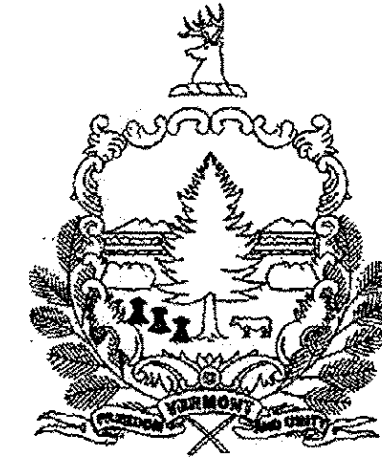
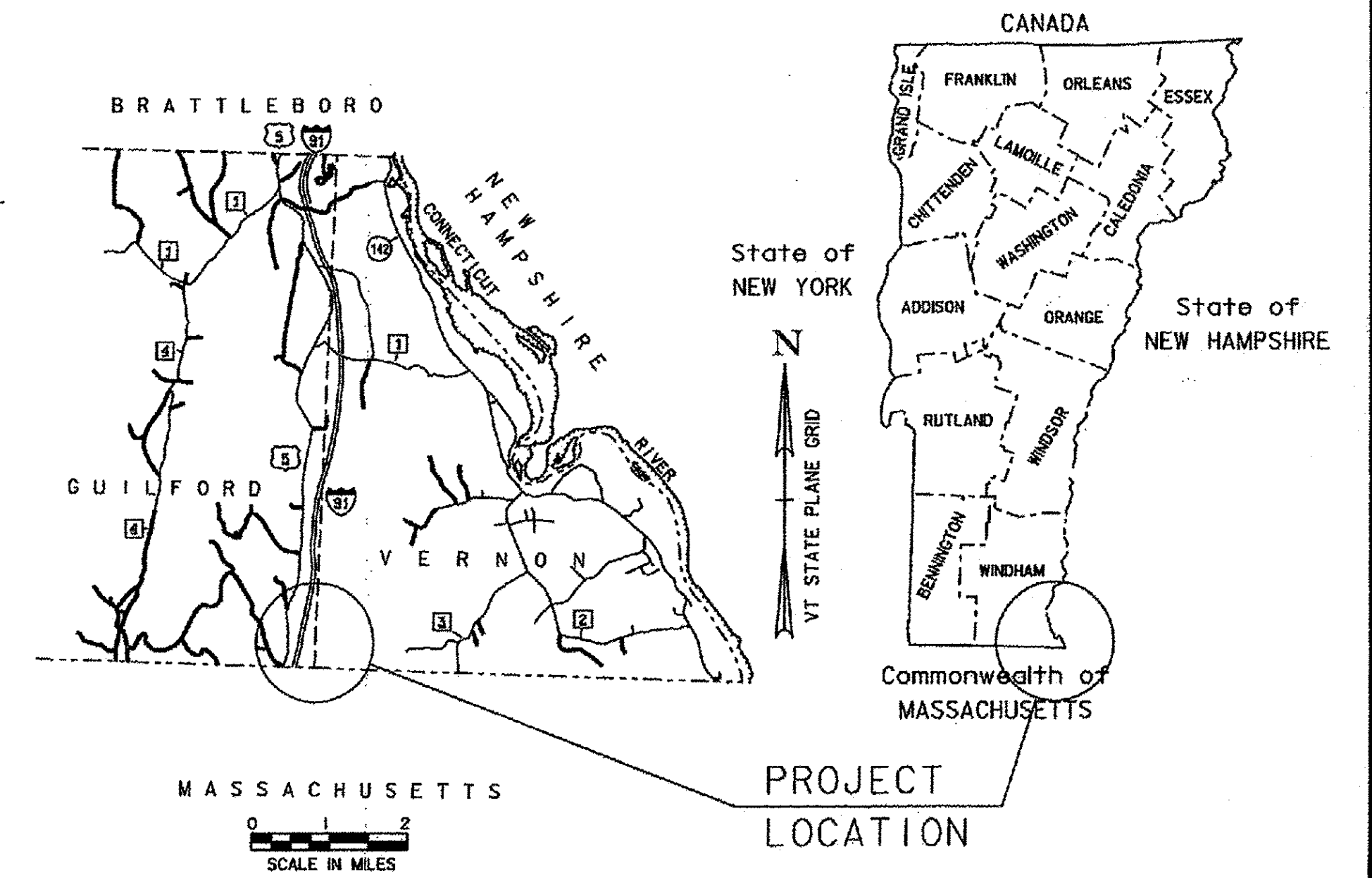


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWN OF GUILFORD COUNTY OF WINDHAM INTERSTATE 91 (NHS)



RECORD PLANS	
CONTRACTOR:	BAZIN BROTHERS TRUCKING, INC. - WESTMINSTER, VT
RESIDENT ENGINEER:	MARK HAUGHWOUT
CONSTRUCTION BEGAN:	JANUARY 7, 2014
CONSTRUCTION COMPLETE:	SEPTEMBER 12, 2014
RECORD PLANS BY:	MARK HAUGHWOUT & AARON JAMES
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	<i>Mark Haughwout</i> RESIDENT ENGINEER
DATE:	8/2/16
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.	

AS PER C.O.D./S.A. #3, DATED 08/06/2014, THE PROJECT PAVING LIMITS WERE EXTENDED SOUTHERLY TO STA 138+65 RT (MM 0.05±) AND EXTENDED NORTHERLY TO STA 165+75 RT (MM 0.50±). THIS AREA INCLUDES THE RUMBLE STRIP PAVING WORK.

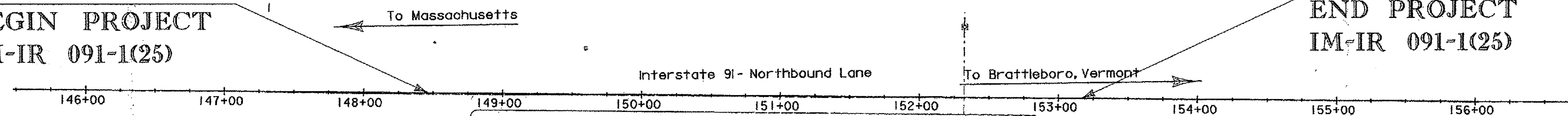
BEGINNING IN THE TOWN OF GUILFORD, AT MILEMARKER 0.11 AND EXTENDING NORTHERLY ALONG THE EASTERLY SIDE OF INTERSTATE 91 FOR A DISTANCE OF 470' TO AN ENDING POINT ON MILEMARKER 0.20.

STATION DATA:
NORTHBOUND STATION 148+44 (MM 0.11) TO STATION 153+14 (MM 0.20) 470 FEET 0.089 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES MODIFICATION OF A PREVIOUSLY UTILIZED INTERSTATE REST AREA INTO A TRUCK WEIGHING AND INSPECTION SITE. SITWORK WILL INCLUDE NEW PAVEMENT, SUBBASE, DRAINAGE, AND OTHER HIGHWAY RELATED ITEMS.

STATION 148+44
BEGIN PROJECT
IM-IR 091-1(25)

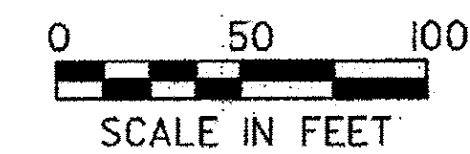
STATION 153+14
END PROJECT
IM-IR 091-1(25)



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	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : VHB
SURVEYED DATE : Nov. 1999

DATUM
VERTICAL : NAVD 88
HORIZONTAL : NAD 83



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.

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATOR	
APPROVED _____	DATE _____
DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>Kevin A. MacLure</i>	DATE 8/1/13
PROJECT MANAGER : PAUL LIBBY	
PROJECT NAME : GUILFORD	
PROJECT NUMBER : IM-IR 091-1(25)	
SHEET 1 OF 46 SHEETS	

INDEX OF SHEETS & STANDARDS LIST

INDEX OF SHEETS

1	TITLE SHEET
2	INDEX OF SHEETS
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4	DECOMMISSIONING WATER WELL DETAIL
5	TIE SHEET
6	LEGEND SHEET
7-8	HORIZONTAL ALIGNMENT SHEETS
9-10	PROFILE SHEETS
11	ALIGNMENT PLAN
12-13	QUANTITY SHEETS
14	EARTHWORKS SUMMARY SHEET
15	GENERAL NOTES
16	DRAINAGE PLAN SHEET
17	DRAINAGE DETAIL SHEET
18	DRAINAGE DETAILS SHEET
19	LIGHTING PLAN SHEET
20	LIGHTING DETAILS & NOTES
21	EPSC - NARRATIVE
22	EPSC - EXISTING CONDITIONS
23	EPSC - CONSTRUCTION
24	EPSC - FINAL CONDITIONS
25-27	EPSC - DETAILS SHEETS
28-35	CROSS SECTION SHEETS
36	DRAINAGE CROSS SECTIONS
37-38	INTERSTATE SIGNING SHEETS
39	TRAFFIC SIGNS AND MARKINGS SHEET
40-44	TRAFFIC SIGN SUMMARY SHEETS
45-46	DELINEATOR SHEETS

STANDARDS LIST

A-60	STANDARD TYPICAL FOR SLOPES IN SOLID ROCK EXCAVATION DRILLING AND BLASTING OF SOLID ROCK SUBGRADE	06-01-1994
B-5	SLOPE GRADING, EMBANKMENTS, MUCK	06-01-1994
B-11	UNDERDRAIN - ROCK SUBGRADE, SLOPE STABILIZ.	06-01-1994
D-3	TREATED GUTTERS	06-01-1994
D-6	REINFORCED CONCRETE DROP INLET W/GRATE (DITCHES)	06-01-1994
D-11	STEEL OR IRON GRATES& COVERS (TYPE A)	06-01-1994
D-15	REINF CONC. MH-GRATES, CAST IRON GRATE WITH FRAME, TYPE D & E	06-01-1994
D-16	DRAINAGE DETAILS INCLUDING DROP INLETS, IRON GRATE TYPE B&C, CONC END SECTIONS. ETC.	06-01-1994
D-30	UNDERDRAIN CONSTRUCTION DETAILS	08-13-2007
E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-2004
E-102A	CONSTRUCTION SIGN DETAILS	05-01-2004
E-105	TRAFFIC CONTROL FOR CONSTRUCTION VEHICLE U-TURNS ON DIVIDED HIGHWAY	05-01-2004
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	08-08-1995
E-111	MINOR MAINTENANCE OPERATIONS	03-11-1997
E-120	STANDARD SIGN PLACEMENT - EXPRESSWAY & FREEWAY	08-08-1995
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	03-16-2004
E-135	INTERSTATE ROUTE MARKER SIGN DETAIL	08-18-1995
E-143	REGULATORY SIGN DETAILS	06-15-2004
E-163	TUBULAR STEEL SIGN POST	05-20-1999
E-164	SQUARE STEEL SIGN POST	06-08-2009
E-173	PULL BOXES AND JUNCTION BOXES	08-09-1995
E-175	POWER DROP STANCHIONS	06-08-2009
E-180A	STREET LIGHTING DETAILS	08-09-1995
E-180B	STREET LIGHTING DETAILS	08-09-1995
E-191	PAVEMENT MARKING DETAILS	02-01-1999
E-193	PAVEMENT MARKING DETAILS	08-18-1995
E-197	DELINEATOR PLACEMENT TYPICAL	04-01-2005
E-198	DELINEATORS AND MILE POSTS	04-01-2005

PROJECT NAME: GUILFORD
PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D91A222_CLOCK_FORMS.DGN PLOT DATE: 22-JUL-2013
PROJECT LEADER: LIBBY DRAWN BY: BEYOR
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER
INDEX OF SHEETS SHEET 2 OF 46

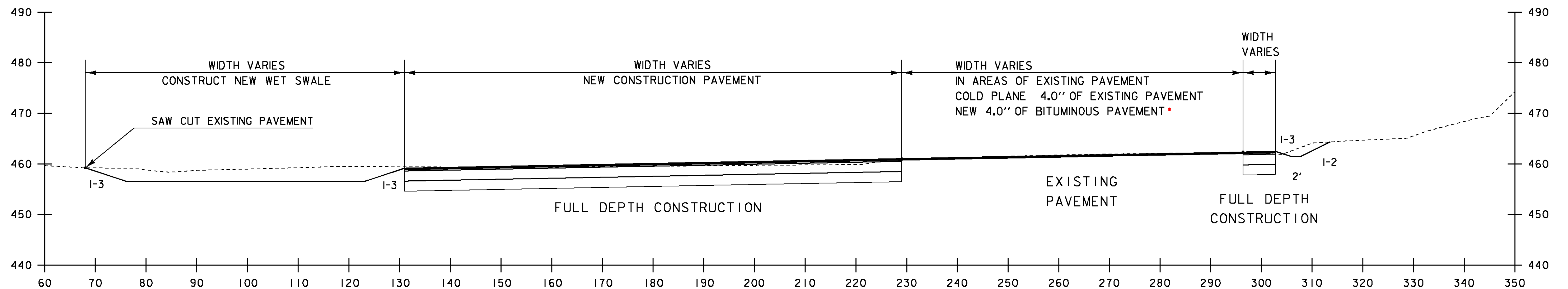
TYPICAL SECTION

1.5" TYPE IVS - WEARING COURSE
 2.5" TYPE IIS - INTERMEDIATE COURSE
 2.5" TYPE IIS - BASE COURSE

 24" SUBBASE OF DENSE GRADED CRUSHED STONE
 24" SAND BORROW

EMULSIFIED ASPHALT TYPE CRS-IH OR RS-IH SHALL BE APPLIED AS A TACK COAT IN BETWEEN ALL BITUMINOUS PAVEMENT COURSES (WHERE APPLICABLE) AT THE RATE OF 0.025 TO 0.040 GAL/SY, AND 0.080 GAL/SY ON MILLED SURFACES OR AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE UNDER ITEM 900.683, "SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-IH OR CRS-IH)".

*AS PER C.O.D./S.A #1, DATED 04/14/14, THIS PROPOSED WORK WAS REVISED TO REMOVE ALL PAVEMENT AND PAVE THE AREA AT A DEPTH OF 6.5".

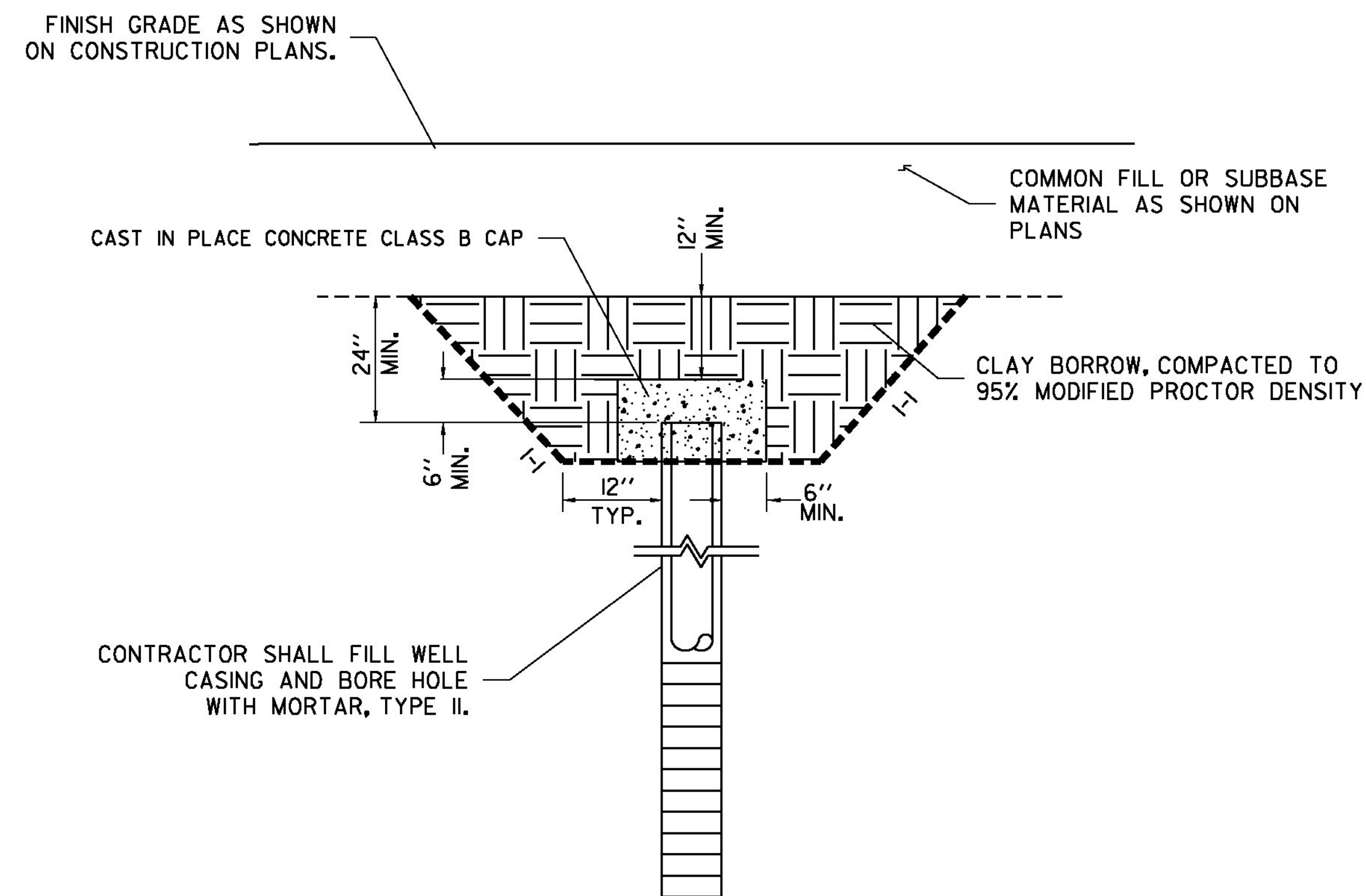
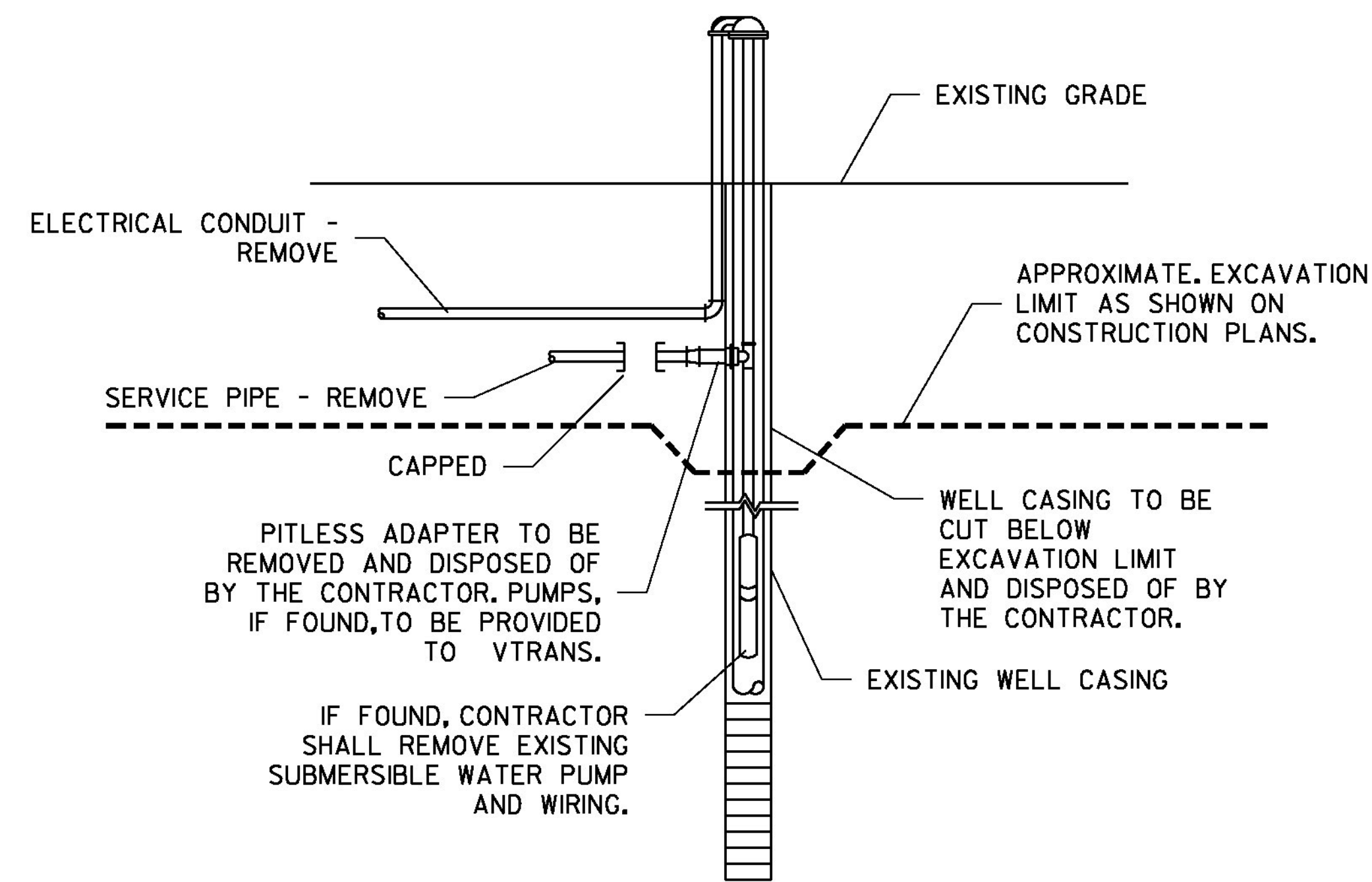


SAMPLE LOCATION (150+80)

THE DITCH RELATED SLOPES AND WIDTHS ARE PERPENDICULAR TO THE OUTSIDE ALIGNMENT (INSPECTION AREA)

STATIONING, OFFSET, AND ELEVATIONS IN FEET

PROJECT NAME:	GUILFORD	PLOT DATE:	22-JUL-2013
PROJECT NUMBER:	IM-IR 091-(125)	DRAWN BY:	BEYOR
FILE NAME:	D9IA222_CLOCK_FORMS.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	3 OF 46
DESIGNED BY:	BEYOR		
TYPICAL SECTIONS SHEET			



WATER SUPPLY WELL DECOMMISSIONING DETAILS

NOT TO SCALE

1-91 153+15, 134' RT

WATER WELL GENERAL NOTES

1. ALL WORK MUST BE PERFORMED, OR OVERSEEN BY A VERMONT LICENSED WELL DRILLER.
2. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THE VERMONT WATER SUPPLY RULE, CHAPTER 21.
3. ONE WATER WELL IS LOCATED ON THE PROJECT. THE CONTRACTOR SHALL LOCATE, PROTECT AND DECOMMISSION THE WELL.
4. CONTRACTOR SHALL IDENTIFY DEPTH OF WELL AND PUMP AND CONFIRM CASING CUT-OFF ELEVATION WITH ENGINEER.
5. ALL WORK AND MATERIALS SHOWN ON THIS SHEET SHALL BE INCIDENTAL TO ITEM 900.620, SPECIAL PROVISION (DECOMMISSION WATER WELL).

PROJECT NAME: GUILFORD
 PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D91A222_CLOCK_FORMS.DGN	PLOT DATE: 22-JUL-2013
PROJECT LEADER: LIBBY	DRAWN BY: BEYOR
DESIGNED BY: BEYOR	CHECKED BY: BOMBARDIER
DECOMMISSIONING WATER WELL DETAIL	SHEET 4 OF 46

GPS CONTROL POINTS

HVCTRL #1

Standard Disk Stamped

186UU
 NORTH = 82371.649
 EAST = 1621689.036
 ELEV. = 451.239

TO REACH THE STATION FROM THE INTERSECTION OF INTERSTATE HIGHWAY 91 AND STATE ROUTE 10, INTERCHANGE 28 IN BERNARDSTON, GO NORTH ON I-91 ABOUT 7.0 KM (4.35 MI) TO THE STATION ON THE LEFT IN THE MEDIAN. THE STATION IS A MAGS DISK STAMPED---186 UU---, AND SET IN A SQUARE CONCRETE MONUMENT 13 CM ON A SIDE FLUSH WITH THE GROUND. IT IS 11.7 METERS (38.5 FT) SOUTHEAST OF THE BELL END OF AN 18-INCH RE-ENFORCED CONCRETE PIPE AND 0.7 METER (2.2 FT) SOUTHEAST OF A CARSONITE WITNESS POST AND 7.0 METERS (23.0 FT) WEST OF THE CENTERLINE OF THE NORTHBOUND TRAVEL LANE OF I-91.

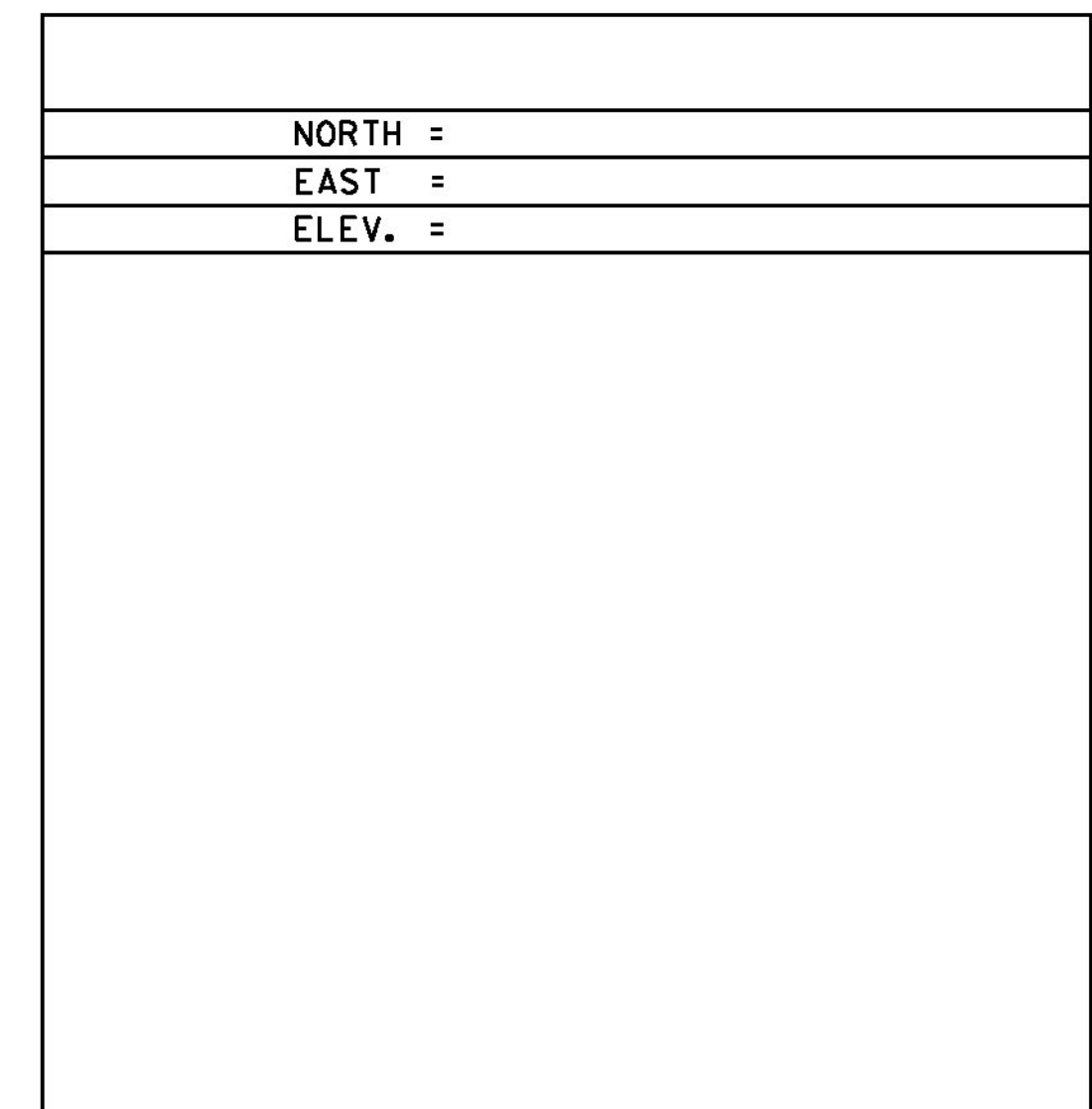
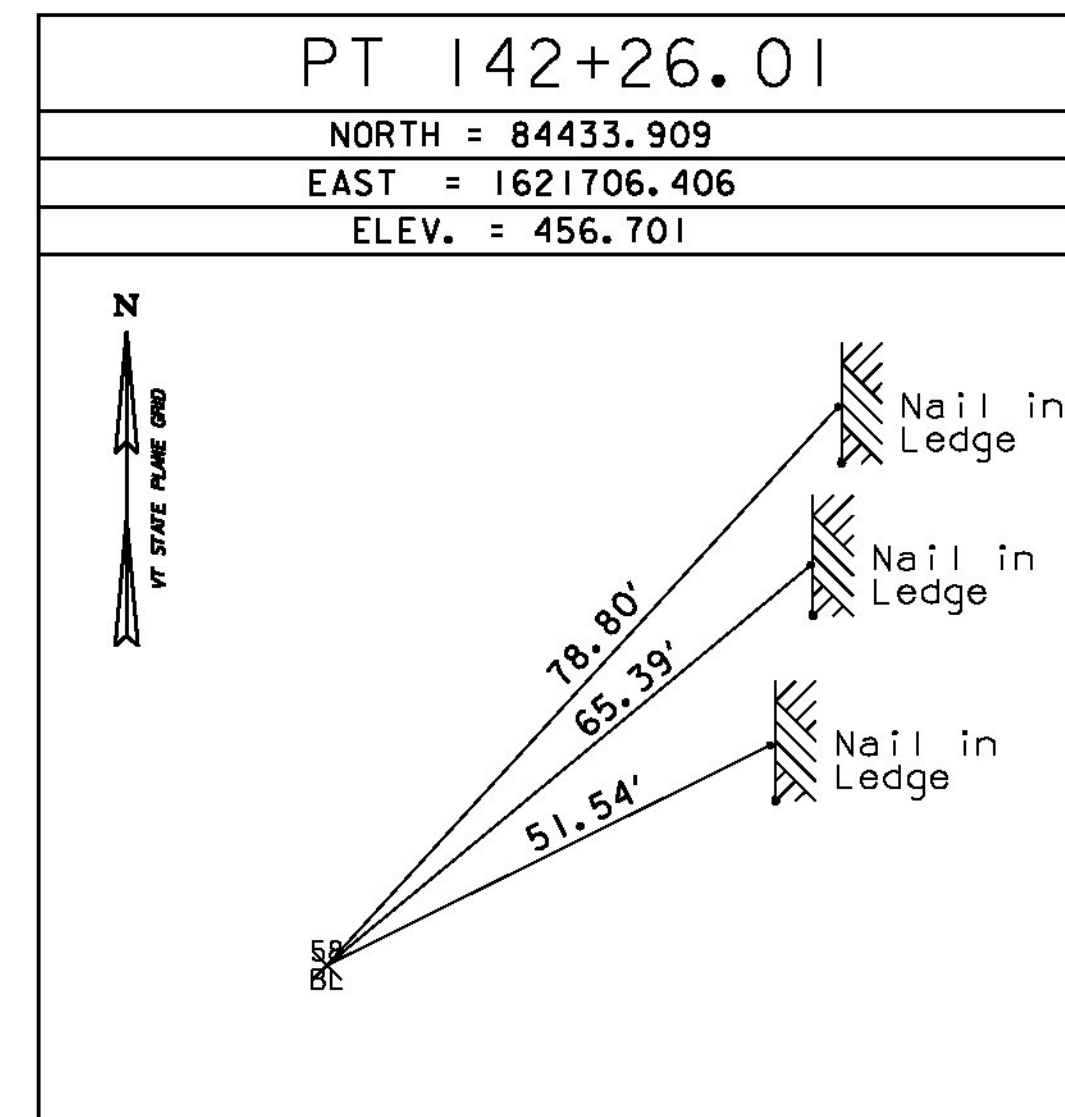
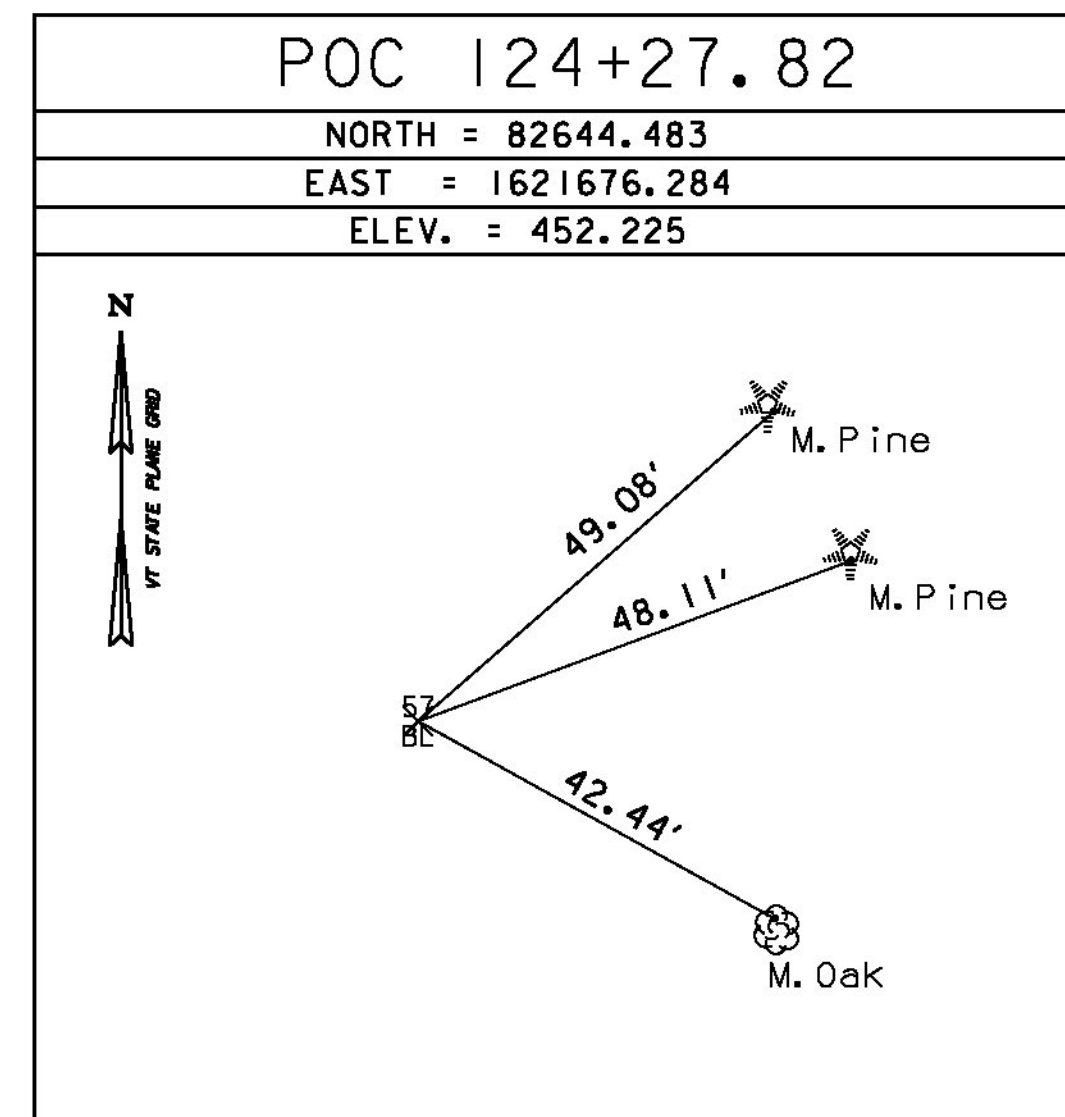
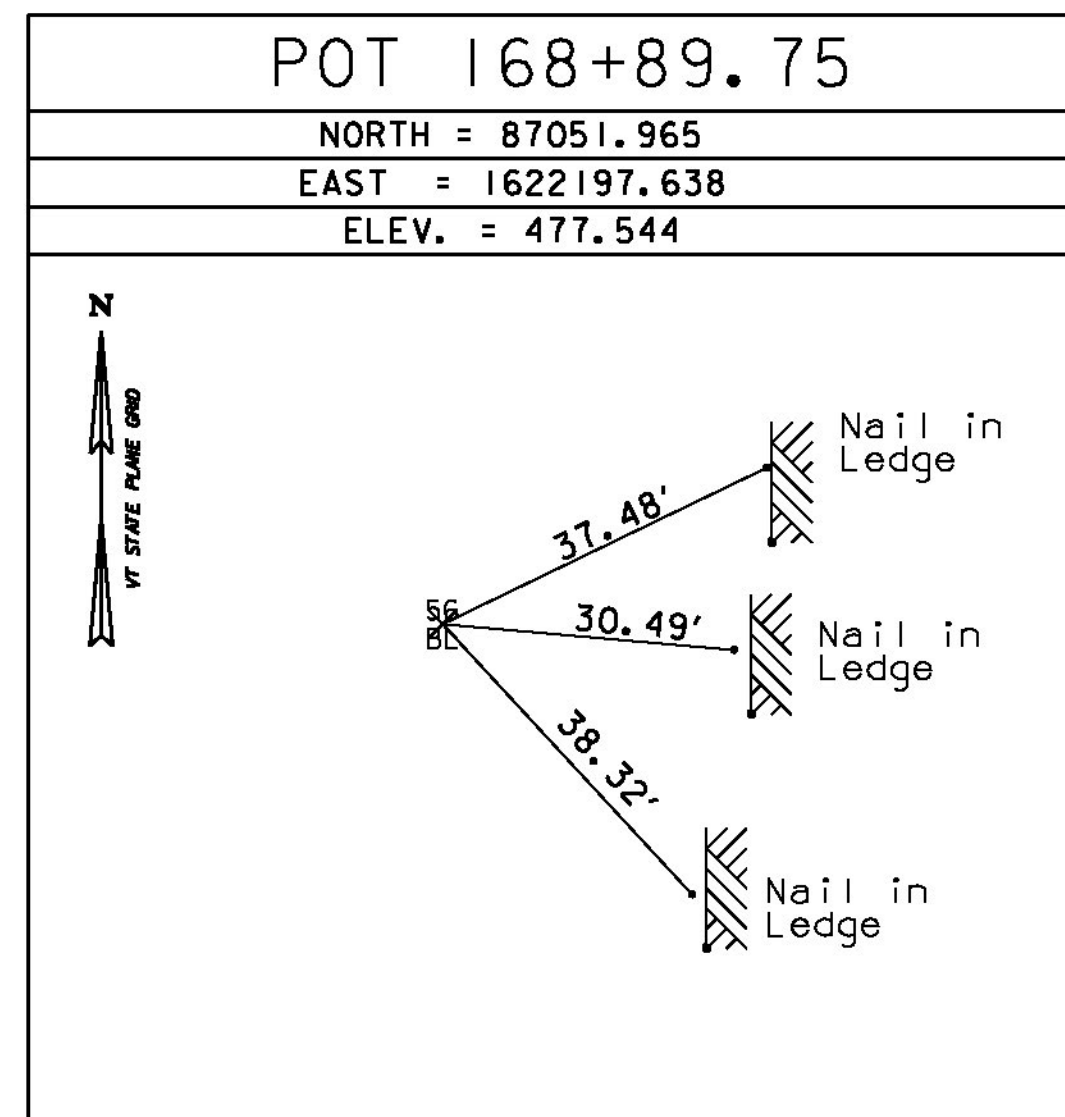
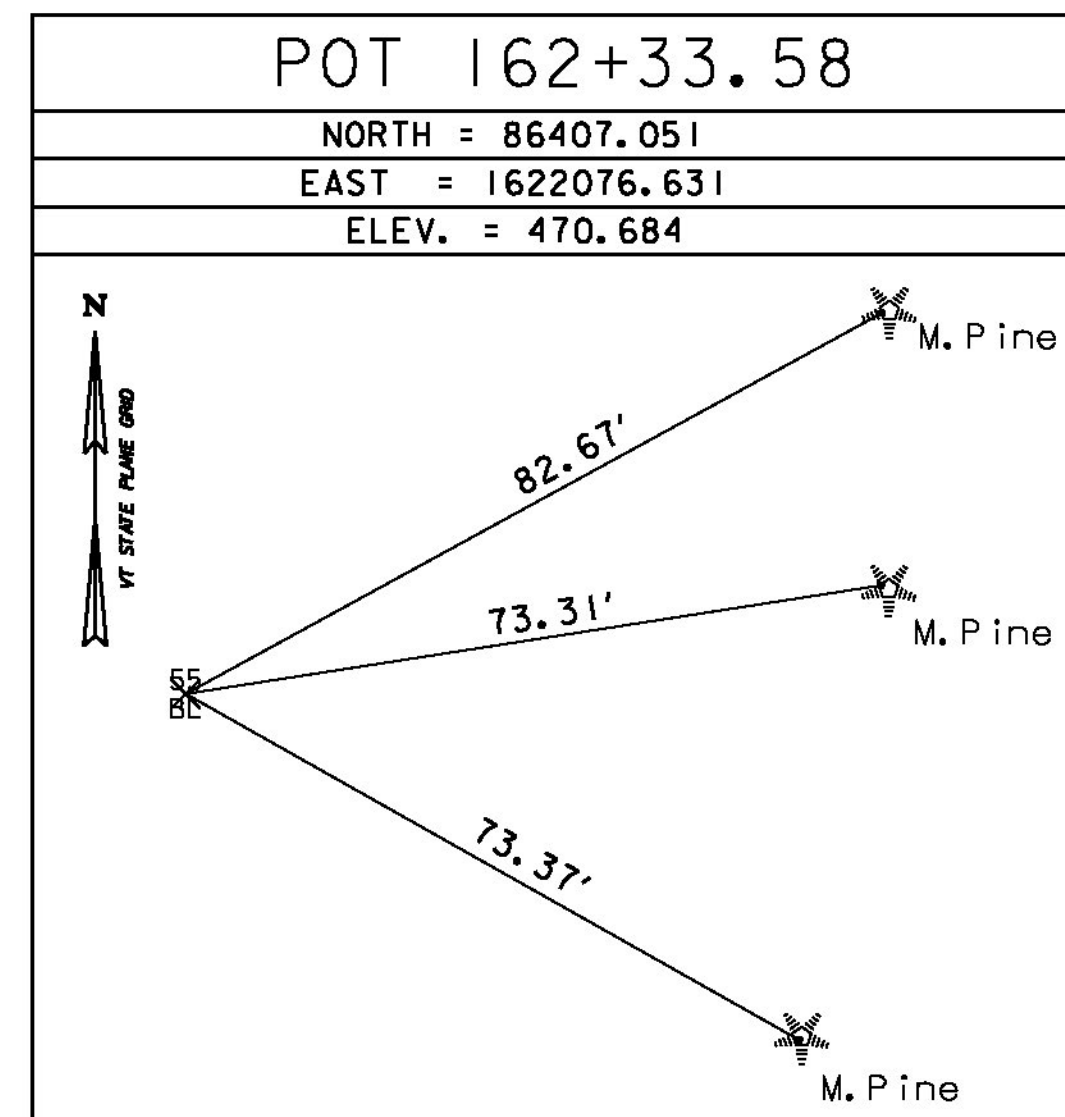
HVCTRL #2

