BRIDGE MEMORANDUM

Job No.: JXXXXXX **Bridge No.:** AXXXX
Route: AAA (low volume) over XXXX Creek **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: Sta. 40+74.61± ℄ Rte. AAA at fill face Bent No. 1
Fill Exception: Sta. 40+74.61± to Sta. 42+07.89 ±
Traffic Handling: Structure to be closed to traffic during constuction. See roadway plans for traffic control.
Existing Bridge: NXXXX to be removed per standard specs, estimated cost $26,000 (bridge item, included in estimate).

GENERAL NOTES:

- Stationing, profile grade and centerline structure are located along centerline Route AAA.
- Use Type II (32") P/S Concrete I-Girders with three girder lines (assumed 9'-9" girder spacing with 3'-7" overhangs).
- Use integral pile cap 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 normal to end bents (roadway item).
- Provide 2-foot 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 feet at both end bents (roadway item).
- Provide 20-foot long bridge approach slabs (minor road) concrete option only (bridge item).
- Seismic Performance Category B (seismic details only).
- Provide right-of-way as required for construction (roadway item).
- Relocate all utilities as required for construction (roadway item).
- No conduit, fencing, lighting, utility and sign supports, or sidewalks are to be included in the final plans for this structure.
- Prestent AADT (2016) = 310; Design AADT (2037) = 340; T = 10%; V = 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 = $328,000

[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 XXXXXXX, SPM (XXX) XXX-XXXX.

Hydrologic Data
Drainage Area = 9.9 mi²
Design Flood Frequency = 50 years
Design Flood Discharge = 5616 cfs
Design Flood (D.F.) Elevation = 433.21
Base Flood (100-year)
Base Flood Elevation = 434.20
Base Flood Discharge = 6688 cfs
Estimated Backwater = 1.36 ft
Average Velocity thru Opening = 8.29 ft/s
Freeboard
Freeboard = 1.13 ft
Roadway Overtopping
Overtopping Flood Discharge = 9267 cfs
Overtopping Flood Frequency > 500 years
500-Year Flood Elevation = 436.75

Prepared by: XXXXXXXXXXX XX — Date
Senior Structural Designer

Bridge: XXXX XXXXXX — Date
Structural Project Manager

District — Date

District — Date