

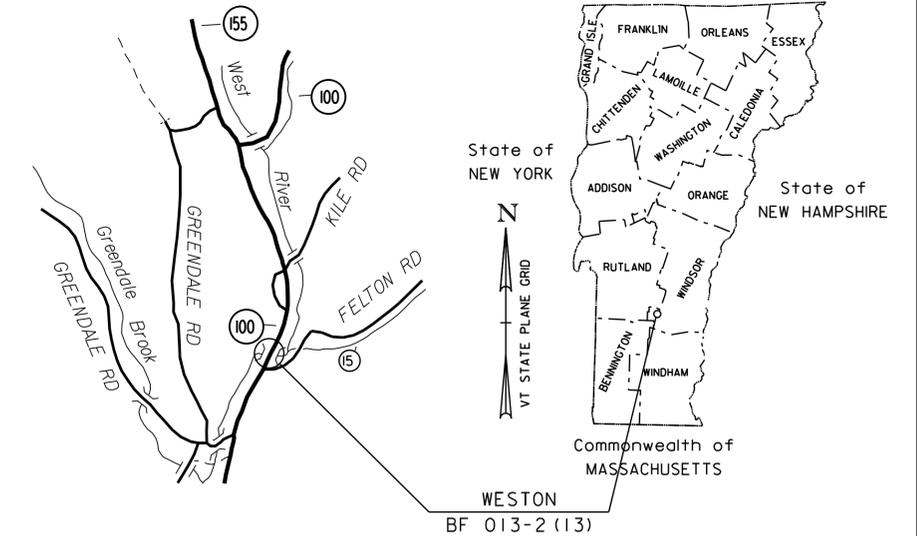
# STATE OF VERMONT AGENCY OF TRANSPORTATION



## PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF WESTON  
COUNTY OF WINDSOR

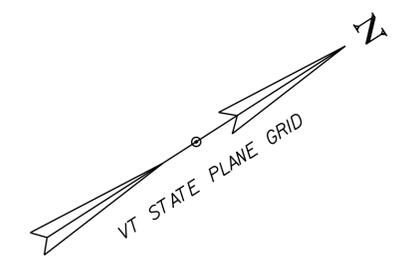
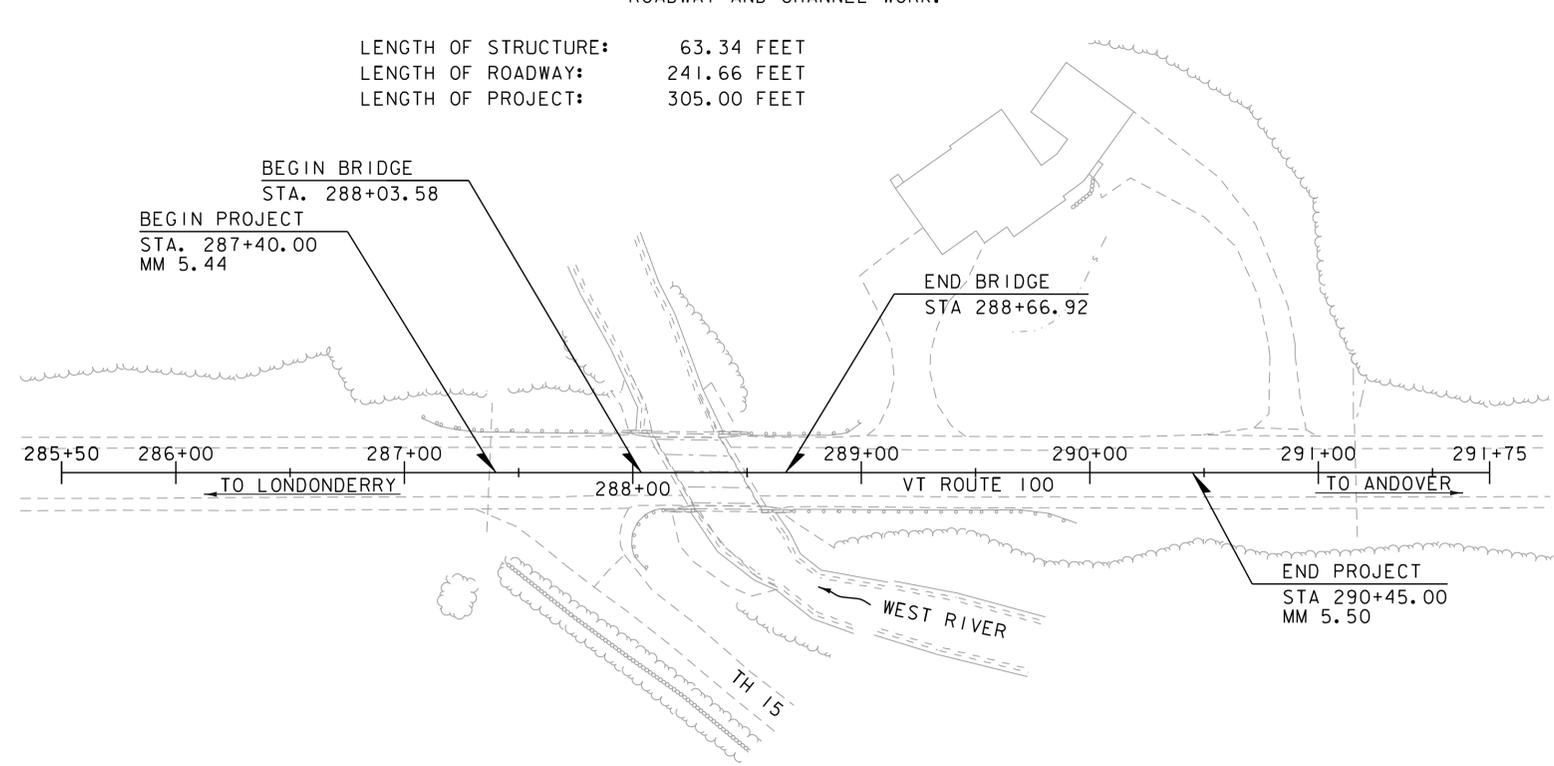
VT ROUTE 100 (RURAL MINOR ARTERIAL) , BRIDGE NO 98



**PROJECT LOCATION:** LOCATED IN THE COUNTY OF WINDSOR, IN THE TOWN OF WESTON, ON VT ROUTE 100; BRIDGE NO. 98 OVER THE WEST RIVER; APPROXIMATELY 1.1 MILES SOUTH OF THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 155.

**PROJECT DESCRIPTION:** WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF BRIDGE NO. 98 ON THE EXISTING ALIGNMENT, WITH ASSOCIATED ROADWAY AND CHANNEL WORK.

**LENGTH OF STRUCTURE:** 63.34 FEET  
**LENGTH OF ROADWAY:** 241.66 FEET  
**LENGTH OF PROJECT:** 305.00 FEET



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.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	05/15/2013
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD 83 (2011)

SCALE 1" = 40' - 0"

DIRECTOR OF PROJECT DELIVERY	
APPROVED _____	DATE _____
PROJECT MANAGER : JENNIFER M. V. FITCH, PE	
PROJECT NAME :	WESTON
PROJECT NUMBER :	BF 013-2 (13)
SHEET 1 OF 68 SHEETS	



**INDEX OF SHEETS**

**FINAL HYDRAULIC REPORT**

**PLAN SHEETS**

1	TITLE SHEET
2	PRELIMINARY INFORMATION SHEET
3	TYPICAL BRIDGE SECTION
4 - 5	TYPICAL SECTIONS (1-2)
6	APPROACH AND TYPICAL EARTHWORK SECTION SHEET
7 - 8	PROJECT NOTES (1-2)
9 - 11	QUANTITY SHEETS (1-3)
12	CONVENTIONAL SYMBOLS LEGEND
13	TIE SHEET
14 - 15	ROADWAY ALIGNMENT LAYOUT SHEETS (1-2)
16	LAYOUT SHEET
17	ROADWAY PROFILE
18	DRIVEWAY PROFILES
19 - 24	TRAFFIC CONTROL PLANS (1-6)
25 - 26	DRAINAGE & UTILITY LAYOUT SHEETS (1-2)
27	TRAFFIC SIGNS & LINE STRIPING SHEET
28	TRAFFIC SIGN SUMMARY SHEET
29	BORING INFORMATION SHEET
30 - 31	BORING LOGS (1-2)
32	PLAN AND ELEVATION
33	NEXT BEAM FRAMING PLAN
34 - 35	NEXT BEAM DETAILS (1-2)
36	NEXT BEAM ABUT NO 1 PLAN & ELEVATION
37	NEXT BEAM ABUT NO 2 PLAN & ELEVATION
38	NEXT BEAM ABUTMENT SECTIONS
39	NEXT BEAM ABUTMENT REINFORCEMENT
40	NEXT BEAM DECK CLOSURE POUR
41	PBU FRAMING PLAN
42	PBU DETAILS
43	PBU CAMBER AND DEFLECTION
44	PBU ABUT NO 1 PLAN & ELEVATION
45	PBU ABUT NO 2 PLAN & ELEVATION
46	PBU ABUTMENT SECTIONS
47	PBU ABUTMENT REINFORCEMENT
48	PBU DECK CLOSURE POUR
49	WINGWALL DETAILS
50	BEARING DETAILS
51 - 52	PRECAST APPROACH SLABS (1-2)
53	BRIDGE RAILING AND GUARDRAIL LAYOUT
54	BOX BEAM GUARD RAIL DETAILS
55 - 56	ROADWAY CROSS SECTIONS (1-2)
57 - 60	DRIVEWAY CROSS SECTIONS (1-4)
61 - 62	CHANNEL CROSS SECTIONS (1-2)
63	EPSC NARRATIVE
64	EPSC EXISTING CONDITIONS SHEET
65	EPSC CONSTRUCTION CONDITIONS SHEET
66	EPSC FINAL CONDITIONS SHEET
67 - 68	EROSION CONTROL DETAILS (1-2)

**STANDARDS LIST**

B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-2005
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-136B	STATE ROUTE MARKER SIGN DETAILS	08-08-1995
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11-15-2002
J-3	MAIL BOX SUPPORT DETAILS	08-07-1995
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	02-10-2014
S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-10-2014
S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-10-2014
S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012
T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-2012
T-40	DELINEATORS AND MILEPOSTS	01-02-2013
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-44	MILEMARKER DETAILS STATE AND TOWN HIGHWAYS	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

**STRUCTURES DETAIL SHEETS**

SD-501.00	CONCRETE DETAILS AND NOTES	2/9/2012
SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011

**HYDROLOGIC DATA**

Date: November 2014

DRAINAGE AREA : 9.1 sq. mi.  
 CHARACTER OF TERRAIN : Hilly to mountainous, mostly wooded  
 STREAM CHARACTERISTICS : Sinuous, incised and alluvial  
 NATURE OF STREAMBED : Boulders, cobbles, gravel

**PEAK FLOW DATA**

Q 2.33 =	800 cfs	Q 50 =	3275 cfs
Q 10 =	1885 cfs	Q 100 =	4070 cfs
Q 25 =	2580 cfs	Q 500 =	6800 cfs

DATE OF FLOOD OF RECORD : Unknown  
 ESTIMATED DISCHARGE : Unknown  
 WATER SURFACE ELEV. : Unknown  
 NATURAL STREAM VELOCITY : @ Q50 = 7.9 fps  
 ICE CONDITIONS : Moderate  
 DEBRIS : Low to moderate  
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No  
 IS ORDINARY RISE RAPID? No  
 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: Steel beam and concrete deck  
 YEAR BUILT: 1959  
 CLEAR SPAN(NORMAL TO STREAM): ~25'  
 VERTICAL CLEARANCE ABOVE STREAMBED: ~8'  
 WATERWAY OF FULL OPENING: 180 sq. ft.  
 DISPOSITION OF STRUCTURE: Remove and replace  
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

**WATER SURFACE ELEVATIONS AT:**

Q2.33 =	1426.1'	VELOCITY =	7.4 fps
Q10 =	1429.3'	"	9.2 fps
Q25 =	1432.1'	"	12.6 fps
Q50 =	1432.4'	"	12.9 fps
Q100 =	1432.4'	"	13.7 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes  
 FREQUENCY: Below Q25  
 RELIEF ELEVATION: 1431.7'  
 DISCHARGE OVER ROAD @Q100: 1640 cfs

**UPSTREAM STRUCTURE**

TOWN: Weston DISTANCE: 2920'  
 HIGHWAY #: 14 STRUCTURE #:   
 CLEAR SPAN: CLEAR HEIGHT:   
 YEAR BUILT: FULL WATERWAY:   
 STRUCTURE TYPE:

**DOWNSTREAM STRUCTURE**

TOWN: Weston DISTANCE: 2530'  
 HIGHWAY #: 22 STRUCTURE #: 29  
 CLEAR SPAN: ~67' CLEAR HEIGHT:   
 YEAR BUILT: 1939 FULL WATERWAY:   
 STRUCTURE TYPE: Rolled beam bridge

**LRFR LOAD RATING FACTORS**

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	1.94	1.04					
POSTING							
OPERATING	2.60	1.39	2.42	1.49	1.93	1.74	1.98
COMMENTS:	FOR NEXT BEAM SUPERSTRUCTURE						

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.41	1.28					
POSTING							
OPERATING	3.12	1.65	2.19	1.40	1.80	1.62	1.82
COMMENTS:	FOR PBU SUPERSTRUCTURE						

**PROPOSED STRUCTURE**

STRUCTURE TYPE: Prestressed Concrete NEXT beams or PBUs

CLEAR SPAN(NORMAL TO STREAM): 50'  
 VERTICAL CLEARANCE ABOVE STREAMBED: ~8.5'  
 WATERWAY OF FULL OPENING: 360 sq. ft.

**WATER SURFACE ELEVATIONS AT:**

Q2.33 =	1425.4'	VELOCITY=	6.7 fps
Q10 =	1427.5'	"	9.0 fps
Q25 =	1427.7'	"	12.0 fps
Q50 =	1428.4'	"	13.4 fps
Q100 =	1429.2'	"	14.3 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No  
 FREQUENCY: N/A  
 RELIEF ELEVATION: 1432.3'  
 DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1429.4'  
 VERTICAL CLEARANCE: @ Q50 = 1.0'

SCOUR: 0' of contraction scour up through 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: 345 cfs ~-3.0'

**TEMPORARY BRIDGE REQUIREMENTS**

STRUCTURE TYPE: N/A  
 CLEAR SPAN (NORMAL TO STREAM):  
 VERTICAL CLEARANCE ABOVE STREAMBED:  
 WATERWAY AREA OF FULL OPENING:

**ADDITIONAL INFORMATION**

**TRAFFIC MAINTENANCE NOTES**

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

**DESIGN VALUES**

1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	d <sub>p</sub> : 0.0 INCH
3. DESIGN SPAN	L: 60.50 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: 1.60 INCH
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f <sub>y</sub> : 270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f' <sub>c</sub> : 7.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f' <sub>cr</sub> : 5.5 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f' <sub>c</sub> : ---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f' <sub>c</sub> : 4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f' <sub>c</sub> : ---
11. CONCRETE, CLASS C	f' <sub>c</sub> : ---
12. REINFORCING STEEL	f <sub>y</sub> : 60 KSI
13. STRUCTURAL STEEL AASHTO M270 (GALVANIZED OR METALIZED)	f <sub>y</sub> : 50 KSI
14. NOMINAL BEARING RESISTANCE OF SOIL	q <sub>n</sub> : ---
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
16. NOMINAL BEARING RESISTANCE OF ROCK	q <sub>n</sub> : ---
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
18. PILE RESISTANCE FACTOR	φ: ---
19. LATERAL PILE DEFLECTION	Δ: ---
20. BASIC WIND SPEED	V <sub>3s</sub> : ---
21. MINIMUM GROUND SNOW LOAD	P <sub>g</sub> : ---
22. SEISMIC DATA	PGA: 0 S: --- S <sub>i</sub> : ---
23.	---
24.	---
25.	---
26.	---

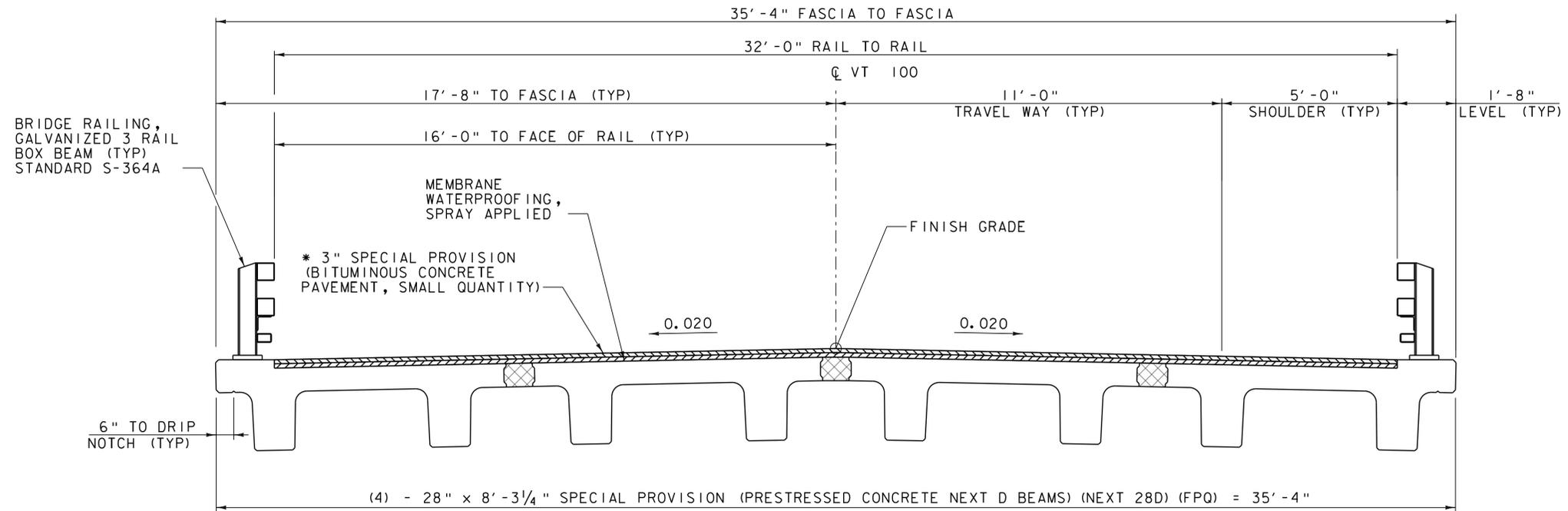
**TRAFFIC DATA**

YEAR	ADT	DHV	% D	% T	ADTT	
2016	1900	330	57	8.9	150	20 year ESAL for flexible pavement from 2016 to 2036 : 768000
2036	2000	350	57	14.2	250	40 year ESAL for flexible pavement from 2016 to 2056 : 1753000
						Design Speed : 50 mph

AS BUILT "REBAR" DETAIL		
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:



PROJECT NAME: **WESTON**  
 PROJECT NUMBER: **BF 013-2(13)**  
 FILE NAME: 57673pi Sheet.xls PLOT DATE: 9/30/2015  
 PROJECT LEADER: M.A. COLGAN DRAWN BY: J.J. WESTCOTT  
 DESIGNED BY: J.J. WESTCOTT CHECKED BY: S.E. BURBANK  
**PRELIMINARY INFORMATION SHEET** SHEET 2 OF 68

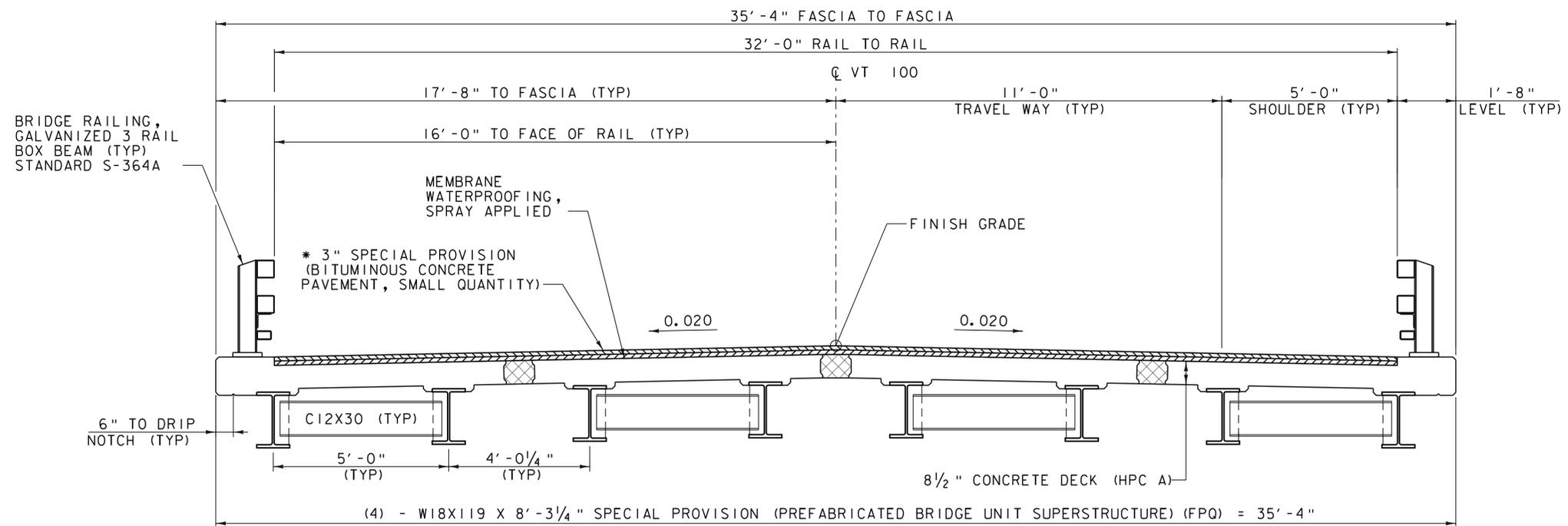


\* - (2) - 1 1/2" LIFTS OF TYPE IVS

**TYPICAL NEXT BEAM BRIDGE SECTION ALTERNATE**

SCALE 1/2" = 1'-0"

☒ = SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)



\* - (2) - 1 1/2" LIFTS OF TYPE IVS

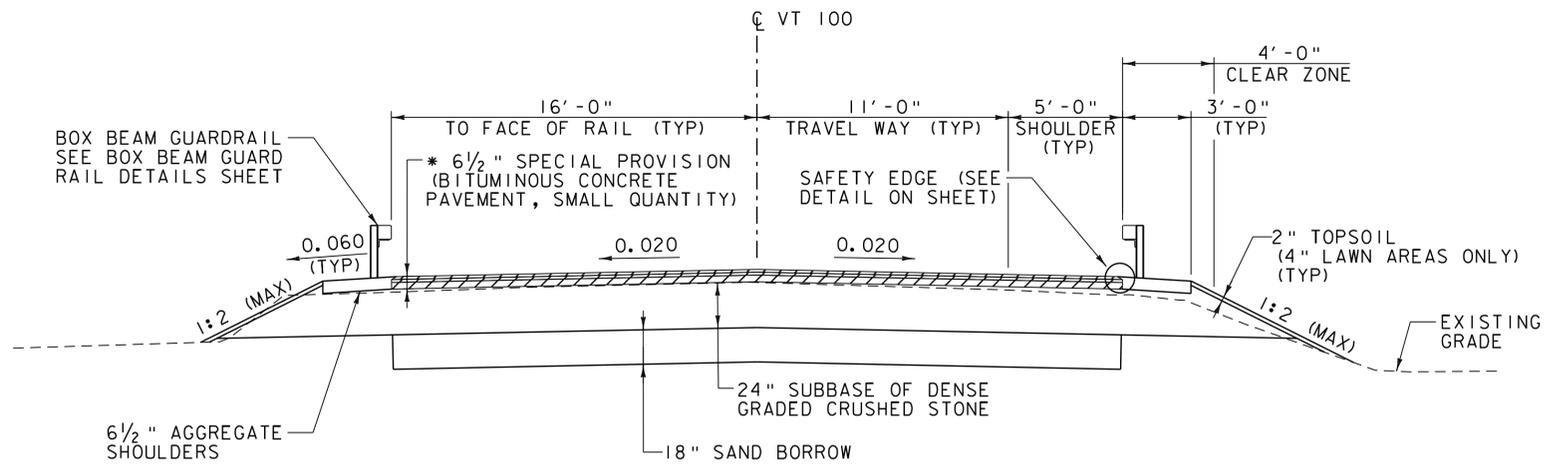
**TYPICAL PBU BRIDGE SECTION ALTERNATE**

SCALE 1/2" = 1'-0"



PROJECT NAME: WESTON  
 PROJECT NUMBER: BF 013-2(13)  
 FILE NAME: z13b076typ.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: J.J. WESTCOTT  
 TYPICAL BRIDGE SECTION

PLOT DATE: 10/2/2015  
 DRAWN BY: J.J. WESTCOTT  
 CHECKED BY: S.E. BURBANK  
 SHEET 3 OF 68

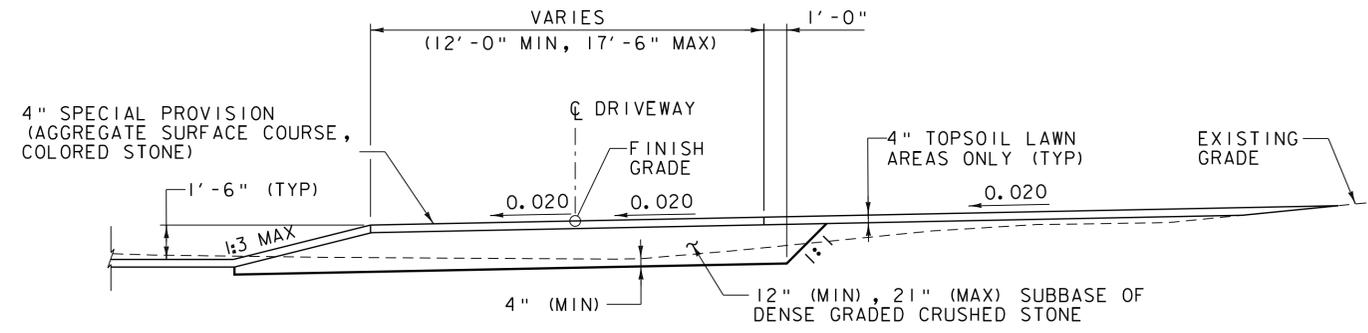


\* (2) - 1 1/2" LIFTS OF TYPE IVS OVER  
 (1) - 3 1/2" LIFT OF TYPE IIS

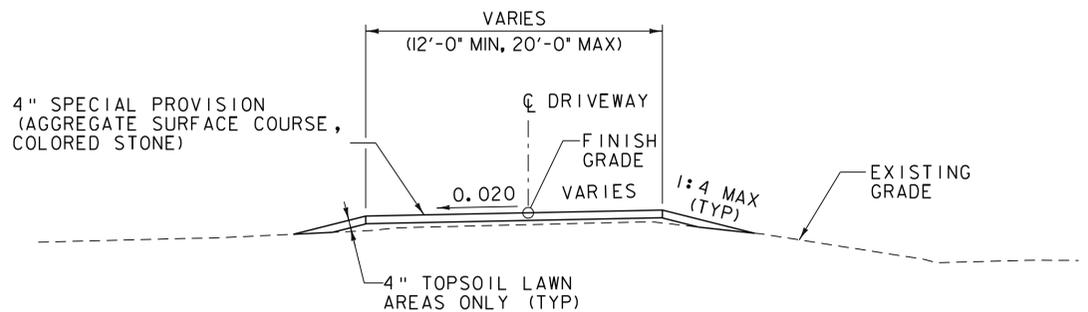
**VT 100 TYPICAL ROADWAY SECTION**  
 SCALE 1/4" = 1'-0"

**MATERIAL TOLERANCES**  
 (IF USED ON PROJECT)

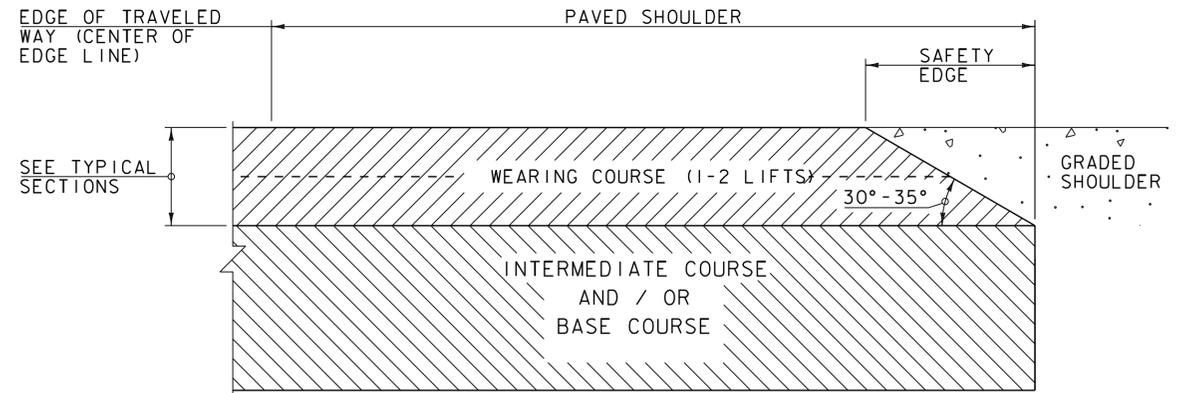
SURFACE	
PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"



**STA. 10+13 - 11+74 DRIVEWAY TYPICAL SECTION**  
 SCALE 1/4" = 1'-0"



**STA. 1+16 - 2+25 DRIVEWAY TYPICAL SECTION**  
 SCALE 1/4" = 1'-0"

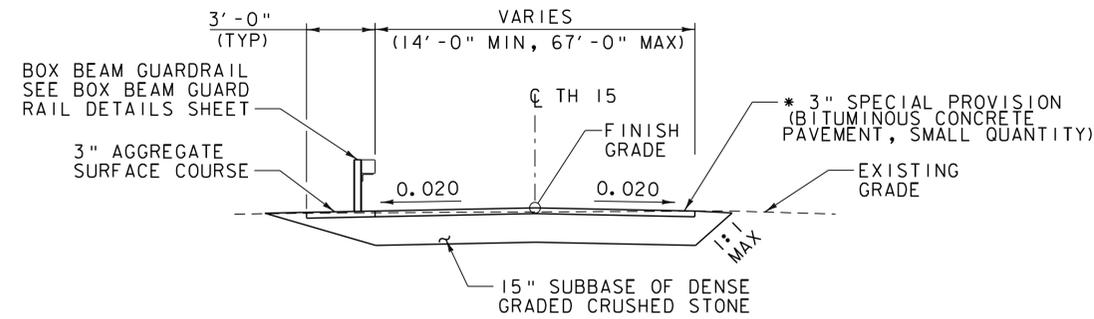


**SAFETY EDGE DETAIL**  
 NOT TO SCALE

1. 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.
2. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDING THE "SAFETY EDGE".



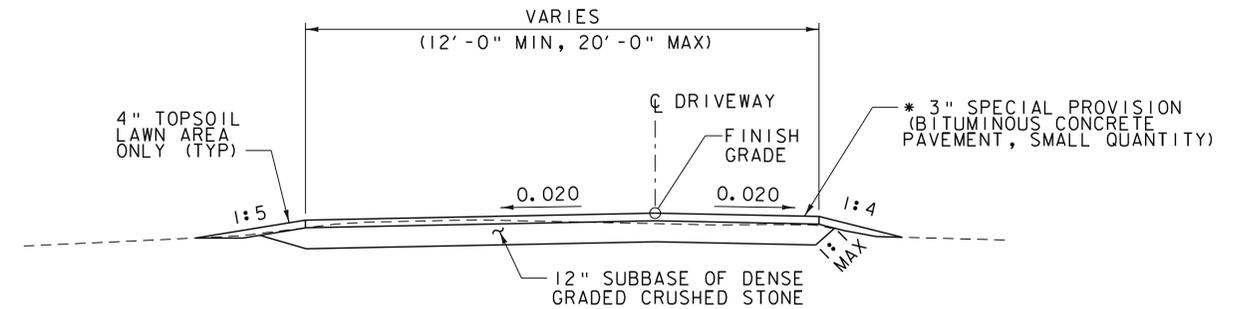
PROJECT NAME: WESTON	PLOT DATE: 10/19/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: J.J. WESTCOTT
FILE NAME: z13b076typ.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 4 OF 68
DESIGNED BY: J.J. WESTCOTT	TYPICAL SECTIONS (10 OF 2)



**TH 15 (FELTON ROAD) TYPICAL PAVED SECTION**

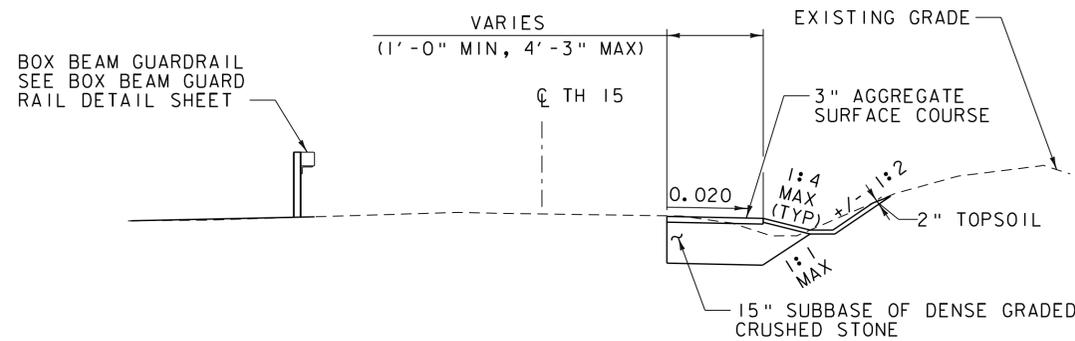
STA. 50+16 - 50+51  
SCALE 1/4" = 1'-0"

\* (2) - 1 1/2" LIFTS OF TYPE IVS



**DRIVEWAY TYPICAL PAVED SECTION**

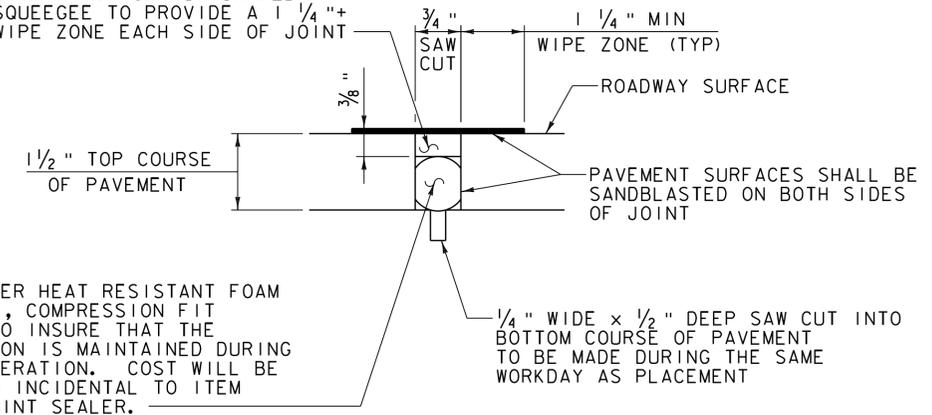
SCALE 1/4" = 1'-0"



**TH 15 (FELTON ROAD) TYPICAL BOX CUT SECTION**

STA. 50+51 - 51+41.51  
SCALE 1/4" = 1'-0"

JOINT SEALER, HOT POURED SHALL BE SLIGHTLY OVER FILLED THEN WIPED FLUSH WITH A "V" OR "U" SHAPED SQUEEGEE TO PROVIDE A 1 1/4"± WIPE ZONE EACH SIDE OF JOINT



**SAW CUT JOINT DETAIL**

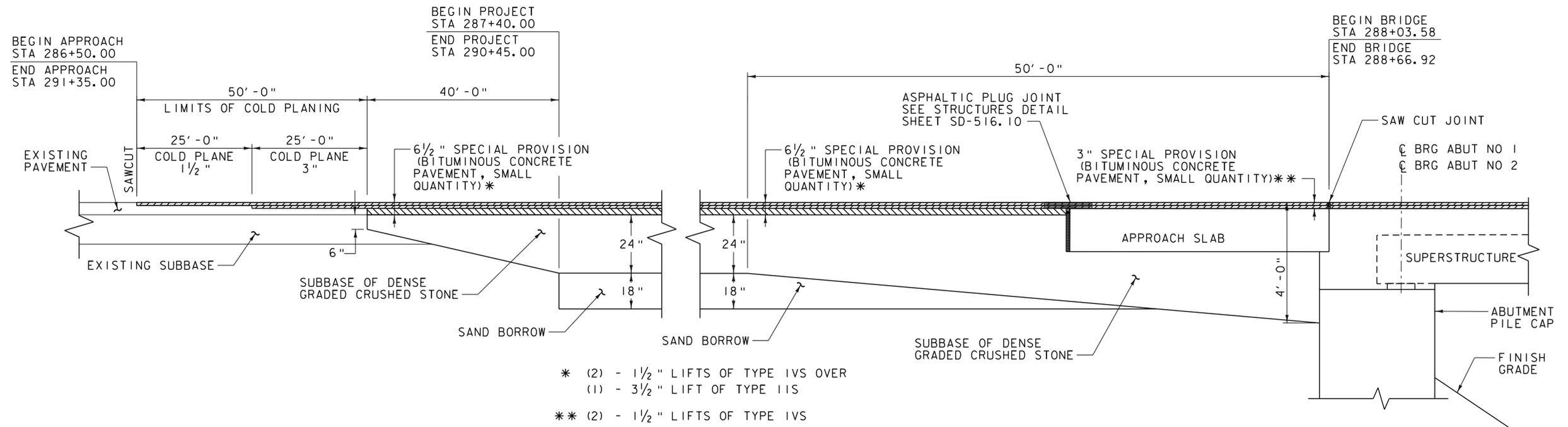
NOT TO SCALE

1. 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 THE 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.
2. SAWED PAVEMENT JOINTS SHALL BE LOCATED BETWEEN THE APPROACH SLABS AND EACH END OF THE BRIDGE AND BETWEEN THE APPROACH SLABS AND ANY PAVED APRONS FOR DRIVES.



PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)  
FILE NAME: z13b076typ.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
TYPICAL SECTIONS (2 of 2)

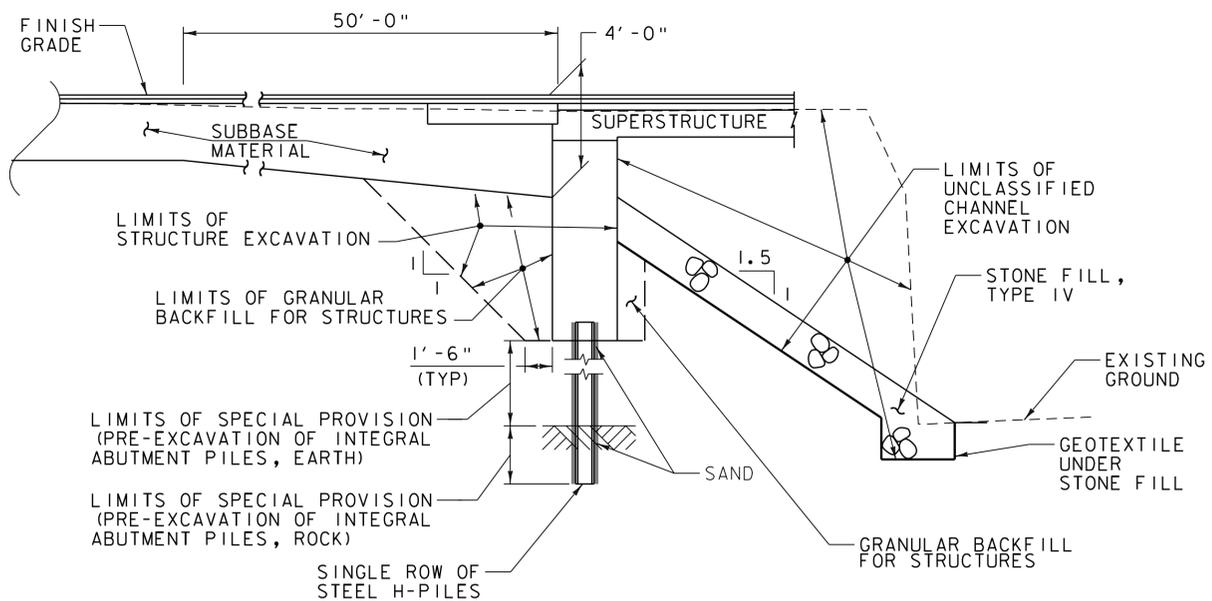
PLOT DATE: 10/19/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 5 OF 68



- \* (2) - 1 1/2" LIFTS OF TYPE IVS OVER  
(1) - 3 1/2" LIFT OF TYPE IIS
- \*\* (2) - 1 1/2" LIFTS OF TYPE IVS

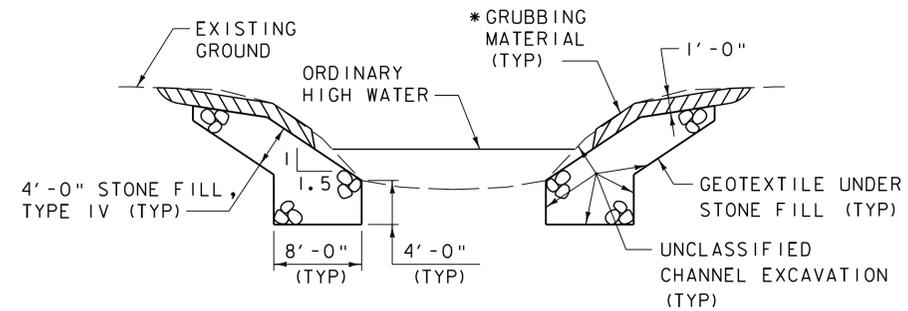
NOTE: EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.040 GAL/SY BETWEEN SUCCESSIVE COURSES OF BITUMINOUS CONCRETE PAVEMENT AND ON THE APPROACH SLAB PRIOR TO PLACING THE FIRST LIFT AND AT A RATE OF 0.080 GAL/SY ON ALL COLD PLANED SURFACES, AS DIRECTED BY THE ENGINEER.

APPROACH SECTION  
NOT TO SCALE



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

ABUTMENT EARTHWORK SECTION  
NOT TO SCALE



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.

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076typ.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
APPROACH AND TYPICAL EARTHWORK SECTION SHEET 6 OF 68	



## PROJECT NOTES

### GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6<sup>TH</sup> EDITION, AND ITS LATEST REVISIONS.
2. ALL PRECAST CONCRETE ELEMENTS TO BE FABRICATED TO THE SPECIFIED DIMENSIONS WITHIN THE TOLERANCES DICTATED IN THE PRECAST/PRESTRESSED CONCRETE INSTITUTE TOLERANCE MANUAL FOR PRECAST AND PRESTRESSED CONCRETE CONSTRUCTION, MNL 135-00, AND ITS LATEST REVISIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CONSISTENCY BETWEEN FABRICATOR'S SHOP DRAWINGS AND ENSURING THAT ALL PRECAST AND RAIL COMPONENTS FIT TOGETHER.
4. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
5. NO ADJUSTMENTS TO THE BITUMINOUS WEARING SURFACE ON THE BRIDGE SHALL BE MADE TO ACCOUNT FOR THE DIFFERENCE BETWEEN THE ACTUAL BEAM CAMBER AND THE THEORETICAL ROADWAY PROFILE. THE WEARING SURFACE SHALL BE SHIMMED TRANSVERSELY AS NECESSARY TO ACCOUNT FOR POTENTIAL DIFFERENTIAL CAMBER OF THE ADJACENT BEAMS.
6. NO CAST-IN-PLACE SUBSTITUTIONS WILL BE PERMITTED FOR PRECAST CONCRETE.
7. THE EXISTING BRIDGE CONTAINS STRUCTURAL STEEL. THE STRUCTURAL STEEL MAY BE PAINTED WITH MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.
8. THE REMOVAL OF THE EXISTING BRIDGE WILL BE PAID FOR UNDER ITEM 529.15 "REMOVAL OF STRUCTURE". THIS WORK WILL INCLUDE THE COMPLETE REMOVAL AND DISPOSAL OF THE EXISTING BRIDGE SUPERSTRUCTURE, INCLUDING ALL BEARINGS, ANCHOR BOLTS, AND THE BRIDGE SUBSTRUCTURE THAT FALL OUTSIDE THE LIMITS COVERED BY THE CONTRACT EXCAVATION ITEMS.

### TRAFFIC CONTROL

9. THE CONTRACTOR SHALL IMPLEMENT THE ROAD CLOSURE, TRAFFIC CONTROL, AND DETOUR AS SHOWN ON THE PLANS.
10. THE CONTRACTOR SHALL NOTIFY THE TOWN AND RESIDENTS WITHIN THE PROJECT LIMITS A MINIMUM OF TWO (2) WEEKS PRIOR TO CLOSING THE ROAD.
11. FULL ACCESS TO ALL SIDE ROADS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
12. ACCESS TO ALL DRIVES SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH MS. PROCTOR AND THE ENGINEER ON CONSTRUCTING MS. PROCTOR'S DRIVEWAYS. MS. PROCTOR SHALL NOT BE DELAYED BY NO MORE THAN TEN (10) MINUTES DUE TO CONSTRUCTION. MS. PROCTOR SHALL BE NOTIFIED AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO ANY DELAY GREATER THAN TEN (10) MINUTES. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
13. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON THE TRAFFIC CONTROL SHEETS AND FOR TEMPORARY TRAFFIC CONTROL DEVICES WILL BE INCLUDED IN THE CONTRACT ITEM 641.10, "TRAFFIC CONTROL". THIS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS:
  - TEMPORARY TRAFFIC BARRIERS
  - RETROREFLECTIVE DRUMS & CONES
  - TEMPORARY SIGNS
  - SIGN POSTS
  - INSTALLATION OF TEMPORARY SIGNS AND SIGN POSTSTEMPORARY TRAFFIC BARRIER SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 621.
14. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) DATED 2009 AND ITS LATEST REVISIONS AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM), AND THE 2012 SUPPLEMENT TO THE 2004 EDITION (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

### EARTHWORK

15. THE "STONE FILL, TYPE IV" UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW BEAMS ARE SET.
16. REMOVAL OF EXISTING BRIDGE PAVEMENT WILL BE PAID UNDER ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
17. THE CONTRACTOR MAY SUBSTITUTE SUBBASE MATERIAL FOR THE SAND BORROW SHOWN IN THE MATERIALS TRANSITION. THE SUBBASE MATERIAL SHALL BE THE TYPE SPECIFIED IN THE CONTRACT AND SHALL BE PLACED TO MEET THE SUBBASE SPECIFICATIONS. IF SUBBASE IS PLACED IN LIEU OF SAND BORROW, A GEOTEXTILE MEETING THE REQUIREMENTS OF ITEM 649.11 "GEOTEXTILE FOR ROAD BED SEPARATOR" SHALL BE PLACED BETWEEN THE SUBGRADE AND SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE SHALL BE INCIDENTAL TO 203.31 "SAND BORROW".

### CONCRETE

18. ALL LIFTING POINTS IN THE SUPERSTRUCTURE SHALL BE REMOVABLE TO THE MINIMUM CLEAR COVER FOR REINFORCING STEEL SPECIFIED IN THE PLANS. THE LIFTING POINTS SHALL BE DETAILED IN THE APPROPRIATE FABRICATION DRAWING. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST ITEM.
19. ALL RECESSED LIFTING POINTS AND BLOCKOUTS SHALL BE FILLED WITH A TYPE IV MORTAR PER SUBSECTIONS 707.03. PAYMENT WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST ITEM.
20. THE METHOD OF FORMING FOR SUBSEQUENT POURS AFTER PLACING PRECAST/PRESTRESSED SUPERSTRUCTURE UNITS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS ENCOURAGED TO WORK WITH THE FABRICATOR IF ADDITIONAL SUPPORTS MAY BE REQUIRED. IN NO CASE SHALL THE CONTRACTOR ATTACH ADDITIONAL FORM OF SCREED SUPPORTS BY DRILLING OR SIMILAR MEANS INTO ANY PRECAST/PRESTRESSED SUPERSTRUCTURE UNIT.
21. ALL FORM SUPPORTS AND FORM TIES THAT ARE TO REMAIN PERMANENTLY IN THE CONCRETE ABOVE THE BRIDGE SEAT SHALL BE AT A MINIMUM PROTECTION LEVEL OF GALVANIZED AND CONFORM TO SECTION 726 OF THE STANDARD SPECIFICATIONS.
22. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, WITH THE EXCEPTION OF THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
23. ALL EXPOSED EDGES SHALL HAVE A 1"X1" CHAMFER UNLESS OTHERWISE NOTED.

### REINFORCING STEEL

24. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
25. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIAL SAMPLING MANUAL" AVAILABLE ON THE AGENCY WEBSITE. A MINIMUM OF TWO TEST SECTIONS ARE REQUIRED FOR EACH SIZE, BRAND, AND GRADE OR TYPE OF REINFORCING. SEE THE MANUAL FOR ACCEPTABLE DIMENSIONS OF TEST SECTIONS. ALL COSTS ASSOCIATED WITH PROVIDING BARS FOR TESTING WILL BE INCLUDED IN THE UNIT BID PRICE FOR THE APPROPRIATE PRECAST ITEM.
26. ALL REINFORCEMENT SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR LEVEL II REINFORCING STEEL. PAYMENT FOR STEEL REINFORCEMENT IN NEXT D BEAMS OR PBUS, INCLUDING REINFORCING FOR THE CLOSURE POUR WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 900.640, "SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS)(NEXT 28D)(FPQ)" OR ITEM 900.640, "SPECIAL PROVISION (PRECAST BRIDGE UNIT SUPERSTRUCTURE)(FPQ)". PAYMENT FOR STEEL REINFORCEMENT IN PRECAST SUBSTRUCTURE UNITS AND APPROACH SLABS, INCLUDING REINFORCING FOR THE CLOSURE POUR, WILL BE INCLUDED IN THE APPROPRIATE PRECAST CONTRACT ITEM.
27. CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04.
28. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG TOP SURFACE OF DECK SLAB:	2½ INCH
ALONG BOTTOM SURFACE OF NEXT BEAM:	1¾ INCH
ALONG BOTTOM SURFACE OF PBUS:	1½ INCH
ELSEWHERE UNLESS OTHERWISE NOTED:	3 INCH

### PRECAST ABUTMENTS AND POST-TENSIONING

29. IF A VERTICAL CONSTRUCTION JOINT IS REQUIRED BY THE CONTRACTOR FOR SHIPMENT OF THE ABUTMENTS, THEN THE SECTIONS SHALL BE KEYED AND MATCH CAST. A JOINT DETAIL SHALL BE SHOWN ON THE FABRICATION DRAWINGS. NO LESS THAN TWO PILES SHALL SUPPORT EACH PRECAST ABUTMENT SECTION.
30. EPOXY BONDING COMPOUND SHALL BE APPLIED TO ALL VERTICAL MATCH CAST CONSTRUCTION JOINTS. SEE AGENCY WEBSITE FOR LIST OF APPROVED EPOXY BONDING COMPOUNDS. PAYMENT FOR EPOXY WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ITEM.
31. ITEM 524.21, JOINT SEALER, POLYURETHANE, SHALL BE APPLIED TO THE OUTSIDE FAR FACE OF ALL VERTICAL MATCH CAST CONSTRUCTION JOINTS.
32. POST-TENSIONING AND ASSOCIATED ITEMS ARE ONLY REQUIRED IF THE PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT. ANY POST-TENSIONING STRANDS AND CONDUIT SHALL ADHERE TO THE REQUIREMENTS OF SECTION 510 - PRESTRESSED CONCRETE. GALVANIZED ANCHOR ASSEMBLIES, CONDUIT AND POST-TENSIONING STRANDS SHALL BE INCLUDED UNDER ITEM 540.10, "PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)" OR "PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 2)" AS APPROPRIATE. POST-TENSIONING STRANDS SHALL BE COVERED WITH SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF THE STRAND, EXCEPT AT ANCHORAGE LOCATIONS.
33. GALVANIZE ANCHOR ASSEMBLIES AFTER FABRICATION ACCORDING TO AASHTO M232M/M232.
34. DESIGN VALUES
  - A. CONCRETE COMPRESSIVE STRENGTH:  $f'c = 5,000$  PSI.
  - B. POST-TENSIONING STRANDS: 0.5 INCH DIAMETER, 270 KSI, LOW RELAXATION 7-WIRE STRANDS.
  - C. ASSUMED MODULUS OF ELASTICITY IS 28,500 KSI.
  - D. THERE SHALL BE 2 STRANDS PER CONDUIT.
  - E. JACKING FORCE PER STRAND = 32 KIPS.
35. THE CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF SUBSECTION 711.01 AND SHALL BE GALVANIZED PER SUBSECTION 726.08 OF THE STANDARD SPECIFICATIONS. ALL COSTS ASSOCIATED WITH FURNISHING AND PLACING THE CORRUGATED STEEL PIPE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ITEM.

36. THE CONCRETE FOR THE ABUTMENT PILE CAVITIES WILL BE PAID FOR UNDER ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.
37. THE BACKFILL BEHIND THE ABUTMENTS SHALL BE LIMITED TO A HEIGHT OF 3'-0" BELOW THE BRIDGE SEAT AND NO CRANES SHALL BE CLOSER THAN 3'-0" TO THE ABUTMENT DURING THE ERECTION OF THE SUPERSTRUCTURE.
38. THE CONTRACTOR SHALL PROVIDE THREE (3) ASSEMBLED SPLICE TUBES PER SPLICE CONNECTOR SIZE FOR TESTING. THE CONNECTION SHALL BE ASSEMBLED IN THE FIELD BY THE CONTRACTOR AND WITNESSED BY THE ENGINEER. THE MECHANICAL COUPLER CONNECTORS SHALL BE PAID FOR UNDER ITEM 540.10, "PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)" AND "PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 2)".

