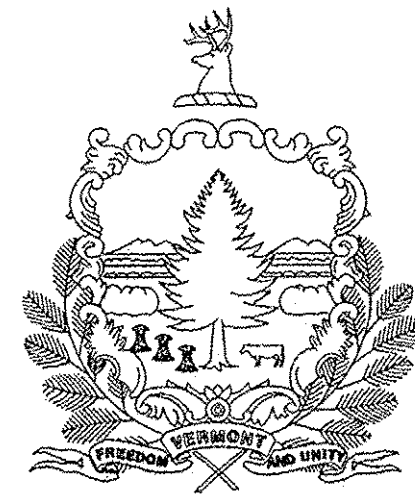
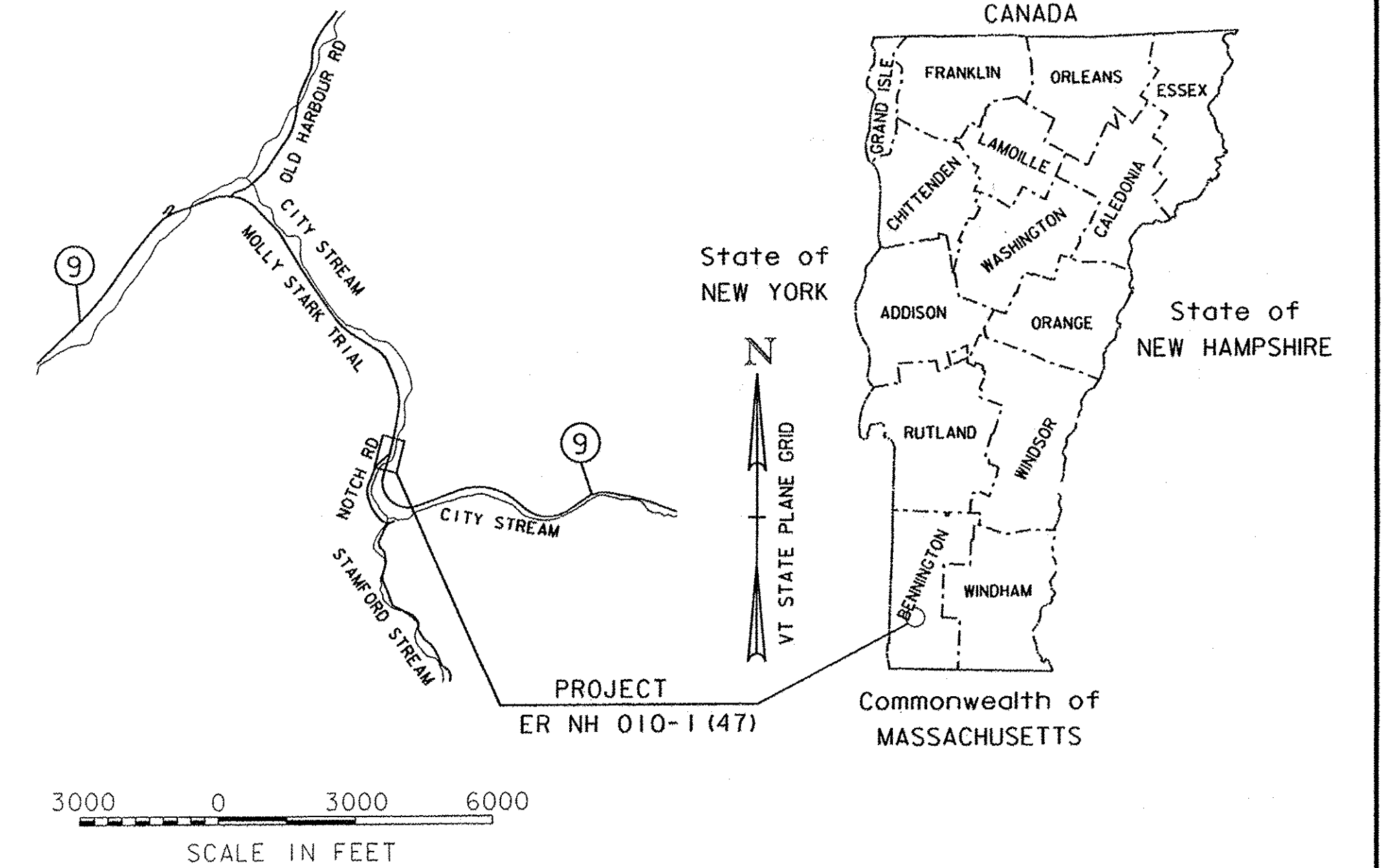


STATE OF VERMONT AGENCY OF TRANSPORTATION

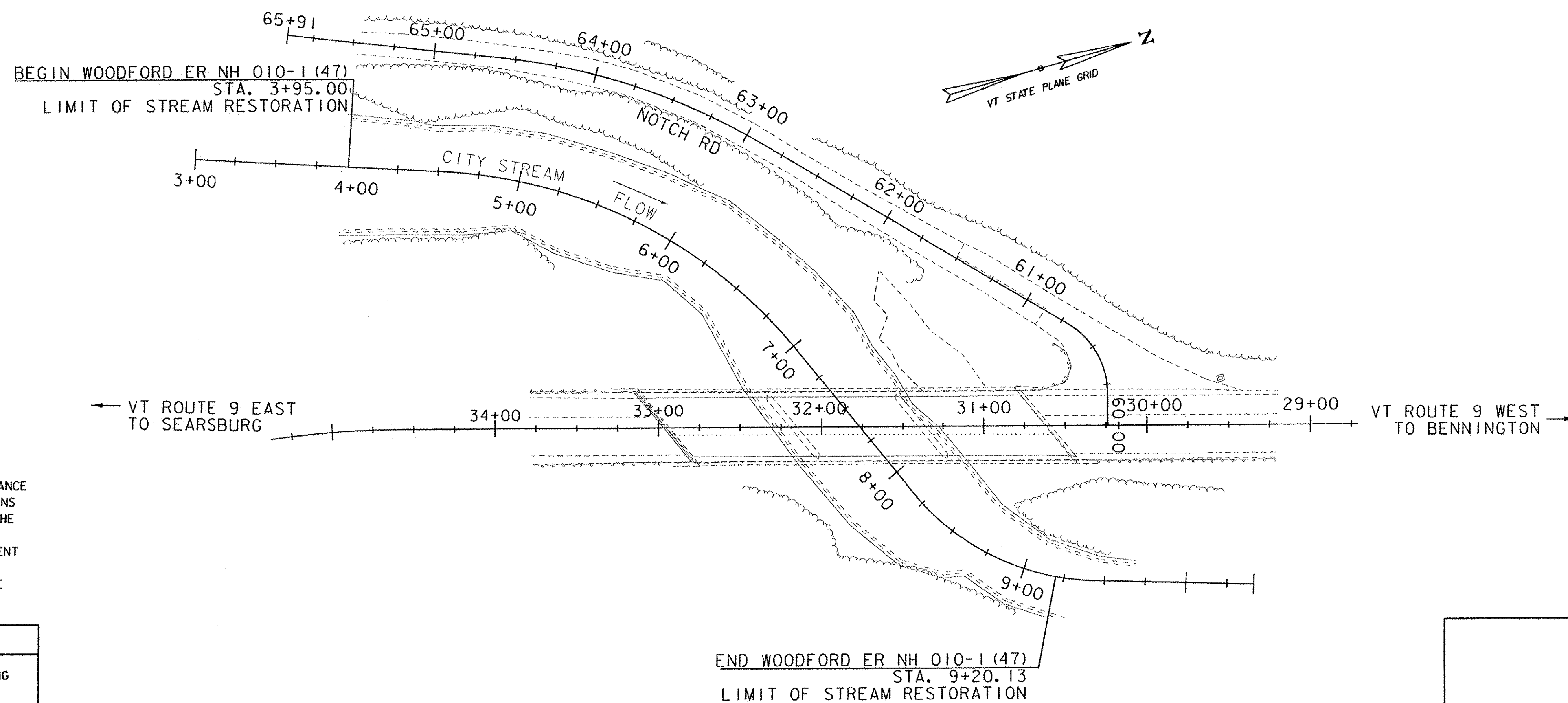


PROPOSED IMPROVEMENT TOWN OF WOODFORD COUNTY OF BENNINGTON VT ROUTE 9 (PRINCIPAL ARTERIAL - NHS)

RECORD PLANS	
CONTRACTOR:	CASELLA CONSTRUCTION, INC. - MENDON, VT
RESIDENT ENGINEER:	RON LEMAIRE
CONSTRUCTION BEGAN:	JULY 6, 2015
CONSTRUCTION COMPLETE:	SEPTEMBER 25, 2015
RECORD PLANS BY:	RON LEMAIRE & AARON JAMES
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	RESIDENT ENGINEER
DATE:	9/20/16
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	



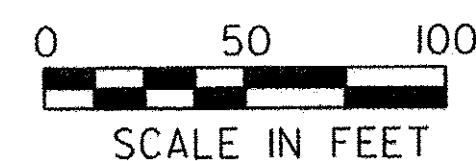
BEGINNING IN THE TOWN OF WOODFORD ALONG CITY STREAM AT A POINT APPROXIMATELY 338-FEET UPSTREAM OF THE UPSTREAM FACE OF BRIDGE #12 ON VT ROUTE 9 AND EXTENDING 525.13 FEET DOWNSTREAM
LENGTH OF PROJECT = 525.13 FEET (0.099 MILES)
THIS PROJECT CONSISTS OF EMBANKMENT RECONSTRUCTION, CHANNEL BOTTOM ARMORING, GUARDRAIL, INSTALLING STONE FILL AND EROSION PREVENTION AND SEDIMENT CONTROL



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

QUALITY ASSURANCE PROGRAM : LEVEL I	
SURVEYED BY : VERMONT SURVEY & ENGINEERING	
SURVEYED DATE : 12/20/2012 & 4/26/2013	
DATUM	
VERTICAL	NAVD 88 FT
HORIZONTAL	NAD 83 (2011) sFT

END WOODFORD ER NH 010-1 (47)
STA. 9+20.13
LIMIT OF STREAM RESTORATION



GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

DIRECTOR OF PROJECT DELIVERY	
APPROVED:	DATE: 12/5/2014
PROJECT MANAGER : PAUL LIBBY	
PROJECT NAME : WOODFORD	
PROJECT NUMBER : ER NH 010-1 (47)	
SHEET 1 OF 35 SHEETS	

INDEX OF SHEETS

1. TITLE SHEET
2. INDEX OF SHEETS
3. CONVENTIONAL SYMBOLOGY LEGEND SHEET
4. TYPICAL SECTIONS SHEET
5. TYPICAL DETAILS SHEET
- 6-7. TIE SHEETS
8. ALIGNMENT SHEET
- 9-11. BORING SHEETS
12. QUANTITY SHEET
13. ITEM DETAIL AND DRAINAGE SHEET
14. EARTHWORKS SHEET
15. PLAN SHEET
16. PROFILE SHEET
- 17-23. EPSC SHEETS
- 24-34. CROSS SECTION SHEETS
35. TRAFFIC CONTROL SHEET

STANDARDS LISTS

- | | |
|-------|------------|
| D-3 | 06/01/1994 |
| D-4 | 08/13/2007 |
| E-193 | 08/18/1995 |
| G-1 | 02/10/2014 |
| T-1 | 08/06/2012 |
| T-10 | 08/06/2012 |
| T-24 | 08/06/2012 |
| T-30 | 08/06/2012 |
| T-31 | 08/06/2012 |
| T-40 | 01/02/2013 |
| T-45 | 01/02/2013 |

NOTE:

ALL UTILITIES HAVE BEEN PLOTTED TO QUALITY LEVEL "C"; SEE BELOW.

UTILITY QUALITY LEVEL INFORMATION INDEX (SEE ASCE/C1 38-02):

UTILITY QUALITY LEVEL A:

PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. MINIMALLY INTRUSIVE EXCAVATION EQUIPMENT IS TYPICALLY USED TO MINIMIZE THE POTENTIAL FOR UTILITY DAMAGE. A PRECISE HORIZONTAL AND VERTICAL LOCATION, AS WELL AS OTHER UTILITY ATTRIBUTES, ARE SHOWN ON PLAN DOCUMENTS. ACCURACY IS TYPICALLY SET TO 0.05 FEET (15-MM) VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY AS DEFINED OR EXPECTED BY THE PROJECT OWNER. INFORMATION IS ONLY VALID WITHIN THE VISIBLE LIMITS OF THE TEST HOLE.

UTILITY QUALITY LEVEL B:

INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

UTILITY QUALITY LEVEL C:

INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D:

INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

VT ROUTE 9 TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2014	3,500	550	54%	13.2%	480
2024	3,600	570	54%	15.3%	570

18 kip ESAL for flexible pavement from 2014 to 2024: 1,824,000
 18 kip ESAL for flexible pavement from 2014 to 2034: 3,923,000

PROJECT NAME: WOODFORD
 PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402frm.dgn
 PROJECT LEADER: E. ATKINS
 DESIGNED BY: M. BRADLEY
 INDEX OF SHEETS

PLOT DATE: 12/03/2014
 DRAWN BY: C. MORIN
 CHECKED BY: E. ATKINS
 SHEET 2 OF 35

GENERAL INFORMATION

SYMBOLY LEGEND NOTE

THE SYMBOLY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLY. THE SYMBOLY 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. SYMBOLY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

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

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

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT CODE	DESCRIPTION
#	APL BOUND APPARENT LOCATION
□	BM 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 VALVE
⊕	H TREE HARDWOOD
△	HCTRL CONTROL HORIZONTAL
▲	HVCTRL CONTROL HORIZ. & VERTICAL
◇	HYD HYDRANT
●	IP IRON PIN
●	IPIPE IRON PIPE
⊕	LI LIGHT - STREET OR YARD
⊕	MB MAILBOX
○	MH MANHOLE (MH)
▣	MM MILE MARKER
●	PM PARKING METER
▣	PMK PROJECT MARKER
○	POST POST STONE/WOOD
⊕	RRSIG RAILROAD SIGNAL
⊕	RRSL RAILROAD SWITCH LEVER
⊕	S TREE SOFTWOOD
⊕	SAT SATELLITE DISH
⊕	SHRUB SHRUB
⊕	SIGN SIGN
⊕	STUMP STUMP
⊕	TEL TELEPHONE POLE
○	TIE TIE
⊕	TSIGN SIGN W/DOUBLE POST
⊕	VCTRL CONTROL VERTICAL
○	WELL WELL
*	WSO WATER SHUT OFF

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLY

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 EAT —	ELECTRIC+TELEPHONE
— CT —	CABLE+TELEPHONE
— ECT —	ELECTRIC+CABLE+TELEP.
—	UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLY

— CZ —	CLEAR ZONE
—	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

**CONVENTIONAL BOUNDARY SYMBOLY**

**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
P/L	PROPERTY LINE (P/L)
SR	SLOPE RIGHTS
6F	6F PROPERTY BOUNDARY
4F	4F PROPERTY BOUNDARY
HAZ	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLY**

**EPSC MEASURES**

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

**ENVIRONMENTAL RESOURCES**

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

**ARCHEOLOGICAL & HISTORIC**

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

**CONVENTIONAL TOPOGRAPHIC SYMBOLY**

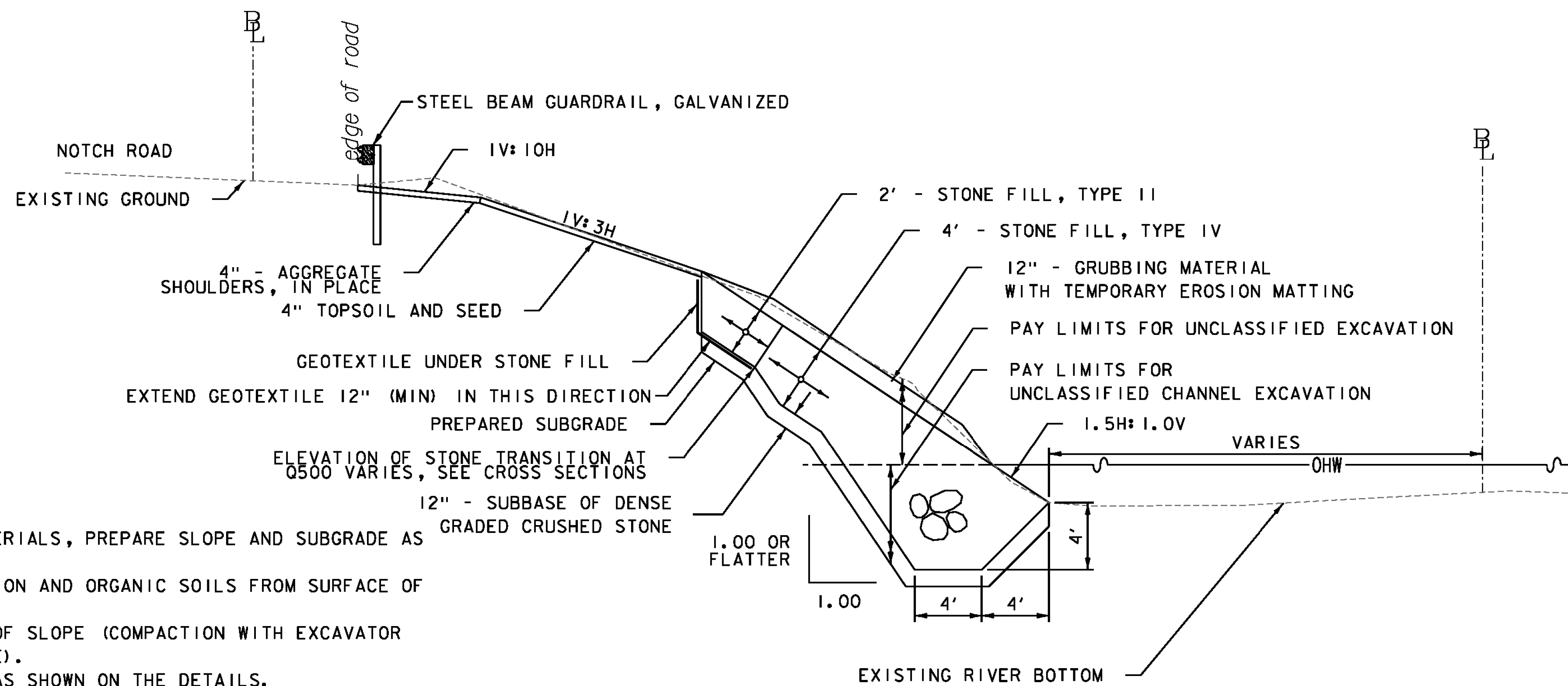
**EXISTING FEATURES**

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

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402legend.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
CONVENTIONAL SYMBOLY LEGEND SHEET

PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 3 OF 35

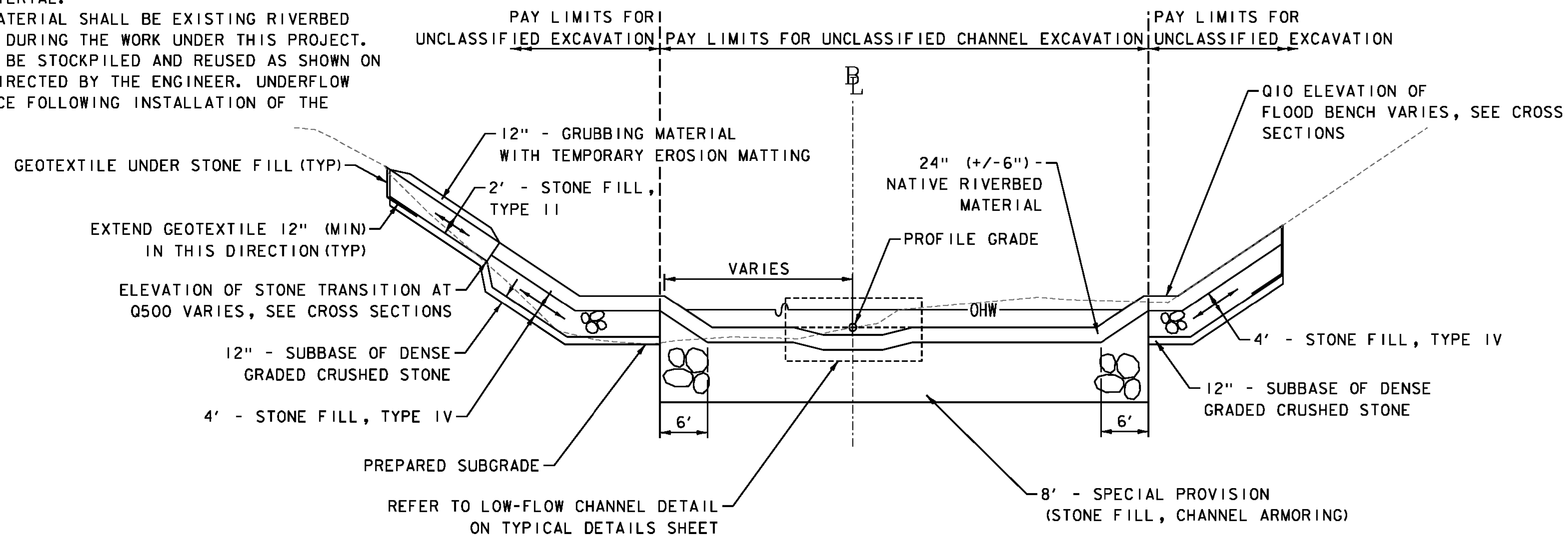


BUILT ESSENTIALLY AS SHOWN

GENERAL NOTES:

1. PRIOR TO PLACING MATERIALS, PREPARE SLOPE AND SUBGRADE AS FOLLOWS:
  - A. EXCAVATE VEGETATION AND ORGANIC SOILS FROM SURFACE OF SLOPE.
  - B. COMPACT SURFACE OF SLOPE (COMPACTION WITH EXCAVATOR BUCKET ACCEPTABLE).
  - C. PLACE MATERIALS AS SHOWN ON THE DETAILS.
2. PLACEMENT OF STONE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
  - A. STONE FILL SHALL BE CAREFULLY PLACED ON SLOPES TO CREATE A STABLE AND WELL-GRADED MIXTURE OF LARGE STONES AND SMALLER STONES WITHOUT LARGE VOIDS IN BETWEEN. VOIDS SHALL BE CHOKED WITH SMALLER STONES TO CREATE A MASS FREE OF LARGE VOIDS.
  - B. DUMPING OF STONE FILL AT THE TOP OF THE SLOPES AND ROLLING OR PUSHING INTO PLACE SHALL NOT BE PERMITTED.
  - C. PLATE COMPACTORS SHALL NOT BE USED IN THE PLACEMENT OF SPECIAL PROVISION (STONE FILL, CHANNEL ARMORING) OR THE NATIVE RIVERBED MATERIAL.
  - D. NATIVE RIVER BED MATERIAL SHALL BE EXISTING RIVERBED MATERIAL EXCAVATED DURING THE WORK UNDER THIS PROJECT. THE MATERIAL SHALL BE STOCKPILED AND REUSED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. UNDERFLOW SHALL NOT TAKE PLACE FOLLOWING INSTALLATION OF THE STREAMBED.

TYPICAL SECTION  
STA. 4+50.00-5+00.00  
NOT TO SCALE



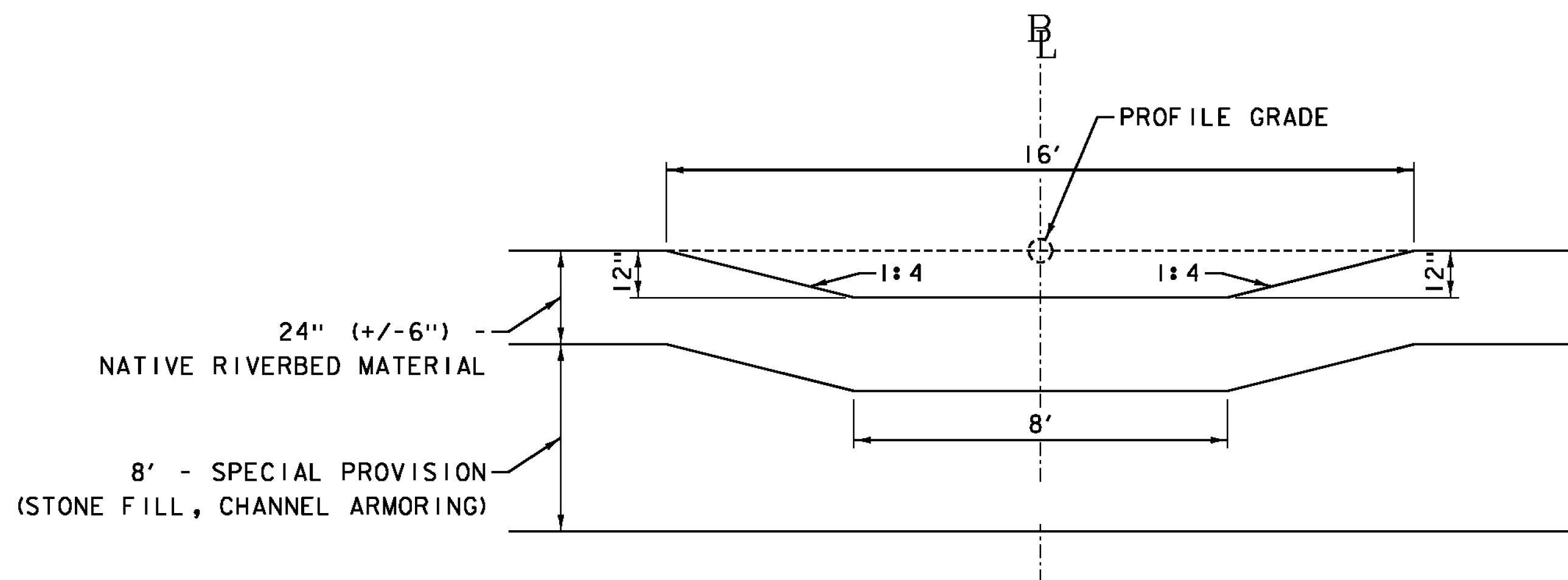
NOTE: NO STONE FILL PLACED BEHIND PIERS. SEE CROSS SECTIONS FOR REVISED STATION LIMITS.

TYPICAL CHANNEL SECTION  
STA. 5+00.00-8+50.00  
NOT TO SCALE

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402+yp.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
TYPICAL SECTIONS SHEET

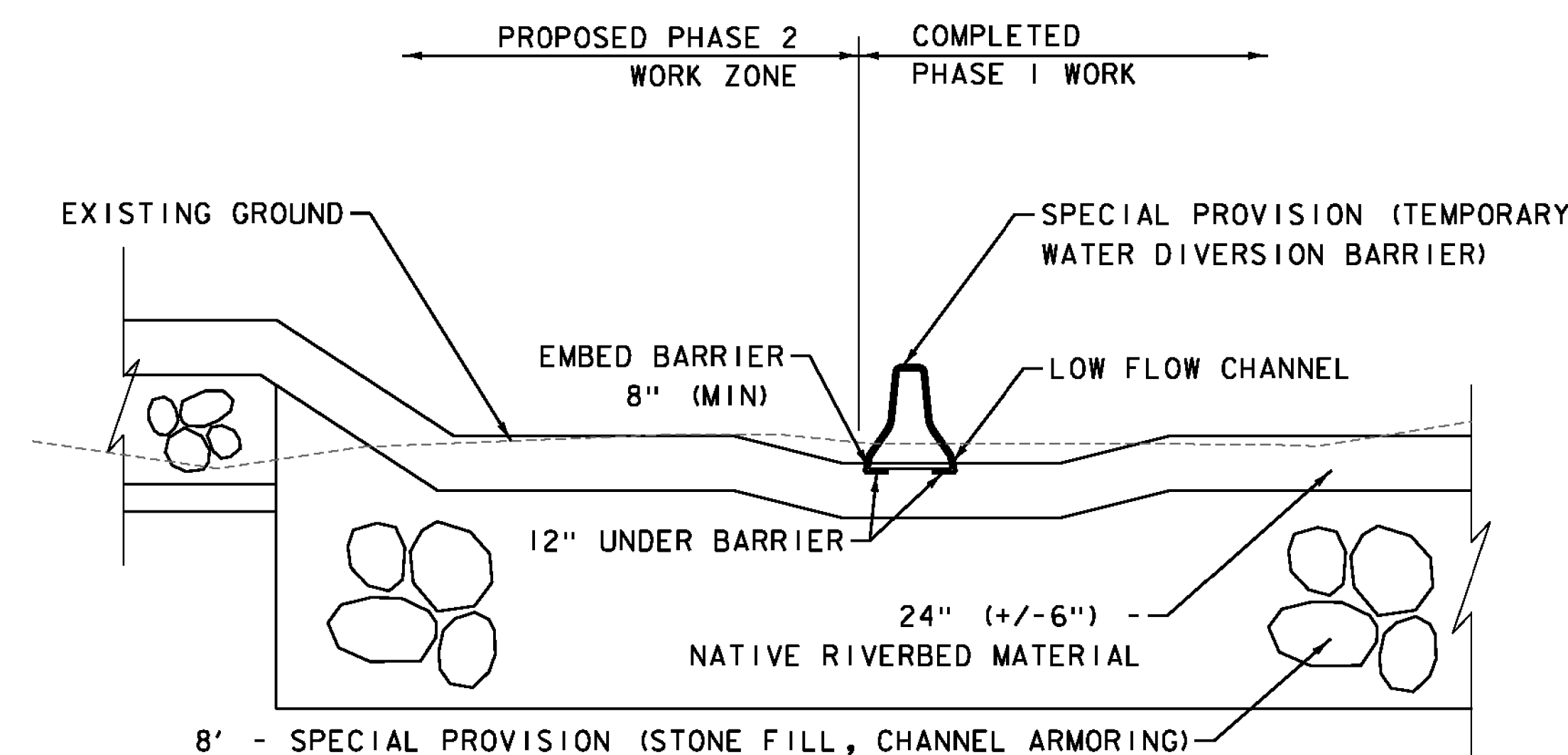
PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 4 OF 35



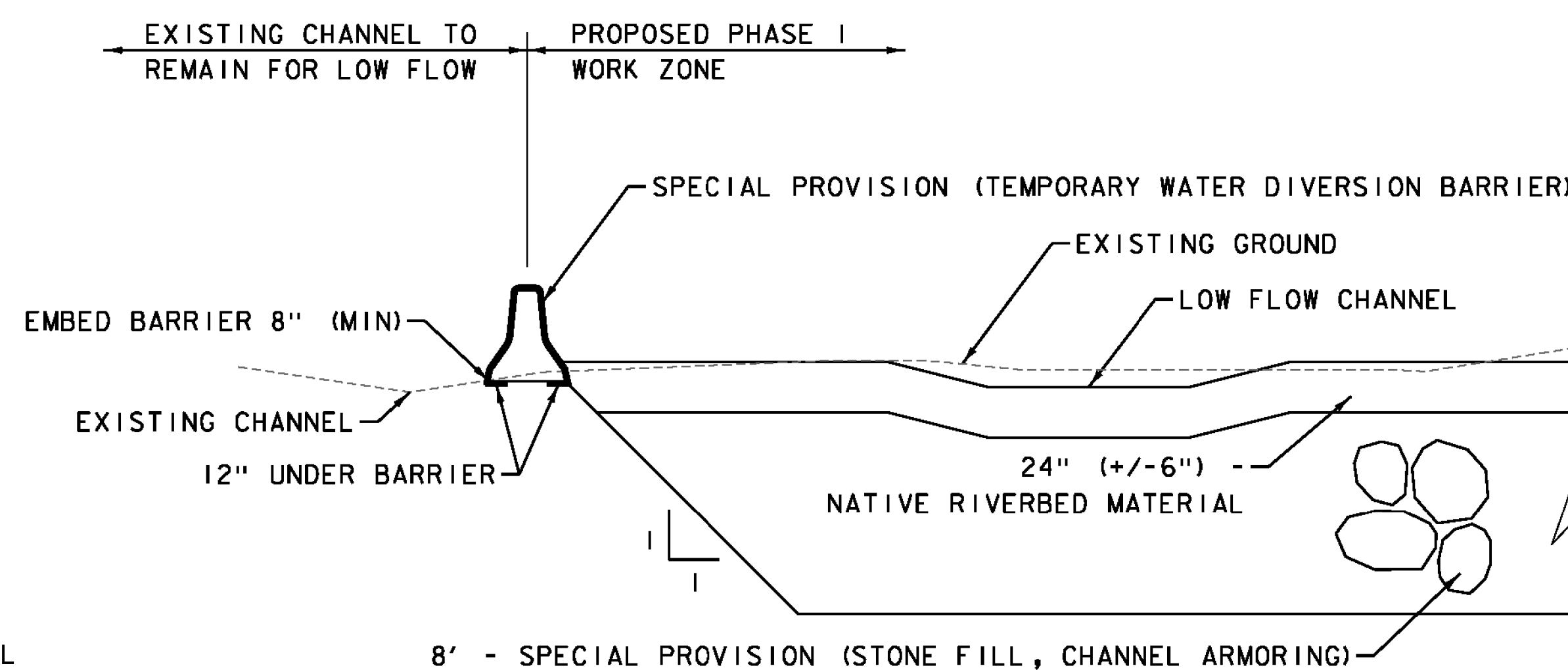
**LOW FLOW CHANNEL DETAIL**  
NOT TO SCALE

**NOTES:**

- 1.) NATIVE RIVERBED MATERIAL SHALL BE EXISTING RIVER MATERIAL AND SHALL BE PLACED TO MIMIC THE NATURAL COBBLE RIVER BOTTOM AND ROUGHNESS THROUGHOUT THE PROJECT TO THE SATISFACTION OF THE ENGINEER.
- 2.) THE COST OF THIS MATERIAL SHALL BE INCIDENTAL TO ITEM 203.27 UNCLASSIFIED CHANNEL EXCAVATION.

