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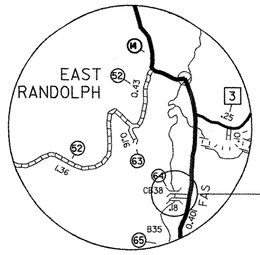
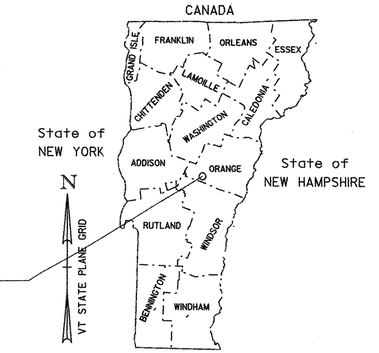
G - 1d	STEEL BEAM GUARDRAIL (40 MPH & LESS)	- 1/03/00

STATE OF VERMONT

AGENCY OF TRANSPORTATION



LOCATION MAP
(TRACED FROM TOWN MAP)



Commonwealth of MASSACHUSETTS

PROPOSED IMPROVEMENT

BRIDGE PROJECT

TOWN OF: RANDOLPH

COUNTY OF: ORANGE

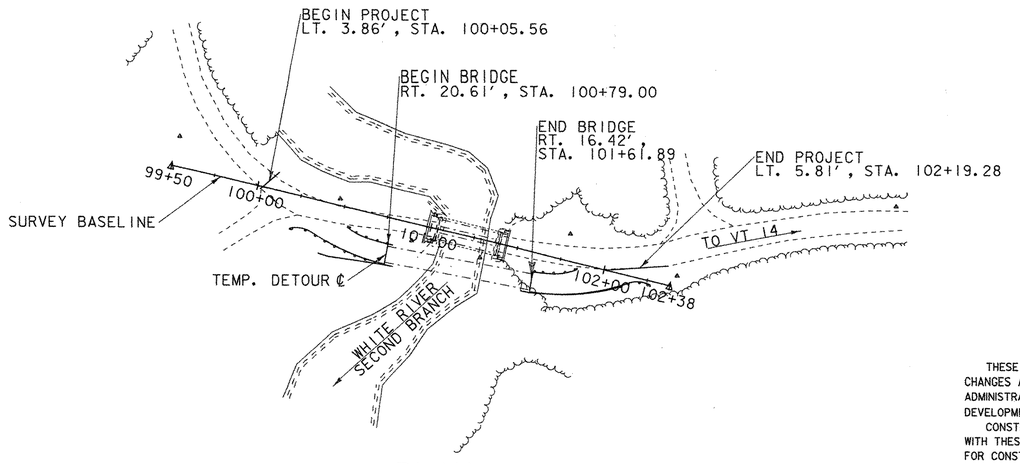
ROUTE NO: TH 64, CL 3 BRIDGE NO: 38

PROJECT LOCATION: BEGINNING APPROXIMATELY 0.1 MILE WEST OF THE INTERSECTION OF TH 64 AND VT14 AND CONTINUING 214' EASTERLY ALONG TH 64.

PROJECT DESCRIPTION: REMOVAL OF A COVERED BRIDGE SUPERSTRUCTURE AND CONSTRUCTION OF A TEMPORARY BRIDGE AND APPROACHES

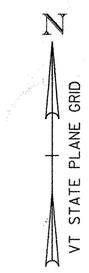
LENGTH OF STRUCTURE: 83.0 FEET

LENGTH OF PROJECT: 214 FEET



PLAN

SCALE: 1" = 40'



RECORD PLANS

CONTRACTOR: MILLER CONSTRUCTION INC. – WINDSOR, VT

RESIDENT ENGINEER: TOM CHASE

CONSTRUCTION BEGAN: APRIL 18, 2007

CONSTRUCTION COMPLETE: JUNE 14, 2007

RECORD PLANS BY: TOM CHASE

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

BY Thomas A. Chase RESIDENT ENGINEER

DATE 10/01/08

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.

BUILT AS DESIGNED

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 : R.Gilman
SURVEYED DATE : 12/19/2005

DATUM
VERTICAL: NAVD88
HORIZONTAL: NAD 83(96)

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 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

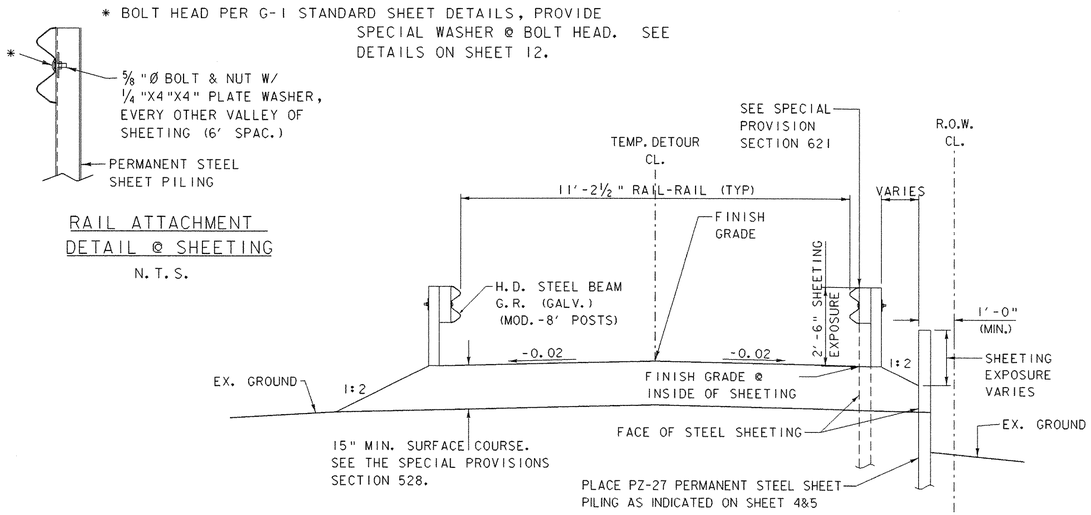
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATOR
APPROVED Ted Kimball DATE 1-18-07

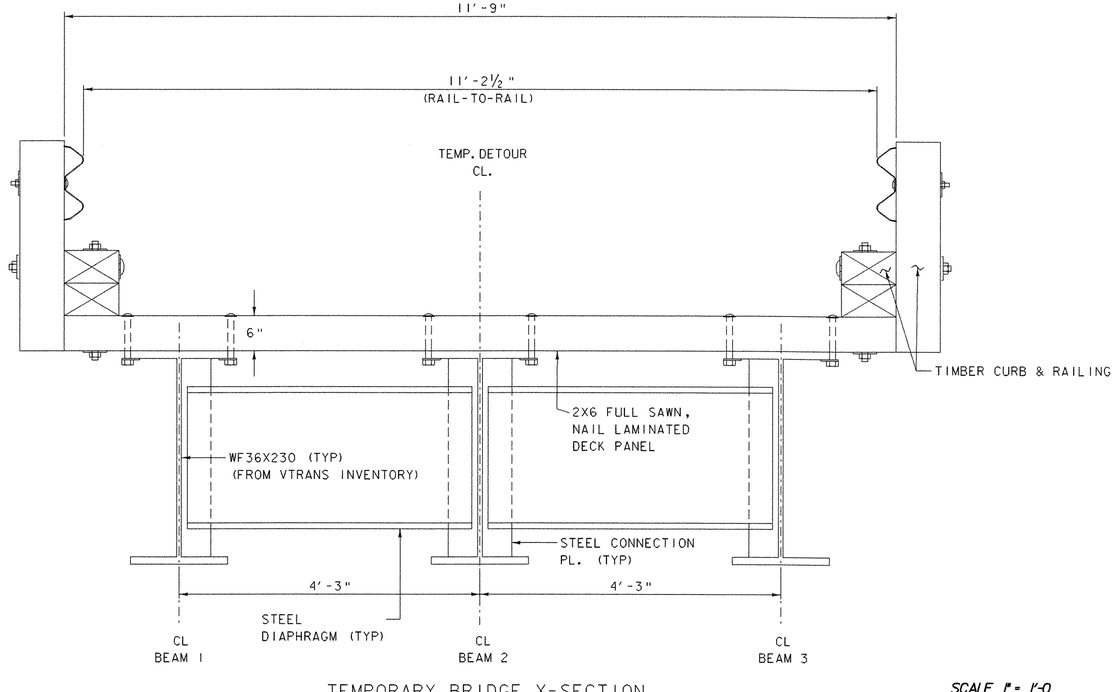
DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Tetreault DATE 12-20-06

PROJECT MANAGER : J. WEAVER

PROJECT NAME : RANDOLPH BHO 1444(50)

SHEET 1 OF 18 SHEETS





LIST OF QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	EROSION CONTROL	BRIDGE	FULL E&C	TOTAL	FINAL
	201.31	THINNING AND TRIMMING	EACH		1		1	
*	505.35	PERMANENT STEEL SHEET PILING (S=45.3 in.³ MIN.)	SF		1540		1540	
	522.20	STRUCTURAL LUMBER AND TIMBER-UNTREATED	MFBM		0.200		0.200	
	527.10	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.)	LS		1		1	
	528.10	ONE-WAY TEMPORARY BRIDGE (975 SF - EST.) (MOD.)	LS		1		1	
	529.20	PARTIAL REMOVAL OF STRUCTURE (MOD.)	EACH		1		1	
	613.10	STONE FILL, TYPE I (MOD. - CHECK DAM)	CY	5			5	
	620.70	SNOW FENCE (MOD.-PDF)	LF	120			120	
	621.21	HEAVY DUTY STEEL BEAM GUARD RAIL (GALV.) (MOD.-8' POSTS)	LF		105		105	
	621.21	HEAVY DUTY STEEL BEAM GUARD RAIL (GALV.) (MOD.-STEEL SHEET PILING)	LF		50		50	
	630.15	FLAGGERS	HR.		20		20	
	631.10	FIELD OFFICE-ENGINEERS	LS			1	1	
	631.25	FIELD OFFICE-TELEPHONE (N.A.B.I.)	LU			1	1	
	635.11	MOBILIZATION/DEMOBILIZATION	LS		1		1	
	641.10	TRAFFIC CONTROL	LS		1		1	
	649.51	GEOTEXTILE FOR SILT FENCE	SY	30			30	
	651.15	SEED	LB	5			5	
	651.18	FERTILIZER	LB	16			16	
	651.20	AGRICULTURAL LIMESTONE	TON	0.1			0.1	
	651.25	HAY MULCH	TON	0.1			0.1	
	651.35	TOPSOIL	CY	26			26	
	652.10	EROSION PREVENTION & SEDIMENT CONTROL PLAN	LS	1			1	
	652.20	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	HR	25			25	
	652.30	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	LU	1			1	
	654.10	EROSION MATTING	SY	154			154	
	675.20	TRAFFIC SIGNS, TYPE A	SF		12.5		12.5	
	675.301	FLANGED CHANNEL SIGN POST	LF		22		22	

* NOTE: "S" IS FOR ENTIRE STEEL SHEET.

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND IT'S LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2002, AND IT'S LATEST REVISIONS.
2. ALL INFORMATION PROVIDED IN THE PLANS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING THE WORK.
3. ALL WORK IS TO BE COMPLETED WITHIN THE AVAILABLE TOWN-OWNED RIGHT-OF-WAY. THE R.O.W. IS ASSUMED TO BE CENTERED ABOUT THE CENTER LINE OF THE BRIDGE OR ROADWAY. NO PROVISIONS HAVE BEEN MADE TO GO OUTSIDE THE EXISTING RIGHT-OF-WAY AND NO WORK SHALL BE PERFORMED OR PAID FOR OUTSIDE OF EXISTING TOWN-OWNED RIGHT-OF-WAY LIMITS. SHOULD THE CONTRACTOR REQUIRE ANY ADDITIONAL R.O.W. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL EASEMENTS.
4. GREAT CARE SHALL BE TAKEN BY THE CONTRACTOR TO PREVENT ANY MATERIAL FROM ENTERING THE STREAMBEDS PER SECTION 105 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ANY MATERIAL THAT DOES ESCAPE THE CONTRACTOR'S CONTAINMENT SYSTEM SHALL BE RECOVERED IMMEDIATELY, TO THE SATISFACTION OF THE ENGINEER.
5. NOT USED.
6. ALL WORK SHALL PROCEED IN A CAREFUL, ORDERLY MANNER SO THAT AFFECTED HISTORIC STRUCTURES ARE NOT DAMAGED IN ANY WAY. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO THE STRUCTURE AS A RESULT OF ITS OPERATIONS AT NO COST TO THE STATE. ALL DAMAGE WILL BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY AND NO REPAIRS WILL BE MADE UNTIL APPROVED BY THE AGENCY.
7. ALL TRAFFIC CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO SIGNS, BARRELS, BARRICADES, CONES, BARRIERS, NECESSARY FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION WILL BE PAID UNDER ITEM 641.10 TRAFFIC CONTROL. WHILE DETOURS AS DETAILED IN STANDARD 107 WILL NOT BE ENCOUNTERED, GENERAL PLACEMENT OF APPROACH SIGNING AND "ROAD CLOSED" SIGNS WILL BE AS SHOWN ON STANDARD 107. THE CONTRACTOR MAY CHOOSE TO SUBMIT TRAFFIC CONTROL PLANS FOR REVIEW. AS DETERMINED BY THE ENGINEER, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHALL REMAIN AT THE PROJECT SITE AFTER CONTRACT WORK IS COMPLETE.
8. THE WORK PAID FOR UNDER ITEM 529.20 PARTIAL REMOVAL OF STRUCTURE (MOD.) SHALL INCLUDE:
   -REMOVAL AND STOCKPILING OF EXISTING COVERED BRIDGE SUPERSTRUCTURE.

