SEE SHEET 2 FOR INDEX OF
SHEETS AND LIST OF STANDARDS

RECORD PLANS

CONTRACTOR ALPINE CONSTRUCTION, LLC - SCHUYLERVILLE, NY

RESIDENT ENGINEER JEFF COTA

CONSTRUCTION BEGAN SEPTEMBER 15, 2008

CONSTRUCTION COMPLETE NOVEMBER 23, 2009

RECORD PLANS BY JEFF COTA & NICK GARBACIK

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

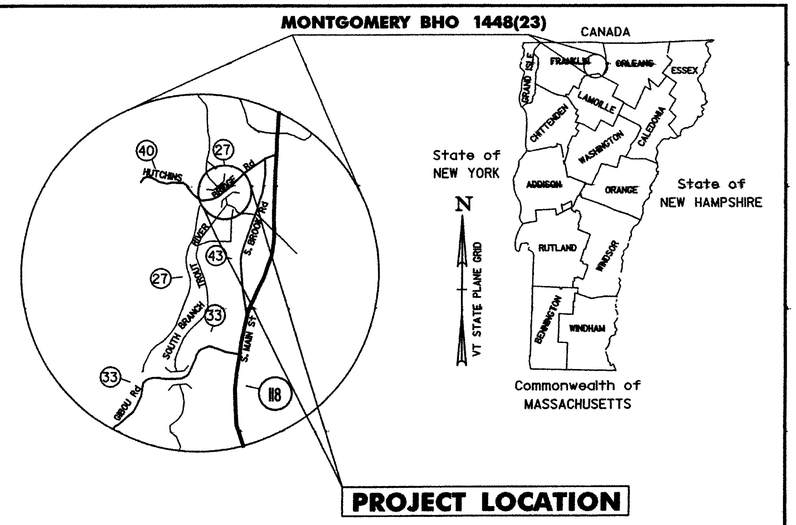
BY _____ RESIDENT ENGINEER

DATE 1/9/11

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives

STATE OF VERMONT
AGENCY OF TRANSPORTATION

MONTGOMERY BHO 1448(23)

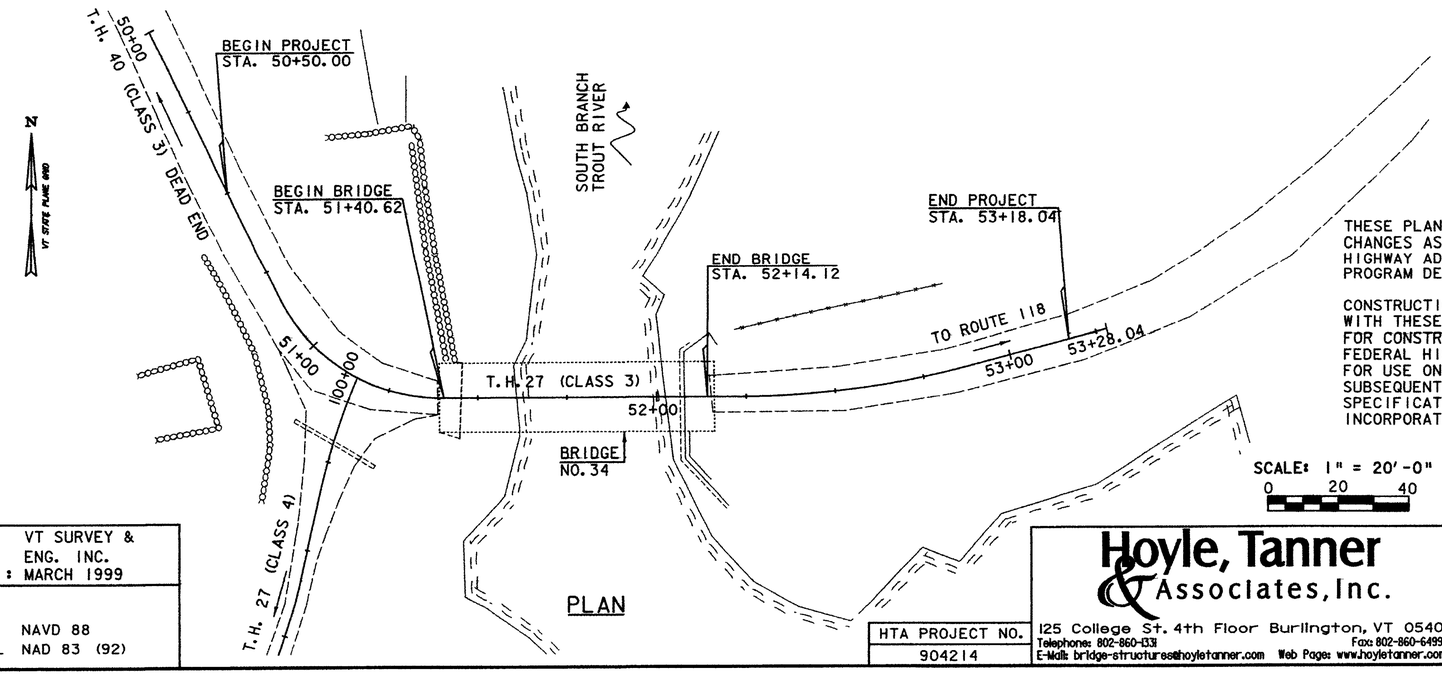


PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF MONTGOMERY
COUNTY OF FRANKLIN
T.H. 27 (CLASS 3) BRIDGE NO. 34

PROJECT LOCATION: ON T.H. 27 BEGINNING APPROXIMATELY 0.16 MILES WEST OF ITS INTERSECTION WITH VT ROUTE 118 AND EXTENDING EASTERLY FOR 268 FEET.

PROJECT DESCRIPTION: REHABILITATION OF THE HUTCHINS COVERED BRIDGE CONSISTS OF REPLACING THE DETERIORATED BRIDGE MEMBERS, INSTALLATION OF NEW SIDING, CONSTRUCTION OF FOUR (4) NEW WINGWALLS, SUBSTRUCTURE REPAIRS AND RECONSTRUCTION, INSTALLATION OF APPROACH RAILING, RECONSTRUCTION OF ROADWAY APPROACHES, CONSTRUCTION AND REMOVAL OF TEMPORARY DETOUR BRIDGE UPSTREAM OF EXISTING COVERED BRIDGE.

LENGTH OF STRUCTURE: 73.50 FEET (END OF DECK TO END OF DECK)
LENGTH OF ROADWAY: 194.54 FEET
LENGTH OF PROJECT: 268.04 FEET



PLAN

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

STATE OF VERMONT
BEAN T. JAMES
NO. 7846
LICENSED
PROFESSIONAL ENGINEER
7/30/2008

SCALE: 1" = 20'-0"
0 20 40

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 & ENG. INC.
SURVEYED DATE : MARCH 1999

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE 8-1-08

PROJECT MANAGER : J.H. WEAVER

PROJECT NAME : MONTGOMERY
PROJECT NUMBER : BHO 1448 (23)

SHEET 1 OF 54 SHEETS

HTA PROJECT NO.
904214

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

INDEX OF SHEETS

1	TITLE SHEET
2	PRELIMINARY INFORMATION SHEET
3	BRIDGE TYPICAL SECTIONS
4	EARTHWORK TYPICALS
5	QUANTITY SHEET (1 OF 2)
6	QUANTITY SHEET (2 OF 2)
7	RIGHT-OF-WAY LAYOUT SHEET
8	TRAVERSE & GEODETIC CONTROL INFO.
9	NEW ALIGNMENT TIE SHEET
10	TEMPORARY ALIGNMENT TIE SHEET
11	TEMPORARY DETOUR PLAN
12	T.H. 27 ROADWAY PLAN
13	TEMPORARY DETOUR PROFILE
14	T.H. 27 ROADWAY PROFILE
15	RESOURCE LAYOUT SHEET
16	EPSC EROSION CONTROL NARRATIVE
17	EPSC EXISTING CONDITIONS PLAN
18	EPSC CONSTRUCTION CONDITIONS PLAN
19	EPSC FINAL CONDITIONS PLAN
20	EPSC DETAIL SHEET (1 OF 2)
21	EPSC DETAIL SHEET (2 OF 2)
22	BORING LAYOUT SHEET
23	BORING LOG SHEET (1 OF 3)
24	BORING LOG SHEET (2 OF 3)
25	BORING LOG SHEET (3 OF 3)
26	COVERED BRIDGE PLAN AND ELEVATION
27	GENERAL NOTES SHEET (1 OF 2)
28	GENERAL NOTES SHEET (2 OF 2)
29	TEMP. BRIDGE AND RET. WALL DETAILS
30	ABUTMENT NO.1 PLAN AND ELEVATION
31	ABUTMENT NO.1 REINFORCING
32	ABUTMENT NO.2 PLAN AND ELEVATION
33	WINGWALLS NO.3A/4A DETAILS
34	ABUTMENT NO.2 REINFORCING
35	COVERED BRIDGE BEARING DETAILS
36	FLOOR FRAMING PLAN
37	NORTH TRUSS ELEV. AND CHORD PLAN
38	SOUTH TRUSS ELEV. AND CHORD PLAN
39	ROOF FRAMING PLAN
40	UPPER LATERAL BRACING
41	BRIDGE DETAILS (1 OF 2)
42	BRIDGE DETAILS (2 OF 2)
43	TRAFFIC SIGN SUMMARY
44	REINFORCING STEEL SCHEDULE SHEET
45	TEMP. DETOUR CROSS SECTIONS (1 OF 4)
46	TEMP. DETOUR CROSS SECTIONS (2 OF 4)
47	TEMP. DETOUR CROSS SECTIONS (3 OF 4)
48	TEMP. DETOUR CROSS SECTIONS (4 OF 4)
49	T.H. 27 CROSS SECTIONS (1 OF 4)
50	T.H. 27 CROSS SECTIONS (2 OF 4)
51	T.H. 27 CROSS SECTIONS (3 OF 4)
52	T.H. 27 CROSS SECTIONS (4 OF 4)
53	T.H. 27 (CLASS 4) CROSS SECTIONS
54	CHANNEL CROSS SECTIONS

INDEX OF STANDARDS

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	06-01-94
B-11	UNDERDRAIN - ROCK SUBGRADE, SLOPE STABILIZATION	06-01-94
B-12	SIDE ROAD INTERSECTION, DEPRESSED RAMP	06-01-94
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-04
E-101	CONSTRUCTION SIGN DETAILS	05-30-03
E-102	CONSTRUCTION SIGN DETAILS	06-30-03
E-102A	CONSTRUCTION SIGN DETAILS	05-01-04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-03
E-107A	BREAKAWAY BARRICADE DETAILS	08-08-95
E-120	STANDARD SIGN PLACEMENT - EXPRESSWAY & FREEWAY	08-08-95
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-95
E-141	REGULATORY SIGN DETAILS	09-20-95
E-143	REGULATORY SIGN DETAILS	06-15-04
E-146	REGULATORY SIGN DETAILS	09-20-95
E-155	WARNING SIGN DETAILS	05-01-04
E-160	FLANGED CHANNEL STEEL SIGN POST	05-20-99
G-1	STEEL BEAM GUARDRAIL WITH WOOD POSTS	01-03-00
G-1D	STEEL BEAM GUARDRAIL (40 MPH & LESS)	01-03-00

Hoyle, Tanner & Associates, Inc.

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: June 2007

DRAINAGE AREA : 15.7 sq. mi.
CHARACTER OF TERRAIN : Mountainous, mostly forested
STREAM CHARACTERISTICS : Sinuous, probably incised, semi-alluvial
NATURE OF STREAMBED : Ledge, cobbles, gravel and sand

PEAK FLOW DATA

Q 2.33 =	1000 cfs	Q 50 =	3000 cfs
Q 10 =	1900 cfs	Q 100 =	3600 cfs
Q 25 =	2500 cfs	Q 500 =	5000 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q25 = 11.7 fps
ICE CONDITIONS : Moderate to heavy
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: < 1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Town Lattice Timber Covered Bridge
YEAR BUILT: 1883
CLEAR SPAN (NORMAL TO STREAM): 62'
VERTICAL CLEARANCE ABOVE STREAMBED: 17' +/-
WATERWAY OF FULL OPENING: 1,050 sq. ft.
DISPOSITION OF STRUCTURE: Rehabilitate
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Ledge and gravel

WATER SURFACE ELEVATIONS AT:

Q2.33 =	574.6'	VELOCITY =	6.2 fps
Q10 =	576.3'	"	7.6 fps
Q25 =	577.3'	"	8.3 fps
Q50 =	578.1'	"	8.9 fps
Q100 =	579.0'	"	9.4 fps

LONG TERM STREAMBED CHANGES: None

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 591.6'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Montgomery — DISTANCE: 2,230'
HIGHWAY # : 33 — STRUCTURE #: 31
CLEAR SPAN: 87' — CLEAR HEIGHT: 23'
YEAR BUILT: 1988 — FULL WATERWAY: 1,260 sq. ft.
STRUCTURE TYPE: Rolled beam

DOWNSTREAM STRUCTURE

TOWN: Montgomery — DISTANCE: 8,500'
HIGHWAY # : — STRUCTURE #:
CLEAR SPAN: — CLEAR HEIGHT:
YEAR BUILT: — FULL WATERWAY:
STRUCTURE TYPE: Confluence with Trout River

WORKING STRESS LOAD RATING (TONS)

LOADING LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY	10	-					
POSTED	10	-	-		-	-	-
OPERATING		-	-	-	-	-	

COMMENTS: BOTTOM CHORD AND FLOOR BEAMS CONTROL THE LOAD RATING

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2007	<40	<10	NA	NA	NA
2027	<40	<10	NA	NA	NA

20 year ESAL for flexible pavement from 2007 to 2027 : <50,000
40 year ESAL for flexible pavement from 2007 to 2047 : <50,000
Design Speed : 15 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Rehabilitated covered bridge

CLEAR SPAN (NORMAL TO STREAM): 62'
VERTICAL CLEARANCE ABOVE STREAMBED: 17' +/-
WATERWAY OF FULL OPENING: 1,050 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	574.6'	VELOCITY=	6.2 fps
Q10 =	576.3'	"	7.6 fps
Q25 =	577.3'	"	8.3 fps
Q50 =	578.1'	"	8.9 fps
Q100 =	579.0'	"	9.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 591.6'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 588.8'
VERTICAL CLEARANCE: @ Q25= 11.5'

SCOUR: Contraction scour = 1.4' at Q500

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	32 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	15 cfs	Depth = 1.0'
ORDINARY HIGH WATER:	430 cfs	Depth = 2.5'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single Span Bridge
CLEAR SPAN (NORMAL TO STREAM): 100' Min.
VERTICAL CLEARANCE ABOVE STREAMBED: 16'
WATERWAY AREA OF FULL OPENING: 1200 sq. ft.

ADDITIONAL INFORMATION

DESIGN CRITERIA

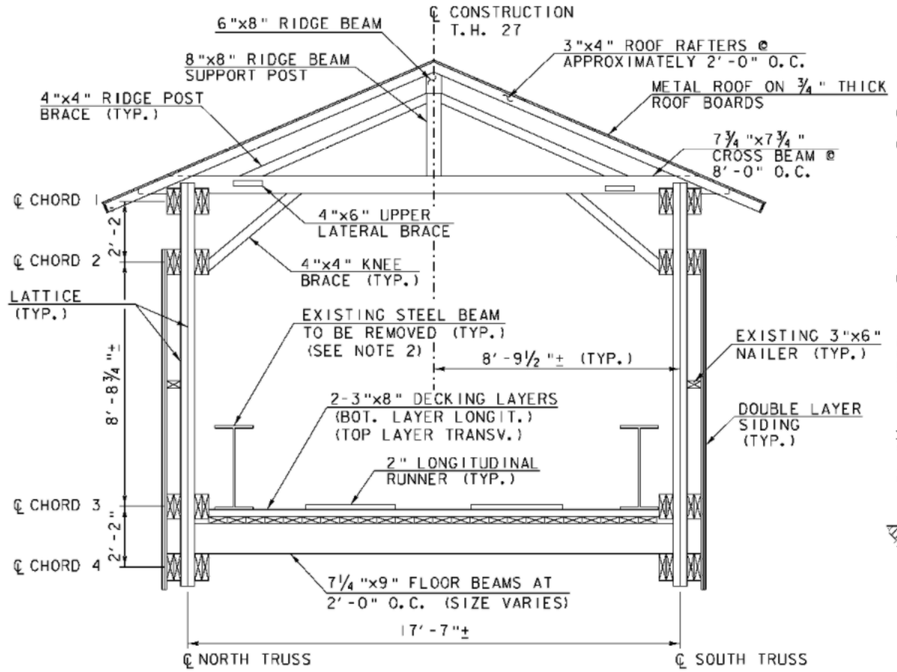
1. DESIGN LIVE LOAD AASHTO H10
2. DESIGN SPAN 62 FEET
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 4 KSF
   ON LEDGE 20 KSF
4. ALLOWABLE LOAD FOR PILING -
   TYPE -
   ESTIMATED LENGTH -
5. STRUCTURAL STEEL AASHTO M270M/M270 GRADE 50W
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A f'c: 4000 PSI
   CONCRETE, HIGH PERFORMANCE CLASS B f'c: 3500 PSI
8. DESIGN SOIL UNIT WEIGHT 140 PCF
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL 3.5 KSF

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? YES
   IF YES, ON EXISTING STRUCTURE? NO
   OR ON TEMPORARY BRIDGE? YES
   ONE OR TWO-WAY TRAVEL? ONE-LANE TRAFFIC
2. TRAFFIC CONTROL SIGNALS REQUIRED? NO
3. ARE SIDEWALKS REQUIRED? NO
   IF SO, ON WHAT SIDE? -

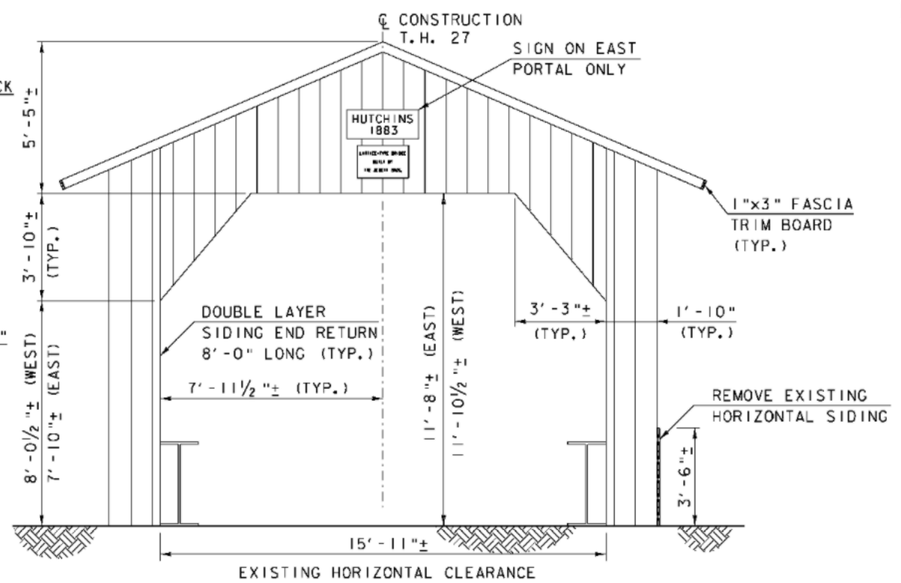
PROJECT NAME: **MONTGOMERY**
PROJECT NUMBER: **BHO 1448(23)**

FILE NAME: **Z96J302PI.xls** — PLOT DATE: **7/23/08**
PROJECT MANAGER: **J.H.WEAVER** — DRAWN BY: **J.BICJA**
DESIGNED BY: **J.BICJA** — CHECKED BY: **S.T.JAMES**
PRELIMINARY INFORMATION SHEET — SHEET **2** OF **54**



EXISTING TYPICAL SECTION

SCALE: ⅜" = 1'-0"



EXISTING PORTAL SECTION

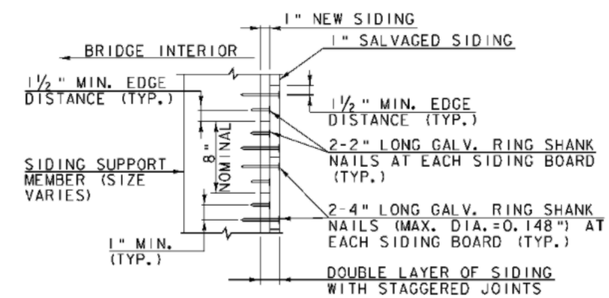
(WEST PORTAL SHOWN, EAST PORTAL SIMILAR)
SCALE: ⅜" = 1'-0"

PLAN NOTES:

1. APPLY CLEAR FIRE RETARDANT AND INSECTICIDE/FUNGICIDE TO WOODEN BRIDGE MEMBERS AS OUTLINED IN THE SPECIAL PROVISIONS OF ITEM 900.645, SPECIAL PROVISION (TIMBER PAINTING, FIRE RETARDANT) AND ITEM 900.645, SPECIAL PROVISION (TIMBER PAINTING, INSECTICIDE/FUNGICIDE).
2. EXISTING STEEL BEAMS REQUIRING REMOVAL SHALL BE CAREFULLY REMOVED FROM THE BRIDGE TO AVOID DAMAGE TO MEMBERS THAT ARE TO REMAIN. SEE GENERAL NOTE G-7 ON SHEET 27 FOR MORE INFORMATION.
3. EXISTING PORTAL SIDING OPENING DIMENSIONS VARY BY UP TO 4"±.
4. NEW SIDING BOARDS SHALL CONSIST OF SINGLE VERTICAL PIECES IN ALL LOCATIONS. HORIZONTAL JOINTS IN THE SIDING WILL NOT BE ALLOWED.
5. EXISTING SIDING IS TWO LAYERS OF 1" NOMINAL BOARDS. THE CONTRACTOR SHALL REMOVE AND SALVAGE SUFFICIENT SIDING TO MEET THE PROPOSED CONDITION. THE PROPOSED CONDITION (SEE DETAIL BELOW) IS NEW 1" THICK SIDING ON THE INTERIOR LAYER WITH SALVAGED SIDING ON THE EXTERIOR LAYER. SEE NOTE W-7.C ON SHEET 27 AND SIDING REPLACEMENT NOTES ON SHEET 28 FOR MORE INFORMATION.
6. RACKING EXISTS IN THE COVERED BRIDGE. ALL COSTS ASSOCIATED WITH STRAIGHTENING AND PLUMBING OF THE BRIDGE ARE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE). SEE NOTE W-9 ON SHEET 27, CAMBER NOTE 3 ON SHEET 42 AND SPECIAL PROVISION FOR ADDITIONAL WORK TO BE PAID UNDER THIS PAY ITEM.
7. THE NEW "HUTCHINS 1883" SIGN ON THE WEST PORTAL SHALL BE 1" THICK MDO PLYWOOD WITH 1"x1" TRIM BOARD ALL AROUND AND PAINTED WITH 2 COATS OF WHITE LATEX PAINT. THE LETTERING SHALL BE ENGRAVED AND MATCH THE EXISTING AS CLOSE AS POSSIBLE. FURNISHING THE COMPLETE SIGN AND INSTALLING IT AT THE SPECIFIED LOCATION ARE CONSIDERED INCIDENTAL TO ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED.

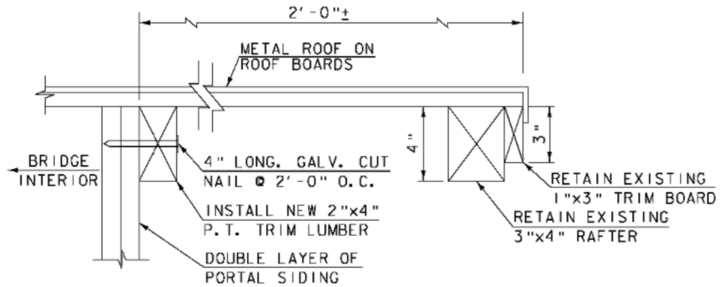
LEGEND:

P.T. PRESSURE TREATED



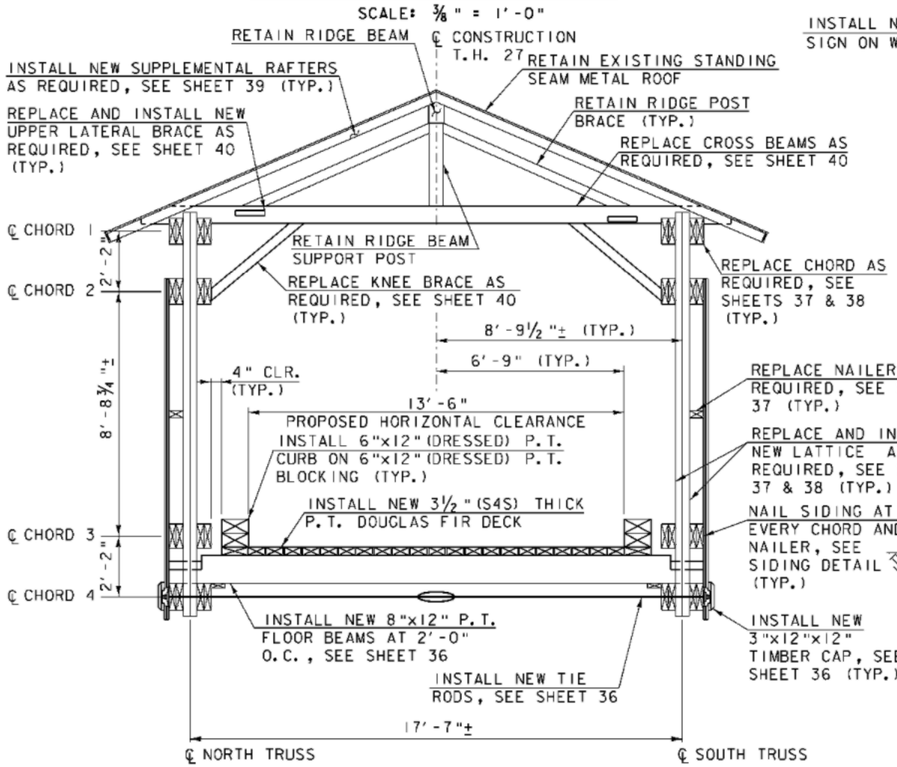
SIDING DETAIL

(PLAN VIEW)
NOT TO SCALE



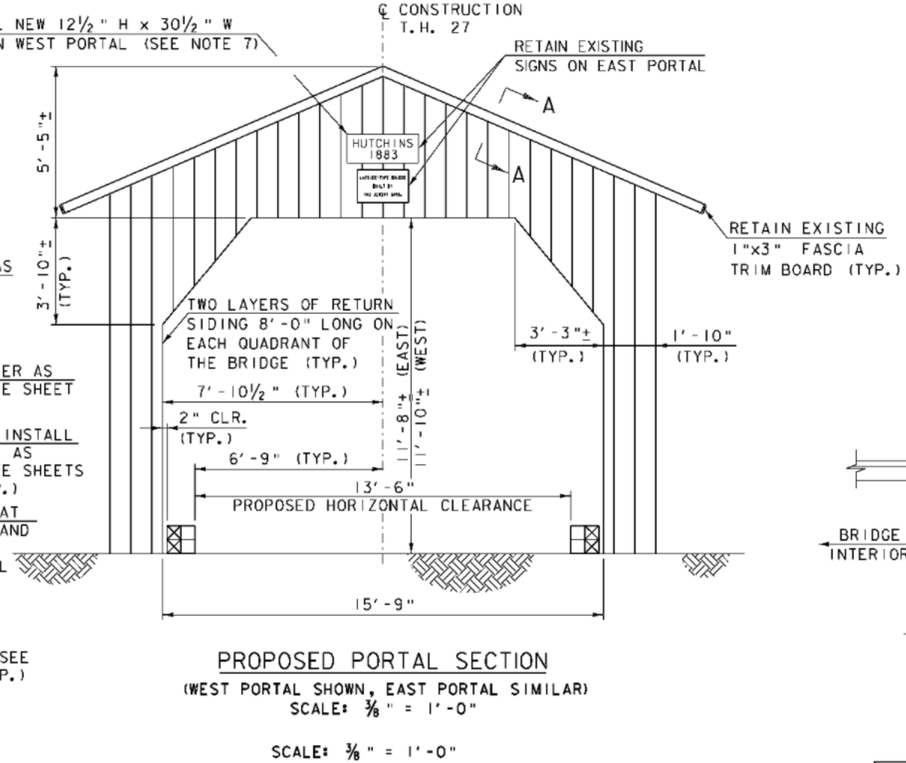
SECTION A-A

SCALE: 3" = 1'-0"



PROPOSED TYPICAL SECTION

SCALE: ⅜" = 1'-0"



PROPOSED PORTAL SECTION

(WEST PORTAL SHOWN, EAST PORTAL SIMILAR)
SCALE: ⅜" = 1'-0"

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

SCALE: ⅜" = 1'-0"
1 0 1 2 3 4

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

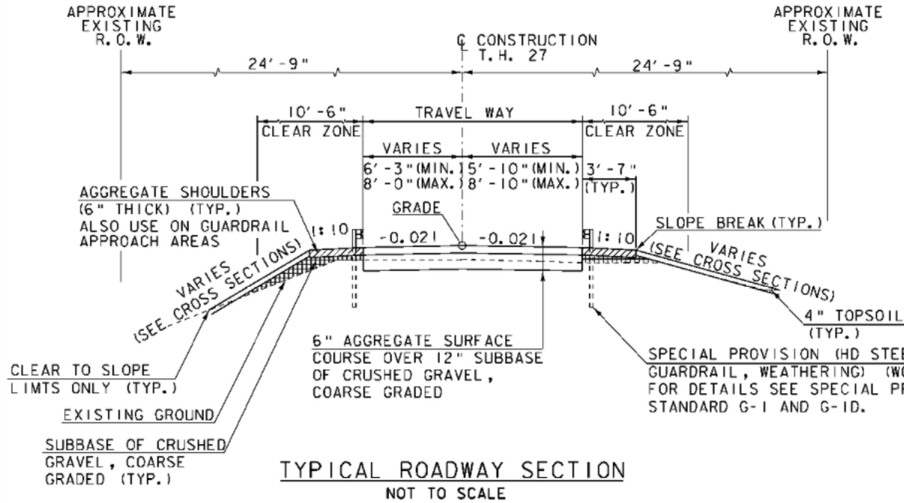
MODEL	SECTIONS
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302supl.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BRIDGE TYPICAL SECTIONS

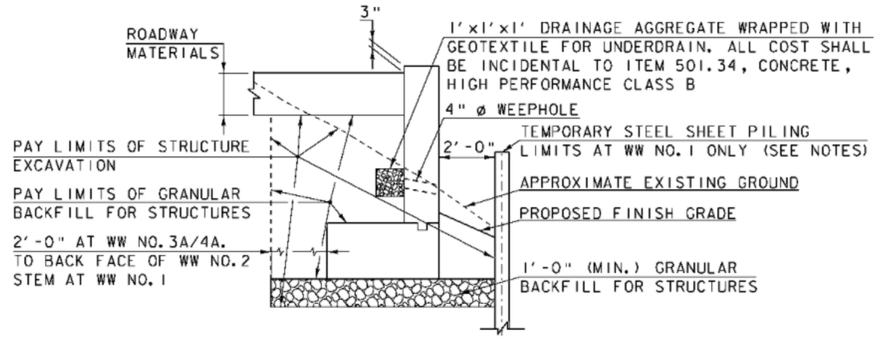
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 3 OF 54



TYPICAL ROADWAY SECTION

NOT TO SCALE

MATERIAL ITEM	TOLERANCE
SURFACE:	
- AGGREGATE SURFACE COURSE	± ½"
CRUSHED GRAVEL COURSE	± ½"
SUBBASE	± 1"

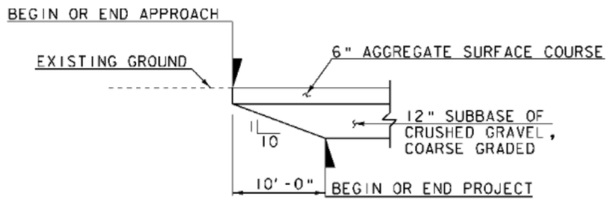


NEW WINGWALL NO. 1, NO. 3A AND 4A TYPICAL EARTHWORK SECTION

SCALE: ⅜" = 1'-0"

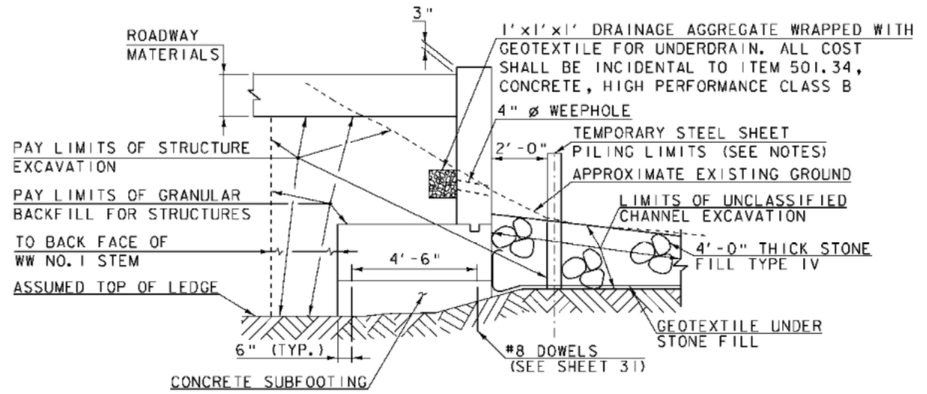
SHEET NOTES:

1. ACTUAL TEMPORARY STEEL SHEET PILING LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF TEMPORARY STEEL SHEET PILING SHALL BE 2'-0" OUTSIDE THE WESTERN ENDS OF WINGWALLS NO. 1 AND NO. 2 AND AS SHOWN ON SHEET 18, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. IF THE TEMPORARY STEEL SHEET PILING IS CONSTRUCTED LARGER THAN INDICATED IN THESE PLANS, THE ADDITIONAL EXCAVATION AND GRANULAR BACKFILL WILL NOT BE MEASURED FOR PAYMENT.
4. ITEM 605.10, 6 INCH UNDERDRAIN PIPE INCLUDES THE GEOTEXTILE FOR UNDERDRAIN, DRAINAGE AGGREGATE AND 6" PERFORATED PVC PIPE COMPLETE IN PLACE.
5. ALL COSTS FOR REMOVAL OF EXISTING CONCRETE AND MASONRY BACKWALL AT ABUTMENT NO. 2 TO THE LIMITS SHOWN, IS PAID FOR UNDER ITEM 529.25, REMOVAL OF CONCRETE OR MASONRY. REMOVAL OF EXISTING TIMBER BACKWALL AT ABUTMENT NO. 1 IS PAID FOR UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.



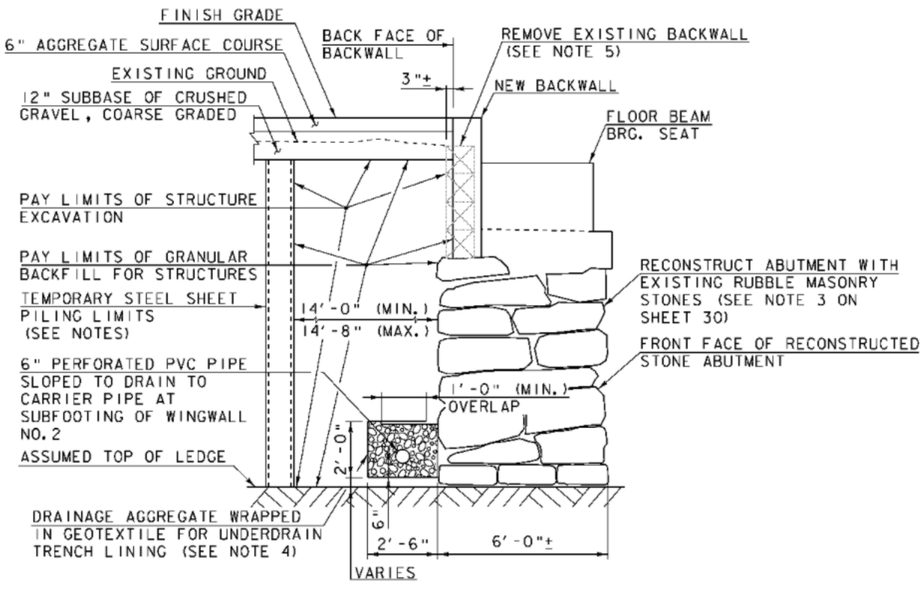
SUBBASE TRANSITION DETAIL

NOT TO SCALE



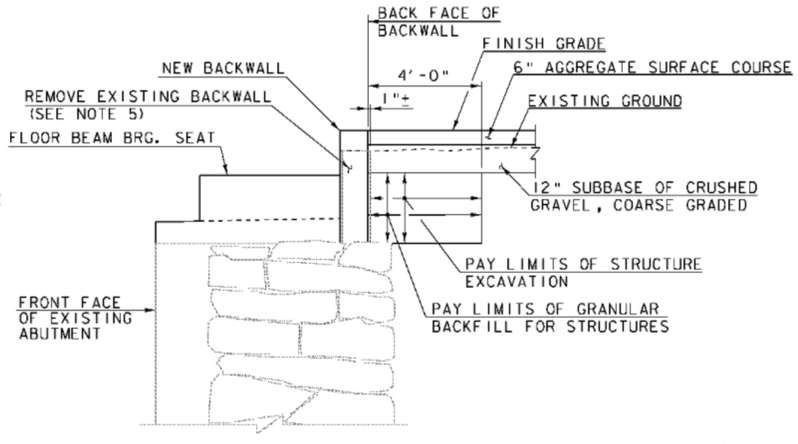
NEW WINGWALL NO. 2 TYPICAL EARTHWORK SECTION

SCALE: ⅜" = 1'-0"



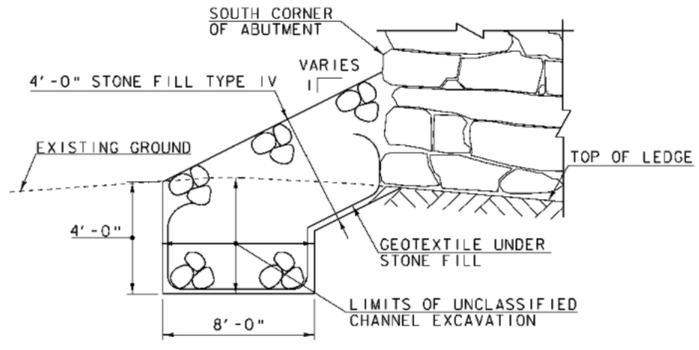
ABUTMENT NO. 1 TYPICAL EARTHWORK SECTION

SCALE: ⅜" = 1'-0"



ABUTMENT NO. 2 TYPICAL EARTHWORK SECTION

SCALE: ⅜" = 1'-0"



TYPICAL SECTION OF STONE FILL AT ABUTMENT NO. 1

(TAKEN TRANSVERSE TO MAINLINE)

NOT TO SCALE

SCALE: ⅜" = 1'-0"

0 1 2 3 4

MODEL
Default
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detail.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
EARTHWORK TYPICALS

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 4 OF 54

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

FULL C.E. ITEMS	EROSION CONTROL	ROADWAY	CHANNEL	ABUTMENT NO.1	ABUTMENT NO.2	WINGWALL NO.1	WINGWALL NO.2	WINGWALL NO.3	WINGWALL NO.4	WINGWALL NO.3A	WINGWALL NO.4A	SUPER-STRUCTURE	ALTERNATE A	ALTERNATE B	BRIDGE QUANTITY
		1													
		260													
			110												110
		70													
				149	3					24	24				200
		60		125	5					20	20				170
		180													
		80													
		50													
				10	7										17
						9.8	15.8			6.2	6.2				38
				450											450
												1			1
							56								56
				40	48		12								100
				1012	1012	905	923			577	571				5000
												4.500			4.500
												11.800			11.800
												2.420			2.420
				16	56										72
												1			1
					6										6
		34													
		34													
		34													
		34													
		34													
		34													
				20											20
				8											8
	10														
		30													
			100												100
		4													
		210													
1															
1															
1															
												1			1

TOTALS

ROUND	GRAND TOTAL	FINAL
	1	
8	260	
9	110	
5	70	
4	200	
9	230	
9	180	
4	80	
2	50	
	17	
0.5	38	
	450	
	1	
	56	
	100	
57	5000	
0.020	4.50	
0.095	11.80	
	2.42	
0.5	72	
	1	
	6	
	34	
	34	
	34	
	34	
	34	
	34	
	34	
	20	
	8	
	10	
4	30	
2	100	
	4	
	210	
	1	
	1	
	1	
	1	
	1	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10
CY	COMMON EXCAVATION	203.15
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27
CY	TRENCH EXCAVATION OF EARTH	204.20
CY	STRUCTURE EXCAVATION	204.25
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25
CY	AGGREGATE SURFACE COURSE	401.10
TON	AGGREGATE SHOULDERS	402.12
CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
SF	TEMPORARY STEEL SHEET PILING	505.36
LS	STRUCTURAL STEEL	506.75
LB	REINFORCING STEEL	507.15
LF	DRILLING AND GROUTING DOWELS	507.16
LB	EPOXY COATED REINFORCING STEEL	507.17
MFBM	STRUCTURAL LUMBER AND TIMBER, UNTREATED	522.20
MFBM	STRUCTURAL LUMBER AND TIMBER, TREATED	522.25
MFBM	NONSTRUCTURAL LUMBER, UNTREATED	522.30
LF	JOINT SEALER, POLYURETHANE	524.21
LS	ONE-WAY TEMPORARY BRIDGE (1760 SF - EST.)	528.10
CY	REMOVAL OF CONCRETE OR MASONRY	529.25
	BEGIN PIPE OPTIONS	
LF	18" CSP .064 (2-2/3 X 1/2)	601.0015
LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215
LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415
LF	18" RCP CLASS III	601.0815
LF	18" CPEP	601.0915
	END PIPE OPTIONS	
LF	RE-LAYING PIPE CULVERTS (18")	601.99
LF	6 INCH UNDERDRAIN PIPE	605.10
LF	6 INCH UNDERDRAIN CARRIER PIPE	605.20
HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25
CY	STONE FILL, TYPE I	613.10
CY	STONE FILL, TYPE IV	613.13
EACH	ANCHOR FOR STEEL BEAM RAIL	621.60
LF	TEMPORARY TRAFFIC BARRIER	621.90
LS	FIELD OFFICE, ENGINEERS	631.10
LS	TESTING EQUIPMENT, CONCRETE	631.16
LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25
LS	MOBILIZATION/DEMOBILIZATION	635.11

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		TEMPORARY EROSION CONTROL ITEMS
		(INCLUDED IN EROSION CONTROL ITEMS)
10	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I
160	SY	GEOTEXTILE FOR SILT FENCE
10	LB	SEED
50	LB	FERTILIZER
1	TON	AGRICULTURAL LIMESTONE
1	TON	HAY MULCH
80	CY	TOPSOIL
1	LS	EPSC PLAN
95	HR	MONITORING EPSC PLAN
1	LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)
320	SY	TEMPORARY EROSION MATTING
10	CY	TEMPORARY STONE CHECK DAM, TYPE I
		EARTHWORK SUMMARY
		FILL AVAILABLE:
260	CY	COMMON EXCAVATION: 260 X 1.0
33	CY	UNCLASSIFIED CHANNEL EXCAVATION: 110 X 0.3
21	CY	TRENCH EXCAVATION OF EARTH: 70 X 0.3
60	CY	STRUCTURE EXCAVATION: 200 X 0.3
374	CY	SUBTOTAL
6	CY	ROUNDING
380	CY	TOTAL
		FILL REQUIRED:
0	CY	TOTAL
380	CY	FILL AVAILABLE
0	CY	FILL REQUIRED
380	CY	WASTE

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: **MONTGOMERY**
PROJECT NUMBER: **BHO 1448(23)**

FILE NAME: **Z96J302quant.xls**
PROJECT MANAGER: **J.H.WEAVER**
DESIGNED BY: **J.BICJA**
QUANTITY SHEET (1 OF 2)

PLOT DATE: **7/24/2008**
DRAWN BY: **J.BICJA**
CHECKED BY: **S.T.JAMES**
SHEET **5** OF **54**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES																TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
FULL C.E. ITEMS	EROSION CONTROL	ROADWAY	CHANNEL	ABUTMENT NO.1	ABUTMENT NO.2	WINGWALL NO.1	WINGWALL NO.2	WINGWALL NO.3	WINGWALL NO.4	WINGWALL NO.3A	WINGWALL NO.4A	SUPER-STRUCTURE	ALTERNATE A	ALTERNATE B	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
		1															1		LS	TRAFFIC CONTROL	641.10			
		73	67												67	7	140		SY	GEOTEXTILE UNDER STONE FILL	649.31			
	160															9	160		SY	GEOTEXTILE FOR SILT FENCE	649.51			
	10															5	10		LB	SEED	651.15			
	50															9	50		LB	FERTILIZER	651.18			
	1															0.8	1		TON	AGRICULTURAL LIMESTONE	651.20			
	1															0.8	1		TON	HAY MULCH	651.25			
	80															5	80		CY	TOPSOIL	651.35			
	1																1		LS	EPSC PLAN	652.10			
	95																95		HR	MONITORING EPSC PLAN	652.20			
	1																1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30			
	320															2	320		SY	TEMPORARY EROSION MATTING	653.20			
	10																10		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25			
		110															110		LF	BARRIER FENCE	653.50			
		450															450		LF	PROJECT DEMARCATION FENCE	653.55			
		2															2		EACH	DECIDUOUS SEEDLINGS (ACER RUBRUM) (3 GAL. CONT.) (6'-8')	656.16			
		2															2		EACH	DECIDUOUS SEEDLINGS (ACER SACCHARUM) (3 GAL. CONT.) (6'-8')	656.16			
		2															2		EACH	DECIDUOUS SEEDLINGS (QUERCUS RUBRA) (3 GAL. CONT.) (6'-8')	656.16			
		3															3		EACH	EVERGREEN TREES (PINUS STROBUS) (1 GAL. CONT.) (3'-4')	656.20			
		28.75															28.75		SF	TRAFFIC SIGNS, TYPE A	675.20			
		52															52		LF	FLANGED CHANNEL SIGN POST	675.301			
				50											50	4	50		CY	SPECIAL PROVISION (REBUILT STONE MASONRY)	900.608			
												8			8		8		EACH	SPECIAL PROVISION (BEARING DEVICE ASSEMBLY, COVERED BRIDGE)	900.620			
												57			57		57		EACH	SPECIAL PROVISION (WOOD EPOXY REPAIRS)	900.620			
				2.7	7.0	0.5	0.7	1.4	2.3	0.2	0.2				15	0.5	15		GAL	SPECIAL PROVISION (CONCRETE STAINING AND SEALING)	900.625			
		228.5															228.5		LF	SPECIAL PROVISION (HD STEEL BEAM GUARDRAIL, WEATHERING) (WOOD POSTS)	900.640			
		1															1		LS	SPECIAL PROVISION (REMOVE AND RESET EXISTING STONE WALL)	900.645			
												1			1		1		LS	SPECIAL PROVISION (TIMBER PAINTING, ENVIRONMENTAL PROTECTION)	900.645			
												1			1		1		LS	SPECIAL PROVISION (TIMBER PAINTING, FIRE RETARDANT)	900.645			
												1			1		1		LS	SPECIAL PROVISION (TIMBER PAINTING, INSECTICIDE/FUNGICIDE)	900.645			
		700															700		SF	SPECIAL PROVISION (TEMPORARY RETAINING WALL)	900.670			
																				BEGIN ALTERNATE ITEMS				
																				ALTERNATE A (IN-PLACE REHABILITATION)				
													1		1		1		LS	SHORING SUPERSTRUCTURE	502.10			
													1		1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20			
													1		1		1		LS	SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)	900.645			
																				ALTERNATE B (RELOCATED REHABILITATION)				
														1	1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20			
														1	1		1		LS	SPECIAL PROVISION (HANDLING, TRANSPORT, AND RE-ERECTION OF COVERED BRIDGE SUPERSTRUCTURE)	900.645			
														1	1		1		LS	SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)	900.645			
																				END ALTERNATE ITEMS				

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: **MONTGOMERY**
PROJECT NUMBER: **BHO 1448(23)**

FILE NAME: **Z96J302quant.xls**
PROJECT MANAGER: **J.H.WEAVER**
DESIGNED BY: **J.BICJA**
QUANTITY SHEET (2 OF 2)

PLOT DATE: **7/25/2008**
DRAWN BY: **J.BICJA**
CHECKED BY: **S.T.JAMES**

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	VOL.	PG.	REMARKS
①	LESSIN, ROBERT H. & NAIDA	7	50+76.1 RT. 25.4′ 51+33.0 RT. 50.4′	51+09.1 RT. 57.4′ 51+88.5 RT. 50.4′			DETOUR (T) 576 S.F. ± DETOUR (T) 1,283 S.F. ±		9-5-2001	TOWN OF MONTGOMERY	59	522	
②	SMITH, THOMAS E. JR. & KIMBERLY O.	7	51+80.6 RT. 24.5′	52+67.8 RT. 24.3′			DETOUR (T) 1,835 S.F. ±		10-17-2001	TOWN OF MONTGOMERY	59	492	

CURVE NO. 1 'TH 27' (CLASS 3) DATA
Δ = 63°56′48" LT
D = 114°35′30"
R = 50.00 FT
T = 31.21 FT
L = 55.80 FT
E = 8.94 FT
BANK = NORMAL

CURVE NO. 2 'TH 27' (CLASS 3) DATA
Δ = 14°52′22" LT
D = 22°55′06"
R = 250.00 FT
T = 32.63 FT
L = 64.89 FT
E = 2.12 FT
BANK = NORMAL

CURVE NO. 3 'TH 27' (CLASS 4) DATA
Δ = 9°51′45" LT
D = 28°38′52"
R = 200.00 FT
T = 17.26 FT
L = 34.43 FT
E = 0.74 FT
BANK = NORMAL

CURVE NO. 4 'TH 27' (CLASS 4) DATA
Δ = 3°55′15" RT
D = 57°17′45"
R = 100.00 FT
T = 3.42 FT
L = 6.84 FT
E = 0.06 FT
BANK = NORMAL

N

VT STATE PLANE GRID

50+00 TH 40 DEAD END

BEGIN APPROACH
STA. 50+40.00
MATCH EXISTING

BEGIN PROJECT
END APPROACH
STA. 50+50.00

① LESSIN, ROBERT H. & NAIDA

PC
STA. 'TH 27' 50+84.03

PI
STA. 'TH 27' 51+15.24

POT
ML STA. 51+15.44 =
T.H. 27 STA. 100+00.00
Δ = 84°47′42.72" RT

PT
STA. 'TH 27' 51+39.84

SOUTH BRANCH TROUT RIVER

P L

N/F
FRANKLIN COUNTY
REALTY CORPORATION

PI
STA. 'TH 27' 52+55.61

PT
STA. 'TH 27' 52+87.87

PC
STA. 'TH 27' 52+22.98

SLOPE LIMITS (TYP.)

