

Bench Mark: Cut square on southwest parapet wall over I-90 on west end, ± 2.5 A/G. Elevation 598.65.

Existing Structure: SN 016-1087 was originally built in 1960 as part of the F.A.I. Route No. 4 Project, Section S-2626.2-1B. The existing structure consists of reinforced concrete abutments and multi column piers founded on sub-piers (reinforced concrete caissons). The existing structure has an overall length of 231'-4 1/2" and an out-to-out deck width of 68'-4". The existing structure is to be removed and replaced. Harrison Street traffic will be detoured via local roads during construction and bridge will be closed. Local access to Cermak Pump Station provided via existing structure (SN 016-1088).

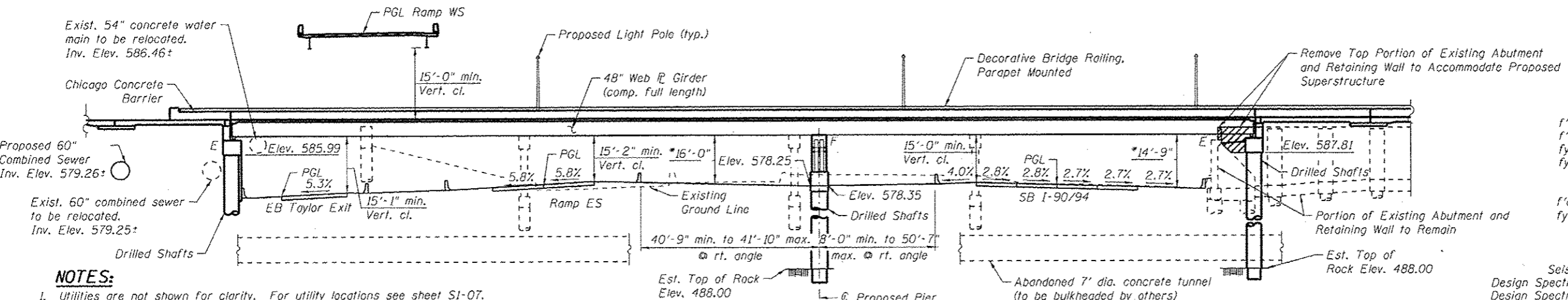
Salvage portion of existing East Abutment and North Retaining Wall.

Proposed East Abutment is designed for vertical load and portion of lateral load. The remainder of the lateral load is resisted by the existing counterfort wall, which is to remain.

DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interim Revisions

LOADING HL-93

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



DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f'_c = 7,000$ psi (West Abut.)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

EXISTING UNITS

$f'_c = 3,000$ psi
 $f_y = 40,000$ psi (Reinforcement)

