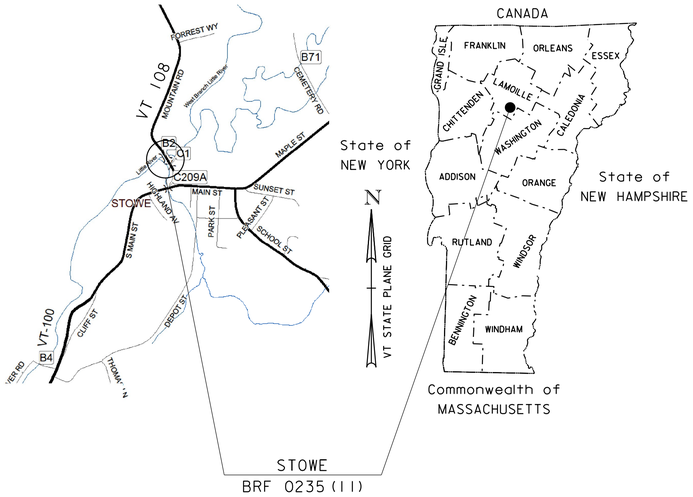
STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

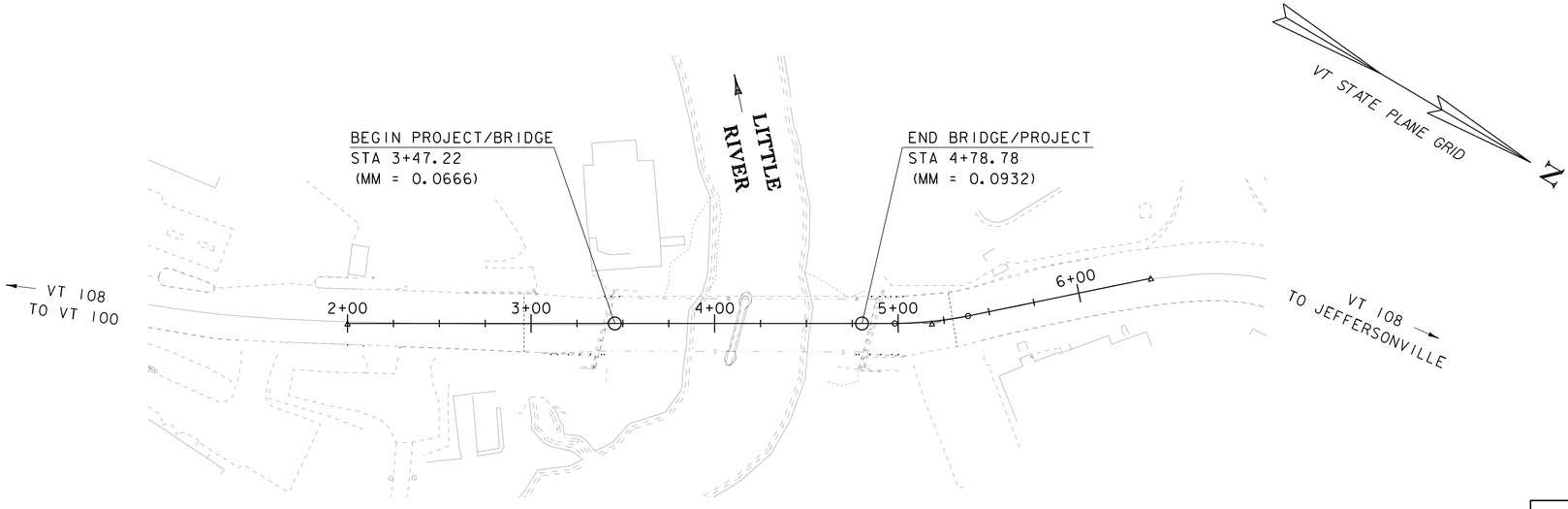
TOWN OF STOWE
COUNTY OF LAMOILLE

ROUTE NO : VT RT 108, MAJOR COLLECTOR BRIDGE NO : 2

PROJECT LOCATION: BEGINNING 0.066 MILES NORTH OF THE INTERSECTION OF VT 108 AND VT 100 AND EXTENDING 0.025 MILES NORTH ON VT 108.

PROJECT DESCRIPTION: REPLACEMENT OF EXISTING BRIDGE TO INCLUDE THE SUPERSTRUCTURE AND SUBSTRUCTURE AND APPROACH ROADWAY WORK.

LENGTH OF STRUCTURE:	131.56 FEET
LENGTH OF ROADWAY:	0.00 FEET
LENGTH OF PROJECT:	131.56 FEET



40 0 40
SCALE: 1" = 40'-0"

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

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	9/21/2009
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (96)

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE _____

PROJECT MANAGER : C. CARLSON, P.E.

PROJECT NAME : STOWE
PROJECT NUMBER : BRF 0235(11)

SHEET 1 OF 64 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 11.06.15

LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

C-2A	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK A	10-14-2005
C-2B	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK A	10-14-2005
C-3A	SIDEWALK RAMPS	03-10-2008
C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	03-10-2008
C-10	CURBING	02-11-2008
D-15	PRECAST REINF CONC. MH-GRATES, CAST IRON GRATE WITH FRAME, TYPE D & E	06-01-1994
E-144	REGULATORY SIGN DETAILS	03-29-1999
E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES & DETAILS	08-09-1995
E-171B	TRAFFIC CONTROL SIGNALS MISC. DETAILS	08-09-1995
E-175	POWER DROP STANCHIONS	06-08-2009
G-1B	BOX BEAM GUARD RAIL	06-01-1994
S-352A	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352B	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352C	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-2012
T-21	TEMPORARY TRAFFIC CONTROL FOR THREE LANE ROADWAY CLOSURE	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-29	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-31	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDNAL DROP-OFFS	08-06-2012
T-36	CONSTRUCTION ZONE LONGITUDNAL DROP-OFFS FOR PAVING	08-06-2012
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

STRUCTURAL DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	2/24/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011

TOWN WATERLINE REPLACEMENT SHEETS

1	12" WATERLINE RELOCATION AND 10" TEMPORARY WATER PLAN AND PROFILE
2	WATER AND STORM DRAIN DETAILS

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: January 2014

DRAINAGE AREA : 52.8 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous, a mixture of forested and open land
STREAM CHARACTERISTICS : Semi-alluvial, sinuous, floodplain - wide upst and narrow dnst
NATURE OF STREAMBED : Gravel, cobbles and some ledge

PEAK FLOW DATA

Q 2.33 =	2500 cfs	Q 50 =	6060 cfs
Q 10 =	4100 cfs	Q 100 =	7150 cfs
Q 25 =	5200 cfs	Q 500 =	9680 cfs

DATE OF FLOOD OF RECORD: unknown
ESTIMATED DISCHARGE: unknown
WATER SURFACE ELEV.: unknown
NATURAL STREAM VELOCITY: @ Q50 = 8.3 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
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: Two span steel beam bridge
YEAR BUILT: 1944, reconstructed 1973
CLEAR SPAN(NORMAL TO STREAM): Two 67' spans = 134' total
VERTICAL CLEARANCE ABOVE STREAMBED: 27'
WATERWAY OF FULL OPENING: 2050 sf
DISPOSITION OF STRUCTURE: Remove and replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See record plans & borings

WATER SURFACE ELEVATIONS AT:

Q2.33 =	692.9'	VELOCITY =	7.1 fps
Q10 =	696.0'	"	7.3 fps
Q25 =	697.3'	"	8.2 fps
Q50 =	698.3'	"	8.8 fps
Q100 =	699.5'	"	9.4 fps

LONG TERM STREAMBED CHANGES: 1' to 2' of scour through the bridge.
No other changes noted.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 710.5'
DISCHARGE OVER ROAD @Q100: none

UPSTREAM STRUCTURE

TOWN: N.A. - River divides
HIGHWAY # :
CLEAR SPAN:
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE:
STRUCTURE #:
CLEAR HEIGHT:
FULL WATERWAY:

DOWNSTRUCTURE STRUCTURE

TOWN: Stowe
HIGHWAY # : T.H. 5
CLEAR SPAN: 70'
YEAR BUILT: 1940
STRUCTURE TYPE: Steel beam bridge with concrete deck
DISTANCE: 3500'
STRUCTURE #: 4
CLEAR HEIGHT: 15'
FULL WATERWAY: N/A

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	4.24	1.19					
POSTING							
OPERATING	3.26	1.55	2.83	1.72	2.91	2.57	2.55
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: New single span steel girder bridge

CLEAR SPAN(NORMAL TO STREAM): 123'
VERTICAL CLEARANCE ABOVE STREAMBED: 24'
WATERWAY OF FULL OPENING: 1900 sf per

WATER SURFACE ELEVATIONS AT:

Q2.33 =	692.6'	VELOCITY=	6.9 fps
Q10 =	695.8'	"	6.9 fps
Q25 =	697.1'	"	7.8 fps
Q50 =	698.0'	"	8.3 fps
Q100 =	699.2'	"	8.8 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 710.5'
DISCHARGE OVER ROAD @Q100: none

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 707.4'
VERTICAL CLEARANCE: @ Q50 = 9.4'

SCOUR: Contraction scour calculated as 3' at Q100 and 7 ' at Q500. Scour may be less where ledge is present.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	110 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	50 cfs	Depth = 2.0'
ORDINARY HIGH WATER:	1100 cfs	Depth = 6.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. SEE TRAFFIC CONTROL PLAN FOR TRAFFIC SIGNAL DETAILS.

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_P:	3.0 INCH
3. DESIGN SPAN	L:	130.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	4.0 KSI
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:	3.0 KSI
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:	0.45
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	564.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	f_y:	50 KSI
21. PILE SIZE		HP 12X 84
22. EST. PILE LENGTHS (TWO SUBSTRUCTURES) (ABUTMENT 1 = 11 AND ABUTMENT 2 = 20) FT	L_P:	
23. PILE RESISTANCE FACTOR	ϕ:	0.70
24. LATERAL PILE DEFLECTION	Δ:	0.76 INCH
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA : 15 %g	S_s:	---
	S_1:	---

AS BUILT "REBAR" DETAIL

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

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2015	8200	1100	53	4.3	340
2035	9200	1200	53	6.8	600

20 year ESAL for flexible pavement from 2015 to 2035 : 2566000
40 year ESAL for flexible pavement from 2015 to 2055 : 6385000
Design Speed : 25 mph

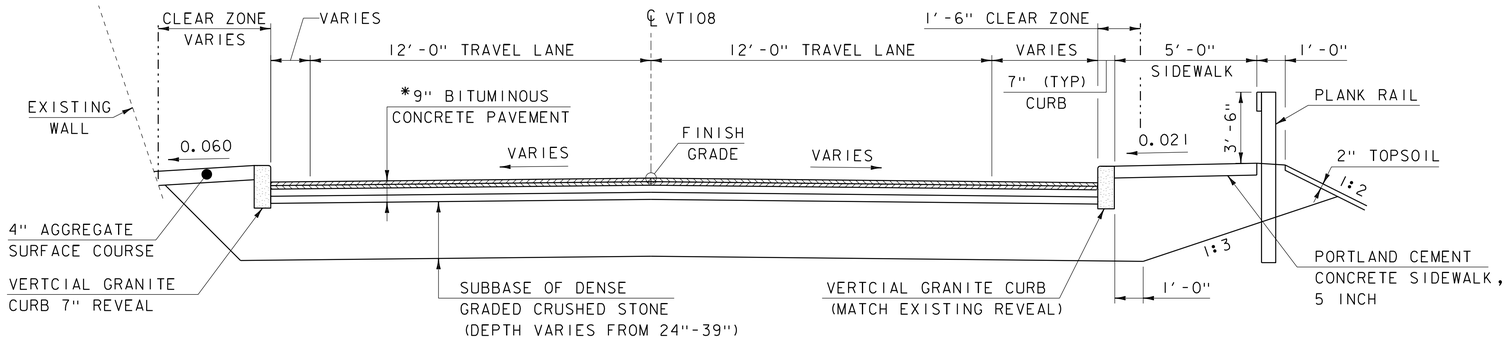
PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY — Rndr: 564.00 KIP
2. PILE TEST RESISTANCE FACTOR — ϕ: 0.7
3. MAXIMUM PILE TIP ELEVATION — NA
4. PRE-EXCAVATED INTEGRAL ABUTMENT PILES. MIN. 3'-0" INTO SOLID ROCK, SAND FILL AROUND PILE IN CAVITY.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052pi.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PRELIMINARY INFORMATION SHEET

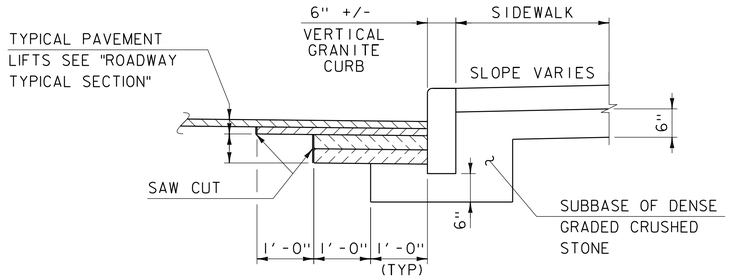
PLOT DATE: 7/17/2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX



ROADWAY TYPICAL SECTION

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

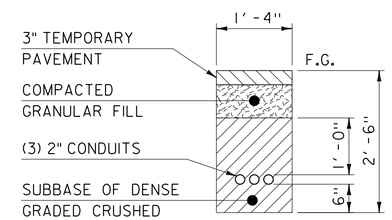
*2 LIFTS OF 1½" BITUM. CONC. PAVEMENT TYPE IIIS OVER 2 LIFTS OF 3" BITUM. CONC. PAVEMENT TYPE IS OR IIS PAID UNDER SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).



CURB & SIDEWALK TYPICAL

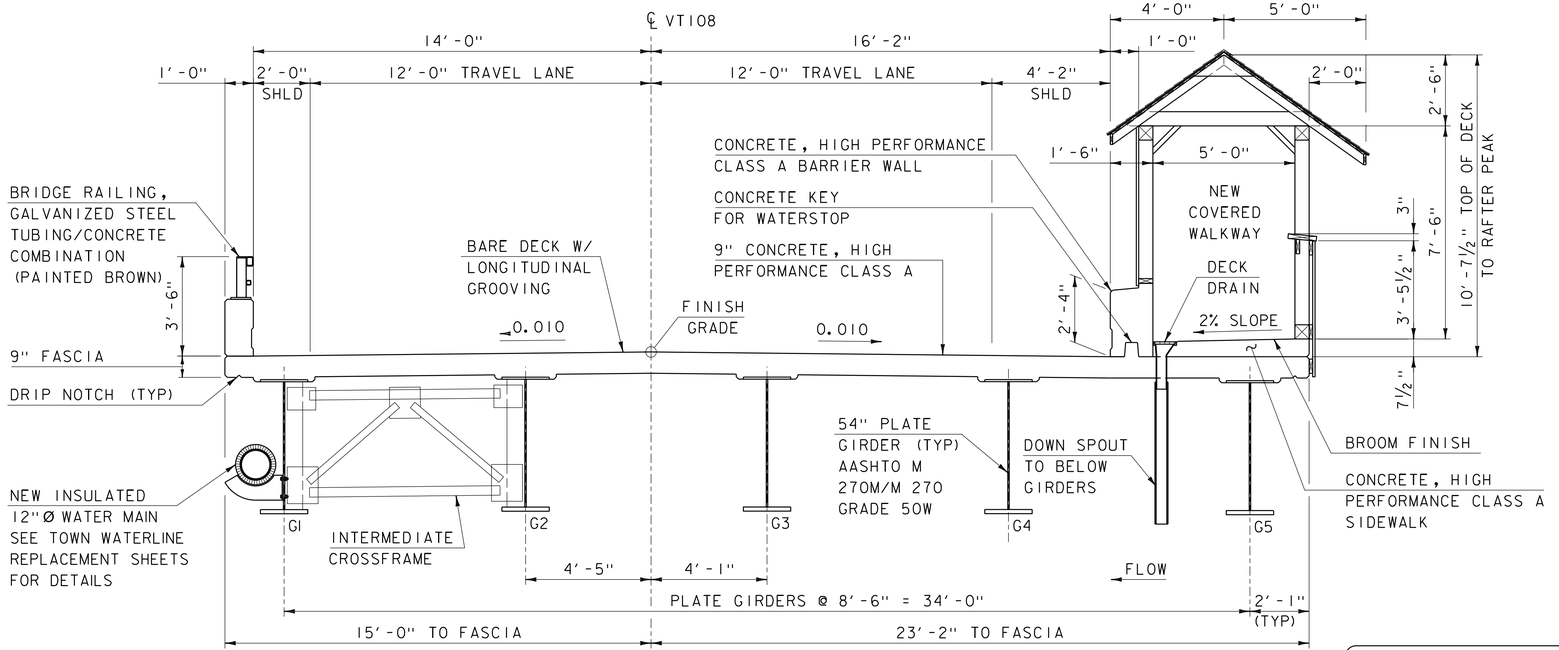
SCALE: 3/4" = 1'-0"

THIS TYPICAL SECTION APPLIES TO NEW CURB AND/OR SIDEWALK LOCATIONS WHERE THERE IS NO NEW ROADWAY SUBBASE REQUIRED. STA 2+00.00 TO STA 2+89.50 AND STA 5+37.50 TO STA 6+40.00



TEMPORARY UTILITY TRENCH TYPICAL

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



BRIDGE TYPICAL SECTION

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

MATERIAL TOLERANCES

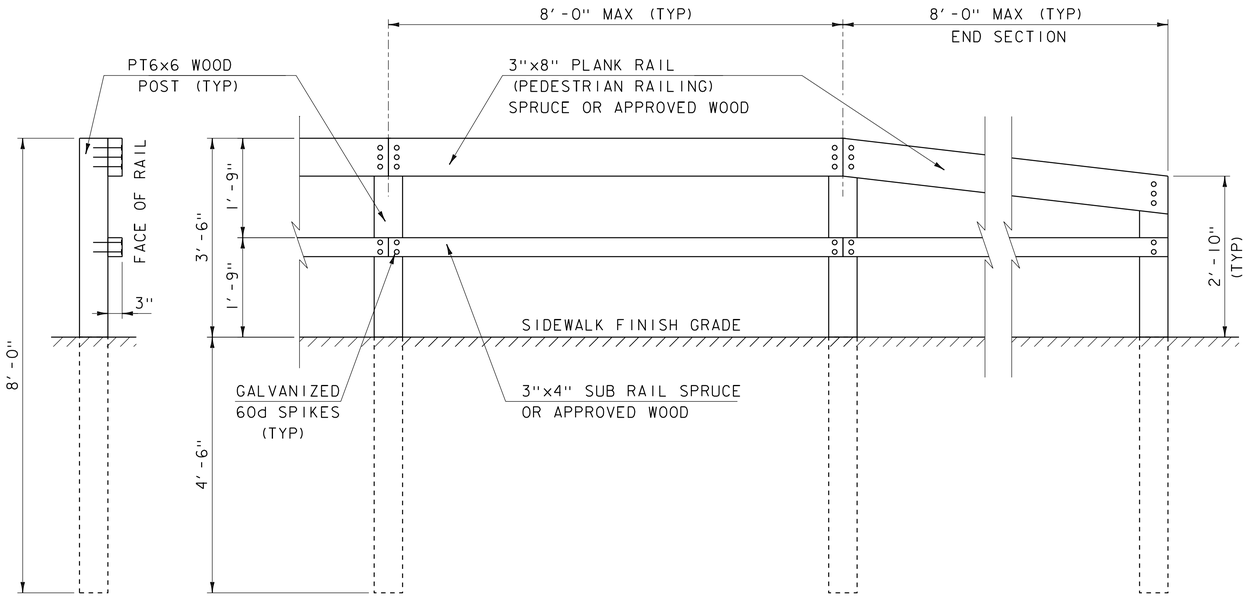
(IF USED ON PROJECT)

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TYPICAL SECTIONS SHEET 1

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 3 OF 64

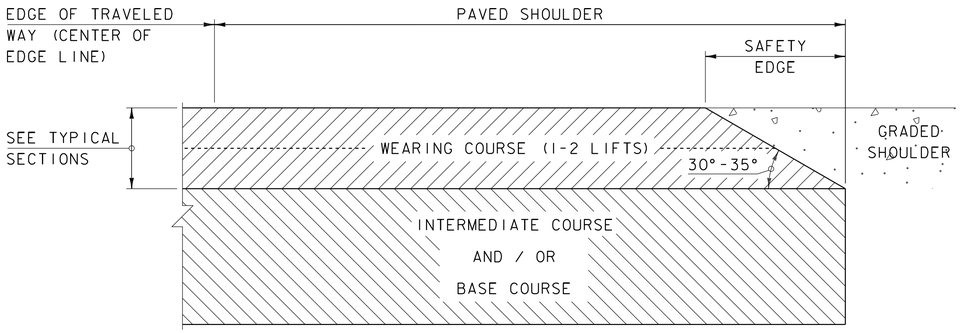


PLANK RAIL (PEDESTRIAN RAILING)

SCALE ¾" = 1'-0"

1) THE HANDGRIP PORTION OF PEDESTRIAN RAIL SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS.

2) EDGES ON TOP SIDES OF WOOD PLANK SHALL HAVE A RADIUS OF 1/4". RAILING SHALL BE CONTINUOUS FOR THE FULL LENGTH AS INDICATED ON THE PLANS.



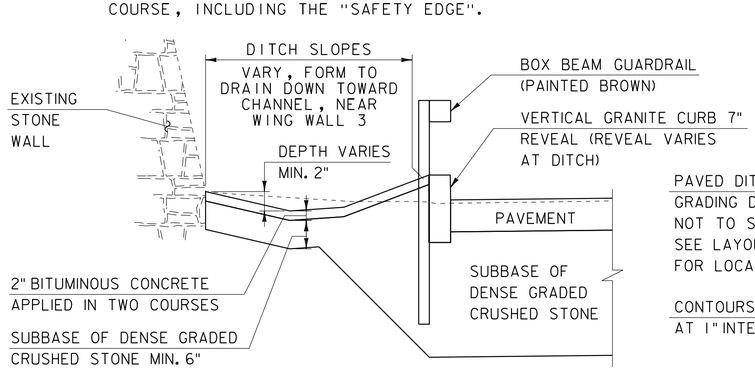
SAFETY EDGE DETAIL

NOT TO SCALE

1. LEVELING COURSE MAY INCLUDE THE "SAFETY EDGE" AT THE CONTRACTOR'S CHOICE.

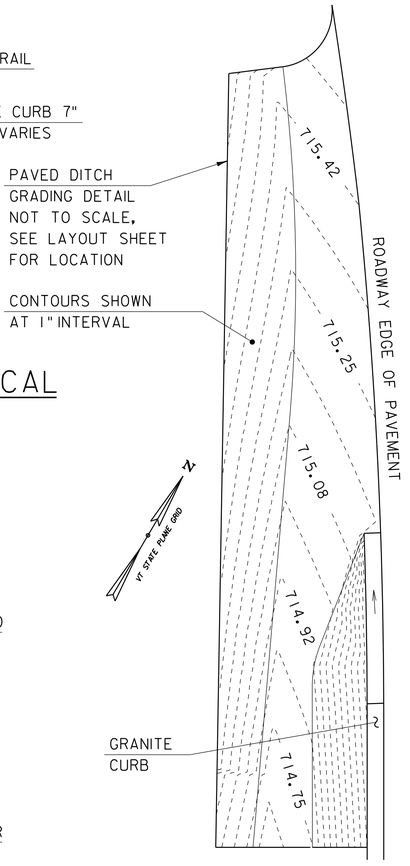
2. THE EDGE OF PAVEMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.

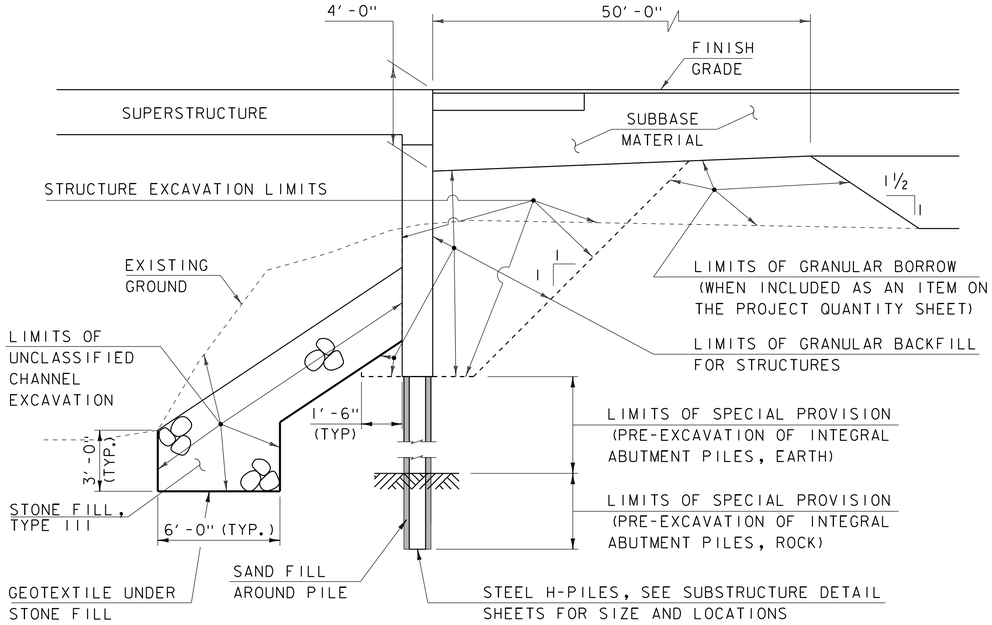
3. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDING THE "SAFETY EDGE".



PAVED DITCH TYPICAL

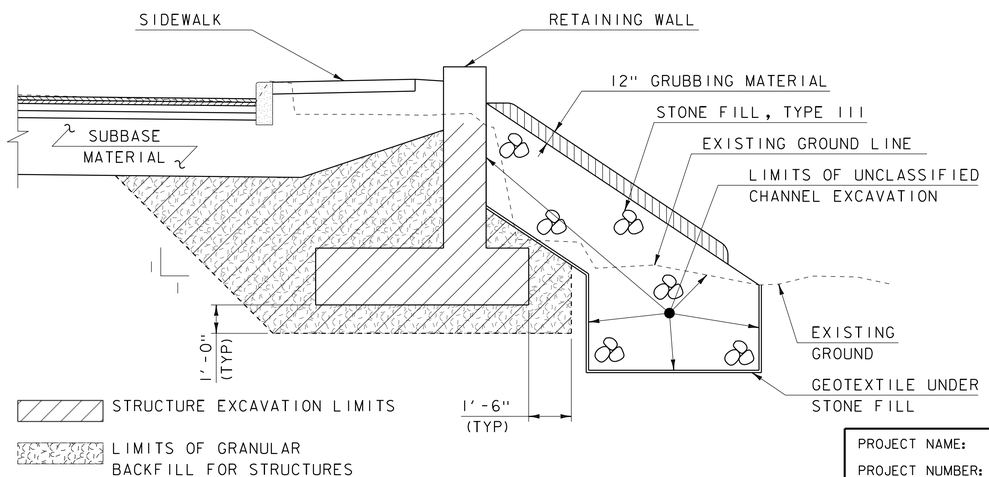
SCALE: ¾" = 1'-0"





ABUTMENT EARTHWORK TYPICAL SECTION

NOT TO SCALE



RETAINING WALL EARTHWORK TYPICAL

SCALE: ⅜" = 1'-0"

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052typ.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
TYPICAL SECTIONS SHEET 2	SHEET 4 OF 64

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE 2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THEIR LATEST REVISIONS.

2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

3. ALL PRECAST SUBSTRUCTURE AND APPROACH SLAB CONCRETE ELEMENTS SHALL BE FABRICATED TO THE SPECIFIED DIMENSIONS AND ERECTED IN THE SPECIFIED LOCATIONS, ALL WITHIN TOLERANCES DEFINED ON THE PLANS AND IN THE PRECAST/PRESTRESSED CONCRETE INSTITUTE TOLERANCE MANUAL FOR PRECAST AND PRESTRESSED CONCRETE CONSTRUCTION, MNL 135-00, AND ITS LATEST REVISIONS.

EARTHWORK

4. ITEM 529.15 “REMOVAL OF STRUCTURE” SHALL INCLUDE:
   - THE REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTION OF THE EXISTING ABUTMENTS AND PIERS NOT REMOVED UNDER STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.
   - THE CONCRETE PIER SHALL BE CUT OFF AT STREAM BED ELEVATION.
   - COMPLETE REMOVAL OF LAID-UP STONE UNDER EXSITING WINGWALL #4.

5. ABUTMENT STONE FILL: PLACE STONE FILL UNDER THE BRIDGE BEFORE SETTING THE STRUCTURAL STEEL.

6. REMOVAL OF THE EXISTING BOX CULVERT HEADWALL FOR DRAINAGE INSTALLATION SHALL BE TO THE ELEVATION SHOWN ON THE PLANS. PAYMENT SHALL BE MADE UNDER ITEM 203.16, SOLID ROCK EXCAVATION.

CONCRETE AND REINFORCING STEEL

7. ITEM 514.10, "WATER REPELLENT, SILANE”, SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE, INCLUDING THE SIDEWALK INSIDE THE COVERED WALKWAY, AND SUBSTRUCTURE, WITH THE EXCEPTION OF THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES.

8. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH, UNLESS OTHERWISE NOTED.

9. CONCRETE CURE TIMES SPECIFIED IN TABLE 501.17A OF THE SPECIFICATIONS SHALL BE REDUCED TO THE FOLLOWING FOR THE SPECIFIED COMPONENTS ONLY:
   - DECK: 7 DAYS
   - ABUTMENTS: 4 DAYS
   - WINGWALLS: 4 DAYS

10. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

11. ITEM 501.33, HIGH PERFORMANCE CONCRETE, CLASS A: USE FOR THE DECK, WALKWAY SIDEWALK, BRIDGE RAIL AND INTEGRAL ABUTMENT CURTAIN WALL AND WINGWALLS ABOVE THE PILE CAP CONSTRUCTION JOINT.

12. ALL PRECAST SUBSTRUCTURE AND APPROACH SLAB CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 540 – PRECAST CONCRETE.

13. ALL CONCRETE FOR PRECAST APPROACH SLAB CLOSURE POURS AND ABUTMENT PILE CAVITIES SHALL MEET THE REQUIREMENTS OF ITEM 900.608, “SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)”.

14. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".

15. ALL REINFORCING STEEL IN THE SUPERSTRUCTURE, INCLUDING THE DECK, WALKWAY SIDEWALK, BRIDGE RAIL AND ANY STEEL EXTENDING INTO HPC, CLASS A SHALL MEET THE REQUIREMENTS FOR LEVEL III CORROSION RESISTANCE, SOLID STAINLESS REINFORCING STEEL IN ACCORDANCE WITH SECTION 507.

16. ALL REINFORCING STEEL IN THE PRECAST APPROACH SLABS, ABUTMENTS, WINGWALLS AND RETAINING WAL SHALL MEET THE REQUIREMENTS FOR LEVEL II CORROSION RESISTANCE IN ACCORDANCE WITH SECTION 507. PAYMENT FOR ALL APPROACH SLAB AND PRECAST ABUTMENT REINFORCING WILL BE MADE UNDER THE APPROPRIATE SECTION 540 CONTRACT ITEM. THE ADDITIONAL LONGITUDINAL STEEL IN THE APPROACH SLAB CLOSURE POURS SHALL BE LEVEL II AND BE INCIDENTAL TO THE PRECAST APPROACH SLAB CONTRACT ITEMS.

17. ALL GROUTED COUPLERS FOR BAR REINFORCEMENT SHALL MEET THE REQUIREMENTS OF SECTION 507. REINFORCING STEEL CORROSION RESISTANCE FOR ALL GROUTED COUPLERS SHALL MATCH THE BARS THAT THEY ARE INTENDED TO SPLICE.

18. GROUT FOR GROUTED COUPLERS FOR BAR REINFORCEMENT SHALL BE APPROVED BY THE SPLICE MANUFACTURER. THE CONTRACTOR SHALL SUBMIT A GROUTING PROCEDURE PROPOSAL TO THE ENGINEER, INCLUDING A PREMIX NAME BRAND FOR APPROVAL.

19. A TEMPLATE SHALL BE USED FOR THE LAYOUT OF GROUTED COUPLERS FOR BAR REINFORCEMENT. THE SAME TEMPLATE SHALL BE USED FOR MATCHING FACES OF EACH CONNECTION.

20. ALL CONNECTIONS BETWEEN PRECAST UNITS SHALL BE DRY FIT PRIOR TO DELIVERY TO THE PROJECT SITE.

21. PAYMENT FOR GROUTED COUPLER CONNECTORS SHALL BE INCIDENTAL TO ITEMS 540.10, “PRECAST CONCRETE STRUCTURE (ABUTMENT #1)” AND “PRECAST CONCRETE STRUCTURE (ABUTMENT #2)”.

22. FORMWORK FOR SURFACES ON THE PRECAST APPROACH SLABS THAT WILL BE IN CONTACT WITH LONGITUDINAL CLOSURE POURS SHALL BE TREATED WITH CONCRETE SURFACE RETARDER, OR SIMILAR, TO PROVIDE A ROUGHENED SURFACE; AND POWER WASHED WITH WATER PRIOR TO ERECTION.

PRECAST ABUTMENTS AND POST TENSIONING

23. THE UNIT PRICE FOR EACH PRECAST ABUTMENT SHALL INCLUDE THE ASSOCIATED PRECAST PORTIONS OF THE WINGWALLS, (EXCLUDING THE FREESTANDING RETAINING WALL PORTION OF WINGWALL #4) AND ALL LABOR AND MATERIALS TO CONNECT WINGWALLS TO THE PILE CAPS. THIS WORK SHALL BE PAID FOR UNDER ITEM 540.10, “PRECAST CONCRETE STRUCTURE (ABUTMENT #1)” AND “PRECAST CONCRETE STRUCTURE (ABUTMENT #2)” AS APPROPRIATE.

24. IF VERTICAL CONSTRUCTION JOINTS ARE REQUIRED BY THE CONTRACTOR FOR SHIPMENT OF THE ABUTMENTS, THEN THE SECTIONS SHALL BE KEYED AND MATCH CAST. A JOINT DETAIL SHALL BE SHOWN ON THE FABRICATION DRAWINGS.

25. ALL POST-TENSIONING STRAND AND CONDUIT SHALL CONFORM TO THE REQUIREMENTS OF SECTION 510 – PRESTRESSED CONCRETE. GALVANIZED ANCHOR ASSEMBLIES, CONDUIT, AND POST-TENSIONING STRANDS SHALL BE INCLUDED UNDER ITEM 540.10, “PRECAST CONCRETE STRUCTURE (ABUTMENT #1) AND “PRECAST CONCRETE STRUCTURE (ABUTMENT #2)” AS APPROPRIATE. POST-TENSIONING STRANDS SHALL BE COVERED WITH SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF THE STRAND, EXCEPT AT ANCHORAGE LOCATIONS.

26. GALVANIZE ANCHOR ASSEMBLIES AFTER FABRICATION ACCORDING TO AASHTO M232M/M 232.

27. DESIGN VALUES
   i. CONCRETE COMPRESSIVE STRENGTH: f'c = 5000 PSI.
   ii. POST-TENSIONING STRANDS: 0.5 INCH DIAMETER, 270 KSI, LOW RELAXATION 7-WIRE STRANDS.
   iii. ASSUMED MODULUS OF ELASTICITY IS 28,500 KSI.
   iv. THERE SHALL BE 2 STRANDS PER CONDUIT.
   v. JACKING FORCE PER STRAND = 32 KIPS

28. THE CORRUGATED STEEL PIPE SHALL BE TYPE 1, GALVANIZED. ALL COSTS ASSOCIATED WITH PLACING THE CORRUGATED STEEL PIPE SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 540.10, “PRECAST CONCRETE STRUCTURE (ABUTMENT #1)” AND ITEM 540.10, “PRECAST CONCRETE STRUCTURE (ABUTMENT #2)”.

29. THE FREESTANDING PORTION OF WINGWALL #4 SHALL BE PAID FOR UNDER ITEM 540.10, PRECAST CONCRETE STRUCTURE (RETAINING WALL).

STRUCTURAL STEEL

30. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270M/M 270, GRADE 50W.

31. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.

32. GIRDER WEBS AND CROSS FRAMES SHALL BE PLUMB IN FINAL POSITION.

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

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

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

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

37. FLEMING BRACKETS OR SIMILAR FALSE WORK: SPACE FLEMING BRACKETS OR SIMILAR FALSEWORK AS REQUIRED BY DESIGN WITH A MAXIMUM SPACING OF 4'-0". THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

38. 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.

H-PILES

39. PRE-EXCAVATION IS REQUIRED AT ALL PILE LOCATIONS. PAYMENT SHALL BE MADE UNDER ITEM 900.640, “SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENTS PILES, EARTH)” OR ITEM 900.640, “SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENTS PILES, ROCK)”. SAND PLACED AROUND THE PILES SHALL BE INCIDENTAL TO ITEM 900.640, “SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENTS PILES, ROCK)”.

40. THE PILE LOCATIONS SHALL BE PRE-EXCAVATED WITH A MINIMUM PENETRATION OF 3 FEET INTO COMPETENT BEDROCK. THE MINIMUM REQUIRED PILE LENGTH IS 10 FEET. IF COMPETENT BEDROCK IS ENCOUNTERED SHALLOWER THAN 7 FEET BELOW THE BOTTOM OF THE PILE CAP, PRE-EXCAVATION TO A MINIMUM DEPTH OF 10 FEET BELOW THE PILE CAP IS REQUIRED. PRE-EXCAVATED HOLES SHALL BE A MINIMUM 24 INCHES IN DIAMETER.

41. PILES SHALL BE SEATED ON BEDROCK TO THE APPROVAL OF THE ENGINEER. ANY WORK REQUIRED FOR THIS SHALL BE INCIDENTAL TO ITEM 504.10, “FURNISHING EQUIPMENT FOR PILE DRIVING”.

42. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AND ARE SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

TRAFFIC CONTROL

43. TRAFFIC SHALL BE MAINTAINED ON A DETOUR AROUND THE PROJECT SITE DURING CONSTRUCTION. THE TOWN SHALL BE NOTIFIED 2 WEEKS PRIOR TO CLOSURE OF THE BRIDGE AND DETOURING OF TRAFFIC.

44. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN. THIS WORK WILL BE INCIDENTAL TO ITEM 900.645, “SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)”.

45. AT LEAST ONE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE POSITIONED IN ADVANCE OF EACH APPROACH TO THE WORK ZONE ADVISING OF THE ACTIVITY AHEAD. PAYMENT FOR PCMS WILL BE MADE SEPARATELY UNDER CONTRACT ITEM 641.15.

46. A TEMPORARY TRAFFIC SIGNAL SHALL BE INSTALLED AT THE INTERSECTION OF WEST HILL ROAD AND VT 100 PRIOR TO CLOSURE OF THE BRIDGE. PAYMENT SHALL BE MADE UNDER ITEM 678.40, “TEMPORARY TRAFFIC SIGNAL SYSTEM”.

47. ALL WORK AND ITEMS ASSOCIATED WITH THE OPENING THE BRIDGE TO TRAFFIC, INCLUDING TEMPORARY TRAFFIC BARRIER AND SIGNS SHALL BE PAID FOR UNDER ITEM 900.645, “SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)”.

48. ANY REMOVAL, COVERING AND/OR RESETTING OF EXISTING TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE INCIDENTAL TO THE ITEM 900.645, “SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)”.

49. ACCESS TO ANY BUSINESSES WITHIN THE WORK ZONE SHALL BE MAINTAINED FOR BOTH VECHILES AND PEDESTRIANS. IF THE CONTRACTOR NEEDS TO CLOSE THE ACCESSES DUE TO THEIR WORK; THEY MUST CONTACT THE PROPRTY OWNERS AT LEAST ONE (1) WEEK IN ADVANCE OF THAT WORK.

50. THE CONTRACTOR SHALL PLACE DETOUR SIGNS SO AS TO AVOID BLOCKING SIGNS OF LOCAL BUSINESSES.

COVERED WALKWAY

51. PAYMENT FOR THE ANCHOR BOLTS USED TO CONNECT THE COVERED WALKWAY TO THE BRIDGE SHALL BE INCIDENTAL TO ITEM 501.33, HIGH PERFORMANCE CONCRETE, CLASS A. THE ANCHOR BOLTS SHALL CONFORM TO ASTM A 449. NUTS AND WASHERS SHALL CONFORM TO SUBSECTION 709.01(h).

52. ALL LUMBER SHALL MEET THE REQUIREMENTS OF SECTION 522 UNLESS OTHERWISE NOTED IN THE PLANS.

53. ALL LUMBER IN THE COVERED WALKWAY SHALL BE FULL SAWN, ROUGH FINISH, EXCEPT WHERE NOTED “S4S” (DRESSED LUMBER). SEE SUBSECTION 709.01(d) FOR FULL DEFINITIONS.

54. LUMBER AND TIMBERS DESIGNATED “PT” SHALL BE PRESSURE TREATED AND MEET THE REQUIREMENTS OF SUBSECTIONS 522.13 AND 726.01.

55. ALL INTERIOR AND EXTERIOR UNTREATED WOOD SURFACES SHALL BE TREATED WITH INSECTICIDE/FUNGICIDE AND FIRE RETARDANT COATINGS IN ACCORDANCE WITH SUBSECTIONS 708.05 (b) and (c) AND SUPPLEMENTAL SPECIFICATION SECTION 660.

56. ALL NAILS AND SPIKES SHALL CONFORM TO ASTM F1667 AND BE DOUBLE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232 UNLESS OTHERWISE SPECIFIED IN THE PLANS.

MISCELLANEOUS

57. THE REMOVAL OF THE EXISTING WOODEN PEDESTRIAN RAIL LEADING UP TO THE COVERED WALKWAY SHALL BE PAID FOR UNDER ITEM 621.80, “REMOVAL AND DISPOSAL OF GUARDRAIL”.

58. THE LIGHTING FOR THE COVERED WALKWAY SHALL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (COVERED WALKWAY).

59. THE GRATE FOR DROP INLET #4 AT STATION 5+70.96 LT SHALL BE AS SHOWN ON THE WATER AND STORM DRAIN SHEET AND BE INCIDENTAL TO ITEM 604.18 PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE.

60. THE INSTALLATION OF THE UNDERGROUND CONDUIT FOR THE TEMPORARY SERVICE TO THE BUILDING ON THE NORTHEAST CORNER OF THE BRIDGE SHALL BE INSTALLED COINCIDENTALLY WITH THE PORTION OF THE TEMPORARY WATERLINE THAT CROSSES VT108, OR AT NIGHT.

61. ALL STEEL COMPONENTS OF BRIDGE RAILING AND BOX BEAM GUARDRAIL, INCLUDING THE RAIL CONNECTION TO THE BRIDGE RAIL, SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SURFACE PREPARED FOR PAINTING IN ACCORDANCE WITH ASTM D 6386. COMPONENTS SHALL BE PAINTED BROWN IN ACCORDNACE WITH SUBSECTION 708.03.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052forms.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
GENERAL NOTES

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 5 OF 64

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES			TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1			1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
660			660		CY	COMMON EXCAVATION	203.15				
11			11		CY	SOLID ROCK EXCAVATION	203.16				
240			240		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
355			355		CY	TRENCH EXCAVATION OF EARTH	204.20				
1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
		570	570		CY	STRUCTURE EXCAVATION	204.25				
280		480	760		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
830			830		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
540			540		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
2			2		CY	AGGREGATE SURFACE COURSE	401.10				
7			7		CWT	EMULSIFIED ASPHALT	404.65				
1			1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
		256	256		CY	CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)	501.33				
		1	1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10				
		159	159		LF	STEEL PILING, HP 12 X 84	505.165				
		210300	210300		LB	STRUCTURAL STEEL, PLATE GIRDER (FPQ)	506.55				
		58135	58135		LB	REINFORCING STEEL, LEVEL III	507.13				
		1	1		LS	SHEAR CONNECTORS (1740 - 7/8" X 7")	508.15				
		440	440		SY	LONGITUDINAL DECK GROOVING	509.10				
		62	62		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				
		134	134		LF	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION (PAINTED BROWN)	525.45				
		1	1		EACH	REMOVAL OF STRUCTURE (5550 SF - EST.)	529.15				
		10	10		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17				
		1	1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #1)	540.10				
		1	1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #2)	540.10				
		1	1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #1)	540.10				
		1	1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #2)	540.10				
		1	1		LS	PRECAST CONCRETE STRUCTURE (RETAINING WALL)	540.10				
						BEGIN OPTION AA					
260			260		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215				
260			260		LF	18" RCP CLASS III	601.0815				
260			260		LF	18" CPEP(SL)	601.2615				
						END OPTION AA					

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052forms.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET I

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 6 OF 64

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
							BEGIN OPTION BB					
1				1		EACH	18" CAAPES .060 (2-2/3 X 1/2)	601.6215				
1				1		EACH	18" RCPES CLASS III	601.6815				
1				1		EACH	18" CPEPES	601.7015				
							END OPTION BB					
7				7		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18				
1				1		EACH	PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER	604.21				
1				1		MGAL	DUST CONTROL WITH WATER	609.10				
		260		260		CY	STONE FILL, TYPE III	613.12				
425				425		LF	VERTICAL GRANITE CURB	616.21				
1				1		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10				
148				148		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				
26				26		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11				
11				11		SF	DETECTABLE WARNING SURFACE	618.30				
84				84		LF	PLANK RAIL	621.15				
86				86		LF	BOX BEAM GUARDRAIL (PAINTED BROWN)	621.30				
111				111		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
1				1		LS	TRANSFER TO NEW SYSTEM, WATER SYSTEM	629.42				
80				80		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
800				800		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				
4				4		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
880				880		LF	4 INCH WHITE LINE	646.20				
880				880		LF	4 INCH YELLOW LINE	646.21				
32				32		LF	CROSSWALK MARKING	646.31				
50				50		EACH	LINE STRIPING TARGETS	646.76				
		270		270		SY	GEOTEXTILE UNDER STONE FILL	649.31				
	60			60		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
	90			90		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
	10			10		LB	SEED	651.15				
	10			10		LB	SEED, WINTER RYE	651.17				
	18			18		LB	FERTILIZER	651.18				
	0.1			0.1		TON	AGRICULTURAL LIMESTONE	651.20				
	0.1			0.1		TON	HAY MULCH	651.25				
	10			10		CY	TOPSOIL	651.35				
	110			110		SY	GRUBBING MATERIAL	651.40				

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052forms.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET 2

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 7 OF 64

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES / TOTALS / DESCRIPTIONS

ROADWAY	EROSION CONTROL	BRIDGE	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
	1			1		LS	EPSC PLAN	652.10	
	40			40		HR	MONITORING EPSC PLAN	652.20	
	1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	
	30			30		SY	TEMPORARY EROSION MATTING	653.20	
	30			30		CY	VEHICLE TRACKING PAD	653.35	
	5			5		EACH	INLET PROTECTION DEVICE, TYPE I	653.40	
	282			282		LF	BARRIER FENCE	653.50	
	92			92		LF	PROJECT DEMARCATION FENCE	653.55	
1				1		SF	TRAFFIC SIGNS, TYPE A	675.20	
46				46		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	
4				4		EACH	REMOVING SIGNS	675.50	
4				4		EACH	ERECTING SALVAGED SIGNS	675.60	
450				450		LF	ELECTRICAL CONDUIT (2")(PVC)	678.21	
1				1		EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM	678.40	
		13		13		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)	900.608	
		102		102		LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, EARTH)	900.640	
		38		38		LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, ROCK)	900.640	
		1		1		LS	SPECIAL PROVISION (COVERED WALKWAY)	900.645	
			1	1		LS	SPECIAL PROVISION (CPM SCHEDULE)	900.645	
1				1		LS	SPECIAL PROVISION (TEMPORARY WATER MAIN)(10" HDPE)	900.645	
1				1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645	
1				1		LS	SPECIAL PROVISION (WATER MAIN ON BRIDGE)(12" D.I.)	900.645	
1				1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE)(N.A.B.I)	900.650	
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	
290				290		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (II)

FILE NAME: s87e052forms.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET 3
PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 8 OF 64

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES					TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
APP SLAB 1	ABUTMENT 1	SUPER-STRUCTURE	ABUTMENT 2	APP SLAB 2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
	247		323		570	CY	STRUCTURE EXCAVATION	204.25			
	205		275		480	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
	40	176	40		256	CY	CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)	501.33			
	0.5		0.5		1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
	60		99		159	LF	STEEL PILING, HP 12 X 84	505.165			
		210300			210300	LB	STRUCTURAL STEEL, PLATE GIRDER (FPQ)	506.55			
	2675	52833	2627		58135	LB	REINFORCING STEEL, LEVEL III	507.13			
		1			1	LS	SHEAR CONNECTORS (1740 - 7/8" X 7")	508.15			
		440			440	SY	LONGITUDINAL DECK GROOVING	509.10			
	4	54	4		62	GAL	WATER REPELLENT, SILANE	514.10			
	32		31		63	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
	32		31		63	LF	JOINT SEALER, HOT POURED	524.11			
		134			134	LF	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION (PAINTED BROWN)	525.45			
		1			1	EACH	REMOVAL OF STRUCTURE (5550 SF - EST.)	529.15			
	5		5		10	EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17			
	1				1	LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #1)	540.10			
			1		1	LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #2)	540.10			
1					1	LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #1)	540.10			
				1	1	LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #2)	540.10			
			1		1	LS	PRECAST CONCRETE STRUCTURE (RETAINING WALL)	540.10			
	125		135		260	CY	STONE FILL, TYPE III	613.12			
	120		150		270	SY	GEOTEXTILE UNDER STONE FILL	649.31			
2.5	4		4	2.5	13	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)	900.608			
	28		74		102	LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, EARTH)	900.640			
	22		16		38	LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES, ROCK)	900.640			
		1			1	LS	SPECIAL PROVISION (COVERED WALKWAY)	900.645			

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052forms.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BRIDGE QUANTITY SHEET

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 9 OF 64

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 VALVE
	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 LINE	TOWN BOUNDARY LINE
COUNTY LINE	COUNTY BOUNDARY LINE
STATE 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
P/L	PROPERTY LINE (P/L)
SR SR SR	SLOPE RIGHTS
6f	6F PROPERTY BOUNDARY
4f	4F PROPERTY BOUNDARY
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

ENVIRONMENTAL RESOURCES

	WETLAND BOUNDARY
	RIPARIAN BUFFER ZONE
	WETLAND BUFFER ZONE
	SOIL TYPE BOUNDARY
T&E	THREATENED & ENDANGERED SPECIES
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:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052forms.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
CONVENTIONAL SYMBOLOGY LEGEND	SHEET 10 OF 64

GPS CONTROL POINTS

COTTAGE

BRASS SURVEY DISK

NORTH = 720366.318
EAST = 1583870.117
ELEV. = 766.304

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1996 (DJM) GENERAL LOCATION - THE STATION IS LOCATED IN THE TOWN OF STOWE, 1.6 MI (2.6 KM) NORTHWEST OF STOWE VILLAGE, 8.2 MI (13.2 KM) SOUTHWEST OF MORRISVILLE, AND 9.9 MI (15.9 KM) NORTH NORTHEAST OF WATERBURY. TO REACH FROM THE JUNCTION OF VERMONT ROUTE 100 AND VERMONT ROUTE 108 IN STOWE VILLAGE, PROCEED NORTHERLY ALONG ROUTE 108 FOR 2.0 MI (3.2 KM) TO COTTAGE CLUB ROAD (TH 29) ON THE RIGHT. PROCEED NORTHEASTERLY ALONG COTTAGE CLUB ROAD FOR 0.1 MI (0.2 KM) TO THE MARK ON THE RIGHT. THE MARK IS A STATE OF VERMONT SURVEY DISK SET IN THE TOP OF A CONCRETE MONUMENT 30 CM IN DIAMETER, FLUSH WITH THE GROUND SURFACE. IT IS LOCATED 128 FT (39.0 M) NORTHEAST OF UTILITY POLE 1, 88.5 FT (27.0 M) SOUTHWEST OF UTILITY POLE 3, 36 FT (11.0 M) SOUTHEAST OF A CHAINLINK FENCE, 18.5 FT (5.6 M) SOUTHEAST OF THE CENTERLINE OF COTTAGE CLUB ROAD (TH 29), AND 3 FT (0.9 M) NORTHWEST OF A FIBERGLASS WITNESS POST. OWNERSHIP IS THE TOWN OF STOWE.

