

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VAR ATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2018-0148-I	VARIOUS	86	1
		ILLINOIS	CONTRACT NO. 62H78	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
VARIOUS LOCATIONS – DISTRICT WIDE
SECTION: 2018-0148-I
BRIDGE DECK SEALING
VARIOUS COUNTIES

C-91-319-19



FOR LOCATION MAPS, SEE SHEET NO. 5 – 8

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER: J. ALAIN MIDY (847) 221-3056
PROJECT MANAGER: FAWAD AQUEEL (847) 705-4247

CONTRACT NO. 62H78

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED January 25, 19
Anthony J. D'Amico/MS REGIONAL ENGINEER
May 10, 19
Scott A. Elk ENGINEER OF DESIGN AND ENVIRONMENT
May 10, 20 19
Paul L. Chisholm DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 3

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OF THE STATE OF ILLINOIS

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INDEX OF SHEETS

1	COVER
2	INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES
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84	TC-8 ENTRANCE AND EXIT RAMP CLOSURE DETAILS
85	TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
86	TC-14 TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)

STATE STANDARDS

701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > 45 MPH
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS = 40 MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, AND THE VILLAGES/CITY OF ELGIN, GLENVIEW, ROLLING MEADOWS, ELK GROVE, NILES, MARKHAM, HARVEY, BLUE ISLAND, NORTHBROOK, CHICAGO GLEENWOOD, CHICAGO HEIGHTS, WHEELING, OAK FOREST, NAPERVILLE, OAK BROOK, VILLA PARK, BATAVIA, ST. CHARLES, HIGHLAND PARK, WADSWORTH, GURNEE, BARRINGTON, SOLON HILLS, RICHMOND, ROCKDALE, FRANKFORT, PEOTONE, MANHATTAN, WILMINGTON AND MOKENA.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE BUREAU OF MAINTENANCE.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT NO DEBRIS WILL ENDANGER OR INTERFERE WITH TRAFFIC ON THE ROADWAY BENEATH THE BRIDGE ACCORDING TO ARTICLE 107.09 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPROPRIATE PAY ITEM INVOLVED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- EXISTING PAVEMENT MARKINGS SHALL BE TEMPORARILY COVERED PRIOR TO APPLICATION OF THE DECK SURFACE TREATMENT, TO PREVENT THE MATERIAL FROM BEING APPLIED TO THE MARKINGS AND TO PROTECT THE REFLECTIVE PROPERTIES OF THE MARKINGS. THE TEMPORARY COVERING MATERIAL USED SHALL BE SUCH THAT IT WILL NOT AFFECT THE MARKING'S REFLECTIVITY WHEN REMOVED AFTER APPLICATION OF THE DECK SURFACE TREATMENT AND PRIOR TO OPENING TO TRAFFIC. COST INCLUDED WITH CONCRETE SEALER.

	USER NAME = diaza	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES			VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					VAR.	2018-0148-I		86	2
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 62H78				
	PLOT DATE = 3/6/2019	DATE -	REVISED -		SCALE:	SHEET 1	OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

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LOCATION NO.	STRUCTURE NUMBER	COUNTY	BRIDGE DECK CONCRETE CRACK SEALER (S.F.)	TRAFFIC CONTROL AND PROTECTION, STANDARD					
				701501	701601	701602	701606	701701	701801
1	016-0219	COOK	5,407				X		
2	016-0243	COOK	14,241				X	X	X
3	016-0349	COOK	6,959				X		X
4	016-0504	COOK	3,490				X		
5	016-0726	COOK	2,233	X					X
6	016-0771	COOK	2,728				X		
7	016-0776	COOK	6,127		X				X
8	016-0814	COOK	2,142	X				X	X
9	016-1020	COOK	12,753	X				X	X
10	016-2503	COOK	2,134				X		
11	016-2514	COOK	5,124	X					
12	016-2529	COOK	2,983	X					
13	016-2530	COOK	3,720	X					X
14	016-2711	COOK	2,125	X					
15	022-0040	DUPAGE	7,143			X			X
16	022-0084	DUPAGE	17,125		X			X	X
17	022-0158	DUPAGE	16,761		X			X	X
18	045-0020	KANE	2,621				X		
19	045-0045	KANE	2,996	X					
20	049-0011	LAKE	5,140	X					X
21	049-0059	LAKE	4,771	X					
22	049-0062	LAKE	11,406			X		X	X
23	049-0083	LAKE	6,345	X					X
24	049-0152	LAKE	1,764			X			X
25	056-0019	McHENRY	5,591	X					
26	056-0056	McHENRY	6,210	X					
27	099-0098	WILL	2,627			X		X	
28	099-0118	WILL	2,079	X					
29	099-0119	WILL	1,731	X					
30	099-0122	WILL	1,947	X					
31	099-0130	WILL	2,799	X					
32	099-0133	WILL	4,319	X					
33	099-0169	WILL	3,513	X					
34	099-0172	WILL	1,425	X					
35	099-0315	WILL	1,996	X					



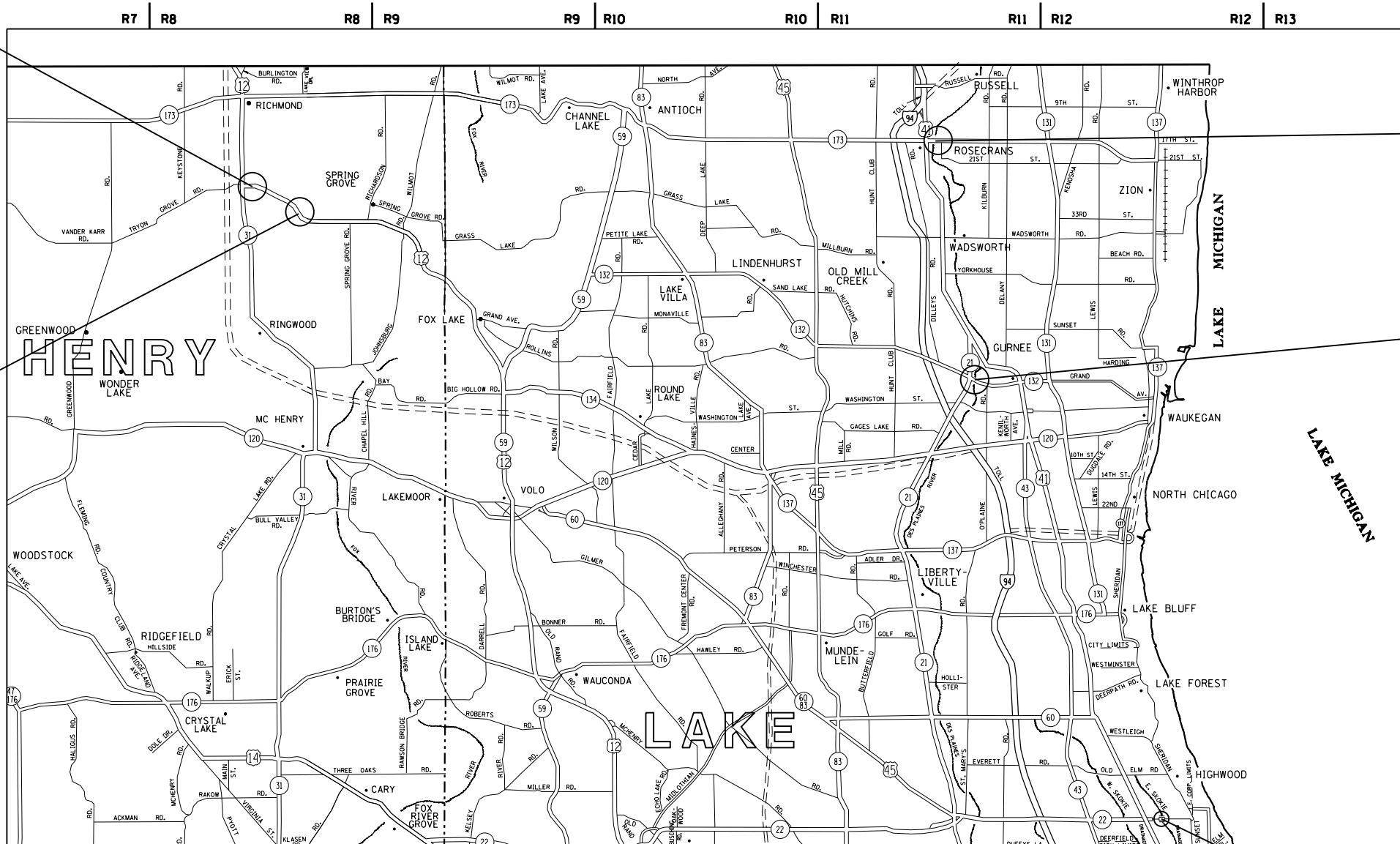
LOCATION OF PROJECT:
26. US ROUTE 12 OVER
NORTH BRANCH NIPPERSINK CREEK
VILLAGE OF RICHMOND
STRUCTURE NO. 056-0056
ADT = 8,350 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
25. US ROUTE 12 OVER
NIPPERSINK CREEK
VILLAGE OF SOLOM MILLS
STRUCTURE NO. 056-0019
ADT = 10,400 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
21. IL ROUTE 173 OVER
DES PLAINES RIVER
VILLAGE OF WAUWATOSH
STRUCTURE NO. 049-0059
ADT = 10,900 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
22. IL ROUTE 132 OVER
DES PLAINES RIVER
VILLAGE OF GURNEE
STRUCTURE NO. 049-0062
ADT = 26,100 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
20. HALF DAY ROAD OVER
EAST BRANCH SKOKIE DITCH
VILLAGE OF HIGHLAND PARK
STRUCTURE NO. 049-0011
ADT = 11,900 (2015)
POSTED SPEED LIMIT = 40 MPH



MORaine, NEWPORT, WARREN AND RICHMOND TOWNSHIPS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAP

SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	5
				CONTRACT NO. 62H78
		ILLINOIS	FED. AID PROJECT	



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAP

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	6
		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		



LOCATION OF PROJECT:
16. 22ND STREET OVER
SALT CREEK
VILLAGE OF OAKBROOK
STRUCTURE NO. 022-0084
ADT = 25,500 (2012)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
18. IL ROUTE 31 OVER
MILL CREEK
VILLAGE OF BATAVIA
STRUCTURE NO. 045-0020
ADT = 19,300 (2017)
POSTED SPEED LIMIT = 45 MPH

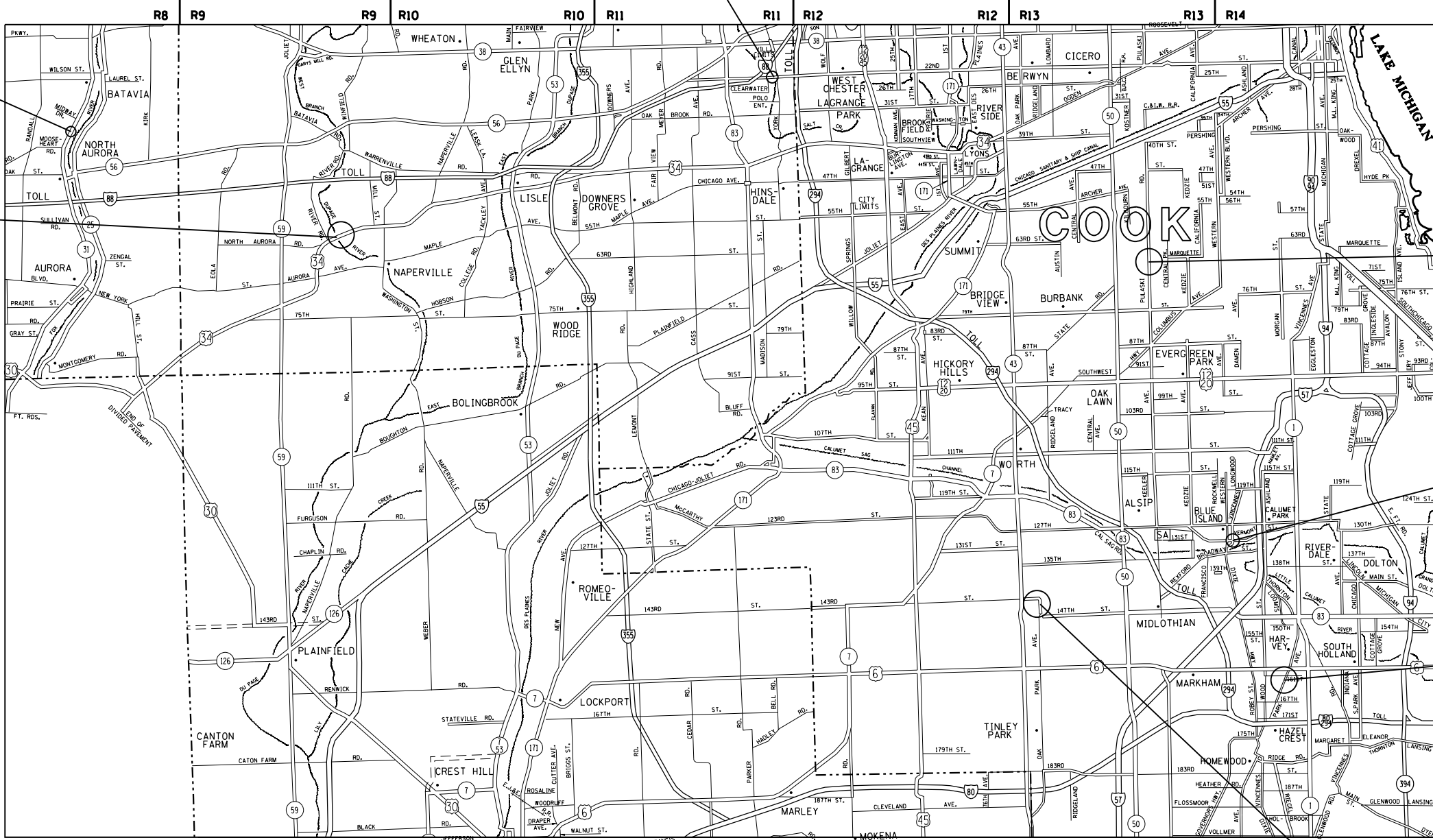
LOCATION OF PROJECT:
15. US ROUTE 34 OVER
WEST BRANCH DUPAGE RIVER
VILLAGE OF NAPERVILLE
STRUCTURE NO. 022-0040
ADT = 32,100 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
9. PULASKI ROAD (NORTHBOUND)
OVER BRC RR
CITY OF CHICAGO
STRUCTURE NO. 016-1020
ADT = 11,100 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
7. WESTERN AVENUE OVER
VERMONT STREET
CITY OF BLUE ISLAND
STRUCTURE NO. 016-0776
ADT = 5,100 (2014)
POSTED SPEED LIMIT = 25 MPH

LOCATION OF PROJECT:
6. PARK AVENUE
OVER CALUMET UNION DITCH
CITY OF MARKHAM/HARVEY
STRUCTURE NO. 016-0771
ADT = 6,550 (2014)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
14. OAK PARK AVENUE
OVER TINLEY CREEK
VILLAGE OF OAK FOREST
STRUCTURE NO. 016-2711
ADT = 13,900 (2017)
POSTED SPEED LIMIT = 45 MPH



THORNTON, CALUMET, LAKE, BLOOM, BREMEN, NAPERVILLE, YORK AND BATAVIA TOWNSHIPS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

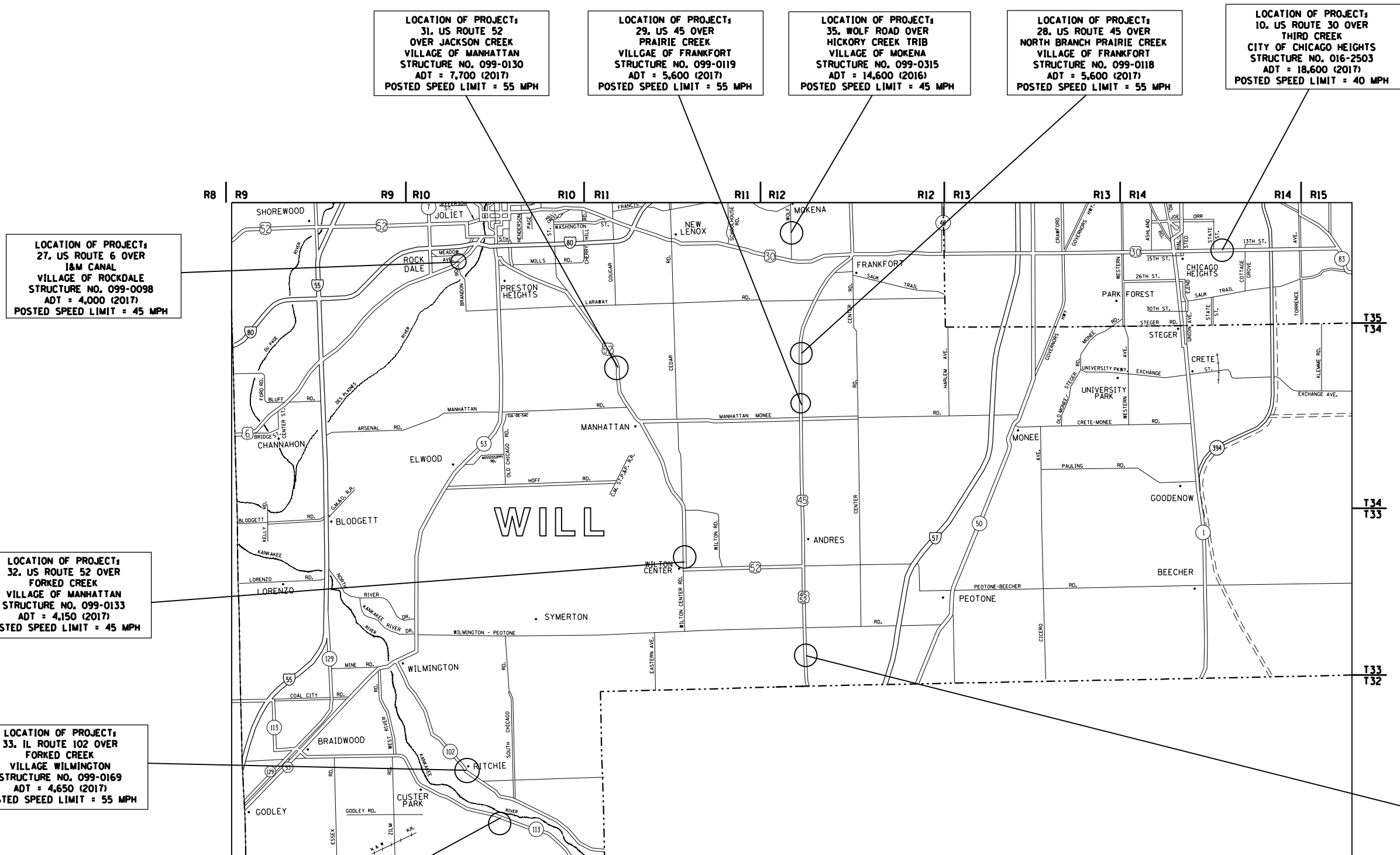
LOCATION MAP

SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	7
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/6/2019	DATE -	REVISED -



LOCATION OF PROJECT:
34, IL ROUTE 113
TERRY CREEK
VILLAGE OF WILMINGTON
STRUCTURE NO. 099-0172
ADT = 2,650 (2017)
POSTED SPEED LIMIT = 55 MPH

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	8
		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		

Benchmark: Brass disc at S.W. Corner of Existing Bridge, El. 812.05 (current USGS elev. is different from elev. listed on 1986 plans)
Existing Structure: No. 016-0219 was built in 1929 with a R.C.D.G. superstructure on R.C. closed abutments and solid piers. The bridge was widened in kind in 1931.
The superstructure was reconstructed with P.P.C. deck beams in 1969, with length of 132'-7 1/2" back to back of abutments and total width of 52'-6" cut to out of superstructure.
Substructure was modified accordingly. Superstructure was resurfaced and railing replaced in 1986. Minor repairs were made to substructure.
Salvage: None for removal components except existing name plates.

ROUTE NO.	SECTION	COUNT	TOTAL (SUM OF 1-3)	SHEET (OF 4)
Sta 29		Coal	22	8
FED. ROAD DIST. NO. 7				
L. L. LUMM		FED. AID PROJECT		

Contract # 62618

SHEET NO. 1
10 SHEETS

1. General Plan & Elevation
2. General Notes and Total Bill of Material
3. Stage Construction
4. Temporary Concrete Barrier for Stage Construction
5. Superstructure Details - 17" Deck Beams
6. Superstructure Details - Sections & Joint Details
7. Rail Post Spacing & Concrete Wearing Surface Plan
8. Steel Railings, Type SM With Concrete Wearing Surface and Curb
9. Bar Splicer Assembly Details
10. Substructure Repairs General Plan & Elevation

No Allowance for future wearing surface

2002 AASHTO Standard Specifications

FIELD UNITS

$$f'_c = 3,500 \text{ psi}$$

$$f_y = 60,000 \text{ psi (reinforcement)}$$
 $E_c = 5,000 \text{ psi}$

$f'_c = 5,000 \text{ psi}$
 $f'_{ci} = 4,000 \text{ psi}$
 $f'_s = 270,000 \text{ psi (1/2" } \phi \text{ low lax strands)}$
 $f'_{si} = 201,960 \text{ psi (1/2" } \phi \text{ low lax strands)}$

RAILROAD DATA

Crossing: DOT/AAR No. 260 529L
Mile Post: 38.57

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (T)
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN & ELEVATION
U.S. RTE. 20 (F.A.P. 426)
OVER E.J. & E. RAILROAD
COOK COUNTY, STA. 106+03.50
STRUCTURE NO. 016-0219

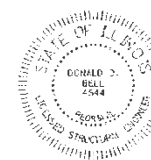


DESIGNED	DDB
CHECKED	LLV
DRAWN	MGH
CHECKED	LLV

EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

Note:
See Sht. 6 of 10 for Sections through Abutments
and Piers. See Sht. 6 of 10 for Cross Section
through Bridge Deck.

PLAN



Donald D. Bell
Donald D. Bell
Illinois Licensed Structural Engineer No. 4544
Lic. Expires: 11/30/08

Date 8-12-07

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	DRAWN -	REVISED -
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PLOT DATE = 1/25/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN
SN: 016-0219

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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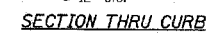
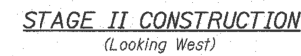
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	11
CONTRACT NO. 62H78				
ILLINOIS		FED. AID PROJECT		

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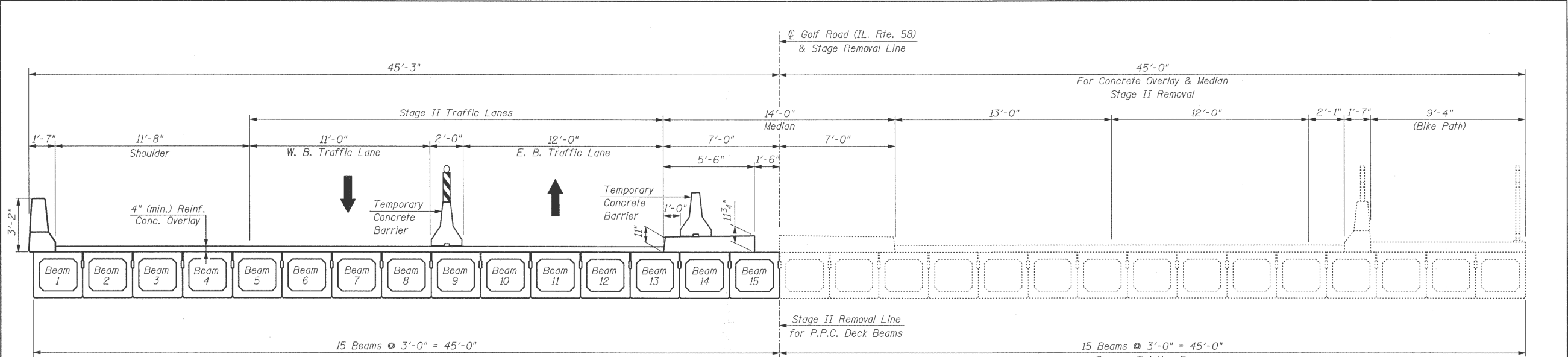
CONTRACT NO. 60C20



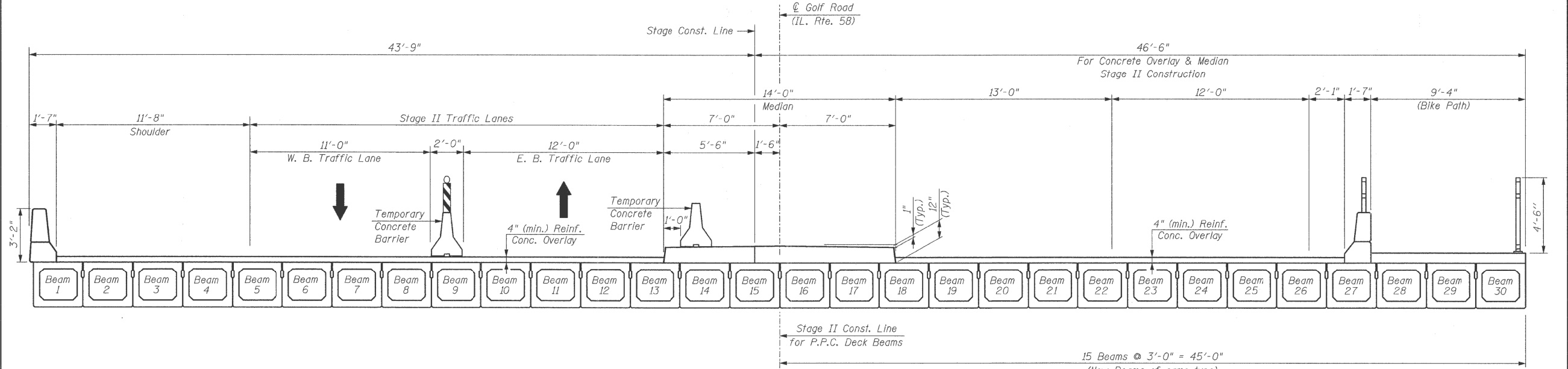
ILLINOIS DEPARTMENT OF TRANSPORTATION	
CONSTRUCTION STAGING-II	
MILWAUKEE AVE. (IL. RTE. 21) OVER UNION PACIFIC RAILROAD	
F.A. RTE. 374 (S.B.I. RTE. 21)	
SECTION: 211-K-V-X-B	
COOK COUNTY STATION 30+71.94	
STRUCTURE NO. 016-0243	
SCALE:	DRAWN BY: F.M.
DATE: JUNE 12, 2007	CHECKED BY: B.N.S.
CHRISTIAN-ROGE & ASSOC., INC.	
CHICAGO	JULY 2005

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	12
CONTRACT NO. 62H78				
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY



STAGE II REMOVAL
(Looking East)



STAGE II CONSTRUCTION
(Looking East)

CONSTRUCTION STAGING

NOTE:
Quantity for Temporary Barrier is included
with Roadway Plans

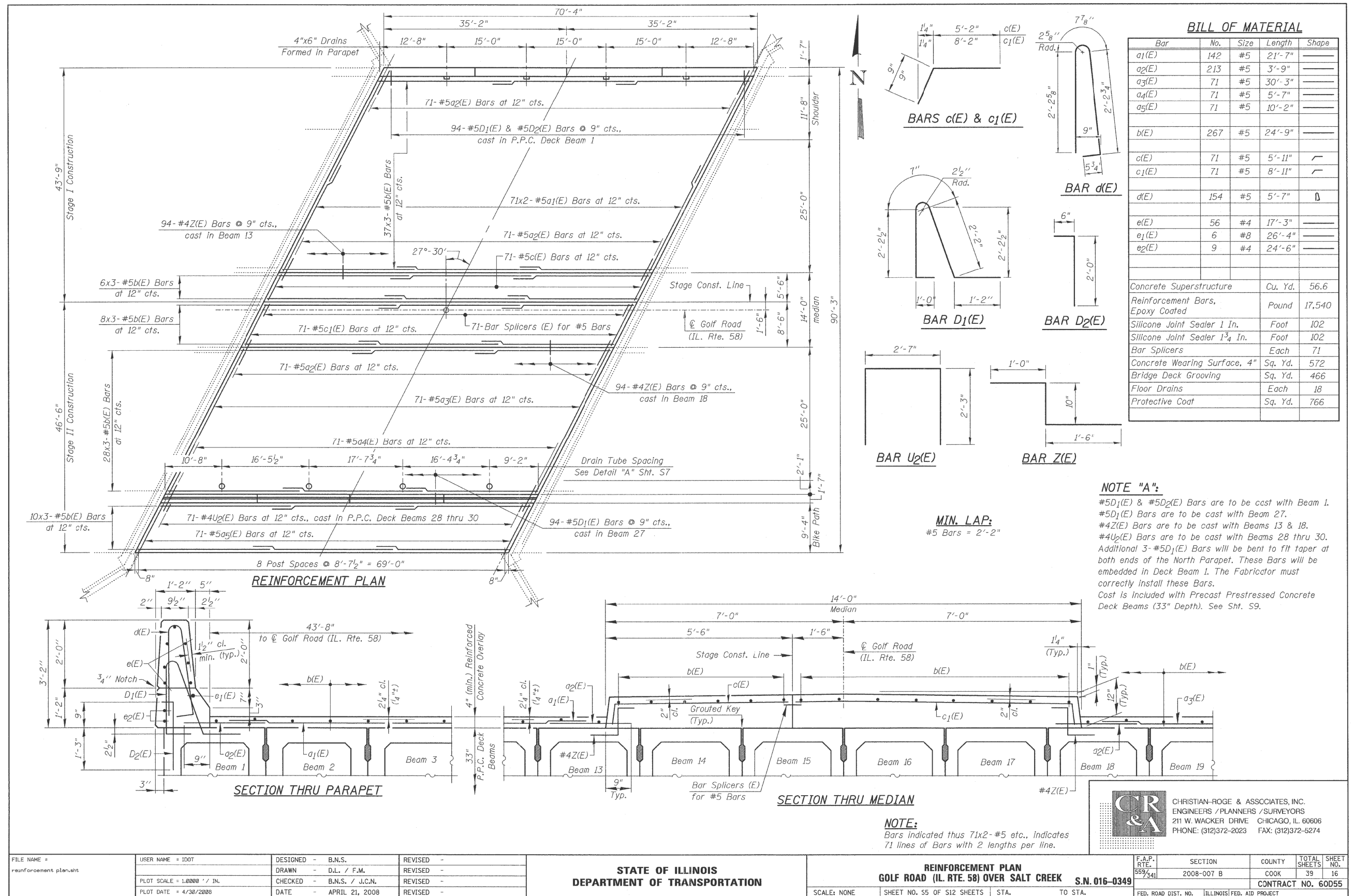
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS / PLANNERS / SURVEYORS
211 W. WACKER DRIVE CHICAGO, IL 60606
PHONE: (312)372-2023 FAX: (312)372-5274

F.A.P. RTE. 559/441	SECTION 2008-007 B	COUNTY COOK	TOTAL SHEETS 39	SHEET NO. 15
SCALE: NONE			CONTRACT NO. 60D55	

FILE NAME = staging sheet.II.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONSTRUCTION STAGING - II GOLF ROAD (IL RTE. 58) OVER SALT CREEK S.N. 016-0349	SCALE: NONE	SHEET NO. S4 OF S12 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
		DRAWN - D.L. / F.M.	REVISED -							
		CHECKED - B.N.S. / J.C.N.	REVISED -							
		DATE - APRIL 21, 2008	REVISED -							

USER NAME = diaza	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTION SN: 016-0349	VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR.	2018-0148-I	VARIOUS	86	14
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 62H78				
PLOT DATE = 1/25/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0349

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	15
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

BENCH MARK:

Existing Structure: S.N. 016-0504, was originally built in 1900 and reconstructed in 1970 as S.B.I. Route 63, Section 31-IR. In 1985, the Structure was repaired, at that time the Bituminous Concrete Surface was removed and replaced. In 1997 the Structure rehabilitation was done due to deterioration, Bituminous Concrete Surface was replaced with a reinforced concrete overlay. In 2005 many concrete deck beams were removed and replaced. The existing two span Structure consists of Precast Prestressed Concrete Deck Beams supported on closed abutments and a solid pier. Dimensions are 44'-0" Back to Back Abutments and 74'-2" out to out deck width with a 0° skew.

PROPOSED IMPROVEMENT:

The existing Precast Prestressed Concrete Deck Beams and Concrete Overlay shall be removed and replaced utilizing Stage Construction, while maintaining the existing Alignment & Profile. Substructure repairs shall be performed as shown.

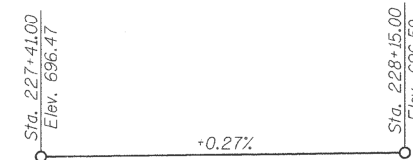
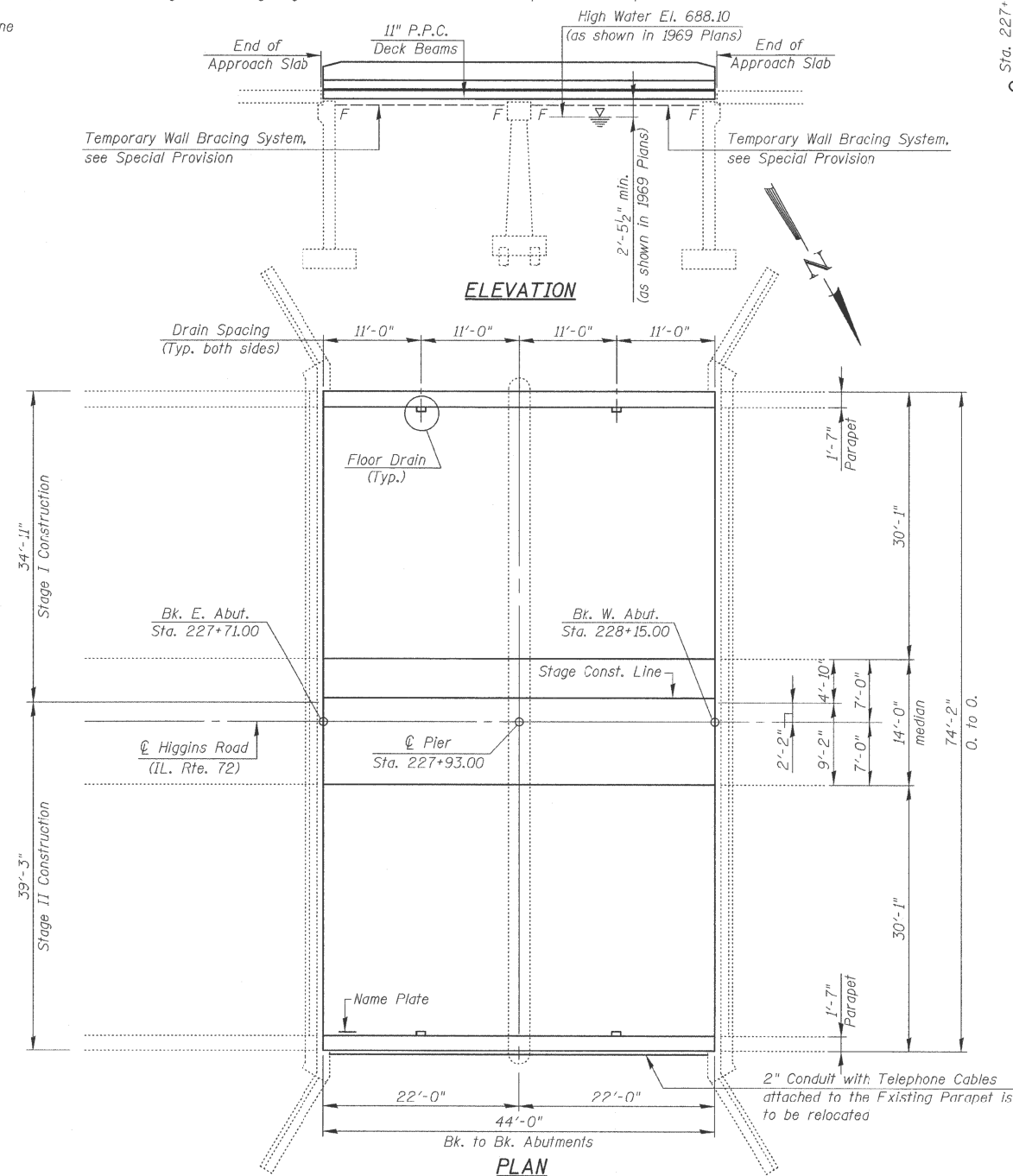
Salvage: None

SCOPE OF WORK:

Remove and replace the P.P.C. Deck Beam Superstructure and the Concrete Wearing Surface, 5" (min.) and perform any needed repairs to the Substructure

INDEX OF SHEETS

- S1 GENERAL PLAN & ELEVATION
- S2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- S3 CONSTRUCTION STAGING-I
- S4 CONSTRUCTION STAGING-II
- S5 REINFORCEMENT PLAN
- S6 PARAPET DETAILS
- S7 JOINT DETAILS
- S8 P.P.C. DECK BEAM DETAILS
- S9 ABUTMENT REPAIR
- S10 PIER REPAIR
- S11 BAR SPlicer ASSEMBLY DETAILS
- S12 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION



PROFILE
HIGGINS ROAD

LOADING HS20-44

Allow 50#/sq. ft. for Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

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

EXISTING CONDITIONS (SERVICE DESIGN)

$f'_c = 1,400$ psi
 $f_y = 20,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_ci = 4,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " Low Relax Strands)
 $f_{si} = 201,960$ psi ($\frac{1}{2}$ " Low Relax Strands)

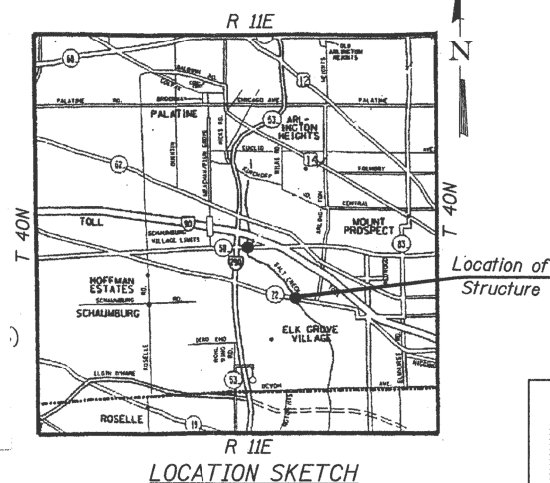
WATERWAY INFORMATION

(AS SHOWN IN 1969 PLANS)

Drainage Area 2,040 acres
Required Opening 295 s.f.
Present Opening 325 s.f.
Future Prop. Opening 325 s.f.
Ordinary Water El. 678.2
Low Water El. 678.2
High Water El. 688.10
 $Q = 1140$ cfs (50 yrs.)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.2



STATION 227+93.00
REBUILT 2008 BY
STATE OF ILLINOIS
F.A.P. RTE. 341 SEC. 2008-007-B
LOADING HS20
STRUCTURE NO. 016-0504

NAME PLATE

See Std. 515001

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



Bhadrash N. Shah
BHADRASH N. SHAH
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. No. 081-004476
EXPIRES: 11-30-08



CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS / PLANNERS / SURVEYORS
211 W. WACKER DRIVE CHICAGO, IL 60606
PHONE: (312)372-2023 FAX: (312)372-5274

FILE NAME = plan_elev.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION HIGGINS ROAD (IL RTE. 72) OVER SALT CREEK S.N. 016-0504	F.A.P. RTE. 559/341	SECTION 2008-007 B	COUNTY COOK	TOTAL SHEETS 39	SHEET NO. 24	CONTRACT NO. 60D55
PLOT SCALE = 1:80000' / IN.	CHECKED - B.N.S. / J.C.N.	DATE - JUNE 30, 2008	REVISED -	SCALE: NONE	SHEET NO. S1 OF S12 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

USER NAME = diaz	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0504

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	16
				CONTRACT NO. 62H78
		ILLINOIS	FED. AID PROJECT	

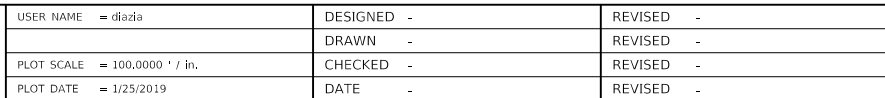
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NOTE:
Quantity for Temporary Barrier is included
with the Roadway Plans

USER NAME = diazla	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTION SN: 016-0504					VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -							VAR.	2018-0148-I	VARIOUS	86	17
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.					CONTRACT NO. 62H78				
PLOT DATE = 1/25/2019	DATE -	REVISED -							ILLINOIS FED. AID PROJECT				

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SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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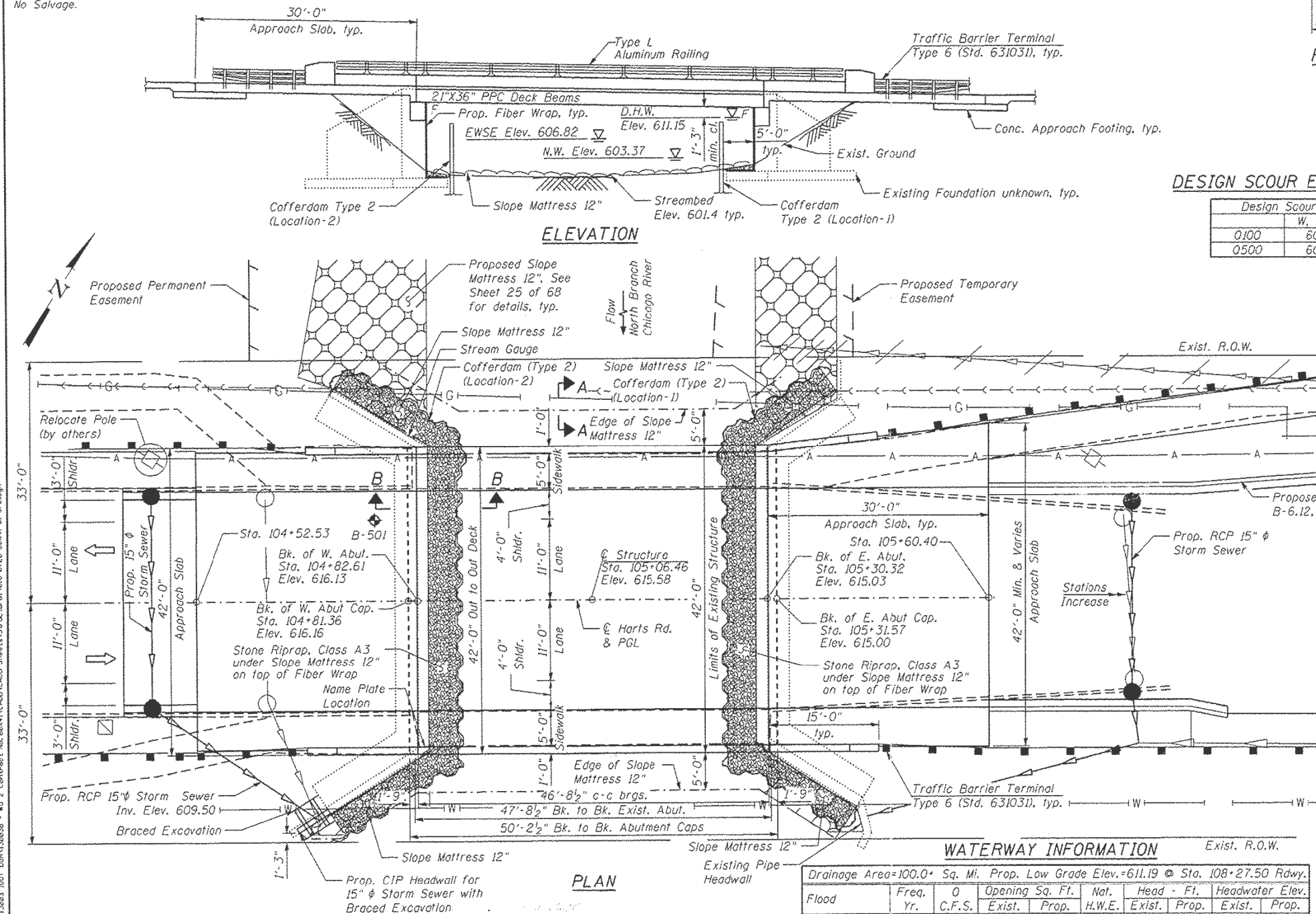
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	18
		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY

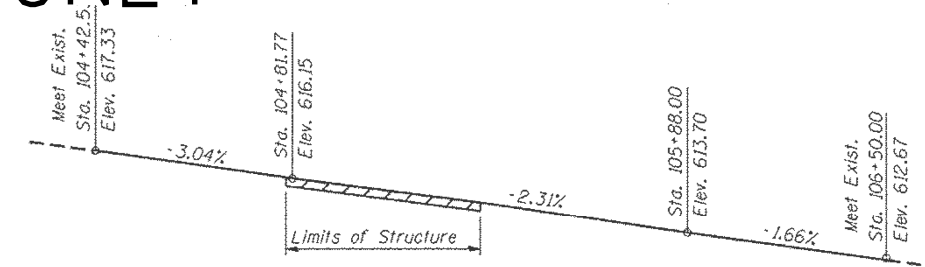
Benchmark: Chiseled square on the west wingwall. Elev. 616.25.

