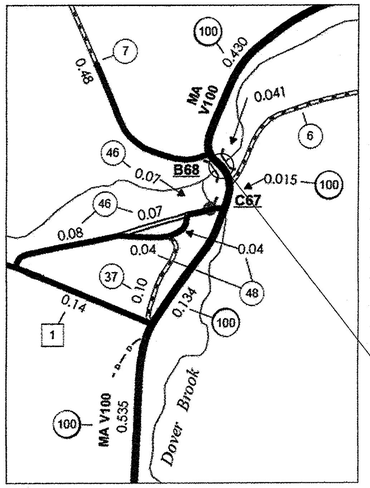
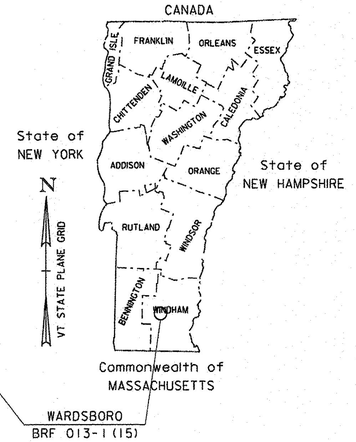
STATE OF VERMONT
AGENCY OF TRANSPORTATION





PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF WARDSBORO
COUNTY OF WINDHAM

VT ROUTE 100 - (MINOR ARTERIAL) BRIDGE NO : 68

PROJECT LOCATION: BEGINNING ON VT 100 APPROXIMATELY 0.008 MILE SOUTH OF THE INTERSECTION OF VT 100 AND TH 6 AND EXTENDING NORTHERLY ALONG VT 100 FOR 0.057 MILE.

PROJECT DESCRIPTION: REPLACEMENT OF EXISTING BRIDGE ON EXISTING ALIGNMENT ALONG WITH RELATED ROADWAY APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE:	69.67 FEET
LENGTH OF ROADWAY:	280.33 FEET
LENGTH OF PROJECT:	350.00 FEET

RECORD PLANS

CONTRACTOR: RENAUD BROTHERS, INC. - VERNON, VT

RESIDENT ENGINEER: CHAD GREENWOOD

CONSTRUCTION BEGAN: MARCH 3, 2016

CONSTRUCTION COMPLETE: NOVEMBER 7, 2017

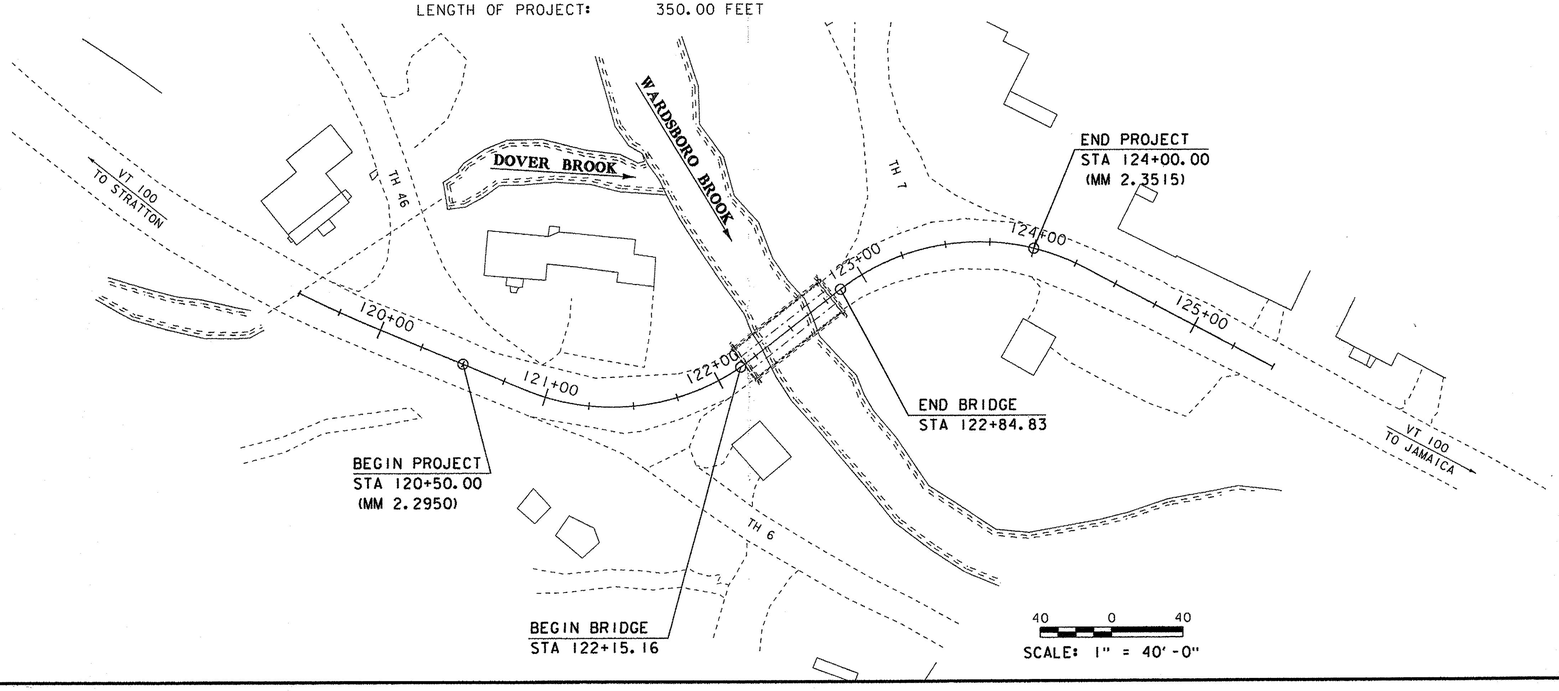
RECORD PLANS BY: CHAD GREENWOOD & AARON WEAVER

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

BY _____ RESIDENT ENGINEER

DATE 7/17/18

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



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 :	L. ORVIS
SURVEYED DATE :	1-12-2009
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD 83 (07)

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE 7/14/2015

PROJECT MANAGER : CAROLYN CARLSON, P.E.

PROJECT NAME : WARDSBORO
PROJECT NUMBER : BRF 013-1(15)

SHEET 1 OF 51 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 12.09.13

LRFD

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50	R.O.W. DETAIL SHEET
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STANDARDS LIST

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E-163	TUBULAR STEEL SIGN POST	05-20-1999
E-191	PAVEMENT MARKING DETAILS	02-01-1999
E-192	PAVEMENT MARKING DETAILS	10-12-2000
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1BM	BOX BEAM GUARD RAIL	06-13-1997
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
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T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-2012
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

STRUCTURES DETAIL SHEETS

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SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	06-04-2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	05-02-2011

SEE REVISED SHEET 2B
DATED 10/5/15

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Nov. 2012

DRAINAGE AREA : 9.4 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous, mostly forested.
STREAM CHARACTERISTICS : Sinuous, semi-alluvial and probably incised.
NATURE OF STREAMBED : Mostly cobbles and boulders with some gravel.

PEAK FLOW DATA

Q 2.33 =	900 cfs	Q 50 =	3550 cfs
Q 10 =	1900 cfs	Q 100 =	4300 cfs
Q 25 =	2800 cfs	Q 500 =	5800 cfs

DATE OF FLOOD OF RECORD: Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 14.2 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: < 1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel beam bridge with concrete deck.
YEAR BUILT: 1929
CLEAR SPAN(NORMAL TO STREAM): 59'
VERTICAL CLEARANCE ABOVE STREAMBED: 14'
WATERWAY OF FULL OPENING: 570 sq. ft.
DISPOSITION OF STRUCTURE: Remove
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1408.6'	VELOCITY =	9.9 fps
Q10 =	1410.8'	"	12.2 fps
Q25 =	1412.5'	"	13.6 fps
Q50 =	1413.7'	"	14.4 fps
Q100 =	1414.7'	"	15.1 fps

LONG TERM STREAMBED CHANGES: Comparing current survey to record plans and the flood insurance study, it appears there may have been some degradation in the past.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1418.6'
DISCHARGE OVER ROAD @Q100: N/A

UPSTREAM STRUCTURE

TOWN: Wardsboro — DISTANCE: 3000'
HIGHWAY # : TH 29 — STRUCTURE #: 26
CLEAR SPAN: 69' — CLEAR HEIGHT: 7.5'
YEAR BUILT: 1939 — FULL WATERWAY: N/A
STRUCTURE TYPE: Single span steel beam bridge with timber deck.

DOWNSTRUCTURE STRUCTURE

TOWN: Wardsboro — DISTANCE: 8000'
HIGHWAY # : TH 6 — STRUCTURE #: 27
CLEAR SPAN: 96' — CLEAR HEIGHT: 19'
YEAR BUILT: 1978 — FULL WATERWAY: N/A
STRUCTURE TYPE: Single span steel 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	2.61	1.33					
POSTING							
OPERATING	3.39	1.73	2.79	1.85	2.4	2.15	2.35
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge with concrete deck.

CLEAR SPAN(NORMAL TO STREAM): 65'
VERTICAL CLEARANCE ABOVE STREAMBED: 14'
WATERWAY OF FULL OPENING: 590 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1408.6'	VELOCITY=	9.9 fps
Q10 =	1410.8'	"	12.2 fps
Q25 =	1412.5'	"	13.6 fps
Q50 =	1413.7'	"	14.4 fps
Q100 =	1414.7'	"	15.1 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1418.6'
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1416.2'
VERTICAL CLEARANCE: @ Q50 = 2.5'

SCOUR: Total long term degradation and contraction scour = 2' at Q100 and 4' at Q500.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	20 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	10 cfs	Depth = 0.5'
ORDINARY HIGH WATER:	390 cfs	Depth = 3.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single span bridge
CLEAR SPAN (NORMAL TO STREAM): 58' minimum
VERTICAL CLEARANCE ABOVE STREAMBED: Elev. 1414.0' minimum
WATERWAY AREA OF FULL OPENING: 395 sq. ft. minimum

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TWO-WAY TRAFFIC ON A TEMPORARY BRIDGE.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY
4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	2.5 INCH
3. DESIGN SPAN	L:	68.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	---
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	10.0 KSF
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	346.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	f_y:	50 KSI
21. PILE SIZE		HP 12X74
22. EST. PILE LENGTH	L_p:	77 FT
23. PILE RESISTANCE FACTOR	ϕ:	0.65
24. LATERAL PILE DEFLECTION	Δ:	0.37 INCH
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA: ---	S_s:	---
	S_1:	---

TRAFFIC DATA

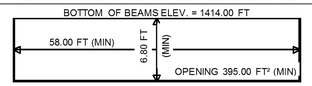
YEAR	ADT	DHV	% D	% T	ADTT
2013	1300	190	51	11.4	160
2033	1500	220	51	17.3	270

20 year ESAL for flexible pavement from 2013 to 2033 : 878000
40 year ESAL for flexible pavement from 2013 to 2053 : 2064000
Design Speed : 30 mph

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

TEMPORARY BRIDGE PROFILE ALONG TEMP CL



PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY	Rndr:	346.00 KIP
2. PILE TEST RESISTANCE FACTOR	ϕ:	0.65
3. MINIMUM PILE TIP ELEVATION		1377.00 FT

4. ONE DYNAMIC PILE LOAD TEST REQUIRED PER ABUTMENT.

PROJECT NAME: **WARDSBORO**
PROJECT NUMBER: **BRF 013-1(15)**

FILE NAME: **s92b283pi.xls**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **D. PETERSON**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 7/9/2015
DRAWN BY: **R. PELLETT**
CHECKED BY: **D. PETERSON**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version12.09.13

LRFD

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SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	05-02-2011

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Nov. 2012

DRAINAGE AREA : 9.4 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous, mostly forested.
STREAM CHARACTERISTICS : Sinuous, semi-alluvial and probably incised.
NATURE OF STREAMBED : Mostly cobbles and boulders with some gravel.

PEAK FLOW DATA

Q 2.33 =	900 cfs	Q 50 =	3550 cfs
Q 10 =	1900 cfs	Q 100 =	4300 cfs
Q 25 =	2800 cfs	Q 500 =	5800 cfs

DATE OF FLOOD OF RECORD: Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY: @ Q50 = 14.2 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: < 1% HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel beam bridge with concrete deck.
YEAR BUILT: 1929
CLEAR SPAN(NORMAL TO STREAM): 59'
VERTICAL CLEARANCE ABOVE STREAMBED: 14'
WATERWAY OF FULL OPENING: 570 sq. ft.
DISPOSITION OF STRUCTURE: Remove
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1408.6'	VELOCITY =	9.9 fps
Q10 =	1410.8'	"	12.2 fps
Q25 =	1412.5'	"	13.6 fps
Q50 =	1413.7'	"	14.4 fps
Q100 =	1414.7'	"	15.1 fps

LONG TERM STREAMBED CHANGES: Comparing current survey to record plans and the flood insurance study, it appears there may have been some degradation in the past.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1418.6'
DISCHARGE OVER ROAD @Q100: N/A

UPSTREAM STRUCTURE

TOWN: Wardsboro — DISTANCE: 3000'
HIGHWAY# : TH 29 — STRUCTURE #: 26
CLEAR SPAN: 69' — CLEAR HEIGHT: 7.5'
YEAR BUILT: 1939 — FULL WATERWAY: N/A
STRUCTURE TYPE: Single span steel beam bridge with timber deck.

DOWNSTREAM STRUCTURE

TOWN: Wardsboro — DISTANCE: 8000'
HIGHWAY# : TH 6 — STRUCTURE #: 27
CLEAR SPAN: 96' — CLEAR HEIGHT: 19'
YEAR BUILT: 1978 — FULL WATERWAY: N/A
STRUCTURE TYPE: Single span steel beam bridge.

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY ⚠	2.46	1.26					
POSTING							
OPERATING ⚠	3.19	1.63	2.63	1.74	2.26	2.03	2.22
COMMENTS:							

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY — Rn: 346.00 KIP
2. PILE TEST RESISTANCE FACTOR — ϕ: 0.65
3. MINIMUM PILE TIP ELEVATION — 1377.00 FT
4. ONE DYNAMIC PILE LOAD TEST REQUIRED PER ABUTMENT.

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge with concrete deck.

CLEAR SPAN(NORMAL TO STREAM): 65'
VERTICAL CLEARANCE ABOVE STREAMBED: 14'
WATERWAY OF FULL OPENING: 590 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1408.6'	VELOCITY=	9.9 fps
Q10 =	1410.8'	"	12.2 fps
Q25 =	1412.5'	"	13.6 fps
Q50 =	1413.7'	"	14.4 fps
Q100 =	1414.7'	"	15.1 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1418.6'
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1416.2'
VERTICAL CLEARANCE: @ Q50 = 2.5'

SCOUR: Total long term degradation and contraction scour = 2' at Q100 and 4' at Q500.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	20 cfs	
ORDINARY LOW WATER:	10 cfs	DEPTH OR ELEVATION: Depth = 0.5'
ORDINARY HIGH WATER:	390 cfs	Depth = 3.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single span bridge
CLEAR SPAN (NORMAL TO STREAM): 58' minimum
VERTICAL CLEARANCE ABOVE STREAMBED: Elev. 1414.0' minimum
WATERWAY AREA OF FULL OPENING: 395 sq. ft. minimum

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TWO-WAY TRAFFIC ON A TEMPORARY BRIDGE.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY
4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	dp:	2.5 INCH
3. DESIGN SPAN	L:	68.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	fy:	---
6. PRESTRESSED CONCRETE STRENGTH	f'c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'ci:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'c:	3.5 KSI
11. CONCRETE, CLASS C	f'c:	---
12. REINFORCING STEEL	fy:	60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERNG)	fy:	50 KSI
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	qn:	4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	qn:	10.0 KSF
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	qp:	346.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	fy:	50 KSI
21. PILE SIZE		HP 12X74
22. EST. PILE LENGTH	Lp:	77 FT
23. PILE RESISTANCE FACTOR	ϕ:	0.65
24. LATERAL PILE DEFLECTION	Δ:	0.37 INCH
25. BASIC WIND SPEED	V3s:	---
26. MINIMUM GROUND SNOW LOAD	pg:	---
27. SEISMIC DATA PGA: ---	Ss:	---
	S1:	---

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED LRFR LOAD RATING FACTORS.

AS BUILT "REBAR" DETAIL

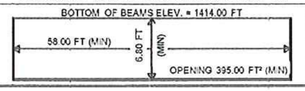
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

TRAFFIC DATA

YEAR	ADT	DHV	%D	%T	ADTT
2013	1300	190	51	11.4	160
2033	1500	220	51	17.3	270

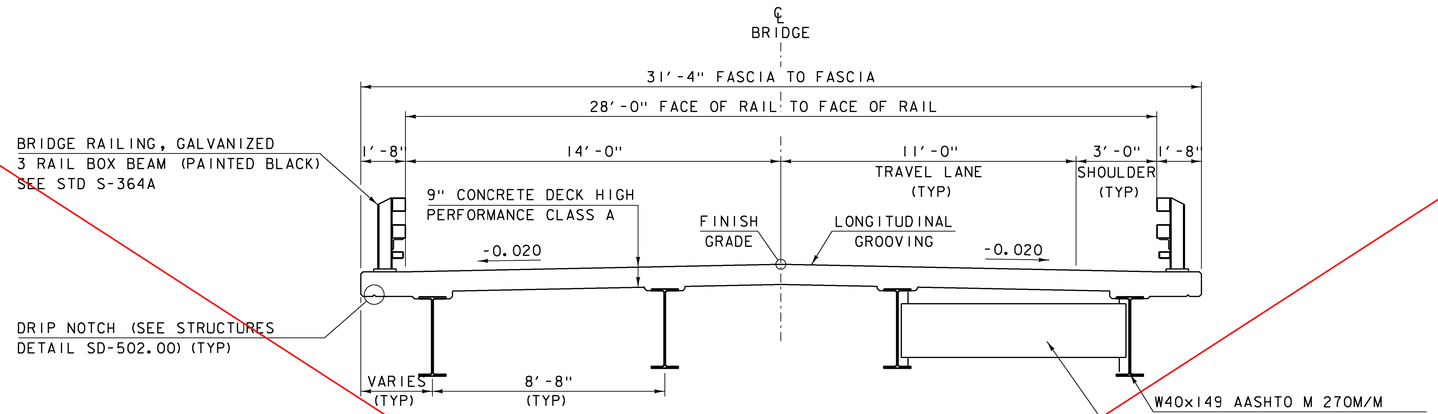
20 year ESAL for flexible pavement from 2013 to 2033 : 878000
40 year ESAL for flexible pavement from 2013 to 2053 : 2064000
Design Speed : 30 mph

TEMPORARY BRIDGE PROFILE ALONG TEMP CL



PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

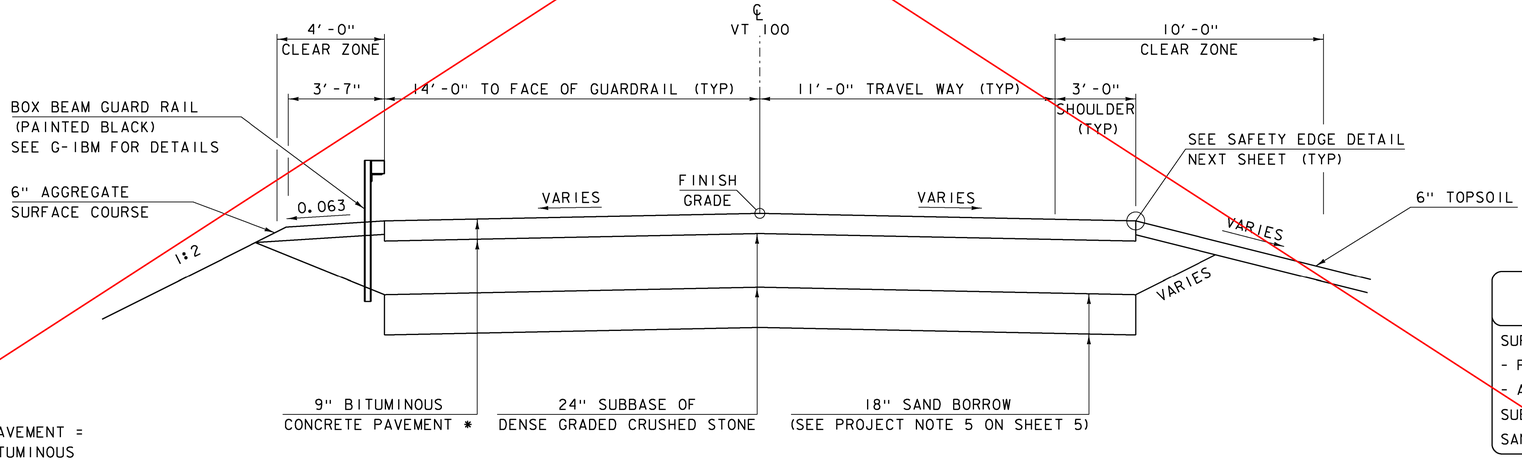
FILE NAME: s92b283pl.xls — PLOT DATE: 10/5/2015
PROJECT LEADER: C. CARLSON — DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON — CHECKED BY: D. PETERSON
PRELIMINARY INFORMATION SHEET — SHEET 2 OF 51



BRIDGE TYPICAL SECTION

SCALE: 3/8" = 1′-0"

SEE REVISED SHEET 3B
DATED 10/5/15



WITH GUARDRAIL

WITHOUT GUARDRAIL

ROADWAY TYPICAL SECTION

SCALE: 3/8" = 1′-0"

BITUMINOUS CONCRETE PAVEMENT =
SPECIAL PROVISION (BITUMINOUS
CONCRETE PAVEMENT, SMALL QUANTITY)

TACK COAT: EMULSIFIED ASPHALT IS TO BE
APPLIED AT THE RATE OF 0.025 GAL/SY
ON ALL COLD PLANED SURFACES AND BETWEEN
SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED
BY THE ENGINEER.

* 1½" TYPE IVS
OVER 1½" TYPE IVS
OVER 3" TYPE IIS
OVER 3" TYPE IIS

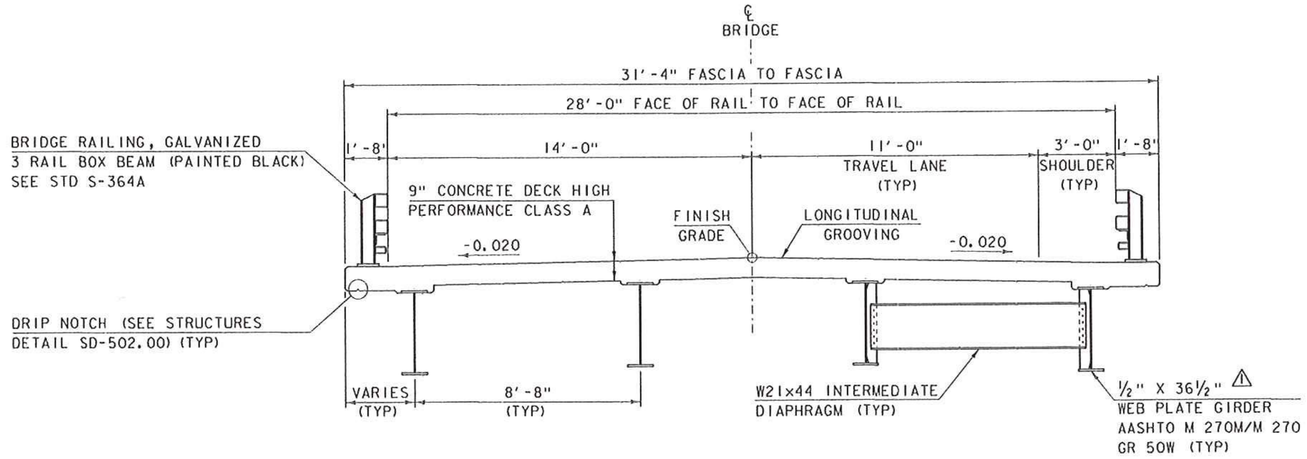
MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

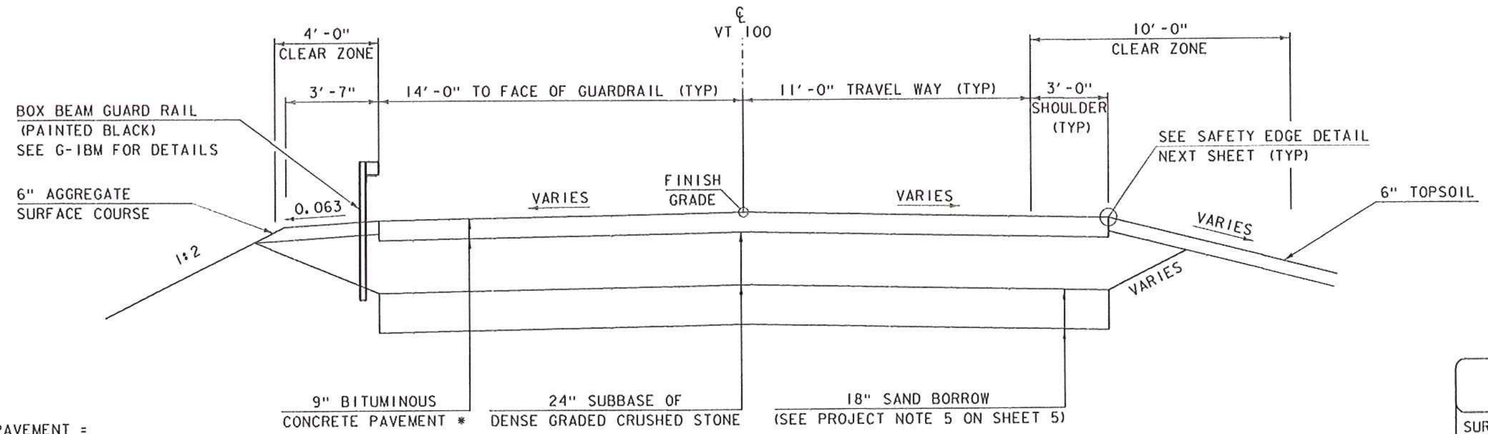
FILE NAME: s92b283typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TYPICAL SECTIONS 1

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 3A OF 51



BRIDGE TYPICAL SECTION

SCALE: 3/8" = 1'-0"



WITH GUARDRAIL

WITHOUT GUARDRAIL

ROADWAY TYPICAL SECTION

SCALE: 3/8" = 1'-0"

BITUMINOUS CONCRETE PAVEMENT =
SPECIAL PROVISION (BITUMINOUS
CONCRETE PAVEMENT, SMALL QUANTITY)

TACK COAT: EMULSIFIED ASPHALT IS TO BE
APPLIED AT THE RATE OF 0.025 GAL/SY
ON ALL COLD PLANED SURFACES AND BETWEEN
SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED
BY THE ENGINEER.

* 1 1/2" TYPE IVS
OVER 1 1/2" TYPE IVS
OVER 3" TYPE IIS
OVER 3" TYPE IIS

MATERIAL TOLERANCES
(IF USED ON PROJECT)

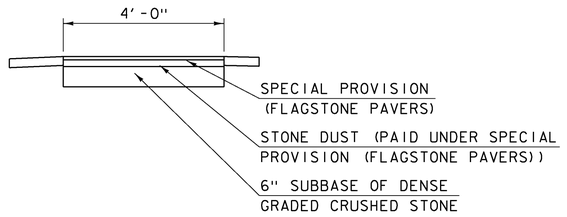
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED ROLLED BEAM TO PLATE GIRDER.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TYPICAL SECTIONS 1

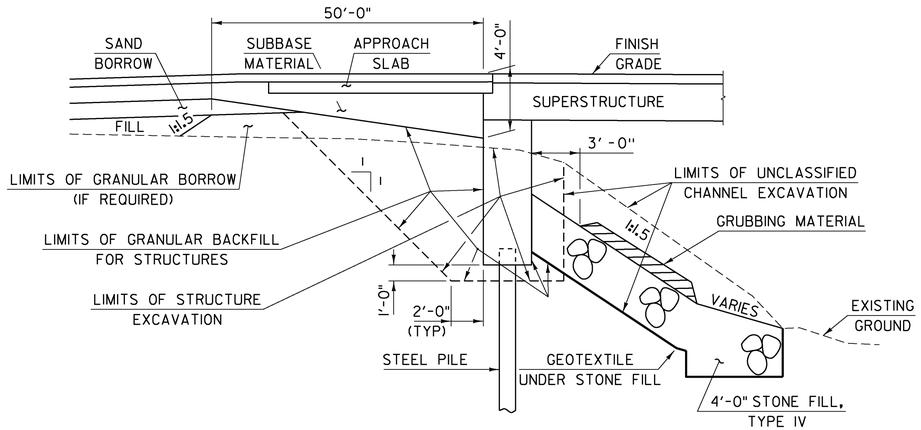
PLOT DATE: 06-OCT-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 3B OF 51



FLAGSTONE PATHWAY TYPICAL SECTION

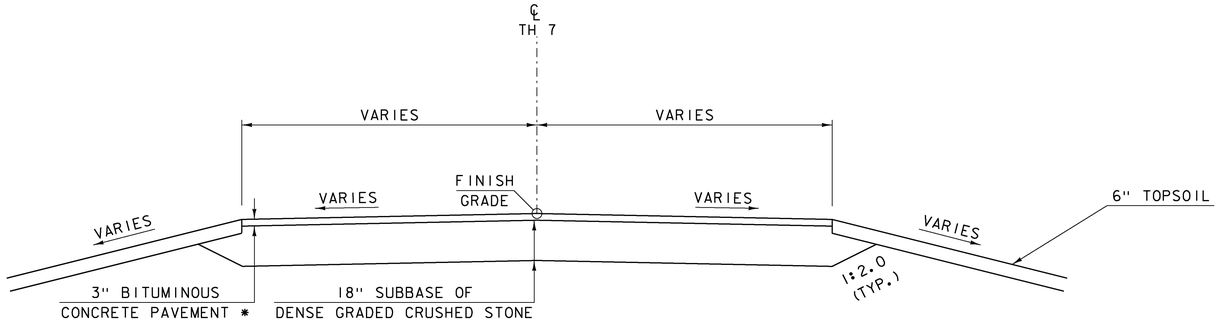
SCALE: 1/4" = 1'-0"

STA 124+52.66 LT TO STA 124+56.66 LT
STA 124+79.58 LT TO STA 124+83.58 LT



ABUTMENT EARTHWORK TYPICAL SECTION

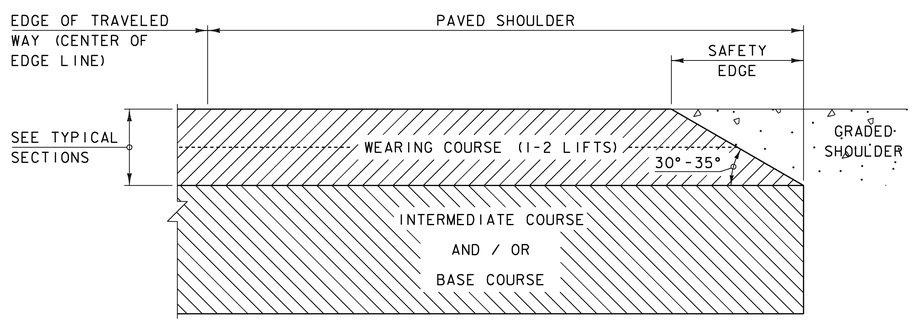
NOT TO SCALE



* 1½" TYPE IVS
OVER 1½" TYPE IVS

TH 7 TYPICAL SECTION

SCALE: 3/8" = 1'-0"

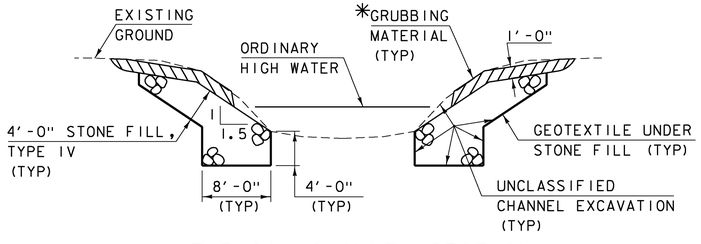


SAFETY EDGE DETAIL

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".



TYPICAL CHANNEL SECTION

NOT TO SCALE

* WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283typ.dgn	PLOT DATE: 20-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
TYPICAL SECTIONS 2	SHEET 4 OF 51

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, THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SIXITH EDITION, DATED 2012 AND IT'S LATEST REVISIONS.

2. BRIDGE #68 WAS DESIGNED FOR HL-93 LIVE LOAD.

3. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS OTHERWISE NOTED.

4. THE DETAILS AND DIMENSIONS SHOW ON THE PROJECT SPECIFIC PLAN AND DETAIL SHEETS TAKE PRECEDENCE OVER THE MORE GENERAL "STRUCTURES DETAIL SHEETS" PROVIDED IN THE PLAN SET.

EARTHWORK AND RELATED ITEMS

5. THE CONTRACTOR MAY SUBSTITUTE SUBBASE OF DENSE GRADED CRUSHED STONE FOR THE SAND BORROW SHOWN ON THE PLANS. IF PLACEMENT OF SUBBASE IS IN LIEU OF SAND BORROW, PLACE A GEOTEXTILE MEETING THE REQUIREMENTS OF SECTION 649 FOR "GEOTEXTILE FOR ROAD BED SEPARATOR" BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ANY SUBSTITUTED MATERIAL WILL BE PAID AT THE UNIT PRICE BID FOR ITEM 203.31, "SAND BORROW". ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE GEOTEXTILE FOR ROADBED SEPARATOR WILL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 203.31, "SAND BORROW".

6. THE STONE FILL UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE GIRDERS ARE SET.

7. THE BACKFILL BEHIND THE ABUTMENTS SHALL NOT BE PLACED HIGHER THAN THE BRIDGE SEATS UNTIL THE ABUTMENTS AND DECK CONSTRUCTION IS COMPLETED. THE DIFFERENCE IN ELEVATION OF FILL BEHIND THE ABUTMENTS AT ANY TIME DURING BACKFILLING OPERATIONS SHALL NOT EXCEED 2 FEET.

8. ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL INCLUDE:

    - THE REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTION OF THE EXISTING ABUTMENTS NOT REMOVED UNDER STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.

STRUCTURAL STEEL

9. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO SUBSECTION 714.03 FOR AASHTO M 270M/M 270, GRADE 50, WEATHERING STEEL.

10. CHARPY V-NOTCH TEST: TEST STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS IN ACCORDANCE WITH SUBSECTION 714.01.

11. BOLTS FOR ALL BOLTED FIELD CONNECTIONS SHALL BE 7/8 INCH DIAMETER HIGH STRENGTH BOLTS IN 15/16 INCH DIAMETER HOLES UNLESS OTHERWISE NOTED.

12. CONNECTIONS NOT SHOWN IN THE PLANS SHALL BE DETAILED BY THE FABRICATOR IN THE FABRICATION DRAWINGS AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.

13. 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 ERECTING THE SUPERSTRUCTURE.

14. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A 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.

15. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF GIRDERS SHALL BE TAKEN UNDER DIRECTION OF THE ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.

16. CONCRETE PORTIONS OF ABUTMENTS AND WINGWALLS ABOVE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL FINISH GRADES HAVE BEEN DETERMINED BY THE ENGINEER.

17. FLEMING BRACKETS OR SIMILAR FALSE WORK: SPACE FLEMING BRACKETS OR SIMILAR FALSEWORK AS REQUIRED BY DESIGN WITH A MAXIMUM SPACING OF 4'-0". THE BRACKETS SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL THEY BEAR ABOVE THE BOTTOM QUARTER OF THE WEB.

18. HOLES IN WEB: FILL ANY BOLT HOLES IN THE WEBS OF THE BEAMS NOT OTHERWISE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS MEETING AASHTO M164 TYPE 3. TIGHTEN THE BOLTS IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.

19. GIRDER WEBS AND DIAPHRAGMS SHALL BE PLUMB IN THE FINAL POSITION.

CONCRETE AND REINFORCING STEEL

20. INDIVIDUAL POURED SEGMENTS ARE TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.

21. ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A" SHALL BE USED FOR THE DECK, INTEGRAL ABUTMENT CURTAIN WALL AND WINGWALLS ABOVE THE PILE CAP CONSTRUCTION JOINT. ALL SUBSTRUCTURE CONCRETE BELOW THE BRIDGE SEATS AND ALL APPROACH SLAB CONCRETE SHALL BE ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B."

22. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.

23. All REINFORCING STEEL IN OR EXTENDING INTO CONCRETE, HPC A SHALL BE LEVEL II UNLESS OTHERWISE NOTED. REINFORCING STEEL IN APPROACH SLABS SHALL BE LEVEL I. ALL OTHER REINFORCING STEEL SHALL BE LEVEL I. PAYMENT FOR REINFORCING STEEL WILL BE MADE UNDER THE APPROPRIATE SECTION 507 CONTRACT ITEM.

SUBSTRUCTURE

24. ITEM 505.16 "STEEL PILING, HP 12 X 74". REINFORCE THE DRIVING TIP ACCORDING TO SUBSECTION 505.04(F).

25. A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED PER ABUTMENT. MORE TESTS MAY BE REQUIRED BY THE RESIDENT ENGINEER. ADDITIONAL TEST(S) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR ITEM 505.45 "DYNAMIC PILE LOADING TEST". THE NOMINAL PILE DRIVING RESISTANCE FOR EACH PILE IS 346 KIPS. A PILE RESISTANCE FACTOR OF 0.65 WAS USED BASED ON THE DYNAMIC TESTING REQUIREMENT.

26. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AND ARE SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY. PILES SHALL HAVE A MINIMUM EMBEDMENT OF 30 FT MEASURED FROM THE BOTTOM OF THE PILE CAP.

TRAFFIC CONTROL

27. TRAFFIC SHALL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE PLACED UPSTREAM OF THE EXISTING BRIDGE.

28. THE TEMPORARY BRIDGE APPROACHES SHALL BE PAVED. A WOODEN DECK WILL NOT BE ALLOWED.

29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN. THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

30. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

MISCELLANEOUS

31. THE ARBOR LOCATED AT APPROXIMATELY STA. 120+89 LT SHALL BE MOVED DURING CONSTRUCTION AND THE LANDSCAPING LOCATED AROUND IT SHALL BE SALVAGED AND RESET BEFORE THE END OF THE PROJECT OR COMPLETELY REPLACED TO THE APPROVAL OF THE PROPERTY OWNER. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE (1630 SF)".

32. THE CONTRACTOR SHALL TAKE CARE TO AVOID DISTURBING THE FLOWER GARDEN LOCATED AT STATION 120+95 LT, ALONG THE SIDE OF THE BUILDING.

33. DURING CONSTRUCTION THE SATELLITE LOCATED AT STA. 121+92.80, 23.8' RT SHALL BE RELOCATED TO A LOCATION WHERE IT CAN RECEIVE A SIGNAL OF SIMILAR QUALITY TO THAT IN IT'S CURRENT LOCATION. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE (1630 SF)".

34. ALL STEEL COMPONENTS OF BRIDGE RAILING, APPROACH RAILING AND BOX BEAM GUARDRAIL SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SURFACE PREPARED FOR PAINTING IN ACCORDANCE WITH ASTM D 6386. COMPONENTS SHALL BE PAINTED BLACK IN ACCORDANCE WITH SUBSECTION 708.03.

35. ALL BRIDGE, APPROACH AND GUARDRAIL SHALL BE PAINTED BLACK (CHIP COLOR #27038) EXCEPT HARDWARE AND ANCHORAGE CAST IN CONCRETE.

36. THE CONTRACTOR SHALL INSTALL FABRIC FILTER OVER THE EXISTING DRY WELL LOCATED AT STATION 121+50 (+/-), 55 FT (LT) PRIOR TO CONSTRUCTION OF THE TEMPORARY BRIDGE. THE COST OF THE FABRIC WILL BE CONSIDERED INCIDENTAL TO ITEM 528.11, "TWO WAY TEMPORARY BRIDGE".