VILLAGE GREEN

BRASS SURVEY DISK

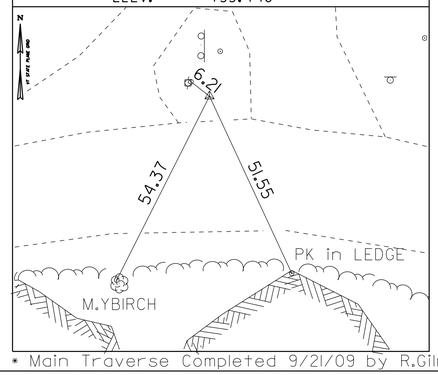
NORTH = 720026.656
EAST = 1585800.072
ELEV. = 750.852

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1996 (DJM) GENERAL LOCATION - THE STATION IS LOCATED IN THE TOWN OF STOWE, 1.2 MI (1.9 KM) NORTHWEST OF STOWE VILLAGE, 8.1 MI (13.0 KM) SOUTHWEST OF MORRISVILLE, AND 9.8 MI (15.8 KM) NORTH NORTHEAST OF WATERBURY. TO REACH FROM THE JUNCTION OF VERMONT ROUTE 100 AND VERMONT ROUTE 108 IN STOWE VILLAGE, PROCEED NORTHERLY ALONG ROUTE 108 FOR 1.7 MI (2.7 KM) TO CAPE COD ROAD (TH 31) ON THE RIGHT. TURN RIGHT AND GO NORTHEAST ALONG CAPE COD ROAD FOR 0.15 MI (0.24 KM) TO THE MARK ON THE RIGHT. THE MARK IS A STATE OF VERMONT SURVEY DISK SET IN THE TOP OF A CONCRETE MONUMENT 30 CM IN DIAMETER FLUSH WITH THE GROUND SURFACE. IT IS LOCATED 176.5 FT (53.8 M) SOUTHWEST OF THE CENTERLINE OF A PAVED DRIVE TO VILLAGE GREEN CONDOMINIUMS, 66.5 FT (20.3 M) NORTHEAST OF UTILITY POLE 3, 31.5 FT (9.6 M) NORTH OF A HIGHWAY SIGN (SPEED LIMIT 35), 14.5 FT (4.4 M) SOUTHEAST OF THE CENTERLINE OF CAPE COD ROAD (TH 31), AND 1FT (0.3 M) WEST OF A FIBERGLASS WITNESS POST. OWNERSHIP IS THE STATE OF VERMONT.

TRAVERSE TIES

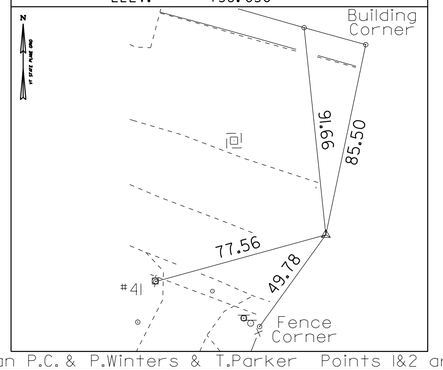
HVCTRL #1

NORTH = 719869.481
EAST = 1587749.554
ELEV. = 733.740



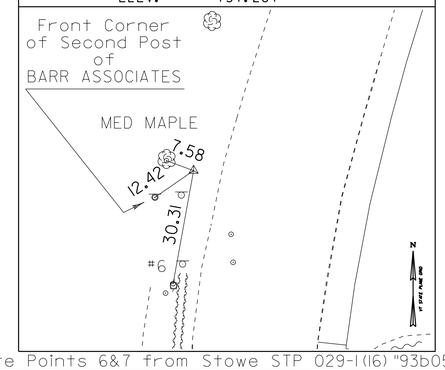
HVCTRL #2

NORTH = 719664.694
EAST = 1588244.397
ELEV. = 738.050



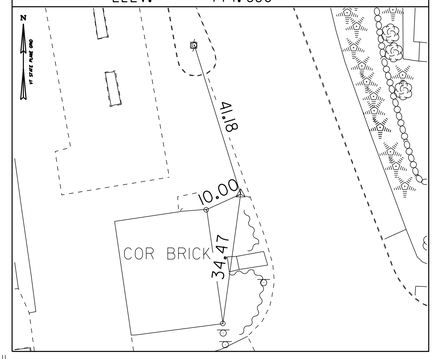
HVCTRL #8

NORTH = 717140.414
EAST = 1591116.847
ELEV. = 731.281



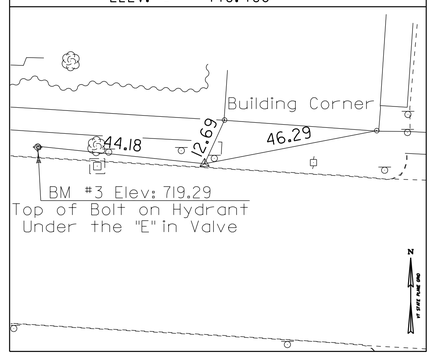
HVCTRL #9

NORTH = 716500.060
EAST = 1591455.075
ELEV. = 714.680



HVCTRL #10

NORTH = 716464.560
EAST = 1591588.010
ELEV. = 718.180



* Main Traverse Completed 9/21/09 by R.Gilman P.C. & P.Winters & T.Parker Points 1&2 are Points 6&7 from Stowe STP 029-1(16)"93b059"

ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83(96)
ADJUSTMENT Compass

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: 87e052\survey\x87e052ti.dg
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TIE SHEET

PLOT DATE: 28-JUL-2014
DRAWN BY: R. BULLOCK
CHECKED BY: J. LACROIX
SHEET II OF 64

BOX BEAM GUARDRAIL (PAINTED BROWN)
VT108 STA 3+40.12 LT - STA 3+50.21 LT
VT108 STA 4+83.56 LT - STA 5+03.00 LT
VT108 STA 3+10.78 RT - STA 3+41.87 RT
VT108 STA 4+75.08 RT - STA 5+00.00 RT

VERTICAL GRANITE CURB
VT108 STA 3+34.25 LT - STA 3+50.21 LT
VT108 STA 4+83.56 LT - STA 5+05.00 LT
VT108 STA 5+23.64 LT - STA 6+40.00 LT
VT108 STA 2+00.00 RT - STA 2+08.66 RT
VT108 STA 2+28.65 RT - STA 3+41.87 RT
VT108 STA 4+75.08 RT - STA 5+14.83 RT
VT108 STA 5+23.64 RT - STA 5+69.34 RT
VT108 STA 5+72.32 RT - STA 6+40.00 RT

PLANK RAIL
VT108 STA 3+10.00 RT - STA 3+41.87 RT
VT108 STA 4+73.60 RT - STA 5+05.00 RT

BEGIN APPROACH
MATCH EXISTING
STA 2+00.00

POB
STA 2+00.00

VT 108 STA 4+00.00 =
CHANNEL LINE STA 11+00.00
△ = 75° LT

CL BEARING #1
STA 3+48.00

BEGIN
PROJECT/BRIDGE
STA 3+47.22

EXISTING DRAINAGE
INLET WITH NEW
PIPE CONNECTION

PT
STA 4+98.18

PC
STA 5+38.39

POE
STA 6+40.00

BRIDGE RAILING, GALVANIZED STEEL
TUBING/CONCRETE COMBINATION (PAINTED BROWN)
VT108 STA 3+50.21 LT - STA 4+83.56 LT

CONCRETE, HIGH PREFORMACE CLASS A (BARRIER WALL)
VT108 STA 3+40.12 RT - STA 4+75.08 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
VT108 STA 2+00.00 RT - STA 2+08.66 RT
VT108 STA 2+28.65 RT - STA 3+41.87 RT
VT108 STA 4+75.08 RT - STA 5+14.83 RT
VT108 STA 5+35.23 RT - STA 6+40.00 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
VT108 STA 2+08.66 RT - STA 2+28.65 RT
VT108 STA 5+14.83 RT - STA 5+35.23 RT

DETECTABLE WARNING SURFACE
VT108 STA 3+02.00 RT

VT STATE PLANE GRID

REMOVAL AND DISPOSAL OF GUARDRAIL
VT108 STA 3+12.00 - STA 3+35.00 RT
VT108 STA 4+83.00 - STA 5+05.00 RT

PRECAST REINFORCED CONCRETE
MANHOLE WITH CAST IRON COVER
VT108 STA 5+04.00 - 30.00' RT — (7)

PRECAST REINFORCED CONCRETE DROP
INLET WITH CAST IRON GRATE
VT108 STA 2+26.50 - 11.20' RT — (8)
VT108 STA 2+74.00 - 13.27' RT — (1)
VT108 STA 2+73.90 - 15.36' LT — (3)
VT108 STA 3+33.11 - 19.35' LT — (2)
VT108 STA 5+04.00 - 15.09' RT — (6)
VT108 STA 5+62.69 - 12.73' RT — (5)
VT108 STA 5+70.96 - 15.55' LT — (4)

CONSTRUCT PAVED DRAINAGE DITCH
VT108 STA 5+00.00 RT (5.5' W x 27' L)

CONSTRUCT PAVED APRON
VT108 STA 3+25.00 LT (9.43' W x 35' L)

CONSTRUCT DRIVE (PAVED)
VT108 STA 5+25.00 RT (8.53' W x 38' L)

REMOVAL AND DISPOSAL OF GUARDRAIL
VT108 STA 3+12.52 RT (20.0')
VT108 STA 3+39.25 LT (9.0')
VT108 STA 5+04.64 RT (22.5')
VT108 STA 5+07.86 LT (14.2')

COLD PLANING, BITUMINOUS PAVEMENT
VT108 STA 2+39.50 - 2+89.50
VT108 STA 5+37.50 - 6+40.00

TEMPORARY
CONSTRUCTION
LIMITS (TYP)

CHANNEL LINE

CL BEARING #2
STA 4+78.00

END BRIDGE/PROJECT
STA 4+78.78

PI CURVE (1)
STA 5+18.36 BK
STA 5+18.22 AH

END APPROACH
MATCH EXISTING
STA 6+40.00

RELOCATE MAILBOX, SINGLE SUPPORT
VT108 STA 3+01.62 RT (18')

REMOVAL AND DISPOSAL OF PLANK RAIL
VT108 STA 5+05.54 RT (38') - STA 5+09.66 RT (52')

PLANK RAIL (REPLACE IN-KIND)
VT108 STA 5+05.54 RT (38') - STA 5+09.66 RT (52')

CURVE (1)
DELTA = 11° 38' 09"
D = 28° 56' 14"
R = 198.00'
T = 20.17'
L = 40.21'
E = 1.03'

EXISTING BRIDGE DATA
CONCRETE DECK ON STEEL BEAMS
CONCRETE ABUTMENTS AND PIER
WOOD COVERED WALKWAY
TWO SPANS @ 74' EACH
OVERALL LENGTH = 148'
OVERALL WIDTH = 38.2'

BM NO. 1
CHISELED SQUARE
ON CONCRETE PAD
EL. 711.25

BM NO. 2
VT SURVEY MARK
EL. 711.603

BM NO. 3
NW CORNER
TOP CONCRETE STEP
EL. 717.851

DRAINAGE LAYOUT LEGEND
*SEE DRAINAGE PROFILE SHEET FOR PIPE DETAILS
(#) NEW 18" DIA. PIPE
(#) NEW DROP INLET

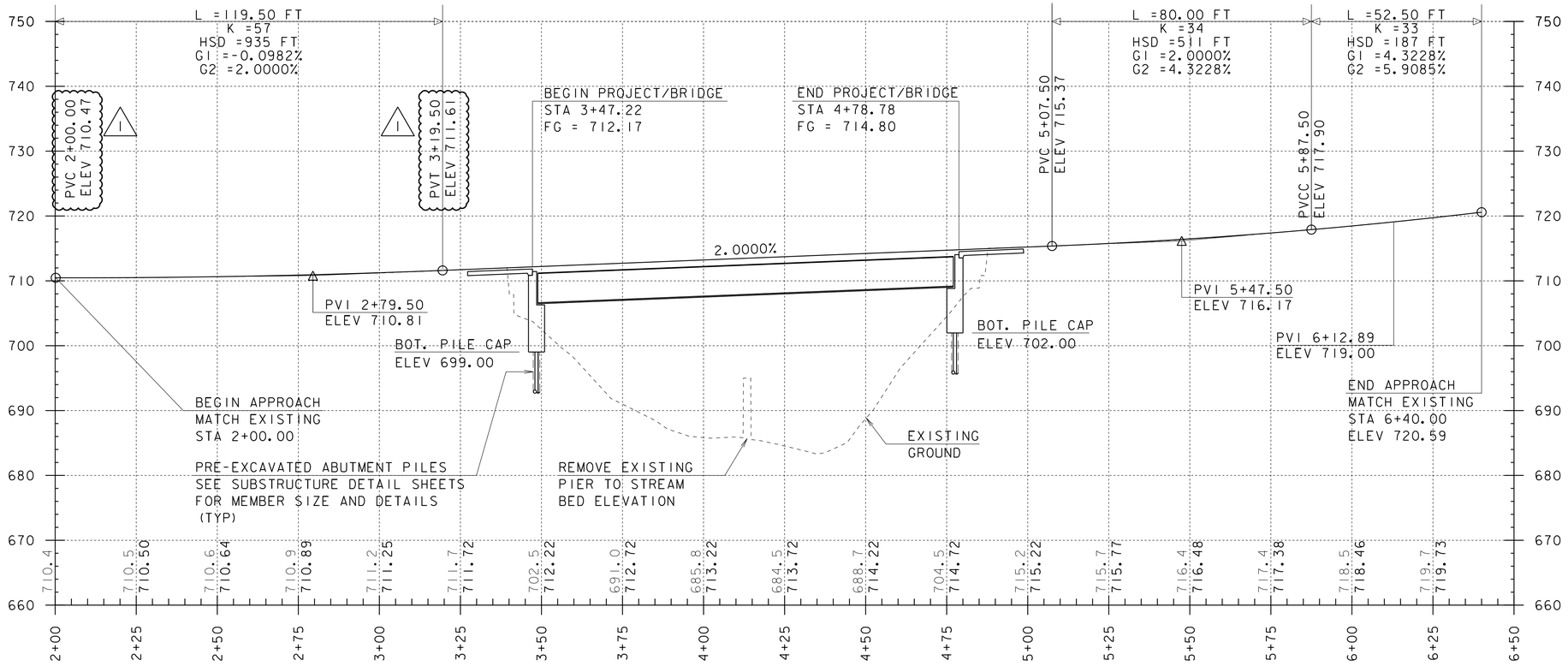
20 0 20
SCALE: 1" = 20'-0"

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
LAYOUT SHEET

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 12 OF 64

VT108_Proposed



PROFILE ALONG VT 108

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

NOTE:

ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG PROPOSED CENTERLINE.

ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADES ALONG PROPOSED CENTERLINE.

REVISION	DATE	DESCIPTION	BY
1	08-18-2014	ADD PVC AND PVT INFORMATION FOR CURVE AT STA2+79.50	MCL

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052pro.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
VT 108 PROFILE

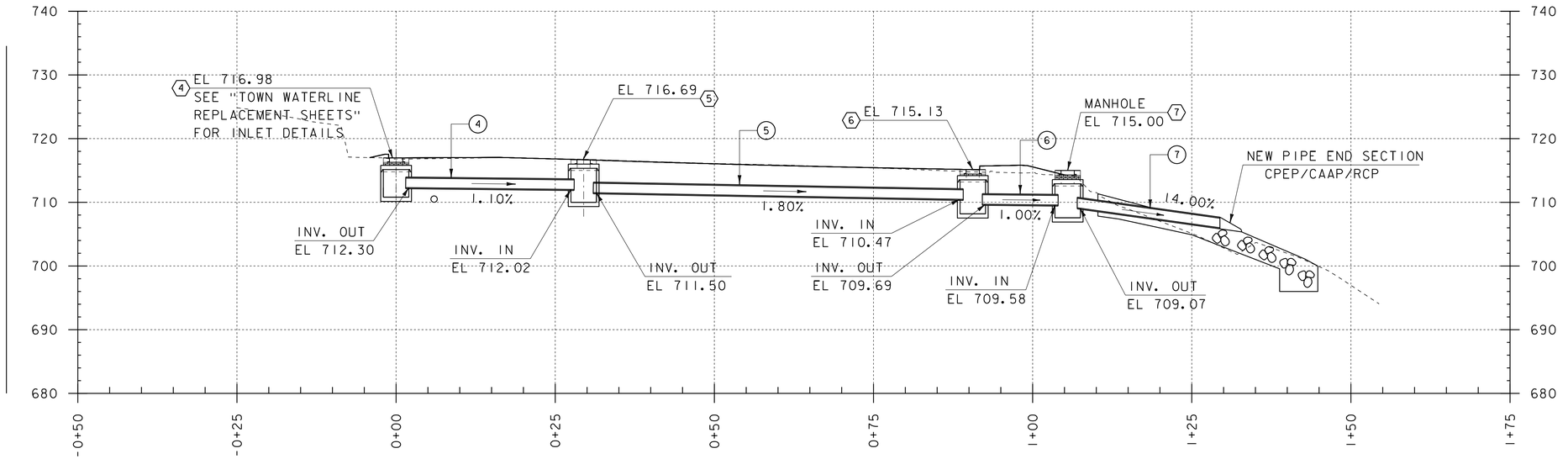
PLOT DATE: 19-AUG-2014
DRAWN BY: G. ROY
CHECKED BY: M. LONGSTREET
SHEET 13 OF 64

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

SCALE: 1" = 20'-0"

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 0235 (11)	
FILE NAME: s87e052bdr_util.dgn	PLOT DATE: 29-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
UTILITY LAYOUT	SHEET 14 OF 64

INLET #4 - PIPE #4 - INLET #5 - PIPE #5 - INLET #6 - PIPE #6 - INLET #7 - PIPE #7



4 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 25'-6"

5 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 57'-2"

6 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 11'-0"

7 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 22'-0"

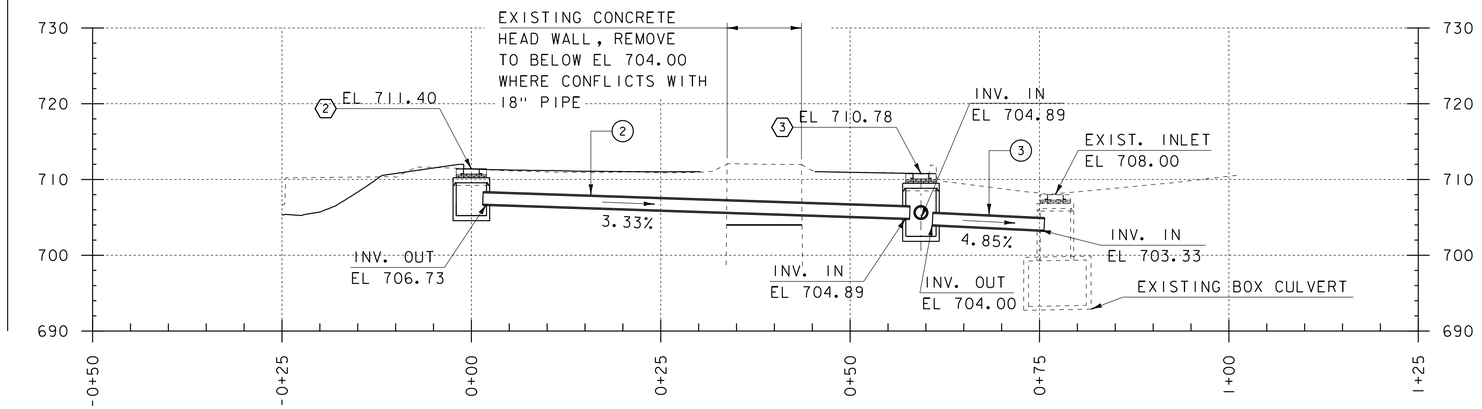
4 — NEW CB

5 — NEW CB

6 — NEW CB

7 — NEW MANHOLE (MH)

INLET #2 - PIPE #2 - INLET #3 - PIPE #3 - INLET TO EXISTING INLET



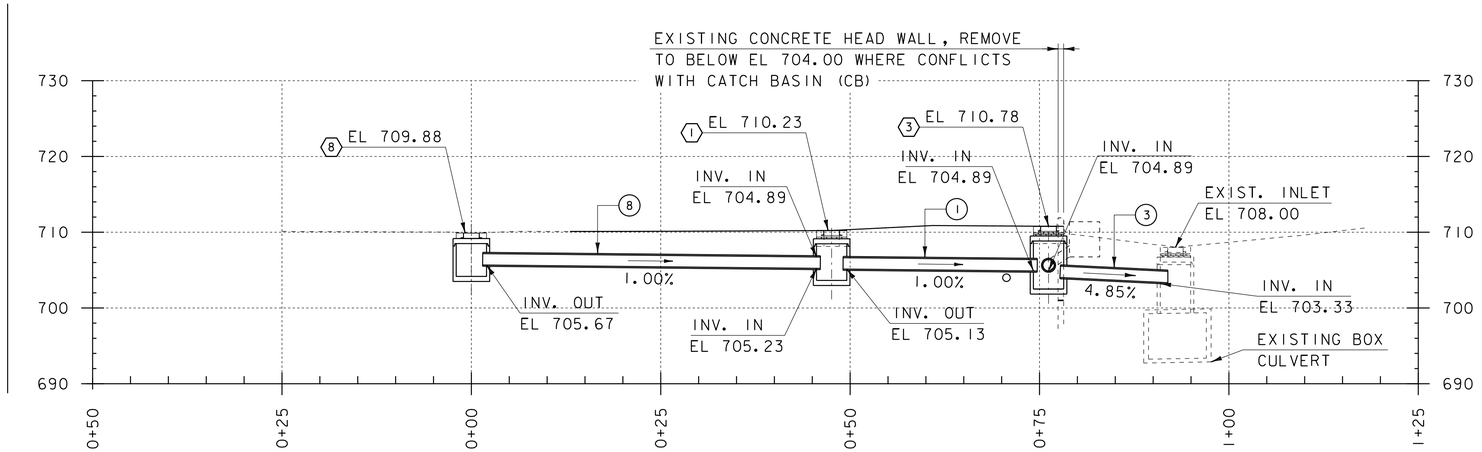
2 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 55'-5"

3 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 13'-9"

2 — NEW CB

3 — NEW CB

INLET #8 - PIPE #8 - INLET #1 - PIPE #1 - INLET #3 - PIPE #3 - TO EXISTING INLET



1 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 24'-8"

3 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 13'-9"

8 — NEW CPEP/CAAP/RCP
DIAMETER = 18"
LENGTH = 44'-6"

1 — NEW CB

3 — NEW CB

8 — NEW CB

(#) NEW PIPE: DIA 18" TYPE: OPTION PIPE

⟨#⟩ NEW DROP INLET (CB) OR MANHOLE (MH)

NOTES:
1) SEE "LAYOUT SHEET" FOR CB STATION OFFSET LOCATIONS FROM VT108 ML.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PIPE PROFILES

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	ASKEW NO. DEG.	INLET/OUTLET TYPE INLET	INLET/OUTLET TYPE OUTLET	DITCH IN	DITCH OUT	PIPE ARCH SPAN IN	PIPE ARCH RISE IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	ALLOWABLE OPTIONS CAAP TH	ALLOWABLE OPTIONS RCP CL	ALLOWABLE OPTIONS CSP TH	ALLOWABLE OPTIONS CPEP SL	ALLOWABLE OPTIONS PCCSP PI TH	PIPE ELBOW NO. DEG.	ES EA	CB EA	PRC DI C	DEPTH DI FT	CONC CLASS B CY	REINF STEEL LBS	DI GRATE TYPE	CHAN ELEV EA	CRM CY	TRENCH EXCAVATION EARTH CY	TRENCH EXCAVATION ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUCT EXCAV CY	GRAN BKFILL STRUCT CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MARKER POSTS LT EA	MARKER POSTS RT EA			REMARKS
2+26.50		RT																				X	5.71			D			17.23	-	-	-	-	12.23	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB8)
2+26.50	2+74.00	RT		CB	CB						18	47.56		X	X		X												38.77	-	-	-	-	35.06	-	-	-	-	-	-			18" PIPE TO CONNECT TWO CB'S (PIPE 8)
2+74.00		RT																				X	6.60			D			18.84	-	-	-	-	14.36	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB1)
2+74.00	2+43.00	LT/RT		CB	CB						18	24.63		X	X		X												20.497	-	-	-	-	18.197	-	-	-	-	-	-			18" PIPE TO CONNECT TWO CB'S (PIPE 1)
3+33.11		LT																				X	6.17			D			17.755	-	-	-	-	13.568	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB 2)
3+33.11	2+73.90	LT/LT		CB	CB						18	55.35		X	X		X												47.817	-	-	-	-	42.645	-	-	-	-	-	-			18" PIPE TO CONNECT TWO CB'S (PIPE 2)
2+73.90		LT																				X	8.28			D			22.469	-	-	-	-	16.85	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB 3)
2+73.90	2+74.11	LT/LT		CB	CB						18	13.75		X	X		X												10.48	-	-	-	-	9.1942	-	-	-	-	-	-			18" PIPE TO CONNECT TWO CB'S (PIPE 3)
5+70.96		LT																				X	6.18			*			17.533	-	-	-	-	13.34	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB 4) *SEE STORM DRAIN PROFILES AND DETAILS SHEET
5+70.96	5+62.69	LT/RT		CB	CB						18	25.47		X	X		X												17.745	-	-	-	-	15.367	-	-	-	-	-	-			18" PIPE TO CONNECT TWO CB'S (PIPE 4)
5+62.69		RT																				X	6.69			D			19.102	-	-	-	-	14.562	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB 5)
5+62.69	5+04.00	RT/RT		CB	CB						18	57.13		X	X		X												44.402	-	-	-	-	39.066	-	-	-	-	-	-			18" PIPE TO CONNECT TWO CB'S (PIPE 5)
5+04.00		RT																				X	6.94			D			18.824	-	-	-	-	14.114	-	-	-	-	-	-			4'-0" DIAMETER PRECAST CB (CB 6)
5+04.00	5+04.00	RT/RT		CB	MH						18	10.91		X	X		X												6.07	-	-	-	-	5.0513	-	-	-	-	-	-			18" PIPE TO CONNECT CB TO MH (PIPE 6)
5+04.00		RT																				X	7.43						17.85	-	-	-	-	12.807	-	-	-	-	-	-			4'-0" DIAMETER PRECAST MH (MH 7) CAST IRON COVER
5+04.00	4+80.96	RT/RT		MH	STONE						18	21.95		X	X		X			X									4.0417	-	-	-	-	1.9752	-	-	-	-	-	-			18" PIPE FROM MH TO CHANNEL (PIPE 7) w/ END SECTION
								SUBTOTAL:				256.75										8							339.48					278.39									
								ROUNDING:				3.75																	0.52					1.61									
								TOTAL:				260.00										8							340.00					280.00									

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (II)

FILE NAME: s87e052xsl.DGN
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DRAINAGE DETAILS

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET

4" YELLOW LINE (DOUBLE) CL
VT108 STA 2+00.00- STA 6+40.00

4" WHITE LINE
VT108 STA 2+00.00 LT - STA 6+40.00 LT
VT108 STA 2+00.00 RT - STA 2+26.00 RT
VT108 STA 2+28.00 RT - STA 6+40.00 RT

CROSSWALK MARKING
VT108 3+02.00 15.5 RT - STA 3+06.00 15.5 LT

VT STATE PLANE GRID

R&S
R&S
N
STA 3+42.25 LT

VD-701
N
BRIDGE
2
VT-108
N
STATION 5+25.00 LT

2+00
3+00
4+00
5+00
6+00
6+40

R&S
R&S
N
STA 2+88.80 RT

VD-701
N
BRIDGE
2
VT 108
N
STATION 3+23.00 RT

EXISTING SIGNS

NEW SIGNS

EXISTING SIGNS
NEW SIGNS
N = NEW
R = REMOVE
RET = RETAIN
R&S = REMOVE AND SALVAGE

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052tcs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TRAFFIC SIGNS & STRIPING

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: J. LACROIX
SHEET 17 OF 64

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

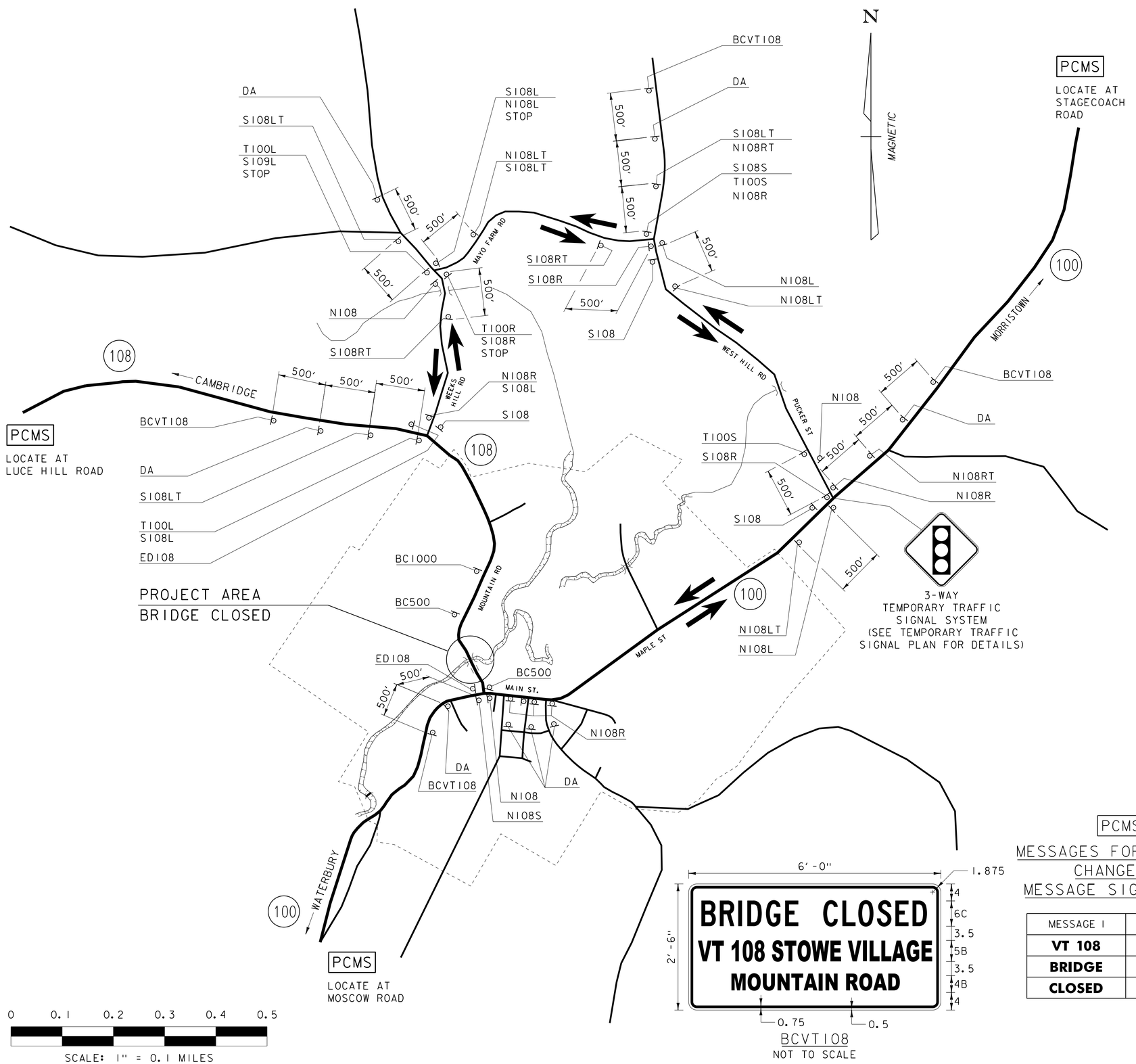
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			FOUNDATION	TUBULAR STEEL Ø (in) lb/ft				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.75	2.0	2.5			3.0	4.0	4.0 MOD		3.0	3.5	4.0	5.0	24"	30"						
															1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
											OPTION ITEMS																								
2+88.80 RT		1	30	30			1				1					15		X	X															WI1-2		SHS
3+42.25 LT		1	30	30			1				1					15		X	X															WI1-2		SHS
2+88.80 RT		1	24	12			1																											WI6-7P		SHS
3+42.25 LT		1	24	12			1																											WI6-7P		SHS
3+23.00 RT		1	6	8	0.33										8			X															VD-701		T-42
5+25.00 LT		1	6	8	0.33										8			X															VD-701		T-42
TOTALS		SF 0.66	SF	EA. 4	SF							FT	FT	FT	FT 16	FT 30	FT		EA 2	LB	LB	LB		LB	LB	LB	LB	EA.	EA.	LB					
															FT 46								EA.												

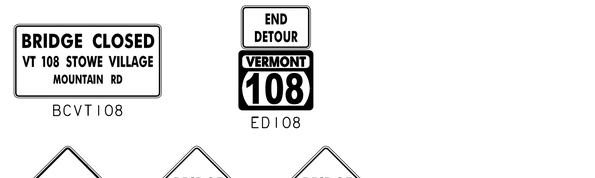
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052tcs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TRAFFIC SIGN SUMMARY SHEET

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: J. LACROIX
SHEET 18 OF 64





NOTES:

1. THE NUMBER OF TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL ROADWAY CLOSURE REQUIREMENTS.

2. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED OFF THE EDGE OF THE ROADWAY, OUTSIDE THE CLEAR ZONE, BUT SHALL BE VISIBLE FROM THE ROADWAY. ANY VEGETATION THAT INTERFERES WITH VISIBILITY OF THE PCMS SHALL BE REMOVED. REMOVAL OF THE VEGETATION SHALL BE INCIDENTAL TO ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN".

3. SEE CONTRACT DOCUMENTS FOR CLOSURE DATES.

PCMS

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

MESSAGE 1	MESSAGE 2
VT 108	**DATE**
BRIDGE	THRU
CLOSED	**DATE**

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052detour.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TRAFFIC DETOUR PLAN

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 19 OF 64

VT STATE PLANE GRID

N

BRIDGE CLOSED
R11-2 MOUNTED ON TYPE III (MOD) BARRICADE

BRIDGE CLOSED
R11-2 MOUNTED ON TYPE III (MOD) BARRICADE

SIDEWALK CLOSED
R11-2 MOUNTED ON TYPE III (MOD) BARRICADE

SIDEWALK CLOSED
R11-2 MOUNTED ON TYPE III (MOD) BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE (MOD.)
- TEMPORARY TRAFIC BARRIER
- PCMS - PORTABLE CHANGEABLE MESSAGE SIGN

2+00 3+00 4+00 5+00 6+00 6+40

NOTE:
TEMPORARY TRAFFIC BARRIER SHALL MEET THE REQUIREMENTS OF SECTION 621 AND WILL BE INCLUDED FOR PAYMENT UNDER CONTRACT ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).
PORTABLE CHANGEABLE MESSAGE SIGNS WILL BE PAID SEPARATELY UNDER CONTRACT ITEM 641.15.

SCALE 1" = 30'-0"
30 0 30

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052detour.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TRAFFIC CONTROL PLAN

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 20 OF 64

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.40	QUANTITY
POWER METER ON STANCHION	1
BREAKER PANEL ON STANCHION	1
TRAFFIC SIGNAL CONTROLLER (NEMA TS2)	1
NEMA POLE MOUNTED CONTROLLER CABINET PAINTED FLAT BLACK WITH ANCILLARY CONTROL EQUIPMENT	1
WESTERN RED CEDAR OR SOUTHERN PINE WOODEN STRAIN POLE (SP-2)	1
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND 5" LOUVERED BACK-PLATES WITH ALL PIECES PAINTED FLAT BLACK	7
DETECTOR EXTENSION BRACKET	3
DETECTOR ASSEMBLY	3
DETECTION PROCESSOR CARD	3

TEMPORARY TRAFFIC SIGNAL SYSTEM
(VT-100 & WEST HILL ROAD)

WOODEN STRAIN POLE
STA 226+03 LT (SP-1)

POLE MOUNT CABINET/CONTROLLER
STA 226+03 LT (SP-1)

POWER STANCHION
STA 226+82 RT (SP-2)

CONTROLLER TIMING CHART

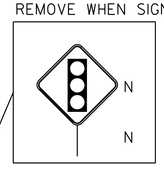
VT ROUTE 100 & WEST HILL ROAD								
		V100		W.H.		V100		
PHASE	1	2	3	4	5	6	7	8
TRAFFIC MOVEMENT		->		↓		<-		
MINIMUM GREEN		5		5		5		
MAXIMUM 1 GREEN		33		16		33		
MAXIMUM 2 GREEN		42		22		42		
MAXIMUM 3 GREEN		--		--		--		
YELLOW CLEARANCE		4.4		3.2		4.4		
ALL RED CLEARANCE		2.0		2.5		2.0		
VEH. EXTENSION		2		2		2		
RECALL MODE		SOFT		--		SOFT		

CONTROLLER TO RUN MAX 1 TIMINGS WHEN
VT-108 BRIDGE IS OPEN TO TRAFFIC

CONTROLLER TO RUN MAX 2 TIMINGS WHEN
VT-108 BRIDGE IS CLOSED TO TRAFFIC

CONTROLLER TO FLASH FROM
11:00 PM TO 6:00 AM

STA 222+50 NEW W3-3
REMOVE WHEN SIGNAL IS REMOVED

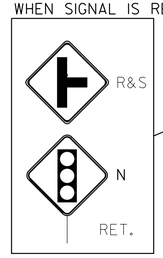


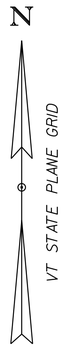
TEMPORARY 24 INCH STOP BAR
STA 225+39 RT (15')
STA 227+15 LT (15')
STA 41+01 LT (12')

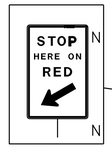
REMOVAL OF EXISTING PAVEMENT MARKINGS
STA 226+03 - 226+26 CL (23 SF)
STA 226+63 - 226+86 CL (23 SF)
STA 40+24 - 40+46 CL (22 SF)

STA. 228+35 LT
REPLACE SIDE ROAD WARNING SIGN W2-2
WITH SIGNAL WARNING SIGN W3-3 ON
EXISTING POST WHEN SIGNAL IS IN PLACE.

REINSTALL SIDE ROAD WARNING SIGN
WHEN SIGNAL IS REMOVED.

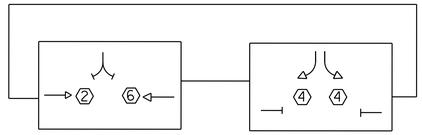


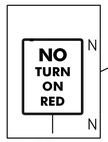




41+00
REMOVE UPON REMOVAL
OF SIGNAL

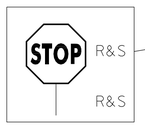
PHASING DIAGRAM





40+75
REMOVE UPON REMOVAL
OF SIGNAL

STA 40+35 RI-1
REMOVE WHEN SIGNAL BECOMES OPERATIONAL
REPLACE WHEN SIGNAL IS REMOVED



NOTE: ALL WORK DETAILED ON THIS SHEET, INCLUDING PAVEMENT MARKINGS, REMOVAL OF EXISTING PAVEMENT MARKINGS AND SIGNS WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 678.40.

LEGEND

- SIGNAL HEAD AND PHASE NUMBER
- POLE AND GUY WIRE
- CONTROLLER CABINET
- RADAR DETECTOR
- RADAR DETECTION AREA AND PHASE NUMBER

0 10 20
SCALE

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235(11)

FILE NAME: t87e052sig.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: I. DEGUTIS
TEMPORARY TRAFFIC SIGNAL PLAN

PLOT DATE: 28-JUL-2014
DRAWN BY: I. DEGUTIS
CHECKED BY: M. LACROIX
SHEET 21 OF 64

TEMPORARY TRAFFIC SIGNAL SYSTEM NOTES

TEMPORARY TRAFFIC CONTROL NOTES FOR TRAFFIC SIGNAL SYSTEM WORK

1. THE FOLLOWING NOTES APPLY TO TRAFFIC CONTROL NECESSARY FOR THE INSTALLATION OR MODIFICATION OF THE TEMPORARY TRAFFIC SIGNALS ONLY.
2. DURING CONSTRUCTION, ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON VT ROUTE 100. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT NIGHT, ON WEEKENDS AND HOLIDAYS. DURING PEAK TRAFFIC AND DURING CONSTRUCTION. AT THE DISCRETION OF THE ENGINEER, UNIFORMED TRAFFIC OFFICERS OR TRAINED FLAG PERSONS SHALL DIRECT TRAFFIC, WHENEVER REQUIRED.
3. TRAFFIC CONTROL SIGNING AND CHANNELIZING DEVICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE STANDARD DRAWINGS (T-1, T-28, T-29, T-30, T-31, T-17, T-21) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. AFTER SIGNAL INSTALLATION, ALL HEADS MUST BE COVERED (TURNING SHALL NOT BE ALLOWED) UNTIL TURNED ON. THE METHOD OF COVERING SHALL BE AS FOLLOWS:
   - ALL NEW TRAFFIC AND PEDESTRIAN SIGNAL HEADS WHICH HAVE BEEN INSTALLED BUT NOT PLACED IN EITHER FLASHING OR FULL OPERATION SHALL BE COVERED. EXISTING SIGNAL HEADS WHICH ARE PLACED OUT OF SERVICE IN ORDER TO PERFORM WORK ON THE SIGNAL SYSTEM SHALL ALSO BE COVERED, EXCEPT WHEN SUCH WORK CAN BE COMPLETED IN A RELATIVELY SHORT PERIOD OF TIME (SEVERAL HOURS) AND TRAFFIC CONTROL HAS BEEN PROVIDED FOR.
   - THE SIGNAL COVERS SHALL CONSIST OF A ONE-PIECE PLASTIC BAG HAVING A MINIMUM THICKNESS OF FOUR MIL. THE BAG SHALL BE OPAQUE. THE COVER SHALL SLIP OVER THE ENTIRE SIGNAL HEAD AND SHALL BE SECURELY TIED AT THE OPENING WITH A ROPE OF SUFFICIENT SIZE AND STRENGTH TO SECURE THE COVER. AN INTERMEDIATE ROPE OF THE SAME MATERIAL SHALL BE DRAWN AROUND THE CENTER OF THE COVER TO PREVENT EXCESS FLAPPING IN THE WIND.
   - A DRAIN HOLE SHALL BE MADE AT THE BOTTOM OF THE BAG TO ALLOW THE ESCAPE OF MOISTURE. NO TAPE OR ADHESIVE WILL BE ALLOWED TO BE ATTACHED TO ANY SURFACE OF THE SIGNAL HOUSING OR LENSES. ALL COVERS SHALL BE PLACED IN A NEAT WORKMANLIKE MANNER, ANY COVER WHICH IS TORN OR MISSING SHALL BE IMMEDIATELY REPLACED. PAYMENT FOR THE COVERS, THEIR REPLACEMENT, AND REMOVAL AND ALL INCIDENTALS FOR COMPLETION OF THE WORK SHALL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 678.40.
5. WHERE TWO-WAY TRAFFIC IS MAINTAINED DURING CONSTRUCTION, THE SIGN PACKAGE SHOWN ON STD. T-21 SHOULD BE USED. APPROACH CONSTRUCTION SIGNING SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD. OTHER SIGNING SHALL BE REMOVED OR COVERED WHEN NOT APPLICABLE.
6. VARIATIONS IN THE SIGNING PACKAGES MAY BE DICTATED BY UNIQUE GEOMETRY AND/OR TRAFFIC CONDITIONS AND THE TRAFFIC CONTROL PLANS.
7. THE CONTRACTOR SHALL NOT WORK WITHIN THE HIGHWAY RIGHT-OF-WAY WITHOUT THE APPROPRIATE CONSTRUCTION SIGNING IN PLACE AS SHOWN ON STD. T-10.

