

**BENCH MARK:**

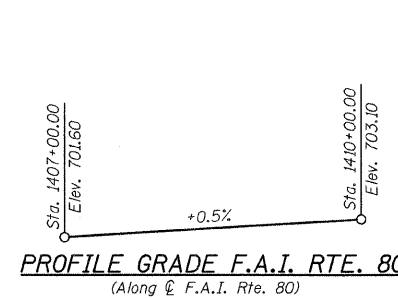
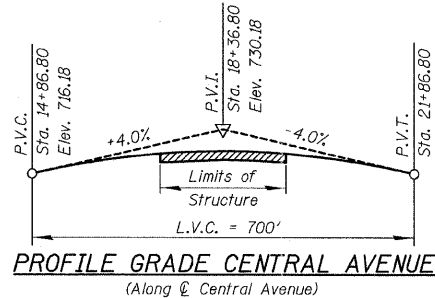
Disk set in concrete 50' east of centerline of Central Ave. & 31' north of centerline of 183rd Street, Elev. 696.42

**EXISTING STRUCTURE:**

S.N. 016-2458 Central Ave. over F.A.I. Rte 80, Sec. 84-19326-09-65 was built in 1963. The superstructure consists of four spans with lengths of 45'-9", 77'-10", 77'-10" & 47'-1". The reinforced concrete deck is supported by non-composite 36WF150 rolled steel beams. The substructure consists of two open bent, pile-supported concrete abutments with slope walls and three pile-supported concrete piers. The existing deck measures 42'-0" out to out and 253'-0" back to back of abutments. Reconstruction was performed on the structure in 1984 increasing the deck thickness from 7" to 9" with a Plastolized Concrete Overlay. The existing deck is to be removed and replaced.

Traffic will be detoured.

Salvage: none

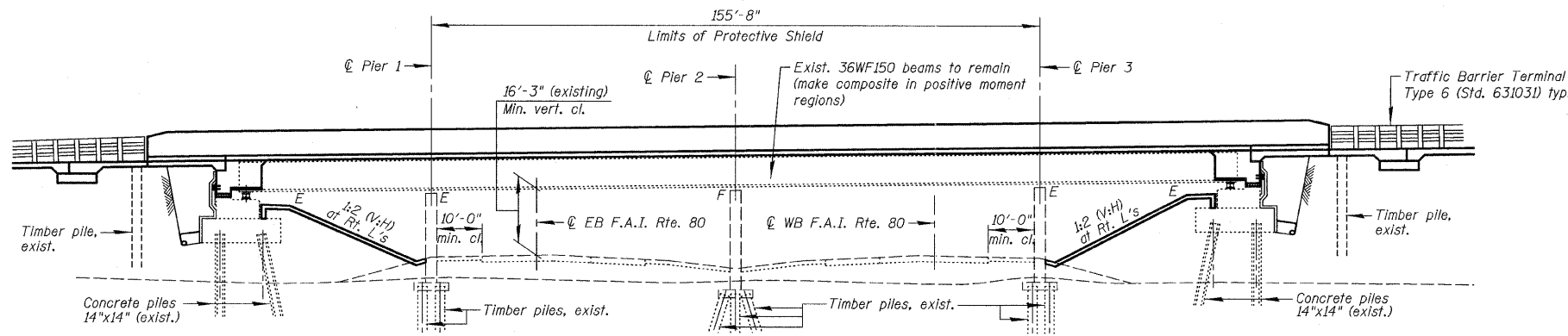


**SCOPE OF WORK:**

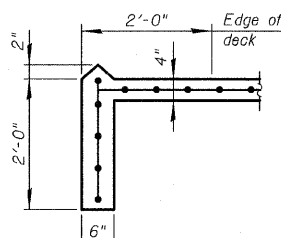
1. Remove and replace the existing deck.
2. Remove rocker bearings & replace with elastomeric bearings with steel extensions.
3. Reconfigure existing abutments to semi-integral configuration.
4. Modify existing wingwall.
5. Remove & replace slopewalls.
6. Repair beam ends & remove end diaphragms.
7. Clean and paint the existing structural steel.
8. Install stud shear connectors
9. Remove and replace approach slabs.
10. Repair abutments & pier.
11. Remove & replace underdeck lighting fixtures and conduit.

