

PRELIMINARY INFORMATION SHEET

INDEX OF SHEETS

1.	TITLE SHEET
2.	PRELIMINARY INFORMATION SHEET
3.	TIE SHEET
4.	TYPICAL SECTIONS SHEET
5-6.	QUANTITY SHEETS
7-8.	LAYOUT SHEETS
9.	PROFILE SHEET
10.	TRAFFIC CONTROL
11.	PHASE II TRAFFIC CONTROL
12.	PHASE III TRAFFIC CONTROL
13.	PERMANENT TRAFFIC SIGNS & PAVEMENT MARKINGS LAYOUT SHEET
14.	TRAFFIC SIGN SUMMARY SHEET
15.	BORING INFORMATION SHEET
16.	BORING LOGS
17.	PLAN & ELEVATION SHEET
18.	EROSION PREVENTION & SEDIMENT CONTROL NARRATIVE
19-20.	EROSION PREVENTION & SEDIMENT CONTROL EXISTING CONDITIONS
21-22.	EROSION PREVENTION & SEDIMENT CONTROL PLAN
23-24.	EROSION PREVENTION & SEDIMENT CONTROL FINAL CONDITIONS
25-28.	EROSION PREVENTION & SEDIMENT CONTROL DETAILS
29.	PROJECT NOTES
30.	SUPERSTRUCTURE DETAILS - 33" X 48" BOX BEAM
31.	DECK DETAILS
32.	BRIDGE END DETAILS
33.	TRANSVERSE TENDON AND SHEAR KEY DETAILS
34.	ABUTMENT NO. 1 DETAILS
35.	ABUTMENT NO. 2 DETAILS
36.	ABUTMENT AND WINGWALL TYPICAL SECTIONS
37.	FOOTING REINFORCING PLAN
38.	REINFORCING STEEL SCHEDULE
39.	MATERIALS TRANSITION DETAIL
40-46.	MAINLINE SECTIONS
47-52.	CHANNEL SECTIONS

INDEX OF STANDARDS

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	6/1/1994
E-100	CONSTRUCTION APPROACH SIGNS	1/2/2004
E-101	CONSTRUCTION SIGN DETAILS	5/30/2003
E-102	CONSTRUCTION SIGN DETAILS	6/30/2003
E-102A	CONSTRUCTION SIGN DETAILS	5/1/2004
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	3/1/2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR U-TURNS ON DIVIDED HIGHWAY	6/30/2003
E-107A	BREAKAWAY BARRICADE DETAILS	8/8/1995
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	8/18/1995
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	8/8/1995
E-123	GUIDE SIGN PLACEMENT MISCELLANEOUS DETAILS	3/16/2004
E-141	REGULATORY SIGN DETAILS	9/20/1995
E-143	REGULATORY SIGN DETAILS	6/15/2004
E-180	FLANGED CHANNEL STEEL SIGN POST	5/20/1999
E-184	SQUARE STEEL SIGN POST	5/20/1999
E-191	PAVEMENT MARKING DETAILS	2/1/1999
E-193	PAVEMENT MARKING DETAILS	8/18/1995
G-1	STEEL BEAM GUARDRAIL WITH STEEL POSTS	1/3/2000
G-10	STEEL BEAM GUARDRAIL WITH WOOD POSTS	1/3/2000
G-10	STEEL BEAM GUARDRAIL APPROACH END TERMINAL	1/3/2000
G-10	STEEL BEAM GUARDRAIL TRAILING END TERMINAL	1/3/2000
G-10	ANCHOR FOR STEEL BEAM RAIL	1/3/2000
G-10	STEEL BEAM MEDIAN BARRIER	1/3/2000
G-18	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	6/1/1994
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11/15/2002

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: April 2007
 DRAINAGE AREA : 2.82 sq. mi.
 CHARACTER OF TERRAIN : Hilly, mostly forested.
 STREAM CHARACTERISTICS : Sinuous, moderately steep.
 NATURE OF STREAMBED : Gravel and cobbles.

