F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	xxxx	1
STA. 173+50	TO	STA. 195+00		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Bench Mark: "X" Cut on Top Row of N.W. bolt of Fire Hydrant W. Side of Mannheim Road and first Fire Hydrant S. of Bridge over RR Tracks and Franklin Ave.

Existing Structure: No. 016-0335. Built as US 12/20/45 (Mannheim Rd.) Sec. 465 VB-R-1 in 1940. Structure widened and rehabilitated in 1978. The superstructure consists of a R.C. deck 1250' long by 100.1' wide supported on 19 spans of Rolled Girder and riveted Plate Girder. Traffic shall be maintained during Structure rehabilitation by staged construction.

Salvage Materials: None.

HIGHWAY CLASSIFICATION

Class: Principal Arterial - FAP 330 US 12/45 (Mannheim Rd.)

DHV: All Trucks 3700, Semis 1600

ADT: 48,000 (1996)
60,000 (2020)

Design Speed: 40 mph

Posted Speed: 40 mph

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

f'c = 3.5 ksi

Fy = 50 ksi (M270 Gr. 50 Struct. Steel)

fy = 60 ksi (Reinf.)

SEISMIC DATA

Seismic Performance Category (SPC) = A

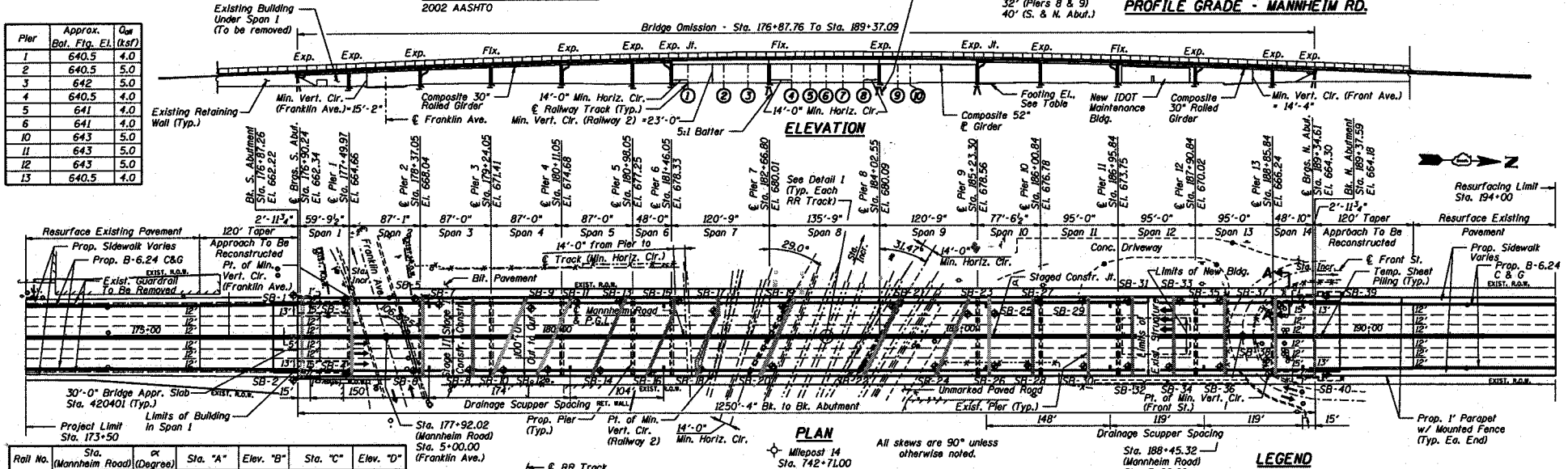
Bedrock Acceleration Coefficient (A) = 0.04g

Site Coefficient (S) = 1.0

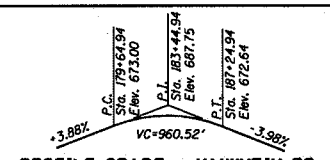
LOADING HS20-44

Allow 50 Lbs/Ft² for future wearing surface.

Pier	Approx. Bot. Ftg. El.	Q_{all} (ksf)
1	640.5	4.0
2	640.5	5.0
3	642	5.0
4	640.5	4.0
5	641	4.0
6	641	4.0
10	643	5.0
11	643	5.0
12	643	5.0
13	640.5	4.0



ELEVATION



PROFILE GRADE - MANNHEIM RD.

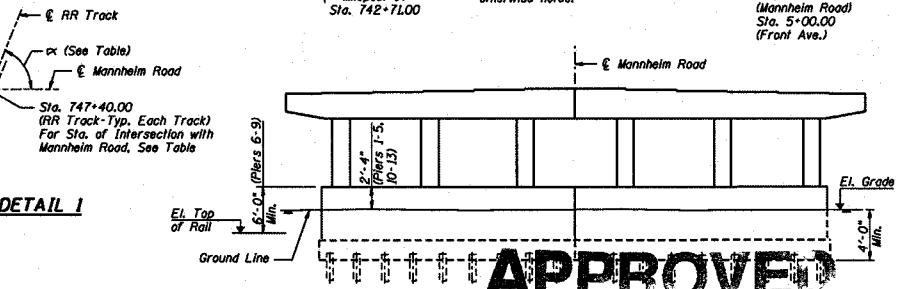
PLAN

Milepost 14
Sta. 742+71.00

All skews are 90° unless otherwise noted.

Rail No.	Sta. (Mannheim Road)	α (Degree)	Sta. "A"	Elev. "B"	Sta. "C"	Elev. "D"
1	181+62.21	90.8	746+90.00	649.51	747+90.00	649.14
2	182+08.60	74.8	746+88.19	650.20	747+91.81	650.08
3	182+37.99	71.3	746+87.22	650.34	747+92.78	650.17
4	182+90.63	67.8	746+86.01	649.85	747+93.99	649.92
5	183+13.70	67.7	746+85.96	650.08	747+94.04	649.97
6	183+33.30	68.0	746+86.09	649.90	747+93.91	649.92
7	183+53.83	68.9	746+86.42	649.84	747+93.58	650.03
8	183+81.86	58.5	746+81.33	649.82	747+98.67	650.01
9	184+22.26	58.6	746+81.43	649.09	747+98.57	649.11
10	184+37.67	58.6	746+81.42	648.99	747+98.58	648.99

TOP OF RAIL ELEVATIONS



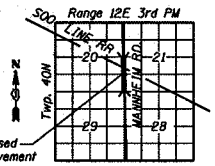
DETAIL 1

PIER ELEVATION

(Looking Upstation)

LEGEND

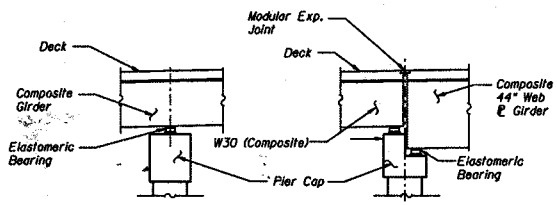
- Boring Location
- Drainage Scupper
- Manhole
- Street Sign
- Fence
- Power Pole
- Switch Control Box
- Fire Hydrant
- Gas Valve



LOCATION SKETCH

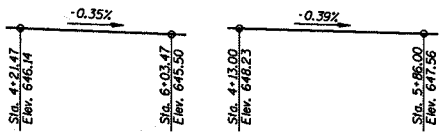
NOTES

1. Elevations "B" and "D" represent top of rail elevations at approximately the fascia line of each side of the proposed new structure.
2. No deck drains will be permitted in the spans over tracks or within 10' of cross arms of a railroad pole line.
3. Conduits to be provided in sidewalk for future bridge lighting.
4. See General Plan II for Section A-A.



SECTION THRU PIER

SECTION THRU PIERS 6 & 9 (@ EXP. JT.)



PROFILE GRADE - FRANKLIN AVE.