### NEXT D BEAMS ALTERNATE

39. NEXT D BEAMS ARE A NON-PROPRIETARY SHAPE DEVELOPED BY PCI NORTHEAST ("PCINE"). STANDARDIZED SECTION PROPERTIES AND DETAILS MAY BE FOUND AT <http://www.pcine.org>
40. DESIGN VALUES

A. CONCRETE COMPRESSIVE STRENGTH: $f'c = 7,000$ PSI.	
B. CONCRETE COMPRESSIVE STRENGTH AT RELEASE: $f'ci = 5,500$ psi.	
C. PRESTRESSING STRANDS: 0.6 INCH DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS	
D. ASSUMED MODULUS OF ELASTICITY = 28,500 KSI	
E. PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION FORCE OF 44.0 KIPS AFTER ACCOUNTING FOR CHUCK SLIPPAGE.	
F. SERVICE LOADS	
MEMBER MOMENT	653 K-FT
NON-COMPOSITE SUPERIMPOSED DEAD LOAD MOMENT	60 K-FT
COMPOSITE SUPERIMPOSED DEAD LOAD MOMENT	169 K-FT
LIVE LOAD AND IMPACT MOMENT	1,181 K-FT
DEAD LOAD REACTION	59 KIPS
LIVE LOAD AND IMPACT REACTION	95 KIPS
TOTAL REACTION	154 KIPS
FINAL CAMBER AT ERECTION	2.6 INCHES
41. THE FABRICATOR SHALL PROVIDE A CALCULATED CAMBER ESTIMATE FOR THE NEXT D BEAMS AT RELEASE, ERECTION, AND FINAL CONDITIONS PRIOR TO ANY SUPERIMPOSED LOADING OF THE BEAM. MINOR ADJUSTMENTS TO THE BRIDGE SEAT ELEVATIONS AND NEXT BEAM FLANGE THICKNESS MAY BE REQUIRED DURING THE FABRICATION REVIEW PROCESS BASED OFF OF THESE VALUES. ALL WORK ASSOCIATED WITH PROVIDING AN ESTIMATED CAMBER ALONG WITH ANY ADJUSTMENTS TO THE BRIDGE SEAT ELEVATIONS OR NEXT BEAM FLANGE THICKNESS BE WILL CONSIDERED INCIDENTAL TO ITEM 900.640 "SPECIAL PROVISION (PRESTRESSED NEXT D BEAMS)(NEXT 28D) (FPQ)" AND THE APPROPRIATE ABUTMENT PAY ITEM.
42. DUE TO STABILITY CONCERNS AT THE ABUTMENTS DURING THE ERECTION OF THE SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT THE ERECTION PLAN A MINIMUM OF 30 WORKING DAYS PRIOR TO THE BRIDGE CLOSURE PERIOD. UNDER NO CIRCUMSTANCES SHALL A BRIDGE CLOSURE PERIOD BEGIN PRIOR TO HAVING AN ACCEPTED ERECTION PLAN.
43. THE FABRICATOR MAY ALTER THE DESIGN AS DETAILED IN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THIS ALTERATION SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT TO MEET THE ABOVE CRITERIA AND SHALL BE APPROVED BY THE PROJECT MANAGER.
44. FORMING THE ENDS OF THE FLANGES ALONG THE LONGITUDINAL CLOSURE POUR SHALL BE TREATED WITH CONCRETE SURFACE RETARDER OR SIMILAR, TO PROVIDE A ROUGHENED/EXPOSED AGGREGATE SURFACE THAT SHALL BE POWER WASHED WITH WATER PRIOR TO ERECTION OF BEAMS.
45. THE CONCRETE FOR FLANGE CLOSURE POURS WILL BE PAID FOR UNDER ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.
46. METHOD OF FORMING FLANGE CONNECTION SHALL BE DETERMINED BY THE CONTRACTOR. THE FORMS SHALL BE REMOVABLE AND ABLE TO ACCOMMODATE DIFFERENTIAL CAMBER. FORM SUPPORTS SHALL NOT BE ATTACHED TO ANY PREFABRICATED SUPERSTRUCTURE ELEMENT BY DRILLING OR SIMILAR MEANS.
47. NEXT BEAMS WILL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS)(NEXT 28D) (FPQ)".

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076pn.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
PROJECT NOTES (1 OF 2)

PLOT DATE: 10/2/2015  
DRAWN BY: K.C. BARRY  
CHECKED BY: J.J. WESTCOTT  
SHEET 7 OF 68



## PREFABRICATED BRIDGE UNITS ALTERNATE

48. PREFABRICATED BRIDGE UNITS ARE NON-PROPRIETARY PRODUCTS.
49. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01.
50. ANY HOLES IN THE WEBS OF THE FASCIA BEAMS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.
51. ANY CONNECTIONS NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.
52. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SECTION 506 UNLESS OTHERWISE NOTED.
53. FLEMING BRACKETS OR SIMILAR FALSE WORK SHALL BE PLACED AT A MAXIMUM SPACING OF 4 FEET. THE BRACKETS SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL THEY BEAR ABOVE THE BOTTOM QUARTER WEB.
54. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED AT THE DECK CASTING SITE, AND BEFORE ANY FORMWORK OR OTHER LOADS ARE ADDED TO THE GIRDERS, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING DECK FORMWORK ELEVATIONS.
55. DURING THE FABRICATION OF THE PBU'S THE CONTRACTOR SHALL LOAD THE UNITS EVENLY TO MINIMIZE DIFFERENTIAL CAMBER BETWEEN UNITS.
56. BEAM WEBS AND CROSS FRAMES SHALL BE PLUMB IN FINAL POSITION.
57. PBU DECKS SHALL MEET THE REQUIREMENTS OF "CONCRETE, HIGH PERFORMANCE CLASS A".
58. PBU STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF SECTION 506 OF THE STANDARD SPECIFICATIONS.
59. ALL CORNERS AND EDGES OF THE STRUCTURAL STEEL SHALL BE GROUND TO A 1/16 INCH RADIUS PRIOR TO GALVANIZING OR METALLIZING.
60. DUE TO STABILITY CONCERNS AT THE ABUTMENTS DURING THE ERECTION OF THE SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT THE ERECTION PLAN A MINIMUM OF 30 WORKING DAYS PRIOR TO THE BRIDGE CLOSURE PERIOD. UNDER NO CIRCUMSTANCES SHALL A BRIDGE CLOSURE PERIOD BEGIN PRIOR TO HAVING AN ACCEPTED ERECTION PLAN.
61. ALL WELDING TO THE STRUCTURAL STEEL SHALL BE COMPLETED PRIOR TO GALVANIZING OR METALIZING.
62. THE FABRICATOR MAY ALTER THE DESIGN AS DETAILED IN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THE ALTERATION SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT TO MEET SPECIFIED CRITERIA AND SHALL BE APPROVED BY THE PROJECT MANAGER.
63. PREFABRICATED BRIDGE UNITS WILL BE PAID UNDER ITEM 900.640, "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)".

## APPROACH SLAB AND SUPERSTRUCTURE LONGITUDINAL CLOSURE POURS

64. THE CONCRETE EDGES ALONG THE LONGITUDINAL CLOSURE POURS SHALL BE TREATED TO PROVIDE A ROUGHENED/EXPOSED AGGREGATE SURFACE. THE AMPLITUDE OF THE EXPOSED AGGREGATE SHALL BE A MINIMUM OF 1/8" AND BE COMPLETED PRIOR TO ERECTION OF THE BEAMS OR THE APPROACH SLABS. THE FABRICATOR SHALL INDICATE THE METHOD USED TO ACHIEVE THIS PROFILE ON THE FABRICATION DRAWINGS AND METHOD USED TO PROTECT THE REINFORCING STEEL.
65. THE CONCRETE FOR LONGITUDINAL CLOSURE POURS SHALL BE ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.
66. THE LONGITUDINAL CLOSURE POUR CONCRETE SHALL OBTAIN A STRENGTH OF 4,000 PSI PRIOR TO ANY VEHICULAR LOADING.

## H-PILES

67. THE PILES SHALL BE HP12X63.
68. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04 (f).
69. THE TOPS OF THE PILES AFTER INSTALLATION 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 TO THE SATISFACTION OF THE ENGINEER HOW THE TOLERANCES WILL BE MET. THESE MEASURES SHALL BE DEMONSTRATED IN A SUBMITTAL TO BE ACCEPTED BEFORE PILE DRIVING COMMENCES.
70. PRE-EXCAVATION IS REQUIRED AT ALL PILE LOCATIONS. PAYMENT WILL BE MADE UNDER ITEM 900.640 "SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, ROCK)" OR 900.640 "SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, EARTH)" AS APPROPRIATE. SAND PLACED AROUND THE PILES WILL BE INCIDENTAL TO ITEM 900.640 "SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, ROCK)".

71. THE PILE LOCATIONS AT THE ABUTMENTS SHALL BE PRE-EXCAVATED THREE (3) FEET MINIMUM INTO COMPETENT BEDROCK. THE MINIMUM REQUIRED PILE LENGTH IS SEVENTEEN (17) FEET AND TWELVE AND A HALF (12.5) FEET BELOW THE ABUTMENT PILE CAP AT ABUTMENT 1 AND ABUTMENT 2 RESPECTIVELY. THE PRE-EXCAVATED HOLES SHALL BE A MINIMUM OF TWENTY THREE (23 INCHES) IN DIAMETER. THE ENTIRE PRE-EXCAVATED HOLE SHALL BE BACKFILLED WITH SAND. SAND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 703.03. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
72. PILES THAT ARE PRE-EXCAVATED INTO COMPETENT BEDROCK SHALL BE SEATED ON BEDROCK IN A METHOD APPROVED BY THE ENGINEER. ANY WORK REQUIRED FOR THIS WILL BE INCIDENTAL TO ITEM 900.640 "SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, ROCK)".
73. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATION WERE ASSUMED AND ARE SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

## ABUTMENT CLOSURE/END DIAPHRAGM

74. THE CONCRETE FOR THE ABUTMENT CLOSURE POUR SHALL BE ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)." SEE SPECIAL PROVISIONS FOR REQUIREMENTS.
75. AFTER THE CONCRETE HAS BEEN PLACED AND THE FINISHING OPERATIONS CONCLUDED, IT SHALL NOT BE WALKED ON OR DISTURBED IN ANY MANNER, INCLUDING THE REMOVAL OF FORMS FOR 12 HOURS.
76. THE END DIAPHRAGM CLOSURE POUR CONCRETE SHALL OBTAIN A STRENGTH OF 4000 PSI PRIOR TO ANY VEHICULAR LOADING.

## APPROACH SLABS

77. PRECAST CONCRETE COMPRESSIVE STRENGTH:  $f'c = 5,000$  PSI.
78. CORRUGATED POST-TENSIONING DUCTS IN THE PRECAST APPROACH SLABS FOR DOWEL CONNECTIONS SHALL BE CONSTRUCTED FOR EITHER POLYETHYLENE OR POLYPROPYLENE. THE DUCT SHALL HAVE A MINIMUM MATERIAL THICKNESS OF 0.080 IN.  $\pm 0.010$  IN. AND SHALL HAVE A WHITE COATING ON THE OUTSIDE OR SHALL BE OF WHITE MATERIAL WITH ULTRAVIOLET STABILIZERS ADDED. POLYETHYLENE DUCT SHALL BE FABRICATED FROM RESINS MEETING OR EXCEEDING THE REQUIREMENTS OF ASTM D 3350 WITH A CELL CLASSIFICATION OF 345464A. POLYPROPYLENE DUCT SHALL BE FABRICATED FROM RESINS MEETING OR EXCEEDING THE REQUIREMENTS OF ASTM D 4101 WITH A CELL CLASSIFICATION RANGE OF PP0340B44544 TO PP340B65884. ALL COSTS ASSOCIATED WITH PLACING THE DUCTS WILL BE INCLUDED IN THE BID PRICE FOR THE APPROPRIATE PRECAST APPROACH SLAB OPTION.
79. GROUT USED TO FILL DOWEL DUCTS IN THE PRECAST APPROACH SLABS FOR DOWEL CONNECTION SHALL BE MORTAR TYPE IV IN ACCORDANCE WITH SECTION 540 - PRECAST CONCRETE. ALL COSTS ASSOCIATED WITH PROVIDING AND PLACING GROUT FOR THE APPROACH SLAB DOWEL CONNECTION WILL BE INCLUDED IN THE BID FOR THE APPROPRIATE PRECAST APPROACH SLAB OPTION.

## MISCELLANEOUS

80. ITEM 520.10, "SHEET MEMBRANE WATERPROOFING, SPRAY APPLIED" SHALL BE APPLIED TO THE BRIDGE DECK AS PER THE MANUFACTURER'S INSTRUCTIONS AND EXTEND ONTO THE APPROACH SLAB 2'-0" BEYOND THE BEGIN BRIDGE/END OF BRIDGE.

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(I3)

FILE NAME: z13b076pn.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
PROJECT NOTES (2 OF 2)

PLOT DATE: 10/2/2015  
DRAWN BY: K.C. BARRY  
CHECKED BY: J.J. WESTCOTT  
SHEET 8 OF 68

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEM	BRIDGE (ALTERNATE A)	BRIDGE (ALTERNATE B)	BRIDGE (ALTERNATE C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS			
1							1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10							
1435							1435		CY	COMMON EXCAVATION	203.15		1435	CY	COMMON EXCAVATION (1435 * 1.0)			
		645					645		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27		484	CY	UNCLASSIFIED CHANNEL EXCAVATION (645*0.75)			
400							400		CY	SAND BORROW	203.31		49	CY	TRENCH EXCAVATION (65* 0.75)			
65							65		CY	TRENCH EXCAVATION OF EARTH	204.20		169	CY	STRUCTURE EXCAVATION (225 * 0.75)			
1							1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22		2136	CY	SUBTOTAL			
		225					225		CY	STRUCTURE EXCAVATION	204.25		4	CY	ROUNDING			
60		90					150		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30		2140	CY	TOTAL			
360							360		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10		2140	CY	FILL AVAILABLE			
1200							1200		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35		40	CY	FILL REQUIRED			
3							3		CY	AGGREGATE SURFACE COURSE	401.10		2,100	CY	TOTAL WASTE			
50							50		CY	AGGREGATE SHOULDERS, IN PLACE	402.10							
16							16		CWT	EMULSIFIED ASPHALT	404.65							
1							1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50							
		225					225		LF	STEEL PILING, HP 12 X 63	505.155							
		13					13		GAL	WATER REPELLENT, SILANE	514.10							
		70					70		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10							
		245					245		SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	520.10							
		70					70		LF	JOINT SEALER, HOT POURED	524.11							
		30					30		LF	JOINT SEALER, POLYURETHANE	524.21							
		134					134		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335							
		230					230		SY	REMOVAL OF BRIDGE PAVEMENT	529.10							
		1					1		EACH	REMOVAL OF STRUCTURE (2020 SF - EST)	529.15							
		16					16		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17							
										BEGIN OPTION AA								
		1					1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)	540.10							
		1					1		LS	SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)(ABUTMENT NO. 1)	900.645							
										END OPTION AA								
										BEGIN OPTION BB								
		1					1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 2)	540.10							
		1					1		LS	SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)(ABUTMENT NO. 2)	900.645							
										END OPTION BB								
										BEGIN OPTION CC								
		1					1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 1)	540.10							
		1					1		LS	SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)(APPROACH SLAB NO. 1)	900.645							
										END OPTION CC								

PROJECT NAME: **WESTON**  
PROJECT NUMBER: **BF 013-2(13)**  
FILE NAME: z13b076qs.dgn PLOT DATE: 10/19/2015  
PROJECT LEADER: S.E. BURBANK DRAWN BY: M.C. SCOTT  
DESIGNED BY: M.C. SCOTT CHECKED BY: J.J. WESTCOTT  
QUANTITY SHEET #1 SHEET 9 OF 82



# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES				
				ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEM	BRIDGE (ALTERNATE A)	BRIDGE (ALTERNATE B)	BRIDGE (ALTERNATE C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS	
														BEGIN OPTION DD						
						1					1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 2)	540.10					
						1					1		LS	SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)(APPROACH SLAB NO. 2)	900.645					
														END OPTION DD						
														BEGIN OPTION EE						
				58							58		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215					
				58							58		LF	18" PCCSP .079 (2-2/3 X 1/2)	601.0416					
				58							58		LF	18" RCP CLASS III	601.0815					
				58							58		LF	18" CPEP	601.0915					
				58							58		LF	18" CPPP (SL)	601.2815					
														END OPTION EE						
					1						1		MGAL	DUST CONTROL WITH WATER	609.10					
					570						570		CY	STONE FILL, TYPE IV	613.13					
				1							1		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10					
				209							209		LF	BOX BEAM GUARDRAIL	621.30					
				4							4		EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51					
				4							4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	621.725					
				302							302		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80					
				240							240		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					
				1							1		LS	TRAFFIC CONTROL	641.10					
				5							5		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15					
				890							890		LF	4 INCH WHITE LINE	646.20					
				900							900		LF	4 INCH YELLOW LINE	646.21					
					350						350		SY	GEOTEXTILE UNDER STONE FILL	649.31					
					480						480		SY	GEOTEXTILE FOR SILT FENCE	649.51					
					130						130		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61					
					25						25		LB	SEED	651.15					
					175						175		LB	FERTILIZER	651.18					
					1						1		TON	AGRICULTURAL LIMESTONE	651.20					
					1						1		TON	HAY MULCH	651.25					
					140						140		CY	TOPSOIL	651.35					
					250						250		SY	GRUBBING MATERIAL	651.40					
					1						1		LS	EPSC PLAN	652.10					
					20						20		HR	MONITORING EPSC PLAN	652.20					
					1						1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30					

PROJECT NAME:	<b>WESTON</b>
PROJECT NUMBER:	<b>BF 013-2(13)</b>
FILE NAME: z13b076qs.dgn	PLOT DATE: 10/19/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: M.C. SCOTT
DESIGNED BY: M.C. SCOTT	CHECKED BY: J.J. WESTCOTT
QUANTITY SHEET #2	SHEET 10 OF 82



# QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
				ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEM	BRIDGE (ALTERNATE A)	BRIDGE (ALTERNATE B)	BRIDGE (ALTERNATE C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					610						610		SY	TEMPORARY EROSION MATTING	653.20				
					30						30		CY	VEHICLE TRACKING PAD	653.35				
					250						250		LF	BARRIER FENCE	653.50				
					1125						1125		LF	PROJECT DEMARCATION FENCE	653.55				
				10							10		SF	TRAFFIC SIGNS, TYPE A	675.20				
				75							75		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
				4							4		EACH	REMOVING SIGNS	675.50				
				1							1		EACH	ERECTING SALVAGED SIGNS	675.60				
				1							1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
				90							90		CY	SPECIAL PROVISION (AGGREGATE SURFACE COURSE, COLORED STONE)	900.608				
						3					3		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620				
					4						4		EACH	SPECIAL PROVISION (DECIDUOUS SHRUBS AND TREES)	900.620				
						197					197		LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, EARTH)	900.640				
						30					30		LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, ROCK)	900.640				
				1							1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE)(N.A.B.I.)	900.650				
				1							1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT)(N.A.B.I.)	900.650				
				1							1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650				
				20							20		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675				
				500							500		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				
														BEGIN ALTERNATE ZA1					
								35			35		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608				
								254			254		LF	SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS)(NEXT 28D) (FPQ)	900.640				
														END ALTERNATE ZA1					
														BEGIN ALTERNATE ZA2					
									45		45		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608				
									254		254		LF	SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)	900.640				
									1		1		LS	SPECIAL PROVISION (GALVANIZING STRUCTURAL STEEL)	900.645				
														END ALTERNATE ZA2					
														BEGIN ALTERNATE ZA3					
										45	45		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608				
										254	254		LF	SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)	900.640				
										1	1		LS	SPECIAL PROVISION (METALIZING STRUCTURAL STEEL)	900.645				
														END ALTERNATE ZA3					





GPS CONTROL POINTS

\_\_ HVCTRL #1 \_\_

WEST AZ MK

NORTH = 300963.067  
 EAST = 1565731.875  
 ELEV. = 1441.280

GENERAL LOCATION, WESTON, VT.  
 TO REACH FROM THE INTERSECTION OF VT ROUTES 100 AND 155, GO SOUTH ALONG VT ROUTE 100 FOR 0.9 MI (1.4 KM) TO A FIELD DRIVE ON THE LEFT LEADING TO A HOUSE LOCATED PAST A WOODEN BRIDGE AND THE SITE OF THE MARK ON THE LEFT.  
 THE MARK IS SET 3 CM (1 INCH) BELOW GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT. IT IS 24.5 M (80.4 FT) SOUTHEAST OF AND ABOUT 2.0 M (6.6 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 100, 6.0 M (19.7 FT) WEST-SOUTHWEST OF THE CENTERLINE OF THE FIELD DRIVE, 18.6 M (61.0 FT) EAST OF POLE NO 6/162/338, 16.5 M (54.1 FT) EAST-NORTHEAST OF A GUY ANCHOR AND 29.0 M (95.1 FT) NORTHWEST OF THE CENTER OF THE WOODEN BRIDGE ALONG THE FIELD DRIVE.

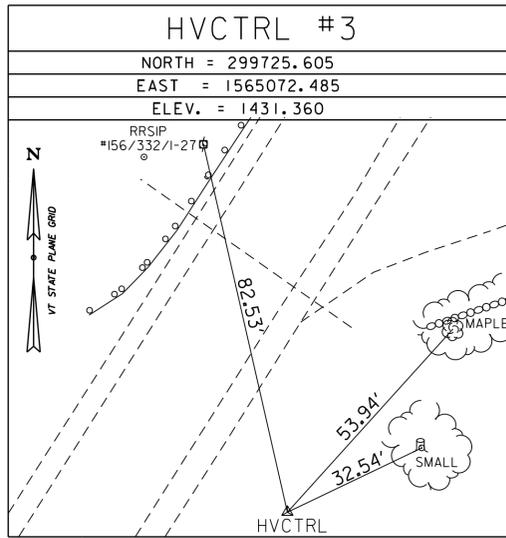
\_\_ HVCTRL #2 \_\_

WEST

NORTH = 299849.204  
 EAST = 1565089.519  
 ELEV. = 1432.239

GENERAL LOCATION, WESTON, VT.  
 TO REACH FROM THE INTERSECTION OF VT ROUTES 100 AND 155 IN WESTON, GO SOUTH ALONG VT ROUTE 100 FOR 1.1 MI (1.8 KM) TO THE SITE OF THE MARK ON THE RIGHT SET IN THE WEST END OF THE NORTHWEST CORNER OF BRIDGE NO 98 OVER THE WEST RIVER.  
 IT IS 4.8 M (15.7 FT) NORTH OF THE CENTERLINE OF VT ROUTE 100, 15 CM (6 INCHES) SOUTH OF THE NORTH EDGE OF THE BRIDGE, 25 CM (10 INCHES) NORTH OF THE SOUTH FACE OF THE GRANITE CURB.

TRAVERSE TIES



HVCTRL #3

NORTH = 299725.605  
 EAST = 1565072.485  
 ELEV. = 1431.360

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

ALIGNMENT TIES

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

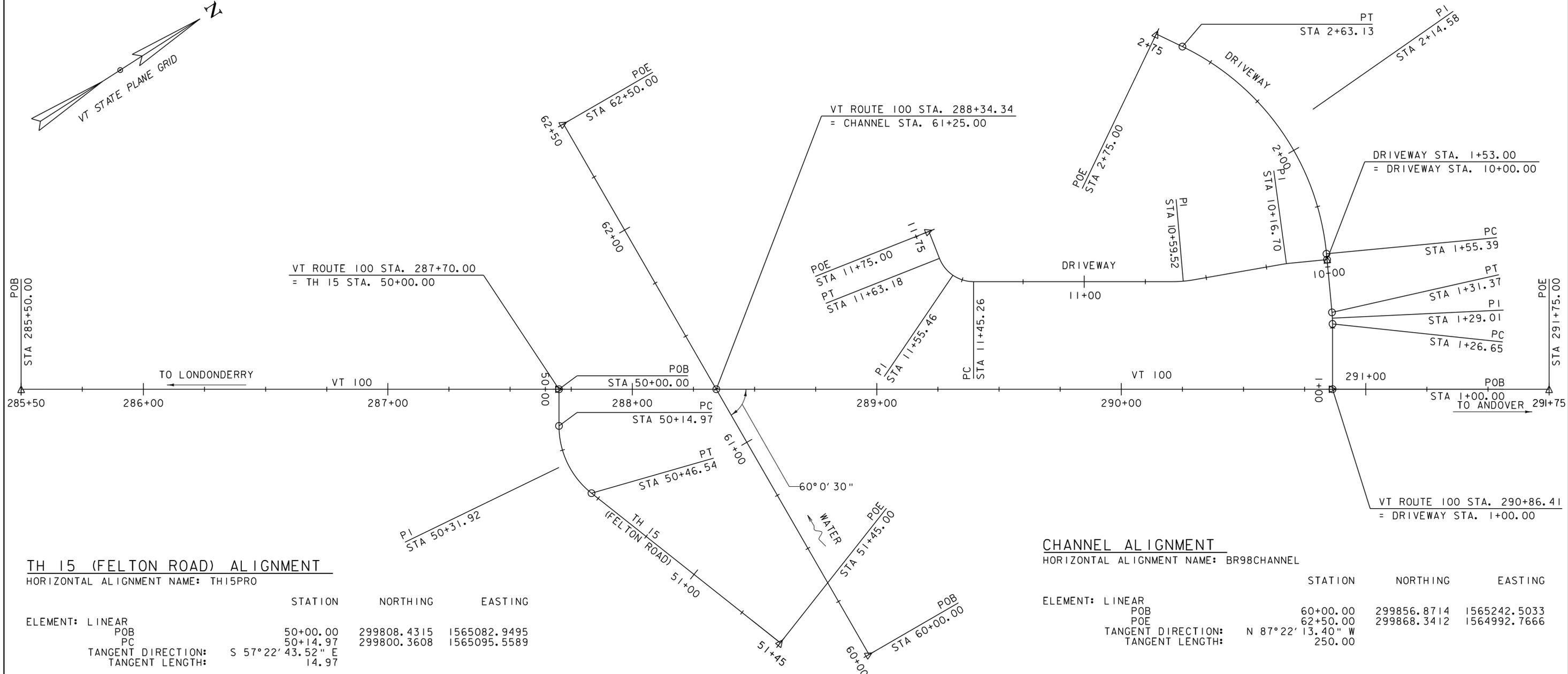
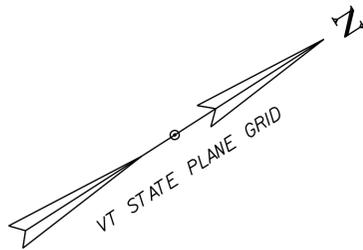
NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83(2011)
ADJUSTMENT	COMPASS



PROJECT NAME:	WESTON	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	DRAWN BY:	J.J. WESTCOTT
FILE NAME:	z13b0761.dgn	CHECKED BY:	S.E. BURBANK
PROJECT LEADER:	S.E. BURBANK	SHEET	13 OF 68
DESIGNED BY:	J.J. WESTCOTT		
TIE SHEET			



**TH 15 (FELTON ROAD) ALIGNMENT**

HORIZONTAL ALIGNMENT NAME: TH15PRO

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	50+00.00	299808.4315	1565082.9495
PC	50+14.97	299800.3608	1565095.5589
TANGENT DIRECTION:	S 57°22' 43.52" E		
TANGENT LENGTH:	14.97		
ELEMENT: CIRCULAR			
PC	50+14.97	299800.3608	1565095.5589
PI	50+31.92	299791.2241	1565109.8340
PT	50+46.54	299796.7576	1565125.8539
RADIUS:	35.00		
DELTA:	51° 40' 36.95" LEFT		
DEGREE OF CURVATURE (ARC):	163° 42' 08.02"		
LENGTH:	31.57		
TANGENT:	16.95		
CHORD:	30.51		
MIDDLE ORDINATE:	3.50		
EXTERNAL:	3.89		
ELEMENT: LINEAR			
PT	50+46.54	299796.7576	1565125.8539
POE	51+45.00	299828.9044	1565218.9209
TANGENT DIRECTION:	N 70°56' 39.52" E		
TANGENT LENGTH:	98.46		

**CHANNEL ALIGNMENT**

HORIZONTAL ALIGNMENT NAME: BR98CHANNEL

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	60+00.00	299856.8714	1565242.5033
POE	62+50.00	299868.3412	1564992.7666
TANGENT DIRECTION:	N 87°22' 13.40" W		
TANGENT LENGTH:	250.00		

**VT ROUTE 100 ALIGNMENT**

HORIZONTAL ALIGNMENT NAME: VT100PROP

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	285+50.00	299623.1359	1564964.3512
POE	291+75.00	300149.5437	1565301.2782
TANGENT DIRECTION:	N 32°37' 16.48" E		
TANGENT LENGTH:	625.00		

NOTE: SEE NEXT SHEET FOR DRIVEWAY ALIGNMENT INFORMATION.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83(2011)
ADJUSTMENT	COMPASS

PROJECT NAME:	WESTON
PROJECT NUMBER:	BF 013-2(13)
FILE NAME:	z13b076align.dgn
PROJECT LEADER:	S.E. BURBANK
DESIGNED BY:	J.J. WESTCOTT
ROADWAY ALIGNMENT LAYOUT SHEET (1 OF 2)	SHEET 14 OF 68
PLOT DATE:	10/2/2015
DRAWN BY:	J.J. WESTCOTT
CHECKED BY:	S.E. BURBANK



DRIVEWAY STA. 1+00 - 2+75

HORIZONTAL ALIGNMENT NAME: MAINDRIVE

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	1+00.00	300074.9296	1565253.5215
PC	1+26.65	300089.2969	1565231.0744
TANGENT DIRECTION:	N 57°22' 43.52" W		
TANGENT LENGTH:	26.65		
ELEMENT: CIRCULAR			
PC	1+26.65	300089.2969	1565231.0744
PI	1+29.01	300090.5688	1565229.0872
PT	1+31.37	300091.6479	1565226.9891
RADIUS:	50.00		
DELTA:	5°24' 11.58" LEFT		
DEGREE OF CURVATURE (ARC):	114°35' 29.61" LEFT		
LENGTH:	4.72		
TANGENT:	2.36		
CHORD:	4.71		
MIDDLE ORDINATE:	0.06		
EXTERNAL:	0.06		
ELEMENT: LINEAR			
PT ( 12)	1+31.37	300091.6479	1565226.9891
PC ( 17)	1+55.39	300102.6364	1565205.6243
TANGENT DIRECTION:	N 62°46' 55.10" W		
TANGENT LENGTH:	24.03		
ELEMENT: CIRCULAR			
PC	1+55.39	300102.6364	1565205.6243
PI	2+14.58	300129.7060	1565152.9933
CC		300009.4979	1565157.7205
PT	2+63.13	300098.5869	1565102.6506
RADIUS:	104.74		
DELTA:	58°56' 24.38" LEFT		
DEGREE OF CURVATURE (ARC):	54°42' 18.58" LEFT		
LENGTH:	107.74		
TANGENT:	59.18		
CHORD:	103.05		
MIDDLE ORDINATE:	13.55		
EXTERNAL:	15.57		
ELEMENT: LINEAR			
PT	2+63.13	300098.5869	1565102.6506
POE	2+75.00	300092.3471	1565092.5561
TANGENT DIRECTION:	S 58°16' 40.53" W		
TANGENT LENGTH:	11.87		

DRIVEWAY 10+00 - 11+75

HORIZONTAL ALIGNMENT NAME: SIDEDRIVE

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	10+00.00	300101.5426	1565207.7510
PC	10+14.81	300088.3541	1565201.0190
TANGENT DIRECTION:	S 27°02' 30.13" W		
TANGENT LENGTH:	14.81		
ELEMENT: CIRCULAR			
PC	10+14.81	300088.3541	1565201.0190
PI	10+16.70	300086.6726	1565200.1607
PT	10+18.58	300084.9312	1565199.4316
RADIUS:	50.00		
DELTA:	4°19' 28.87" LEFT		
DEGREE OF CURVATURE (ARC):	114°35' 29.61" LEFT		
LENGTH:	3.77		
TANGENT:	1.89		
CHORD:	3.77		
MIDDLE ORDINATE:	0.04		
EXTERNAL:	0.04		
ELEMENT: LINEAR			
PT	10+18.58	300084.9312	1565199.4316
PC	10+55.19	300051.1627	1565185.2942
TANGENT DIRECTION:	S 22°43' 01.26" W		
TANGENT LENGTH:	36.61		
ELEMENT: CIRCULAR			
PC	10+55.19	300051.1627	1565185.2942
PI	10+59.52	300047.1665	1565183.6211
PT	10+63.83	300043.5176	1565181.2856
RADIUS:	50.00		
DELTA:	9°54' 15.22" RIGHT		
DEGREE OF CURVATURE (ARC):	114°35' 29.61" RIGHT		
LENGTH:	8.64		
TANGENT:	4.33		
CHORD:	8.63		
MIDDLE ORDINATE:	0.19		
EXTERNAL:	0.19		
ELEMENT: LINEAR			
PT	10+63.83	300043.5176	1565181.2856
PC	11+45.26	299974.9328	1565137.3880
TANGENT DIRECTION:	S 32°37' 16.48" W		
TANGENT LENGTH:	81.43		
ELEMENT: CIRCULAR			
PC	11+45.26	299974.9328	1565137.3880
PI	11+55.46	299966.3402	1565131.8883
PT	11+63.18	299968.2977	1565121.8761
RADIUS:	15.00		
DELTA:	68°26' 27.76" RIGHT		
DEGREE OF CURVATURE (ARC):	381°58' 18.71" RIGHT		
LENGTH:	17.92		
TANGENT:	10.20		
CHORD:	16.87		
MIDDLE ORDINATE:	2.60		
EXTERNAL:	3.14		
ELEMENT: LINEAR			
PT	11+63.18	299968.2977	1565121.8761
POE	11+75.00	299970.5655	1565110.2764
TANGENT DIRECTION:	N 78°56' 15.76" W		
TANGENT LENGTH:	11.82		

NOTE: SEE PREVIOUS SHEET FOR ADDITIONAL ALIGNMENT INFORMATION.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83(2011)
ADJUSTMENT	COMPASS

PROJECT NAME:	WESTON
PROJECT NUMBER:	BF 013-2(13)
FILE NAME:	z13b076align.dgn
PLOT DATE:	10/2/2015
PROJECT LEADER:	S.E. BURBANK
DRAWN BY:	J.J. WESTCOTT
DESIGNED BY:	J.J. WESTCOTT
CHECKED BY:	S.E. BURBANK
ROADWAY ALIGNMENT LAYOUT SHEET (2 OF 2) SHEET	15 OF 68



BRIDGE RAILING, GALVANIZED  
3 RAIL BOX BEAM  
STA. 287+95 - 288+62, LT  
STA. 288+08 - 288+75, RT

BOX BEAM GUARDRAIL  
STA. 287+06 - 287+63, LT  
STA. 50+42, 14.2' LT - 50+81, LT  
STA. 288+94 - 289+51, LT  
STA. 289+07 - 289+64, RT

MANUFACTURED TERMINAL SECTION,  
TANGENT

STA. 286+92 - 287+06, LT  
STA. 50+81 - 50+95, RT  
STA. 289+51 - 289+65, LT  
STA. 289+64 - 289+78, RT

REMOVAL AND DISPOSAL OF GUARDRAIL  
STA. 287+07 - 287+95, LT  
STA. 288+00 - 288+14, RT  
STA. 288+51 - 289+00, LT  
STA. 288+70 - 289+94, RT

GUARDRAIL APPROACH SECTION,  
3 RAIL BOX BEAM  
STA. 287+63 - 287+95, LT  
STA. 50+42, 14.2' LT = 287+90, 29.6' RT - 288+08, RT  
STA. 288+62 - 288+94, LT  
STA. 288+75 - 289+07, RT

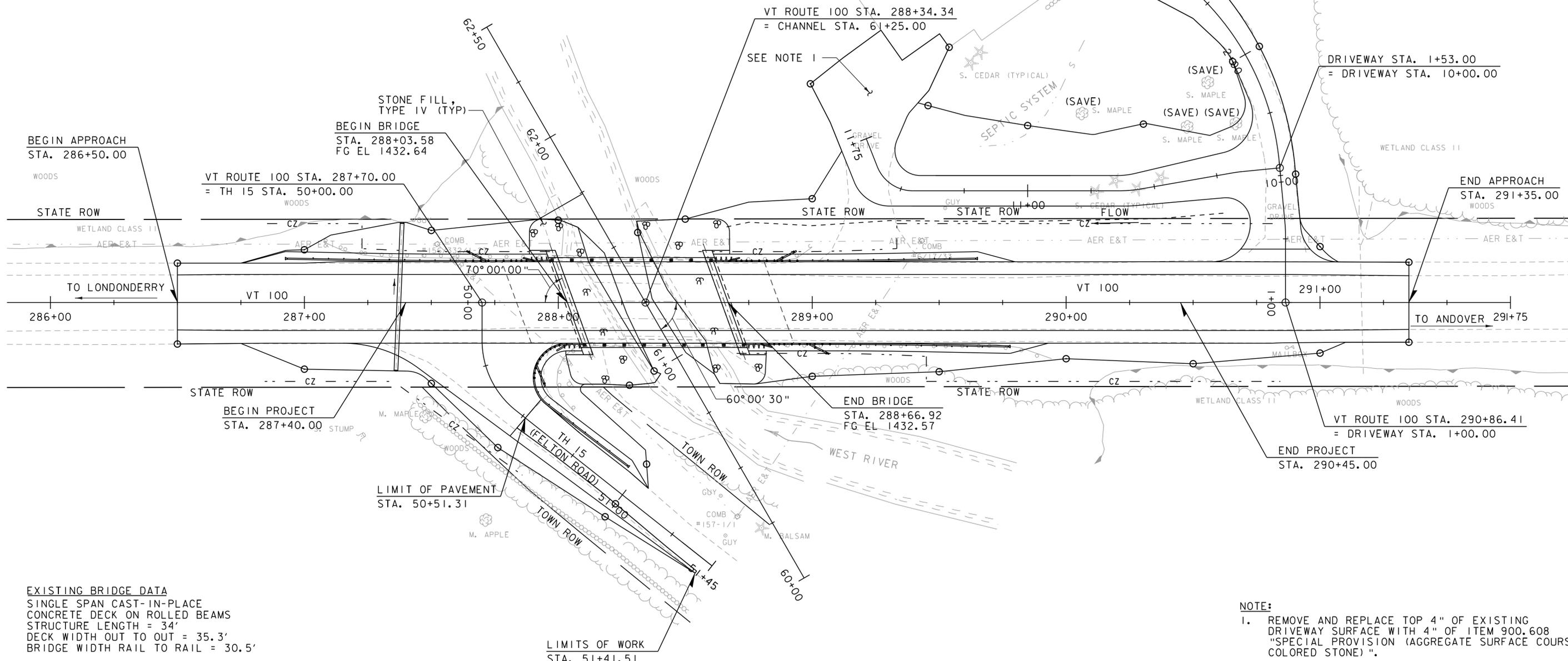
CONSTRUCT GRAVEL DRIVE WITH  
5' PAVED APRON

STA. 290+82, LT - 50' WIDE

CONSTRUCT GRAVEL TH 15 WITH  
35' PAVED APRON

STA. 287+70, RT - 88' WIDE

RELOCATE MAILBOX SINGLE SUPPORT  
STA. 290+86, RT



EXISTING BRIDGE DATA  
SINGLE SPAN CAST-IN-PLACE  
CONCRETE DECK ON ROLLED BEAMS  
STRUCTURE LENGTH = 34'  
DECK WIDTH OUT TO OUT = 35.3'  
BRIDGE WIDTH RAIL TO RAIL = 30.5'

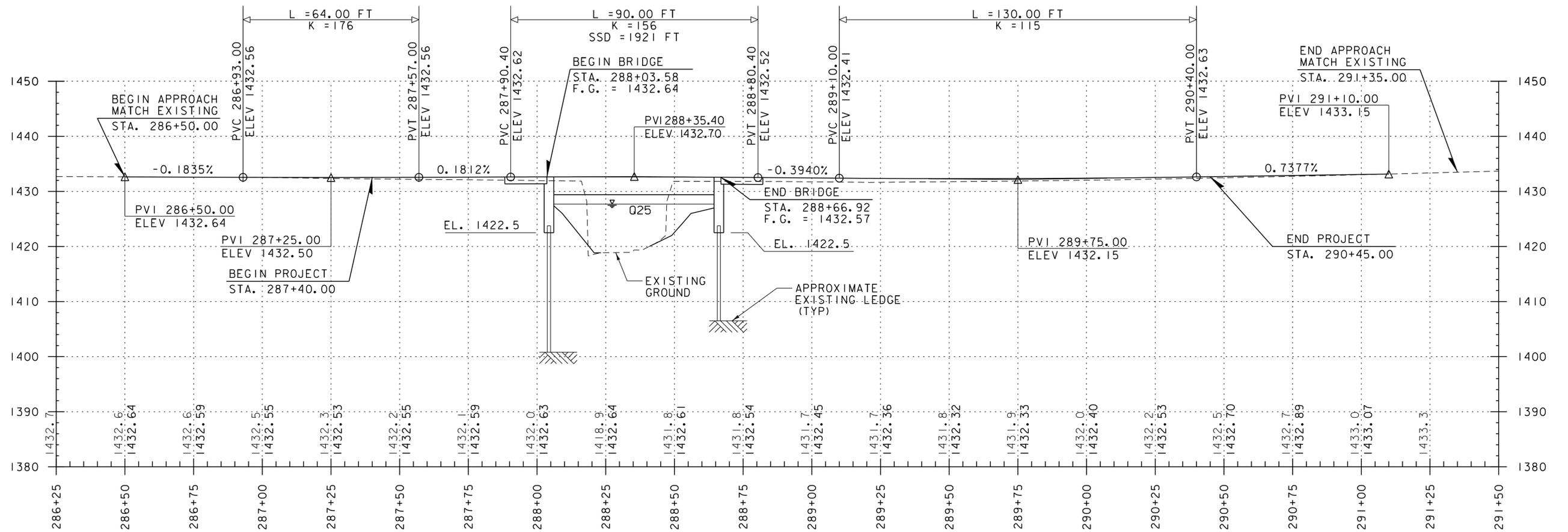
- NOTE:
1. REMOVE AND REPLACE TOP 4" OF EXISTING DRIVEWAY SURFACE WITH 4" OF ITEM 900.608 "SPECIAL PROVISION (AGGREGATE SURFACE COURSE, COLORED STONE)".
  2. CONTRACTOR TO COORDINATE ALL CONSTRUCTION ACTIVITIES OUTSIDE OF THE STATE'S AND TOWN'S RIGHT-OF-WAY WITH THE PROPERTY OWNER. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076bdr\_nul.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
LAYOUT SHEET

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 16 OF 68





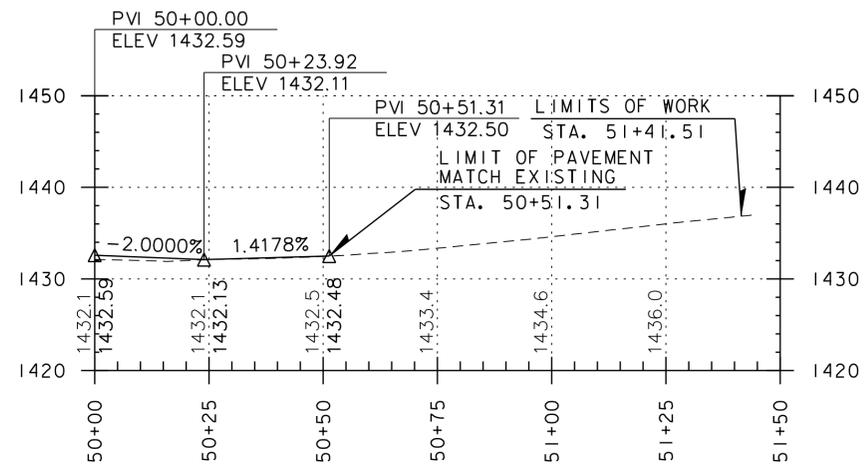
VT 100 PROFILE  
 SCALE 1" = 20' HORIZONTAL  
 1" = 10' VERTICAL

THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

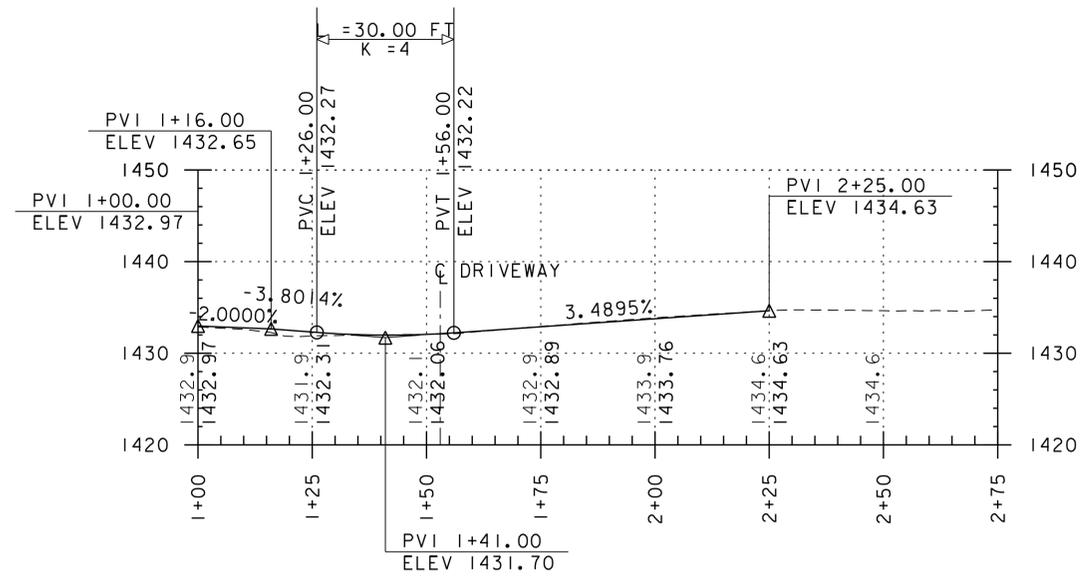
THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.



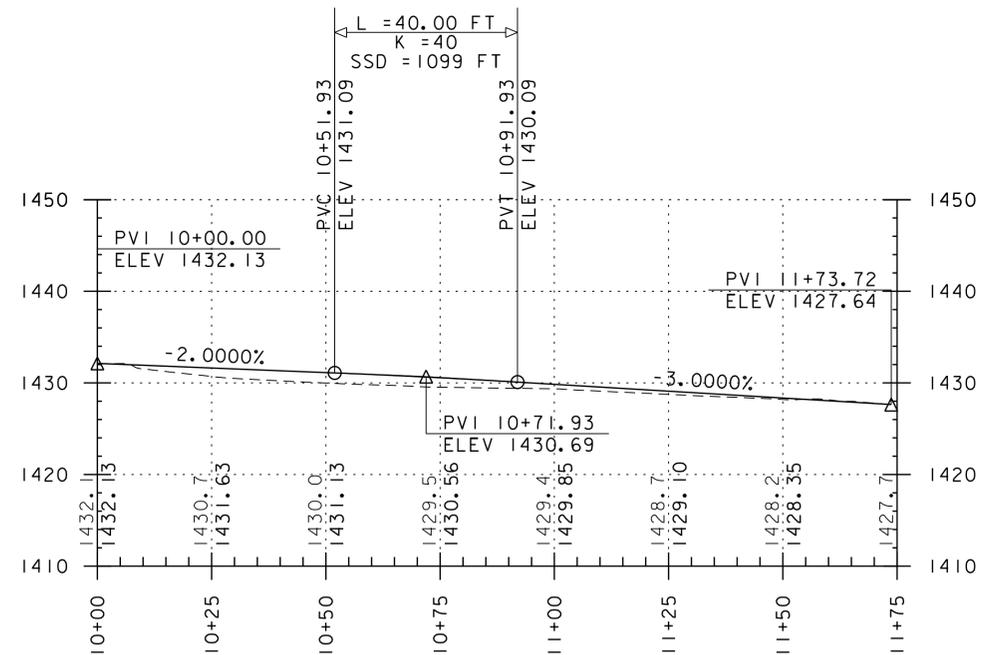
PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: J.J. WESTCOTT
FILE NAME: z13b076pro.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 17 OF 68
DESIGNED BY: J.J. WESTCOTT	ROADWAY PROFILE



TH 15 (FELTON ROAD) STA. 50+00 TO 51+45  
 SCALE 1" = 20' HORIZONTAL  
 1" = 10' VERTICAL



DRIVEWAY STA. 1+00 TO 2+75  
 SCALE 1" = 20' HORIZONTAL  
 1" = 10' VERTICAL



DRIVEWAY STA. 10+00 TO 11+75  
 SCALE 1" = 20' HORIZONTAL  
 1" = 10' VERTICAL

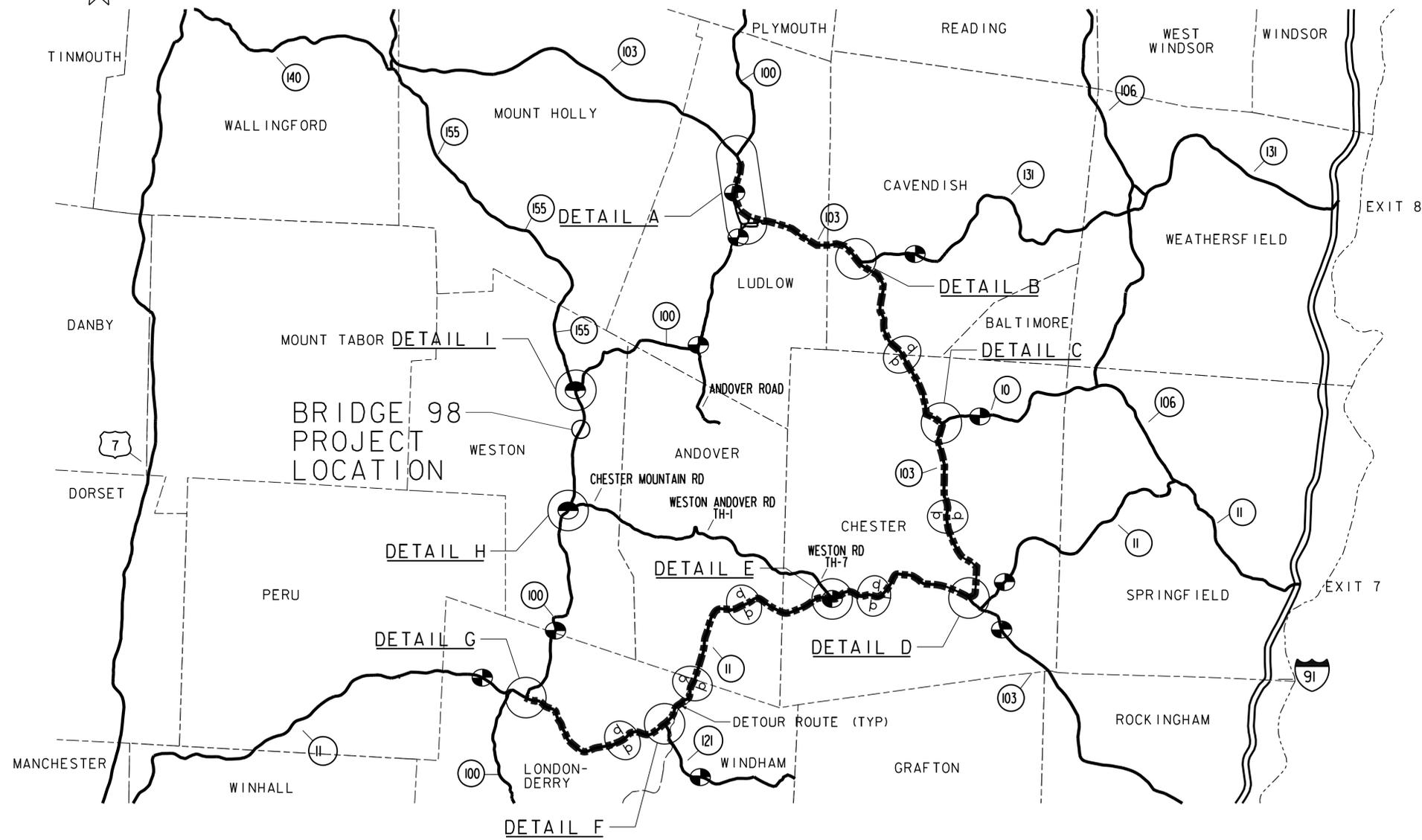
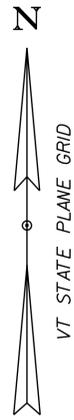
THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.



PROJECT NAME: WESTON  
 PROJECT NUMBER: BF 013-2(13)  
 FILE NAME: z13b076pro.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: J.J. WESTCOTT  
 DRIVEWAY PROFILES

PLOT DATE: 10/2/2015  
 DRAWN BY: J.J. WESTCOTT  
 CHECKED BY: S.E. BURBANK  
 SHEET 18 OF 68

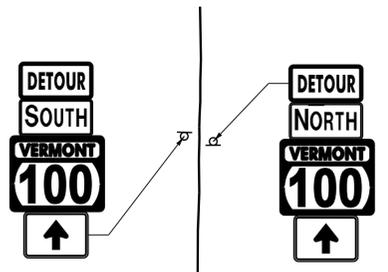


**TRAFFIC CONTROL NOTES:**

1. SEE TRAFFIC CONTROL PLAN 2-6 FOR ADDITIONAL NOTES.
2. INSTALL CONFIRMATORY ROUTE MARKERS ALONG THE DETOUR ROUTE AT LOCATIONS AS INDICATED ON THIS PLAN.
3. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT THE INTERSECTIONS OR ALONG THE DETOUR ROUTE, THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO THE EXISTING ROUTE MARKER ASSEMBLIES AND THE ROUTE MARKER SHALL BE COVERED IF ASSEMBLY CONFLICTS WITH DETOUR ROUTE MARKER ASSEMBLY.
4. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
5. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED OFF THE EDGE OF THE ROADWAY, OUTSIDE THE CLEAR ZONE, BUT SHALL BE VISIBLE FROM THE ROADWAY. ANY VEGETATION THAT INTERFERES WITH VISIBILITY OF THE PCMS SHALL BE REMOVED. REMOVAL OF THE VEGETATION SHALL BE INCIDENTAL TO ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN". WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
6. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.
7. SEE TRAFFIC CONTROL PLANS 2-4 FOR A-1 DETAILS.

**LEGEND**

- CONFIRMATORY ROUTE MARKER ASSEMBLY (SEE NOTE 2 AND 3 ABOVE).
- ROAD CLOSED / XX MILES AHEAD/ NO THRU TRAFFIC (SP-1 & SP-2 SIGNS SEE SHEETS 19-24 FOR SIGN DIMENSIONS AND LOCATION).
- CLOSURE STATIC SIGN (SP-3) NOTIFICATION SEE SHEETS 19-24 FOR SIGN DETAIL AND LOCATIONS.

