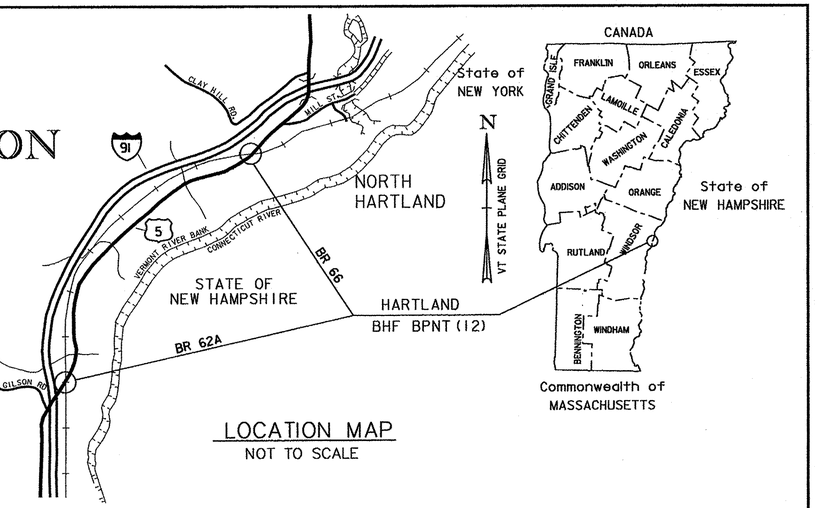
STATE OF VERMONT
AGENCY OF TRANSPORTATION



LOCATION MAP
NOT TO SCALE

RECORD PLANS	
CONTRACTOR:	KUBRICKY CONSTRUCTION CORP. - WILTON, NY
RESIDENT ENGINEER:	DARYL BASSETT
CONSTRUCTION BEGAN:	JUNE 10, 2014
CONSTRUCTION COMPLETE:	NOVEMBER 5, 2014
RECORD PLANS BY:	DARYL BASSETT & KEVIN KING

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

BY _____ RESIDENT ENGINEER

DATE 2/22/16

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found by contacting Vtrans Records Management.

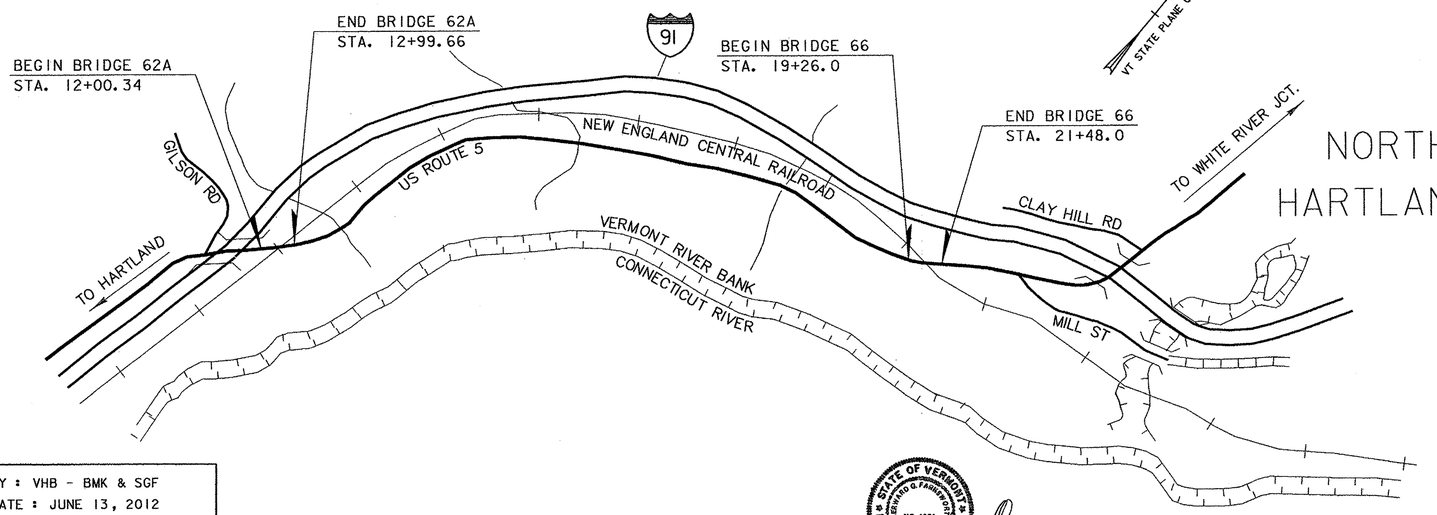
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF HARTLAND
COUNTY OF WINDSOR

US ROUTE 5 (MAJOR COLLECTOR), BRIDGE NUMBERS 62A AND 66

PROJECT LOCATIONS: BRIDGE NO. 62A IS BEGINNING AT A POINT ON US ROUTE 5 APPROXIMATELY 3.900 MILES NORTH OF THE WINDSOR/HARTLAND TOWN LINE EXTENDING NORTHERNLY 0.038 MILES. BRIDGE NO. 66 IS LOCATED ON US ROUTE 5 APPROXIMATELY 5.940 MILES NORTH OF THE WINDSOR/HARTLAND TOWN LINE. BOTH BRIDGES CROSS OVER THE NEW ENGLAND CENTRAL RAILROAD (NECR) AT ROXBURY SUB-DIVISION MILE POST 7.16 AND 9.29.

PROJECT DESCRIPTION: BRIDGE NO. 62A INVOLVES THE REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE DECK, WINGWALLS, AND ASSOCIATED ROADWAY WORK. BRIDGE NOS. 62A AND 66 INVOLVE CLEANING AND REPAINTING THE EXISTING STEEL SUPERSTRUCTURE MEMBERS AND MINOR ASSOCIATED WORK.

LENGTH OF STRUCTURE:	BR 62A	99.32	FEET	(0.019 MILES)
	BR 66	222.0	FEET	(0.042 MILES)
TOTAL LENGTH OF STRUCTURES:		321.32	FEET	(0.061 MILES)
LENGTH OF ROADWAY:	BR 62A	157.68	FEET	(0.030 MILES)
LENGTH OF PROJECT:		479.00	FEET	(0.0907 MILES)



QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS

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

SURVEYED BY : VHB - BMK & SGF
SURVEYED DATE : JUNE 13, 2012

DATUM
VERTICAL: ASSUMED
HORIZONTAL: ASSUMED

STATE OF VERMONT — RICHARD G. FAULKNER — NO. 4021 — REGISTERED PROFESSIONAL ENGINEER
12-18-2013

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

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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE 12-18-13

PROJECT MANAGER : MARK SARGENT

PROJECT NAME : HARTLAND
PROJECT NUMBER : BHF BPNT (12)

SHEET 1 OF 55 SHEETS

VHB Vanasse Hangen Brustlin, Inc.

VHB 57627.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 12.01.01c

LRFD

INDEX OF SHEETS

PLAN SHEETS

STRUCTURE DETAILS

STANDARDS LIST

PROJECT REFERENCE SHEETS

NOTE: THE STATIONING ON THE TITLE SHEET IS BASED ON AN ASSUMED STATIONING FOR BRIDGE 62A AND RECORD PLAN STATIONING FOR BRIDGE 66. THE BRIDGES ARE 3 MILES APART.

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date:

DRAINAGE AREA :
CHARACTER OF TERRAIN :
STREAM CHARACTERISTICS :
NATURE OF STREAMBED :

PEAK FLOW DATA

Q 2.33 = ____ Q 50 = ____
Q 10 = ____ Q 100 = ____
Q 25 = ____ Q 500 = ____

DATE OF FLOOD OF RECORD :
ESTIMATED DISCHARGE:
WATER SURFACE ELEV.:
NATURAL STREAM VELOCITY : @ Q?? =
ICE CONDITIONS :
DEBRIS:
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY?
IS ORDINARY RISE RAPID?
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS?
IF YES, DESCRIBE:

WATERSHED STORAGE: 0% HEADWATERS:
UNIFORM:
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span composite rolled beam
YEAR BUILT: 1955
CLEAR SPAN(NORMAL TO STREAM): N/A
VERTICAL CLEARANCE ABOVE R.R. TRACKS: 22'-2"
WATERWAY OF FULL OPENING: N/A
DISPOSITION OF STRUCTURE: Retain existing steel
TYPE OF MATERIAL UNDER SUBSTRUCTURE:

WATER SURFACE ELEVATIONS AT:

Q2.33 = ____ VELOCITY = ____
Q10 = ____ " ____
Q25 = ____ " ____
Q50 = ____ " ____
Q100 = ____ " ____

LONG TERM STREAMBED CHANGES:

IS THE ROADWAY OVERTOPPED BELOW Q100:
FREQUENCY:
RELIEF ELEVATION:
DISCHARGE OVER ROAD @Q100: NO

UPSTREAM STRUCTURE

TOWN: DISTANCE:
HIGHWAY # : STRUCTURE #:
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

DOWNSTREAM STRUCTURE

TOWN: DISTANCE:
HIGHWAY # : STRUCTURE #:
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

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	3.73	1.68					
POSTING							
OPERATING	4.83	2.18	2.66	1.55	2.62	2.34	2.37
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Retain existing with new deck

CLEAR SPAN(NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED: NA
WATERWAY OF FULL OPENING: NA

WATER SURFACE ELEVATIONS AT:

Q2.33 = ____ VELOCITY= ____
Q10 = ____ " ____
Q25 = ____ " ____
Q50 = ____ " ____
Q100 = ____ " ____

IS THE ROADWAY OVERTOPPED BELOW Q100: NA
FREQUENCY:
RELIEF ELEVATION:
DISCHARGE OVER ROAD @Q100:

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:
VERTICAL CLEARANCE: @ Q?? =

SCOUR:

REQUIRED CHANNEL PROTECTION:

PERMIT INFORMATION

AVERAGE DAILY FLOW: ____ DEPTH OR ELEVATION:
ORDINARY LOW WATER: ____
ORDINARY HIGH WATER: ____

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: None - Detour will be in place during construction for 62A deck
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. TRAFFIC DETOURED DURING DECK REPLACEMENT ON BRIDGE 62A.
2. TRAFFIC SIGNALS USED DURING RETAINING WALL, WINGWALL, CLEANING AND PAINTING OF STRUCTURE FOR BRIDGE 62A.
3. FLAGGERS AND TRAFFIC SIGNAL TO BE USED FOR BRIDGE 66.

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	2.5 INCH
3. DESIGN SPAN	L:	0.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A LOW CEMENT	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	---
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	---
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	---
20. PILE YIELD STRENGTH ASTM A572	f_y:	---
21. PILE SIZE		---
22. EST. PILE LENGTH	L_p:	
23. PILE RESISTANCE FACTOR	ϕ:	---
24. LATERAL PILE DEFLECTION	Δ:	---
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA: ---	S_s:	---
	S_1:	---

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2013	2150	240	54	7.0	150
2033	2420	260	54	7.0	170

20 year ESAL for flexible pavement from 2013 to 2033 : 0
40 year ESAL for flexible pavement from 2013 to 2053 : 0
Design Speed : 45 mph

AS BUILT "REBAR" DETAILS

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

Vanasse Hangen Brustlin, Inc.

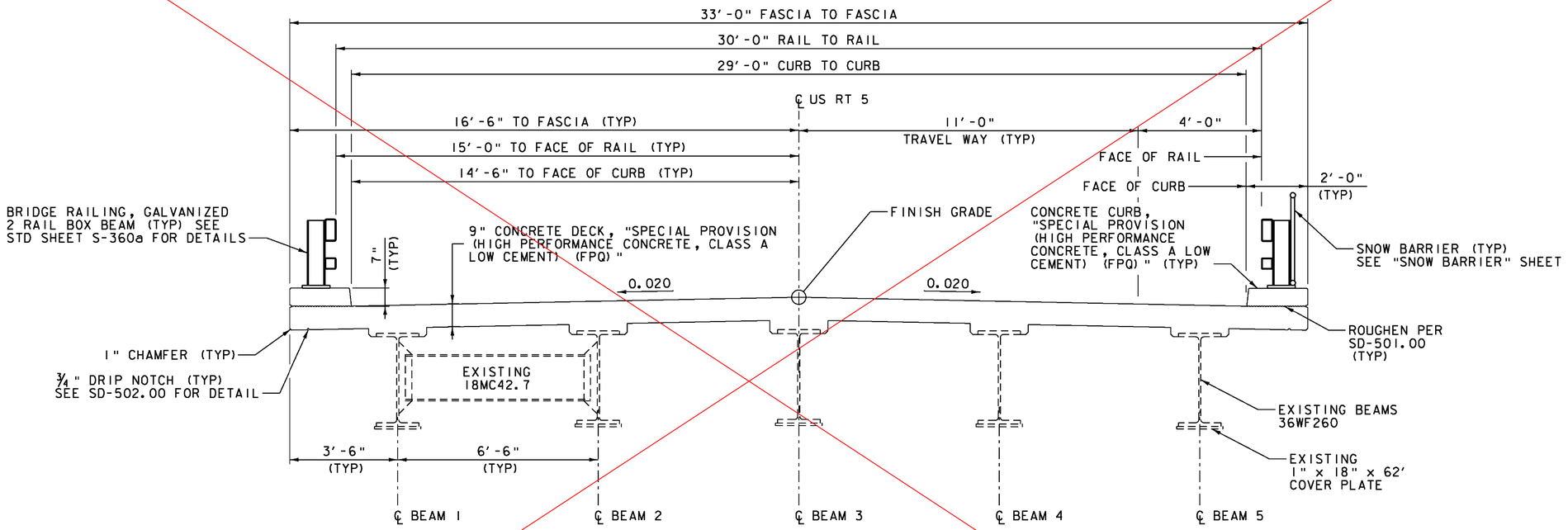
PROJECT NAME: **HARTLAND**
PROJECT NUMBER: **BHF BPNT(12)**

FILE NAME: z11c260pi.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G. FARNSWORTH
BR 62A PRELIMINARY INFORMATION SHEET

PLOT DATE: 12/31/2013
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.G. FARNSWOR
SHEET 2 OF 55

VHB 57537

SEE REVISED SHEET

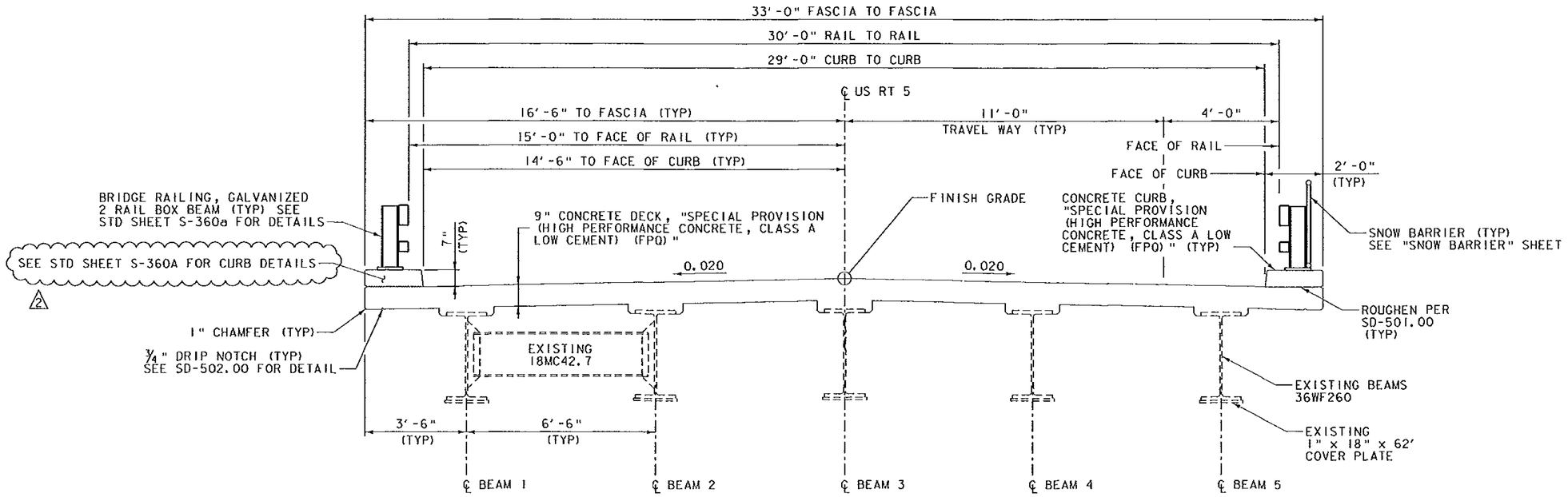


TYPICAL BRIDGE SECTION
SCALE: ½" = 1'-0"

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260typ.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: A.J. GOUDREAU	CHECKED BY: S.G. FARNSWORTH
BR 62A TYPICAL BRIDGE SECTION	SHEET 3 OF 55

VHB 57537



TYPICAL BRIDGE SECTION
SCALE: ½" = 1'-0"

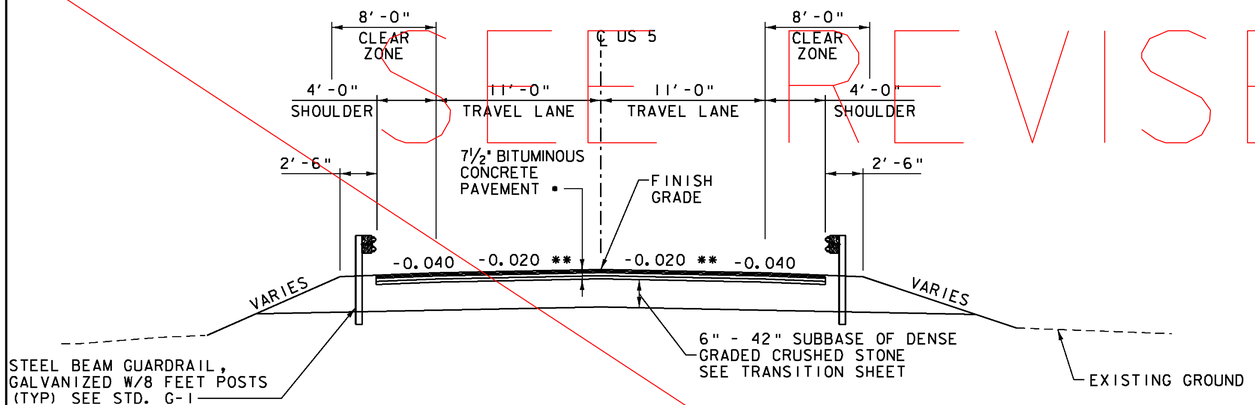
REV.	DESCRIPTION	DATE
2	SEE CURB DETAILS STD SHEET	3/3/2014

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260typ.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: A.J. GOUDREAU
BR 62A TYPICAL BRIDGE SECTION
PLOT DATE: 3/3/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.G. FARNSWORTH
SHEET 3 OF 55

Vanasse Hangen Brustlin, Inc.

VHB 57537



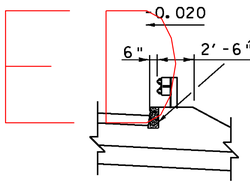
* 1¼" TYPE IVS WEARING COURSE OVER
1¼" TYPE IVS BINDER COURSE OVER
2½" TYPE IIS BASE COURSE OVER
2½" TYPE IIS BASE COURSE

** AFTER ABUTMENT 2, ROADWAY BANKING TO THE LEFT TO A MAXIMUM OF 0.035

NOTE: PAVEMENT SHALL BE UNDER THE ITEM 900.680, "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

US 5 TYPICAL ROADWAY SECTION
SCALE: 1" = 5'

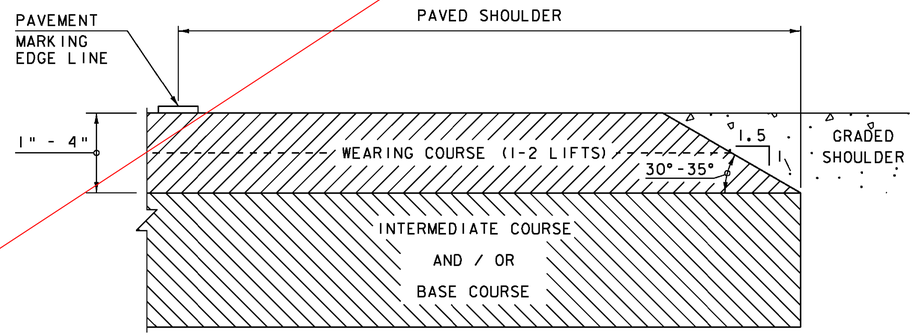
TACK COATS OF EMULSIFIED ASPHALT SHALL BE APPLIED AT THE RATE OF 0.040 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.



TYPICAL CURB DETAIL
SCALE: 1" = 5'-0"

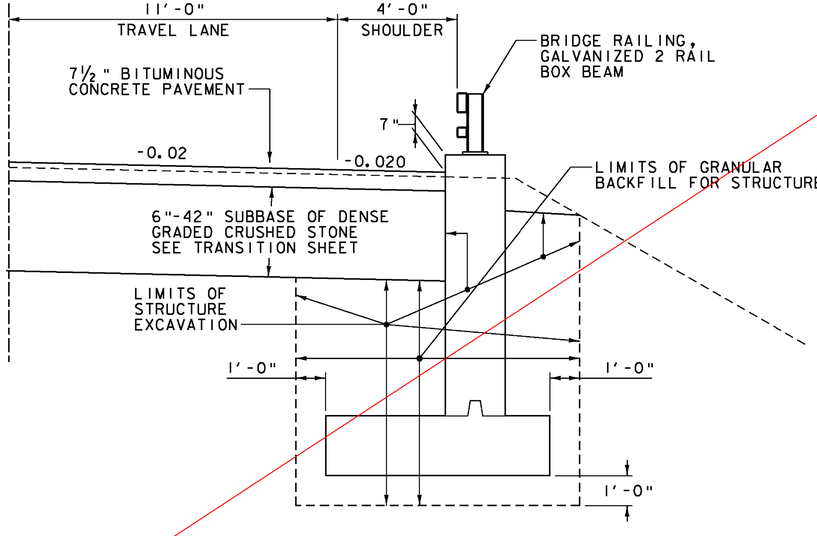
MATERIAL TOLERANCES
(IF USED ON PROJECT)

	TOTAL DEPTH FOR EACH MATERIAL
SURFACE	
- PAVEMENT	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
BASE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"
GRANULAR BORROW	+/- 1"



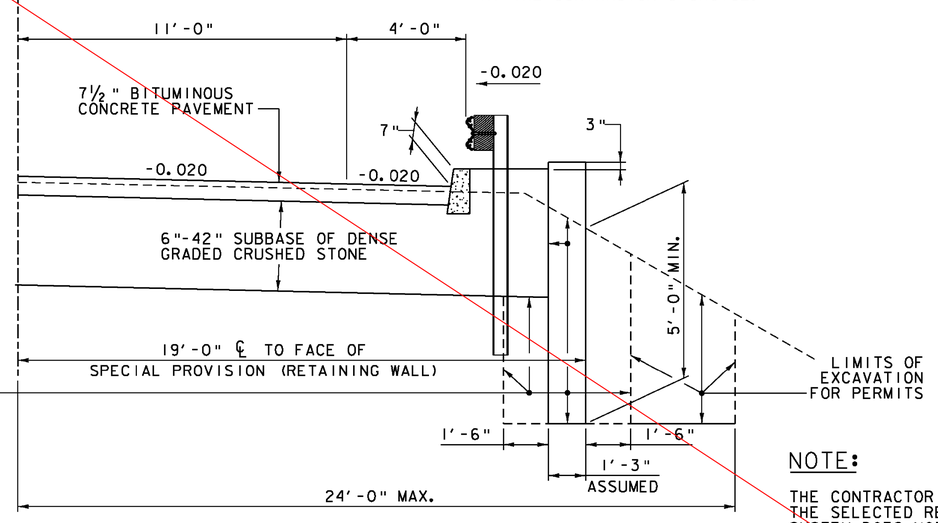
SAFETY EDGE DETAIL
NOT TO SCALE

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



WINGWALL TYPICAL EARTHWORKS SECTION
N. T. S.

EXCAVATION AND BACKFILL PAID FOR UNDER ITEM 900.670, "SPECIAL PROVISION (RETAINING WALL)"



SPECIAL PROVISION (RETAINING WALL)
N. T. S.

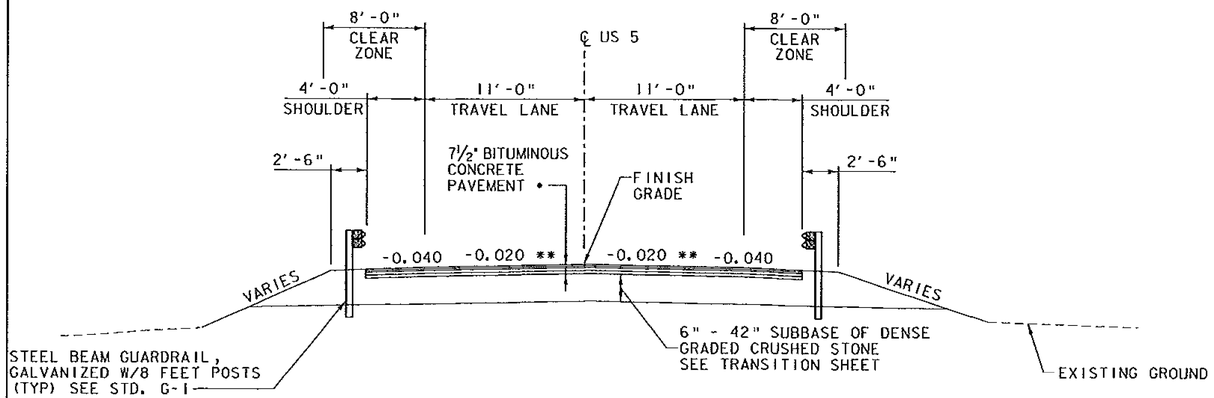
NOTE:

THE CONTRACTOR SHALL ENSURE THAT THE SELECTED RETAINING WALL SYSTEM DOES NOT CONFLICT WITH THE GUARDRAIL INSTALLATION.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260typ.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. COUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.G. FARNSWORTH
BR 62A TYPICAL ROADWAY SECTIONS	SHEET 4 OF 55

VHB 57537



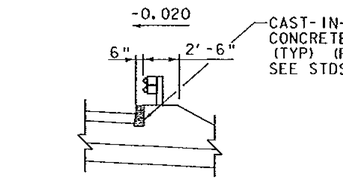
* 1¼" TYPE IVS WEARING COURSE OVER
1¼" TYPE IVS BINDER COURSE OVER
2½" TYPE IIS BASE COURSE OVER
2½" TYPE IIS BASE COURSE

** AFTER ABUTMENT 2, ROADWAY BANKING TO THE LEFT TO A MAXIMUM OF 0.035

NOTE: PAVEMENT SHALL BE UNDER THE ITEM 900.680, "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

US 5 TYPICAL ROADWAY SECTION
SCALE: 1" = 5'

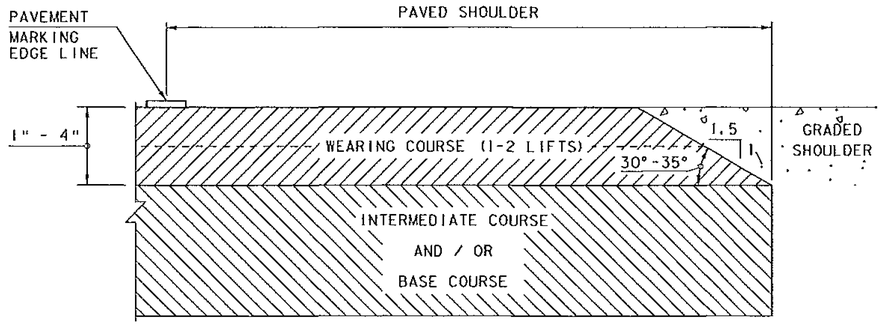
TACK COATS OF EMULSIFIED ASPHALT SHALL BE APPLIED AT THE RATE OF 0.040 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.



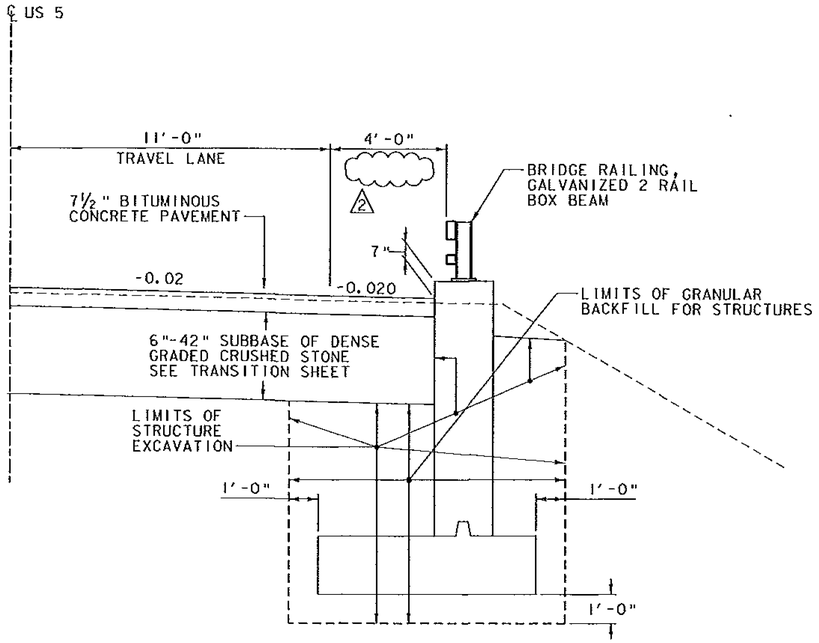
TYPICAL CURB DETAIL
SCALE: 1" = 5'-0"

MATERIAL TOLERANCES
(IF USED ON PROJECT)

	TOTAL DEPTH FOR EACH MATERIAL
SURFACE	
- PAVEMENT	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
BASE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"
GRANULAR BORROW	+/- 1"

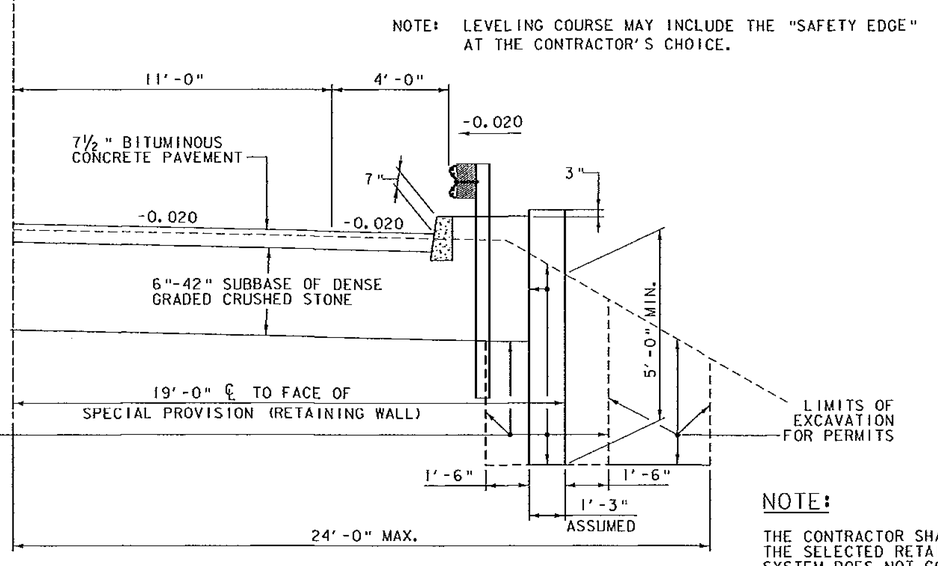


SAFETY EDGE DETAIL
NOT TO SCALE



WINGWALL TYPICAL EARTHWORKS SECTION
N. T. S.

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



SPECIAL PROVISION (RETAINING WALL)
N. T. S.

NOTE:

THE CONTRACTOR SHALL ENSURE THAT THE SELECTED RETAINING WALL SYSTEM DOES NOT CONFLICT WITH THE GUARDRAIL INSTALLATION.

REV.	DESCRIPTION	DATE
2	REMOVED THE WORD "SHOULDER"	3/3/2014

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260typ.dgn — PLOT DATE: 3/3/2014
PROJECT LEADER: M.A. COLGAN — DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH — CHECKED BY: S.G. FARNSWORTH
BR 62A TYPICAL ROADWAY SECTIONS — SHEET 4 OF 55

VHB 57537

PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION, 6TH EDITION AND ITS LATEST REVISIONS.

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

3. MAINTAIN EXISTING MINIMUM VERTICAL CLEARANCE.

4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DOCUMENT THE CONDITION OF ALL STRUCTURES THAT HAVE THE POTENTIAL FOR DAMAGE FROM CONSTRUCTION ACTIVITIES. THIS DOCUMENTATION SHALL BE IN THE FORM OF VIDEO OR PICTURES, WITH SUFFICIENT DESCRIPTION, AND SHALL BE SUPPLIED TO THE ENGINEER PRIOR TO ANY EXCAVATION OR DRIVING OF SHEET PILING. THE COST OF PREPARING THIS DOCUMENTATION WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO ALL CONTRACT ITEMS. SEE SPECIAL PROVISIONS.

5. THE BRIDGE IS DESIGNED FOR HL-93 LIVE LOAD WITH A 2.5 INCH ALLOWANCE FOR FUTURE PAVEMENT.

6. ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS. UNLESS SHOWN OTHERWISE ON REFERENCE PLANS, THE RIGHT-OF-WAY LIMIT SHALL BE ASSUMED TO BE 3 RODS.

7. STAGING AREAS OFF THE PAVEMENT SHALL UNDERGO VTRANS CONSTRUCTION STAGING REVIEW. ALL DISTURBED STAGING AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. TEMPORARY STAGING AREAS OFF PAVEMENT, IF APPROVED, SHALL MEET THE REQUIREMENTS OF SECTION 105.

8. THE PAYMENT FOR THE REMOVAL AND SALVAGE OF THE EXISTING BRIDGE 62A BRIDGE RAILING, POSTS, AND HARDWARE SHALL BE INCLUDED IN THE CONTRACT ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

CONCRETE

1. CONCRETE FOR THE DECK, CURBS AND ABUTMENTS ABOVE THE BRIDGE SEAT OR CONSTRUCTION JOINT SHALL BE ITEM 900.608, "SPECIAL PROVISION, (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT) (FPQ)".

2. ALL OTHER SUBSTRUCTURE CONCRETE SHALL BE ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B" UNLESS OTHERWISE NOTED.

3. NO CONCRETE IN ABUTMENT WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE BEAMS HAVE BEEN PROFILED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED BY THE ENGINEER.

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

5. RELATIVE TO GRADE, ALL DECK POURS SHALL BEGIN FROM THE LOW ELEVATION END AND PROCEED TOWARDS THE HIGH ELEVATION END.

6. STAY-IN-PLACE CORRUGATED METAL FORMS (SIPCMF) MAY BE USED TO FORM THE UNDERSIDE OF THE CONCRETE BRIDGE DECK IN ACCORDANCE WITH SUBSECTION 501.09.

7. FLEMING BRACKETS OR SIMILAR FALSE WORK SHALL BE DESIGNED BY THE CONTRACTOR AND PLACED AT A MAXIMUM SPACING OF 4'-0". THE BRACKET SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL BEAR ABOVE THE BOTTOM QUARTER OF THE WEB DEPTH.

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

9. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.

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

11. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 2" ALONG THE BACK FACES OF WALLS AGAINST EARTH, 1 ½" ALONG THE BOTTOM SURFACE OF THE DECK AND 3" ELSEWHERE, UNLESS OTHERWISE NOTED.

12. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCETE REINFORCING STEEL INSTITUTUE (CRSI).

13. ALL REINFORCEMENT IN THE DECK, CURTAIN WALLS, AND CURBS SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR LEVEL II REINFORCING STEEL AND WILL BE PAID FOR UNDER CONTRACT ITEM 507.12. ALL OTHER REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR LEVEL I EPOXY COATED REINFORCING STEEL AND WILL BE PAID FOR UNDER CONTRACT ITEM 507.11.

14. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
    SPACING +/- 1"
    CLEARANCE +/- ¼"

15. CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04.

TRAFFIC CONTROL

1. THE CONTRACTOR SHALL NOTIFY THE TOWN A MINIMUM OF TWO (2) WEEKS PRIOR TO CLOSING THE ROAD.

2. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

3. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

4. THE CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK FOR ANY WORK ON US ROUTE 5 OR FROM THE ROAD ABOVE OR RAILROAD BELOW THE BRIDGES. THE DESIGN SHALL ENSURE STATE-REGULATED WIDE LOADS CAN BE ACCOMMODATED DURING LANE CLOSURES. A MINIMUM WIDTH OF 14'- 6" SHALL BE MAINTAINED BETWEEN THE FACE OF CURB AND THE TEMPORARY TRAFFIC BARRIER. TRAFFIC CONTROL PLANS SHALL BE DEVELOPED IN ACCORDANCE WITH THE 2009 M.U.T.C.D. SITE CONDITIONS MAY WARRANT ADDITIONAL CONSIDERATIONS FOR SAFETY. MINIMUM VERTICAL CLEARANCE OVER THE RAILROAD SHALL BE SHOWN ON TRAFFIC CONTROL PLAN SUBMITTALS. PLANS SHALL BE SUBMITTED IN ACCORDANCE WITH SUBSECTION 105.03 AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN AN APPROPRIATE DISCIPLINE IN THE STATE OF VERMONT.

5. THE TRAFFIC CONTROL PLANS SHALL SHOW ALL BIKE LANES, SIDEWALKS AND INTERSECTIONS AS APPLICABLE TO EACH BRIDGE SITE. PEDESTRIANS SHALL BE ACCOMMODATED IN ACCORDANCE WITH A.D.A. GUIDELINES.

6. NIGHT WORK WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER.

7. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS, ALL COSTS FOR TEMPORARY TRAFFIC CONTROL DEVICES WILL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL, ITEM 641.10.

8. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED 2 WEEKS IN ADVANCE OF LANE CLOSURE AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE MADE UNDER ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.

9. RIGHT-OF-WAY FENCE MAY HAVE TO BE REMOVED AND RESET IN ACCORDANCE WITH SECTION 620 FOR EGRESS AND INGRESS. THIS WORK SHALL BE INCIDENTAL TO TRAFFIC CONTROL, ITEM 641.10.

10. ALL EQUIPMENT AND CONTAINMENT FACILITIES SHALL BE PROTECTED BY A CONCRETE BARRIER OVERNIGHT AND DURING NON-WORKING HOURS. PERMANENT LANE CLOSURES SHALL UTILIZE TEMPORARY TRAFFIC BARRIER AND SHALL BE INDICATED IN THE SITE SPECIFIC TRAFFIC CONTROL PLANS. ALSO SEE SUBSECTION 621.07 FOR ADDITIONAL REQUIREMENTS.

RAILROAD – BRIDGES 62A AND 66

1. BRIDGE LOCATIONS IN REFERENCE TO THE ROXBURY SUB-DIVISION OF THE NECR.

US 5 BRIDGE NO.	ROXBURY MILE POST
62A	Br 7.16
66	Br 9.29

2. SEE THE RAILROAD SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

UTILITIES

1. REFER TO UTILITIES SPECIAL PROVISIONS.

EXISTING STEEL BEAMS AND CONCRETE

1. ITEM 529.20 PARTIAL REMOVAL OF STRUCTURE (US 5 BR 62A) SHALL BE USED FOR REMOVAL OF THE EXISTING SUPERSTRUCTURE INCLUDING BRIDGE RAIL COMPONENTS, CONCRETE DECK, CURBS, AND CURTAIN WALLS. THIS WORK SHALL INCLUDE THE REMOVAL OF THE EXISTING CONCRETE WINGWALLS AND THE EXISTING SPIRAL AND/OR STUD SHEAR CONNECTORS TO ¼" ABOVE THE EXISTING STEEL BEAMS. REMOVAL AND DISPOSAL OF BRIDGE PAVEMENT WILL BE PAID FOR SEPARATELY UNDER CONTRACT ITEM 529.10.

2. ITEM 529.20 PARTIAL REMOVAL OF STRUCTURE (US5 BR 66) SHALL BE USED FOR THE REMOVAL OF THE EXISTING BLAST PROTECTION MATERIAL FROM THE INTERIOR BEAMS AND DIAPHRAGMS OF SPAN NO. 2 AND SHALL BE PROPERLY DISPOSED OF. THE CONCRETE TYPE MATERIAL WITH WIRE MESH WHICH ENCASES MORE THAN TWO-THIRDS OF THE INTERIOR BEAMS LENGTH AND DIAPHRAGMS HAS BEEN TESTED AND DOES NOT CONTAIN ASBESTOS.

3. THE CONTRACTOR SHALL TAKE CARE AS TO NOT DAMAGE THE EXISTING STEEL BEAMS WHILE REMOVING THE CONCRETE AND SPIRAL AND/OR STUD SHEAR CONNECTORS.

4. ITEM 900.645 SPECIAL PROVISION (PUBLIC PROTECTION FOR BRIDGE PROJECTS) SHALL BE USED TO PROVIDE A TEMPORARY PROTECTION SYSTEM TO BRIDGE 62A TO PREVENT CONCRETE AND REINFORCING STEEL FROM FALLING ONTO THE TRACKS AND EMBANKMENTS UNDER THE BRIDGE.

BRIDGE 66 DRAIN TROUGH

1. THE CONTRACTOR SHALL PROVIDE AND ERECT STAGING AND /OR LADDERS SO THAT THE ENGINEER CAN INSPECT THE EXISTING DRAIN TROUGHS AT THE PIERS. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 900.640, "SPECIAL PROVISION (REMOVE AND RESTORE DRAIN TROUGH)".

2. ITEM 900.640, "SPECIAL PROVISION (REMOVE AND REPLACE DRAIN TROUGH) SHALL INCLUDE ALL INCIDENTAL WORK AND MATERIALS FOR THE REMOVAL OF EXISTING DRAIN TROUGH AND REPLACING IT AS DETAILED IN THE PLANS.

3. ITEM 900.640, "SPECIAL PROVISION (REMOVE AND RESTORE DRAIN TROUGH) SHALL INCLUDE ALL INCIDENTAL WORK FOR THE REMOVAL OF THE EXISTING DRAIN TROUGH, SALVAGING THE MATERIALS AND RESTORING THE DRAINAGE TROUGH. THE COST FOR ANY NEW CRADLES, DRAIN TROUGH SUPPORTS, AND APRON FABRIC AT THE FASCIA AS DETAILED IN THE PLANS SHALL BE INCIDENTAL TO THIS ITEM.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260pn.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S. FARNSWORTH
PROJECT NOTES (1 OF 2)

PLOT DATE: 1/3/2014
DRAWN BY: M.C. SCOTT
CHECKED BY: S. FARNSWORTH
SHEET 5 OF 55

VHB 57537

BRIDGE PAINTING NOTES

GENERAL

1. PRIOR TO PAINTING BRIDGE 66, THE EXISTING BLAST PROTECTION OF THE INTERIOR BEAMS AND DIAPHRAGM OF SPAN NO. 2 SHALL BE REMOVED AND PROPERLY DISPOSED OF. SEE EXISTING STEEL BEAMS AND CONCRETE NOTES ON PREVIOUS SHEET.

2. ALL COSTS ASSOCIATED WITH EXTENDING OR FILLING THE DRAIN TUBES ON BRIDGE 66 SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).

3. THE CONTRACTOR SHALL NOT DRILL OR DOWEL INTO THE PIERS FOR CONTAINMENT SUPPORT OR ANY OTHER WORK.

4. EXISTING GREASE PAINT REMOVAL SHALL BE PAID AS ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).

5. EXISTING MINIMUM VERTICAL CLEARANCE UNDER BRIDGES (FROM VTRANS BRIDGE INSPECTION REPORTS DATED MAY 2011):

BRIDGE NO.	CLEARANCE
62A	22'-3"
66	19'-2"

PROTECTIVE COATINGS

1. THE SURFACE PREPARATION OF THE EXISTING STEEL ON BRIDGES 62A AND 66 SHALL INCLUDE 100% REMOVAL OF THE EXISTING PAINT SYSTEM.

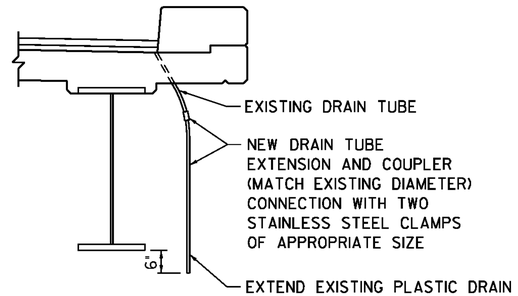
2. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE BROWN CONFORMING TO SUBSECTION 708.03.

3. TWO INTERMEDIATE COATS OF PAINT SHALL BE APPLIED TO ALL BEAMS AND DIAPHRAGMS IN ACCORDANCE WITH ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL), WITHIN 20 FEET OF EACH ABUTMENT (FIXED AND EXPANSION JOINTS); AND AT PIERS FROM BEAM END TO A LENGTH EQUAL TO TWO TIMES THE BEAM DEPTH FROM POINT OF BEARING AND SHALL INCLUDE ALL EXPOSED SURFACE AREAS OF ATTACHMENTS OR MEMBERS WITHIN THIS DISTANCE. COST SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).