(Along N. Edge of Pavement)

PROFILE GRADE - FRONT STREET

APPROVED
SUBJECT TO RR APPROVAL
NOV 14 2003
Conditionally Approved
AS A BASIS FOR
PREPARATION OF DETAILED PLAN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

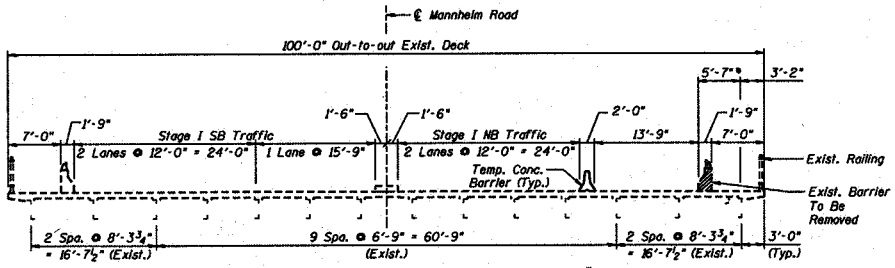
GENERAL PLAN I

FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE.
STRUCTURE NO. 016-2815

SECTION 465 VB-R-1 — COOK COUNTY
STA. 183+33.30 — DRAWN BY CVM
DATE 3/22/02 — CHECKED BY KPZ

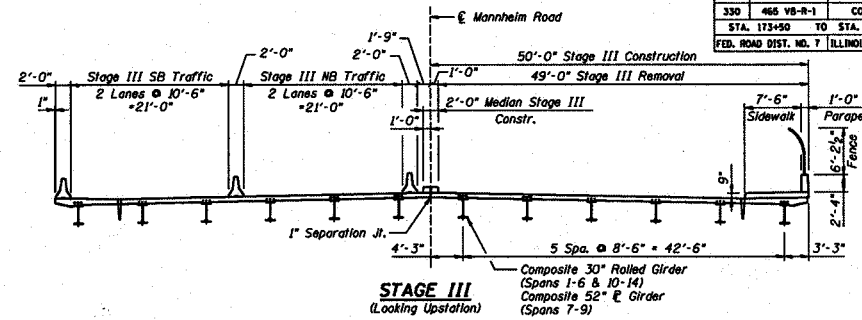
$$DATE$$ $$DGN$$

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	xxxx	1
STA. 173+50	TO	STA. 195+00		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

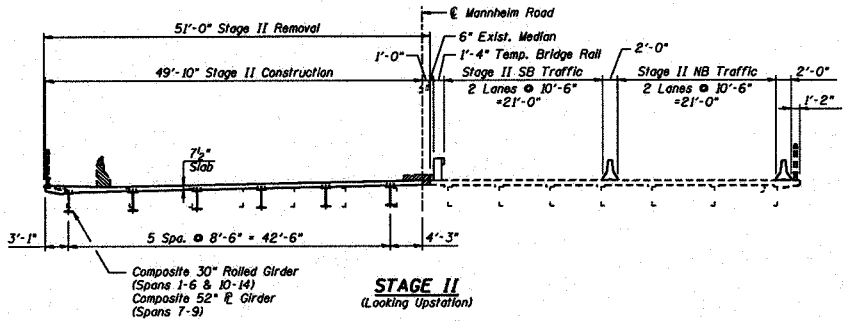


STAGE I-BARRIER REMOVAL
(Looking Upstation)

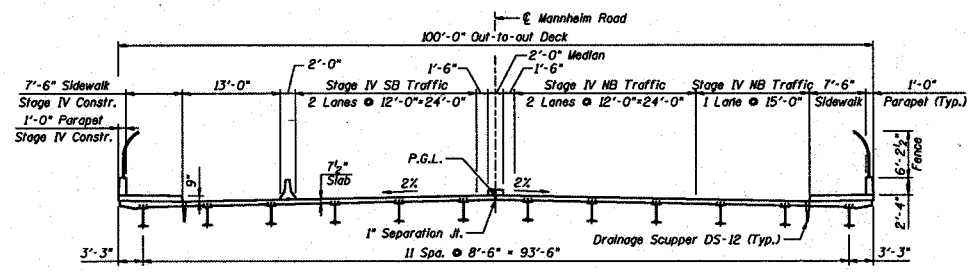
* Pour 2" wearing surface over this width to match existing roadway elevation.