END PROJECT
BEGIN APPROACH
STA. 53+18.04

END APPROACH
STA. 53+28.04
MATCH EXISTING

ASSUMED EXISTING R.O.W. - 3 RODS

END BRIDGE
STA. 52+14.12
F.G. = 591.66

50+76.1
25.4′ RT.

50+85.4
31.8′ RT.

51+01.9
26.6′ RT.

51+00

100.00

CURVE NO.1

BEGIN BRIDGE
STA. 51+40.62
F.G. = 592.71

CURVE NO.2

53+00 TO ROUTE 118

53+28.04

52+00

CURVE NO.3

SHOULDER BREAK (TYP.)

BRIDGE NO. 34

51+80.6
24.5′ RT.

52+17.3
24.1′ RT.

52+52.3
24.4′ RT.

51+35.3
25.4′ RT.

① LESSIN, ROBERT H. & NAIDA

② SMITH, THOMAS E. JR. & KIMBERLY O.

ASSUMED EXISTING R.O.W. - 3 RODS

52+67.8
24.3′ RT.

PI
STA. 100+17.26

51+06.8
56.0′ RT.

51+09.1
57.4′ RT.

52+57.1
34.0′ RT.

TEMPORARY CONSTRUCTION EASEMENT LIMITS

52+47.3
37.6′ RT.

TH 27 (CLASS 4)

PT
STA. 100+34.43

PI
STA. 100+62.76

51+33.0
50.4′ RT.

52+33.1
43.2′ RT.

PC
STA. 100+59.33

CURVE NO. 4

END T.H. 27 CONSTRUCTION
STA. 100+62.75

51+88.5
50.4′ RT.

52+23.7
50.9′ RT.

PT
STA. 100+66.18

TEMPORARY CONSTRUCTION EASEMENT LIMITS

100+83.00

① LESSIN, ROBERT H. & NAIDA

P L

SOUTH BRANCH TROUT RIVER

LEGEND:

AREA OF TEMPORARY CONSTRUCTION EASEMENT

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES (P/L) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF MONTGOMERY'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

TEMPORARY CONSTRUCTION EASEMENT PLAN

SCALE 1" = 10′-0"
10 0 10

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)
ADJUSTMENT UNKNOWN

MODEL: Default
HTA PROJECT NO.: 904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302row.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
RIGHT-OF-WAY LAYOUT SHEET

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 7 OF 54

GEODETIC CONTROL INFORMATION

HVCTRL #1

NUTTING

NORTH = 849646.41
EAST = 1612158.67

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1994 (CHR) GENERAL LOCATION, MONTGOMERY, VT., IN THE SMALL SETTLEMENT OF HECTORVILLE, ABOUT 13 MI (20.9 KM) SOUTH OF THE U.S./CANADA BORDER, ABOUT 20.5 MI (33.0 KM) WEST OF NEWPORT, AND ABOUT 23.5 MI (37.8 KM) EAST OF ST ALBANS. TO REACH FROM THE INTERSECTION OF VT ROUTES 118 AND 242 IN MONTGOMERY CENTER GO SOUTH ALONG VT ROUTE 118 FOR 3.3 MI (5.3 KM) TO THE MARK ON THE RIGHT, ABOUT 25 M (82.0 FT) SOUTH OF THE INTERSECTION OF NUTTING ROAD. THE MARK IS 8.7 M (28.5 FT) WEST OF AND ABOUT LEVEL WITH THE CENTERLINE OF VT ROUTE 118, 35.4 M (116.1 FT) SOUTHWEST OF POLE NO. VE COOP MT/164, 17.4 M (57.1 FT) EAST OF A 40-CM MAPLE (MOST NORTHERLY OF 2) , 34.7 M (113.8 FT) NORTH-NORTHEAST OF POLE NO. 20/91A/1/2/29-2, AND 0.3 M (1.0 FT) EAST OF A FIBERGLASS WITNESS POST. IT IS SET FLUSH WITH THE GROUND IN THE TOP OF A 30-CM DIAMETER CONCRETE MONUMENT POURED TO A DEPTH OF 1.3 M.

HVCTRL #2

NUTTING AZ MK

NORTH = 850907.87
EAST = 1612197.778

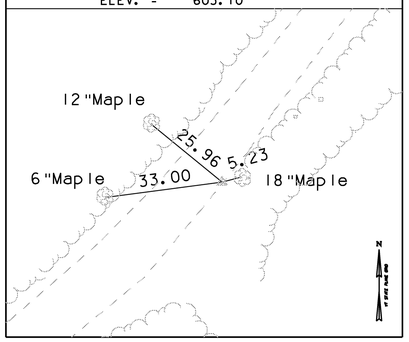
DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1994 (CHR) GENERAL LOCATION, MONTGOMERY, VT., IN THE SMALL SETTLEMENT OF HECTORVILLE, ABOUT 12.5 MI (20.1 KM) SOUTH OF THE U.S./CANADA BORDER, ABOUT 20.5 MI (33.0 KM) WEST OF NEWPORT, AND ABOUT 23.5 MI (37.8 KM) EAST OF ST ALBANS. OWNERSHIP, ARNOLD MERCY, RD 1 BOX 330, MONTGOMERY CENTER, VT. 05471. PHONE 802-326-4200. TO REACH FROM THE INTERSECTION OF VT ROUTES 118 AND 242 IN MONTGOMERY CENTER GO SOUTH ALONG VT ROUTE 118 FOR 3.1 MI (5.0 KM) TO THE MARK ON THE RIGHT, ABOUT 0.1 MI (0.2 KM) NORTH OF A LOG HOME. THE MARK IS 11.5 M (37.7 FT) WEST OF AND ABOUT LEVEL WITH THE CENTERLINE OF VT ROUTE 118, 2.6 M (8.5 FT) SOUTH OF UNDERGROUND TELEPHONE CABLE BOX NO. 2/29, 4.3 M (14.1 FT) SOUTHWEST OF MILE MARKER 1180/0610/0260 AND A GUY ANCHOR, AND 3.4 M (11.2 FT) SOUTH OF A FIBERGLASS WITNESS POST AND POLE NO. MT/168. IT IS SET FLUSH WITH THE GROUND IN THE TOP OF A 1 M (3.3 FT) X 0.5 M (1.6 FT) ROCK OUTCROP.

* ADD 800,000.00 TO THE NORTHINGS AND 1,600,000.00 TO THE EASTINGS TO BRING THIS PROJECT BACK TO VERMONT STATE PLANE GRID

TRAVERSE TIE INFORMATION

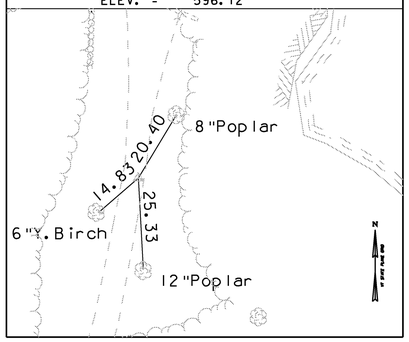
HVCTRL #18

NORTH = 59826.97
EAST = 11448.37
ELEV. = 603.10



HVCTRL #19

NORTH = 59665.76
EAST = 11163.07
ELEV. = 596.12



* MAIN TRAVERSE COMPLETED BY VERMONT SURVEY CONSULTANTS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)
ADJUSTMENT UNKNOWN

MODEL
Default
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302tie1.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TRAVERSE & GEODETIC CONTROL INFO.

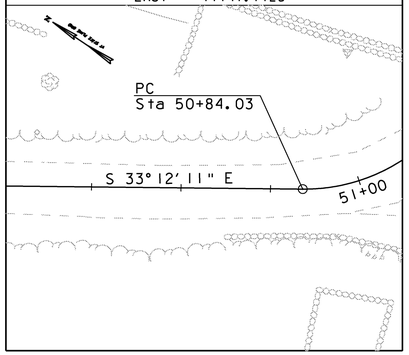
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 8 OF 54

NEW ALIGNMENT TIE INFORMATION

* ADD 800,000.00 TO THE NORTHINGS AND 1,600,000.00 TO THE EASTINGS TO BRING THIS PROJECT BACK TO VERMONT STATE PLANE GRID

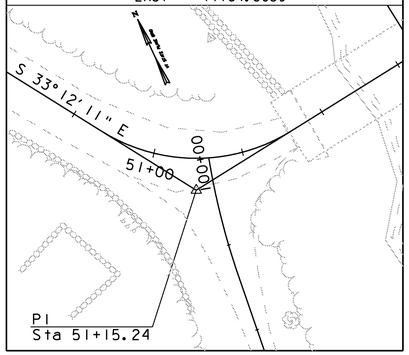
PC STA 'TH27' 50+84.03

NORTH = 59753.6439
EAST = 11147.7125



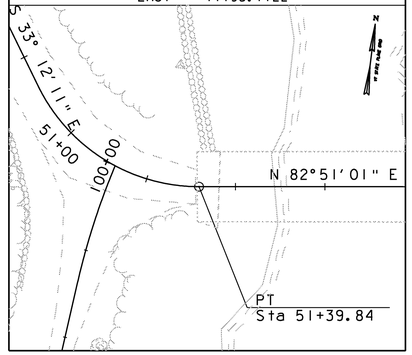
PI STA 'TH27' 51+15.24

NORTH = 59727.5285
EAST = 11164.8039



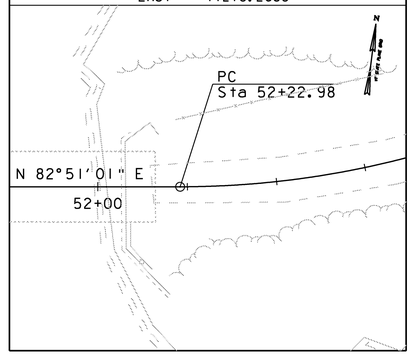
PT STA 'TH27' 51+39.84

NORTH = 59731.4130
EAST = 11195.7722



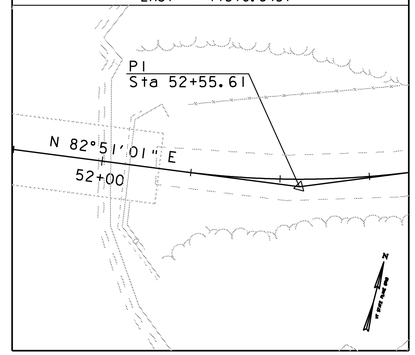
PC STA 'TH27' 52+22.98

NORTH = 59741.7610
EAST = 11278.2688



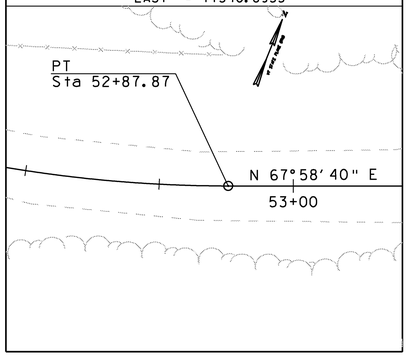
PI STA 'TH27' 52+55.61

NORTH = 59745.8222
EAST = 11310.6457



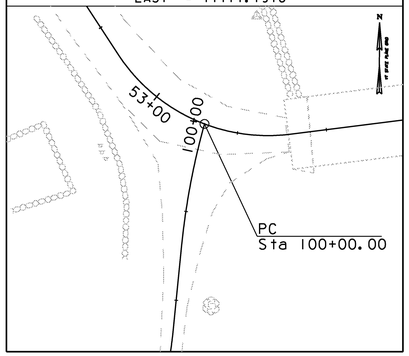
PT STA 'TH27' 52+87.87

NORTH = 59758.0576
EAST = 11340.8955



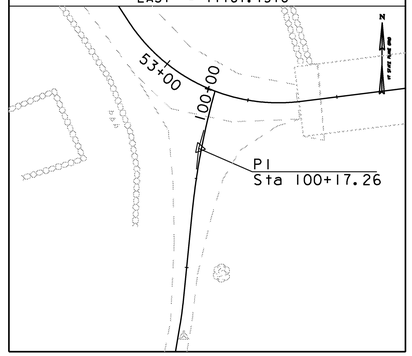
PC STA 100+00.00

NORTH = 59734.2839
EAST = 11171.7916



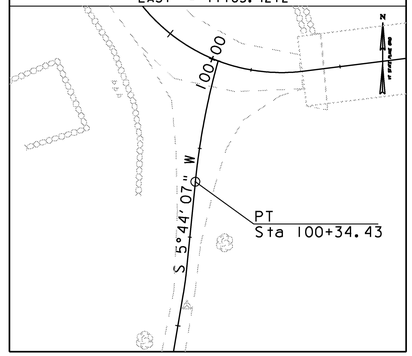
PI STA 100+17.26

NORTH = 59717.6633
EAST = 11167.1516



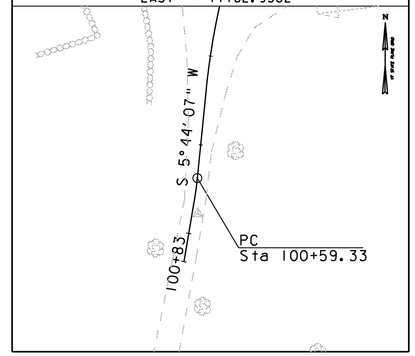
PT STA 100+34.43

NORTH = 59700.4936
EAST = 11165.4272



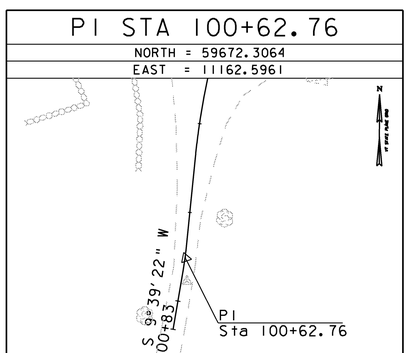
PC STA 100+59.33

NORTH = 59675.7122
EAST = 11162.9382



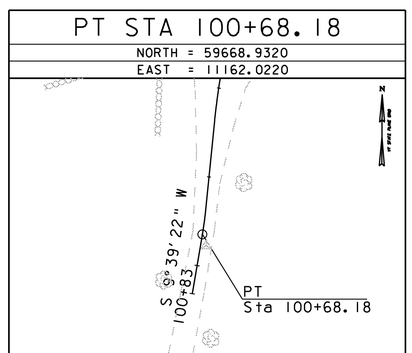
PI STA 100+62.76

NORTH = 59672.3064
EAST = 11162.5961



PT STA 100+68.18

NORTH = 59668.9320
EAST = 11162.0220



DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (92)

ADJUSTMENT UNKNOWN

MODEL
Default
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302tie2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
NEW ALIGNMENT TIE SHEET

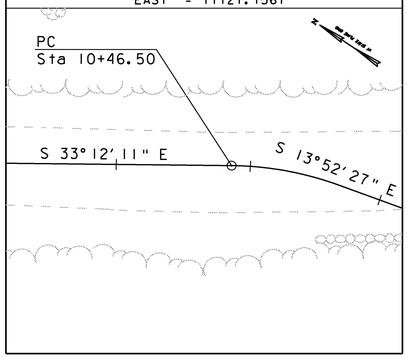
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 9 OF 54

TEMPORARY ALIGNMENT TIE INFORMATION

* ADD 800,000.00 TO THE NORTHINGS AND 1,600,000.00 TO THE EASTINGS TO BRING THIS PROJECT BACK TO VERMONT STATE PLANE GRID

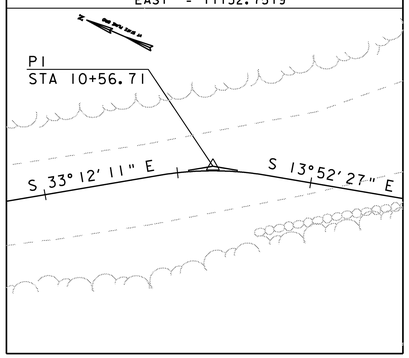
PC STA 'TMP' 10+46.50

NORTH = 59785.0528
EAST = 11127.1567



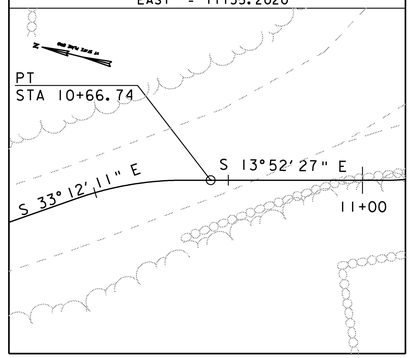
PI STA 'TMP' 10+56.71

NORTH = 59776.5034
EAST = 11132.7519



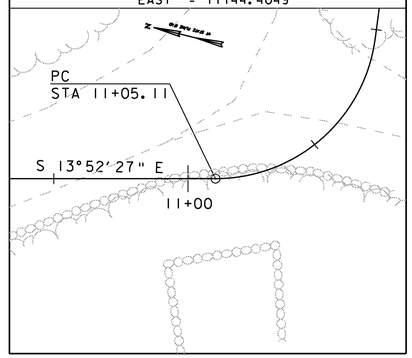
PT STA 'TMP' 10+66.74

NORTH = 59766.5838
EAST = 11135.2020



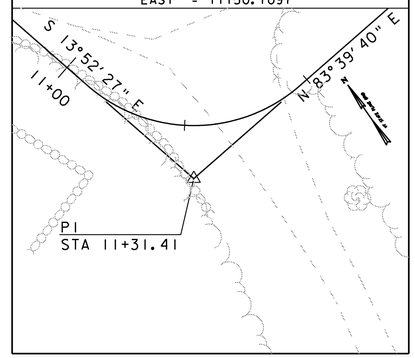
PC STA 'TMP' 11+05.11

NORTH = 59729.3249
EAST = 11144.4049



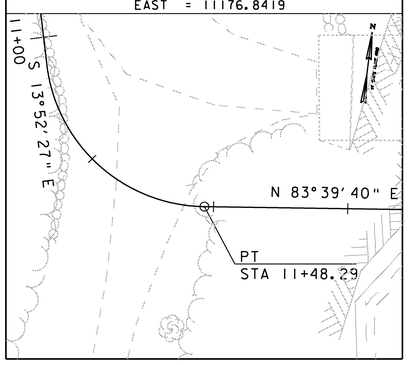
PI STA 'TMP' 11+31.41

NORTH = 59703.7991
EAST = 11150.7097



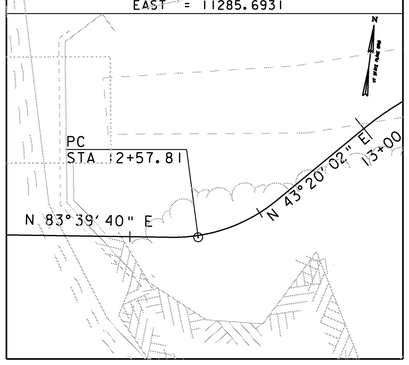
PT STA 'TMP' 11+48.29

NORTH = 59706.7021
EAST = 11176.8419



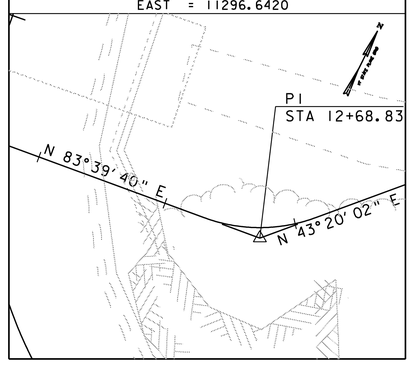
PC STA 'TMP' 12+57.81

NORTH = 59718.7942
EAST = 11285.6931



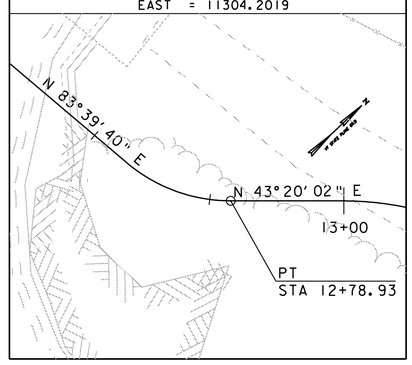
PI STA 'TMP' 12+68.83

NORTH = 59720.0105
EAST = 11296.6420



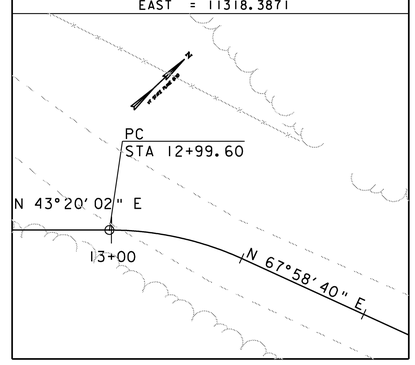
PT STA 'TMP' 12+78.93

NORTH = 59728.0233
EAST = 11304.2019



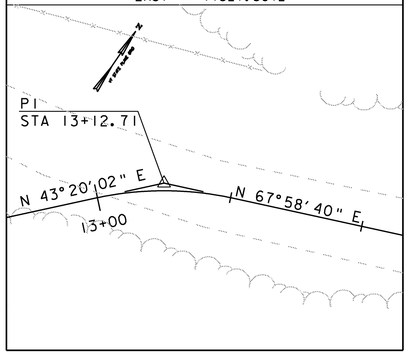
PC STA 'TMP' 12+99.60

NORTH = 59743.0584
EAST = 11318.3871



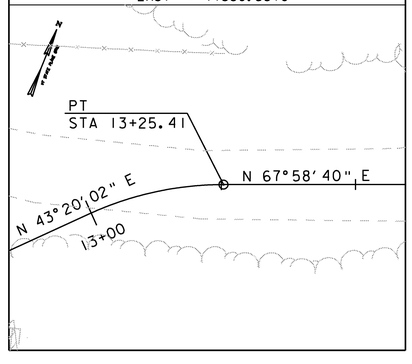
PI STA 'TMP' 13+12.71

NORTH = 59752.5914
EAST = 11327.3812



PT STA 'TMP' 13+25.41

NORTH = 59757.5057
EAST = 11339.5310



DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (92)

ADJUSTMENT UNKNOWN

MODEL
Default
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96j302tie3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TEMPORARY ALIGNMENT TIE SHEET

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 10 OF 54

CURVE NO. 1 'Tmp' DATA	CURVE NO. 2 'Tmp' DATA	CURVE NO. 3 'Tmp' DATA	CURVE NO. 4 'Tmp' DATA
Δ = 19°19'44" RT	Δ = 82°27'53" LT	Δ = 40°19'38" LT	Δ = 24°38'38" RT
D = 95°29'35"	D = 190°59'09"	D = 190°59'09"	D = 95°29'35"
R = 60.00 FT	R = 30.00 FT	R = 30.00 FT	R = 60.00 FT
T = 10.22 FT	T = 26.29 FT	T = 11.02 FT	T = 13.11 FT
L = 20.24 FT	L = 43.18 FT	L = 21.12 FT	L = 25.81 FT
E = 0.86 FT	E = 9.89 FT	E = 1.96 FT	E = 1.41 FT
BANK = NORMAL	BANK = NORMAL	BANK = NORMAL	BANK = NORMAL

SPECIAL PROVISION
(REMOVE AND RESET EXISTING STONE WALL)

[1] STA. 10+76.00± RT. 7.4' TO STA. 11+27.00± RT. 12.2'

[2] STA. 10+96.82± RT. 20.1' TO STA. 11+12.68± RT. 20.5'

TEMPORARY TRAFFIC BARRIER

STA. 'TMP' 10+80.5 LT 16.4' - STA. 'TMP' 11+45.8 LT 6.6'
STA. 'TMP' 11+35.7 RT 19.3' - STA. 'TMP' 11+47.1 RT 7.1'
STA. 'TMP' 12+60.3 LT 6.6' - STA. 'TMP' 13+12.9 LT 12.0'
STA. 'TMP' 12+58.7 RT 6.5' - STA. 'TMP' 13+48.3 RT 10.8'

DRAINAGE NOTES

CONSTRUCT 34 LF x 18" DIA. DRAINAGE PIPE
STA. 11+30.26 RT 12.02' TO
(1) STA. 11+54.77 RT 20.33'
INLET INVERT ELEV. = 592.00
OUTLET INVERT ELEV. = 589.50

10+00
TH 40 DEAD END
S 33°12'11" E
BEGIN APPROACH
STA. 10+40.00
MATCH EXISTING
BEGIN TEMP. DETOUR
END APPROACH
STA. 10+52.50
CURVE NO. 1
PROPOSED EDGE OF TRAVEL WAY
TEMPORARY TRAFFIC BARRIER (TYP.)
S 13°52'27" E
11+00
PC
STA. 'Tmp' 10+46.50
PI
STA. 'Tmp' 10+56.71
PT
STA. 'Tmp' 10+66.74
TEMPORARY RETAINING WALL "A"
CLEAR TO SLOPE LIMITS ONLY (TYP.)
TEMPORARY CONSTRUCTION EASEMENT LIMITS
[2] REMOVE STONE WALL AS REQUIRED TO CONSTRUCT TEMP. RETAINING WALL AND RESET TO PRE-CONSTRUCTION CONDITIONS
PI
STA. 'Tmp' 11+31.41
CONSTRUCT 10'x10' STONE FILL, TYPE I PAD WITH GEOTEXTILE UNDER STONE FILL
PC
STA. 'Tmp' 11+05.11
[1] REMOVE AND RESET EXISTING STONE WALL TO PRE-CONSTRUCTION CONDITIONS
REMOVE EXISTING 15" CGMPP. (INCIDENTAL TO ITEM 528.10)
TEMPORARY ABUTMENT NO. 1
CURVE NO. 2
CONSTRUCT ONE-WAY TEMPORARY BRIDGE (SEE SHEET 29)
N 83°39'40" E
12+00
BEGIN TEMP. BRIDGE
PT STA. 11+48.29±
F.G. = 592.79
END TEMP. BRIDGE
PC STA. 12+57.81±
F.G. = 593.00
TEMPORARY CONSTRUCTION EASEMENT LIMITS
CONSTRUCT 6'x12' STONE FILL, TYPE I PAD WITH GEOTEXTILE UNDER STONE FILL
ASSUMED EXISTING R.O.W. - 3 RODS
(CLASS 4) TH 27
SOUTH BRANCH TROUT RIVER
BRIDGE NO. 34
ASSUMED EXISTING R.O.W. - 3 RODS
PT
STA. 'Tmp' 13+25.41
PI
STA. 'Tmp' 13+12.71
PC
STA. 'Tmp' 12+99.60
CURVE NO. 4
N 67°58'40" E
13+67
TO ROUTE 118
TEMPORARY ABUTMENT NO. 2
N 43°20'02" E
13+00
CURVE NO. 3
ASSUMED EXISTING R.O.W. - 3 RODS
PT
STA. 'Tmp' 12+78.93
TEMPORARY RETAINING WALL "B"
PI
STA. 'Tmp' 12+68.83
SOUTH BRANCH TROUT RIVER
END APPROACH
STA. 13+67.05
MATCH EXISTING
END TEMP. DETOUR
BEGIN APPROACH
STA. 13+54.55
N
VT STATE PLANE GRID
610
590
580
570

PLAN NOTE:

1. SEE SHEET 18 FOR REMOVAL OF TREES ON EACH ROADWAY APPROACH AS REQUIRED TO CONSTRUCT THE TEMPORARY DETOUR ROUTE AND BRIDGE.

TEMPORARY DETOUR PLAN

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

MODEL	Default
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detour1.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TEMPORARY DETOUR PLAN

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 11 OF 54

DRAINAGE NOTES

RE-LAY 34 LF x 18" DIA. DRAINAGE PIPE
FROM DRAINAGE NOTE (1) ON SHEET 11
(2) STA. 51+07.82, RT 20.29' TO
STA. 51+31.83, RT 22.54'
INLET INVERT ELEV. = 591.00
OUTLET INVERT ELEV. = 588.00

CURVE NO.1 'TH 27' (CLASS 3) DATA

Δ = 63°56'48" LT
D = 114°35'30"
R = 50.00 FT
T = 31.21 FT
L = 55.80 FT
E = 8.94 FT
BANK = NORMAL

CURVE NO.2 'TH 27' (CLASS 3) DATA

Δ = 14°52'22" LT
D = 22°55'06"
R = 250.00 FT
T = 32.63 FT
L = 64.89 FT
E = 2.12 FT
BANK = NORMAL

CURVE NO.3 'TH 27' (CLASS 4) DATA

Δ = 9°51'45" LT
D = 28°38'52"
R = 200.00 FT
T = 17.26 FT
L = 34.43 FT
E = 0.74 FT
BANK = NORMAL

CURVE NO.4 'TH 27' (CLASS 4) DATA

Δ = 3°55'15" RT
D = 57°17'45"
R = 100.00 FT
T = 3.42 FT
L = 6.84 FT
E = 0.06 FT
BANK = NORMAL

SPECIAL PROVISION (HD STEEL BEAM GUARDRAIL, WEATHERING) (WOOD POSTS) (SEE SHEET 26 FOR MORE INFORMATION)

STA. 'TH 27' 50+66.2 LT. 12.0' - STA. 'TH 27' 51+36.0 LT. 7.0'
STA. 'TH 27' 51+23.3 RT. 35.7' - STA. 'TH 27' 51+37.0 RT. 7.0'
STA. 'TH 27' 52+19.0 LT. 7.2' - STA. 'TH 27' 52+81.8 LT. 12.7'
STA. 'TH 27' 52+19.0 RT. 7.2' - STA. 'TH 27' 52+65.7 RT. 12.7'

ANCHOR FOR STEEL BEAM RAIL

STA. 'TH 27' 50+71.3 LT. 9.2'
STA. 'TH 27' 51+22.7 RT. 28.1'
STA. 'TH 27' 52+76.7 LT. 9.6'
STA. 'TH 27' 52+61.1 RT. 9.6'

PROPOSED TRAVEL WAY TAPER

STA. 50+40 LT/RT BEGIN 20:1 TAPER
STA. 50+57 RT END 20:1 TAPER
STA. 50+80 LT END 20:1 TAPER
STA. 51+18 LT/RT BEGIN 20:1 TAPER
STA. 51+38 LT/RT END 20:1 TAPER
STA. 52+16 LT/RT BEGIN 20:1 TAPER
STA. 52+36 LT/RT END 20:1 TAPER
STA. 52+88 RT BEGIN 20:1 TAPER
STA. 53+28 RT END 20:1 TAPER

50+00 TH 40 DEAD END
BEGIN APPROACH
STA. 50+40.00
MATCH EXISTING
BEGIN PROJECT
END APPROACH
STA. 50+50.00
PROPOSED EDGE OF TRAVEL WAY
PC
STA. 'TH 27' 50+84.03
PI
STA. 'TH 27' 51+15.24
POT
ML STA. 51+15.44 =
T.H. 27 STA. 100+00.00
Δ = 84°47'42.72" RT
S 33°12'11" E
HVCTRL #100
NORTHING = 59764.49
EASTING = 11186.40
ELEVATION = 585.80
SOUTH BRANCH TROUT RIVER
CHANNEL LINE STATIONING
POT
ML STA. 51+81.30 =
CHANNEL STA. 250+00.00
Δ = 90°00'00"
PC
STA. 'TH 27' 52+22.98
PI
STA. 'TH 27' 52+55.61
SHOULDER BREAK (TYP.)
W5-3 ONE LANE BRIDGE
VR-017 LEGAL LOAD LIMIT 20,000 POUNDS
STA. 50+49.18
RT. 14.1'
W12-2 11'-6"
STA. 52+40.00
LT. 10.0'
W5-3 ONE LANE BRIDGE
VR-017 LEGAL LOAD LIMIT 20,000 POUNDS
STA. 52+97.12
LT. 10.0'
ASSUMED EXISTING R.O.W. - 3 RODS
WINGWALL NO.1
WINGWALL NO.3A
WINGWALL NO.3
PT
STA. 'TH 27' 51+39.84
51+00
100.00
CURVE NO.1
CURVE NO.3
MAINLINE
250.00
N 82°51'01" E
52+00
CURVE NO.2
TO ROUTE 118
N 67°58'40" E
53+00
53+28.04
END APPROACH
STA. 53+28.04
MATCH EXISTING
END PROJECT
BEGIN APPROACH
STA. 53+18.04
PT
STA. 'TH 27' 52+87.87
PLANT (2) RED OAK TREES (QUERCUS RUBRA)
WINGWALL NO.4A
PLANT (2) RED MAPLE TREES (ACER RUBRUM)
PLANT (2) SUGAR MAPLE TREES (ACER SACCHARUM)
PLANT (3) WHITE PINE TREES (PINUS STROBUS)
WINGWALL NO.4
CONSTRUCT STONE FILL, TYPE I PAD WITH GEOTEXTILE UNDER STONE FILL (SEE CROSS SECTIONS)
ASSUMED EXISTING R.O.W. - 3 RODS
PI
STA. 100+17.26
PT
STA. 100+34.43
CLEAR TO SLOPE LIMITS ONLY (TYP.)
RC
STA. 100+59.33
CURVE NO.4
PT
STA. 100+66.18
S 5°44'07" W
TH 27 (CLASS 4)
S 9°39'22" W
100+83.00
POE
STA. 100+83.00
HVCTRL #19
NORTHING = 59665.76
EASTING = 11163.07
ELEVATION = 596.12
PI
STA. 100+62.76
END T.H. 27 CONSTRUCTION
STA. 100+62.75
ASSUMED EXISTING R.O.W. - 3 RODS
BRIDGE NO. 34
ABUTMENT NO.1
ABUTMENT NO.2
ASSUMED EXISTING R.O.W. - 3 RODS
BEGIN BRIDGE
STA. 51+40.62
F.G. = 592.71
END BRIDGE
STA. 52+14.12
F.G. = 591.66
WINGWALL NO.2
4'-0" THICK STONE FILL TYPE IV
1'-0" THICK STONE FILL TYPE I (INSTALLED DURING CONSTRUCTION OF TEMP. BRIDGE)
BENCHMARK #1
CHISELED SQUARE
NORTHING = 59719.60
EASTING = 11270.24
ELEVATION = 587.57
SOUTH BRANCH TROUT RIVER
251+00

EXISTING COVERED BRIDGE

TOWN LATTICE COVERED BRIDGE
76'-9" OVERALL LENGTH
62' CLEAR SPAN
CONSTRUCTED 1883
16' ROADWAY
WOODEN DECK
11'-8" (MIN.) CLEAR HEIGHT
LAID UP STONE ABUT. NO.1
LAID UP STONE AND PARTIALLY CONCRETE ENCASED ABUT. NO.2

PLAN NOTES:

1. ALL TREES CUT WITHIN PROJECT LIMITS SHALL BE CUT INTO 4 FOOT LENGTHS AND PLACED ON THOMAS E. SMITH'S LAND AS AGREED UPON BY THE CONTRACTOR AND PROPERTY OWNER. ALL COSTS OF CUTTING AND PLACING THE 4 FOOT LENGTHS ARE CONSIDERED INCIDENTAL TO ITEM 201.10.
2. SIGN LOCATIONS SHOWN ARE APPROXIMATE. FINAL LOCATIONS WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.
3. SEE SHEET 19 FOR NEW TREE PLANTINGS DETAILS.

SIGN LEGEND:

N NEW SIGN OR POST

NOTE: FINAL LOCATION AND ELEVATIONS OF DRAINAGE ITEMS MAY BE ADJUSTED IN THE FIELD AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

T.H. 27 ROADWAY PLAN

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

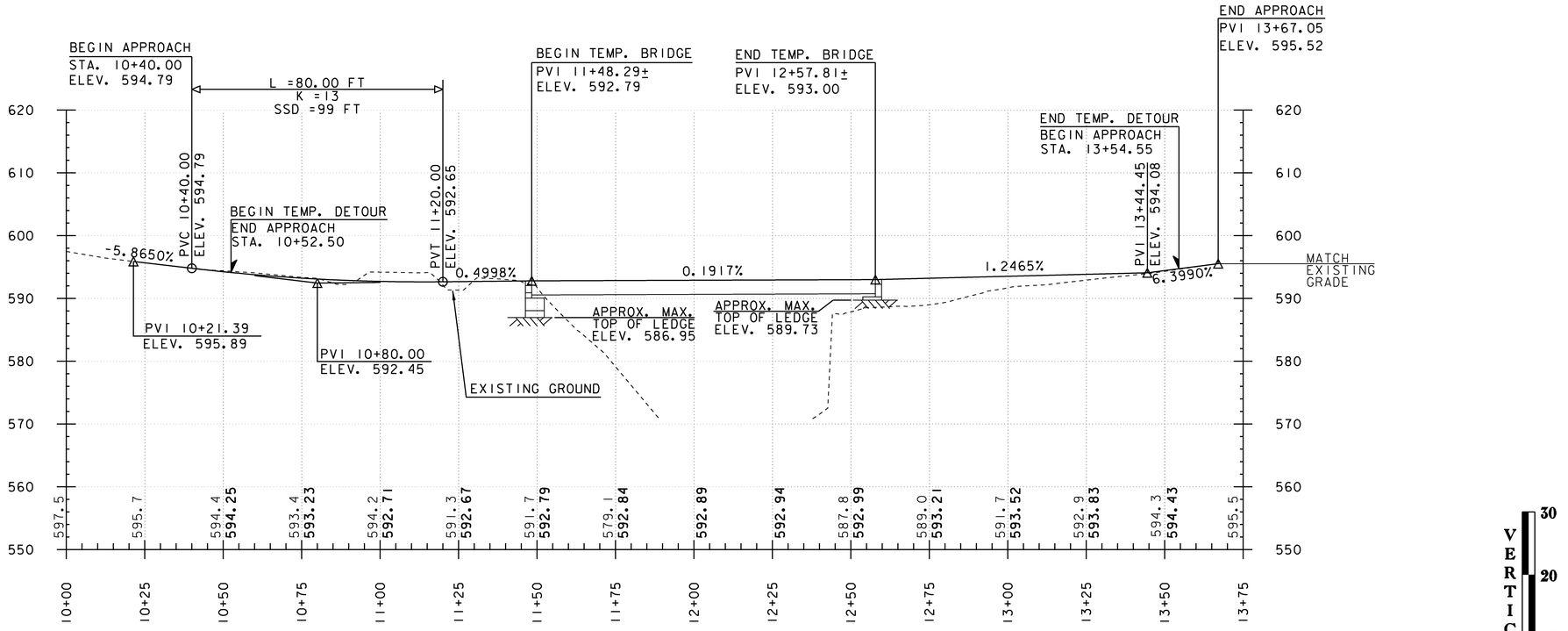
Hoyle, Tanner & Associates, Inc.

MODEL	Default
HTA PROJECT NO.	904214

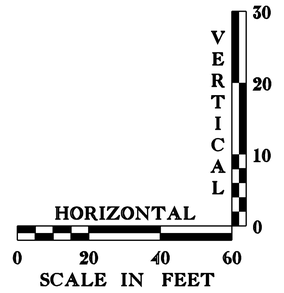
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302sht1lay.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 ROADWAY PLAN

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 12 OF 54



PROFILE ALONG TEMPORARY DETOUR



NOTE: THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW TEMPORARY DETOUR ROUTE ALIGNMENT.