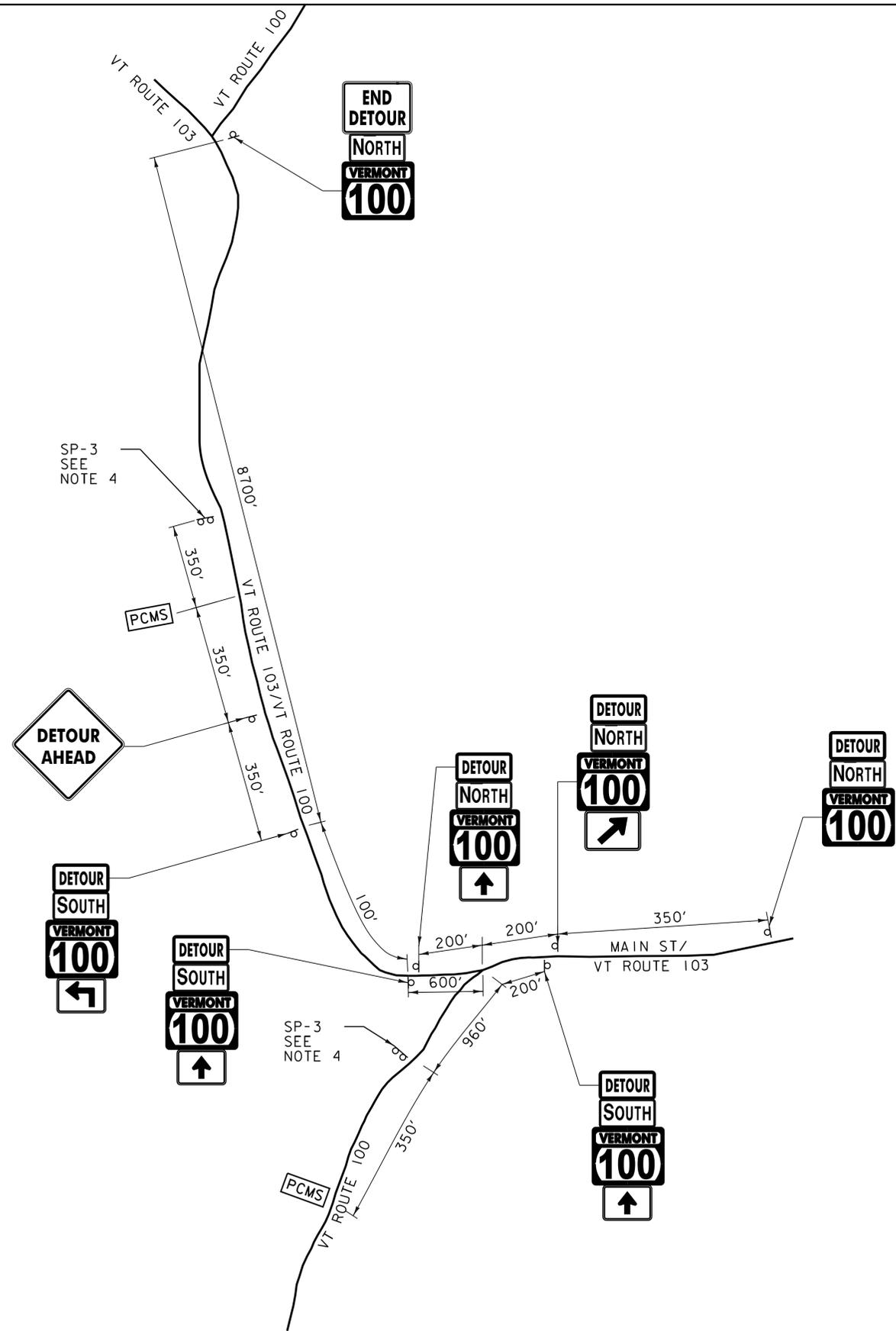
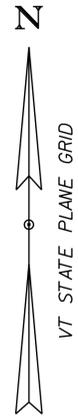


CONFIRMATORY ROUTE MARKER ASSEMBLY  
NOT TO SCALE

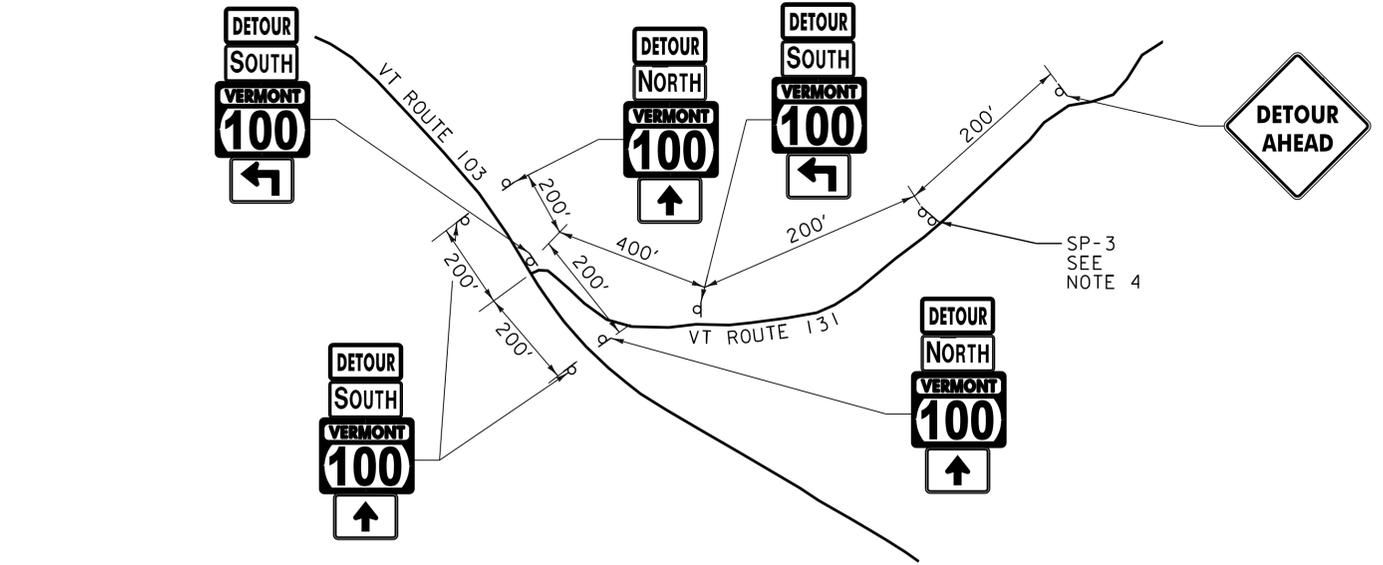
**REGIONAL TRAFFIC DETOUR**

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076detour.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL PLAN (1 OF 6)	SHEET 19 OF 68

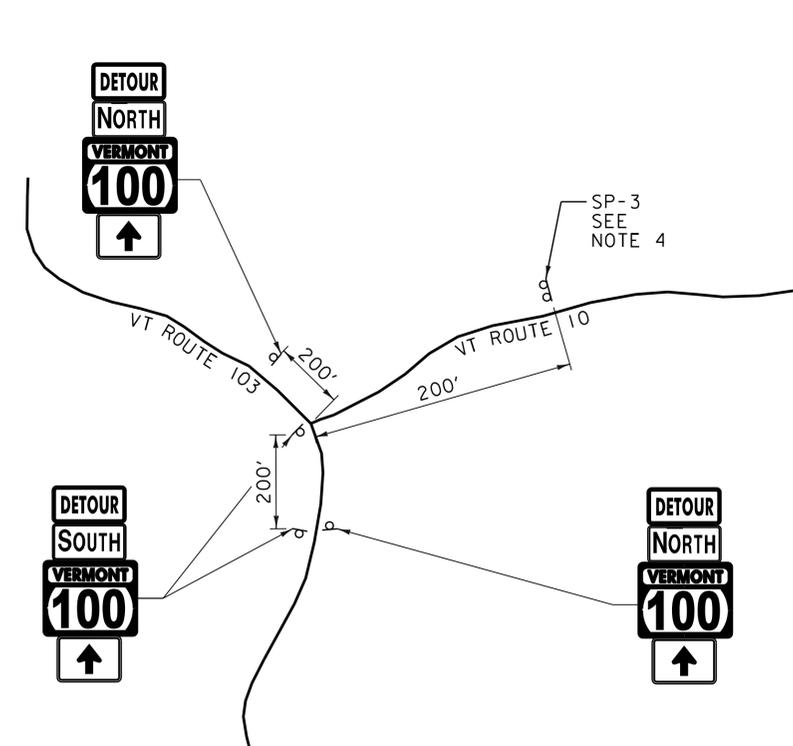




DETAIL A  
NOT TO SCALE



DETAIL B  
NOT TO SCALE



DETAIL C  
NOT TO SCALE

LEGEND

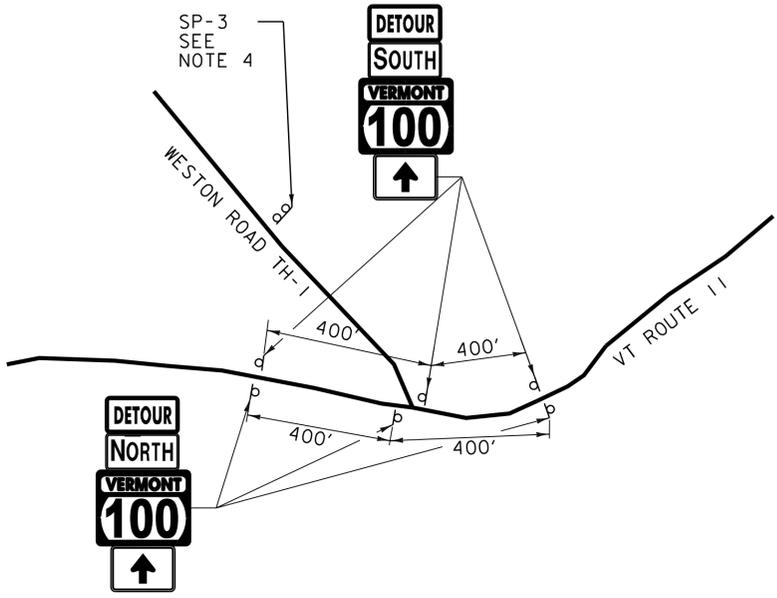
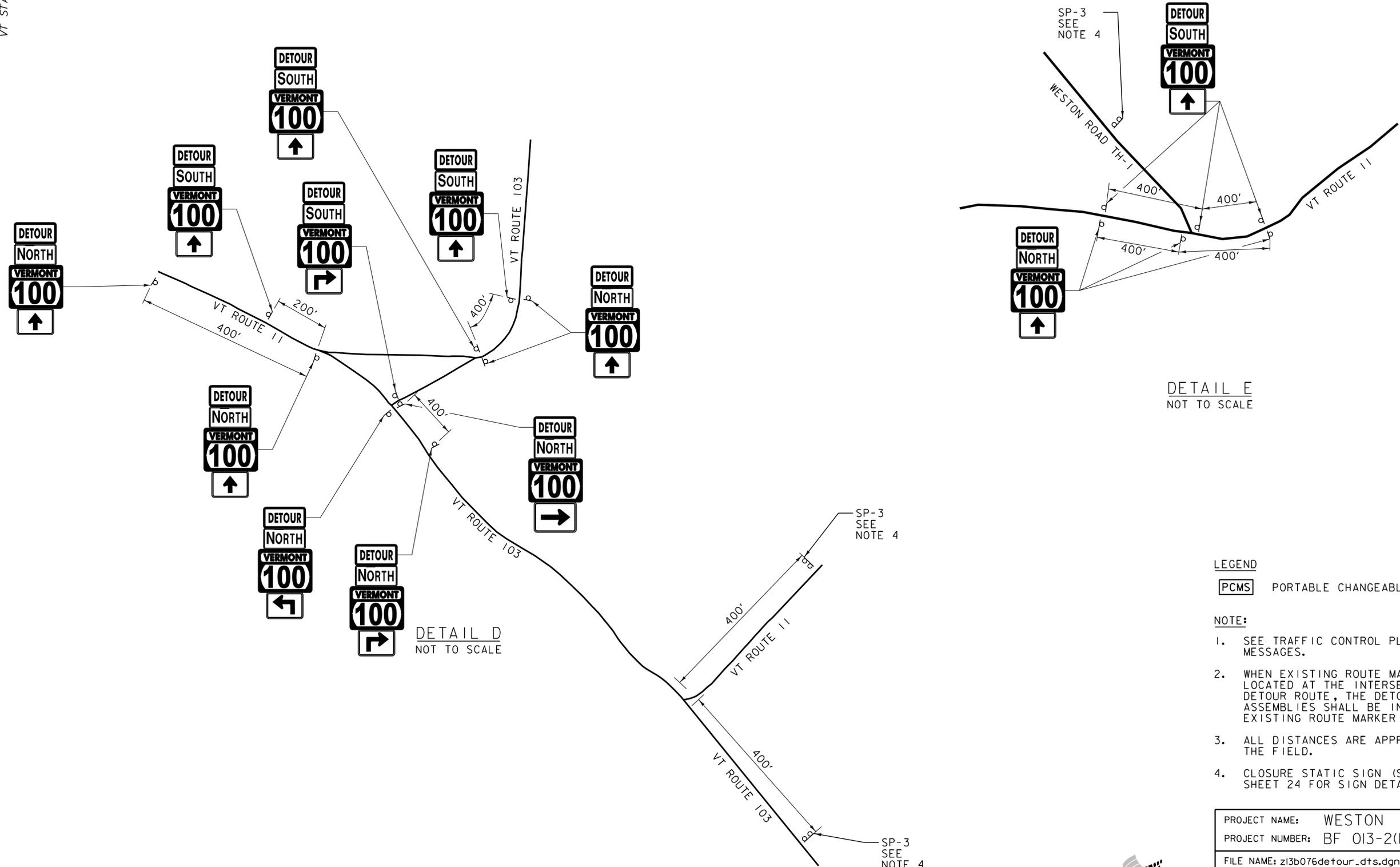
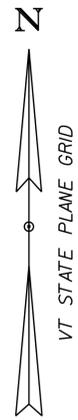
PCMS PORTABLE CHANGEABLE MESSAGE SIGN

NOTE:

1. SEE TRAFFIC CONTROL PLAN (6 OF 6) FOR PCMS MESSAGES.
2. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT THE INTERSECTIONS OR ALONG THE DETOUR ROUTE, THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO THE EXISTING ROUTE MARKER ASSEMBLIES.
3. ALL DISTANCES ARE APPROXIMATE AND MAY VARY IN THE FIELD.
4. CLOSURE STATIC SIGN (SP-3) NOTIFICATION SEE SHEET 24 FOR SIGN DETAIL.

PROJECT NAME:	WESTON
PROJECT NUMBER:	BF 013-2(I3)
FILE NAME:	z13b076detour.dts.dgn
PROJECT LEADER:	S.E. BURBANK
DESIGNED BY:	J.J. WESTCOTT
TRAFFIC CONTROL PLAN (2 OF 6)	
PLOT DATE:	10/2/2015
DRAWN BY:	J.J. WESTCOTT
CHECKED BY:	S.E. BURBANK
SHEET	20 OF 68





DETAIL E  
NOT TO SCALE

DETAIL D  
NOT TO SCALE

LEGEND

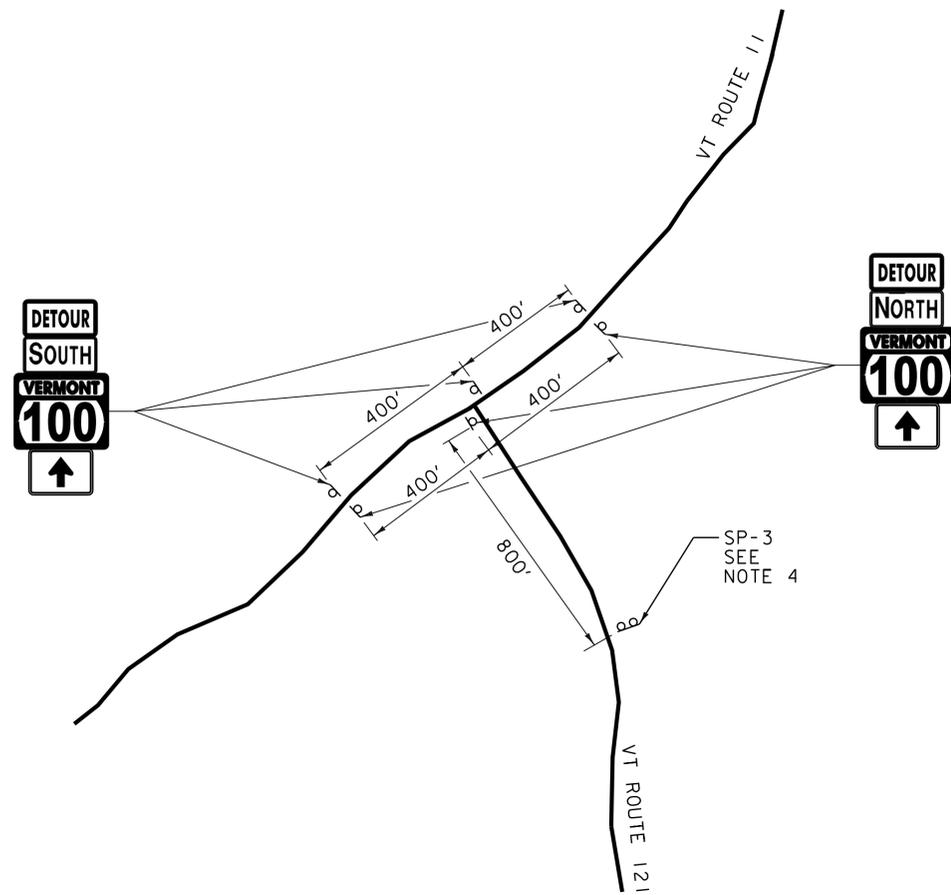
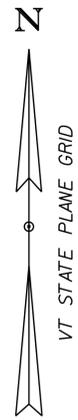
PORTABLE CHANGEABLE MESSAGE SIGN

NOTE:

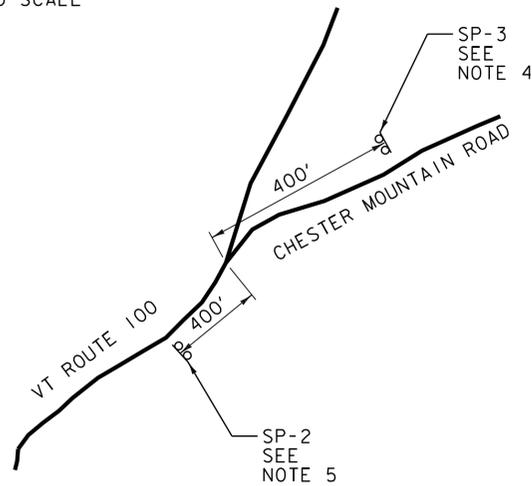
1. SEE TRAFFIC CONTROL PLAN (6 OF 6) FOR PCMS MESSAGES.
2. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT THE INTERSECTIONS OR ALONG THE DETOUR ROUTE, THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO THE EXISTING ROUTE MARKER ASSEMBLIES.
3. ALL DISTANCES ARE APPROXIMATE AND MAY VARY IN THE FIELD.
4. CLOSURE STATIC SIGN (SP-3) NOTIFICATION SEE SHEET 24 FOR SIGN DETAIL.

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076detour.dts.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL PLAN (3 OF 6)	SHEET 21 OF 68

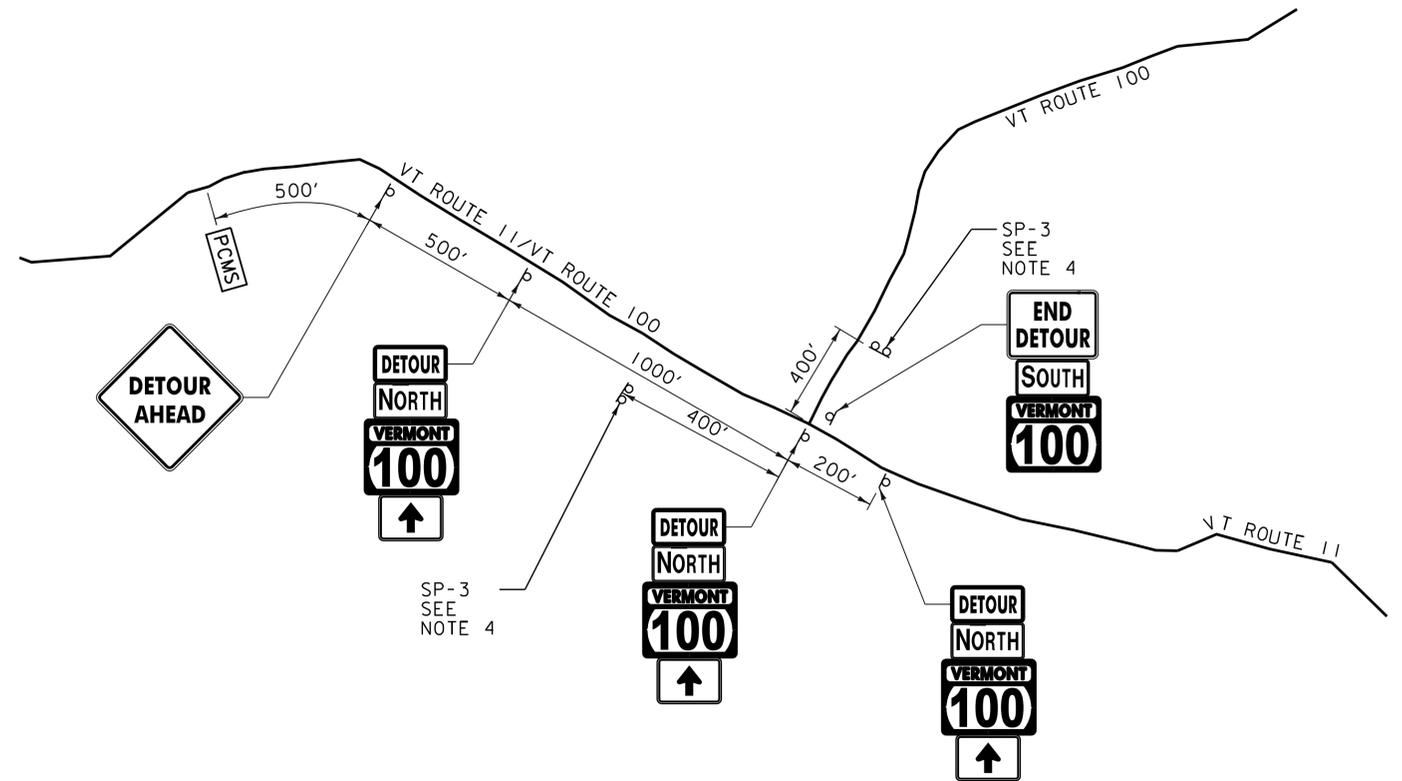




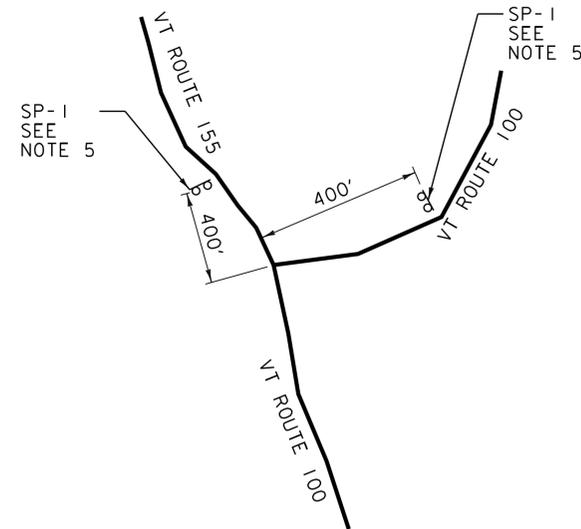
DETAIL F  
NOT TO SCALE



DETAIL H  
NOT TO SCALE



DETAIL G  
NOT TO SCALE



DETAIL I  
NOT TO SCALE

LEGEND

**PCMS** PORTABLE CHANGEABLE MESSAGE SIGN

NOTE:

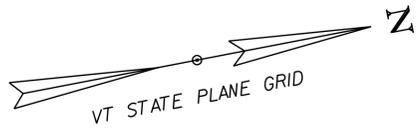
1. SEE TRAFFIC CONTROL PLAN (6 OF 6) FOR PCMS MESSAGES.
2. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT THE INTERSECTIONS OR ALONG THE DETOUR ROUTE, THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO THE EXISTING ROUTE MARKER ASSEMBLIES.
3. ALL DISTANCES ARE APPROXIMATE AND MAY VARY IN THE FIELD.
4. CLOSURE STATIC SIGN (SP-3) NOTIFICATION SEE SHEET 24 FOR SIGN DETAIL.
5. ROAD CLOSED/ XX MILES AHEAD/ NO THRU TRAFFIC (SP-1 & SP-2 SIGNS) SEE SHEETS 19-24 FOR SIGN DIMENSIONS AND LOCATIONS

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076detour.dts.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
TRAFFIC CONTROL PLAN (4 OF 6)

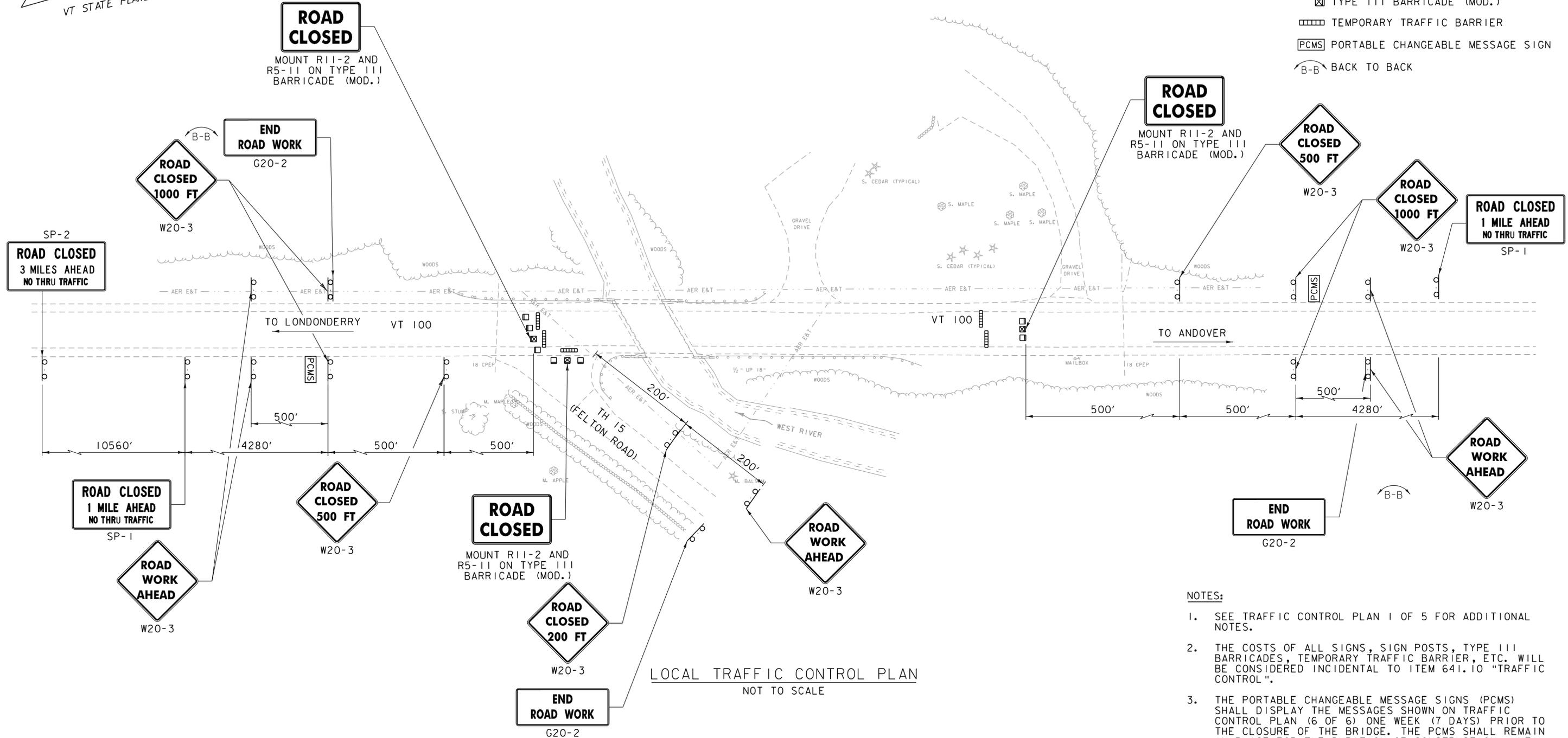
PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 22 OF 68





**LEGEND**

- TYPE III BARRICADE
- ⊠ TYPE III BARRICADE (MOD.)
- ▬▬▬ TEMPORARY TRAFFIC BARRIER
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- ↔ B-B BACK TO BACK



LOCAL TRAFFIC CONTROL PLAN  
NOT TO SCALE

**NOTES:**

1. SEE TRAFFIC CONTROL PLAN 1 OF 5 FOR ADDITIONAL NOTES.
2. THE COSTS OF ALL SIGNS, SIGN POSTS, TYPE III BARRICADES, TEMPORARY TRAFFIC BARRIER, ETC. WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
3. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL DISPLAY THE MESSAGES SHOWN ON TRAFFIC CONTROL PLAN (6 OF 6) ONE WEEK (7 DAYS) PRIOR TO THE CLOSURE OF THE BRIDGE. THE PCMS SHALL REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION, UNTIL THE ROAD IS OPEN TO TRAFFIC.
4. THE NUMBER OF TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL ROADWAY CLOSURE REQUIREMENTS.
5. SEE THE PROJECT SPECIAL PROVISIONS FOR ALLOWABLE BRIDGE CLOSURE PERIOD.

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076+cp.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: M.A. COLGAN	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL PLAN (5 OF 6)	SHEET 23 OF 68



IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQ'D	REMARKS	COLOR
	WIDTH (IN)	HEIGHT (IN)				
M1-5	30	24		43*	SEE NOTE 2	VTRANS STD E-136B
M3-1	24	12		23*	SEE NOTE 2	VTRANS STD E-136B
M3-3	24	12		20*	SEE NOTE 2	VTRANS STD E-136B
G20-2	36	18		3	MOUNT ON ONE POST	LEGEND BLACK BACKGROUND ORANGE **
M4-8	24	12		42*	MOUNT ABOVE THE M3-1 OR M3-3	LEGEND BLACK BACKGROUND ORANGE **
M4-8A	24	18		2	MOUNT ON ONE POST	LEGEND BLACK BACKGROUND ORANGE **
M5-1L	21	15		4	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***
M5-1R	21	15		2	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***
M5-2R	21	15		0	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***
M6-1L	21	15		1	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***
M6-2L	21	15		0	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***
M6-2R	21	15		1	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***
M6-3	21	15		34*	MOUNT BELOW THE MI-5	LEGEND BLACK BACKGROUND ORANGE***

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQ'D	REMARKS	COLOR
	WIDTH (IN)	HEIGHT (IN)				
R11-2	48	30		3	MOUNT ON TYPE III BARRICADE (MOD.)	LEGEND BLACK BACKGROUND WHITE ***
SP-1	60	30		2	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND WHITE ***
SP-2	60	30		1	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND WHITE ***
W20-2	48	48		2	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND ORANGE **
W20-3	48	48		4	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND ORANGE **
W20-3	48	48		2	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND ORANGE **
W20-3	48	48		5	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND ORANGE **
SP-3	42	66		11	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND ORANGE **
W20-3	48	48		1	MOUNT ON TWO POSTS	LEGEND BLACK BACKGROUND ORANGE **

NOTES:

- PAYMENT OF ALL DETOUR SIGNS AND REQUIRED SIGN POSTS WILL BE MADE UNDER ITEM 641.10, "TRAFFIC CONTROL".
- THE M1-5, M3-1, AND THE M3-3 SIGNS SHALL BECOME PROPERTY OF THE STATE AFTER THEY ARE REMOVED FROM THE DETOUR. THE CONTRACTOR SHALL DELIVER THE SIGNS TO THE STATE GARAGE IN THE TOWN OF LONDONDERRY. ALL COSTS ASSOCIATED WITH PROVIDING SIGNS TO THE STATE WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
- ONE WEEK PRIOR (7 DAYS) TO CONSTRUCTION ON THE BRIDGE, PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) MESSAGES 1 AND 2 WILL BE DISPLAYED AT THE BRIDGE AND PCMS MESSAGES 3, 4, AND 5 WILL BE DISPLAYED REGIONALLY.
- DURING THE BRIDGE CLOSURE, PCMS SHALL READ MESSAGES 6 AND 7 REGIONALLY.

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) - AT BRIDGE

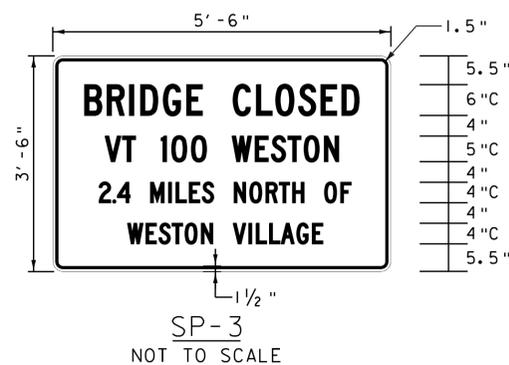
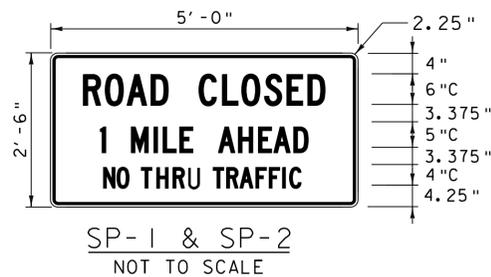
ONE WEEK PRIOR		
MESSAGE 1	MESSAGE 2	(DATE) **
(ROUTE) *** <b>VT 100</b>	<b>MMMM DD</b>	
<b>BRIDGE</b>	<b>TO</b>	
<b>CLOSED</b>	<b>MMMM DD</b>	(DATE) **

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) - REGIONAL DETOUR

ONE WEEK PRIOR			
MESSAGE 3	MESSAGE 4	MESSAGE 5	(DATE) **
(ROUTE) *** <b>VT 100</b>	<b>NORTH OF</b>	<b>MMMM DD</b>	
<b>BRIDGE</b>	<b>WESTON</b>	<b>TO</b>	
<b>CLOSED</b>	<b>VILLAGE</b>	<b>MMMM DD</b>	(DATE) **

DURING BRIDGE CLOSURE	
MESSAGE 6	MESSAGE 7
(ROUTE) *** <b>VT 100</b>	<b>NORTH OF</b>
<b>BRIDGE</b>	<b>WESTON</b>
<b>CLOSED</b>	<b>VILLAGE</b>

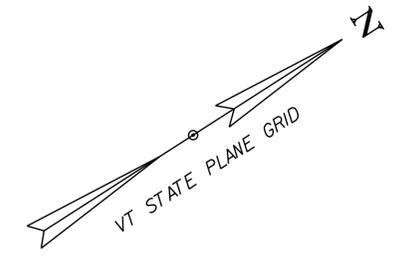
- \*\* - MONTH SHALL BE SPELLED OUT - JUNE 10 NOT 06/10  
 \*\*\* - ROUTE VT 100 SHALL SPECIFY N (NORTH) OR S (SOUTH) AS APPROPRIATE FOR THE DETOUR.



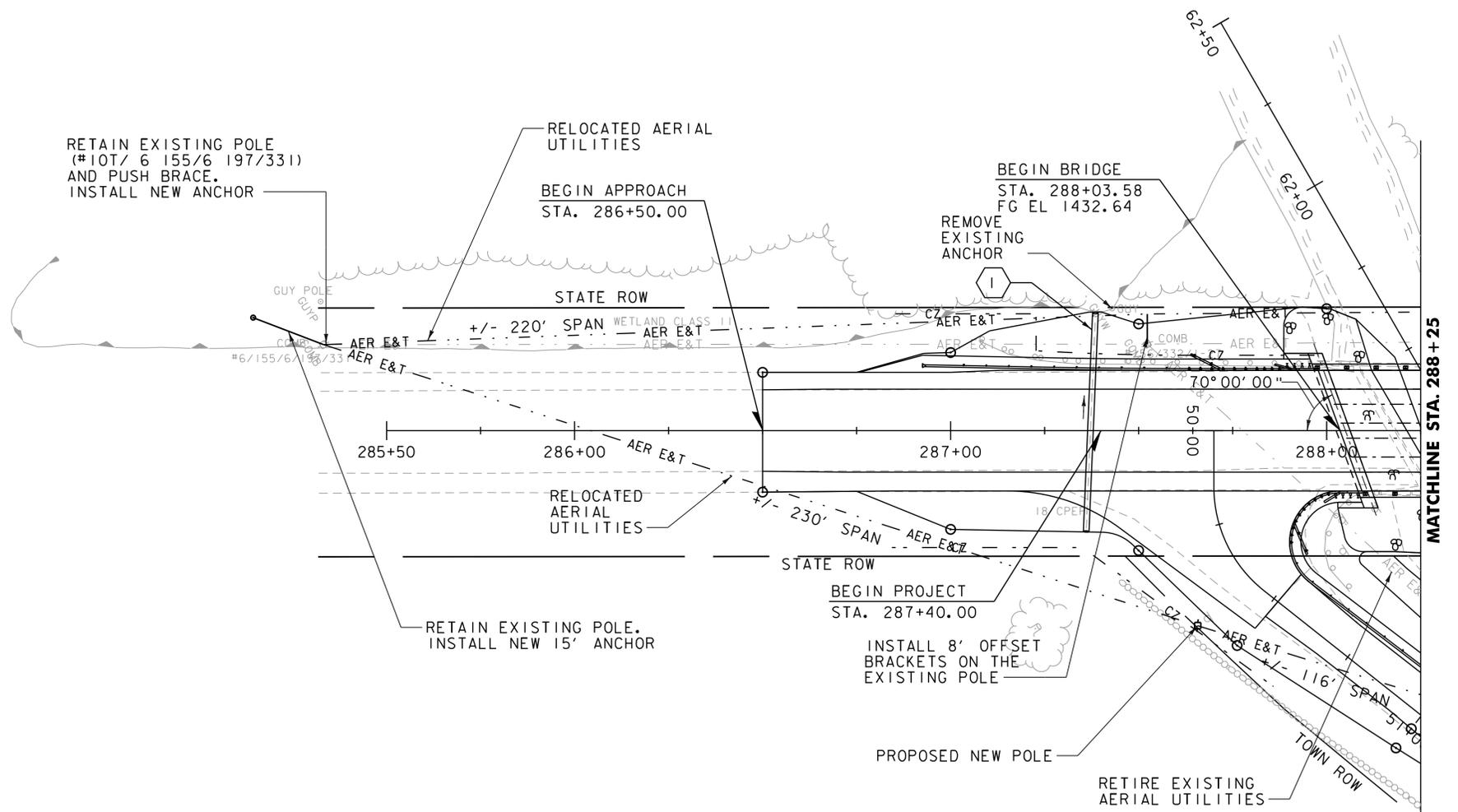
\* = NUMBER OF SIGNS REQ'D ASSUMING APPROXIMATELY 3 LOCATIONS OF CONFIRMATORY ROUTE MARKER ASSEMBLY DETAIL  
 \*\* = SIGN BACKGROUND SHALL BE RETROREFLECTIVE FLUORESCENT  
 \*\*\* = SIGN BACKGROUNDS SHALL BE RETOREFLECTIVE

PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: J.J. WESTCOTT
FILE NAME: z13b076detour.dts.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	TRAFFIC CONTROL PLAN (6 OF 6)
DESIGNED BY: J.J. WESTCOTT	SHEET 24 OF 68





NEW 18" PIPE OPTION  
 STA. 287+36, 27' RT TO STA 287+39, 31' LT



RETAIN EXISTING POLE  
 (#10T/ 6 155/6 197/331)  
 AND PUSH BRACE.  
 INSTALL NEW ANCHOR

RELOCATED AERIAL  
 UTILITIES

BEGIN APPROACH  
 STA. 286+50.00

BEGIN BRIDGE  
 STA. 288+03.58  
 FG EL 1432.64

REMOVE  
 EXISTING  
 ANCHOR

STATE ROW

+/- 220' SPAN

#6/155/6/198/33

285+50

286+00

287+00

288+00

RELOCATED  
 AERIAL  
 UTILITIES

STATE ROW

BEGIN PROJECT  
 STA. 287+40.00

RETAIN EXISTING POLE.  
 INSTALL NEW 15' ANCHOR

INSTALL 8' OFFSET  
 BRACKETS ON THE  
 EXISTING POLE

PROPOSED NEW POLE

RETIRE EXISTING  
 AERIAL UTILITIES

MATCHLINE STA. 288+25

NOTES:

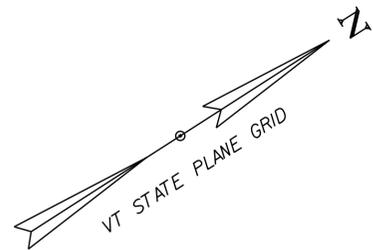
I REMOVE EXISTING 18" CPEP  
 STA. 287+36.06, 26' RT - 287+38.54, 30' LT

CONST. 58 LF x 18" PIPE OPTION  
 18" INV. @ INLET (27' RT) = 1428.18  
 18" INV. @ OUTLET (31' LT) = 1427.39



PROJECT NAME:	WESTON
PROJECT NUMBER:	BF 013-2(I3)
FILE NAME:	z13b076bdr_utility_reloc.dgn
PROJECT LEADER:	S.E. BURBANK
DESIGNED BY:	J.J. WESTCOTT
DRAINAGE & UTILITY LAYOUT SHEET (1 OF 2)	
PLOT DATE:	10/2/2015
DRAWN BY:	J.J. WESTCOTT
CHECKED BY:	S.E. BURBANK
SHEET	25 OF 68





4 INCH YELLOW LINE  
 STA. 286+50 - 287+45, LT & RT  
 STA. 287+85 - 291+35, LT & RT

4 INCH WHITE LINE  
 STA. 286+50 - 291+35, LT  
 STA. 286+50 - 287+15, RT  
 STA. 288+04 - 291+35, RT

TRAFFIC SIGNS, TYPE A

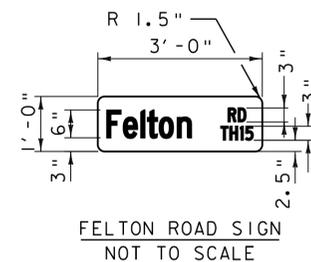
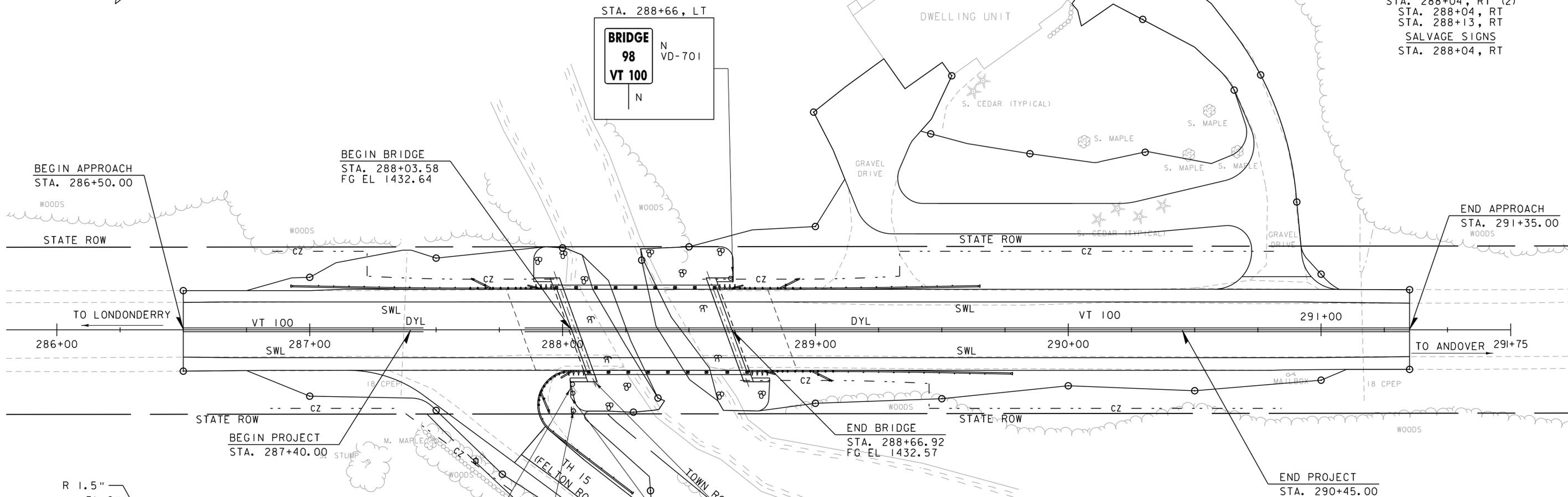
STA. 288+04, RT  
 STA. 288+04, RT  
 STA. 288+04, RT  
 STA. 288+66, LT

REMOVING SIGNS

STA. 288+04, RT (2)  
 STA. 288+04, RT  
 STA. 288+13, RT

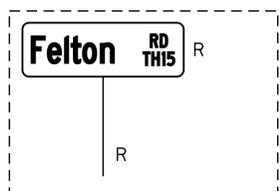
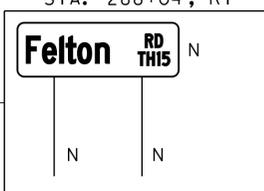
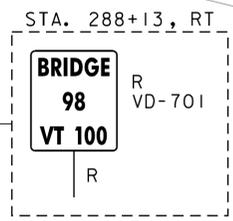
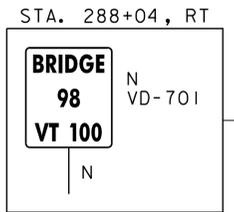
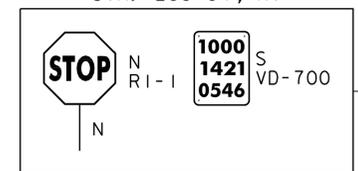
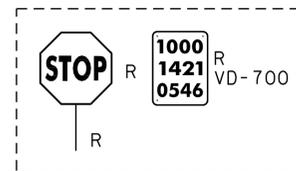
SALVAGE SIGNS

STA. 288+04, RT



FELTON ROAD SIGN  
 NOT TO SCALE

\*STREET SIGN LEGEND  
 TEXT 6" / 3" BACKGROUND  
 SHALL BE GREEN WITH  
 WHITE LETTERING AND  
 BORDER.



SIGNING LEGEND

N = NEW  
 RET = RETAIN  
 R = REMOVE  
 S = SALVAGE

STRIPING LEGEND

DYL = DOUBLE YELLOW LINE  
 SWL = SINGLE WHITE LINE

PROJECT NAME:	WESTON	FILE NAME:	z13b076+sl.dgn	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	PROJECT LEADER:	S.E. BURBANK	DRAWN BY:	J.J. WESTCOTT
		DESIGNED BY:	J.J. WESTCOTT	CHECKED BY:	S.E. BURBANK
		TRAFFIC SIGNS & LINE STRIPING SHEET		SHEET	27 OF 68





**SOIL CLASSIFICATION**

**AASHTO**

- A1 Gravel and Sand
- A3 Fine Sand
- A2 Silty or Clayey Gravel and Sand
- A4 Silty Soil - Low Compressibility
- A5 Silty Soil - Highly Compressible
- A6 Clayey Soil - Low Compressibility
- A7 Clayey Soil - Highly Compressible

**ROCK QUALITY DESIGNATION**

R.O.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

**SHEAR STRENGTH**

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

**CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY**

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

**COMMONLY USED SYMBOLS**

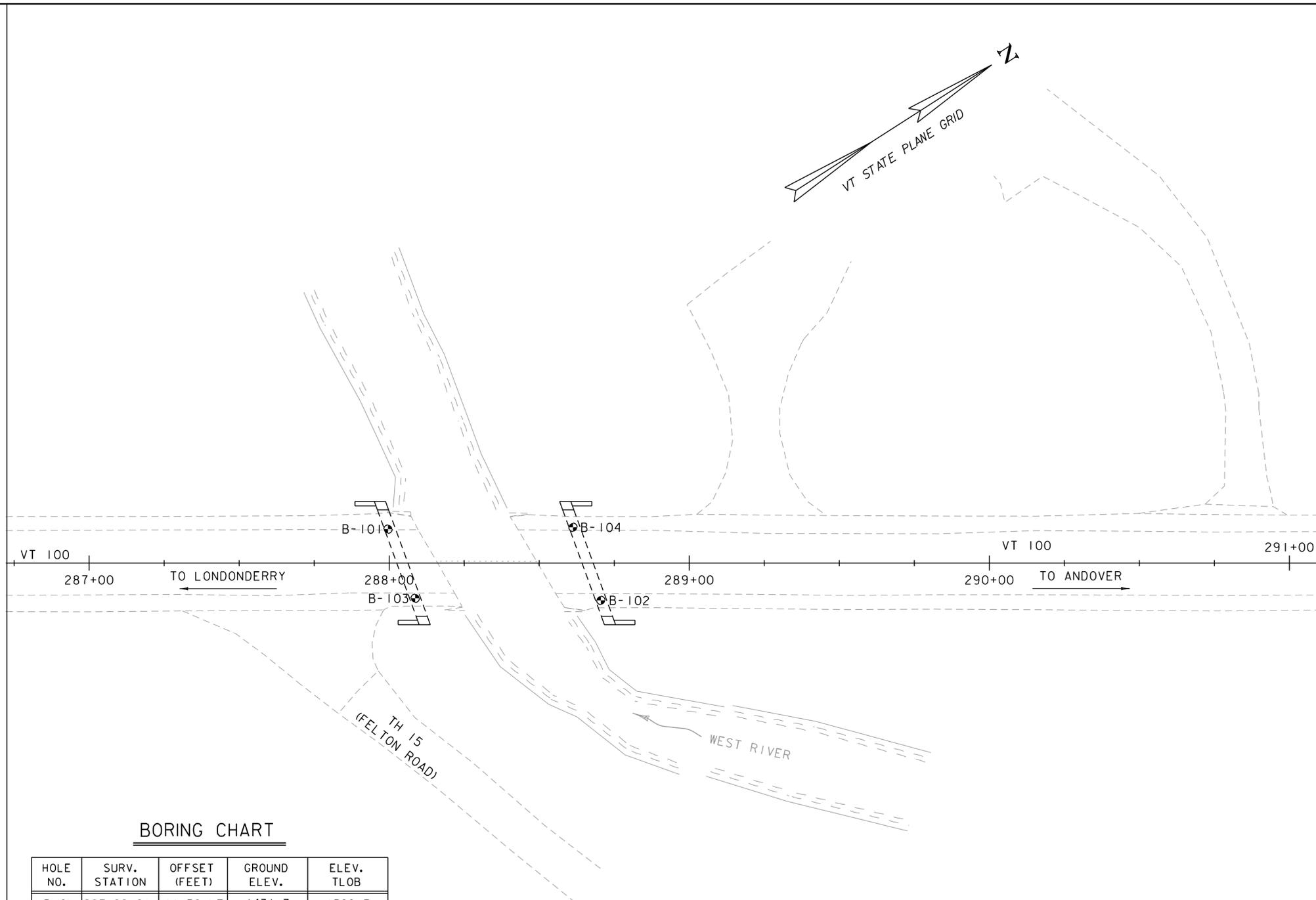
- ▼ Water Elevation
- ⊕ Standard Penetration Boring
- ⊗ Auger Boring
- ⊙ Rod Sounding
- S Sample
- N Standard Penetration Test  
Blow Count Per Foot For:  
2" O.D. Sampler  
1 3/8" I.D. Sampler  
Hammer Weight Of 140 Lbs.  
Hammer Fall Of 30"
- VS Field Vane Shear Test
- US Undisturbed Soil Sample
- B Blast
- DC Diamond Core
- MD Mud Drill
- WA Wash Ahead
- HSA Hollow Stem Auger
- AX Core Size 1 1/8"
- BX Core Size 1 3/8"
- NX Core Size 2 1/8"
- M Double Tube Core Barrel Used
- LL Liquid Limit
- PL Plastic Limit
- PI Plasticity Index
- NP Non Plastic
- w Moisture Content (Dry Wgt. Basis)
- D Dry
- M Moist
- MTW Moist To Wet
- W Wet
- Sat Saturated
- Bo Boulder
- Gr Gravel
- Sa Sand
- Si Silt
- Cl Clay
- HP Hardpan
- Le Ledge
- NLTD No Ledge To Depth
- CNPF Can Not Penetrate Further
- TLOB Top of Ledge Or Boulder
- NR No Recovery
- Rec. Recovery
- 1/2 Rec. Percent Recovery
- ROD Rock Quality Designation
- CBR California Bearing Ratio
- < Less Than
- > Greater Than
- R Refusal (N > 100)
- VTSPG NAD83 - See Note 7

**COLOR**

- blk Black
- bl Blue
- brn Brown
- dk Dark
- gr'y Gray
- gn Green
- lt Light
- or Orange
- pnk Pink
- pu Purple
- rd Red
- tn Tan
- wh White
- yel Yellow
- mltc Multicolored

**DEFINITIONS (AASHTO)**

- BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.
- BOULDER - A rock fragment with an average dimension > 12 inches.
- COBBLE - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND - Particles of rock < 0.075" (#10 sieve) and > 0.0029" (#200 sieve).
- SLT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED - Alternate layers of silt and clay.
- HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
- MUCK - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT - Weight of water divided by dry weight of soil.
- FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP - Inclination of bed with a horizontal plane.



**BORING CHART**

HOLE NO.	SURV. STATION	OFFSET (FEET)	GROUND ELEV.	ELEV. TLOB
B-101	287+99.61	11.30 LT	1431.7	1399.7
B-102	288+70.53	12.40 RT	1431.6	1412.5
B-103	288+08.67	11.70 RT	1431.8	1406.8
B-104	288+61.25	11.90 LT	1431.7	1406.7

**GENERAL NOTES**

- The subsurface explorations shown herein were made in June, 2014 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
- Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.



PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076bor.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
BORING INFORMATION SHEET

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 29 OF 68



STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG				Boring No.: <b>B-104</b>				
		WESTON BF 013-2(13) VT-100 BR-98				Page No.: 1 of 1				
						Pin No.: 13B076				
						Checked By: BLS				
Boring Crew: JUDKINS, HOOK, STRINGER		Casing Type: WB	Sampler Type: SS	Groundwater Observations						
Date Started: 6/25/14 Date Finished: 6/26/14		I.D.: 4 in	1.5 in	Date	Depth (ft)	Notes				
VTSPG NAD83: N 299891.64 ft E 1565121.97 ft		Hammer Wt: N.A.	140 lb.	06/26/14	9.6	While drilling.				
Station: 288+61.25 Offset: -11.90		Hammer Fall: N.A.	30 in.							
Ground Elevation: 1431.7 ft		Hammer/Rod Type: Auto/AWJ								
		Rig: CME 45C SKID	C <sub>p</sub> = 1.33							
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip dep.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		Asphalt Pavement, 0.0 ft - 0.85 ft								
0.85		A-1-b, SaGr, brn, Moist, Rec. = 1.0 ft				13-13-12-22 (25)	7.7	43.5	41.0	15.5
5		Field Note: Cleaned out with Roller cone								
5		Visual Description: Sample was mostly Wood pieces with silt & sand, brn, MTW, Rec. = 0.2 ft				5-4-10 (8)	76.9	9.6	61.6	28.8
5		A-2-4, SiSa, brn, MTW, Rec. = 0.6 ft								
10		Field Note: Cleaned out with NXDC, Appears to be Cobbles, Boulders, and sand.								
10		Field Note: No Recovery, Possible Boulder.				R@0.0" (R)				
10		Field Note: NXDC Boulders, Cobbles, and sand								
15		Field Note: No Recovery, Appears to be Cobbles and sand.								
15		Field Note: Cleaned out with NXDC, Appears to be Cobbles and sand.				49-R@3.5" (R)				
20		Visual Description: Sample was mostly Broken Rock with silty sand, brn-gry, Moist, Rec. = 0.2 ft				36-R@1.0" (R)	7.6			
25		Field Note: Cleaned out with NXDC								
25		Field Note: No Recovery				R@0.0"				
25		25.0 ft - 30.0 ft, Gray and white, Biotite-quartz-plagioclase Gneiss, with quartz rich zones. Hard, Unweathered, Fair rock, NXMDC, Closely spaced stained jointing. RMR = 44	1 (30)	98 (0)	3					
30		30.0 ft - 35.0 ft, Gray and white, Biotite-quartz-plagioclase Gneiss, with quartz rich zones. Hard, Unweathered, Fair rock, NXMDC, Closely spaced stained jointing. RMR = 44	2 (30)	100 (14)	2					
35		Hole stopped @ 35.0 ft								
Remarks: Hole collapsed at 5.0 ft.										
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C <sub>p</sub> is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.										

