

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

INDEX OF SHEETS

FINAL HYDRAULIC REPORT

PLAN SHEETS

STANDARDS LIST

1	TITLE	E-134	BRIDGE NUMBER PLAQUE	08-08-1995
2	PRELIMINARY INFORMATION	E-141	REGULATORY SIGN DETAILS	09-20-1995
3	TYPICAL SECTIONS	G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	01-03-2000
4	PROJECT NOTES	G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	01-03-2000
5 - 7	QUANTITY SHEETS 1 - 3	G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11-15-2002
8	CONVENTIONAL SYMBOLOGY-LEGEND	T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
9	TIE SHEET	T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
10	LAYOUT	T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
11	PROFILE & DETAILS	T-45	SQUARE TUBE SIGN POST AND ANCHOR	08-06-2012
12	PLAN AND ELEVATION	S-367A	BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING	05-24-2012
13	DECK TYPICAL & PLAN	S-367B	GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM	05-24-2012
14	VOIDED SLAB UNIT DETAILS			
15	BEARING & MISCELLANEOUS DETAILS			
16	SLEEPER SLAB 1 PLAN & ELEVATION			
17	SLEEPER SLAB 2 PLAN & ELEVATION			
18	EXISTING WINGWALL #2 REPAIR			
19 - 21	MAINLINE CROSS SECTIONS 1 - 3			
22 - 24	CHANNEL LINE CROSS SECTIONS 1 - 3			
25	EPSC NARRATIVE			
26	EPSC EXSTING			
27	EPSC CONSTRUCTION			
28	EPSC FINAL			
29 - 30	EPSC DETAILS 1 - 2			

STRUCTURAL DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	5/7/2010

HYDROLOGIC DATA Date: January 2013

DRAINAGE AREA : 3.5 sq. mi.
 CHARACTER OF TERRAIN : Mountainous, steep and forested
 STREAM CHARACTERISTICS : Sinuous, semi-alluvial
 NATURE OF STREAMBED : Gravel, cobbles, ledge

PEAK FLOW DATA

Q 2.33 =	325 cfs	Q 50 =	1400 cfs
Q 10 =	825 cfs	Q 100 =	1650 cfs
Q 25 =	1150 cfs	Q 500 =	2150 cfs

DATE OF FLOOD OF RECORD: Unknown
 ESTIMATED DISCHARGE: Unknown
 WATER SURFACE ELEV.: Unknown
 NATURAL STREAM VELOCITY: @ Q25 = 14.9 fps
 ICE CONDITIONS: Moderate
 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: Rolled beam with timber deck
 YEAR BUILT: 1919
 CLEAR SPAN(NORMAL TO STREAM): 25'
 VERTICAL CLEARANCE ABOVE STREAMBED: 11'
 WATERWAY OF FULL OPENING: 270 sq. ft.
 DISPOSITION OF STRUCTURE: Replace superstructure
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1136.1'	VELOCITY =	14.6 fps
Q10 =	1137.2'	"	16.6 fps
Q25 =	1138.4'	"	17.4 fps
Q50 =	1139.3'	"	12.3 fps
Q100 =	1140.1'	"	13.0 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: N/A
 RELIEF ELEVATION: 1145.0'
 DISCHARGE OVER ROAD @Q100: N/A

UPSTREAM STRUCTURE

TOWN: None DISTANCE:
 HIGHWAY #: STRUCTURE #:
 CLEAR SPAN: CLEAR HEIGHT:
 YEAR BUILT: FULL WATERWAY:
 STRUCTURE TYPE:

DOWNSTREAM STRUCTURE

TOWN: Montgomery DISTANCE: 15,800'
 HIGHWAY #: TH 6 STRUCTURE #: 35
 CLEAR SPAN: 65' (45' normal to the stream) CLEAR HEIGHT: 8'
 YEAR BUILT: 1970 FULL WATERWAY:
 STRUCTURE TYPE: Rolled beam with concrete deck

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.23	1.29					
POSTING							
OPERATING	2.89	1.67	2.69	1.58	2.1	1.91	2.18
COMMENTS:							

AS BUILT "REBAR" DETAIL		
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

PROPOSED STRUCTURE

STRUCTURE TYPE: Precast prestressed voided slab with sleeper slab

CLEAR SPAN(NORMAL TO STREAM): 25'
 VERTICAL CLEARANCE ABOVE STREAMBED: 11'
 WATERWAY OF FULL OPENING: 275 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1136.1'	VELOCITY =	14.6 fps
Q10 =	1137.2'	"	16.6 fps
Q25 =	1138.4'	"	17.4 fps
Q50 =	1139.3'	"	12.3 fps
Q100 =	1140.1'	"	13.0 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: N/A
 RELIEF ELEVATION: 1145.0'
 DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1143.2'
 VERTICAL CLEARANCE: @ Q25 = 4.8'

SCOUR: Contraction scour at Q100 = 1' and at Q500 = 2'

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW: 10 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 5 cfs 0.5'
 ORDINARY HIGH WATER: 140 cfs 2.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: None required
 CLEAR SPAN (NORMAL TO STREAM):
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

- ROAD CLOSED
- TRAFFIC SIGNALS ARE NOT NECESSARY.
- SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	d _p : 2.5 INCH
3. DESIGN SPAN	L: 49.33 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: 0.85 INCH
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f _y : 270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f' _c : 7.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f' _{cr} : 5.5 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f' _c : ---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f' _c : ---
10. CONCRETE, HIGH PERFORMANCE CLASS B	f' _c : 3.5 KSI
11. CONCRETE, CLASS C	f' _c : ---
12. REINFORCING STEEL	f _y : 60 KSI
13. STRUCTURAL STEEL AASHTO M270	f _y : ---
14. SOIL UNIT WEIGHT	γ: 0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q _n : 4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
17. NOMINAL BEARING RESISTANCE OF ROCK	q _n : ---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
19. NOMINAL AXIAL PILE RESISTANCE	q _p : ---
20. PILE YIELD STRENGTH ASTM A572	f _y : ---
21. PILE SIZE	---
22. EST. PILE LENGTH	L _p : ---
23. PILE RESISTANCE FACTOR	φ: ---
24. LATERAL PILE DEFLECTION	Δ: ---
25. BASIC WIND SPEED	V _{3s} : ---
26. MINIMUM GROUND SNOW LOAD	p _g : ---
27. SEISMIC DATA	PGA: --- S _s : --- S ₁ : ---

PROJECT NAME: MONTGOMERY
 PROJECT NUMBER: BHO 1448(27)

FILE NAME: s96j306pi.xls PLOT DATE: 11/21/2013
 PROJECT LEADER: C. CARLSON DRAWN BY: R. PELLETT
 DESIGNED BY: H. SALLS CHECKED BY: H. SALLS
PRELIMINARY INFORMATION SHEET 2 OF 30

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT	
2008	<40	<10	NA	NA	NA	20 year ESAL for flexible pavement from 2008 to 2028 : <50,000
2028	NA	NA	NA	NA	NA	40 year ESAL for flexible pavement from 2008 to 2048 : NA
						Design Speed : 25 mph