Standard Disk Stamped

186VV
 NORTH = 83858.651
 EAST = 1621578.974
 ELEV. = 451.869

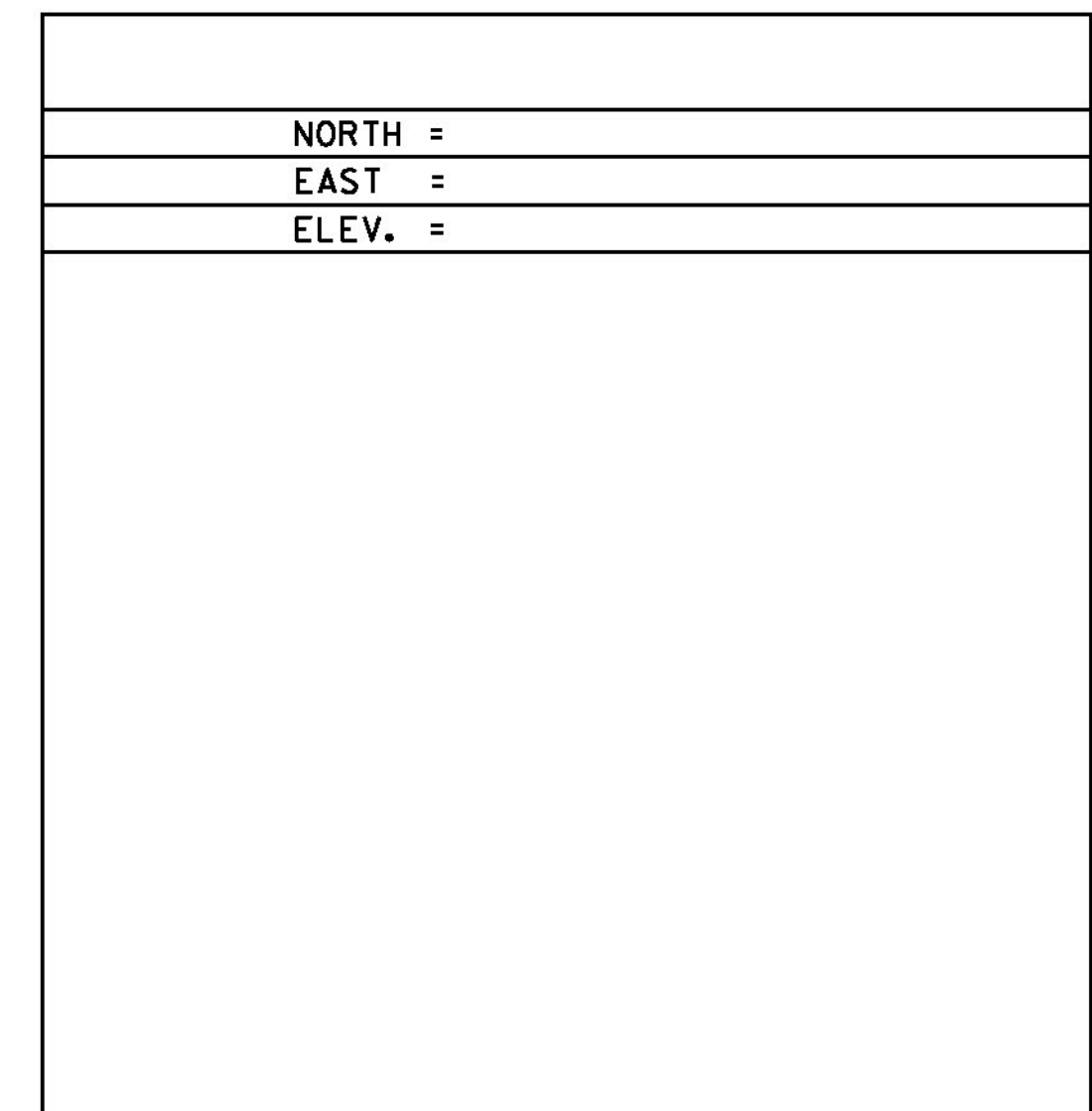
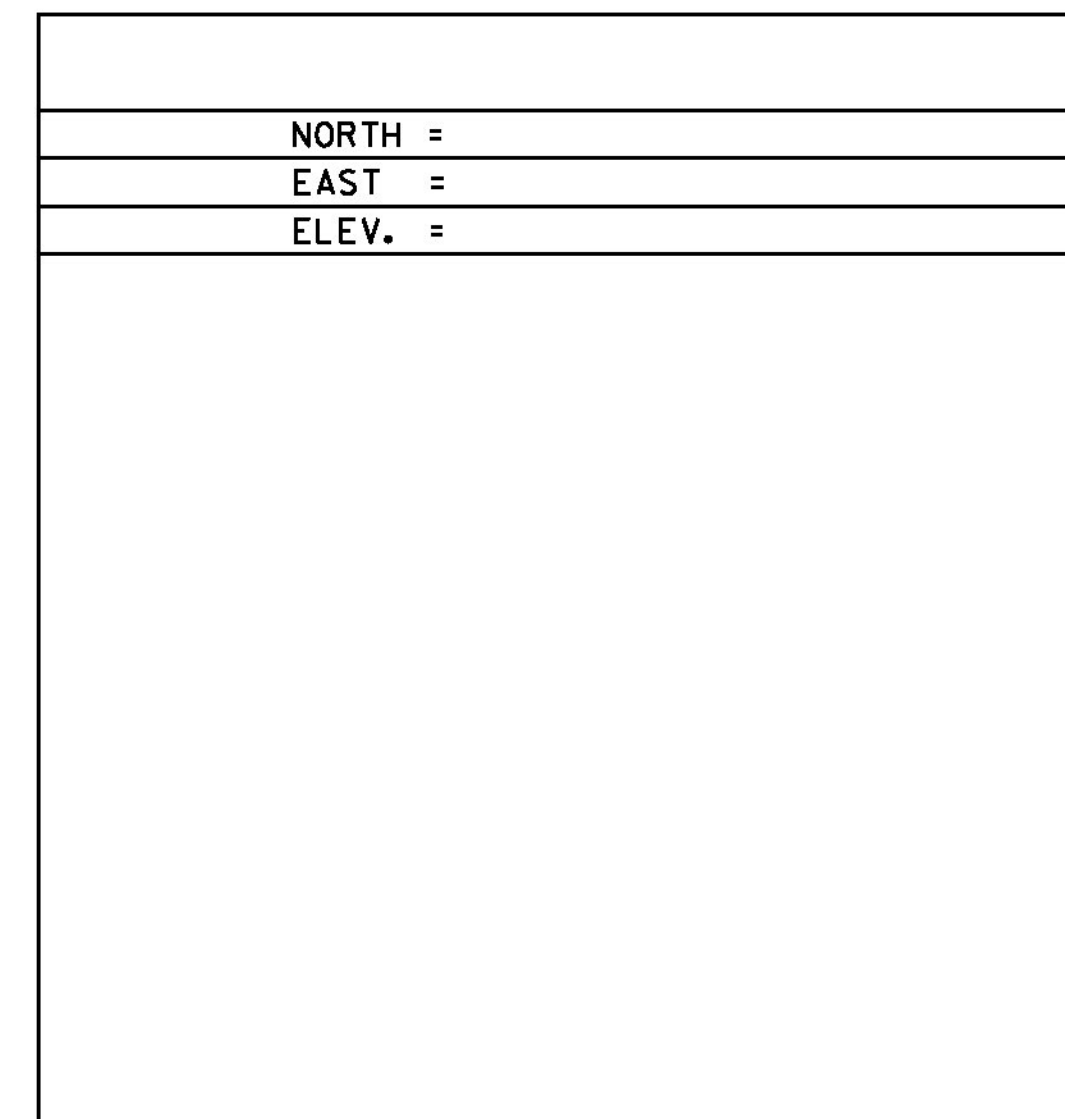
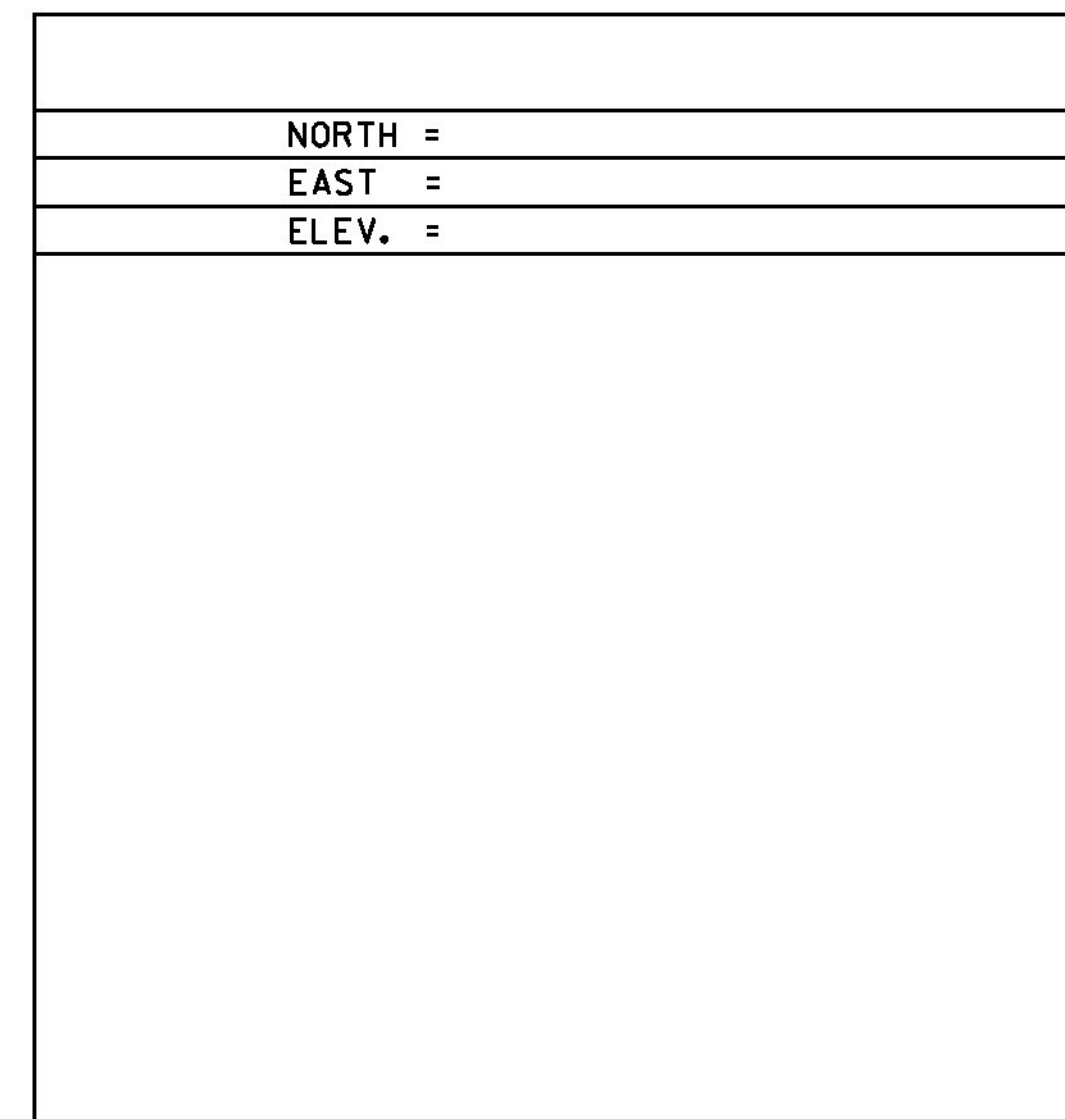
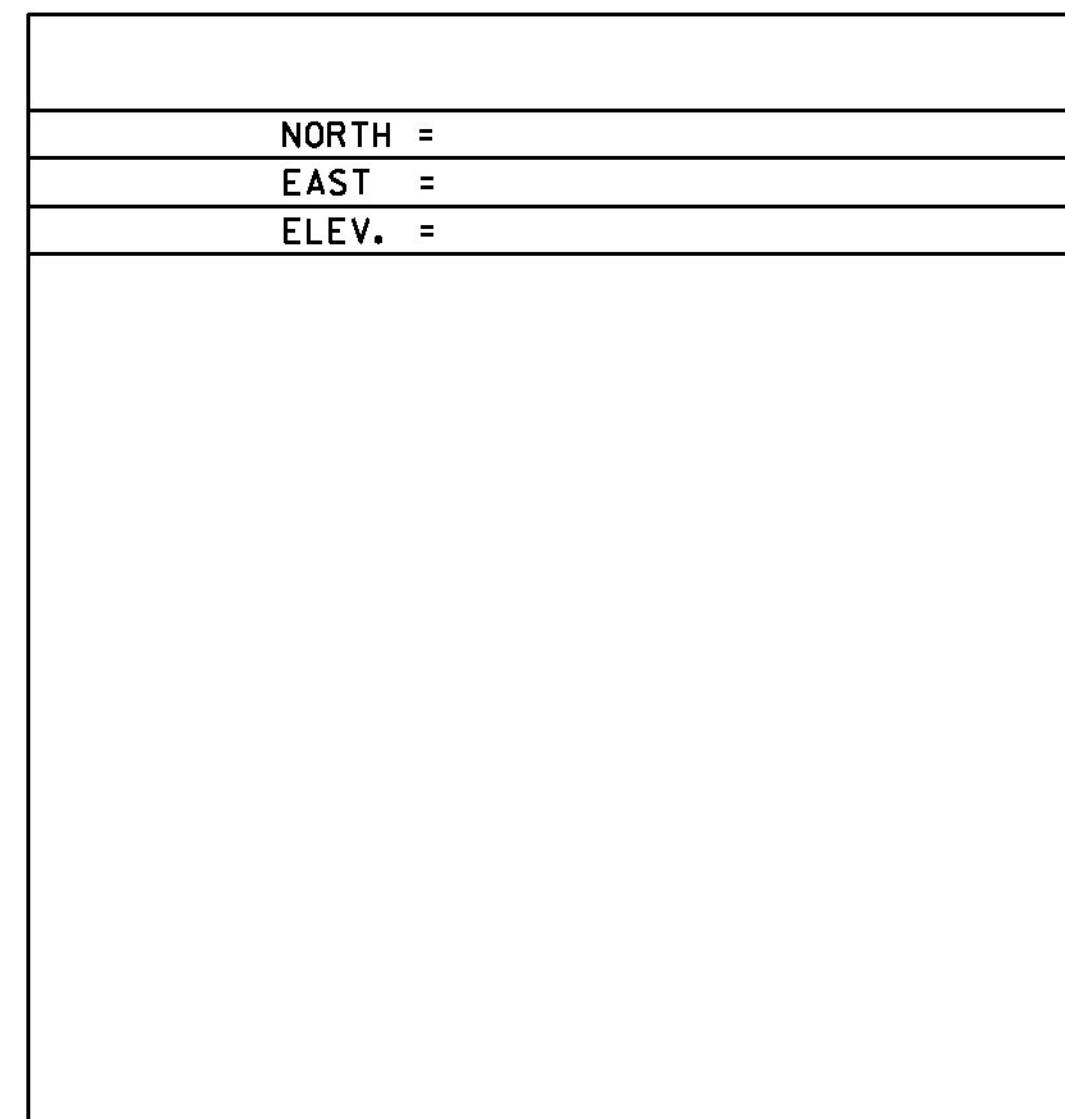
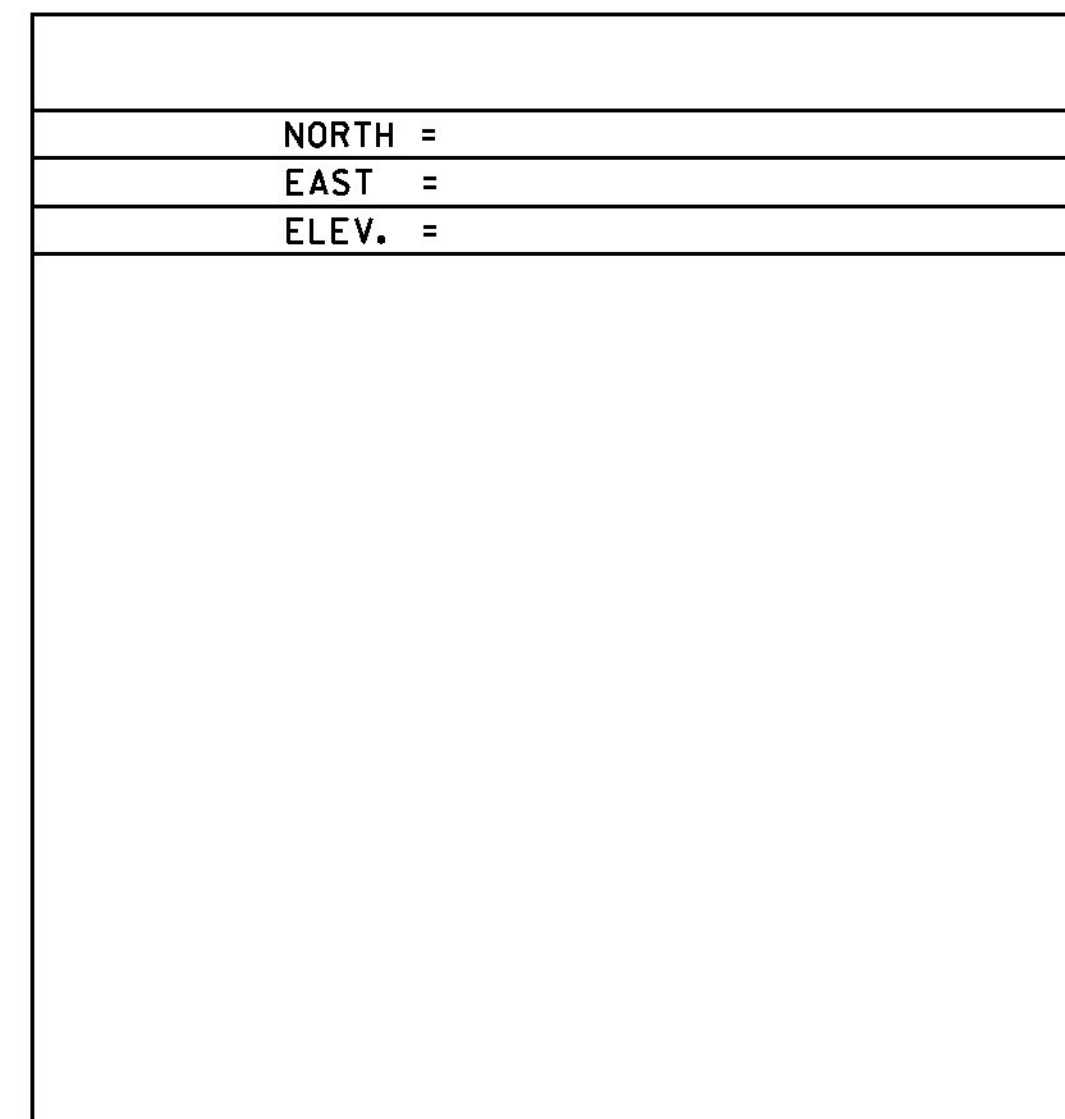
THE STATION IS LOCATED ABOUT 9.6 KM (5.95 MI) SOUTH OF GUILFORD, VT, 6.4 KM (4.00 MI) NORTH OF BERNARDSTON, ON THE VERMONT STATE LINE, IN THE CENTER OF THE GRASS MEDIAN OF BETWEEN THE NORTH AND SOUTH BOUND LANES OF INTERSTATE HIGHWAY 91. OWNERSHIP--DEPARTMENTS OF TRANSPORTATION. THE STATION IS AN E-PIN IN LEAD IN THE TOP OF THE NORTHWEST CORNER OF A 36-CM SQUARE DRESSED GRANIT PILLAR THAT IS 95 CM TALL AND RECESSED 45 CM BELOW THE TOP OF A ROUND STEEL MAN-HOLE COVER THAT IS 70 CM IN DIAMETER AND RECESSED 4 CM BELOW GROUND. LOCATED 10.0 M (32.8 FT) NORTH FROM THE CENTER OF THE SOUTH ONE OF TWO PAVED CROSS OVERS, 7.3 M (24.0 FT) SOUTH FROM THE CENTER OF THE NORTH CROSS OVER, 7.3 M (24.0 FT) WEST FROM THE WEST EDGE OF THE NORTH BOUND HIGHWAY LANES, 11M (3.6 FT) NORTH FROM A FIBERGLASS WITNESS POST, 11CM EAST OF THE WEST EDGE OF THE GRANIT MONUMENT, AND 11CM SOUTH FROM THE NORTH EDGE OF THE MONUMENT.

TRAVERSE TIES



* Main Traverse Completed 03/16/2005 by R.Gilman P.C. P. Winters D.Breer

ALIGNMENT TIES



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME:	GUILFORD
PROJECT NUMBER:	IM-IR 091-1(25)
FILE NAME:	91a222/Survey/x91a222+1
PROJECT LEADER:	P. LIBBY
DESIGNED BY:	P. BEYOR
TIE SHEET	
PLOT DATE:	22-JUL-2013
DRAWN BY:	S. DONOVAN
CHECKED BY:	P. BEYOR
SHEET	5 OF 46

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.

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 RADUIS 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 E&T —	ELECTRIC+TELEPHONE
— CT —	CABLE+TELEPHONE
— ECT —	ELECTRIC+CABLE+TELEP.
—	UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLY

—	CLEAR ZONE
—	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

▲	TOP OF CUT SLOPE
○	TOE OF FILL SLOPE
⊕	STONE FILL
⊕	BOTTOM OF DITCH 'L
---	CULVERT PROPOSED
---	STRUCTURE SUBSURFACE
PDF	PROJECT DEMARCATION FENCE
BF	BARRIER FENCE
XXXXXX	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
---	PROPERTY LINE (P/L)
SR	SLOPE RIGHTS
6F	6F PROPERTY BOUNDARY
4F	4F PROPERTY BOUNDARY
HAZ	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLY**

**EPSC MEASURES**

ONNOONNOONNO	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
---	THREATENED & ENDANGERED SPECIES
HAZ	HAZARDOUS WASTE AREA
---	AGRICULTURAL LAND
---	FISH & WILDLIFE HABITAT
---	FLOOD PLAIN
---	ORDINARY HIGH WATER (OHW)
---	STORM WATER
---	USDA FOREST SERVICE LANDS
---	WILDLIFE HABITAT SUIT/CONN

**ARCHEOLOGICAL & HISTORIC**

---	ARCHEOLOGICAL BOUNDARY
---	HISTORIC DISTRICT BOUNDARY
---	HISTORIC AREA
H	HISTORIC STRUCTURE

**CONVENTIONAL TOPOGRAPHIC SYMBOLY**

**EXISTING FEATURES**

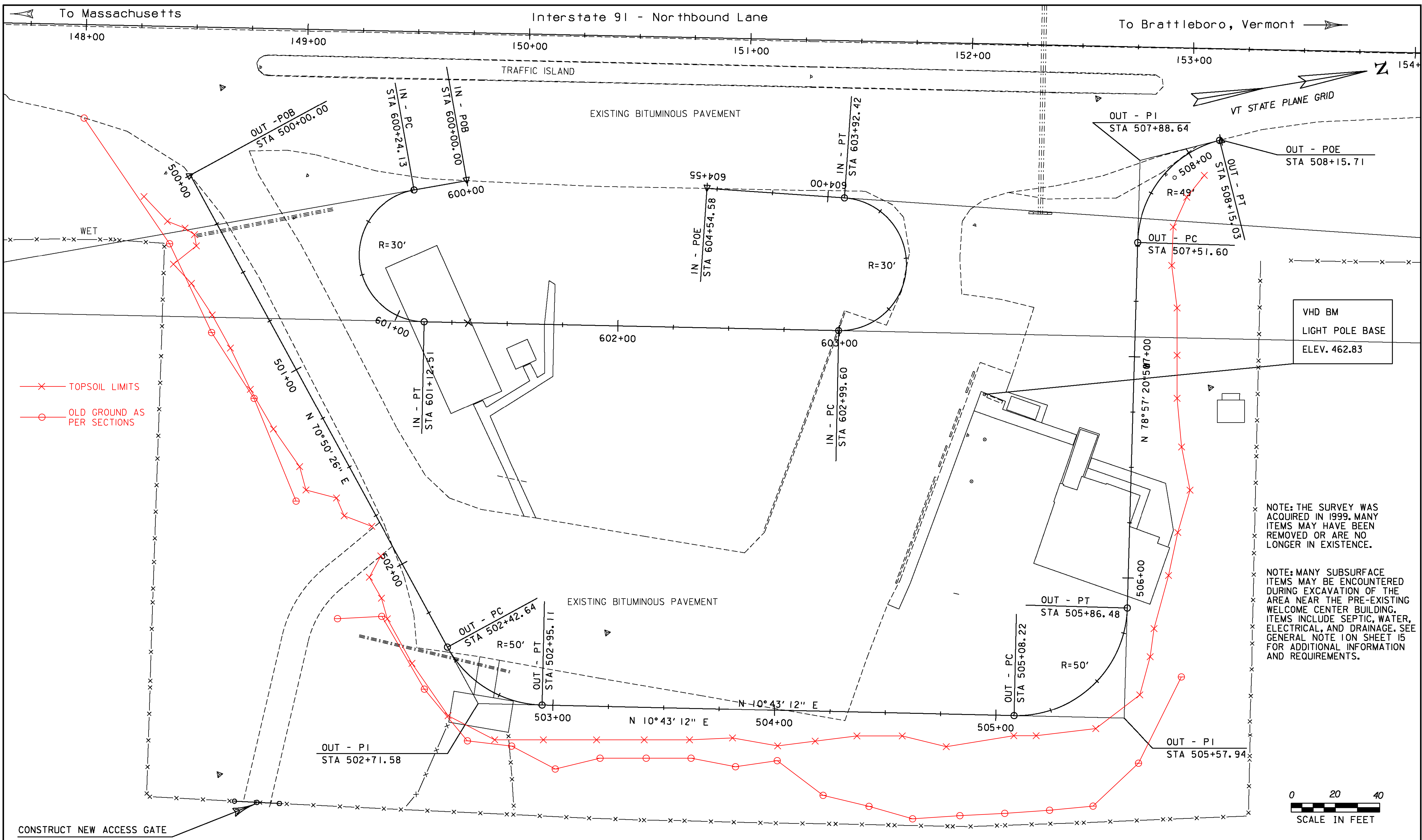
---	ROAD EDGE PAVEMENT
---	ROAD EDGE GRAVEL
---	DRIVEWAY EDGE
---	DITCH
---	FOUNDATION
x	FENCE (EXISTING)
□	FENCE WOOD POST
○	FENCE STEEL POST
---	GARDEN
---	ROAD GUARDRAIL
	RAILROAD TRACKS
---	CULVERT (EXISTING)
---	STONE WALL
---	WALL
---	WOOD LINE
---	BRUSH LINE
---	HEDGE
---	BODY OF WATER EDGE
---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

**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

PROJECT NAME: GUILFORD  
PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D9IA222_CLOCK_FORMS.DGN PLOT DATE: 22-JUL-2013  
PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
LEGEND SHEET SHEET 6 OF 46



NOTE: THE SURVEY WAS ACQUIRED IN 1999. MANY ITEMS MAY HAVE BEEN REMOVED OR ARE NO LONGER IN EXISTENCE.

NOTE: MANY SUBSURFACE ITEMS MAY BE ENCOUNTERED DURING EXCAVATION OF THE AREA NEAR THE PRE-EXISTING WELCOME CENTER BUILDING. ITEMS INCLUDE SEPTIC, WATER, ELECTRICAL, AND DRAINAGE. SEE GENERAL NOTE ION SHEET 15 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

✕ TOPSOIL LIMITS  
 ○ OLD GROUND AS PER SECTIONS



NOTE: FOR HORIZONTAL ALIGNMENT INFORMATION; SEE ALIGNMENT SHEET #2

PROJECT NAME:	GUILFORD	PLOT DATE:	30-AUG-2013
PROJECT NUMBER:	IM-IR 091-I(25)	DRAWN BY:	BEYOR
FILE NAME:	D9IA222_CLOCK.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	7 OF 46
DESIGNED BY:	BEYOR		
HORIZONTAL ALIGNMENT SHEET #1			

## HORIZONTAL ALIGNMENT DATA

### INTERSTATE 91- MAINLINE

### OUTSIDE (INSPECTION AREA)

### INSIDE (SWALE)

Project Name: za222  
 Description: VERNON TIS  
 Horizontal Alignment Name: I-91  
 Description: Along TW 7-25  
 Style: align1

Project Name: za222  
 Description: VERNON TIS  
 Horizontal Alignment Name: Clock_Out_H  
 Description: Clock_Outside_Horz  
 Style: align1

Project Name: za222  
 Description: VERNON TIS  
 Horizontal Alignment Name: Clock_In_H  
 Description: Clock_Inside_Horz  
 Style: align2

	STATION	NORTHING	EASTING
POB ( )	Element: Linear		
	100+00.00	80285.4566	1622247.3360
PC ( )	119+17.31	82144.3092	1621777.5121
	Tangent Direction: N 14° 11' 03.87" W		
	Tangent Length: 1917.31		
PC ( )	Element: Circular		
	119+17.31	82144.3092	1621777.5121
PI ( )	130+90.04	83281.2852	1621490.1421
CC ( )	83450.7233	1626946.3243	
PT ( )	142+26.00	84433.9013	1621706.4104
	Radius: 5331.35		
	Delta: 24° 48' 41.03" Right		
	Degree of Curvature (Arc): 1° 04' 28.90"		
	Length: 2308.69		
	Tangent: 1172.73		
	Chord: 2290.70		
	Middle Ordinate: 124.48		
	External: 127.46		
	Tangent Direction: N 14° 11' 03.87" W		
	Radial Direction: N 75° 48' 56.13" E		
	Chord Direction: N 1° 46' 43.36" W		
	Radial Direction: S 79° 22' 22.84" E		
	Tangent Direction: N 10° 37' 37.16" E		
PT ( )	Element: Linear		
	142+26.00	84433.9013	1621706.4104
POE ( )	172+01.43	87358.2983	1622255.1222
	Tangent Direction: N 10° 37' 37.16" E		
	Tangent Length: 2975.43		