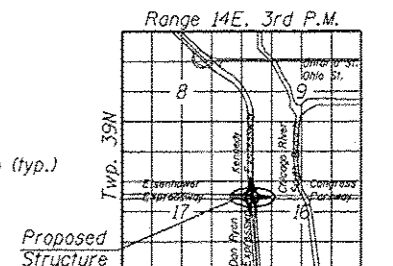
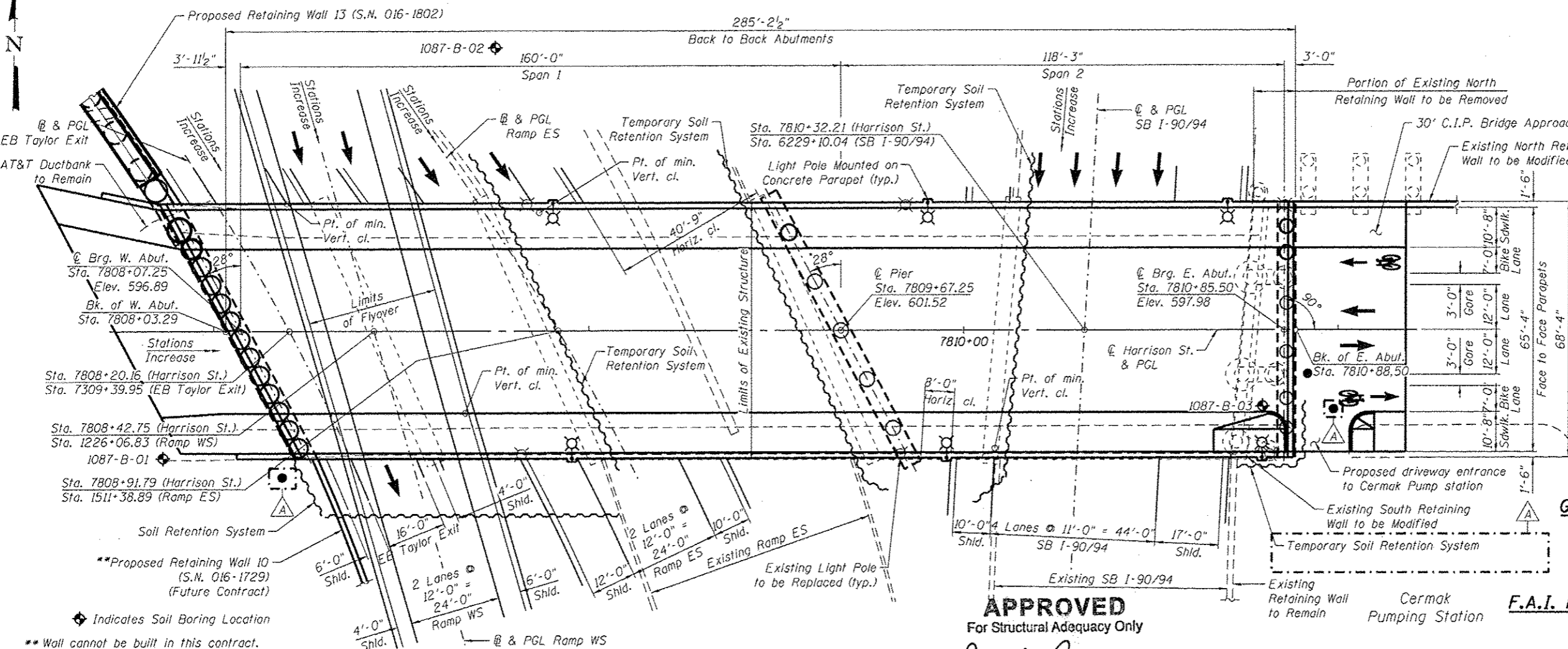
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.144g
Soil Site Class = D

NOTES:

1. Utilities are not shown for clarity. For utility locations see sheet S1-07.
2. For soil and temporary soil retention system details see sheet S1-07.
3. See Civil Plans for roadway barrier removal under the structure along ramps and I-90/94.

ELEVATION



LOCATION SKETCH



Brad M. Radovich 10-14-2013
BRAD M. RADOVICH DATE
LICENSE EXPIRES 11/30/2014

GENERAL PLAN & ELEVATION

**HARRISON ST. OVER
F.A.I. RTE. SB 90/94
(DAN RYAN EXPRESSWAY)**

F.A.I. RTE. 90/94 - SECTION 2013-008R

COOK COUNTY

STATION 7810+32.21

STRUCTURE NO. 016-1713

APPROVED
For Structural Adequacy Only

D. Carl Pempsey JES
Engineer of Bridges & Structures

PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 016-1713

SHEET NO. S1-01 OF S1-48 SHEETS

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94/290 | 2013-008R | COOK | 559 | 251 |
| CONTRACT NO. | | | 60W26 | |
| ILLINOIS FED. AID PROJECT | | | | |



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|-----------------------|----------------|-----------------------------|
| USER NAME = kr1tzm | DESIGNED - EJO | REVISED 10/15/2013 EJO, BRD |
| PLOT SCALE = N.T.S. | CHECKED - ATB | REVISED |
| PLOT DATE = 9/15/2013 | DRAWN - MRK | REVISED |
| | CHECKED - EJO | REVISED |