**INDEX OF SHEETS**

- S1 GENERAL PLAN & ELEVATION
- S2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- S3 TOP OF SLAB ELEVATIONS-I
- S4 TOP OF SLAB ELEVATIONS-II
- S5 TOP OF SLAB ELEVATIONS-III
- S6 TOP OF SLAB ELEVATIONS-IV
- S7 TOP OF SOUTH APPROACH SLAB ELEVATIONS
- S8 TOP OF NORTH APPROACH SLAB ELEVATIONS
- S9 DECK PLAN & CROSS SECTION
- S10 SUPERSTRUCTURE DETAILS-I
- S11 SUPERSTRUCTURE DETAILS-II
- S12 BRIDGE APPROACH SLAB DETAILS-I
- S13 BRIDGE APPROACH SLAB DETAILS-II
- S14 FRAMING PLAN
- S15 BEAM END REPAIRS
- S16 BEARING DETAILS-SOUTH & NORTH ABUTMENTS
- S17 BEARING DETAILS-PIERS 1 & 3
- S18 CONCRETE REMOVAL & REPAIR DETAILS FOR SOUTH ABUTMENT
- S19 CONCRETE REMOVAL & REPAIR DETAILS FOR NORTH ABUTMENT
- S20 PIER 1 REPAIRS
- S21 PIER 2 REPAIRS
- S22 PIER 3 REPAIRS
- S23 SLOPE WALL REMOVAL & REPLACEMENT
- S24 BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS



**ELEVATION**



**SECTION A-A**

STATION 18+00.43  
BUILT XX BY  
STATE OF ILLINOIS  
F.A.I. ROUTE 80  
SECTION 84-19326-09-65  
LOADING HS-20  
STRUCTURE NO. 016-2458

**NAME PLATE**

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates

**DESIGN STRESSES**

**FIELD UNITS EXISTING STRUCTURE**

f'c = 1,400 psi  
f<sub>s</sub> = 20,000 psi (Reinforcement)  
f<sub>s</sub> = 20,000 psi (Structural Steel A-36)

**FIELD UNITS NEW CONSTRUCTION**

f'c = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 36,000 psi (AASHTO M 270, Gr. 36)