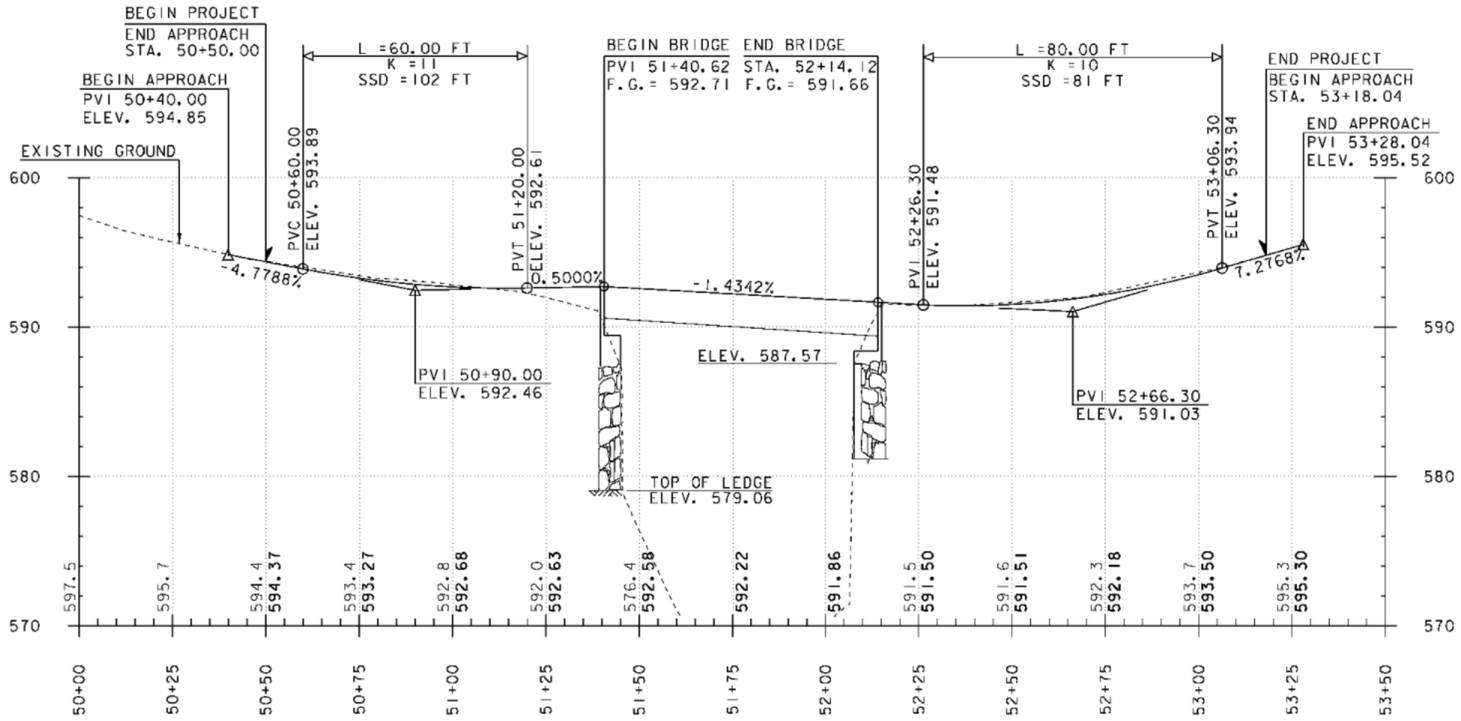
MODEL	TEMP BRG PROFILE
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

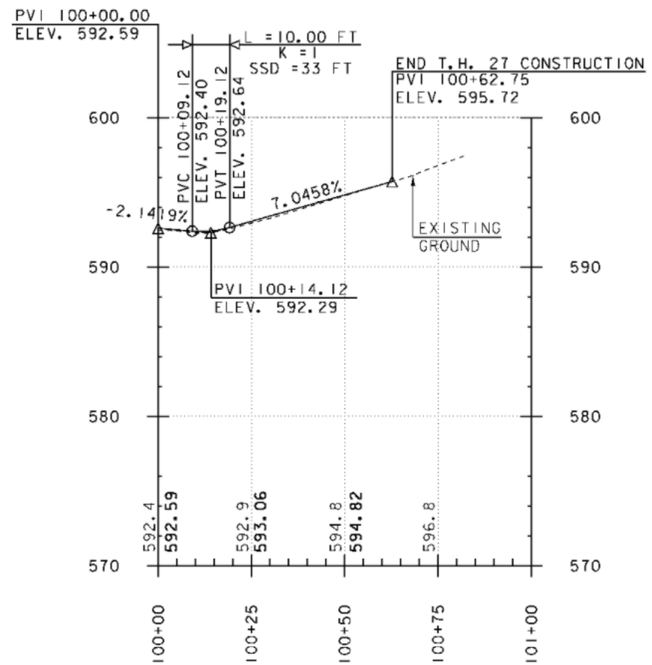
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detourpro.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TEMPORARY DETOUR PROFILE

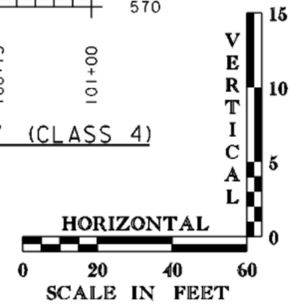
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 13 OF 54



PROFILE ALONG T.H. 27 (CLASS 3)



PROFILE ALONG T.H. 27 (CLASS 4)



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

MODEL	
PROFILE	
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

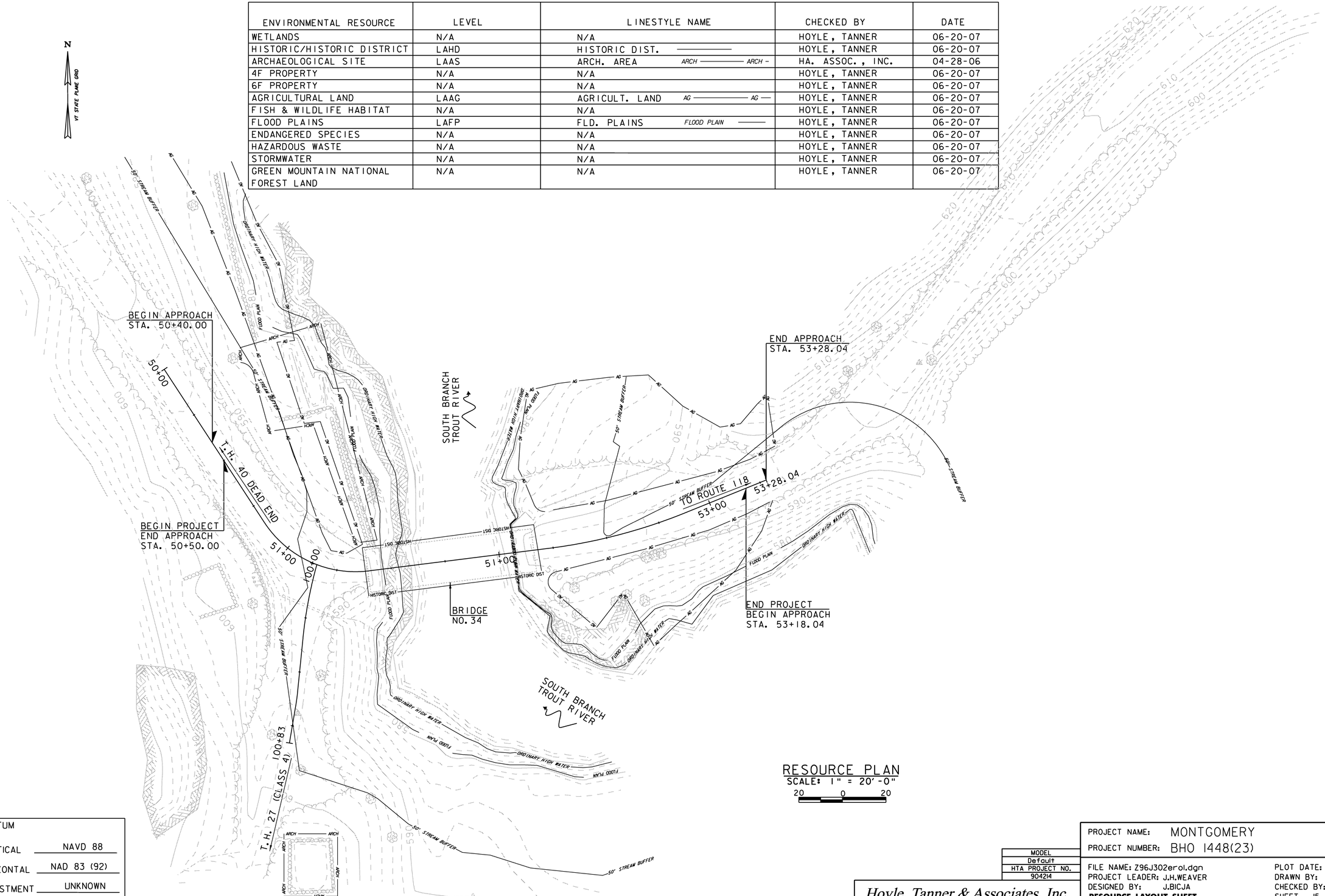
FILE NAME: Z96J302pro.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 ROADWAY PROFILE

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 14 OF 54

ENVIRONMENTAL RESOURCE	LEVEL	LINESTYLE NAME	CHECKED BY	DATE
WETLANDS	N/A	N/A	HOYLE, TANNER	06-20-07
HISTORIC/HISTORIC DISTRICT	LAHD	HISTORIC DIST. ————	HOYLE, TANNER	06-20-07
ARCHAEOLOGICAL SITE	LAAS	ARCH. AREA ARCH ———— ARCH -	HA. ASSOC., INC.	04-28-06
4F PROPERTY	N/A	N/A	HOYLE, TANNER	06-20-07
6F PROPERTY	N/A	N/A	HOYLE, TANNER	06-20-07
AGRICULTURAL LAND	LAAG	AGRICULT. LAND AG ———— AG —	HOYLE, TANNER	06-20-07
FISH & WILDLIFE HABITAT	N/A	N/A	HOYLE, TANNER	06-20-07
FLOOD PLAINS	LAFP	FLD. PLAINS FLOOD PLAIN ———	HOYLE, TANNER	06-20-07
ENDANGERED SPECIES	N/A	N/A	HOYLE, TANNER	06-20-07
HAZARDOUS WASTE	N/A	N/A	HOYLE, TANNER	06-20-07
STORMWATER	N/A	N/A	HOYLE, TANNER	06-20-07
GREEN MOUNTAIN NATIONAL FOREST LAND	N/A	N/A	HOYLE, TANNER	06-20-07

N

VT STATE PLANE GRID



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

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (92)

ADJUSTMENT UNKNOWN

MODEL
Default
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY

PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302erol.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
RESOURCE LAYOUT SHEET

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 15 OF 54

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE HUTCHINS COVERED BRIDGE (BRIDGE NO. 34) OVER THE SOUTH BRANCH TROUT RIVER. THE PROJECT IS LOCATED ON THE T.H. NO. 27 AN UNPAVED CLASS 3 AND 4 TOWN HIGHWAY, IN THE TOWN OF MONTGOMERY. THE BRIDGE IS OPEN TO TRAFFIC BUT WILL BE CLOSED DURING CONSTRUCTION. TRAFFIC WILL BE DETOURED ON A 110 FT LONG DETOUR BRIDGE CONSTRUCTED SOUTH (UPSTREAM) OF THE EXISTING BRIDGE. THE PROJECT CONSISTS OF REPLACING THE DETERIORATED BRIDGE MEMBERS, NEW SIDING, CONSTRUCTION OF FOUR (4) NEW WINGWALLS, RECONSTRUCTION OF ABUTMENT NO. 1, INSTALLATION OF BRIDGE APPROACH RAILING AND REGRADING OF EXISTING ROADWAY APPROACHES. IN ADDITION, A ONE (1) LANE TEMPORARY BRIDGE WILL BE CONSTRUCTED UPSTREAM OF THE EXISTING COVERED BRIDGE. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES IS APPROXIMATELY 215 FT. THE LIMITS OF CONSTRUCTION ENCROACH ON PRIVATE PROPERTY, BUT TEMPORARY CONSTRUCTION EASEMENTS HAVE BEEN OBTAINED. THE SITE IS LOCATED, BASED UPON NAD 83 (92), AT N849646.41 E1612158.67 (HVCTRL #1 - SEE TRAVERSE AND GEODETIC CONTROL INFORMATION SHEET).

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO (2) CONSTRUCTION SEASONS.

TOTAL AREA OF DISTURBANCE INCLUDING LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS IS APPROXIMATELY 0.50 ACRES.

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE EXISTING T.H. NO. 27 AND T.H. NO. 40 HAVE A GRAVEL ROADBED WITH DEFINED DRAINAGE DITCHES AND MODERATE TO STEEP SLOPES. THE AREA SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION INCLUDING BRUSHES, SOFTWOOD AND HARDWOOD. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT SITE WILL BE LIMITED TO THAT WHICH IS CONVEYED ALONG THE ROAD SIDE DITCHED AND THAT WHICH FOLLOWS T.H. NO. 27 ALONG THE 7.3% GRADE AT THE EAST APPROACH AND THAT WHICH FOLLOWS T.H. NO. 40 ALONG THE 4.8% GRADE AT THE WEST APPROACH OF THE PROJECT LIMITS.

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

THE SOUTH BRANCH TROUT RIVER IS LOCATED ON THE PROJECT AREA. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. THE STREAMBED OF THE SOUTH BRANCH TROUT RIVER IS MAINLY COMPOSED OF SAND, GRAVEL AND LEDGE. THE STREAM BANKS ARE MODERATELY STEEP THROUGHOUT THE PROJECT. THE SOUTH BRANCH TROUT RIVER IS CLASSIFIED AS SINUOUS, SEMI-ALLUVIAL, MOUNTAINOUS AND FORESTED SURROUNDINGS THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 15.7 SQUARE MILES.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS HILLY WITH WOODED AREAS. VERMONT ROUTE 118 IS PARALLEL TO THE SOUTH BRANCH TROUT RIVER ON THE EAST. THE WEST AND EAST BANKS OF THE RIVER ARE RELATIVELY STEEP WITHIN THE PROJECT VICINITY. THE HUTCHINS BRIDGE SERVES ONE RESIDENCE AT THE END OF T.H. NO. 40, A DEAD END ROAD. THERE ARE NO UNDERGROUND OR OVERHEAD UTILITIES WITHIN THE PROJECT AREA.

1.2.4 VEGETATION

THE LAND ON AND ADJACENT TO THE PROJECT SITE IS RURAL AND CONSISTS OF A MIX OF HARDWOOD AND SOFTWOOD TREES OF ALL SIZES AND UNDERGROWTH. NO FIELDS OR AGRICULTURAL CROPS EXIST NEAR THE PROJECT. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH IS AFFECTED BY THE CONSTRUCTION OF THE DETOUR WITHIN THE ACQUIRED TEMPORARY CONSTRUCTION EASEMENT AND EXISTING RIGHT-OF-WAY. SOME SMALL TREES, BOTH SOFTWOOD AND HARDWOOD WILL BE REMOVED AND REPLACED TO ALLOW THE CONSTRUCTION AND INSTALLATION OF THE TEMPORARY ONE (1) LANE BRIDGE. THERE IS LEDGE ON BOTH RIVER BANKS. FOLLOWING CONSTRUCTION OF THE REHABILITATED COVERED BRIDGE, THE EXISTING ROADWAY APPROACHES WILL BE RECONSTRUCTED WITH 12-INCHES OF CRUSHED GRAVEL SUBBASE. DISTURBED SLOPES WILL BE STABILIZED WITH STONE FILL AS SPECIFIED ON THE PLANS AND VEGETATION REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) AND THE VERMONT CENTER FOR GEOGRAPHIC INFORMATION (VCGI), THERE ARE THREE SOIL TYPES PRESENT ON THIS PROJECT SITE. COLTON GRAVELLY LOAMY SAND (K=0.15) IS LOCATED ON THE WEST SIDE OF THE PROJECT UP TO STA. 11+50. DUE TO RELATIVE STEEPNESS OF SLOPES IN THIS REGION THERE IS THE POTENTIAL FOR THEM BEING MODERATE ERODIBLE. MISSISQUOI LOAMY SAND (K=0.17) IS FOUND ON THE EAST SIDE OF THE PROJECT AWAY FROM STA. 13+25. THIS AREA HAS THE POTENTIAL TO BE MODERATELY ERODIBLE DUE TO STEEP SLOPES. RUMNEY VARIANT SILT LOAM (K=0.37) IS FOUND ALONG THE RIVER FROM STA. 11+50 TO STA. 13+25, AND IS CONSIDERED MODERATE ERODIBLE. SLOPES WITHIN THE VICINITY OF THE PROJECT RANGE FROM 0-100%.
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.

1.2.6 SENSITIVE RESOURCE AREAS

NO THREATENED & ENDANGERED SPECIES HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS. AN ARCHAEOLOGICAL FIELD REVIEW IDENTIFIED THE REMAINS OF THE HUTCHINS MILL ON THE NORTHWEST CORNER OF THE BRIDGE AND CELLAR HOLE LOCATED AT THE SOUTHWEST END OF T.H. NO. 27 OUTSIDE THE LIMITS OF THE DETOUR BRIDGE. THESE ARCHEOLOGICAL SENSITIVE AREAS SHALL BE CORDONED OFF WITH PROTECTIVE CONSTRUCTION FENCING. THE SOUTH BRANCH TROUT RIVER IS THE ONLY WATER RESOURCE WITHIN THE PROJECT SITE. THERE ARE NO IDENTIFIED WETLANDS. STATEWIDE AGRICULTURAL LAND IS IDENTIFIED WITHIN THE VICINITY OF THE PROJECT. THERE WILL BE MINIMAL IMPACTS TO THIS TYPE OF LAND IN SOUTHEAST CORNER OF THE BRIDGE FOR THE CONSTRUCTION AND INSTALLATION OF THE TEMPORARY DETOUR BRIDGE.

DISTURBANCE OF SOIL NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT AND INSTALL THE TEMPORARY DETOUR BRIDGE, WINGWALL NO. 2 AND APPLICABLE ROADWAY APPROACHES. STABILIZATION OF DISTURBANCES TO STREAM BANKS ON THE SOUTHWEST QUADRANT OF THE EXISTING COVERED BRIDGE WILL BE ACCOMPLISHED WITH STONE FILL, TYPE IV.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO, OR DURING CONSTRUCTION, RESULT IN ONE (1) OR MORE ACRES OF EARTH DISTURBANCE, OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH THE VERMONT AGENCY OF NATURAL RESOURCES VIA FILING OF THE APPROPRIATE “NOTICE OF INTENT” UNDER THE GENERAL CONSTRUCTION PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

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

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

1.4.3 STABILIZE CONSTRUCTION EXIT

STABILIZED CONSTRUCTION ENTRANCE AND EXIT ARE NOT USED IN THIS PROJECT.

1.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK DAMS SHALL BE UTILIZED AS NECESSARY.

1.4.7 CONSTRUCT PERMANENT CONTROLS

THERE WILL BE A NEW STONE FILL SLOPE SURROUNDING THE SOUTH CORNER OF ABUTMENT NO. 1. THE STONE FILL WILL BE TYPE IV AND WILL BE APPROXIMATELY AT 1:1.5 SLOPE.

1.4.8 STABILIZE EXPOSED SOILS

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING, OR AN EQUIVALENT PRODUCT, WILL BE UTILIZED ON ALL SLOPES THAT ARE NOT LINED WITH STONE FILL. SEE ROADWAY SECTIONS FOR SIDESLOPE GRADES. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION ACTIVITY.

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. THE FORECAST OF RAINFALL EVENTS SHALL ALSO TRIGGER PROTECTION OF EXPOSED SLOPES.

1.4.9 WINTER STABILIZATION

IF CONSTRUCTION ACTIVITIES INVOLVING EARTH DISTURBANCE CONTINUE PAST OCTOBER 15 OR BEGIN BEFORE APRIL 15, 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 FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
• DISTURBED AREAS 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 SHOULD BE 10–20 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES THAT ARE NOT LINED WITH STONE FILL. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

1.4.11 DE-WATERING ACTIVITIES

SEDIMENT BASINS FOR SUBSTRUCTURE AND TEMPORARY RETAINING WALL “A” WORK SHALL BE USED AS NECESSARY.

SEDIMENT SETTLING BASIN SIZING CRITERIA TABLE:

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH / WIDTH = 2:1			
Q(gpm)	Q(m^3/s)	(ft^2)	(m^2)	L (ft)	W (ft)	L (m)	W (m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

1.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

1.4.13 SECTION 106 STIPULATIONS

ALL IDENTIFIED RESOURCES WITHIN THE PROJECT LIMITS ARE TO BE PROTECTED AND AVOIDED AS IT HAS BEEN DETERMINED THAT THIS PROJECT WILL **NOT**:

REQUIRE A TEMPORARY DETOUR OUTSIDE EXISTING RIGHT-OF-WAY, OR A TEMPORARY WETLAND OR STREAM CROSSING WHICH WILL REQUIRE NON-ROUTINE MITIGATION, OR A RAMP CLOSURE, UNLESS THE FOLLOWING CONDITIONS ARE MET

(1) PROVISIONS ARE MADE FOR ACCESS BY LOCAL TRAFFIC AND THE FACILITY IS POSTED ACCORDINGLY,
(2) BUSINESSES DEPENDENT UPON THROUGH TRAFFIC WILL NOT BE UNDULY AFFECTED,
(3) THE TEMPORARY DETOUR OR RAMP CLOSURE WILL NOT INTERFERE WITH LOCAL SPECIAL EVENTS,
(4) THE TEMPORARY DETOUR, RAMP CLOSURE, WETLAND OR STREAM CROSSING WILL NOT SUBSTANTIALLY INCREASE THE ENVIRONMENTAL CONSEQUENCES OF THE ACTION (PROJECT).

INVOLVE CONSTRUCTION IN WETLANDS AND/OR STREAMS (BELOW ORDINARY HIGH WATER) TOTALING MORE THAN 5,000 SQUARE FEET, REQUIRING THE ARMY CORP OF ENGINEERS TO COORDINATE WITH RESOURCE AGENCIES PER GENERAL PERMIT #NAE-2007-24.

REQUIRE A RISK ANALYSIS FOR AN INCREASE IN 100-YEAR FLOOD WATER SURFACE ELEVATIONS, PER EO 11988.

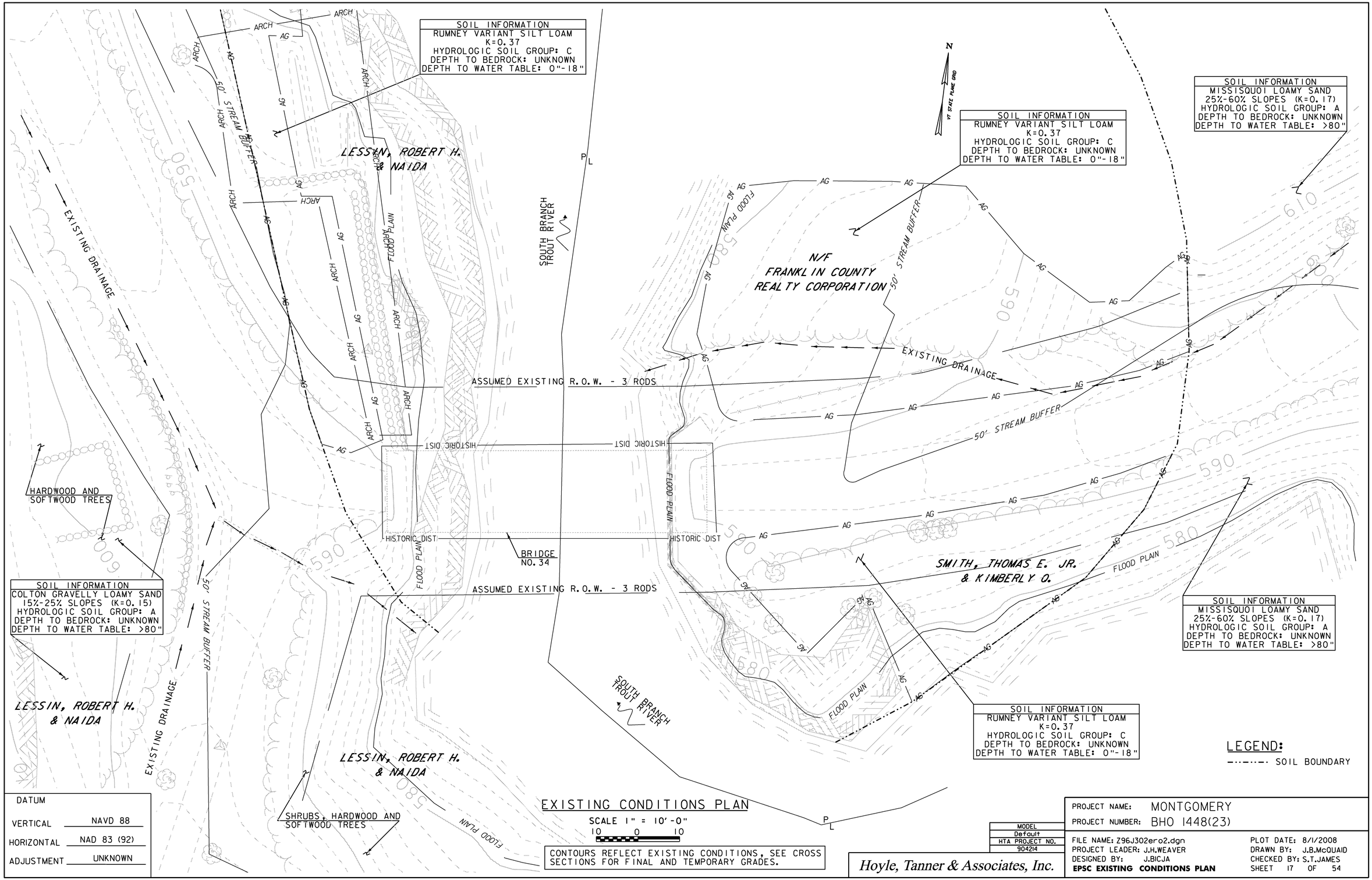
MODEL: det2
HTA PROJECT NO.: 904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302noteserol.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
EPSC EROSION CONTROL NARRATIVE

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 16 OF 54


SOIL INFORMATION
RUMNEY VARIANT SILT LOAM
K=0.37
HYDROLOGIC SOIL GROUP: C
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: 0"-18"
SOIL INFORMATION
RUMNEY VARIANT SILT LOAM
K=0.37
HYDROLOGIC SOIL GROUP: C
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: 0"-18"
SOIL INFORMATION
MISSISQUOI LOAMY SAND
25%-60% SLOPES (K=0.17)
HYDROLOGIC SOIL GROUP: A
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: >80"
SOIL INFORMATION
COLTON GRAVELLY LOAMY SAND
15%-25% SLOPES (K=0.15)
HYDROLOGIC SOIL GROUP: A
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: >80"
SOIL INFORMATION
MISSISQUOI LOAMY SAND
25%-60% SLOPES (K=0.17)
HYDROLOGIC SOIL GROUP: A
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: >80"
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K=0.37
HYDROLOGIC SOIL GROUP: C
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: 0"-18"
LESSIN, ROBERT H. & NAIDA
N/F FRANKLIN COUNTY REALTY CORPORATION
SMITH, THOMAS E. JR. & KIMBERLY O.
LESSIN, ROBERT H. & NAIDA
LESSIN, ROBERT H. & NAIDA
SOUTH BRANCH TROUT RIVER
SOUTH BRANCH TROUT RIVER
EXISTING DRAINAGE
EXISTING DRAINAGE
EXISTING DRAINAGE
50' STREAM BUFFER
50' STREAM BUFFER
50' STREAM BUFFER
50' STREAM BUFFER
FLOOD PLAIN
FLOOD PLAIN
FLOOD PLAIN
FLOOD PLAIN
ASSUMED EXISTING R.O.W. - 3 RODS
ASSUMED EXISTING R.O.W. - 3 RODS
HISTORIC DIST
HISTORIC DIST
HISTORIC DIST
HISTORIC DIST
BRIDGE NO. 34
HARDWOOD AND SOFTWOOD TREES
SHRUBS, HARDWOOD AND SOFTWOOD TREES
ARCH
AG
P L
N
VT STATE PLANE GRID
LEGEND:
SOIL BOUNDARY
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)
ADJUSTMENT UNKNOWN
EXISTING CONDITIONS PLAN
SCALE 1" = 10'-0"
10 0 10
CONTOURS REFLECT EXISTING CONDITIONS, SEE CROSS SECTIONS FOR FINAL AND TEMPORARY GRADES.
MODEL
Default
HTA PROJECT NO.
904214
Hoyle, Tanner & Associates, Inc.
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)
FILE NAME: Z96J302er02.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
EPSC EXISTING CONDITIONS PLAN
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 17 OF 54

SOIL INFORMATION
RUMNEY VARIANT SILT LOAM
K=0.37
HYDROLOGIC SOIL GROUP: C
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: 0"-18"

SOIL INFORMATION
MISSISQUOI LOAMY SAND
25%-60% SLOPES (K=0.17)
HYDROLOGIC SOIL GROUP: A
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15%-25% SLOPES (K=0.15)
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DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: >80"

SOIL INFORMATION
RUMNEY VARIANT SILT LOAM
K=0.37
HYDROLOGIC SOIL GROUP: C
DEPTH TO BEDROCK: UNKNOWN
DEPTH TO WATER TABLE: 0"-18"

BEGIN APPROACH
STA. 50+40.00

BEGIN PROJECT
END APPROACH
STA. 50+50.00

END APPROACH
STA. 53+28.04

END PROJECT
BEGIN APPROACH
STA. 53+18.04

LESSIN, ROBERT H. & NAIDA

N/F FRANKLIN COUNTY REALTY CORPORATION

SMITH, THOMAS E. JR. & KIMBERLY O.

SOUTH BRANCH TROUT RIVER

ASSUMED EXISTING R.O.W. - 3 RODS

BRIDGE NO. 34

APPROX. LIMITS OF TEMP. STEEL SHEET PILING

BEGIN BRIDGE
STA. 51+40.62
F.G. = 592.71

END BRIDGE
STA. 52+14.12
F.G. = 591.66

STONE FILL TYPE IV

REMOVE 10 SMALL TREES AS REQUIRED TO CONSTRUCT THE TEMP. BRIDGE

TEMP. ABUT. NO. 1

TEMP. ABUT. NO. 2

TEMPORARY CONSTRUCTION EASEMENT LIMITS

END T.H. 27 CONSTRUCTION
STA. 100+62.75

CONSTRUCT TEMPORARY ROADWAY APPROACH WITH A MIN. OF 15" OF APPROVED GRAVEL MATERIAL (TYP.) (PAID UNDER ITEM 528.10)

SLOPE LIMITS (TYP.)

HARDWOOD AND SOFTWOOD TREES

REMOVE SMALL TREE

PROPOSED DRAINAGE

TEMPORARY CONSTRUCTION EASEMENT LIMITS

SHRUBS, HARDWOOD AND SOFTWOOD TREES

EXISTING DRAINAGE

50' STREAM BUFFER

FLOOD PLAIN

HISTORIC DIST

CONSTRUCTION CONDITIONS PLAN

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

CONTOURS REFLECT EXISTING CONDITIONS, SEE CROSS SECTIONS FOR FINAL AND TEMPORARY GRADES.

LEGEND:

- (I) END OF SILT FENCE TURNED UPHILL TO CREATE PONDING
- STONE CHECK DAMS
- BF — BARRIER FENCE
- SOIL BOUNDARY
- PDF — PROJECT DEMARCATION FENCE
- SILT FENCE
- SO REMOVE SMALL OAK TREE
- SP REMOVE SMALL PINE TREE
- SD REMOVE SMALL DEAD TREE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)
ADJUSTMENT UNKNOWN

MODEL: Default
HTA PROJECT NO.: 904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302ero3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES

EPSC CONSTRUCTION CONDITIONS PLAN
SHEET 18 OF 54

PLANT LIST TABLE

QUANTITY	SIZE	COMMON NAME	BOTANICAL	SPACING
2	6'-8' HEIGHT/3 GALLON CONTAINER	RED MAPLE	ACER RUBRUM	10' O.C./SPRING PLANTING
2	6'-8' HEIGHT/3 GALLON CONTAINER	SUGAR MAPLE	ACER SACCHARUM	10' O.C./SPRING PLANTING
2	6'-8' HEIGHT/3 GALLON CONTAINER	RED OAK	QUERCUS RUBRA	10' O.C./SPRING PLANTING
3	3'-4' HEIGHT/1 GALLON CONTAINER	WHITE PINE	PINUS STROBUS	10' O.C./SPRING PLANTING

PLAN NOTES:

1. MULCH EACH TREE WITH 2"-3" LAYER OF APPROVED SHREDDED BARK. MULCH AREA OUT TO 5'-0" DIAMETER FROM TRUNK. TAPER TO NO MULCH AT TRUNK. ALL COSTS OF SUCH WORK ARE CONSIDERED INCIDENTAL TO ITEM 656.16 AND ITEM 656.20.
2. MAKE A FIRM, 3" HIGH WATERING RETENTION MOUND 18" IN DIAMETER OUT OF SOIL AROUND EACH TREE TO CONSERVE WATER. ON SLOPES ONLY PLACE MOUND ON DOWNHILL SIDE OF EACH TREE.
3. WATER THOROUGHLY AT TIME OF PLANTING FOLLOWING STANDARD SPECIFICATIONS 656.08(f). WATER 10 GALLONS PER TREE 2 TIMES PER WEEK WHICH IS THE EQUIVALENT TO 1" OF NATURAL RAINFALL. THE RESIDENT ENGINEER SHALL LOG RAINFALL TO ADJUST WATERING SCHEDULE DUE TO NATURAL RAINFALL. WATER DURING ESTABLISHMENT PERIOD UNTIL OCTOBER 1ST.
4. THE PLANTING OF THE 6 DECIDUOUS TREES, 6'-8' HEIGHT/3 GALLON CONTAINER SHALL BE PAID UNDER ITEM 656.16.
5. FINAL LOCATION OF NEW SEEDLINGS MAY BE ADJUSTED IN THE FIELD AS DEEMED NECESSARY BY THE RESIDENT ENGINEER AND TO AVOID LEDGE AREAS.

50+00
BEGIN APPROACH
STA. 50+40.00
BEGIN PROJECT
END APPROACH
STA. 50+50.00
50' STREAM BUFFER
LESSIN, ROBERT H. & NAIDA
PROPOSED EDGE OF TRAVEL WAY
TH 40 DEAD END
SOUTH BRANCH TROUT RIVER
P.L.
N
VT STATE PLANE GRID
N/F FRANKLIN COUNTY REALTY CORPORATION
50' STREAM BUFFER
ASSUMED EXISTING R.O.W. - 3 RODS
51+00
100+00
52+00
BRIDGE NO. 34
LESSIN, ROBERT H. & NAIDA
50' STREAM BUFFER
TH 27 (CLASS 4)
1'-0" THICK STONE FILL TYPE I
CLEAR TO SLOPE LIMITS ONLY (TYP.)
ASSUMED EXISTING R.O.W. - 3 RODS
END BRIDGE
STA. 52+14.12
F.G. = 591.66
BEGIN BRIDGE
STA. 51+40.62
F.G. = 592.71
4'-0" THICK STONE FILL TYPE IV
1'-0" THICK STONE FILL TYPE I
END T.H. 27 CONSTRUCTION
STA. 100+62.75
100+83.00
LESSIN, ROBERT H. & NAIDA
ASSUMED EXISTING R.O.W. - 3 RODS
PLANT (2) RED OAK TREES (QUERCUS RUBRA)
PLANT (3) WHITE PINE (PINUS STROBUS) TREES 3'-4' IN HEIGHT (PAID UNDER ITEM 656.20)
SOUTH BRANCH TROUT RIVER
P.L.
END APPROACH
STA. 53+28.04
END PROJECT
BEGIN APPROACH
STA. 53+18.04
SHOULDER BREAK (TYP.)
50' STREAM BUFFER
53+00 TO ROUTE 118
53+28.04
SMITH, THOMAS E. JR. & KIMBERLY O.
PLANT (2) RED MAPLE TREES (ACER RUBRUM)
PLANT (2) SUGAR MAPLE TREES (ACER SACCHARUM)
18" DEPTH TOPSOIL - CONTINUOUS TREE PIT. DIG OUT COMPACTED ROAD BASE FROM TEMPORARY DETOUR AND REPLACE WITH TOPSOIL. EXTEND TOPSOIL PIT 5'-0" MINIMUM BEYOND TREES. SEED AND MULCH AS NOTED

LEGEND:

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

CONTINUOUS SOIL PIT FOR TREES

FINAL CONDITIONS PLAN

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

CONTOURS REFLECT EXISTING CONDITIONS, SEE CROSS SECTIONS FOR FINAL AND TEMPORARY GRADES.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)
ADJUSTMENT	UNKNOWN

MODEL	Default
HTA PROJECT NO.	904214

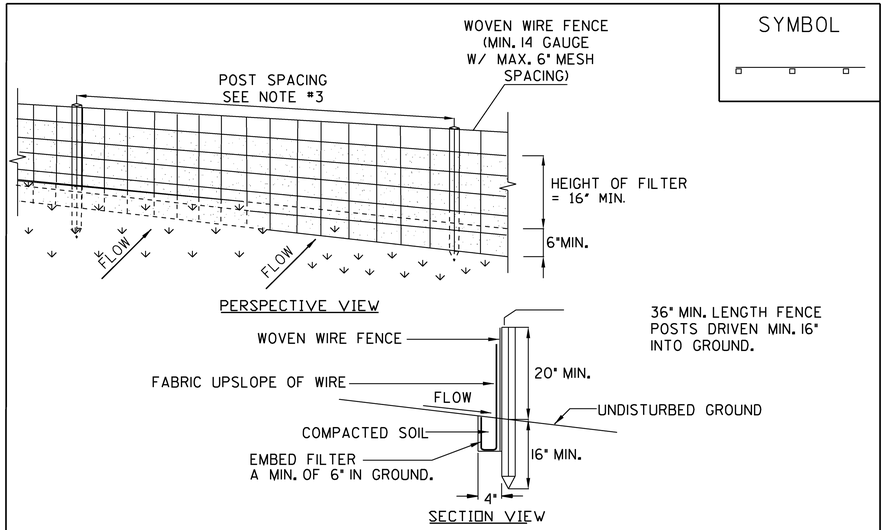
Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302erc4.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
EPSC FINAL CONDITIONS PLAN

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 19 OF 54

SYMBOL



CONSTRUCTION SPECIFICATIONS

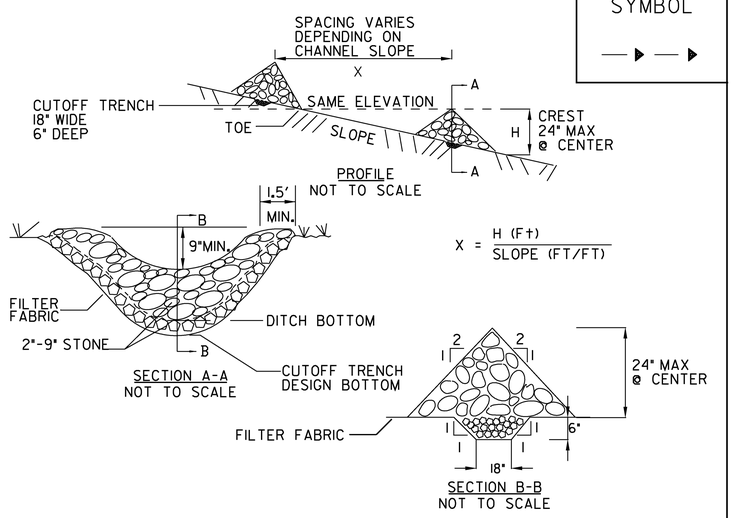
1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

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

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
STANDARD SPECIFICATION 649.51 GEOTEXTILE FOR SILT FENCE ~~OR~~
~~SPECIAL PROVISION 900.675 (GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED)~~

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

   MAXIMUM DRAINAGE AREA 2 ACRES.

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

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.25 TEMPORARY STONE CHECK DAM, TYPE I

REVISIONS	
MARCH 8, 2007	JMF

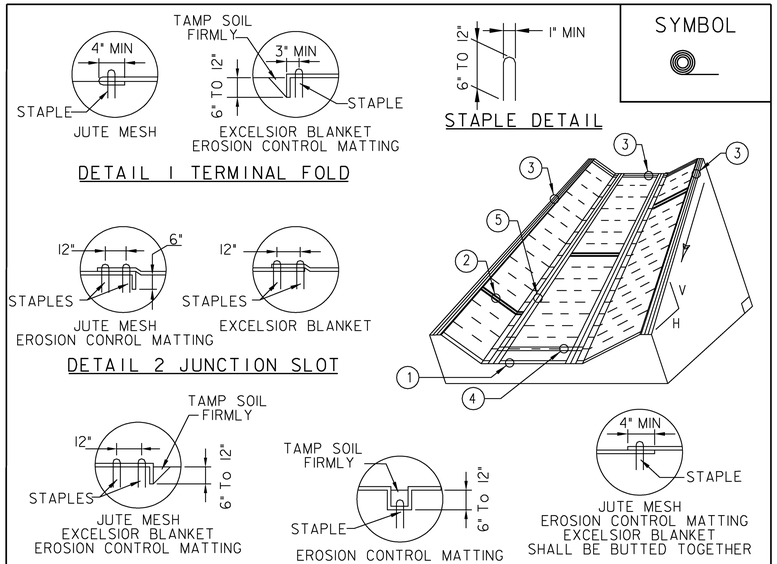
MODEL	det2
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302noteser02.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
EPSC DETAIL SHEET (1 OF 2)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 20 OF 54



SYMBOL

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'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.

4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.

5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

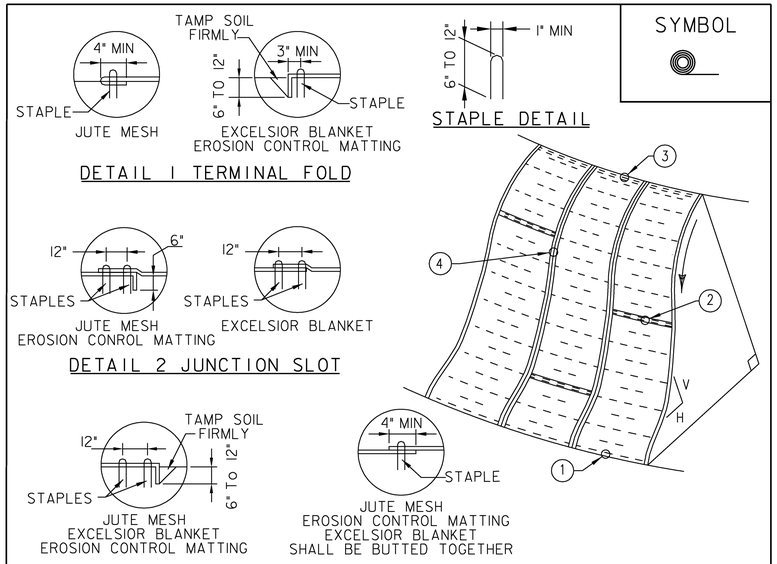
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING ~~OR 653.21 PERMANENT EROSION MATTING~~

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF



SYMBOL

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.

2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.

3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.

4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.

