

PRELIMINARY INFORMATION SHEET

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LIST OF STANDARDS

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	06-01-94
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-04
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
J-3	MAILBOX SUPPORT DETAILS	08-07-95

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: September 2006
 DRAINAGE AREA : 36.4 sq mi
 CHARACTER OF TERRAIN : Hilly, mostly forested.
 STREAM CHARACTERISTICS : Meandering.
 NATURE OF STREAMBED : Sand and gravel.

PEAK FLOW DATA

Q 2.33 =	1,000 cfs	Q 50 =	3,200
Q 10 =	2,100	Q 100 =	3,700
Q 25 =	2,700	Q 500 =	5,900

DATE OF FLOOD OF RECORD : Unknown
 ESTIMATED DISCHARGE : Unknown
 WATER SURFACE ELEV. : Unknown
 NATURAL STREAM VELOCITY : @ Q25 = 4.6 ft/s
 ICE CONDITIONS : Moderate
 DEBRIS : Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
 IS ORDINARY RISE RAPID? No
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
 IF YES, DESCRIBE : There is an abandoned dam 300' downstream.

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

EXISTING STRUCTURE INFORMATION
 STRUCTURE TYPE : Covered Bridge
 YEAR BUILT : 1865
 CLEAR SPAN(NORMAL TO STREAM): 60'
 VERTICAL CLEARANCE ABOVE STREAMBED: 13.3'
 WATERWAY OF FULL OPENING: 715 sq. ft.
 DISPOSITION OF STRUCTURE: Rehabilitate
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	379.1'	VELOCITY =	2.7 fps
Q10 =	380.7'	"	4.1 fps
Q25 =	381.4'	"	4.6 fps
Q50 =	381.9'	"	4.9 fps
Q100 =	382.4'	"	5.2 fps

LONG TERM STREAMBED CHANGES: None

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: n/a
 RELIEF ELEVATION: 385.0'
 DISCHARGE OVER ROAD @Q100: none

UPSTREAM STRUCTURE
 TOWN: Fairfield DISTANCE: 950'
 HIGHWAY # : TH50 STRUCTURE #: Br45
 CLEAR SPAN: 38' CLEAR HEIGHT: 13'
 YEAR BUILT: 1951 FULL WATERWAY: 490 sq. ft.
 STRUCTURE TYPE: Concrete T Beam

DOWNSTREAM STRUCTURE
 TOWN: Fairfield DISTANCE: 5,400'
 HIGHWAY # : TH47 STRUCTURE #: B46
 CLEAR SPAN: 31' CLEAR HEIGHT: 12'
 YEAR BUILT: 1919 FULL WATERWAY: 370 sq. ft.
 STRUCTURE TYPE: Rolled Beam

WORKING STRESS LOAD RATING (TONS)

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

COMMENTS: BOTTOM & UPPER CHORD AND STRINGERS CONTROL THE LOAD RATING

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2007	130	<15	64	4	5
2027	170	<20	64	6	10

20 year ESAL for flexible pavement from 2007 to 2027 : <25,000
 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): 60'
 VERTICAL CLEARANCE ABOVE STREAMBED: 13.3'
 WATERWAY OF FULL OPENING: 715 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	379.1'	VELOCITY=	2.7 fps
Q10 =	380.7'	"	4.1 fps
Q25 =	381.4'	"	4.6 fps
Q50 =	381.9'	"	4.9 fps
Q100 =	382.4'	"	5.2 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: n/a
 RELIEF ELEVATION: 385'
 DISCHARGE OVER ROAD @Q100: none

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 383.0'
 VERTICAL CLEARANCE: @ Q25 = 1.6'

SCOUR: 3.1' at Q500

REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION
 AVERAGE DAILY FLOW: 75 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 35 EI = 376.6'
 ORDINARY HIGH WATER: 430 EI = 377.9'

TEMPORARY BRIDGE REQUIREMENTS
 STRUCTURE TYPE: Road closed, no temporary structure needed.
 CLEAR SPAN (NORMAL TO STREAM):
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

- DESIGN CRITERIA**
- DESIGN LIVE LOAD AASHTO H6
 - DESIGN SPAN 62 FEET
 - ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 4.0 KSF
ON LEDGE 30 KSF
 - ALLOWABLE LOAD FOR PILING -
TYPE -
ESTIMATED LENGTH -
 - STRUCTURAL STEEL AASHTO M270M/M270 GRADE 50W
 - REINFORCING STEEL GRADE 60
 - CONCRETE, HIGH PERFORMANCE CLASS A f_c: 4000 PSI
CONCRETE, HIGH PERFORMANCE CLASS B f_c: 3500 PSI
 - DESIGN SOIL UNIT WEIGHT 140 PCF
 - DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL 2.4 KSF

- TRAFFIC MAINTENANCE**
- IS TRAFFIC TO BE MAINTAINED? NO - ROAD CLOSED
IF YES, ON EXISTING STRUCTURE? -
OR ON TEMPORARY BRIDGE? -
ONE OR TWO-WAY TRAVEL? -
 - TRAFFIC CONTROL SIGNALS REQUIRED? NO
 - ARE SIDEWALKS REQUIRED? NO
IF SO, ON WHAT SIDE? -

PROJECT NAME: FAIRFIELD
 PROJECT NUMBER: BHO 1448(32)
 FILE NAME: Z04J144Pl.xls PLOT DATE: 4/15/2008
 PROJECT MANAGER: J.H.WEAVER DRAWN BY: J.BICJA
 DESIGNED BY: J.BICJA CHECKED BY: S.T.JAMES
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