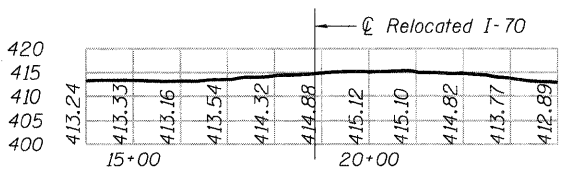
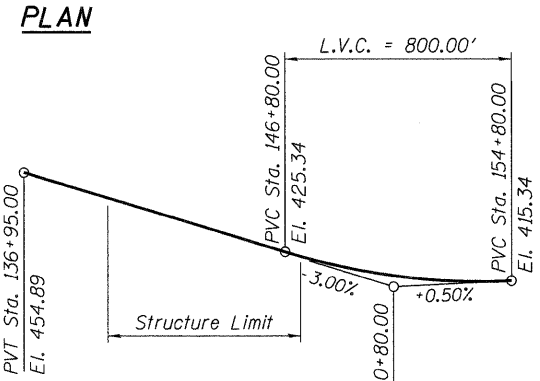
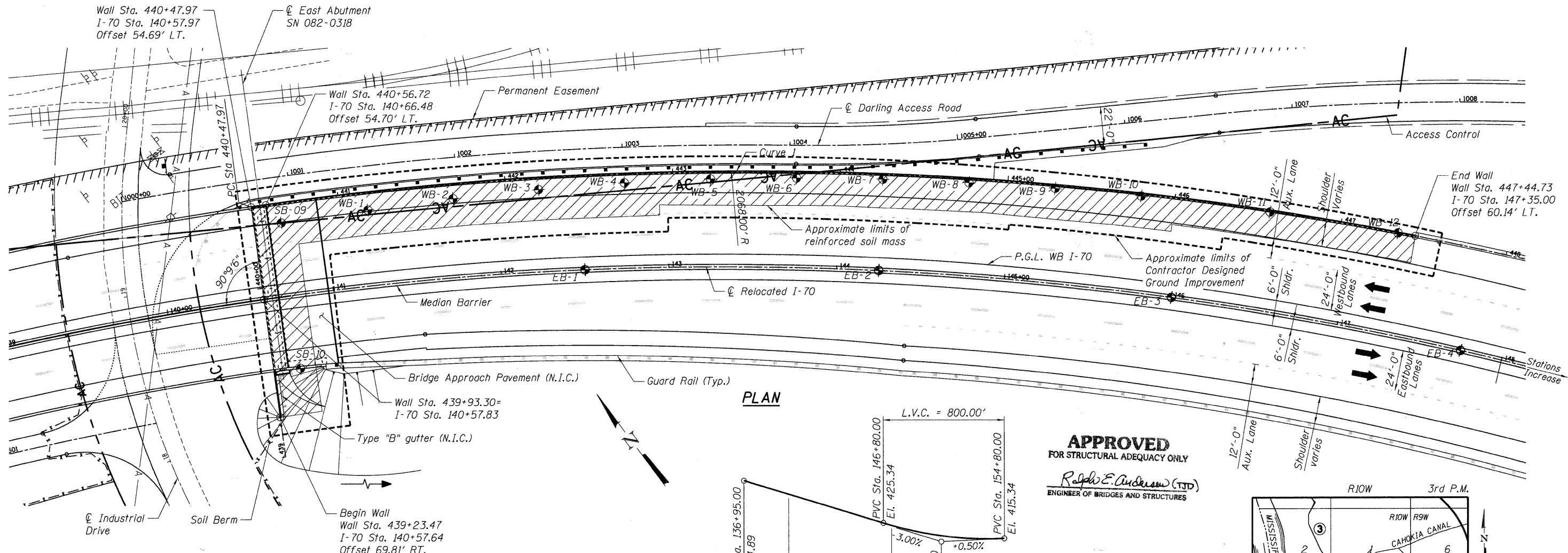
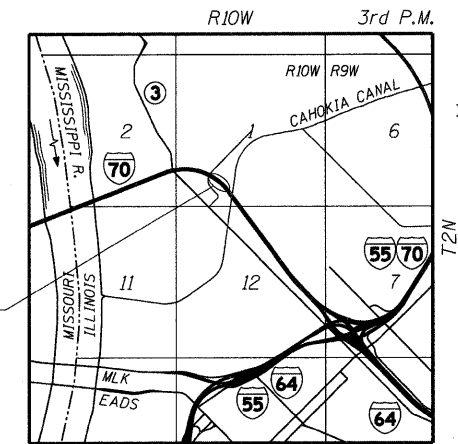


BENCH MARK:
 Monument No. 11: Aluminum disk set in the back of a 4.5' concrete walk (end of walk), located on the west side of Illinois Route 3 approximately 0.3 miles south of Canal Street (Brooklyn). El. 414.02



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
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 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
R. SHANKAR NAIR
 81-3676
 LICENSED PROFESSIONAL ENGINEER



DESIGN SPECIFICATIONS
 2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

$f'_c = 4,500$ psi (Precast Panels)

SEISMIC DATA *

Soil Site Class = D		
Return Period, T_r [yrs]	1000	2500
Modified Peak Ground Acceleration, A_s [g]	0.20	0.26
Importance Category	Critical	Essential
Seismic Performance Zone	2	2

* Seismic Data based on site-specific analysis.

CURVE DATA - WALL CURVE 1

PI Sta. 444+33.90
 $\Delta = 21^\circ 08' 30''$ (RT)
 $D = 2^\circ 46' 14''$
 $R = 2,068.00'$
 $L = 763.07'$
 $T = 385.92'$
 $E = 35.70'$
 $SE = N/A$
 PC Sta. 440+47.97
 PT Sta. 448+11.04

RELOCATED I-70 CURVE 17003

PI Sta. = 138+29.72
 $\Delta = 74^\circ 40' 52''$ (RT)
 $D = 2^\circ 56' 04''$
 $R = 1,952.50'$
 $T = 1,489.60'$
 $L = 2,544.95'$
 $E = 503.34'$
 $SE = 5.40\%$
 PC Sta. = 123+40.13
 PT Sta. = 148+85.08

INDEX OF SHEETS

- W-1 MSE Wall Plan
- W-2 MSE Wall Elevation
- W-3 MSE Wall Details
- W-4 to W-14 Soil Boring Logs 1 to 11

LEGEND:

- Soil Boring
- Ditch

BILL OF MATERIAL

Item	Unit	Total
MSE Wall	Sq. Ft.	18,598
Contractor Designed Ground Improvement	L. Sum	1

Notes:

- Stations and offsets are measured from the Centerline Relocated I-70 to the front face of the MSE wall panels.
- MSE Wall to be constructed in this Contract. Parapet, Moment Slab, Wall Coping, Approach Pavement and Roadway to be constructed in later Contract.
- Design of the wall shall include consideration of seismic force effects. Under the 1000-year seismic demand, the performance objective is uninterrupted use of the supported roadway. Wall displacements shall thus be limited to effectively "undamaged" levels. Under the 2500-year seismic demand, the performance objective is availability of the supported roadway to emergency services vehicles (only). Large wall displacements and significant local damage is permissible, but large-scale collapse shall be prevented.