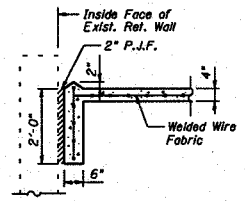
STAGE III
(Looking Upstation)



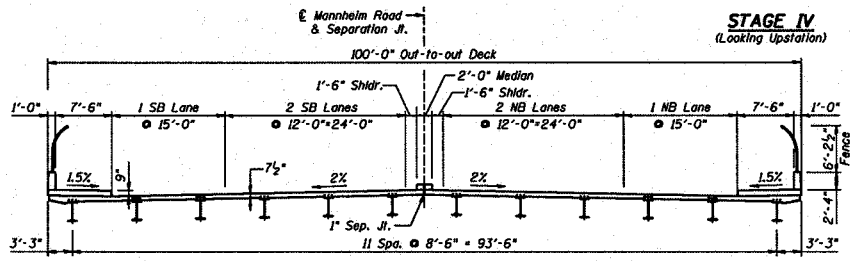
STAGE II
(Looking Upstation)



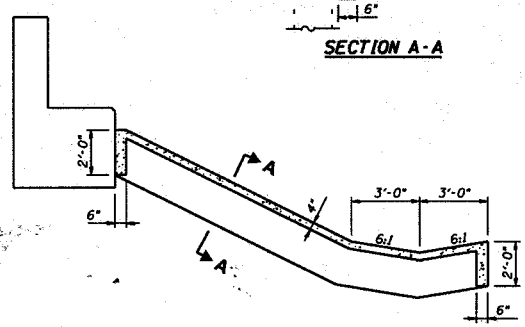
STAGE IV
(Looking Upstation)



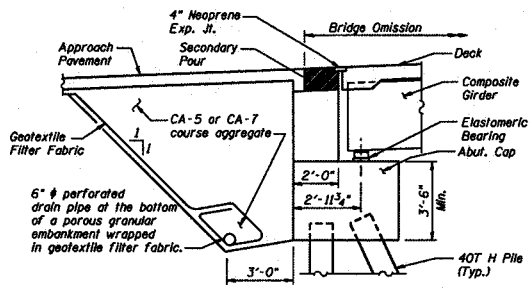
SECTION A-A



CROSS-SECTION
(Looking Upstation)



TYPICAL SECTION THRU. SLOPE WALL
(South Abutment shown, North is similar)



SECTION THRU ABUTMENT
(Typ.)

SCOPE OF WORK

1. Set up Stage I temporary concrete barrier. Remove sidewalk barrier. Pour 2" wearing surface.
2. Place Stage II temporary concrete barriers and temporary bridge rail. Traffic will travel on existing sidewalk.
3. Remove Stage II deck, girders, approach slabs, abutments and piers.
4. Construct Stage II piers, abutments and approach slabs.
5. Construct Stage II superstructure with new bearings, expansion joints, composite girders and deck.
6. Relocate Stage II temporary concrete barriers for Stage III construction.
7. Repeat Steps 3-5 for Stage III construction.
8. Place Stage IV temporary barrier.
9. Construct Stage IV sidewalk.
10. Remove temporary concrete barrier.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN II

FAP 330 US 12/45 (MANNHEIM RD.) OVER SOO LINE RR & FRANKLIN AVE.
STRUCTURE NO. 016-2815

SECTION 465 VB-R-1 COOK COUNTY
STA. 183+33.30 DRAWN BY CVM
DATE 3/22/02 CHECKED BY KPZ

$$DATE$$ $$DGN$$