**DESIGN SPECIFICATIONS**

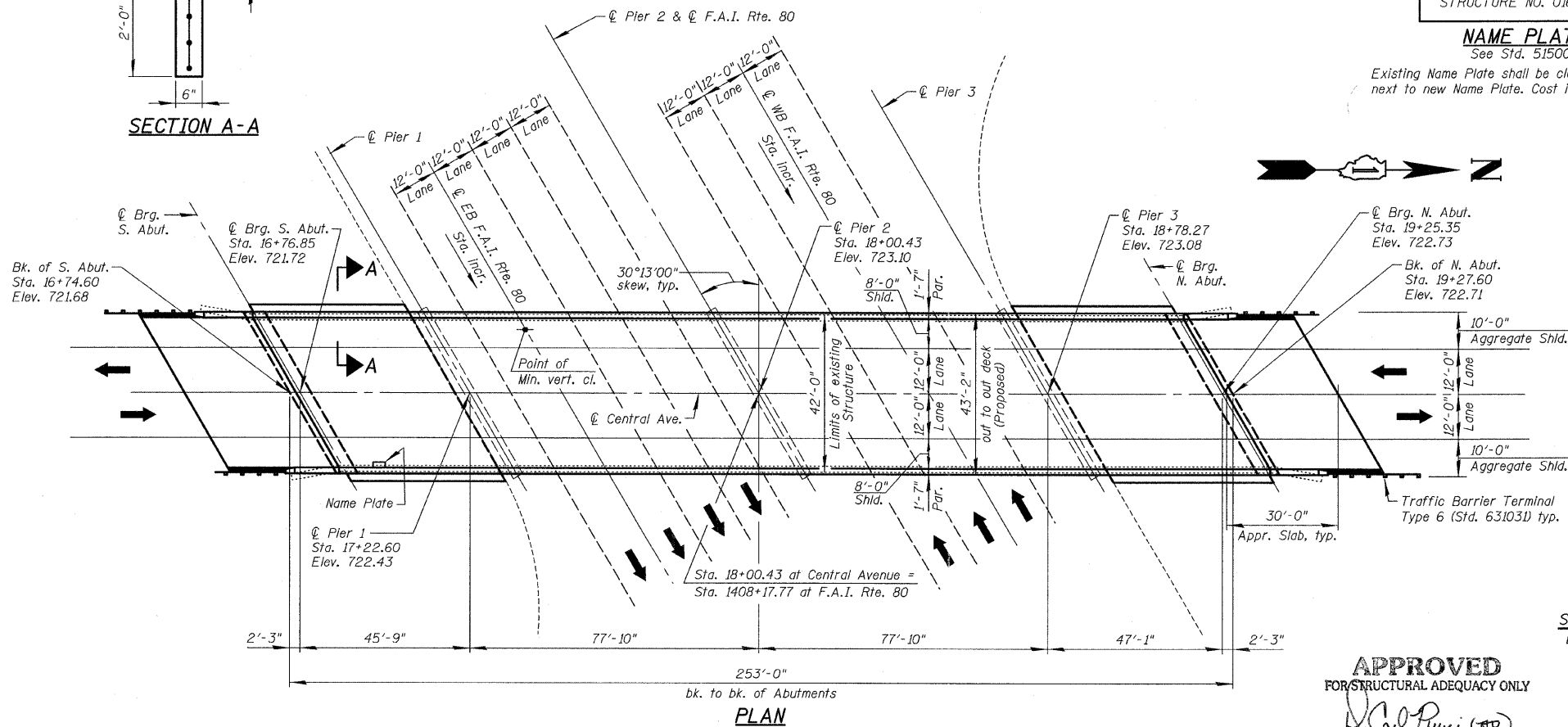
2002 AASHTO Standard Specifications for Highway Bridges

**LOADING HS 20-44**

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

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration coefficient (A) = 0.04 g  
Site coefficient (S) = 1.0

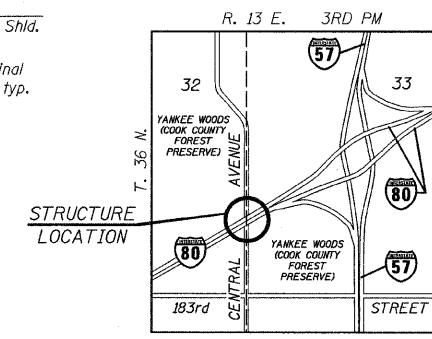


**PLAN**



**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Cal Pappas*  
ENGINEER OF BRIDGES AND STRUCTURES



**LOCATION SKETCH**



*Bhadrash N. Shah*  
BHADRASH N. SHAH  
LICENSED STRUCTURAL ENGINEER  
STATE OF ILLINOIS LIC. NO. 081-004476  
EXPIRES: 11-30-12

**GENERAL PLAN & ELEVATION**  
**CENTRAL AVENUE OVER**  
**F.A.I. RTE. 80**  
**SECTION 1415-803HB-R**  
**COOK COUNTY**  
**STATION 18+00.43**  
**STRUCTURE NO. 016-2458**

FILE NAME = I:\10229093\_Central\_Ave\_Structural\CADD\_Sheets\160P17-81-GPE.dgn

	USER NAME = IDOT	DESIGNED - J.C.N./B.N.S.	REVISED -
	PLOT SCALE = 49.999968' / IN.	CHECKED - B.N.S.	REVISED -
	PLOT DATE = 12/10/2011	DRAWN - F.M.	REVISED -
		DATE - DECEMBER 9, 2011	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

F.A.I. RTE. 80	SECTION 1415-803HB-R	COUNTY COOK	TOTAL SHEETS 51	SHEET NO. 16
				CONTRACT NO. 60P17
[ILLINOIS] FED. AID PROJECT				