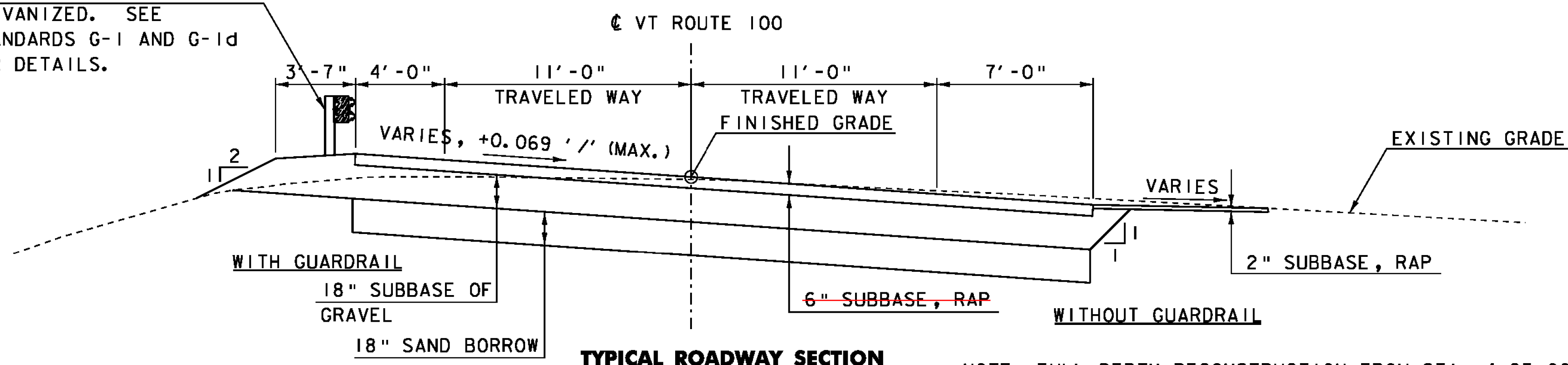
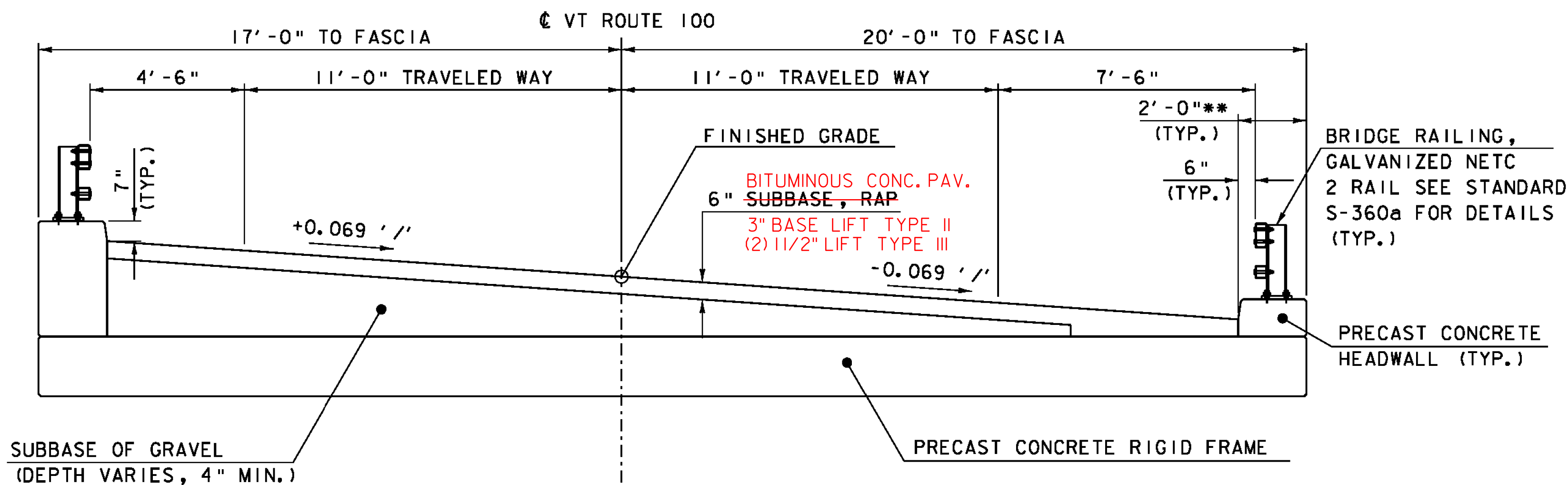


HD STEEL BEAM GUARDRAIL, GALVANIZED. SEE STANDARDS G-1 AND G-1d FOR DETAILS.