   SEE SPECIAL PROVISIONS.
9. TRAFFIC SHALL BE MAINTAINED ON THE PRESENT BRIDGE SUPERSTRUCTURE UNTIL THE TEMPORARY BRIDGE IS COMPLETE AND ACCEPTED FOR USE. TEMPORARY TRAFFIC RAILINGS SHALL BE CONSTRUCTED FOR MAINTAINING TRAFFIC ON THE REMAINING EXISTING SUPERSTRUCTURE AND APPROACHES ONCE THE COVERED BRIDGE TRUSSES AND ROOF HAVE BEEN REMOVED. SUCH WORK SHALL BE MEASURED AND PAID FOR UNDER ITEM 527.10, MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.).
10. WHERE NOT SPECIFIED, ALL LUMBER AND TIMBER DIMENSIONS ARE IN INCHES.

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2007	40	<10	64	4.0	<5
2027	50	<10	64	6.0	<5

FLEXIBLE ESAL's: 2007-2027 <10,000 2007-2047 <15,000

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444 (50)

FILE NAME: s06j094typ
PROJECT LEADER: J. WEAVER
DESIGNED BY: J. TREI
TYPICAL SECTIONS, NOTES & QUANTITIES

PLOT DATE: 3/29/06
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER
SHEET 2 OF 18

GPS CONTROL POINTS

HVCTRL # 1

STANDARD DISK STAMPED

East Randolph

N = 521893.79
E = 1626547.81
ELEV. = 657.60

To reach from the intersection of VT route 14 and VT route 66 in East Randolph go south along route 14 for 0.9 mi to the intersection of a gravel drive left, at the south edge of a cemetery, and the site of the mark on the left, south of the gravel drive. The mark is set 1in below the ground surface in the top of a 12 in diameter concrete monument poured 4 ft deep. It is 21.7 ft east of and about 1.6 ft higher than the centerline of route 14, 16.7 ft south of the centerline of the gravel drive, 43 ft east of pole # 30T/7/122/61/30, 48.6 ft southwest of the southwest corner of the gravestone of Blodgett, and 1ft west of a fiberglass witness post.

HVCTRL # 2

STANDARD DISK STAMPED

East Randolph Az MS

N = 520093.26
E = 1626438.54
ELEV. = 647.81

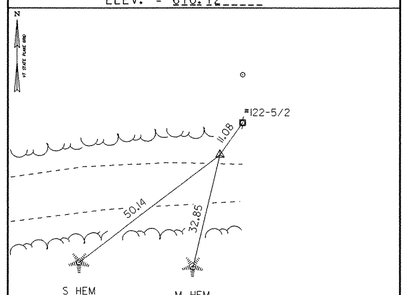
To reach from the intersection of VT route 14 and VT route 66 in East Randolph go south along route 14 for 0.6 mi to the East Randolph School on the left and the site of the mark on the left, in a lawn in front of the school.. The mark is set 4 in below the ground surface in the top of a 12 in diameter concrete monument poured 4 ft deep. It is 22 ft east of and about 0.3 ft lower than the centerline of route 14, 42.7 ft north of the centerline of the most southernly enterance drive to the school. 89 ft west northwest of the southwest corner of the school building, and 59 ft southwest of pole # 61/20 and a fiberglass witness post.

• DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

TRAVERSE TIES

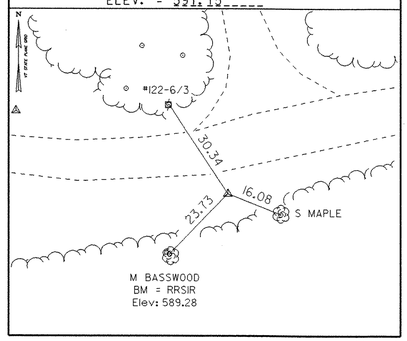
HVCTRL #4

NORTH = 520686.55
EAST = 1626117.80
ELEV. = 610.72



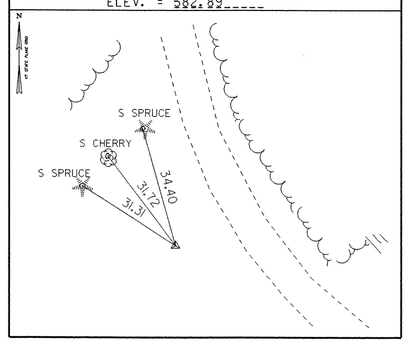
HVCTRL #5

NORTH = 520647.42
EAST = 1625994.71
ELEV. = 591.15



HVCTRL #6

NORTH = 520725.38
EAST = 1625715.30
ELEV. = 582.89



_____HVCTRL_____

NORTH = _____
EAST = _____
ELEV. = _____

_____HVCTRL_____

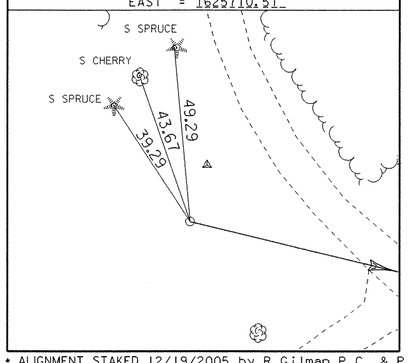
NORTH = _____
EAST = _____
ELEV. = _____

• MAIN TRAVERSE COMPLETED 08/24/05 by R. Gilman P. C. & P. Winters

ALIGNMENT TIES

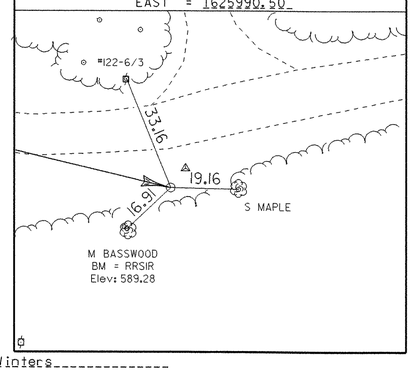
POB 99+50.00

NORTH = 520709.43
EAST = 1625710.51



POE 102+38.00

NORTH = 520641.98
EAST = 1625990.50



_____

NORTH = _____
EAST = _____

_____

NORTH = _____
EAST = _____

_____

NORTH = _____
EAST = _____

• ALIGNMENT STAKED 12/19/2005 by R. Gilman P. C. & P. Winters

DATUM

VERTICAL NAVD88
HORIZONTAL NAD 83(96)
ADJUSTMENT Compass

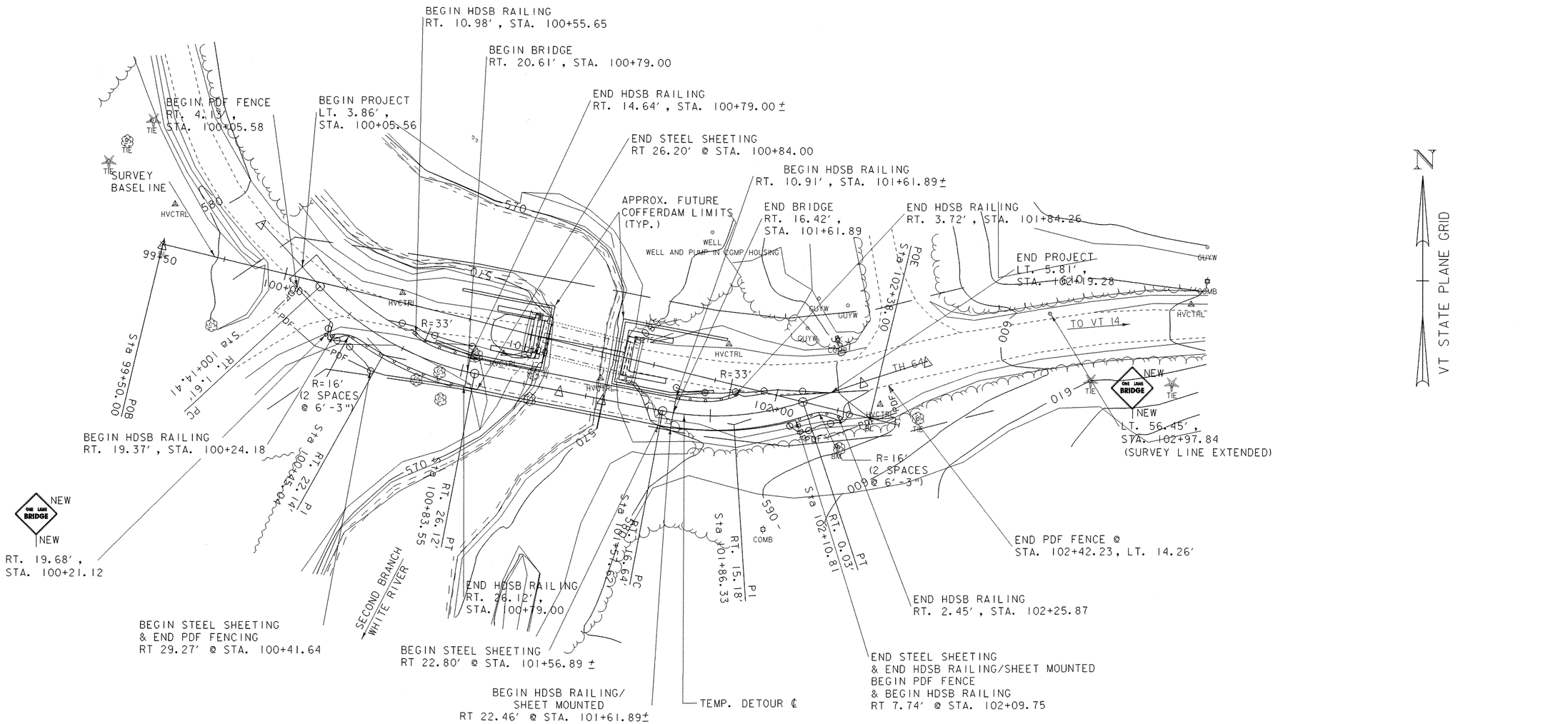
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: survey\s06j094ti.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY:
TIE SHEET

PLOT DATE: 4/11/06
DRAWN BY: R. Bullock
CHECKED BY: J. TREI

SUGGESTED SEQUENCE OF CONSTRUCTION

1.) MAKE REPAIRS TO THE DOWNSTREAM COVERED BRIDGE TRUSS.
2.) INSTALL TEMPORARY RAILINGS ON THE REMAINING SUPERSTRUCTURE AND APPROACHES.
3.) REMOVE AND TRANSPORT THE COVERED BRIDGE TRUSSES AND ROOF TO THE DESIGNATED TOWN STORAGE SITE. SEE SHEET 13 FOR ADDITIONAL DETAILS.
4.) INSTALL THE STEEL SHEETING, TEMPORARY BRIDGE, APPROACHES, AND RAILINGS.
5.) REMOVE AND DISPOSE OF THE REMAINING EXISTING BRIDGE SUPERSTRUCTURE AND TEMPORARY RAILINGS.



