

PTB 214 – 006

STRUCTURES

Dan Ryan Elevated – 13th St to 28th St – see attached map w/ SN list – shown below –

| Wilson | | | | | | | |
|---------|------------------------------|--------------------------------|----------------------|--------|------------------------|--------------|---------------|
| SN | Facility Carried | Feature Crossed | Location | Status | Main Str Material Type | Length Total | Inv County On |
| 0160137 | I- 90,94 DAN RYAN | MAXWELL TO 15TH ST | 0.2 M S ROOSEVELT RD | 1 | 402 | 1214.1 | 016 |
| 0161110 | I- 90,94 RYAN ELEV | 15TH TO 16TH STS | 2 M S I-290 | 1 | 402 | 678.1 | 016 |
| 0161111 | I- 90,94 RYAN ELEV | 16TH TO 18TH STS | 1 M N I-55 | 1 | 402 | 942.1 | 016 |
| 0161112 | I- 90,94 RYAN ELEV | 18TH TO 22ND STS | 0.8 M N I-55 | 1 | 402 | 1714 | 016 |
| 0161113 | I- 90,94 RYAN ELEV | 22ND TO SB CHI RVR | 0.3 M N I-55 | 1 | 402 | 995.5 | 016 |
| 0161114 | I- 90,94 RYAN ELEV | S BR CHI RIVER | 0.2 M N I-55 | 1 | 402 | 517 | 016 |
| 0161115 | I- 90,94 RYAN ELEV | S BR CHGO RIV TO CAN | 2 M S I-290 | 1 | 402 | 1961.5 | 016 |
| 0161116 | I- 90,94 RYAN ELEV | CANAL TO STEWART STS | 0.4 M S I-55 | 1 | 402 | 574.9 | 016 |
| 0161117 | I-90,94 ELEV EXP | Stewart Ave to 28 PL | 0.6 M S I-55 | 1 | 402 | 2041 | 016 |
| 0161118 | I-90,94 NB ELEV Locals | Wells to 29 th PL | 0.6 M S I-55 | 1 | 402 | 1033 | 016 |
| 0161067 | I-90,94 ELEV Locals | Stewart to 29 th St | 0.6 M W I-55 | 1 | 402 | 1234 | 016 |

PTB 214 – 006

| Wilson | | | | | | | |
|---------|---------------------|------------------------|----------------|--------|------------------------|--------------|---------------|
| SN | Facility Carried | Feature Crossed | Location | Status | Main Str Material Type | Length Total | Inv County On |
| 0161070 | I-55 SB to Ryan NB | Chi River, Cermak RR | 1.4 M S I-290 | 1 | 402 | 517 | 016 |
| 0161066 | I-90,94 SB to 55 WB | Chi River, Canal P Ave | 1.5 M SW I-290 | 1 | 402 | 2700 | 016 |
| 0161140 | I-94 NB to 55 WB | I-55 | 0.1 M W I-94 | 1 | 402 | 744 | 016 |
| 0161047 | I-55 WB RMP RYAN NB | ARCHER; BNSF & IC RR | 0.2 M E I-94 | 1 | 402 | 713 | 016 |
| 0161059 | I-55 EB TO RYAN NB | I-55 STEVENSON | 0.1 M E I-94 | 1 | 402 | 1174 | 016 |
| 0161050 | I-90,94 SB to 55 EB | I-55 | 0.1 M W I-94 | 1 | 402 | 1276 | 016 |
| 0161062 | I-90,94 SB to 55 WB | Archer RRs | 0.1 M W I-94 | 1 | 402 | 588 | 016 |
| 0161046 | I-55 EB RMP RYAN SB | DRY LAND | AT I-94 | 1 | 402 | 1625.4 | 016 |

PTB 214 – 006

Between the JBI and the Dan Ryan Elevated bridge is the Roosevelt Rd bridge and the pump station:

| Wilson | | | | | | | |
|---------|-----------------|-------------------|---------------|--------|---------------------|-------------|-------------|
| SN | FacilityCarried | FeatureCrossed | Location | Status | MainStrMaterialType | LengthTotal | InvCountyOn |
| 0160478 | Roosevelt Rd | I- 90,94 Dan Ryan | 0.6 M S I-290 | 1 | 402 | 191 | 016 |

Start with Madison St up to the Ohio Street Interchange bridges – (note that Hubbard’s Cave won’t show up in IRoads, because it’s classified a Tunnel, and only bridges and culverts shown up in IRoads at the present time).

Ohio Interchange:

| Wilson | | | | | | | |
|---------|---------------------|----------------|---------------|--------|---------------------|-------------|-------------|
| SN | FacilityCarried | FeatureCrossed | Location | Status | MainStrMaterialType | LengthTotal | InvCountyOn |
| 0162053 | MADISON ST | I- 90,94 JFK | 0.4 M N I-290 | 1 | 402 | 286.3 | 016 |
| 0160601 | WASHINGTON BLVD | I- 90,94 JFK | 0.5 M N I-290 | 1 | 402 | 336 | 016 |
| 0160608 | RANDOLPH ST | I- 90,94 JFK | 0.6 M N I-290 | 1 | 402 | 286.4 | 016 |
| 0162052 | LAKE ST | I- 90,94 JFK | 0.7 M N I-290 | 1 | 402 | 287.1 | 016 |
| 0162051 | FULTON ST | I- 90,94 JFK | 0.8 M N I-290 | 1 | 402 | 149.4 | 016 |
| 0162020 | RRs, Kinzie, Wayman | I- 90,94 JFK | | | TUNNEL | | 016 |
| 0160136 | GREEN ST | I- 90,94 JFK | 1 M NW I-290 | 1 | 402 | 203.5 | 016 |

PTB 214 – 006

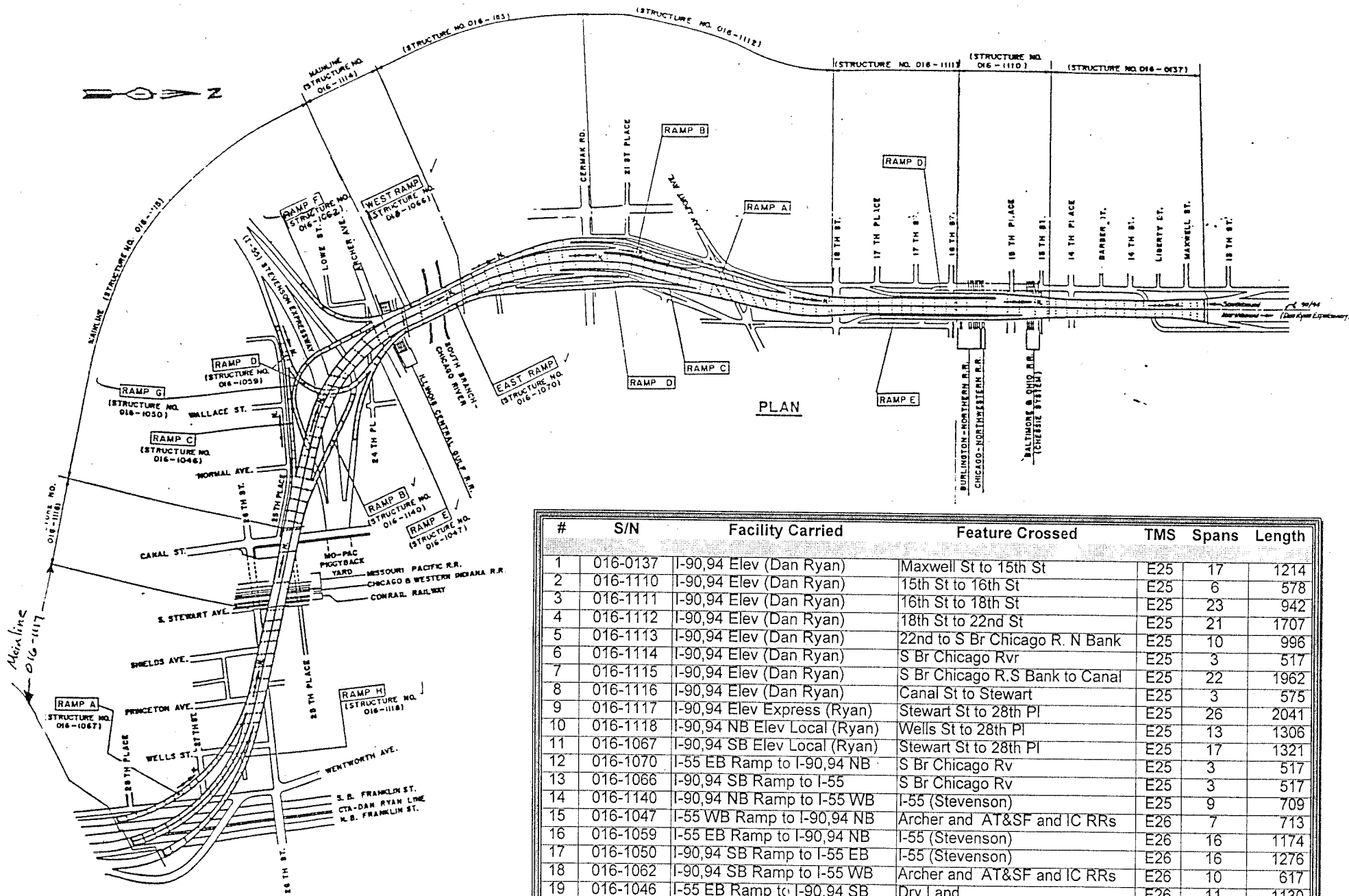
| Wilson | | | | | | | |
|---------|----------------------|---------------------|----------------------|--------|---------------------|-------------|-------------|
| SN | FacilityCarried | FeatureCrossed | Location | Status | MainStrMaterialType | LengthTotal | InvCountyOn |
| 0162050 | HUBBARD ST | I- 90,94 JFK | 1 M N&NW I-290 | 1 | 402 | 204 | 016 |
| 0162048 | GRAND AVE | I- 90,94 JFK | 1.1 M N&NW I-290 | 5 | 402 | 357.1 | 016 |
| 0160204 | I- 90,94 EB TO OHIO | I- 90,94 JFK | 0.1 M NW GRAND | 1 | 402 | 295.9 | 016 |
| 0162551 | I- 90,94 REV TO OHIO | I- 90,94 NWB JFK | JUST SW OF OGDEN AVE | 1 | 302 | 737.1 | 016 |
| 0161322 | Ohio St WB to 94 EB | I-94 | 0.24 M W Grand Ave | | | | 016 |
| 0162573 | Ohio WB to 94 EB | Ohio WB to 94 WB | Just SW of Ogden | | | | 016 |
| 0161323 | Ohio St WB to 94 EB | I 94 EB Rmp to Ohio | 0.1 M W of I 94 | | | | 016 |
| | | | | | | | |
| | | | | | | | |
| 0166278 | Halsted St | Kinzie St, RR Trk | Kinzie to Wayman | | CDOT Owner | | 016 |

PTB 214 – 006

| Wilson | | | | | | | |
|---------|-----------------|----------------|----------|--------|---------------------|-------------|-------------|
| SN | FacilityCarried | FeatureCrossed | Location | Status | MainStrMaterialType | LengthTotal | InvCountyOn |
| 0162022 | UP RR | I- 90,94 JFK | | | RR Owner | | 016 |

Note that the CDOT owned bridge carrying Halsted St crosses over the Tunnel bridge – 016-6278

Other odd ball is the RR that crosses over the JFK just north of the Tunnel – between Hubbard St and Green St. It's RR owned. 016-2022



| # | S/N | Facility Carried | Feature Crossed | TMS | Spans | Length |
|----|----------|------------------------------|--------------------------------|-----|-------|--------|
| 1 | 016-0137 | I-90,94 Elev (Dan Ryan) | Maxwell St to 15th St | E25 | 17 | 1214 |
| 2 | 016-1110 | I-90,94 Elev (Dan Ryan) | 15th St to 16th St | E25 | 6 | 578 |
| 3 | 016-1111 | I-90,94 Elev (Dan Ryan) | 16th St to 18th St | E25 | 23 | 942 |
| 4 | 016-1112 | I-90,94 Elev (Dan Ryan) | 18th St to 22nd St | E25 | 21 | 1707 |
| 5 | 016-1113 | I-90,94 Elev (Dan Ryan) | 22nd to S Br Chicago R. N Bank | E25 | 10 | 996 |
| 6 | 016-1114 | I-90,94 Elev (Dan Ryan) | S Br Chicago Rvr | E25 | 3 | 517 |
| 7 | 016-1115 | I-90,94 Elev (Dan Ryan) | S Br Chicago R.S Bank to Canal | E25 | 22 | 1962 |
| 8 | 016-1116 | I-90,94 Elev (Dan Ryan) | Canal St to Stewart | E25 | 3 | 575 |
| 9 | 016-1117 | I-90,94 Elev Express (Ryan) | Stewart St to 28th Pl | E25 | 26 | 2041 |
| 10 | 016-1118 | I-90,94 NB Elev Local (Ryan) | Wells St to 28th Pl | E25 | 13 | 1306 |
| 11 | 016-1067 | I-90,94 SB Elev Local (Ryan) | Stewart St to 28th Pl | E25 | 17 | 1321 |
| 12 | 016-1070 | I-55 EB Ramp to I-90,94 NB | S Br Chicago Rv | E25 | 3 | 517 |
| 13 | 016-1066 | I-90,94 SB Ramp to I-55 | S Br Chicago Rv | E25 | 3 | 517 |
| 14 | 016-1140 | I-90,94 NB Ramp to I-55 WB | I-55 (Stevenson) | E25 | 9 | 709 |
| 15 | 016-1047 | I-55 WB Ramp to I-90,94 NB | Archer and AT&SF and IC RRs | E26 | 7 | 713 |
| 16 | 016-1059 | I-55 EB Ramp to I-90,94 NB | I-55 (Stevenson) | E26 | 16 | 1174 |
| 17 | 016-1050 | I-90,94 SB Ramp to I-55 EB | I-55 (Stevenson) | E26 | 16 | 1276 |
| 18 | 016-1062 | I-90,94 SB Ramp to I-55 WB | Archer and AT&SF and IC RRs | E26 | 10 | 617 |
| 19 | 016-1046 | I-55 EB Ramp to I-90,94 SB | Dry Land | E26 | 11 | 1130 |

BENCH MARK

BM 43 MARK RE. Range 400 on
Hydrant on N.W. corner of 21st &
Crawford St. 22.1354

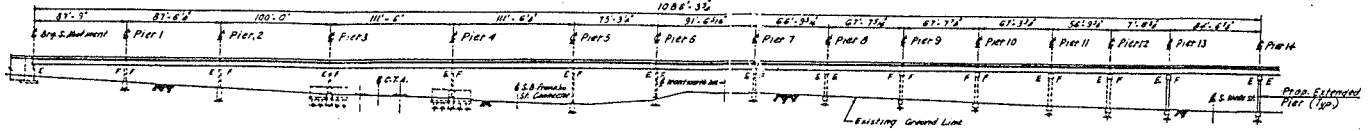
EXISTING STRUCTURE

Structure No. 016-117, I-90194 Main Line, Structure No. 016-1047,
Ramp A and Structure No. 016-1118 Ramp H are part of the Dan Ryan
Expressway Viaduct. The substructure is series of piers and
abutments, with girders above. The construction consists of precast concrete
girders, steel joists and abutments supported on concrete columns.
The structures were built in 1951 and opened to traffic in 1952. No Change
The lower N.B. Deck shall be removed as part of this contract.

