

Bench Mark: Chiseled square on west concrete base of overhead sign on I-57 - I-70 "South Memphis, West St. Louis" Station 2078+07. Elevation 581.46, 86.8ft LT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Structure: #025-2018 carries FAI 70 EB RDWY B over Frontage Road 1354 previously Frontage Road 1355. The Structure was constructed in 1960 as a cast in place concrete 16'-0" x 14'-0" single cell culvert subway with 66'-3" out to out headwalls. Traffic is to be maintained at all times on 57/70. FR 1354 is to be closed during construction.

No salvage.

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 GR 60. See special provisions.

Removal of the existing wings during construction shall be completed according to section 501.05 of the standard spec.

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of work, however, the Contractor will be paid for the quantity furnished at the unit price for the work.

Expansion bolts shall be according to standard specifications article 1006.10. Precast concrete culvert alternative will not be allowed at this site.

For the culvert extension, the outside surface of the walls, top, slab, and back of wingwalls below grade shall be waterproofed according to Article 503.18 of the Standard Specifications. Cost of waterproofing shall be included in the cost of "Concrete Box Culverts".

The final finish on the Culvert Extension bottom slabs shall be Type A according to Article 420.09 of the Standard Spec.

Epoxy Crack Injection shall be according to the Standard Specifications Section 590. Concrete Sealer shall be applied to the inside faces of the new & existing box culverts & the faces of the exposed wingwall.

For maintenance of traffic and Stage Construction Layout See Roadway Plans.

Reinforcement bars designated (E) shall be epoxy coated.

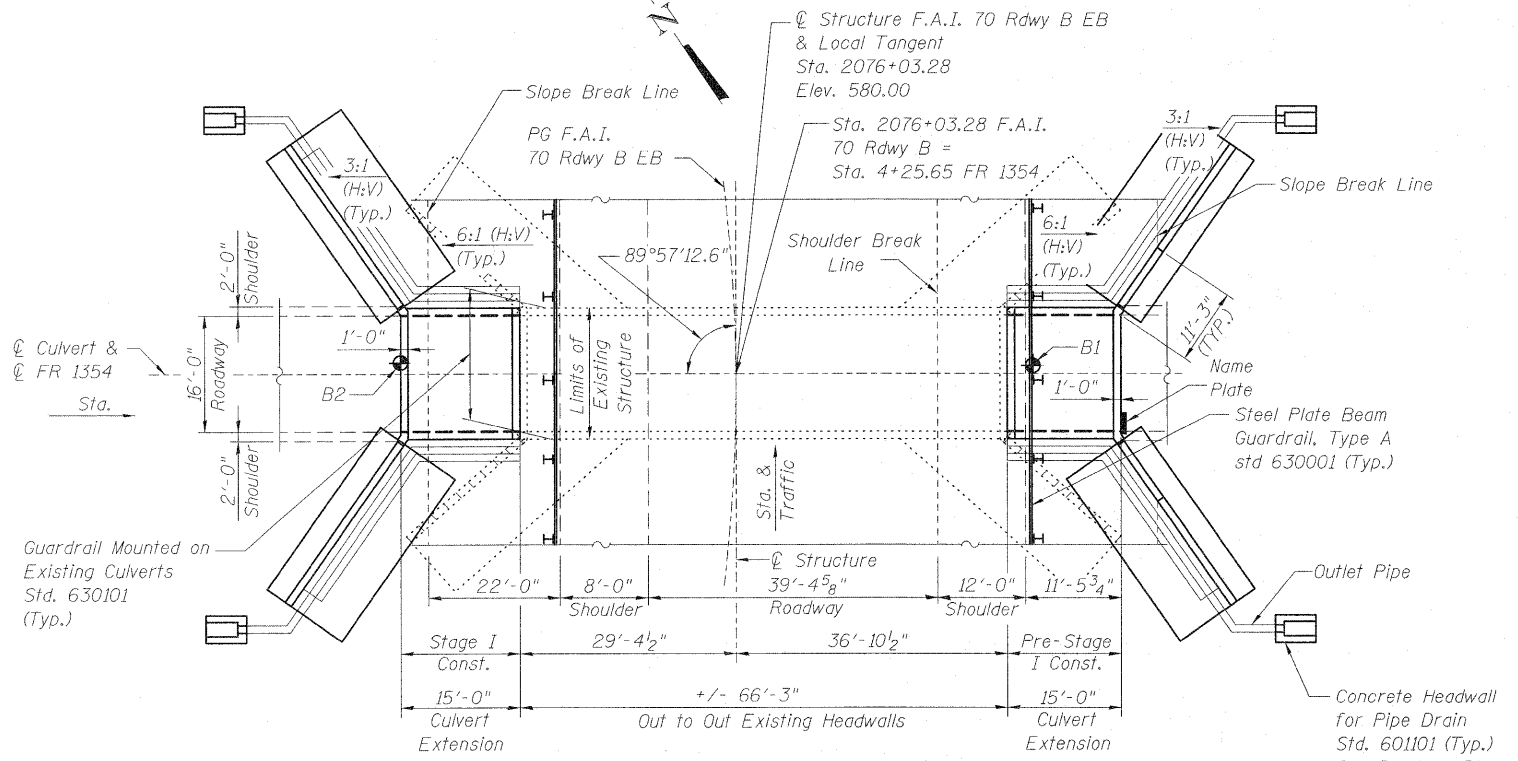
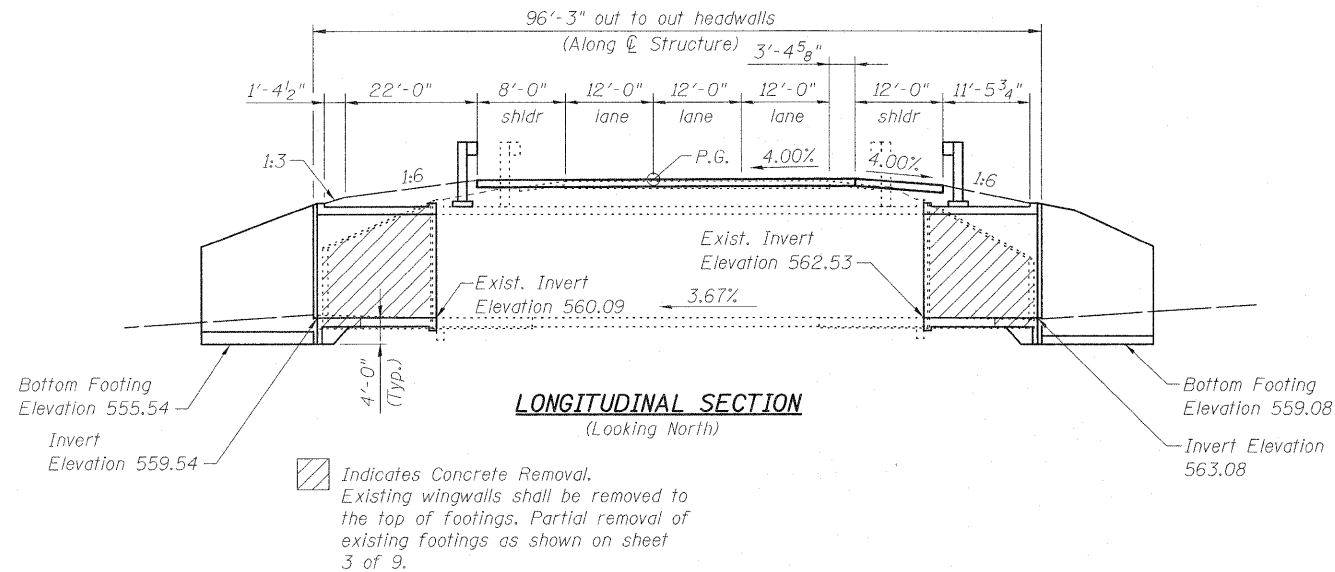
Porous Granular Embankment (Special) needs to be crushed stone, Gradation CA7 or CA11.

