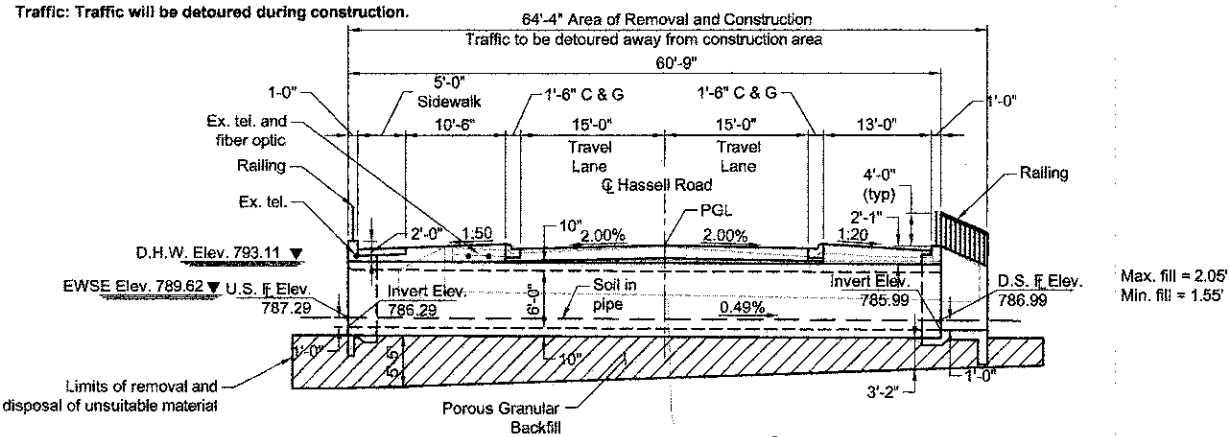


Benchmark: Chiseled cross on north sidewalk approximately 1 ft north of curb at Elev. 794.37 feet.

Datum = NGVD29

Existing Structure: SN 016-6326 built in 1970 as twin CMP Pipe Arches, approximate out-to-out width of 25'-10" and approximately 50'-6" in length. No salvage.

Traffic: Traffic will be detoured during construction.



Longitudinal Section

Note: Approx. 3 to 5 feet of undercut of unsuitable soils and replacement with PGE prior to culvert installation. Dimensions at right angles to Centerline of Roadway unless otherwise noted.

General Notes

1. Precast concrete box culvert sections shall conform to the requirements of ASTM C15577.
2. Lifting holes shall be filled with concrete plugs and mastic after the box sections are in place.
3. Diversion of stream flow during the removal of the existing culvert and the construction of the proposed culvert and all required erosion control measures shall be considered as included in concrete box culverts and no additional compensation will be allowed.

Sheet No.

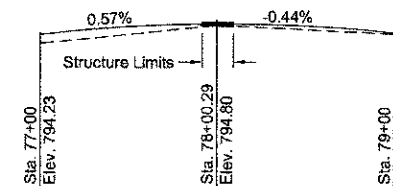
- CC1
- CC2
- CC3
- CC4
- CC5
- CC6
- CC7

Index of Sheets

- Description**
- General Plan & Longitudinal Section
 - South End Section
 - South End Section Details
 - North End Section
 - North End Section Details
 - Decorative Steel Railing Details
 - Soil Boring Logs

Total Bill of Material

| ITEM | UNIT | QUANTITY |
|---|--------|----------|
| REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL | CU YD | 387 |
| POROUS GRANULAR BACKFILL | CU YD | 469 |
| BRIDGE RAIL REMOVAL | FOOT | 74 |
| PIPE CULVERT REMOVAL | FOOT | 101 |
| NAME PLATES | EACH | 1 |
| BOX CULVERT END SECTIONS, CULVERT NO. 2 | EACH | 2 |
| PRECAST CONCRETE BOX CULVERTS 10' X 6' | FOOT | 107 |
| DECORATIVE STEEL RAILING | FOOT | 95 |
| FORM LINER TEXTURED SURFACE, SPECIAL | SQ. FT | 289 |



Profile Grade
(along Q roadway)