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s98b283gn.dgn	PLOT DATE: 21-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: STR3
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
GENERAL NOTES	SHEET 5 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES				TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				* N.A.B.I. - NOT A BID ITEM
1860				1860		CY	COMMON EXCAVATION	203.15				
780				780		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				**EARTHWORKS SUMMARY**
350				350		CY	SAND BORROW	203.31				**FILL AVAILABLE**
484				484		CY	TRENCH EXCAVATION OF EARTH	204.20		1860	CY	COMMON EXCAVATION (1,860 x 1.0)
28				28		CY	TRENCH EXCAVATION OF ROCK	204.21		234	CY	UNCLASSIFIED CHANNEL EXCAVATION (780 x 0.3)
1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22		123	CY	STRUCTURE EXCAVATION (410 x 0.3)
		410		410		CY	STRUCTURE EXCAVATION	204.25		306	CY	TRENCH EXCAVATION OF EARTH (340 x 0.9)
290		205		495		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30		7	CY	ROUNDING
470				470		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10		**2530**	**CY**	**TOTAL FILL AVAILABLE**
960				960		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
15				15		CY	AGGREGATE SURFACE COURSE	401.10				
17				17		CWT	EMULSIFIED ASPHALT	404.65				
1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
		121		121		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
		135		135		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
		1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10				
		770		770		LF	STEEL PILING, HP 12 X 74	505.16				
		2		2		EACH	DYNAMIC PILE LOADING TEST	505.45				
		48320		48320		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
		6065		6065		LB	REINFORCING STEEL, LEVEL I	507.11				
		33364		33364		LB	REINFORCING STEEL, LEVEL II	507.12				
		1		1		LS	SHEAR CONNECTORS (824 - 7/8" x 7")	508.15				
		217		217		SY	LONGITUDINAL DECK GROOVING	509.10				
		10		10		GAL	WATER REPELLENT, SILANE	514.10				
		63		63		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
		63		63		LF	JOINT SEALER, HOT POURED	524.11				
		146		146		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)	525.335				
1				1		LS	TWO-WAY TEMPORARY BRIDGE (1630 SF)	528.11				
1				1		EACH	REMOVAL OF STRUCTURE (2112 SF - EST.)	529.15				
		8		8		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17				
							BEGIN OPTION AA					
245				245		LF	18" CAAP .105 (2-2/3 X 1/2)	601.0217				
245				245		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415				
245				245		LF	18" CPEP	601.0915				
							END OPTION AA					
3				3		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18				
850				850		CY	STONE FILL, TYPE IV	613.13				
20				20		LF	BOX BEAM GUARDRAIL (PAINTED BLACK)	621.30				
4				4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)	621.725				

SEE REVISED SHEET 6B
DATED 10/5/15

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET 1

PLOT DATE: 15-JUL-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 6A OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES							TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				* N.A.B.I. - NOT A BID ITEM
1860				1860		CY	COMMON EXCAVATION	203.15				
780				780		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				EARTHWORKS SUMMARY
350				350		CY	SAND BORROW	203.31				FILL AVAILABLE
484				484		CY	TRENCH EXCAVATION OF EARTH	204.20		1860	CY	COMMON EXCAVATION (1,860 x 1.0)
28				28		CY	TRENCH EXCAVATION OF ROCK	204.21		234	CY	UNCLASSIFIED CHANNEL EXCAVATION (780 x 0.3)
1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22		123	CY	STRUCTURE EXCAVATION (410 x 0.3)
		410		410		CY	STRUCTURE EXCAVATION	204.25		306	CY	TRENCH EXCAVATION OF EARTH (340 x 0.9)
290		205		495		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30		7	CY	ROUNDING
470				470		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10		**2530**	**CY**	**TOTAL FILL AVAILABLE**
960				960		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
15				15		CY	AGGREGATE SURFACE COURSE	401.10				
17				17		CWT	EMULSIFIED ASPHALT	404.65		**10**	**CY**	**TOTAL FILL REQUIRED (EST.)**
1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50		**2520**	**CY**	**TOTAL WASTE**
		121		121		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
		135		135		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
		1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10				
		770		770		LF	STEEL PILING, HP 12 X 74	505.16				
		2		2		EACH	DYNAMIC PILE LOADING TEST	505.45				
		44026 ⚠		44026 ⚠		LB	STRUCTURAL STEEL, PLATE GIRDER	506.55 ⚠				
		6065		6065		LB	REINFORCING STEEL, LEVEL I	507.11				
		33364		33364		LB	REINFORCING STEEL, LEVEL II	507.12				
		1		1		LS	SHEAR CONNECTORS (Ø24 - 7/8" x 7")	508.15				
		217		217		SY	LONGITUDINAL DECK GROOVING	509.10				
		10		10		GAL	WATER REPELLENT, SILANE	514.10				
		63		63		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
		63		63		LF	JOINT SEALER, HOT POURED	524.11				
		146		146		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)	525.335				
1				1		LS	TWO-WAY TEMPORARY BRIDGE (1630 SF)	528.11				
1				1		EACH	REMOVAL OF STRUCTURE (2112 SF - EST.)	529.15				
		8		8		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17				
							BEGIN OPTION AA					
245				245		LF	18" CAAP .105 (2-2/3 X 1/2)	601.0217				
245				245		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415				
245				245		LF	18" CPEP	601.0915				
							END OPTION AA					
3				3		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18				
850				850		CY	STONE FILL, TYPE IV	613.13				
20				20		LF	BOX BEAM GUARDRAIL (PAINTED BLACK)	621.30				
4				4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)	621.725				

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED PAY ITEM NO AND QUANTITY.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET 1

PLOT DATE: 06-OCT-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 68 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						112				112		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				* N.A.B.I. - NOT A BID ITEM
						200				200		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
						400				400		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				
						1100				1100		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404				
						1100				1100		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414				
						50				50		LF	DURABLE 24 INCH STOP BAR	646.480				
						8				8		EACH	DURABLE LETTER OR SYMBOL	646.490				
						130				130		SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85				
							810			810		SY	GEOTEXTILE UNDER STONE FILL	649.31				
							66			66		SY	GEOTEXTILE FOR SILT FENCE	649.51				
							95			95		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
							20			20		LB	SEED	651.15				
							10			10		LB	SEED, WINTER RYE	651.17				
							100			100		LB	FERTILIZER	651.18				
							0.5			0.5		TON	AGRICULTURAL LIMESTONE	651.20				
							0.5			0.5		TON	HAY MULCH	651.25				
							130			130		CY	TOPSOIL	651.35				
							380			380		SY	GRUBBING MATERIAL	651.40				
							1			1		LS	EPSC PLAN	652.10				
							50			50		HR	MONITORING EPSC PLAN	652.20				
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							400			400		SY	TEMPORARY EROSION MATTING	653.20				
							50			50		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
							30			30		CY	VEHICLE TRACKING PAD	653.35				
							2			2		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
							100			100		LF	BARRIER FENCE	653.50				
							700			700		LF	PROJECT DEMARCATION FENCE	653.55				
						6.08				6.08		SF	TRAFFIC SIGNS, TYPE A	675.20				
						35				35		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
						14				14		EACH	REMOVING SIGNS	675.50				
						7				7		EACH	ERECTING SALVAGED SIGNS	675.60				
						9				9		EACH	SETTING SALVAGED POSTS	675.61				
						1				1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
						10				10		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620				
						1				1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET 2

PLOT DATE: 21-JUL-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 7 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
						1				1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
						9.5				9.5		SY	SPECIAL PROVISION (FLAGSTONE PAVERS)	900.675				
						804				804		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET 3

PLOT DATE: 15-JUL-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 8 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES				TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
APPROACH SLAB #1	APPROACH SLAB #2	SUPERSTRUCTURE	ABUTMENT #1	ABUTMENT #2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
			200	210	410	CY	STRUCTURE EXCAVATION	204.25			
			100	105	205	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		77	22	22	121	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33			
26	26		42	41	135	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
			0.5	0.5	1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
			385	385	770	LF	STEEL PILING, HP 12 X 74	505.16			
			1	1	2	EACH	DYNAMIC PILE LOADING TEST	505.45			
		48320			48320	LB	STRUCTURAL STEEL, ROLLED BEAM	506.50			
3075	2990				6065	LB	REINFORCING STEEL, LEVEL I	507.11			
		16889	8270	8205	33364	LB	REINFORCING STEEL, LEVEL II	507.12			
		1			1	LS	SHEAR CONNECTORS (824 - 7/8" x 7")	508.15			
		217			217	SY	LONGITUDINAL DECK GROOVING	509.10			
		5	2.5	2.5	10	GAL	WATER REPELLENT, SILANE	514.10			
		63			63	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
		63			63	LF	JOINT SEALER, HOT POURED	524.11			
		146			146	LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)	525.335			
			4	4	8	EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17			

SEE REVISED SHEET 9B
DATED 10/5/15

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BRIDGE QUANTITY SHEET

PLOT DATE: 15-JUL-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 9A OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES							TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
APPROACH SLAB #1	APPROACH SLAB #2	SUPERSTRUCTURE	ABUTMENT #1	ABUTMENT #2			BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
			200	210			410	CY	STRUCTURE EXCAVATION	204.25			
			100	105			205	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		77	22	22			121	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33			
26	26		42	41			135	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
			0.5	0.5			1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
			385	385			770	LF	STEEL PILING, HP 12 X 74	505.16			
			1	1			2	EACH	DYNAMIC PILE LOADING TEST	505.45			
		44026 ⚠					44026 ⚠	LB	STRUCTURAL STEEL, PLATE GIRDER	506.55 ⚠			
3075	2990						6065	LB	REINFORCING STEEL, LEVEL I	507.11			
		16889	8270	8205			33364	LB	REINFORCING STEEL, LEVEL II	507.12			
		1					1	LS	SHEAR CONNECTORS (Ø24 - 7/8" x 7")	508.15			
		217					217	SY	LONGITUDINAL DECK GROOVING	509.10			
		5	2.5	2.5			10	GAL	WATER REPELLENT, SILANE	514.10			
		63					63	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
		63					63	LF	JOINT SEALER, HOT POURED	524.11			
		146					146	LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)	525.335			
			4	4			8	EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17			

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED PAY ITEM NO AND QUANTITY.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BRIDGE QUANTITY SHEET

PLOT DATE: 06-OCT-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 9B OF 51

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALUE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEP.
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PROJECT DEMARCATION FENCE
- BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN BOUNDARY LINE
- COUNTY BOUNDARY LINE
- STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6F — 6F PROPERTY BOUNDARY
- 4F — 4F PROPERTY BOUNDARY
- HAZ — HAZ HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283legend.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
CONVENTIONAL SYMBOLOGY - LEGEND	SHEET 10 OF 51

GPS CONTROL POINTS

HVCTRL #1

H CLARK

NORTH = 193128.822
EAST = 1544611.500
ELEV. = 1478.230

GENERAL LOCATION, WARDSBORO, VT., IN THE VILLAGE OF WEST WARDSBORO. OWNERSHIP, HAROLD CLARK, POST OFFICE BOX 482, SOUTHINGTON, CT 06489.
TO REACH FROM THE INTERSECTION OF VT ROUTE 100 SOUTH AND VT ROUTE 30 IN EAST JAMAICA GO SOUTH ALONG VT ROUTE 100 FOR 8.9 MI (14.3 KM) TO THE INTERSECTION OF THE STRATTON-ARLINGTON ROAD RIGHT, IN WEST WARDSBORO. TURN RIGHT AND GO NORTHWEST ALONG THE STRATTON-ARLINGTON ROAD FOR 0.3 MI (0.5 KM) TO THE SITE OF THE MARK ON THE RIGHT. THE MARK IS SET 4 CM (2 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCHES) DIAMETER CONCRETE MONUMENT. IT IS 10.4 M (34.1 FT) NORTHEAST OF AND ABOUT 0.5 M (1.6 FT) LOWER THAN THE CENTERLINE OF STRATTON - ARLINGTON ROAD, 11.5 M (37.7 FT) WEST OF THE WEST CORNER OF HOUSE NO 284, 16.6 M (54.5 FT) WEST-SOUTHWEST OF THE NORTH CORNER OF THE HOUSE, 24.8 M (81.4 FT) EAST-NORTHEAST OF AND ACROSS THE ROAD FROM POLE NO 7/251/137, 3.2 M (10.5 FT) SOUTHEAST OF THE CENTERLINE OF A HEDGE, AND 13.7 M (44.9 FT) NORTHWEST OF A 15 CM (6 INCHES) MAPLE.

HVCTRL #2

SPENCER

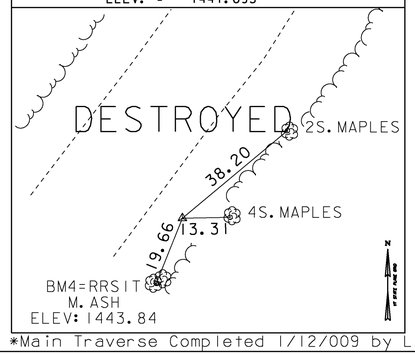
NORTH = 192833.352
EAST = 1545545.992
ELEV. = 1479.278

GENERAL LOCATION, WARDSBORO, VT., IN THE VILLAGE OF WEST WARDSBORO. OWNERSHIP, CATHY KOELSCH, 137 STRATTON-ARLINGTON ROAD, WEST WARDSDBORO, VT 05360.
TO REACH FROM THE INTERSECTION OF VT ROUTE 100 SOUTH AND VT ROUTE 30 IN EAST JAMAICA GO SOUTH ALONG VT ROUTE 100 FOR 8.9 MI (14.3 KM) TO THE INTERSECTION OF THE STRATTON-ARLINGTON ROAD RIGHT, IN WEST WARDSBORO. TURN RIGHT AND GO NORTHWEST ALONG THE STRATTON-ARLINGTON ROAD FOR 0.1 MI (0.2 KM) TO THE SITE OF THE MARK ON THE LEFT IN A FIELD. IT IS ABOUT 45 M (147.6 FT) SOUTHEAST ALONG THE STRATTON-ARLINGTON ROAD FROM ITS INTERSECTION WITH CROSS ROAD RIGHT. THE MARK IS SET IN THE TOP OF A 0.7 M (2.3 FT) X 0.7 M (2.3 FT) ROCK OUTCROP WHICH PROJECTS ABOUT 0.2 M (0.7 FT) ABOVE GROUND SURFACE. IT IS 23.5 M (77.1 FT) SOUTHWEST OF AND ABOUT 2.2 M (7.2 FT) HIGHER THAN THE CENTERLINE OF STRATTON ARLINGTON ROAD, 53.5 M (175.5 FT) EAST OF THE EAST CORNER OF HOUSE NO 137, 46.4 M (152.2 FT) NORTH NORTHWEST OF A 30 CM (12 INCHES) FIR, AND 28.6 M (93.8 FT) SOUTH OF A SCHOOL BUS STOP AHEAD SIGN.

TRAVERSE TIES

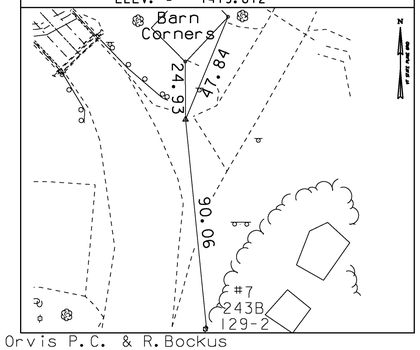
HVCTRL #4

NORTH = 192971.361
EAST = 1546366.705
ELEV. = 1441.695



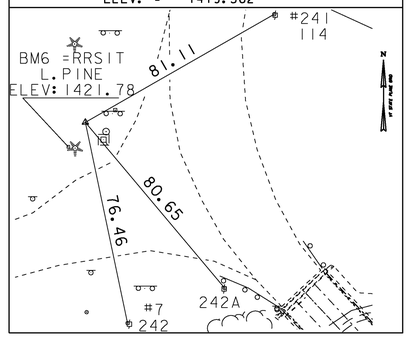
HVCTRL #5

NORTH = 193410.054
EAST = 1546528.311
ELEV. = 1419.872



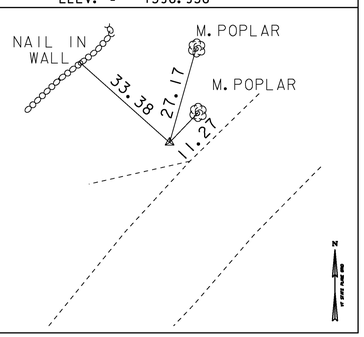
HVCTRL #6

NORTH = 193545.952
EAST = 1546359.162
ELEV. = 1419.562



HVCTRL #7

NORTH = 194028.955
EAST = 1546596.303
ELEV. = 1396.938



NORTH =
EAST =
ELEV. =

*Main Traverse Completed 1/12/2009 by L.Orvis P.C. & R.Bockus

ALIGNMENT COORD

Horizontal Alignment Name: VT 100

	STATION	NORTHING	EASTING
PC	119+50.00	193185.51	1546465.31
PI	119+74.67	193208.50	1546474.26
	Radius:	716.20	
	Delta:	3°56'46.42"	Left
	DOC:	7°59'59.99"	
	Length:	49.33	
	Tangent:	24.67	
	Chord:	49.32	
	Middle Ordinate:	0.42	
	External:	0.42	
PT	119+99.33	193232.06	1546481.61
PC	120+87.97	193316.68	1546508.00
PI	121+62.12	193387.47	1546530.07
	Radius:	127.32	
	Delta:	60°25'39.75"	Left
	DOC:	44°59'59.94"	
	Length:	134.28	
	Tangent:	74.15	
	Chord:	128.15	
	Middle Ordinate:	17.30	
	External:	20.02	
PT	122+22.26	193441.60	1546479.41
PC	122+84.61	193487.12	1546436.80

PI	123+66.94	193547.23	1546380.53
	Radius:	127.32	
	Delta:	65°46'41.75"	Right
	DOC:	44°59'59.94"	
	Length:	146.17	
	Tangent:	82.34	
	Chord:	138.28	
	Middle Ordinate:	20.41	
	External:	24.30	
PT	124+30.78	193623.20	1546412.27
POE	125+50.00	193733.21	1546458.22

*ALIGNMENT CURRENT AS OF 4/24/2012

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83 (07)
ADJUSTMENT Compass

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

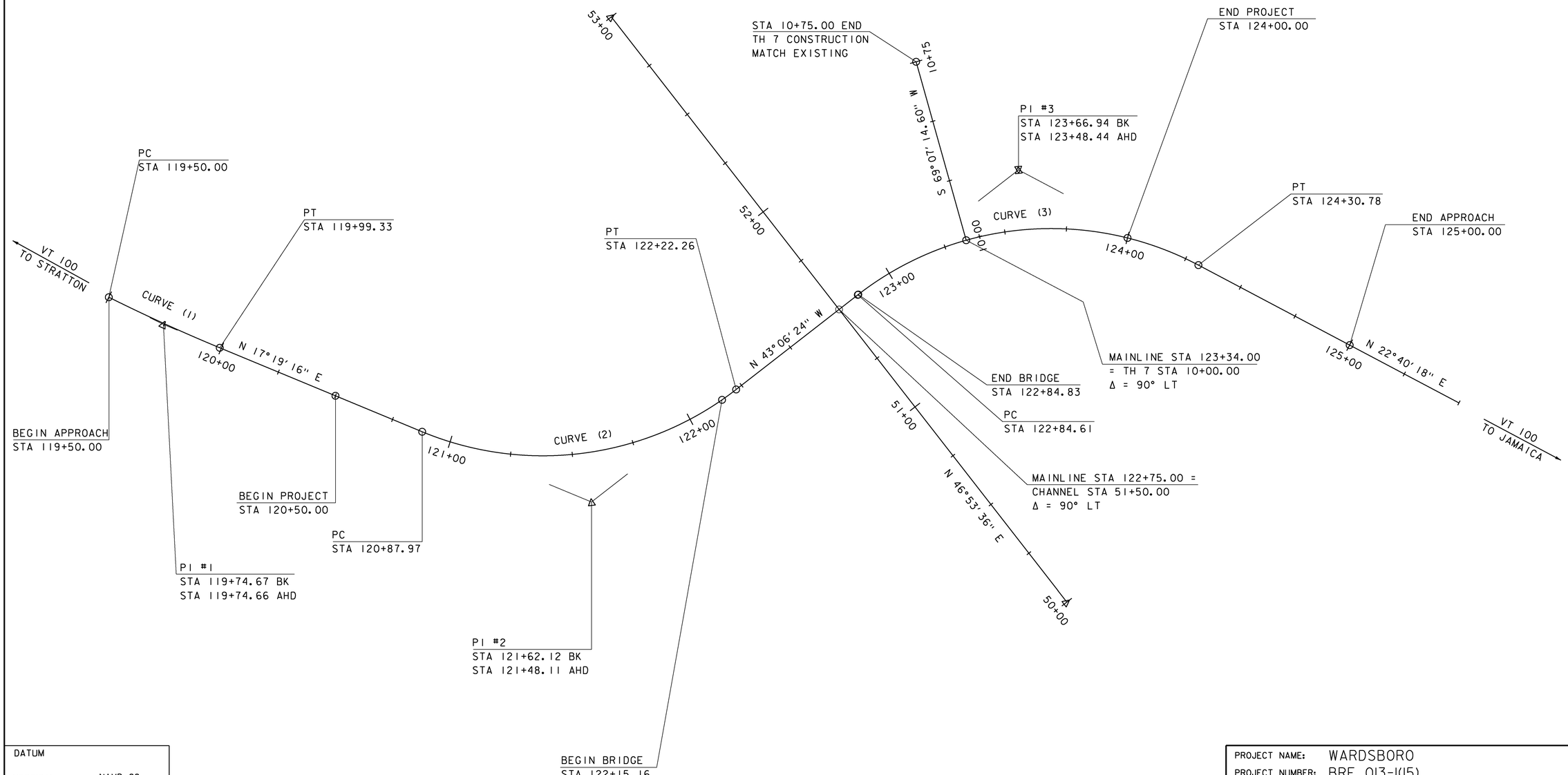
FILE NAME: s92b283tie.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: SURVEY
TIE SHEET

PLOT DATE: 15-JUL-2015
DRAWN BY: R. BULLOCK
CHECKED BY: D. PETERSON
SHEET 11 OF 51

VT 100 CURVE (1)
DELTA = 3°56′46"
D = 8°
R = 716.20′
T = 24.67′
L = 49.33′
E = 0.42′

VT 100 CURVE (2)
DELTA = 60°25′40" LT
D = 45°
R = 127.32′
T = 74.15′
L = 134.28′
E = 20.02′
BANKING = MAX 3%

VT 100 CURVE (3)
DELTA = 65°46′42" RT
D = 45°
R = 127.32′
T = 82.34′
L = 146.17′
E = 24.30′
BANKING = MAX 3%



DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (07)
ADJUSTMENT Compass

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ALIGNMENT

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 12 OF 51

CONSTRUCT PAVED DRIVE
STA 121+00.00 - STA 121+62.66 LT - 55.77 FT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 121+76.44 - STA 122+16.34 RT
STA 121+90.46 - STA 122+15.75 LT
STA 122+80.30 - STA 123+01.85 LT
STA 122+80.55 - STA 122+93.72 RT

CONSTRUCT PAVED TH APPROACH
STA 119+67.06 - STA 120+67.26 LT
STA 121+04.13 - STA 121+94.75 RT
STA 122+92.51 - STA 123+85.06 LT

VT STATE PLANE GRID

BM NO 6
RR SPIKE IN L PINE
EL 1421.783

R/R SPIKE IN POLE
BM ELEV. = 1419.38'

STA 10+75.00 END
TH 7 CONSTRUCTION
MATCH EXISTING

END PROJECT
STA 124+00.00

900.675 SPECIAL PROVISION
(FLAGSTONE PAVERS)

900.675 SPECIAL PROVISION
(FLAGSTONE PAVERS)

END APPROACH
STA 125+00.00

STONE FILL
TYPE IV

STONE FILL
TYPE IV

TEMPORARY DETOUR

TEMP CONST LIMITS

BEGIN APPROACH
STA 119+50.00

BEGIN PROJECT
STA 120+50.00

BEGIN BRIDGE
STA 122+15.16

END BRIDGE
STA 122+84.83

MAINLINE STA 123+34.00
= TH 7 STA 10+00.00
Δ = 90° LT

MAINLINE STA 122+75.00 =
CHANNEL STA 51+50.00
Δ = 90° LT

TH 7
NEWELL HILL RD

TH 46
CROSS RD

WARDSBORO BROOK

DOVER BROOK

EXISTING TOWN R.O.W.

EXISTING RIGHT-OF-WAY

TH 6
SMEAD RD

VT 100
TO STRATTON

VT 100
TO JAMAICA

GUARDRAIL APPROACH SECTION,
GALVANIZED 3 RAIL BOX BEAM
(PAINTED BLACK)
STA 121+76.63 - STA 122+12.41 LT
STA 121+86.06 - STA 122+14.37 RT
STA 122+86.31 - STA 123+13.45 LT
STA 122+86.73 - STA 123+22.52 RT

BOX BEAM GUARDRAIL (PAINTED BLACK)
STA 121+71.85 - STA 121+76.63 LT
STA 121+83.00 - STA 121+86.06 RT
STA 123+13.45 - STA 123+15.48 LT
STA 123+22.52 - STA 123+27.36 RT

BRIDGE RAILING, GALVANIZED
3 RAIL BOX BEAM (PAINTED BLACK)
STA 122+12.41 - STA 122+86.31 LT
STA 122+14.37 - STA 122+86.73 RT

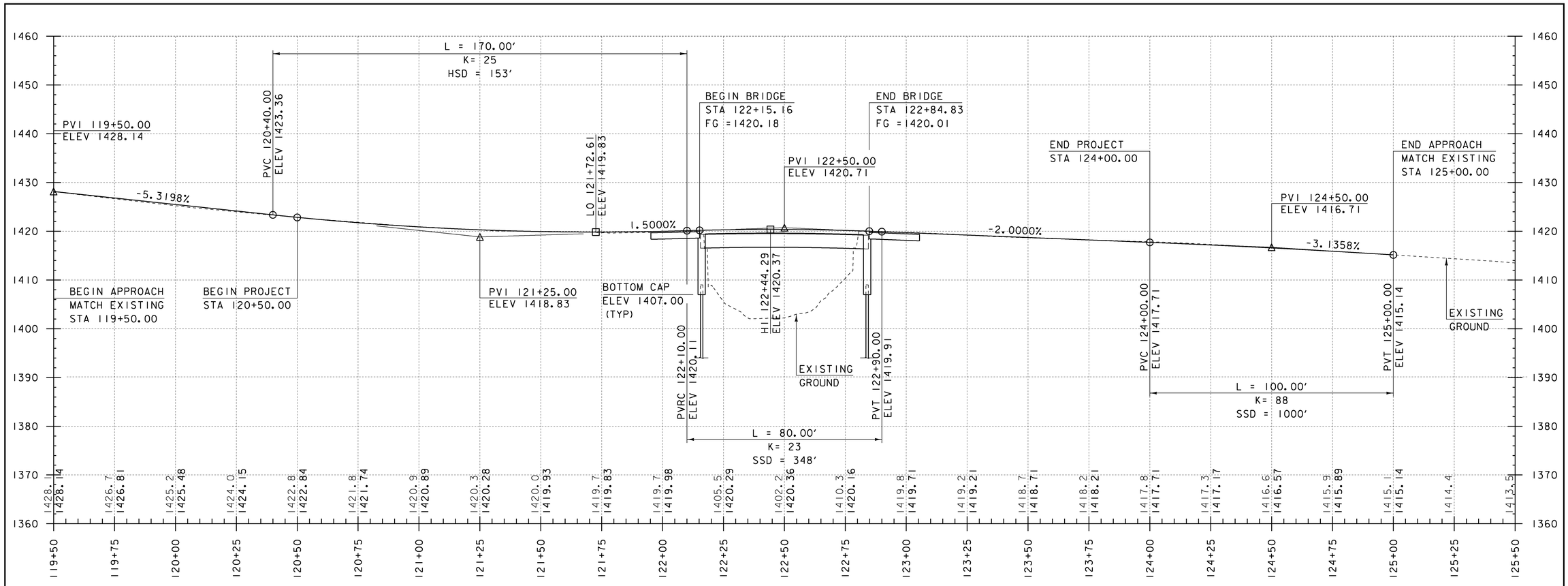
EXISTING BRIDGE DATA
SINGLE SPAN ROLLED BEAM
BUILT - 1929
OVERALL LENGTH - 64'-0"
SPAN LENGTH - 62'-0"
NO CURB
ROADWAY WIDTH - 30'-0"
OUT TO OUT WIDTH - 33'-0"

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

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

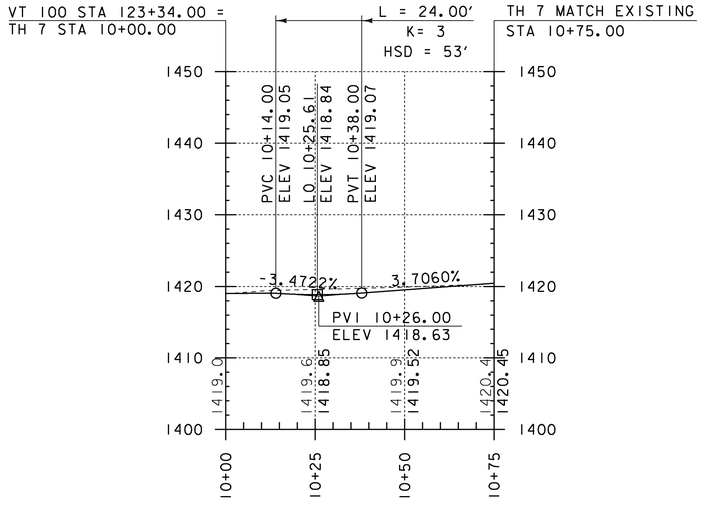
FILE NAME: s92b283bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
LAYOUT

PLOT DATE: 20-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 13 OF 51



PROFILE ALONG VT 100

HORIZONTAL SCALE 1" = 20'-0"
VERTICAL SCALE 1" = 10'-0"



PROFILE ALONG TH 7

HORIZONTAL SCALE 1" = 20'-0"
VERTICAL SCALE 1" = 10'-0"

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: WARDSBORO	
PROJECT NUMBER: BRF 013-1(15)	
FILE NAME: s92b283pro.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
VT 100 AND TH 7 PROFILES	SHEET 14 OF 51

1. STA 121+50.1 LT
REMOVE EXISTING DI

2. STA 121+50.9 LT - STA 122+19.6 LT
REMOVE EXISTING 18" PIPE

3. STA 122+78.1 LT - STA 123+53.1 LT
REMOVE EXISTING 18" ACCGMP

4. STA 123+53.9 LT
REMOVE EXISTING DI

1. STA 120+50.0 LT
NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D

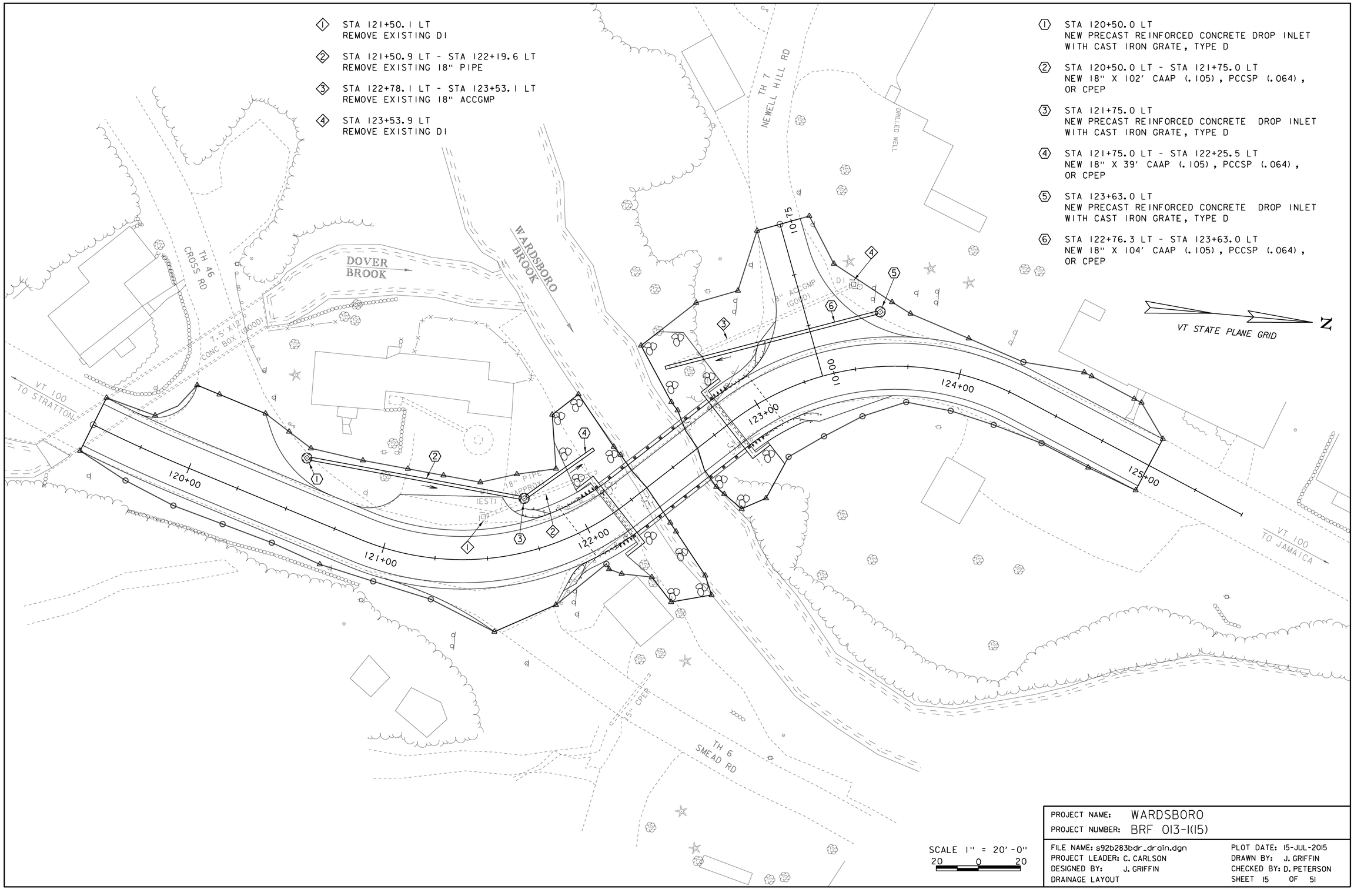
2. STA 120+50.0 LT - STA 121+75.0 LT
NEW 18" X 102' CAAP (.105), PCCSP (.064),
OR CPEP

3. STA 121+75.0 LT
NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D

4. STA 121+75.0 LT - STA 122+25.5 LT
NEW 18" X 39' CAAP (.105), PCCSP (.064),
OR CPEP

5. STA 123+63.0 LT
NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D

6. STA 122+76.3 LT - STA 123+63.0 LT
NEW 18" X 104' CAAP (.105), PCCSP (.064),
OR CPEP



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

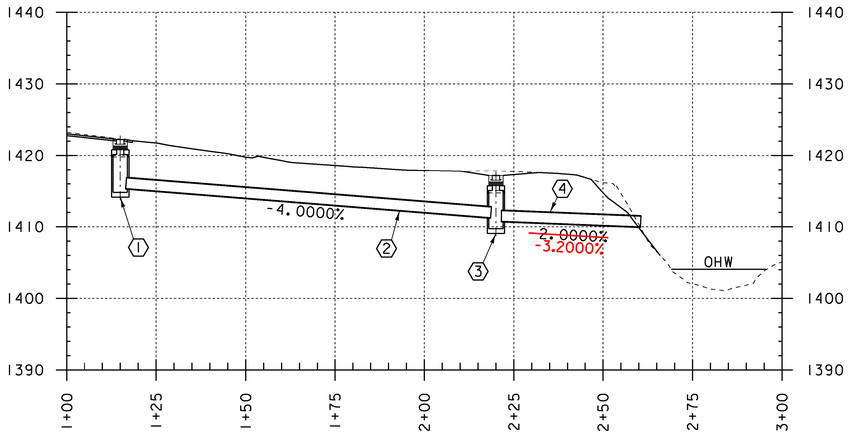
PROJECT NAME: WARDSBORO	
PROJECT NUMBER: BRF 013-1(15)	
FILE NAME: s92b283bdr_drain.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
DRAINAGE LAYOUT	SHEET 15 OF 51

① STA 120+50.0, 26.0' LT
NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D
RIM ELEV 1422.23; SUMP ELEV 1414.78

② STA 120+50.0, 26.3' LT - STA 121+75.0, 25.5' LT
NEW 18" X 102' CAAP (.105), PCCSP (.064),
OR CPEP
INLET INV ELEV 1415.33; OUTLET INV ELEV 1411.25

③ STA 121+75.0, 24.8' LT
NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D
RIM ELEV 1417.17; SUMP ELEV 1409.72

④ STA 121+75.0, 25.3' LT - STA 122+25.5, 30.0' LT
NEW 18" X 39' CAAP (.105), PCCSP (.064),
OR CPEP
INLET INV ELEV ~~1410.67~~ 1411.17; OUTLET INV ELEV 1409.88



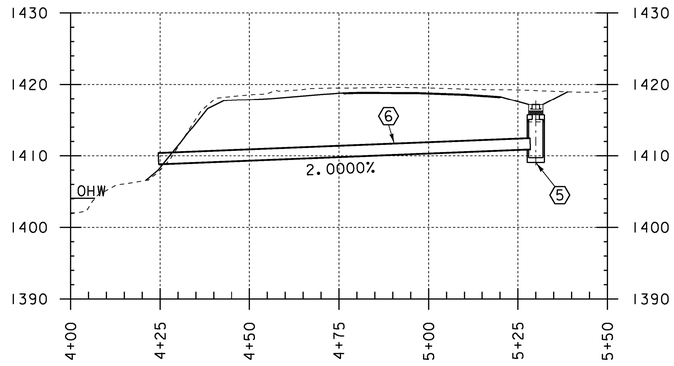
DRAINAGE 1 PROFILE

STA 120+50.00 TO STA 122+25.50 LT

HORIZONTAL SCALE 1" = 20'-0"
VERTICAL SCALE 1" = 10'-0"

⑤ STA 123+63.0, 26.0' LT
NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D
RIM ELEV 1417.17; SUMP ELEV 1409.72

⑥ STA 122+76.3, 39.6' LT - STA 123+63.0, 25.7' LT
NEW 18" X 104' CAAP (.105), PCCSP (.064),
OR CPEP
INLET INV ELEV 1410.92; OUTLET INV ELEV 1408.84



DRAINAGE 2 PROFILE

STA 122+76.3 TO STA 123+63.00 LT

HORIZONTAL SCALE 1" = 20'-0"
VERTICAL SCALE 1" = 10'-0"

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283pro.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
DRAINAGE PROFILES

