F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	267-1414F-15D	COOK		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Bench Mark:

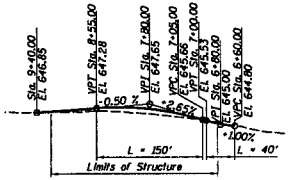
Chisled square on east side of light pole foundation located off of the south shoulder of Eastbound I-90, 255' west of the existing bridge. Elev. 627.00.

Existing Structure

S.N. 016-1104 built as F.A. Rte. 173 Sec. 267-1414 F-15D in 1958. The existing bridge has four simple spans which consist of a reinforced concrete deck 235'-10" long by 65'-0" wide supported on 48"PPC I-beams. The existing bridge superstructure shall be removed and replaced. The existing median pier shall be retained and rehabilitated. The existing Piers 1 & 3 shall be removed. The existing abutments shall be removed and replaced.

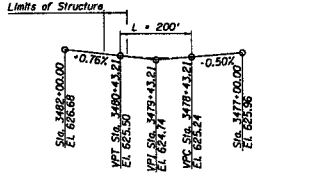
Salvage Weather Station.

Construction staging is not required. Sayre Avenue will be closed during construction and traffic will be detoured.



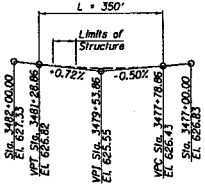
PROFILE GRADE SAYRE AVE.

(Along PGL Roadway)



PROFILE GRADE I-90 (KENNEDY EXPRWY.)

(Along PGL Roadway - Existing)

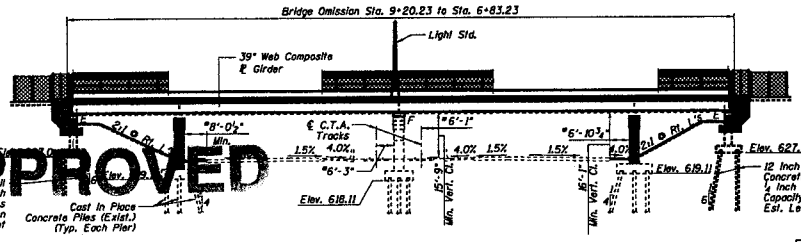


PROFILE GRADE C.T.A. TRACKS

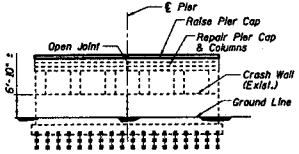
(Top of Rail - Existing)

SCOPE OF WORK

1. Remove the existing superstructure and replace with a two span superstructure that can accommodate the existing CTA/I-90 configuration and also the future CTA/I-90 widening. See sheet 2 of 3.
2. Remove existing Piers 1 & 3.
3. Replace fixed bearing at abutments with elastomeric expansion bearings. Replace existing fixed bearings at Pier 2 with new fixed bearings skewed to the pier and at 90 degrees to the ℄ Sayre Avenue.
4. Repair and raise Pier 2 pier cap, and repair Pier 2 columns and crashwall.
5. Remove existing abutments and replace with high wall abutments at 90 degrees to the ℄ Sayre Avenue and able to accommodate the future widening of I-90. See sheet 2 of 2.
6. Remove and replace bridge approach pavement.
7. Remove and replace concrete slopewalls.

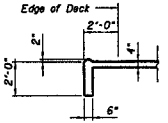


ELEVATION

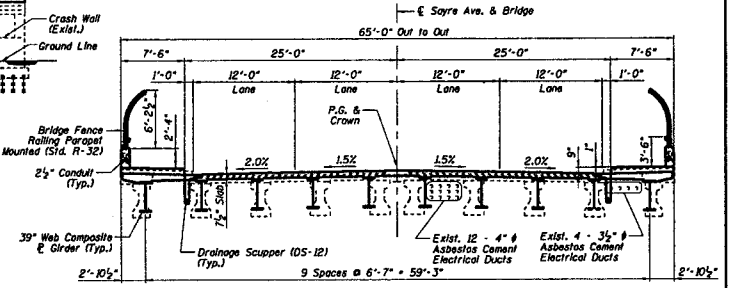


PIER SKETCH

(Pier 2)



SECTION A-A



CROSS SECTION

(Looking North)

NOTE: Existing Electrical Ducts to be relocated (By Others).