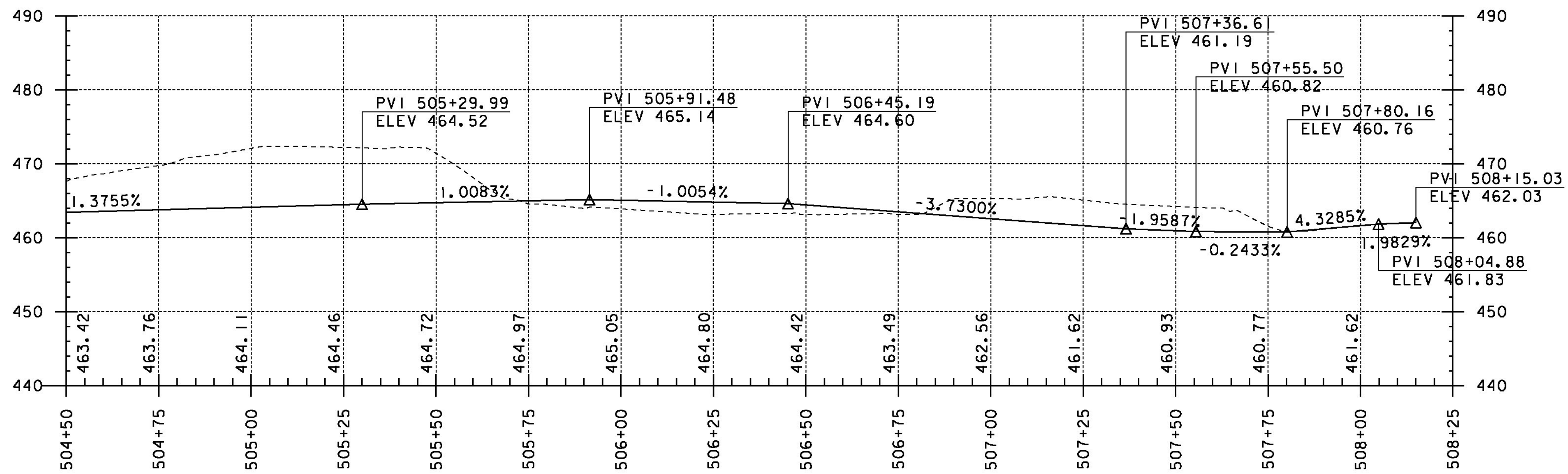
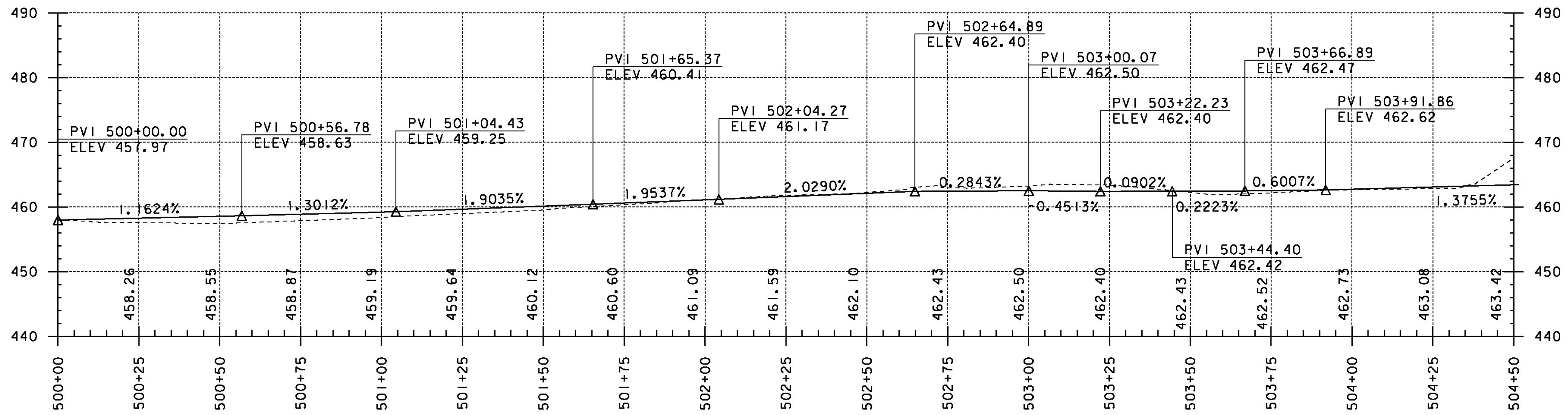
	STATION	NORTHING	EASTING
POB ( )	Element: Linear		
	500+00.00	85033.1501	1621886.9958
PC ( )	502+42.64	85112.7850	1622116.1998
	Tangent Direction: N 70° 50' 26.46" E		
	Tangent Length: 242.64		
PC ( )	Element: Circular		
	502+42.64	85112.7850	1622116.1998
CC ( )	502+95.11	85160.0155	1622099.7900
PT ( )	502+95.11	85150.7150	1622148.9174
	Radius: 50.00		
	Delta: 60° 07' 14.74" Left		
	Degree of Curvature (Arc): 114° 35' 29.61"		
	Length: 52.47		
	Tangent: 28.94		
	Chord: 50.09		
	Middle Ordinate: 6.73		
	External: 7.77		
	Tangent Direction: N 70° 50' 26.46" E		
	Radial Direction: S 19° 09' 33.54" E		
	Chord Direction: N 40° 46' 49.09" E		
	Radial Direction: S 79° 16' 48.28" E		
	Tangent Direction: N 10° 43' 11.72" E		
PT ( )	Element: Linear		
	502+95.11	85150.7150	1622148.9174
PC ( )	505+08.22	85360.1072	1622188.5579
	Tangent Direction: N 10° 43' 11.72" E		
	Tangent Length: 213.11		
PC ( )	Element: Circular		
	505+08.22	85360.1072	1622188.5579
PI ( )	505+57.94	85408.9572	1622197.8058
CC ( )	505+57.94	85369.4076	1622139.4305
PT ( )	505+86.48	85418.4816	1622149.0089
	Radius: 50.00		
	Delta: 89° 40' 32.10" Left		
	Degree of Curvature (Arc): 114° 35' 29.61"		
	Length: 78.26		
	Tangent: 49.72		
	Chord: 70.51		
	Middle Ordinate: 14.54		
	External: 20.51		
	Tangent Direction: N 10° 43' 11.72" E		
	Radial Direction: S 79° 16' 48.28" E		
	Chord Direction: N 34° 07' 04.32" W		
	Radial Direction: N 11° 02' 39.63" E		
	Tangent Direction: N 78° 57' 20.37" W		
PT ( )	Element: Linear		
	505+86.48	85418.4816	1622149.0089
PC ( )	507+51.60	85450.1143	1621986.9425
	Tangent Direction: N 78° 57' 20.37" W		
	Tangent Length: 165.12		
PC ( )	Element: Circular		
	507+51.60	85450.1143	1621986.9425
PI ( )	507+88.64	85457.2090	1621950.5935
CC ( )	508+15.03	85498.2068	1621996.3293
PT ( )	508+15.03	85494.1145	1621947.5005
	Radius: 49.00		
	Delta: 74° 09' 54.02" Right		
	Degree of Curvature (Arc): 116° 55' 48.58"		
	Length: 63.43		
	Tangent: 37.03		
	Chord: 59.09		
	Middle Ordinate: 9.91		
	External: 12.42		
	Tangent Direction: N 78° 57' 20.37" W		
	Radial Direction: N 11° 02' 39.63" E		
	Chord Direction: N 41° 52' 23.36" W		
	Radial Direction: N 85° 12' 33.65" E		
	Tangent Direction: N 4° 47' 26.35" W		
PT ( )	Element: Linear		
	508+15.03	85494.1145	1621947.5005
POE ( )	508+15.71	85494.7957	1621947.4434
	Tangent Direction: N 4° 47' 26.35" W		
	Tangent Length: 0.68		

	STATION	NORTHING	EASTING
POB ( )	Element: Linear		
	600+00.00	85155.7954	1621909.8593
PC ( )	600+24.13	85131.6639	1621910.1065
	Tangent Direction: S 0° 35' 12.55" E		
	Tangent Length: 24.13		
PC ( )	Element: Circular		
	600+24.13	85131.6639	1621910.1065
PI ( )	603+29.71	84826.1058	1621913.2361
CC ( )	601+12.51	85131.9712	1621940.1049
PT ( )	601+12.51	85126.4386	1621969.5904
	Radius: 30.00		
	Delta: 168° 47' 08.93" Left		
	Degree of Curvature (Arc): 190° 59' 09.35"		
	Length: 88.38		
	Tangent: 305.57		
	Chord: 59.71		
	Middle Ordinate: 27.07		
	External: 277.04		
	Tangent Direction: S 0° 35' 12.55" E		
	Radial Direction: S 89° 24' 47.45" W		
	Chord Direction: S 84° 58' 47.02" E		
	Radial Direction: S 79° 22' 21.48" E		
	Tangent Direction: N 10° 37' 38.52" E		
PT ( )	Element: Linear		
	601+12.51	85126.4386	1621969.5904
PC ( )	602+99.60	85310.3223	1622004.0942
	Tangent Direction: N 10° 37' 38.52" E		
	Tangent Length: 187.09		
PC ( )	Element: Circular		
	602+99.60	85310.3223	1622004.0942
PI ( )	615+57.30	86546.4506	1622236.0404
CC ( )	603+92.42	85315.8549	1621974.6088
PT ( )	603+92.42	85322.7871	1621945.4207
	Radius: 30.00		
	Delta: 177° 16' 01.78" Left		
	Degree of Curvature (Arc): 190° 59' 09.35"		
	Length: 92.82		
	Tangent: 1257.70		
	Chord: 59.98		
	Middle Ordinate: 29.28		
	External: 1228.06		
	Tangent Direction: N 10° 37' 38.52" E		
	Radial Direction: S 79° 22' 21.48" E		
	Chord Direction: N 78° 00' 22.37" W		
	Radial Direction: N 76° 38' 23.26" W		
	Tangent Direction: S 13° 21' 36.74" W		
PT ( )	Element: Linear		
	603+92.42	85322.7871	1621945.4207
POE ( )	604+54.58	85262.3098	1621931.0573
	Tangent Direction: S 13° 21' 36.74" W		
	Tangent Length: 62.16		

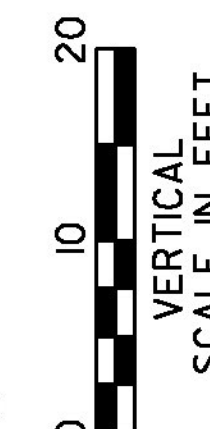
PROJECT NAME: GUILFORD  
 PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D91A222_CLOCK.DGN	PLOT DATE: 22-JUL-2013
PROJECT LEADER: LIBBY	DRAWN BY: BEYOR
DESIGNED BY: BEYOR	CHECKED BY: BOMBARDIER
HORIZONTAL ALIGNMENT SHEET #2	SHEET 8 OF 46

# ALIGNMENT PROFILE - OUTSIDE (INSPECTION AREA)

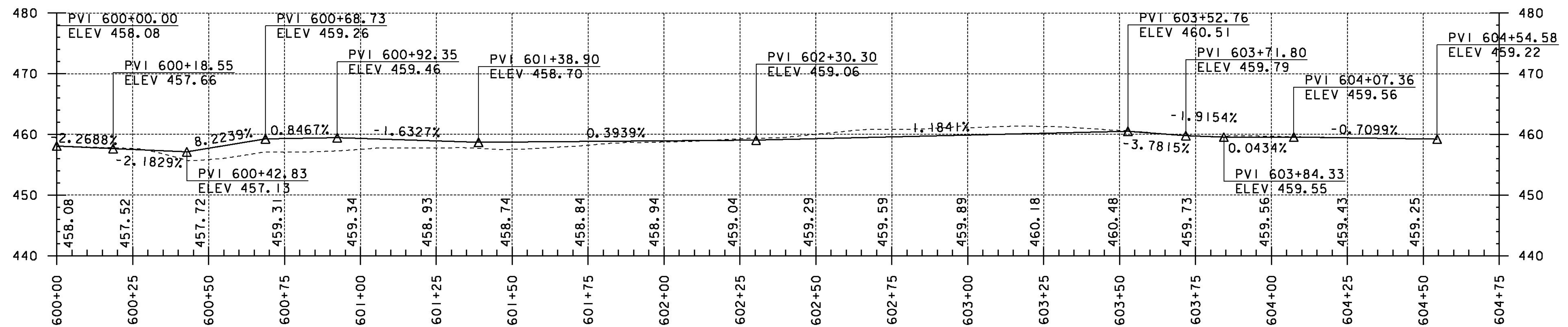


NOTE: THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISHED GRADES ALONG THE PROPOSED ALIGNMENT.

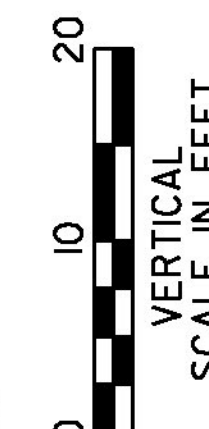
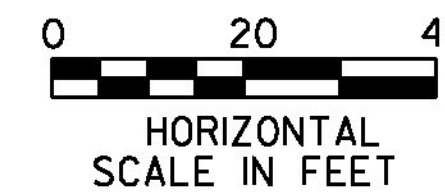


PROJECT NAME: GUILFORD		PLOT DATE: 30-AUG-2013	
PROJECT NUMBER: IM-IR 091-I(25)		DRAWN BY: BEYOR	
FILE NAME: D9IA222_CLOCK.DGN	DESIGNED BY: BEYOR	CHECKED BY: BOMBARDIER	SHEET 9 OF 46
PROFILE SHEET 1			

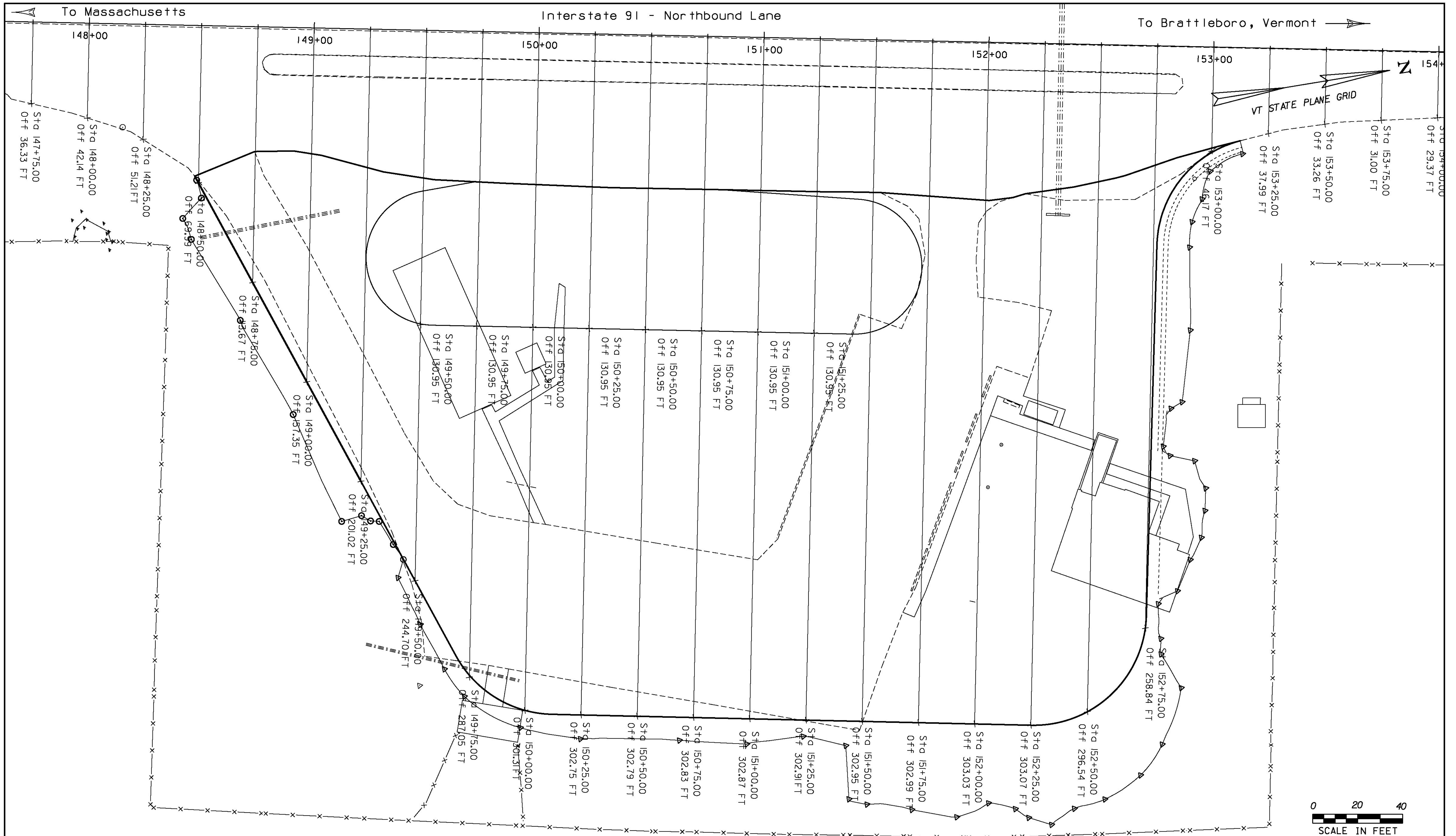
# ALIGNMENT PROFILE - INSIDE (SWALE)



NOTE: THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISHED GRADES ALONG THE PROPOSED ALIGNMENT.



PROJECT NAME: GUILFORD	PLOT DATE: 30-AUG-2013
PROJECT NUMBER: IM-IR 091-(25)	DRAWN BY: BEYOR
FILE NAME: D91A222_CLOCK.DGN	CHECKED BY: BOMBARDIER
PROJECT LEADER: LIBBY	SHEET 10 OF 46
DESIGNED BY: BEYOR	
PROFILE SHEET 2	



OFFSET / ELEVATION FROM 191 BASELINE

PROJECT NAME:	GUILFORD	PLOT DATE:	22-JUL-2013
PROJECT NUMBER:	IM-IR 091-K(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	II OF 46
DESIGNED BY:	BEYOR		
ALIGNMENT PLAN			

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	EROSION CONTROL	FULL CE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								1			1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	--			
								1			1		EACH	DEMOLITION AND DISPOSAL OF BUILDING (149+85, 306' RT)	202.10	--			ITEM 490.30 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
								1			1		EACH	DEMOLITION AND DISPOSAL OF BUILDING (153+20, 165' RT)	202.10	--	683	TON	TYPE IVS - WEARING COURSE
								9000			9000		CY	COMMON EXCAVATION	203.15	117	1139	TON	TYPE IIS - INTERMEDIATE COURSE
								100			100		CY	SOLID ROCK EXCAVATION	203.16	EST	678	TON	TYPE IIS - BASE COURSE
								60			60		CY	EARTH BORROW	203.30	5	2500	TON	TOTALS
								3500			3500		CY	SAND BORROW	203.31	345			
								220			220		CY	TRENCH EXCAVATION OF EARTH	204.20	23			
								30			30		CY	TRENCH EXCAVATION OF ROCK	204.21	2			
								1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	--			
								50			50		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	EST			
								3200			3200		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	66			
								3500			3500		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	345			
								1			1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	--			
								2500			2500		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30	30			
								1			1		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	--			
								1			1		LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	490.32	--			
								100			100		CY	CONTROLLED DENSITY (FLOWABLE) FILL	541.45	EST			
								180			180		LF	24" CPEP	601.0920	--			
								3			3		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18	--			
								1			1		EACH	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	604.20	--			
								500			500		LF	6 INCH UNDERDRAIN PIPE	605.10	EST			
								100			100		LF	6 INCH UNDERDRAIN CARRIER PIPE	605.20	EST			
								5			5		EACH	UNDERDRAIN FLUSHING BASIN	605.95	EST			
								20			20		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	--			
								20			20		HR	TRUCK RENTAL	608.37	--			
								10			10		CY	STONE FILL, TYPE II	613.11	6			
								225			225		LF	REMOVAL OF EXISTING CURB	616.41	14			
								6			6		EACH	STEEL MARKER POSTS	619.16	1			
								38			38		LF	GATE FOR CHAIN-LINK FENCE, 6 FEET	620.16	--			
								1			1		EACH	DRIVE GATE FOR WOVEN WIRE FENCE	620.30	--			
								200			200		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST			
								200			200		HR	FLAGGERS	630.15	EST			
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10	--			
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16	--			
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	--			
										3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	--			
								1			1		LS	MOBILIZATION/DEMobilIZATION	635.11	--			
								1			1		LS	TRAFFIC CONTROL	641.10	--			
								2			2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	--			

⚠ REVISÉD: 09-23-2013

PROJECT NAME: GUILFORD  
 PROJECT NUMBER: IM-IR 091-1(25)  
 FILE NAME: D9IA222_CLOCK_FORMS.DGN PLOT DATE: 23-SEP-2013  
 PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
 DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
 QUANTITY SHEET #1 SHEET 12 OF 46

# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	EROSION CONTROL	FULL CE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								1600			1600		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	53			
								850			850		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	35			
								90			90		LF	DURABLE 24 INCH STOP BAR, POLYUREA	646.484	--			
								11			11		EACH	DURABLE LETTER OR SYMBOL, POLYUREA	646.494	--			
									500		500		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515	EST			
									100		100		LB	SEED	651.15	23			
									350		350		LB	FERTILIZER	651.18	29			
									2		2		TON	AGRICULTURAL LIMESTONE	651.20	0.22			
									2		2		TON	HAY MULCH	651.25	0.22			
								200			200		CY	TOPSOIL	651.35	28			
									1		1		LS	EPSC PLAN	652.10	--			
									60		60		HR	MONITORING EPSC PLAN	652.20	EST			
									1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	--			
									100		100		SY	TEMPORARY EROSION MATTING	653.20	EST			
									800		800		SY	PERMANENT EROSION MATTING	653.21	136			
									1		1		CY	VEHICLE TRACKING PAD	653.35	--			
									1		1		EACH	FILTER BAG	653.45	--			
									1100		1100		LF	PROJECT DEMARCATION FENCE	653.55	67			
								177			177		SF	TRAFFIC SIGNS, TYPE A	675.20	--			
								200			200		SF	TRAFFIC SIGNS, TYPE B	675.21	--			
								1115			1115		LB	TUBULAR STEEL SIGN POST	675.33	--			
								585			585		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	--			
								8			8		EACH	FOUNDATION FOR TUBULAR STEEL POST	675.43	--			
								40			40		EACH	DELINEATOR WITH STEEL POST	676.10	3			
								1400			1400		LF	WIRED CONDUIT (2")(PVC)	678.23	45			
								250			250		LF	WIRED CONDUIT (4")(PVC)	678.23	30			
								4			4		EACH	PULL BOX, STANDARD	678.25	--			
								220			220		LF	ELECTRICAL CONDUIT SLEEVE (8")	678.30	--			
								9			9		EACH	LIGHT POLE BASE	679.21	--			
								9			9		EACH	BREAKAWAY FEATURE FOR LIGHT POLE	679.23	--			
								9			9		EACH	LIGHT POLE	679.45	--			
								9			9		EACH	BRACKET ARM	679.47	--			
								1			1		EACH	POWER DROP STANCHION, STREET LIGHTING	679.55	--			
								1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	--			
								1			1		EACH	SPECIAL PROVISION (DECOMMISSION WATER WELL)	900.620	--			
								9			9		EACH	SPECIAL PROVISION (LUMINAIRE, LED)	900.620	--			
								10			10		EACH	SPECIAL PROVISION (REMOVE EXISTING LIGHT POLE)	900.620	--			
								55			55		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-IH OR CRS-IH)	900.683	--			

PROJECT NAME: GUILFORD  
PROJECT NUMBER: IM-IR 091-1(25)  
FILE NAME: D9IA222_CLOCK_FORMS.DGN PLOT DATE: 23-SEP-2013  
PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
QUANTITY SHEET #2 SHEET 13 OF 46



# GENERAL NOTES

1. MANY SUBSURFACE ITEMS MAY BE ENCOUNTERED DURING EXCAVATION OF THE AREA NEAR THE PRE-EXISTING WELCOME CENTER BUILDING. ITEMS INCLUDE SEPTIC, WATER, ELECTRICAL, AND DRAINAGE.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF BURIED CABLE THROUGH DIG SAFE AND ITEM 204.22 TRENCH EXCAVATION OF EARTH - EXPLORATORY (N.A.B.I.) PRIOR TO THE START OF CONSTRUCTION. PAYMENT FOR ALL NON-EXPLORATORY EXCAVATION WILL BE MADE UNDER THE APPROPRIATE CONTRACT ITEMS.

IF ANY SOLID ITEMS ARE FOUND IN THE LIMITS OF EXCAVATION; THEY SHALL BE COMPLETELY REMOVED OR DEMOLISHED TO A LOCATION 8" BELOW SAND BORROW (OR FINAL GRADE LINE) AS DIRECTED BY THE ENGINEER AND THE RESULTING CAVITY FILLED WITH ITEM 541.45 - CONTROLLED DENSITY (FLOWABLE) FILL.

2. APPROXIMATELY 100 CY OF WASTE STONE SHALL BE DONATED TO THE VERMONT DEPARTMENT OF FISH AND WILDLIFE FOR SNAKE HABITAT. THE LOCATION OF THE INDIVIDUAL HABITAT MOUNDS WILL OCCUR ON THE PROPERTY IMMEDIATELY ADJACENT TO THE WEIGH STATION PROJECT. CONTACT TIM MORTON AT 802-777-6899 (TIM.MORTON@STATE.VT.US) TO DETERMINE LOCATION.

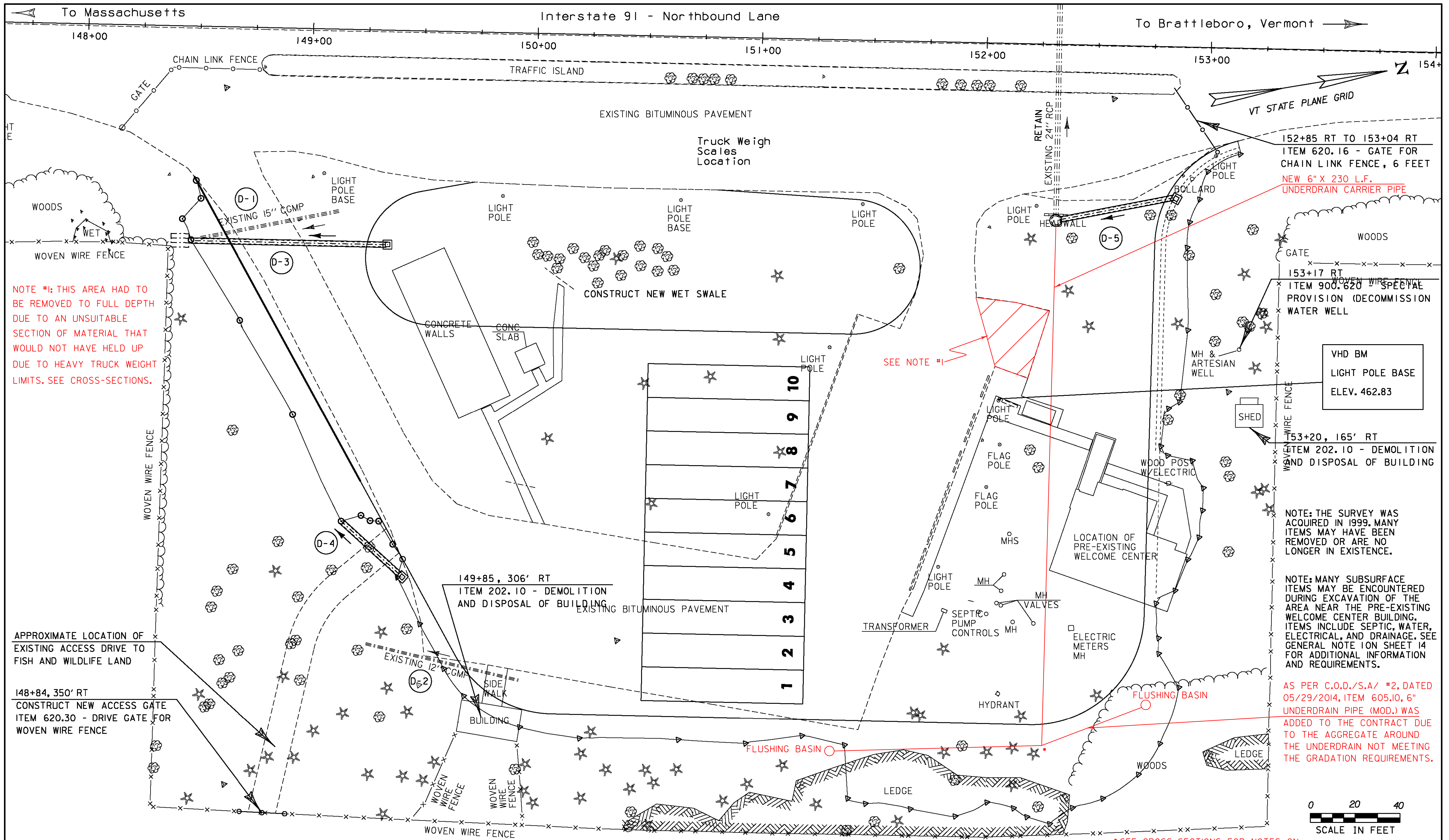
3. PERMANENT TRAFFIC SIGNS WILL BE PLACED WITHIN THE BORDERS OF THE COMMONWEALTH OF MASSACHUSETTS. THE CONTRACTOR IS DIRECTED TO CONTACT BAO LANG OF THE MASSDOT DISTRICT #2 TRAFFIC OFFICE PRIOR TO THE INSTALLATION OF ANY SIGN OR SIGN FOUNDATION IN MASSACHUSETTS. MASSDOT HAS AN INTELLIGENT TRANSPORTATION SYSTEM (ITS) LINE ESTABLISHED ALONG INTERSTATE 91 AND CARE SHOULD BE TAKEN TO ENSURE THAT NO DAMAGE IS INFLICTED ON THIS UTILITY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ANY BURIED UTILITY IN MASSACHUSETTS THROUGH DIG SAFE. BAO LANG CAN BE CONTACTED AT: 413-582-0547 (BAO.LANG@STATE.MA.US)

THE INSTALLATION OF THE SIGNS IN MASSACHUSETTS WILL LIKELY REQUIRE A RIGHT LANE CLOSURE ON INTERSTATE 91 - NORTHBOUND. THE CONTRACTOR SHALL UTILIZE THE MUTCD PART VI, FIGURE 6H-33 (TA-33) "STATIONARY LANE CLOSURE ON A DIVIDED HIGHWAY", OR AS DIRECTED BY THE MASSACHUSETTS DOT. PAYMENT WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10.

THE INSTALLATION OF THE SIGNS IN MASSACHUSETTS WILL REQUIRE AN ACCESS PERMIT FROM MASSDOT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE PERMITS HAVE BEEN PROCESSED AND APPROVED PRIOR TO ANY WORK WITHIN THE ROW IN MASSACHUSETTS. PAYMENT FOR COORDINATION FOR INSTALLING SIGNS WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT SIGNING ITEMS.

PROJECT NAME:	GUILFORD
PROJECT NUMBER:	IM-IR 091-1(25)

FILE NAME:	D9IA222_CLOCK_FORMS.DGN	PLOT DATE:	30-AUG-2013
PROJECT LEADER:	LIBBY	DRAWN BY:	BEYOR
DESIGNED BY:	BEYOR	CHECKED BY:	BOMBARDIER
GENERAL NOTES		SHEET 15	OF 46



NOTE #1: THIS AREA HAD TO BE REMOVED TO FULL DEPTH DUE TO AN UNSUITABLE SECTION OF MATERIAL THAT WOULD NOT HAVE HELD UP DUE TO HEAVY TRUCK WEIGHT LIMITS. SEE CROSS-SECTIONS.

SEE NOTE #1

152+85 RT TO 153+04 RT  
ITEM 620.16 - GATE FOR CHAIN LINK FENCE, 6 FEET  
NEW 6" X 230 L.F. UNDERDRAIN CARRIER PIPE

153+17 RT  
ITEM 900.620 - SPECIAL PROVISION (DECOMMISSION WATER WELL)

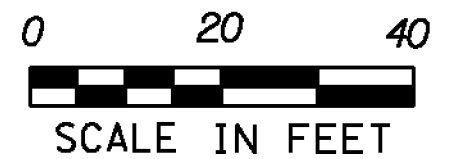
VHD BM  
LIGHT POLE BASE  
ELEV. 462.83

153+20, 165' RT  
ITEM 202.10 - DEMOLITION AND DISPOSAL OF BUILDING

NOTE: THE SURVEY WAS ACQUIRED IN 1999. MANY ITEMS MAY HAVE BEEN REMOVED OR ARE NO LONGER IN EXISTENCE.

NOTE: MANY SUBSURFACE ITEMS MAY BE ENCOUNTERED DURING EXCAVATION OF THE AREA NEAR THE PRE-EXISTING WELCOME CENTER BUILDING. ITEMS INCLUDE SEPTIC, WATER, ELECTRICAL, AND DRAINAGE. SEE GENERAL NOTE ON SHEET 14 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

AS PER C.O.D./S.A/ #2, DATED 05/29/2014, ITEM 605.10, 6" UNDERDRAIN PIPE (MOD.) WAS ADDED TO THE CONTRACT DUE TO THE AGGREGATE AROUND THE UNDERDRAIN NOT MEETING THE GRADATION REQUIREMENTS.



* SEE CROSS-SECTIONS FOR NOTES ON THE LOCATIONS OF THE UNDERDRAIN.

APPROXIMATE LOCATION OF EXISTING ACCESS DRIVE TO FISH AND WILDLIFE LAND

148+84, 350' RT  
CONSTRUCT NEW ACCESS GATE  
ITEM 620.30 - DRIVE GATE FOR WOVEN WIRE FENCE

149+85, 306' RT  
ITEM 202.10 - DEMOLITION AND DISPOSAL OF BUILDING

- (D-1) 148+51.70 (94.25' RT) - 149+13.29 (80.92' RT)  
REMOVE EXISTING 15' CGMP
- (D-2) 149+28.90 (273.35' RT) - 149+98.14 (288.31' RT)  
REMOVE EXISTING 12' CGMP

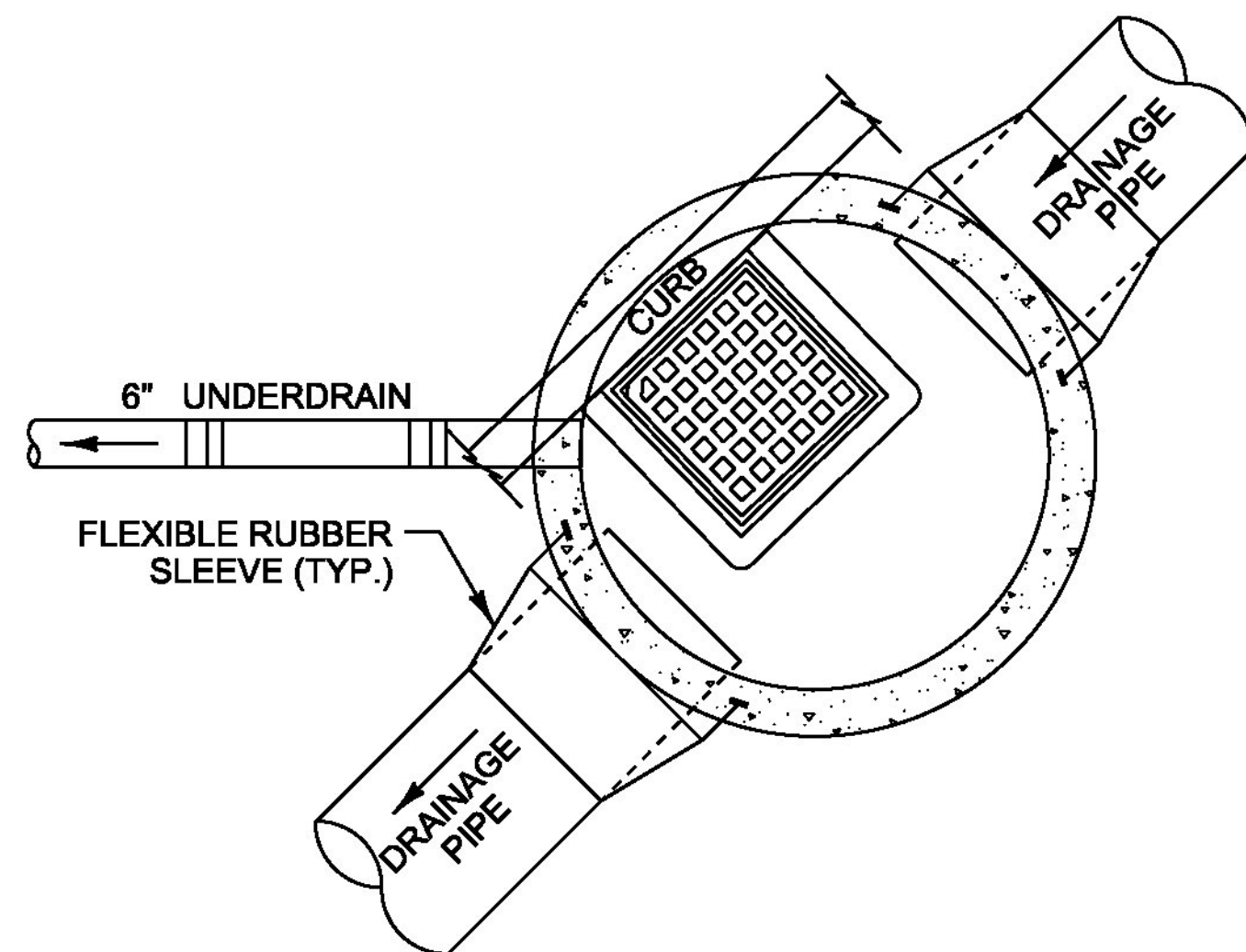
- (D-3) STA 149+34.82 (95.53' RT) - STA 148+46.48 (95.51' RT)  
NEW 24" X 88' CPEP DETENTION POND - OUTLET CULVERT  
CONSTRUCT NEW 6' X 8' STONE FILL TYPE II PAD AT OUTLET
- (D-4) STA 149+43.13 (242.06' RT) - STA 149+16.82 (218.99' RT)  
NEW 24" X 38' CPEP DRIVE CULVERT

- (D-5) STA 152+84.82 (78.42' RT) - STA 152+32.21 (67.25' RT)  
NEW 24" X 54' CPEP PERIMETER DITCH - OUTLET CULVERT  
NEW DI AT INLET, NEW MANHOLE AT OUTLET

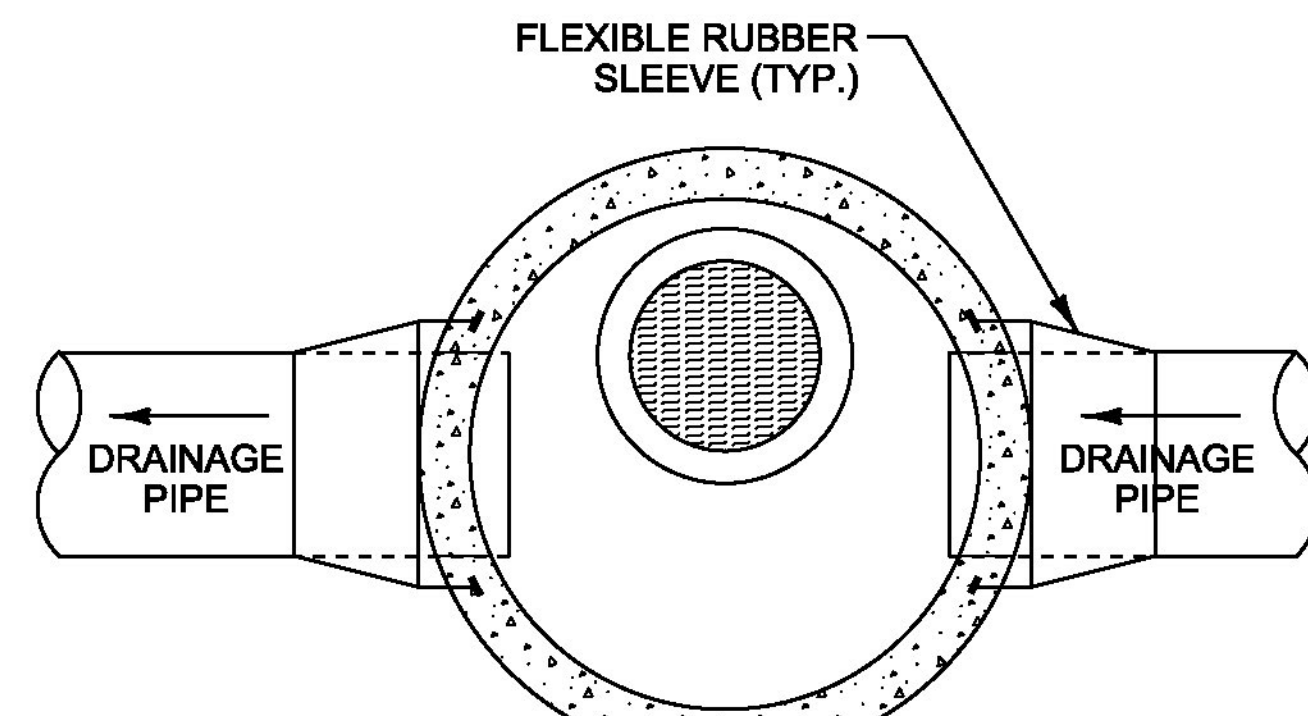
PROJECT NAME:	GUILFORD	PLOT DATE:	22-JUL-2013
PROJECT NUMBER:	IM-IR 091-(125)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	16 OF 46
DESIGNED BY:	BEYOR		
DRAINAGE PLAN SHEET			