BOTTOM OF CAP  
EL = 1422.5

ESTIMATED PILE TIP  
EL = 1403.7

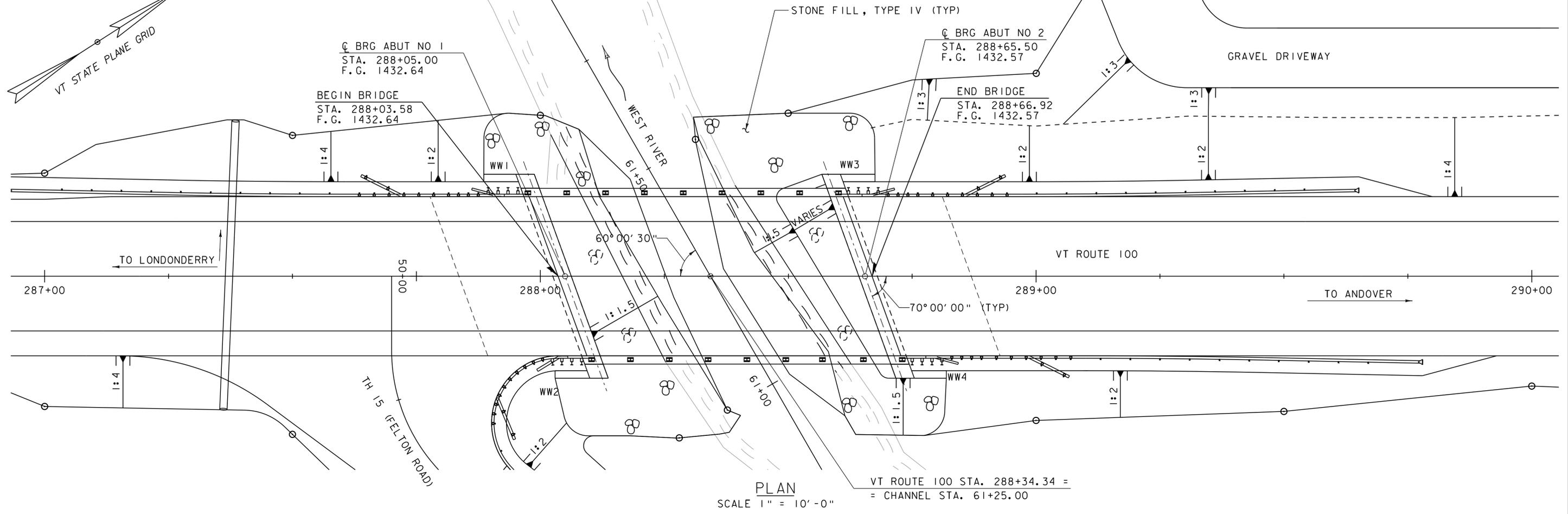
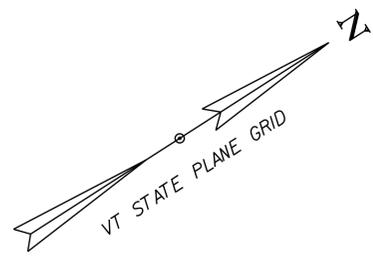
BORING LOG 2 WESTON BF 013-2(13) GRJ VERMONT AOT.GPJ 8/6/14

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

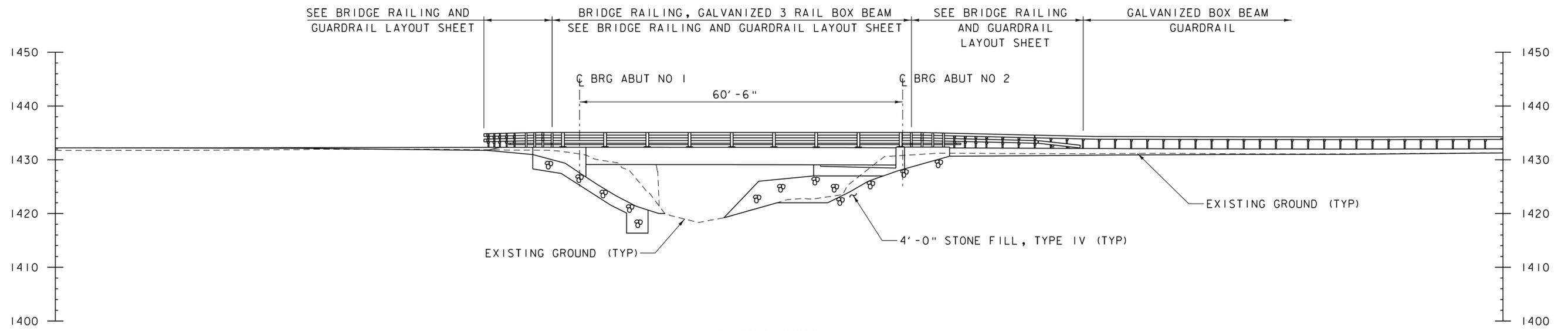
FILE NAME: z13b076borlogs.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: VTRANS  
BORING LOGS (2 OF 2)

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 31 OF 68





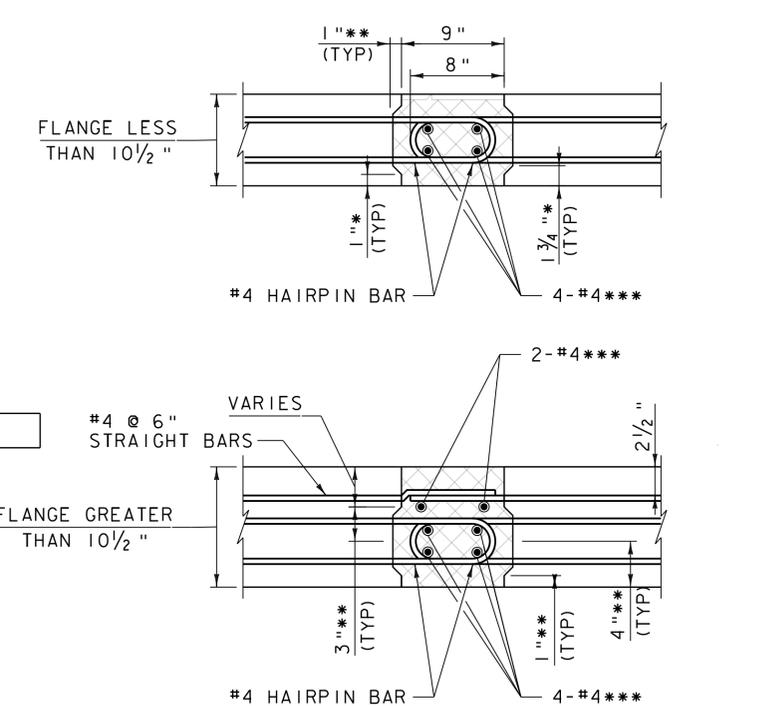
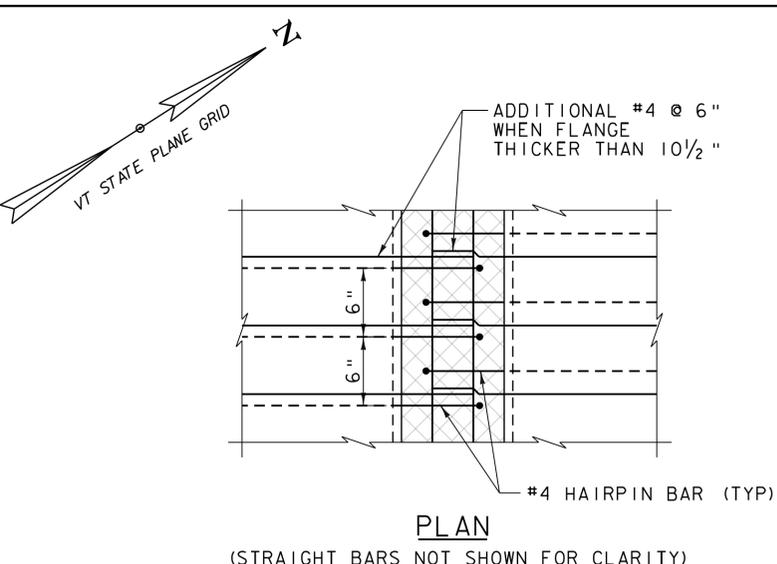
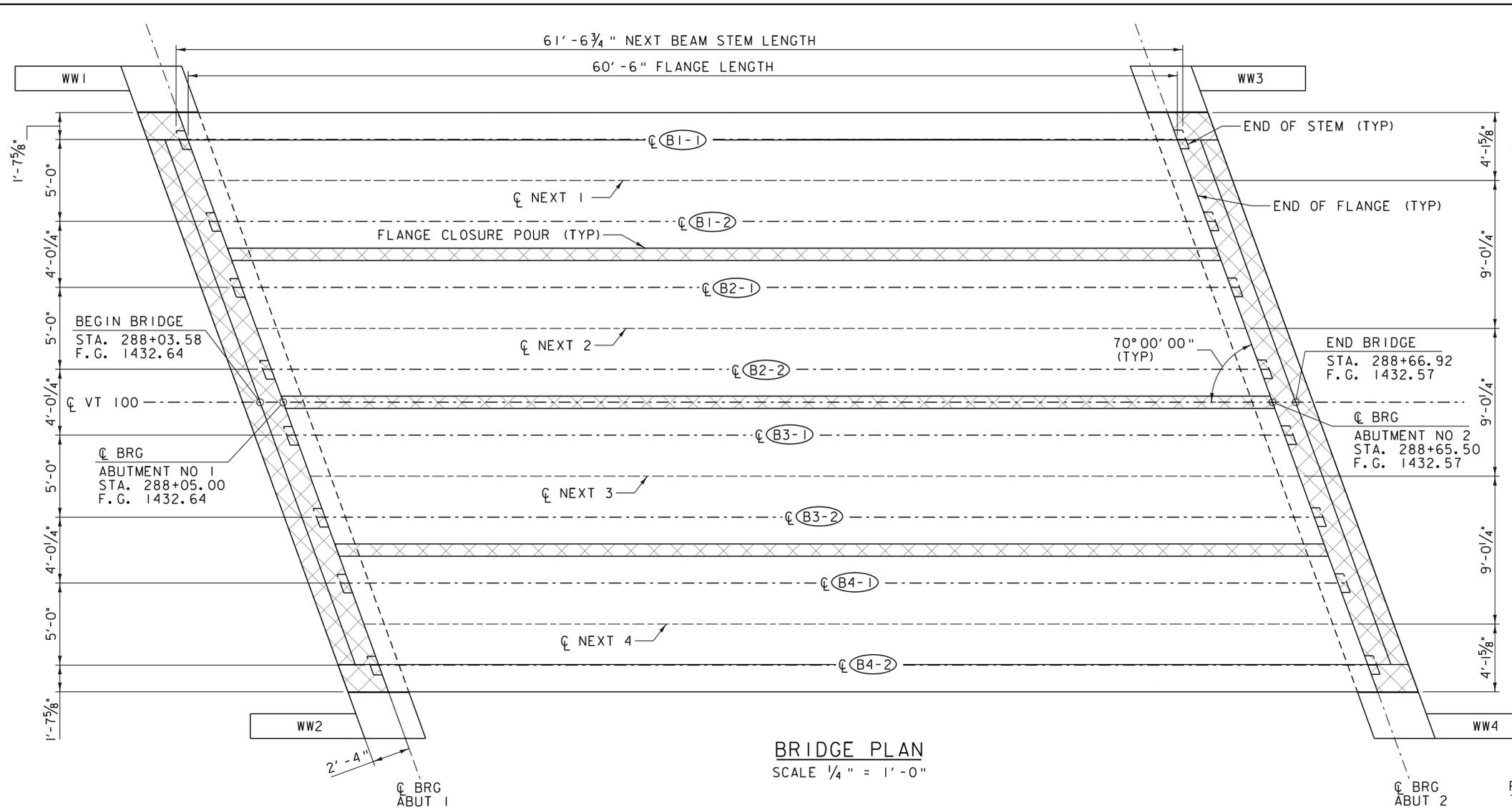
PLAN  
SCALE 1" = 10'-0"



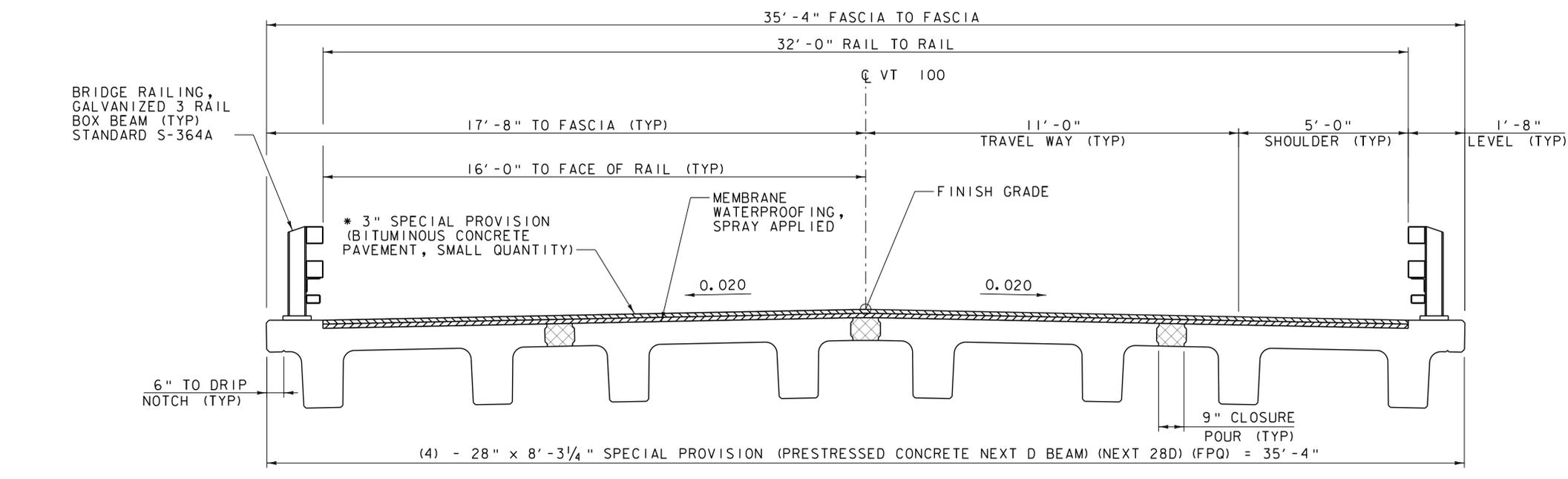
ELEVATION  
SCALE 1" = 10'-0"

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076pe.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
PLAN AND ELEVATION	SHEET 32 OF 68



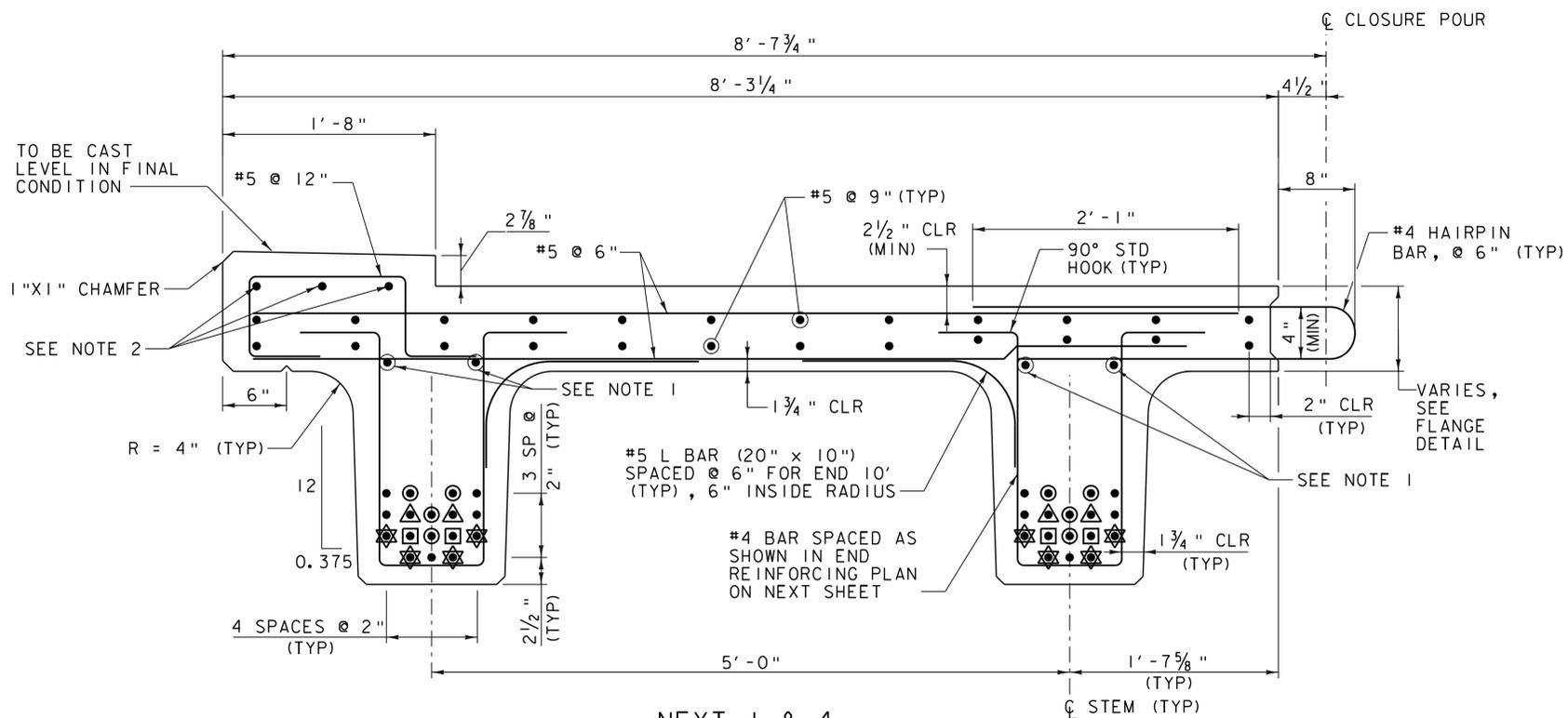


\* - (2) - 1/2" LIFTS OF TYPE IVS  
 \* 3" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)  
 \*\* DIMENSIONS ARE TO KEY IN JOINT  
 \*\*\* #4 BARS SHALL BE PLACED AS SHOWN ALONG ENTIRE LENGTH OF JOINT. PAYMENT SHALL BE INCIDENTAL TO "SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS) (NEXT 28D) (FPQ)".



PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: K.C. BARRY
FILE NAME: z13b076supl.dgn	DESIGNED BY: J.J. WESTCOTT
PROJECT LEADER: S.E. BURBANK	CHECKED BY: L.S. CHERVINCKY
NEXT BEAM FRAMING PLAN	SHEET 33 OF 68





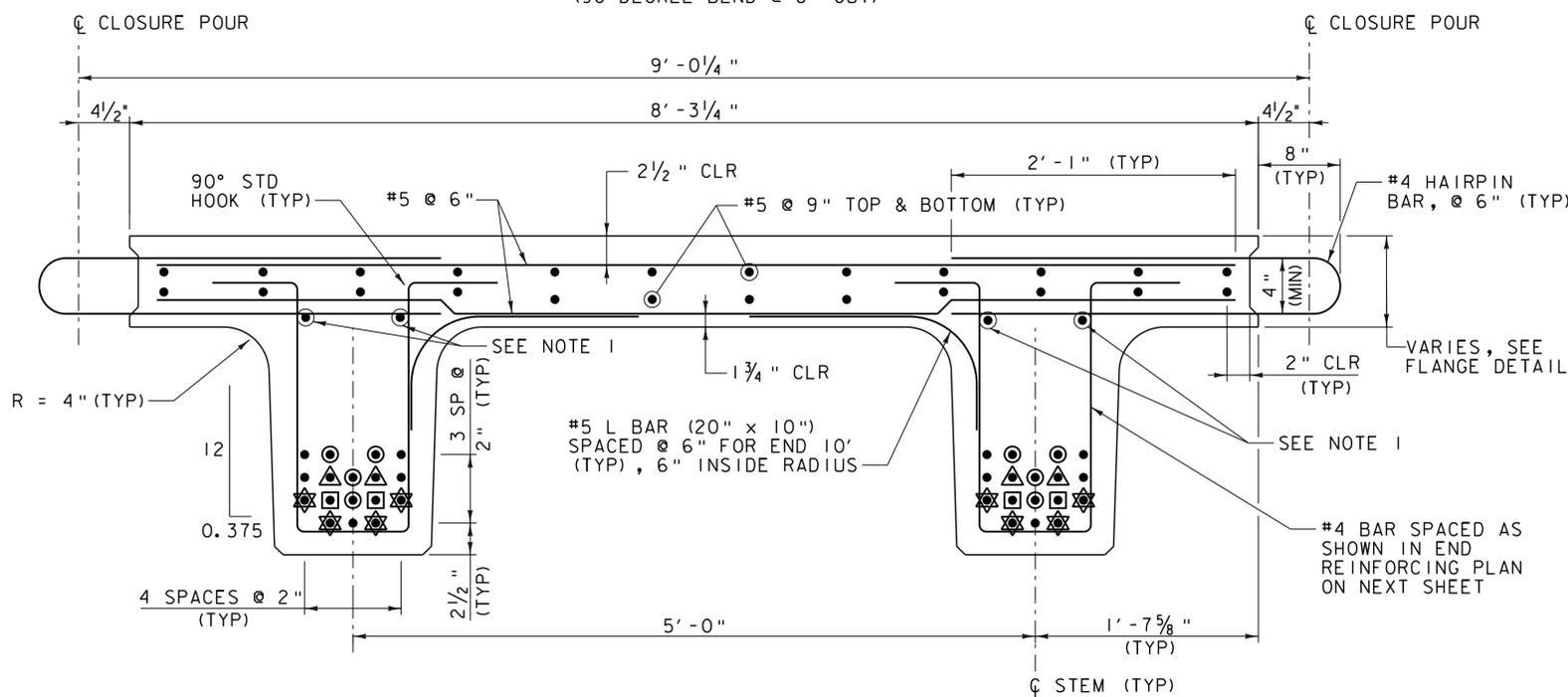
NEXT 1 & 4

(BEAM 1 SHOWN, BEAM 4 HAS LIP OPPOSITE HAND)  
SCALE 1 1/2" = 1'-0"

NOTE:

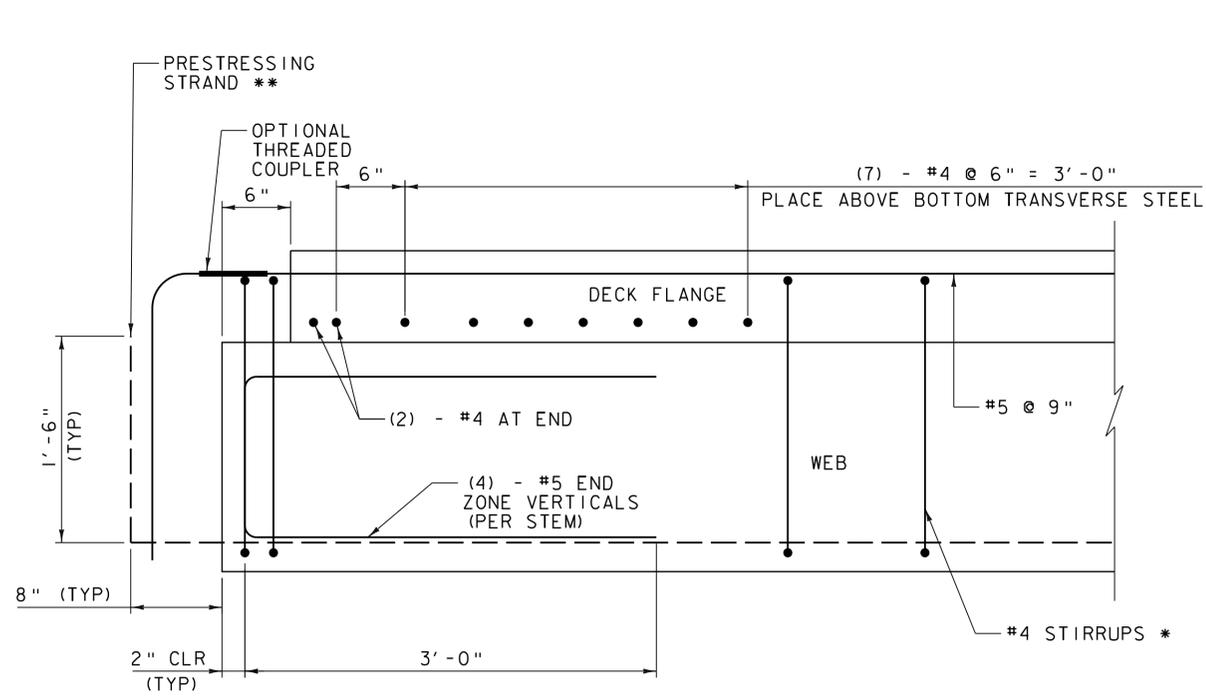
1. WHEN FLANGE IS GREATER THAN 101#2", ADDITIONAL TRANSVERSE #4 BARS @ 6" SHALL EXTEND THE FULL WIDTH OF THE BEAM AND INTO LONGITUDINAL POUR. SEE FLANGE CONNECTION DETAIL ON PREVIOUS SHEET.
2. (3) #5 EQUALLY PLACED, ONLY AT ENDS OF BEAM AT 5'-0" FROM END OF BEAM AND EXTENDING 2'-0" BEYOND END OF BEAM FLANGE INTO CLOSURE POUR.

- ▣ - DEBONDED 16' EACH END
- ▲ - DEBONDED 14' EACH END
- - DEBONDED 6" EACH END
- ⊗ - EXTEND 2'-2" OUT OF BEAM (90 DEGREE BEND @ 8" OUT)



NEXT 2 & 3

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



ADDITIONAL END BEAM REINFORCING  
LONGITUDINAL SECTION

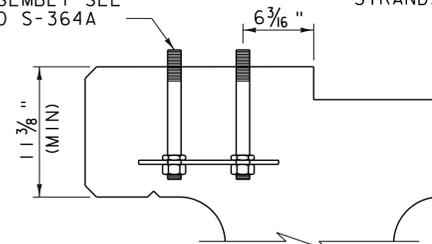
TYPICAL BARS IN DECK FLANGE OMITTED FOR CLARITY

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

\* SEE END REINFORCING PLAN FOR SPACING

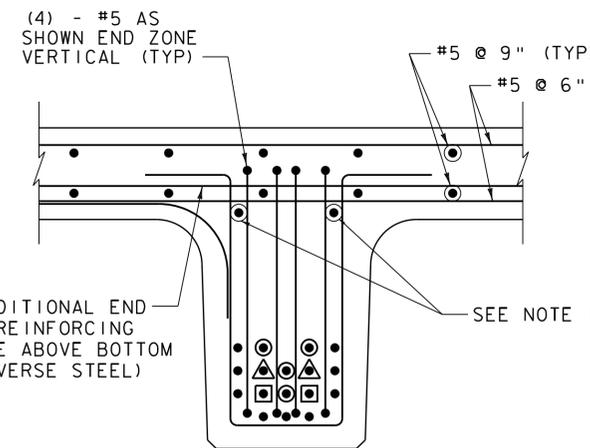
\*\* LEAVE FOUR STRANDS LONG PER STEM AS INDICATED. TIE STRANDS TO HORIZONTAL FF REINFORCING IN DECK CLOSURE POUR. SLEEVES FOR PERMANENT BENDING OF THE PRESTRESSING STRANDS WILL NOT BE ALLOWED INSIDE THE CLOSURE POUR

ANCHOR BOLT ASSEMBLY SEE STD S-364A



POST DETAIL

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



WEB END SECTION

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

NOTE:

1. STRANDS NOTED AT THE TOP WILL ONLY BE TENSIONED A NOMINAL AMOUNT TO FACILITATE REINFORCING STEEL PLACEMENT.
2. SEE NEXT SHEET FOR SKEWED END DETAIL.

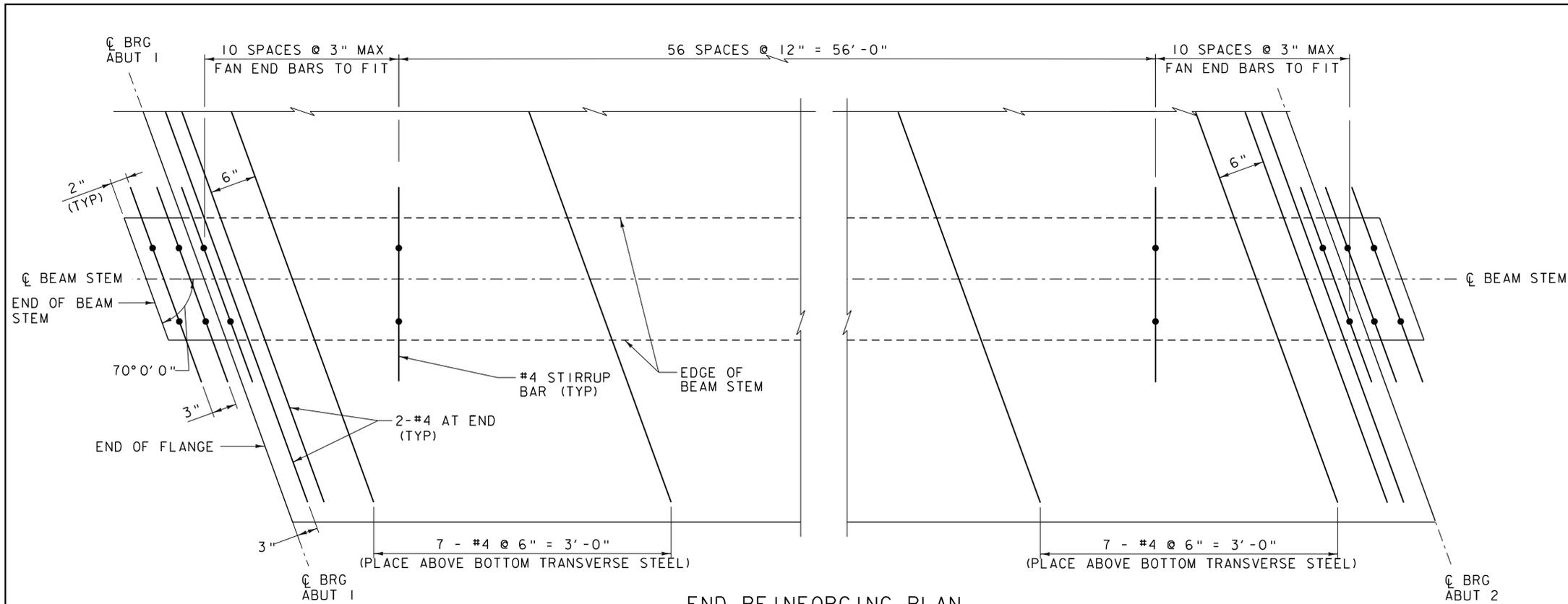
NOTE:

- NF = NEAR FACE
  - FF = FAR FACE
  - EF = EACH FACE
  - ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



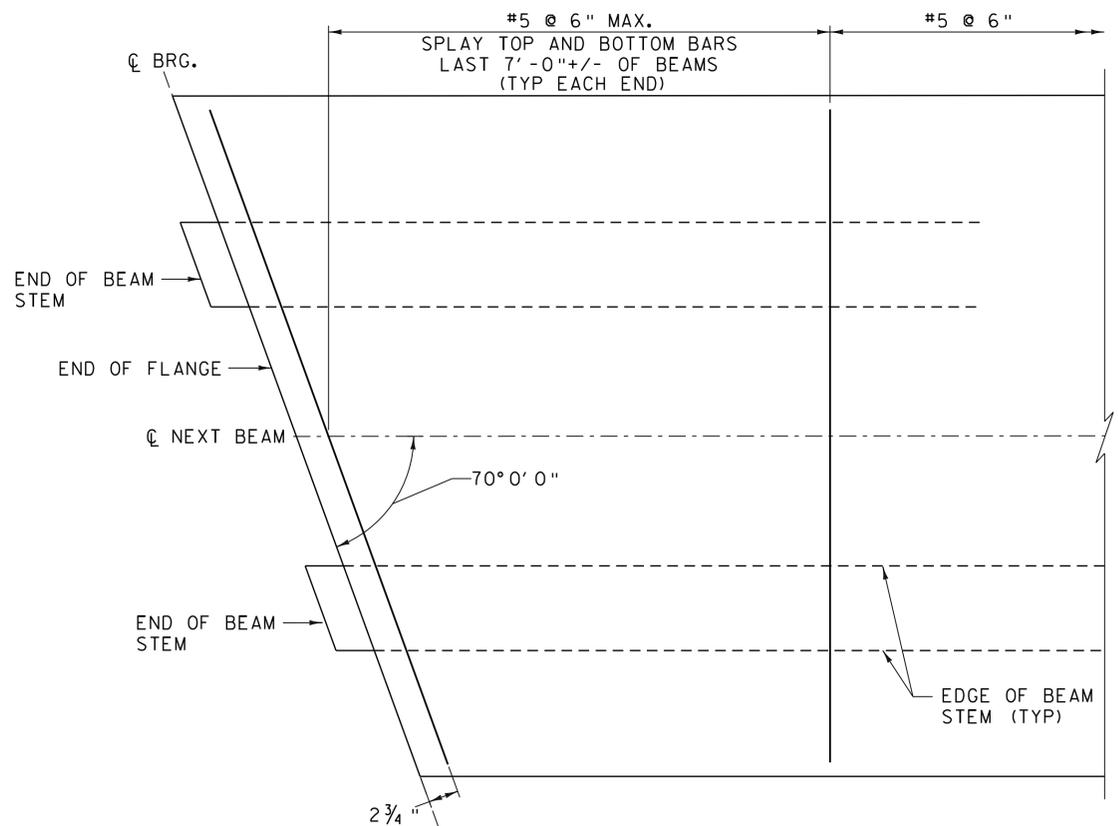
PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)  
FILE NAME: z13b076supl.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
NEXT BEAM DETAILS (1 OF 2)

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: L.S. CHERVINCKY  
SHEET 34 OF 68



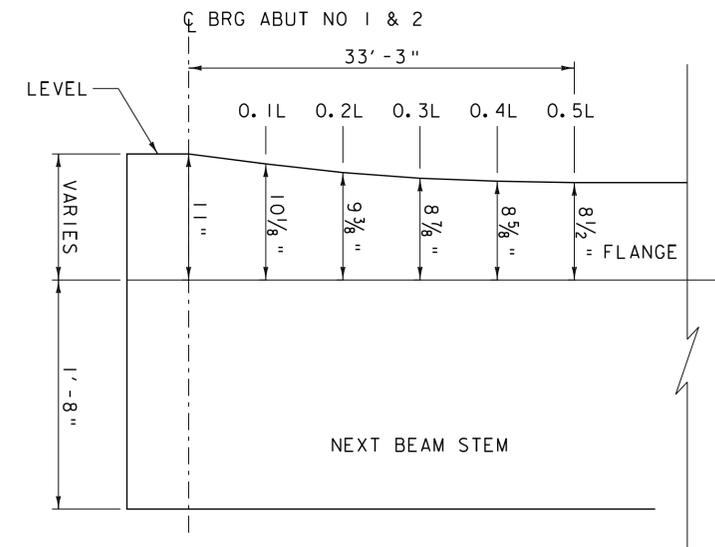
**END REINFORCING PLAN**

TYPICAL ALL UNITS  
 TYPICAL DECK STEEL AND END ZONE VERTICALS NOT SHOWN FOR CLARITY  
 SCALE 1/2" = 1'-0"



**TYPICAL TRANSVERSE FLANGE REINFORCING STEEL DETAIL**

TYPICAL ALL UNITS  
 SCALE 3/4" = 1'-0"



**THICKENED FLANGE DETAIL**  
 NOT TO SCALE

**NOTES:**

1. THICKENED DECK IS SYMMETRICAL ABOUT CL SPAN.
2. REINFORCEMENT IN TOP FLANGE SHALL BE PLACED TO MAINTAIN PROPER COVER TO TOP OF THE FLANGE.

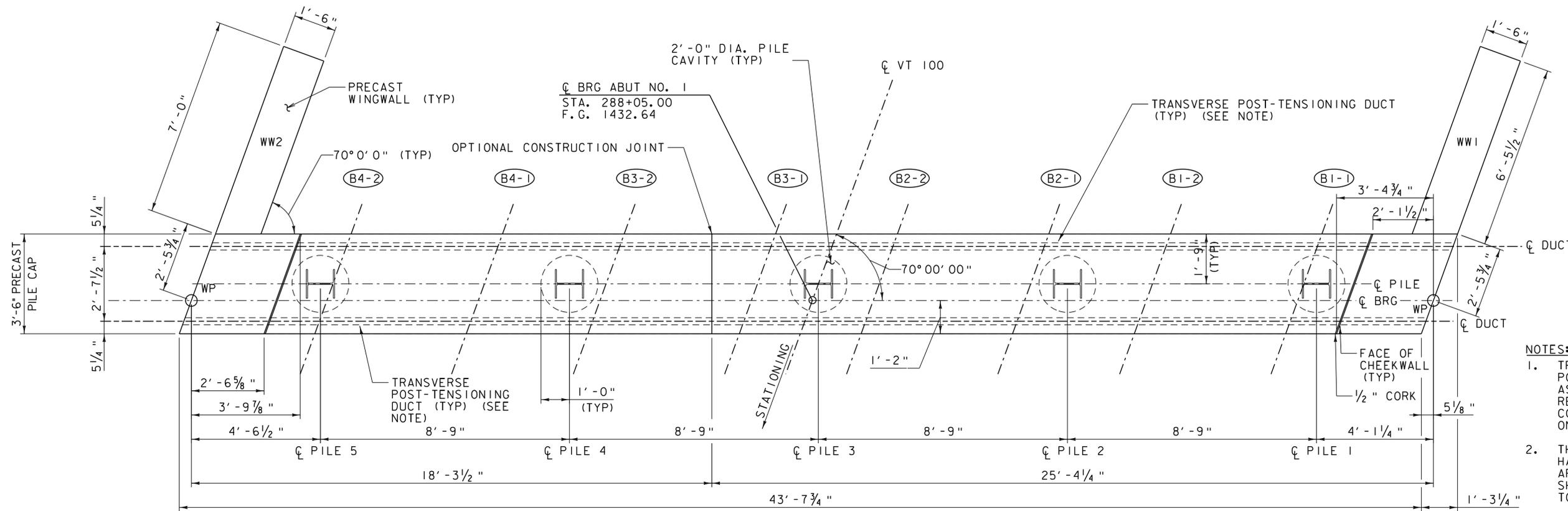
**NOTE:**

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



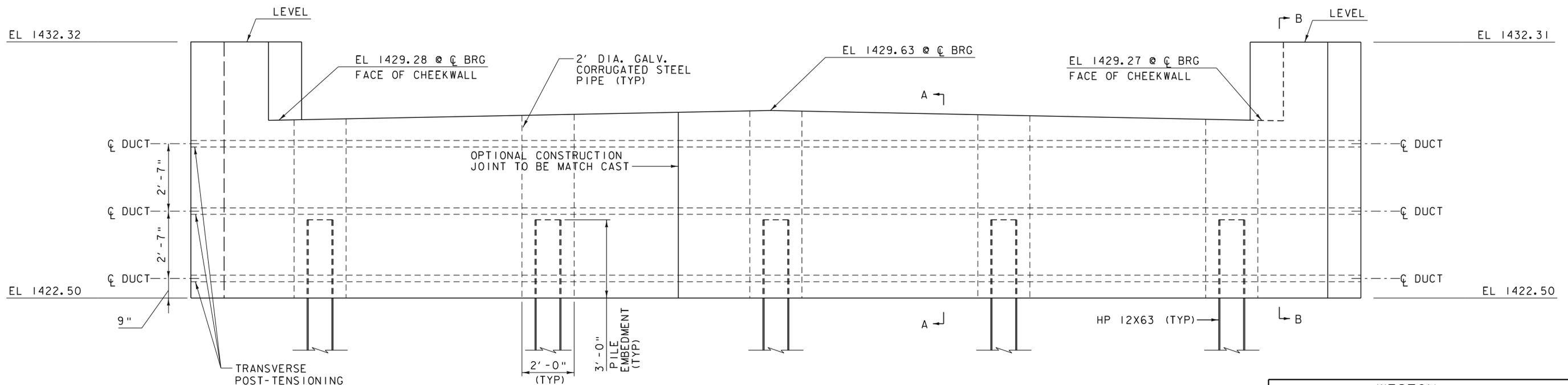
PROJECT NAME: WESTON  
 PROJECT NUMBER: BF 013-2(13)  
 FILE NAME: z13b076supl.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: J.J. WESTCOTT  
 NEXT BEAM DETAILS (2 OF 2)

PLOT DATE: 10/2/2015  
 DRAWN BY: J.J. WESTCOTT  
 CHECKED BY: L.S. CHERVINCKY  
 SHEET 35 OF 68



- NOTES:**
1. TRANSVERSE POST-TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.
  2. THE BRIDGE SEAT SHALL HAVE A ROUGHENED FINISH. AREAS UNDER BEARING PADS SHALL BE TROWELED SMOOTH TO THE PROPOSED SLOPE.

**ABUTMENT NO 1 PLAN**  
SCALE 1/2" = 1'-0"

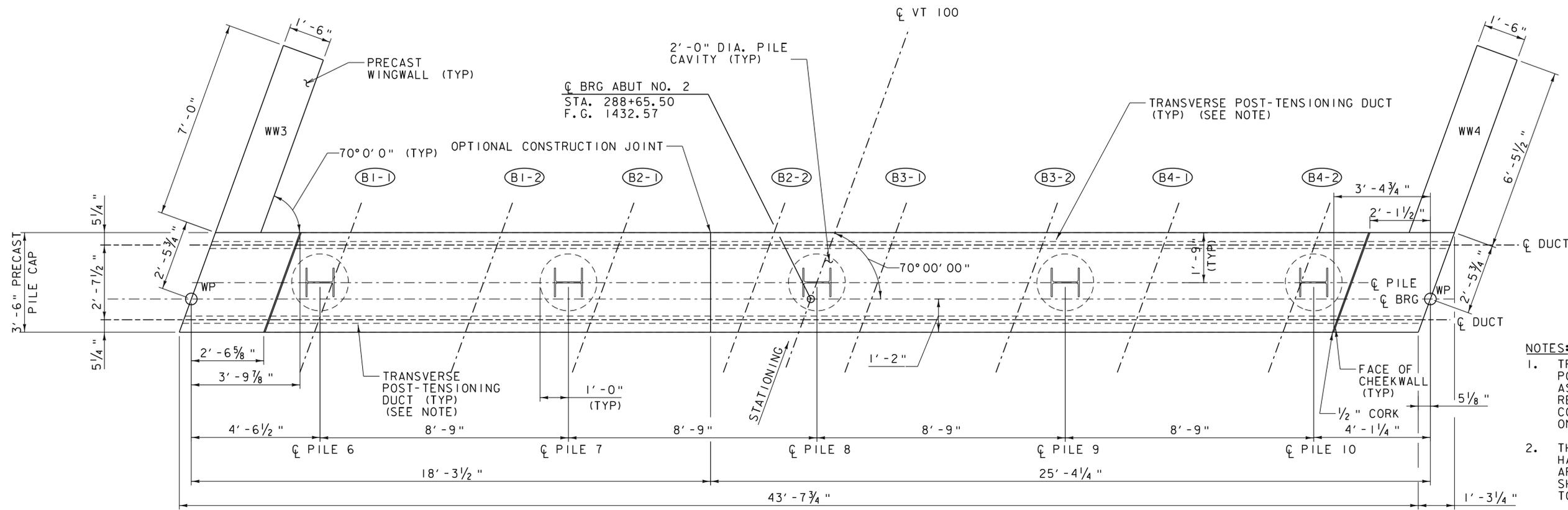


**ABUTMENT NO 1 ELEVATION**  
SCALE 1/2" = 1'-0"

SEE NEXT BEAM ABUTMENT SECTIONS SHEET FOR SECTIONS A-A AND B-B.

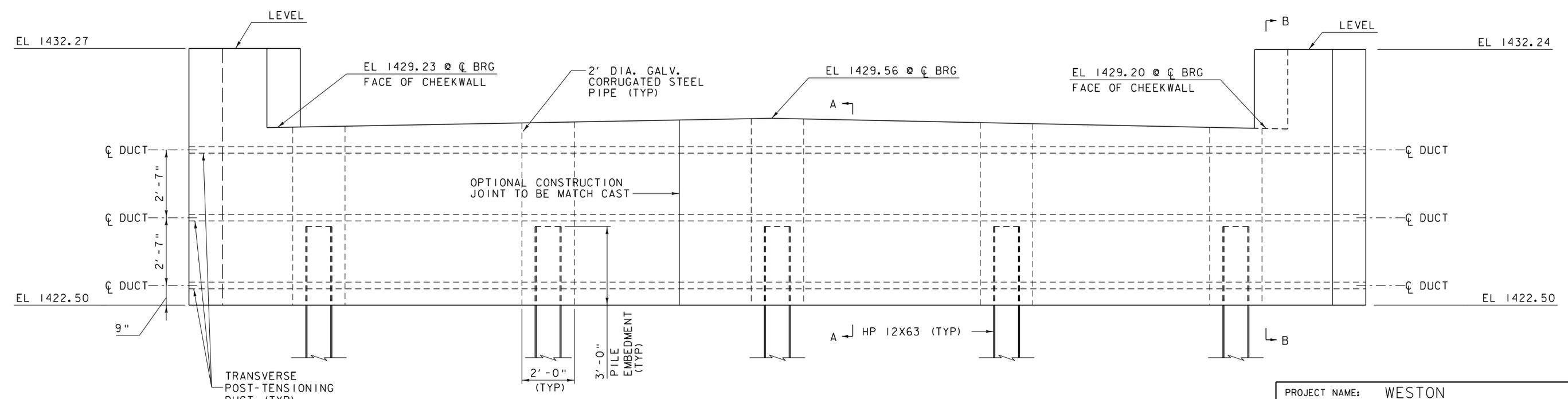


PROJECT NAME:	WESTON	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	DRAWN BY:	J.J. WESTCOTT
FILE NAME:	z13b076subl.dgn	CHECKED BY:	L.S. CHERVINCKY
PROJECT LEADER:	S.E. BURBANK	SHEET	36 OF 68
DESIGNED BY:	J.J. WESTCOTT		
NEXT BEAM ABUT NO 1 PLAN & ELEVATION			



- NOTES:**
1. TRANSVERSE POST-TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.
  2. THE BRIDGE SEAT SHALL HAVE A ROUGHENED FINISH. AREAS UNDER BEARING PADS SHALL BE TROWELED SMOOTH TO THE PROPOSED SLOPE.

**ABUTMENT NO 2 PLAN**  
SCALE 1/2" = 1'-0"



**ABUTMENT NO 2 ELEVATION**  
SCALE 1/2" = 1'-0"

SEE NEXT BEAM ABUTMENT SECTIONS SHEET FOR SECTIONS A-A AND B-B.



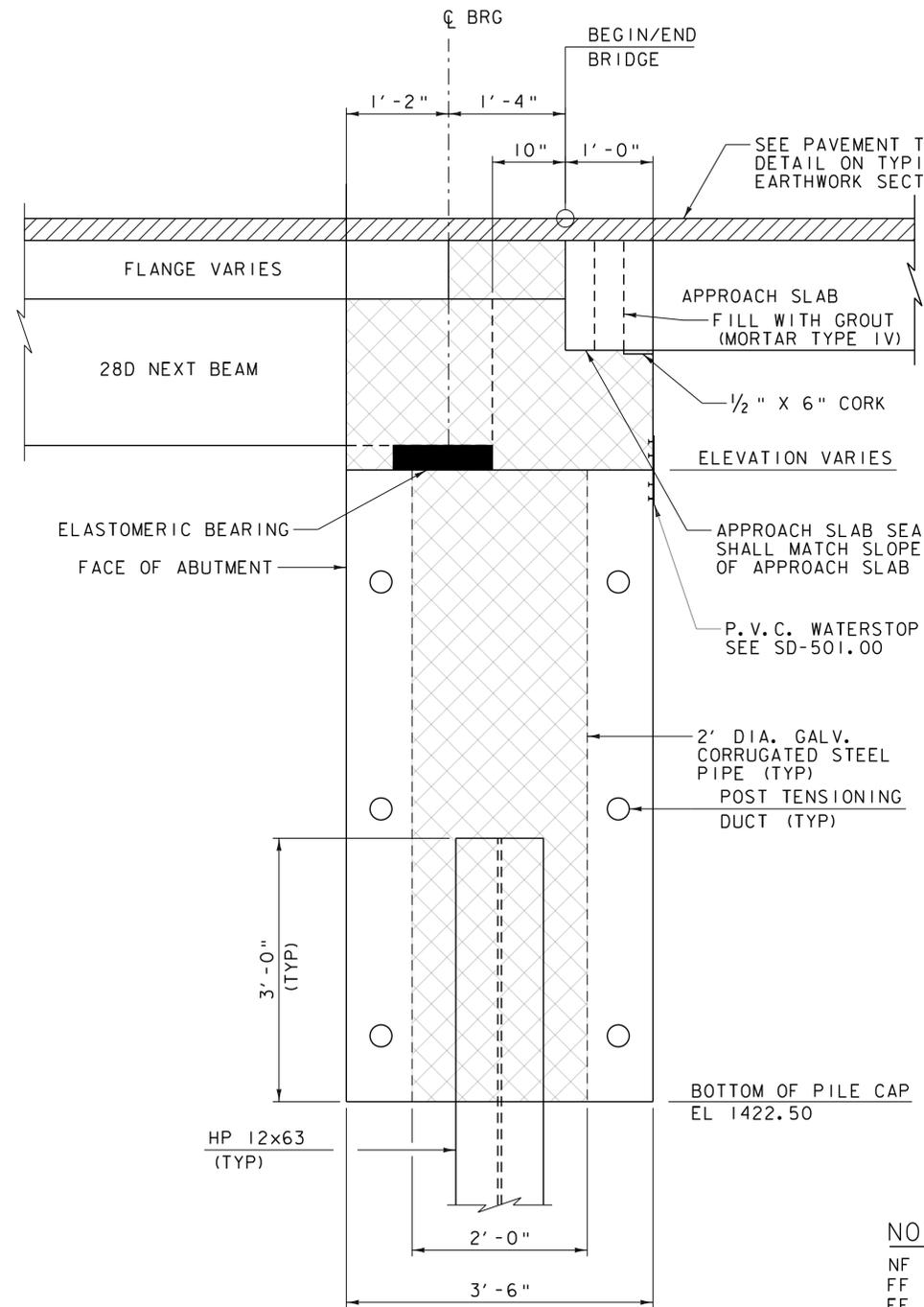
PROJECT NAME:	WESTON	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	DRAWN BY:	J.J. WESTCOTT
FILE NAME:	z13b076subl.dgn	DESIGNED BY:	J.J. WESTCOTT
PROJECT LEADER:	S.E. BURBANK	CHECKED BY:	L.S. CHERVINCKY
NEXT BEAM ABUT NO 2 PLAN & ELEVATION SHEET		37 OF 68	

**NOTES:**

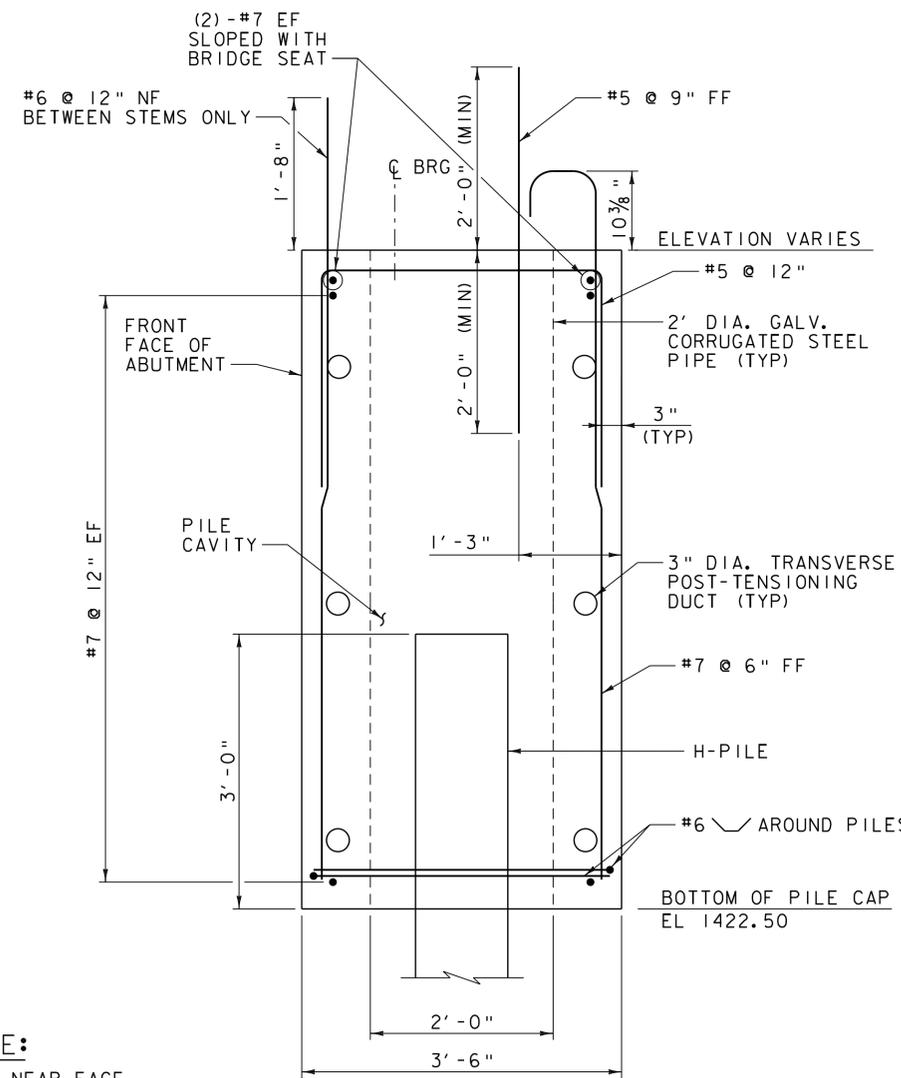
1. ABUTMENTS SHALL BE PRECAST CONCRETE ACCORDING TO THE APPROPRIATE PRECAST ITEM.
2. SEE PROJECT NOTES FOR ADDITIONAL FABRICATION, CONSTRUCTION, AND SEQUENCE NOTES.
3. ELEVATIONS SHOWN ARE FOR ABUTMENT NO 1 AND ABUTMENT NO 2.



