

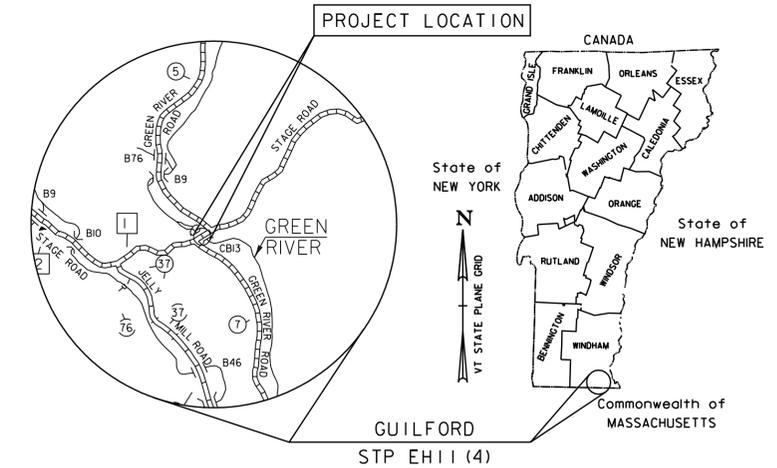
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TOWN OF GUILFORD  
WINDHAM COUNTY  
VERMONT



PROPOSED IMPROVEMENT  
BRIDGE PROJECT  
GUILFORD STP EH11(4)  
GREEN RIVER COVERED BRIDGE  
BRIDGE NO. 13



PROJECT LOCATION: ON T.H. NO. 1 BEGINNING APPROXIMATELY 30 FEET EAST OF ITS INTERSECTION WITH T.H. NO. 7 AND EXTENDING EASTERLY FOR 240 FEET.

PROJECT DESCRIPTION: REHABILITATION OF THE GREEN RIVER COVERED BRIDGE CONSISTS OF REPAIRS TO THE TRUSSES TO CORRECT THE RACK AND SWEEP, REPAIRS OR REPLACEMENTS OF THE DETERIORATED BRIDGE MEMBERS, REPLACEMENT OF THE EXISTING ROOF WITH STANDING SEAM METAL ROOF, SUBSTRUCTURE REPAIRS, APPLICATION OF FIRE RETARDANT, INSECTICIDE AND FUNGICIDE COATINGS TO ALL WOOD SURFACES AND INSTALLATION OF NEW STEEL BACKED TIMBER GUARDRAIL.

STANDARDS LIST

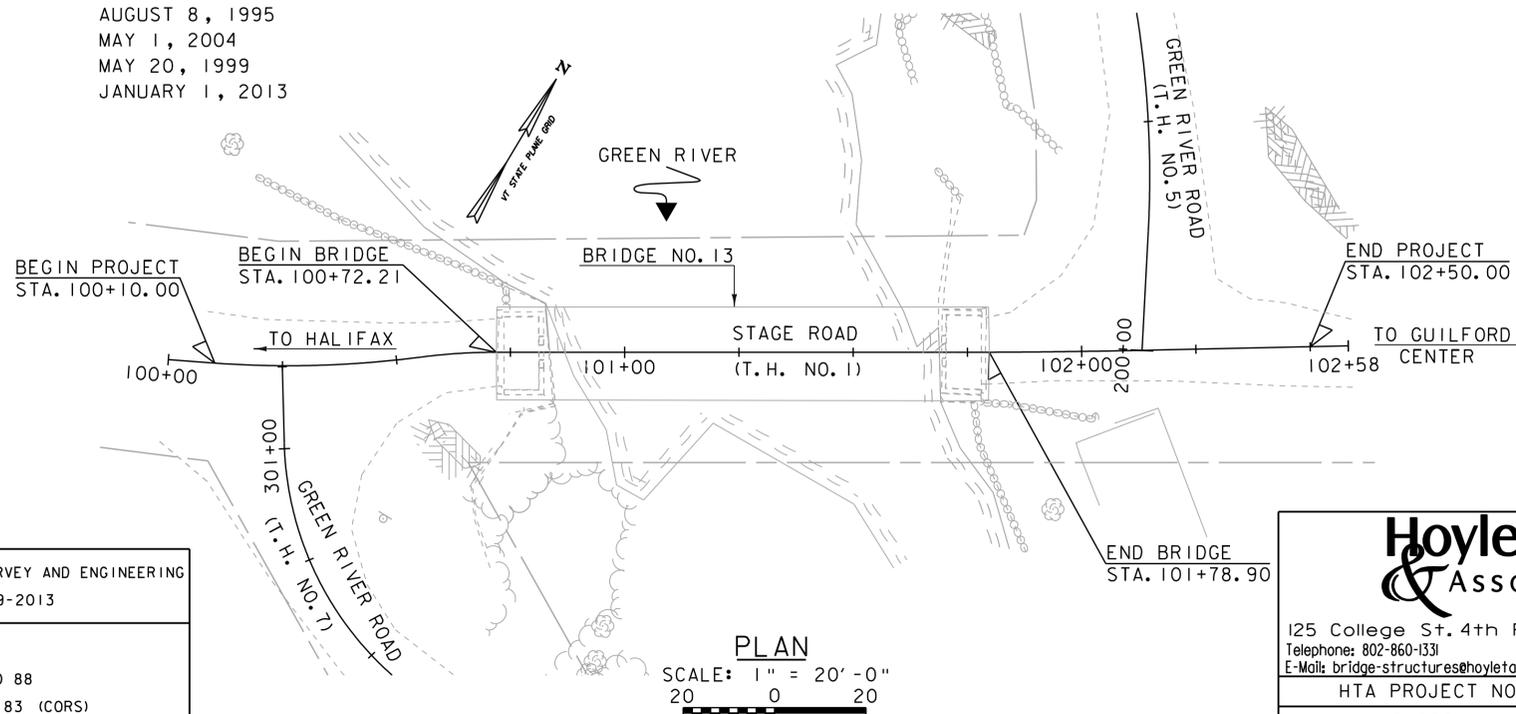
D-1	PRECAST REINFORCED CONCRETE DROP INLET DETAILS	JUNE 1, 1994
D-4	VARIOUS DRAWING DETAILS	AUGUST 13, 2007
D-11	STEEL OR IRON GRATES AND COVERS (TYPE A)	JUNE 1, 1994
D-13	CONCRETE CATCH BASIN	JANUARY 3, 2000
E-121	STANDARD SIGN PLACEMENT-CONVENTIONAL ROAD	AUGUST 8, 1995
E-155	WARNING SIGN DETAILS	MAY 1, 2004
E-160	FLANGED CHANNEL STEEL SIGN POST	MAY 20, 1999
T-45	SQUARE TUBE SIGN POST AND ANCHOR	JANUARY 1, 2013

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 : VT SURVEY AND ENGINEERING  
SURVEYED DATE : 9-9-2013

DATUM  
VERTICAL NAVD 88  
HORIZONTAL NAD 83 (CORS)



PLAN

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

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 VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

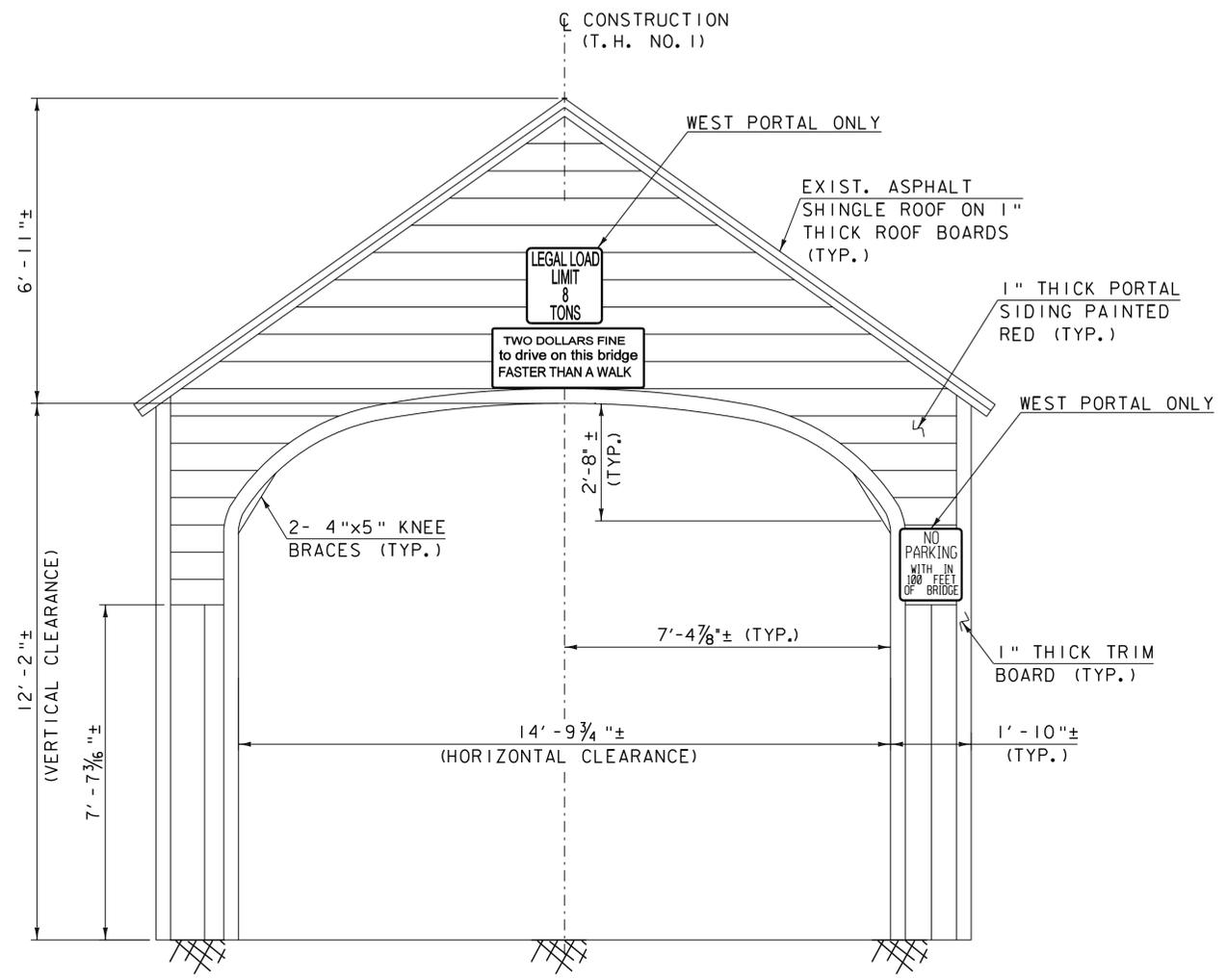
**Hoyle, Tanner & Associates, Inc.**  
125 College St. 4th Floor Burlington, VT 05401  
Telephone: 802-860-1331 Fax: 802-860-6499  
E-Mail: bridge-structures@hoyletanner.com Web Page: www.hoyletanner.com

HTA PROJECT NO.	MODEL
919201	919201FSC

PROJECT MANAGER : S. GURLEY

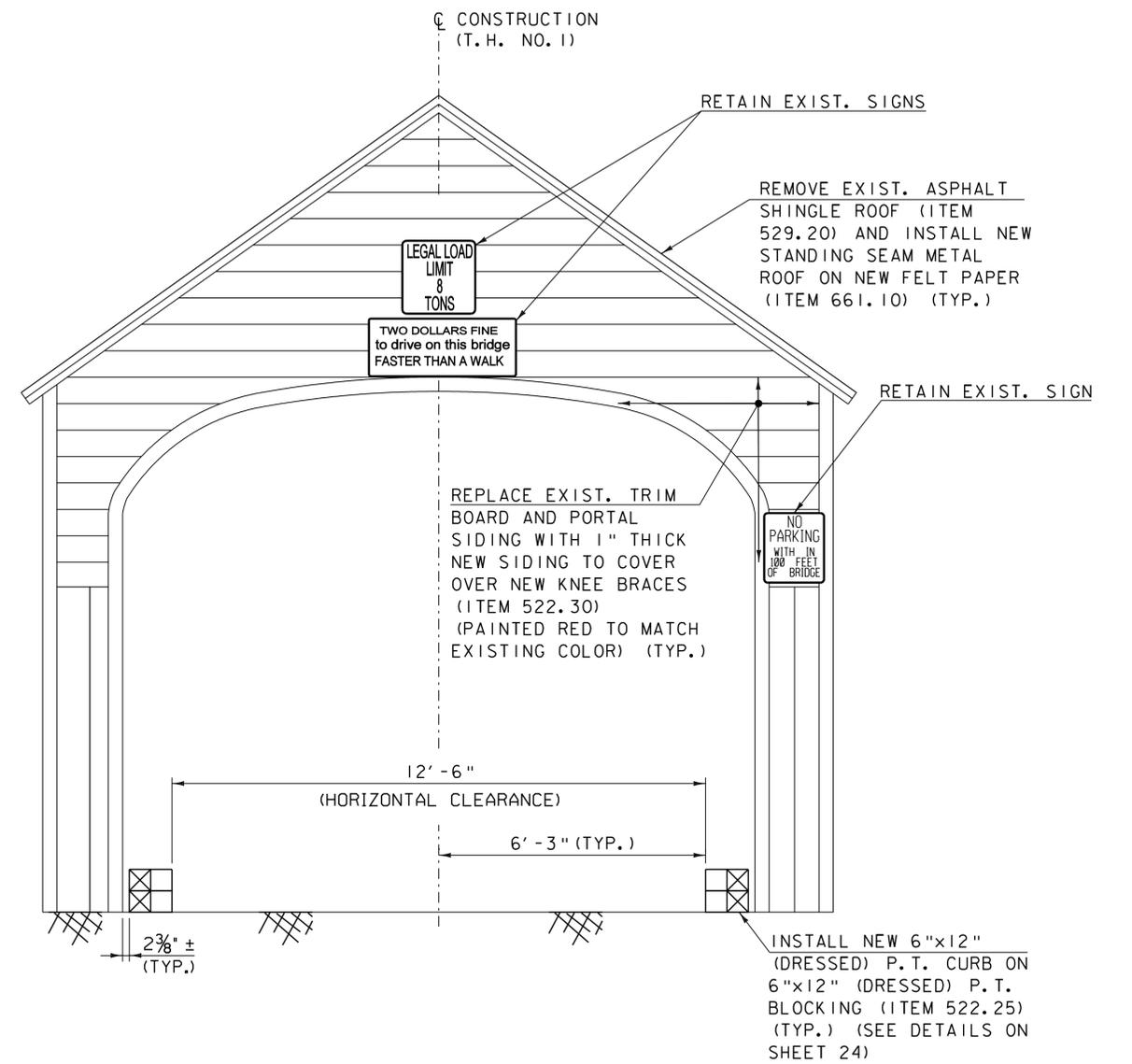
PROJECT NAME : GUILFORD  
PROJECT NUMBER : STP EH11(4)

SHEET 1 OF 32 SHEETS



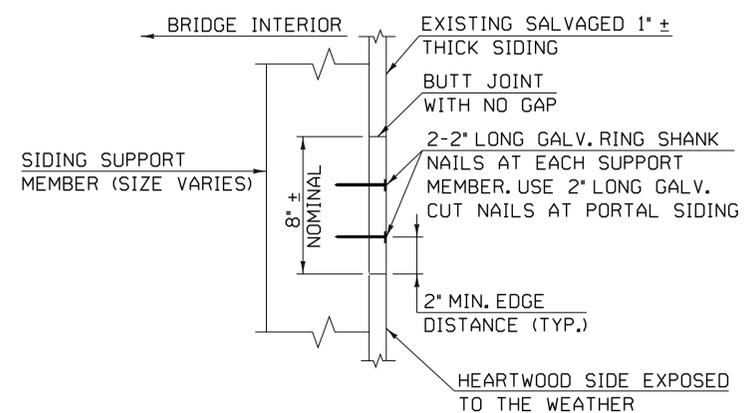
**EXISTING PORTAL SECTION**  
(WEST PORTAL SHOWN, EAST PORTAL SIMILAR)  
SCALE: 1/2" = 1'-0"

NOTE: DIMENSIONS OF TIMBER AND LUMBER MEMBERS SHOWN ON THESE PLANS ARE THE ACTUAL SIZES UNLESS OTHERWISE NOTED.

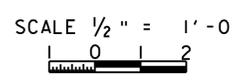


**PROPOSED PORTAL SECTION**  
(WEST PORTAL SHOWN, EAST PORTAL SIMILAR)  
SCALE: 1/2" = 1'-0"

**PLAN NOTE:**  
1. DIMENSIONS SHOWN IN THE EXISTING PORTAL ELEVATION SHALL BE MAINTAINED EXCEPT WHERE NOTED OTHERWISE IN THE PROPOSED PORTAL ELEVATION.



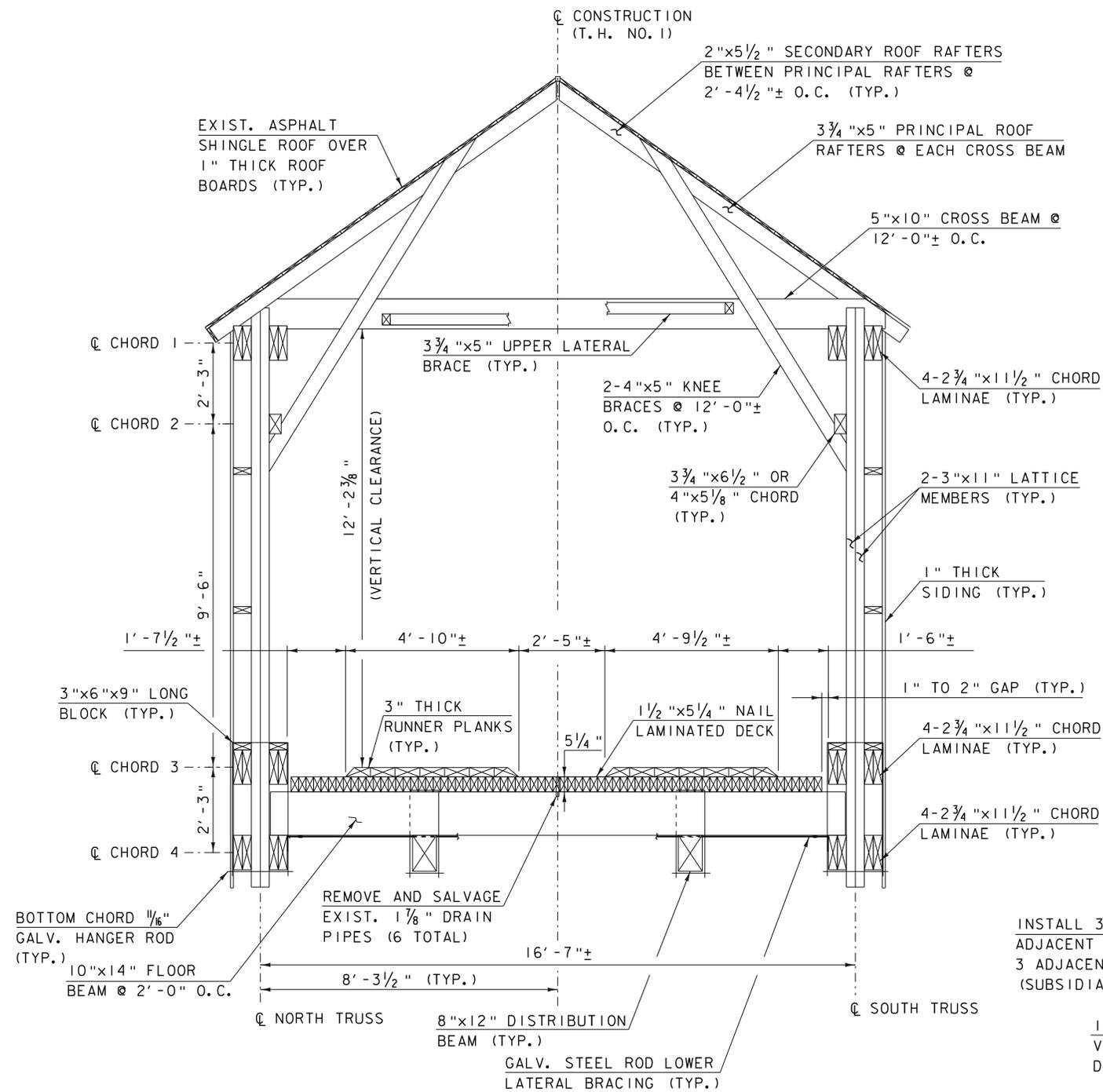
**SIDING DETAIL**  
(PLAN VIEW)  
NOT TO SCALE



**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 91920I	MODEL 91920ISUP1
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PROJECT NAME: GUILFORD	PLOT DATE: 6/6/2014
PROJECT NUMBER: STP EHII(4)	DRAWN BY: J.B.McQUAID
FILE NAME: 91920Isup1.dgn	CHECKED BY: S.T.JAMES
PROJECT LEADER: S.GURLEY	
DESIGNED BY: J.BICJA	
<b>EXIST. AND PROP. PORTAL TYPICAL SECTIONS SHEET 2 OF 32</b>	



**EXISTING TYPICAL SECTION**  
SCALE: 1/2" = 1'-0"

**PLAN NOTES:**

1. APPLY CLEAR FIRE RETARDANT AND INSECTICIDE/FUNGICIDE TO WOODEN BRIDGE MEMBERS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION SECTION 660.
2. THE FOLLOWING MEMBERS ARE INCLUDED IN THE ESTIMATED LUMBER AND TIMBER QUANTITIES OF:

**A. ITEM 522.20, STRUCTURAL LUMBER AND TIMBER, UNTREATED:**

- CROSS BEAMS (0.285 MFBM)
- WOOD BLOCKS (0.075 MFBM)
- KNEE BRACES (0.133 MFBM)
- UPPER LATERAL BRACING (0.020 MFBM)
- LATTICE (0.099 MFBM)
- ROOF RAFTERS (0.140 MFBM)
- SILL PLATE (0.028 MFBM)
- VERTICAL POSTS (1.440 MFBM)

**B. ITEM 522.25, STRUCTURAL LUMBER AND TIMBER, TREATED:**

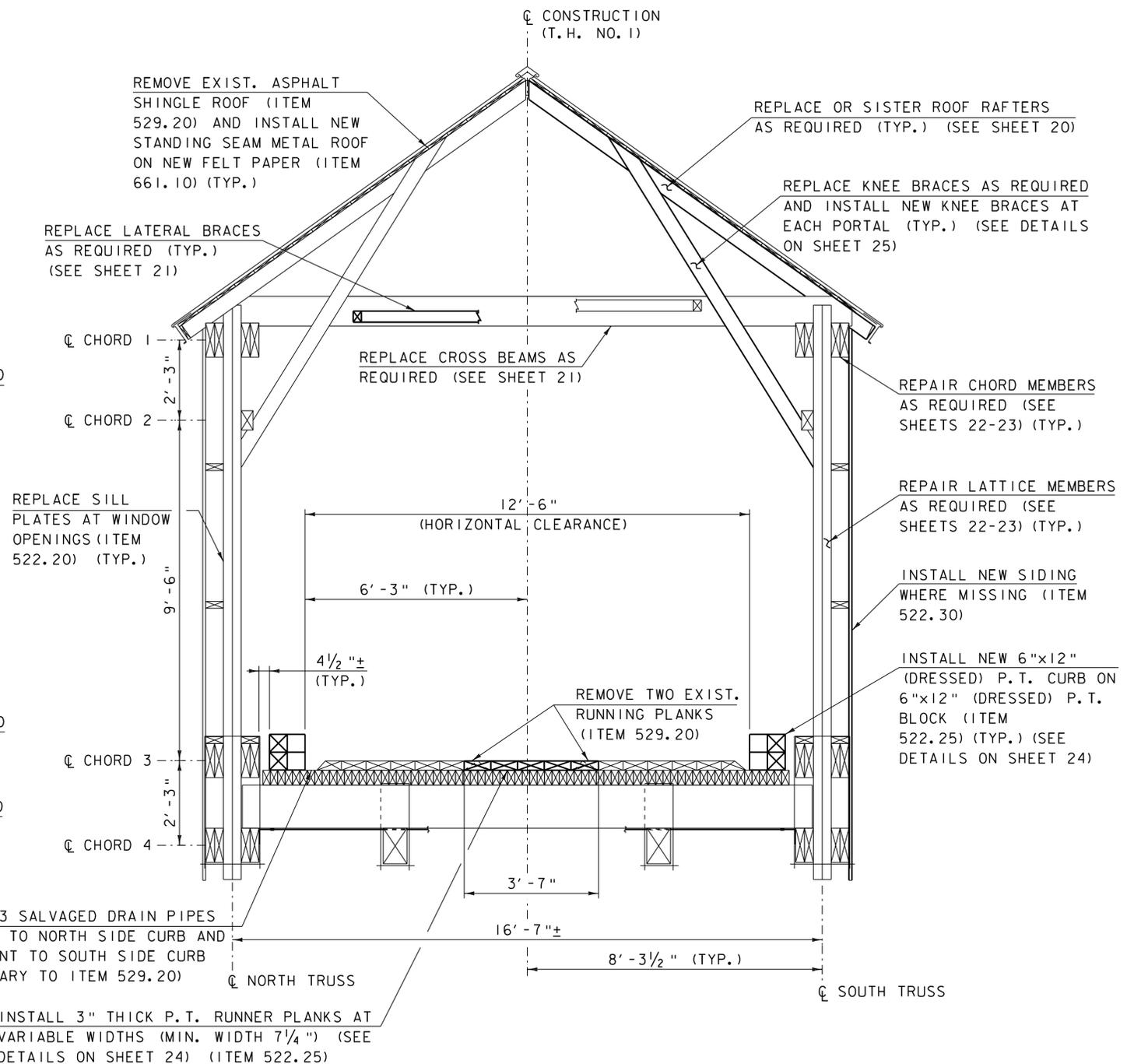
- CURB AND CURB BLOCKING (1.732 MFBM)
- RUNNER PLANKS (1.284 MFBM)

**C. ITEM 522.30, NON-STRUCTURAL LUMBER, UNTREATED:**

- ROOF BOARDS (0.389 MFBM)
- SIDING 0.570 MFBM)

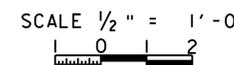
SEE WOOD NOTES ON SHEET 19 FOR MORE INFORMATION.

3. THE EXISTING BRIDGE IS RACKED UP TO 6"+ AND SHALL BE RESTORED TO A PLUMB AND TRUE CONDITION PRIOR TO COMPLETING OTHER BRIDGE WORK (COST INCLUDED IN ITEM 900.675). ONCE PLUMB AND SQUARE, SHIMMING WILL BE REQUIRED AT CROSS BEAMS AND KNEE BRACES TO MAINTAIN THE REALIGNED SHAPE.



**PROPOSED TYPICAL SECTION**  
SCALE: 1/2" = 1'-0"

NOTE: DIMENSIONS OF TIMBER AND LUMBER MEMBERS SHOWN ON THESE PLANS ARE THE ACTUAL SIZES UNLESS OTHERWISE NOTED.