LEGEND & ABBREVIATIONS

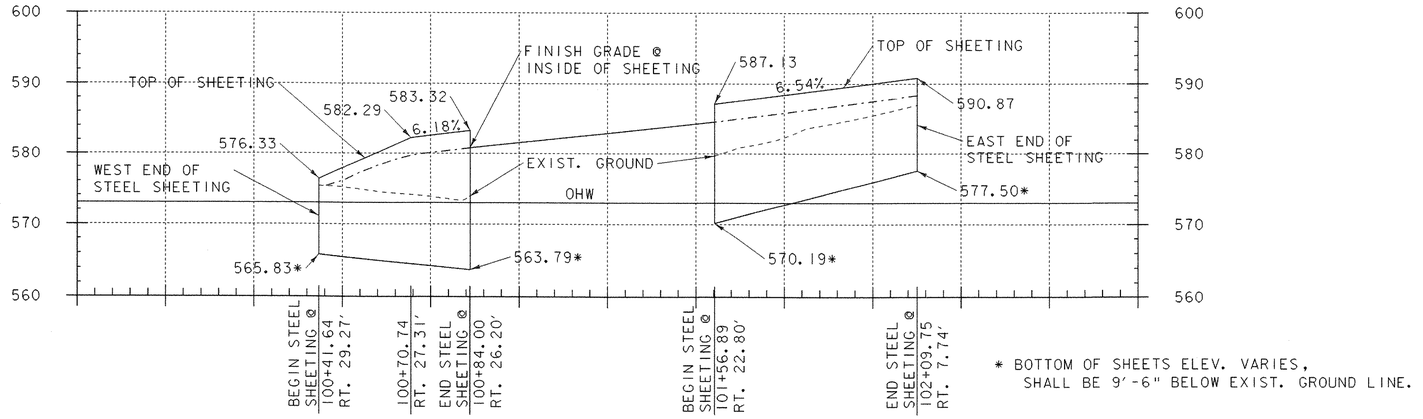
PDF———PDF———	SNOW FENCE (MOD.-PDF)
——————— ———	RIGHT OF WAY
HDSB RAILING:	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED) (MOD.-8' POSTS)
HDSB RAILING/ SHEET MOUNTED:	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED) (MOD.-STEEL SHEET PILING)
STEEL SHEETING:	PERMANENT STEEL SHEET PILING (S=45.3 in³ MIN.)

PLAN

SCALE: 1"=20'

SCALE 1" = 20'-0
20 0 20

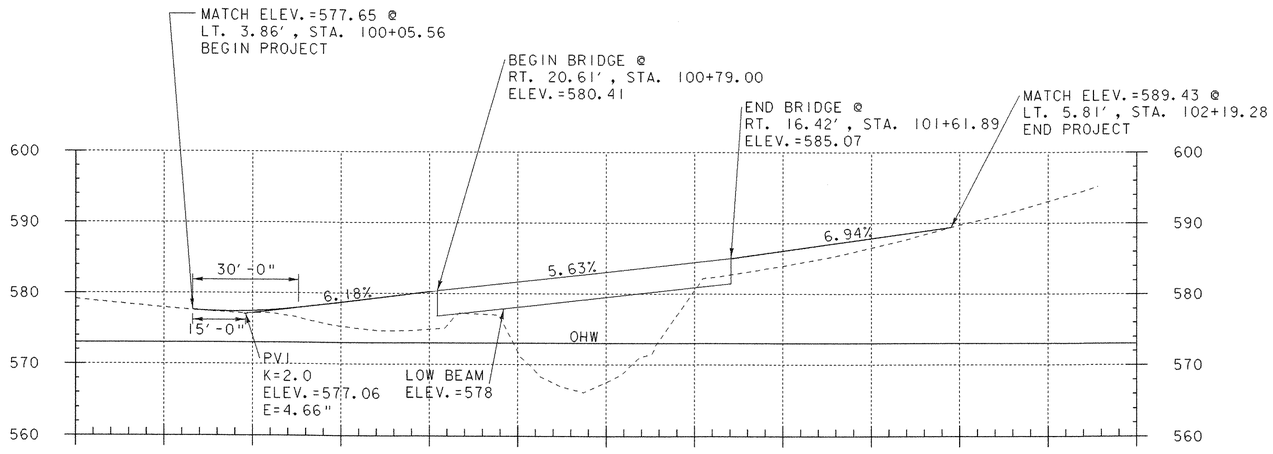
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BHO 1444(50)
FILE NAME: s061094plnprof	PLOT DATE: 4/11/06
PROJECT LEADER: J.WEAVER	DRAWN BY: J.TREI
DESIGNED BY: J.TREI	CHECKED BY: J.WEAVER
PLAN_SHEET	SHEET 4 OF 18



* BOTTOM OF SHEETS ELEV. VARIES, SHALL BE 9'-6" BELOW EXIST. GROUND LINE.

PROFILE @ FACE OF STEEL SHEETING (PERMANENT STEEL SHEET PILING)

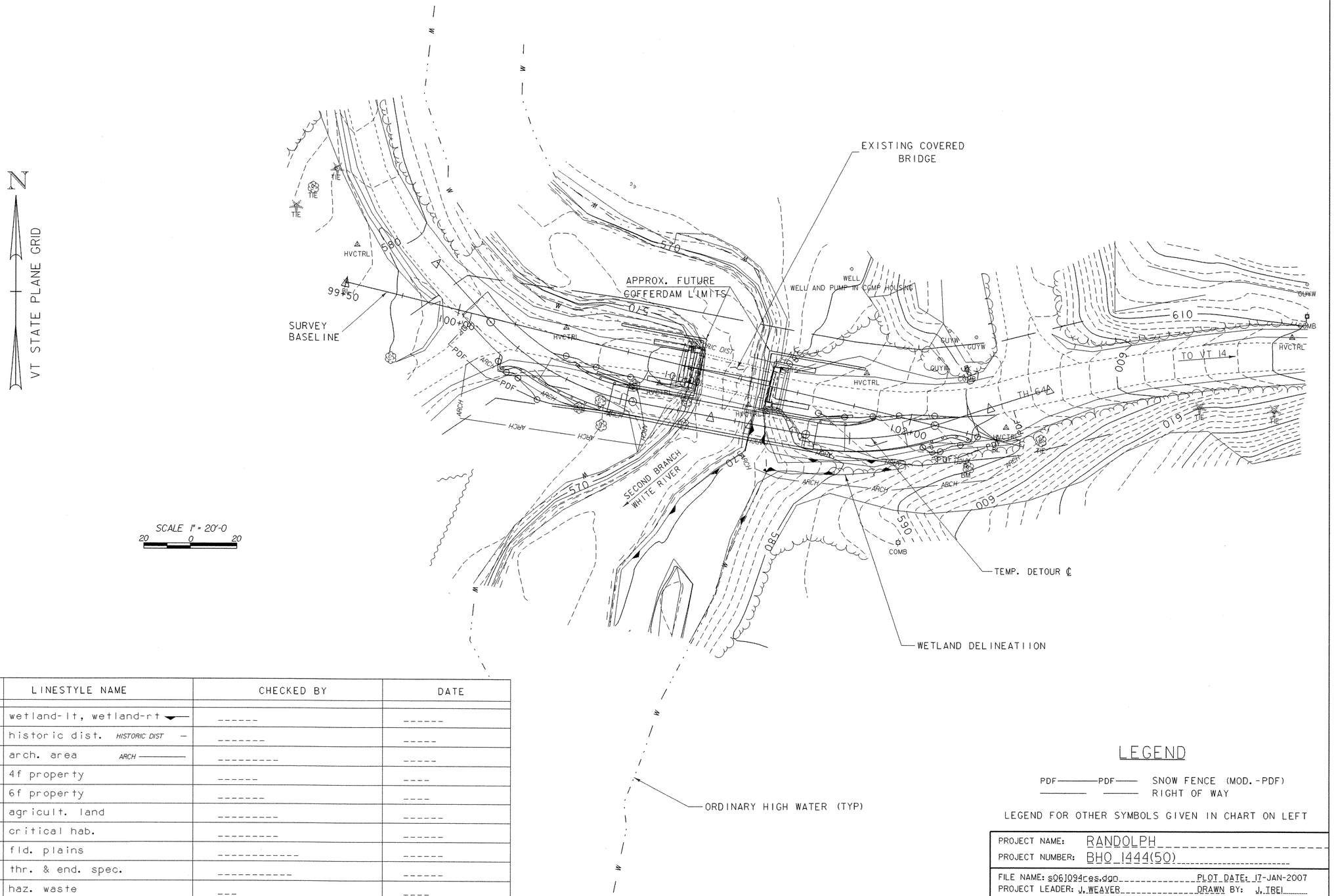
HORIZ. SCALE: 20' = 1"
VERT. SCALE: 10' = 1"



PROFILE @ TEMP. DETOUR CL

HORIZ. SCALE: 20' = 1"
VERT. SCALE: 10' = 1"

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BHO 1444(50)
FILE NAME: s061094xs	PLOT DATE: 17-JAN-2007
PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
DESIGNED BY: J. TREI	CHECKED BY: J. WEAVER
PROFILE SHEET	SHEET 5 OF 18



ENVIRONMENTAL RESOURCE	LEVEL	LINESTYLE NAME	CHECKED BY	DATE
Wetlands	EWB_P	wetland-lt, wetland-rt	------	------
Historic/Historic District	MHBC	historic dist. HISTORIC DIST	-------	-----
Archeaological Site	LAAS	arch. area ARCH	---------	-----
4f Property	MPL	4f property	------	----
6f Property	MPL	6f property	-------	----
Agricultural Land	LAPB	agricult. land	---------	------
Fish & Wildlife Habitat	EHA	critical hab.	---------	------
Flood Plains	EWB_P	fld. plains	----------	------
Endangered Species	EHA	thr. & end. spec.	----------	------
Hazardous Waste	EDEFAULT	haz. waste	---	----
Stormwater	DDEFAULT	Diamond	---------	-----

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: s06j094res.dgn PLOT DATE: 17-JAN-2007
PROJECT LEADER: J. WEAVER DRAWN BY: J. TREI
DESIGNED BY: J. TREI CHECKED BY: J. WEAVER
RESOURCE SHEET SHEET 6 OF 18

1. NARRATIVE

1.1. PROJECT DESCRIPTION

1.2. This project "Randolph BHO 1444(50)" will construct the temporary bridge to be used during the repair of Bridge 38 on Town Highway 64 over the South Branch of the White River in the Town of Randolph. This site is located approximately 0.1 miles west of the intersection of TH 64 & VT 14. The temporary bridge will be a one lane, single span, wood deck on steel girders. The temporary bridge will be located just south of the existing structure and will require temporary realignment of the existing road. The project will maintain traffic on an alternate route during construction. The total length of project work, including both approaches, drives and existing roadway is approximately 214 ft. The estimated disturbed area (excluding waste, borrow and staging areas) is approx 0.12 ac.* The estimated disturbed area for waste, borrow, and staging areas is approximately 0.15 acres*. This project should last one construction season.

1.3. SITE INVENTORY & ANALYSIS

1.3.1. Off Site Drainage Characteristics (Up And Down Gradient). The land in the project area is low lying flood plain. It consists of growth of brush, softwood and hardwood trees. The soil is primarily "level, deep, moderately well drained soils on flood plains of major streams and their tributaries. These soils formed in very fine sandy loam and silt loam alluvium." Road surfaces are gravel and there are some surrounding residential properties.

1.3.2. Drainage, Waterways, Bodies of Water. The bridges cross the South Branch of the White River. The river is meandering, and alluvial. The river at the new bridge is 2 ft wide at the bottom and 25 ft wide at the top and 5 ft deep from top to bottom. The watershed area is 46.9 sq. miles.

1.3.3. Topography, Existing Roads, Buildings, Utilities. The project site is on TH 64, which is a Class III gravel town highway through a low-lying valley. There is a resident to the northeast of the project, but is not within the vicinity of the work. Existing utility poles start on the right of the existing highway and run east.

1.3.4. The vegetation on the east approach is lightly forested with a mix of hardwoods and softwoods and the west approach is comprised of assorted brush, a couple of small to medium sized hardwood trees, and some field grass. Several small hardwoods and areas of brush will be removed within the existing right-of-way to accommodate the temporary detour bridge. Seed & Mulch will stabilize slopes flatter than 66%.

1.3.5. The Soil Conservation Service "Soil Survey of Orange County" identifies two soil types in the project site.

1.3.5.1.1. Wo Winooski very fine sandy loam. This soil is the primary soil covering most of the bridge area. The soil profile is typically: 8 in. of very fine sandy loam; 8-17 in. dark grayish born and olive very fine sandy loam; 17-60 in. is very dark grayish brown very fine sandy loam with mottles. It's erosion hazard rating is slight. The slope suggests low erodibility.