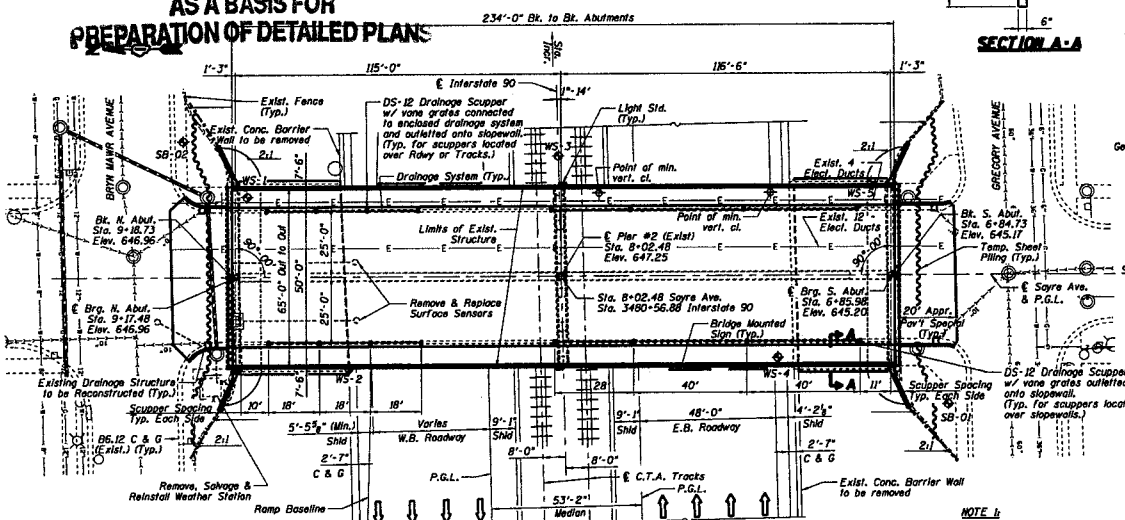
APPROVED

JUN 11 2004

SUBJECT TO CTA APPROVAL

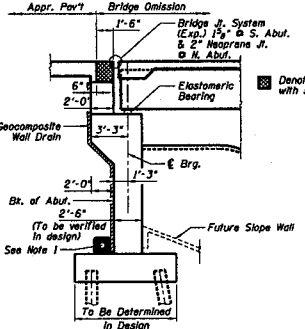
AS A BASIS FOR

PREPARATION OF DETAILED PLANS



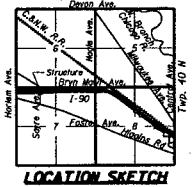
PLAN

NOTE 1:
A 6" ϕ perforated drain pipe shall be situated within an approximately 18" x 18" block of CA-5 or CA-7 course aggregate. The 18" x 18" block of course aggregate shall be wrapped in filter fabric.



SEC. THRU ABUTMENTS

(Dim. of Right Angles)



LOCATION SKETCH

HIGHWAY CLASSIFICATION

FA ROUTE 173 - Sayre Avenue
ADT: 7,700 (1997); 10,000 (2020)
Functional Class: Local Street (Urban)
Design Speed: 30 mph (Posted)

F.A.I. 90
ADT: 208,500 (1995)
Functional Class: Interstate, FAI
Design Speed: 55 mph (Posted)

DESIGN STRESSES

EXISTING CONSTRUCTION

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

NEW CONSTRUCTION

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (W 270 Gr. 50 Structural Steel)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20