**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201 MODEL 919201SUP2

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)  
FILE NAME: 919201sup2.dgn PLOT DATE: 6/6/2014  
PROJECT LEADER: S.GURLEY DRAWN BY: J.B.McQUAID  
DESIGNED BY: J.BICJA CHECKED BY: S.T.JAMES  
**EXIST. AND PROP. BRIDGE TYPICAL SECTIONS SHEET 3 OF 32**

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	EROSION CONTROL	BRIDGE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								50			50		CY	COMMON EXCAVATION	203.15				
								5			5		CY	EARTH BORROW	203.30				
								110			110		CY	TRENCH EXCAVATION OF EARTH	204.20				
								40			40		CY	TRENCH EXCAVATION OF ROCK	204.21				
								10			10		CY	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.26				
								40			40		TON	AGGREGATE SHOULDERS	402.12				
										1	1		LS	STRUCTURAL STEEL	506.75				
										2.3	2.3		MFBM	STRUCTURAL LUMBER AND TIMBER, UNTREATED	522.20				
										3.1	3.1		MFBM	STRUCTURAL LUMBER AND TIMBER, TREATED	522.25				
										1	1		MFBM	NONSTRUCTURAL LUMBER, UNTREATED	522.30				
										1	1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
								13			13		LF	15" RCP CLASS III	601.0810				
								89			89		LF	18" RCP CLASS III	601.0815				
								1			1		EACH	18" CAAPES .060 (2-2/3 X 1/2)	601.6215				
								1			1		EACH	24" CAAPES .060 (2-2/3 X 1/2)	601.6225				
								2			2		EACH	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	604.20				
								1			1		EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CONCRETE COVER	604.26				
								5			5		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
								5			5		CY	STONE FILL, TYPE I	613.10				
								223			223		LF	STEEL BACKED TIMBER GUARDRAIL	621.18				
								150			150		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
								60			60		LF	TEMPORARY TRAFFIC BARRIER	621.90				
								1			1		LS	MOBILIZATION/DEMobilIZATION	635.11				
								1			1		LS	TRAFFIC CONTROL	641.10				
								10			10		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								110			110		SY	GEOTEXTILE FOR SILT FENCE	649.51				
								10			10		LB	SEED	651.15				
								30			30		LB	FERTILIZER	651.18				
								1			1		TON	HAY MULCH	651.25				
								30			30		CY	TOPSOIL	651.35				
								1			1		LS	EPSC PLAN	652.10				
								16			16		HR	MONITORING EPSC PLAN	652.20				
								1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
								260			260		SY	TEMPORARY EROSION MATTING	653.20				
								10			10		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
								3			3		EACH	FILTER BAG	653.45				
								350			350		LF	PROJECT DEMARCATION FENCE	653.55				
										1	1		LS	TIMBER PAINTING, ENVIRONMENTAL PROTECTION	660.10				
										1	1		LS	TIMBER PAINTING, FIRE RETARDANT	660.20				
										1	1		LS	TIMBER PAINTING, INSECTICIDE/FUNGICIDE	660.30				



PROJECT NAME: GUILFORD  
 PROJECT NUMBER: STP EHII(4)  
 FILE NAME: 91920IQAN.dgn  
 PROJECT LEADER: S.GURLEY  
 DESIGNED BY: J.BICJA  
**QUANTITY SHEET (1 OF 2)**  
 PLOT DATE: 6/6/2014  
 DRAWN BY: J.B.McQUAID  
 CHECKED BY: S.T.JAMES  
 SHEET 4 OF 32

HTA PROJECT NO.	MODEL
91920I	91920IQAN

# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES				
								ROADWAY	EROSION CONTROL	BRIDGE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
										290	290		SY	METAL ROOFING	661.10				
								36			36		SF	TRAFFIC SIGNS, TYPE A	675.20				
								64			64		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
										80	80		EACH	SPECIAL PROVISION (WOOD EPOXY REPAIRS)	900.620				
										1	1		LS	SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)	900.645				
										150	150		SY	SPECIAL PROVISION (REPAIRING STONE MASONRY)	900.675				

### WOOD MATERIALS LIST

COMPONENT	EXISTING (AVERAGE SIZE IN INCHES)	PROPOSED (ACTUAL SIZE IN INCHES)	PROPOSED SPECIES & GRADE
CROSS BEAMS	5x10	5x10	DOUGLAS FIR SEL. STR.
KNEE BRACING	4x5	4x5	DOUGLAS FIR SEL. STR.
NEW SIDING	1" THICK	1" THICK	EASTERN WHITE PINE COMMON PREMIUM
RAFTERS	2x5 1/2 OR 3 3/4 x5	2x5 OR 4x5	DOUGLAS FIR SEL. STR.
ROOF BOARDS	1" THICK	1" THICK	EASTERN HEMLOCK NO. 1 COMMON
RUNNER PLANKS	3" THICK	3" THICK	P. T. DOUGLAS FIR NO. 1
SILL PLATE	2x6	2x6	SPRUCE FIR NO. 1
TRUSS LATTICE	3x11	3x11	DOUGLAS FIR SEL. STR.
UPPER LATERAL BRACING	3 3/4 x5	3 3/4 x5	DOUGLAS FIR SEL. STR.
VERTICAL POST	VARIES	6x10	DOUGLAS FIR SEL. STR.
WOOD CURB	---	5 1/2 x11 1/2	P. T. DOUGLAS FIR NO. 1
WOOD CURB BLOCKING	---	5 1/2 x11 1/2	P. T. DOUGLAS FIR NO. 1

### MINIMUM ALLOWABLE WOOD STRESSES

SPECIES	SIZE	GRADE	F <sub>b</sub> (PSI)	F <sub>t</sub> (PSI)	F <sub>v</sub> (PSI)	F <sub>c</sub> (PSI)	F <sub>c</sub> + (PSI)	E (10 <sup>6</sup> PSI)
DOUGLAS FIR	2"-4" THICK	NO. 1	1000	675	180	1500	625	1.7
DOUGLAS FIR	2"-4" THICK	SEL. STR.	1500	1000	180	1700	625	1.9
DOUGLAS FIR	BEAMS & STRINGERS*	NO. 1	1350	675	170	925	625	1.6
DOUGLAS FIR	BEAMS & STRINGERS*	SEL. STR.	1600	950	170	1100	625	1.6
SPRUCE FIR	2"-4" THICK	NO. 1	875	450	135	1150	425	1.4
WHITE OAK	2"-4" THICK	NO. 1	875	500	220	900	800	1.0

### LEGEND:

- P. T. PRESSURE TREATED
- \* 5" & THICKER AND MORE THAN 2 IN. GREATER THAN THICKNESS ( E.G. 4 1/2 x8 7/8 )
- \*\* 5" & THICKER AND NOT MORE THAN 2 IN. GREATER THAN THICKNESS ( E.G. 8 3/4 x8 )



HTA PROJECT NO. 919201  
MODEL 919201QUAN2

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)

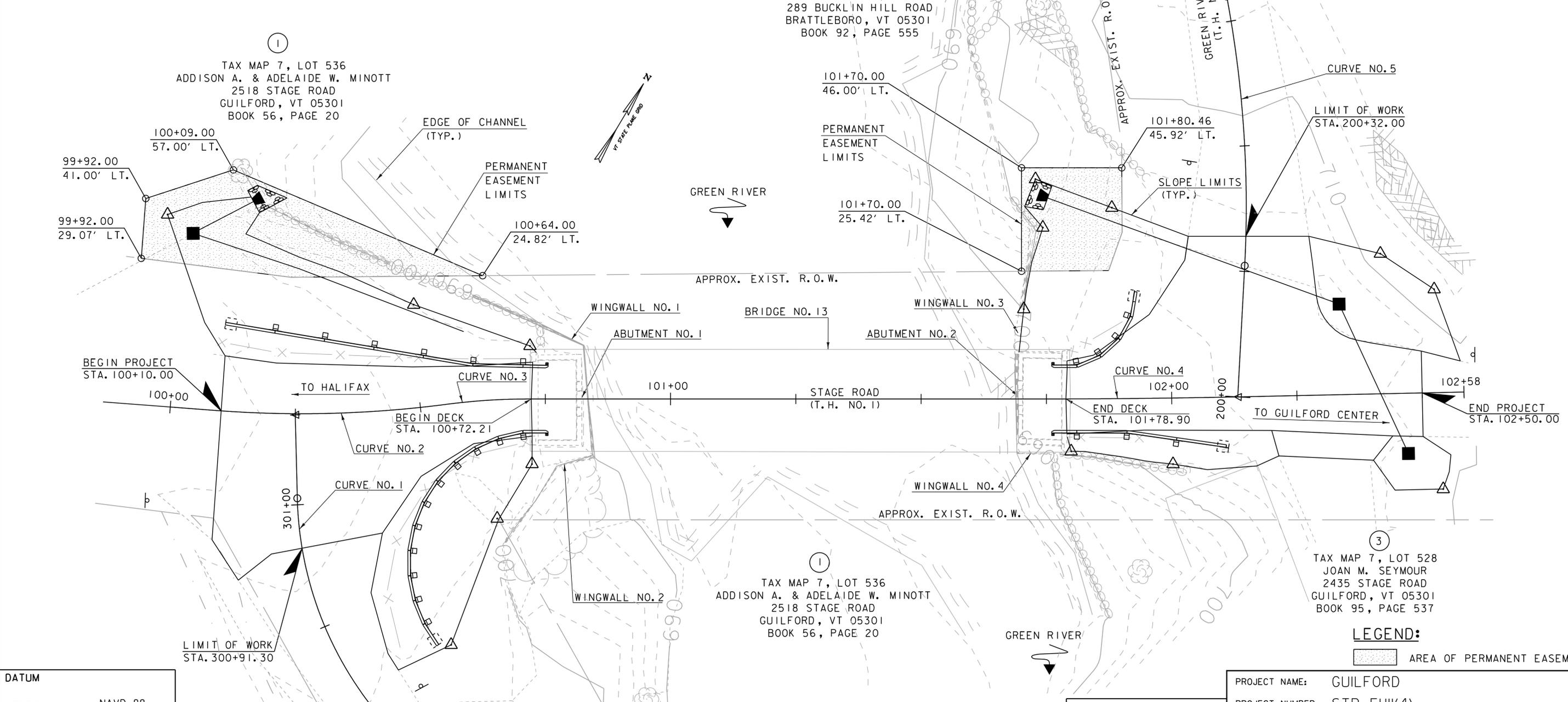
FILE NAME: 919201QUAN2.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA  
**QUANTITY SHEET (2 OF 2)**

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES  
SHEET 5 OF 32

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	VOL.	PG.	REMARKS
①	ADDISON A. & ADELAIDE W. MINOTT	6	99+92.00 LT. 29.07	100+64.00 LT. 24.82	809 SF					TOWN OF GUILFORD			
②	GREEN RIVER VILLAGE PRESERVATION TRUST, INC.	6	101+70.00 LT. 25.42	101+80.45 LT. 45.92	401 SF					TOWN OF GUILFORD			

LINES SHOWN ON THIS PLAN AS APPROXIMATE EXISTING RIGHT-OF-WAY (R.O.W.) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF GUILFORD'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

CURVE No. 1	CURVE No. 2	CURVE No. 3	CURVE No. 4	CURVE No. 5
PI = 300+74.26 N = 100340.39128 E = 1595469.35127 Delta = 47°05'18.01" T = 30.50' R = 70.00' L = 57.53' E = 6.36'	PI = 100+32.37 N = 100383.20490 E = 1595450.86886 Delta = 11°44'12.96" T = 23.13' R = 225.00' L = 46.09' E = 1.19'	PI = 100+63.44 N = 100402.59715 E = 1595475.34762 Delta = 7°25'04.31" T = 8.10' R = 125.00' L = 16.18' E = 0.26'	PI = 101+93.42 N = 100469.49471 E = 1595586.82195 Delta = 1°13'46.06" T = 21.46' R = 2000.00' L = 42.92' E = 0.12'	PI = 200+53.18 N = 100527.00369 E = 1595578.62807 Delta = 13°42'28.07" T = 27.04' R = 225.00' L = 53.83' E = 1.62'



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (CORS)
ADJUSTMENT	COMPASS

**RIGHT-OF-WAY PLAN**  
SCALE: 1" = 10'-0"  
10 0 10

**Hoyle, Tanner & Associates, Inc.**  
HTA PROJECT NO. 919201 MODEL 91920IEASE

PROJECT NAME:	GUILFORD	FILE NAME:	91920IEASE.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EHII(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
		<b>RIGHT-OF-WAY LAYOUT PLAN</b>		SHEET	6 OF 32

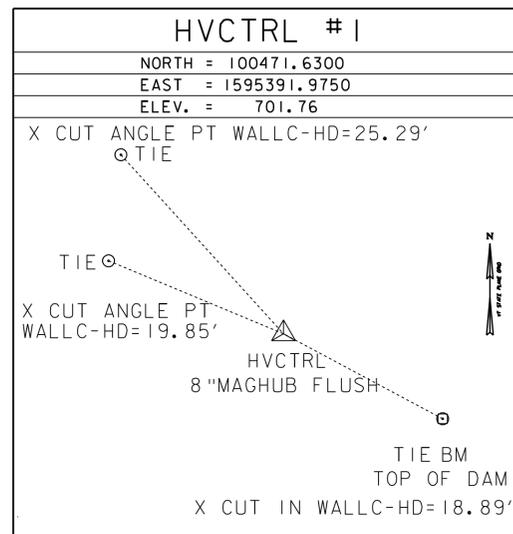
**LEGEND:**  
[Hatched Box] AREA OF PERMANENT EASEMENT

GEODETIC CONTROL INFORMATION

HVCTRL #1

NORTH = 100471.6300  
 EAST = 1595391.9750  
 ELEV. = 701.76

TRAVERSE TIE INFORMATION



\* MAIN TRAVERSE COMPLETED BY VERMONT SURVEY CONSULTANTS

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (CORS)
ADJUSTMENT	COMPASS

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO.	MODEL
919201	919201tie1

PROJECT NAME:	GUILFORD	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EHII(4)	DRAWN BY:	J.B.McQUAID
FILE NAME:	919201tie1.dgn	CHECKED BY:	S.T.JAMES
PROJECT LEADER:	S.GURLEY	<b>TIE SHEET</b>	SHEET 7 OF 32
DESIGNED BY:	J.BICJA		

INSTALL NEW CB STA. 100+01.95, LT 34.80' (SEE NOTE 4)  
 WITH CAST IRON GRATE, TYPE A  
 INLET ELEV = MATCH EXISTING  
 GRATE ELEV = 703.00±  
 (D1) INSTALL 13 LF OF NEW 15" RCP  
 INSTALL BERM AROUND CB TO PREVENT FLOW BYPASS (SUBSID.)  
 INSTALL 18" CAAPES AT OUTLET (MATCH EXISTING LOCATION)  
 OUTLET ELEV = MATCH EXISTING  
 REMOVE 13 LF EXISTING CMP

(D2) INSTALL NEW DI STA. 102+47.00, RT 12.00'  
 WITH CONCRETE COVER  
 18" INV OUT = 702.25  
 RIM ELEV = 707.50  
 INSTALL 29 LF OF NEW 18" RCP

CONSTRUCT 5'x5'x1'-0"  
 THICK STONE FILL TYPE  
 I PAD WITH GEOTEXTILE  
 UNDER STONE FILL

(D3) INSTALL NEW CB STA. 102+33.80, LT 18.00'  
 WITH CAST IRON GRATE, TYPE A  
 18" INV IN = 702.10  
 18" INV OUT = 702.10  
 GRATE ELEV = 705.60  
 INSTALL 60 LF OF NEW 18" RCP  
 INSTALL 24" CAAPES AT OUTLET STA. 101+75.30, LT 40.00'  
 OUTLET ELEV = 701.78  
 REMOVE 37 LF EXISTING 15" CMP

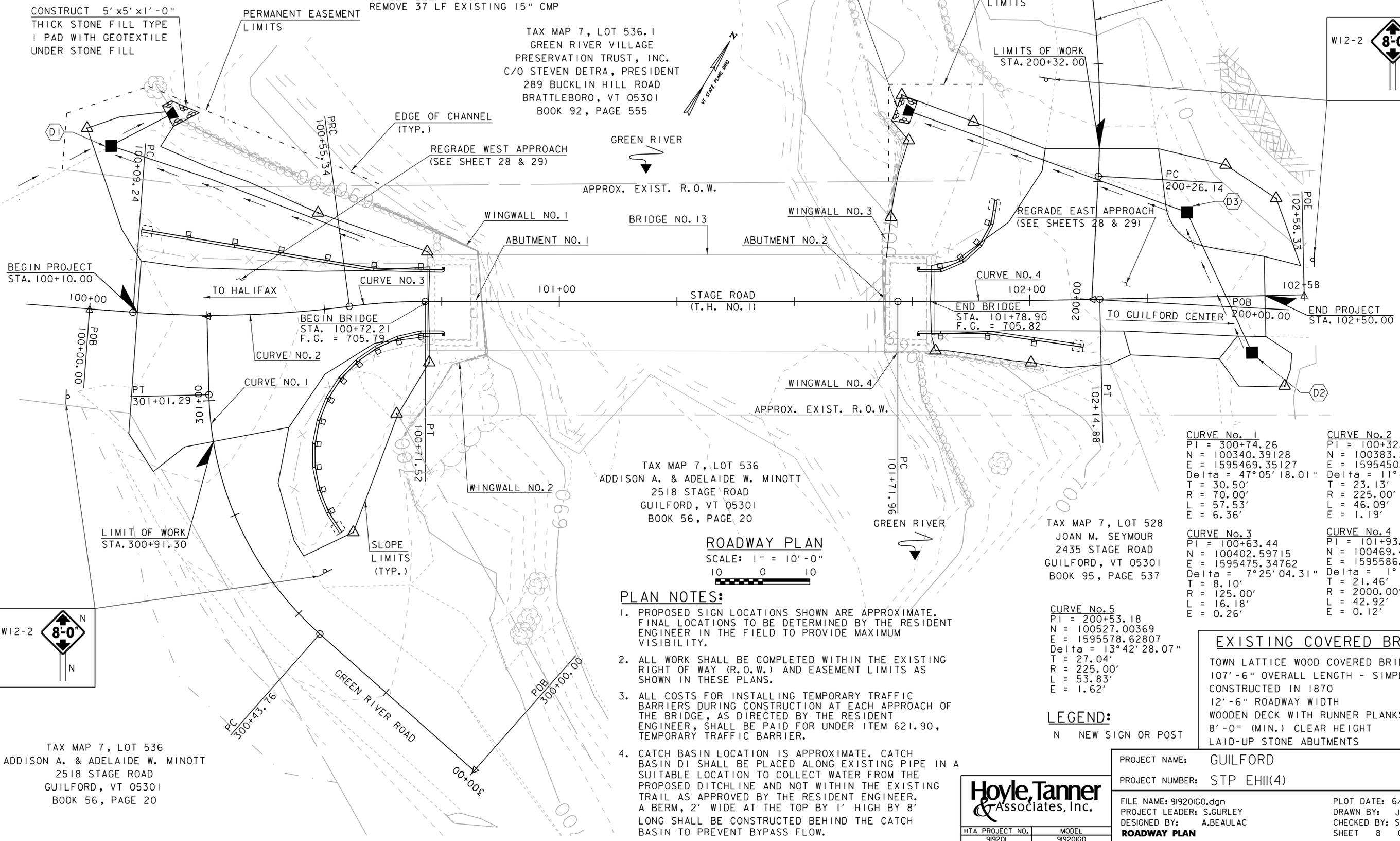
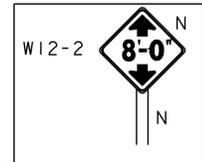
CONSTRUCT 5'x5'x1'-0"  
 THICK STONE FILL TYPE  
 I PAD WITH GEOTEXTILE  
 UNDER STONE FILL

TAX MAP 7, LOT 536.1  
 GREEN RIVER VILLAGE  
 PRESERVATION TRUST, INC.  
 C/O STEVEN DETRA, PRESIDENT  
 289 BUCKLIN HILL ROAD  
 BRATTLEBORO, VT 05301  
 BOOK 92, PAGE 555

GREEN RIVER

PERMANENT  
 EASEMENT  
 LIMITS

LIMITS OF WORK  
 STA. 200+32.00



TAX MAP 7, LOT 536  
 ADDISON A. & ADELAIDE W. MINOTT  
 2518 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 56, PAGE 20

TAX MAP 7, LOT 528  
 JOAN M. SEYMOUR  
 2435 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 95, PAGE 537

**ROADWAY PLAN**  
 SCALE: 1" = 10'-0"  
 10 0 10

**PLAN NOTES:**

1. PROPOSED SIGN LOCATIONS SHOWN ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD TO PROVIDE MAXIMUM VISIBILITY.
2. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING RIGHT OF WAY (R.O.W.) AND EASEMENT LIMITS AS SHOWN IN THESE PLANS.
3. ALL COSTS FOR INSTALLING TEMPORARY TRAFFIC BARRIERS DURING CONSTRUCTION AT EACH APPROACH OF THE BRIDGE, AS DIRECTED BY THE RESIDENT ENGINEER, SHALL BE PAID FOR UNDER ITEM 621.90, TEMPORARY TRAFFIC BARRIER.
4. CATCH BASIN LOCATION IS APPROXIMATE. CATCH BASIN D1 SHALL BE PLACED ALONG EXISTING PIPE IN A SUITABLE LOCATION TO COLLECT WATER FROM THE PROPOSED DITCHLINE AND NOT WITHIN THE EXISTING TRAIL AS APPROVED BY THE RESIDENT ENGINEER. A BERM, 2' WIDE AT THE TOP BY 1' HIGH BY 8' LONG SHALL BE CONSTRUCTED BEHIND THE CATCH BASIN TO PREVENT BYPASS FLOW.

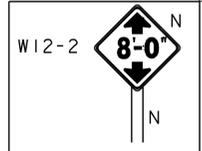
<b>CURVE No. 1</b> PI = 300+74.26 N = 100340.39128 E = 1595469.35127 Delta = 47°05'18.01" T = 30.50' R = 70.00' L = 57.53' E = 6.36'	<b>CURVE No. 2</b> PI = 100+32.37 N = 100383.20490 E = 1595450.86886 Delta = 11°44'12.96" T = 23.13' R = 225.00' L = 46.09' E = 1.19'
--	---

<b>CURVE No. 3</b> PI = 100+63.44 N = 100402.59715 E = 1595475.34762 Delta = 7°25'04.31" T = 8.10' R = 125.00' L = 16.18' E = 0.26'	<b>CURVE No. 4</b> PI = 101+93.42 N = 100469.49471 E = 1595586.82195 Delta = 1°13'46.06" T = 21.46' R = 2000.00' L = 42.92' E = 0.12'
---	---

**CURVE No. 5**  
 PI = 200+53.18  
 N = 100527.00369  
 E = 1595578.62807  
 Delta = 13°42'28.07"  
 T = 27.04'  
 R = 225.00'  
 L = 53.83'  
 E = 1.62'

**EXISTING COVERED BRIDGE**  
 TOWN LATTICE WOOD COVERED BRIDGE  
 107'-6" OVERALL LENGTH - SIMPLE SPAN  
 CONSTRUCTED IN 1870  
 12'-6" ROADWAY WIDTH  
 WOODEN DECK WITH RUNNER PLANKS  
 8'-0" (MIN.) CLEAR HEIGHT  
 LAID-UP STONE ABUTMENTS

**LEGEND:**  
 N NEW SIGN OR POST

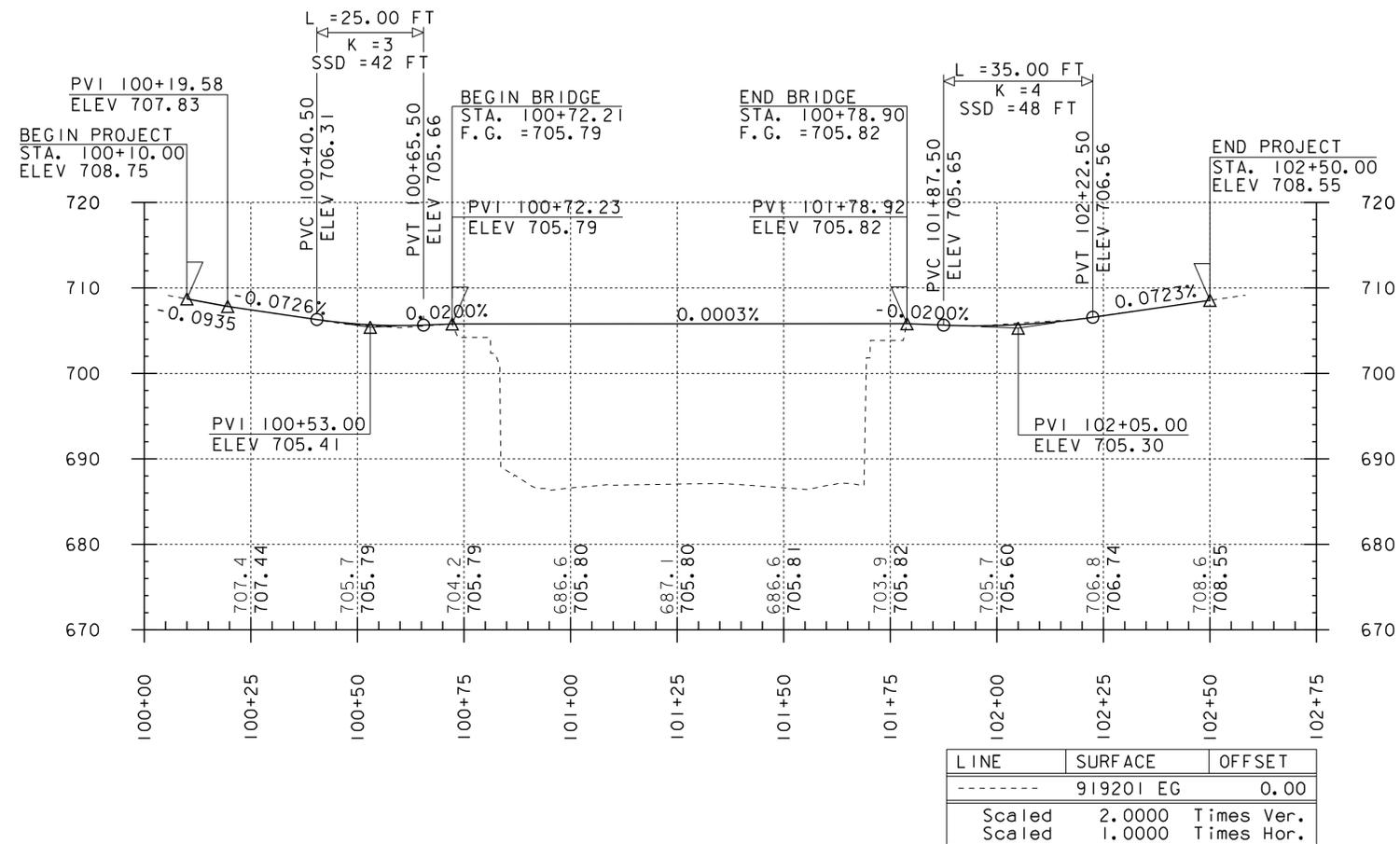


TAX MAP 7, LOT 536  
 ADDISON A. & ADELAIDE W. MINOTT  
 2518 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 56, PAGE 20

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201	MODEL 919201GO
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PROJECT NAME: GUILFORD	PLOT DATE: 6/6/2014
PROJECT NUMBER: STP EH11(4)	DRAWN BY: J.B.McQUAID
FILE NAME: 919201GO.dgn	CHECKED BY: S.T.JAMES
PROJECT LEADER: S.GURLEY	SHEET 8 OF 32
DESIGNED BY: A.BEAULAC	
<b>ROADWAY PLAN</b>	

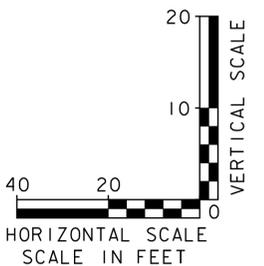


PROFILE ALONG T.H. NO. 1

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

NOTE: GRADES SHOWN TO THE NEAREST TENTH REPRESENT EXISTING GROUND ELEVATION ALONG THE PROPOSED ALIGNMENT.

GRADES SHOWN TO THE NEAREST HUNDREDTH REPRESENT FINISHED GRADE ELEVATION ALONG THE PROPOSED ALIGNMENT.



HTA PROJECT NO. 919201 MODEL 919201PRO

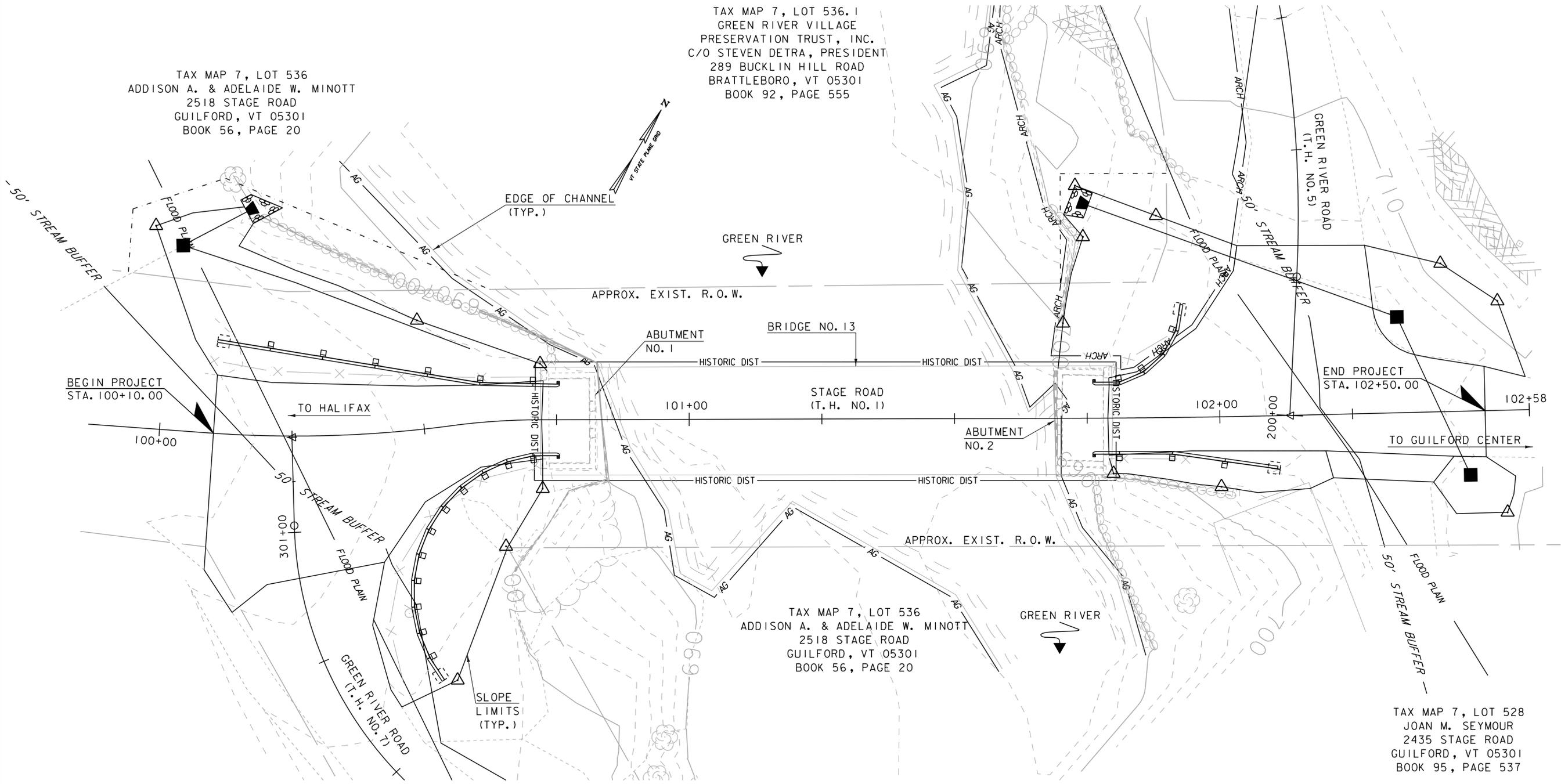
PROJECT NAME: GUILFORD  
 PROJECT NUMBER: STP EHII(4)

FILE NAME: 919201PRO.dgn  
 PROJECT LEADER: S.GURLEY  
 DESIGNED BY: A.BEAULAC  
**ROADWAY PROFILE**

PLOT DATE: 6/6/2014  
 DRAWN BY: J.B.McQUAID  
 CHECKED BY: S.T.JAMES  
 SHEET 9 OF 32

TAX MAP 7, LOT 536  
 ADDISON A. & ADELAIDE W. MINOTT  
 2518 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 56, PAGE 20

TAX MAP 7, LOT 536.1  
 GREEN RIVER VILLAGE  
 PRESERVATION TRUST, INC.  
 C/O STEVEN DETRA, PRESIDENT  
 289 BUCKLIN HILL ROAD  
 BRATTLEBORO, VT 05301  
 BOOK 92, PAGE 555



**RESOURCE PLAN**

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

**DATUM**

VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (CORS)
ADJUSTMENT	COMPASS

ENVIRONMENTAL RESOURCE	LEVEL	LINestyle NAME	CHECKED BY	DATE
WETLANDS	N/A	N/A	HOYLE, TANNER	6-24-2013
HISTORIC/HISTORIC DISTRICT	LAHD	HISTORIC DIST. — HISTORIC DIST —	HOYLE, TANNER	6-24-2013
ARCHAEOLOGICALLY SENSITIVE LAND	LAAS	ARCH. AREA — ARCH —	VTRANS ARCH. OFFICER	9-6-2011
4F PROPERTY	N/A	N/A	HOYLE, TANNER	6-24-2013
6F PROPERTY	N/A	N/A	HOYLE, TANNER	6-24-2013
AGRICULTURAL LAND	LAAG	AGRICULT. LAND — AG —	HOYLE, TANNER	6-24-2013
FISH & WILDLIFE HABITAT	N/A	N/A	HOYLE, TANNER	6-24-2013
FLOOD PLAINS	LAFP	FLD. PLAINS — FLOOD PLAIN —	HOYLE, TANNER	6-24-2013
ENDANGERED SPECIES	LATE	N/A	HOYLE, TANNER	6-24-2013
HAZARDOUS WASTE	N/A	N/A	HOYLE, TANNER	6-24-2013
STORMWATER	N/A	N/A	HOYLE, TANNER	6-24-2013
GREEN MOUNTAIN NATIONAL FOREST LAND	N/A	N/A	HOYLE, TANNER	6-24-2013

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO.	MODEL
919201	919201r1.s1

PROJECT NAME:	GUILFORD	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EH11(4)	DRAWN BY:	J.B.McQUAID
FILE NAME:	919201R1.s1.dgn	CHECKED BY:	S.T.JAMES
PROJECT LEADER:	S.GURLEY	RESOURCE LAYOUT SHEET	SHEET 10 OF 32
DESIGNED BY:	J.BICJA		

# EPSC PLAN NARRATIVE

## 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE GREEN RIVER COVERED BRIDGE (BRIDGE NO. 13) OVER THE GREEN RIVER. THE PROJECT IS LOCATED ON STAGE ROAD (T.H. NO. 1), A GRAVEL CLASS 2 TOWN HIGHWAY, IN THE TOWN OF GUILFORD BEGINNING APPROXIMATELY 30 FEET EAST OF ITS INTERSECTION WITH GREEN RIVER ROAD (T.H. NO. 7) AND EXTENDS EASTERLY FOR 240 FEET. THE BRIDGE IS OPEN TO TRAFFIC BUT WILL BE CLOSED DURING CONSTRUCTION WHILE TRAFFIC IS DETOURED. THE PROJECT CONSISTS OF REPAIRS TO THE TRUSSES TO CORRECT THE RACK AND SWEEP, REPAIRS OR REPLACEMENTS OF THE DETERIORATED BRIDGE MEMBERS, REPLACEMENT OF THE EXISTING ROOF WITH STANDING SEAM METAL ROOF, SUBSTRUCTURE REPAIRS, APPLICATION OF FIRE RETARDANT, INSECTICIDE AND FUNGICIDE COATINGS TO ALL WOOD SURFACES AND INSTALLATION OF NEW STEEL BACKED TIMBER GUARDRAIL. THE SITE IS LOCATED, BASED ON NAVD 88, AT N100471.6300 E1595391.9750 (HVCTRL #1 - SEE TRAVERSE & GEODETIC CONTROL INFO. SHEET).