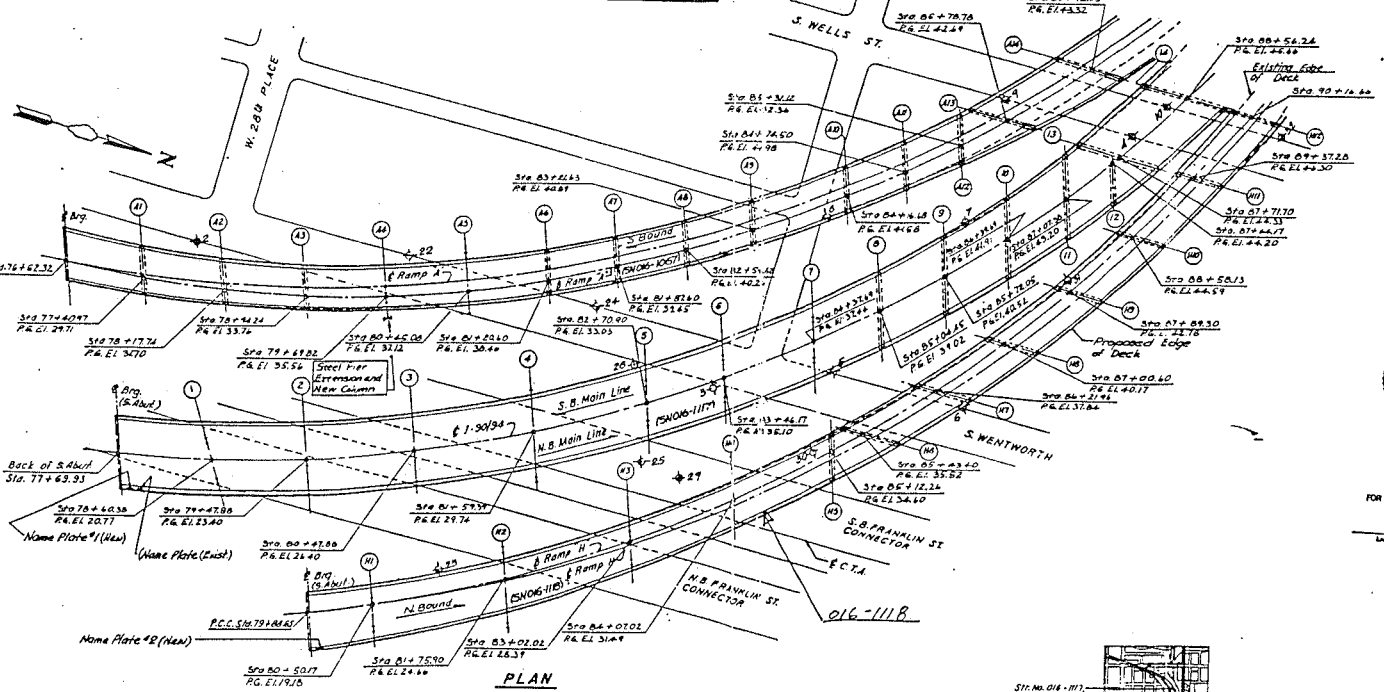
The lower N.B. Deck shall be removed as part of this contract.

| | | | | |
|------------------|----------|----------|---------|-------|
| PROJECT NO. | DIVISION | DESIGNER | TITLE | SHEET |
| 90/94 | 8 | COOK | RECON | 3 |
| FILE NO. DRAWING | REVISION | DATE | PROJECT | |
| | | | | |

SECTION 1985-0778-11



ELEVATION

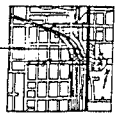


PLAN



APPROVED
FOR STRUCTURAL AGENCY ONLY

Signature of Engineer and Structures



LOCATION PLAN

LEGEND
 □ Proposed Pier Widening
 ⊕ Indicates Existing Soil Borings
 (Not Applicable to this Contract.)

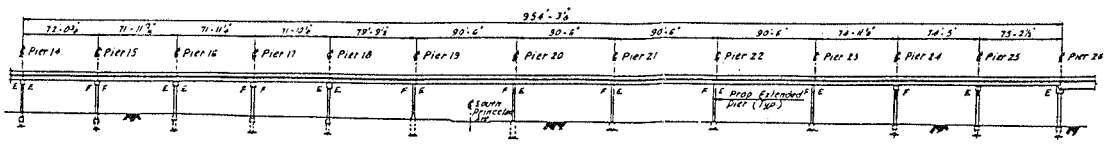
SHEET 33 OF 88

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F&I ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-0778-8-COOK COUNTY
 N.B. MARSH RECONSTRUCTION
 STRUCTURE NO. 016-1117 & 1118
GENERAL PLAN
 Scale: 1/8"=1'-0"
 Date: 1 AUGUST 1988
 Drawn By: S.R.
 Checked By: S.R.
 ENGINEERING INC.
 Chicago, Illinois

| | | | | |
|--------------------|----------------|----------|------|---------|
| PROJECT NO. | SECTION | DESIGNER | DATE | SCALE |
| 90/94 | 11 | COOK | 9/8 | 1" = 4' |
| STA. | DATE | | BY | |
| | 1985 | | SR | |
| FILE NO. SHEET NO. | CLASSIFICATION | PROJECT | | |

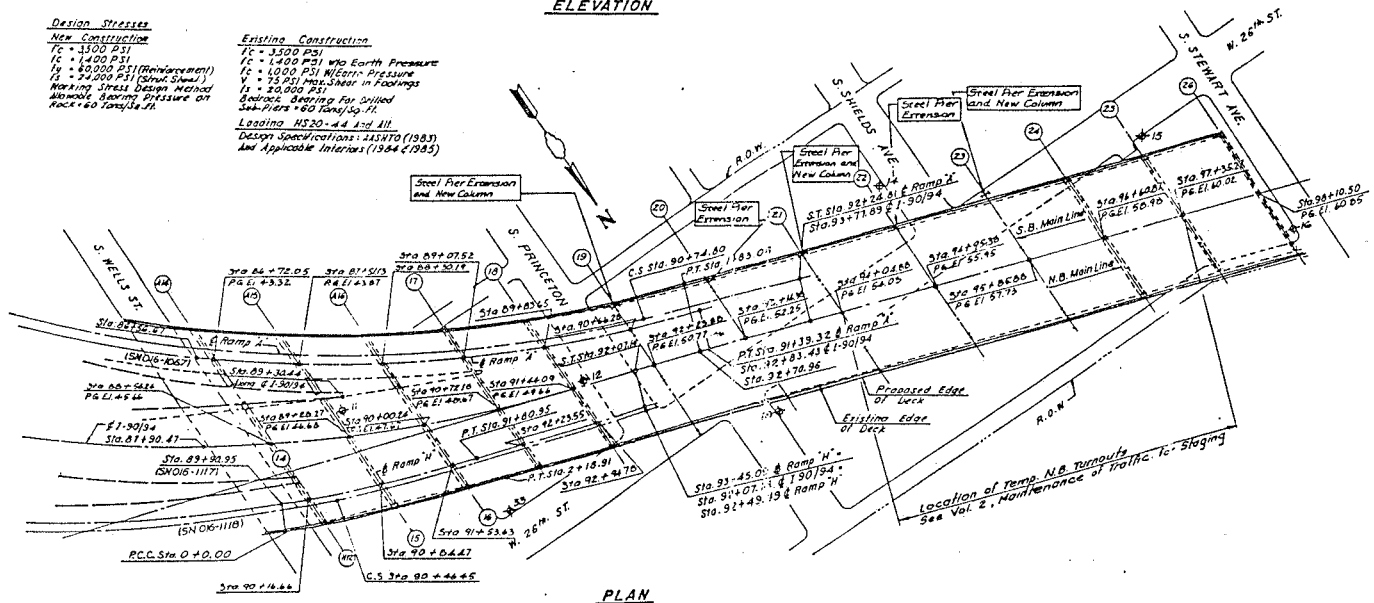
*SECTION 1985-0778-R



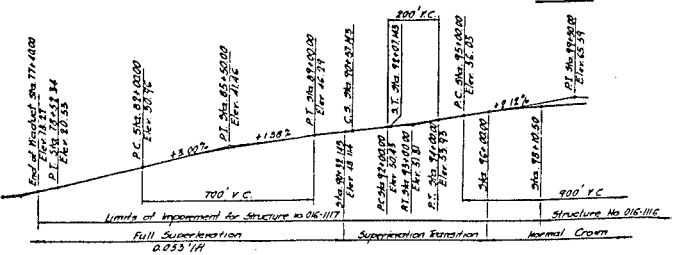
ELEVATION

Design Stresses
New Construction
 FC = 3500 PSI
 FC = 1400 PSI
 FC = 8000 PSI (Reinforcement)
 FS = 24,000 PSI (Struct. Steel)
 Working Stress Design Method
 Allowable Decking Pressure on Rock = 60 Tons/Sq. Ft.

Existing Construction
 FC = 3500 PSI
 FC = 1400 PSI w/o Earth Pressure
 FC = 1000 PSI w/Earth Pressure
 FS = 17,000 PSI (Struct. Steel in Castings)
 FS = 20,000 PSI
 Decking: Design for Drilled Sub-Piers = 60 Tons/Sq. Ft.
 Loading: HS20-44 1-d III
 Design Specifications: 115HT0 (1983)
 And Applicable Interiors (1984-1985)



PLAN



PROPOSED MAINLINE PROFILE GRADE

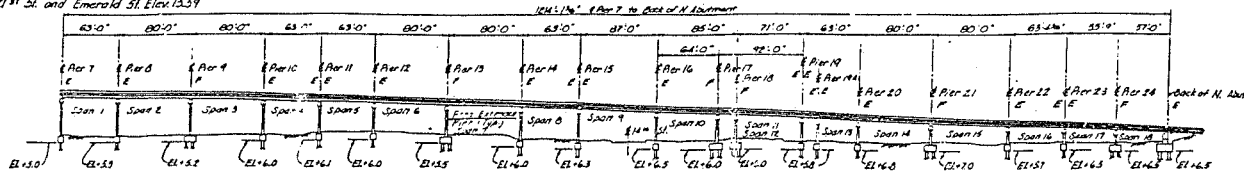
SHEET J4 OF 99

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 SECTION 1985-0778-A COOK COUNTY
 M.B. MAINLINE RECONSTRUCTION
 STRUCTURE NOS. 016-1061, 1117 & 1118
GENERAL PLAN
 Scale: 1/8" = 1'-0"
 Date: AUGUST 1985
 Drawn By: SR
 Checked By: SK
 ENGINEERS INC.
 Chicago, Illinois

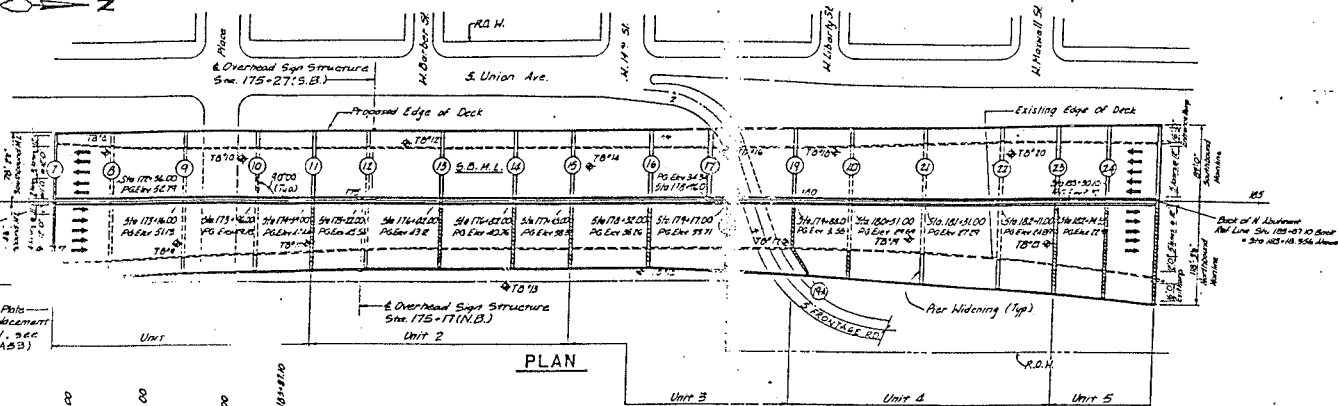
* Indicates Existing Soil Borelogs (Not Applicable to this Contract)

Anchor Mark
 TBM #49 North NE Flange bolt on hydrant
 on NW corner of 21st St. and Emerald St. Elev 13.59



Existing Structure
 Structure No. 016-0137 is part of the Dan Ryan Expressway Viaduct. The superstructure consists of four span, first span and two span continuous steel and concrete structures. Spans 1 thru 16 are rolled beam spans and spans 17 & 18 are concrete beam spans. The substructure consists of multiple column concrete piers and abutment supported on concrete caisson. The structure was built in 1961 and opened to traffic in 1962. The contractor shall maintain traffic at all times on existing structure while widening the substructures.

ELEVATION



Name Piles
 For placement
 detail, see
 SHEET A33

PLAN

Design Stresses

New Construction

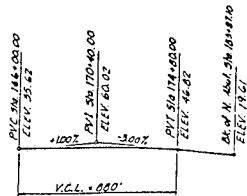
- $f_c = 3500$ PSI
- $f_s = 1400$ PSI
- $f_y = 60,000$ PSI (Reinforcement)
- $f_v = 20,000$ PSI
- Working Stress Design Method
- Allowable Bearing Pressure on Rock = 60 Tons / Sq. Ft.

Existing Construction

- $f_c = 3500$ PSI
- $f_s = 1400$ PSI W/O Earth Pressure
- $f_s = 1,000$ PSI W/ Earth Pressure
- $V = 75$ PSI Max Shear in Footings
- $f_y = 20,000$ PSI
- Vertical Bearing for Drilled Sub-Piers = 60 Tons / Sq. Ft.