5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING ~~OR 653.21 PERMANENT EROSION MATTING~~

NEW	
APRIL 16, 2007	WHF
REVISIONS	

MODEL	
dgn2	
HTA PROJECT NO.	
904214	

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302noteser03.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
EPSC DETAIL SHEET (2 OF 2)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 21 OF 54

SOIL CLASSIFICATION

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

ROCK QUALITY DESIGNATION

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

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

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

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

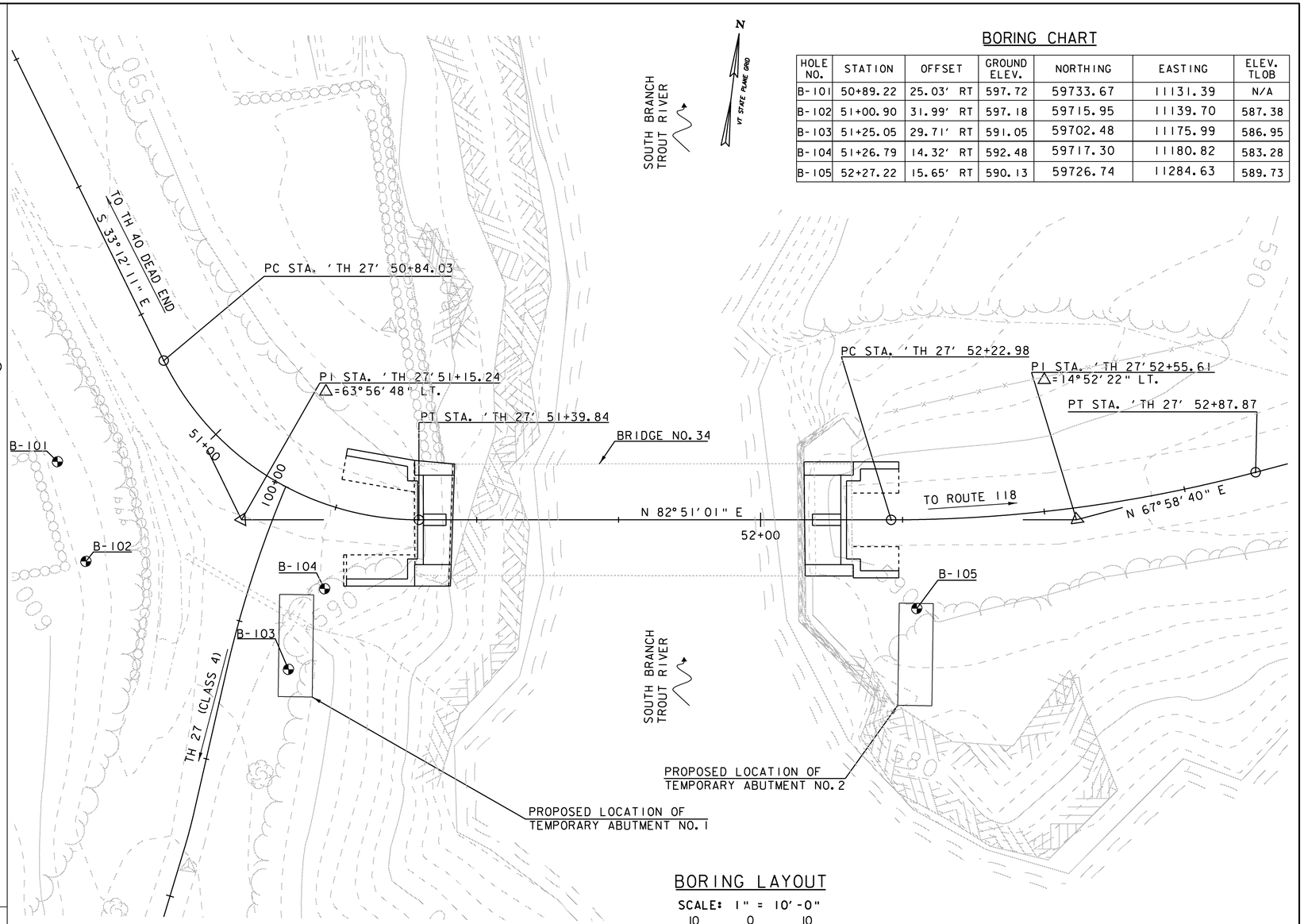
FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

BORING CHART

HOLE NO.	STATION	OFFSET	GROUND ELEV.	NORTHING	EASTING	ELEV. TLOB
B-101	50+89.22	25.03' RT	597.72	59733.67	11131.39	N/A
B-102	51+00.90	31.99' RT	597.18	59715.95	11139.70	587.38
B-103	51+25.05	29.71' RT	591.05	59702.48	11175.99	586.95
B-104	51+26.79	14.32' RT	592.48	59717.30	11180.82	583.28
B-105	52+27.22	15.65' RT	590.13	59726.74	11284.63	589.73



BORING LAYOUT

SCALE: 1" = 10'-0"

10 0 10

GENERAL NOTES

1. The subsurface explorations shown herein were made between 7/19/07 and 8/03/07 by the Agency.

2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.

3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.

4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.

5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

MODEL	Default
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302borl.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BORING LAYOUT SHEET

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 22 OF 54

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

BORING NUMBER: B-101
SHEET 1 of 1
DATE STARTED: 8/03/07
DATE COMPLETED: 8/03/07

PROJECT NAME: MONTGOMERY
SITE NAME: TH-27
STATION: 50+89.22
OFFSET: 25.03
VTSPG: N 859733.67 ft E 1611131.39 ft

PROJECT NUMBER: BHO 1448(23)
SITE NUMBER: BR-34
GROUND ELEVATION: 597.72 ft
GROUNDWATER DEPTH: 3.1 ft 8/03/07
PROJECT PIN NUMBER: 96J302

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: CARRIERE

BORING RIG: LAG TRACK RIG w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

BOTTOM OF RETAINING WALL "A" ELEV. 592.50

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-1-b, SiSaGr, brn, Moist, Rec. = 0.8 ft	2	30.2	42.4	35.3	22.3
2.5		A-1-b, SaGr, brn, Moist, Rec. = 1.1 ft	8	19.2	56.4	27.0	16.6
5.0		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft	16	15.4	33.0	54.2	12.8
7.5		A-1-a, SaGr, brn, Moist, Rec. = 1.2 ft	51	10.2	65.9	25.8	8.3
		Field Class., Cobbles, BXMDC, Cleaned out casing.					
10.0		A-2-4, SiSa, brn, Moist, Rec. = 1.0 ft	6	21.9	5.5	66.1	28.4
12.5		Hole stopped @ 12.0 ft					
15.0							
17.5							

LOG OF BORING MONTGOMERY BHO 1448(23).GPJ VT AOT.GDT 10/29/07

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

BORING NUMBER: B-102
SHEET 1 of 1
DATE STARTED: 7/26/07
DATE COMPLETED: 7/26/07

PROJECT NAME: MONTGOMERY
SITE NAME: TH-27
STATION: 51+00.90
OFFSET: 31.99
VTSPG: N 859715.95 ft E 1611139.70 ft

PROJECT NUMBER: BHO 1448(23)
SITE NUMBER: BR-34
GROUND ELEVATION: 597.18 ft
GROUNDWATER DEPTH: 3.0 ft 7/26/07
PROJECT PIN NUMBER: 96J302

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: CARRIERE

BORING RIG: SMALL SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

BOTTOM OF RETAINING WALL "A" ELEV. 592.50

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / ROD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.6 ft	3	44.0	29.9	38.1	32.0
2.5		A-1-b, SiSaGr, brn, MTW, Rec. = 1.6 ft	14	24.2	46.5	33.1	20.4
5.0		No Recovery, 4.0 ft - 6.0 ft	18				
7.5		A-4, Si, gry, Moist, Rec. = 1.2 ft	14	26.3	3.6	6.2	90.2
		A-4, Si, gry, Moist, Rec. = 1.5 ft	13	29.8	2.9	7.7	89.4
10.0		Gray, Quartz Schist, Iron stained on bottom surface. Possible Boulder., Very hard, BXMDC, 9.9 ft - 10.9 ft, Rec. = 0.65 ft	1	65		5	36
		Drilling break., 10.9 ft - 11.9 ft					
12.5		Gray, Graphitic quartz-albite-sericite-chlorite schist, with quartzite layers. Possible top of bedrock. Insufficient sample length to make competency determination., Hard, Unweathered, 11.9 ft - 13.9 ft			35	40	18 15
		Hole stopped @ 13.9 ft					
15.0							
17.5							

LOG OF BORING MONTGOMERY BHO 1448(23).GPJ VT AOT.GDT 10/29/07

MODEL	det2
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302bol.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BORING LOG SHEET (1 OF 3)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 23 OF 54

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

BORING NUMBER: B-103
SHEET 1 of 1
DATE STARTED: 7/24/07
DATE COMPLETED: 7/25/07

PROJECT NAME: MONTGOMERY
SITE NAME: TH-27
STATION: 51+25.05
OFFSET: 29.71
VTSPG: N 859702.48 ft E 1611175.99 ft

PROJECT NUMBER: BHO 1448(23)
SITE NUMBER: BR-34
GROUND ELEVATION: 591.05 ft
GROUNDWATER DEPTH: 3.0 ft 7/25/07
PROJECT PIN NUMBER: 96J302

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: CARRIERE

BORING RIG: SMALL SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

BOTTOM OF TEMPORARY ABUTMENT NO.1
ELEV. 586.95

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.8 ft	4	23.2	24.2	46.2	29.6
2.5		A-1-b, SaGr, brn, Moist, Rec. = 1.2 ft, Broken rock was within sample.	5	16.6	57.6	27.2	15.2
				Top of Bedrock @ 4.1 ft			
5.0		Gray, Quartz-albite-sericite-chlorite schist, with quartzite layers. Competent, Hard, Unweathered, BXMDC, 4.1 ft - 9.1 ft, Rec. = 4.65 ft	1	93	85	40	3 6 6 8 8
7.5							
10.0		Gray, Quartz-albite-sericite-chlorite schist, with quartzite layers. Competent. Stained jointing at 11.0 ft., Hard, Unweathered, BXMDC, 9.1 ft - 14.1 ft, Rec. = 5.0 ft	2	100	85	40	10 10 6 7 9
12.5							
		Hole stopped @ 14.1 ft					
15.0							
17.5							

LOG OF BORING MONTGOMERY BHO 1448(23).GPJ VT AOT.GDT 10/30/07

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

BORING NUMBER: B-104
SHEET 1 of 1
DATE STARTED: 7/19/07
DATE COMPLETED: 7/19/07

PROJECT NAME: MONTGOMERY
SITE NAME: TH-27
STATION: 51+26.79
OFFSET: 14.32
VTSPG: N 859717.30 ft E 1611180.82 ft

PROJECT NUMBER: BHO 1448(23)
SITE NUMBER: BR-34
GROUND ELEVATION: 592.48 ft
GROUNDWATER DEPTH: 6.8 ft 7/19/07
PROJECT PIN NUMBER: 96J302

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: CARRIERE

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

BOTTOM OF WINGWALL NO. 2 SUBFOOTING
ELEV. 583.28

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-1-b, SaGr, brn, Moist, Rec. = 0.8 ft	3	11.1	45.1	43.2	11.7
2.5		Field Note, No Recovery. Appears to be sand.	3				
5.0		Field Note, No Recovery. Stone in sampler.	4				
		Visual Classification, A-2-4, Si Gr, brn, Moist, Rec. = 0.2 ft, Insufficient sample for testing.	2	16.7			
7.5		Visual Classification, A-2-4, Si Sa Gr, brn, Moist, Rec. = 0.6 ft, Insufficient sample for testing.	R	10.9			
				Top of Bedrock @ 9.2 ft			
10.0		Gray, Graphitic quartz-albite-sericite-chlorite schist, with quartzite layers. Competent. Stained jointing at 11.0 ft. and at 13.2 ft., Hard, Unweathered, BXMDC, 9.2 ft - 14.2 ft, Rec. = 4.3 ft	1	86	72	40	4 5 5 4 5
12.5							
15.0		Gray, Graphitic quartz-albite-sericite-chlorite schist, with quartzite layers. Competent., Hard, Unweathered, BXMDC, 14.2 ft - 19.2 ft, Rec. = 5.0 ft	2	100	100	40	4 5 4 5 5
17.5							
		Hole stopped @ 19.2 ft					

LOG OF BORING MONTGOMERY BHO 1448(23).GPJ VT AOT.GDT 10/30/07

MODEL	det2
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302bo2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BORING LOG SHEET (2 OF 3)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 24 OF 54

BOTTOM OF TEMPORARY ABUTMENT NO. 2
ELEV. 589.73

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

BORING NUMBER: B-105
SHEET 1 of 1
DATE STARTED: 7/20/07
DATE COMPLETED: 7/20/07

PROJECT NAME: MONTGOMERY
SITE NAME: TH-27
STATION: 52+27.22
OFFSET: 15.65
VTSPG: N 859726.74 ft E 1611284.63 ft

PROJECT NUMBER: BHO 1448(23)
SITE NUMBER: BR-34
GROUND ELEVATION: 590.13 ft
GROUNDWATER DEPTH: 5.9 ft 7/20/07
PROJECT PIN NUMBER: 96J302

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: WERNER

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-1-a, SaGr, brn, Moist, Rec. = 0.4 ft		4.0	50.8	40.1	9.1
		Seated casing in bedrock., 0.4 ft – 1.0 ft		Top of	Bedrock @	0.4 ft	
2.5		Gray, Graphitic quartz-albite-sericite-chlorite schist, with quartzite layers. Slightly weathered overall with moderate weathering from 1.0 ft. to 2.0 ft. Competent., Hard, BXMDC, 1.0 ft – 6.0 ft, Rec. = 4.85 ft	1	97	90	40	4 4 3 4 4
5.0							
7.5		Gray, Graphitic quartz-albite-sericite-chlorite schist, with quartzite layers. Slightly weathered at 7.2 ft. Remainder of run unweathered. Competent., Hard, BXMDC, 6.0 ft – 11.0 ft, Rec. = 4.95 ft	2	99	93	40	3 4 4 4 5
10.0							
		Hole stopped @ 11.0 ft					

LOG OF BORING MONTGOMERY BHO 1448(23).GPJ VT_AOT.GDT 10/30/07

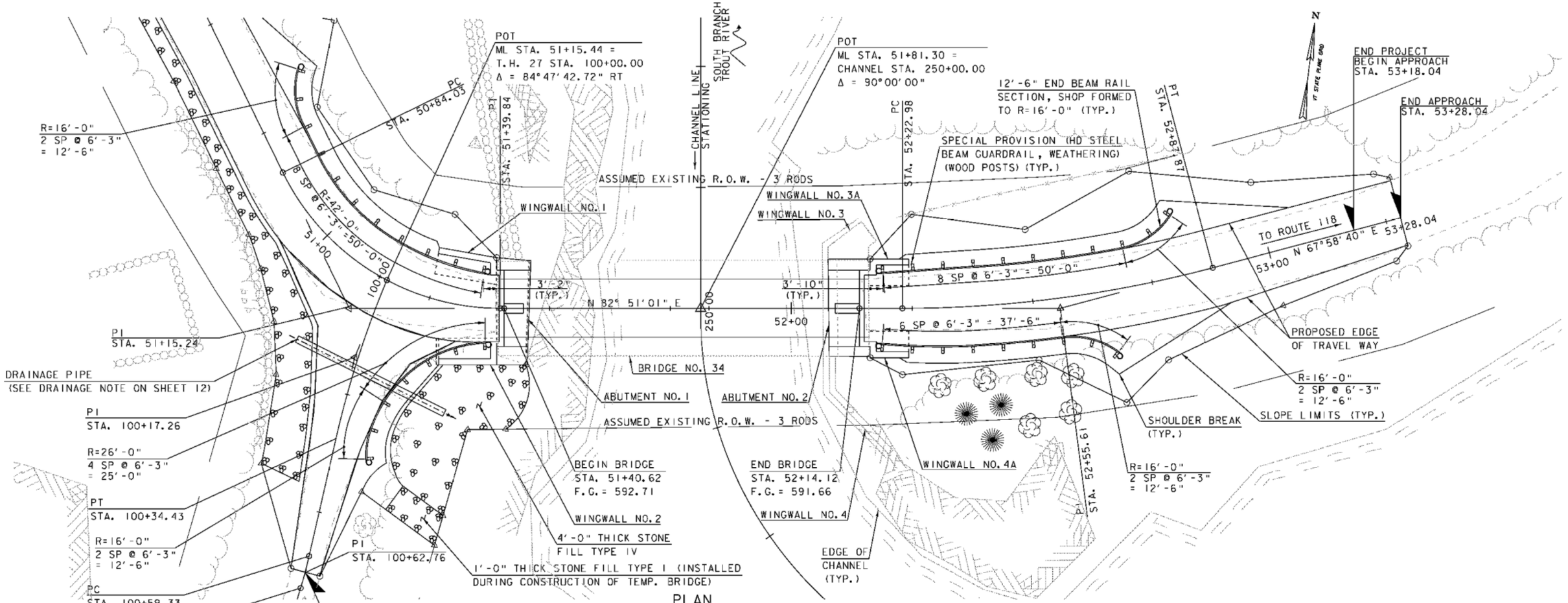
MODEL: dat2
HTA PROJECT NO.: 904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

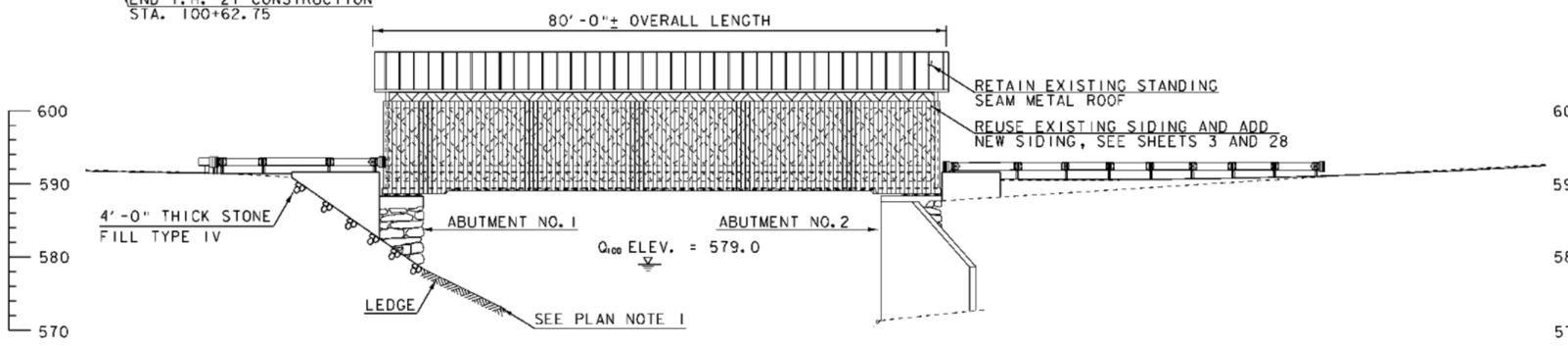
FILE NAME: Z96J302bo3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BORING LOG SHEET (3 OF 3)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 25 OF 54



PLAN

SCALE: 1" = 10'-0"



ELEVATION AT UPSTREAM FASCIA

SCALE: 1" = 10'-0"

PLAN NOTES:

1. TOPOGRAPHIC SURVEY NOT AVAILABLE FOR SOUTH BRANCH TROUT RIVER BOTTOM. BOTTOM ELEVATION AND PROFILE OF RIVER IS NOT KNOWN.
2. SEE SHEET 12 FOR CONSTRUCTION NOTES OF HD STEEL BEAM GUARDRAIL.
3. SEE SHEET 19 FOR NEW TREE PLANTINGS AND DETAILS.

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

MODEL
Default
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302pe.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES

COVERED BRIDGE PLAN AND ELEVATION SHEET 26 OF 54

GENERAL NOTES:

G-1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

G-2. DESIGN OF THE REHABILITATED STRUCTURE IS FOR AN AASHTO H10 LIVE LOAD.

G-3. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO INSURE THAT NO DEBRIS FALLS INTO THE SOUTH BRANCH TROUT 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 STATE.

G-4. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING R.O.W AND TEMPORARY CONSTRUCTION EASEMENT LIMITS SHOWN IN THESE PLANS.

G-5. 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. 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-6. 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. 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 STATE, 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 STEEL I-BEAMS THAT SUPPORT THE EXISTING COVERED BRIDGE WERE INSTALLED BY THE TOWN OF MONTGOMERY AND SHALL BE DELIVERED TO:

A & L ST. ONGE CONSTRUCTION
1711 NORTH MAIN STREET
MONTGOMERY, VT
CONTACT: ARTIE ST. ONGE, (802) 326-3000

THE CONTRACTOR SHALL UNLOAD THE I-BEAMS FROM THE TRUCK AND PLACE THEM AT A LOCATION AS DIRECTED BY THE OWNER. PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE PRIOR TO DELIVERING THE STEEL I-BEAMS. THESE STEEL BEAMS THAT SUPPORT THE EXISTING COVERED BRIDGE ARE COATED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S MOVING OF THESE STEEL BEAMS. ALL COSTS ASSOCIATED WITH THE REMOVAL, HANDLING AND DELIVERY OF STEEL BEAMS ARE PAID UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE. ALL OTHER REMOVED ITEMS PAID UNDER ITEM 529.20, SHALL BE DISPOSED OF BY THE CONTRACTOR.

G-8. 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-9. 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-10. ALL JOINTS IN REPLACED MEMBERS SHALL MATCH THE EXISTING JOINT, INCLUDING ALL NAILS, BOLTS OR SCREWS REQUIRED UNLESS NOTED OTHERWISE.

G-11. 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.

STRUCTURAL STEEL NOTES:

S-1. EXCEPT AS NOTED OTHERWISE IN THE CONTRACT PLANS, ITEM 506.75, STRUCTURAL STEEL SHALL INCLUDE THE FOLLOWING:

- THE NEW LOWER LATERAL BRACING TIE RODS (INCLUDING NUTS, PLATES, WASHERS AND TURNBUCKLES)
- ALL NEW STEEL THROUGH BOLTS (INCLUDING NUTS, WASHERS AND BEVELED WASHERS) THAT ARE TO CONNECT THE SPLIT ENDS OF TRUSS LATTICE MEMBERS
- ALL REPLACED STEEL THROUGH BOLTS THAT ARE TO CONNECT CHORD 4 WITH TRUSS LATTICE MEMBERS OF BOTH TRUSSES
- NEW CARRIAGE BOLTS WITH HEAVY SQUARE NUTS AND OGEE WASHERS THAT ARE TO CONNECT THE UPPER X-BRACING MEMBERS
- NEW LAG SCREWS TO CONNECT EXISTING WOOD MEMBERS
- FLOOR BEAM HOLD DOWN STRAPS

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. ALL STEEL PLATES AND RODS SHALL BE ASTM A36.

RECOMMENDED SEQUENCE OF WORK:

RS-1. INSTALL TEMPORARY ONE LANE BRIDGE AS SHOWN IN THE PLANS AND OPEN IT TO TRAFFIC.

RS-2. REMOVE THE EXISTING FLOOR DECKING, FLOOR BEAMS AND SIDING AS SHOWN IN THE PLANS. PROVIDE TEMPORARY SUPPORT OF THE LOWER CHORDS AS REQUIRED.

RS-3. DEPENDING ON WHICH ALTERNATE WAS CHOSEN, INSTALL TEMPORARY SHORING TO SUPPORT THE EXISTING BRIDGE OR MOVE THE EXISTING BRIDGE TO A STAGING AREA TO COMPLETE THE REPAIRS. THE CONTRACTOR SHALL SUBMIT PLANS AND DESIGN CALCULATIONS FOR THE PROPOSED WORK, TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS, TWO (2) WEEKS PRIOR TO COMMENCEMENT OF THE WORK.

RS-4. THE EXISTING BRIDGE SHALL BE JACKED AND BRACED AS REQUIRED TO STRAIGHTEN, RELEASE STRESSES, PLUMB AND RE-ALIGN THE TRUSSES. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF WORK TO THE RESIDENT ENGINEER PRIOR TO THE START OF REALIGNMENT OPERATIONS. (SEE ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)).

RS-5. REPLACE BRIDGE MEMBERS AS DETAILED IN CONTRACT DRAWINGS AND COMPLETE SUBSTRUCTURE WORK.

RS-6. DEPENDING ON WHICH ALTERNATE WAS CHOSEN, REMOVE TEMPORARY SHORING TO SUPPORT STRUCTURE, OR RE-INSTALL THE BRIDGE SUPERSTRUCTURE, COMPLETE REMAINING WORK ITEMS AS DETAILED ON DRAWINGS, REOPEN BRIDGE TO TRAFFIC AND REMOVE TEMPORARY ONE LANE BRIDGE AND TEMPORARY ROADWAY APPROACHES.

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, 5TH 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. MATERIAL AND WORK OF 5 NEW TRUNNELS TO CONNECT EXISTING MEMBERS AS SHOWN ON SHEETS 37 AND 38 ARE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE). TRUNNELS WHICH ARE SALVAGED AND REUSED IN CONJUNCTION WITH EXISTING MEMBERS THAT ARE TO REMAIN ARE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

W-4. DOWEL HOLES IN EXISTING MEMBERS THAT ARE OVERSIZED OR DISTORTED SHALL BE PLUGGED WITH AN APPROVED WOOD EPOXY AND REDRILLED AS APPROVED BY THE ENGINEER (COST OF SUCH REPAIRS IS INCLUDED UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS). APPROXIMATELY 10 LOCATIONS HAVE BEEN IDENTIFIED. AN ADDITIONAL 5 DOWEL HOLE REPAIRS ARE INCLUDED FOR BIDDING PURPOSES.

W-5. THE REPAIR OF APPROXIMATELY 31 SPLITS AND CHECKS IN EXISTING LATTICE, CHORD 2D OF NORTH TRUSS AND 5 LOCATIONS IN CROSS BEAMS 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 5 ROTTED MEMBER REPAIRS (AS SHOWN ON "EPOXY REPAIR DETAIL" ON SHEET 39) ARE INCLUDED FOR BIDDING PURPOSES. SEE THE RECOMMENDED REPAIR SEQUENCE NOTES ON SHEET 39 FOR MORE INFORMATION.

W-6. EACH PIECE OF NEW LUMBER AND TIMBER SHALL BE GRADED, BY A RECOGNIZED LUMBER GRADING AGENCY. INDIVIDUAL PIECES SHOULD NOT BE STAMPED WITH A GRADE STAMP. MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WOOD IN ACCORDANCE WITH SECTION 709.

W-7. THE FOLLOWING MEMBERS ARE INCLUDED IN THE ESTIMATED LUMBER AND TIMBER QUANTITIES OF:

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

- RAFTERS (0.155 MFBM)
- TOP LATERAL BRACING, KNEE BRACES, CROSS BEAMS AND RIDGE POST BRACE (0.655 MFBM)
- TRUSS LATTICE AND CHORD (3.010 MFBM)
- END POSTS (0.350 MFBM)
- NAILERS (0.055 MFBM)
- TIE ROD CAPS AND HARDWOOD BED & BLOCKING TIMBERS (0.255 MFBM)

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

- SAWN DECK (4.530 MFBM)
- CURB AND CURB BLOCKING (1.200 MFBM)
- PORTAL TRIM LUMBER (0.030 MFBM)
- SLEEPER BEAMS (0.490 MFBM)
- FLOOR BEAMS (5.455 MFBM)

C. ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED:

- NEW SIDING (2.420 MFBM)

W-8. THE QUANTITIES OF ITEM 522.20 STRUCTURAL LUMBER AND TIMBER, UNTREATED GIVEN ABOVE ASSUME REPLACEMENT OF 40 ADDITIONAL FEET OF 3"X11" CHORD, 4 ADDITIONAL LATTICE MEMBERS (2 ON SOUTH TRUSS AND 2 ON NORTH TRUSS) AND 2 ADDITIONAL SUPPLEMENTAL 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-9. 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-10. 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.

W-11. ALL STRUCTURAL LUMBER AND TIMBER NOT SHOWN ON THE WOOD MATERIALS LIST TABLE ON SHEET 28 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-12. ALL FIELD CUTS AND BORINGS OF TREATED WOOD SHALL BE TREATED WITH TWO COATS OF COPPER NAPHTHENATE LIBERALLY APPLIED PER SPECIFICATION SECTION 522.

W-13. EXISTING TRUSS, ROOF RAFTER, KNEE BRACING, CROSSBEAMS AND UPPER LATERAL BRACING JOINTS SHALL BE RERLICATED ON ALL STRUCTURE MEMBERS TO BE REPLACED UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS.

MODEL	det2
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302notes.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
GENERAL NOTES SHEET (1 OF 2)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 27 OF 54

GENERAL NOTES:

G-1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

G-2. DESIGN OF THE REHABILITATED STRUCTURE IS FOR AN AASHTO H10 LIVE LOAD.

G-3. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO INSURE THAT NO DEBRIS FALLS INTO THE SOUTH BRANCH TROUT 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 STATE.

G-4. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING R.O.W AND TEMPORARY CONSTRUCTION EASEMENT LIMITS SHOWN IN THESE PLANS.

G-5. 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. 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-6. 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. 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 STATE, 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 STEEL I-BEAMS THAT SUPPORT THE EXISTING COVERED BRIDGE WERE INSTALLED BY THE TOWN OF MONTGOMERY AND SHALL BE DELIVERED TO:

A & L ST. ONGE CONSTRUCTION
1711 NORTH MAIN STREET
MONTGOMERY, VT
CONTACT: ARTIE ST. ONGE, (802) 326-3000

THE CONTRACTOR SHALL UNLOAD THE I-BEAMS FROM THE TRUCK AND PLACE THEM AT A LOCATION AS DIRECTED BY THE OWNER. PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE PRIOR TO DELIVERING THE STEEL I-BEAMS. THESE STEEL BEAMS THAT SUPPORT THE EXISTING COVERED BRIDGE ARE COATED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S MOVING OF THESE STEEL BEAMS. ALL COSTS ASSOCIATED WITH THE REMOVAL, HANDLING AND DELIVERY OF STEEL BEAMS ARE PAID UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE. ALL OTHER REMOVED ITEMS PAID UNDER ITEM 529.20, SHALL BE DISPOSED OF BY THE CONTRACTOR.

G-8. 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-9. 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-10. ALL JOINTS IN REPLACED MEMBERS SHALL MATCH THE EXISTING JOINT, INCLUDING ALL NAILS, BOLTS OR SCREWS REQUIRED UNLESS NOTED OTHERWISE.

G-11. 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.

STRUCTURAL STEEL NOTES:

S-1. EXCEPT AS NOTED OTHERWISE IN THE CONTRACT PLANS, ITEM 506.75, STRUCTURAL STEEL SHALL INCLUDE THE FOLLOWING:

- THE NEW LOWER LATERAL BRACING TIE RODS (INCLUDING NUTS, PLATES, WASHERS AND TURNBUCKLES)
- ALL NEW STEEL THROUGH BOLTS (INCLUDING NUTS, WASHERS AND BEVELED WASHERS) THAT ARE TO CONNECT THE SPLIT ENDS OF TRUSS LATTICE MEMBERS
- ALL REPLACED STEEL THROUGH BOLTS THAT ARE TO CONNECT CHORD 4 WITH TRUSS LATTICE MEMBERS OF BOTH TRUSSES
- NEW CARRIAGE BOLTS WITH HEAVY SQUARE NUTS AND OGEE WASHERS THAT ARE TO CONNECT THE UPPER X-BRACING MEMBERS
- NEW LAG SCREWS TO CONNECT EXISTING WOOD MEMBERS
- FLOOR BEAM HOLD DOWN STRAPS

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. ALL STEEL PLATES AND RODS SHALL BE ASTM A36.

RECOMMENDED SEQUENCE OF WORK:

RS-1. INSTALL TEMPORARY ONE LANE BRIDGE AS SHOWN IN THE PLANS AND OPEN IT TO TRAFFIC.

RS-2. REMOVE THE EXISTING FLOOR DECKING, FLOOR BEAMS AND SIDING AS SHOWN IN THE PLANS. PROVIDE TEMPORARY SUPPORT OF THE LOWER CHORDS AS REQUIRED.

RS-3. DEPENDING ON WHICH ALTERNATE WAS CHOSEN, INSTALL TEMPORARY SHORING TO SUPPORT THE EXISTING BRIDGE OR MOVE THE EXISTING BRIDGE TO A STAGING AREA TO COMPLETE THE REPAIRS. FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF THE WORK THE CONTRACTOR SHALL SUBMIT PLANS AND DESIGN CALCULATIONS FOR THE PROPOSED WORK TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS.

RS-4. THE EXISTING BRIDGE SHALL BE JACKED AND BRACED AS REQUIRED TO STRAIGHTEN, RELEASE STRESSES, PLUMB AND RE-ALIGN THE TRUSSES. FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF REALIGNMENT OPERATIONS THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF WORK TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS. (SEE ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)).

RS-5. REPLACE BRIDGE MEMBERS AS DETAILED IN CONTRACT DRAWINGS AND COMPLETE SUBSTRUCTURE WORK.

RS-6. DEPENDING ON WHICH ALTERNATE WAS CHOSEN, REMOVE TEMPORARY SHORING TO SUPPORT STRUCTURE, OR RE-INSTALL THE BRIDGE SUPERSTRUCTURE, COMPLETE REMAINING WORK ITEMS AS DETAILED ON DRAWINGS, REOPEN BRIDGE TO TRAFFIC AND REMOVE TEMPORARY ONE LANE BRIDGE AND TEMPORARY ROADWAY APPROACHES.

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, 5TH 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. MATERIAL AND WORK OF 5 NEW TRUNNELS TO CONNECT EXISTING MEMBERS AS SHOWN ON SHEETS 37 AND 38 ARE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE). TRUNNELS WHICH ARE SALVAGED AND REUSED IN CONJUNCTION WITH EXISTING MEMBERS THAT ARE TO REMAIN ARE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

W-4. DOWEL HOLES IN EXISTING MEMBERS THAT ARE OVERSIZED OR DISTORTED SHALL BE PLUGGED WITH AN APPROVED WOOD EPOXY AND REDRILLED AS APPROVED BY THE ENGINEER (COST OF SUCH REPAIRS IS INCLUDED UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS). APPROXIMATELY 10 LOCATIONS HAVE BEEN IDENTIFIED. AN ADDITIONAL 5 DOWEL HOLE REPAIRS ARE INCLUDED FOR BIDDING PURPOSES.

W-5. THE REPAIR OF APPROXIMATELY 31 SPLITS AND CHECKS IN EXISTING LATTICE, CHORD 2D OF NORTH TRUSS AND 5 LOCATIONS IN CROSS BEAMS 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 5 ROTTED MEMBER REPAIRS (AS SHOWN ON "EPOXY REPAIR DETAIL" ON SHEET 39) ARE INCLUDED FOR BIDDING PURPOSES. SEE THE RECOMMENDED REPAIR SEQUENCE NOTES ON SHEET 39 FOR MORE INFORMATION.

W-6. EACH PIECE OF NEW LUMBER AND TIMBER SHALL BE GRADED, BY A RECOGNIZED LUMBER GRADING AGENCY. INDIVIDUAL PIECES SHOULD NOT BE STAMPED WITH A GRADE STAMP. MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WOOD IN ACCORDANCE WITH SECTION 709.

W-7. THE FOLLOWING MEMBERS ARE INCLUDED IN THE ESTIMATED LUMBER AND TIMBER QUANTITIES OF:

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

- RAFTERS (0.155 MFBM)
- TOP LATERAL BRACING, KNEE BRACES, CROSS BEAMS AND RIDGE POST BRACE (0.655 MFBM)
- TRUSS LATTICE AND CHORD (3.010 MFBM)
- END POSTS (0.350 MFBM)
- NAILERS (0.055 MFBM)
- TIE ROD CAPS AND HARDWOOD BED & BLOCKING TIMBERS (0.255 MFBM)

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

- SAWN DECK (4.530 MFBM)
- CURB AND CURB BLOCKING (1.200 MFBM)
- PORTAL TRIM LUMBER (0.030 MFBM)
- SLEEPER BEAMS (0.490 MFBM)
- FLOOR BEAMS (5.455 MFBM)

C. ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED:

- NEW SIDING (2.420 MFBM)

W-8. THE QUANTITIES OF ITEM 522.20 STRUCTURAL LUMBER AND TIMBER, UNTREATED GIVEN ABOVE ASSUME REPLACEMENT OF 40 ADDITIONAL FEET OF 3"X11" CHORD, 4 ADDITIONAL LATTICE MEMBERS (2 ON SOUTH TRUSS AND 2 ON NORTH TRUSS) AND 2 ADDITIONAL SUPPLEMENTAL 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-9. 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-10. 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.

W-11. ALL STRUCTURAL LUMBER AND TIMBER NOT SHOWN ON THE WOOD MATERIALS LIST TABLE ON SHEET 28 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-12. ALL FIELD CUTS AND BORINGS OF TREATED WOOD SHALL BE TREATED WITH TWO COATS OF COPPER NAPHTHENATE LIBERALLY APPLIED PER SPECIFICATION SECTION 522.

W-13. EXISTING TRUSS, ROOF RAFTER, KNEE BRACING, CROSSBEAMS AND UPPER LATERAL BRACING JOINTS SHALL BE RERLICATED ON ALL STRUCTURE MEMBERS TO BE REPLACED UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS.

MODEL	det2
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302notes.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
GENERAL NOTES SHEET (1 OF 2)

PLOT DATE: 8/12/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 27 OF 54

WOOD NOTES (CONTINUED FROM SHEET 27):

W-14. THE WOOD CURB BLOCKING, CURB, DECKING, SLEEPER BEAMS, FLOOR BEAMS AND PORTAL TRIM LUMBER TREATMENT SHALL COMPLY WITH STANDARD SPECIFICATION 726.01 TYPE III PENTACHLOROPHENOL TYPE C.

W-15. 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-16. DECKING SHALL BE SURFACED FOUR SIDES (S4S). NEW LATTICE AND CHORD MEMBERS SHALL BE SURFACED ONE SIDE (S1S) (WIDE FACE). ALL OTHER NEW LUMBER AND TIMBER SHALL BE ROUGH SURFACED.

W-17. DIMENSIONS OF ALL LUMBER AND TIMBER MEMBERS SHOWN IN THESE PLANS ARE THE ACTUAL SIZES AFTER SEASONING UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. THE DIMENSIONS OF NARROW FACES OF NEW CHORD AND LATTICE MEMBERS SHALL BE THE ACTUAL DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. FOR ALL NEW LATTICE AND CHORD MEMBERS' WIDE FACES AND ALL OTHER MEMBERS THAT ARE NOT SURFACED S4S, CROSS-SECTIONAL DIMENSION VARIATIONS OF UP TO $^{1}/_{8}$" WILL BE ALLOWED.

SIDING REPLACEMENT NOTES:

SD-1. THE ENTIRE SIDING AND PORTAL SIDING SHALL BE REMOVED FROM THE BRIDGE. PORTAL AND END RETURN SIDING WHICH IS PAINTED RED SHALL BE DISPOSED OF BY THE CONTRACTOR AND SHALL NOT BE SALVAGED. A PORTION OF THE SIDING THAT IS TO BE REUSED AS SHOWN IN THE PLANS SHALL BE STORED UNDER COVER UNTIL IT IS REINSTALLED. ALL PROTRUDING NAILS REMAINING IN THE SIDING SUPPORTS SHALL BE CAREFULLY REMOVED AFTER SIDING REMOVAL. REINSTALLATION OF SALVAGED SIDING IS PAID UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

SD-2. NEW SIDING SHALL BE INSTALLED ON THE INTERIOR LAYER FOR THE ENTIRE LENGTH OF THE UPSTREAM AND DOWNSTREAM OUTSIDES, PORTAL SECTIONS AND END RETURNS AT EACH QUADRANT OF THE BRIDGE UTILIZING EXISTING AND NEW SIDING SUPPORTS AS INDICATED ON THE PLANS. THE EXTERIOR SURFACE OF PORTAL AND END RETURN SIDING SHALL BE PAINTED WHITE. SEE SPECIAL PROVISIONS OF ITEM 900.645, SPECIAL PROVISION (TIMBER PAINTING, FIRE RETARDANT) FOR MORE INFORMATION.

SD-3. THE EXISTING SALVAGED SIDING SHALL MEET THE FOLLOWING REQUIREMENTS: BE FREE OF LOOSE OR MISSING KNOTS, BE A CONTINUOUS FULL HEIGHT PIECE, FREE OF CUP SPLITS AND BREAKS.

CONCRETE AND REINFORCING STEEL NOTES:

C-1. REINFORCING STEEL SHALL CONFORM TO SECTION 507 OF STANDARD SPECIFICATIONS AND DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE" (CRSI).

C-2. WHEN EPOXY COATED REINFORCING IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL IS NOT PERMITTED.

C-3. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT; ANY DOWNWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE ABOVE THE JOINT.

C-4. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 1"
CLEARANCE +/- $^{1}/_{4}$"

C-5. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE TWO (2) INCHES ALONG THE BACK FACES OF WALLS AGAINST EARTH AND THREE (3) INCHES ELSEWHERE, UNLESS NOTED OTHERWISE.

C-6. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS NOTED OTHERWISE.

C-7. TOP SURFACES OF TRUSS AND FLOOR BEAM PEDESTALS SHALL BE LEVEL.

C-8. THE CONCRETE IN BACKWALLS, PADS, TRUSS AND FLOOR BEAM PEDESTALS SHALL BE HIGH PERFORMANCE CONCRETE CLASS A AND PAID UNDER ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A. ALL OTHER CONCRETE (INCLUDING SUBFOOTING CONCRETE) SHALL BE HIGH PERFORMANCE CONCRETE CLASS B AND PAID UNDER ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.

C-9. ALL NEW AND EXISTING EXPOSED CONCRETE SURFACES SHALL BE SEALED AND STAINED. PAYMENT WILL BE MADE UNDER ITEM 900.625, SPECIAL PROVISION (CONCRETE STAINING AND SEALING).

C-10. ASHLAR STONE FORM LINER IS TO BE PROVIDED AT THE EXPOSED FACES OF NEW WINGWALLS. SEE NOTE 4 ON SHEET 30 FOR MORE INFORMATION.

LEDGE NOTES:

L-1. BORINGS WERE TAKEN ON THIS PROJECT; SUBSURFACE CONDITIONS MAY VARY FROM THE CONDITIONS ASSUMED FOR DESIGN.

L-2. IF LEDGE IS ENCOUNTERED HIGHER THAN BOTTOM OF FOOTING OR MORE THAN (2) FEET BELOW THE INDICATED BOTTOM OF FOOTING ELEVATIONS AS SHOWN ON THE PLANS, THE STRUCTURES SECTION SHALL BE CONTACTED. PROFILES OF THE LEDGE MAY BE REQUIRED TO ADJUST THE FOOTING ELEVATIONS AND SIZE. NO FURTHER WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED FROM THE STRUCTURES SECTION.

L-3. FOOTINGS SHALL BE PLACED ON SOUND AND COMPETENT LEDGE WHICH SHALL BE CLEANED OF ALL LOOSE ROCK AND DEBRIS. THE LEDGE SHALL NOT BE EXCAVATED FOR STONE FILL PLACEMENT. LEDGE IN THE AREA OF THE NEW CONCRETE SUBFOOTING OF WINGWALL NO.2 IS NOT EXPECTED TO BE REMOVED, HOWEVER IT SHALL BE CLEANED OF ALL LOOSE ROCK AND DEBRIS.

L-4. A MAXIMUM OF 6" OVERBREAKAGE WILL BE REPLACED WITH ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B. OVERBREAKAGE BEYOND 6" SHALL BE REPLACED WITH HIGH PERFORMANCE CLASS B CONCRETE AT THE EXPENSE OF THE CONTRACTOR.

L-5. #8 DOWELS SHALL BE DRILLED AND GROUTED INTO THE LEDGE AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A MINIMUM 2'-0" EMBEDMENT INTO THE LEDGE AND SHALL EXTEND INTO THE SUBFOOTING A MINIMUM OF 1'-6". THE DRILLING AND GROUTING SHALL BE PAID FOR UNDER THE ITEM 507.16, DRILLING AND GROUTING DOWELS, WHILE THE DOWELS SHALL BE PAID FOR UNDER ITEM 507.15, REINFORCING STEEL.

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.

E-2. CONSTRUCTION ACTIVITIES SHALL ADHERE TO THE PERMIT REQUIREMENTS ISSUED FROM THE AGENCY OF NATURAL RESOURCES.