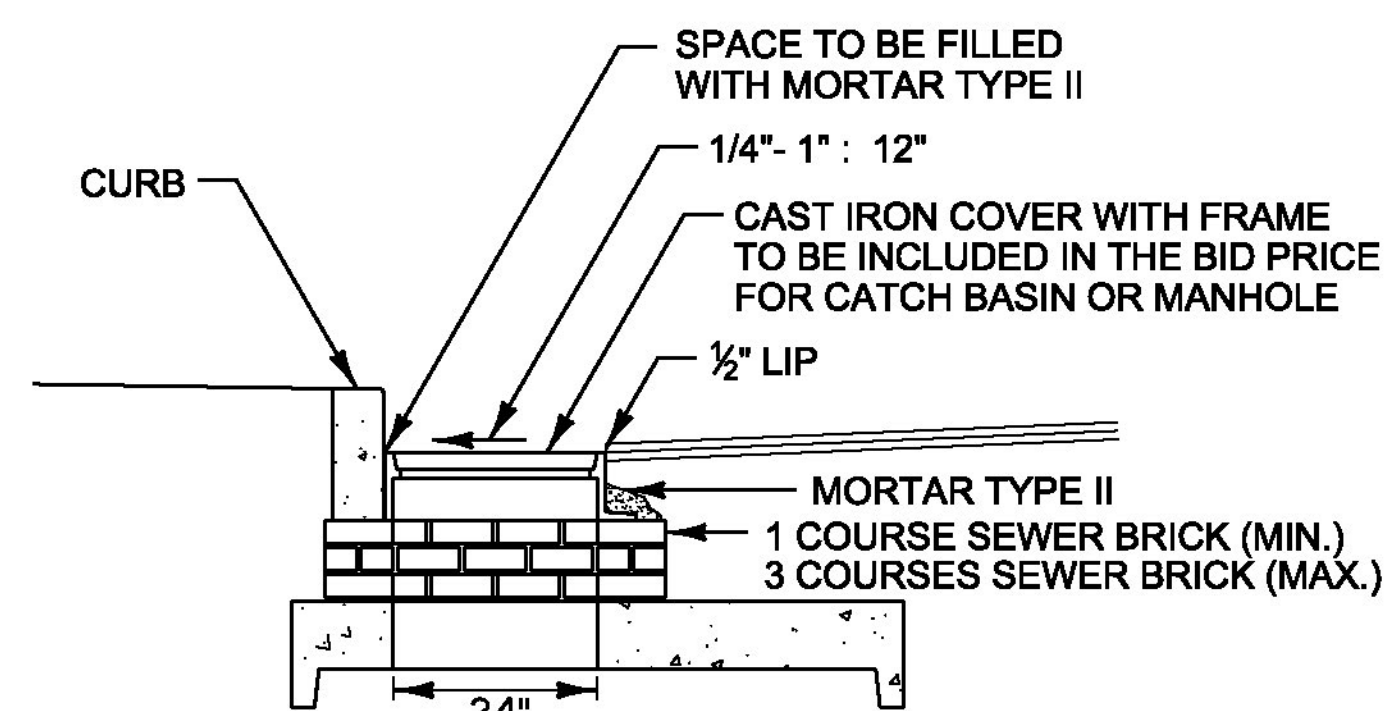
# DRAINAGE DETAILS



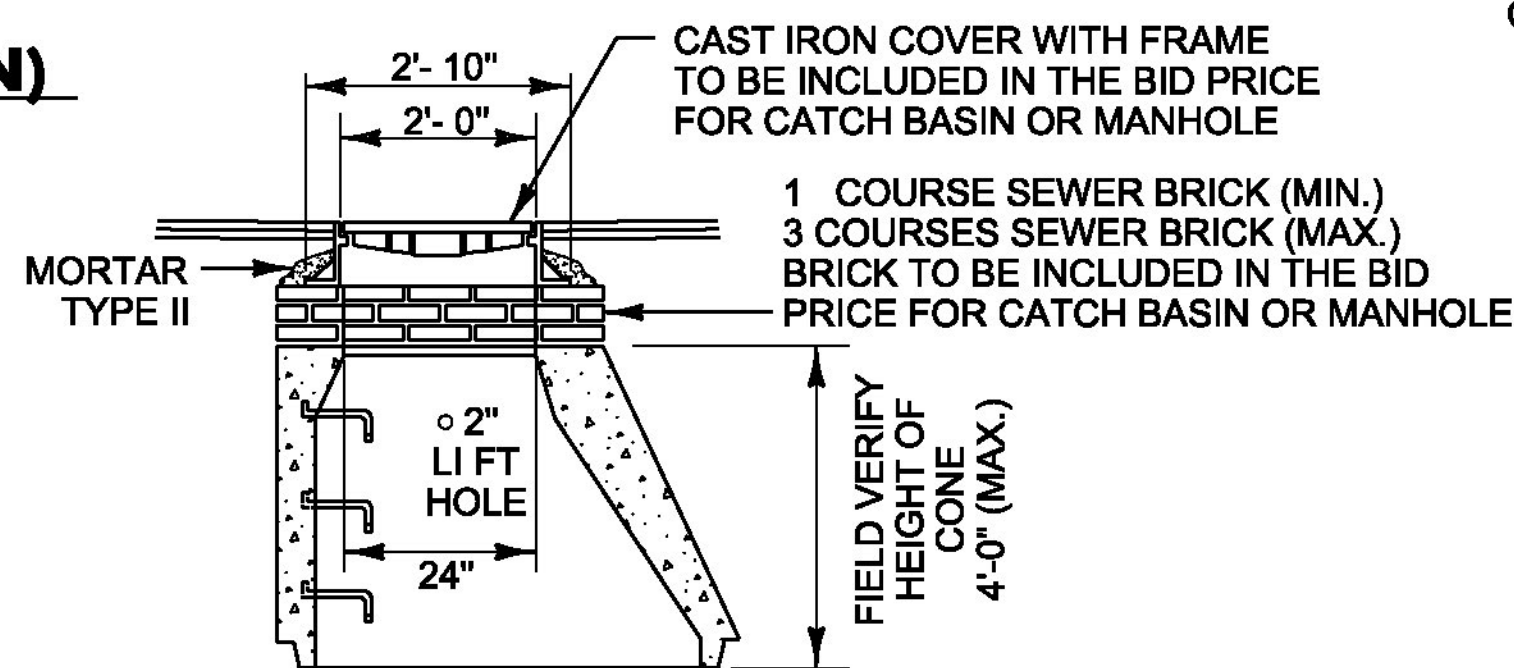
**CATCH BASIN (PLAN) WITH UNDERDRAIN**  
NOT TO SCALE



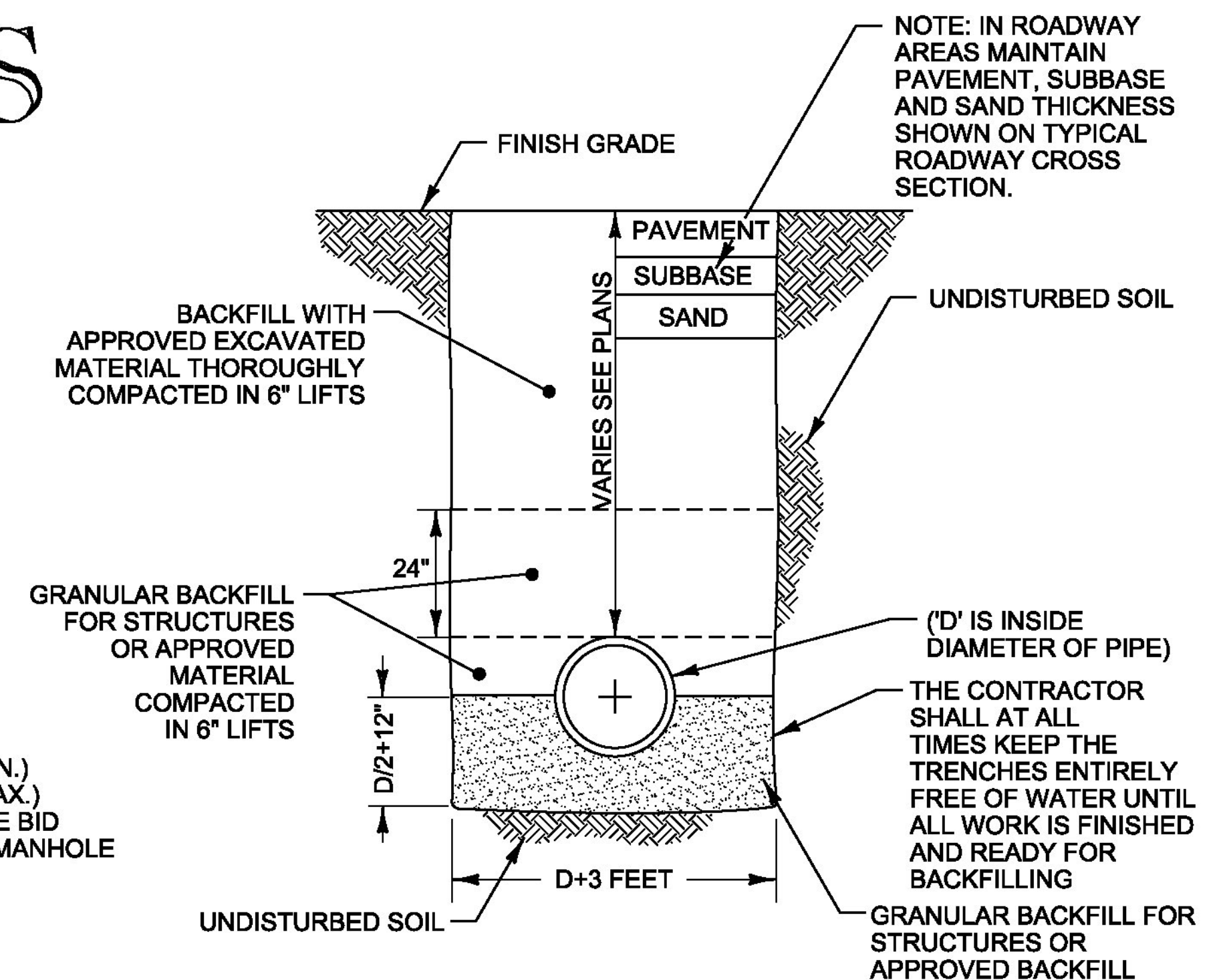
**MANHOLE (PLAN)**  
NOT TO SCALE



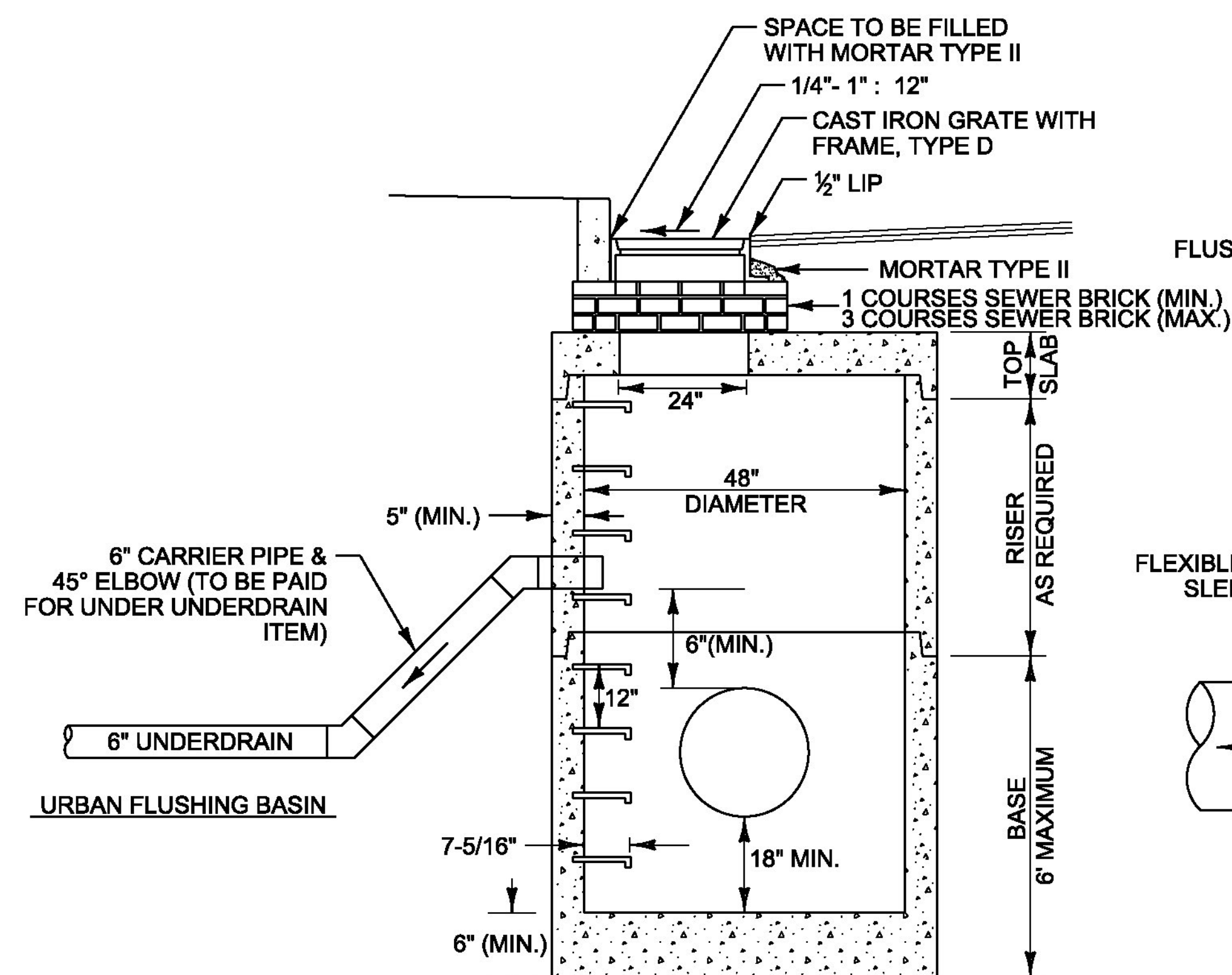
**TYPICAL GRATE INSTALLATION WITH CURB (ELEVATION)**  
NOT TO SCALE



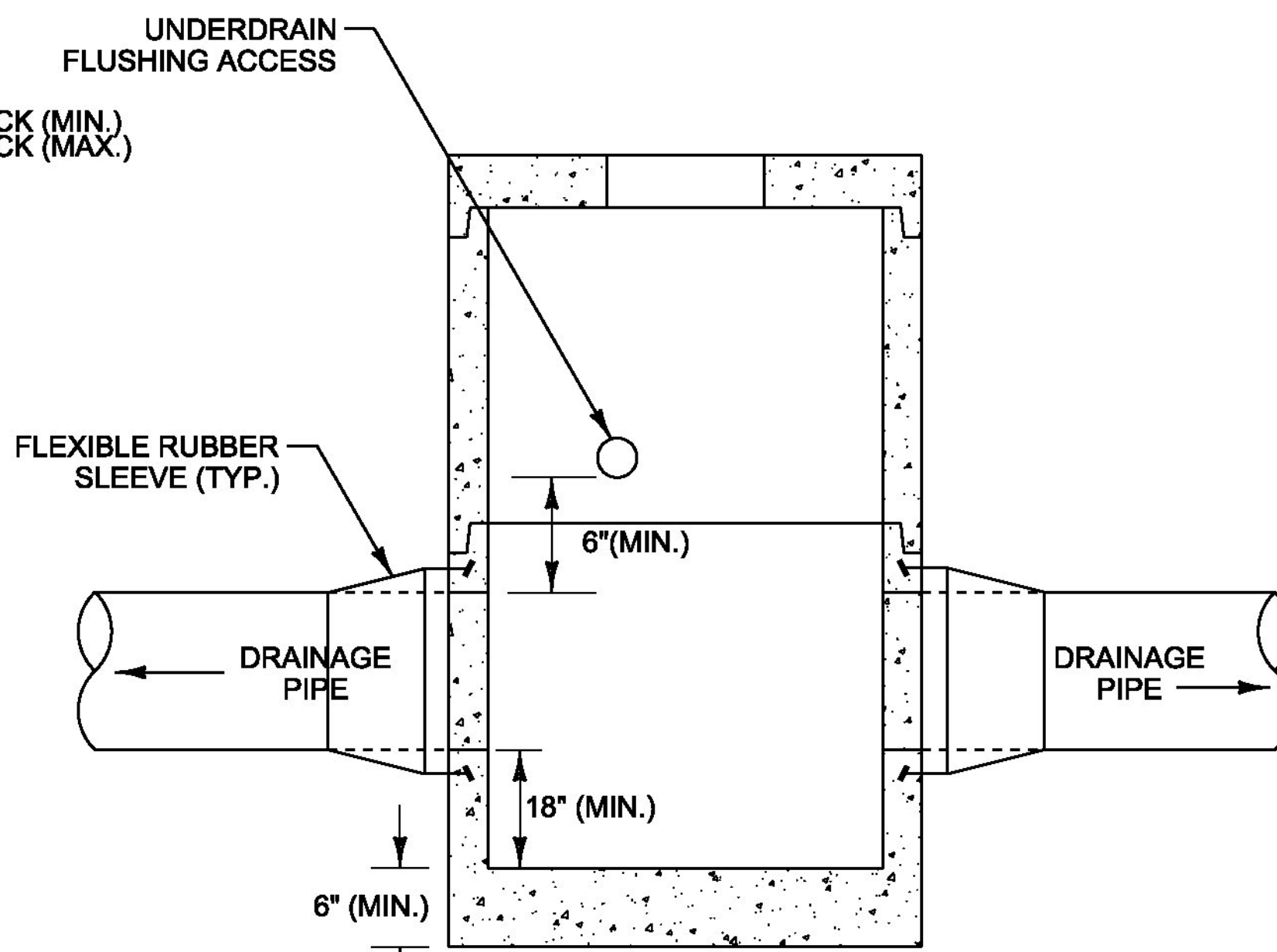
**MANHOLE CONE SECTION**  
NOT TO SCALE



**TYPICAL STORM DRAIN AND PIPE SLEEVE TRENCH**  
NOT TO SCALE



**ELEVATION VIEW**



**SIDE VIEW**

**TYPICAL PRECAST CATCH BASIN OR MANHOLE WITH UNDERDRAIN FLUSHING ACCESS**  
NOT TO SCALE

## PRECAST REINFORCED CONCRETE CATCH BASIN NOTES:

1. PRECAST CONCRETE SECTIONS SHALL CONFORM TO SUBSECTION 705.04 OF THE STANDARD SPECIFICATIONS.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH: 5,000 PSI AT 28-DAYS
3. STEEL REINFORCING SHALL CONFORM TO ASTM A185 OR A82 FOR HS-25 LOADING.
4. MANHOLE STEPS SHALL BE 14" WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST CONCRETE MANUFACTURER. MANHOLE STEPS IN THE RISER SHALL ALIGN WITH THE MANHOLE STEPS IN BASE OF THE STRUCTURE.
5. FACE OF PIPE SHALL NOT PROJECT MORE THAN 2" OR LESS THAN 1" FROM INSIDE WALL OF STRUCTURE.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
7. FITTING FRAME TO FINAL GRADE MAY BE DONE WITH BRICK OR PRECAST CONCRETE GRADE RINGS OF APPROPRIATE THICKNESS (3 COURSES MAX).
8. FLAT SLAB TOPS SHALL BE USED FOR ALL CATCH BASINS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
9. ALL PIPE INVERTS AND PENETRATION ANGLES SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AND BE ASSEMBLED USING A BUTYL RUBBER OR APPROVED EQUAL SEALANT.
11. PROVIDE FLEXIBLE RUBBER SLEEVES CONFORMING TO ASTM C-923, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO STRUCTURE. SLEEVES SHALL BE CAST INTO PRECAST STRUCTURE BY THE MANUFACTURER FOR ALL PIPE PENETRATIONS.
12. INSTALLATION OF THE MANHOLES SHALL INCLUDE CLEAN CUTTING OF THE EXISTING PIPE, PROVIDING AN EXTENSION PIPE OF SIMILAR MATERIAL AND SIZE AS THE EXISTING PIPE, COUPLINGS REQUIRED FOR THE CONNECTION BETWEEN THE EXTENSION PIPE AND THE EXISTING PIPE, AND INSTALLING FLEXIBLE RUBBER SLEEVES AS SHOWN IN DETAILS PROVIDED ON THIS SHEET. COST OF THIS WORK SHALL BE INCIDENTAL TO THE COST OF THE MANHOLES.
13. PAYMENT FOR INSTALLATION OF CATCH BASINS SHALL BE MADE UNDER THE PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE ITEM (604.20).
14. DEPTH AS SHOWN ON THE DRAINAGE DETAIL SHEET AND DRAINAGE PROFILE SHEETS IS DEFINED AS THE VERTICAL DISTANCE BETWEEN RIM ELEVATION AND THE BOTTOM OF SUMP.

PROJECT NAME: GUILFORD  
PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D91A222_CLOCK_FORMS.DGN PLOT DATE: 22-JUL-2013  
PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
DRAINAGE DETAILS SHEET SHEET 18 OF 46

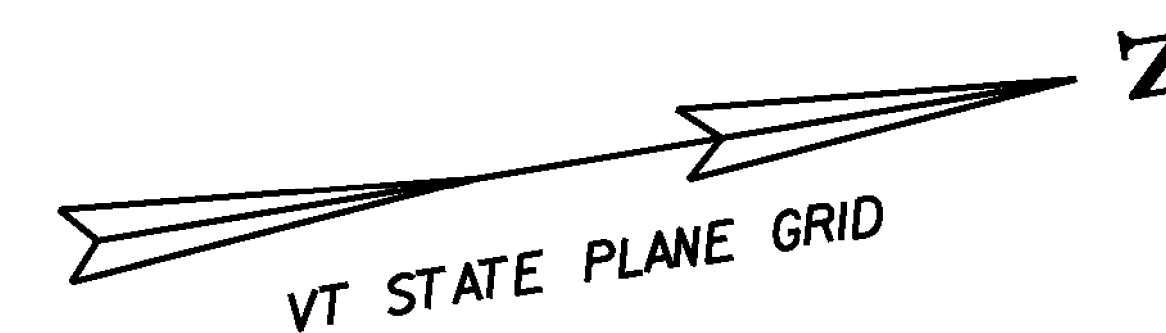
AS PER C.O.D./S.A. #4, DATED 12/11/2014, THE STANDARD 100 V OUTLETS ON ALL 9 LIGHT POLES WERE ENERGIZED. ALSO, THE SERVICE WAS CHANGED TO 100 AMP. A SURFACE MOUNT OUTLET WAS ALSO INSTALLED FOR DMV TO POWER THEIR PORTABLE OFFICE TRAILER AT LIGHT POLE #6.

ITEM 900.620 - SPECIAL PROVISION (REMOVE EXISTING LIGHT POLE)

- 147+59 (38' RT) <LPR-1>
- 149+86 (73' RT) <LPR-2>
- 150+65 (73' RT) <LPR-3>
- 151+07 (212' RT) <LPR-9>
- 151+33 (137' RT) <LPR-7>
- 151+46 (73' RT) <LPR-4>
- 151+83 (234' RT) <LPR-10>
- 152+08 (159' RT) <LPR-8>
- 152+24 (72' RT) <LPR-5>
- 153+03 (48' RT) <LPR-6>

ITEM 679.21 - LIGHT POLE BASE

- 148+27 (54' RT) <LP-1>
- 149+77 (73' RT) <LP-2>
- 149+78 (129' RT) <LP-5>
- 150+35 (304' RT) <LP-8>
- 151+29 (129' RT) <LP-6>
- 151+31 (73' RT) <LP-3>
- 152+08 (305' RT) <LP-9>
- 152+78 (156' RT) <LP-7>
- 153+32 (38' RT) <LP-4>



AS PER C.O.D./A.S. #5, DATED 04/30/2015, LIGHT POLE #4 WAS REPLACED.

ITEM 679.23 - BREAKAWAY FEATURE FOR LIGHT POLE BASE

- 148+27 (54' RT) <LP-1>
- 149+77 (73' RT) <LP-2>
- 149+78 (129' RT) <LP-5>
- 150+35 (304' RT) <LP-8>
- 151+29 (129' RT) <LP-6>
- 151+31 (73' RT) <LP-3>
- 152+08 (305' RT) <LP-9>
- 152+78 (156' RT) <LP-7>
- 153+32 (38' RT) <LP-4>

ITEM 900.620 - SPECIAL PROVISION (LUMINAIRE, LED)

- 148+27 (54' RT) <LP-1>
- 149+77 (73' RT) <LP-2>
- 149+78 (129' RT) <LP-5>
- 150+35 (304' RT) <LP-8>
- 151+29 (129' RT) <LP-6>
- 151+31 (73' RT) <LP-3>
- 152+08 (305' RT) <LP-9>
- 152+78 (156' RT) <LP-7>
- 153+32 (38' RT) <LP-4>

ITEM 679.55 - POWER DROP STANCHION, STREET LIGHTING

- 153+02 (101' RT) <POWER DROP>

ITEM 678.30 - ELECTRICAL CONDUIT SLEEVE

- 148+47 (76' RT) - 149+51 (74' RT) <S1> (104')
- 151+72 (104' RT) - 152+77 (101' RT) <S2> (105')

ITEM 679.45 - LIGHT POLE

- 148+27 (54' RT) <LP-1>
- 149+77 (73' RT) <LP-2>
- 149+78 (129' RT) <LP-5>
- 150+35 (304' RT) <LP-8>
- 151+29 (129' RT) <LP-6>
- 151+31 (73' RT) <LP-3>
- 152+08 (305' RT) <LP-9>
- 152+78 (156' RT) <LP-7>
- 153+32 (38' RT) <LP-4>

ITEM 679.47 - BRACKET ARM

- 148+27 (54' RT) <LP-1> (8')
- 149+77 (73' RT) <LP-2> (8')
- 149+78 (129' RT) <LP-5> (8')
- 150+35 (304' RT) <LP-8> (8')
- 151+29 (129' RT) <LP-6> (8')
- 151+31 (73' RT) <LP-3> (8')
- 152+08 (305' RT) <LP-9> (8')
- 152+78 (156' RT) <LP-7> (8')
- 153+32 (38' RT) <LP-4> (8')

ITEM 678.25 - PULLBOX, STANDARD

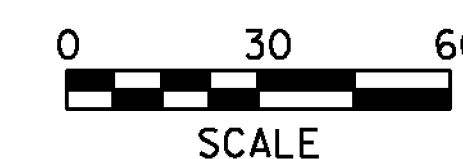
- 148+46 (76' RT) <PB-1>
- 149+52 (74' RT) <PB-2>
- 151+71 (104' RT) <PB-3>
- 152+78 (101' RT) <PB-4>

NOTES:

1. WIRING AND LIGHTING MUST BE ACCOMPLISHED BY A LICENSED MASTER ELECTRICIAN.
2. MINIMUM 200 AMP SERVICE REQUIRED.
3. ELECTRICAL CONNECTION TO ENTIRE AREA TO BE DISCONNECTED PRIOR TO ANY EXCAVATION.
4. ALL WIRING TO MEET NATIONAL ELECTRICAL CODE.
5. GROUND FAULT INTERRUPTER (GFI) TO BE UTILIZED ON ALL OUTLET RECEPTACLES.
6. SEE LIGHTING DETAILS SHEET FOR ADDITIONAL LIGHTING INFORMATION.

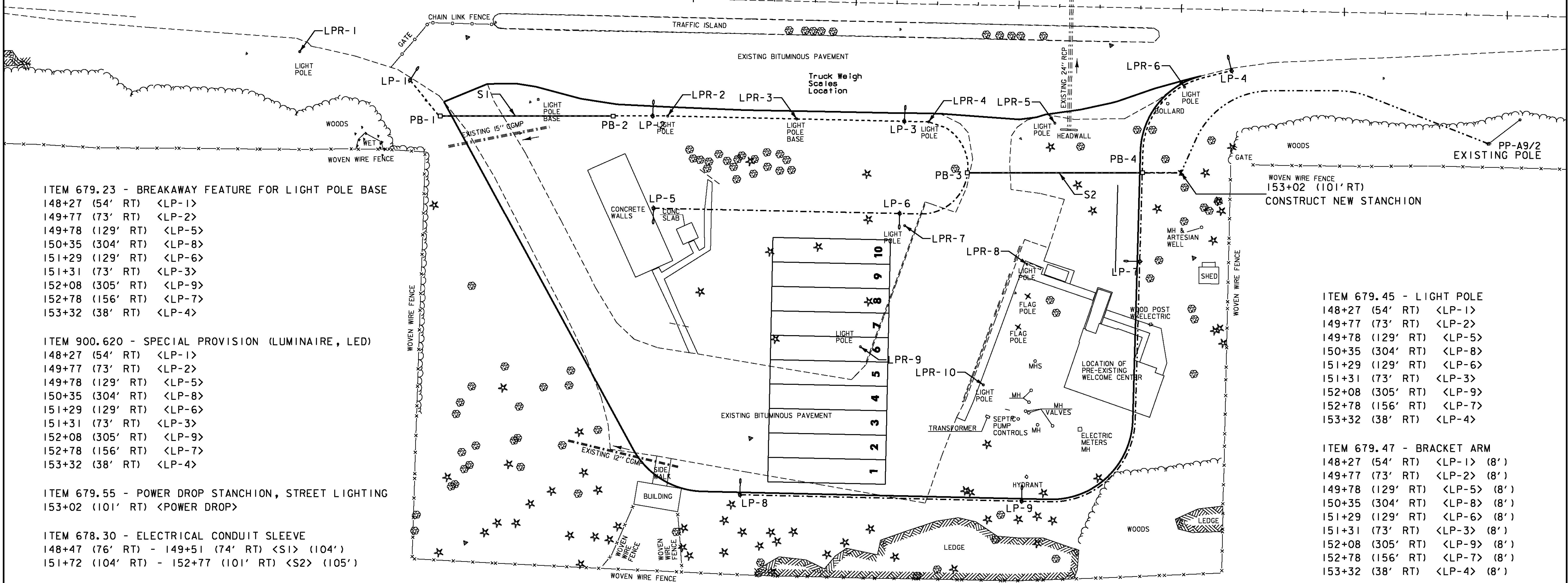
**LIGHTING LEGEND**

- 2" WIRED CONDUIT (#6 CU.) - CIRCUIT "A"
- 2" WIRED CONDUIT (#6 CU.) - CIRCUIT "B"
- 4" WIRED CONDUIT (#6 CU.) - POWER
- ===== 8" ELECTRICAL CONDUIT SLEEVE (PVC)
- PULLBOX
- ⊕ LIGHT POLE WITH BREAKAWAY FEATURE
- LUMINAIRE WITH BRACKET ARM



PROJECT NAME: GUILFORD  
PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D91A222_CLOCK_2D_UTL.DGN PLOT DATE: 22-JUL-2013  
PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
LIGHTING PLAN SHEET SHEET 19 OF 46



# STREET LIGHTING GENERAL NOTES

## CONCRETE BASES

WHEN CONCRETE BASES ARE INSTALLED IN SLOPING GROUND, THE GREATEST EXPOSED HEIGHT TO KEEP ALL OF THE TOP ABOVE GROUND MUST BE DOUBLED AND THEN ADDED TO THE MINIMUM DEPTH FOR THE TOTAL BASE DEPTH.

CARE SHOULD BE TAKEN WHERE CONCRETE BASES, DRAINAGE STRUCTURES OR UTILITIES ARE CLOSE TOGETHER.

THE OFFSET FOR CONCRETE BASES (FACE OF CURB OR EDGE OF PAVEMENT TO CENTER OF CONCRETE BASE) SHALL BE A MINIMUM OF 2'-6" OR AS OTHERWISE NOTED ON THE PLANS.

## POLES, ANCHOR BASES AND ARM

ALL NEW STREET LIGHTS POLES, BASES AND LUMINAIRE ARMS SHOULD BE ALUMINUM, PAINTED FLAT BLACK.

ALL STREET LIGHT POLES SHALL HAVE A FRANGIBLE OR BREAKAWAY DEVICE (TRANSFORMER BASE, UNLESS NOTED ON THE PLANS).

UTILIZE APPROVED DUAL-RATED PARALLEL TAP CONNECTOR WITH INSULATING COVER TO TAPS AT POLE BASES.

A U.L. LISTED, WATERPROOF GROUND FAULT INTERRUPTER (GFI) POWER RECEPTACLE (110V) SHALL BE INSTALLED ON EACH NEW STREET LIGHT POLE. THESE RECEPTACLES SHALL BE INSTALLED PER THE NATIONAL ELECTRIC CODE (NEC) AND ALL OTHER LOCAL REGULATIONS. PAYMENT WILL BE INCLUDED UNDER CONTRACT ITEM 679.45 - LIGHT POLE

## LUMINAIRES

LUMINAIRES SHALL BE L.E.D. TYPE.

POLE-MOUNTED LUMINAIRES SHALL BE ONE OF THE FOLLOWING:

- BETALED LEDWAY IP SERIES
- HOLOPHANE LEDGENDS SERIES
- LRL LED #SAT-96M SERIES

ALL POLE-MOUNTED LUMINAIRES MUST BE EQUIPPED WITH BIRD SPIKES ON THE TOP.

ALL LUMINAIRE HOUSINGS SHALL BE PAINTED FLAT BLACK.

## CONDUIT SLEEVE

THE SLEEVE SHALL EXTEND TO WITHIN 2 FEET OF THE SIDE OF A CONCRETE BASE OR PULLBOX. WHERE NO CONCRETE BASE OR PULLBOX IS PRESENT, THE SLEEVE SHALL EXTEND 4 FEET BEYOND THE OUTSIDE EDGE OF SHOULDER OR FACE OF CURB. BACKFILLING AROUND A SLEEVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE SLEEVE SHALL BE SCHEDULE 80.

## WIRE

ALL WIRING BETWEEN THE METER AND/OR POWER SOURCE AND THE FIRST POLE AND/OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER AND SIZE AS SPECIFIED ON THE PLANS. ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.

CIRCUIT CONDUCTORS SHALL BE CLEARLY IDENTIFIED BY CORROSION RESISTANT TAGS INDICATING CIRCUIT NUMBER AND PANEL SOURCES AT EVERY POLE BASE AND HANDHOLE.

## GROUNDING

ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR. RIGID STEEL CONDUIT SHALL BE PROPERLY CONNECTED AT THE JOINTS SO AS TO BE WATERTIGHT AND MAINTAIN ELECTRICAL CONTINUITY AND HAVE GROUNDING BUSHINGS SO AS TO ACT AS A GROUNDING CONDUCTOR. ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

THE GROUNDING CONDUCTOR SHALL BE CONTINUOUS.

ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

## PULLBOXES, HANDHOLES AND JUNCTION BOXES

POLYMER CONCRETE AND REINFORCED FIBERGLASS U.L. LISTED PULLBOXES AND HANDHOLES SHALL BE INSTALLED WITH HEAVY DUTY COVERS.

ALL CONNECTIONS IN HANDHOLES SHALL BE MADE WITH INSULATED WATERPROOF MECHANICAL SCREW-TYPE CONNECTOR SUITABLE FOR DIRECT BURIAL. NO BARE OR COMPRESSION TYPE CONNECTORS MAY BE USED.

## GENERAL

THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE. LOAD TO NEUTRAL.

THE LAST CONCRETE POLE BASE AT THE END OF EACH CIRCUIT AND SOME PULLBOXES SHALL HAVE A CONDUIT SWEEP WITH CAP INSTALLED FOR FUTURE USE.

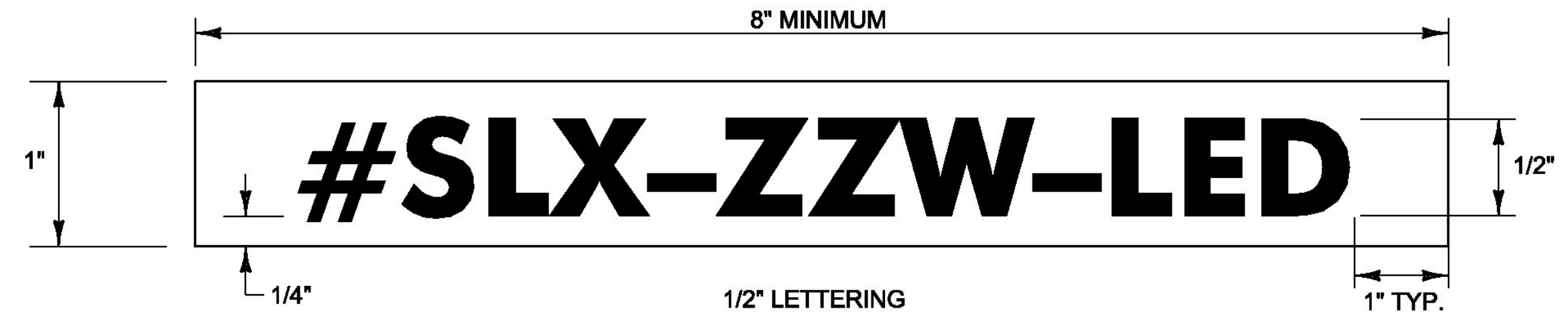
THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE STREET LIGHTING SYSTEM. IF APPLICABLE, THE ROUTING OF POWER TO THE SYSTEM SHALL BE SUCH THAT THE AGENCY OF TRANSPORTATION HAS FULL RESPONSIBILITY FROM THE TRANSFORMER THROUGH THE LIGHTING SYSTEM. NO INTERVENING OWNERSHIP OR RESPONSIBILITY SHALL BE ALLOWED.

ALL CONNECTING HARDWARE (NUTS, BOLTS, ETC.) SHALL BE STAINLESS STEEL.

MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.

ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL CODES, REGULATIONS AND REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.

A MANUAL DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET.



LEGEND: BLACK OR WHITE (NON-REFLECTIVE) - STAMPED PRIOR TO PRINTING/PAINTING. BACKGROUND: NATURAL ALUMINUM OR FLAT BLACK SURFACE, THE SAME AS POLE FINISH.