Existing Structure: Existing S.N. 016-0726 carrying Harts Road over North Branch of Chicago River was originally built in 1921 as a single span reinforced concrete slab bridge under Construction Route SA3-A, Section 66-15D. The structure was reconstructed in 1970 as PPC deck beams under Contract 28227 as Construction Route CHS 47, Section 1970-15BR. The structure was resurfaced in 2001 under contract 83547 as Construction Route FAU 3519 Section 99-00100-00-WR. The existing structure is a single span PPC deck beam bridge with bituminous concrete wearing surface and waterproofing membrane system. The structure is 47'-8 1/2" back to back of closed abutments and 42'-0" out to out of deck including 5'-0" raised sidewalk with parapet and L-type aluminum railing on each side of the roadway. There is no skew with the roadway alignment. Traffic shall be detoured during construction.

No Salvage.



Notes:
The existing structure is scour critical.
Boring B-501 was taken in 1994.



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)		
	W. Abut.	E. Abut.
0100	601.4	601.4
0500	601.4	601.4

STATION 105+06.46
RE-BUILT 201 BY
STATE OF ILLINOIS
F.A.U. RTE. 3519
SEC. 66-B
LOADING HL-93
STRUCTURE NO. 016-0726

NAME PLATE

See Std. 515001

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

DESIGN SPECIFICATIONS

For Existing Abutment & Southwest Headwall Construction
2002 AASHTO Standard Specifications
For Highway Bridges, 17th Edition

For all other New Construction
2014 AASHTO LRFD Bridge Design
Specifications, 7th Edition with 2016 Interims

SEISMIC DATA

Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration Coefficient = 0.038g
Site Coefficient = 1.2

DESIGN STRESSES

EXISTING STRUCTURE

f'_c = 1,400 psi (Substructure)
 f_y = 20,000 psi (Reinforcement)

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

f'_c = 35,000 psi
 f'_c = 4,000 psi (Superstructure)
 f_y = 60,000 psi (Reinforcement)



DATE SIGNED: 03/16/17
EXP. DATE: 11/30/18

APPROVED
For Structural Adequacy Only

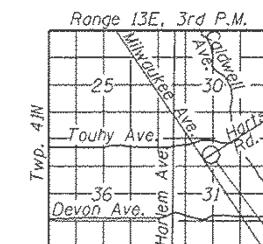
Engineer of Bridges & Structures

PRECAST PRESTRESSED CONCRETE DECK BEAMS

f'_c = 6,000 psi
 f'_ci = 5,000 psi
 f_{pu} = 270,000 psi (1/2" ϕ low lax strands)
 f_{pbt} = 201,960 psi (1/2" ϕ low lax strands)

LOADING HL-93

No future wearing surface will be allowed.



LOCATION SKETCH

GENERAL PLAN
HARTS ROAD OVER NORTH
BRANCH CHICAGO RIVER
F.A.U. RTE. 3519
SEC. 66-B
COOK COUNTY
STATION 105+06.46
STRUCTURE NO. 016-0726



USER NAME = johnn	DESIGNED - SAT	REVISED
PLOT SCALE = 1/16" = 1' / in.	CHECKED - JW	REVISED
PLOT DATE = 3/16/2017	DRAWN - SAT	REVISED
	CHECKED - JW	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 21 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3519	66-B	COOK	69	35
CONTRACT NO. 60X41				
ILLINOIS FED. AID PROJECT				

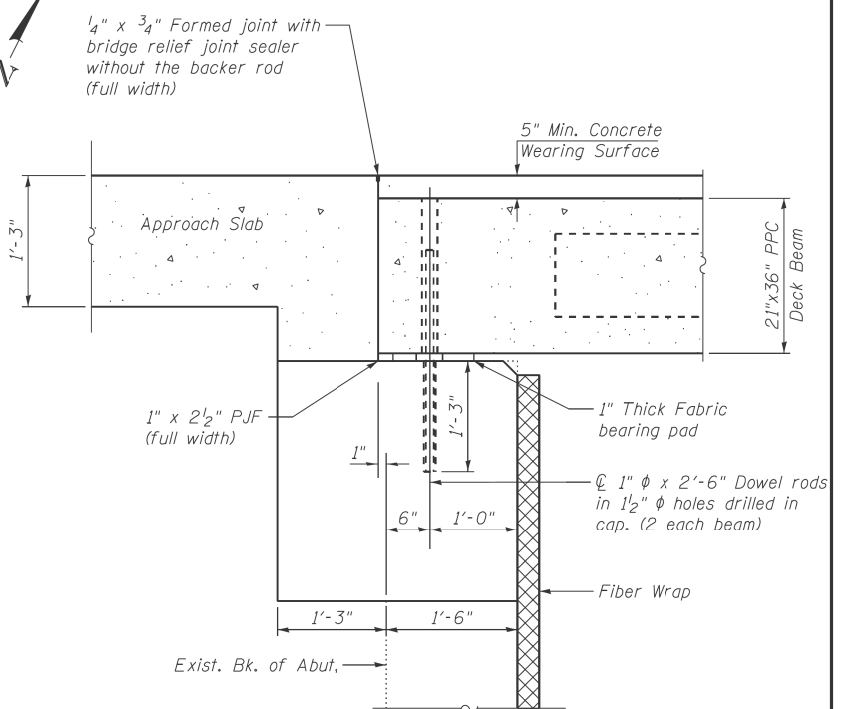
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PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0726

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	19
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				



Notes:
See Sheet 6 of 21 for Superstructure Details and Bill of Material.
Bars indicated thus 40 x 2-#4 etc, indicates 40 lines of bars with 2 lengths per line.
D(E) bars included in the cost of PPC Deck Beams. See Sheets 12 and 13 of 21 for Bar Details.

42'-0" out to out Deck

Dimensions (from left to right):

- 1'-0" Sidewalk
- 5'-0" Roadway
- 4'-0" Shoulder
- 15'-0" Lane
- 11'-0" Lane
- 15'-0" Lane
- 4'-0" Shoulder
- 5'-0" Roadway
- 1'-0" Sidewalk

Vertical dimensions (from top to bottom):

- 1'-9" Typ.
- 1'-7" Typ.
- 1'-6" max.

Other dimensions and labels:

- 8" J"
- 1.7%
- Slope $\frac{3}{16}$ "/ft.
- d(E)
- b(E)
- c(E)
- 5" Min. Concrete Wearing Surface
- 2'4" c.l. ($\pm \frac{1}{4}$ ")
- Total Drop = $2\frac{13}{16}$ " typ.
- Slope $\frac{3}{16}$ "/ft.
- 1.7%
- D(E)
- Fabric Bearing Pad, typ.
- Grouted Shear Key, typ.
- 21"x36" PPC Deck Beams, typ.
- 13-21"x36" PPC Deck Beams = 39'-0"
- 1'-6" max.

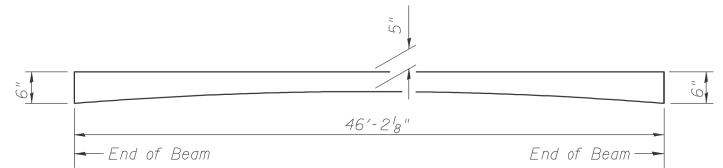
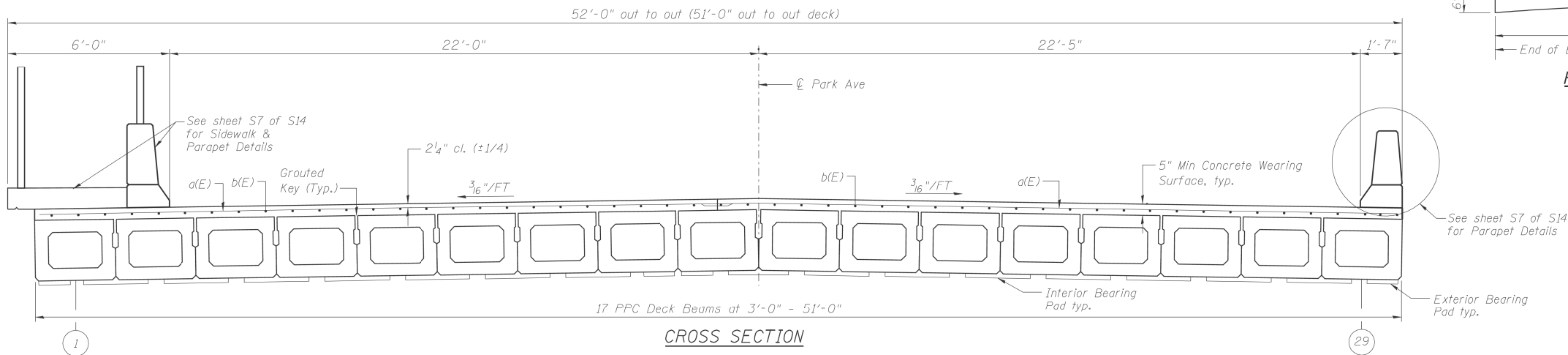
Centerline: $\odot$ Harts Road

 Accurate GROUP, INC.	USER NAME = \$USER\$	DESIGNED - PP	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE PLAN AND CROSS SECTION STRUCTURE NO. 016-0726	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JMT	REVISED			3519	66-B	COOK	69	39
	PLOT SCALE = \$SCALE\$	DRAWN - JN	REVISED			CONTRACT NO. 60X41				
	PLOT DATE = \$DATE\$	CHECKED - SAT	REVISED			SHEET NO. 5 OF 21 SHEETS				
ILLINOIS FED. AID PROJECT										

 Accurate GROUP, INC.	USER NAME = djazja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTION SN: 016-0726	VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			VAR.	2018-0148-I	VARIOUS	86	20
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	PLOT DATE = 2/4/2019	DATE -	REVISED -			SHEET NO. 1 OF 1 SHEETS				
ILLINOIS FED. AID PROJECT										

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FOR INFORMATION ONLY

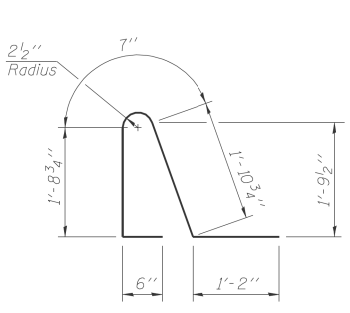
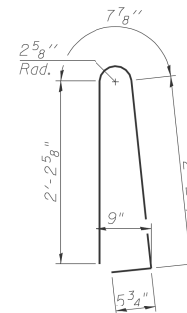
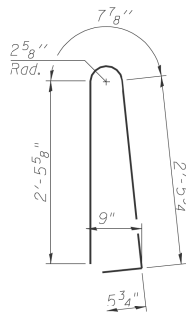
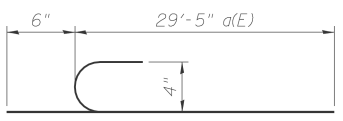
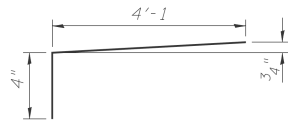
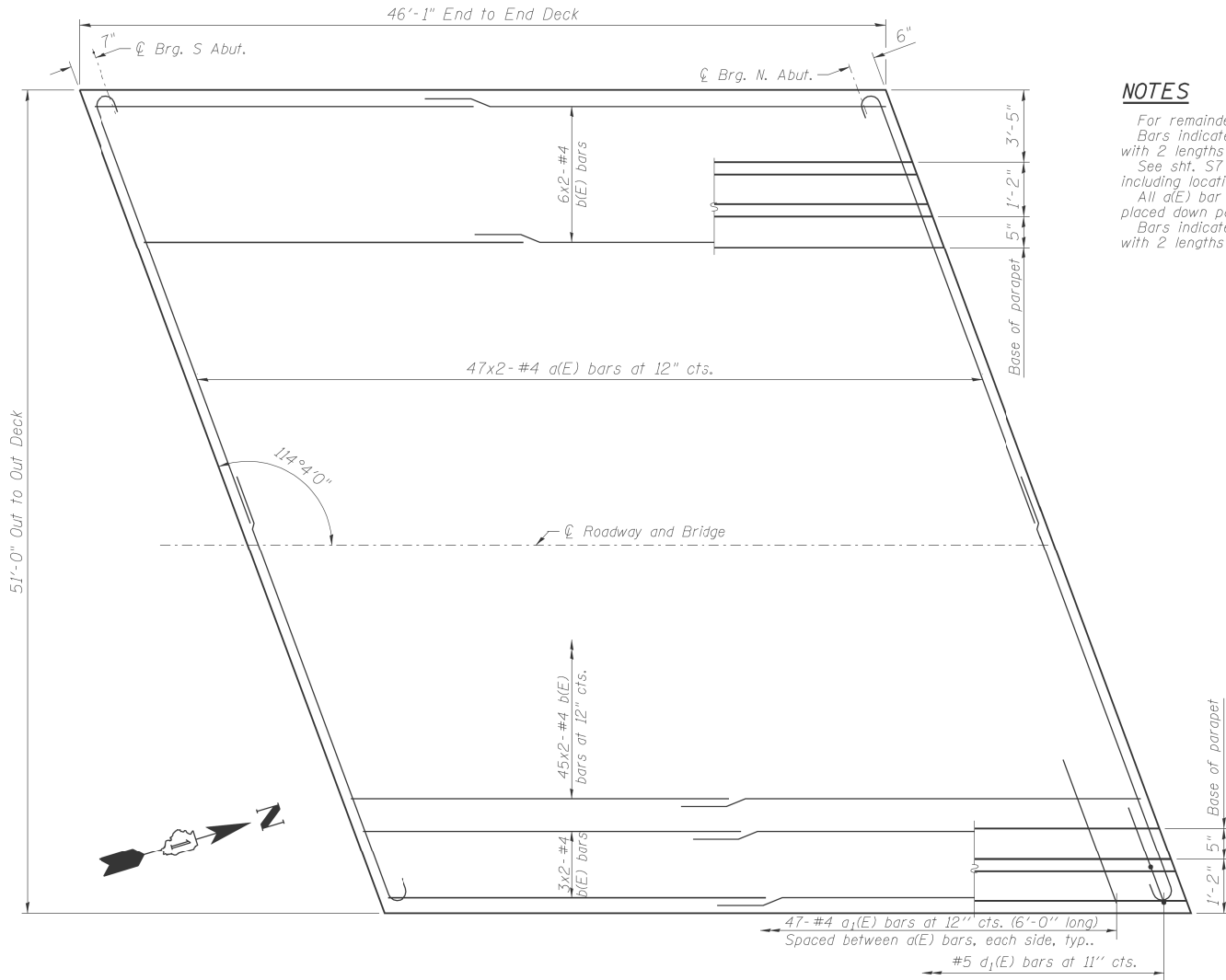


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	94	#4	29'-11"	
a1(E)	94	#5	6'-0"	
b(E)	108	#4	23'-11"	
b1(E)	10	#5	24'-2"	
c(E)	47	#5	4'-6"	
d(E)	51	#5	5'-7"	
d1(E)	102	#4	5'-11"	
d2(E)	51	#5	6'-1"	
e(E)	42	#4	15'-0"	
e1(E)	2	#8	45'-9"	
e2(E)	2	#4	23'-10"	
Concrete Wearing Surface, 5"			Sq. Yd.	262
Concrete Superstructure			Cu. Yd.	16.6
Reinforcement Bars, Epoxy Coated			Pound	6390

NOTES

For remainder of Superstructure Details see sht. S6 of S14.
Bars indicated thus 45x2-#4, etc., indicates 45 lines of bars with 2 lengths per line.
See sht. S7 of S14 for sidewalk plan and parapet details, including locations of d(E) thru d2(E) bars.
All a(E) bar spacings measured parallel to CL roadway, but placed down parallel to skew.
Bars indicated thus 47x2-#4 etc. indicates 47 lines of bars with 2 lengths per line.



MIN. BAR LAP
#4 bars = 2'-1"

LONCO, INC. CONSULTING ENGINEERS 1560 WALL ST, SUITE 222 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100		DESIGNED - SLV		REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SUPERSTRUCTURE STRUCTURE NO. 016-0771		F.A.J. RTE.		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.			
		CHECKED - MJM		REVISED -						3597		0710 B		COOK		30		14			
		DRAWN - SLV		REVISED -																	
		CHECKED - MJM		REVISED -																	
								D-91-292-09										CONTRACT NO. 60F95			
								SHEET NO. S5 OF S14 SHEETS										ILLINOIS FED. AID PROJECT			

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PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

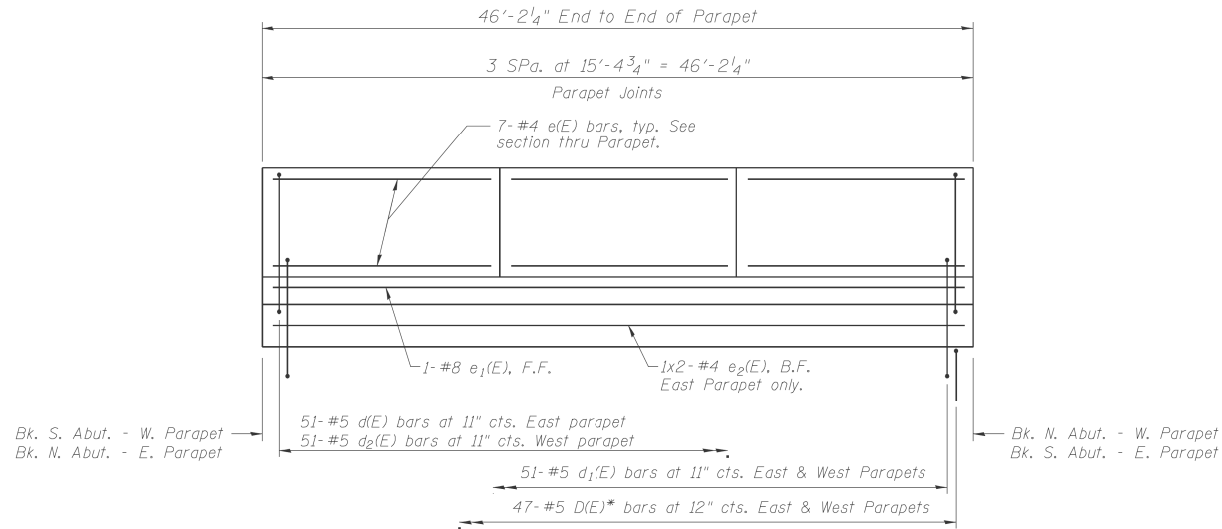
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0771

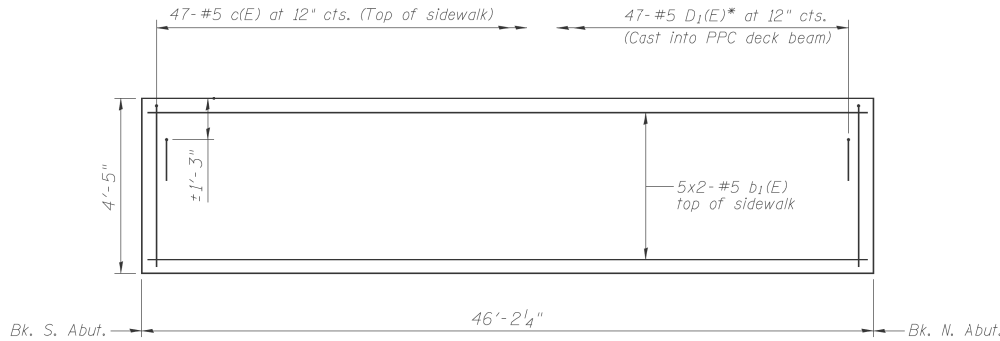
SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	22
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



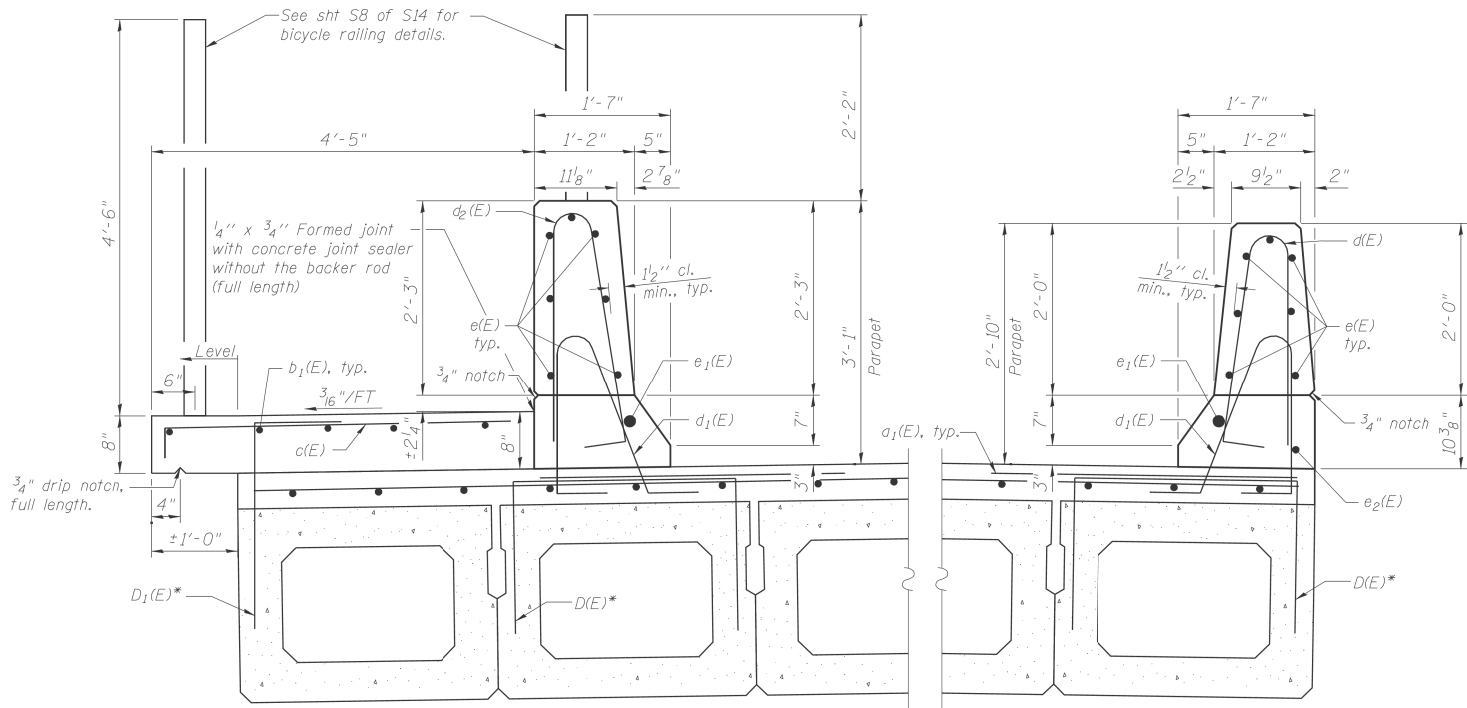
INSIDE PARAPET ELEVATION



SIDEWALK PLAN

MIN. BAR LAP

Min bar lap: #4 = 2'-1"
Min bar lap: #5 = 2'-7"



WEST PARAPET

EAST PARAPET

NOTE:
The West parapet front face has the same
slope as the East parapet front face.

*See sht. S11 of S14 for D(E) and D₁(E)
bar details cast into PPC Deck Beams.

NOTES

See Concrete wearing Surface Plan on sht. S5 of S14 for deck
reinforcement and Bill of Material.
Bars indicated thus 1x2-#5, etc., indicates 1 line of bars with
2 lengths per line.
See sht. S10 of S14 for parapet joint details.

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED -	SLV	REVISED -	
CHECKED -	MJM	REVISED -	
DRAWN -	SLV	REVISED -	
CHECKED -	MJM	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET DETAILS
STRUCTURE NO. 016-0771**

SHEET NO. S7 OF S14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	16
D-91-292-09		CONTRACT NO. 60F95		
ILLINOIS FED. AID PROJECT				

USER NAME =	diazla	DESIGNED -		REVISED -	
		DRAWN -		REVISED -	
PLOT SCALE =	100.0000 ' / in.	CHECKED -		REVISED -	
PLOT DATE =	1/25/2019	DATE -		REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK PLAN
SN: 016-0771**

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

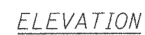
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Contract #: 62362

Chiseled square at the southwest corner of a retaining wall at the southeast corner of the entrance to 'Great Lakes Bank of Choice' on the north side of Vermont Avenue.
Elevation: 635.79

No Salvage.



1. General Plan & Elevation
2. General Notes & Total Bill of Materials
3. Slab Construction
4. Temporary Concrete Barrier
5. Superstructure Details 42" Deck Beams
6. Superstructure Details Sections & Joint Details
7. Concrete Wearing Surface
8. Parapet & Railing Details
9. Bar Splicer Assembly Details
10. Substructure Modifications

2002 AASHTO Standard Specifications - 17th ed.

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

FIELD UNITS

$f'_c = 5,000 \text{ psi}$
 $f_y = 60,000 \text{ psi (reinf.)}$
PRECAST PRESTRESSED UNITS
 $f'_c = 5,000 \text{ psi}$
 $f'_{ci} = 4,000 \text{ psi}$
 $f'_s = 270,000 \text{ psi } (\frac{1}{2}" \phi \text{ low lax strands})$
 $f'_{si} = 201,960 \text{ psi } (\frac{1}{2}" \phi \text{ low lax strands})$

Existing 14BP73 piles for abutments



Ralph E. Anderson (TJD)
ENGINEER OF BRIDGES AND STRUCTURES



* Measured along slope of deck. See sheet 3 of 10.

 **GRAEF
ANHALT
SCHLOEMER**

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631
(773) 399-0112

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

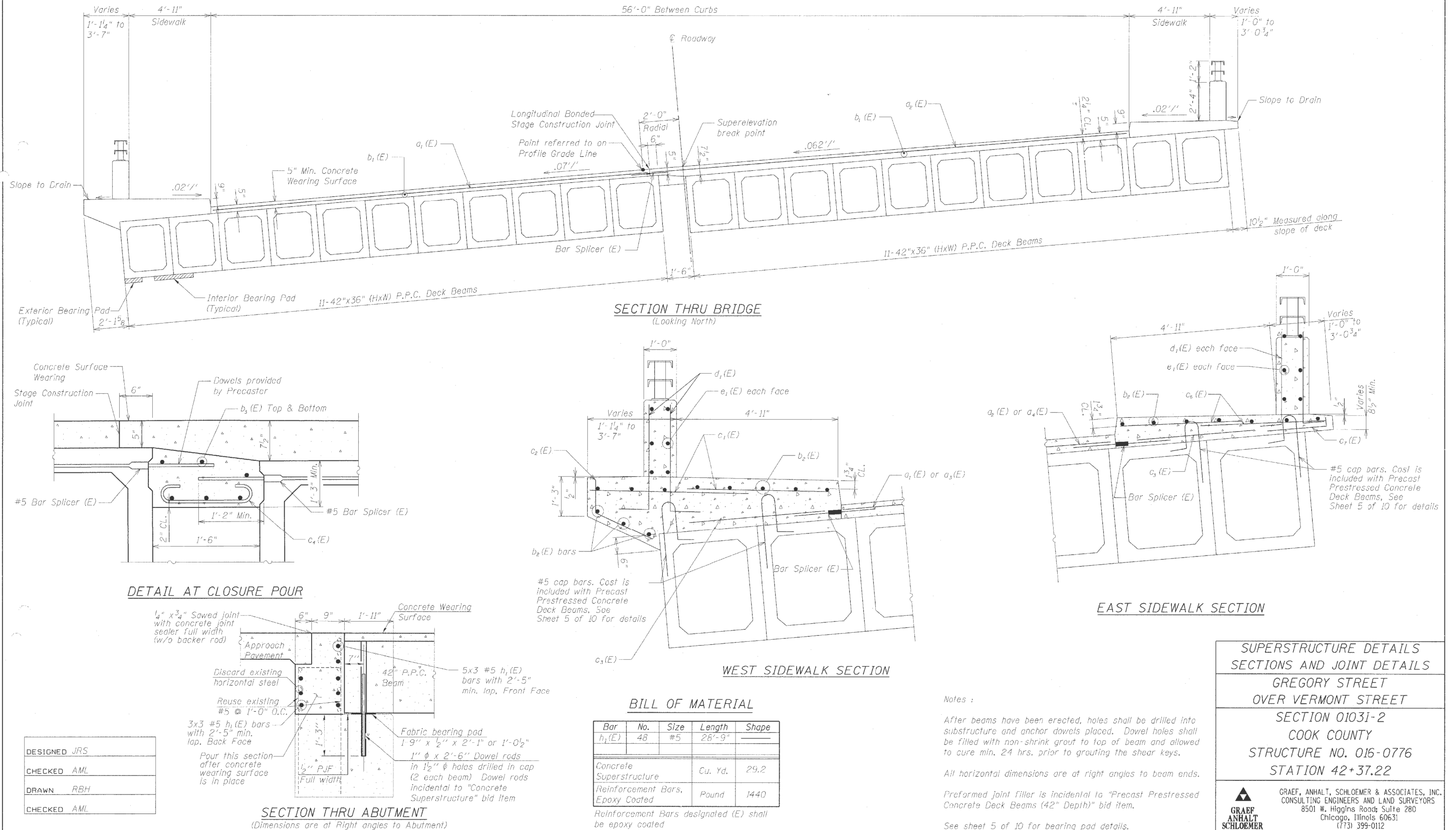
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	24
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.	SHEET NO.
FAP 370	01031-2	COOK	27	14	10 SHEETS
Contract # 62362					



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0776

SCALE: SHEET OF SHEETS STA. TO STA.

VAR.	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.		2018-0148-1	VARIOUS	86	25
					CONTRACT NO. 62H78

ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY

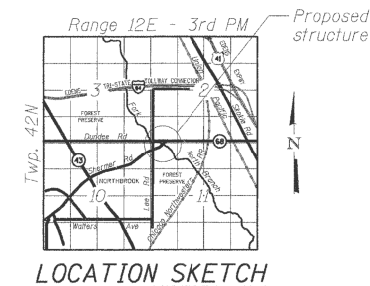
Benchmark - Spike found in south face of power pole at southwest corner of Illinois Rte. 68 and Shermer Road. Elev = 647.74.

Existing Structure - S.N. 016-0814 originally built in 1959 as S.A. Route 106, Sec. 106-0203-MFT. The existing structure consists of a single span of 27"x36" PPC deck beams with closed abutments supported on 12" diameter timber piles. The back to back of abutments measures 50'-0" and the out to out of deck is 40'-0". In 1979, the original HMA overlay was removed and replaced with a variable thickness reinforced concrete wearing surface. In 2002, the concrete wearing surface was removed and replaced. The superstructure is to be removed and replaced. Traffic is to be detoured.

No salvage.

Scope of Work

1. Remove and replace PPC deck beam superstructure
2. Construct concrete wearing surface
3. Perform substructure repairs
4. Remove and replace HMA overlay on approach slabs
5. Remove and replace approach sidewalks and guardrail



DESIGN SPECIFICATIONS

(New Construction)

AASHTO LRFD Bridge Design Specifications, 5th Edition, with 2010 Interim Revisions

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS (New Construction)

$f'_c = 3,500$ psi

$f_y = 60,000$ psi (Reinforcement)

FIELD UNITS (Existing Construction)

$f'_c = 3,000$ psi

$f_y = 40,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi

$f_{ci} = 5,000$ psi

$f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low relax. strands)

$f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low relax. strands)

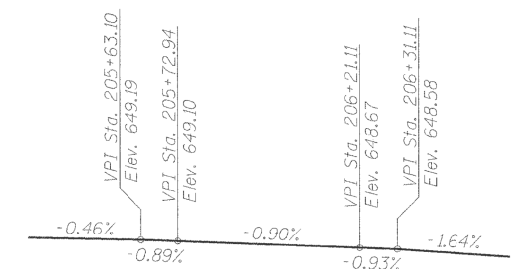
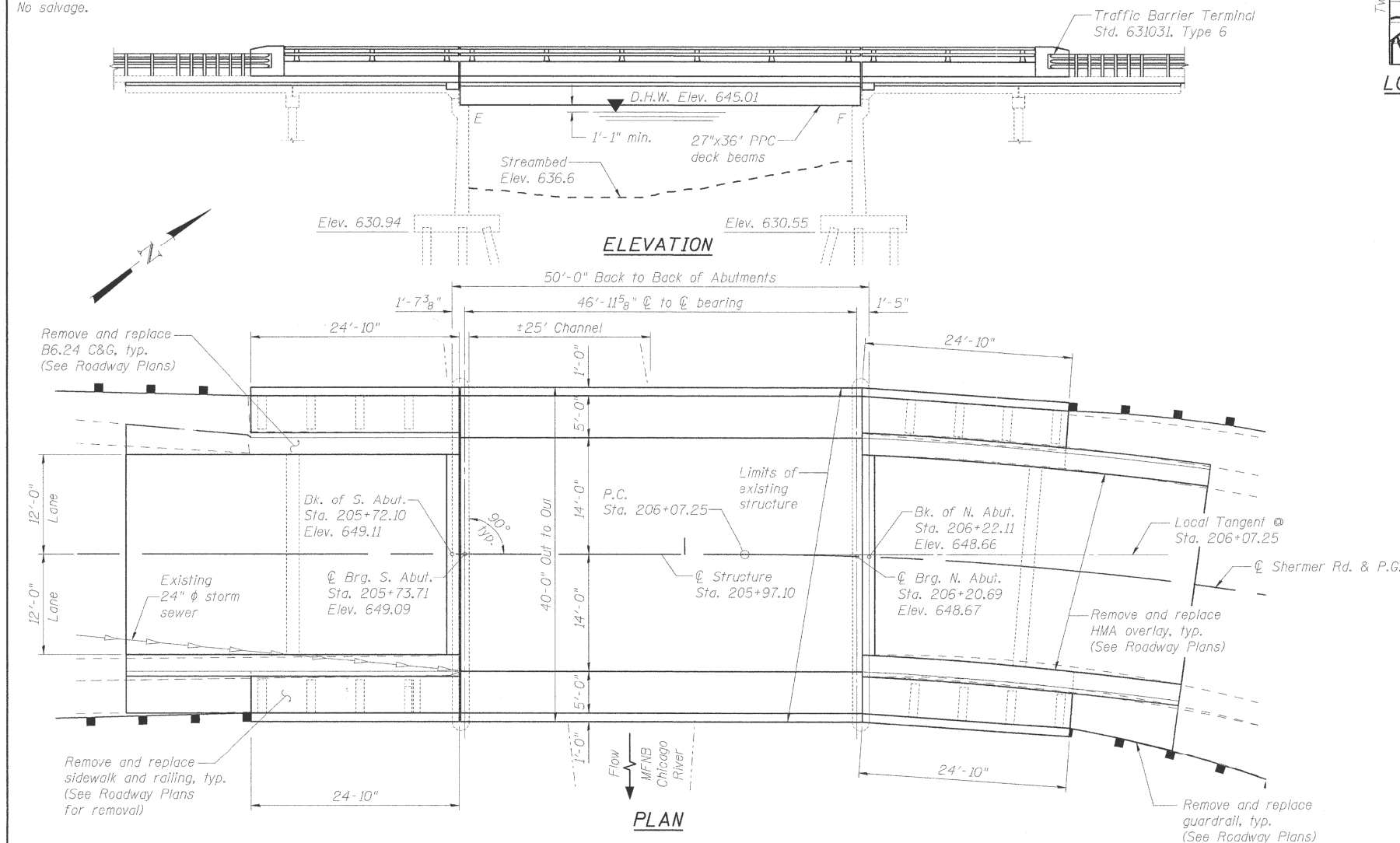
SEISMIC DATA

(Existing Construction)

Seismic Performance Zone (SPC) = A

Bedrock Acceleration Coefficient (A) = 0.04g

Site Coefficient (S) = 1.0



PROFILE GRADE

(Along ϕ Shermer Rd.)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Brad H. Sayers
ENGINEER OF BRIDGES AND STRUCTURES



Brad H. Sayers
BRAD H. SAYERS, S.E.
IL. LIC. NO. 081-006267

EXP 11/30/12

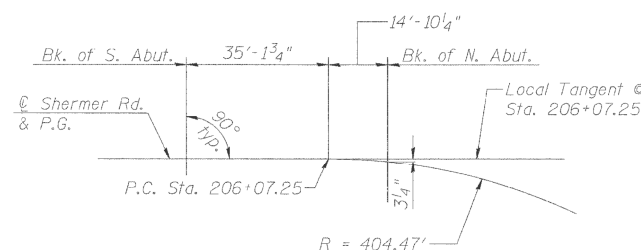
DATE 10/12/11

WATERWAY INFORMATION

Drainage Area = 21.54 sq. mi. Low Grade Elev. 647.60 ft. @ Sta. 206+75									
Flood	Freq.	Q	Opening	Sq. Ft.	Nat.	Head	- Ft.	Headwater	El.
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	10	449.0	312.3	312.3	644.19	0.03	0.03	644.22	644.22
Base	50	734.0	331.4	331.4	645.01	0.08	0.08	645.09	645.09
Max. Calc.	100	870.0	331.4	331.4	645.32	0.12	0.12	645.44	645.44
	500	1743.0	331.4	331.4	646.34	0.34	0.34	646.68	646.68

DESIGN SCOUR ELEVATION TABLE

Design Scour	S. Abut.	N. Abut.
Elevation (ft.)	626.12	630.08



CURVE DATA

$\Delta = 53^\circ 49' 00''$ (RT)
 $D = 14^\circ 09' 56''$
 $T = 205.27'$
 $L = 379.91'$
 $E = 49.11'$
 $R = 404.47'$
 $S.E. = n/a$
 $P.C. = Sta. 206+07.25$
 $P.T. = Sta. 209+87.16$
 $P.I. = Sta. 208+12.53$



USER NAME = 2sayerb

DESIGNED - BPS

REVISED -

CHECKED - BHS

REVISED -

DRAWN - BPS

REVISED -

CHECKED - GSP

REVISED -

PLOT SCALE = N/A

PLOT DATE = 10/5/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
S.N. 016-0814

SHEET NO. 51 OF 14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2760	100-B-1	COOK	28	11
		CONTRACT NO. 60M80		
ILLINOIS FED. AID PROJECT				

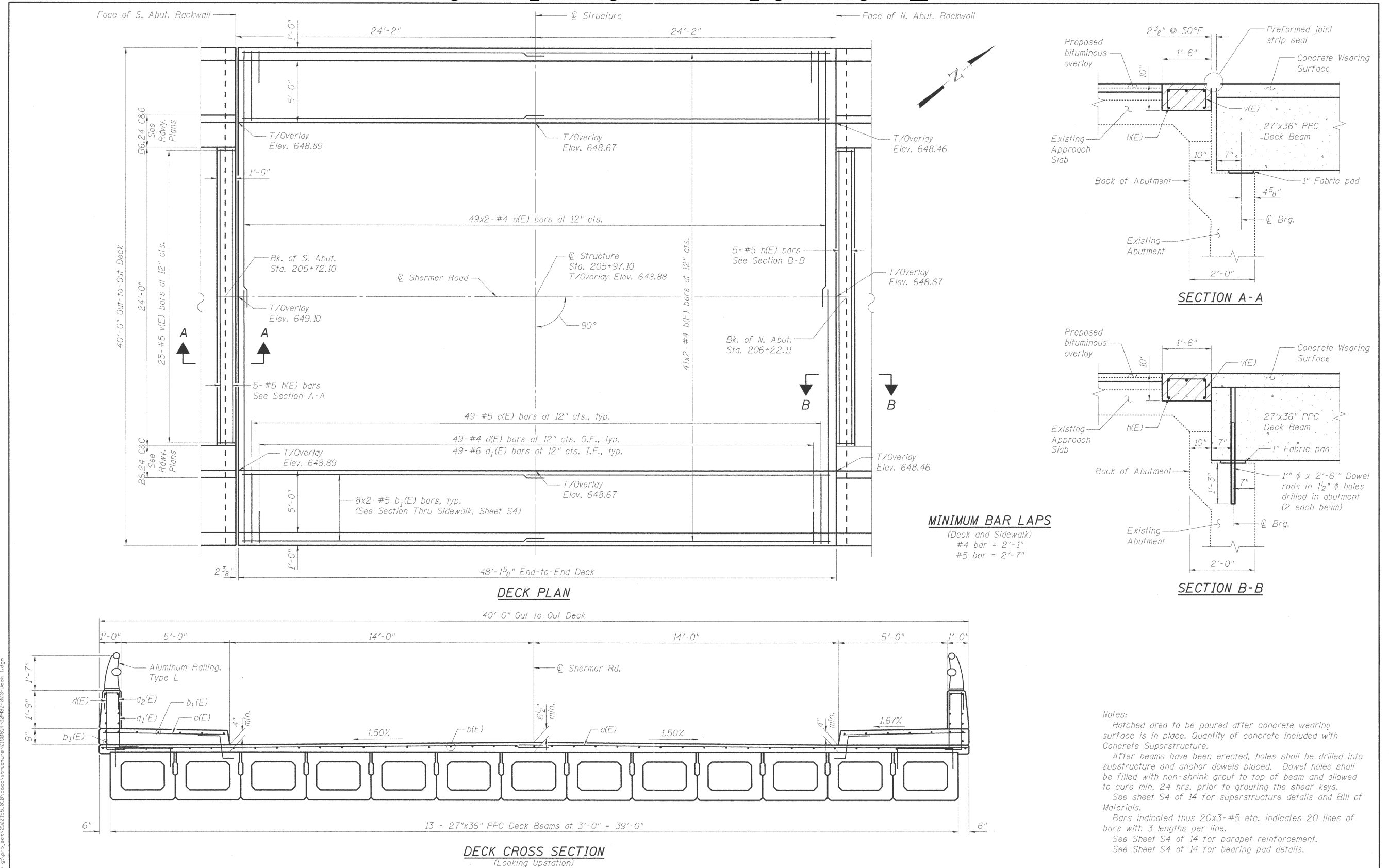
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0814

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	26
		CONTRACT NO. 62H78		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY



	USER NAME = 2sagerb	DESIGNED - BPS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN S.N. 016-0814	F.A.U. RTE. 2760	SECTION 100-B-1	COUNTY COOK	TOTAL SHEETS 28	SHEET NO. 13					
	PLOT SCALE = N/A	CHECKED - BHS	REVISED -												
	PLOT DATE = 10/14/2011	DRAWN - BPS	REVISED -												
		CHECKED - GSP	REVISED -												
					SHEET NO. S3 OF 14 SHEETS		CONTRACT NO. 60M80								
					ILLINOIS FED. AID PROJECT										

USER NAME = diaza	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN SN: 016-0814			
SCALE:	SHEET	OF	SHEETS
	STA.		TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	27
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

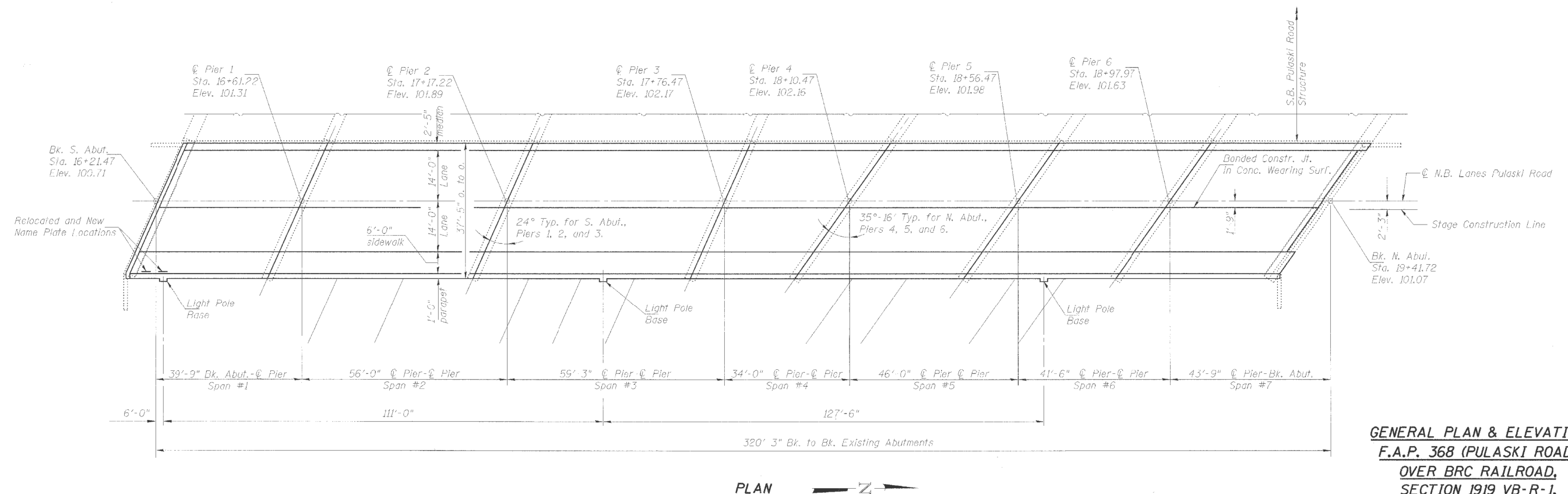
Existing Structure: No. 015-1020 built in 1943 as SA Rte. 051, Sec. 1919 VB at Sta. 17+81.60. Seven spans with concrete piers and abutments. Superstructure replaced with PPC Deck Beams with bit. surf in 1980. Structure has sidewalk, parapet and alum rail on east and median on west. 37'-5" out to out. Contractor shall remove existing superstructure and replace with PPC Dk. Bms in kind, conc wearing surface, sidewalk, parapet, re-erected alum rail and median.