PROPOSED PROFILE GRADE

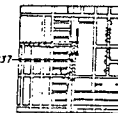
DAN RYAN EXPRESSWAY (I 90 / 94)



Loadings 45 20-44 and A11
 Design Specifications: AA5470 (1985)
 and applicable interims (1983, 1985 thru 1987)

Legend

- Indicates existing soil borings
- New Pier Replacement or Widening completed in previous contracts
- Indicates Pier Number
- Pier Replacement or Widening



LOCATION PLAN



| | | | | | | | |
|----------------|---------|-----------------|------|-----------|----|--------------|---|
| PROJECT NO. | 90/94 | DESIGN NO. | 000K | SHEET NO. | 45 | TOTAL SHEETS | 5 |
| DATE | TO DATE | | | | | | |
| FOR MR. BUREAU | CLERK | FOR AIR PROJECT | | | | | |



APPROVED
 PER STRUCTURAL RESUBMITAL ONLY
 James J. Gorman
 State of Illinois

SHEET A3 OF A65

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |
| | |

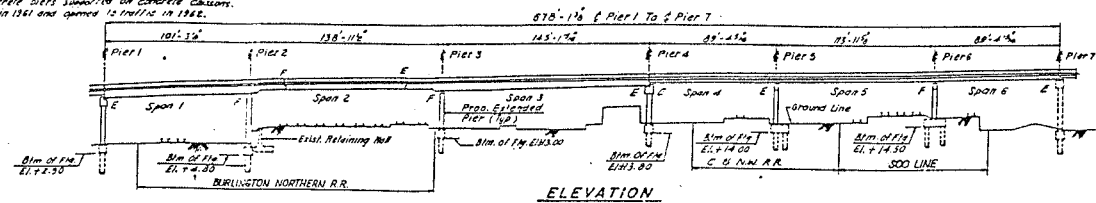
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985 - OTTUM - COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-0137
 GENERAL PLAN
 Scale: NONE
 Date: AUG. 1986
 Drawn By: D.C.
 Checked By: M.E.H.
 ENVIRONMENTAL ENGINEERS INC.
 Chicago, Illinois

BENCH MARK

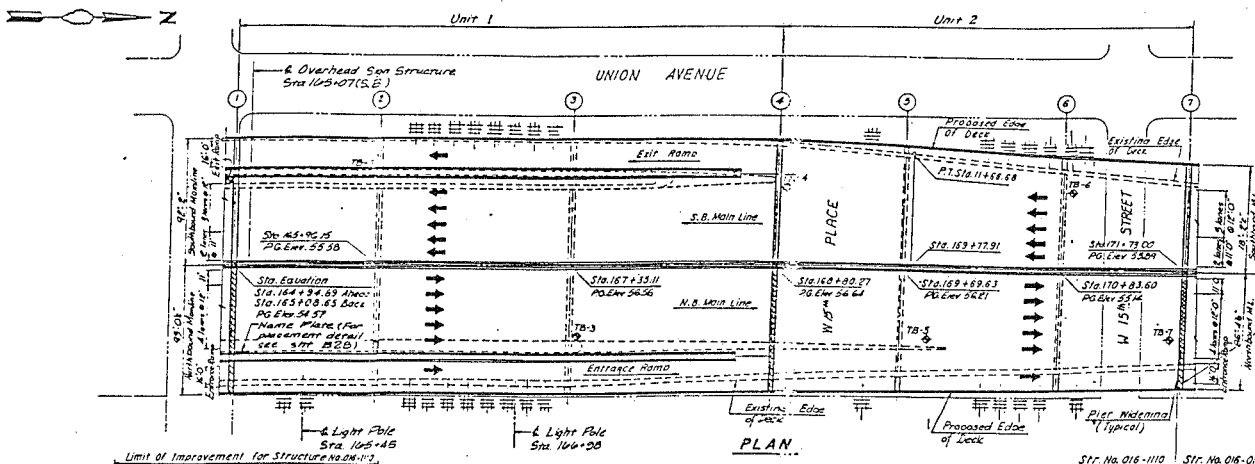
T.B.M. #29 MARKS 1/4" 10mm 1 1/2" on
Hydrant on NW Corner of 11th St.
0+0 Elevation 58.41m (19.15')

EXISTING STRUCTURE

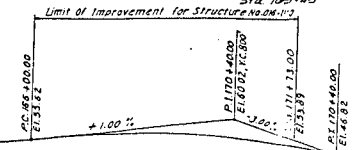
Structure No. 016-1110 is a part of Dan Ryan Expressway Viaduct. The superstructure is concrete deck supported on steel pipe girders. The existing structure consists of two main spans (two continuous spans each) the entrance and exit ramps structures (two) main spans of each end with cantilever retaining into center spans to support center spans on 100' centerline. The structure consists of multiple column concrete deck supported on concrete caissons. The structure was built in 1961 and opened to traffic in 1962.



ELEVATION



PLAN



PROPOSED PROFILE GRADE
DAN RYAN EXPRESSWAY (7-50/94)

Design Stresses

New Construction
 f_c = 3500 PSI
 f_s = 1400 PSI
 f_y = 60,000 PSI (Reinforcement)
 E = 29,000,000 PSI
 Working Stress Design Method
 Allowable Bearing Pressure on Rock = 40 Tons/50 Ft.
 Loadings HS20-44 and HL
 Design Specifications: AASHTO (1983) and
 Approximate Interims (1984, 1985) plus 167"

Existing Construction

f_c = 3500
 f_s = 1400 with Earth Pressure
 f_c = 1000 PSI with Earth Pressure
 V = 75 PSI Max. Shear in Footings
 E = 29,000 PSI
 Bedrock Bearing for Drilled
 Sub-Piers = 60 Tons/50 Ft.

LEGEND

- ⊕ Indicates Existing Soil Borings
- ⊕ New Pier Replacement or Widening, Completed in Previous Contract
- Indicates Pier No
- Pier Replacement or Widening



LOCATION PLAN

| | | | |
|-------------|---------------|------------|--------------|
| PROJECT NO. | SECTION | COUNTY | TOTAL SHEETS |
| 190/94 | 4 | COOK | 33 |
| DATE | NO. OF SHEETS | | |
| 1984 | 19 | | |
| PREP. BY | DESIGNED BY | CHECKED BY | DATE |
| | | | |

1984-07-08



APPROVED
 FOR STRUCTURAL ENGINEER ONLY
 James J. Henderson

SHEET 83 OF 833

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 ILL. ROUTE 90+0+ (DAN RYAN EXPRESSWAY)
 SECTION 1984-0708 - COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE NO. 016-1110
 GENERAL PLAN
 Scale: 1/8"=1'-0"
 Date: AUG. 1988
 Drawn By: M.H.
 Checked By: M.E.
 ENVIRONMENTAL ENGINEERS INC.
 Chicago, Illinois

BENCH MARK
 TBM # 43 NORTH NE Flanore bldg
 on Hydrant on NW corner of 21st St
 and Emerald St Elev. 13.53

EXISTING STRUCTURE

Structure No. 016 is a part of the Dan Ryan Expressway Viaduct.
 The structure is a concrete beam supported on 11 pier bents.
 The mainline structure is 11 spans long, 1011 feet long. Each span is
 90 feet long and there is a three span continuous span in the entrance ramp.
 Structure consists of 10 units of three and four continuous spans.
 A vertical exit ramp is structure has one level of five continuous spans.
 The structure consists of multiple column concrete piers and the
 main abutments supported on concrete caissons. The structure was
 built in 1961 and opened to traffic in 1962.

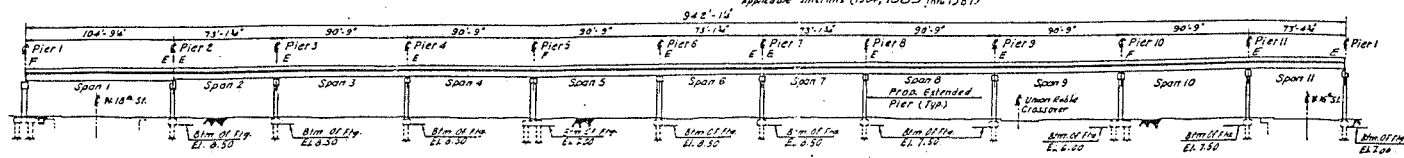
Design Stresses

New Construction
 $f_c = 3500$ PSI
 $f_c = 1400$ PSI
 $f_y = 60,000$ PSI (Reinforcement)
 $f_y = 20,000$ PSI
 Working Stress Design Method
 Allowable Bearing Pressure on
 Rock = 60 Tons/Sq. Ft.
 Logging: USSD-14-A All
 Design Specifications: AASHTO (1993) and
 Applicable Interims (1984, 1985 thru 1987)

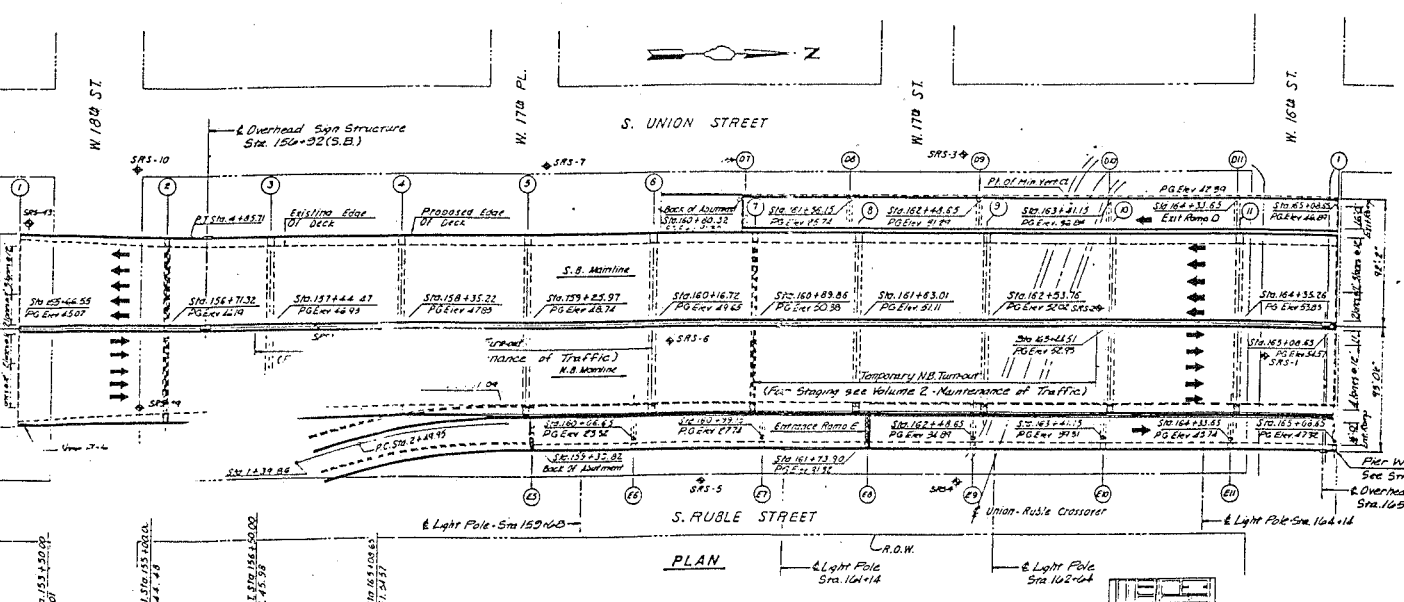
Existing Construction

$f_c = 3500$
 $f_c = 1400$ No Earth Pressure
 $f_c = 1,000$ PSI Water Pressure
 $f_y = 75$ PSI Max. Stress in Footings
 $f_y = 60,000$ PSI
 Allowable Bearing for Drilled
 Sub-Piers = 60 Tons/Sq. Ft.

| PROJECT NO. | SECTION | DATE | BY | CHKD. |
|-------------|---------|------|------|-------|
| 902794 | | | COOK | 51 |
| REV. | NO. | DATE | BY | CHKD. |
| | | | | |



ELEVATION



PLAN

PROPOSED PROFILE GRADE

LEGEND

- New Pier Widening Completed in Previous Contracts
- Indicates Existing Soil Borings
- Indicates Pier Number
- ▭ Retaining wall, Pier Replacement or Widening

LOCATION PLAN



APPROVED
 James L. Johnson
 PROFESSIONAL ENGINEER

SHEET C3 OF C51

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A. ROUTE 307A (DAN RYAN EXPRESSWAY)
 SECTION 1965 - 0778A - COOK COUNTY
 NB MAINLINE RECONSTRUCTION
 STRUCTURE 016 - 1111
 GENERAL PLAN
 Scale: NONE
 Date: JUL. 2008
 Drawn By: M.H.S.
 Checked By: M.E.H.
 DIMONOTHE ENGINEERS, INC.
 Chicago, Illinois

ANCH MARK.
 184 143 NORTH NE Flange Ball on
 Warrant On NW Corner Of 21st St.
 10 Emerald St. Elev 13.68

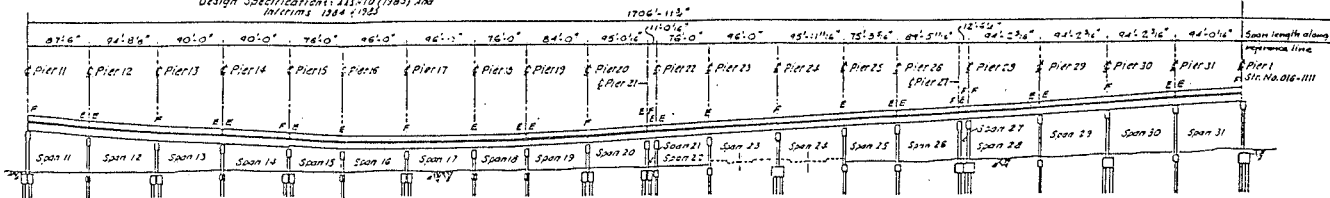
Design Stresses

New Construction
 1/2 = 3,500 PSI
 1/4 = 1,400 PSI
 1/4 = 60,000 PSI (Reinforcement)
 1/4 = 20,500 PSI (Slab Spec. 105)
 Working Stress Design - 100%
 Allowable Bearing Pressure on
 Rock = 60 Tons/sq. ft.
 Loading - V-20 - 14 and 11
 Design Specifications - 11570 (1983) and
 Interims 1984 & 1985

Existing Construction

1/2 = 3,500 PSI
 1/4 = 1,400 PSI w/ Earth Pressure
 1/4 = 1,000 PSI Interior Pressure
 1/4 = 77,531 Pile Spacing in Piering
 1/4 = 110,000 PSI (Slab Spec.)
 Bedrock Bearing for Direct
 Contact = 40 Tons/sq. ft.
 1/4 = 40,000 PSI (Reinforcement)