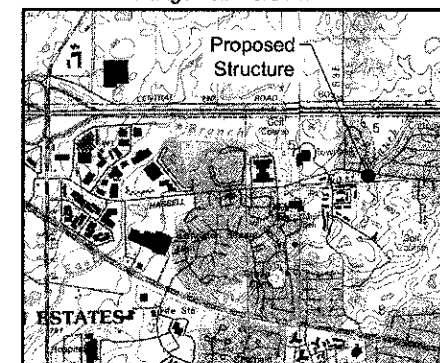
Waterway Information Table

| Flood | | Frequency | Discharge (cfs) | Waterway Opening (sq. ft.) | Natural H.W.E. | Created Head (ft.) | | Headwater Elev. | | |
|--------------------|--|-----------|-----------------|----------------------------|----------------|--------------------|----------|-----------------|----------|--------|
| | | Year | | Existing | Proposed | Existing | Proposed | Existing | Proposed | |
| Design | | 10 | 215.00 | 83.7 | 98.6 | 792.45 | 0.00 | 0.06 | 792.45 | 792.51 |
| | | 30 | 270.00 | 86.2 | 98.6 | 793.11 | 0.01 | 0.14 | 793.12 | 793.25 |
| | | 50 | 340.00 | 86.4 | 98.6 | 793.33 | 0.29 | 0.17 | 793.62 | 793.50 |
| Base (Overtopping) | | 100 | 400.00 | 86.4 | 98.6 | 794.04 | 0.34 | 0.17 | 794.38 | 794.21 |
| Max Calc. | | 500 | 555.00 | 86.4 | 98.6 | 794.71 | 0.11 | 0.05 | 794.82 | 794.76 |

Drainage Area = 2484.81 acres
3.8825 sq. mi.

Existing Low Grade Elevation = 793.39 ft. @ Sta: 77+60
Proposed Low Grade Elevation = 793.39 ft. @ Sta: 77+60

Range 10E - 3rd PM



Location Sketch

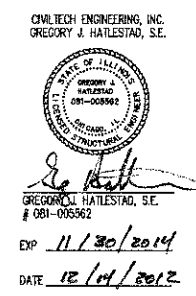
| Station | Offset | Station | Offset |
|----------|-----------|----------|-----------|
| 78+13.07 | 26.55' RT | 77+69.66 | 36.00' LT |
| 78+18.75 | 32.33' RT | 77+90.91 | 36.00' LT |
| 78+16.04 | 34.94' RT | 77+90.91 | 34.63' LT |
| 77+82.37 | 34.94' RT | 78+12.18 | 34.63' LT |
| 77+79.67 | 32.23' RT | 78+12.18 | 36.00' LT |
| 77+85.47 | 26.43' RT | 78+33.43 | 36.00' LT |
| 77+87.45 | 25.00' LT | 78+33.43 | 27.50' LT |
| 77+77.91 | 25.00' LT | 78+25.18 | 27.50' LT |
| 77+77.91 | 27.50' LT | 78+25.18 | 25.00' LT |
| 77+69.66 | 27.50' LT | 78+15.05 | 25.00' LT |

Limits of Removal/Disposal

Station 78+00
Built 201_ by
Hoffman Estates
Loading HL-93
Structure No. 016-6343

Name Plate
See Std. 515001

General Plan & Longitudinal Section
Hassell Road over
Poplar Creek East Branch
F.A.U. Rt. 1100
Section 11-00087-00-FP
Cook County
Station 78+00.29
Structure No. 016-6343