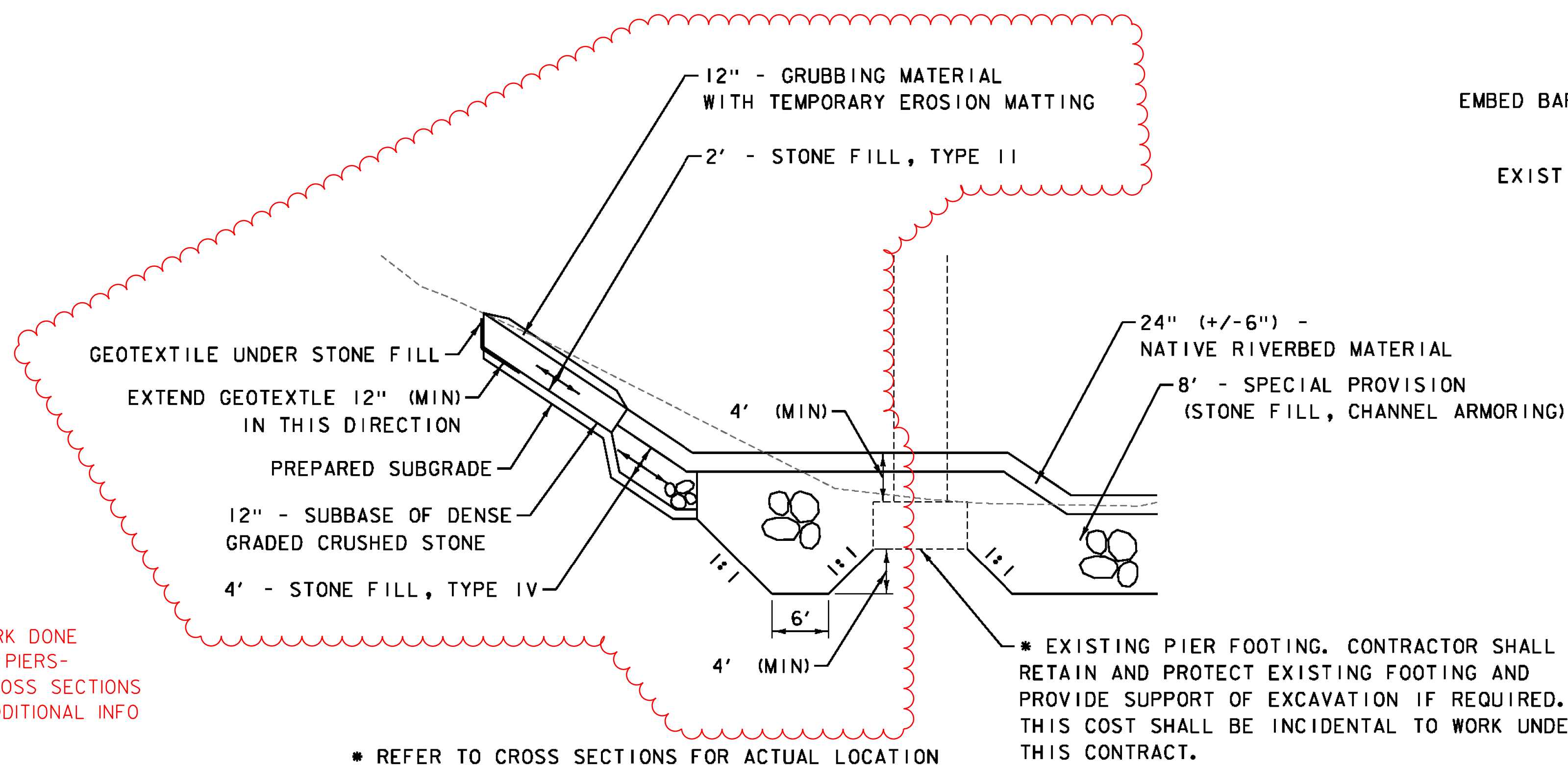


**PHASE 2**



**PHASE 1**

**SPECIAL PROVISION (TEMPORARY WATER DIVERSION BARRIER) PLACEMENT DETAIL**  
NOT TO SCALE



* REFER TO CROSS SECTIONS FOR ACTUAL LOCATION

**TYPICAL STONE PLACEMENT AT PIERS DETAIL**  
PIER 1 SHOWN, PIER 2 SIMILAR  
NOT TO SCALE

NO WORK DONE  
BEHIND PIERS-  
SEE CROSS SECTIONS  
FOR ADDITIONAL INFO

* EXISTING PIER FOOTING. CONTRACTOR SHALL  
RETAIN AND PROTECT EXISTING FOOTING AND  
PROVIDE SUPPORT OF EXCAVATION IF REQUIRED.  
THIS COST SHALL BE INCIDENTAL TO WORK UNDER  
THIS CONTRACT.

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402de+.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
TYPICAL DETAILS SHEET

PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 5 OF 35

GPS CONTROL POINTS

**BENNINGTON CORS ARP**

PID DK8255  
 N = 140182.50  
 E = 1452827.16  
 ELLIP HEIGHT = 603.33

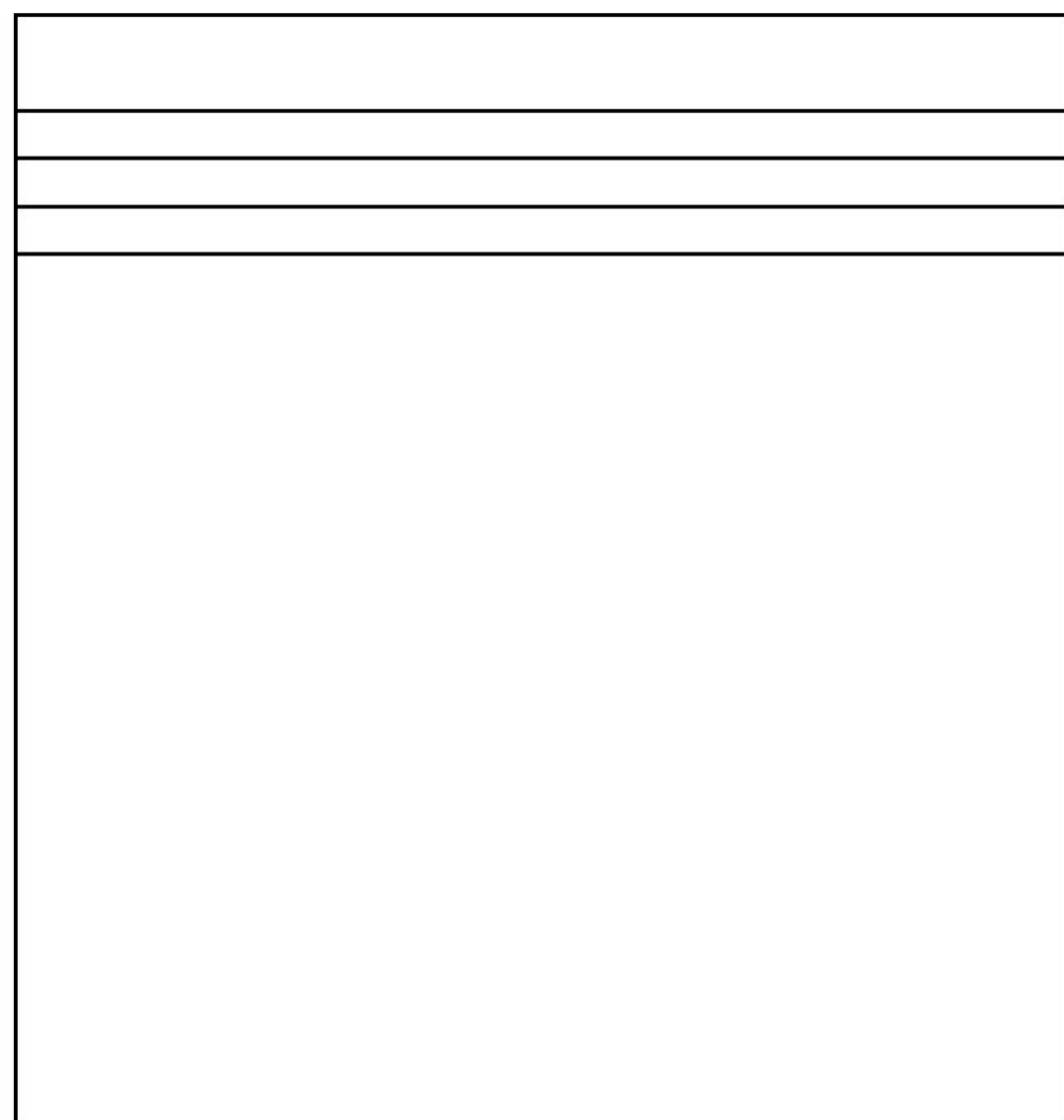
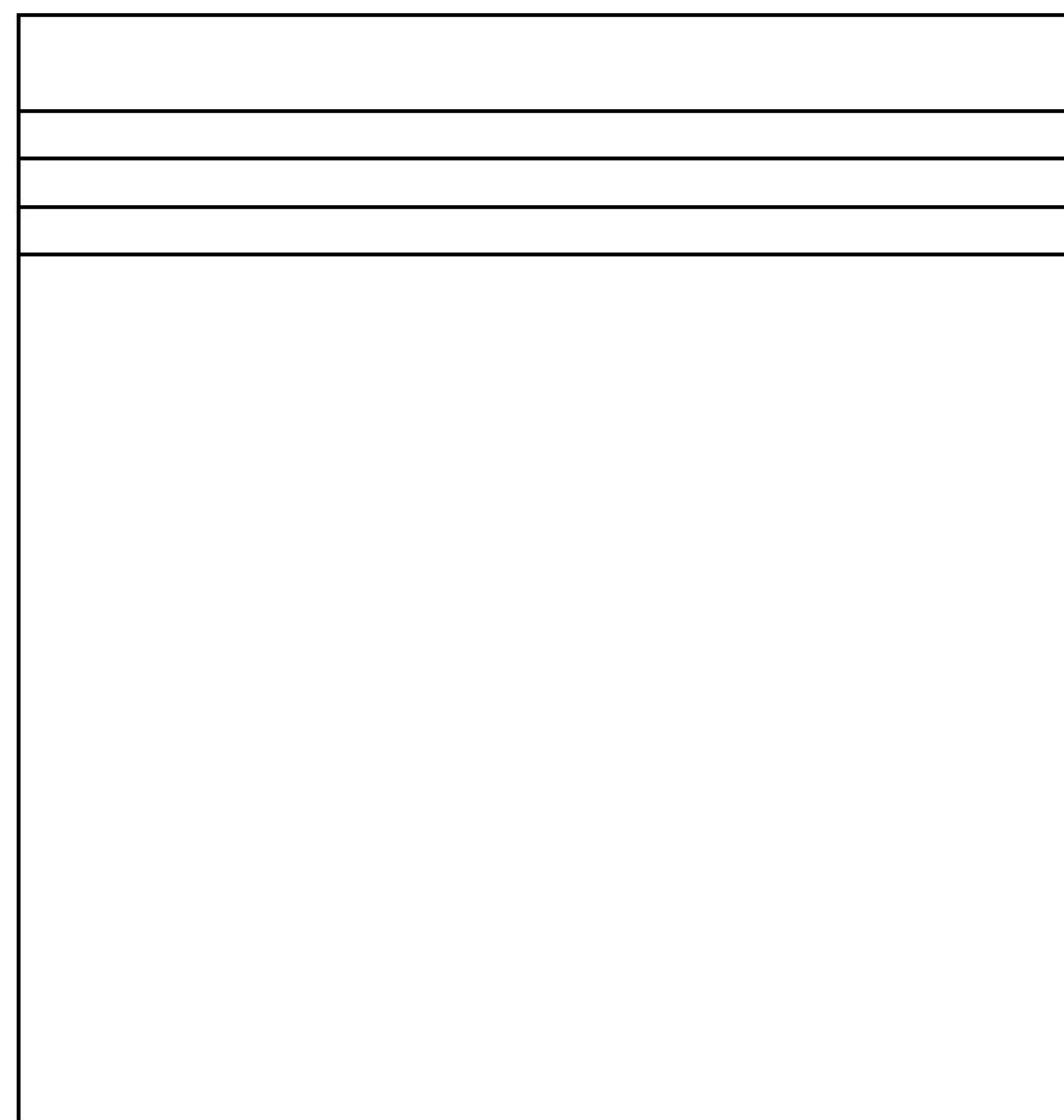
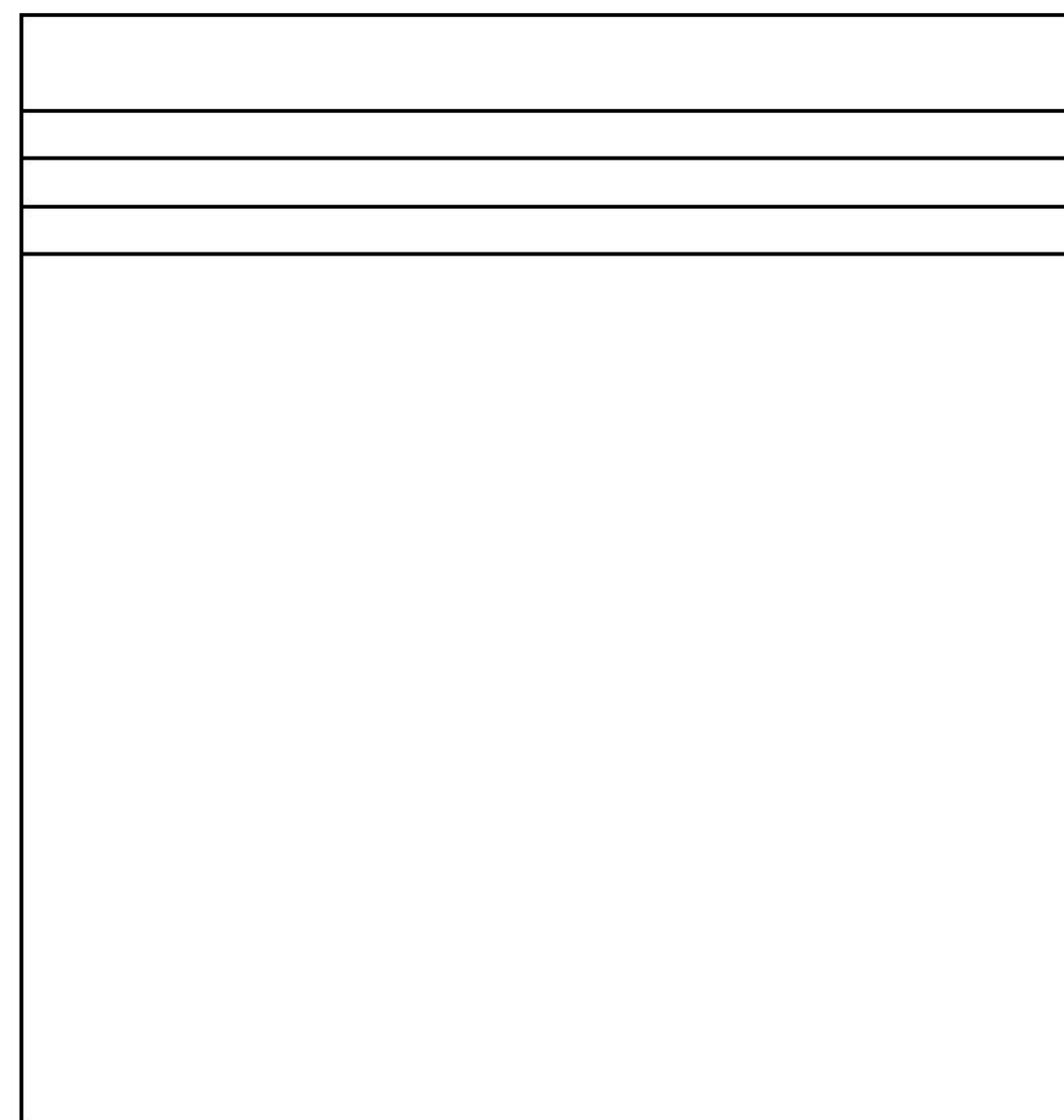
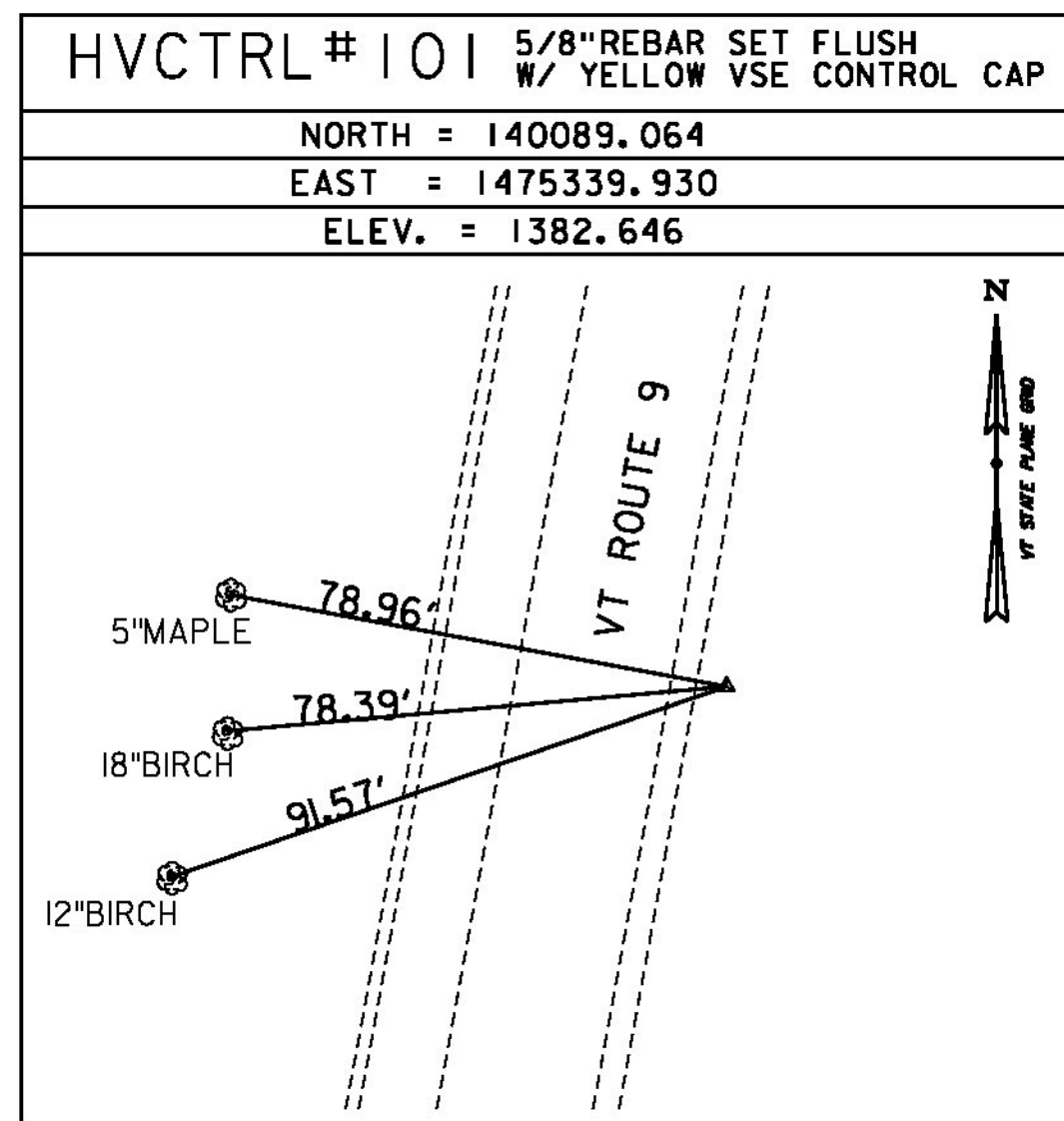
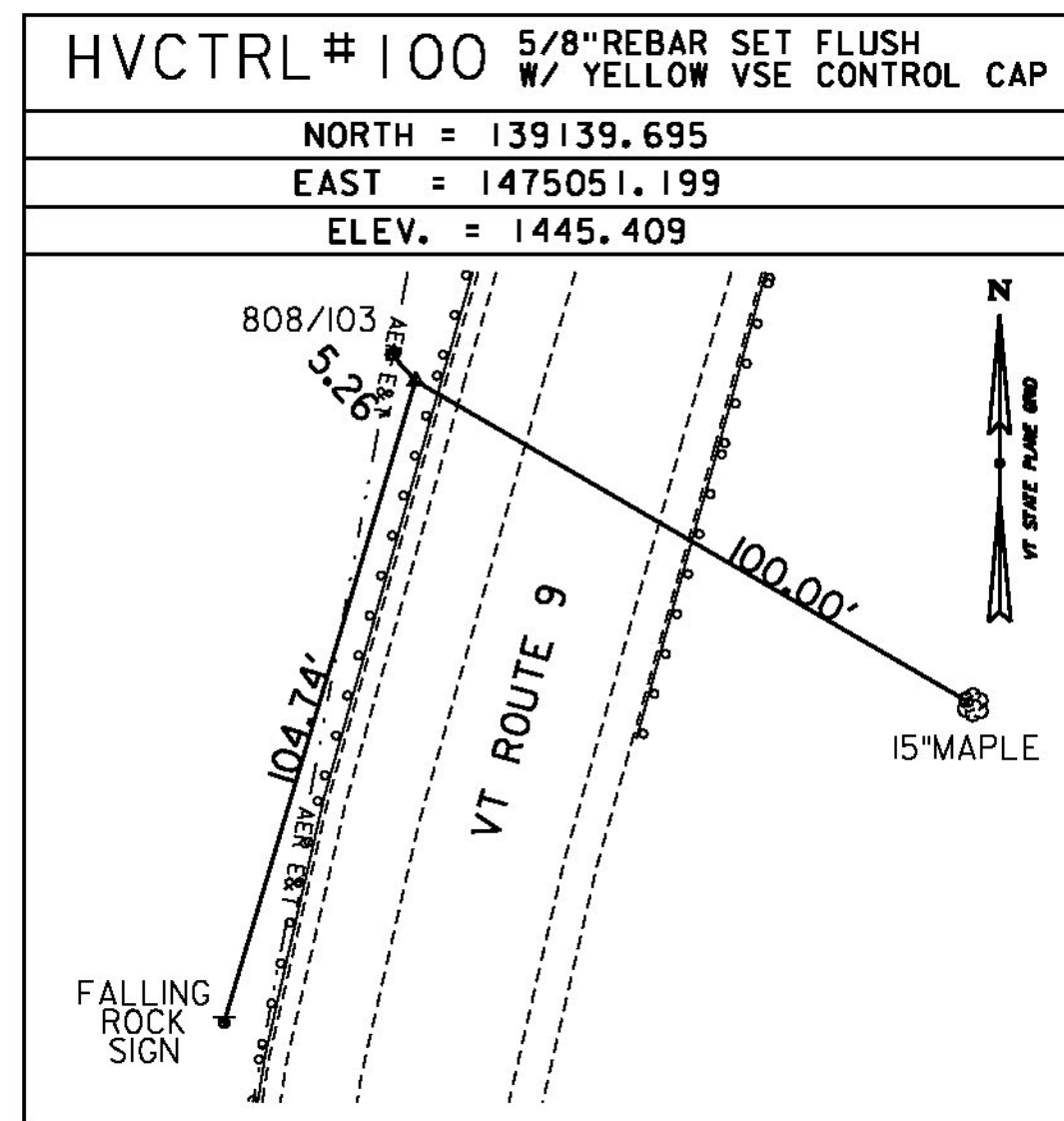
STATION IS A GPS CONTINUOUSLY OPERATING REFERENCE STATION. STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA. LOCATED AT THE BENNINGTON, VERMONT FIRE DEPARTMENT, THE MONUMENT IS ATTACHED TO A THREE STORY CONCRETE & BRICK BUILDING WITH A 10 FT CONCRETE FOUNDATION BUILT IN 1998. THE MAST IS A 1.75 INCH DIA. GALV PIPE THAT IS 108 INCHES LONG. THE MAST IS ATTACHED TO A STEEL MOUNTING FRAME WITH THREE ATTACHMENTS CONSISTING OF 3/8 INCH SS THROUGH BOLTS. THE MOUNTING FRAME IS ATTACHED TO THE BUILDING USING 6 ATTACHMENT POINTS. ALL 6 ATTACHMENTS ARE THROUGH BOLTED AND CONSIST OF 1/2 INCH SS THREADED ROD AND NUTS.