1.3.5.1.2. HdE Hartland silt loam, 25 to 50 % slope. This soil is in the area east of the old bridge. The soil profile is typically: 6 in. dark grayish brown silt loam over; 13 in. silt loam subsoil; over 19-60 in. dark grayish brown and olive silt and olive brown, yellowish brown, and olive very fine sandy loam. It's erosion hazard rating is severe. The slope suggests high erodibility.

1.3.6. Sensitive Resource Areas near the project include a Riparian Buffer extending 50' from the water's edge, an archaeological area to the south of the temporary bridge, and an historic area which is the covered bridge itself.

1.3.7. The Proximity to Natural or Man-Made Water Features in this area are as follows: The project is directly above the South Branch of the White River with existing ditches running along the highway and draining to the river. A well is located upstream north of the project approximately 60' away from construction.

1.4. TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL (SEE EROSION CONTROL DETAILS)

1.4.1. Temporary Measures to Prevent Erosion & Control Sediment Transport include:

1.4.1.1.1. "Project Demarcation Fencing" delineates the construction area for construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

1.4.1.1.2. "Seeding & Mulching" stabilizes slopes ranging from 0% to 66%. Add biodegradable "Erosion Control Matting" (or equivalent) to slopes ranging from 33% to 66%. Use seeding for long term exposed slopes. Grass takes 2 weeks to establish itself. Stabilize slopes within 48 hours or sooner considering rain.

1.4.1.1.3. "Stone Check Dams" placed in ditches reduce flow velocities and prevent erosion. Place dams in ditches so that the elevation of the top of a check dam is level with the toe of the next upslope check dam. The check dams may be removed once the stone lining of the ditches is complete and the surrounding area stabilized.

1.4.1.1.4. "Steel Sheeting" is placed along ROW to contain roadway approaches.

1.4.1.1.5. "Silt Fence" placed level on slopes control sheet flow sediment transport. Place level silt fence 5'-10' from the toe of slopes. Turn the ends of silt fence slightly uphill to stop concentrated water from flowing around the ends. The maximum slope length between separate runs of silt fence is 100'. Place silt fence before beginning upslope earthwork. Silt fence shall not be placed across contours.

1.4.1.1.6. Hay Bales are unacceptable alternatives to silt fences, sand bags, or check dams.

1.5. FINAL EROSION CONTROL MEASURES

1.5.1. Place "Surface Course" on the roadway to prevent erosion. Compact aggregate appropriately to prevent erosion of the aggregate.

1.5.2. "Seeding & Mulching" will establish vegetation on side slopes less than 66% that prevents erosion and control sediment transport. Add biodegradable "Erosion Control Matting" (or equivalent) to slopes ranging from33% to 66%.

1.5.3. Roadway Ditches beside the road control concentrated flows and prevent erosion. Including Erosion Matting in roadway ditches prevents erosion and controls sediment transport. See ESPC Sheet #4 for details.

2. GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

2.1. The Erosion Control Plans are guidelines for preventing erosion and controlling sediment transport throughout the life of the project. The purpose of the plan is to minimize soil loss and the pollution and sedimentation of receiving waters.

2.2. Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. Use additional erosion control measures as necessary during the sequence of construction and as directed by the Engineer. See sub-section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

2.3. Maintain existing vegetated buffers along stream banks, wetlands or other sensitive areas wherever possible.

2.4. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes. Control only sediment-laden runoff from the project site.

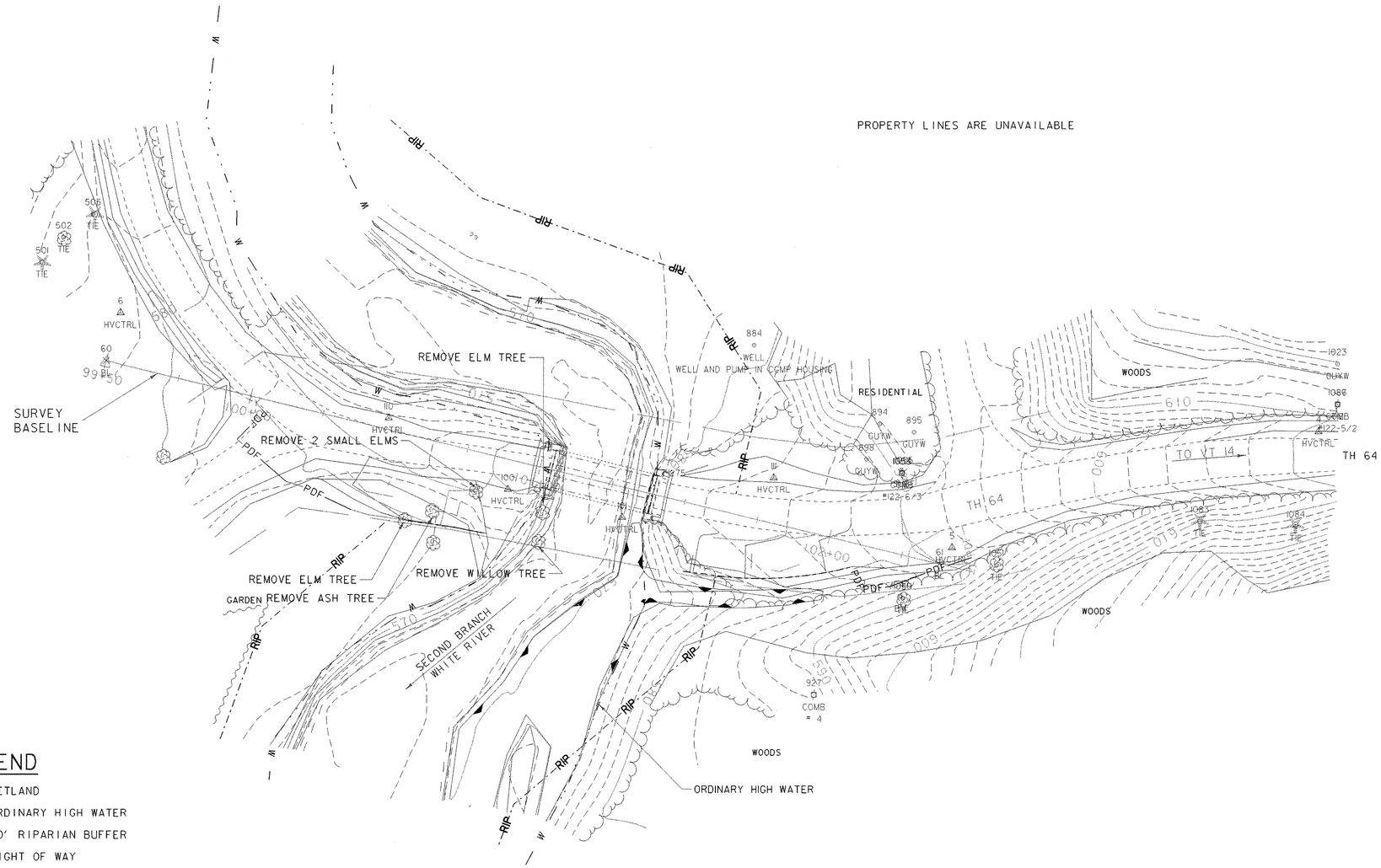
2.5. Install erosion and sediment control measures as shown in the Erosion Control Plan or as directed by the Engineer. Do not modify the type, size or location of any control or practice without approval of the Engineer. Note any changes on the plans, in the weekly inspection report, and report them to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures promptly once damage is discovered.

2.6. Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas promptly after construction activity has temporarily or permanently ceased. Establish temporary vegetation if the disturbed area is to be without construction activity for a period of 14 days. Install perimeter control measures following clearing and before the start of any grubbing or grading activity. Install other temporary controls in incremental stages as construction proceeds.

2.7. Operate construction equipment only within perimeter control measures.

* The anticipated areas of disturbance for the covered bridge rehabilitation project and this project are 0.21 acres for the covered bridge rehabilitation and 0.12 acres for the temporary bridge, for a total of 0.33 acres. The estimated area of waste, borrow, and staging is less than 0.67 acres, for an overall project total of less than 1.00 acre. Should conditions change and result in 1 or more acres of earth disturbance, then the contractor will be responsible for additional permitting with the Agency of Natural Resources.

PROJECT NAME: RANDOLPH	
PROJECT NUMBER: BHO 1444 (50)	
FILE NAME: s061094ero.dgn	PLOT DATE: 3/29/06
PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
DESIGNED BY: J. TREI	CHECKED BY: J. WEAVER
ESPC SHEET 1 - NARRATIVE	SHEET 7 OF 18



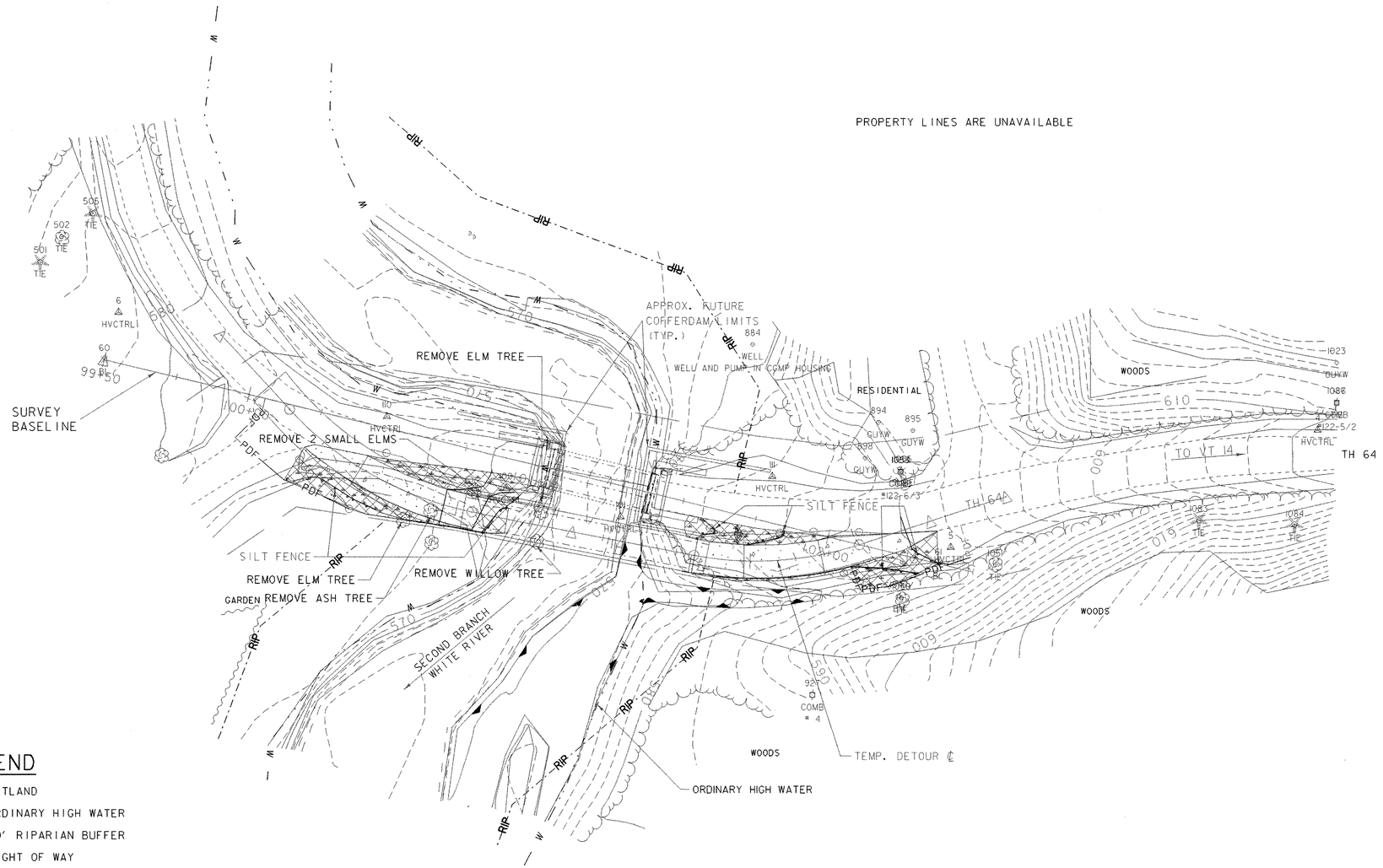
LEGEND

- WETLAND
- W W W ORDINARY HIGH WATER
- RIP RIP RIP 50' RIPARIAN BUFFER
- RIGHT OF WAY

SCALE 1" - 20'-0

20 0 20

PROJECT NAME: RANDOLPH	
PROJECT NUMBER: BHO 1444 (50)	
FILE NAME: s061094ero.dgn	PLOT DATE: 3/29/06
PROJECT LEADER: J.WEAVER	DRAWN BY: J. TREI
DESIGNED BY: J. TREI	CHECKED BY: J. WEAVER
EPSC SHEET 2 - EXISTING CONDITIONS	SHEET 8 OF 18



LEGEND

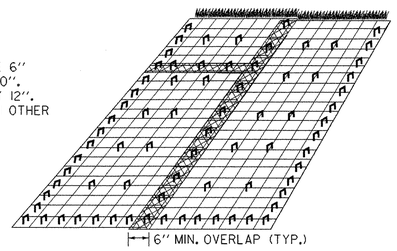
- WETLAND
- W W W ORDINARY HIGH WATER
- RIP RIP RIP 50' RIPARIAN BUFFER
- RIGHT OF WAY
- SILT FENCE
- STONE FILL, TYPE I (MOD.-CHECK DAM)
- PDF PDF SNOW FENCE (MOD.-PDF)
- SEED & MULCH
- EROSION MATTING
- TEMPORARY ROADWAY

SCALE 1" - 20'-0
20 0 20

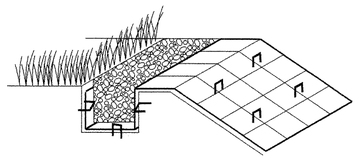
* REGRADE, SEED, & MULCH DISTURBED AREAS TO ORIGINAL EXISTING CONDITIONS. IF SLOPES ARE GREATER THAN 1:3 PROVIDE EROSION MATTING.