TOTAL AREA OF DISTURBANCE SHOWN IN THESE PLANS IS APPROXIMATELY 0.23 ACRES. EARTH DISTURBANCE FOR ANY WASTE, STAGING, AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS IS ESTIMATED TO BE APPROXIMATELY 0.27 ACRES. TOTAL AREA OF DISTURBANCE IS 0.50 ACRES.

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

## 1.2 SITE INVENTORY

### 1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE PROJECT SITE IS FLAT WITH SOME WOODED AREAS. STAGE ROAD (T.H. 1), GREEN RIVER ROAD (T.H. 7), AND A GRAVEL DRIVEWAY ARE WITHIN THE PROJECT SITE. THERE IS A GARAGE ON THE EAST SIDE OF THE PROJECT, AND A RESIDENCE UP SLOPE TO THE EAST WITH GRASS AND TREE BUFFERS.

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

THE GREEN RIVER IS LOCATED IN THE PROJECT AREA. THE GREEN RIVER IS A MEANDERING WATERWAY THAT FLOWS IN THE NORTH-SOUTH DIRECTION WITHIN THE VICINITY OF THE PROJECT. THE STREAM BED OF THE GREEN RIVER IS MAINLY COMPOSED OF GRAVEL, COBBLES AND LEDGE. THERE IS A DAM UPSTREAM OF THE COVERED BRIDGE THAT CONTROLS THE HYDRAULICS AT THE SITE. THERE ARE TWO CULVERTS THAT OUTLET INTO THE RIVER TO BE REPLACED WITH NEW PIPE THAT WILL RECEIVE STORMWATER FROM TWO NEW CATCH BASINS AND A NEW DROP INLET. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 24.7 SQUARE MILES. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. ARCHAEOLOGICAL AND HISTORICAL RESOURCES ARE LOCATED WITHIN THE PROJECT AREA AND ARE SHOWN ON THE RESOURCE LAYOUT SHEET.

### 1.2.3 VEGETATION

THE LAND ON AND ADJACENT TO THE PROJECT SITE IS RURAL AND CONSISTS OF MEDIUM HARDWOOD TREES AND WELL ESTABLISHED VEGETATION. AGRICULTURAL FIELDS ARE PRESENT WITHIN VICINITY OF THE PROJECT ADJACENT TO THE SOUTHWEST RIVER BANKS. FOLLOWING THE CONSTRUCTION OF THE REHABILITATED COVERED BRIDGE, THE EXISTING ROADWAY APPROACHES WILL BE REGRADED. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE INSTALLATION OF NEW GUARDRAIL AND THE REPLACEMENT OF THE EXISTING CULVERTS AND INSTALLATION OF THE NEW DRAINAGE STRUCTURES. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

### 1.2.4 SOILS

ALL SOIL DATA WAS OBTAINED FROM THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) AND THE VERMONT CENTER FOR GEOGRAPHIC INFORMATION (VCGI) FOR THE COUNTY OF WINDHAM, VERMONT. SOILS ON THE PROJECT SITE ARE BERSHIRE-TUNBRIDGE (EAST BANK) AND WESTBURY (WEST BANK), FINE SANDY LOAM, 3% TO 8% SLOPES AND 9-15% SLOPES WITH "K FACTORS" = 0.24 AND 0.32 RESPECTIVELY.

**NOTE:** K-VALUES GENERALLY INDICATE THE FOLLOWING:

0.0-0.23 = LOW EROSION POTENTIAL

0.24-0.36 = MODERATE EROSION POTENTIAL

0.37 AND HIGHER = HIGH EROSION POTENTIAL

### 1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO

HISTORICAL OR ARCHEOLOGICAL AREAS: YES, AN ARCHAEOLOGICAL FIELD INVESTIGATION PERFORMED BY JEANNINE RUSSELL, VTRANS ARCHAEOLOGY OFFICER AND ASSISTANT ARCHAEOLOGIST BRENNAN GAUTHIER LOCATED ONE AREA OF ARCHAEOLOGICAL SENSITIVITY IN THE NE QUADRANT OF THE PROJECT AREA. CONSIDERABLE MILL REMAINS ARE PRESENT AND ARE RELATED TO THE EXTANT CRIB DAM AND COVERED BRIDGE, WHICH BOTH ARE LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES. THE MILL REMAINS WERE SEVERELY COMPROMISED BY HURRICANE IRENE RELATED FLOODING. THESE ARCHAEOLOGICAL SENSITIVE AREAS ARE NOT EXPECTED TO BE AFFECTED. IF OTHER ARCHAEOLOGICAL AREAS ARE FOUND CONTACT JEANNINE RUSSELL AT 802-828-3981.

PRIME AGRICULTURAL LAND: YES

THREATENED AND ENDANGERED SPECIES: NO

WATER RESOURCE: NO

WETLANDS: NO

## 1.3 RISK EVALUATION

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

## 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

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

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

### 1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED. PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

### 1.4.2 LIMIT DISTURBANCE AREA

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

MAINTAINING VEGETATED BUFFERS ALONG GREEN RIVER BANKS 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 ENTRANCE AND EXIT ARE NOT ANTICIPATED ON THIS PROJECT.

### 1.4.4 INSTALL SEDIMENT BARRIERS

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

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

### 1.4.5 DIVERT UPLAND RUNOFF

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

THE PROJECT AREA IS RELATIVELY 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.

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

### 1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS. PERMANENT CONTROL MEASURES ARE NOT ANTICIPATED IN THIS PROJECT.

### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS.

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.

THE FOLLOWING REQUIREMENTS MUST BE ADHERED TO:

1. ENLARGED ACCESS POINTS STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
2. A MINIMUM 25 FOOT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE.
3. IN AREAS OF DISTURBANCE THAT DRAIN TO A WATER BODY WITHIN 100 FEET, TWO ROWS OF SILT FENCE MUST BE INSTALLED ALONG THE CONTOUR.
4. SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROZEN GROUND.
5. MULCH USED FOR TEMPORARY STABILIZATION MUST BE APPLIED AT DOUBLE THE STANDARD RATE, OR A MINIMUM OF 3 INCHES WITH AN 80-90% COVER.
6. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
  - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECASTED AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
  - DISTURBED AREA THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
7. PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO LESS THAN 1 INCH THICKNESS.
8. USE STONE TO STABILIZE AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS WOULD BE 10-20 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.

## 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.

TREATMENT OF DEWATERING TRENCH EXCAVATION IS ANTICIPATED. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS. HOWEVER, THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR.

## 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 SPECIFICATION 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: GUILFORD

PROJECT NUMBER: STP EHII(4)

FILE NAME: 91920Inoteserol.dgn

PROJECT LEADER: S.GURLEY

DESIGNED BY: J.BICJA

**EPSC EROSION CONTROL NARRATIVE**

PLOT DATE: 6/6/2014

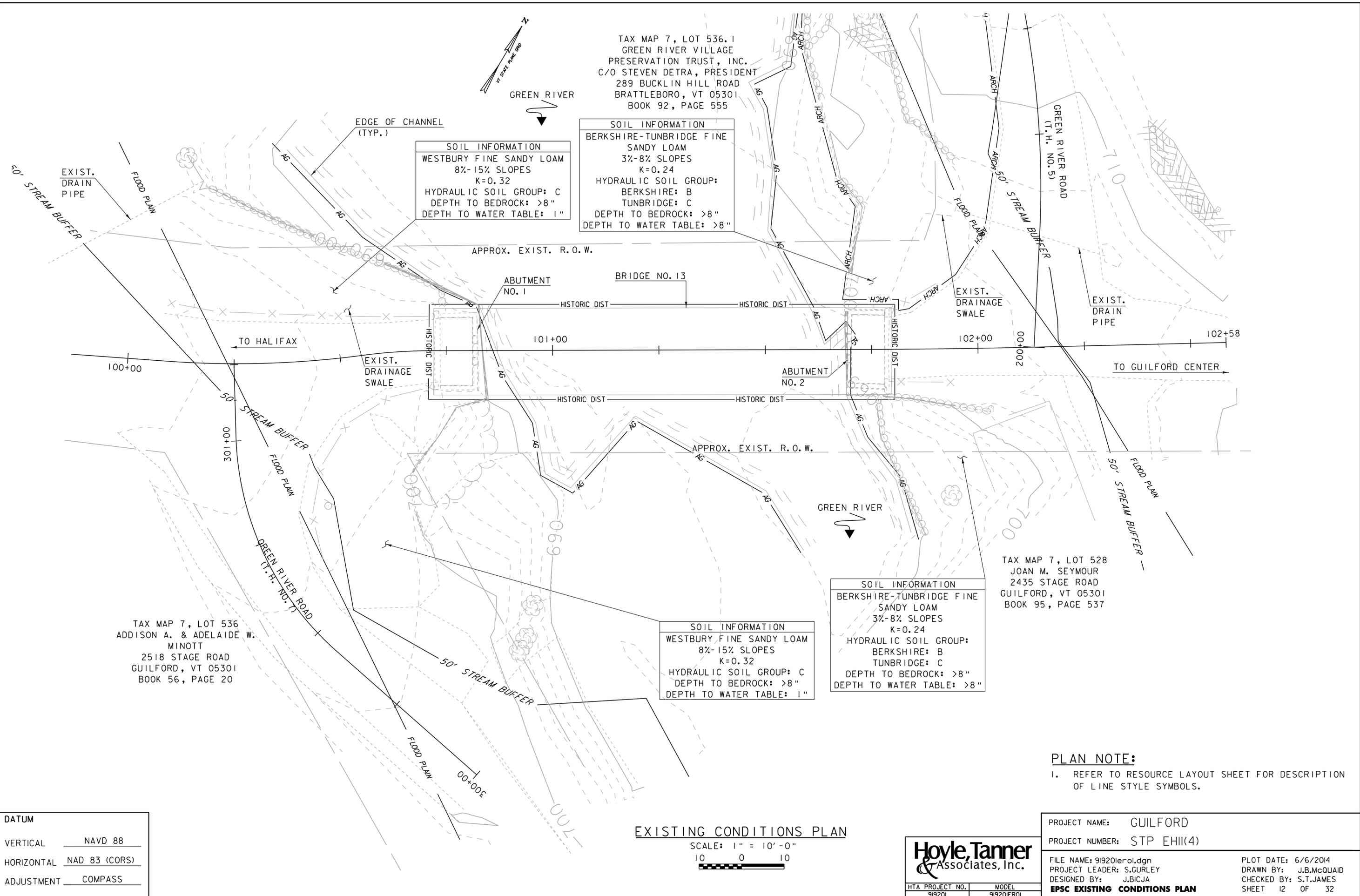
DRAWN BY: J.B.McQUAID

CHECKED BY: S.T.JAMES

SHEET II OF 32

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO.	MODEL
91920I	91920Inoteserol



TAX MAP 7, LOT 536.1  
 GREEN RIVER VILLAGE  
 PRESERVATION TRUST, INC.  
 C/O STEVEN DETRA, PRESIDENT  
 289 BUCKLIN HILL ROAD  
 BRATTLEBORO, VT 05301  
 BOOK 92, PAGE 555

**SOIL INFORMATION**  
 WESTBURY FINE SANDY LOAM  
 8%-15% SLOPES  
 K=0.32  
 HYDRAULIC SOIL GROUP: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: 1"

**SOIL INFORMATION**  
 BERKSHIRE-TUNBRIDGE FINE  
 SANDY LOAM  
 3%-8% SLOPES  
 K=0.24  
 HYDRAULIC SOIL GROUP:  
 BERKSHIRE: B  
 TUNBRIDGE: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: >8"

**SOIL INFORMATION**  
 BERKSHIRE-TUNBRIDGE FINE  
 SANDY LOAM  
 3%-8% SLOPES  
 K=0.24  
 HYDRAULIC SOIL GROUP:  
 BERKSHIRE: B  
 TUNBRIDGE: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: >8"

TAX MAP 7, LOT 536  
 ADDISON A. & ADELAIDE W.  
 MINOTT  
 2518 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 56, PAGE 20

TAX MAP 7, LOT 528  
 JOAN M. SEYMOUR  
 2435 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 95, PAGE 537

**PLAN NOTE:**  
 1. REFER TO RESOURCE LAYOUT SHEET FOR DESCRIPTION  
 OF LINE STYLE SYMBOLS.

<b>DATUM</b>	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (CORS)
ADJUSTMENT	COMPASS

**EXISTING CONDITIONS PLAN**

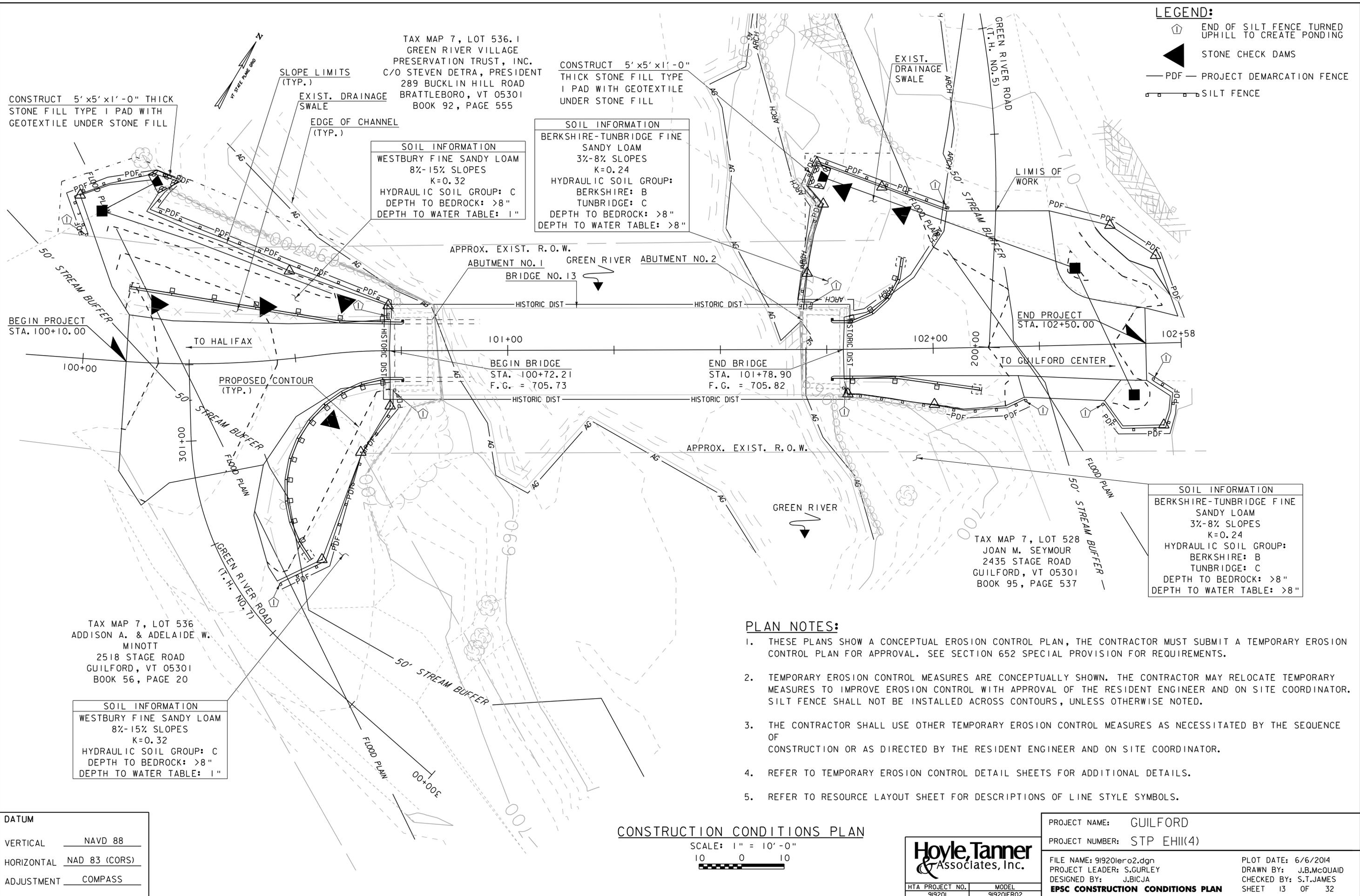
SCALE: 1" = 10'-0"  
 10 0 10

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO.	MODEL
919201	919201ERO1

PROJECT NAME:	GUILFORD	FILE NAME:	919201er01.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EH11(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
		<b>EPSC EXISTING CONDITIONS PLAN</b>		SHEET	12 OF 32

- LEGEND:**
-  END OF SILT FENCE TURNED UPHILL TO CREATE PONDING
  -  STONE CHECK DAMS
  -  PROJECT DEMARCATION FENCE
  -  SILT FENCE



TAX MAP 7, LOT 536.1  
 GREEN RIVER VILLAGE  
 PRESERVATION TRUST, INC.  
 C/O STEVEN DETRA, PRESIDENT  
 289 BUCKLIN HILL ROAD  
 BRATTLEBORO, VT 05301  
 BOOK 92, PAGE 555

CONSTRUCT 5' x 5' x 1'-0" THICK  
 STONE FILL TYPE 1 PAD WITH  
 GEOTEXTILE UNDER STONE FILL

CONSTRUCT 5' x 5' x 1'-0" THICK  
 STONE FILL TYPE 1 PAD WITH  
 GEOTEXTILE UNDER STONE FILL

**SOIL INFORMATION**  
 WESTBURY FINE SANDY LOAM  
 8%-15% SLOPES  
 K=0.32  
 HYDRAULIC SOIL GROUP: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: 1"

**SOIL INFORMATION**  
 BERKSHIRE-TUNBRIDGE FINE  
 SANDY LOAM  
 3%-8% SLOPES  
 K=0.24  
 HYDRAULIC SOIL GROUP:  
 BERKSHIRE: B  
 TUNBRIDGE: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: >8"

**SOIL INFORMATION**  
 BERKSHIRE-TUNBRIDGE FINE  
 SANDY LOAM  
 3%-8% SLOPES  
 K=0.24  
 HYDRAULIC SOIL GROUP:  
 BERKSHIRE: B  
 TUNBRIDGE: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: >8"

TAX MAP 7, LOT 536  
 ADDISON A. & ADELAIDE W.  
 MINOTT  
 2518 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 56, PAGE 20

TAX MAP 7, LOT 528  
 JOAN M. SEYMOUR  
 2435 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 95, PAGE 537

**SOIL INFORMATION**  
 WESTBURY FINE SANDY LOAM  
 8%-15% SLOPES  
 K=0.32  
 HYDRAULIC SOIL GROUP: C  
 DEPTH TO BEDROCK: >8"  
 DEPTH TO WATER TABLE: 1"

**PLAN NOTES:**

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL. SEE SECTION 652 SPECIAL PROVISION FOR REQUIREMENTS.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. REFER TO RESOURCE LAYOUT SHEET FOR DESCRIPTIONS OF LINE STYLE SYMBOLS.

**DATUM**

VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (CORS)
ADJUSTMENT	COMPASS

**CONSTRUCTION CONDITIONS PLAN**

SCALE: 1" = 10'-0"  


**Hoyle, Tanner & Associates, Inc.**

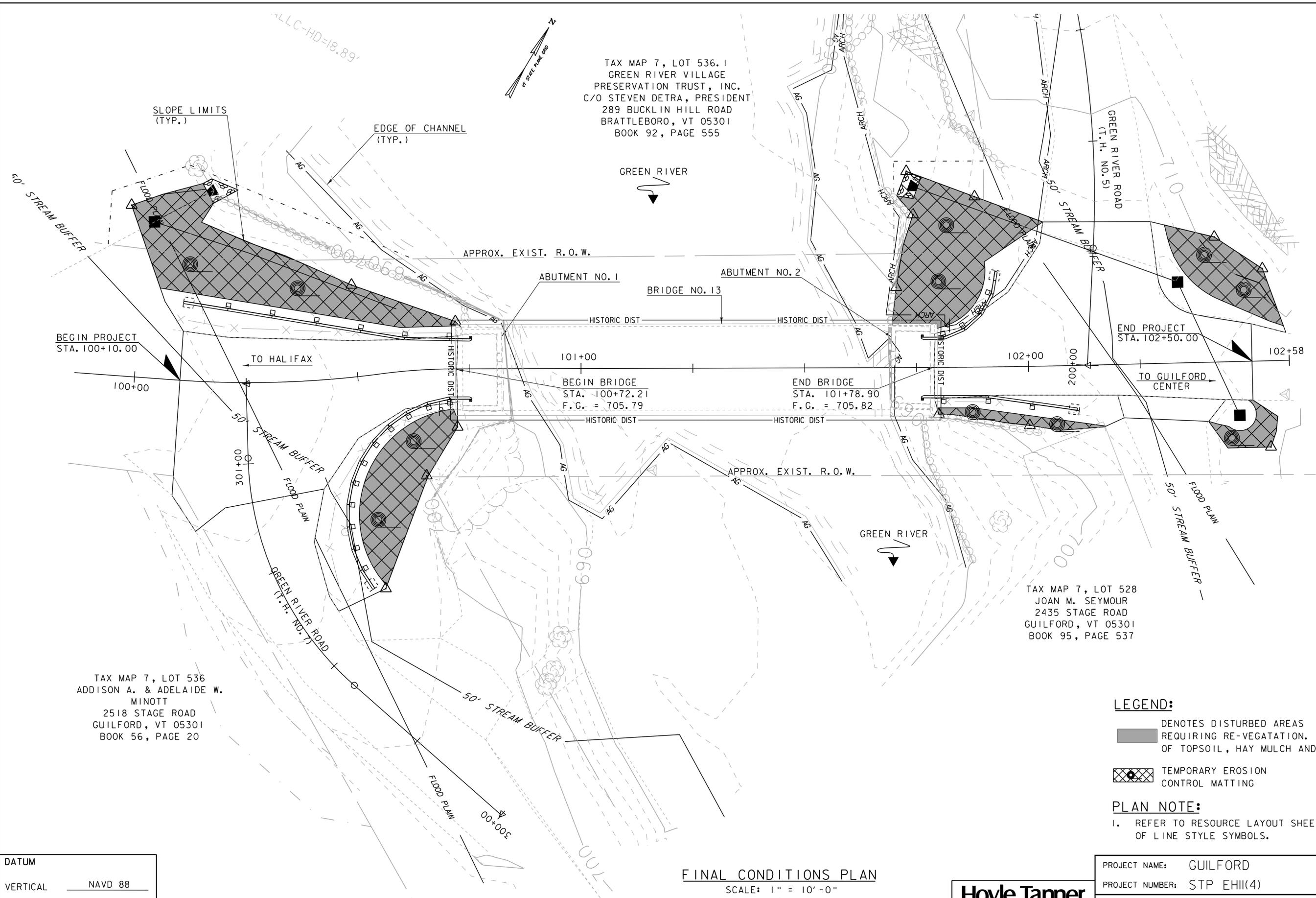
HTA PROJECT NO.	MODEL
919201	919201E02

PROJECT NAME:	GUILFORD	FILE NAME:	919201er02.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EH11(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
		<b>EPSC CONSTRUCTION CONDITIONS PLAN</b>		SHEET	13 OF 32

TAX MAP 7, LOT 536.1  
 GREEN RIVER VILLAGE  
 PRESERVATION TRUST, INC.  
 C/O STEVEN DETRA, PRESIDENT  
 289 BUCKLIN HILL ROAD  
 BRATTLEBORO, VT 05301  
 BOOK 92, PAGE 555

TAX MAP 7, LOT 528  
 JOAN M. SEYMOUR  
 2435 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 95, PAGE 537

TAX MAP 7, LOT 536  
 ADDISON A. & ADELAIDE W.  
 MINOTT  
 2518 STAGE ROAD  
 GUILFORD, VT 05301  
 BOOK 56, PAGE 20



- LEGEND:**
-  DENOTES DISTURBED AREAS REQUIRING RE-VEGETATION. USE 4" OF TOPSOIL, HAY MULCH AND SEED
  -  TEMPORARY EROSION CONTROL MATTING

- PLAN NOTE:**
1. REFER TO RESOURCE LAYOUT SHEET FOR DESCRIPTION OF LINE STYLE SYMBOLS.