4. CLEANING AND PAINTING OF ANY DOWNSPOUTS AND/OR ANY STEEL CONNECTORS FOR DRAIN TROUGHS SHALL BE INCLUDED AS PART OF THE WORK.

NIGHT WORK

1. NIGHT WORK WILL NOT BE ALLOWED AT BRIDGE 66 BETWEEN THE HOURS OF 9:00 PM AND 7:00 AM.



NOTES:

1. DRAIN TUBE EXTENSION DETAIL TO BE USED WHERE THE END OF EXISTING TUBES ARE LESS THAN 6" BELOW ADJACENT BEAM OR AS DIRECTED BY THE ENGINEER.

2. IF EXISTING DRAIN TUBE IS TOO SHORT TO PROVIDE AN ADEQUATE CONNECTION, THE CONTRACTOR SHALL COMPLETELY FILL THE TUBE WITH POLYURETHANE SEALANT CONFORMING TO SUBSECTION 707.05. TUBES TO BE FILLED WITH POLYURETHANE SEALANT SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEING FILLED.

DRAIN TUBE EXTENSION DETAIL

NOT TO SCALE

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT (12)
FILE NAME: zllc260pn.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S. FARNSWORTH	CHECKED BY: S. FARNSWORTH
PROJECT NOTES (2 OF 2)	SHEET 6 OF 55

VHB 57537

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY (BRIDGE 62A)	TRAINING	EROSION CONTROL (BRIDGE 62A)	BRIDGE (BRIDGE 62A)	FULL C.E. ITEMS	ROADWAY (BRIDGE 66)	BRIDGE (BRIDGE 66)	TOTALS GRAND TOTAL	TOTALS FINAL	UNIT	DESCRIPTIONS ITEMS	ITEM NUMBER	ROUND
460							460		CY	COMMON EXCAVATION	203.15	
1							1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
			200				200		CY	STRUCTURE EXCAVATION	204.25	
			120				120		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
660							660		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
420							420		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
2							2		CWT	EMULSIFIED ASPHALT	404.65	
1							1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
			90				90		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
			6100				6100		LB	REINFORCING STEEL, LEVEL I	507.11	
			20000				20000		LB	REINFORCING STEEL, LEVEL II	507.12	
			39				39		LF	DRILLING AND GROUTING DOWELS	507.16	
			1				1		LS	SHEAR CONNECTORS (980 - 7/8"x7")	508.15	
			15				15		GAL	WATER REPELLENT, SILANE	514.10	
			82				82		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
			279				279		LF	BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM	525.33	
			318				318		SY	REMOVAL OF BRIDGE PAVEMENT	529.10	
			1				1		EACH	PARTIAL REMOVAL OF STRUCTURE (US5-BR. NO. 62A)	529.20	
						1	1		EACH	PARTIAL REMOVAL OF STRUCTURE (US5-BR. NO. 66)	529.20	
6							6		LF	12" CPEP	601.0905	
1							1		EACH	PRECAST REINFORCED CONCRETE CURB DI WITH CAST IRON GRATE	604.30	
2880					720		3600		HR	TRUCK-MOUNTED ATTENUATOR	608.45	
		3					3		CY	STONE FILL, TYPE I	613.10	EST
200							200		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	
40							40		LF	REMOVING AND RESETTING FENCE	620.50	
			112				112		LF	SNOW BARRIER	620.75	
125							125		LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	
1							1		EACH	MANUFACTURED TERMINAL SECTION, FLARED	621.50	
1							1		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	
4							4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM	621.72	
350							350		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
			950			320	1270		LF	TEMPORARY TRAFFIC BARRIER	621.90	
			430				430		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95	
150					150		300		HR	UNIFORMED TRAFFIC OFFICERS	630.10	
800					400		1200		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	
	520						520		HR	EMPLOYEE TRAINEESHIP	634.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORK SUMMARY
460	CY	COMMON EXCAVATION (460 CY*1.00)
150	CY	STRUCTURE EXCAVATION (200 CY* 0.75)
610	CY	SUBTOTAL
0	CY	ROUNDING
610	CY	TOTAL
610	CY	FILL AVAILABLE
0	CY	FILL REQUIRED
0	CY	BORROW
610	CY	WASTE
		COMMON EXCAVATION
460	CY	MAINLINE
0	CY	ROUNDING
460	CY	TOTAL

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260qs.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G FARNSWORTH
QUANTITY SHEET #1

PLOT DATE: 01/06/2014
DRAWN BY: E.A. FIALA
CHECKED BY: S.G. FARNSWORTH
SHEET 7 OF 55

VHB 57537

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY (BRIDGE 62A)	TRAINING	EROSION CONTROL (BRIDGE 62A)	BRIDGE (BRIDGE 62A)	FULL C.E. ITEMS	ROADWAY (BRIDGE 66)	BRIDGE (BRIDGE 66)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
460							460		CY	COMMON EXCAVATION	203.15	
1							1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
			200				200		CY	STRUCTURE EXCAVATION	204.25	
			120				120		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
660							660		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
420							420		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
2							2		CWT	EMULSIFIED ASPHALT	404.65	
1							1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
			90				90		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
			6320				6320		LB	REINFORCING STEEL, LEVEL I	507.11	
			25400				25400		LB	REINFORCING STEEL, LEVEL II	507.12	
			39				39		LF	DRILLING AND GROUTING DOWELS	507.16	
			1				1		LS	SHEAR CONNECTORS (980 - 7/8"x7")	508.15	
			15				15		GAL	WATER REPELLENT, SILANE	514.10	
			82				82		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
			279				279		LF	BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM	525.33	
			318				318		SY	REMOVAL OF BRIDGE PAVEMENT	529.10	
			1				1		EACH	PARTIAL REMOVAL OF STRUCTURE (US5-BR. NO. 62A)	529.20	
						1	1		EACH	PARTIAL REMOVAL OF STRUCTURE (US5-BR. NO. 66)	529.20	
6							6		LF	12" CPEP	601.0905	
1							1		EACH	PRECAST REINFORCED CONCRETE CURB DI WITH CAST IRON GRATE	604.30	
2880					720		3600		HR	TRUCK-MOUNTED ATTENUATOR	608.45	
		3					3		CY	STONE FILL, TYPE I	613.10	EST
200							200		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	
40							40		LF	REMOVING AND RESETTING FENCE	620.50	
			112				112		LF	SNOW BARRIER	620.75	
125							125		LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	
1							1		EACH	MANUFACTURED TERMINAL SECTION, FLARED	621.50	
1							1		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	
4							4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM	621.72	
350							350		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
			950			320	1270		LF	TEMPORARY TRAFFIC BARRIER	621.90	
			430				430		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95	
150					150		300		HR	UNIFORMED TRAFFIC OFFICERS	630.10	
800					400		1200		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	
	520						520		HR	EMPLOYEE TRAINEESHIP	634.10	

DELETE ITEM 621.60 FROM CONTRACT.

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORK SUMMARY
460	CY	COMMON EXCAVATION (460 CY* 1.00)
150	CY	STRUCTURE EXCAVATION (200 CY* 0.75)
610	CY	SUBTOTAL
0	CY	ROUNDING
610	CY	TOTAL
610	CY	FILL AVAILABLE
0	CY	FILL REQUIRED
0	CY	BORROW
610	CY	WASTE
		COMMON EXCAVATION
460	CY	MAINLINE
0	CY	ROUNDING
460	CY	TOTAL

REV	DESCRIPTION	DATE
2	DELETED ITEM OR INCREASED QUANTITY	3-3-2014

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260qs.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G FARNSWORTH
QUANTITY SHEET #1
PLOT DATE: 02/28/2014
DRAWN BY: E.A. FIALA
CHECKED BY: S.G. FARNSWORTH
SHEET 7 OF 55

VHB 57537

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY (BRIDGE 62A)	TRAINING	EROSION CONTROL (BRIDGE 62A)	BRIDGE (BRIDGE 62A)	FULL C.E. ITEMS	ROADWAY (BRIDGE 66)	BRIDGE (BRIDGE 66)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
0.5					0.5		1		LS	MOBILIZATION/DEMOBILIZATION	635.11	
1							1		LS	TRAFFIC CONTROL (US5-BR. NO. 62A)	641.10	
					1		1		LS	TRAFFIC CONTROL (US5-BR. NO. 66)	641.10	
3					3		6		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	
650							650		LF	4 INCH WHITE LINE	646.20	
650							650		LF	4 INCH YELLOW LINE	646.21	
800					500		1300		LF	TEMPORARY 4 INCH WHITE LINE, TYPE II TAPE	646.601	
800					500		1300		LF	TEMPORARY 4 INCH YELLOW LINE, TYPE II TAPE	646.611	
433							433		SF	PAVEMENT MARKING MASK	646.86	
		310					310		SY	GEOTEXTILE FOR SILT FENCE	649.51	
		10					10		LB	SEED	651.15	
		70					70		LB	FERTILIZER	651.18	
		0.3					0.3		TON	AGRICULTURAL LIMESTONE	651.20	
		0.3					0.3		TON	HAY MULCH	651.25	
		1					1		LS	EPSC PLAN	652.10	
		30					30		HR	MONITORING EPSC PLAN	652.20	
		1					1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	
		175					175		SY	TEMPORARY EROSION MATTING	653.20	
		15					15		CY	VEHICLE TRACKING PAD	653.35	
		460					460		LF	PROJECT DEMARCATION FENCE	653.55	
1							1		SF	TRAFFIC SIGNS, TYPE A	675.20	
14							14		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	
			115				115		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT) (FPQ)	900.608	
1					1		2		EACH	SPECIAL PROVISION (TEMPORARY TRAFFIC SIGNAL SYSTEM, PORTABLE)	900.620	
						82	82		LF	SPECIAL PROVISION (REMOVE AND REPLACE DRAIN TROUGH)	900.640	
						82	82		LF	SPECIAL PROVISION (REMOVE AND RESTORE DRAIN TROUGH)	900.640	
						1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (US5-BR. NO. 66)	900.645	
			1				1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(US5-BR. NO. 62A)	900.645	
1							1		LS	SPECIAL PROVISION (PUBLIC PROTECTION FOR BRIDGE PROJECTS)	900.645	
			1				1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)(US5-BR. NO. 62A)	900.645	
						1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)(US5-BR. NO. 66)	900.645	
			1				1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE)(N.A.B.I.)	900.650	
			1			1	2		LU	SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC)(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	
215							215		SF	SPECIAL PROVISION (RETAINING WALL)	900.670	
300							300		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
197	TON	TYPE IIS
98	TON	TYPE IVS
295	TON	SUBTOTAL
5	TON	ROUND
300	TON	TOTAL

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260qs.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G FARNSWORTH
QUANTITY SHEET #2

PLOT DATE: 01/03/2014
DRAWN BY: E.A. FIALA
CHECKED BY: S.G. FARNSWORTH
SHEET 8 OF 55

VHB 57537

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
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	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	CALCULATED ROW POINT
[DISTANCE]		DISTANCE CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- 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)

- 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

- CLEAR ZONE (CZ)
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

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

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260LegendSheet.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: VTRANS	CHECKED BY: S.E. BURBANK
CONVENTIONAL SYMBOLOGY LEGEND	SHEET 9 OF 55

GPS CONTROL POINTS

HVCTRL #1

NORTH = 20000.00
EAST = 10000.00
ELEV. = 100.00

HVCTRL #2

NORTH = 19825.030
EAST = 9863.306
ELEV. = 114.457

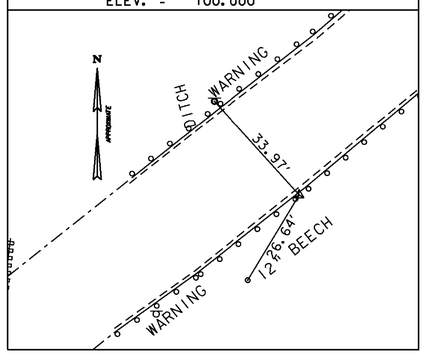
HVCTRL #3

NORTH = 19930.980
EAST = 9856.446
ELEV. = 76.262

TRAVERSE TIES

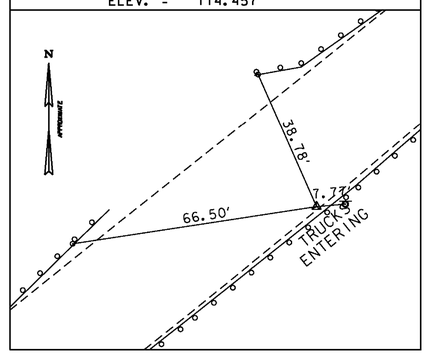
HVCTRL #1

NORTH = 20000.000
EAST = 10000.000
ELEV. = 100.000



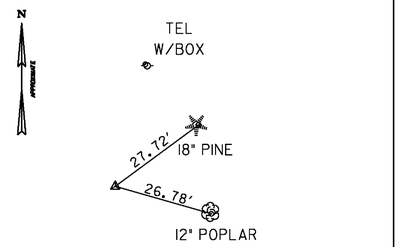
HVCTRL #2

NORTH = 19825.030
EAST = 9863.306
ELEV. = 114.457



HVCTRL #3

NORTH = 19930.980
EAST = 9856.446
ELEV. = 76.262



DATUM
VERTICAL ASSUMED
HORIZONTAL ASSUMED
ADJUSTMENT COMPASS

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260t1.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: VHB
BR 62A TIE SHEET

PLOT DATE: 12/17/2013
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S. FARNSWORTH
SHEET 10 OF 55

VHB 57537

GPS CONTROL POINTS

⚠ HVCTRL #1

NORTH = 10000.00
EAST = 20000.00
ELEV. = 100.00
STA. 13+46.76, 16.97 RT

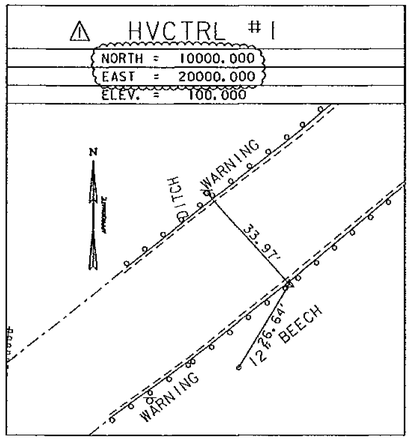
⚠ HVCTRL #2

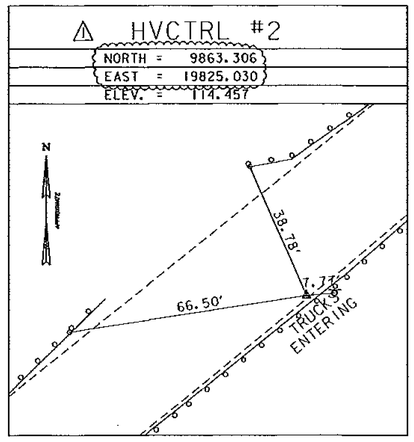
NORTH = 9863.306
EAST = 19825.030
ELEV. = 114.457
STA. 11+24.74, 14.31 RT

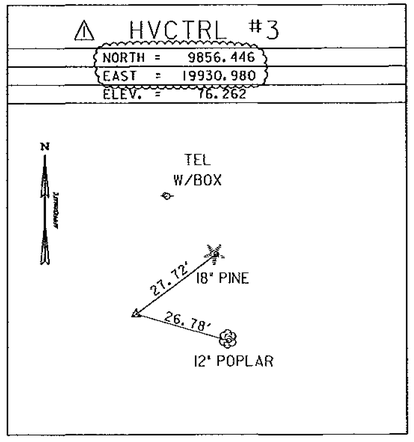
⚠ HVCTRL #3

NORTH = 9856.446
EAST = 19930.980
ELEV. = 76.262
STA. 12+03.16, 85.89 RT

TRAVERSE TIES







DATUM	
VERTICAL	ASSUMED
HORIZONTAL	ASSUMED
ADJUSTMENT	COMPASS

REV.	DESCRIPTION	DATE
⚠	CORRECTED COORDINATES & ADDED STATIONS WITH OFFSETS	2/12/2014

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z:\c26011.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: VHB
BR 62A TIE SHEET

PLOT DATE: 2/12/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S. FARNSWORTH
SHEET 10 OF 55

VHB *Vanasse Hangen Brustlin, Inc.*

VHB 57537

SEE REVISED SHEET

N

VT STATE PLANE GRID

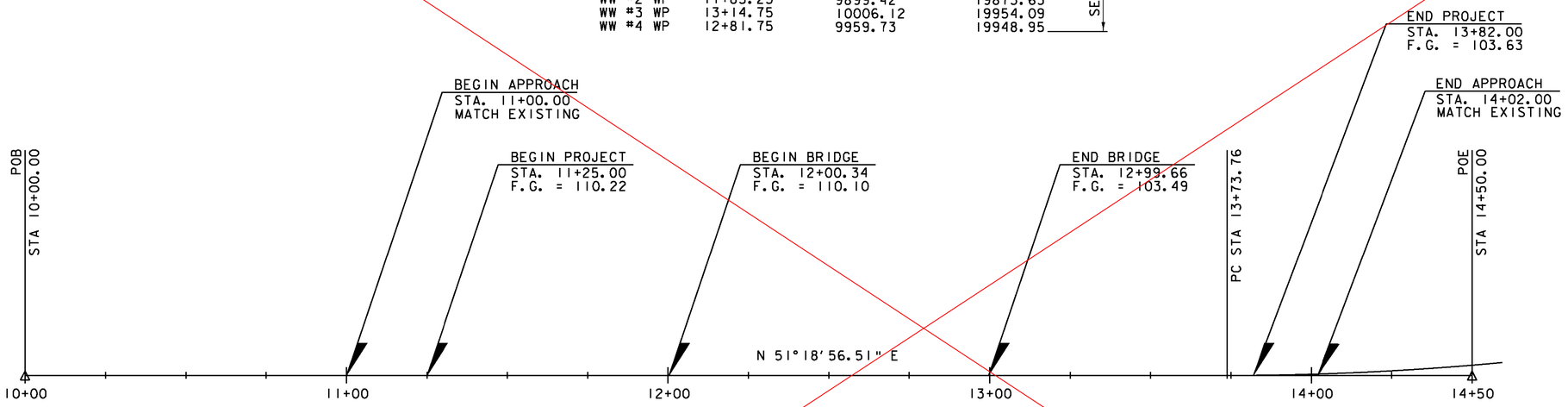
COORDINATE TABLE WITH NORTHINGS AND EASTINGS

	STATION	NORTHING	EASTING	
POB	10+00.00	9796.51	19718.71	
BEGIN PROJECT	11+25.00	9874.64	19816.28	
PC	13+73.76	10030.12	20010.47	
END PROJECT	13+82.00	10035.27	20016.90	
BEGIN BRIDGE	12+00.34	9921.73	19875.09	
ABUT #1 CL BRG	12+01.75	9922.61	19875.20	
ABUT #2 CL BRG	12+98.25	9982.92	19951.52	
END BRIDGE	12+99.66	9983.81	19952.62	
WW #1 WP	12+18.25	9945.80	19878.76	
WW #2 WP	11+85.25	9899.42	19873.63	
WW #3 WP	13+14.75	10006.12	19954.09	
WW #4 WP	12+81.75	9959.73	19948.95	

SEE NOTE 1

HORIZONTAL ALIGNMENT NAME: US 5 PROPOSED

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	10+00.00	9796.5098	19718.7069
POE	14+50.00	10077.7727	20069.9776
TANGENT DIRECTION:	N 51° 18' 56.51" E		
TANGENT LENGTH:	450.00		



HORIZONTAL CURVE DATA

PI = 16+19.40
DELTA = 30° 0' 0"
D = 6° 15' 0"
R = 916.73
T = 245.64
L = 480
E = 32.34

NOTE:

1. ENGINEER TO VERIFY THAT ROADWAY CL PASSES DIRECTLY OVER THE CL OF BEAM 3 PRIOR TO SETTING THE WORKING POINTS

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

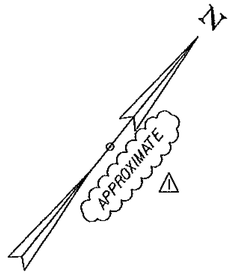
DATUM
VERTICAL ASSUMED
HORIZONTAL ASSUMED
ADJUSTMENT COMPASS

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260align.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: M.C. SCOTT
BR 62A ALIGNMENT LAYOUT PLAN

PLOT DATE: 1/2/2014
DRAWN BY: M.C. SCOTT
CHECKED BY: S.E. BURBANK
SHEET 11 OF 55



COORDINATE TABLE WITH NORTHINGS AND EASTINGS

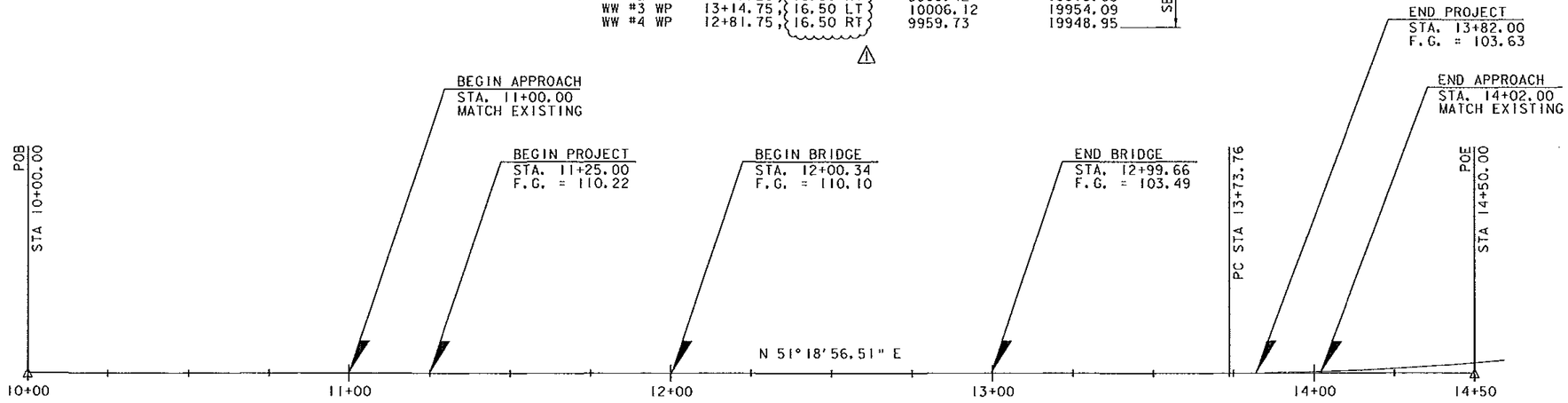
	STATION		NORTHING	EASTING
POB	10+00.00		9796.51	19718.71
BEGIN PROJECT	11+25.00		9874.64	19816.28
PC	13+73.76		10030.12	20010.47
END PROJECT	13+82.00		10035.27	20016.90
BEGIN BRIDGE	12+00.34		9921.73	19875.09
ABUT #1 CL BRG	12+01.75		9922.61	19876.20
ABUT #2 CL BRG	12+98.25		9982.92	19951.52
END BRIDGE	12+99.66		9983.81	19952.62
WW #1 WP	12+18.25	16.50 LT	9945.80	19878.76
WW #2 WP	11+85.25	16.50 RT	9899.42	19873.63
WW #3 WP	13+14.75	16.50 LT	10006.12	19954.09
WW #4 WP	12+81.75	16.50 RT	9959.73	19948.95

⚠ SEE NOTE 1

⚠

HORIZONTAL ALIGNMENT NAME: US 5 PROPOSED

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
POB	10+00.00	9796.5098	19718.7069
POE	14+50.00	10077.7727	20069.9776
TANGENT DIRECTION:		N 51°18'56.51" E	
TANGENT LENGTH:		450.00	



HORIZONTAL CURVE DATA

PI = 16+19.40
DELTA = 30° 0' 0"
D = 6° 15' 0"
R = 916.73
T = 245.64
L = 480
E = 32.34

NOTE:

1. ENGINEER TO VERIFY THAT ROADWAY CL PASSES DIRECTLY OVER THE CL OF BEAM 3 PRIOR TO SETTING THE WORKING POINTS

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

REV.	DESCRIPTION	DATE
⚠	CORRECTED COORDINATE & ADDED WP OFFSETS	2/12/2014

DATUM	
VERTICAL	ASSUMED
HORIZONTAL	ASSUMED
ADJUSTMENT	COMPASS

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260align.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: M.C. SCOTT
BR 62A ALIGNMENT LAYOUT PLAN

PLOT DATE: 2/12/2014
DRAWN BY: M.C. SCOTT
CHECKED BY: S.E. BURBANK
SHEET 11 OF 55

MANUFACTURED TERMINAL SECTION, FLARED

STA. 11+24.76 - 11+62.26, LT
STA. 10+37.50 - 10+75.00, LT

CAST-IN-PLACE CONCRETE CURB, TYPE B

STA. 11+29.84 - 11+69.84, LT
STA. 13+01.16 - 13+41.06, LT
STA. 11+63.84 - 12+03.84, RT
STA. 13+41.91 - 13+81.91, RT

GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM

STA. 11+74.76 - 12+03.84, LT
STA. 13+41.91 - 13+70.99, LT
STA. 11+40.76 - 11+69.84, RT
STA. 13+01.16 - 13+30.24, RT

REMOVAL AND DISPOSAL OF GUARDRAIL

STA. 11+03.26 - 11+83.80, RT
STA. 11+34.00 - 12+12.80, LT
STA. 12+88.70 - 13+93.99, RT
STA. 13+14.73 - 13+95.99, LT

STEEL BEAM GUARDRAIL, GALVANIZED W/ 8 FEET POSTS

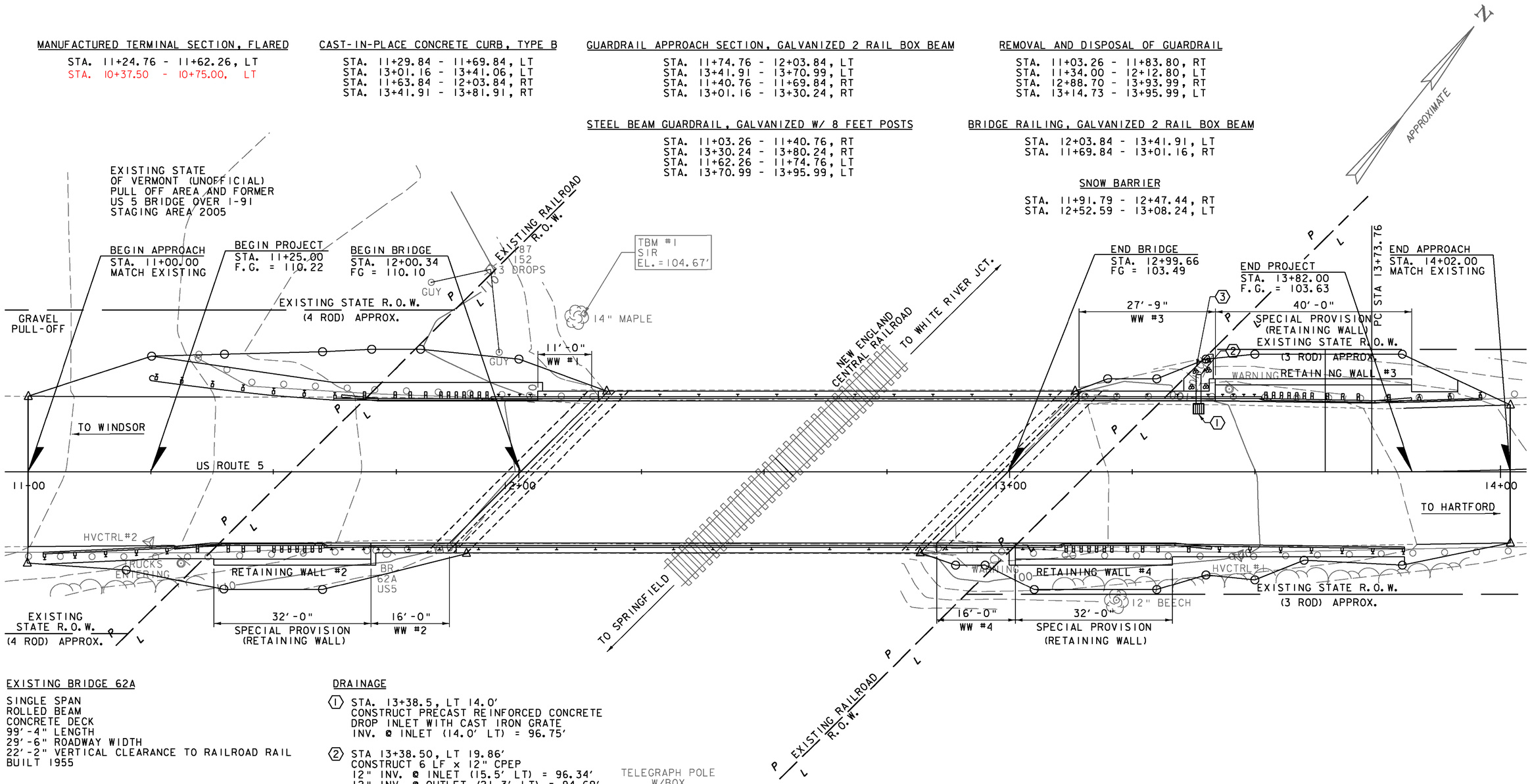
STA. 11+03.26 - 11+40.76, RT
STA. 13+30.24 - 13+80.24, RT
STA. 11+62.26 - 11+74.76, LT
STA. 13+70.99 - 13+95.99, LT

BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM

STA. 12+03.84 - 13+41.91, LT
STA. 11+69.84 - 13+01.16, RT

SNOW BARRIER

STA. 11+91.79 - 12+47.44, RT
STA. 12+52.59 - 13+08.24, LT



EXISTING BRIDGE 62A

SINGLE SPAN
ROLLED BEAM
CONCRETE DECK
99'-4" LENGTH
29'-6" ROADWAY WIDTH
22'-2" VERTICAL CLEARANCE TO RAILROAD RAIL
BUILT 1955

DRAINAGE

(1) STA. 13+38.5, LT 14.0'
CONSTRUCT PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE
INV. @ INLET (14.0' LT) = 96.75'

(2) STA 13+38.50, LT 19.86'
CONSTRUCT 6 LF x 12" CPEP
12" INV. @ INLET (15.5' LT) = 96.34'
12" INV. @ OUTLET (21.3' LT) = 94.69'

(3) STA 13+38.50, LT 16.5' TO LT 24.0'
STONE FILL, TYPE 1, 1.5' x 6'

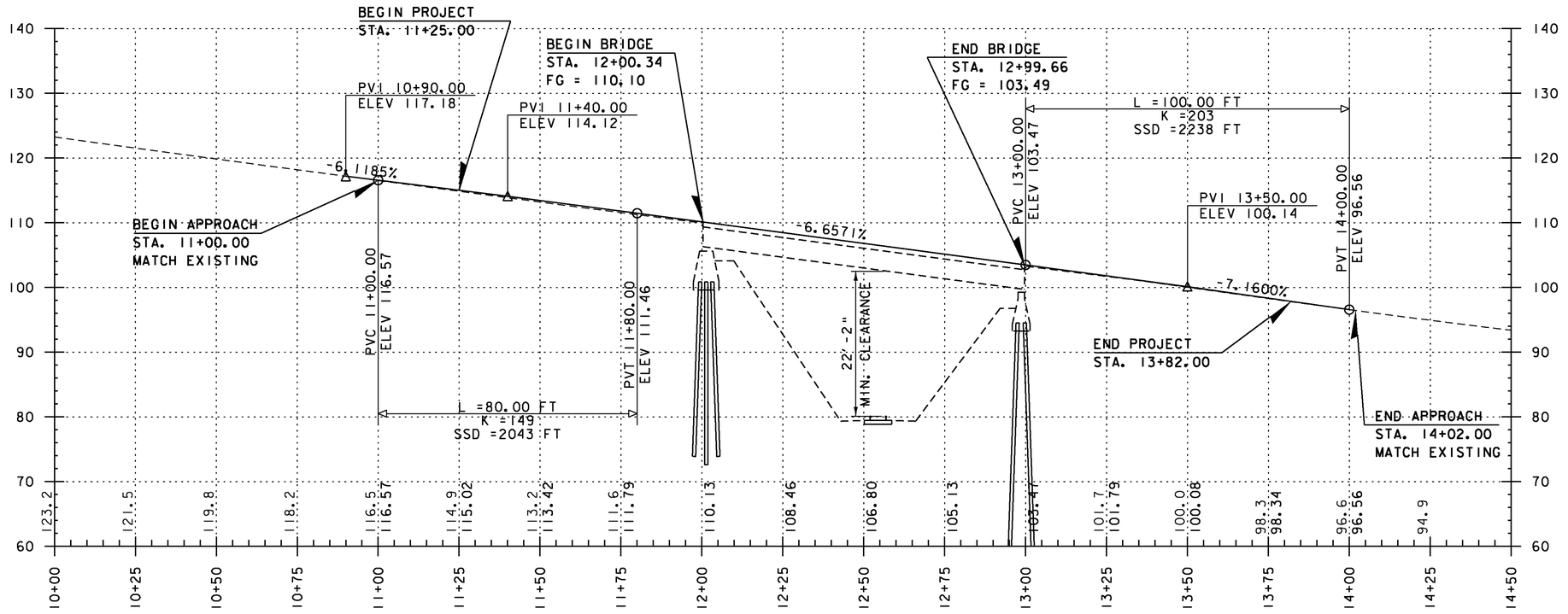
NOTE:

1. NEW STEEL BEAM GUARDRAIL IS TO BE ATTACHED TO EXISTING STEEL BEAM GUARDRAIL AT STATIONS 11+03.26 RT, 13+80.24 RT AND 13+95.99 LT.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260bdr_nul.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A LAYOUT SHEET	SHEET 12 OF 55

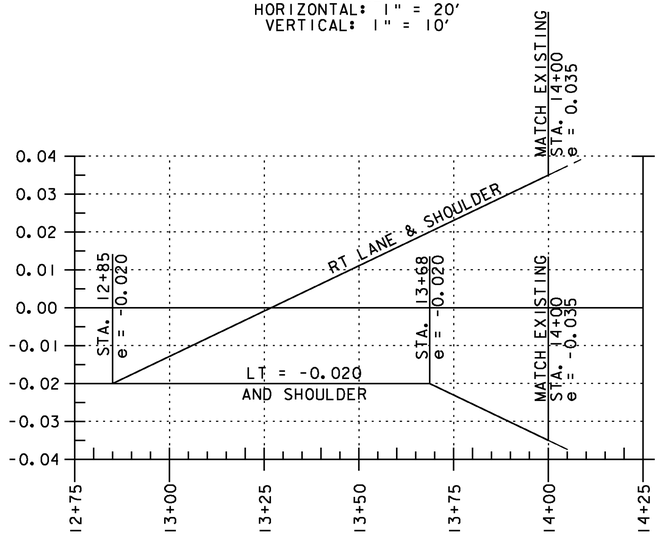
VHB Vanasse Hangen Brustlin, Inc.

VHB 57537



US ROUTE 5 PROFILE

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



BANK TRANSITION

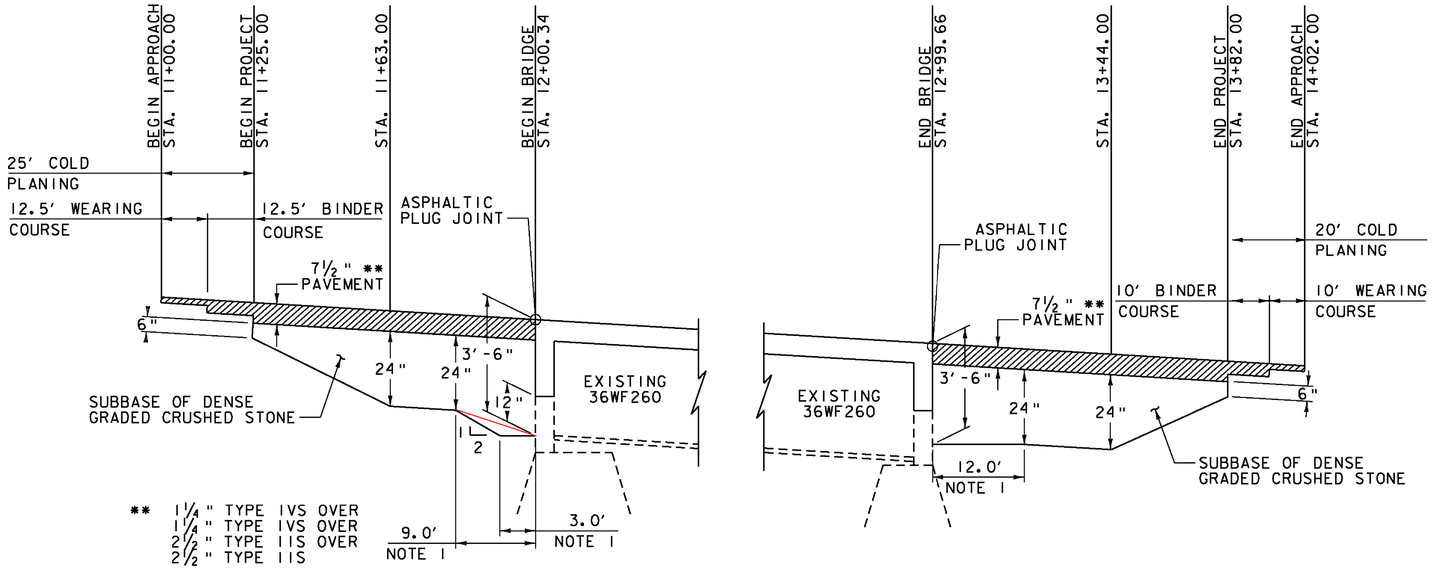
SCALE
HORIZONTAL: 1 = 20'
VERTICAL: 1 = 0.02 FT/FT

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

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

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260pro.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A PROFILE SHEET	SHEET 13 OF 55



NOTE:

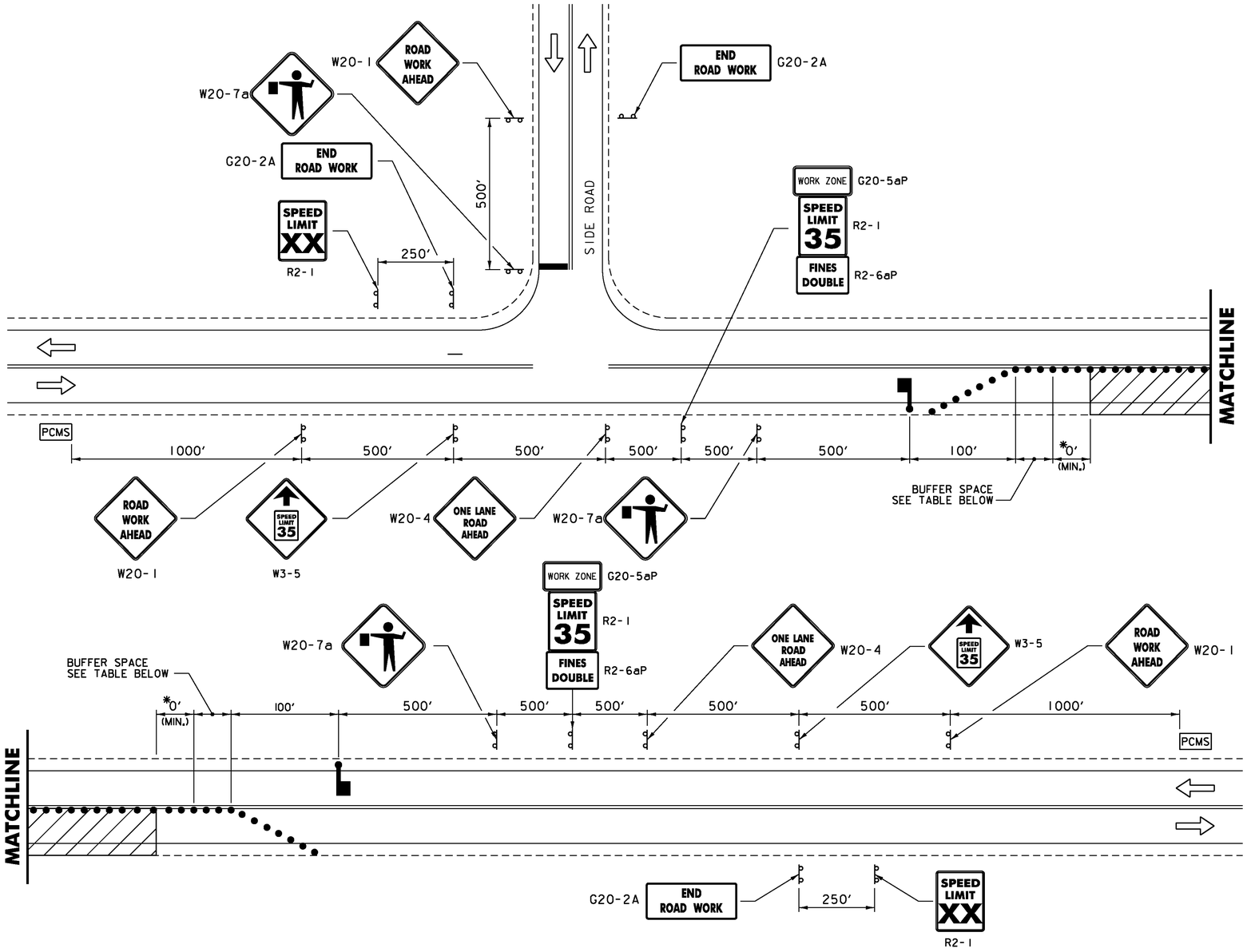
1. MEASURED PERPENDICULAR TO BACK OF ABUTMENT

US RT 5 MATERIAL TRANSITION DIAGRAM

N. T. S.

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260pro.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A MATERIAL TRANSITION DIAGRAM	SHEET 14 OF 55



XX = PRESENT POSTED SPEED LIMIT

* - ACTUAL DIMENSION TO BE DETERMINED BY INDIVIDUAL BRIDGE SITE CONDITIONS AND TO BE SHOWN ON TRAFFIC CONTROL PLANS SUBMITTED BY THE CONTRACTOR.

TRAFFIC CONTROL PLAN ON NON-INTERSTATE ROADWAYS

NOT TO SCALE

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM OR CONCRETE BARRIER
- WORK AREA
- FLAGGER
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 13)

TRAFFIC CONTROL NOTES OTHER HIGHWAYS:

1. THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC AND SHOULD BE USED AS AN EXAMPLE ONLY. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGES 62A & 66 TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING ANY NECESSARY REVISIONS TO THE PLAN, WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10. THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR APPROVAL OF THE TRAFFIC CONTROL PLAN. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS AN APPROVED TRAFFIC CONTROL PLAN.
2. ANY PARKING AREAS OR DRIVES WITH AN ENTRANCE/EXIT BETWEEN THE FLAGGER AND THE WORK ZONE SHALL HAVE THAT ENTRANCE/EXIT CLOSED WITH CONES OR DRUMS, PROVIDED ADDITIONAL ENTRANCES/EXITS EXIST IN THE AREA APPROACHING THE FLAGGER.
3. ANY PUBLIC HIGHWAYS BETWEEN THE FLAGGER AND THE WORK ZONE WILL REQUIRE AN ADDITIONAL FLAGGER TO MAINTAIN TRAFFIC CONTROL FOR THE PUBLIC HIGHWAY.
4. SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS OR CORNER SIGHT DISTANCE FROM TOWN HIGHWAYS OR DRIVES.
5. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" BOOK (SHS) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
6. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956 TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
7. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D 4956 TYPE VI.
8. SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
9. FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL.
10. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND AT ONE FOOT MINIMUM ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
11. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
12. THE NUMBER OF CHANNELIZING DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY, THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BY THE CONTRACTOR AND SHOWN ON THE TRAFFIC CONTROL PLAN SUBMITTED BY THE CONTRACTOR. WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
13. THE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER, THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.55 OF THE MUTCD.

BUFFER SPACE TABLE

POSTED SPEED (MPH)	MINIMUM BUFFER SPACE LENGTH (FT)
35	250
40	305
45	360
50	425

VHB Vanasse Hangen Brustlin, Inc.

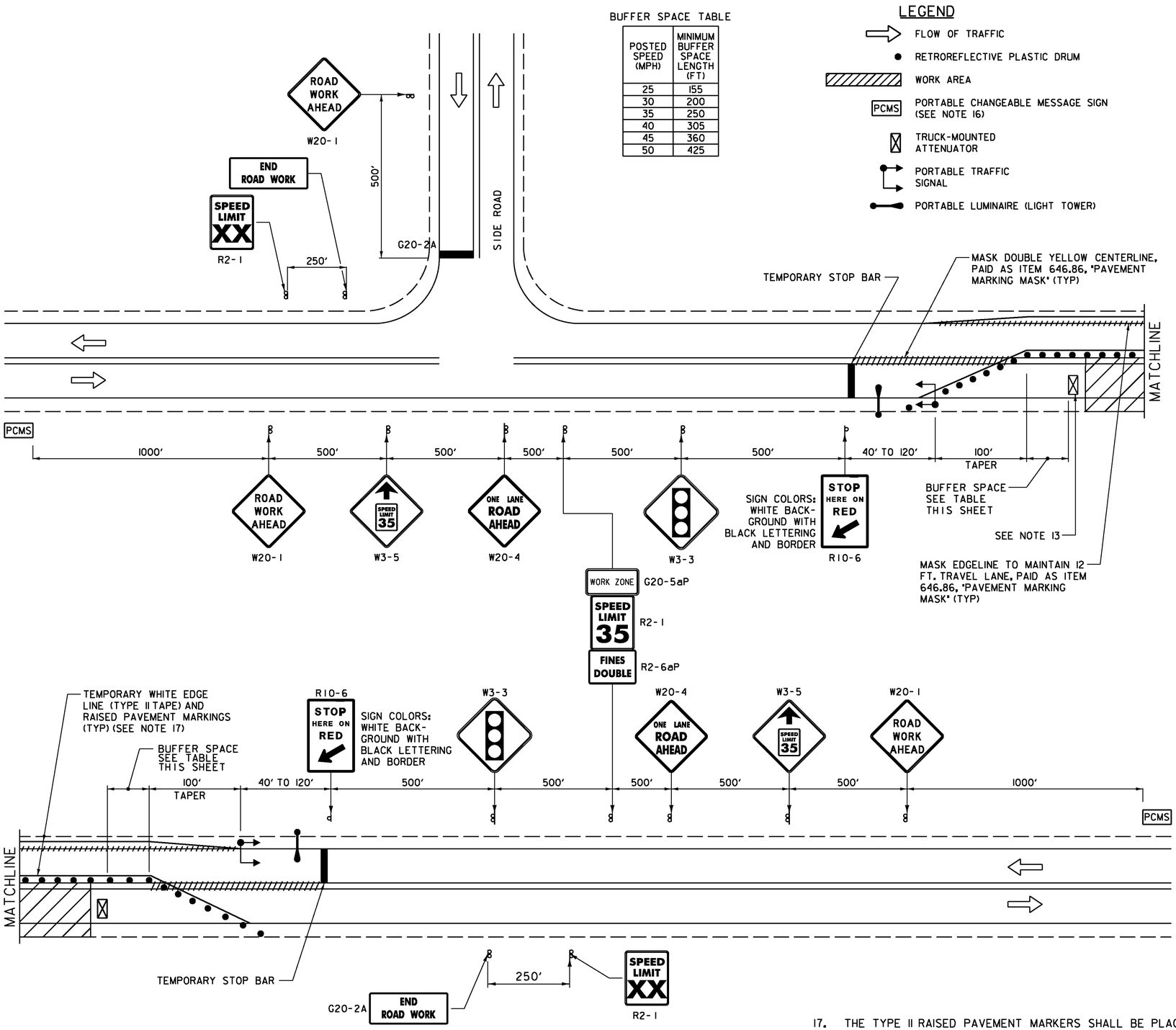
PROJECT NAME: HARTLAND	
PROJECT NUMBER: BHF BPNT(12)	
FILE NAME: z11c260tc.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: E.A. FIALA
DESIGNED BY: E.A. FIALA	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL WITH FLAGGERS	SHEET 15 OF 55

BUFFER SPACE TABLE

POSTED SPEED (MPH)	MINIMUM BUFFER SPACE LENGTH (FT)
25	155
30	200
35	250
40	305
45	360
50	425

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- WORK AREA
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 16)
- TRUCK-MOUNTED ATTENUATOR
- PORTABLE TRAFFIC SIGNAL
- PORTABLE LUMINAIRE (LIGHT TOWER)



XX = PRESENT POSTED SPEED LIMIT

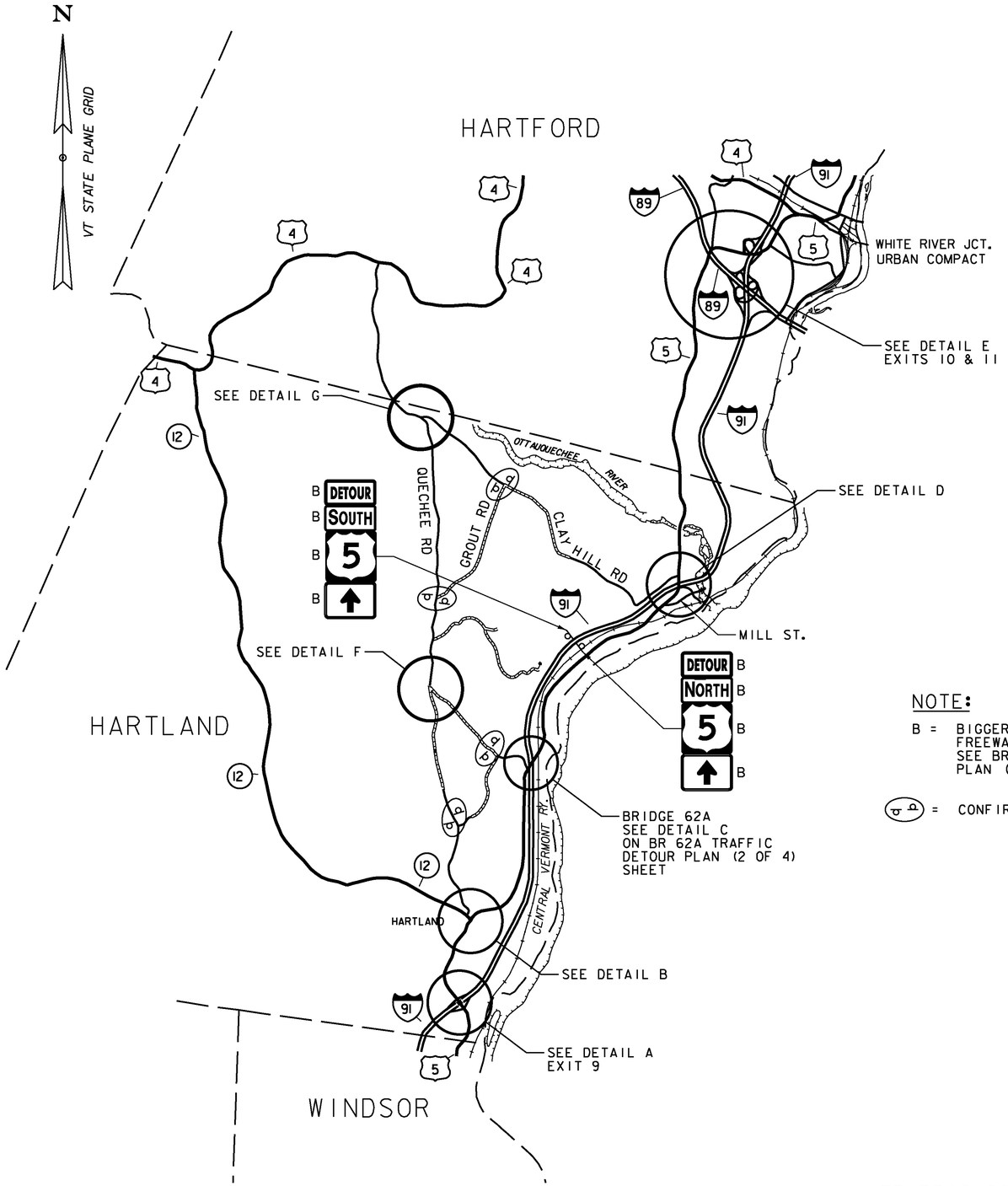
TRAFFIC CONTROL FOR BRIDGES 62A AND 66 RIGHT SIDE CLOSED
(LEFT SIDE CLOSURE SIMILAR)
NOT TO SCALE

TRAFFIC CONTROL NOTES:

1. CONSTRUCTION APPROACH SIGNS SHALL BE PROVIDED ON EACH APPROACH AS SHOWN. PAYMENT FOR THESE SIGNS, THE RETROREFLECTIVE PLASTIC DRUMS, ETC., SHALL BE INCLUDED IN ITEM 641.10, "TRAFFIC CONTROL". SEE SHEET 17 FOR ADDITIONAL NOTES.
2. ALL WORK DESCRIBED HEREIN FOR THE TEMPORARY TRAFFIC SIGNAL SYSTEM, AND NOT SPECIFIED FOR PAYMENT UNDER A SEPARATE CONTRACT ITEM, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 900.620, "SPECIAL PROVISION (TEMPORARY TRAFFIC SIGNAL SYSTEM, PORTABLE)".
3. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE ENGINEER SHALL BE ACCOMPLISHED WITHIN 24 HOURS AFTER BEING REQUESTED. PAYMENT SHALL BE INCIDENTAL TO ITEM 900.620, "SPECIAL PROVISION (TEMPORARY TRAFFIC SIGNAL SYSTEM, PORTABLE)". THE CONTRACTOR, AT THE DIRECTION OF THE ENGINEER, SHALL MAKE SEVERAL TRIAL RUNS TO DETERMINE THE PROPER ALL-RED CLEARANCE INTERVAL.
4. SIGNAL FACES SHALL BE L.E.D. AND CONSIST OF 12" LENSES. (RED, AMBER, 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. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.
6. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.
7. ONE SIGNAL HEAD SHALL BE SUPPORTED FROM A CANTILEVER MAST ARM, WHICH SHALL BE IN THE CONE OF VISION OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD SHALL BE MOUNTED TO THE POST OF THE CANTILEVER MAST ARM. THE PORTABLE TRAFFIC SIGNAL SHALL BE LOCATED SO AS TO PLACE THE POST MOUNTED SIGNAL HEAD AT A HORIZONTAL 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 M.U.T.C.D. 2009 EDITION FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
8. SIGNAL HEAD LOCATION SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
9. THE TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL CONSIST OF A MINIMUM OF TWO (2) PORTABLE TRAFFIC SIGNALS, LUMINARIES, AND ASSOCIATED PAVEMENT MARKINGS.
10. ALL PORTABLE TRAFFIC SIGNALS, 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, ETC.
11. A PORTABLE LIGHT TOWER WITH A MINIMUM OF A 250 WATT MER/150 WATT HPS LUMINAIRE MOUNTED ON A MAST AT A HEIGHT OF 30 FEET ABOVE THE ROADWAY CENTERLINE SHALL BE PROVIDED AS SHOWN ON THE TRAFFIC CONTROL PLANS OR AT THE DISCRETION OF THE ENGINEER. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT. LIGHTING SHALL BE INCIDENTAL TO ITEM 900.620, "SPECIAL PROVISION (TEMPORARY TRAFFIC SIGANL SYSTEM, PORTABLE)".
12. TEMPORARY STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 120' FROM THE NEAREST SIGNAL HEAD.
13. IF WORK ZONE IS BEHIND TEMPORARY TRAFFIC BARRIER THEN THE TRUCK-MOUNTED ATTENUATOR IS NOT NEEDED UNLESS THE END OF THE TEMPORARY TRAFFIC BARRIER IS WITHIN THE CLEAR ZONE.
14. ALL STOP SIGNS AND ANY OTHER TRAFFIC SIGNS MADE IRRELEVANT DUE TO THE TEMPORARY SIGNAL SHALL BE COVERED DURING OPERATION OF THE TEMPORARY SIGNAL OR AT THE DISCRETION OF THE ENGINEER. THE COSTS OF COVERING AND UNCOVERING THESE SIGNS SHALL BE PAID INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF THE PHASING DIAGRAM BY THE ENGINEER.
16. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD. THE PCMS SHALL READ "ONE LANE BRIDGE AHEAD, BE PREPARED TO STOP" OR AS DIRECTED BY THE ENGINEER.
17. THE TYPE II RAISED PAVEMENT MARKERS SHALL BE PLACED TO THE OUTSIDE OF THE TEMPORARY TAPE PAVEMENT MARKINGS. THE TYPE II RAISED PAVEMENT MARKERS SHALL BE PLACED AT A SPACING OF 20 FEET.

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260tc.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: E.A. FIALA
DESIGNED BY: E.A. FIALA	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL WITH TEMP. SIGNALS	SHEET 16 OF 55



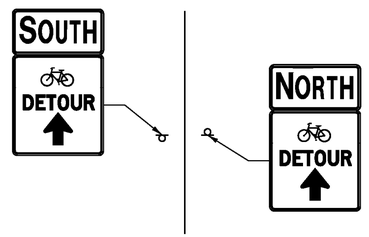
TRAFFIC CONTROL NOTES:

1. ALL SIGNS SHALL BE LOCATED SO THEY ARE VISIBLE AND ABLE TO BE READ BY THE TRAVELING PUBLIC. SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
2. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" BOOK (SHS) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
3. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING MATERIALS" (ASTM D 4956) TYPE VII, VIII, IX REQUIREMENTS, UNLESS OTHERWISE NOTED. SOLID SUBSTRATE REGULATORY SIGNS (WHITE BACKGROUND) SHALL HAVE A RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D 4956 TYPE III.
4. SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, AND UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
5. FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL. ALL SIGNS SHALL BE INSTALLED WITHIN VTRANS OR TOWN'S RIGHT-OF-WAY (ROW). IF THE SIGN CANNOT BE INSTALLED IN THE ROW, THE CONTRACTOR SHALL GET PERMISSION FROM THE LANDOWNER.
6. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
7. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT THE INTERSECTIONS OR ALONG THE DETOUR ROUTE, THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO THE EXISTING ROUTE MARKER ASSEMBLIES.
8. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD. 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. THE MESSAGE SIGN SHALL BE A MINIMUM OF 7 FEET ABOVE THE ROADWAY IN URBAN AREAS AND 5 FEET ABOVE THE ROADWAY IN RURAL AREAS WHEN IT IS IN THE OPERATING MODE. REMOVAL OF THE VEGETATION SHALL BE INCIDENTAL TO ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN". WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
9. SEE BR 62A TRAFFIC DETOUR PLAN (2 AND 3) FOR DETAILS A-G.
10. THE COSTS OF ALL DETOUR SIGNS AND REQUIRED SIGN POSTS & INSTALLATION SHALL BE INCLUDED IN ITEM 641.10, "TRAFFIC CONTROL".

NOTE:

B = BIGGER SIGNS FOR FREEWAY SIGN STANDARD. SEE BR 62A TRAFFIC DETOUR PLAN (4 OF 4) SHEET.

(bb) = CONFIRMATORY BIKE DETOUR SIGNS



CONFIRMATORY BIKE DETOUR SIGNS
NOT TO SCALE

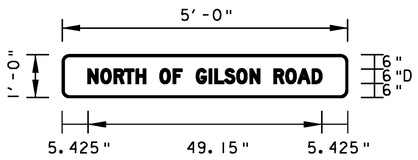
TRAFFIC CONTROL PLAN

0.5 0 0.5
MILES

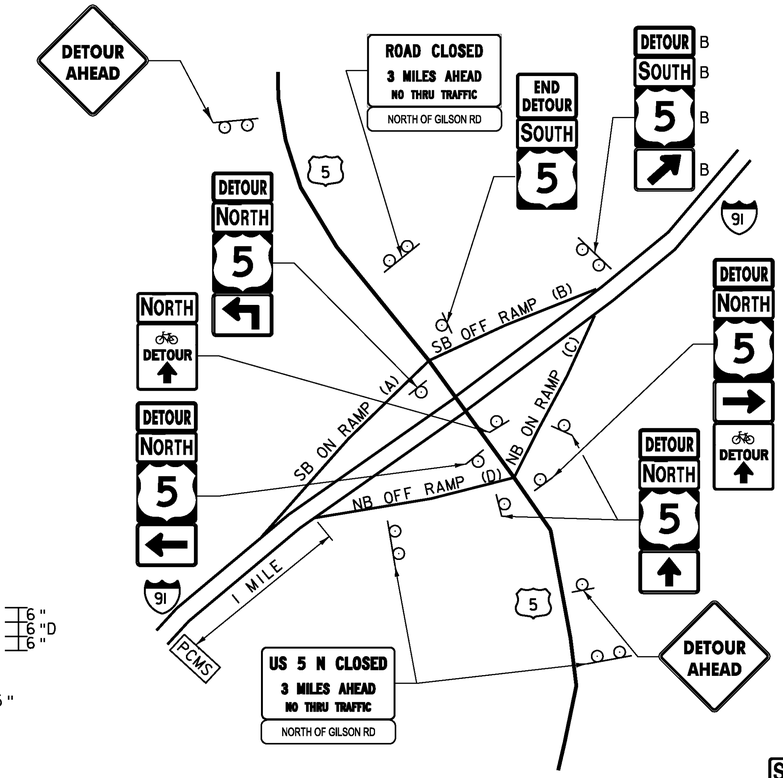
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260detour.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.G. FARNSWORTH
BR 62A TRAFFIC DETOUR PLAN (1 OF 4)	SHEET 17 OF 55

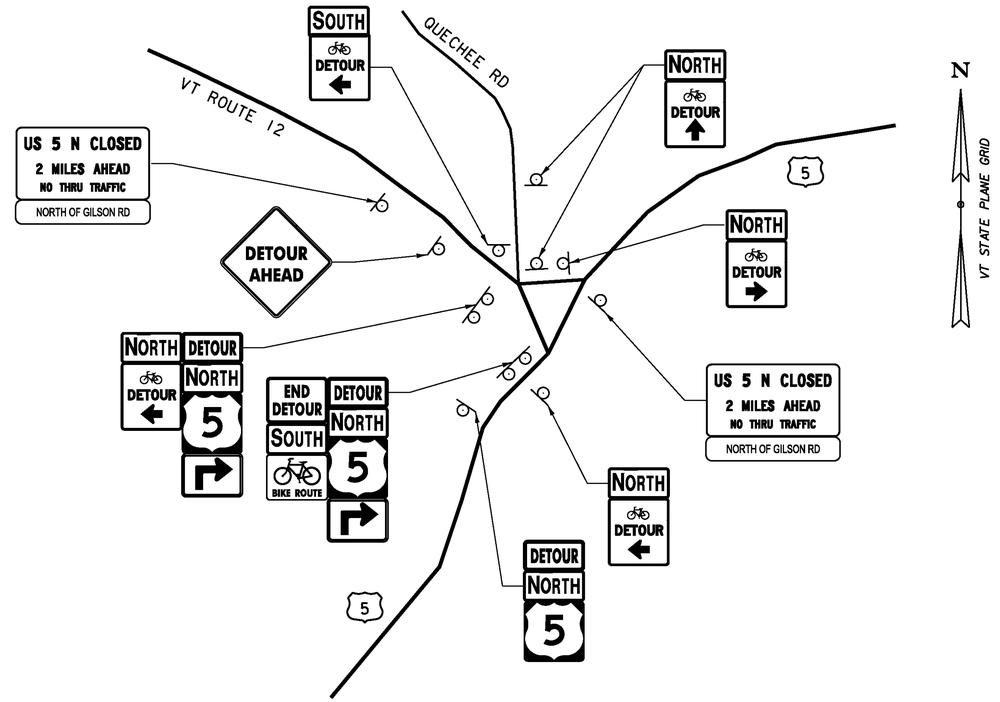
VHB 57537



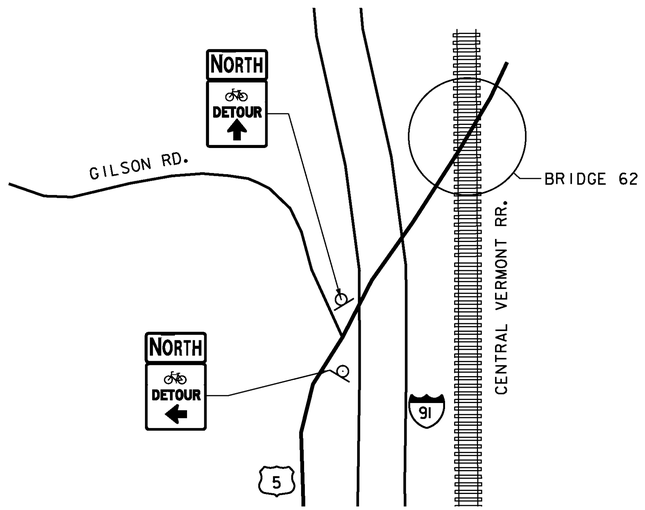
SP-5
NOT TO SCALE



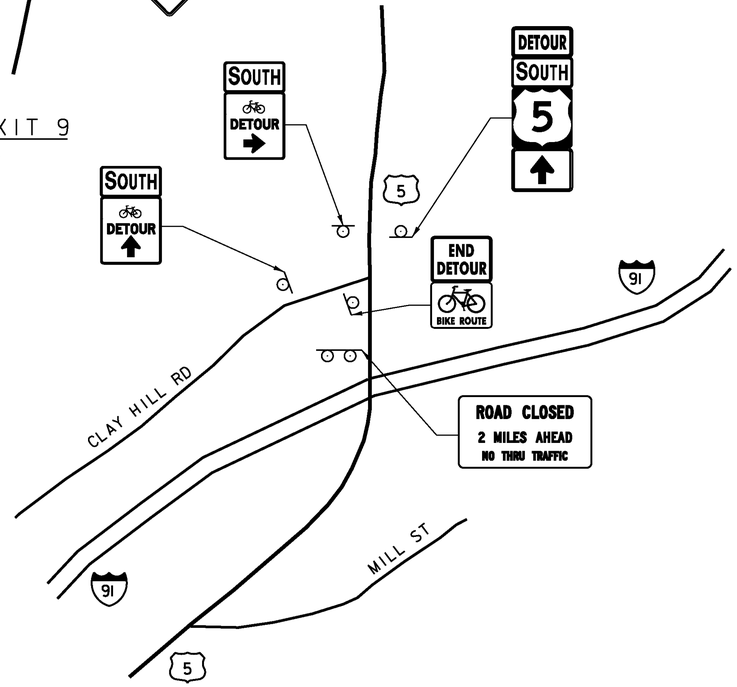
DETAIL A - EXIT 9
NOT TO SCALE



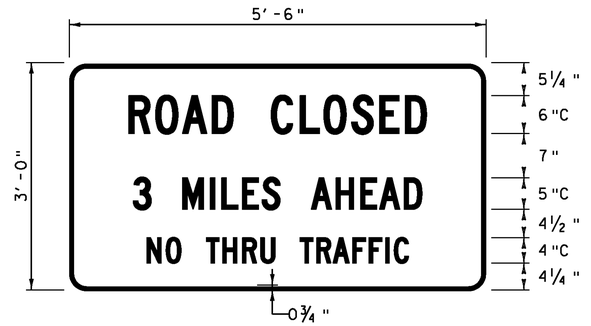
DETAIL B
NOT TO SCALE



DETAIL C
NOT TO SCALE



DETAIL D
NOT TO SCALE



SP-1
NOT TO SCALE

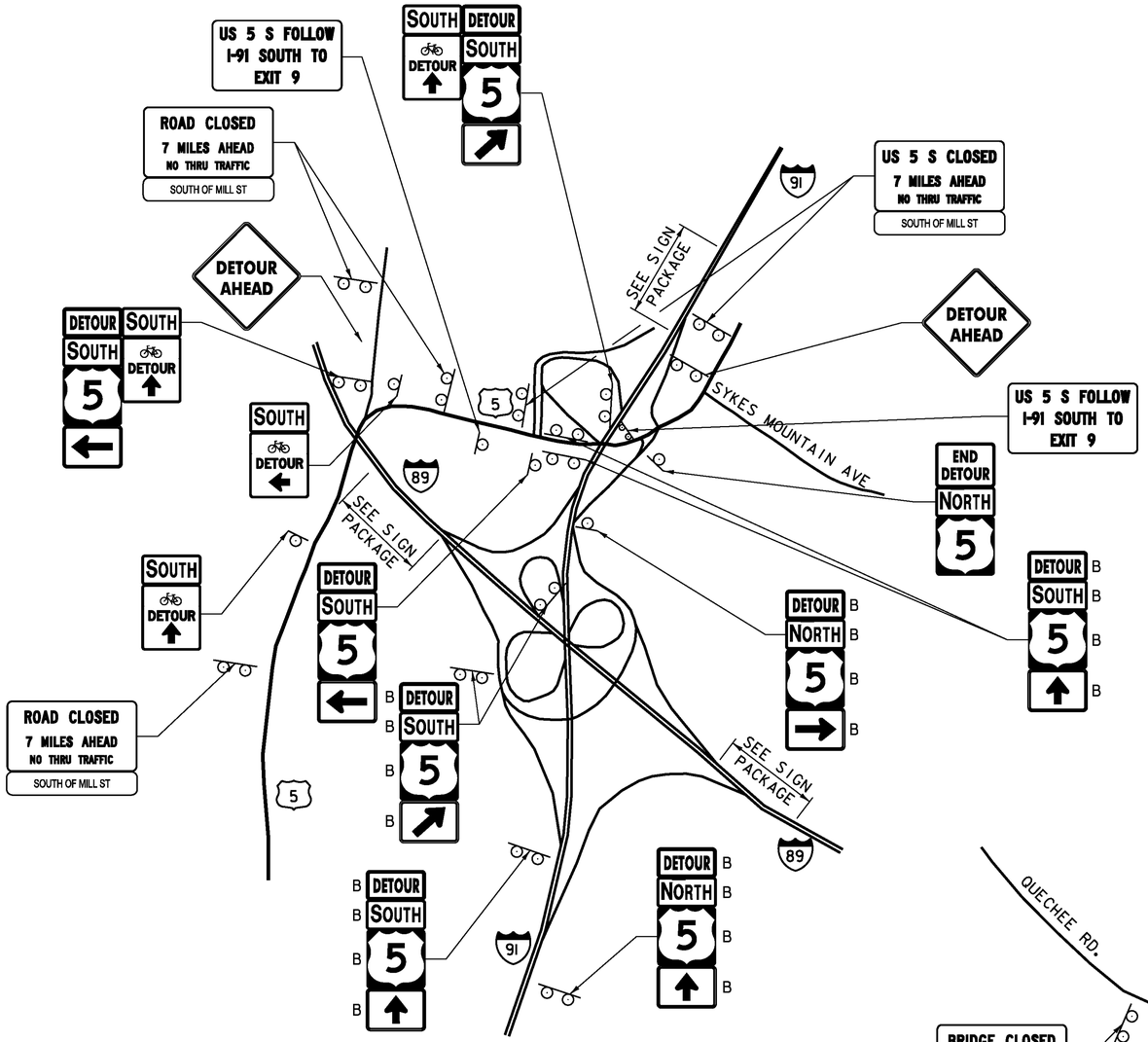
NOTE:
1. SEE BR 62A TRAFFIC DETOUR PLAN (4 OF 4) FOR PCMS MESSAGES.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)

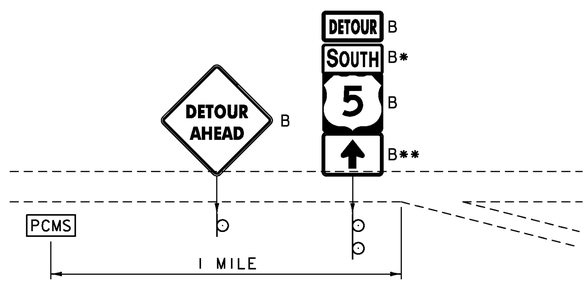
FILE NAME:	z11c260detour_details.dgn	PLOT DATE:	12/17/2013
PROJECT LEADER:	M.A. COLGAN	DRAWN BY:	M.C. SCOTT
DESIGNED BY:	S.G. FARNSWORTH	CHECKED BY:	S.G. FARNSWORTH
BR 62A TRAFFIC DETOUR PLAN (2 OF 4)		SHEET	18 OF 55

VHB Vanasse Hangen Brustlin, Inc.

VHB 57537



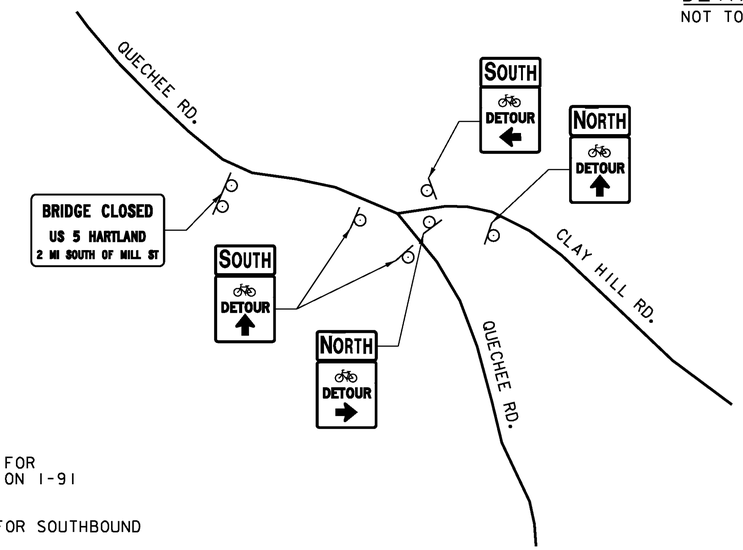
DETAIL E
NOT TO SCALE



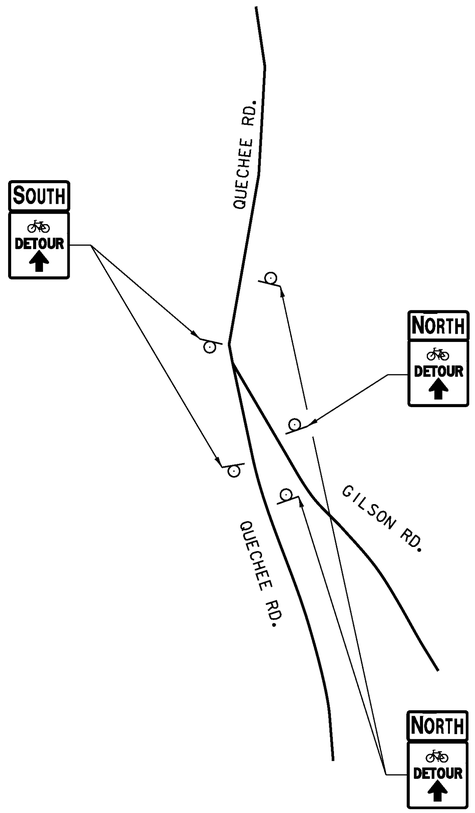
SIGN PACKAGE
NOT TO SCALE

* - SIGN TO READ NORTH FOR NORTHBOUND TRAFFIC ON I-91

** - SIGN TO READ ↗ FOR SOUTHBOUND TRAFFIC ON I-89

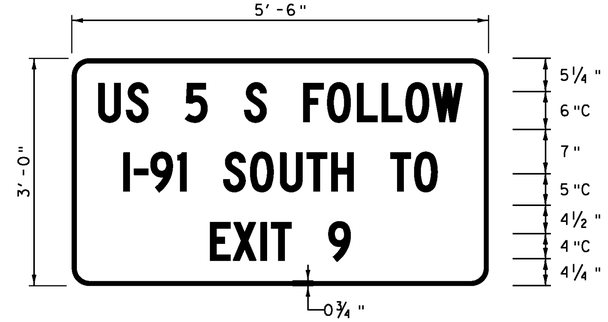


DETAIL G
NOT TO SCALE



SP-6
NOT TO SCALE

DETAIL F
NOT TO SCALE



SP-4
NOT TO SCALE

NOTES:

1. B = BIGGER SIGNS FOR FREEWAY SIGN STANDARD. SEE BR 62A TRAFFIC DETOUR PLAN (4 OF 4) SHEET.
2. SEE BR 62A TRAFFIC DETOUR PLAN (4 OF 4) FOR PCMS MESSAGES.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260detour_details.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.G. FARNSWORTH
BR 62A TRAFFIC DETOUR PLAN (3 OF 4)	SHEET 19 OF 55

VHB Vanasse Hangen Brustlin, Inc.

VHB 57537

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	TEXT	NUMBER OF SIGNS REQ'D	REMARKS
D11-1	24	18	BIKE ROUTE	2	MOUNT BELOW THE M4-8A
M1-4	24	24	5	16	---
M1-4-B	36	36	5	11	---
M3-1	24	12	NORTH	25*	---
M3-1-B	36	18	NORTH	4	---
M3-3	24	12	SOUTH	25*	---
M3-3-B	36	18	SOUTH	8	---
M4-8	24	12	DETOUR	14	MOUNT ABOVE THE M3-1 OR M3-3
M4-8-B	36	18	DETOUR	12	MOUNT ABOVE THE M3-1-B OR M3-3-B
M4-8A	24	18	END DETOUR	4	MOUNT ABOVE THE M3-1 OR M3-3 OR W11-1
M4-9CR	30	24	DETOUR →	3	---
M4-9CL	30	24	DETOUR ←	6	---
M4-9CT	30	24	DETOUR ↑	25	---
M5-1L	21	15		1	MOUNT BELOW THE M1-4
M5-1R	21	15		2	MOUNT BELOW THE M1-4
M6-1L	21	15		3	MOUNT BELOW THE M1-4
M6-1R	21	15		1	MOUNT BELOW THE M1-4
M6-1R-B	30	21		1	MOUNT BELOW THE M1-4

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	TEXT	NUMBER OF SIGNS REQ'D	REMARKS
M6-2R	21	15		1	MOUNT BELOW THE M1-4-B
M6-2R-B	30	21		4	MOUNT BELOW THE M1-4-B
M6-3	21	15		3	MOUNT BELOW THE M1-4
M6-3-B	30	21		7	MOUNT BELOW THE M1-6A
SP-1A	66	36	ROAD CLOSED 3 MILES AHEAD NO THRU TRAFFIC	1	MOUNT ON TWO POSTS
SP-1B	66	36	ROAD CLOSED 7 MILES AHEAD NO THRU TRAFFIC	3	MOUNT ON TWO POSTS
SP-1C	66	36	ROAD CLOSED 2 MILES AHEAD NO THRU TRAFFIC	1	MOUNT ON TWO POSTS
SP-2	66	36	BRIDGE CLOSED US 5 HARTLAND 2 MI SOUTH OF MILL ST	1	MOUNT ON TWO POSTS
SP-3	66	36	US 5 N CLOSED 2 MILES AHEAD NO THRU TRAFFIC	2	MOUNT ON TWO POSTS
SP-4	66	36	US 5 S FOLLOW I-91 SOUTH TO EXIT 9	2	MOUNT ON TWO POSTS
SP-5	60	12	NORTH OF GILSON RD	5	MOUNT BELOW THE SP-1 OR SP-3
SP-6	60	12	SOUTH OF MILL ST	5	MOUNT BELOW THE SP-1
SP-7	66	36	US 5 N CLOSED 3 MILES AHEAD NO THRU TRAFFIC	2	MOUNT ON TWO POSTS
SP-8	66	36	US 5 S CLOSED 7 MILES AHEAD NO THRU TRAFFIC	2	MOUNT ON TWO POSTS
W20-2	36	36	DETOUR AHEAD	5	MOUNT ON TWO POSTS
W20-2-B	48	48	DETOUR AHEAD	4	MOUNT ON TWO POSTS

* - NUMBER OF SIGNS REQ'D ASSUMING APPROXIMATELY 4 LOCATIONS OF CONFIRMATORY BIKE DETOUR SIGNS

NOTES:

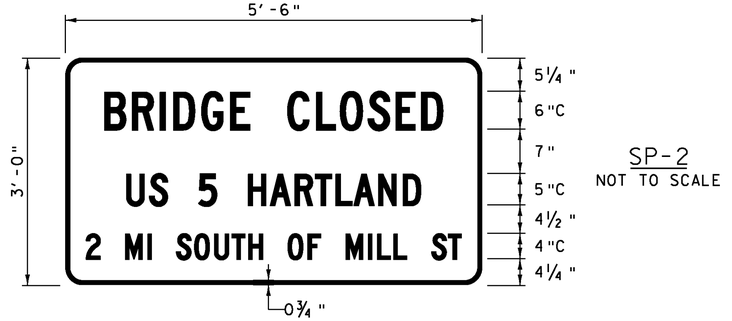
1. ONLY THE TEMPORARY DETOUR SIGNS ARE SHOWN ON THIS SHEET. THE TRAFFIC CONTROL SIGNS WITH SIGNALS AND FLAGGERS ARE NOT SHOWN.
2. COLORS FOR THE M1-4, M3-1, AND M3-3 SIGNS SHALL MATCH THE COLORS SHOWN ON VTRANS STD. E-136A.
3. COLORS FOR M5-1L, M5-1R, M6-1L, M6-1R, M6-1L AND SP-3 SIGNS SHALL BE A BLACK ARROW AND BORDER ON A RETROREFLECTIVE ORANGE BACKGROUND.
4. COLORS FOR THE SP-1, SP-2, SP-3, SP-4, SP-5 AND SP-6 SIGNS SHALL BE BLACK TEXT AND BORDER ON RETROREFLECTIVE WHITE BACKGROUND.
5. TWO ORANGE FLAGS (ONE EACH SIDE) SHALL BE PLACED AT THE TOP OF THE SP-1, SP-2, SP-3 AND SP-4 SIGN.
6. M1-4, M1-4-B, M3-1, M3-1-B, M3-3, AND M3-3-B SIGNS SHALL BECOME THE PROPERTY OF THE STATE OF VERMONT AFTER THEY ARE REMOVED FROM THE DETOUR. THE CONTRACTOR SHALL DELIVER THE SIGNS TO THE STATE AT THE STATE GARAGE LOCATED AT 226 BESWICK DR, WHITE RIVER JUNCTION, VT. CONTACT THE STATE FOREMAN, TREVOR STARR AT (802) 295-8888. ALL COSTS ASSOCIATED WITH PROVIDING THE SIGNS TO THE STATE SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
7. COLORS FOR D11-1, M4-8, M4-8-B, M4-8A, M4-9CR, M4-9CL AND M4-9CT SHALL BE BLACK TEXT AND BORDER ON RETROREFLECTIVE ORANGE BACKGROUND.
8. SEE TRAFFIC DETOUR PLAN BR 62A (2 & 3 OF 4) FOR SP-4, SP-5, AND SP-6 LAYOUT MEASUREMENTS.
9. SP-7 SIGN SAME AS SP-3 BUT WITH "3 MILES AHEAD".

NORTHBOUND SIGN

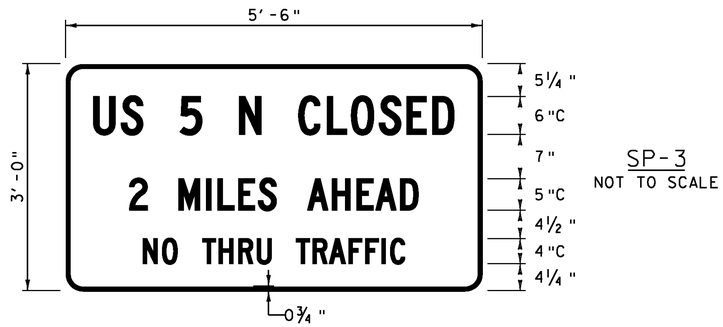
PHASE 1	PHASE 2
US 5	NORTH OF
NORTH	N. GILSON
CLOSED	ROAD

SOUTHBOUND SIGN

PHASE 1	PHASE 2
US 5	2 MILES
SOUTH	SOUTH OF
CLOSED	MILL ST



SP-2
NOT TO SCALE



SP-3
NOT TO SCALE

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)

FILE NAME: z11c260detour_details.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.G. FARNSWORTH
BR 62A TRAFFIC DETOUR PLAN (4 OF 4)	SHEET 20 OF 55

VHB 57537

TRAFFIC SIGNS, TYPE A
STA. 11+69, RT
STA. 13+42, LT

4 INCH YELLOW LINE
STA. 11+00 - STA 14+02, LT & RT

4 INCH WHITE LINE
STA. 11+00 - 14+02, LT & RT

STA 13+42 LT

BRIDGE
62A
US 5

N

N
VD-701

APPROXIMATE

EXISTING STATE
OF VERMONT (UNOFFICIAL)
PULL OFF AREA AND FORMER
US 5 BRIDGE OVER I-91
STAGING AREA 2005

BEGIN APPROACH
STA. 11+00.00
MATCH EXISTING

BEGIN PROJECT
STA. 11+25.00
F.G. = 110.22

BEGIN BRIDGE
STA. 12+00.34
FG = +10.10

EXISTING RAILROAD
R.O.W.

87
152
3 DROPS

GUY

TBM #1
SIR
EL. = 104.67'

14" MAPLE

EXISTING STATE R.O.W.
(4 ROD) APPROX.

GRAVEL
PULL-OFF

NEW ENGLAND
CENTRAL RAILROAD
TO WHITE RIVER JCT.

END BRIDGE
STA. 12+99.66
FG = 103.49

END PROJECT
STA. 13+82.00
F.G. = 103.63

PC STA 13+73.76

END APPROACH
STA. 14+02.00
MATCH EXISTING

EXISTING STATE R.O.W.
(4 ROD) APPROX.

WARNING

TO WINDSOR

SWL

US ROUTE 5

DYL

45°

11+00

12+00

13+00

14+00

℄ BRG. ABUT 2
STA. 12+99.66
F.G. 103.63

TO HARTFORD

HVCTRL#2

SWL

TRUCKS
ENTERING

BR
62A
US5

WARNING

HVCTRL#1

12" BEECH

TO SPRINGFIELD

EXISTING STATE R.O.W.
(4 ROD) APPROX.

EXISTING RAILROAD
R.O.W.

STA 11+69 RT

BRIDGE
62A
US 5

N

N
VD-701

TELEGRAPH POLE
W/BOX

HVCTRL#3

18" PINE

SIGN LEGEND
N = NEW
RET = RETAIN
R = REMOVAL
S = SALVAGE

STRIPING LEGEND
DYL = DOUBLE YELLOW LINE
SWL = SINGLE WHITE LINE

0 10 20
SCALE IN FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260tsl.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: M.C. SCOTT	CHECKED BY: S.G. FARNSWORTH
BR 62A TRAFFIC SIGNS & LINE STRIPING	SHEET 21 OF 55

VHB 57537

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILE MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																						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	REMARKS	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								
VT 73											OPTION ITEMS																								
11+69, RT 13+42, LT	BRIDGE 62A US 5	2	6	8	0.67						2				X			X															VD-701		E-134
AVERAGE POST LENGTH = 7 FEET 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."												FT	FT	FT	FT 14	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
	TOTALS				SF 0.67	SF	EA.	SF				FT			FT 14					LB			EA.	LB				EA.	EA.	LB					

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260tss.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: M.C. SCOTT	CHECKED BY: S.G. FARNSWORTH
BR 62A TRAFFIC SIGN SUMMARY SHEET	SHEET 22 OF 55

VHB *Vanasse Hangen Brustlin, Inc.*

VHB 57537

SEE REVISED SHEET

BEGIN BRIDGE
STA. 12+00.34
FG = 110.10

END BRIDGE
STA. 12+99.66
FG = 103.49

PC STA 13+73.76

GRAVEL
PULL-OFF

11'-0"
WW #1

APPROXIMATE

NEW ENGLAND
CENTRAL RAILROAD

TO WHITE RIVER JCT.