LIMITS OF SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) CLOSURE POUR

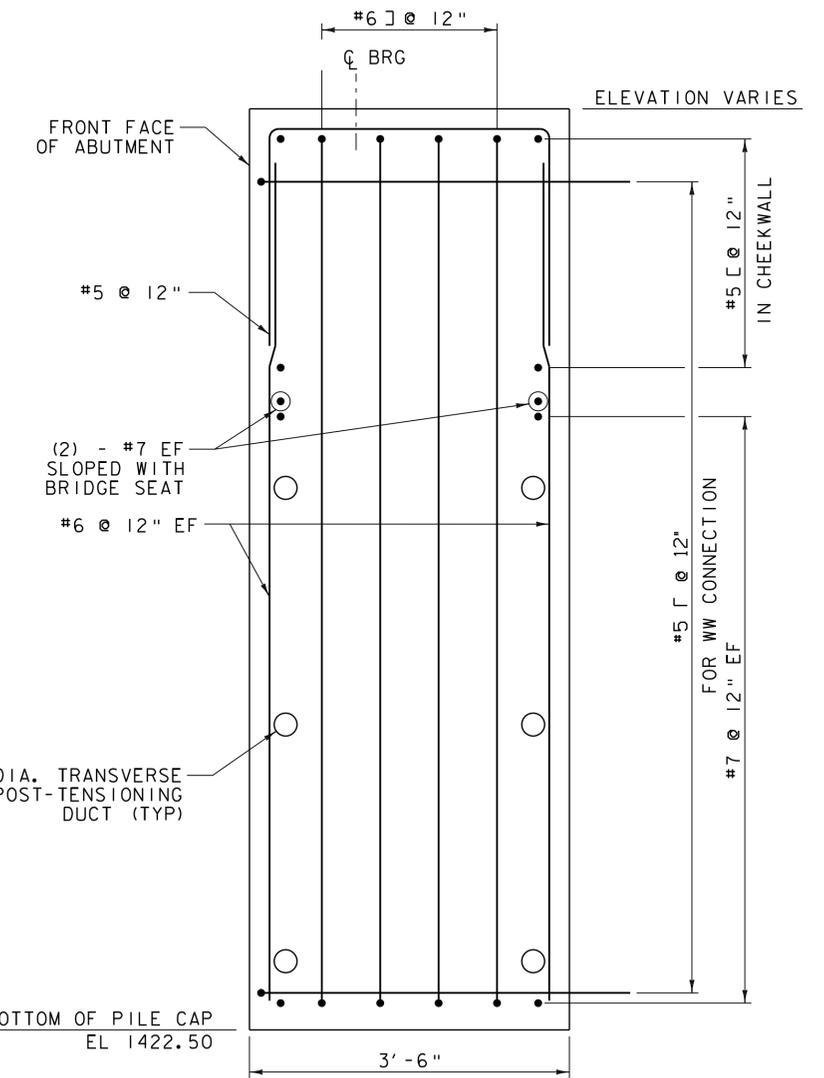


**BRIDGE END DETAIL**  
 (ABUT NO 1 SHOWN, ABUT NO 2 SIMILAR, OPPOSITE HAND)  
 (DIMENSIONS ARE NORMAL TO  $\phi$  BRG)  
 SCALE 1" = 1'-0"



**SECTION A-A**  
 SCALE 1" = 1'-0"

**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



**SECTION B-B**  
 SCALE 1" = 1'-0"

PROJECT NAME:	WESTON	FILE NAME:	z13b076subl.dgn	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	PROJECT LEADER:	S.E. BURBANK	DRAWN BY:	J.J. WESTCOTT
		DESIGNED BY:	J.J. WESTCOTT	CHECKED BY:	L.S. CHERVINCKY
		NEXT BEAM ABUTMENT SECTIONS		SHEET	38 OF 68





(3) - #5 AS SHOWN, SEE SECTION A-A

(5) #5 AS SHOWN, SEE SECTION A-A

(2) #5 SHALL BE PLACED TO AVOID CONFLICT WITH BRIDGE RAILING ANCHOR BOLT CONNECTION, WHILE MAINTAINING A MAXIMUM SPACING OF 12" (TYP)

(3) - #5 AS SHOWN NF (BETWEEN STEMS ONLY) (TYP)

(3) #5 (TYP) SEE NEXT BEAM DETAIL SHEET

OPTIONAL THREADED COUPLER

(3) - #5 AS SHOWN

#5 @ 12" (BETWEEN STEMS ONLY)

#5 @ 12" (BETWEEN STEMS ONLY)

#5 @ 9"

(3) - #5 AS SHOWN NF (BETWEEN STEMS ONLY)

#8 @ 18" FF (MAX) SEE NOTE 1

(5) - #5 AS SHOWN

#7 @ 6" FF (MIN)

#6 @ 12" BETWEEN STEMS ONLY (NF)

#5 @ 9" FF

**ABUTMENT NO 1  
DECK CLOSURE POUR REINFORCING PLAN**

(TRANSVERSE POST-TENSIONING DUCTS & GROUT DUCTS NOT SHOWN FOR CLARITY)  
(ABUTMENT NO. 2 SIMILAR)  
SCALE 1/2" = 1'-0"

(2) #5 SHALL BE PLACED TO AVOID CONFLICT WITH BRIDGE RAILING ANCHOR BOLT CONNECTION, WHILE MAINTAINING A MAXIMUM SPACING OF 12" (TYP)

#8 @ 18" (MAX) FF (SEE NOTE 1)  
#5 @ 12" (BETWEEN STEMS ONLY)  
#5 @ 12" (BETWEEN STEMS ONLY)  
#5 @ 12" (BETWEEN STEMS ONLY)

(3) - #5 AS SHOWN NF (BETWEEN STEMS ONLY) (TYP)

(5) - #5 AS SHOWN IN SECTION A-A (FF)

(2) ADDITIONAL #5 AT END (TYP)

**SECTION A-A**

(ABUT NO 1 SHOWN, ABUT NO 2 SIMILAR, OPPOSITE HAND)  
(DIMENSIONS ARE NORMAL TO CL BRG)

SCALE 3/4" = 1'-0"

LIMITS OF SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) CLOSURE POUR

- NOTE:**
1. SPACED TO MATCH 4" DIAMETER HOLES IN THE PRECAST APPROACH SLAB.
  2. ALL REINFORCING WITHIN CLOSURE POUR NEAR THE BRIDGE RAILING ANCHOR ASSEMBLY LOCATIONS SHALL BE PLACED AT THEIR MINIMUM SPACING WHILE AVOIDING THE BRIDGE RAILING ASSEMBLIES.
  3. ITEM 524.21, JOINT SEALER, POLYURETHANE, WILL BE APPLIED OVER THE CORK AND ON THE FAR FACE OF THE MATCH CAST VERTICAL CONSTRUCTION JOINT.

**NOTE:**  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

**ABUTMENT NO 1  
DECK CLOSURE POUR REINFORCING ELEVATION**

(TRANSVERSE POST-TENSIONING DUCTS NOT SHOWN FOR CLARITY)  
(ABUTMENT NO 2 SIMILAR)  
SCALE 1/2" = 1'-0"

#5 @ 9" FF  
#6 @ 12" NF (BETWEEN STEMS ONLY), #7 @ 6" FF

OPTIONAL CONSTRUCTION JOINT TO BE MATCH CAST

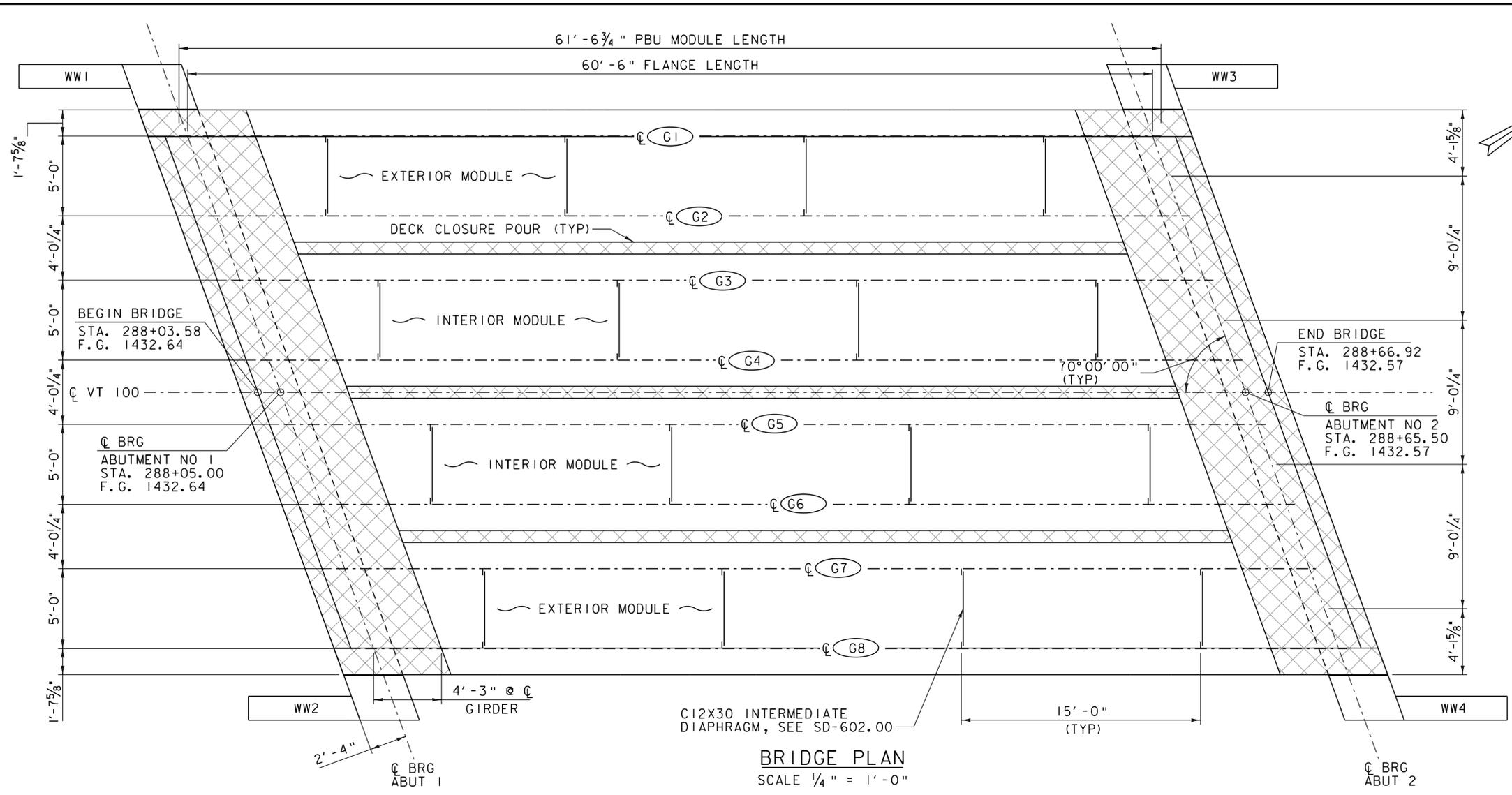
1/2" CORK (TYP)



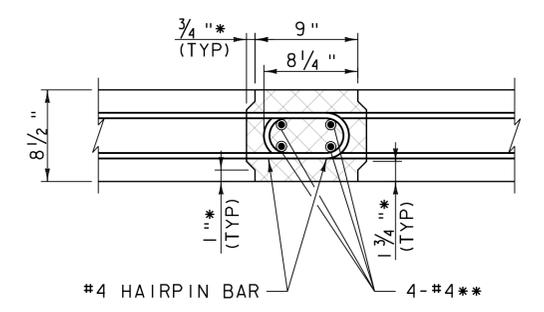
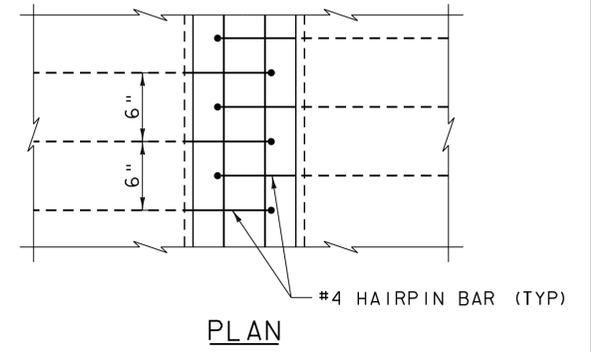
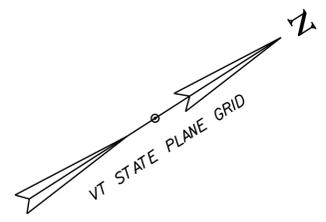
PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(I3)

FILE NAME: z13b076subl.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
NEXT BEAM DECK CLOSURE POUR

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: L.S. CHERVINCKY  
SHEET 40 OF 68



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

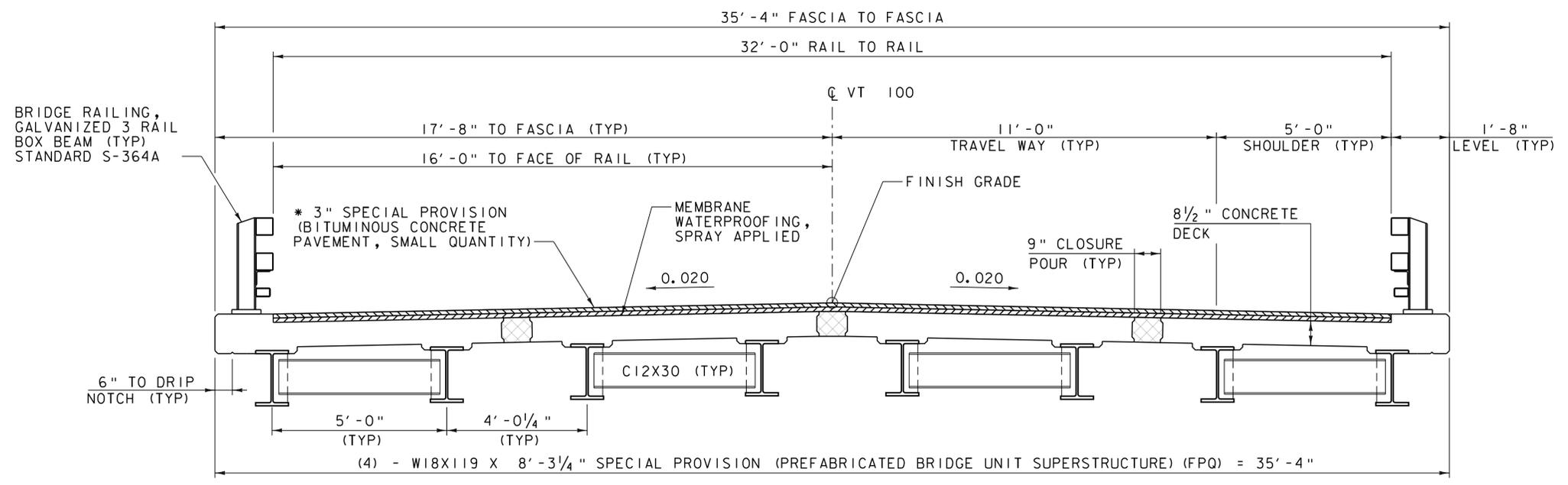


**SECTION**

**FLANGE CONNECTION DETAILS**  
NOT TO SCALE

⊠ = SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

- \* DIMENSIONS ARE TO KEY IN JOINT
- \*\* FOUR #4 BARS SHALL BE PLACED AS SHOWN ALONG ENTIRE LENGTH OF JOINT. PAYMENT SHALL BE INCIDENTAL TO "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)".

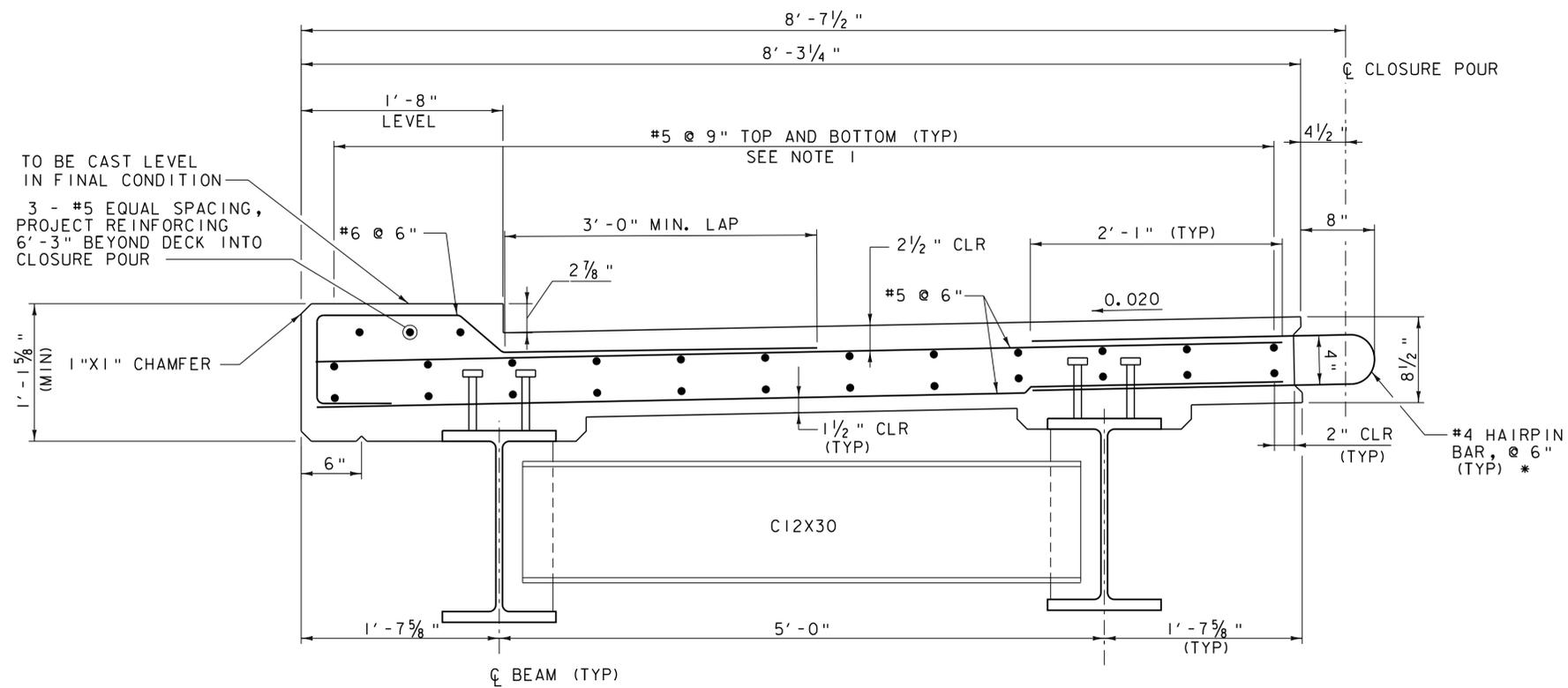


**TYPICAL BRIDGE SECTION PBU ALTERNATE**  
SCALE 1/2" = 1'-0"

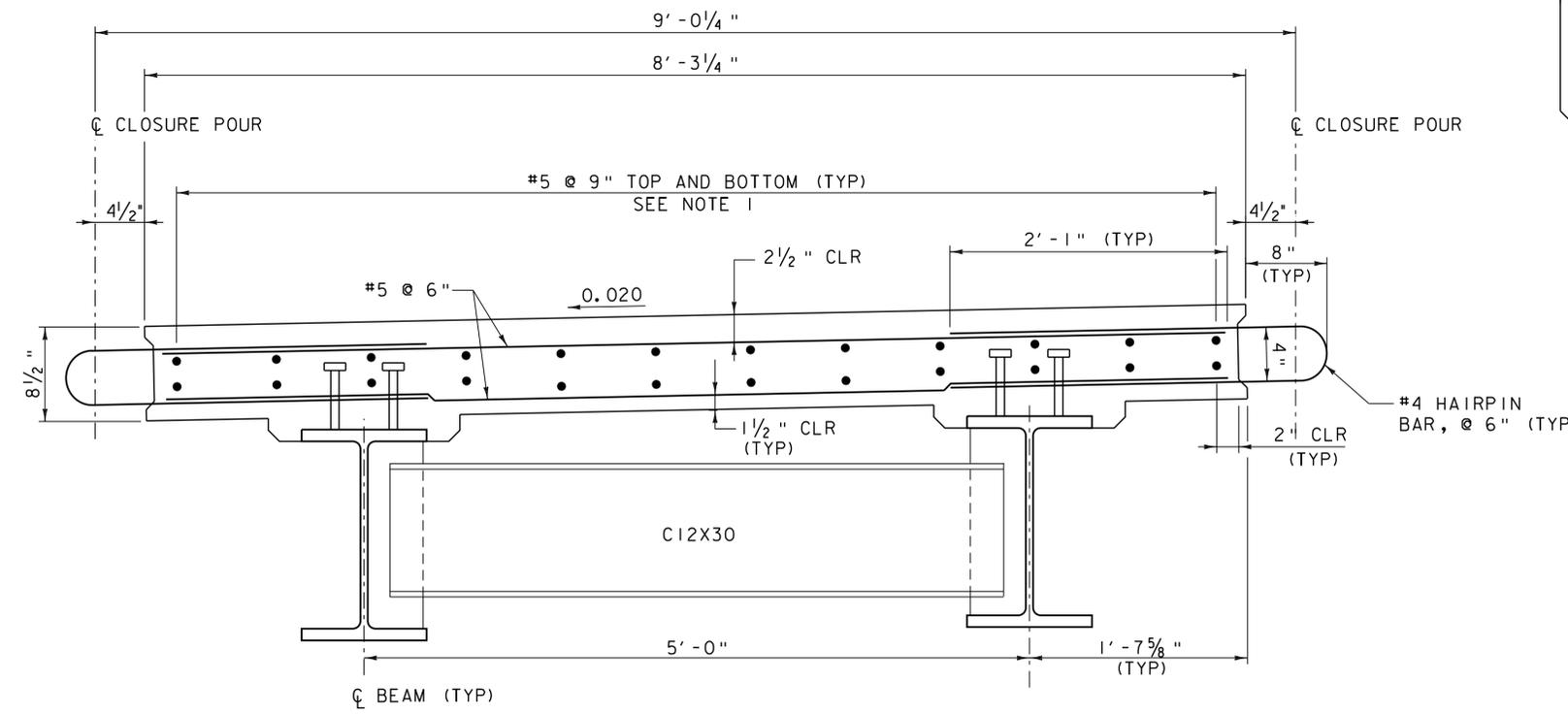
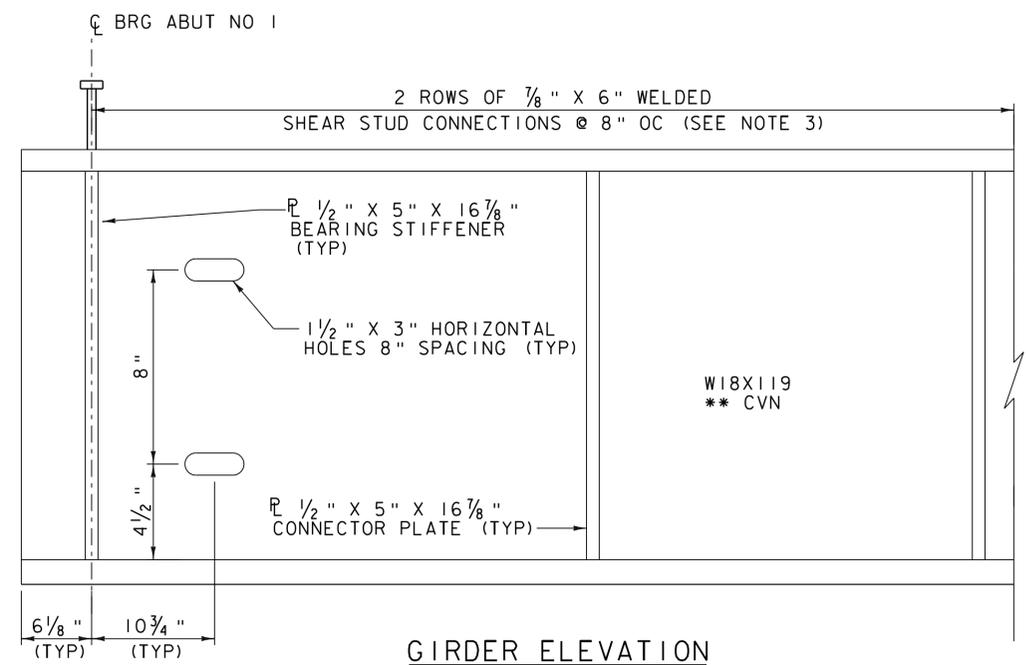
\* - (2) - 1 1/2" LIFTS OF TYPE IVS



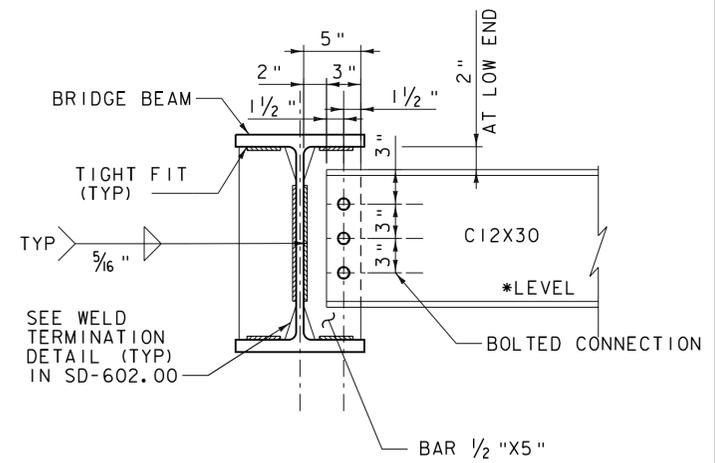
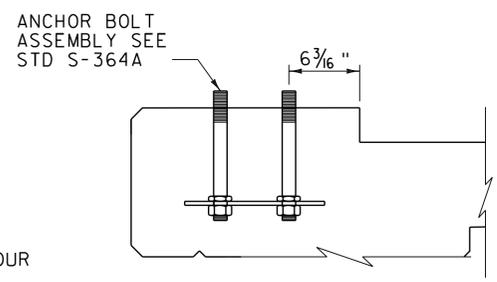
PROJECT NAME:	WESTON	FILE NAME:	z13b076sup2.dgn	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	PROJECT LEADER:	S.E. BURBANK	DRAWN BY:	K.C. BARRY
		DESIGNED BY:	J.D. KEENER	CHECKED BY:	M.J. MOZIER
		PBU FRAMING PLAN		SHEET	41 OF 68



**EXTERIOR MODULE DETAIL**  
(PBU 1 SHOWN, PBU 4 HAS LIP OPPOSITE HAND)  
SCALE 1 1/2" = 1'-0"



**INTERIOR MODULE DETAIL**  
SCALE 1 1/2" = 1'-0"

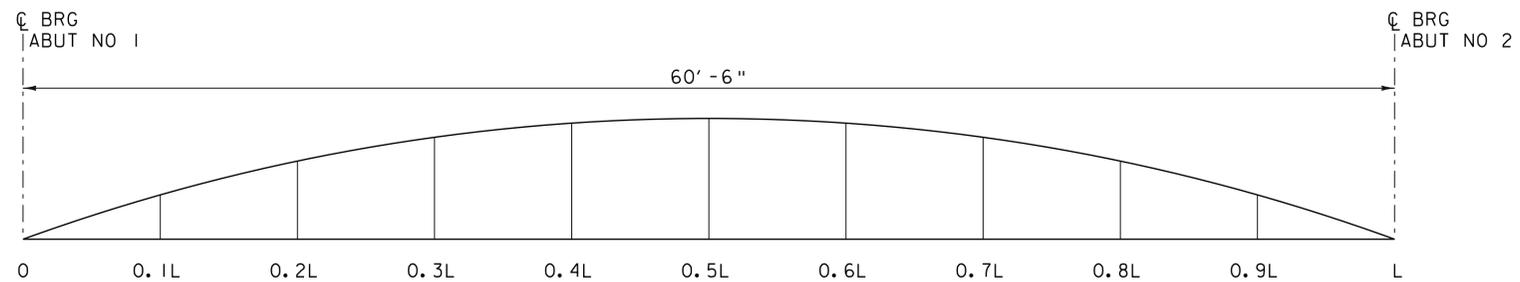


**NOTE:**  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
\* TO BE STAGGERED WITH ADJACENT BEAM  
\*\* CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

- NOTE:**
1. MINIMUM LONGITUDINAL LAP SPLICE IS 1'-9".
  2. TRANSVERSE REINFORCING ORIENTED WITH CENTERLINE OF BEARING. STAGGER BARS BETWEEN ADJACENT PBU'S.
  3. THE COST OF SHEAR CONNECTORS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.640 "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)".

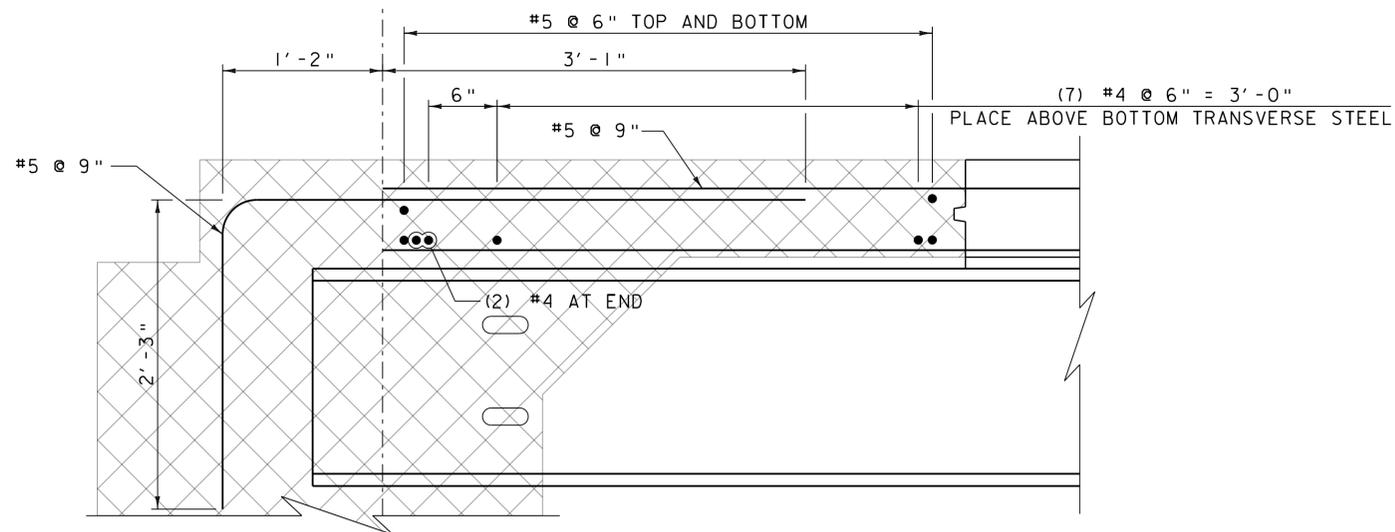


PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: K.C. BARRY
FILE NAME: z13b076sup2.dgn	CHECKED BY: M.J. MOZIER
PROJECT LEADER: S.E. BURBANK	SHEET 42 OF 68
DESIGNED BY: J.D. KEENER	
PBU DETAILS	



**CAMBER DIAGRAM**  
NOT TO SCALE

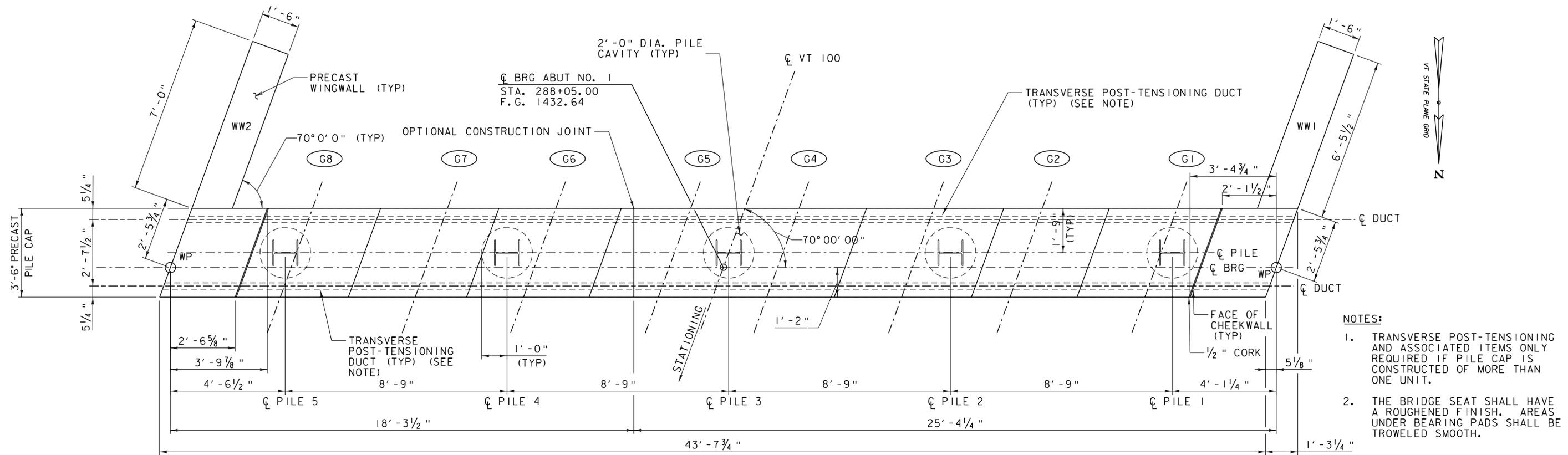
CAMBER TABLE - GIRDERS 1 - 8 (INCHES)											
	0.00	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
STEEL DEFLECTION	0.00	0.20	0.37	0.51	0.59	0.62	0.59	0.51	0.37	0.20	0.00
SLAB AND SUPER DEFLECTION	0.00	0.76	1.44	1.98	2.31	2.43	2.31	1.98	1.44	0.76	0.00
TOTAL DEFLECTION	0.00	1.09	2.07	2.83	3.31	3.48	3.31	2.83	2.07	1.09	0.00
RESIDUAL CAMBER	0.00	0.44	0.82	1.11	1.29	1.35	1.29	1.11	0.82	0.44	0.00
TOTAL CAMBER	0.00	1.53	2.88	3.93	4.60	4.83	4.60	3.93	2.88	1.53	0.00



**ADDITIONAL END REINFORCING  
ELEVATION VIEW**  
SCALE 1/2" = 1'-0"

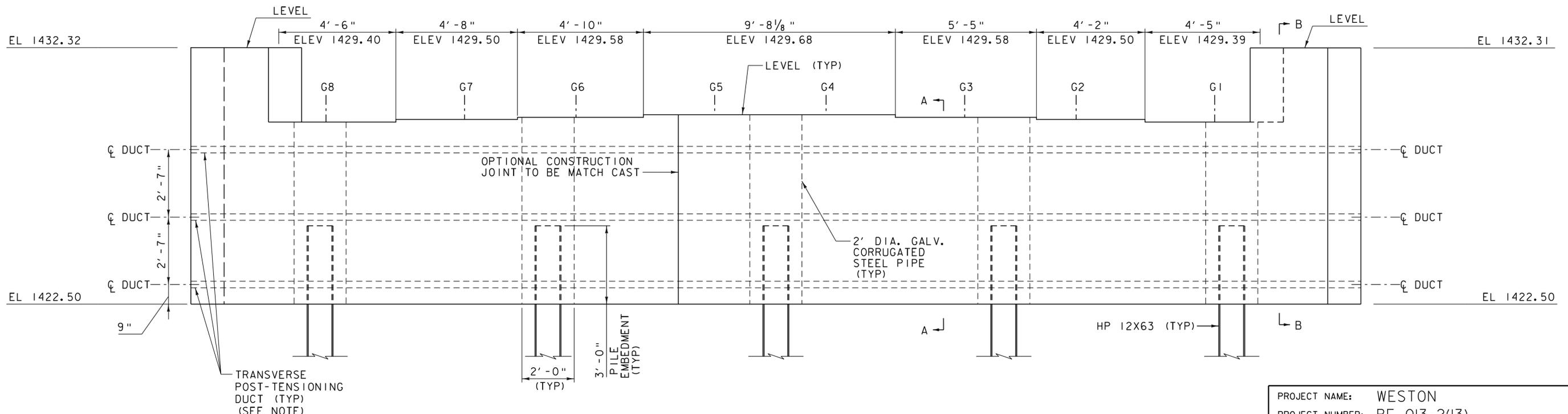


PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: K.C. BARRY
FILE NAME: z13b076sup2.dgn	CHECKED BY: M.J. MOZIER
PROJECT LEADER: S.E. BURBANK	SHEET 43 OF 68
DESIGNED BY: J.D. KEENER	
PBU CAMBER AND DEFLECTION	



- NOTES:**
1. TRANSVERSE POST-TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.
  2. THE BRIDGE SEAT SHALL HAVE A ROUGHENED FINISH. AREAS UNDER BEARING PADS SHALL BE TROWELED SMOOTH.

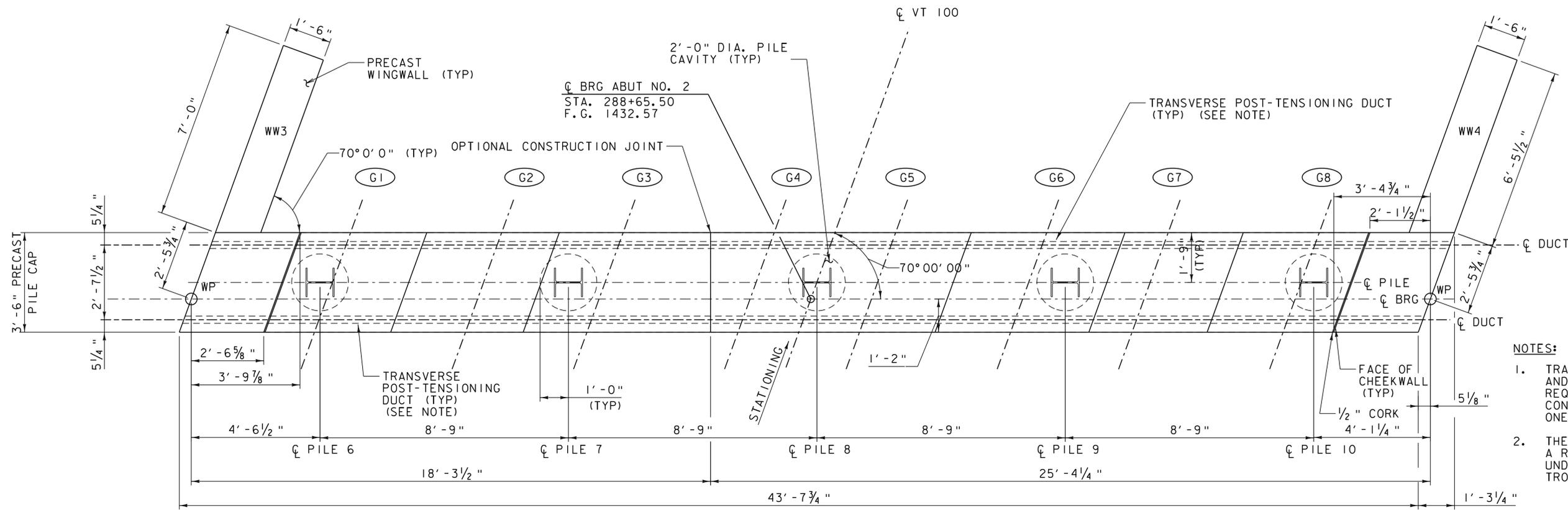
**ABUTMENT NO 1 PLAN**  
SCALE 1/2" = 1'-0"



**ABUTMENT NO 1 ELEVATION**  
SCALE 1/2" = 1'-0"  
SEE PBU ABUTMENT SECTIONS SHEET FOR SECTIONS A-A AND B-B.

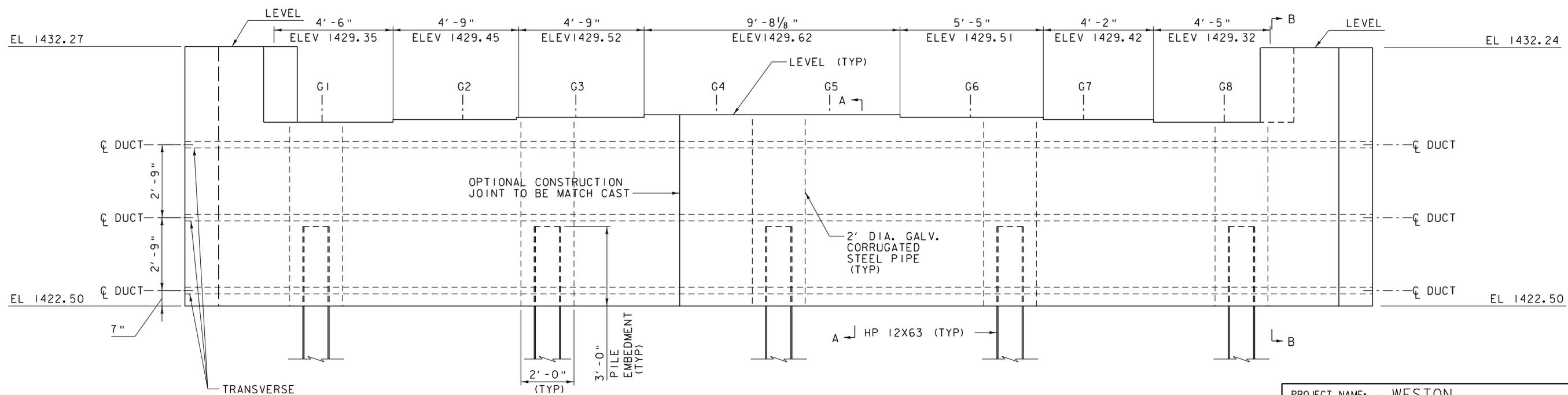


PROJECT NAME:	WESTON	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	DRAWN BY:	J.J. WESTCOTT
FILE NAME:	z13b076sub2.dgn	CHECKED BY:	L.S. CHERVINCKY
PROJECT LEADER:	S.E. BURBANK	SHEET	44 OF 68
DESIGNED BY:	J.J. WESTCOTT	PBU ABUT NO 1 PLAN & ELEVATION	



- NOTES:**
1. TRANSVERSE POST-TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.
  2. THE BRIDGE SEAT SHALL HAVE A ROUGHENED FINISH. AREAS UNDER BEARING PADS SHALL BE TROWELED SMOOTH.

ABUTMENT NO 2 PLAN  
SCALE 1/2" = 1'-0"



ABUTMENT NO 2 ELEVATION  
SCALE 1/2" = 1'-0"

SEE PBU ABUTMENT SECTIONS SHEET FOR SECTIONS A-A AND B-B.

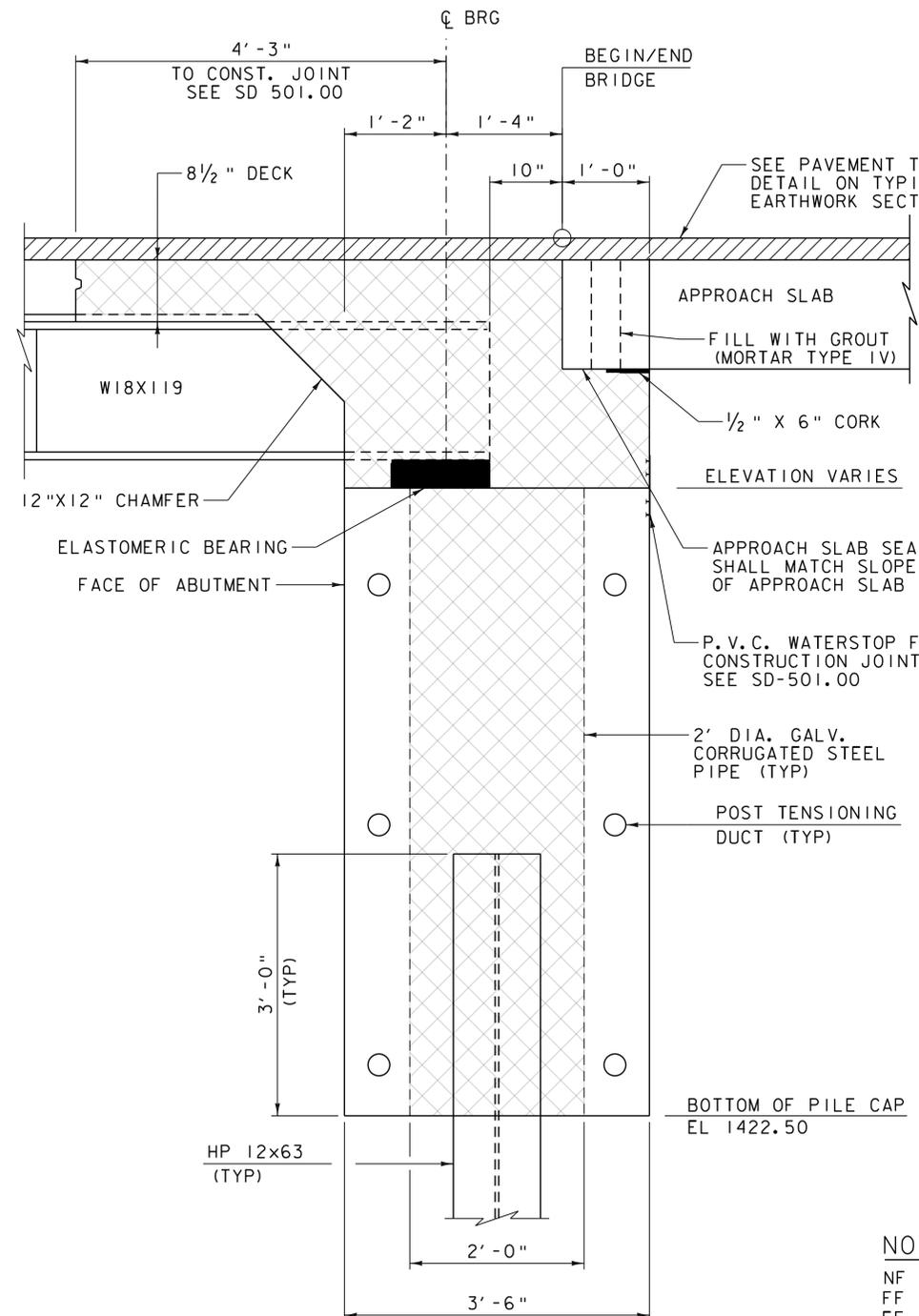


PROJECT NAME:	WESTON	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	DRAWN BY:	J.J. WESTCOTT
FILE NAME:	z13b076sub2.dgn	DESIGNED BY:	J.J. WESTCOTT
PROJECT LEADER:	S.E. BURBANK	CHECKED BY:	L.S. CHERVINCKY
PBU ABUT NO 2 PLAN & ELEVATION		SHEET	45 OF 68

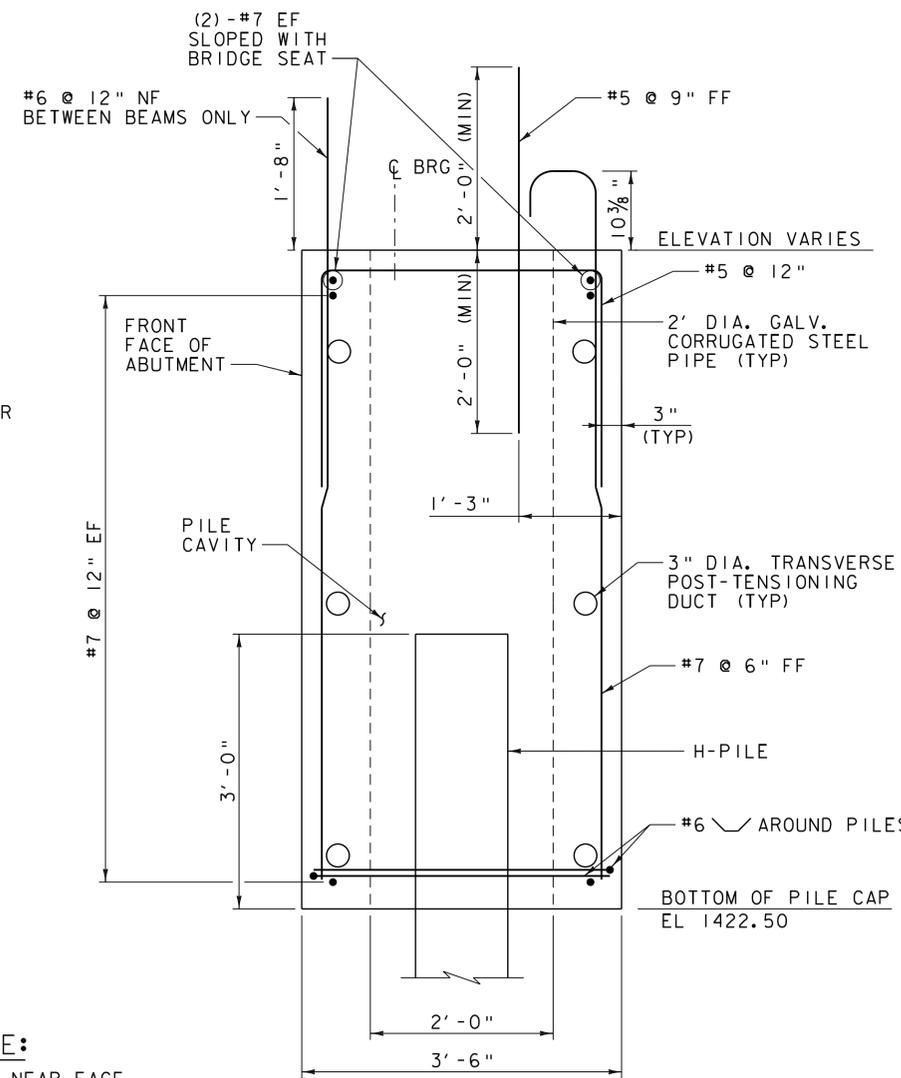
**NOTES:**

1. ABUTMENTS SHALL BE PRECAST CONCRETE ACCORDING TO THE APPROPRIATE PRECAST ITEM.
2. SEE PROJECT NOTES FOR ADDITIONAL FABRICATION, CONSTRUCTION, AND SEQUENCE NOTES.
3. ELEVATIONS SHOWN ARE FOR ABUTMENT NO 1 AND ABUTMENT NO 2.