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BHO 1444 (50)
FILE NAME: s061094erp.dgn	PLOT DATE: 3/29/06
PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
DESIGNED BY: J. TREI	CHECKED BY: J. WEAVER
EPSC SHEET 3 - CONST./FINAL CONDITIONS	SHEET 9 OF 18

NOTES:
1. ALL FABRIC OVERLAPS SHALL BE 6" MINIMUM WITH STAPLES EVERY 20".
2. STAPLE EDGES OF FABRIC EVERY 12".
3. USE 40" MAX. STAPLE SPACING IN OTHER AREAS.
4. SEE "EROSION MATTING FOR DITCHES" DETAIL FOR ANCHORING AT TOPS OF SLOPES.

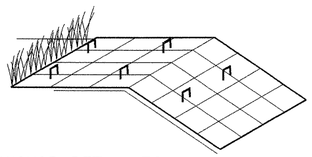


EROSION MATTING FOR SLOPES STEEPER THAN 1:3



ANCHOR DETAIL 'E1'

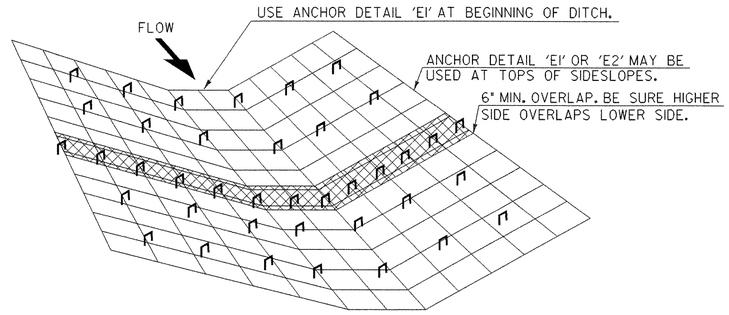
INSERT & STAPLE FABRIC INTO 6" X 6" TRENCH PRIOR TO BACKFILLING & COMPACTING SOIL. USE 3 STAPLE PATTERN EVERY 20".



ANCHOR DETAIL 'E2'

IF THE TOP OF SLOPE IS RELATIVELY FLAT EXTEND MATERIAL APPROXIMATELY 24" AND STAPLE EVERY 20" MINIMUM.

ANCHOR DETAILS FOR EROSION MATTING



EROSION MATTING FOR DITCHES

1. TO BE USED WHERE SLOPE OF DITCHLINE EXCEEDS 5%
2. OVERLAPS SHALL BE 6" MINIMUM IN THE DIRECTION OF FLOW AND STAPLED EVERY 20" MIN. THROUGH BOTH FABRICS.
3. USE 40" MAX STAPLE SPACING IN OTHER AREAS.

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

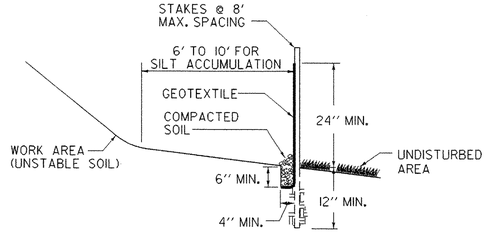
AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

SPLICE DETAIL

WRAP POSTS & SILT FENCE FABRIC AROUND EACH OTHER BEFORE POUNDING INTO GROUND.



SILT FENCE

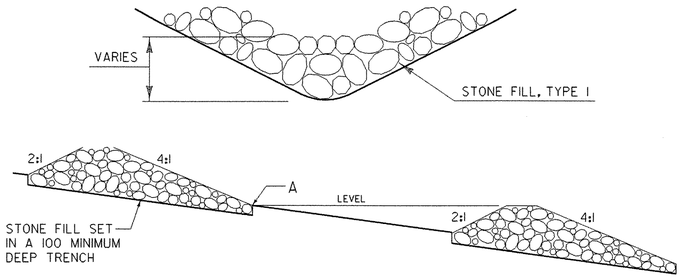
NOTES :
1. DO NOT USE SILT FENCE IN STREAMS, DRAINAGE DITCHES, OR AREAS OF CONCENTRATED FLOW.
2. BACK WITH STAKED-IN-PLACE HAY BALES OR WIRE FENCE IF ADDITIONAL SUPPORT IS NEEDED.
3. MUST BE REMOVED WHEN SOIL IS STABILIZED.

NOTE: FOR ADDITIONAL EROSION CONTROL MEASURES REFER TO:
THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL;
VEMONT EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE;
AND THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444 (50)

FILE NAME: s06j094erco.dgn
PROJECT MANAGER: J. WEAVER
DESIGNED BY: J. TREI
ESPC_SHEET_4_-_DETAILS_1

PLOT DATE: 4/12/06
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER



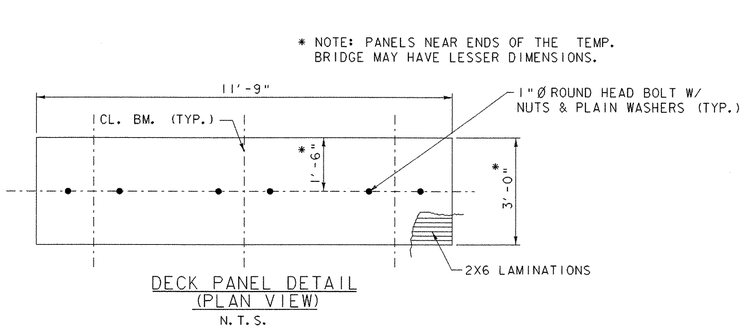
DETAIL "B"
TEMPORARY STONE CHECK DAM

NOTES :
1. CHECK DAMS TO BE USED PRIOR TO COMPLETION OF STONE LINING IN DITCHES
2. LOCATE DOWNSTREAM STRUCTURE SUCH THAT POINT "B" IS APPROXIMATELY LEVEL WITH THE LOWEST GROUND ELEVATION "A" OF THE UPSTREAM STRUCTURE
3. PAYMENT WILL BE MADE UNDER ITEM 613.10, STONE FILL, TYPE I (MOD.-CHECK DAM).

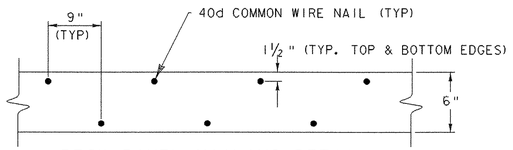
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444 (50)

FILE NAME: s061094ero.dgn
PROJECT MANAGER: J. WEAVER
DESIGNED BY: J. IREAL
ESPC SHEET 5 - DETAILS 2

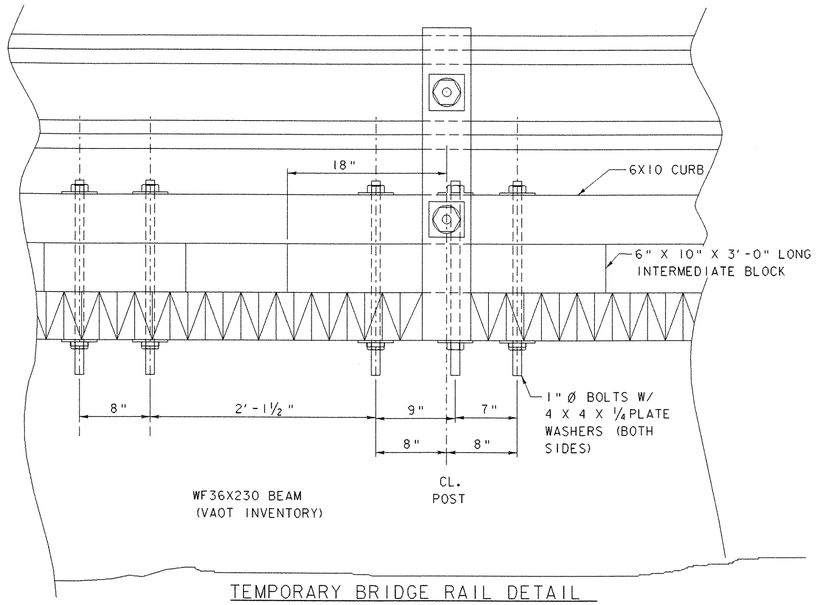
PLOT DATE: 4/11/06
DRAWN BY: J. IREL
CHECKED BY: J. WEAVER
SHEET 11 OF 18



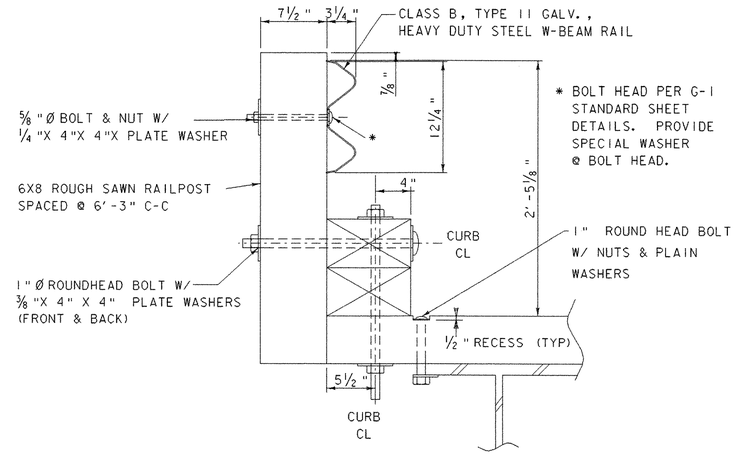
DECK PANEL DETAIL
(PLAN VIEW)
N. T. S.