27'-9"
WW #3

40'-0"
SPECIAL PROVISION
(RETAINING WALL)

RETAINING WALL #3

TO WINDSOR

US ROUTE 5

11+00

12+00

13+00

14+00

TO HARTFORD

RETAINING WALL #2

32'-0"
SPECIAL PROVISION
(RETAINING WALL)

16'-0"
WW #2

TO SPRINGFIELD

RETAINING WALL #4

16'-0"
WW #4

32'-0"
SPECIAL PROVISION
(RETAINING WALL)

PLAN
SCALE 1" = 10'-0"

37'-6" PAY LIMITS
STEEL BEAM GUARDRAIL,
GALVANIZED
W/ 8 FEET POSTS

29'-1" PAY LIMITS
GUARDRAIL APPROACH
SECTION, GALVANIZED
2 RAIL BOX BEAM

131'-3 15/16" PAY LIMITS
BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM

29'-1" PAY LIMITS
GUARDRAIL APPROACH
SECTION, GALVANIZED
2 RAIL BOX BEAM

50'-0" PAY LIMITS
STEEL BEAM GUARDRAIL,
GALVANIZED
W/ 8 FEET POSTS

140
130
120
110
100
90
80
70
60

22'-2"
MIN. CLEARANCE

ELEVATION AT SOUTH FASCIA
SCALE 1" = 10'-0"

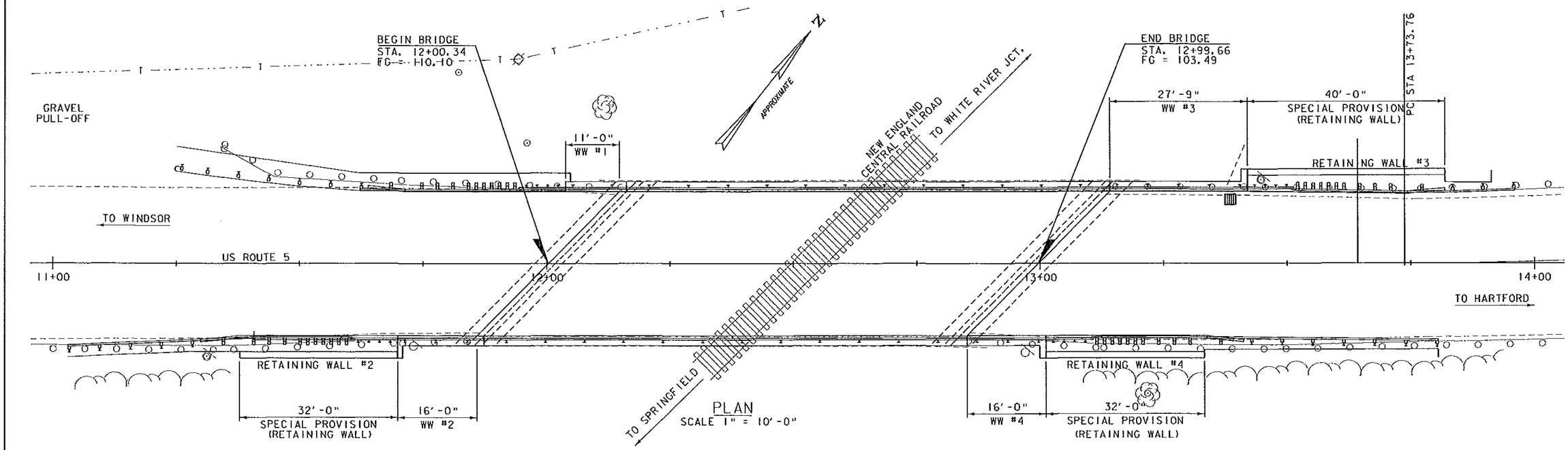
NOTE:
1. SEE BRIDGE AND GUARD RAIL LAYOUT SHEET FOR PAY LIMITS AND ITEM NAMES OF BOTH FASCIAS

DATUM	
VERTICAL	ASSUMED
HORIZONTAL	ASSUMED

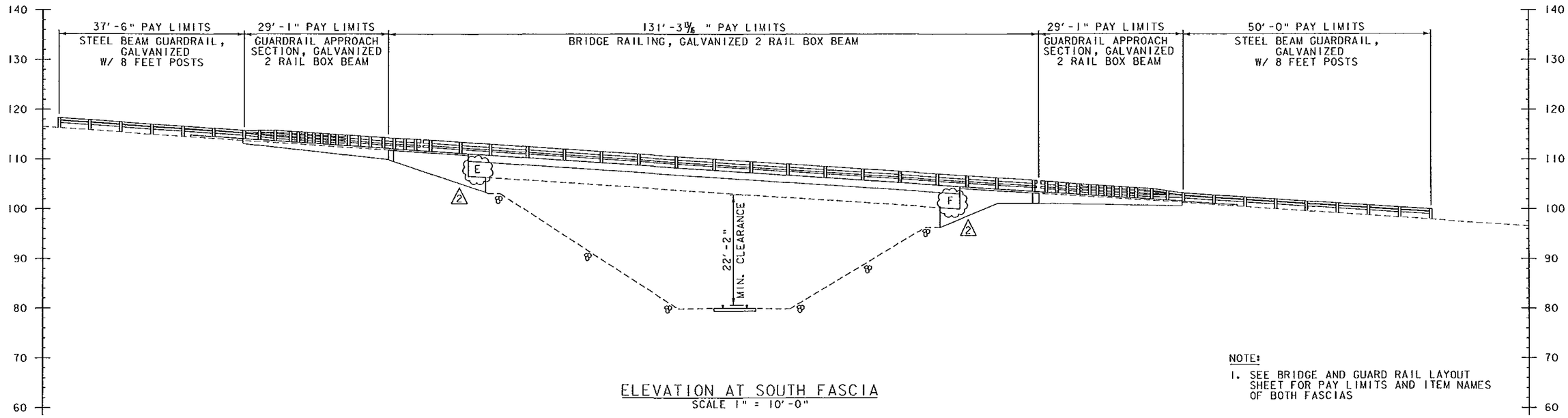
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260pe.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.G. FARNSWORTH
BR 62A PLAN AND ELEVATION	SHEET 23 OF 55

VHB 57537



PLAN
SCALE 1" = 10'-0"



ELEVATION AT SOUTH FASCIA
SCALE 1" = 10'-0"

NOTE:
1. SEE BRIDGE AND GUARD RAIL LAYOUT SHEET FOR PAY LIMITS AND ITEM NAMES OF BOTH FASCIAS

DATUM	
VERTICAL	ASSUMED
HORIZONTAL	ASSUMED

REV.	DESCRIPTION	DATE
2	FIXED AND EXPANSION NOTATION	3/3/2014

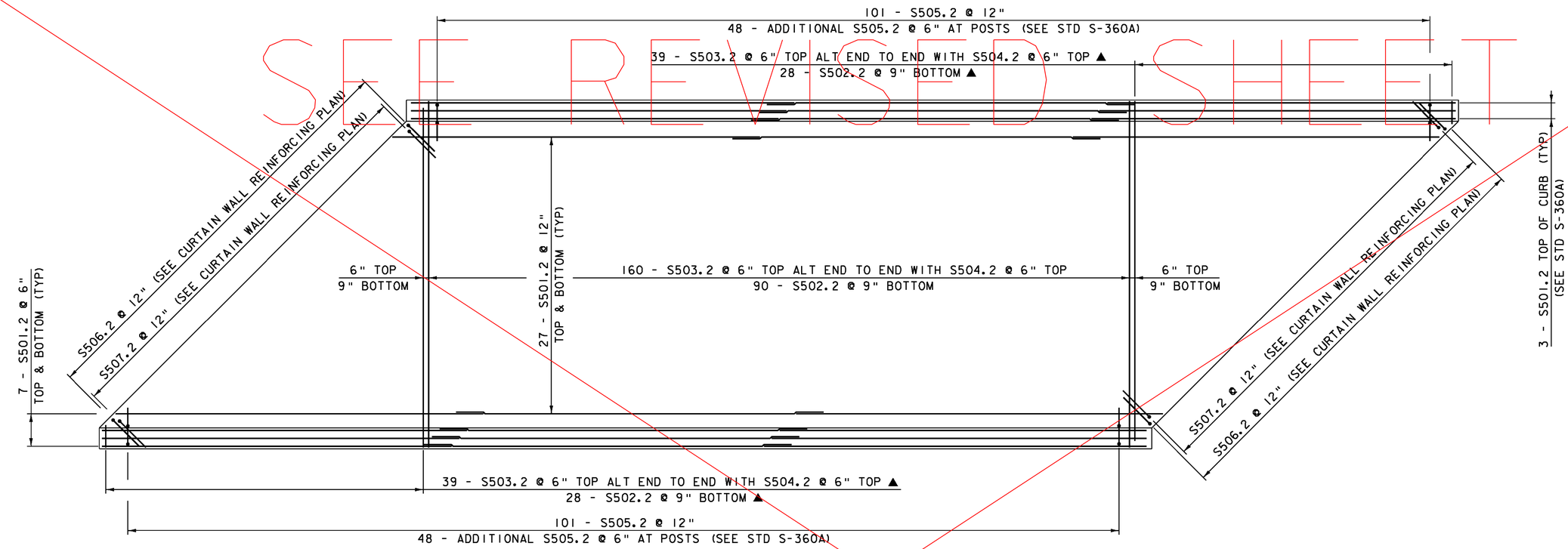
Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260pe.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G. FARNSWORTH
BR 62A PLAN AND ELEVATION

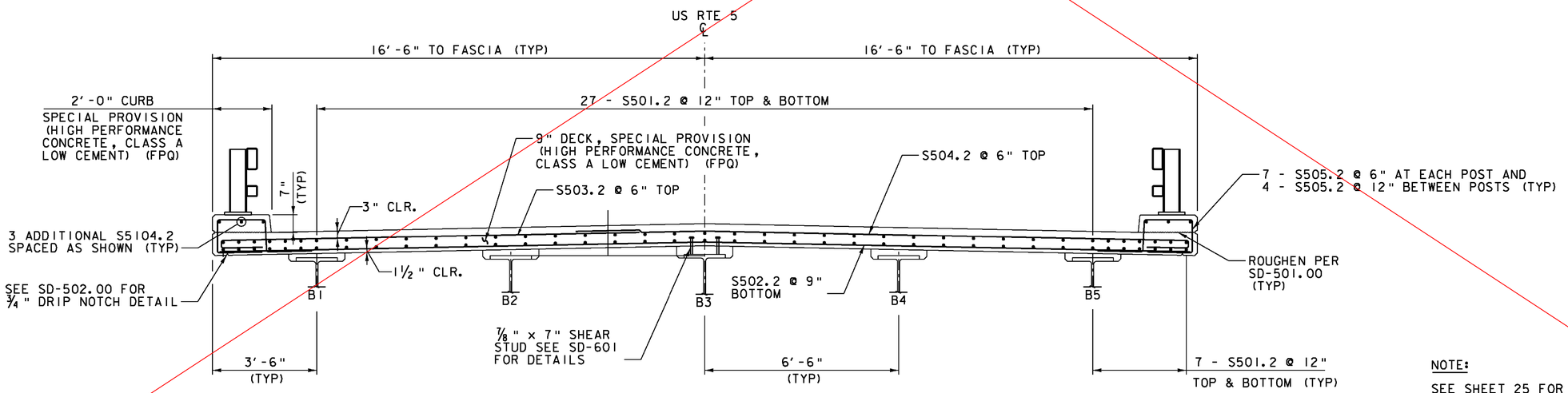
PLOT DATE: 3/3/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.G. FARNSWORTH
SHEET 23 OF 55

VHB 57537



DECK REINFORCING PLAN

SCALE 3/16" = 1'-0"



TYPICAL DECK REINFORCEMENT

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

NOTE:

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

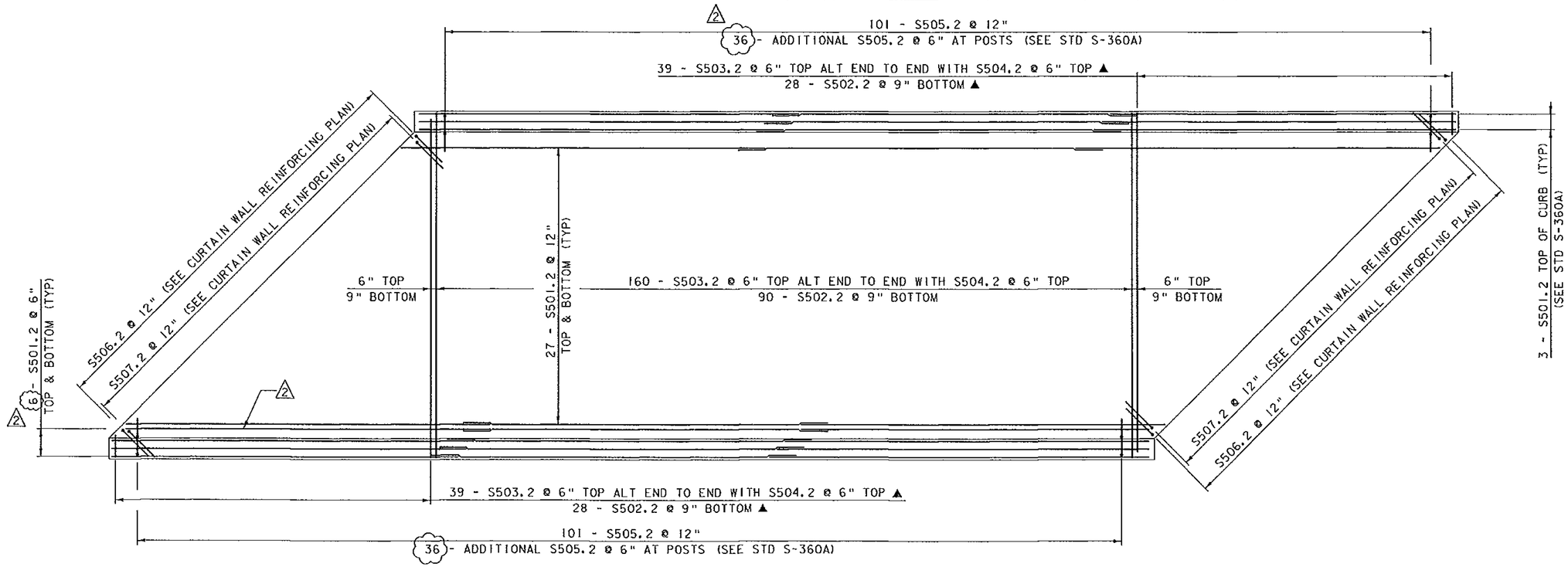
NOTE:

SEE SHEET 25 FOR CURTAIN WALL REINFORCING PLAN

VHB Vanasse Hangen Brustlin, Inc.

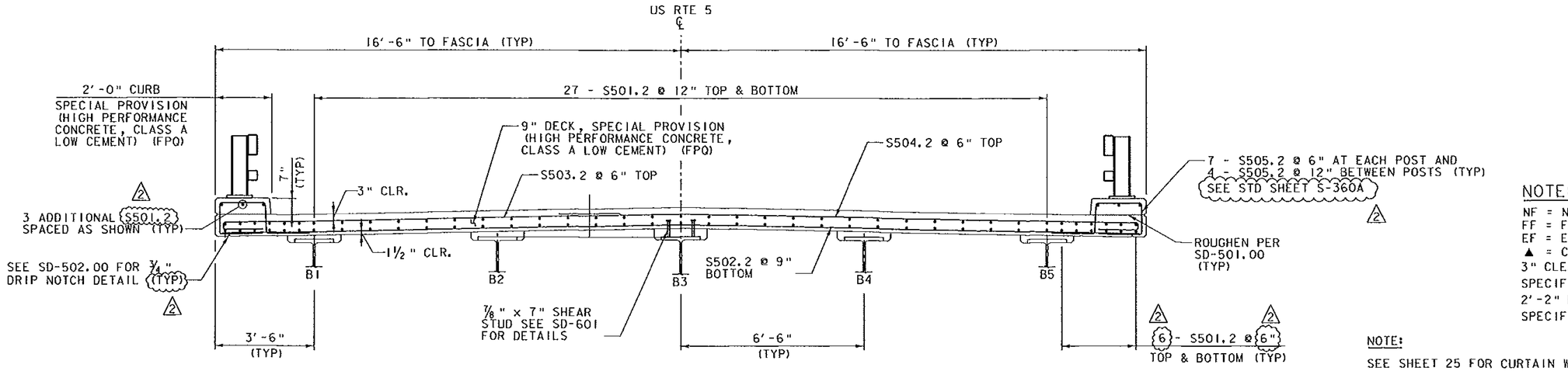
PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT (12)
FILE NAME: zllc260deck.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: A.J. GOUDREAU	CHECKED BY: E.A. FIALA
BR 62A DECK REINFORCING	SHEET 24 OF 55

VHB 57537



DECK REINFORCING PLAN

SCALE 3/16" = 1'-0"



TYPICAL DECK REINFORCEMENT

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.

NOTE:
SEE SHEET 25 FOR CURTAIN WALL REINFORCING PLAN

REV.	DESCRIPTION	DATE
2	REBAR QUANTITY, SIZE, AND SPACING	3/3/2014

Vanasse Hangen Brustlin, Inc.

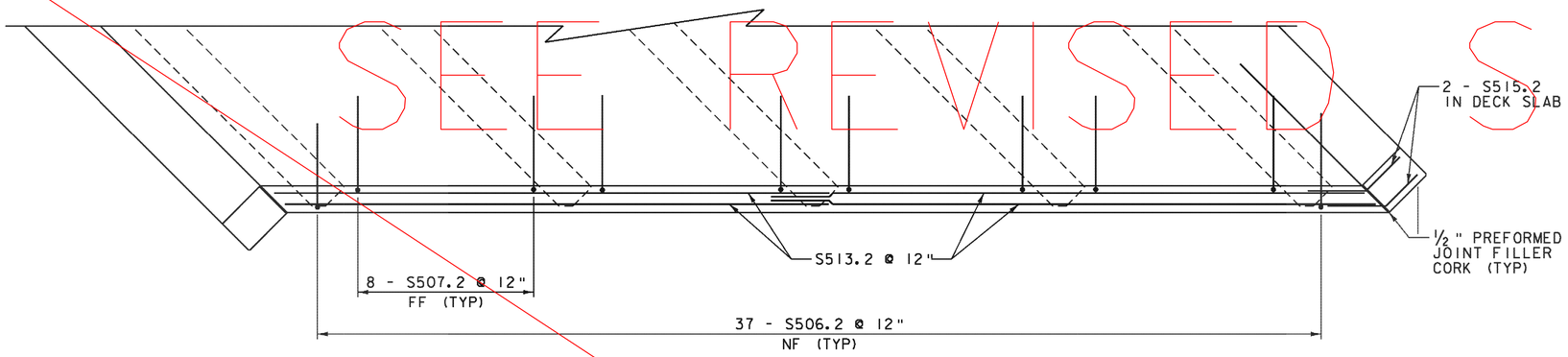
PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260deck.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: A.J. GOUDREAU
BR 62A DECK REINFORCING

PLOT DATE: 3/3/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: E.A. FIALA
SHEET 24 OF 55

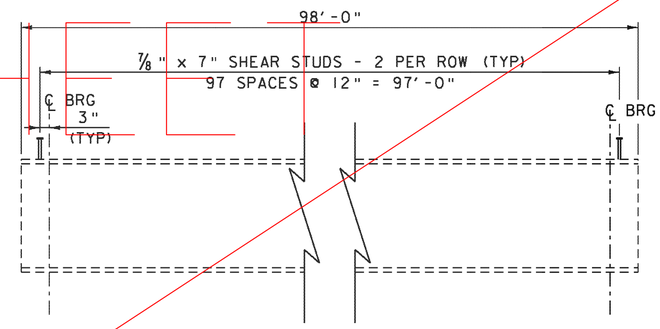
VHB 57537

SEE REVISED SHEET



ABUTMENT 1 CURTAIN WALL REINFORCING PLAN

SCALE: ⅜ " = 1'-0"

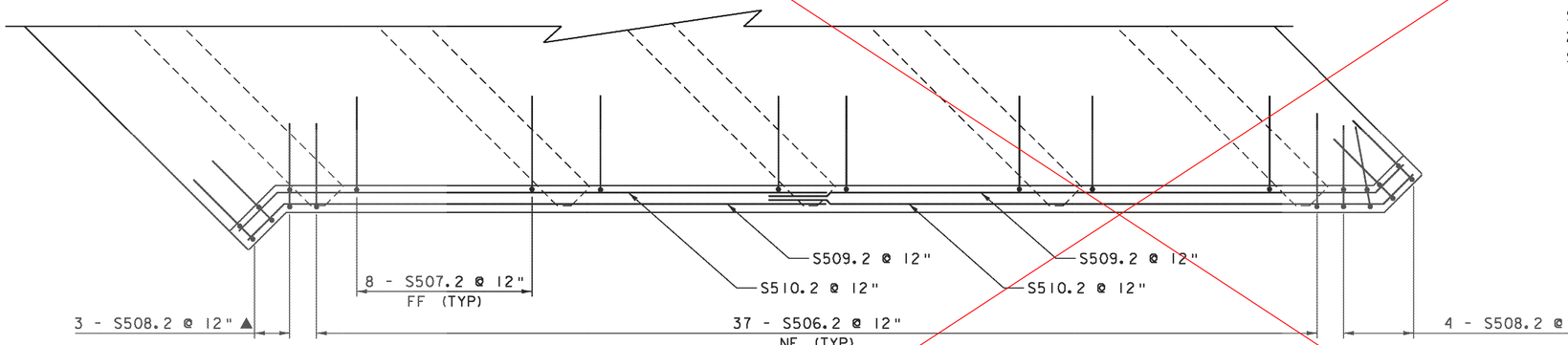


SHEAR STUD LAYOUT

SCALE: ½ " = 1'-0"

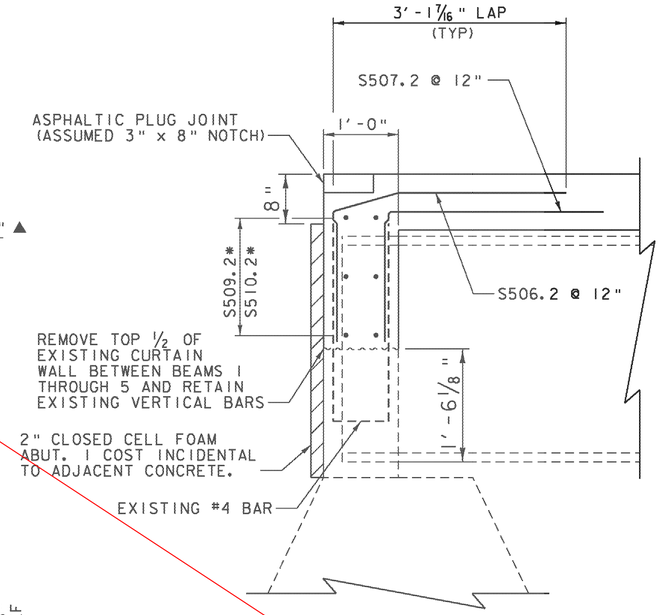
NOTE:

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.



ABUTMENT 2 CURTAIN WALL REINFORCING PLAN

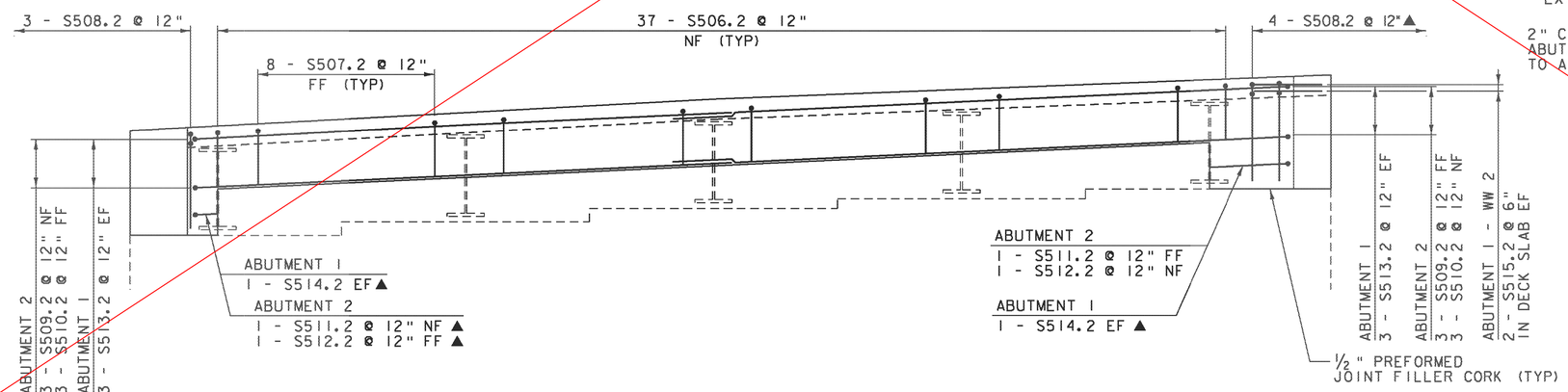
SCALE: ⅜ " = 1'-0"



* REFER TO PLAN AND ELEVATION VIEWS FOR SPACING AND LAYOUT

CURTAIN WALL TYPICAL SECTION

SCALE: ¾ " = 1'-0"



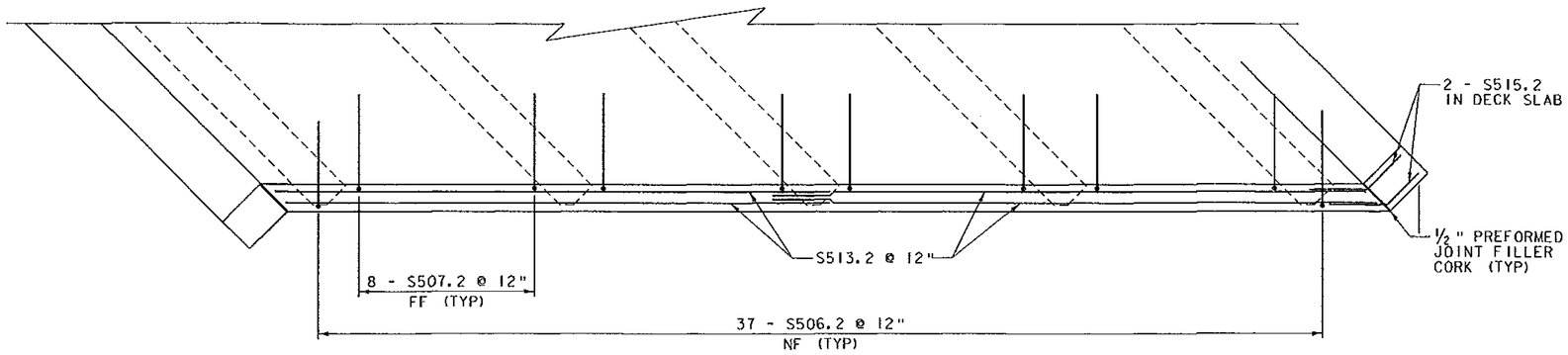
CURTAIN WALL REINFORCING ELEVATION

SCALE: ⅜ " = 1'-0"

VHB Vanasse Hangen Brustlin, Inc.

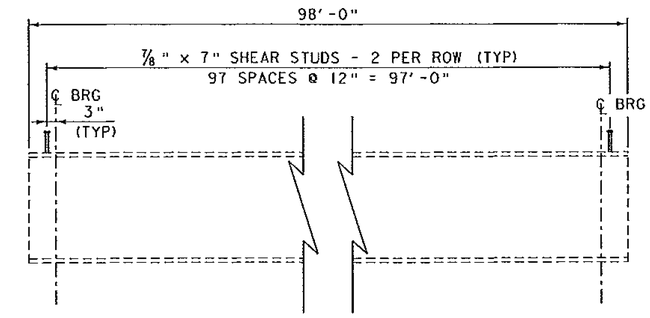
PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT (12)
FILE NAME: zllc260deck.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: A.J. GOUDREAU	CHECKED BY: S.G. FARNSWORTH
BR 62A CURTAIN WALL/SHEAR STUD LAYOUT	SHEET 25 OF 55

VHB 57537



ABUTMENT 1 CURTAIN WALL REINFORCING PLAN

SCALE: ⅜ " = 1'-0"

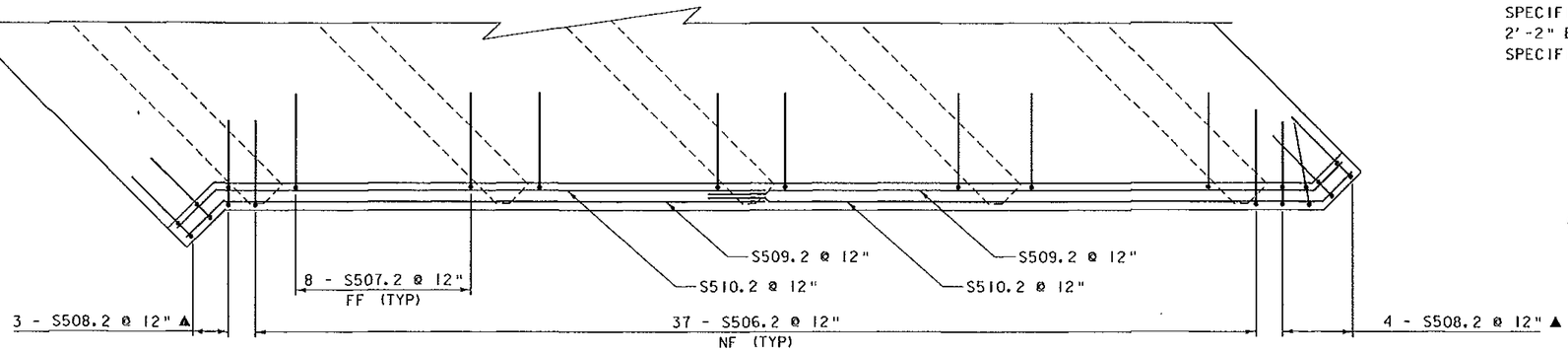


SHEAR STUD LAYOUT

SCALE: ½ " = 1'-0"

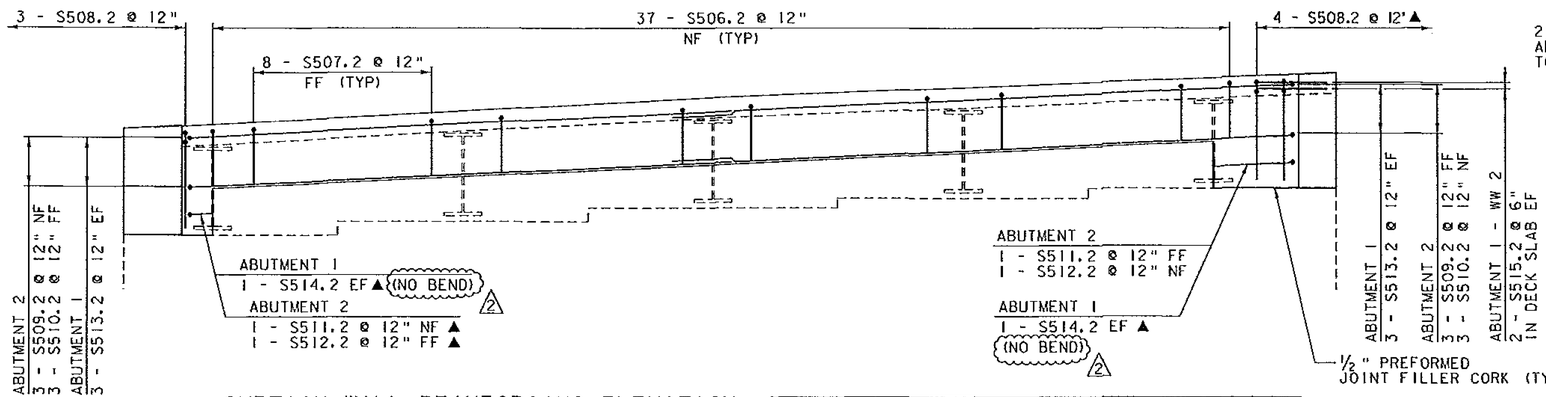
NOTE:

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.



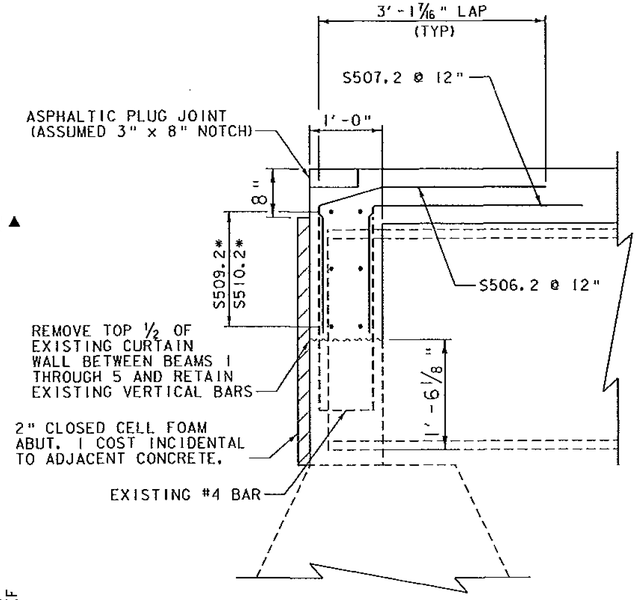
ABUTMENT 2 CURTAIN WALL REINFORCING PLAN

SCALE: ⅜ " = 1'-0"



CURTAIN WALL REINFORCING ELEVATION

SCALE: ⅜ " = 1'-0"



* REFER TO PLAN AND ELEVATION VIEWS FOR SPACING AND LAYOUT

CURTAIN WALL TYPICAL SECTION

SCALE: ¾ " = 1'-0"

REV.	DESCRIPTION	DATE
2	REBAR S514.2 IS A STRAIGHT BAR	3/3/2014

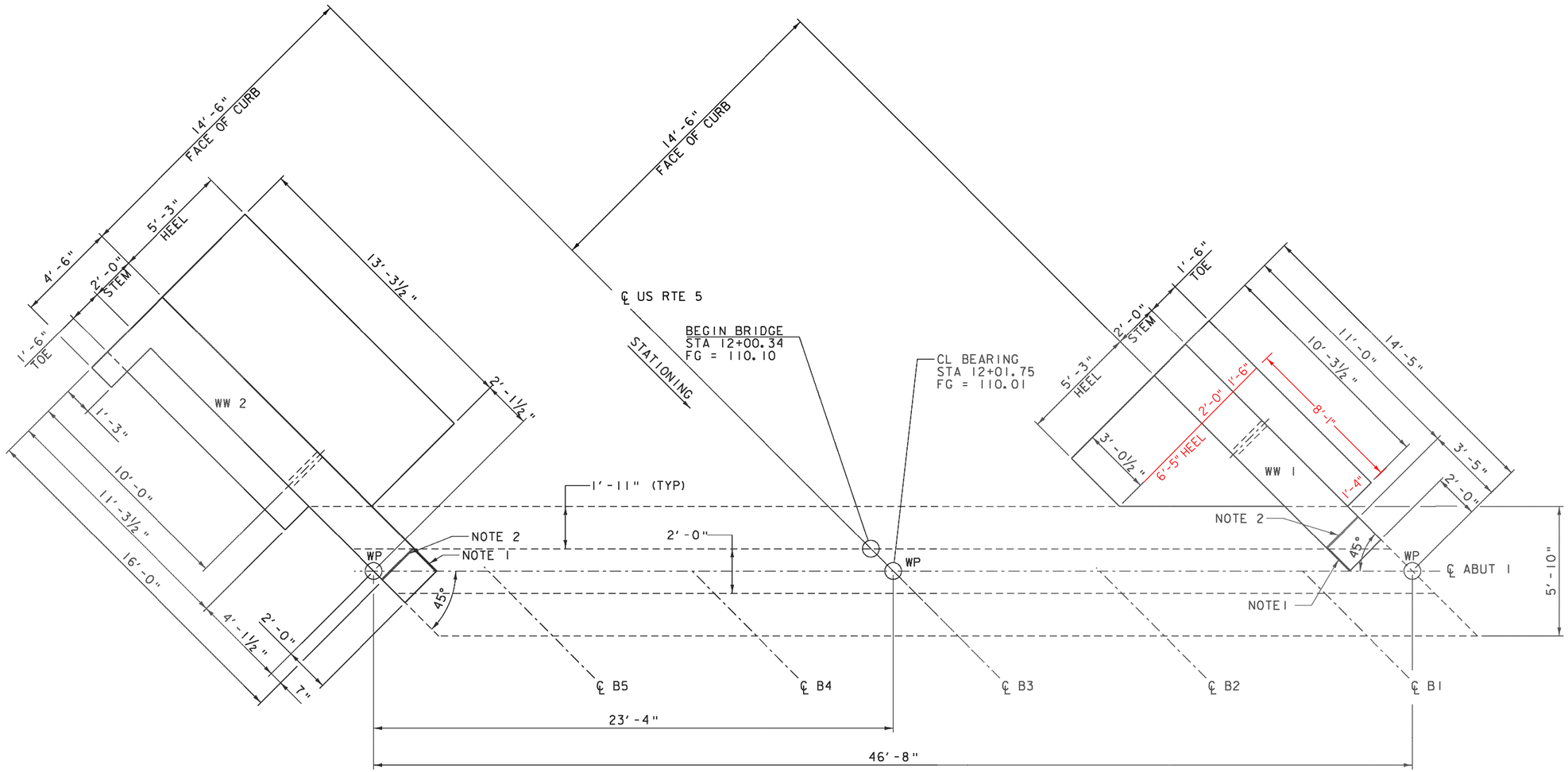
Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260deck.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: A.J. GOUDREAU
BR 62A CURTAIN WALL/SHEAR STUD LAYOUT

PLOT DATE: 3/3/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.G. FARNSWORTH
SHEET 25 OF 55

VHB 57537



ABUTMENT 1 PLAN

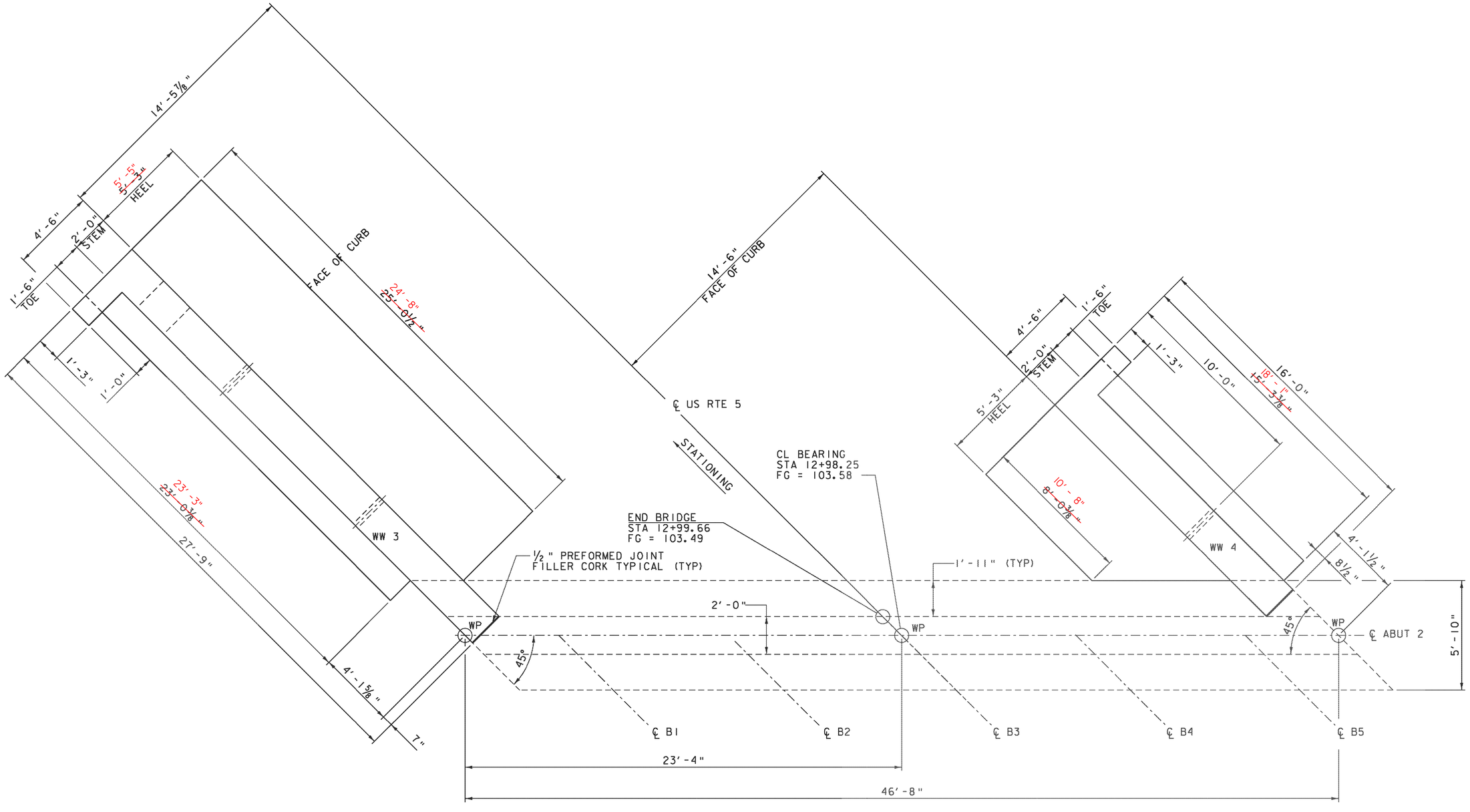
SCALE ⅜" = 1'-0"

NOTE:

1. ½" PREFORMED JOINT FILLER CORK BETWEEN WINGWALL AND CURTAINWALL.
2. ONE INCH OF CLOSED CELL FOAM WITH ONE INCH POLYURETHANE JOINT SEALER BETWEEN WINGWALL AND CONCRETE SLAB. COST INCIDENTAL TO UNIT BID PRICE FOR ADJACENT CONCRETE.

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND	
PROJECT NUMBER: BHF BPNT(12)	
FILE NAME: z11c260sub.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A ABUTMENT 1 PLAN	SHEET 26 OF 55



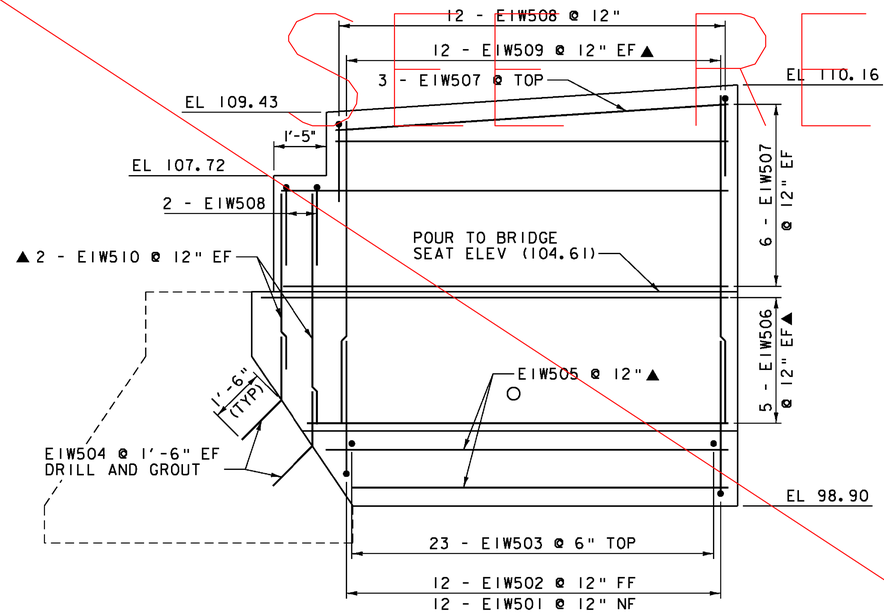
ABUTMENT 2 PLAN

SCALE ⅜" = 1'-0"

Vanasse Hangen Brustlin, Inc.

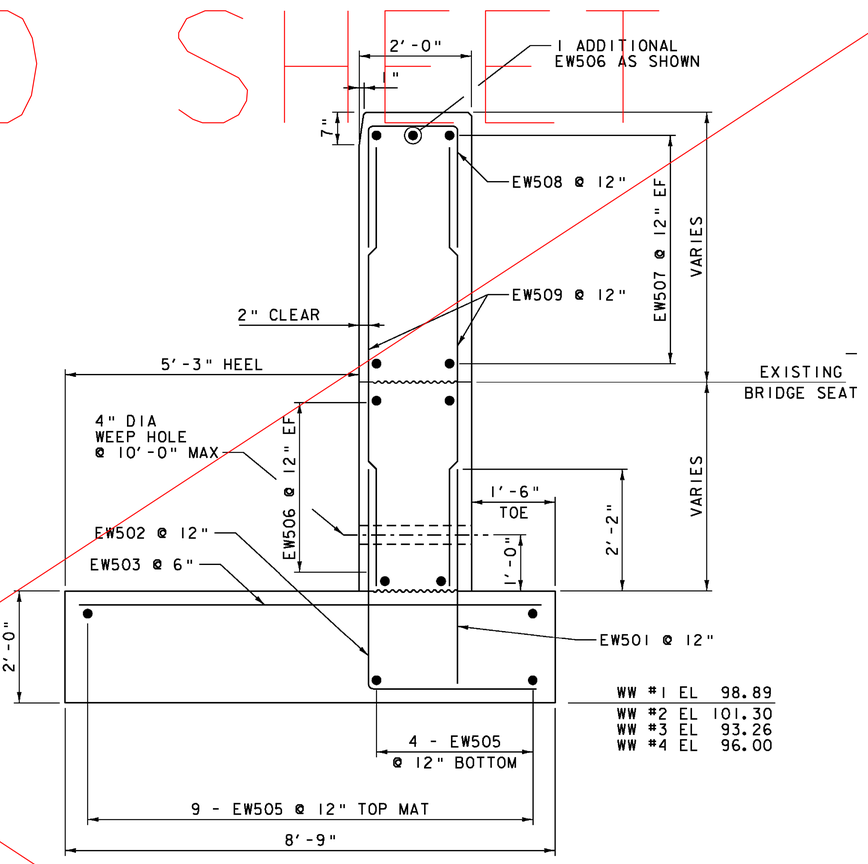
PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260sub.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A ABUTMENT 2 PLAN	SHEET 27 OF 55

REVISED SHEET



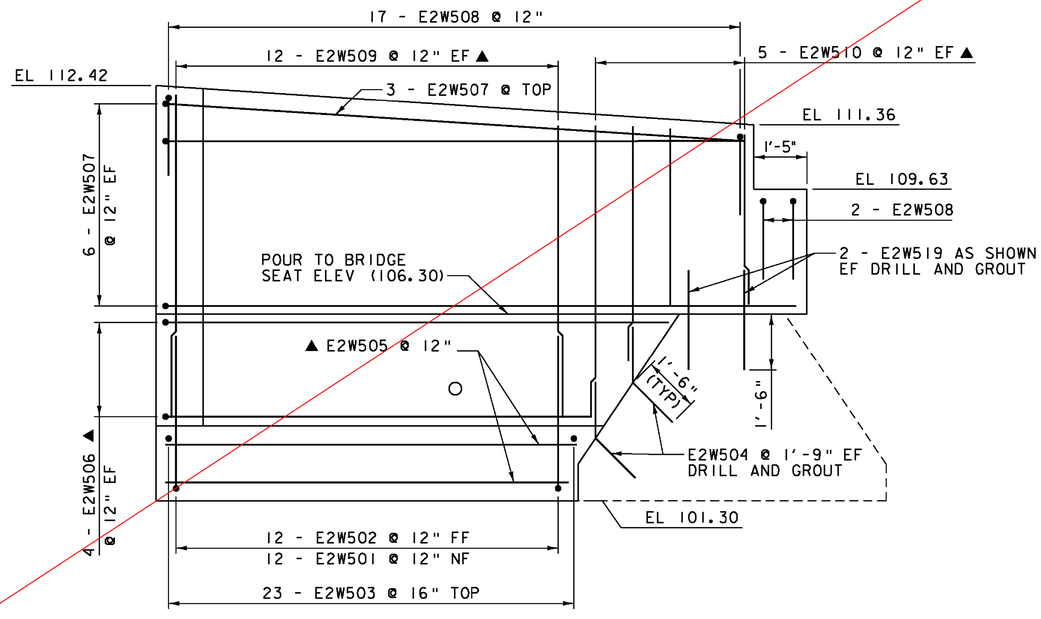
WINGWALL 1 ELEVATION

SCALE ½" = 1'-0"



WINGWALL TYPICAL SECTION

SCALE 3/4" = 1'-0"



WINGWALL 2 ELEVATION

SCALE ½" = 1'-0"

NOTE:

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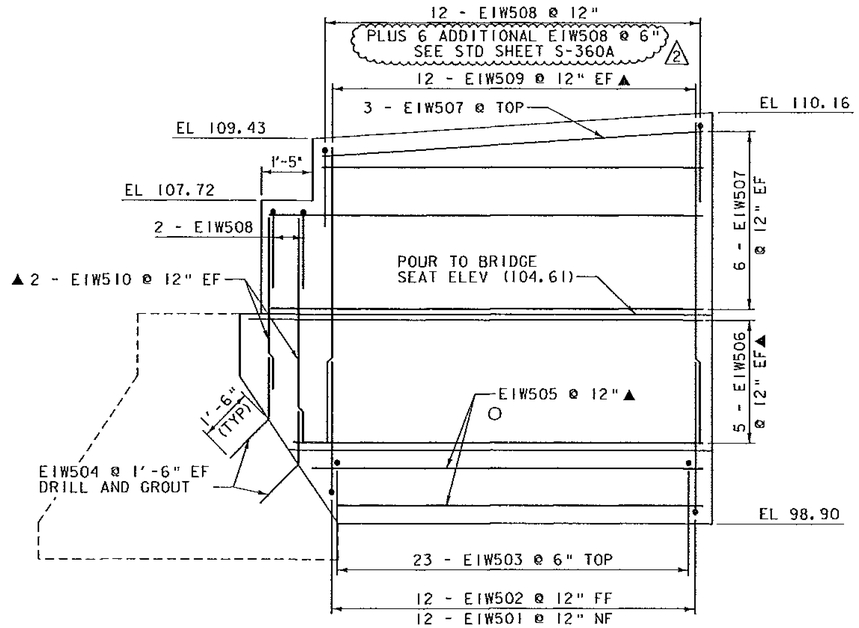
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
DRILL & GROUT IN 2" DIA HOLES

VHB Vanasse Hangen Brustlin, Inc.