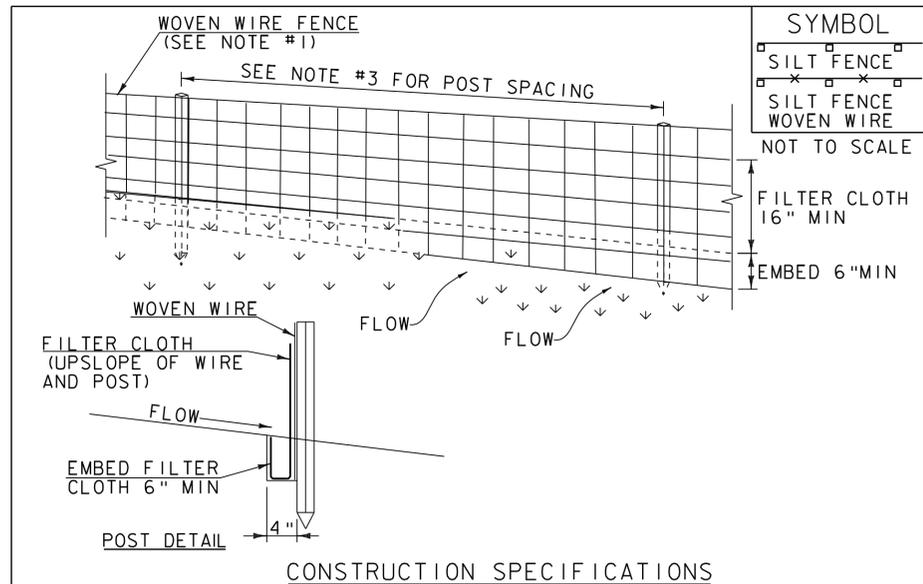
<b>DATUM</b>	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (CORS)
ADJUSTMENT	COMPASS

**FINAL CONDITIONS PLAN**  
 SCALE: 1" = 10'-0"  
 10 0 10

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201	MODEL 919201ER03
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PROJECT NAME: GUILFORD	PLOT DATE: 6/6/2014
PROJECT NUMBER: STP EHI1(4)	DRAWN BY: J.B.McQUAID
FILE NAME: 919201er03.dgn	CHECKED BY: S.T.JAMES
PROJECT LEADER: S.GURLEY	SHEET 14 OF 32
DESIGNED BY: J.BICJA	
<b>EPSC FINAL CONDITIONS PLAN</b>	



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

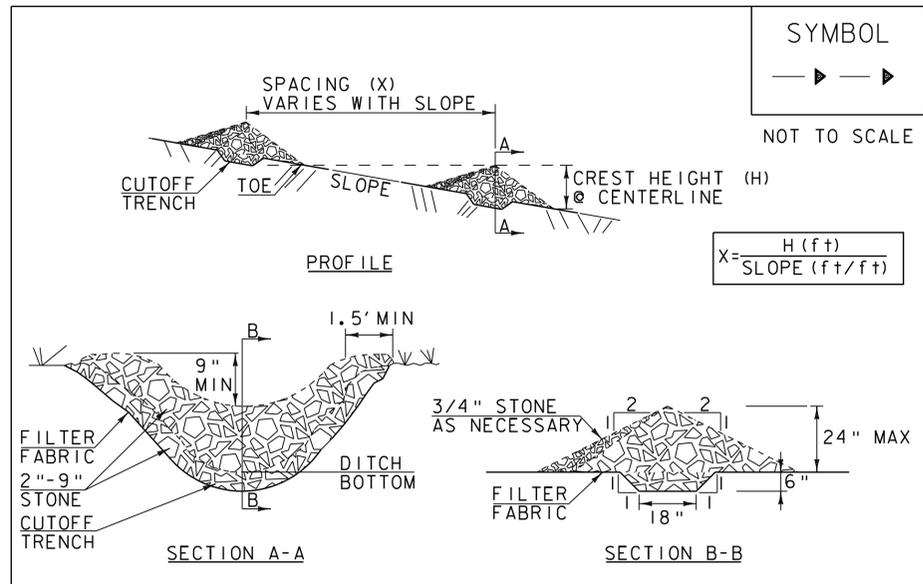
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**SILT FENCE**

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

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

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



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

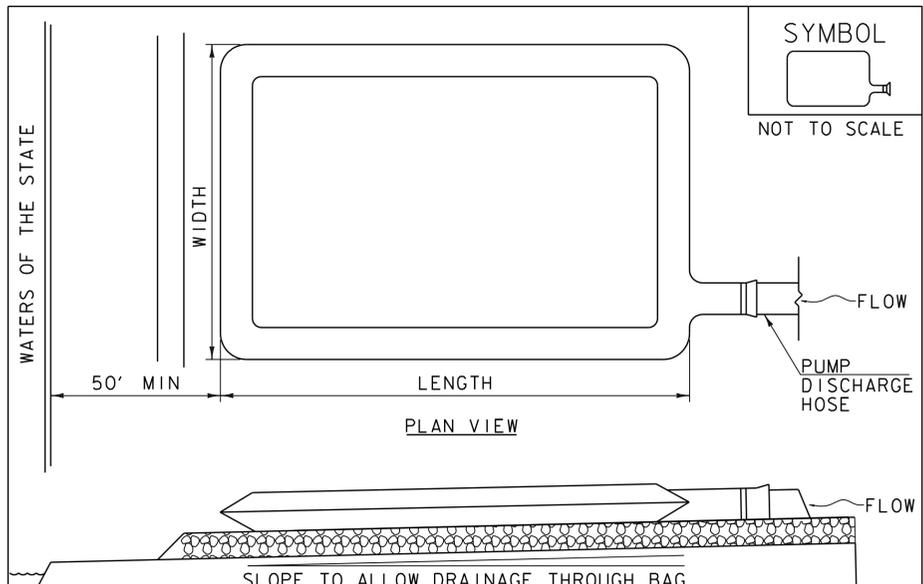
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**CHECK DAM**

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

REVISIONS		
MARCH 21, 2008	WHF	
JANUARY 8, 2009	WHF	

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



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

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

**FILTER BAG**

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

REVISIONS		
MARCH 24, 2008	WHF	
JANUARY 13, 2009	WHF	

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

PROJECT NAME: GUILFORD		PLOT DATE: 6/6/2014	
PROJECT NUMBER: STP EHI(4)		DRAWN BY: J.B.McQUAID	
FILE NAME: 91920Inotesero2.dgn		DESIGNED BY: J.BICJA	
PROJECT LEADER: S.GURLEY		CHECKED BY: S.T.JAMES	
EPSC DETAILS SHEET (1 OF 2)		SHEET 15 OF 32	

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO.	MODEL
919201	91920Inotesero2

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

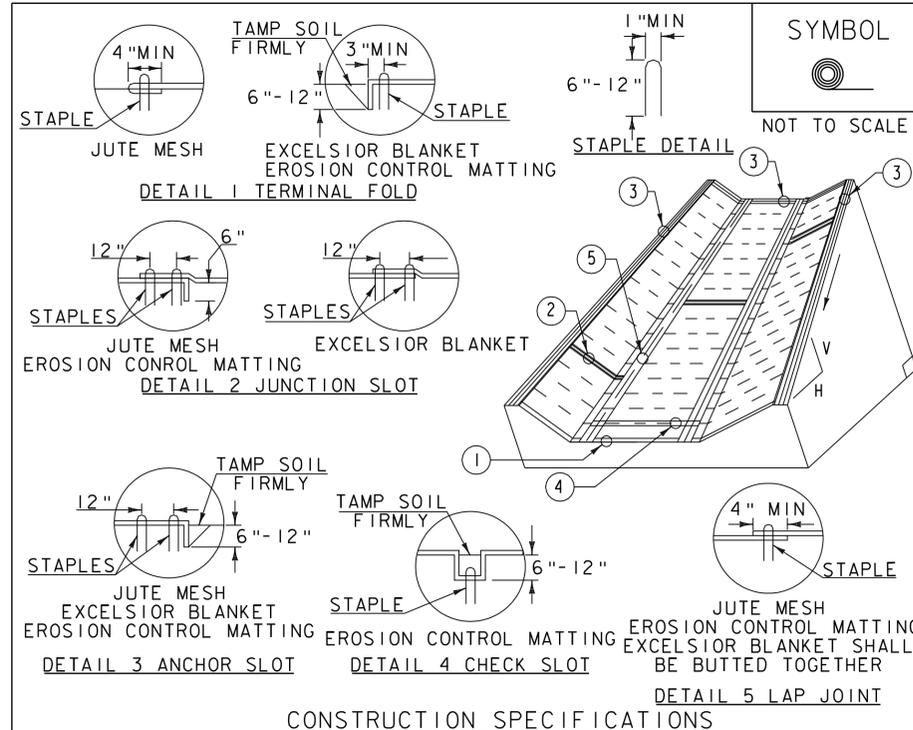
**CONSTRUCTION GUIDANCE**

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	



**CONSTRUCTION SPECIFICATIONS**

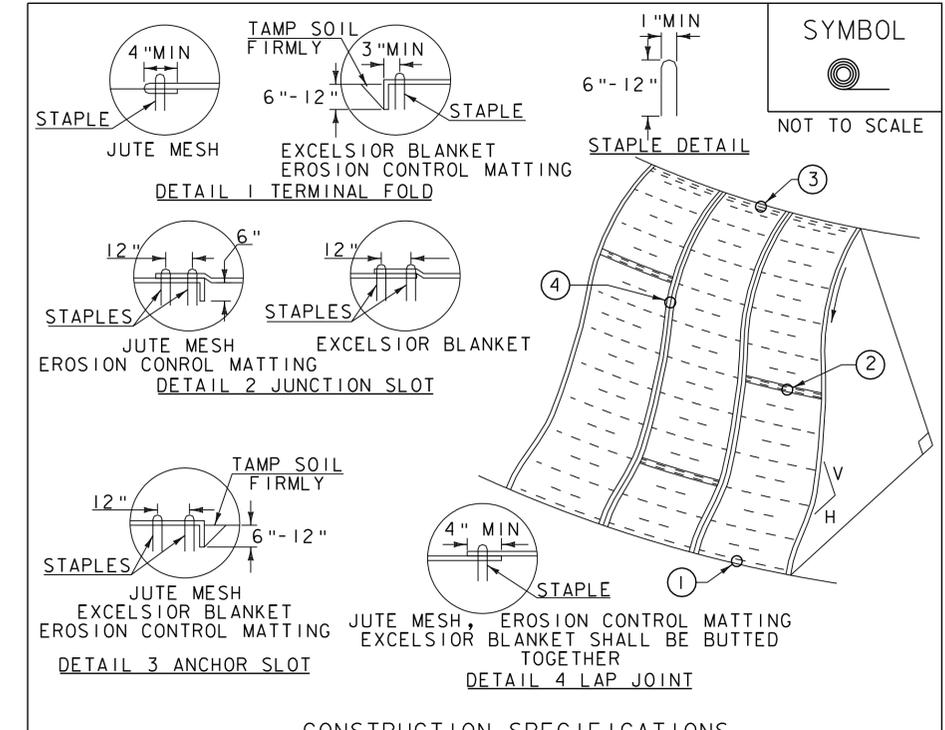
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

**ROLLED EROSION CONTROL PRODUCT (RECP) DITCH**

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.2).

REVISIONS		
MARCH 8, 2007	JMF	
APRIL 16, 2007	WHF	
JANUARY 13, 2009	WHF	



**CONSTRUCTION SPECIFICATIONS**

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

**ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE**

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.2).

REVISIONS		
APRIL 16, 2007	JMF	
JANUARY 13, 2009	WHF	

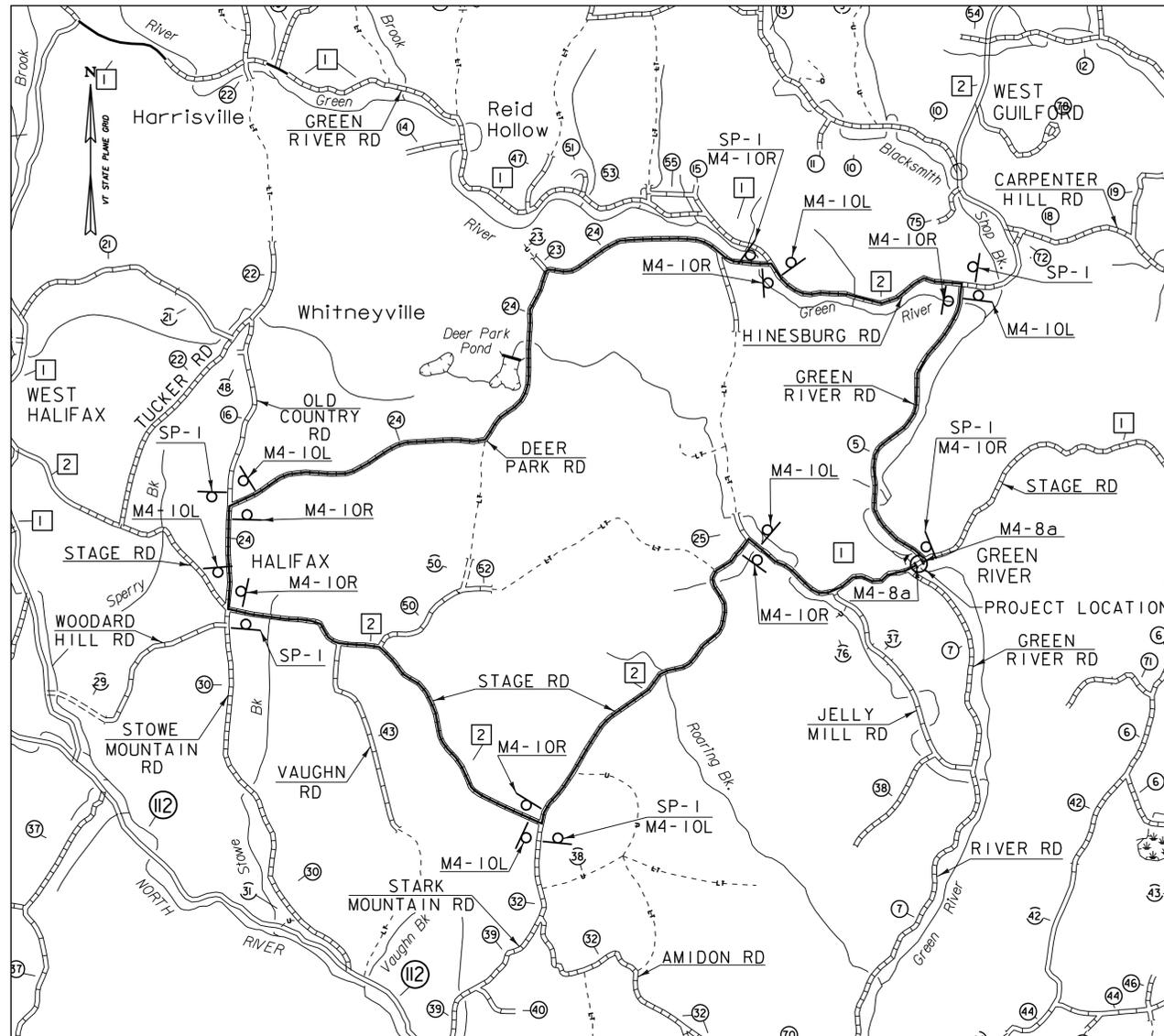
**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201 MODEL 919201notesero3

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)

FILE NAME: 919201notesero3.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA  
**EPSC DETAILS SHEET (2 OF 2)**

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES  
SHEET 16 OF 32



**DETOUR PLAN**

DETOUR LENGTH = 14± MILES  
 SCALE: 1" = 2500'  
 0 2500 5000 7500

**TRAFFIC CONTROL NOTES:**

- TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
- CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.
- CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.
- SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.
- NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED. CONSTRUCTION SIGNS SHALL BE PLACED ON TWO POSTS.
- CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE GUARDRAIL, OR TWO FEET OUTSIDE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.
- PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
- SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
- ROLL UP CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VI AND TYPE VII UNLESS OTHERWISE NOTED.
- SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VIII OR IX REQUIREMENTS UNLESS OTHERWISE NOTED.

**MAINTENANCE OF TRAFFIC**

SIGN NO.	DESCRIPTION	SIZE WxH	SQ. FT.	NO REQ.	TOTAL AREA	POST	COLOR
M4-8a		24" X 18"	3	2	6	1 POST PER SIGN	B/O
M4-10R		48" X 18"	6	8	48	1 POST PER SIGN	B/O
M4-10L		48" X 18"	6	7	42	1 POST PER SIGN	B/O
R11-2B		48" X 30"	10	2	20	MOUNTED ON TYPE III BARRICADE	B/W
SP-1		48" X 30"	10	6	60	ON POST ABOVE M4-10R OR M4-10L	B/O

**LEGEND:**

- TEMPORARY CONSTRUCTION SIGN
- PROPOSED DETOUR ROUTE
- EXISTING ROADWAY
- STREAM OR RIVER
- TOWN LINE
- RAILROAD
- U.S. NUMBERED ROUTE
- STATE NUMBERED ROUTE
- TOWN HIGHWAY

- WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
- ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.
- THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.
- ALL TEMPORARY SIGNS ARE PAID UNDER ITEM 641.0, TRAFFIC CONTROL.
- STEEL FLANGED CHANNEL POSTS SHALL BE INSTALLED FOR EACH SIGN PER STANDARD E-160. THE COSTS OF THESE POSTS WILL NOT BE PAID SEPARATELY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 641.0, TRAFFIC CONTROL.
- ALL SIGNS AND POSTS USED FOR TRAFFIC CONTROL, WITH THE EXCEPTION OF SP-1 SIGNS, SHALL REMAIN THE PROPERTY OF THE CONTRACTOR UPON COMPLETION OF WORK. SP-1 SIGNS SHALL BE DELIVERED TO THE TOWN OF GUILFORD PUBLIC WORKS.
- THE TRAFFIC CONTROL SIGNS SHOWN IN THIS SHEET SHALL REMAIN IN PLACE FOR THE 2 WEEK FULL CLOSURE OF THE COVERED BRIDGE.
- TYPE III BARRICADES SHALL BE INSTALLED AT EACH END OF BRIDGE TO SEPARATE WORK AREA FROM PEDESTRIAN TRAFFIC. EXACT LOCATIONS OF BARRICADES SHALL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD. THE COST OF FURNISHING, INSTALLING AND REMOVING TEMPORARY SIGNS AND TYPE III BARRICADES IS PAID FOR UNDER ITEM 621.90, TEMPORARY TRAFFIC BARRIER.

PROJECT NAME: GUILFORD  
 PROJECT NUMBER: STP EH11(4)

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201 MODEL 919201TR

FILE NAME: 919201tr.dgn PLOT DATE: 6/6/2014  
 PROJECT LEADER: S.GURLEY DRAWN BY: J.B.McQUAID  
 DESIGNED BY: J.BICJA CHECKED BY: S.T.JAMES  
**DETOUR PLAN** SHEET 17 OF 32

CONSTRUCT 5'x5'x1'-0" THICK  
STONE FILL TYPE 1 PAD WITH  
GEOTEXTILE UNDER STONE FILL

PROPOSED DRAINAGE  
(SEE DRAINAGE  
NOTES ON SHEET 8)

SLOPE LIMITS  
(TYP.)

PRC  
100+55.34

EDGE OF CHANNEL  
(TYP.)

GREEN RIVER

PROPOSED DRAINAGE  
(SEE DRAINAGE  
NOTES ON SHEET 8)

CONSTRUCT 5'x5'x1'-0"  
THICK STONE FILL TYPE  
1 PAD WITH GEOTEXTILE  
UNDER STONE FILL

APPROX. EXIST. R.O.W.

WINGWALL NO. 3

WINGWALL NO. 1

BRIDGE NO. 13

ABUTMENT NO. 2

ABUTMENT NO. 1

BEGIN PROJECT  
STA. 100+10.00

TO HALIFAX

100+00

101+00

STAGE ROAD  
(T.H. NO. 1)

102+00

END PROJECT  
STA. 102+50.00

102+58

POB  
100+00.00

BEGIN DECK  
STA. 100+72.21

END DECK  
STA. 101+78.90

POB  
200+00.00

TO GUILFORD CENTER

PT  
301+01.29

301+00

PT  
100+71.52

WINGWALL NO. 2

LIMITS OF SPECIAL PROVISION  
(REPAIRING STONE MASONRY)

WINGWALL NO. 4

APPROX. EXIST. R.O.W.

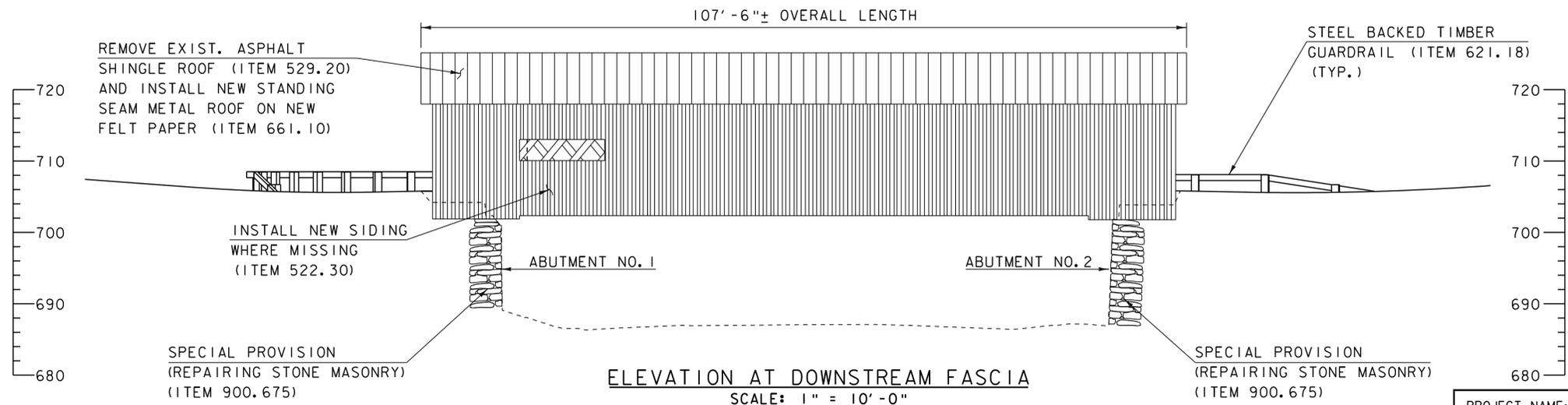
GREEN RIVER

PC  
101+71.96

LIMITS OF SPECIAL PROVISION  
(REPAIRING STONE MASONRY)

PLAN

SCALE: 1" = 10'-0"



ELEVATION AT DOWNSTREAM FASCIA

SCALE: 1" = 10'-0"

PLAN NOTE:

1. SEE SHEET 26 FOR  
APPROACH RAIL LAYOUT.

SCALE: 1" = 10'-0"

10 0 10

Hoyle, Tanner  
& Associates, Inc.

HTA PROJECT NO. 919201 MODEL 91920IGPE

PROJECT NAME: GUILFORD

PROJECT NUMBER: STP EHII(4)

FILE NAME: 91920IGPE.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA

COVERED BRIDGE PLAN AND ELEVATION

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES

SHEET 18 OF 32

**GENERAL NOTES:**

- G-1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.
- G-2. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO INSURE THAT NO DEBRIS FALLS INTO THE GREEN RIVER DURING CONSTRUCTION. ALL MATERIAL FALLING IN THE AREA BELOW AND ADJACENT TO THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO COST TO THE TOWN.
- G-3. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING R.O.W AND PERMANENT CONSTRUCTION EASEMENT LIMITS SHOWN IN THESE PLANS. SHOULD THE CONTRACTOR REQUIRE ANY ADDITIONAL RIGHT-OF-WAY IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL EASEMENTS, AND BEAR THE COSTS OF SUCH EASEMENTS WITHOUT FURTHER COMPENSATION.
- G-4. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME OF BIDDING. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE CHECKED BY THE CONTRACTOR IN THE FIELD PRIOR TO COMMENCING THE WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE DIMENSIONS AND DETAILS OF EXISTING BRIDGE FEATURES AND COMPONENTS PRIOR TO THE FABRICATION OF NEW BRIDGE COMPONENTS. ACTUAL WORK SHALL MATCH FIELD CONDITIONS UNLESS NOTED OTHERWISE. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G-5. EXCEPT AS NOTED OTHERWISE, ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE SHALL INCLUDE ANY WORK NECESSARY TO FACILITATE AND ACCOMPLISH THE SCOPE OF PROJECT WORK AS INDICATED BY THE CONTRACT DOCUMENTS AND DIRECTED BY THE ENGINEER: REMOVING AND DISPOSING SUPERSTRUCTURE MEMBERS AND PORTIONS OF MEMBERS; AS WELL AS REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR RE-USE, INCLUDING REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR THE CONTRACTOR'S METHODS OF REHABILITATION.
- G-6. NO BURNING OF REMOVED MATERIALS AT THE PROJECT SITE WILL BE ALLOWED. THE EXISTING COVERED BRIDGE TIMBERS AND LUMBER MAY CONTAIN HAZARDOUS WOOD PRESERVATIVES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE TOWN, ITS OFFICERS AND EMPLOYEES HARMLESS REGARDING THE CONTRACTOR'S HANDLING OF THESE MATERIALS AND SUBSEQUENT USE, RE-USE, OR DISPOSAL OF THESE MATERIALS.
- G-7. THE COST OF INSTALLING AND MAINTAINING ALL TEMPORARY CONSTRUCTION SIGNS SHALL BE INCLUDED IN ITEM 641.10, TRAFFIC CONTROL. THE REMOVAL AND/OR RESETTING OF TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER SHALL ALSO BE INCLUDED IN THE TRAFFIC CONTROL ITEM.
- G-8. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO MEMBERS THAT ARE TO REMAIN AND TO AVOID MOVEMENT OF THE TRUSS THAT COULD RESULT IN DISTORTION OR MISALIGNMENT OF THE TRUSS AND ITS JOINTS. MEMBERS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT CONTRACTOR'S EXPENSE.
- G-9. ALL JOINTS IN REPLACED MEMBERS SHALL MATCH THE EXISTING JOINT, INCLUDING ALL NAILS, BOLTS OR SCREWS REQUIRED UNLESS NOTED OTHERWISE.
- G-10. ALL EXISTING MEMBERS SHOWN TO BE REPLACED ARE TO BE REPLACED "IN-KIND" WITH NEW MEMBERS IDENTICAL IN DIMENSIONS AND CONFIGURATIONS AS THE MEMBERS ORIGINALLY USED IN THE COVERED BRIDGE (INCLUDING MORTISES, TENONS, NOTCHES, HOLES, ETC.) UNLESS NOTED OTHERWISE IN THESE PLANS. SEE SHEET 5 FOR WOOD MATERIALS LIST.

**TIMBER CONNECTORS NOTES:**

- TC-1. EXCEPT AS SPECIFIED IN THE STRUCTURAL STEEL NOTES, PAYMENT FOR STRUCTURAL LUMBER AND TIMBER AND NON-STRUCTURAL LUMBER QUANTITIES SHALL BE FULL COMPENSATION FOR DETAILING, FURNISHING, TRANSPORTING, HANDLING, PLACING AND INSTALLING NEW TIMBER CONNECTORS WHICH ARE USED TO CONNECT NEW LUMBER AND TIMBER MEMBERS WITH EXISTING LUMBER AND TIMBER MEMBERS.
- TC-2. EXCEPT AS SPECIFIED IN THE STRUCTURAL STEEL NOTES, DETAILING, FURNISHING, TRANSPORTING, HANDLING, AND INSTALLING NEW AND REUSED TIMBER CONNECTORS WHICH ARE USED TO CONNECT EXISTING LUMBER AND TIMBER MEMBERS SHALL BE CONSIDERED INCIDENTAL TO THE WORK REQUIRED FOR ITEM 900.645 SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

**WOOD NOTES:**

- W-1. ALL WOOD CONSTRUCTION SHALL COMPLY WITH THE LATEST AASHTO SPECIFICATIONS, THE NATIONAL DESIGN SPECIFICATION (NDS) AND SUPPLEMENT FOR WOOD CONSTRUCTION, AND THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) SPECIFICATION, 6TH EDITION.

W-2. THE MAXIMUM IN PLACE MOISTURE CONTENT OF THE WOOD USED SHALL BE AS FOLLOWS:

MEMBERS LESS THAN 5" THICK	16%
MEMBERS GREATER THAN 5" THICK	19%
TRUNNELS	10%
ALL HARDWOOD 2.5" AND THICKER MAY BE GREEN	

- W-3. ALL NEW WOOD TRUNNELS SHALL BE MADE OF WHITE OAK. TRUNNELS SHALL BE DRIVEN IN A MANNER WHICH AVOIDS SPLITTING THE TRUNNELS OR THE MEMBER CONNECTED BY THEM. HOLES SHALL BE SIZED 1/16" IN DIAMETER SMALLER THAN THE TRUNNEL TO PROVIDE A FRICTION FIT. TRUNNELS SHALL BE DIPPED IN BOILED LINSEED OIL, MINERAL OIL OR AN APPROVED WAX PRIOR TO DRIVING. ALL NEW OR EXISTING WOOD TRUNNELS IN SOUND CONDITION THAT ARE TO BE RE-USED WITH PERMISSION OF THE RESIDENT ENGINEER FOR CONNECTING NEW OR REPLACED MEMBERS ARE CONSIDERED INCIDENTAL TO ITEM 522.20, STRUCTURAL LUMBER AND TIMBER, UNTREATED.
- W-4. THE REPAIR OF APPROXIMATELY 63 SPLITS AND CHECKS IN EXISTING LATTICE AND 4 SPLITS IN CHORD MEMBERS OF THE NORTH TRUSS SHALL BE MADE WITH AN APPROVED WOOD EPOXY TO ACHIEVE FULL STRENGTH OF THE REPAIRED MEMBER (PAY ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS)). AN ADDITIONAL 13 ROTTED MEMBER REPAIRS (AS SHOWN ON "EPOXY REPAIR DETAIL" ON SHEET 21) ARE INCLUDED FOR BIDDING PURPOSES. SEE THE RECOMMENDED REPAIR SEQUENCE NOTES ON SHEET 21 AND SHEET 24 FOR MORE INFORMATION.
- W-5. EACH PIECE OF NEW LUMBER AND TIMBER SHALL BE GRADED, BY A RECOGNIZED LUMBER GRADING AGENCY. INDIVIDUAL PIECES SHOULD BE STAMPED WITH A GRADE STAMP AT THE END GRAIN OF THE MEMBERS. MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WOOD IN ACCORDANCE WITH SECTION 709.
- W-6. THE QUANTITIES OF ITEM 522.20 STRUCTURAL LUMBER AND TIMBER, UNTREATED GIVEN ABOVE ASSUME REPLACEMENT OF 3 ADDITIONAL ROOF RAFTERS FOR BIDDING PURPOSES THAT HAVE NOT BEEN IDENTIFIED IN THE PLANS. THE CONTRACTOR AND RESIDENT ENGINEER SHALL JOINTLY INSPECT ALL TRUSS CHORDS, LATTICE MEMBERS AND ALL ROOF RAFTERS AT THE TIME OF CONSTRUCTION TO IDENTIFY ADDITIONAL CHORD, LATTICE MEMBERS AND RAFTERS TO BE REPLACED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LUMBER AND TIMBER DIMENSIONS AND SIZES REQUIRED FOR CONSTRUCTION.
- W-7. THE QUANTITY OF ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED ASSUMES REPLACEMENT OF 10 FT OF FASCIA SIDING WHERE MISSING, PORTAL SIDING MODIFICATIONS AND 15% OF EXISTING ROOF BOARDS. THE CONTRACTOR AND RESIDENT ENGINEER SHALL JOINTLY INSPECT ALL ROOF BOARDS AFTER THE REMOVAL OF THE EXISTING ASPHALT SHINGLE ROOF TO IDENTIFY ADDITIONAL MEMBERS TO BE REPLACED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LUMBER DIMENSIONS AND SIZES REQUIRED FOR CONSTRUCTION.
- W-8. ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE) SHALL INCLUDE ALL COSTS ASSOCIATED WITH RE-INSTALLING STOCKPILED COMPONENTS (FROM ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE) ON THE SUPERSTRUCTURE; ALTERATIONS TO IN-PLACE MEMBERS REQUIRED FOR RE-USE/REHABILITATION OF THE SUPERSTRUCTURE; TEMPORARY BRACING AND BLOCKING; ALL LABOR, MATERIALS AND SUBMITTALS REQUIRED FOR THE REHABILITATION WORK (EXCEPT AS SPECIFIED BY OTHER CONTRACT ITEMS); STRAIGHTENING, PLUMBING, AND RE-ALIGNING THE TRUSSES; CAMBER RESTORATION; AND FURNISHING AND INSTALLING NEW TRUNNELS WHERE NONE EXIST.
- W-9. ALL NUTS, BOLTS, WASHERS, AND SCREWS SHALL CONFORM TO ASTM A307, ALL NAILS AND SPIKES SHALL CONFORM TO ASTM F1667 AND BE DOUBLE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232. THE USE OF ELECTRO GALVANIZED NAILS WILL NOT BE ALLOWED. STAINLESS STEEL NAILS ARE REQUIRED IF NAIL GUNS ARE USED.
- W-10. ALL STRUCTURAL LUMBER AND TIMBER NOT SHOWN ON THE WOOD MATERIALS LIST TABLE ON SHEET 5 SHALL BE DOUGLAS FIR NO.1 OR BETTER. LIKEWISE, ALL HARDWOOD SHALL BE WHITE OAK NO.1 OR BLACK LOCUST NO.1 OR BETTER WHERE THE SPECIES IS NOT NOTED.
- W-11. ALL FIELD CUTS AND BORINGS OF TREATED WOOD SHALL BE TREATED WITH TWO COATS OF COPPER NAPHTHENATE LIBERALLY APPLIED PER SPECIFICATION SECTION 522.
- W-12. EXISTING TRUSS, ROOF RAFTER, KNEE BRACING, CROSSBEAMS AND UPPER LATERAL BRACING JOINTS SHALL BE RERLOCATED ON ALL STRUCTURE MEMBERS TO BE REPLACED UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS.
- W-13. THE WOOD CURB BLOCKING, CURB AND NEW RUNNER PLANKS SHALL COMPLY WITH SUBSECTION 726.01 FOR TYPE III PENTACHLOROPHENOL TYPE C.
- W-14. ALL LAG BOLTS AND NUTS FOR THROUGH BOLTS SHALL BE TIGHTENED SNUGLY BUT NOT SO TIGHTLY AS TO CAUSE CRUSHING OF THE WOOD UNDER THE WASHER OR PLATE.
- W-15. RUNNER PLANKS SHALL BE SURFACED THREE SIDES (S3S) (ROUGH SIDE ON TOP). ALL OTHER NEW LUMBER AND TIMBER SHALL BE ROUGH SURFACED.