**B95016**

PID AB7332  
 N = 139409.350  
 E = 1475065.907  
 ELEV. = 1419.948

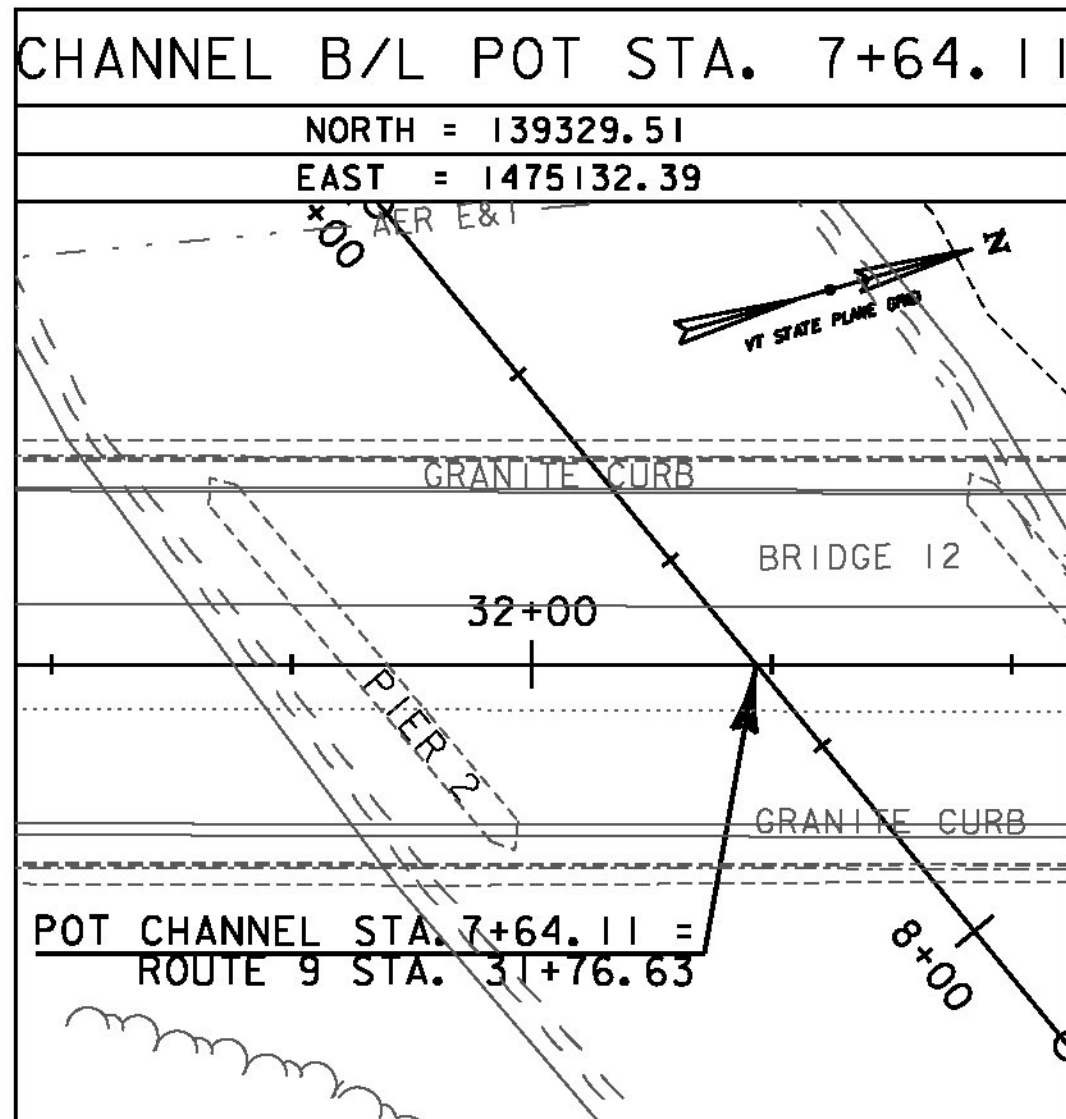
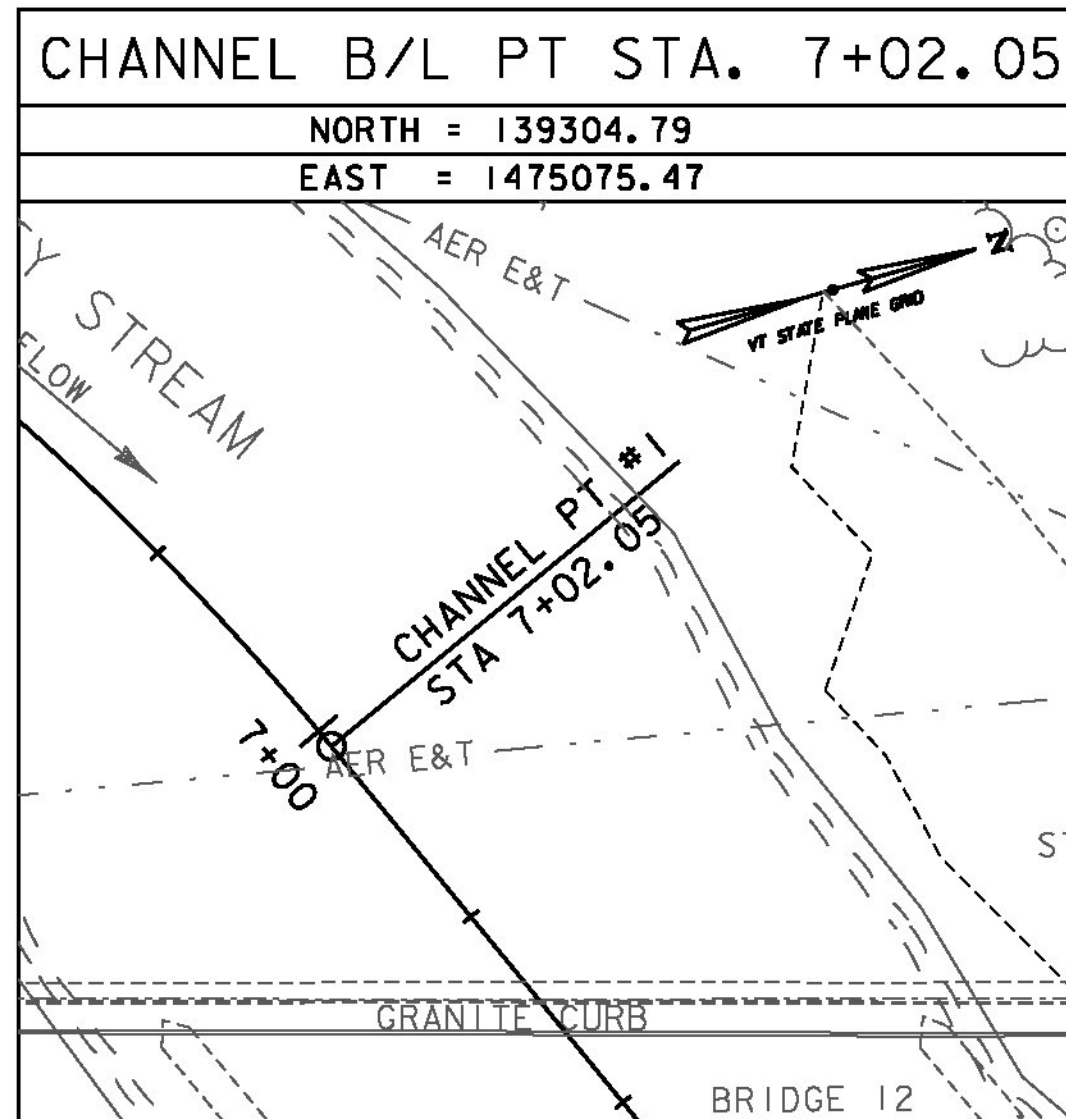
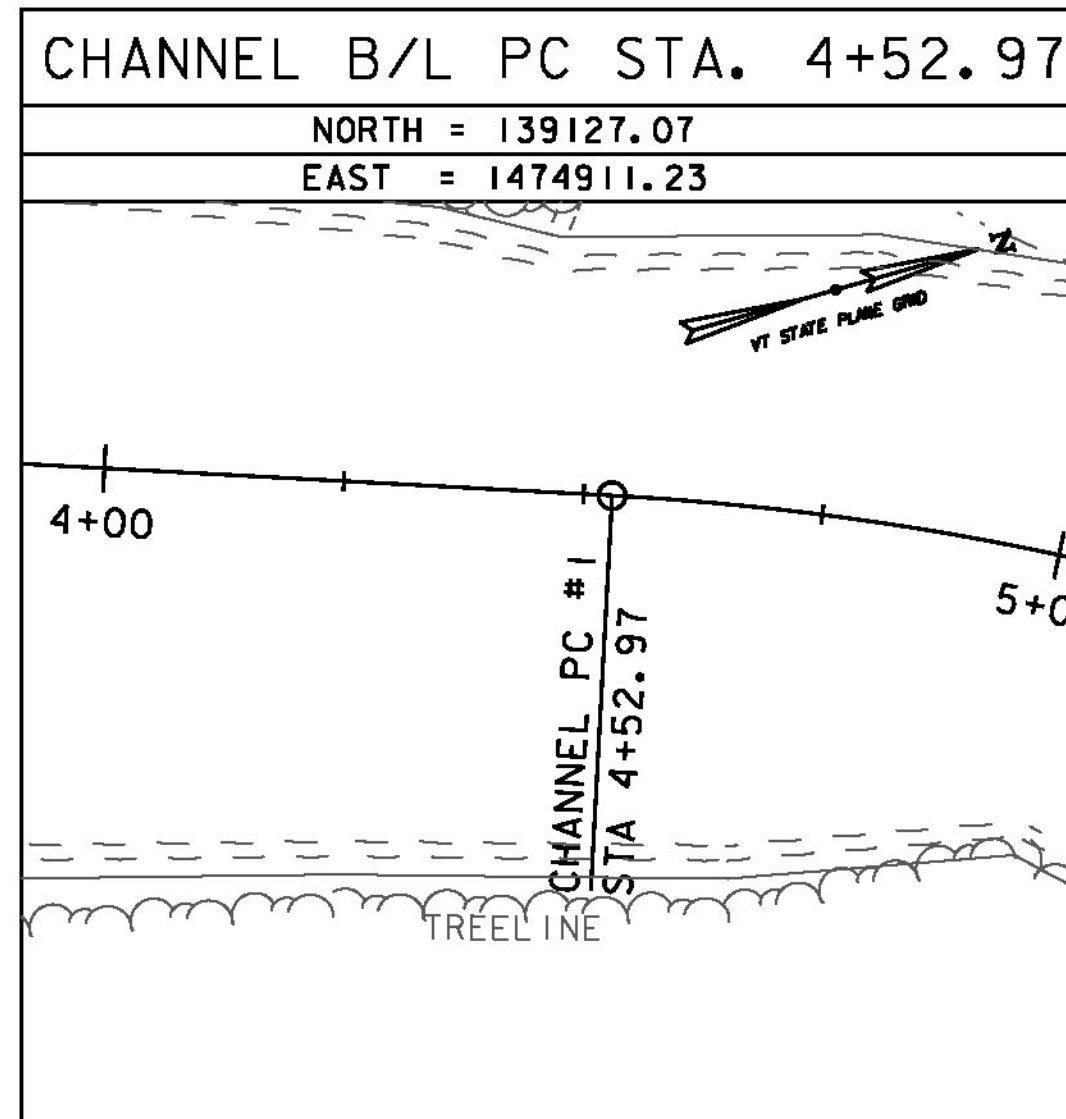
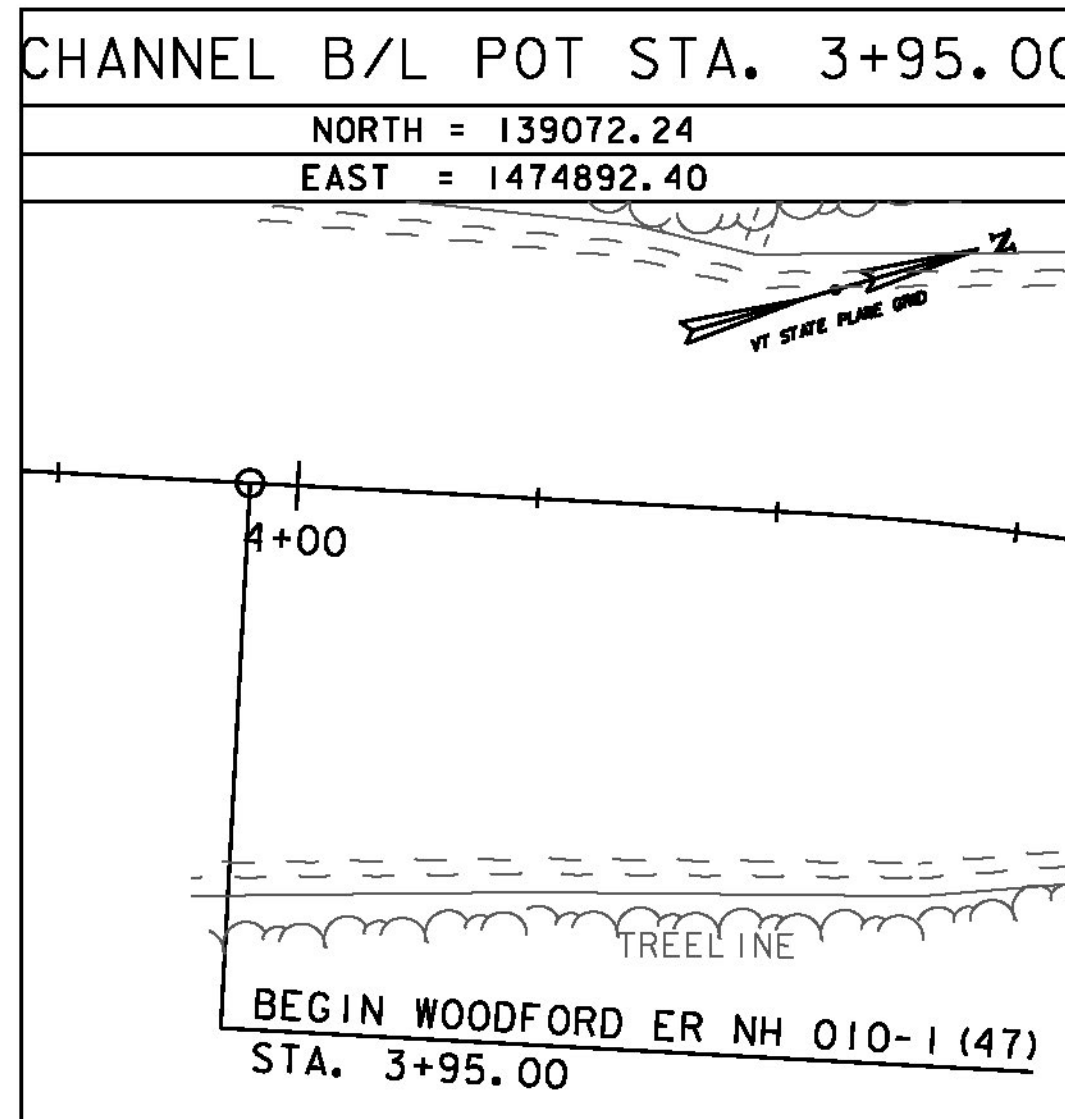
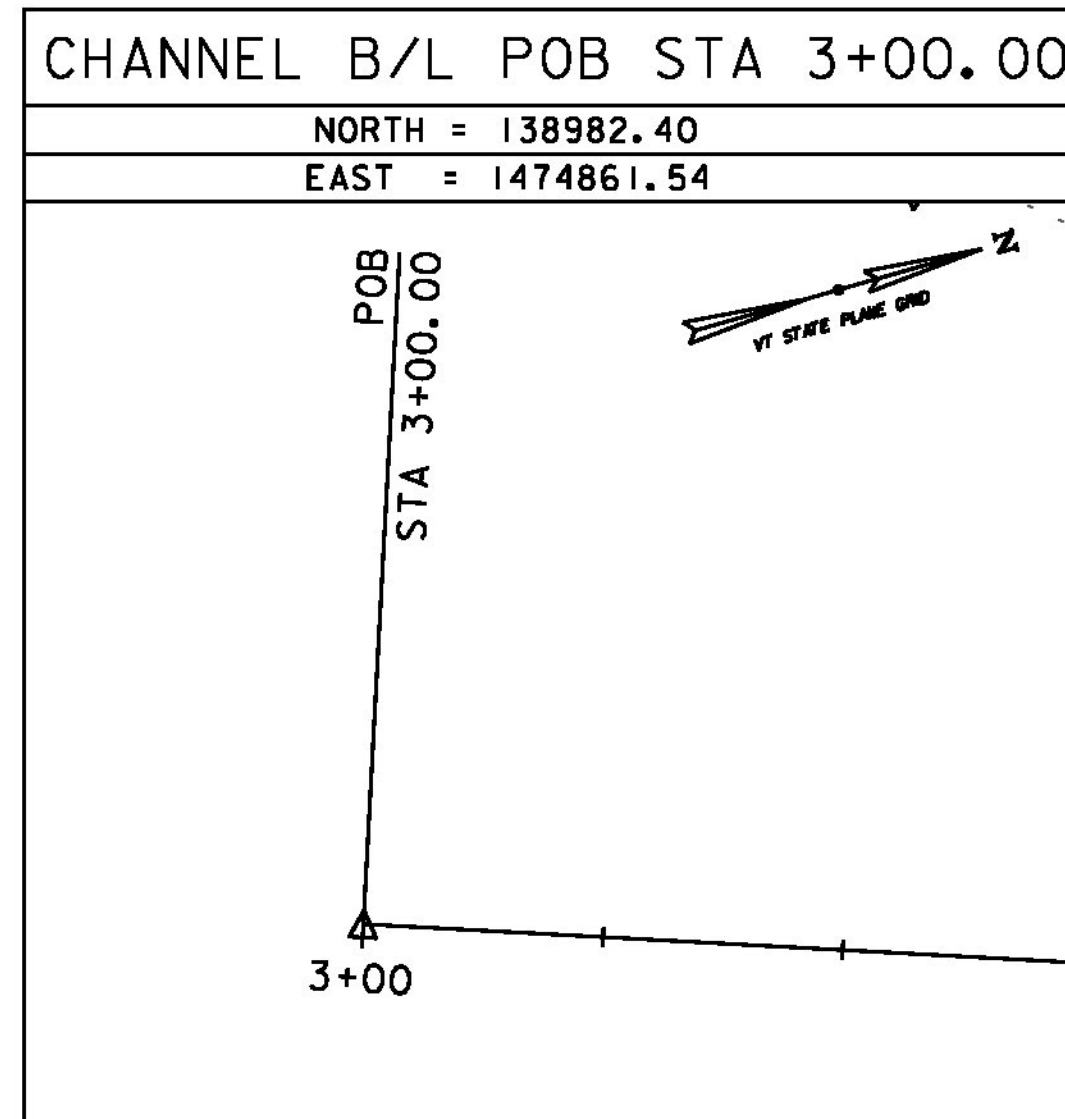
DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1995 (CHR). GENERAL LOCATION, WOODFORD, VT., ABOUT 4 MI (6.4 KM) EAST OF BENNINGTON. TO REACH FROM THE INTERSECTION OF U.S.ROUTE 7 AND VT ROUTE 9 IN BENNINGTON, GO EAST ALONG VT ROUTE 9 FOR 5.2 MI (8.4 KM) TO THE INTERSECTION OF A GRAVEL ROAD RIGHT, JUST NORTH OF THE VT ROUTE 9 BRIDGE OVER THE ROARING BRANCH. TURN RIGHT AND GO WEST ALONG THE GRAVEL ROAD FOR ABOUT 25 M (82.0 FT) TO THE MARK ON THE LEFT IN A FLAT AREA BETWEEN THE ROAD AND THE TOP OF A STEEP BANK LEADING DOWN TO THE ROARING BRANCH. THE MARK IS SET 5 CM BELOW GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT POURED TO A DEPTH OF 1.6 M (5.2 FT). IT IS 4.7 M (15.4 FT) SOUTH OF AND ABOUT LEVEL WITH THE CENTERLINE OF THE GRAVEL ROAD, 24.2 M (79.4 FT) WEST OF THE NORTHWEST ABUTMENT CORNER OF THE VT ROUTE 9 BRIDGE OVER THE ROARING BRANCH, 10.4 M (34.1 FT) WEST-NORTHWEST OF POLE NO. 2/102/345/812, AND 3.1 M (10.2 FT) NORTH OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES



* CONTROL TIES COMPLETED: FEBRUARY 12, 2013 BY VSE, T. SCARZELLO-PC, T. COMSTOCK

ALIGNMENT TIES

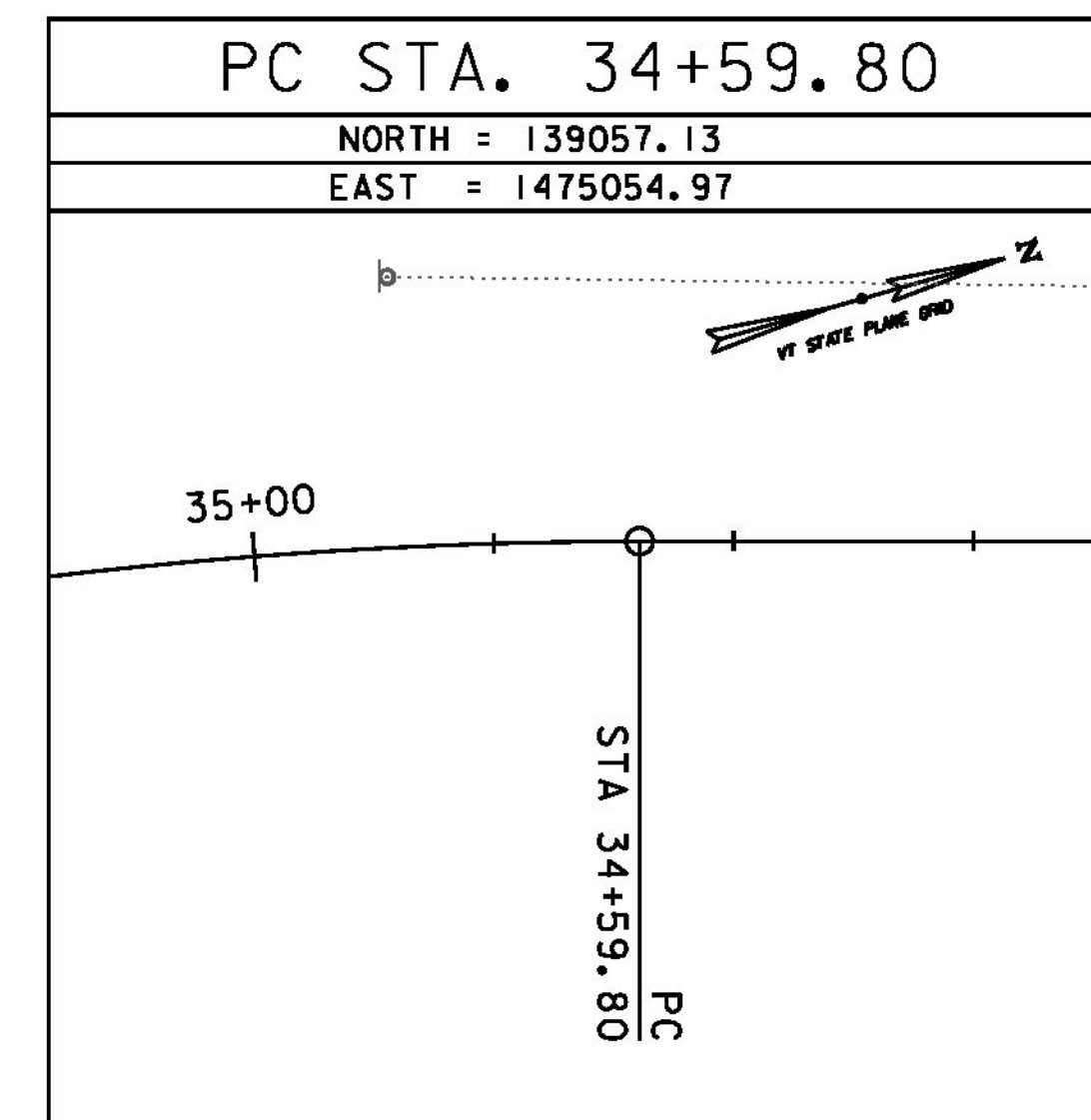
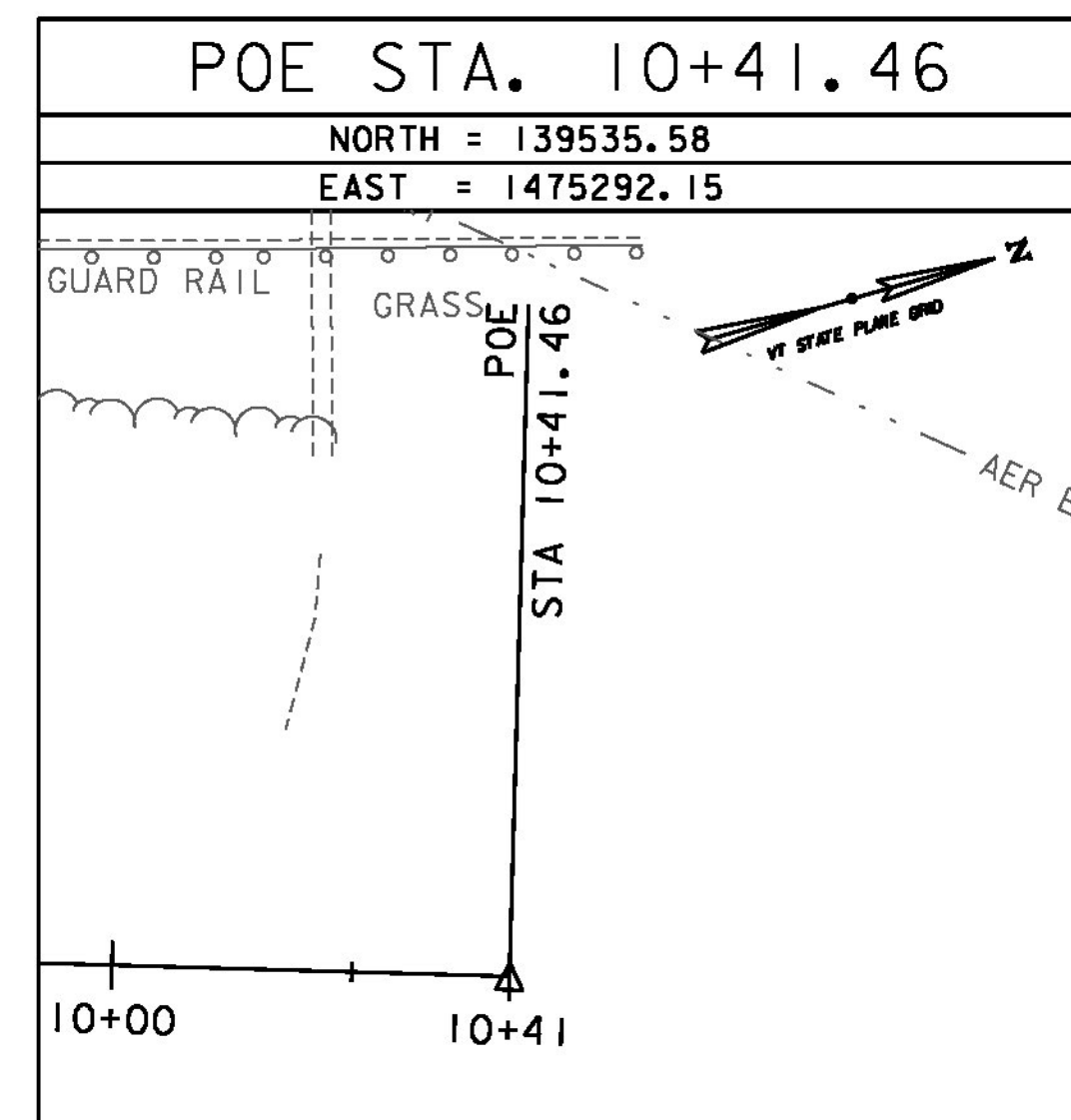
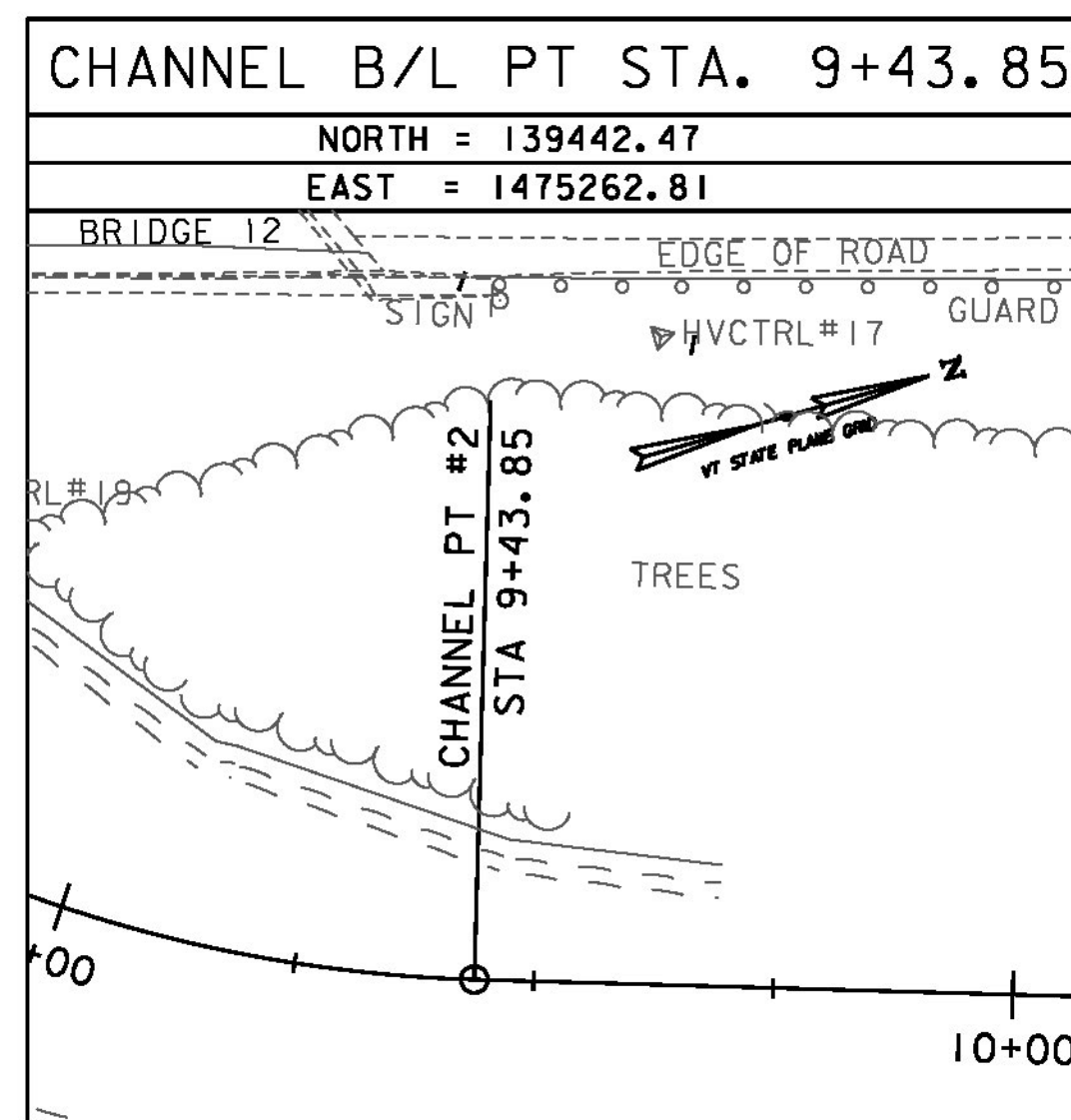
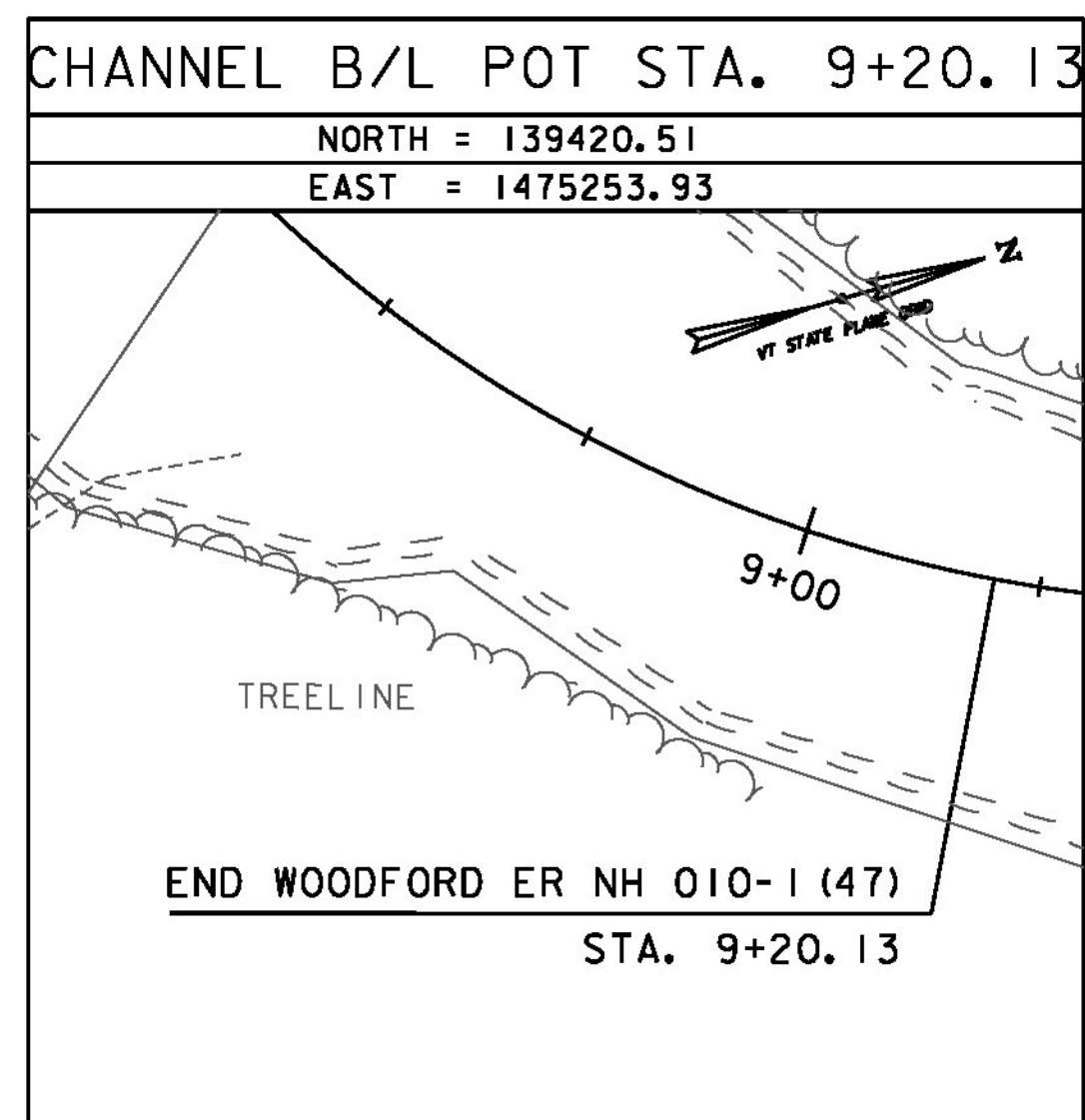
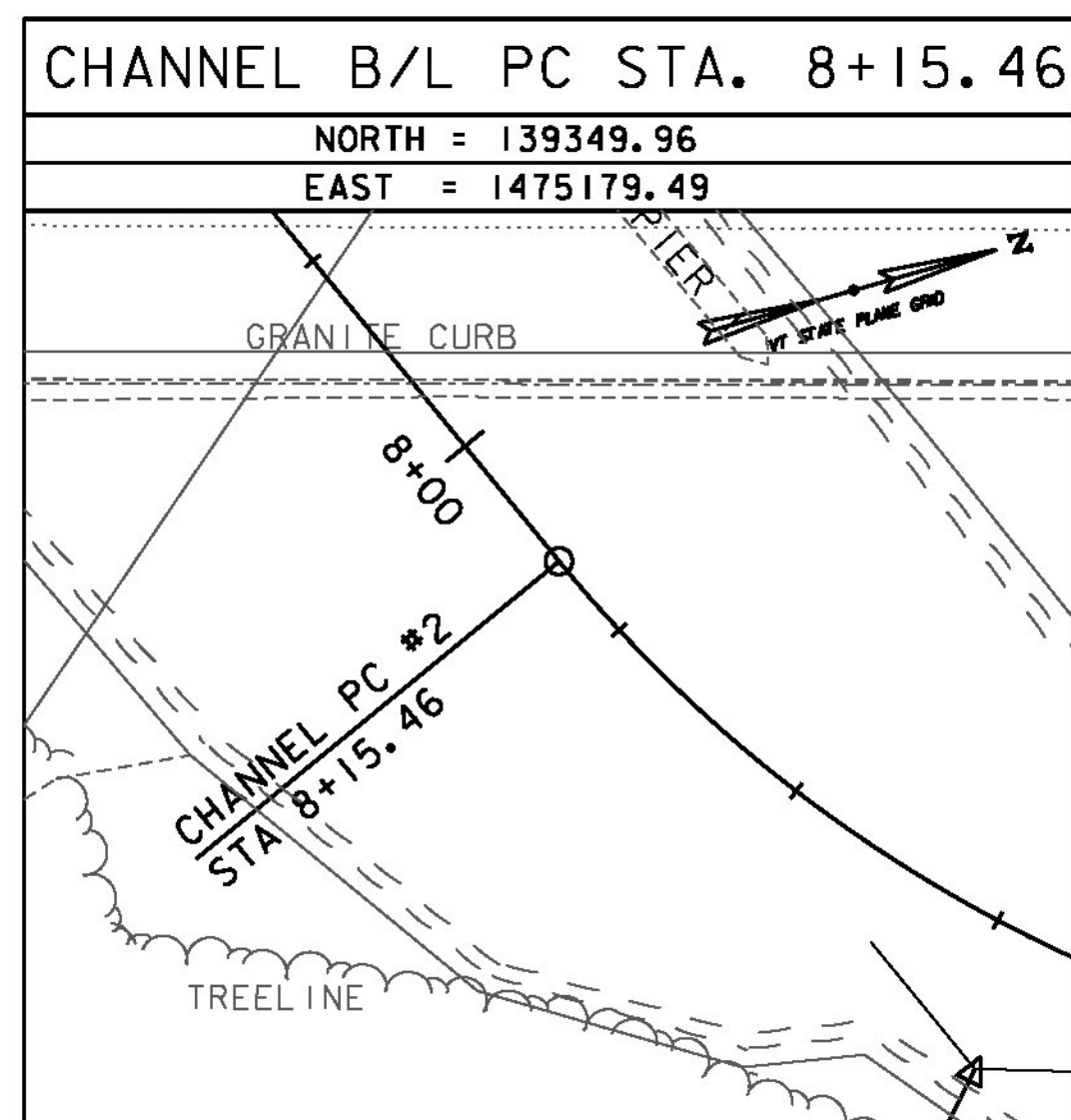


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HORIZONTAL	NAD 83(2011) sFT
ADJUSTMENT	NONE