WOOD MATERIALS LIST

COMPONENT	EXISTING (AVERAGE SIZE IN INCHES)	PROPOSED (ACTUAL SIZE IN INCHES)	PROPOSED SPECIES & GRADE
BEARING BLOCKS	---	4" THICK	WHITE OAK NO. 1
CROSS BEAMS	7¾ x 7¾	7¾ x 7¾	DOUGLAS FIR NO. 1
SLEEPER BEAMS	---	6x9	P. T. DOUGLAS FIR NO. 1
FLOOR BEAMS	7½ x 9	8x12	P. T. DOUGLAS FIR SEL. STR.
FLOOR DECKING	3" THICK	3½ " THICK	P. T. DOUGLAS FIR NO. 1
KNEE BRACING	4x4	4x4	DOUGLAS FIR NO. 1
RAFTERS	3x4	3x4	SPRUCE FIR NO. 1
RIDGE POST BRACE	4x4	4x4	DOUGLAS FIR NO. 1
NEW SIDING	1" THICK	1" THICK	EASTERN WHITE PINE COMMON PREMIUM
TRUSS CHORD	VARIES	3x11	DOUGLAS FIR SEL. STR.
TRUSS LATTICE	3x10½	3x10½	DOUGLAS FIR SEL. STR.
UPPER LATERAL BRACING	4x6	4x6	DOUGLAS FIR NO. 1
WOOD CURB	---	5½ x 11½	P. T. DOUGLAS FIR NO. 1
WOOD CURB BLOCKING	---	5½ x 11½	P. T. DOUGLAS FIR NO. 1

MINIMUM ALLOWABLE WOOD STRESSES

SPECIES	SIZE	GRADE	F_b (PSI)	F_t (PSI)	F_v (PSI)	F_c (PSI)	$F_{c\perp}$ (PSI)	E (10*6 PSI)
DOUGLAS FIR	2"-4" THICK	NO. 1	1000	675	180	1500	625	1.7
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
DOUGLAS FIR	POST & TIMBERS**	NO. 1	1200	825	170	1000	625	1.6
SPRUCE FIR	2"-4" THICK	NO. 1	875	450	135	1150	425	1.4
SPRUCE FIR	BEAMS & STRINGERS*	NO. 1	900	450	125	625	425	1.3
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. 4½ x 8⅞)
** 5" & THICKER AND NOT MORE THAN 2 IN. GREATER THAN THICKNESS (E.G. 8¾ x 8)

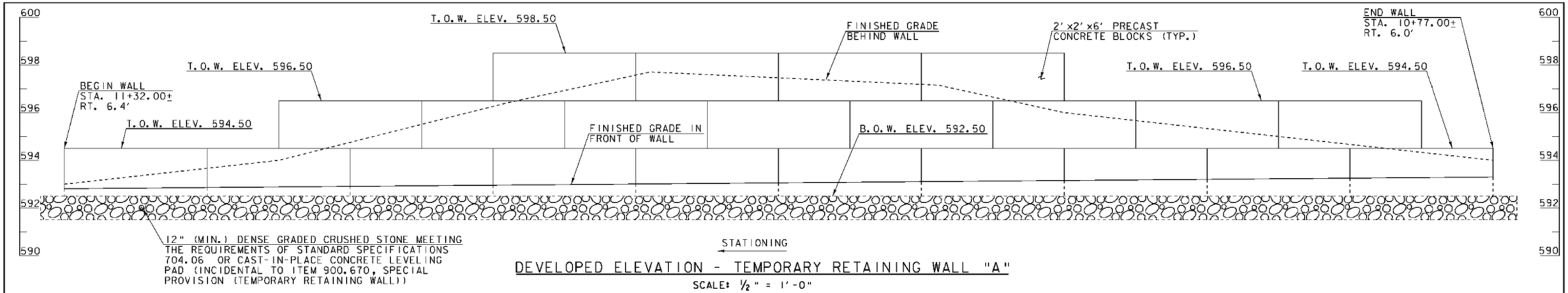
MODEL	det2
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

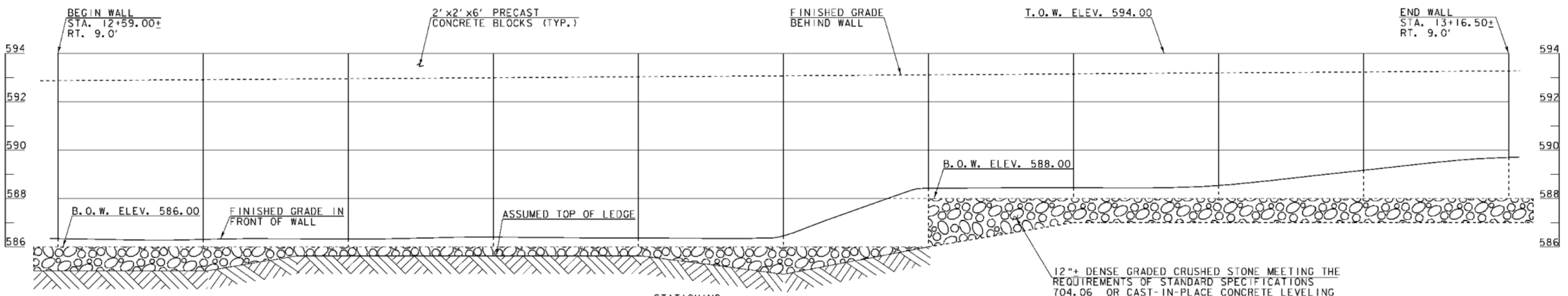
FILE NAME: Z96J302notes2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
GENERAL NOTES SHEET (2 OF 2)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 28 OF 54



DEVELOPED ELEVATION - TEMPORARY RETAINING WALL "A"

SCALE: ½" = 1'-0"



DEVELOPED ELEVATION - TEMPORARY RETAINING WALL "B"

SCALE: ½" = 1'-0"

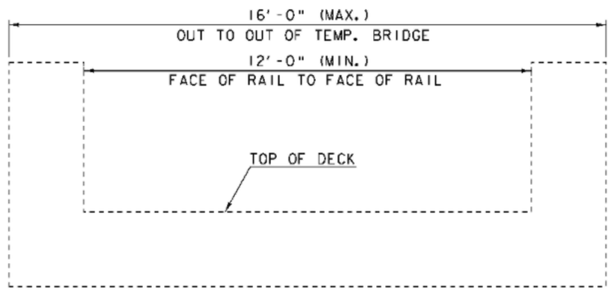
TEMPORARY BRIDGE NOTES:

1. THE TEMPORARY BRIDGE MUST MEET THE MINIMUM CRITERIA:
   - CURB TO CURB WIDTH: 12 FEET MINIMUM
   - SPAN: 100 FEET MINIMUM

   THE CONTRACTOR SHALL SUBMIT TO THE STRUCTURES ENGINEER CONSTRUCTION DRAWINGS OF THE BRIDGE (SUPERSTRUCTURE AND SUBSTRUCTURE) AND DESIGN CALCULATIONS FOR APPROVAL IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS (SEE SECTION 528.03 FOR MORE INFORMATION). CONSTRUCTION DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT.

2. IF THE CONTRACTOR USES A LONGER TEMPORARY BRIDGE THAN SHOWN IN THESE PLANS, IT COULD REQUIRE THE REDESIGN OF ROADWAY HORIZONTAL ALIGNMENT TO MEET THE MINIMUM HORIZONTAL CURVE RADII SHOWN ON SHEET 11 AND AN INCREASE IN THE AREA OF TEMPORARY RETAINING WALLS.

3. THE CONTRACTOR SHALL BE LIMITED TO MOBILIZATION AND CONSTRUCTION OF THE PROJECT WITHIN THE RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENTS LIMITS SHOWN IN THESE PLANS UNLESS NOTED OTHERWISE. ADDITIONAL STAGING AREAS REQUIRED BY THE CONTRACTOR FOR A LONGER TEMPORARY BRIDGE SHALL BE COORDINATED BY THE CONTRACTOR WITH THE AFFECTED PROPERTY OWNERS AND SHALL BE AT NO COST TO THE STATE.



TEMPORARY BRIDGE CROSS SECTION

SCALE: ½" = 1'-0"

LEGEND:

T.O.W. TOP OF WALL

B.O.W. BOTTOM OF WALL

SCALE: ½" = 1'-0"
0 1 2 3 4

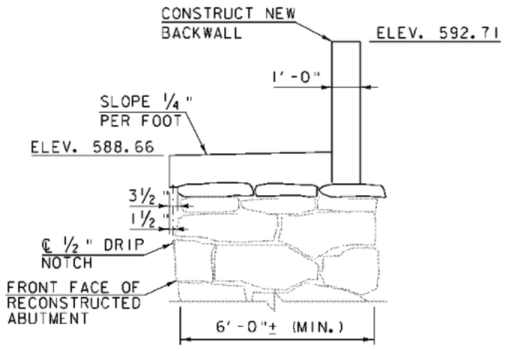
MODEL	Default
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

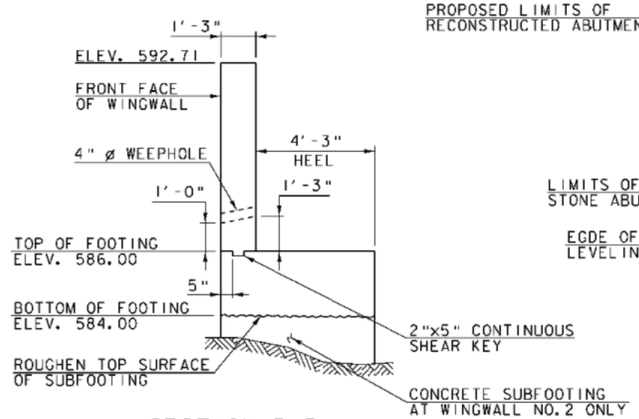
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detail2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TEMP. BRIDGE AND RET. WALL DETAILS

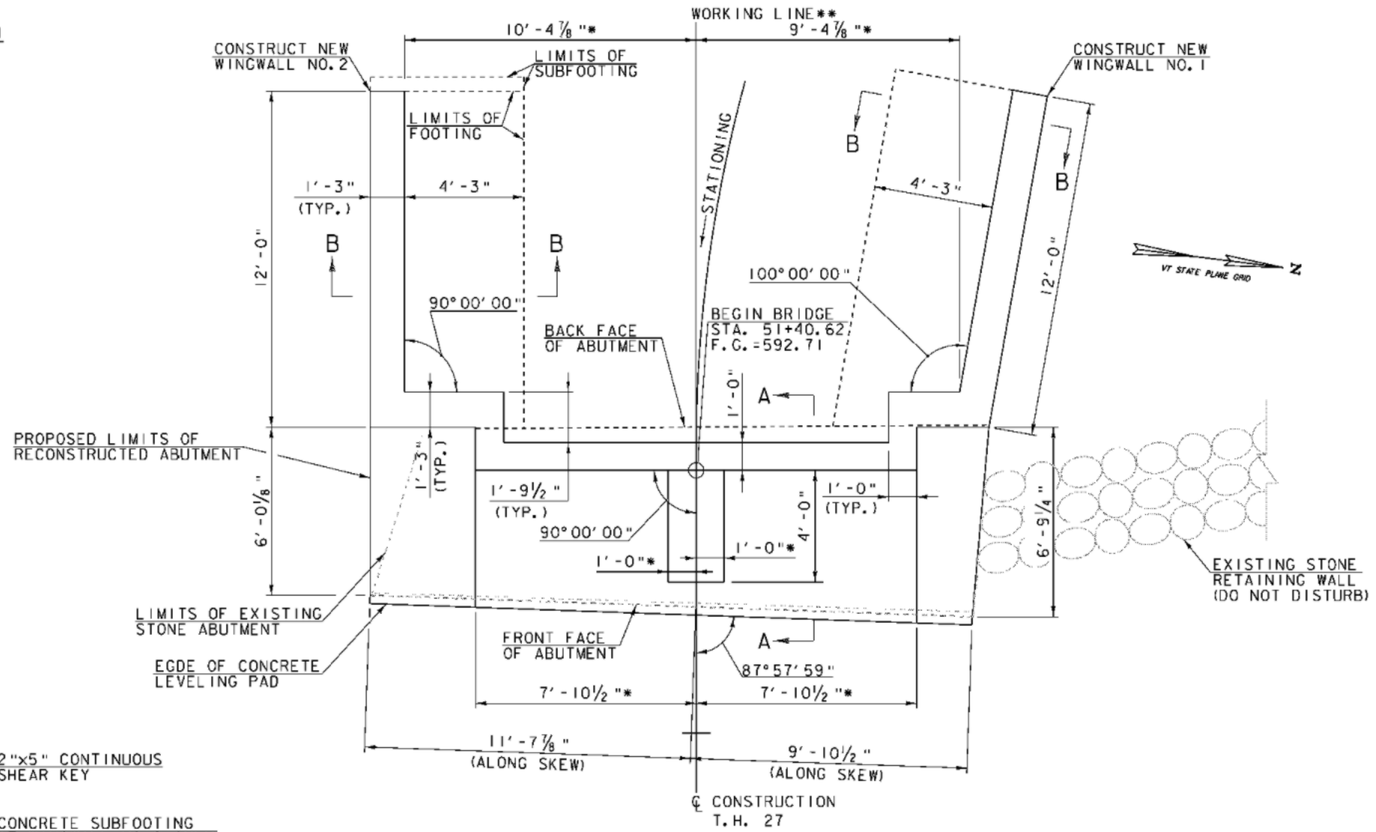
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 29 OF 54



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



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



ABUTMENT NO. 1 PLAN
SCALE: 3/8" = 1'-0"

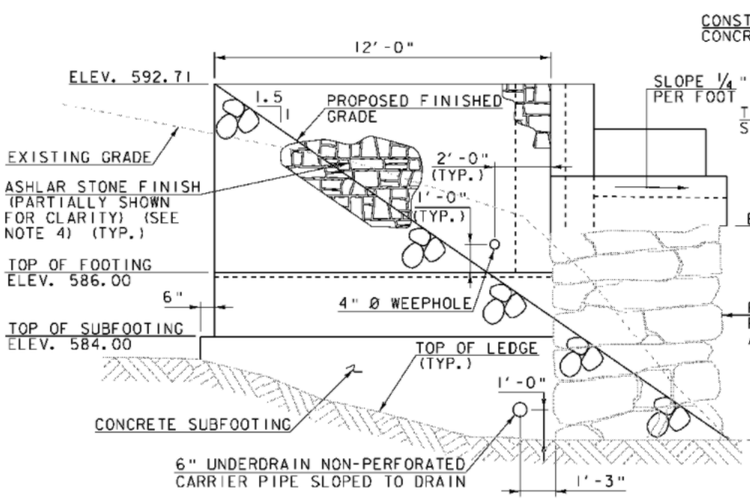
PLAN NOTES:

1. APPROACH WORK DETAILS (GUARDRAIL, EDGE OF TRAVEL WAY, ETC.) AND BRIDGE SUPERSTRUCTURE ARE NOT SHOWN FOR CLARITY.
2. EXISTING CONCRETE AND MASONRY SURFACES SHALL BE CLEANED AND CUT TO A FIRM LEVEL ROUGHENED SURFACE PRIOR TO PLACING NEW CONCRETE OVER THEM. ALL COSTS SHALL BE INCIDENTAL TO ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B.
3. ITEM 900.608, SPECIAL PROVISION (REBUILT STONE MASONRY) SHALL INCLUDE REMOVAL OF EXISTING ABUTMENT STONES AS SHOWN ON THE PLANS, RESETTING OF STONES AND ADDITION OF SIMILAR NEW STONES AS REQUIRED TO RETURN ABUTMENT NO. 1 TO ITS ORIGINAL PLUMB AND TRUE CONDITION. NEW STONES SHALL CLOSELY MATCH THE COLOR, TEXTURE, PATTERN AND SIZE OF EXISTING STONES. INSTALL SMALL STONES BETWEEN LARGE STONES FOR STABLE BEARING AS REQUIRED.
4. EXPOSED FACES OF THE NEW WINGWALLS SHALL HAVE AN ASHLAR STONE FORM LINER FINISH, WHICH SHALL ALSO EXTEND A MINIMUM OF 1' BELOW THE FINISH GRADE. FORM LINER SHALL BE ASHLAR STONE NO. 330 MULTI-CAST, AS MANUFACTURED BY GREENSTREAK, 3400 TREE COURT INDUSTRIAL BOULEVARD, ST. LOUIS MO 63122 (TEL: 1-800-325-9504) OR ASHLAR STONE #16986 AS MANUFACTURED BY FITZGERALD FORM LINERS, 1341 EAST POMONA STREET, SANTA ANNA, CA 92705 (TEL: 1-800-547-7760) OR APPROVED EQUAL. ALL COSTS SHALL BE INCIDENTAL TO ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B.

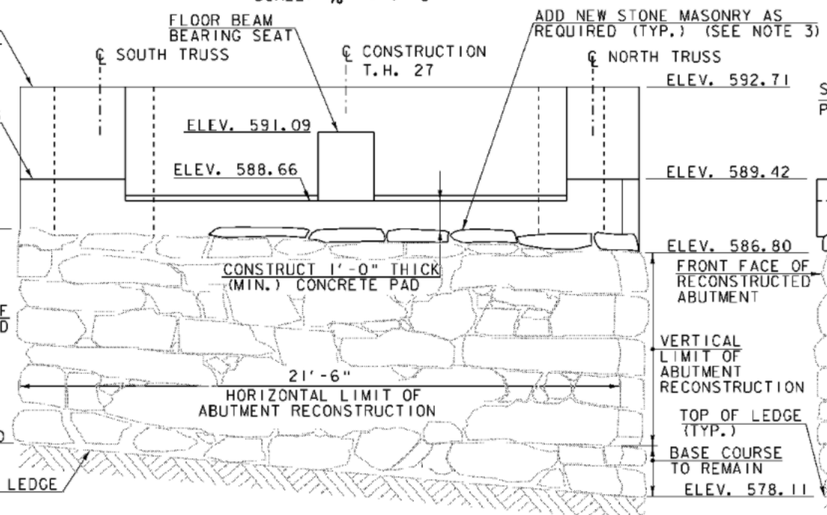
LEGEND:

* DIMENSIONS ARE GIVEN PERPENDICULAR TO THE WORKING LINE

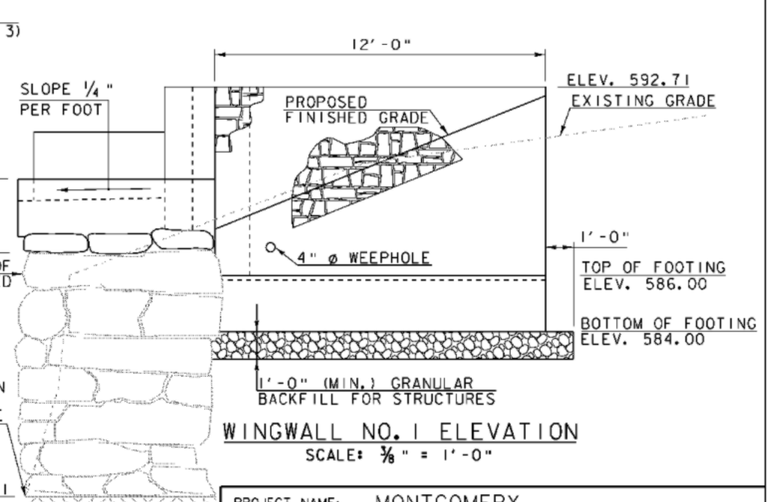
** WORKING LINE IS AN EXTENSION OF THE ROADWAY TANGENT THAT RUNS FROM STA. 51+39.84 TO STA. 52+22.98



WINGWALL NO. 2 ELEVATION
SCALE: 3/8" = 1'-0"



ABUTMENT NO. 1 ELEVATION
SCALE: 3/8" = 1'-0"



WINGWALL NO. 1 ELEVATION
SCALE: 3/8" = 1'-0"

SCALE: 3/8" = 1'-0"
1 0 1 2 3 4

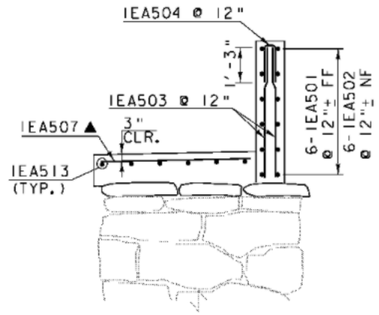
MODEL	
MODEL	
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

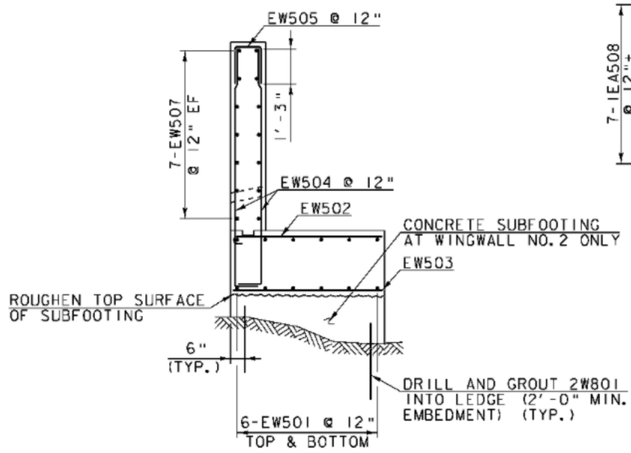
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302subl.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
ABUTMENT NO.1 PLAN AND ELEVATION

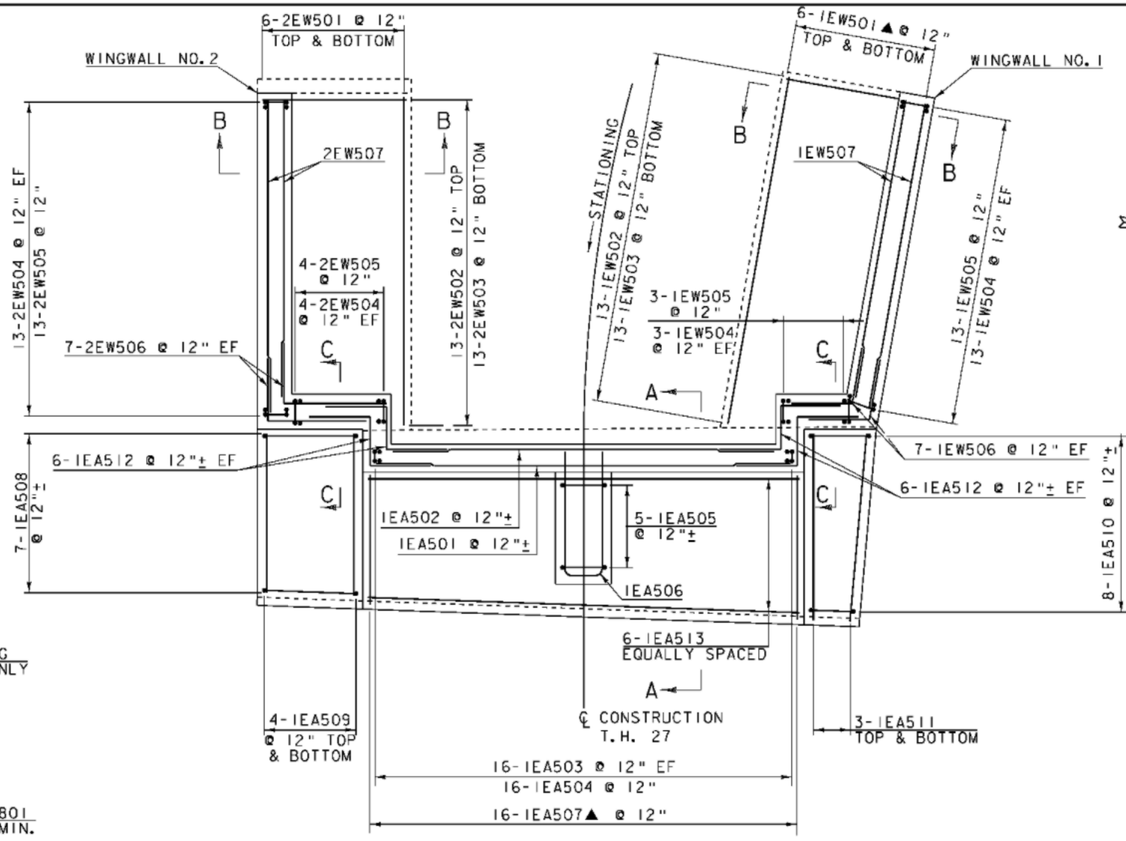
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 30 OF 54



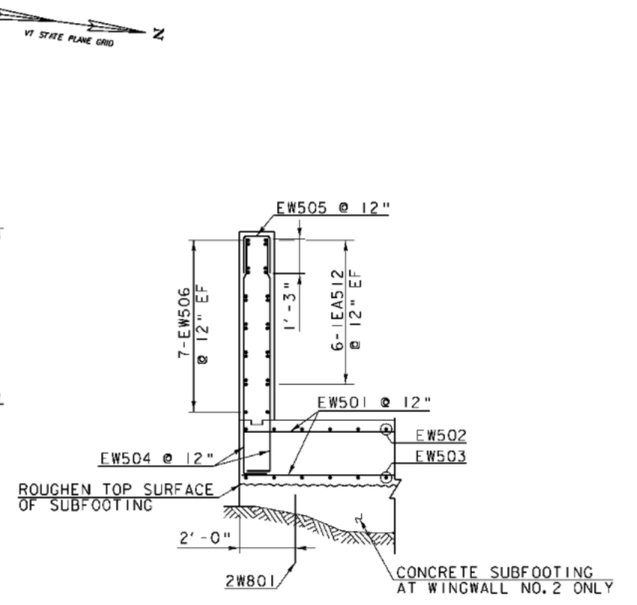
SECTION A-A
SCALE: 3/8" = 1'-0"



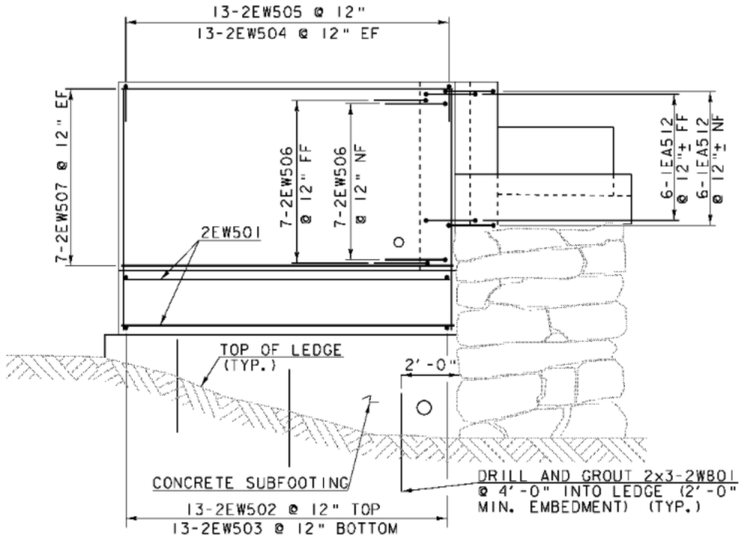
SECTION B-B
SCALE: 3/8" = 1'-0"



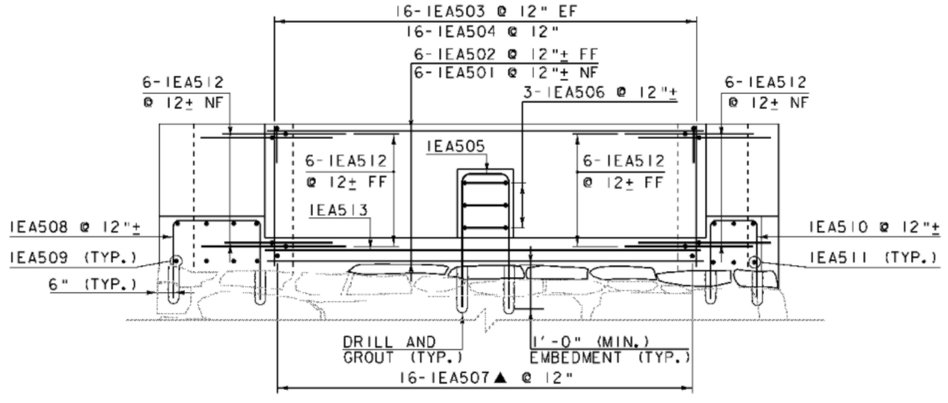
ABUTMENT NO. 1 PLAN
SCALE: 3/8" = 1'-0"



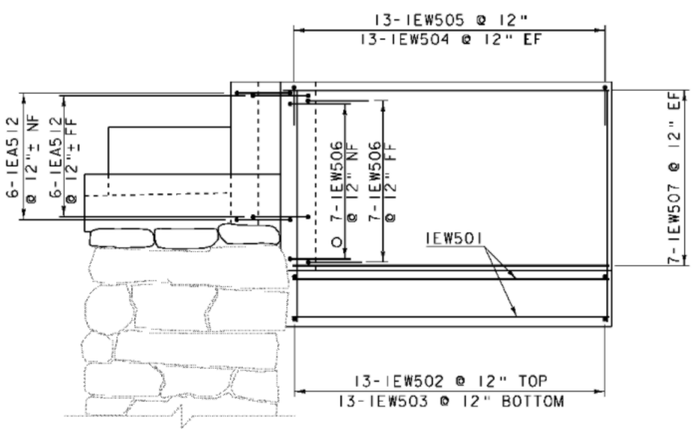
SECTION C-C
SCALE: 3/8" = 1'-0"



WINGWALL NO. 2 ELEVATION
SCALE: 3/8" = 1'-0"



ABUTMENT NO. 1 ELEVATION
SCALE: 3/8" = 1'-0"



WINGWALL NO. 1 ELEVATION
SCALE: 3/8" = 1'-0"

LEGEND:

NF NEAR FACE
FF FAR FACE
EF EACH FACE
▲ REINFORCING TO BE CUT IN FIELD

SCALE: 3/8" = 1'-0"
1 0 1 2 3 4

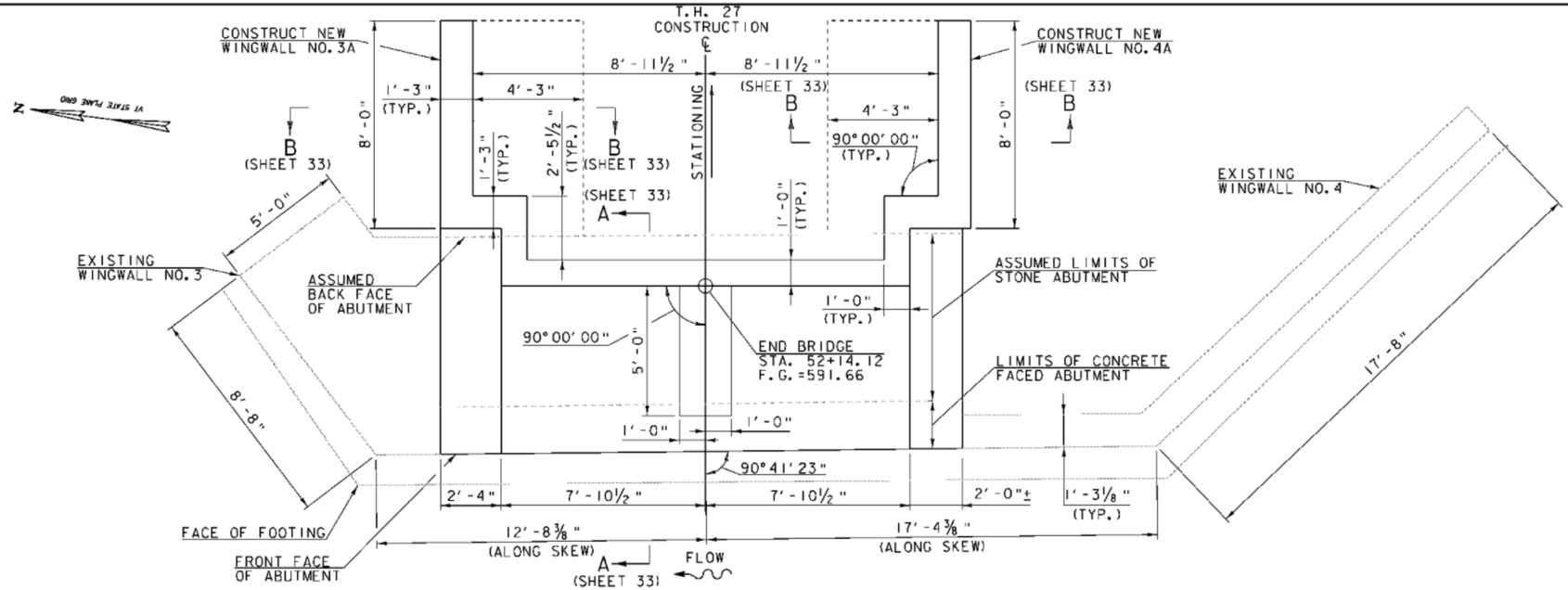
MODEL	
MODEL	
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302subreinfl.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
ABUTMENT NO.1 REINFORCING

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 31 OF 54

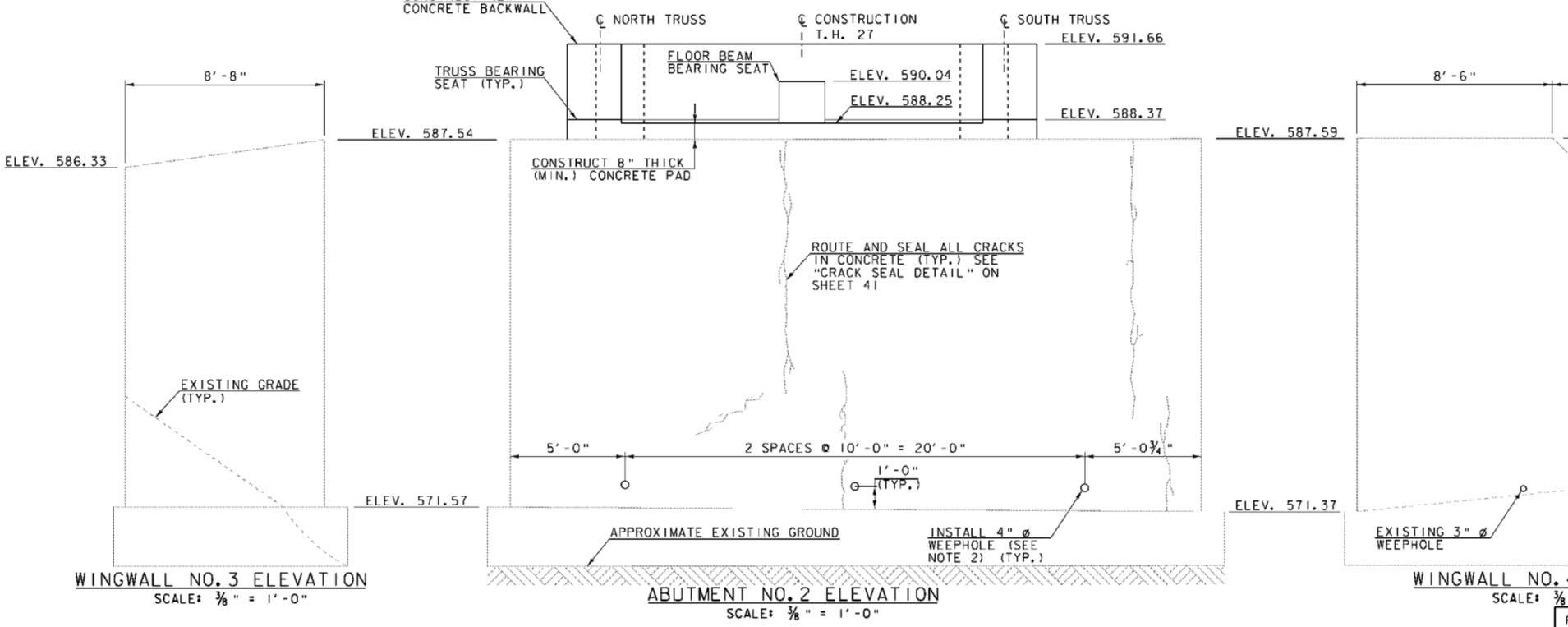


ABUTMENT NO. 2 PLAN

SCALE: ⅜" = 1'-0"

PLAN NOTES:

1. SEE SHEET 33 FOR WINGWALLS NO. 3A & 4A ELEVATIONS AND SHEET 30 FOR NOTES THAT APPLY TO THIS SHEET.
2. LENGTH OF THE NEW 4" ø WEEPHOLES AT ABUTMENT NO. 2 SHALL BE FOR FULL THICKNESS OF CONCRETE FACING. WRAP A GEOTEXTILE AT THE INLET END OF THE WEEPHOLE. ALL COST OF SUCH WORK IS CONSIDERED INCIDENTAL TO ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.



WINGWALL NO. 3 ELEVATION

SCALE: ⅜" = 1'-0"

ABUTMENT NO. 2 ELEVATION

SCALE: ⅜" = 1'-0"

WINGWALL NO. 4 ELEVATION

SCALE: ⅜" = 1'-0"

SCALE: ⅜" = 1'-0"

MODEL	Default
HTA PROJECT NO.	904214

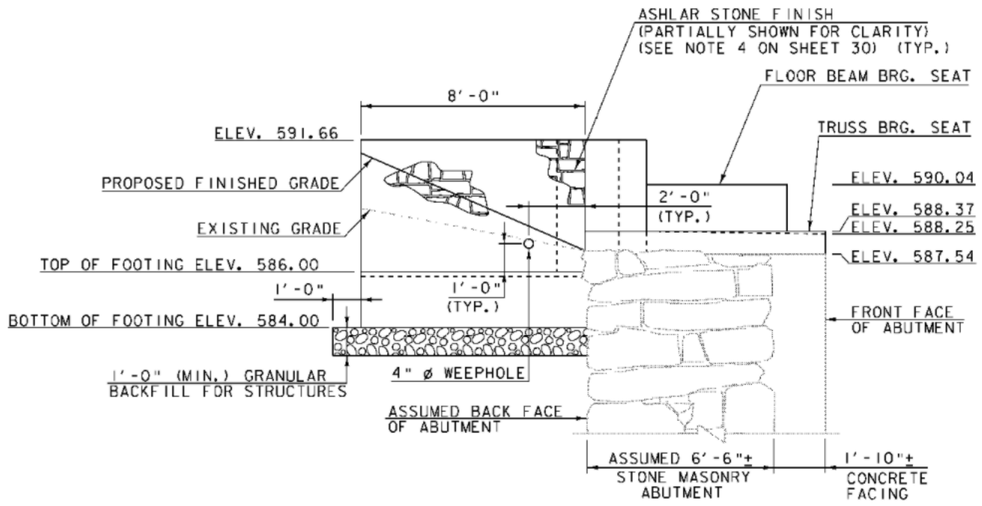
Hoyle, Tanner & Associates, Inc.

PROJECT NAME:	MONTGOMERY
PROJECT NUMBER:	BHO 1448(23)
FILE NAME:	Z96J302sub2.dgn
PROJECT LEADER:	J.H.WEAVER
DESIGNED BY:	J.BICJA
PLOT DATE:	8/1/2008
DRAWN BY:	J.B.McQUAID
CHECKED BY:	S.T.JAMES

ABUTMENT NO.2 PLAN AND ELEVATION SHEET 32 OF 54

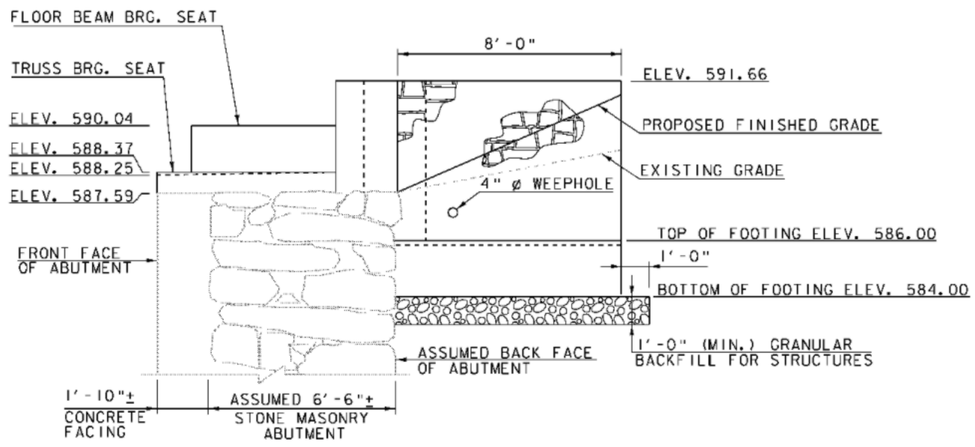
PLAN NOTE:

1. SEE SHEET 32 FOR ABUTMENT NO. 2, WINGWALLS NO. 3A AND 4A PLAN VIEW AND DETAILS.



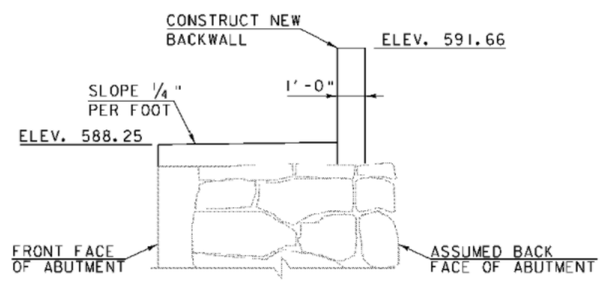
WINGWALL NO. 3A ELEVATION

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



WINGWALL NO. 4A ELEVATION

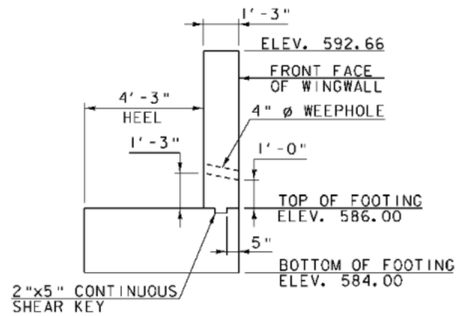
SCALE: 3/8" = 1'-0"



SECTION A-A

(SEE SHEET 32)

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



SECTION B-B

(SEE SHEET 32)

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

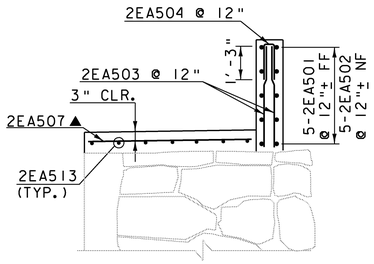
SCALE: 3/8" = 1'-0"

1 0 1 2 3 4

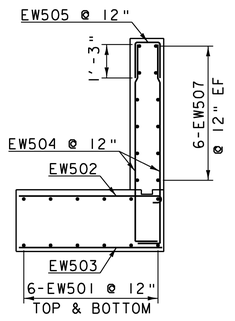
MODEL	
ABT 1PLAN - ELEV	
HTA PROJECT NO.	
904214	

Hoyle, Tanner & Associates, Inc.