Traffic to be maintained at all times utilizing stage construction.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 368	1919 VB-R-1	Cook	47	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

SHEET NO. 1
28 SHEETS

Contract # 60C11



DESIGNED	DDB
CHECKED	LLV
DRAWN	MGM
CHECKED	DDB

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (T)
ENGINEER OF BRIDGES AND STRUCTURES



License Expires: 11/30/08
Date Signed: 8-20-07

GENERAL PLAN & ELEVATION
F.A.P. 368 (PULASKI ROAD)
OVER BRC RAILROAD,
SECTION 1919 VB-R-1,
COOK COUNTY, STA. 17+81.60
STRUCTURE NO. 016-1020



USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN
SN: 016-1020

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
--------	-------	----	--------	------	---------

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	28
		CONTRACT NO. 62H78		
		ILLINOIS FED. AID PROJECT		

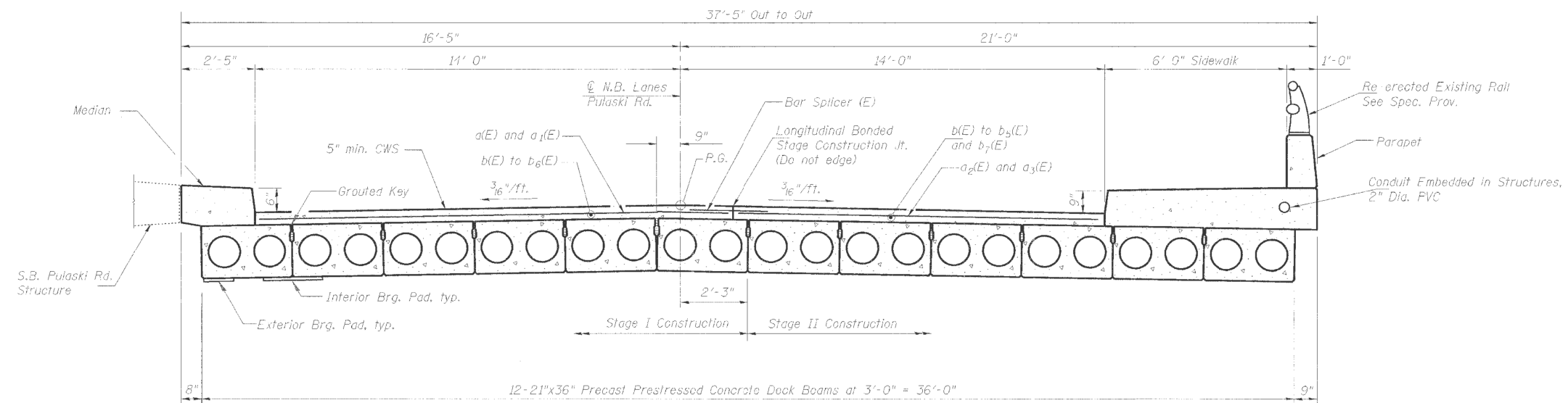
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FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

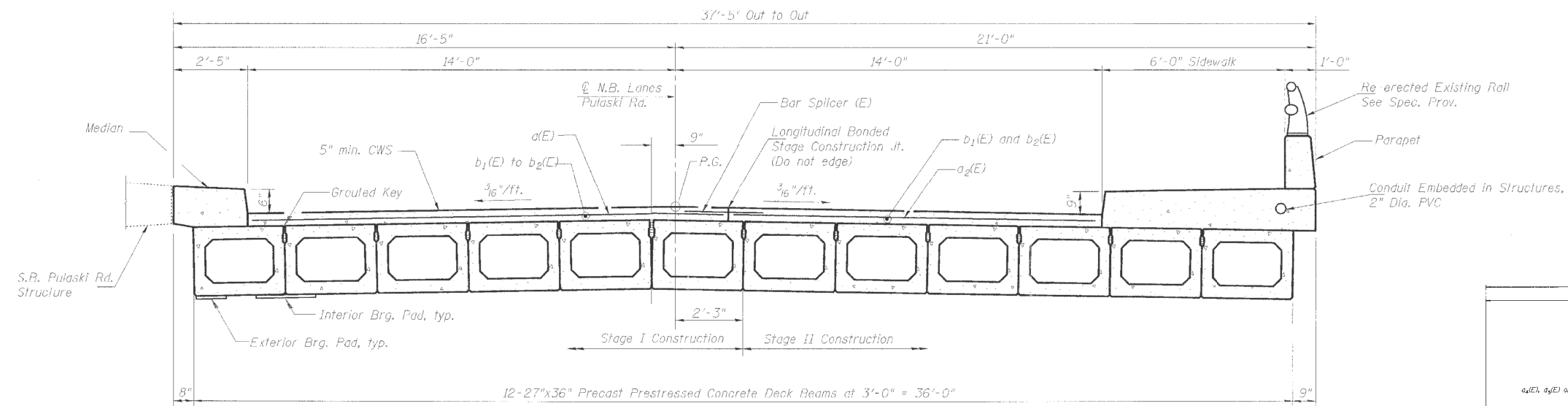
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 368	1919 VB-R-1	Cook	47	17
Contract # 60C11				

28 SHEETS



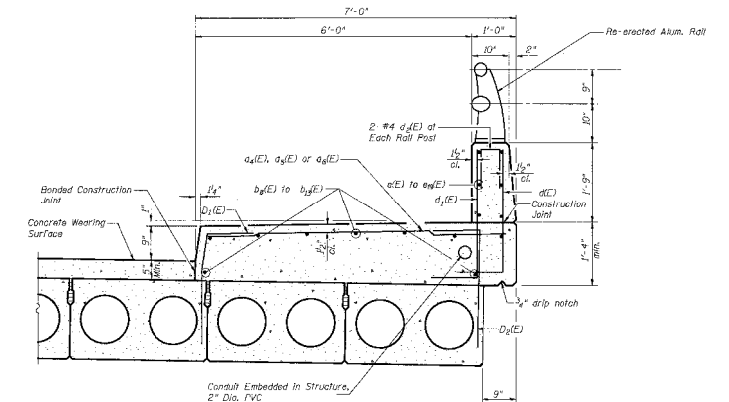
CROSS SECTION

Span 1, Span 4, Span 5, Span 6, and Span 7
(Looking North)



CROSS SECTION

Span 2 and Span 3
(Looking North)



FOR INFORMATION ONLY

Bench Mark: BM #1 - Cut in SW corner of TCB Concrete Base SE corner of US 30 & State St. Elev. 650.71

Existing Structure: SN 016-2503, constructed in 1982 as F.A. Rte. 848, Section 1978-214BR-78 as a single span of Precast Prestressed Concrete Deck beams, 17 inch depth, with a minimum 1 3/4"± bituminous surface overlay and water proofing membrane. The Structure carries two 12'-0" lane in each direction and a 5'-0" sidewalk on the south side of the bridge. The Out to Out of deck measures 61'-7" and the Bk. to Bk. of abutments is 33'-4". The substructure consists of Reinforced Concrete closed wall abutments supported on spread footing keyed into rock. Traffic is to be maintained utilizing stage construction. One Lane for each direction will be provided.

Salvage: None

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCOPE OF WORK

1. Remove existing Hot-Mix Asphalt Overlay, 2".
2. Remove and replace Bridge Superstructure in kind in Stages (PPC Deck Beams, 17" Depth).
3. Substructure Repairs.
4. Install 5 inch Concrete Wearing Surface.
5. Guardrail Improvement.
6. Repair Abutments Wall and Modify Top of Abutment & Beam Seat.
7. Remove and Replace Approach Slabs.
8. Maintain Traffic in all Stages of Construction
9. Provide/Install riprap along the East Abutment

LOADING HL-93

No future wearing surface allowed.

DESIGN SPECIFICATIONS (NEW CONSTRUCTION)

2007 AASHTO LRFD Bridge Design Specifications,
4th Edition with 2008 and 2009 Interims

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pbt} = 201,960$ psi (1/2 " low relax. strands)
 $f_{pu} = 270,000$ psi (1/2 " low relax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.039g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.096g
Soil Site Class = B

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1	-	1
Concrete Superstructure	Cu. Yd.	174	-	174
Concrete Structures	Cu. Yd.	-	37	37
Reinforcement Bars, Epoxy Coated	Pound	46,650	60	46,710
Protective Coat	Sq. Yd.	607	-	607
Bridge Deck Grooving	Sq. Yd.	178	-	178
Bar Splicers	Each	256	-	256
Name Plates	Each	1	-	1
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,000	-	2,000
Epoxy Crack Injection	Foot	83*	-	83
Aluminum Railing Type L	Foot	25	-	25
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	-	32*	32*
Structural Repair of Concrete (Depth greater than 5 inches)	Sq. Ft.	-	5*	5*
Structure Excavation	Cu. Yd.	3	-	3
Approach Slab Removal	Sq. Yd.	214	-	214
Concrete Wearing Surface, 5"	Sq. Yd.	223	-	223
Combination Curb and Gutter Removal	Foot	120	-	120
P.C.C. Sidewalk, 5 inches	Sq. Ft.	150	-	150
Stone Riprap, Class A6	Sq. Yd.	130	-	130
Concrete Removal	Cu. Yd.	-	4	4
Filter Fabric	Sq. Yd.	-	215	215

* Inflated to 120%

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	634.80	635.10

WATERWAY INFORMATION

Drainage Area = 3.033 Acres Existing Low Grade Elev. = 644.21 Ft @ Sta. 182+50 4.74 Sq.Mi. Proposed Low Grade Elev. = 644.21 Ft @ Sta. 182+50									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. Exist.	Prop.	H.W.E. Exist.	Prop.	Headwater EL.	Headwater EL.
Design	10	849	173.3	173.3	173.3	642.06	0.00	0.00	642.06
Base	50	1059	177.7	177.7	177.7	642.44	0.07	0.07	642.51
Overlapping	100	1112	177.7	177.7	177.7	642.54	0.06	0.06	642.60
Max. Calc.	500	1406	177.7	177.7	177.7	643.02	0.18	0.18	643.20

Datum: All Elevations are in NGVD29 (To Convert to NAVD 88 Subtract 0.15')

STATION 180+65.5
REBUILT 20
BY
STATE OF ILLINOIS
F.A.P. 353/US 30 SEC 11-5-B
LOADING HL-93
STRUCTURE NO. 016-2503

NAME PLATE

See Std. 515001

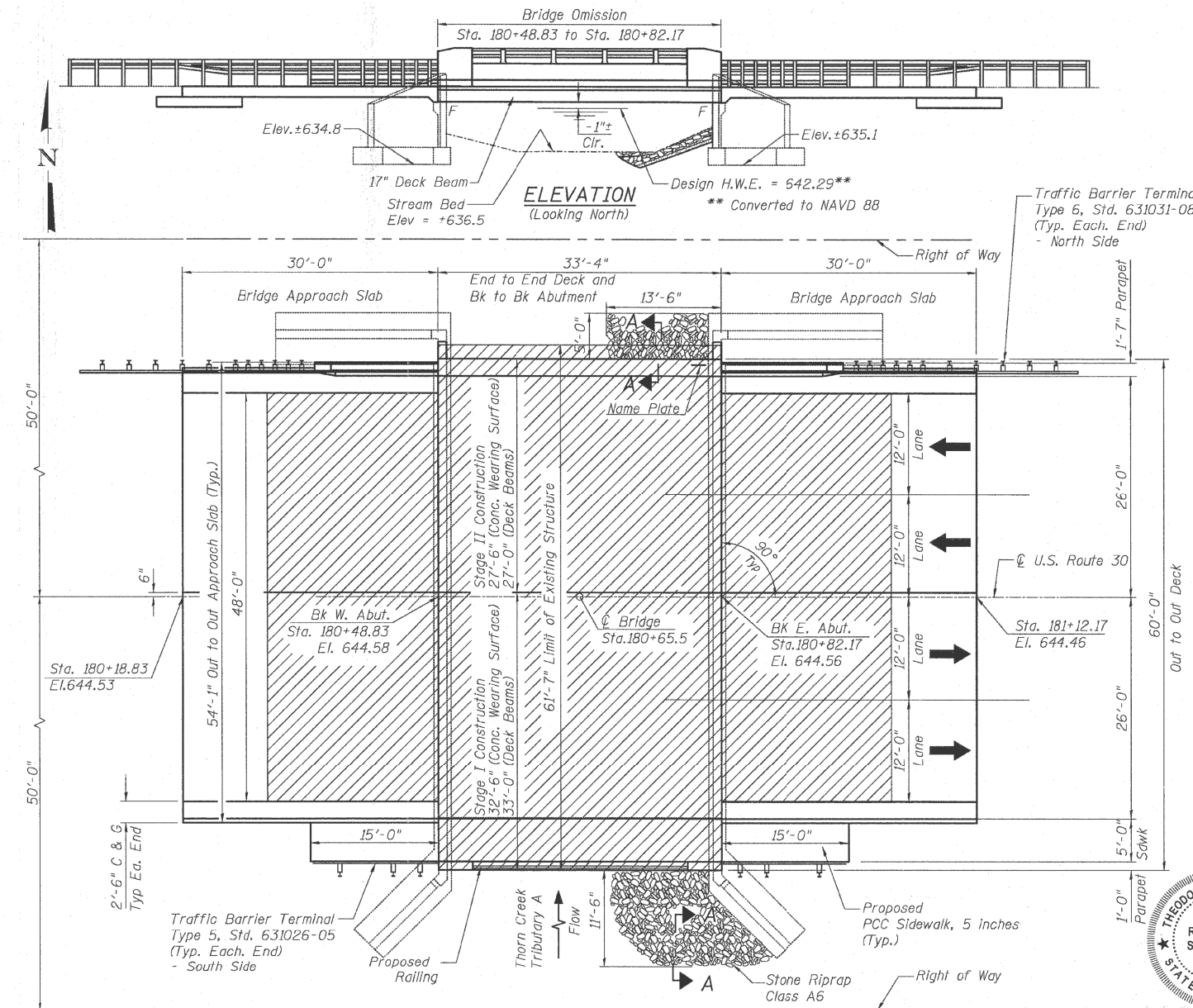
Existing Name Plate shall be cleaned and relocated next to new Name Plate.
Cost Included with Name Plates.

GENERAL PLAN & ELEVATION
FAP 353/US 30 (LINCOLN HIGHWAY)
OVER THORN CREEK TRIBUTARY A
(FORMER THIRD CREEK)
COOK COUNTY
STA. 180+65.5
STRUCTURE NO. 016-2503

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson (T)D
ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. S1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S18 SHEETS	353	11-5-B	COOK	39	13
CONTRACT NO. 60J44					
ILLINOIS FED. AID PROJECT					



PLAN

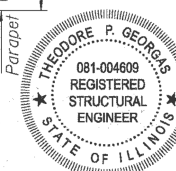
DESIGNED JPM
CHECKED TG
DRAWN MPS
CHECKED JPM, TG

Primera
180 S. WACKER DRIVE, SUITE 700, CHICAGO, IL 60606, P. 312-686-8900 F. 312-686-8945

Note:
For Section A-A and
Riprap Details, see
Sheet S2 of S18.

LEGEND:

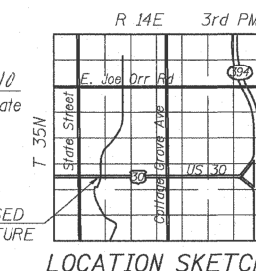
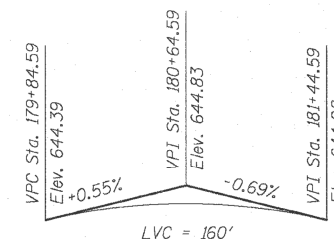
- Existing Approach Slab Removal
- Existing Superstructure Removal



Theodore P. Georgas
Licensed Structural Engineer
State of Illinois 081-4609
Expires 11/30/2010

PROFILE GRADE

Along US Rte. 30



LOCATION SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

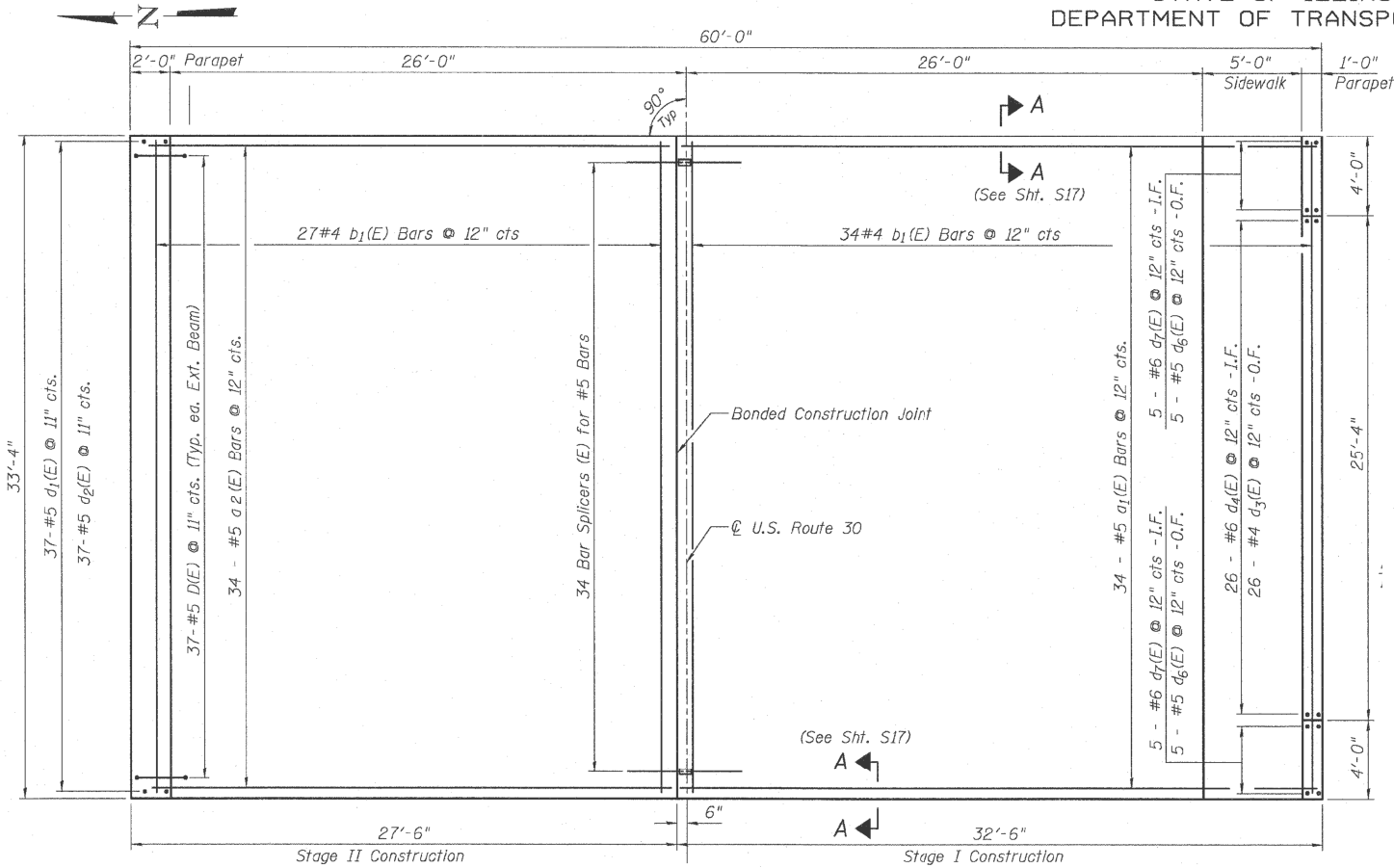
GENERAL PLAN
SN: 016-2503

SCALE: SHEET OF SHEETS STA. TO STA.

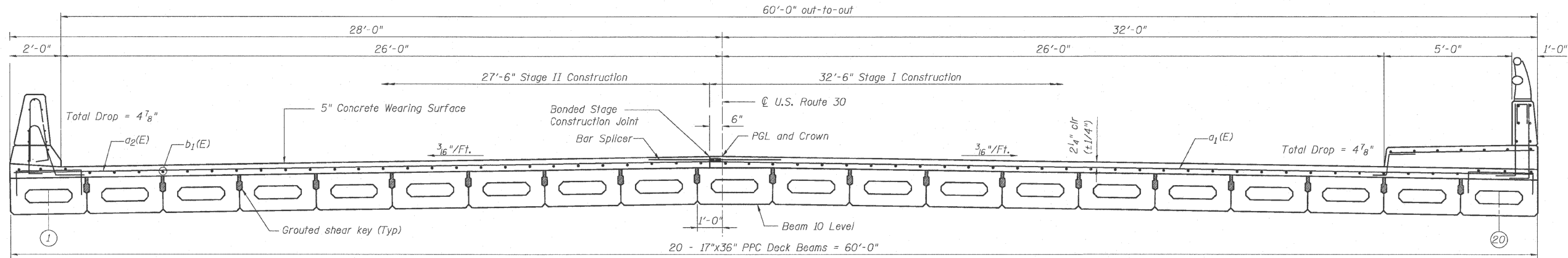
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	30
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DECK PLAN



CROSS SECTION
Looking East

MIN. BAR LAP
#5 = 2'-2"

Note:
For Parapet and Sidewalk reinforcement
See "Superstructure - Parapet Plan, Elevations
and Details", Sheet S10 of S18

All concrete wearing surfaces in each stage
shall be placed prior to casting approach slab.

I.F. = Denotes Inside Face
O.F. = Denotes Outside Face

SUPERSTRUCTURE PLAN AND
CROSS SECTION
STRUCTURE NO. 016-2503

DESIGNED	JPM
CHECKED	TG
DRAWN	MPS
CHECKED	JPM, TG

Primera
100 S. WACKER DRIVE SUITE 700, CHICAGO, IL 60606, P.312-686-8800 F.312-686-8805

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S18 SHEETS	353	11-5-B	COOK	39	21
CONTRACT NO. 60J44					
ILLINOIS FED. AID PROJECT					

USER NAME	= diaza	DESIGNED	-	REVISED	-
PLOT SCALE	= 100,0000' / in.	DRAWN	-	REVISED	-
PLOT DATE	= 1/25/2019	CHECKED	-	REVISED	-
		DATE	-	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.

CROSS SECTION
SN: 016-2503

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	31
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Benchmark : Benchmark #1 - cut "□" in top of northwest wingall.
Assumed Elevation = 100.00'

Existing Structure: S.N. 016-2514 built in 1978 as a single span 27"x36" PPC Deck Beam bridge with 2" bituminous wearing surface on closed abutments on spread footings. The structure measures 59'-6" back to back abutments and 87'-5" out to out deck. Bridge was rehabilitated in 2004 with partial beam replacement. Traffic is to be maintained utilizing stage construction. One lane for each direction shall be provided.

Salvage: None

STATION 495+60.00
REBUILT 20_ BY
STATE OF ILLINOIS
F.A.U. ROUTE 1320 SEC 581B-1
LOADING HL-93
STRUCTURE NO. 016-2514

NAME PLATE
See Std. 515001

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

2007 AASHTO LRFD 4th Edition

DESIGN STRESSES

FIELD UNITS

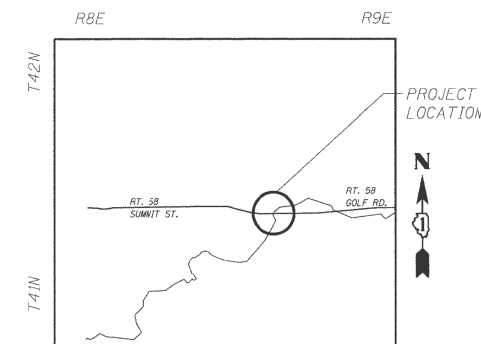
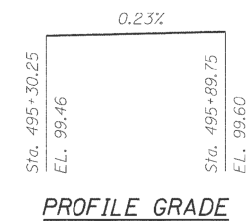
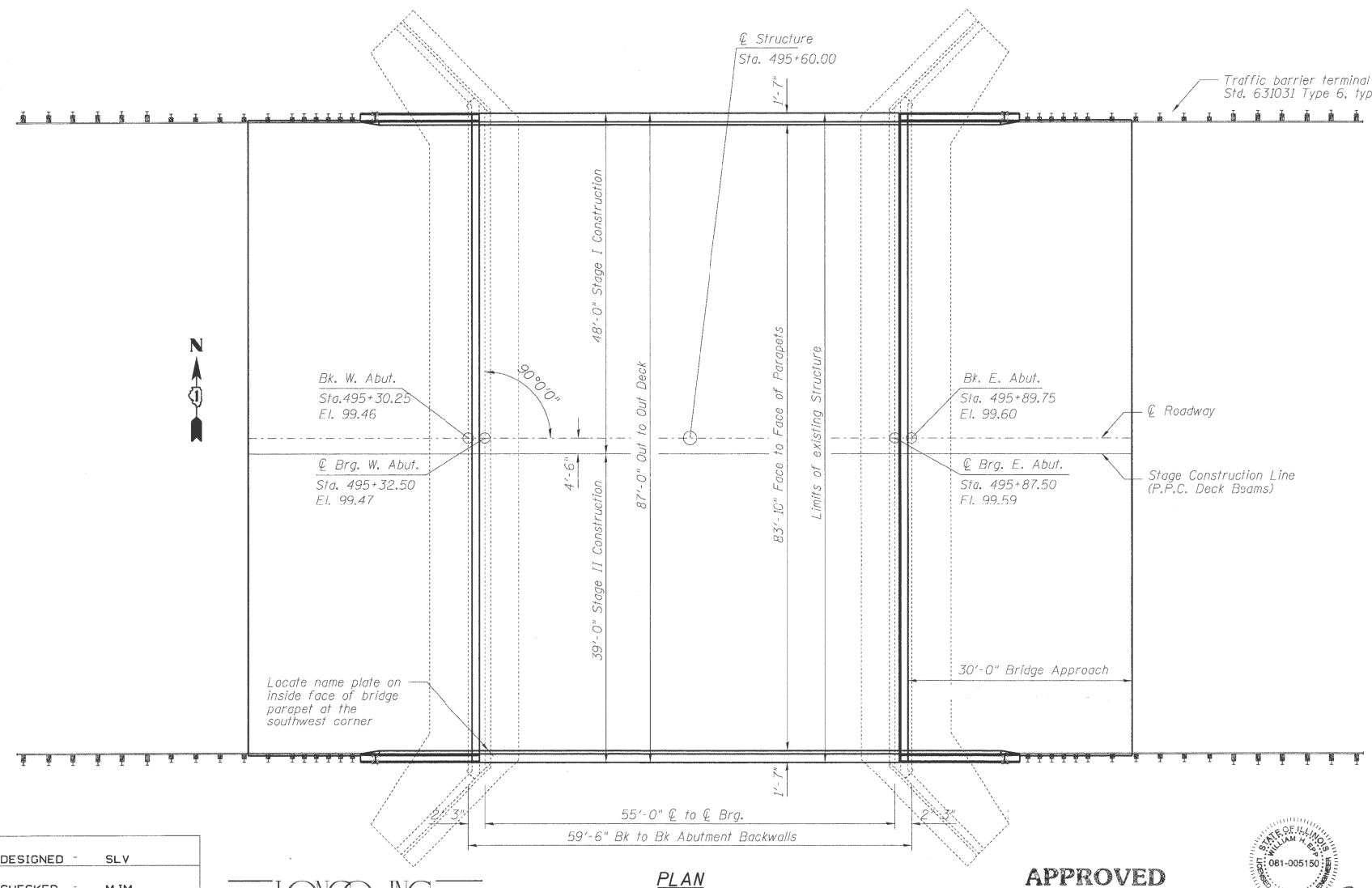
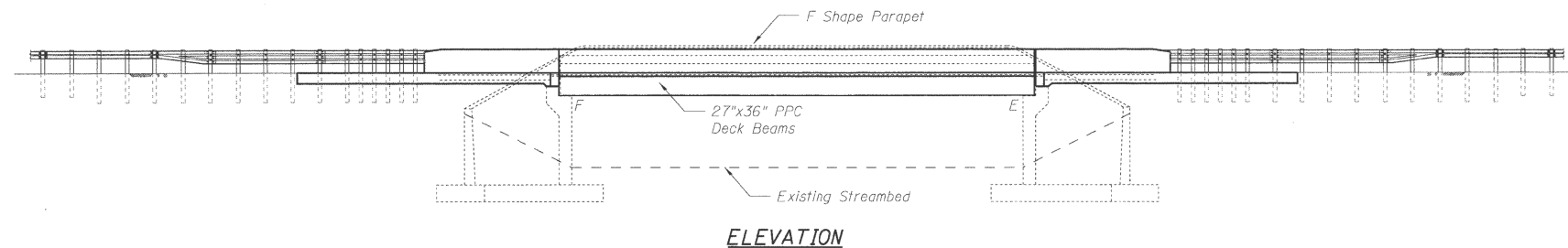
$f'_c = 3,500$ psi
 $f'_c = 5000$ psi (Concrete Wearing Surface)
 $f_y = 60000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6000$ psi
 $f'_{ci} = 5000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax. strands)
 $f'_{si} = 201,900$ psi (1/2" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2



**GENERAL PLAN AND ELEVATION
IL RTE 58 OVER POPLAR CREEK
F.A.U. RT. 1320
SECTION 581B-1
COOK COUNTY
STA. 495+60.00
STRUCTURE NO. 016-2514**

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONGCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TSP)
ENGINEER OF BRIDGES AND STRUCTURES



W. J. [Signature]
Expires 11/20/10

LOCATION SKETCH

SHEET NO. S1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
OF S15 SHEETS	1320	581 B-1	COOK	33	12
		D-91-288-09	CONTRACT NO. 60F91		
		FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT	

USER NAME = diaza	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

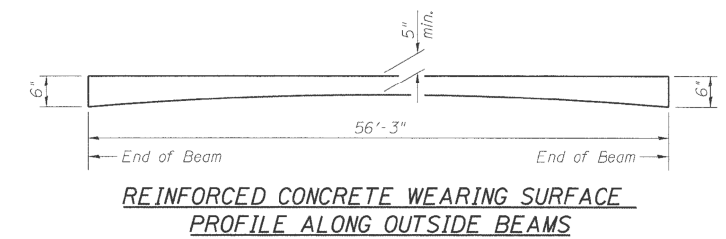
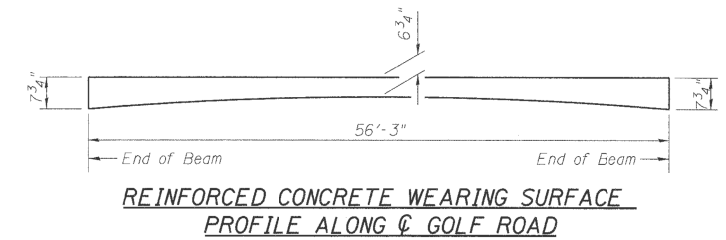
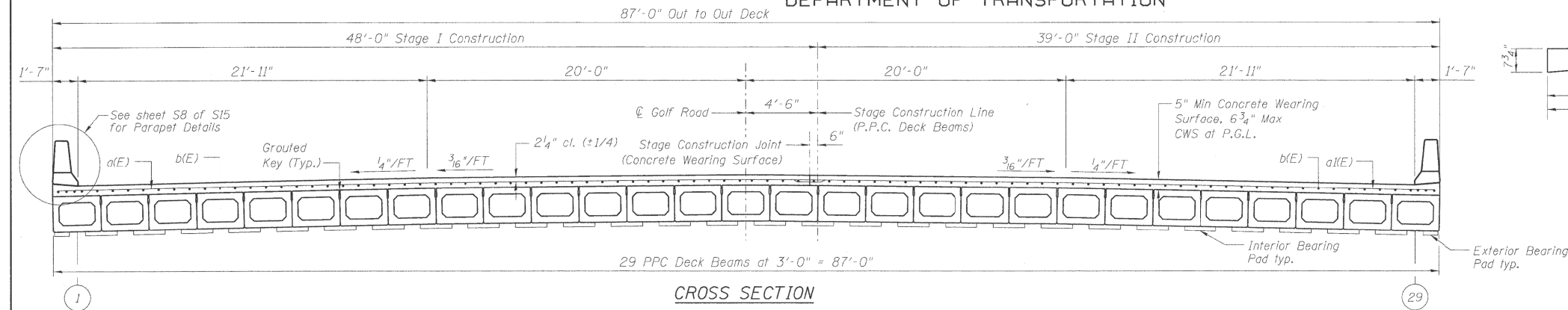
**GENERAL PLAN
SN: 016-2514**

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	32
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

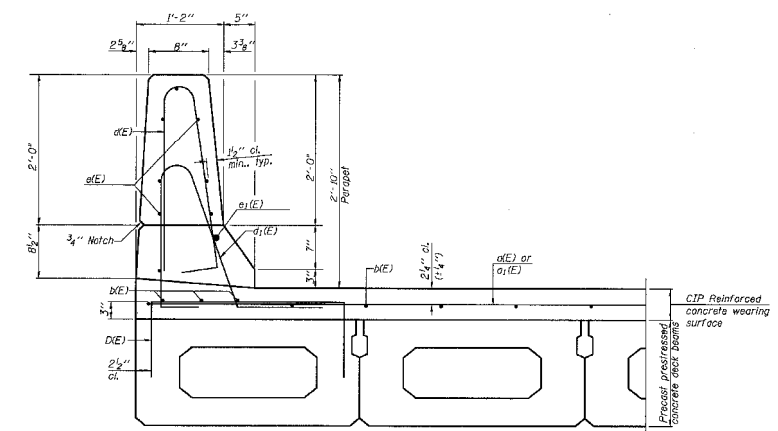
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



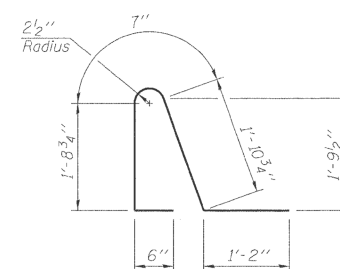
NOTES

For remainder of Superstructure Details see Sheet S8 of S15.

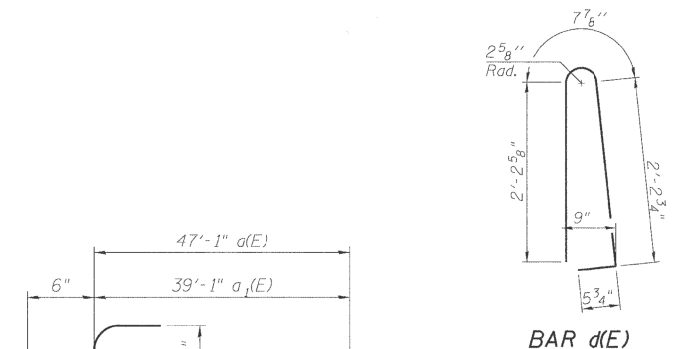
Bars indicated thus 84x2-#4, etc., indicates 84 lines of bars with 2 lengths per line.



SECTION THRU PARAPET
See sheet S-7 for Superstructure Bill of Materials



BAR $d_1(E)$



BAR $d(E)$

BAR $a(E)$ & $a_1(E)$

SUPERSTRUCTURE
STRUCTURE NO. 016-2514

DESIGNED	SLV
CHECKED	MJM
DRAWN	SLV
CHECKED	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

CONCRETE WEARING SURFACE PLAN

Min. bar lap: #4 = 1'-8"

SHEET NO. S7	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1320	581 B-1	COOK	33	18	
OF S15 SHEETS	D-91-288-09	CONTRACT NO. 60F91			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

USER NAME = diaza	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2514

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	33
		CONTRACT NO. 62H78		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

B.M. - Cut "C" in SE corner of the South Abutment wall of the N-S Railroad Bridge over Palatine Road. Bridge located ±2100' west of the E of Wolf Road. Elev. = 654.66

Existing Structure - Structure No. 016-2529 built as East Frontage Road over F.A.S. Route 116, Palatine Road, Section 110-1415 in 1963. In 2006, the bituminous overlay was replaced with a reinforced concrete overlay, the approach "notch" was removed and replaced and preformed joint seals replaced the existing joint filler. The superstructure consists of 33"x36" PPC Deck Beams supporting a reinforced concrete overlay. The length of the structure is 65'-6" center of center of bearings. The existing deck width is 41'-0" out to out of deck. The deck is not skewed. The road will be closed during construction.

Salvage - Remove and reinstall existing West Parapet Railing. The East Parapet Railing shall be salvaged and delivered to the IDOT Maintenance Facility in Elk Grove Village.