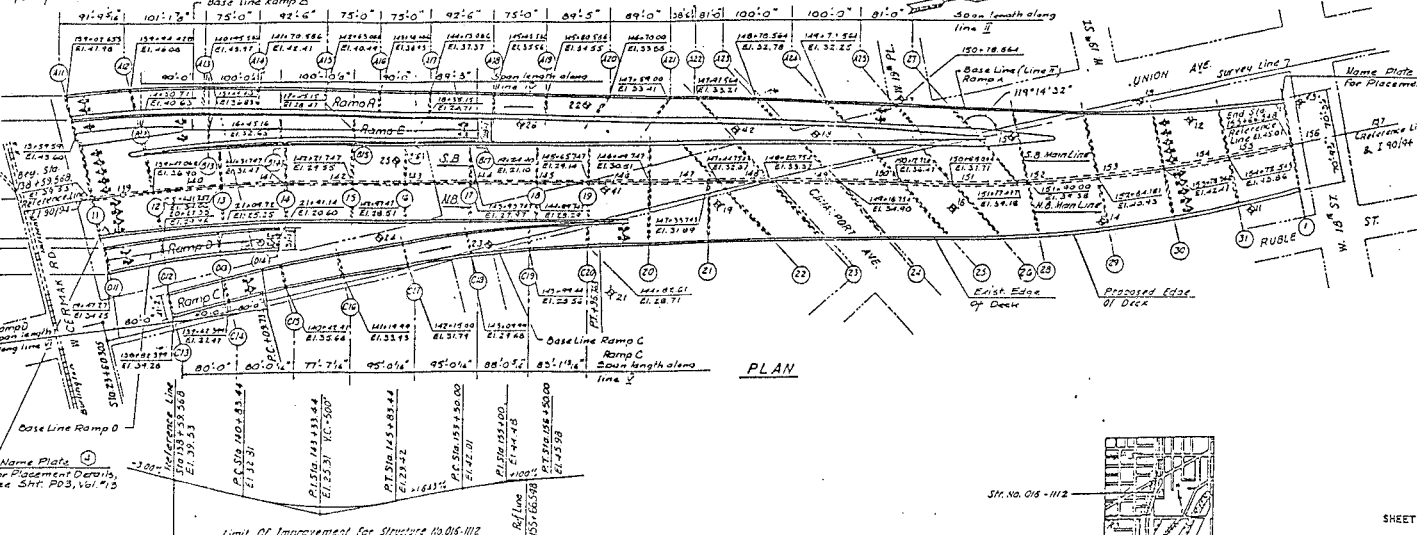
| | | | |
|------------------|---------|------------------|--------------|
| PROJECT NO. | SECTION | SHEET | TOTAL SHEETS |
| 90/94 I | COOK | 120 | 3 |
| DATE | NO. OF | | |
| FOR PL. DATE NO. | ALIGNED | PER. AND PROJECT | |
| © 1985 - 082 R | | | |



ELEVATION

EXISTING STRUCTURE

Structure No. 016-1112 / 90/94 Mainline, Ramp A,
 Ramp B, Ramp C & Ramp D are part of the
 San Ryan Expressway Project. The superstructure
 is a series of welded girders of various and continuous
 spans. The substructure consists of multiple columns
 concrete piers and abutments supported on concrete
 caissons. The structure was built in 1961 and opened to
 traffic in 1962.
 This entire S.B. deck (Main Line & Ramp) shall be removed
 as part of this contract.



PLAN

PROPOSED PROFILE GRADE

LEGEND
 O - Indicates Existing Soil Samplings, 225
 □ - Proposed Pier Widening



LOCATION PLAN



APPROVED
 FOR STRUCTURAL AGENCY ONLY

James T. Pauline
 LICENSED PROFESSIONAL ENGINEER

Elevations are Profile Grade line elevations.

SHEET 03 OF 120

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 FAL ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082 R - COOK COUNTY
 S.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-1112
 GENERAL PLAN

| REVISIONS | |
|-----------|---------|
| Name | Date |
| (1) Rev | 4-22-88 |
| | |
| | |

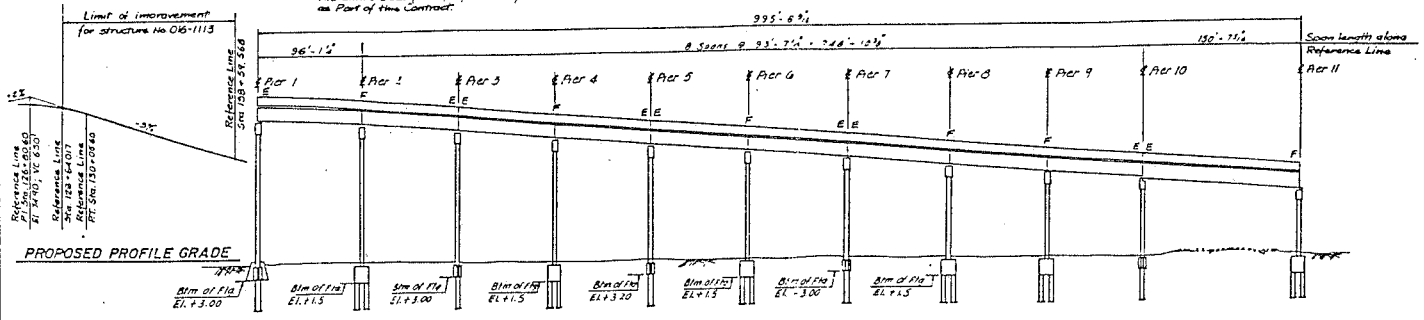
Scale: NONE
 Date: AUG. 14, 1987
 Drawn By: J.P.
 Checked By: M.H.T.
 ENGINEERING INC.
 Chicago, Illinois

REVISED 12-9-87

| | | | | |
|---------------|----------|------------------------------|------------|-------|
| DATE OF ISSUE | REVISION | DESIGNED BY | CHECKED BY | SCALE |
| 9/0/94 | * | COOK | BB | 3 |
| PROJECT NO. | | PROJECT NAME | | DATE |
| 1985-077-B-R | | N.B. MAINLINE RECONSTRUCTION | | 1988 |

Anchor Mark:
 7.84' x 4.9' North NE Flange bolt
 on hydrant on NW corner of 2nd St.
 and Emerald St. Elev. 13.59.

EXISTING STRUCTURE
 STRUCTURE NO. 016-1113 IS PART OF THE DAM PLAN EXPRESSWAY VIADUCT.
 THE SUBSTRUCTURE IS VERTICALLY OF STEEL AND CONCRETE. JOISTS ARE
 PLATE GIRDERS. THE SUBSTRUCTURE CONSISTS OF BRIDGE COLUMNS
 CONCRETE PIERS SUPPORTING AN CONCRETE DECKS. THE STRUCTURE
 WAS BUILT IN 1951 AND OPENED TO TRAFFIC IN 1952.
 THE ENTIRE DECK (RAMP & MAINLINE) WILL BE REMOVED
 AS PART OF THIS CONTRACT.

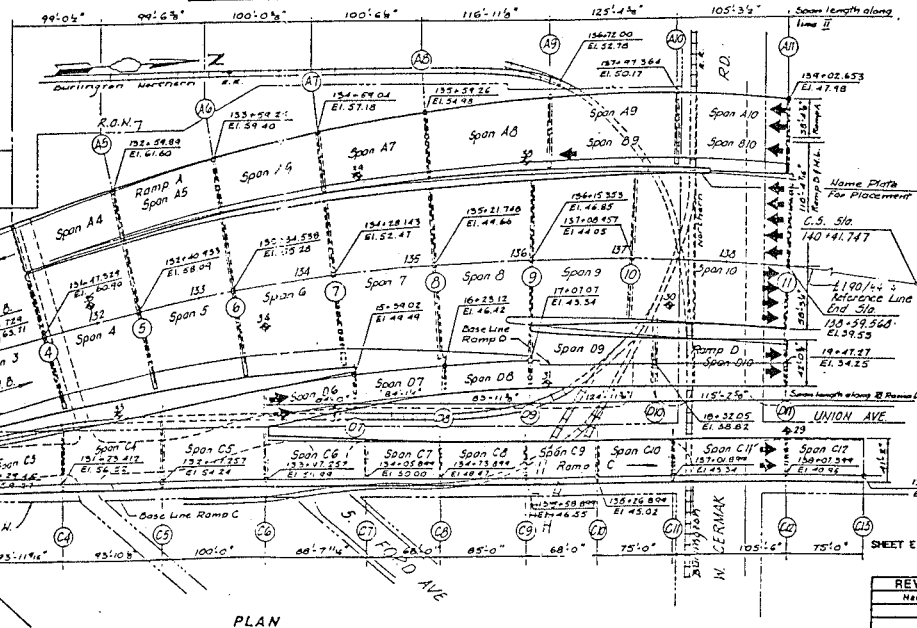


DESIGN STRESSES

New Construction
 TC = 3300 PSI
 FC = 14000 PSI
 FS = 60,000 PSI
 FS = 20,000 PSI (small H-103)
 Working Stress Design Method
 Allowable Bearing Pressure on
 Rock = 60 Tons/Sq Ft.
 Allowable H-20-A2 and H-10
 Design Specifications (ASHTO) (1983)
 and Interim 1984 thru 1987

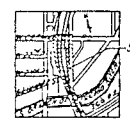
Existing Construction
 TC = 3300 PSI
 FC = 14000 PSI NO Earth Pressure
 FC = 1,000 PSI MISC. PIPE
 FS = 75 PSI MAX. SHEAR IN PIPE JOINT
 FS = 18,000 PSI (Str. Steel)
 Deck Rock Bearing Per Direct
 Calculation = 60 Tons/Sq Ft.
 FS = 40,000 PSI (Non-ferrous)

ELEVATION



LEGEND

◆ Indicates Existing Soil Berms, SPS
 □ Proposed per Inventory, not part
 of this Contract.



LOCATION PLAN

LOCATION PLAN

Sig 128-64.017
 EL. 68.63
 T.S. Sig 127 L&O 119
 Reference Line
 N.B. Date
 For Placement Details, see S&P E-03



APPROVED
 ENGINEER
 [Signature]

Elevations are Profile Grade Line, unless noted

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 EAL. ROUTE 90/94 (DAM RYAN EXPRESSWAY)
 SECTION 1985-077-B-R-COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-1113
 GENERAL PLAN

Scale: 1/8" = 1'-0"
 Date: AUGUST 1988
 Drawn By: J.R.
 Checked By: C.M.
 ENGINEERING INC.
 CHICAGO, ILLINOIS

| REVISIONS | Name | Date |
|-----------|------|------|
| | | |
| | | |
| | | |

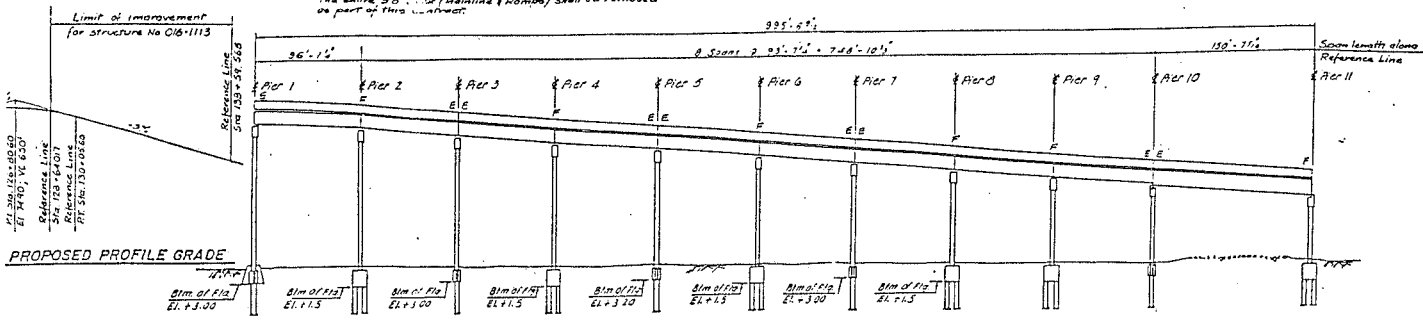
PLAN

SHEET E3 OF 88

| | | | | |
|---------------|----------|------------------|-----|-----|
| DESIGNER | SECTION | DATE | BY | CHK |
| 90/94 | * | COOK | 6.7 | 3 |
| STA. | | NO. STA. | | |
| FILE NO. DATE | ALUMINUM | FILE NO. PROJECT | | |
| # 1985-082 R | | | | |

Bench Mark:
 7.81 +49 North NE Flange bolt
 on hydrant on NW corner of 21st St.
 and Emerald St. Elevation 13.60.

EXISTING STRUCTURE
 Structure No. 018-1113 is part of the Dan Ryan Expressway Viaduct.
 The superstructure is a series of spans and continuous spans placed
 above girders. The substructure consists of multiple column
 concrete piers supported on cast-in-place concrete. The structure
 was built in 1961 and opened to traffic in 1962.
 The entire S.B. Line (mainline (Roman)) shall be removed
 as part of this contract.

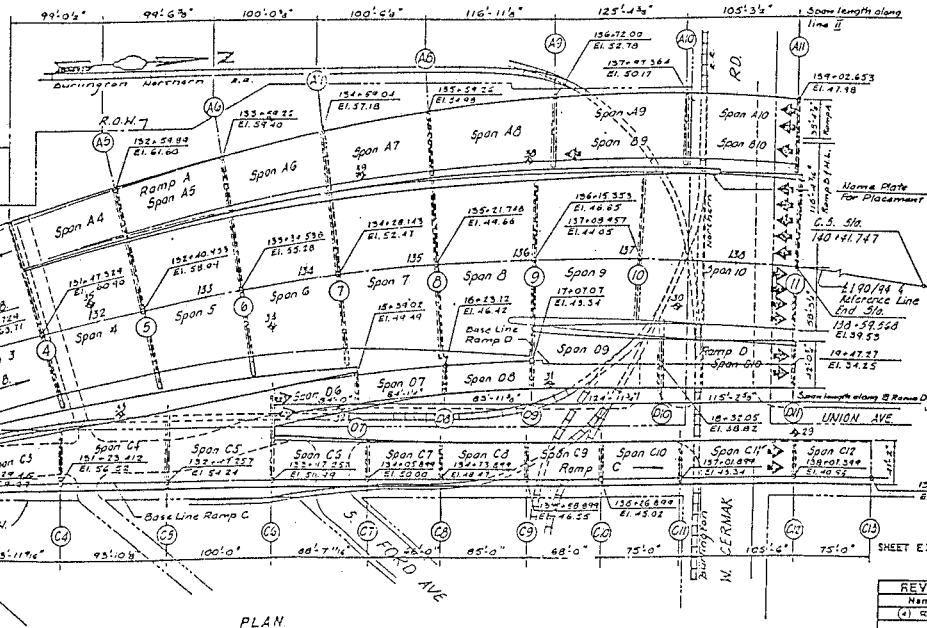


DESIGN STRESSES

New Construction
 Fc = 3,500 PSI
 Ft = 14,000 PSI
 fy = 60,000 PSI (Rein)
 fs = 20,000 PSI (Stl. Deck/Walls)
 Working Stress Design Method
 Ultimate Bearing Pressure as
 per ACI 308.3R-77
 fy = 60,000 PSI (Reinforcement)

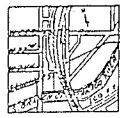
Existing Construction
 Fc = 3,500 PSI
 Ft = 14,000 PSI W/O Earth Pressure
 fy = 60,000 PSI W/Earth Pressure
 fs = 20,000 PSI (Stl. Deck/Walls)
 fy = 18,000 PSI (Stl. Steel)
 Ultimate Bearing Pressure as
 per ACI 308.3R-77
 fy = 40,000 PSI (Reinforcement)