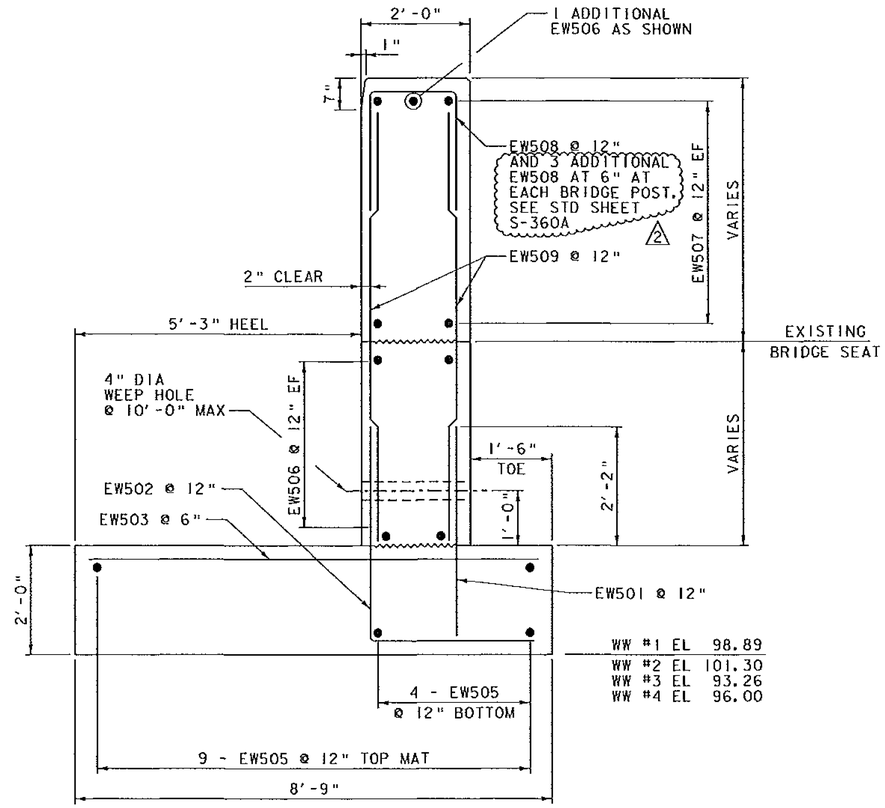
PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260sub.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J GOUDREAU
DESIGNED BY: A.J. GOUDREAU	CHECKED BY: S.G. FARNSWORTH
BR 62A WINGWALL DETAILS (1 OF 2)	SHEET 28 OF 55

VHB 57537



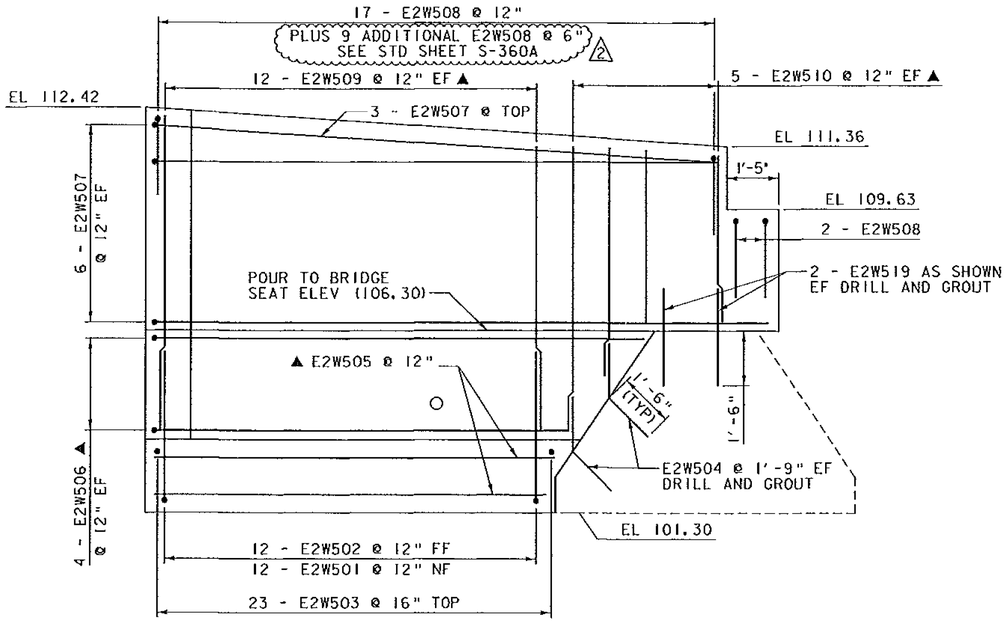
WINGWALL 1 ELEVATION

SCALE ½" = 1'-0"



WINGWALL TYPICAL SECTION

SCALE 3/4" = 1'-0"



WINGWALL 2 ELEVATION

SCALE ½" = 1'-0"

NOTE:

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2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
DRILL & GROUT IN 2" DIA HOLES

REV.	DESCRIPTION	DATE
2	ADDITIONAL EW508 AT POSTS	3/3/2014

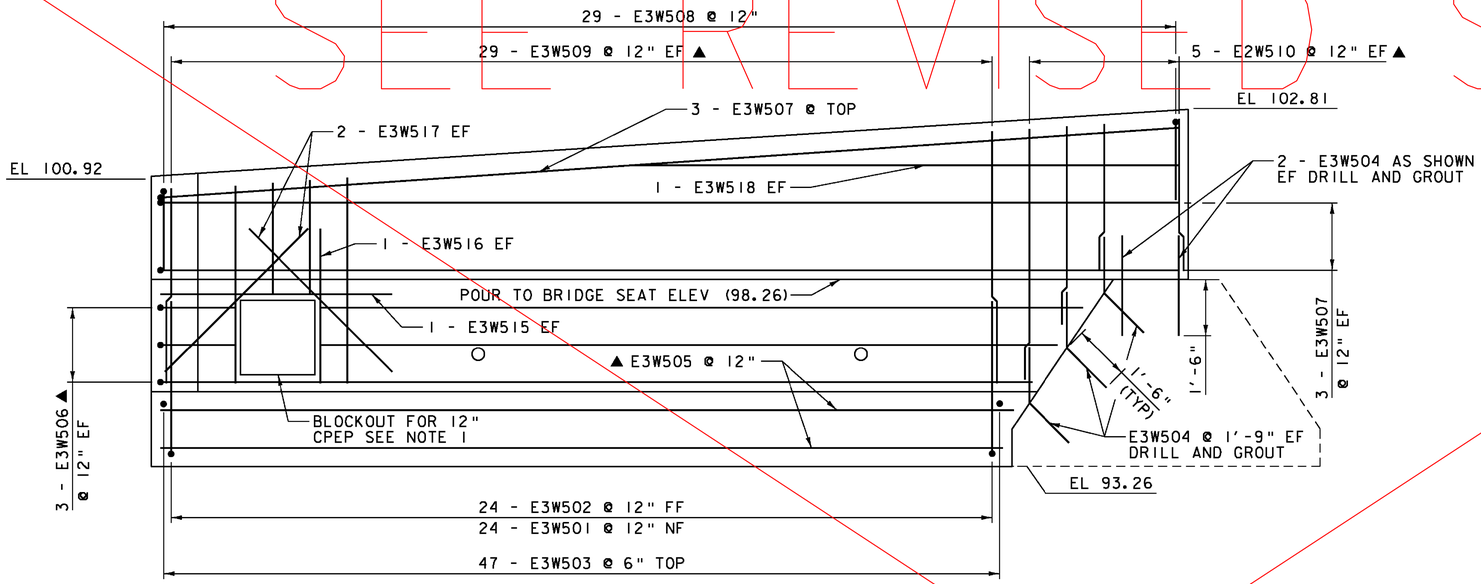
PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260sub.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: A.J. GOUDREAU
BR 62A WINGWALL DETAILS (1OF 2)

PLOT DATE: 3/3/2014
DRAWN BY: A.J GOUDREAU
CHECKED BY: S.G. FARNSWORTH
SHEET 28 OF 55

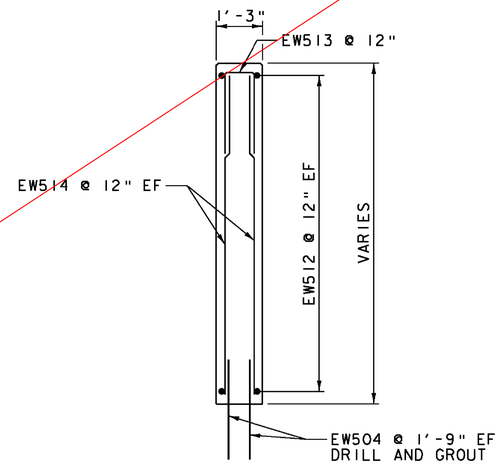
VHB Vanasse Hangen Brustlin, Inc.

SEE REVISED SHEET



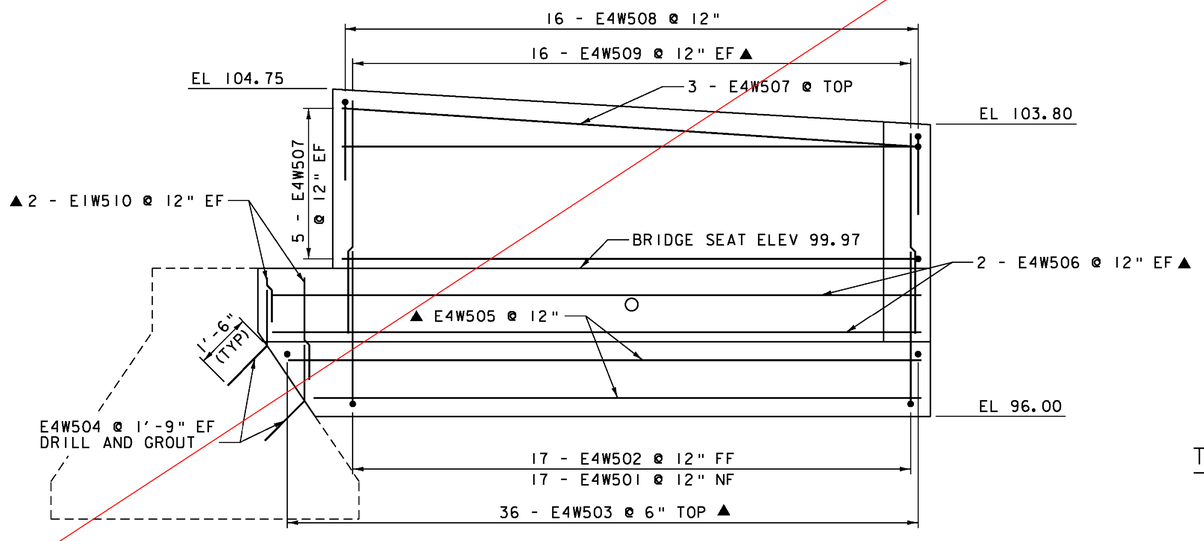
WINGWALL 3 ELEVATION

SCALE ½" = 1'-0"



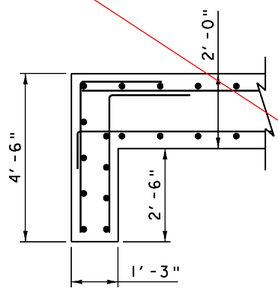
TYPICAL CANTILEVERED WINGWALL SECTION

SCALE ½" = 1'-0"



WINGWALL 4 ELEVATION

SCALE ½" = 1'-0"



TYPICAL WINGWALL CORNER DETAIL

SCALE ½" = 1'-0"

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2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
DRILL & GROUT IN 2" DIA HOLES

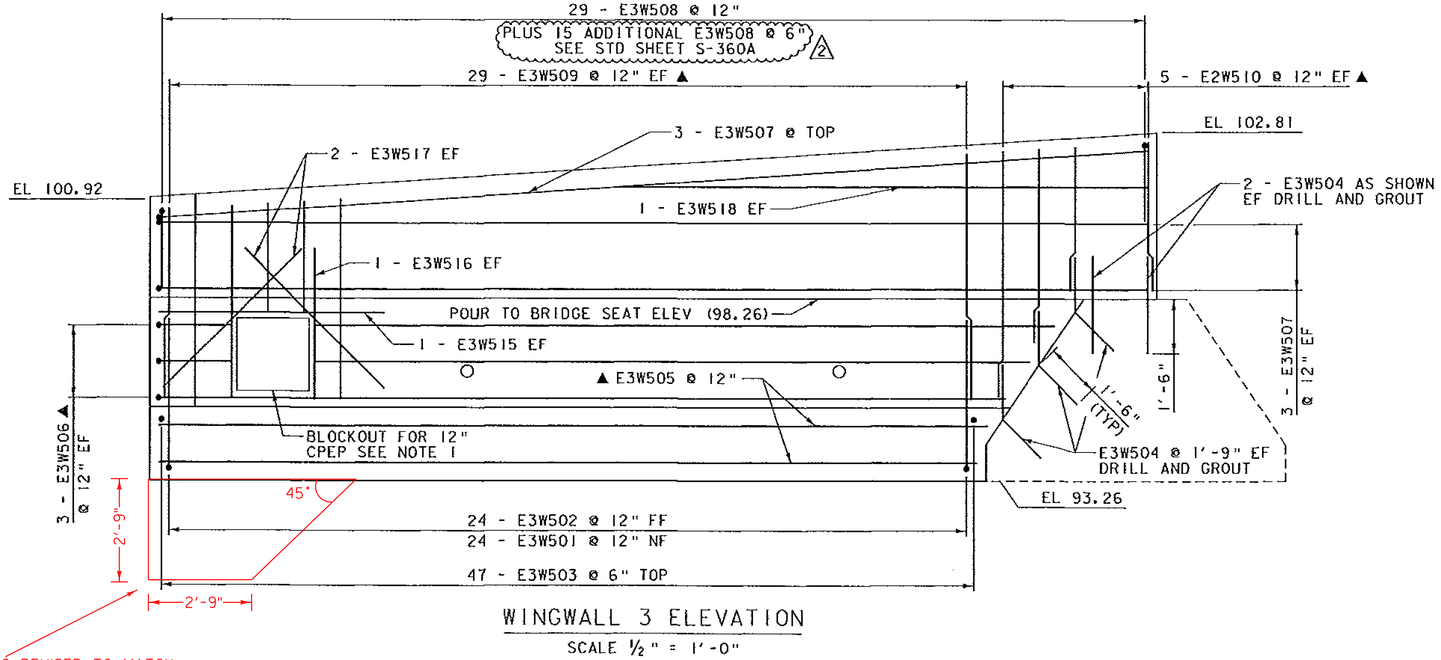
NOTES:

1. A BLOCKOUT IS TO BE CONSTRUCTED FOR THE 12" CPEP, AND GROUTED AFTER INSTALLATION OF DROP INLET AND CPEP. COST FOR BLOCKOUT AND GROUT TO BE INCLUDED IN ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260sub.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: A.J. GOUDREAU	CHECKED BY: S.G. FARNSWORTH
BR 62A WINGWALL DETAILS (2 OF 2)	SHEET 29 OF 55

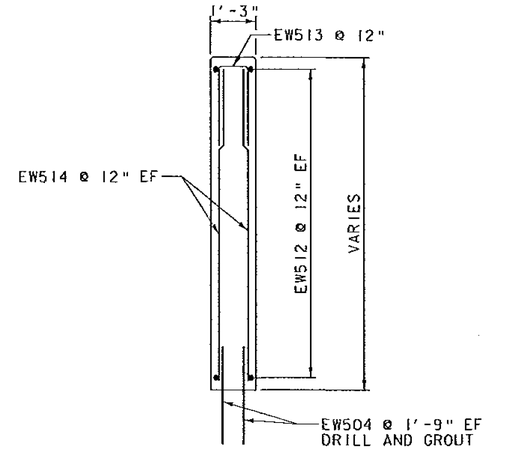
VHB 57537



WINGWALL 3 ELEVATION

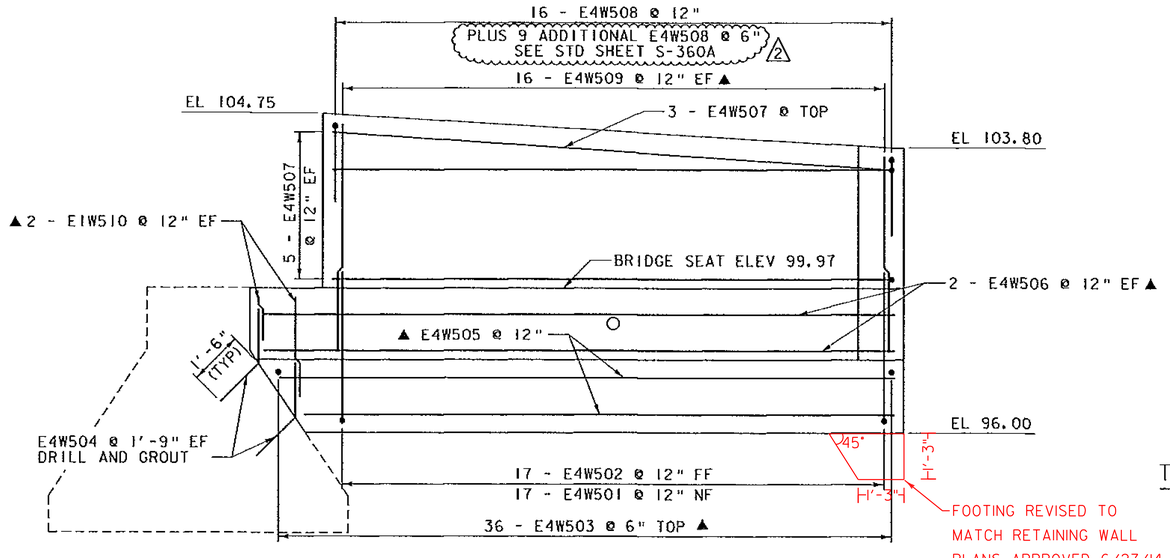
SCALE ½" = 1'-0"

FOOTING REVISED TO MATCH RETAINING WALL PLANS APPROVED 6/27/14.



TYPICAL CANTILEVERED WINGWALL SECTION

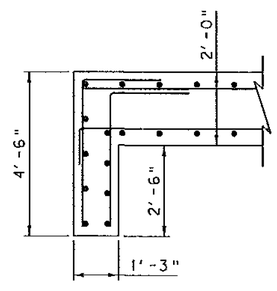
SCALE ½" = 1'-0"



WINGWALL 4 ELEVATION

SCALE ½" = 1'-0"

FOOTING REVISED TO MATCH RETAINING WALL PLANS APPROVED 6/27/14.



TYPICAL WINGWALL CORNER DETAIL

SCALE ½" = 1'-0"

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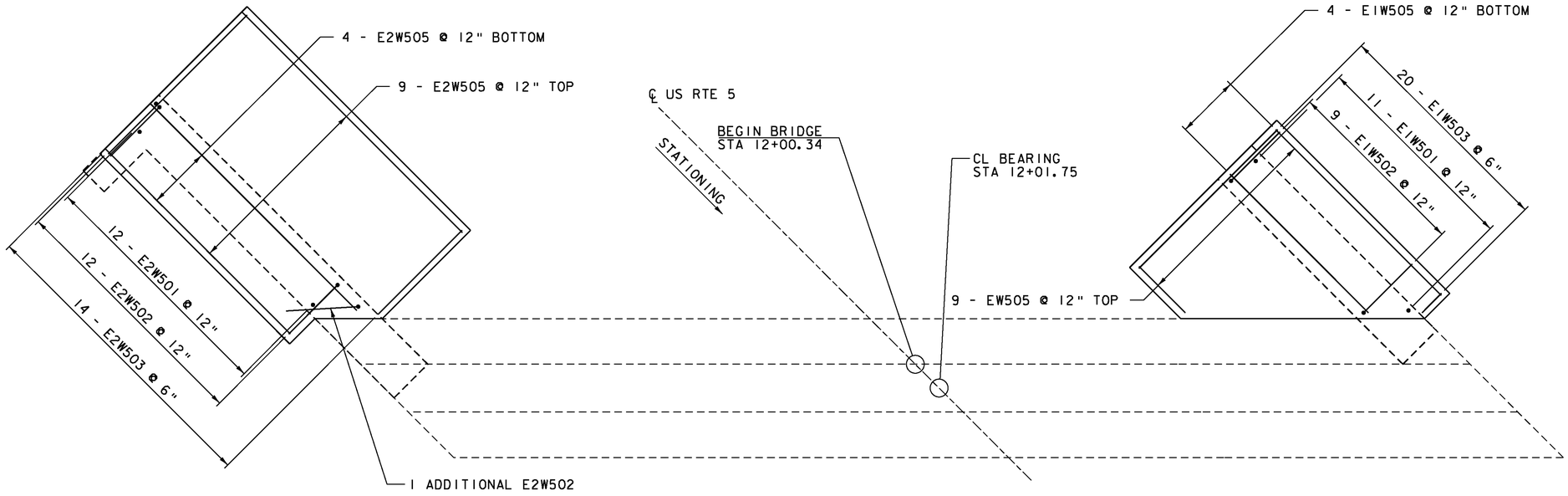
REV.	DESCRIPTION	DATE
2	ADDITIONAL EW508 AT POSTS	3/3/2014

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260sub.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: A.J. GOUDREAU
BR 62A WINGWALL DETAILS (2 OF 2)
PLOT DATE: 3/3/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.G. FARNSWORTH
SHEET 29 OF 55

VHB Vanasse Hangen Brustlin, Inc.

VHB 57537



ABUTMENT 1 FOOTING REINFORCING PLAN

SCALE 3/8" = 1'-0"

NOTE:

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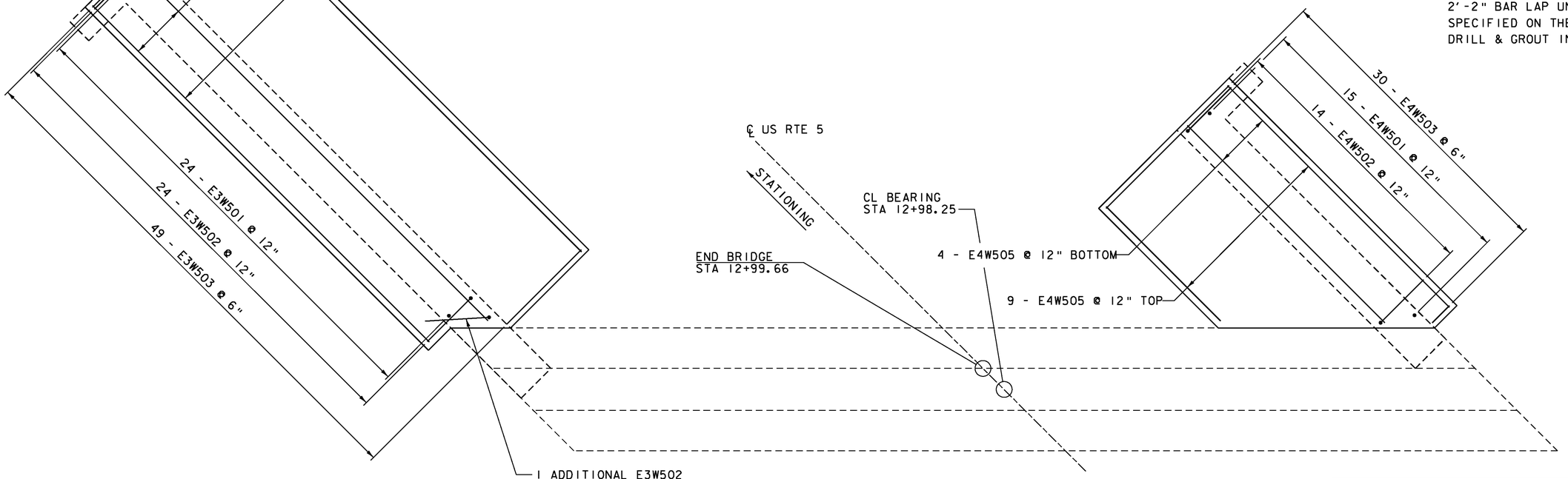
DRILL & GROUT IN 2" DIA HOLES



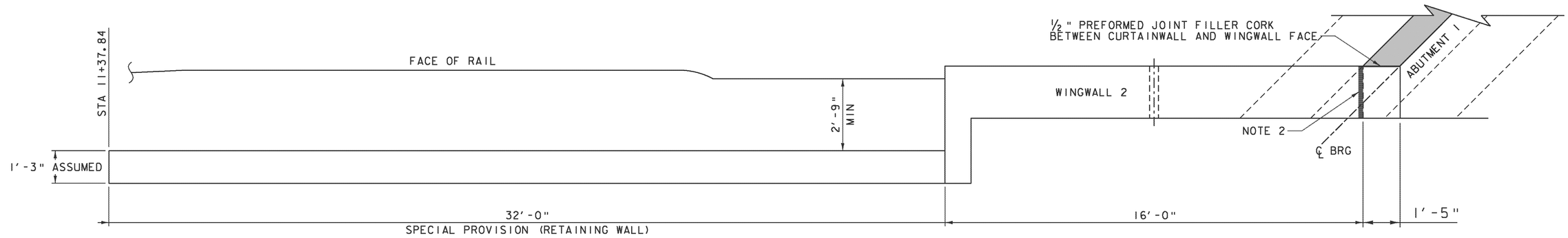
ABUTMENT 2 FOOTING REINFORCING PLAN

SCALE 3/8" = 1'-0"

Vanasse Hangen Brustlin, Inc.

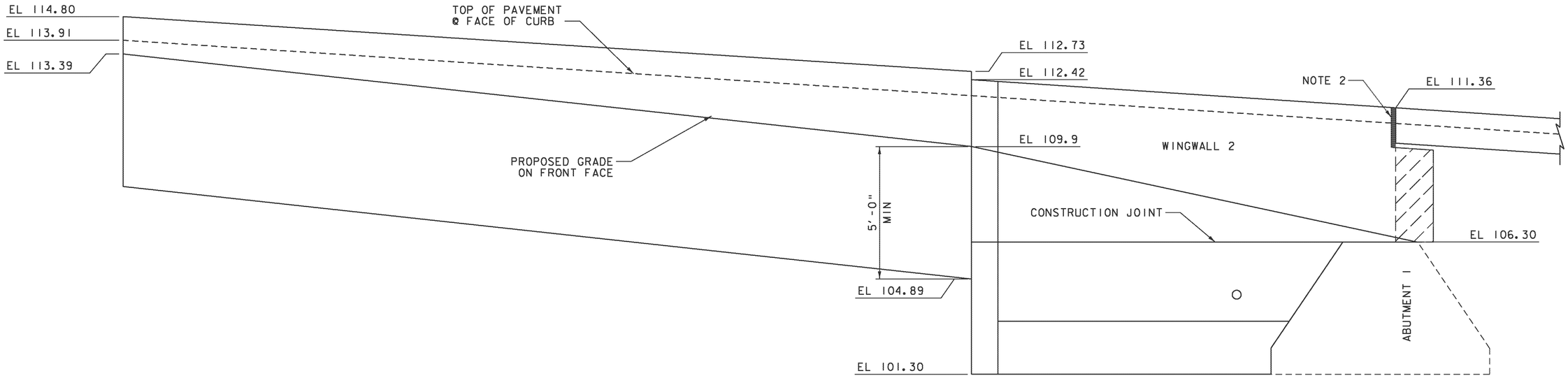
PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260sub.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A FOOTING REINFORCING PLAN	SHEET 30 OF 55

VHB 57537



RETAINING WALL 2 PLAN

SCALE 1/2" = 1'-0"



RETAINING WALL 2 ELEVATION

SCALE 1/2" = 1'-0"

KEY

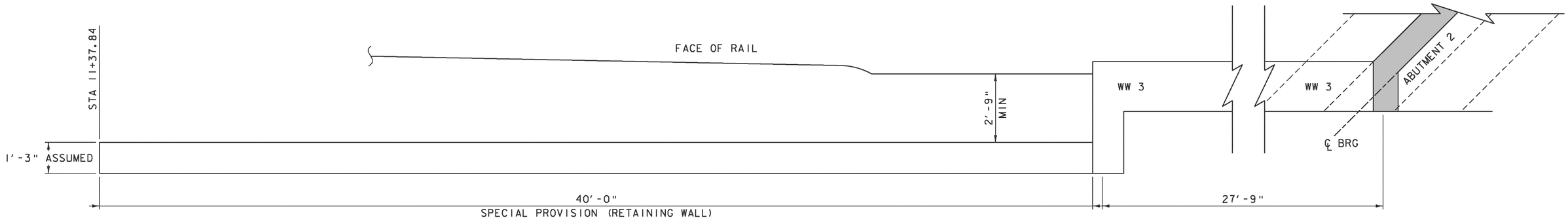
CURTAIN WALL

NOTE:

1. SEE SHEET 4 FOR SPECIAL PROVISION (RETAINING WALL) EXCAVATION DETAIL.
2. ONE INCH OF CLOSED CELL FOAM WITH ONE INCH POLYURETHANE JOINT SEALER BETWEEN WINGWALL AND CONCRETE SLAB. COST INCIDENTAL TO UNIT BID PRICE FOR ADJACENT CONCRETE.

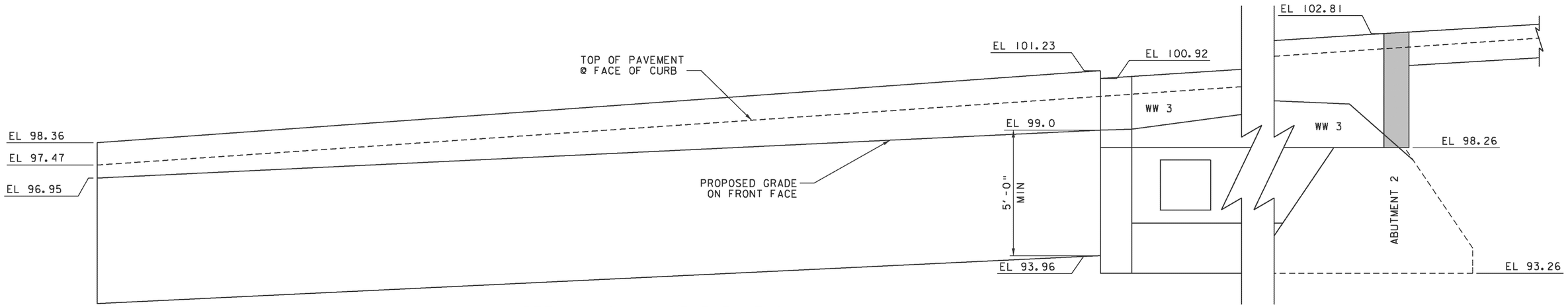
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260sub.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A. J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A RETAINING WALL DETAILS (1 OF 3)	SHEET 31 OF 55



RETAINING WALL 3 PLAN

SCALE ½" = 1'-0"



RETAINING WALL 3 ELEVATION

SCALE ½" = 1'-0"

KEY

CURTAIN WALL

NOTE:

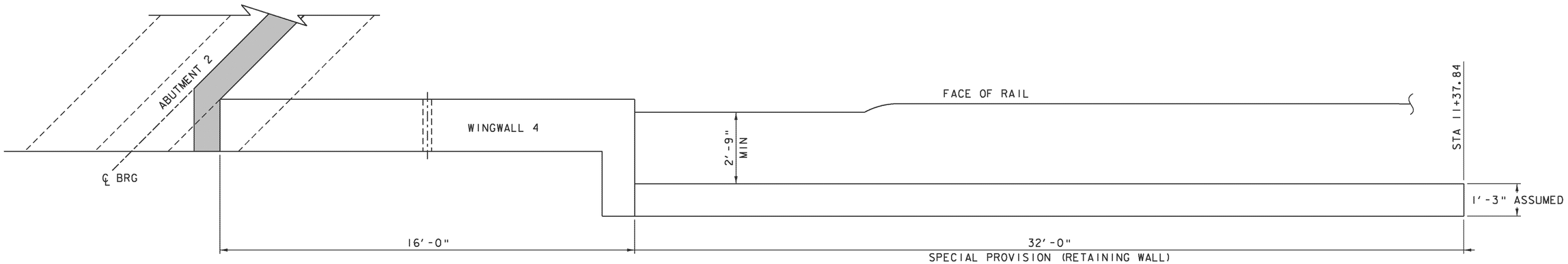
SEE SHEET 4 FOR SPECIAL PROVISION (RETAINING WALL) EXCAVATION DETAIL.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260sub.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G. FARNSWORTH
BR 62A RETAINING WALL DETAILS (2 OF 3)

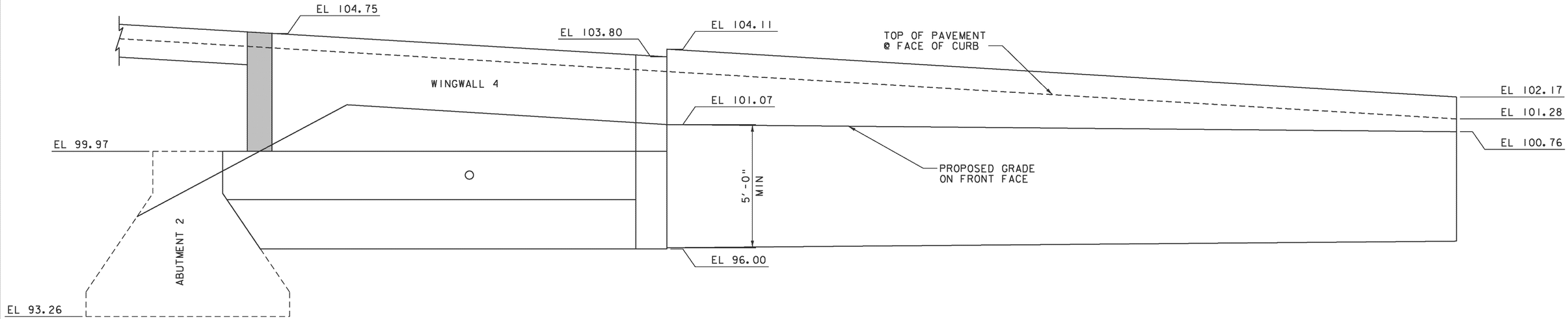
PLOT DATE: 12/17/2013
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.E. BURBANK
SHEET 32 OF 55

VHB Vanasse Hangen Brustlin, Inc.



RETAINING WALL 4 PLAN

SCALE ½" = 1'-0"



RETAINING WALL 4 ELEVATION

SCALE ½" = 1'-0"

KEY

CURTAIN WALL

NOTE:

SEE SHEET 4 FOR SPECIAL PROVISION (RETAINING WALL) EXCAVATION DETAIL.

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND	
PROJECT NUMBER: BHF BPNT(12)	
FILE NAME: z11c260sub.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A RETAINING WALL DETAILS (3 OF 3)	SHEET 33 OF 55

STATE OF VERMONT
AGENCY OF TRANSPORTATION

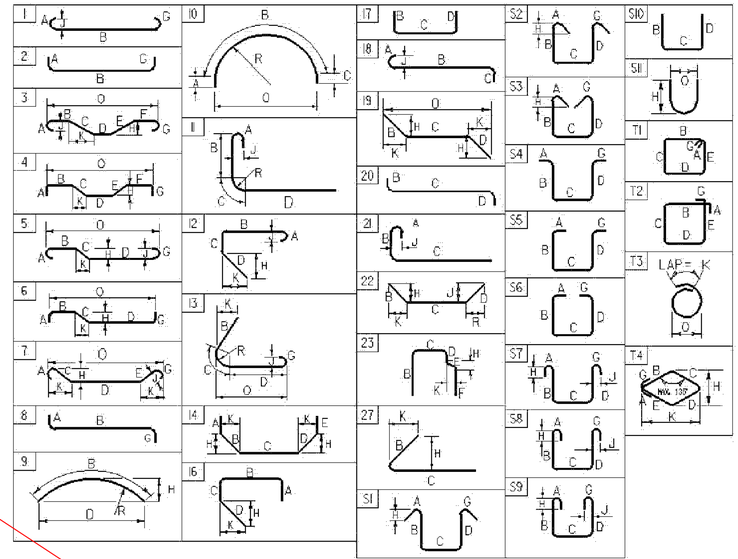
REINFORCING STEEL SCHEDULE

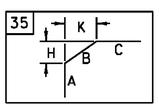
SHEET REVISED

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	DECK & CURB																
	99	5	34'- 6"	S501.2	STR												
	146	5	32'- 6"	S502.2	STR												
▲	238	5	14'- 8"	S503.2	1	0'- 7"	14'- 1"										
▲	238	5	21'- 2"	S504.2	1		20'- 7"					0'- 7"					
	298	5	4'- 6"	S505.2	S5	0'- 6"	1'- 0"	1'- 6"	1'- 0"			0'- 6"					
	74	5	4'- 8"	S506.2	35	1'- 8"	1'- 0"	2'- 0"					0'- 3"		1'- 0"		
	64	5	4'- 8"	S507.2	17		3'- 0"	1'- 8"									
▲	14	5	9'- 10"	S508.2	S5	3'- 0"	1'- 8"	0'- 6"	1'- 8"			3'- 0"					
	3	5	23'- 5"	S509.2	19		1'- 10"	21'- 7"					1'- 4"		1'- 4"		22'- 11"
✳	4	5	23'- 8"	S510.2	19		2'- 1"	21'- 7"					1'- 6"		1'- 6"		23'- 1"
▲	2	5	4'- 7"	S511.2	19		1'- 10"	2'- 9"					1'- 4"		1'- 4"		4'- 1"
▲	2	5	4'- 10"	S512.2	19		2'- 1"	2'- 9"					1'- 6"		1'- 6"		4'- 3"
	6	5	21'- 8"	S513.2	STR												
▲	4	5	4'- 0"	S514.2	STR												
	4	5	4'- 2"	S515.2	19		2'- 3"	1'- 9"					1'- 9"		1'- 9"		3'- 6"
	WINGWALL NO. 1																
✳	13	5	3'- 11"	E1W501	STR												
	12	5	7'- 2"	E1W502	17		3'- 11"	3'- 3"									
	23	5	8'- 3"	E1W503	STR												
	4	5	3'- 8"	E1W504	19		1'- 6"	2'- 2"					1'- 1"		1'- 1"		
▲	13	5	11'- 0"	E1W505	STR												
▲	10	5	12'- 6"	E1W506	STR												
	12	5	11'- 11"	E1W507	STR												
	14	5	5'- 10"	E1W508	S10		2'- 2"	1'- 6"	2'- 2"								
▲	24	5	9'- 0"	E1W509	STR												
▲	4	5	6'- 6"	E1W510	STR												
	WINGWALL NO. 2																
	12	5	3'- 11"	E2W501	STR												
	12	5	7'- 2"	E2W502	17		3'- 11"	3'- 3"									
	23	5	8'- 3"	E2W503	STR												
	4	5	3'- 8"	E2W504	19		1'- 6"	2'- 2"					1'- 1"		1'- 1"		
▲	13	5	12'- 9"	E2W505	STR												
▲	8	5	15'- 8"	E2W506	17		2'- 2"	13'- 6"									
	13	5	19'- 1"	E2W507	17		2'- 2"	15'- 6"									
	19	5	5'- 10"	E2W508	S10		2'- 2"	1'- 6"	2'- 2"								
▲	24	5	5'- 9"	E2W509	STR												
▲	14	5	8'- 4"	E2W510	STR												
	20	5	5'- 1"	E2W512	S10		2'- 2"	0'- 9"	2'- 2"								
	4	5	6'- 2"	E2W513	S5		4'- 0"	2'- 2"									
	6	5	8'- 9"	E2W514	STR												
	6	5	3'- 8"	E2W519	STR												
	WINGWALL NO. 3																
	24	5	3'- 11"	E3W501	STR												
	24	5	7'- 2"	E3W502	17		3'- 11"	3'- 3"									
	47	5	8'- 3"	E3W503	STR												
	4	5	3'- 8"	E3W504	19		1'- 6"	2'- 2"									
▲	13	5	22'- 10"	E3W505	STR												
▲	6	5	2'- 2"	E3W506	17		2'- 2"										
	9	5	2'- 2"	E3W507	17		2'- 2"										
	29	5	5'- 10"	E3W508	S10		2'- 2"	1'- 6"	2'- 2"								
▲	58	5	6'- 10"	E3W509	STR												
▲	10	5	7'- 3"	E3W510	STR												
	20	5	5'- 1"	E3W512	S10		2'- 2"	0'- 9"	2'- 2"								
	4	5	6'- 2"	E3W513	S5		4'- 0"	2'- 2"									
	6	5	5'- 5"	E3W514	STR												
	2	5	6'- 3"	E3W515	STR												
	2	5	4'- 2"	E3W516	STR												
	4	5	5'- 5"	E3W517	STR												
	2	5	19'- 0"	E3W518	STR												
	4	5	3'- 8"	E3W519	STR												
	WINGWALL NO. 4																
	17	5	3'- 11"	E4W501	STR												
	17	5	7'- 2"	E4W502	17		3'- 11"	3'- 3"									
▲	36	5	8'- 3"	E4W503	STR												
	4	5	3'- 8"	E4W504	19		1'- 6"	2'- 2"									
▲	13	5	17'- 0"	E4W505	STR												
▲	4	5	19'- 8"	E4W506	17		2'- 2"	17'- 6"									
	11	5	17'- 8"	E4W507	17		2'- 2"	15'- 6"									
	16	5	5'- 10"	E4W508	S10		2'- 2"	1'- 6"	2'- 2"								
▲	32	5	6'- 5"	E4W509	STR												
▲	4	5	3'- 3"	E4W510	STR												
	14	5	5'- 1"	E4W512	S10		2'- 2"	0'- 9"	2'- 2"								
	4	5	6'- 2"	E4W513	S5		4'- 0"	2'- 2"									
	6	5	5'- 6"	E4W514	STR												

~ NOTES ~

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





ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS-ROUND SECTION DIAMETER INCHES	AREA INCHES^2	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

VHB *Vanasse Hangen Brustlin, Inc.*

PROJECT NAME: **HARTLAND**
PROJECT NUMBER: **BHF BPNT(12)**

FILE NAME: **z11c260rss.dgn**
PROJECT MANAGER: **M.A. COLGAN**
DESIGNED BY: **A.J. GOUDREAU**
BR 62A REINFORCING STEEL SCHEDULE

PLOT DATE: **1/2/2014**
DRAWN BY: **A.J. GOUDREAU**
CHECKED BY: **M.C. SCOTT**
SHEET **34** OF **55**

VHB 57537

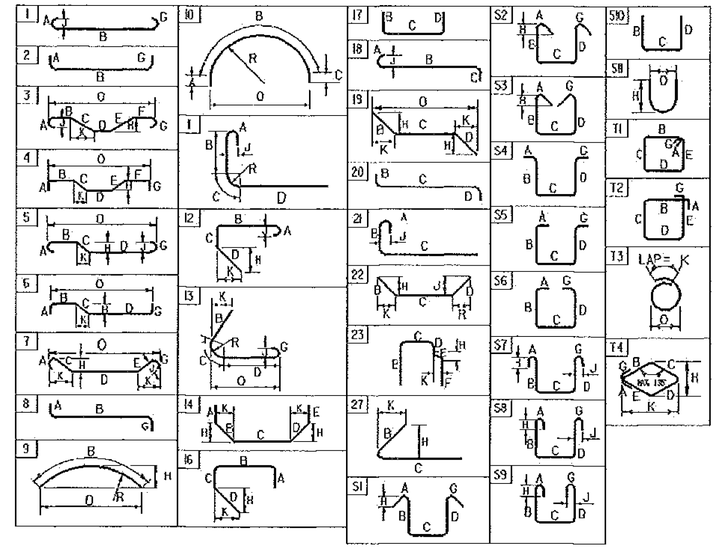
STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
DECK & CURB																	
	(252)	5	34'- 6"	S501.2	STR	△2											
	146	5	32'- 6"	S502.2	STR												
▲	238	5	14'- 8"	S503.2	1	0'- 7"	14'- 1"										
▲	238	5	21'- 2"	S504.2	1		20'- 7"					0'- 7"					
	(274)	5	4'- 5"	S505.2	S5	0'- 6"	1'- 0"	(1'- 5")	1'- 0"	△2		0'- 6"					
	74	5	4'- 8"	S506.2	35	1'- 8"	1'- 0"	2'- 0"									
	64	5	4'- 8"	S507.2	17		3'- 0"	1'- 8"					0'- 3"		1'- 0"		
▲	14	5	9'- 10"	S508.2	S5	3'- 0"	1'- 8"	0'- 8"	1'- 8"			3'- 0"					
	3	5	23'- 5"	S509.2	19		1'- 10"	21'- 7"					1'- 4"		1'- 4"		22'- 11"
✳	4	5	23'- 8"	S510.2	19		2'- 1"	21'- 7"					1'- 6"		1'- 6"		23'- 1"
▲	2	5	4'- 7"	S511.2	19		1'- 10"	2'- 9"					1'- 4"		1'- 4"		4'- 1"
▲	2	5	4'- 10"	S512.2	19		2'- 1"	2'- 9"					1'- 6"		1'- 6"		4'- 3"
	6	5	21'- 8"	S513.2	STR												
▲	4	5	4'- 0"	S514.2	STR												
	4	5	4'- 2"	S515.2	19		2'- 3"	1'- 9"					1'- 9"		1'- 9"		3'- 6"
WINGWALL NO. 1																	
✳	13	5	3'- 11"	E1W501	STR												
	12	5	7'- 2"	E1W502	17		3'- 11"	3'- 3"									
	23	5	8'- 3"	E1W503	STR												
	4	5	3'- 8"	E1W504	19		1'- 6"	2'- 2"					1'- 1"		1'- 1"		
▲	13	5	11'- 0"	E1W505	STR												
▲	10	5	12'- 6"	E1W506	STR												
	12	5	11'- 11"	E1W507	STR												
	(20)	5	5'- 9"	E1W508	S10		2'- 2"	(1'- 5")	2'- 2"	△2							
▲	24	5	9'- 0"	E1W509	STR												
▲	4	5	6'- 6"	E1W510	STR												
WINGWALL NO. 2																	
	12	5	3'- 11"	E2W501	STR												
	12	5	7'- 2"	E2W502	17		3'- 11"	3'- 3"									
	23	5	8'- 3"	E2W503	STR												
	4	5	3'- 8"	E2W504	19		1'- 6"	2'- 2"					1'- 1"		1'- 1"		
▲	13	5	12'- 9"	E2W505	STR												
▲	8	5	15'- 8"	E2W506	17		2'- 2"	13'- 6"									
	13	5	19'- 1"	E2W507	17		2'- 2"	15'- 6"									
	(28)	5	5'- 9"	E2W508	S10		2'- 2"	(1'- 5")	2'- 2"	△2							
▲	24	5	5'- 9"	E2W509	STR												
▲	14	5	8'- 4"	E2W510	STR												
	20	5	5'- 1"	E2W512	S10		2'- 2"	0'- 9"	2'- 2"								
	4	5	6'- 2"	E2W513	S5		4'- 0"	2'- 2"									
	6	5	8'- 9"	E2W514	STR												
	6	5	3'- 8"	E2W519	STR												
WINGWALL NO. 3																	
	24	5	3'- 11"	E3W501	STR												
	24	5	7'- 2"	E3W502	17		3'- 11"	3'- 3"									
	47	5	8'- 3"	E3W503	STR												
	4	5	3'- 8"	E3W504	19		1'- 6"	2'- 2"									
▲	13	5	22'- 10"	E3W505	STR												
▲	6	5	2'- 2"	E3W506	17		2'- 2"										
	9	5	2'- 2"	E3W507	17		2'- 2"										
	(44)	5	5'- 9"	E3W508	S10		2'- 2"	(1'- 5")	2'- 2"	△2							
▲	58	5	6'- 10"	E3W509	STR												
▲	10	5	7'- 3"	E3W510	STR												
	20	5	5'- 1"	E3W512	S10		2'- 2"	0'- 9"	2'- 2"								
	4	5	6'- 2"	E3W513	S5		4'- 0"	2'- 2"									
	6	5	5'- 5"	E3W514	STR												
	2	5	6'- 3"	E3W515	STR												
	2	5	4'- 2"	E3W516	STR												
	4	5	5'- 5"	E3W517	STR												
	2	5	19'- 0"	E3W518	STR												
	4	5	3'- 8"	E3W519	STR												
WINGWALL NO. 4																	
	17	5	3'- 11"	E4W501	STR												
	17	5	7'- 2"	E4W502	17		3'- 11"	3'- 3"									
▲	36	5	8'- 3"	E4W503	STR												
	4	5	3'- 8"	E4W504	19		1'- 6"	2'- 2"									
▲	13	5	17'- 0"	E4W505	STR												
▲	4	5	19'- 8"	E4W506	17		2'- 2"	17'- 6"									
	11	5	17'- 8"	E4W507	17		2'- 2"	15'- 6"									
	(25)	5	5'- 9"	E4W508	S10		2'- 2"	(1'- 5")	2'- 2"	△2							
▲	32	5	6'- 5"	E4W509	STR												
▲	4	5	3'- 3"	E4W510	STR												
	14	5	5'- 1"	E4W512	S10		2'- 2"	0'- 9"	2'- 2"								
	4	5	6'- 2"	E4W513	S5		4'- 0"	2'- 2"									
	6	5	5'- 6"	E4W514	STR												

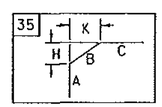
~ NOTES ~

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	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09



VHB Vanasse Hangen Brustlin, Inc.