STATION 2076+03.28
REBUILT 200_ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. (25-3)BY
LOADING HS-20-44 & ALT.
STR. NO 025-2018

NAME PLATE
(See Std. 515001)

INDEX OF SHEETS

1. General Plan
2. Stage Construction Details
3. Concrete Removal & Expansion Bolt Details
4. Drainage Details
5. Culvert Details
6. West Extension Wing Walls
7. East Extension Wing Walls
8. Existing Culvert Repair Details
9. Soil Borings



BOX FLOOR LOADING H15-44

LOADING OVER BOX

HS20-44 & ALT.

No Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

New Construction
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

Existing Structure
f'c = 3,500 psi (Top Slab & Bottom Slab)
f'c = 2,500 psi (Side Walls & Footings)
fy = 40,000 psi (Reinforcement)

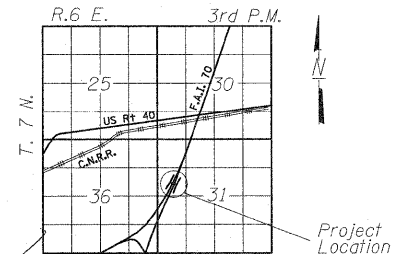
Illinois Design Firm Number 184.001670

BERNARDIN
LOCHMUELLER &
ASSOCIATES, INC.

3 Oak Drive
Maryville, IL 62062-5685
Local (618) 288-4665
Fax 618-288-4666

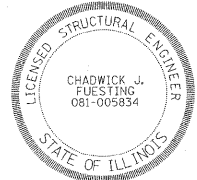
TOTAL BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|--|---------|--------|
| Geocomposite Wall Drain | Sq. Yd. | 258 |
| Pipe Underdrains for Structures, 4" | Foot | 164 |
| Porous Granular Embankment (Special) | Cu. Yd. | 350 |
| Expansion Bolts 3/4" | Each | 96 |
| Concrete Box Culverts | Cu. Yd. | 255.3 |
| Reinforcement Bars, Epoxy Coated | Pound | 43,260 |
| Name Plates | Each | 1 |
| Concrete Removal | Cu. Yd. | 50.9 |
| Epoxy Crack Injection | Foot | 70 |
| Concrete Sealer | Sq. Ft. | 7,511 |
| Porous Granular Embankment | Cu. Yd. | 60 |
| Removal and Disposal of Unsuitable Materials | Cu. Yd. | 60 |



GENERAL PLAN
EASTBOUND F.A.I. ROUTE 70
ROADWAY B E.B.
OVER FRONTAGE ROAD 1354
STATION 2076+03.28
STRUCTURE NO. 025-2018

| | |
|----------|---------------|
| DESIGNED | B.B. |
| CHECKED | C.J.F. |
| DRAWN | J.G. |
| CHECKED | C.J.F. & B.B. |



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TSP)
ENGINEER OF BRIDGES AND STRUCTURES

EXP. 11-30-2010
Chadwick J. Fuesting 3/18/10

| | | | | | |
|---|-------------------|---------------------|---------------------|----------------------|------------------|
| SHEET NO. 1 9 SHEETS | F.A.I. RTE. 70 | SECTION (25-3)BY | COUNTY EFFINGHAM | TOTAL SHEETS 1416 | SHEET NO. 467 |
| | SN 025-2018 | | CONTRACT NO. 74296 | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |