

Benchmark: Set cross cut on sidewalk at southwest corner of Illinois Route 176 and Taylor Street. Station 85+10 at 6.5' from E.O.P. Elev. 807.26.

Existing Structure: SN 056-0072 was originally constructed in 1930 as Federal Aid Project 189-A, Route 67, Section 119 as a 2 cell reinforced concrete culvert with 9'-0" spans and 3'-0" rise at a 45° skew. In 2001, the ends of the culvert and wingwalls were reconstructed. Traffic to be detoured during construction.

Precast alternate is not allowed.

No salvage.

DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | Upstream | Downstream |
|------------------------------|----------|------------|
| | 799.20 | 799.03 |

INDEX OF SHEETS

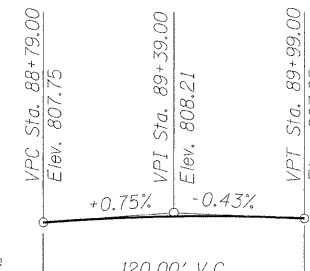
- S1. General Plan and Elevation
- S2. Top of Slab Elevations
- S3. Culvert Details (1 of 2)
- S4. Culvert Details (2 of 2)
- S5. Approach Slab Details (1 of 2)
- S6. Approach Slab Details (2 of 2)
- S7. Parapet Railing
- S8. Boring Logs
- S9. Existing Culvert Plans

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions. Reinforcement bars designated (E) shall be epoxy coated. All exposed edges of concrete shall be beveled 3/4".

LEGEND

- Proposed Guard Rail
- Existing Aerial Line
- Existing Underground Telephone Line
- Existing Storm Sewer
- Existing Underground Gasline



Brad H. Sayers
BRAD H. SAYERS, S.E.
 IL. LIC. NO. 081-006267
 EXP 11/30/12
 DATE 10/15/11

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
J. Paul Payne (TS)
 ENGINEER OF BRIDGES AND STRUCTURES

PROFILE GRADE
 along Illinois Route 176

TOTAL BILL OF MATERIAL

| ITEM | UNIT | QTY. |
|---|-------|--------|
| Removal and Disposal of Unsuitable Material | Cu Yd | 93 |
| Porous Granular Embankment | Cu Yd | 93 |
| Stone Riprap, Class A4 | Sq Yd | 90 |
| Filter Fabric | Sq Yd | 90 |
| Removal of Existing Structures | Each | 1 |
| Floor Drains | Each | 4 |
| Concrete Structures | Cu Yd | 35.7 |
| Concrete Superstructure | Cu Yd | 176.1 |
| Bridge Deck Grooving | Sq Yd | 427 |
| Protective Coat | Sq Yd | 474 |
| Reinforcement Bars, Epoxy Coated | Pound | 81,540 |
| Parapet Railing | Foot | 49 |
| Name Plates | Each | 1 |
| Concrete Box Culverts | Cu Yd | 104.8 |
| Geocomposite Wall Drain | Sq Yd | 10 |
| Porous Granular Embankment, Special | Cu Yd | 14 |

LOADING HS 20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
 f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges 17th Edition

WATERWAY INFORMATION

Drainage Area = 6.48 sq. mi. Low Grade Elev. 807.40 @ Sta. 86+00

| Flood Yr. | Freq. | Q C.F.S. | Opening Sq. Ft. | Nat. Exist. | Prop. | H.W.E. Exist. | Prop. | Head - Ft. Exist. | Prop. | Headwater El. Exist. | Prop. |
|-------------|-------|----------|-----------------|-------------|-------|---------------|--------|-------------------|-------|----------------------|--------|
| 10 | 10 | 380 | 54 | 66 | 66 | 808.52 | 808.52 | 0.00 | 0.00 | 808.52 | 808.52 |
| Design | 50 | 492 | 54 | 66 | 66 | 808.75 | 808.75 | 0.00 | 0.00 | 808.75 | 808.75 |
| Base | 100 | 688 | 54 | 66 | 66 | 808.77 | 808.77 | 0.00 | 0.00 | 808.77 | 808.77 |
| Overtopping | <10yr | | | | | | | | | | |
| Max. Calc. | 500 | 863 | 54 | 66 | 66 | 808.89 | 808.89 | 0.00 | 0.00 | 808.89 | 808.89 |