 LIMITS OF SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) CLOSURE POUR

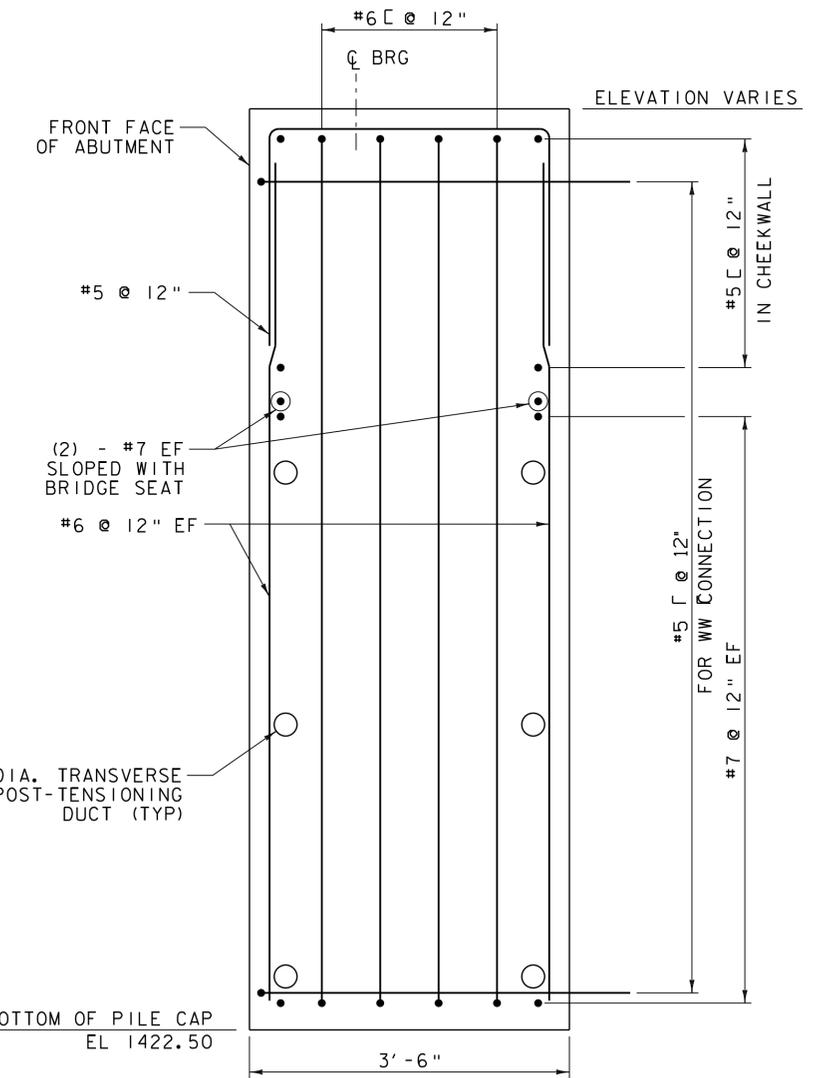


**BRIDGE END DETAIL**  
 (ABUT NO 1 SHOWN, ABUT NO 2 SIMILAR, OPPOSITE HAND)  
 (DIMENSIONS ARE NORMAL TO  $\phi$  BRG)  
 SCALE 1" = 1'-0"



**SECTION A-A**  
 SCALE 1" = 1'-0"

**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 $\nabla$  = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

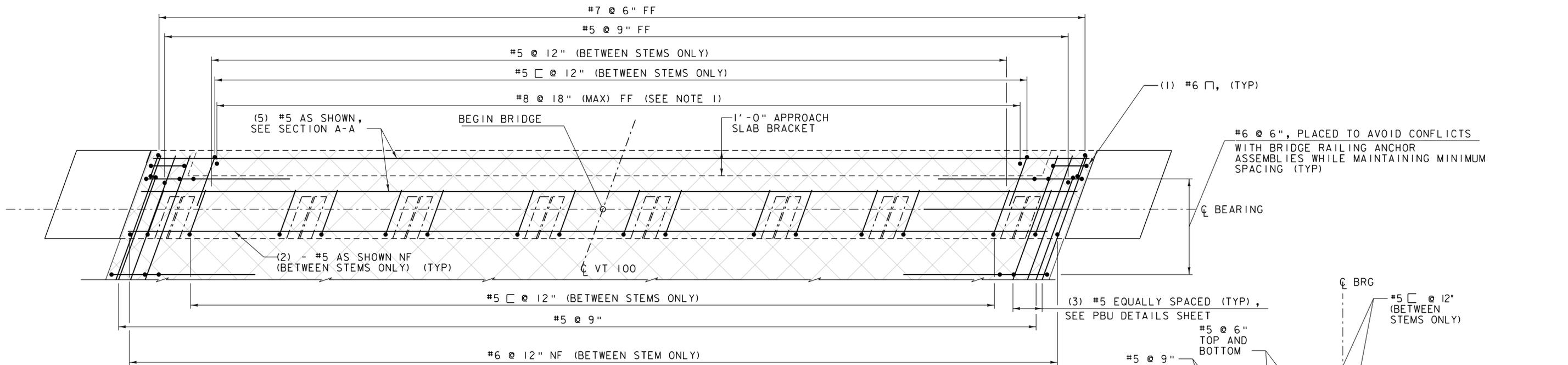


**SECTION B-B**  
 SCALE 1" = 1'-0"

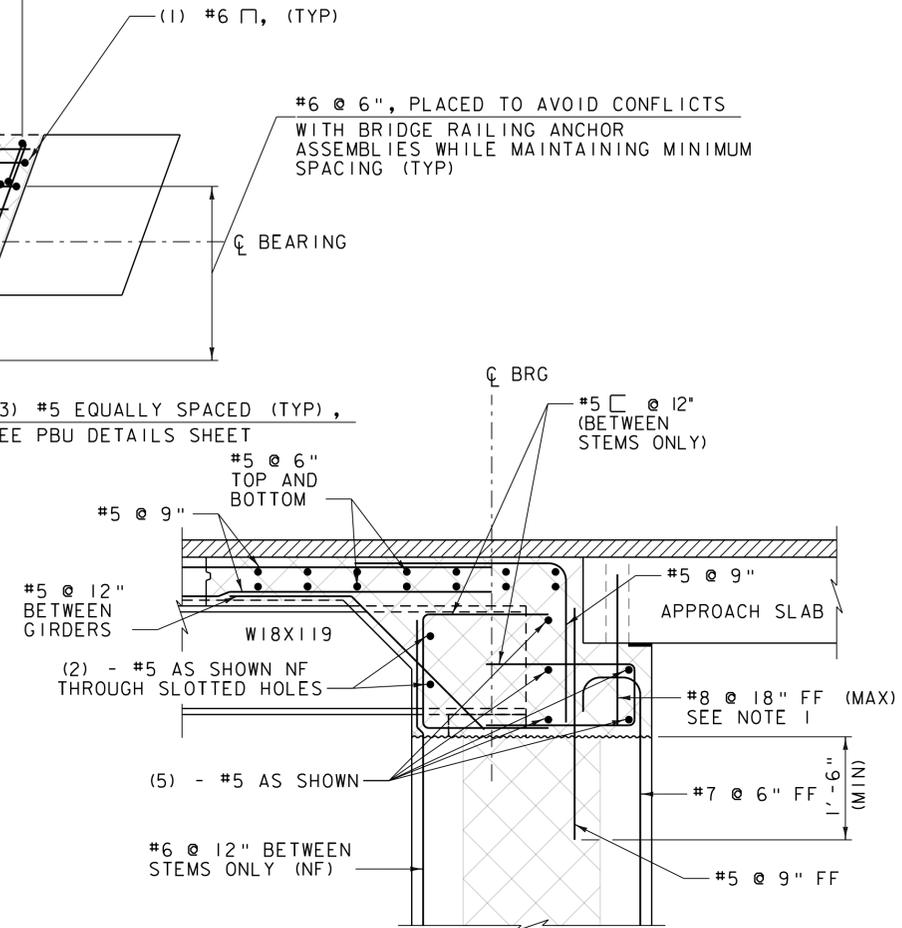
PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: J.J. WESTCOTT
FILE NAME: z13b076sub2.dgn	CHECKED BY: L.S. CHERVINCKY
PROJECT LEADER: S.E. BURBANK	SHEET 46 OF 68
DESIGNED BY: J.J. WESTCOTT	
PBU ABUTMENT SECTIONS	







ABUTMENT NO 1  
DECK CLOSURE POUR REINFORCING PLAN  
(TRANSVERSE POST-TENSIONING DUCTS & GROUT DUCTS NOT SHOWN FOR CLARIFY)  
(ABUTMENT NO. 2 SIMILAR)  
SCALE 1/2" = 1'-0"



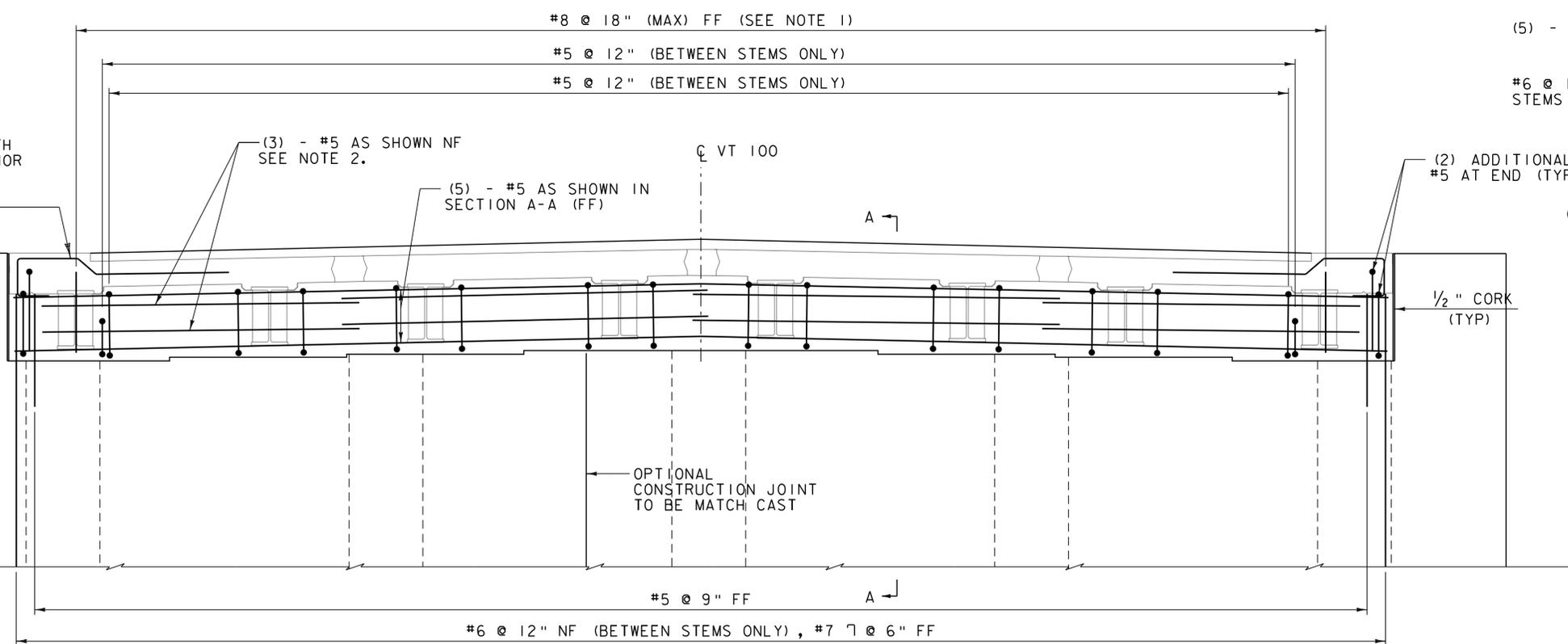
SECTION A-A  
(ABUT NO 1 SHOWN, ABUT NO 2 SIMILAR, OPPOSITE HAND)  
(DIMENSIONS ARE NORMAL TO CL BRG)  
SCALE 3/4" = 1'-0"

LIMITS OF SPECIAL PROVISION  
(HIGH PERFORMANCE CONCRETE,  
RAPID SET) (FPQ) CLOSURE POUR

- NOTE:
1. SPACED TO MATCH 4" DIAMETER HOLES IN THE PRECAST APPROACH SLAB.
  2. THE TWO #5 BARS MUST BE PLACED IN THE SLOTTED HOLES BEFORE SETTING BEAMS ON BRIDGE SEAT.
  3. ITEM 524.21, JOINT SEALER, POLYURETHANE, WILL BE APPLIED OVER THE CORK AND ON THE FAR FACE OF THE MATCH CAST VERTICAL CONSTRUCTION JOINT.

#6 @ 6", PLACED TO AVOID CONFLICTS WITH BRIDGE RAILING ANCHOR ASSEMBLIES WHILE MAINTAINING MINIMUM SPACING (TYP).

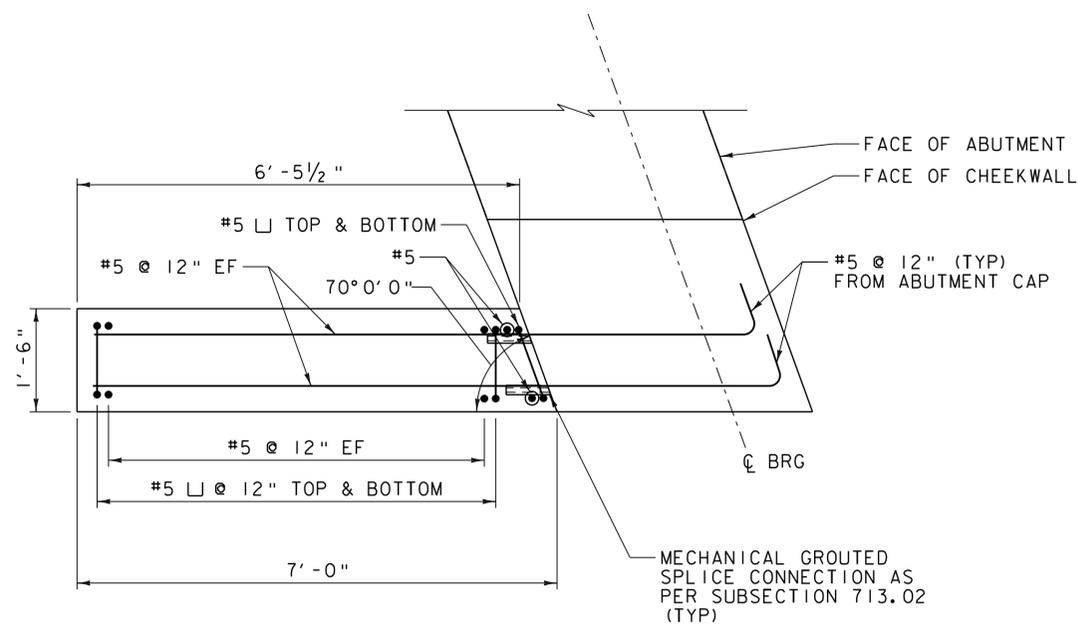
- NOTE:
- NF = NEAR FACE
  - FF = FAR FACE
  - EF = EACH FACE
  - ▲ = CUT TO FIT IN FIELD
  - 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



ABUTMENT NO 1  
DECK CLOSURE POUR REINFORCING ELEVATION  
(TRANSVERSE POST-TENSIONING DUCTS NOT SHOWN FOR CLARIFY)  
(ABUTMENT NO 2 SIMILAR)  
SCALE 1/2" = 1'-0"

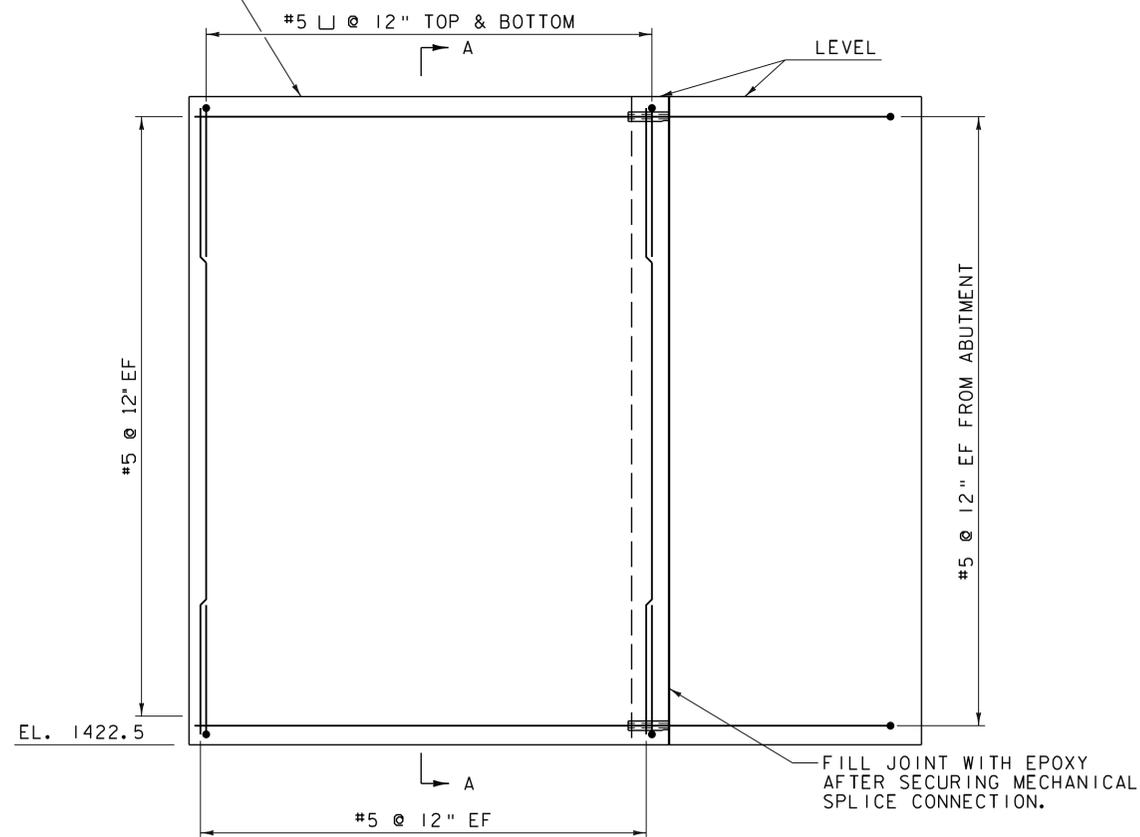
PROJECT NAME:	WESTON	FILE NAME:	z13b076sub2.dgn	PLOT DATE:	10/2/2015
PROJECT NUMBER:	BF 013-2(13)	PROJECT LEADER:	S.E. BURBANK	DRAWN BY:	J.J. WESTCOTT
		DESIGNED BY:	J.J. WESTCOTT	CHECKED BY:	L.S. CHERVINCKY
		PBU DECK CLOSURE POUR		SHEET	48 OF 68





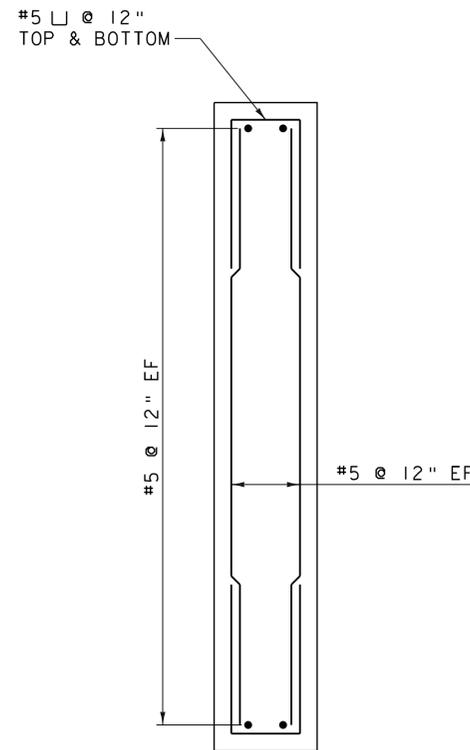
WINGWALL NO. 1, 2, 3, & 4 PLAN  
SCALE 3/4" = 1'-0"

WW 1 EL. 1432.31  
WW 2 EL. 1432.32  
WW 3 EL. 1432.27  
WW 4 EL. 1432.24

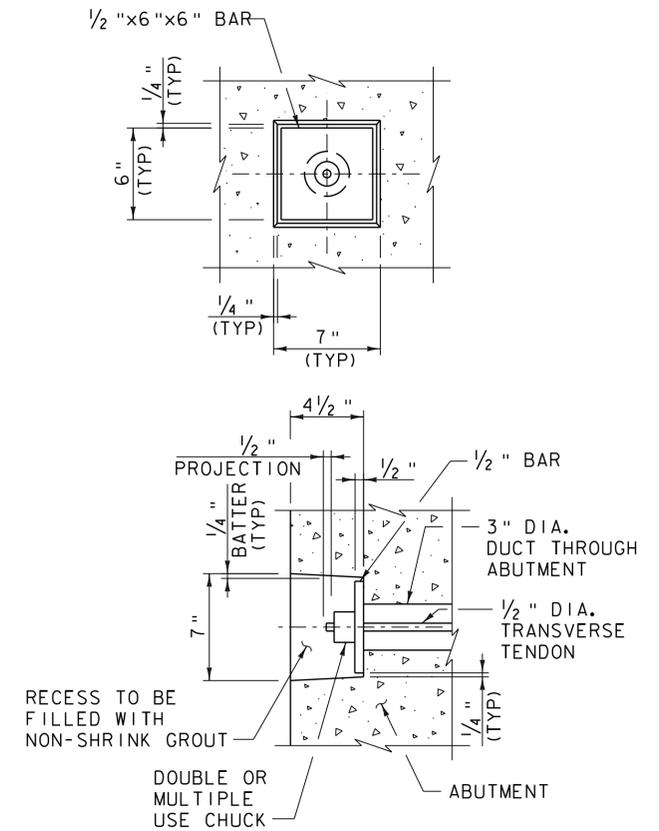


WINGWALL NO 2 ELEVATION  
WINGWALL 1, 3, AND 4 SIMILAR  
SCALE 3/4" = 1'-0"

**NOTE:**  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



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



TRANSVERSE TENDON DETAIL  
NOT TO SCALE

**TRANSVERSE TENDON NOTES:**

1. MORTAR FOR EXTERIOR POCKETS SHALL BE THE SAME COLOR AND TEXTURE AS THE ABUTMENT CONCRETE.
2. OTHER ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATER TIGHT AND CORROSION PROOF.
3. TRANSVERSE TENDONS SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITING GREASE BETWEEN THE STRAND/ANCHOR AND THE SHEATH) FOR THE FULL LENGTH OF THE TENDON/ANCHOR, EXCEPT AT THE ANCHORAGE LOCATION.

**NOTES:**

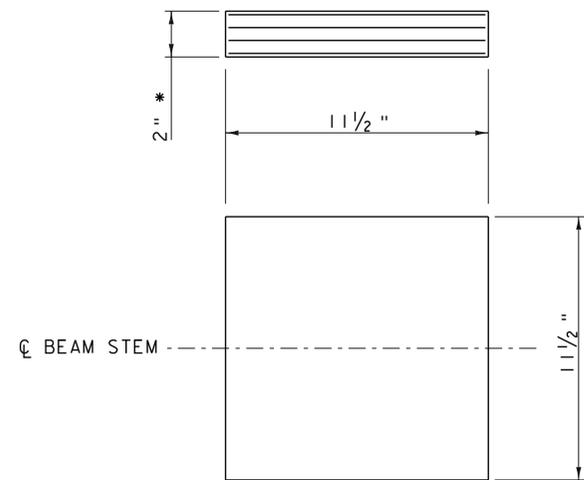
1. PAYMENT FOR ALL REINFORCING STEEL AND MECHANICAL CONNECTORS WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST CONTRACT ITEM. THE CONTRACTOR SHALL PROVIDE THREE (3) MECHANICAL CONNECTORS ASSEMBLED PER SPLICE SIZE FOR TESTING. THE ASSEMBLY SHALL BE WITNESSED BY THE ENGINEER.
2. ALL REINFORCING STEEL IN WINGWALLS SHALL MEET REQUIREMENTS OF SECTION 507 FOR LEVEL II REINFORCING. ALL MECHANICAL CONNECTORS IN WINGWALLS SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR LEVEL I (EPOXY COATED) REINFORCING.
3. THE BRIDGE PLAQUE FURNISHED BY THE AGENCY SHALL BE CAST INTO WINGWALL 2. ALL WORK TO INSTALL THE PLAQUE SHALL BE INCIDENTAL TO THE APPROPRIATE PRECAST CONTRACT ITEM. SEE SD-502.00 FOR FURTHER DETAILS.
4. PAYMENT FOR EPOXY GROUT WILL BE CONSIDERED INCIDENTAL TO APPROPRIATE PRECAST PAY ITEM.

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076sub2.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
WINGWALL DETAILS

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: L.S. CHERVINCKY  
SHEET 49 OF 68

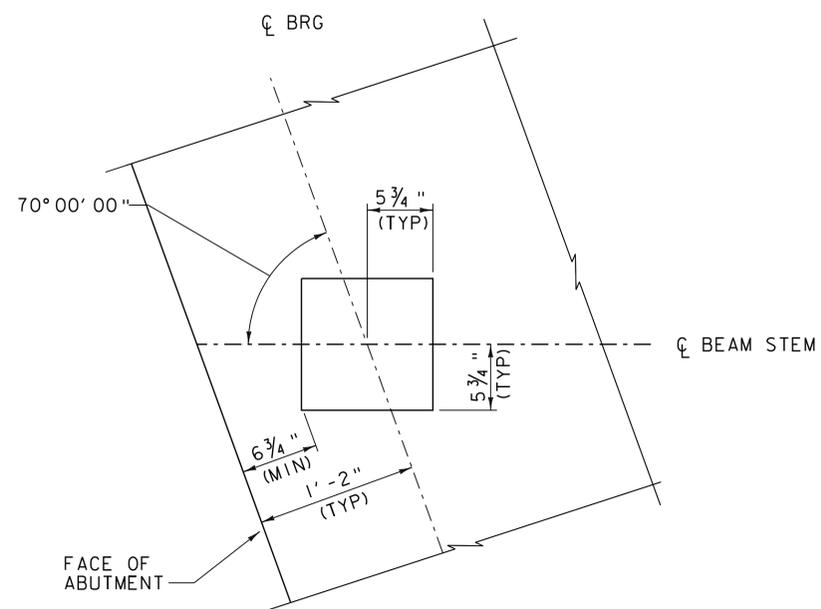




- \* 2 - 1/8" EXTERIOR LAYERS OF ELASTOMER
- 3 - 1/2" INTERIOR LAYERS OF ELASTOMER
- 4 - 1/16" STEEL REINFORCING PLATES

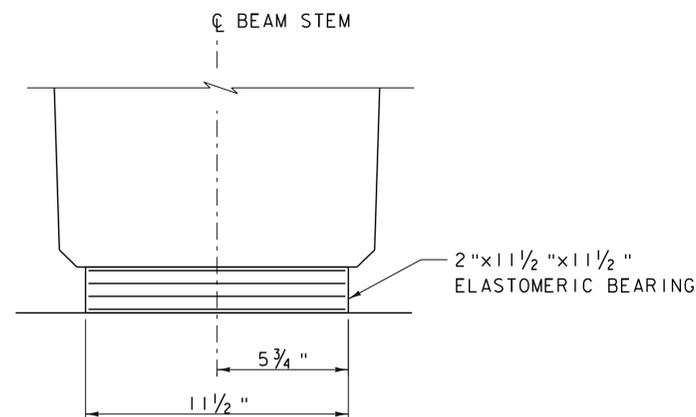
**ELASTOMERIC BEARING DETAIL**

SCALE 3" = 1'-0"

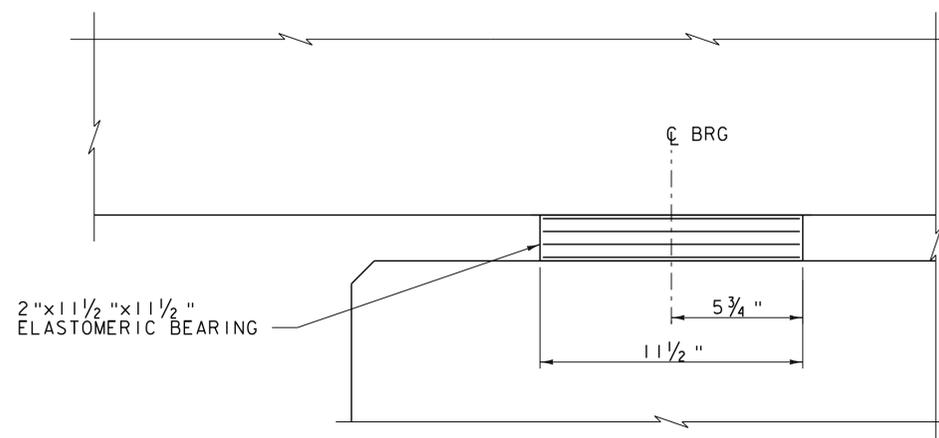


**PLAN**

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



**FRONT ELEVATION**



**SIDE ELEVATION**

**ELASTOMERIC BEARING DETAILS**

SCALE 3" = 1'-0"

**BEARING NOTES**

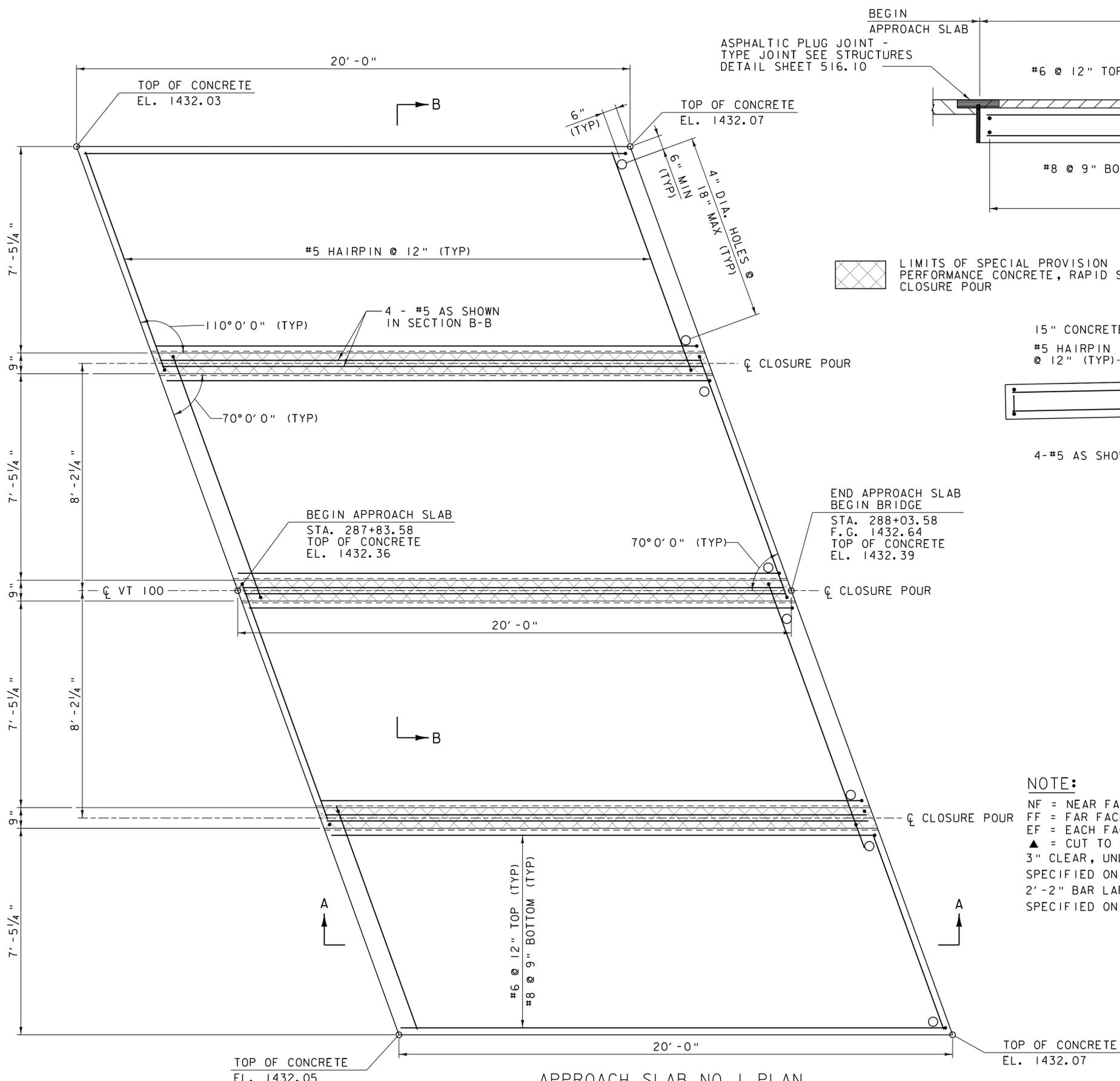
1. BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL MEETING THE REQUIREMENTS OF SUBSECTION 714.02. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST, AND MILL SCALE. THE PLATES SHALL 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 165 PSI +/- 15%.
5. THE CONCRETE UNDER THE BEARING DEVICE SHALL BE LEVEL.
6. THE CONTRACTOR IS ADVISED TO HAVE A MINIMUM OF 16 - 1/4"x12 1/2"x12 1/2" GALVANIZED STEEL SHIMS AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND PAYMENT WILL BE INCLUDED UNDER ITEM 531.17, "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD".



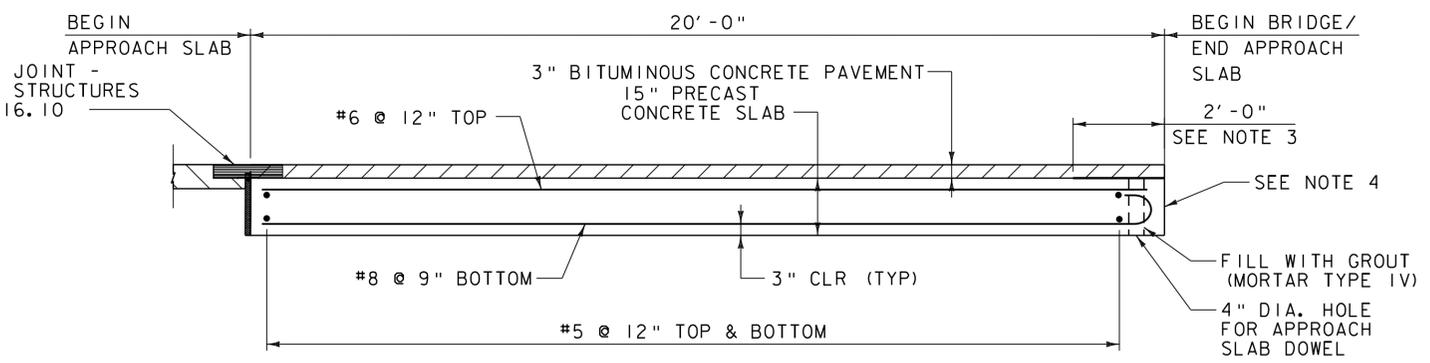
PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076brg.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
BEARING DETAILS

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 50 OF 68

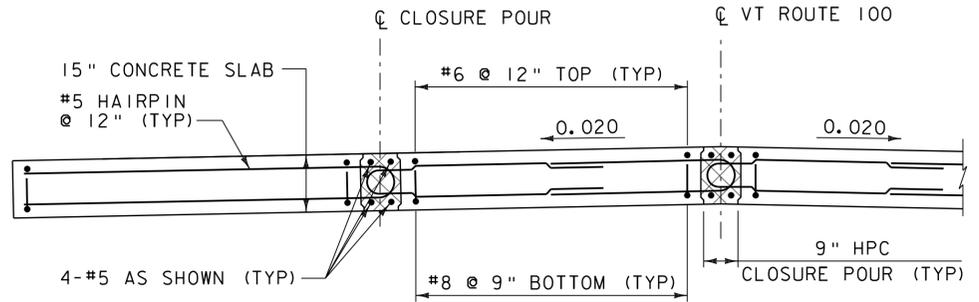


APPROACH SLAB NO. 1 PLAN  
SCALE 1/2" = 1'-0"

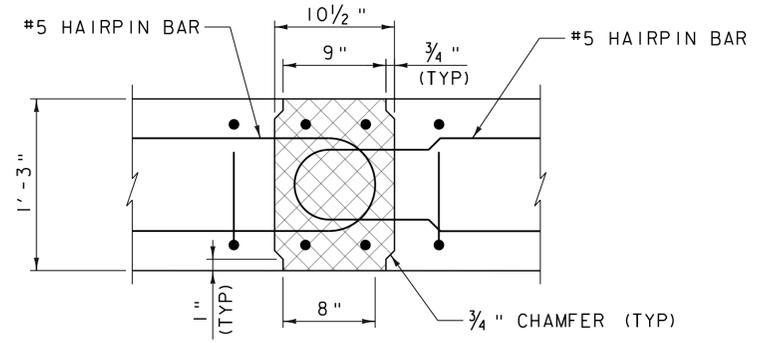


SECTION A-A  
SCALE 1/2" = 1'-0"

LIMITS OF SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) CLOSURE POUR



SECTION B-B  
SCALE 1/2" = 1'-0"



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

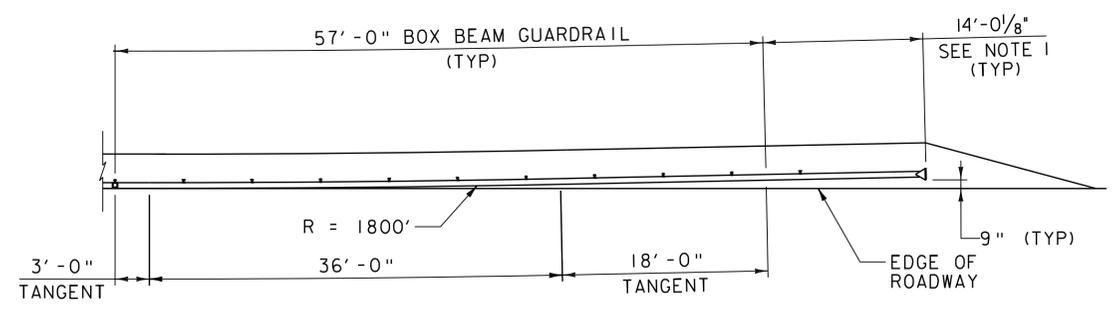
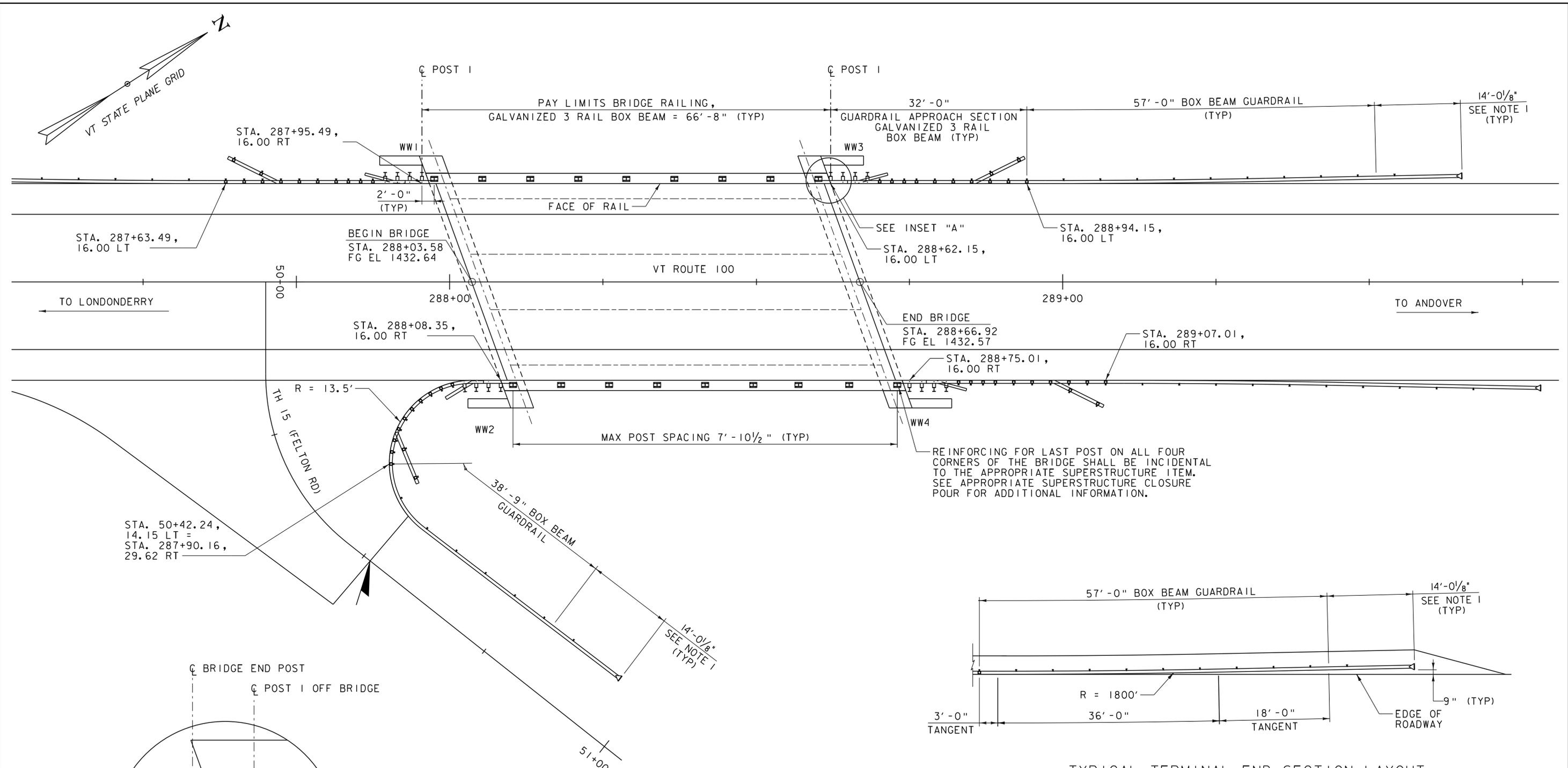
**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

- NOTES:**
- LIFTING POINTS IN APPROACH SLABS TO BE DESIGNED BY PRECASTER AND SUBMITTED WITH CALCULATIONS.
  - CONTRACTOR SHALL INCLUDE IN THE FABRICATION DRAWINGS THE METHOD AND DETAILS FOR ESTABLISHING CONTINUOUS CONTACT WITH SUBGRADE AND SUPPORT FOR PRECAST APPROACH SLABS.
  - MEMBRANE WATERPROOFING, SPRAY APPLIED SHALL BE APPLIED 2'-0" ONTO APPROACH SLAB FROM BEGIN/END BRIDGE.
  - FRONT FACE OF APPROACH SLAB SHALL BE VERTICAL WHEN PLACED ON APPROACH SLAB SEAT.

PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: J.J. WESTCOTT
FILE NAME: z13b076slab.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 51 OF 68
DESIGNED BY: J.J. WESTCOTT	
PRECAST APPROACH SLABS (1 OF 2)	





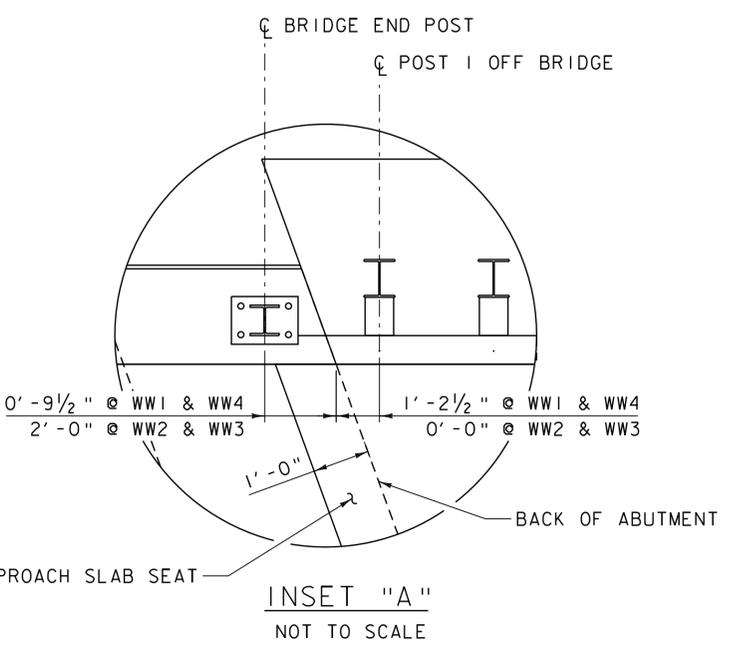


TYPICAL TERMINAL END SECTION LAYOUT

SCALE 1/8" = 1'-0"

NOTE:

1. 14'-0 1/8" MANUFACTURED TERMINAL SECTION, TANGENT.
2. SEE STANDARDS S-364A, S-364B, S-364C AND S-364D FOR FURTHER DETAILS.
3. SEE BOX BEAM GUARD RAIL DETAILS SHEET FOR FURTHER DETAILS.

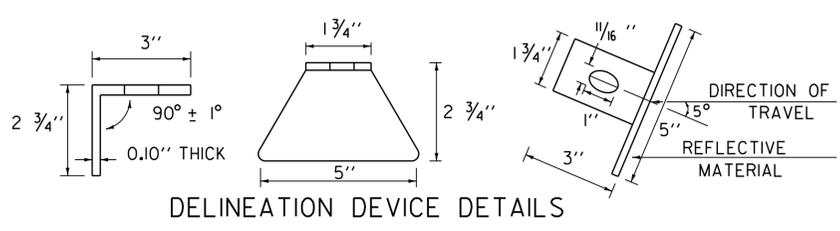
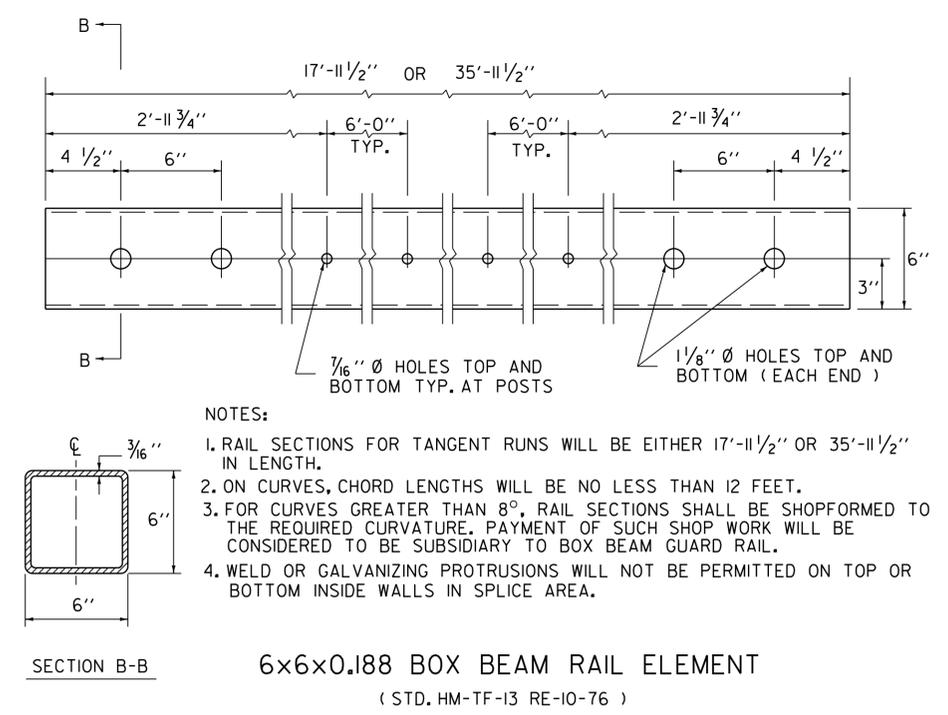
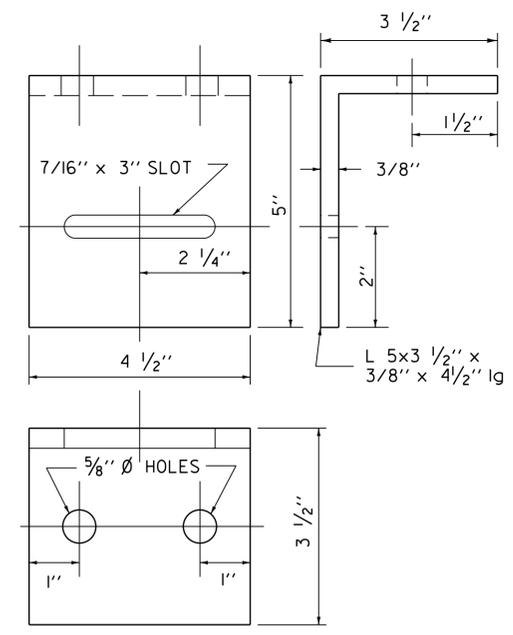
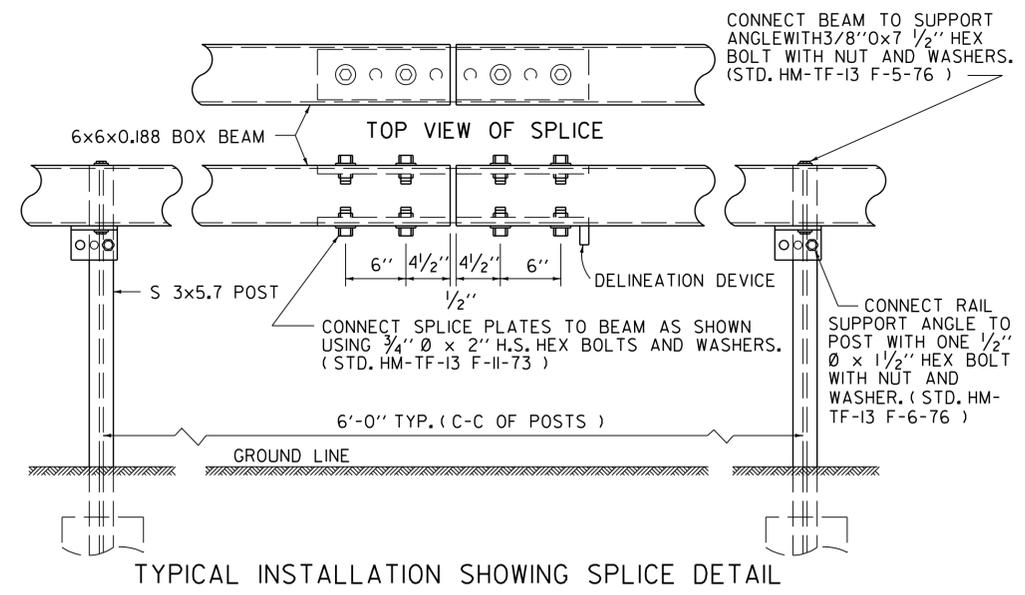
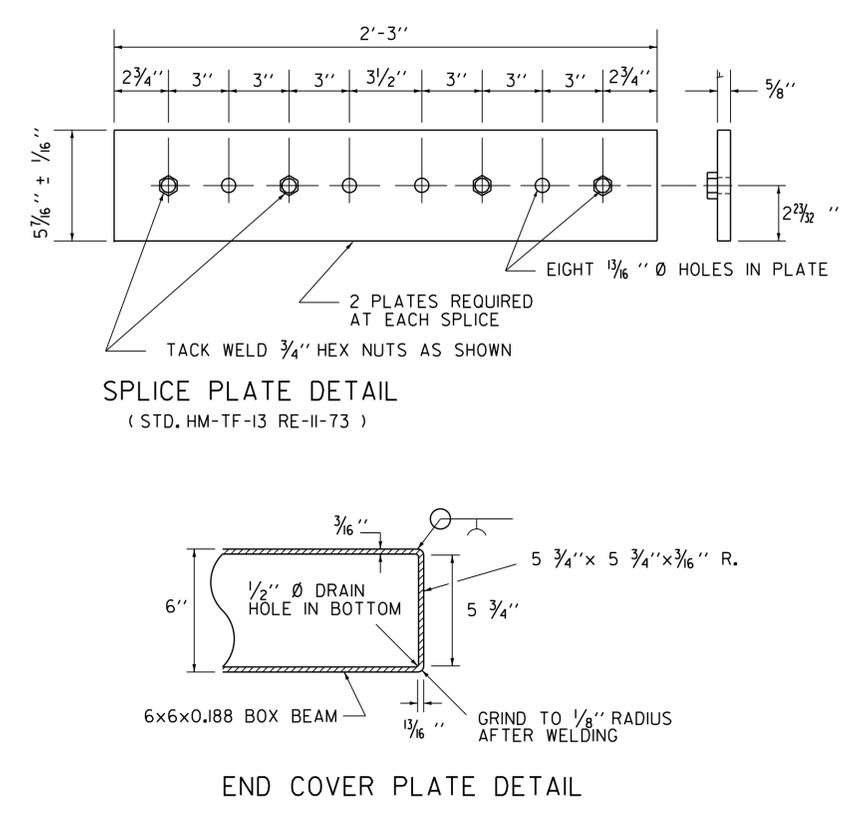
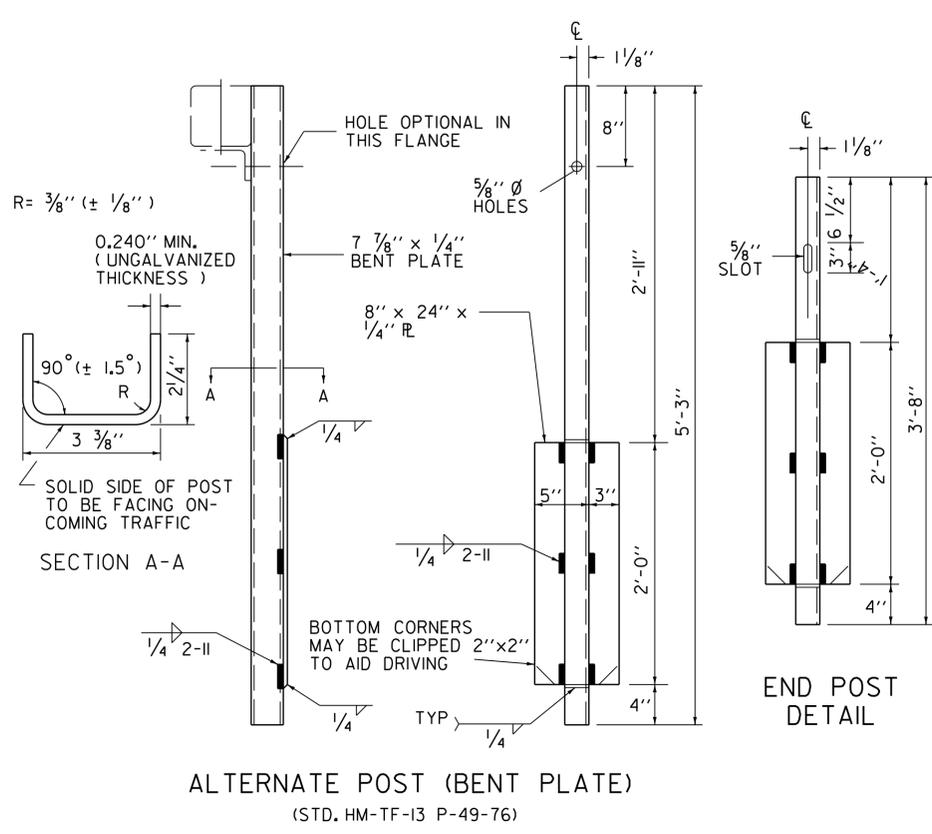
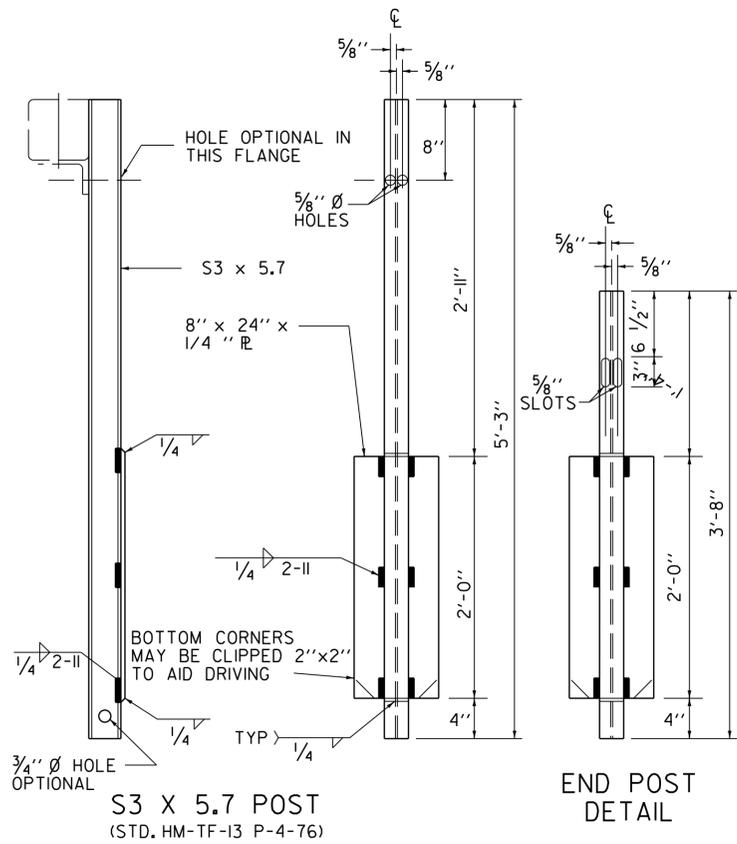


BRIDGE RAIL LAYOUT

SCALE 1/8" = 1'-0"

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076brail.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
BRIDGE RAILING AND GUARDRAIL LAYOUT	SHEET 53 OF 68





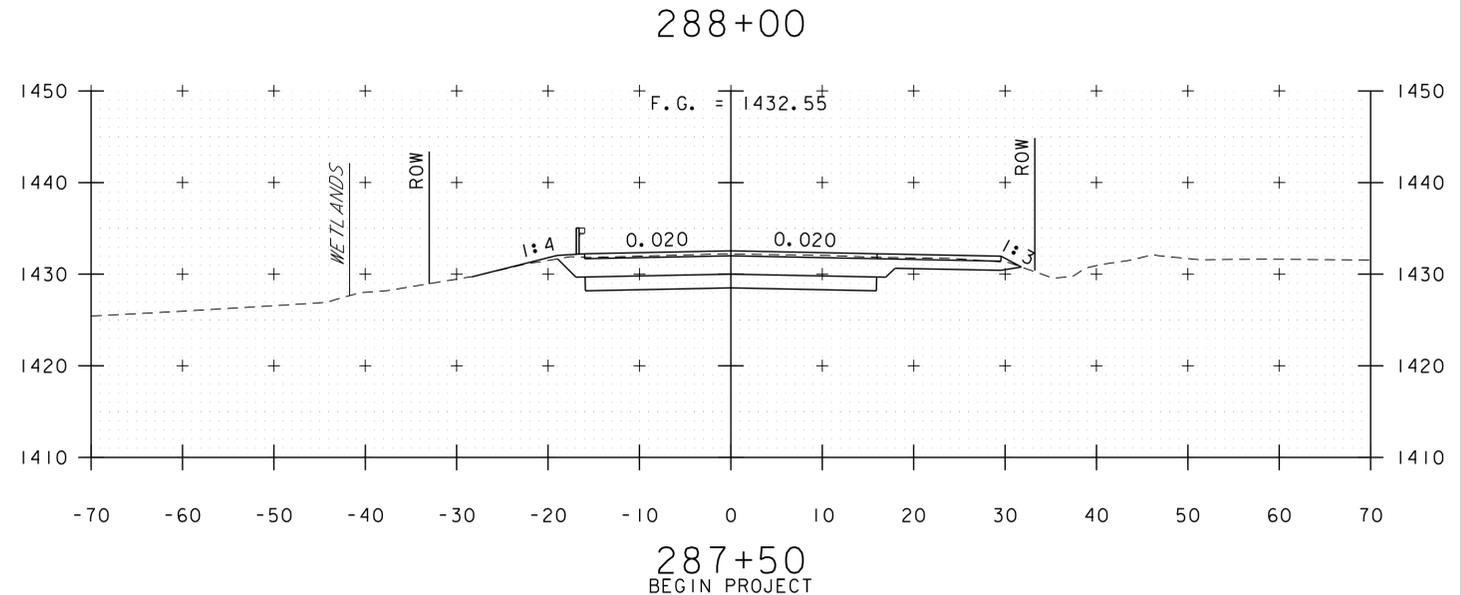
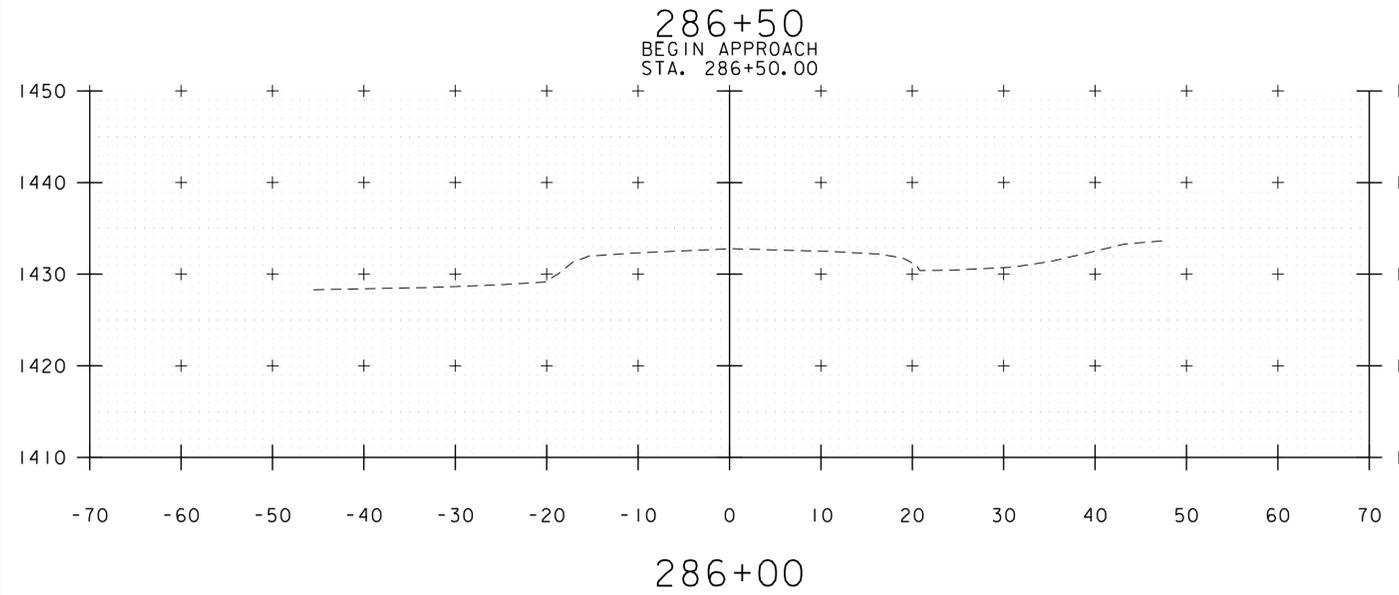
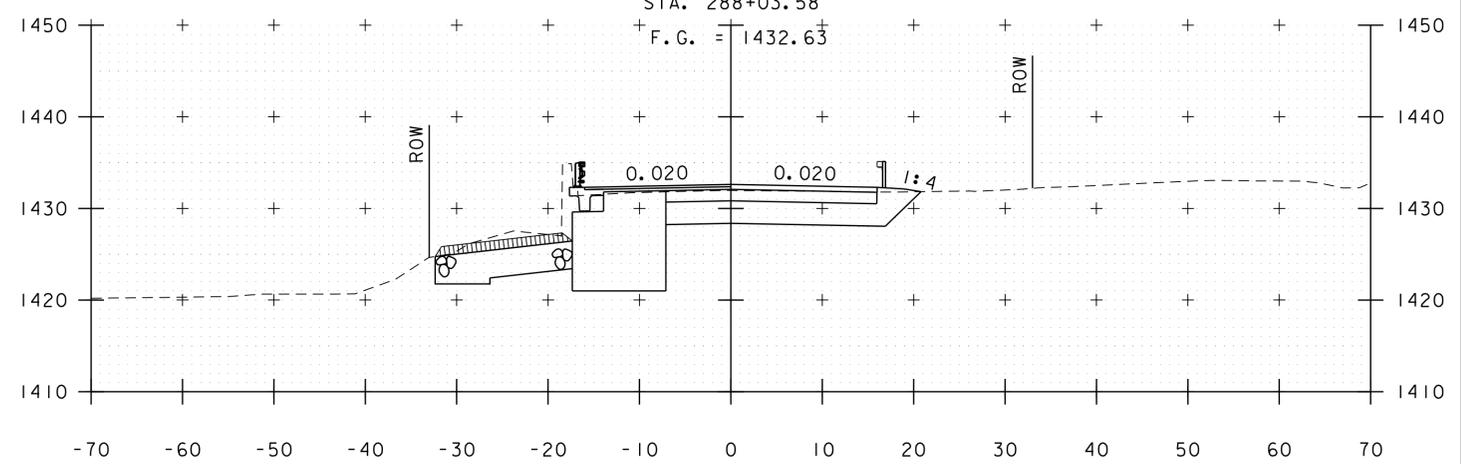
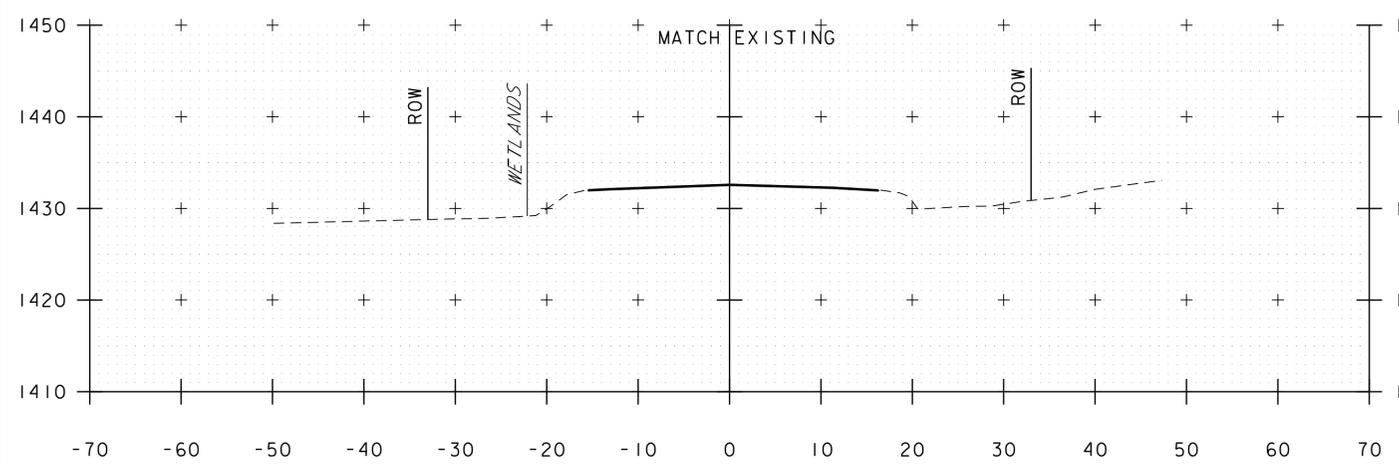
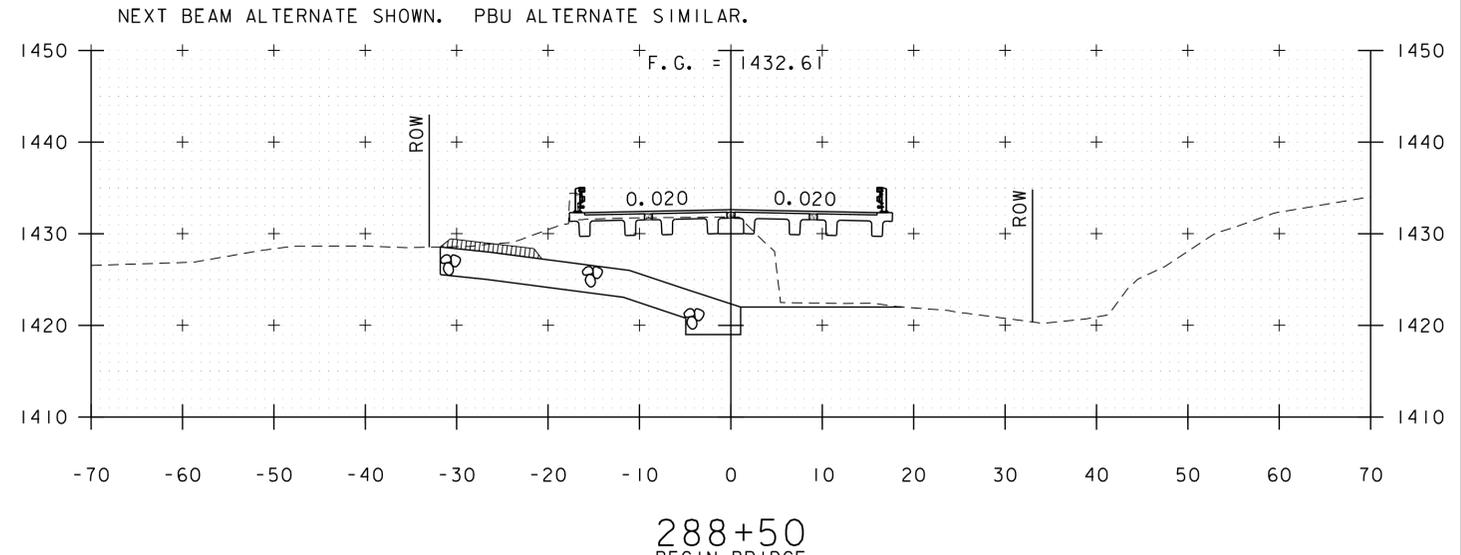
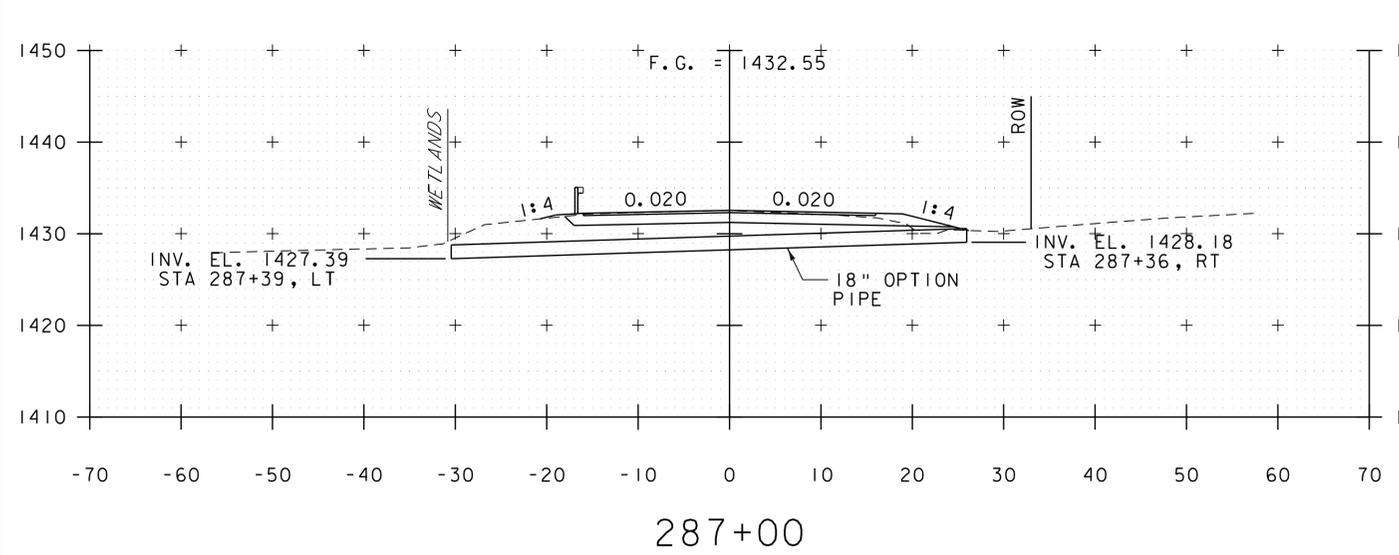
THIS REFLECTORIZED ALUMINUM DELINEATION DEVICE IS TO BE ERECTED EVERY 36 FEET, AT SPLICES. DELINEATOR SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.

REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.09 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE LEFT OR MEDIUM SIDE OF INTERSTATE ROADWAYS OR RAMPS.

**BOX BEAM GUARD RAIL DETAILS**  
NOT TO SCALE



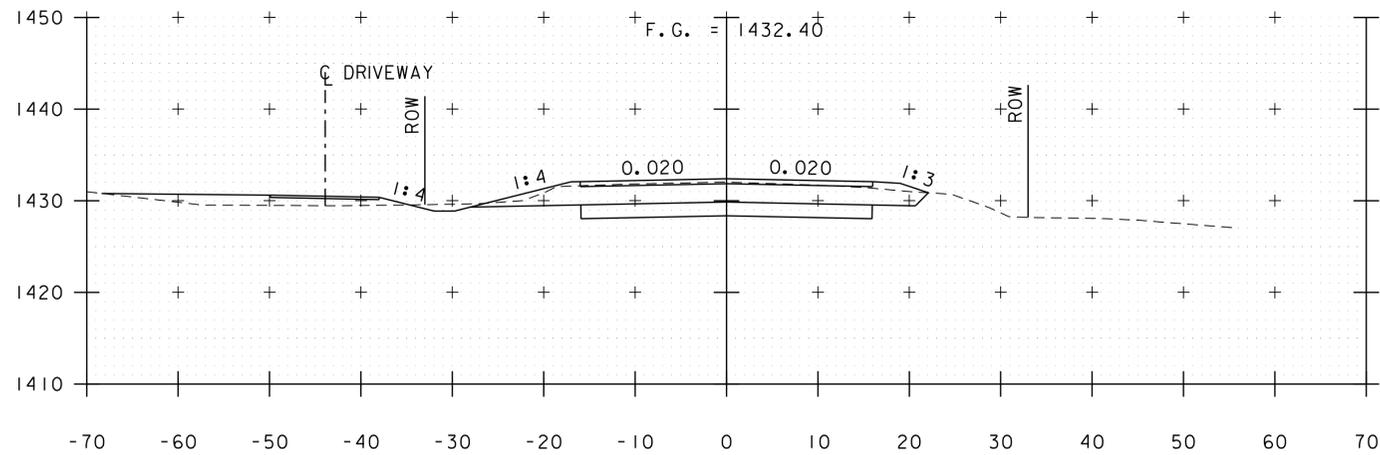
PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: K.C. BARRY
FILE NAME: z13b076brail.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 54 OF 68
DESIGNED BY: K.C. BARRY	
BOX BEAM GUARD RAIL DETAILS	



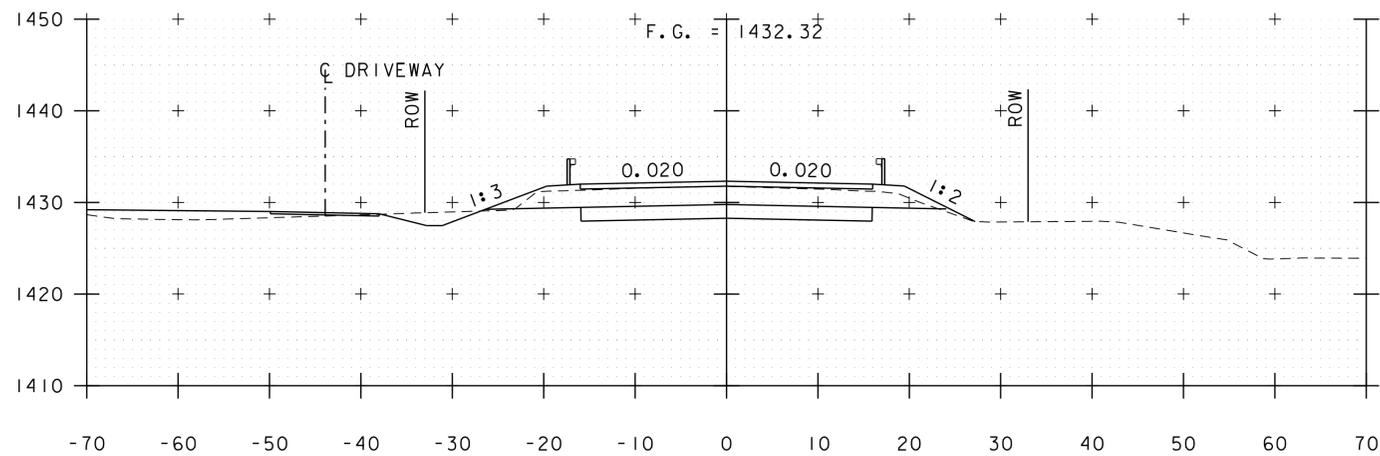
ROADWAY CROSS SECTIONS  
STA. 286+00 - 288+50



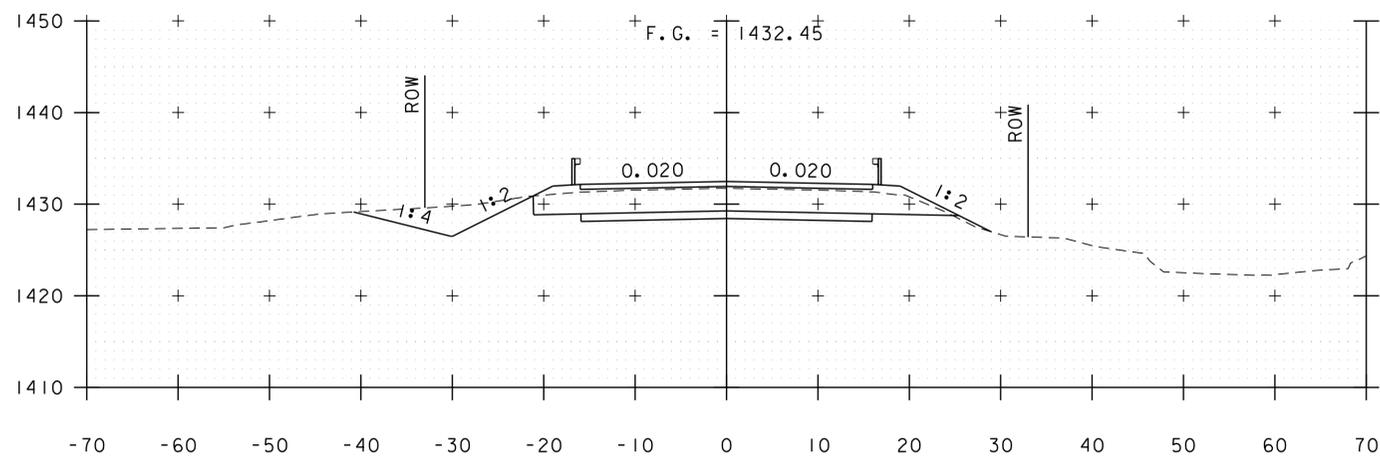
PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: J.J. WESTCOTT
FILE NAME: z13b076xsl.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 55 OF 68
DESIGNED BY: J.J. WESTCOTT	
ROADWAY CROSS SECTIONS (1 OF 2)	



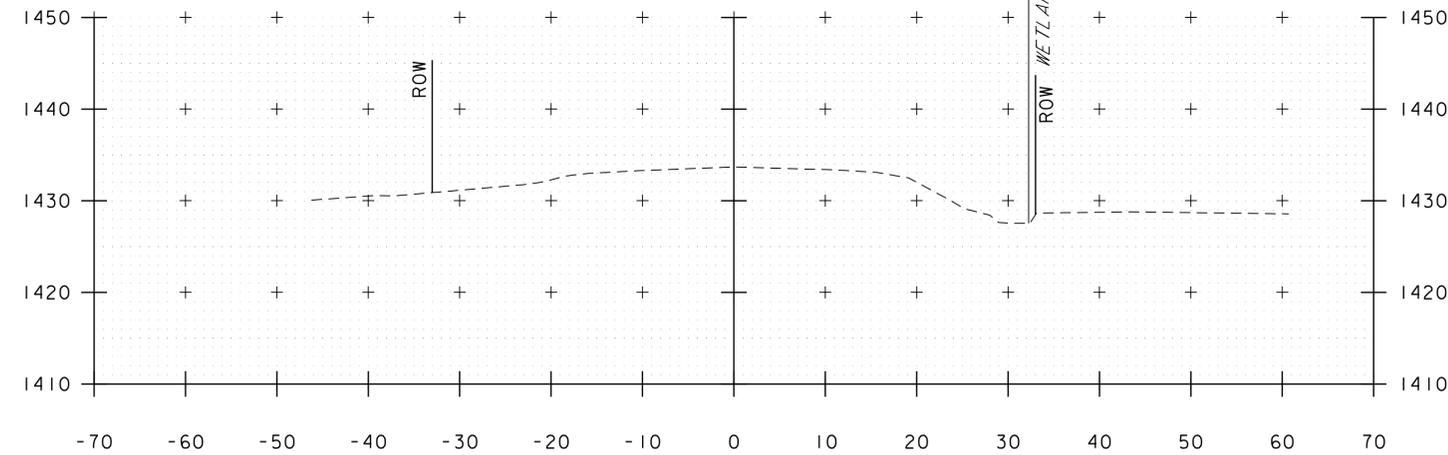
290+00



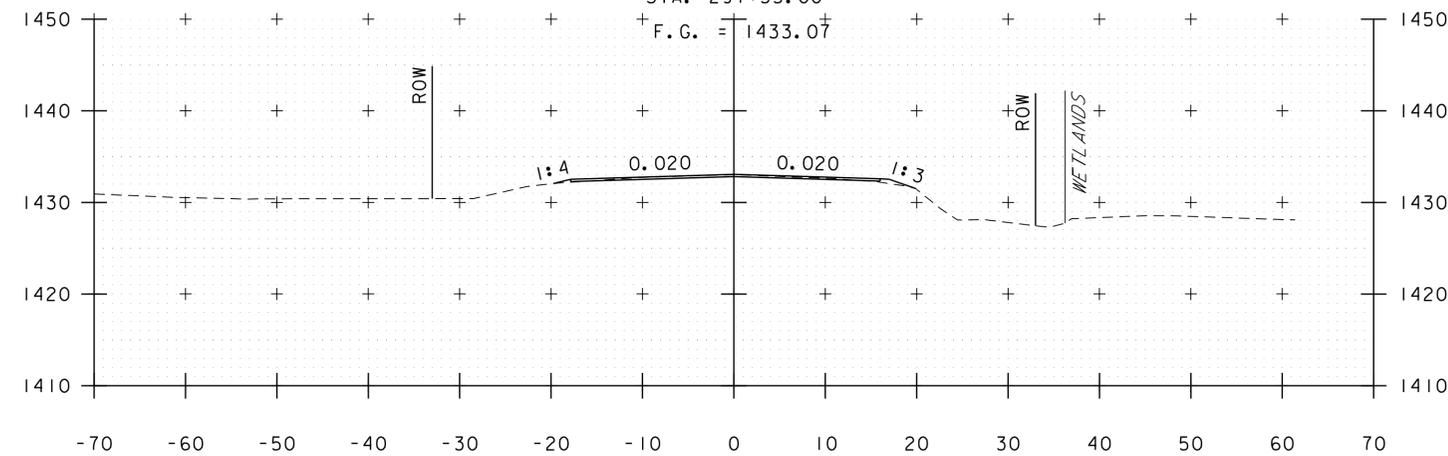
289+50



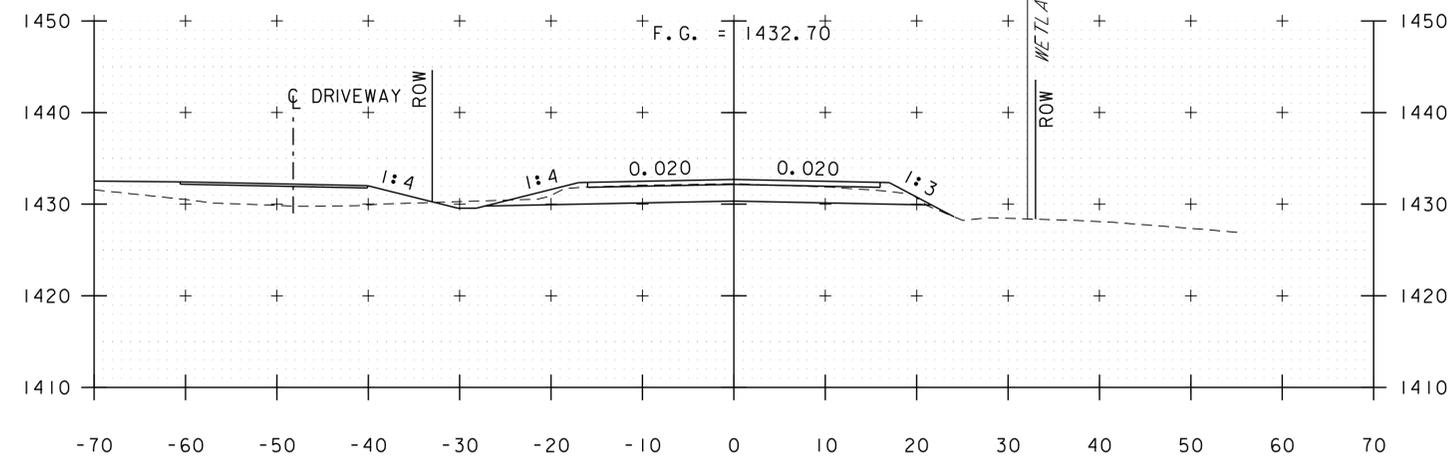
289+00  
END BRIDGE  
STA. 288+66.92



291+50  
END APPROACH  
STA. 291+35.00



291+00



290+50  
END PROJECT  
STA. 290+45.00

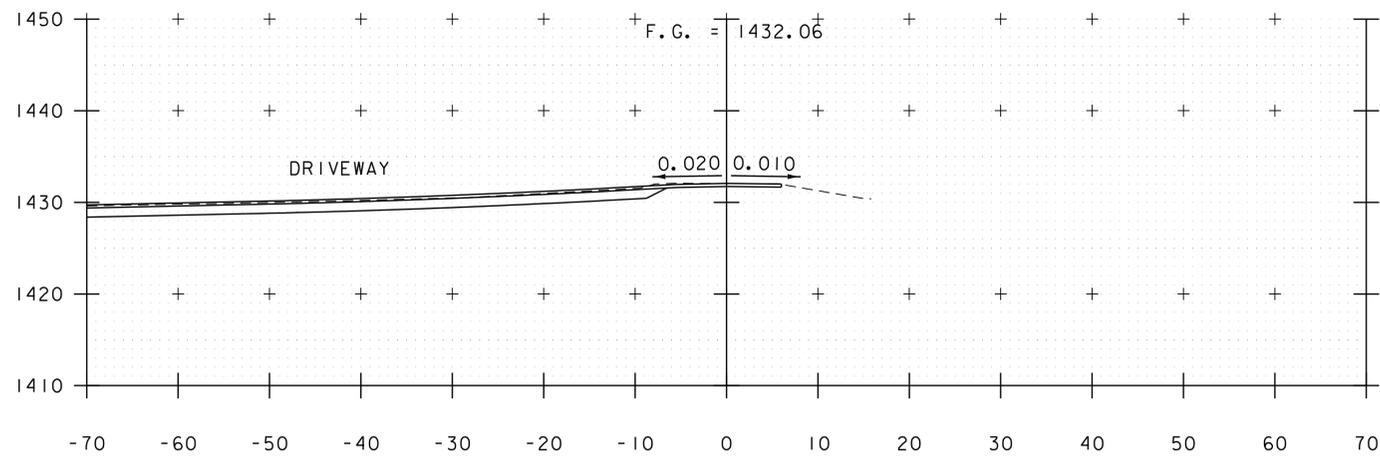
ROADWAY CROSS SECTIONS  
STA. 289+00 - 291+50



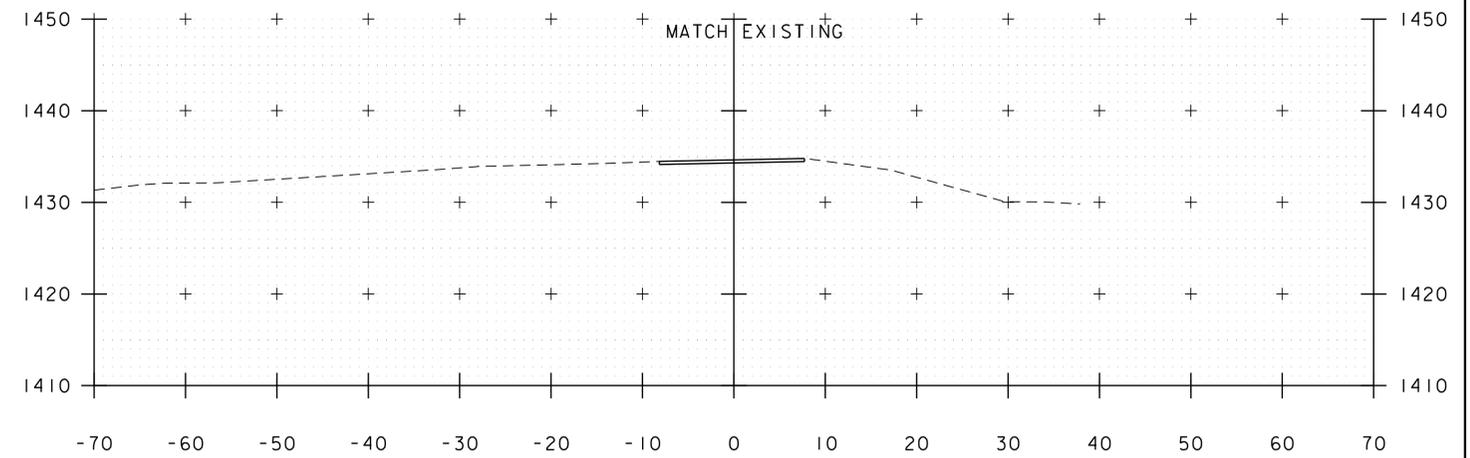
PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076xsl.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
ROADWAY CROSS SECTIONS (2 OF 2)

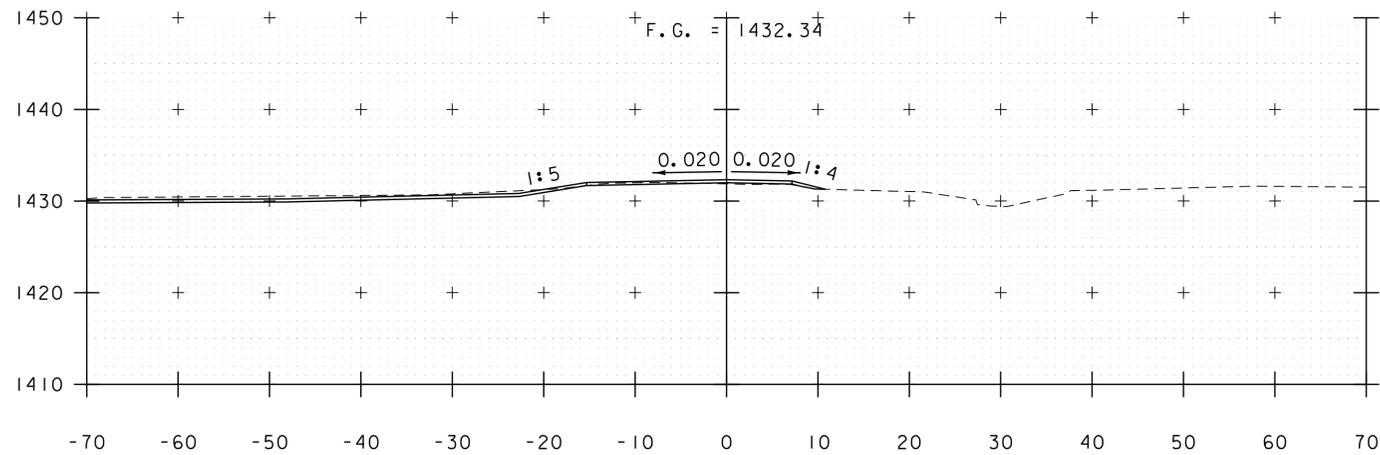
PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 56 OF 68



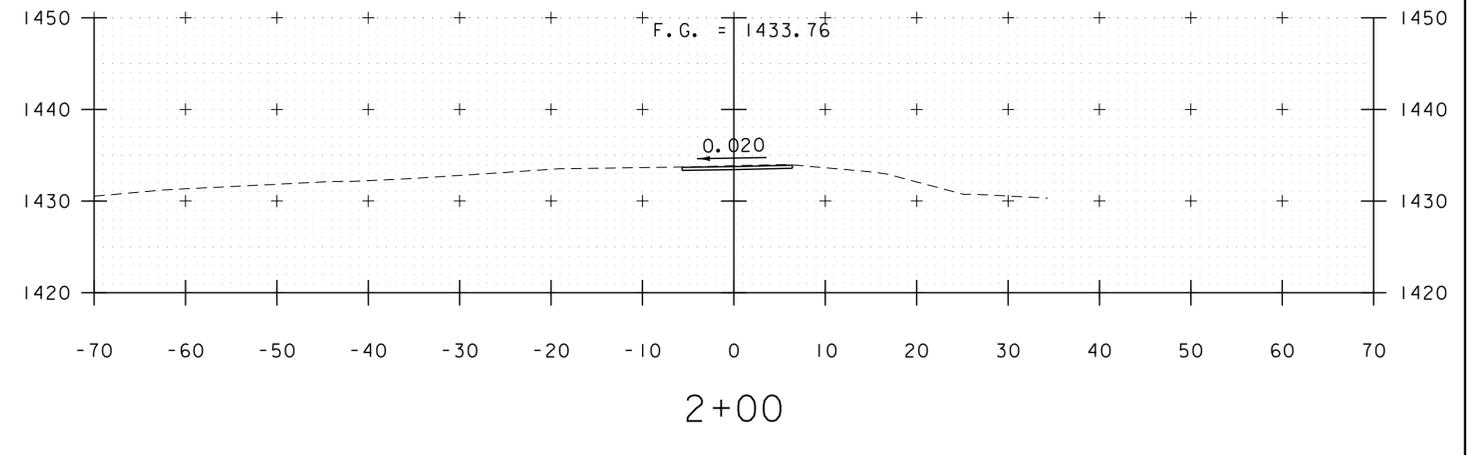
1+50



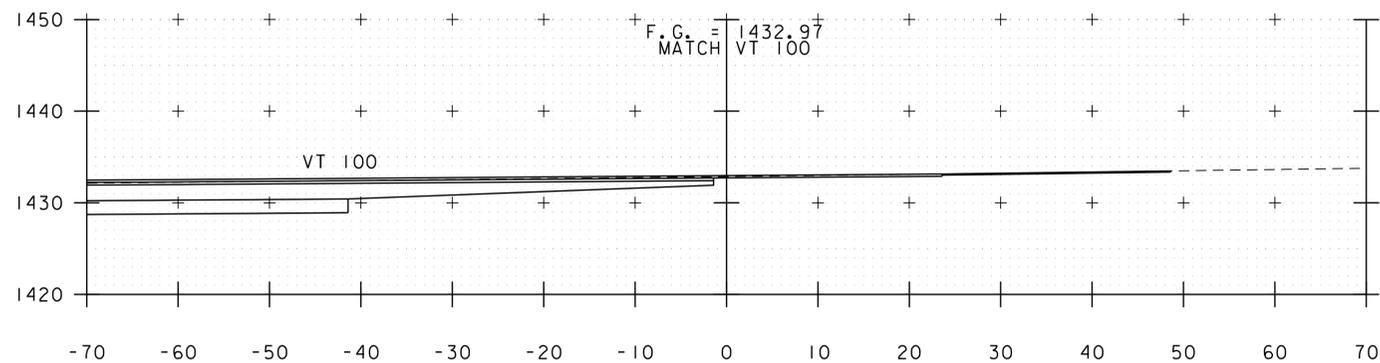
2+25



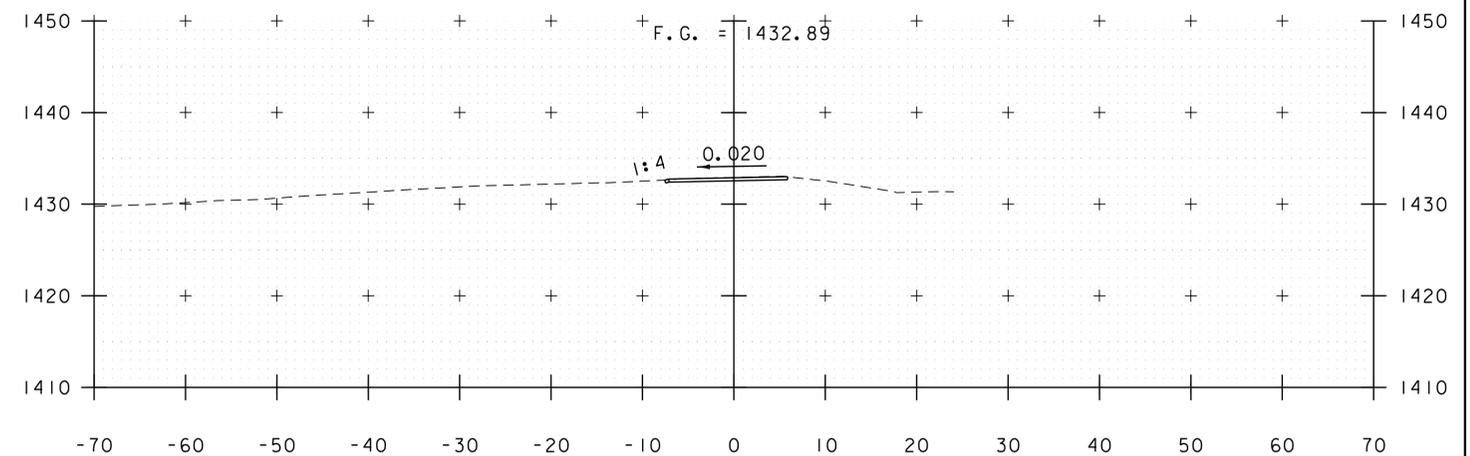
1+25



2+00



1+00



1+75

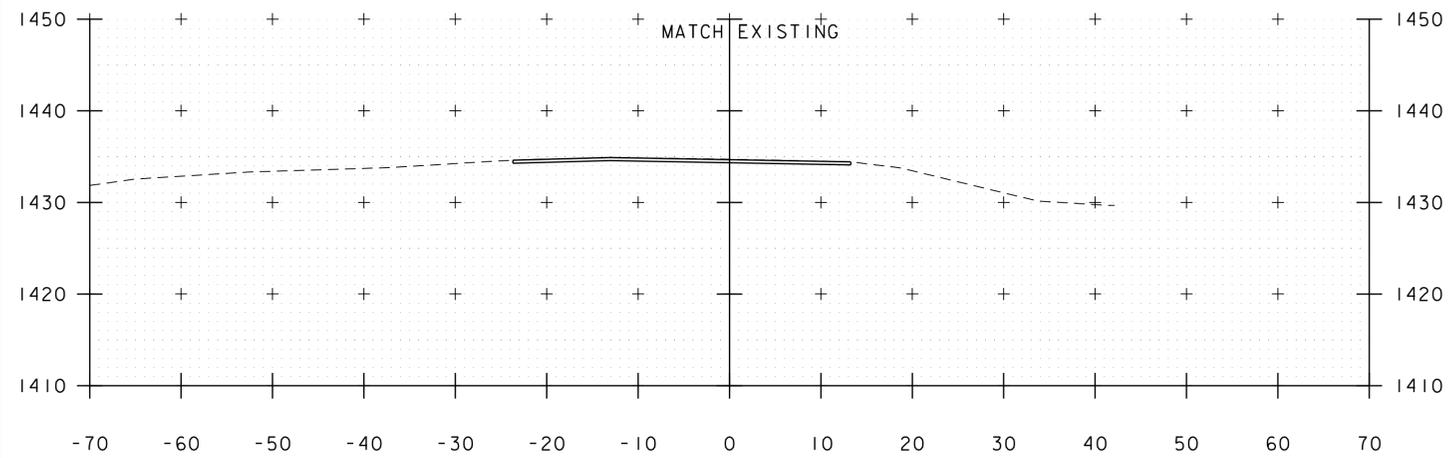
DRIVEWAY CROSS SECTIONS  
STA. 1+00 TO 2+25



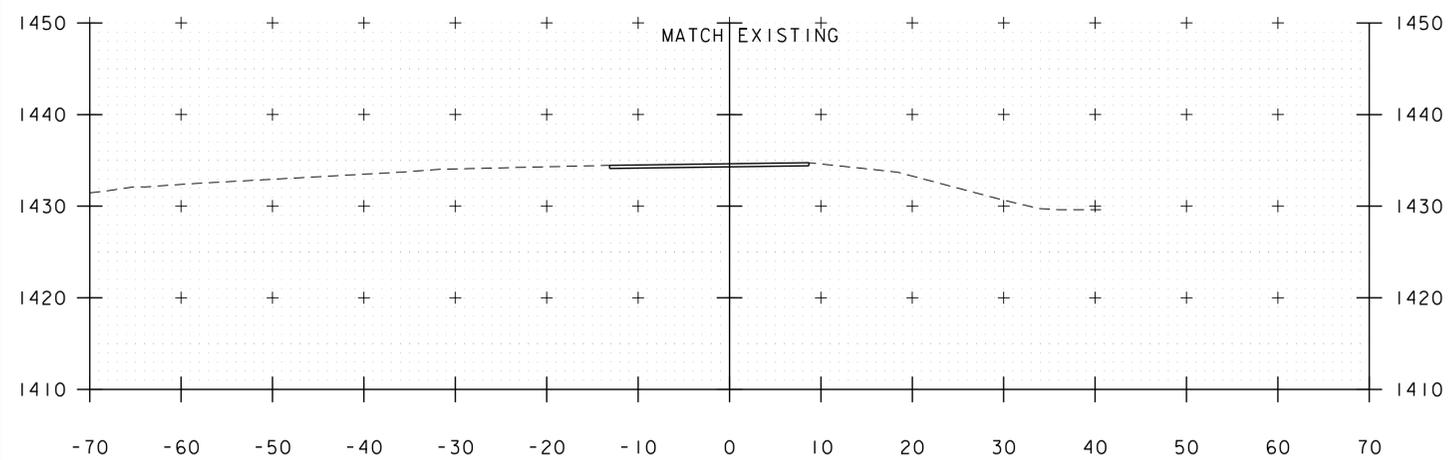
PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076xsl.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: E.F. LAWES  
DRIVEWAY CROSS SECTIONS (1 OF 4)

PLOT DATE: 10/2/2015  
DRAWN BY: E.F. LAWES  
CHECKED BY: S.E. BURBANK  
SHEET 57 OF 68



2+75

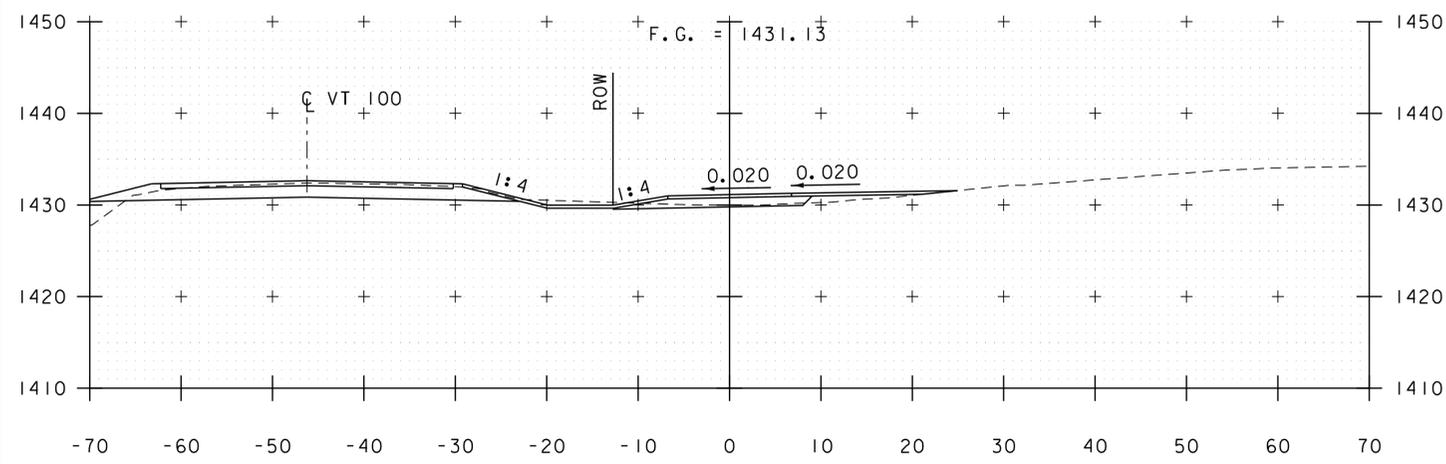


2+50

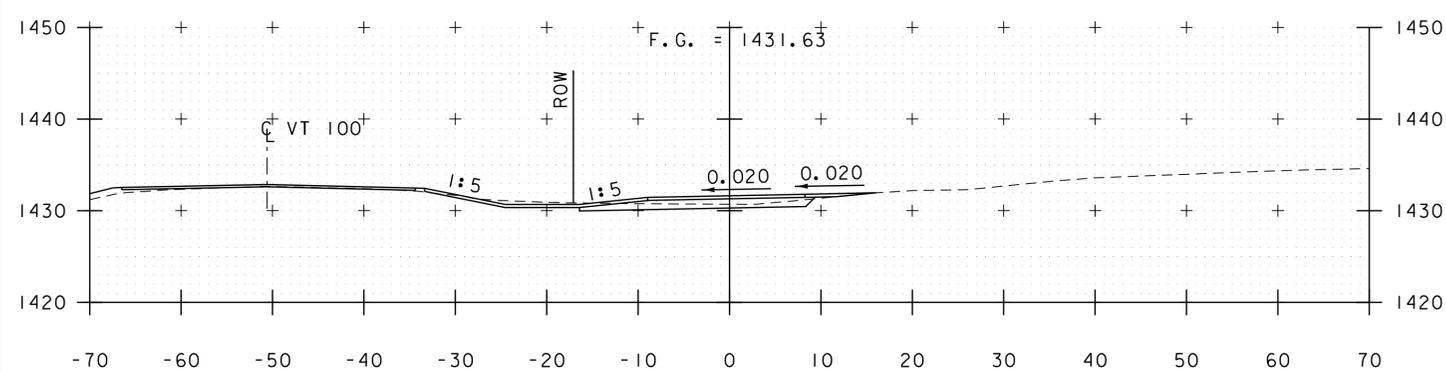
DRIVEWAY CROSS SECTIONS  
STA. 2+50 TO 2+75



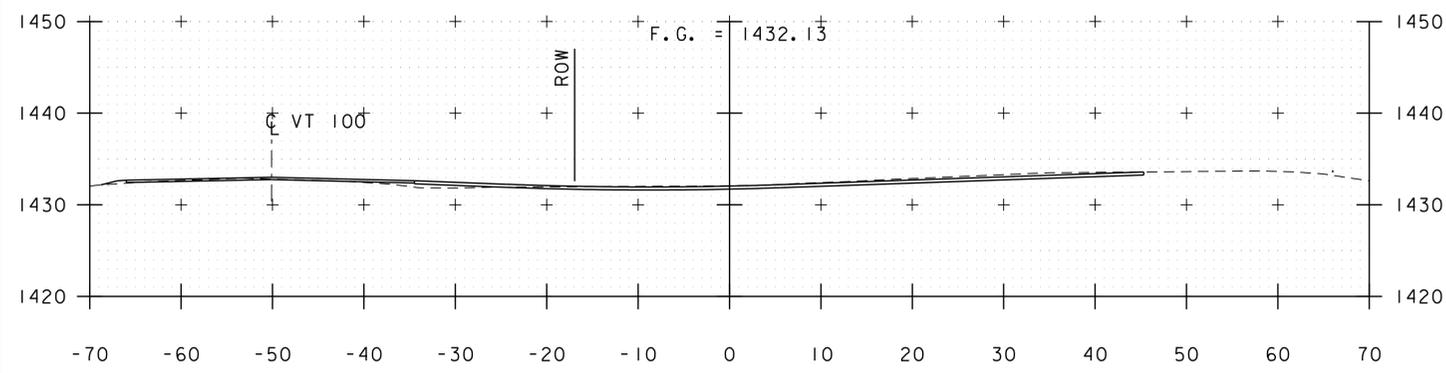
PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: E.F. LAWES
FILE NAME: z13b076xsl.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 58 OF 68
DESIGNED BY: E.F. LAWES	
DRIVEWAY CROSS SECTIONS (2 OF 4)	



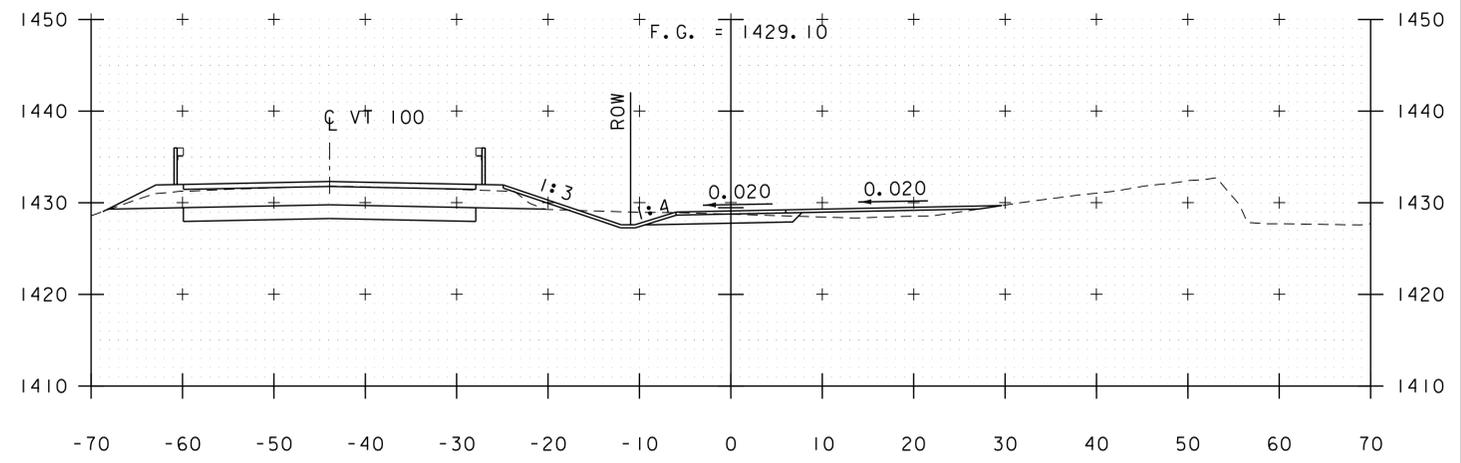
10+50



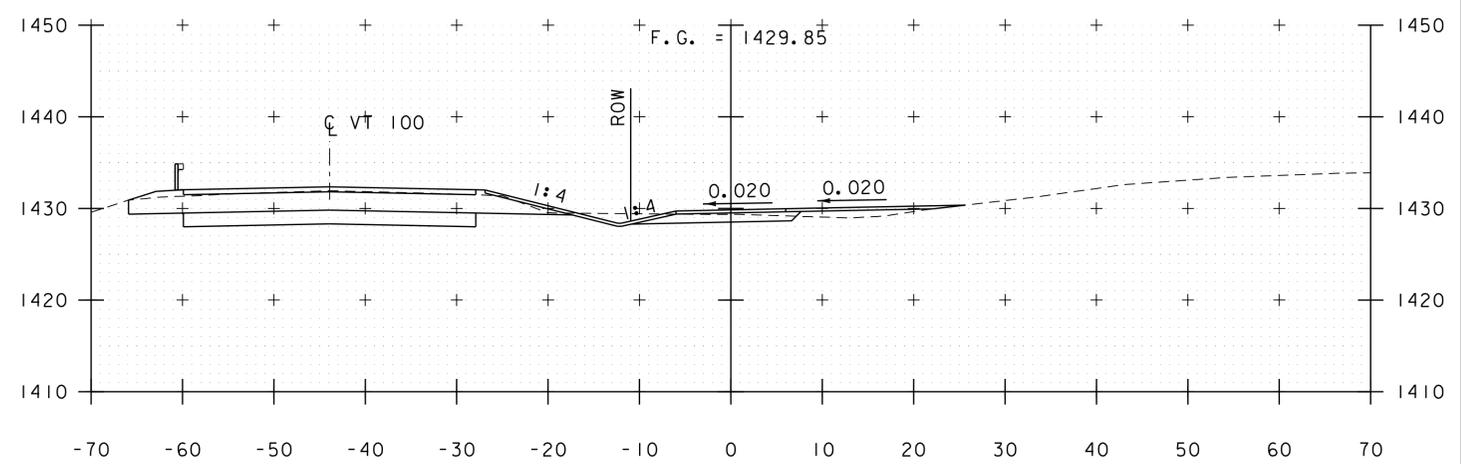
10+25



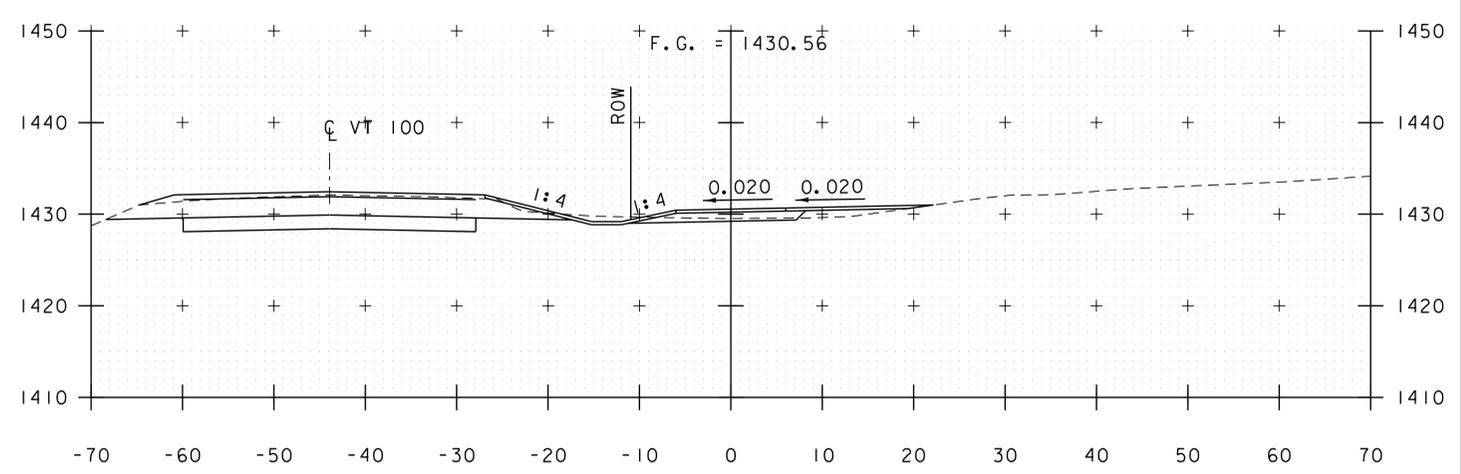
10+00



11+25



11+00

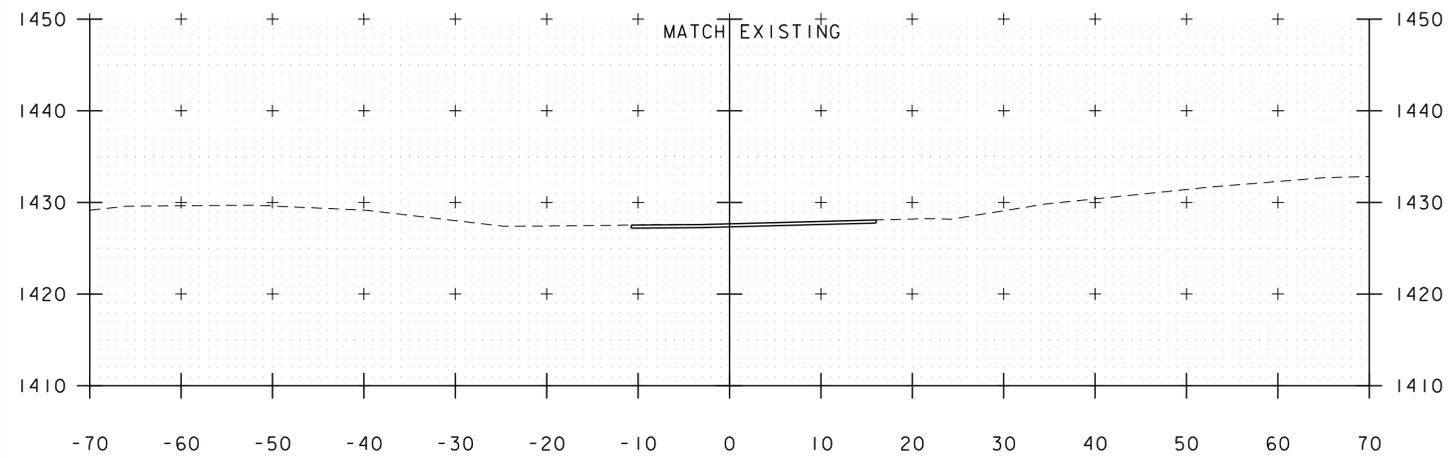


10+75

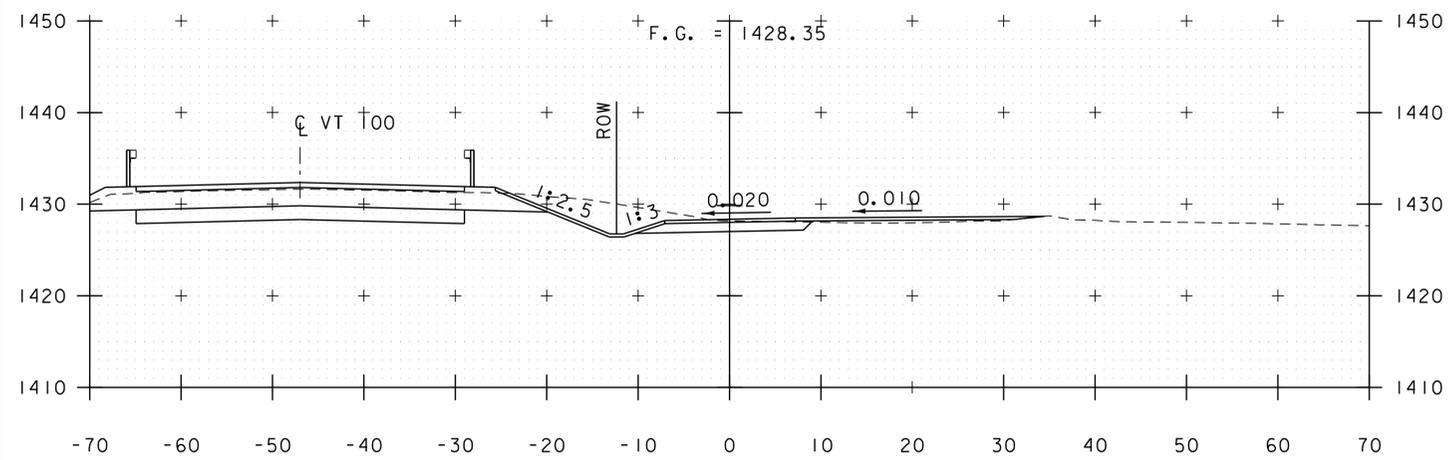
DRIVEWAY CROSS SECTIONS  
STA. 10+00 TO 11+25



PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: E.F. LAWES
FILE NAME: z13b076xsl.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 59 OF 68
DESIGNED BY: E.F. LAWES	
DRIVEWAY CROSS SECTIONS (3 OF 4)	



11+75

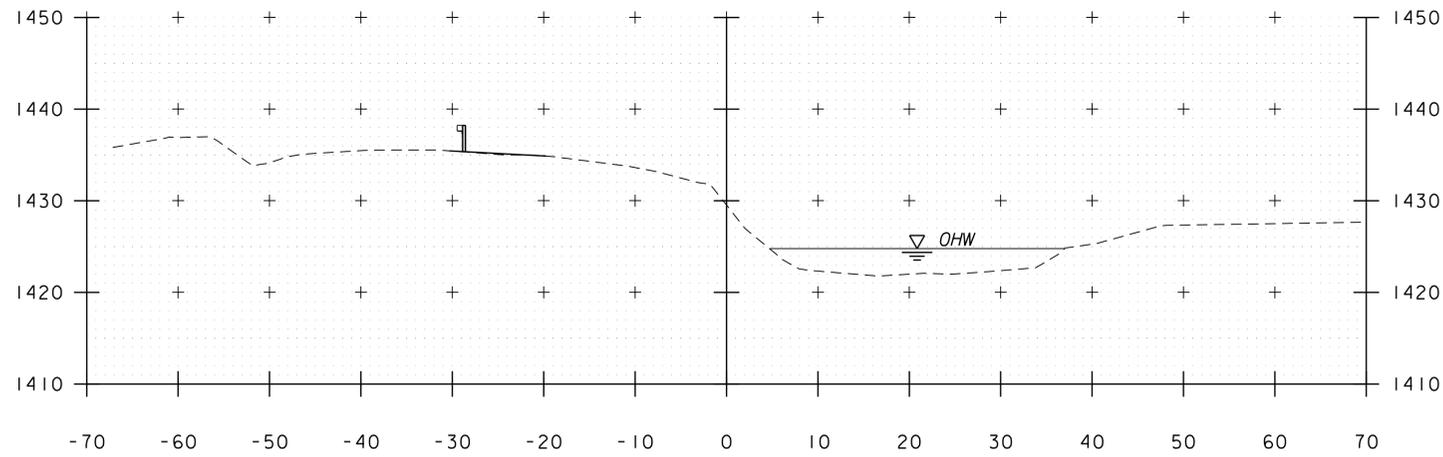


11+50

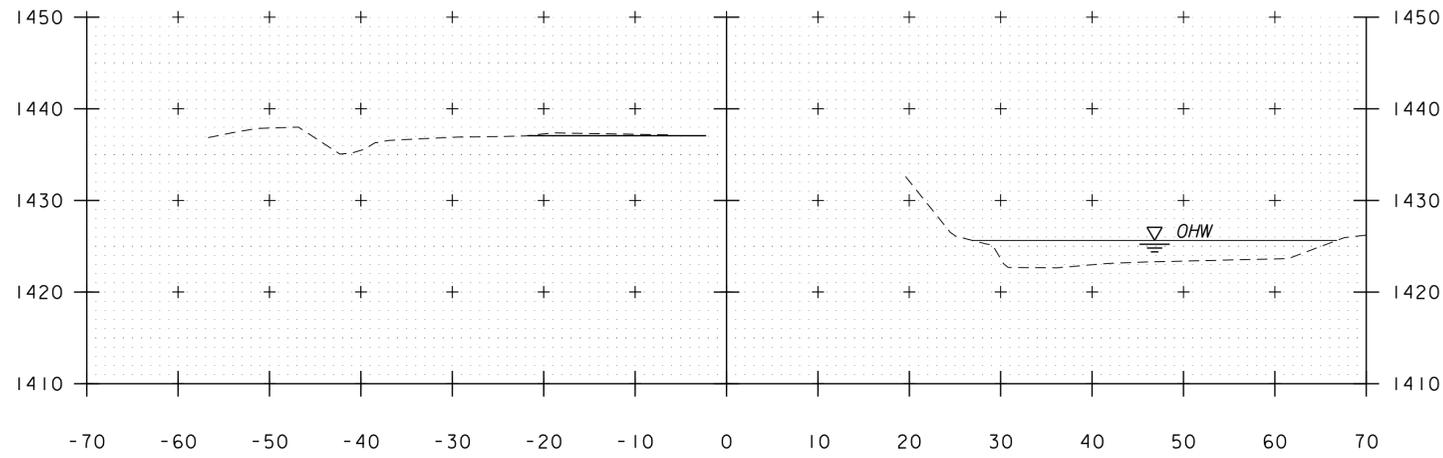
DRIVEWAY CROSS SECTIONS  
STA. 11+50 TO 11+75



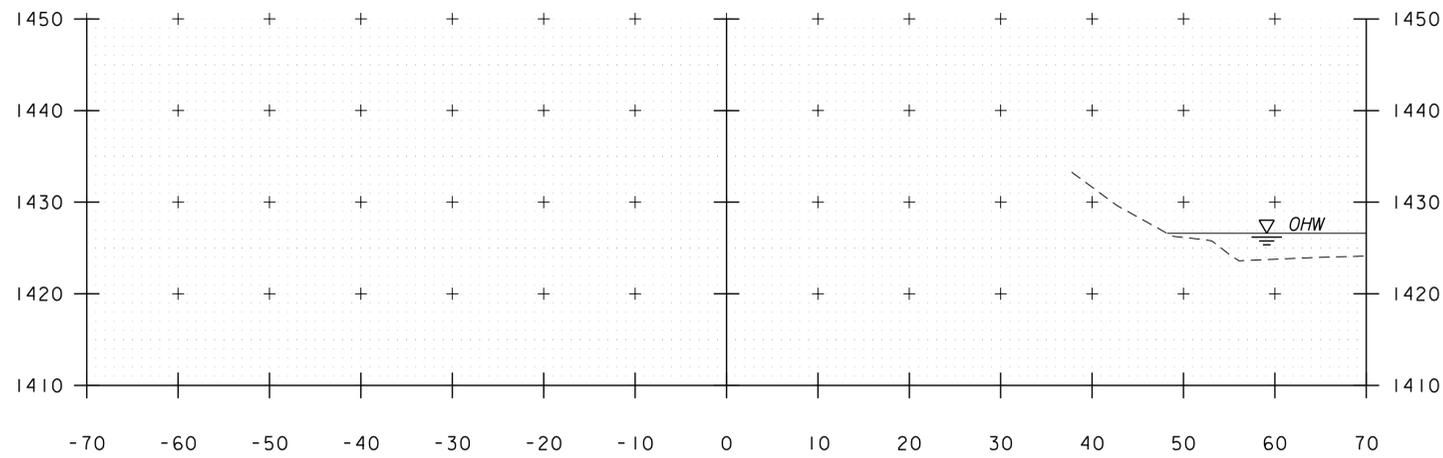
PROJECT NAME: WESTON	PLOT DATE: 10/2/2015
PROJECT NUMBER: BF 013-2(13)	DRAWN BY: E.F. LAWES
FILE NAME: z13b076xsl.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 60 OF 68
DESIGNED BY: E.F. LAWES	
DRIVEWAY CROSS SECTIONS (4 OF 4)	



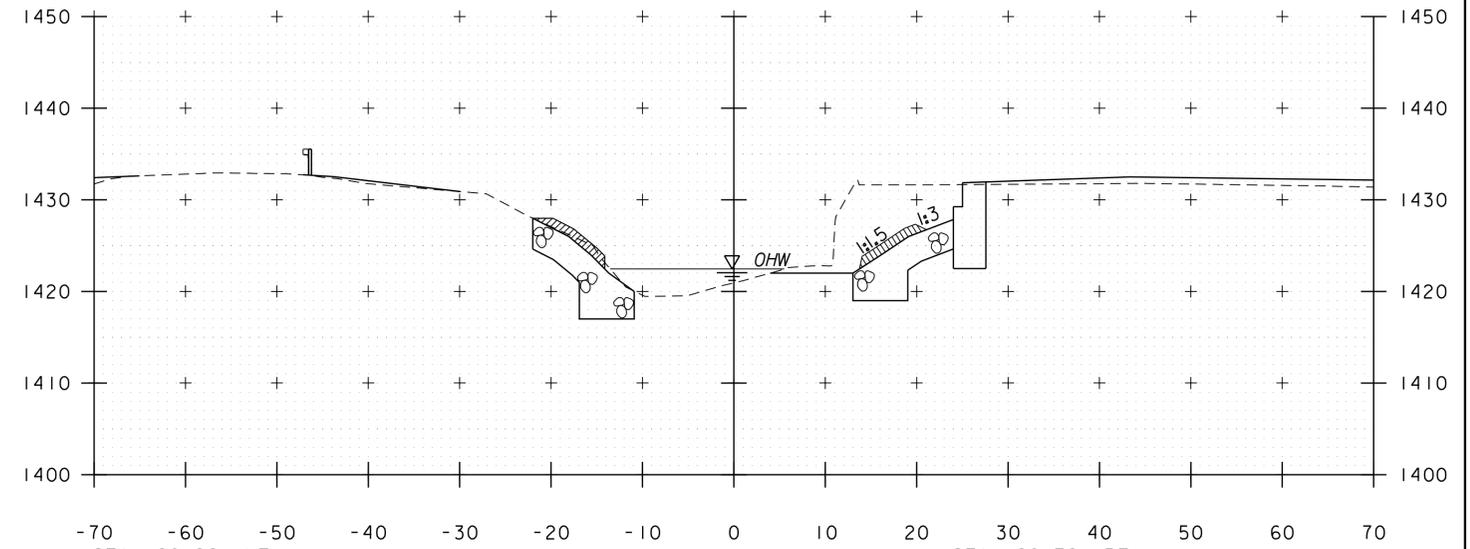
60+50



60+25



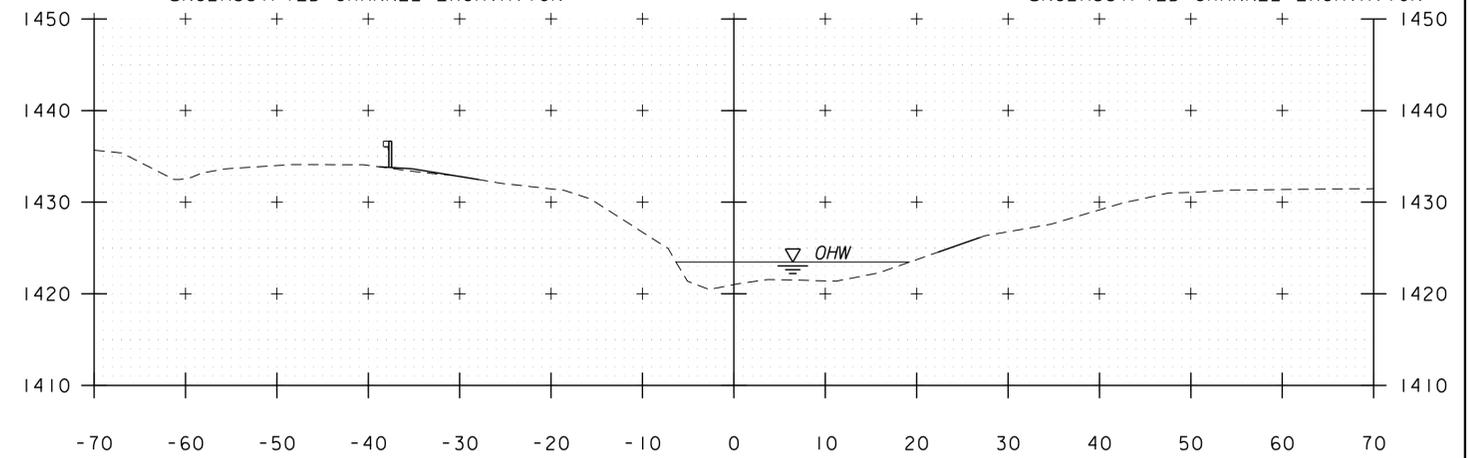
60+00



61+00

STA. 60+96, LT  
 BEGIN STONE FILL, TYPE IV  
 GEOTEXTILE UNDER STONE FILL  
 GRUBBING MATERIAL  
 UNCLASSIFIED CHANNEL EXCAVATION

STA. 60+76, RT  
 BEGIN STONE FILL, TYPE IV  
 GEOTEXTILE UNDER STONE FILL  
 GRUBBING MATERIAL  
 UNCLASSIFIED CHANNEL EXCAVATION



60+75

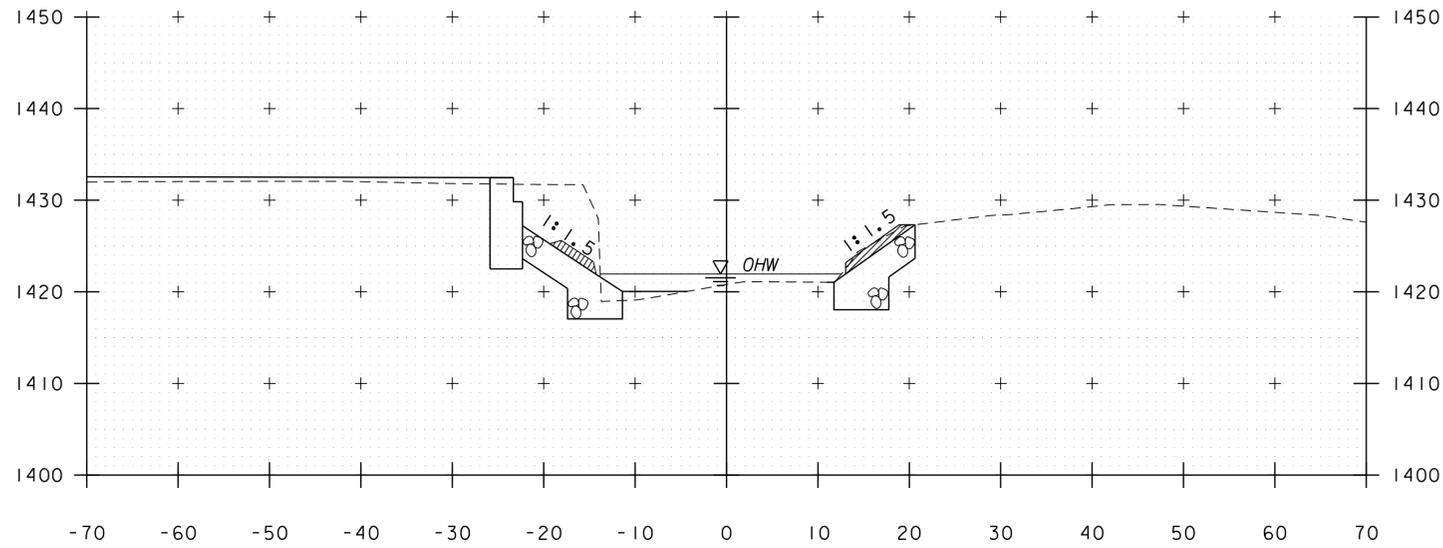
CHANNEL CROSS SECTIONS  
 STA. 60+00 - 61+00



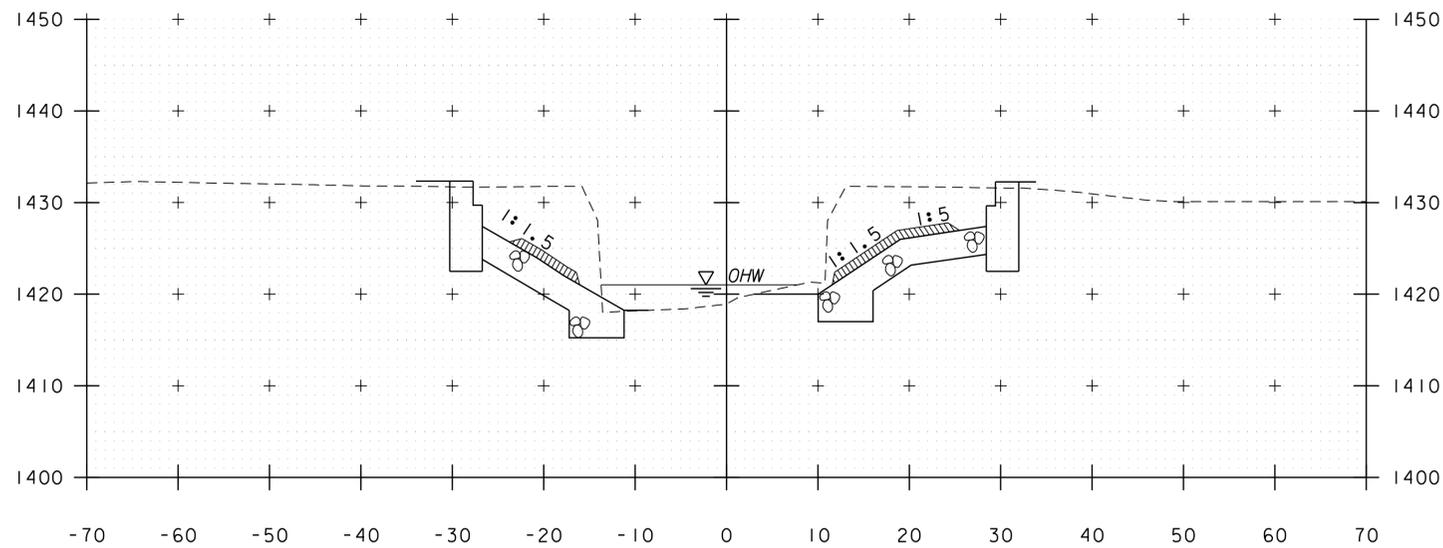
PROJECT NAME: WESTON  
 PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076xsl.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: J.J. WESTCOTT  
 CHANNEL CROSS SECTIONS (1 OF 2)

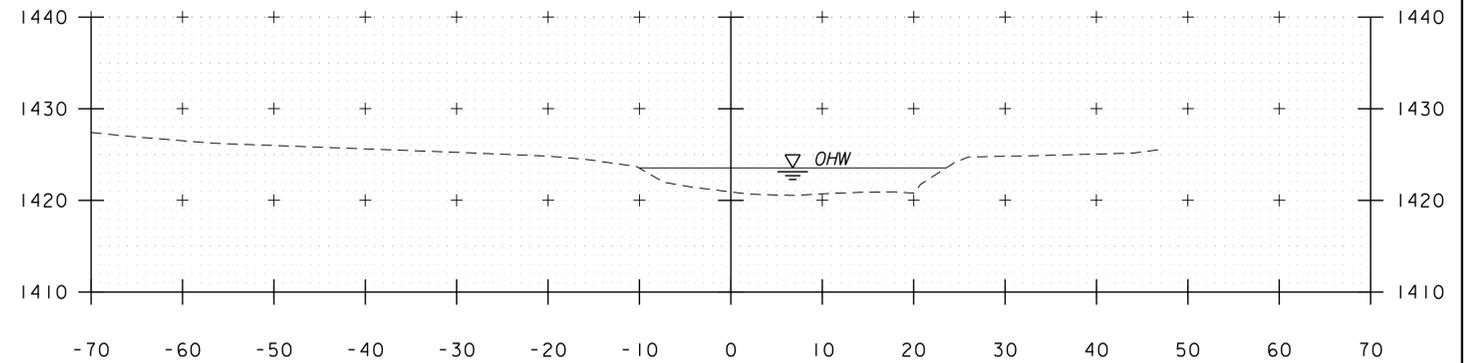
PLOT DATE: 10/2/2015  
 DRAWN BY: J.J. WESTCOTT  
 CHECKED BY: S.E. BURBANK  
 SHEET 61 OF 68



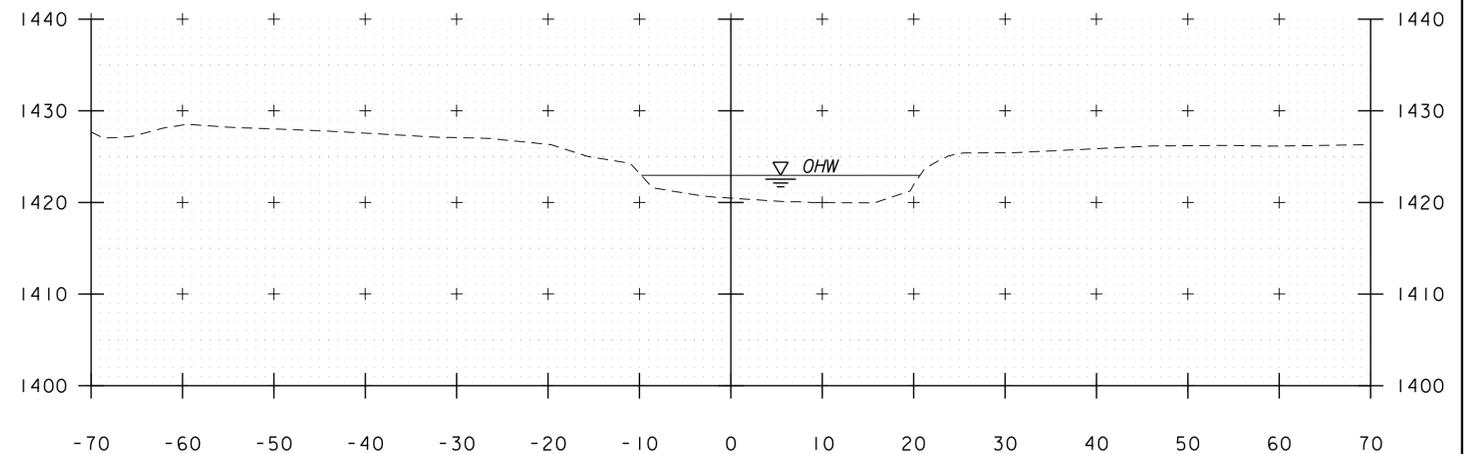
61+50



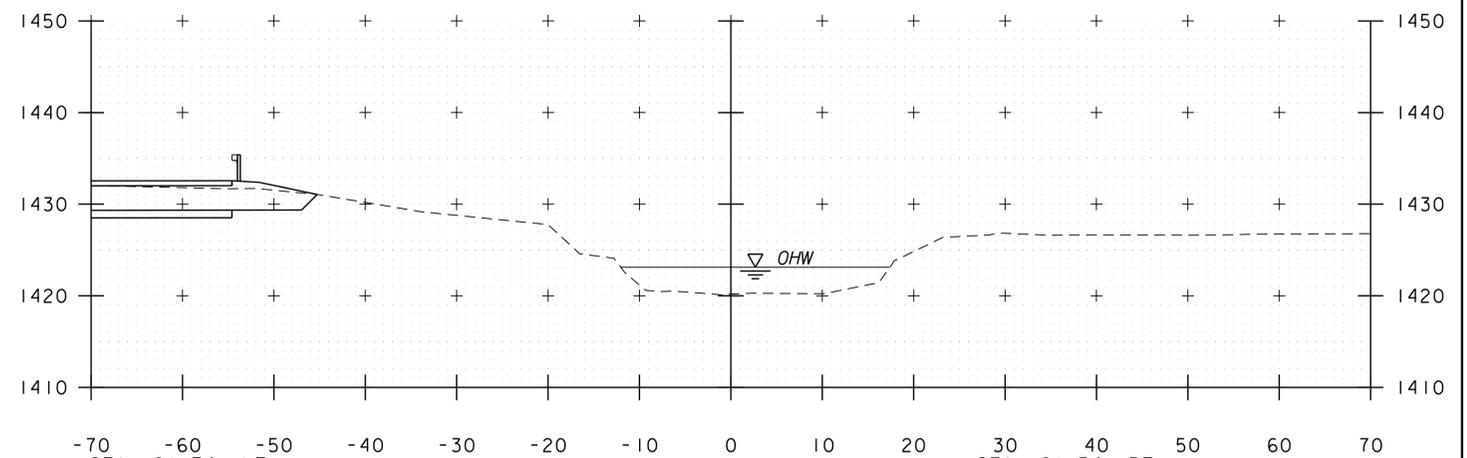
61+25



62+25



62+00



61+75

STA. 61+74, LT  
 END STONE FILL, TYPE IV  
 UNCLASSIFIED CHANNEL EXCAVATION  
 GEOTEXTILE UNDER STONE FILL  
 GRUBBING MATERIAL

STA. 61+54, RT  
 END STONE FILL, TYPE IV  
 UNCLASSIFIED CHANNEL EXCAVATION  
 GEOTEXTILE UNDER STONE FILL  
 GRUBBING MATERIAL

CHANNEL CROSS SECTIONS  
 STA. 61+25 - 62+25



PROJECT NAME: WESTON  
 PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076xsl.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: J.J. WESTCOTT  
 CHANNEL CROSS SECTIONS (2 OF 2)

PLOT DATE: 10/2/2015  
 DRAWN BY: J.J. WESTCOTT  
 CHECKED BY: S.E. BURBANK  
 SHEET 62 OF 68

# EPSC PLAN NARRATIVE

## 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF THE EXISTING ROLLED STEEL BEAM SUPERSTRUCTURE AND CONCRETE SUBSTRUCTURE OF BRIDGE NO. 98 WITH RELATED APPROACH AND CHANNEL WORK. DURING CONSTRUCTION, TRAFFIC WILL BE DETOURED ON AN OFF-SITE DETOUR. THIS PROJECT IS LOCATED ON VT 100, A HEAVILY TRAVELED ROAD, WHERE VT 100 CROSSES THE WEST RIVER, IN THE TOWN OF WESTON. THE EXISTING BRIDGE IS APPROXIMATELY 36 FEET LONG AND HAS A 35'-4" WIDE CONCRETE DECK. THE EXISTING SUBSTRUCTURE CONSISTS OF CONCRETE ABUTMENTS AND WINGWALLS.

THE BRIDGE REPLACEMENT INCLUDES THE REMOVAL OF THE EXISTING STRUCTURE IN ITS ENTIRETY AND THE CONSTRUCTION OF A NEW 63 FOOT SINGLE SPAN BRIDGE WITH PRECAST PRESTRESSED CONCRETE NEXT BEAMS OR PBUS TO CREATE A NEW BRIDGE WIDTH OF 35'-4". NEW INTEGRAL CONCRETE ABUTMENTS, EACH ON A SINGLE ROW OF PILES, AND WINGWALLS WILL BE PRECAST. ASSOCIATED ROADWAY APPROACH WORK INCLUDES BRIDGE APPROACH SLABS AND NEW GUARDRAIL. ONCE THE BRIDGE IS COMPLETED, THE DETOUR SIGNS WILL BE REMOVED AND THE AREA WILL BE RESTORED TO THE PREVIOUS CONDITIONS.

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 IS APPROXIMATELY 0.95 ACRES.

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

## 1.2 SITE INVENTORY

### 1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS RELATIVELY FLAT, WITH A STEEP SLOPE DOWN TO THE WEST RIVER. VT ROUTE 100 AND TH 15 ARE WITHIN THE PROJECT SITE.

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

THE WEST RIVER IS THE ONLY STREAM FEATURE ON THE PROJECT SITE. THE RIVER RUNS EAST TO WEST BENEATH VT 100 IN WESTON, VERMONT. THE OHW LEVEL IS APPROXIMATELY 50-FEET WIDE WITH AN AVERAGE DEPTH OF THREE FEET. THE AREAS ON EITHER SIDE OF THE RIVER ARE DEVELOPED. THE STREAM SUBSTRATE GENERALLY CONSISTS OF BOULDERS AND COBBLES. THE WEST RIVER WILL REQUIRE COVERAGE AS A CATEGORY 2 ACTIVITY UNDER THE DEPARTMENT OF THE ARMY VERMONT GENERAL PERMIT. THERE ARE CLASS II WETLANDS WITHIN THE IMMEDIATE AREA OF THE PROJECT. THE WETLANDS ARE ALL SHRUB/FORESTED WETLANDS AND HAVE HIGH FUNCTION VALUES SUCH AS FLOOD STORAGE, WILDLIFE HABITAT AND EROSION CONTROL.

### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF TRIMMED GRASS AND A FEW TREES. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED 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 WINDSOR, VERMONT. SOILS ON THE PROJECT SITE ARE PODUNK FINE SANDY LOAM, 0% TO 3% SLOPES, "K FACTOR" = 0.32, CONSIDERED MODERATELY ERODIBLE; AND COLTON FINE SANDY LOAM, 3% TO 8% SLOPES, "K FACTOR" = 0.17 CONSIDERED LOW EROSION POTENTIAL.

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: NO  
HISTORICAL OR ARCHEOLOGICAL AREAS: NO  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: NO  
WATER RESOURCE: WEST RIVER  
WETLANDS: YES, THERE ARE CLASS II WETLANDS ALONG THE TOE OF SLOPE OF VT 100.

## 1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, 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. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. 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. BARRIER FENCE SHALL BE USED ALONG MISS PROCTOR'S PROPERTY IN THE VICINITY OF THE SEPTIC SYSTEM.

### 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 AS PROPOSED ON THE EPSC PLAN AND 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.

FILTER CURTAIN SHALL 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.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS ARE NOT ANTICIPATED FOR THIS PROJECT.

### 1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT EROSION CONTROL STRUCTURES ARE NOT ANTICIPATED FOR THIS PROJECT.

### 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. TEMPORARY 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.

### 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.

TREATMENT OF DEWATERING COFFERDAM IS NOT ANTICIPATED.

### 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 OFF-SITE ACTIVITIES

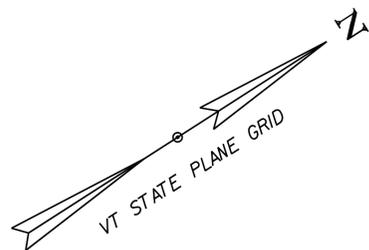
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076eroNarrative.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
EPSC NARRATIVE

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 63 OF 68





SOIL CLASSIFICATION  
 PODUNK FINE SANDY LOAM,  
 OCCASIONALLY FLOODED  
 0%-3% SLOPES  
 MODERATE EROSION POTENTIAL  
 K = 0.32

**YUENGLING, ROBERT F.  
 & CHRISTINE M.**

BENCHMARK  
 RAILROAD SPIKE IN POLE  
 ELEV = 1431.77

**PROCTOR, BEVERLEY J.**

BEGIN APPROACH  
 STA. 286+50.00

BEGIN BRIDGE  
 STA. 288+03.58  
 FG EL 1432.64

END APPROACH  
 STA. 291+35.00

STATE ROW

STATE ROW

TO LONDONDERRY

TO ANDOVER

BEGIN PROJECT  
 STA. 287+40.00

END BRIDGE  
 STA. 288+66.92  
 FG EL 1432.57

END PROJECT  
 STA. 290+45.00

**HART, DONALD W.  
 & MARIE W.**

SOIL CLASSIFICATION  
 COLTON FINE SANDY LOAM  
 3%-8% SLOPES  
 LOW EROSION POTENTIAL  
 K = 0.17

**PROBST JR., FREDERICK J  
 & PROBST, JENNIFER L.**

LIMITS OF WORK  
 STA. 51+41.51



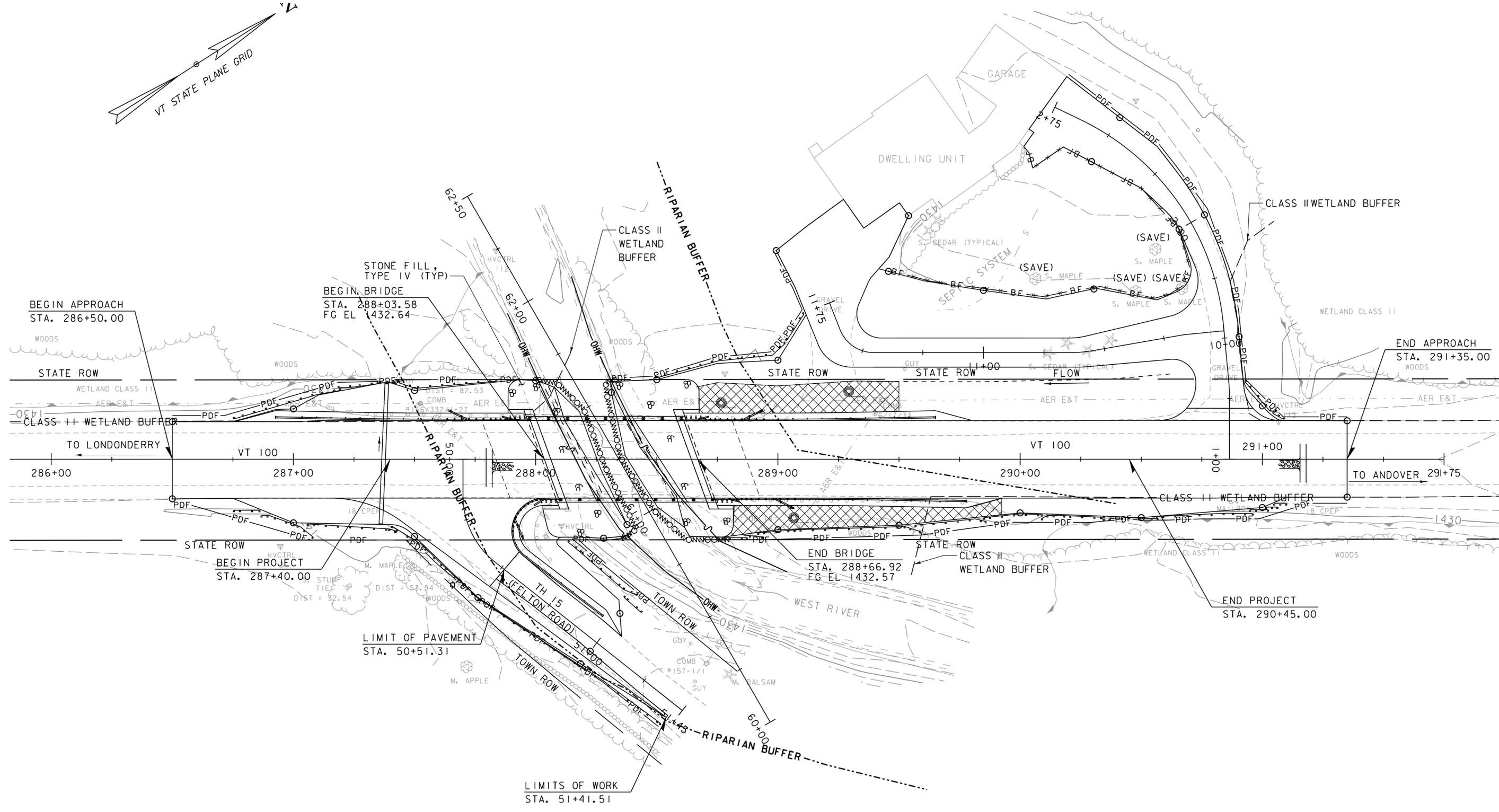
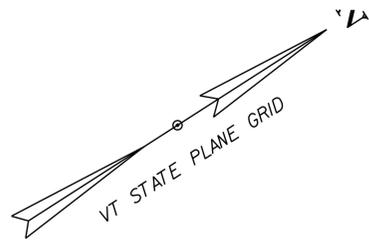
SEE SHEET 12 FOR CONVENTIONAL SYMBOLY LEGEND.

PROJECT NAME: WESTON  
 PROJECT NUMBER: BF 013-2(I3)

FILE NAME: z13b076bdr\_ero.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: J.J. WESTCOTT  
 EPSC EXISTING CONDITIONS SHEET

PLOT DATE: 10/2/2015  
 DRAWN BY: J.J. WESTCOTT  
 CHECKED BY: S.E. BURBANK  
 SHEET 64 OF 68



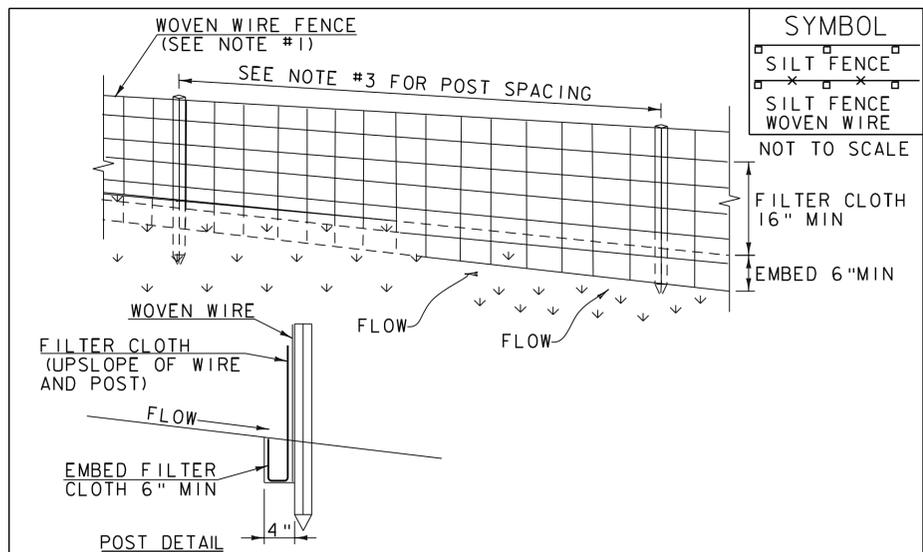


SEE SHEET 12 FOR CONVENTIONAL SYMBOLOLOGY LEGEND.

PROJECT NAME: WESTON	
PROJECT NUMBER: BF 013-2(13)	
FILE NAME: z13b076bdr_ero.dgn	PLOT DATE: 10/2/2015
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.J. WESTCOTT
DESIGNED BY: J.J. WESTCOTT	CHECKED BY: S.E. BURBANK
EPSC CONSTRUCTION CONDITIONS SHEET	SHEET 65 OF 68







**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, MIRAFL100X, 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

VAOT LOW GROW/FINE FESCUE MIX						
WEIGHT	LBS/AC		NAME	LATIN NAME	GERM	PURITY
	BROADCAST	HYDROSEED				
38%	57	95	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX						
WEIGHT	LBS/AC		NAME	LATIN NAME	GERM	PURITY
	BROADCAST	HYDROSEED				
37.5%	22.5	45	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

**GENERAL AMENDMENT GUIDANCE**

FERTILIZER	LIME
10/20/10	AG LIME PELLITIZED
500 LBS/AC	2 TONS/AC 1 TONS/AC

**CONSTRUCTION GUIDANCE**

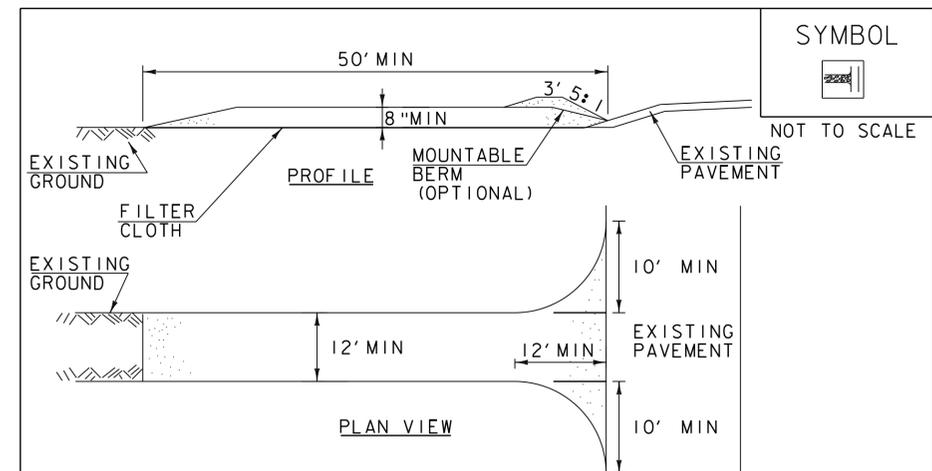
1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT 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. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. 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**

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

REVISIONS	
JANUARY 12, 2015	WHF



**CONSTRUCTION SPECIFICATIONS**

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.

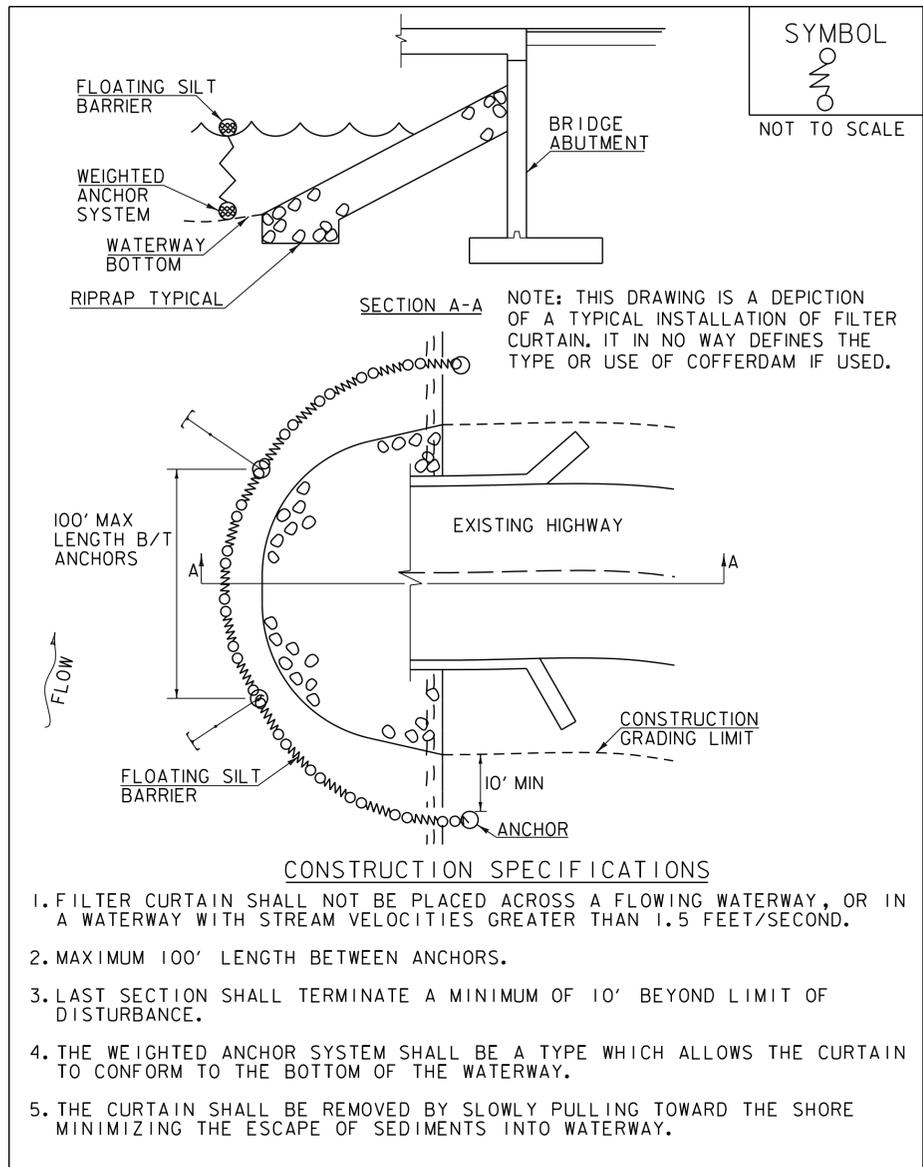
REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076details\_ero.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
EROSION CONTROL DETAILS (1 OF 2)

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 67 OF 68

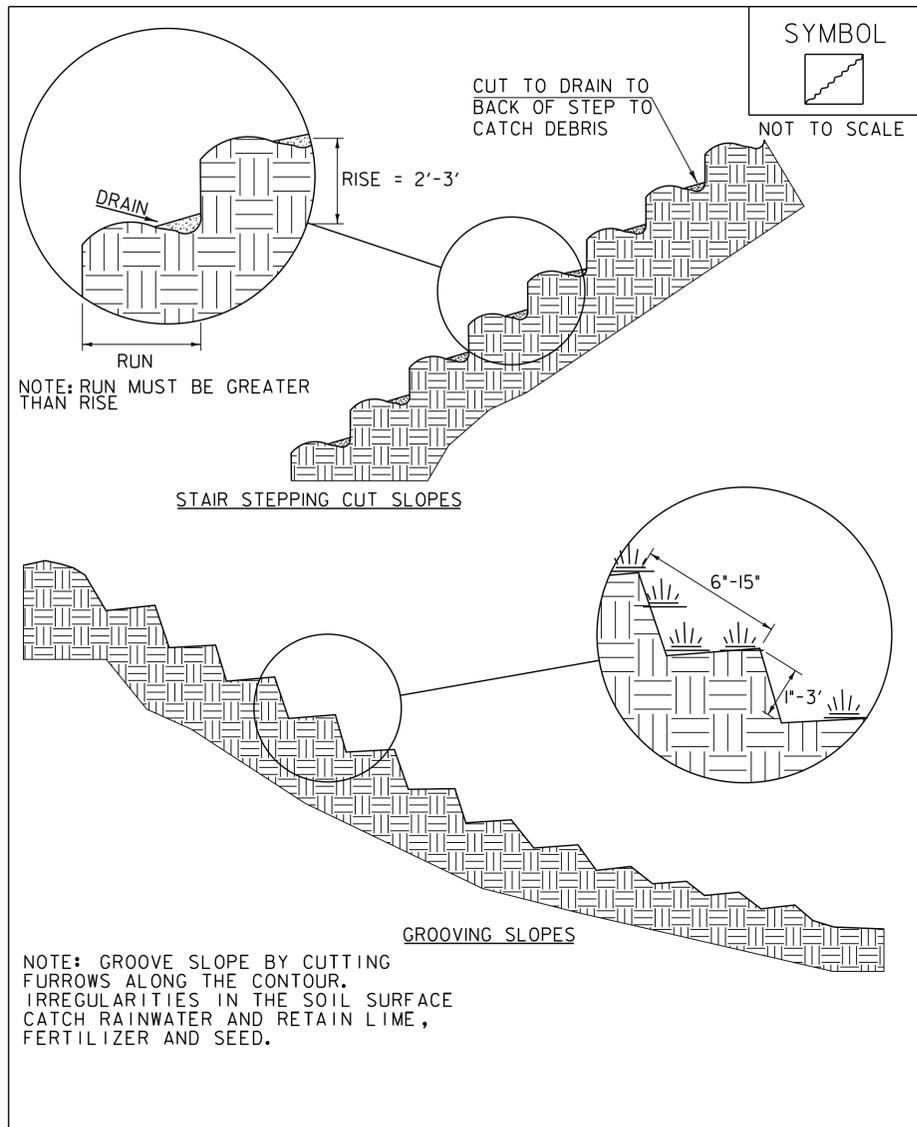




FILTER CURTAIN

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.6).

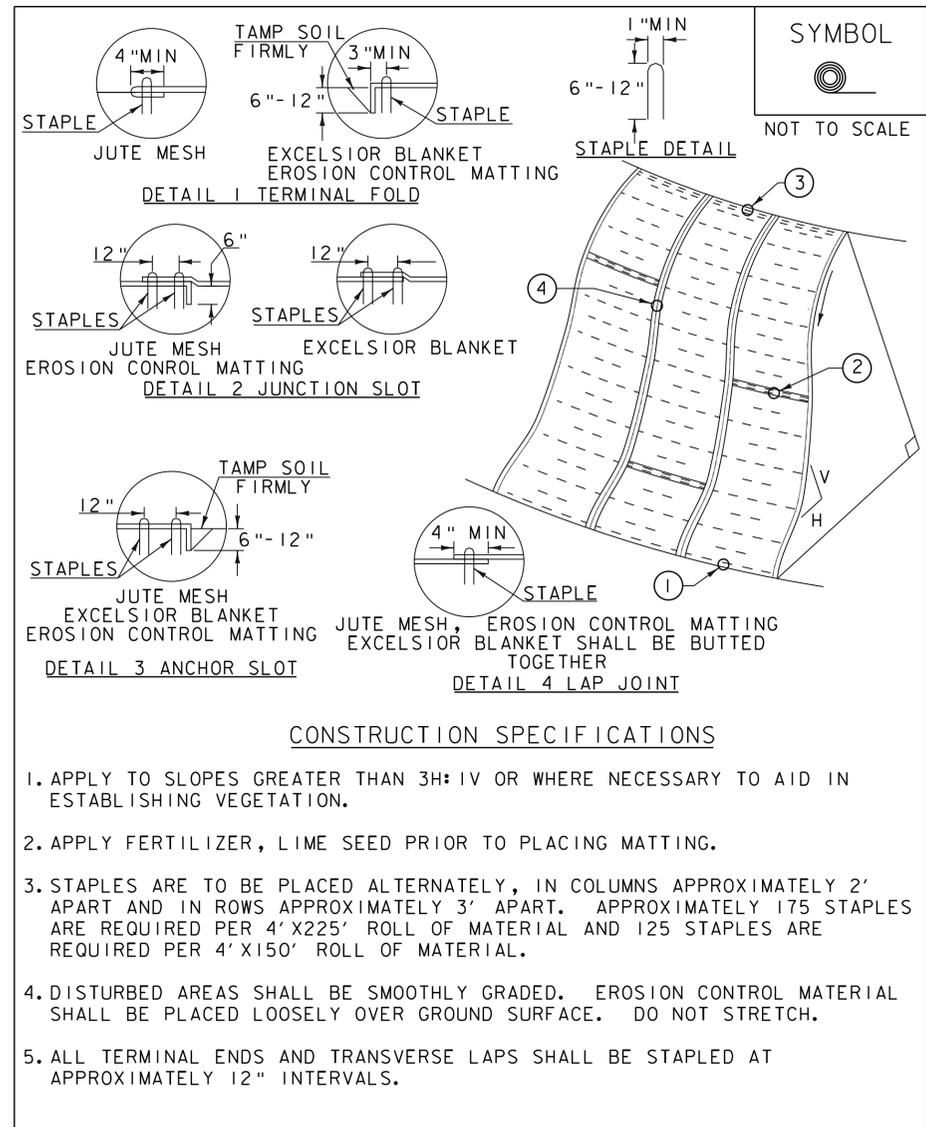


SURFACE ROUGHENING

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 WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF



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



PROJECT NAME: WESTON  
PROJECT NUMBER: BF 013-2(13)

FILE NAME: z13b076details\_ero.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: J.J. WESTCOTT  
EROSION CONTROL DETAILS (2 OF 2)

PLOT DATE: 10/2/2015  
DRAWN BY: J.J. WESTCOTT  
CHECKED BY: S.E. BURBANK  
SHEET 68 OF 68