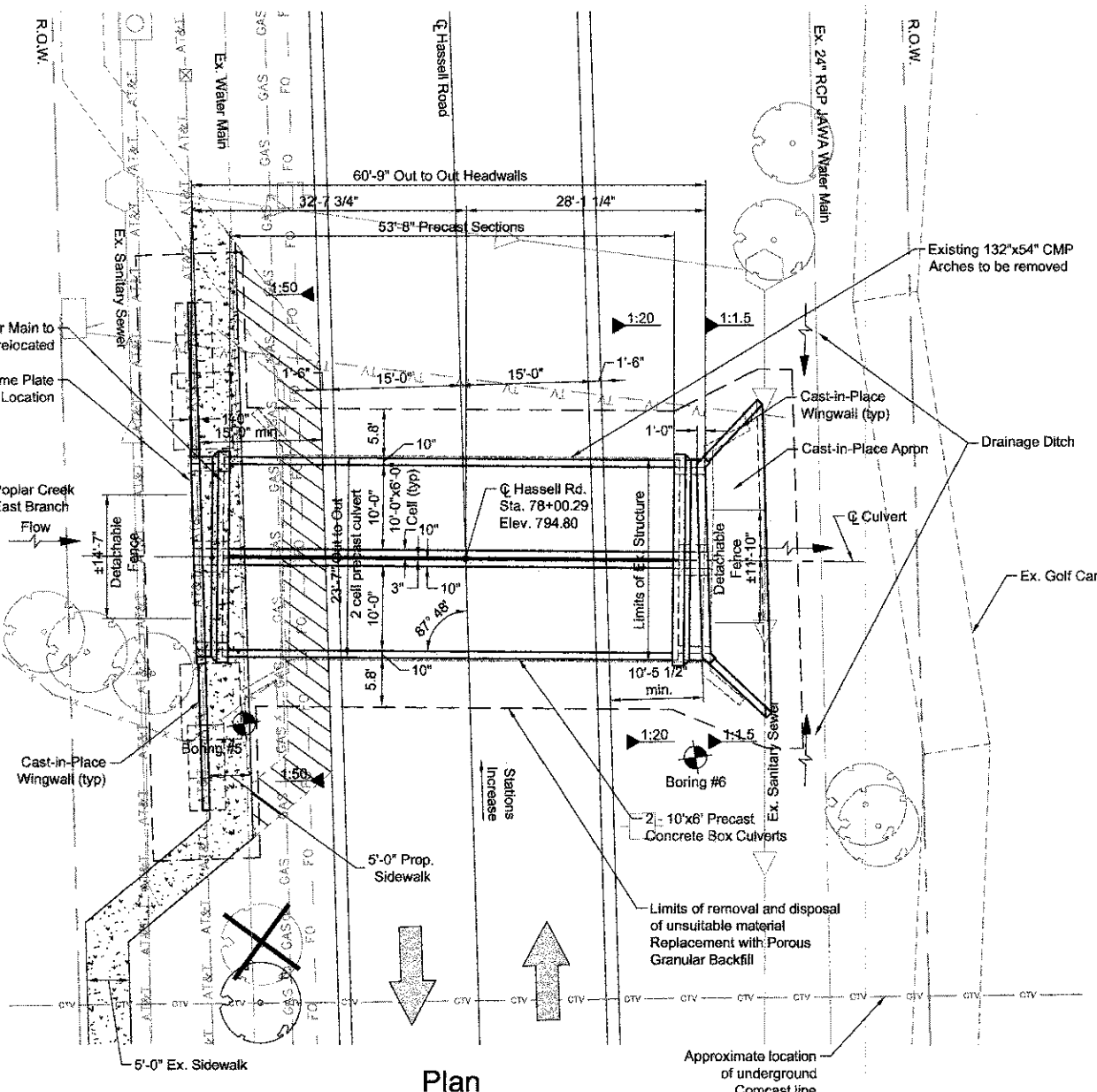


I certify that to the best knowledge, information and belief, this box culvert design is structurally adequate for the design loading shown on the shown plans. The design is an economical one for the style of the structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications of Highway Bridges.

Loading HL-93
Allow 50#/sq-ft for future wearing surface.
Design Fill Height = 1'-6"

Design Specifications
2012 AASHTO LRFD Bridge
Design Specifications, 6th Edition

Design Stresses
Field Units
f_c = 5,000 psi (pre-cast)
f_y = 60,000 psi (reinforcement)
f_y = 65,000 psi (welded wire fabric)
f_c = 3,500 psi (cast in place)



Plan

Note: Dimensions at right angles to Centerline of Roadway unless otherwise depicted.

PLAN

| | |
|------|----|
| DATE | BY |
| DATE | BY |

NOTE BOOK NO. OF WAY CHECKED
NO. OF WAY CHECKED
NO. OF WAY CHECKED
NO. OF WAY CHECKED

PROFILE

| | |
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