

ROUTE NO.	SECTION	COUNTY	LENG.	DATE	SHEET NO.
FAI 55		MCLEAN	70	52	14 SHEETS
PER. NO.	DATE	BY	PER. NO.	DATE	BY

• (157-4)HBR-58.VBR-11&57-2HB-1

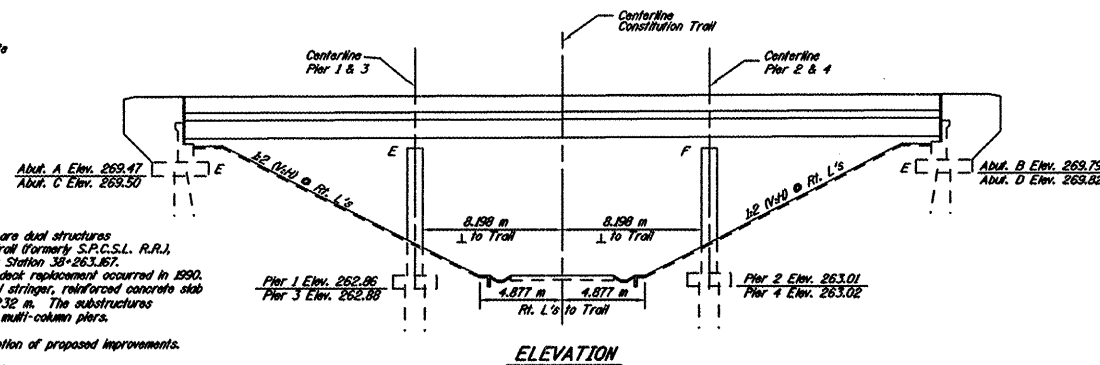
Benchmark: MP-5 brass tablet set in concrete
Sta. 38+400.200 Elev. 270.21 m

Existing Structures

Structure Number 057-0026 and 057-0027 are dual structures carrying F.A.I. Route 55 over Constitution Trail (formerly S.P.C.S.L. R.R.), Section (57-4) RS-3 & 1, McLean County at Station 38+263.167. Structures were built in 1962, widening and deck replacement occurred in 1990. The superstructures consist of 3 span, steel stringer, reinforced concrete slab deck with bit. to bit. abutment length of 46.232 m. The substructures consist of concrete pile bent abutments and multi-column piers.

See proposed work on this sheet for description of proposed improvements.

Traffic to be maintained by staged construction.