TEMPORARY TRAFFIC SIGNAL NOTES

1. TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE IN ACCORDANCE WITH ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM."
2. DESIGN OF THE SIGNAL SUPPORTS AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. SIGNAL PHASING/TIMING ADJUSTMENTS REQUESTED BY THE ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD.
4. SIGNAL FACES SHALL BE L.E.D. AND CONSIST OF 12" LENSES. (RED, YELLOW AND GREEN)
5. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE GROUND.
6. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.
7. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE OF NO GREATER THAN 14.5 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE CURRENT EDITION OF THE MUTCD FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
8. SIGNAL HEAD PLACEMENT IS CRITICAL.
9. THE TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL CONSIST OF POLES, SIGNS AND POSTS, WARNING SIGNS, LUMINAIRES, FLASHING BEACONS, ASSOCIATED PAVEMENT MARKINGS, AND SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE DESIGN. IT ALSO INCLUDES PERMITS AND COSTS ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
10. INSTALL WIRING BETWEEN SIGNAL POLES TO PROVIDE FOR A SAFE INSTALLATION. ATTACHMENT TO UTILITY POLES TO BE COORDINATED BY THE CONTRACTOR WITH THE UTILITY COMPANY.
11. PLACE TEMPORARY POLES BEHIND GUARDRAIL OR OUTSIDE OF THE CLEAR ZONE.
12. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELING PUBLIC.
13. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.

A. SIGNAL EQUIPMENT

1. ALL SIGNAL HEADS SHALL BE 12" POLYCARBONATE. THE SIGNAL HEADS SHALL HAVE FLAT BLACK HOUSINGS AND VISORS.
2. ALL SIGNAL HEADS SHALL HAVE FLAT BLACK LOUVERED BACK PLATES.
3. THE CONTROLLER SHALL BE AN ASC/3-2100 (NEMA TS2) OR NAZTEC MODEL 980 (NEMA TS2) OR MCCAIN ATC eX (NEMA TS2) IN A NEMA POLE MOUNT CONTROL CABINET INSTALLED AT THE LOCATION SHOWN ON THE PLANS. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SUCH THAT THE DOOR DOES NOT FACE THE ROADWAY.
4. ALL SIGNAL HEADS SHALL HAVE RED, YELLOW AND GREEN L.E.D. SIGNALS WITH A VISIBLE BEAM SPREAD OF 80 DEGREES OFF AXIS.
5. ALL TRAFFIC SIGNAL EQUIPMENT AND SPAN WIRE HANGING SIGNS SHALL HAVE SAFETY CABLES.
6. A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET.

B. SIGNAL OPERATION

1. SWITCH-OVER TO THE TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK TRAFFIC OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING THE SWITCH-OVER.
2. ALL SIGNALS SHALL DWELL ON VT ROUTE 100 UNLESS OTHERWISE NOTED.
3. THE VT ROUTE 100 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.
4. SIGNAL TIMING SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC OBSERVATION AND/OR ADDITIONAL FIELD STUDIES.

C. STOP BAR DETECTION EQUIPMENT

1. STOP BAR DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASE IS NOT AFFECTED.
2. STOP BAR DETECTION ZONES SHALL EXTEND FIVE FEET PAST THE STOP BAR.
3. SEE THE PLANS FOR A DETAILED LIST OF EQUIPMENT. INDUCTIVE LOOPS OR VIDEO DETECTION SHALL NOT BE ALLOWED.

D. GENERAL

1. A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.
2. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A POWER SUPPLY TO THE TRAFFIC SIGNAL EQUIPMENT.
3. ALL ELECTRICAL WIRING SHALL BE DONE BY A LICENSED ELECTRICIAN AND OVERSEEN BY A MASTER ELECTRICIAN.
4. SEE STANDARDS E171-A AND 171-B FOR ADDITIONAL NOTES.
5. SAG ON THE LOADED SPAN WIRE SHALL NOT EXCEED 5% OF THE TOTAL LENGTH OF THE WIRE.
6. ALL WORKS MENTIONED IN THIS SHEET BE INCLUDED UNDER BID ITEM 678.40 UNLESS OTHERWISE NOTED.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235(11)

FILE NAME: t87e052sig.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: I. DEGUTIS
TEMPORARY TRAFFIC SIGNAL SYSTEM NOTES

PLOT DATE: 28-JUL-2014
DRAWN BY: I. DEGUTIS
CHECKED BY: M. LACROIX
SHEET 22 OF 64

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.

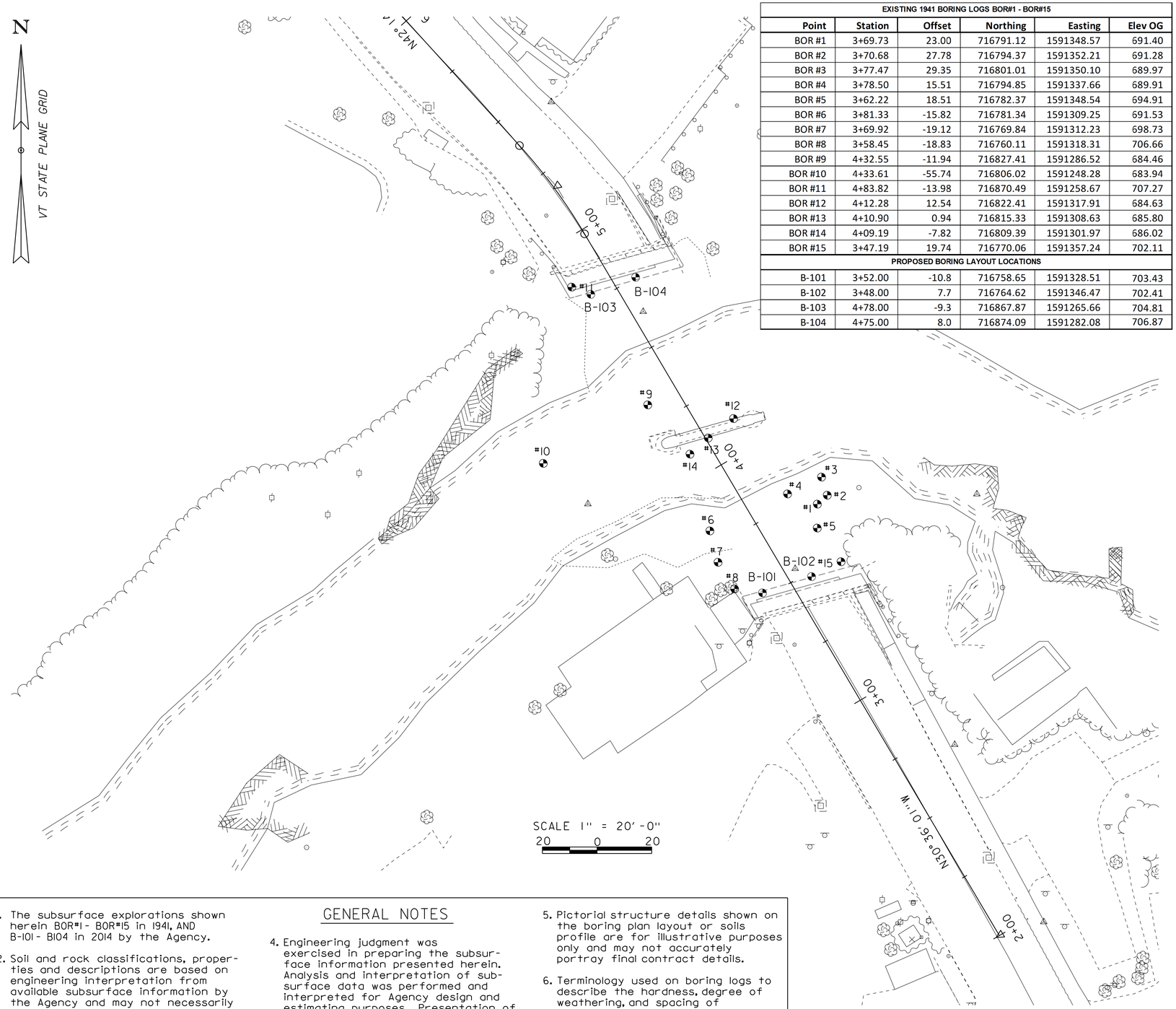
MUCK - Soft organic soil (containing > 10% organic material.

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.



EXISTING 1941 BORING LOGS BOR#1 - BOR#15					
Point	Station	Offset	Northing	Easting	Elev OG
BOR #1	3+69.73	23.00	716791.12	1591348.57	691.40
BOR #2	3+70.68	27.78	716794.37	1591352.21	691.28
BOR #3	3+77.47	29.35	716801.01	1591350.10	689.97
BOR #4	3+78.50	15.51	716794.85	1591337.66	689.91
BOR #5	3+62.22	18.51	716782.37	1591348.54	694.91
BOR #6	3+81.33	-15.82	716781.34	1591309.25	691.53
BOR #7	3+69.92	-19.12	716769.84	1591312.23	698.73
BOR #8	3+58.45	-18.83	716760.11	1591318.31	706.66
BOR #9	4+32.55	-11.94	716827.41	1591286.52	684.46
BOR #10	4+33.61	-55.74	716806.02	1591248.28	683.94
BOR #11	4+83.82	-13.98	716870.49	1591258.67	707.27
BOR #12	4+12.28	12.54	716822.41	1591317.91	684.63
BOR #13	4+10.90	0.94	716815.33	1591308.63	685.80
BOR #14	4+09.19	-7.82	716809.39	1591301.97	686.02
BOR #15	3+47.19	19.74	716770.06	1591357.24	702.11
PROPOSED BORING LAYOUT LOCATIONS					
B-101	3+52.00	-10.8	716758.65	1591328.51	703.43
B-102	3+48.00	7.7	716764.62	1591346.47	702.41
B-103	4+78.00	-9.3	716867.87	1591265.66	704.81
B-104	4+75.00	8.0	716874.09	1591282.08	706.87

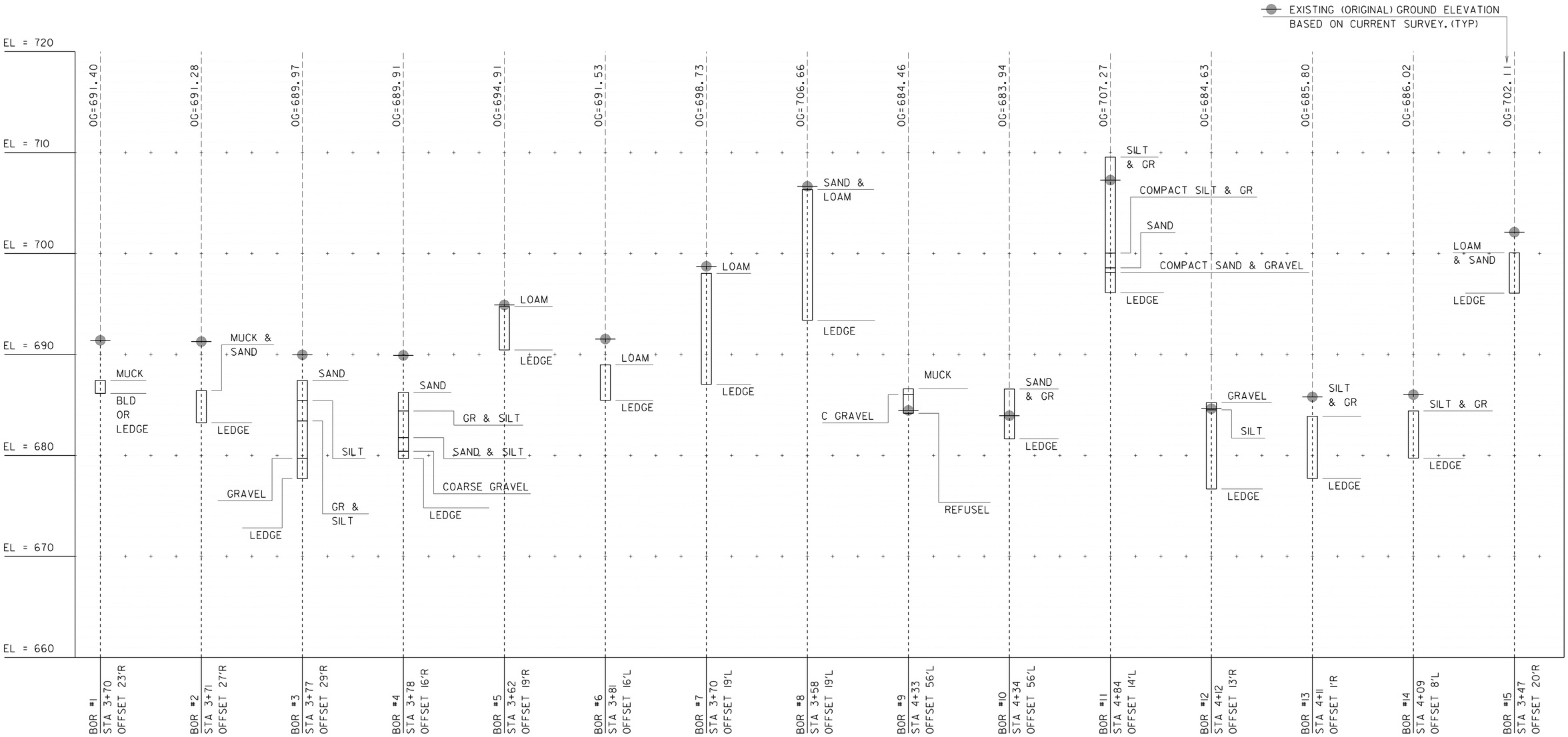
GENERAL NOTES

1. The subsurface explorations shown herein BOR#1 - BOR#15 in 1941, AND B-101 - B104 in 2014 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: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BORING INFORMATION SHEET

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 23 OF 64



NOTES:

1) THESE BORINGS (BOR #1 - BOR #15) WERE EXTRACTED FROM 1941 RECORD PLANS "STOWE VILLAGE BRIDGE S.A. 4-1941". THE ELEVATION DATUM USED ON THESE RECORD PLANS APPEARS TO BE RELATIVELY SIMILAR, APPROXIMATELY 0.61' LOWER THAN THE PROPOSED PROJECT VERTICAL DATUM BASED ON F.G. ELEVATIONS AT BEGIN BRIDGE AND END BRIDGE. ELEVATIONS OF THE CHANNEL GROUND WILL LIKELY VARY MORE SIGNIFICANTLY.

2) THE SYMBOL (—●—) INDICATES THE ELEVATION OF THE CURRENT CHANNEL PER THE PROPOSED PROJECT EXISTING GROUND SURVEY. CURRENT EXISTING GROUND ELEVATIONS ARE ALSO LABLED FOR EACH BORING LOCATION.

3) THE BORING LOCATIONS WERE SCALED AND PLOTTED USING THE 1941 RECORD PLANS.

4) THE APPROXIMATE LOCATIONS OF EACH SUBSURFACE MATERIAL WERE SCALED AND PLOTTED FROM THE 1941 RECORD PLAN BORING TABLE.

5) BORING LOGS B-101 - B-104 PROVIDE CURRENT INFORMATION.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BORING LOGS 1

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 24 OF 64

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

BORING LOG

STOWE
BHF 0235(11)
VT-108 BR-2

Boring No.: **B-101**
Page No.: 1 of 1
Pin No.: 87E052
Checked By:

Boring Crew: JUDKINS, GARROW, NIETO
Date Started: 1/14/14 Date Finished: 1/15/14
VTSPG NAD83: N 716758.65 ft E 1591328.51 ft
Station: 3+52 Offset: -10.80
Ground Elevation: 703.43 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 55 TRACK	C. = 1.46

Groundwater Observations

Date	Depth (ft)	Notes

PILE CAP
EL=699.00

ESTIMATED PILE
TIP EL= 689.00

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Field Note:, No Recovery				R@1.0"				
2.5										
		Field Note:, NXDC, Cleaned out casing.								
5.0										
		A-1-b, SiSaGr, gry-brn, Moist, Rec. = 0.9 ft, Lab Note: Broken Rock was within sample.				4-3-4-6 (7)	22.5	52.6	24.9	22.5
7.5										
		9.0 ft - 11.0 ft, First two feet of run is possible Boulder.. NXMDC	1 (70)	100 (0)	3 2 8					
10.0		11.0 ft - 12.0 ft, Dark gray & black, Carbonaceous biotite-muscovite-quartz Phyllite, with quartz laminae. Moderately soft, Unweathered, Fair rock, RMR = 44				Top of Bedrock @ 11.0 ft				
12.5		12.0 ft - 17.0 ft, Dark gray & black, Carbonaceous biotite-muscovite-quartz Phyllite, with quartz laminae. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 49	2 (70)	96 (30)	4 3 3 3 6					
15.0										
17.5		17.0 ft - 19.0 ft, Dark gray, Carbonaceous biotite-muscovite-quartz Phyllite, with quartz laminae. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 54	3 (70)	90 (70)	3 5					
20.0		Hole stopped @ 19.0 ft								
22.5		Remarks: 1. Drilling was performed from the bridge deck. 2. Asphalt Pavement depth was 0.20 ft. 3. Concrete depth was 0.90 ft.								

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

BORING LOG 2 STOWE BHF 0235(11).GPJ VERMONT AOT.GDT 1/31/14

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

BORING LOG

STOWE
BHF 0235(11)
VT-108 BR-2

Boring No.: **B-102**
Page No.: 1 of 1
Pin No.: 87E052
Checked By:

Boring Crew: JUDKINS, GARROW, NIETO
Date Started: 1/17/14 Date Finished: 1/17/14
VTSPG NAD83: N 716764.62 ft E 1591346.47 ft
Station: 3+48 Offset: 7.70
Ground Elevation: 702.41 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 55 TRACK	C. = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
01/17/14	2.0	While drilling.

PILE CAP
EL=699.00

ESTIMATED PILE
TIP EL= 689.00

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, SaGr, brn-gry, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock was within sample.				25-11-4-3 (15)	6.9	45.3	36.4	18.3
2.5		A-2-4, SiGrSa, white-brn, Moist, Rec. = 0.5 ft, Lab Note: Broken Rock was within sample.				4-3-10-8 (13)	12.8	28.3	49.4	22.3
5.0		A-2-4, GrSiSa, brn-gry, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.				4-2-2-2 (4)	28.3	24.2	42.7	33.1
7.5		A-1-b, SaGr, brn-gry, Moist, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.				4-10-R@0.0" (R)	15.7	52.8	29.0	18.2
10.0		8.0 ft - 13.0 ft, Grayish green, Chlorite-muscovite-quartz Phyllitic Schist, with quartzofeldspthic layers. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 58	1 (60)	100 (84)	6 3 3 4 4	Top of Bedrock @ 8.0 ft				
12.5		13.0 ft - 18.0 ft, Grayish green, Chlorite-muscovite-quartz Phyllitic Schist, with quartzofeldspthic layers. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 58	2 (60)	100 (80)	3 3 3 3 3					
15.0										
17.5		Hole stopped @ 18.0 ft								
20.0		Remarks: 1. Drilling was performed from the bridge deck. 2. Asphalt Pavement depth was 0.15 ft. 3. Concrete depth was 0.67 ft. 4. Hole collapsed at 7.0 ft.								
22.5										

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

BORING LOG 2 STOWE BHF 0235(11).GPJ VERMONT AOT.GDT 1/31/14

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BORING LOGS 2

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 25 OF 64

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

BORING LOG

STOWE
BHF 0235(11)
VT-108 BR-2

Boring No.: **B-103**
Page No.: 1 of 1
Pin No.: 87E052
Checked By:

Boring Crew: JUDKINS, GARROW, NIETO
Date Started: 1/13/14 Date Finished: 1/14/14
VTSPG NAD83: N 716867.87 ft E 1591265.66 ft
Station: 4+78 Offset: -9.30
Ground Elevation: 704.81 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 55 TRACK	C. = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
01/14/14	2.7	While drilling.
01/14/14	1.1	Hole collapsed.

PILE CAP
EL=702.00

ESTIMATED PILE
TIP EL= 685.71

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, SaGr, gry, Moist, Rec. = 1.3 ft, Lab Note: Mostly Broken Rock pieces (Phyllite).				30-17-5-2 (22)	14.1	52.1	29.6	18.3
		A-1-a, SaGr, brn-gry, Moist, Rec. = 0.7 ft, Lab Note: Mostly Broken Rock pieces (Phyllite).				3-10-8-7 (18)	10.1	56.5	31.9	11.6
5		A-4, SaSi, gry-Lt/brn, Moist, Rec. = 1.3 ft				3-4-5-6 (9)	18.4	6.3	39.0	54.7
		A-4, GrSaSi, gry-Lt/brn, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock pieces (Phyllite) were within sample.				5-6-8-R@1.0" (14)	16.7	22.1	35.2	42.7
		A-1-b, SiSaGr, gry-rust, Moist, Rec. = 0.3 ft, Lab Note: Broken & Weathered Rock pieces (Phyllite) were within sample.				R@3.5"	14.4	39.2	36.9	23.9
10		A-4, SaSi, gry, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock pieces (Phyllite) were within sample.				9-7-7-7 (14)	22.3	10.4	42.0	47.6
		A-4, GrSaSi, gry, Moist, Rec. = 1.5 ft, Lab Note: Broken Rock pieces (Phyllite) were within sample.				4-5-8-14 (13)	16.4	30.5	33.5	36.0
		A-1-b, SaGr, gry, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock pieces (Phyllite) were within sample.				32-36-R@5.0" (R) R@1.0"	11.9	50.9	31.9	17.2
15		A-1-b, SaGr, gry, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock pieces (Phyllite) were within sample.								
		Visual Description:, Broken Rock pieces (Phyllite), gry, Moist, Rec. = 0.1 ft	1 (60)	80 (0)	5	Top of Bedrock @ 16.1 ft				
		16.1 ft - 21.1 ft, Dark gray, Carbonaceous biotite-muscovite-quartz Phyllite, with quartz laminae. Moderately soft, Fair rock, NXMDC, Upper part of Run was Unweathered. Lower part of Run was Moderately Weathered. RMR = 44			4 8 9 11					
20										
		21.1 ft - 26.1 ft, Dark gray, Carbonaceous biotite-muscovite-quartz Phyllite, with quartz laminae. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 54	2 (60)	100 (60)	4 5 6 5 6					
25										
		Hole stopped @ 26.1 ft								
30		Remarks: 1. Drilling was performed from the bridge deck. 2. Asphalt Pavement depth was 0.13 ft. 3. Concrete depth was 0.97 ft.								

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

BORING LOG 2 STOWE BHF 0235(11).GPJ VERMONT AOT.GDT 1/31/14

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

BORING LOG

STOWE
BHF 0235(11)
VT-108 BR-2

Boring No.: **B-104**
Page No.: 1 of 1
Pin No.: 87E052
Checked By:

Boring Crew: JUDKINS, GARROW, NIETO
Date Started: 1/16/14 Date Finished: 1/16/14
VTSPG NAD83: N 716874.09 ft E 1591282.08 ft
Station: 4+75 Offset: 8.00
Ground Elevation: 706.87 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 55 TRACK	C. = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
01/16/14	17.5	While drilling.

PILE CAP
EL=702.00

ESTIMATED PILE
TIP EL= 682.87

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaGrSi, Lt/brn, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample.				6-2-2-5 (4)	23.9	31.4	26.6	42.0
5										
		A-4, SaSi, Lt/brn, Moist, Rec. = 1.3 ft, Lab Note: Sample was rust colored.				1-1-2-2 (3)	34.1	7.3	39.6	53.1
10										
		A-1-b, SaGr, gry, Moist, Rec. = 0.7 ft, Lab Note: Sample was mostly Broken Rock pieces (Phyllite).				15-R@3.5" (R)	11.8	44.7	39.4	15.9
15		Field Note:, NXDC, Cobbles & Boulders, Cleaned out casing.								
		A-1-b, SiSaGr, gry, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock was within sample.				7-13-11-19 (24)	13.7	45.0	34.7	20.3
20		Field Note:, NXDC, Cobbles, Cleaned out casing.								
		21.0 ft - 26.0 ft, Grayish green, Chlorite-muscovite-quartz Phyllitic Schist, with quartzofeldspthic layers. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 49	1 (88)	96 (44)	4 6 5 5 4	Top of Bedrock @ 21.0 ft				
25										
		26.0 ft - 31.0 ft, Grayish green, Chlorite-muscovite-quartz Phyllitic Schist, with quartzofeldspthic layers. Moderately soft, Unweathered, Fair rock, NXMDC, RMR = 49	2 (88)	100 (36)	4 3 3 3 4					
30		Hole stopped @ 31.0 ft								
35		Remarks: 1. Drilling was performed from the bridge deck. 2. Asphalt Pavement depth was 0.15 ft. 3. Concrete depth was 0.85 ft.								

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

BORING LOG 2 STOWE BHF 0235(11).GPJ VERMONT AOT.GDT 1/31/14

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BORING LOGS 3

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 26 OF 64

BEGIN PROJECT/BRIDGE
STA 3+47.22

℄ BEARING #1
STA 3+48.00
FG = 712.18'

℄ BEARING #3
STA 4+78.00
FG = 714.78'

END BRIDGE/PROJECT
STA 4+78.78

VT STATE PLANE GRID

N

PAVED DITCH

CONCRETE WALL

4 MB

#3

DI

WW1

WOOD DECK

STONE WALL

CGMP

GV

75° ASKEW (TYP)

3+00

2'-0" FIRST POST
OFF BRIDGE DECK (TYP)

VT 108 STA 4+00 =
CHANNEL STA 11+00
DELTA ANGLE 75°

4+00

11+25

12" INSULATED
WATER LINE

#20

GRANITE BLOCK WALL

WW3

GV

5+00

DI

WSO

WW2

CONCRETE WALL

6'W X 7.5'H
CONC. BOX

STONE FILL,
TYPE III

10+75

MHS

10+50

LITTLE RIVER

STONE WALL

WW4

STONE FILL,
TYPE III

IP

PAVED PARKING LOT

PLAN

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

BOX BEAM GUARD RAIL
(PAINTED BROWN) (LT/RT)

133'-7½" - BRIDGE BARRIER RAIL - HIGH PERFORMANCE CONCRETE CLASS A (NEAR SIDE)

133'-7½" - PAY LIMIT BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION (PAINTED BROWN) (FAR SIDE)

BOX BEAM GUARD RAIL
(PAINTED BROWN) (LT/RT)

PLANK RAIL (RT)
SEE TYPICAL SECTIONS
FOR DETAILS

130'-0" ℄ BEARING #1 TO ℄ BEARING #2

PLANK RAIL (RT)
SEE TYPICAL SECTIONS
FOR DETAILS

COVERED WALKWAY

730
720
710
700
690
680
670

Q100 EL=699.2

STONE FILL,
TYPE III

STONE FILL,
TYPE III

EXISTING GROUND

REMOVE EXISTING PIER TO
EXISTING STREAM BED ELEVATION

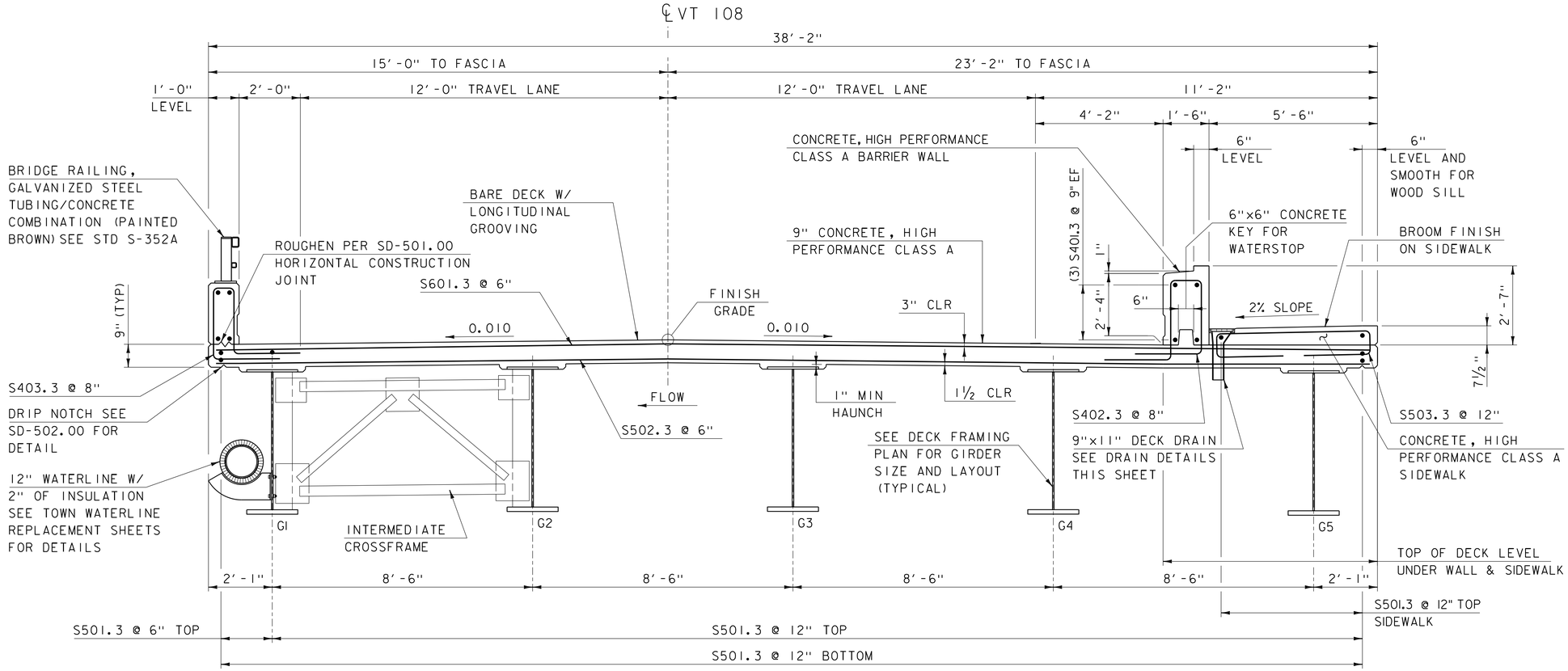
ELEVATION

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052pe.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PLAN & ELEVATION

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 27 OF 64



BRIDGE DECK TYPICAL

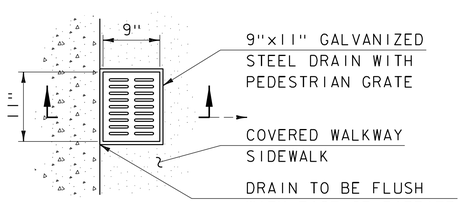
SCALE ½" = 1'-0"

NOTES:

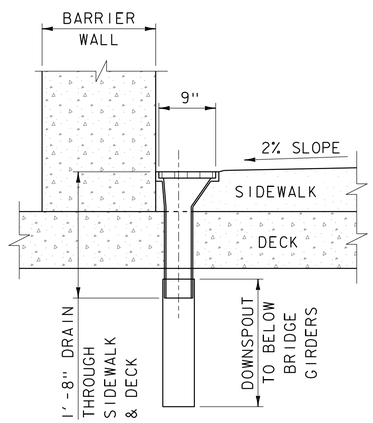
1.) DECK DRAIN AND DOWNSPOUT PAYMENT METHOD SHALL BE INCIDENTAL TO CONCRETE, HIGH PERFORMANCE CLASS A

2.) PROVIDE DECK DRAIN, HEAVY DUTY, NEENAH STYLE, R-4015-B1 OR EQUIVALENT, WITH TYPE "P" GRATE OR EQUIVALENT.

3.) GRATE AND DECK DRAIN SHALL BE HOT-DIP GALVANIZED.



PLAN VIEW



SECTION VIEW

DRAIN DETAILS

SCALE 1" = 1'-0"

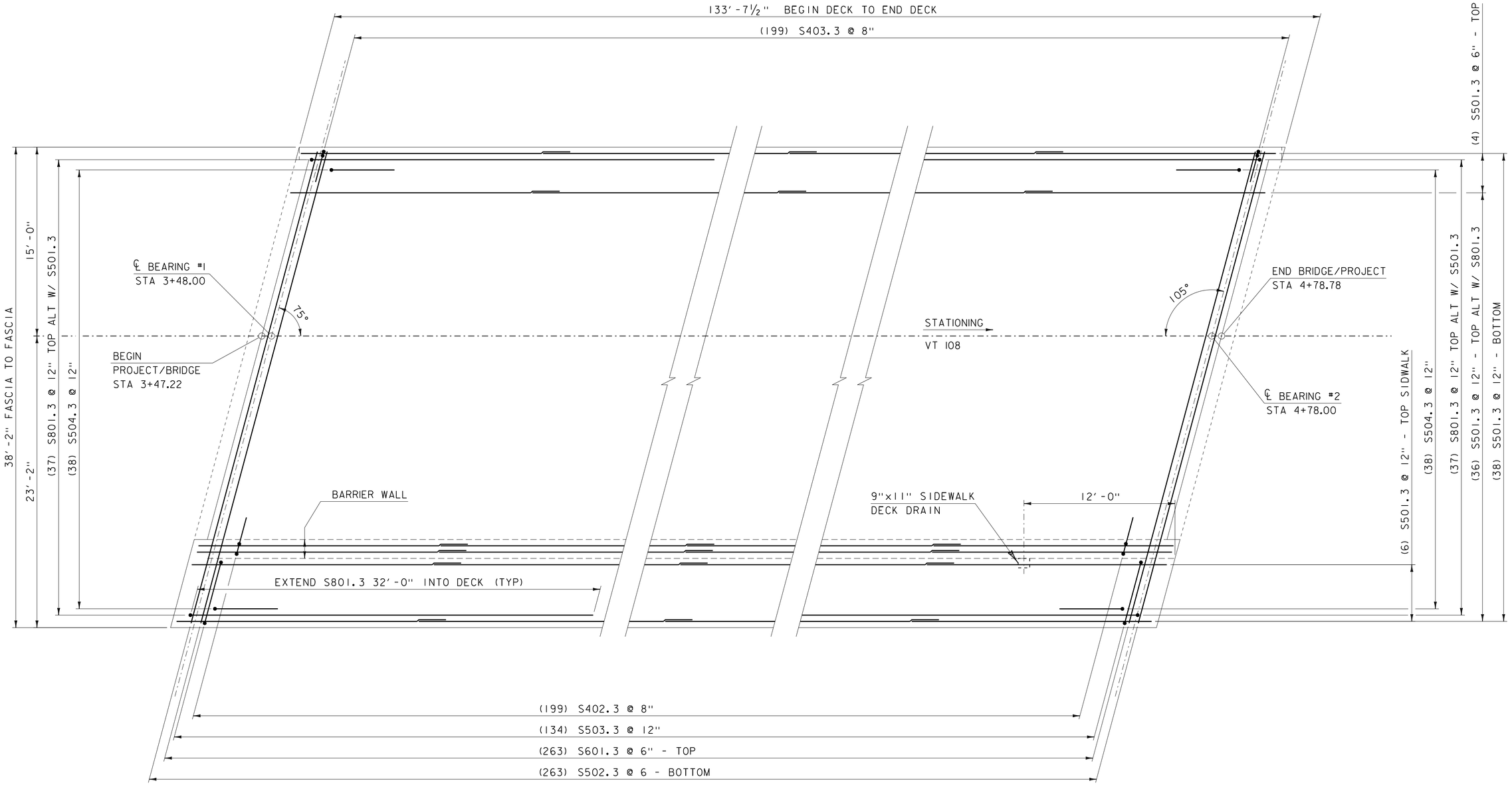
NOTE:

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DECK TYPICAL & DETAILS

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 28 OF 64



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.

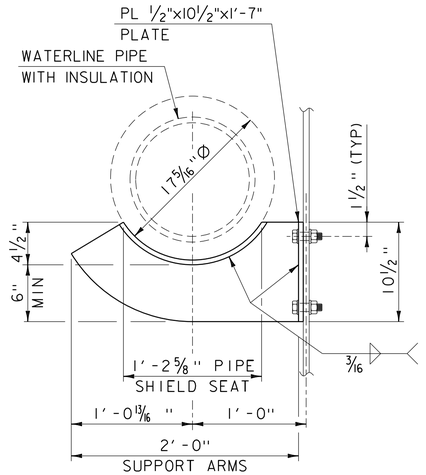
DECK REINFORCING PLAN

SCALE: ¼" = 1'-0"

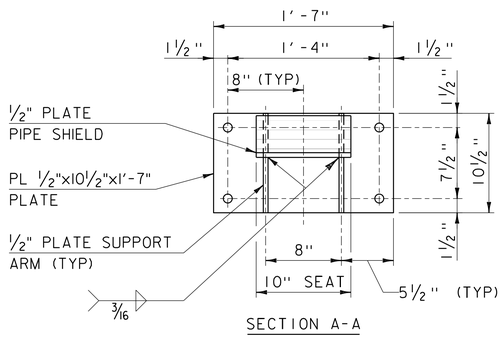
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DECK REINFORCING PLAN

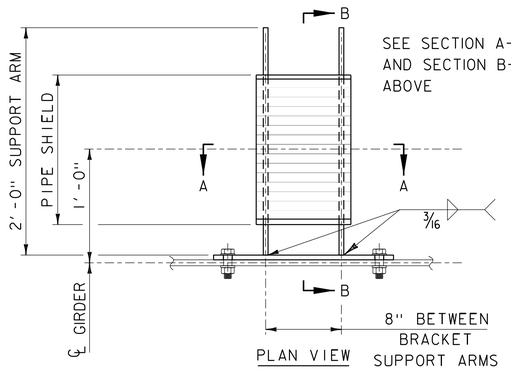
PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 29 OF 64



SECTION B-B



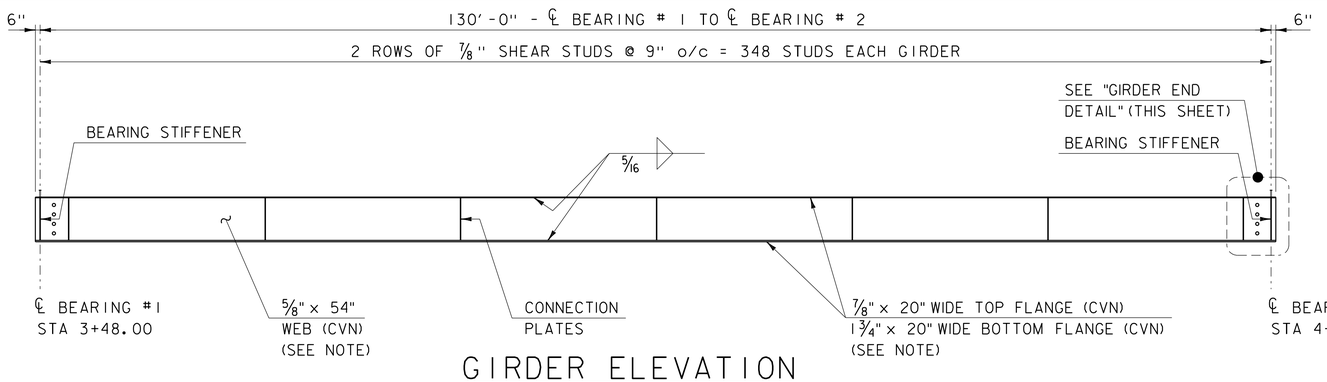
SECTION A-A



PLAN VIEW

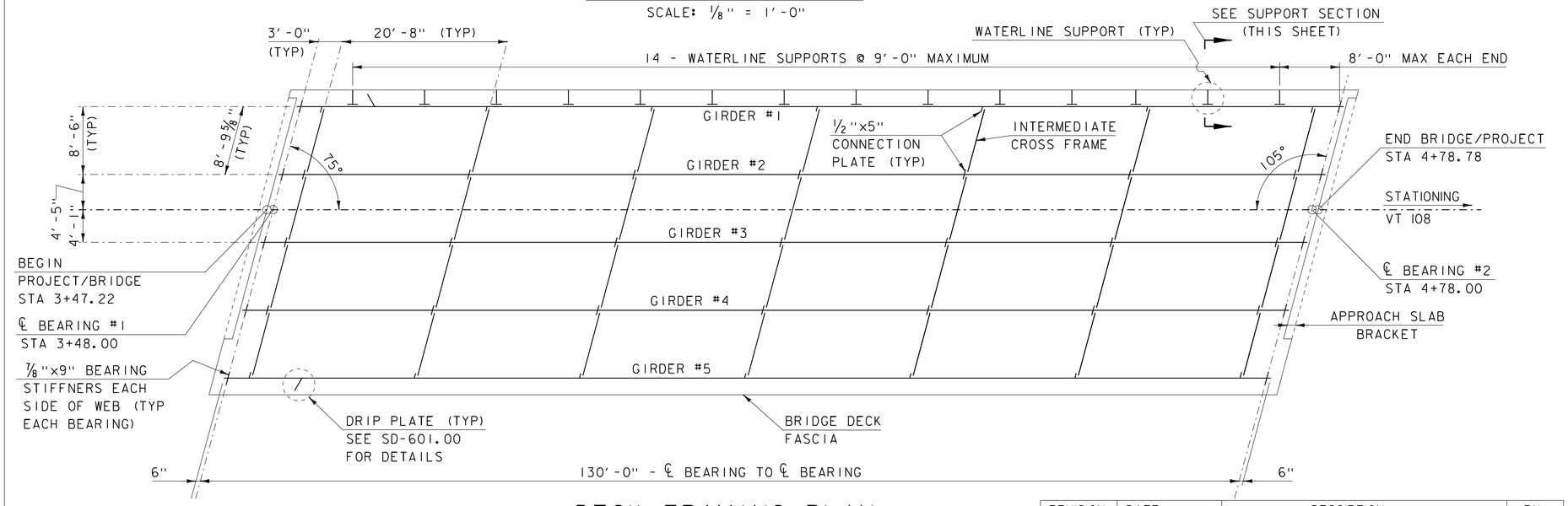
BRACKET DETAILS

SCALE: 1½" = 1'-0"



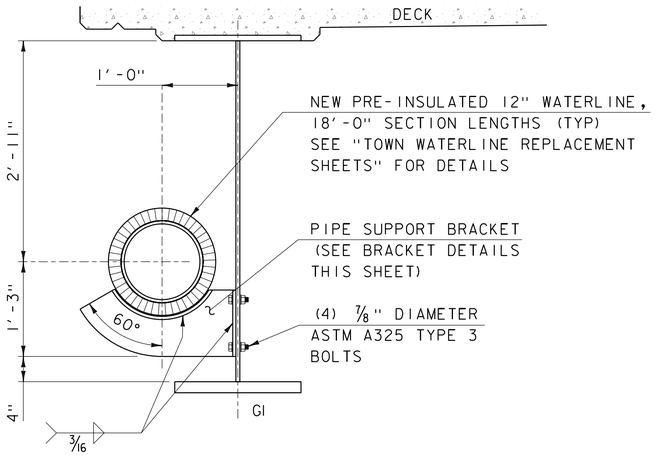
GIRDER ELEVATION

SCALE: ⅛" = 1'-0"



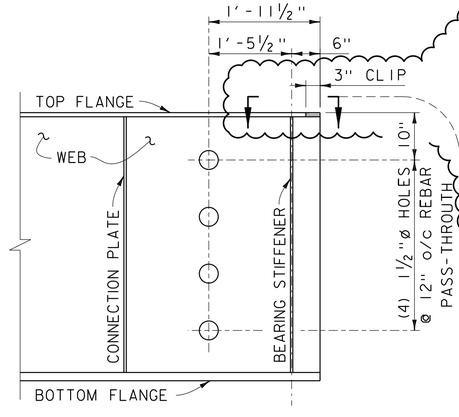
DECK FRAMING PLAN

SCALE: ⅛" = 1'-0"



SUPPORT SECTION

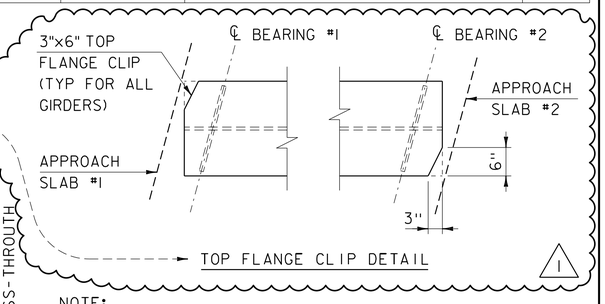
SCALE 1" = 1'-0"



* DETAIL TYPICAL FOR ALL GIRDERS EACH END.

GIRDER END DETAIL

SCALE: ¾" = 1'-0"



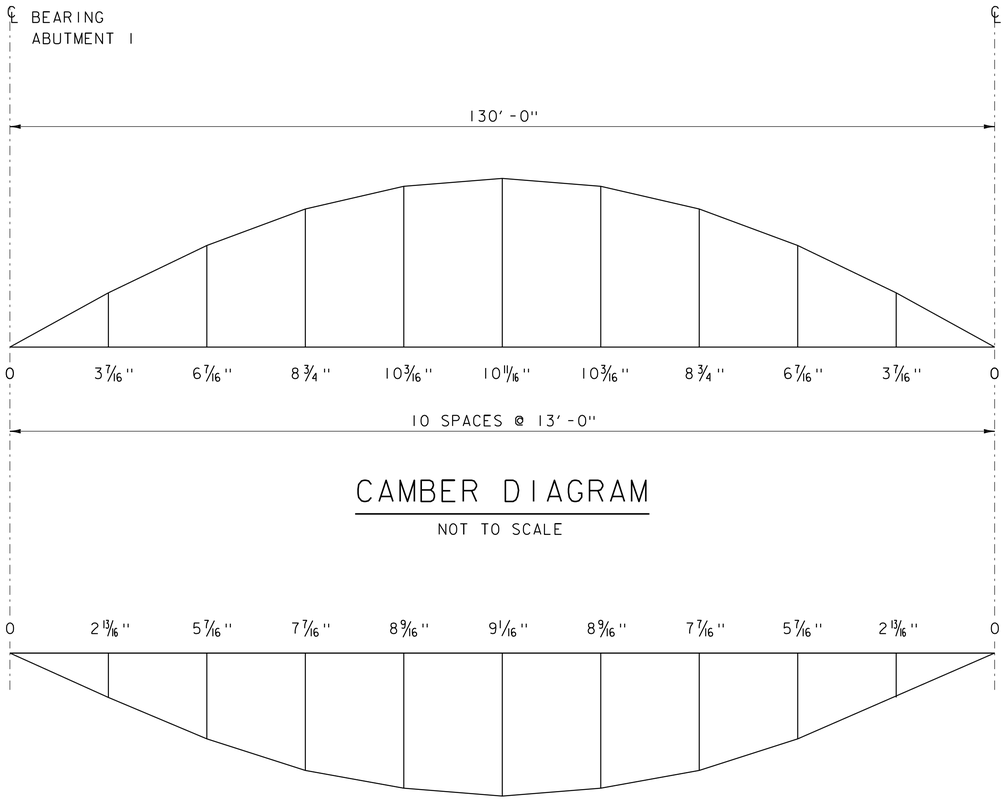
NOTE:
CVN - SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS INDICATED IN SECTION 714 OF THE STANDARD SPECIFICATION

REVISION	DATE	DESCIPTION	BY
1	08-18-2014	TOP FLANGE CLIP DETAIL ADDED	MCL

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
FRAMING PLAN

PLOT DATE: 19-AUG-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 30 OF 64



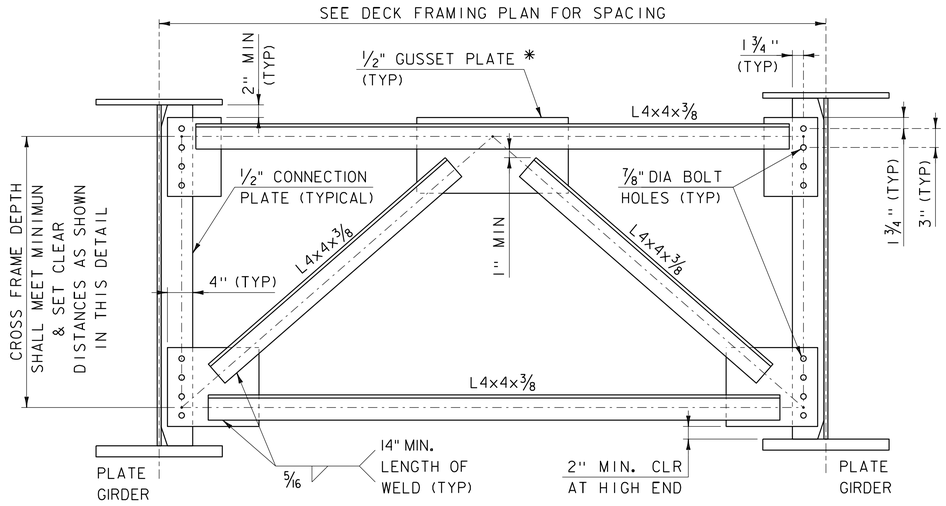
CAMBER DIAGRAM

NOT TO SCALE

DEAD LOAD DEFLECTION DIAGRAM

NOT TO SCALE

NOTE:
DEFLECTION INCLUDES, GIRDER, CROSS FRAMES, DECK, SIDEWALK, COVERED WALKWAY , AND RAILING.