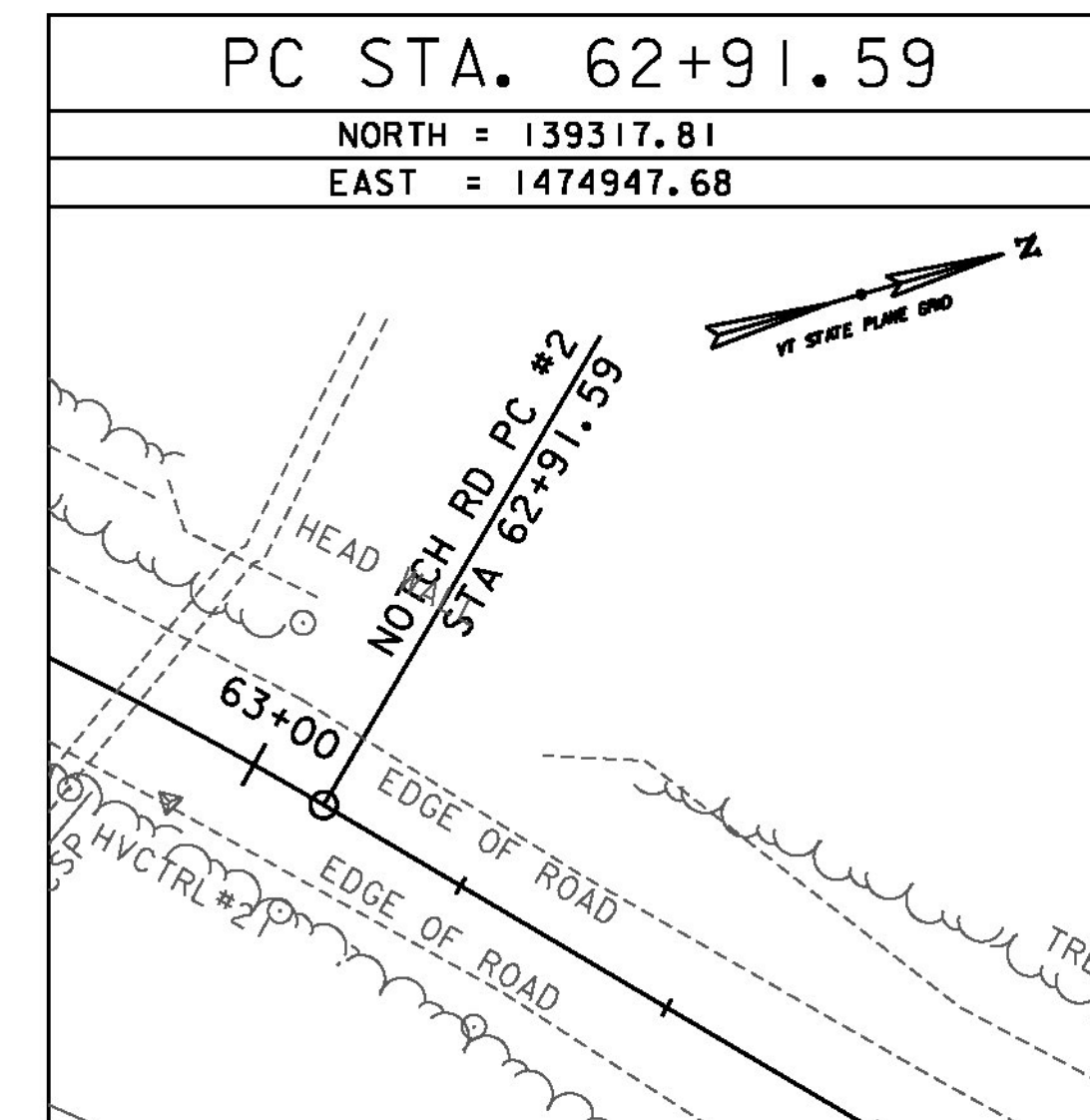
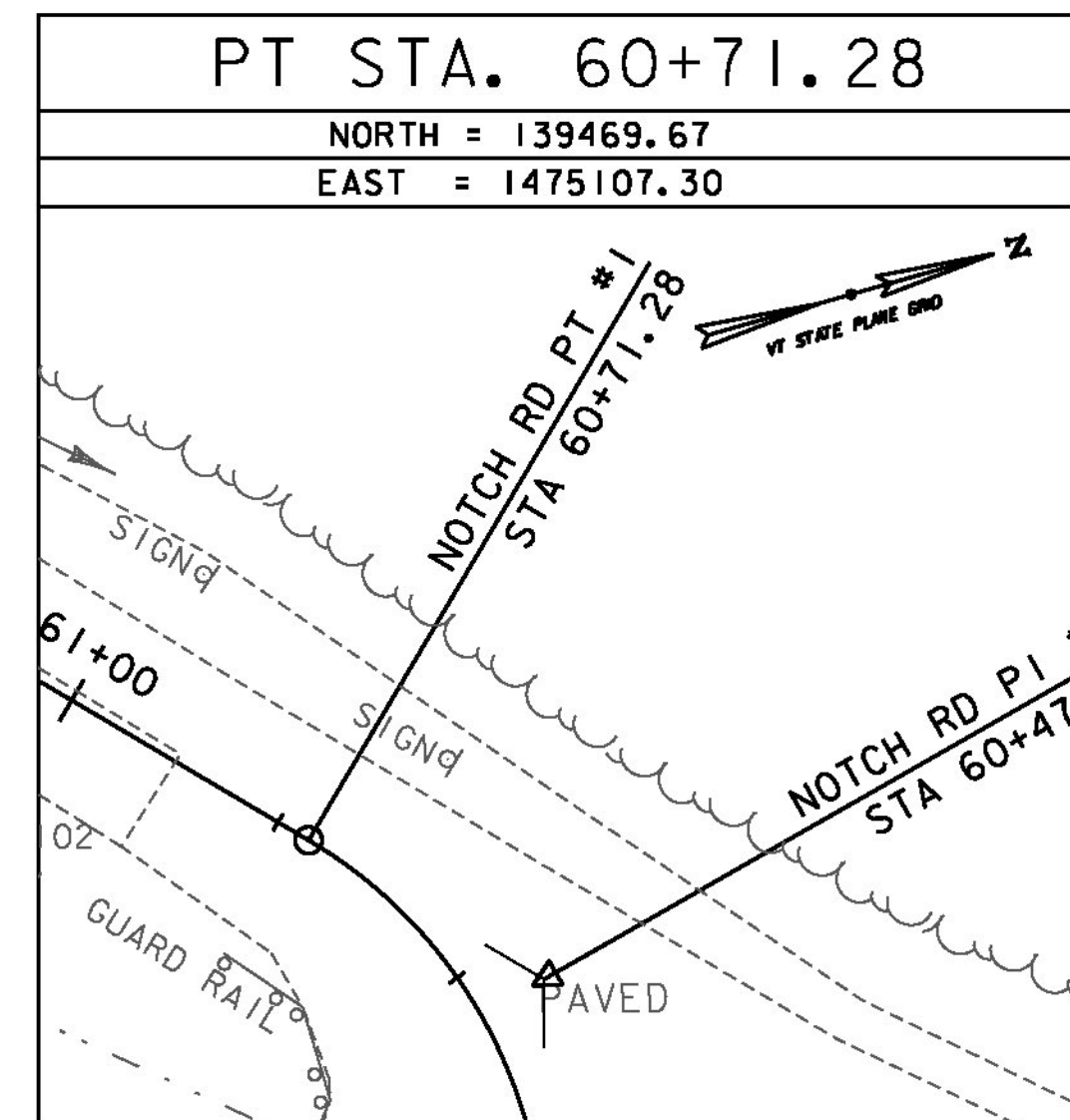
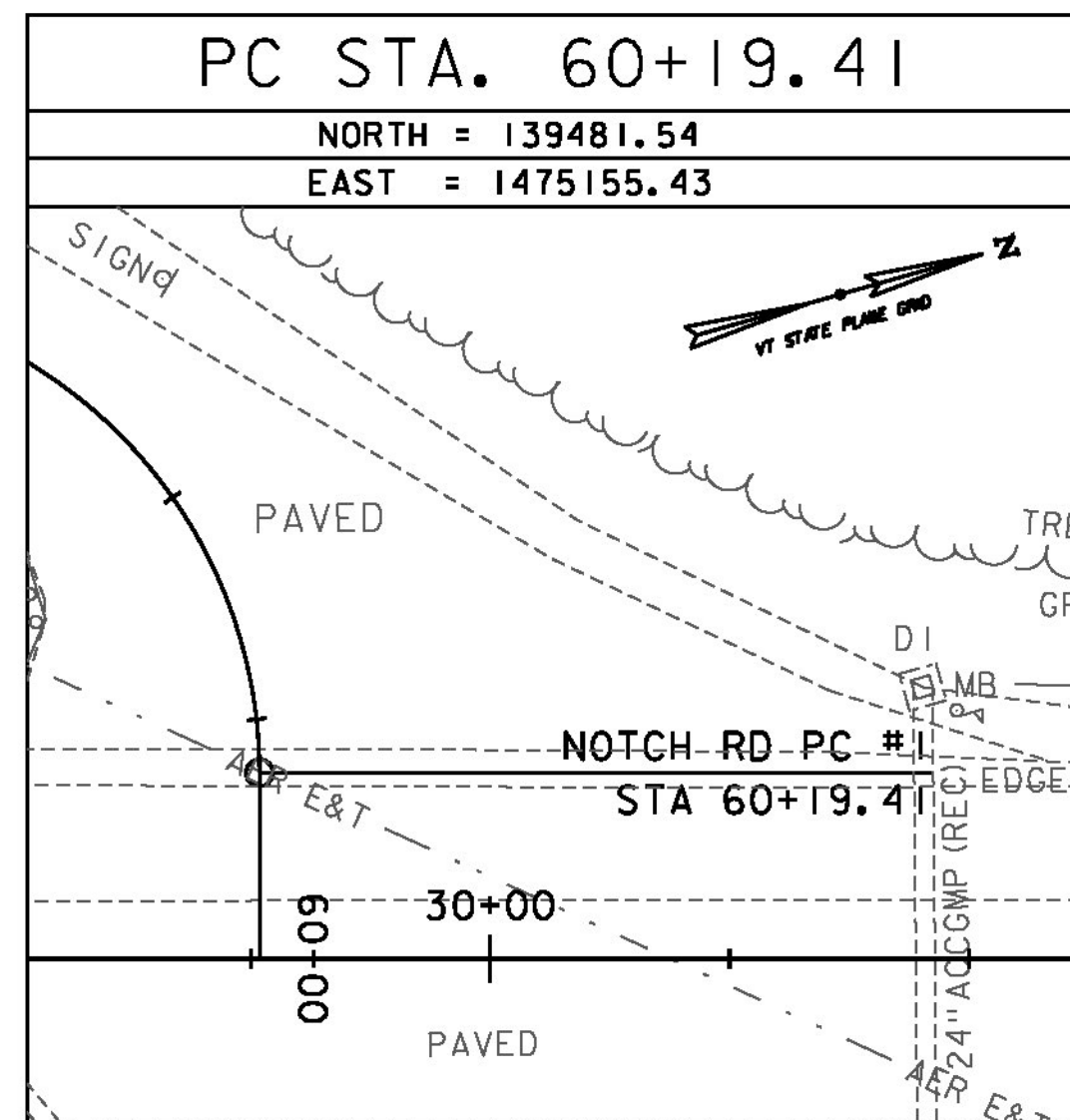
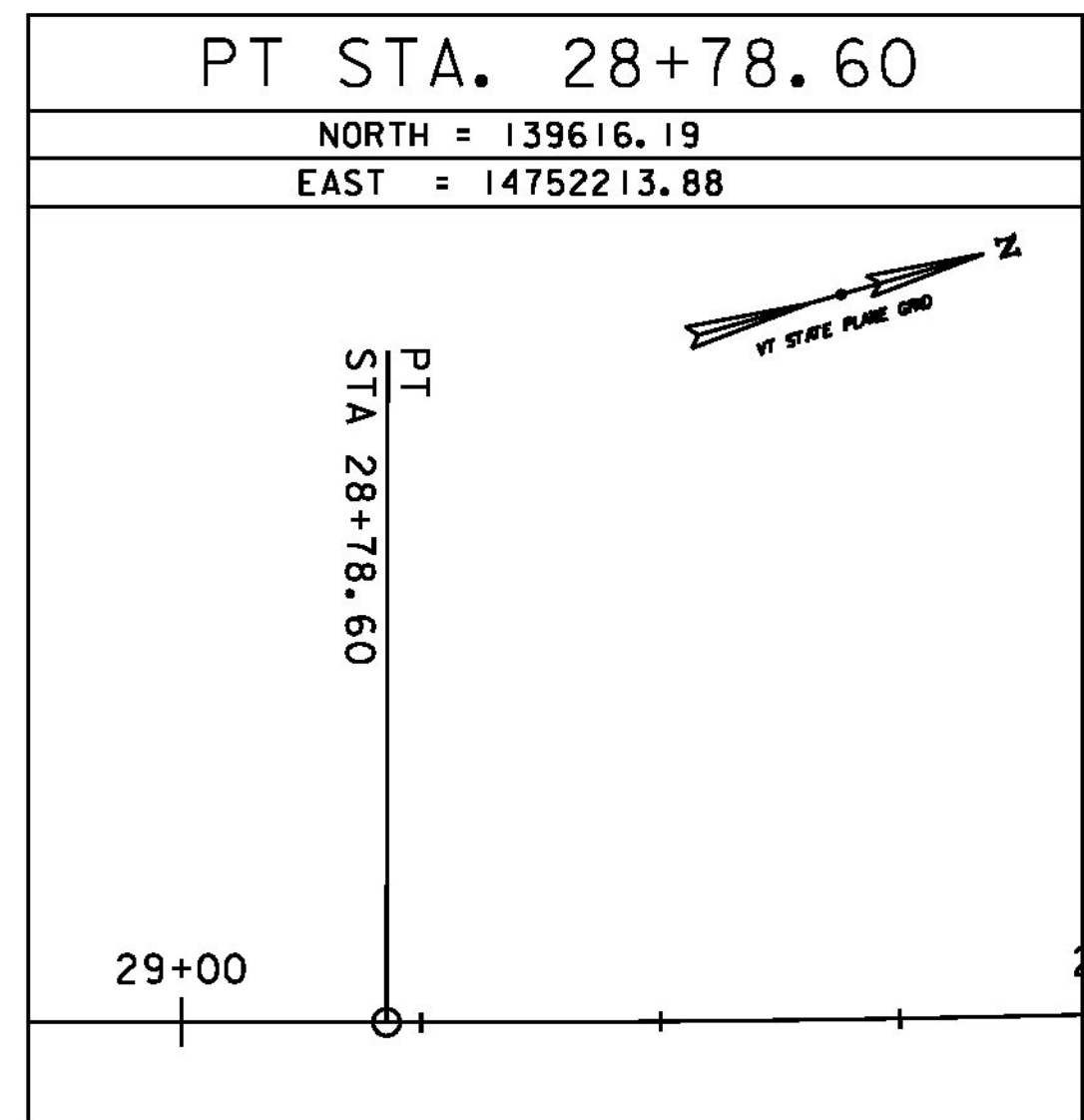
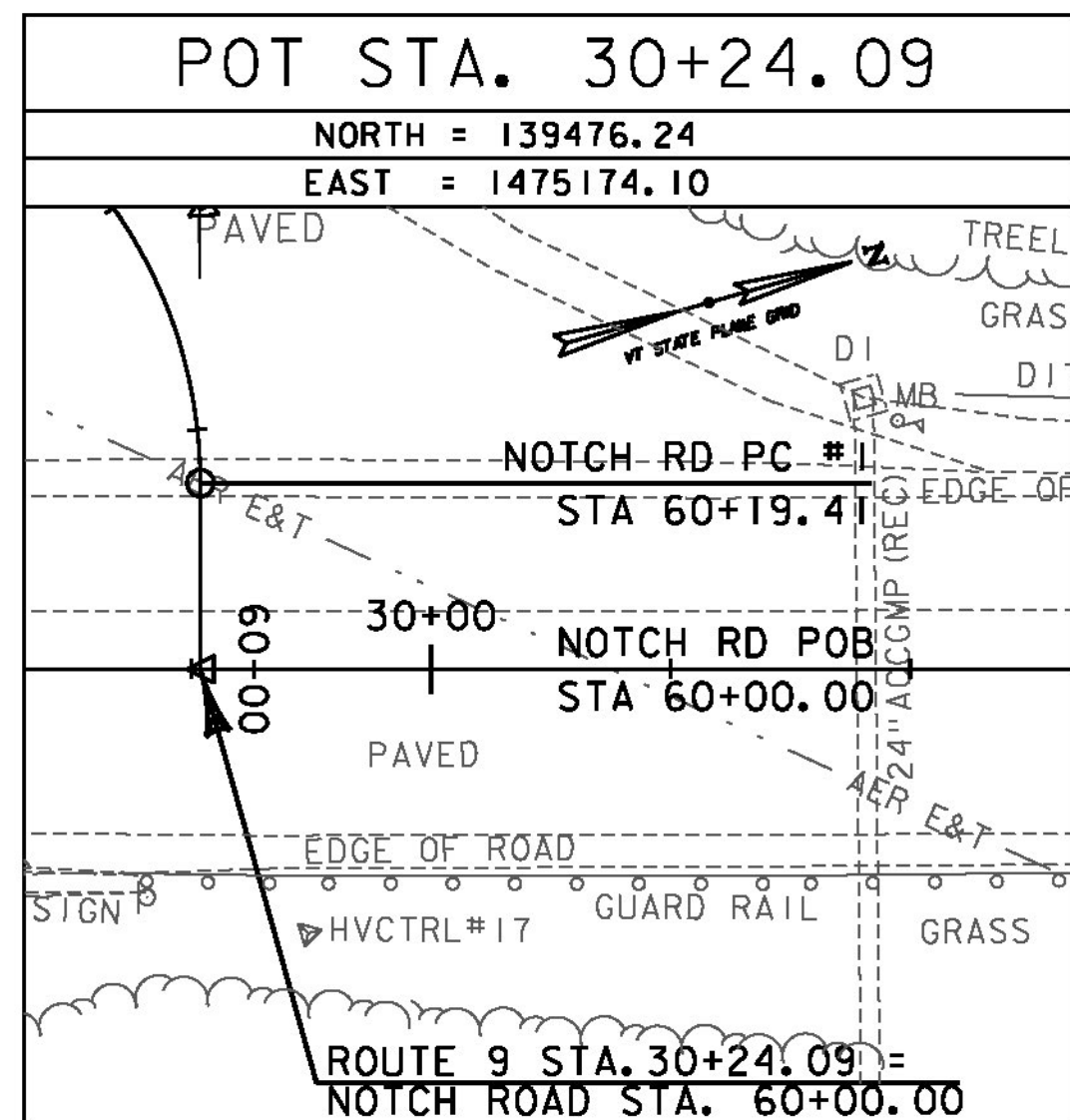
PROJECT NAME:	WOODFORD
PROJECT NUMBER:	ER NH 010-1(47)
FILE NAME:	z12b402+1e.dgn
PROJECT LEADER:	E. ATKINS
DESIGNED BY:	M. BRADLEY
TIE SHEET 1	
PLOT DATE:	12/03/2014
DRAWN BY:	C. MORIN
CHECKED BY:	E. ATKINS
SHEET	6 OF 35



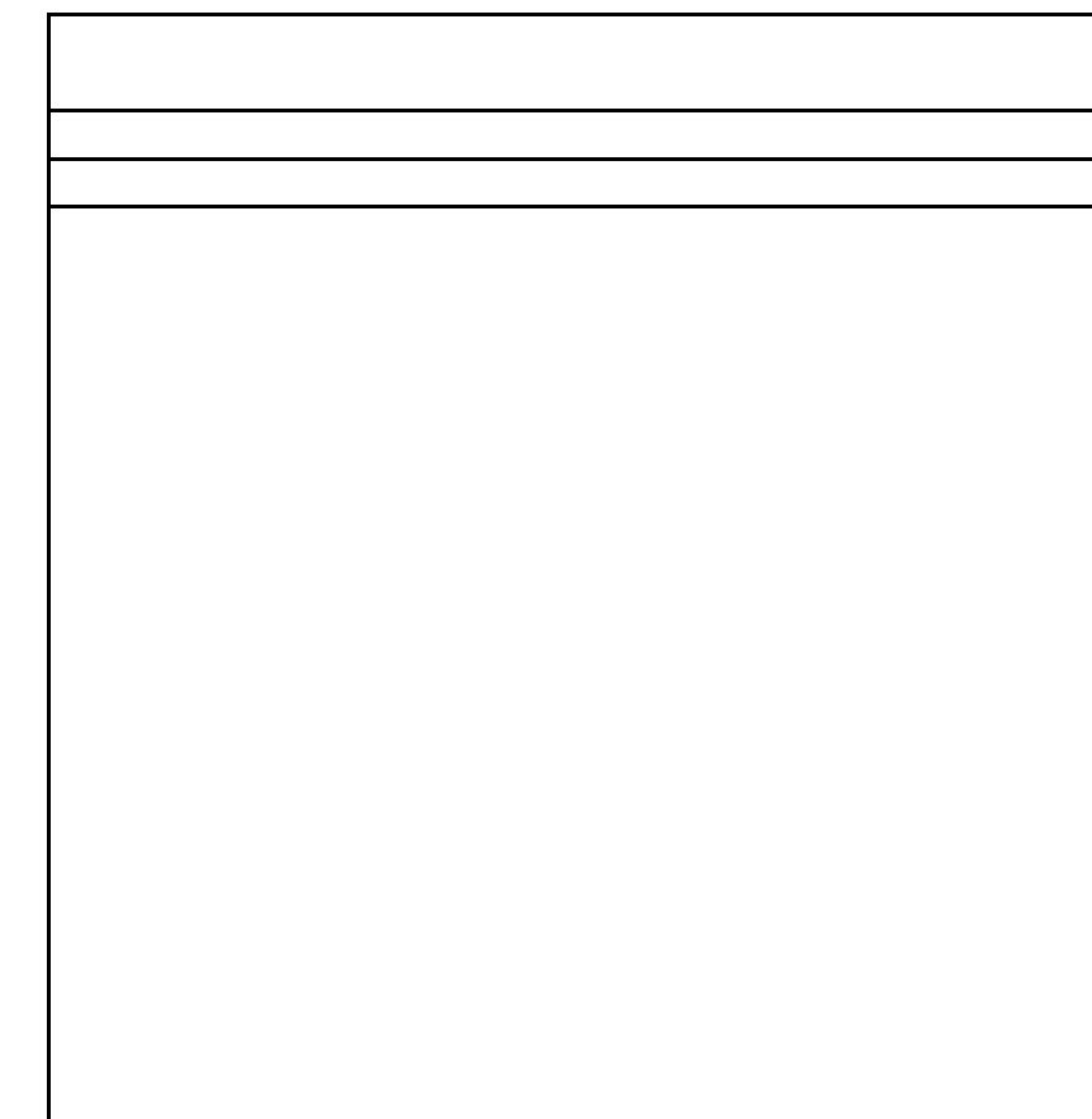
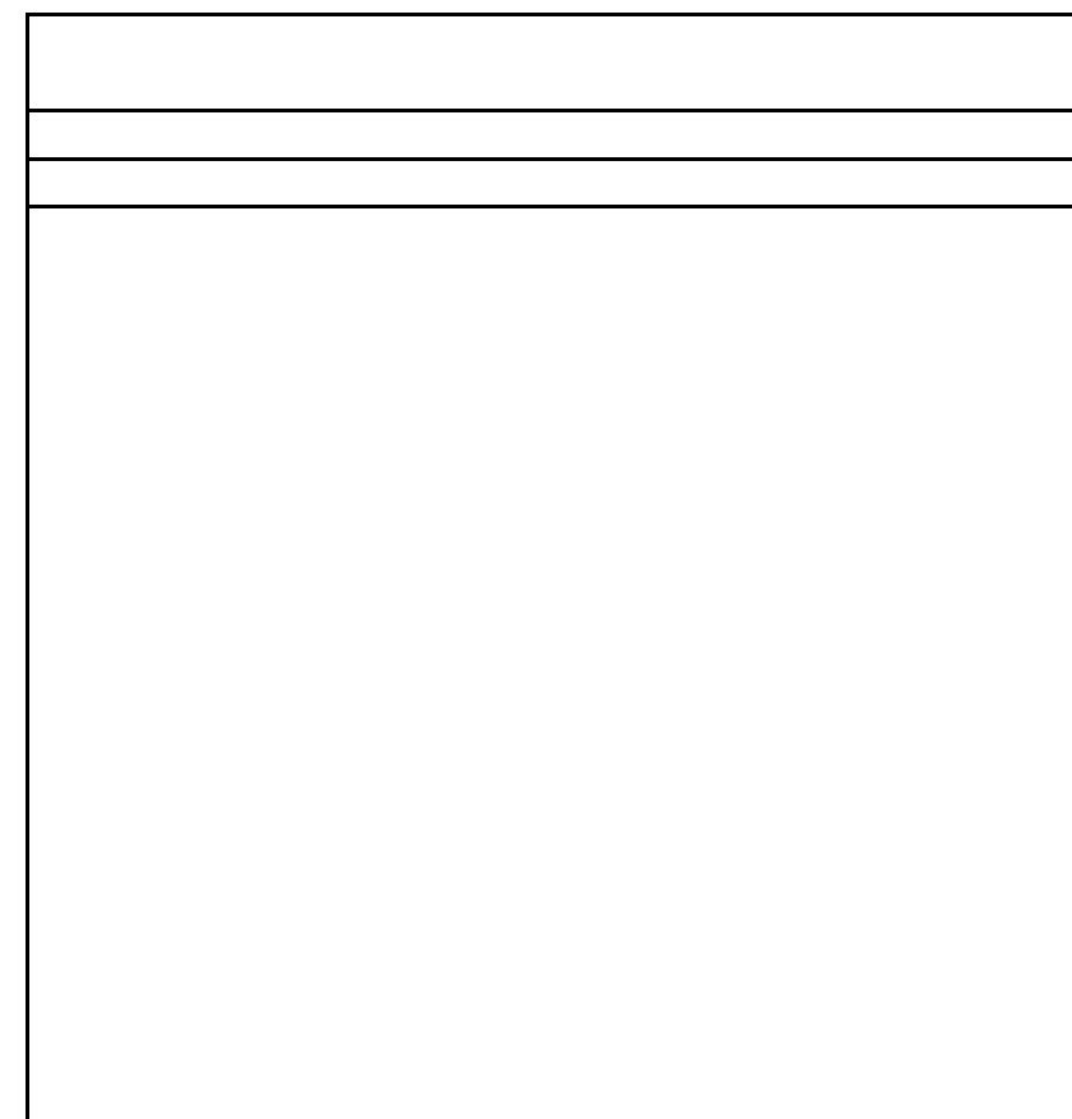
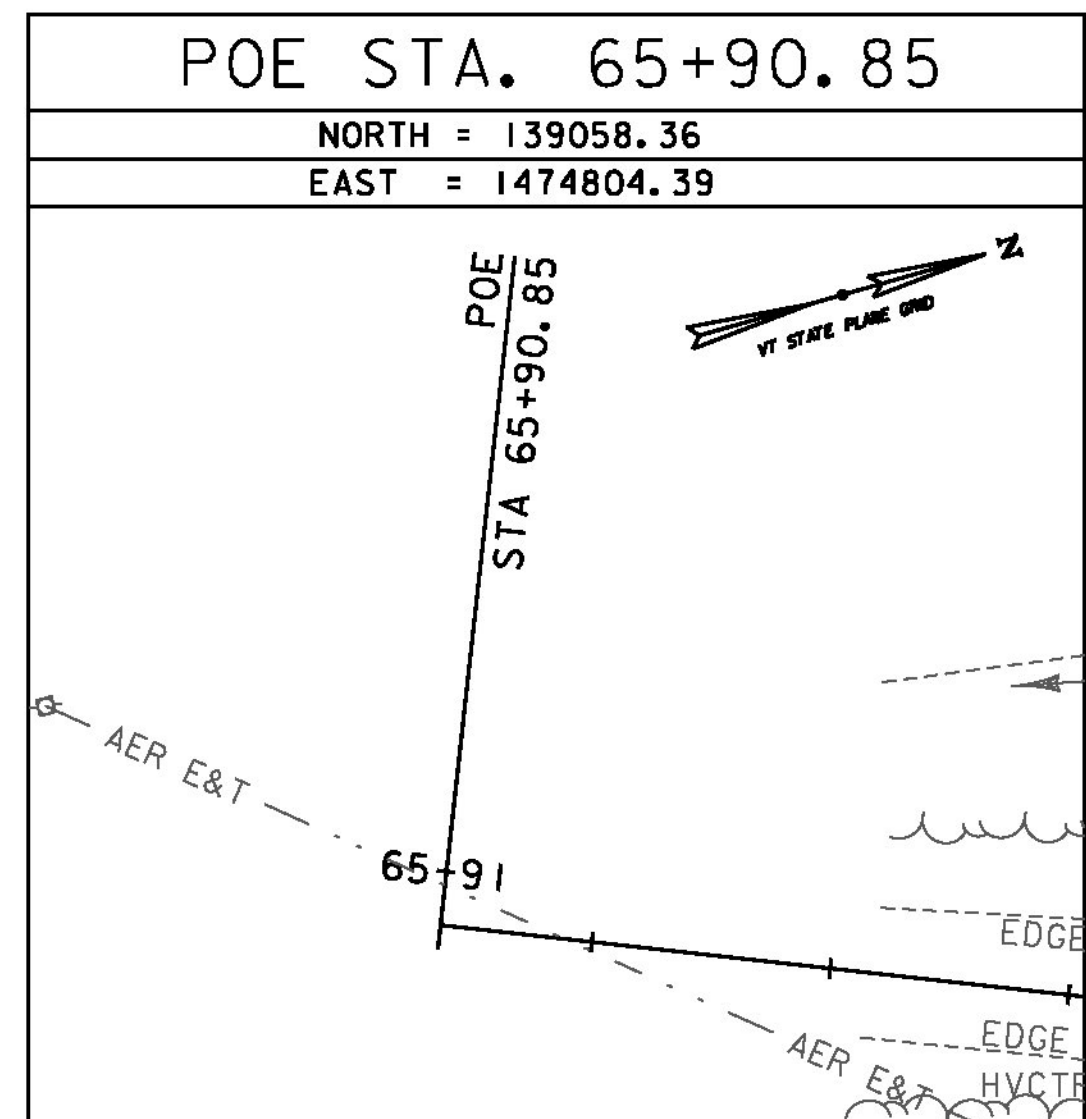
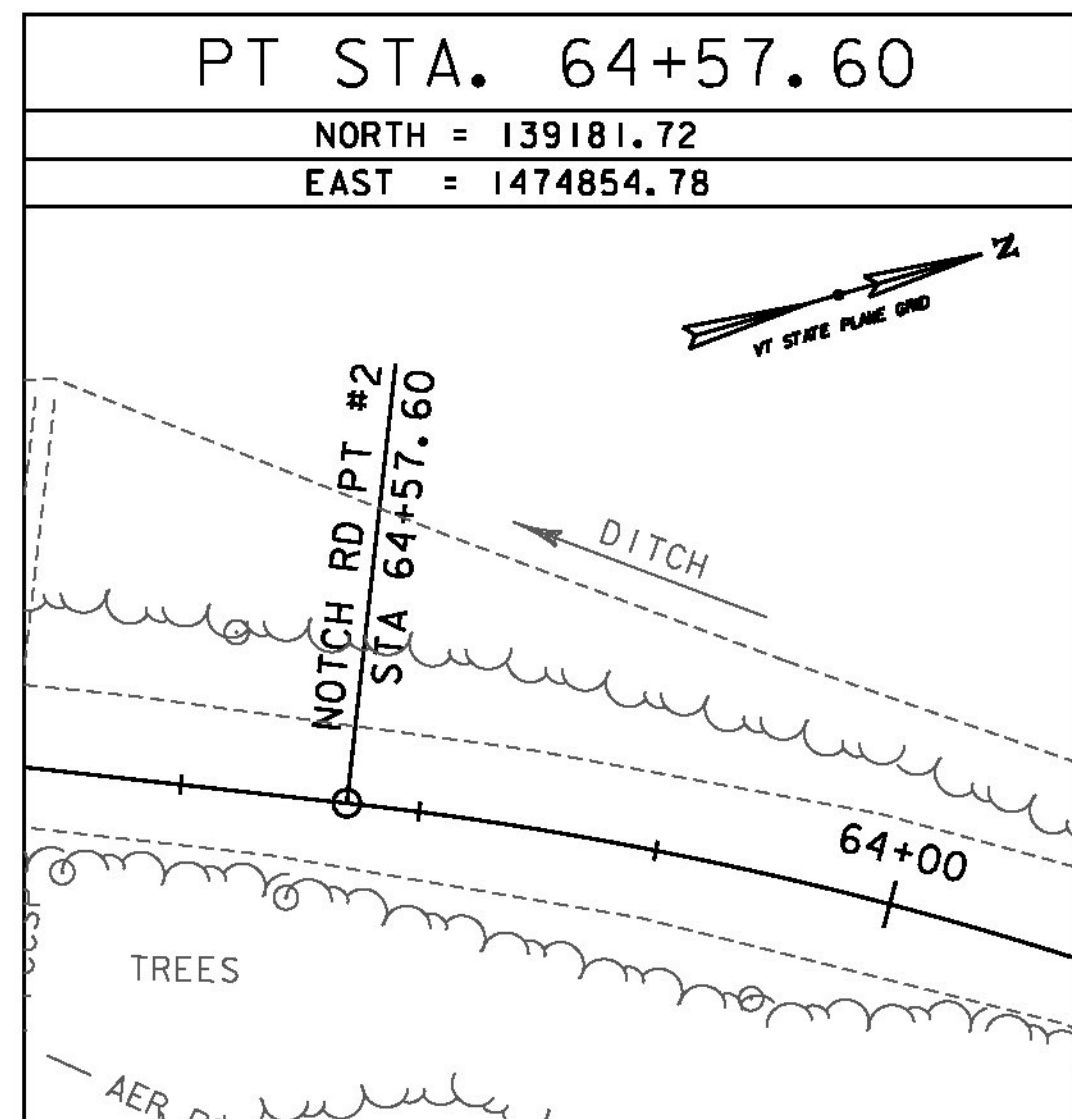
ALIGNMENT TIES