ELEVATION

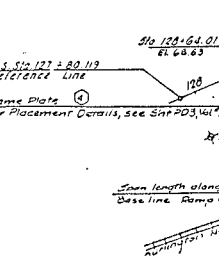


LEGEND

⊕ Indicates existing soil borings, SPS
 ▭ Proposed pier footing



LOCATION PLAN



APPROVED
 FOR STRUCTURAL ANALYSIS ONLY

James T. Johnson
 ELEVATIONS ARE PROFILE GRADE LINE ELEVATIONS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 FALL ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082 R, COOK COUNTY
 S.B. MAINLINE RECONSTRUCTION
 STRUCTURE 018-1113
 GENERAL PLAN

| REVISIONS | |
|-----------|----------|
| Name | Date |
| (1) Raw | 11-22-88 |

Scale: NONE
 Date: AUG. 14, 1987
 Drawn By: J.P.
 Checked By: J.P.
 ENGINEERING ENGINEERS INC.
 Chicago, Illinois

REVISION 12-9-87

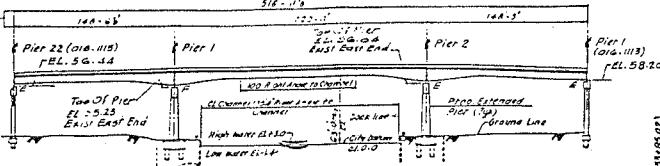
BENCH MARK
 T&E No. 999 N.C. Tower and on Adjacent to
 N.E. Corner of 21st St. on E. of 11th St. 12/59

Dimensions given
 along E. 2" 50/34

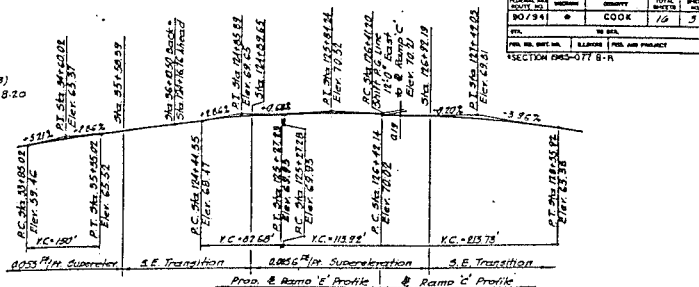
EXISTING STRUCTURE

Structure No. 016-1114, 1-2004 Mainline Structure 016-066
 S.B. Ramps and Structure No. 016-1070 & Ramps are part of
 The Dan Ryan Expressway Viaduct. The deck is concrete
 slab supported on 18" x 24" 220'0" long 18" x 18" Taper Spun
 Continuous welded pipe piers. The viaduct carries one
 mainline deck and composite. The substructure consists
 of precast concrete columns supported on concrete caissons.
 The structures were built in 1961 and opened in 1964.

The Entire N.B. Deck Shall be Removed as Part of This Contract



ELEVATION



Design Stresses

New Construction
 FC = 3500 PSI
 FC = 14000 PSI
 FS = 80,000 PSI (Reinforcement)
 FS = 29,000 PSI (Struct. Steel)
 Working Stress Design Method
 Allowable Bearing Pressure on
 Deck = 60 Tons/Sq. Ft.

Existing Construction

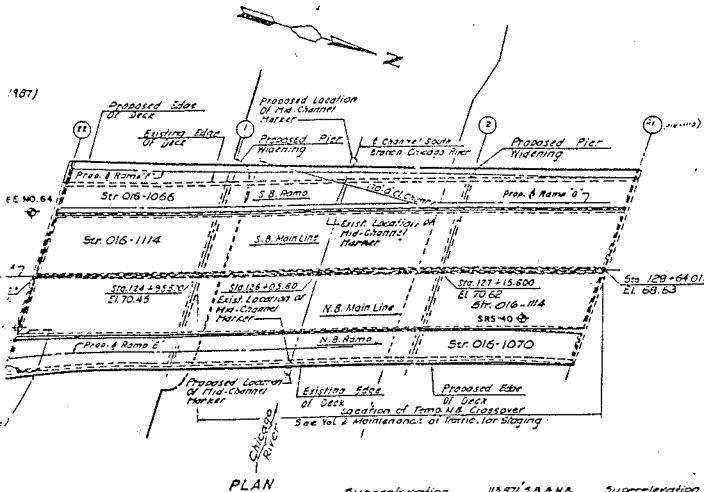
FC = 3500 PSI
 FC = 14000 PSI w/o Earth Pressure
 FC = 1000 PSI (Misc. Pressure)
 FS = 75,000 PSI (Steel, in Footings)
 FS = 10,000 PSI
 Working Stress Design Method
 Allowable Bearing Pressure on
 Sub-structure = 60 Tons/Sq. Ft.
 Loading HS20-44 and All
 Design Specifications: A13.70 (1983)
 and Applicable Interims (1964, 1967)



LOCATION PLAN

LEGEND

◆ Indicates Existing Soil Borings
 Existing Plaques (To Be Relocated)



PLAN

PROPOSED RAMP 'E' & RAMP 'C'

NOTES

- See sheet F2 for Bill of Material.
- Bars indicated thus 24-2-#5 etc. denotes 24 lines with 2 lengths per line.
- Inside face of parapet denoted I.F. Outside face of parapet denoted O.F.
- All reinforcement in concrete deck and parapet to be epoxy coated.
- Typical splice lengths for #5 bars to be 2'-2" min. and #8 bars to be 3'-8" min.
- All longitudinal reinforcement bent to roadway curvature.
- For Junction Box Detail and reinforcement see sheet PD-2, Vol.13. Also see Vol.14 sheet EDB.
- For Parapet Detail see sheet PD-3, Vol.13 & J72.
- For Overhead Sign Details and Reinforcement see sheet PD-1, Vol.13.
- For Light Pole Detail and Reinforcement see sheet PD-3, Vol.13.
- For Concrete Deck Mat Reinforcement See SH. PD-3, Vol.13

ABBREVIATIONS

- E.S Each Side
- R.J.S Preformed Joint Seal
- N.E.J Neoprene Expansion Joint
- S.P Special (Scupper)
- E.F Each Face
- For Scupper details see sheet B5.1, B5-2, B5-3, Vol.13.

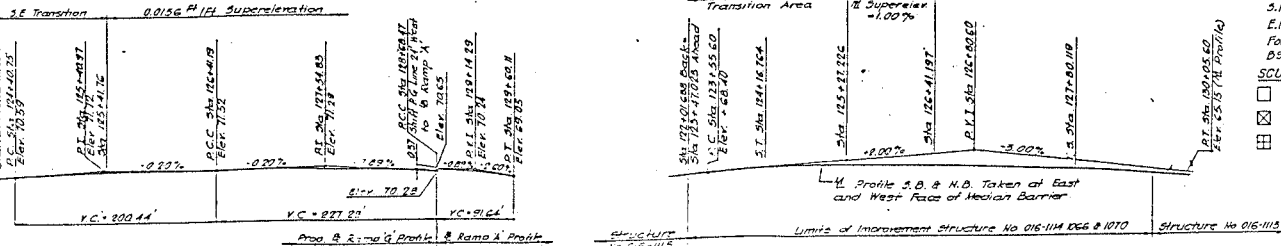
SCUPPER LEGEND

- ☐ Type A
- ☒ Type B
- ☒ Type C



APPROVED

FOR STRUCTURAL ACCEPTANCE ONLY
 James J. Radford
 12345 N. State St., Chicago, Ill.



PROPOSED RAMP 'G' & RAMP 'A'

MAINLINE PROFILE - S.B. & N.B.

SHEET F3 OF 16

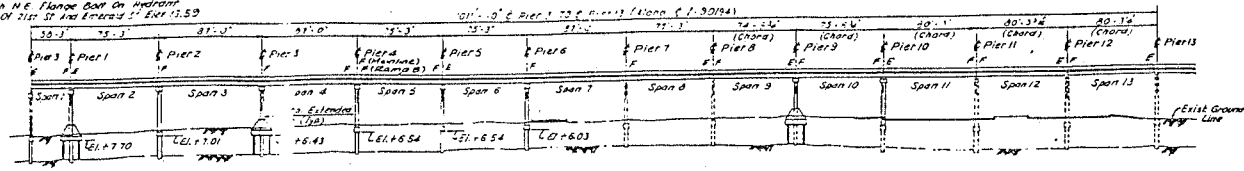
| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 90/204 DAN RYAN EXPRESSWAY
 SECTION 1985-0776-COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE NOS. 016-1070 & 1114

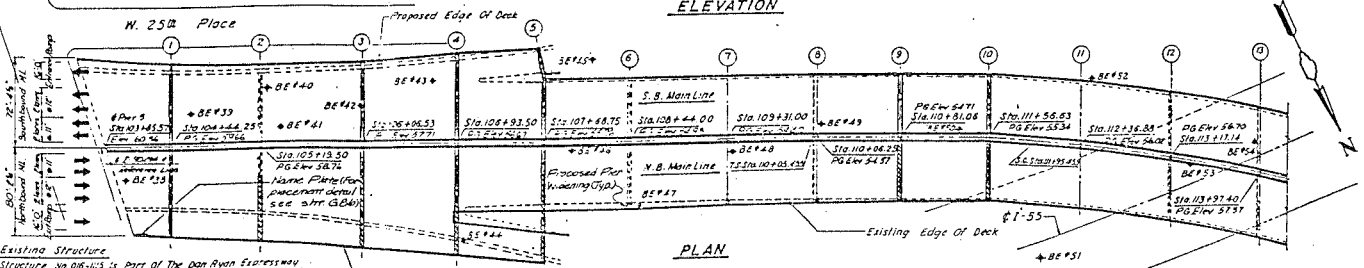
GENERAL PLAN
 Scale: 1/8" = 1'-0"
 Date: AUG. 1988
 Drawn By: SR
 Checked By: SK
 UNIRODME ENGINEERS INC.
 Chicago, Illinois

| | | | |
|-------------|---------|------------|--------------|
| PROJECT NO. | SECTION | DATE | TOTAL SHEETS |
| 90/94 | * | COOK | 101 |
| DESIGNED BY | | CHECKED BY | |
| M. S. COOK | | M. S. COOK | |
| DRAWN BY | | CHECKED BY | |
| M. S. COOK | | M. S. COOK | |

Bench Mark
 TBM #49 North N.E. Flange Bolt On Hydrant
 On NW Corner of 71st St and Expressway Elev 15.53



ELEVATION



PLAN

Existing Structure
 Structure No. 08-115 is part of the Dan Ryan Expressway Viaduct. The Superstructure consists of Rolled Beam and Heavy Plate Girder Spans. The substructure consists of Multiple Column Concrete Piers and pier bents supported on concrete caissons. The structure was built in 1961 and opened to traffic in 1962. The contractor shall maintain traffic at all times on existing structure while widening the viaductures.

Design Stresses

- New Construction
- F_c = 3500 PSI
 - F_t = 1400 PSI
 - F_y = 60,000 PSI (Reinforcement)
 - F_t = 50,000 PSI
 - Working Stress Design Method
 - Allowable Bearing Pressure On Rock = 60 Tons/Sq. Ft.

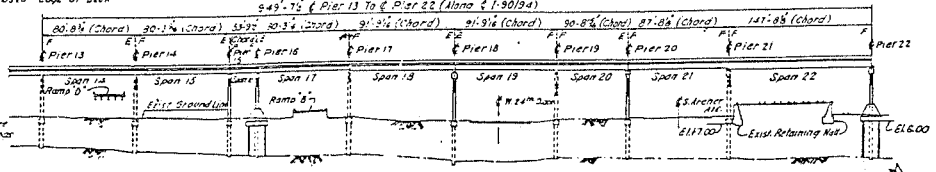
Existing Construction

- F_c = 3500
- F_t = 1400 W/O Form Pressure
- F_y = 60,000 PSI (Reinforcement)
- V = 75 PSI Max. Shear In Rock
- F_t = 10,000 PSI
- Deck Slab Bearing On Pier = 60 Tons/Sq. Ft.

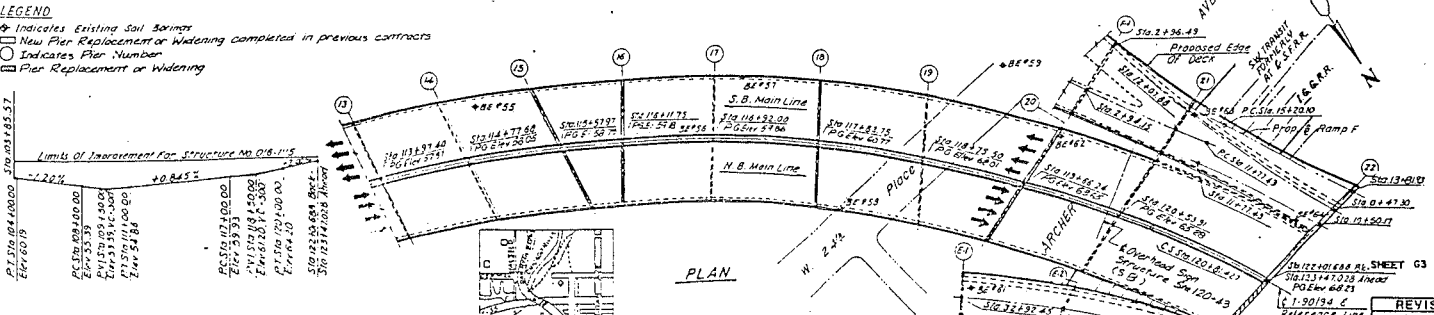
Loading: HS20-A4 - RH
 Design Specifications: 14510 (1983) and Appendix Interims (1984 thru 1987)

LEGEND

- ★ Indicates Existing Soil Springs
- New Pier Replacement or Widening completed in previous contracts
- Indicates Pier Number
- ▭ Pier Replacement or Widening



ELEVATION



PLAN

PROPOSED PROFILE GRADE
 DAN RYAN EXPRESSWAY (1-30-94)

LOCATION PLAN



APPROVED
 FOR STRUCTURAL DESIGN ONLY
 M. S. COOK

| REVISIONS | Name | Date |
|-----------|------|------|
| | | |
| | | |
| | | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 FALL ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1965-077-BB - COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-1115 (MAINLINE)
 GENERAL PLAN
 Scale: NONE
 Date: AUG. 1988
 Drawn By: M.S. COOK
 Checked By: M.S. COOK
 ENVIROTECH ENGINEERS INC.
 CHICAGO, ILLINOIS