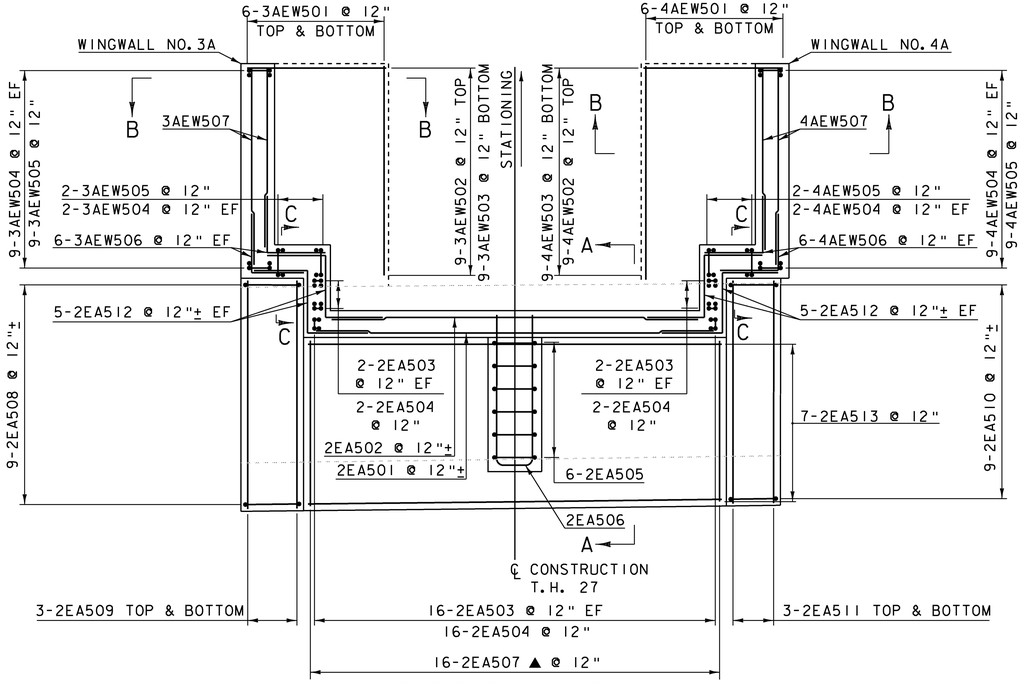
PROJECT NAME:	MONTGOMERY
PROJECT NUMBER:	BHO 1448(23)
FILE NAME: Z96J302sub3.dgn	PLOT DATE: 8/1/2008
PROJECT LEADER: J.H.WEAVER	DRAWN BY: J.B.McQUAID
DESIGNED BY: J.BICJA	CHECKED BY: S.T.JAMES
WINGWALLS NO. 3A4A DETAILS	SHEET 33 OF 54



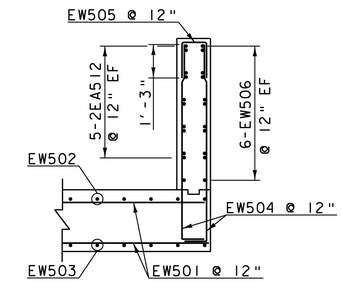
SECTION A-A
SCALE: 3/8" = 1'-0"



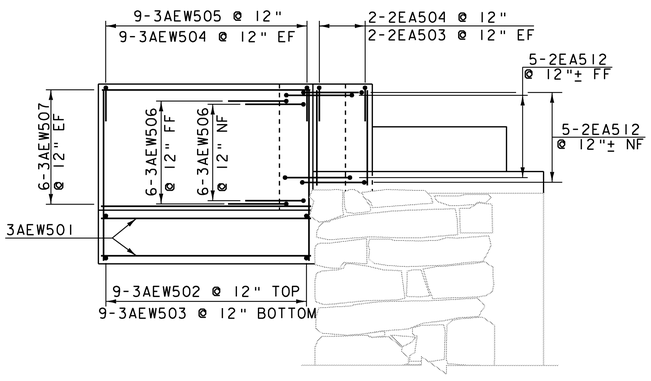
SECTION B-B
SCALE: 3/8" = 1'-0"



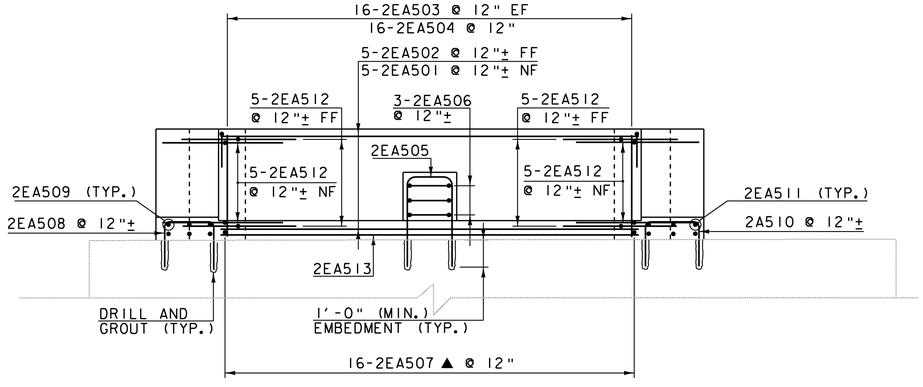
ABUTMENT NO. 2 PLAN
SCALE: 3/8" = 1'-0"



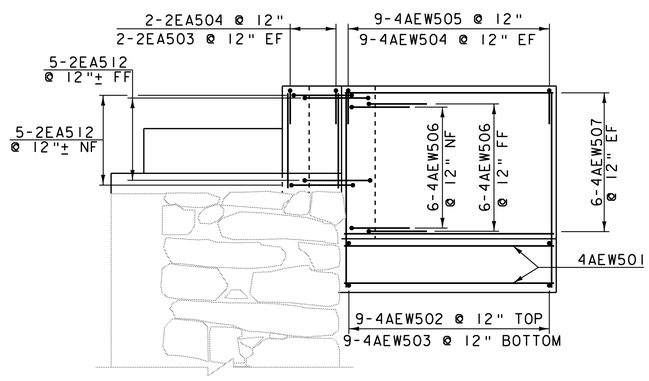
SECTION C-C
SCALE: 3/8" = 1'-0"



WINGWALL NO. 3A ELEVATION
SCALE: 3/8" = 1'-0"



ABUTMENT NO. 2 ELEVATION
SCALE: 3/8" = 1'-0"



WINGWALL NO. 4A ELEVATION
SCALE: 3/8" = 1'-0"

LEGEND:

NF NEAR FACE

FF FAR FACE

EF EACH FACE

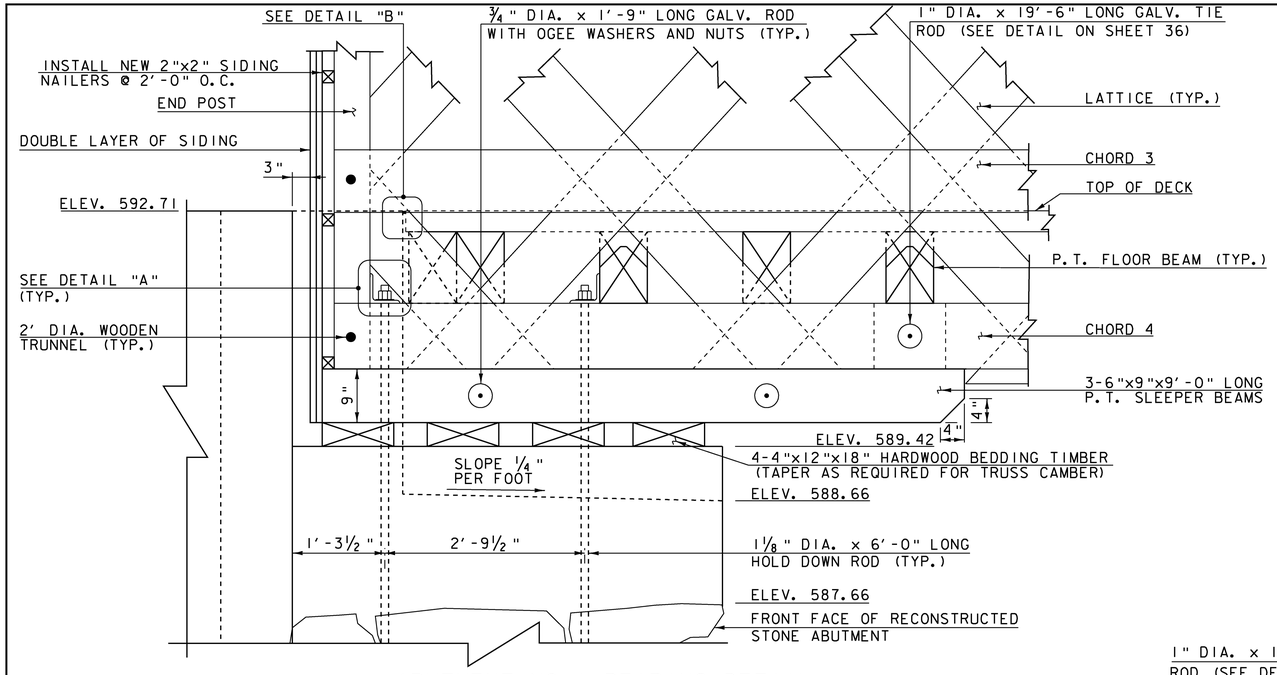
▲ REINFORCING TO BE CUT IN FIELD

SCALE: 3/8" = 1'-0"
1 0 1 2 3 4

MODEL	Default
HTA PROJECT NO.	904214

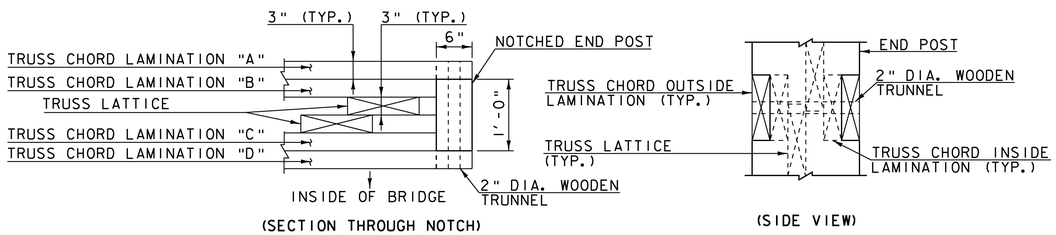
Hoyle, Tanner & Associates, Inc.

PROJECT NAME:	MONTGOMERY
PROJECT NUMBER:	BHO 1448(23)
FILE NAME: Z96J302subreinf2.dgn	PLOT DATE: 8/1/2008
PROJECT LEADER: J.H.WEAVER	DRAWN BY: J.B.McQUAID
DESIGNED BY: J.BICJA	CHECKED BY: S.T.JAMES
ABUTMENT NO.2 REINFORCING	SHEET 34 OF 54



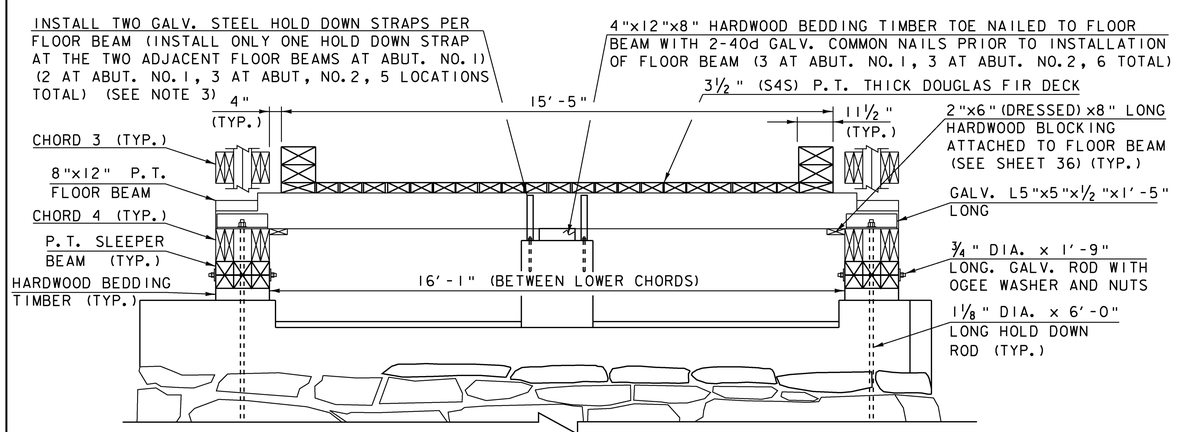
ABUTMENT NO. 1 BEARING DETAIL

SCALE: 1" = 1'-0"



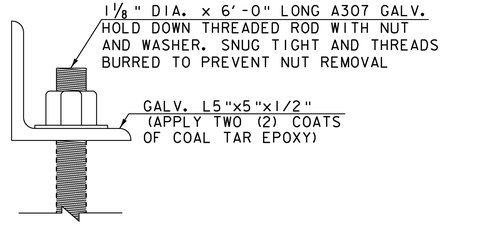
TYPICAL TRUSS CHORD TO END POST DETAIL

SCALE: 1" = 1'-0"



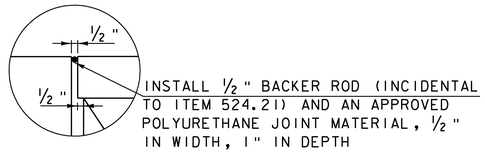
ABUTMNET NO. 1 BEARING TYPICAL SECTION

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



DETAIL "A"

NOT TO SCALE

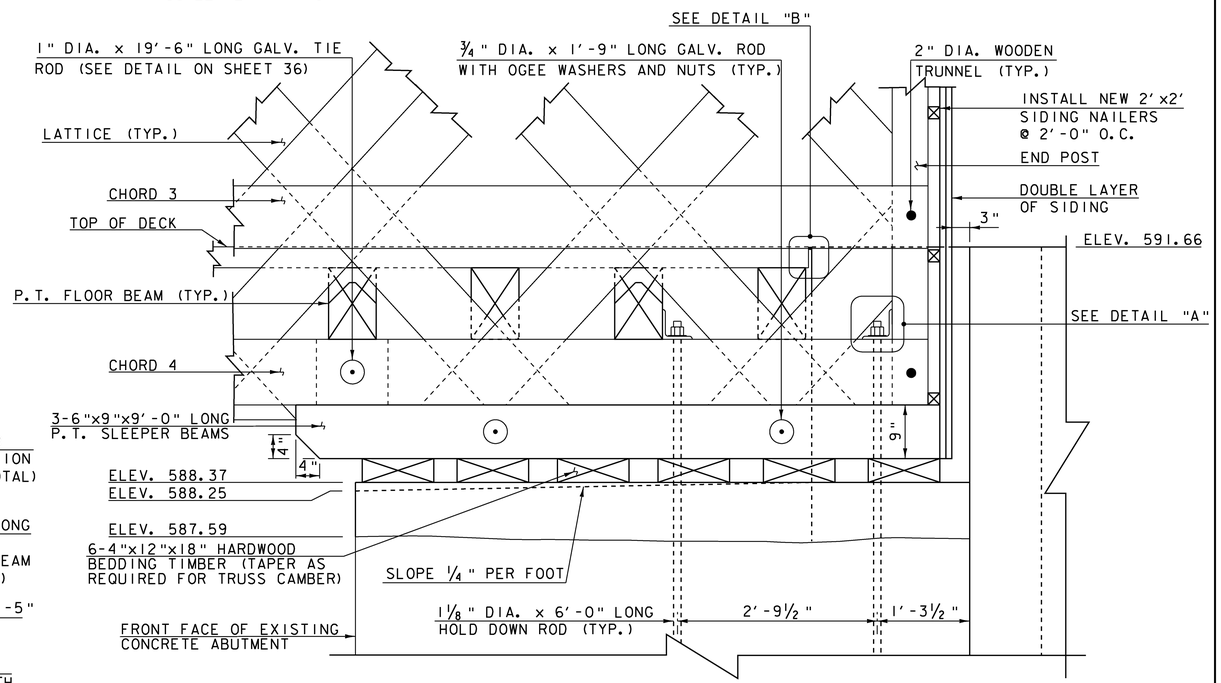


DETAIL "B"

SCALE: 2" = 1'-0"

SHEET NOTES:

1. THE HOLD DOWN RODS SHALL BE GROUTED INTO THE ABUTMENTS USING SPEC BOND 200 BY CONSPEC, RESCON 304 BY SYMONS CORPORATION OR DURALCRETE BY TAMMS INDUSTRIES OR OTHER EQUIVALENT APPROVED EPOXY MORTAR IN LIEU OF MORTAR, TYPE IV.
2. THE HOLD DOWN RODS, DRILLING AND GROUTING OF THEM, NUTS, WASHERS, L5x5x1/2 ANGLES, REMOVAL AND REINSTALLATION OF END LATTICE TO ALLOW INSTALLATION OF HOLD DOWN RODS SHALL BE PAID UNDER ITEM 900.620, SPECIAL PROVISION (BEARING DEVICE ASSEMBLY, COVERED BRIDGE) COMPLETE IN PLACE.
3. HOLD DOWN STRAPS SHALL BE GALVANIZED WITH A MINIMUM UPLIFT CAPACITY OF 1,000 LBS PER FLOOR BEAM. ACCEPTABLE MANUFACTURES ARE SIMPSON STRONG-TIE OR TECO OR APPROVED EQUAL (PAID UNDER ITEM 506.75, STRUCTURAL STEEL).



ABUTMENT NO. 2 BEARING DETAIL

SCALE: 1" = 1'-0"

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

1 0 1 2

SCALE: 1" = 1'-0"

1 9 6 3 0 1 2

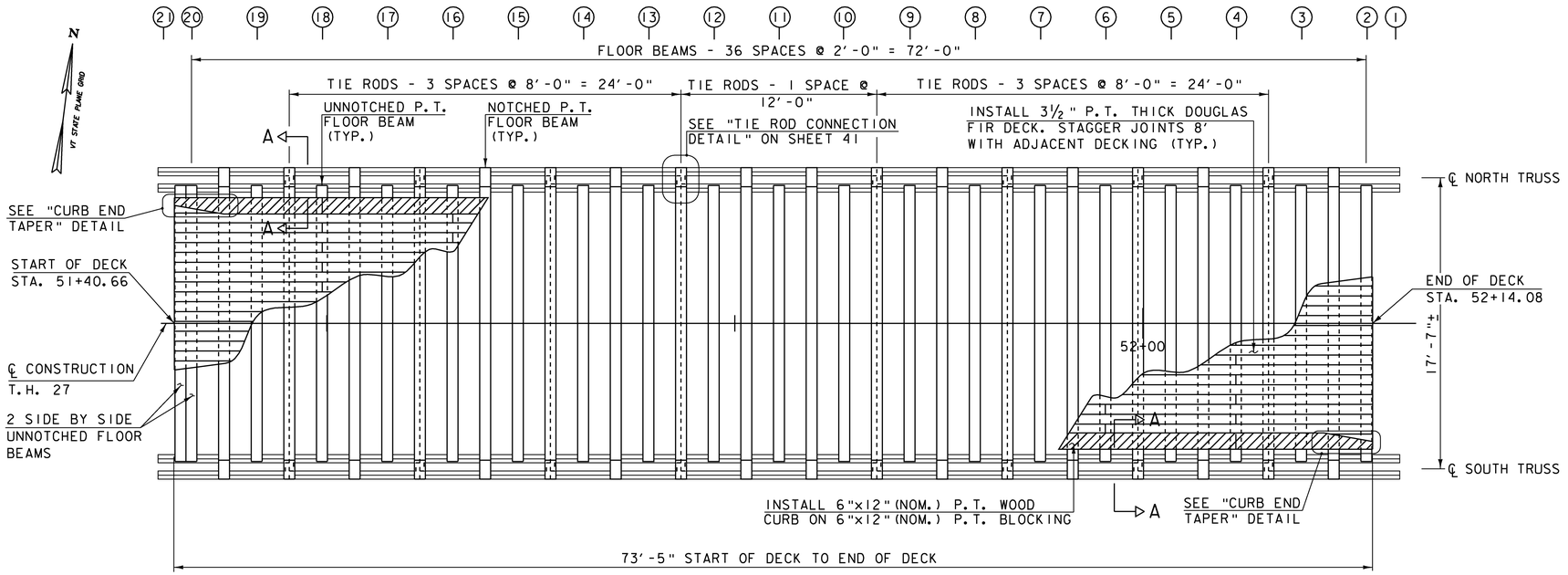
MODEL	Default
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302sup2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
COVERED BRIDGE BEARING DETAILS

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 35 OF 54



FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

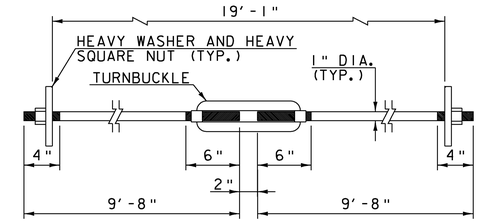
NOTE: DECK AND CURBING PARTIALLY SHOWN FOR CLARITY.

PLAN NOTES:

1. REMOVE THE EXISTING FLOOR BEAMS, DECKING AND RUNNERS IN THEIR ENTIRETY AND REPLACE AS DETAILED ON THIS SHEET.
2. EXTERIOR DECK PLANKS AT CURB ATTACHMENT SHALL HAVE AN ACTUAL WIDTH OF 11¼". ALL OTHER INTERIOR DECK PLANKS SHALL HAVE AN ACTUAL WIDTH OF 7¼".

LEGEND:

(1) TRUSS NODE LOCATION

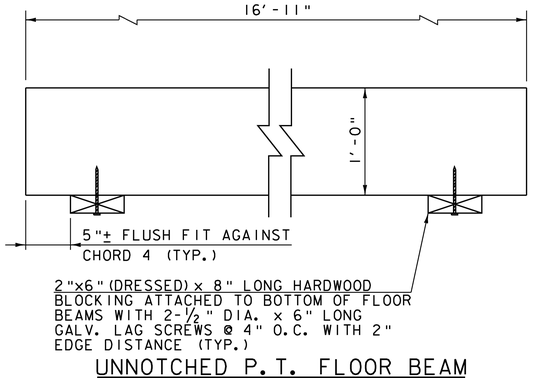


GALVANIZED TIE ROD ASSEMBLY

(8 REQUIRED)

SCALE: 1½" = 1'-0"

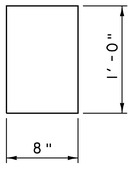
NOTE: TIGHTEN NUTS AND TURNBUCKLES SNUG BUT NOT SO TIGHT AS TO CAUSE CRUSHING OF WOOD BEHIND THE STEEL PLATES.



UNNOTCHED P.T. FLOOR BEAM

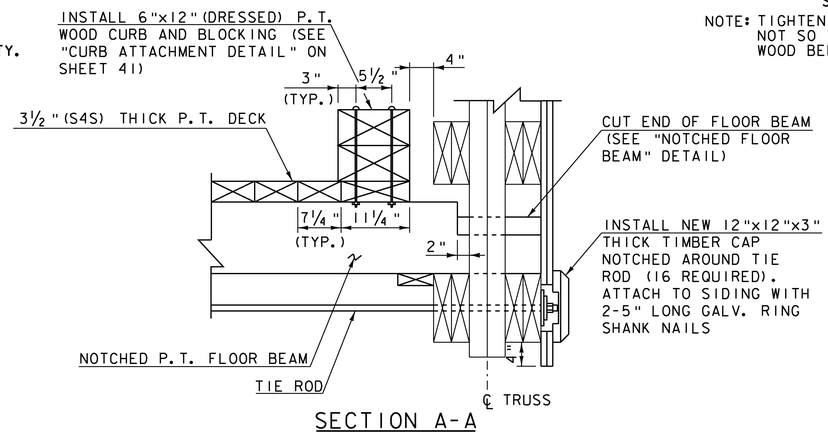
(20 REQUIRED)

SCALE: 1½" = 1'-0"



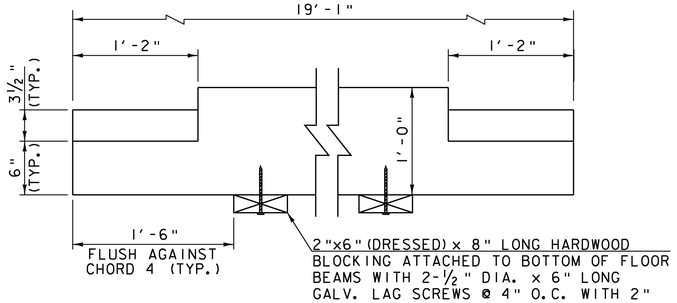
UNNOTCHED P.T. FLOOR BEAM END SECTION

SCALE: 1½" = 1'-0"



SECTION A-A

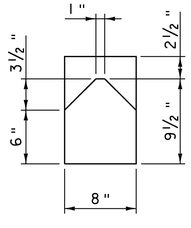
SCALE: 1" = 1'-0"



NOTCHED P.T. FLOOR BEAM

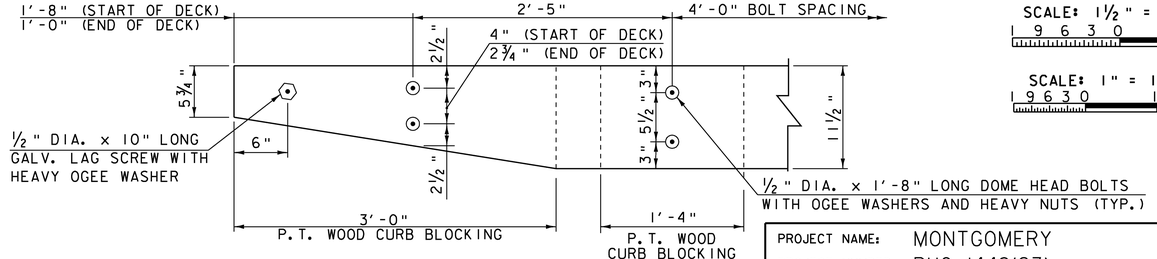
(18 REQUIRED)

SCALE: 1½" = 1'-0"



NOTCHED P.T. FLOOR BEAM END SECTION

SCALE: 1½" = 1'-0"



CURB END TAPER

SCALE: 1½" = 1'-0"

SCALE: ¼" = 1'-0"
1 0 2 4 6

SCALE: 1½" = 1'-0"
1 9 6 3 0

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

MODEL	Default
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

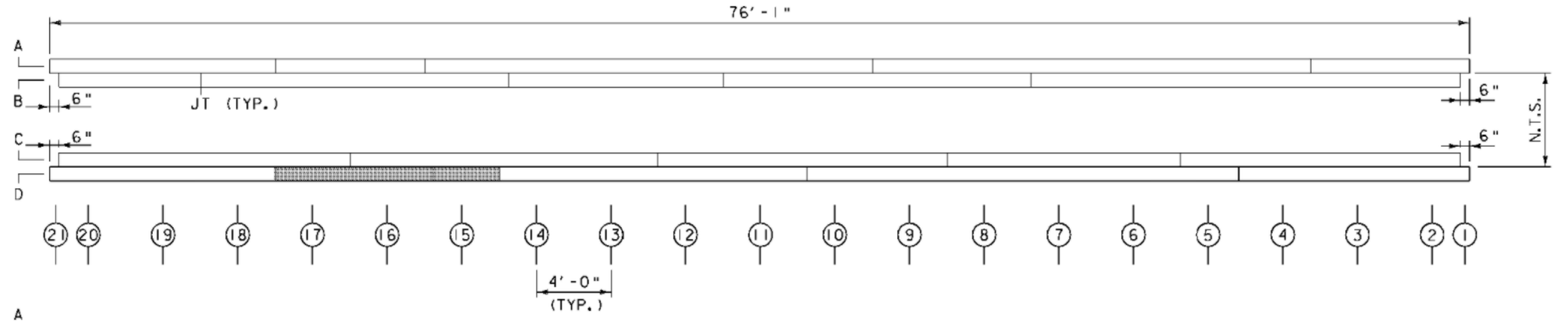
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302sup3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
FLOOR FRAMING PLAN

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 36 OF 54

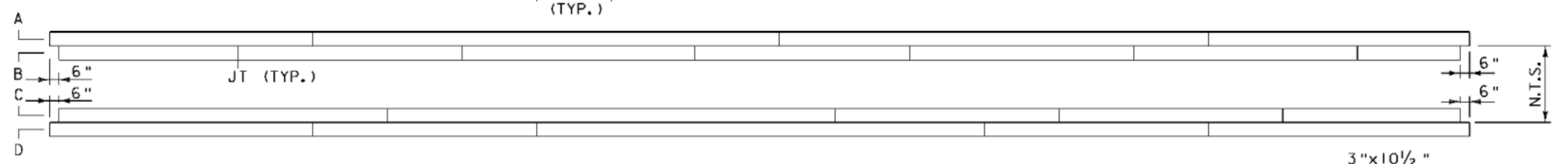
CHORD 1 PLAN

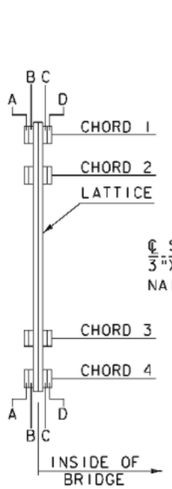
SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.



CHORD 2 PLAN

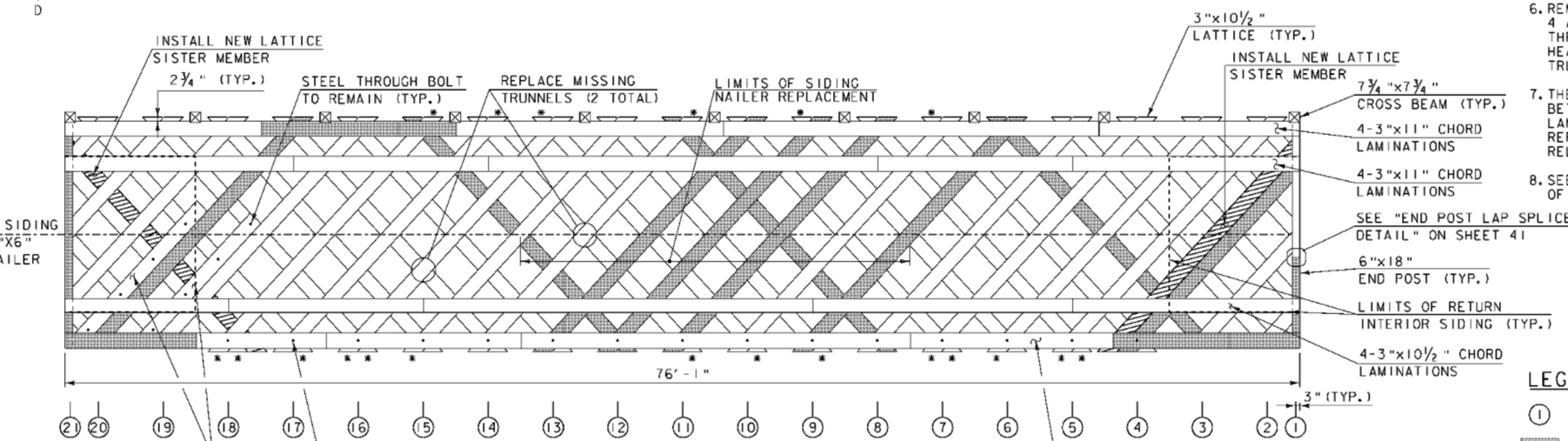
SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.





TYPICAL TRUSS SECTION

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

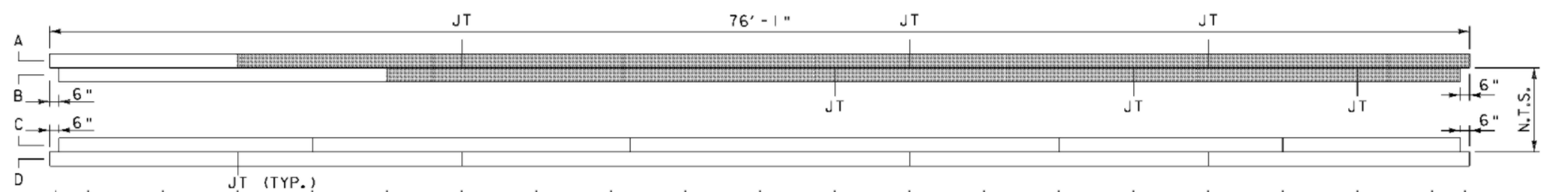


NORTH TRUSS ELEVATION

(LOOKING NORTH)
SCALE: 1/4" = 1'-0"

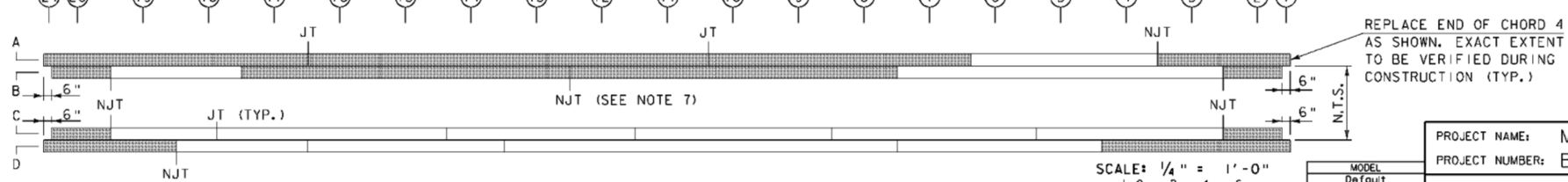
CHORD 3 PLAN

SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.



CHORD 4 PLAN

SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.



SCALE: 1/4" = 1'-0"
0 2 4 6

PLAN NOTES:

1. SEE SHEET 42 FOR CAMBER TABLE AND NOTES THAT APPLY TO THIS SHEET.
2. SEE SHEET 42 FOR LATTICE CONNECTION DETAILS THAT APPLY TO THIS SHEET.
3. ALL SIDING SHALL BE REMOVED TO PROVIDE ACCESS TO CHORDS 1 AND 2 PRIOR TO ORDERING MATERIAL TO VERIFY THAT ROT IN THESE CHORDS DOES NOT EXTEND INTO LATTICE MEMBERS.
4. REMOVE EXISTING 3"x6" SUPPORT BLOCKS AT CHORDS 3 AND 4 OF SOUTH TRUSS (TOTAL OF 28). SALVAGE BOLTS, NUTS, AND WASHERS FOR THE TOWN OF MONTGOMERY HISTORICAL SOCIETY AND DELIVER THEM TO THE ADDRESS SHOWN IN NOTE G-7, SHEET 27.
5. APPLY TWO COATS OF AN APPROVED COPPER NAPHTHENATE PRESERVATIVE TO ENDS OF CHORDS 3 AND 4 (NEW AND EXISTING) FOR FULL LENGTH OF SLEEPER BEAMS (INCIDENTAL TO ITEM 522.25).
6. REMOVE EXISTING THROUGH BOLTS AT CHORD 4 AND INSTALL NEW 1" DIA. GALV. THROUGH BOLT WITH OGEE WASHERS AND HEAVY NUTS (30 TOTAL, 15 IN SOUTH TRUSS & 15 IN NORTH TRUSS).
7. THERE IS AN EXISTING JOINT AT CHORD 4 BETWEEN NODES 11 AND 12 OF "B" LAMINATION WHICH IS NOT REQUIRED TO BE REPLICATED. THIS JOINT SHALL BE RELOCATED BETWEEN NODES 12 AND 13.
8. SEE DETAIL ON SHEET 35 FOR CONNECTION OF TRUSS CHORDS TO END POSTS.

LEGEND:

(1)	TRUSS NODE LOCATION
	PREDETERMINED MEMBER TO BE REPLACED. ADDITIONAL MEMBERS MAY BE REQUIRED TO BE REPLACED. SEE NOTE W-8 ON SHEET 27.
	NEW MEMBER
N.T.S.	NOT TO SCALE
JT	EXISTING CHORD JOINT
NJT	NEW CHORD JOINT
*	DENOTES SPLIT IN LATTICE MEMBERS TO BE REPAIRED. SEE "SPLIT LATTICE END REPAIR DETAILS" ON SHEET 42.

MODEL: Default
HTA PROJECT NO.: 904214

Hoyle, Tanner & Associates, Inc.

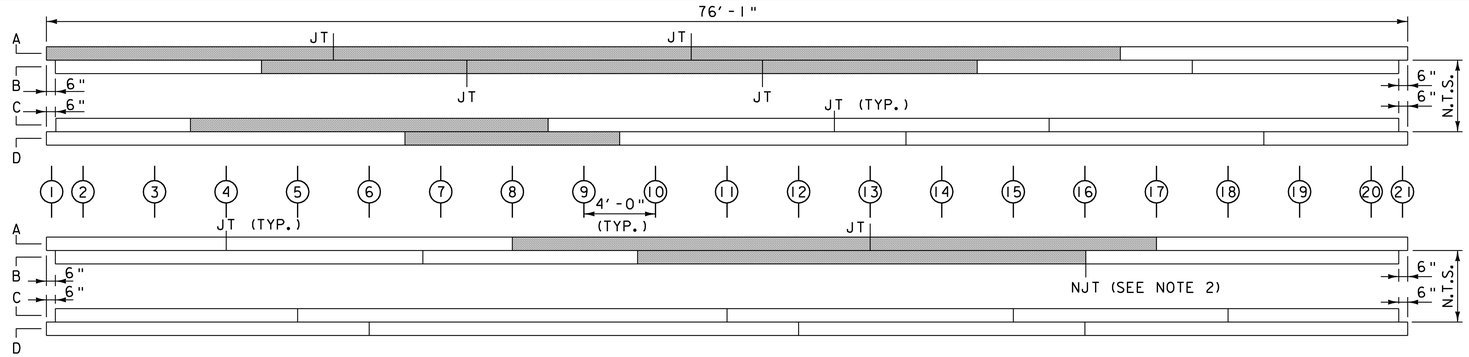
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302sup4.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
NORTH TRUSS ELEV. AND CHORD PLAN

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 37 OF 54

CHORD 1 PLAN

SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.

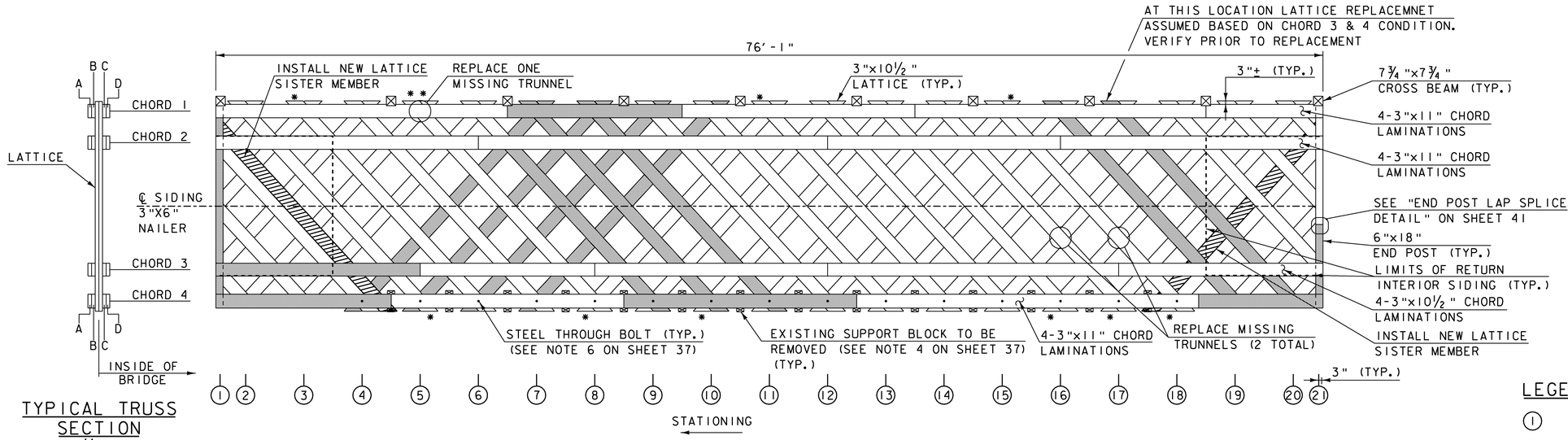


CHORD 2 PLAN

SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.

PLAN NOTES:

1. SEE SHEET 37 FOR NOTES THAT APPLY TO THIS SHEET.
2. THERE IS AN EXISTING JOINT AT CHORD 2 BETWEEN NODES 13 AND 14 OF "B" LAMINATION WHICH IS NOT REQUIRED TO BE REPLICATED. THE REPLACED "B" LAMINATE SHALL BE CONTINUOUS FROM NODE 10 TO NODE 16.



TYPICAL TRUSS SECTION

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

SOUTH TRUSS ELEVATION

(LOOKING SOUTH)
SCALE: 1/4" = 1'-0"

LEGEND:

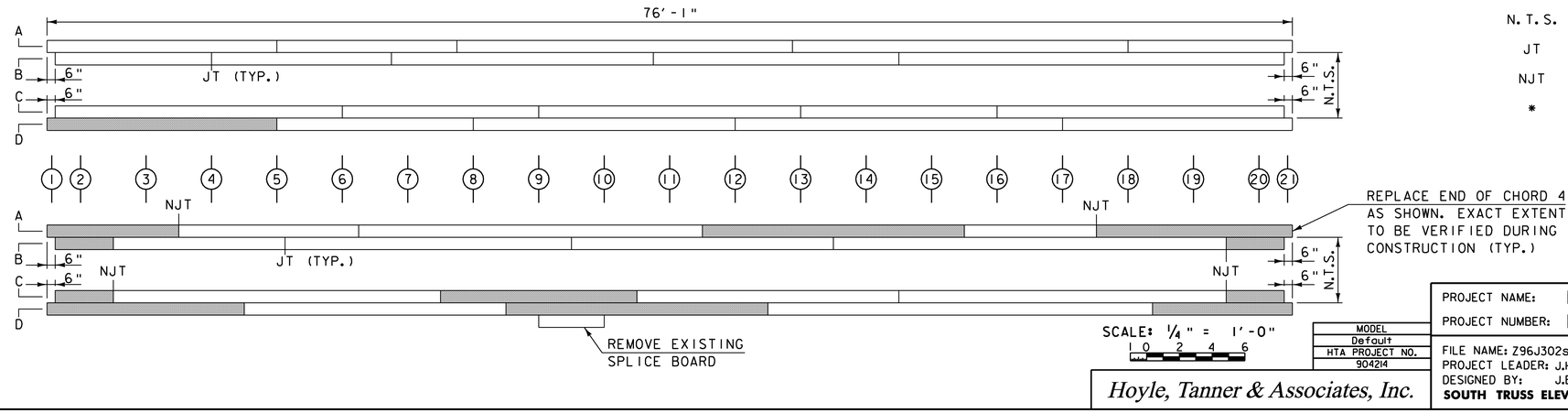
(1)	TRUSS NODE LOCATION
	PREDETERMINED MEMBER TO BE REPLACED. ADDITIONAL MEMBERS MAY BE REQUIRED TO BE REPLACED. SEE NOTE W-8 ON SHEET 27.
	NEW MEMBER
N.T.S.	NOT TO SCALE
JT	EXISTING CHORD JOINT
NJT	NEW CHORD JOINT
*	DENOTES SPLIT IN LATTICE MEMBERS TO BE REPAIRED. SEE "SPLIT LATTICE END REPAIR DETAILS" ON SHEET 42.

CHORD 3 PLAN

SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.

CHORD 4 PLAN

SCALE: 1/4" = 1'-0" HORIZ.
N.T.S. VERT.



SCALE: 1/4" = 1'-0"
1 0 2 4 6

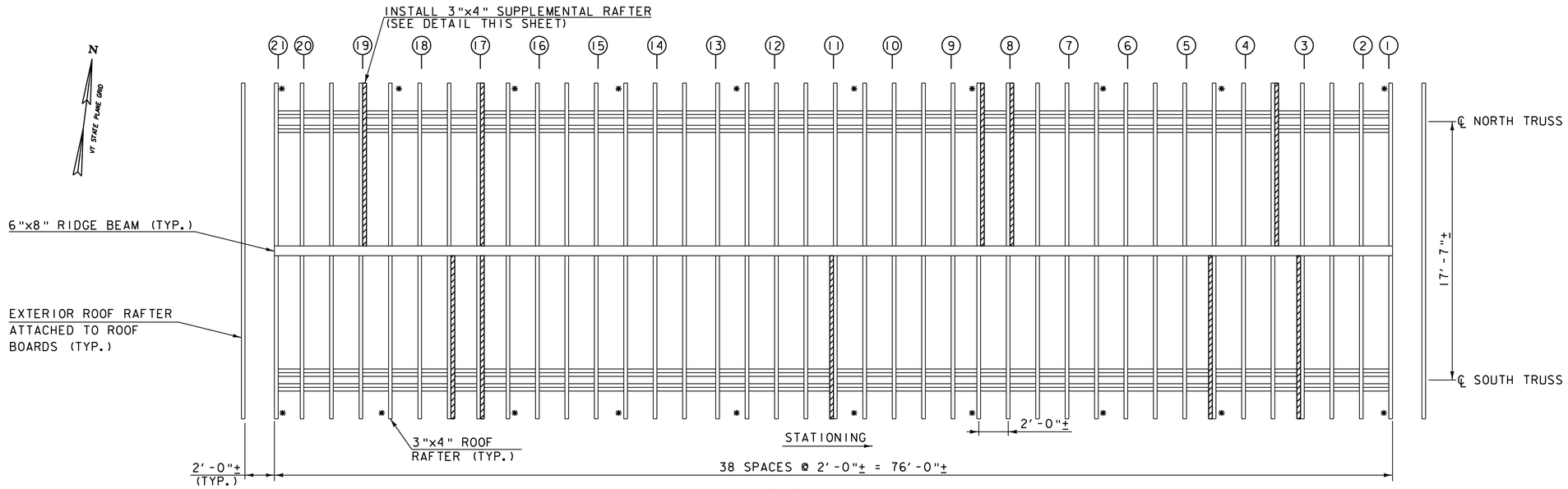
MODEL	Default
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302sup5.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
SOUTH TRUSS ELEV. AND CHORD PLAN

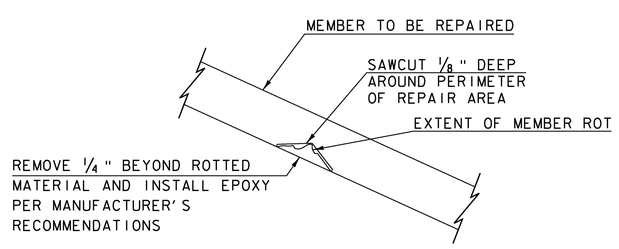
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 38 OF 54



ROOF FRAMING PLAN

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

NOTE: ROOF BOARDS, METAL ROOF AND UPPER LATERAL BRACING NOT SHOWN FOR CLARITY.



EPOXY REPAIR DETAIL

NOT TO SCALE

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.

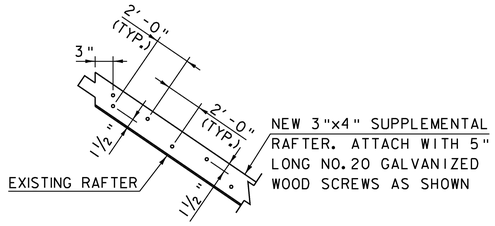
R-2. REMOVE ALL ROTTED MATERIAL TO A MINIMUM OF 1/4" BEYOND EXTENT OF ROT. SAWCUT 1/4" DEEP AROUND PERIMETER OF REPAIR AREA.

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.

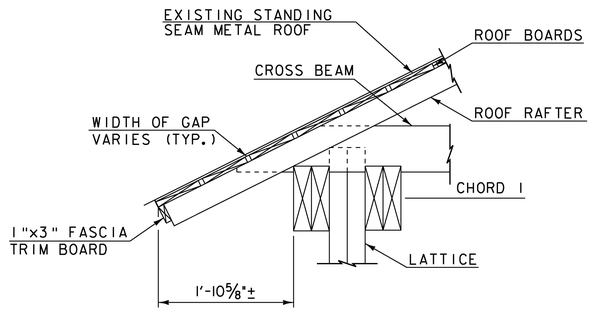
R-5. INSTALL TWO GALVANIZED LAG SCREWS INTO EXISTING SPLIT THROUGH REPAIR MATERIAL (IF REQUIRED). SIZE OF LAG SCREWS TO BE DETERMINED BY THE RESIDENT ENGINEER.

R-6. SEE NOTES W-4 AND W-5 ON SHEET 27 AND PLAN NOTE 4 ON SHEET 42 FOR ALL WORK TO BE PAID FOR UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS).