ALIGNMENT TIES



ALIGNMENT TIES



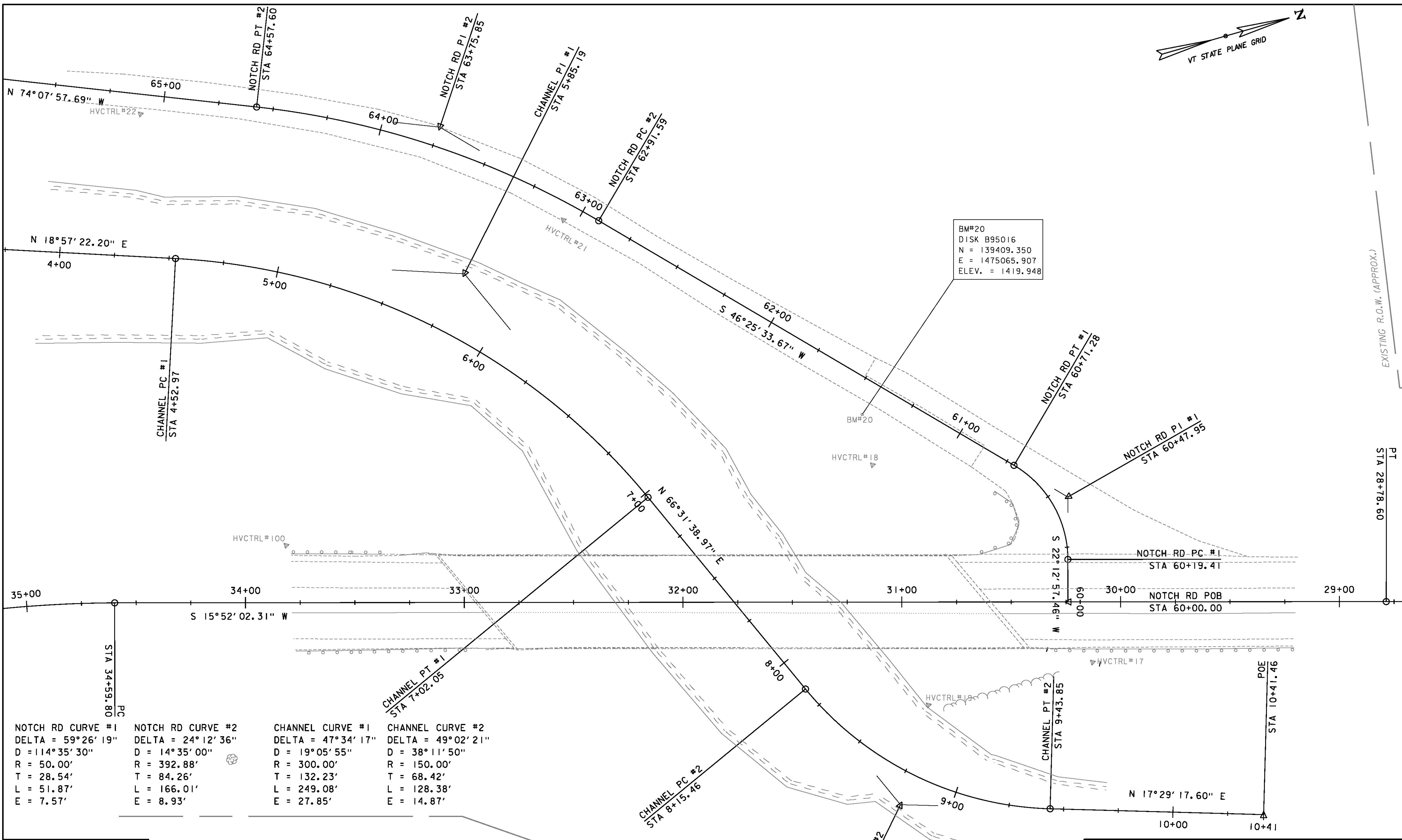
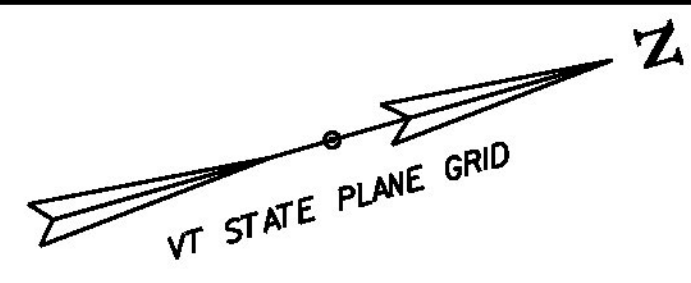
DATUM	
VERTICAL	NAVD 88 FT
HORIZONTAL	NAD 83(2011) sFT
ADJUSTMENT	NONE

PROJECT NAME: WOODFORD  
 PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402+1e.dgn  
 PROJECT LEADER: E. ATKINS  
 DESIGNED BY: M. BRADLEY  
 TIE SHEET 2

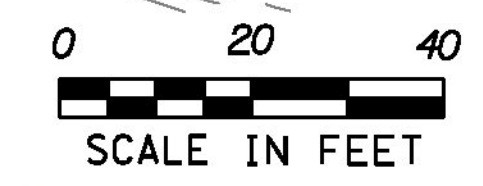
PLOT DATE: 12/03/2014  
 DRAWN BY: C. MORIN  
 CHECKED BY: E. ATKINS  
 SHEET 7 OF 35





NOTCH RD CURVE #1	NOTCH RD CURVE #2	CHANNEL CURVE #1	CHANNEL CURVE #2
DELTA = 59°26'19"	DELTA = 24°12'36"	DELTA = 47°34'17"	DELTA = 49°02'21"
D = 114'35'30"	D = 14'35'00"	D = 19'05'55"	D = 38'11'50"
R = 50.00'	R = 392.88'	R = 300.00'	R = 150.00'
T = 28.54'	T = 84.26'	T = 132.23'	T = 68.42'
L = 51.87'	L = 166.01'	L = 249.08'	L = 128.38'
E = 7.57'	E = 8.93'	E = 27.85'	E = 14.87'

DATUM	
VERTICAL	NAVD 88 FT
HORIZONTAL	NAD 83(2011) sFT
ADJUSTMENT	NONE



GREEN INTERNATIONAL AFFILIATES, INC.  
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	WOODFORD	PLOT DATE:	12/03/2014
PROJECT NUMBER:	ER NH 010-I(47)	DRAWN BY:	M. BRADLEY
FILE NAME:	z12b402algnbdr.dgn	CHECKED BY:	E. ATKINS
PROJECT LEADER:	E. ATKINS	ALIGNMENT SHEET	SHEET 8 OF 35
DESIGNED BY:	M. BRADLEY		

**SOIL CLASSIFICATION**

**AASHTO**

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

**ROCK QUALITY DESIGNATION**

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

**SHEAR STRENGTH**

UNDRAINED SHEAR STRENGTH IN kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

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

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

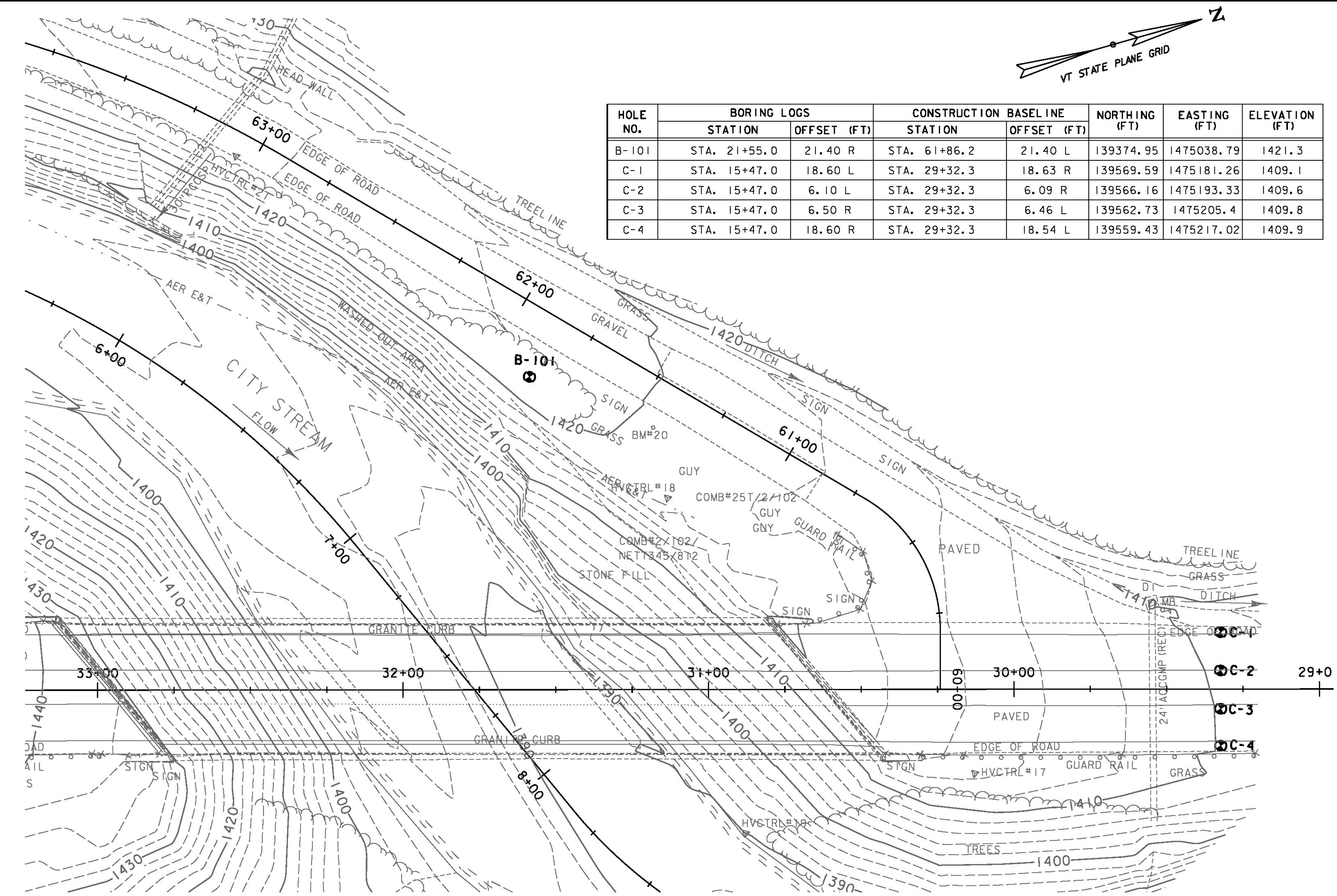
**COMMONLY USED SYMBOLS**

- ▼ Water Elevation
  - ⊕ Standard Penetration Boring
  - ⊙ Auger Boring
  - ⊙ Rod Sounding
  - S Sample
  - N Standard Penetration Test
  - Blow Count Per 300 mm For:
  - 50.8 mm O.D. Sampler
  - 35.0 mm I.D. Sampler
  - Hammer Weight Of 63.5 kg.
  - Hammer Fall Of 762 mm
  - VS Field Vane Shear Test
  - US Undisturbed Soil Sample
  - B Blast
  - DC Diamond Core
  - MD Mud Drill
  - WA Wash Ahead
  - HSA Hollow Stem Auger
  - AX Core Size 30.1mm
  - BX Core Size 42.0 mm
  - NX Core Size 54.7 mm
  - M Double Tube Core Barrel Used
  - LL Liquid Limit
  - PL Plastic Limit
  - PI Plasticity Index
  - NP Non Plastic
  - w Moisture Content (Dry Wgt. Basis)
  - D Dry
  - M Moist
  - MTW Moist To Wet
  - W Wet
  - Sat Saturated
  - Bo Boulder
  - Gr Gravel
  - Sa Sand
  - SI Silt
  - Cl Clay
  - HP Hardpan
  - Le Ledge
  - NLTD No Ledge To Depth
  - CNPF Can Not Penetrate Further
  - TLOB To Ledge Or Boulder
  - NR No Recovery
  - Rec. Recovery
  - %Rec. Percent Recovery
  - RQD Rock Quality Designation
  - CBR California Bearing Ratio
  - < Less Than
  - > Greater Than
  - R Refusal (N > 100)
  - OW Indicates a temporary observation well installed
- COLOR**
- |     |        |      |              |
|-----|--------|------|--------------|
| blk | Black  | pnk  | Pink         |
| bl  | Blue   | pu   | Purple       |
| brn | Brown  | rd   | Red          |
| dk  | Dark   | tn   | Tan          |
| gry | Gray   | wh   | White        |
| gn  | Green  | yel  | Yellow       |
| lt  | Light  | mitc | Multicolored |
| or  | Orange |      |              |

**DEFINITIONS (AASHTO)**

- BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.
- BOULDER - A rock fragment with an average dimension > 304.8 mm.
- COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.
- GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).
- SAND - Particles of rock < 2 mm (#10 sieve) and > 75 μm (#200 sieve).
- SILT - Soil < 75 μm (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

- VARVED - Alternate layers of silt and clay.
- HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
- MUCK - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT - Weight of water divided by dry weight of soil.
- FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP - Inclination of bed with a horizontal plane.



HOLE NO.	BORING LOGS		CONSTRUCTION BASELINE		NORTHING (FT)	EASTING (FT)	ELEVATION (FT)
	STATION	OFFSET (FT)	STATION	OFFSET (FT)			
B-101	STA. 21+55.0	21.40 R	STA. 61+86.2	21.40 L	139374.95	1475038.79	1421.3
C-1	STA. 15+47.0	18.60 L	STA. 29+32.3	18.63 R	139569.59	1475181.26	1409.1
C-2	STA. 15+47.0	6.10 L	STA. 29+32.3	6.09 R	139566.16	1475193.33	1409.6
C-3	STA. 15+47.0	6.50 R	STA. 29+32.3	6.46 L	139562.73	1475205.4	1409.8
C-4	STA. 15+47.0	18.60 R	STA. 29+32.3	18.54 L	139559.43	1475217.02	1409.9

**GENERAL NOTES**

- The test borings shown herein were drilled by the Agency between 10/16/2013 and 10/17/2013.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.



GREEN INTERNATIONAL AFFILIATES, INC.  
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402bor.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
BORING SHEET

PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 9 OF 35

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>B-101</b>			
WOODFORD NH 010-1(47) VT-9 BR-12		Page No.: 1 of 1		Pin No.: 12B402			
Checked By: TDE		Date		Groundwater Observations			
Boring Crew: DAIGNEAULT, JUDKINS		Type: WB	Casing: SS	Date: 10/17/13			
Date Started: 10/16/13 Date Finished: 10/17/13		I.D.: 4 in	Sampler: 1.5 in	Depth (ft): 4.4			
VTSPG NAD83: N 139374.95 ft E 1475038.79 ft		Hammer Wt: N.A.	140 lb.	Notes: AM, Before drilling.			
Station: 21+55 Offset: 21.40		Hammer Fall: N.A.	30 in.				
Ground Elevation: 1421.3 ft		Hammer/Rod Type: Auto/AWJ					
		Rig: CME 45C SKID	C _r = 1.33				
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		A-4, SiSa, brn, Moist, Rec. = 0.8 ft	3-7-11-R (18)	12.3	18.8	42.8	38.4
		Field Note, NXDC, Cleaned out casing					
5		A-2-4, SiSaGr, brn, Moist, Rec. = 0.5 ft, Broken Rock was within sample.	25-37 (R@1.0')	9.0	38.8	33.3	27.9
		Field Note, NXDC, Cleaned out casing					
10		A-4, GrSaSi, brn, Moist, Rec. = 0.6 ft	17-47 (R@2.5')	13.2	21.7	37.3	41.0
		Visual Description, Broken white rock with sand & silt, white, Moist, Rec. = 0.2 ft		7.9			
		A-4, GrSaSi, brn, Moist, Rec. = 0.8 ft, Broken Rock was within sample.	23-28 (R@3.5')	9.4	29.9	31.5	38.6
15		A-4, GrSaSi, brn, MTW, Rec. = 0.7 ft, Broken Rock was within sample.	10-10-43-15 (53)	10.8	27.9	35.1	37.0
		A-4, GrSaSi, brn, Moist, Rec. = 0.4 ft, Broken Rock was within sample.	25-21-27-24 (48)	11.1	27.7	33.9	38.4
		Field Note, No Recovery	27-45-26-R (71)				
20		A-4, SaGrSi, brn, Moist, Rec. = 0.8 ft, Broken Rock was within sample.	11-15-14-R (29)	11.2	33.1	29.3	37.6
		Field Note, No Recovery					
		Field Note, NXDC, Cleaned out casing	(R@0.0')				
25		A-4, GrSaSi, brn, Moist, Rec. = 1.1 ft, Broken Rock was within sample.	11-8-9-17 (15)	11.5	27.5	33.1	39.4
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.9 ft, Broken Rock was within sample.	8-24-37-R (61)	11.0	32.8	34.9	32.3
		Visual Description, Broken Rock with sand & silt, brn, Moist, Rec. = 0.3 ft, Insufficient sample for testing.	(R@3.5')	9.3			
30		Visual Description, Broken Rock with sand & silt, brn, Moist, Rec. = 0.5 ft, Insufficient sample for testing.	35-46 (R@2.5')	7.5			
		Field Note, No Recovery					
		Field Note, NXDC, Cleaned out casing	(R@3.5')				
35		A-2-4, GrSiSa, brn, Moist, Rec. = 0.6 ft, Broken Rock was within sample.	28 (R@3.5')	10.1	29.2	35.4	35.4
		Field Note, NXDC, Cleaned out casing					
40		A-2-4, GrSiSa, brn, Moist, Rec. = 0.4 ft, Broken Rock was within sample.	34 (R@3.5')	10.0	30.6	36.8	32.6
		Hole stopped @ 40.8 ft					
		Hole collapsed at 4.4 ft.					

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

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>C-1</b>			
WOODFORD NH 010-1(47) VT-9 BR-12		Page No.: 1 of 1		Pin No.: 12B402			
Checked By: TDE		Date		Groundwater Observations			
Boring Crew: DAIGNEAULT, JUDKINS		Type: SS	Casing: SS	Date: 10/16/13			
Date Started: 10/16/13 Date Finished: 10/16/13		I.D.: 3 in	Sampler: 3 in	Depth (ft):			
VTSPG NAD83: N 139569.59 ft E 1475181.26 ft		Hammer Wt: N.A.	140 lb.	Notes: No water to depth.			
Station: 15+47 Offset: -18.60		Hammer Fall: N.A.	30 in.				
Ground Elevation: 1409.1 ft		Hammer/Rod Type: Auto/AWJ					
		Rig: CME 45C SKID	C _r = 1.33				
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		Asphalt Pavement, 0.0 ft - 0.72 ft					
2.5		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft	32-30-43-51	6.4	69.1	21.7	9.2
		A-1-a, Gr, brn, Moist, Rec. = 1.0 ft	49-89-46-67	5.8	73.3	19.0	7.7
5.0		Hole stopped @ 5.0 ft					
7.5		Remarks: 1. Driller's used a 3.0 inch split spoon sampler.					
10.0							
12.5							
15.0							
17.5							

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

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>C-2</b>			
WOODFORD NH 010-1(47) VT-9 BR-12		Page No.: 1 of 1		Pin No.: 12B402			
Checked By: TDE		Date		Groundwater Observations			
Boring Crew: DAIGNEAULT, JUDKINS		Type: SS	Casing: SS	Date: 10/16/13			
Date Started: 10/16/13 Date Finished: 10/16/13		I.D.: 3 in	Sampler: 3 in	Depth (ft):			
VTSPG NAD83: N 139566.16 ft E 1475193.33 ft		Hammer Wt: N.A.	140 lb.	Notes: No water to depth.			
Station: 15+47 Offset: -6.10		Hammer Fall: N.A.	30 in.				
Ground Elevation: 1409.6 ft		Hammer/Rod Type: Auto/AWJ					
		Rig: CME 45C SKID	C _r = 1.33				
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		Asphalt Pavement, 0.0 ft - 0.64 ft					
2.5		A-1-a, SaGr, brn, Moist, Rec. = 0.9 ft	32-41-65-32	5.5	61.3	26.5	12.2
		A-1-a, Gr, brn, Moist, Rec. = 1.1 ft	65-51-115-49	5.8	73.6	18.1	8.3
5.0		Hole stopped @ 5.0 ft					
7.5		Remarks: 1. Driller's used a 3.0 inch split spoon sampler.					
10.0							
12.5							
15.0							
17.5							

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

PROJECT NAME: WOODFORD  
 PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402bor.dgn  
 PROJECT LEADER: E. ATKINS  
 DESIGNED BY: M. BRADLEY  
 BORING LOG SHEET 1

PLOT DATE: 12/03/2014  
 DRAWN BY: M. BRADLEY  
 CHECKED BY: E. ATKINS  
 SHEET 10 OF 35

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: C-3	
Boring Crew: WHITLOCK, DAIGNEAULT, JUDKINS		Type: SS		Groundwater Observations		Page No.: 1 of 1	
Date Started: 10/16/13 Date Finished: 10/16/13		I.D.: 3 in		Date Depth (ft) Notes		Pin No.: 12B402	
VTSPG NAD83: N 139562.73 ft E 1475205.40 ft		Hammer Wt: N.A. 140 lb.		No water to depth.		Checked By: TDE	
Station: 15+47 Offset: 6.50		Hammer Fall: N.A. 30 in.					
Ground Elevation: 1409.8 ft		Hammer/Rod Type: Auto/AWJ					
		Rig: CME 45C SKID C _r = 1.33					
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.71 ft					
2.5		A-1-a, Gr, brn, Moist, Rec. = 1.5 ft	22-42-53-49	3.3	74.3	18.5	7.2
		A-1-a, Gr, brn, Moist, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.	127-300	5.0	75.1	17.3	7.6
		Hole stopped @ 3.7 ft TLOB, CNPF					
5.0		Remarks: 1. Driller's used a 3.0 inch split spoon sampler.					
7.5							
10.0							
12.5							
15.0							
17.5							
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C _r is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.							

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: C-4	
Boring Crew: WHITLOCK, DAIGNEAULT, JUDKINS		Type: SS		Groundwater Observations		Page No.: 1 of 1	
Date Started: 10/16/13 Date Finished: 10/16/13		I.D.: 3 in		Date Depth (ft) Notes		Pin No.: 12B402	
VTSPG NAD83: N 139559.43 ft E 1475217.02 ft		Hammer Wt: N.A. 140 lb.		No water to depth.		Checked By: TDE	
Station: 15+47 Offset: 18.60		Hammer Fall: N.A. 30 in.					
Ground Elevation: 1409.9 ft		Hammer/Rod Type: Auto/AWJ					
		Rig: CME 45C SKID C _r = 1.33					
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.65 ft					
2.5		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft	35-57-300	4.2	72.6	21.9	5.5
		Field Note: No Recovery	300				
		Hole stopped @ 2.6 ft TLOB, CNPF					
5.0		Remarks: 1. Driller's used a 3.0 inch split spoon sampler.					
7.5							
10.0							
12.5							
15.0							
17.5							
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C _r is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.							

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402bor.dgn PLOT DATE: 12/03/2014  
PROJECT LEADER: E. ATKINS DRAWN BY: M. BRADLEY  
DESIGNED BY: M. BRADLEY CHECKED BY: E. ATKINS  
BORING LOG SHEET 2 SHEET II OF 35

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
							ROADWAY	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							1			1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-	UNCLASSIFIED EXCAVATION		
							6000			6000		CY	UNCLASSIFIED EXCAVATION	203.17	62	5938 CY	CHANNEL	
							11000			11000		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	242	62 CY	ROUNDING	
							1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-	6000 CY	TOTAL	
							1200			1200		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	101	UNCLASSIFIED CHANNEL EXCAVATION		
							40			40		CY	AGGREGATE SHOULDERS, IN PLACE	402.10	9	10758 CY	CHANNEL	
							20			20		LF	24" PCCSP .064 (2-2/3 X 1/2)	601.0425	8	242 CY	ROUNDING	
							20			20		LF	30" PCCSP .079 (2-2/3 X 1/2)	601.0436	10	11000 CY	TOTAL	
							75			75		MGAL	DUST CONTROL WITH WATER	609.10	1	SUBBASE OF DENSE GRADED CRUSHED STONE		
								1400		1400		CY	STONE FILL, TYPE II	613.11	92	1099 CY	CHANNEL	
								2900		2900		CY	STONE FILL, TYPE IV	613.13	81	101 CY	ROUNDING	
							2			2		EACH	YIELDING MARKER POSTS	619.17	-	1200 CY	TOTAL	
							337.5			337.5		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	-	PERMANENT EROSION CONTROL		
							500			500		LF	TEMPORARY TRAFFIC BARRIER	621.90	9	1400 CY	STONE FILL, TYPE II	
							450			450		HR	FLAGGERS	630.15	EST.	2900 CY	STONE FILL, TYPE IV	
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10	-	750 SY	GEOTEXTILE UNDER STONE FILL	
									3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-	0.3 TON	HAYMULCH	
							1			1		LS	MOBILIZATION/DEMOBILIZATION	635.11	-	1500 SY	TEMPORARY EROSION MATTING	
							1			1		LS	TRAFFIC CONTROL	641.10	-	SPECIAL PROVISION (STONE FILL, CHANNEL ARMORING)		
										750		SY	GEOTEXTILE UNDER STONE FILL	649.31	39	8407 CY	TYPE V	
										200		SY	GEOTEXTILE FOR SILT FENCE	649.51	42	93 CY	ROUNDING	
										50		LB	SEED	651.15	36	8500 CY	TOTAL	
										50		LB	SEED, WINTER RYE	651.17	36			
										100		LB	FERTILIZER	651.18	41			
										0.3		TON	AGRICULTURAL LIMESTONE	651.20	0.1			
										0.3		TON	HAY MULCH	651.25	0.1			
							70			70		CY	TOPSOIL	651.35	9			
							1400			1400		SY	GRUBBING MATERIAL	651.40	3			
										1		LS	EPSC PLAN	652.10	-			
								150		150		HR	MONITORING EPSC PLAN	652.20	-			
								1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-			
								1500		1500		SY	TEMPORARY EROSION MATTING	653.20	16			
								20		20		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25	2			
								30		30		CY	VEHICLE TRACKING PAD	653.35	1			
								1100		1100		LF	BARRIER FENCE	653.50	5			
										1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
								8500		8500		CY	SPECIAL PROVISION (STONE FILL, CHANNEL ARMORING)	900.608	93			
								600		600		LF	SPECIAL PROVISION (TEMPORARY WATER DIVERSION BARRIER)	900.640	87			

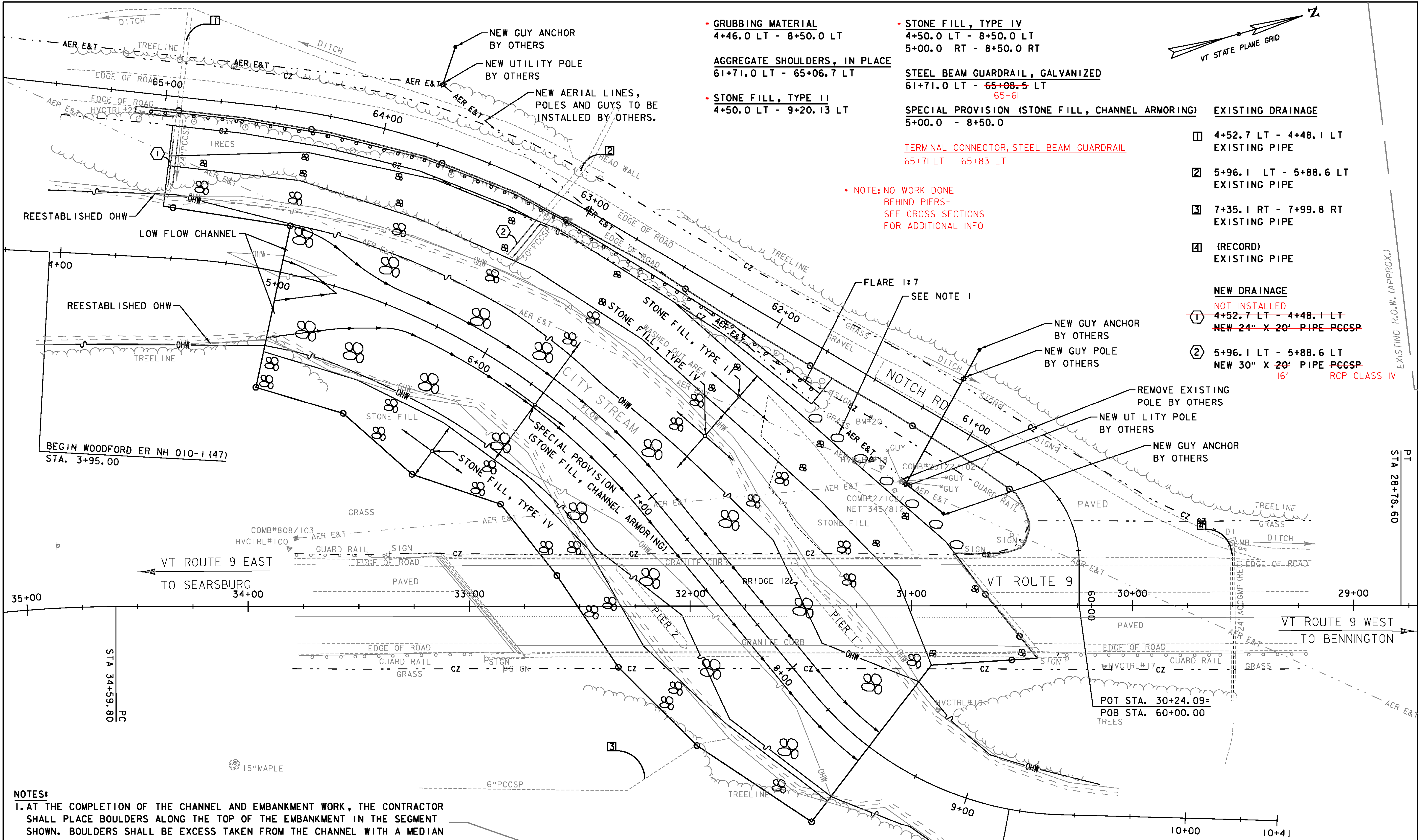
PROJECT NAME: WOODFORD  
 PROJECT NUMBER: ER NH 010-1(47)  
 FILE NAME: z12b402qty.dgn  
 PROJECT LEADER: E. ATKINS  
 DESIGNED BY: M. BRADLEY  
 QUANTITY SHEET

PLOT DATE: 12/03/2014  
 DRAWN BY: M. BRADLEY  
 CHECKED BY: E. ATKINS  
 SHEET 12 OF 35



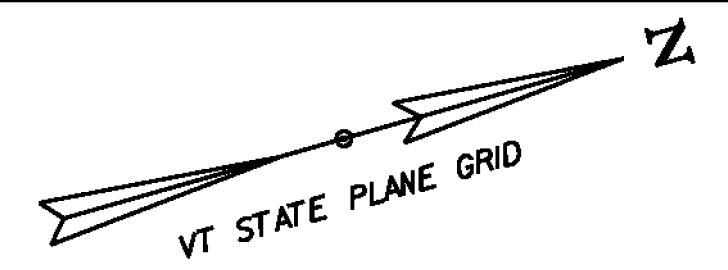






- GRUBBING MATERIAL  
4+46.0 LT - 8+50.0 LT
- STONE FILL, TYPE IV  
4+50.0 LT - 8+50.0 LT  
5+00.0 RT - 8+50.0 RT
- AGGREGATE SHOULDERS, IN PLACE  
61+71.0 LT - 65+06.7 LT
- STONE FILL, TYPE II  
4+50.0 LT - 9+20.13 LT
- STEEL BEAM GUARDRAIL, GALVANIZED  
61+71.0 LT - 65+08.5 LT  
65+61
- SPECIAL PROVISION (STONE FILL, CHANNEL ARMORING)  
5+00.0 - 8+50.0
- EXISTING DRAINAGE
- 1 4+52.7 LT - 4+48.1 LT  
EXISTING PIPE
- 2 5+96.1 LT - 5+88.6 LT  
EXISTING PIPE
- 3 7+35.1 RT - 7+99.8 RT  
EXISTING PIPE
- 4 (RECORD)  
EXISTING PIPE
- NEW DRAINAGE
- NOT INSTALLED
- 1 4+52.7 LT - 4+48.1 LT  
NEW 24" X 20" PIPE PCCSP
- 2 5+96.1 LT - 5+88.6 LT  
NEW 30" X 20" PIPE PCCSP  
16' RCP CLASS IV
- TERMINAL CONNECTOR, STEEL BEAM GUARDRAIL  
65+71 LT - 65+83 LT

• NOTE: NO WORK DONE  
BEHIND PIERS-  
SEE CROSS SECTIONS  
FOR ADDITIONAL INFO



- NOTES:**
1. AT THE COMPLETION OF THE CHANNEL AND EMBANKMENT WORK, THE CONTRACTOR SHALL PLACE BOULDERS ALONG THE TOP OF THE EMBANKMENT IN THE SEGMENT SHOWN. BOULDERS SHALL BE EXCESS TAKEN FROM THE CHANNEL WITH A MEDIAN DIMENSION OF 36". BOULDERS SHALL BE PLACED AT INTERVALS WITH THE MAXIMUM GAP BETWEEN BOULDERS APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE OVERALL COST OF THE CONTRACT ITEMS.
  2. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT THE END OF NOTCH RD AT LEAST 48-HOURS PRIOR TO THE IMPLEMENTATION OF ANY TRAFFIC CONTROL ON NOTCH RD.

END WOODFORD ER NH 010-1 (47)  
STA. 9+20.13

0 20 40  
SCALE IN FEET

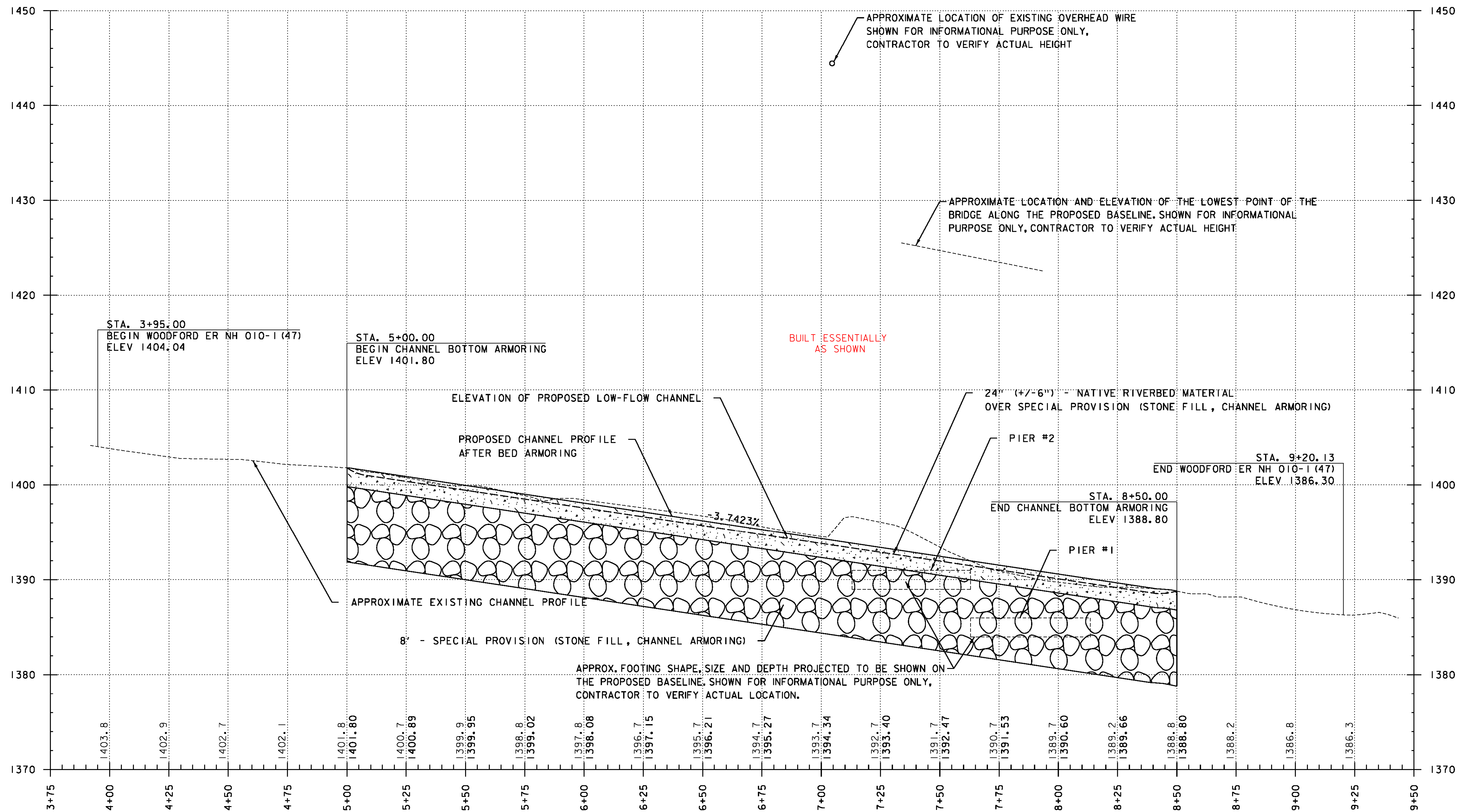
PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402bdr.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
PLAN SHEET

PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 15 OF 35



# CITY STREAM PROFILE



**PROFILE NOTES:**

- 1.) CREATE UNIFORM SLOPE TRANSITIONS INTO AND OUT OF WORK AREA.
- 2.) TO MIMIC THE NATURAL CHANNEL ROUGHNESS, VARIATIONS IN BED ELEVATION (+/- 1') ARE EXPECTED AND ACCEPTABLE. DO NOT SMOOTH CHANNEL RELATIVE TO NEARBY REACHES.
- 3.) USE NATIVE RIVERBED MATERIAL TO FILL VOIDS IN EACH LIFT OF THE BED ARMORING TO PREVENT UNDERFLOW.