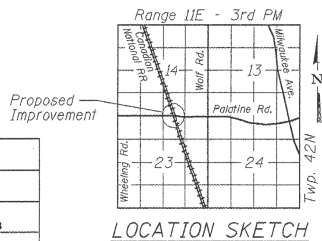
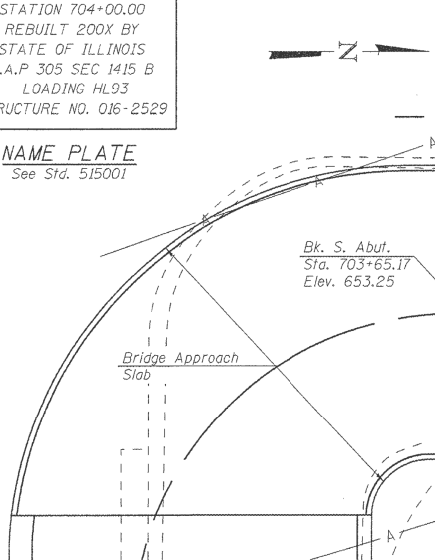
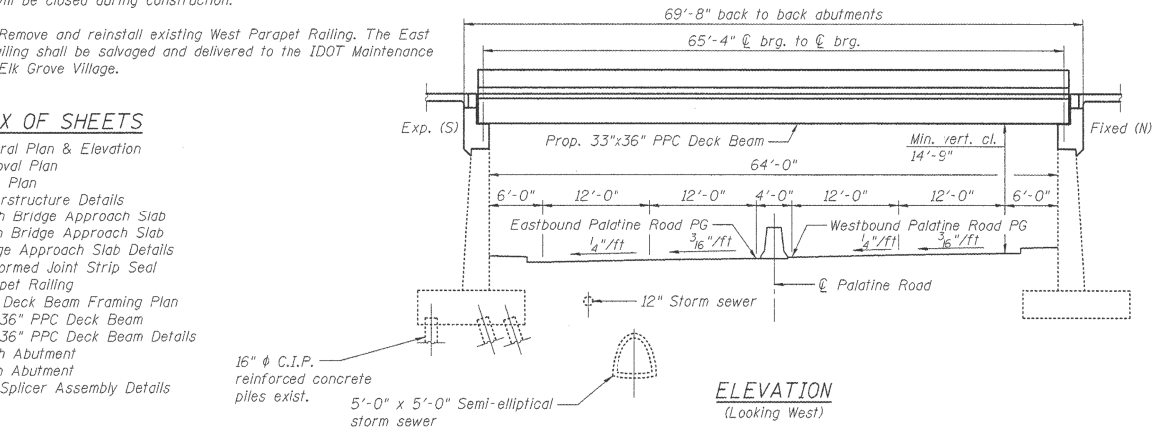
INDEX OF SHEETS

1. General Plan & Elevation
2. Removal Plan
3. Deck Plan
4. Superstructure Details
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6. North Bridge Approach Slab
7. Bridge Approach Slab Details
8. Preformed Joint Strip Seal
9. Parapet Railing
10. PPC Deck Beam Framing Plan
11. 33"x36" PPC Deck Beam
12. 33"x36" PPC Deck Beam Details
13. South Abutment
14. North Abutment
15. Bar Splicer Assembly Details

STATION 704+00.00
REBUILT 200X BY
STATE OF ILLINOIS
F.A.P. 305 SEC 1415 B
LOADING HL93
STRUCTURE NO. 016-2529

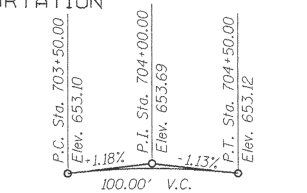
NAME PLATE

See Std. 515001

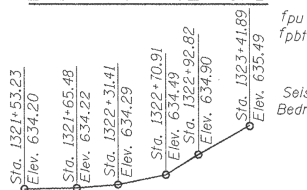


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CHECKED	GSP
DRAWN	BPS/MJB
CHECKED	GSP

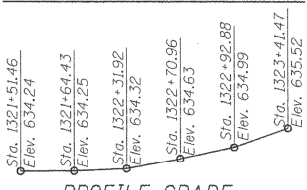
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PROFILE GRADE
EAST FRONTAGE ROAD



PROFILE GRADE
EASTBOUND PALATINE ROAD



PROFILE GRADE
WESTBOUND PALATINE ROAD

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771

EXP. 11-30-2010
DATE 01-28-2009



DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design
Specifications with 2008 Interims

LOADING HL93

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

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low relax strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low relax strands)

SEISMIC DATA

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

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
4. Concrete Sealer shall be applied to the surface of the backwalls, abutment seats, and front face of new concrete on abutments.
5. The minimum thickness of the Concrete Overlay shall be 5 inches and varies as required to adjust for the new Profile Grade and Beam Camber.
6. Slipforming of the parapets is not allowed.
7. If the Contractor's procedures for existing deck beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Superstructures, No. 2.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Removal of Existing Superstructures No. 2	Each	1		1
Concrete Removal	Cu. Yd.		35.0	35.0
Structure Excavation	Cu. Yd.		50	50
Concrete Structures	Cu. Yd.		63.8	63.8
Concrete Superstructures	Cu. Yd.	188.5		188.5
Bridge Deck Grooving	Sq. Yd.	582		582
Protective Coat	Sq. Yd.	695		695
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,594		2,594
Reinforcement Bars, Epoxy Coated	Pound	39,370	11,370	50,740
Bar Splicers	Each	66		66
Removing and Re-erecting Existing Railing	Foot	66.5		66.5
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	39.5		39.5
Concrete Sealer	Sq. Ft.		641	641
Concrete Wearing Surface, 5"	Sq. Yd.	292.5		292.5
Asbestos Bearing Pod Removal	Each	26		26

GENERAL PLAN & ELEVATION
EAST FRONTAGE ROAD OVER PALATINE ROAD
F.A.P. 305/PALATINE ROAD
SECTION 1415 B
COOK COUNTY
STATION 704+00.00
STRUCTURE NO. 016-2529

SHEET NO. 1	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	305	1415 B	COOK	75	24
15 SHEETS			CONTRACT NO. 60F60		
	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

USER NAME = diaza	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 1/25/2019	DATE -	REVISED -

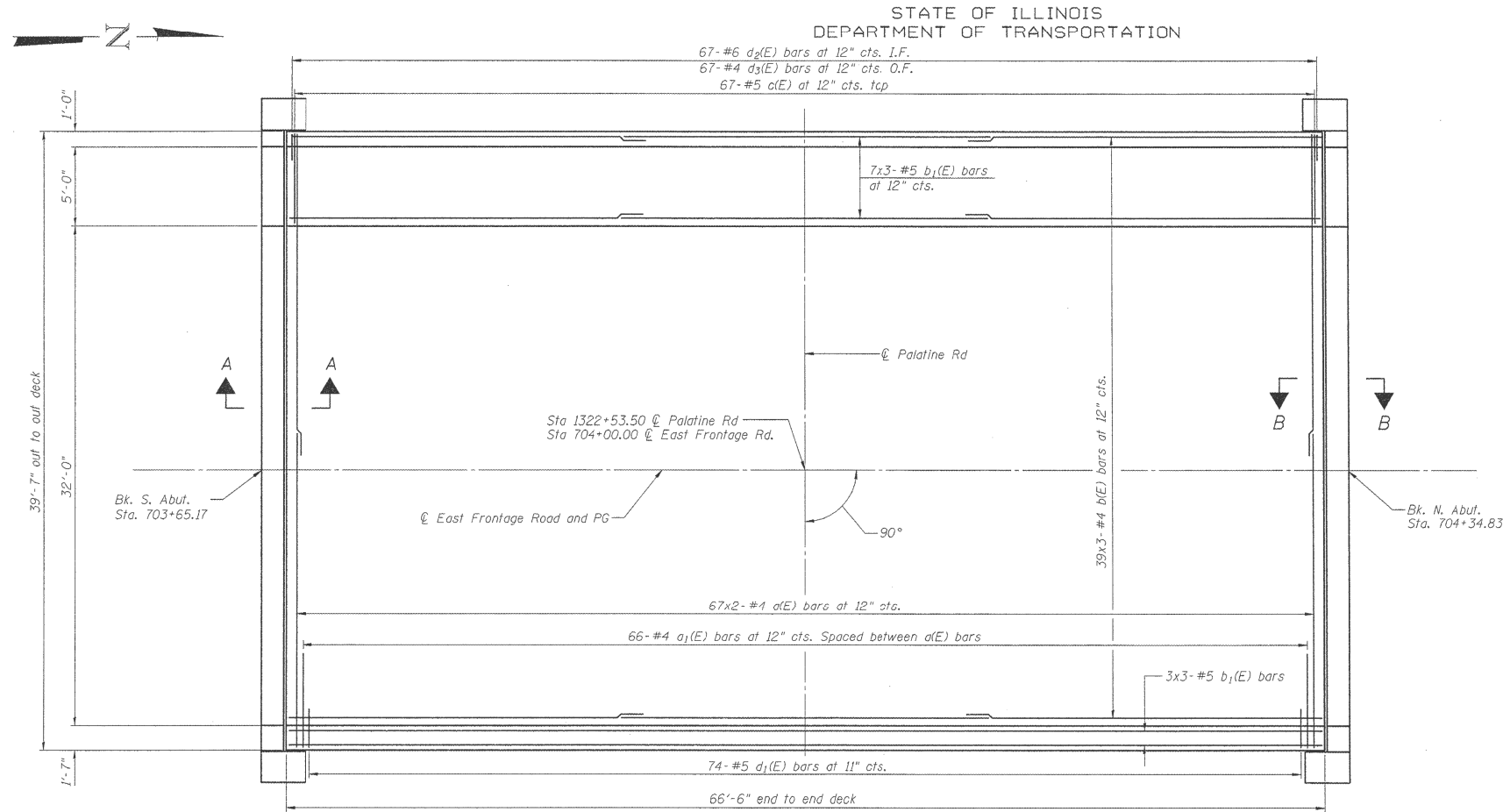
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2529

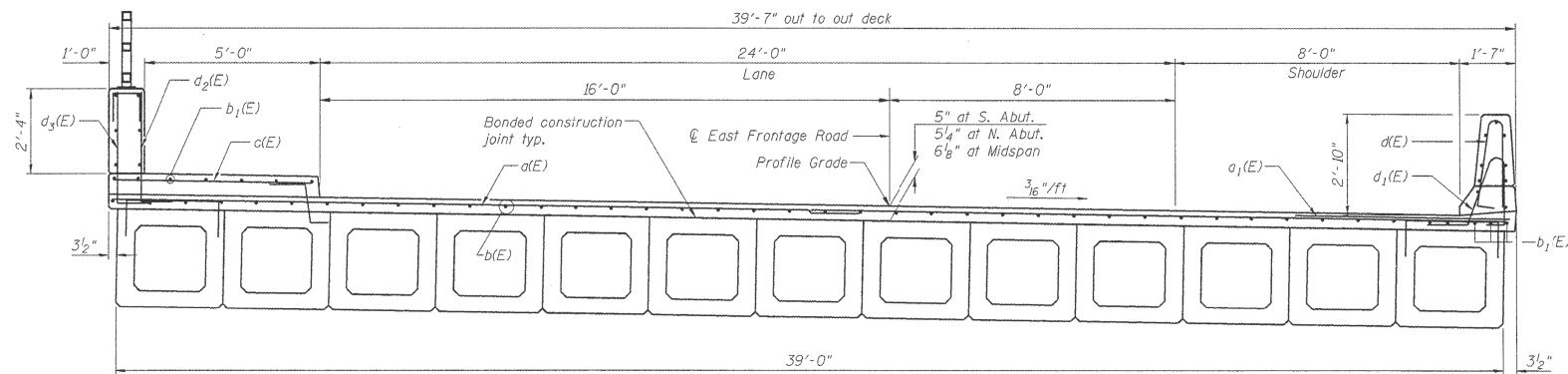
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VAR. RTE.	SECTION 2018-0148-I	COUNTY VARIOUS	TOTAL SHEETS 86	SHEET NO. 34
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

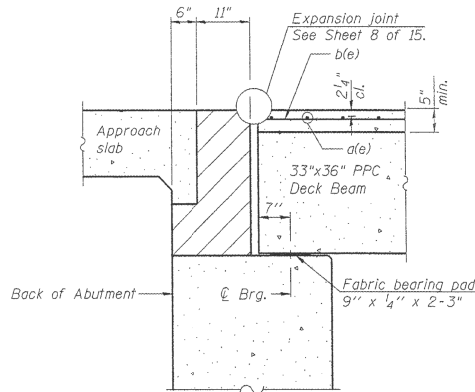
FOR INFORMATION ONLY



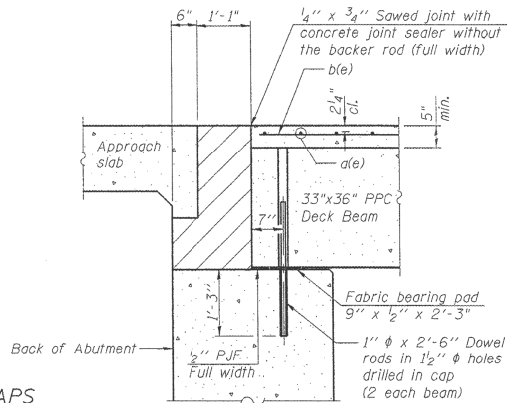
DECK PLAN



DECK CROSS SECTION
(Looking Upstation)



SECTION A-A

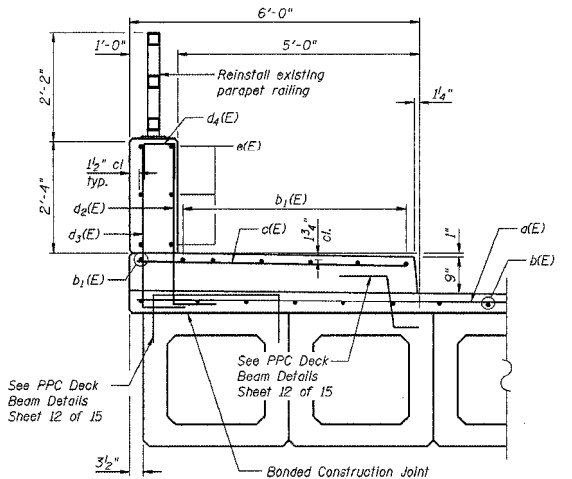


SECTION B-B

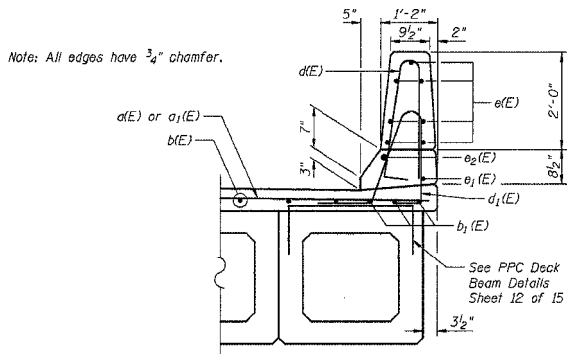
MINIMUM BAR LAPS
(Deck and Sidewalk)
#4 bar = 1'-4"
#5 bar = 1'-8"

Notes:
Hatched area to be poured after concrete wearing surface is in place. Quantity of concrete included with Concrete Superstructure.
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
See sheet 4 of 15 for superstructure details and Bill of Materials.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 4 of 15 for parapet reinforcement.
See sheet 12 of 15 for bearing pad details.

DECK PLAN
STRUCTURE NO. 016-2529



SECTION THRU SIDEWALK PARAPET AND SIDEWALK



SECTION THRU ROADWAY PARAPET

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	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2529

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	35
CONTRACT NO. 62H78				
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY

B.M. - Cut "C" in SE corner of the South Abutment wall of the N-S Railroad Bridge over Palatine Road.
Bridge located ±2100' west of the C of Wolf Road. Elev. = 654.66

Existing Structure - Structure No. 016-2530 built as West Frontage Road over F.A.S. Route 116, Palatine Road, Section 110-1415 in 1963. The structure was widened in 2003. In 2006, the bituminous overlay was replaced with a reinforced concrete overlay, the approach "notch" was removed and replaced and preformed joint seals replaced the existing joint filler. The superstructure consists of 33"x36" PPC Deck Beams supporting a reinforced concrete overlay. The length of the structure is 65'-6" center of center of bearings. The existing deck width is 48'-4" out to out of deck. The deck is not skewed. The road will be closed during construction.

Salvage - Remove and reinstall existing parapet and bicycle railing.

INDEX OF SHEETS

1. General Plan & Elevation
2. Removal Plan
3. Deck Plan
4. Superstructure Details
5. South Bridge Approach Slab
6. North Bridge Approach Slab
7. Bridge Approach Slab Details
8. Preformed Joint Strip Seal
9. Parapet & Bicycle Railing
10. PPC Deck Beam Framing Plan
11. 33"x36" PPC Deck Beam
12. 33"x36" PPC Deck Beam Details
13. South Abutment
14. North Abutment
15. Bar Splicer Assembly Details

STATION 504+00.00
REBUILT 200X BY
STATE OF ILLINOIS
F.A.P. 305 SEC. 1415 B
LOADING HL93
STRUCTURE NO. 016-2530

NAME PLATE

See Std. 515001
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with "Name Plates."

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design
Specifications with 2008 Interims

LOADING HL 93

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

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low relax strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low relax strands)

SEISMIC DATA

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

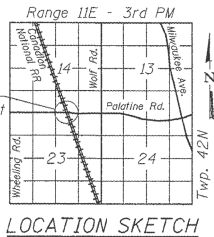
GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
4. Concrete Sealer shall be applied to the surface of the backwalls, abutment seats, and front face of new concrete on abutments.
5. The minimum thickness of the Concrete Overlay shall be 5 inches and varies as required to adjust for the new Profile Grade and Beam Camber.
6. The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the Beams when developing Construction Procedures for Removal and Replacement of the Superstructure.
7. If the Contractor's procedures for existing deck beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Superstructures No. 1.
8. Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Removal of Existing Superstructures No. 1	Each	1		1
Concrete Removal	Cu. Yd.		40.8	40.8
Structure Excavation	Cu. Yd.		60	60
Concrete Structures	Cu. Yd.		69.7	69.7
Concrete Superstructures	Cu. Yd.	248.9		248.9
Bridge Deck Grooving	Sq. Yd.	615		615
Protective Coat	Sq. Yd.	864		864
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	3,192		3,192
Reinforcement Bars, Epoxy Coated	Pound	46,680	12,640	59,320
Bar Splicers	Each	96		96
Removing and Re-erecting Existing Railing	Foot	97.5		97.5
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	48.5		48.5
Concrete Sealer	Sq. Ft.		801	801
Bicycle Railing to be Removed and Reinstalled	Foot	66.5		66.5
Concrete Wearing Surface, 5"	Sq. Yd.	357.1		357.1
Asbestos Bearing Pad Removal	Each	26		26

GENERAL PLAN & ELEVATION WEST FRONTAGE ROAD OVER PALATINE ROAD F.A.P. 305/PALATINE ROAD SECTION 1415 B COOK COUNTY STATION 504+00.00 STRUCTURE NO. 016-2530



GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
EXP. 11-30-2010
DATE 01-28-2009
Ralph J. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

ENTRAN

SHEET NO. 1 15 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	305	1415 B	COOK	75	39
	CONTRACT NO.			60F60	
	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

DESIGNED -	BPS
CHECKED -	GSP
DRAWN -	BPS/MJB
CHECKED -	GSP

USER NAME = diaza	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

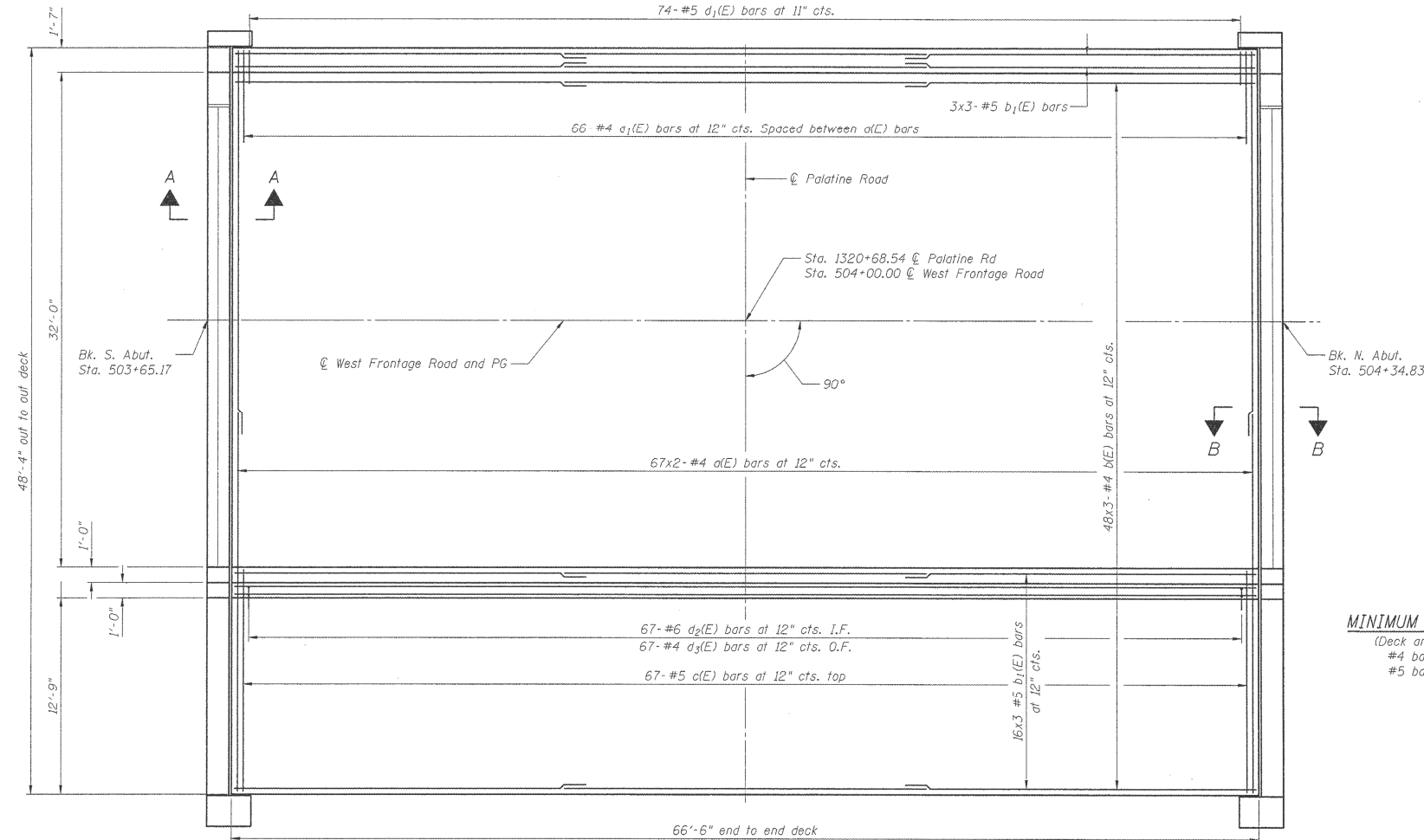
GENERAL PLAN
SN: 016-2530

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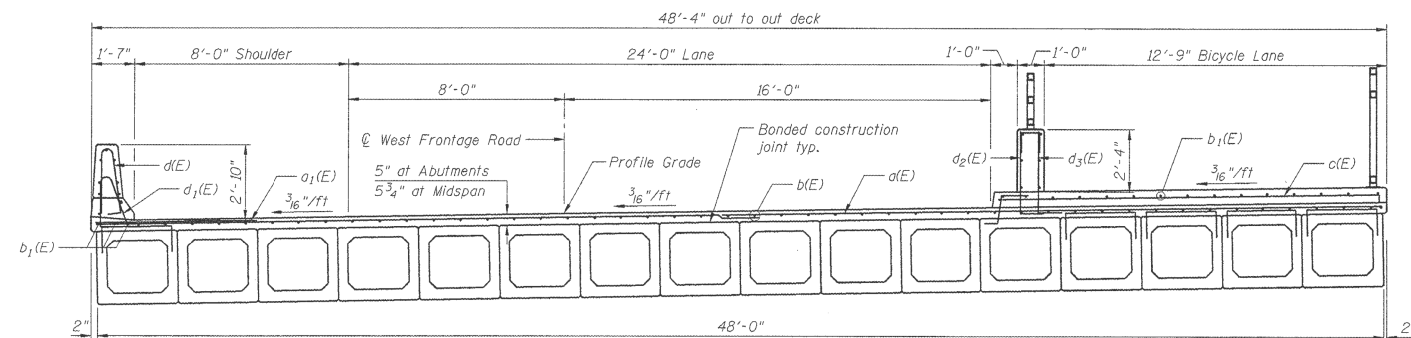
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CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

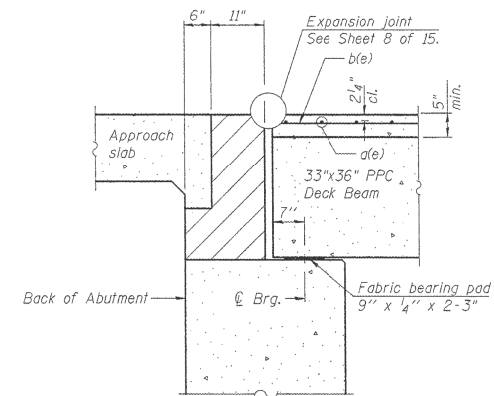
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DEPARTMENT OF TRANSPORTATION



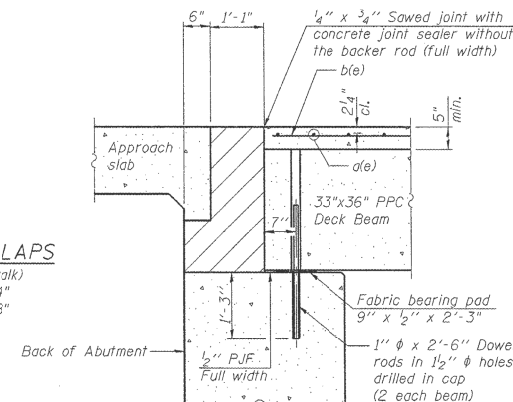
DECK PLAN



DECK CROSS SECTION
(Looking Upstation)



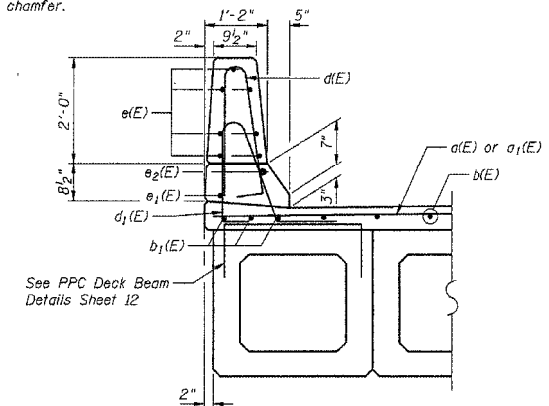
SECTION A-A



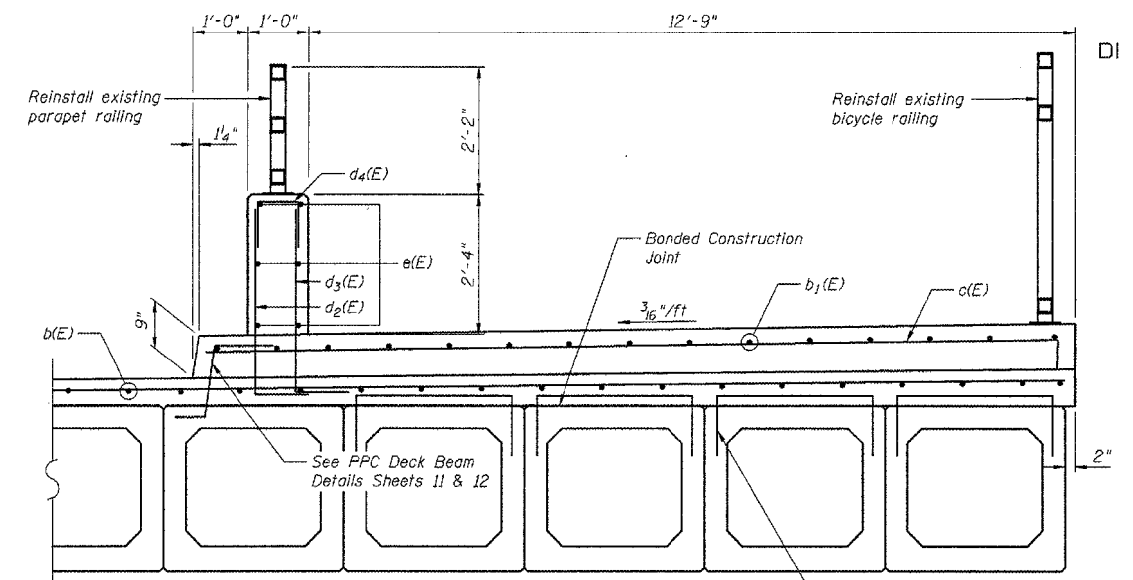
SECTION B-B

MINIMUM BAR LAPS
(Deck and Sidewalk)
#4 bar = 1'-4"
#5 bar = 1'-8"

All edges should have 3/4" chamfer.



SECTION THRU ROADWAY PARAPET



SECTION THRU BICYCLE PATH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

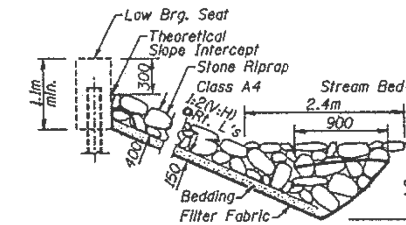
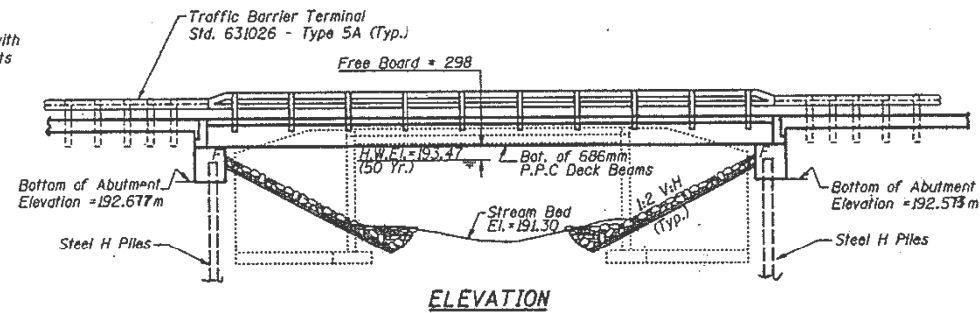
CROSS SECTION
SN: 016-2530

SCALE: SHEET OF SHEETS STA. TO STA.

VAR.	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.		2018-0148-I	VARIOUS	86	37
CONTRACT NO. 62H78					
ILLINOIS FED. AID PROJECT					

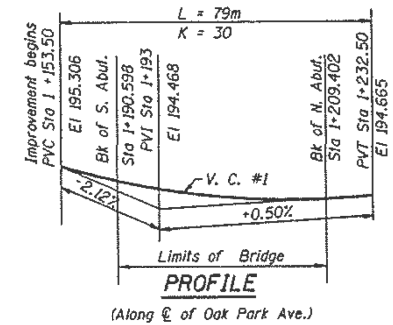
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Oak Park Avenue between 143rd St. & 147th St. will be closed for traffic during construction. A Detour will be utilized. See Roadway Plan for Detour.



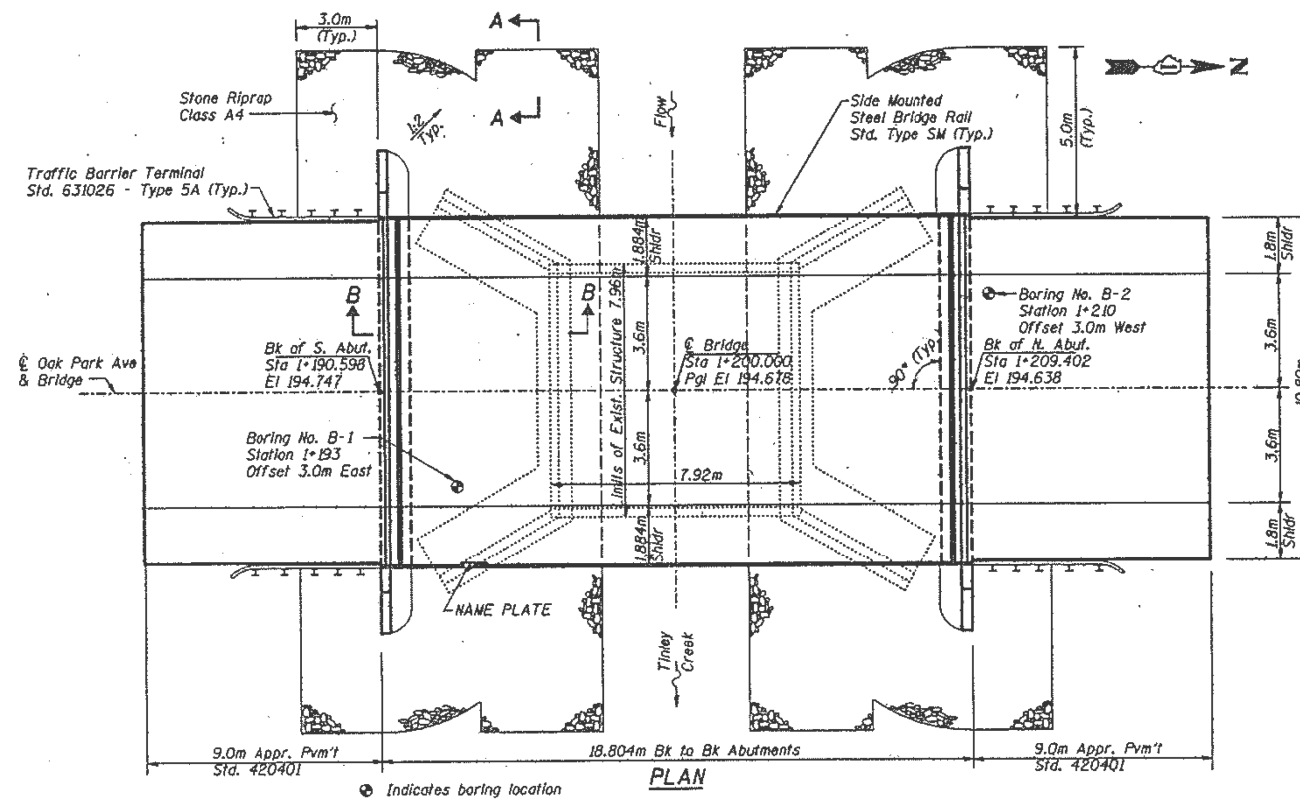
SECTION B-B

F - Fixed Bearing



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S1	General Plan & Elevation
S2	General Notes & Total Bill of Materials
S3	Superstructure
S4	Superstructure Details
S5	PPC Deck Beam Superstructure
S6	PPC Deck Beam Details
S7	South Abutment & Wingwalls
S8	North Abutment & Wingwalls
S9	Soil Boring Logs



WATERWAY INFORMATION

Drainage Area = 20.58 Km ² Low Grade Elev. 194.466m Exist • Sta. 1+217									
Flood	Freq. Yr.	Q m ³ /s	Opening m ²		Nat. H.W.E.	Head - m		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	20.5	13.0	22.9	193.31	0.09	0.00	193.40	193.31
Design	50	27.3	14.0	25.4	193.47	0.12	0.03	193.59	193.50
Base	100	30.3	14.4	26.4	193.55	0.15	0.03	193.70	193.55
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	41.9	17.4	28.9	193.70	0.37	0.03	194.07	193.70

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

P. I. ...
ENGINEER OF BRIDGES AND STRUCTURES

DESIGN SPECIFICATIONS

1996 AASHTO & 1997 Interim.

LOADING MS 18

Allow 2.4 kN/m^2 for future wearing surface.

DESIGN STRESSES	FIELD UNITS
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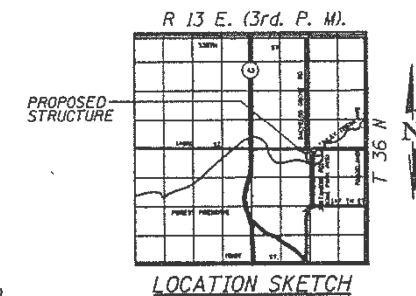
$f'_c = 24 \text{ MPa}$ (Concrete)
 $f_y = 400 \text{ MPa}$ (Reinforcing Steel)

Pre-cast Pre-stressed Units

$f'_c = 35 \text{ MPa}$
 $f'_{ci} = 28 \text{ MPa}$
 $f'_s = 1860 \text{ MPa (12.7mm dia stress relieved strands)}$
 $f_{si} = 1302 \text{ MPa (12.7mm dia stress relieved strands)}$

SEISMIC DATA

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



DESIGNED	MT
CHECKED	GBC/SMK
DRAWN	JL/SR
CHECKED	JL/SMK

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION

**OAK PARK AVENUE
OVER TINLEY CREEK**

**F.A.U. ROUTE 2774 - SEC. 80B
COOK COUNTY**

**STATION 1+200.000
STRUCTURE NO. 016-2711**

SCALE: NONE
DATE: August 26, 1998

 **DELTA ENGINEERING, INC.**
3075 IOWA ENGINEERING CENTER BLVD.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN
SN: 016-2711

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

Benchmark: TBM #1, Top of NE bolt in light pole at Sta. 1699+89, 35' Rf. - Elev. 101.45
Existing Structure: No. 022-0040, Two span, 99'-2" Bk-Bk Abuts. 58'-0" face to face curb, 5'-0" sidewalks and 1'-0" parapets each side, 70'-0" out to out, PPC Dk. Bms placed on older substructure in 1986.
Concrete parapet with aluminum handrail on top.

Salvage: Remove, store and re-erect aluminum rail. Remove, clean and reinstall existing name plate.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 311	625X-B-R-1	DuPage	29	9
SHEET NO. 1				
15 SHEETS				

Contract #60C53

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1. General Plan & Elevation
2. General Notes and Total Bill of Material
3. Stage Construction
4. Temporary Concrete Barrier
5. Deck Cross Section
6. 21" x 36" PPC Dk. Bms.
7. 21" x 48" PPC Dk. Bms.
8. Precast Approach Beams
9. Concrete Wearing Surface
10. Sidewalks
11. Parapets
12. Railing
13. Expansion Joint Details
14. Abutments and Pier Details
15. Substructure Repairs
16. Bar Splicer Details

LOADING HS20-44

No Allowance for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

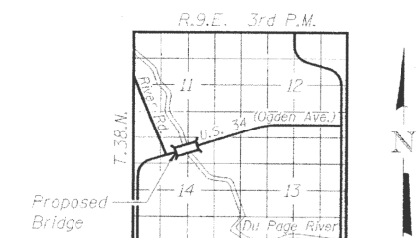
DESIGN STRESSES

FIELD UNITS

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

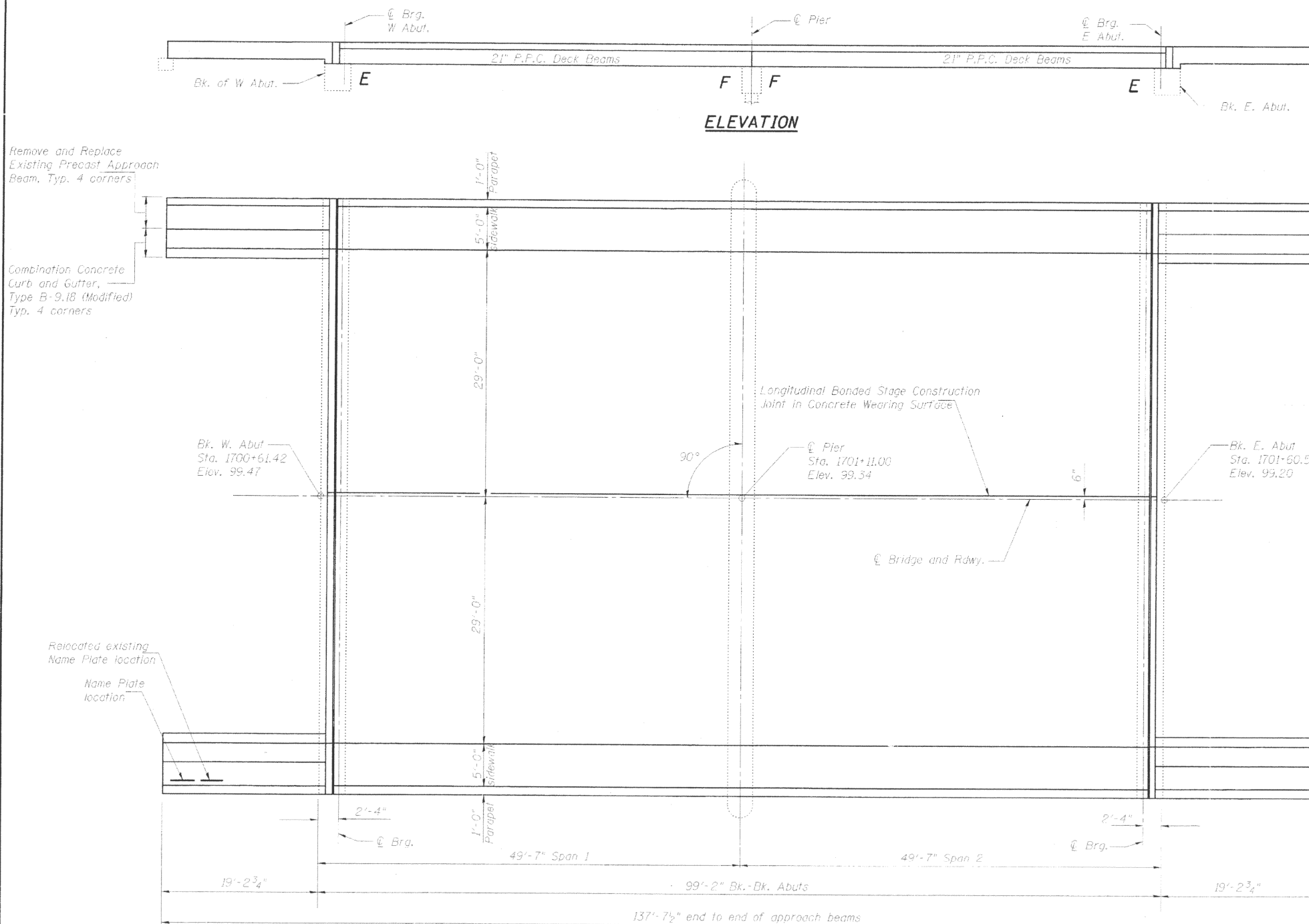
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax strands)
 $f_{si} = 201,960$ psi (1/2" ϕ low lax strands)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.P. 311 (US RTE. 34)
OVER W BRANCH OF DU PAGE RIVER
SECTION 652X-B-R-1,
DU PAGE COUNTY, STA. 1701+11
STRUCTURE NO. 022-0040



DESIGNED	UDB
CHECKED	LLV
DRAWN	MGM
CHECKED	DBB

PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Relph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



License Expires: 11/30/08
Date Signed: 11-8-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN
SN: 022-0040**

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	ILLINOIS	86	40
CONTRACT NO. 62H78				

MODEL: Default
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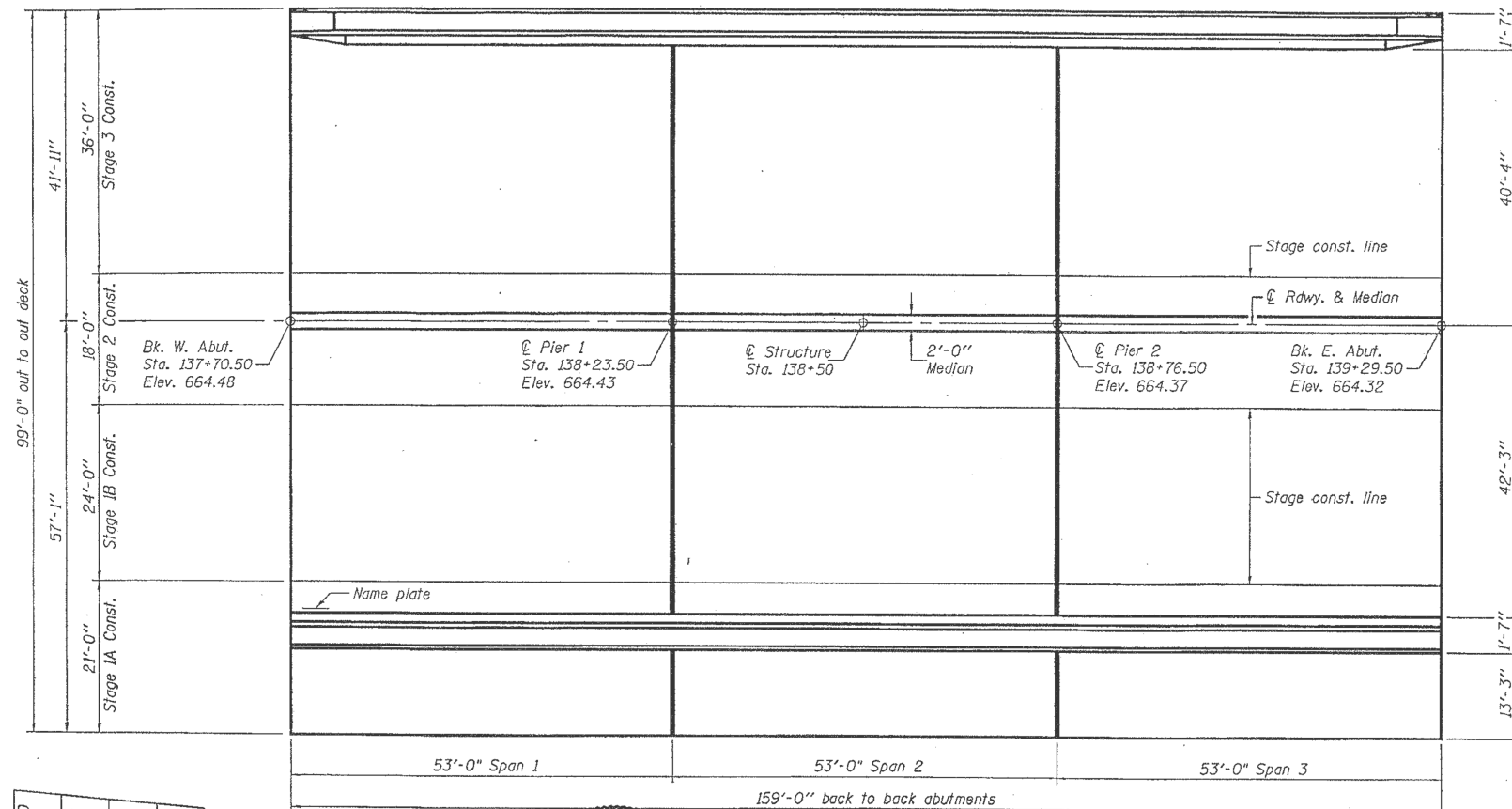
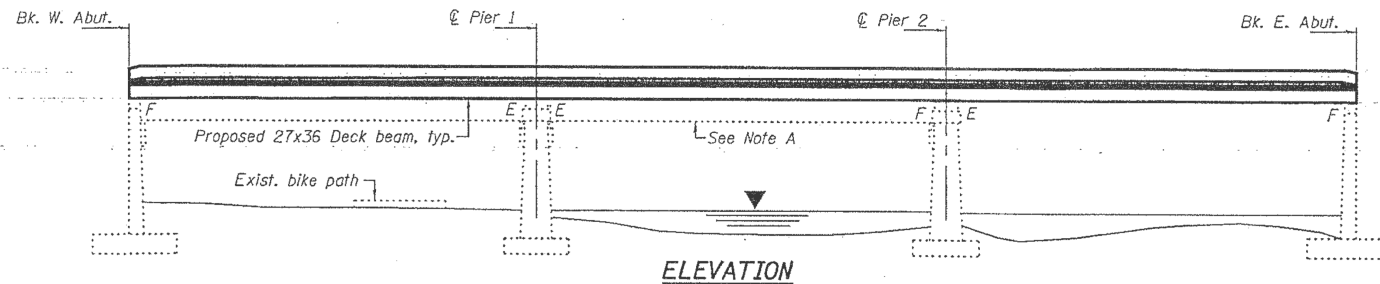


VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	41
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Existing Structure: S.N. 022-0084 was built in 1930, widened in 1962, redecked in 1976, and repaired in 2006 as IL Route 68. The structure consists of 3 spans of PPC Deck Beams (27" depth) and solid piers with closed abutments. The back to back abutment dimension is 159'-0" and the out to out dimension is 99'-0". The existing superstructure shall be replaced with PPC Deck Beams 27" depth and a 5" concrete overlay using staged construction.