- W-16. DIMENSIONS OF ALL LUMBER AND TIMBER MEMBERS SHOWN IN THESE PLANS ARE THE ACTUAL SIZES AFTER SEASONING UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. FOR ALL NEW MEMBERS THAT ARE NOT SURFACED S3S, CROSS-SECTIONAL DIMENSION VARIATIONS OF UP TO 1/8" WILL BE ALLOWED.
- W-17. ALL WOOD MEMBERS WITHIN 5 FT OF THE WINDOW OPENINGS SHALL BE COATED WITH TWO COATS OF THOMPSON WATERSEAL ADVANCED WOOD PROTECTOR BY THOMPSON'S COMPANY OR WOLMAN RAINCOAT CLEAR WATER REPELLENT BY RUSTOLEUM OR WATER REPELLENT CLEAR SEALER BY RECOCHEN INC. OR APPROVED EQUAL. PRIOR TO THE APPLICATION, ALL WOOD SURFACE SHALL BE FREE OF DIRT, MILDEW AND CONTAMINANTS. A TRIAL TEST SHALL BE DONE PRIOR TO APPLICATION FOR APPROVAL BY THE RESIDENT ENGINEER. ALL COST IS CONSIDERED SUBSIDIARY TO ITEM 900.645 SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

**STRUCTURAL STEEL NOTES:**

- S-1. EXCEPT AS NOTED OTHERWISE IN THE CONTRACT PLANS, ITEM 506.75, STRUCTURAL STEEL SHALL INCLUDE THE FOLLOWING:
  - NEW CARRIAGE BOLTS WITH HEAVY SQUARE NUTS AND OGEE WASHERS THAT ARE TO CONNECT THE UPPER X-BRACING MEMBERS

FABRICATION DRAWINGS AND ERECTION PLAN SUBMITTALS ARE NOT REQUIRED FOR ITEM 506.75, STRUCTURAL STEEL.
- S-2. ALL NEW STRUCTURAL STEEL SHOWN IN THE PLANS INCLUDING PLATES, BOLTS, LAG BOLTS, TURNBUCKLES, NUTS, WASHERS, RODS, ANGLES AND MISCELLANEOUS STEEL, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232 EXCEPT FOR PLATES WHICH SHALL BE GALVANIZED PER AASHTO M 111M/ M 111 AND STAINLESS STEEL BOLTS (WHERE SPECIFIED) WHICH SHALL CONFORM TO ASTM A304. ALL STEEL PLATES AND RODS SHALL BE ASTM A36.
- S-3. EXPOSED ENDS OF ALL STRUCTURAL STEEL AND HARDWARE SHALL BE COATED WITH 2 COATS OF A-H COAL TAR EPOXY 210 BY ANTI-HYDRO COMPANY, BITUMASTIC 300-M BY CARBOLINE, DURAL 306 BY TAMMS INDUSTRIES OR OTHER EQUIVALENT APPROVED EQUAL COAL TAR EPOXY. ALL COST FOR THIS WORK IS CONSIDERED INCIDENTAL TO ITEM 506.75, STRUCTURAL STEEL.

**RECOMMENDED SEQUENCE OF WORK:**

- RS-1. INSTALL TEMPORARY TRAFFIC SIGNS AND CLOSE THE EXISTING COVERED BRIDGE TO ALL TRAFFIC.
- RS-2. THE EXISTING BRIDGE SHALL BE JACKED AND BRACED AS REQUIRED TO STRAIGHTEN, RELEASE STRESSES, PLUMB AND RE-ALIGN THE TRUSSES. FOUR WEEKS PRIOR TO COMMENCEMENT OF REALIGNMENT OPERATIONS THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF WORK TO THE RESIDENT ENGINEER IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS. (SEE ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)).
- RS-3. REPLACE AND INSTALL NEW BRIDGE MEMBERS AS DETAILED IN CONTRACT DRAWINGS.
- RS-4. COMPLETE REMAINING WORK ITEMS AS DETAILED IN THE CONTRACT DOCUMENTS AND REOPEN BRIDGE TO TRAFFIC.
- RS-5. COMPLETE SUBSTRUCTURE WORK.

**ENVIRONMENTAL PROTECTION NOTES:**

- E-1. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO ANY STREAM FROM POLLUTION BY DEBRIS, SEDIMENT, OR OTHER FOREIGN MATERIAL OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR SUCH STREAMS. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO A STREAM ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM A STREAM, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM REQUIRED TO PROTECT AND SUSTAIN AQUATIC LIFE.

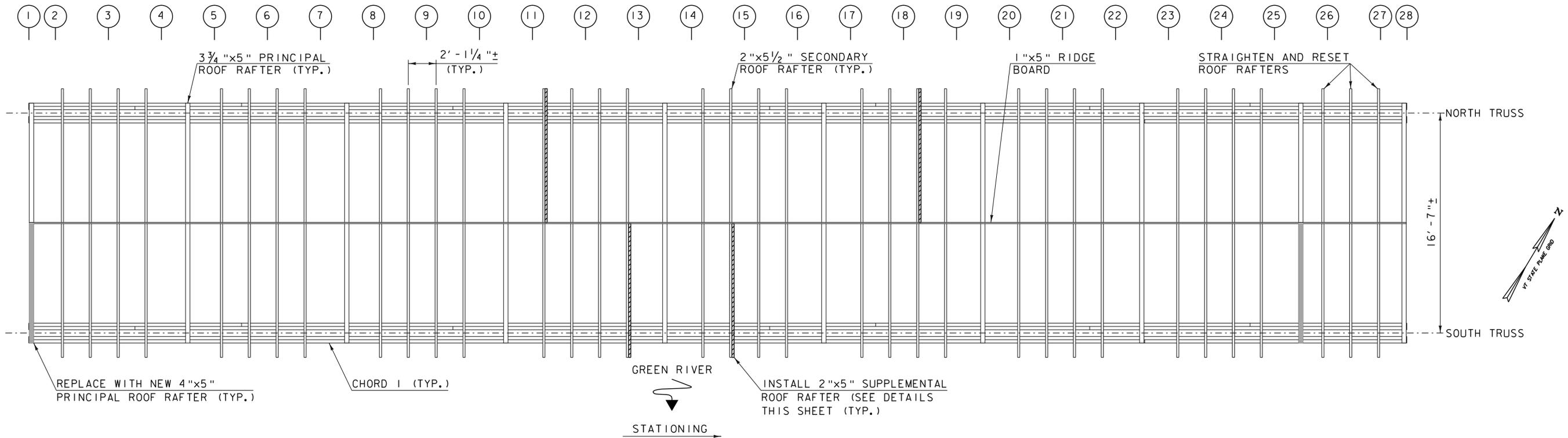
**SIDING NOTES:**

- SN-1. THE END RETURN SIDING, EXTERIOR FASCIA SIDING AT EACH QUADRANT OF THE BRIDGE AND PART OF PORTAL SIDING IS REQUIRED TO BE CAREFULLY REMOVED AND REINSTALLED IN ORDER TO FACILITATE THE INSTALLATION OF NEW VERTICAL POSTS AND END CROSS BEAMS. ALL COSTS FOR THIS WORK ARE PAID UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).
- SN-2. IF THE REMOVED SIDING IS DAMAGED AND DEEMED UNUSABLE BY THE RESIDENT ENGINEER, IT SHALL BE REPLACED IN-KIND WITH NEW SIDING AND PAID UNDER ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED. FOR BIDDING PURPOSES IT IS ASSUMED THAT 0.330 MFBM OF NEW SIDING WILL BE REQUIRED TO REPLACE THE DAMAGED SIDING.

PROJECT NAME: GUILFORD	
PROJECT NUMBER: STP EHII(4)	
FILE NAME: 91920Inotes.dgn	PLOT DATE: 6/6/2014
PROJECT LEADER: S.GURLEY	DRAWN BY: J.B.McQUAID
DESIGNED BY: J.BICJA	CHECKED BY: S.T.JAMES
<b>PROJECT NOTES SHEET</b>	
SHEET 19 OF 32	

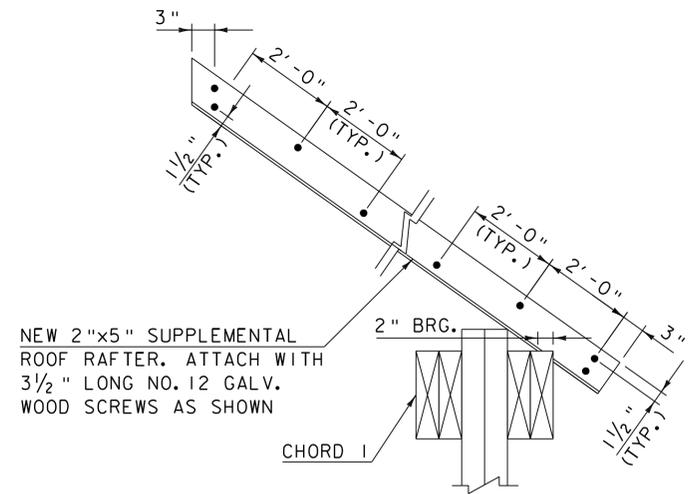


HTA PROJECT NO.	MODEL
91920I	91920INOTESI



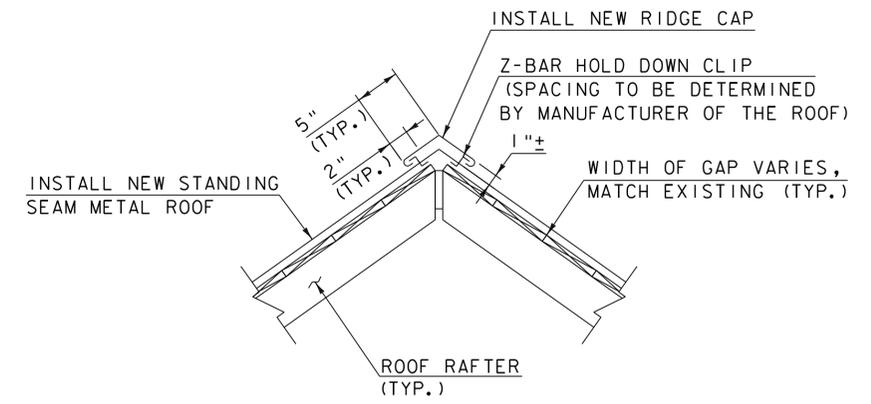
NOTE: ROOF BOARDS AND KNEE BRACING NOT SHOWN FOR CLARITY.

**ROOF FRAMING PLAN**  
SCALE: 1/4" = 1'-0"

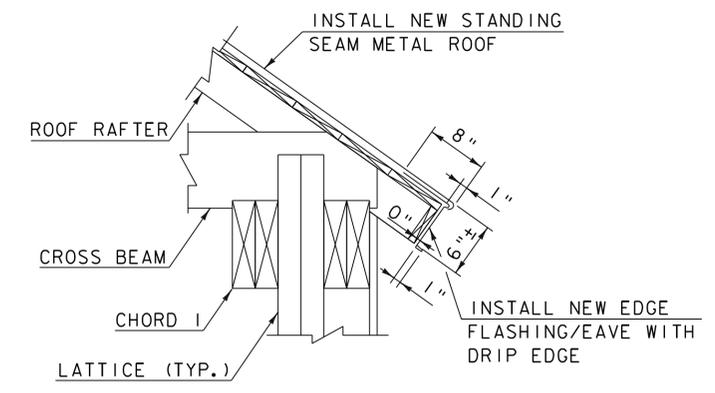


**SUPPLEMENTAL RAFTER DETAIL**  
NOT TO SCALE

NOTE: INSTALLATION OF SUPPLEMENTAL RAFTER MAY REQUIRE ADDITIONAL NOTCHING OF THE LATTICE TAIL. THE CONTRACTOR SHALL VERIFY WITH THE RESIDENT ENGINEER PRIOR TO COMPLETING THE WORK.

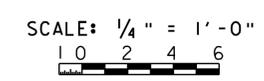


**ROOF RIDGE CAP DETAIL**  
NOT TO SCALE



**ROOF EAVE DETAIL**  
NOT TO SCALE

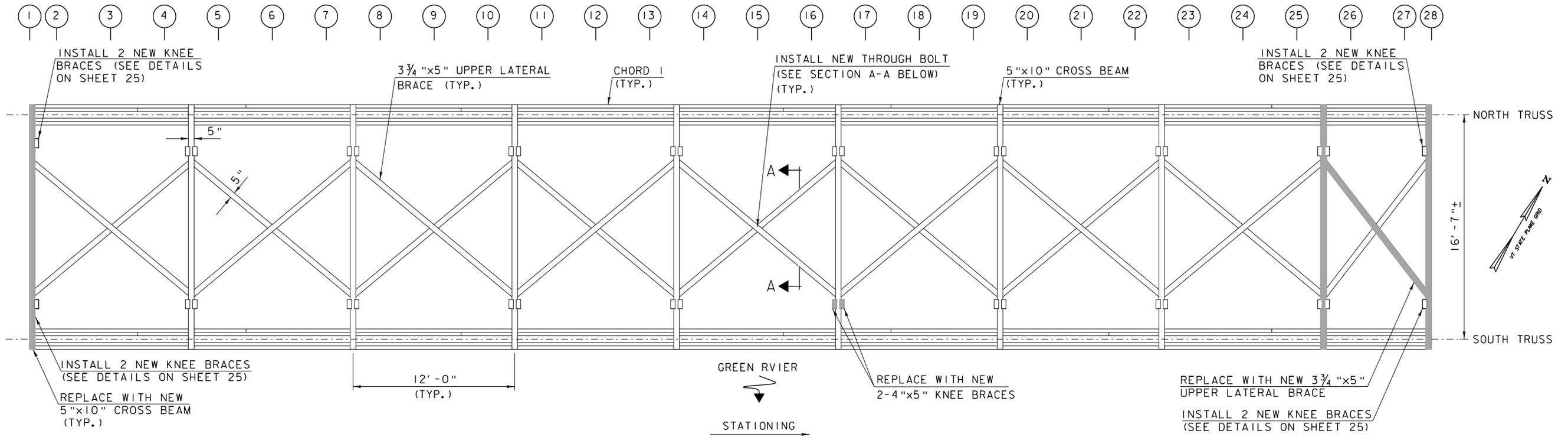
- LEGEND:**
- (XX) TRUSS NODE LOCATION
  - [Hatched Box] NEW SUPPLEMENTAL MEMBER
  - [Solid Grey Box] PREDETERMINED MEMBER TO BE REPLACED



**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 91920I  
MODEL 91920ISUP5

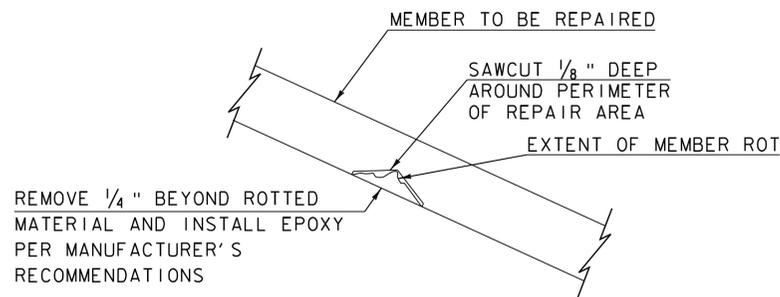
PROJECT NAME:	GUILFORD	FILE NAME:	91920Isup5.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EHII(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
		<b>ROOF FRAMING PLAN</b>			SHEET 20 OF 32



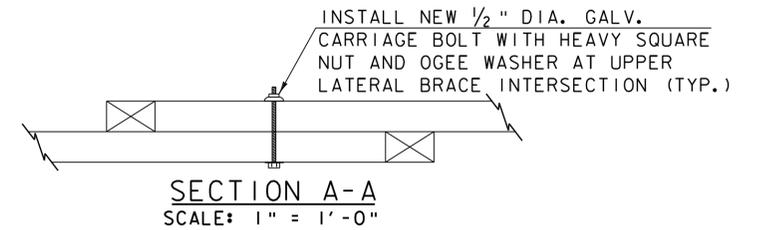
**UPPER LATERAL BRACING PLAN**  
SCALE: 1/4" = 1'-0"

**RECOMMENDED REPAIR SEQUENCE:**

- R-1. IDENTIFIED ROTTED MATERIAL IN LUMBER AND TIMBER MEMBERS, IF LESS THAN 1 INCH IN DEPTH, SHALL BE REPAIRED AS SHOWN ABOVE ON THE "EPOXY REPAIR DETAIL". IF ROT IS GREATER THAN 1 INCH IN DEPTH, THE ENTIRE MEMBER SHALL BE REPLACED AS DIRECTED BY THE RESIDENT ENGINEER.
- R-2. REMOVE ALL ROTTED MATERIAL TO A MINIMUM OF 1/4" BEYOND EXTENT OF ROT. SAWCUT 1/8" DEEP AROUND PERIMETER OF REPAIR AREA.
- R-3. CLEAN EXISTING MEMBER OF ALL DIRT, SAWDUST, ETC. AND PREPARE SURFACE PER MANUFACTURER'S RECOMMENDATIONS.
- R-4. INSTALL/INJECT APPROVED EPOXY REPAIR MATERIAL PER MANUFACTURER'S RECOMMENDATIONS, (PAID UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS)). COLOR OF REPAIR MATERIAL TO MATCH EXISTING WOOD. A COMPLETED TEST SECTION SHALL BE MADE FOR APPROVAL BY THE RESIDENT ENGINEER.
- R-5. INSTALL TWO GALVANIZED LAG SCREWS INTO EXISTING SPLIT THROUGH REPAIR MATERIAL (IF REQUIRED). SIZE OF LAG SCREWS TO BE DETERMINED BY THE RESIDENT ENGINEER.
- R-6. SEE NOTE W-4 ON SHEET 19 FOR ALL WORK TO BE PAID FOR UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS).



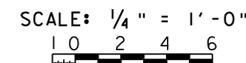
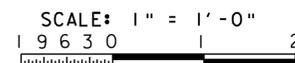
RAFTER OR OTHER MEMBER (VARIOUS ITEM NUMBERS)  
**EPOXY REPAIR DETAIL**  
NOT TO SCALE



**SECTION A-A**  
SCALE: 1" = 1'-0"

**LEGEND:**

- (XX) TRUSS NODE LOCATION
- PREDETERMINED MEMBER TO BE REPLACED



**Hoyle, Tanner & Associates, Inc.**

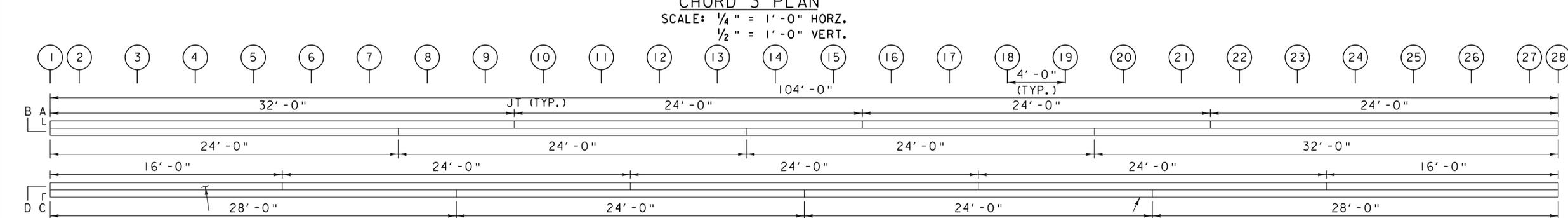
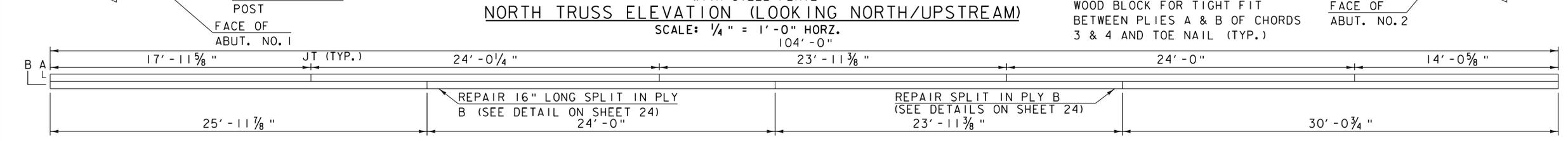
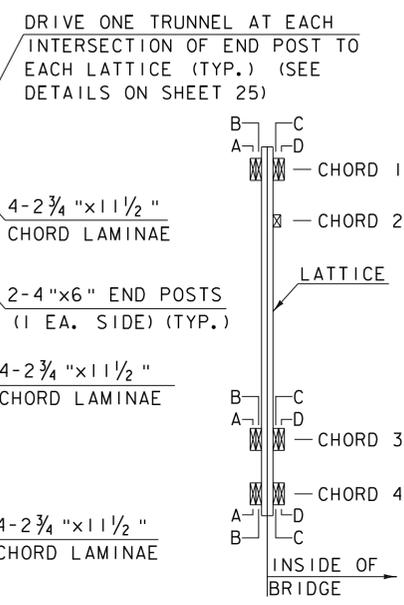
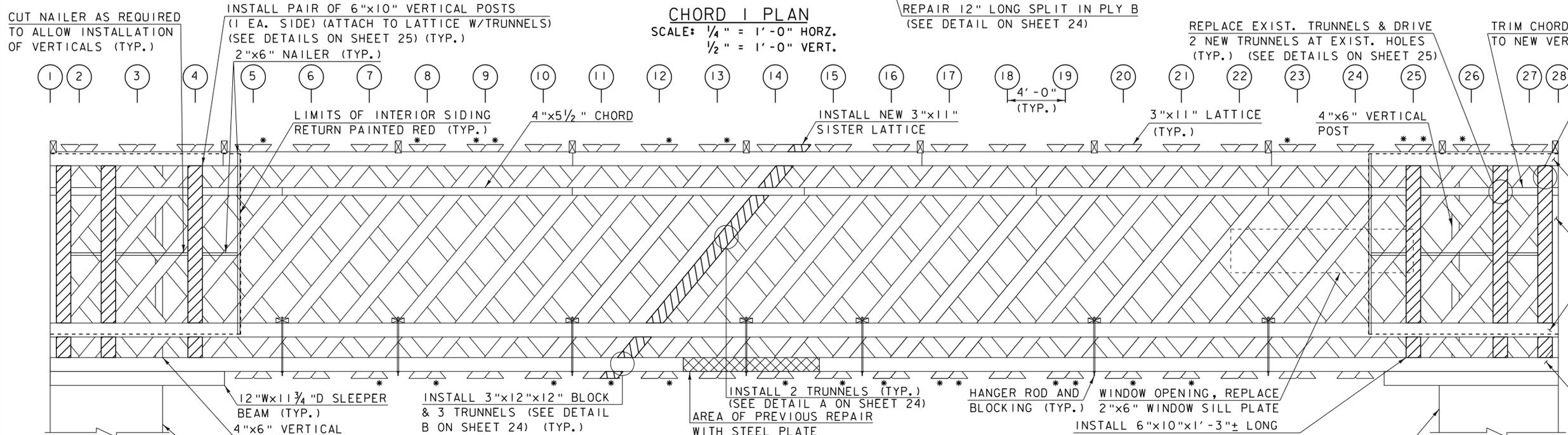
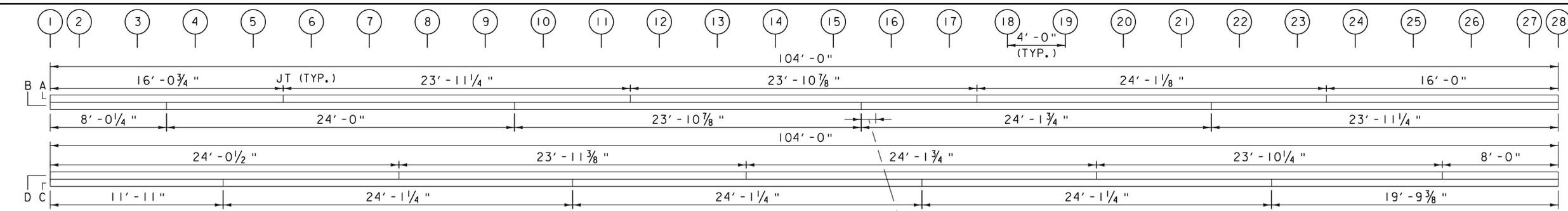
HTA PROJECT NO. 91920I  
MODEL 91920ISUP6

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)

FILE NAME: 91920Isup6.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES

**UPPER LATERAL BRACING PLAN & DETAILS** SHEET 21 OF 32



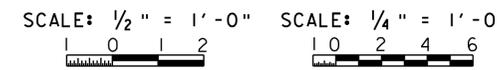
- LEGEND:**
- ⊗ TRUSS NODE LOCATION
  - ▨ NEW MEMBER
  - JT EXISTING CHORD JOINT
  - \* DENOTES SPLIT IN LATTICE MEMBER TO BE REPAIRED WITH WOOD EPOXY AND THROUGH BOLT (SEE DETAILS ON SHEET 24)

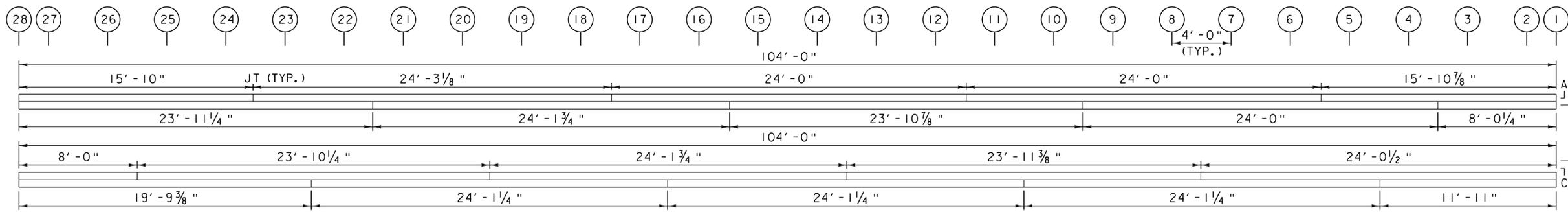
**PLAN NOTE:**

1. EXISTING FLOOR BEAMS, BRACING AND CHORD 2 PLAN VIEW NOT SHOWN FOR CLARITY.

**Hoyle, Tanner & Associates, Inc.**

PROJECT NAME:	GUILFORD	FILE NAME:	91920lsup3.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EHII(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
<b>NORTH TRUSS ELEV. AND CHORD PLAN</b>			SHEET 22 OF 32		





**CHORD 1 PLAN**

SCALE: 1/4" = 1'-0" HORZ.  
1/2" = 1'-0" VERT.

CUT NAILER AS REQUIRED TO ALLOW INSTALLATION OF VERTICALS (TYP.)

INSTALL PAIR OF 6"x10" VERTICAL POSTS (1 EA. SIDE) (ATTACH TO LATTICE W/TRUNNELS) (SEE DETAILS ON SHEET 25) (TYP.)