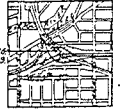
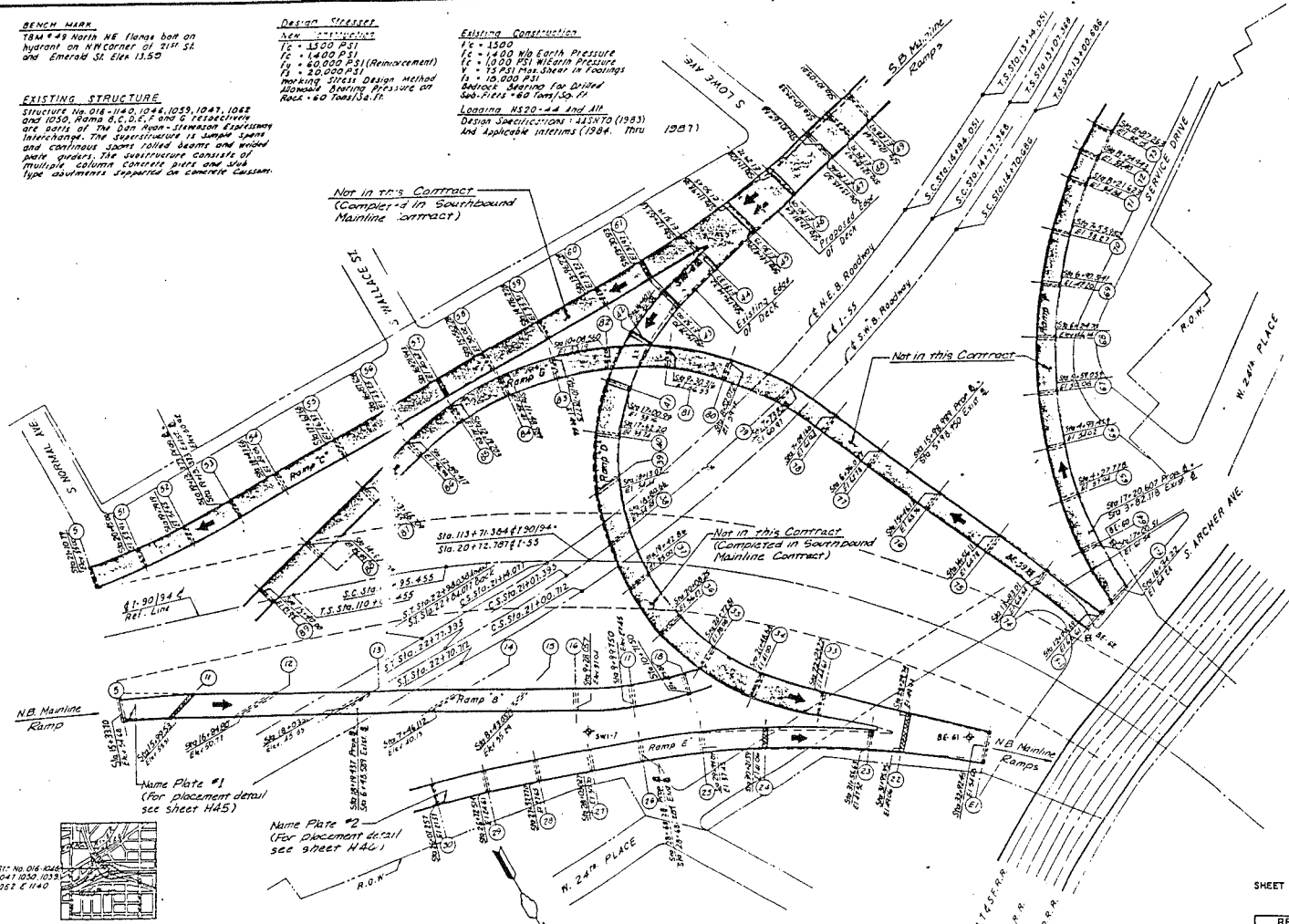
| | | | | |
|---------------|----------|------------------|------|-------|
| DESIGN NO. | SECTION | COUNTY | DATE | SHEET |
| 90/94 | # | COOK | 5/3 | 3 |
| BY | TO | | BY | |
| FOR. OR. DATE | REVISION | FOR. AND PROJECT | | |
| # 085-077-B | | | | |

BENCH MARK
 184 #49 North NE Flange bar on hydrant on NW corner of 21st St. and Emerald St. Elev. 13.50

Design Criteria
 New Structures
 Tc = 1500 PSI
 Tc = 1400 PSI
 Tc = 60,000 PSI (Reinforcement)
 Tc = 20,000 PSI
 Tc = 10,000 PSI
 Working Stress Design Method
 Allowable Bearing Pressure of Rock = 60 Tons/Sq. Ft.

Existing Construction
 Tc = 1500
 Tc = 400 N/A Earth Pressure
 Tc = 1000 PSI Minimum Pressure
 Tc = 15 PSI Max. Shear in Footings
 Tc = 10,000 PSI
 Working Stress Design Method
 Allowable Bearing Pressure of Rock = 60 Tons/Sq. Ft.
 Loading MS20-A and AP
 Design Specifications: 415RTO (1983) and applicable interims 1984, thru 1987

EXISTING STRUCTURE
 Structure No. 016-1040, 1044, 1053, 1047, 1042 and 1050. Ramps B, C, D, E, F and G retrofitted are parts of The Dan Ryan-Idan Ryan Expressway Interchange. The superstructure is simple spans and continuous spans, rolled beams and wood deck girders. The substructure consists of multiple column concrete piers and slab type abutments supported on concrete caissons.



LOCATION PLAN

- LEGEND**
- ⊛ Indicates Existing Soil Borings
 - ▭ New Pier to be Completed in Previous Contract
 - Indicates Pier Number
 - ▭ Pier Replacement or Widening

PLAN



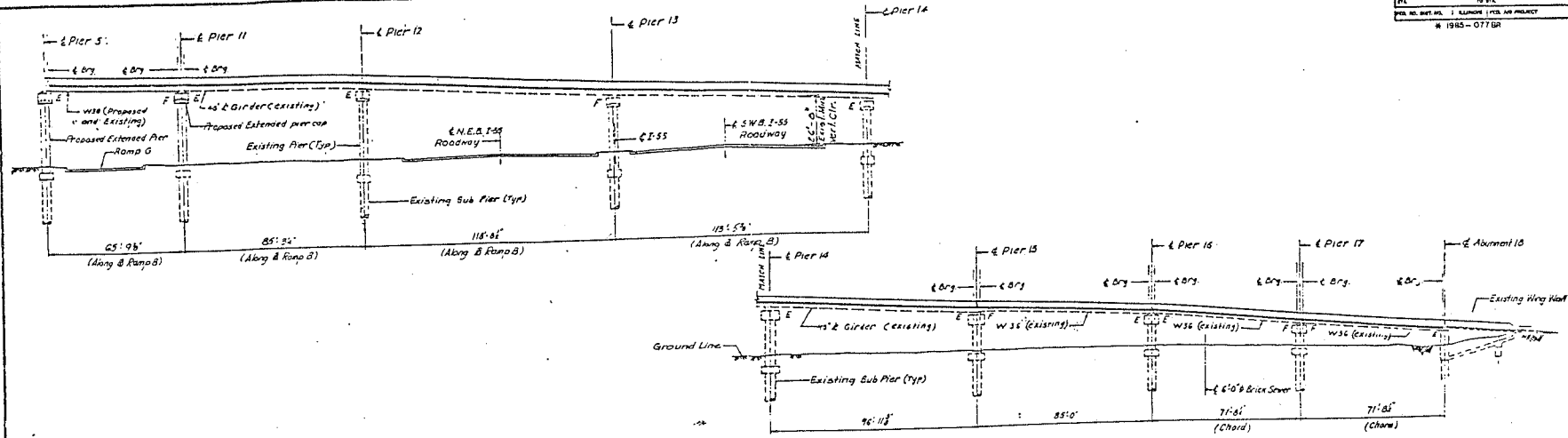
APPROVED
 FOR STRUCTURE AND ACCESSORY ONLY
James J. Anderson
 LICENSE NO. 016-1040, 1044, 1053, 1047, 1042 AND 1050

SHEET H3 OF H53

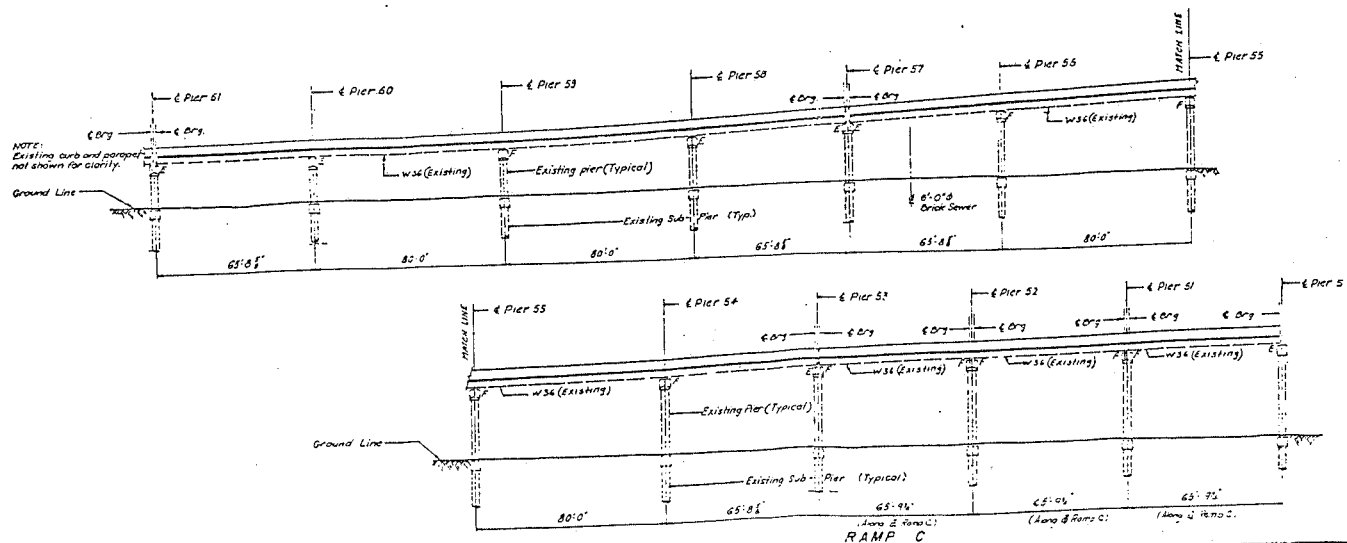
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 ILLINOIS STATE ROADWAY DISTRICT
 FULL ROUTE 90/94 IDAN RYAN EXPRESSWAY
 SECTION 1985-077-B# - COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-1047 & 1040 (RAMP E & RAMP F)
 GENERAL PLAN
 Scale: NONE
 Date: AUG. 1988
 Drawn By: M.H.
 Checked By: J.E.M.
 DIVISION OF ENGINEERS INC.
 CHICAGO, ILLINOIS

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |
| | |

| | | | |
|-------------|---------|--------|--------------|
| PROJECT NO. | SECTION | COUNTY | TOTAL SHEETS |
| 90/94 | 4 | COOK | 53 |
| SHEET NO. | | | 4 |
| DATE | | | |
| 1985-07-18 | | | |



RAMP B



RAMP C

NOTE:
Existing curb and parapet
not shown for clarity.

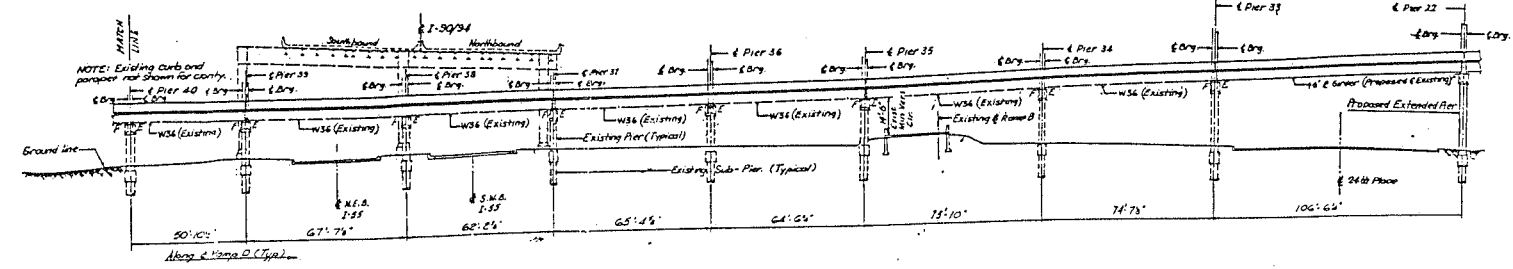
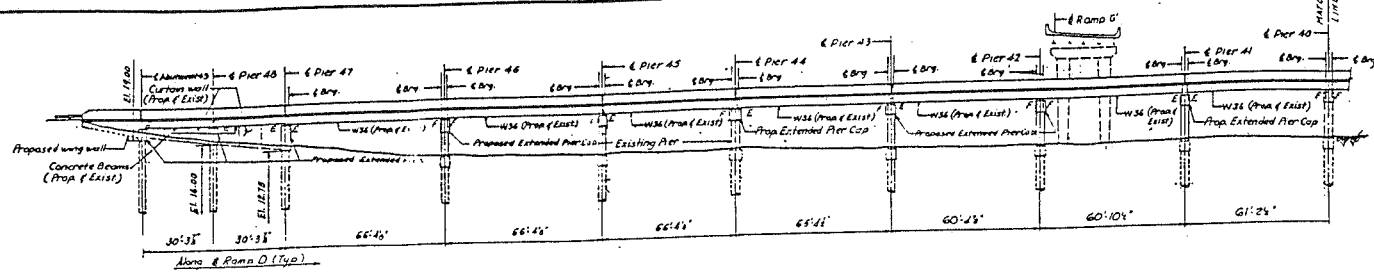
SHEET 4 OF 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAL ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 985 - 077 DR - COOK COUNTY
"B" MARKING RECONSTRUCTION
SIN. 04-1046, 1047, 1050, 1052, 1062, 1140
ELEVATIONS - RAMP B & C

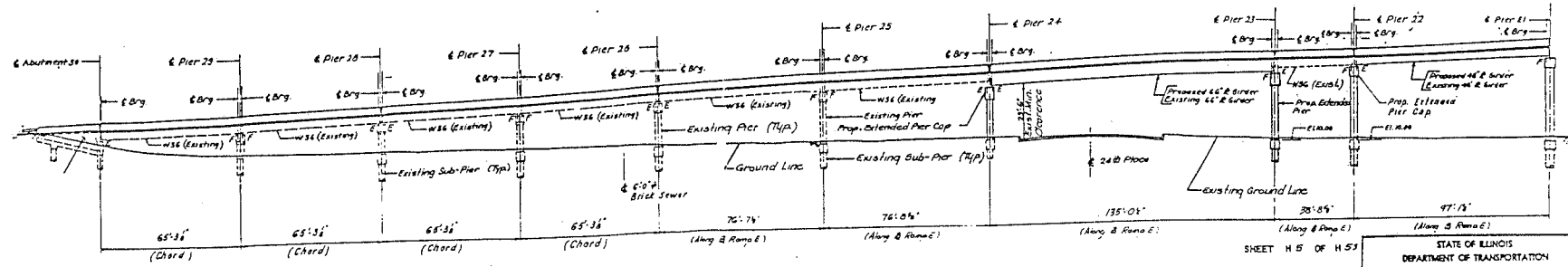
| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |

Scale: NONE
Date: AUG. 1985
Drawn By: JG
Checked By: JEM
ENVIRONMENTAL ENGINEERS, INC.
Chicago, Illinois

| | | | |
|-------------------|--------------------------|------|----|
| PROJECT NO. | SECTION & QUANTITY | DATE | BY |
| 90/941 M | COOK | 53 | 3 |
| DATE | BY | | |
| FOR THE DIST. NO. | ALIGNED WITH THE PROJECT | | |
| N 845-077 BR | | | |



RAMP D



RAMP E

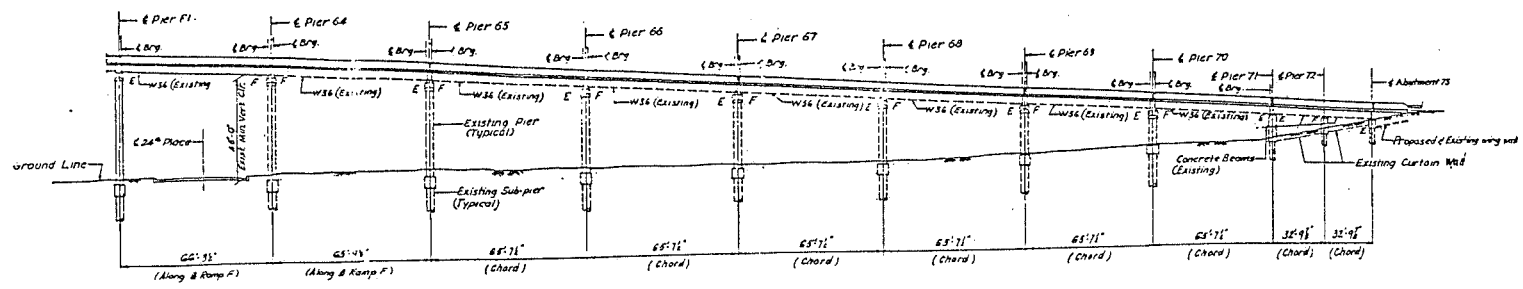
SHEET H 5 OF H 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

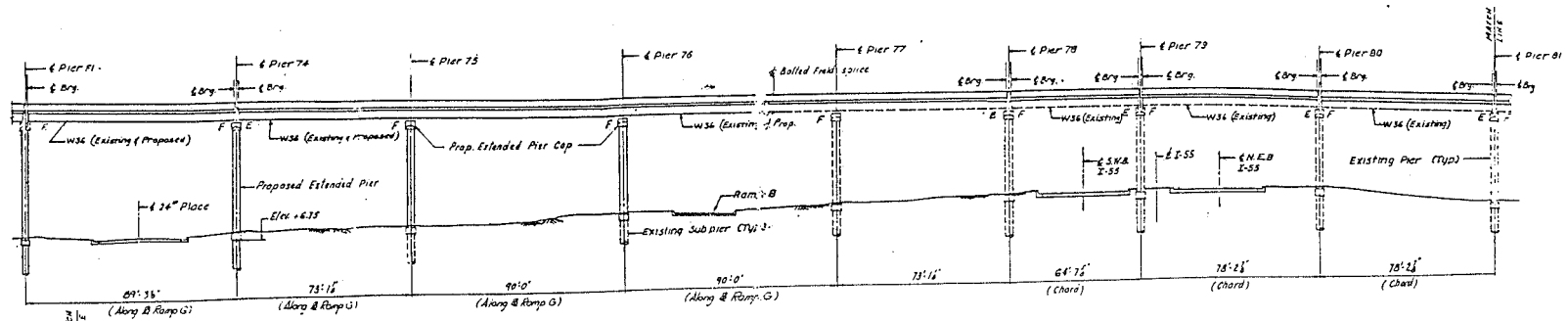
FAI ROUTE 90/941 (DAN RYAN EXPRESSWAY)
SECTION 083 - 07758 - COOK COUNTY
N.B. MARK THE RECORDS SECTION
STR 016-1046, 1047, 1050, 1059, 1062 & 1140
ELEVATIONS - RAMP D & E

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |
| | |

Scale: NONE
Date: AUG. 2008
Drawn By: J.S. Chivers & B.J. Mew
Checked By: M.E.W.
ENHANCED ENGINEERS INC.
Chicago, Illinois



RAMP F



RAMP G

SHEET H6 OF H53

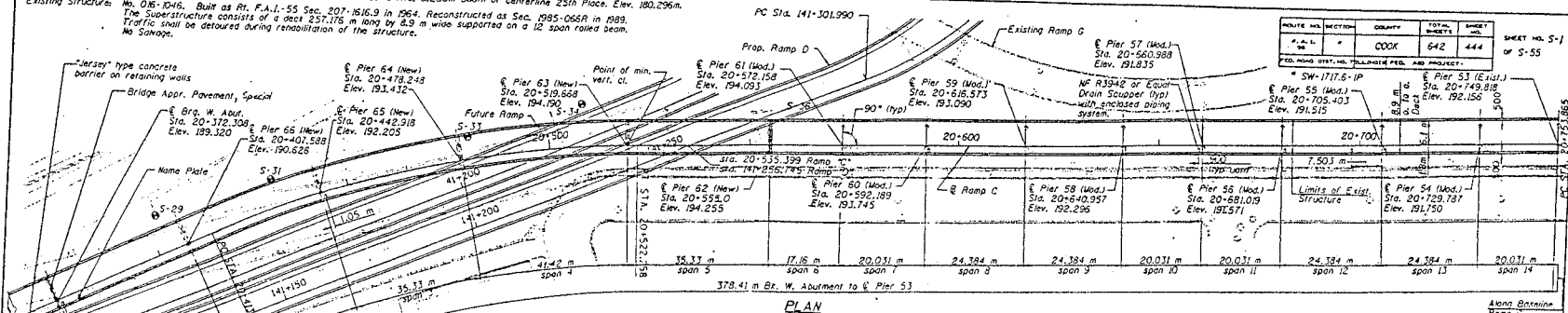
| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 30/94 (DAN STAN EXPRESSWAY)
 SECTION 1985 - 07781 - COOK COUNTY
 NB WARRIAGE RECONSTRUCTION
 STR. 016-104.6, 1047, 1050, 1059, 1062 & 1040
 ELEVATIONS - RAMP F&G
 Scale: NONE
 Date: 2/08/1988
 Drawn By: J.G.
 Checked By: W.C.M.
 ENVIRONMENTAL ENGINEERS INC.
 CHICAGO, ILLINOIS

Bench Marks: C.P. #22 P-K nail in pavement (marked #1080) centerline Lowe Ave. 8,230m South of centerline 25th Place. Elev. 180.296m.
 Existing Structure: No. 016-1046. Built as Rt. F.A.I.-55 Sec. 207-1516.9 in 1964. Reconstructed as Sec. 1985-066R in 1989.
 The Superstructure consists of a deck 237.176 m long by 8.2 m wide supported on a 12 span roller beam.
 Traffic shall be detoured during rehabilitation of the structure.
 No Salvage.

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------|-----------|--------|--------------|-----------|
| 55 | 1171.6-IP | COOK | 642 | 444 |

SHEET NO. 5-1 OF 5-55

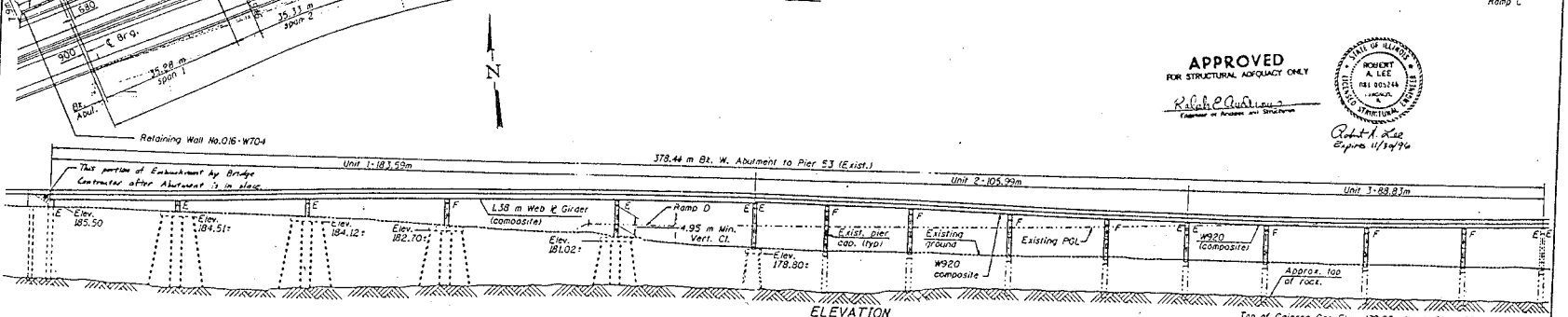


PLAN

APPROVED
 FOR STRUCTURAL ADOPTANCE ONLY



Robert A. Lee
 (Contractor of Bridges and Structures)



ELEVATION

STATION 20+535.399
 BUILT BY
 STATE OF ILLINOIS
 F.A.I. RT. 55 (SEC. 1171.6-IP)
 LOADING MS18
 STR. NO. 016-1046

NAME PLATE
 See Sta. 2113
 (Contract 82449)

CURVE DATA
 Δ = 24°-20'-11.44"
 R = 255,000 m
 T = 54,985 m
 L = 408.312 m
 E = 5.861 m
 PC = 20+413.946
 PT = 20+522.258
 SE = 5.4%
 SE Transition
 Sta. 20+307,000 to 20+435,500
 Sta. 20+506,500 to 20+552,500

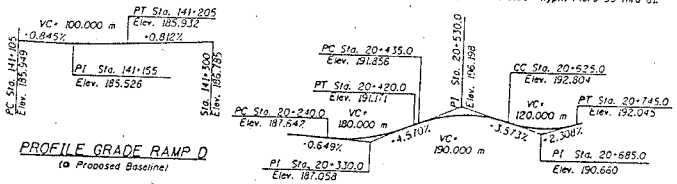
SEISMIC DATA
 Seismic Performance Category (SPC)=A
 Base Rock Acceleration Coefficient (A)=0.4 g
 Site Coefficient (S)=1.5

NOTES
 All dimensions are in millimeters (mm) except as noted.
 Noise Abatement Wall not shown for clarity, located from Sta. 20+371.408 to 20+749.818 on top of South parapet.
 Steel piles are to be HP 130x79, w/ metal shoes.

DESIGN SPECIFICATIONS
 1992 AASHTO with 1993, 1994 & 1995 Interims
 AASHTO Guide Specifications for Structural Design of Sound Barriers (1989)
 AASHTO Guide Specifications for Horizontally Curved Highway Bridges (1993)

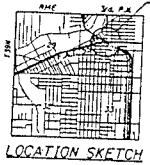
LOADING MS18
 Allow 1.2 kN/m² for future wearing surface
 1.7 kN/m² for wind on Noise Abatement Wall
 2.39 kN/m² for Noise Abatement Wall Dead Load

DESIGN STRESSES
 Field Units:
 f_c = 24 MPa
 f_y = 400 MPa (Reinf.)
 f_y = 345 MPa (AASHTO M 270 GR. 345)
 E_s = 191,000 MPa
 F_y = 270 MPa (Steel) f_c = 24 MPa



PROFILE GRADE RAMP D
 (a) Proposed Baseline

PROFILE GRADE RAMP C
 (a) Proposed Baseline



LOCATION SKETCH



| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
 RAMP C OVER RAMP D
 F.A.I. ROUTE 55 SECTION SW-1171.6-IP
 COOK COUNTY
 STA. 20+535.399 (Ramp C)
 STA. 141+265.745 (Ramp D)
 STRUCTURE NO. 016-1046

DATE 08-11-96 DRAW BY GUS CHECKED BY

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------|---------|--------|--------------|-----------|
| 64 | 1 | COOK | 642 | 504 |

SHEET NO. 502 OF 553

STATION 141+22.55
BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 55 SEC. 5W-1717.6-1P
LOADING NS18
STR. NO. 016-1859

NEW NAME PLATE
See Sta. 213

NOTE: Clean and relocate existing name plate next to new name plate. For location see sheet S33. Cost incidental to "Name Plates".

CURVE DATA

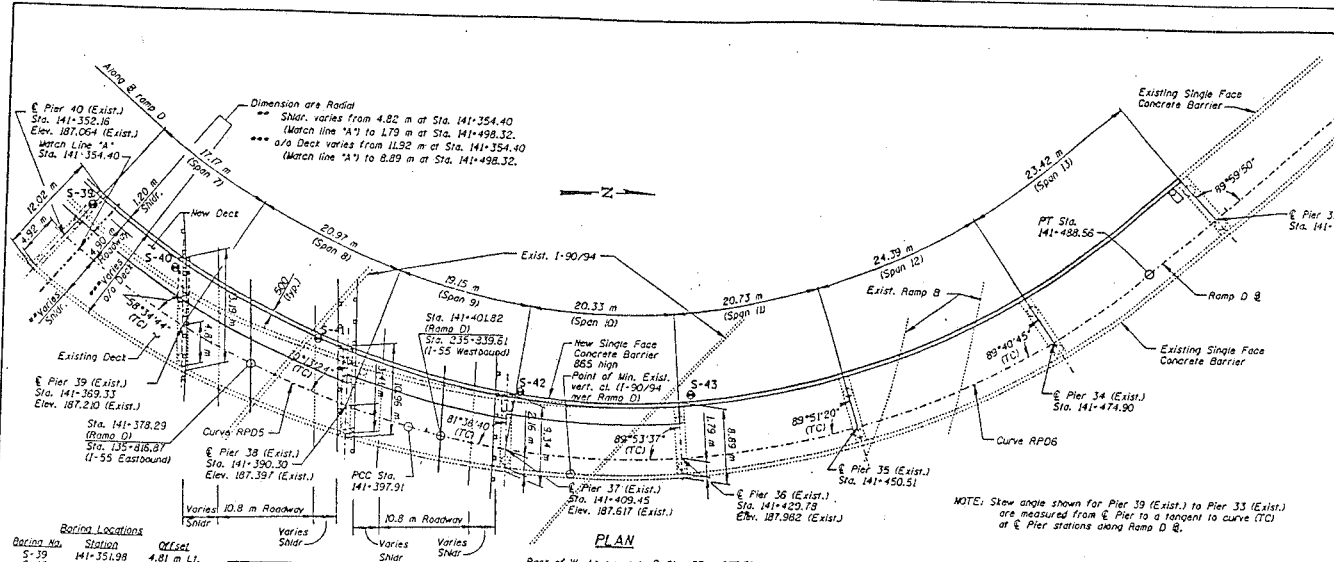
CURVE RPD5

P.I. = 141+349.75
Δ = 58°-17'-50.59" (LT)
R = 104.07 m
L = 58.64 m
T = 49.86 m
E = 15.38 m
PC = 141+231.11
PCC = 141+397.91
SE Transition = Sta. 141+277.61 to Sta. 141+313.50
Min. SE = 2.01%
Max. SE = 5.07%

CURVE RPD6

P.T. = 141+498.55
Δ = 57°-32'-12.15" (LT)
R = 90.27 m
L = 49.86 m
T = 49.86 m
E = 12.71 m
SE Transition =
To match existing SE transition based on survey.