DECK PANEL NAILING DETAIL
(ELEVATION VIEW)
SCALE: 1" = 1'-0"

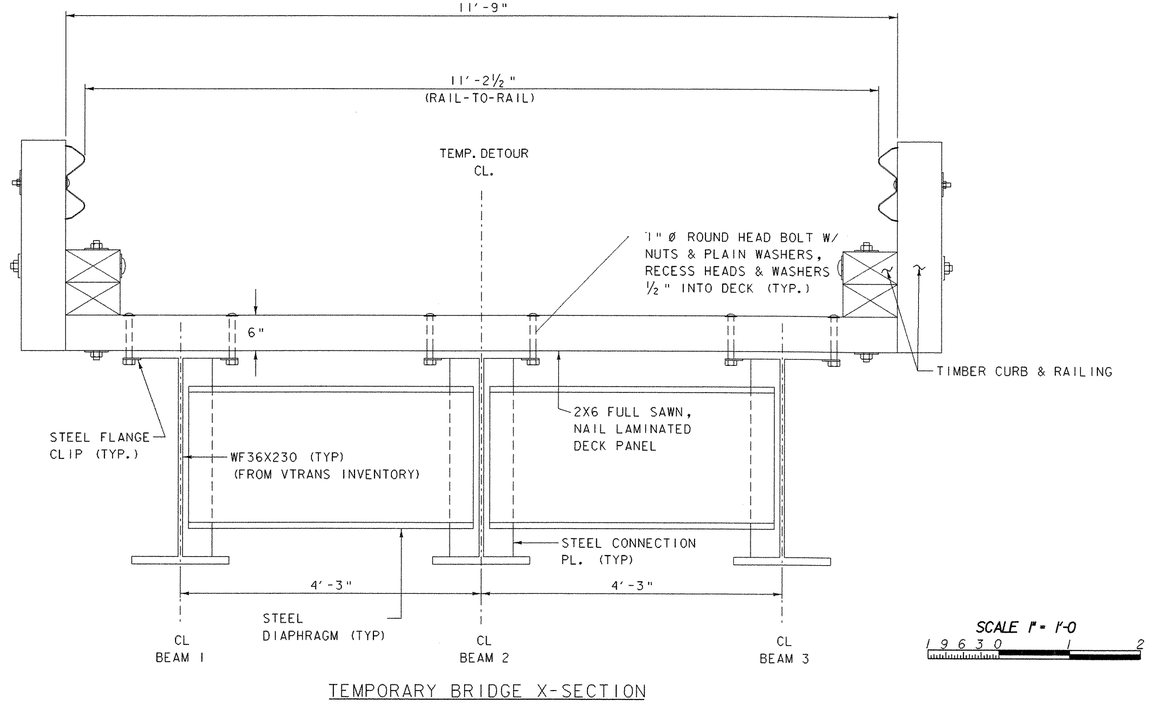


TEMPORARY BRIDGE RAIL DETAIL
(OUTSIDE VIEW)
SCALE: 1½" = 1'-0"



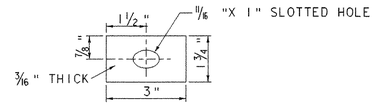
TEMPORARY BRIDGE RAIL DETAIL
(SECTION VIEW)
SCALE: 1½" = 1'-0"

SCALE 1½"= 1'-0
1 9 6 3 0 1

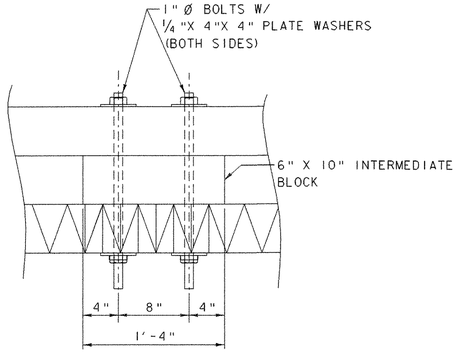


SCALE 1"= 1'-0
1 9 6 3 0 1 2

TEMPORARY BRIDGE X-SECTION
SCALE: 1" = 1'-0"



SPECIAL WASHER DETAIL
N. T. S.



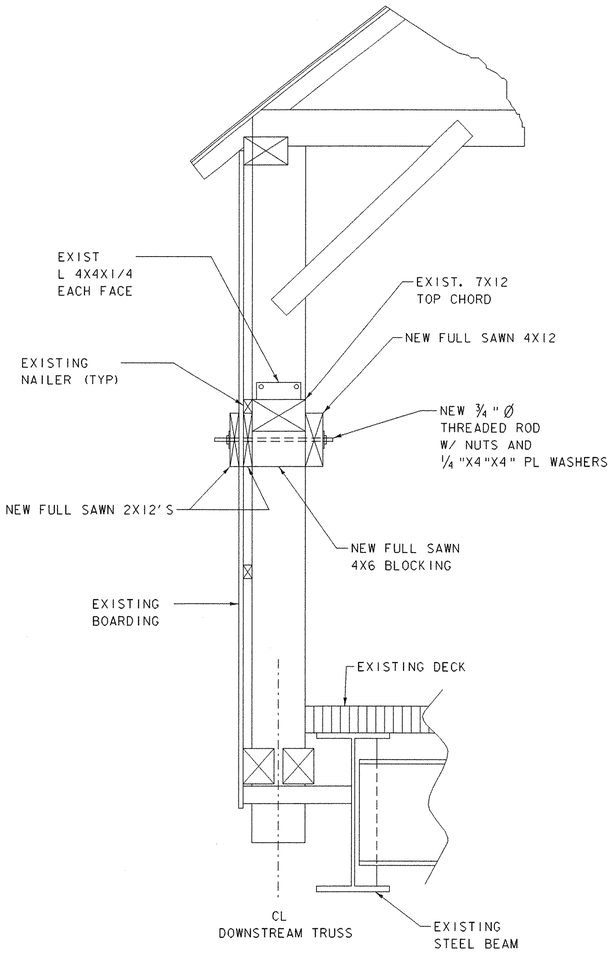
INTERMEDIATE CURB SUPPORT
(ELEV. VIEW)
SCALE: 1½" = 1'-0"

TEMPORARY BRIDGE NOTES:

1. ALL TEMPORARY BRIDGE DETAILS NOT SHOWN SHALL BE DESIGNED AND FURNISHED BY THE CONTRACTOR FOR VAOT APPROVAL PER SECTION 528 OF THE SPECIFICATIONS.
2. THE WF36X230 BEAMS REQUIRED WILL BE PROVIDED BY THE AGENCY. HOWEVER THE CONTRACTOR MUST PROVIDE MEANS FOR BOTH LOADING AND TRANSPORTING THE BEAMS TO THE BRIDGE SITE. THE BEAMS ARE LOCATED AT THE VAOT MAINTENANCE ROYALTON DISTRICT 4 SITE ON VT 107. THE CONTRACTOR SHALL CONTACT TAMMY ELLIS, GENERAL MAINTANENCE MANAGER DIST. 4 (802-296-5568), PROVIDING ONE WEEK NOTICE OF INTENT TO REMOVE THE BEAMS.
3. CURBS SHALL BE 6X10 NO. 2 GRADE SOUTHERN PINE CUT AT A MINIMUM LENGTH OF 8 FEET. DECK PANELS SHALL BE LAMINATED 2X6 SOUTHERN YELLOW PINE NO. 2 GRADE LUMBER. ALL LUMBER SHALL BE TYPE II PRESERVATIVE TREATED IN ACCORDANCE WITH SUPPLEMENTAL SPEC. SECTION 726 OF THE SPECIFICATIONS. EXCEPT AS NOTED, ALL LUMBER SHALL BE DRESSED SIZE AND FINISH.
4. ALL BOLTS, NUTS, AND WASHERS SHALL BE IN ACCORDANCE WITH ASTM A307 REQUIREMENTS.
5. SEE THE SPECIAL PROVISIONS SECTION 528 FOR ALL WORK AND PAYMENT CONCERNING PAY ITEM 528.10 ONE-WAY TEMPORARY BRIDGE (MOD.).

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: s06j094dtl.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY: J. TREI
TEMPORARY BRIDGE DETAILS SHEET
PLOT DATE: 3/27/06
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER
SHEET 12 OF 18

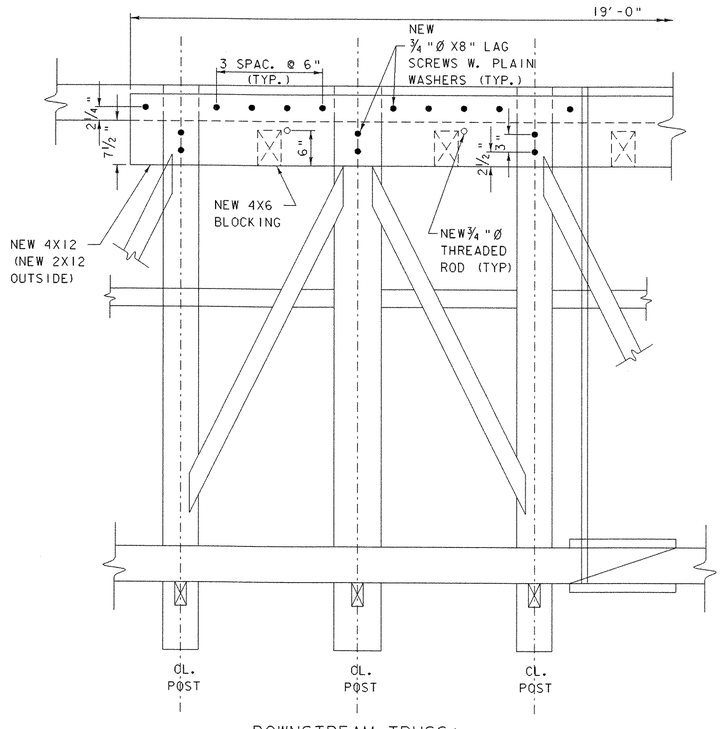


SECTION @ EXISTING TRUSS

SCALE: ¾" = 1'-0"

SCALE ¾" = 1'-0

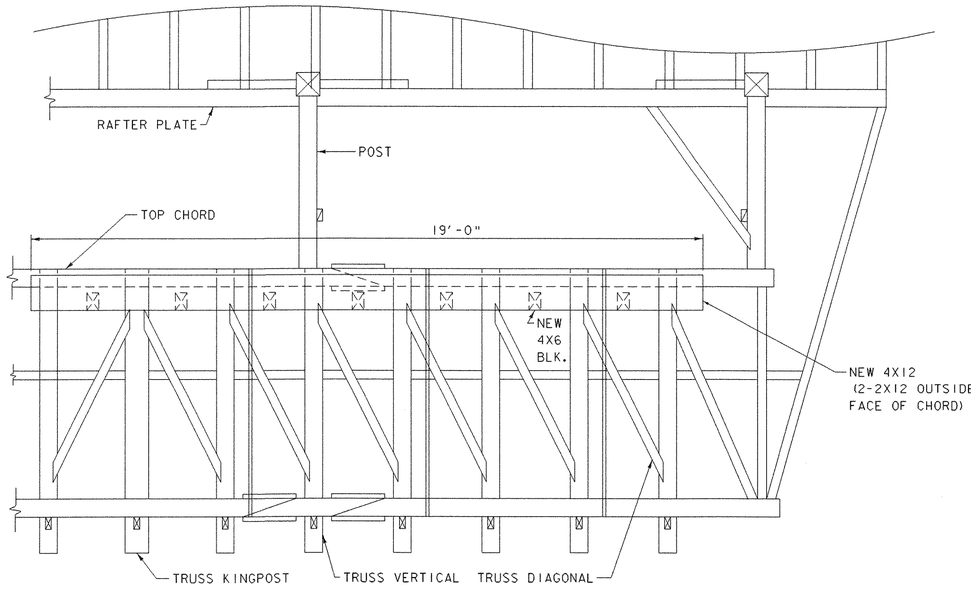
1 0 1 2



DOWNSTREAM TRUSS*
INSIDE VIEW DETAILS

SCALE: 1" = 1'-0"

* OUTSIDE VIEW SIMILAR FASTENER DETAILS



DOWNSTREAM TRUSS ELEVATION
(INSIDE VIEW-BOARDING NOT SHOWN)

SCALE: ½" = 1'-0"

SCALE ½" = 1'-0

1 0 1 2

SCALE 1" = 1'-0

1 9 6 3 0 1 2

NOTES:

1. ALL BRIDGE MEMBERS SHOWN ARE EXISTING EXCEPT AS NOTED.
2. ALL NEW LUMBER SHALL BE UNTREATED NO. 1/NO. 2 GRADE SPRUCE-PINE-FIR OR SYP NO. 2 GRADE.
3. ALL THREADED RODS, LAG SCREWS, NUTS, AND WASHERS SHALL BE GALV. AND MEET THE REQUIREMENTS OF ASTM 307 SPECIFICATIONS. PLATE WASHERS SHALL BE GALVINIZED AND MEET THE REQUIREMENTS OF ASTM A36/A36M SPECIFICATIONS

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: s06j094dtl.dgn PLOT DATE: 3/22/06
PROJECT LEADER: J. WEAVER DRAWN BY: J. TREI
DESIGNED BY: J. WEAVER CHECKED BY: J. WEAVER
CONSTRUCTION DETAILS SHEET SHEET 13 OF 18

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
ROD	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.