INSTALL 2 TRUNNELS (TYP.) (SEE DETAIL A ON SHEET 24)

INSTALL 3"x12"x12" BLOCK & 3 TRUNNELS (SEE DETAIL B ON SHEET 24) (TYP.)

INSTALL 6"x12"x12" LONG BLOCK & TOE NAIL TO CHORD 1

2-4"x6" VERTICAL POSTS (1 EA. SIDE)

REPLACE EXIST. TRUNNELS & DRIVE 2 NEW TRUNNELS AT EXIST. HOLES (TYP.) (SEE DETAILS ON SHEET 25)

TRIM CHORD 2 AND TOE NAIL TO NEW VERTICAL (TYP.)

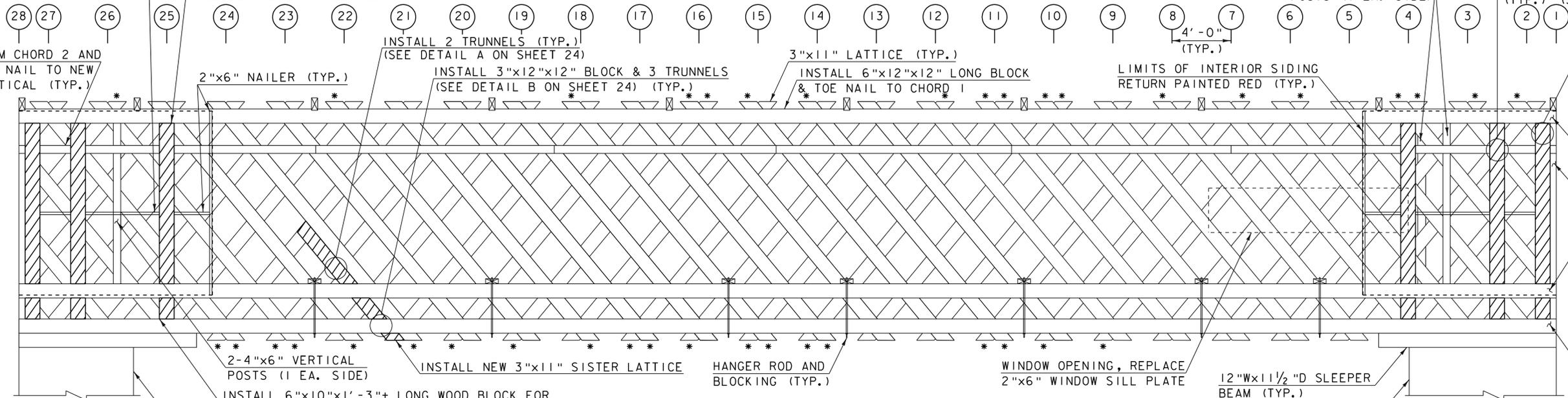
2"x6" NAILER (TYP.)

INSTALL 3"x12"x12" BLOCK & 3 TRUNNELS (SEE DETAIL B ON SHEET 24) (TYP.)

INSTALL 6"x12"x12" LONG BLOCK & TOE NAIL TO CHORD 1

LIMITS OF INTERIOR SIDING RETURN PAINTED RED (TYP.)

DRIVE ONE TRUNNEL AT EACH INTERSECTION OF END POST TO EACH LATTICE (TYP.) (SEE DETAILS ON SHEET 25)



**SOUTH TRUSS ELEVATION (LOOKING SOUTH/DOWNSTREAM)**

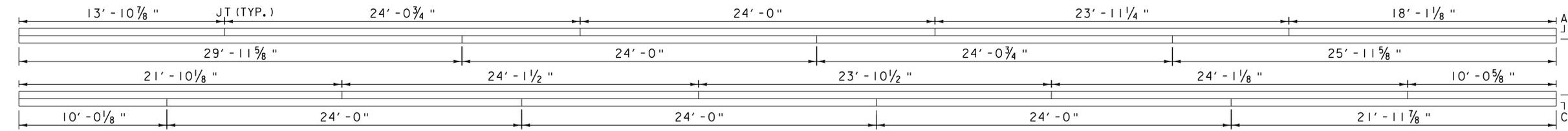
SCALE: 1/4" = 1'-0" HORZ.

**TRUSS TYPICAL SECTION**

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

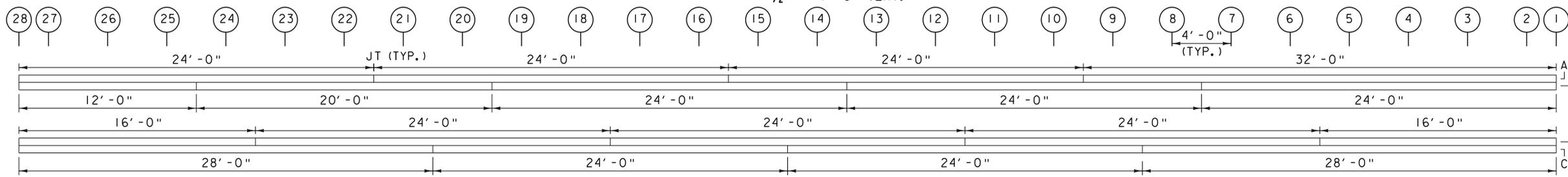
**LEGEND:**

- ⊗ TRUSS NODE LOCATION
- ▨ NEW MEMBER
- JT EXISTING CHORD JOINT
- \* DENOTES SPLIT IN LATTICE MEMBER TO BE REPAIRED WITH WOOD EPOXY AND THROUGH BOLT (SEE DETAILS ON SHEET 24)



**CHORD 3 PLAN**

SCALE: 1/4" = 1'-0" HORZ.  
1/2" = 1'-0" VERT.

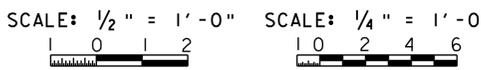


**CHORD 4 PLAN**

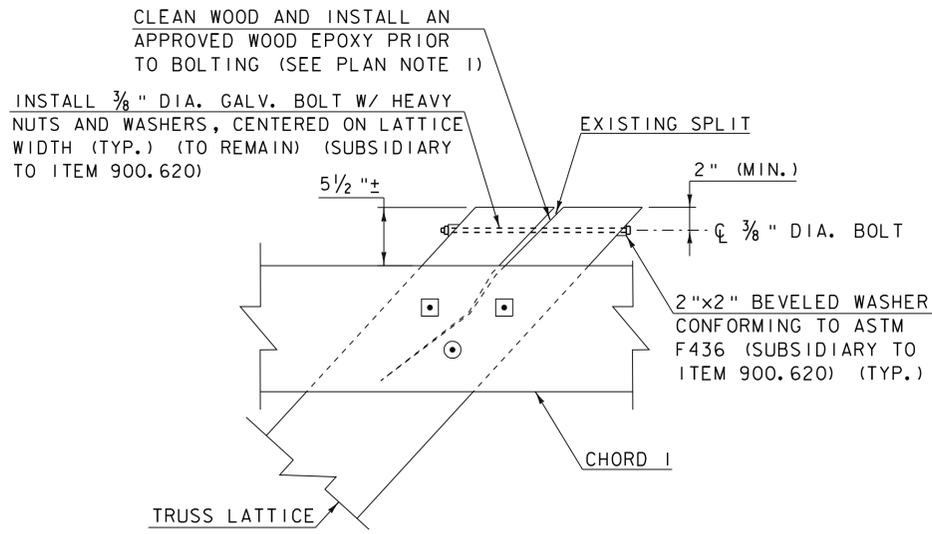
SCALE: 1/4" = 1'-0" HORZ.  
1/2" = 1'-0" VERT.

**PLAN NOTE:**

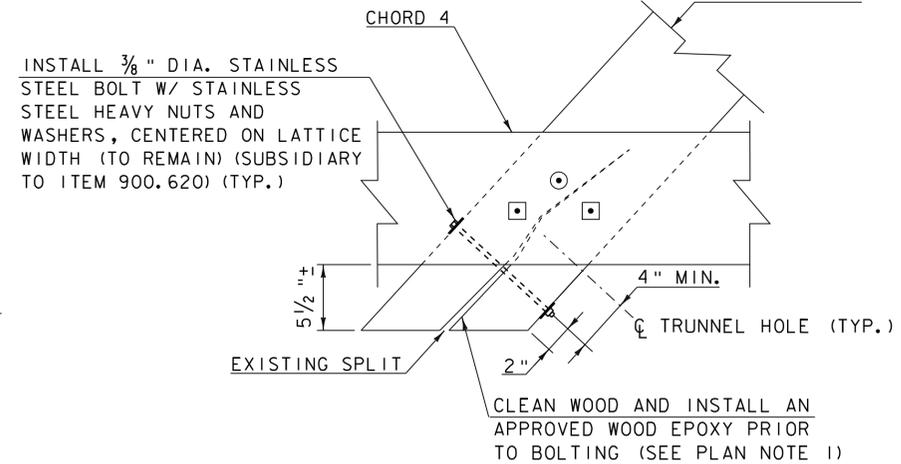
- 1. EXISTING FLOOR BEAMS, BRACING AND CHORD 2 PLAN VIEW NOT SHOWN FOR CLARITY.



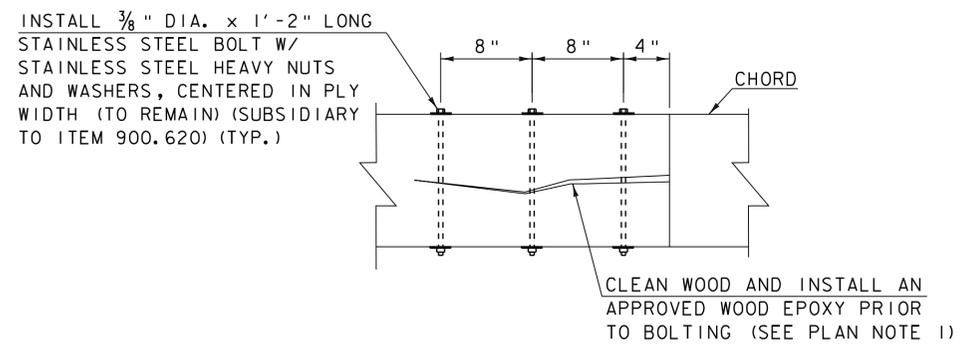
PROJECT NAME:	GUILFORD	FILE NAME:	919201sup4.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EHII(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
<b>SOUTH TRUSS ELEV. AND CHORD PLAN</b>			SHEET 23 OF 32		



**TOP END SPLIT LATTICE REPAIR DETAIL**  
SCALE: 1 1/2" = 1'-0"

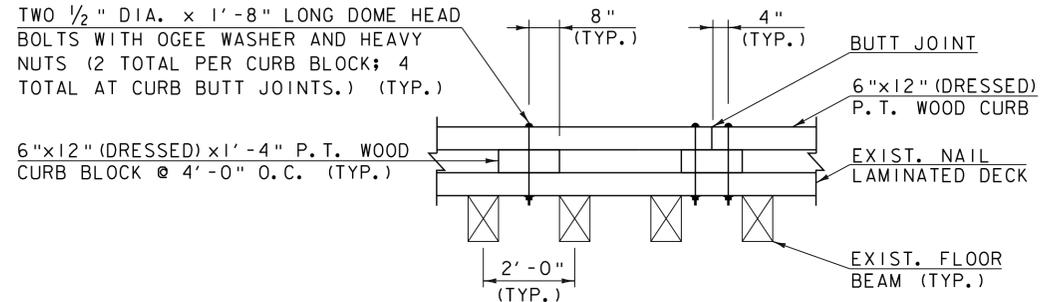


**BOTTOM END SPLIT LATTICE REPAIR DETAIL**  
SCALE: 1 1/2" = 1'-0"

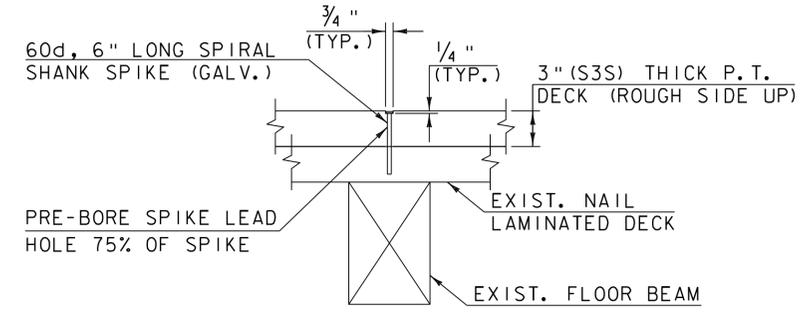


NOTE: LATTICE MEMBERS NOT SHOWN FOR CLARITY.

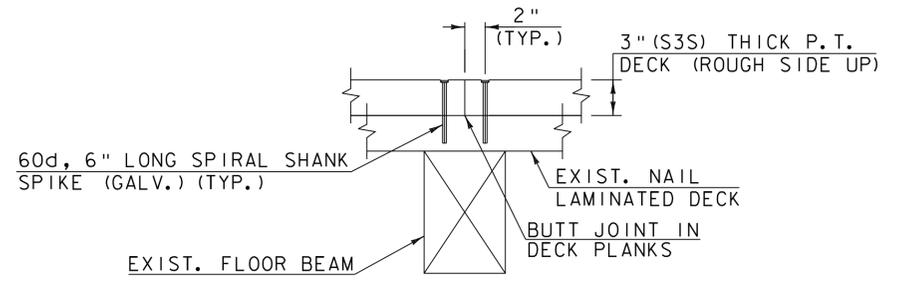
**CHORD SPLIT REPAIR**  
SCALE: 1 1/2" = 1'-0"



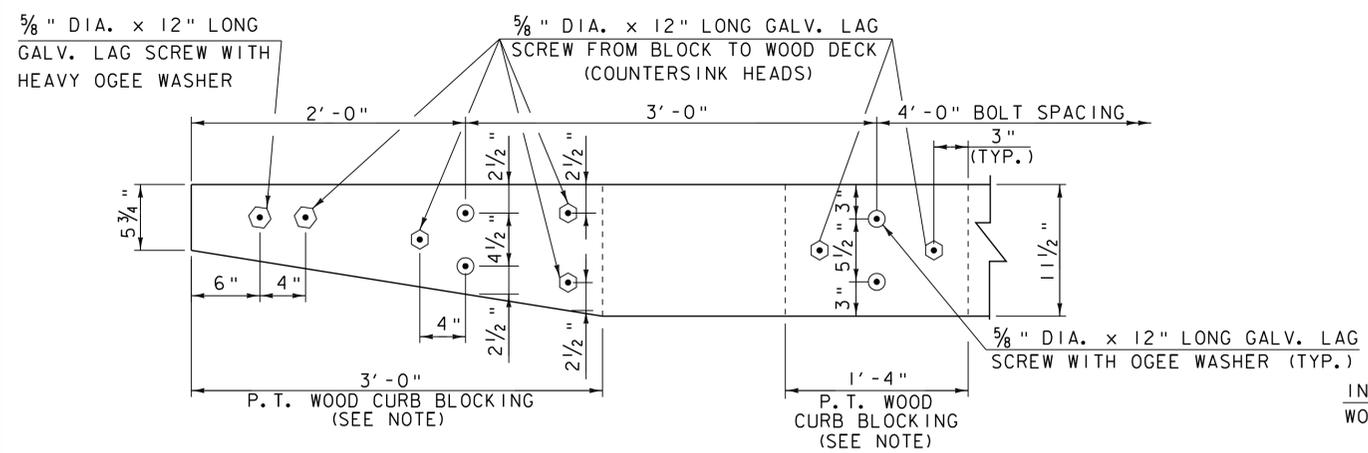
**CURB ATTACHMENT DETAIL**  
SCALE: 1/2" = 1'-0"



**DECK PLANK OVER FLOOR BEAM**

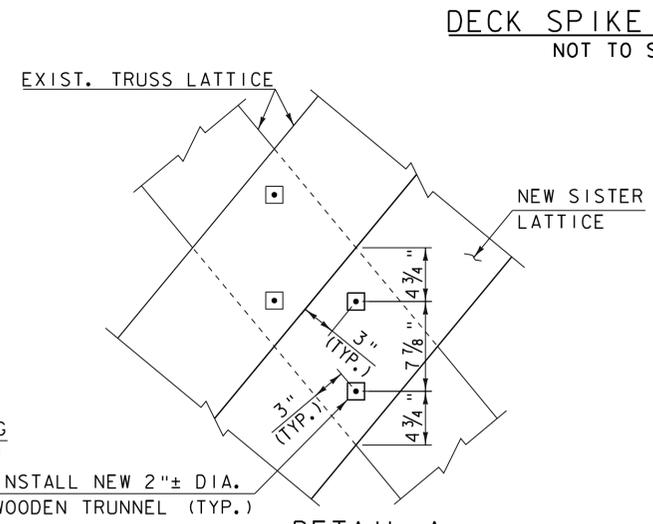


NOTE: STAGGER BUTT JOINTS OF ADJACENT PLANKS BY AT LEAST ONE FLOOR BEAM SPACING.  
**DECK PLANK BUTT JOINT OVER FLOOR BEAM**

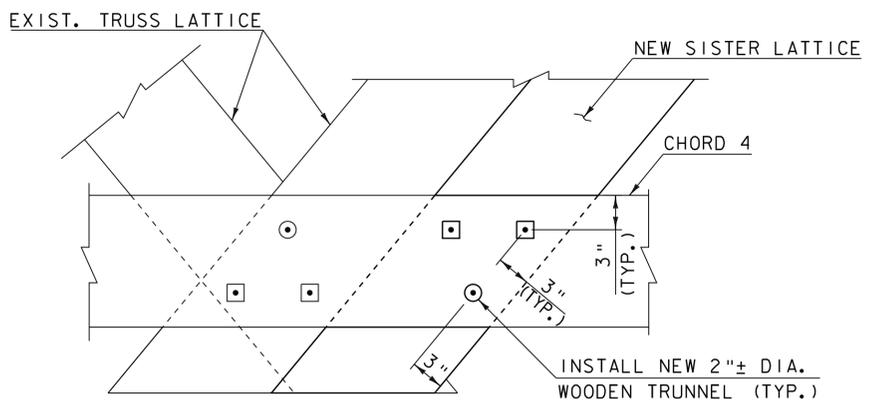


NOTE: THE FIRST TWO WOOD BLOCKS AT EACH END OF BRIDGE SHALL BE CUT IN THE FIELD IN ORDER TO MAINTAIN A LEVEL TOP OF CURB ELEVATION.

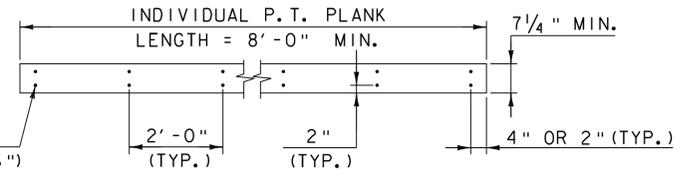
**CURB END TAPER**  
SCALE: 1 1/2" = 1'-0"



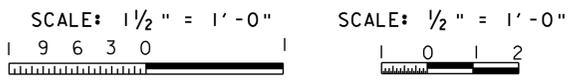
**DETAIL A**  
SCALE: 1 1/2" = 1'-0"



**DETAIL B**  
SCALE: 1 1/2" = 1'-0"



**RUNNER DECK PLANK ATTACHMENT**  
NOT TO SCALE



**PLAN NOTE:**

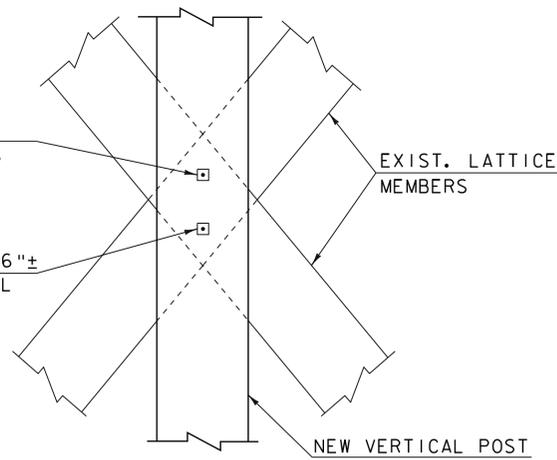
1. THE REPAIR OF SPLITS ON LATTICE AND CHORD MEMBERS, AS SHOWN ON THIS SHEET, ARE PAID UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS). SEE SHEET 21 FOR THE RECOMMENDED REPAIR SEQUENCE.

**Hoyle, Tanner & Associates, Inc.**

PROJECT NAME:	GUILFORD	FILE NAME:	91920ID+11.dgn	PLOT DATE:	6/6/2014
PROJECT NUMBER:	STP EH11(4)	PROJECT LEADER:	S.GURLEY	DRAWN BY:	J.B.McQUAID
		DESIGNED BY:	J.BICJA	CHECKED BY:	S.T.JAMES
			<b>BRIDGE DETAILS (1 OF 2)</b>		SHEET 24 OF 32

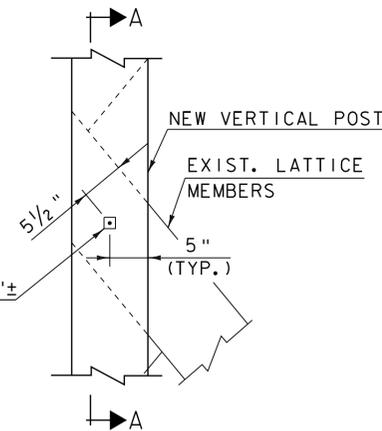
REMOVE EXIST. TRUNNELS AND REUSE EXIST. HOLES. MIGHT REQUIRE RE-DRILLING FOR NEW 2" DIA. TRUNNELS (TYP.)

NEW 2"± DIA. x 1'-6"± LONG WOODEN TRUNNEL (TYP.)

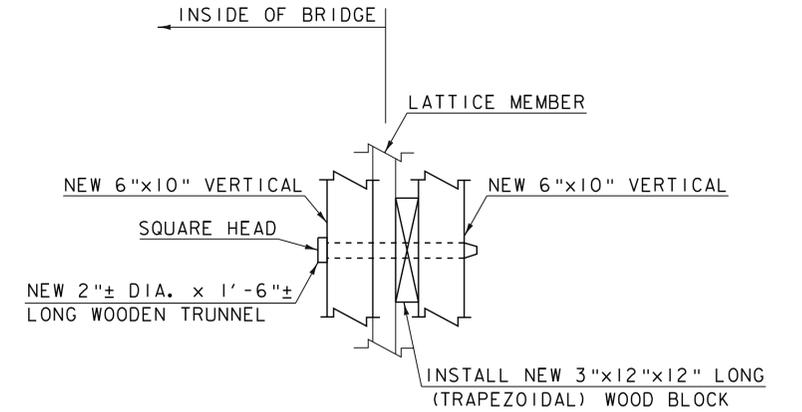


**TYPICAL NEW VERTICAL POST TO LATTICE CONNECTION**  
SCALE: 1" = 1'-0"

NEW 2"± DIA. x 1'-6"± LONG WOODEN TRUNNEL



**TYPICAL NEW VERTICAL POST TO LATTICE CONNECTION AT PORTAL**  
SCALE: 1" = 1'-0"



**SECTION A-A**  
SCALE: 1" = 1'-0"

INSTALL NEW GALV. STEEL BRACKET (SEE DETAIL C)

INSTALL 5/8" DIA. GALV. BOLTS

HARDWOOD BLOCK

INSTALL 4-5/8" DIA. GALV. BOLTS, NUTS & FLAT WASHERS (TWO AT EACH KNEE BRACE) (COUNTERSINK HEADS)

NEW 6"x10" VERTICALS

SIDING

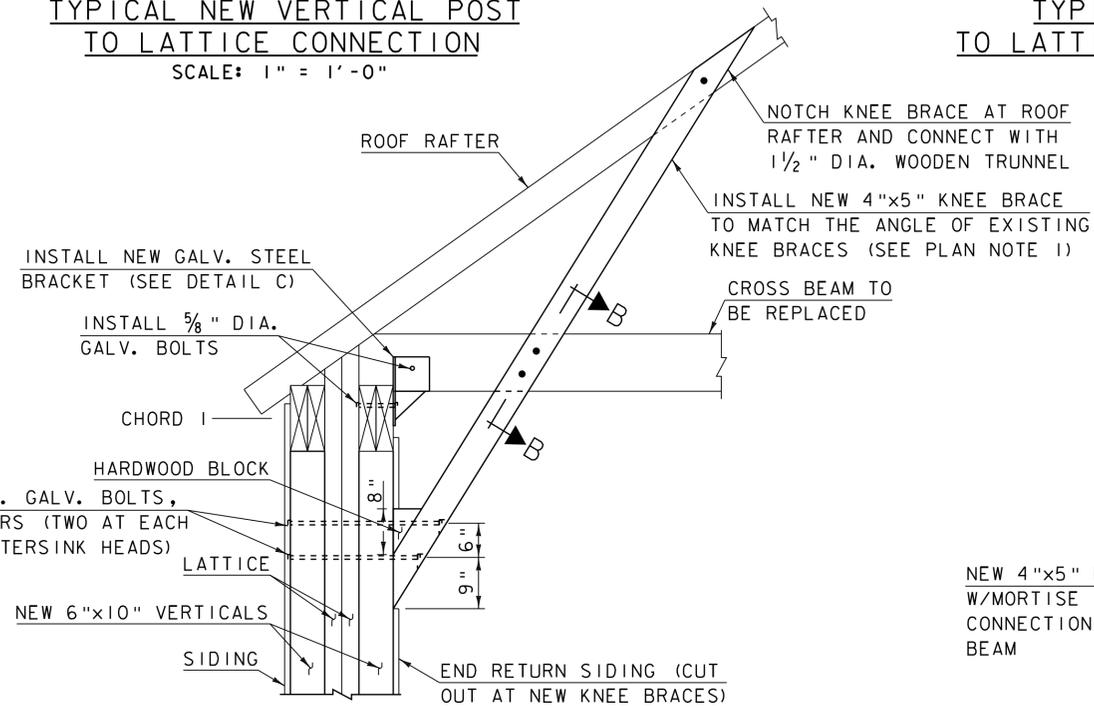
END RETURN SIDING (CUT OUT AT NEW KNEE BRACES)

**NEW KNEE BRACE AT PORTAL**  
SCALE: 3/4" = 1'-0"

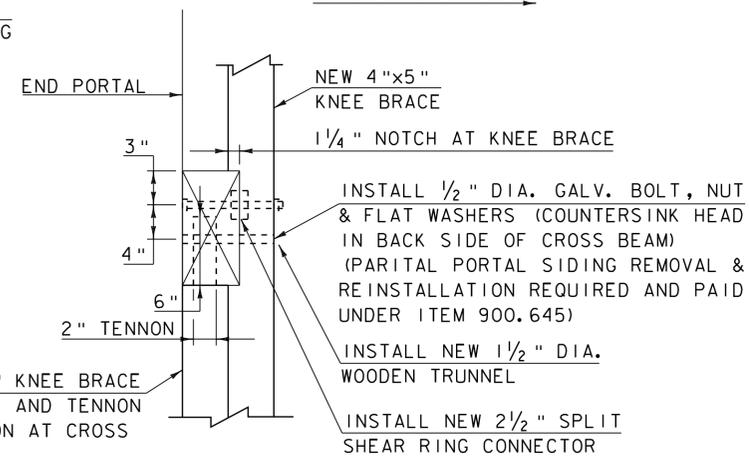
NOTCH KNEE BRACE AT ROOF RAFTER AND CONNECT WITH 1 1/2" DIA. WOODEN TRUNNEL

INSTALL NEW 4"x5" KNEE BRACE TO MATCH THE ANGLE OF EXISTING KNEE BRACES (SEE PLAN NOTE 1)

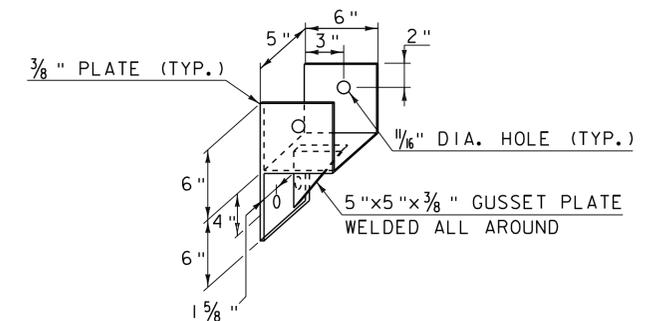
CROSS BEAM TO BE REPLACED



INSIDE OF BRIDGE



**SECTION B-B**  
NOT TO SCALE



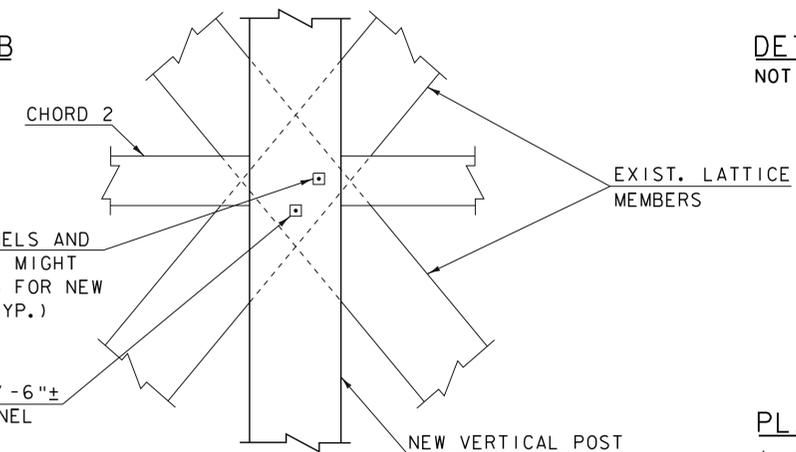
NOTE: GALV. AFTER FABRICATION.