No salvage.

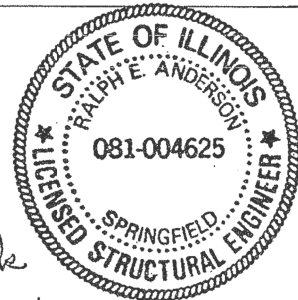


Sta. 137+50 Elev. 664.50	Sta. 138+00 Elev. 664.45	Sta. 138+50 Elev. 664.40	Sta. 139+00 Elev. 664.35	Sta. 139+50 Elev. 664.30
-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------

PROFILE GRADE
Rdwy. along IL. Rt. 68

DESIGNED	h.t. duong
CHECKED	h.t. duong
DRAWN	h.t. duong
CHECKED	h.t. duong

EXAMINED	h.t. duong
PASSED	h.t. duong



EXPIRES 11-30-2008

LOADING HS20-44

No future wearing surface is allowed on the structure.

**DESIGN STRESSES
PRESTRESS UNITS**

(New Construction)
 $f'_c = 5000$ psi
 $f'_{ci} = 4000$ psi
 $f'_s = 270,000$ ($\frac{1}{2}\phi$ low relaxation strands)
 $f'_{si} = 201,960$ ($\frac{1}{2}\phi$ low relaxation strands)
 $f = 60,000$ psi (reinforcement bars)

FIELD UNITS

$f'_s = 60,000$ psi (reinforcement bars)
 $f'_{ci} = 5,000$ psi (conc. wearing surface)
 $f = 3,500$ psi (substructure)

STATION 138+50
RE-BUILT 20 BY
STATE OF ILLINOIS
F.A.U. RT. 1453 SEC. 552B-BR
LOADING HS20-44
STRUCTURE NO. 022-0084

NAME PLATE
See Std. 515001

GENERAL PLAN & ELEVATION
F.A.U. RTE. 1453 OVER
SALT CREEK - SEC. 552B-BR
DUPAGE COUNTY
STATION 138+50
STRUCTURE NO. 022-0084

...projects\hda00025\0220084.dgn 10/19/2007 1:29:19 PM

USER NAME = diaza	DESIGNED -	REVISED -
PLOT SCALE = 100,000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 022-0084

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	42
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	43
		CONTRACT NO. 62H78		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
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FOR INFORMATION ONLY

Bench Mark: A "P.K." in center median east of S.N. 022-0158, Sta. 103+45.79, Elevation 668.06

Existing Structure: S.N. 022-0158 was constructed in 1985 as section 543X-M(82). The structure consists of a three span structure with PPC deck beams supported on reinforced concrete slab abutments on two rows of steel H-piles and reinforced concrete solid wall piers sitting on rock. The superstructure consists of twenty-five 21" deep by 48" wide PPC deck beams, topped with a 5" minimum concrete overlay. The bridge is 154'-1" back-to-back abutments and 101'-2" out-to-out deck.

Traffic to be maintained utilizing staged construction. During the demolition and setting of the beams, the existing bike path under the bridge will be closed.

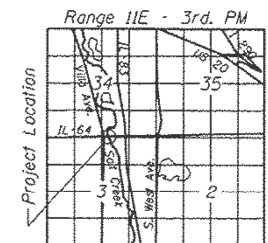
No Salvage.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	670.22	655.33	651.78	668.06

SCOPE OF WORK

1. Remove and replace PPC Deck Beams.
2. Modify abutments as required.
3. Construct 5" (min.) concrete wearing surface, sidewalks, median, and parapets/rails.
4. Remove and replace bridge approach slabs.
5. Repair existing substructure units and slope walls as required.



NAME PLATE

STATION 100+00.00
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 307 SEC. 131B-BR
LOADING HL-93
STR. NO. 022-0158

NAME PLATE

(See Std. 515001)
Existing Name Plate shall be cleaned and relocated next to new Name Plate.
Cost included with Name Plates.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

LOADING HL-93 (NEW CONST.)

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS (PROPOSED)

f'c = 3,500 psi
f'ci = 5,000 psi (CWS only)
fy = 60,000 psi (Reinforcement)

FIELD UNITS (EXISTING)

f'c = 3,500 psi (Piers & Abutments)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS (PROPOSED)

f'c = 7,000 psi
f'ci = 6,000 psi
fpu = 270,000 psi (1/2" ϕ Strands)
fpbt = 201,960 psi (1/2" ϕ Strands)

APPROVED
For Structural Adequacy Only

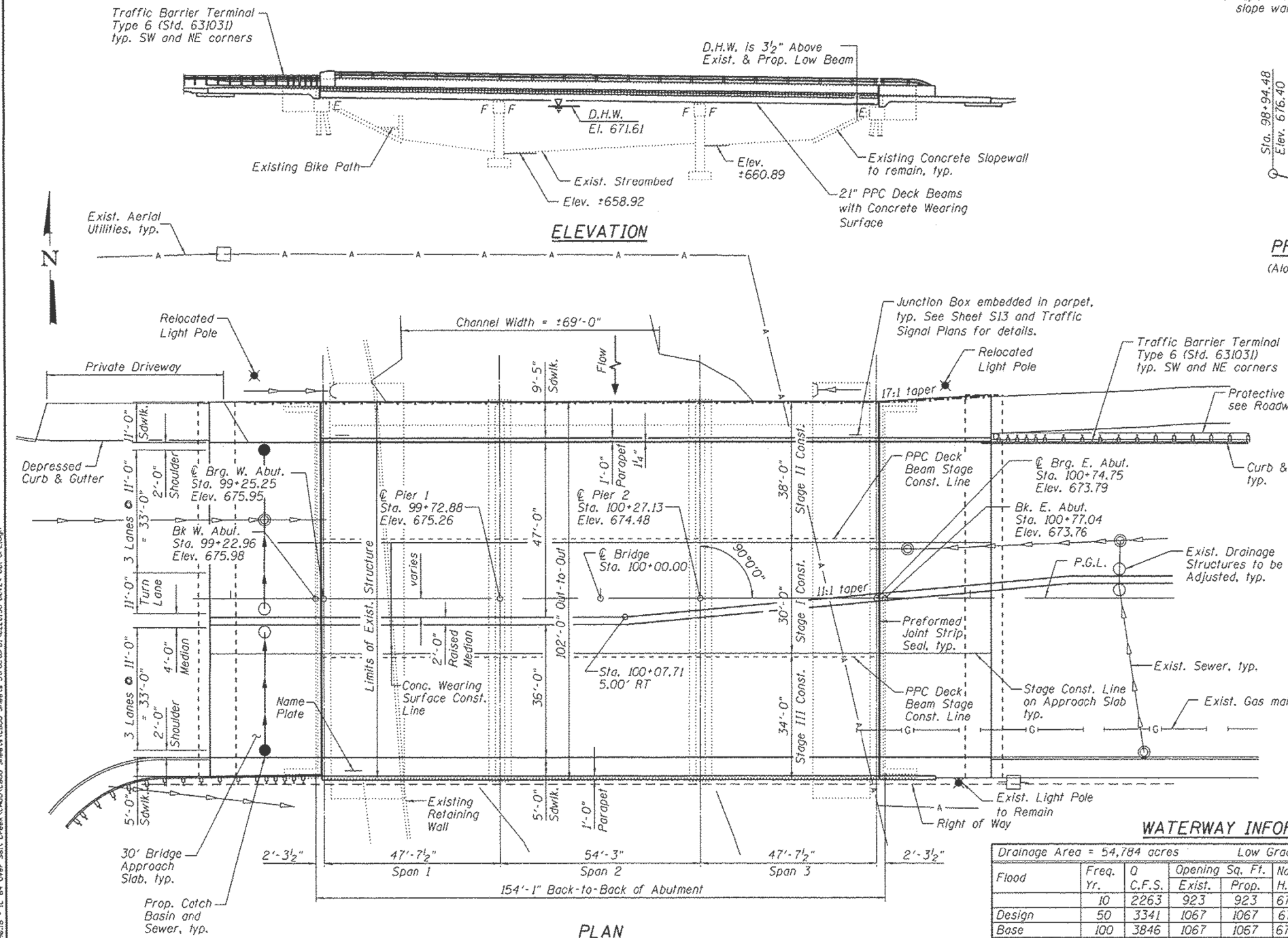
Ewa K. Mroczek
Engineer of Bridges & Structures



Ewa K. Mroczek 10/24/13
COLLINS ENGINEERS, INC.
EWA MROCZEK, P.E., S.E.
NO. 081-006067
EXP.: 11/30/2014

WATERWAY INFORMATION

Drainage Area = 54,784 acres		Low Grade Elev. 671.76 @ Sta. 103+00							
Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	2263	923	923	670.31	0.00	0.00	670.31	670.3
Base	50	3341	1067	1067	671.61	0.00	0.00	671.61	671.6
Overlapping	100	3846	1067	1067	672.21	0.00	0.00	672.21	672.2
Max. Calc.	500	5224	1067	1067	673.71	0.00	0.00	673.71	673.7



COLLINS ENGINEERS, INC.
11119 CADDO RD, SUITE 100
DALLAS, TEXAS 75243
TEL: 972-381-1111
WWW.COLLENGR.COM

USER NAME: diaza
DESIGNED: LJ
CHECKED: EKM
DRAWN: DR
PLOT DATE: 1/25/2019

DESIGNED: LJ
CHECKED: EKM
DRAWN: DR
PLOT DATE: 1/25/2019

DESIGNED: LJ
CHECKED: EKM
DRAWN: DR
PLOT DATE: 1/25/2019

DESIGNED: LJ
CHECKED: EKM
DRAWN: DR
PLOT DATE: 1/25/2019

DESIGNED: LJ
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PLOT DATE: 1/25/2019

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PLOT DATE: 1/25/2019

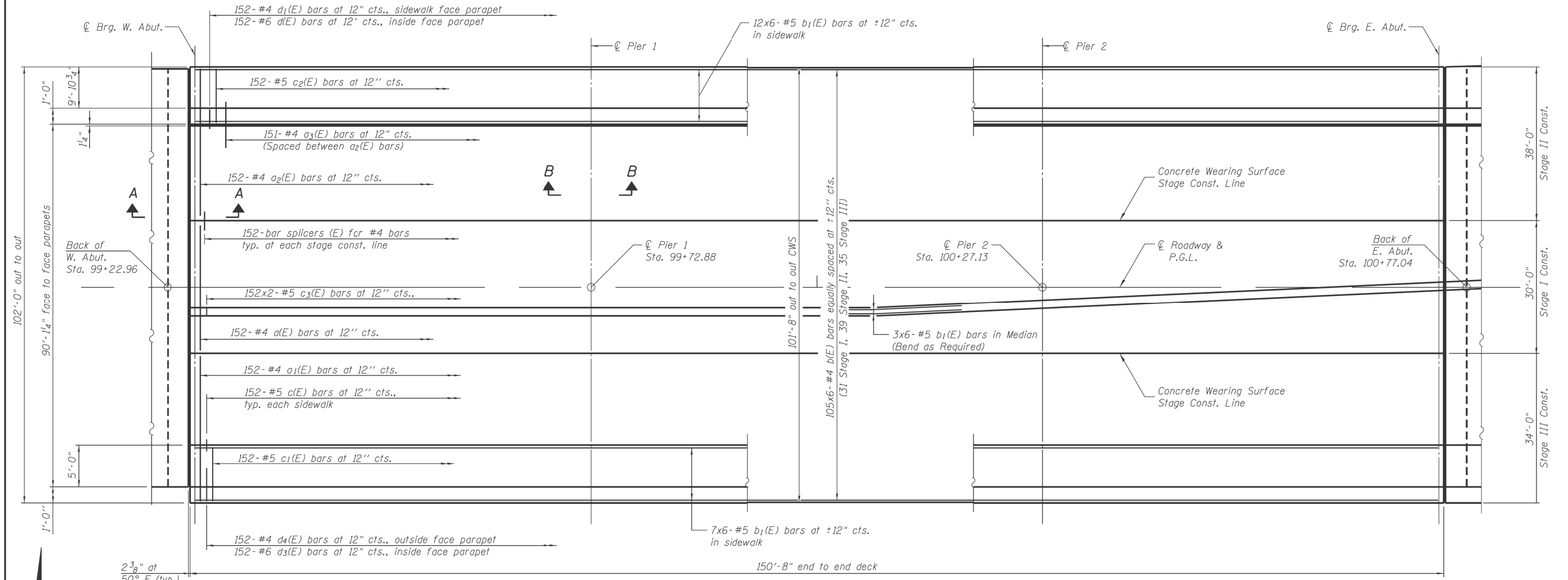
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 022-0158

SCALE: SHEET OF SHEETS STA. TO STA.

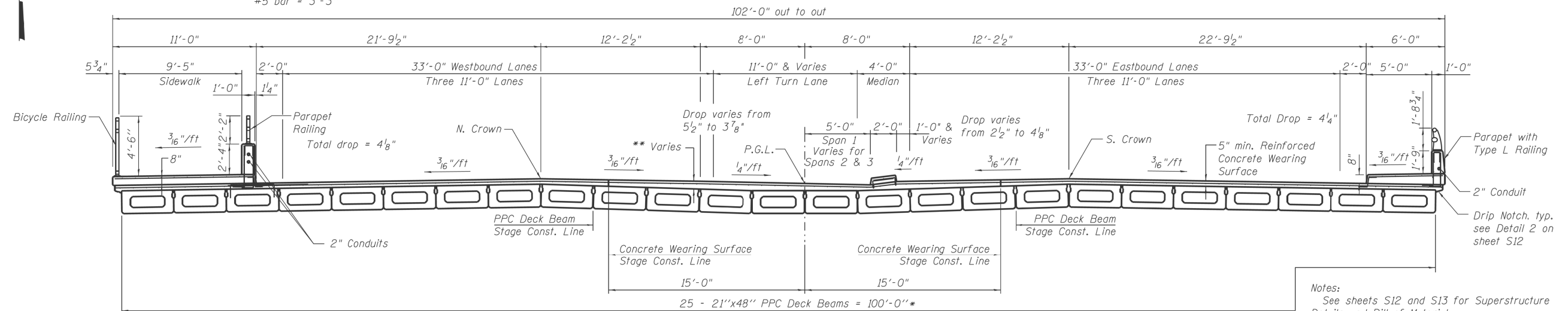
VAR. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
VAR. 2018-0148-I VARIOUS 86 44
CONTRACT NO. 62H78
ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY



MINIMUM BAR LAP
#4 bar = 2'-7"
#5 bar = 3'-3"

PLAN



CROSS SECTION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 022-0158

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	131B-BR	DUPAGE	111	80
CONTRACT NO. 60V24				
ILLINOIS FED. AID PROJECT				

COLLINS ENGINEERS
123 N. Main St.
Suite 200
Chicago, IL 60606
Tel: (312) 704-3300
Fax: (312) 704-3300
www.collinsengr.com
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 04-000993

USER NAME =	DESIGNED - LJ	REVISED
PLCT SCALE =	CHECKED - EKM	REVISED
PLCT DATE =	DRAWN - DR	REVISED
	CHECKED - LJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

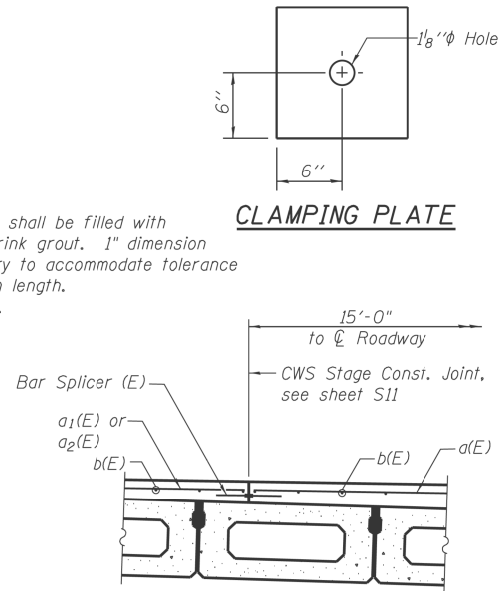
CROSS SECTION
SN: 022-0158

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	45
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET OF SHEETS STA. TO STA.

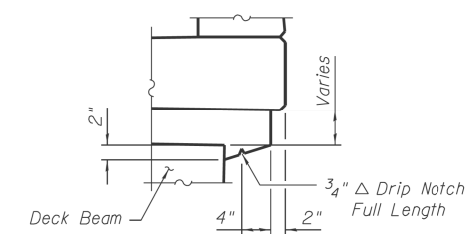
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PLOT SCALE = 100,0000 ' / in.	DRAWN -	REVISED -
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	DATE -	REVISED -

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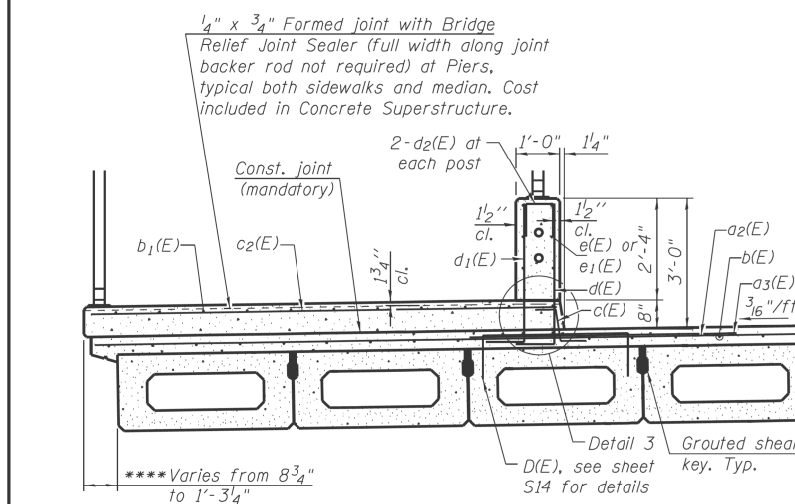
Cost included with Precast Prestressed Concrete Deck Beams.
See Stage Construction Details for traffic lanes.

*** Cast semicircular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts.

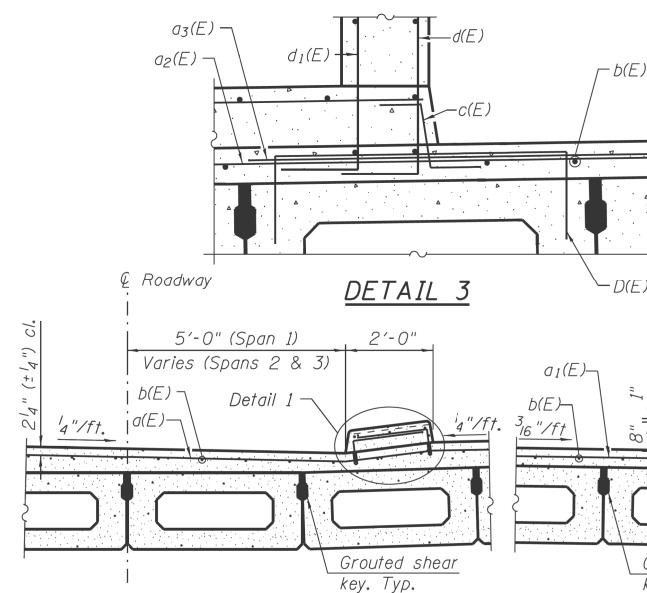


DETAIL 2

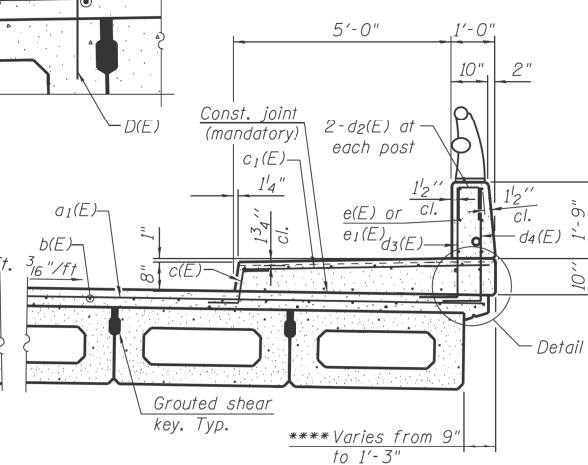
N. Sidewalk similar, opp. hand



SECTION THRU NORTH SIDEWALK



SECTION THRU MEDIAN



SECTION THRU SOUTH SIDEWALK

* The cost of expansion anchors/inserts is included in Reinforcement Bars, Epoxy Coated.
*** Dimensions vary depending on beam tolerances.

USER NAME =	DESIGNED - LJ	REVISED
	CHECKED - EKM	REVISED
PLCT SCALE =	DRAWN - DR/PRH	REVISED
PLCT DATE =	CHECKED - LJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS I
STRUCTURE NO. 022-0158

SHEET NO. S12 OF S26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	131B-BR	DuPAGE	111	81
CONTRACT NO. 60V24				
ILLINOIS FED. AID PROJECT				

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTION
SN: 022-0158

SCALE:				SHEET OF SHEETS		STA. TO STA.		CONTRACT NO. 62H78	
								ILLINOIS FED. AID PROJECT	

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	46
		CONTRACT NO. 62H78		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

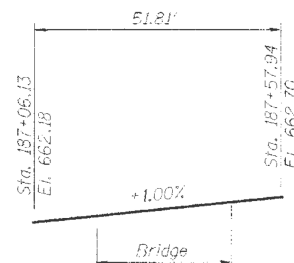
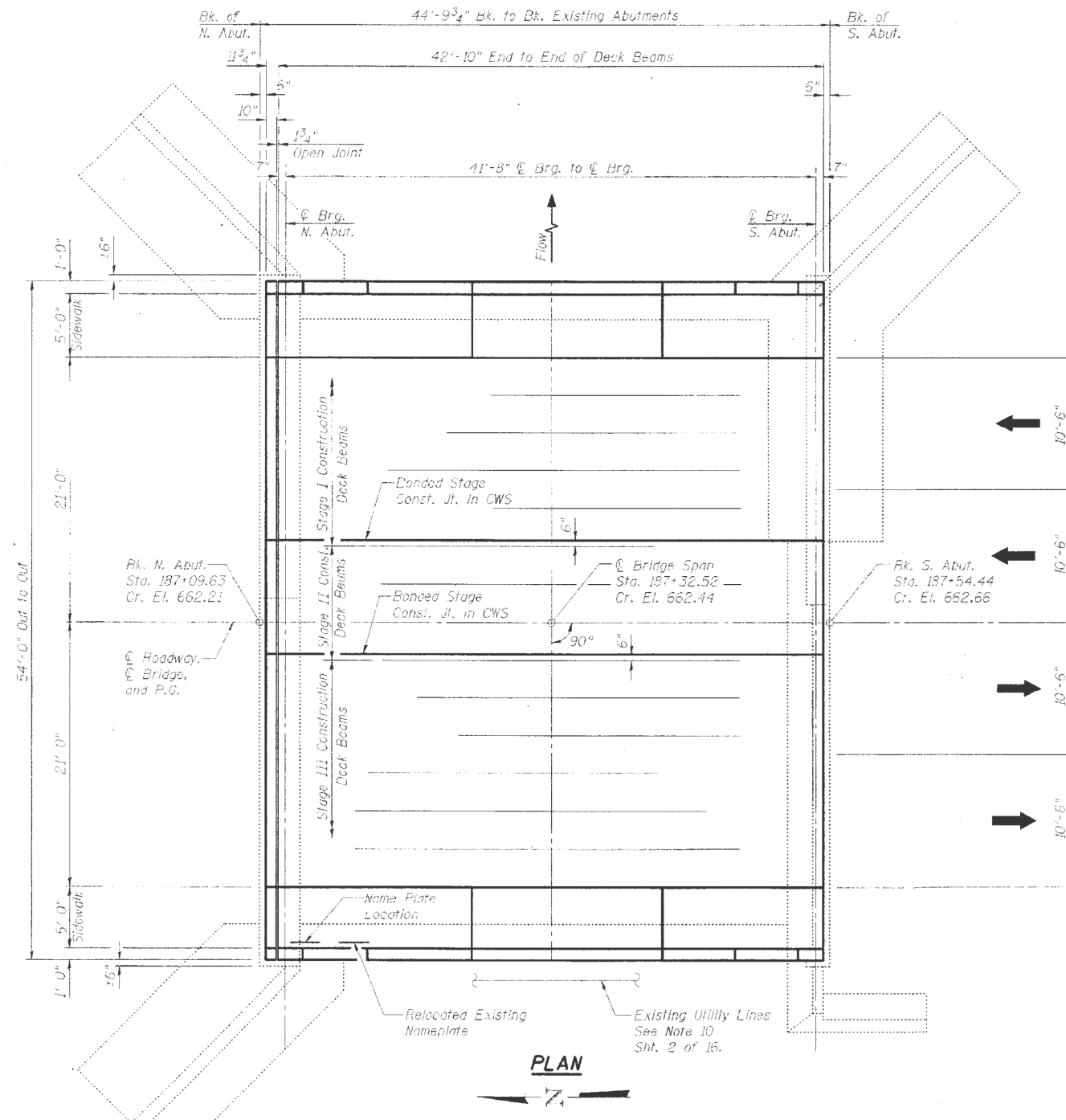
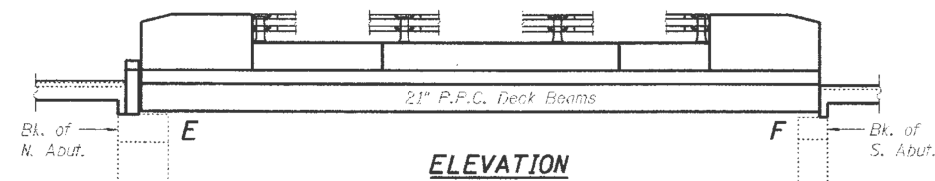
FIGURE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL	SHEET NO.
3887	AR-B	KANE	43	17	16 SHEETS
FED. ROAD DIST. NO. 111119 (CADD Data Design) 111119-0001.dgn					

Contract #60023

Benchmark:
Existing benchmark could not be found on N.E. wingwall. Top of N.E. wingwall was assumed at El. 661.84 (original benchmark elevation). Elevation was transferred to temporary benchmark which is railroad spike in west side of power pole, El. 662.23.

Existing Structure:
Original Bridge S.N. 045-0020 was built as R.C. Deck Girder with Closed Abutments next to thru steel girder Railroad Bridge in early 1900's. Railroad Bridge was removed and Highway Bridge was widened in kind, abutments modified, in 1935. This structure was rebuilt in 1978. Superstructure was removed and replaced with PPC Deck Beams. Abutments were modified for deck beams and repaired as required. The existing PPC Deck Beams, Sidewalk, and Parapets shall be removed and replaced utilizing stage construction. Existing brass name plate has SN 025-0020 imprinted rather than SN 045-0020.

Salvage:
Remove and re-erect existing aluminum railing. Relocate existing name plate.



PROFILE GRADE
at Roadway
(For Bridge Only)

DESIGNED	LLV
CHECKED	DDB
DRAWN	MGM
CHECKED	LLV

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes and Total Bill of Material
3. Stage I Construction
4. Stage II Construction
5. Stage III Construction
6. Temporary Concrete Barrier
7. Superstructure Details
8. Sections and Bearing Details
9. Strip Seal Joint Details
10. Concrete Wearing Surface
11. Sidewalk & Parapet Details
12. Parapet Details
13. Bar Splicer Assembly Details
14. Re-erected Aluminum Railing
15. North Abutment Details
16. Substructure Repairs

LOADING HS20-44

No Allowance for future wearing surface

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications

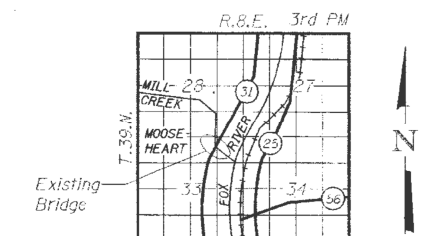
DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax strands)
 $f_{si} = 201,960$ psi (1/2" ϕ low lax strands)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.U. 3887 (IL 31)
OVER MILL CREEK
SECTION AR-B
KANE COUNTY STA. 187+31.80
STRUCTURE NO. 045-0020

STS CONSULTANTS
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph (309) 676-8464
FAX (309) 676-5445
IL Design Firm Reg. No. 184-001518

License Expires: 11/30/06
Date Signed: 11-2-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 045-0020

SCALE: SHEET OF SHEETS STA. TO STA.

VAR.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	47
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

USER NAME = diaza	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

FOR INFORMATION ONLY

Benchmark: Chiseled box on top of parapet at S.E. corner of existing bridge. Elev. = 100.00

Existing Structure: No. 045-0045 built in 1967.
Two span, 65'-5" Bk-Bk Abut. PPC Dk. Beams 46'-0" O.-O.
Concrete parapet with aluminum handrail on top.
4" CWS added in 1988.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA 13		Kane	27	7

SHEET NO. 1
10 SHEETS

Contract # 60B91

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes and Total Bill of Material
3. Stage Construction
4. Temporary Concrete Barrier
5. Superstructure Details - 17" Deck Beams
6. Superstructure Details - Sections and Joint Details
7. Rail Post Spacing and Concrete Wearing Surface
8. Steel Rolling, Type SM w/ Concrete Wearing Surface
9. Bar Splicer Assembly Details
10. Substructure Repairs

LOADING HS20-44

No Allowance for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi

$f_y = 60,000$ psi (reinforcement)

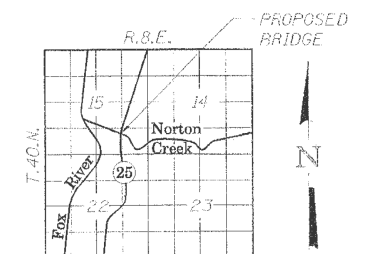
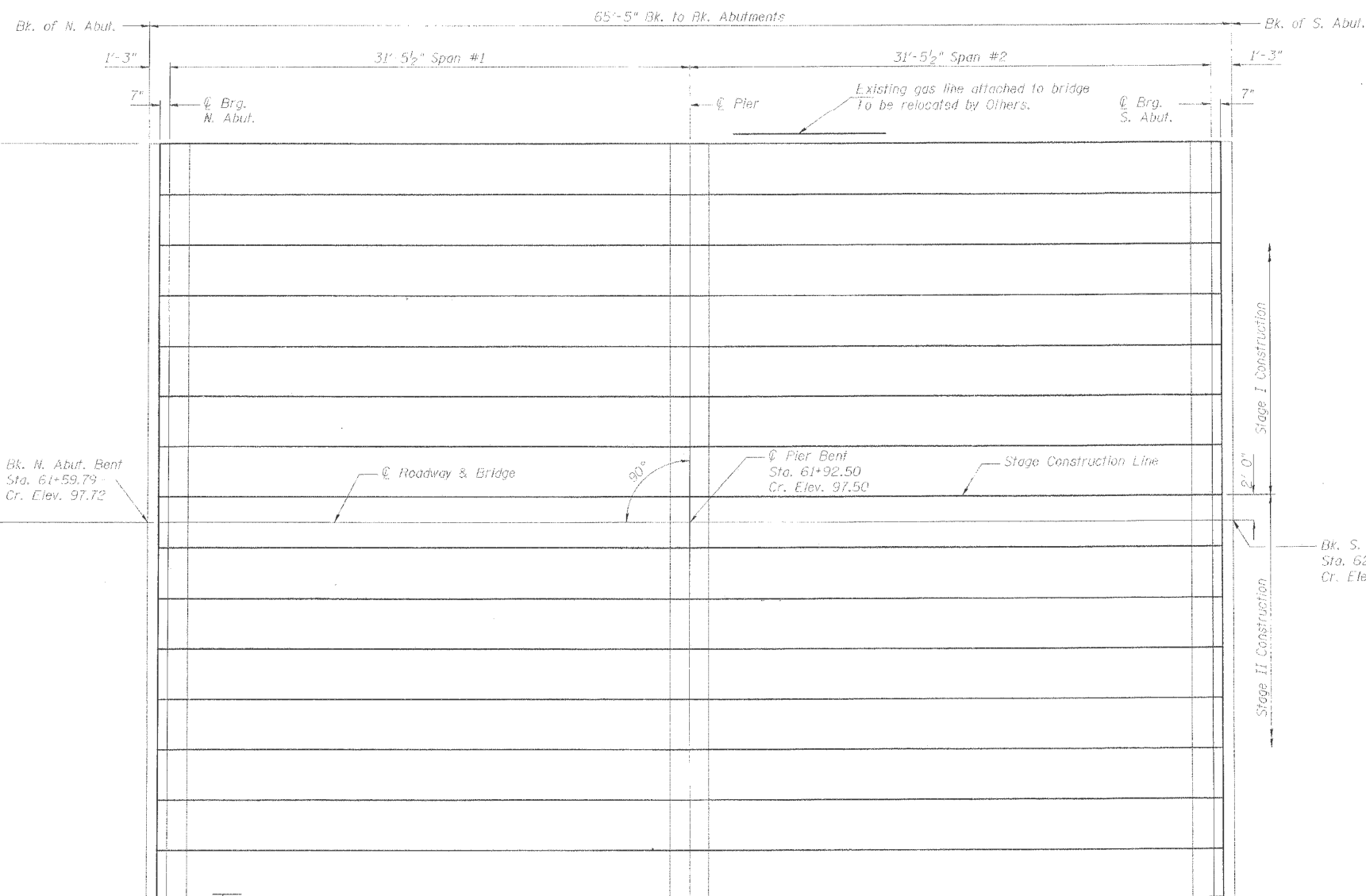
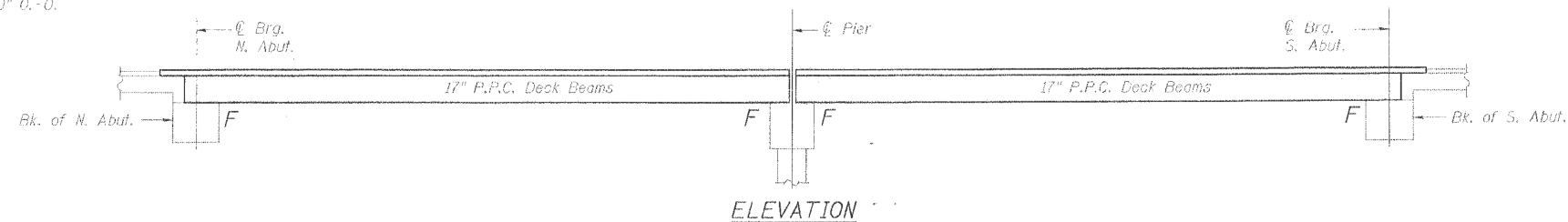
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi

$f_{hi} = 4,000$ psi

$f'_s = 270,000$ psi (1/2" ϕ low lax strands)

$f_{si} = 201,960$ psi (1/2" ϕ low lax strands)



LOCATION SKETCH

GENERAL PLAN & ELEVATION

S.A. 13 (IL RTE. 25)

OVER NORTON CREEK

S.A. RTE. 13 (F.A.S. 106)

KANE COUNTY, STA. 61+92.50

STRUCTURE NO. 045-0045

DESIGNED	DDB
CHECKED	LLV
DRAWN	MGM
CHECKED	DDB

EXAMINED	200
PASSED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ENGINEER OF BRIDGES AND STRUCTURES



License Expires: 11/30/08
Date Signed: 6-4-07



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 045-0045

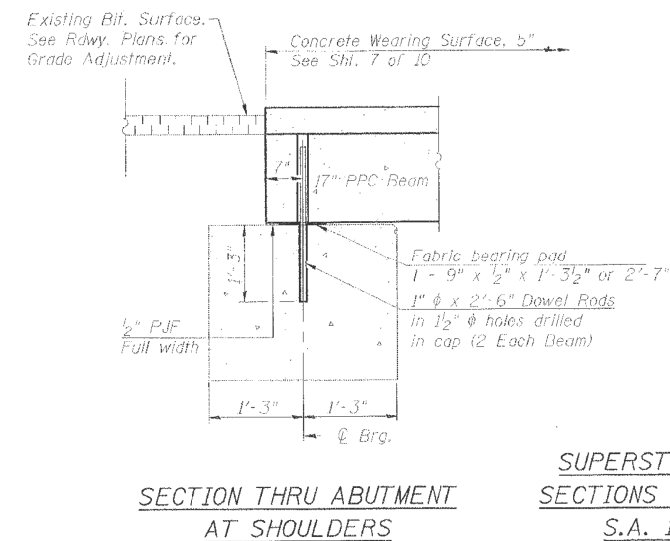
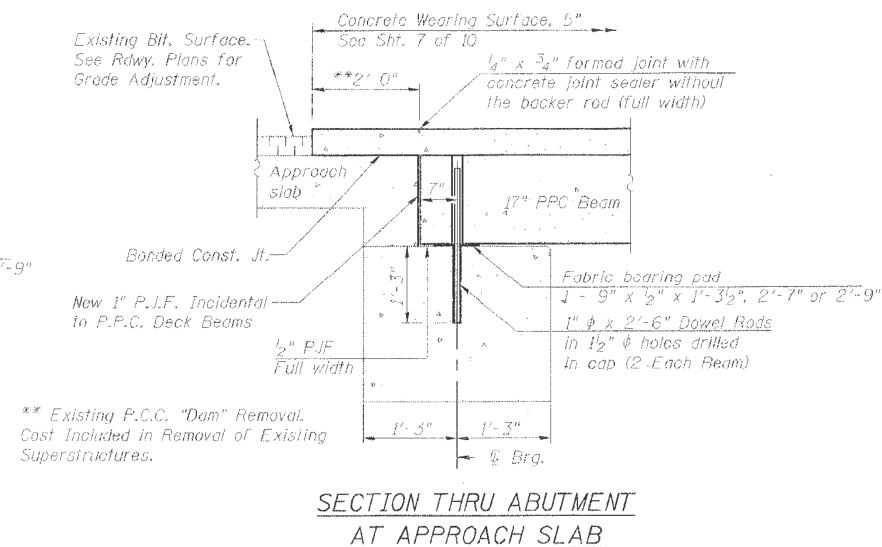
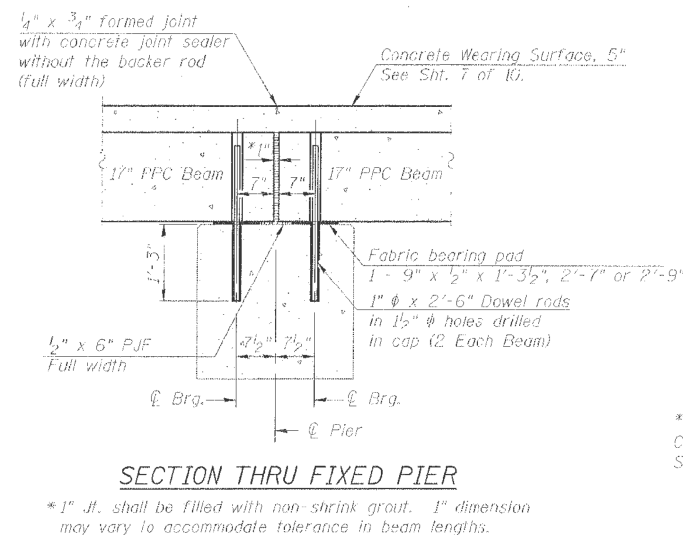
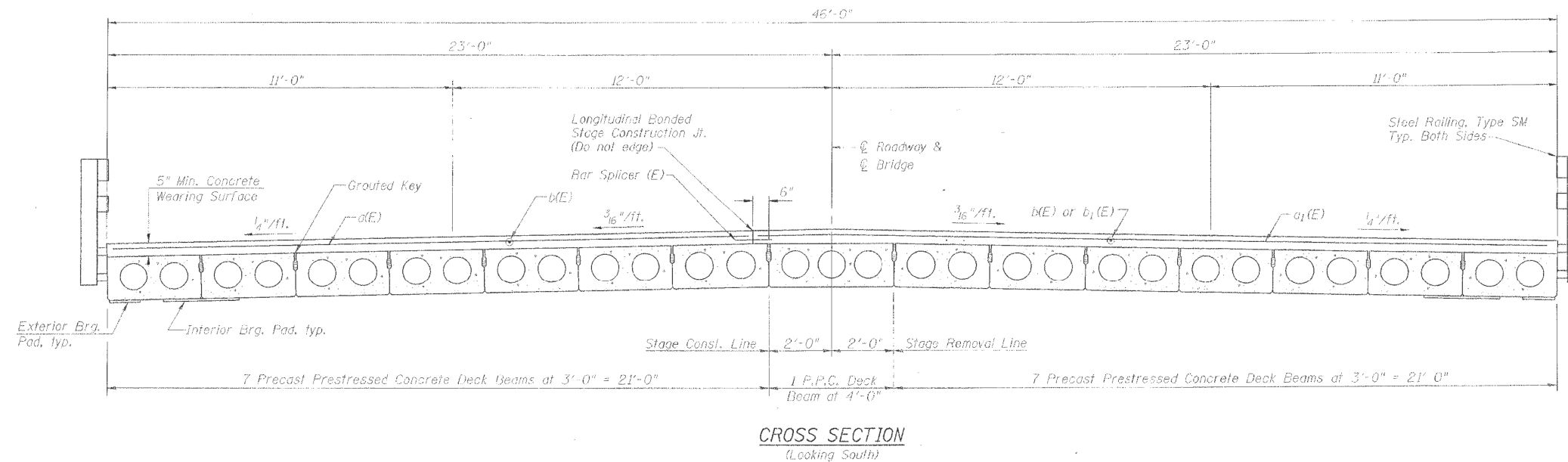
SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	49
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
SA 13		Kane	27	12
Contract # 60B81				



**SUPERSTRUCTURE DETAILS
SECTIONS AND JOINT DETAILS**
S.A. 13 (IL RTE. 25)
OVER NORTON CREEK
S.A. RTE. 13 (F.A.S. 106)
KANE COUNTY, STA. 61+92.50
STRUCTURE NO. 045-0045

DESIGNED	DDB	200
CHECKED	LLV	EXAMINED
DRAWN	MGM	PASSED
CHECKED	DDB	ENGINEER OF BRIDGES AND STRUCTURES

Notes:

- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
- All horizontal dimensions are at right angles to beam ends.
- See Sht. 5 of 10 for bearing pad details.
- Existing dowel rods shall be burned off flush with the top of the abutment or pier.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 045-0045

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	50
CONTRACT NO. 62H78				

ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
		Lake	17	9	7 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract Number: 62768

GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of each fascia beam. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

All construction joints shall be bonded.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Attach new Name plate to the inside face of parapet, southwest corner. Existing name plate is to be removed, cleaned and relocated adjacent to new name plate. Cost included in the cost of Name Plates.