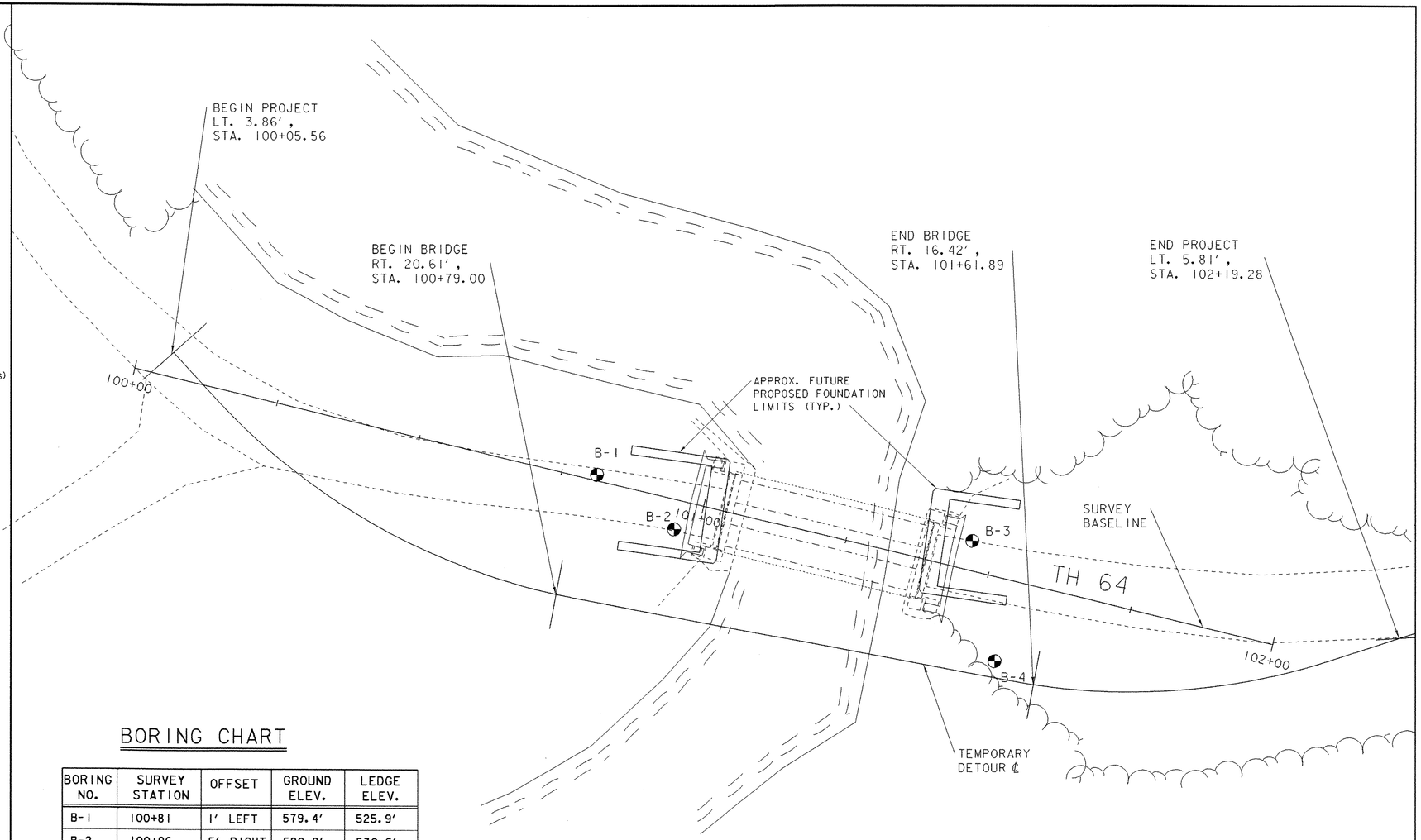
MUCK - Soft organic soil (containing > 10% organic material.

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.



LAYOUT

SCALE: 1:10

BORING CHART

BORING NO.	SURVEY STATION	OFFSET	GROUND ELEV.	LEDGE ELEV.
B-1	100+81	1' LEFT	579.4'	525.9'
B-2	100+96	5' RIGHT	580.8'	530.6'
B-3	101+46	5' LEFT	582.7'	526.2'
B-4	101+55	14' RIGHT	582.4'	530.7'

NOTE:
SURVEY STATIONING AND OFFSETS ARE BASED ON TEMPORARY SURVEY BASELINE

GENERAL NOTES

1. The subsurface explorations shown herein were made between 1/20/2006 and 2/22/2006 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
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.

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: s061094bor.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY:
BORING LAYOUT SHEET

PLOT DATE: 17-JAN-2007
DRAWN BY: D. GELFENBEIN/J. TREI
CHECKED BY: J. WEAVER
SHEET 14 OF 18

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

BORING NUMBER: B-1
SHEET 1 of 1
DATE STARTED: 1/26/06
DATE COMPLETED: 2/08/06

PROJECT NAME: RANDOLPH
SITE NAME: TH-64
STATION: 100+81.0
OFFSET: -1.00
VTSPG: N 520679.569 ft E 1625838.865 ft

PROJECT NUMBER: BHO 1444(44)
SITE NUMBER: Braley Covered Bridge
GROUND ELEVATION: 579.4 ft
GROUNDWATER DEPTH: 10.3 ft 2/08/06

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: DAVISON

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

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, SlGrSa, brn, Moist, Rec. = 2.0 ft, Frozen material	R	11.8	31.1	45.3	23.6
		A-1-b, GrSlSa, brn, Moist, Rec. = 1.4 ft	27	13.4	24.5	50.2	25.3
		A-1-b, SlGrSa, brn, Moist, Rec. = 0.8 ft	11	6.7	29.0	50.3	20.7
		A-1-b, SlGrSa, brn, Moist, Rec. = 1.45 ft	10	11.1	23.5	56.3	20.2
		A-2-4, SlSa, brn, Moist, Rec. = 2.0 ft	8	24.3	10.4	57.5	32.1
10		A-1-b, GrSa, brn, Wet, Rec. = 0.8 ft	9	18.9	24.4	61.9	13.7
		A-1-b, SaGr, brn, MTW, Rec. = 0.8 ft	10	16.4	43.8	43.0	13.2
		No Recovery, 14.0 ft - 16.0 ft	8				
		No Recovery, 16.0 ft - 18.0 ft	18				
		A-4, Si, gry, Moist, Rec. = 1.05 ft, Sample tested "NP" for Limits	10	32.5	0.0	1.7	98.3
20		A-4, Si, gry, Moist, Rec. = 1.7 ft, Sample tested "NP" for Limits	10	27.5	0.0	12.1	87.9
		A-4, SlSa, brn-gry, Moist, Rec. = 1.0 ft	10	24.5	2.7	54.0	43.3
30		A-2-4, Sa, brn, MTW, Rec. = 1.2 ft	8	24.8	8.3	76.9	14.8
		A-2-4, Sa, brn, MTW, Rec. = 1.15 ft	17	23.6	9.9	73.2	16.9
40		A-2-4, SlSa, brn, MTW, Rec. = 1.4 ft, Started using drillers mud	16	24.4	7.8	64.0	28.2
		A-4, SlSa, brn-gry, Moist, Rec. = 1.3 ft	17	20.1	0.1	54.6	45.3
50		A-2-4, SlSa, gry, Moist, Rec. = 1.0 ft	9	22.3	0.8	66.4	32.8
				Top of Bedrock @ 53.5 ft			
		Gray, Meta-Limestone, with interbedded phyllite. Moderately hard. Drilling brecks from 55.5 feet to 56.2 feet. Intact rock is unweathered. Rock fragments from 55.5 feet to 56.2 feet are slightly weathered. Poor competency., Moderately hard, NXMDC, 53.5 ft - 58.5 ft, Rec. = 3.5 ft	1	70	44	35	6 5 6 6 7
		Gray, Phyllite, Fair competency., Moderately soft, Slightly weathered, NXMDC, 58.5 ft - 59.5 ft, Rec. = 1.0 ft	2 3	100 100	60 100	40 40	18 13
60		Gray, Meta-Limestone, with interbedded phyllite. Competent., Moderately hard, Unweathered, NXMDC, 59.5 ft - 61.5 ft, Rec. = 2.0 ft					17
		Hole stopped @ 61.5 ft					

LOG OF BORING RANDOLPH BHO 1444(44).GPJ VT AOT.GDT 3/23/06

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

BORING NUMBER: B-2
SHEET 1 of 1
DATE STARTED: 2/09/06
DATE COMPLETED: 2/14/06

PROJECT NAME: RANDOLPH
SITE NAME: TH-64
STATION: 100+96.0
OFFSET: 5.00
VTSPG: N 520670.311 ft E 1625851.411 ft

PROJECT NUMBER: BHO 1444(44)
SITE NUMBER: Braley Covered Bridge
GROUND ELEVATION: 580.83 ft
GROUNDWATER DEPTH: 10.0 ft 2/14/06

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: DAVISON

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

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, SlGrSa, brn-gry, Moist, Rec. = 0.7 ft, Material was frozen.	R	12.3	27.4	47.5	25.1
		4.3 ft - 5.0 ft, Cleaned out casing A-2-4, SlSa, brn, Moist, Rec. = 0.8 ft	7	18.6	19.6	53.1	27.3
10		A-2-4, SlGrSa, brn, Moist, Rec. = 0.7 ft	6	19.6	27.8	48.5	23.7
		12.0 ft - 14.0 ft, Cobble stones					
		No Recovery. Trace of sand in sampler, brn, Moist, 15.0 ft - 17.0 ft	11				
20		A-2-4, SlSa, brn, MTW, Rec. = 1.2 ft	11	25.9	3.7	67.2	29.1
		A-2-4, Sa, brn, MTW, Rec. = 0.9 ft, Some fine graded broken rock material was within sample.	12	18.3	2.0	81.9	16.1
30		No Recovery. Appears to be fine sand, 30.0 ft - 32.0 ft	16				
		A-1-b, Sa, gry-brn, MTW, Rec. = 1.4 ft	13	19.7	4.3	80.1	15.6
		37.0 ft - 40.0 ft, Casing plugged up, Started using mud, Lost our water					
40		A-2-4, SlSa, gry-brn, MTW, Rec. = 1.2 ft	18	19.8	1.6	68.9	29.5
		A-4, SlSa, gry, MTW, Rec. = 1.1 ft	18	19.1	7.2	55.8	37.0
50		50.0 ft - 50.25 ft, No Rec., Hit Bedrock	R	Top of Bedrock @ 50.25 ft			
		Gray, Meta-Limestone, with thin phyllite beds. Competent., Medium hard, Unweathered, NXMDC, 50.25 ft - 55.25 ft, Rec. = 4.7 ft	1	94	86	40	14 18 14 12 11
		Hole stopped @ 55.25 ft					
60							

LOG OF BORING RANDOLPH BHO 1444(44).GPJ VT AOT.GDT 3/23/06

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: s06j094bor.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY:
BORING LOGS - SHEET 1

PLOT DATE: 17-JAN-2007
DRAWN BY: D. GELFENBEIN
CHECKED BY:
SHEET 15 OF 18

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

BORING NUMBER: B-3
SHEET 1 of 1
DATE STARTED: 2/15/06
DATE COMPLETED: 2/22/06

PROJECT NAME: RANDOLPH
SITE NAME: TH-64
STATION: 101+46.0
OFFSET: -5.00
VTSPG: N 520668.394 ft E 1625902.209 ft

PROJECT NUMBER: BHO 1444(44)
SITE NUMBER: Braley Covered Bridge
GROUND ELEVATION: 582.71 ft
GROUNDWATER DEPTH: 13.0 ft 2/22/06