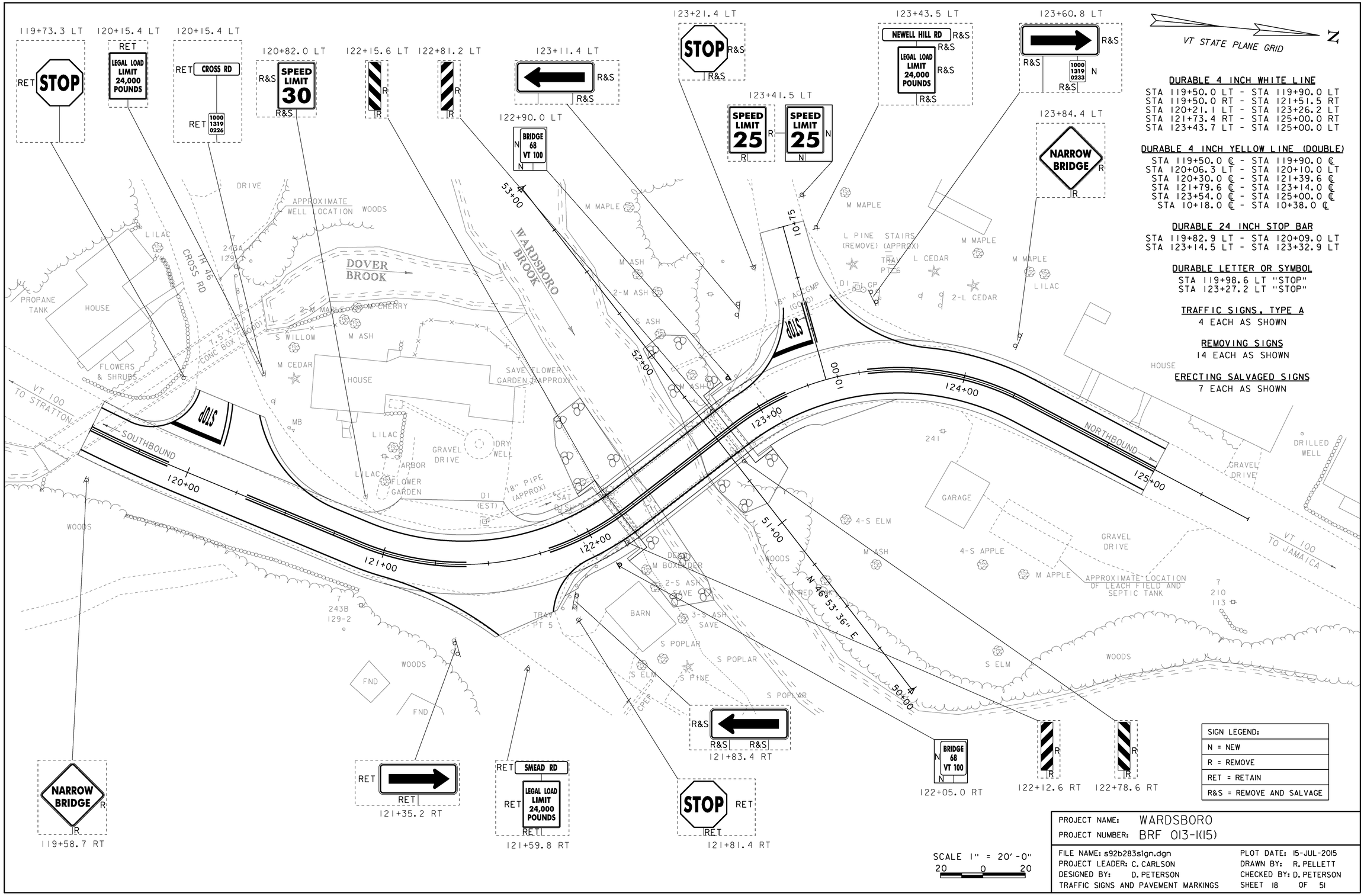
PLOT DATE: 15-JUL-2015
DRAWN BY: J. GRIFFIN
CHECKED BY: D. PETERSON
SHEET 16 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB		DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS				REMARKS
				INLET	OUTLET	IN	OUT	SPAN	RISE	L	D	L	PCCSP	CAAP	RCP	CSP	CPEP	PCCSP PI										EARTH	ROCK									LT	RT			
			NO. DEG.					IN	IN	FT	IN	FT	TH	TH	CL	TH	SL	TH	NO. DEG.	EA	EA		FT	CY	LBS	TYPE	EA	CY	CY	CY	CY	CY	CY	CY	CY	SY	CY	TYPE	EA	EA			
120+50.00		LT																				X	7.45			D			12.87					5.65								1	NEW PRECAST REINFORCED CONCRETE DROP INLET
120+50.0	121+75.0	LT		CB	CB						18	102	X	X			X												110.64					95.61								2	NEW 18" PIPE TO CONNECT DI TO CB
121+75.00		LT																				X	7.45			D			13.79					5.89								3	NEW PRECAST REINFORCED CONCRETE DROP INLET
121+75.0	122+25.5	LT		CB	STONE						18	39	X	X			X												48.14					35.74								4	NEW 18" PIPE FROM CB TO OUTLET ON CHANNEL
123+63.00		LT																				X	7.45			D			13.90					7.10								5	NEW PRECAST REINFORCED CONCRETE DROP INLET
122+76.3	123+63.0	LT		CB	STONE						18	104	X	X			X												139.7					138.20								6	NEW 18" PIPE FROM DI TO OUTLET ON CHANNEL
121+50.1		LT																											14												1	REMOVE EXISTING DI
121+50.9	122+19.6	LT																										68.70													2	REMOVE EXISTING 18" PIPE
122+78.1	123+53.1	LT																										116.67													3	REMOVE EXISTING 18" ACCGMP
123+53.9		LT																											14												4	REMOVE EXISTING DI
							SUBTOTAL:	245.00														3							483.87	28				288.19									
							ROUNDING:	0.00																					.013	0				1.81									
							TOTAL:	245.00														3							484	28				290.00									

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283pro.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
DRAINAGE DETAILS	SHEET 17 OF 51


119+73.3 LT
RET
STOP
120+15.4 LT
RET
LEGAL LOAD LIMIT 24,000 POUNDS
120+15.4 LT
RET
CROSS RD
RET
1000 1319 0226
120+82.0 LT
R&S
SPEED LIMIT 30
R&S
122+15.6 LT
R
122+81.2 LT
R
123+11.4 LT
R&S
R&S
122+90.0 LT
N
BRIDGE 68 VT 100
N
123+21.4 LT
STOP
R&S
R&S
123+41.5 LT
SPEED LIMIT 25
R
SPEED LIMIT 25
N
123+43.5 LT
NEWELL HILL RD
R&S
R&S
LEGAL LOAD LIMIT 24,000 POUNDS
R&S
123+60.8 LT
R&S
R&S
1000 1319 0233
N
R&S
123+84.4 LT
NARROW BRIDGE
R
VT STATE PLANE GRID
N
DURABLE 4 INCH WHITE LINE
STA 119+50.0 LT - STA 119+90.0 LT
STA 119+50.0 RT - STA 121+51.5 RT
STA 120+21.1 LT - STA 123+26.2 LT
STA 121+73.4 RT - STA 125+00.0 RT
STA 123+43.7 LT - STA 125+00.0 LT
DURABLE 4 INCH YELLOW LINE (DOUBLE)
STA 119+50.0 ℄ - STA 119+90.0 ℄
STA 120+06.3 LT - STA 120+10.0 LT
STA 120+30.0 ℄ - STA 121+39.6 ℄
STA 121+79.6 ℄ - STA 123+14.0 ℄
STA 123+54.0 ℄ - STA 125+00.0 ℄
STA 10+18.0 ℄ - STA 10+38.0 ℄
DURABLE 24 INCH STOP BAR
STA 119+82.9 LT - STA 120+09.0 LT
STA 123+14.5 LT - STA 123+32.9 LT
DURABLE LETTER OR SYMBOL
STA 119+98.6 LT "STOP"
STA 123+27.2 LT "STOP"
TRAFFIC SIGNS, TYPE A
4 EACH AS SHOWN
REMOVING SIGNS
14 EACH AS SHOWN
ERECTING SALVAGED SIGNS
7 EACH AS SHOWN
DRIVE
APPROXIMATE WELL LOCATION
WOODS
LILAC
TH 46
CROSS RD
243A
129
DOVER BROOK
WARDSBORO BROOK
PROPANE TANK
HOUSE
7.5 X 12 CONC BOX (GOOD)
2-M MAPLE
CHERRY
S WILLOW
M ASH
M CEDAR
FLOWERS & SHRUBS
SAVE FLOWER GARDEN (APPROX)
MB
LILAC
GRAVEL DRIVE
DRY WELL
ARBOR
LILAC
FLOWER GARDEN
DI (EST)
18" PIPE (APPROX)
SAT DISH
M MAPLE
M ASH
2-M ASH
S ASH
53+00
52+00
51+00
50+00
10+75
10+00
124+00
123+00
125+00
122+00
121+00
120+00
STOP
STOP
SOUTHBOUND
NORTHBOUND
VT 100 TO STRATTON
VT 100 TO JAMAICA
M MAPLE
L PINE
STAIRS (REMOVE) (APPROX)
TRAV PT 6
L CEDAR
M MAPLE
2-L CEDAR
M MAPLE
LILAC
DI
GP
18" ACCMP (GOOD)
HOUSE
241
DRILLED WELL
GRAVEL DRIVE
GARAGE
4-S ELM
M ASH
4-S APPLE
M APPLE
GRAVEL DRIVE
APPROXIMATE LOCATION OF LEACH FIELD AND SEPTIC TANK
WOODS
M RED OAK
N 46° 53' 36" E
7
210
113
WOODS
S ELM
DECID
M BOXELDER
2-S ASH SAVE
3-S ASH SAVE
BARN
TRAV PT 5
S POPLAR
S POPLAR
S ELM
S PINE
S POPLAR
CREEK
WOODS
FND
FND
7
243B
129-2
WOODS
R&S
R&S
R&S
121+83.4 RT
N
BRIDGE 68 VT 100
N
122+05.0 RT
R
R
122+12.6 RT
R
R
122+78.6 RT
NARROW BRIDGE
R
R
119+58.7 RT
RET
RET
121+35.2 RT
RET
SMEAD RD
RET
LEGAL LOAD LIMIT 24,000 POUNDS
RET
121+59.8 RT
STOP
RET
RET
121+81.4 RT
SIGN LEGEND:
N = NEW
R = REMOVE
RET = RETAIN
R&S = REMOVE AND SALVAGE
SCALE 1" = 20'-0"
20 0 20
PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)
FILE NAME: s92b283sign.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TRAFFIC SIGNS AND PAVEMENT MARKINGS
PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 18 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		SIGN REFRAMED REQUIRED	REMARKS (SHS = STANDARD HIGHWAY SIGNS)	SIGN DETAIL		
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			TUBULAR STEEL Ø (in) lb/ft					W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE			DETAIL IN SHS	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
															1.75	2.0	2.5			3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	24"	30"						
												1.12	2.0	3.0	1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
											OPTION ITEMS																									
122+05.0 RT	BRIDGE 68 VT 100	1	6	8	0.33						1				7.00 X			X														VD-701 BRIDGE 68 VT 100			T-42
122+90.0 LT	BRIDGE 68 VT 100	1	6	8	0.33						1				6.50 X			X														VD-701 BRIDGE 68 VT 100			T-42
123+41.5 LT	SPEED LIMIT 25	1	24	30	5.00						1					14.75 X		X														R2-1	X		
123+60.8 LT	1000 1319 0233	1	6	10	0.42					X																						VD-700 1000 / 1319 / 0233			T-45
120+85.0 LT ~~120+82.0 LT~~	SPEED LIMIT 30		24	30	5.00		~~X~~			~~X~~						13.25																			
123+11.4 LT	←						X			~~X~~						8.00																			
121+81.4 RT ~~123+21.4 LT~~	STOP						X			X																									
123+43.5 LT	NEWELL HILL RD						~~X~~			~~X~~																									
123+45.5 LT ~~123+43.5 LT~~	LEGAL LOAD LIMIT 24,000 POUNDS						X			X																									
123+60.8 LT	→						~~X~~			~~X~~																									
121+83.4 RT	←						~~X~~			~~X~~																									

POST TOTALS						FT	FT	FT	FT ~~20~~ 13.5	FT ~~15~~ 36	FT	EA	LB	LB	LB		LB	LB	LB	LB										
SUB-TOTAL	SF ~~6.08~~ 11.08	SF	EA ~~3~~ X	SF		FT			FT				LB			EA	LB				EA	EA	LB							
									~~35~~ 49.5																						
TOTALS	SF ~~6.08~~ 11.08	SF	EA	SF		FT			FT				LB			EA	LB				EA	EA	LB							
									~~35~~ 49.5																						

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283sign.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TRAFFIC SIGN SUMMARY

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 19 OF 51

VT STATE PLANE GRID

N

STA 10+75.00 END
TH 7 CONSTRUCTION
MATCH EXISTING

END PROJECT
STA 124+00.00

END APPROACH
STA 125+00.00

MAINLINE STA 123+34.00
= TH 7 STA 10+00.00
Δ = 90° LT

END BRIDGE
STA 122+84.83

MAINLINE STA 122+75.00 =
CHANNEL STA 51+50.00
Δ = 90° LT

BEGIN APPROACH
STA 119+50.00

BEGIN PROJECT
STA 120+50.00

BEGIN BRIDGE
STA 122+15.16

N 46°53'36" E

TH 7
NEWELL HILL RD

TH 46
CROSS RD

TH 6
SMEAD RD

WARDSBORO
BROOK

DOVER
BROOK

VT 100
TO STRATTON

VT 100
TO JAMAICA

EXISTING TOWN R.O.W.

EXISTING RIGHT-OF-WAY

TEMP CONST
LIMITS

℄ TEMPORARY
DETOUR

APPROXIMATE
WELL LOCATION

DRILLED
WELL

AER E

120+00
121+00
122+00
123+00
124+00
125+00
50+00
51+00
52+00
53+00

49.50'

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

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283bdr.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
DETOUR LAYOUT	SHEET 20 OF 51

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.Q.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 5/8"
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
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

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

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 > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - 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.

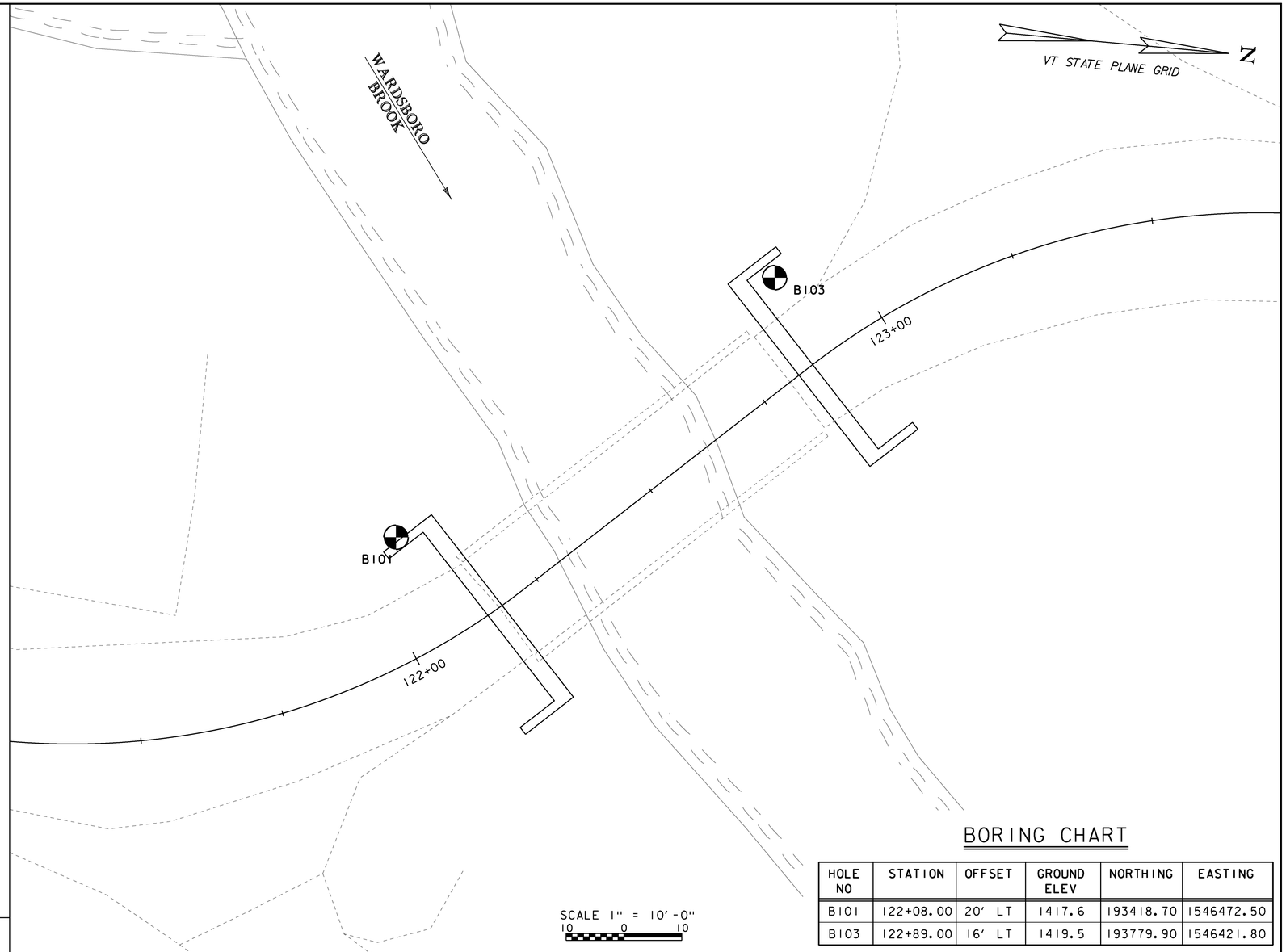
MUCK - Soft organic soil (containing > 10% organic material.

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	STATION	OFFSET	GROUND ELEV	NORTHING	EASTING
B101	122+08.00	20' LT	1417.6	193418.70	1546472.50
B103	122+89.00	16' LT	1419.5	193779.90	1546421.80

GENERAL NOTES

1. The subsurface explorations shown herein were made between 05/21/12 and 06/01/12 by the Agency.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283boring.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BORING INFORMATION

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 21 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

WARDSBORO
BRF 013-1(15)
VT-100 BR-68

Boring No.: B-101
Page No.: 1 of 2
Pin No.: 92B283
Checked By: CEE

Boring Crew: PORTER, GARROW
Date Started: 5/21/12 Date Finished: 5/25/12
VTSPG NAD83: N 193418.70 ft E 1546472.50 ft
Station: 122+08 Offset: -20.00
Ground Elevation: 1417.6 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
05/24/12	17.0	AM
05/25/12		2.5' Above ground

ABUT NO 1
BOTTOM CAP
ELEV 1407.00

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.2 ft	3-2-2-6 (4)	9.0	27.0	46.7	26.3
		A-1-b, SaGr, brn, Moist, Rec. = 1.1 ft	6-8-2-2 (10)	9.9	44.3	42.9	12.8
		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft, Broken (Cobbles) Rock were within sample.	2-3-3-3 (6)	6.9	44.1	47.4	8.5
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft, Broken (Cobbles) Rock were within sample.	7-10-R@6.0"	15.5	34.6	49.9	15.5
10		Field Note:, NXDC, Cobbles Field Note:, No Recovery Field Note:, NXDC, Boulder & Cobbles	R@2.5"				
		A-1-a, SaGr, brn, Moist, Rec. = 0.8 ft	7-8-R@4.5"	8.7	58.5	31.8	9.7
		Field Note:, NXDC, Cobbles Field Note:, NXDC, Silt					
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 0.5 ft	5-R@2.5"	11.9	20.9	36.8	42.3
		Field Note:, NXDC, Cobbles	9-11-15-17 (26)	9.9	19.3	36.8	43.9
20		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.3 ft					
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 1.2 ft	11-15-15-15 (30)	9.7	27.2	33.8	39.0
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 1.2 ft	10-20-13-20 (33)	9.8	22.4	35.7	41.9
30		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.3 ft	11-11-30-15 (41)	9.9	18.0	36.9	45.1
		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.4 ft	13-17-17-17 (34)	10.2	16.2	38.2	45.6
40		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.6 ft	9-10-14-15 (24)	10.6	17.7	37.5	44.8
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 1.4 ft	11-16-16-14 (32)	11.1	30.0	32.5	37.5
50		No Recovery, 49.0 ft - 51.0 ft, Stone in end of sampler.	13-14-16-40 (30)				
		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.8 ft	8-10-15-30 (25)	12.9	9.4	28.7	61.9
60		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 1.6 ft	12-13-27-27 (40)	10.8	21.0	39.0	40.0

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WARDSBORO BRF 013-1(15).GPJ VERMONT AOT.GDT 9/7/12

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

WARDSBORO
BRF 013-1(15)
VT-100 BR-68

Boring No.: B-101
Page No.: 2 of 2
Pin No.: 92B283
Checked By: CEE

Boring Crew: PORTER, GARROW
Date Started: 5/21/12 Date Finished: 5/25/12
VTSPG NAD83: N 193418.70 ft E 1546472.50 ft
Station: 122+08 Offset: -20.00
Ground Elevation: 1417.6 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
05/24/12	17.0	AM
05/25/12		2.5' Above ground

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.4 ft	11-14-15-20 (29)	11.0	13.0	39.2	47.8
70		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.6 ft	15-20-38-40 (58)	11.5	15.4	31.8	52.8
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 1.0 ft Field Note:, Changed drill rigs, Sleaved casing down to 3.0 inch	20-32-50-R@0.0"	10.2	20.8	34.3	44.9
80		A-4, SaSi, gry, Moist, Rec. = 1.6 ft, Lab Note: Not as Hard Packed	13-16-20-30 (36)	18.2	14.2	38.5	47.3
		A-2-4, SaSiGr (Lab Note: HP), gry, Moist, Rec. = 0.4 ft	R@5.0"	9.7	45.4	26.6	28.0
90		A-4, SaSi, gry, Moist, Rec. = 1.5 ft, Lab Note: Not as Hard Packed	18-33-35-35 (68)	17.6	12.6	26.1	61.3
		A-4, Si, gry, Moist, Rec. = 1.2 ft	10-35-R@6.0"	18.2	18.7	18.2	63.1
100		A-4, GrSiSa (Lab Note: HP), gry, Moist, Rec. = 0.9 ft	35-R@5.0"	11.1	22.3	41.0	36.7
		A-2-4, SaSiGr, gry, Moist, Rec. = 0.5 ft, Broken Rock was within sample.	R@6.0"	13.0	37.0	28.6	34.4
110		A-1-b, SiSaGr, gry, Moist, Rec. = 0.5 ft, Broken Rock was within sample.	R@6.0"	9.3	44.2	34.6	21.2
		Field Note:, BXDC, Cobbles A-1-b, SiSaGr, gry, Moist, Rec. = 0.5 ft, Broken Rock was within sample.	R@6.0"	10.2	46.6	33.0	20.4
120		Hole stopped @ 114.5 ft					

EST PILE TIP
ELEV 1332.00

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WARDSBORO BRF 013-1(15).GPJ VERMONT AOT.GDT 9/7/12

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283bor_log.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: MATERIALS & RESEARCH
BORING LOGS 1

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 22 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

WARDSBORO
BRF 013-1(15)
VT-100 BR-68

Boring No.: B-103
Page No.: 1 of 2
Pin No.: 92B283
Checked By: CEE

Boring Crew: PORTER, GARROW
Date Started: 5/30/12 Date Finished: 6/01/12
VTSPG NAD83: N 193479.90 ft E 1546421.80 ft
Station: 122+89 Offset: -16.00
Ground Elevation: 1419.5 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
05/31/12	12.9	AM
05/31/12		2.5' Above ground

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft	1-1-2-8 (3)	9.9	38.6	52.2	9.2
		A-1-a, SaGr, brn, Moist, Rec. = 0.8 ft	3-4-6-11 (10)	9.1	57.8	36.1	6.1
		Field Note:, NXDC, Cobbles					
10		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft, Broken (Cobbles) Rock were within sample.	18-33-18-21 (51)	8.7	60.7	31.0	8.3
		Field Note:, NXDC, Boulder					
ABUT NO 2 BOTTOM CAP ELEV 1407.00		A-1-b, GrSa, brn, Moist, Rec. = 1.5 ft, Broken (Cobbles) Rock were within sample.	9-12-20-16 (32)	9.6	38.6	47.1	14.3
		A-1-a, SaGr, brn, Moist, Rec. = 1.0 ft	11-22-R@2.5"	10.3	59.7	29.1	11.2
		Field Note:, NXDC, Boulder					
		A-1-b, SaGr, brn, Moist, Rec. = 0.8 ft	14-R@6.0"	11.2	41.4	40.6	18.0
20		Field Note:, NXDC, Cobbles					
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 0.8 ft	30-R@6.0"	10.2	24.4	35.2	40.4
		Field Note:, NXDC, Appears to be GrSaSi					
		A-4, GrSaSi (Lab Note: HP), gry, Moist, Rec. = 1.3 ft	26-40-R@6.0"	8.5	31.4	32.3	36.3
		Field Note:, NXDC, Appears to be GrSaSi					
30		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.6 ft	20-28-33-R@2.5" (61)	9.5	17.6	37.7	44.7
		Field Note:, NXDC, Appears to be GrSaSi					
		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.7 ft	21-30-25-28 (55)	9.8	17.6	37.9	44.5
		Field Note:, NXDC, Appears to be SaSi					
		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.8 ft	15-22-26-30 (48)	10.0	15.0	38.7	46.3
40		Field Note:, NXDC, Appears to be SaSi					
		A-4, GrSaSi, gry, Moist, Rec. = 1.6 ft	8-13-17-33 (30)	11.6	21.8	29.0	49.2
		Field Note:, Roller Coned ahead. Appears to be SaSi					
		Visual Description:, SaSi, gry, Moist, Rec. = 0.2 ft, Insufficient sample for testing.	7-14-17-20 (31)	14.6			
50							
		Field Note:, Roller Coned ahead. Appears to be GrSa					
		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.7 ft	6-10-16-22	14.5	12.0	30.9	57.1

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WARDSBORO BRF 013-1(15).GPJ VERMONT AOT.GDT 9/7/12

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

WARDSBORO
BRF 013-1(15)
VT-100 BR-68

Boring No.: B-103
Page No.: 2 of 2
Pin No.: 92B283
Checked By: CEE

Boring Crew: PORTER, GARROW
Date Started: 5/30/12 Date Finished: 6/01/12
VTSPG NAD83: N 193479.90 ft E 1546421.80 ft
Station: 122+89 Offset: -16.00
Ground Elevation: 1419.5 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
05/31/12	12.9	AM
05/31/12		2.5' Above ground

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
			(26)				
		Field Note:, Roller Coned ahead. Appears to be SaSi					
70		Field Note:, No Recovery	R@1.0"				
		Field Note:, Roller Coned ahead. Appears to be GrSaSi					
80		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.6 ft	28-30-35-R@5.0" (65)	12.2	17.8	37.4	44.8
		Field Note:, NXDC, Appears to be GrSaSi					
90		A-4, SaSi (Lab Note: HP), gry, Moist, Rec. = 1.1 ft	25-32-35-R@2.0" (67)	14.2	10.9	29.0	60.1
		Field Note:, Roller Coned ahead. Appears to be GrSiSa					
100		Field Note:, No Recovery	R@6.0"				
		NXDC, Appears to be GrSiSa, 107.0 ft - 108.0 ft					
110		A-1-b, GrSa, gry, Moist, Rec. = 0.5 ft, Lab Note: Broken Weathered Rock was within sample	R@6.0"	8.6	37.4	46.2	16.4
		Hole stopped @ 108.5 ft Sand was locking up the casing.					

EST PILE TIP
ELEV 1332.00

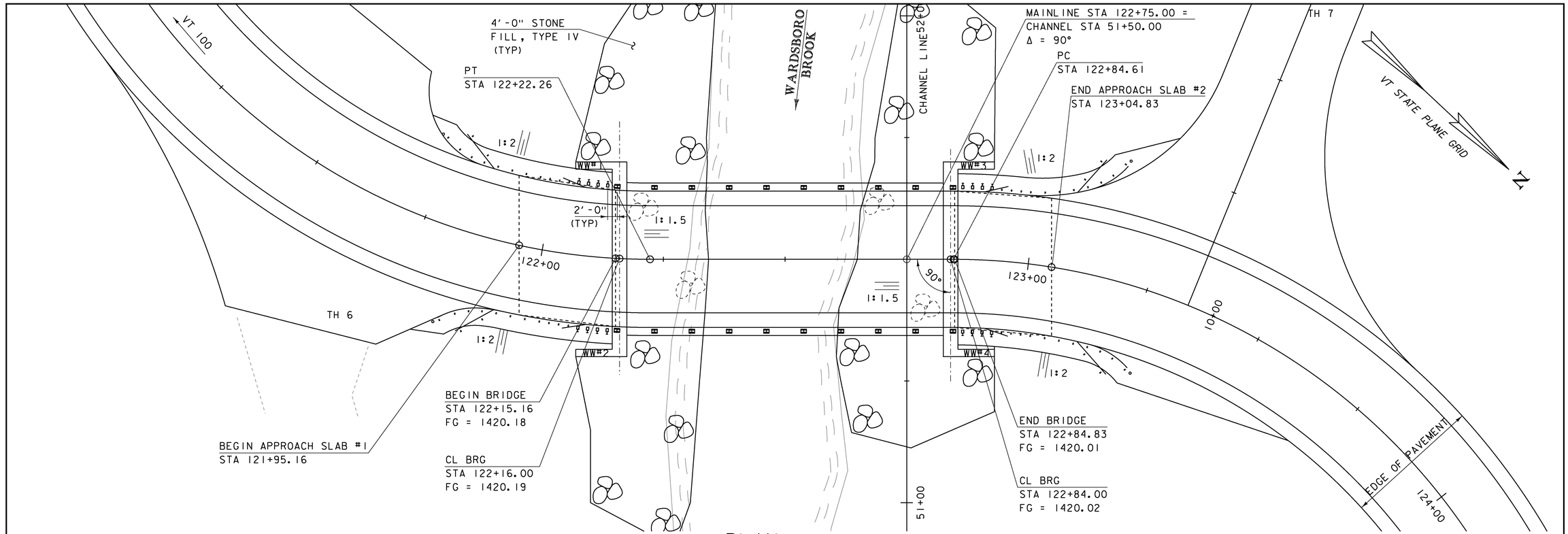
Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WARDSBORO BRF 013-1(15).GPJ VERMONT AOT.GDT 9/7/12

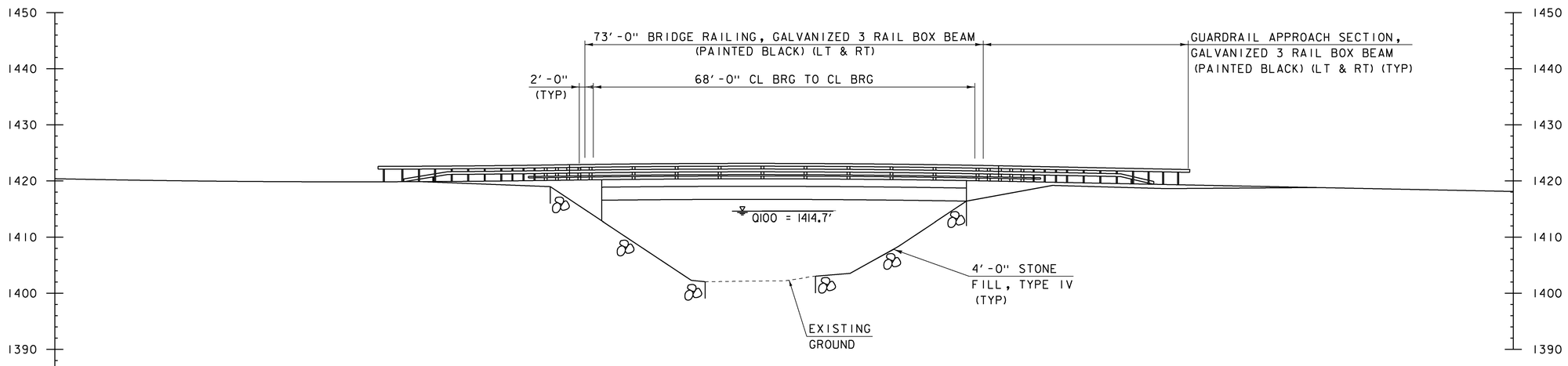
PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283bor_log.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: MATERIALS & RESEARCH
BORING LOGS 2

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 23 OF 51



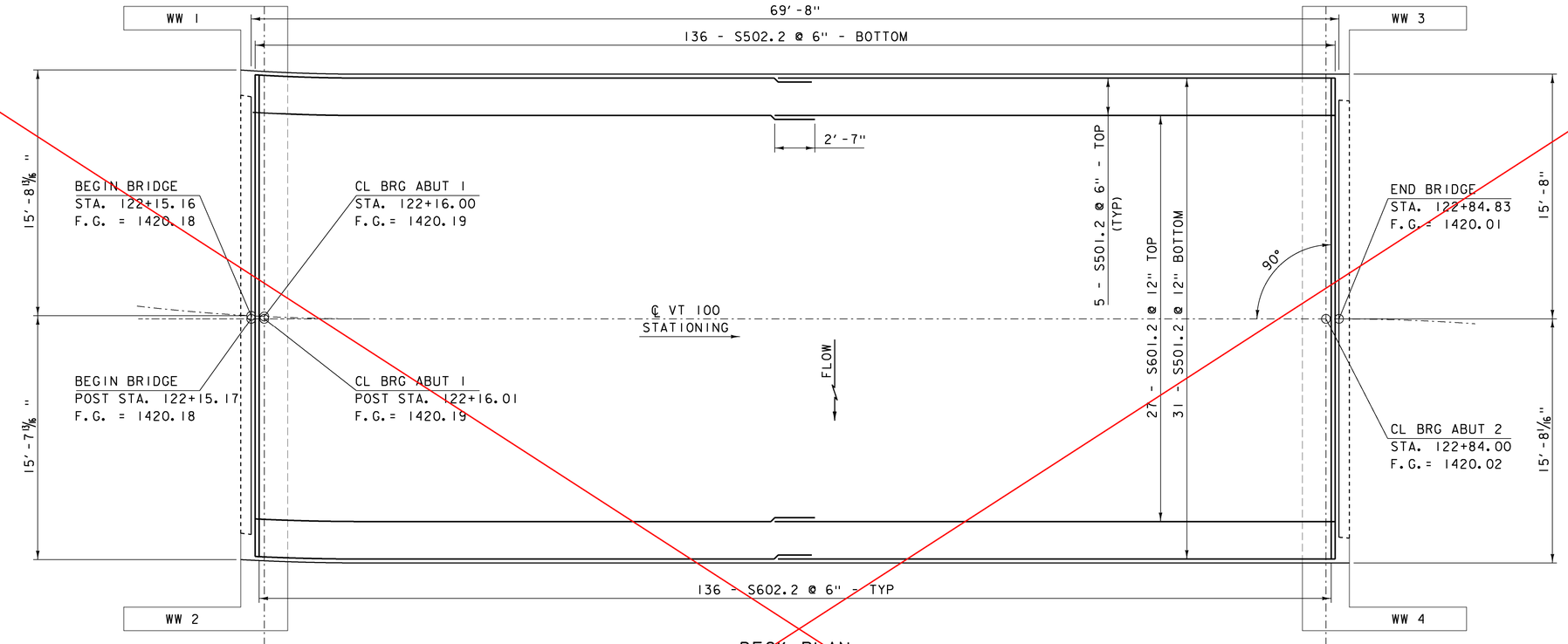
PLAN



ELEVATION

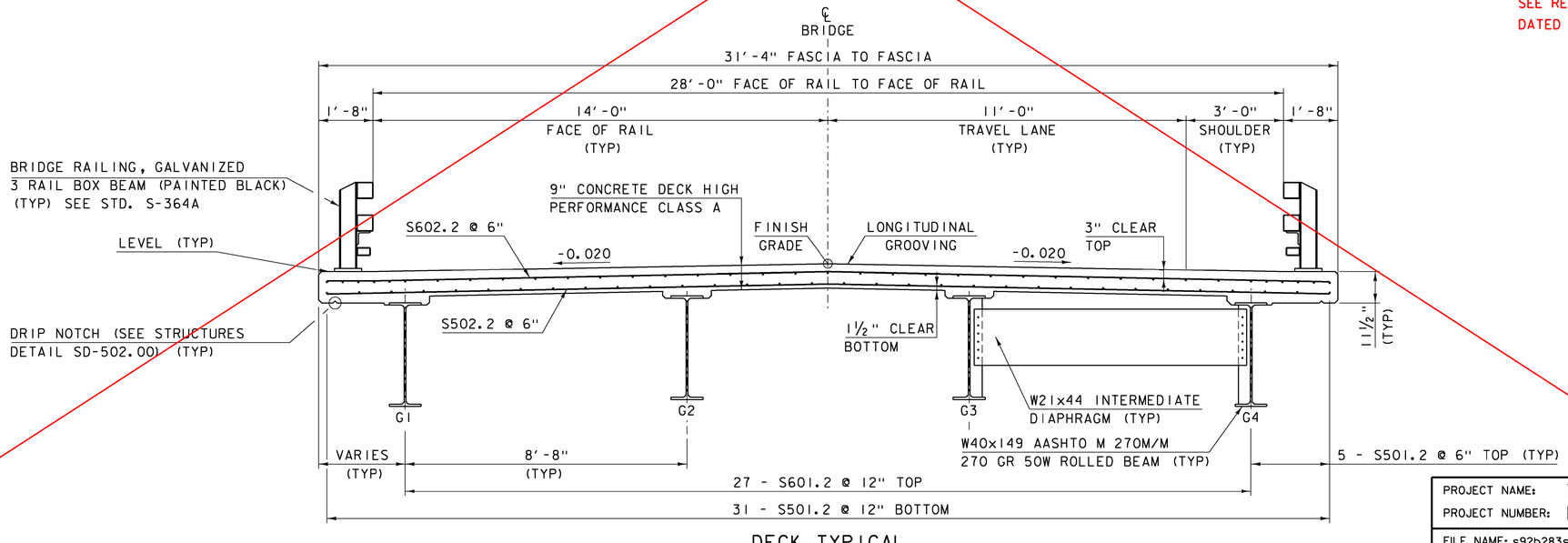
SCALE 1" = 10'-0"
10 0 10

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283pe.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
PLAN AND ELEVATION	SHEET 24 OF 51



DECK PLAN
SCALE 1/4" = 1'-0"

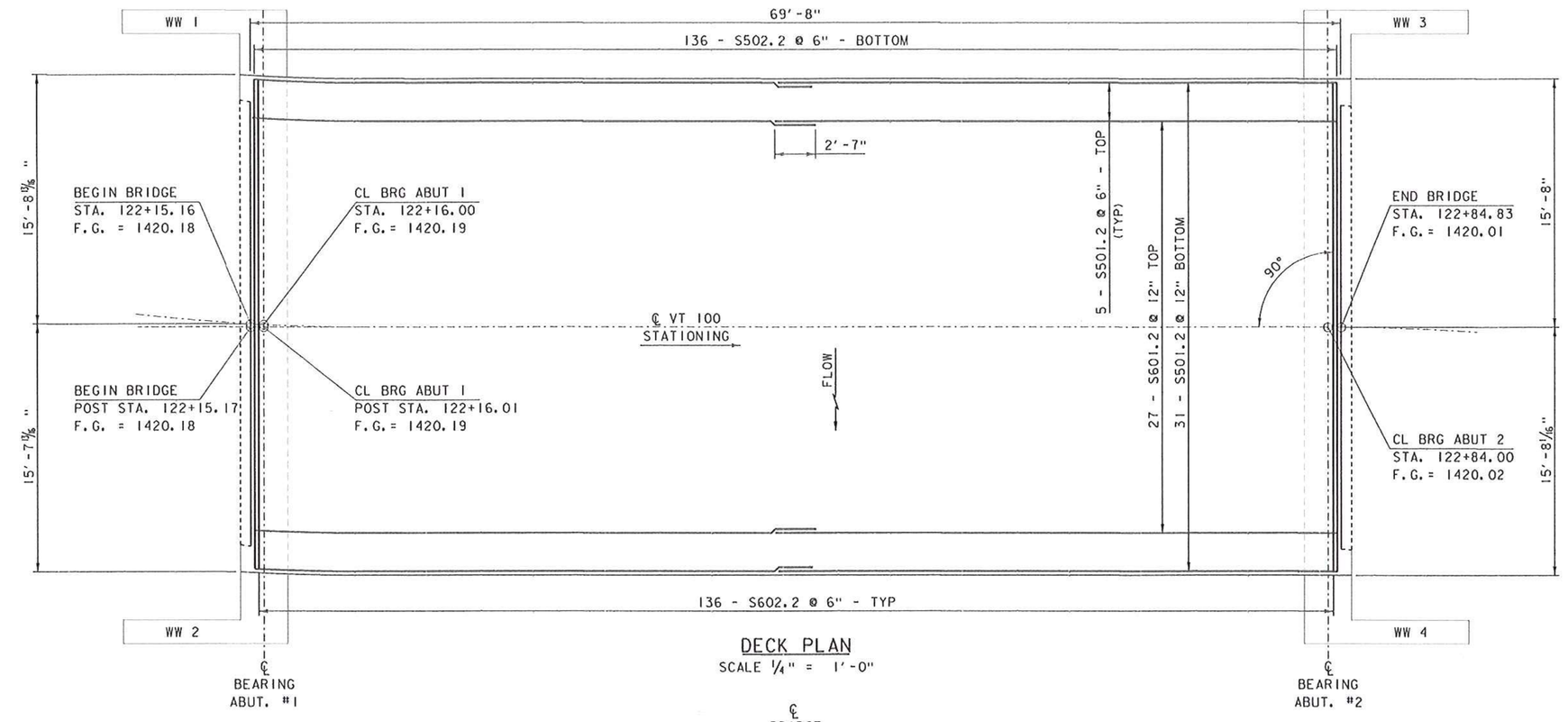
SEE REVISED SHEET 25B
DATED 10/5/15



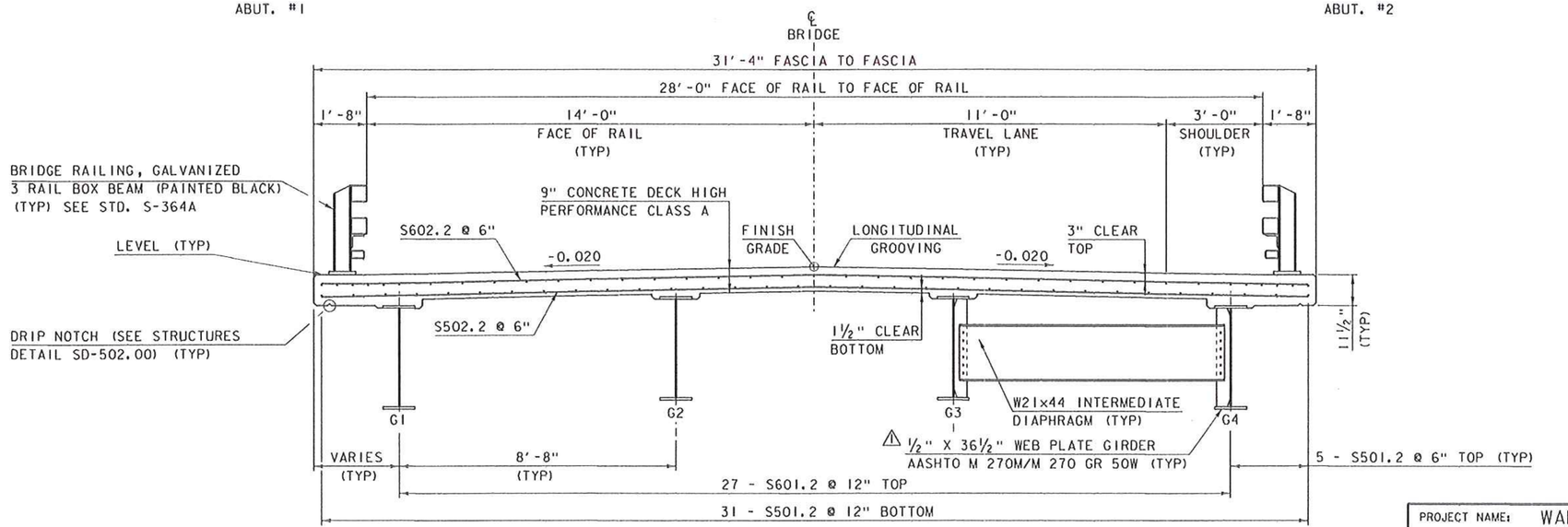
DECK TYPICAL
SCALE 1/2" = 1'-0"

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.