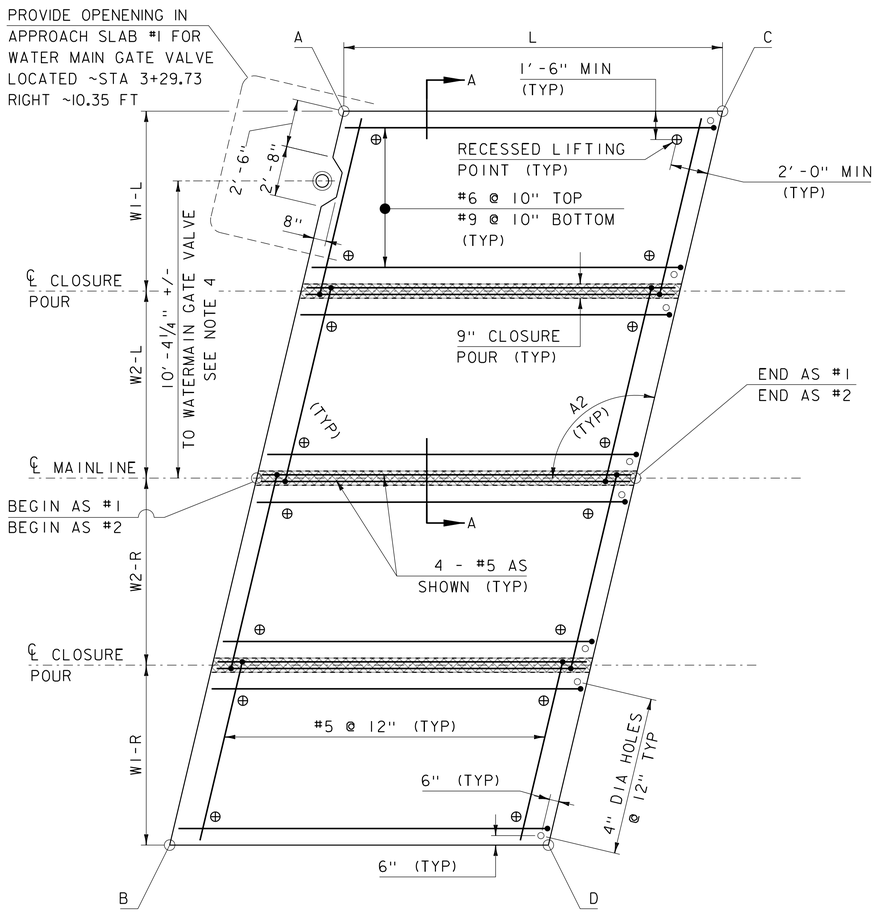


INTERMEDIATE CROSSFRAME DETAILS

SCALE 1" = 1'-0"

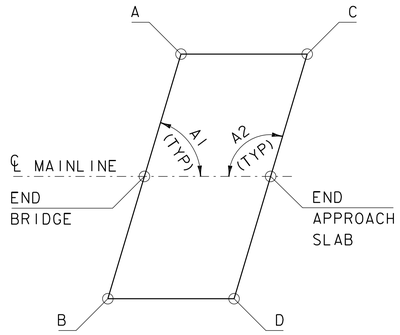
* THE FABRICATOR MAY ALTER THE SHAPE OF THE GUSSET PLATES AS REQUIRED TO MEET MINIMUM WELDING LENGTH AND TO MAINTAIN THE BOLT HOLE LOCATIONS.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052sup.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: D. KARABEGOVIC
DESIGNED BY: D. PETERSON	CHECKED BY: M. LONGSTREET
CAMBER & DEFLECTION	SHEET 31 OF 64



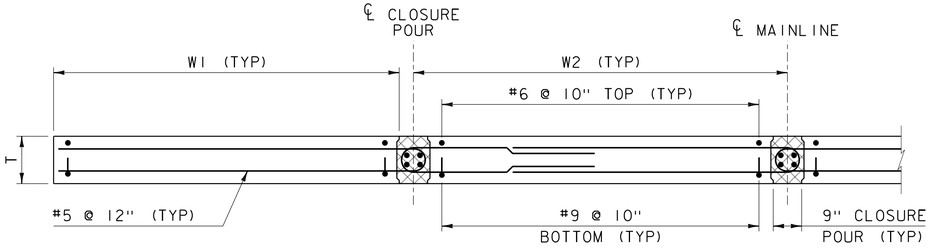
APPROACH SLAB #1 PLAN VIEW

NOT TO SCALE



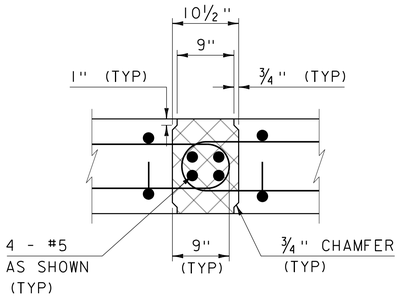
APPROACH SLAB #2 PLAN VIEW

NOT TO SCALE



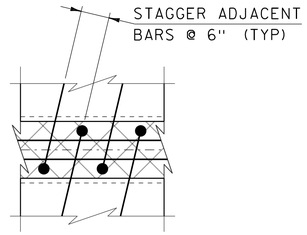
SECTION A-A

SCALE 1/2" = 1'-0"



CONNECTION DETAIL SECTION

SCALE 1" = 1'-0"

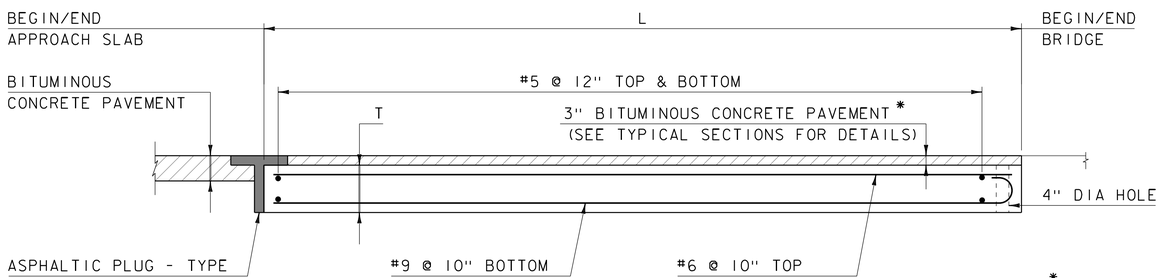


CONNECTION DETAIL PLAN

SCALE 1" = 1'-0"

APPROACH SLAB #1			
	STATION	OFFSET	ELEVATION
1A	3+30.97	14.00	711.09
BEGIN AS #1	3+27.22	0.00	711.52
1B	3+22.89	16.17	711.89
1C	3+50.97	14.00	711.85
END AS #1	3+47.22	0.00	711.92
1D	3+42.89	16.17	711.17

1. LIFTING POINTS SHALL BE DESIGNED BY FABRICATOR AND SUBMITTED WITH CALCULATIONS.
2. REINFORCING STEEL FOR APPROACH SLAB #2 SHALL BE SIMILAR TO THAT SHOWN FOR APPROACH SLAB #1
3. CLOSURE POUR CONCRETE SHALL BE PAID FOR UNDER ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPO)
4. APPROACH SLAB #1 HAS A WATER MAIN GATE VALVE BLOCK-OUT OPENING, THE BLOCK-OUT LOCATION AND SIZE IS TO BE FIELD VERIFIED PRIOR TO FABRICATION.



APPROACH SLAB ELEVATION VIEW

SCALE 1/2" = 1'-0"

*TWO LIFTS OF 1 1/2 BITUMINOUS CONCRETE PAVEMENT TYPE IIIS

T	1'-3"
L	20'-0"
W1-R	8'-1"
W2-R	8'-1"
W1-L	7'-0"
W2-L	7'-0"

APPROACH SLAB #1	A1	75°
	A2	105°

APPROACH SLAB #2	A1	75°
	A2	105°

APPROACH SLAB DIMENSIONS

APPROACH SLAB #2			
	STATION	OFFSET	ELEVATION
2A	4+82.53	14.00	714.48
BEGIN AS #2	4+78.78	0.00	714.55
2B	4+74.44	16.17	714.30
2C	5+02.86	13.95	714.88
END AS #2	4+98.78	0.00	714.95
2D	4+94.44	16.17	714.69

APPROACH SLAB ELEVATIONS

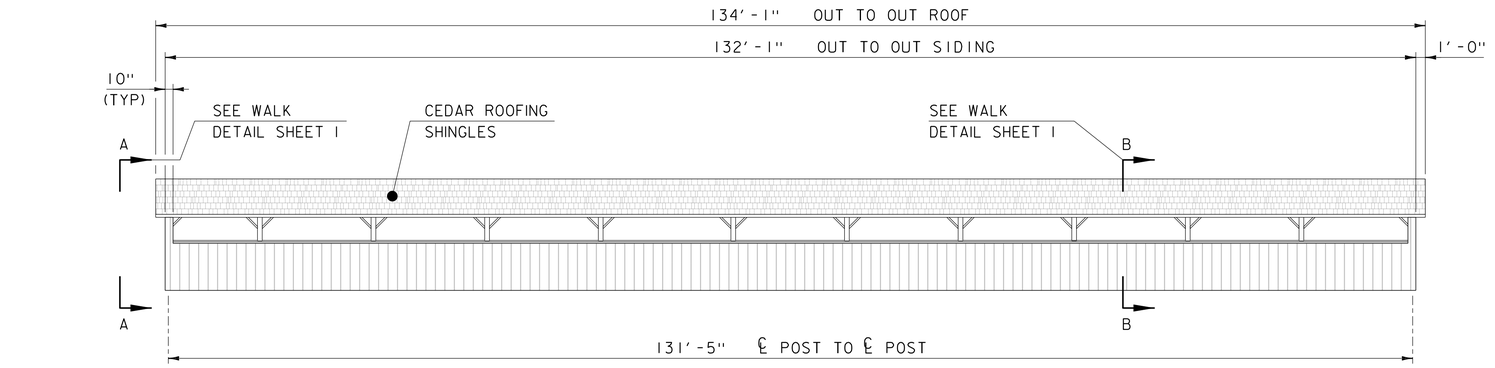
ALL ELEVATIONS ARE TOP OF SLAB

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-7" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

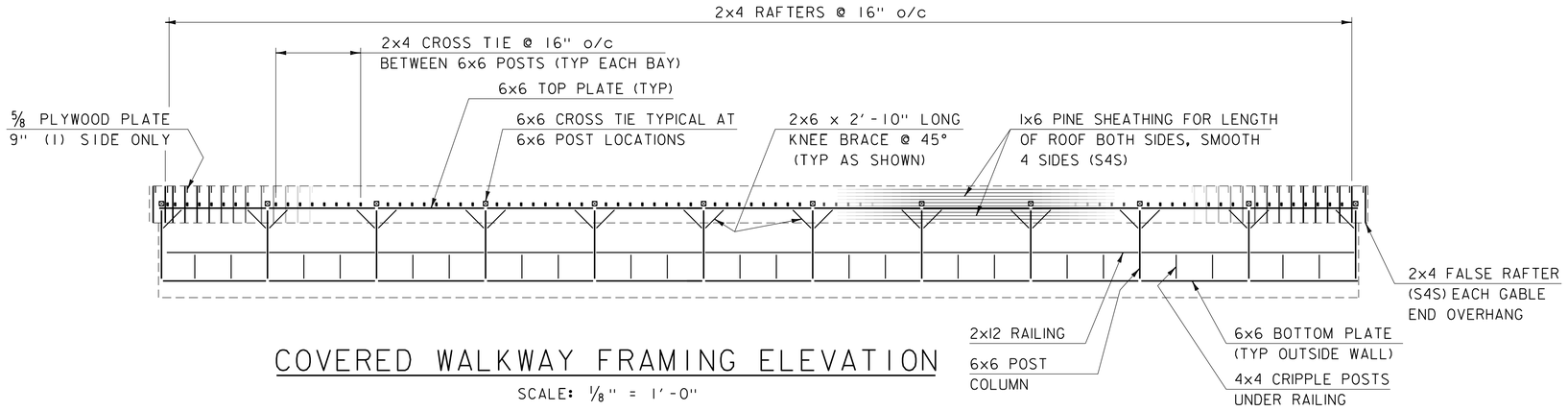
FILE NAME: s87E052appslab.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
APPROACH SLAB DETAILS

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: J. LACROIX
SHEET 32 OF 64



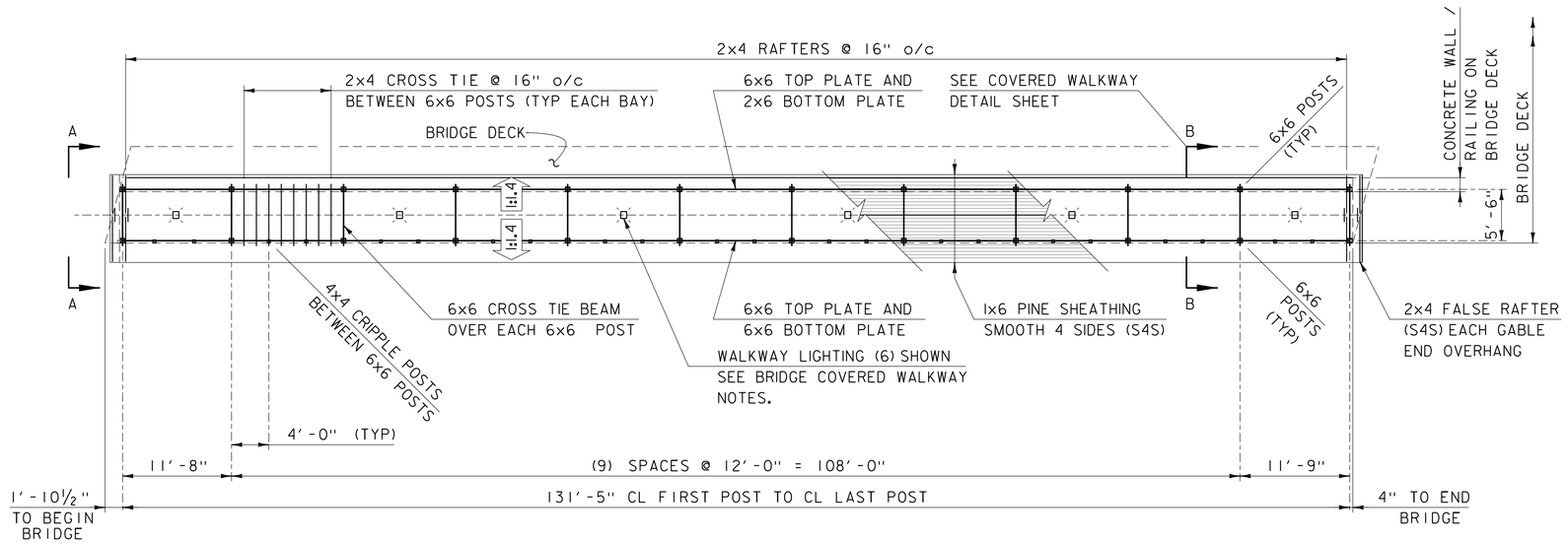
COVERED WALKWAY EAST ELEVATION

SCALE: 1/8" = 1'-0" (LOOKING WEST)



COVERED WALKWAY FRAMING ELEVATION

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



COVERED WALKWAY FRAMING PLAN

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

BRIDGE COVERED WALKWAY NOTES:

1) ALL LUMBER IN WOODEN WALKWAY SHALL BE FULL SAWN, ROUGH FINISH, EXCEPT AS NOTED, SMOOTH 4 SIDES (S4S) FINISHED DIMENSION FOR DRESSED LUMBER).

2) STRUCTURAL POST, GIRDERS, AND BRACING SHALL BE FULL SAWN, ROUGH FINISH, EASTERN SPRUCE GRADE NO. 1, UNLESS NOTED OTHERWISE ON PLANS.

3) THE PINE BOARD SIDING SHALL BE FULL SAWN, ROUGH FINISH, EASTERN WHITE PINE GRADE NO. 1. THE SIDING SHALL BE PLACED VERTICALLY, PERPENDICULAR TO BRIDGE GRADE, WITH A 1" GAP BETWEEN EACH BOARD.

4) PINE SHEATHING ON THE ROOF SHALL BE 1x6 NUMBER 2 PINE OR BETTER.

5) ALL EXTERIOR SIDING, TRIM AND ROOF SHEETING NAILS SHALL BE 2 1/2" STAINLESS STEEL SIDING NAILS.

6) ROOFING SHALL BE RED CEDAR SHINGLES, 18" NUMBER 2 GRADE, RED LABEL.

7) USE 1 1/2" 14 GAUGE DOUBLE HOT-DIP GALVANIZED CEDAR SHINGLE AND SHAKE NAILS FOR ROOF SHINGLES, (2) NAILS PER SINGLE.

8) FINISH - THE CEDAR SHINGLES SHALL BE LEFT NATURAL. ALL OTHER EXTERIOR SURFACES SHALL BE GIVEN TWO COATS OF BLEACHING OIL IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS. ANY FIRE RETARDANTS SHALL BE APPLIED AFTER BLEACHING OILS ARE APPLIED. SEE GENERAL NOTES SHEET FOR FIRE RETARDANT APPLICATIONS.

9) THE WOOD AND TIMBER COVERED WALKWAY WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (COVERED WALKWAY).

10) THE BARRIER WALL IS NOT CONSIDERED PART OF THE COVERED WALKWAY IT WILL BE CONSTRUCTED AS A SEPARATE ITEM.

11) LIGHT FIXTURES AND WIRING ON COVERED WALKWAY SHALL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (COVERED WALKWAY).

12) SIX 29 WATT (MIN.) LED LIGHT FIXTURES SHALL BE INSTALLED IN THE BAYS SHOWN IN THE THE COVERED WALKWAY FRAMING PLAN.

13) ALL TIMBER MEMBER CONNECTIONS NOT SPECIFICALLY DETAILED IN THE PLANS SHALL FOLLOW STANDARD WOOD FRAMING PRACTICES, AS APPROVED BY THE RESIDENT ENGINEER.

14) PRESSURE TREATED (PT) SILL AND BOTTOM PLATES SHALL BE FULL SAWN, ROUGH FINISH.

15) ALL 1/4" LAG BOLTS SHALL BE ZINC PLATED, HEX HEAD LAG SCREWS WITH A 3/4" WASHER, OR EQUIVALENT STRUCTURAL WOOD SCREW.

16) ANY AND ALL BOLTS USED SHALL HAVE APPROPRIATELY SIZED PILOT HOLES DRILLED TO INSURE PROPER THREAD GRIP AND PREVENT FRAMING MEMBERS FROM DAMAGE.

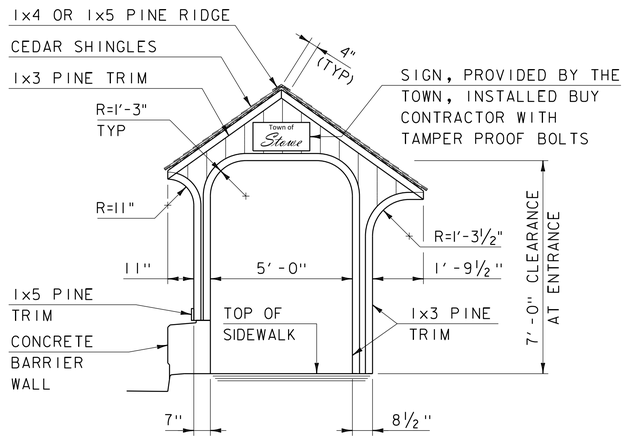
17) ALL DIMENSIONS SHOWN FOR COVERED WALKWAY WOOD FRAMING AND WOOD SHEETING ARE IN INCHES UNLESS OTHERWISE NOTED.

NOTE: DIMENSION IN INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

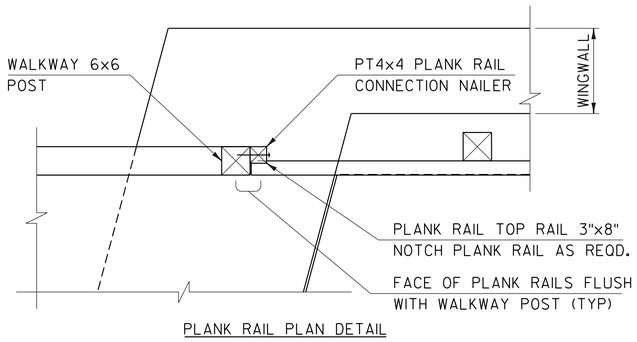
FILE NAME: s87e052walk.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
WALK FRAMING PLAN & ELEVATIONS

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 33 OF 64

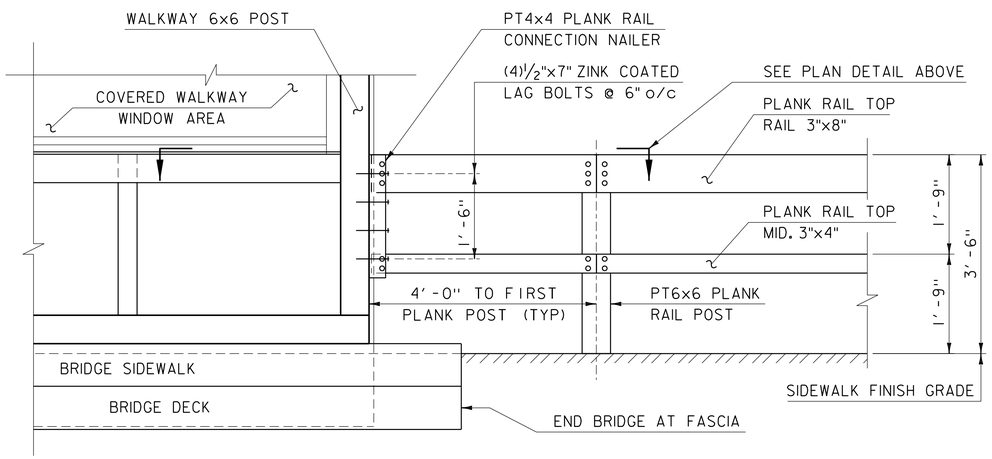


ELEVATION A-A

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



PLANK RAIL PLAN DETAIL

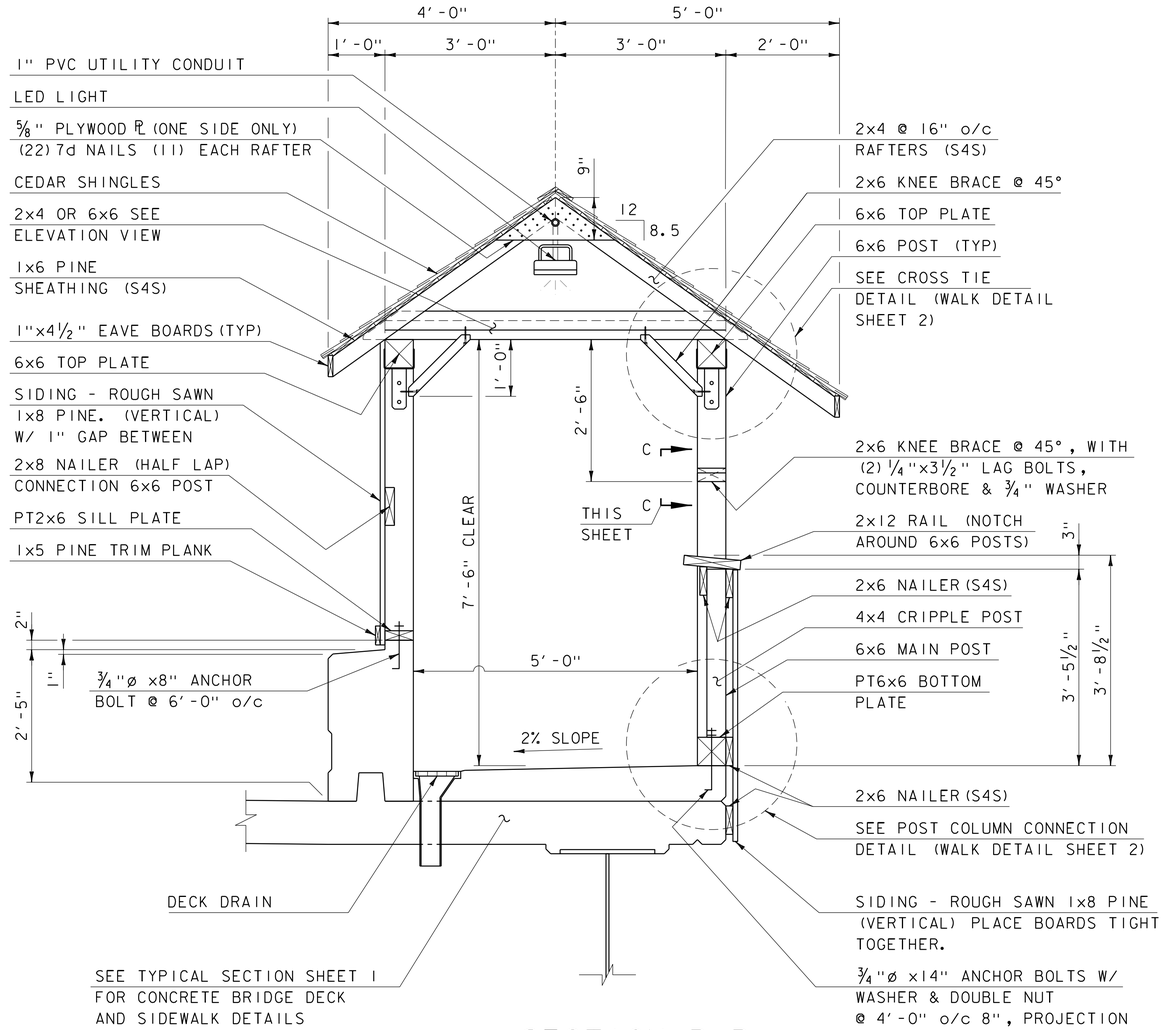


PLANK RAIL CONNECTION DETAIL

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

1) PLANK RAIL WILL BE PAID FOR UNDER CONTRACT ITEM 621.15.

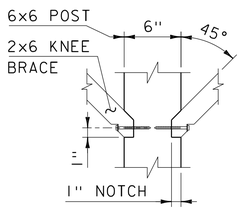
2) THE PT4x4 AND (4) 1/2"x7" LAG BOLTS WILL BE INCLUDED IN THE COVERED WALKWAY SPECIAL PROVISION ITEM.



SECTION B-B

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

1) SEE WALK FRAMING PLAN & ELEVATIONS SHEET FOR ADDITIONAL NOTES AND CONNECTIONS REQUIREMENTS.



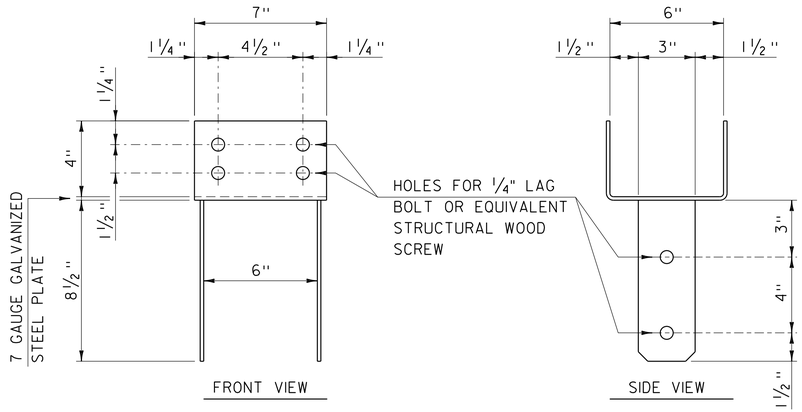
SECTION C-C

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

NOTE: DIMENSION IN INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)

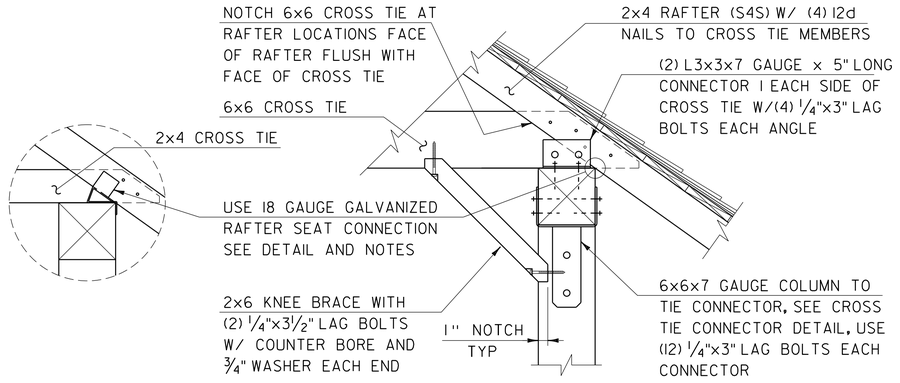
FILE NAME: s87e052walk.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
WALK DETAIL SHEET 1	SHEET 34 OF 64



6x6 COLUMN CONNECTOR

SCALE: 3" = 1'-0"

1) THE 7 GAUGE GALVANIZED STEEL PLATE USED FOR CONNECTIONS HAS AN ASSUMED APPROXIMATE THICKNESS OF 0.138".

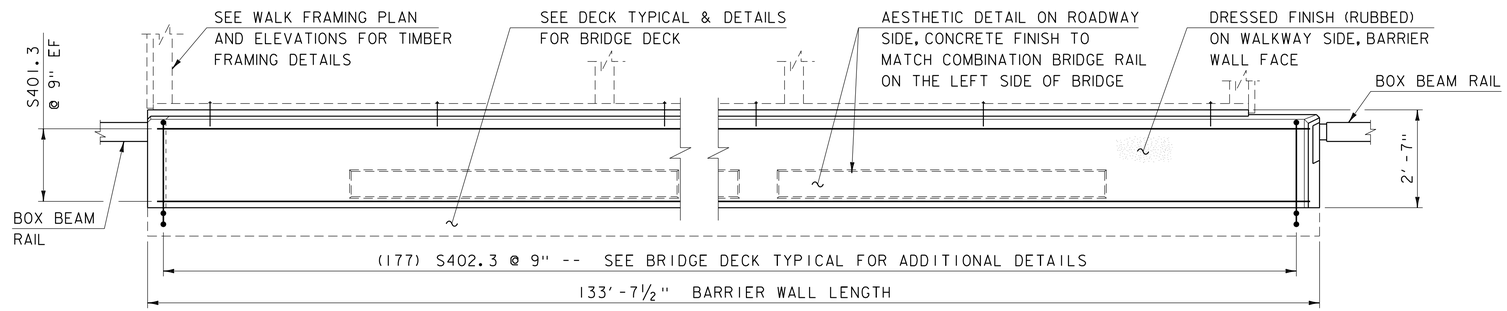


CROSS TIE DETAIL

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

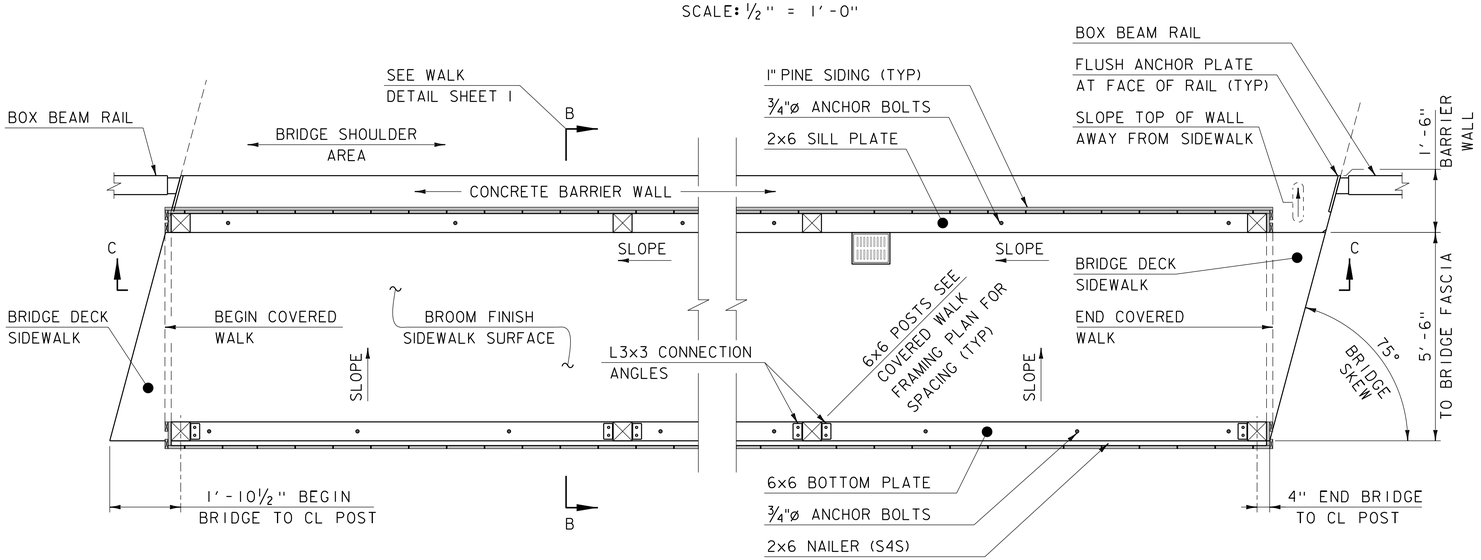
1) ALL 1/4" LAG BOLTS SHALL BE ZINC PLATED, HEX HEAD LAG SCREWS WITH A 3/4" WASHER, OR EQUIVALENT STRUCTURAL WOOD SCREW. PRE DRILL A PILOT HOLE FOR EACH BOLT.

2) ALL RAFTERS NOT LAPPED AND NOTCHED INTO A 6x6 CROSS TIE MEMBER SHALL BE CONNECTED TO THE 6x6 TOP PLATE MEMBER WITH AN 18 GAUGE, GALVANIZED STEEL, VARIABLE PITCH CONNECTION PLATE. THE RAFTERS SHALL ALSO BE NAILED TO THE 2x4 CROSS TIE MEMBERS WITH (2) 8d NAILS.



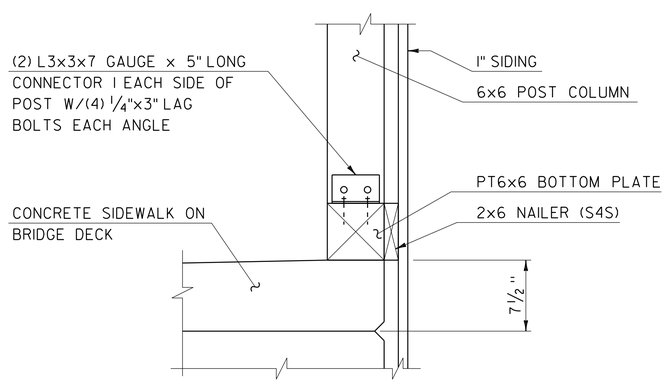
BARRIER WALL ELEVATION C-C

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



COVERED WALK PLAN DETAIL

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



POST COLUMN CONNECTION DETAIL

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

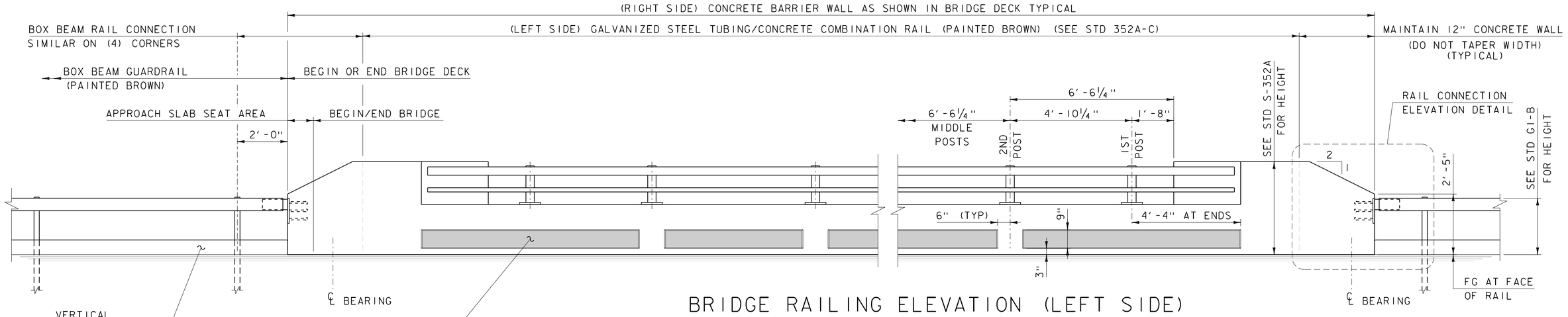
1) THE POST COLUMN CONNECTION ON THE CONCRETE BARRIER WALL SIDE OF THE WALK WAY SHALL HAVE (3) 16d GALVANIZED NAILS ON (2) SIDES.

2) THE 4x4 CRIPPLE POST SHALL HAVE (2) 16D GALVANIZED NAILS ON (2) SIDES.

NOTE: DIMENSION IN INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)

FILE NAME: s87e052walk.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
WALK DETAIL SHEET 2	SHEET 35 OF 64

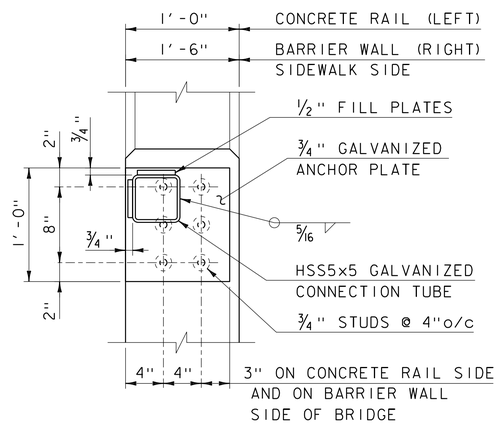


BRIDGE RAILING ELEVATION (LEFT SIDE)

SCALE ½" = 1'-0"

1) USE BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION RAILING STD 352A. MODIFY RAILING AS SHOWN.

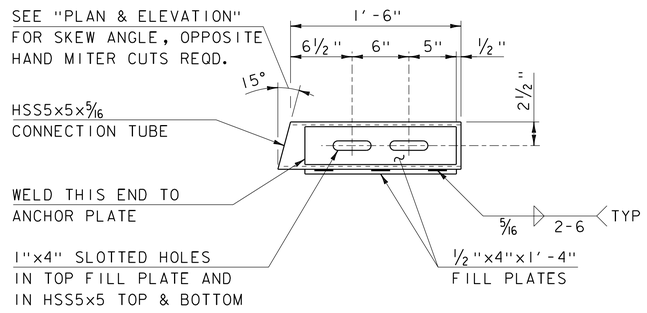
2) BOX BEAM GUARD RAIL CONNECTION AND ANCHOR PLATE IS SIMILAR AT THE COVERED WALKWAY BARRIER WALL LOCATIONS.



SECTION A-A

SCALE 1½" = 1'-0"

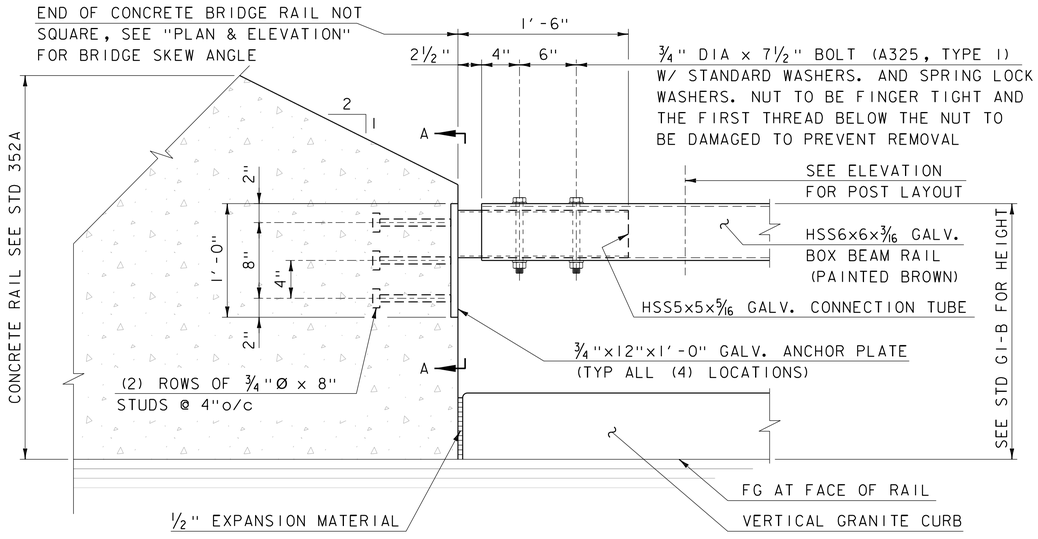
1) END OF BARRIER WALL AND CONCRETE RAIL NOT SQUARE, SEE "PLAN & ELEVATION" FOR SKEW ANGLE.



CONNECTION TUBE PLAN DETAIL

SCALE 1½" = 1'-0"

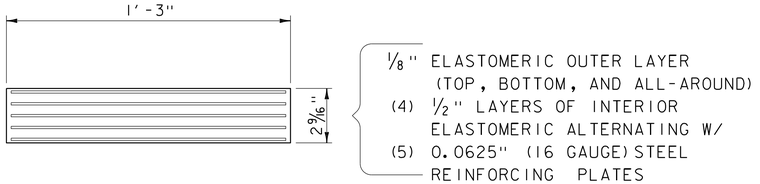
1) ALL HSS STEEL AND PLATE STEEL TO BE GALVANIZED UNLESS OTHERWISE NOTED.



RAIL CONNECTION ELEVATION DETAIL

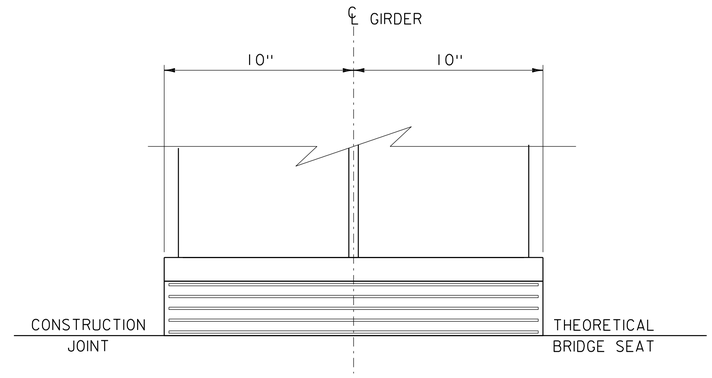
SCALE 1½" = 1'-0"

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052rail.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
BRIDGE & APPROACH RAIL DETAILS	SHEET 36 OF 64



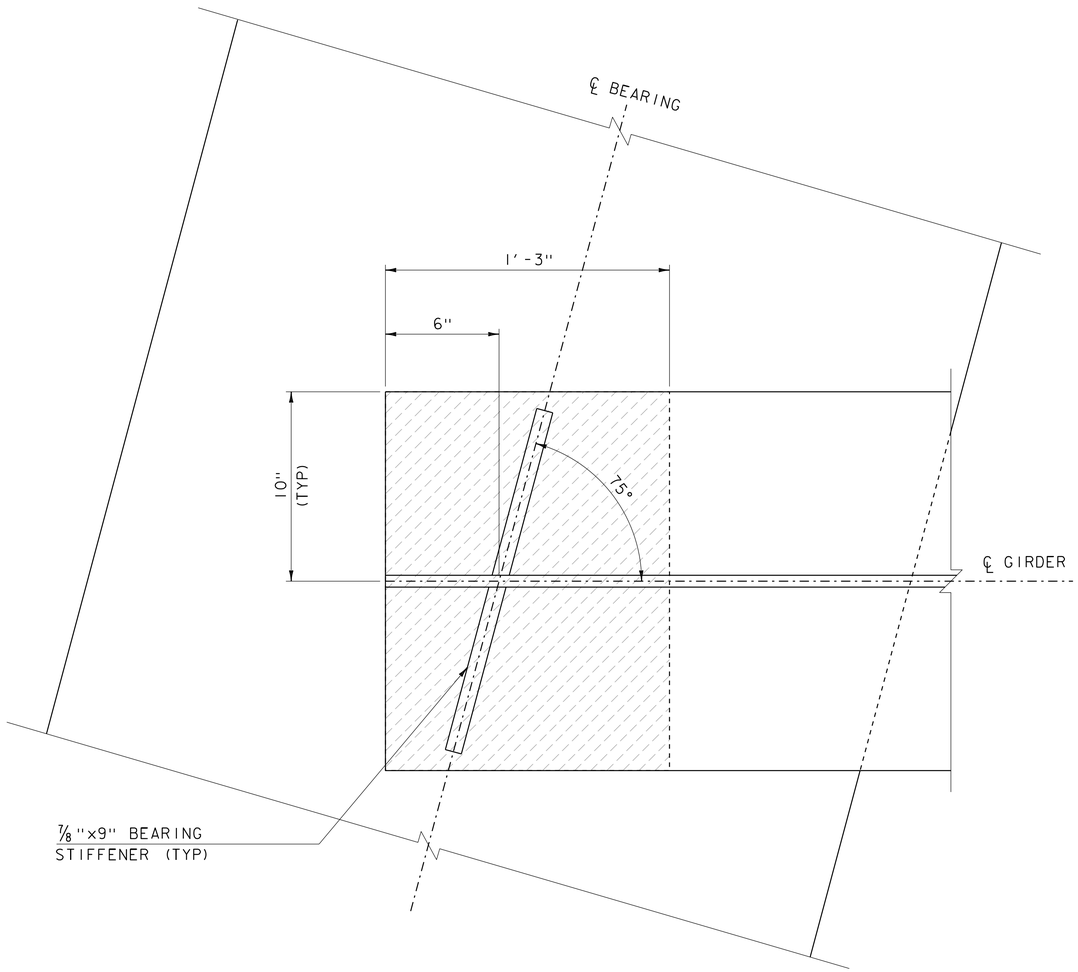
ELASTOMERIC BEARING PAD DETAIL

SCALE 3" = 1'-0"



BEARING SECTION

SCALE 3" = 1'-0"



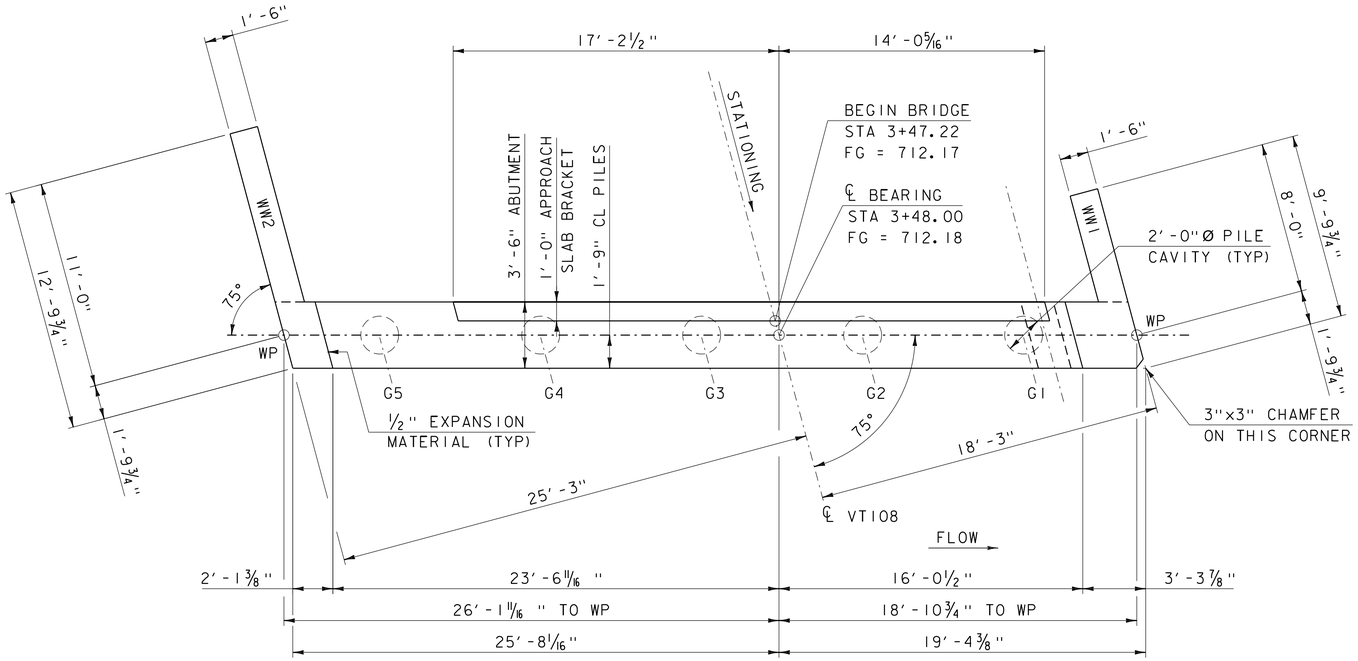
BEARING PLAN

SCALE 3" = 1'-0"

BEARING DEVICE NOTE

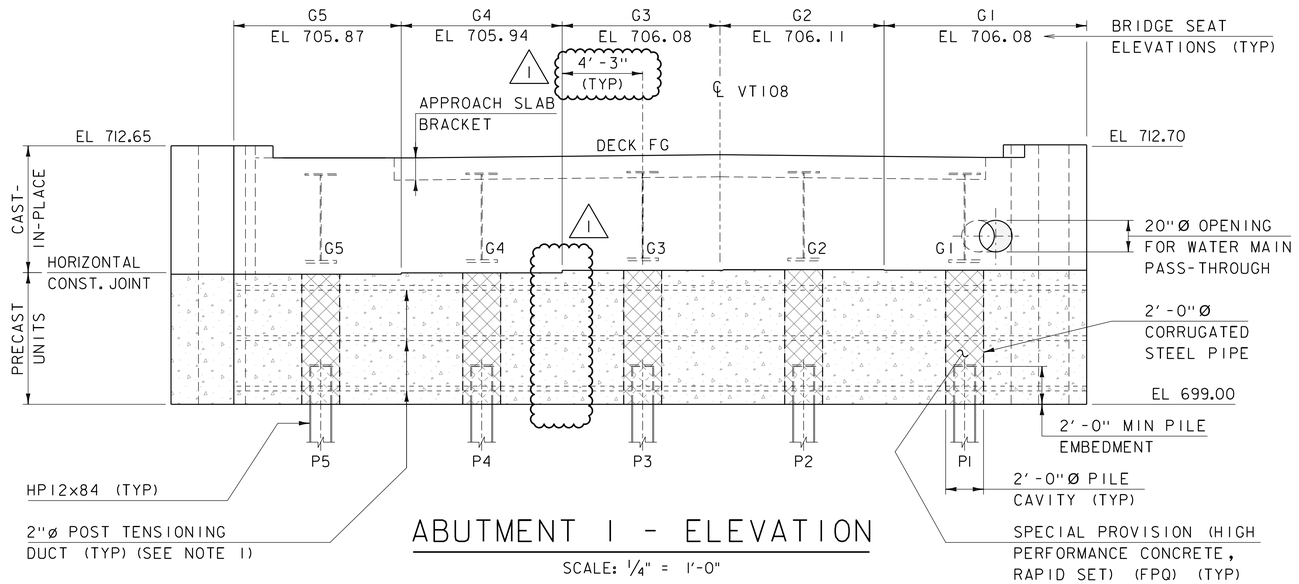
1. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.17 "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052brg.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: D. PETERSON
DESIGNED BY: C. BURRALL	CHECKED BY: M. LONGSTREET
TEMPORARY BEARING DETAILS	SHEET 37 OF 64



ABUTMENT 1 - PLAN

SCALE: ¼" = 1'-0"



ABUTMENT 1 - ELEVATION

SCALE: ¼" = 1'-0"

1) POST TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.