REV.	DESCRIPTION	DATE
△2	LEG "C" LENGTH AND/OR QUANTITY CHANGED	3/3/2014

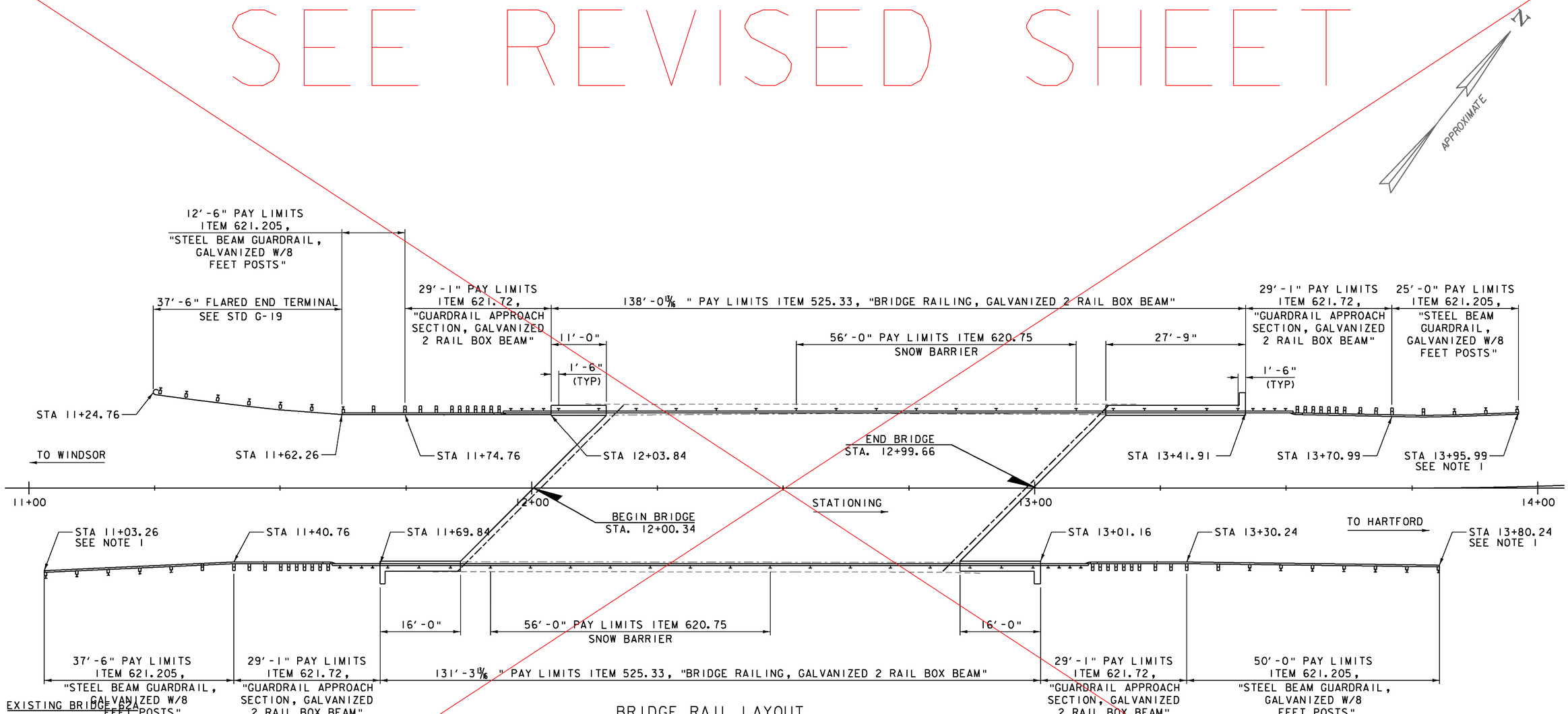
PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260rss.dgn
PROJECT MANAGER: M.A. COLGAN
DESIGNED BY: A.J. GOUDREAU
BR 62A REINFORCING STEEL SCHEDULE

PLOT DATE: 2/27/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: M.C. SCOTT
SHEET 34 OF 55

VHB 57537

SEE REVISED SHEET



BRIDGE RAIL LAYOUT

SCALE: 1" = 10'-0"

0 10 20
SCALE IN FEET

EXISTING BRIDGE 62A

SINGLE SPAN
ROLLED BEAM
CONCRETE DECK
99'-4" LENGTH
29'-6" ROADWAY WIDTH
22'-2" VERTICAL CLEARANCE TO RAILROAD RAIL
BUILT 1955

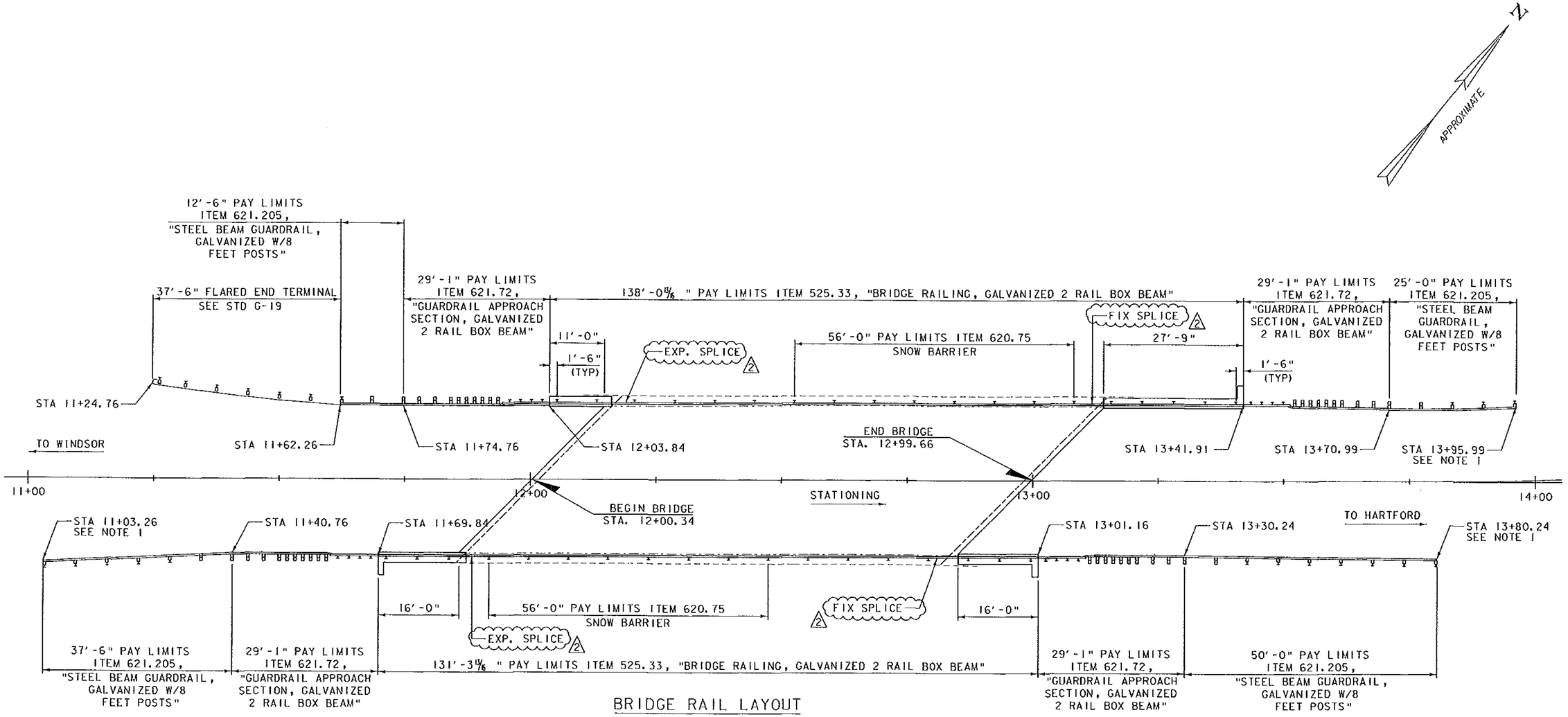
NOTES:

1. MATCH INTO EXISTING STEEL BEAM GUARDRAIL

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND	
PROJECT NUMBER: BHF BPNT(12)	
FILE NAME: z11c260brail.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A BRIDGE AND GUARD RAIL LAYOUT	SHEET 35 OF 55

VHB 57537



BRIDGE RAIL LAYOUT

SCALE: 1" = 10'-0"

0 10 20
SCALE IN FEET

EXISTING BRIDGE 62A

SINGLE SPAN
ROLLED BEAM
CONCRETE DECK
99'-4" LENGTH
29'-6" ROADWAY WIDTH
22'-2" VERTICAL CLEARANCE TO RAILROAD RAIL
BUILT 1955

NOTES:

1. MATCH INTO EXISTING STEEL BEAM GUARDRAIL

REV.	DESCRIPTION	DATE
2	NOTED EXPANSION AND FIXED SPLICE LOCATION	3/3/2014

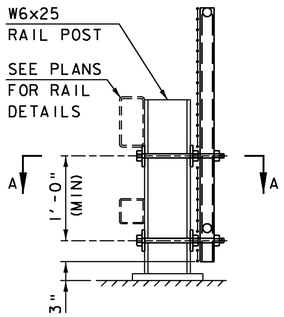
PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260brail.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G. FARNSWORTH
BR 62A BRIDGE AND GUARD RAIL LAYOUT

PLOT DATE: 3/3/2014
DRAWN BY: A.J. GOUDREAU
CHECKED BY: S.E. BURBANK
SHEET 35 OF 55

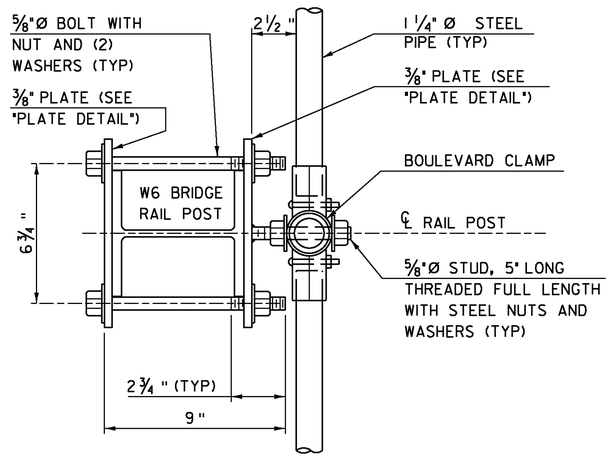
VHB Vanasse Hangen Brustlin, Inc.

VHB 57537

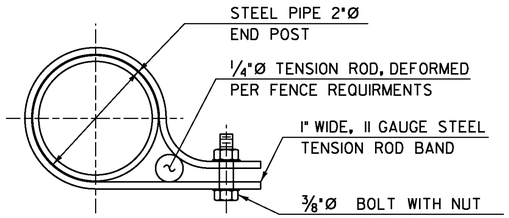


TYPICAL SECTION

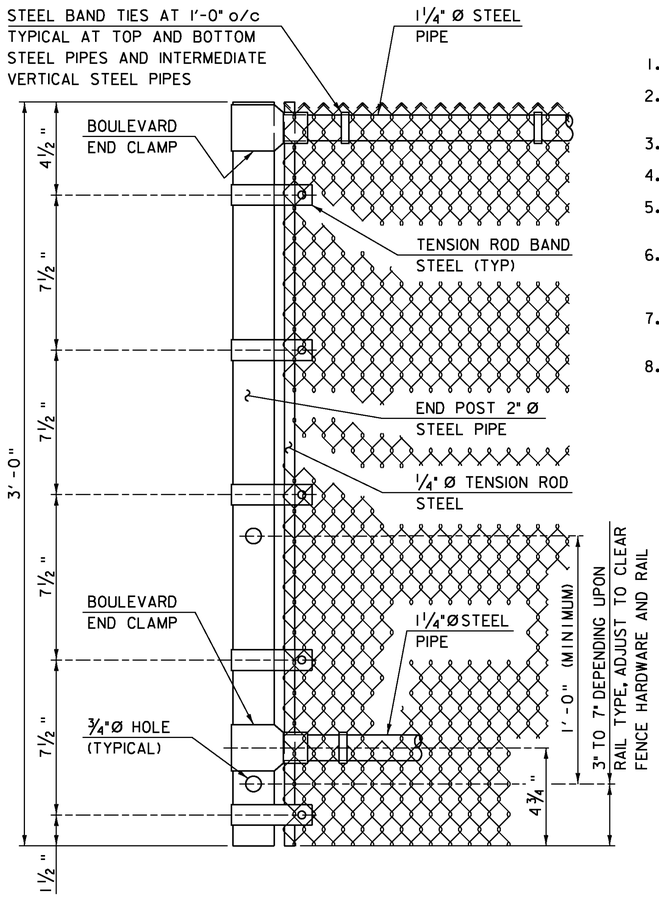
FOR SPECIFIC RAIL CONFIGURATION AND SIZES SEE PLAN SET



SECTION A-A



TENSION ROD BAND



END POST DETAILS

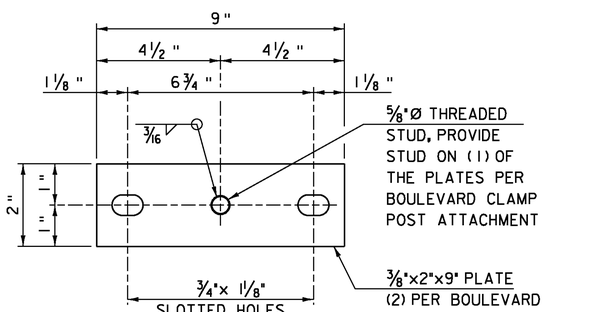
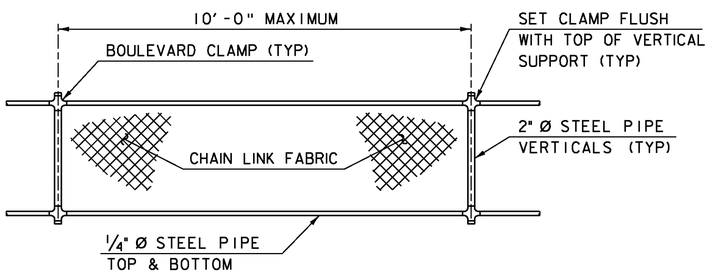


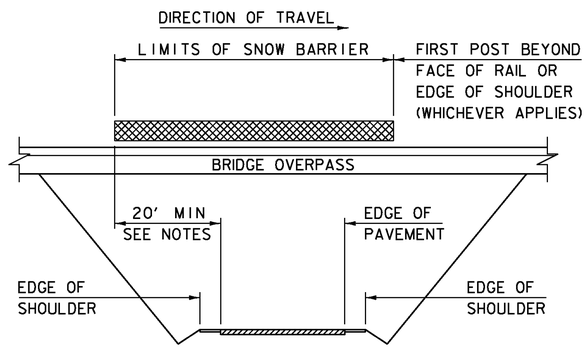
PLATE DETAIL



ELEVATION SNOW BARRIER

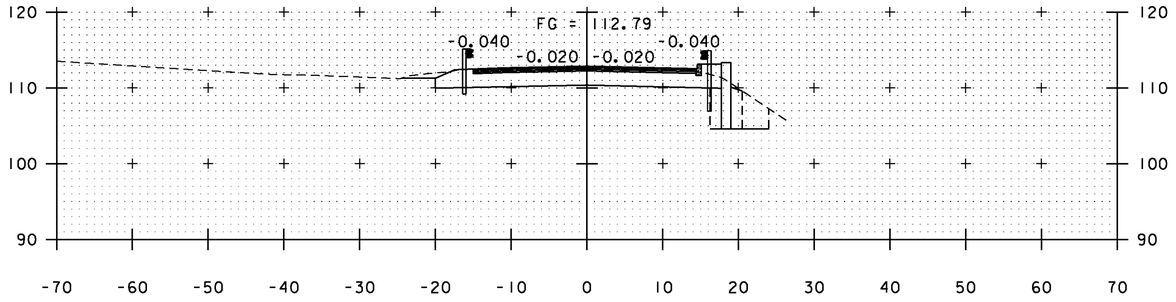
NOTES

1. ALL WORK AND MATERIAL SHALL CONFORM TO SECTION 620.
2. SNOW BARRIER CAN BE USED WITH GALVANIZED 2,3, AND 4 RAIL BOX BEAM BRIDGE RAIL.
3. 1 1#4" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL STEEL PLATES SHALL CONFORM TO AASHTO M270/M270M GRADE 36.
6. SNOW BARRIER SHALL BEGIN AT THE BRIDGE RAIL POST WHICH WILL PROVIDE A MINIMUM DISTANCE OF 20' (AS SHOWN) OR AS DIRECTED BY THE ENGINEER.
7. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O.D.).
8. HARDWARE FOR THE CONNECTION OF THE SNOW BARRIER SHALL BE HOT-DIP GALVANIZED OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M 298, CLASS 10.

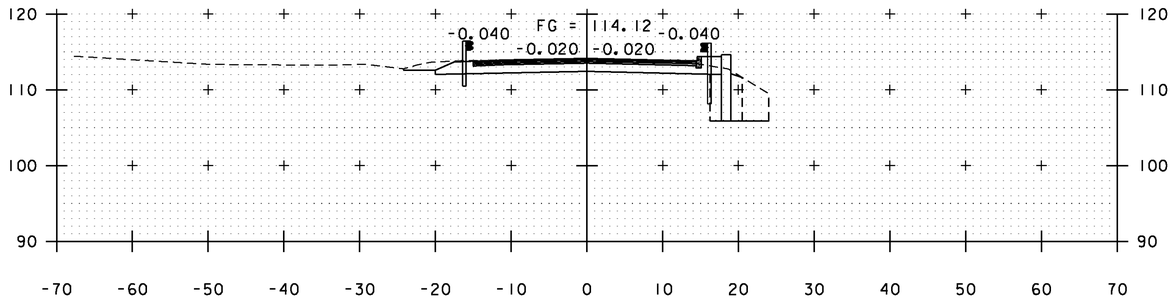


SCHEMATIC SNOW BARRIER LIMITS

PROJECT NAME:	HARLTAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260snowbarrier.dgn	PLOT DATE: 1/3/2014
PROJECT LEADER: VTRANS	DRAWN BY: VTRANS
DESIGNED BY: VTRANS	CHECKED BY: VTRANS
BR 62A SNOW BARRIER	SHEET 36 OF 55

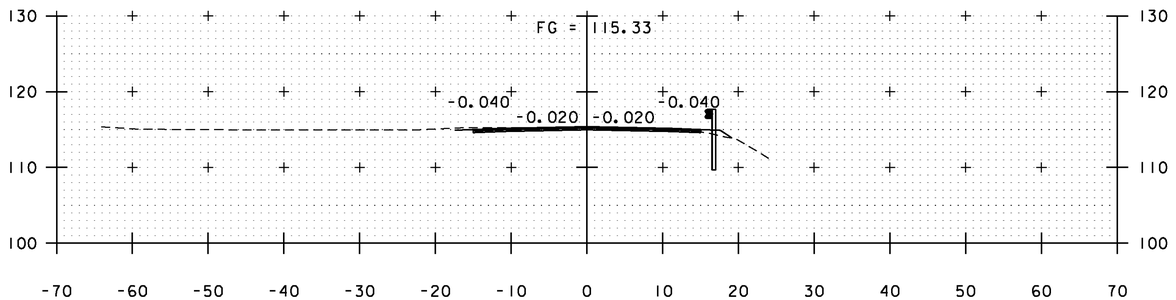


11+60

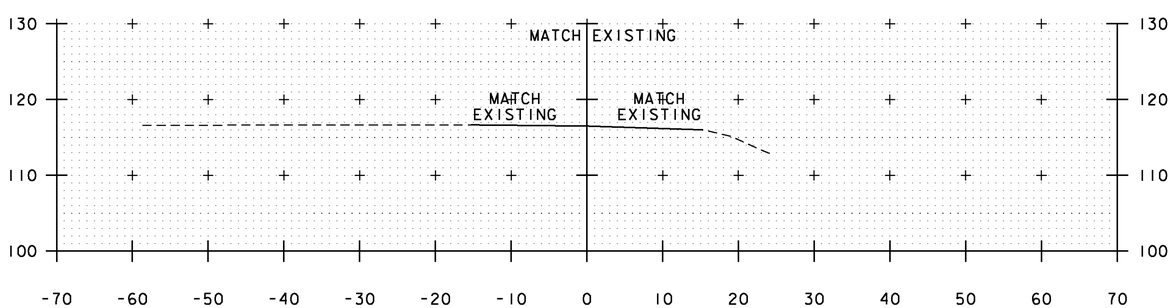


11+40

BEGIN PROJECT
STA. 11+25.00



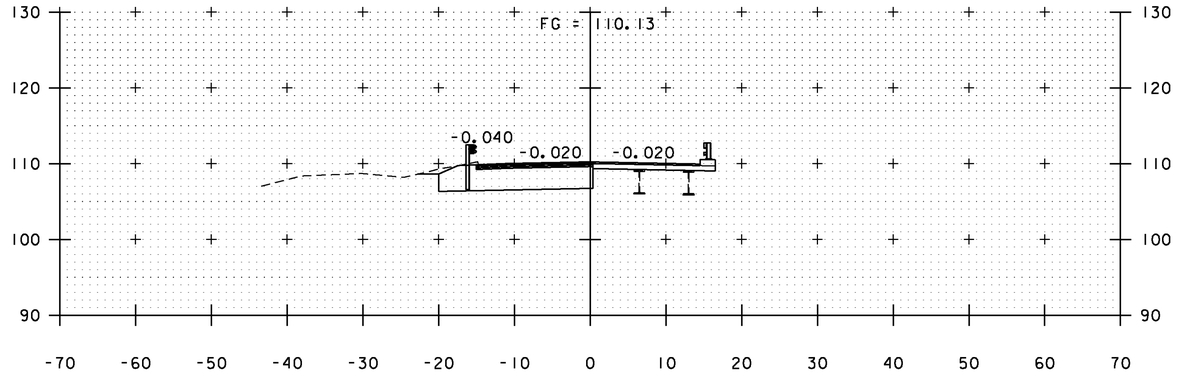
11+20



11+00

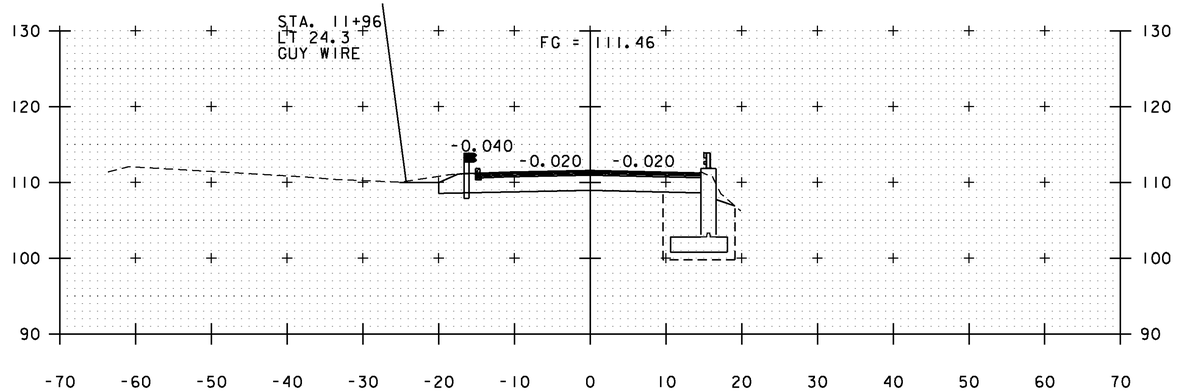
BEING APPROACH
STA. 11+00.00

0 10 20
SCALE IN FEET

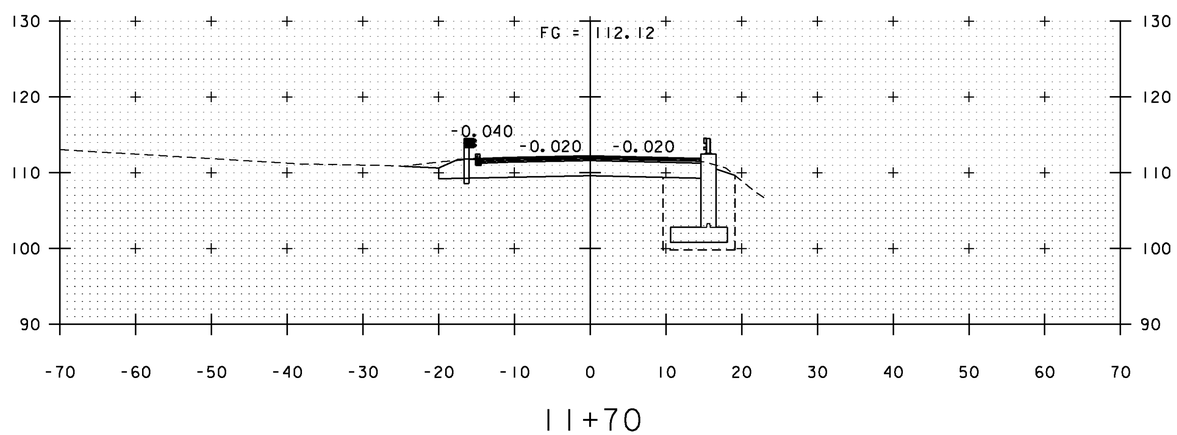


12+00

BEGIN BRIDGE
STA. 12+00.34



11+80



11+70

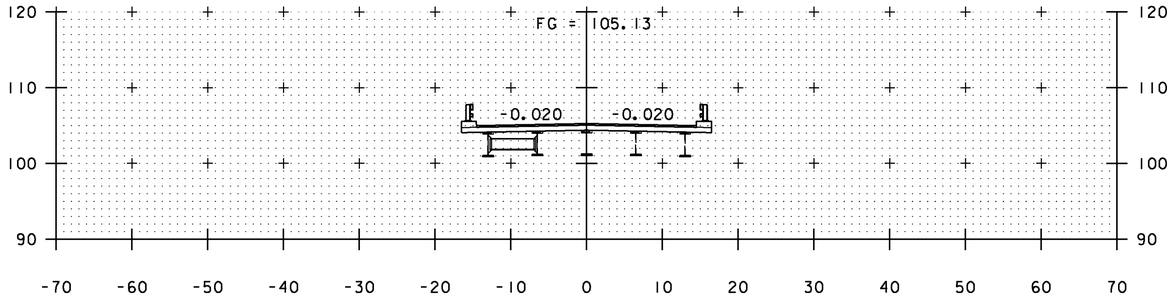
US RT 5 ROADWAY CROSS SECTIONS

STA. 11+00 THRU STA. 12+00

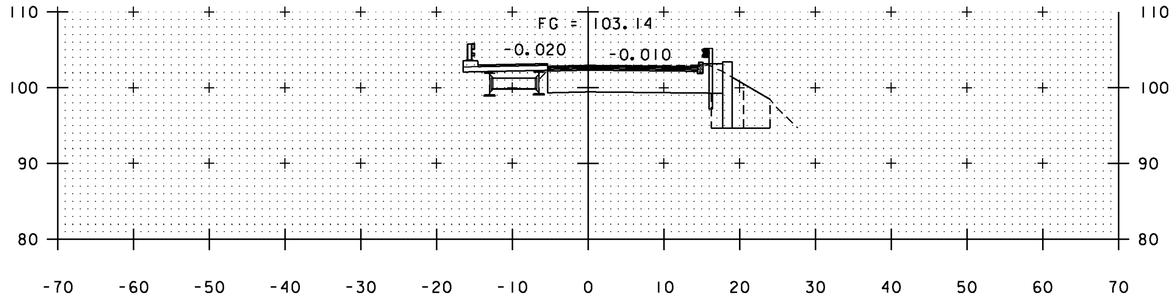
Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260xs.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A US 5 CROSS SECTIONS (1 OF 3)	SHEET 37 OF 55

VHB 57537

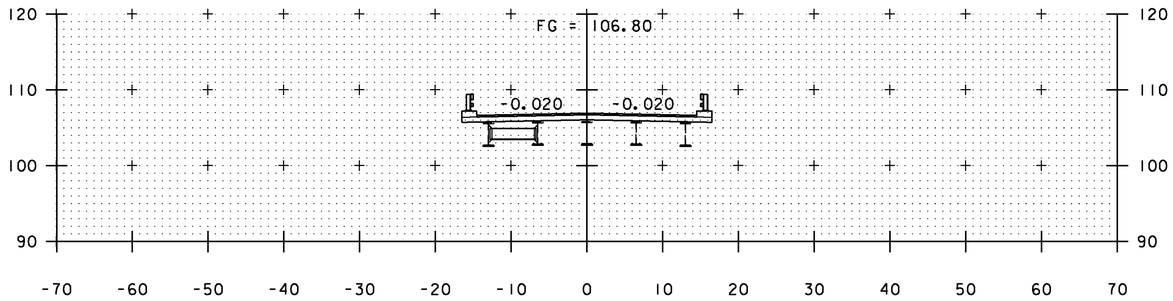


12+75

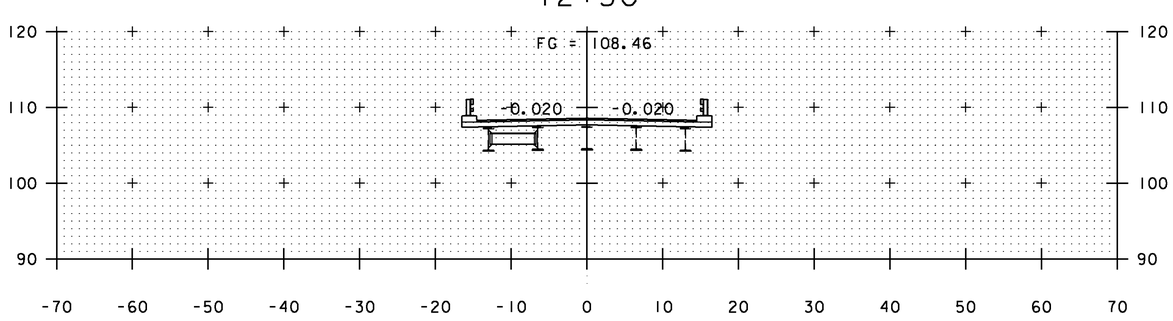


13+05

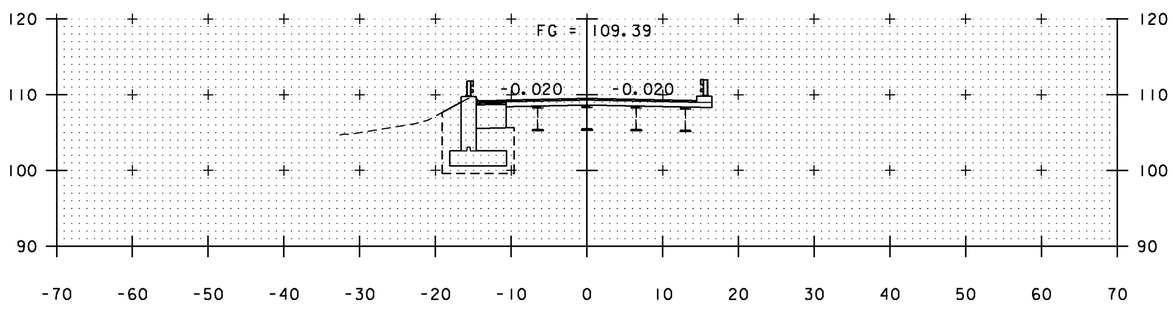
END BRIDGE
STA. 12+99.66



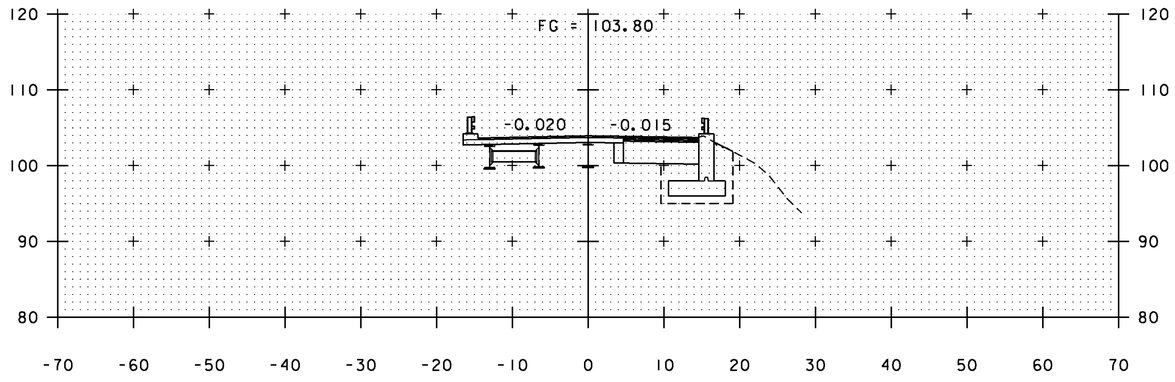
12+50



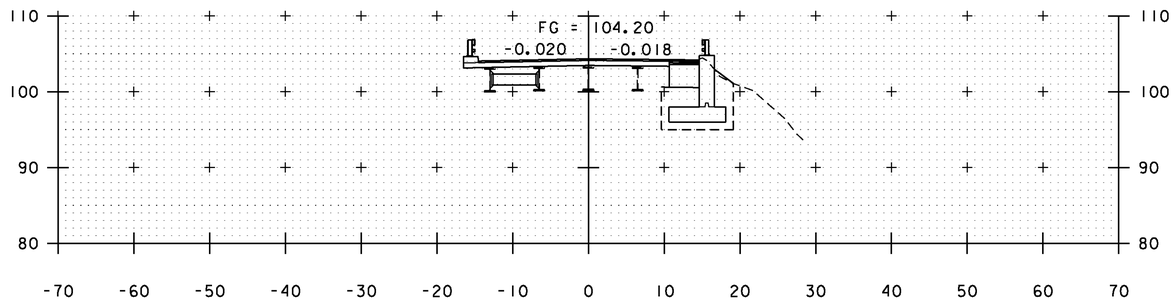
12+25



12+11



12+95



12+89

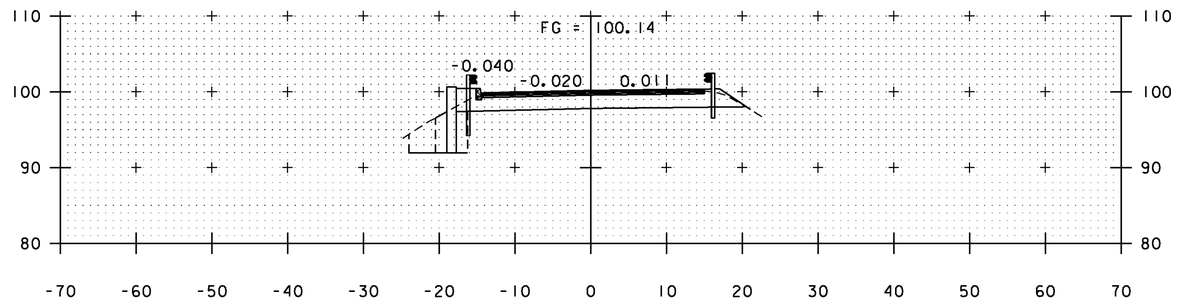
US RT 5 ROADWAY CROSS SECTIONS

STA. 12+11 THRU STA. 13+05

0 10 20
SCALE IN FEET

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260xs.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A US 5 CROSS SECTIONS (2 OF 3)	SHEET 38 OF 55



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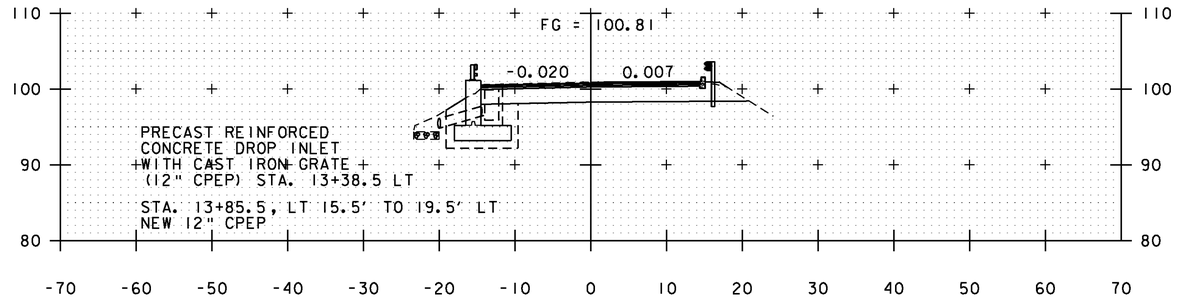

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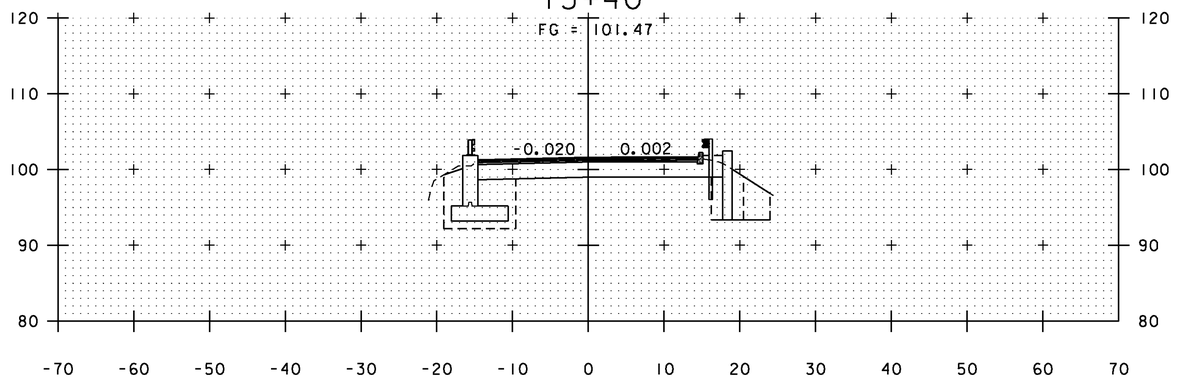

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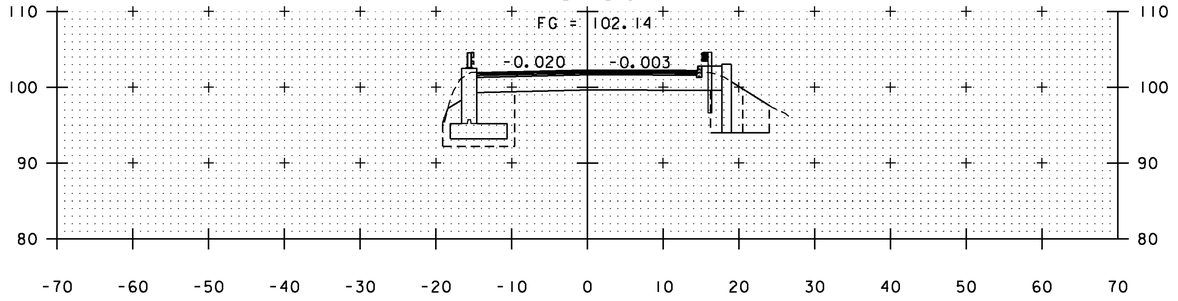

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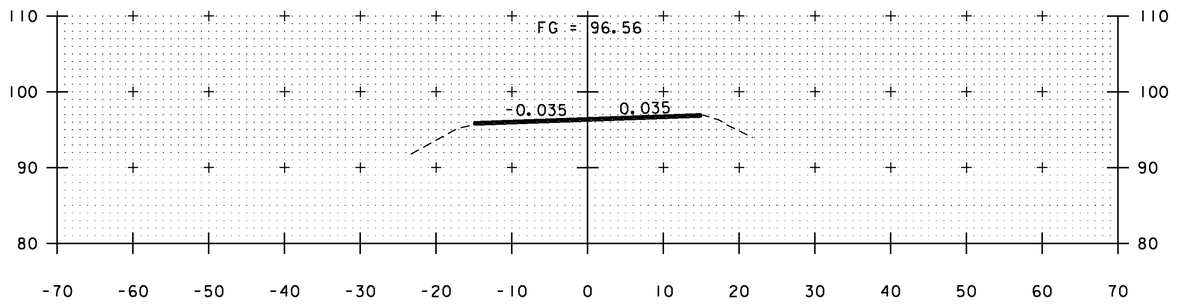
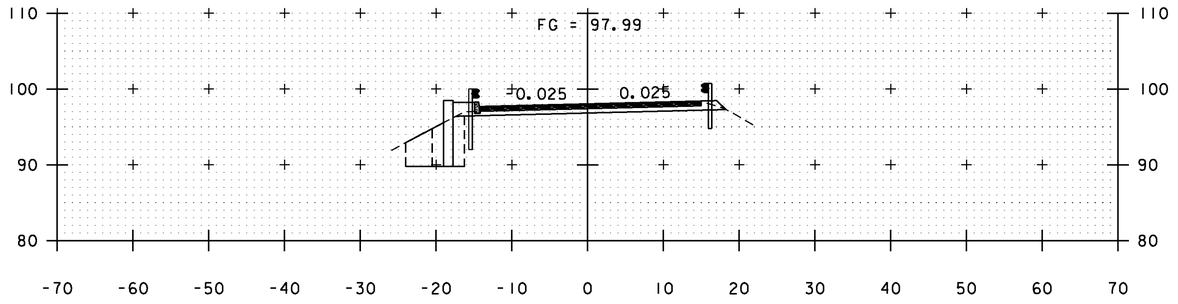
END APPROACH
STA. 14+02.00



14+00

END PROJECT
STA. 13+82.00



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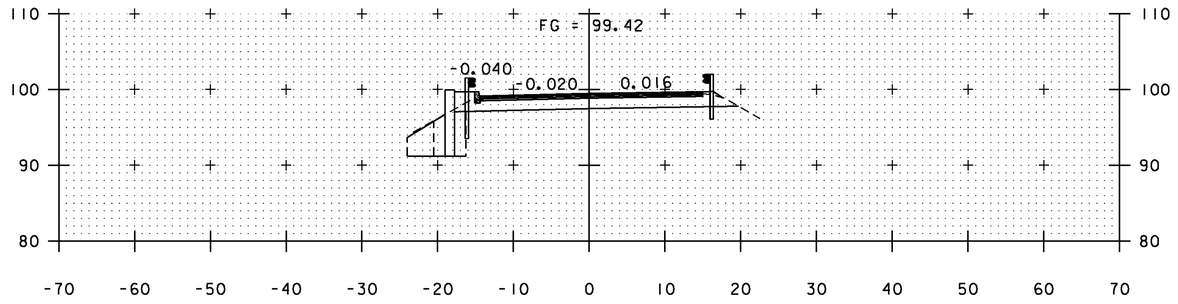


13+60

US RT 5 ROADWAY CROSS SECTIONS

STA. 13+20 THRU STA. 14+00

0 10 20
SCALE IN FEET

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260xs.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: A.J. GOUDREAU
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A US 5 CROSS SECTIONS (3 OF 3)	SHEET 39 OF 55

VHB 57537

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THE PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE DECK AND NEW WINGWALLS WITH RELATED APPROACH WORK. DURING CONSTRUCTION, TRAFFIC WILL BE DETOURED OFFSITE. THIS PROJECT IS LOCATED ON US ROUTE 5 LOCATED NORTH OF I-91 AND PASSES OVER THE NEW ENGLAND CENTRAL RAILROAD IN THE TOWN OF HARTLAND, VT. THE EXISTING BRIDGE IS APPROXIMATELY 99 FEET LONG WITH A 33 FOOT WIDE CONCRETE DECK. THE EXISTING SUBSTRUCTURE CONSISTS OF CONCRETE ABUTMENTS AND WINGWALLS.