### NOTES:

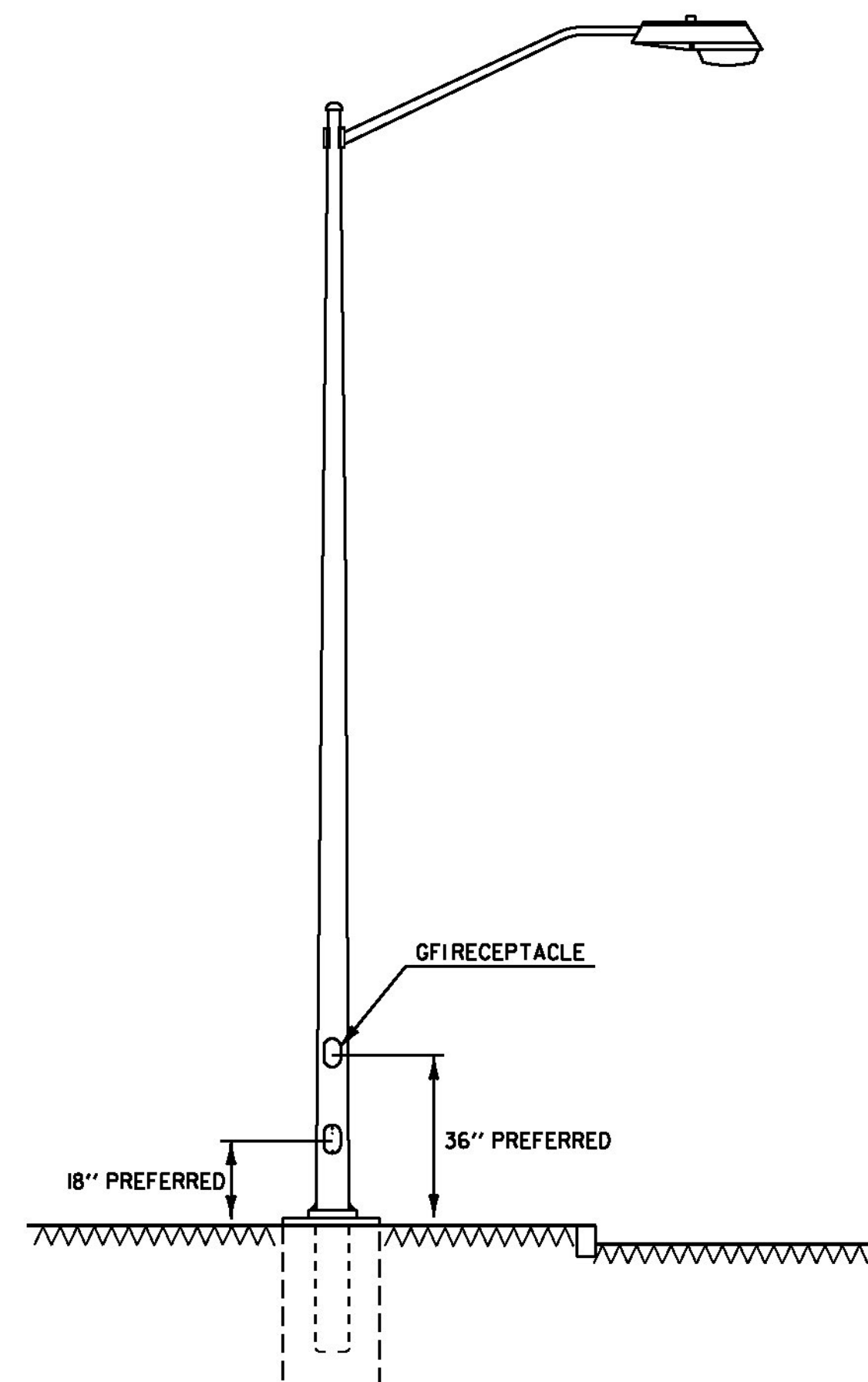
1. THE TAG SHALL BE MOUNTED ON ALL STREET LIGHT POLES IN SUCH A MANNER AS NOT TO BE EASILY REMOVED, SUCH AS WELDED, RIVETED, OR BOLTED WITH VANDAL PROOF BOLTS.
2. THE LETTERS SHALL BE PUNCHED, STAMPED, ENGRAVED, OR PHOTO-ETCHED. PUNCHING, STAMPING OR ENGRAVING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3. THE BASE MATERIAL FOR THE TAG SHALL BE ALUMINUM WITH A MINIMUM THICKNESS OF 0.10 INCHES.
4. THE TAG SHALL BE ATTACHED TO THE POLE ABOVE THE HANDHOLE, 6 INCHES MAXIMUM, IF THE POLE HAS A TRANSFORMER BASE, ATTACH TAG TO COVER.
5. FIXTURE TAG CHARACTER "X" SHALL BE THE DESIGNATED SL NUMBER AS SHOWN ON THE LIGHTING PLANS.
6. FIXTURE TAG CHARACTER "ZZ" SHALL BE THE WATTAGE OF THE LUMINAIRE.

## DETAIL FOR TAGS ATTACHED TO STREET LIGHT POLES

NOT TO SCALE

## WIRED CONDUIT SCHEDULE

LOCATION	WIRED CONDUIT 4" #6 CU. POWER	WIRED CONDUIT 2" #6 CU. CIRCUIT "A"	WIRED CONDUIT 2" #6 CU. CIRCUIT "B"	DESCRIPTION
PP-A9/2 TO STANCHION	220'			POLE TO STANCHION
STANCHION TO PB-4		22'		POWER SUPPLY
PB-4 TO LP-4		93'		
PB-4 TO PB-3		108'		VIA SLEEVE S2
PB-3 TO LP-3		59'		
LP-3 TO LP-2		154'		
LP-2 TO PB-2		25'		
PB-2 TO PB-1		107'		VIA SLEEVE S1
PB-1 TO LP-1		28'		
STANCHION TO PB-4			22'	POWER SUPPLY
PB-4 TO PB-3			108'	VIA SLEEVE S2
PB-3 TO LP-6			55'	
LP-6 TO LP-5			151'	
PB-4 TO LP-7			55'	
LP-7 TO LP-9			195'	
LP-9 TO LP-8			173'	
SUBTOTAL	220'	596'	759'	
ROUNDING	30'		45'	
TOTAL	250'		1400'	



## GFI RECEPTACLE DETAIL

NOT TO SCALE

PROJECT NAME: GUILFORD  
PROJECT NUMBER: IM-IR 091-1(25)

FILE NAME: D91A222_CLOCK_2D_UTI.DGN PLOT DATE: 22-JUL-2013  
PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
LIGHTING DETAILS & NOTES SHEET 20 OF 46

## **EPSC PLAN NARRATIVE**

### **1.1 PROJECT DESCRIPTION**

THE PROJECT IS LOCATED IN THE TOWN OF GUILFORD, COUNTY OF WINDAM, ALONG THE EASTERLY SIDE OF INTERSTATE 91; BEGINNING AT MILEMARKER 0.11 AND ENDING AT MILEMARKER 0.20.

THIS PROJECT INVOLVES THE MODIFICATION OF A PREVIOUSLY UTILIZED INTERSTATE REST AREA INTO A TRUCK WEIGHING AND INSPECTION SITE. SITEWORK WILL INCLUDE NEW PAVEMENT, SUBBASE, DRAINAGE, AND OTHER HIGHWAY RELATED ITEMS.

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 2.27 ACRES.

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

### **1.2 SITE INVENTORY**

#### **1.2.1 TOPOGRAPHY**

THE TOPOGRAPHY OF THE AREA IS RELATIVELY FLAT WITH A MIXTURE OF EXISTING PAVEMENT, GRASS AND LIGHT TREE COVERAGE.

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

THERE ARE TWO EXISTING CULVERTS THAT CARRY WATER WITHIN THE PROJECT AREA THAT DRAIN THE SITE. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

#### **1.2.3 VEGETATION**

THE VEGETATION IN THE PROJECT AREA CONSISTS OF MIXED HARDWOOD AND SOFTWOOD TREES, GRASSY AREAS AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE CONSTRUCTION OF THE WEIGH STATION AND THE DRAINAGE DITCHES SURROUNDING THE WEIGH STATION'S PAVED AREA. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

#### **1.2.4 SOILS**

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

LIMERICK SILT LOAM  
K FACTOR = 0.49

MACOMBER-TACONIC COMPLEX,  
15 TO 25 PERCENT SLOPES, VERY ROCKY  
K FACTOR =0.32/0.37  
HIGHLY ERODIBLE

MACOMBER-TACONIC COMPLEX,  
8 TO 15 PERCENT SLOPES, VERY ROCKY  
K FACTOR =0.32/0.37  
POTENTIALLY HIGHLY ERODIBLE

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

#### **1.2.5 SENSITIVE RESOURCE AREAS**

CRITICAL HABITATS: YES - NORTH AMERICAN RACER BACK SNAKES  
HISTORICAL OR ARCHEOLOGICAL AREAS: NO  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: YES - NORTH AMERICAN RACER BACK SNAKES  
WATER RESOURCE: UNNAMED WETLAND FEEDING THE FALL RIVER  
WETLANDS: ADJACENT WETLANDS TO THE SOUTH; NO IMPACTS ANTICIPATED

### **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.

#### **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.

THE CONTRACTOR WILL LOCATE SILT FENCE, AS NEEDED, WITHIN THE PROJECT AREA. DESIGN OF THE SILT FENCE WILL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR, AND WILL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. 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.

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

#### **1.4.6 SLOW DOWN CHANNELIZED RUNOFF**

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

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.

#### **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.

IF TREATMENT OF DEWATERING COFFERDAM IS NEEDED; THE CONTRACTOR WILL SPECIFY THE LOCATION AND SPECIFIC MEANS FOR DISCHARGE TO THE ENGINEER FOR APPROVAL.

#### **1.4.12 INSPECT YOUR SITE**

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

### **1.5 SEQUENCE AND STAGING**

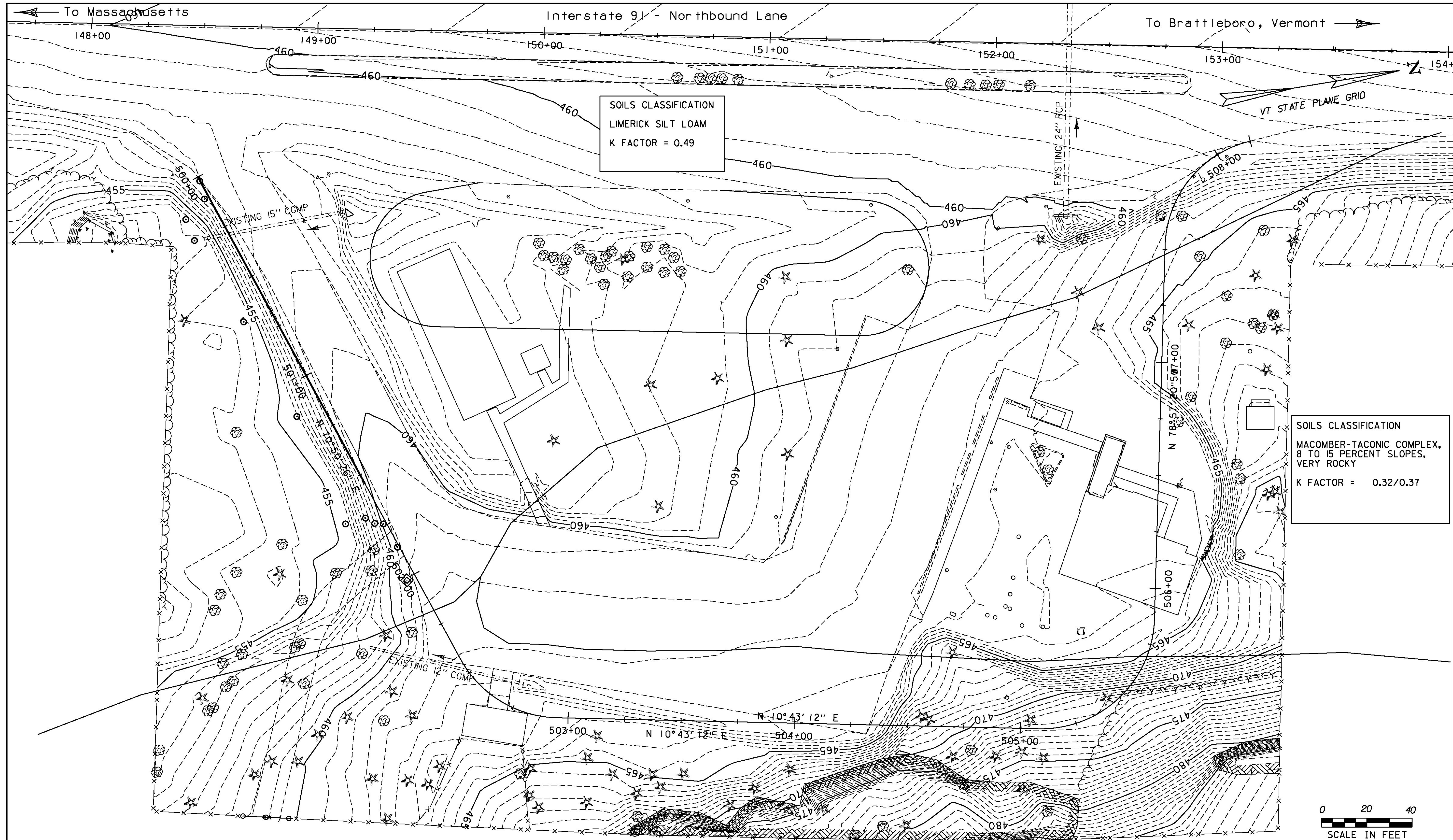
THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

#### **1.5.1 CONSTRUCTION SEQUENCE**

#### **1.5.2 OFF-SITE ACTIVITIES**

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

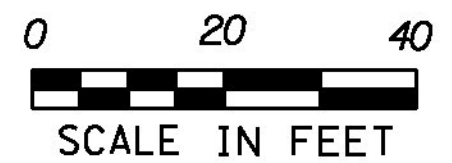
PROJECT NAME:	GUILFORD
PROJECT NUMBER:	IM-IR 091-1(25)
FILE NAME:	D9IA222_CLOCK_FORMS.DGN
PROJECT LEADER:	LIBBY
DESIGNED BY:	BEYOR
EPSC NARRATIVE	
PLOT DATE:	30-AUG-2013
DRAWN BY:	BEYOR
CHECKED BY:	BOMBARDIER
SHEET	21 OF 46



SOILS CLASSIFICATION  
 LIMERICK SILT LOAM  
 K FACTOR = 0.49

SOILS CLASSIFICATION  
 MACOMBER-TACONIC COMPLEX,  
 8 TO 15 PERCENT SLOPES,  
 VERY ROCKY  
 K FACTOR = 0.32/0.37

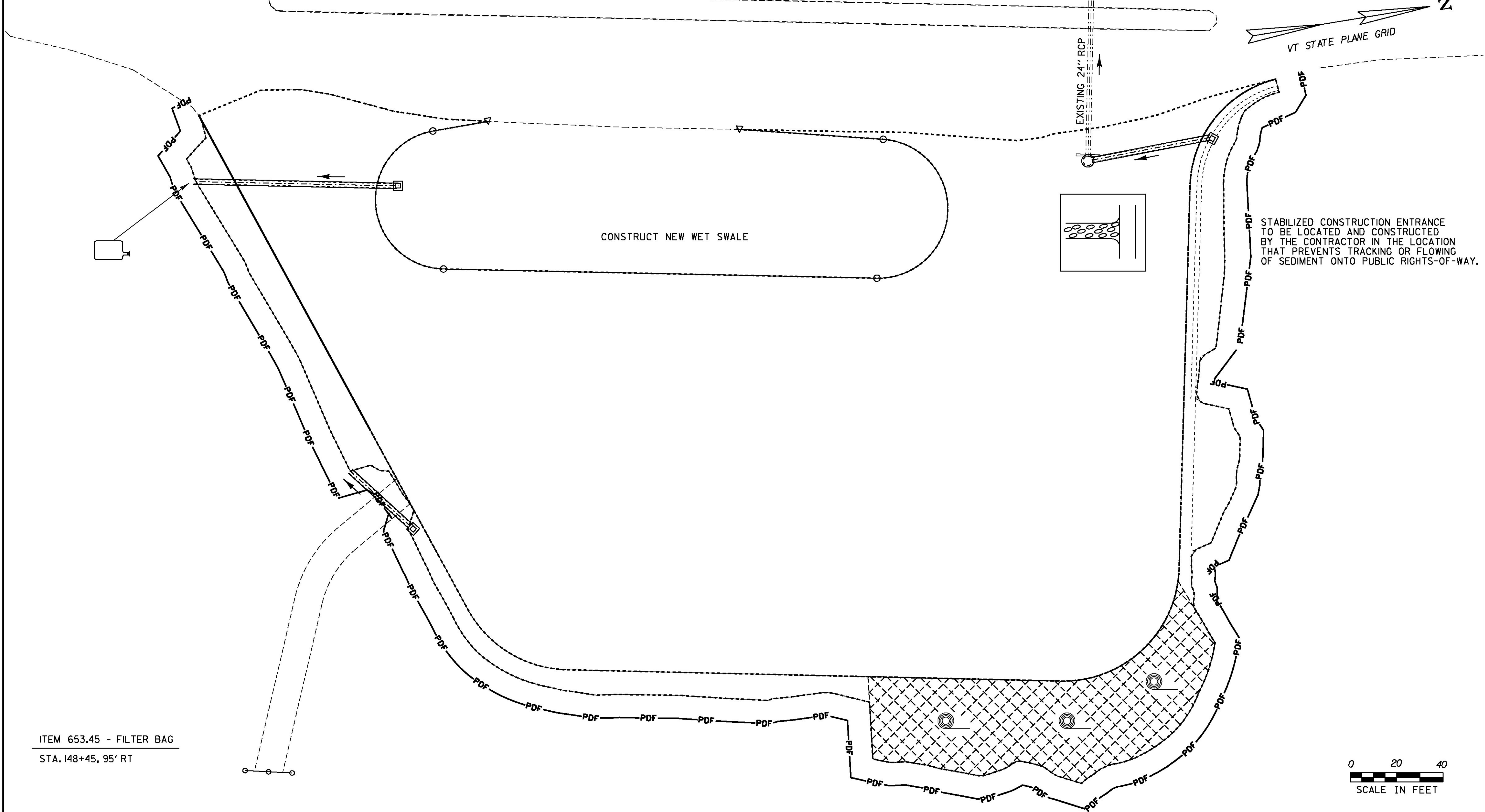
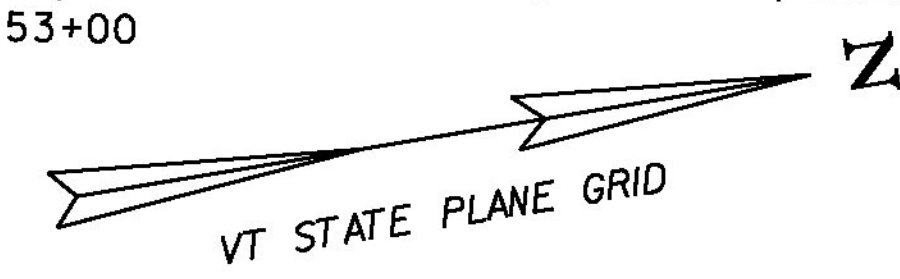
SOILS CLASSIFICATION  
 MACOMBER-TACONIC COMPLEX,  
 15 TO 25 PERCENT SLOPES,  
 VERY ROCKY  
 K FACTOR = 0.32/0.37



PROJECT NAME:	GUILFORD	PLOT DATE:	22-JUL-2013
PROJECT NUMBER:	IM-IR 091-I(25)	DRAWN BY:	BEYOR
FILE NAME:	D9IA222_CLOCK.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	22 OF 46
DESIGNED BY:	BEYOR		
EPSC - EXISTING CONDITIONS			

To Massachusetts ← Interstate 91 - Northbound Lane To Brattleboro, Vermont →

148+00 149+00 150+00 151+00 152+00 153+00



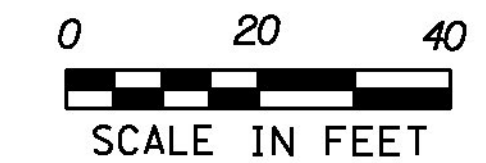
STABILIZED CONSTRUCTION ENTRANCE TO BE LOCATED AND CONSTRUCTED BY THE CONTRACTOR IN THE LOCATION THAT PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY.

ITEM 653.45 - FILTER BAG  
STA. 148+45, 95' RT

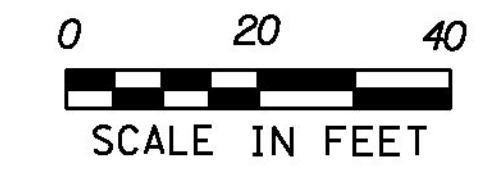
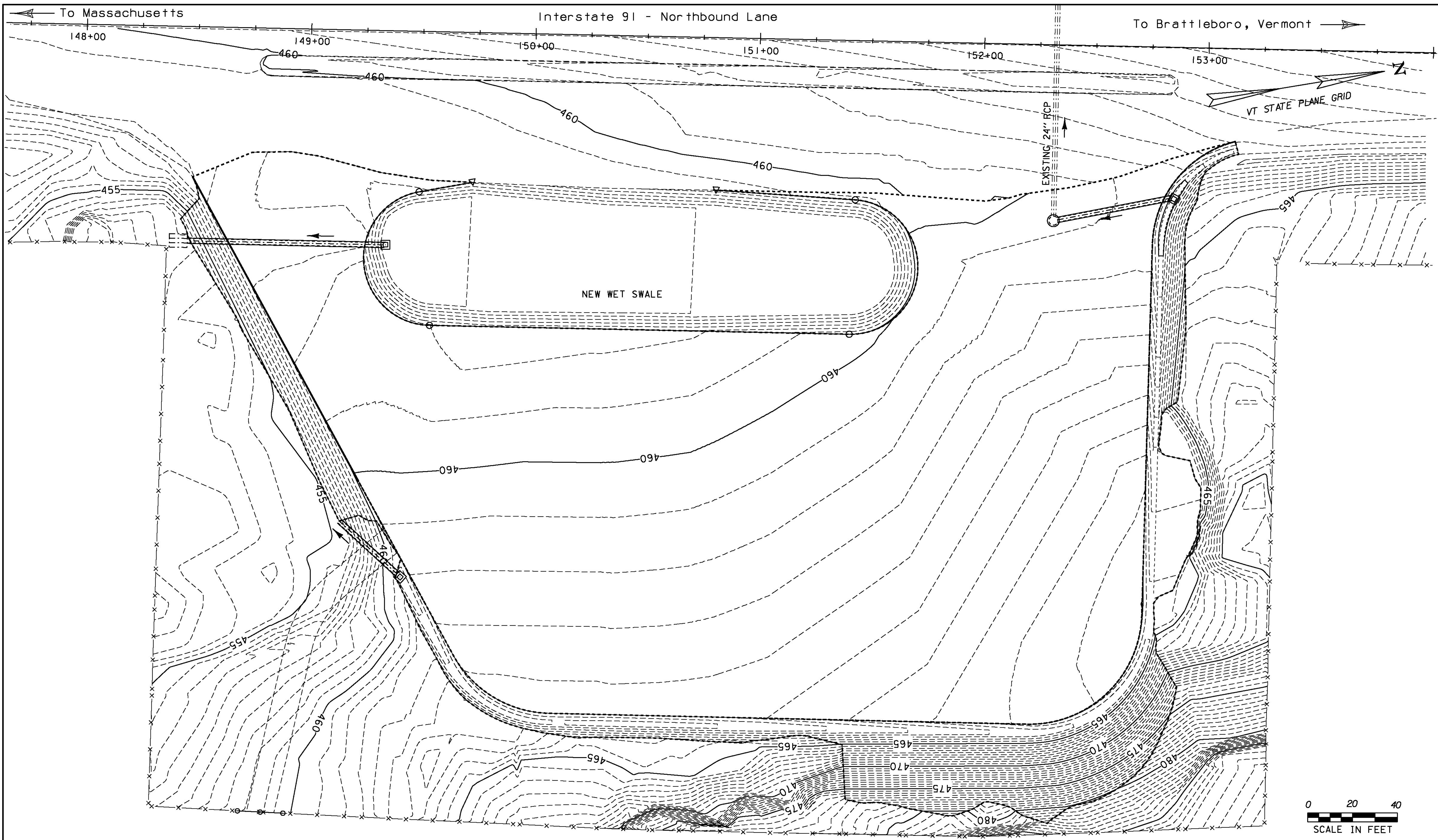
ITEM 653.55 - PROJECT DEMARCATION FENCE  
STA. 148+40 RT TO STA. 153+23 RT

ITEM 653.21 - PERMANENT EROSION MATTING  
STA. 151+42 RT TO STA. 152+91 RT

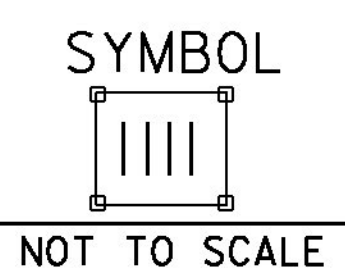
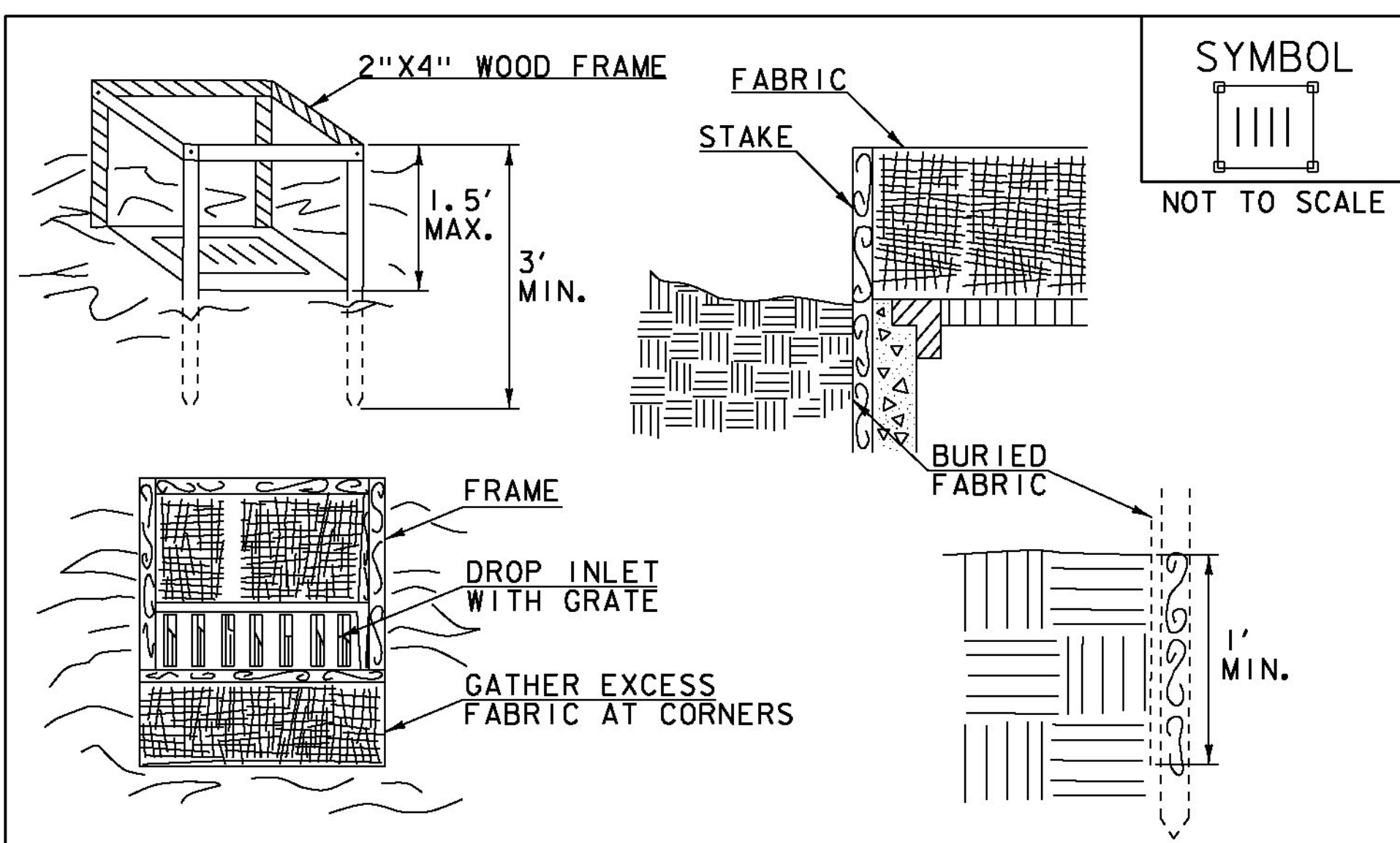
ITEM 653.35 - VEHICLE TRACKING PAD  
STA. 152+35, 95' RT



PROJECT NAME:	GUILFORD	PLOT DATE:	22-JUL-2013
PROJECT NUMBER:	IM-IR 091-1(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	23 OF 46
DESIGNED BY:	BEYOR		
EPSC - CONSTRUCTION			



PROJECT NAME:	GUILFORD	PLOT DATE:	22-JUL-2013
PROJECT NUMBER:	IM-IR 091-1(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	24 OF 46
DESIGNED BY:	BEYOR		
EPSC - FINAL CONDITIONS			



**CONSTRUCTION SPECIFICATIONS**

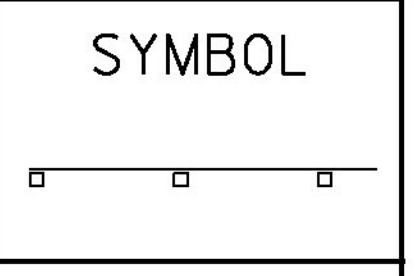
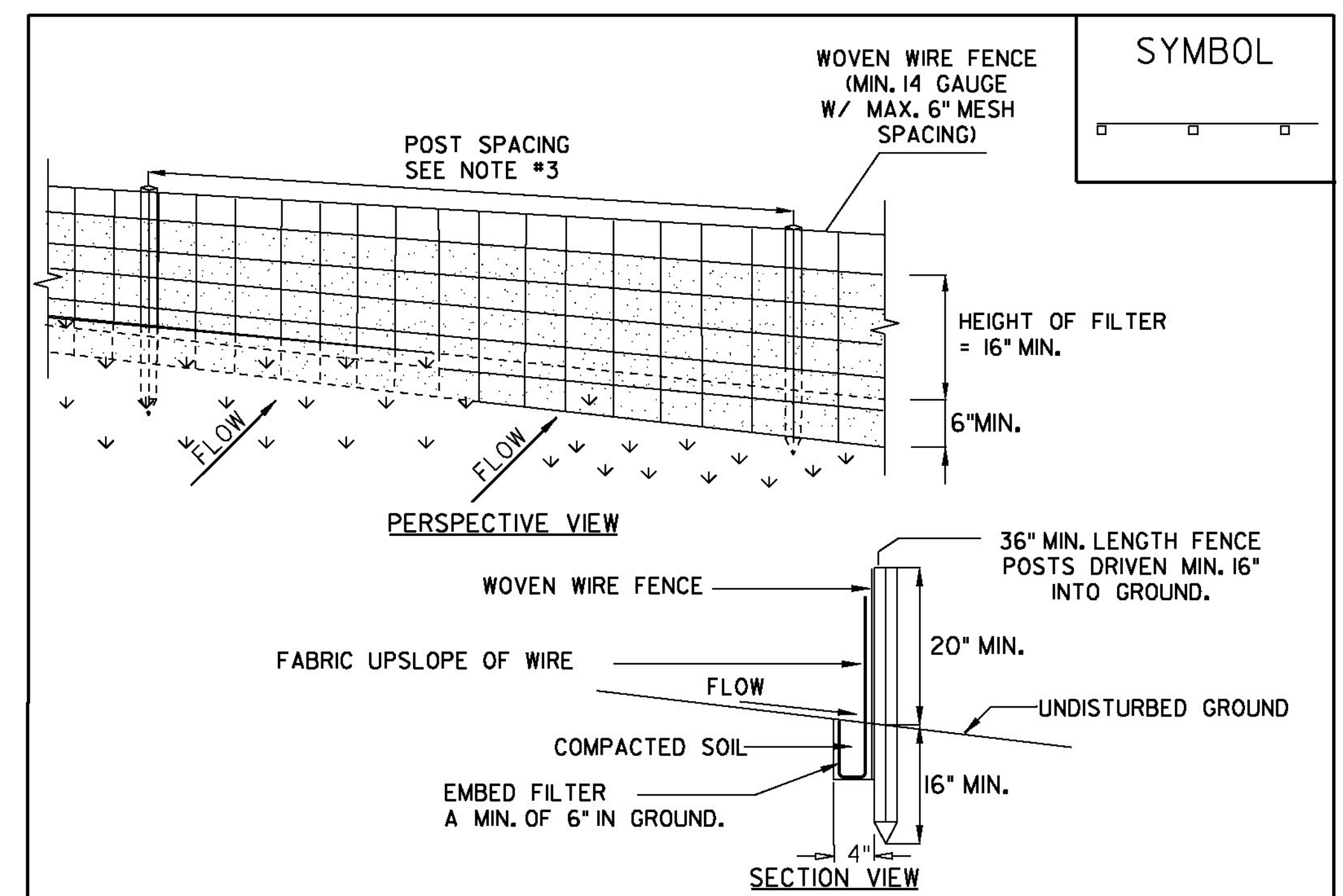
1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL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

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

**FILTER FABRIC  
DROP INLET  
PROTECTION**

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PART ITEM 653.40).

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF



**CONSTRUCTION SPECIFICATIONS**

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF100X, 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'. FOR FILTER-CLOTH FENCE, 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 SIX INCHES AND FOLDED.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
7. 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 ITEM SHALL BE PAID FOR UNDER ITEM 649.51 GEOTEXTILE FOR SILT FENCE OR 649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED

**EPSC LAYOUT PLAN SYMBOLOGY LEGEND**

- PROJECT BOUNDARY FENCE**
- PDF ——— PDF PROJECT DEMARCATION FENCE
  - BF —*—*— BF BARRIER FENCE

**EPSC MEASURES**

- ONNOONNOONNO FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING
- FILTER BAG
- STABILIZED CONSTRUCTION ENTRANCE

**ENVIRONMENTAL RESOURCES**

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

**ARCHAEOLOGICAL & HISTOIC**

- WETLAND BOUNDARY
- HISTORIC DISTRICT BOUNDARY
- HISTORIC AREA
- (H) HISTORIC STRUCTURE

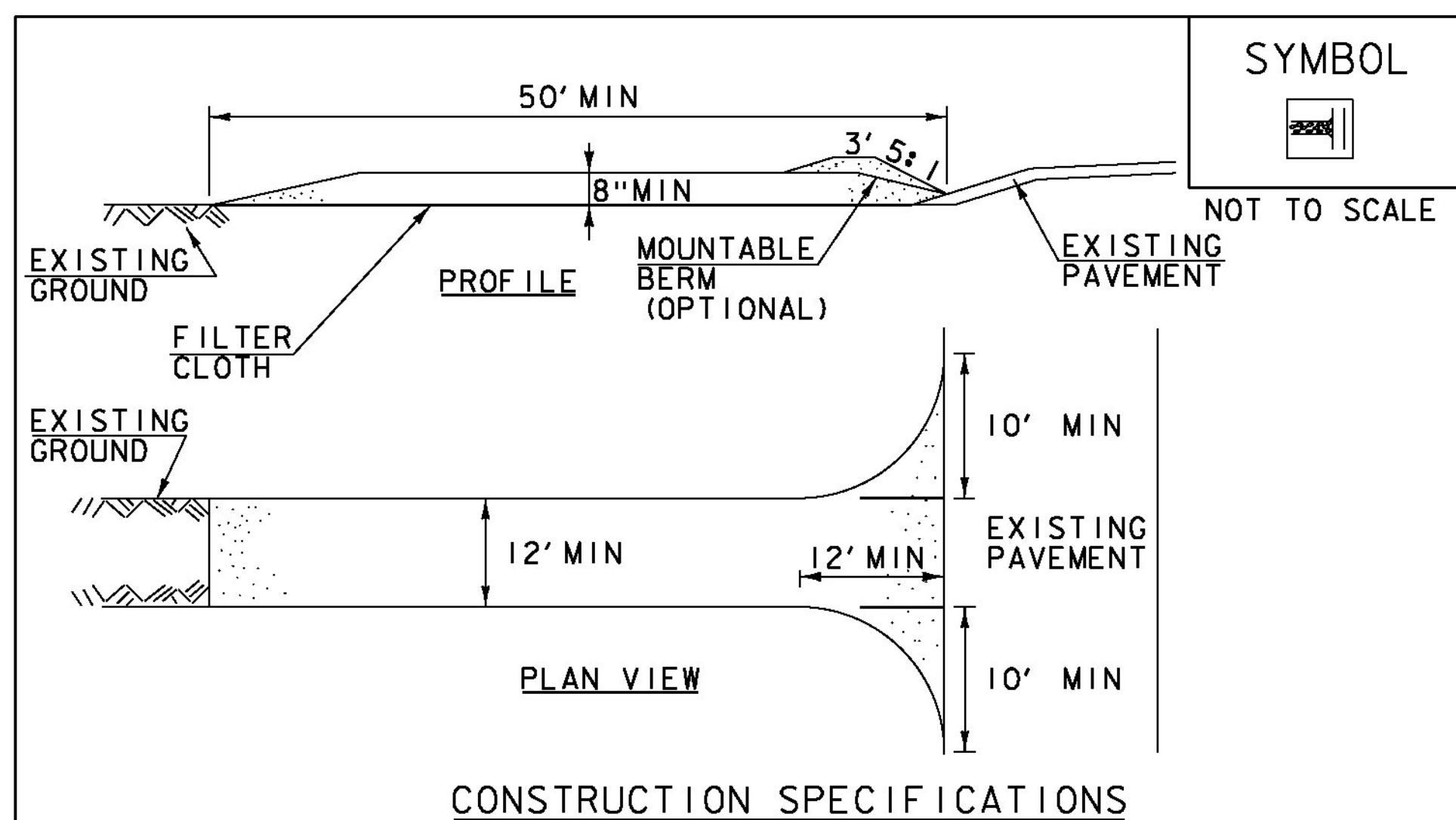
**UTILITY SYMBOLOGY**

- AER E&T — AREAL ELECTRIC & TELEPHONE
- E — AREAL ELECTRIC
- UE — UNDERGROUND ELECTRIC
- UT — UNDERGROUND TELEPHONE
- UC — UNDER GROUND TV
- G — GAS LINE
- W — WATER LINE

**CONSTRUCTION FEATURES**

- — TOE OF SLOPE CUT OR FILL
- ⊗ — STONE FILL, TYPE III
- ⊗ — STONE FILL, TYPE II
- ⊗ — STONE FILL, TYPE I

PROJECT NAME: GUILFORD  
PROJECT NUMBER: IM-IR 091-1(25)  
FILE NAME: D91A222_CLOCK_FORMS.DGN PLOT DATE: 22-JUL-2013  
PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
EPSC DETAILS SHEET 1 SHEET 25 OF 46



SYMBOL

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

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

**STABILIZED CONSTRUCTION ENTRANCE**

**NOTES:**  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
 THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

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

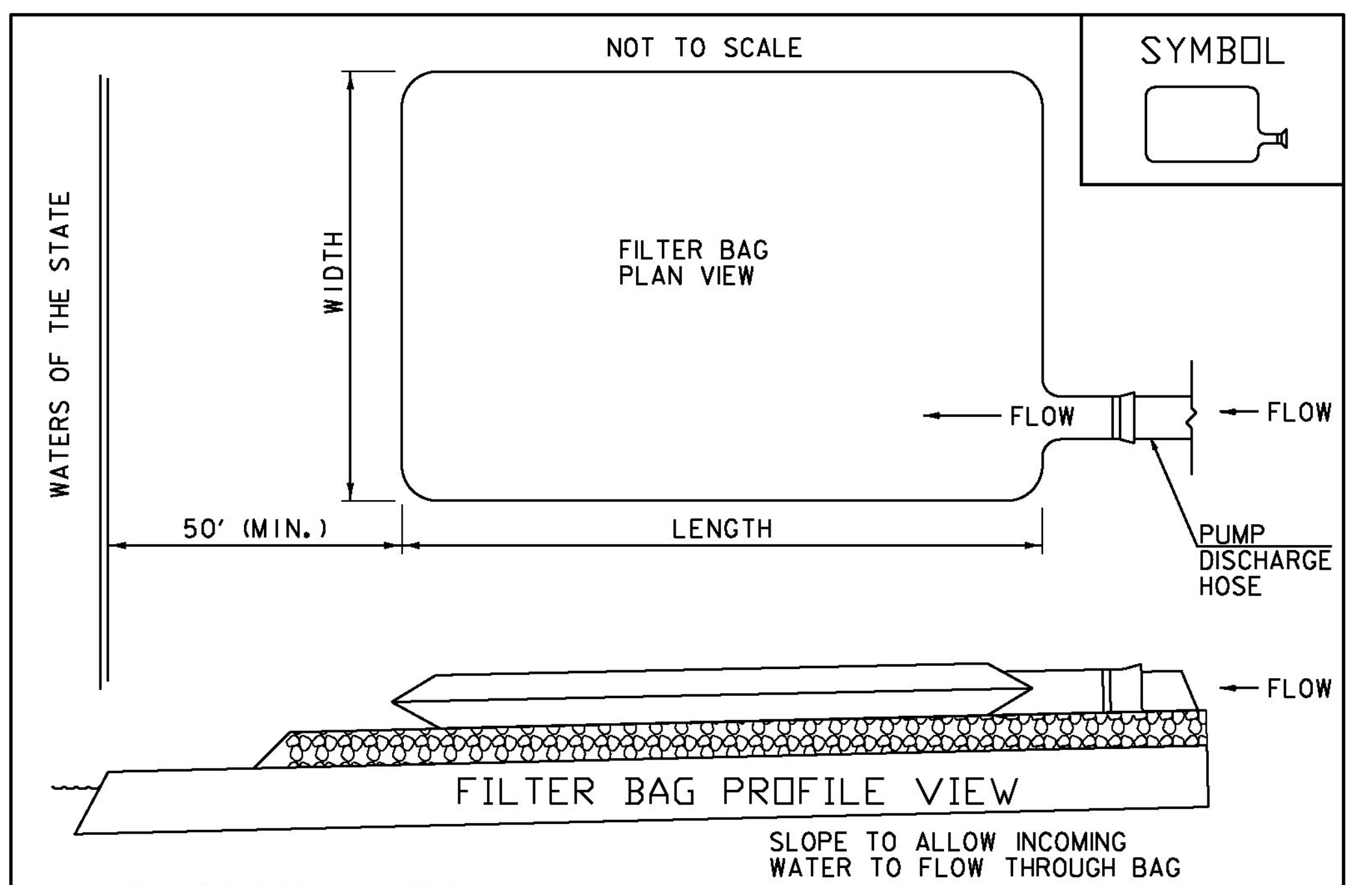
**CONSTRUCTION GUIDANCE**

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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

**TURF ESTABLISHMENT**

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



**APPLICATION NOTES:**

THE PRIMARY PURPOSE OF THE FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS WHILE ALLOWING WATER TO PASS THROUGH THE BAG.