THE GRADES SHOWN TO THE TENTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE NEW ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402xsl.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
PROFILE SHEET

PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 16 OF 35



## EPSC PLAN NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF APPROXIMATELY 450-FEET OF RIVER EMBANKMENT AND ARMORING OF ABOUT 400-FEET OF RIVER BOTTOM. THE EMBANKMENT WILL BE RECONSTRUCTED WITH SUBBASE OF DENSE GRADED CRUSHED STONE AND STONE FILL ARMORING. THE CHANNEL BOTTOM WILL BE ARMORED WITH STONE FILL AND THE VOIDS WILL BE FILLED WITH NATIVE COBBLE MATERIAL THAT IS WASHED IN TO ALLOW FOR FUTURE AQUATIC ORGANISM PASSAGE. THE PROJECT IS LOCATED IN THE TOWN OF WOODFORD, NEAR THE INTERSECTION OF VT ROUTE 9 AND NOTCH ROAD.

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

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.90 ACRES.

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

### 1.2 SITE INVENTORY

#### 1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS A VALLEY THAT IS MOSTLY WELL ESTABLISHED FOREST. VT ROUTE 9 AND NOTCH ROAD ARE IN THE PROJECT AREA. VT ROUTE 9 CROSSES OVER AND NOTCH ROAD RUNS ALONG CITY STREAM. THERE ARE NO RESIDENCES ON THE PROJECT, HOWEVER, THERE IS ONE HOUSE APPROXIMATELY 0.37 MILES UP NOTCH ROAD ALONG CITY STREAM.

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

CITY STREAM IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS AT THE SITE. THE TRIBUTARY AREA AT THE CULVERT CROSSING IS APPROXIMATELY 15.6 MILES². THERE IS ONE DROP INLET ON SITE DRAINING FROM THE ROADWAY TO CITY STREAM DOWNSTREAM OF THE PROPOSED WORK. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

#### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY WITHIN THE PROJECT LIMITS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

#### 1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF BENNINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE MUNDAL-WILMINGTON ASSOCIATION, ROLLING, VERY STONY, "K FACTOR" = 0.37 AND TUNBRIDGE-BERKSHIRE ASSOCIATION, VERY STEEP, ROCKY "K FACTOR" = 0.64. THE SOIL IS CONSIDERED HIGHLY ERODIBLE DUE TO SIGNIFICANT SLOPES.

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

#### 1.2.5 SENSITIVE RESOURCE AREAS

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

### 1.3 RISK EVALUATION

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

### 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE

RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

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

#### 1.4.1 MARK SITE BOUNDARIES

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

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

#### 1.4.2 LIMIT DISTURBANCE AREA

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

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

#### 1.4.3 SITE ENTRANCE/EXIT STABILIZATION

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

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

#### 1.4.4 INSTALL SEDIMENT BARRIERS

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

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

#### 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.

#### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

WORK SHALL TAKE PLACE DURING THE LOW FLOW SEASON, BETWEEN JULY 1ST AND OCTOBER 1ST.

#### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

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

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

#### 1.4.9 WINTER STABILIZATION

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

#### 1.4.10 STABILIZE SOIL AT FINAL GRADE

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

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

#### 1.4.11 DE-WATERING ACTIVITIES

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

#### 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

#### 1.5.1 CONSTRUCTION SEQUENCE

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST. THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME TO 2 ACRE OR LESS. A SUGGESTED GENERAL SEQUENCE OF CONSTRUCTION FOR EACH OF THE MAJOR ACTIVITIES IS AS FOLLOWS:

##### • CHANNEL-SOUTH EMBANKMENT AND SOUTH PORTION OF CHANNEL BOTTOM

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS.
- 2) INSTALL WATER DIVERSION BARRIER TO BLOCK FLOW FROM PART OF THE CHANNEL AND LOW FLOW CHANNEL OUTSIDE WORK ZONE FOR AQUATIC ORGANISM PASSAGE, AS SHOWN ON PLANS.
- 3) INSTALL SEDIMENT CONTROL MEASURES AT DOWN STREAM END OF WORK AREA, AS SHOWN ON PLANS.
- 4) CLEAR AND GRUB WORK AREAS AS NECESSARY, WORK SHALL PROCEED FROM UPSTREAM TO DOWNSTREAM.
- 5) BEGIN CUT & FILL OPERATIONS, LIMIT AREA OF DISTURBANCE TO < 2 ACRE AT ANY ONE TIME. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 7-DAYS OF DISTURBANCE.
- 6) CONCURRENTLY INSTALL TEMPORARY AND PERMANENT STABILIZATION AND EPSC MEASURES AS WORK PROGRESSES SO THAT CHANNEL IS STABILIZED PRIOR TO ALLOWING RUNOFF TO DISCHARGE TO IT.
- 7) WASH NATIVE SAND, GRAVEL, AND COBBLE LAYER INTO THE STONE FILL TO FILL VOIDS AND PREVENT UNDERFLOW ALLOWING FOR AQUATIC ORGANISM PASSAGE.

##### • CHANNEL - NORTH EMBANKMENT AND NORTH PORTION OF RIVER BOTTOM

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS.
- 2) INSTALL WATER DIVERSION BARRIER TO BLOCK FLOW FROM PART OF THE CHANNEL AND LOW FLOW CHANNEL OUTSIDE WORK ZONE FOR AQUATIC ORGANISM PASSAGE, AS SHOWN ON PLANS.
- 3) INSTALL SEDIMENT CONTROL MEASURES AT DOWNSTREAM END OF WORK AREA, AS SHOWN ON PLANS.
- 4) CLEAR AND GRUB WORK AREAS AS NECESSARY, WORK SHALL PROCEED FROM UPSTREAM TO DOWNSTREAM.
- 5) BEGIN CUT & FILL OPERATIONS, LIMIT AREA OF DISTURBANCE TO < 2 ACRE. EMBANKMENT WORK SHALL PROGRESS FROM THE TOE OF SLOPE UP, LIMITING EXPOSED SOILS TO NO MORE THAN 7 DAYS WITHOUT STABILIZATION.
- 6) CONCURRENTLY INSTALL TEMPORARY AND PERMANENT STABILIZATION AND EPSC MEASURES AS WORK PROGRESSES SO THAT CHANNEL IS STABILIZED PRIOR TO ALLOWING RUNOFF TO DISCHARGE TO IT.
- 7) WASH NATIVE SAND, GRAVEL, AND COBBLE LAYER INTO THE STONE FILL TO FILL VOIDS AND PREVENT UNDERFLOW ALLOWING FOR AQUATIC ORGANISM PASSAGE.

##### • NOTCH ROAD

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS.
- 2) INSTALL SEDIMENT CONTROL MEASURES AS NECESSARY.
- 3) CLEAR AND GRUB AS NECESSARY.
- 4) INSTALL GUARDRAIL, AS SHOWN ON PLANS.
- 5) PLACE LARGE PROTECTIVE BOULDERS BETWEEN PARKING AREA AND EMBANKMENT, AS SHOWN ON PLANS.

#### 1.5.2 OFF-SITE ACTIVITIES

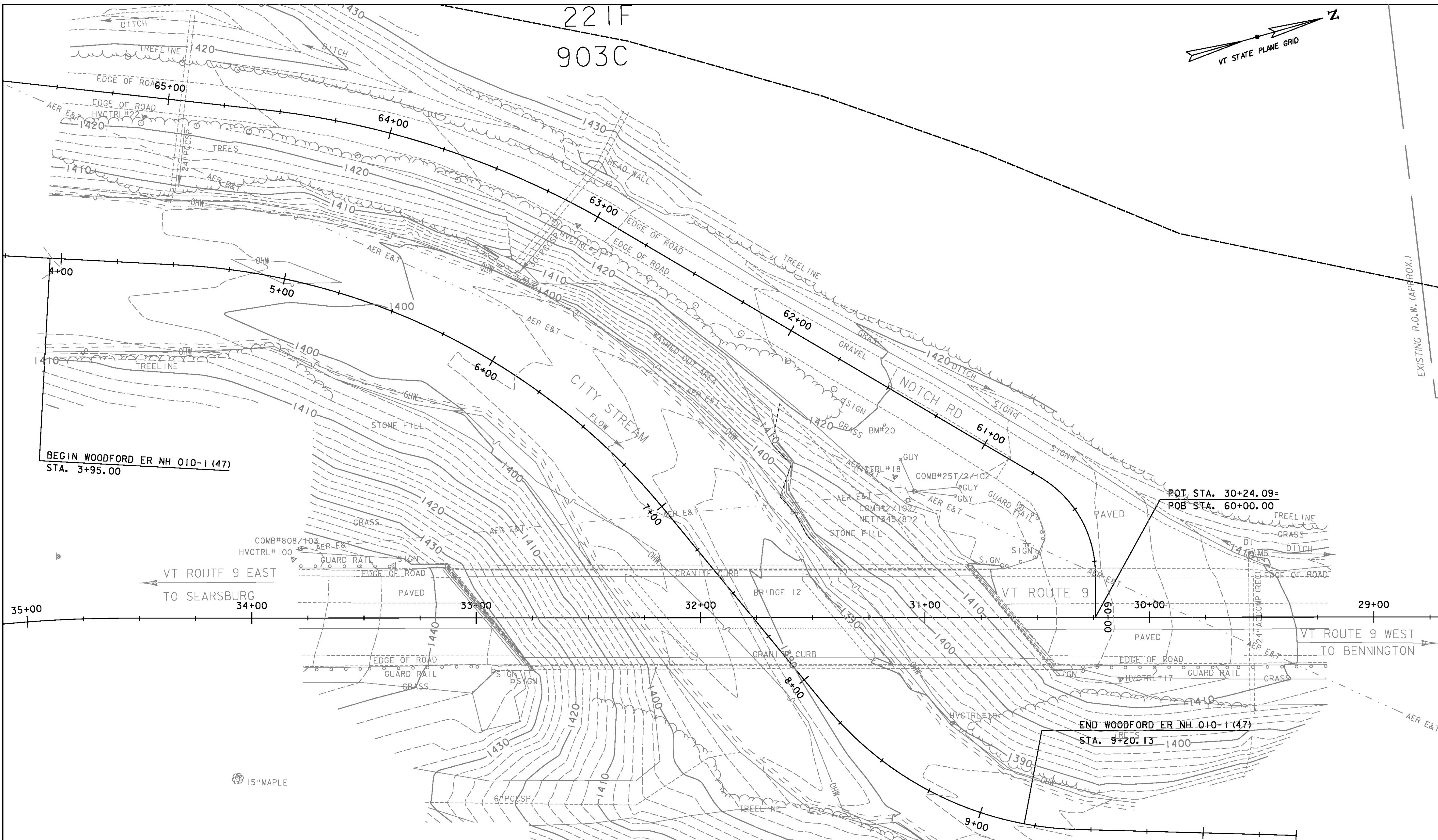
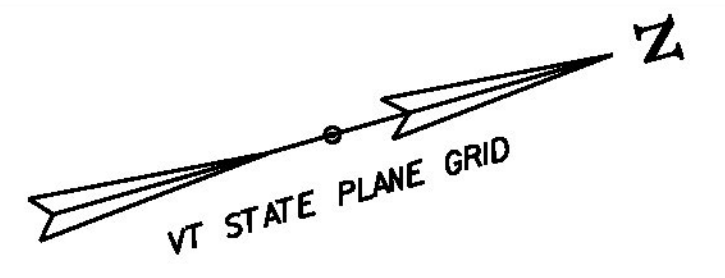
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402er0nar.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
EPSC NARRATIVE

PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 17 OF 35

22 IF  
903C



BEGIN WOODFORD ER NH 010-1(47)  
STA. 3+95.00

POT. STA. 30+24.09=  
POB STA. 60+00.00

VT ROUTE 9 EAST  
TO SEARSBURG

VT ROUTE 9

VT ROUTE 9 WEST  
TO BENNINGTON

END WOODFORD ER NH 010-1(47)  
STA. 9+20.13

SOIL DESIGNATION	HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
903C = MUNDAL-WILMINGTON ASSOCIATION, ROLLING, VERY STONY	C	0.37
22 IF = TUNBRIDGE-BERKSHIRE ASSOCIATION, VERY STEEP, ROCKY	C	0.64



SCALE IN FEET  
GREEN INTERNATIONAL AFFILIATES, INC.  
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)  
FILE NAME: z12b402erobdr.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
EPSC EXISTING CONDITIONS PLAN SHEET

PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 18 OF 35

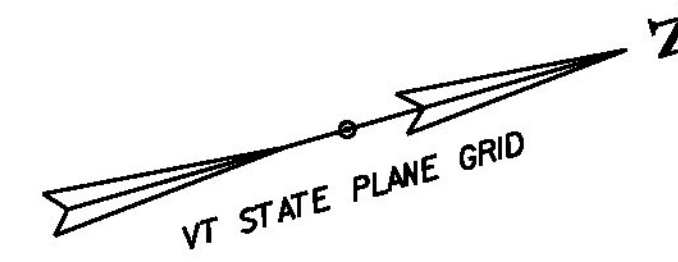
22 IF  
903C

GEOTEXTILE FOR SILT FENCE  
60+55 RT - 65+21 RT

TEMPORARY STONE CHECK DAM, TYPE I  
8+90 RT

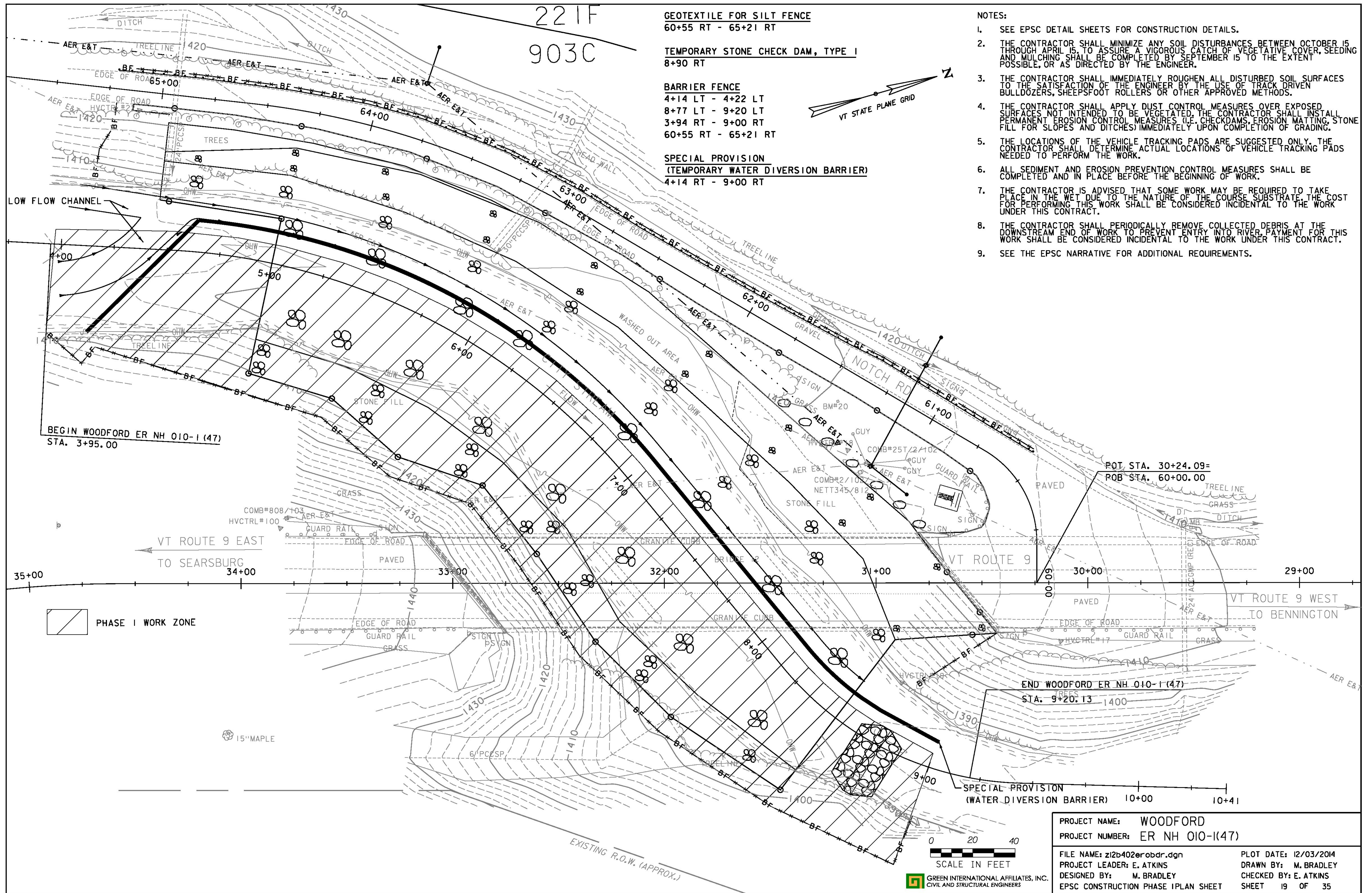
BARRIER FENCE  
4+14 LT - 4+22 LT  
8+77 LT - 9+20 LT  
3+94 RT - 9+00 RT  
60+55 RT - 65+21 RT

SPECIAL PROVISION  
(TEMPORARY WATER DIVERSION BARRIER)  
4+14 RT - 9+00 RT



NOTES:

1. SEE EPSC DETAIL SHEETS FOR CONSTRUCTION DETAILS.
2. THE CONTRACTOR SHALL MINIMIZE ANY SOIL DISTURBANCES BETWEEN OCTOBER 15 THROUGH APRIL 15 TO ASSURE A VIGOROUS CATCH OF VEGETATIVE COVER, SEEDING AND MULCHING SHALL BE COMPLETED BY SEPTEMBER 15 TO THE EXTENT POSSIBLE, OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL IMMEDIATELY ROUGHEN ALL DISTURBED SOIL SURFACES TO THE SATISFACTION OF THE ENGINEER BY THE USE OF TRACK DRIVEN BULLDOZERS, SHEEPSFOOT ROLLERS OR OTHER APPROVED METHODS.
4. THE CONTRACTOR SHALL APPLY DUST CONTROL MEASURES OVER EXPOSED SURFACES NOT INTENDED TO BE VEGETATED. THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL MEASURES (I.E. CHECKDAMS, EROSION MATTING, STONE FILL FOR SLOPES AND DITCHES) IMMEDIATELY UPON COMPLETION OF GRADING.
5. THE LOCATIONS OF THE VEHICLE TRACKING PADS ARE SUGGESTED ONLY. THE CONTRACTOR SHALL DETERMINE ACTUAL LOCATIONS OF VEHICLE TRACKING PADS NEEDED TO PERFORM THE WORK.
6. ALL SEDIMENT AND EROSION PREVENTION CONTROL MEASURES SHALL BE COMPLETED AND IN PLACE BEFORE THE BEGINNING OF WORK.
7. THE CONTRACTOR IS ADVISED THAT SOME WORK MAY BE REQUIRED TO TAKE PLACE IN THE WET DUE TO THE NATURE OF THE COURSE SUBSTRATE. THE COST FOR PERFORMING THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE WORK UNDER THIS CONTRACT.
8. THE CONTRACTOR SHALL PERIODICALLY REMOVE COLLECTED DEBRIS AT THE DOWNSTREAM END OF WORK TO PREVENT ENTRY INTO RIVER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE WORK UNDER THIS CONTRACT.
9. SEE THE EPSC NARRATIVE FOR ADDITIONAL REQUIREMENTS.



BEGIN WOODFORD ER NH 010-1(47)  
STA. 3+95.00

POT. STA. 30+24.09=  
POB STA. 60+00.00

END WOODFORD ER NH 010-1(47)  
STA. 9+20.13

PHASE I WORK ZONE



SCALE IN FEET  
GREEN INTERNATIONAL AFFILIATES, INC.  
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: WOODFORD	PLOT DATE: 12/03/2014
PROJECT NUMBER: ER NH 010-1(47)	DRAWN BY: M. BRADLEY
FILE NAME: z12b402erobdr.dgn	CHECKED BY: E. ATKINS
PROJECT LEADER: E. ATKINS	DESIGNED BY: M. BRADLEY
EPSC CONSTRUCTION PHASE I PLAN SHEET	SHEET 19 OF 35

22 IF  
903C

SEED  
4+50 LT - 6+00 LT  
6+53 LT - 8+50 LT

HAY MULCH  
4+50 LT - 6+00 LT  
6+53 LT - 8+50 LT

SEED, WINTER RYE  
4+50 LT - 6+00 LT  
6+53 LT - 8+50 LT

TOP SOIL  
4+50 LT - 6+00 LT

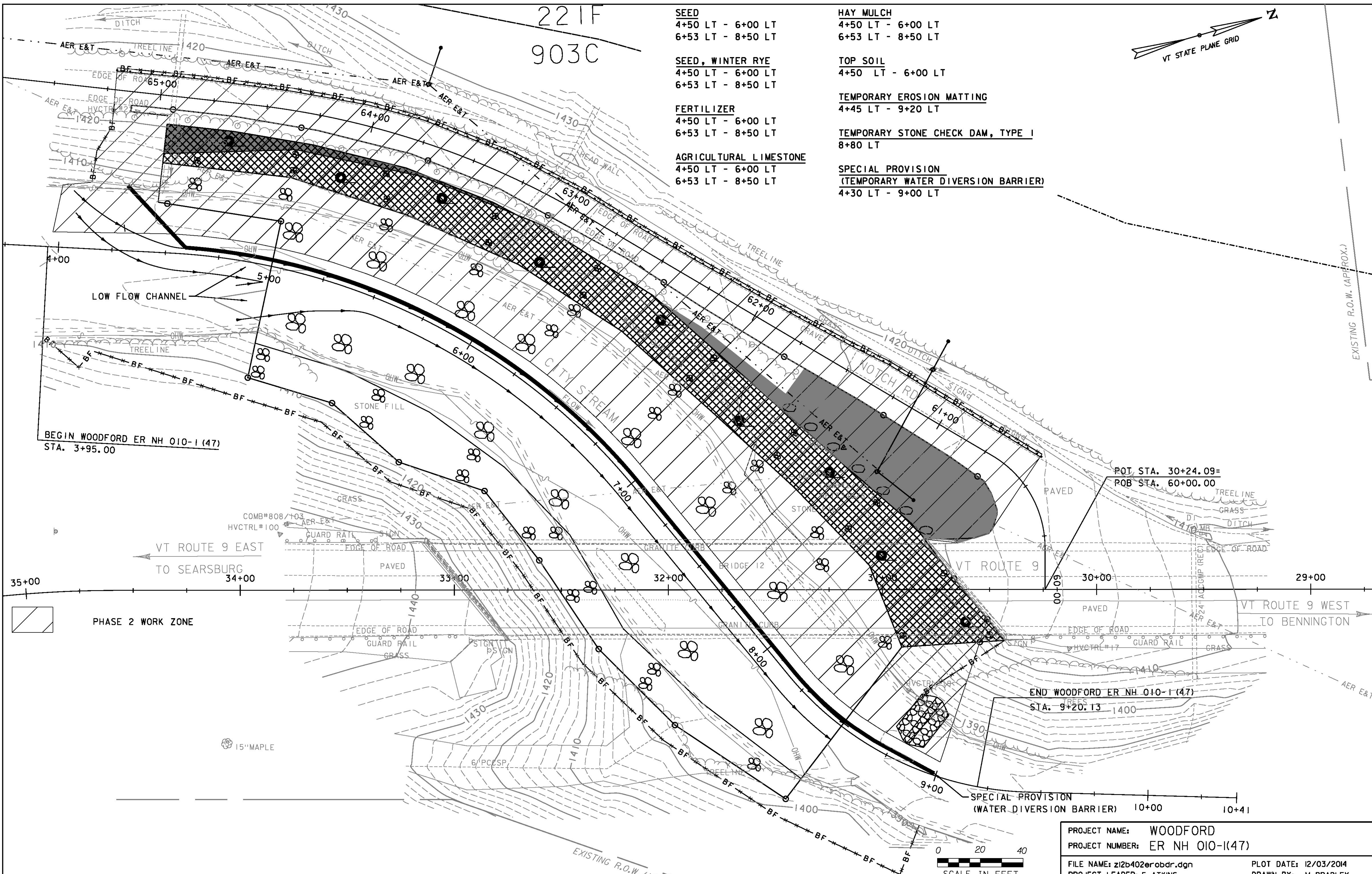
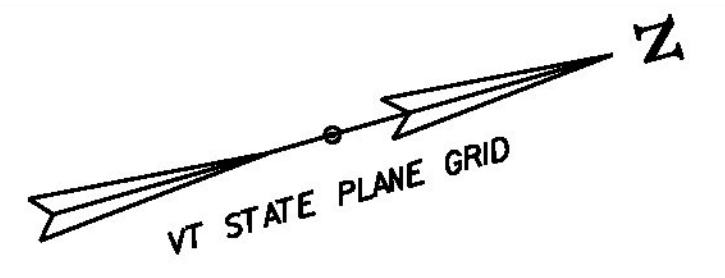
FERTILIZER  
4+50 LT - 6+00 LT  
6+53 LT - 8+50 LT

TEMPORARY EROSION MATTING  
4+45 LT - 9+20 LT

AGRICULTURAL LIMESTONE  
4+50 LT - 6+00 LT  
6+53 LT - 8+50 LT

TEMPORARY STONE CHECK DAM, TYPE I  
8+80 LT

SPECIAL PROVISION  
(TEMPORARY WATER DIVERSION BARRIER)  
4+30 LT - 9+00 LT



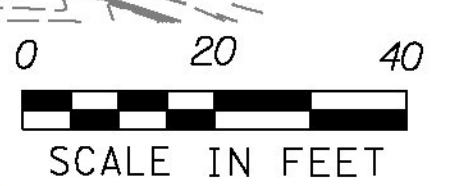
BEGIN WOODFORD ER NH 010-1 (47)  
STA. 3+95.00

POT. STA. 30+24.09=  
ROB. STA. 60+00.00

END WOODFORD ER NH 010-1 (47)  
STA. 9+20.13

SPECIAL PROVISION  
(WATER DIVERSION BARRIER) 10+00 10+41

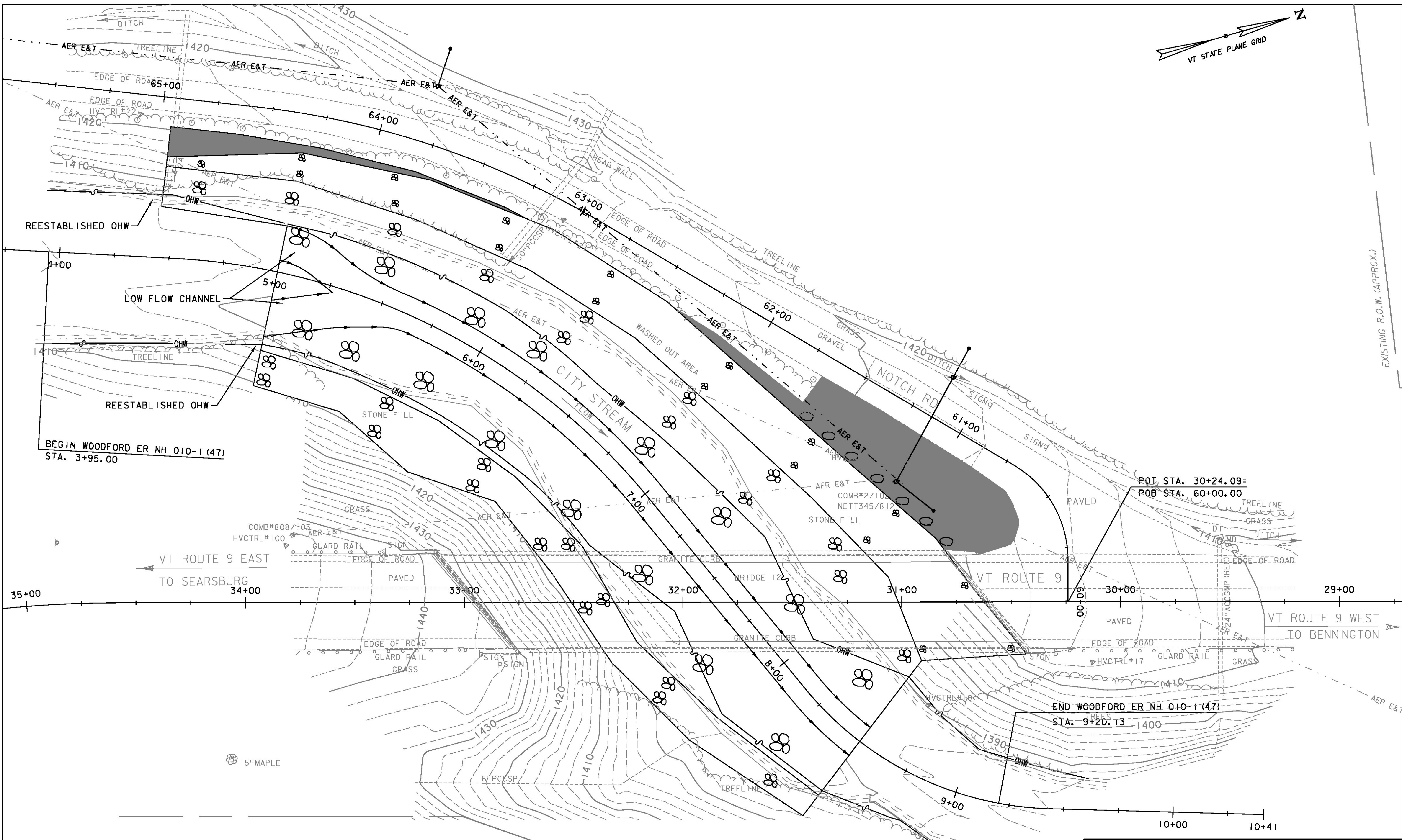
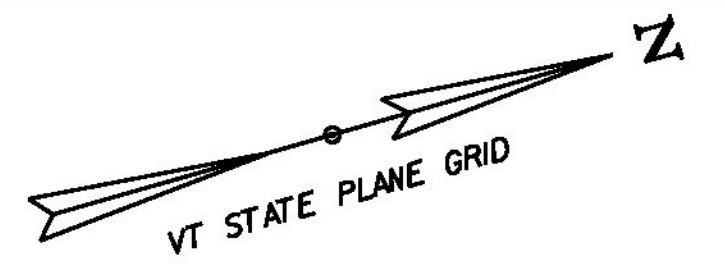
PHASE 2 WORK ZONE



SCALE IN FEET  
GREEN INTERNATIONAL AFFILIATES, INC.  
CIVIL AND STRUCTURAL ENGINEERS

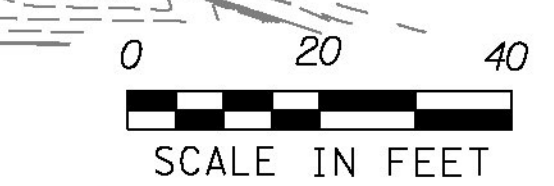
PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)  
FILE NAME: z12b402erobdr.dgn  
PLOT DATE: 12/03/2014  
PROJECT LEADER: E. ATKINS  
DRAWN BY: M. BRADLEY  
DESIGNED BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
EPSC CONSTRUCTION PHASE 2 PLAN SHEET  
SHEET 20 OF 35

*REFER TO NOTES ON EPSC CONSTRUCTION PHASE I SHEET



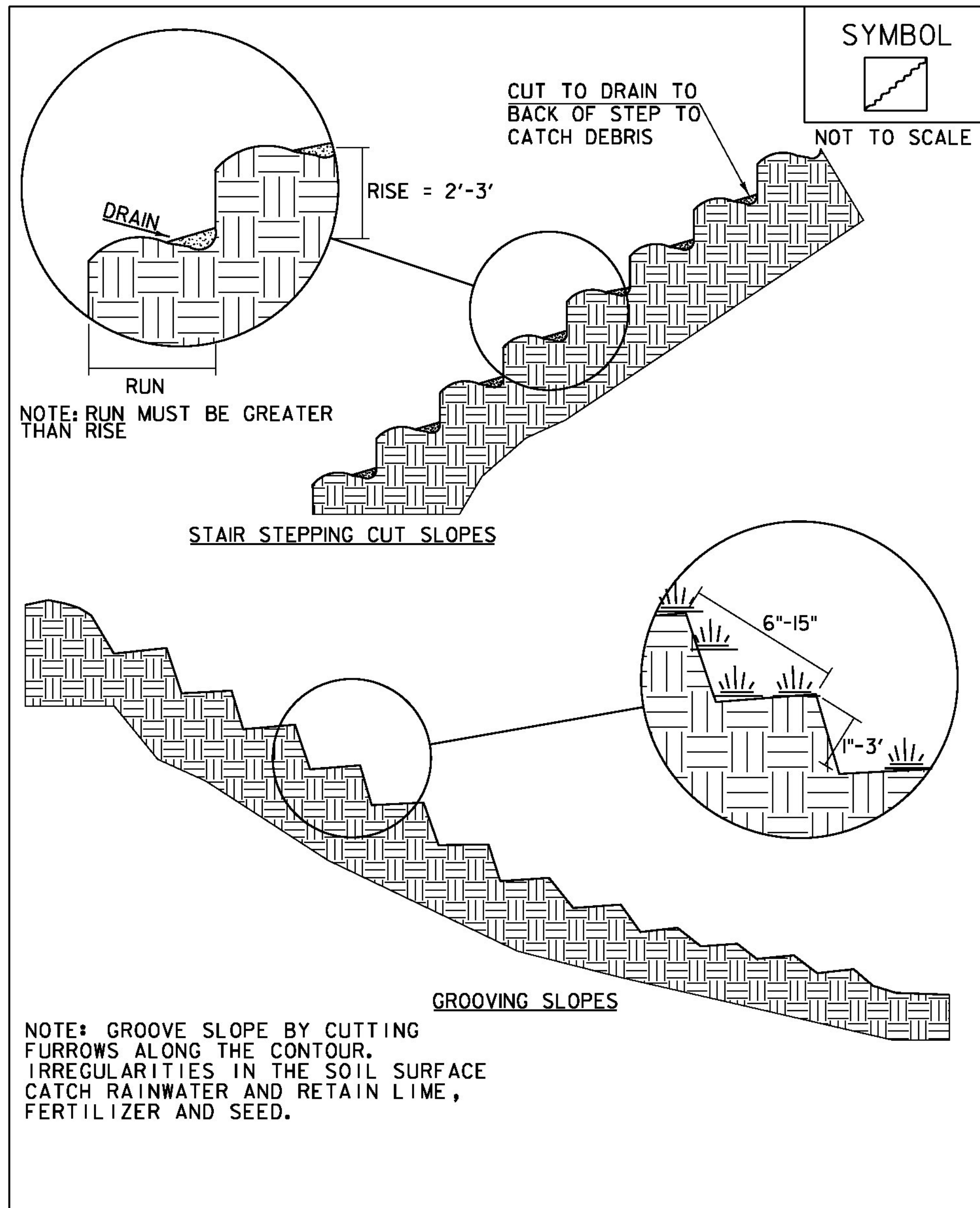
EXISTING R.O.W. (APPROX.)