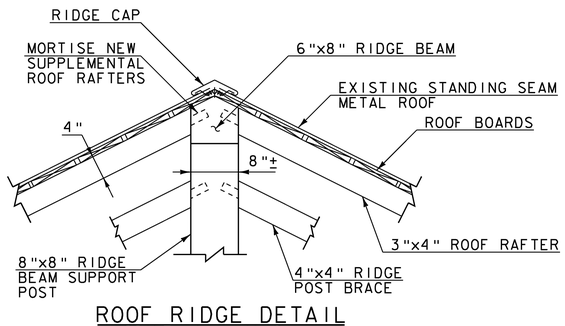
SUPPLEMENTAL RAFTER DETAIL

NOT TO SCALE



ROOF RAFTER DETAIL

SCALE: 1" = 1'-0"



ROOF RIDGE DETAIL

SCALE 1" = 1'-0"

LEGEND:

(1)	TRUSS NODE LOCATION
▨	NEW SUPPLEMENTAL MEMBER. ADDITIONAL MEMBERS MAY BE REQUIRED TO BE SISTERED OR REPLACED. SEE NOTE W-8 ON SHEET 27.
*	APPROX. LOCATION OF CROSS BEAM (NOT SHOWN FOR CLARITY)

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

1 0 2 4 6

SCALE 1" = 1'-0

1 9 6 3 0 1 2

MODEL	Default
HTA PROJECT NO.	904214

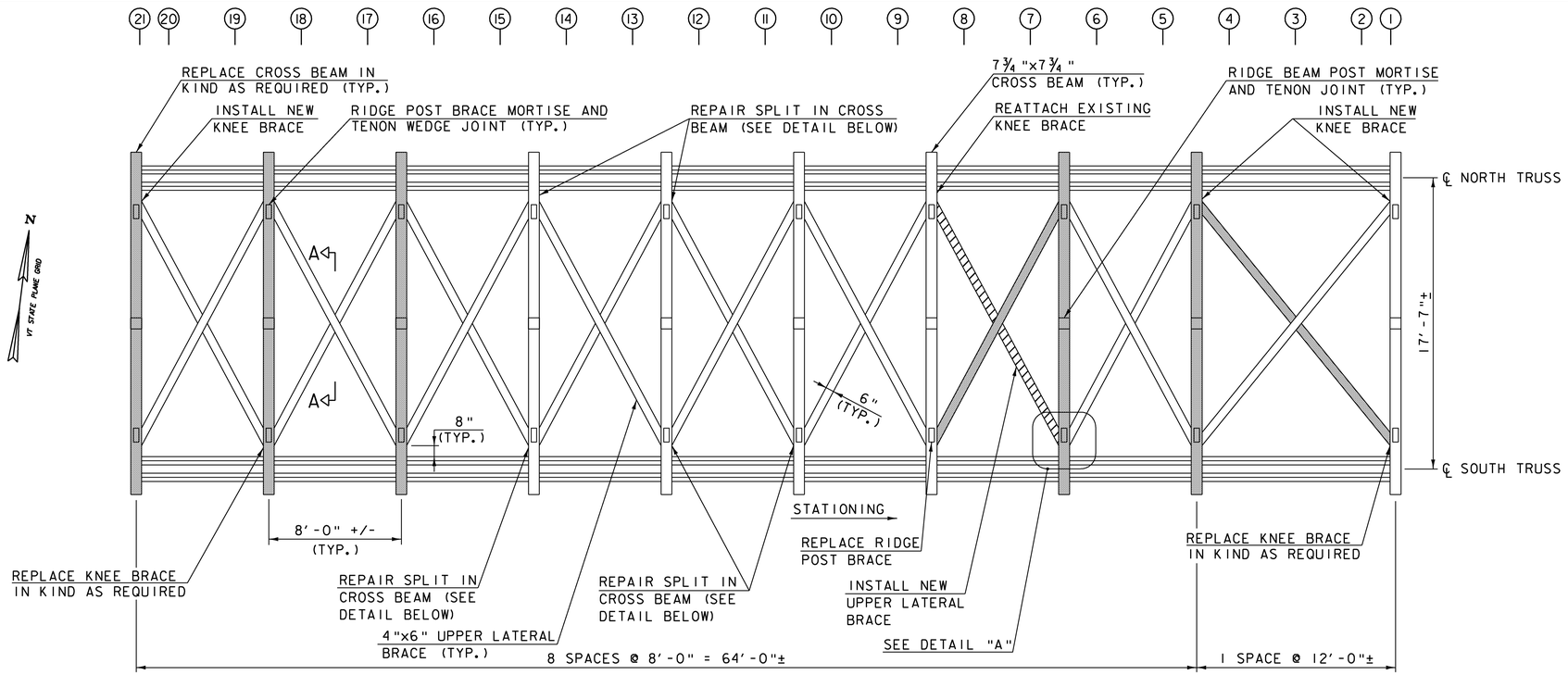
Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY

PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302sup6.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
ROOF FRAMING PLAN

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 39 OF 54



UPPER LATERAL BRACING PLAN

SCALE: ¼" = 1'-0"

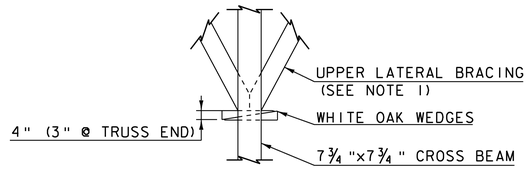
NOTE: KNEE BRACES NOT SHOWN FOR CLARITY. LOCATION VARIES, BUT GENERALLY SPAN FROM LOWER FACE OF CHORD 2 TO THE BOTTOM FACE OF THE CROSSBEAM.

PLAN NOTE:

1. THE UPPER LATERAL BRACING TENONS SHALL BE 3" IN DEPTH AND CENTERED VERTICALLY ON THE CROSS BEAM. SEE DETAIL "A" FOR THE JOINT DETAIL.

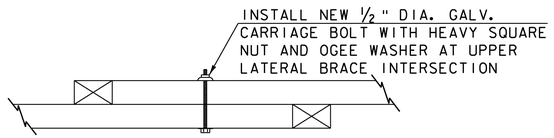
LEGEND:

- (1) TRUSS NODE LOCATION
- PREDETERMINED MEMBER TO BE REPLACED
- NEW MEMBER



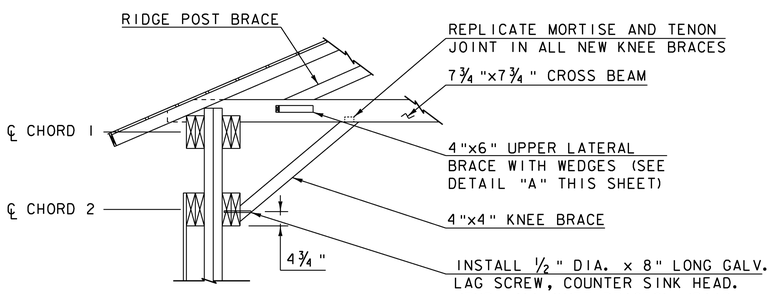
DETAIL "A"

SCALE: ½" = 1'-0"



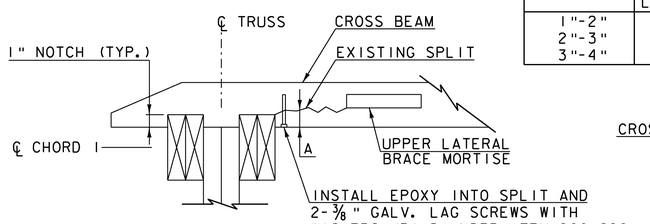
SECTION A-A

SCALE: 1" = 1'-0"



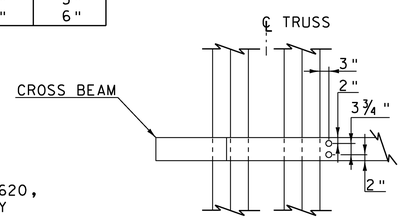
KNEE BRACE DETAIL

SCALE: ½" = 1'-0"



DIMENSION "A"	LAG SCREW LENGTH
1"-2"	4"
2"-3"	5"
3"-4"	6"

ELEVATION VIEW



PLAN VIEW

CROSS BEAM SPLIT REPAIR DETAIL

NOTE: RIDGE POST BRACE NOT SHOWN FOR CLARITY.
SCALE: 1" = 1'-0"

SCALE: ½" = 1'-0"
1 0 1 2

SCALE: ¼" = 1'-0"
1 0 2 4 6

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

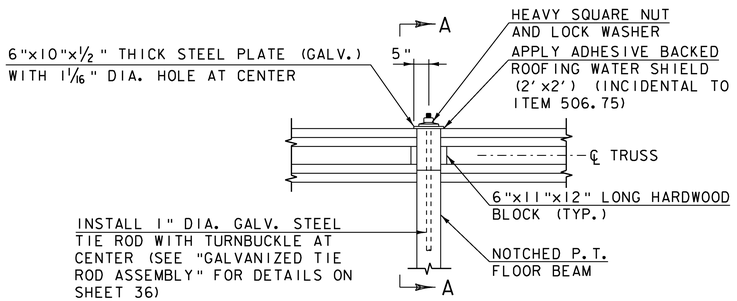
MODEL	ULB
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

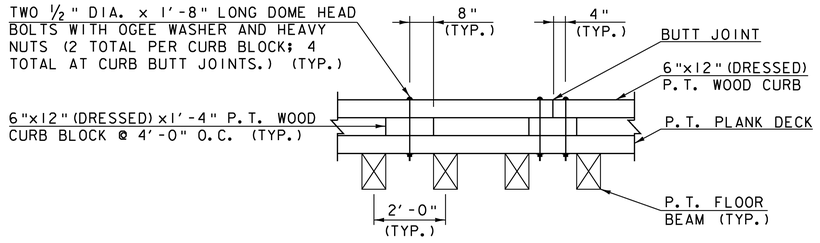
FILE NAME: Z96J302sup7.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
UPPER LATERAL BRACING

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 40 OF 54



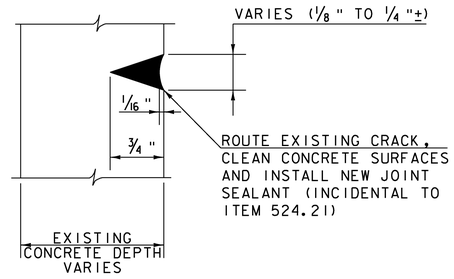
TIE ROD CONNECTION DETAIL

SCALE: ½" = 1'-0"



CURB ATTACHMENT DETAIL

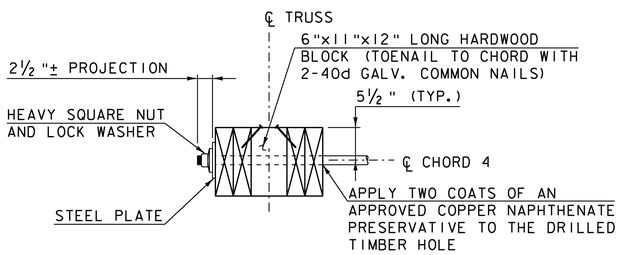
SCALE: ½" = 1'-0"



CRACK SEAL DETAIL

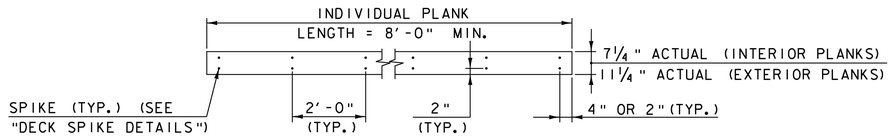
NOT TO SCALE

NOTE: NEW JOINT SEALANT SHALL BE AN APPROVED ONE COMPONENT POLYURETHANE ELASTOMERIC SEALANT COMPLYING WITH STANDARD SPECIFICATIONS SECTION 707.05.



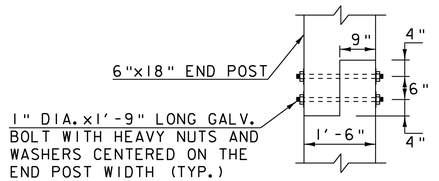
SECTION A-A

SCALE: 1" = 1'-0"



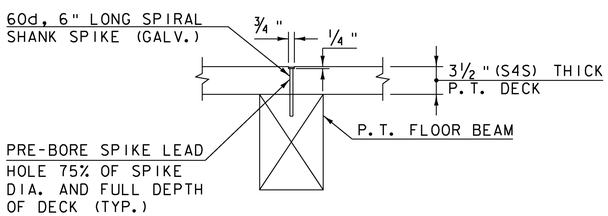
DECK PLANK ATTACHMENT

NOT TO SCALE

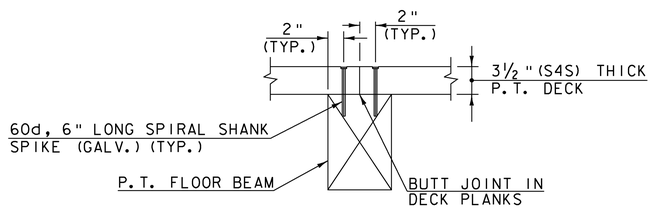


END POST LAP SPLICE DETAIL

NOT TO SCALE



DECK PLANK OVER FLOOR BEAM



DECK PLANK BUTT JOINT OVER FLOOR BEAM

SCALE: ½" = 1'-0"
0 1 2 3 4

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

DECK SPIKE DETAILS

NOT TO SCALE

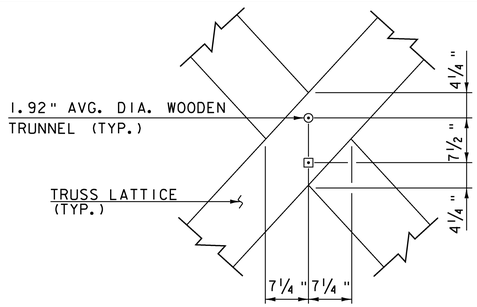
MODEL	DET1
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detail3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BRIDGE DETAILS (1 OF 2)

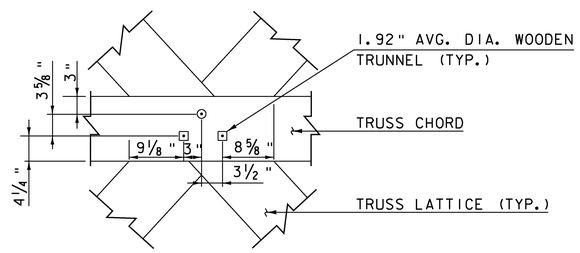
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 41 OF 54



TYPICAL LATTICE TO LATTICE 2 TRUNNEL CONNECTION

SCALE: 1" = 1'-0"

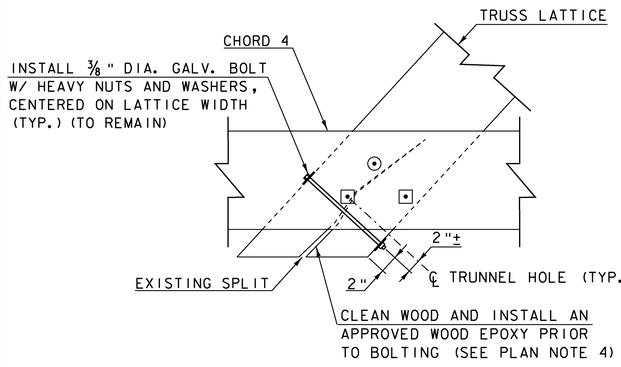
NOTE: TRUNNEL ORIENTATION AND SPACING VARIES.



TYPICAL LATTICE TO CHORD 3 TRUNNEL CONNECTION

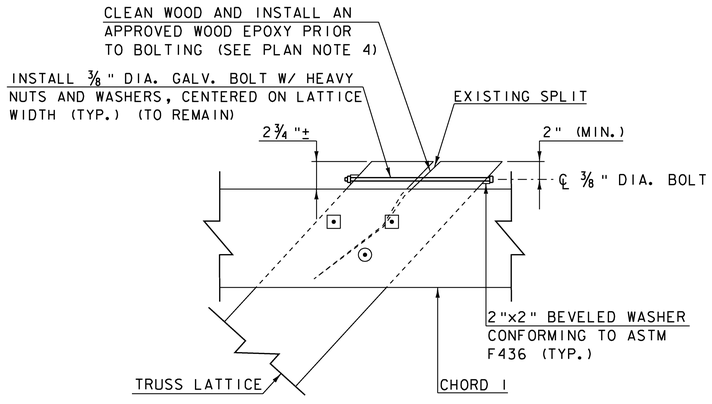
SCALE: 1" = 1'-0"

NOTE: TRUNNEL ORIENTATION AND SPACING VARIES.



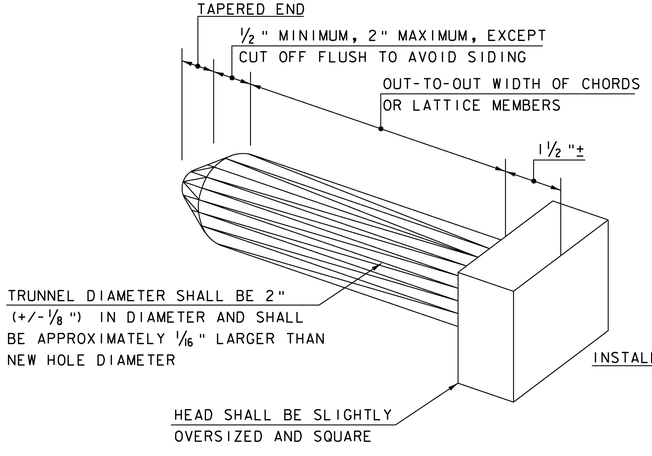
BOTTOM END SPLIT LATTICE REPAIR DETAIL

SCALE: 1½" = 1'-0"



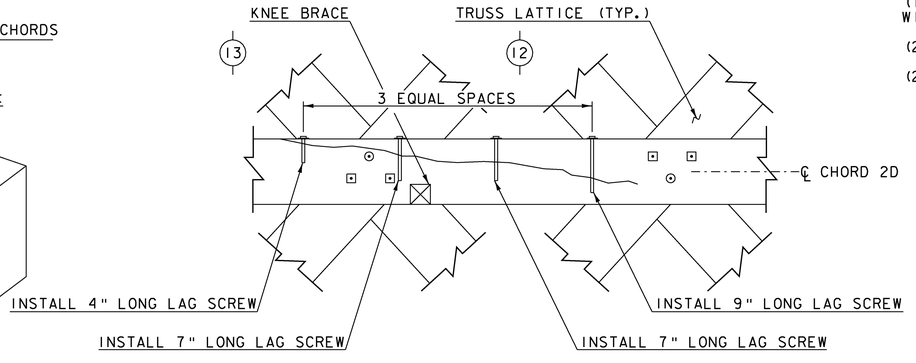
TOP END SPLIT LATTICE REPAIR DETAIL

SCALE: 1½" = 1'-0"



NEW TRUNNEL DETAIL

NOT TO SCALE



NORTH TRUSS, CHORD 2D REPAIR

SCALE: 1" = 1'-0"

NOTE: ALL LAG SCREWS SHALL BE GALV. ½" DIA. WITH WASHERS. INSERT AN APPROVED WOOD EPOXY IN CRACK PRIOR TO INSTALLING LAG SCREWS. CENTER LAGS ON CHORD WIDTH (SEE PLAN NOTE 4).

SCALE: 1½" = 1'-0"
1 9 6 3 0

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

PLAN NOTES:

1. DIMENSIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ALL DIMENSIONS AND MEMBER SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO ODERING ALL TIMBER AND LUMBER. SEE NOTE G-5 ON SHEET 27 FOR MORE INFORMATION.
2. TRUSS NODES ARE LOCATED AT THE CENTER OF THE INTERSECTION OF LATTICE MEMBERS WITH CHORD 1 AND CHORD 4.
3. NEW TRUNNEL ORIENTATION TO MATCH EXISTING.
4. THE REPAIR OF SPLITS IN LATTICE MEMBERS AND CHORD 2D OF NORTH TRUSS, AS SHOWN BELOW, ARE PAID UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS). SEE SHEET 39 FOR THE RECOMMENDED REPAIR SEQUENCE.

CAMBER NOTES:

1. ALL VALUES IN CAMBER TABLE ARE MEASURED FROM A REFERENCE LINE THAT IS A STRAIGHT LEVEL LINE CONNECTING POINTS LOCATED AT THE TOP OF CHORD 3. NEGATIVE VALUES INDICATE DOWN DIRECTIONS (SAG).
2. THE EXISTING COVERED BRIDGE SHALL BE JACKED AND BRACED AS REQUIRED PRIOR TO THE START OF REALIGNMENT OPERATIONS. INSTALLATION OF NEW TRUSS MEMBERS SHALL NOT BEGIN UNTIL REALIGNMENT OPERATIONS ARE COMPLETE. SEE NOTE RS-4 ON SHEET 27 FOR MORE INFORMATION.
3. THE TRUSSES ARE PARTIALLY SUPPORTED BY TWO STEEL BEAMS IN THE BRIDGE THEREFORE THE EXACT CAMBER OR SAG WITHOUT THE STEEL BEAMS IS NOT KNOWN. THE CONTRACTOR SHALL JACK THE BRIDGE TO A MAXIMUM 4" MIDSPAN CAMBER PRIOR TO REPLACING TRUSS MEMBERS. ALL COST OF SUCH WORK IS PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE). SEE SPECIAL PROVISION, NOTE W-9 ON SHEET 27 AND NOTE 6 ON SHEET 3 FOR ADDITIONAL WORK TO BE PAID UNDER THIS PAY ITEM.
4. THE CONTRACTOR SHALL PROVIDE TO THE RESIDENT ENGINEER THE MEASUREMENTS OF THE AS-BUILT CAMBER. ALL COST OF SUCH WORK IS PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

EXISTING AND AS-BUILT TRUSS CAMBER (INCHES) * +

NODES	(1A)	(1B)	(2A)	(2B)	NODES	(1A)	(1B)	(2A)	(2B)
1	------	------			12	0.87	1.73		
2	------	------			13	1.21	1.84		
3	------	------			14	0.82	1.71		
4	0.00	0.00			15	0.56	1.11		
5	-0.03	0.59			16	0.41	0.86		
6	0.07	0.94			17	0.39	0.37		
7	0.03	1.29			18	0.00	0.00		
8	0.14	1.53			19	------	------		
9	0.23	1.76			20	------	------		
10	0.45	1.87			21	------	------		
11	0.66	1.74							

(1A) EXISTING CAMBER SOUTH TRUSS WITH STEEL SUPPORT BEAMS IN PLACE

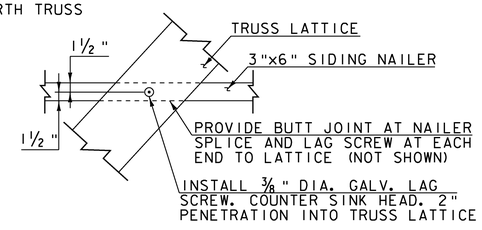
(1B) EXISTING CAMBER NORTH TRUSS WITH STEEL SUPPORT BEAMS IN PLACE

(2A) AS-BUILT CAMBER SOUTH TRUSS

(2B) AS-BUILT CAMBER NORTH TRUSS

* NEGATIVE VALUES INDICATE SAG

+ NODES WITHOUT EXISTING CAMBER VALUE WERE NOT ACCESSIBLE AT TIME OF SURVEY



REPLACED NEW SIDING NAILER TO LATTICE CONNECTION

SCALE: 1" = 1'-0"

MODEL	dg12
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

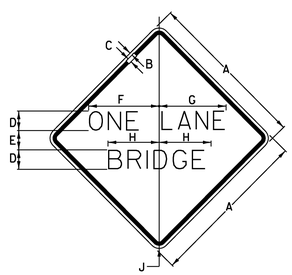
FILE NAME: Z96J302detail4.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
BRIDGE DETAILS (2 OF 2)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 42 OF 54

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø/(in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	FOUNDATION	TUBULAR STEEL Ø (in) lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																										
VR-017	LEGAL LOAD LIMIT 20,000 POUNDS	2	24"	30"	10.0																													STA. 50+49.18, RT. 14.1' STA. 52+97.12, LT. 10.0'		E-141
W5-3	ONE LANE BRIDGE	2	30"	30"	12.5						2			X																				STA. 50+49.18, RT. 14.1' STA. 52+97.12, LT. 10.0'	43	SEE BELOW
W12-2	11'-6"	1	30"	30"	6.25						1			X																				STA. 52+40.00 LT. 10.0'		E-155
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE ROADWAY TRAFFIC & SAFETY SECTION'S "SIGN POST DESIGN GUIDELINE."												FT	FT	FT 52.0	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
	TOTALS	SF 28.75		SF		EA.		SF				FT 52.0			FT					LB			EA.	LB				EA.		EA.		LB			



COLORS
LEGEND - BLACK (NON - REFL.)
BACKGROUND - YELLOW (REFL.)

SIGN	DIMENSIONS (INCHES) A	B	C	D	E	F	G	H	J
MIN.	30	1/2	3/4	5C	3 1/4	13 5/16	12 11/16	9 1/8	1 7/8
STD.	36	5/8	7/8	6C	4	16	15 1/4	11 1/2	2 1/4
SPECIAL	48	3/4	1 1/4	8C	5	21 1/4	20 1/4	15 3/8	3

MODEL	
DETI	
HTA PROJECT NO.	
904214	

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302ts.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TRAFFIC SIGN SUMMARY

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 43 OF 54

STATE OF VERMONT
AGENCY OF TRANSPORTATION

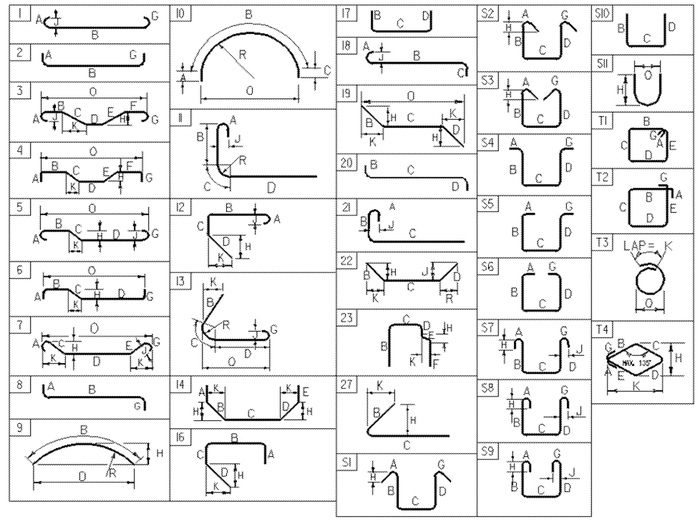
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
ABUTMENT NO.1																	
	6	5	15'- 3"	1EA501	STR												
	6	5	13'- 9"	1EA502	STR												
	32	5	4'- 6"	1EA503	STR												
	16	5	3'- 0"	1EA504	S10		1'- 3"	0'- 6"	1'- 3"								
	5	5	10'- 0"	1EA505	S10		4'- 3"	1'- 6"	4'- 3"								
	3	5	10'- 5"	1EA506	S10		4'- 6"	1'- 5"	4'- 6"								
▲	16	5	5'- 0"	1EA507	STR												
	7	5	8'- 3"	1EA508	S10		2'- 6"	3'- 3"	2'- 6"								
	8	5	5'- 9"	1EA509	STR												
	8	5	6'- 3"	1EA510	S10		2'- 6"	1'- 3"	2'- 6"								
	6	5	6'- 6"	1EA511	STR												
	24	5	6'- 1"	1EA512	20		2'- 2"	1'- 9"	2'- 2"								
	6	5	15'- 9"	1EA513	STR												
ABUTMENT NO.2																	
	5	5	15'- 3"	2EA501	STR												
	5	5	13'- 9"	2EA502	STR												
	40	5	3'- 7"	2EA503	STR												
	20	5	3'- 0"	2EA504	S10		1'- 3"	0'- 6"	1'- 3"								
	6	5	8'- 0"	2EA505	S10		3'- 3"	1'- 6"	3'- 3"								
	3	5	12'- 5"	2EA506	S10		5'- 6"	1'- 5"	5'- 6"								
▲	16	5	6'- 3"	2EA507	STR												
	9	5	5'- 0"	2EA508	S10		1'- 7"	1'- 10"	1'- 7"								
	6	5	8'- 3"	2EA509	STR												
	9	5	4'- 8"	2EA510	S10		1'- 7"	1'- 6"	1'- 7"								
	6	5	8'- 0"	2EA511	STR												
	20	5	6'- 9"	2EA512	20		2'- 2"	2'- 5"	2'- 2"								
	7	5	15'- 9"	2EA513	STR												
WINGWALL NO.1																	
▲	12	5	12'- 6"	1EW501	STR												
	13	5	5'- 7"	1EW502	1	0'- 7"	5'- 0"							0'- 5"			
✳	14	5	5'- 0"	1EW503	STR												
	32	5	8'- 11"	1EW504	S10		8'- 2"	0'- 9"									
	16	5	3'- 4"	1EW505	S10		1'- 3"	0'- 10"	1'- 3"								
	14	5	4'- 8"	1EW506	12			2'- 6"	2'- 2"				0'- 4"		2'- 1"		
	14	5	11'- 6"	1EW507	STR												
WINGWALL NO.2																	
	12	5	11'- 6"	2EW501	STR												
	13	5	5'- 7"	2EW502	1	0'- 7"	5'- 0"							0'- 5"			
	13	5	5'- 0"	2EW503	STR												
	34	5	8'- 11"	2EW504	S10		8'- 2"	0'- 9"									
	17	5	3'- 4"	2EW505	S10		1'- 3"	0'- 10"	1'- 3"								
	14	5	5'- 8"	2EW506	S10		2'- 2"	3'- 6"									
	14	5	11'- 6"	2EW507	STR												
	6	8	3'- 6"	2W801	STR												
WINGWALL NO.3A																	
	12	5	7'- 6"	3AEW501	STR												
	9	5	5'- 7"	3AEW502	1	0'- 7"	5'- 0"							0'- 5"			
✳	10	5	5'- 0"	3AEW503	STR												
	22	5	7'- 11"	3AEW504	S10		7'- 2"	0'- 9"									
	11	5	3'- 4"	3AEW505	S10		1'- 3"	0'- 10"	1'- 3"								
	12	5	4'- 4"	3AEW506	S10		2'- 2"	2'- 2"									
	12	5	7'- 6"	3AEW507	STR												
WINGWALL NO.4A																	
	12	5	7'- 6"	4AEW501	STR												
	9	5	5'- 7"	4AEW502	1	0'- 7"	5'- 0"							0'- 5"			
	9	5	5'- 0"	4AEW503	STR												
	22	5	7'- 11"	4AEW504	S10		7'- 2"	0'- 9"									
	11	5	3'- 4"	4AEW505	S10		1'- 3"	0'- 10"	1'- 3"								
	12	5	4'- 4"	4AEW506	S10		2'- 2"	2'- 2"									
	12	5	7'- 6"	4AEW507	STR												

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

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

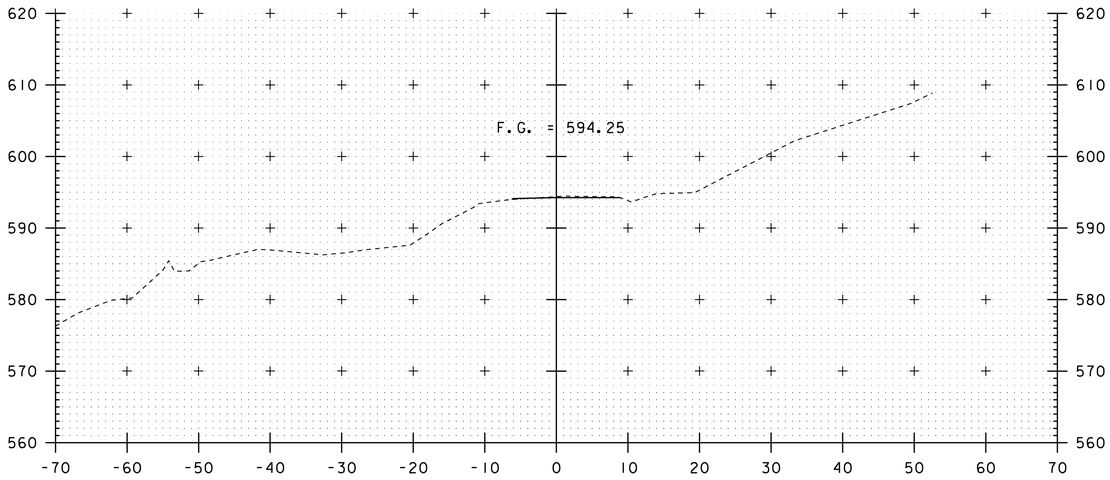
Hoyle, Tanner & Associates, Inc.

PROJECT NAME: **MONTGOMERY**
PROJECT NUMBER: **BHO 1448(23)**

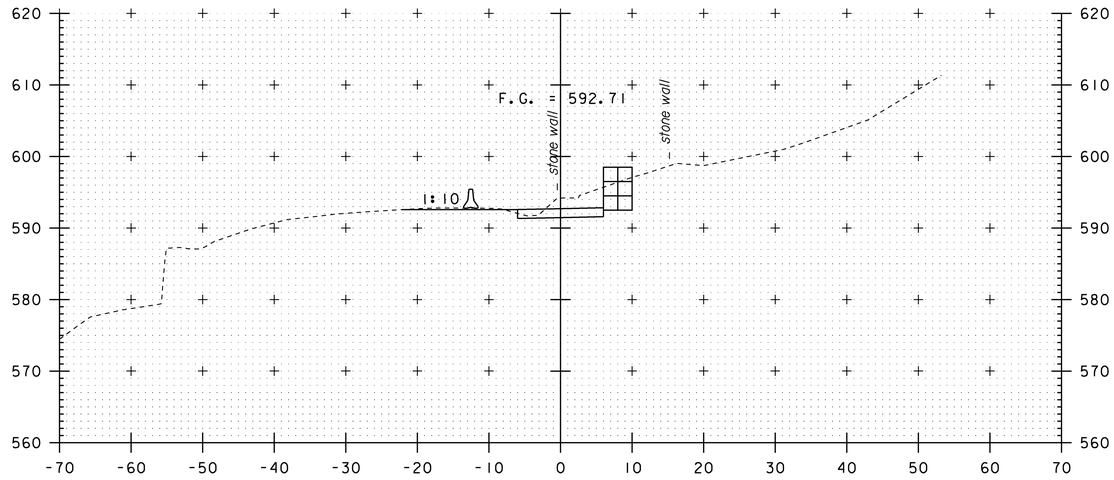
FILE NAME: **Z96J302reinf.xls**
PROJECT MANAGER: **J.H.WEAVER**
DESIGNED BY: **J.BICJA**
REINFORCING STEEL SCHEDULE SHEET

PLOT DATE: **7/24/2008**
DRAWN BY: **J.BICJA**
CHECKED BY: **S.T.JAMES**
SHEET **44** OF **54**

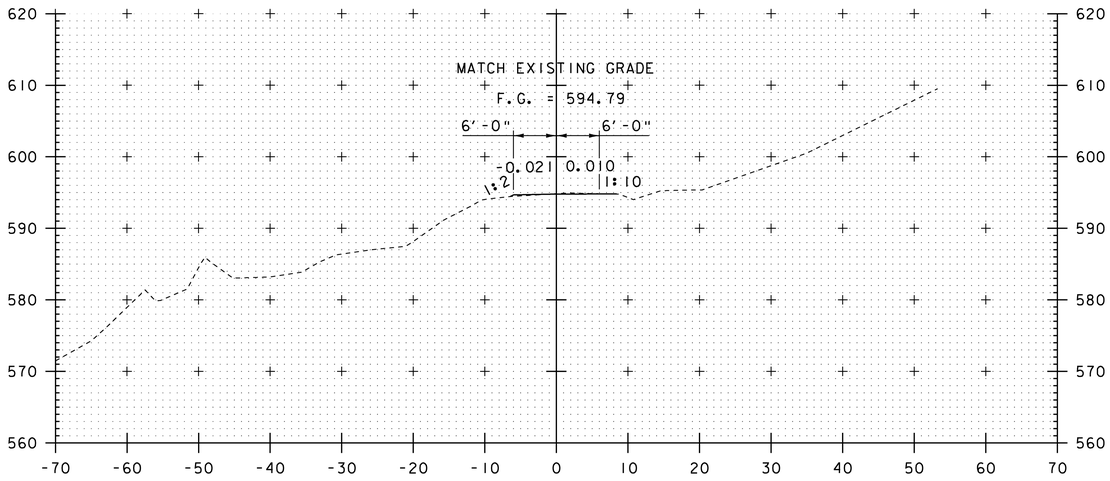
BEGIN TEMP. DETOUR
END APPROACH
STA. 10+52.50



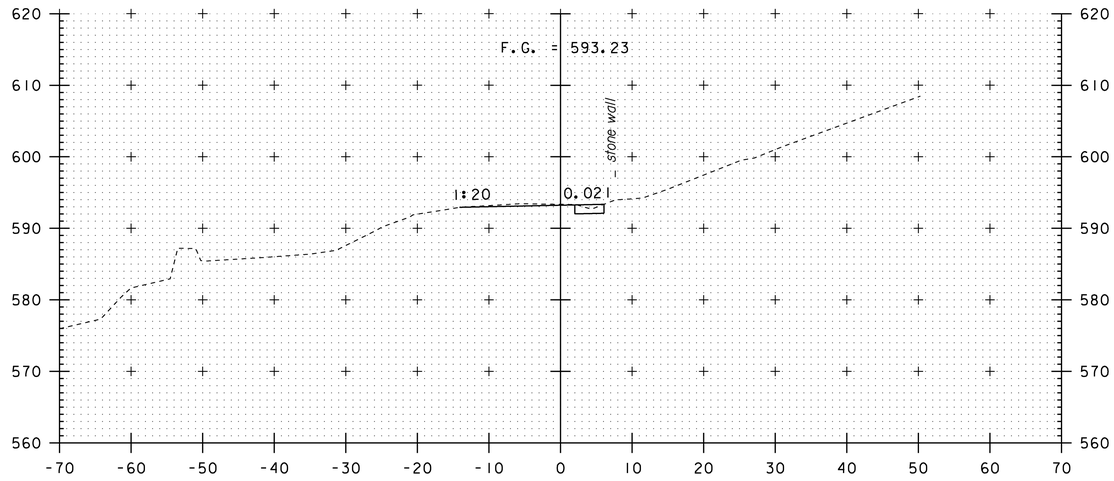
10+50



11+00



10+40
BEGIN APPROACH



10+75

STA. 10+40 - STA. 11+00

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

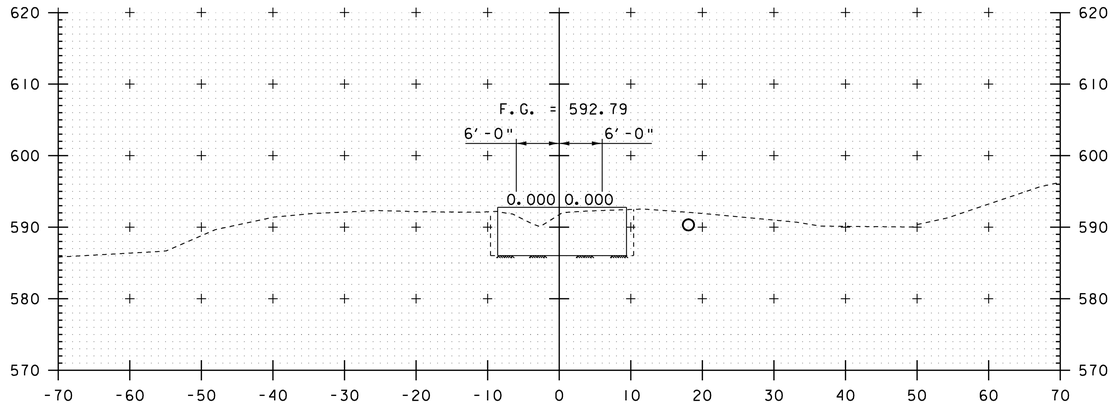
MODEL	1
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

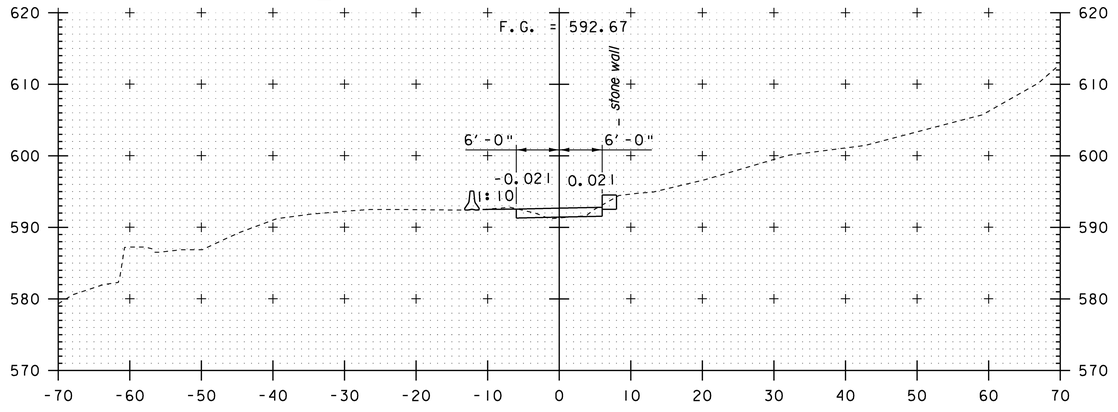
FILE NAME: Z96J302detourxsl.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
TEMP. DETOUR CROSS SECTIONS (1 OF 4)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 45 OF 54

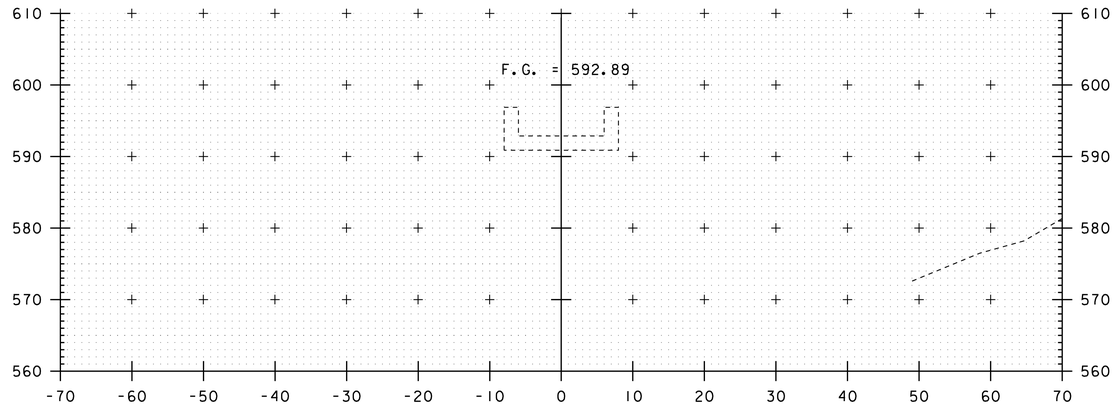


11+50

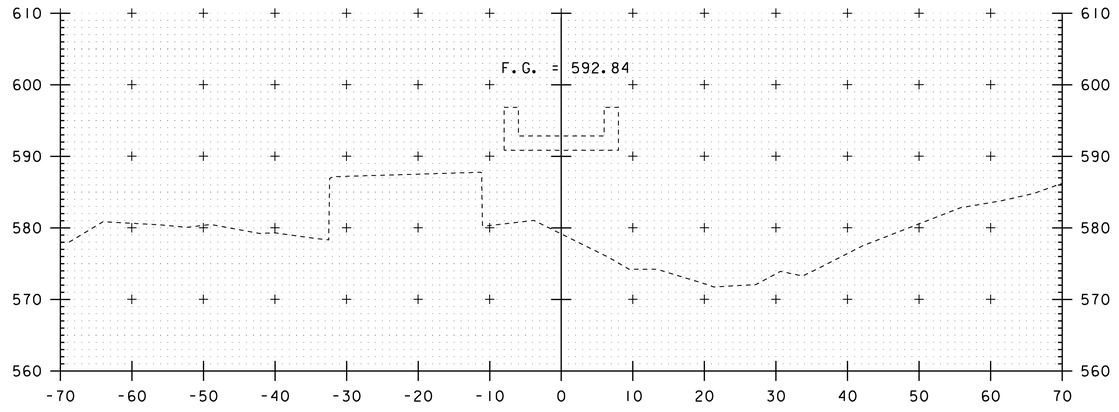
BEGIN TEMP. BRIDGE
STA. 11+48.29±



11+25



12+00



11+75

STA. 11+25 - STA. 12+00

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

MODEL	2
HTA PROJECT NO.	904214

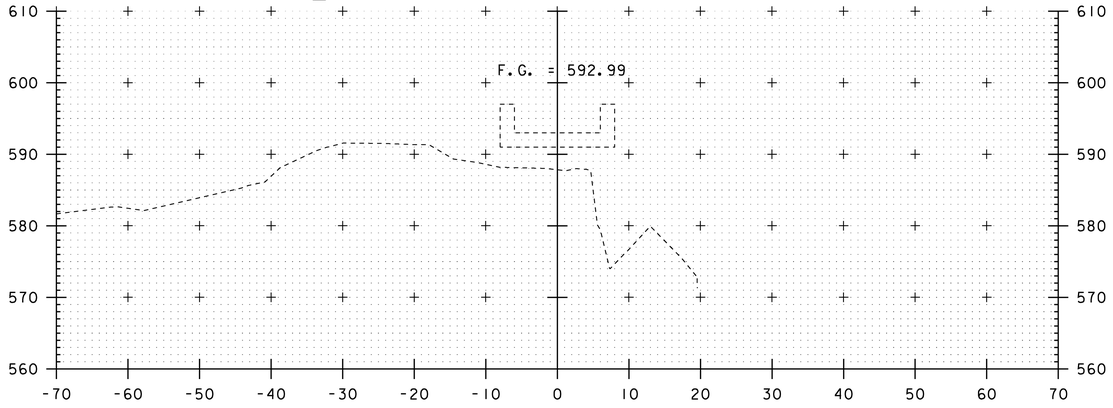
Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