REVISION	DATE	DESCIPTION	BY
1	08-18-2014	DIMENSION BRIDGE SEAT WIDTHS REMOVE CONST JOINT LOCATION	MCL

PRECAST ABUTMENT FABRICATION TOLERANCES	
LENGTH (OVERALL)	± ¼"
WIDTH (OVERALL)	± ¼"
DEPTH (OVERALL)	± ¼"
VARIATION FROM SPECIFIED END SQUARENESS OR SKEW	± ⅛" PER 12" WIDTH ± ½" MAXIMUM
LOCATION OF MECHANICAL SPLICE CONNECTORS MEASURED FROM COMMON REFERENCE POINT	± ¼"
LOCATION OF PROJECTING REINFORCING MEASURED FROM COMMON REFERENCE POINT	± ¼"
LOCAL SMOOTHNESS OF ANY SURFACE	± ¼" IN 10 FEET
LOCATION OF POST TENSIONING CONDUITS	± ¼"
LOCATION OF PILE CAVITIES	± 1"

PRECAST ABUTMENT ERECTION TOLERANCE	
VARIATION FROM SPECIFIED BRIDGE SEAT ELEVATION	± ⅛", ⅛" MAXIMUM BETWEEN ADJACENT UNITS
PLAN LOCATION OF ANY POINT MEASURED FROM COMMON REFERENCE POINT	± ½"
PLUMB	± ¼" IN 10 FEET ± ½" MAXIMUM

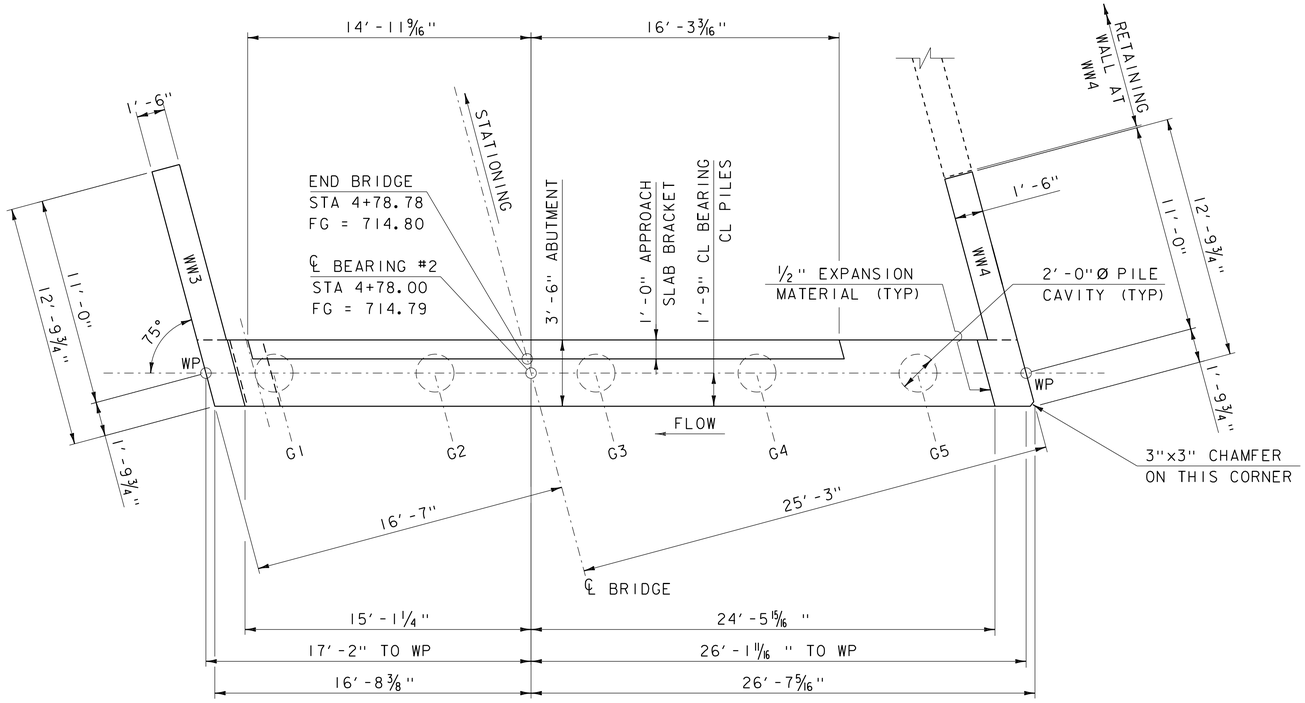
NOTE:

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: STOWE
PROJECT NUMBER: BRF 0235 (11)

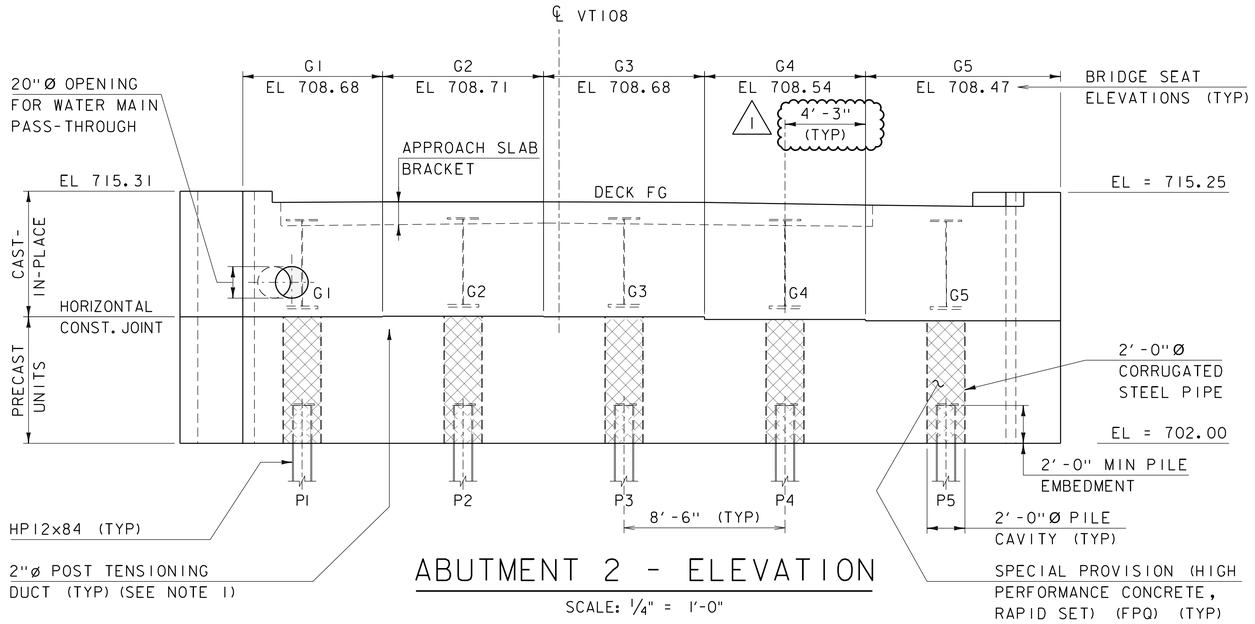
FILE NAME: s87e052sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT #1 PLAN & ELEVATION

PLOT DATE: 01-OCT-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: C. BURRALL
SHEET 38 OF 64



ABUTMENT 2 - PLAN

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

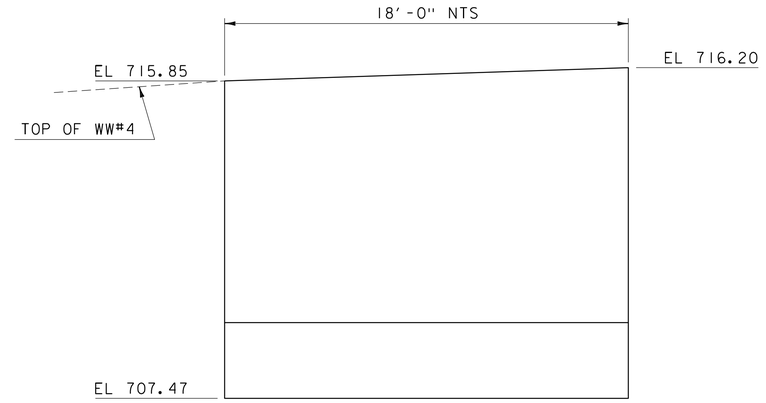


ABUTMENT 2 - ELEVATION

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

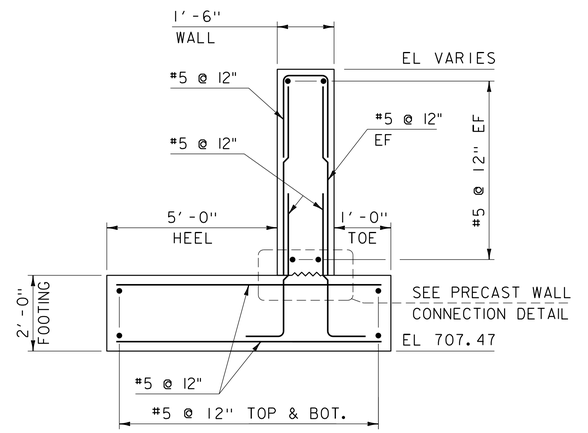
1) POST TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.

REVISION	DATE	DESCIPTION	BY
1	08-18-2014	DIMENSION BRIDGE SEAT WIDTHS	MCL



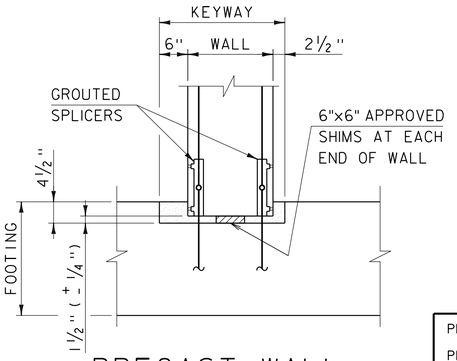
RETAINING WALL ELEVATION

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



RETAINING WALL TYPICAL

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



PRECAST WALL CONNECTION DETAIL

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

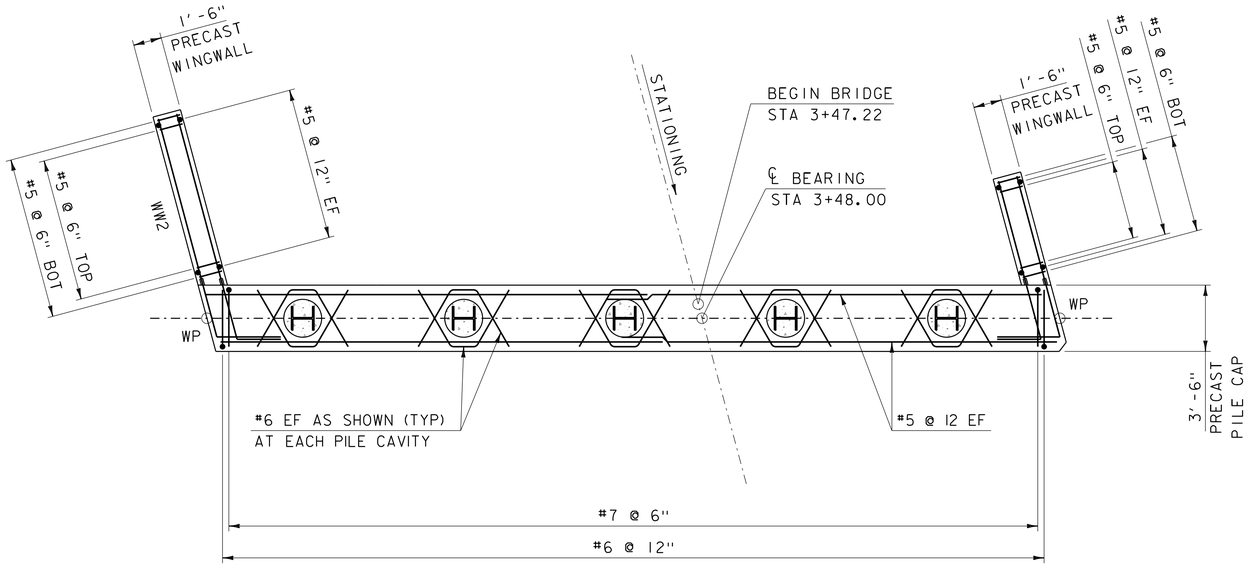
NOTE:

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

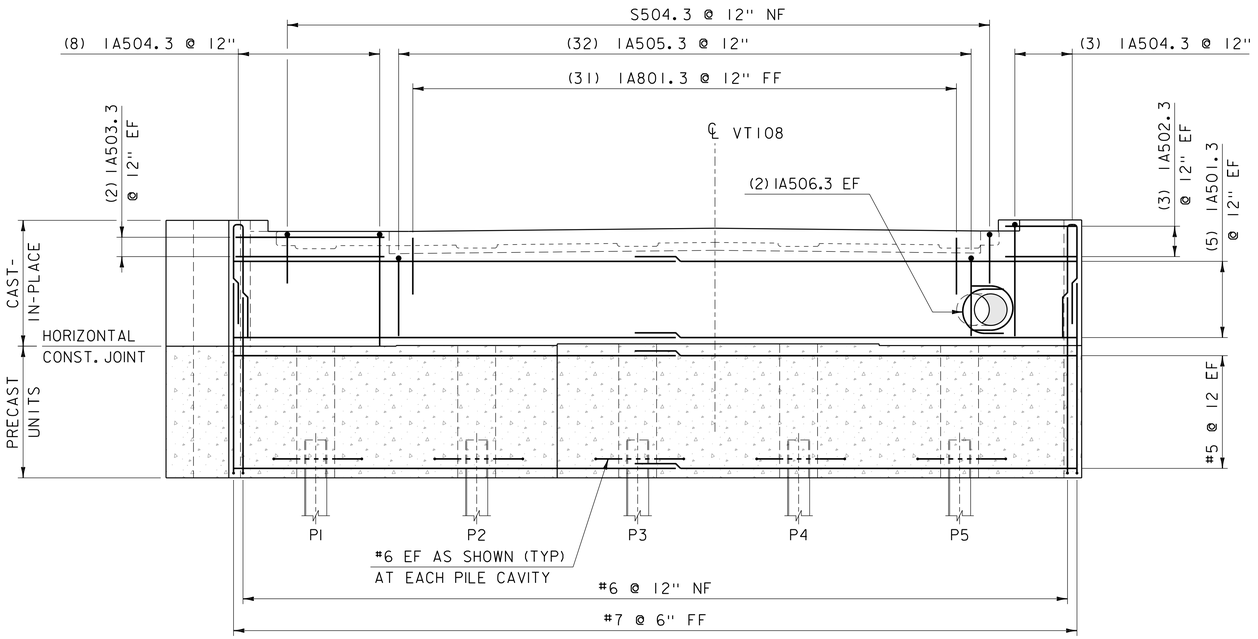
FILE NAME: s87e052sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT #2 PLAN & ELEVATION

PLOT DATE: 18-AUG-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 39 OF 64



ABUTMENT 1 PRECAST - REINFORCING PLAN

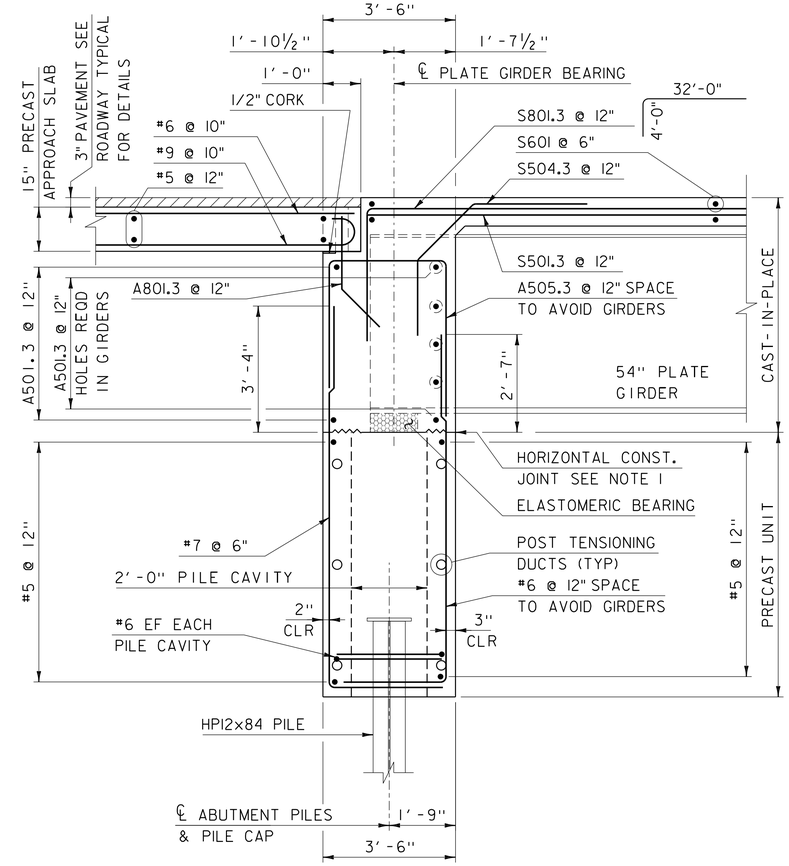
SCALE: 1/4" = 1'-0"



ABUTMENT 1 - REINFORCING ELEVATION

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

1) FIELD CUTTING ABUTMENT #1 & #2 REINFORCING STEEL SHALL BE PERMITTED AS REQUIRED TO FIT 20" DIA WATER MAIN PASS-THROUGH.



ABUTMENT 1 & 2 - TYPICAL

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

1) HORIZONTAL CONSTRUCTION JOINT SHALL BE ROUGHENED AS SHOWN IN 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.

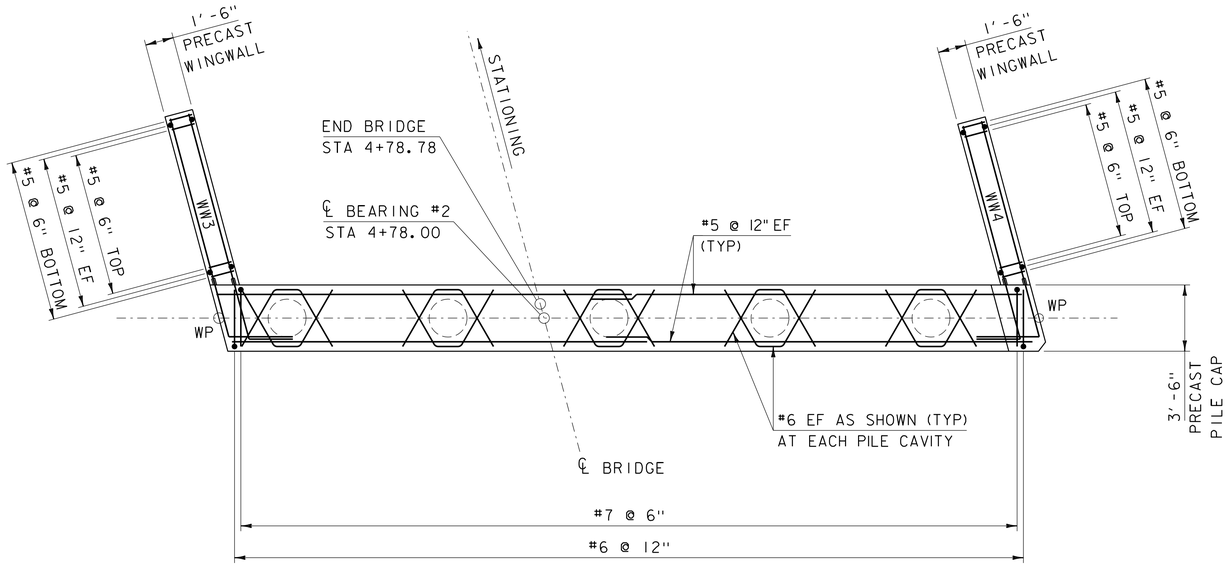
NOTE:

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: STOWE
PROJECT NUMBER: BRF 0235 (11)

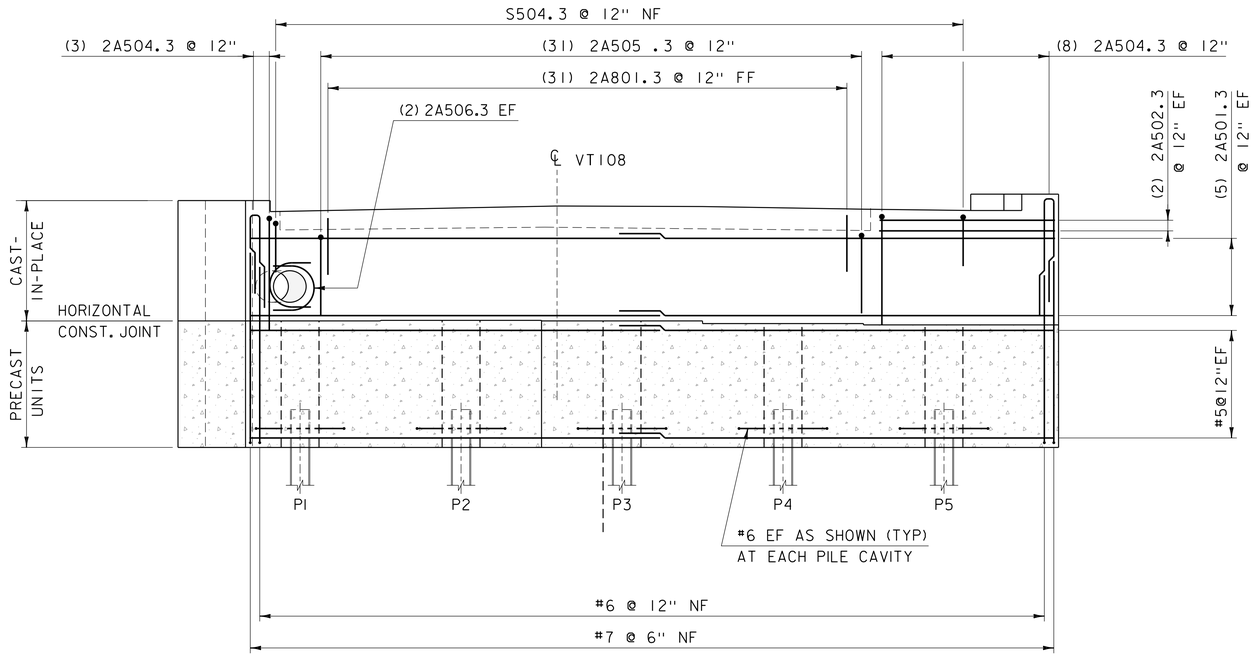
FILE NAME: s87e052sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT #1 REINFORCING DETAILS

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: C. BURRALL



ABUTMENT 2 PRECAST - REINFORCEMENT PLAN

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



ABUTMENT 2 - REINFORCING ELEVATION

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

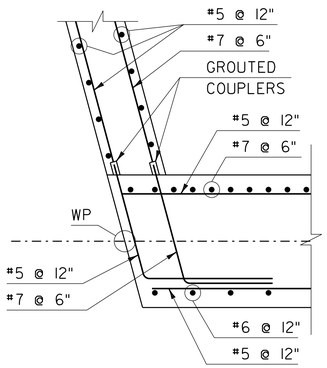
NOTE:

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (II)

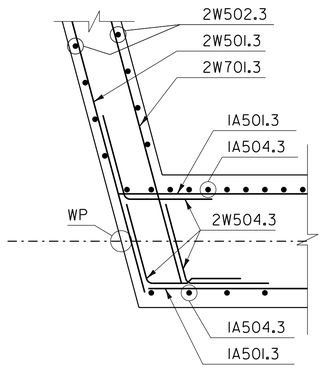
FILE NAME: s87e052sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT #2 REINFORCING DETAILS

PLOT DATE: 28-JUL-2014
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 41 OF 64



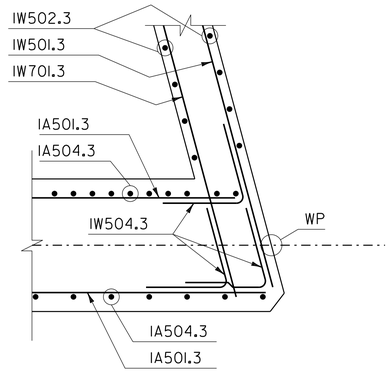
WW2 CORNER DETAIL PCU

SCALE: ½" = 1'-0"
(BELOW SEAT)



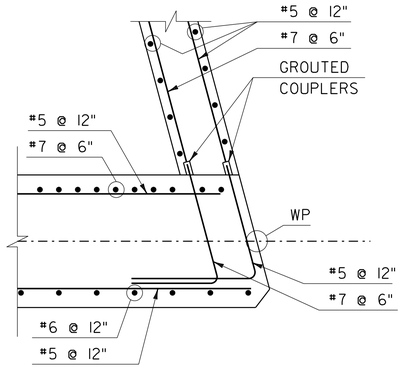
WW2 CORNER DETAIL CIP

SCALE: ½" = 1'-0"
(ABOVE SEAT)



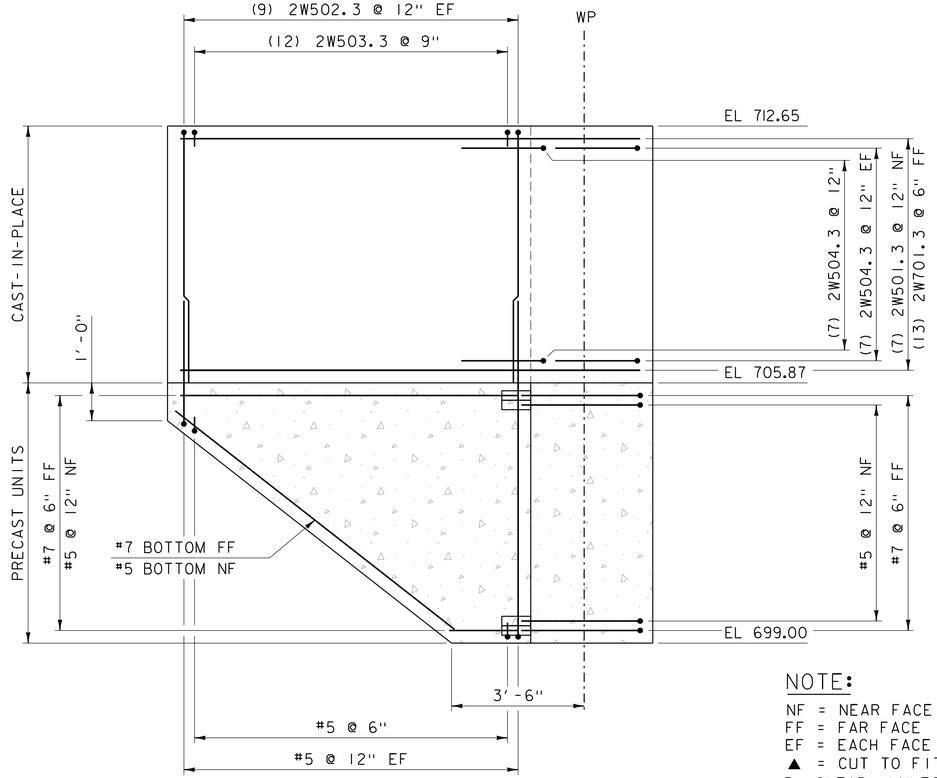
WW1 CORNER DETAIL CIP

SCALE: ½" = 1'-0"
(ABOVE SEAT)



WW1 CORNER DETAIL PCU

SCALE: ½" = 1'-0"
(BELOW SEAT)

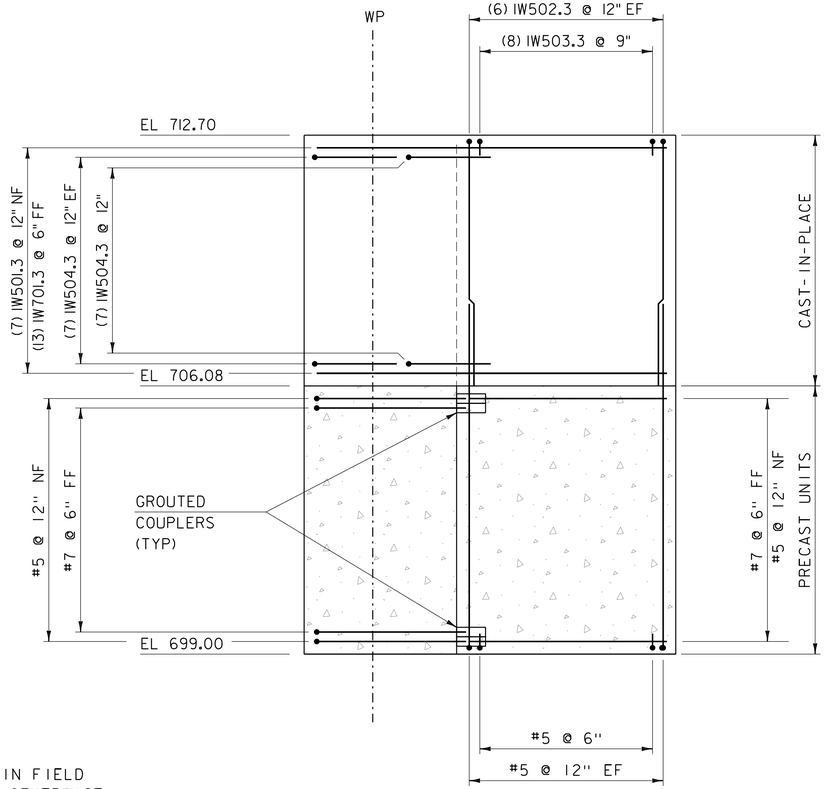


WINGWALL 2 - ELEVATION

SCALE: ½" = 1'-0"

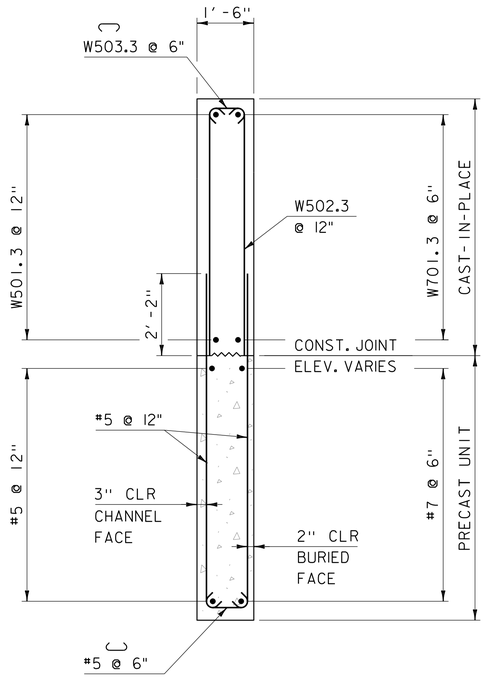
NOTE:

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.



WINGWALL 1 - ELEVATION

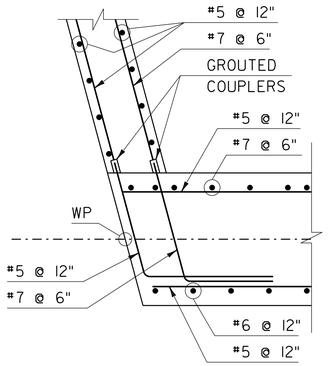
SCALE: ½" = 1'-0"



WINGWALL 1-4 - TYPICAL

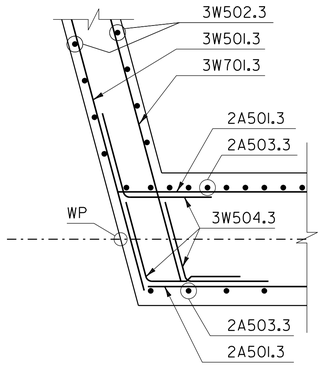
SCALE: ½" = 1'-0"

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052sub.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: C. BURRALL
WINGWALL 1 - 2 ELEVATIONS & TYPICAL	SHEET 42 OF 64



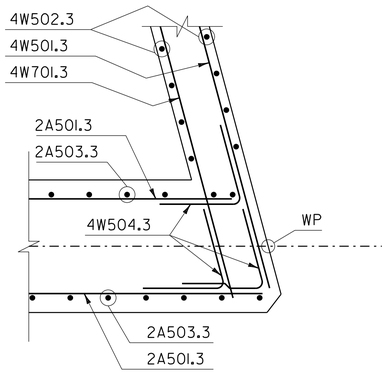
WW3 CORNER DETAIL PCU

SCALE: ½" = 1'-0"
(BELOW SEAT)



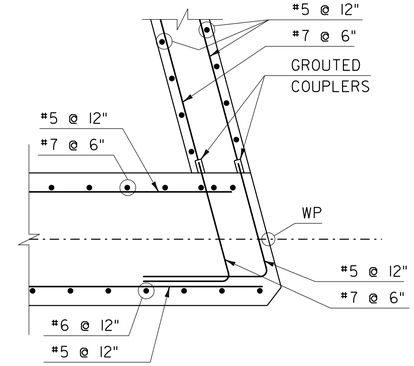
WW3 CORNER DETAIL CIP

SCALE: ½" = 1'-0"
(ABOVE SEAT)



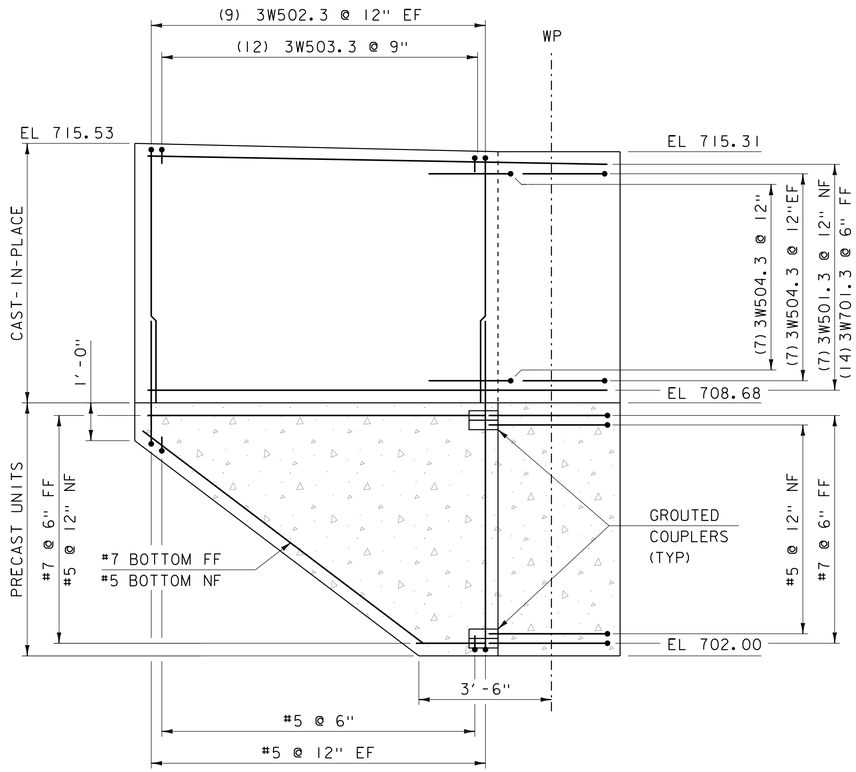
WW4 CORNER DETAIL CIP

SCALE: ½" = 1'-0"
(ABOVE SEAT)



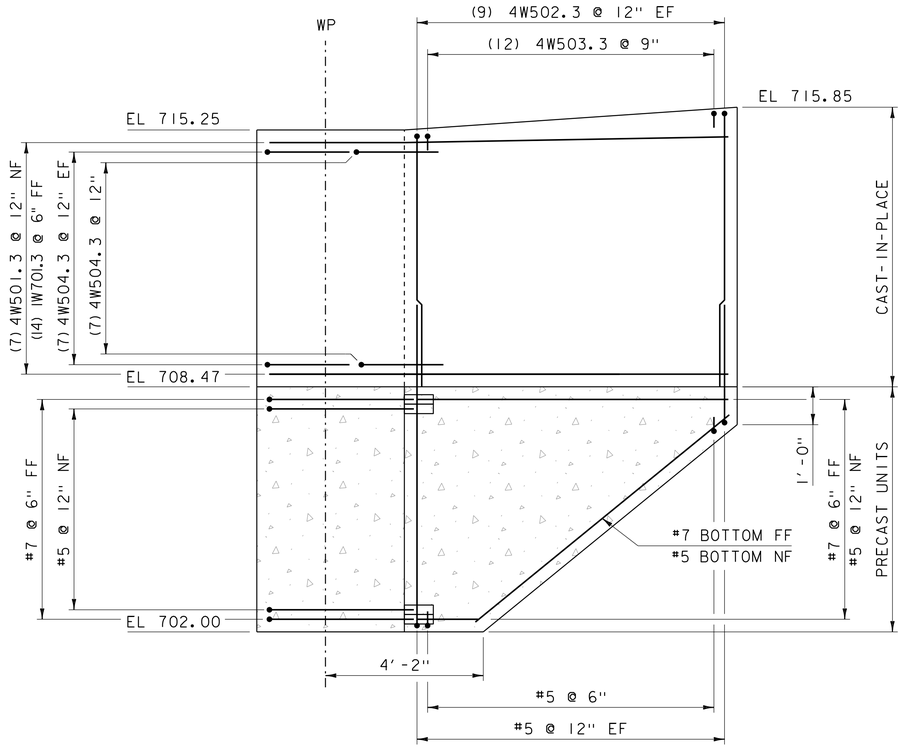
WW4 CORNER DETAIL PCU

SCALE: ½" = 1'-0"
(BELOW SEAT)



WINGWALL 3 - ELEVATION

SCALE: ½" = 1'-0"



WINGWALL 4 - ELEVATION

SCALE: ½" = 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:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052sub2.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: D. KARABEGOVIC
DESIGNED BY: D. PETERSON	CHECKED BY: M. LONGSTREET
WINGWALL 3 - 4 ELEVATIONS	SHEET 43 OF 64

STATE OF VERMONT
AGENCY OF TRANSPORTATION

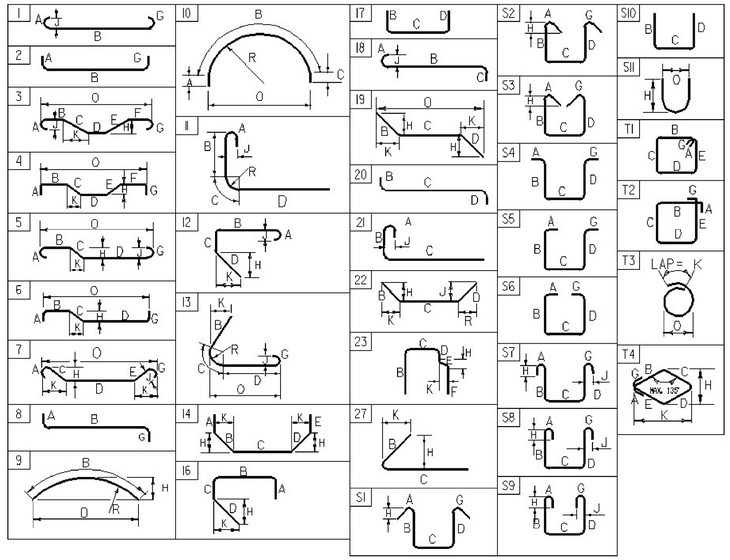
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	DECK		**(INCLUDING BARRIER WALL AND WALKWAY SIDEWALK)**														
✳	25	4	34'- 11"	S401.3	STR	34'- 11"											
	336	5	34'- 11"	S501.3	STR	34'- 11"											
	263	5	39'- 0"	S502.3	STR	39'- 0"											
✳	264	6	39'- 0"	S601.3	STR	39'- 0"											
✳	75	9	36'- 0"	S801.3	2	4'- 0"	32'- 0"	---									
	199	4	10'- 5"	S402.3	S5	2'- 2"	2'- 5"	1'- 0"	2'- 8"			2'- 2"					
	199	4	9'- 6"	S403.3	S5	2'- 2"	2'- 3"	0'- 7"	2'- 4"			2'- 2"					
	134	5	10'- 10"	S503.3	S6	2'- 2"	0'- 9"	5'- 0"	0'- 9"			2'- 2"					
	76	5	6'- 5"	S504.3	22		2'- 0"	2'- 5"	2'- 0"				1'- 3"	1'- 3"	1'- 3"	1'- 3"	
	ABUTMENT #1																
	20	5	23'- 4"	1A501.3	STR	23'- 4"											
	6	5	2'- 9"	1A502.3	STR	2'- 9"											
✳	5	5	7'- 10"	1A503.3	STR	7'- 10"											
	12	5	14'- 11"	1A504.3	S10		5'- 11"	3'- 1"	5'- 11"								
	32	5	11'- 9"	1A505.3	S10		4'- 4"	3'- 1"	4'- 4"								
	4	5	5'- 3"	2A506.3	S11								2'- 1"				2'- 2"
	31	8	3'- 5"	1A801.3	19		1'- 5"	2'- 0"	---				1'- 0"		1'- 0"		3'- 0"
	WINGWALL #1																
	7	5	9'- 4"	1W501.3	STR	9'- 4"											
✳	14	7	9'- 4"	1W701.3	STR	9'- 4"											
	12	5	6'- 11"	1W502.3	1	0'- 7"	6'- 4"							0'- 5"			
	14	5	2'- 1"	1W503.3	S3	0'- 6"	---	1'- 1"				0'- 6"	0'- 4"				
	21	5	4'- 4"	1W504.3	27		2'- 2"	2'- 2"					2'- 1"		0'- 7"		
	WINGWALL #2																
	7	5	12'- 4"	2W501.3	STR	12'- 4"											
	14	7	12'- 4"	2W701.3	STR	12'- 4"											
	18	5	7'- 1"	2W502.3	1	0'- 7"	6'- 6"					---		0'- 5"			
	12	5	2'- 0"	2W503.3	S3	0'- 6"	---	1'- 1"	---			0'- 6"	0'- 4"				
	21	5	4'- 6"	2W504.3	22		2'- 3"	2'- 3"	---				2'- 1"	---	0'- 7"	---	
	ABUTMENT #2																
	20	5	22'- 6"	2A501.3	STR	22'- 6"											
	4	5	8'- 11"	2A502.3	STR	8'- 11"											
	3	5	14'- 9"	2A504.3	S10		5'- 10"	3'- 1"	5'- 10"								
	31	5	11'- 9"	2A505.3	S10		4'- 4"	3'- 1"	4'- 4"								
	4	5	5'- 3"	2A506.3	S11								2'- 1"				2'- 2"
	31	8	3'- 5"	2A801.3	19		1'- 5"	2'- 0"	---				1'- 0"		1'- 0"		3'- 0"
	WINGWALL #3																
	7	5	12'- 4"	3W501.3	STR	12'- 4"											
	14	7	12'- 4"	3W701.3	STR	12'- 4"											
	18	5	6'- 11"	3W502.3	1	0'- 7"	6'- 4"					---		0'- 5"			
	12	5	2'- 0"	3W503.3	S3	0'- 6"	---	1'- 1"	---			0'- 6"	0'- 4"				
	21	5	4'- 4"	3W504.3	22		2'- 2"	2'- 2"	---				2'- 1"	---	0'- 7"	---	
	WINGWALL #4																
	7	5	12'- 4"	4W501.3	STR	12'- 4"											
	14	7	12'- 4"	4W701.3	STR	12'- 4"											
	18	5	7'- 1"	4W502.3	1	0'- 7"	6'- 6"					---		0'- 5"			
	12	5	2'- 0"	4W503.3	S3	0'- 6"	---	1'- 1"	---			0'- 6"	0'- 4"				
	21	5	4'- 5"	4W504.3	27		2'- 3"	2'- 2"					2'- 1"		0'- 7"		

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.



