

BRIDGE MEMORANDUM

Job No.: XXXXXXXX
Route: X (minor) over XXXX Creek

Bridge No.: XXXXXX
County: XXXXXXXX

Final Layout: (36'-49'-44') Prestressed Concrete I-Girder Spans
Roadway Width: 24'-0" (symmetrical) plus 16" Safety Barrier Curbs
Alignment: Tangent
Skew: 35° Right Advance
Profile Grade: VPT Sta. 40+53.00, PG Elev. 438.09 (match existing ±), +0.095% ahead across structure to Sta. 42+32.00, PG Elev. 438.26 (match existing ±)
Loading: HL-93
Beg. Station: Fill Face End Bent No. 1 = Sta. 40+74.61 ± C.Rte. X
Fill Exception: Sta. 40+74.61 to Sta. 42+07.89 ± C.Rte. X
Traffic Handling: Structure to be closed to traffic during construction
Existing Bridge: XXXXXX to be removed per standard specs, estimated cost \$26,000 (Bridge Item, included in estimate)

GENERAL NOTES:

- Stationing, Profile Grade and C.Rte. Structure are located along C.Rte. X.
- Use Type II (32") P/S Concrete I-Girders with three (3) girder lines (assumed 9'-9" girder spacing with 3'-7" overhangs).
- Use integral end bents with 10'-0" long turned back wings.
- Remove old roadway fill under the ends of the bridge to natural ground line (Roadway Item).
- Spill fill slopes shall be 2:1 (H:V) normal to end bents (Roadway Item).
- Provide 2' thick, Type 2 Rock Blanket with Permanent Erosion Control Geotextile at both end bents along full height of spill slopes. Extend Rock Blanket with Geotextile from toe of spill slope towards channel 15' at both end bents (Roadway Item).
- Install modified Bridge Approach Slabs for concrete pavement option (Roadway Item).
- Seismic Performance Category B (seismic details only).
- Provide right-of-way as required for construction.
- Relocate all utilities as required for construction.
- No conduit, lighting, utility supports, sign supports, fencing or sidewalks are to be included in the final bridge plans.
- Route X AADT Const. (2013) = 310 ; AADT Design (2033) = 340 ; AADTT = 10% ; Design Speed = 55 mph.
- A NFIP flood study for Ste. Genevieve County, MO (FIRM Panel 29186C0350D, Effective Date July 4, 2011) shows this construction site in a "Zone A" flood hazard area subject to 100-year flooding. Base flood elevations have not been determined nor has a floodway been identified. The Bridge Division will obtain the required Floodplain Development Permit.

Estimated Working Days = 35

¹ FY '14 Estimated Construction Cost = #331,000

¹ Does not include inflation from Planning (3% compounded annually)

Programmed Bridge STIP Amount = \$361,000

District contact is XXX XXXXXXXX, TPM (XXX) XXX-XXXX.

Bridge contact is XXXX XXXXXXXX, SPM (XXX) XXX-XXXX.

Hydrologic Data	
Drainage Area	= 9.9 (sq. mi.)
Backwater/Base Flood Data (100 year)	
High Water Elev.	= 434.20
Design Discharge	= 6688 (cfs)
Estimated Backwater	= 1.36 (ft)
Average Velocity thru Opening	= 8.29 (ft/sec)
Freeboard	
Design Frequency	= 50 (year)
Design Discharge	= 5616 (cfs)
Freeboard	= 1.13 (ft)
Design High Water (DHW) Elev.	= 433.21
Roadway Overtopping	
Design Elev. (1' below shoulder)	= 436.75
Design Discharge	> 9267 (cfs)
Design Frequency	> 500 (year)

Prepared by: XXXXXXXX XXXXXX Senior Structural Designer	Date
Bridge: XXXX XXXXXXXX Structural Project Manager	Date
District	Date
District	Date