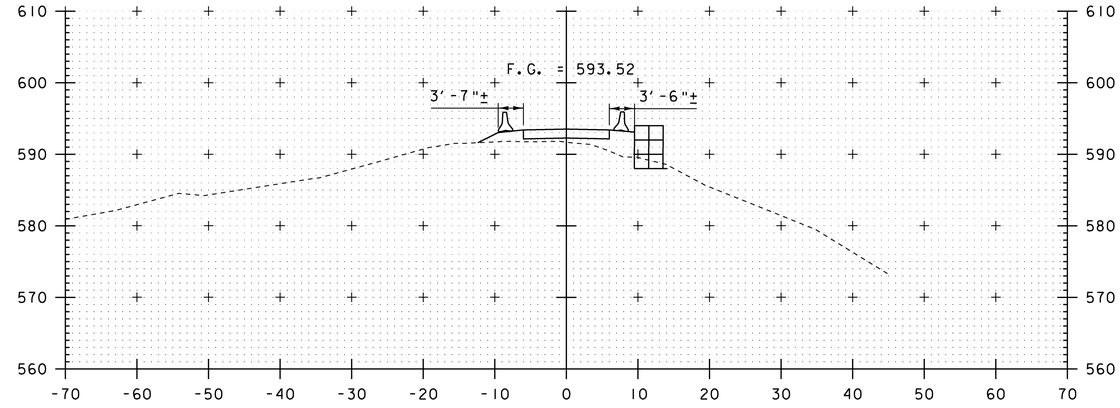
FILE NAME: Z96J302detourxs2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES

TEMP. DETOUR CROSS SECTIONS (2 OF 4)

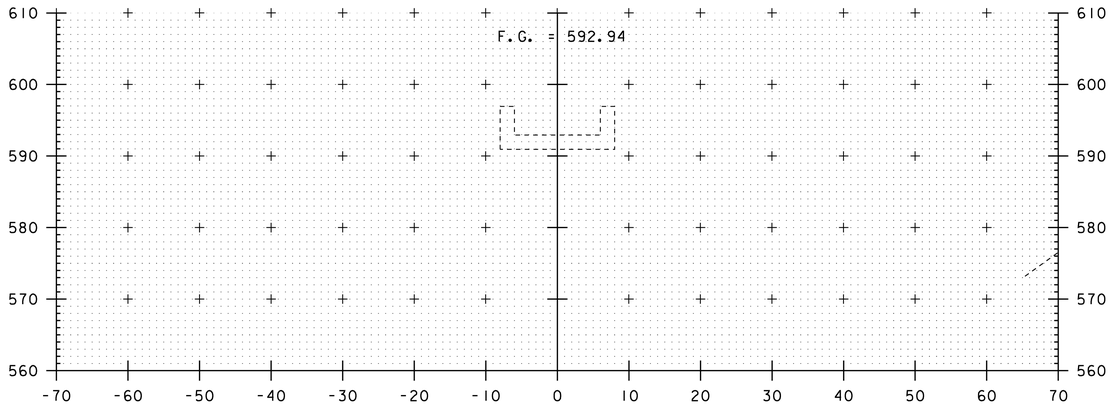
END TEMP. BRIDGE
STA. 12+57.81±



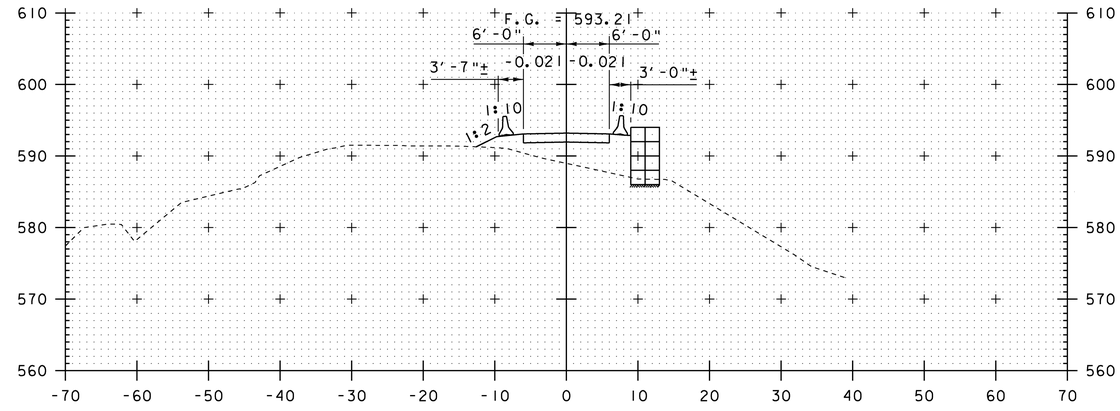
12+50



13+00



12+25



12+75

STA. 12+25 - STA. 13+00

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

MODEL	3
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

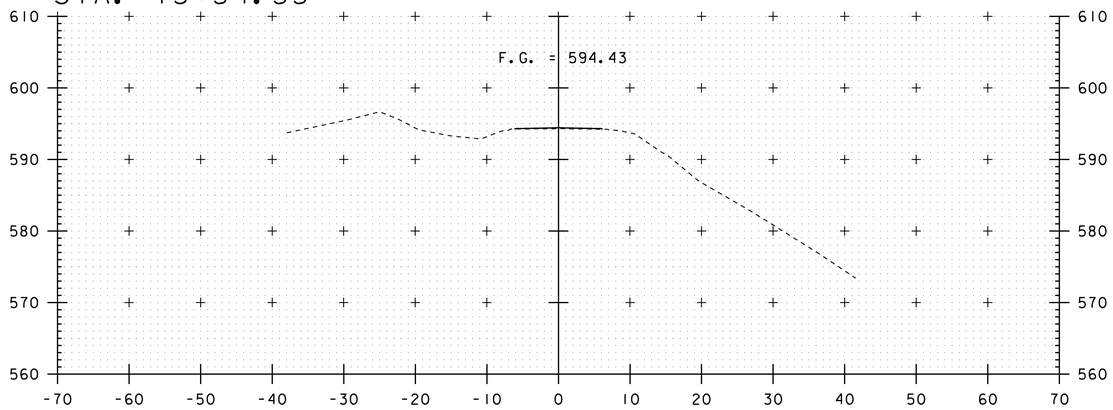
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detourxs3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA

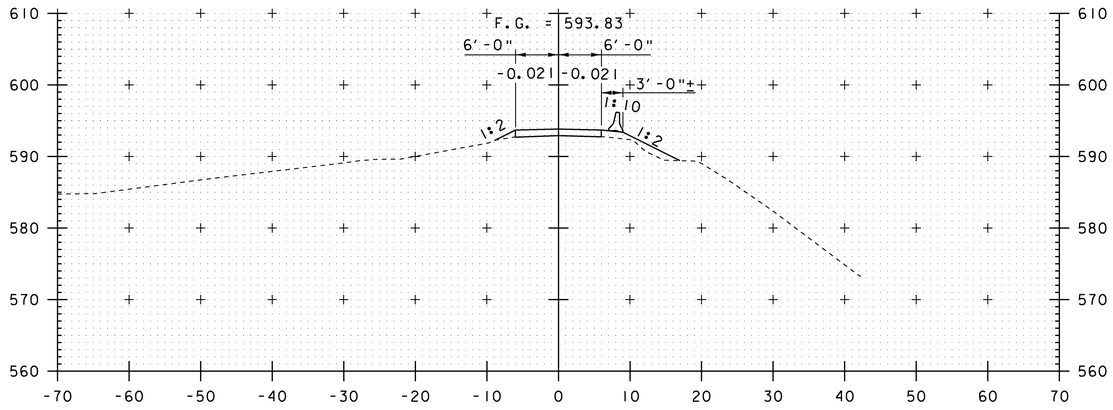
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES

TEMP. DETOUR CROSS SECTIONS (3 OF 4)

END TEMP. DETOUR
BEGIN APPROACH
STA. 13+54.55

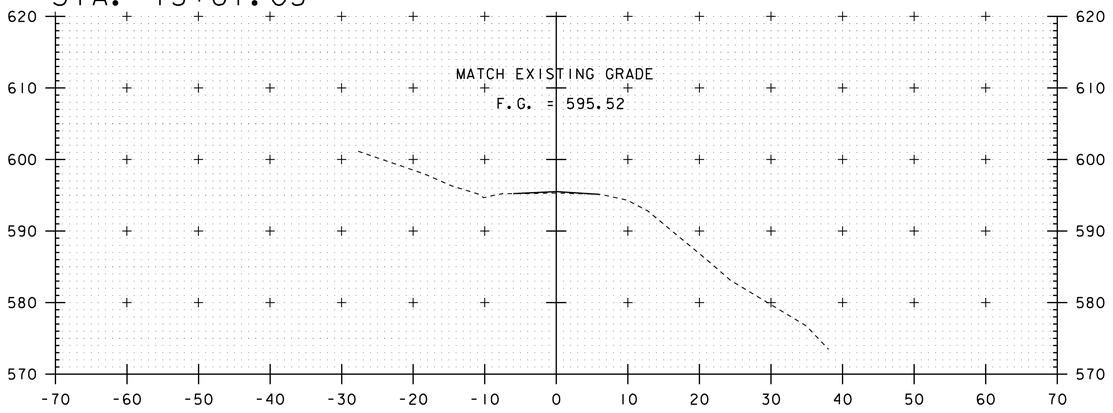


13+50



13+25

END APPROACH
STA. 13+67.05



13+67

STA. 13+25 - STA. 13+67

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

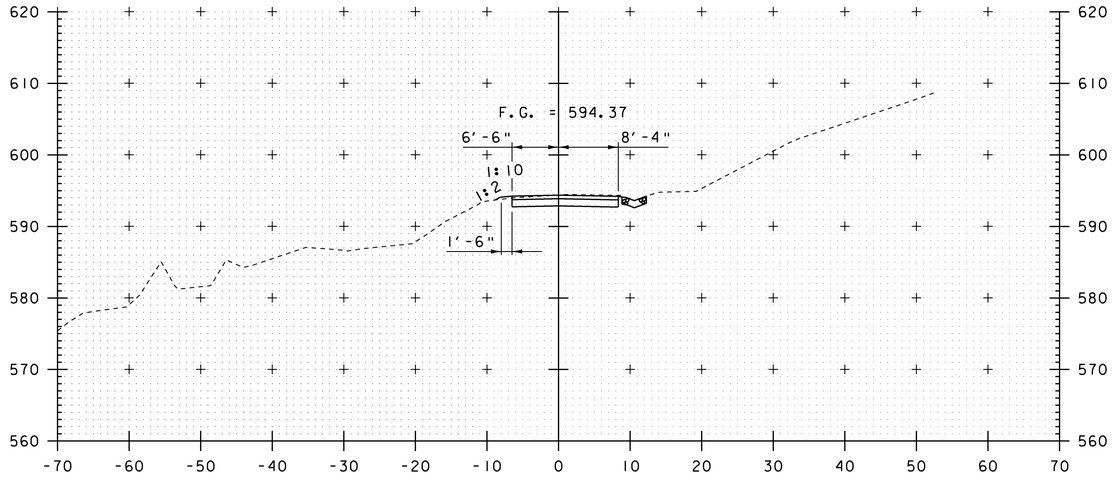
MODEL	4
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

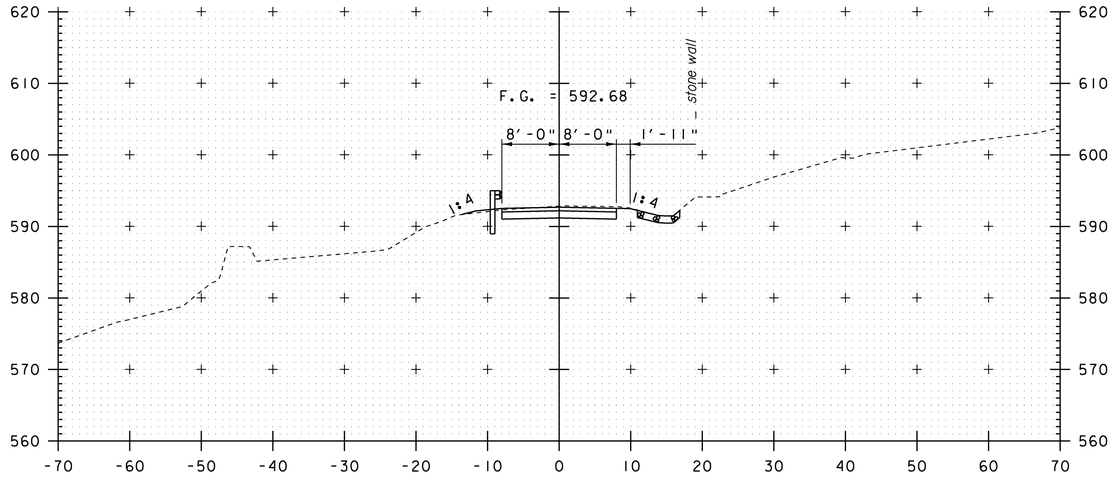
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302detourxs4.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES

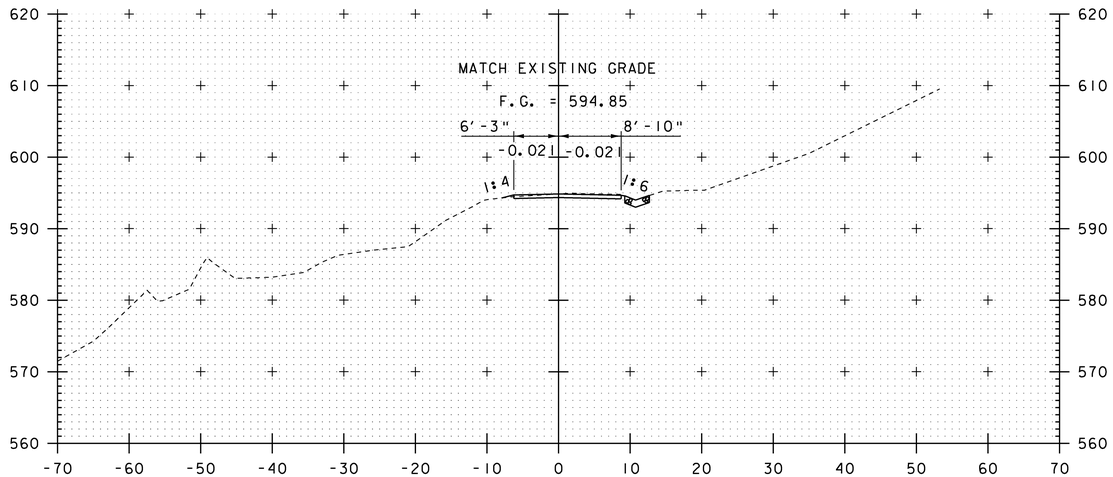
TEMP. DETOUR CROSS SECTIONS (4 OF 4)



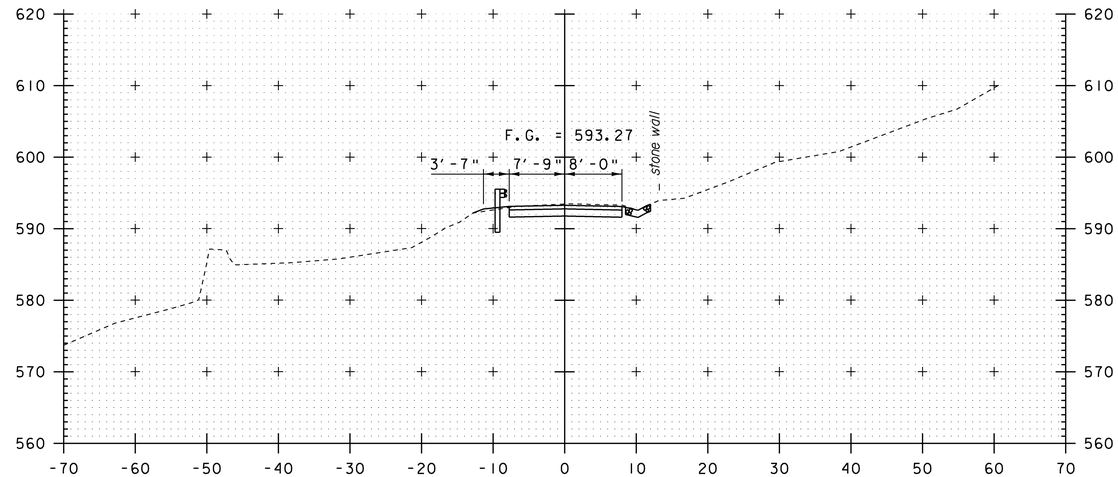
50+50
BEGIN PROJECT
END APPROACH



51+00



50+40
BEGIN APPROACH



50+75

STA. 50+40 - STA. 51+00

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

MODEL	5040 to 5100
HTA PROJECT NO.	904214

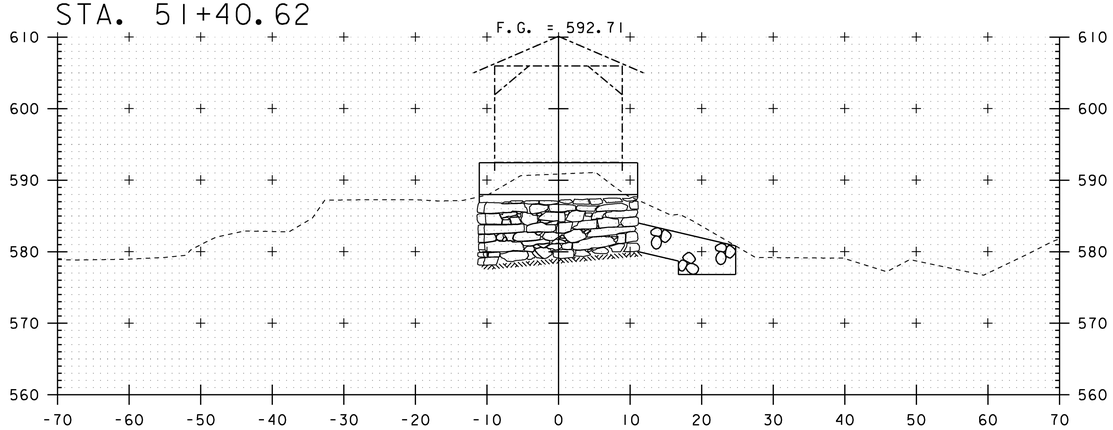
Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

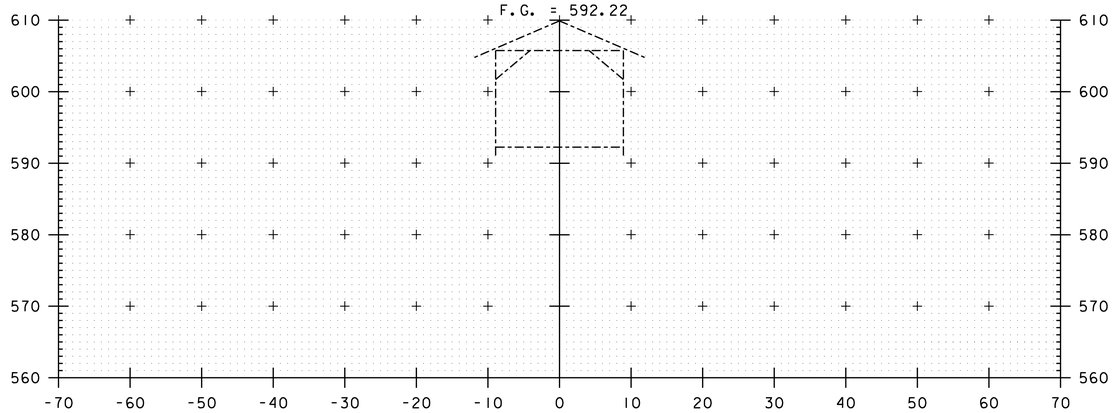
FILE NAME: Z96J302XSI.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 CROSS SECTIONS (1 OF 4)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 49 OF 54

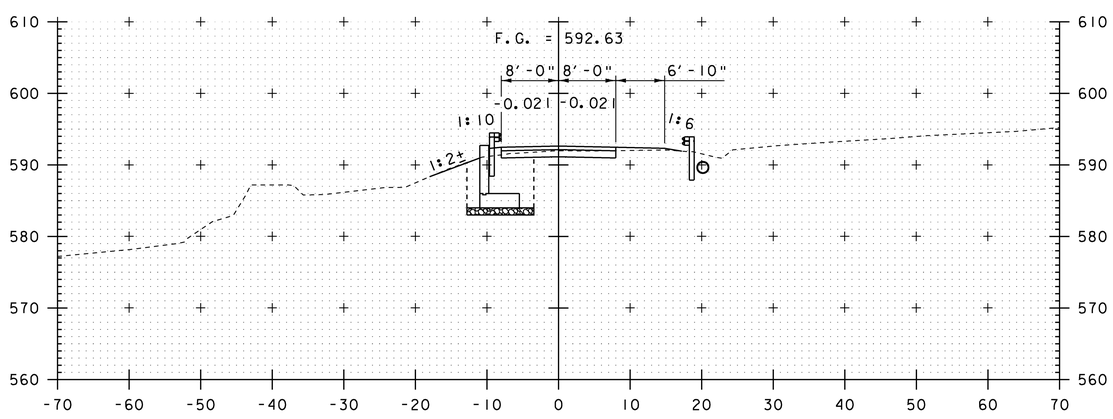
BEGIN BRIDGE
STA. 51+40.62



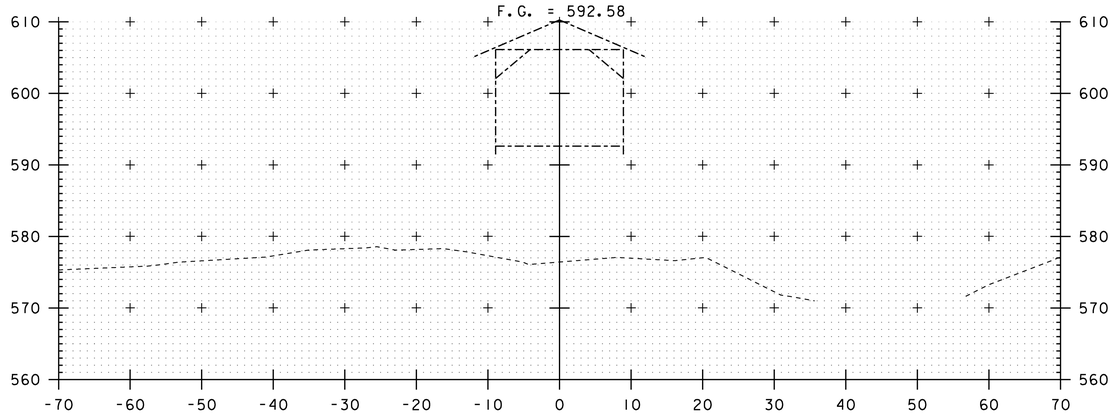
51+39



51+75



51+25



51+50

STA. 51+25 - STA. 51+75

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

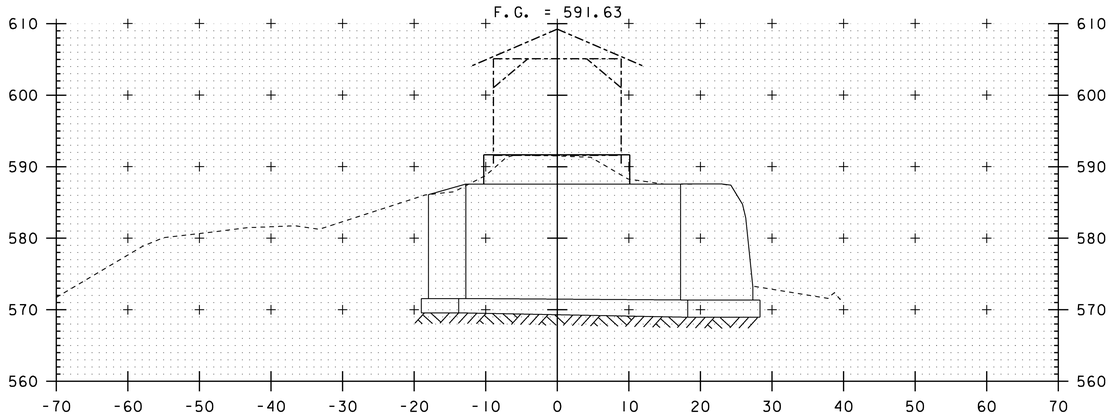
MODEL	5125 TO 5200
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

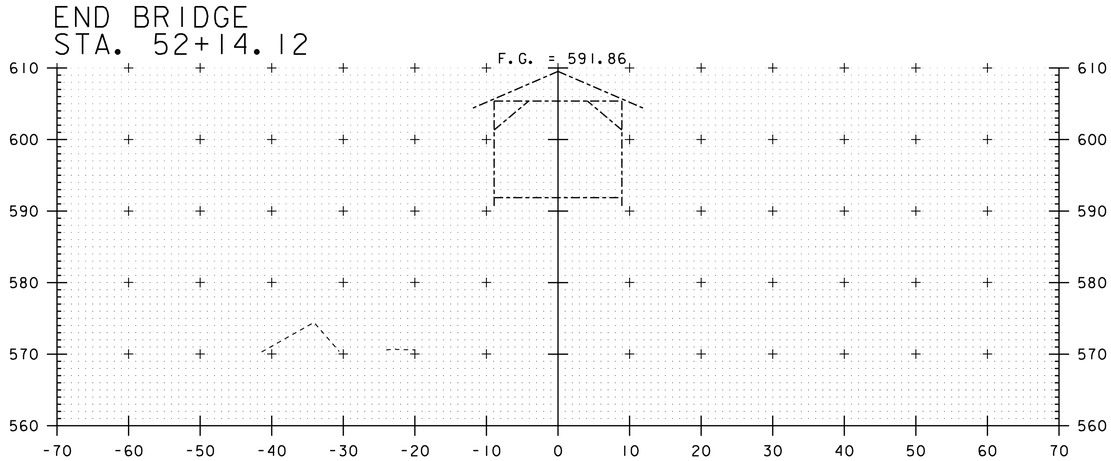
FILE NAME: Z96J302XS2.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 CROSS SECTIONS (2 OF 4)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 50 OF 54

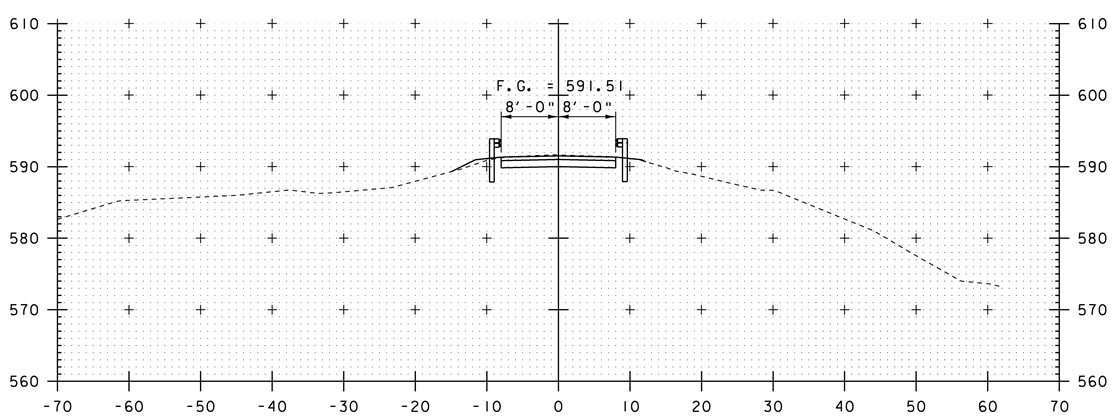


52+16

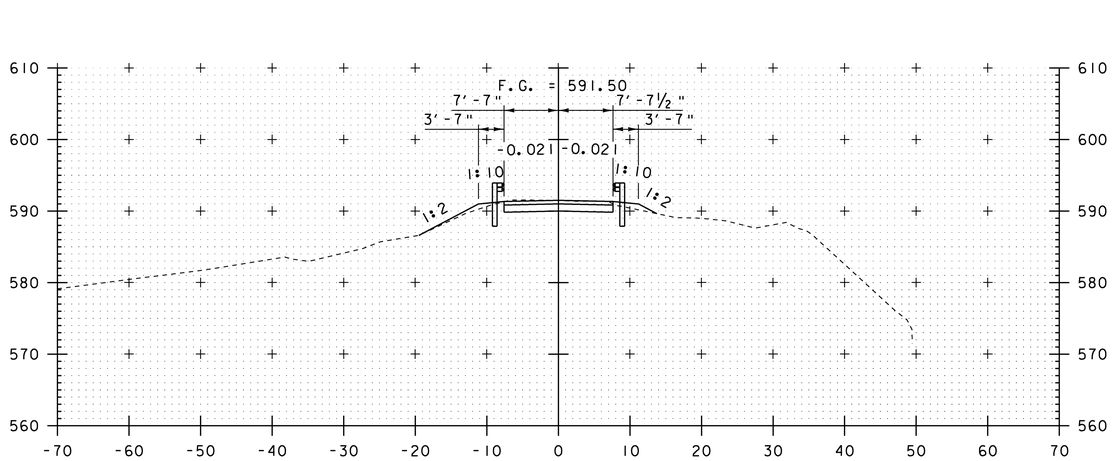
END BRIDGE
STA. 52+14.12



52+00



52+50



52+25

STA. 52+00 - STA. 52+50

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

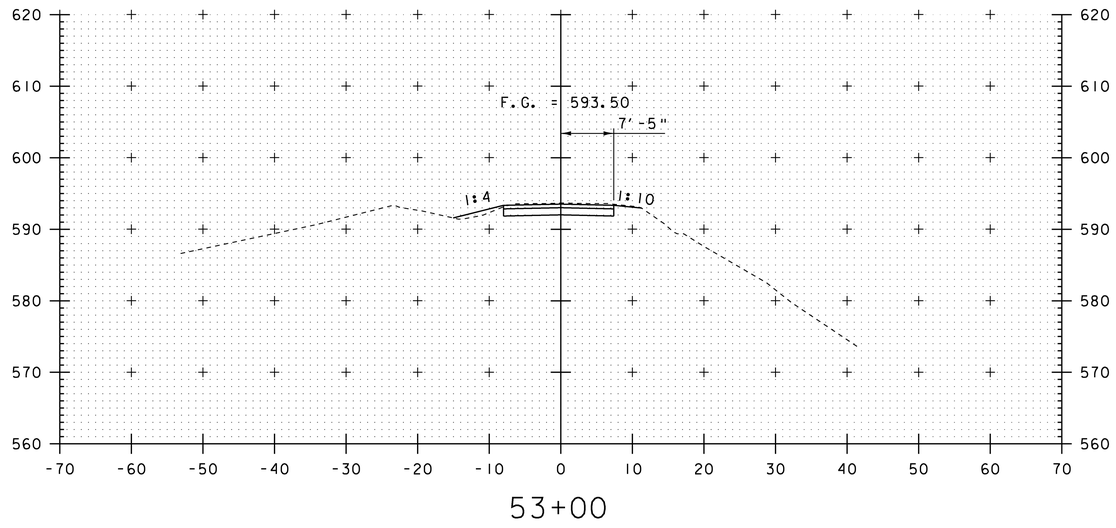
MODEL	5216 TO 5275
HTA PROJECT NO.	904214

Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

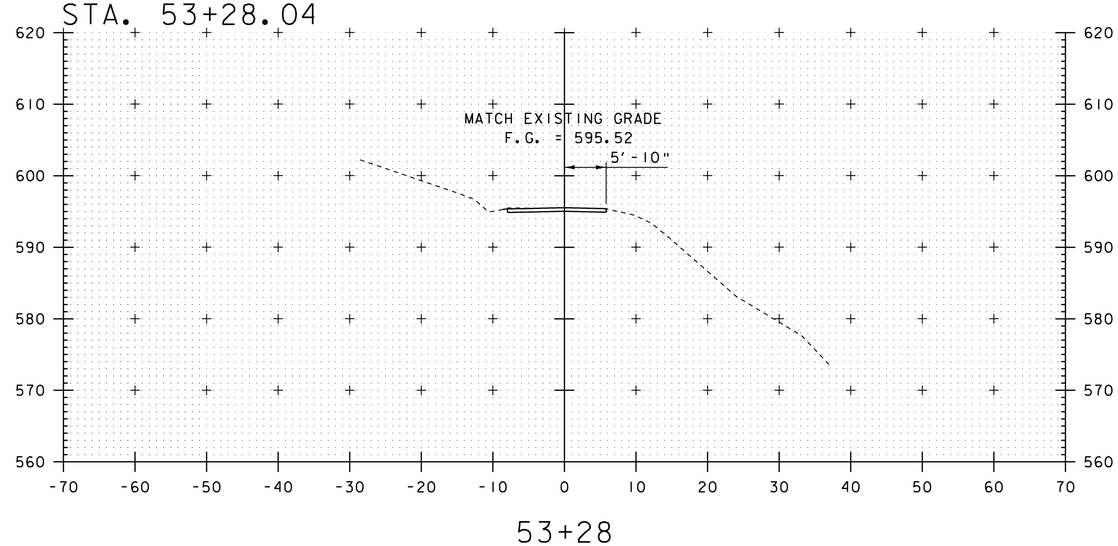
FILE NAME: Z96J302XS3.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 CROSS SECTIONS (3 OF 4)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 51 OF 54

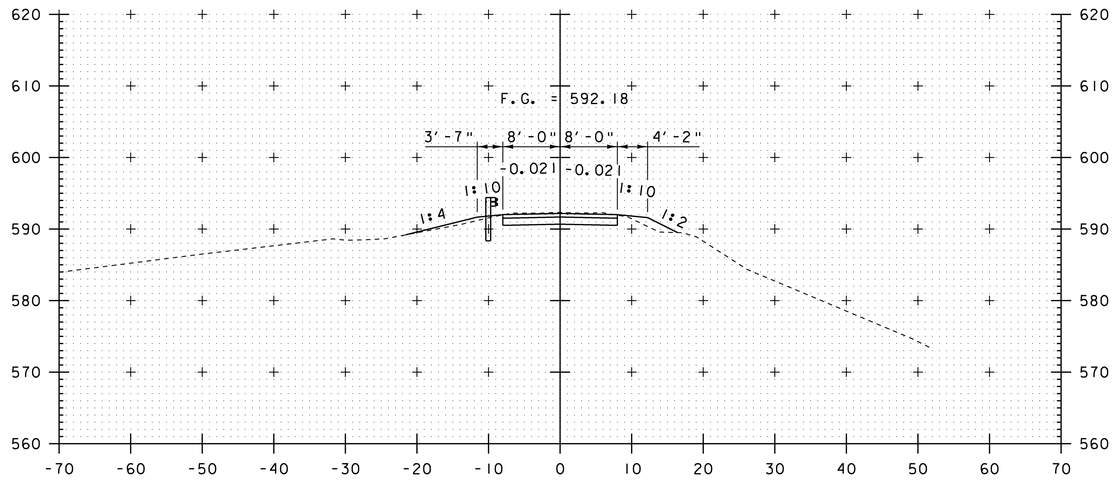


53+00

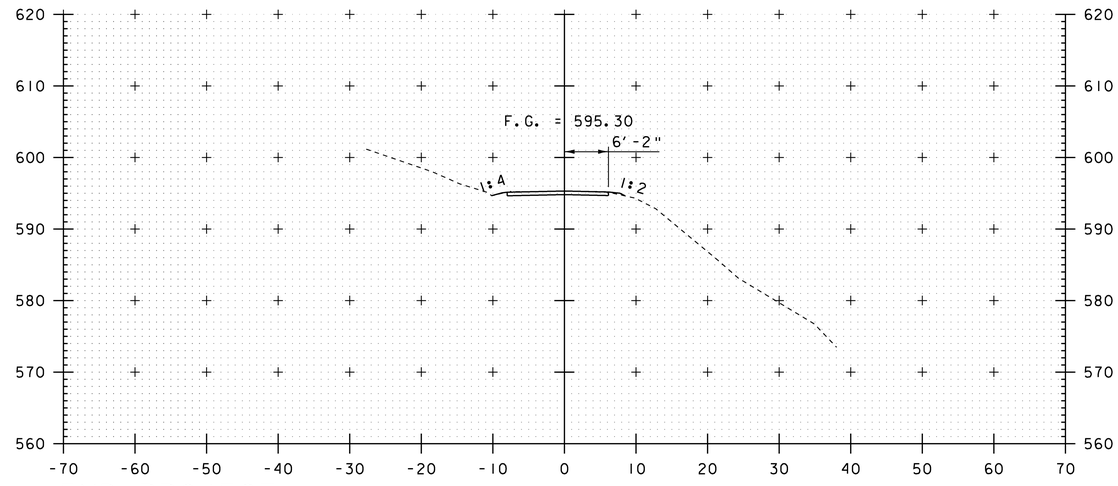
END APPROACH
STA. 53+28.04



53+28



52+75



END PROJECT
BEGIN APPROACH
STA. 53+18.04

53+25

STA. 52+75 - STA. 53+28

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

MODEL	5300 TO 5328
HTA PROJECT NO.	904214

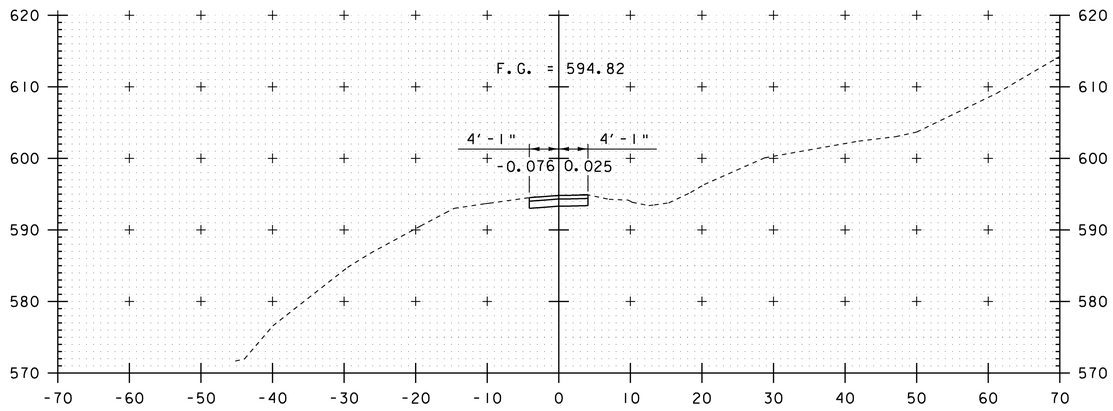
Hoyle, Tanner & Associates, Inc.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

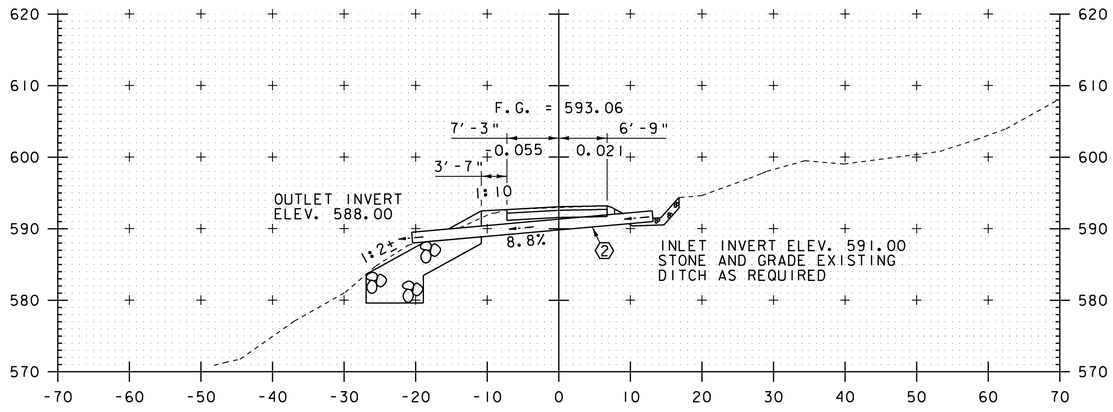
FILE NAME: Z96J302XS4.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 CROSS SECTIONS (4 OF 4)

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 52 OF 54

END T.H. 27 CONSTRUCTION
STA. 100+62.75



100+50



100+25

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

STA. 100+25 - STA. 100+50

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

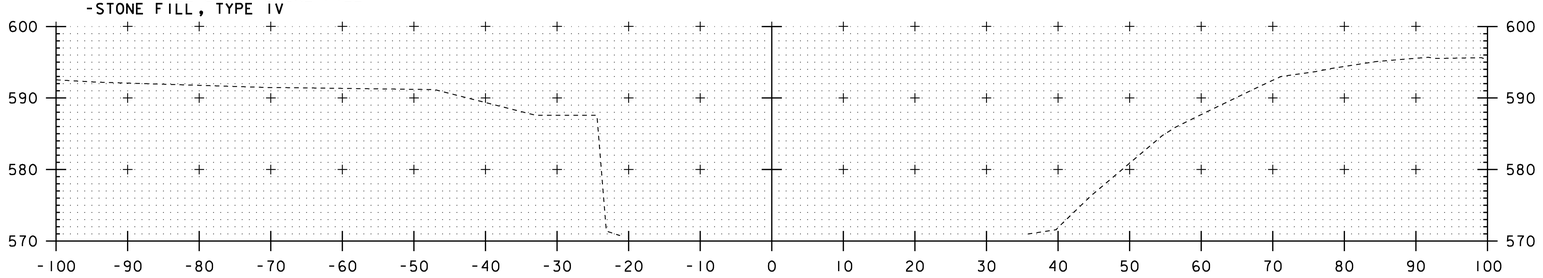
MODEL
5040 to 5100
HTA PROJECT NO.
904214

FILE NAME: Z96J302xs5.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
T.H. 27 (CLASS 4) CROSS SECTIONS

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 53 OF 54

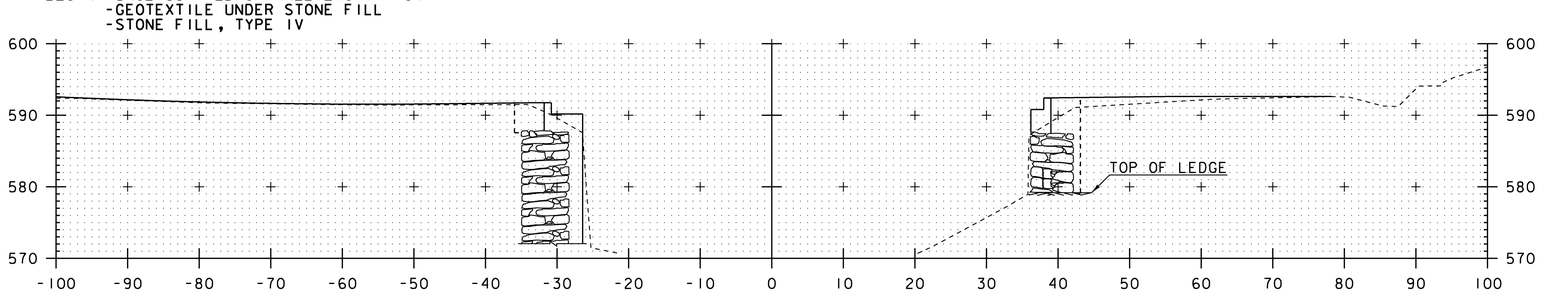
Hoyle, Tanner & Associates, Inc.

STA. 250+25 RT.
END -UNCLASSIFIED CHANNEL EXCAVATION
-GEOTEXTILE UNDER STONE FILL
-STONE FILL, TYPE IV

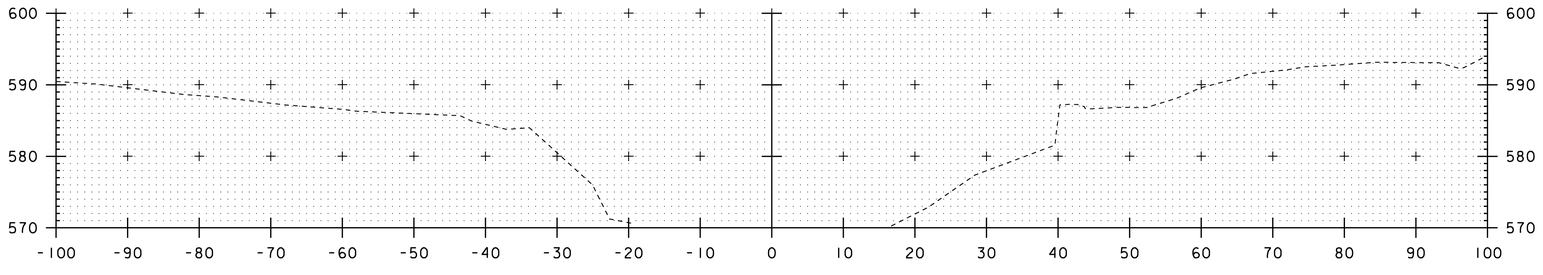


250+25

STA. 250+08 RT.
BEGIN -UNCLASSIFIED CHANNEL EXCAVATION
-GEOTEXTILE UNDER STONE FILL
-STONE FILL, TYPE IV



250+00



249+75

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

MODEL
5040 to 5100
HTA PROJECT NO.
904214

Hoyle, Tanner & Associates, Inc.

STA. 249+75 - STA. 250+25

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(23)

FILE NAME: Z96J302xs6.dgn
PROJECT LEADER: J.H.WEAVER
DESIGNED BY: J.BICJA
CHANNEL CROSS SECTIONS

PLOT DATE: 8/1/2008
DRAWN BY: J.B.McQUAID
CHECKED BY: S.T.JAMES
SHEET 54 OF 54