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: RUSSELL

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

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		Fill Material, No sample, 0.0 ft - 2.0 ft					
		A-2-4, SlSa with some Wood material, brn, Moist, Rec. = 0.5 ft	2	16.8	5.3	70.2	24.5
10		A-2-4, SlSa with some Wood material, brn, Moist, Rec. = 0.9 ft	4	27.5	10.1	65.8	24.1
		A-1-b, GrSa, brn, MTW, Rec. = 0.7 ft	8	22.5	20.3	66.6	13.1
20		A-1-b, GrSa, brn, MTW, Rec. = 1.0 ft	6	18.9	27.4	60.1	12.5
		Cleaned out casing., 23.6 ft - 25.0 ft					
		A-1-b, GrSa, gry-brn, MTW, Rec. = 1.2 ft	16	15.0	32.2	51.8	16.0
30		A-4, SaSl, gry-brn, MTW, Rec. = 1.2 ft	15	25.7	2.0	43.0	55.0
		A-2-4, Sa, brn-gry, MTW, Rec. = 1.1 ft	18	18.3	18.0	68.1	13.9
40		Cleaned out casing., 39.2 ft - 40.0 ft					
		A-1-b, GrSa, brn-gry, MTW, Rec. = 1.1 ft	17	16.4	24.7	59.8	15.5
		A-2-4, Sa, gry, MTW, Rec. = 1.0 ft	13	22.1	5.1	80.2	14.7
50		A-1-b, Sa, gry, MTW, Rec. = 0.5 ft	15	18.3	18.9	66.5	14.6
		A-1-b, SaGr with Broken Rock within sample., gry, MTW, Rec. = 1.3 ft	R	9.9	52.7	31.2	16.1
				Top of Bedrock @ 56.5 ft			
		Gray, Phyllite, Poor competency., Moderately soft, Unweathered, BXMDC, 56.5 ft - 58.0 ft, Rec. = 0.5 ft	1	33	0	40	
60		Gray, Phyllite, Fair competency., Moderately soft, Unweathered, BXMDC, 58.0 ft - 61.0 ft, Rec. = 1.8 ft	2	60	50	40	
		Gray, Phyllite, Competent., Moderately soft, Unweathered, BXMDC, 61.0 ft - 64.0 ft, Rec. = 2.7 ft	3	90	73	40	
		Hole stopped @ 64.0 ft					

LOG OF BORING RANDOLPH BHO 1444(44).GPJ VT AOT.GDT 3/23/06

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

BORING NUMBER: B-4
SHEET 1 of 1
DATE STARTED: 1/20/06
DATE COMPLETED: 1/25/06

PROJECT NAME: RANDOLPH
SITE NAME: TH-64
STATION: 101+54.5
OFFSET: 14.00
VTSPG: N 520647.972 ft E 1625906.016 ft

PROJECT NUMBER: BHO 1444(44)
SITE NUMBER: Braley Covered Bridge
GROUND ELEVATION: 582.43 ft
GROUNDWATER DEPTH: 12.0 ft 1/25/06

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: DAVISON

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

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, GrSlSa, brn, Moist, Rec. = 1.1 ft	2	19.0	22.8	51.7	25.5
		A-1-a, SaGr, brn, Moist, Rec. = 0.75 ft	5	6.9	52.2	38.6	9.2
		A-2-4, SlSa, brn, Moist, Rec. = 0.9 ft	2	14.5	18.6	58.8	22.6
		A-2-4, GrSlSa, brn, Moist, Rec. = 1.0 ft	5	17.9	26.6	41.2	32.2
		A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft	14	12.9	29.4	51.3	19.3
10		A-2-4, GrSlSa, brn, MTW, Rec. = 1.0 ft, Cleaned out casing	7	23.6	20.2	56.4	23.4
		A-1-b, Sa, brn, MTW, Rec. = 0.8 ft	7	20.4	20.0	63.6	16.4
		A-1-b, GrSa, brn, MTW, Rec. = 0.55 ft	6	23.6	21.8	61.6	16.6
		A-1-b, GrSa, brn, Wet, Rec. = 1.0 ft	6	22.4	26.9	59.0	14.1
		A-1-b, GrSa, brn, MTW, Rec. = 0.75 ft	7	18.6	31.8	54.5	13.7
20		A-1-b, GrSa, brn, Wet, Rec. = 0.8 ft	11	15.5	32.7	49.4	17.9
		A-4, SaSl, brn, MTW, Rec. = 1.15 ft	13	26.0	0.0	49.2	50.8
30		A-1-b, GrSa, brn, MTW, Rec. = 1.15 ft	35	14.5	28.8	57.3	13.9
		A-1-b, Sa, brn, MTW, Rec. = 1.15 ft	14	21.7	5.8	77.1	17.1
40		A-2-4, Sa, brn, Wet, Rec. = 1.0 ft	12	21.9	8.3	75.4	16.3
		A-1-b, SaGr, brn, Wet, Rec. = 0.95 ft	32	12.8	48.0	36.2	15.8
50		A-1-b, SlGrSa, gry, MTW, Rec. = 0.5 ft	R	12.1	31.6	46.5	21.9
				Top of Bedrock @ 51.7 ft			
		Gray, Meta-Limestone, interbedded with phyllite. Competent., Moderately hard, Unweathered, NXMDC, 51.7 ft - 56.7 ft, Rec. = 5.0 ft	1	100	86	50	7 10 8 7 6
60		Gray, Meta-Limestone, interbedded with phyllite. Competent., Moderately hard, Unweathered, NXMDC, 56.7 ft - 61.7 ft, Rec. = 4.75 ft	2	95	95	50	6 5 4 4 5
		Hole stopped @ 61.7 ft					

LOG OF BORING RANDOLPH BHO 1444(44).GPJ VT AOT.GDT 3/23/06

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BHO 1444(50)

FILE NAME: s06j094bor.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY:
BORING LOGS - SHEET 2

PLOT DATE: 17-JAN-2007
DRAWN BY: D. GELFENBEIN
CHECKED BY:
SHEET 16 OF 18

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

LOCATION	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) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 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																										
STA. & OFFSET PER PLAN SHEET (EXACT LOCATION AS DETERMINED BY THE ENGINEER)	ONE LANE BRIDGE	2	30	30	6.25						1 EACH SIGN			×																				W5 - 3	SEE BELOW	

W5-3

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

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

NOTE: SIGNS AND POSTS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM 675.20, TRAFFIC SIGNS, TYPE A, AND ITEM 675.301, FLANGED CHANNEL SIGN POST.

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

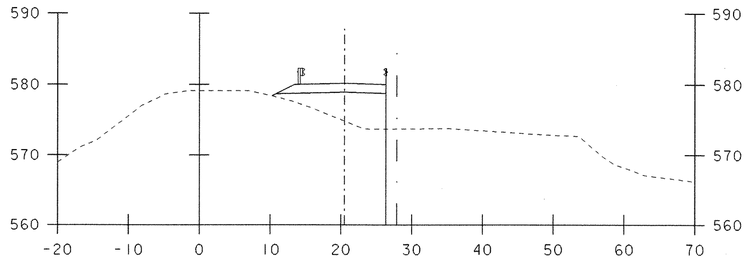
							FT	FT	FT	FT	FT	FT	EA	LB	LB	LB	LB	LB	LB	LB	EA.	EA.	LB
TOTALS	SF	SF	EA.	SF		FT			FT			LB	EA.		LB					EA.	EA.	LB
RANDOLPH	12.5					22																	

PROJECTS:
RANDOLPH BHO 1444(50)

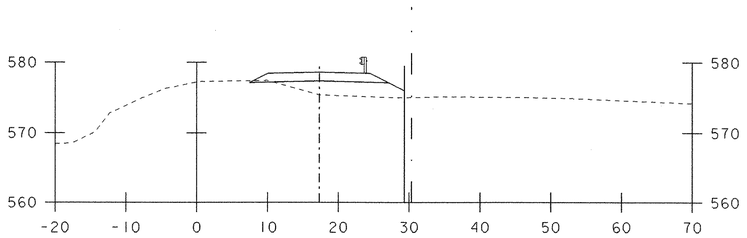
DESIGN FILE NAME: s06j094traf.dgn
DESIGNED BY: J. WEAVER
TRAFFIC SIGN SUMMARY SHEET

PLOT DATE: 17-JAN-2007
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER
SHEET: 17 OF 18

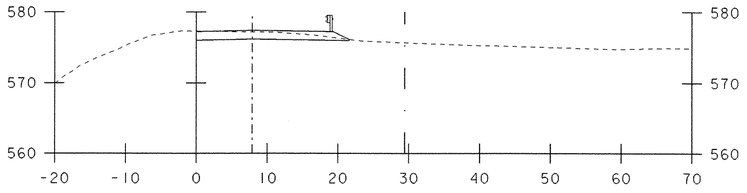
BEGIN BRIDGE STA. 100+79.00, 20.61' RT.



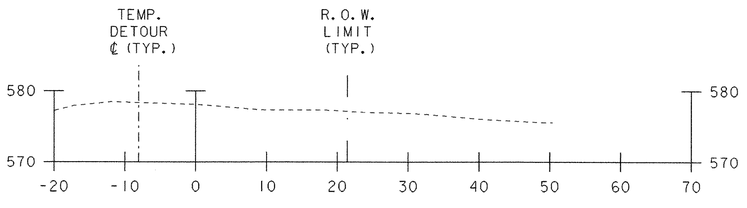
100+75



100+50



100+25

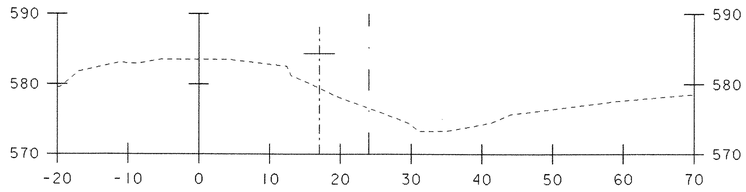


100+00

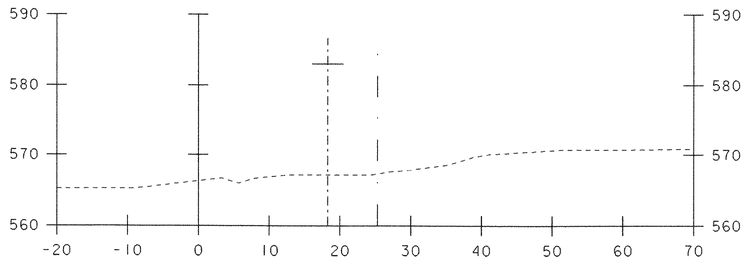
BEGIN PROJECT STA. 100+05.56, 3.86' LT.

NOTE: CROSS SECTIONS ARE DRAWN PERPENDICULAR TO THE SURVEY BASELINE, THEREFORE ROADWAY FEATURES MAY BE SKEWED.

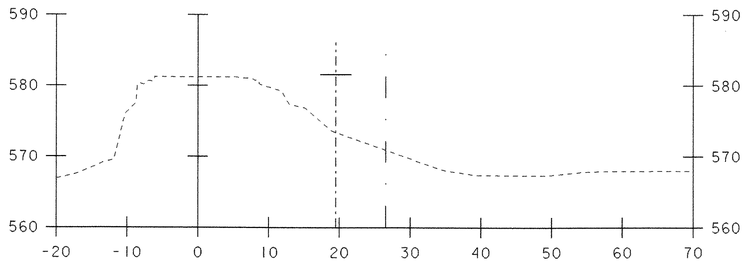
END BRIDGE STA. 101+61.89, 16.42' RT.



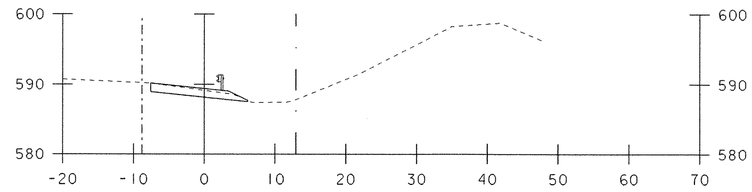
101+50



101+25

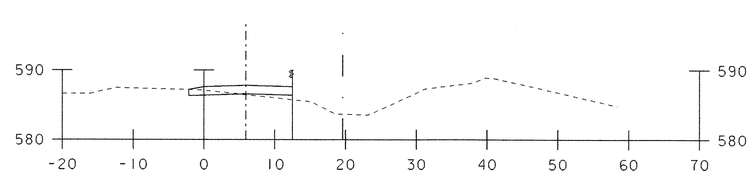


101+00

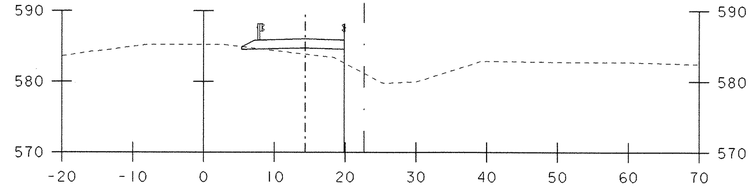


102+25

END PROJECT STA. 102+19.28, 5.81' LT.



102+00



101+75

SCALE 1" = 10'-0

10 0 10

STA. 100+00 TO STA. 102+25

PROJECT NAME: RANDOLPH

PROJECT NUMBER: BHO 1444(50)

FILE NAME: s061094xs.dgn PLOT DATE: 17-JAN-2007

PROJECT LEADER: J. WEAVER DRAWN BY: J. TREI

DESIGNED BY: J. TREI CHECKED BY: J. WEAVER

SURVEY BASELINE CROSS-SECTIONS SHEET 18 OF 18