Allowance for Future Wearing Surface = 25 lb/ft²

SEISMIC DATA

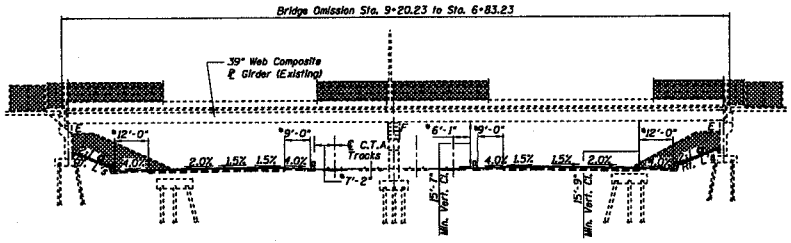
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.035g
Site Coefficient (S) = 1.0

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
FA ROUTE 173 (SAYRE AVENUE) OVER INTERSTATE 90 (KENNEDY EXPRESSWAY)
COOK COUNTY STATION 8+02.48
SECTION 267-1414F-15D
STRUCTURE NO. 016-1104

SCALE: None
DRAWN BY: E. Mroczek
DATE: April 26, 2004
CHECKED BY: G. Hatlestad

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	267-1414F-15D	COOK		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



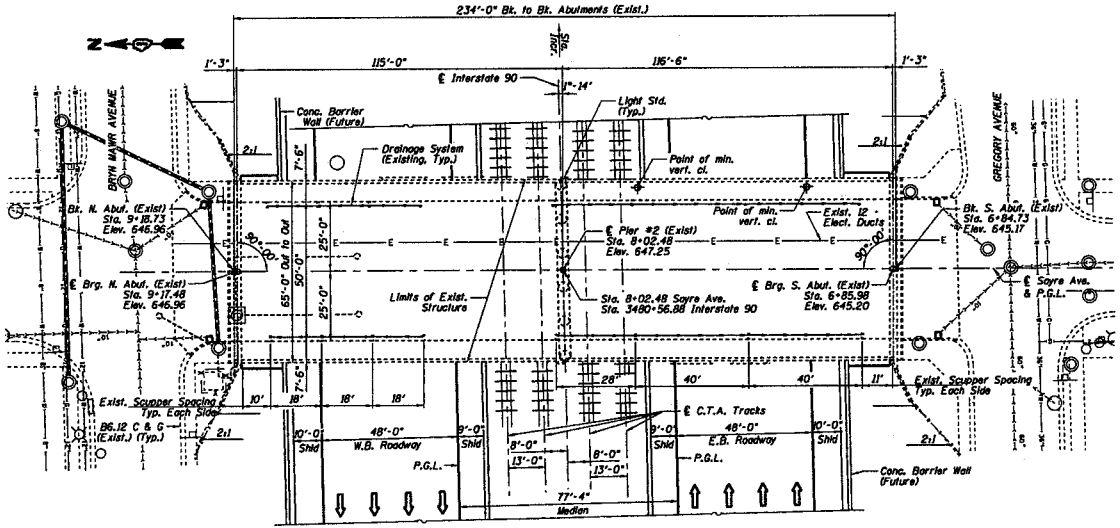
FUTURE ELEVATION

* At Rt. L's to I-90

Denotes Embankment removal

ANTICIPATED FUTURE SCOPE OF WORK

1. Remove and replace the concrete slope walls and construct barrier walls to accommodate the future anticipated CTA and I-90 widening.