THE BRIDGE REPLACEMENT INCLUDES THE REMOVAL OF THE EXISTING CONCRETE DECK IN ITS ENTIRETY AND THE CONSTRUCTION OF A NEW 99 FOOT SINGLE SPAN CONCRETE SLAB TO CREATE A NEW BRIDGE WIDTH OF 33 FEET. NEW CONCRETE ABUTMENTS AND WINGWALLS WILL BE FORMED IN PLACE AND ASSOCIATED APPROACH WORK INCLUDES THREE NEW APPROACH PRECAST RETAINING WALLS AND NEW GUARDRAIL.

THE SITE IS LOCATED AT LATITUDE N 43 DEGREES 34 MINUTES, LONGITUDE W 72 DEGREES 23 MINUTES.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, 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 0.21 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE ROAD IN THIS PROJECT AREA IS RELATIVELY FLAT IN A FOREST WITH OCCASIONAL OPEN AREAS AND FOLLOWS THE LAY OF THE SURROUNDING TOPOGRAPHY. US ROUTE 5 OVERPASSES INTERSTATE 89 JUST WEST OF THE PROJECT AND A RESIDENTIAL HOME IS JUST TO THE NORTH AND LEFT OF THE PROJECT AREA BUT NEITHER IS WITHIN THE PROJECT AREA.

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

NO SOILS NEAR NATURAL OR MAN-MADE WATERWAYS WILL BE DISTURBED. THE NEAREST WATERWAY, CONNECTICUT RIVER, IS APPROXIMATELY 0.2 MILES AWAY.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS AFFECTED BY THE EXCAVATION REQUIRED TO INSTALL THE NEW PRECAST CONCRETE WINGWALLS.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS ON THE PROJECT SITE ARE WINDSOR, LOAMY FINE SAND, 8% TO 15% SLOPES, "K FACTOR" = 0.17. THE SOIL IS CONSIDERED TO HAVE LOW EROSION POTENTIAL.

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: NO
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

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

1.4.1 MARK SITE BOUNDARIES

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

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

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.

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 NARROW. 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.

CHECK STRUCTURES ARE NOT ANTICIPATED FOR THIS PROJECT.

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 EROSION CONTROL STRUCTURES ARE NOT ANTICIPATED FOR THIS PROJECT.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

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

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

1.4.9 WINTER STABILIZATION

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

1.4.10 STABILIZE SOIL AT FINAL GRADE

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

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

1.4.11 DE-WATERING ACTIVITIES

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

DEWATERING IS NOT ANTICIPATED FOR THIS PROJECT.

1.4.12 INSPECT YOUR SITE

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

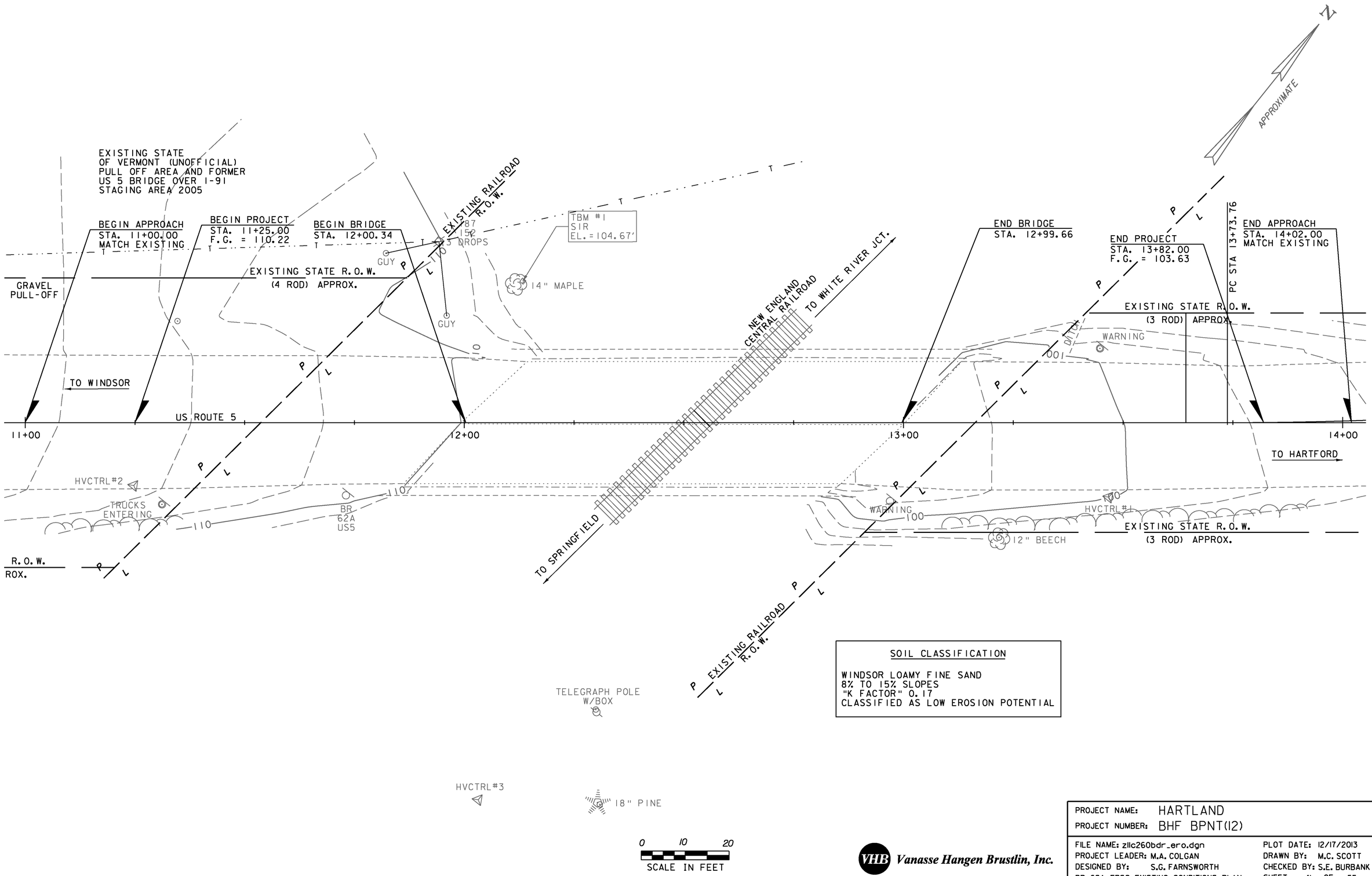
1.5 SEQUENCE AND STAGING

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

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

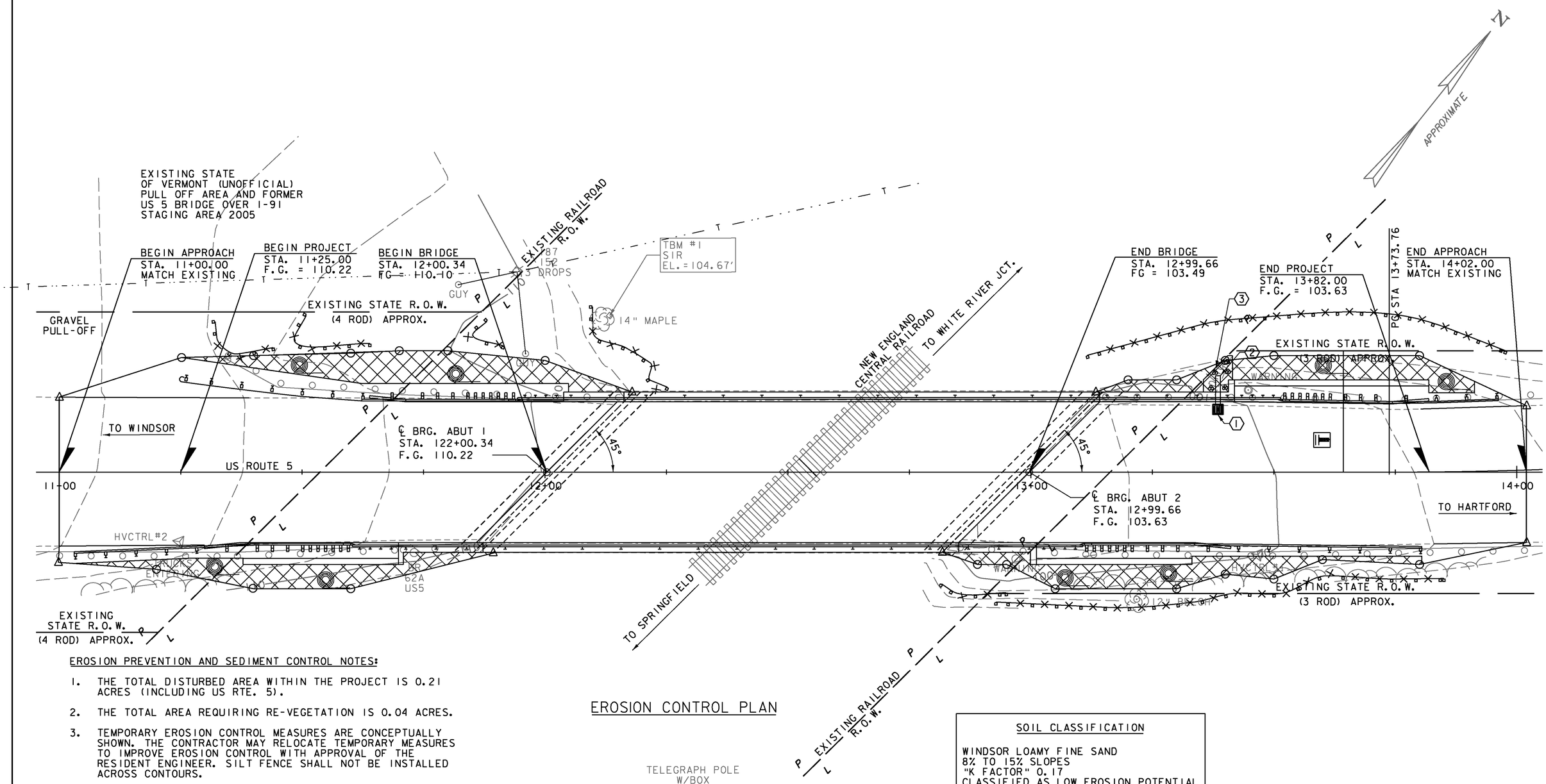


SOIL CLASSIFICATION

WINDSOR LOAMY FINE SAND
8% TO 15% SLOPES
"K FACTOR" 0.17
CLASSIFIED AS LOW EROSION POTENTIAL

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260bdr_ero.dgn	PLOT DATE: 12/17/2013
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A EPSC EXISTING CONDITIONS PLAN	SHEET 41 OF 55



EROSION CONTROL PLAN

EROSION PREVENTION AND SEDIMENT CONTROL NOTES:

1. THE TOTAL DISTURBED AREA WITHIN THE PROJECT IS 0.21 ACRES (INCLUDING US RTE. 5).
2. THE TOTAL AREA REQUIRING RE-VEGETATION IS 0.04 ACRES.
3. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
4. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER.
5. REFER TO EPSC DETAILS SHEETS FOR ADDITIONAL DETAILS.
6. SEE SHEET 9 FOR EPSC LAYOUT PLAN SYMBLOGY.

SOIL CLASSIFICATION

WINDSOR LOAMY FINE SAND
8% TO 15% SLOPES
"K FACTOR" 0.17
CLASSIFIED AS LOW EROSION POTENTIAL

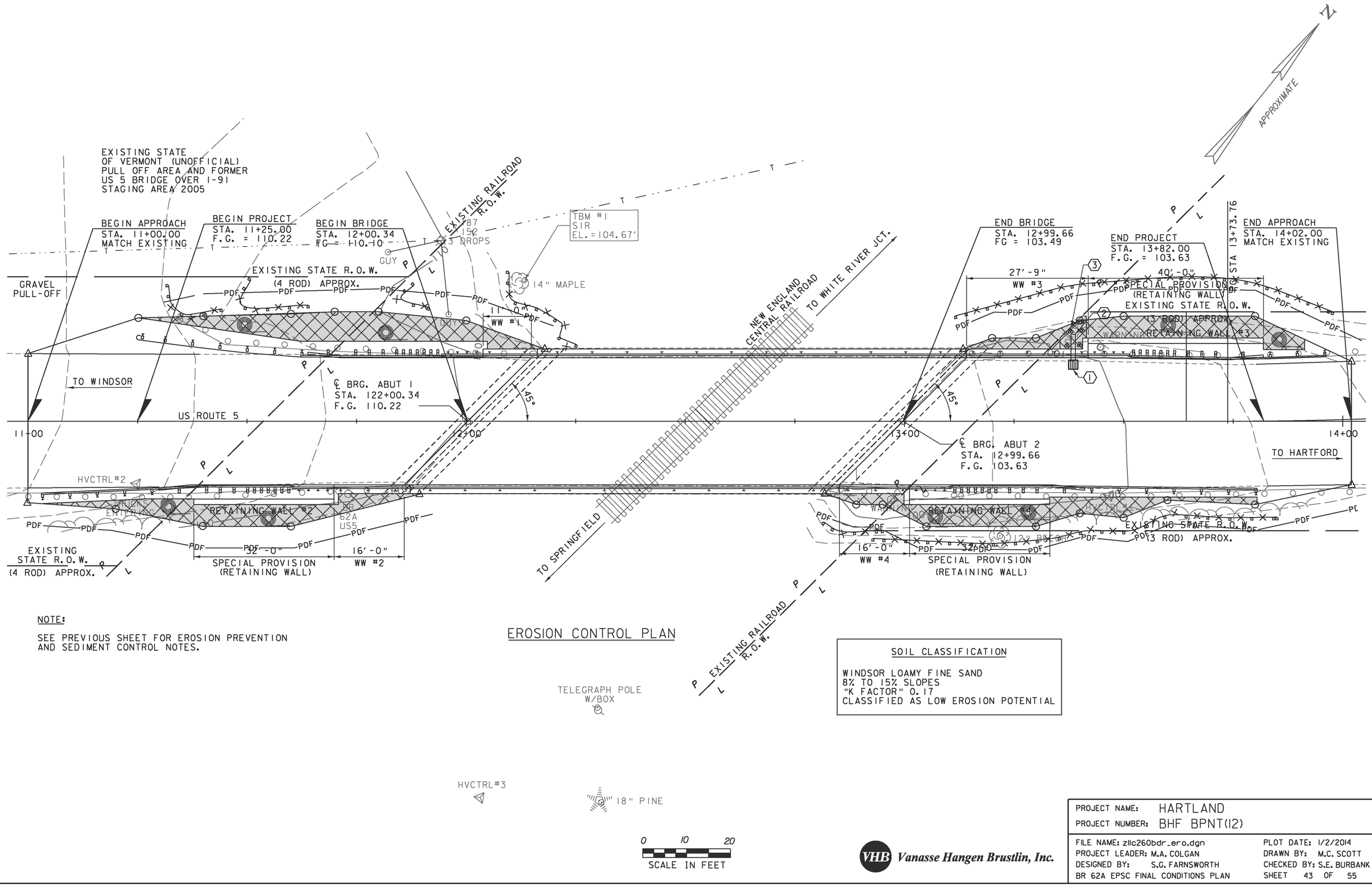
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT(12)

FILE NAME: z11c260bdr_ero.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S.G. FARNSWORTH
BR 62A EPSC CONSTRUCTION CONDIT. PLAN

PLOT DATE: 1/2/2014
DRAWN BY: M.C. SCOTT
CHECKED BY: S.E. BURBANK
SHEET 42 OF 55

VHB 57537



NOTE:

SEE PREVIOUS SHEET FOR EROSION PREVENTION AND SEDIMENT CONTROL NOTES.

EROSION CONTROL PLAN

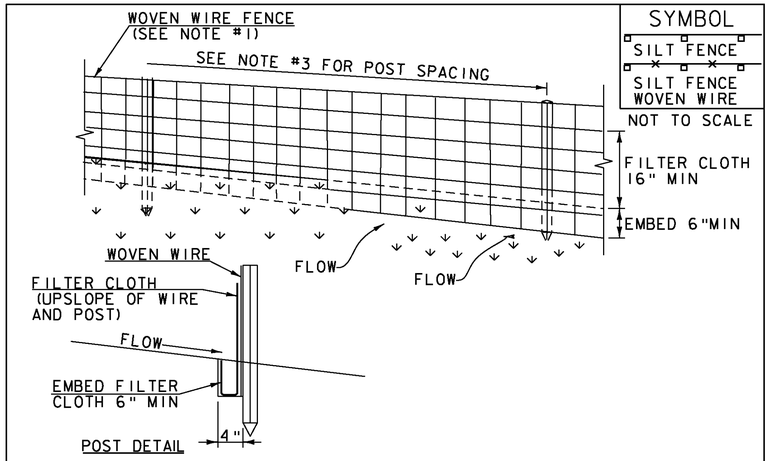
SOIL CLASSIFICATION

WINDSOR LOAMY FINE SAND
8% TO 15% SLOPES
"K FACTOR" 0.17
CLASSIFIED AS LOW EROSION POTENTIAL

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: zllc260bdr_ero.dgn	PLOT DATE: 1/2/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: M.C. SCOTT
DESIGNED BY: S.G. FARNSWORTH	CHECKED BY: S.E. BURBANK
BR 62A EPSC FINAL CONDITIONS PLAN	SHEET 43 OF 55

VHB 57537



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 50' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

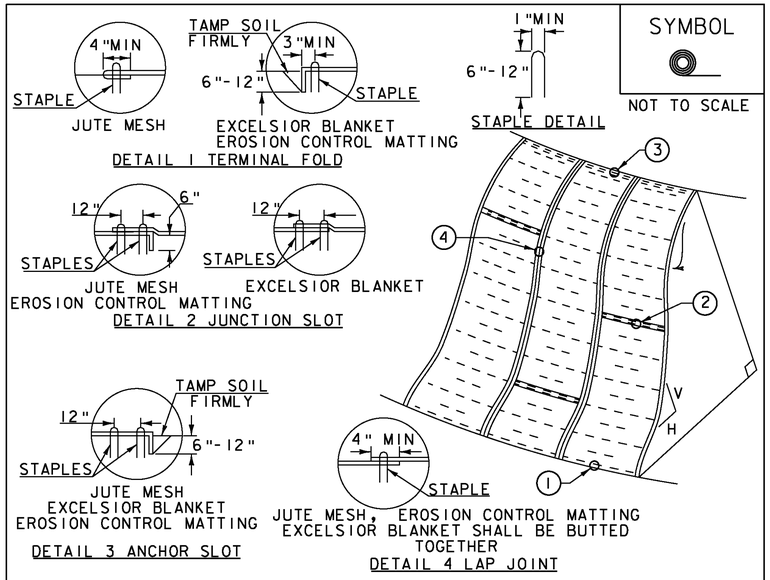
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

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

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

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



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

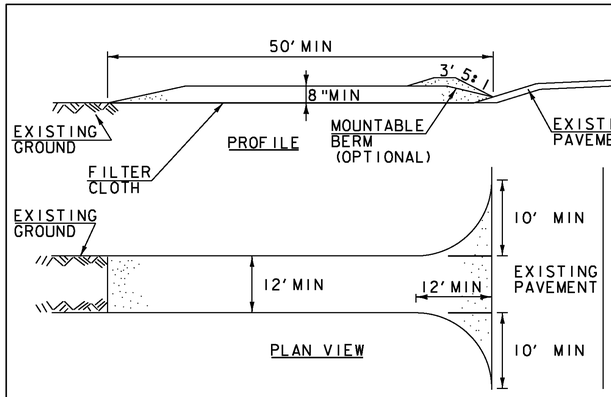
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED 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

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260epsc.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S. FARNSWORTH
EPSC DETAILS (1 OF 2)

PLOT DATE: 12/17/2013
DRAWN BY: J.L. LEMIEUX
CHECKED BY: S. FARNSWORTH
SHEET 44 OF 55

VHB 57537

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			

GENERAL GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	19-19-19	PELLETIZED	LIQUID
500 LBS/AC		2 TONS/AC	4.4 GAL/AC

CONSTRUCTION GUIDANCE

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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF

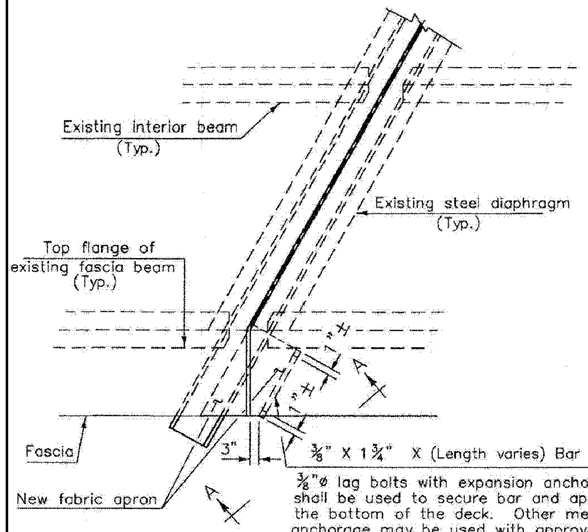
Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HARTLAND
PROJECT NUMBER: BHF BPNT (12)

FILE NAME: z11c260epsc.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: S. FARNSWORTH
EPSC DETAILS (2 OF 2)

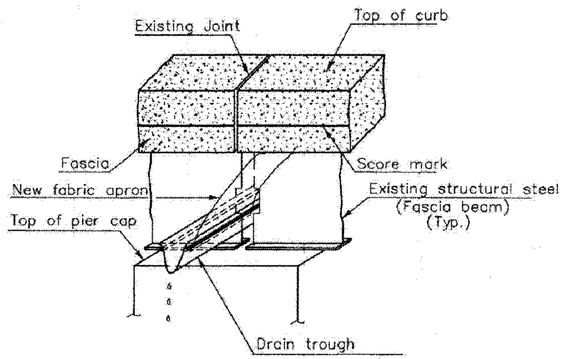
PLOT DATE: 12/17/2013
DRAWN BY: J.L. LEMIEUX
CHECKED BY: S. FARNSWORTH
SHEET 45 OF 55

VHB 57537



TYPICAL PARTIAL PLAN VIEW AT PIER

N.T.S.



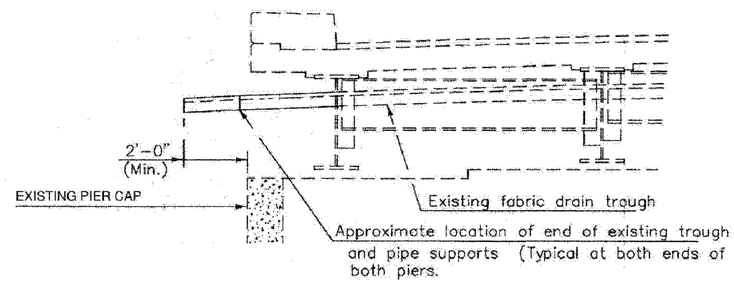
VIEW A–A

N.T.S.

THE COST OF THE 3/8 INCH BAR, ADHESIVE, AND ANCHORAGE BOLTS SHALL BE INCIDENTAL TO THE ITEM 900.640 SPECIAL PROVSION (REMOVE AND REPLACE DRAIN TROUGH).

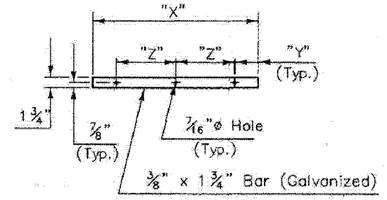
	"X"	"Y"	"Z"	NO. OF HOLES REQ'D	NO. OF BARS REQ'D
PIER 1	2'-6"	3"	8"	4	2
PIER 2	2'-6"	3"	8"	4	2

The Contractor shall field verify that the "X" dimension is correct prior to fabricating the bars



DETAILS FOR EXTENDING DRAIN TROUGH AND SUPPORT PIPES

N.T.S.

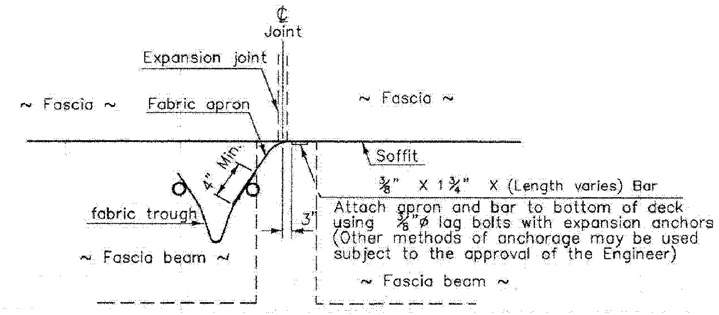


BAR DETAILS

SCALE: 1' = 1'-0"

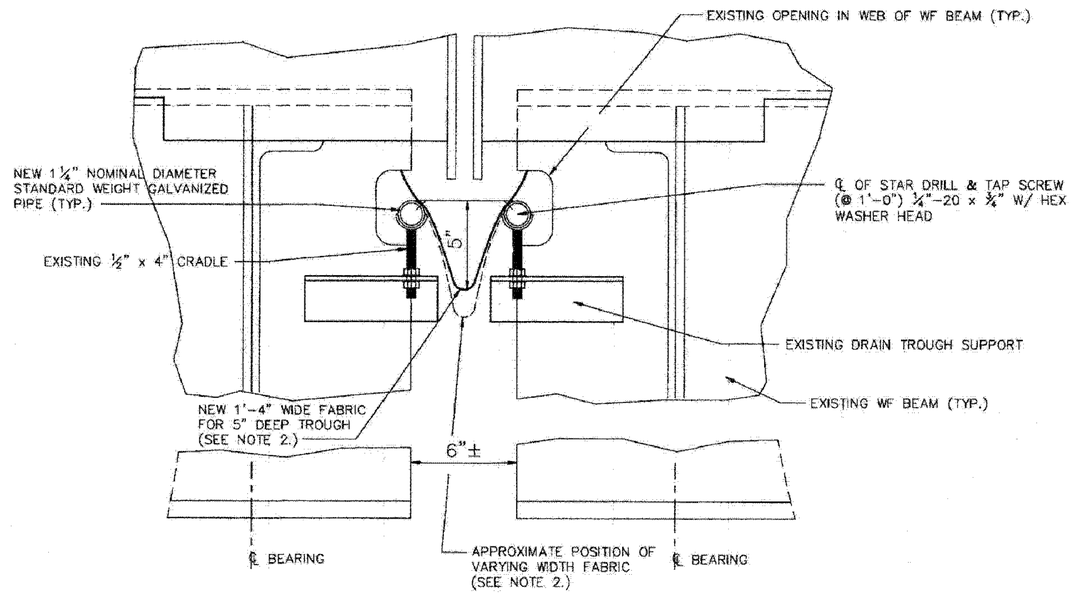
NOTES:

1. THE CONTRACTOR SHOULD BID ON THE COMPLETE REMOVAL AND TOTAL REPLACEMENT OF THE ENTIRE EXISTING DRAIN TROUGHS AND ALL RELATED HARDWARE AND COMPONENTS. THE ENGINEER WILL ONLY EVALUATE THE EXISTING CONDITIONS OF THE DRAIN TROUGH SUPPORTS ATTACHED TO THE BEAMS INCLUDING THE ½" X 4" CRADLES FOR POSSIBLE REUSE.
2. FABRIC USED IN THE CONSTRUCTION OF THE DRAIN TROUGHS SHALL BE A THREE PLY PREFORMED FABRIC MATERIAL AS SPECIFIED IN SUBSECTION 707.07. IT WILL BE ONE CONTINUOUS STRIP. THE APPROXIMATE WIDTH FOR A 5" DEEP TROUGH IS ABOUT 16". HOWEVER A VARYING WIDTH MAY BE REQUIRED TO MAINTAIN A MINIMUM FLOW LINE GRADE OF ½" PER FOOT. A STEEPER GRADE IS DESIRABLE. THE ENGINEER WILL DETERMINE THE GRADE FOR EACH TROUGH BASED ON FIELD CONDITIONS.
3. 1¼" (NOMINAL DIAMETER) STANDARD WEIGHT GALVANIZED PIPE SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF TROUGH. ALL COSTS FOR THE PIPE AND COUPLINGS, SUPPORTS, CRADLES, SCREWS AND RELATED HARDWARE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE APPROPRIATE CONTRACT 900.640 DRAIN TROUGH ITEM.
4. THE ENGINEER WILL DETERMINE THE CROSS SLOPE OF EACH DRAIN AND REQUIRED TOTAL LENGTH OF EACH NEW DRAIN TROUGH LOCATION PRIOR TO REMOVAL OF THE EXISTING TROUGH.



ELEVATION VIEW OF APRON AT FASCIA

N.T.S.



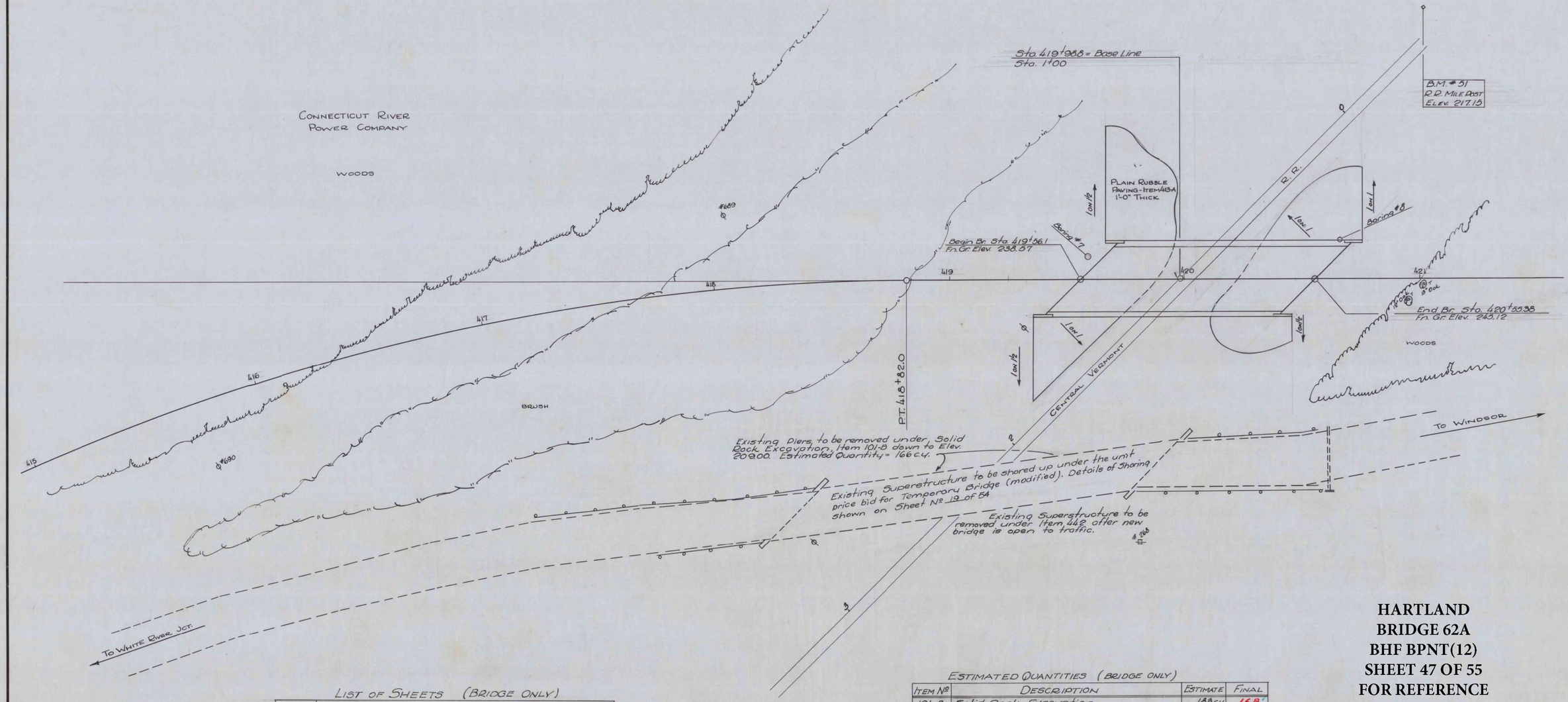
DRAIN TROUGH REPLACEMENT DETAIL

N.T.S

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HARTLAND
PROJECT NUMBER:	BHF BPNT(12)
FILE NAME: z11c260drain_trough.dgn	PLOT DATE: 1/3/2014
PROJECT LEADER: M.A. COLGAN	DRAWN BY: VTRANS
DESIGNED BY: VTRANS	CHECKED BY: S.G. FARNSWORTH
BR 66 DRAIN TROUGH DETAILS	SHEET 46 OF 55

VHB 57537



List of Sheets (Bridge Only)

11	Plan Sheet (1" = 20'-0")
12	Profile & Boring Sheet (1" = 20'-0")
13	Earthwork Sheet
14	Superstructure Details
15	Bridge Railing & Spiral Welding Details
16	Abutment No. 1 Details
17	Abutment No. 2 Details
18	Reinforcing Steel Details
19	Temporary Shoring - Overpass over C.V.R.R.
20	Std. Dwg. SB 20 - Det. D, E, H, J, K & L
21	Std. Dwg. SB 11 (Barricades, Signs & Lights)
22-28	Structure Sections

Estimated Quantities (Bridge Only)

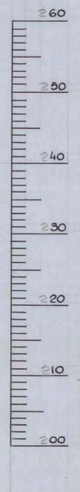
Item No.	Description	Estimate	Final
101-B	Solid Rock Excavation	183 cy.	168
102	Borrow	1428 cy	1380
106-C	Unclass. Channel Excavation	123 cy	728
107	Structure Excavation	45 cy	42
361-B	Bituminous Conc. Pavement (Class I)	41 tons	40
401-B	Concrete, Class "B" (modified)	232 cy	223
402	Reinforcing Steel	28455 lbs	28,508
402-A	Spiral Reinforcement	1120 lbs	995
403-A	Structural Steel	158000 lbs	155,842
413-A	Plain Rubble Paving	281 cy	517
441	Temporary Bridge (modified)	1 l.s.	1
442	Removal of Present Superstructure	1 l.s.	1
501	Furn. Equipment for Driving Piles	1 l.s.	1
502-B	Treated Timber Piling	1830 l.f.	1843
502-B1	Cutoffs, Treated Timber Piling	180 l.f.	403
502-C	Metal Shoes for Timber Piling	60 ea	60
556-C	Granite Bridge Curb	199 l.f.	199
572	Bridge Railing	188 l.f.	188

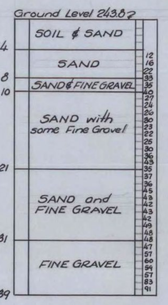
HARTLAND
BRIDGE 62A
BHF BPNT(12)
SHEET 47 OF 55
FOR REFERENCE
ONLY

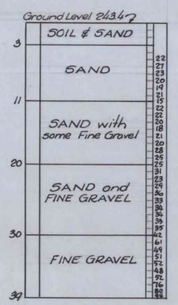
HARTLAND
Project F.G. 77(11)
Sheet 11 of 54 Sheets

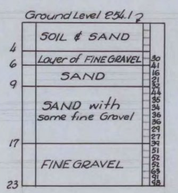
Weight of Hammer 350# - Thickness of Shell=⅜"
Drop of Hammer= 24" - Diameter of Casing=12"

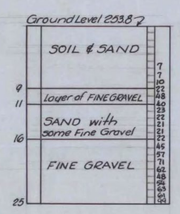
Elevations for Borings 1 thru 6

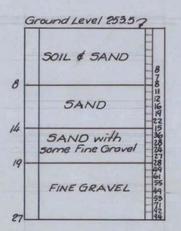






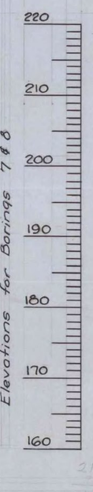




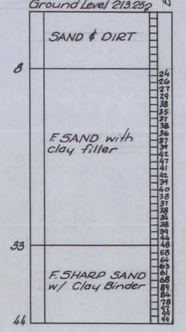


BORINGS 1 TO 6 NOT USED

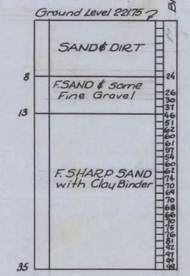
Elevations for Borings 7 & 8



BOTT. FOOTING ABUT. #1

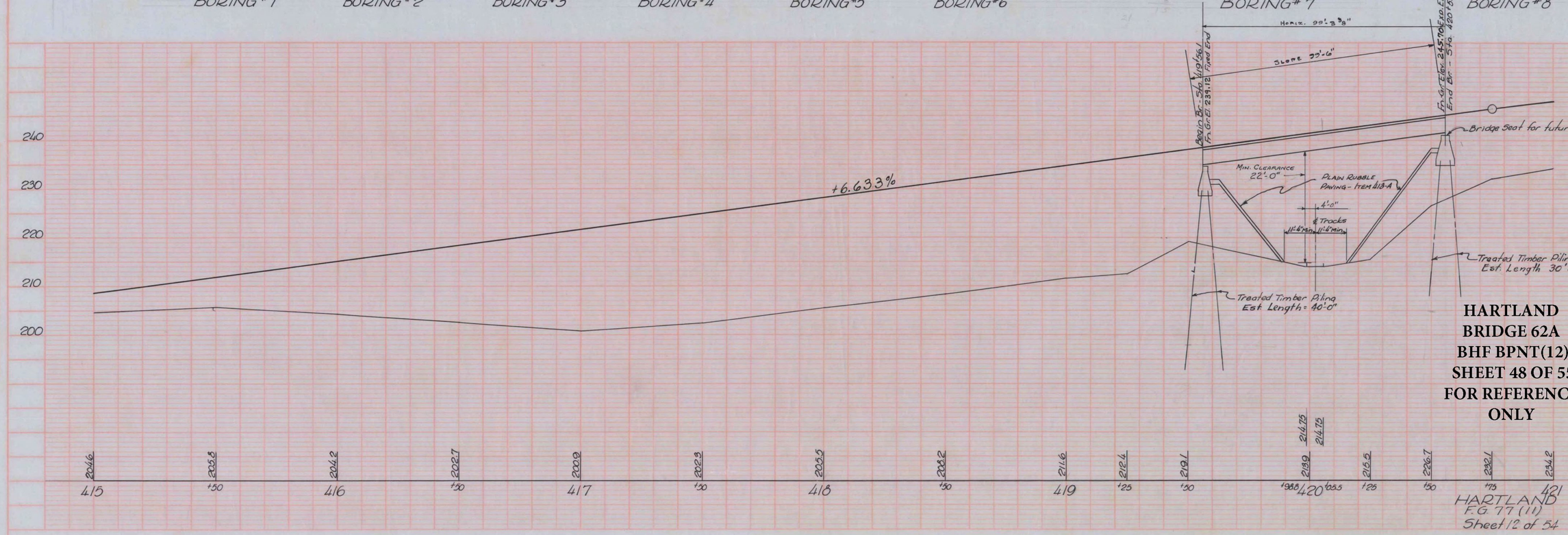


TRACK LEVEL



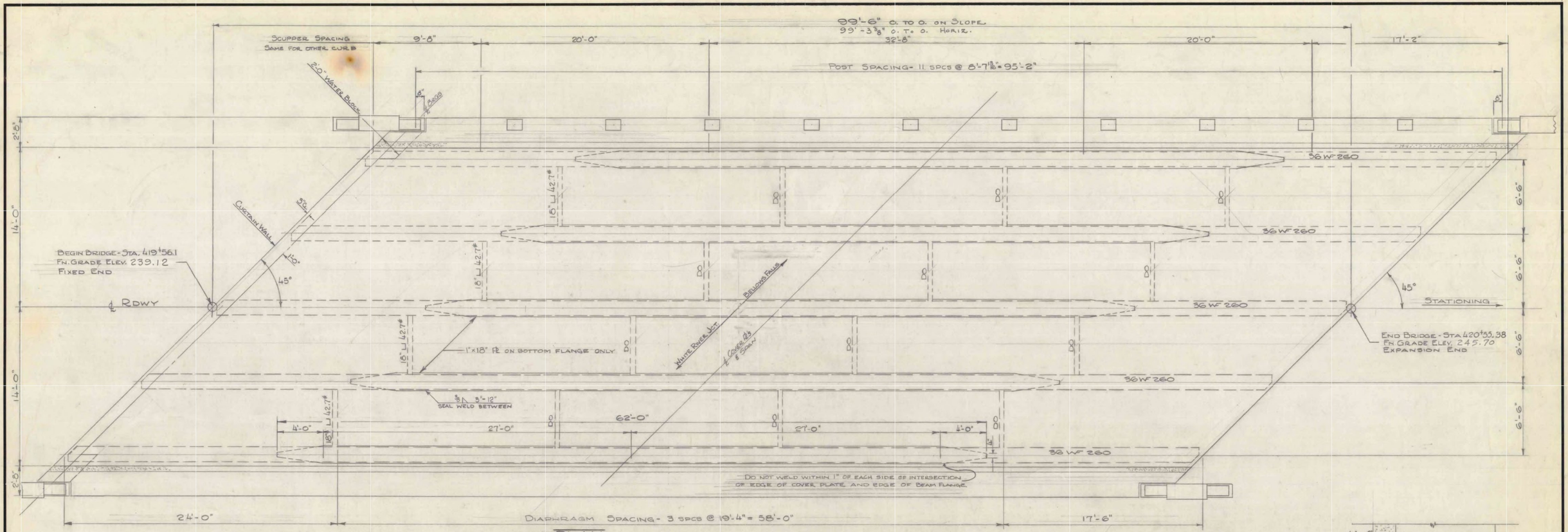
FOR LOCATION OF BORINGS 7 & 8
SEE SHEET Nº 11 of 54

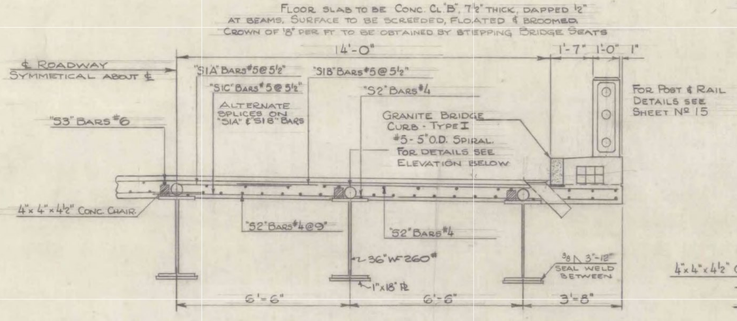
BORING #1 BORING #2 BORING #3 BORING #4 BORING #5 BORING #6 BORING #7 BORING #8



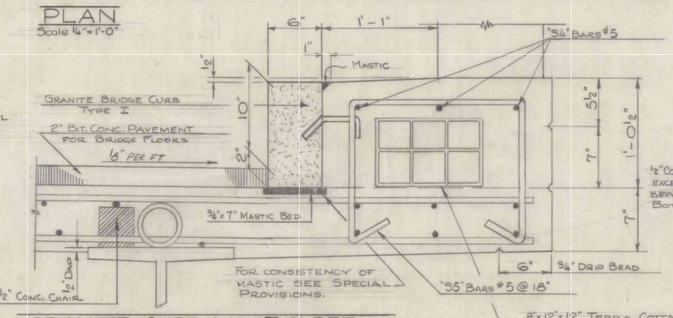
HARTLAND
F.G. 77 (11)
Sheet 12 of 54

HARTLAND
BRIDGE 62A
BHF BPNT(12)
SHEET 48 OF 55
FOR REFERENCE
ONLY

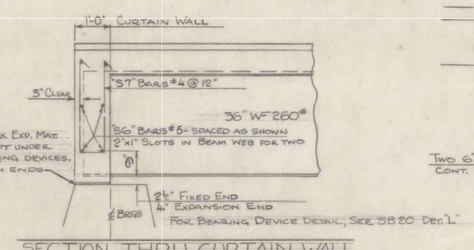




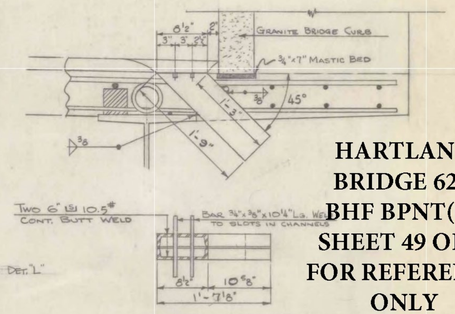
TYPICAL HALF SECTION
Scale 3/8" = 1'-0"



GRANITE CURB & MASTIC DETAIL
Scale 1½" = 1'-0"

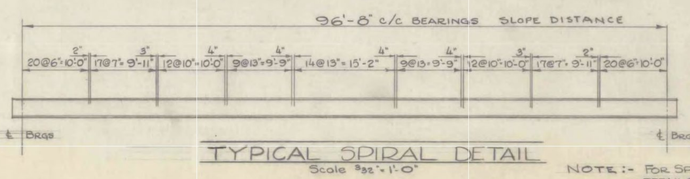


SECTION THRU CURTAIN WALL
Scale ½" = 1'-0"



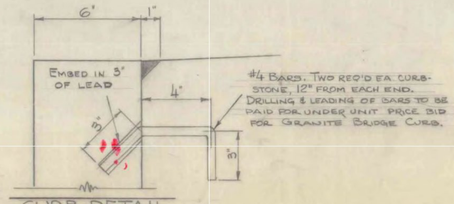
SCUPPER DETAIL
Scale 1" = 1'-0"

8"x12"x12" Terra Cotta partition tile. Place on side. Run cells parallel to bridge. Omit tile where necessary for reinforcing steel in railing posts. Plug openings to prevent hollow tile from filling with concrete. Tile to be paid for under unit price bid for Conc. Cl. "B", Item 401-B. In computing the volume of concrete, no deduction shall be made for the volume displaced by this tile.