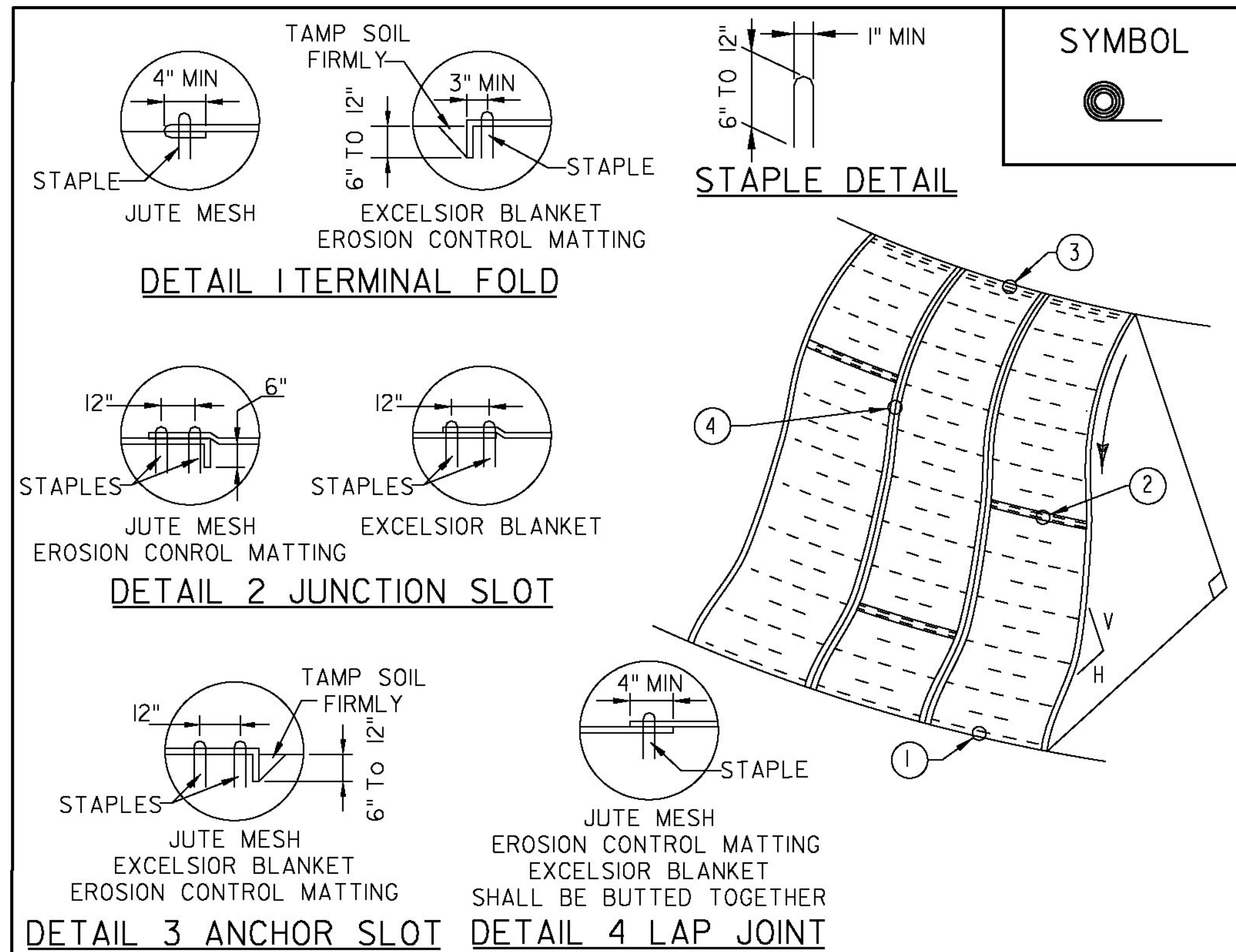
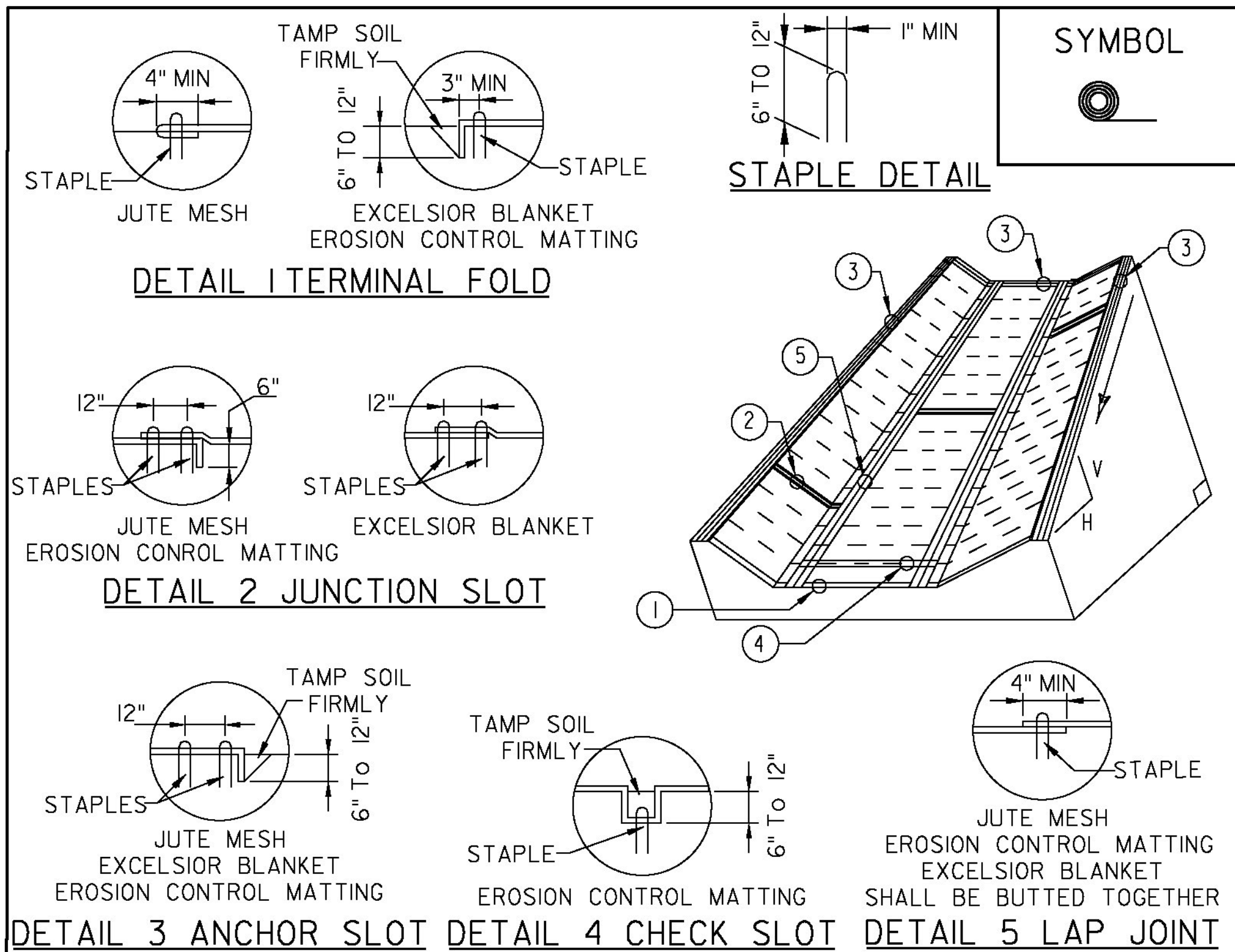
**GENERAL NOTES:**

1. FILTER BAG SHALL BE INSTALLED ON A VEGETATED SLOPE TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
2. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
3. FILTER BAG SHALL BE LOCATED A MINIMUM OF 50 FEET FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
4. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
5. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
6. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.45 FILTER BAG

REVISIONS	
SEPTEMBER 18, 2007	WHF
DECEMBER 13, 2007	WHF

PROJECT NAME: GUILFORD  
 PROJECT NUMBER: IM-IR 091-1(25)  
 FILE NAME: D9IA222_CLOCK_FORMS.DGN PLOT DATE: 22-JUL-2013  
 PROJECT LEADER: LIBBY DRAWN BY: BEYOR  
 DESIGNED BY: BEYOR CHECKED BY: BOMBARDIER  
 EPSC DETAILS SHEET 2 SHEET 26 OF 46



**CONSTRUCTION SPECIFICATIONS**

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
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.

**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: ILLINOIS USDA-NRCS  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

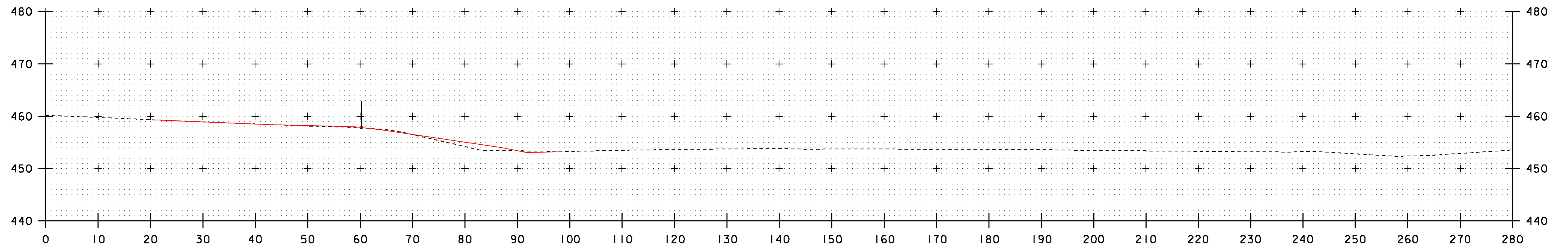
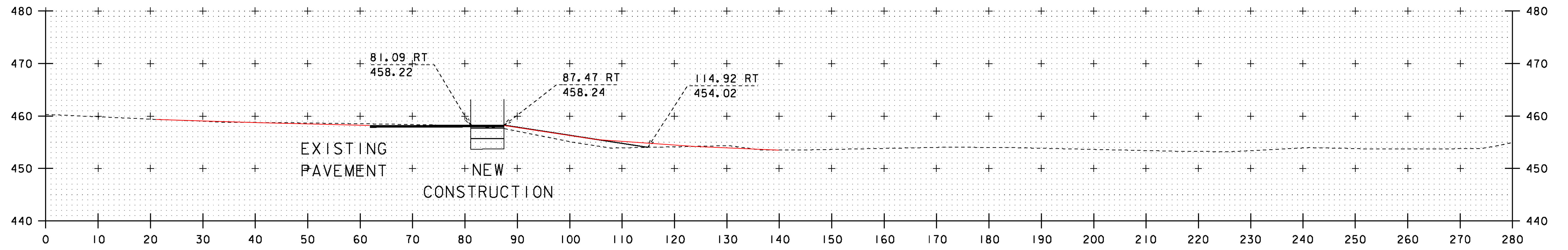
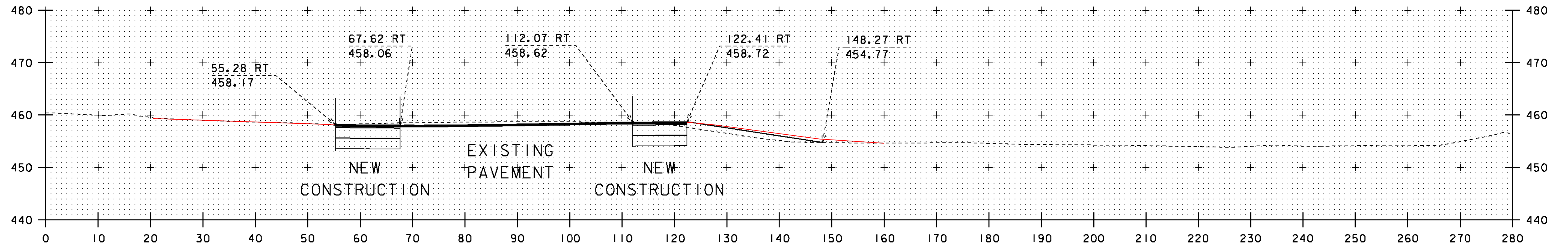
ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
  
THIS ITEM SHALL BE PAID FOR UNDER ITEM  
653.20 TEMPORARY EROSION MATTING OR  
653.21 PERMANENT EROSION MATTING

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF

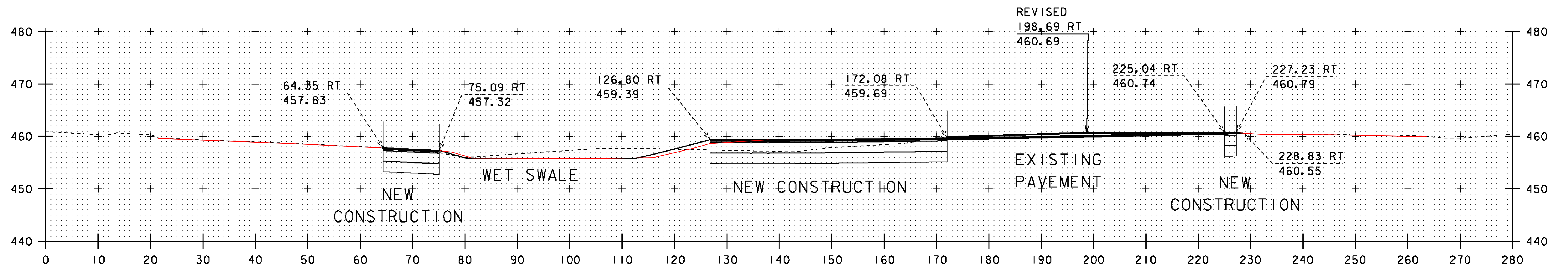
NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
  
THIS ITEM SHALL BE PAID FOR UNDER ITEM  
653.20 TEMPORARY EROSION MATTING OR  
653.21 PERMANENT EROSION MATTING

NEW	
APRIL 16, 2007	WHF
REVISIONS	

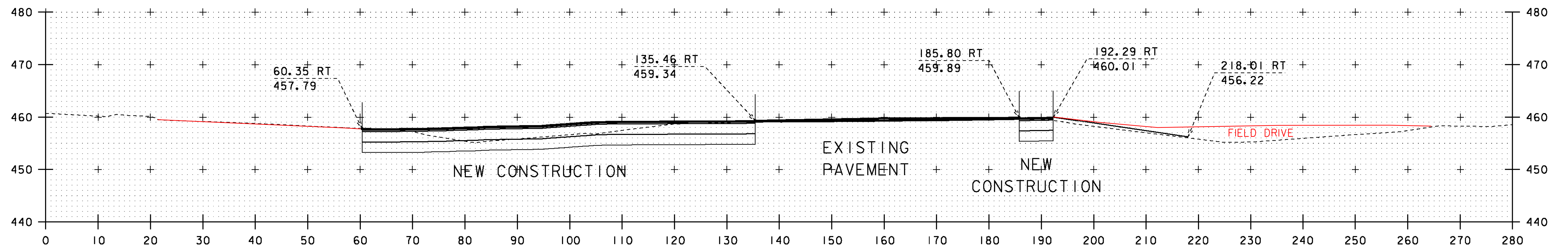


STA. 148+40 - STA. 148+80

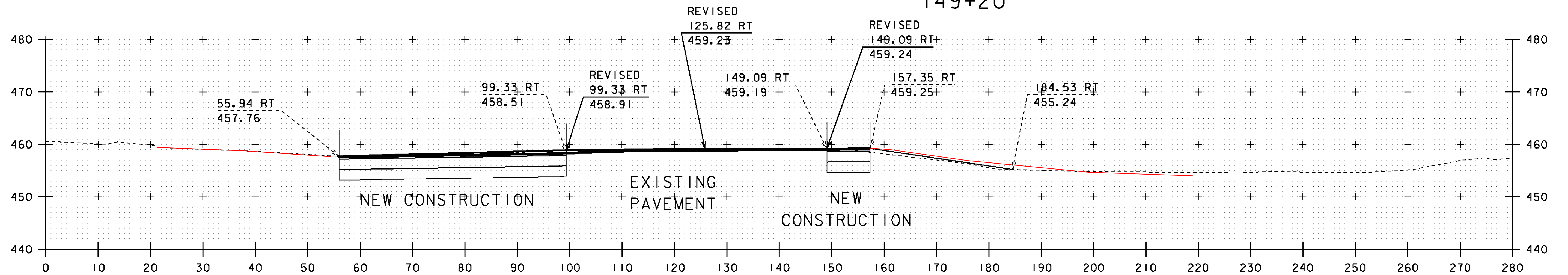
PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	28 OF 46
DESIGNED BY:	BEYOR		
CROSS SECTION SHEET #1			



149+40



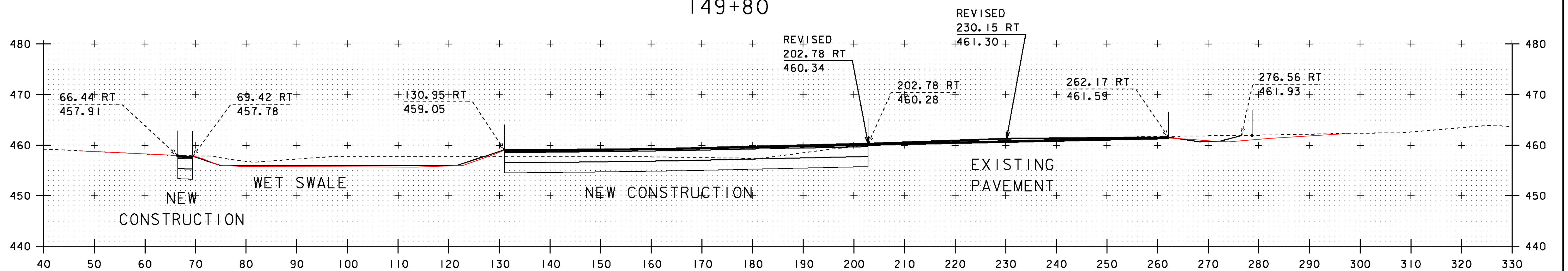
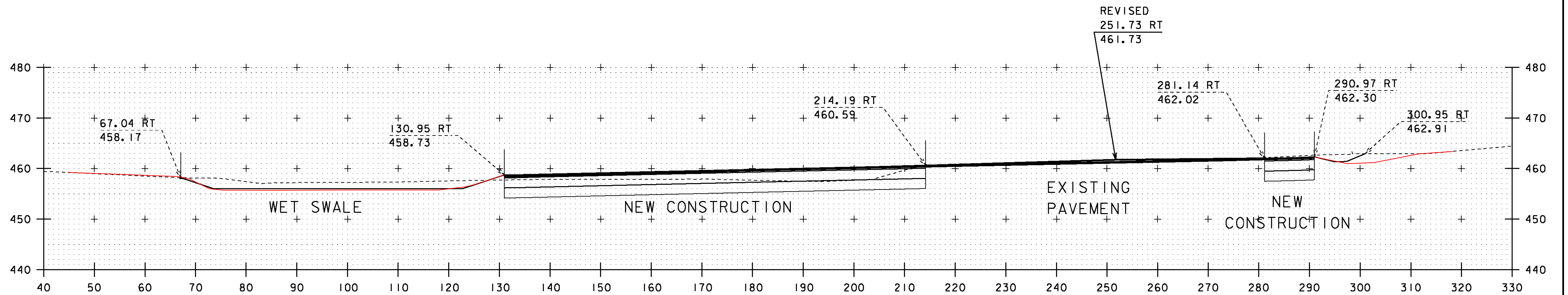
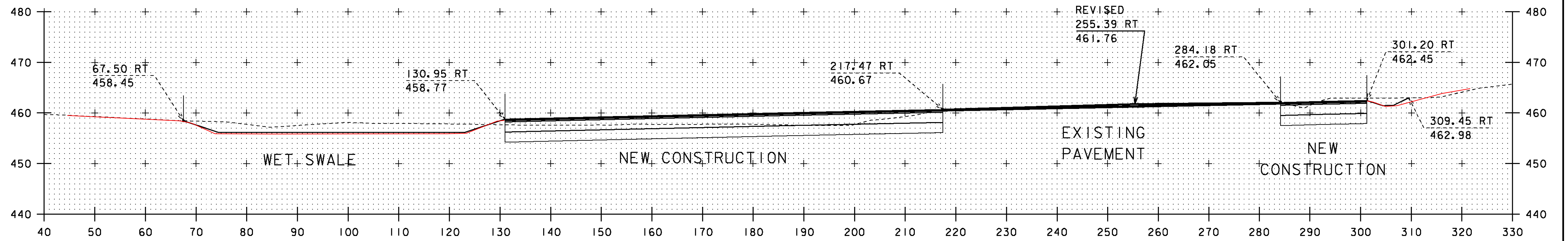
149+20



149+00

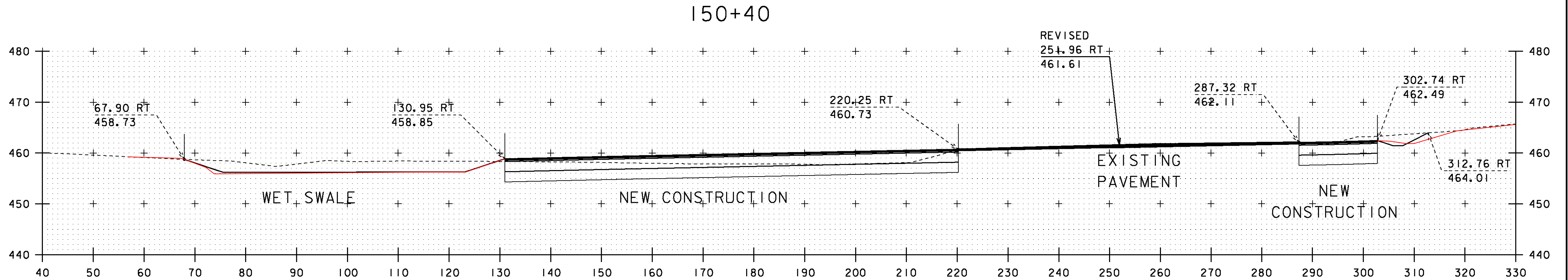
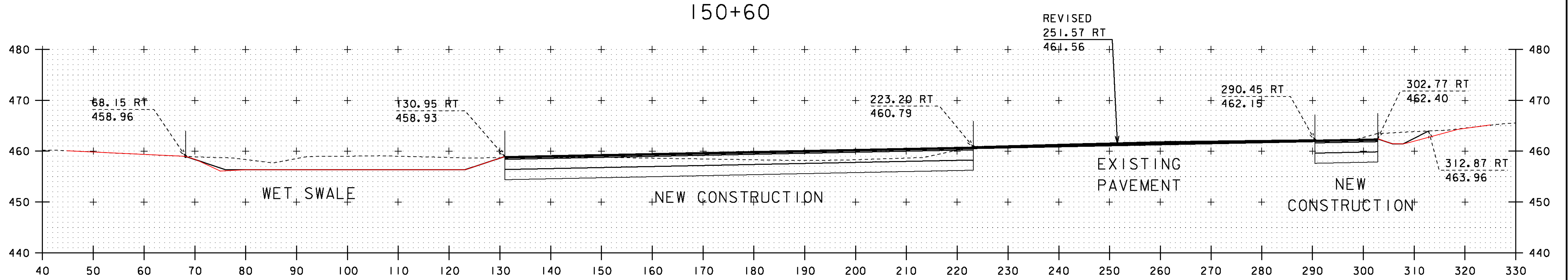
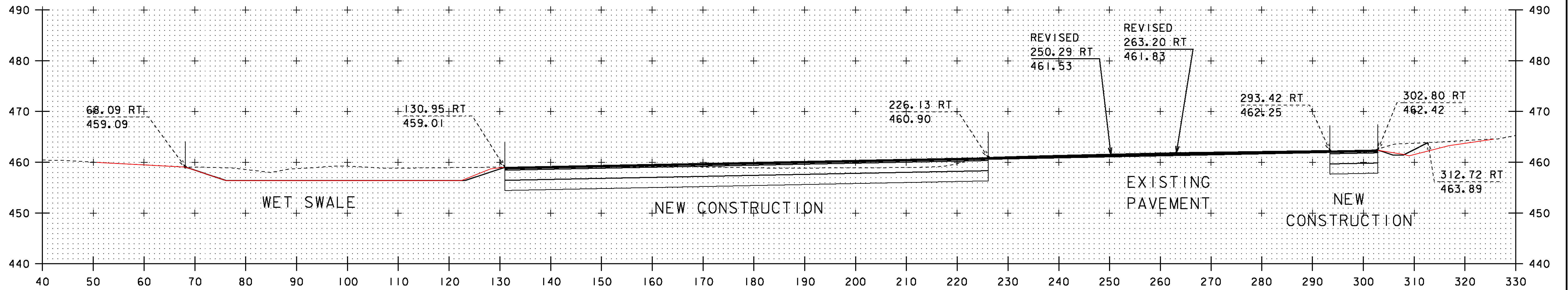
PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	29 OF 46
DESIGNED BY:	BEYOR		
CROSS SECTION SHEET #2			

STA. 149+00 - STA. 149+40



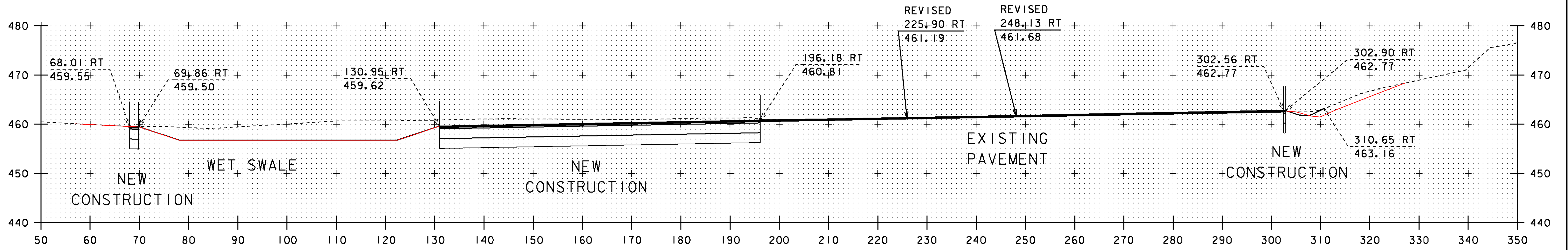
PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-I(25)	DRAWN BY:	BEYOR
FILE NAME:	D9IA222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	CROSS SECTION SHEET #3	SHEET 30 OF 46

STA. 149+60 - STA. 150+00

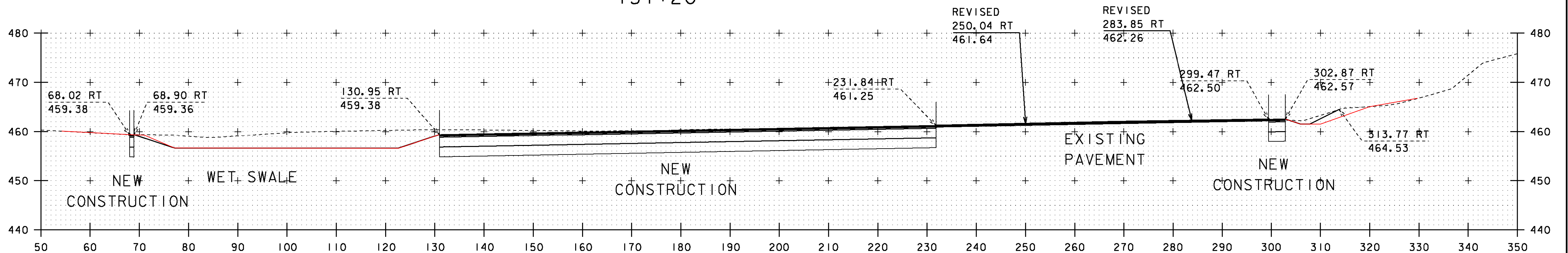


STA. 150+20 - STA. 150+60

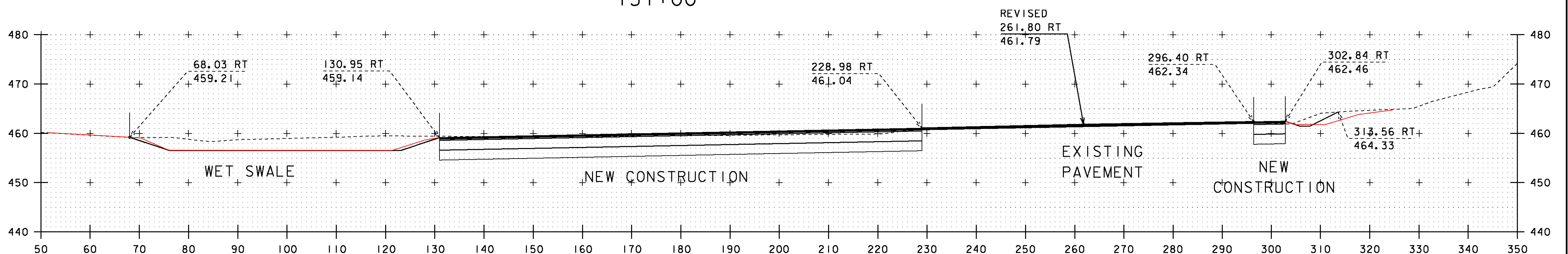
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PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D9IA222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	31 OF 46
DESIGNED BY:	BEYOR	CROSS SECTION SHEET	#4



151+20



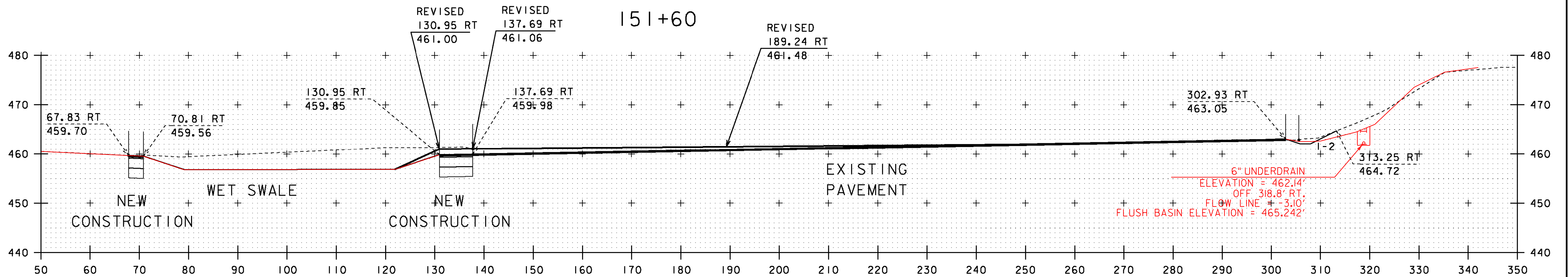
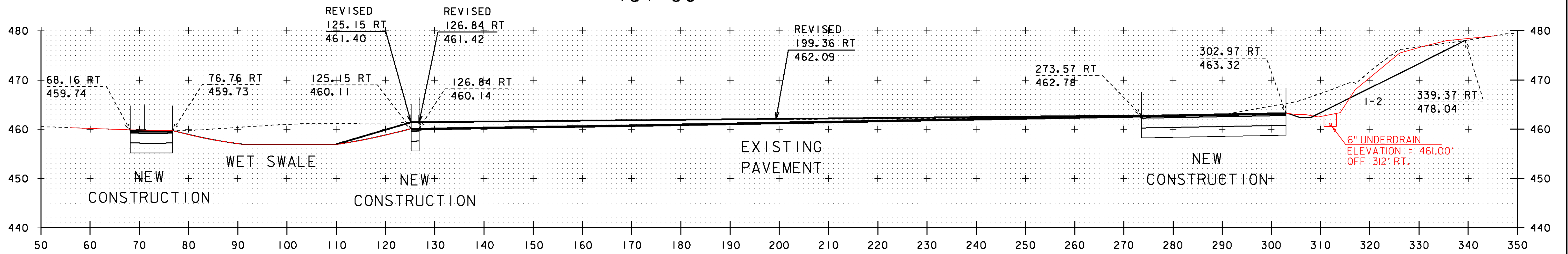
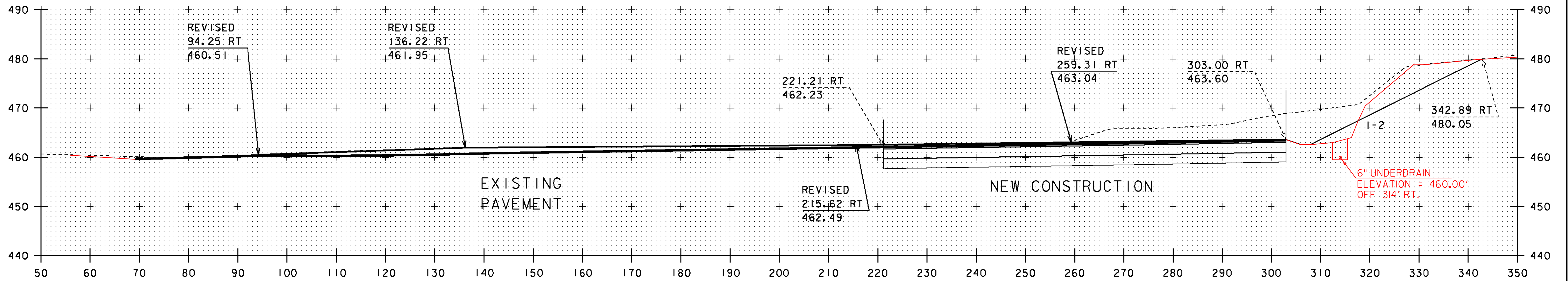
151+00



150+80

STA. 150+80 - STA. 151+20

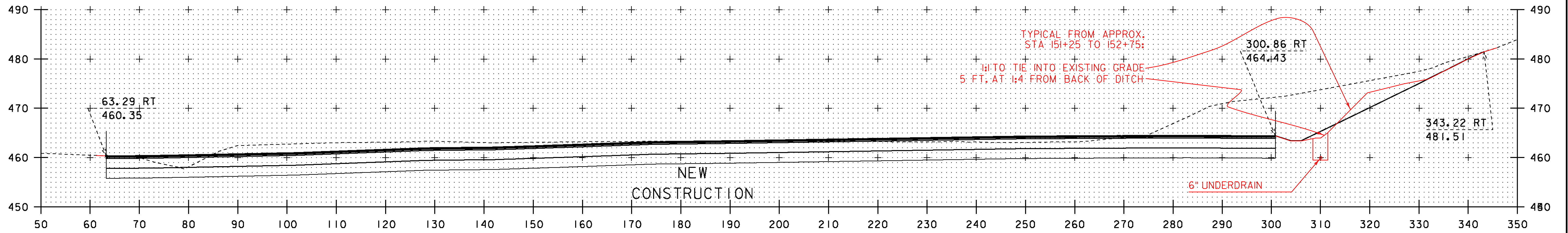
PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	32 OF 46
DESIGNED BY:	BEYOR		
CROSS SECTION SHEET	#5		



151+38.42  
151+40

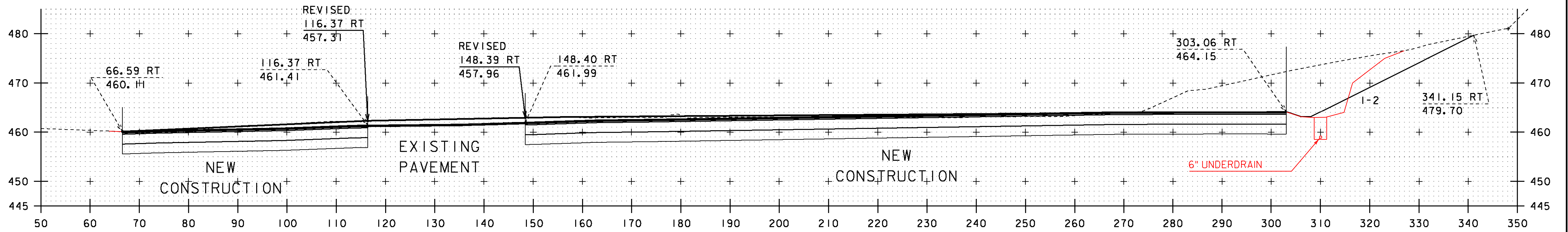
STA. 151+38.42 - STA. 151+80

PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	33 OF 46
DESIGNED BY:	BEYOR	CROSS SECTION SHEET	#6

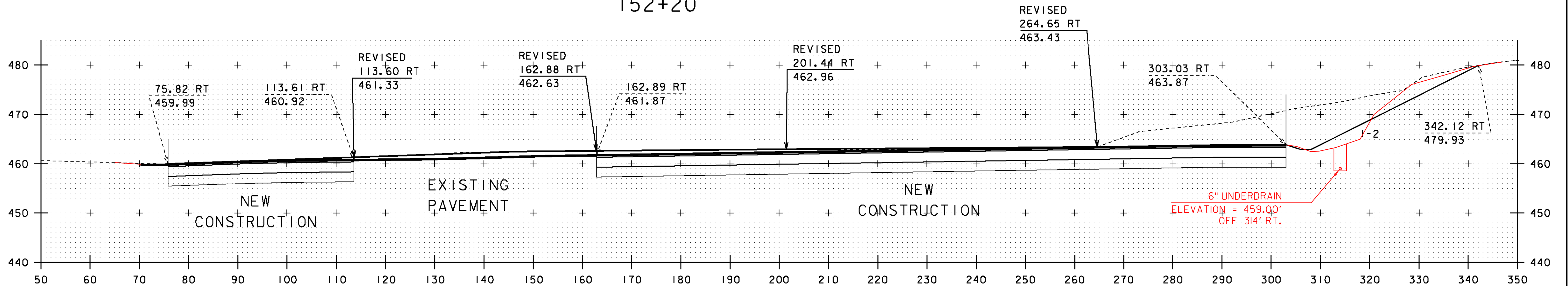


152+40

6" UNDERDRAIN T'S AT STA 152+30  
 ELEV = 358.75'  
 OFF 310' RT.