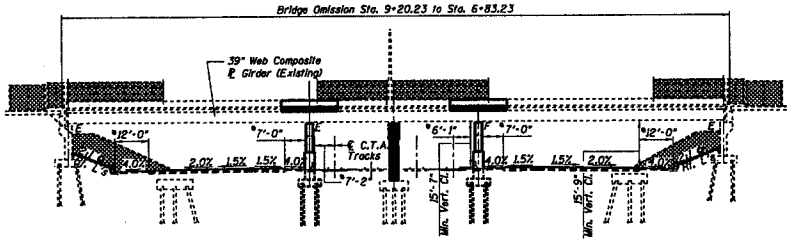
FUTURE PLAN

ILLINOIS DEPARTMENT OF TRANSPORTATION
FUTURE 2-SPAN PLAN & ELEVATION
FA ROUTE 173 (SAYRE AVENUE) OVER
INTERSTATE 90 (KENNEDY EXPRESSWAY)
COOK COUNTY STATION 8+02.48
SECTION 267-1414F-15D
STRUCTURE NO. 016-1104

SCALE: None DRAWN BY: E. Mroczek
DATE: April 28, 2004 CHECKED BY: G. Hollestad

REVISIONS	
NAME	DATE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	267-1414F-150	COOK		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



FUTURE ELEVATION * At Rt. L's to I-90

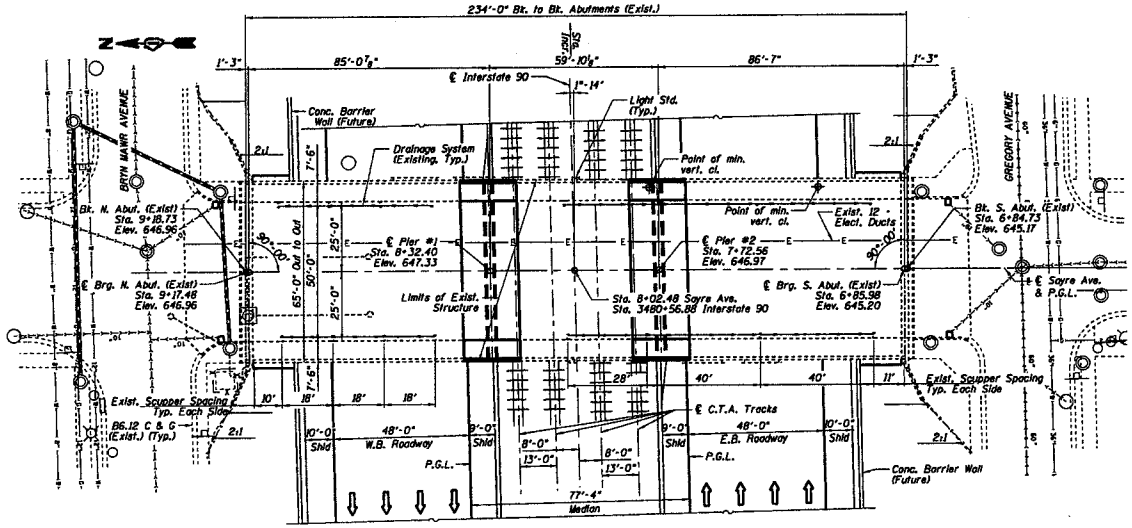
Denotes Embankment removal

Denotes Structure removal

ANTICIPATED FUTURE SCOPE OF WORK

1. Remove a portion of deck over locations of proposed median shoulder piers if required for construction of median shoulder piers.
2. Construct median shoulder piers; drive foundation piles from deck of bridge or drill "micro-piles" below bridge deck.
3. Remove existing median pier.
4. Replace portion of deck previously removed over locations of proposed median shoulder pier if required.
5. Remove and replace the concrete slope walls and construct barrier walls to accommodate the future anticipated CTA and I-90 widening.

DELETE OPTION



FUTURE PLAN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FUTURE 3-SPAN PLAN & ELEVATION
FA ROUTE 173 (SAYRE AVENUE) OVER
INTERSTATE 90 (KENNEDY EXPRESSWAY)
COOK COUNTY STATION 8+02.48
SECTION 267-1414F-150
STRUCTURE NO. 016-1104

SCALE: None DRAWN BY: E. Wroczek
DATE: April 28, 2004 CHECKED BY: G. Hollestad