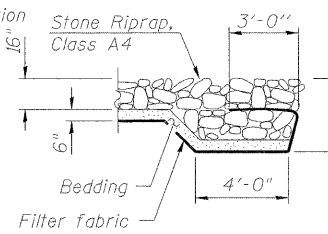
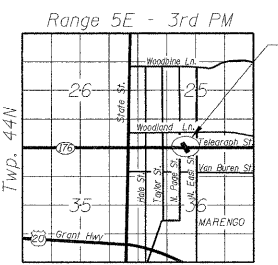
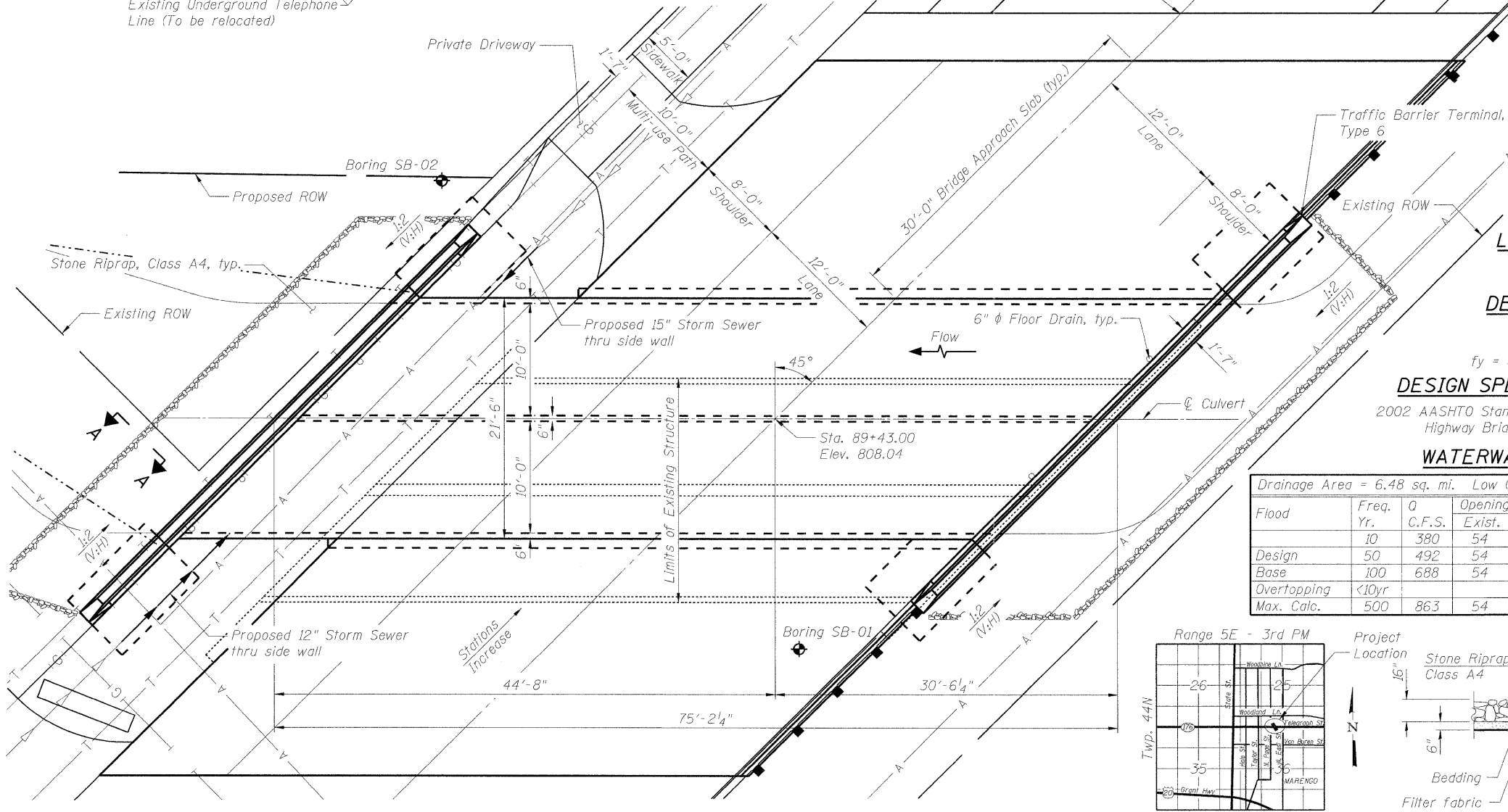
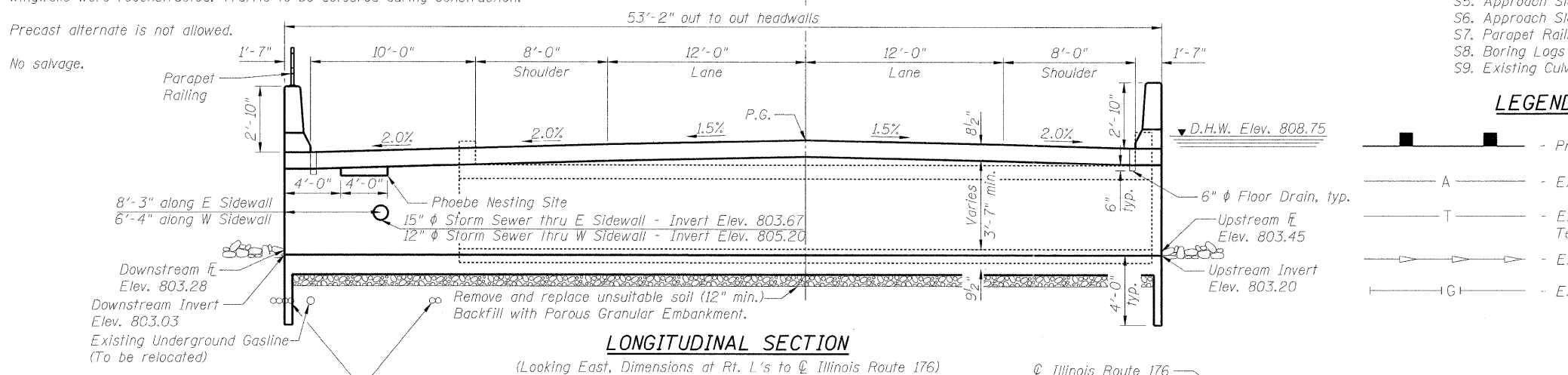
STATION 89+43.00
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P. RTE. 533
 SEC. 119-T-1
 LOADING HS20
 STR. NO. 056-0301

NAME PLATE

See Highway Standard 515001-03 for dimensions and placement

**GENERAL PLAN AND ELEVATION
 ILLINOIS ROUTE 176 OVER DRAINAGE DITCH
 F.A.P. ROUTE 533 - SECTION 119-T-1**

**MCHENRY COUNTY
 STATION 89+43.00
 STRUCTURE NO. 056-0301**



| | | |
|------------------------|----------------|-----------|
| USER NAME = Zsagerb | DESIGNED - BPS | REVISED - |
| | CHECKED - BHS | REVISED - |
| PLOT SCALE = N/A | DRAWN - BPS | REVISED - |
| PLOT DATE = 10/15/2011 | CHECKED - BHS | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
 S.N. 056-0301
 SHEET NO. S1 OF 9 SHEETS**

| | | | | |
|---------------------|---------------------------|--------------------|-----------------|--------------|
| F.A.P. RTE. 533 | SECTION 119-T-1 | COUNTY MCHENRY | TOTAL SHEETS 40 | SHEET NO. 16 |
| IL ROUTE 176 | | CONTRACT NO. 60M54 | | |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |

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