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283sup.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
DECK REINFORCING PLAN & TYPICAL	SHEET 25A OF 51



DECK PLAN
SCALE ¼" = 1'-0"



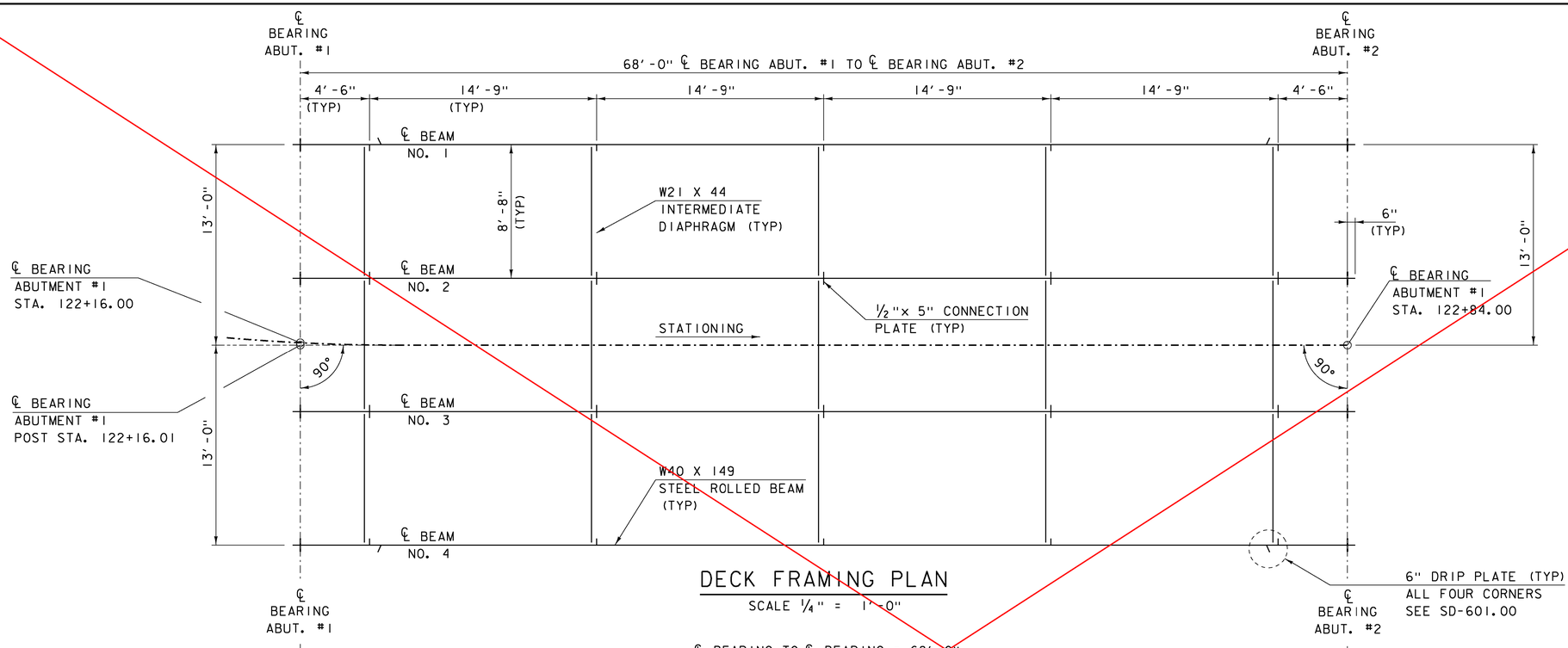
DECK TYPICAL
SCALE ½" = 1'-0"

NOTE:
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2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED ROLLED BEAM TO PLATE GIRDER.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

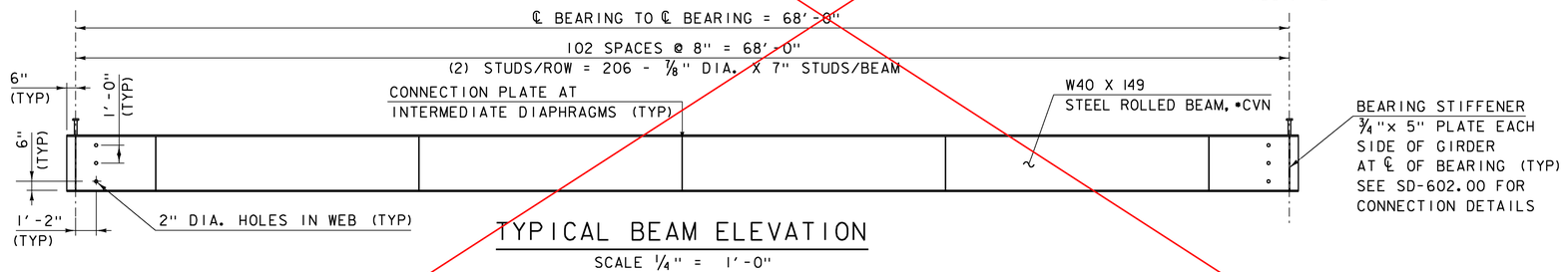
FILE NAME: s92b283sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DECK REINFORCING PLAN & TYPICAL
PLOT DATE: 06-OCT-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 25B OF 51



DECK FRAMING PLAN

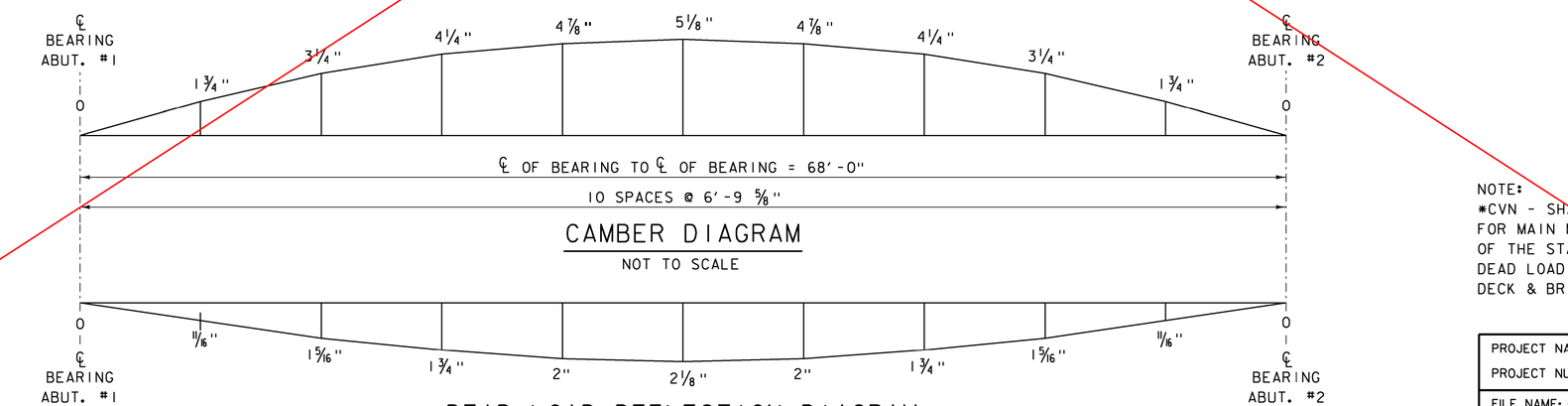
SCALE ¼" = 1'-0"

SEE REVISED SHEET 26B DATED 10/5/15



TYPICAL BEAM ELEVATION

SCALE ¼" = 1'-0"



CAMBER DIAGRAM

NOT TO SCALE

DEAD LOAD DEFLECTION DIAGRAM

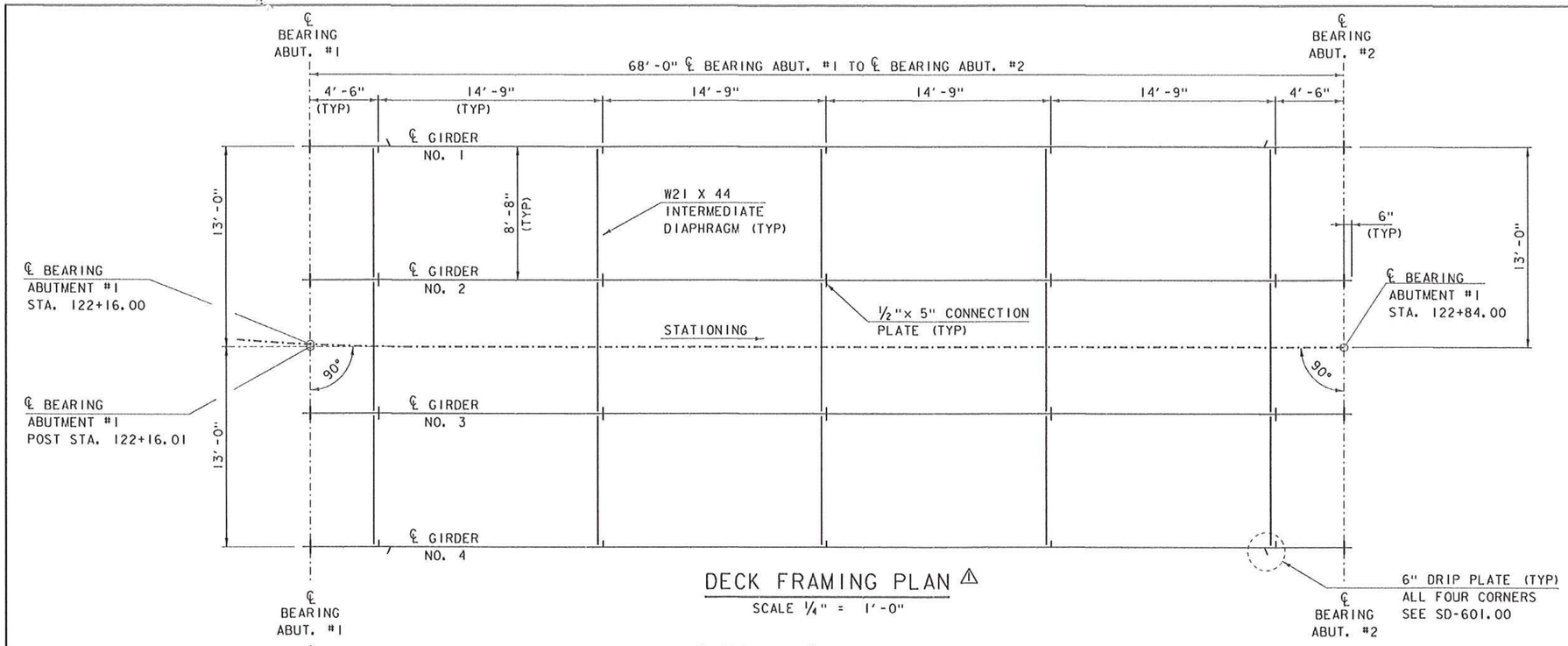
NOT TO SCALE

NOTE:
*CVN - SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS INDICATED IN SECTION 714 OF THE STANDARD SPECIFICATION.
DEAD LOAD DEFLECTION INCLUDES: BEAM, DIAPHRAGMS, DECK & BRIDGE RAIL.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

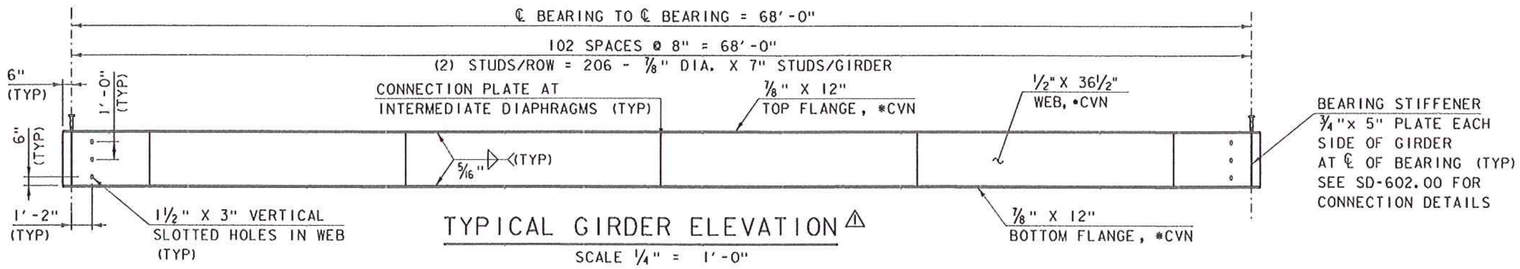
FILE NAME: s92b283sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DECK FRAMING PLAN

PLOT DATE: 15-JUL-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 26A OF 51



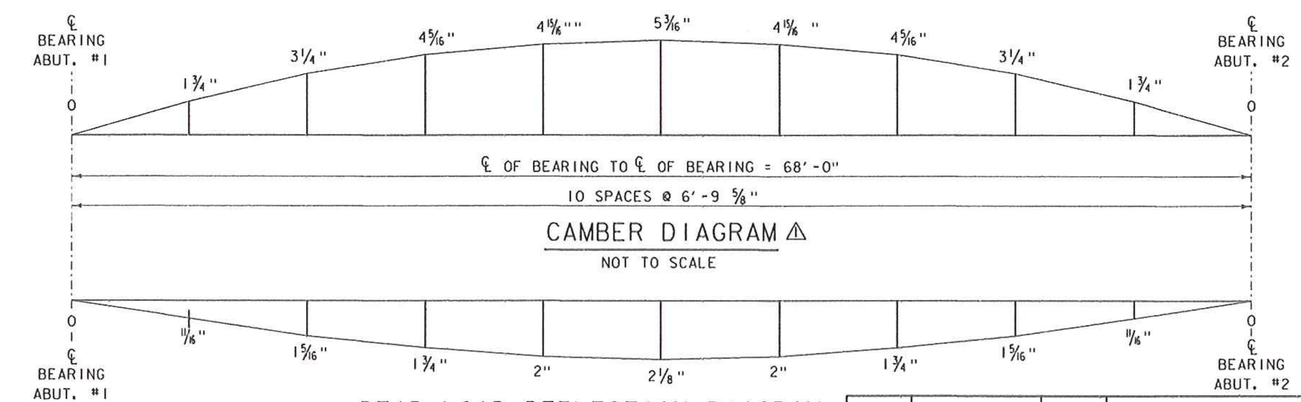
DECK FRAMING PLAN ⚠

SCALE 1/4" = 1'-0"



TYPICAL GIRDER ELEVATION ⚠

SCALE 1/4" = 1'-0"



CAMBER DIAGRAM ⚠

NOT TO SCALE

DEAD LOAD DEFLECTION DIAGRAM

NOT TO SCALE

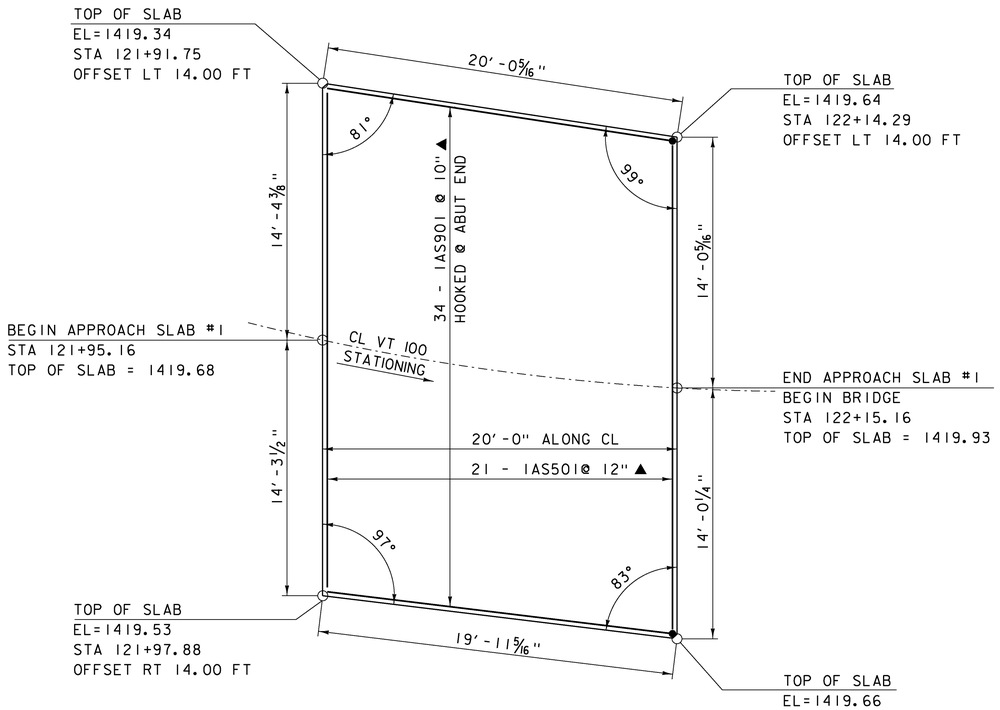
⚠ NOTE:
*CVN - SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS INDICATED IN SECTION 714 OF THE STANDARD SPECIFICATION.
DEAD LOAD DEFLECTION INCLUDES: GIRDER, DIAPHRAGMS, DECK & BRIDGE RAIL.

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED ROLLED BEAM TO PLATE GIRDER.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

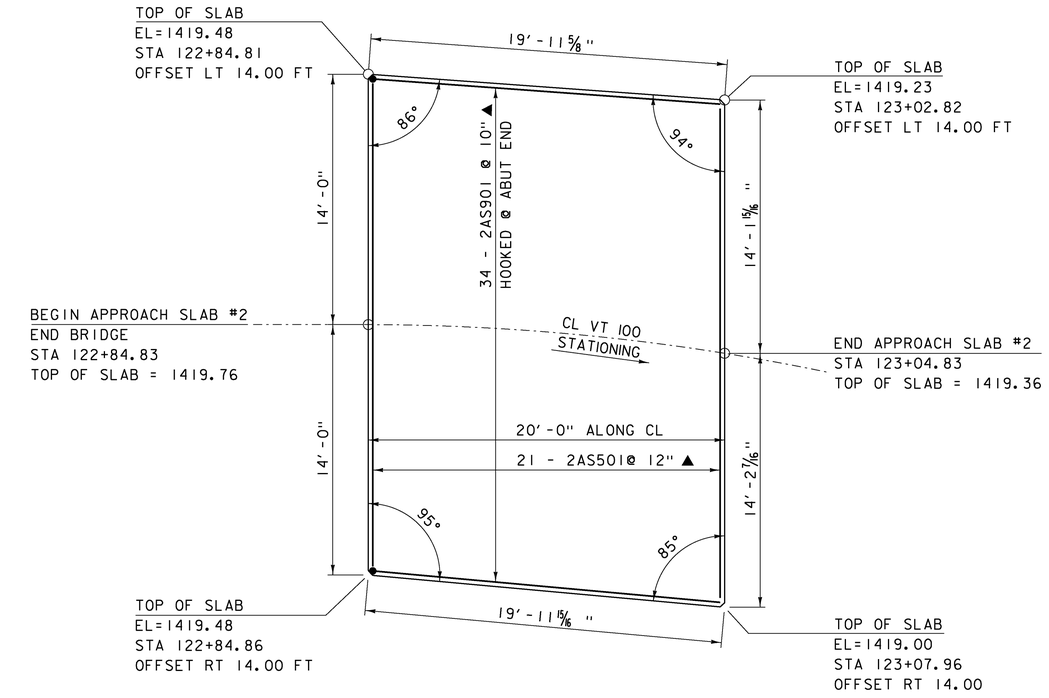
FILE NAME: s92b283sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DECK FRAMING PLAN

PLOT DATE: 08-OCT-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: D. PETERSON
SHEET 26B OF 51



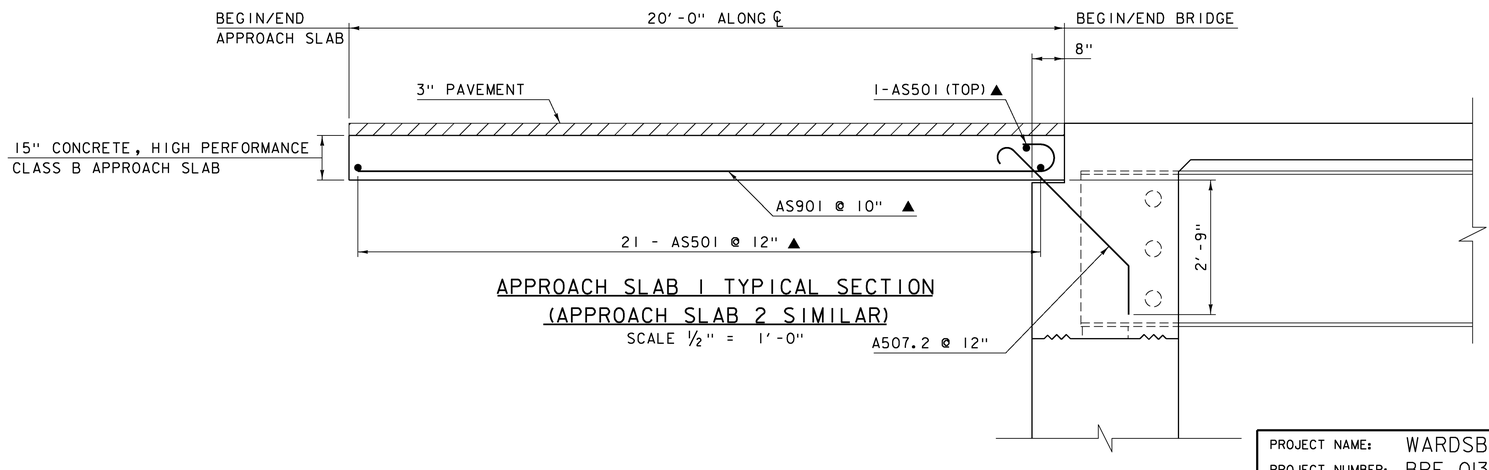
APPROACH SLAB #1 PLAN

SCALE 1/4" = 1'-0"



APPROACH SLAB #2 PLAN

SCALE 1/4" = 1'-0"



APPROACH SLAB 1 TYPICAL SECTION
(APPROACH SLAB 2 SIMILAR)

SCALE 1/2" = 1'-0"

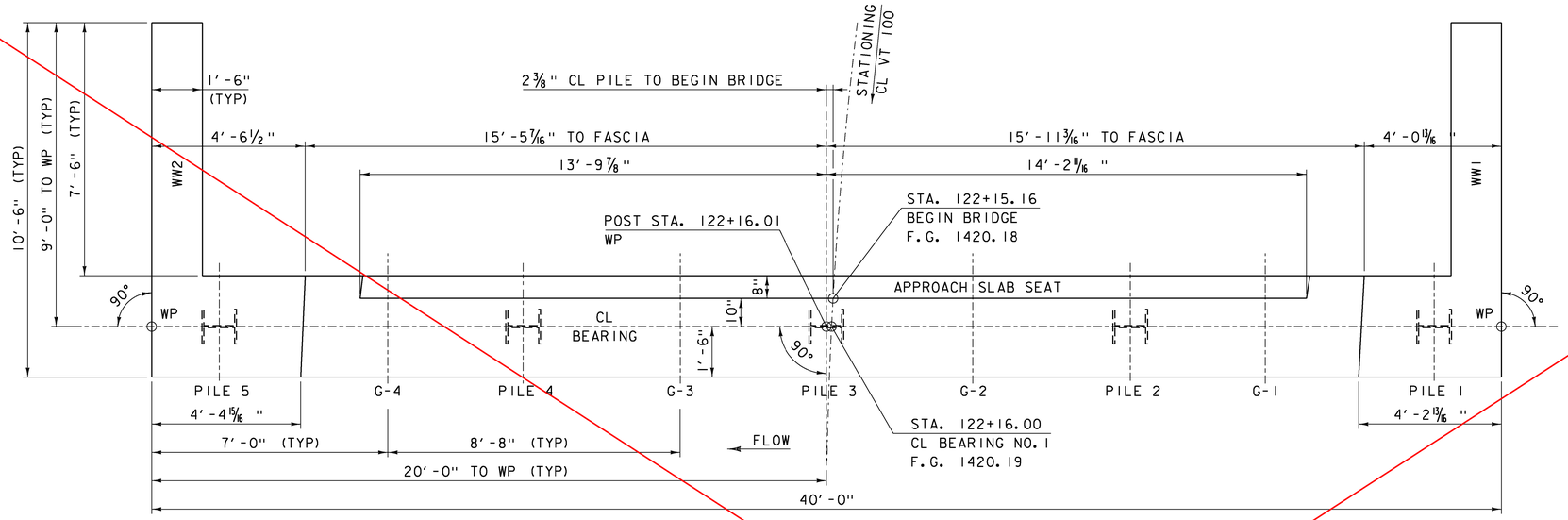
NOTE:

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3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
APPROACH SLAB PLANS & TYPICAL

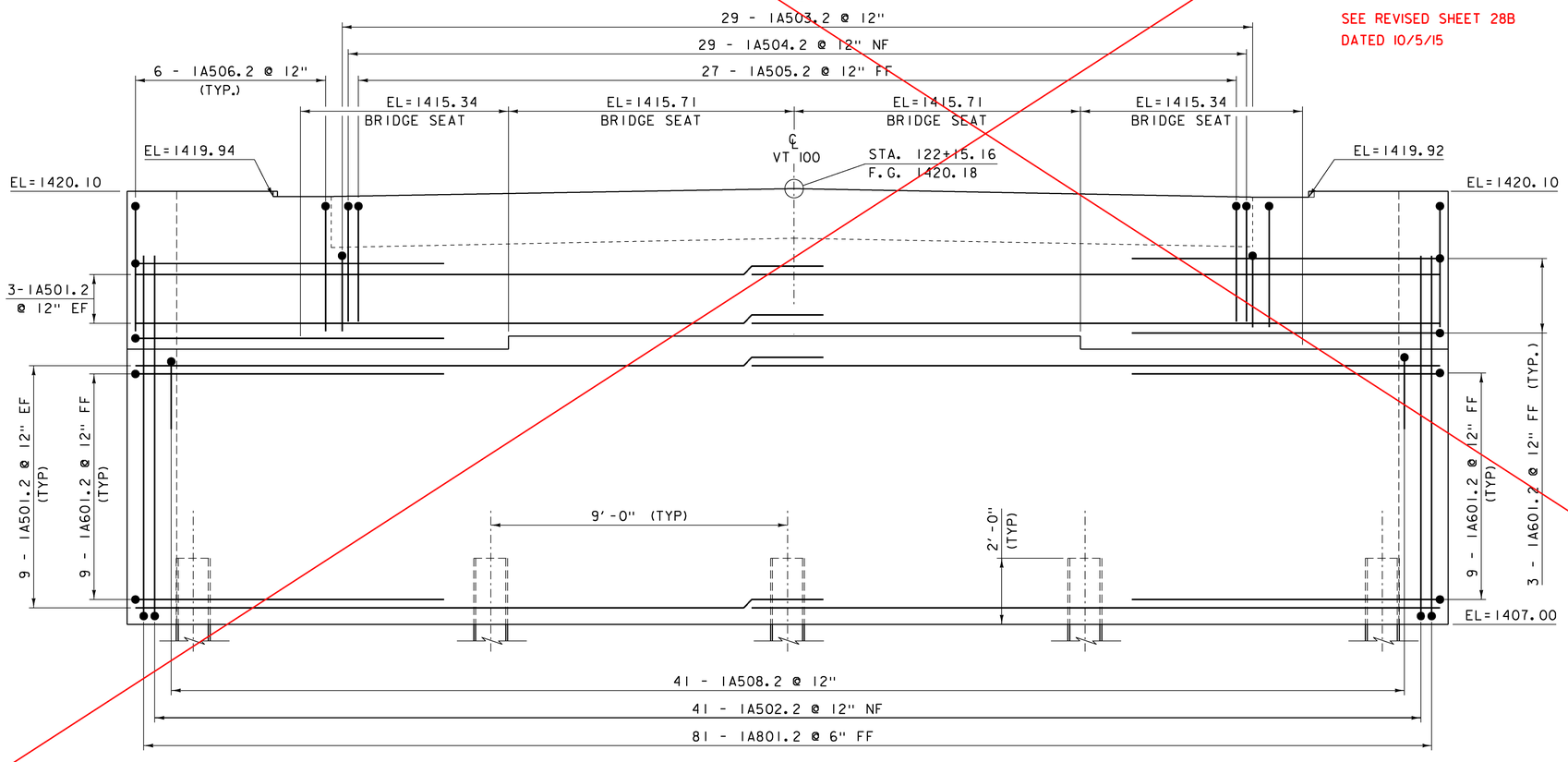
PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 27 OF 51



INTEGRAL ABUTMENT NO. 1 PLAN

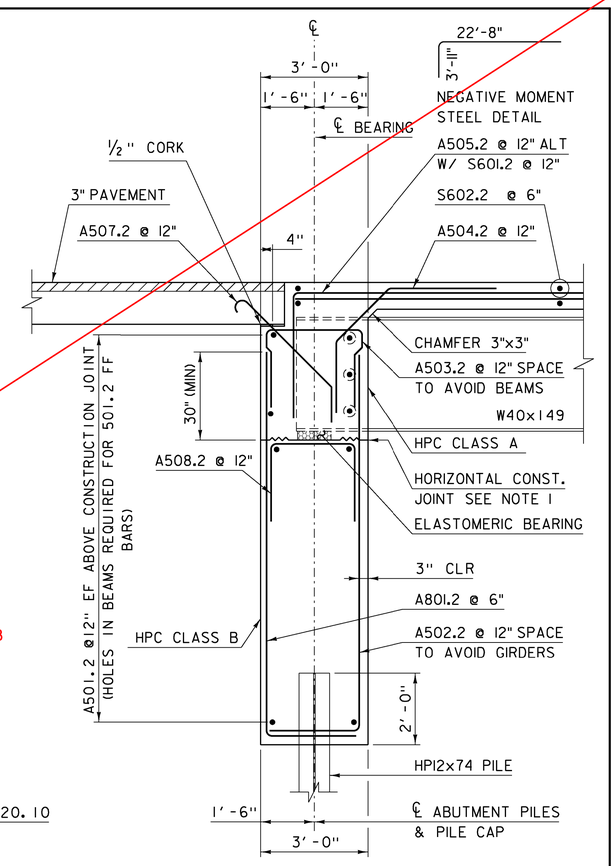
SCALE ½" = 1'-0

SEE REVISED SHEET 28B
DATED 10/5/15



INTEGRAL ABUTMENT NO. 1 ELEVATION

SCALE ½" = 1'-0



ABUTMENT 1 & 2 TYPICAL

SCALE: ½" = 1'-0"

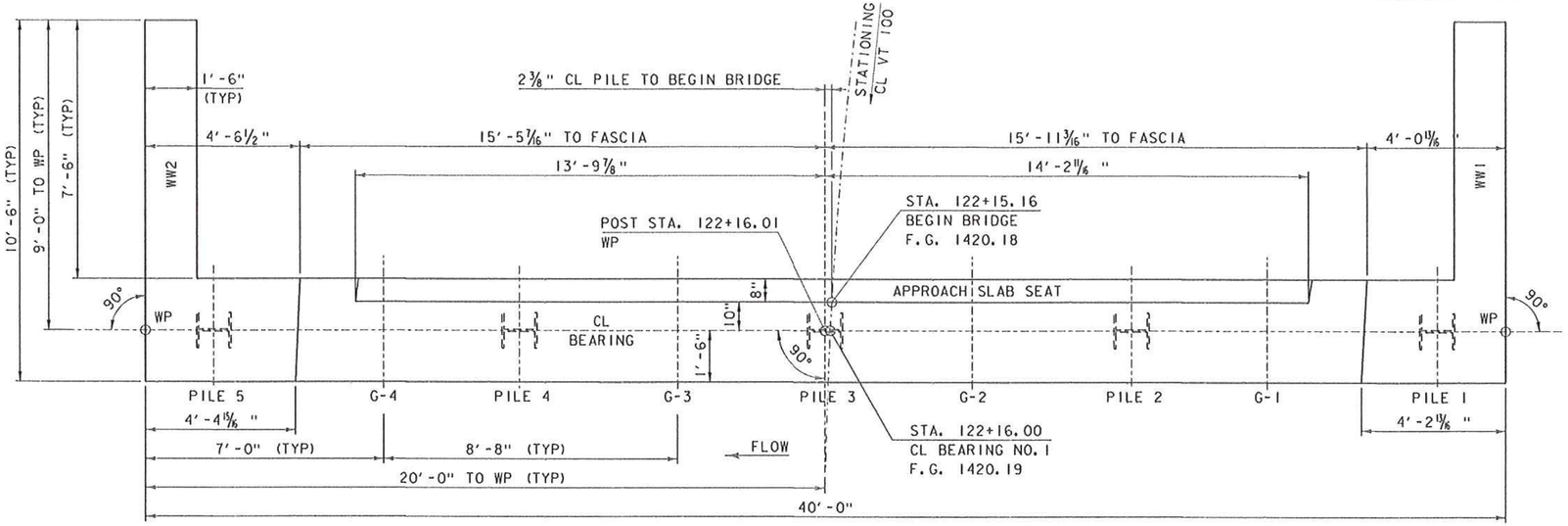
1) HORIZONTAL CONSTRUCTION JOINT SHALL SHALL BE ROUGHENED AS SHOWN IN STRUCTURES DETAIL SHEET SD-501.00. SURFACE SHALL BE ROUGHENED TO WITHIN 3" OF EACH FACE OF CONCRETE AND WITHIN 3" OF ELASTOMERIC BEARING PADS. SURFACE UNDER EACH BEARING PAD SHALL REMAIN SMOOTH.

2) SEE STRUCTURES DETAIL SHEET SD-502.00 FOR BRIDGE PLAQUE DETAILS.

NOTE:

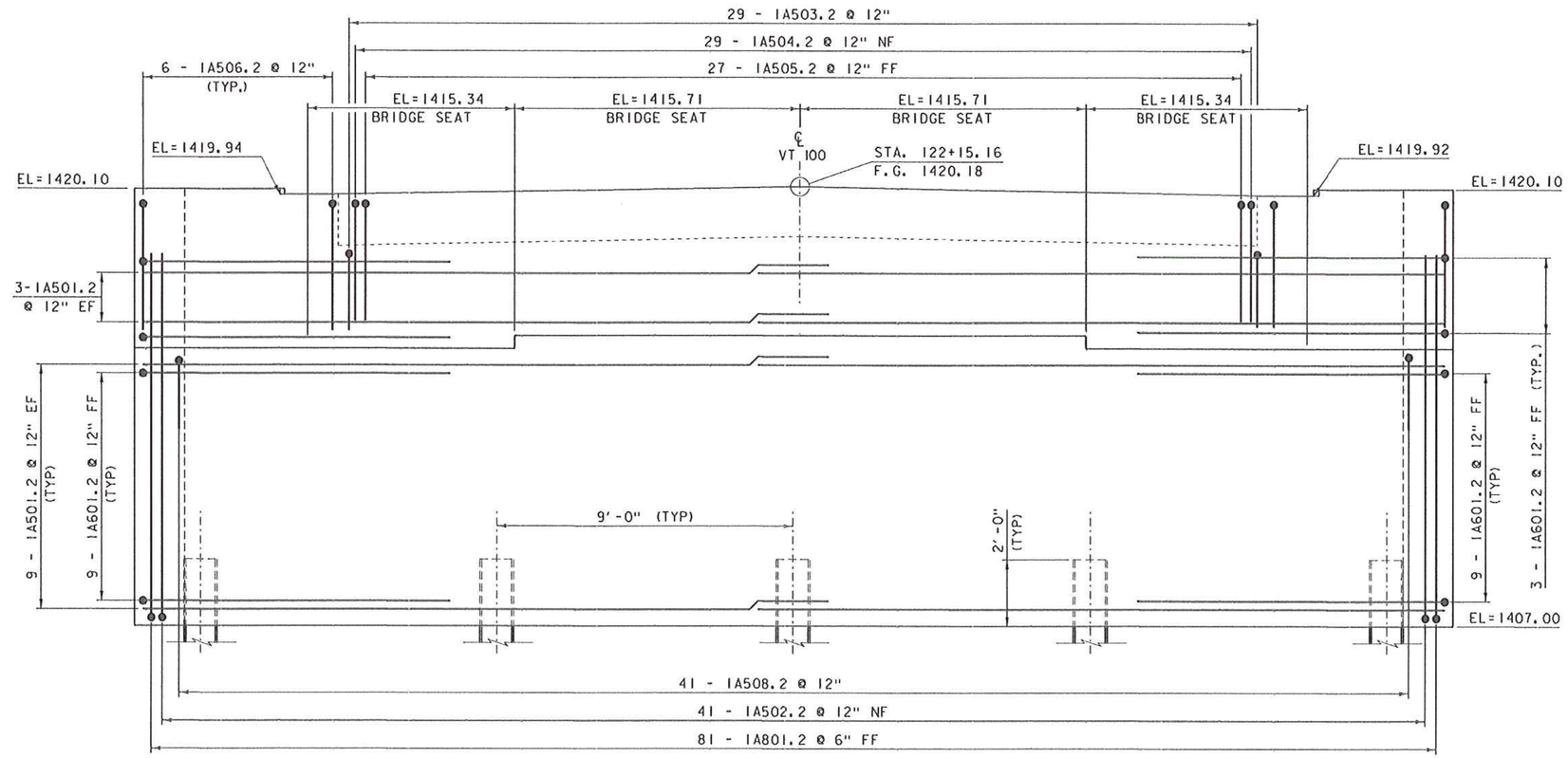
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3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283sub.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
ABUTMENT #1 PLAN & ELEVATION	SHEET 28A OF 51



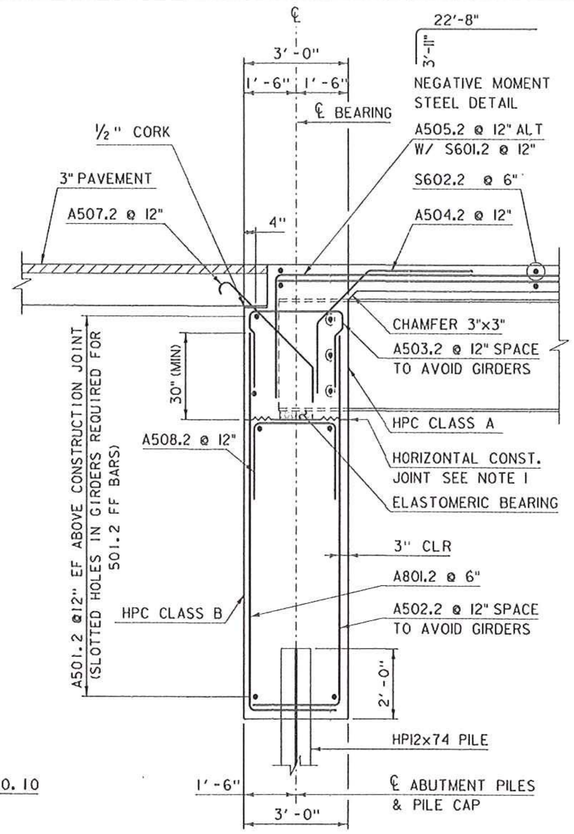
INTEGRAL ABUTMENT NO. 1 PLAN

SCALE ½" = 1'-0



INTEGRAL ABUTMENT NO. 1 ELEVATION

SCALE ½" = 1'-0



ABUTMENT 1 & 2 TYPICAL ⚠

SCALE: ½" = 1'-0"

1) HORIZONTAL CONSTRUCTION JOINT SHALL SHALL BE ROUGHENED AS SHOWN IN STRUCTURES DETAIL SHEET SD-501.00. SURFACE SHALL BE ROUGHENED TO WITHIN 3" OF EACH FACE OF CONCRETE AND WITHIN 3" OF ELASTOMERIC BEARING PADS. SURFACE UNDER EACH BEARING PAD SHALL REMAIN SMOOTH.

2) SEE STRUCTURES DETAIL SHEET SD-502.00 FOR BRIDGE PLAQUE DETAILS.

NOTE:

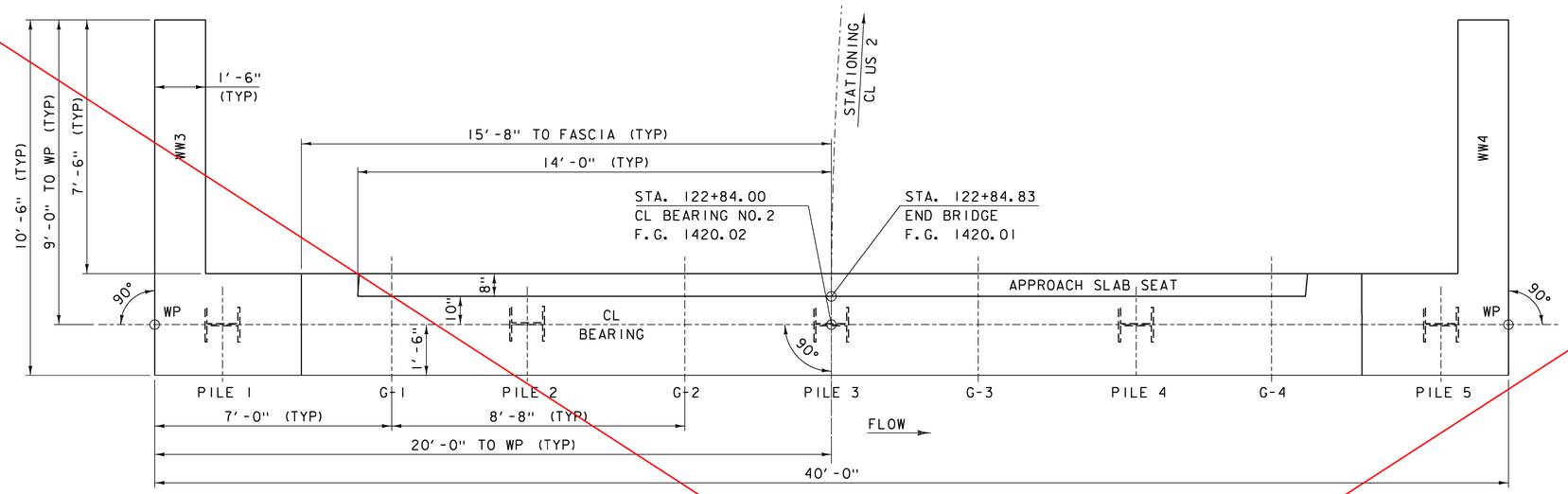
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3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED ROLLED BEAM TO PLATE GIRDER.

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

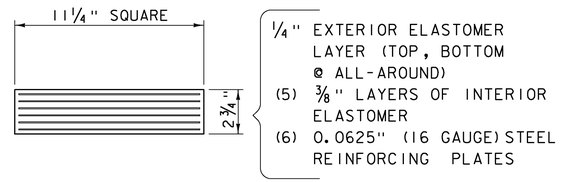
FILE NAME: s92b283sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT #1 PLAN & ELEVATION

PLOT DATE: 06-OCT-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 28B OF 51



INTEGRAL ABUTMENT NO. 2 PLAN

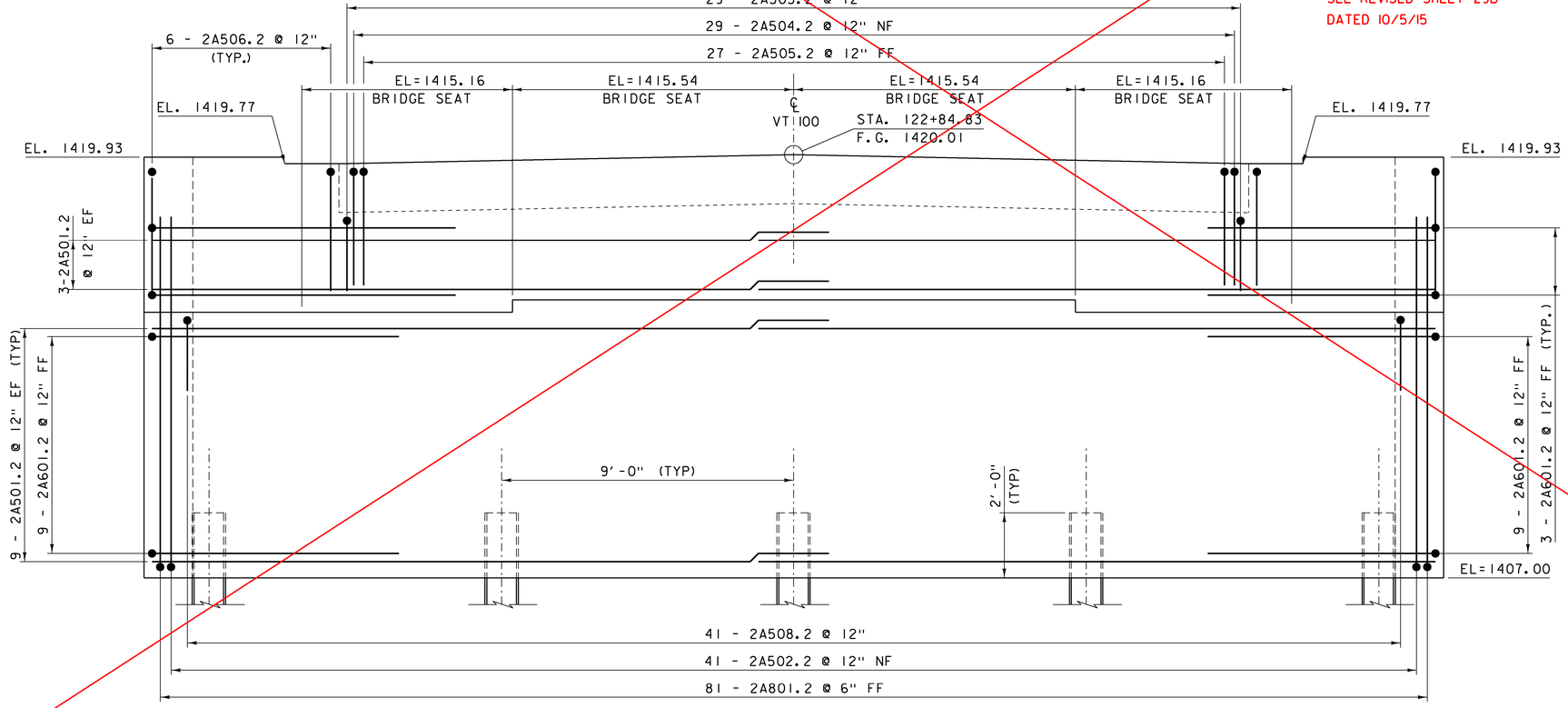
SCALE ½" = 1'-0



SEE REVISED SHEET 29B
DATED 10/5/15

ELASTOMERIC BEARING PAD DETAIL

NOT TO SCALE



INTEGRAL ABUTMENT NO. 2 ELEVATION

SCALE ½" = 1'-0

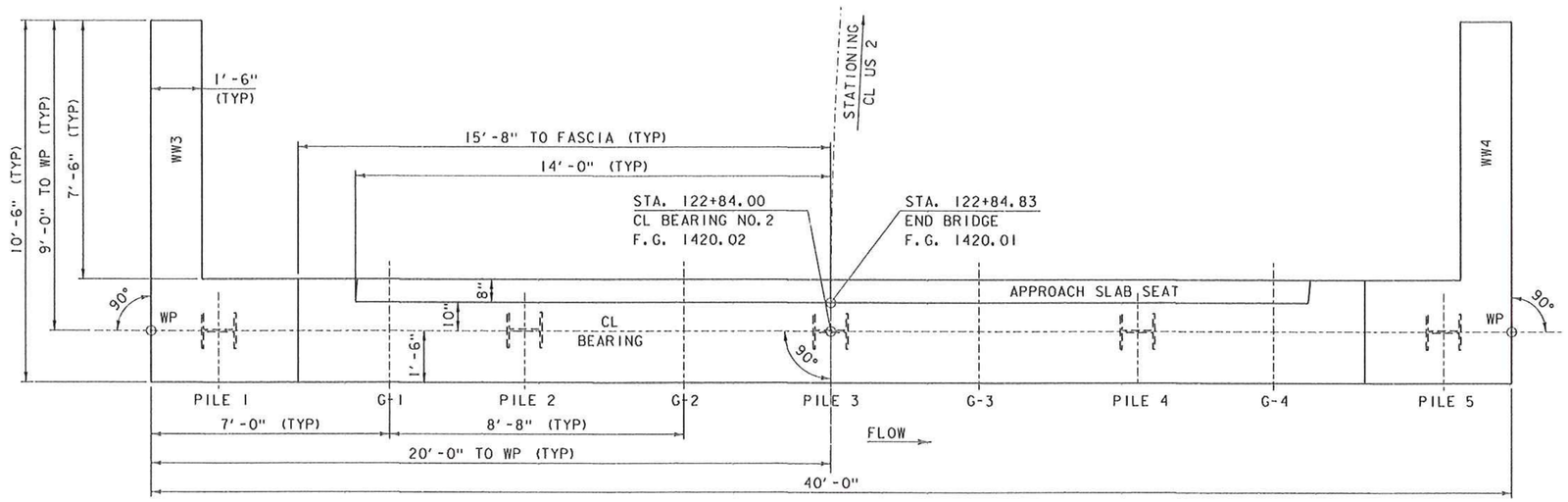
NOTE:

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▲ = 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: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

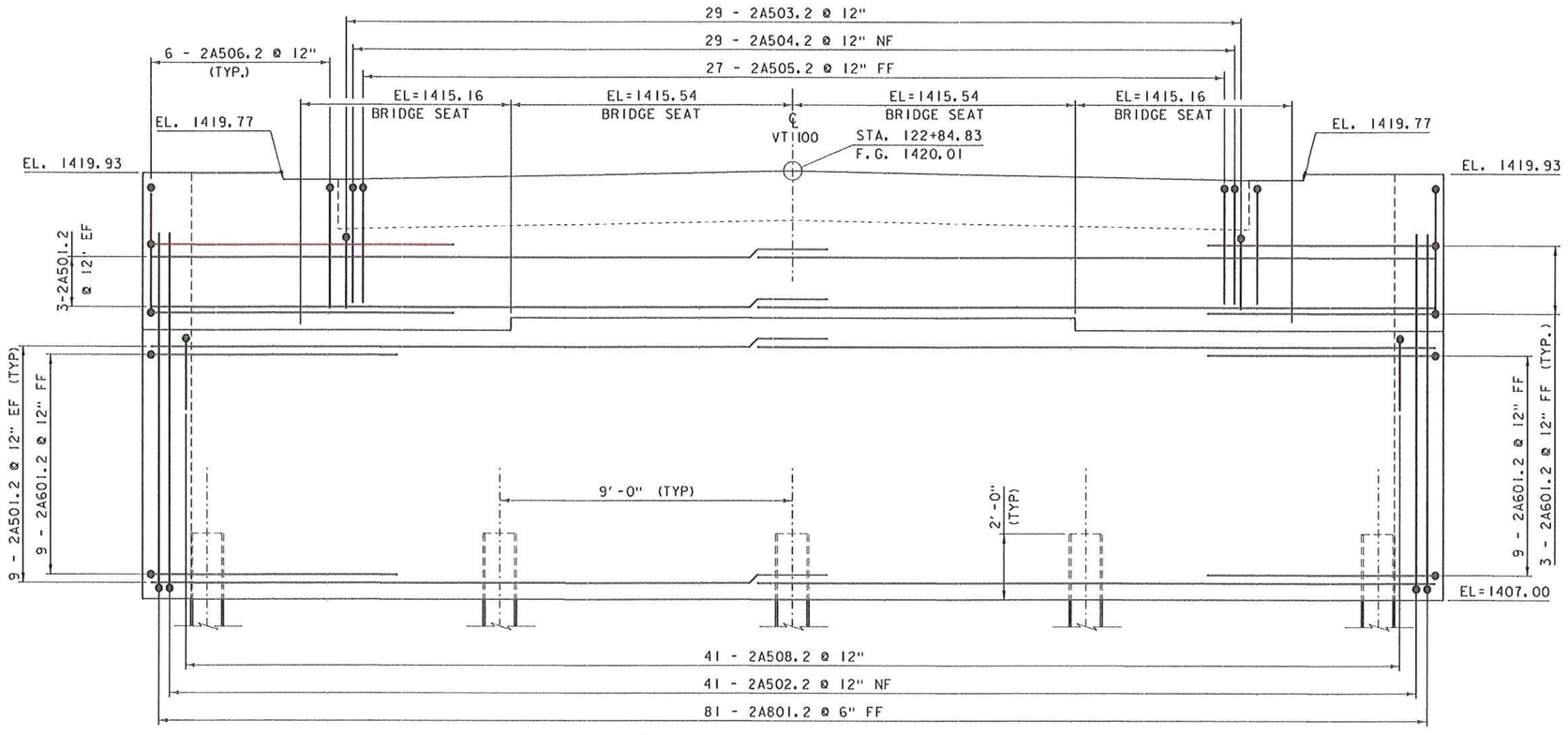
FILE NAME: s92b283sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON

ABUTMENT #2 PLAN & ELEVATION AND BEARING DETAIL SHEET 29A OF 51



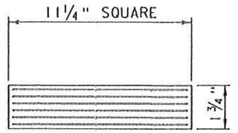
INTEGRAL ABUTMENT NO. 2 PLAN

SCALE ½" = 1'-0



INTEGRAL ABUTMENT NO. 2 ELEVATION

SCALE ½" = 1'-0



ELASTOMERIC BEARING PAD DETAIL ⚠

NOT TO SCALE

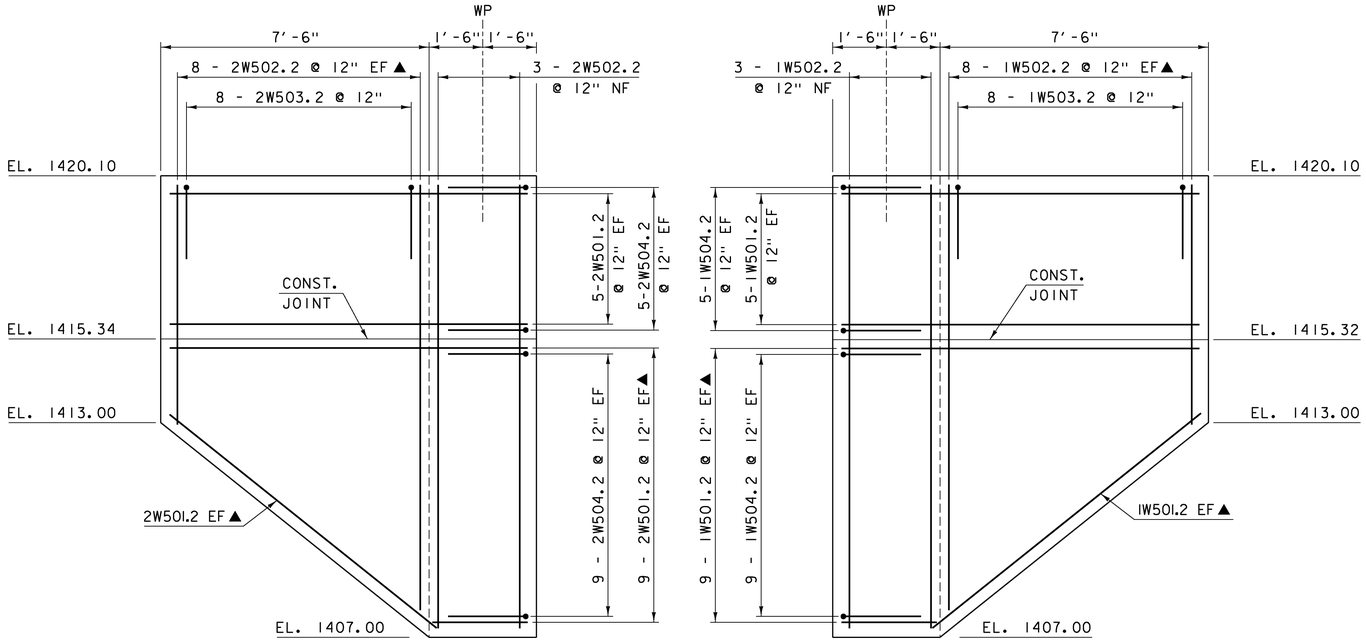
NOTE:

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2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

KEY	DATE	BY	REVISION
⚠	10/05/2015	VAOT	MODIFIED BEARING THICKNESS

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PLOT DATE: 07-OCT-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
ABUTMENT #2 PLAN & ELEVATION AND BEARING DETAIL SHEET 29 OF 51

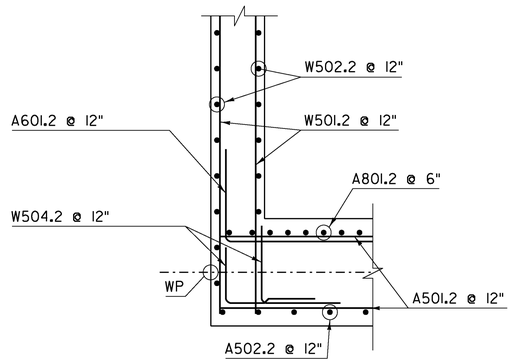


WINGWALL NO. 2 ELEVATION

SCALE ½" = 1'-0

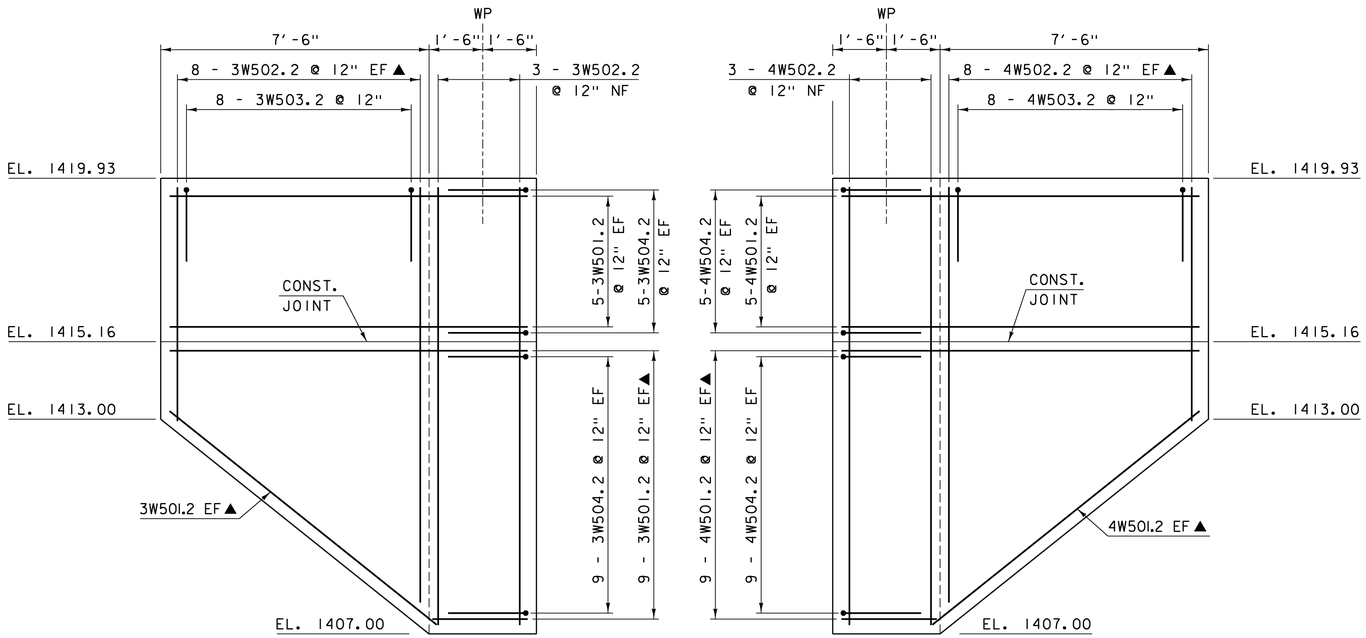
WINGWALL NO. 1 ELEVATION

SCALE ½" = 1'-0



WINGWALL CORNER DETAIL (TYP)

SCALE ½" = 1'-0

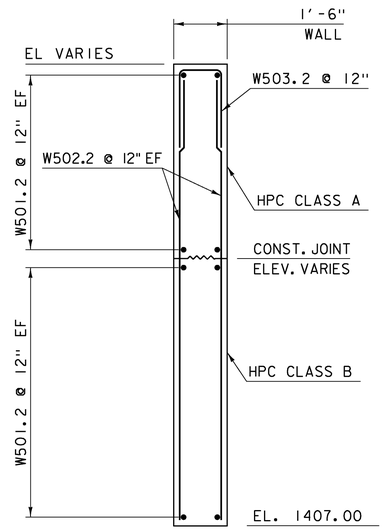


WINGWALL NO. 3 ELEVATION

SCALE ½" = 1'-0

WINGWALL NO. 4 ELEVATION

SCALE ½" = 1'-0



WINGWALL SECTION (TYP)

SCALE ½" = 1'-0

NOTE:

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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: WARDSBORO	
PROJECT NUMBER: BRF 013-1(15)	
FILE NAME: s92b283sub.dgn	**PLOT DATE:** 15-JUL-2015
PROJECT LEADER: C. CARLSON	**DRAWN BY:** R. PELLETT
DESIGNED BY: D. PETERSON	**CHECKED BY:** D. PETERSON
WINGWALLS 1-4 ELEVATIONS & TYPICALS	**SHEET** 30 **OF** 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

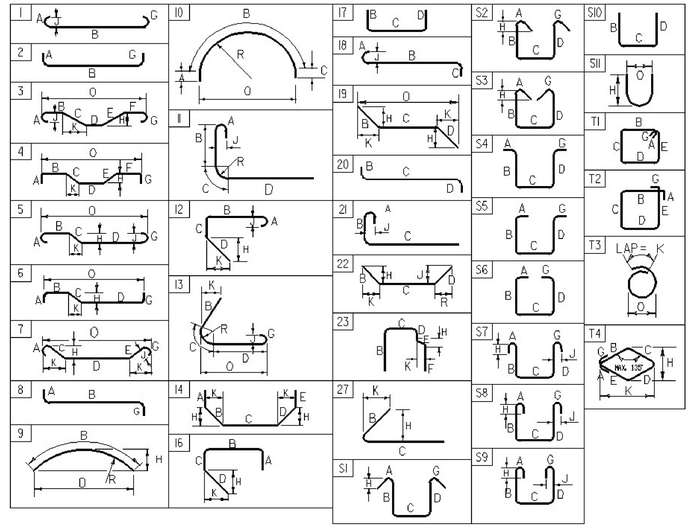
ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
DECK																	
	82	5	30'- 10"	S501.2	STR	30'- 10"											
	136	5	35'- 8"	S502.2	STR	35'- 8"											
	54	6	35'- 8"	S601.2	STR	35'- 8"											
	136	6	30'- 10"	S602.2	STR	30'- 10"											
APPROACH SLAB 1																	
▲	22	5	28'- 2"	1AS501	STR	28'- 2"											
✳ ▲	35	9	20'- 5"	1AS901	1	0'- 11"	19'- 6"					---		0'- 9"			
APPROACH SLAB 2																	
▲	22	5	27'- 10"	2AS501	STR	27'- 10"											
▲	34	9	20'- 5"	2AS901	1	0'- 11"	19'- 6"					---		0'- 9"			
ABUTMENT 1																	
	48	5	20'- 10"	1A501.2	STR	20'- 10"											
	41	5	13'- 6"	1A502.2	17		10'- 11"	2'- 7"	-								
	29	5	6'- 11"	1A503.2	17		2'- 2"	2'- 7"	2'- 2"								
	29	5	5'- 4"	1A504.2	22		3'- 2"		2'- 2"				2'- 3"	1'- 6"	2'- 3"	1'- 6"	
	27	5	26'- 7"	1A505.2	2	3'- 11"	22'- 8"										
	12	5	10'- 3"	1A506.2	17		3'- 10"	2'- 7"	3'- 10"								
	29	5	5'- 1"	1A507.2	5	0'- 7"	3'- 6"	1'- 0"	-			-	0'- 8"	-	0'- 8"		
	41	5	6'- 11"	1A508.2	17		2'- 2"	2'- 7"	2'- 2"								
✳	25	6	11'- 11"	1A601.2	2	2'- 7"	9'- 4"										
✳	82	8	13'- 6"	1A801.2	17		10'- 11"	2'- 7"	-								
ABUTMENT 2																	
	48	5	20'- 10"	2A501.2	STR	20'- 10"											
	41	5	13'- 6"	2A502.2	17		10'- 11"	2'- 7"	-								
	29	5	6'- 11"	2A503.2	17		2'- 2"	2'- 7"	2'- 2"								
	29	5	5'- 4"	2A504.2	22		3'- 2"		2'- 2"				2'- 3"	1'- 6"	2'- 3"	1'- 6"	
	27	5	26'- 7"	2A505.2	2	3'- 11"	22'- 8"										
	12	5	10'- 3"	2A506.2	17		3'- 10"	2'- 7"	3'- 10"								
	29	5	5'- 1"	2A507.2	5	0'- 7"	3'- 6"	1'- 0"	-			-	0'- 8"	-	0'- 8"		
	41	5	6'- 11"	2A508.2	17		2'- 2"	2'- 7"	2'- 2"								
	24	6	11'- 11"	2A601.2	2	2'- 7"	9'- 4"										
	81	8	13'- 6"	2A801.2	17		10'- 11"	2'- 7"									
WINGWALL 1																	
✳ ▲	31	5	10'- 0"	1W501.2	STR	10'- 0"											
▲	16	5	12'- 5"	1W502.2	STR	12'- 5"											
	8	5	5'- 5"	1W503.2	17		2'- 2"	1'- 1"	2'- 2"								
	28	5	4'- 4"	1W504.2	17		2'- 2"	2'- 2"	-								
WINGWALL 2																	
▲	30	5	10'- 0"	2W501.2	STR	10'- 0"											
▲	16	5	12'- 5"	2W502.2	STR	12'- 5"											
	8	5	5'- 5"	2W503.2	17		2'- 2"	1'- 1"	2'- 2"								
	28	5	4'- 4"	2W504.2	17		2'- 2"	2'- 2"	-								
WINGWALL 3																	
▲	30	5	10'- 0"	3W501.2	STR	10'- 0"											
▲	16	5	12'- 5"	3W502.2	STR	12'- 5"											
	8	5	5'- 5"	3W503.2	17		2'- 2"	1'- 1"	2'- 2"								
	28	5	4'- 4"	3W504.2	17		2'- 2"	2'- 2"	-								
WINGWALL 4																	
▲	30	5	10'- 0"	4W501.2	STR	10'- 0"											
▲	16	5	12'- 5"	4W502.2	STR	12'- 5"											
	8	5	5'- 5"	4W503.2	17		2'- 2"	1'- 1"	2'- 2"								
	28	5	4'- 4"	4W504.2	17		2'- 2"	2'- 2"	-								

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

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

~~11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.~~



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES 2	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

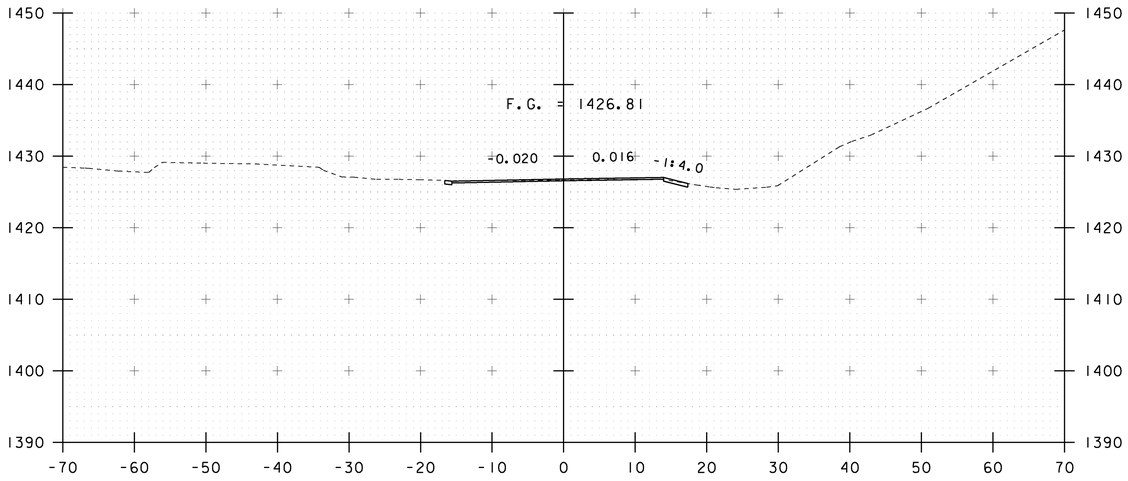
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A ,2 FOR LEVEL TWO SUFFIX OR ,3 FOR LEVEL THREE SUFFIX. ,1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROVIDED FOR EACH CORROSION LEVEL WILL BE RECORDED ON THE PLAN SET PI SHEET FOR AS-BUILT RECORD PLAN ARCHIVES.

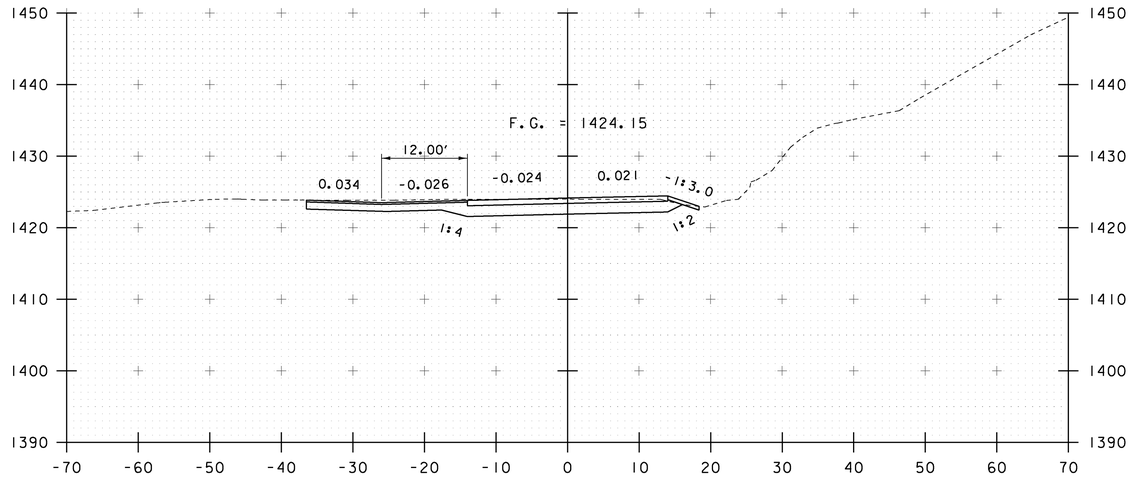
PROJECT NAME: **WARDSBORO**
PROJECT NUMBER: **BRF 013-1(15)**

FILE NAME: **s92b283rss.xls**
PROJECT MANAGER: **C. CARLSON**
DESIGNED BY: **D. PETERSON**
REINFORCING STEEL SCHEDULE

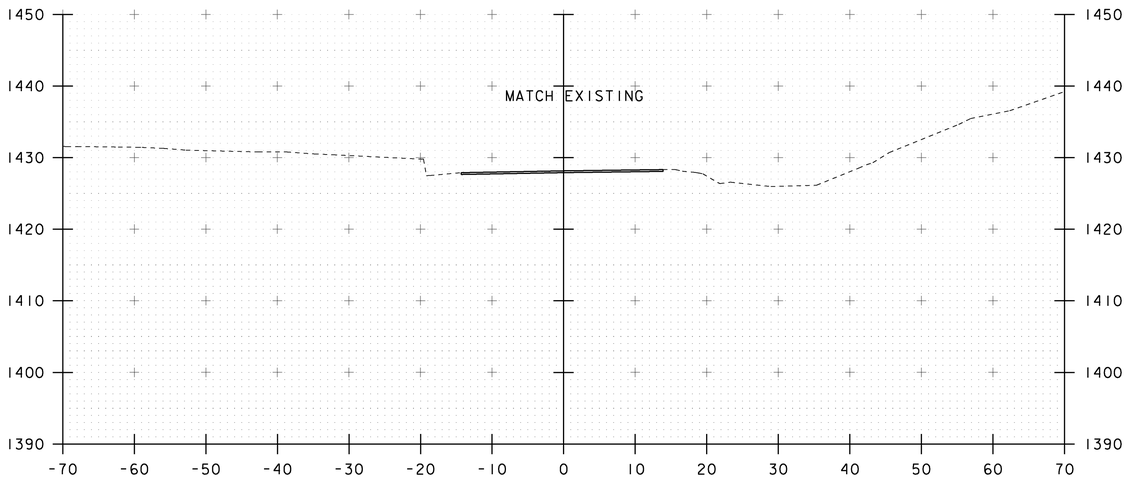
PLOT DATE: **2/23/2015**
DRAWN BY: **R. PELLETT**
CHECKED BY: **D. PETERSON**
SHEET 31 OF 51



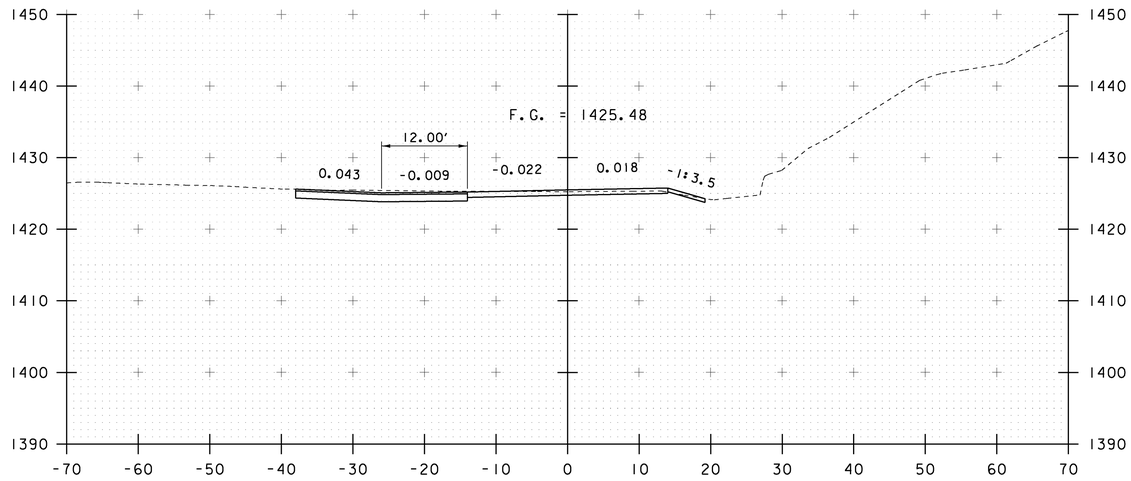
119+75



120+25



BEGIN APPROACH 119+50

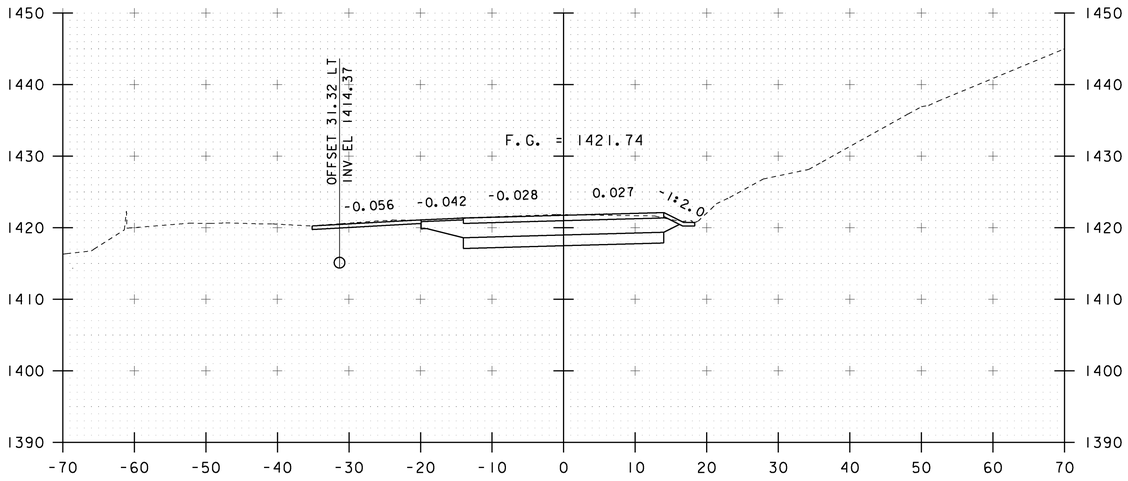


120+00

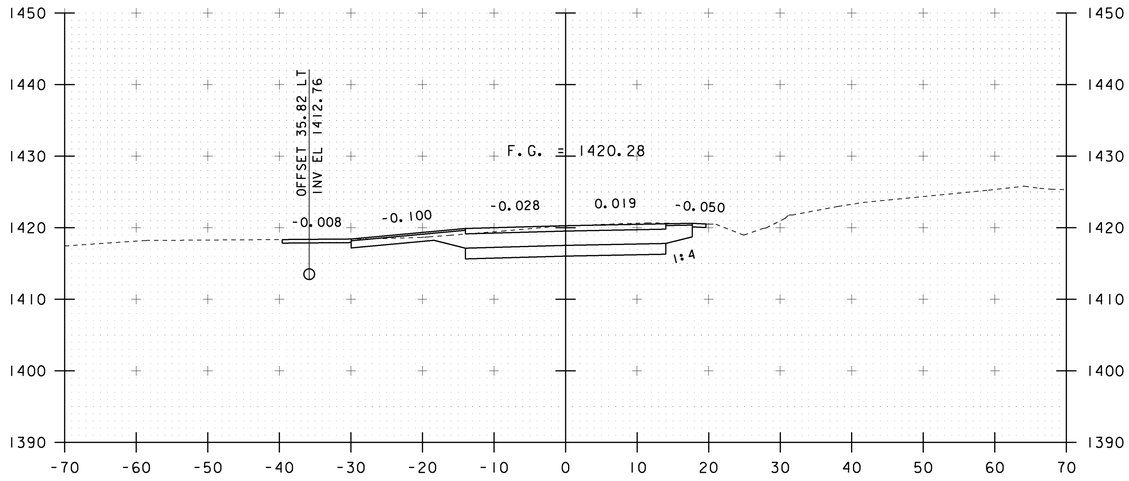
STA. 119+50 TO STA. 120+25

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)

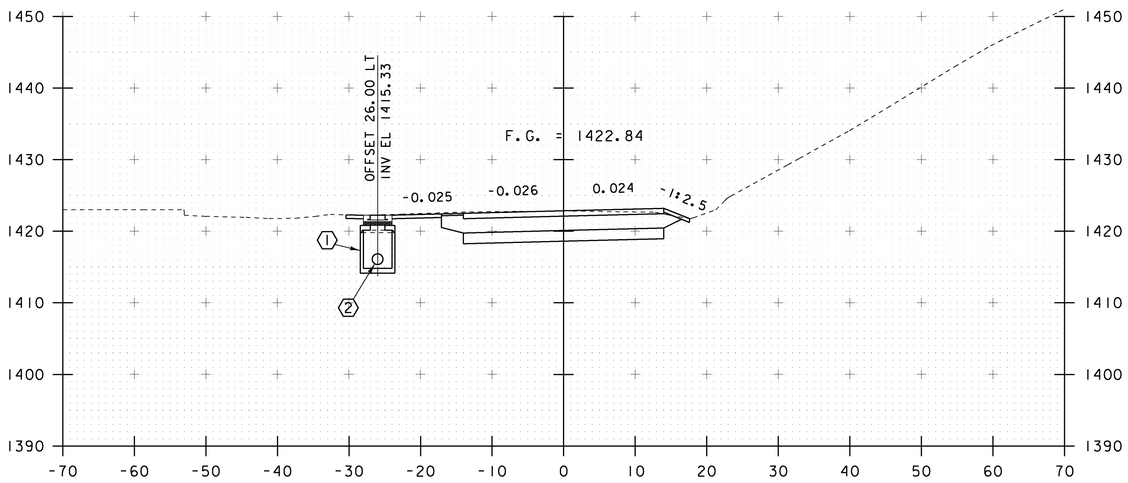
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
VT 100 CROSS SECTIONS 1	SHEET 32 OF 51



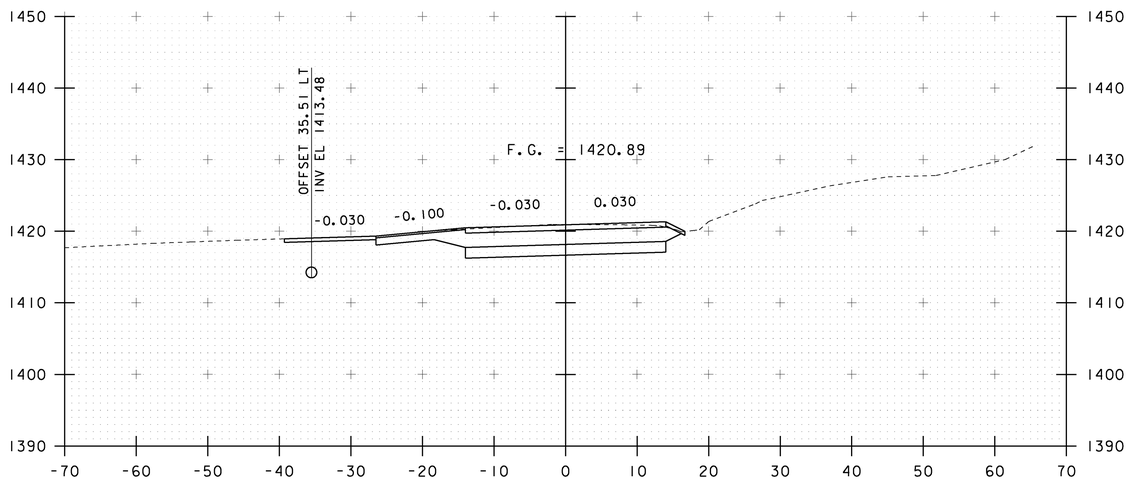
120+75



121+25



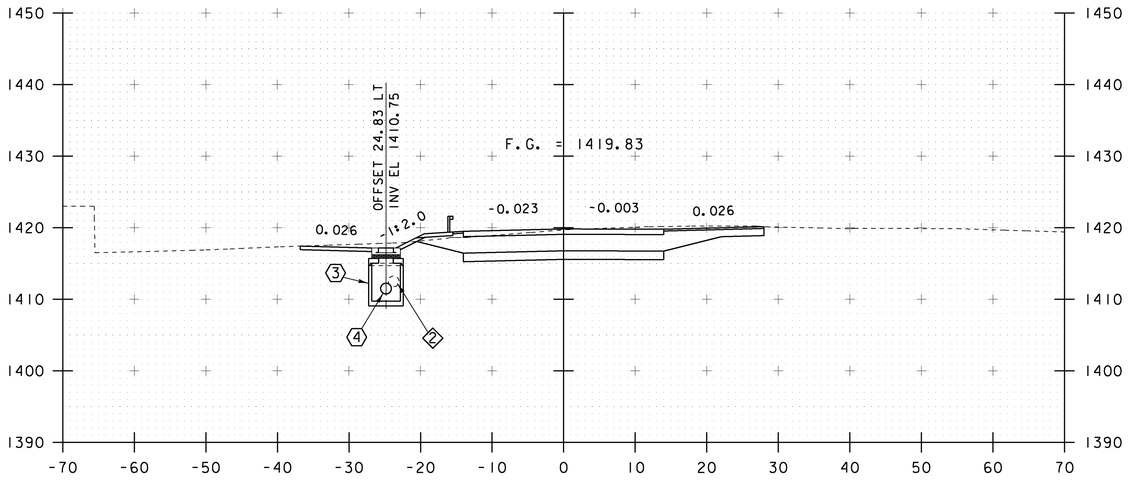
BEGIN PROJECT 120+50



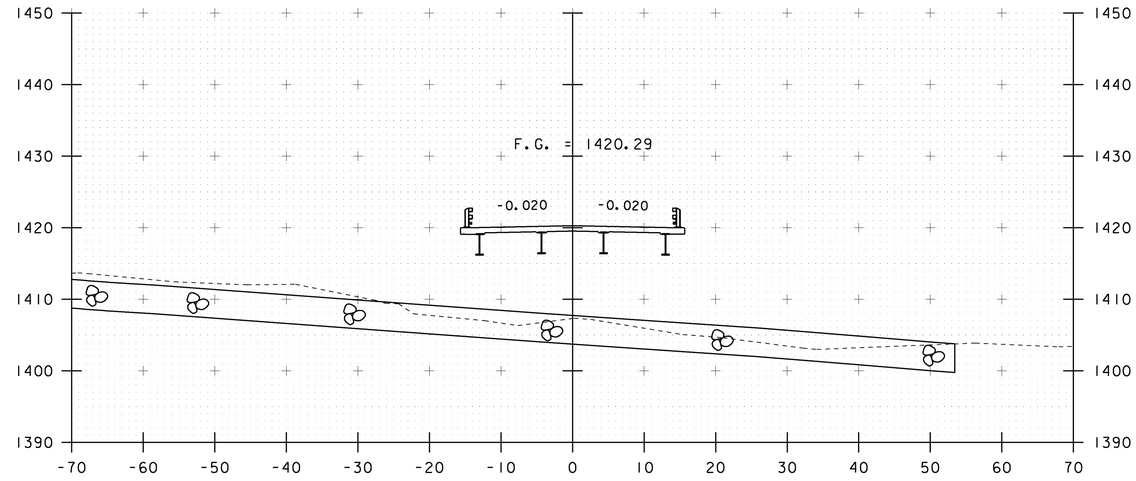
121+00

STA. 120+50 TO STA. 121+25

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
VT 100 CROSS SECTIONS 2	SHEET 33 OF 51

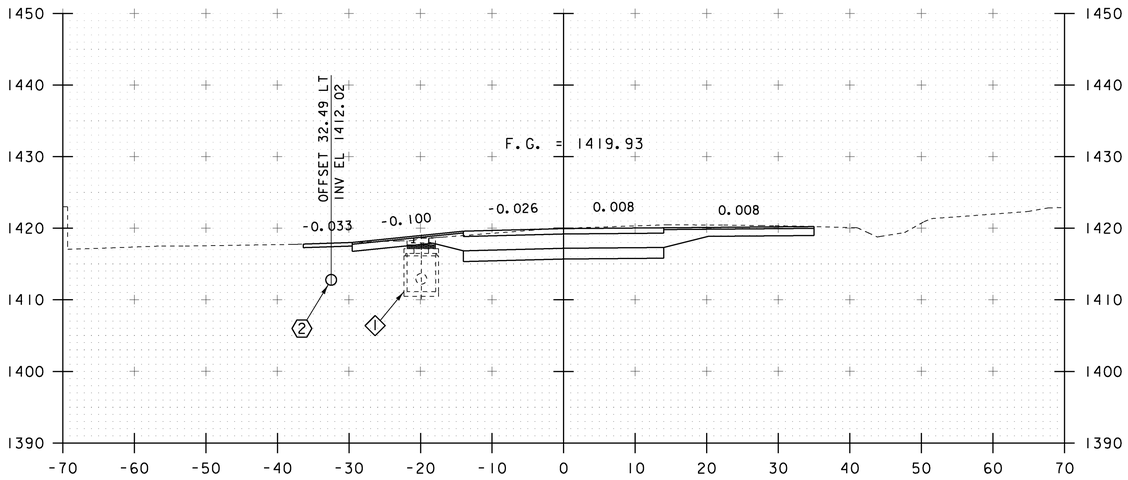


121+75

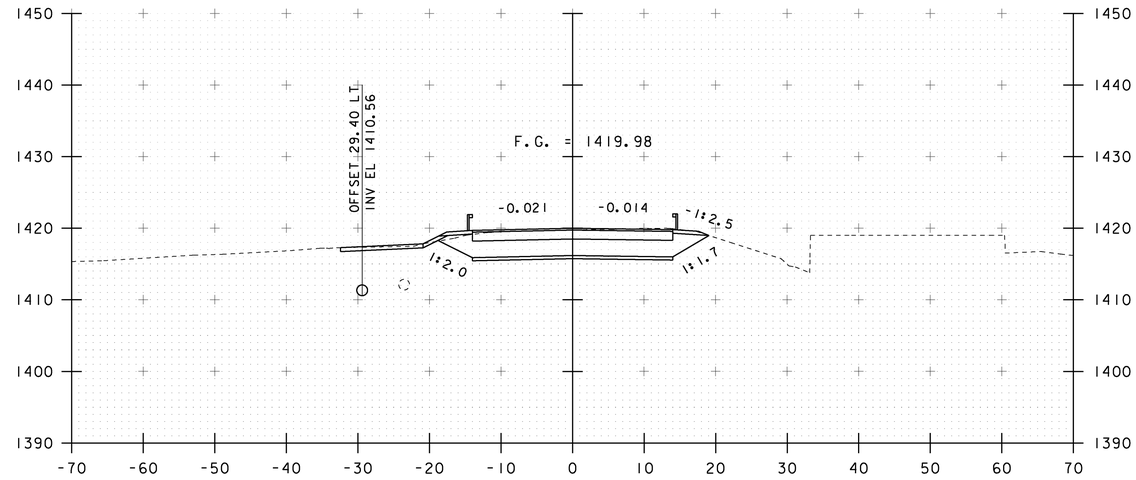


BEGIN BRIDGE
STA 122+15.16

122+25



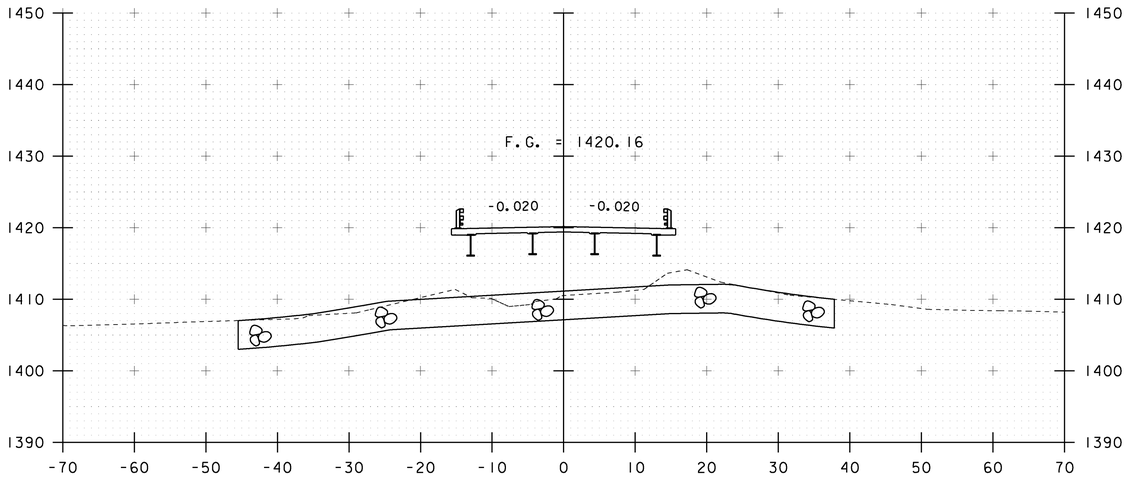
121+50



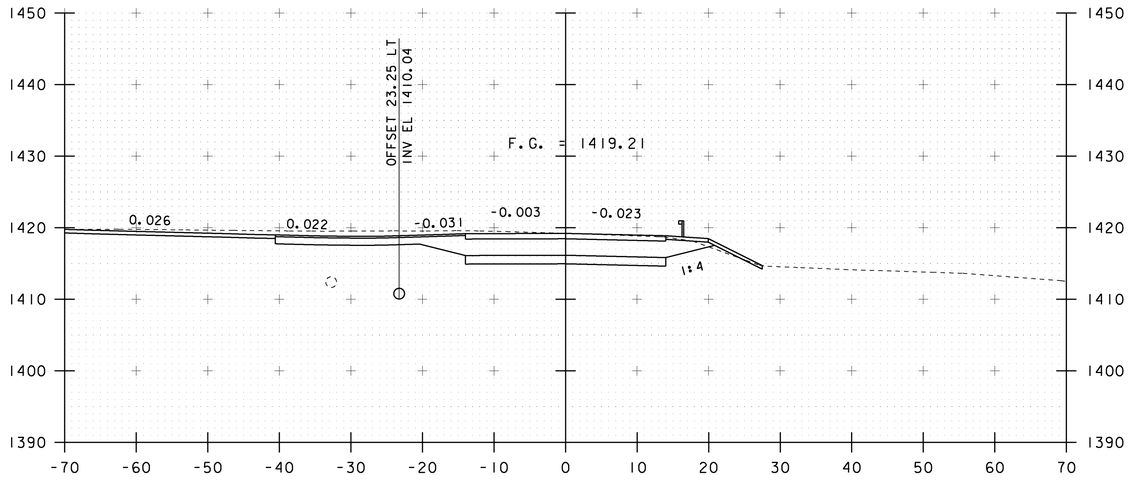
122+00

STA. 121+50 TO STA. 122+25

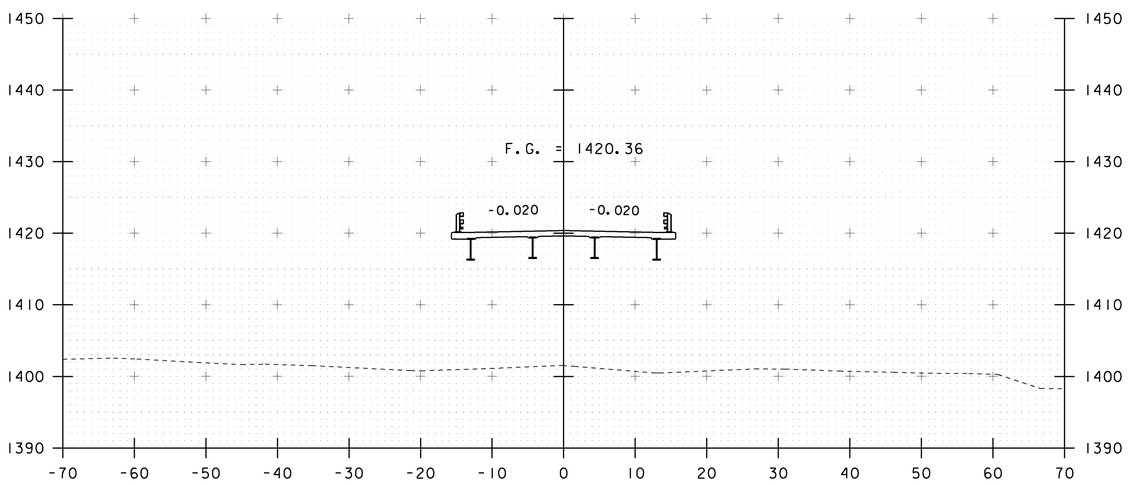
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PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
VT 100 CROSS SECTIONS 3	SHEET 34 OF 51



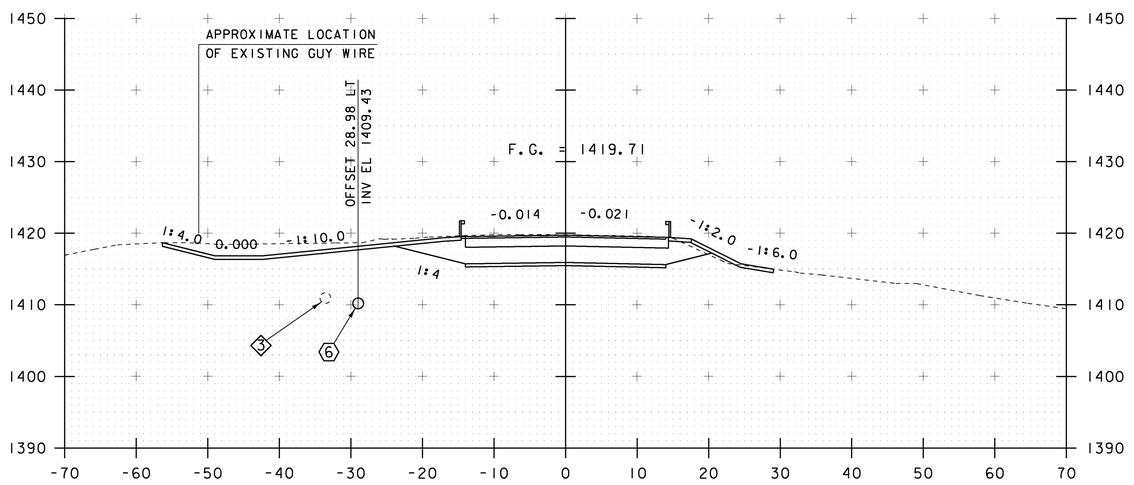
122+75



123+25



122+50

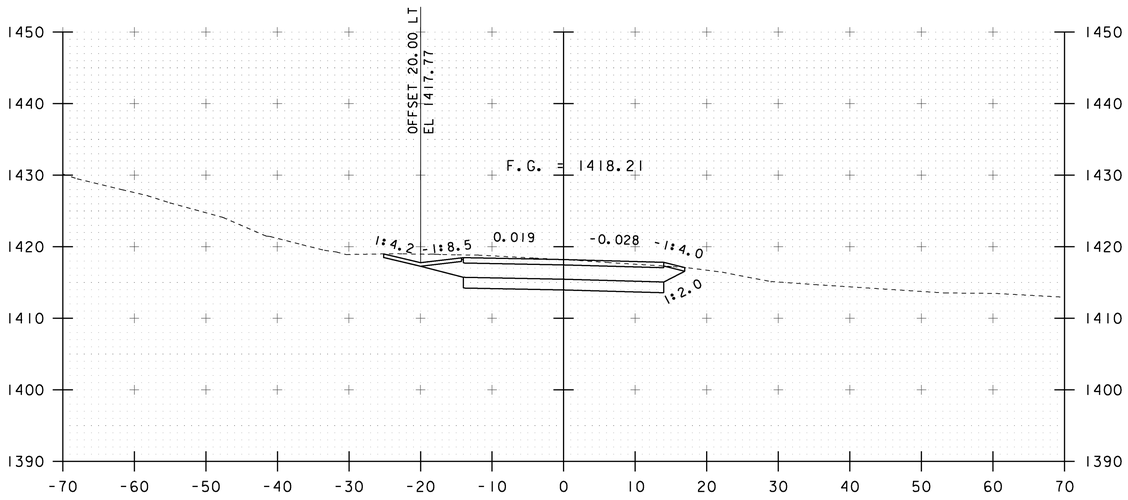


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STA 122+84.83

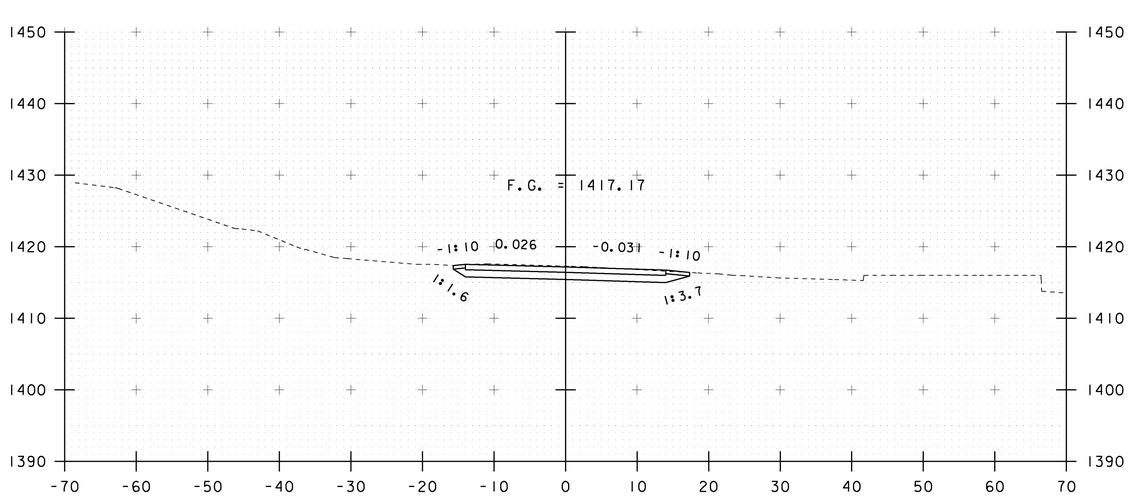
123+00

STA. 122+50 TO STA. 123+25

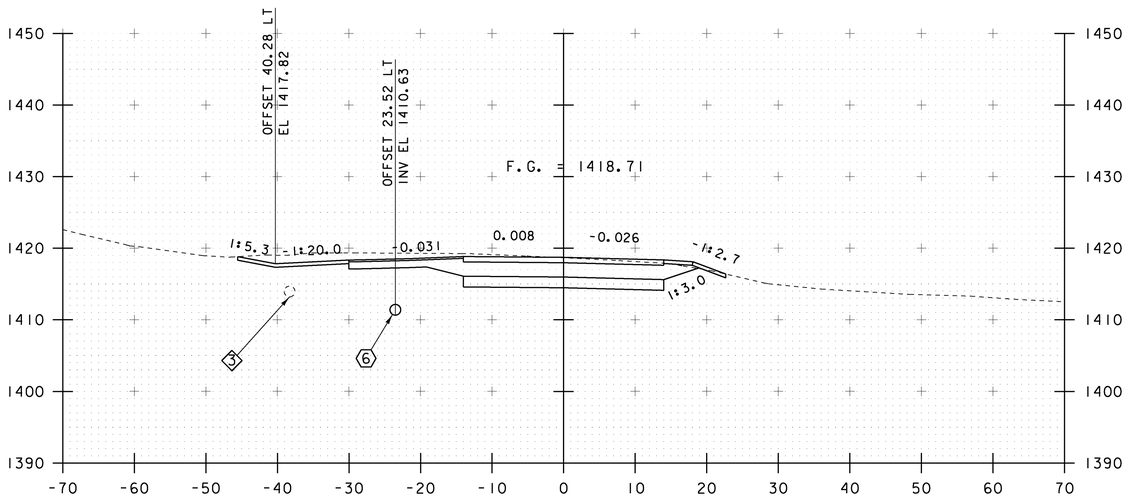
PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
VT 100 CROSS SECTIONS 4	SHEET 35 OF 51



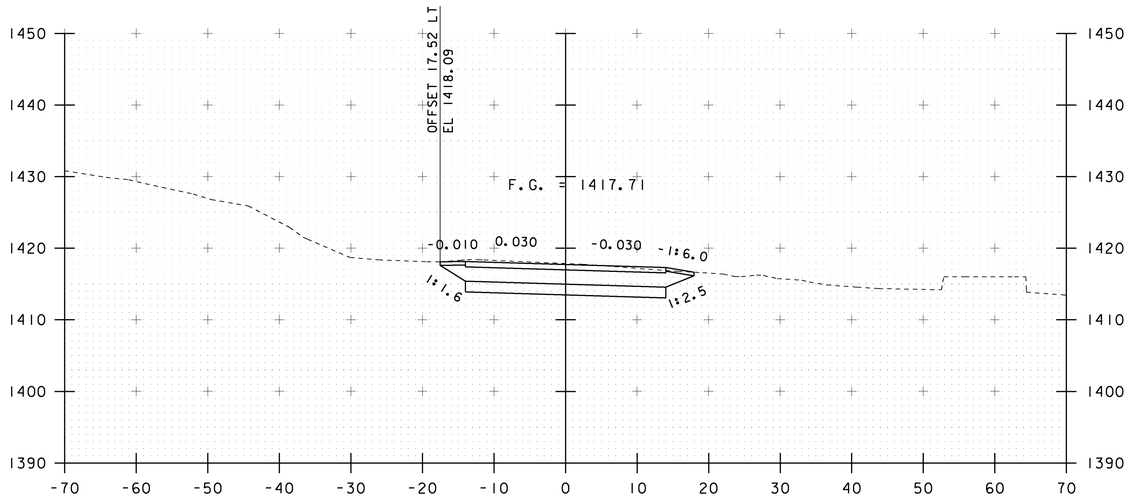
123+75



124+25



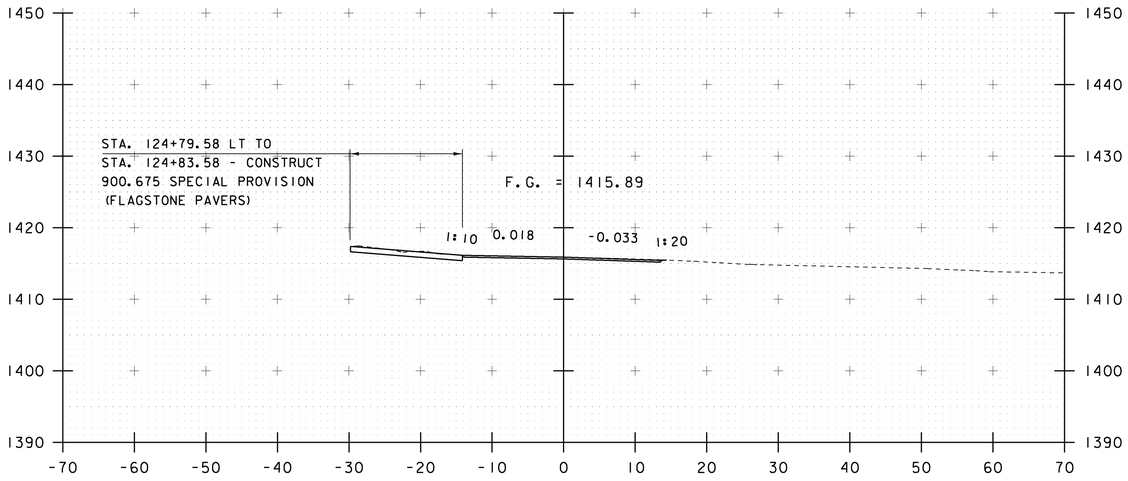
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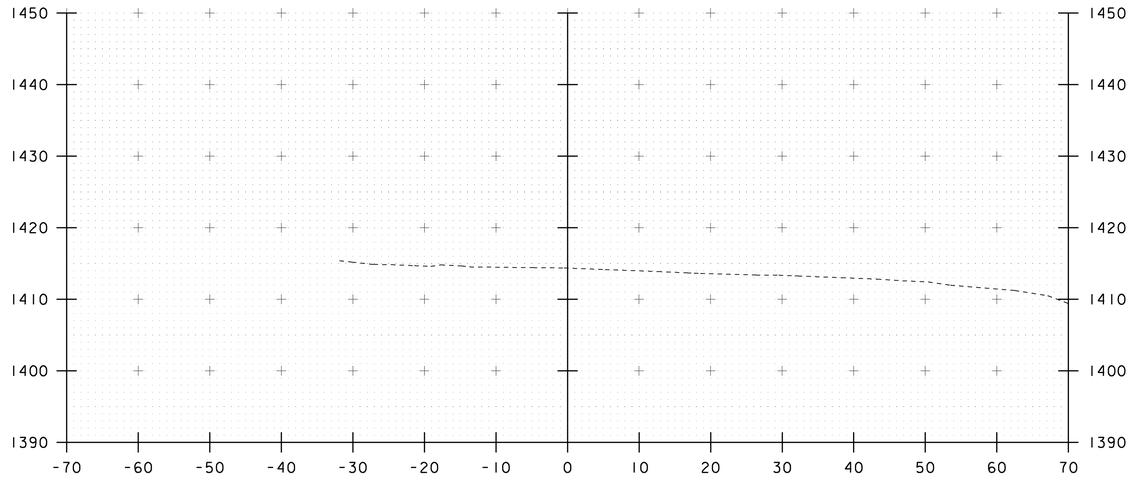
END PROJECT 124+00

STA. 123+50 TO STA. 124+25

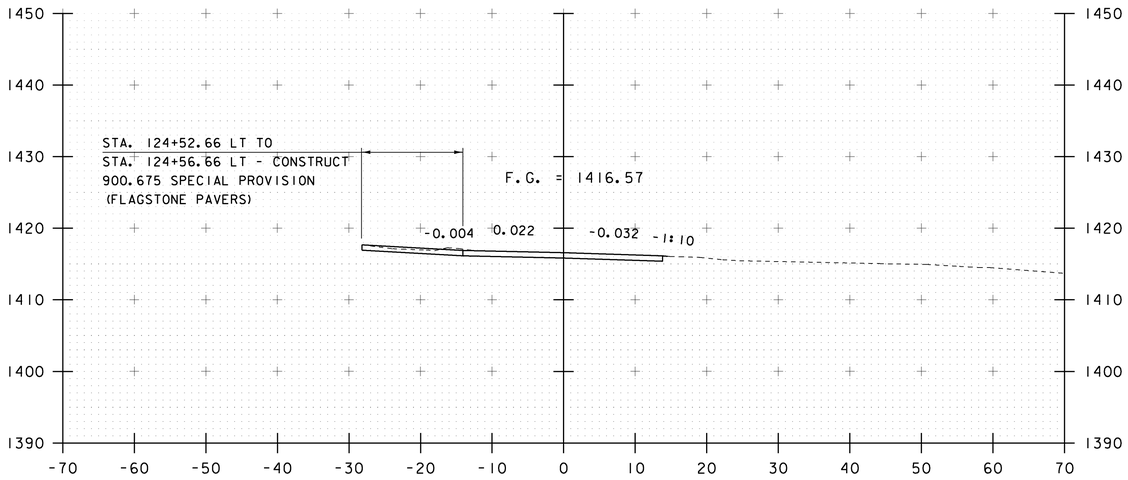
PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
VT 100 CROSS SECTIONS 5	SHEET 36 OF 51



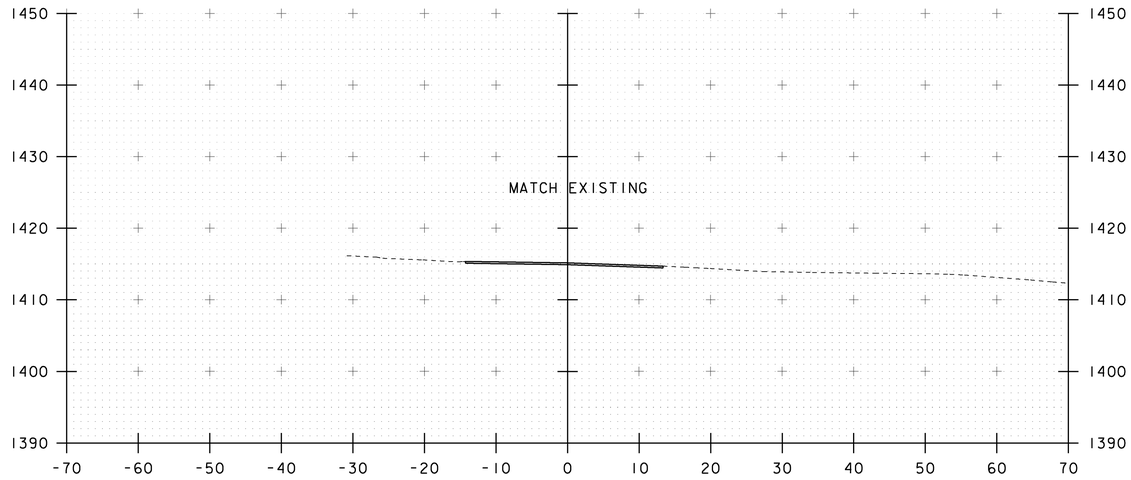
124+75



125+25



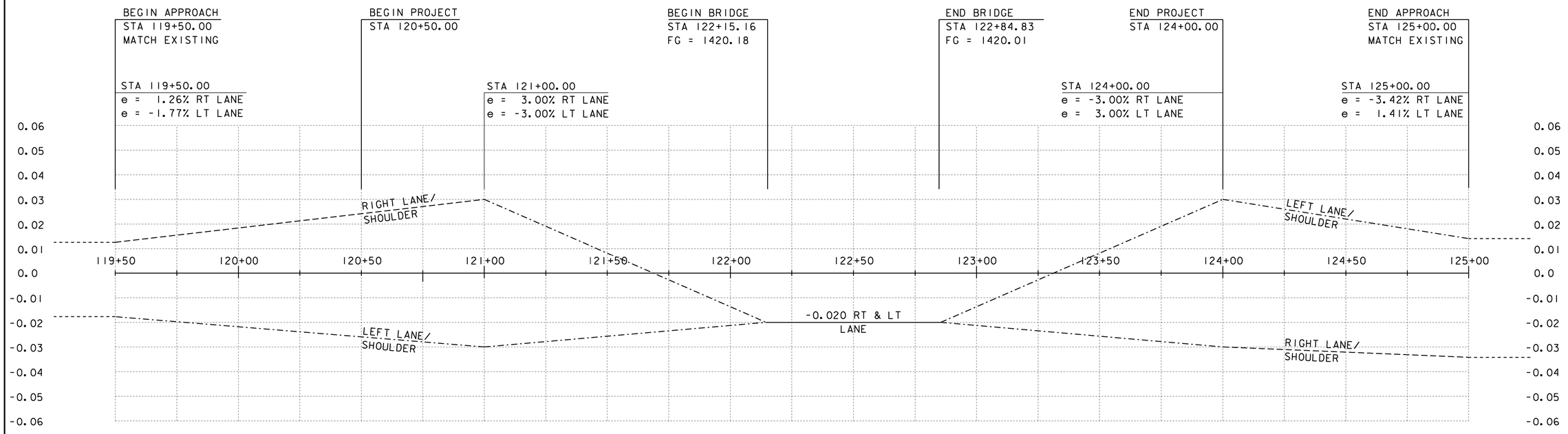
124+50



END APPROACH 125+00

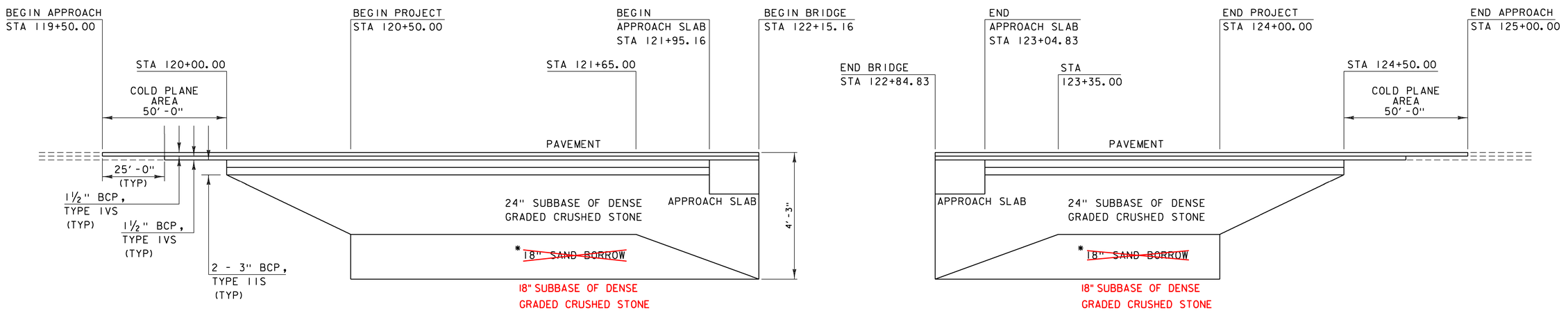
STA. 124+50 TO STA. 125+25

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
VT 100 CROSS SECTIONS 6	SHEET 37 OF 51



BANKING DIAGRAM

HORIZONTAL SCALE 1" = 20'-0"
NO VERTICAL SCALE

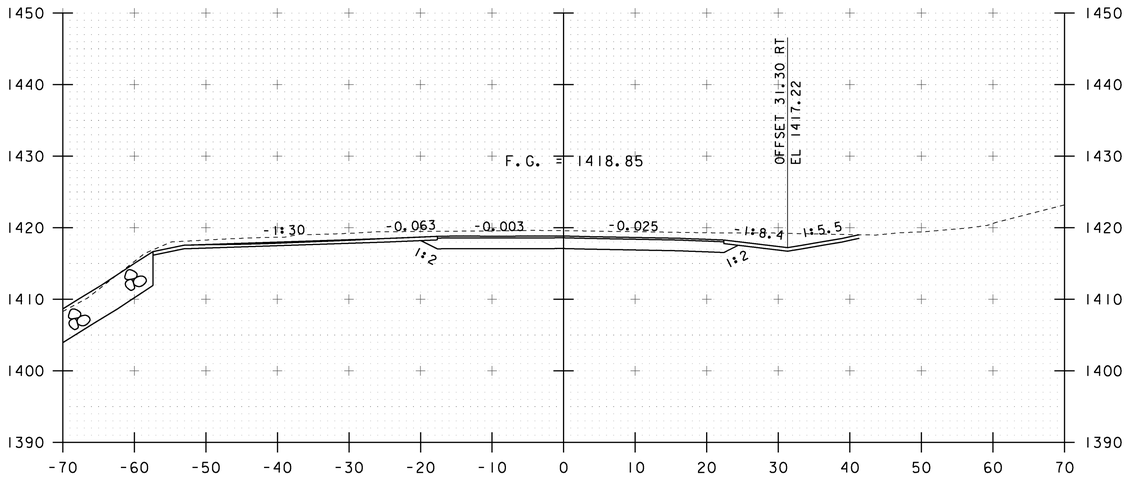


MATERIAL TRANSITION

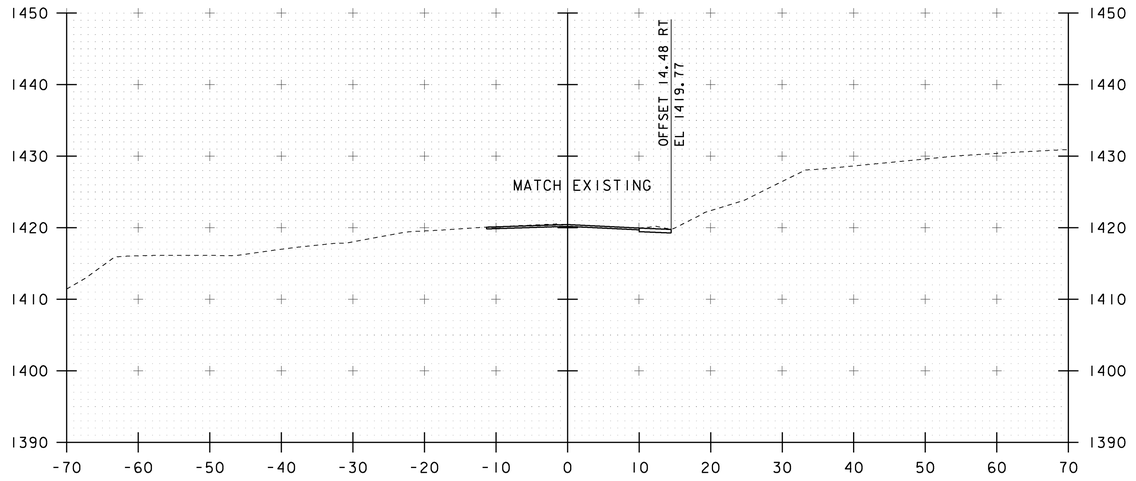
HORIZONTAL SCALE 1" = 20'-0"
NO VERTICAL SCALE