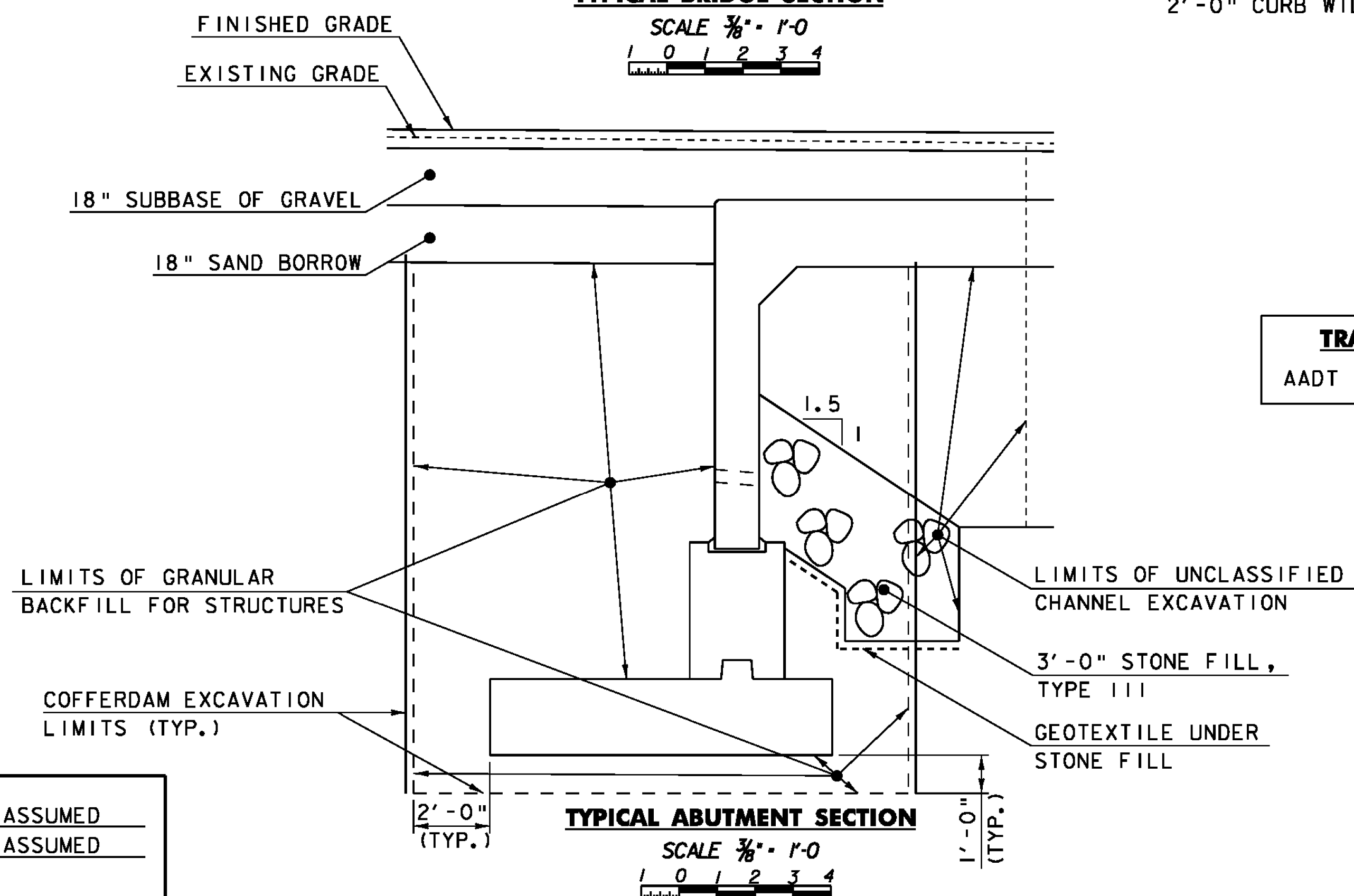
NOTE: FULL DEPTH RECONSTRUCTION FROM STA. 4+25.00 TO BEGIN BRIDGE AND END BRIDGE TO STA. 6+00.00. IN OTHER LOCATIONS, SUBBASE SHALL BE BUILT-UP AND REGRADED TO OBTAIN GRADE AND CROSS-SLOPE. SEE SHEET 7 FOR APPROACH TRANSITION DETAIL



** DIMENSION VARIES DUE TO CURVE. 2'-0" CURB WIDTH AT MIDSPAN.

TRAFFIC DATA

AADT = 1100 (2010)



DATUM
VERTICAL ASSUMED
HORIZONTAL ASSUMED

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA: 5.0 SQ. MILES
CHARACTER OF TERRAIN: MOUNTAINOUS
CHARACTER & TYPE OF STREAM: PERENNIAL BUT FLASHY, STEEP, LITTLE OR NO FLOODPLAIN, SINUOUS, NOT BRAIDED
NATURE OF STREAMBED: SAND, GRAVEL, COBBLE