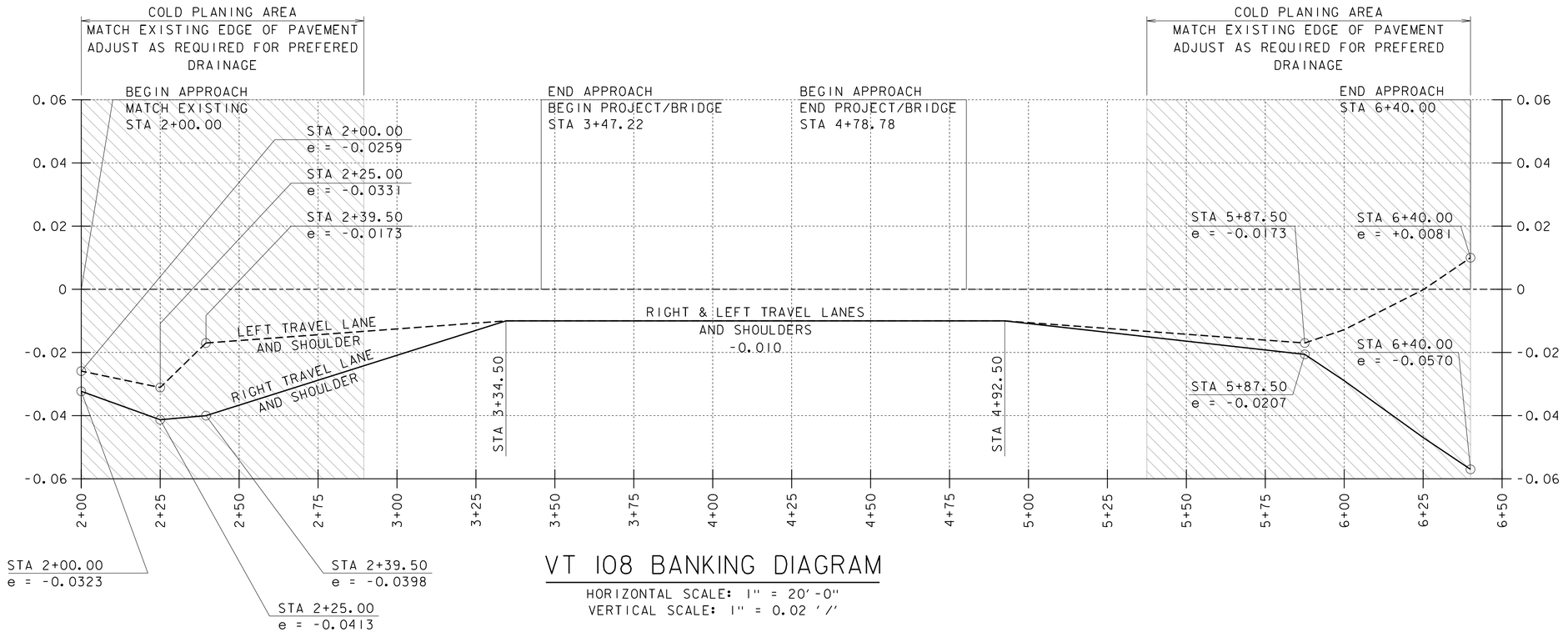
ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES²	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 ~

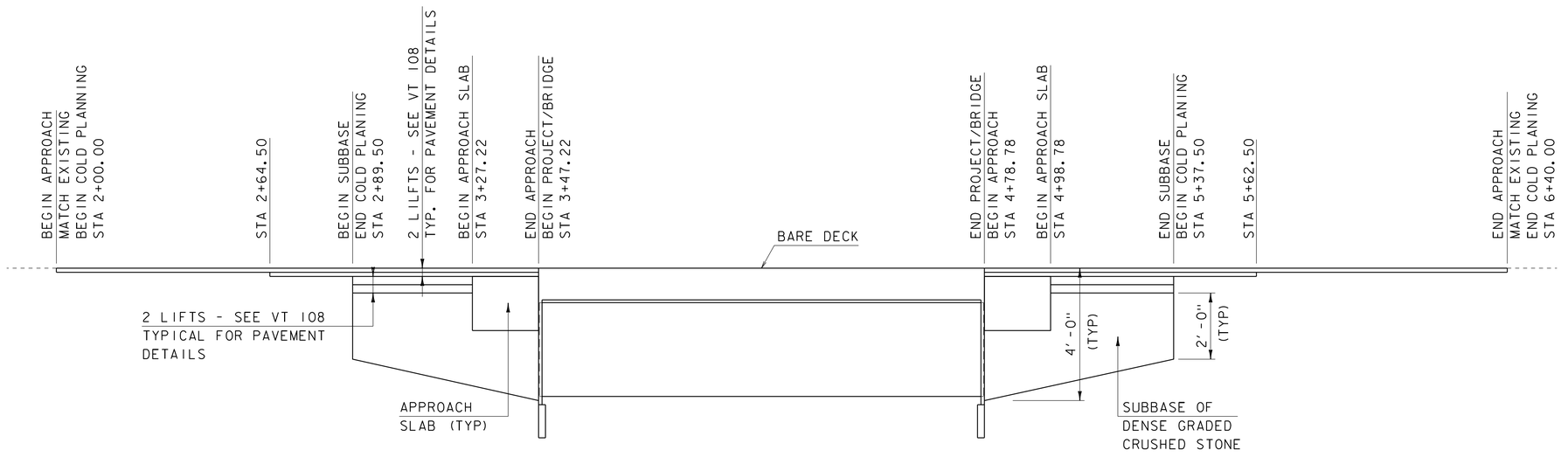
THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A ,2 FOR LEVEL TWO SUFFIX OR ,3 FOR LEVEL THREE SUFFIX ,1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROIVEDED FOR EACH CORRIOSION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

PROJECT NAME:	**STOWE**
PROJECT NUMBER:	**BRF 0235 (11)**
FILE NAME: **s87e052rss.xls**	PLOT DATE: **7/15/2014**
PROJECT MANAGER: **C. CARLSON**	DRAWN BY: **M. LONGSTREET**
DESIGNED BY: **D. PETERSON**	CHECKED BY: **J. LACROIX**
REINFORCING STEEL SCHEDULE	SHEET 44 OF 64



VT 108 BANKING DIAGRAM

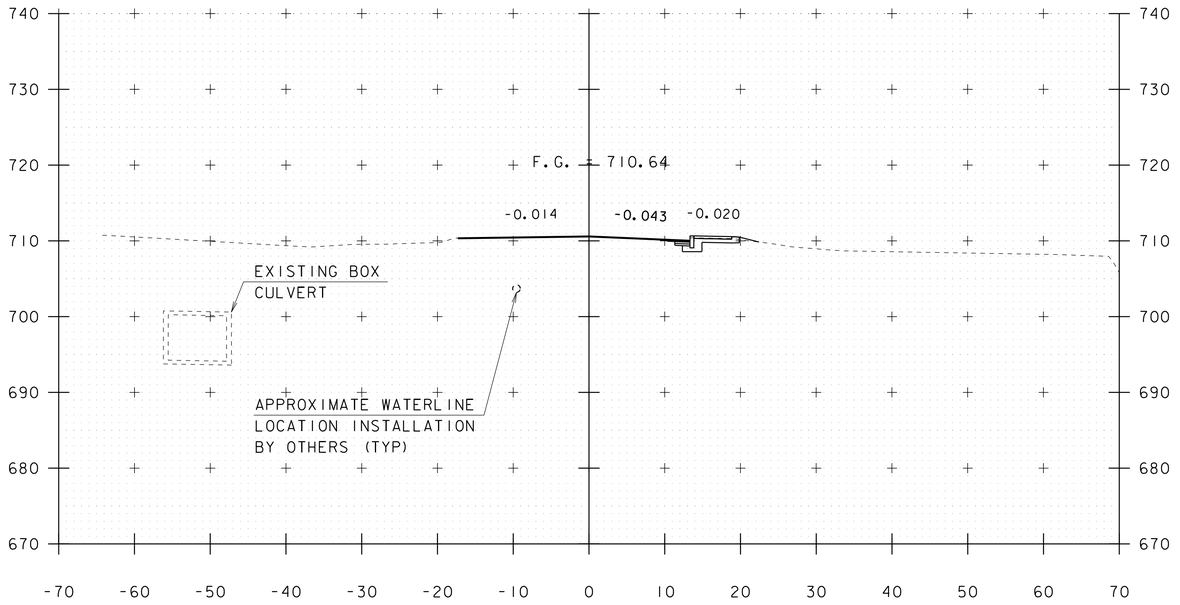
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 0.02 '/'



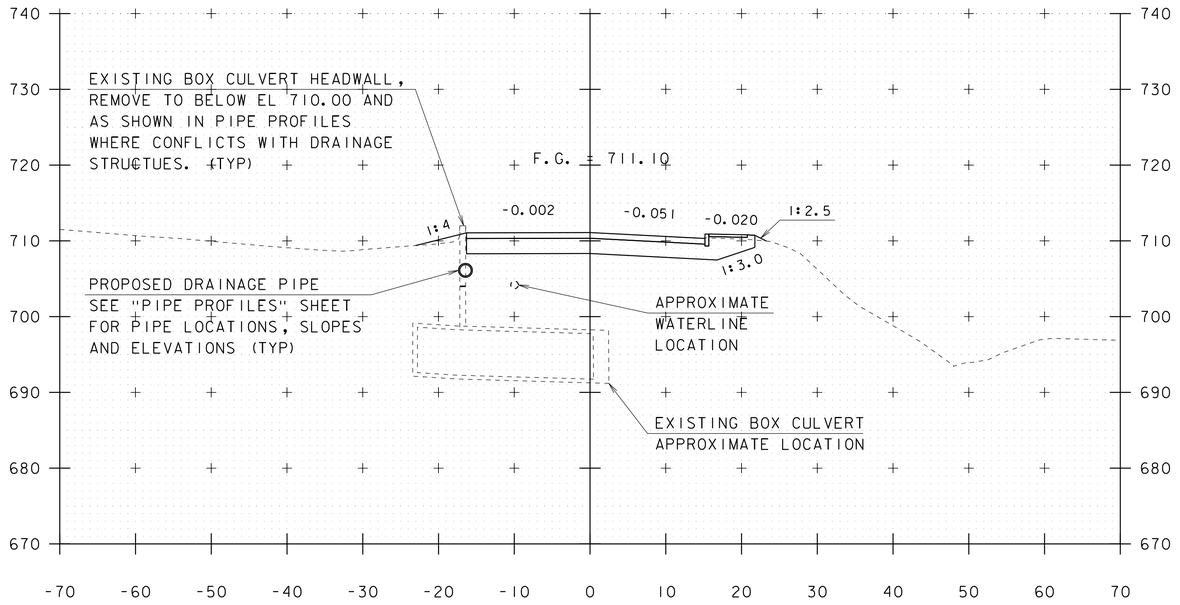
VT 108 MATERIAL TRANSITION DETAIL

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

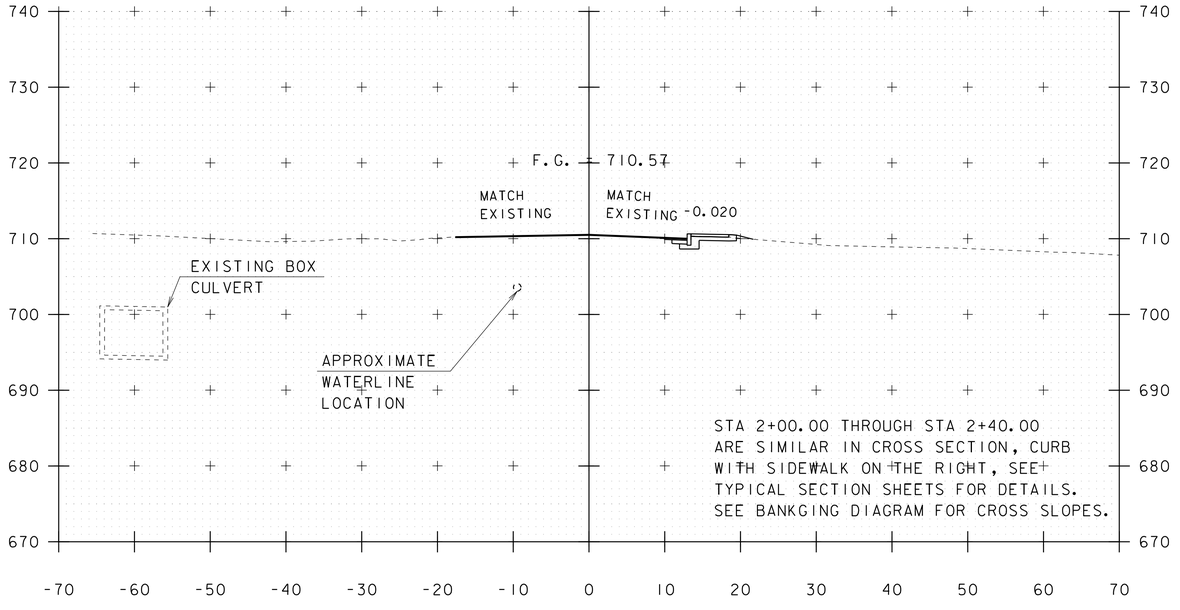
PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052pro.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROY
DESIGNED BY: D. PETERSON	CHECKED BY: M. LONGSTREET
BANKING DIAGRAM & MATERIAL TRANSITION	SHEET 45 OF 64



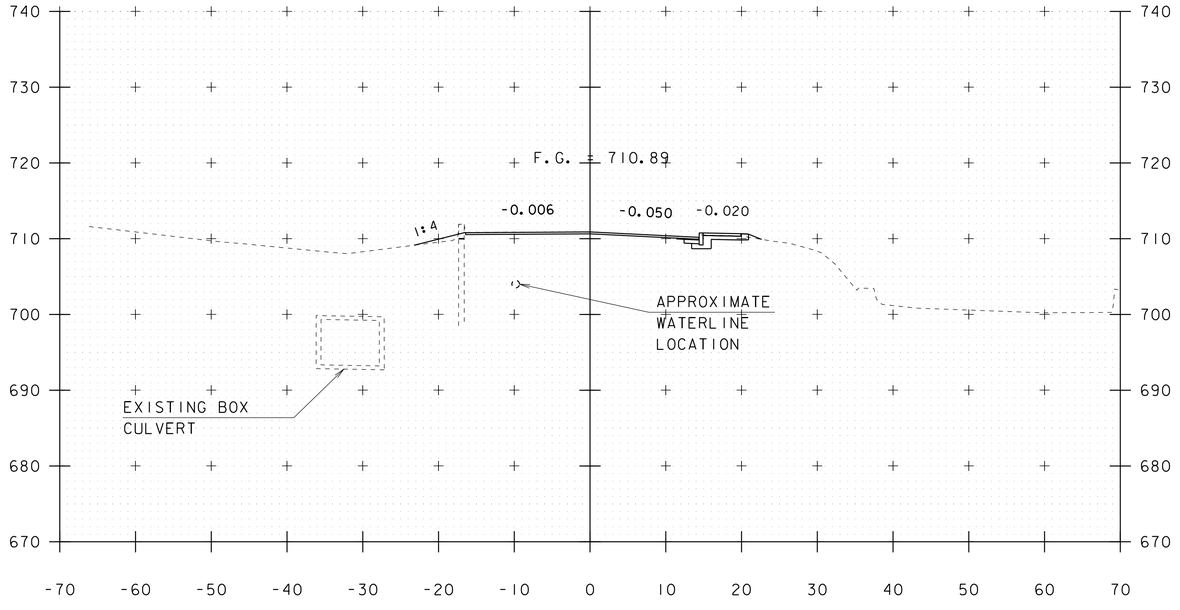
2+50



2+90



2+40
BEGIN APPROACH
STA 2+00.00
(MATCH EXISTING)



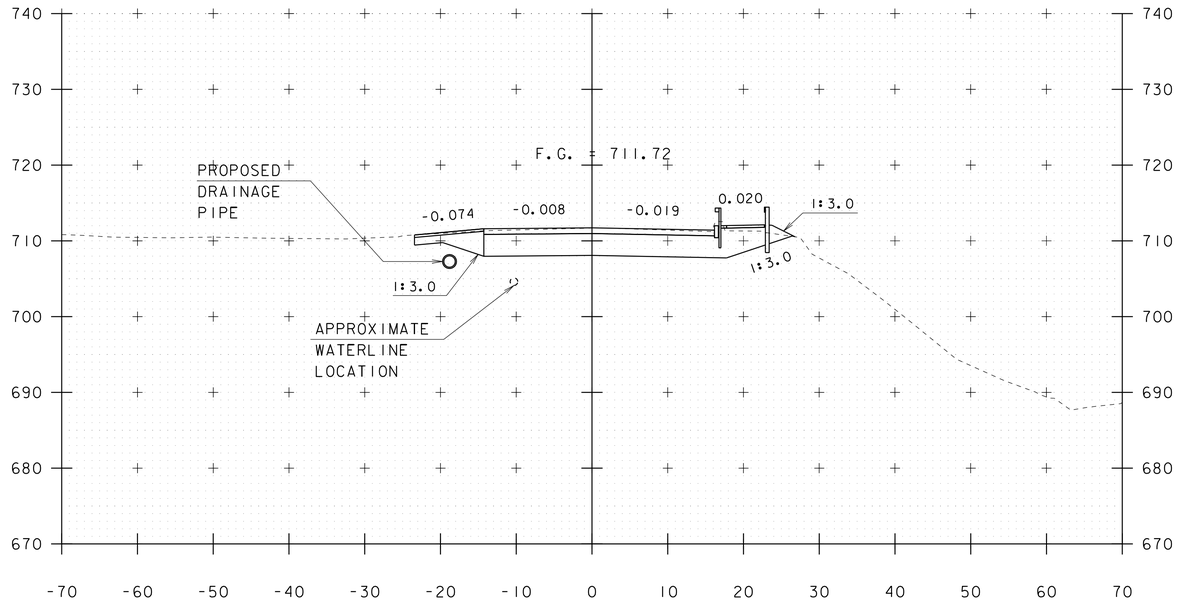
2+75

STA. 2+40 TO STA. 2+90

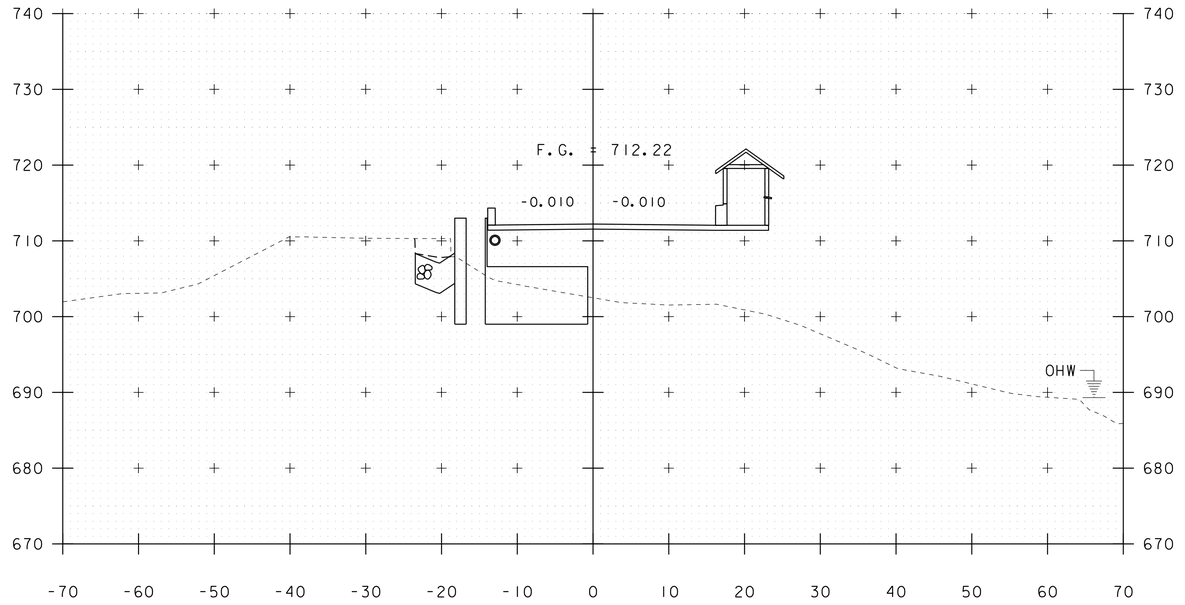
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
VT 108 CROSS SECTIONS SHEET 1

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 46 OF 64

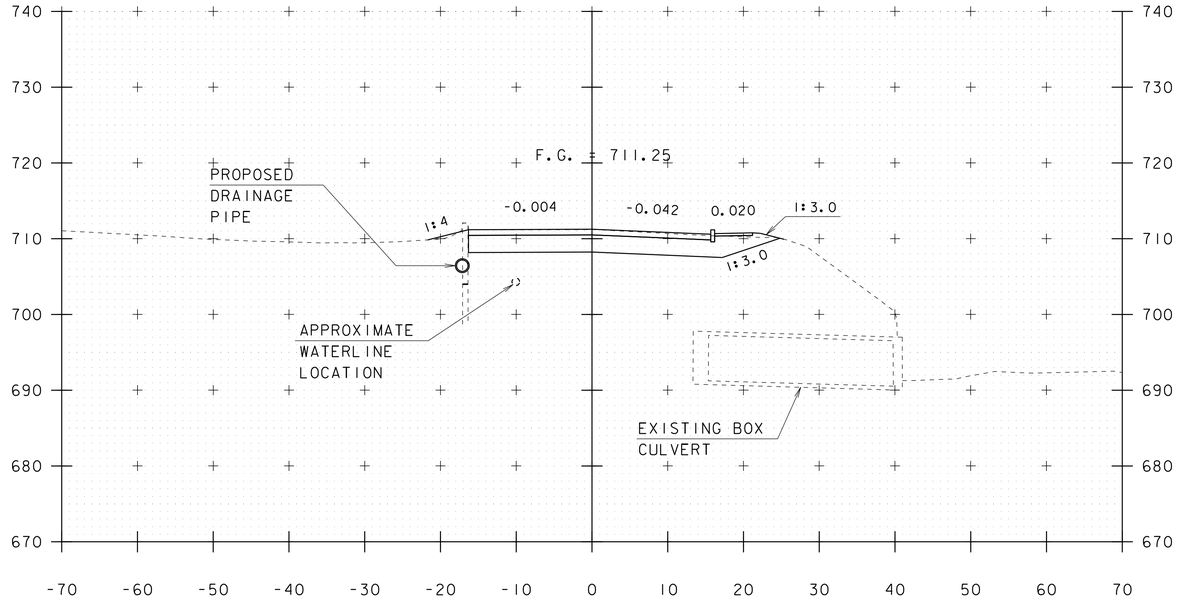


3+25

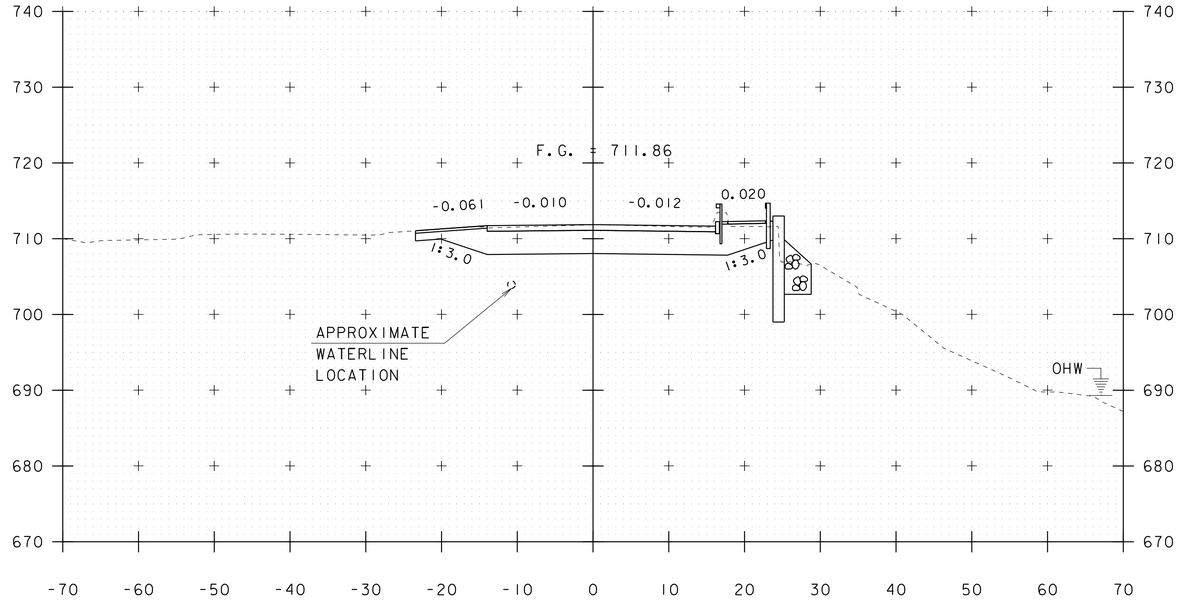


3+50

BEGIN PROJECT/BRIDGE
STA 3+47.22



3+00



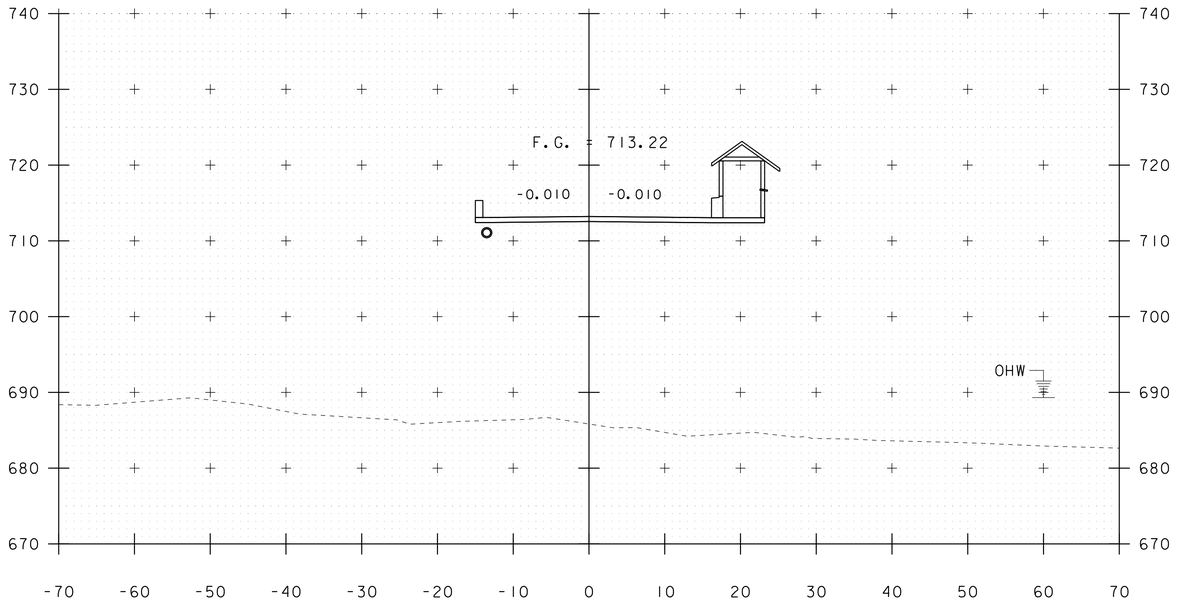
3+32

STA. 3+00 TO STA. 3+50

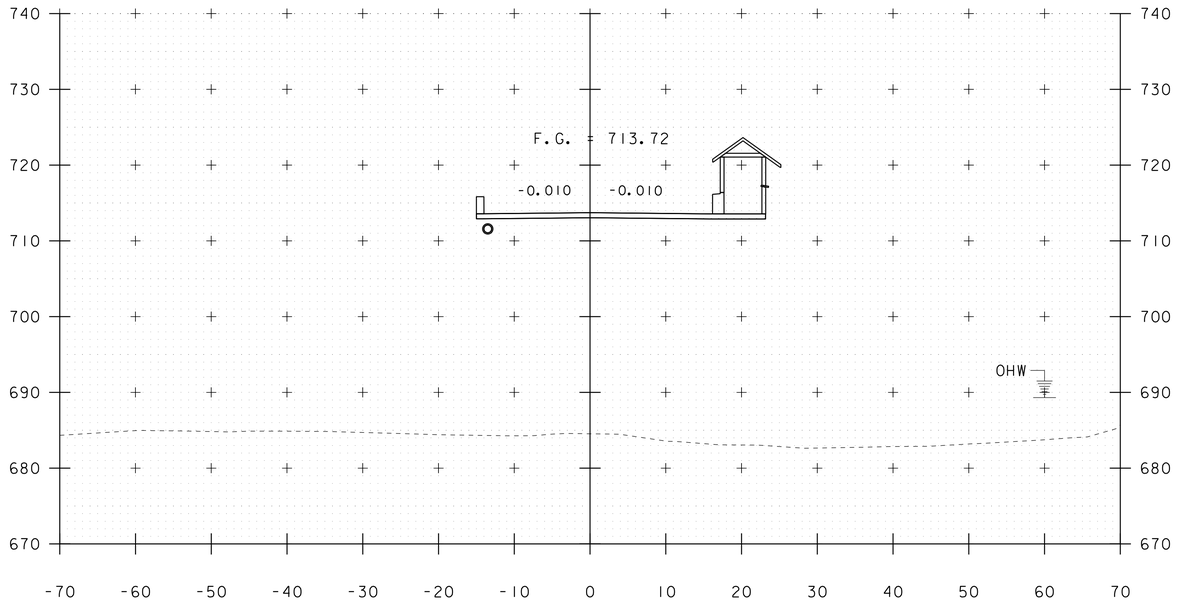
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
VT 108 CROSS SECTIONS SHEET 2

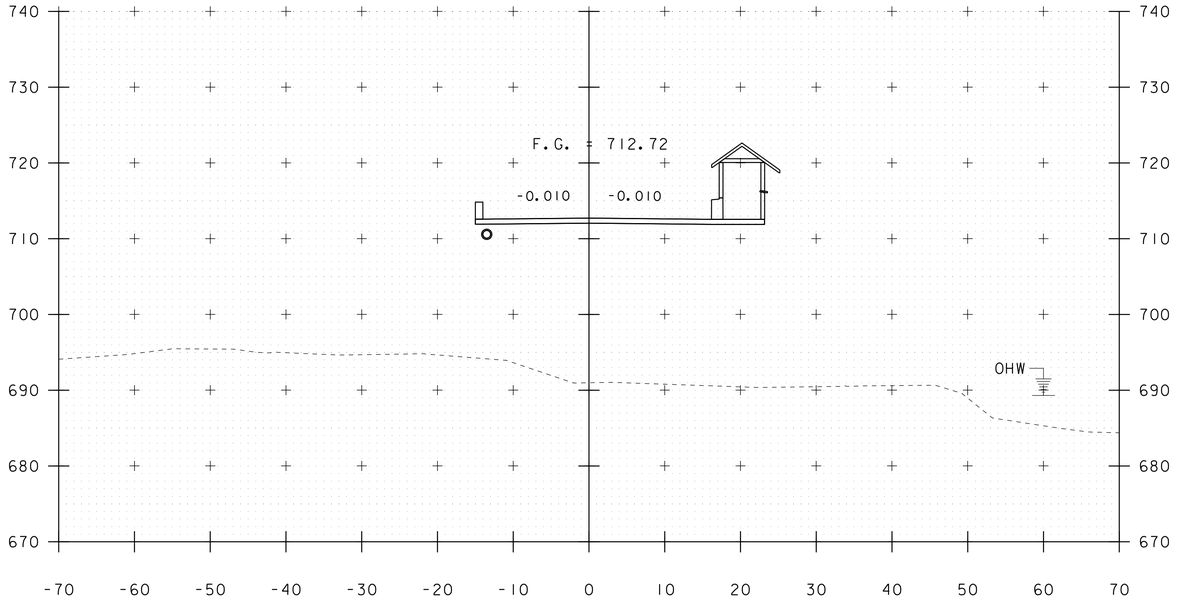
PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 47 OF 64



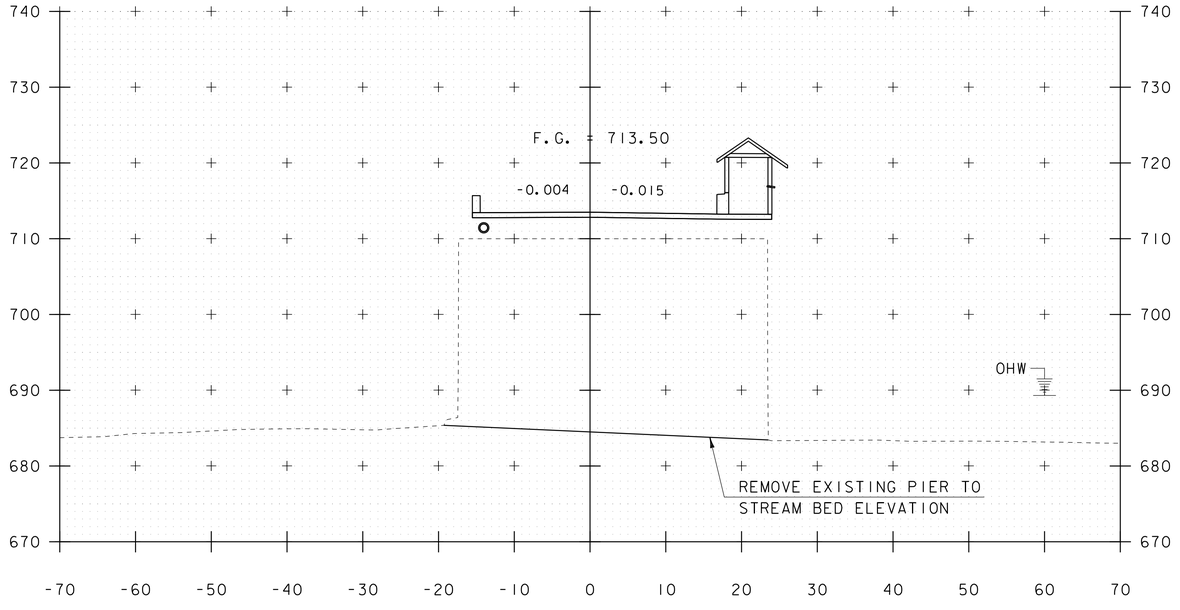
4+00



4+25



3+75



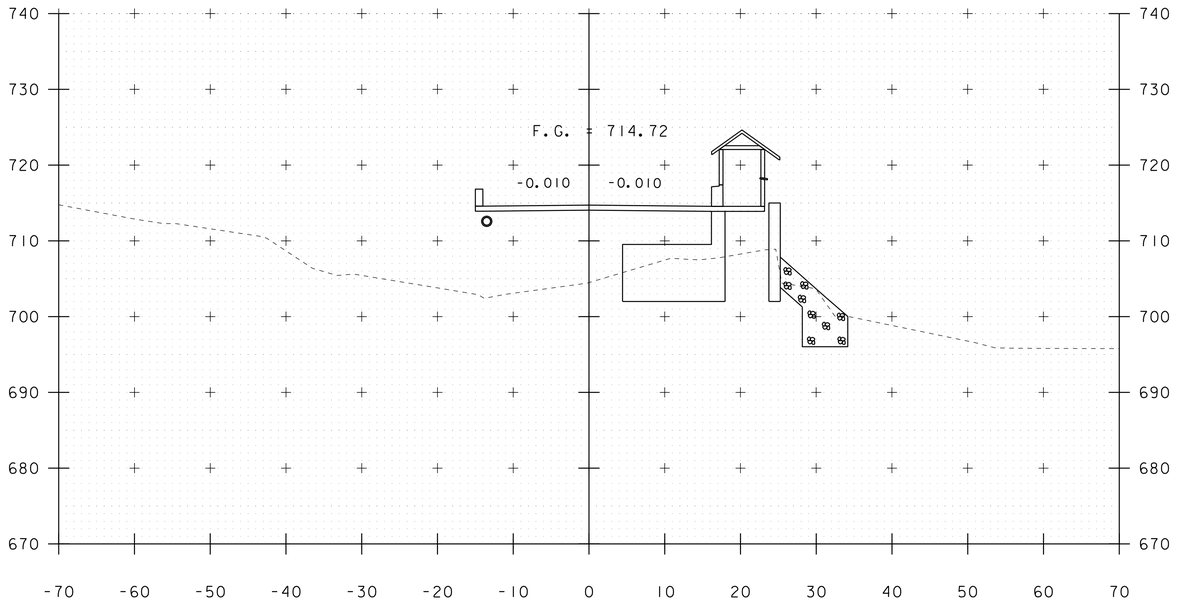
4+14 (CUT ON 15° SKEW)

STA. 3+75 TO STA. 4+25

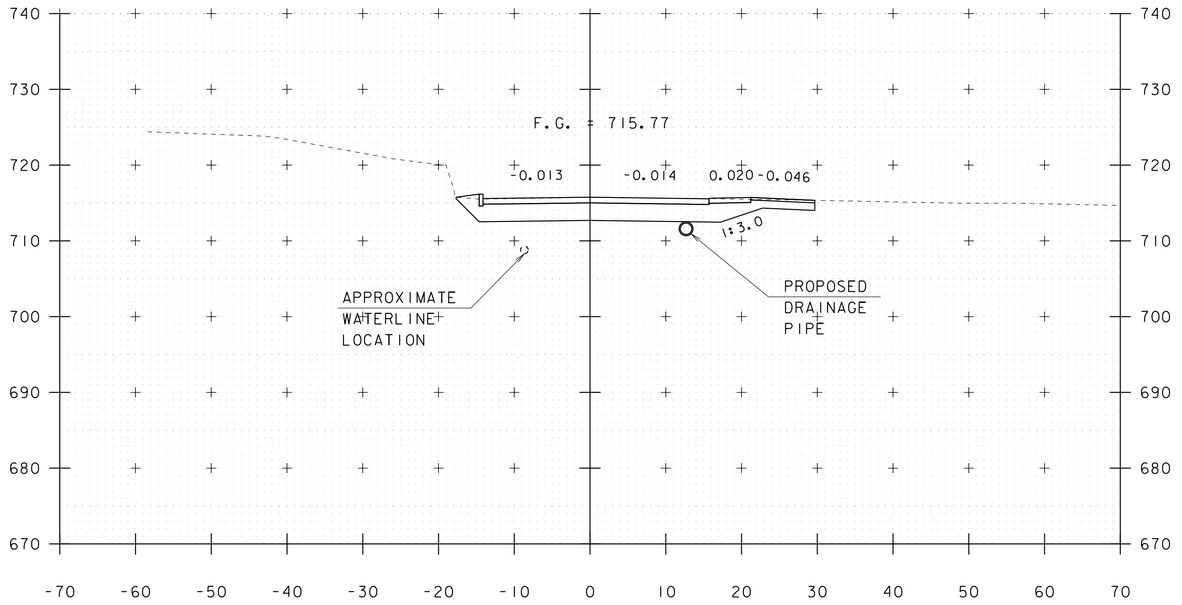
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
VT 108 CROSS SECTIONS SHEET 3

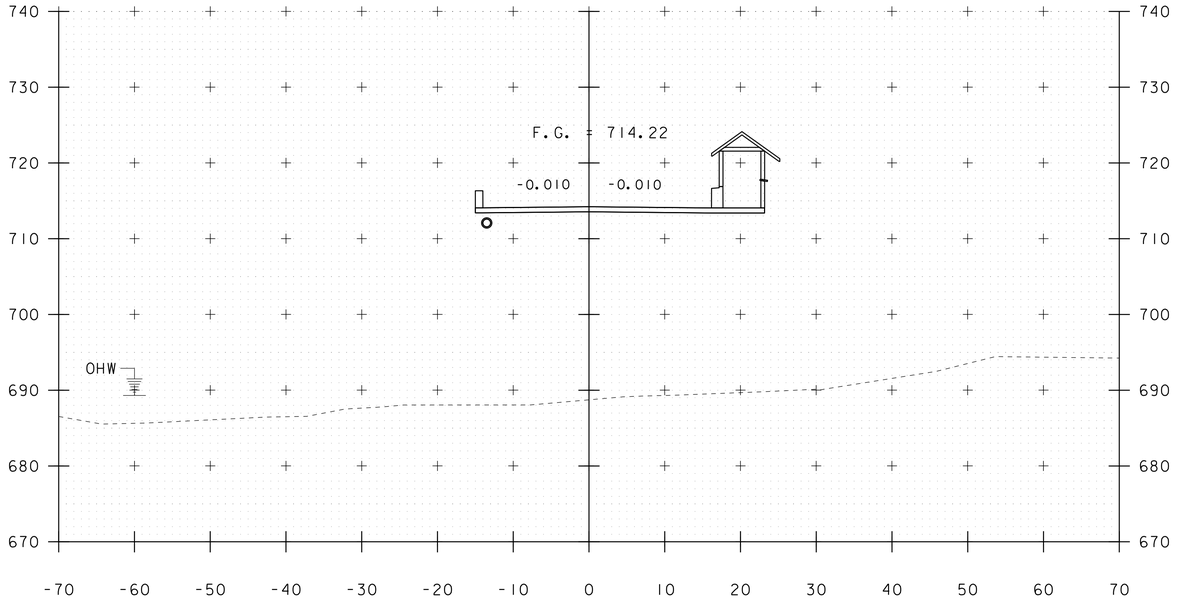
PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 48 OF 64



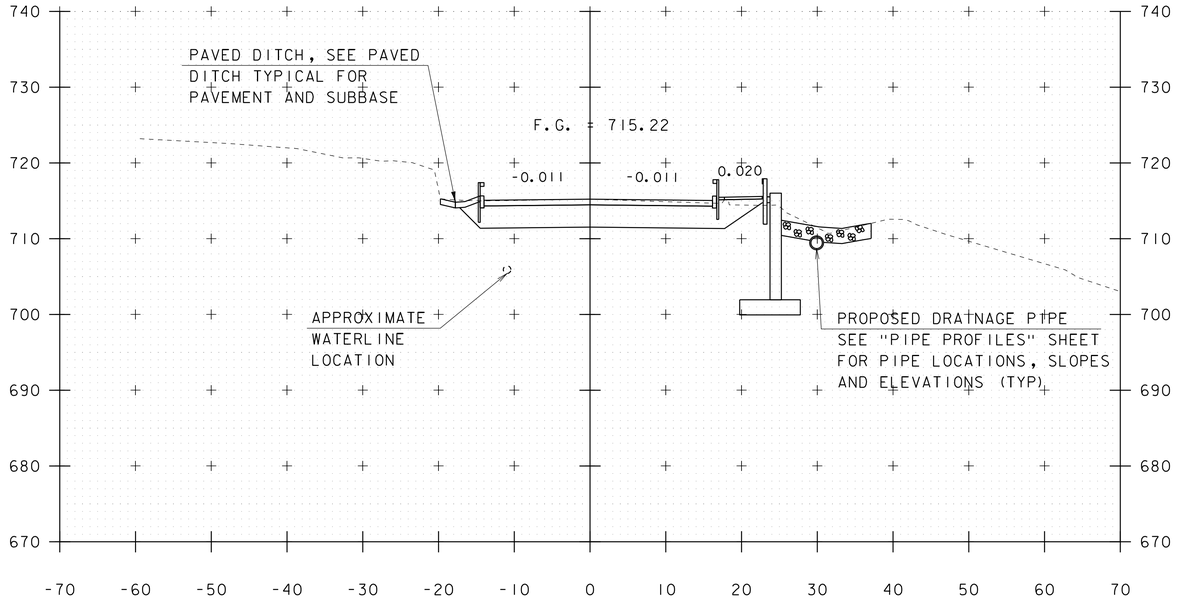
4+75



5+25



4+50



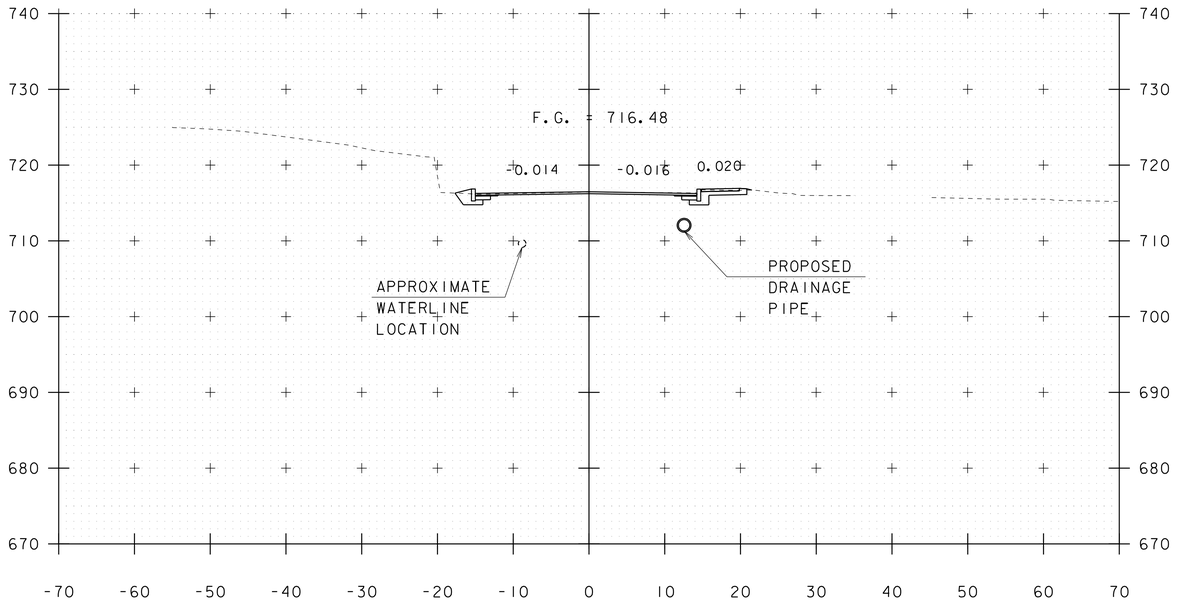
END BRIDGE/PROJECT 5+00
STA 4+78.78

STA. 4+50 TO STA. 5+25

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

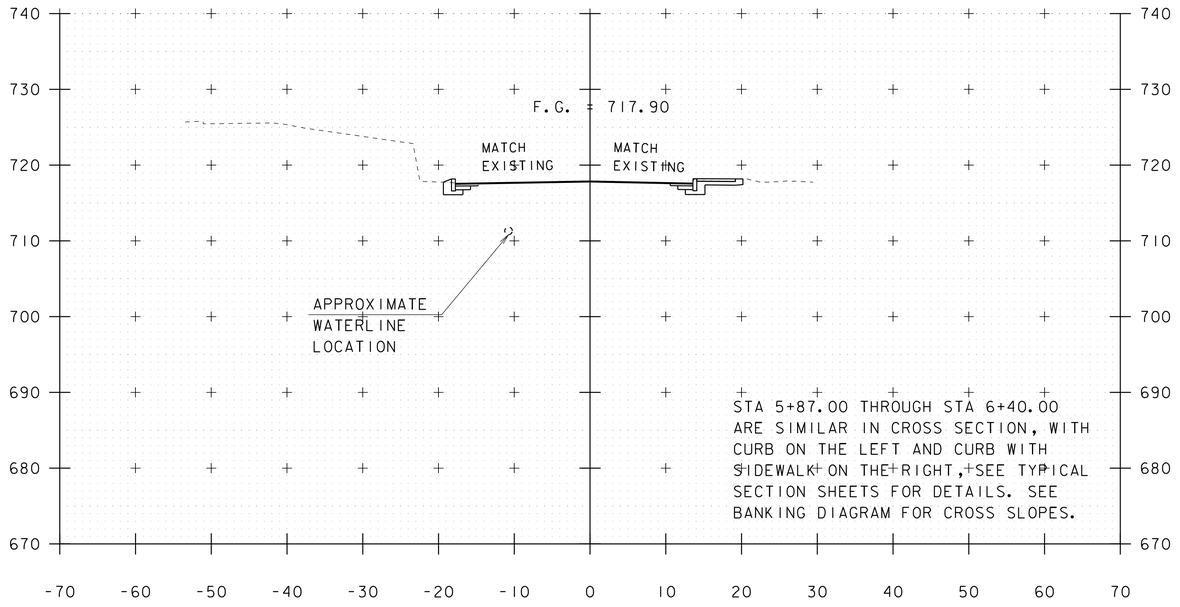
FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
VT 108 CROSS SECTIONS SHEET 4

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 49 OF 64



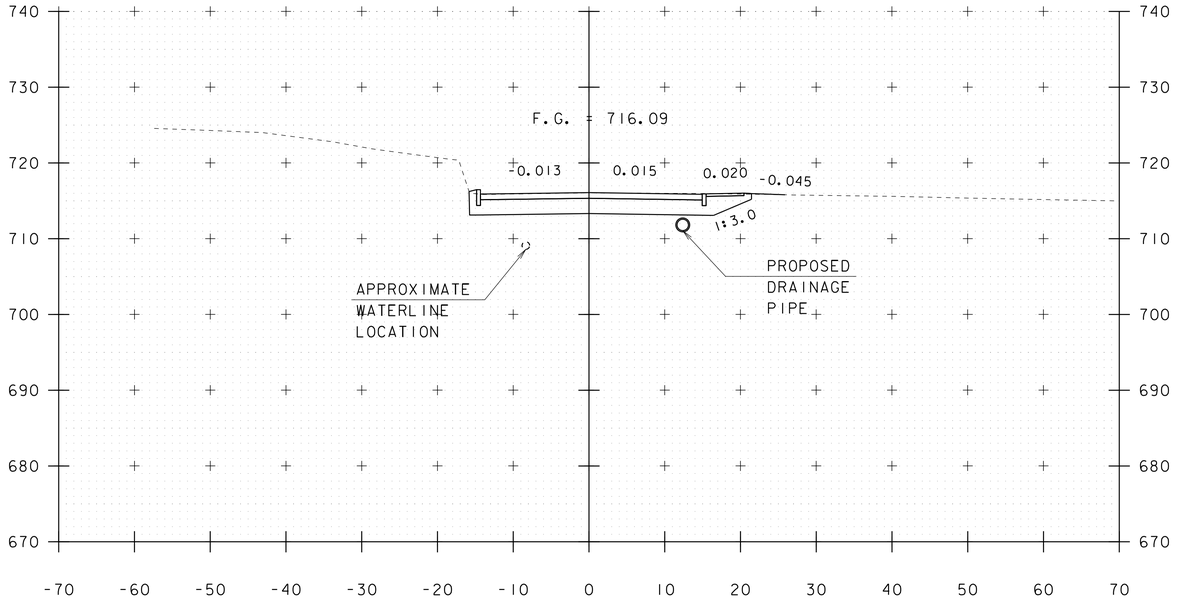
5+50

END APPROACH STA 6+40.00

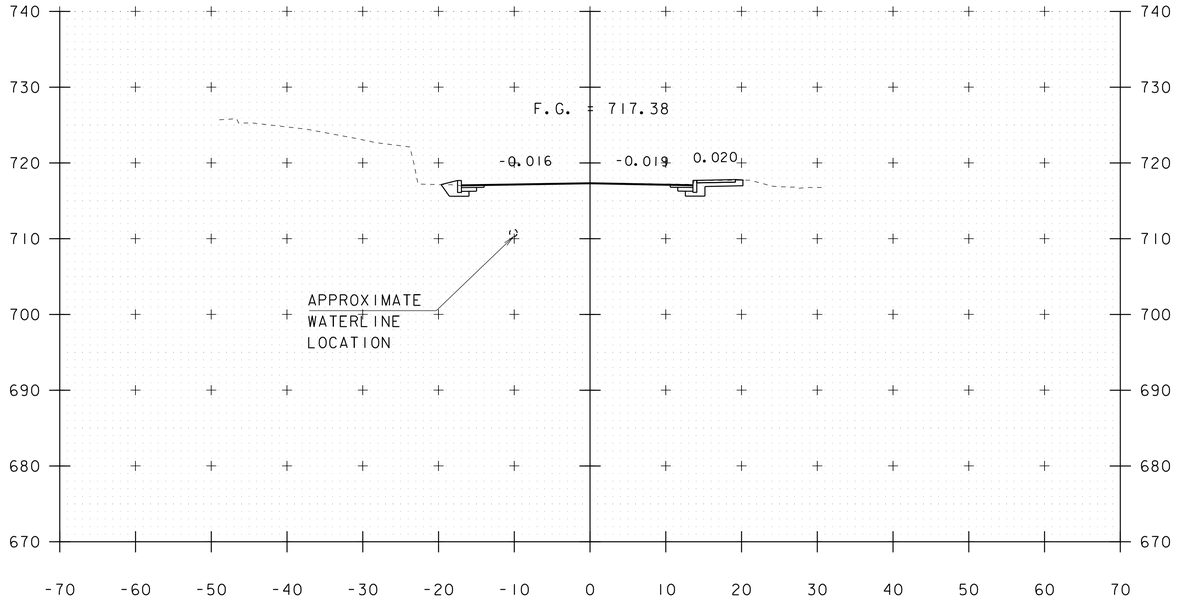


STA 5+87.00 THROUGH STA 6+40.00 ARE SIMILAR IN CROSS SECTION, WITH CURB ON THE LEFT AND CURB WITH SIDEWALK ON THE RIGHT, SEE TYPICAL SECTION SHEETS FOR DETAILS. SEE BANKING DIAGRAM FOR CROSS SLOPES.