TYPICAL SPIRAL DETAIL
Scale 3/32" = 1'-0"

NOTE:- For spiral welding details see Bridge Railing Detail Sheet No. 15



CURB DETAIL
Scale 3" = 1'-0"

NOTES:-

All beams to be rolled to a true circular camber the full length of beam. The middle ordinate shall be 3.7". Concrete shall be Class B modified.

One half bag additional cement, over and above the amount shown in State of Vermont Dept. of Highways, Std. Specifications for Road and Bridge Construction, dated Nov. 1948, shall be added to each cubic yard of Class B, C, & D concrete.

See Special Provisions for Curing Concrete.

FINAL QUANT.

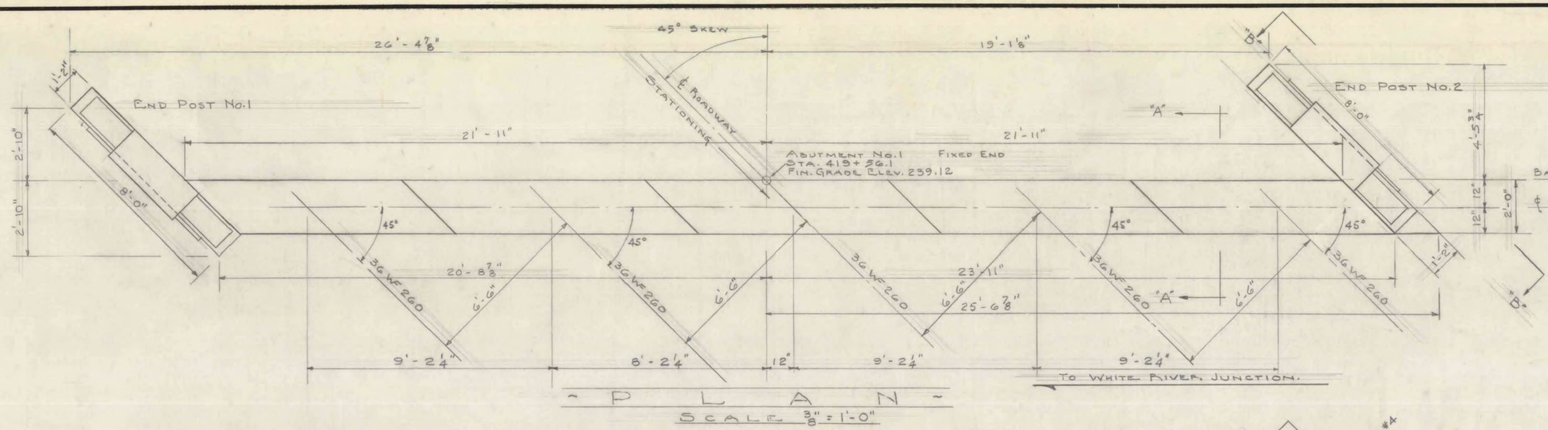
40	361-B	Bituminous Conc. Pavement (Class I)	41 Tons
105	401-B	Concrete, Class "B" (Mod.)	112 C.Y.
	402	Reinforcing Steel (See Reinf. Steel Sheet)	
995	402-A	Spiral Reinforcement	1120 Lbs.
155,842	403-A	Structural Steel	158000 Lbs.
199	556-C	Granite Bridge Curb	199 L.F.
188	572	Bridge Railing (Mod)	188 L.F.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Town of HARTLAND
Route No. US 5 B62A Log Sta. 204+82
Superstructure Details

Scale As noted
Surveyed by Funk
Drawn by JT Checked by J.L.H.
Project No. FG. 77 (11)
Sheet 14 of 54

HARTLAND
BRIDGE 62A
BHF BPNT(12)
SHEET 49 OF 55
FOR REFERENCE ONLY

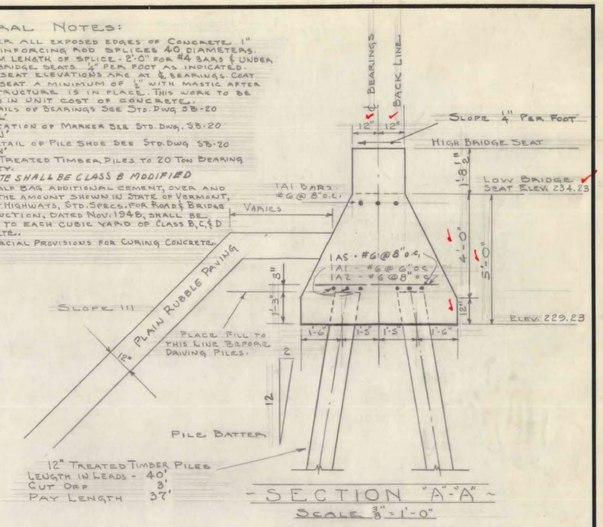


~ P L A N ~

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

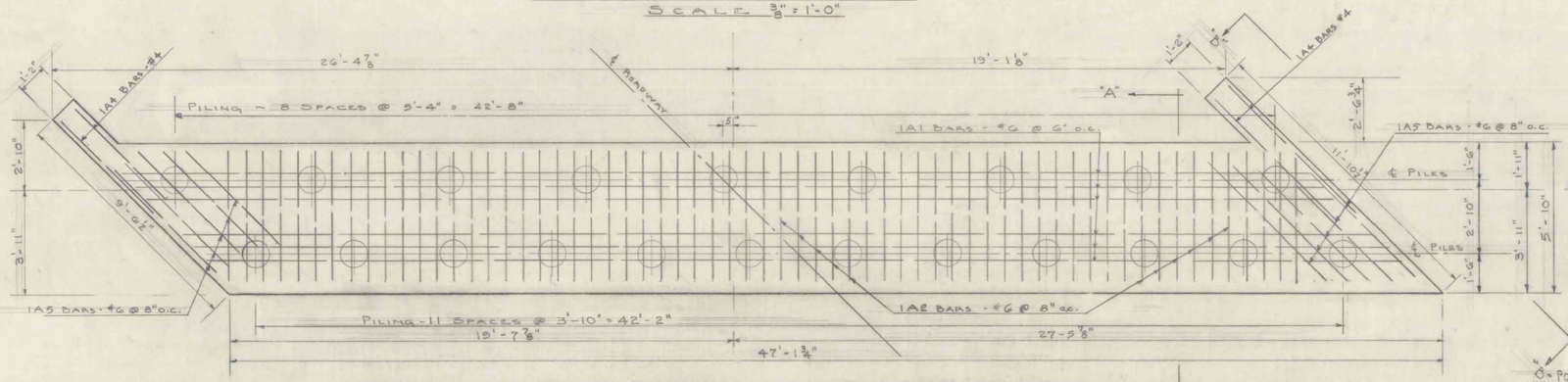
GENERAL NOTES:

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 1"
2. LAP REINFORCING ROD SPLICES 40 DIAMETERS. MINIMUM LENGTH OF SPLICE - 2'-0" FOR #4 BARS & UNDER
3. SLOPE BRIDGE SEATS $\frac{1}{4}$" PER FOOT AS INDICATED. BRIDGE SEAT ELEVATIONS ARE AT ℄ BEARINGS. COAT BRIDGE SEAT A MINIMUM OF $\frac{1}{2}$" WITH MASTIC AFTER SUPERSTRUCTURE IS IN PLACE. THIS WORK TO BE INCLUDED IN UNIT COST OF CONCRETE.
4. FOR DETAILS OF BEARINGS SEE STD. DWG. 88-20 DETAIL 'L'
5. FOR LOCATION OF MARKER SEE STD. DWG. 88-20 DETAIL 'J'
6. FOR DETAIL OF PILE SHOE SEE STD. DWG. 88-20 DETAIL 'N'
7. DRIVE TREATED TIMBER PILES TO 20 TON BEARING CAPACITY.
8. CONCRETE SHALL BE CLASS B MODIFIED
9. ONE-HALF BAG ADDITIONAL CEMENT, OVER AND ABOVE THE AMOUNT SHOWN IN STATE OF VERMONT, DEPT. OF HIGHWAYS, STD. SPECS. FOR ROADS & BRIDGE CONSTRUCTION, DATED NOV. 1948, SHALL BE ADDED TO EACH CUBIC YARD OF CLASS B, C & D CONCRETE.
10. SEE SPECIAL PROVISIONS FOR CURING CONCRETE.



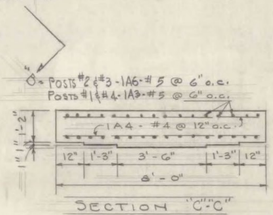
~ SECTION "A"-"A" ~

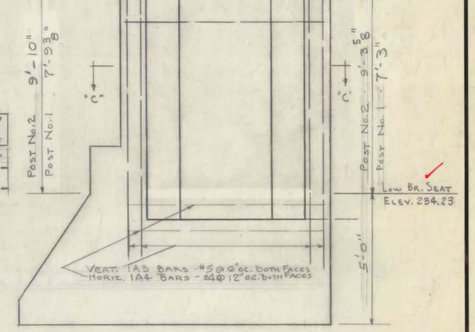
SCALE $\frac{3}{8}$" = 1'-0"



~ F O U N D A T I O N P L A N ~ "A"

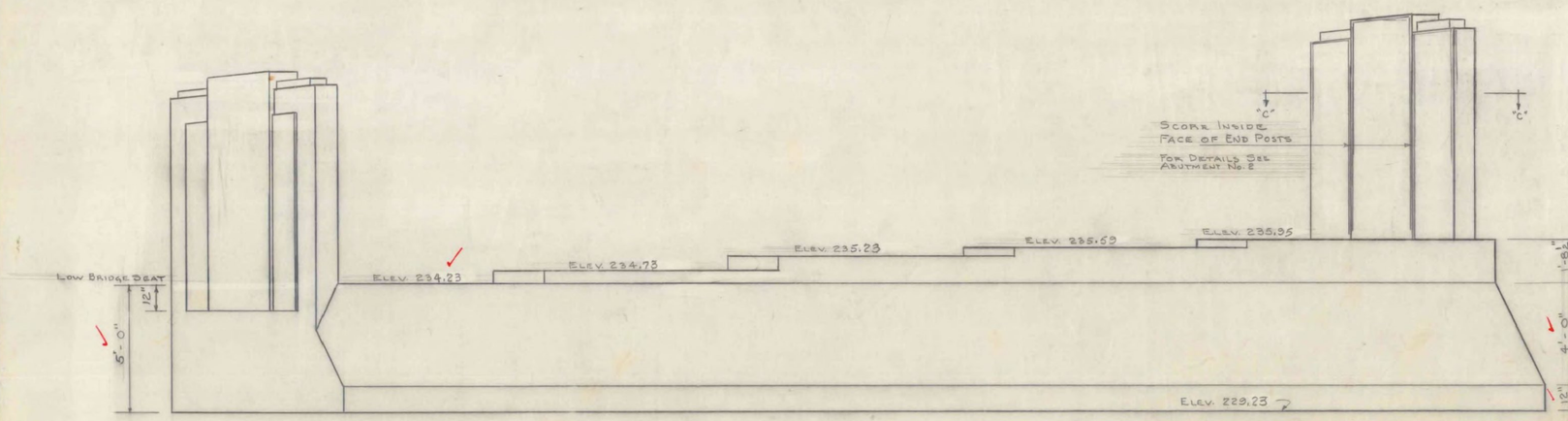
SCALE $\frac{3}{8}$" = 1'-0"





~ E L E V A T I O N "B"-"B" ~

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



~ E L E V A T I O N ~

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

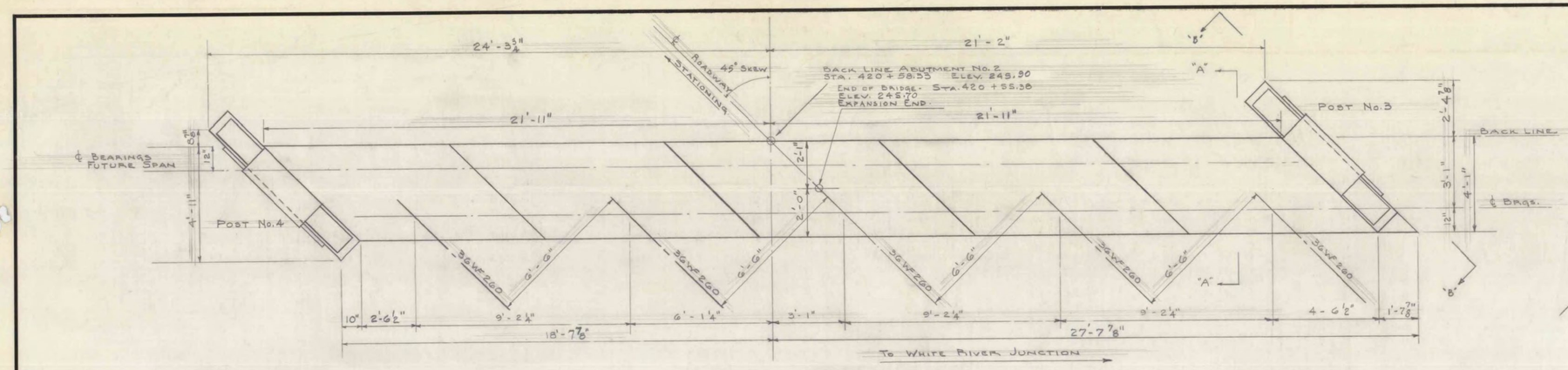
HARTLAND
BRIDGE 62A
BHF BPNT(12)
SHEET 50 OF 55
FOR REFERENCE ONLY

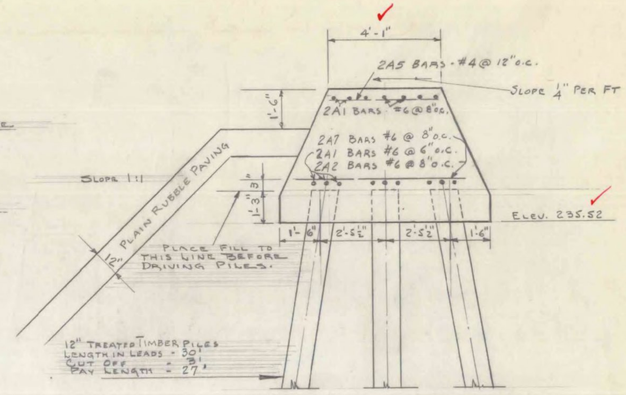
Final	ITEM	DESCRIPTION	QUANTITY
80'	101-B	SOLID ROCK EXCAV.	87 C.Y.
740	102	BORROW	766 C.Y.
188	106-C	UNCL. CHANNEL EXCAVATION	34 C.Y.
19	107	STRUCTURE EXCAVATION, MODIFIED	20 C.Y.
49	401-B	CONCRETE, CLASS B, MODIFIED	50 C.Y.
	402	REINFORCING STEEL	SEE SCHED.
261	413-A	PLAIN RUBBLE PAVING	145 C.Y.
1	501	FURNISH EQUIP. FOR DRIVING PILES	1 L.S.
682	502-B	TREATED TIMBER PILING	777 L.F.
175	502-B1	CUT OFFS, TREATED TIMBER PILING	63 L.F.
21	502-C	METAL SHOES FOR TIMBER PILING	21

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTLAND
ROUTE No. US-5 LOG STA. 204+82
ABUTMENT NO. 1

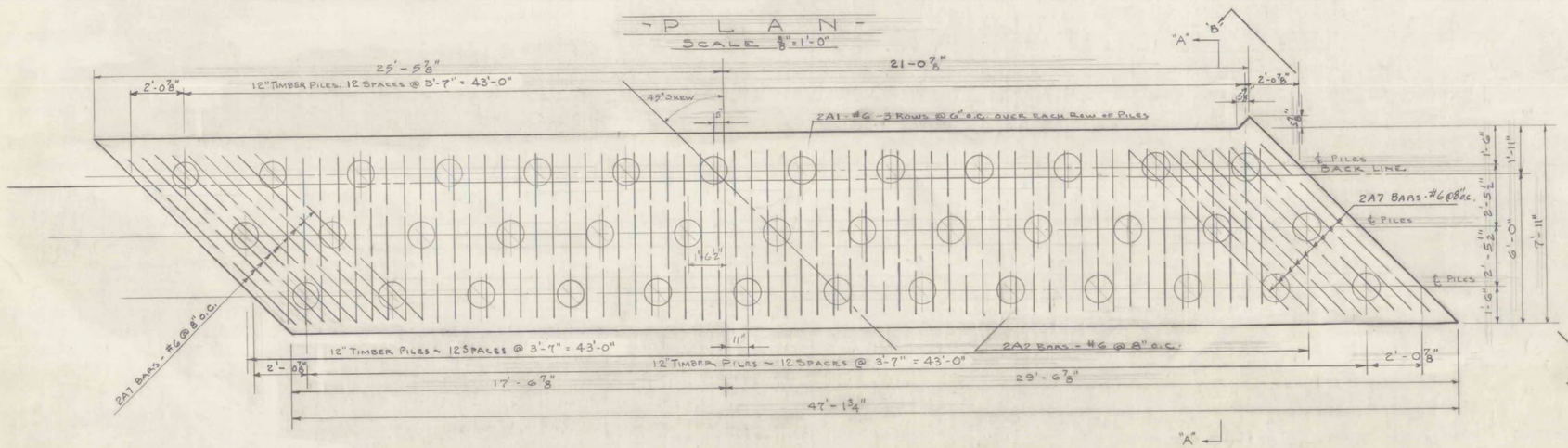
SCALE $\frac{3}{8}$" = 1'-0"
SURVEYED BY FUNK
DRAWN BY R.B.M. CHECKED BY J.L.H.
PROJECT NO. FG-77(11)
SHEET 16 OF 54



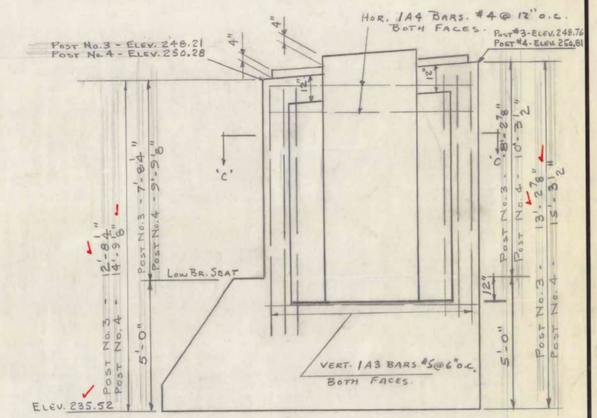


SECTION 'A-A'
SCALE 3/8" = 1'-0"

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



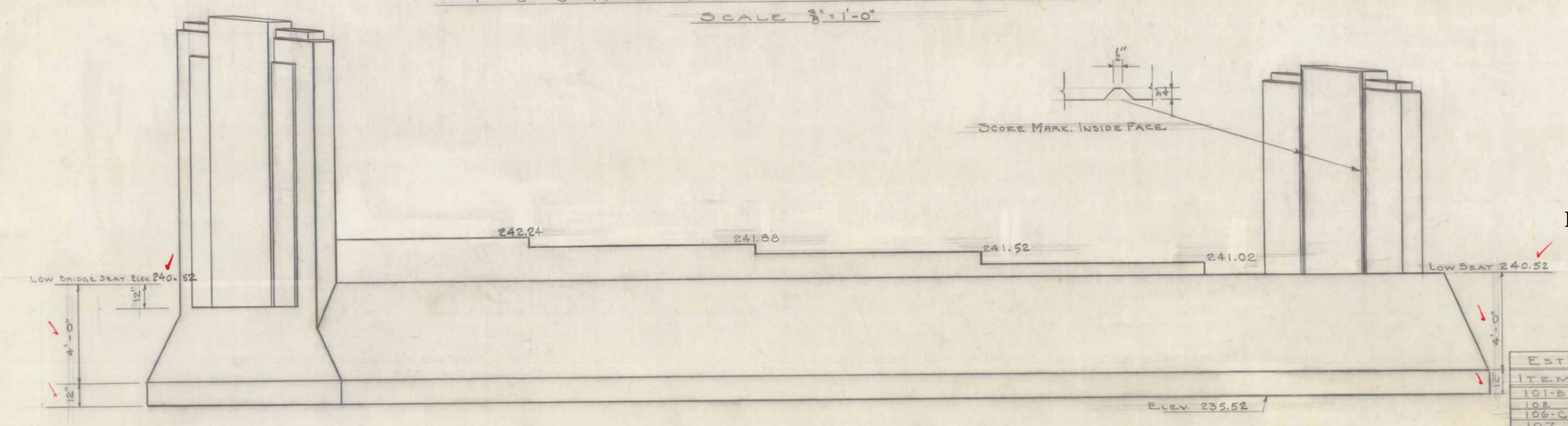
- FOUNDATION PLAN -
SCALE 3/8" = 1'-0"



ELEVATION 'B-B'
SCALE 3/8" = 1'-0"

For Section 'C'-'C', See Abut. No. 1

For General Notes See Abutment No. 1.



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

HARTLAND
BRIDGE 62A
BHF BPNT(12)
SHEET 51 OF 55
FOR REFERENCE ONLY

ESTIMATE OF QUANTITIES

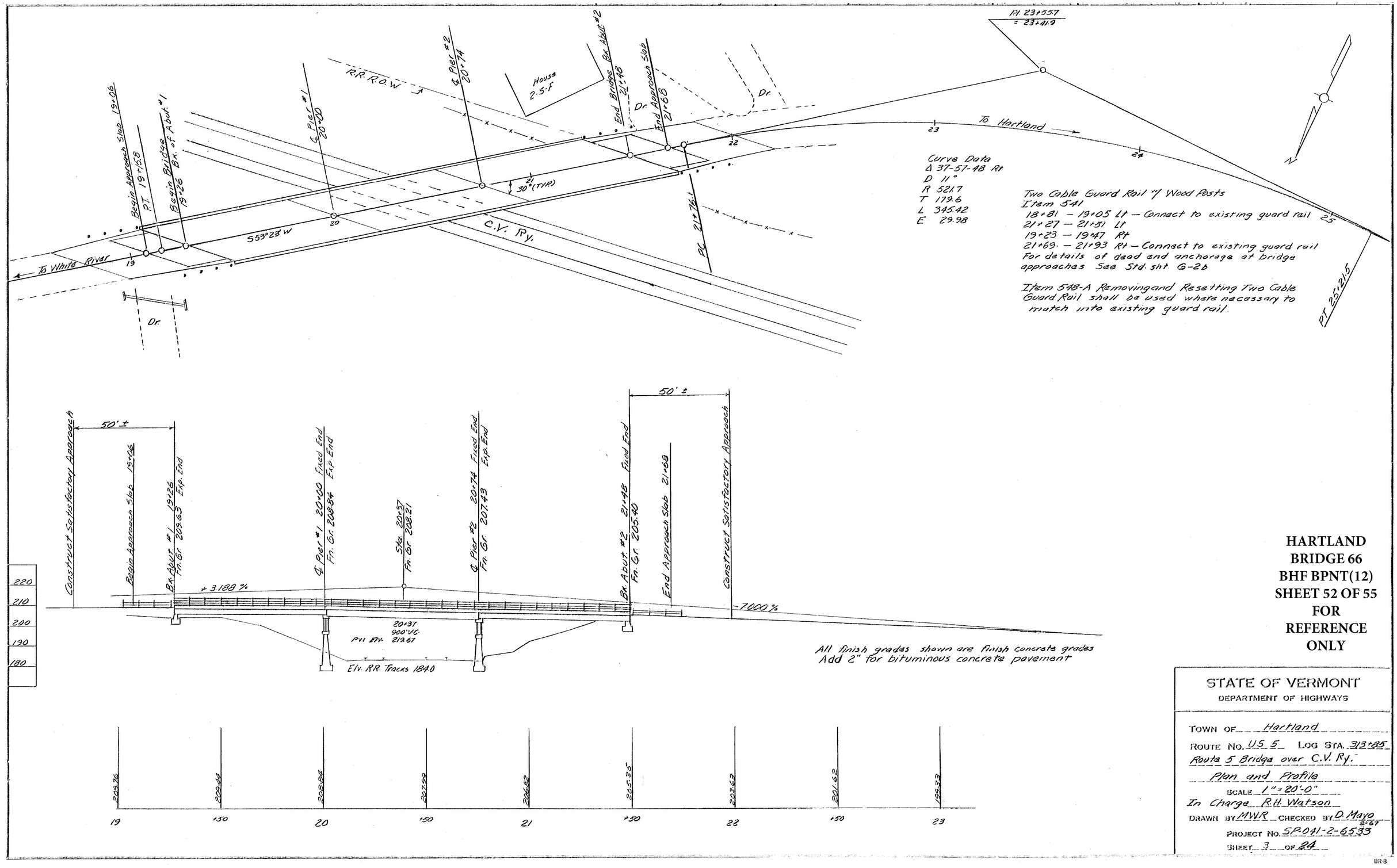
ITEM	DESCRIPTION	QUANTITY
101-B	SOLID ROCK EXCAV.	26 C.Y.
102	BORROW	662 C.Y.
106-C	UNCL. CHANNEL EXCAVATION	89 C.Y.
107	STRUCTURE EXCAV. MODIFIED	25 C.Y.
401-B	CONCRETE, CLASS B, MODIFIED	70 C.Y.
402	REINF. STEEL	DEE SCHED.
413-A	PLAIN RUBBLE PAVING	136 C.Y.
502-B	TREATED TIMBER PILING	1053 C.F.
502-B1	CUT OFFS - TREATED TIMBER PILING	117 C.F.
502-C	METAL SHOES FOR TIMBER PILING	39

FINAL
38
640
549
23
67
256
1161
228
39

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTLAND
ROUTE NO. US-5 LOG STA.
ABUTMENT NO. 2
SCALE 3/8" = 1'-0"
SURVEYED BY FUNK
DRAWN BY R.B.M. CHECKED BY J.L.H.
PROJECT NO. FG-77(11)
SHEET 17 OF 54

PHOENIX N188 © TRACING CLOTH
E. L. M. INC. 1973



HARTLAND
BRIDGE 66
BHF BPNT(12)
SHEET 52 OF 55
FOR
REFERENCE
ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

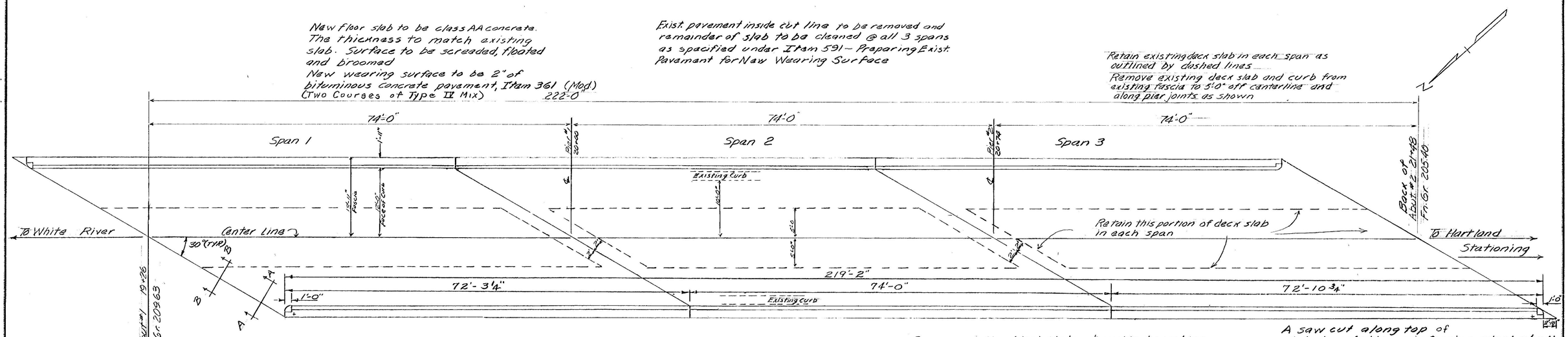
TOWN OF Hartland
ROUTE NO. US 5 LOG STA. 313+85
Route 5 Bridge over C.V. Ry.
Plan and Profile
SCALE 1" = 20'-0"
In Charge R.H. Watson
DRAWN BY MWR CHECKED BY D. Mayo 3-67
PROJECT NO. SP 041-2-6533
SHEET 3 OF 24

BR-8

New floor slab to be class AA concrete. The thickness to match existing slab. Surface to be screeded, floated and broomed
New wearing surface to be 2" of bituminous concrete pavement, Item 361 (Mod.) (Two Courses of Type IV Mix)

Exist. pavement inside cut line to be removed and remainder of slab to be cleaned @ all 3 spans as specified under Item 591 – Preparing Exist. Pavement for New Wearing Surface

Retain existing deck slab in each span as outlined by dashed lines
Remove existing deck slab and curb from existing fascia to 5'-0" off centerline and along pier joints as shown

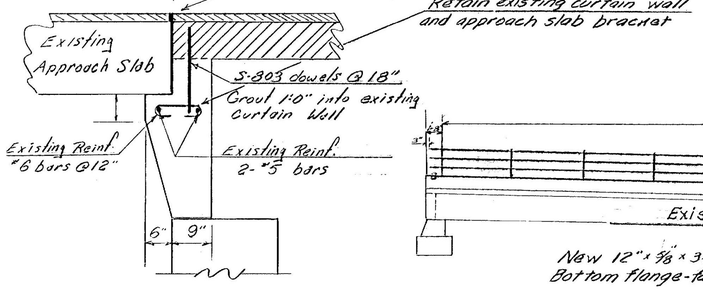


PLAN
Scale 1/8" = 1'

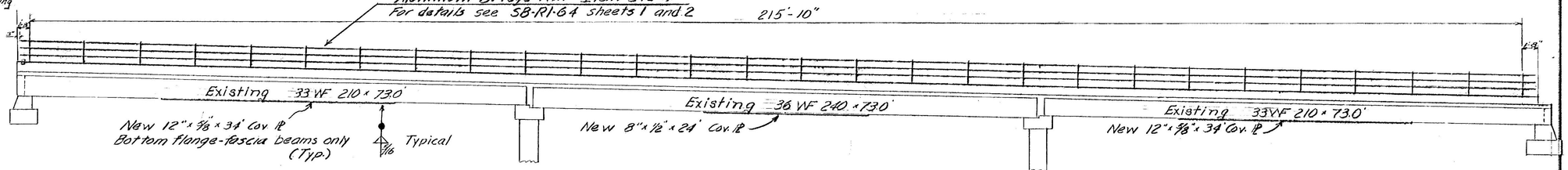
Remove existing blast plates & gunite haunching from span 2 fascia beams. Payment for this work to be made under Item 5'75 – Preparing Superstructure for Widening

A saw cut along top of slab to existing reinforcing steel shall be made along all indicated lines where concrete is to be removed to provide a vertical breaking edge. At the contractor's option the joint may be sawed along the top of slab and line drilled @ uniform spacing to provide vertical breaking edge. Payment for this work to be included under Item 5'75, Preparing Superstructure for Widening

Note:
Remove existing approach slab curbs to top of existing approach slab concrete as Item 103-B. (Typical both ends of bridge)
Item 312-A Joint sealer Hot Poured
For details not shown see SB-AS-65 Section B-B



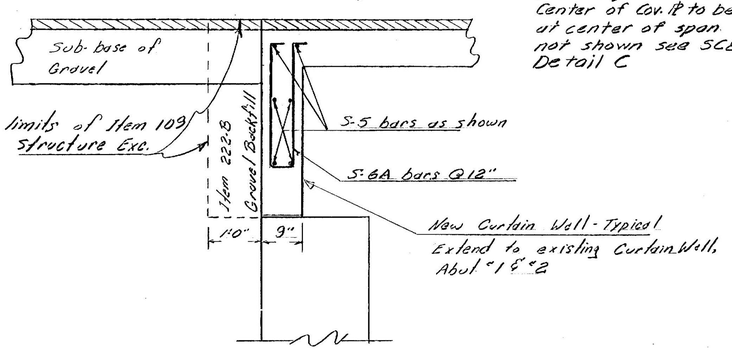
SECTION B-B
¾" = 1'



Spans 1 and 3
12" x ⅜" x 34' Cov. Pl to be welded to bot. flange of fascia beams. Center of Cov. Pl to be positioned at center of span. For details not shown see SCB-D7-65 Detail C

PARTIAL ELEVATION
Scale 1/8" = 1'-0"

Span 2
8" x ½" x 24' Cov. Pl to be welded to bot. flange of fascia beams. Center of Cov. Pl to be positioned at center of span. For details not shown see SCB-D7-65 Detail C



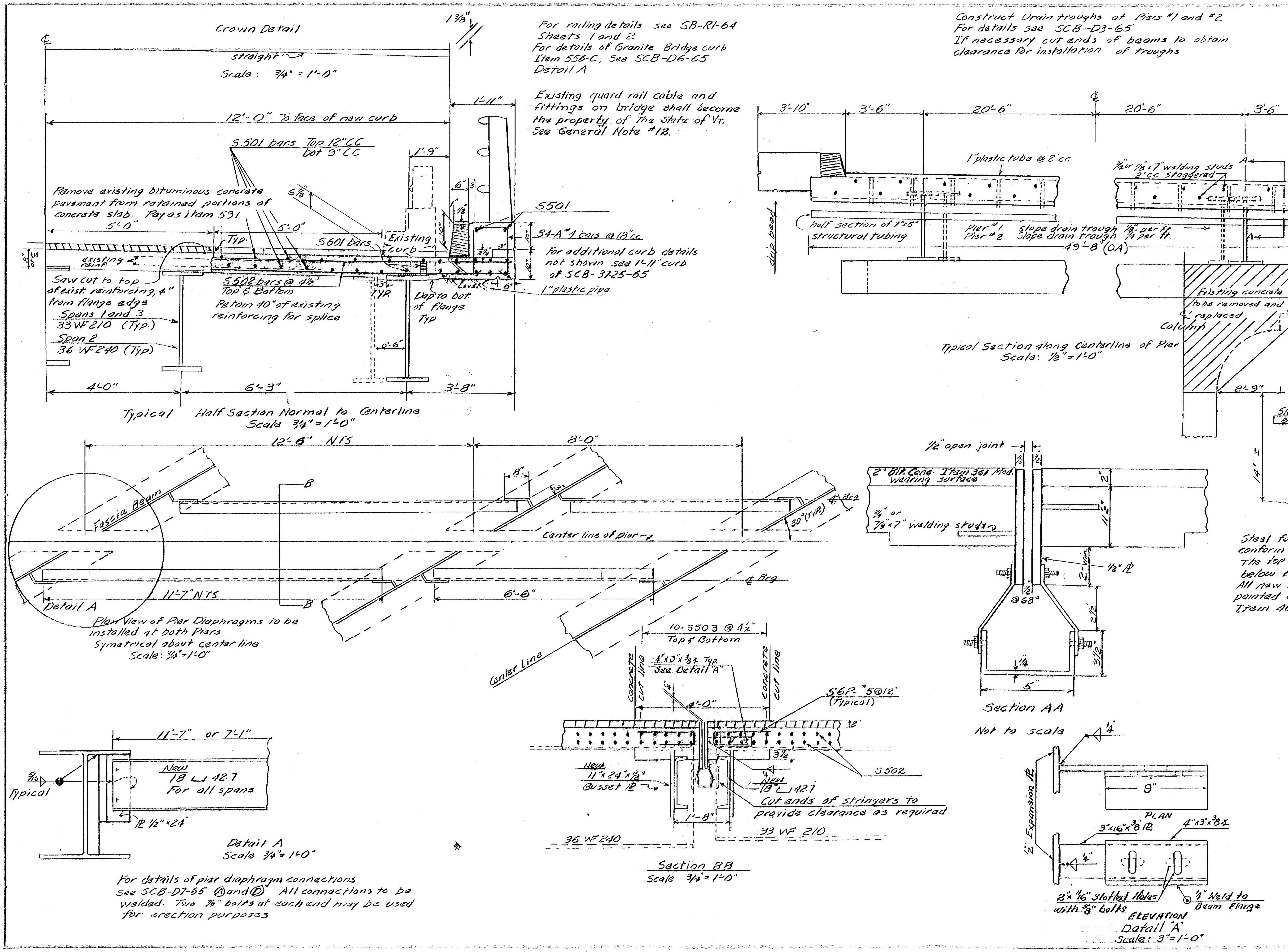
SECTION A-A
¾" = 1'

HARTLAND
BRIDGE 66
BHF BPNT(12)
SHEET 53 OF 55
FOR
REFERENCE
ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartland
ROAD NO. US 5 LOG STA. 313+85
Route 5 Bridge over C.V. Ry.
Plan and Elevation
SCALE 1/8" = 1'-0"
In Charge R.H. Watson
DRAWN BY M. Redmond CHECKED BY D. Mayo 2-67
PROJECT NO. SP 041-2-6533
SHEET 4 OF 24

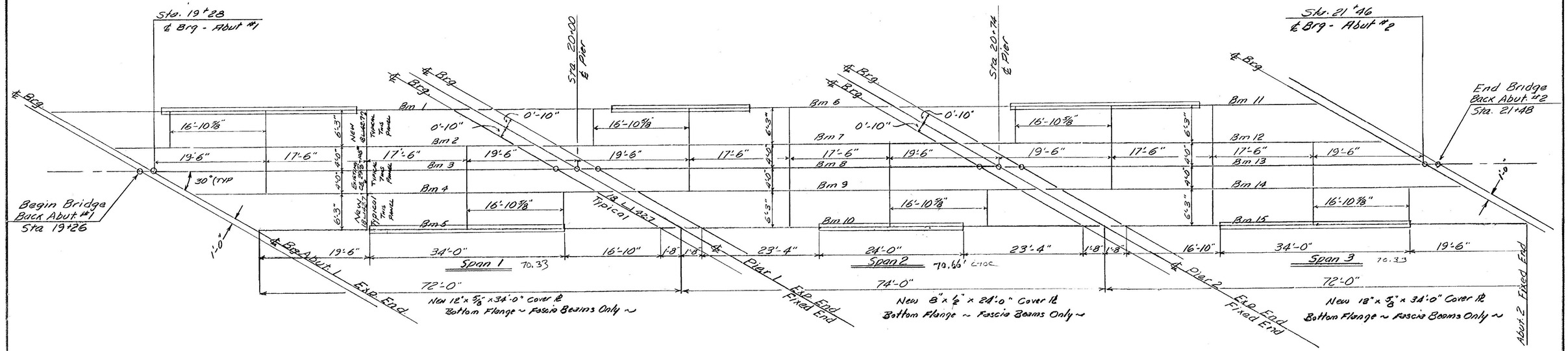
BR-1



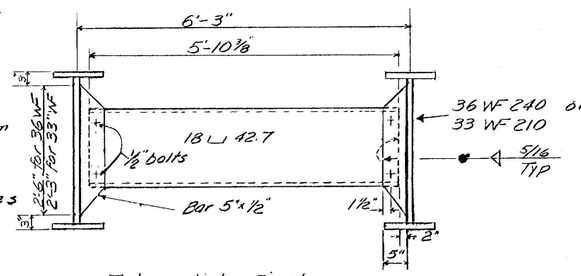
HARTLAND
BRIDGE 66
BHF BPNT(12)
SHEET 54 OF 55
FOR
REFERENCE
ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Town of Hartland
Route No. US 5 Log Sta. 313+85
Route 5 Bridge over C.V. Ry.
Curb-End Dams and Drain Details
Scale As Noted
In Charge R.H. Watson
Drawn by MWR Checked by D. Mayo
Project No. SP-041-2-6533 2-67
Sheet 5 of 24



Framing Plan



Existing intermediate diaphragms between fascia beams and adjacent beam to be removed and replaced with new 18"L 42.7 All connections to be welded. Two ½" bolts may be used at each end for erection purposes

For Pier diaphragm details see sheet #5

Intermediate Diaphragms
Typical
For details not shown see
SCB-D7-65

HARTLAND
BRIDGE 66
BHF BPNT(12)
SHEET 55 OF 55
FOR
REFERENCE
ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartland
ROUTE NO. US 5 LOG STA. 313+85
US 5 Bridge over C.V. Ry.
Framing Plan
SCALE 1/8" = 1'-0"
In Charge R.H. Watson
DRAWN BY M. Redmond CHECKED BY D. Mayo 2-67
PROJECT NO. SP 041-2-65 33
SHEET 6 OF 24

BR 8