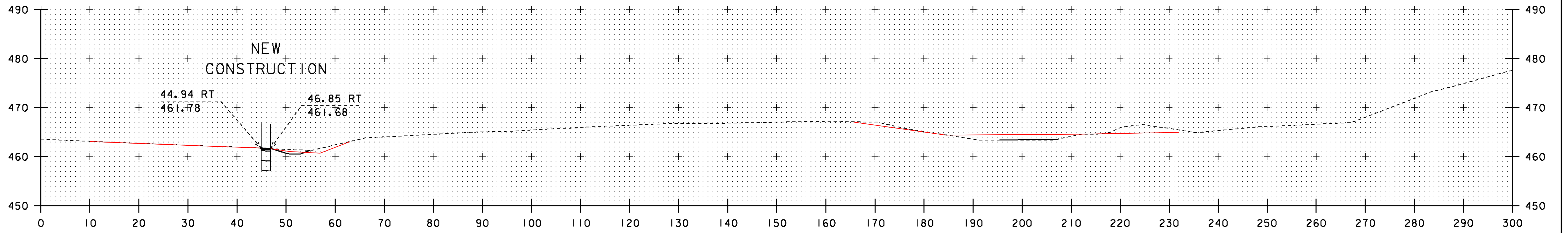
152+20



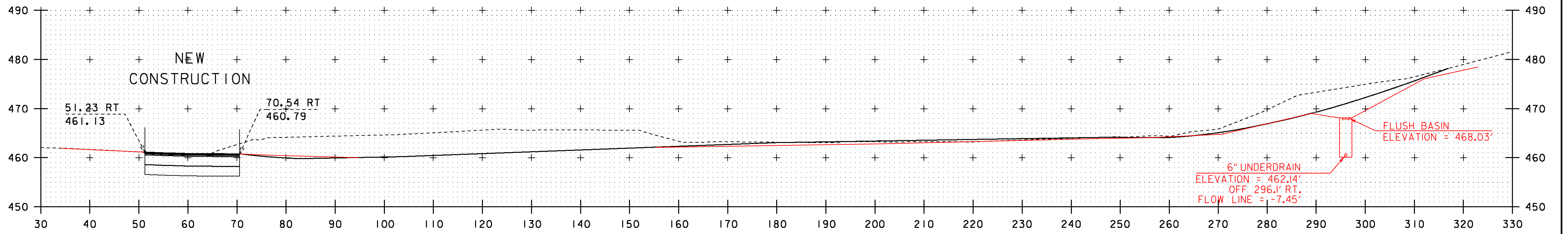
152+00

STA. 152+00 - STA. 152+40

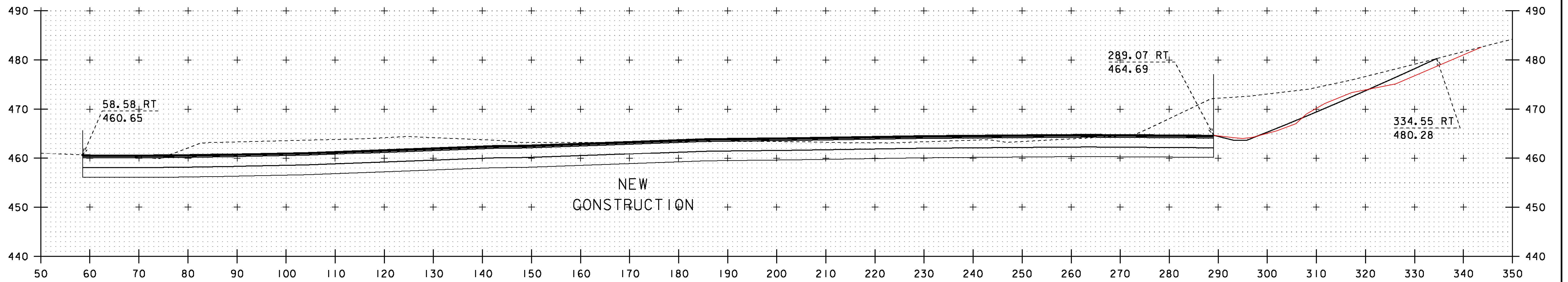
PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D91A222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	34 OF 46
DESIGNED BY:	BEYOR	CROSS SECTION SHEET	#7



153+00



152+74.5  
~~152+80~~



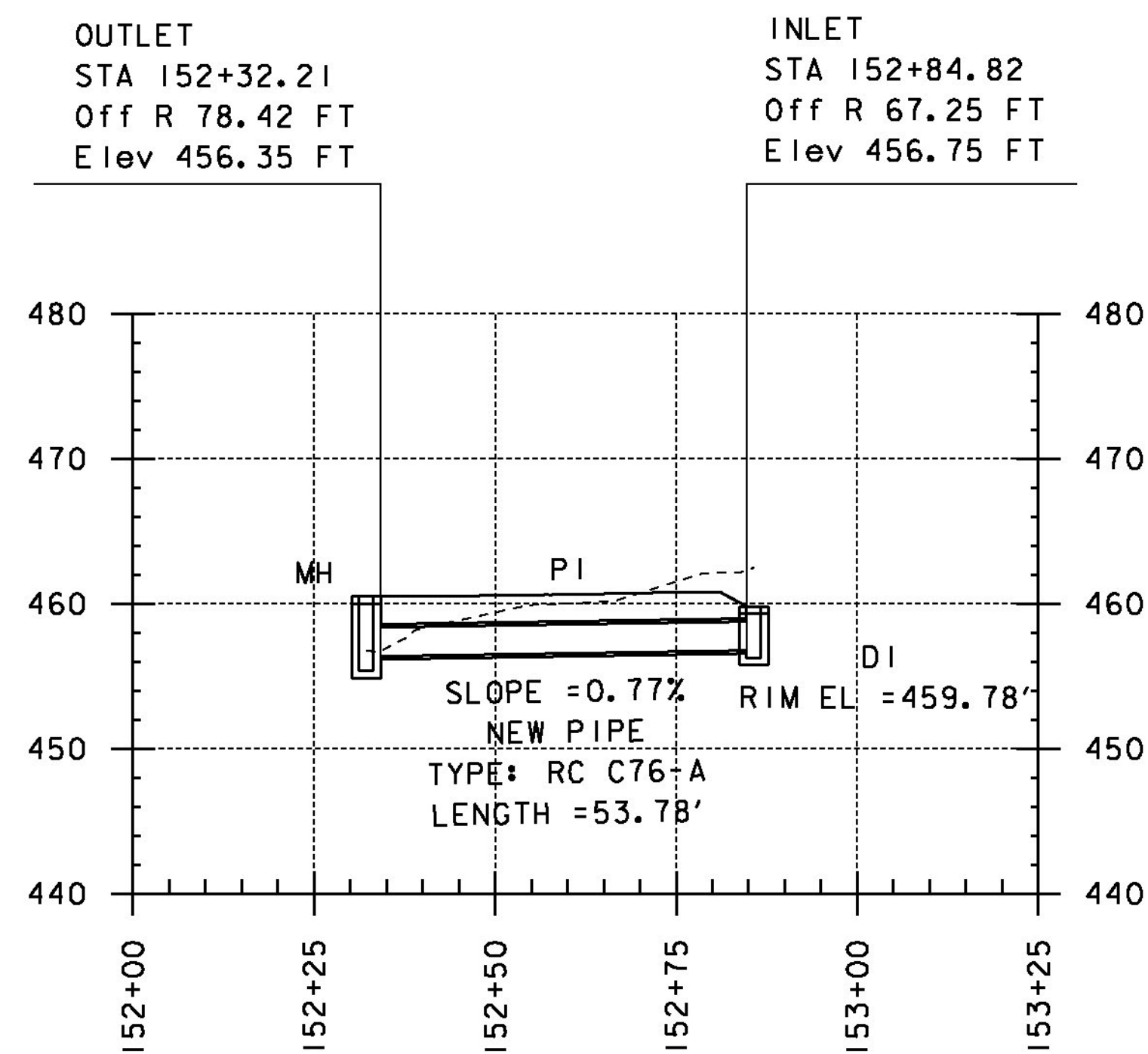
152+60

STA. 152+60 - STA. 153+00

PROJECT NAME:	GUILFORD	PLOT DATE:	05-MAY-2014
PROJECT NUMBER:	IM-IR 091-(25)	DRAWN BY:	BEYOR
FILE NAME:	D9IA222_CLOCK_BDR.DGN	CHECKED BY:	BOMBARDIER
PROJECT LEADER:	LIBBY	SHEET	35 OF 46
DESIGNED BY:	BEYOR		
CROSS SECTION SHEET	#8		

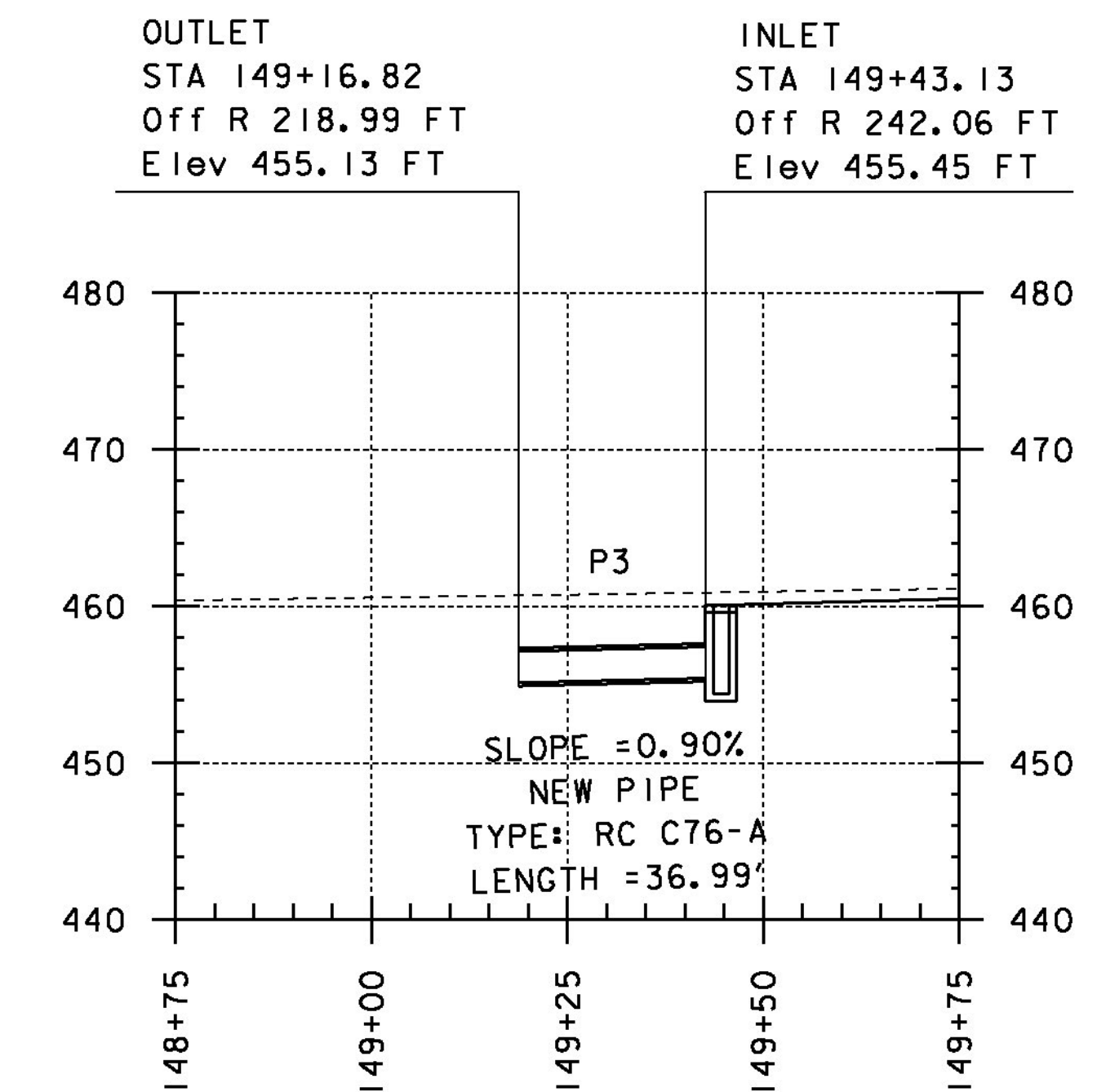
D-5

STA 152+84.82 (78.42' RT) - STA 152+32.21 (67.25' RT)  
 NEW 24" X 54" CPEP PERIMETER DITCH - OUTLET CULVERT



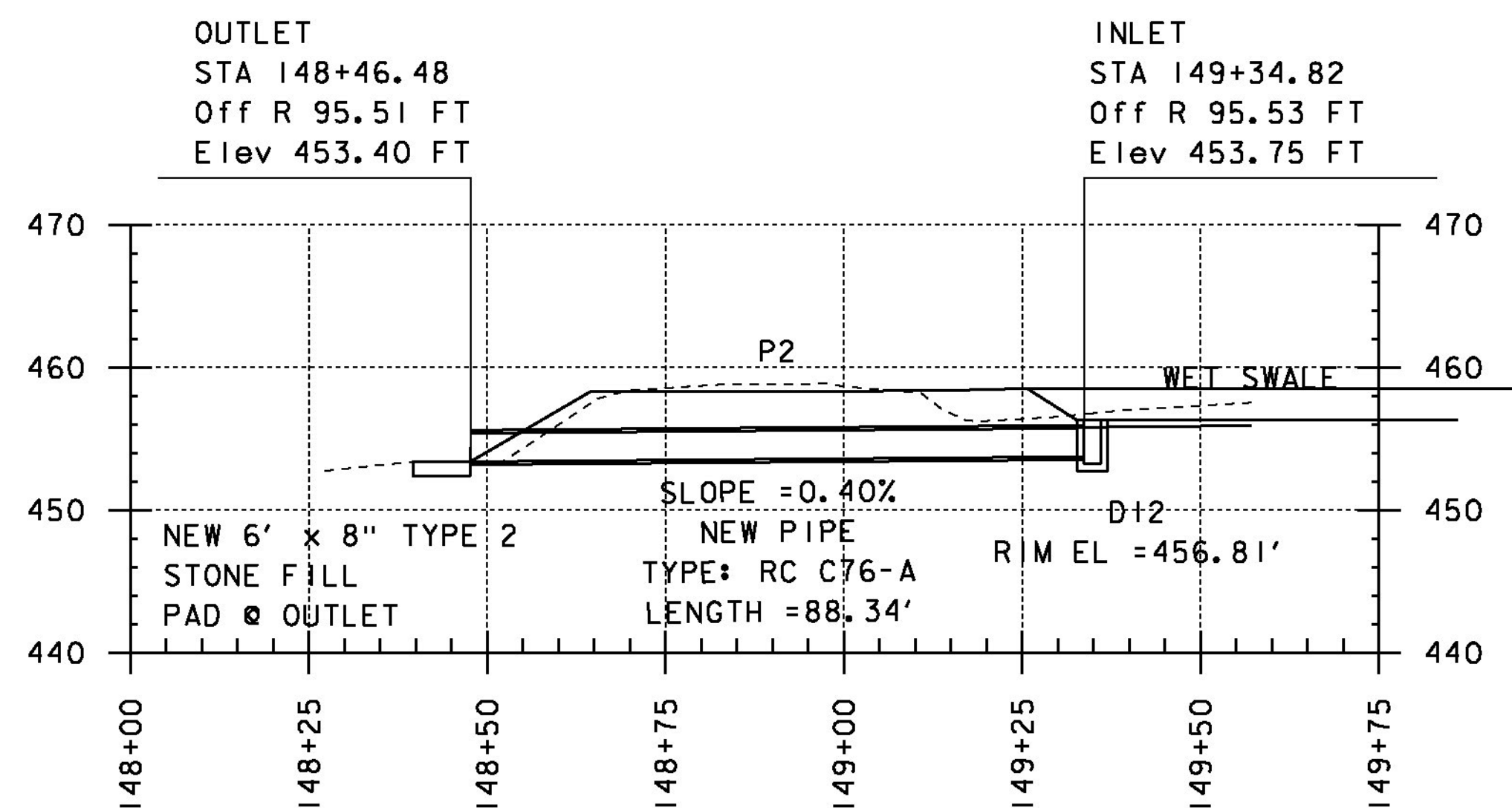
D-4

STA 149+43.13 (242.06' RT) - STA 149+16.82 (218.99' RT)  
 NEW 24" X 38" CPEP DRIVE CULVERT



D-3

STA 149+34.82 (95.53' RT) - STA 148+46.48 (95.51' RT)  
 NEW 24" X 88" CPEP DETENTION POND - OUTLET CULVERT



PROJECT NAME: GUILFORD	
PROJECT NUMBER: IM-IR 091-1(25)	
FILE NAME: D91A222_CLOCK.DGN	PLOT DATE: 22-JUL-2013
PROJECT LEADER: LIBBY	DRAWN BY: BEYOR
DESIGNED BY: BEYOR	CHECKED BY: BOMBARDIER
DRAINAGE CROSS SECTIONS	SHEET 36 OF 46

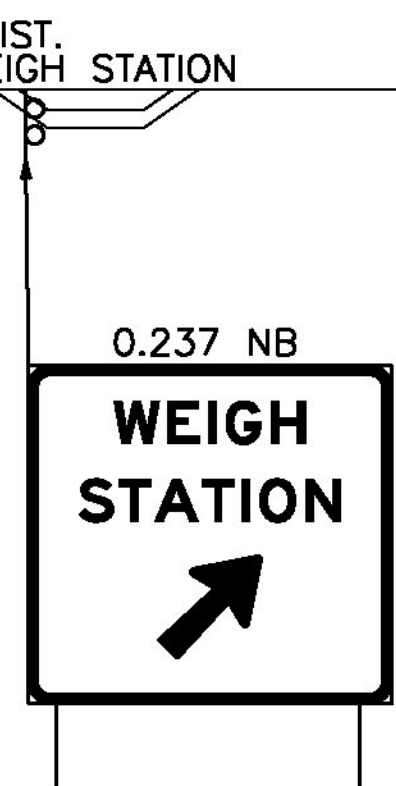
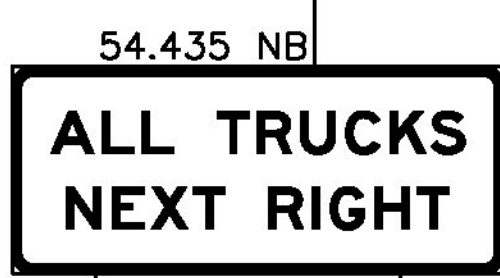
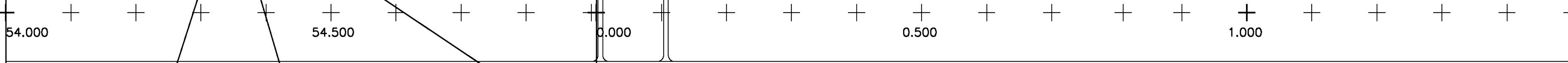
**BEGIN APPROACH  
(MASS. MM 54.000)**

**VERMONT BORDER  
(MM 00.000)  
(MASS. MM 54.908)**

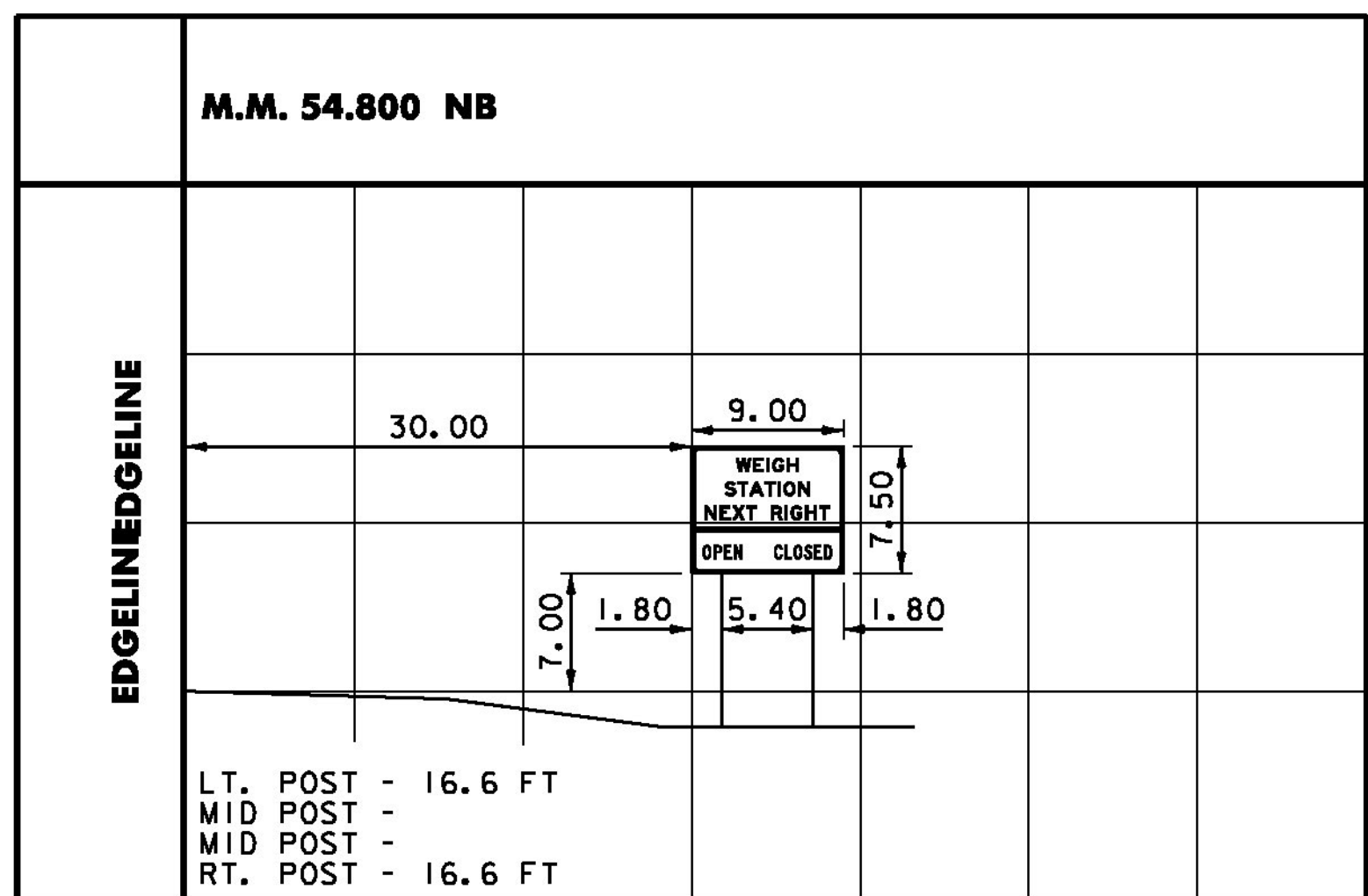
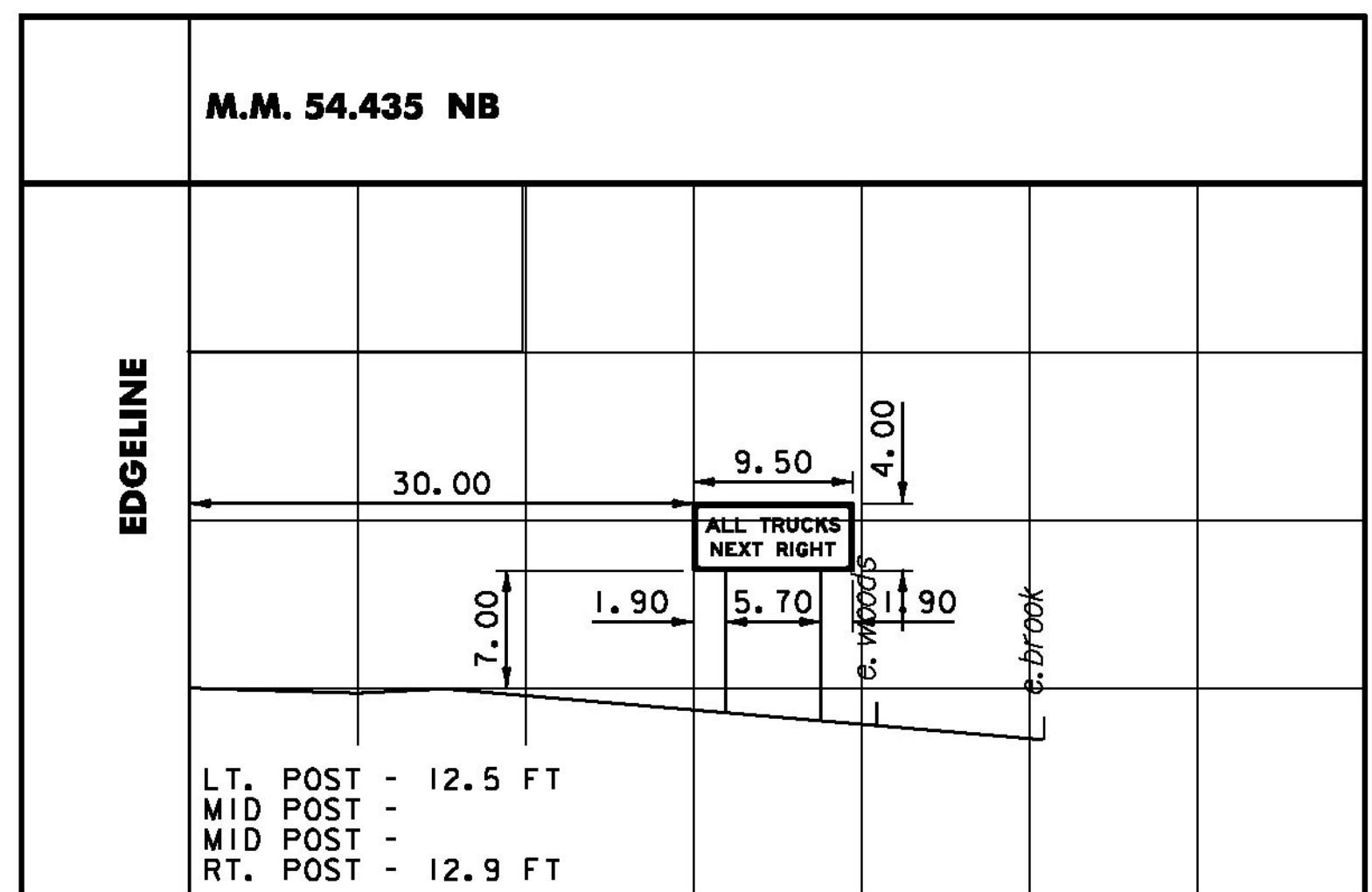
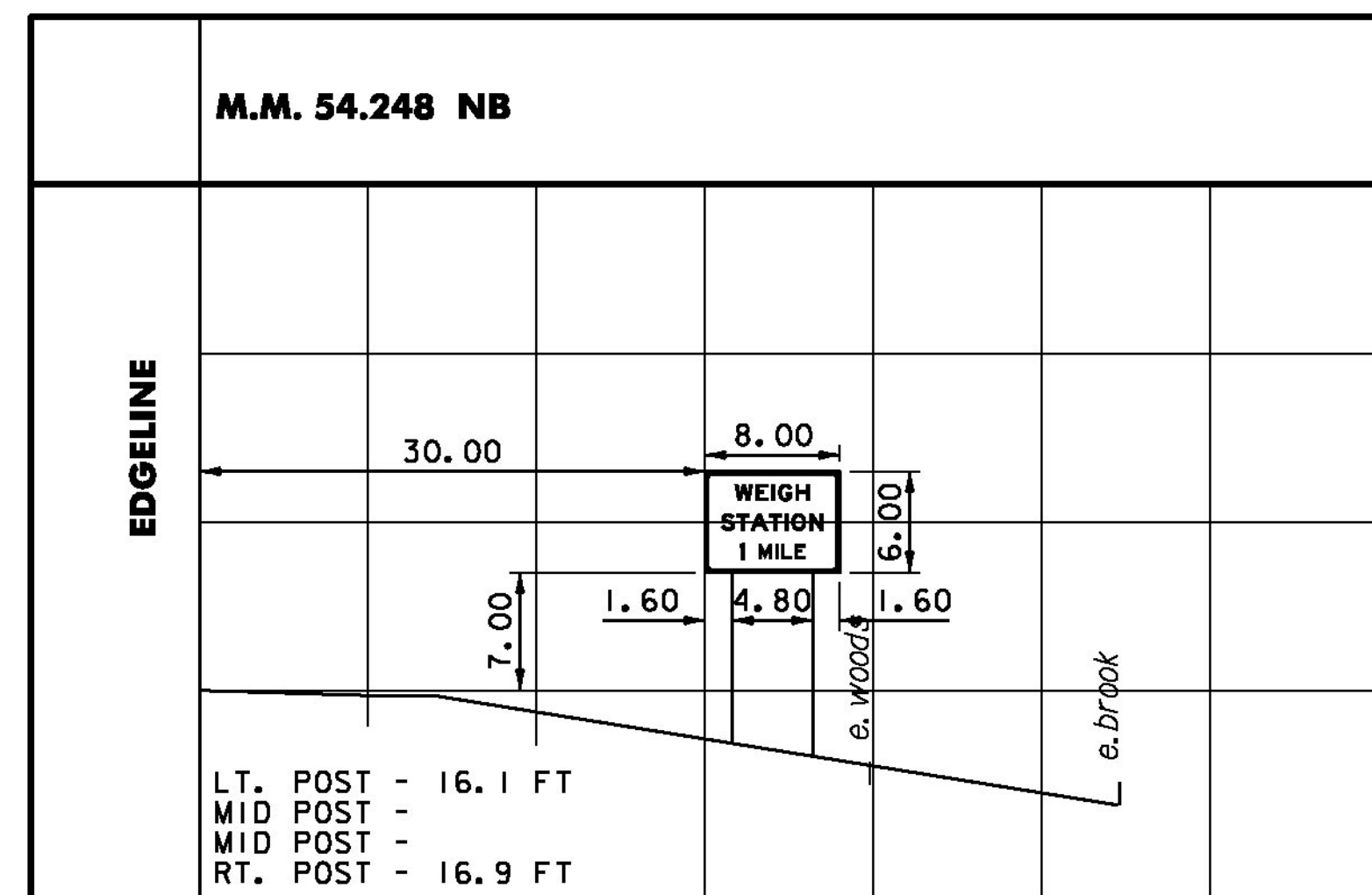
**PROPOSED**

CONTRACTOR SHALL ADJUST  
LOCATIONS OF SIGNS AS  
NECESSARY TO AVOID EXISTING  
MASSDOT ITS INFRASTRUCTURE

MM 01.500



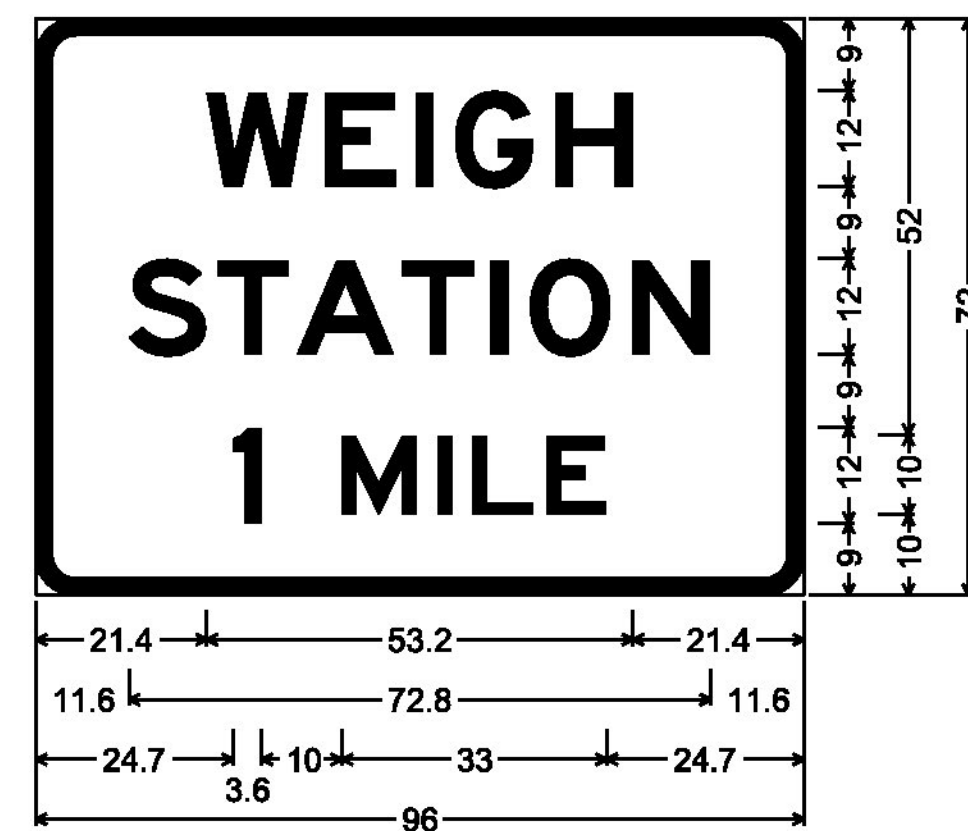
MM 1.218  
EXIST. PULLOFF  
MM 1.320



**M.M. 54.800 NB  
NO SECTION AS GROUND  
ASSUMED TO BE FLAT.**

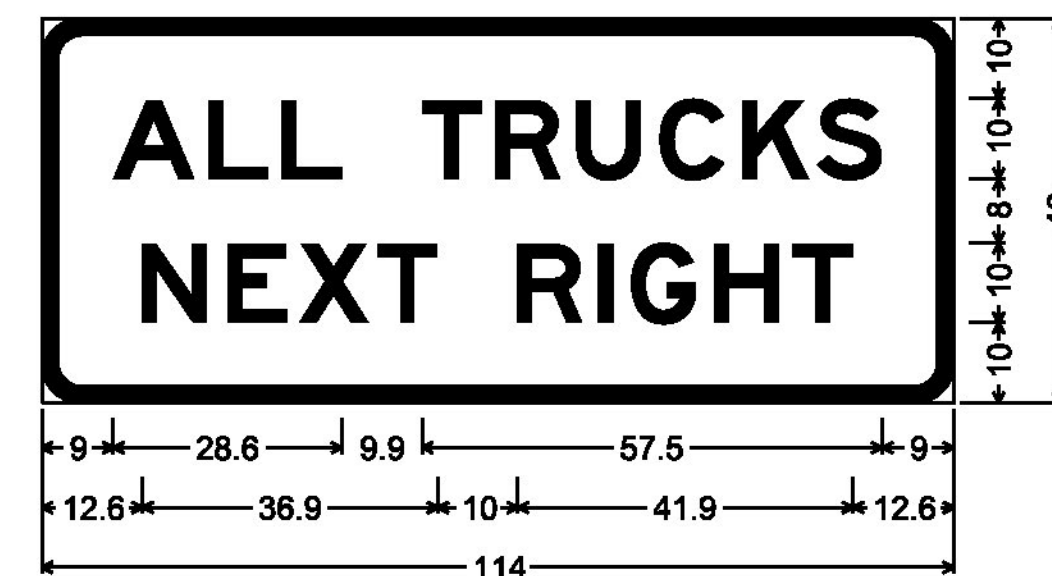
PROJECT NAME: GUILFORD	PLOT DATE: 22-JUL-2013
PROJECT NUMBER: IM-IR 091-1(25)	DRAWN BY: BEYOR
FILE NAME: D9IA222_TRF.dgn	CHECKED BY: BOMBARDIER
DESIGNED BY: BEYOR	SHEET 37 OF 46
INTERSTATE SIGNING #1	