NOTE:  
SEE CROSS SECTIONS FOR ADDITIONAL PROPOSED GRADING.



GREEN INTERNATIONAL AFFILIATES, INC.  
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: WOODFORD	PLOT DATE: 12/03/2014
PROJECT NUMBER: ER NH 010-1(47)	DRAWN BY: M. BRADLEY
FILE NAME: z12b402erobdr.dgn	CHECKED BY: E. ATKINS
PROJECT LEADER: E. ATKINS	SHEET 21 OF 35
DESIGNED BY: M. BRADLEY	
EPSC FINAL CONDITIONS PLAN	



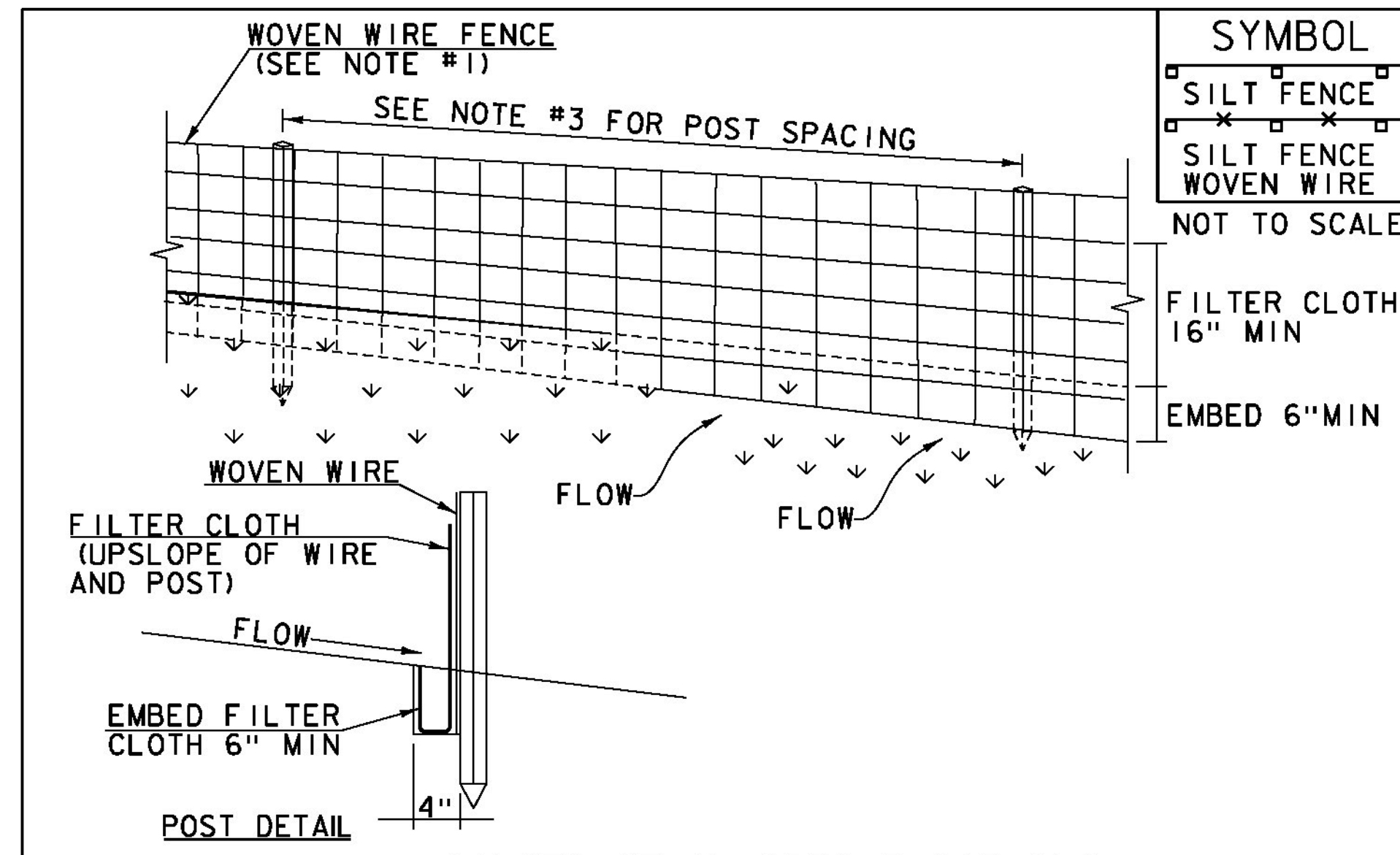
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**SURFACE ROUGHENING**

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

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE  
CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF



**CONSTRUCTION SPECIFICATIONS**

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

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

**SILT FENCE**

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

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

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

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

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

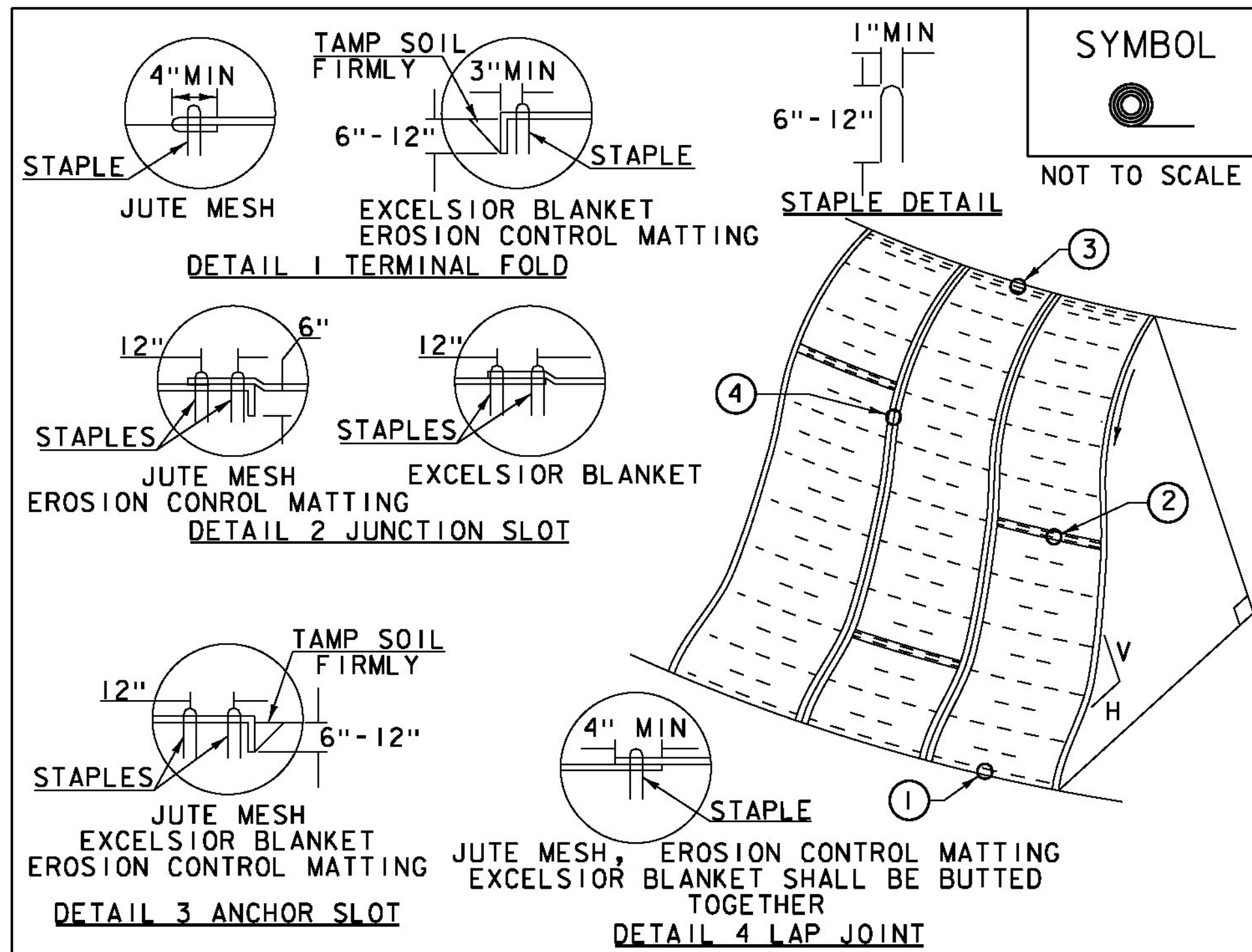
- CONSTRUCTION GUIDANCE**
1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
  2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
  3. ALL SEED MIXTURES: SHALL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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR  
ROADWAYS AND TRANSPORTATION FACILITIES

**TURF ESTABLISHMENT**

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

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)  
FILE NAME: z12b402ecd.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
EPSC DETAIL SHEET 1  
PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 22 OF 35



**CONSTRUCTION SPECIFICATIONS**

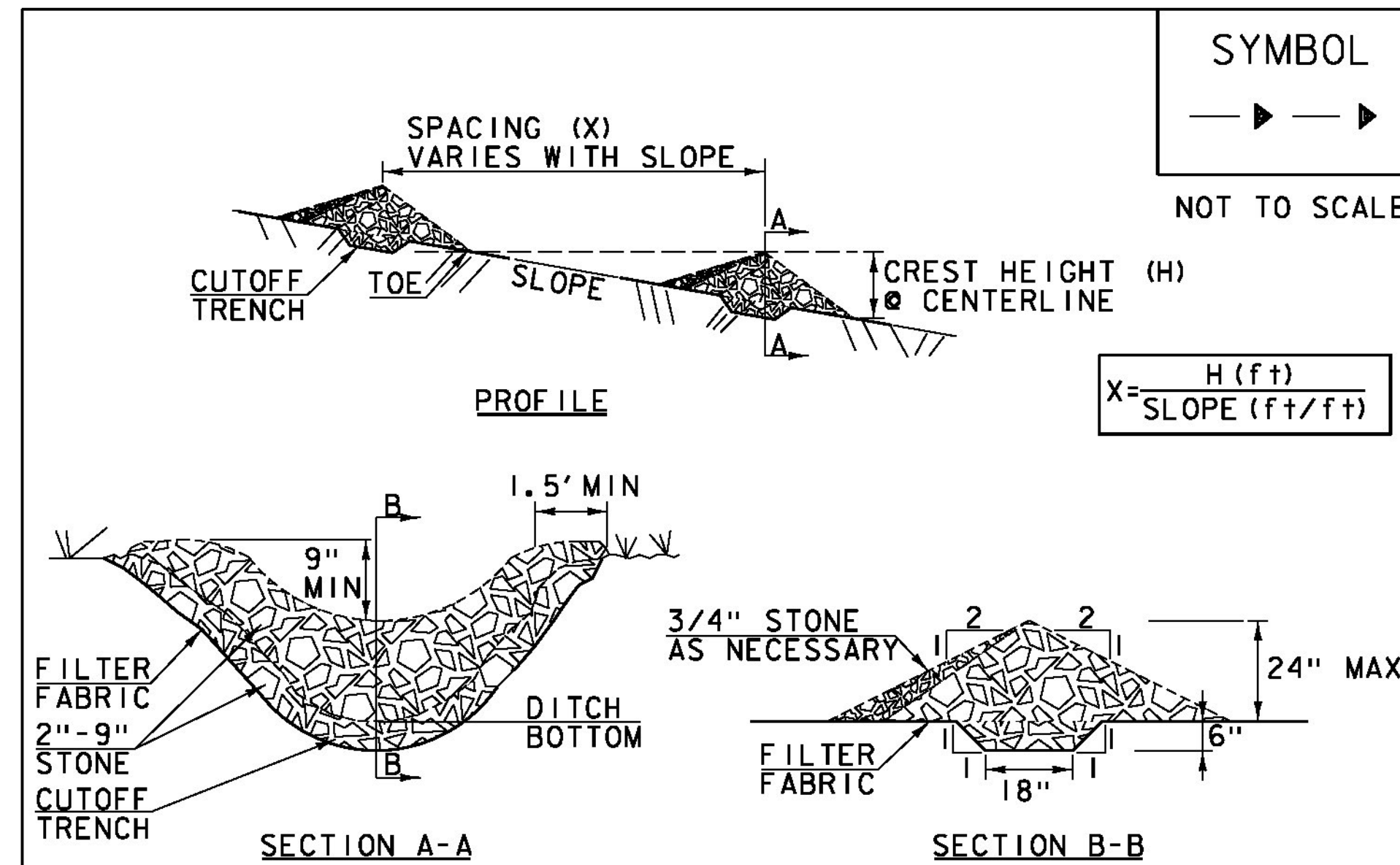
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' 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 653.20).

REVISIONS		
APRIL 16, 2007	JMF	
JANUARY 13, 2009	WHF	



**CONSTRUCTION SPECIFICATIONS**

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

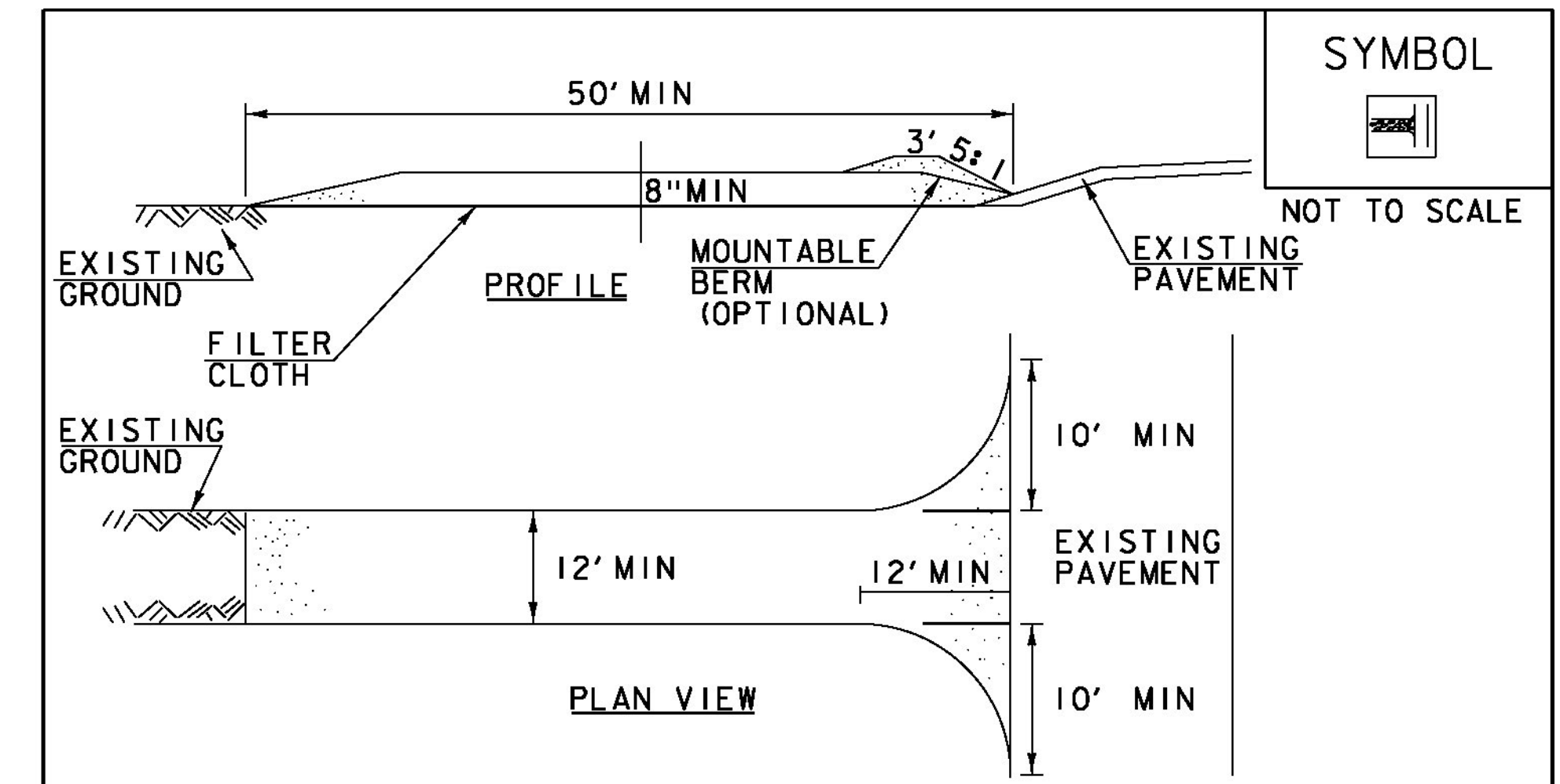
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**CHECK DAM**

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE 1 (PAY ITEM 653.25)

REVISIONS		
MARCH 21, 2008	WHF	
JANUARY 8, 2009	WHF	



**CONSTRUCTION SPECIFICATIONS**

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

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

**STABILIZED CONSTRUCTION ENTRANCE**

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

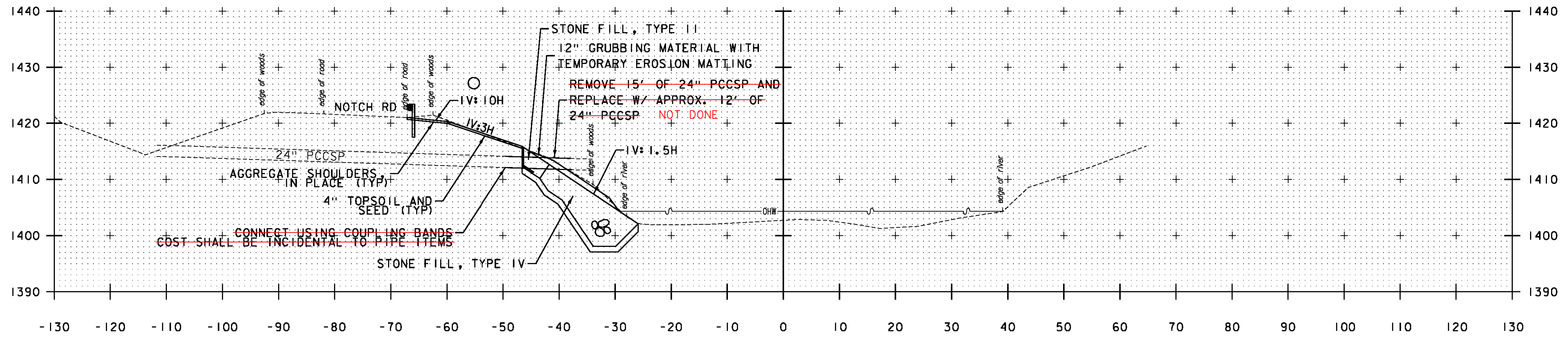
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS		
MARCH 24, 2008	WHF	
JANUARY 13, 2009	WHF	

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402ecd.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
EPSC DETAIL SHEET 2

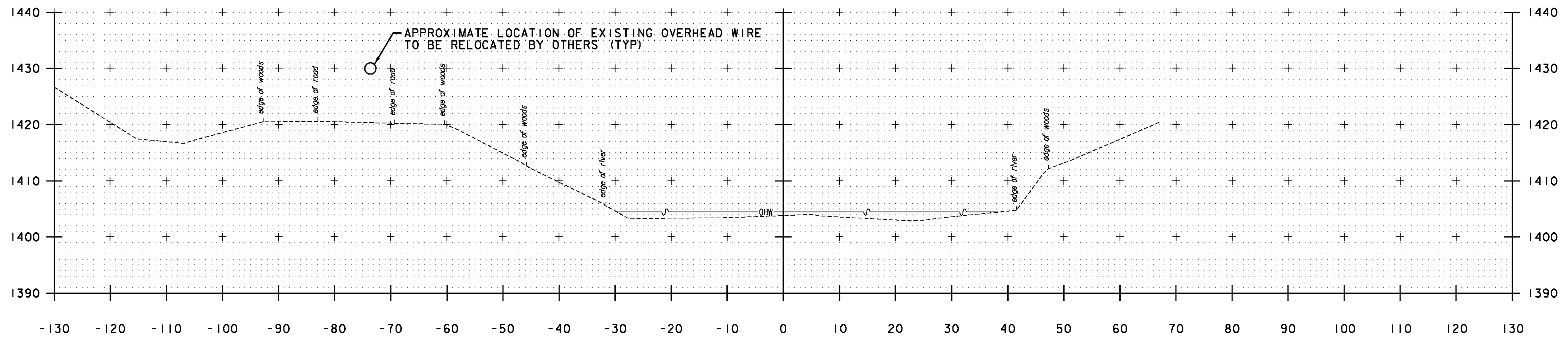
PLOT DATE: 12/03/2014  
DRAWN BY: M. BRADLEY  
CHECKED BY: E. ATKINS  
SHEET 23 OF 35



BUILT ESSENTIALLY AS SHOWN

4+46.10 24" PCCSP CULVERT  
 SKEWED 86° 17' 58.6" LT  
 BEGIN CHANNEL RESTORATION 4+45.60

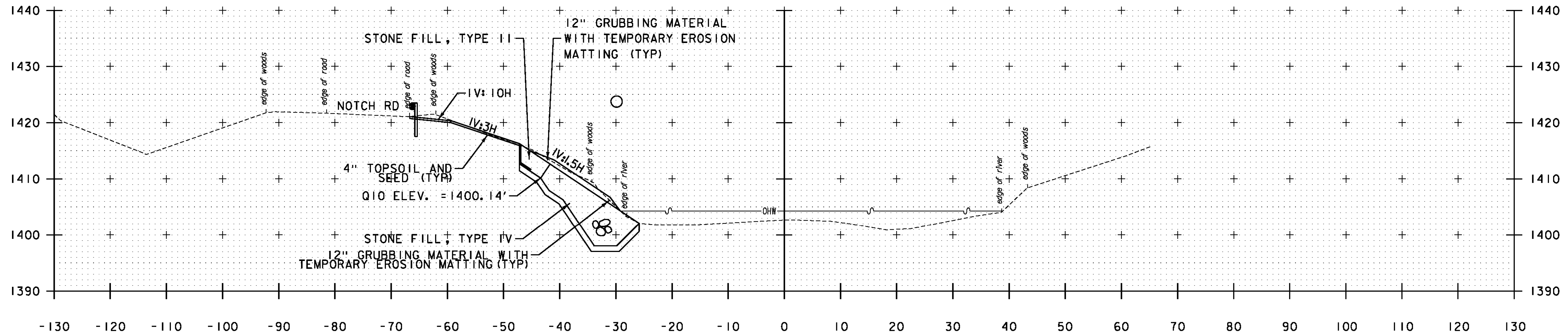
NOTE: CROSS SECTION AND DETAILS AT STA 4+24 LT ARE THE SAME AS STA 4+50 LT FOR TYPE II AND TYPE IV STONE FILL



4+00  
 BEGIN PROJECT STA 3+95.00

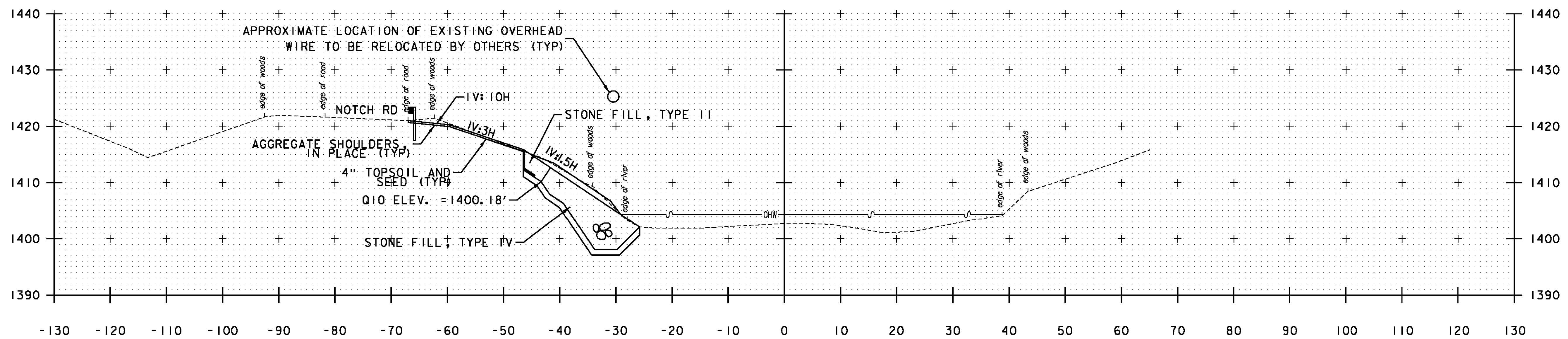
STA. 3+95 TO STA. 4+46.10

PROJECT NAME:	WOODFORD	PLOT DATE:	12/03/2014
PROJECT NUMBER:	ER NH 010-1(47)	DRAWN BY:	C. MORIN
FILE NAME:	z12b402xsl.dgn	DESIGNED BY:	M. BRADLEY
PROJECT LEADER:	E. ATKINS	CHECKED BY:	E. ATKINS
CROSS SECTIONS SHEET 1		SHEET	24 OF 35



BUILT ESSENTIALLY  
AS SHOWN

4+52.97 PC



4+50  
AND 4+24

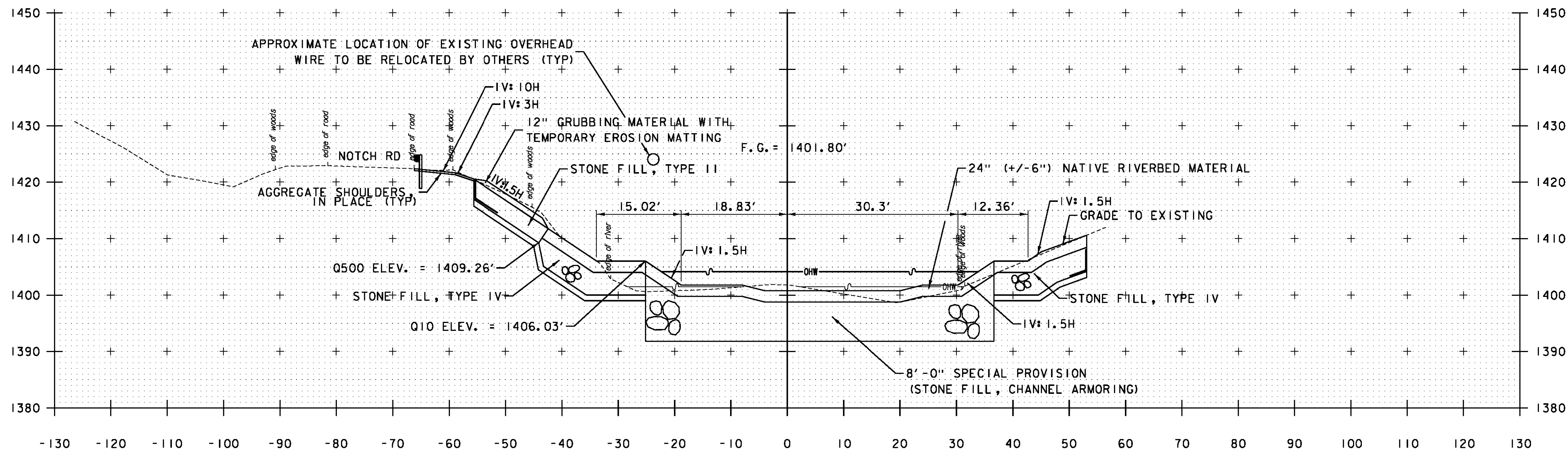
SEE NOTE ON SHEET 24

STA. 4+50 TO STA. 4+52.97

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402xsl.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
CROSS SECTIONS SHEET 2

PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 25 OF 35



BUILT ESSENTIALLY  
AS SHOWN

BEGIN CHANNEL BOTTOM  
ARMORING 5+00

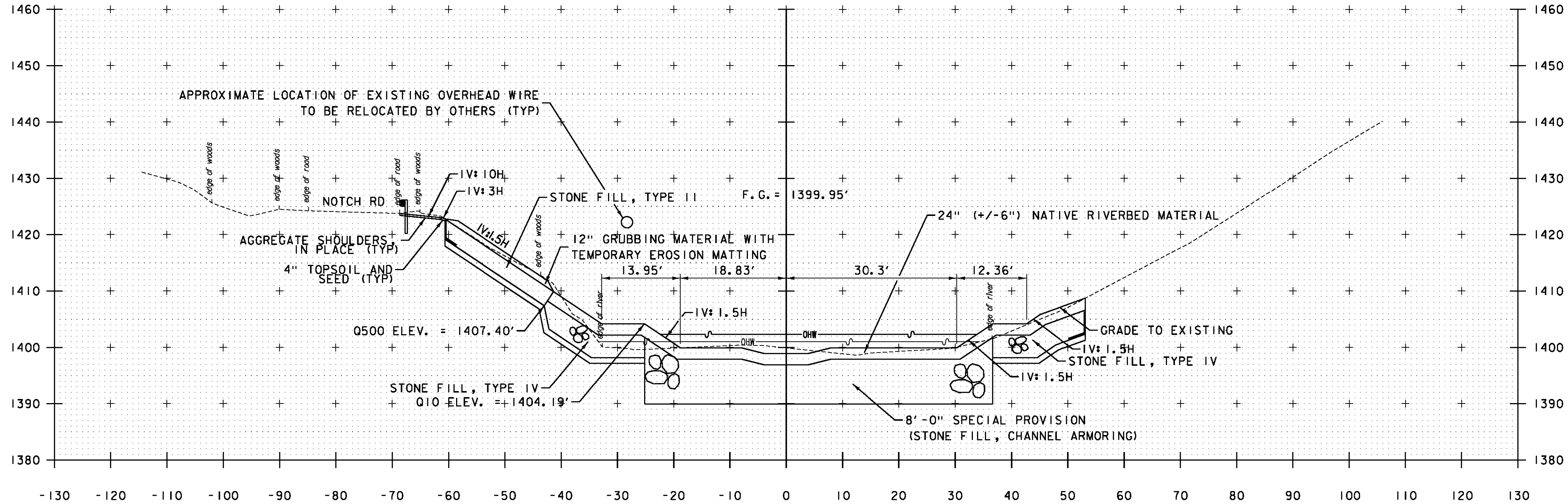
STA. 5+00

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402xsl.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
CROSS SECTIONS SHEET 3

PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 26 OF 35





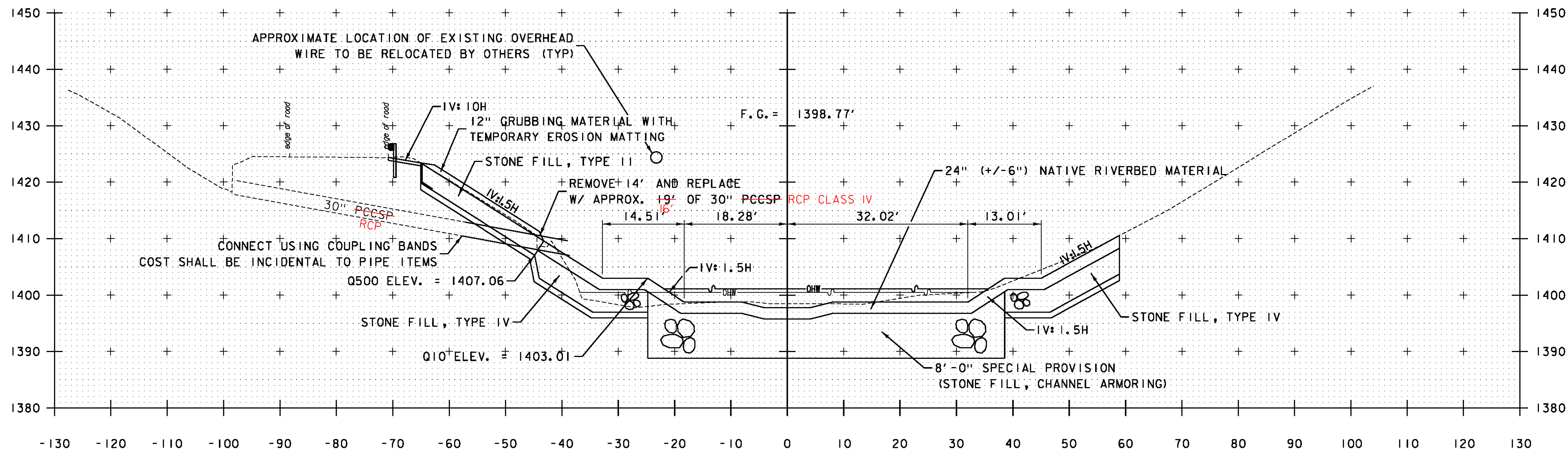
BUILT ESSENTIALLY  
AS SHOWN

5+50

STA. 5+50

PROJECT NAME:	WOODFORD	PLOT DATE:	12/03/2014
PROJECT NUMBER:	ER NH 010-1(47)	DRAWN BY:	C. MORIN
FILE NAME:	z12b402xsl.dgn	DESIGNED BY:	M. BRADLEY
PROJECT LEADER:	E. ATKINS	CHECKED BY:	E. ATKINS
CROSS SECTIONS SHEET 4		SHEET	27 OF 35





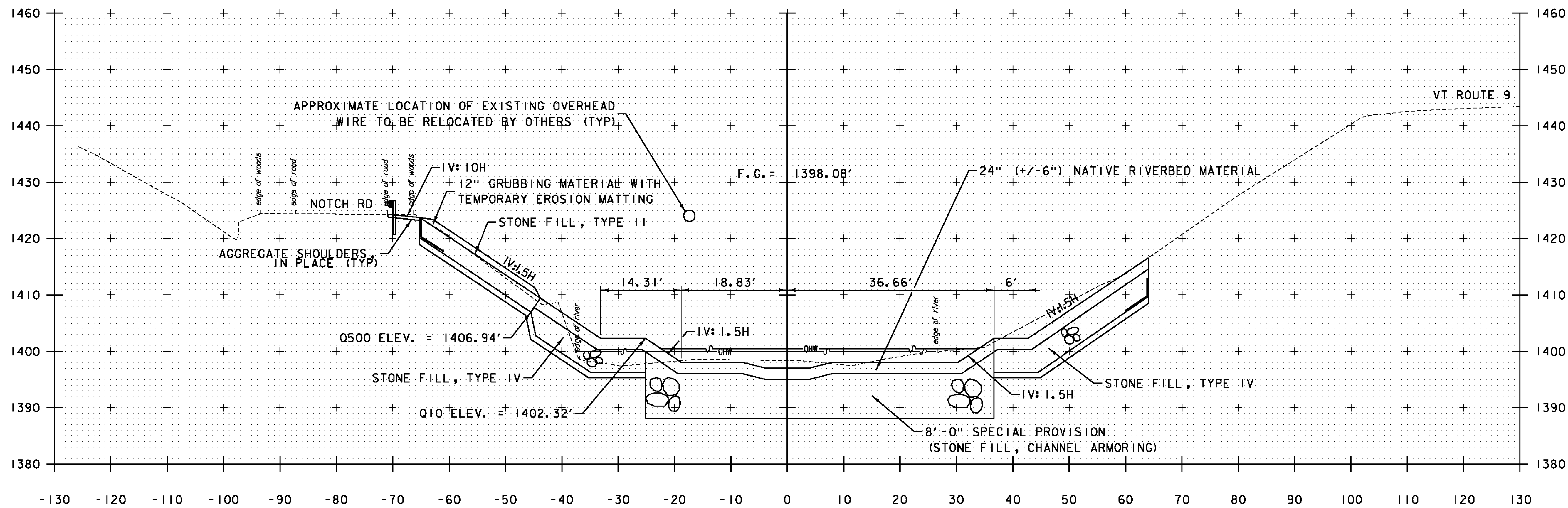
BUILT ESSENTIALLY AS SHOWN

5+81.60 30" PCCSP CULVERT  
 SKEWED 78° 17' 58.6" LT

STA. 5+81.60

PROJECT NAME:	WOODFORD	PLOT DATE:	12/03/2014
PROJECT NUMBER:	ER NH 010-1(47)	DRAWN BY:	C. MORIN
FILE NAME:	z12b402xsl.dgn	DESIGNED BY:	M. BRADLEY
PROJECT LEADER:	E. ATKINS	CHECKED BY:	E. ATKINS
CROSS SECTIONS SHEET 5		SHEET	28 OF 35





BUILT ESSENTIALLY AS SHOWN

6+00

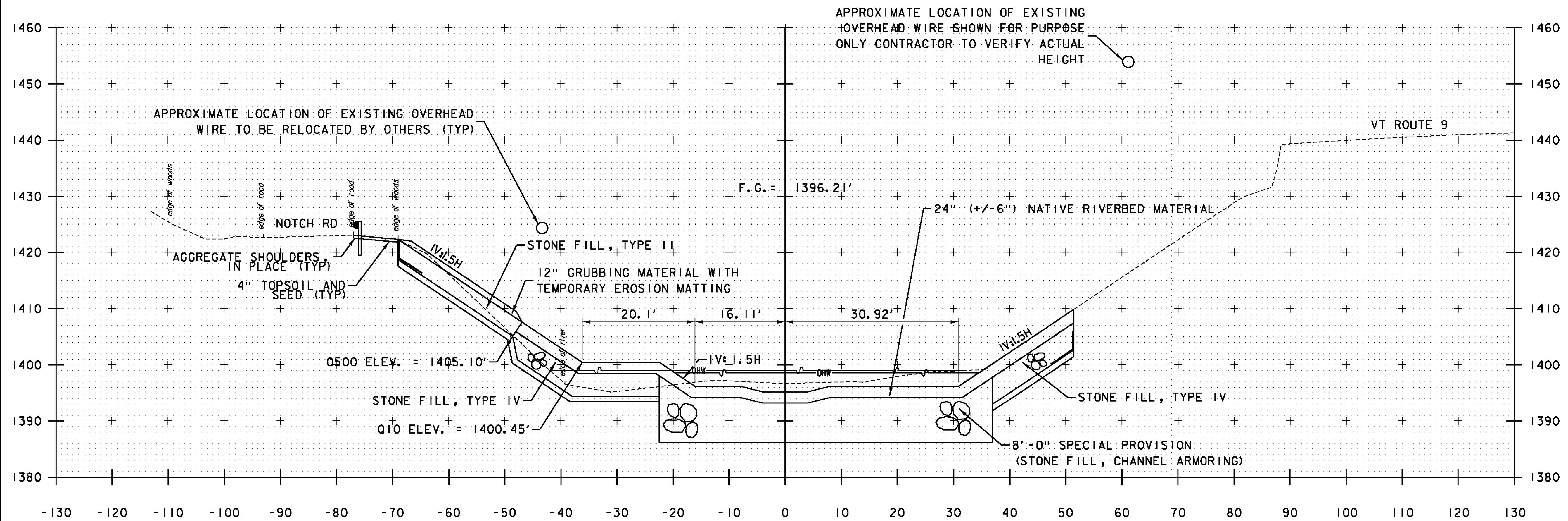
STA. 6+00

PROJECT NAME: WOODFORD  
 PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402xsl.dgn  
 PROJECT LEADER: E. ATKINS  
 DESIGNED BY: M. BRADLEY  
 CROSS SECTIONS SHEET 6

PLOT DATE: 12/03/2014  
 DRAWN BY: C. MORIN  
 CHECKED BY: E. ATKINS  
 SHEET 29 OF 35





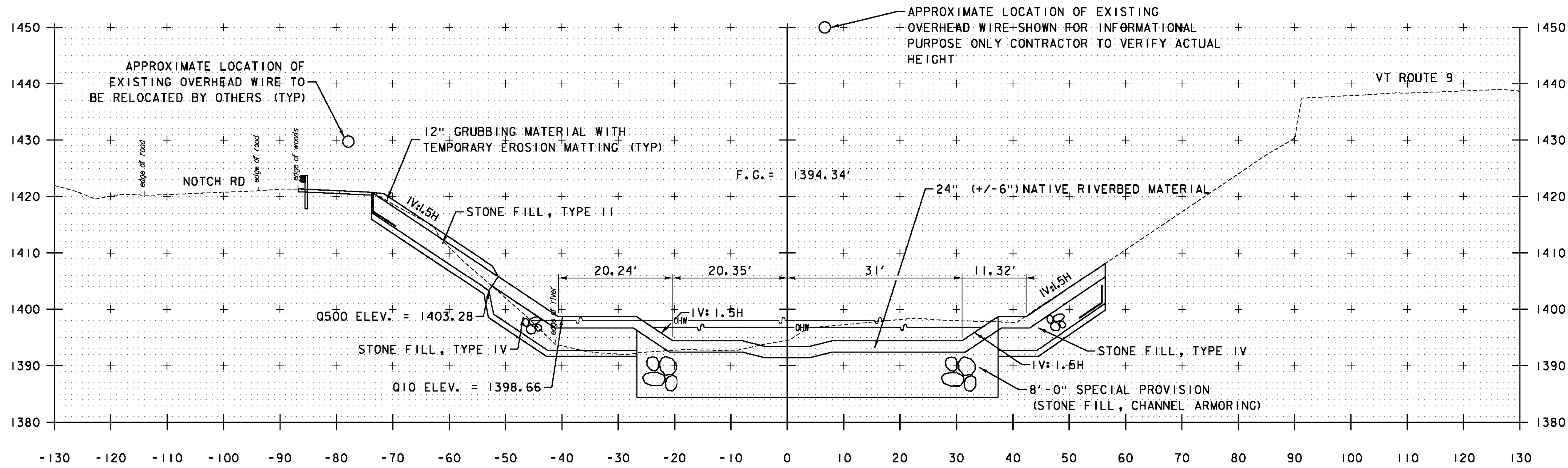
BUILT ESSENTIALLY AS SHOWN

6+50

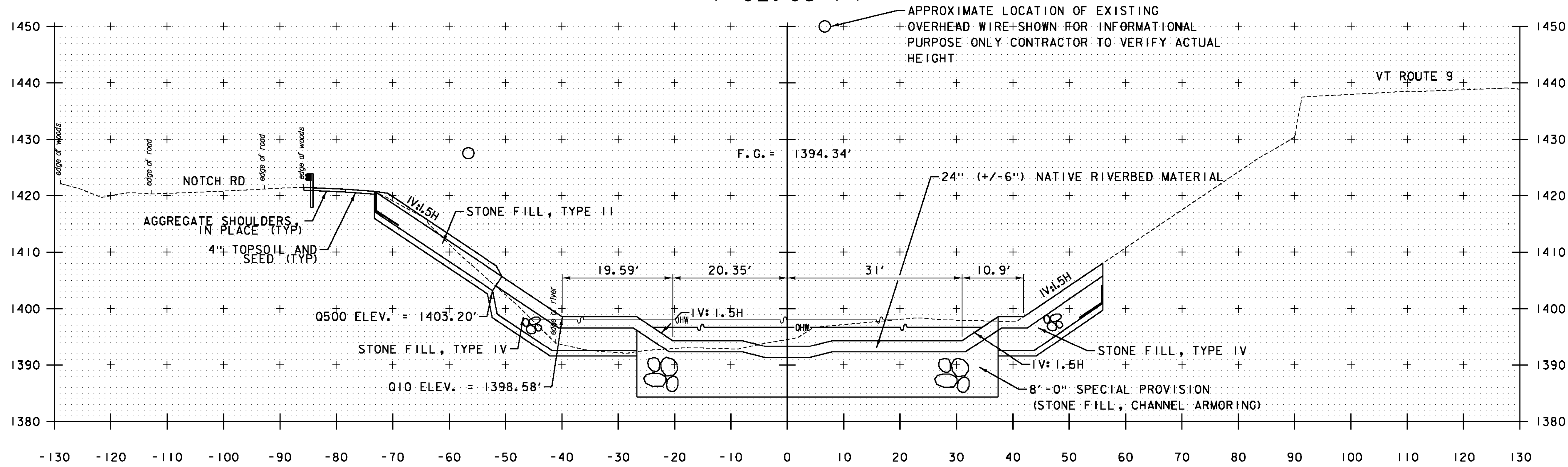
STA. 6+50

PROJECT NAME: WOODFORD	
PROJECT NUMBER: ER NH 010-1(47)	
FILE NAME: z12b402xsl.dgn	PLOT DATE: 12/03/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: C. MORIN
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
CROSS SECTIONS SHEET 7	SHEET 30 OF 35





7+02.05 PT



7+00

BUILT ESSENTIALLY AS SHOWN

NOTE: THERE WAS NO TYPE II OR TYPE IV STONE FILL PLACED FROM STA 7+13 RT TO STA 7+50 RT BEHIND PIER 2

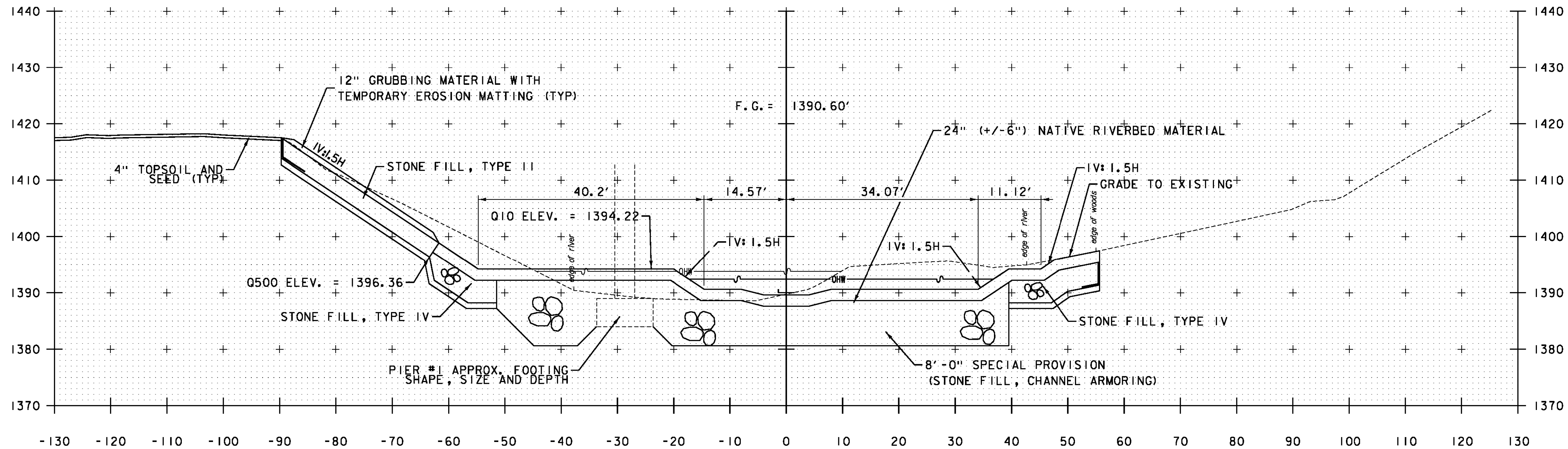
STA. 7+00 TO STA. 7+02.05

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

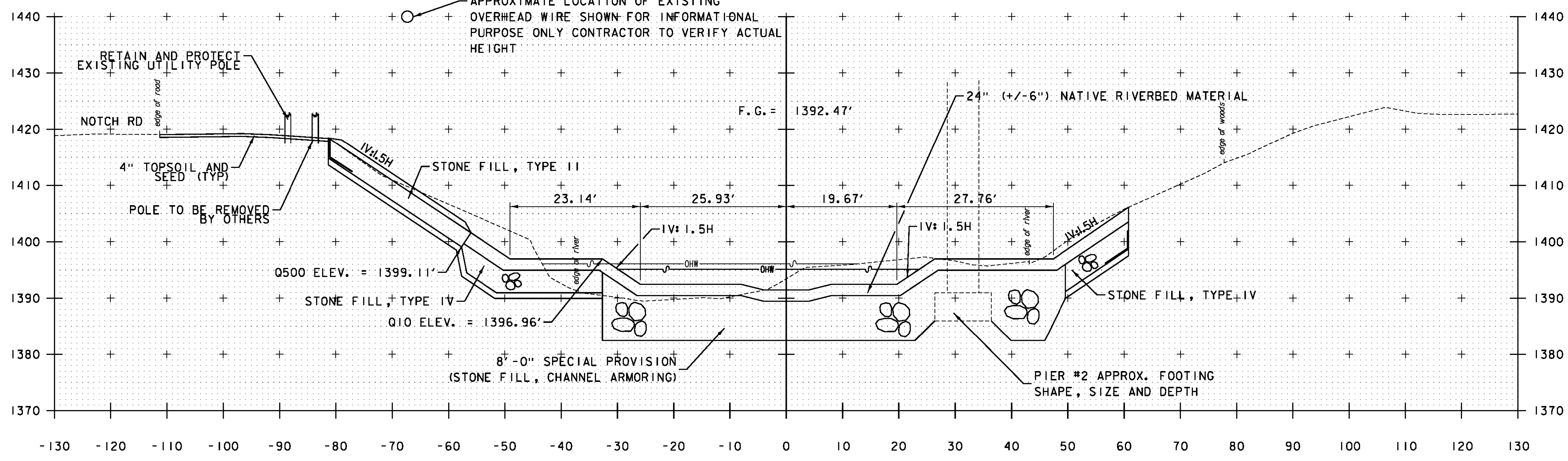
FILE NAME: z12b402xsl.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
CROSS SECTIONS SHEET 8

PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 31 OF 35





8+00



7+50

BUILT ESSENTIALLY AS SHOWN

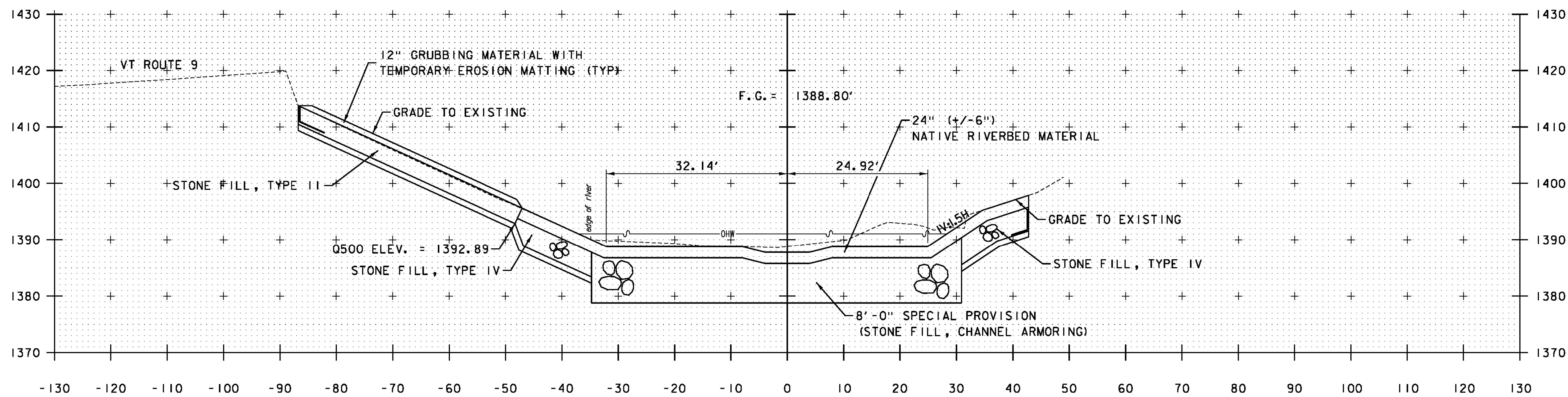
NOTE: RESUME TYPE IV STONE FILL AT STA 7+50 RT

NOTE: THERE WAS NO TYPE II OR TYPE IV STONE FILL PLACED FROM STA 7+63 LT TO STA 8+14 LT BEHIND PIER 1

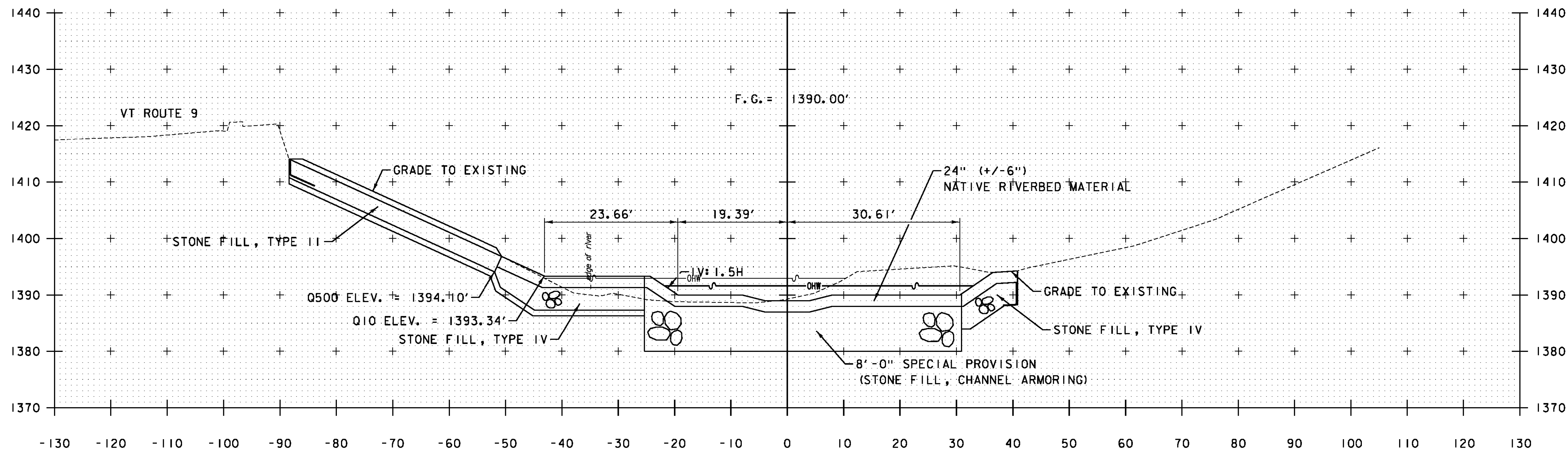
STA. 7+50 TO STA. 8+00

PROJECT NAME: WOODFORD	
PROJECT NUMBER: ER NH 010-1(47)	
FILE NAME: z12b402xsl.dgn	PLOT DATE: 12/03/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: C. MORIN
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
CROSS SECTIONS SHEET 9	SHEET 32 OF 35





END CHANNEL BOTTOM  
ARMORING 8+50



8+15.46 PC

BUILT ESSENTIALLY  
AS SHOWN

NOTE: RESUME TYPE II AND TYPE IV  
STONE FILL AT STA 8+14 LT

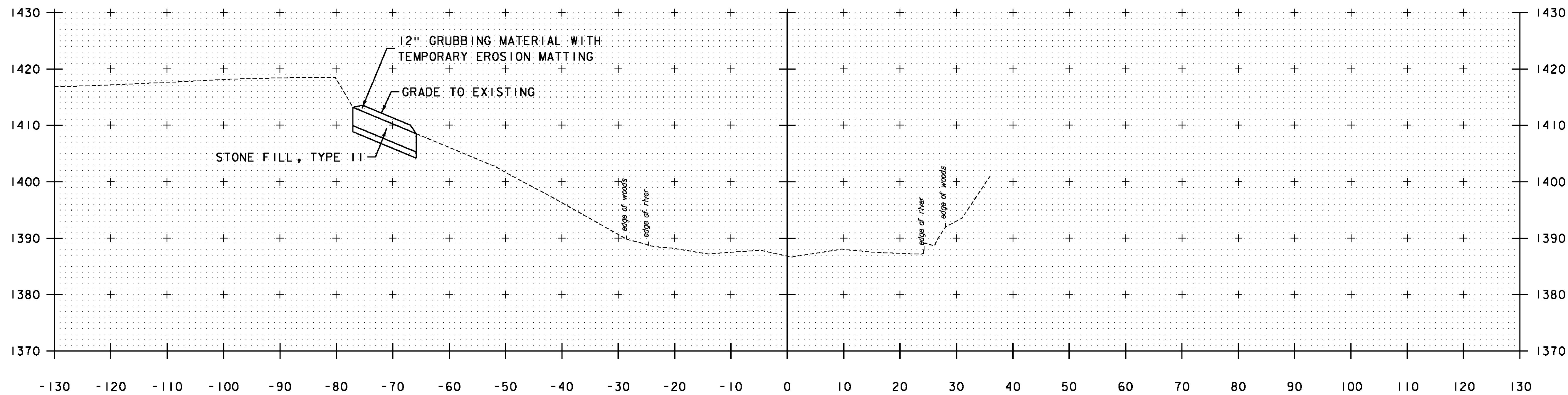
STA. 8+15.46 TO STA. 8+50

PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402xsl.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
CROSS SECTIONS SHEET 10

PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 33 OF 35

BUILT ESSENTIALLY  
AS SHOWN



9+00  
END PROJECT 9+20.13

STA. 9+00 TO STA. 9+20.13

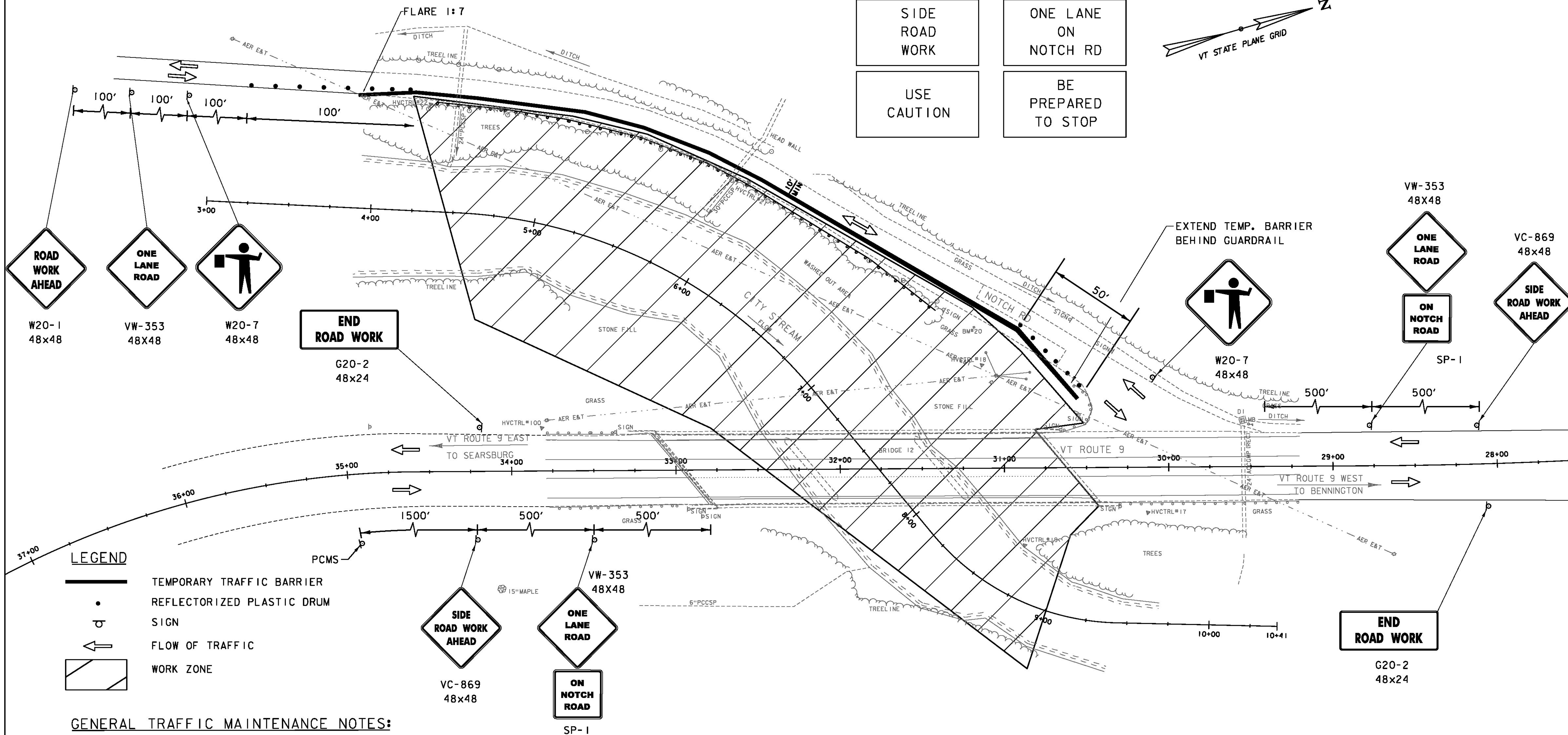
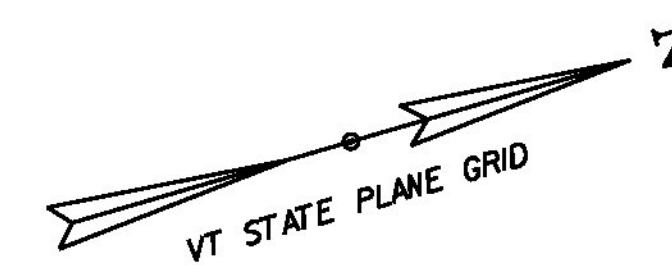
PROJECT NAME: WOODFORD  
PROJECT NUMBER: ER NH 010-1(47)

FILE NAME: z12b402xsl.dgn  
PROJECT LEADER: E. ATKINS  
DESIGNED BY: M. BRADLEY  
CROSS SECTIONS SHEET II

PLOT DATE: 12/03/2014  
DRAWN BY: C. MORIN  
CHECKED BY: E. ATKINS  
SHEET 34 OF 35

PCMS DISPLAYS DURING CONSTRUCTION,  
SEE GENERAL TRAFFIC MAINTENANCE NOTE 8

SIDE ROAD WORK	ONE LANE ON NOTCH RD
USE CAUTION	BE PREPARED TO STOP

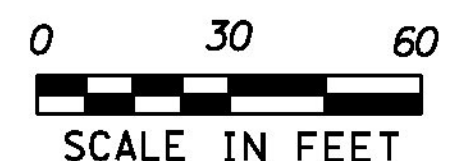


**LEGEND**

- TEMPORARY TRAFFIC BARRIER
- REFLECTORIZED PLASTIC DRUM
- SIGN
- FLOW OF TRAFFIC
- WORK ZONE

**GENERAL TRAFFIC MAINTENANCE NOTES:**

- 1) CONTRACTOR SHALL RELOCATE OR COVER ALL EXISTING SIGNS WHERE THEY CONFLICT WITH CONSTRUCTION SIGNAGE. THE COST SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
- 2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING CONSTRUCTION SIGNAGE SO AS NOT TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE. THE COST WILL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
- 3) ALL TEMPORARY TRAFFIC BARRIERS SHALL BE DELINEATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
- 4) PAYMENT FOR FURNISHING AND PLACING TEMPORARY TRAFFIC SIGNS AND REMOVING AND RELOCATING TEMPORARY TRAFFIC SIGNS WILL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
- 5) PAYMENT FOR REMOVING AND RESETTING TEMPORARY TRAFFIC BARRIER WILL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
- 6) EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- 7) ACCESS TO ABUTTERS SHALL BE MAINTAINED AT ALL TIMES.
- 8) THE CONTRACTOR SHALL REVISE THE PCMS MESSAGE EVERY TWO WEEKS OR AS DIRECTED BY THE ENGINEER. ALL MESSAGES SHALL BE APPROVED BY THE ENGINEER.



PROJECT NAME: WOODFORD	PLOT DATE: 12/03/2014
PROJECT NUMBER: ER NH 010-1(47)	DRAWN BY: D. VERTIYEV
FILE NAME: z12b402+mp.dgn	CHECKED BY: A. ACHARYA
PROJECT LEADER: E. ATKINS	TRAFFIC CONTROL SHEET
DESIGNED BY: A. ACHARYA	SHEET 35 OF 35