**DETAIL C**  
NOT TO SCALE

REMOVE EXIST. TRUNNELS AND REUSE EXIST. HOLES. MIGHT REQUIRE RE-DRILLING FOR NEW 2" DIA. TRUNNELS (TYP.)

NEW 2"± DIA. x 1'-6"± LONG WOODEN TRUNNEL (TYP.)

**TYPICAL NEW VERTICAL POST TO LATTICE/CHORD 2 CONNECTION**  
SCALE: 1" = 1'-0"

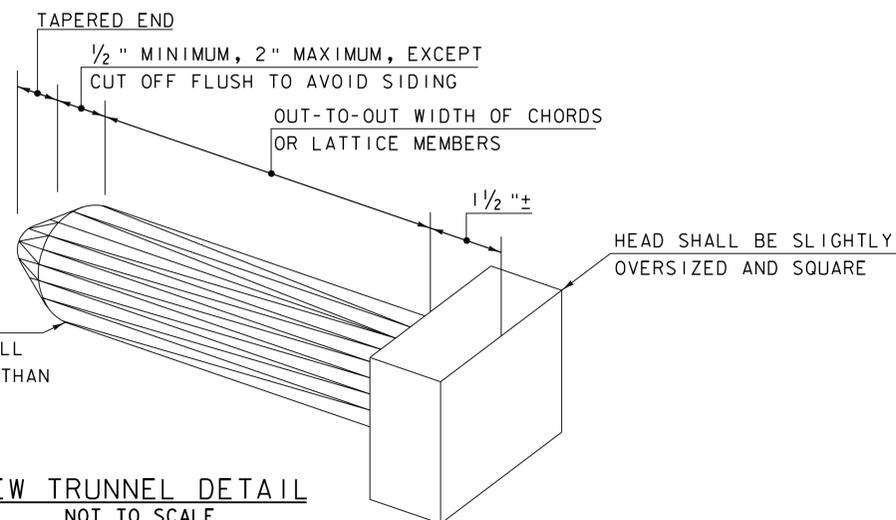


**PLAN NOTE:**

1. RELOCATE VERTICAL STRUTS BETWEEN TOP OF CROSS BEAM AND RAFTER AS REQUIRED (NOT SHOWN FOR CLARITY).

TRUNNEL DIAMETER SHALL BE 2" (+/- 1/8") IN DIAMETER AND SHALL BE APPROXIMATELY 1/16" LARGER THAN NEW HOLE DIAMETER

**NEW TRUNNEL DETAIL**  
NOT TO SCALE



SCALE: 1" = 1'-0"  
1 9 6 3 0 1 2

SCALE: 3/4" = 1'-0"  
1 0 1 2

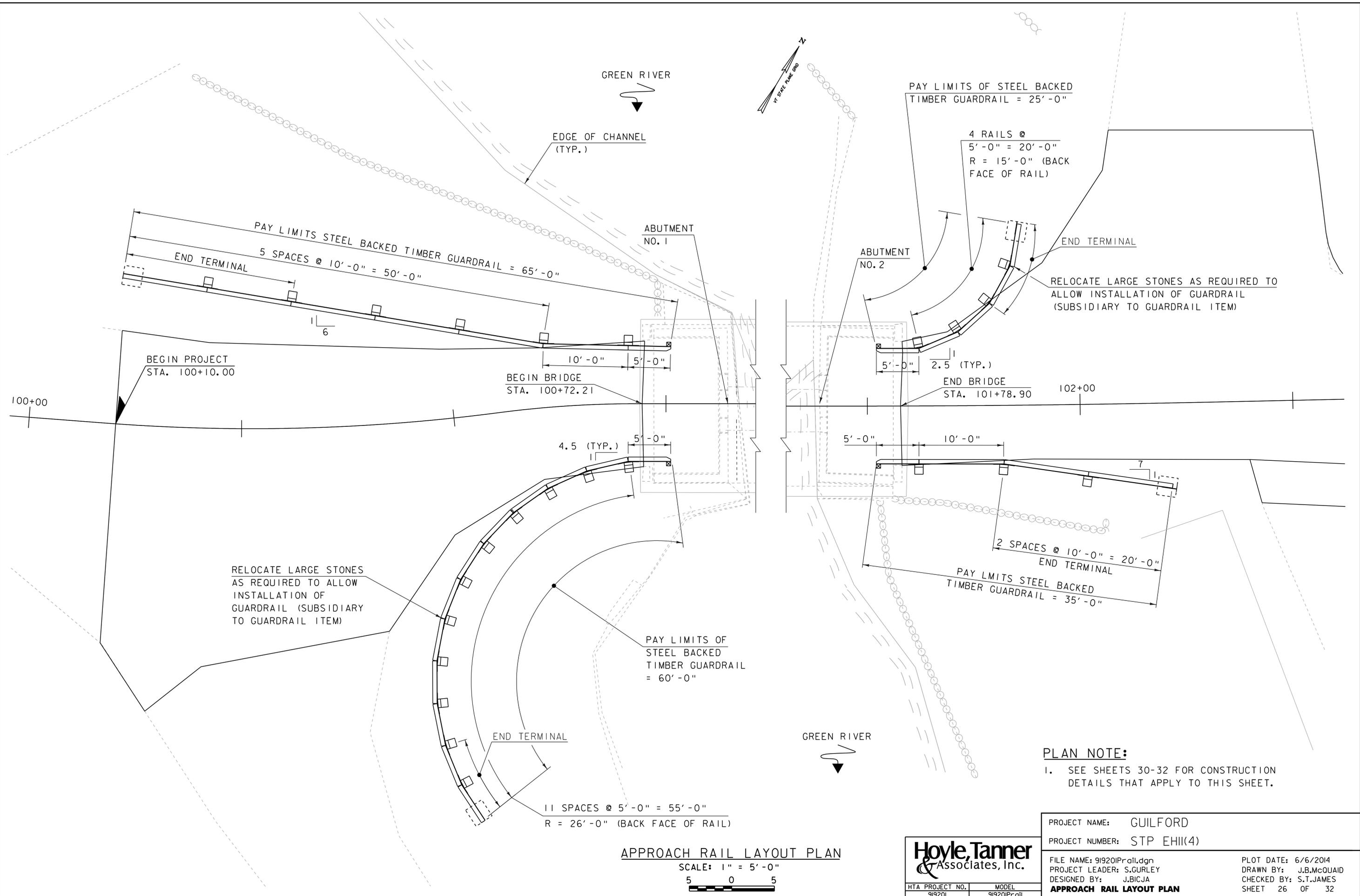
**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201 MODEL 919201TL2

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)

FILE NAME: 91920ID+12.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA  
**BRIDGE DETAILS (2 OF 2)**

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES  
SHEET 25 OF 32



**APPROACH RAIL LAYOUT PLAN**

SCALE: 1" = 5'-0"  
 5 0 5

**PLAN NOTE:**  
 1. SEE SHEETS 30-32 FOR CONSTRUCTION DETAILS THAT APPLY TO THIS SHEET.

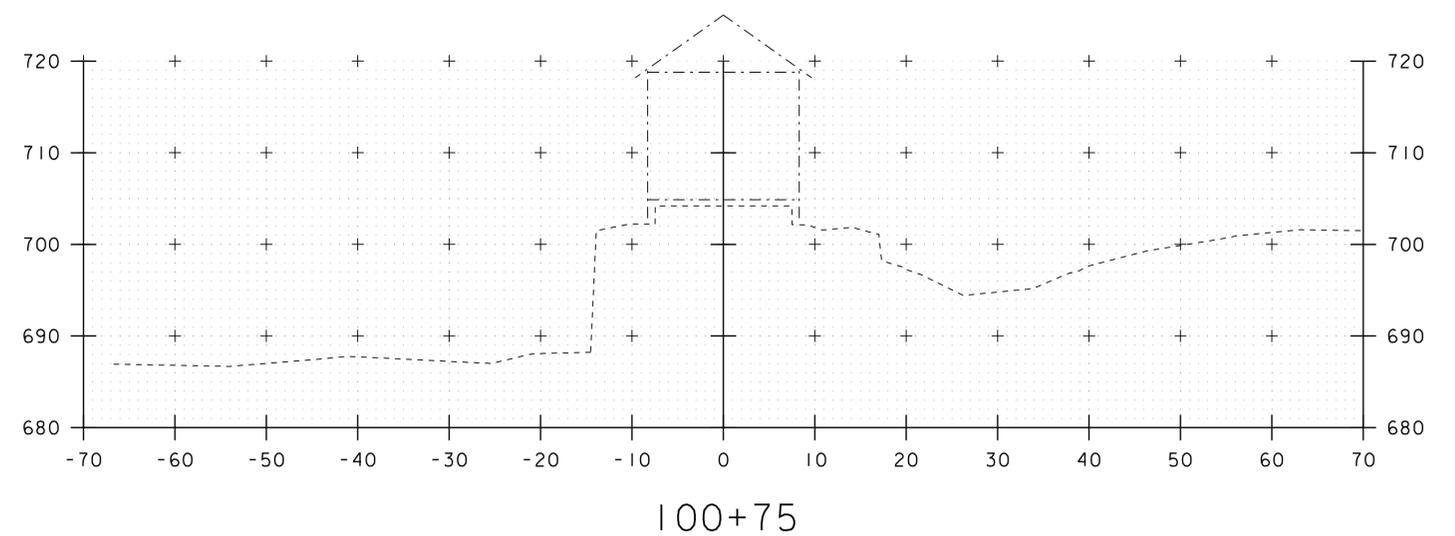
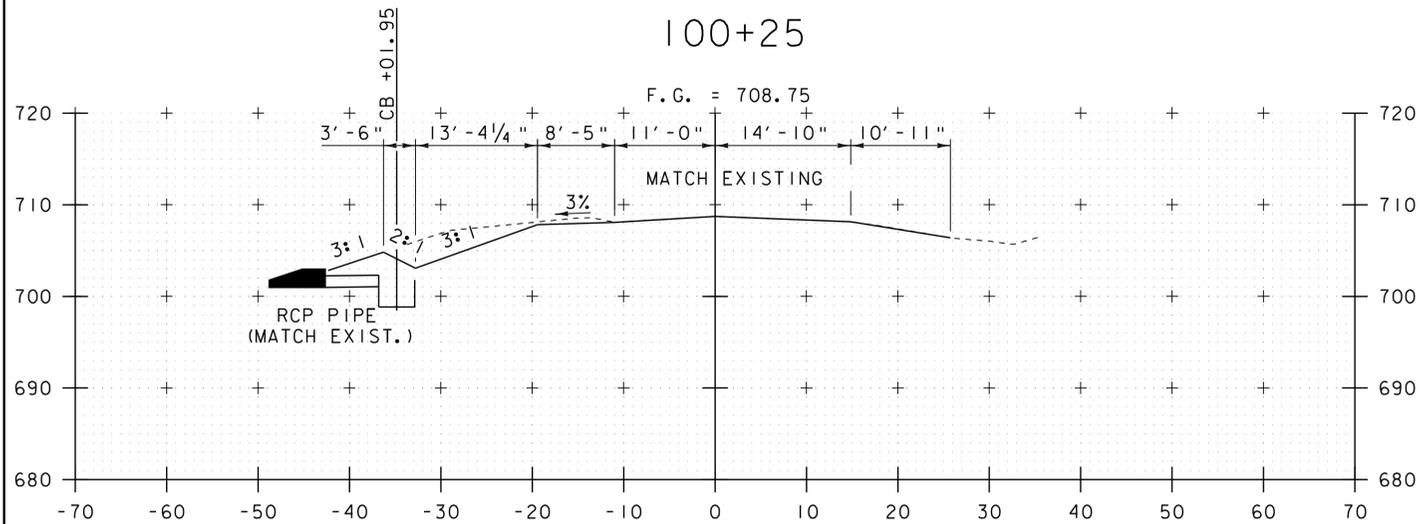
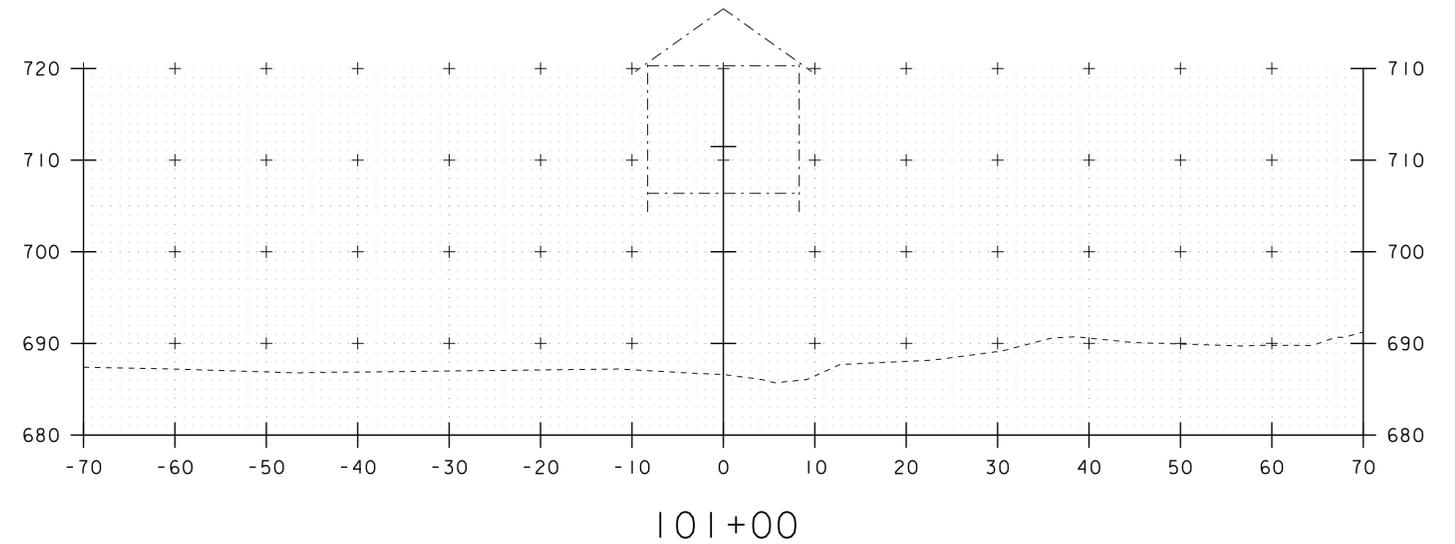
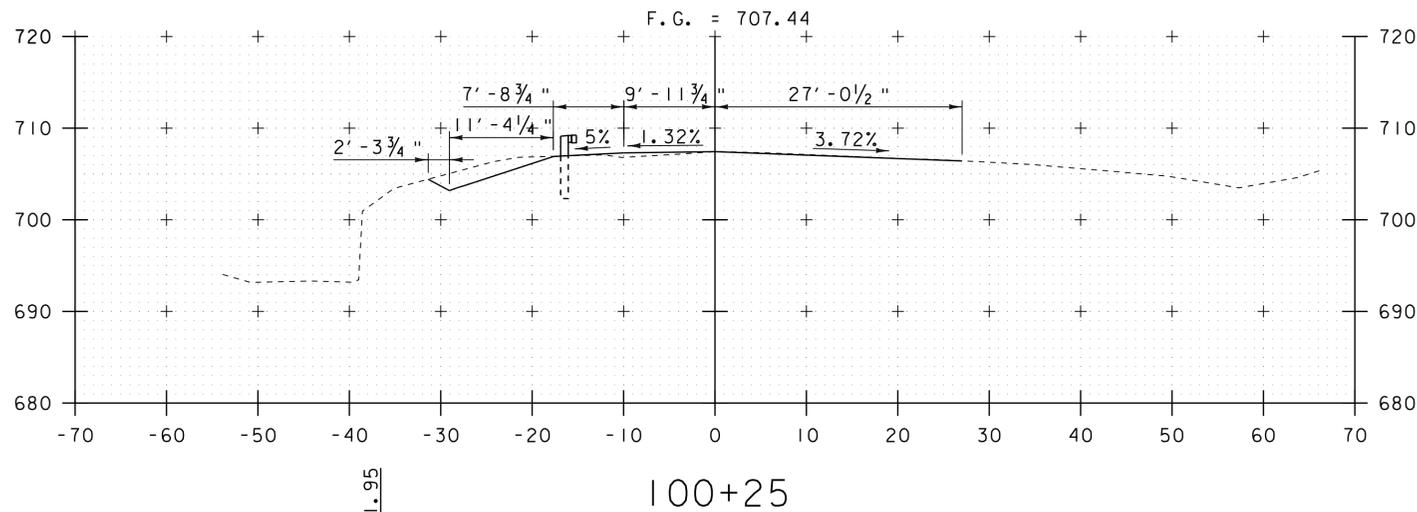
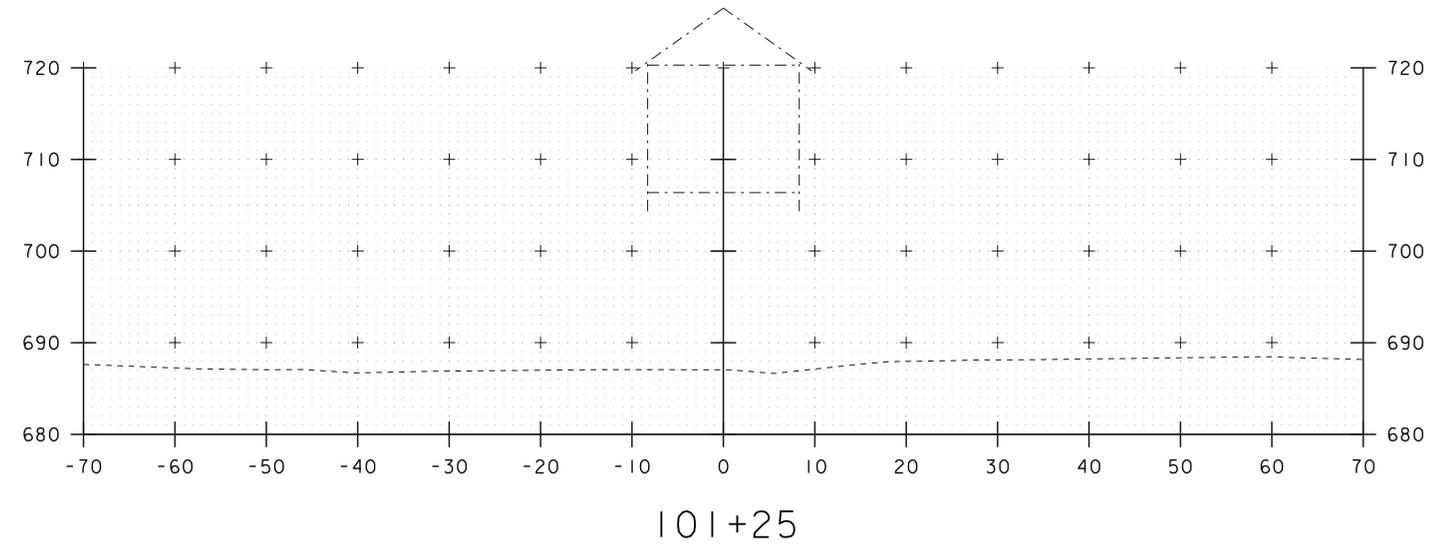
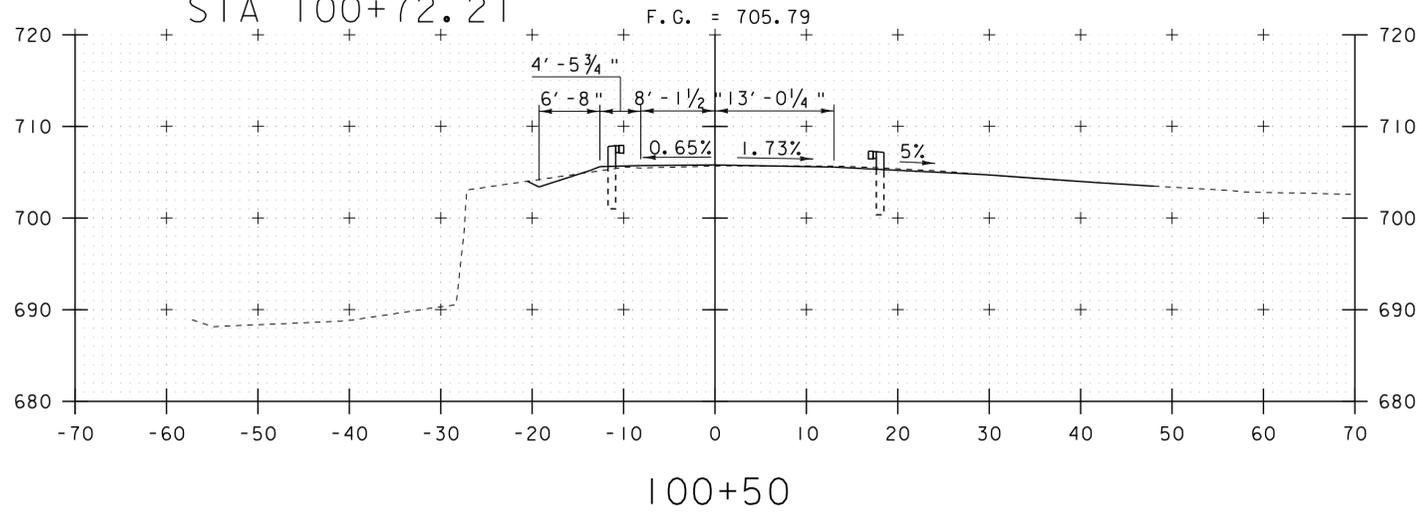
**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201	MODEL 919201Prail
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PROJECT NAME: GUILFORD	PLOT DATE: 6/6/2014
PROJECT NUMBER: STP EHII(4)	DRAWN BY: J.B.McQUAID
FILE NAME: 919201Prail.dgn	CHECKED BY: S.T.JAMES
PROJECT LEADER: S.GURLEY	SHEET 26 OF 32
DESIGNED BY: J.BICJA	
<b>APPROACH RAIL LAYOUT PLAN</b>	



BEGIN BRIDGE  
STA 100+72.21



100+10  
BEGIN PROJECT

STA. 100+10 TO STA. 101+25

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)

**Hoyle, Tanner & Associates, Inc.**

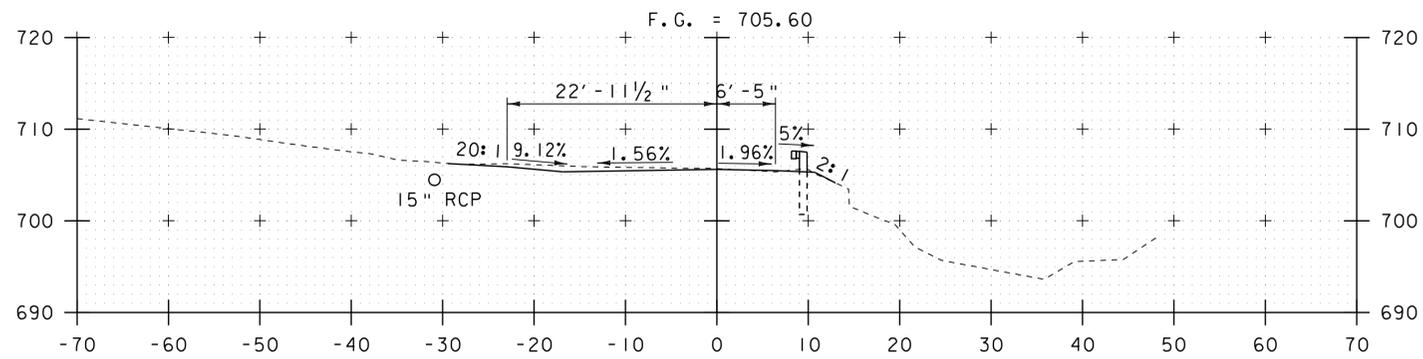
FILE NAME: 919201XSI.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: A.BEAULAC

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES

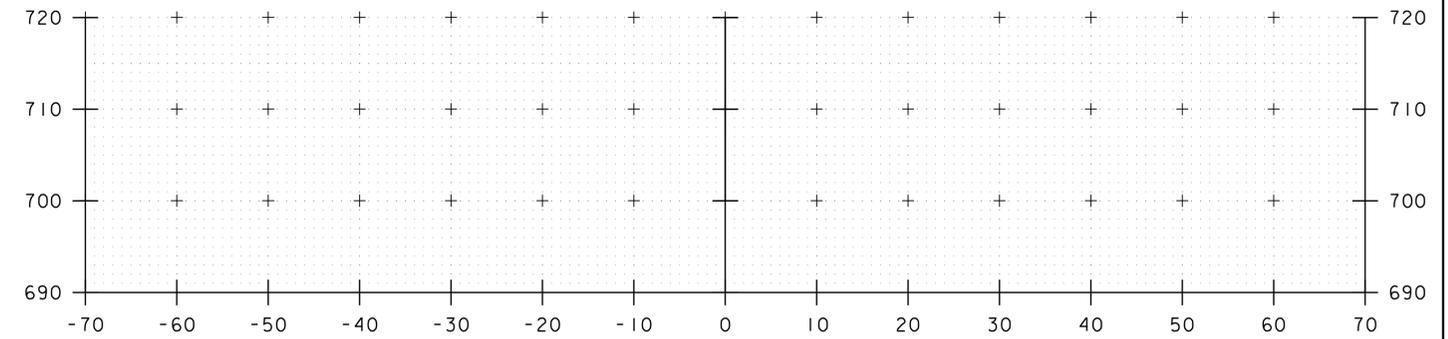
**ROADWAY CROSS SECTIONS (1 OF 2)**

SHEET 28 OF 32

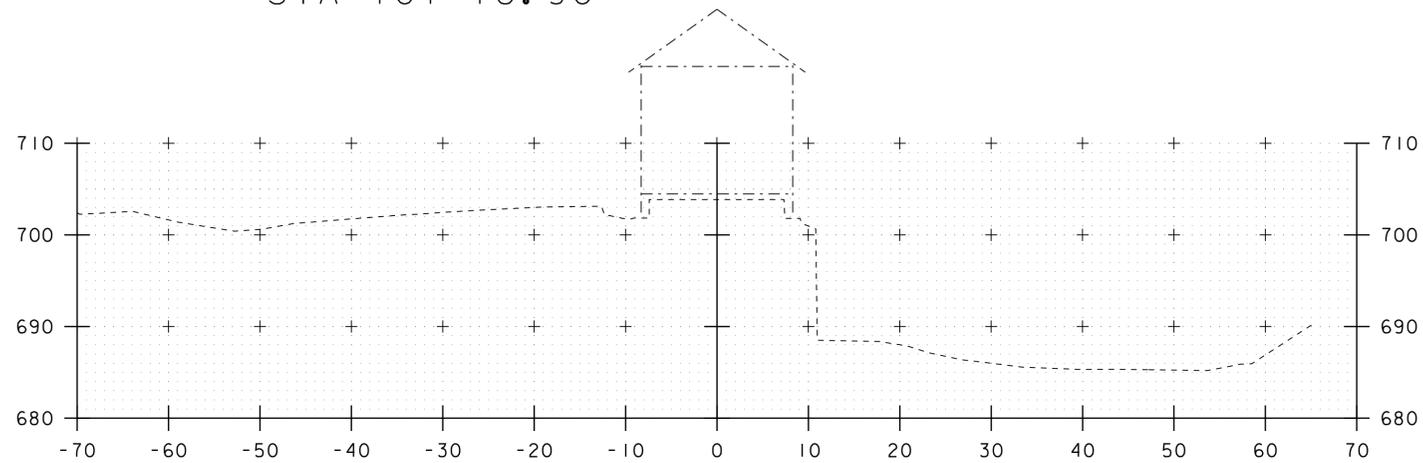
HTA PROJECT NO. 919201 MODEL 919201XSI



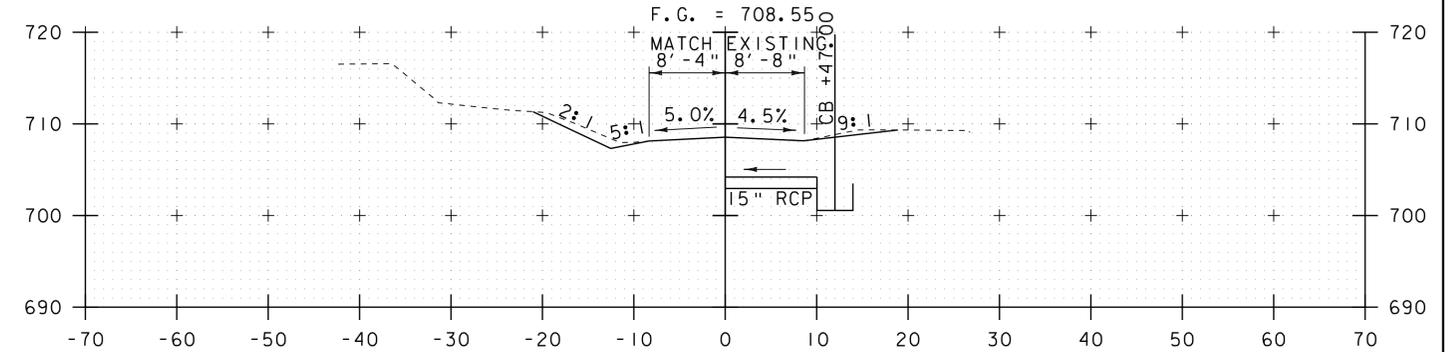
END BRIDGE 102+00  
STA 101+78.90



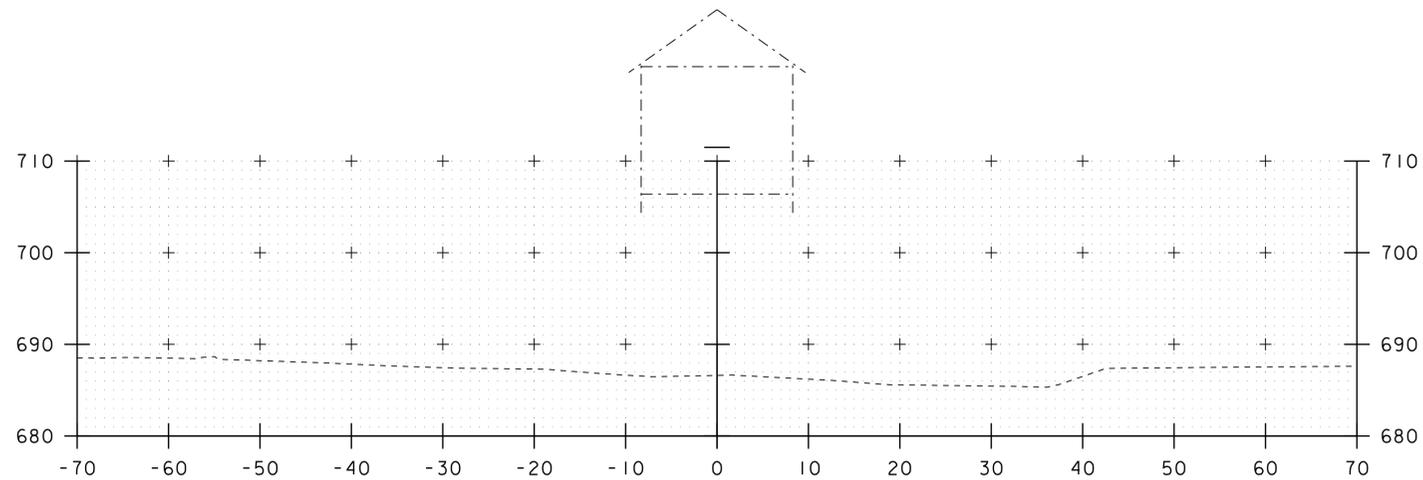
102+58



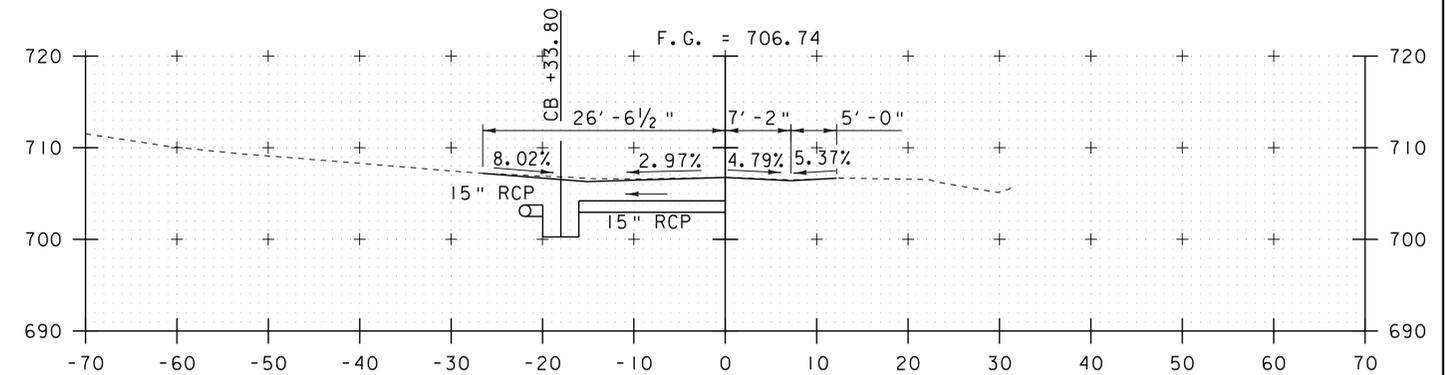
101+75



102+50  
END PROJECT



101+50



102+25

STA. 101+50 TO STA. 102+58



HTA PROJECT NO. 919201  
MODEL 919201XS2

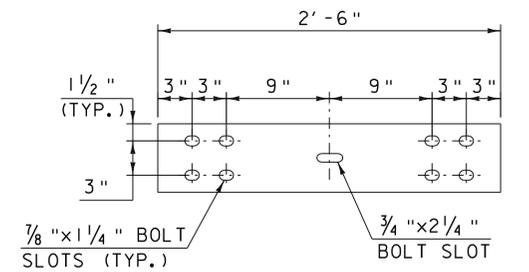
PROJECT NAME: GUILFORD

PROJECT NUMBER: STP EHII(4)