*SEE PROJECT NOTE 5 ON SHEET 5

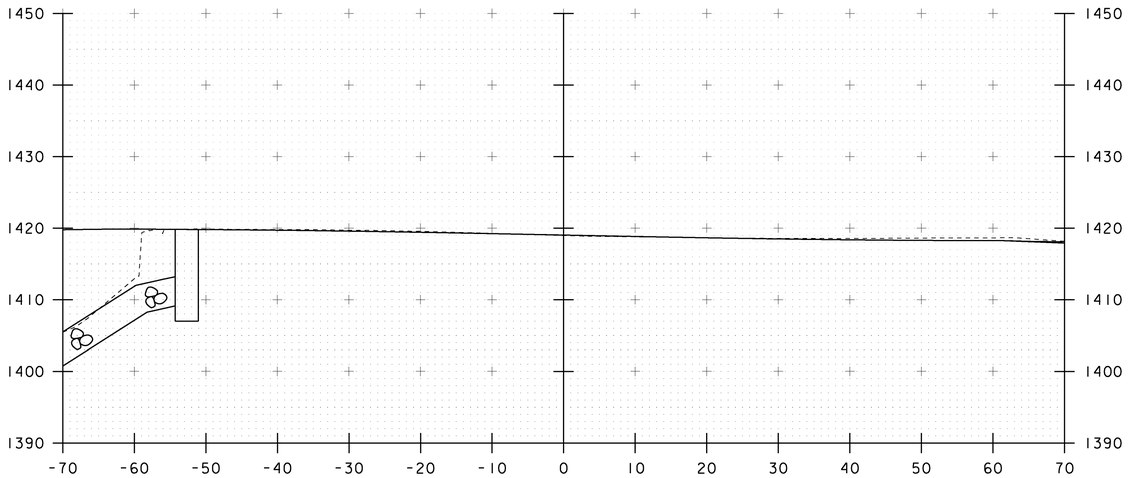
PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
BANKING / MATERIAL TRANSITION	SHEET 38 OF 51



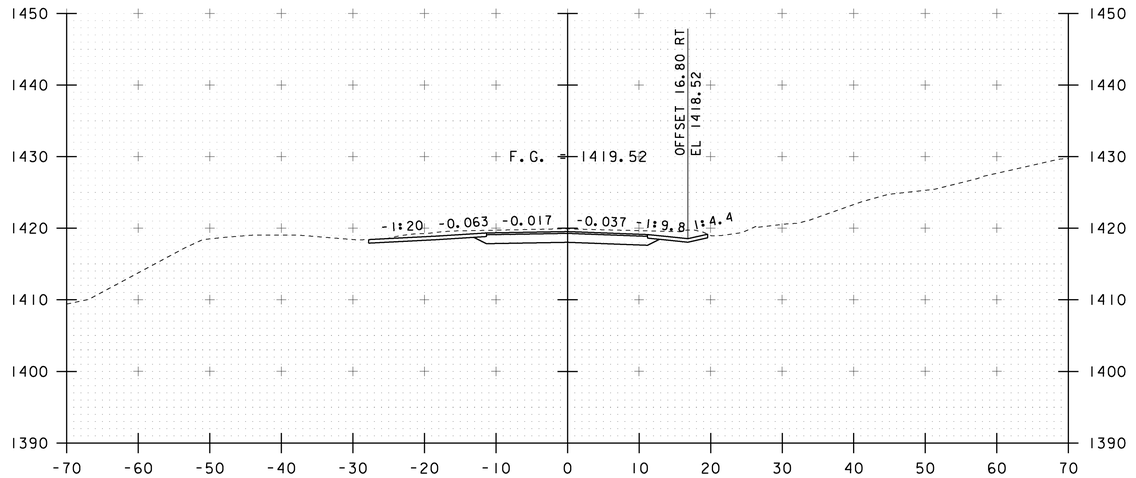
10+25



10+75



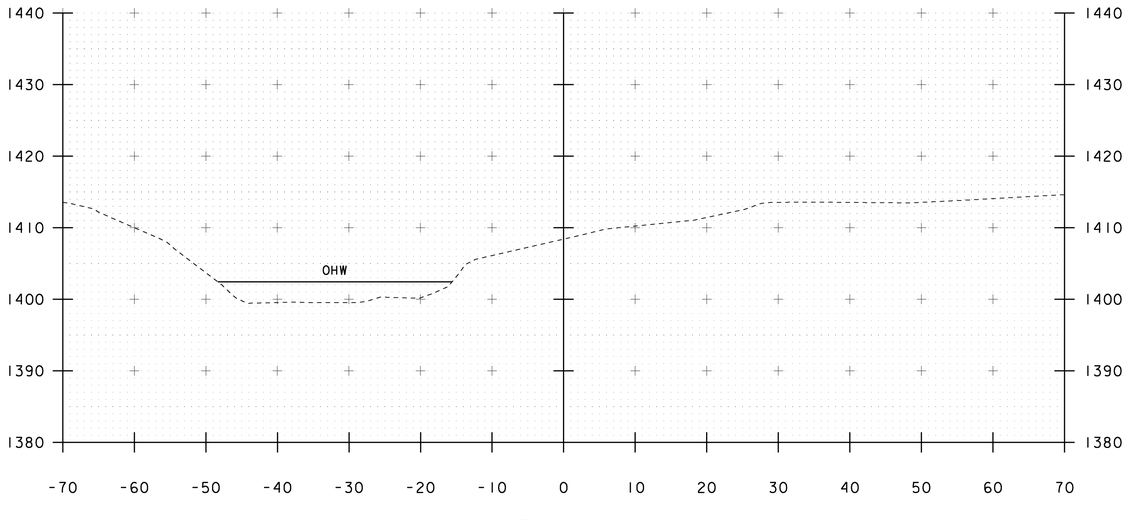
10+00



10+50

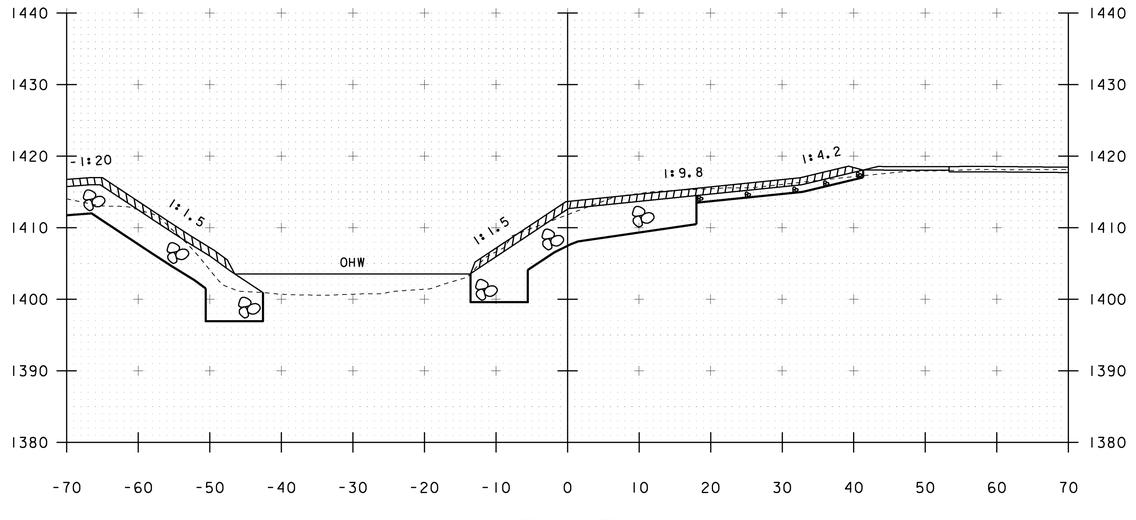
STA. 10+00 TO STA. 10+75

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
TOWN HIGHWAY 7 CROSS SECTIONS	SHEET 39 OF 51

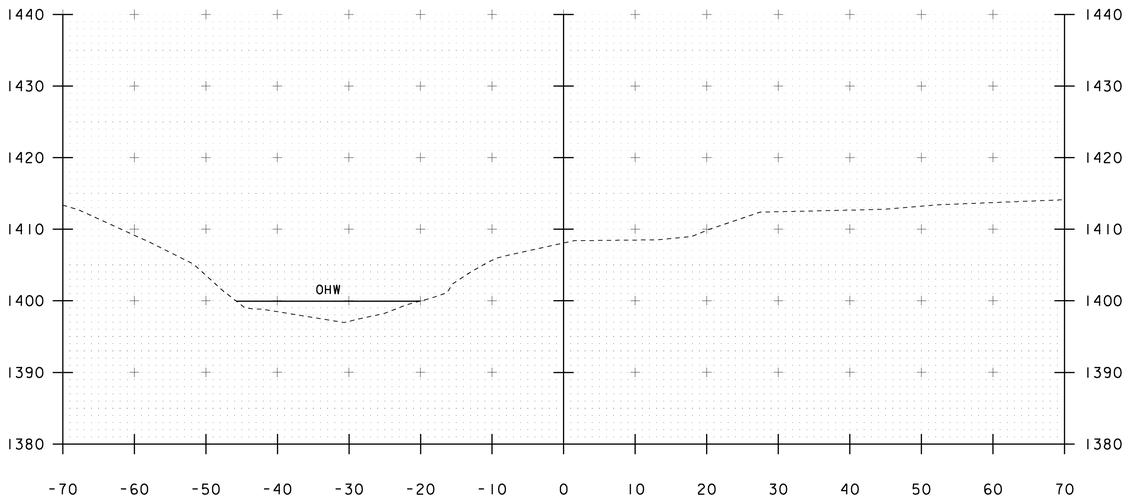


50+90

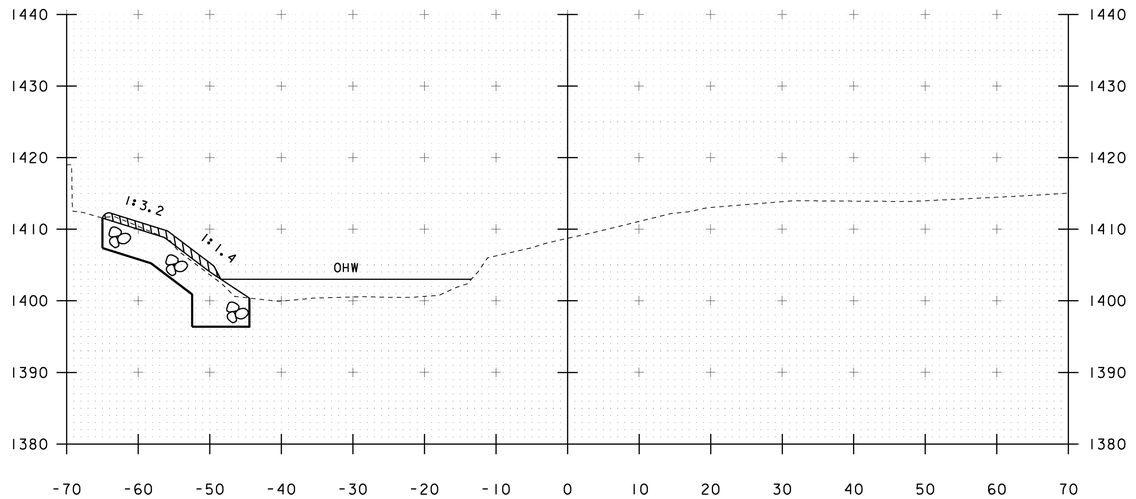
STA 51+11.24 RT
BEGIN UNCLASSIFIED CHANNEL EX,
GEOTEXTILE UNDER STONE FILL,
STONE FILL TYPE IV,
GRUBBING MATERIAL.



51+25



50+75



51+00

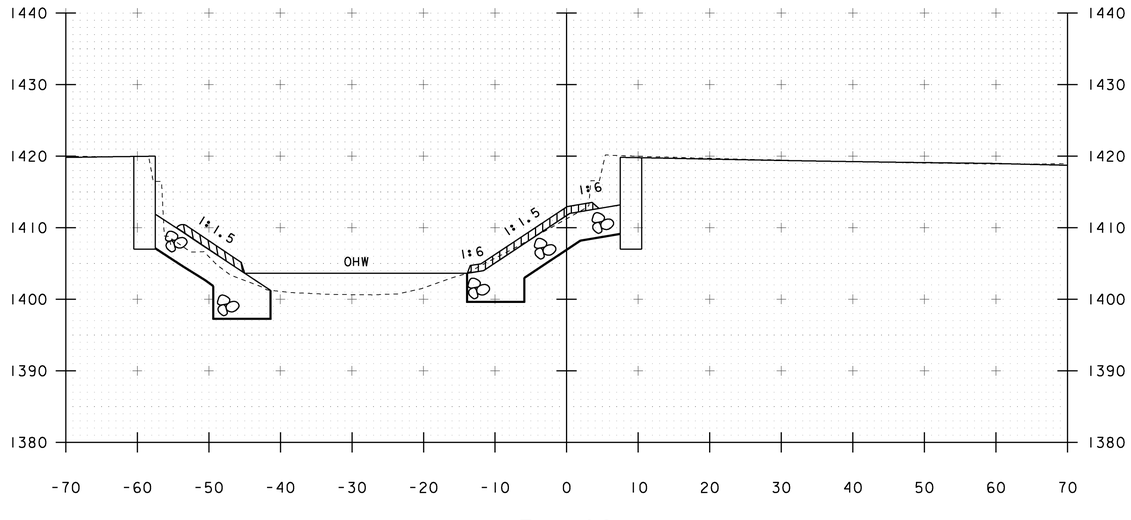
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STONE FILL TYPE IV,
GRUBBING MATERIAL.

STA. 50+75 TO STA. 51+25

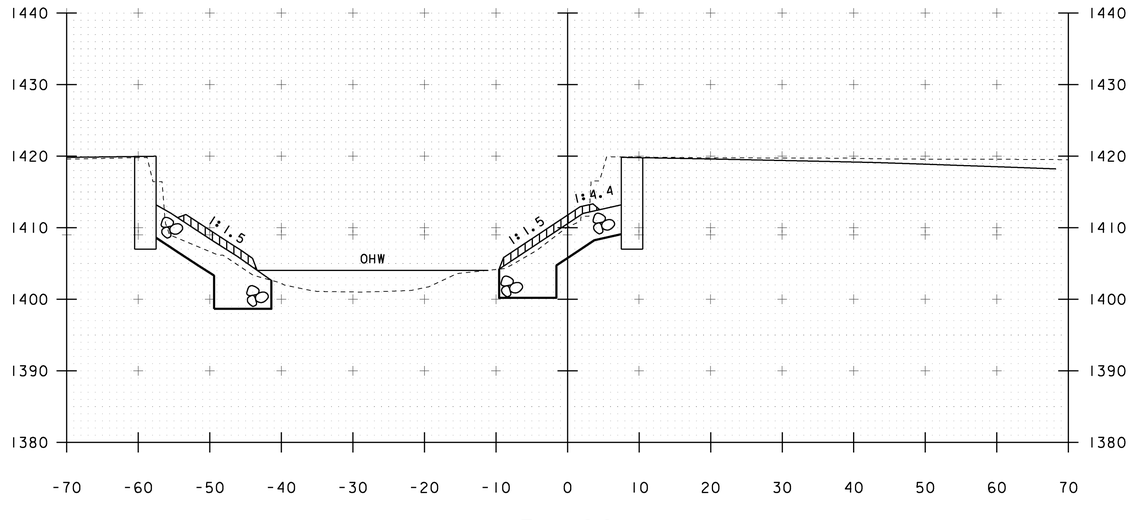
PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
CHANNEL CROSS SECTIONS 1

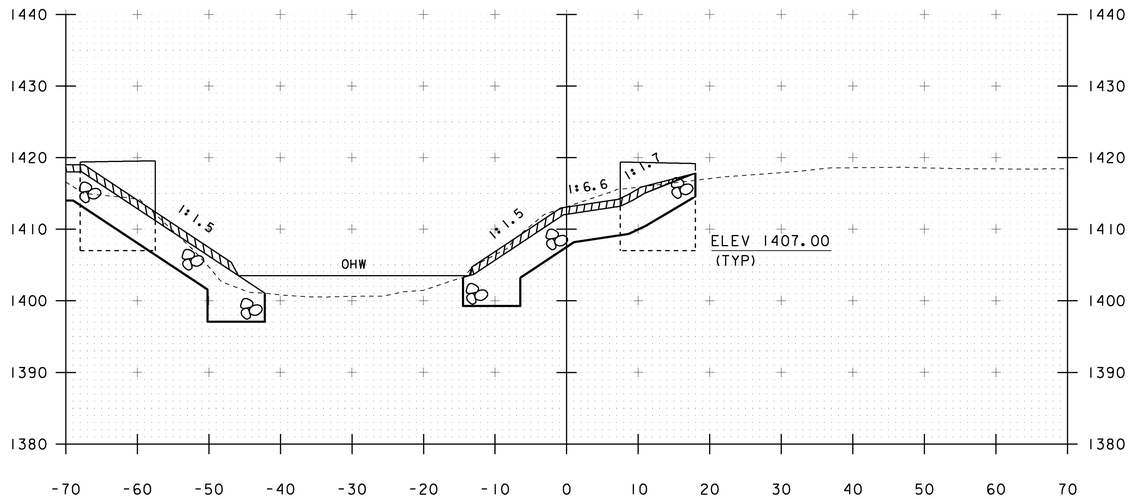
PLOT DATE: 15-JUL-2015
DRAWN BY: J. GRIFFIN
CHECKED BY: D. PETERSON
SHEET 40 OF 51



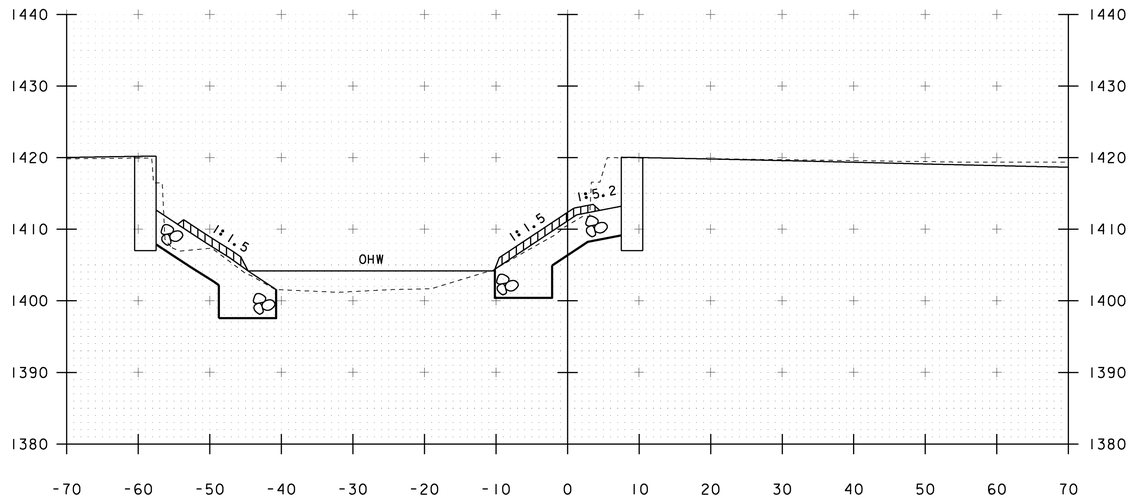
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51+60



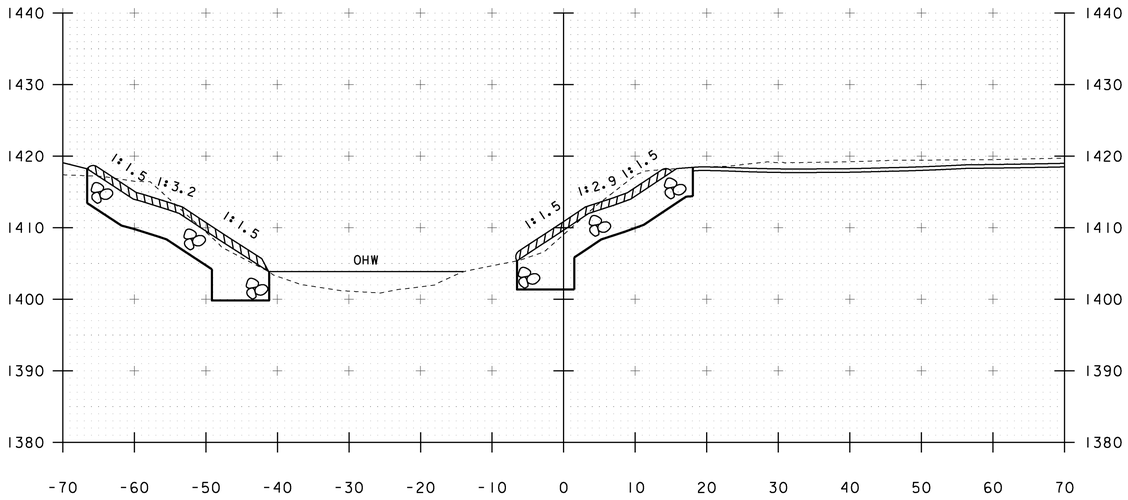
51+30



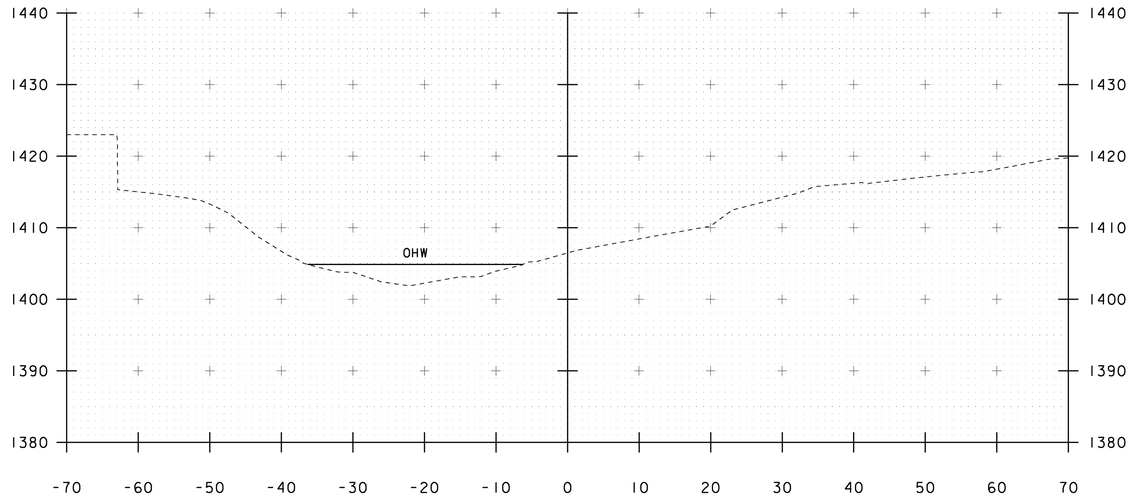
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STA. 51+30 TO STA. 51+60

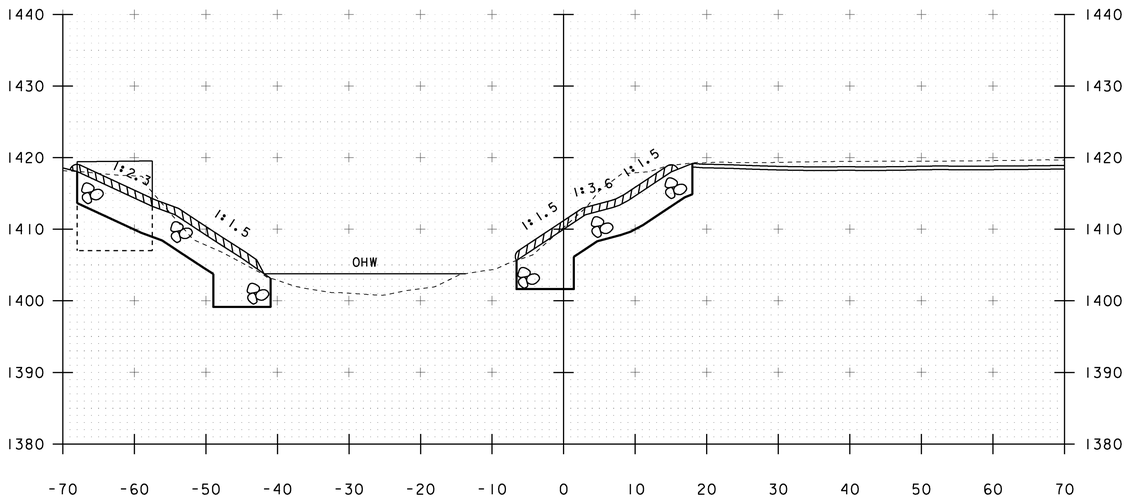
PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283xsl.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: D. PETERSON
CHANNEL CROSS SECTIONS 2	SHEET 41 OF 51



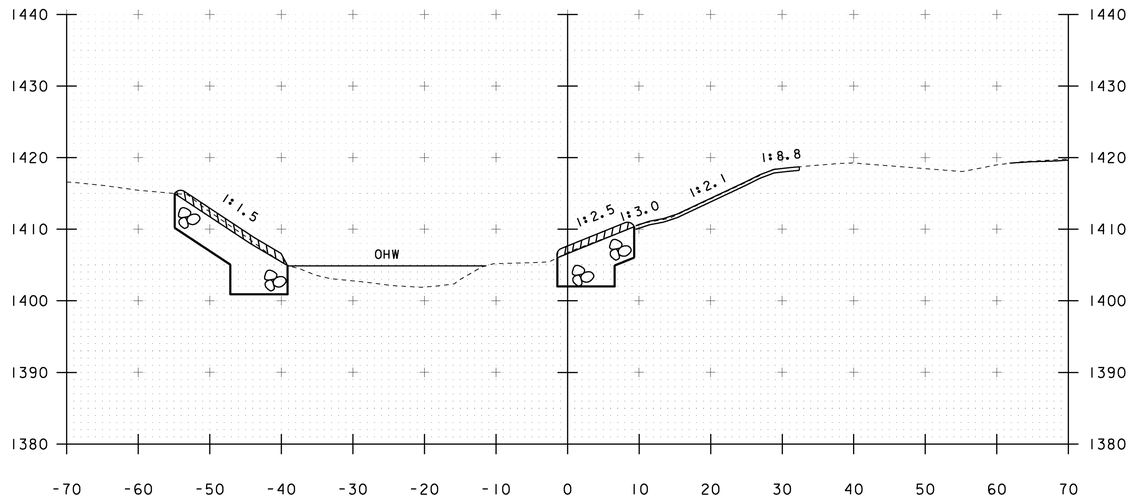
51+75



52+25



51+70



52+05

STA 52+05.00 LT-RT
END UNCLASSIFIED CHANNEL EX,
GEOTEXTILE UNDER STONE FILL,
STONE FILL TYPE IV,
GRUBBING MATERIAL,

STA. 51+70 TO STA. 52+25

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
CHANNEL CROSS SECTIONS 3

PLOT DATE: 15-JUL-2015
DRAWN BY: J. GRIFFIN
CHECKED BY: D. PETERSON
SHEET 42 OF 51

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE NO. 68 ON EXISTING ALIGNMENT ALONG WITH RELATED ROADWAY APPROACH AND CHANNEL WORK. BRIDGE NO. 68 WILL BE REPLACED WITH A ROLLED STEEL BEAM BRIDGE, SPANNING 69.66 FEET OVER WARDSBORO BROOK ON NEW SUBSTRUCTURE ALONG THE SAME ALIGNMENT. THE PROJECT IS LOCATED IN THE TOWN OF WARDSBORO ON VT ROUTE 100, AND BEGINS APPROXIMATELY 50 FEET SOUTH OF THE INTERSECTION OF VT 100 AND TH 6 AND EXTENDS NORTHERLY ALONG VT 100 FOR 350 FEET.

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

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.74 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON WITH THE CONTRACTOR HAVING THE OPTION TO INSTALL THE TEMPORARY BRIDGE DURING THE WINTER PRIOR TO THE CONSTRUCITON SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS A SADDLE THAT IS MOSTLY WELL ESTABLISHED FOREST WITH OCCASIONAL OPEN AREAS. VT ROUTE 100, CROSS ROAD (TH 46), SMEAD ROAD (TH 6), NEWELL HILL ROAD (TH 7), A PAVED DRIVEWAY AND A GRAVEL DRIVE ARE WITHIN THE PROJECT SITE. THERE IS A RESIDENCE ON THE SOUTH WEST SIDE, A BARN ON THE SOUTH EAST SIDE, A GARAGE ON THE NORTH EAST SIDE AND A HOUSE ON THE NORTH WEST SIDE OF THE PROJECT.

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

THE WARDSBORO BROOK AND THE DOVER BROOK FEEDING INTO IT ARE THE WATER SOURCES ON THE PROJECT SITE. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. 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 WINDHAM, VERMONT. SOILS ON THE PROJECT SITE ARE COLTON LOAMY FINE SAND WITH 8% TO 15% SLOPES, “K FACTOR” = 0.17. THE SOIL IS CONSIDERED SLIGHTLY ERODIBLE DUE TO THE SLOPES.

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: YES, IN STREAM
HISTORICAL OR ARCHEOLOGICAL AREAS: YES ADJACENT TO THE FILL SLOPES
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: WARDSBORO BROOK & DOVER BROOK
WETLANDS: NO

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 OR 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.

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, WOVEN WIRE REINFORCED IS NOT USED ON THIS PROJECT.

FILTER CURTAIN SHALL BE INSTALLED AS SHOWN IN THE PLANS.

1.4.5 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS. STONE CHECK DAMS AND INLET PROTECTION DEVICES WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.6 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

DISTURBED AREAS AND SOIL STOCKPILES THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY STABILIZED WITH SEED AND MULCH/RECP WITHIN 48 HOURS.

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

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

1.4.7 WINTER STABILIZATION

IF 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. PROJECT IS ANTICIPATED TO REQUIRE WINTER STABILIZATION MEASURES.

1.4.8 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.

1.4.9 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS. DEWATERING IS NOT ANTICIPATED ON THIS PROJECT.

1.4.10 INSPECT YOUR SITE

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

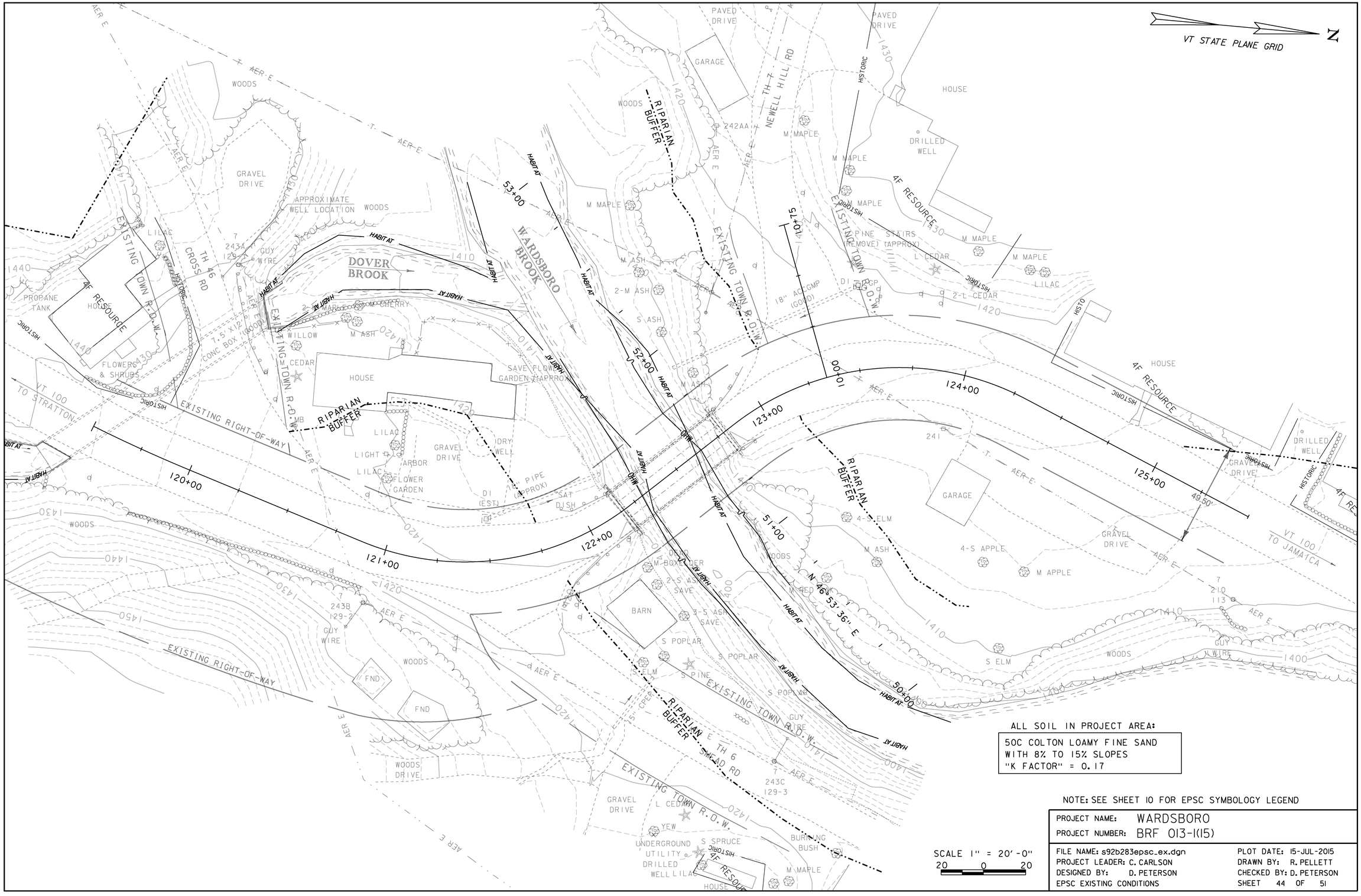
1.5 SEQUENCE AND STAGING

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

1.5.2 OFF-SITE ACTIVITIES

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

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283epsc_nar.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
EPSC NARRATIVE	SHEET 43 OF 51



ALL SOIL IN PROJECT AREA:

50C COLTON LOAMY FINE SAND
WITH 8% TO 15% SLOPES
"K FACTOR" = 0.17

NOTE: SEE SHEET 10 FOR EPSC SYMBOLOGY LEGEND

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

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283epsc_ex.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
EPSC EXISTING CONDITIONS	SHEET 44 OF 51

N

VT STATE PLANE GRID

LEGEND

STABILIZED CONSTRUCTION ENTRANCE

PIPE INLET PROTECTION

NOTES:
REFER TO CROSS SECTIONS FOR FINAL GROUND CONTOURS

SEE SHEET 10 FOR EPSC SYMBOLOGY LEGEND

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

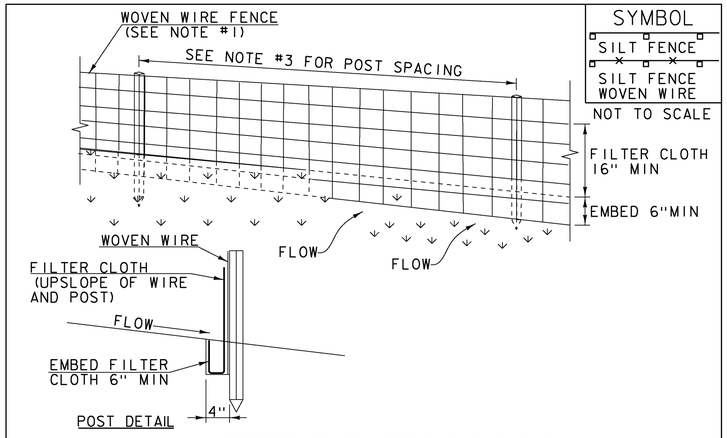
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PROJECT NUMBER: BRF 013-1(15)	
FILE NAME: s92b283epsc_dur.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
EPSC CONSTRUCTION CONDITIONS	SHEET 45 OF 51

NOTES:
REFER TO CROSS SECTIONS FOR FINAL GROUND CONTOURS

SEE SHEET 10 FOR EPSC SYMBOLOGY LEGEND

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BRF 013-1(15)
FILE NAME: s92b283epsc_fin.dgn	PLOT DATE: 15-JUL-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
EPSC FINAL CONDITIONS	SHEET 46 OF 51

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



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

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, MIRAFI100X, 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.

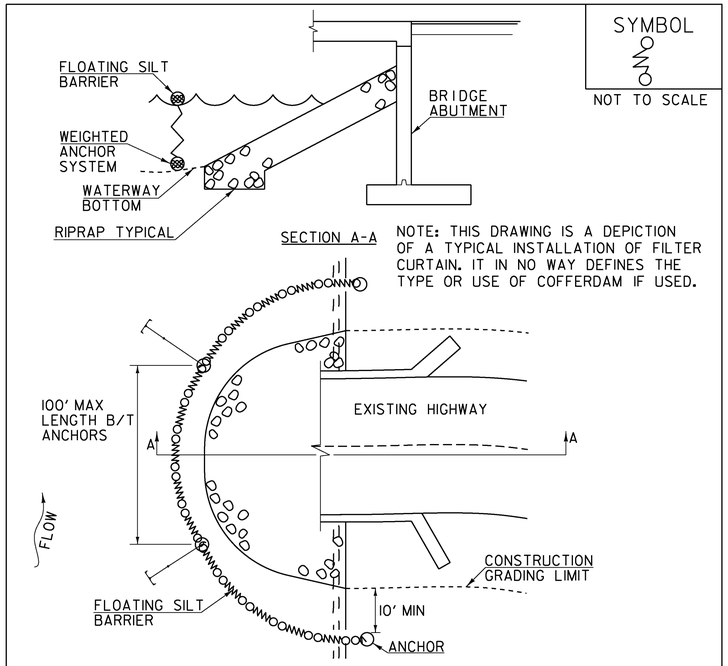
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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



SYMBOL

NOT TO SCALE

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.