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends to prevent movement of the beams.

Weight restrictions will be required for Stage I Traffic. See Roadway plans for sign details and placement locations. Signs must be placed prior to installation of Stage I traffic control.

LOADING HS20-44

No allowance for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi

$f'_c = 5,000$ psi (Concrete Wearing Surface)

$f_y = 60,000$ psi (Reinforcement)

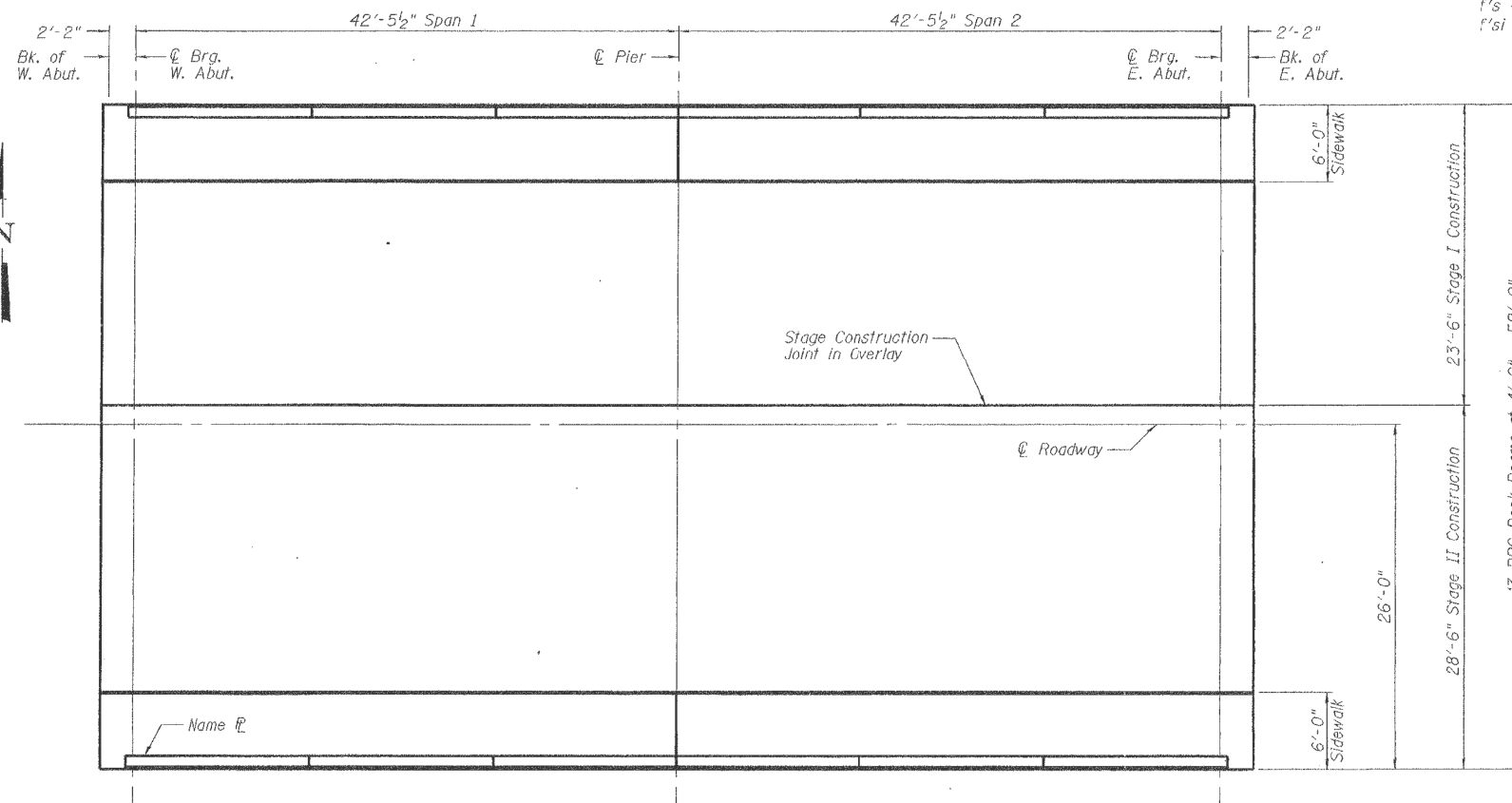
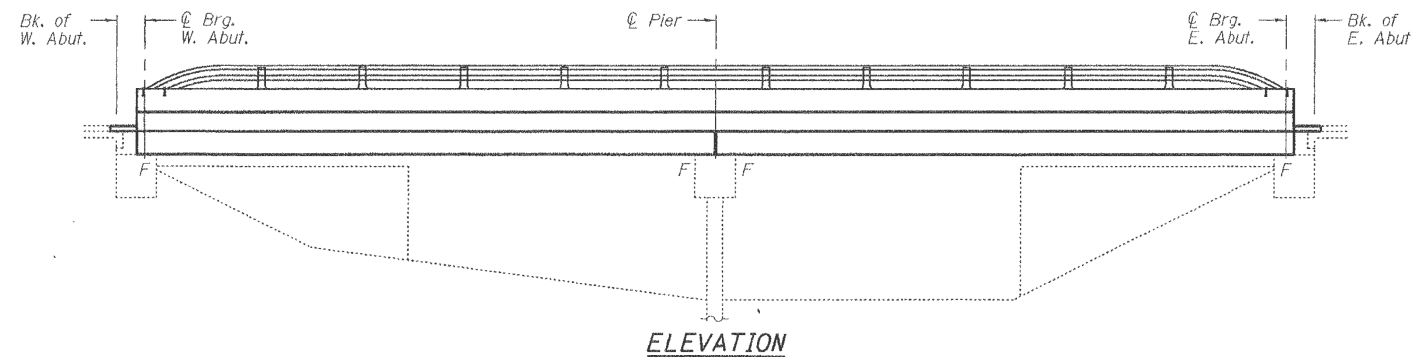
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi

$f'_{ci} = 4,000$ psi

$f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax strands)

$f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax strands)



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq. Yd.	565.8
Removal of Existing Superstructures	Each	1
PPC Deck Beams (21" Depth)	Sq. Ft.	4,476
Reinforcement Bars, Epoxy Coated	Pound	12,030
Aluminum Railing Type L	Foot	170
Concrete Wearing Surface, 5"	Sq. Yd.	521
Bridge Deck Grooving	Sq. Yd.	383.9
Name Plates	Each	1
Bar Splacers	Each	91
Concrete Structures	Cu. Yd.	0.5
Concrete Superstructure	Cu. Yd.	46.8
Concrete Removal	Cu. Yd.	0.5

STATION 65+88.00
RE-BUILT 20 BY
STATE OF ILLINOIS
F.A.U. ROUTE 1253
SEC. Y-B-R-2
LOADING HS20
STR. NO. 049-0011

NAME PLATE
(See Std. 515001)

PLAN AND ELEVATION
F.A.U. RT. 1253
HALF DAY RD / EAST
BRANCH OF SKOKIE DITCH
LAKE COUNTY
SN 049-0011

DESIGNED	John T. Holloway
CHECKED	John T. Holloway
DRAWN	John T. Holloway
CHECKED	John T. Holloway

September 21, 2006
EXAMINED John A. Morrison
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Expires: November 30, 2006

SLT-91-001-06

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN SN: 049-0011

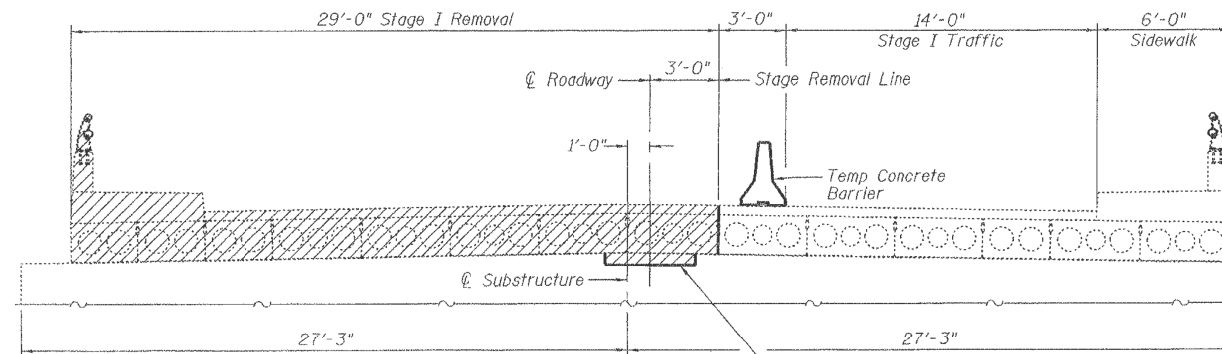
SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	51
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

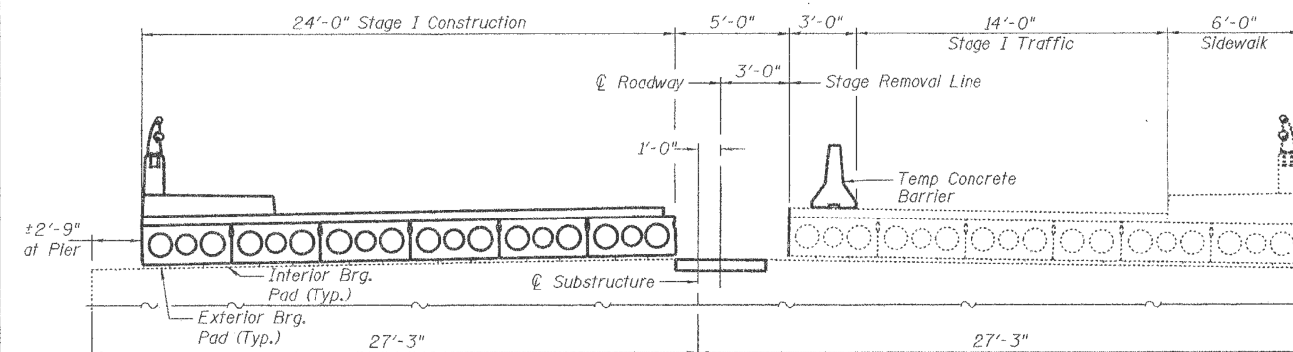
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
		Lake	17	10	7 SHEETS
Contract Number: 62768					

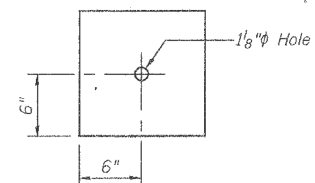


STAGE I REMOVAL

Part of Brg. Seat at Abutments and Pier to be removed and replaced in Stage I. See sheet 4 of 7 for details.

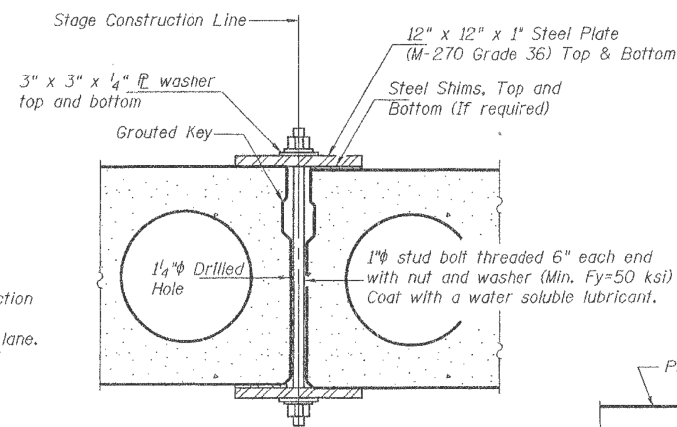


STAGE I CONSTRUCTION



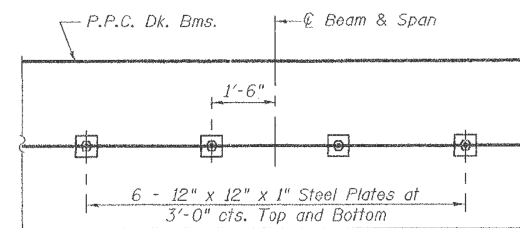
CLAMPING PLATE

Notes:
See Special Provisions for Stage Construction
Precast Prestressed Concrete Deck Beams.
See Stage Construction Detail for traffic lane.
Cost is included with Precast Prestressed Concrete Deck Beams.

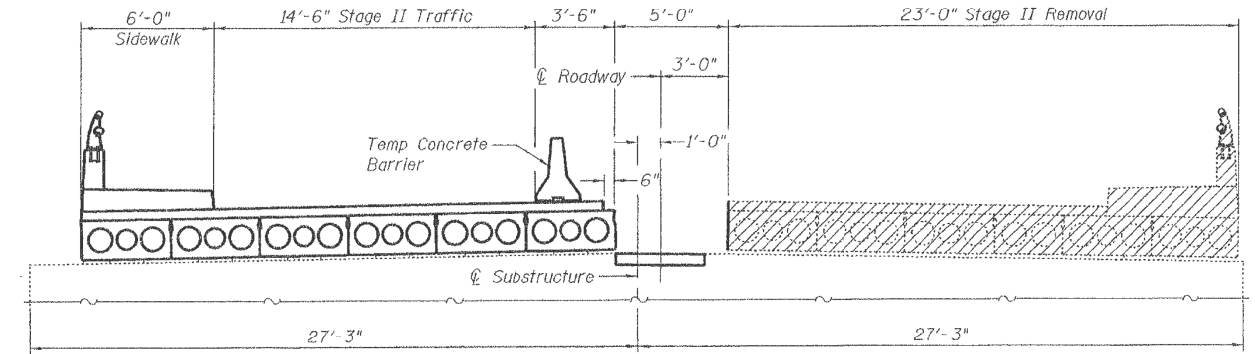


DESIGNED	A.T.H.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	A.T.H. S.J.B.

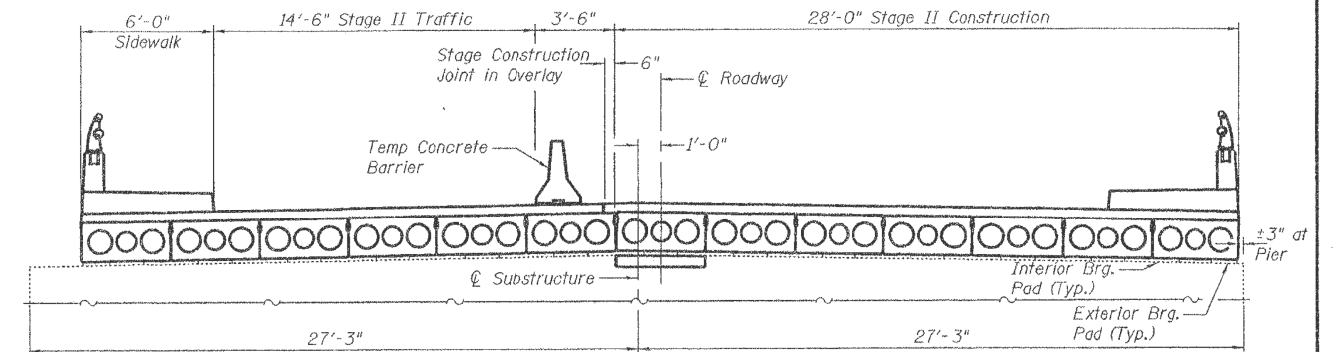
September 21, 2006
EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



PLAN AT STAGE CONSTRUCTION LINE

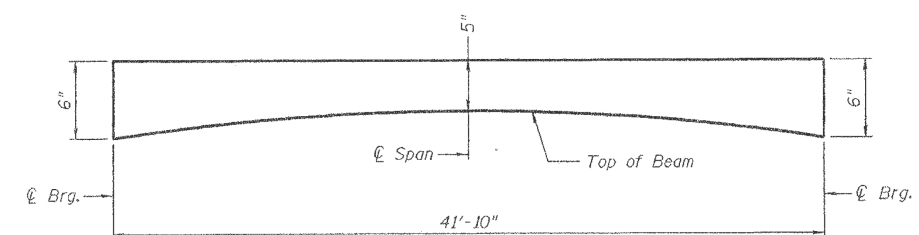


STAGE II REMOVAL



STAGE II CONSTRUCTION

Notes:
All cross-sections are looking East.
Cross hatched area indicates area of removal.
For Temporary Concrete Barrier Details see sheet 6 of 7.



CONCRETE WEARING SURFACE PROFILE

STAGE CONSTRUCTION DETAILS
F.A.U. RT. 1253
HALF DAY RD / EAST
BRANCH OF SKOKIE DITCH
LAKE COUNTY
SN 049-001!

SLT-91-001-06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 049-0011

SCALE: SHEET OF SHEETS STA. TO STA.

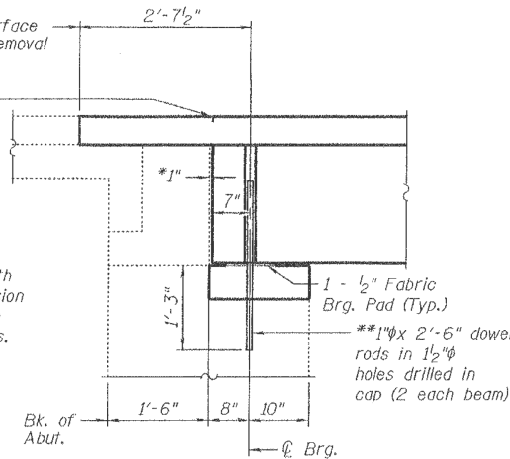
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	52
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

Limits of existing wearing surface removal. Cost included with Removal of Existing Superstructures.

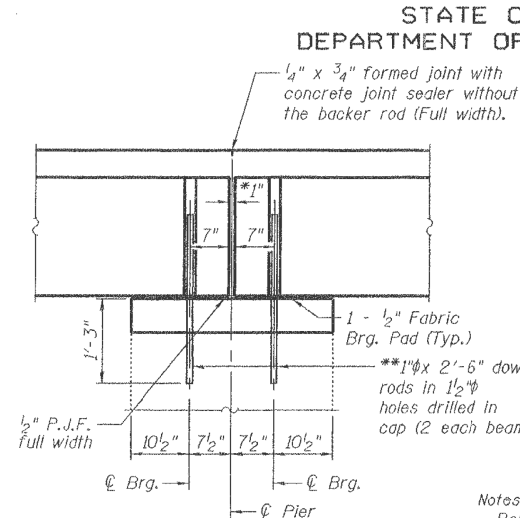
1/4" x 3/4" formed joint with concrete joint sealer without the backer rod (Full width).

* Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.

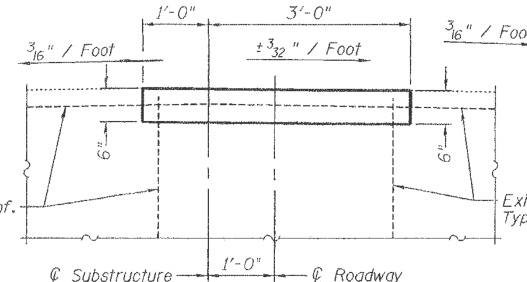


TYPICAL SECTION AT ABUTMENT
(Looking North)
(Near ϕ Roadway)

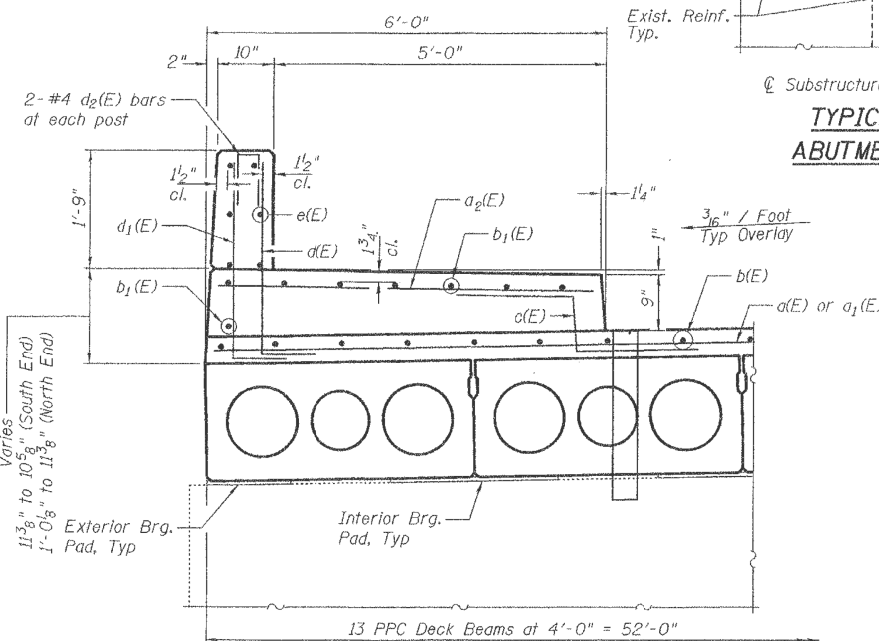
**Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing Superstructure. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.



TYPICAL SECTION AT PIER
(Looking North)
(Near ϕ Roadway)



TYPICAL ELEVATION AT ABUTMENTS AND PIER CAP
(Looking West)



TYPICAL CROSS SECTION SHOWING SIDEWALK

DESIGNED A.T.H.
CHECKED S.J.B.
DRAWN Drew Christopher
CHECKED A.T.H. S.J.B.

September 21, 2006
EXAMINED John A. Morris
PASSED Ralph E. Anderson

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	91	#4	23'-3"	
a1(E)	91	#4	28'-3"	
a2(E)	182	#5	5'-6"	
b(E)	212	#4	24'-0"	
b1(E)	64	#5	24'-6"	
c(E)	182	#5	2'-4"	
d(E)	180	#6	3'-3"	
d1(E)	180	#4	3'-3"	
d2(E)	40	#4	2'-0"	
e(E)	72	#5	14'-0"	
Bar Splicers	Each	91		
Reinforcement Bars, Epoxy Coated	Pound	12,030		
Concrete Wearing Surface, 5"	Sq. Yd.	521		
Concrete Superstructure	Cu. Yd.	46.8		
Concrete Structures	Cu. Yd.	0.5		

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Min. Bar Lap

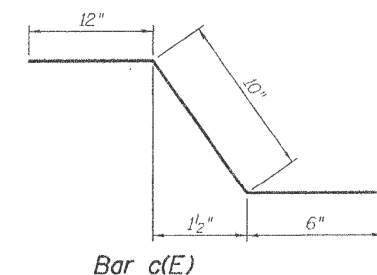
#4 = 1'-8"
#5 = 2'-2"

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Lake	17	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: 62768

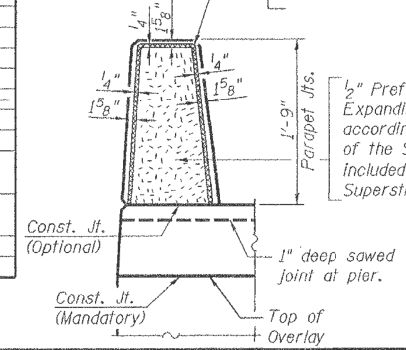
SHEET NO. 4
7 SHEETS

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.
Reinforcement bars for concrete wearing surface shall be placed at least 2" from edge of drain pipes.
Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.

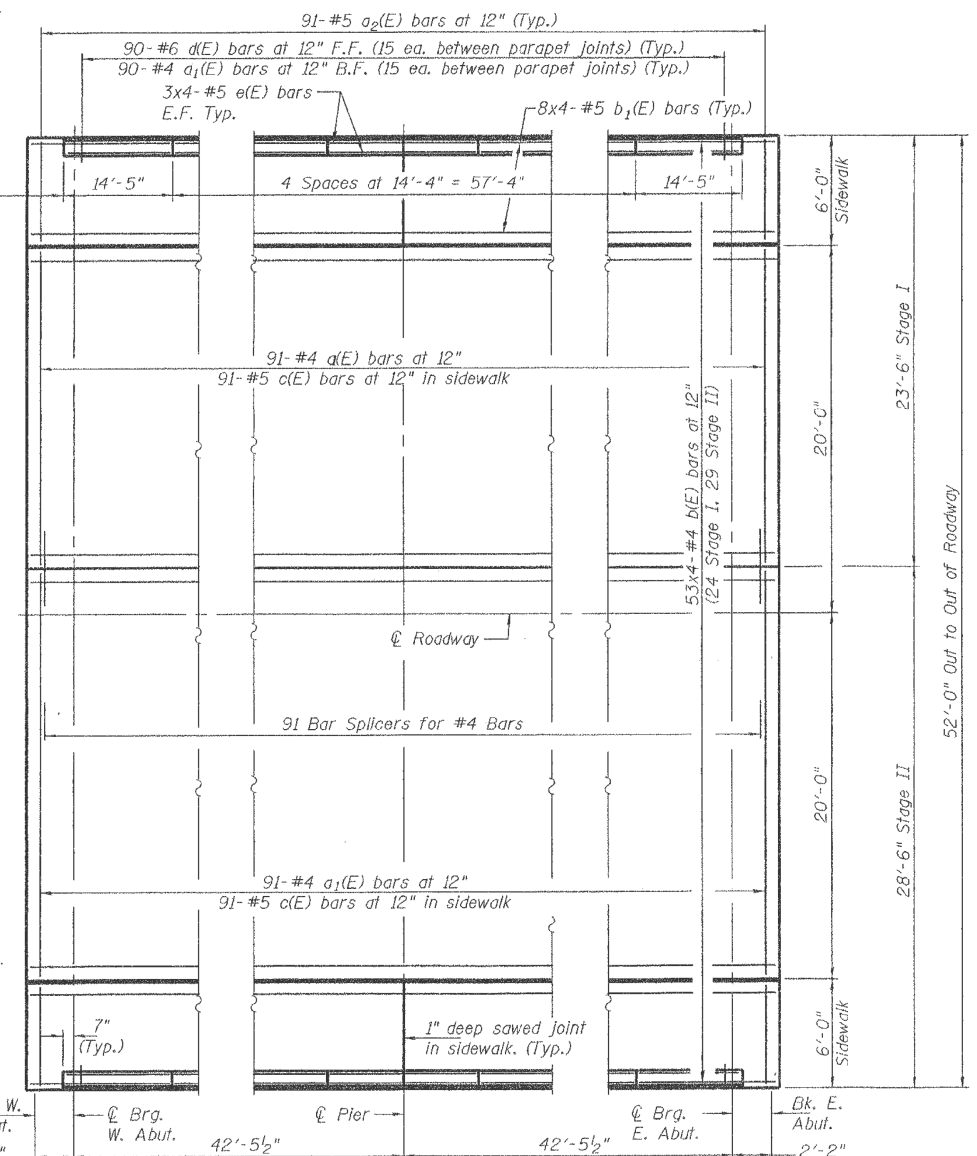


Bar c(E)

Non-staining gray one component non-sag elastomeric guri grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, Use T.



PARAPET JOINT DETAILS



OVERLAY PLAN

Bar d2(E)

OVERLAY DETAILS AND TYPICAL SECTIONS
F.A.U. RT. 1253
HALF DAY RD / EAST
BRANCH OF SKOKIE DITCH
LAKE COUNTY
SN 049-0011

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK PLAN SN: 049-0011

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	53
				CONTRACT NO. 62H78

ILLINOIS FED. AID PROJECT

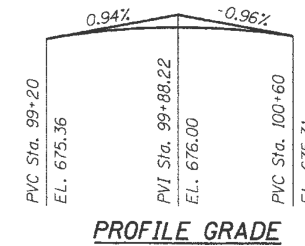
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark : Benchmark #1 - cut " " in top of northwest wingwall.
Assumed elevation = 675.14'

Existing Structure: S.N. 049-0059 built in 1929 and completely replaced in 1978 as a three span 17"x36" PPC Deck Beam bridge with 2" bituminous wearing surface on closed abutments and 2 piers on spread footings. The structure measures 114'-0 1/2" back to back abutments and 41'-0" out to out. Bridge was rehabilitated in 2002 with a new 4" concrete wearing surface. Traffic is to be maintained utilizing stage construction. One lane of alternating two-way traffic is to be maintained using traffic signals.

Salvage: None



LOADING HL-93
Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS
2007 AASHTO LRFD 4th Edition

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
 f'_c = 5000 psi (Concrete Wearing Surface)
 f_y = 60000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'_c = 6000 psi
 f'_ci = 5000 psi
 f'_s = 270,000 psi (1/2" ϕ low lax. strands)
 f'_si = 201,900 psi (1/2" ϕ low lax. strands)

SEISMIC DATA

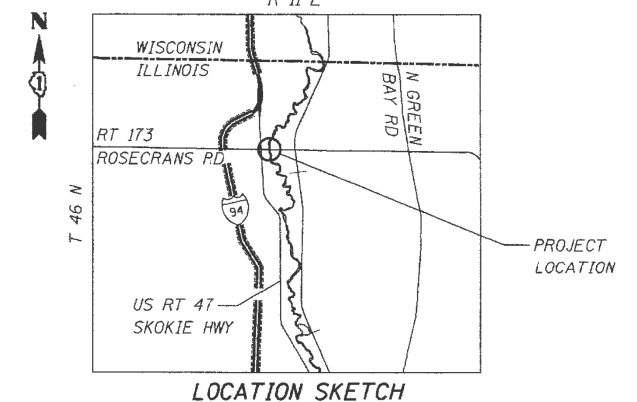
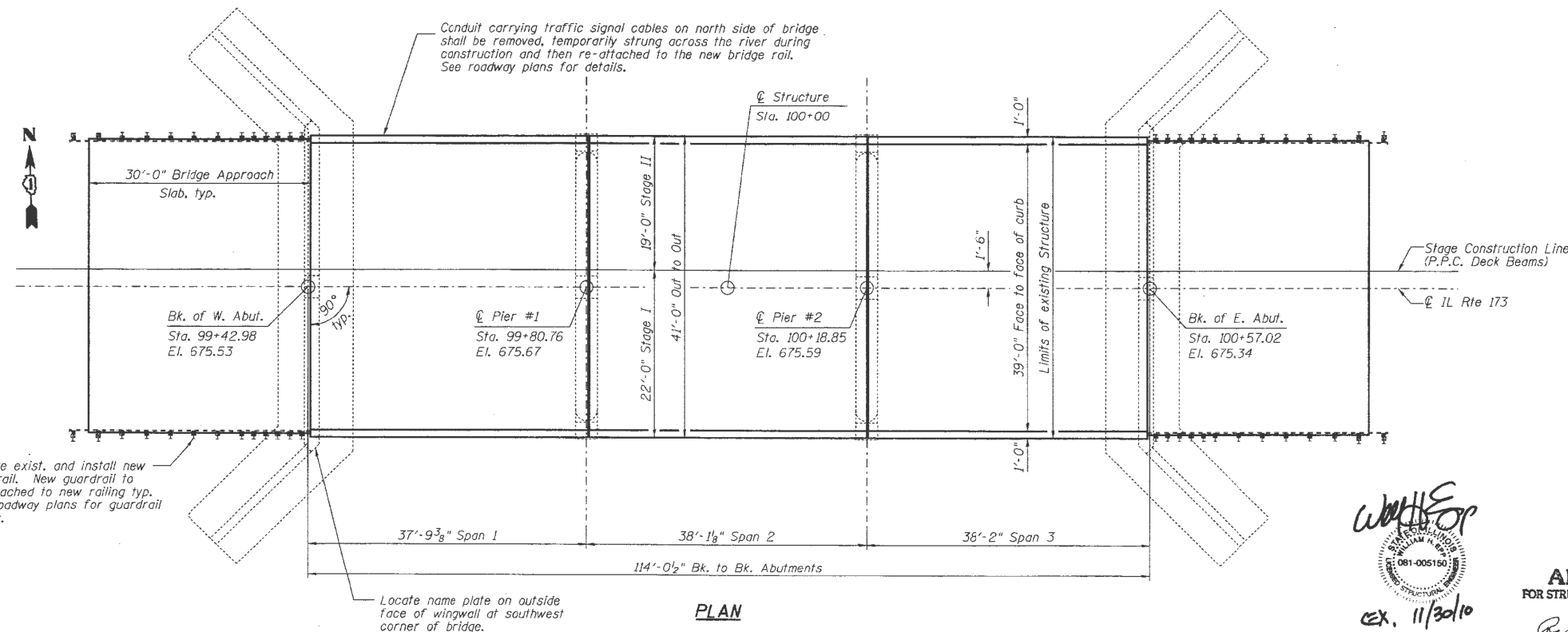
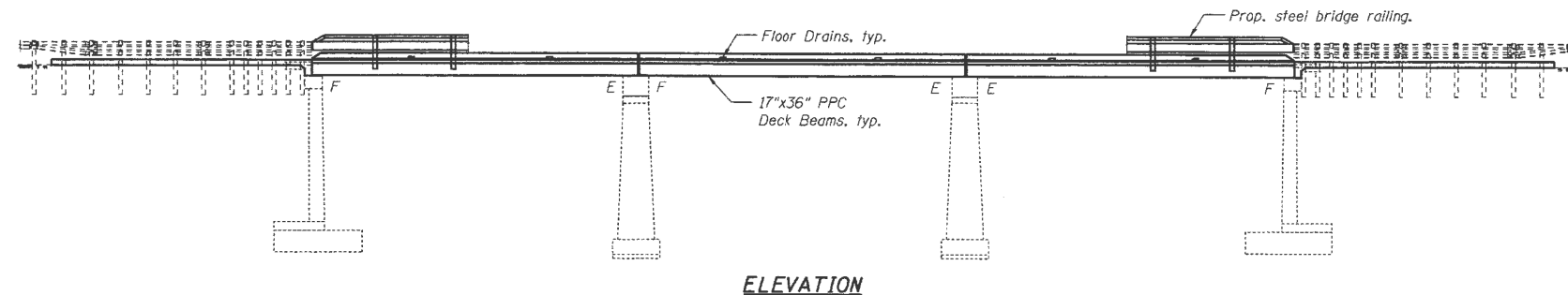
Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2

STATION 100+00.00
REBUILT 20_ _ BY
STATE OF ILLINOIS
F.A.P. ROUTE 303 SEC 136 B-1
LOADING HL-93
STRUCTURE NO. 049-0059

NAME PLATE

See Std. 515001

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



LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
IL 173 OVER DES PLAINES RIVER**

**F.A.P. RT. 303
SECTION 136 B-1**

LAKE COUNTY

STA. 100+00.00

STRUCTURE NO. 049-0059

DESIGNED	-	SLV
CHECKED	-	DJB
DRAWN	-	SLV
CHECKED	-	DJB

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

WATTS
EX. 11/30/10

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Miller
ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. S1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
OF S20 SHEETS	303	136 B-1	LAKE	43	16
D-91-290-09		CONTRACT NO. 60F93			
FED. ROAD DIST. NO. _		ILLINOIS	FED. AID PROJECT		

USER NAME = diaza	DESIGNED -	REVISED -
PLOT SCALE = 100,000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

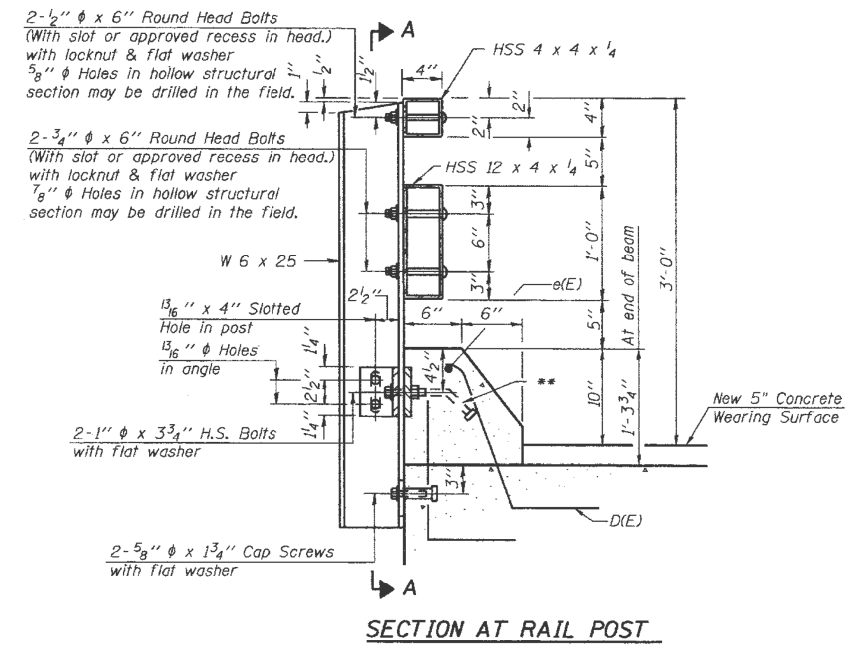
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 049-0059

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	54
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: c:\nw\084ERIN\TEG Illinoi.com\DOT Documents\DOT_Offices\District_1\Projects\0111419\CADData\Baseline\0111419_egenr1.dgn



NOTES

For remainder of Superstructure Details see Sheet S8 of S20.
Bars Indicated thus 40x2-#4, etc, indicates 40 lines of bars with 2 lengths per line.