(MASS.)MM 54.248 NB



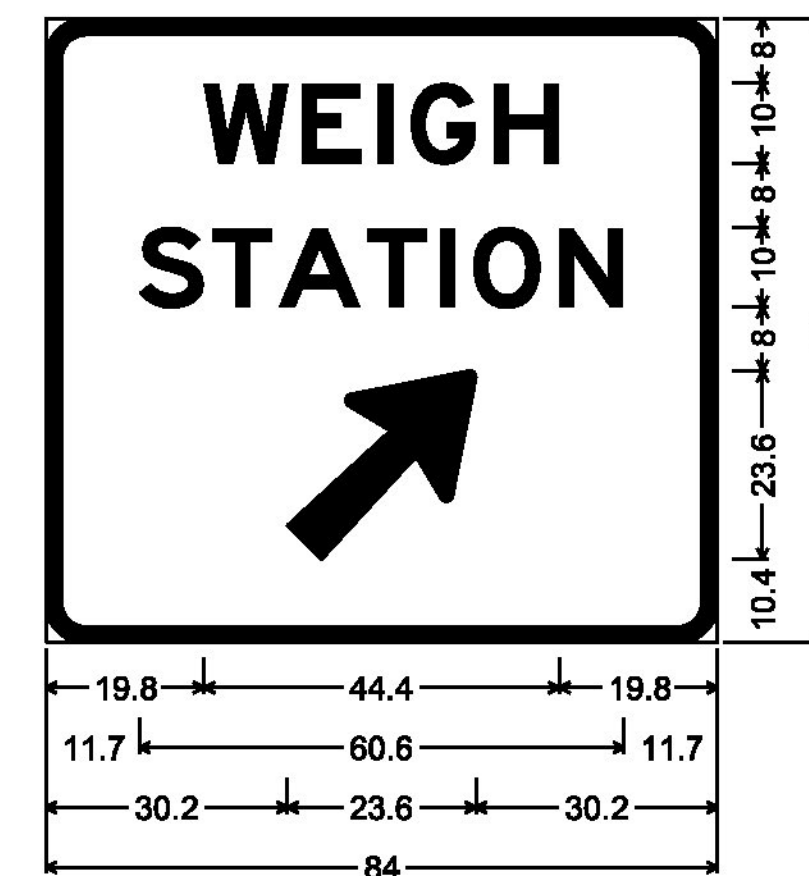
5.0" Radius, 2.0" Border, White on Green;  
[WEIGH] E 2K; [STATION] E 2K; [1] E 2K;  
[MILE] E 2K;

(MASS.)MM 54.435 NB

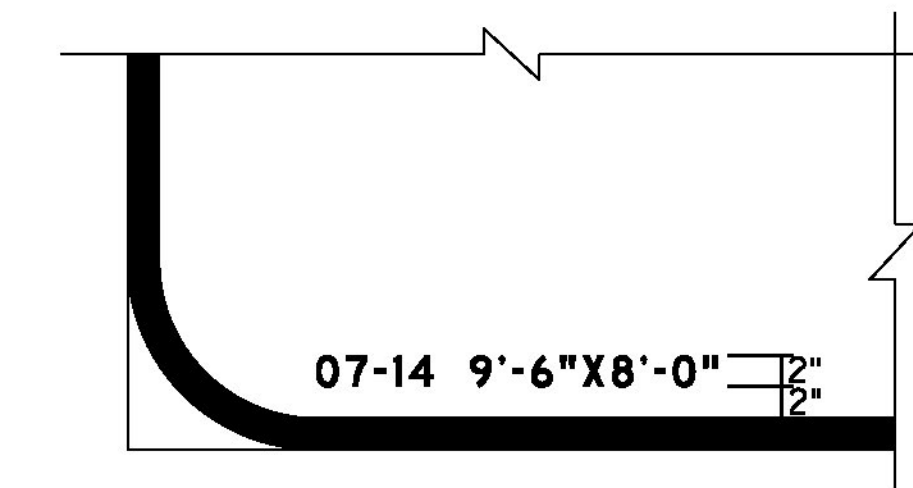


5.0" Radius, 2.0" Border, White on Black;  
[ALL TRUCKS] E 2K; [NEXT RIGHT] E 2K;

MM 0.237 NB



5.0" Radius, 2.0" Border, White on Green;  
[WEIGH] E 2K; [STATION] E 2K;  
Arrow 133 - 30.0" 45°;

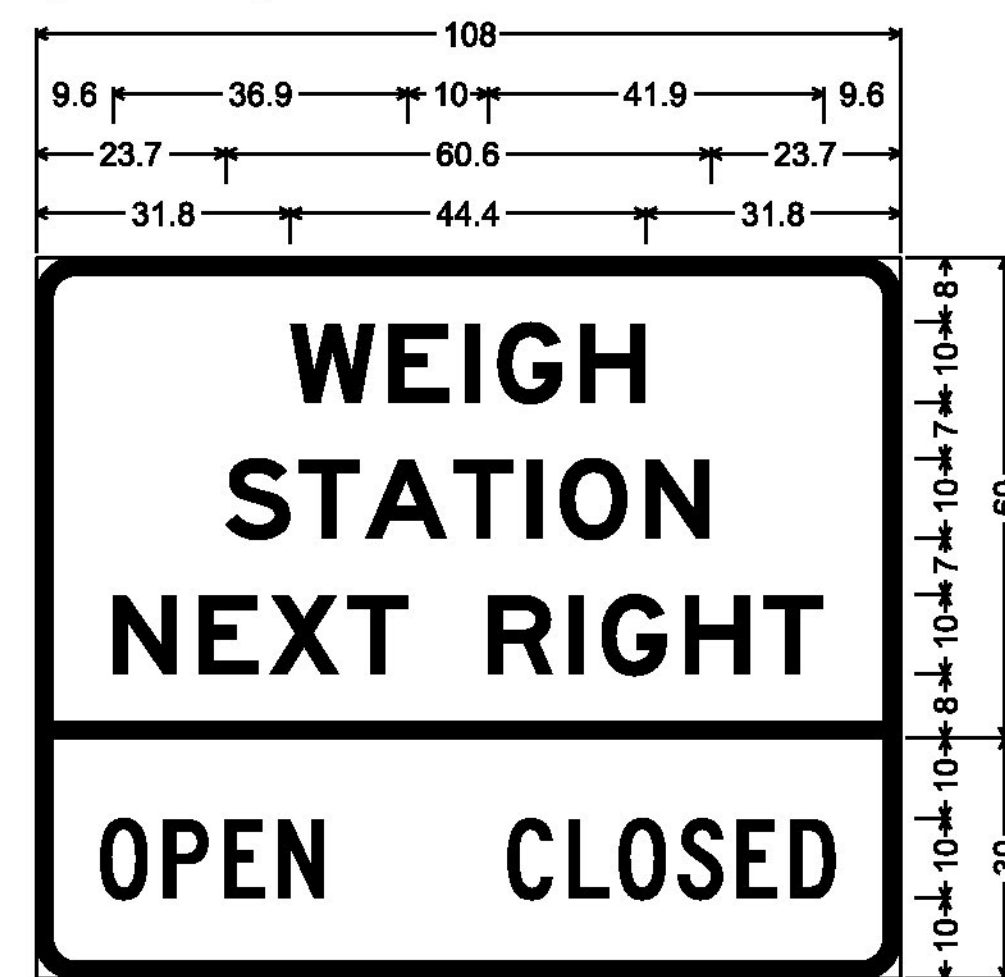


**SIGN INFORMATION DETAIL**

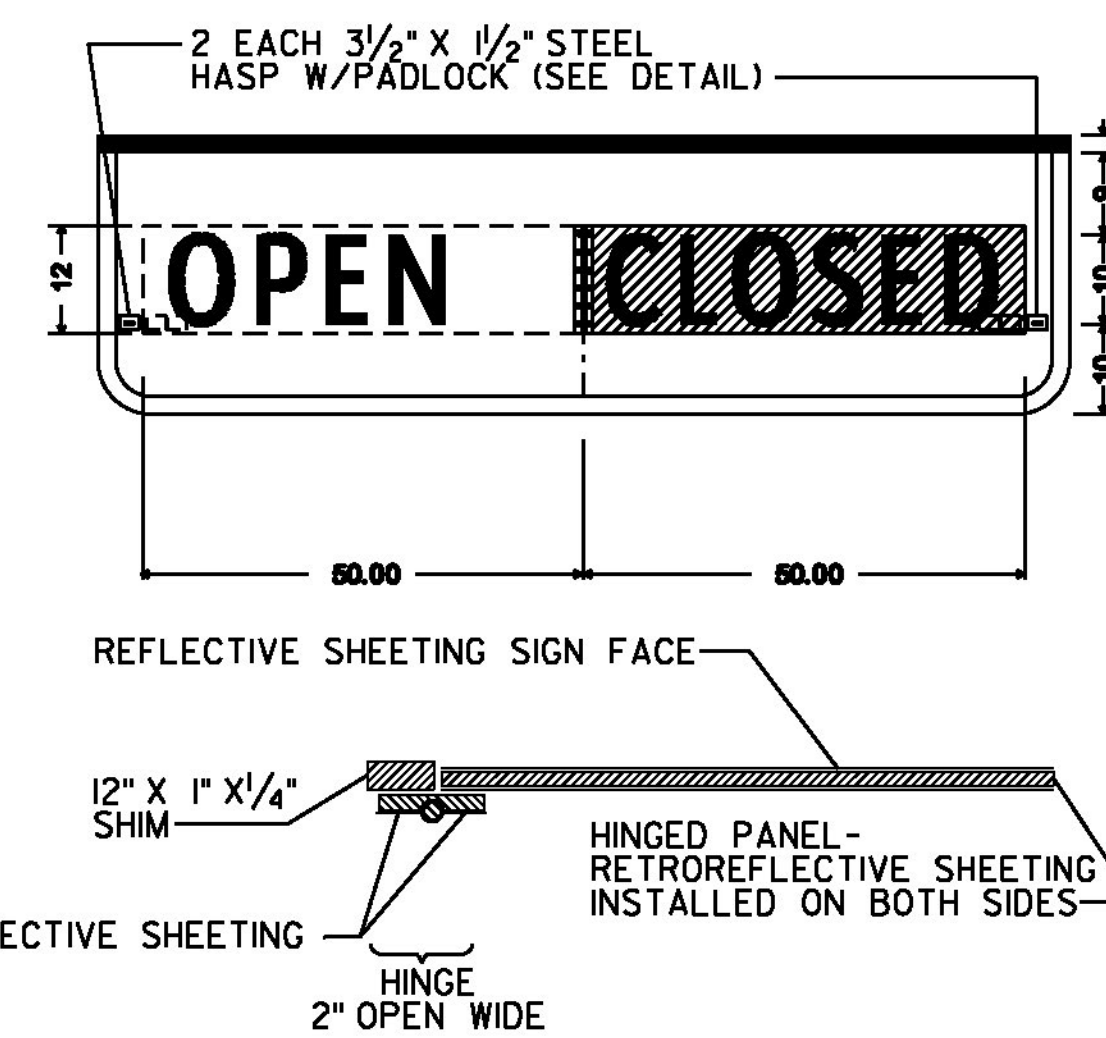
**NOTES:**

1. ALL TYPE B SIGNS SHALL HAVE THE DATE OF MANUFACTURE AND SIGN DIMENSIONS PLACED IN THE LOWER LEFT CORNER OF THE SIGN.
2. DATE SHALL BE FORMATTED TO MONTH-YEAR (MM-YY). DIMENSIONS SHALL BE IN FEET-INCHES.
3. LETTERS AND NUMBERS SHALL BE 2 IN. (50 MM) NON-REFLECTIVE WHITE MATERIAL.
4. APPLICATION OF COPY FOR TYPE B SIGNS SHALL BE CUT-OUT OR SILK SCREENED AS SPECIFIED BY THE SHEETING MANUFACTURER. NON-ADHESIVE CUT-OUT COPY SHALL BE BONDED TO THE SIGN SURFACE BY THE HEAT VACUUM APPLICATOR METHOD.

(MASS.)MM 54.800 NB

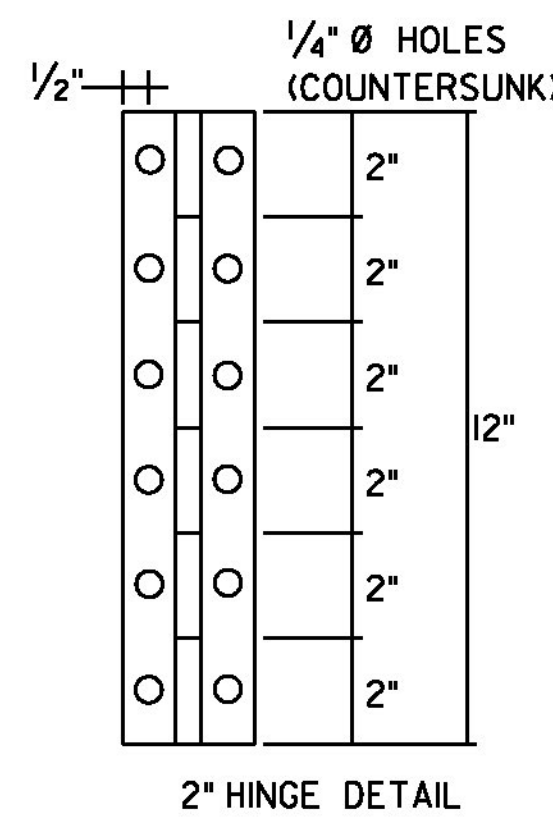
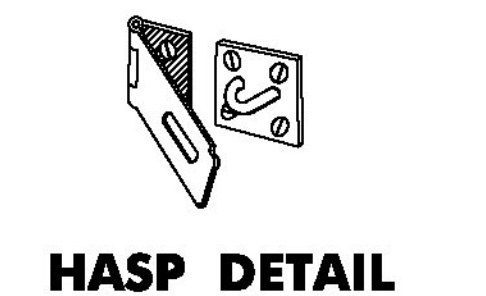


5.0" Radius, 2.0" Border, White on Green;  
[WEIGH] E 2K; [STATION] E 2K;  
[NEXT RIGHT] E 2K;  
5.0" Radius, 2.0" Border, White on Green;  
[OPEN] C 2K; [CLOSED] C 2K;



**HINGED PANEL DETAIL**  
NOT TO SCALE

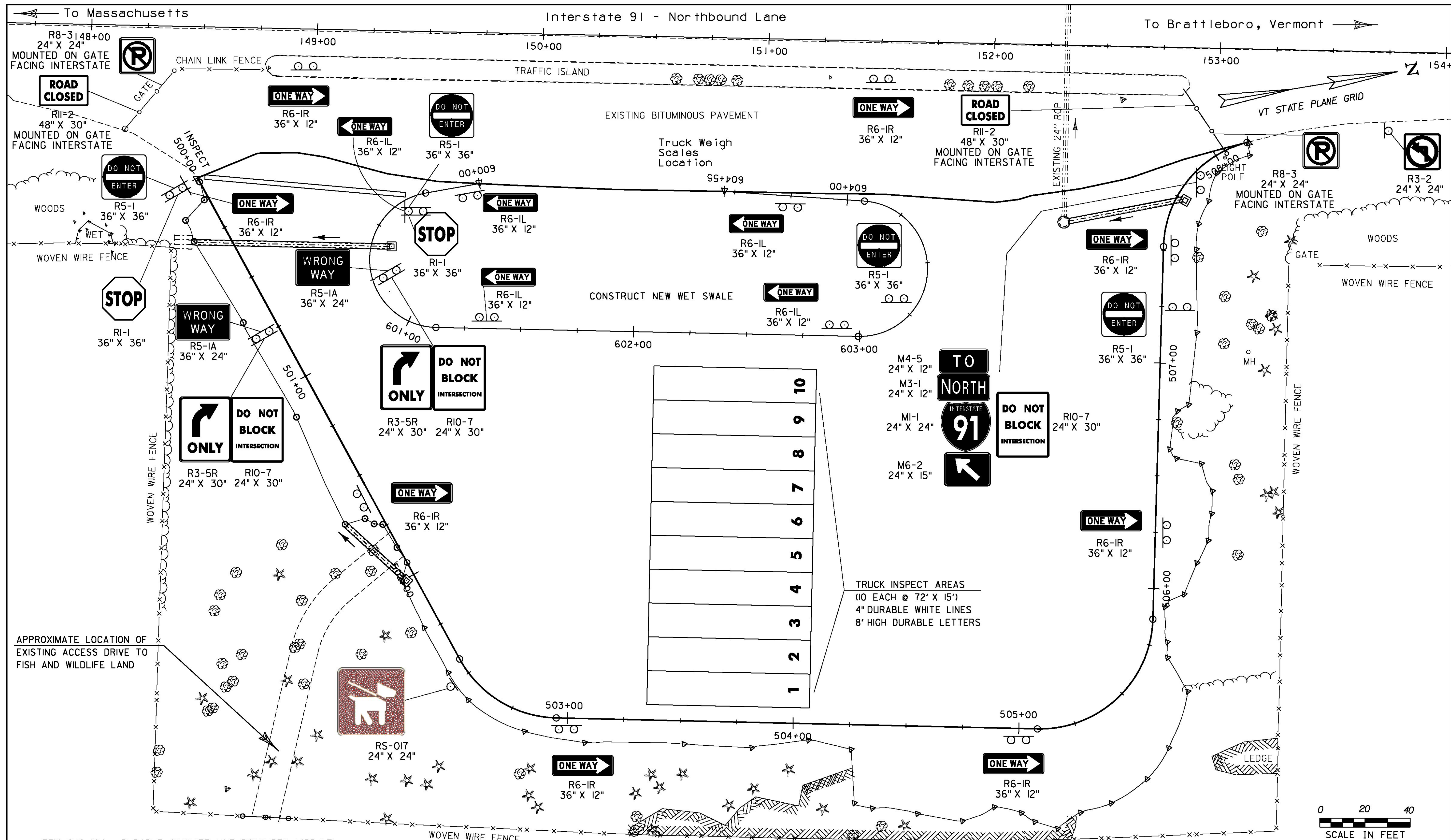
THE CENTRALLY HINGED PANEL TO HAVE THE WORD "OPEN" DISPLAYED WHEN SWUNG TO THE RIGHT AND "CLOSED" DISPLAYED WHEN SWUNG TO THE LEFT ON THE PARENT SIGN. FURNISH AND MOUNT STAINLESS STEEL RETAINERS TO SECURE THE PANEL IN EITHER POSITION. PANEL POSITION WILL BE CHANGED FROM THE GROUND WITH A POLE. HINGE TO BE COVERED WITH SAME RETROREFLECTIVE MATERIAL AS MAIN SIGN. ADJUST LETTER TO LETTER SPACING TO CLEAR HINGE IF NECESSARY.



**GENERAL SIGN DETAIL NOTES**

1. THE NOTE BELOW EACH SIGN DETAIL INCLUDES THE CORNER RADII, BORDER WIDTH, TEXT COLOR, BACKGROUND COLOR AND TEXT SERIES TO BE USED.
2. COLORS: UNLESS NOTED OTHERWISE, WHITE ON GREEN AND WHITE ON BLUE SIGNIFIES WHITE ASTM D4956 TYPE IX RETROREFLECTIVE LEGEND AND BORDER ON GREEN OR BLUE ASTM D 4956 TYPE III RETROREFLECTIVE BACKGROUND. BLACK ON YELLOW AND BLACK ON WHITE SIGNIFIES BLACK LEGEND AND BORDER ON YELLOW OR WHITE ASTM D 4956 TYPE III (MINIMUM) RETROREFLECTIVE BACKGROUND. ALL COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY AASHTO AND APPROVED BY FHWA.
3. TEXT LAYOUT DIMENSIONS ARE BASED ON THE STANDARD ALPHABETS SPACING CHARTS FOUND IN THE LATEST MUTCD STANDARD HIGHWAY SIGNS PUBLICATION. MINOR VARIATIONS IN TEXT DIMENSIONS ARE ACCEPTABLE BASED ON INDIVIDUAL MANUFACTURER'S LETTER FABRICATION. SIGNIFICANT CHANGES WHICH AFFECT SIGN APPEARANCE SHALL BE BROUGHT TO THE ATTENTION OF THE VTRANS' HIGHWAY SAFETY AND DESIGN SECTION BEFORE FABRICATION.
4. THE NOTE BELOW EACH GUIDE SIGN DETAIL SPECIFIES APPROPRIATE ARROW LENGTHS WHEN APPLICABLE. FOR ARROW DIMENSIONS REFER TO GUIDE SIGN ARROW DETAILS IN THE LATEST MUTCD STANDARD HIGHWAY SIGNS PUBLICATION.
5. ALL DIMENSIONS SHOWN IN INCHES UNLESS NOTED OTHERWISE.

PROJECT NAME: GUILFORD	PLOT DATE: 22-JUL-2013
PROJECT NUMBER: IM-IR 091-1(25)	DRAWN BY: BEYOR
FILE NAME: D9IA222_TRF.dgn	CHECKED BY: BOMBARDIER
PROJECT LEADER: LIBBY	SHEET 38 OF 46
DESIGNED BY: BEYOR	
INTERSTATE SIGNING #2	



ITEM 646.404 - DURABLE 4" WHITE LINE, POLYUREA (455 LF)  
 SWALE 600+00 RT - 604+55 RT  
 TRUCK INSPECTION AREA (10 EACH @ 72' X 15')

ITEM 646.414 - DURABLE 4" YELLOW LINE, POLYUREA (815 LF)  
 INSPECT 500+00 RT - 508+15 RT

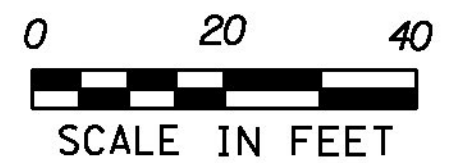
ITEM 646.484 - 24" STOP BAR, POLYUREA (90 LF)  
 INSPECT 500+00 LT - SWALE 600+30 RT

ITEM 646.494 - DURABLE LETTER OR SYMBOL, POLYUREA (8' TALL)  
 I-91 151+14 (289' RT) TO I-91 151+14 (289' RT) (11 EACH)

PROJECT NAME: GUILFORD  
 PROJECT NUMBER: IM-IR 091-I(25)

FILE NAME: D91A222_TRF.DGN  
 PROJECT LEADER: LIBBY  
 DESIGNED BY: BEYOR  
 TRAFFIC SIGNS AND MARKINGS

PLOT DATE: 22-JUL-2013  
 DRAWN BY: BEYOR  
 CHECKED BY: BOMBARDIER  
 SHEET 39 OF 46












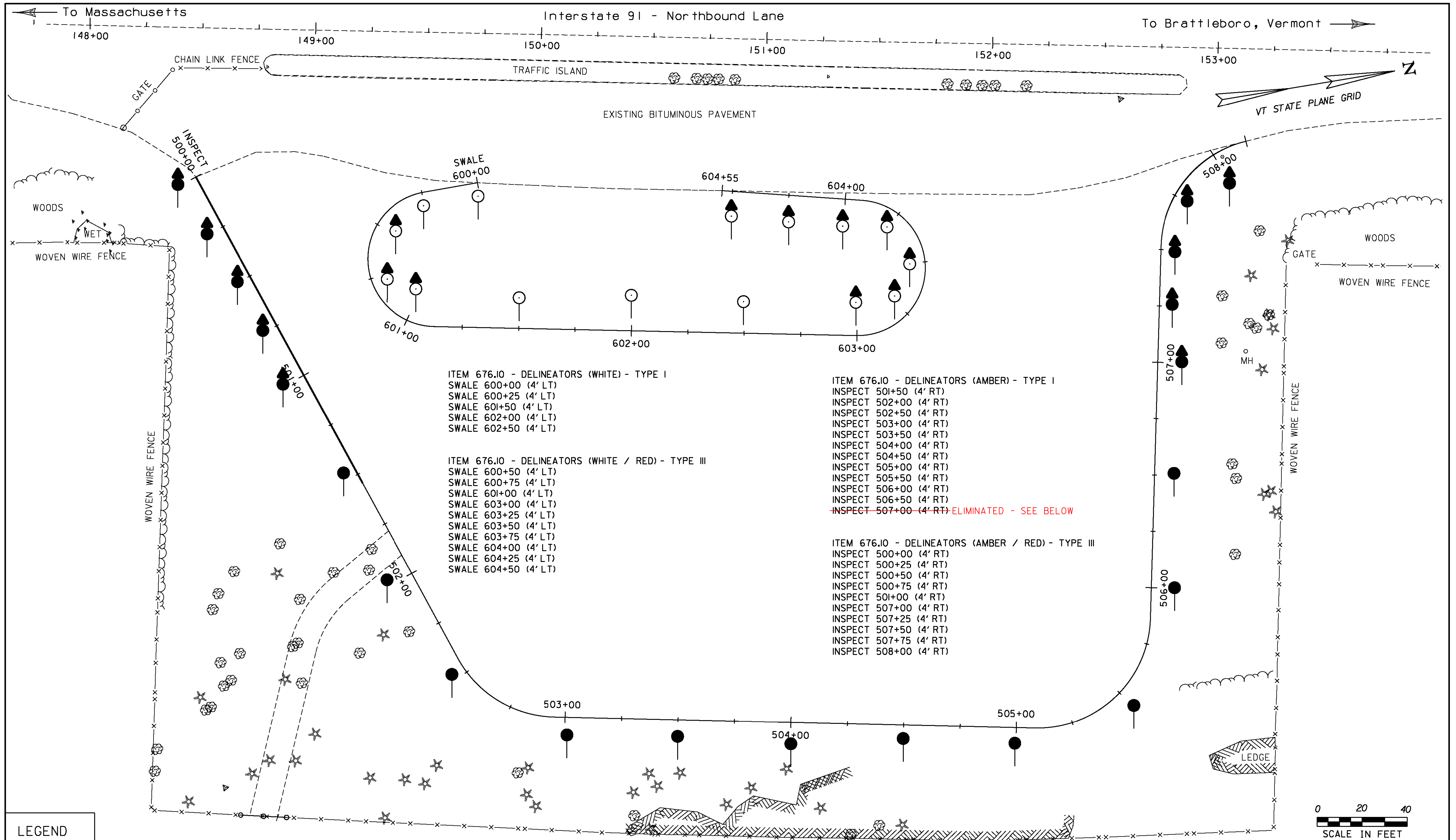




# TRAFFIC SIGN SUMMARY SHEET

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NO. OF POST	NEW SIGN POSTS																REMARKS	SIGN DETAIL					
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			TUBULAR ALUMINUM Ø (IN) (LB / FT)			TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL (FTG. SIZE)		WEIGHT		POST SIZE	SIGN FRAME REQUIRED	DETAIL ON SHEET NUMBER	STANDARD SHEET NUMBER		
												1.12	2.00	3.00	1.75	2.00	2.50	3.00	4.00	4.0 MOD	3.00	4.00	4.00	5.00	24"	30"								
												1.30	1.70	1.70	ANCHOR	SLEEVE	FOUNDATION	7.60	9.00	10.80	14.60													
<b>OPTION ITEMS</b>																																		
INSPECT 507+25 (8' RT)		1	36	36	9						2																		R5-1	SHSM				
INSPECT 507+50 (5' RT)		1	36	12	3						2																		R6-1R	SHSM				
INSPECT 507+85 (5' RT)		1	24	12	2						1																		M4-5	(WHITE ON BLUE)	SHSM			
INSPECT 507+85 (5' RT)		1	24	12	2						—																			M3-1	(WHITE ON BLUE)	SHSM		
INSPECT 507+85 (5' RT)		1	24	24	4						—																			M1-1		SHSM		
INSPECT 507+85 (5' RT)		1	24	15	2.50						—																			M6-2	(WHITE ON BLUE)	SHSM		
INSPECT 507+85 (5' RT)		1	24	30	5						1																			R10-7		SHSM		





ITEM 676.10 - DELINEATORS (WHITE) - TYPE I  
 SWALE 600+00 (4' LT)  
 SWALE 600+25 (4' LT)  
 SWALE 601+50 (4' LT)  
 SWALE 602+00 (4' LT)  
 SWALE 602+50 (4' LT)

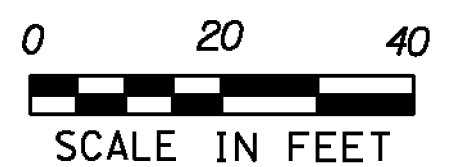
ITEM 676.10 - DELINEATORS (WHITE / RED) - TYPE III  
 SWALE 600+50 (4' LT)  
 SWALE 600+75 (4' LT)  
 SWALE 601+00 (4' LT)  
 SWALE 603+00 (4' LT)  
 SWALE 603+25 (4' LT)  
 SWALE 603+50 (4' LT)  
 SWALE 603+75 (4' LT)  
 SWALE 604+00 (4' LT)  
 SWALE 604+25 (4' LT)  
 SWALE 604+50 (4' LT)

ITEM 676.10 - DELINEATORS (AMBER) - TYPE I  
 INSPECT 501+50 (4' RT)  
 INSPECT 502+00 (4' RT)  
 INSPECT 502+50 (4' RT)  
 INSPECT 503+00 (4' RT)  
 INSPECT 503+50 (4' RT)  
 INSPECT 504+00 (4' RT)  
 INSPECT 504+50 (4' RT)  
 INSPECT 505+00 (4' RT)  
 INSPECT 505+50 (4' RT)  
 INSPECT 506+00 (4' RT)  
 INSPECT 506+50 (4' RT)  
~~INSPECT 507+00 (4' RT) ELIMINATED - SEE BELOW~~

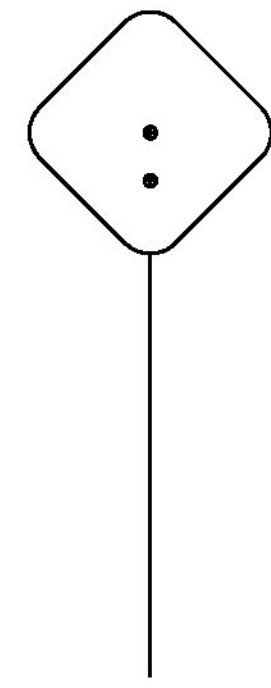
ITEM 676.10 - DELINEATORS (AMBER / RED) - TYPE III  
 INSPECT 500+00 (4' RT)  
 INSPECT 500+25 (4' RT)  
 INSPECT 500+50 (4' RT)  
 INSPECT 500+75 (4' RT)  
 INSPECT 501+00 (4' RT)  
 INSPECT 507+00 (4' RT)  
 INSPECT 507+25 (4' RT)  
 INSPECT 507+50 (4' RT)  
 INSPECT 507+75 (4' RT)  
 INSPECT 508+00 (4' RT)

LEGEND

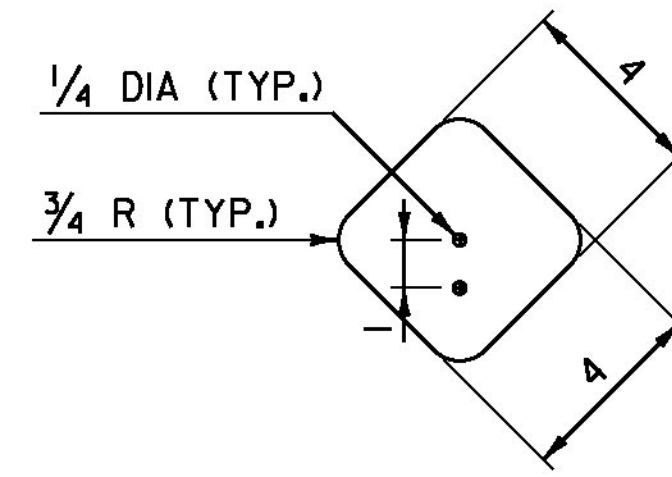
- DELINEATORS (WHITE) - TYPE I
- DELINEATORS (AMBER) - TYPE I
- DELINEATORS (WHITE / RED) - TYPE III
- DELINEATORS (AMBER / RED) - TYPE III



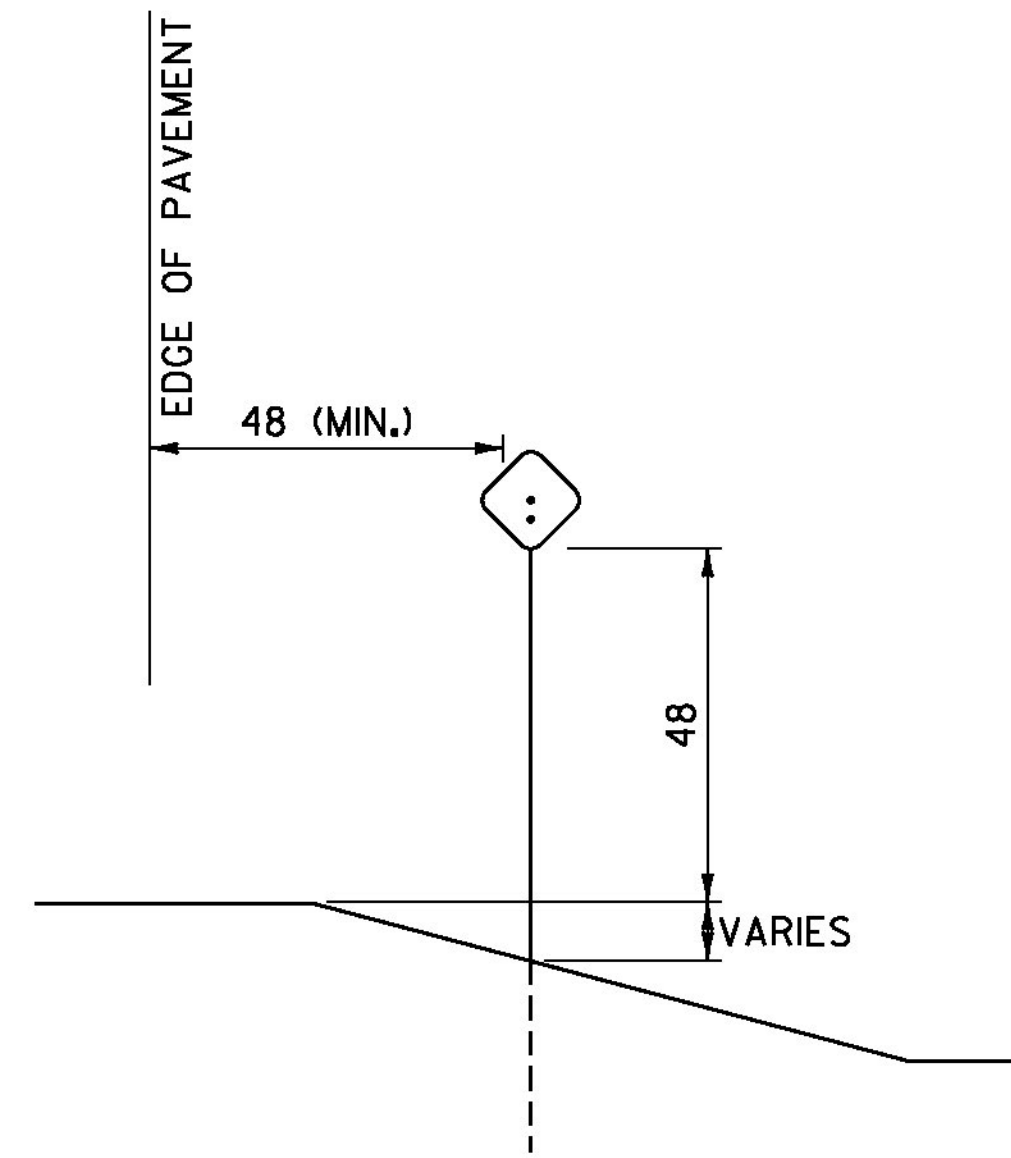
PROJECT NAME: GUILFORD	
PROJECT NUMBER: IM-IR 091-I(25)	
FILE NAME: D9IA222_TRF.dgn	PLOT DATE: 22-JUL-2013
PROJECT LEADER: LIBBY	DRAWN BY: BEYOR
DESIGNED BY: BEYOR	CHECKED BY: BOMBARDIER
DELINEATOR SHEET I	SHEET 45 OF 46



**TYPE I**



**TYPE I DELINEATOR**



**INSTALLATION DETAIL**

**GENERAL NOTES:**

1. THE INTERSTATE MILEPOST PLAQUE AND DELINEATOR BASE MATERIAL SHALL BE 0.063 INCH FLAT SHEET ALUMINUM.  
  
CORNERS SHALL BE ROUNDED TO A 1/2 INCH RADIUS UNLESS OTHERWISE NOTED.
2. A TYPE III DELINEATOR CONSISTS OF A TYPE I DELINEATOR FACING THE NORMAL DIRECTION OF TRAVEL AND A SINGLE RED TYPE I DELINEATOR FACING THE OPPOSITE DIRECTION. THE WHITE DELINEATOR AND RED DELINEATOR COMBINATION IS PLACED ON THE DRIVER'S RIGHT AND THE AMBER DELINEATOR AND RED DELINEATOR COMBINATION ON THE DRIVER'S LEFT.
3. DELINEATORS SHALL HAVE WHITE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D4956 TYPE III, OR RED OR YELLOW RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D 4956 TYPE VII, VIII, OR IX.  
  
A SINGLE 14 GAGE, 1.75 INCH SQUARE STEEL POST AND 12 GAGE, TWO INCH SQUARE ANCHOR SHALL BE USED FOR INSTALLATION. THE ANCHOR SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
4. THE TOP OF POST SHALL BE ONE INCH ABOVE THE UPPER HOLE FOR ALL TYPE I DELINEATORS.
5. ALL DIMENSIONS SHOWN IN INCHES.

PROJECT NAME: GUILFORD	
PROJECT NUMBER: IM-IR 091-1(25)	
FILE NAME: D9IA222_TRF.dgn	PLOT DATE: 22-JUL-2013
PROJECT LEADER: LIBBY	DRAWN BY: BEYOR
DESIGNED BY: BEYOR	CHECKED BY: BOMBARDIER
DELINEATOR SHEET 2	SHEET 46 OF 46