ELEVATION

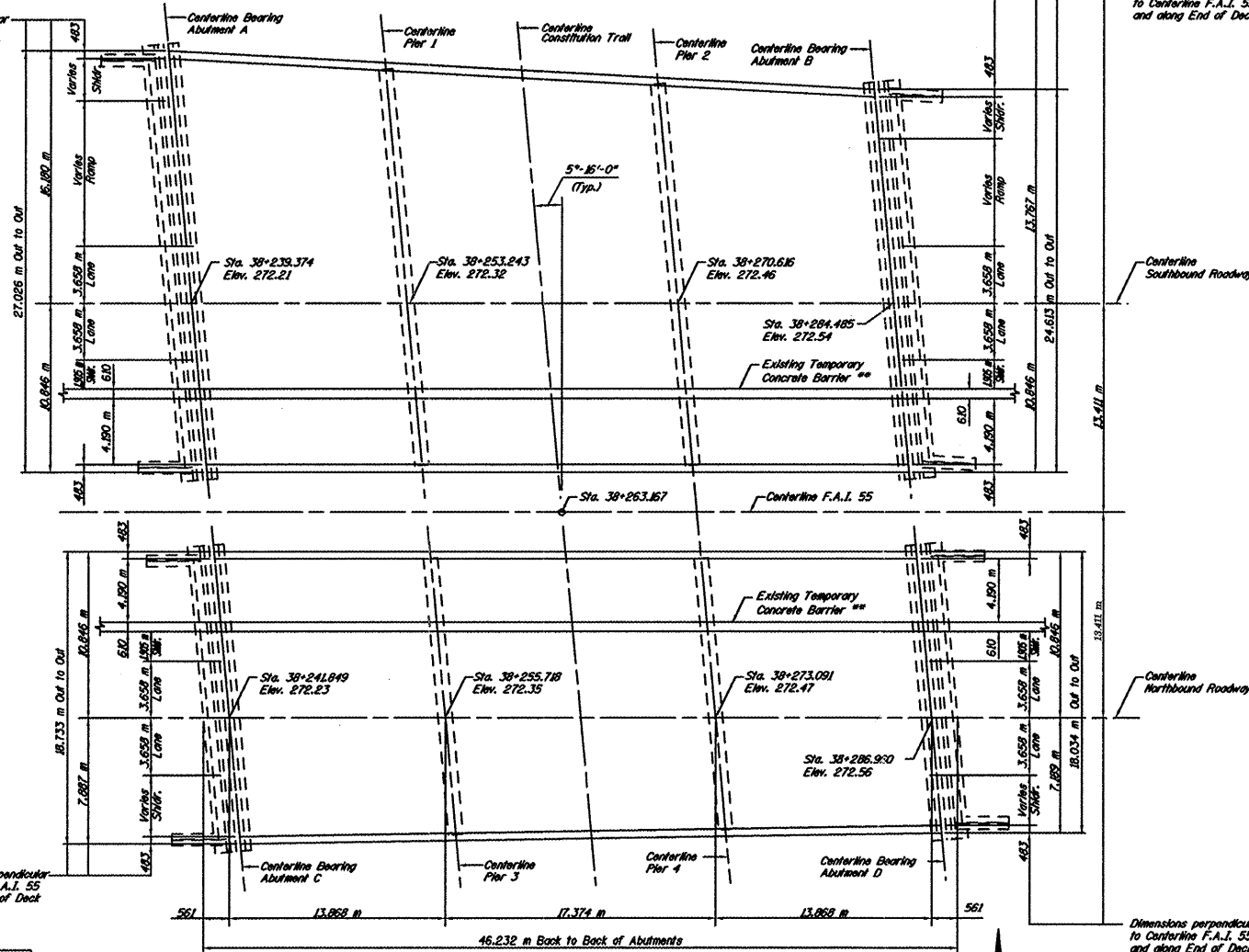
Proposed Work

1. Expansion joint removal and replacement.
2. Partial deck removal and replacement.
3. Add stud shear connectors at abutment ends of beams.
4. Remove existing expansion bearings of abutments and replace with elastomeric bearings.
5. Structural repair of concrete at abutments.

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub.	Total
CONCRETE REMOVAL	CU M	93.6	0.7	93.6
PREFORMED JOINT STRIP SEAL	METER	87.3	--	87.3
CONCRETE SUPERSTRUCTURE	CU M	93.6	--	93.6
BRIDGE DECK GROOVING	SQ M	332	--	332
PROTECTIVE COAT	SQ M	406	--	406
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 125 MM)	SQ M	--	1.0	1.0
FURNISHING AND ERECTING STRUCTURAL STEEL	KG	3050	--	3050
REINFORCEMENT BARS, EPOXY COATED	KG	12870	--	12870
PROTECTIVE SHIELD	SQ M	464	--	464
BAR SPIGOTS	EACH	186	--	186
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	24	--	24
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	24	--	24
STUD SHEAR CONNECTORS	EACH	2016	--	2016
JACK AND REMOVE EXISTING BEARINGS	EACH	48	--	48
ANCHOR BOLTS, M24	EACH	96	--	96

Dimensions perpendicular to Centerline F.A.I. 55 and along End of Deck



PLAN

General Notes

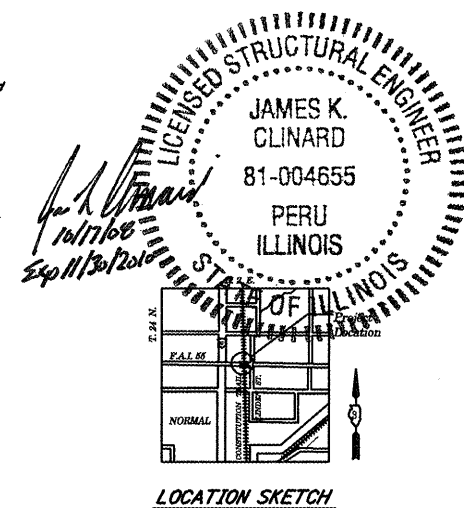
- Reinforcement Bars designated (E) shall be Epoxy Coated.
- All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type I. Cost included with Furnishing and Erecting Structural Steel.
- Field welding of construction accessories will not be permitted to beams or girders.
- Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.
- Any cracks that cannot be removed by grinding 1" back deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 103.04 of the Standard Specifications.
- All dimensions are in millimeters (mm) except as noted.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Reinforcement bars shall conform to the requirements of ASTM A 706 or 400. See Special Provisions.

DESIGN STRESSES

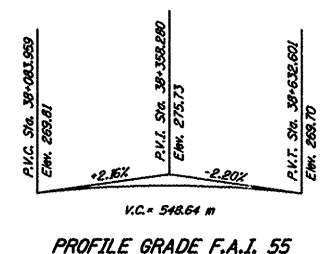
(EXISTING CONSTRUCTION)
Concrete: f'c = 24 Mpa
Reinforcement: fs (1962) = 139 Mpa
fs (1990) = 400 Mpa
Structural Steel: fs (1962) = 224 Mpa
fs (1990) = 248 Mpa
Design Loading: MSB & Alternate
Allow 12 MN/m for future wearing surface.
Design Specifications: AASHTO (1983) plus ISB4 thru 1988 Interims.

DESIGN STRESSES

(NEW CONSTRUCTION)
Concrete: f'c = 24 Mpa
Reinforcement: fs = 400 Mpa
Structural Steel: fs = 248 Mpa
Design Specifications: AASHTO 2002 and Interims



LOCATION SKETCH



PROFILE GRADE F.A.I. 55

DESIGNED	GAE
CHECKED	JDA
DRAWN	NO
CHECKED	GAE

** To be relocated See sheet 2 of 14

GENERAL PLAN AND ELEVATION
F.A.I. 55 OVER CONSTITUTION TRAIL
MCLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

CHAMBLIN ASSOCIATES
PERU ILLINOIS MORRIS