CONSTRUCTION SPECIFICATIONS

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

FILTER CURTAIN

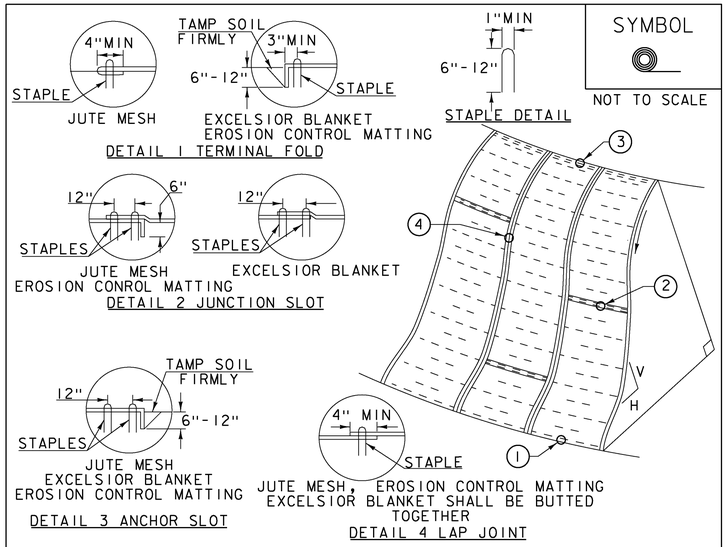
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

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

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283epsc_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC DETAILS 1

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 47 OF 51



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

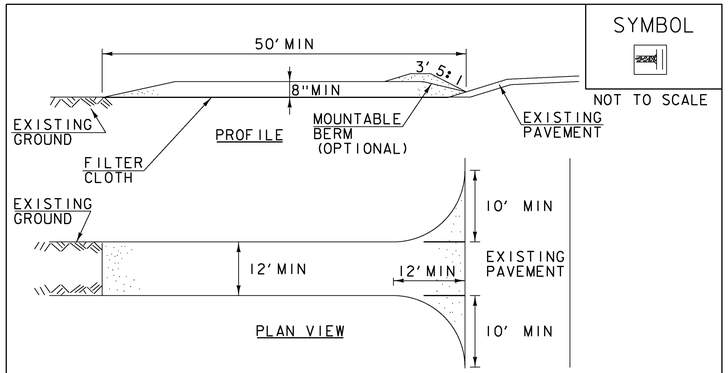
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER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

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

REVISIONS		
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

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

VAOT LOW GROW/FINE FESCUE MIX

LBS/AC						
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
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

LBS/AC						
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
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

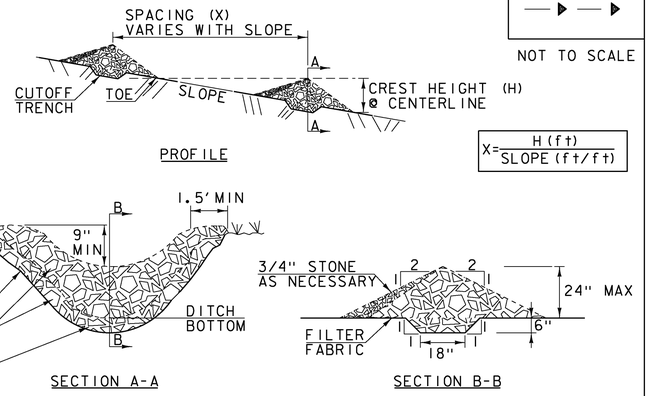
PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283epsc_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC DETAILS 2

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 48 OF 51

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

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

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

CHECK DAM

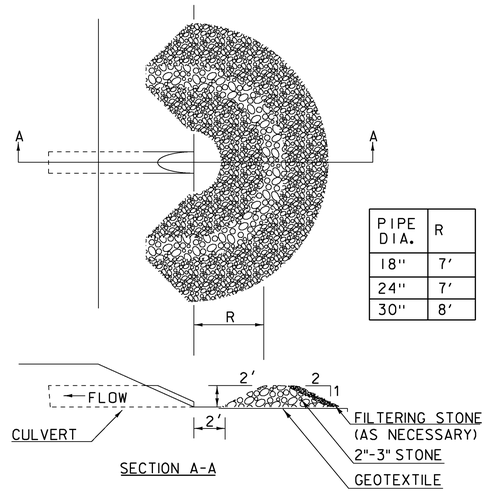
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

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

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

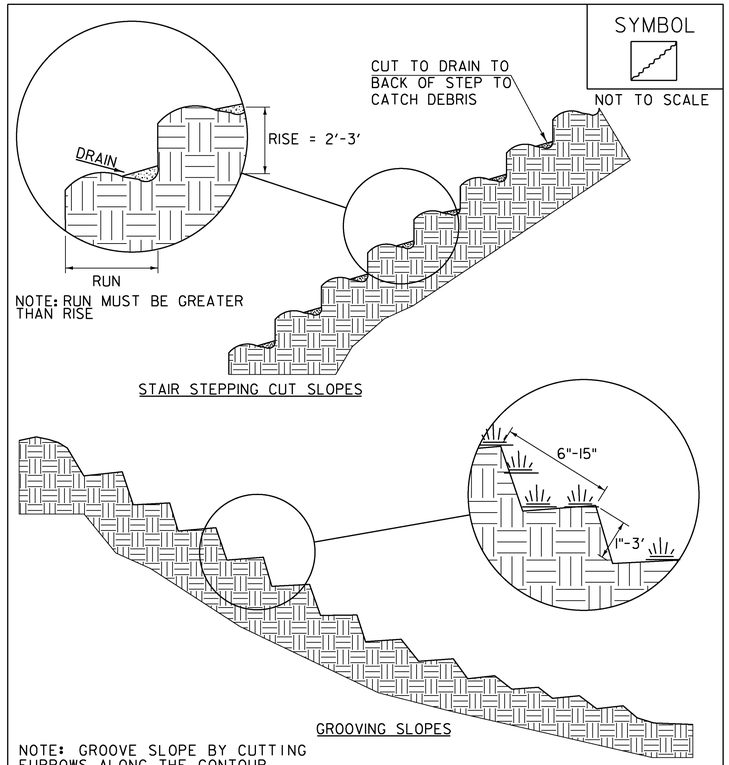
PIPE INLET PROTECTION

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

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

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

SURFACE ROUGHENING

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

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: s92b283epsc_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC DETAILS 3

PLOT DATE: 15-JUL-2015
DRAWN BY: R. PELLETT
CHECKED BY: D. PETERSON
SHEET 49 OF 51

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	COBURN, FRANCIS & CHERYL	1	VT 100 120+35 LT	VT 100 120+97 LT			CONSTRUCTION	(T)	259 SF						INCLUDES PDF
			VT 100 120+36 LT	VT 100 122+08 LT			SLOPE	(T)	1,600 SF						
			VT 100 120+47 LT	VT 100 122+25 LT			CULVERT & DRAINAGE	(P)							INCL. TWO DROP INLETS & 18" PIPE
			VT 100 120+84 LT	VT 100 120+92 LT			REMOVE	(T)							ARBOR
			VT 100 120+85 LT	VT 100 120+91 LT			REMOVE	(T)							FLOWER GARDEN
			VT 100 120+91 LT	VT 100 122+55 LT			DETOUR	(T)	3,600 SF						
			VT 100 120+99 LT	VT 100 121+62.66 LT			DRIVE	(T)							55.77' PAVED DRIVE; MM 2.29
			VT 100 121+05 LT	VT 100 122+05 LT			ACCESS	(T)							
			VT 100 121+73 LT	VT 100 121+98 LT			REMOVE	(T)							18" PIPE
			VT 100 121+93 LT				REMOVE & RESET	(T)							SATELLITE DISH
			VT 100 122+05 LT	VT 100 122+34 LT			CHANNEL	(P)	664 SF						INCLUDES STONE FILL
			VT 100 119+80 LT												W-1 MONITOR WELL
2	MEHNER, ROBERT E. & JAYNE E.	1	VT 100 121+83 RT	VT 100 122+08 RT			CONSTRUCTION	(T)	198 SF						INCLUDES PDF & EC
			VT 100 122+03 RT	VT 100 122+32 RT			CHANNEL	(P)	702 SF						INCLUDES STONE FILL
			VT 100 122+10 RT	VT 100 122+36 RT			CONSTRUCTION	(T)	436 SF						INCLUDES PDF & EC
			VT 100 121+90 RT												W-2 MONITOR WELL
3	DYKES, GREGORY A. &	1	VT 100 122+50 LT	VT 100 123+18 LT			DETOUR	(T)	3,119 SF						INCLUDES PDF & EC
	AUGELLO, PETRINA A.		VT 100 122+68 LT	VT 100 122+92 LT			CHANNEL	(T)	635 SF						INCLUDES STONE FILL
			VT 100 122+76 LT	VT 100 123+15 LT			CULVERT & DRAINAGE	(P)							18" PIPE
			VT100 122+78 LT	VT100 123+16 LT			REMOVE	(T)							18" CULVERT
			VT 100 122+84 LT	VT 100 123+16 LT			SLOPE	(T)	1,011 SF						
			VT 100 123+12 LT	VT 100 123+15 LT			INSTALL & MAINTAIN	(P)	5 SF						GUARDRAIL
			VT 100 123+50 LT	VT 100 124+02 LT			CONSTRUCTION	(T)	513 SF						INCLUDES PDF
			VT 100 123+53 LT	VT 100 123+61 LT			INSTALL	(T)							INLET PROTECTION
			VT 100 123+53 LT	VT 100 123+75 LT			CULV,DITCH & DRAIN.	(P)	305 SF						18" PIPE & DROP INLET
			VT 100 123+54 LT	VT 100 123+56 LT			REMOVE	(T)							DROP INLET
			VT 100 123+56 LT	VT 100 123+74 LT			DETOUR	(T)	71 SF						
			VT 100 123+80 LT												W-3 MONITOR WELL
4	SANDRA L. MANZKE REVOCABLE TRUST	1	VT 100 122+59 RT	VT 100 124+11 RT			CONSTRUCTION	(T)	1,398 SF						INCLUDES PDF & EC
	SANDRA L. MANZKE PLATT - TRUSTEE		VT 100 122+61 RT	VT 100 122+96 RT			CHANNEL	(P)	337 SF						INCLUDES STONE FILL
			VT 100 122+95 RT	VT 100 123+42 RT			SLOPE	(P)	116 SF						INCLUDES STONE FILL
			VT 100 125+55 LT												W-4 MONITOR WELL
5A	TOWN OF WARDSBORO	1	VT 100 119+83 LT	VT 100 120+41 LT			APPROACH	(T)		QCD	06/29/15	WARDSBORO	96	458-460	TH 46
5B			VT 100 121+40 RT	VT 100 121+82 RT			APPROACH	(T)							TH 6
			VT 100 121+46 RT	VT 100 121+82 RT			DITCH	(T)							
			VT 100 121+76 RT	VT 100 121+83 RT			INSTALL	(T)							INLET PROTECTION
			VT 100 121+76 RT	VT 100 121+86 RT			CONSTRUCTION	(T)	106 SF						INCLUDES PDF & EC
			VT 100 121+76 RT	VT 100 121+79 RT			REMOVE	(T)							GUARDRAIL
5C			VT 100 123+15 LT	VT 100 123+57 LT			APPROACH	(T)							TH 7
			VT 100 123+15 LT	VT 100 123+22 LT			INSTALL & MAINTAIN	(P)	24 SF						GUARDRAIL
			VT 100 123+15 LT	VT 100 123+19 LT			CULVERT	(P)							18" CULVERT
			VT 100 123+16 LT	VT 100 123+54 LT			REMOVE	(T)							18" CULVERT
			VT 100 123+52 LT	VT 100 123+55 LT			INSTALL	(T)							INLET PROTECTION
			VT 100 123+54 LT	VT 100 123+57 LT			CULVERT	(P)							18" CULVERT
6	TELEPHONE OPERATING COMPANY		VT 100 119+83 LT	VT 100 124+11 LT											UTILITY
	OF VERMONT, LLC														
7	GREEN MOUNTAIN POWER		VT 100 119+83 LT	VT 100 124+11 LT											UTILITY
	CORPORATION														

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	4	PARCEL NO. 4 - MANZKE. CHANGE CONSTRUCTION AREA TO	04/13/15
		1,398 SF. ADJUSTED TEMPORARY RIGHT LINE TO RUN ALONG	
		PDF LINE. ADDED NOTE OF NEW STONE WALKWAY.	
		PER C.O. 9988	
		MADE BY: JB APPROVED BY: RC	
2	3, 4	PARCEL 1, COBURN - ADD W-1 MONITOR WELL AT	05/13/15
		STA. VT 100 119+80 LT.	
		REV. BY: MT C.O. 9998 APPR. BY: RC	
3	3, 4	PARCEL 2, MEHNER - ADD W-2 MONITOR WELL AT	05/13/15
		STA. VT 100 121+90 RT.	
		REV. BY: MT C.O. 9999 APPR. BY: RC	
4	3, 4	PARCEL 3, DYKES & AUGELLO - CORRECT NAME FROM	05/13/15
		PATRINA TO PETRINA; ADD W-3 MONITOR WELL AT	
		STA. VT 100 123+80 LT.	
		REV. BY: MT C.O. 10000 APPR. BY: RC	
5	3, 4	PARCEL 4, MANZKE - ADD W-4 MONITOR WELL AT	05/13/15
		STA. VT 100 125+55 LT.	
		REV. BY: MT C.O. 10001 APPR. BY: RC	
6	3, 4	PARCEL 5, TOWN OF WARDSBORO - ADD DITCH(T) TEXT	05/13/15
		TO LAYOUT SHEET.	
		REV. BY: MT C.O. 10002 APPR. BY: RC	

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

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

R & R - REMOVE & RESET
I & M - INSTALL & MAINTAIN

APPROVED: RYAN CLOUTIER DATE: 5-14-14
CHIEF, PLANS & TITLES

PROJECT NAME: **WARDSBORO**
PROJECT NUMBER: **BRF 013-1 (15)**

FILE NAME: **r92b283detail.xls**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **J. BLANCHARD**
R.O.W. DETAIL SHEET

PLOT DATE: 15-JUL-2015
DRAWN BY: **M. RYAN**
CHECKED BY: **R. CLOUTIER**
SHEET 50 OF 51

VT 100 CURVE (1)
DELTA = 3°56'46"
D = 8°
R = 716.20'
T = 24.67'
L = 49.33'
E = 0.42'

VT 100 CURVE (2)
DELTA = 60°25'40" LT
D = 45°
R = 127.32'
T = 74.15'
L = 134.28'
E = 20.02'
BANKING = MAX 3%

VT 100 CURVE (3)
DELTA = 65°46'42" RT
D = 45°
R = 127.32'
T = 82.34'
L = 146.17'
E = 24.30'
BANKING = MAX 3%

BEGIN R.O.W PROJECT
BRF 013-1(15)
STA. 119+83, 24.75' LT

CONSTRUCT PAVED DRIVE
STA 121+00.00 - STA 121+62.66 LT - 55.77 FT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 121+76.44 - STA 122+16.34 RT
STA 121+90.46 - STA 122+15.75 LT
STA 122+80.30 - STA 123+01.85 LT
STA 122+80.55 - STA 122+93.72 RT

CONSTRUCT PAVED TH APPROACH
STA 119+67.06 - STA 120+67.26 LT
STA 121+04.13 - STA 121+94.75 RT
STA 122+92.51 - STA 123+85.06 LT

VT STATE PLANE GRID

N/F RICE

N/F LEHN

5A TOWN OF WARDSBORO

1 COBURN, FRANCIS & CHERYL

3 DYKES, GREGORY A. & AUGELLO, PETRINA A.

STA 10+75.00 END TH 7 CONSTRUCTION MATCH EXISTING

5C TOWN OF WARDSBORO

3 DYKES, GREGORY A. & AUGELLO, PETRINA A.

END PROJECT
STA 124+00.00

N/F PLATT, SANDRA L., MANZKE TRUSTEE

900.675 SPECIAL PROVISION (FLAGSTONE PAVERS)

900.675 SPECIAL PROVISION (FLAGSTONE PAVERS)

END APPROACH
STA 125+00.00

N/F BAHNY

4 SANDRA L. MANZKE REVOCABLE TRUST
SANDRA L. MANZKE PLATT - TRUSTEE

END BRIDGE
STA 122+84.83

END R.O.W. PROJECT
BRF 013-1(15)
STA. 124+11, 26.53' RT

BEGIN APPROACH
STA 119+50.00

BEGIN PROJECT
STA 120+50.00

STATE OF VERMONT

5B TOWN OF WARDSBORO

2 MEHNER, ROBERT E. & JAYNE E.

N/F PLATT, SANDRA L.

BEGIN BRIDGE
STA 122+15.16

N/F MEHNER, ROBERT E. & JAYNE E.

PROJECT:
WARDSBORO ROS 0117(8)
DATED: 9/5/1975

GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)
STA 121+76.63 - STA 122+12.41 LT
STA 121+86.06 - STA 122+14.37 RT
STA 122+86.31 - STA 123+13.45 LT
STA 122+86.73 - STA 123+22.52 RT

BOX BEAM GUARDRAIL (PAINTED BLACK)
STA 121+71.85 - STA 121+76.63 LT
STA 121+83.00 - STA 121+86.06 RT
STA 123+13.45 - STA 123+15.48 LT
STA 123+22.52 - STA 123+27.36 RT

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (PAINTED BLACK)
STA 122+12.41 - STA 122+86.31 LT
STA 122+14.37 - STA 122+86.73 RT

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

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

FOR R.O.W. USE ONLY

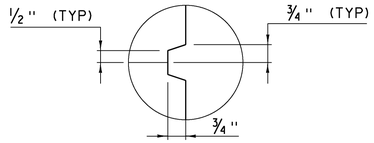
PROJECT NAME: WARDSBORO
PROJECT NUMBER: BRF 013-1(15)

FILE NAME: r92b283 lay 1.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: R. PELLETT
R.O.W. LAYOUT SHEET 1 OF 1

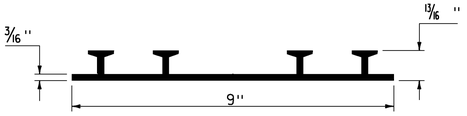
PLOT DATE: 15-JUL-2015
DRAWN BY: J. BLANCHARD
CHECKED BY: R. CLOUTIER
SHEET 51 OF 51

CONCRETE GENERAL NOTES

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"
2. REINFORCING STEEL SIZE AND SPACING SHOWN IN THE PLANS IS BASED ON 60 KSI STEEL, UNLESS NOTED OTHERWISE. WITH THE ENGINEER'S PERMISSION, BAR SIZE AND SPACING MAY BE MODIFIED ACCORDING TO THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATION AND STRUCTURES DESIGN MANUAL WHEN USING HIGHER STRENGTH STEEL.



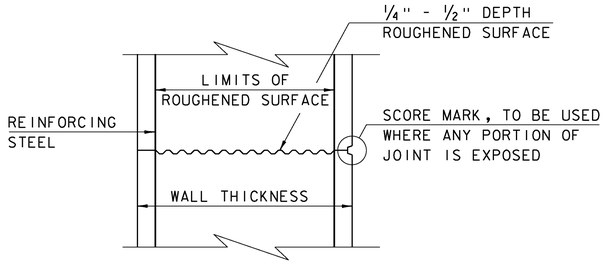
SCORE MARK DETAIL
(NOT TO SCALE)



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

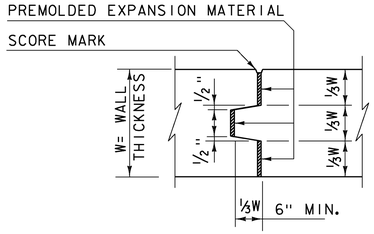
PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

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

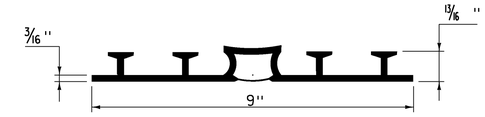


TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

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



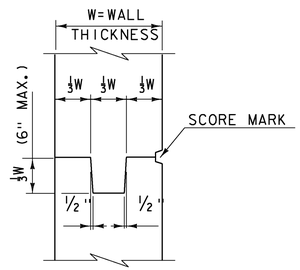
TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



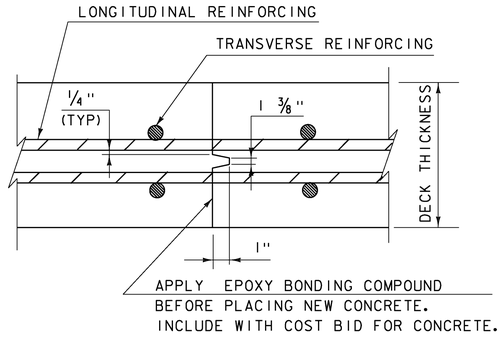
P.V.C. WATERSTOP FOR EXPANSION JOINTS
(NOT TO SCALE)

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

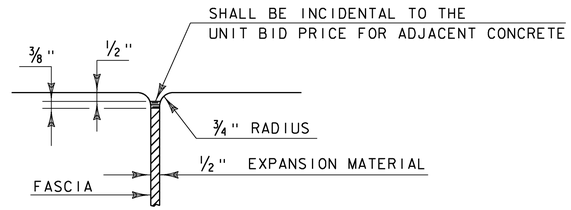
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



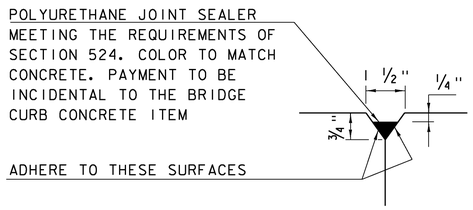
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
FEBRUARY 9, 2012	REBAR SUBSTITUTION ALLOWANCE ADDED TO CONCRETE GENERAL NOTES.

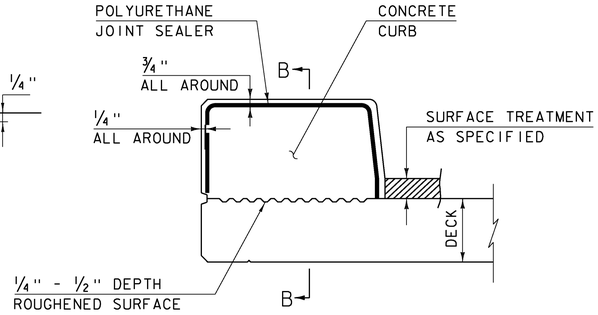
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

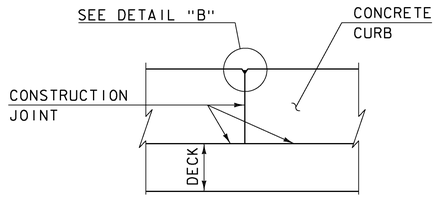
STRUCTURES DETAIL
SD-501.00



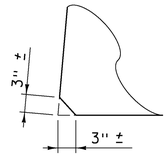
DETAIL "B"
(NOT TO SCALE)



CONCRETE CURB JOINT SECTION
(NOT TO SCALE)



SECTION B - B
(NOT TO SCALE)



ACUTE ANGLE CLIP DETAIL
(NOT TO SCALE)

1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION

CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.

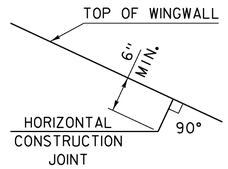
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.

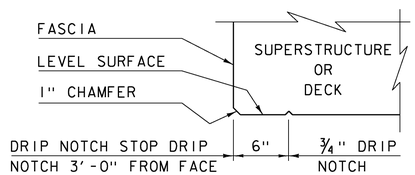
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.

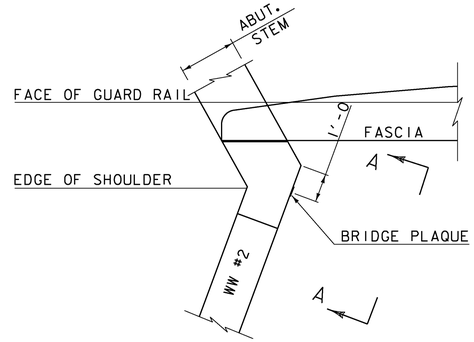
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



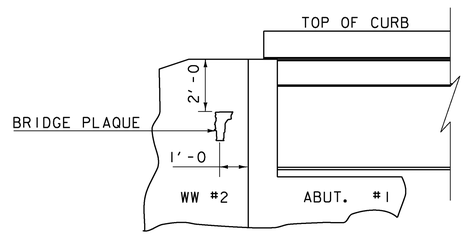
HORIZONTAL WINGWALL CONSTRUCTION JOINT
(NOT TO SCALE)



DRIP NOTCH DETAIL
(NOT TO SCALE)



PLAN



VIEW "A - A"

BRIDGE PLAQUE
(NOT TO SCALE)

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

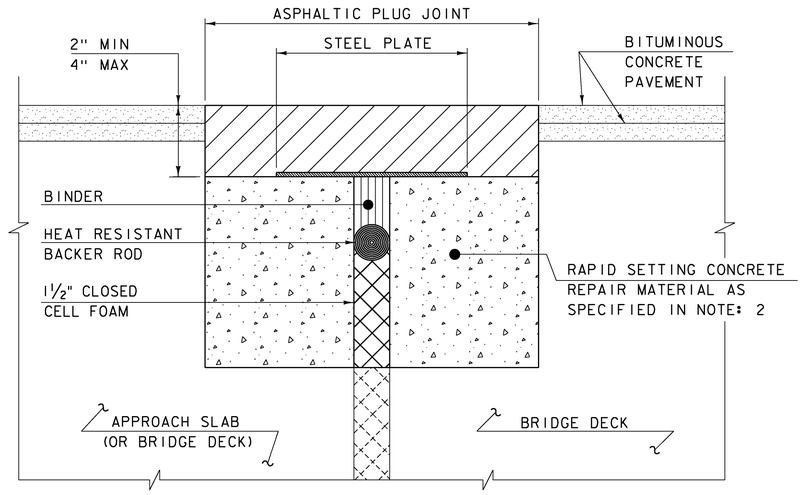
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

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

CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-502.00



ASPHALTIC PLUG JOINT DETAIL - REHAB

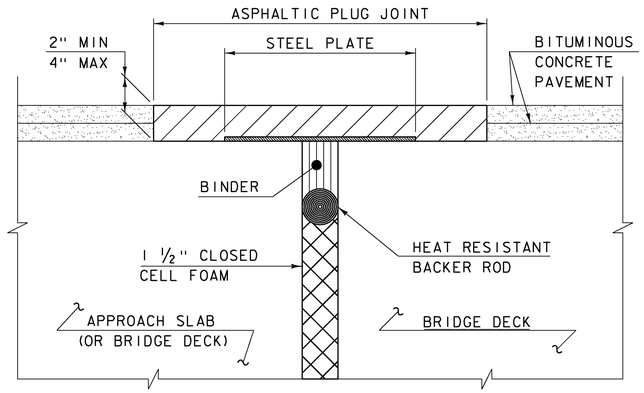
NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.

2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.

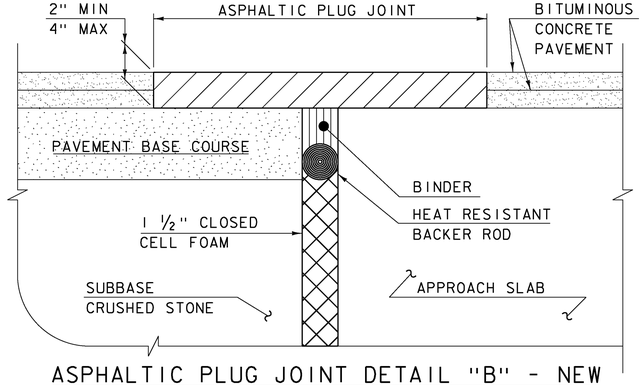
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:
PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

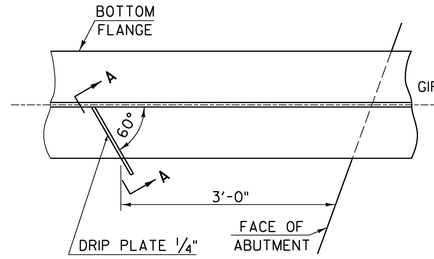
BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

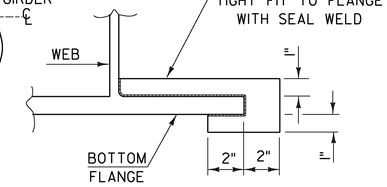
STRUCTURES DETAIL
SD-516.10

STRUCTURAL STEEL GENERAL NOTES:

1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.19, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.
3. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
4. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
5. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.
6. ENDS OF GIRDERS ARE TO BE VERTICAL IN THEIR FINAL POSITION.
7. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES.

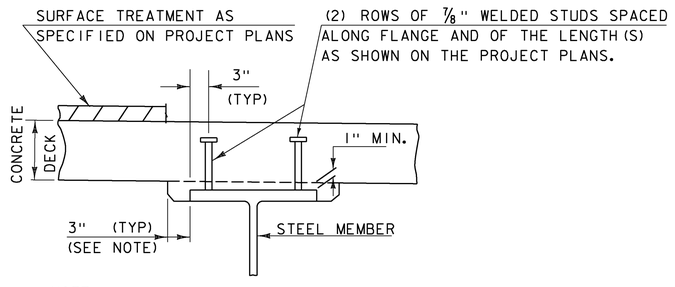


PLAN DRIP PLATE



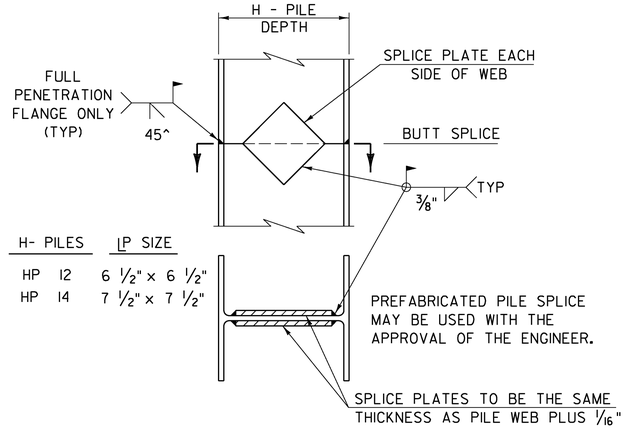
SECTION A - A

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



NOTE:
THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

HAUNCH AND SHEAR CONNECTOR DETAIL



H- PILES	LP SIZE
HP 12	6 1/2" x 6 1/2"
HP 14	7 1/2" x 7 1/2"

DETAIL OF PILE SPLICE

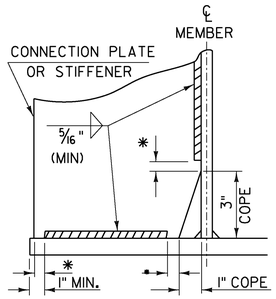
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED NOTES

STRUCTURAL STEEL DETAILS & NOTES

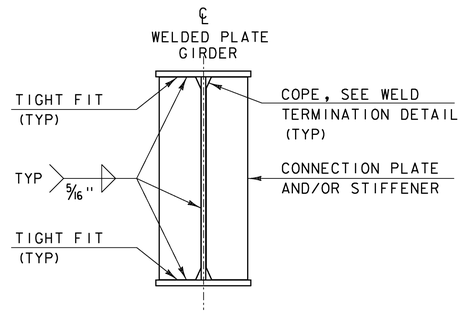
VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-601.00



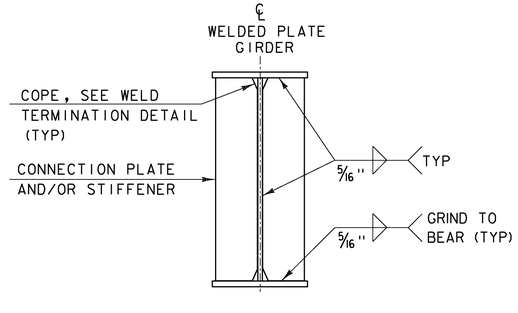
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

*NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

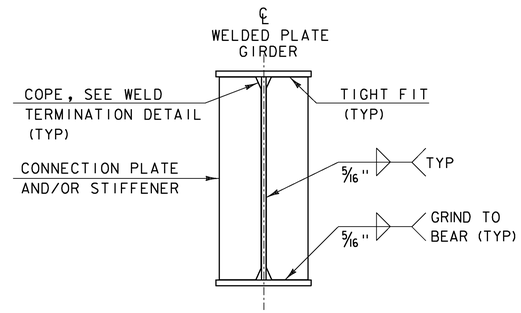


INTERMEDIATE CONNECTION PLATES AND/OR STIFFENERS FOR WELDED PLATE GIRDERS

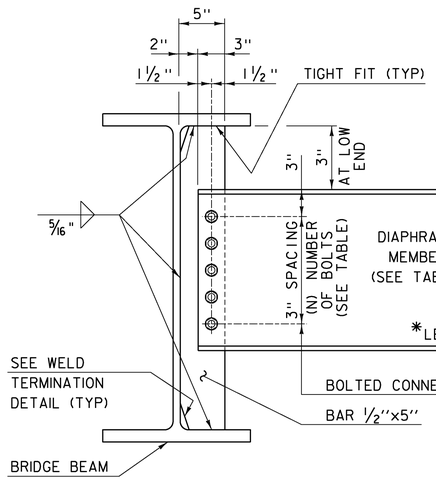
INTERMEDIATE DETAIL IS ONLY USED WHEN PLATE DOES NOT OCCUR AT AN ABUTMENT OR PIER.



ABUTMENT BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



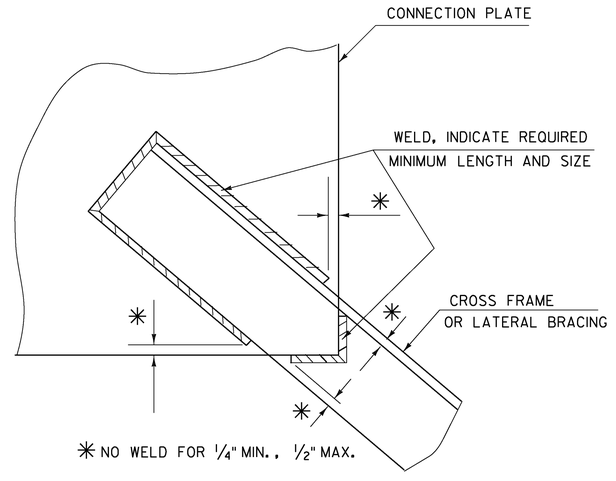
PIER BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



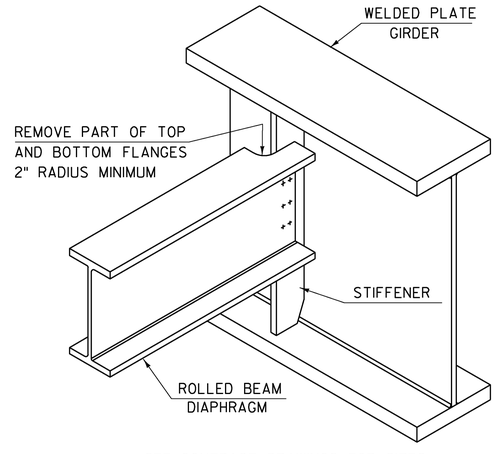
DEPTH		DIAPHRAGM MEMBER	(N) BOLTS
ROLLED BEAM	24" 30"	C15x33.9	4
	31" 36"	MC18x42.7	5
	37" 42"	W21x44	6
PLATE GIRDER WEB	31" 36"	W27x84	7
	37" 42"	W33x118	9
	43" 48"	W36x135	10

INTERMEDIATE DIAPHRAGMS FOR 24" TO 48" BRIDGE BEAMS

*IF CLEARANCE CANNOT BE MET, DIAPHRAGM MAY BE SLOPED.



WELD LOCATION DETAIL AT CROSS FRAMES AND LATERAL BRACING



SEE CONTRACT DRAWINGS FOR SIZES OF MEMBERS AND CONNECTION DETAILS

ROLLED BEAM USED AS DIAPHRAGM

DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
MAY 2, 2011	ADD INTERMEDIATE DIAPHRAGMS DETAIL & ADD NOT TO SCALE NOTE

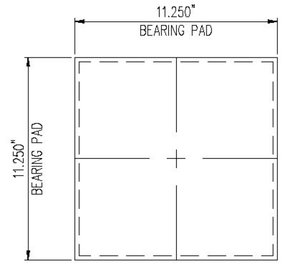
STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

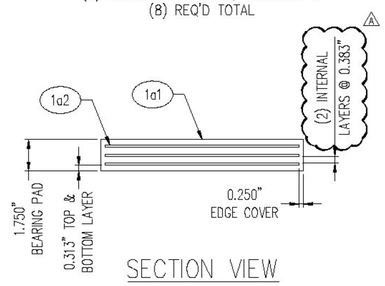
STRUCTURES DETAIL
SD-602.00

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	WT*	REV
1A	8	ELASTOMERIC BEARING	49531.1103.1			21	
1a1	8	1.750" X 11.250"	NATURAL RUBBER	11.250"	110 PSI +/-15% GR. 3	9	
1a2	24	11 GA. X 10.750"	A1011 GR 36	10.750"	PLAIN	4	A
		*Approx. Gross Wt. Lbs Per Single Unit			4/7/2016 4:19:12 PM		

TOLERANCE TABLE	
DESCRIPTION	TOLERANCE (INCHES U.N.O.)
ELASTOMERIC BEARING DESIGN THICKNESS ≤ 1.250"	−0, +0.1181
ELASTOMERIC BEARING DESIGN THICKNESS > 1.250"	−0, +0.2362
ELASTOMERIC BEARING PLAN DIMENSIONS ≤ 36"	−0, +0.2362
ELASTOMERIC BEARING PLAN DIMENSIONS > 36"	−0, +0.4724
THICKNESS OF INDIVIDUAL LAYERS OF ELASTOMER (LAMINATED BEARINGS ONLY) AT ANY POINT WITHIN THE BEARING	±0.1181
VARIATION FROM A PLANE PARALLEL TO THE THEORETICAL SURFACE (AS DETERMINED BY MEASUREMENTS AT THE EDGE OF THE BEARINGS) (PARALLELISM):	
TOP & BOTTOM	±0.005 RAD
SIDES	±0.2362
POSITION OF EXPOSED CONNECTION MEMBERS	±0.1181
ELASTOMERIC EDGE COVER	−0, +0.1181
ELASTOMERIC BEARING HOLE OR SLOT SIZE	±0.1181
ELASTOMERIC BEARING HOLE OR SLOT LOCATION	±0.1181



1A – PLAN VIEW
LAMINATED ELASTOMERIC BEARING
(4) REQ'D @ BRIDGE 68, ABUTMENT 1
(4) REQ'D @ BRIDGE 68, ABUTMENT 2
(8) REQ'D TOTAL



SECTION VIEW

GENERAL NOTES:

1. MATERIALS SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011 AND THE LATEST REVISIONS, INCLUDING SUPPLEMENTARY SPECIFICATIONS, CONTRACT PLANS, AND THE SPECIAL PROVISIONS.
2. THIS SHOP DRAWING WAS PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THIS SHOP DRAWING.
3. THE D.S. BROWN COMPANY TO SUPPLY ONLY THE PARTS SHOWN ON THIS DRAWING.
4. ALL BEARINGS SHALL BE ENCASED IN CONCRETE IN THE FIELD. IN CONFORMANCE WITH THE SPECIAL PROVISIONS NO TESTING IS REQUIRED FOR FULLY ENCASED BEARINGS.
5. IN ACCORDANCE WITH STATE SPECIFICATIONS, THE FABRICATOR SHALL HAVE THE OPTION TO USE NEOPRENE OR NATURAL RUBBER FOR THE ELASTOMER.
6. INTERNAL ALIGNMENT PINS: AFTER FABRICATION, HOLES TO BE FILLED WITH ELASTOMER EQUIVALENT TO THAT USED IN THE MANUFACTURE OF THE PAD.
7. WELDING PROCEDURES, IF APPLICABLE, SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH THE ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE DETERMINED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS.

REV.	DESCRIPTION	DATE	DET.	CKD.
A	SHIM THICKNESS CHANGE	4/7/16	RTP	ECW

Vermont Agency of Transportation
RECEIVED
Waterbury BRF 013-1(15) - Elastomeric Bearing Shop Drawing 022.pdf
CK'D BY D. PETERSON OK'D BY C. CARLSON
April 11, 2016
RESUBMIT NO Approved
BY C. CARLSON DATE 04/11/2016

D.S. BROWN
A GIBRALTAR INDUSTRIES COMPANY
THE D.S. BROWN COMPANY
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NORTH BALTIMORE, OHIO 45872
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WWW.DSBROWN.COM

ITEM	QUANTITY
LOCATION — WARDSBORO	–
BRIDGE — 68	–
PROJECT — BRF 013-1(15)	–
—	–
—	–
—	–
CUSTOMER — RENAUD BROTHERS	–
	–

DESCRIPTION: VERSIFLEX ELASTOMERIC BEARING
WINDHAM CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	BRIDGE SHEET:
N.T.S.	RTP	ECW	3/23/2016	–

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
49531	1103	1	01