NOTE: Stew angle shown for Pier 39 (Exist.) to Pier 33 (Exist.) are measured from E Pier to a tangent to curve (TC) at E Pier stations along Ramp D.



Boring Locations

| Boring No. | Station | Offset |
|------------|------------|------------|
| S-39 | 141+354.99 | 4.81 m Lt. |
| S-40 | 141+354.73 | 5.14 m Lt. |
| S-41 | 141+383.56 | 6.00 m Lt. |
| S-42 | 141+409.98 | 6.98 m Lt. |
| S-43 | 141+431.36 | 7.38 m Lt. |

PLAN

DESIGN SPECIFICATIONS

1992 AASHTO with 1993, 1994 & 1995 Interims and AASHTO Guide Specification for Structural Design of Sound Barriers (1989)

LOADING NS18

Allow 1.2 kN/m for future wearing surface
Allow 1.7 kN/m for wind on Noise Abatement Wall

DESIGN STRESSES

Field Units:
New Construction:
f'c = 24 MPa
fy = 400 MPa (Reinf.)
fy = 345 MPa (Struct. Steel M270 Grade 345)
fy = 250 MPa (Struct. Steel M270 Grade 250)
Old Construction:
f'c = 24 MPa
fy = 400 MPa (Reinf.)
fy = 137 MPa (Struct. Steel)

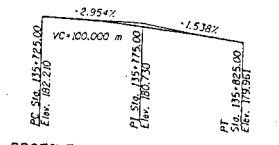
SEISMIC DATA

Seismic Performance Category (SPC)-A
Seismic acceleration Coefficient (A) = 0.02 of 'g'
Site Coefficient (S) = 1.5

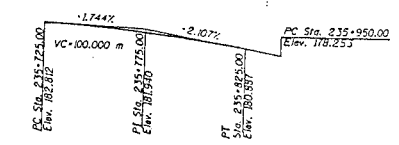
| REVISIONS | | |
|-----------|------|--|
| NAME | DATE | |
| | | |
| | | |
| | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION II
RAMP D OVER I-55
F. A. I. ROUTE 55 SECTION 5W-1717.6-1P
COOK COUNTY
STA. 141+228.97 TO 141+498.32
STRUCTURE NO. 016-1859

DATE 08-20-96
DRAWN BY KAM
CHECKED BY L...



PROFILE GRADE I-55 EASTBOUND
(O Proposed Baseline)



PROFILE GRADE I-55 WESTBOUND
(O Proposed Baseline)



| ROUTE NO. | SECTION | COUNTY | ESTD. | SHEET NO. |
|---------------------------|---------|--------|-------|-----------|
| A. A. L. | * | COOK | 642 | 504 |
| POLYMER BOND NO. ILLINOIS | | | | |
| *SW-1717.6-UP | | | | |

SHEET NO. 502
OF 553

STATION 141+221.55
BUILT BY
STATE OF ILLINOIS
FAI RT. 55 SEC SW-1717.6-UP
LOADING WS18
STR. NO. 016-1059

NEW NAME PLATE
See Sta. 213

NOTE: Clean and relocate existing name plate next to new name plate. For location see sheet 553.
Cost incidental to 'Name Plates'.

CURVE DATA

CURVE RPO5

P.I. = 141+349.75
Δ = 58° 47' 50.59" (LT)
R = 104.07 m
T = 55.64 m
L = 106.80 m
E = 15.33 m
PC = 141+231.11
PCC = 141+397.91
SE Transition = Sta. 141+277.61 to Sta. 141+313.50
Min. SE = 2.0%
Max. SE = 5.07%

CURVE RPO6

PT = 141+488.55
Δ = 57° 32' 12.15" (LT)
R = 90.27 m
T = 49.56 m
L = 90.65 m
E = 12.71 m
SE Transition = To match existing SE transition based on survey.

DESIGN SPECIFICATIONS

1992 AASHTO with 1993, 1994 & 1995 Interims and AASHTO Guide Specification for Structural Design of Sound Barriers (1989)

LOADING WS18

Allow 1.2 kN/m² for future wearing surface
Allow 1.7 kN/m² for wind on Noise Abatement Wall

DESIGN STRESSES

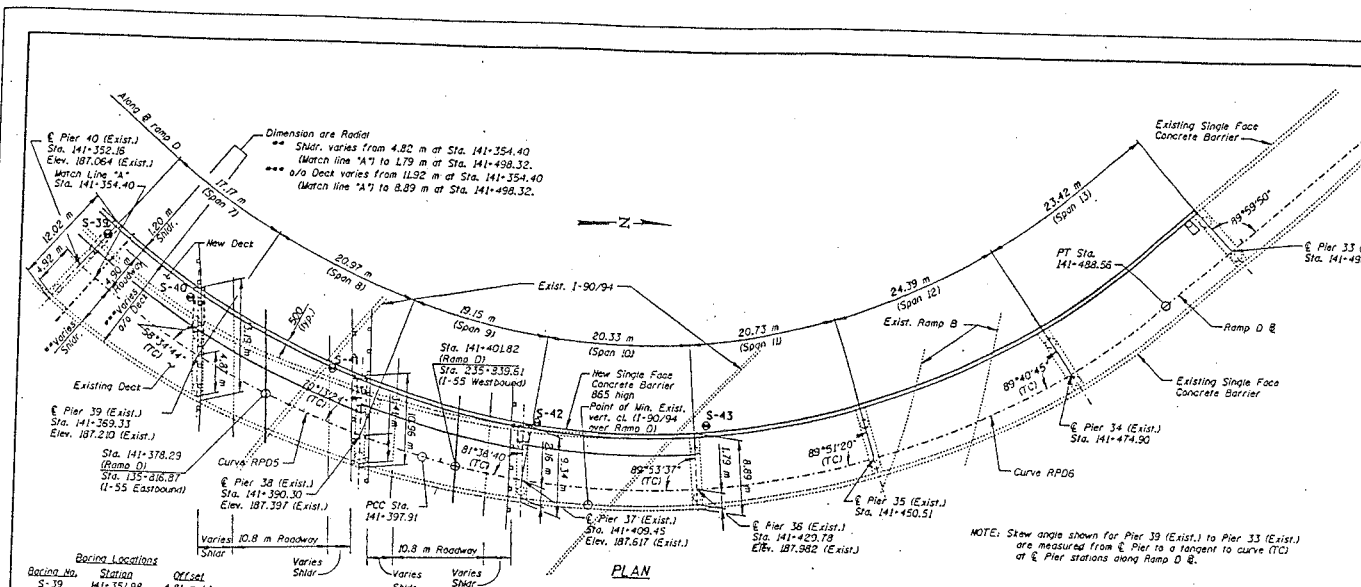
Field Units:
New Construction:
f_c = 24 MPa
f_y = 400 MPa (Reinf.)
f_y = 345 MPa (Struct. Steel W270 Grade 345)
f_y = 250 MPa (Struct. Steel W270 Grade 250)
Old Construction:
f_c = 24 MPa
f_y = 400 MPa (Reinf.)
f_y = 137 MPa (Struct. Steel)

SEISMIC DATA

Seismic Performance Category (SPC)-A
Bedrock Acceleration Coefficient (A)=4.0% of "g"
Site Coefficient (S)=1.5

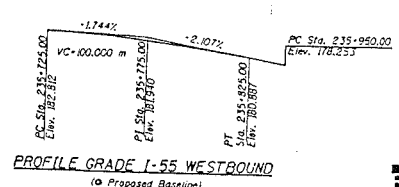
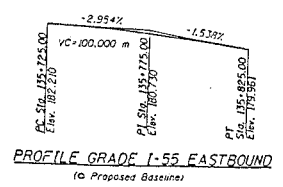
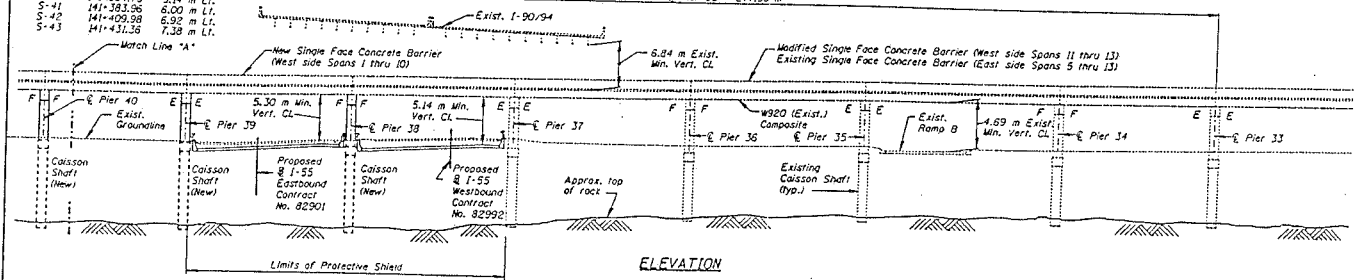
| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION II
RAMP D OVER I-55
F. A. I. ROUTE 55 SECTION SW-1717.6-1P
COOK COUNTY
STA. 141+228.97 TO 141+498.32
STRUCTURE NO. 016-1059
DESIGNED BY JAW
DATE 09-20-95
CHECKED BY JAW



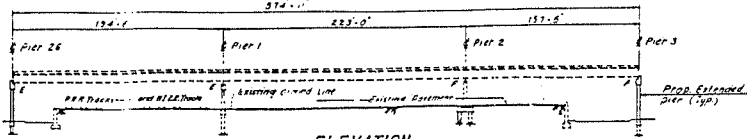
Boring Locations

| Boring No. | Station | Offset |
|------------|------------|------------|
| S-39 | 141+351.99 | 4.81 m Lt. |
| S-40 | 141+364.73 | 5.14 m Lt. |
| S-41 | 141+383.96 | 6.00 m Lt. |
| S-42 | 141+409.98 | 6.92 m Lt. |
| S-43 | 141+431.26 | 7.38 m Lt. |



| | | | | |
|------------------|---------|--------------|--------------|-----------|
| TOTAL SHEETS | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94 | * | COOK | 21 | 3 |
| FRA. | | TO STA. | | |
| FRA. NO. 174 | | FRA. NO. 174 | | |
| FRA. NO. 174 | | FRA. NO. 174 | | |
| FED. AID PROJECT | | | | |
| 1985 - 082 B-R | | | | |

BENCH MARK:
 TBM #43 NORTH N.E. Flange box of hydrant on N.W. Corner of 1st St. and Emerald St. Elev. 13.54



ELEVATION

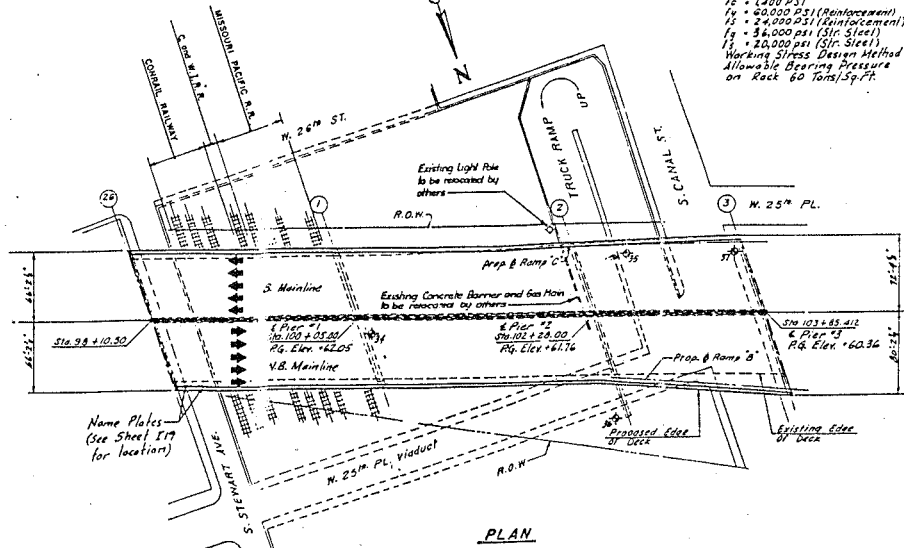
EXISTING STRUCTURE

Structure No. 016-1116 is part of Dan Ryan Expressway carrying I-90/94 and was constructed in 1962. It is 116'-2" out to out. The deck is concrete slab supported on 134'-2" x 22'-0" x 15'-6" continuous composite pier. Piers 1, 2, 1 and 3 are trapezoidal cast-in-place concrete pier and pier 2 is trapezoidal column pier over one quarter of span. All piers are supported on concrete caissons.

Design Stresses

New Construction
 Fc = 1500 PSI
 Ft = 400 PSI
 Fy = 60,000 PSI (Reinforcement)
 Fy = 24,000 PSI (Reinforcement)
 Fy = 34,000 psi (St. Steel)
 Fy = 20,000 psi (St. Steel)
 Working Stress Design Method
 Allowable Bearing Pressure on Rock 60 Tons/Sp.Ft.

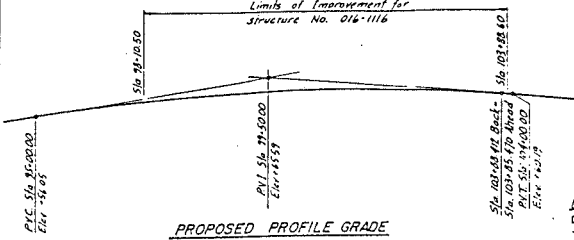
Existing Construction
 Fc = 1500
 Ft = 1400 N/A Earth Pressure
 Ft = 1000 PSI N/A Earth Pressure
 Ft = 15 PSI N/A Shear in Floorings
 Fy = 24,000 PSI
 Bridge Bearing Pile Drilled Shaft - 60 Tons/Sp.Ft.
 Loading HS20-44 And AM
 Design Specifications: AASHTO (1983) and Applicable Interims (1984 thru 1987)



PLAN

Name Plates—
 (See Sheet 174 for location)

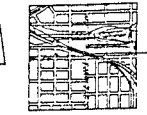
Limits of Improvement for Structure No. 016-1116



PROPOSED PROFILE GRADE

LEGEND

Proposed Pier Widening, Not part of this contract
 Indicates Existing Soil Boring, 36"



LOCATION PLAN



APPROVED
 James L. Smith
 License No. 11-3239

SHEET [3] OF [21]

| REVISIONS | |
|-----------|------|
| Name | Date |
| | |
| | |
| | |
| | |
| | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 I-90/94 (DAN RYAN EXPRESSWAY)
 SECTION 082 - 082 B-COOK COUNTY
 N.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016 - 1116
GENERAL PLAN
 Scale: NONE
 Date: AUG. 1988
 Drawn By: M. H.
 Checked By: S. K. D.
 ENVIRONMENTAL ENGINEERS INC.
 Chicago, Illinois