5+87



5+37



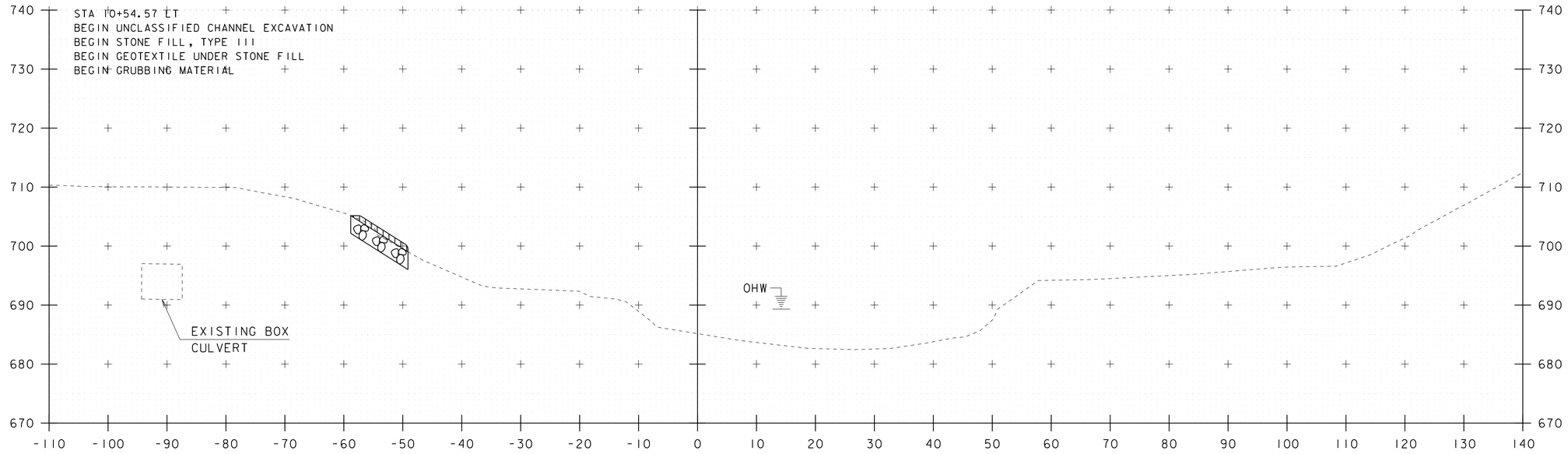
5+75

STA. 5+37 TO STA. 5+87

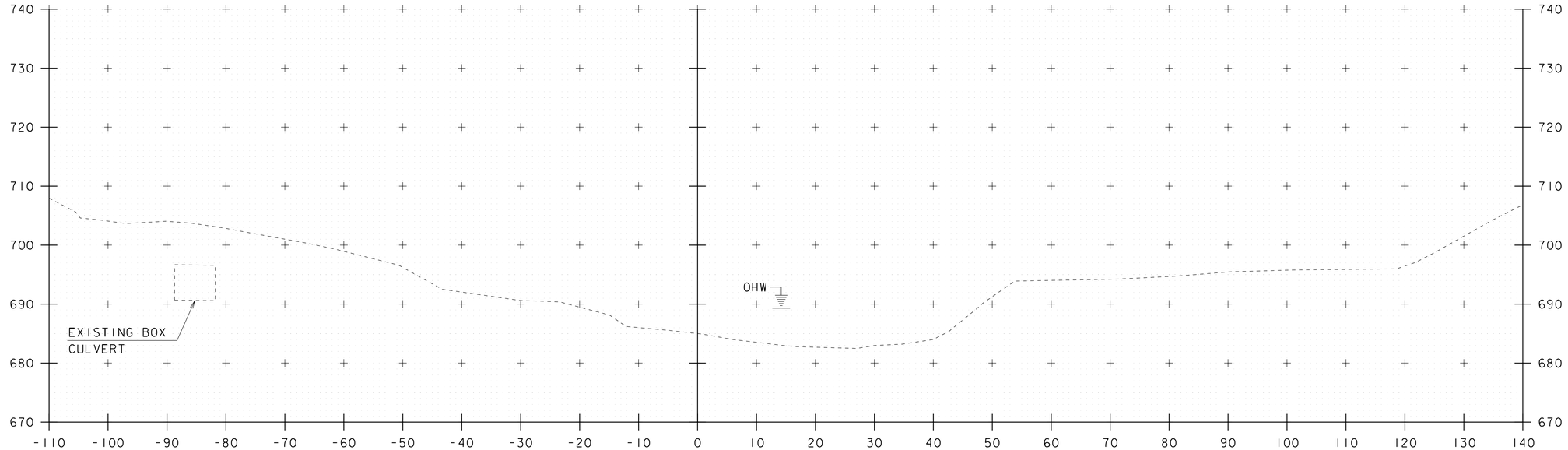
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
VT 108 CROSS SECTIONS SHEET 5

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 50 OF 64



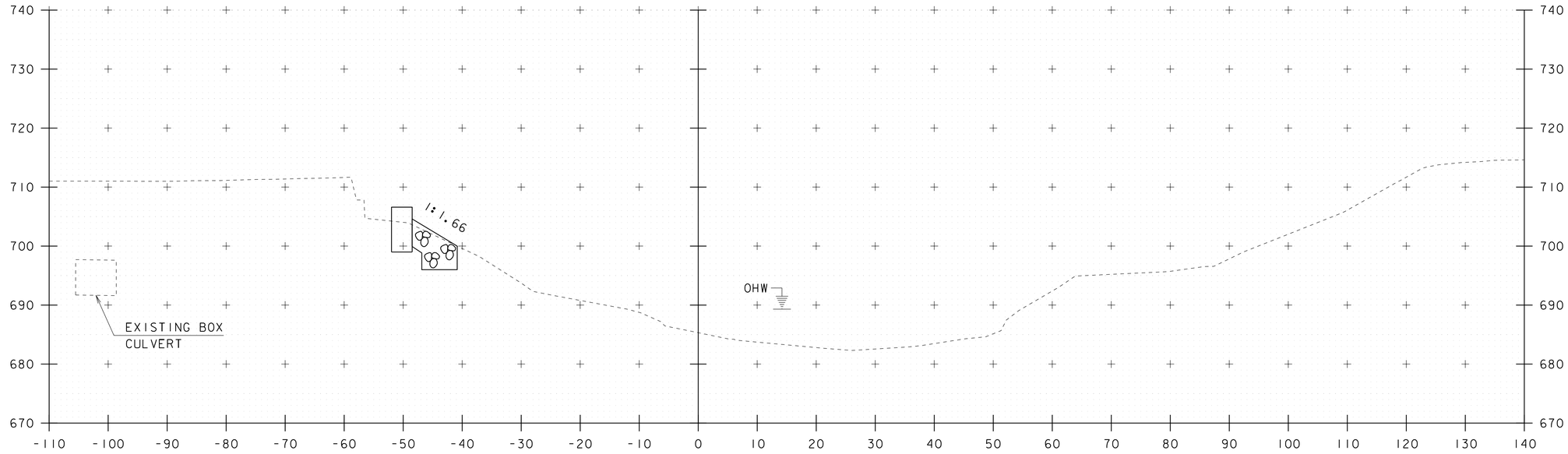
10+50



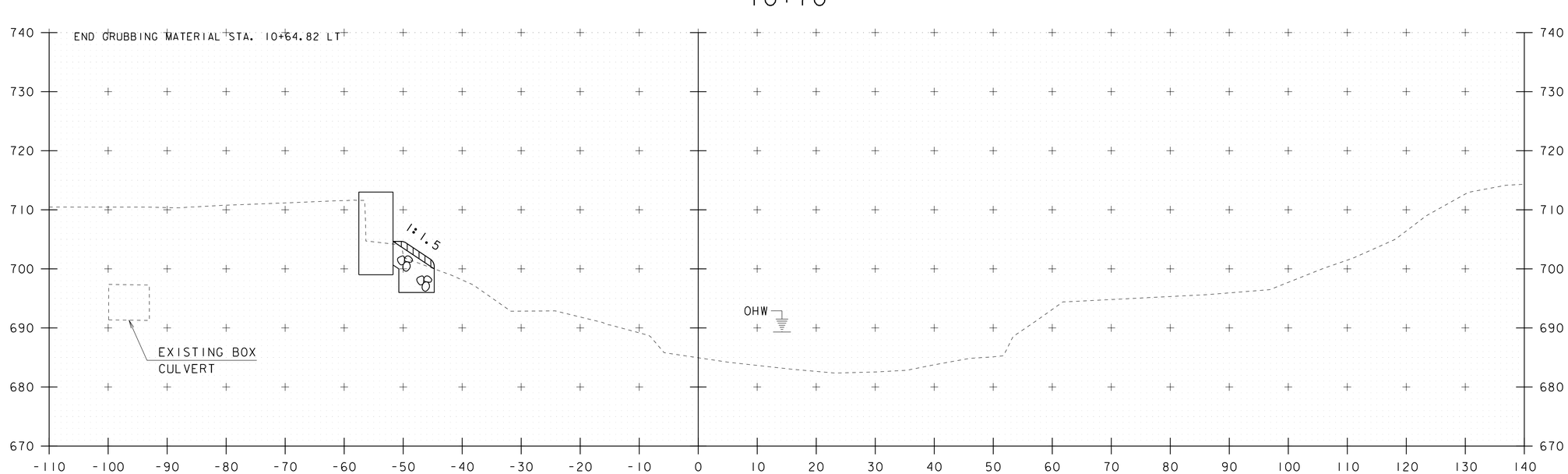
10+40

STA. 10+40 TO STA. 10+50

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052xsl.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
CHANNEL CROSS SECTIONS SHEET 1	SHEET 51 OF 64



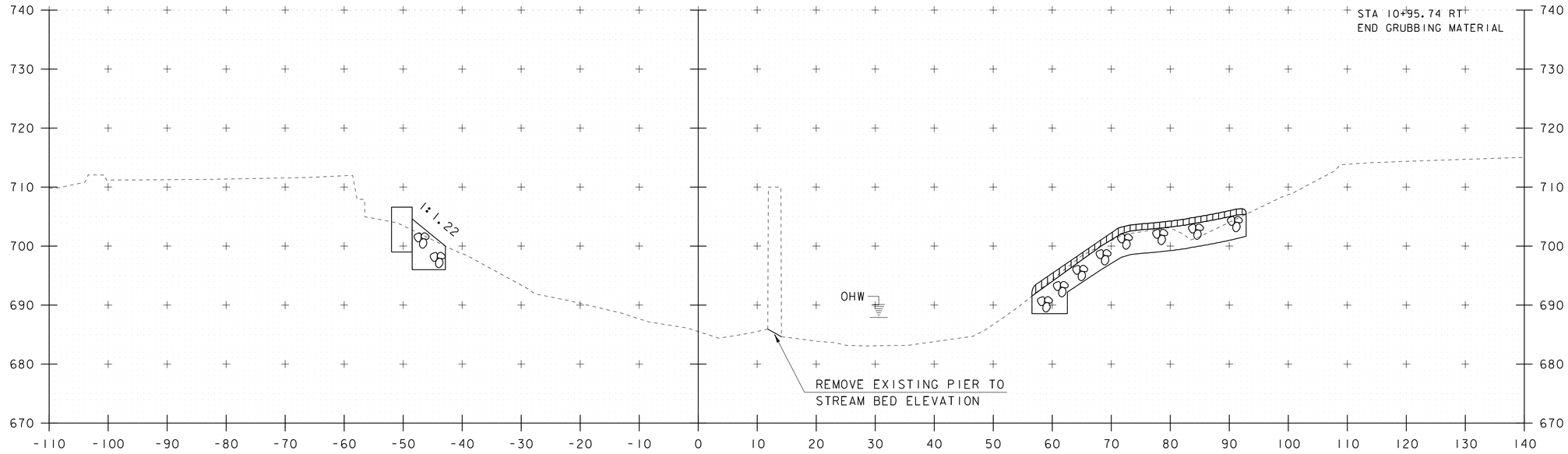
10+70



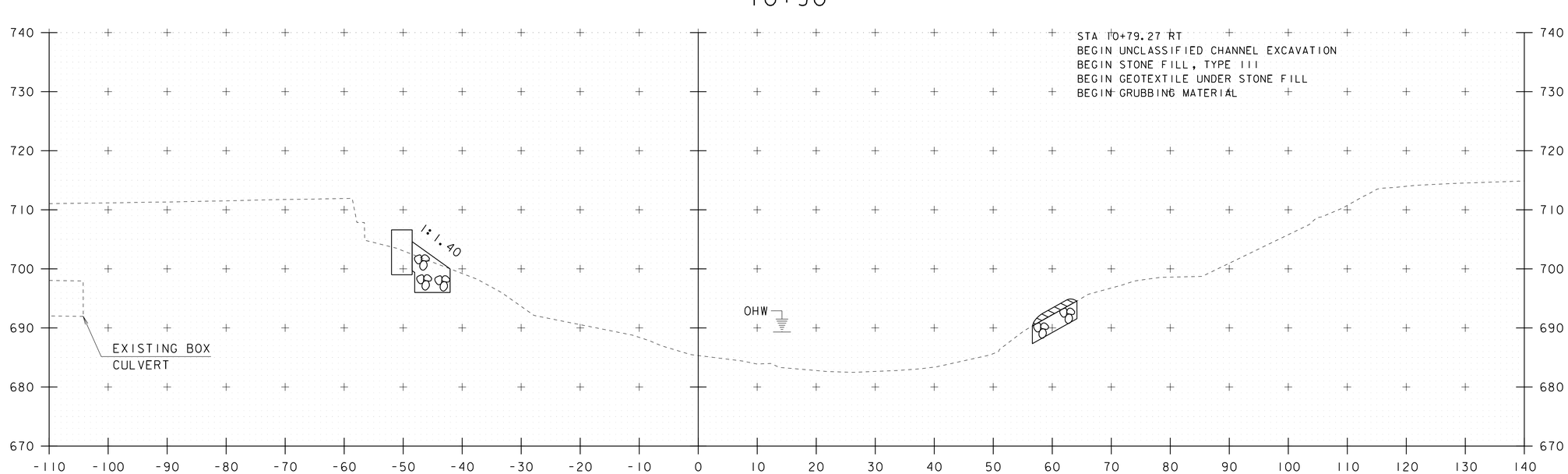
10+60

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052xsl.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
CHANNEL CROSS SECTIONS SHEET 2	SHEET 52 OF 64

STA. 10+60 TO STA. 10+70



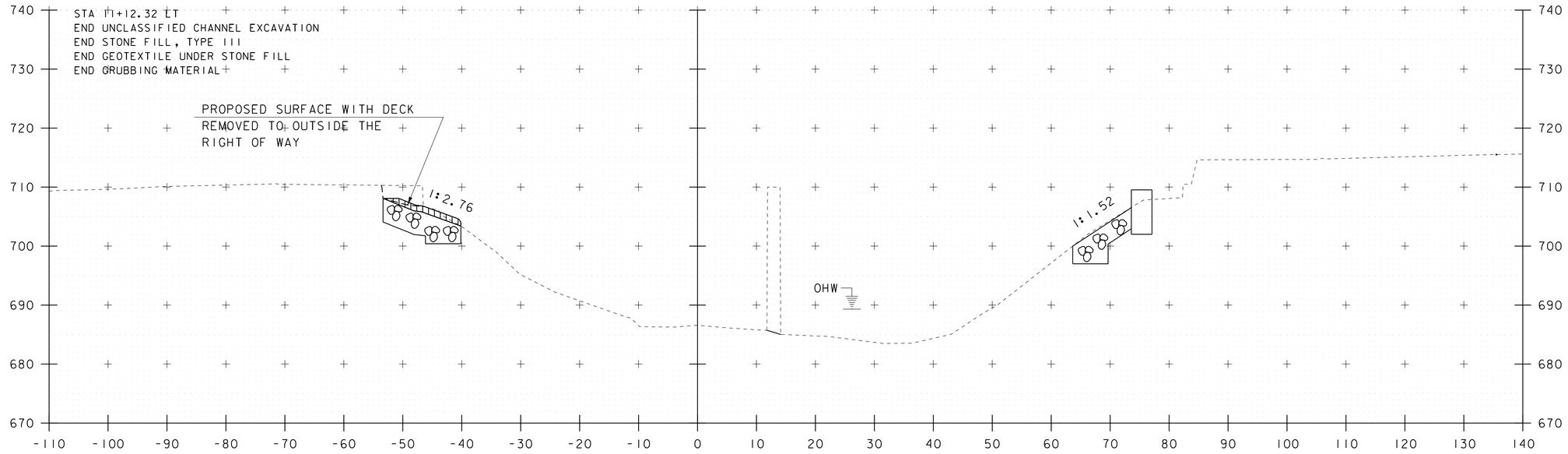
10+90



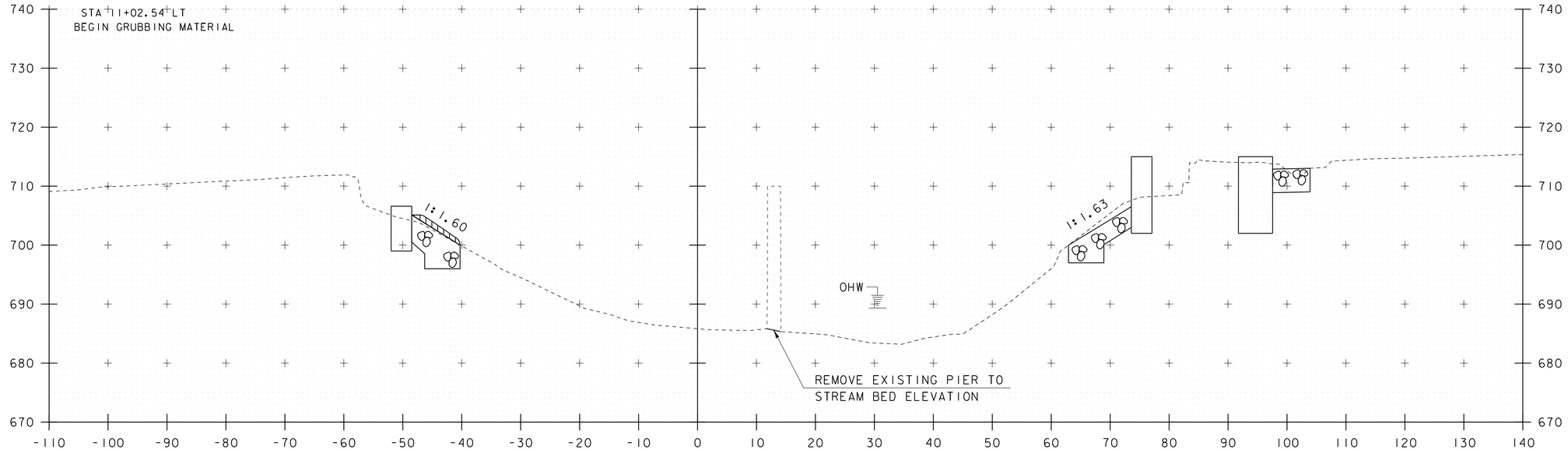
10+80

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052xsl.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
CHANNEL CROSS SECTIONS SHEET 3	SHEET 53 OF 64

STA. 10+80 TO STA. 10+90



11+10



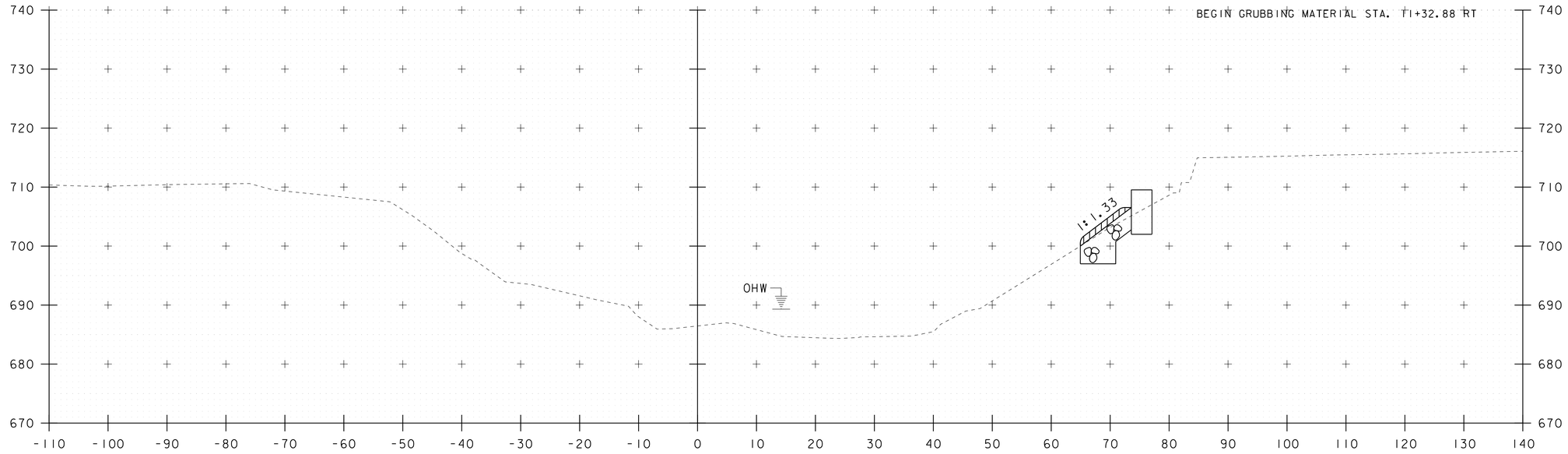
11+00

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

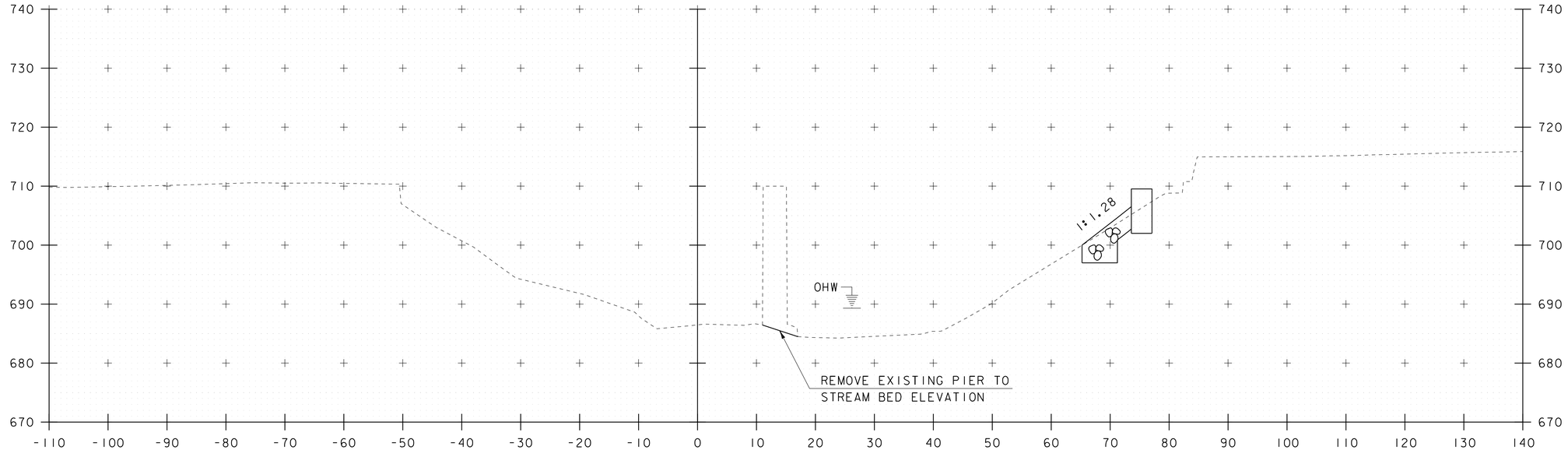
FILE NAME: s87e052xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
CHANNEL CROSS SECTIONS SHEET 4

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 54 OF 64

STA. 11+00 TO STA. 11+10



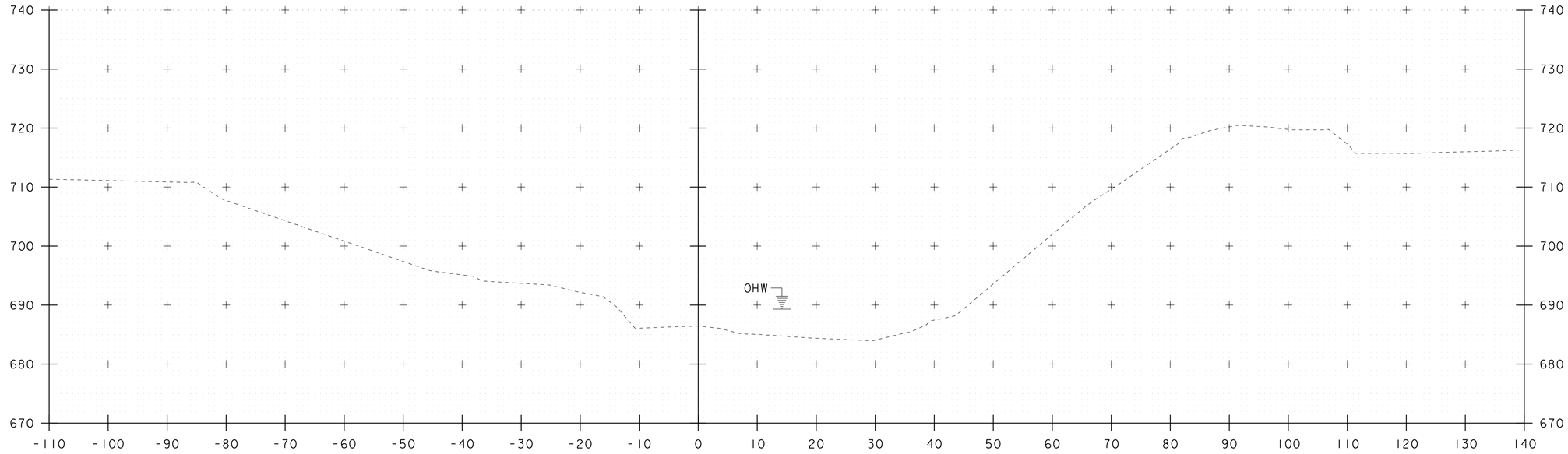
11+30



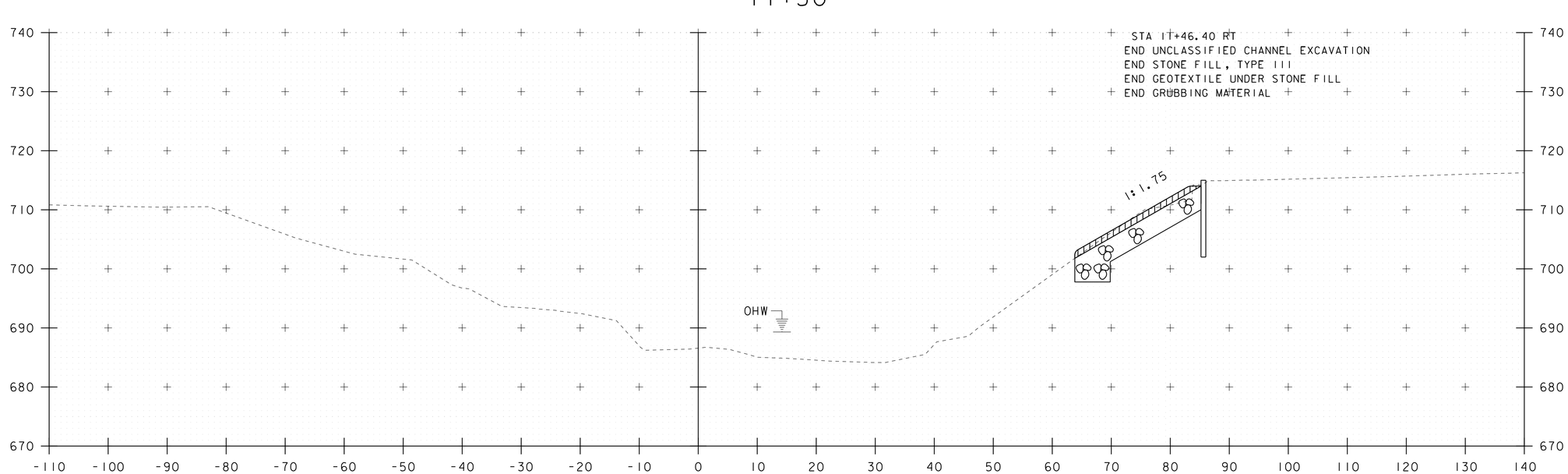
11+20

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052xsl.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
CHANNEL CROSS SECTIONS SHEET 5	SHEET 55 OF 64

STA. 11+20 TO STA. 11+30



11+50



11+40

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052xsl.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
CHANNEL CROSS SECTIONS SHEET 6	SHEET 56 OF 64

STA. 11+40 TO STA. 11+50

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF AN EXISTING 148 FOOT BRIDGE WITH A NEW 130 LONG SINGLE SPAN BRIDGE. THE EXISTING BRIDGE DECK IS 36± FEET WIDE. THE EXISTING DECK IS REINFORCED CONCRETE ON STEEL BEAMS. THERE IS A CONCRETE SIDEWALK ON THE BRIDGE WITH AN ENCLOSED WOODED STRUCTURE. THE BRIDGE RESTS ON TWO ABUTMENTS AND ONE PIER. THE EXISTING ABUTMENTS AND PIER WILL BE REMOVED. THE PIER WILL BE REMOVED TO THE STREAMBED ELEVATION. THE NEW BRIDGE WILL BE A CONCRETE DECK ON NEW STEEL GIRDERS WITH NEW INTEGRAL ABUTMENTS WITH PILES ON LEDGE. THE NEW BRIDGE WILL BE THE SAME WIDTH AS THE EXISTING BRIDGE AND WILL INCLUDE THE COMPLETE REPLACEMENT IN KIND OF THE COVERED PEDESTRIAN WALKWAY.

THIS PROJECT IS LOCATED IN STOWE VERMONT, ON VT ROUTE 108, 0.066 MILES WEST OF THE VT 100 AND VT 108 INTERSECTION. THE BRIDGE SPANS OVER THE "LITTLE RIVER".

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 0.35 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON, WITH THE BRIDGE BEING CLOSED TO TRAFFIC FOR NO MORE THAN SIX WEEKS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS MOSTLY WELL ESTABLISHED FOREST WITH SMALL OPEN AREAS IN A MOUNTAINOUS TERRAIN. THERE ARE THREE PAVED DRIVES IN THE PROJECT LIMITS OR ADJACENT TO THE PROJECT LIMITS. THERE ARE COMMERCIAL BUSINESSES ON THREE SIDES OF THE PROJECT AND ONE DRIVE OR PULL ON THE SOUTH END OF THE BRIDGE TO THE NORTH EAST.

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

THE CHANNEL IS MEANDERING UPSTREAM WITH A WIDE FLOODPLAIN. THE DOWNSTREAM CHANNEL IS STRAIGHT, STEEPER AND HAS A NARROW FLOODPLAIN WITH STEEP BANKS. THERE ARE SOME BUILDINGS NEAR THE BRIDGE AND CHANNEL. THERE HAVE BEEN PROBLEMS WITH THE STONE FILL IN FRONT OF THE ABUTMENTS FAILING, AND SOME SCOUR AT THE PIER. THE SURVEY SHOWS THERE IS SOME EXPOSED LEDGE UPSTREAM AND DOWNSTREAM. THE PROJECT IS 6 MILES UPSTREAM FROM THE WATERBURY RESERVOIR. THE PROJECT IS 500 FEET DOWN STREAM FROM THE WEST BRANCH OF THE LITTLE RIVER OUTLET, INTO THE LITTLE RIVER.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THE CONSTRUCTION OF A NEW DRAINAGE DITCH NEAR WINGWALL #4 AND NEAR WINGWALL #2 FOR ITS INSTALLATION. IMPACTED VEGETATION WILL BE RESEEDED AFTER THE PROJECT IS COMPLETED.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF LAMOILLE, VERMONT. SOILS ON THE PROJECT SITE ARE:

ADAMS LOAMY FINE SAND	**BERKSHIRE FINE SANDY LOAM**	**RUMNEY FINE SANDY LOAM**
(NOT HIGHLY ERODIBLE)	(HIGHLY ERODIBLE) (DUE TO SLOPES	(NOT HIGHLY ERODIBLE)
K-FACTOR = .24, 2%-8% SLOPES	K-FACTOR = .24, 15%-25% SLOPES	K-FACTOR = .17, 0%-3% SLOPES
HYDROLOGICAL SOIL GROUP: A	HYDROLOGICAL SOIL GROUP: B	HYDROLOGICAL SOIL GROUP: C

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: LITTLE RIVER
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 FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. 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 THAT CONSTRUCTION EQUIPMENT CAN ACCESS, SHALL BE DELINEATED.

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

1.4.2 LIMIT DISTURBANCE AREA

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

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

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

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

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

INLET PROTECTION DEVICES SHALL BE INSTALLED IN THE LOCATIONS SHOWN IN THE PLANS.

1.4.5 DIVERT UPLAND RUNOFF

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

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

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

NO SIGNIFICANT CHANNELIZED RUNOFF IS ANTICIPATED. CHECK STRUCTURE MEASURES WILL NOT BE REQUIRED.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

PERMANENT STORMWATER TREATMENT DEVICES ARE NOT PROPOSED FOR THIS PROJECT.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

THE PROJECT AREA IS RELATIVELY FLAT, WITH LIMITED EXPOSED SOILS. NO STABILIZATION MEASURES ARE SPECIFICALLY SHOWN FOR THE PROPOSED PROJECT CONSTRUCTION.

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

1.4.9 WINTER STABILIZATION

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

1.4.10 STABILIZE SOIL AT FINAL GRADE

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

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

1.4.11 DE-WATERING ACTIVITIES

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

DE-WATERING MAY BE REQUIRED TO INSTALL THE ABUTMENT FOOTINGS DEPENDING ON SEASONAL CHANGES TO THE RIVER'S WATER LEVEL.

1.4.12 INSPECT YOUR SITE

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

1.5 SEQUENCE AND STAGING

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

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052eroDetails.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC NARRATIVE

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 57 OF 64


SOIL INFORMATION:
ADAMS LOAMY FINE SAND
(NOT HIGHLY ERODIBLE)
K-FACTOR = .24, 2%-8% SLOPES
HYDROLOGICAL SOIL GROUP: A
SOIL INFORMATION:
BERKSHIRE FINE SANDY LOAM
(HIGHLY ERODIBLE)
K-FACTOR = .24, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: B
SOIL INFORMATION:
RUMNEY FINE SANDY LOAM
(NOT HIGHLY ERODIBLE)
K-FACTOR = .17, 0%-3% SLOPES
HYDROLOGICAL SOIL GROUP: C
SOIL INFORMATION:
BERKSHIRE FINE SANDY LOAM
(HIGHLY ERODIBLE)
K-FACTOR = .24, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: B
SOIL INFORMATION:
ADAMS LOAMY FINE SAND
(NOT HIGHLY ERODIBLE)
K-FACTOR = .24, 2%-8% SLOPES
HYDROLOGICAL SOIL GROUP: A
LITTLE RIVER
VT STATE PLANE GRID
N
CL BEARING #1
STA 3+48.00
BEGIN
PROJECT/BRIDGE
STA 3+47.22
BEGIN APPROACH
MATCH EXISTING
STA 2+00.00
CL BEARING #2
STA 4+78.00
END BRIDGE/PROJECT
STA 4+78.78
END APPROACH
MATCH EXISTING
STA 6+40.00
VT 108
TO VT 100
VT 108
(PAVED)
VT 108
TO JEFFERSONVILLE
EXIST STORM & SEWER EASEMENT
EXIST STORM & SEWER EASEMENT
RIPARIAN BUFFER
RIPARIAN BUFFER
CHANNEL LINE
S 74°23'59" W
12" INSULATED
WATER LINE
246.967
S30°40'47"E
246.967
S30°40'47"E
56.463
S41°16'47"E
57.288
S41°16'47"E
GAS
STATION
GAS PUMP
ISLANDS
PAVED
PARKING
LOT
GRAVEL
PARKING
LOT
1½ STY
HOUSE
2½ STY
HOUSE
2 STY
HOUSE
BUILDING
FOUNDATION
6'W X 7.5'H
CONC. BOX
FIELD DRIVE
PAVED SIDEWALK
STONE WALL
CONCRETE WALL
GRANITE BLOCK WALL
WOODEN
STEPS
GUY
WIRE
TRANSFORMER
MON. WELLS
GARBAGE
ENCLOSURE
2+00
3+00
4+00
5+00
6+00
6+40
10+00
12+00
20
0
20
SCALE: 1" = 20'-0"

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)

FILE NAME: s87e052bdr_ero.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
EPSC EXISTING LAYOUT	SHEET 58 OF 64

SOIL INFORMATION:
ADAMS LOAMY FINE SAND
(NOT HIGHLY ERODIBLE)
K-FACTOR = .24, 2%-8% SLOPES
HYDROLOGICAL SOIL GROUP: A

CL BEARING #1
STA 3+48.00

BEGIN
PROJECT/BRIDGE
STA 3+47.22

BEGIN APPROACH
MATCH EXISTING
STA 2+00.00

STABALIZED
CONSTRUCTION
ENTRANCE

SOIL INFORMATION:
BERKSHIRE FINE SANDY LOAM
(HIGHLY ERODIBLE)
K-FACTOR = .24, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: B

VT STATE PLANE GRID

LITTLE RIVER

RIPARIAN BUFFER

S 74°23'59" W

12" INSULATED WATER LINE

CHANNEL L-LINE

CL BEARING #2
STA 4+78.00

END BRIDGE/PROJECT
STA 4+78.78

1 CY SANDBAGS
TO DIVERT WATER
(SEE NOTE)

STABALIZED
CONSTRUCTION
ENTRANCE

END APPROACH
MATCH EXISTING
STA 6+40.00

VT 108
TO JEFFERSONVILLE

VT 108
TO VT 100

VT 108
(PAVED)

SOIL INFORMATION:
BERKSHIRE FINE SANDY LOAM
(HIGHLY ERODIBLE)
K-FACTOR = .24, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: B

SOIL INFORMATION:
RUMNEY FINE SANDY LOAM
(NOT HIGHLY ERODIBLE)
K-FACTOR = .17, 0%-3% SLOPES
HYDROLOGICAL SOIL GROUP: C

SOIL INFORMATION:
ADAMS LOAMY FINE SAND
(NOT HIGHLY ERODIBLE)
K-FACTOR = .24, 2%-8% SLOPES
HYDROLOGICAL SOIL GROUP: A

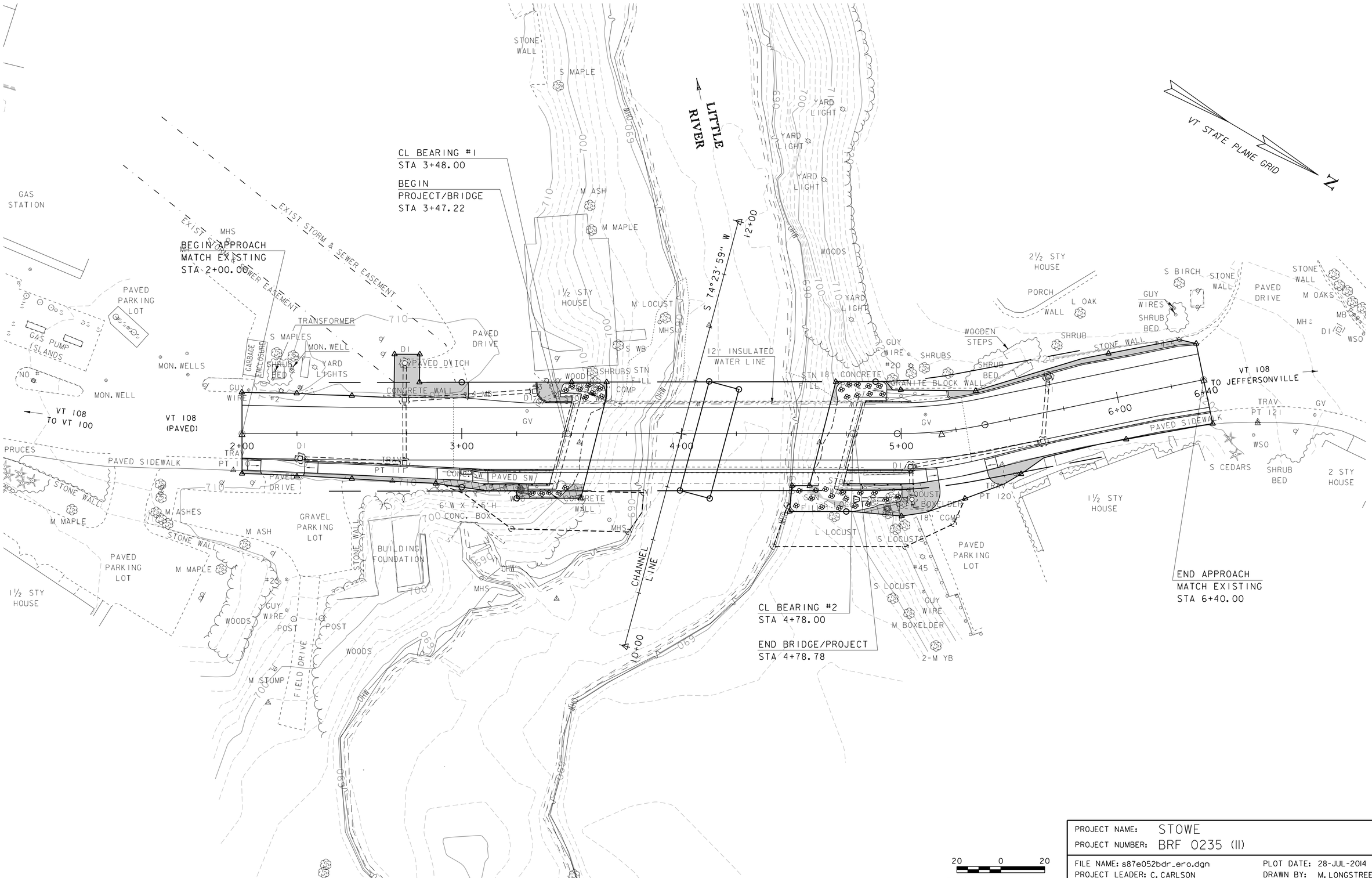
NOTE:
OPTIONAL CHANNEL WORK FOR THE INSTALLATION OF THE OPTIONAL PIER STAGING. THIS WORK CAN ONLY BE DONE BETWEEN OCTOBER 20TH AND DECEMBER 5TH. SEE SPECIAL PROVISIONS FOR MORE INFORMATION.