02.33= 370 cfs 050= 1140 cfs
010= 700 cfs 0100= 1380 cfs
025= 930 cfs 0500=

DATE OF FLOOD OF RECORD: AUGUST 27 AND 28, 2011
WATER SURFACE ELEV.: UNKNOWN ESTIMATED DISCHARGE: UNKNOWN
NATURAL STREAM VELOCITY @ 0 UNKNOWN
ICE CONDITIONS: UNKNOWN DEBRIS: UNKNOWN
DOES THE STREAM REACH MAXIMUM HIGH WATER ELEVATION RAPIDLY: YES
IS ORDINARY RISE RAPID? YES
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? YES
IF YES, DESCRIBE: STAGE AFFECTED BY DOWNSTREAM FOREST SERVICE BRIDGE

WATERSHED STORAGE: NONE HEADWATERS: UNIFORM THROUGHOUT WATERSHED IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

STRUCTURE TYPE: CONCRETE SLAB ON SPREAD FOOTINGS YEAR BUILT: 1957
CLEAR SPAN (NORMAL TO STREAM): 18'-0"
VERTICAL CLEARANCE ABOVE STREAMBED: 5'-6"
WATERWAY OF FULL OPENING: 72 SQ. FEET
DISPOSITION OF STRUCTURE: TO BE REMOVED BY CONTRACTOR

TYPE OF MATERIAL UNDER SUBSTRUCTURE:
WATER SURFACE ELEV. @ 02.33= - ft VELOCITY: -
010= - ft -
025= - ft -
050= - ft -
0100= - ft -
SEE ADDITIONAL COMMENTS

LONG TERM STREAM BED CHANGES:
IS THE ROADWAY OVERTOPPED BELOW THE 0100? NO FREQUENCY: N/A
RELIEF ELEVATION: 499.4 DISCHARGE OVER ROAD @ 0100: N/A

UPSTREAM STRUCTURE: TOWN: GRANVILLE DISTANCE: 860 FT
HIGHWAY NO.: VT 100 STRUCTURE NO.: C-164
NOTE:

DOWNSTREAM STRUCTURE: TOWN: WARREN DISTANCE: 300 FT
HIGHWAY NO.: US FOREST SERVICE BR. STRUCTURE NO.: NOT AVAILABLE
NOTE:

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO HL-93
- DESIGN SPAN 32'-0" CLEAR SPAN
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL SEE GENERAL NOTES ON LEDGE SEE GENERAL NOTES
- ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
- STRUCTURAL STEEL AASHTO GRADE N/A
- REINFORCING STEEL GRADE 60
- CONCRETE $f_c = 3500$ PSI FOOTINGS AND PEDESTAL WALLS (CAST-IN-PLACE CONCRETE)
 $f_c = 5000$ PSI FOOTINGS, PEDESTAL WALLS, AND RIGID FRAME (PRECAST CONCRETE)

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE YES OR ON TEMPORARY BRIDGE
- TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED YES
MINIMUM CLEAR SPAN (NORMAL TO STREAM): VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY OF FULL OPENING:
ARE SIDEWALKS REQUIRED? IF SO, ON WHAT SIDE?
STRUCTURE TYPE:

PROPOSED STRUCTURE

STRUCTURE TYPE: PRECAST CONCRETE RIGID FRAME ON SPREAD FOOTINGS

CLEAR SPAN (NORMAL TO STREAM): 32'-0"
VERTICAL CLEARANCE ABOVE STREAMBED: 6'-0"
WATERWAY OF FULL OPENING: 179.3 SQ. FEET

WATER SURFACE ELEV. @ 02.33= 494.6 ft VELOCITY= 4.2 fps
010= 495.8 ft 5.4 fps
025= 497.6 ft 5.5 fps
050= 497.8 ft 6.7 fps
0100= 498.1 ft 8.1 fps

IS THE ROADWAY OVERTOPPED BELOW THE 0100? NO FREQUENCY: N/A
RELIEF ELEVATION: 499.4 DISCHARGE OVER ROAD @ 0100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 497.25
VERTICAL CLEARANCE @ 0.25: 0.0 FT

SCOUR: ESTIMATED DEPTH SCOUR EL. 487.5
REQUIRED CHANNEL PROTECTION: STONE FILL, TYPE III

ADDITIONAL COMMENTS

EXISTING STRUCTURE DAMAGED BY AUG. 27 & 28, 2011 STORM EVENT. TWO TEMPORARY 78" DIA. CMP PIPES INSTALLED TO MAINTAIN FLOW. NO HYDRAULIC ANALYSIS PERFORMED ON TEMPORARY STRUCTURE.

TEMPORARY BRIDGE SKETCH
NOT TO SCALE

PRELIMINARY INFORMATION SHEET

PROJECT NAME: WARREN
PROJECT NUMBER: ER-STP 013-4 (36)

FILE NAME: PLOT DATE: 11/4/2011
PROJECT LEADER: JWT DRAWN BY: BMB
DESIGNED BY: RHB CHECKED BY: EPD
PLOT FILE: SHEET 2 OF 19