USER NAME = diazda	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

CROSS SECTION
SN: 049-0059

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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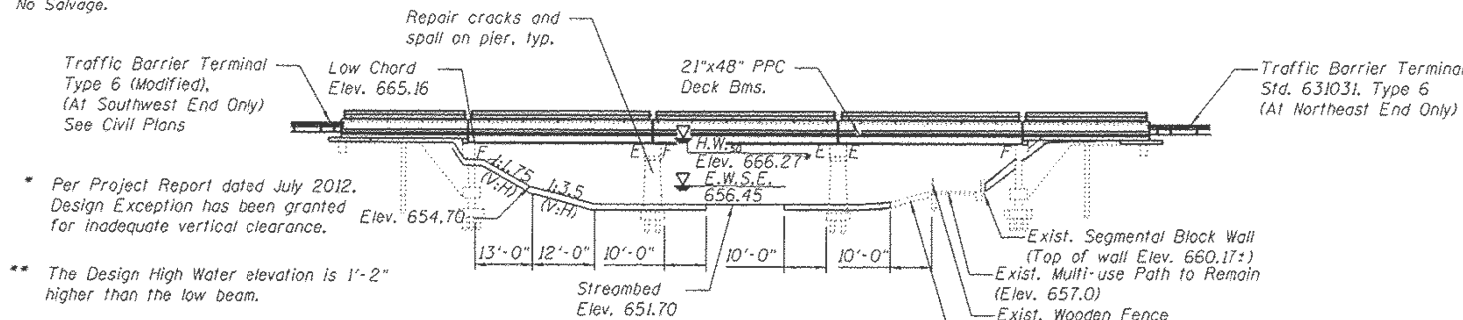
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	55
		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY

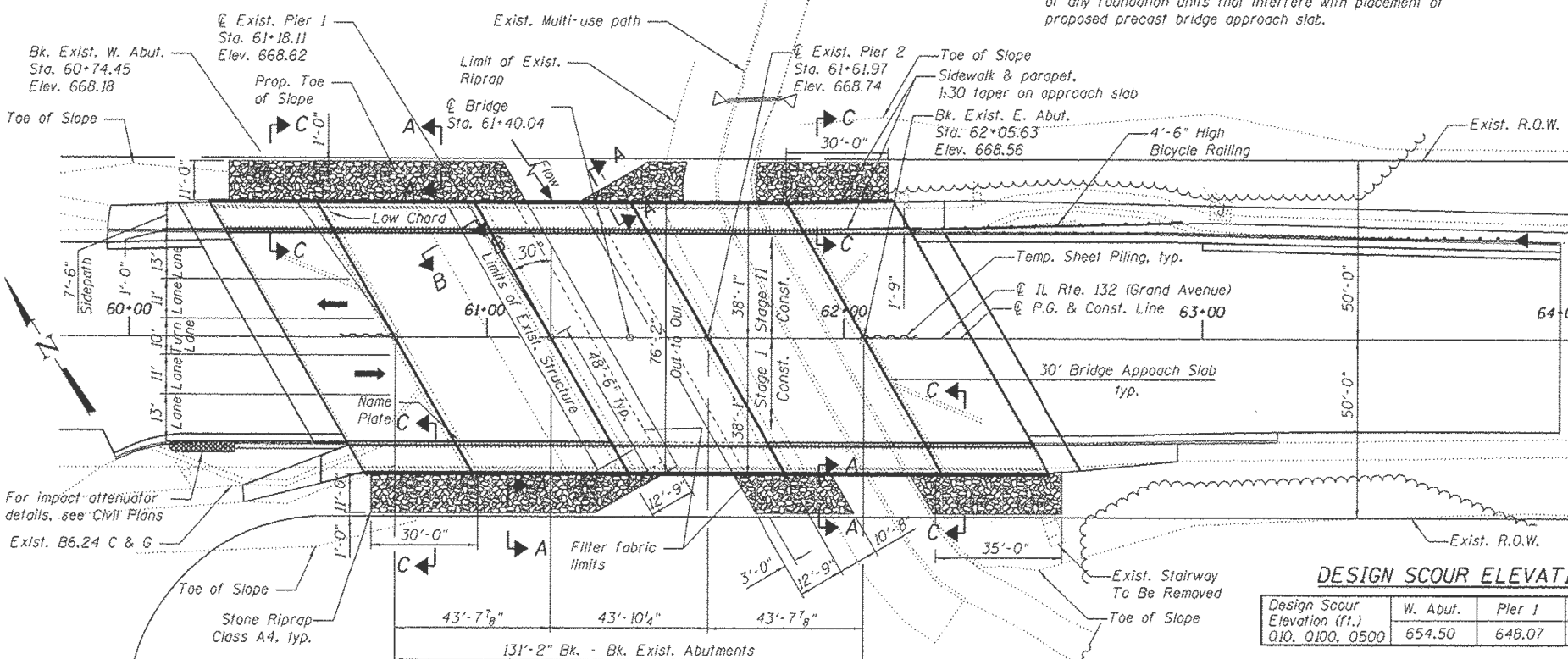
Stamped "IDMR" Brass Plug in Southwest Headwall. Elev. 671.36.

Existing Structure: Built as SN 049-0062 in 1920 as FAP-541 Section X-6B; a 3 span concrete T-beam superstructure with abutments and piers on pile caps with timber piles. Widened in 1957 by extending abutments and piers and placing PPC Dk. Bms. for the superstructure. Superstructure widened to 73' in 1995 by replacing the PPC Dk. Bms. and cantilevering the abut and pier caps; 131'-2" bk.-bk. abutments. Superstructure to be removed and replaced with PPC deck beams; minor spalls in substructure to be repaired. Traffic to be maintained using stage construction.

No Salvage.



ELEVATION

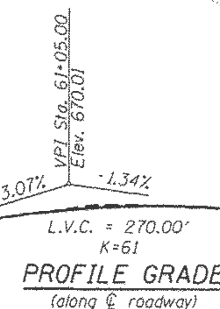


WATERWAY INFORMATION

		Existing Low Grade Elev. 662.95 (East of Bridge)		Proposed Low Grade Elev. 662.95 (East of Bridge)			
Drainage Area = (225 Sq. Mi.)							
Flood	Freq.	0	Opening Sq. Ft.	Nat.	Head - Ft.	Headwater El.	
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.
Design	50	4836	1197	1224	666.27	0.11	0.11
Base	100	5644	1197	1224	667.19	0.06	0.06
Overtopping	<10						
Max. Calc.	500	7723	1197	1224	669.58	0.02	0.02

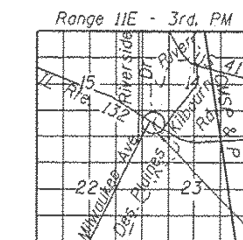
10 year velocity through existing and proposed structures = 1.95 ft/sec

PLAN



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
Q10, Q100, Q500	654.50	648.07	648.04	654.50



LOCATION SKETCH

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications
6th Edition for Superstructure
2002 AASHTO LRFD Bridge Design Specifications
17th Edition for Substructure

LOADING HL-93

ORIGINAL DESIGN STRESSES

FIELD UNITS

f'_c = 1,400 psi (Superstructure)
 f'_c = 800 psi (Substructure)
 f_s = 20,000 psi (Reinforcement)
 f_s = 18,000 psi (Structural)
 n = 10

DESIGN STRESSES

FIELD UNITS

f'_c = 5,000 psi (Wearing Surface)
 f'_c = 3,500 psi (Substructure)
 f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

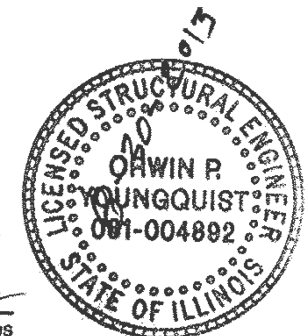
f'_c = 6,000 psi
 f'_c = 5,000 psi
 f_{pu} = 270,000 psi ($\frac{1}{2}$ " ϕ Low Relaxation Strands)
 f_{pb} = 201,960 psi ($\frac{1}{2}$ " ϕ Low Relaxation Strands)

SEISMIC DATA

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

APPROVED
For Structural Adequacy Only

[Signature]
Engineer of Bridges & Structures



Sheets: S1, S2, S3, S4, S5, S6, S7,
S8, S9, S10, S11, S12, S13,
S14, S15, S16, S17, S18, S19,
S20, S21, S22, S23

[Signature]
Expires: 11/30/2014

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 132 OVER DES PLAINES RIVER
F.A.P. 541 (IL 132) - SECTION X-6B-R
LAKE COUNTY
STATION 61+40.04
STRUCTURE NO. SN 049-0062



USER NAME	4401	DESIGNED	OY	REVISED	
FILE NAME	049-0062.01.CP&E.dgn	CHECKED	DB	REVISED	
		DRAWN	CM	REVISED	
PLOT DATE	8/29/2013	CHECKED	OY	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 049-0062

SHEET NO. 51 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	X-6B-R	LAKE	93	42
CONTRACT NO. 60N22				
ILLINOIS FED. AID PROJECT				

USER NAME	diada	DESIGNED	-	REVISED	-
		DRAWN	-	REVISED	-
PLOT SCALE	= 100,000' / in.	CHECKED	-	REVISED	-
PLOT DATE	= 1/25/2019	DATE	-	REVISED	-

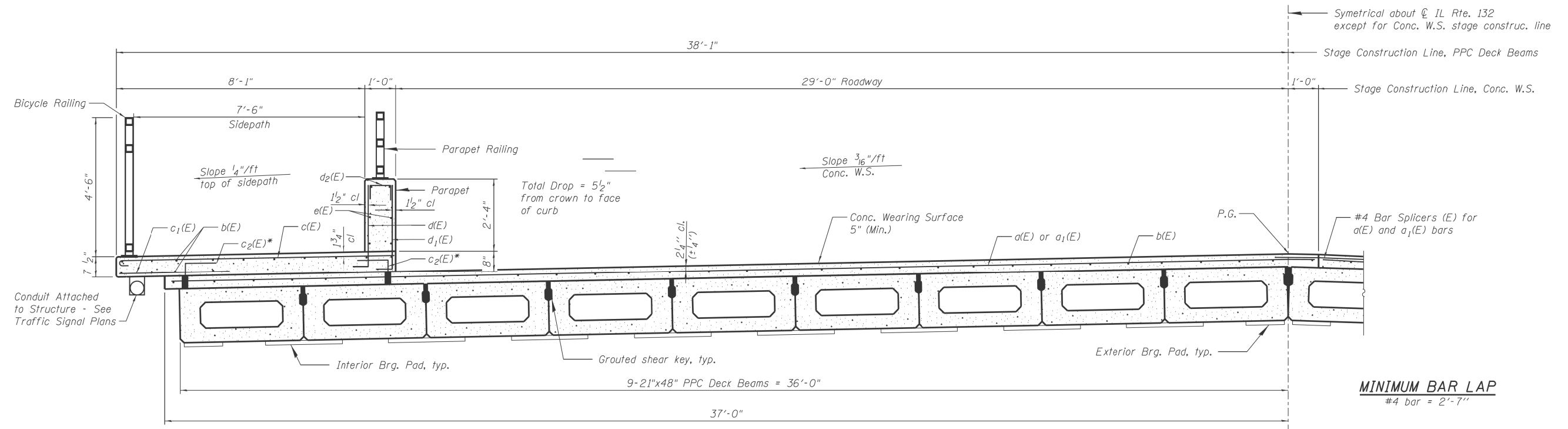
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 049-0062

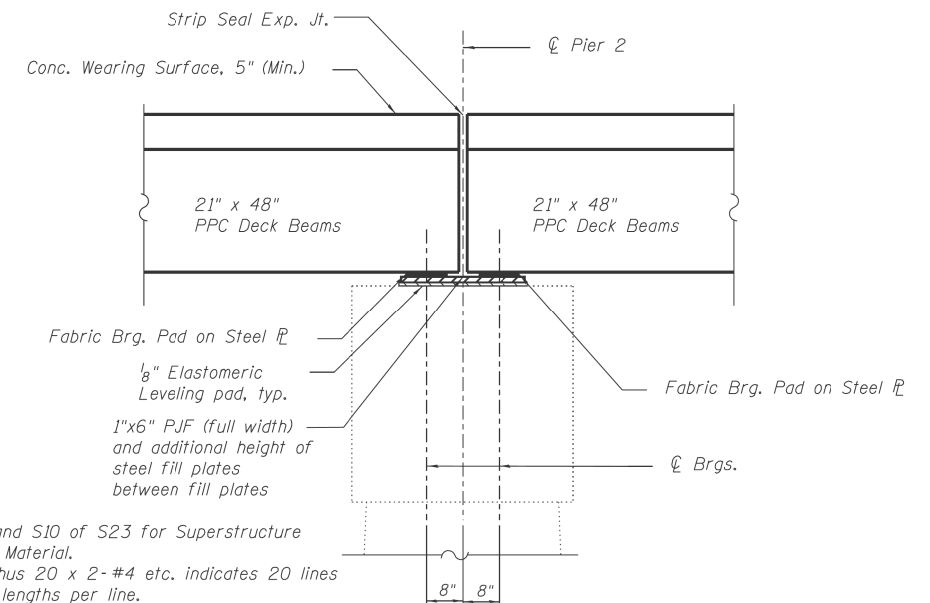
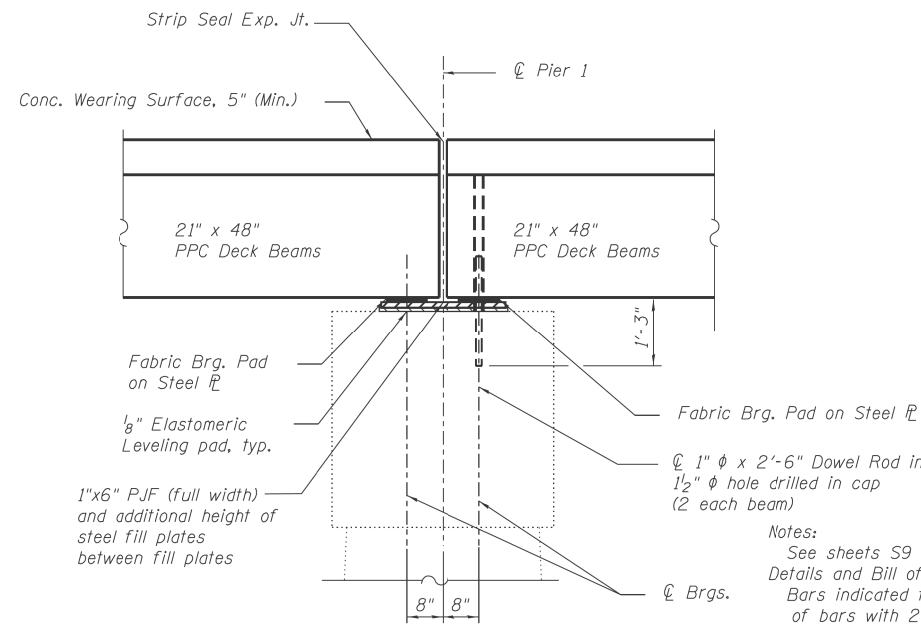
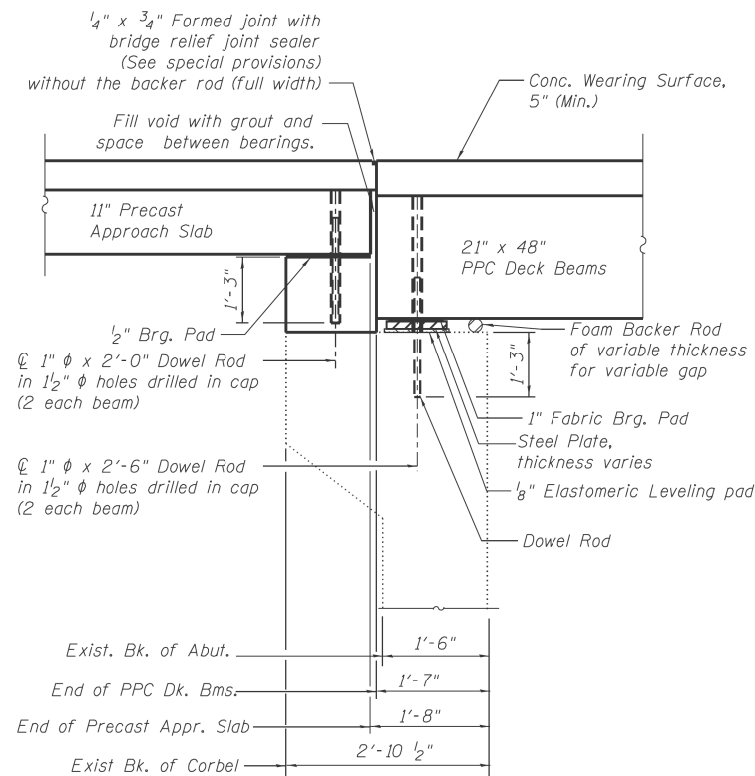
SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	56
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



CROSS SECTION
(Looking East)



Notes:

See sheets S9 and S10 of S23 for Superstructure Details and Bill of Material.

Bars indicated thus 20 x 2'-#4 etc. indicates 20 lines of bars with 2 lengths per line.

Spacing of a(E) and a₁(E) bars shall be measured along the C of structure.

*Epoxy grout bars into 5" deep drilled holes in the Concrete Wearing Surface accordance with Section 584 of the Standard Specifications.

All concrete wearing surface on deck beams shall be placed prior to casting a backwall and/or approach slab.

See sheet S18 of S23 for fabric bearing pad details.

Foam backer rod and grout included in Cost for PPC Deck Beams, 21" Depth.

1/8" Elastomeric leveling pads shall have material properties according to Art. 1052.02 of the Standard Specifications.

Model: Default
File: 049-0062-08.super_section.dgn
M:\L 132 over: DesPlanes River\12-154-001\GRW\INGO\Structural\Final Plans\049-0062-08.super_section.dgn

	USER NAME = JPS		DESIGNED - OY	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE CROSS SECTION STRUCTURE NO. 049-0062				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME = 049-0062-08.super_section.dgn		CHECKED - DB	REVISED		SHEET NO. 58 OF 523 SHEETS				541	X-6B-R	LAKE	93	49
	PLOT DATE = 9/3/2013		DRAWN - CM	REVISED						CONTRACT NO. 60N22				
			CHECKED - OY	REVISED						ILLINOIS FED. AID PROJECT				

	USER NAME = diazia		DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTION SN: 049-0062				VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			DRAWN -	REVISED -						VAR.	2018-0148-I	VARIOUS	86	57
	PLOT SCALE = 100,0000 ' / in.		CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.				CONTRACT NO. 62H78				
	PLOT DATE = 1/25/2019		DATE -	REVISED -						ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

Bench Mark: #1 (Elev. 656.88) Square cut on southeast corner of east handrail of Sheridan Road Bridge over Drainage Ditch. #2 (Elev. 679.45) USGS elevation marked T274 at southwest corner of west headwall of pedestrian overpass over railroad.

Existing Structure: SN 049-0083 built as Sheridan Road, Section 112X-BR, in 1925. The structure consists of a three span prestressed concrete deck beam bridge supported by two piers and two abutments (35'-7 5/8", 72'-7 1/4", 35'-8 3/4") Bk.-Bk. Abut., 200'-3 5/8" Bk.-Bk. of approach, and 39'-0" out-of-deck. The existing superstructure will be removed and replaced.

Traffic is to be detoured.

No salvage.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2800	113B-2BR	LAKE	32	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Sheet 1 of 11

DESIGN SPECIFICATIONS

AASHTO 1996 thru 2000 Interims

LOADING HS20

Allow 25 psf for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3500$ psi
 $f_y = 60,000$ psi

PRECAST PRESTRESSED UNITS

17" BEAMS

$f'_c = 5000$ psi
 $f_{ci} = 4000$ psi
 $f'_s = 270$ ksi (1/2" ϕ low relaxation strands)
 $f_{si} = 189$ ksi (1/2" ϕ low relaxation strands)

33" BEAMS

$f'_c = 5000$ psi
 $f_{ci} = 4950$ psi
 $f'_s = 270$ ksi (1/2" ϕ low relaxation strands)
 $f_{si} = 189$ ksi (1/2" ϕ low relaxation strands)

SEISMIC DATA

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

SCOPE OF WORK

1. Remove & replace superstructure
2. Repair existing substructure.
3. Mill and resurface approach

INDEX OF SHEETS

Sheet No.	Description
1	General Plan
2	Typical Section & Bill of Materials
3	Deck Plan & Cross Section
4	Superstructure Details
5	Sidewalk & Parapet Details
6	Sidewalk & Parapet Details - 2
7	Beam Details - Spans 1 & 3
8	Beam Details - Span 2
9	Abutment Repair
10	Pier Repair
11	Type L Aluminum Rolling

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

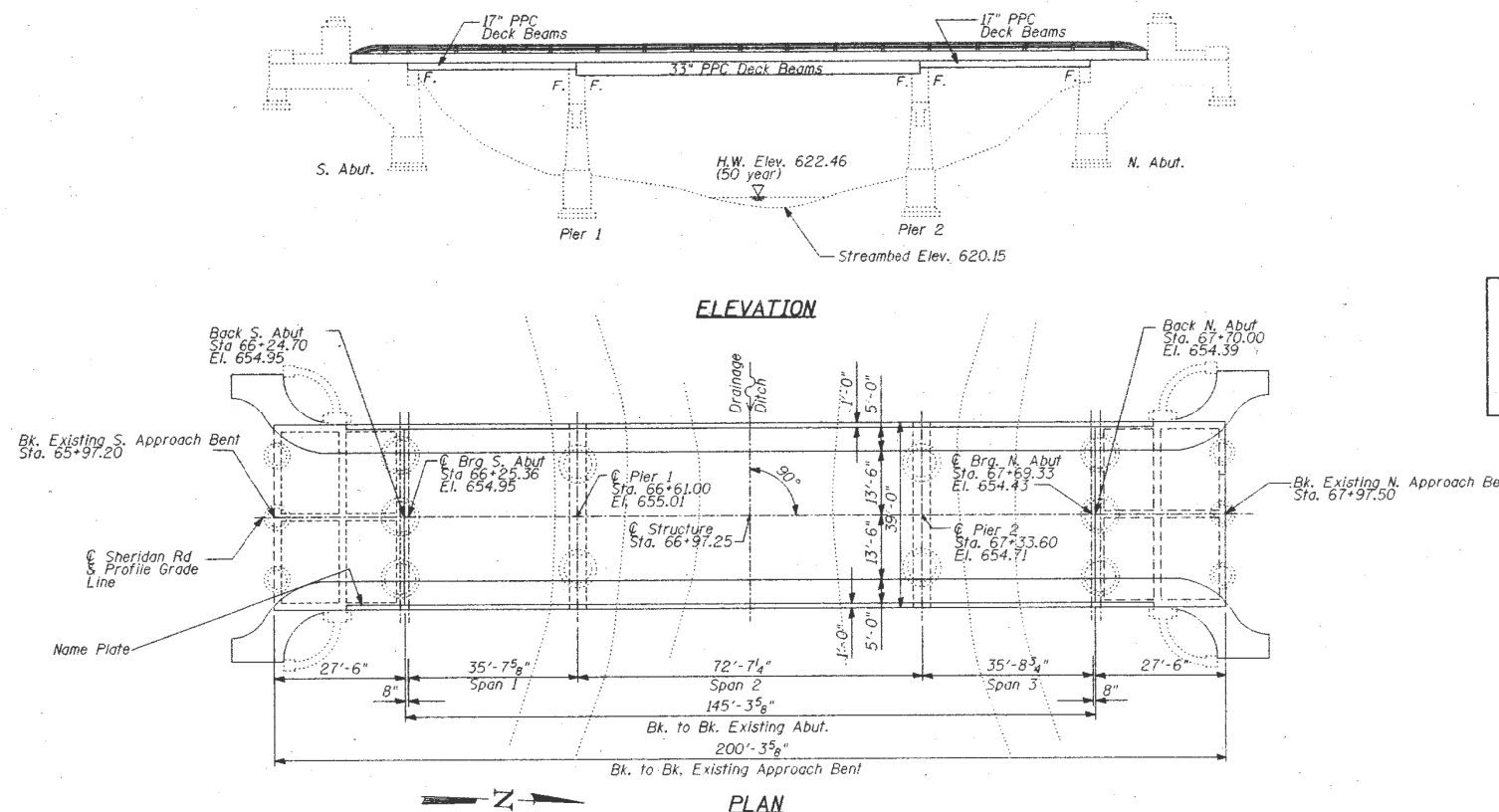
STATION 66+97.25
Rebuilt 200 By
State of Illinois
S.B.I. RT. 42 Sec 112X-BR
Loading HS 20
STR. No. 049-0083

F.A.U. ROUTE 2800
PRJ. ACBHM-2000(1)

NAME PLATE

See Std. 515001

The existing Name Plate shall be Cleaned
and Relocated Next to the New Name Plate.
Cost Included with "Name Plates".

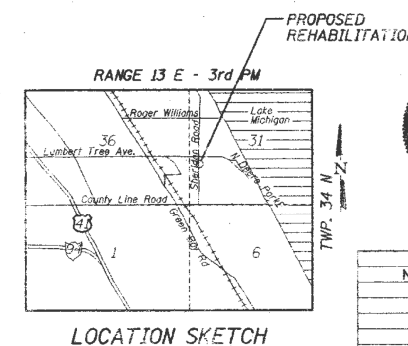


WATERWAY INFORMATION

Drainage Area = 0.21 Sq. mi. Low Grade Elev. 654.44 ft @ Sta.									
Flood	Freq. yr.	Q cfs	Opening Sq. ft.		Nat. H.W.E. ft	Created Head-ft		Headwater Elev. ft	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	142	25	25	622.46	1.34	1.34	623.80	623.80
Base	100	161	27	27	622.65	1.31	1.31	623.96	623.96
Max. Calc.	500	202	31	31	623.04	1.26	1.26	624.30	624.30

Applied Technologies
300 NORTH MILWAUKEE AVENUE, SUITE E
LAKE VILLA, ILLINOIS 60046

PROFILE GRADE Along Sheridan Road



ROBERT C. JAMES
001-00000
REGISTERED
STRUCTURAL
ENGINEER
OF
ILLINOIS
Robert C. James
Expires 11-30-02

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SHERIDAN RD OVER DRAINAGE DITCH

GENERAL PLAN

F.A.U. 2800 SECTION 113B-2BR
LAKE COUNTY S.N. 049-0083
STA. 66+97.25
SCALE: VERT. NTS
HORIZ. NTS
DATE 2/15/02
DRAWN BY DJS
CHECKED BY LLP

USER NAME = diaza	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

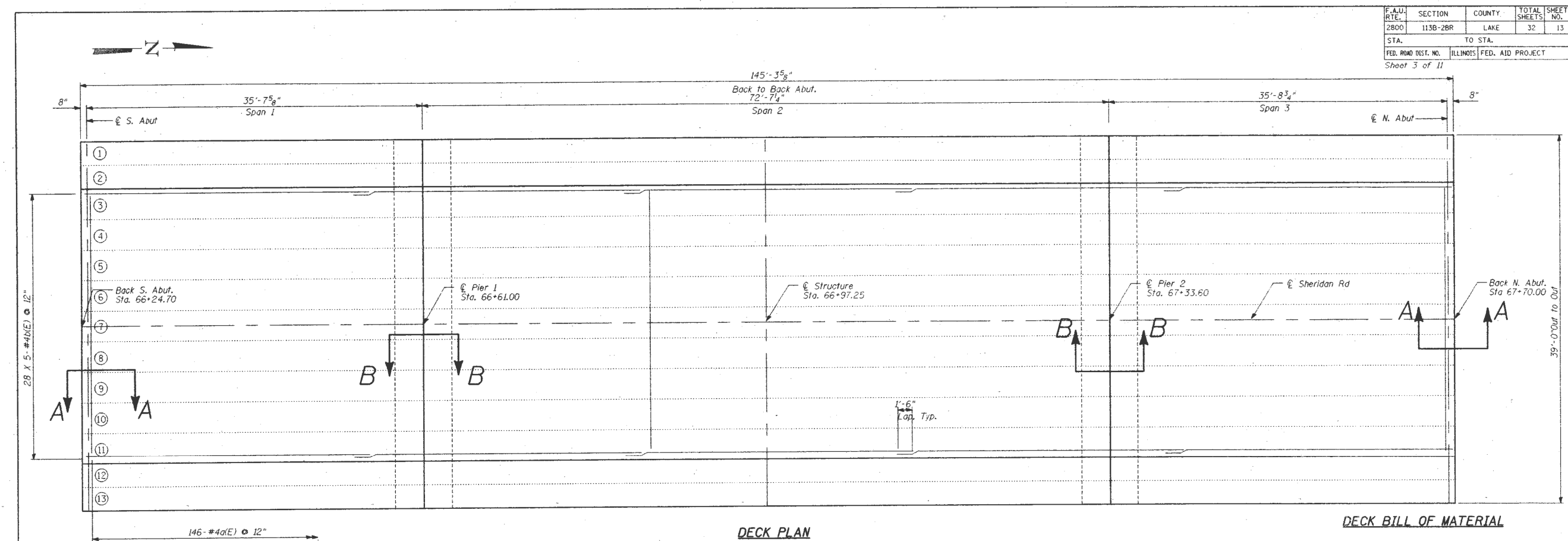
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN SN: 049-0083

SCALE: SHEET OF SHEETS STA. TO STA.

VAR.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	58
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

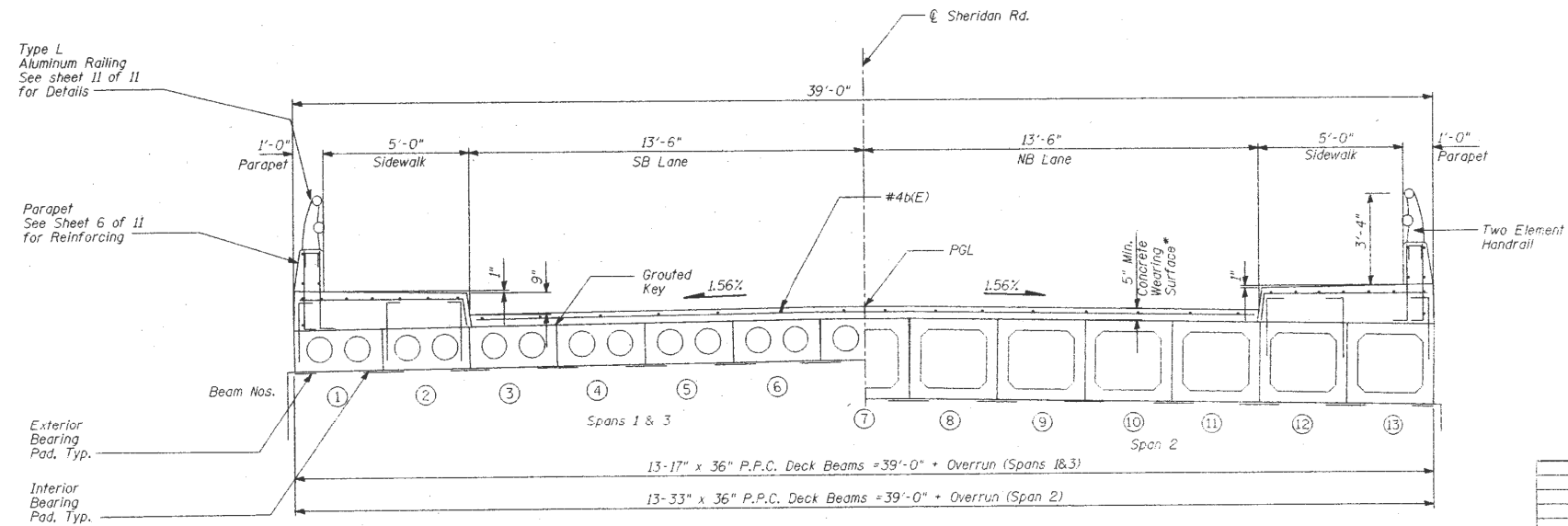


DECK PLAN

DECK BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	146	#4	26'-8"	—
b(E)	140	#4	30'-5"	—
Bridge Deck Grooving				
			Sq Yds	437
Protective Coat			Sq Yds	764
Concrete Wearing Surface			Sq Yds	437
Reinforcement Bars, Epoxy Coated			Lbs	5,610

* Wearing Surface shall be Class BD Concrete.



CROSS SECTION
(Looking North)

DESIGNED	RGT
CHECKED	LLP
DRAWN	DJS
CHECKED	RGT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SHERIDAN RD OVER DRAINAGE DITCH

DECK PLAN & CROSS SECTION

F.A.U. 2800 SECTION 113B-2BR
LAKE COUNTY S.N. 049-0083
STA. 66+97.25
SCALE: VERT. NTS
DATE 2/15/02
DRAWN BY DJS
CHECKED BY LLP

USER NAME = diaza	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

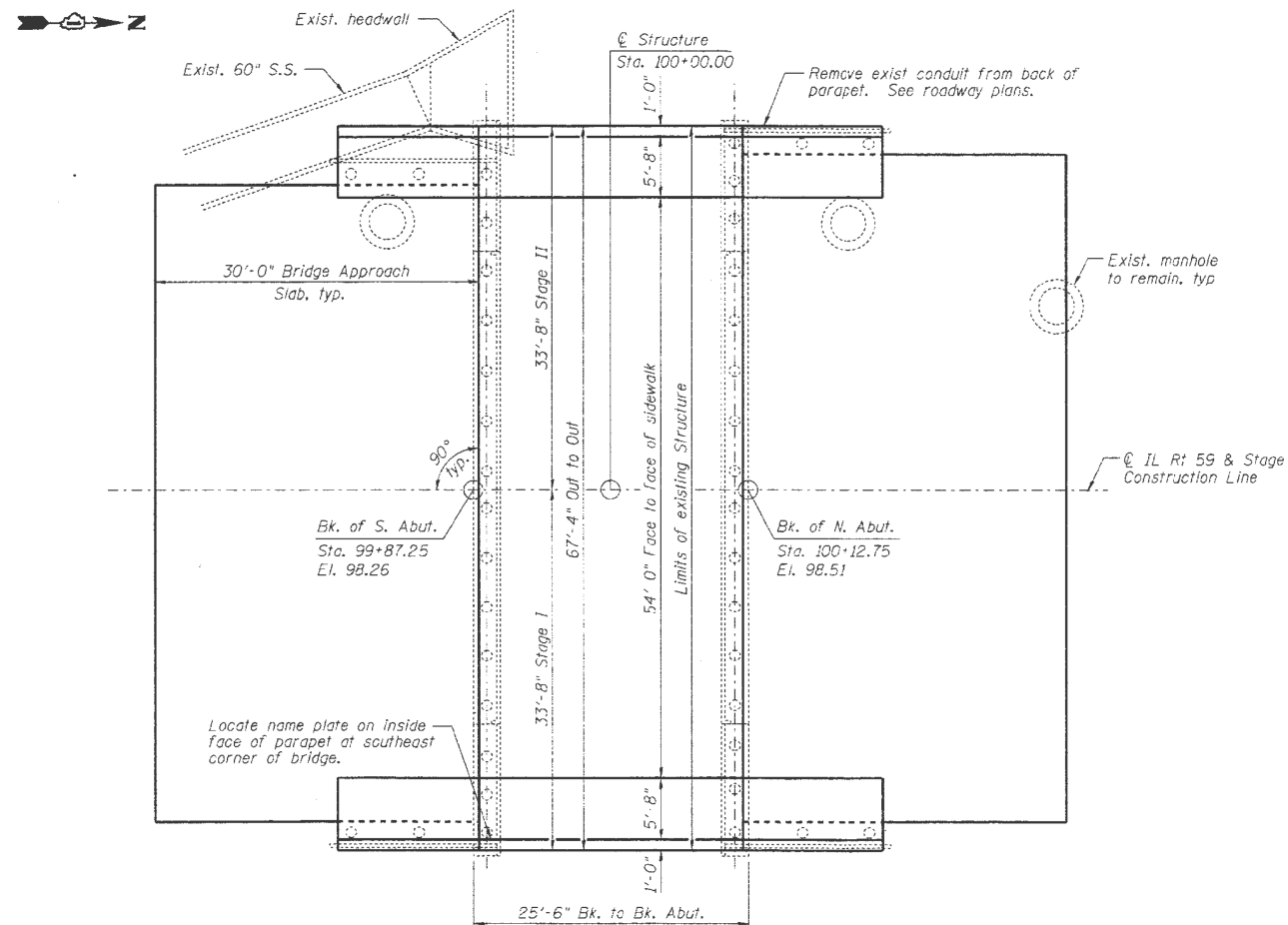
DECK PLAN
SN: 049-0083

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	59
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Salvage: Steel Bridge Rolling



DESIGNED -	SLV
CHECKED -	DJB
DRAWN -	SLV
CHECKED -	DJB

LONGO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9130

PVC Sta. 98+00					
E.L. 97.95	-0.85%			0.98%	0.77%
PVI Sta. 98+89.09					
E.L. 97.19		1.10%			
PVC Sta. 99+87.25					
E.L. 98.27					
Sta. 100+12.75					
E.L. 98.52					
Sta. 101+60					
E.L. 99.66					

The map shows the project location in Cook County, Illinois. The project is located at the intersection of Ridge Rd, Lake Cook Rd, and US Rt 14 WNW Hwy. The map also shows the intersection of Ridge Rd, Lake Cook Rd, and US Rt 14 WNW Hwy. The map includes a north arrow and a scale bar.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TJD)
ENGINEER OF BRIDGES AND STRUCTURES



all of
Expires 11/30/10

GENERAL PLAN AND ELEVATION
IL RT 59 OVER FLINT CREEK
F.A.P RT. 338
SECTION 108 B-1
LAKE COUNTY
STA. 100+00.00
STRUCTURE NO. 049-0152

SHEET NO. S1 CF S17 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	338	108 B-1	LAKE	40	13
	D-91-289-09		CONTRACT NO. 60F92		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' f in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

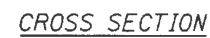
GENERAL PLAN
SN: 049-0152

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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For remainder of Superstructure Details see
Sheet S8 & S9 of S17.
See sht. S13 & S14 of S17 for PPC Deck
Beams.
Protective coat shall be applied to new concrete
wearing surface



USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

CROSS SECTION
SN: 049-0152

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	61
		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY

BENCHMARK: "0" CUT TOP OF WINGWALL AT N.W. CORNER OF BRIDGE #056-0019 AT STATION 123+03. ELEV = 783.14'

STR. #056-0019 = EXISTING STRUCTURE IS A 118'-1" CAST IN PLACE CONCRETE T-BEAM BRIDGE HAVING A DECK WIDTH OF 54' FACE TO FACE OF RAILING. THE STRUCTURE CONSISTS OF THREE SPANS SUPPORTED ON FULL HEIGHT CONCRETE ABUTMENTS HAVING FLARED WINGWALLS AND SOLID SHAFT CONCRETE PIERS. WITH ALL STRUCTURE ELEMENTS FOUNDED ON SPREAD FOOTINGS. THE BRIDGE REMOVAL CONSISTS OF ALL ELEMENTS EXCEPT THE FULL HEIGHT ABUTMENTS WITH WINGWALLS WHICH WILL BE MODIFIED AND RE-USED FOR THE NEW BRIDGE.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES:

- SEE PROPOSAL FOR BORING DATA.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- THE TOP SURFACES OF THE DECK BEAMS SHALL BE ROUGHENED AS SPECIFIED FOR I-BEAMS IN ART. 505.06(c)(5) OF THE STANDARD SPECIFICATIONS.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.
- THE CONTRACTOR SHALL DRIVE ONE STEEL TEST PILE IN A PERMANENT LOCATION AT PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
- A CALCIUM NITRITE CORROSION INHIBITOR AS COVERED IN THE SPECIAL PROVISIONS SHALL BE USED IN THE CONCRETE FOR PRESTRESSED CONCRETE DECK BEAMS.
- ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE AND VINYL PAINT SYSTEM.
- THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN AND COMPUTATIONS OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
FAS 029	116R-84	McHENRY	195	105	9 SHEETS
F. HW. A. REG. 4 ILLINOIS FED. AID PROJECT					

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
REMOVAL OF EXISTING STRUCTURE	EA			1
CLASS X CONCRETE SUPERSTRUCTURE	CU YDS	29.6		29.6
CLASS X CONCRETE	CU YDS		141.0	141.0
REINFORCEMENT BARS	LBS		6430	6430
REINFORCEMENT BARS (EPOXY COATED)	LBS	11,300	2860	13,990
P.P.C. DECK BEAMS 27" DP	SQ FT	5072		5072
PREFORMED JOINT SEAL (4")	LIN FT	44.1		44.1
BRIDGE DECK CONCRETE OVERLAY	SQ YDS	529		529
PROTECTIVE COAT	SQ YDS	640		640
FURNISHING STEEL PILES-HP 12x53	LIN FT		670	670
DRIVING STEEL PILES-HP 12x53	LIN FT		670	670
TEST PILE-STEEL HP 12x53	EACH		1	1
TEMPORARY SHEET PILING	SQ FT		540	540
TEMPORARY CONCRETE BARRIER	LIN FT	154		154
COFFERDAM	EACH		1	1
COFFERDAM, EXCAVATION	CU YDS		34	34
NAMEPLATES	EACH		1	1
STRUCTURAL STEEL	LBS	1650		1650
REPAIR CONCRETE STRUCTURES	SQ FT		150	150
EPOXY CRACK SEALING	LIN FT		200	200
STRUCTURE EXCAVATION	CU YDS		200	200

* APPROXIMATE VOLUME OF EXISTING STRUCTURE TO BE REMOVED IS 880 CU YDS.