PEAK FLOW DATA

Q 2.33 =	150 cfs	Q 50 =	540 cfs
Q 10 =	330 cfs	Q 100 =	630 cfs
Q 25 =	450 cfs	Q 500 =	880 cfs

DATE OF FLOOD OF RECORD : Unknown

ESTIMATED DISCHARGE: Unknown
 WATER SURFACE ELEV.: Unknown
 NATURAL STREAM VELOCITY: @ Q50 = 6.2 ft/s
 ICE CONDITIONS : Moderate
 DEBRIS: Heavy
 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: Corrugated Metal Plate Pipe
 YEAR BUILT: 1961
 CLEAR SPAN(NORMAL TO STREAM): Diameter = 114"
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY OF FULL OPENING: 70.9 sq. ft.
 DISPOSITION OF STRUCTURE: Remove
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	736.9'	VELOCITY =	15.8 ft/s
Q10 =	739.5'	"	19.1 ft/s
Q25 =	741.0'	"	20.5 ft/s
Q50 =	742.1'	"	21.3 ft/s
Q100 =	743.1'	"	22.0 ft/s

LONG TERM STREAMBED CHANGES: Scour pool at outlet.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: Above Q100
 RELIEF ELEVATION: 744.0'
 DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Springfield DISTANCE: 700'
 HIGHWAY #: TH9 STRUCTURE #: B164
 CLEAR SPAN: 14' CLEAR HEIGHT: 6'
 YEAR BUILT: Unknown FULL WATERWAY: 84 sq. ft.
 STRUCTURE TYPE: Bridge

DOWNSTREAM STRUCTURE

TOWN: Springfield DISTANCE: 3,600'
 HIGHWAY #: VT11 STRUCTURE #: B156
 CLEAR SPAN: 12'-10" CLEAR HEIGHT: 8'-4"
 YEAR BUILT: 1961 FULL WATERWAY: 85 sq. ft.
 STRUCTURE TYPE: CMPPA

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2006	6300	700	50	7	380
2026	8100	890	690	10	50

20 year ESAL for flexible pavement from 2006 to 2026 : 2,377,000
 40 year ESAL for flexible pavement from 2006 to 2046 : 5,884,000
 Design Speed : 50 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Prestress Concrete Box Beam Bridge
 CLEAR SPAN(NORMAL TO STREAM): 53'
 VERTICAL CLEARANCE ABOVE STREAMBED: 8.8'
 WATERWAY OF FULL OPENING: 280 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	734.2'	VELOCITY =	10.3 ft/s
Q10 =	735.5'	"	8.6 ft/s
Q25 =	736.0'	"	9.7 ft/s
Q50 =	736.3'	"	10.4 ft/s
Q100 =	736.6'	"	11.1 ft/s

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: Above Q100
 RELIEF ELEVATION: 744.0'
 DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 739.8'
 VERTICAL CLEARANCE: @ Q50 = 3.5'

SCOUR: No scour with Stone Fill, Type III lining the channel
 REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 6 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 3 cfs Depth > 1.0'
 ORDINARY HIGH WATER: 64 cfs Depth = 2.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required. Water diversion may be required. ***
 CLEAR SPAN (NORMAL TO STREAM):
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

*** If traffic is maintained with phased construction, a temporary pipe may be used to convey water through the construction area. A 60" pipe is the minimum size that should be used, based on passing a Q2.33 flood with 6.4' of headwater. The contractor may propose other options as long as a minimum water area of 19.6 sq. ft. is maintained.

DESIGN CRITERIA

- DESIGN LIVE LOAD AASHTO HS-25-44
- DESIGN SPAN 56'
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 4000 psf
ON LEDGE N/A
- ALLOWABLE LOAD FOR PILING N/A
TYPE N/A
ESTIMATED LENGTH
- STRUCTURAL STEEL AASHTO M270M/M270 GRADE N/A
- REINFORCING STEEL GRADE 60
- CONCRETE, HIGH PERFORMANCE CLASS A fc: N/A
CONCRETE, HIGH PERFORMANCE CLASS B fc: 3500 psi
- DESIGN SOIL UNIT WEIGHT 140 pcf
- DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL 3000 psf

TRAFFIC MAINTENANCE

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

* TRAFFIC WILL BE MAINTAINED BY USING PHASED CONSTRUCTION.

PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: ST CULV(5)

FILE NAME: s04c178pi.xls PLOT DATE: 4/24/2007
 PROJECT MANAGER: R. Whitcomb DRAWN BY: L. Bullock
 DESIGNED BY: D. Bonneau CHECKED BY: D. Peterson
 PRELIMINARY INFORMATION SHEET SHEET 2 OF 52