FILE NAME: 919201XS1.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: A.BEAULAC

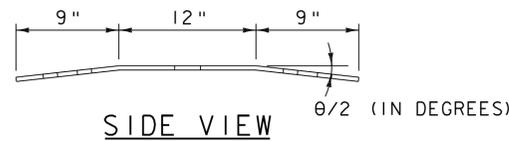
ROADWAY CROSS SECTIONS (2 OF 2)

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES  
SHEET 29 OF 32



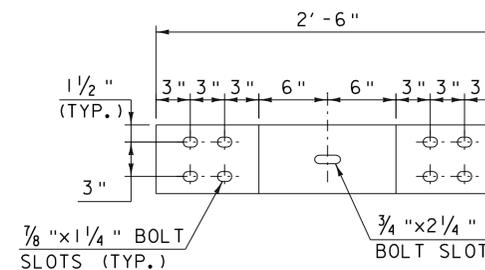
**STEEL SPLICE PLATE DETAIL**

6" x 3/8" x 2'-6"  
NOT TO SCALE



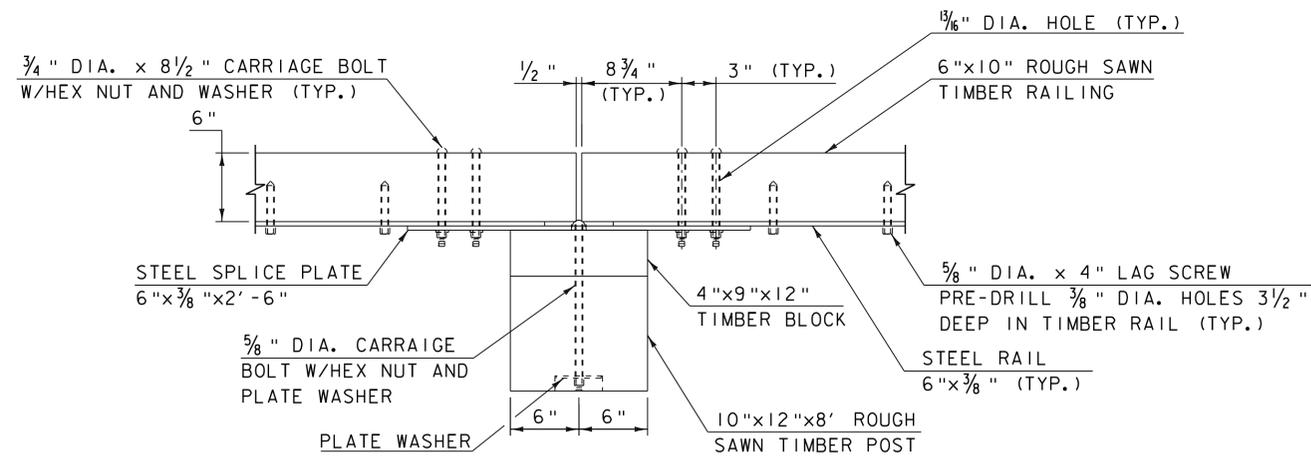
**SIDE VIEW**

θ/2 (IN DEGREES)



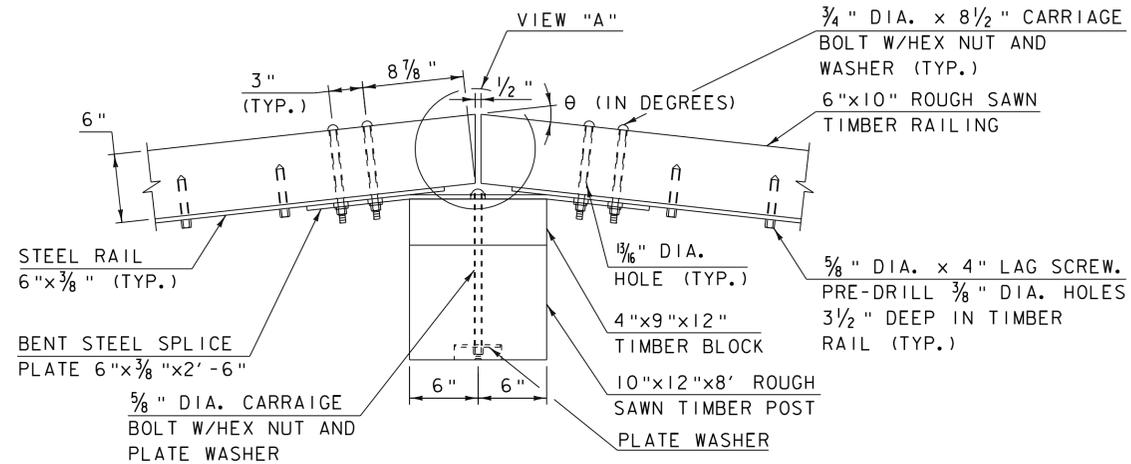
**BENT STEEL SPLICE PLATE DETAIL**

6" x 3/8" x 2'-6"  
NOT TO SCALE



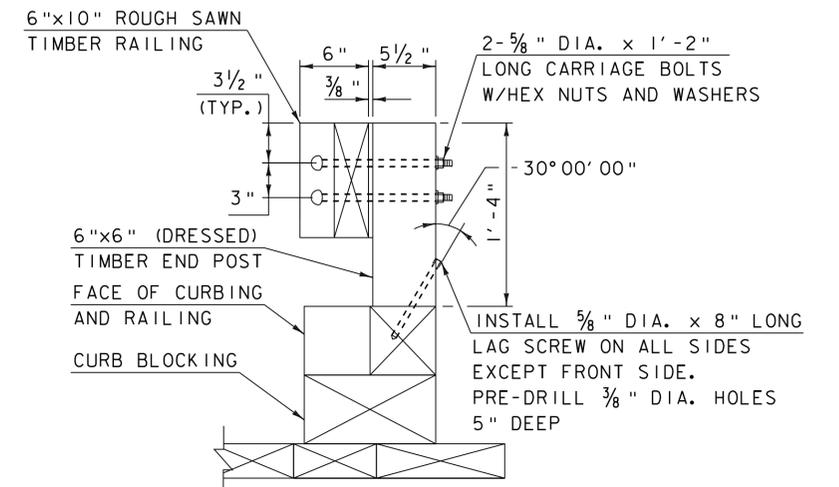
**POST CONNECTION PLAN**

NOT TO SCALE



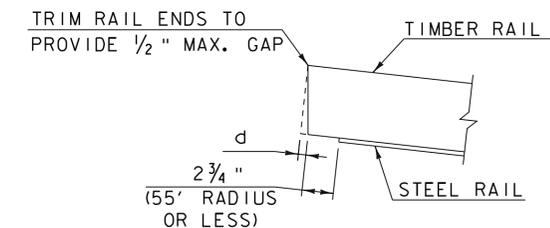
**ANGLE POINT POST CONNECTION PLAN**

NOT TO SCALE



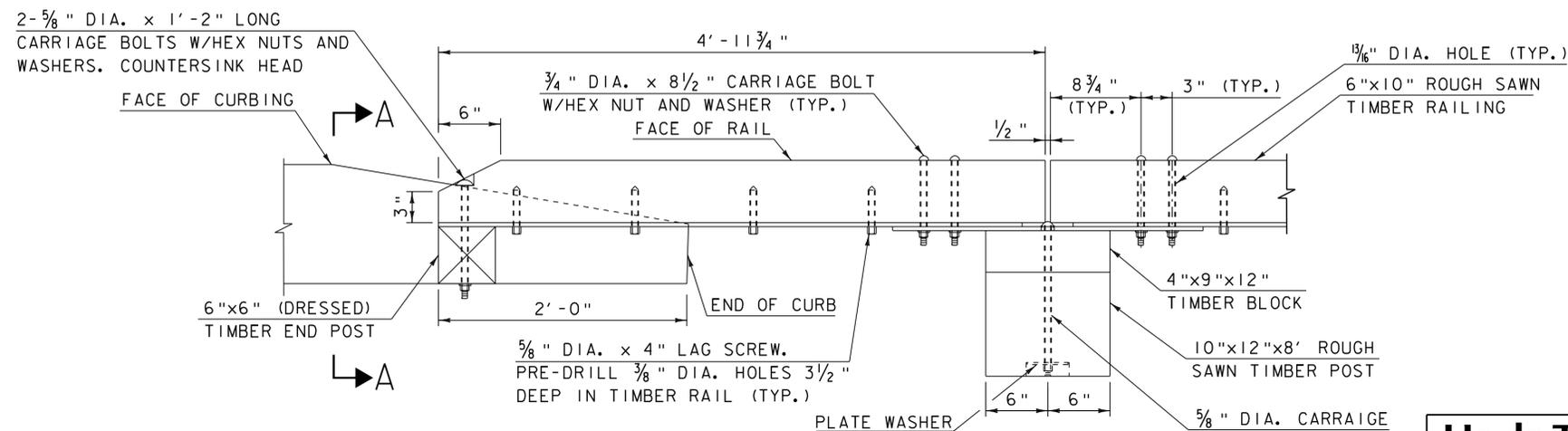
**SECTION A-A**

NOT TO SCALE



**VIEW A**

NOT TO SCALE



**RAILING TO BRIDGE CONNECTION PLAN**

NOT TO SCALE

RADIUS R (FT.)	θ/2 (DEGREES)	d (INCHES)
15	9.56	1"
20	7.18	3/4"
25	5.74	5/8"
26	5.51	5/8"
30	4.78	1/2"
35	4.10	5/16"
40	3.58	3/8"
45	3.18	1/3"
50	2.86	5/16"
55	2.60	1/4"
60	2.40	1/4"
65	2.20	1/4"
70	2.05	1/4"
OVER 70	FLAT	0

PROJECT NAME: GUILFORD

PROJECT NUMBER: STP EH11(4)

FILE NAME: 919201r-all.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES

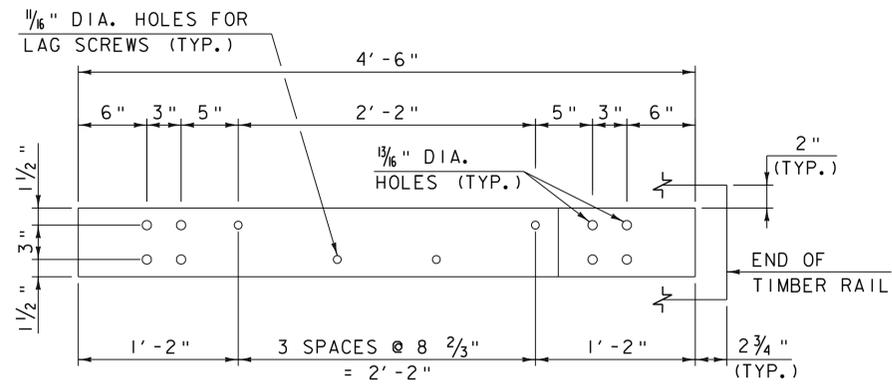
**STEEL BACKED TIMBER GUARDRAIL (1 OF 3)**

SHEET 30 OF 32

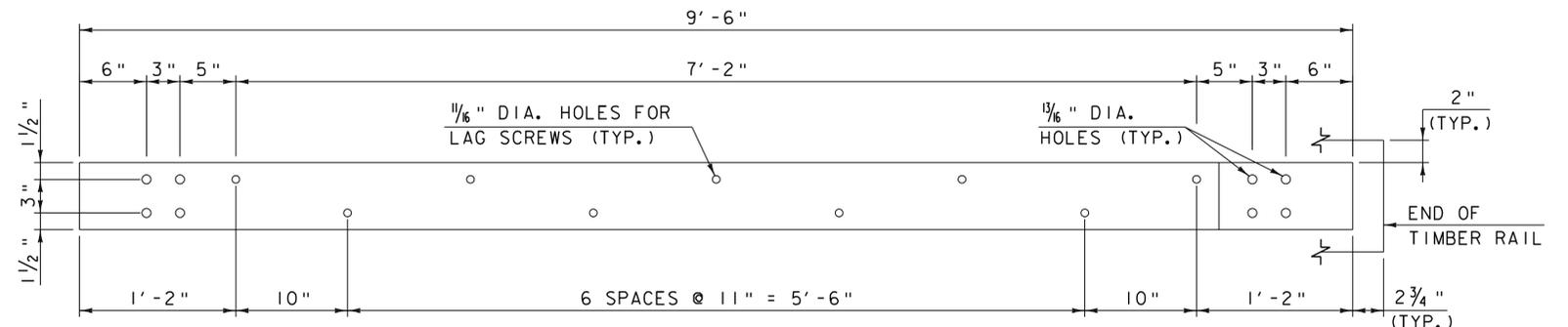
**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201

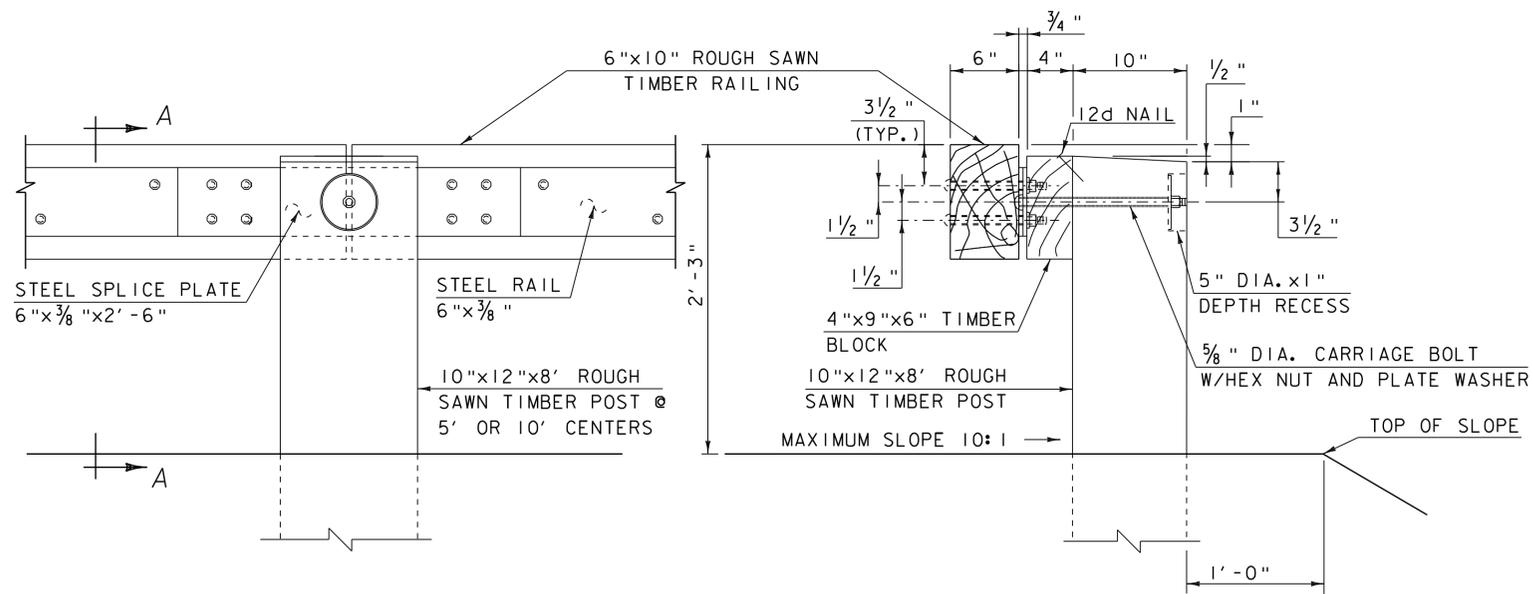
MODEL 919201r-all



**STEEL RAIL DETAIL (5'-0" SPACING)**  
 6"x<sup>3</sup>/<sub>8</sub>"x4'-6"  
 NOT TO SCALE

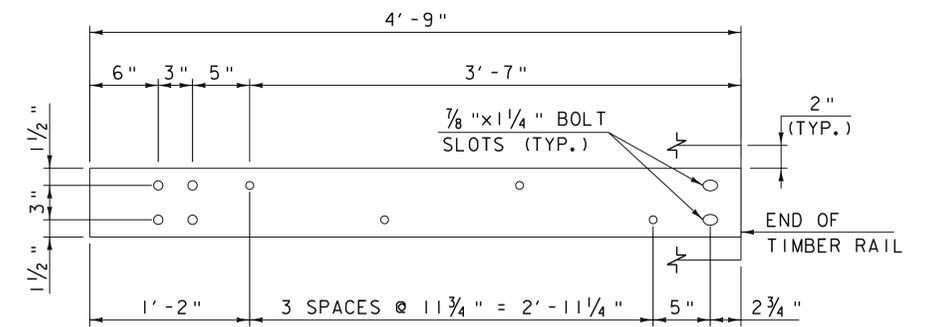


**STEEL RAIL DETAIL (10'-0" SPACING)**  
 6"x<sup>3</sup>/<sub>8</sub>"x9'-6"  
 NOT TO SCALE



**POST CONNECTION ELEVATION**  
 NOT TO SCALE

**SECTION A-A**  
 NOT TO SCALE



**STEEL RAIL DETAIL (AT BRIDGE CONNECTION)**  
 6"x<sup>3</sup>/<sub>8</sub>"x4'-9"  
 NOT TO SCALE

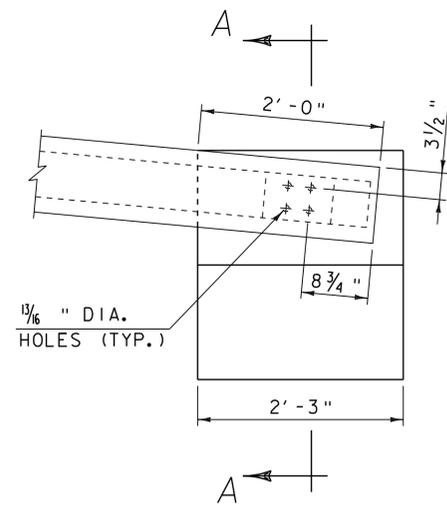


HTA PROJECT NO. 919201 MODEL 919201r012

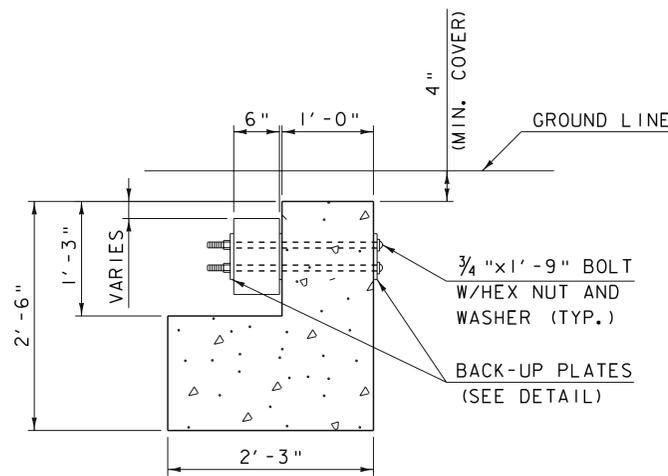
PROJECT NAME: GUILFORD  
 PROJECT NUMBER: STP EHII(4)

FILE NAME: 919201r012.dgn PLOT DATE: 6/6/2014  
 PROJECT LEADER: S.GURLEY DRAWN BY: J.B.McQUAID  
 DESIGNED BY: J.BICJA CHECKED BY: S.T.JAMES

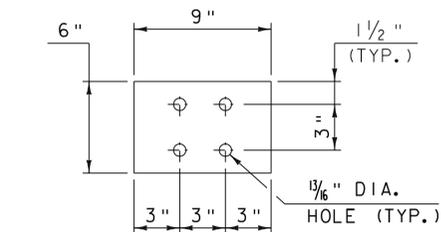
**STEEL BACKED TIMBER GUARDRAIL (2 OF 3)** SHEET 31 OF 32



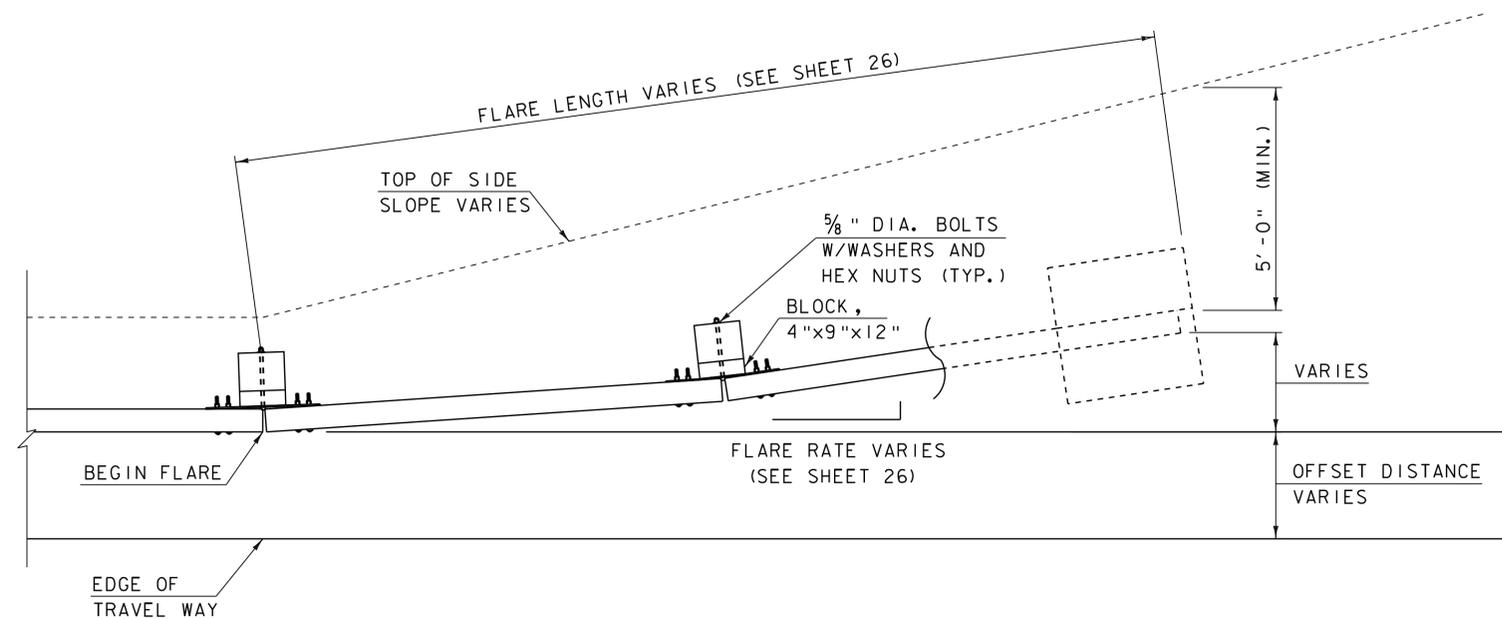
VIEW A  
NOT TO SCALE



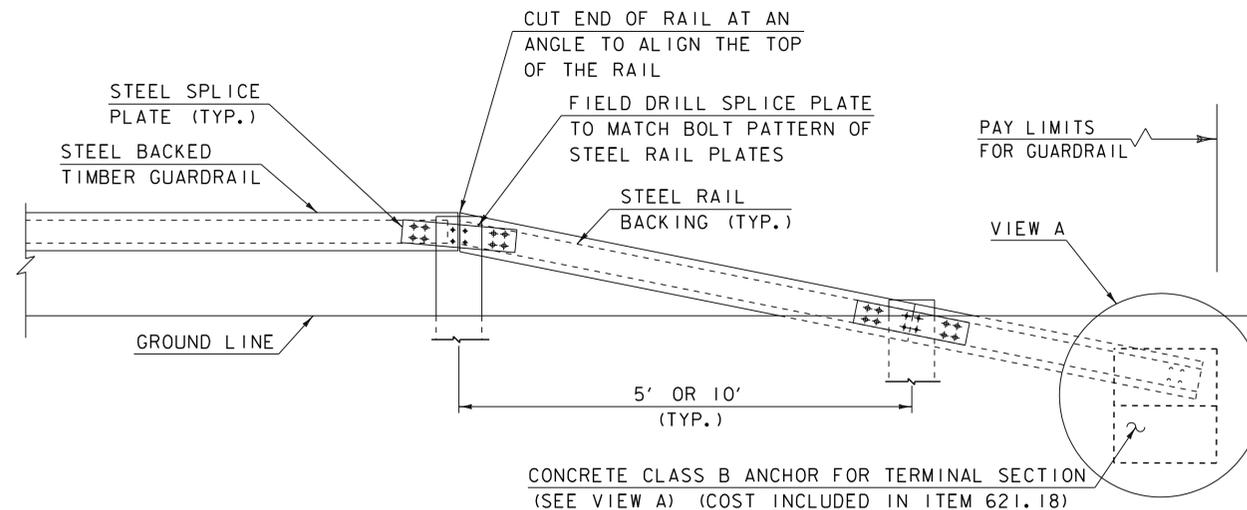
SECTION A-A  
NOT TO SCALE



BACK-UP PLATE DETAIL  
6"x1/2"x9" GALVANIZED  
NOT TO SCALE



GUARDRAIL END TERMINAL PLAN  
NOT TO SCALE



GUARDRAIL END TERMINAL ELEVATION  
NOT TO SCALE

**PLAN NOTE:**

- SEE SHEETS 30 AND 31 FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT NO. 919201 MODEL 919201r013

PROJECT NAME: GUILFORD  
PROJECT NUMBER: STP EHII(4)

FILE NAME: 919201r013.dgn  
PROJECT LEADER: S.GURLEY  
DESIGNED BY: J.BICJA

PLOT DATE: 6/6/2014  
DRAWN BY: J.B.McQUAID  
CHECKED BY: S.T.JAMES

**STEEL BACKED TIMBER GUARDRAIL (3 OF 3)** SHEET 32 OF 32