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

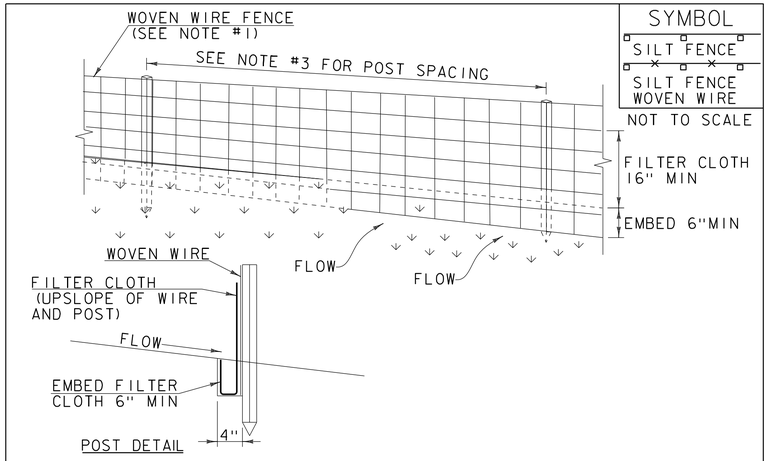
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bdr_ero.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC CONSTRUCTION LAYOUT

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 59 OF 64



PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 0235 (11)
FILE NAME: s87e052bdr_ero.dgn	PLOT DATE: 28-JUL-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: M. LONGSTREET
DESIGNED BY: D. PETERSON	CHECKED BY: J. LACROIX
EPSC FINAL LAYOUT	SHEET 60 OF 64



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

VAOT RURAL AREA MIX

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

VAOT URBAN AREA MIX

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

SOIL AMENDMENT GUIDANCE

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

CONSTRUCTION GUIDANCE

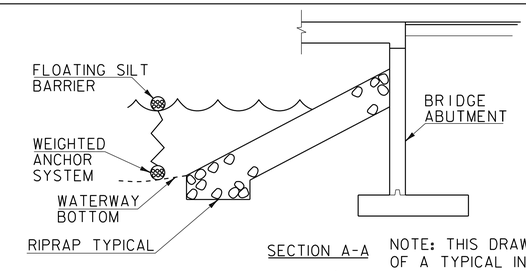
1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

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

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

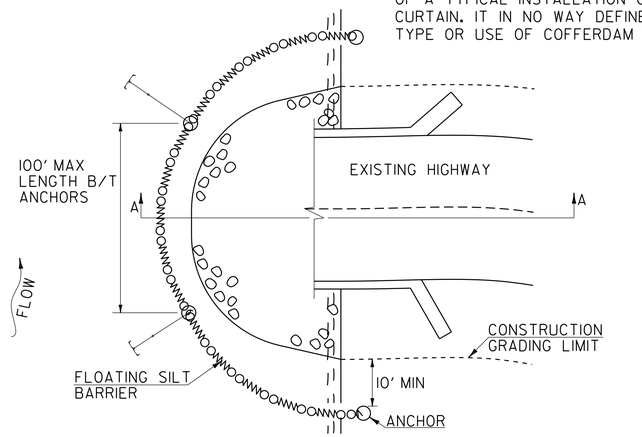


SYMBOL

NOT TO SCALE

SECTION A-A

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

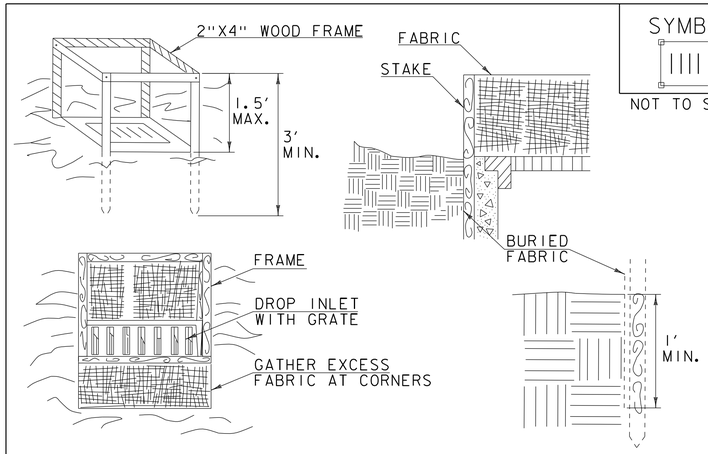
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052eroDetails.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC DETAIL SHEET 1

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 61 OF 64



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

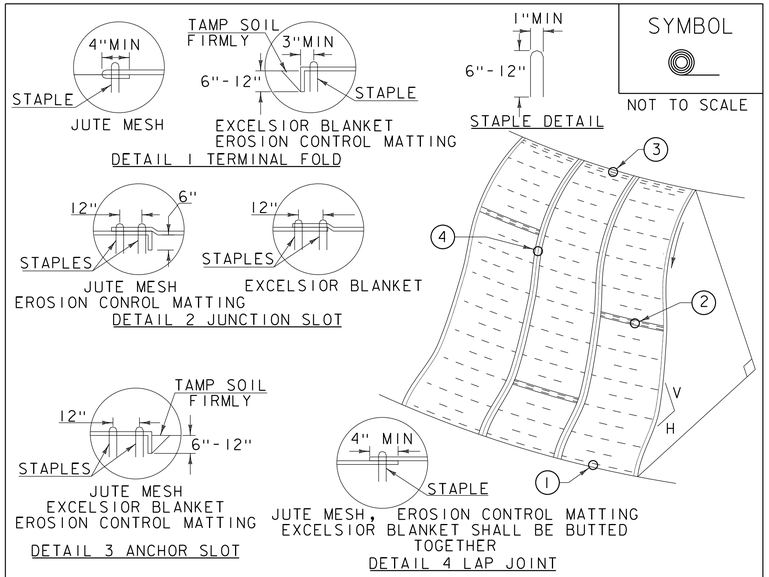
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FILTER FABRIC DROP INLET PROTECTION

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 INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF



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.

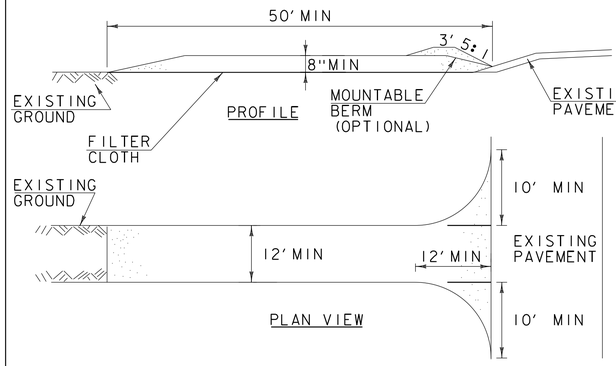
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052eroDetails.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC DETAIL SHEET 2

PLOT DATE: 28-JUL-2014
DRAWN BY: M. LONGSTREET
CHECKED BY: J. LACROIX
SHEET 62 OF 64

BOX BEAM GUARDRAIL (PAINTED BROWN)
VT108 STA 3+40.12 LT - STA 3+50.21 LT
VT108 STA 4+83.56 LT - STA 5+03.00 LT
VT108 STA 3+10.78 RT - STA 3+41.87 RT
VT108 STA 4+75.08 RT - STA 5+00.00 RT

VERTICAL GRANITE CURB
VT108 STA 3+34.25 LT - STA 3+50.21 LT
VT108 STA 4+83.56 LT - STA 5+05.00 LT
VT108 STA 5+23.64 LT - STA 6+40.00 LT
VT108 STA 2+00.00 RT - STA 2+08.66 RT
VT108 STA 2+28.65 RT - STA 3+41.87 RT
VT108 STA 4+75.08 RT - STA 5+14.83 RT
VT108 STA 5+23.64 RT - STA 5+69.34 RT
VT108 STA 5+72.32 RT - STA 6+40.00 RT

PLANK RAIL
VT108 STA 3+10.00 RT - STA 3+41.87 RT
VT108 STA 4+73.60 RT - STA 5+05.00 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
VT108 STA 3+12.00 - STA 3+35.00 RT
VT108 STA 4+83.00 - STA 5+05.00 RT

PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER
VT108 STA 5+04.00 - 30.00' RT

PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE
VT108 STA 2+26.50 - 11.20' RT
VT108 STA 2+74.00 - 13.27' RT
VT108 STA 2+73.90 - 15.36' LT
VT108 STA 3+33.11 - 19.35' LT
VT108 STA 5+04.00 - 15.09' RT
VT108 STA 5+62.69 - 12.73' RT
VT108 STA 5+70.96 - 15.55' LT

CONSTRUCT PAVED DRAINAGE DITCH
VT108 STA 5+00.00 RT (5.5' Wx27' L)

CONSTRUCT PAVED APRON
VT108 STA 3+25.00 LT (9.43' Wx35' L)

CONSTRUCT DRIVE (PAVED)
VT108 STA 5+25.00 RT (8.53' Wx38' L)

REMOVAL AND DISPOSAL OF GUARDRAIL
VT108 STA 3+12.52 RT (20.0')
VT108 STA 3+39.25 LT (9.0')
VT108 STA 5+04.64 RT (22.5')
VT108 STA 5+07.86 LT (14.2')

COLD PLANING, BITUMINOUS PAVEMENT
VT108 STA 2+39.50 - 2+89.50
VT108 STA 5+37.50 - 6+40.00

BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION (PAINTED BROWN)
VT108 STA 3+50.21 LT - STA 4+83.56 LT

CONCRETE, HIGH PREFORMACE CLASS A (BARRIER WALL)
VT108 STA 3+40.12 RT - STA 4+75.08 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
VT108 STA 2+00.00 RT - STA 2+08.66 RT
VT108 STA 2+28.65 RT - STA 3+41.87 RT
VT108 STA 4+75.08 RT - STA 5+14.83 RT
VT108 STA 5+35.23 RT - STA 6+40.00 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
VT108 STA 2+08.66 RT - STA 2+28.65 RT
VT108 STA 5+14.83 RT - STA 5+35.23 RT

DETECTABLE WARNING SURFACE
VT108 STA 3+02.00 RT

RELOCATE MAILBOX
VT108 STA 3+01.6

REMOVAL AND DISPOSAL OF PLANK RAIL
VT108 STA 5+05.54 RT (38') - STA 5+09.66 RT (52')

PLANK RAIL (REPLACE IN-KIND)
VT108 STA 5+05.54 RT (38') - STA 5+09.66 RT (52')

VT STATE PLANE GRID
N
N/F WILDFLOWER DESIGN INC.
VT 108 STA 4+00.00 = CHANNEL LINE STA 11+00.00
△= 75° LT
CL BEARING #1
STA 3+48.00
BEGIN PROJECT/BRIDGE
STA 3+47.22
TEMP SERVICE LINE
DE-ENERGIZE LEAVE IN PLACE (HARD GUARD)
BEGIN APPROACH MATCH EXISTING
STA 2+00.00
BM NO.1 CHISELED SQUARE ON CONCRETE PAD EL. 711.251
N/F R.L. VALLEE
POB
STA 2+00.00
N/F FISHMAN
LITTLE RIVER
S 74°23'59" W
N/F STOWE INN, LLC.
PT
STA 4+98.18
PC
STA 5+38.39
REMOVE SERVICE LINES DURING CONSTRUCTION
POE
STA 6+40.00
246.967
S30°40'47"E
56.463
S41°16'47"E
57.288
S41°16'47"E
N30°36'01"W
N42°14'10"W
VT 108 TO VT 100
VT 108 TO JEFFERSONVILLE
2+00
3+00
4+00
5+00
6+00
12" INSULATED WATER LINE
ABANDONED WATERLINE
SR(P)
CUL&DR(P)
SR(T)
I&M (P)
DRIVE(T) REMOVE (T)
CONST(T)
TEMPORARY CONSTRUCTION LIMITS (TYP)
TEMP UTILITY AND CONST. ACCESS BRIDGE
8" TEMP WATER
EXISTING ELECTRIC CONDUIT TO COVERED WALKWAY LIGHTING
GUY WIRE TO BE REMOVED ONLY WHEN NECESSARY (BY OTHERS)
TEMPORARY UNDERGROUND SERVICE 3 - 2" DIA CONDUITS
END APPROACH MATCH EXISTING
STA 6+40.00
BM NO.3 NW CORNER TOP CONCRETE STEP EL. 717.851
DE-ENERGIZE BRIDGE WALK SERVICE LINE AND REMOVE
BM NO.2 VT SURVEY MARK EL. 711.603
CHANNEL LINE
10+00
1
McKECHNIE 2005 FAMILY TRUST
2
STERLING VENTURES INC.
3
RAVEN BEACH HOLDINGS, LLC.
BEGIN ROW PROJECT
STOWE BRF 0235 (11)
STA. 2+80 26.14' RT.
END ROW PROJECT
STOWE BRF 0235 (11)
STA. 5+52 24.56' RT.

EXISTING BRIDGE DATA
CONCRETE DECK ON STEEL BEAMS
CONCRETE ABUTMENTS AND PIER
WOOD COVERED WALKWAY
TWO SPANS @ 74' EACH
OVERALL LENGTH = 148'
OVERALL WIDTH = 38.2'

LINE 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 AQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

CURVE (1)
DELTA = 11°38'09"
D = 28°56'14"
R = 198.00'
T = 20.17'
L = 40.21'
E = 1.03'

FOR R.O.W. USE ONLY

SCALE: 1" = 20'-0"

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 0235 (11)

FILE NAME: s87e052bdr.dgn
PROJECT LEADER: C.CARLSON
DESIGNED BY: D.PETERSON
R.O.W. LAYOUT SHEET
PLOT DATE: 28-JUL-2014
DRAWN BY: M.LONGSTREET
CHECKED BY: J.LACROIX
ROW SHEET 63 OF 64

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	McKECHNIE 2005 FAMILY TRUST	1	2+80 RT	3+81 RT			CONSTRUCTION	T	1,507 SF	WDOE		STOWE			INCL. EC, BF&TEMP. WATER LINE BRIDGE
			3+10 RT	3+55 RT			SLOPE	P	124 SF						INCLUDES STONE FILL
2	STERLING VENTURES, INC.	1	4+42 RT	5+02 RT			CONSTRUCTION	T	1,123 SF	WDOE		STOWE			INCL. EC, BF&TEMP. WATER LINE BRIDGE
			4+57 RT	4+98 RT			SLOPE	P	291 SF						INCLULDES STONE FILL
			4+81 RT	4+95 RT			CUL & DRAIN	P							
3	RAVEN BEACH HOLDINGS, LLC.	1	4+93 RT	5+00 RT			SLOPE	P	33 SF	WDOE		STOWE			INCLUDES STONE FILL
			4+95 RT	5+15 RT			SLOPE	T	207 SF						
			4+98 RT	5+51 RT			CONSTRUCTION	T	892 SF						INCL. EC, BF, TEMP. WATER LINE BRIDGE
															& TEMP. UNDERGROUND UTILITY
			4+98 RT	5+15 RT			REMOVE	T							CULVERT
			4+95 RT	5+06 RT			INSTALL & MAINTAIN	P							CULVERT INCLUDING D.I.
			5+25 RT				DRIVE	T							38' WIDE PAVED; MM 009

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1		CHANGE PROJECT NUMBER FROM BHF 0235 (11) TO	04/29/14
		BRF 0235 (11). PER C.O. 9878	
		MADE BY: MR APPROVED BY: RC	
2	4,5,9	DELETE PEDESTRIAN BRIDGE NOTE FROM P.I. SHEET	05/09/14
		ADD TEMPORARY WATER LINE BRIDGE TO LAYOUT	
		ADD EXISTING EDGE OF PAVEMENT TO EPSC SHEET	
		PER C.O. 9883	
		MADE BY: MR APPROVED BY: RC	
3	3,4	PARCEL NO. 3 RAVEN BEACH. INCREASE CONSTRUCTION	05/27/14
		(T) TO INCLUDE TEMPORARY UNDERGROUND UTILITY.	
		CHANGE ENDING STA. OF CONST. (T) TO 5+51 RT.	
		CHANGE AREA OF CONST. (T) TO 892 SF±	
		PER C.O. 9888	
		MADE BY: JB APPROVED BY: RC	
4	3,4	PARCEL NO. 2 STERLING VENTURES. ADD CUL & DR (P) AT ST.	06/06/14
		4+81 RT. TO 4+95 RT. PER C.O. 9894	
		MADE BY: JB APPROVED BY: RC	
5	3	PARCEL NO. 3 RAVEN BEACH. CHANGE STATIONS OF INSTALL	06/06/14
		& MAINTAIN TO 4+95 RT TO 5+06 RT. PER C.O. 9895	

PLOT DATE 06/06/14

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

APPROVED: RYAN CLOUTIER DATE: 4-15-2014
CHIEF, PLANS & TITLES

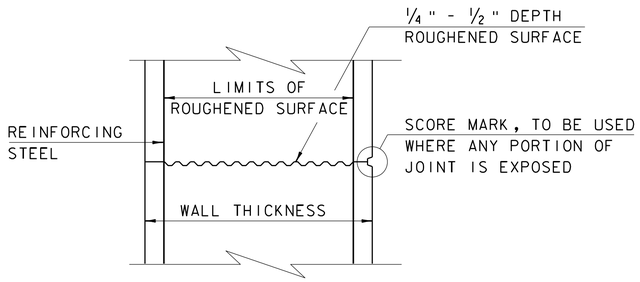
PROJECT NAME: **STOWE**
PROJECT NUMBER: **BRF 0235 (11)**

FILE NAME: **r87e052detail.xls**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **D. PETERSON**
R.O.W. DETAIL SHEET **ROW**

PLOT DATE:
DRAWN BY: **G. ROY**
CHECKED BY: **J. LACROIX**
SHEET **64** OF **64**

CONCRETE GENERAL NOTES

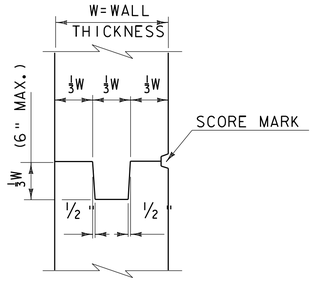
1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"



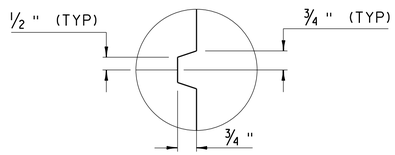
TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.

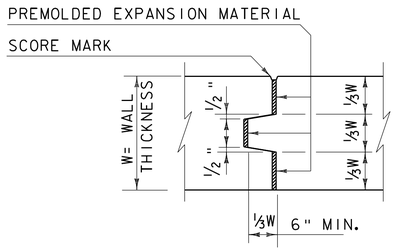
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



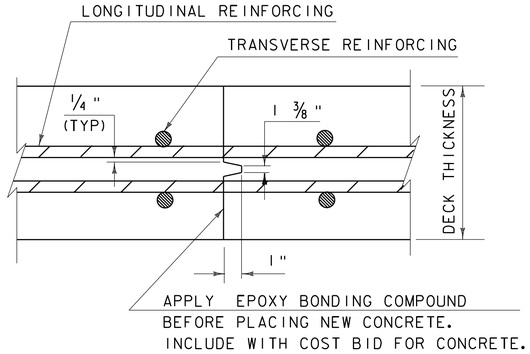
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



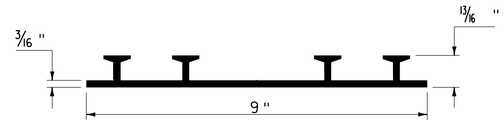
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



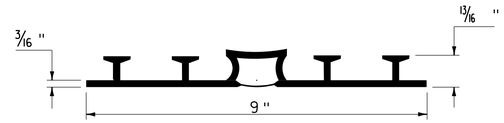
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



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

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

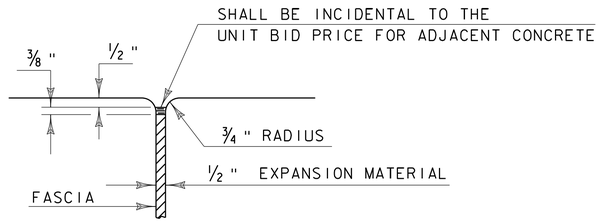
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



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

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

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



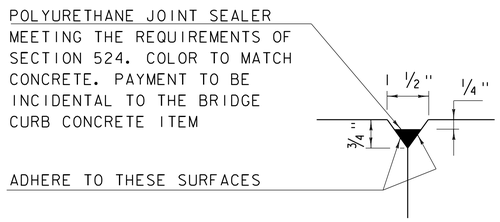
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

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

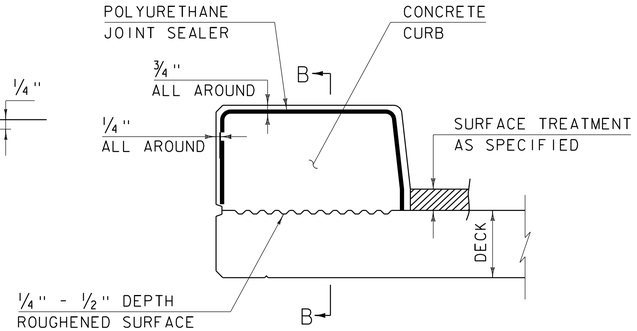
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

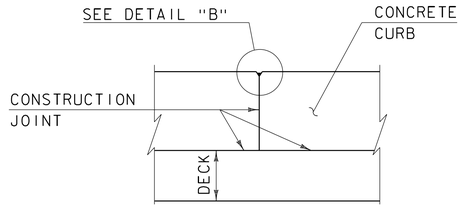
STRUCTURES DETAIL SD-501.00



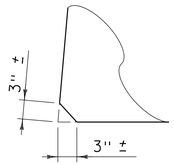
DETAIL "B"
(NOT TO SCALE)



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.

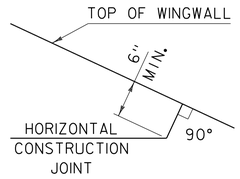
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

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.

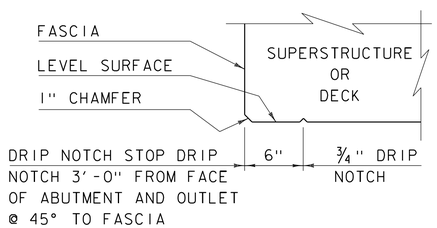
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

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.

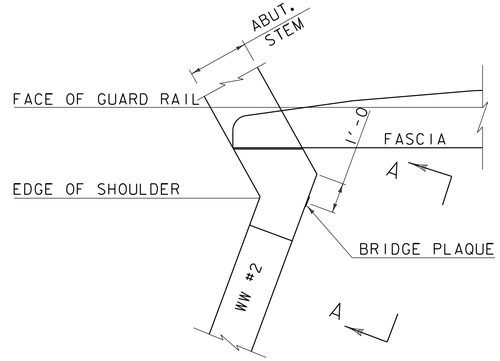
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



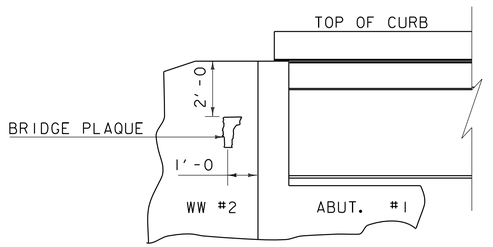
HORIZONTAL WINGWALL CONSTRUCTION JOINT
(NOT TO SCALE)



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.

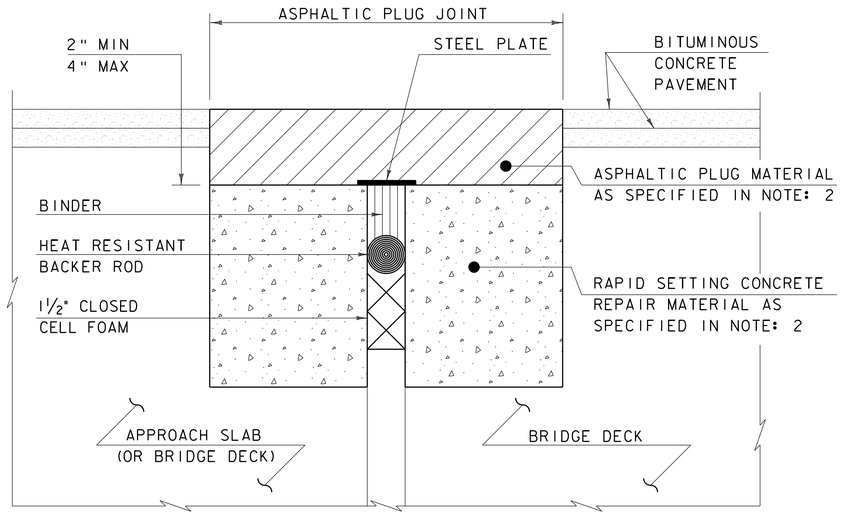
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

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



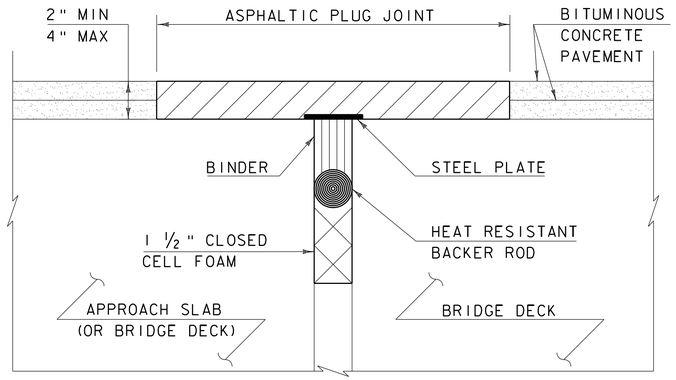
ASPHALTIC PLUG-TYPE JOINT DETAIL - REHAB

NOTES: (NOT TO SCALE)

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 COURSE 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.



ASPHALTIC PLUG-TYPE JOINT DETAIL - NEW

(NOT TO SCALE)

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. REPAIR MATERIAL GREATER THAN 4 INCHES FROM FINISHED GRADE WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
5. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
6. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
7. 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.
8. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
9. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. ONCE THE JOINT REACHES 82 DEG C (180 DEG F) +/-, WATER MAY BE USED TO EXPEDITE THE COOLING PROCESS.
12. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

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.

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

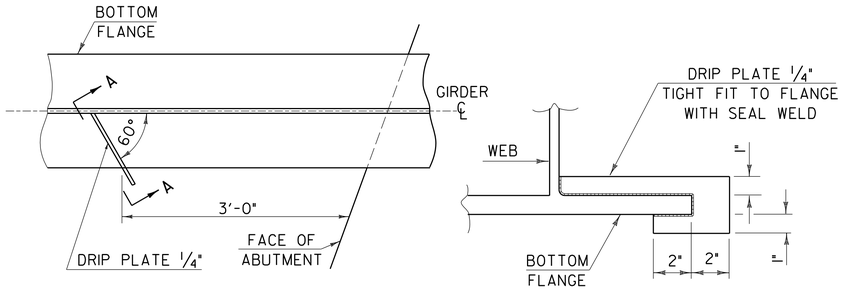
BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES · DIVISION

STRUCTURES DETAIL
SD-516.10

STRUCTURAL STEEL GENERAL NOTES:

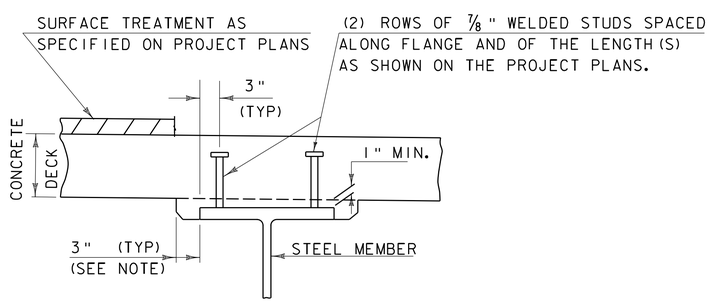
1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.19, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS 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

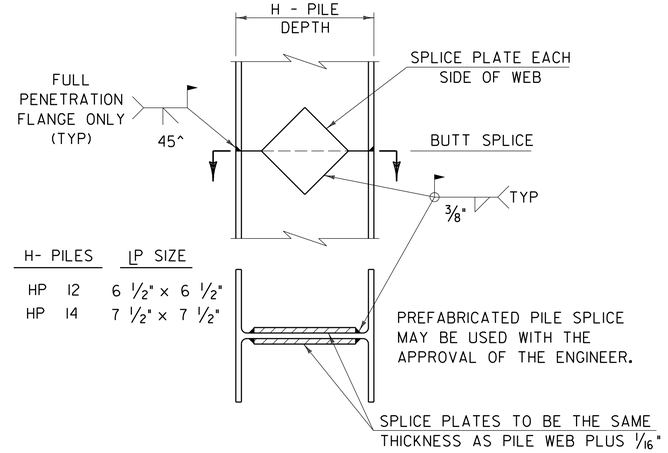
SECTION A - A

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

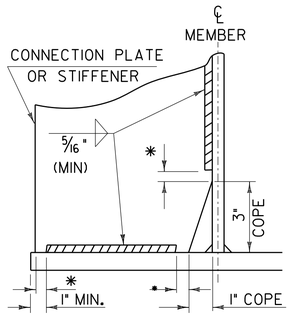
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

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

STRUCTURAL STEEL DETAILS & NOTES

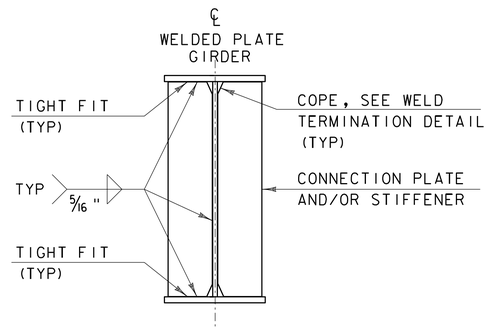
VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-601.00



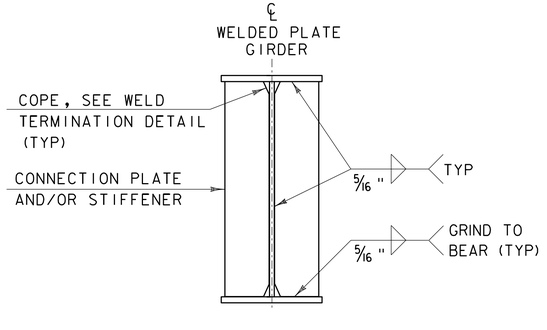
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

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

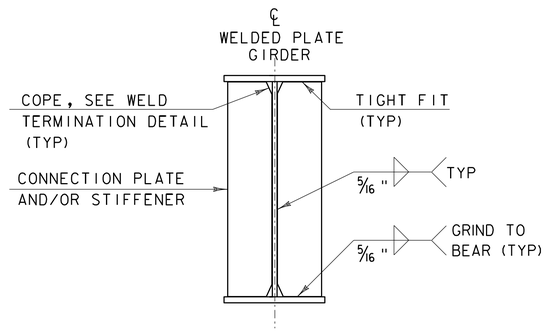


INTERMEDIATE CONNECTION PLATES AND/OR STIFFENERS FOR WELDED PLATE GIRDERS

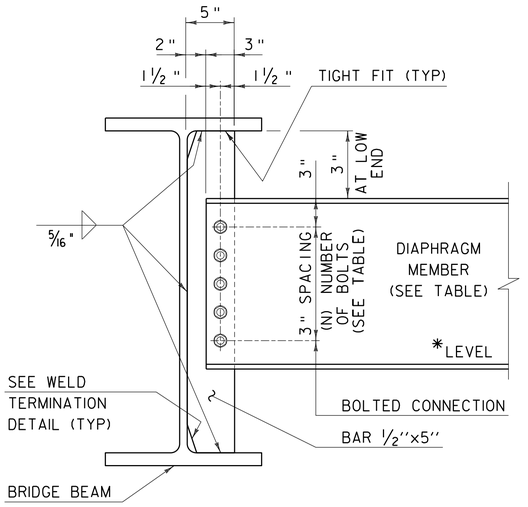
INTERMEDIATE DETAIL IS ONLY USED WHEN PLATE DOES NOT OCCUR AT AN ABUTMENT OR PIER.



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



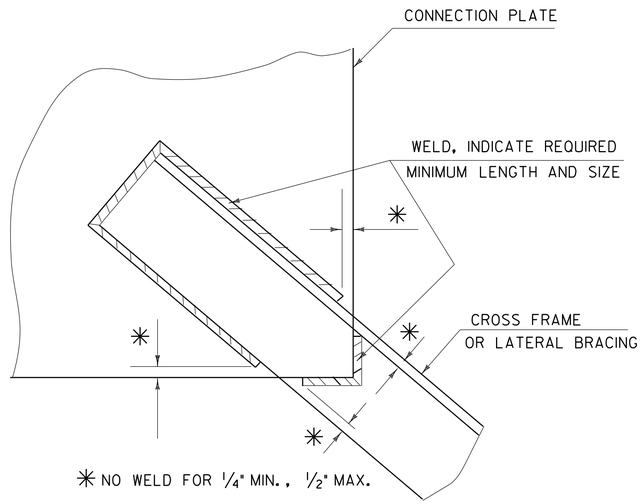
PIER BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



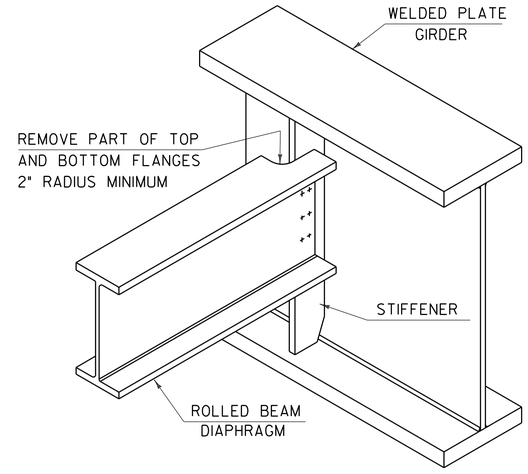
DEPTH		DIAPHRAGM MEMBER	(N) BOLTS
ROLLED BEAM	24" 30"	C15x33.9	4
	31" 36"	MC18x42.7	5
	37" 42"	W21x44	6
PLATE GIRDER WEB	31" 36"	W27x84	7
	37" 42"	W33x118	9
	43" 48"	W36x135	10

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

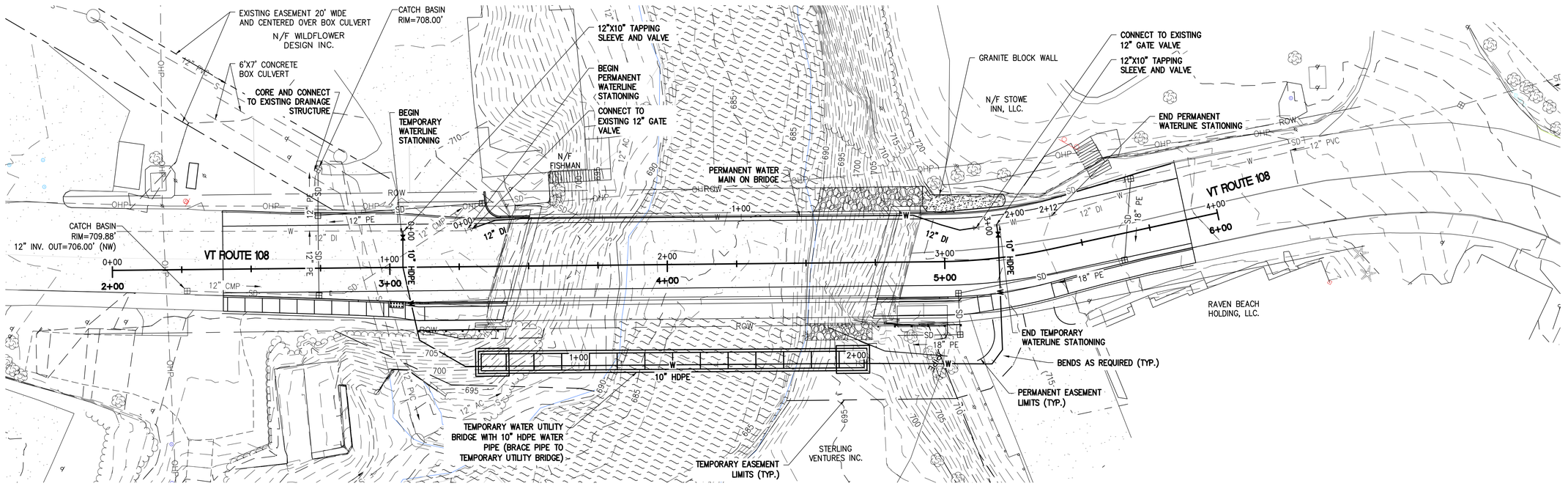
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

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

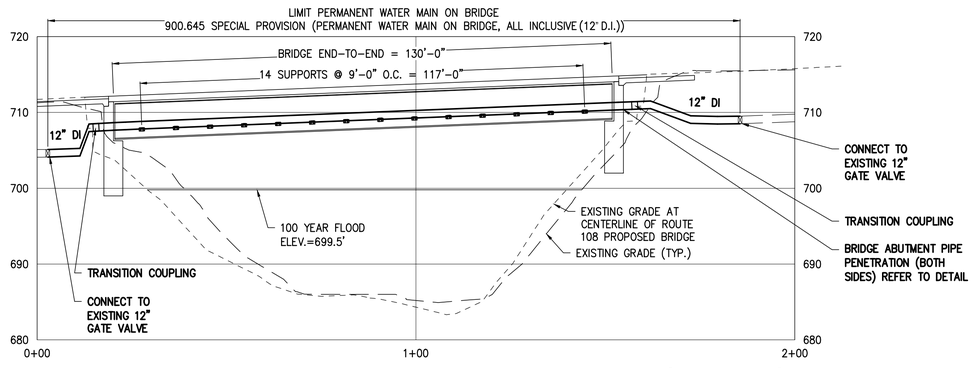


PLAN
SCALE: 1"=20'

GRAPHIC SCALE

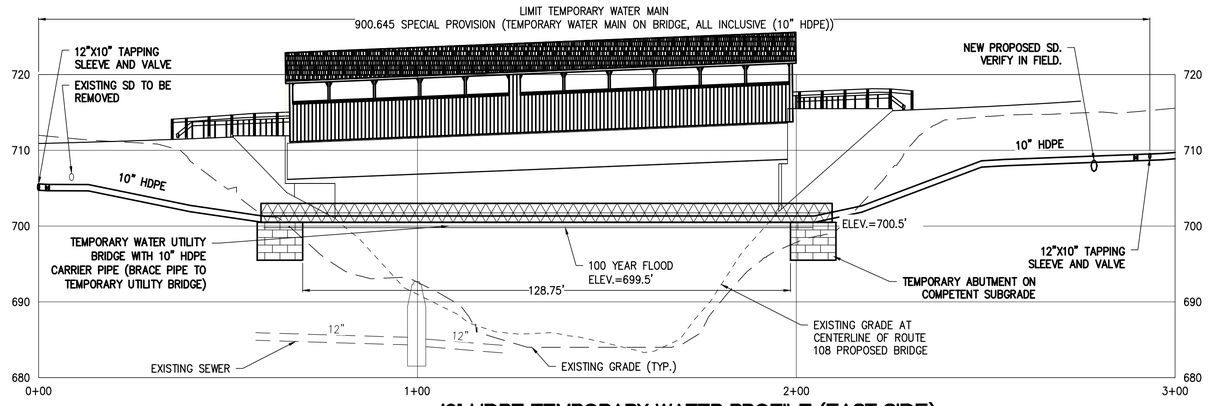
20 0 10 20 40 80

(IN FEET)



12" DI WATERLINE RELOCATION PROFILE (WEST SIDE)

SCALE: HORIZ. 1"=20'
VERT. 1"=10'



10" HDPE TEMPORARY WATER PROFILE (EAST SIDE)

SCALE: HORIZ. 1"=20'
VERT. 1"=10'

NOTES:

1. TEMPORARY WATERLINE BRIDGE AND ABUTMENTS ARE DESIGNED BY TEMPORARY BRIDGE MANUFACTURER.
2. AFTER TEMPORARY WATER LINE IS IN SERVICE, THE EXISTING 12" GATE VALVES SHALL BE CLOSED PRIOR TO REMOVAL OF EXISTING WATER LINE ON BRIDGE. EXISTING GATE VALVES ON BOTH SIDES OF BRIDGE SHALL BE TEMPORARILY RESTRAINED AFTER REMOVAL OF THE EXISTING WATER LINE ON THE BRIDGE.
3. TEMPORARY WATER LINE SHALL BE LEFT EMPTY FOR WINTER, THEN FILLED AND TESTED IN SPRING PRIOR TO PLACING IN SERVICE.
4. ALL BURIED FITTINGS SHALL HAVE MECHANICAL JOINT RESTRAINTS. REFER TO THE SPECIAL PROVISIONS.
5. THE TEMPORARY WATER LINE SHALL BE CAPPED AND RESTRAINED AT EACH VALVE AFTER THE NEW WATER LINE IS IN SERVICE.

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEngineers.com

STATE OF VERMONT
JASON R. BOOTH
No. 9235
Civil
LICENSED
PROFESSIONAL ENGINEER

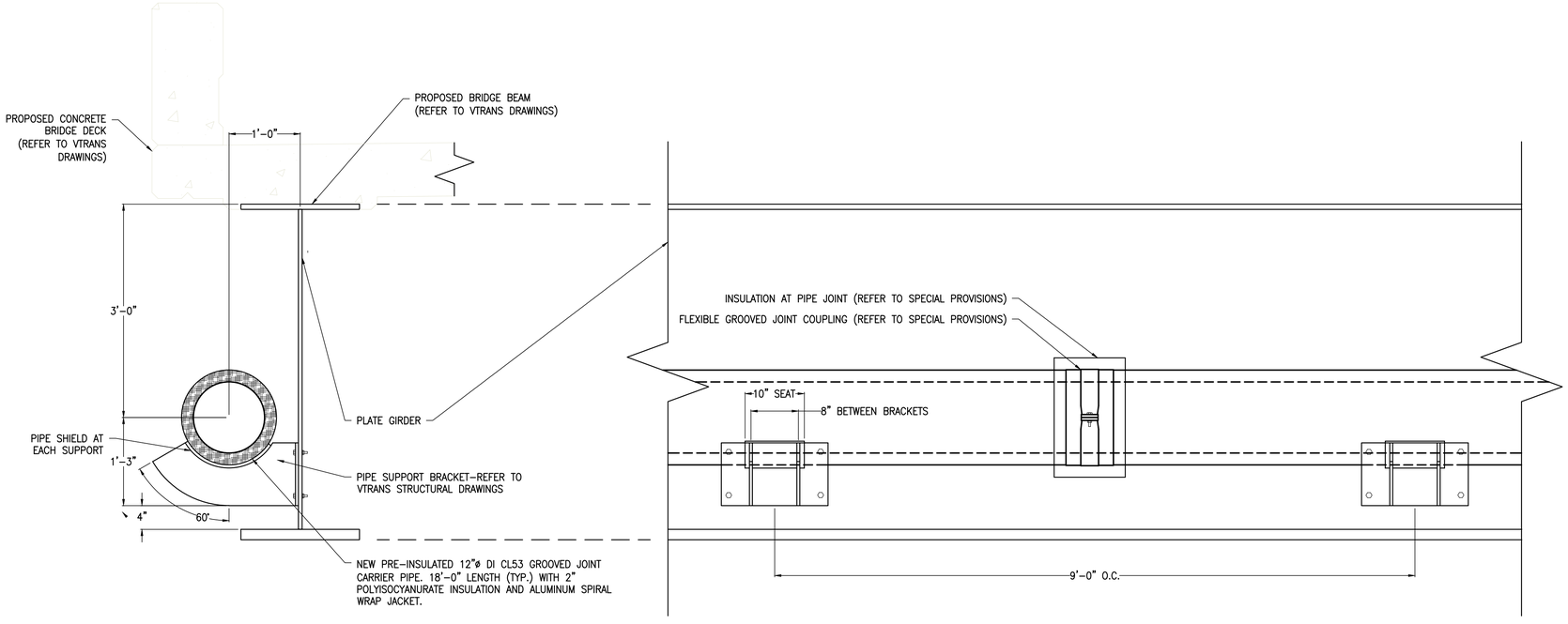
No.	DATE	DESCRIPTION	CHECKED

TOWN OF STOWE, VERMONT

BRIDGE STREET BRIDGE UTILITY REPLACEMENT BRF 0235 (II)

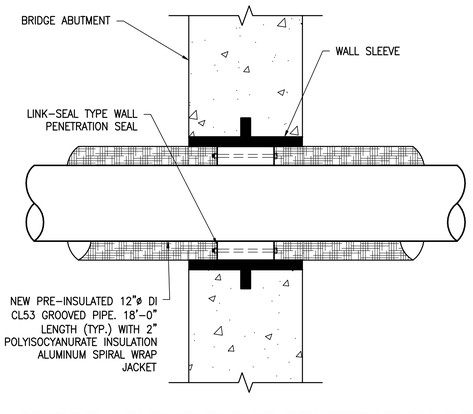
12" WATERLINE RELOCATION AND 10" TEMPORARY WATER PLAN AND PROFILE

DESIGNED	PROJECT NO.
CM	14012
DRAWN: JEN	DRAWING
CHECKED: JAB	
DATE: MAY, 2014	



NOTES:
1. BRACKETS SHALL BE PER THE DETAILS ON THE VTRANS STRUCTURAL DRAWINGS.

STEEL BEAM PIPE SUPPORT SECTION
SCALE: 1"=1'-0"



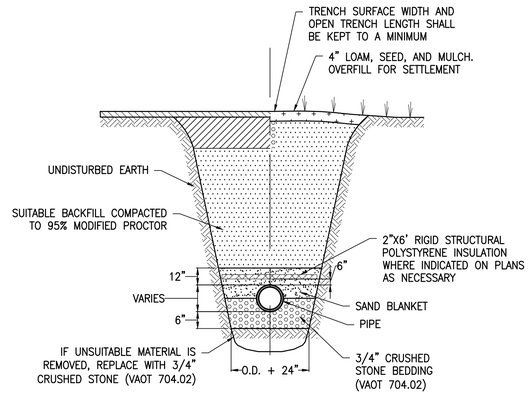
BRIDGE ABUTMENT PIPE PENETRATION DETAIL
SCALE: 1-1/2"=1'-0"

MINIMUM BEARING SURFACES SQUARE FEET					
PIPE DIA.	TEE	HYD.	90° BEND'	45° BEND	END CAP
12"	14	–	18.5	10	14
10"	14	–	17	10	14

NOTES:
1. THRUST BLOCKS SHALL BE PROVIDED AT ALL WATERLINE TEES, HYDRANTS, 90° AND 45° BENDS, REDUCERS, AND END CAPS.
2. ALL THRUST BLOCKS SHALL BE CLASS "B" CONCRETE. SEE SPEC SECTION 541.
3. CONCRETE SHALL BE PLACED SO AS NOT TO HAMPER THE FUTURE REMOVAL OF A FITTING.
4. ALL FITTINGS ARE TO BE WRAPPED WITH POLYETHYLENE.

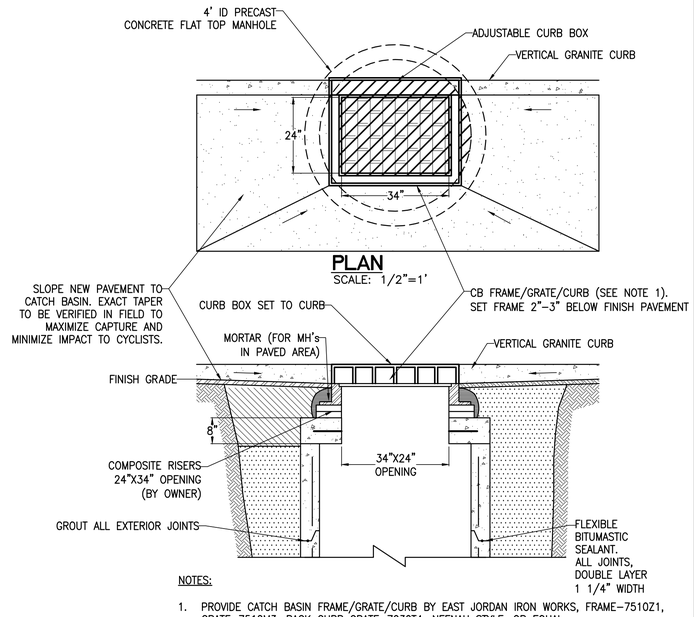
TYPICAL THRUST BLOCK DETAILS
SCALE: NONE

TYPICAL SECTION
SCALE: NONE



NOTES:
1. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
2. COMPACTION OF BACKFILL SHALL MEET A MINIMUM 95% STANDARD PROCTOR.
3. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.

TYPICAL WATERLINE TRENCH DETAIL
SCALE: NONE



PLAN
SCALE: 1/2"=1'

NOTES:
1. PROVIDE CATCH BASIN FRAME/GRATE/CURB BY EAST JORDAN IRON WORKS, FRAME-7510Z1, GRATE-7510M3, BACK CURB GRATE-7030T4, NEENAH STYLE, OR EQUAL.

TYPICAL CATCH BASIN DETAIL
SCALE: 1/2"=1'-0"

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEngineers.com

STATE OF VERMONT JASON R. BOOTH No. 9235 Civil LICENSED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	CHECKED

TOWN OF STOWE, VERMONT

BRIDGE STREET BRIDGE UTILITY REPLACEMENT BRF 0235 (II)

WATER AND STORM DRAIN DETAILS

DESIGNED	PROJECT NO.
CM	14012
DRAWN: JEN	DRAWING
CHECKED: JAB	
DATE: MAY, 2014	