** QUANTITY INCLUDES PROTECTIVE COAT APPLIED TO DECK.

*** Location and actual quantity to be determined in the field by the Engineer.

DESIGN STRESSES:

FIELD UNITS

$f'_c = 3,500$, $f_y = 60,000$ PSI REINFORCEMENT
 $f_y = 36,000$ PSI STRUCTURAL STEEL (M182)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ PSI
 $f'_ci = 4,050$ PSI
 $f'_s = 270,000$ PSI, $1/2"$ ϕ STRANDS
 $f'_si = 189,000$ PSI, $1/2"$ ϕ STRANDS
 $f_y = 60,000$ PSI (NON-PRESTRESSED REINFORCEMENT)

LOADING - HS 20-44

ALLOW 25 PSF FOR FUTURE WEARING SURFACE

DESIGN SPECIFICATION:

AASHTO 1983 AND INTERIMS (1984 THRU 1988)

WATERWAY INFORMATION

DRAINAGE AREA 188.5 SQ.MI. LOW GRADE EL. 770.10 AT STA. 124+00.00				EXIST. EL. 770.10 AT STA. 124+00.00		LAST OF STRUCTURE	
FLOOD	REQ.	Q	OPENING SQ.FT.	NAT	HEAD-FT.	HEAD-FT.	EXIST. EL.
	YR.	C.F.S.	EXIST.	PROP.	H.W.E.	EXIST.	PROP.
DESIGN	50	6377	855	855	766.4	0.0	0.0
BASE	100	7506	938	938	767.2	0.0	0.0
OVERTOPPING	EXCEEDS 500						
MAX. CALC	500	11942	1199	1199	769.7	0.0	0.0

STATION 123+69

BUILT 198 BY

STATE OF ILLINOIS

FAS ROUTE 029 SECTION 116R-84

PROJ. ACIX-0003(68)

LOADING HS-20

STRUCTURE NO. 056-0019

SEE STD. DWG. 2113

BRIDGE NAME PLATE

SEE STD. DWG. 2113

OLD S.N. 056-0019

NEW S.N. 056-0062



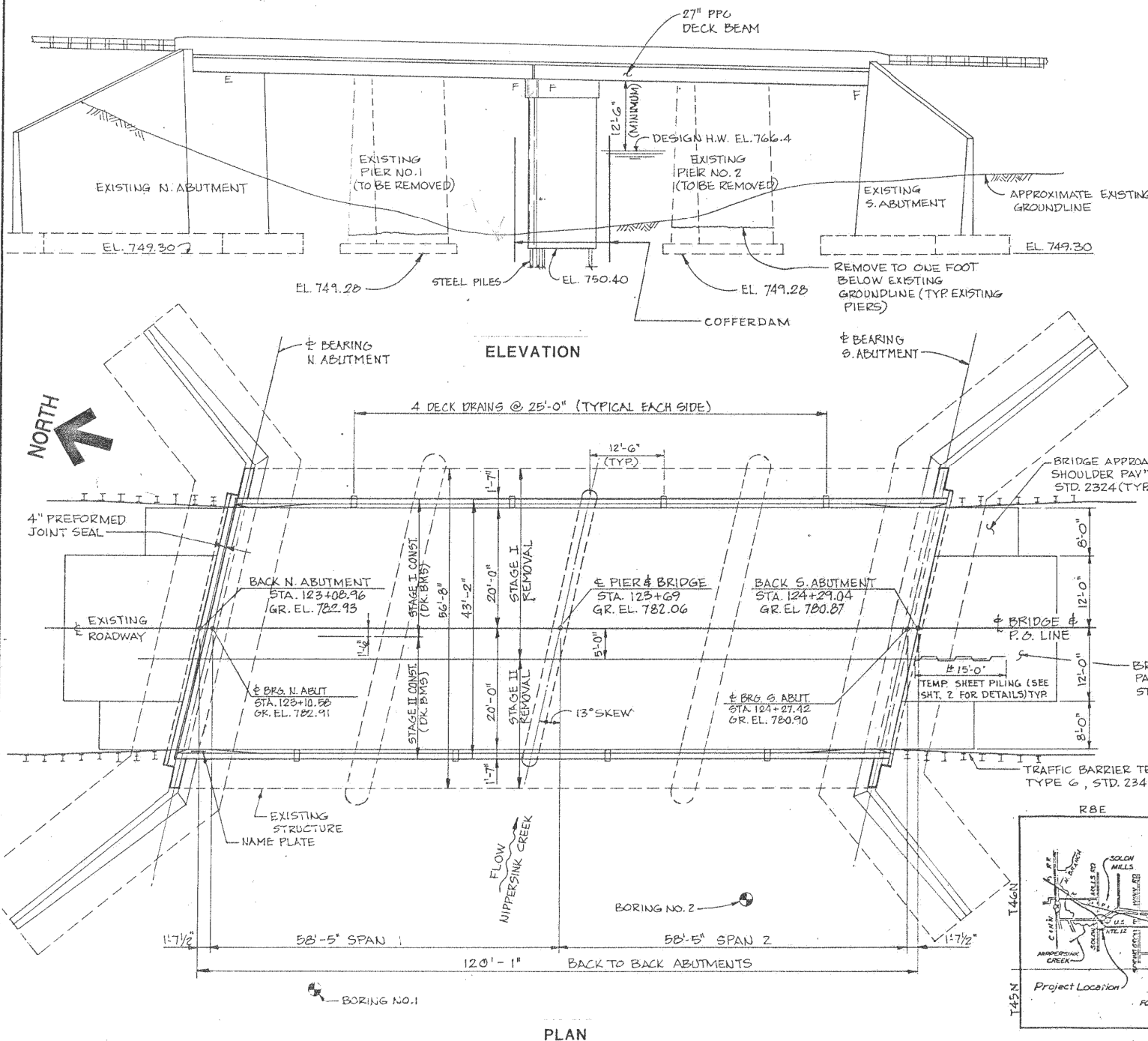
GENERAL PLAN AND ELEVATION

SECTION 116R-84

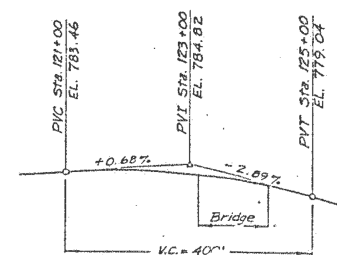
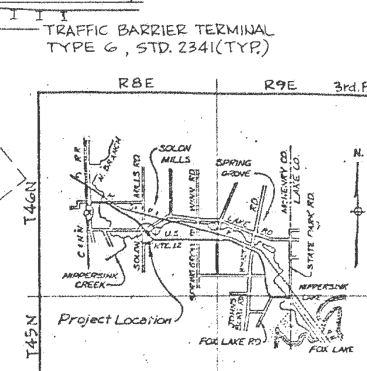
FAS ROUTE 029 (US 12) OVER NIPPERSINK CREEK

MC HENRY COUNTY

STATION 123+69



LOCATION MAP



PROPOSED PROFILE GRADE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 056-0019

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-0148-I	VARIOUS	86	62
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

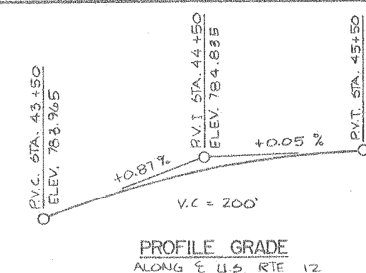
WATERWAY INFORMATION

EXISTING STRUCTURE: STRUCTURE NO. 054-0018, STA. 44+40 BUILT IN 1932. EXISTING STRUCTURE TO BE REMOVED IS A 90'-0" LONG CONCRETE SLAB BRIDGE HAVING A DECK WIDTH OF 43'-0" FACE TO FACE OF RAILING. THE STRUCTURE CONSISTS OF THREE SIMPLE SPANS SUPPORTED ON FULL HEIGHT CLOSED, REINFORCED CONCRETE ABUTMENTS AND TWO SOLID SHAFT UNREINFORCED CONCRETE PIERS. WEST ABUTMENT AND PIERS FOUNDED ON SPREAD FOOTINGS; EAST ABUTMENT FOUNDED ON PILES. TRAFFIC TO BE MAINTAINED BY STAGE CONSTRUCTION.

SALVAGE: PIER RETAINING COLLAR AND ATTACHMENTS. RETURN TO I.D.O.T.

HATCHED AREAS INDICATE REMOVAL.

Drainage Area		67.70	SQ. MI.	Low Grade Elev.		760.50 (e) 760.75 (p)	@ Sta. 39+00.00 (WEST OF STRUCTURE)			
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head Ft.		Headwater El.		
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.	
Design	50	2301	540	653	775.5	0.68	0.46	776.18	775.94	
Base	100	2735	564	686	775.8	0.86	0.58	776.66	776.38	
Overlapping										
Max. Calc.	500	4521		788	776.7		1.14		777.94	

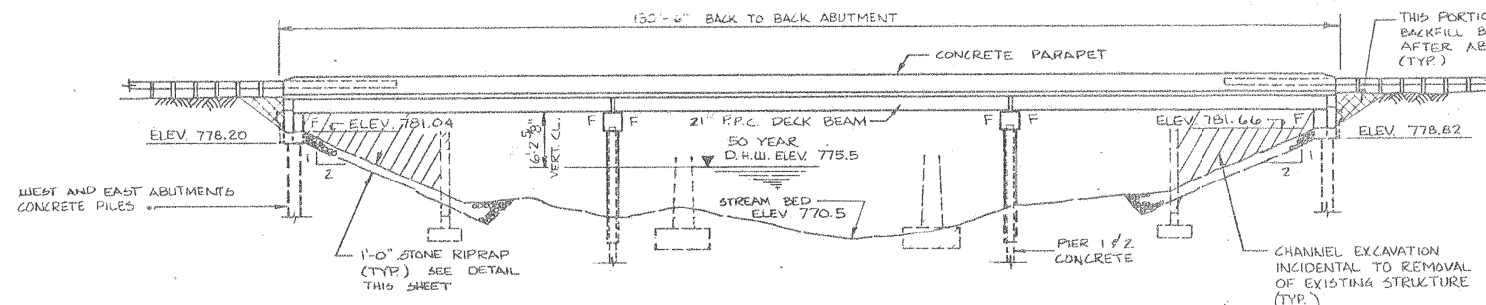


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 029	116R-84	McHENRY	195	93
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

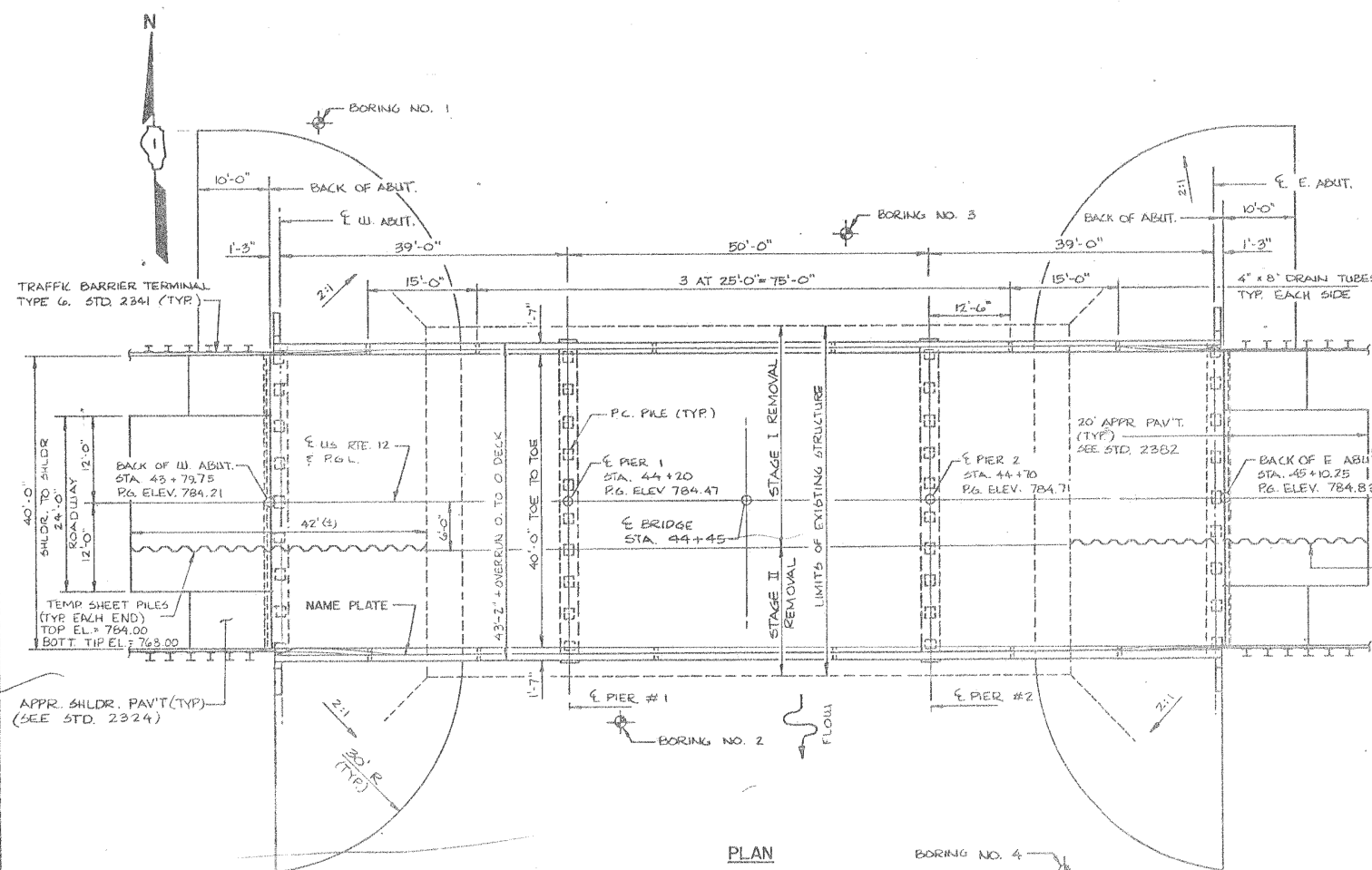
SHEET NO. 1
12 SHEETS

GENERAL NOTES

1. SEE PROPOSAL FOR BORING DATA.
2. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 or M-53 GRADE 60.
3. LAYOUT OF RIPRAP SLOPEWALL MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
4. A CALCIUM NITRITE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.
5. THE CONTRACTOR SHALL DRIVE (1) CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AND AT EACH PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
6. THE TEMPORARY PIER RETAINING COLLAR AND THE ATTACHMENTS AT PIER #1 SHALL REMAIN IN PLACE UNTIL ALL TRAFFIC HAS BEEN TRANSFERRED ONTO THE NEW CONSTRUCTION.
7. TEMPORARY SHEET PILING SHALL BE REMOVED AFTER COMPLETION OF STAGE - II SUBSTRUCTURE CONSTRUCTION AND PRIOR TO STAGE II DECK BEAM ERECTION.
8. THE TEMPORARY CONCRETE BARRIER INSTALLATION SHALL BE INCORPORATED IN THE SAME TIME FRAME AS THE ROADWAY BARRIERS ARE INSTALLED. THE ROADWAY AND BRIDGE CONTRACTORS SHALL MAINTAIN IDENTICAL STAGE CONSTRUCTION SCHEDULES.
9. THE INFORMATION SHOWN FOR TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN AND COMPUTATIONS OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.



ELEVATION



PLAN

STATION 44+45
BUILT 198 BY
STATE OF ILLINOIS
F.A.S. RTE. 029 SEC. 116R-8
LOADING HS20
STR. NO. 056-0056

NAME PLATE DETAIL
(SEE STD. 2113-2)

DESIGN NOTES

SPECIFICATIONS:
AASHTO SPECIFICATIONS DATED 1983, AND
1984 THRU 1988 INTERIM SPECIFICATIONS

LOADING:
HS 20-44
INCLUDES ALLOWANCE FOR 75 P.S.F.
FUTURE BEARING SURFACE

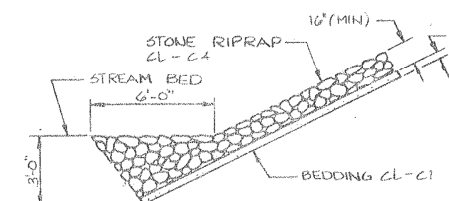
STRESSED:

PRESTRESSED BEAMS...	$f_c = 5,000$	P. 1
	$f_{ci} = 4,000$	P. 1
	$f_{ci} = 4,100$	P. 1, 1.1
PRESTRESSED STRANDS...	$f_{ts} = 270,000$	P. 1
	$f_{si} = 189,000$	P. 1
CLASS X CONCRETE...	$f_c = 3,500$	P. 1
REINFORCEMENT BARS...	$f_y = 60,000$	P. 1

(FOR 21" x 36" BEAM, DO SEAN ONLY)

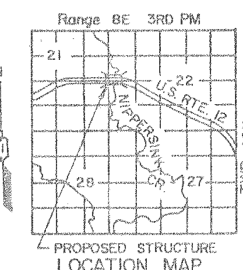
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB STRUCT.	SUPER STRUCT.	TOTAL
REMOVAL OF EXISTING STRUCTURES	EACH	—	—	—
STRUCTURE EXCAVATION	CU. YD.	160	—	160
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	—	32.8	32.8
CLASS X CONCRETE	CU. YD.	121.9	—	121.9
PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ. FT.	—	5547	5547
REINFORCEMENT BARS	POUND	9870	—	9870
REINFORCEMENT BARS, EPOXY COATED	POUND	—	11340	11340
FURNISHING CONCRETE PILES	LIN. FT.	1551	—	1551
DRIVING CONCRETE PILES	LIN. FT.	1551	—	1551
TEST PILES CONCRETE	EACH	4	—	4
TEMPORARY SHEET PILING	SQ. FT.	1344	—	1344
NAME PLATES	EACH	—	1	1
STONE RIPRAP CLASS C4	SQ. YD.	1038	—	1038
FILTEE FABRIC FOR USE W/ RIPRAP	SQ. YD.	1080	—	1080
PROTECTIVE COAT	SQ. YD.	—	690	690
BRIDGE DECK CONCRETE OVERLAY	SQ. YD.	—	582.9	582.9
TEMPORARY CONCRETE BARRIER	LIN. FT.	—	140	140



STONE RIPRAP ANCHOR DETAIL

TEMPORARY SHEET PILES
TOP ELEV = 784.50
BOTTOM TIP ELEV = 768.50



NOTE

CONTRACTOR SHALL ANCHOR SHEETING TO BACK OF ABUTMENT. WALL CONNECTIONS SHALL BE APPROVED BY ENGINEER. SHEETING WITHIN LIMITS OF FOOTING SHALL HAVE THEIR TOP ELEVATION AT TOP OF EXISTING FOOTINGS.

APPROVAL
FOR SIGNATURE

James T. Rayburn

A circular professional engineer seal for Patricia H. Hogley, State of Illinois, No. 123456789. The seal features the text "PATRICIA H. HOGLEY" at the top, "No. 123456789" in the center, "STATE OF ILLINOIS" at the bottom, and "PROFESSIONAL ENGINEER" around the perimeter. The seal is stamped over a handwritten signature.

WELLS ENGINEERS, INC.

GENERAL PLAN
U. S. ROUTE 12
OVER N. BRANCH, NIPPERSINK CR.
F.A.S. 029 SEC. 116R-84
STA. 44+45
McHENRY COUNTY
STRUCTURE NO. 056-0056

DATE: 6-3-86	DRAWN BY: GLH	JOB NO. 850172
DESIGNED BY: JAW	CHECKED BY: JMG	SHEET NO. 1 OF 12

PREVIOUS SHEET IS SHEET # 85A

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

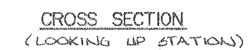
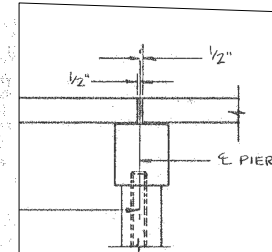
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN
SN: 056-0056

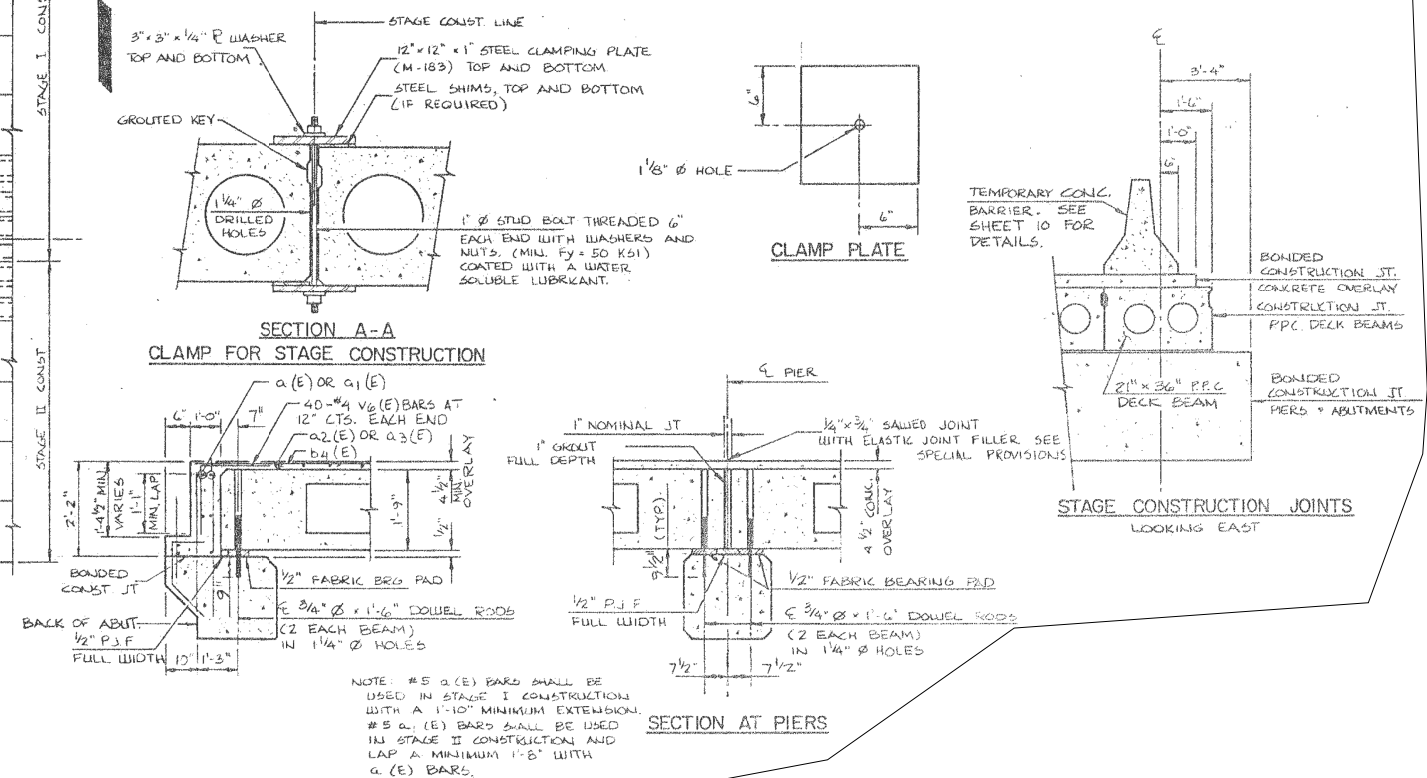
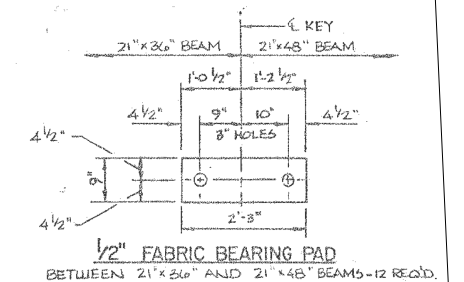
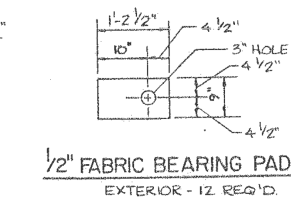
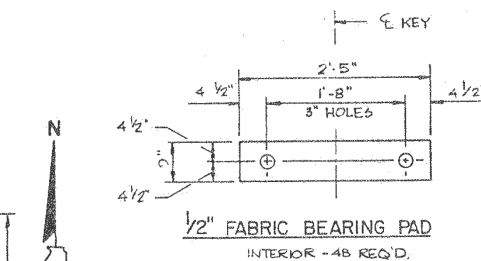
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								ILLINOIS FED. AID PROJECT	

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NOTE: SEE SHEET 5 OF 12 FOR
SUPERSTRUCTURE BILL OF
MATERIALS AND DETAILS.



SECTION AT ABUTMENTS

- ### NOTES
- 1 AFTER BEAMS HAVE BEEN ERECTED, HOLES SHALL BE DRILLED INTO SUBSTRUCTURE AND ANCHOR DOWELS PLACED. DOVEL HOLES SHALL BE FILLED WITH NON-SHRINK GROUT TO TOP OF BEAM ALLOWED TO CURE MIN. 24 HRS. PRIOR TO GROUTING THE SHEAR KEYS.
 - 2 NOMINAL 1" JOINT AT $\frac{1}{2}$ PIER SHALL BE FILLED WITH NON-SHRINK GROUT.
 - 3 LONGITUDINAL KEYS SHALL BE GROUTED
 - 4 THE 1" ϕ RODS IN THE TRANSVERSE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET. POCKETS THAT RECEIVE TRANSVERSE TIE BAR ON OUTSIDE SHALL BE FILLED WITH GROUT AFTER ASSEMBLY IS IN PLACE.
 - 5 THE BEARING SEAT SURFACES SHALL BE ADJUSTED BY SHIMMING TO ASSURE FIRM AND EVEN BEARING.
- TUX, V8" FABRIC BEARING PADS OF THE DIMENSIONS OF THE EXTERIOR BEARING PAD SHALL BE PROVIDED FOR EACH BEARING.

USER NAME = djada	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DECK PLAN
SN: 056-0056

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	65
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Benchmark: Chiseled "□" N-E Wingwall, Offset 32'-10" RT. Sta. 112+64 Elev. 535.96

Existing Structure: S.N. 099-0098, single span precast prestressed concrete bridge deck beams with a concrete wearing surface on closed abutments. Substructure built in 1934 and widened in 1990, superstructure reconstructed in 1974 and partially reconstructed in 1990 with additional deck beams added to widen the structure. The structure measures 39' - 8 7/8" Back to Back of abutments and 68'-0" out to out deck. Traffic is to be maintained utilizing stage construction. One lane for both directions will be provided.

Salvage: None

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCOPE OF WORK

1. Total superstructure and substructure removal and replacement.
2. Substructure repairs.
3. Approach slab removal and replacement. See roadway sheet for details.

INDEX OF SHEETS

- S-1 General Plan & Elevation
- S-2 Stage Construction Details
- S-3 Temporary Concrete Barrier
- S-4 17"x36" PCC Deck Beam
- S-5 17"x36" PCC Deck Beam Details
- S-6 17"x48" PCC Deck Beam
- S-7 17"x48" PCC Deck Beam Details
- S-8 Superstructure Details 1
- S-9 Superstructure Details 2
- S-10 Parapet Details
- S-11 North Abutment
- S-12 South Abutment Removal and Repair
- S-13 South Abutment
- S-14 Bar Splicer Details

STATION 112+00.00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.U. RT. 318 SEC. DB-1-R-B
LOADING HL 93
STR. NO. 099-0098

NAME PLATE

See Std. 515001

LOADING HL-93

No future wearing surface allowed

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications
(4th Edition, 2007)

DESIGN STRESSES

FIELD UNITS

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

PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax. strands)
 $f'_{sl} = 201,900$ psi (1/2" ϕ low lax. strands)

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See Special Provisions.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Attach new Name Plate to the inside face of parapet as shown. Existing name plate is to be removed, cleaned and relocated adjacent to new name plate. Cost included in the cost of Name Plates.

Reinforcement Bars designated (E) shall be epoxy coated.

No in-stream work will be allowed on this project.

Slip forming of the parapets is not allowed.

The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Repair of the substructure shall be completed prior to placement of the new deck beams.

After the removal of the existing beams for stage 1 removal, the Contractor shall re-connect or re-engage the transverse ties in the existing beams for stage 1 traffic.

Burn or cut the existing dowel rods flush with existing bearing seat. Grind the existing dowel rods smooth and seal with epoxy. The cost of this work shall be included with "Removal of Existing Superstructure."

WATERWAY INFORMATION

Drainage Area = 3 Acres		Low Grade Elev. = 535.1				At Sta. 10+45			
Flood	Freq. Yr.	Q C.F.S.	Opening Exist.	Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
	10								
Design	30	760**	131	131	532.5*	0	0	532.5	532.5
Base	100	1178**	155	155	534.1*	0	0	534.1	534.1
Overtopping									
Max. Calc.	500								

* Back Water From Thorne Creek
** Discharges From Thorne Creek

TOTAL BILL OF MATERIAL

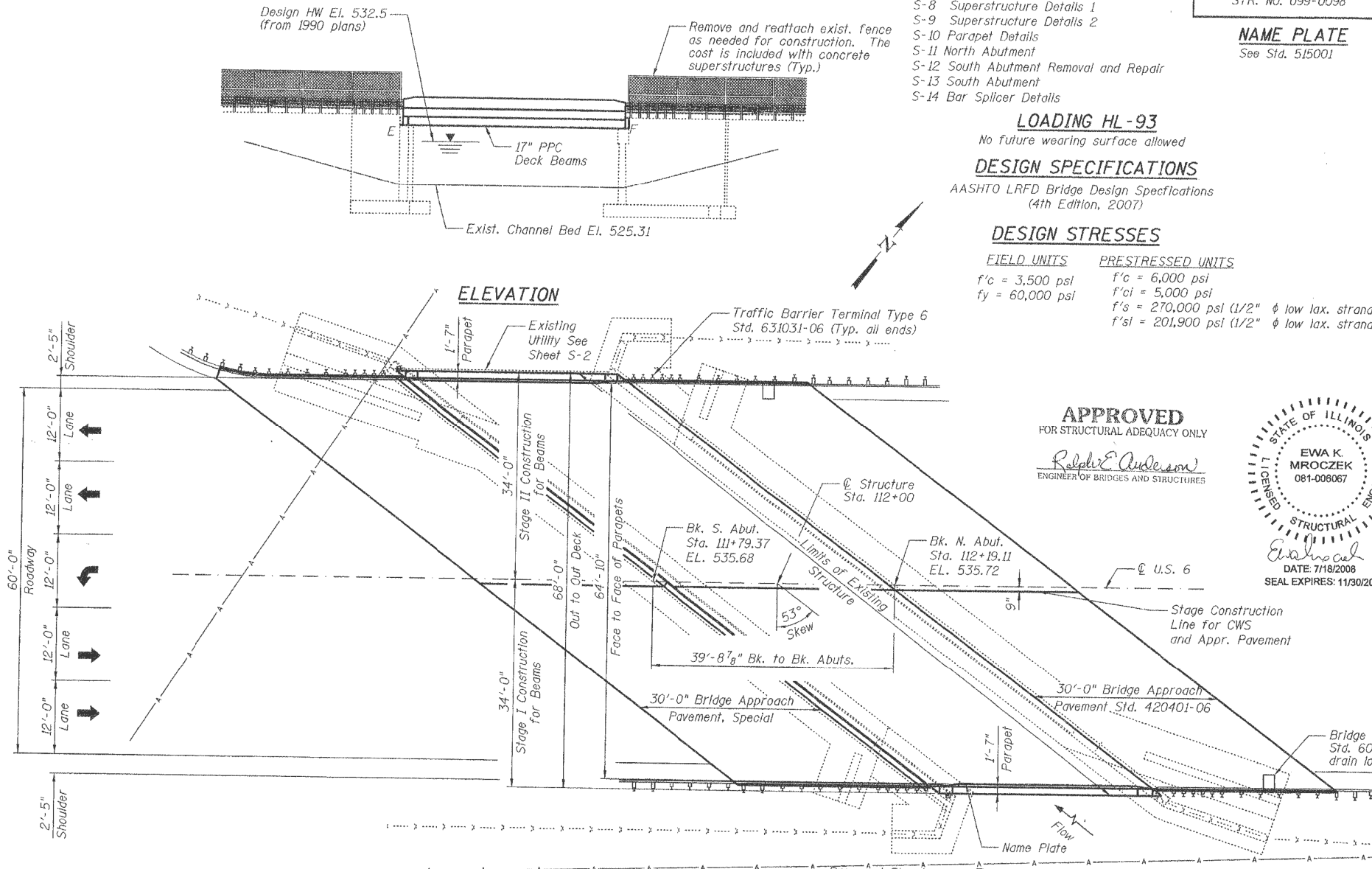
ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu. Yd.	6.1
Concrete Superstructure	Cu. Yd.	15.9
Bridge Deck Grooving	Sq. Yd.	263
Protective Coat	Sq. Yd.	321
Concrete Wearing Surface 5"	Sq. Yd.	300
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,468
Reinforcement Bars, Epoxy Coated	Pound	8,170
Bar Splicers	Each	43
Name Plates	Each	1
Preformed Joint Strip Seal	Foot	113
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.	354
Asbestos Bearing Pad Removal	Each	17

* Special Provision

GENERAL PLAN AND ELEVATION US 6 (RAILROAD AVE.) OVER I & M CANAL

STA. 112+00
S.N. 099-0098

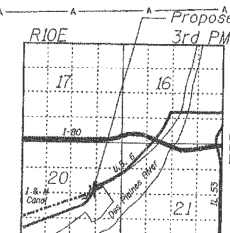
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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60D88	



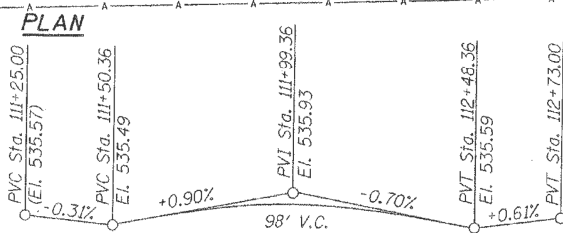
DESIGNED B. Sauter
CHECKED E. Mroczek
DRAWN R. Danley
CHECKED B. Sauter



Giorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@giorba.com



LOCATION SKETCH



PROFILE GRADE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN SN: 099-0098

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	66
				CONTRACT NO. 62H78

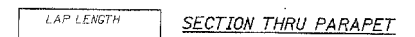
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	DATE -	REVISED -

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NOTES:

- STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**



TEMPORARY RETAINER ANGLE

CROSS SECTION
SN: 099-0098

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	67
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Benchmark: Disc in corner of NE Wingwall Elev. 734.36

Existing Structure: S.N. 099-0118, built in 1978 as a single span 21"x36" PPC Deck Beam Bridge with 2" Bituminous wearing surface on closed abutments on spread footings. The structure measures 44'-6" Back to Back abutments and 42'-0" out to out deck. Bridge was rehabilitated in 2005 with partial beam replacement. Traffic is to be maintained utilizing stage construction. One lane for both directions will be provided by using temporary traffic signals.

Salvage: None

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 330	105B-IR	WILL	33	10	9 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract # 60D50

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See Special Provisions.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Attach new Name Plate to the inside face of parapet as shown. Existing name plate is to be removed, cleaned and relocated adjacent to new name plate. Cost included in the cost of Name Plates.

Reinforcement Bars designated (E) shall be epoxy coated.

No in-stream work will be allowed on this project.

Slip forming of the parapets is not allowed.

The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Repair of the substructure shall be completed prior to placement of the new deck beams.

INDEX OF SHEETS

1. General Plan & Elevation
2. Stage Construction Details
3. Temporary Concrete Barrier
4. Beam Details (21"x36")
5. Superstructure Details
6. Parapet Details
7. Concrete Removal and Substructure Repair
8. North & South Abutments
9. Bar Splicer Details

STATION 259+37.00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 330 SEC. 105B-IR
LOADING HS20-44
STR. NO. 099-0118

NAME PLATE

See Std. 515001

LOADING HS-20-44

Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications
2003 IDOT Prestressed Concrete Manual

DESIGN STRESSES

FIELD UNITS
f'a = 3,500 psi
f'y = 60,000 psi

PRESTRESSED UNITS
f'a = 5000 psi
f'ci = 4000 psi
f's = 270,000 psi (1/2" ϕ low lax. strands)
f'si = 201,900 psi (1/2" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2

WATERWAY INFORMATION

Drainage Area = 1510 Acres									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	500	283	283	729.30	0	0		
Base	100	630			729.80	0	0		
Overtopping									
Max. Calc.	500								

All time H.W. Elev. 731.10
Information taken from 1976 plans and adjusted to project datum.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Superstructures	Cu.Yd.	13.6
Bridge Deck Grooving	Sq.Yd.	183
Protective Coat	Sq.Yd.	230
Concrete Wearing Surface (5")	Sq.Yd.	209
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq.Ft.	1,883
Reinforcement Bars, Epoxy Coated	Pound	5,070
Bar Splicers	Each	55
Name Plates	Each	1
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq.Ft.	313

* Special Provision

GENERAL PLAN AND ELEVATION

US RTE 45 OVER NORTH
BRANCH OF PRAIRIE CREEK

F.A.P. RT. 330

SECTION 105B-IR

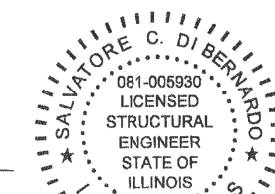
WILL COUNTY

STA. 259+37.00

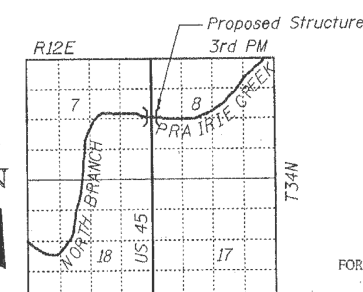
S.N. 099-0118

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



DATE: 10/17/2007
SEAL EXPIRES: 11/30/2008

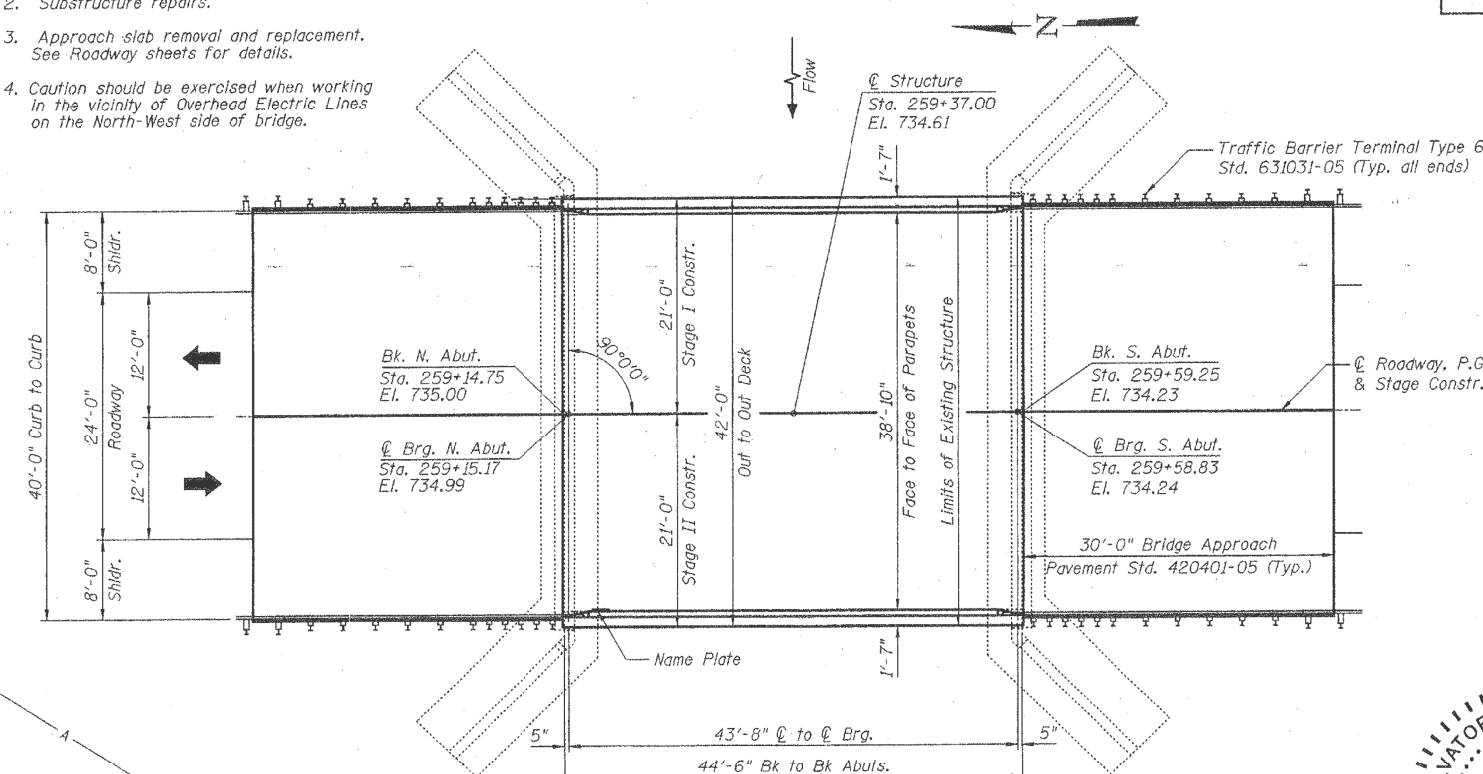


LOCATION SKETCH

SCOPE OF WORK

1. Total superstructure removal and replacement.
2. Substructure repairs.
3. Approach slab removal and replacement. See Roadway sheets for details.
4. Caution should be exercised when working in the vicinity of Overhead Electric Lines on the North-West side of bridge.

ELEVATION



PLAN

DESIGNED	B. Sauter
CHECKED	E. Mroczek
DRAWN	R. Danley
CHECKED	B. Sauter

CG Ciorba Group, Inc.
CONSULTING ENGINEERS
6507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email: chicago@ciorga.com

PROFILE GRADE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

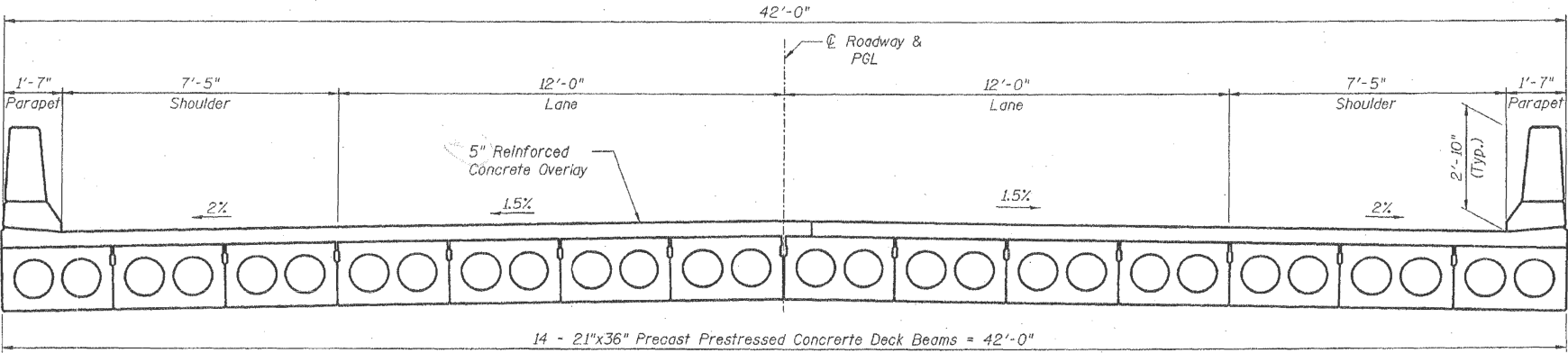
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SN: 099-0118

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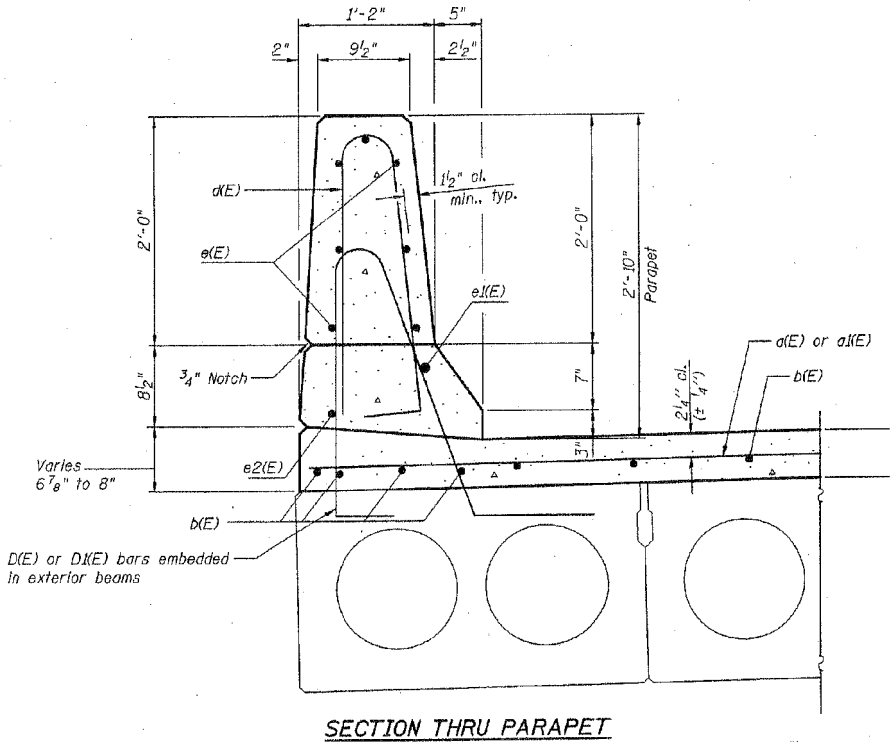
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	68
				CONTRACT NO. 62H78

ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY



FINAL
(Looking North)



MODEL: Default
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DRAWN -	REVISED -	
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

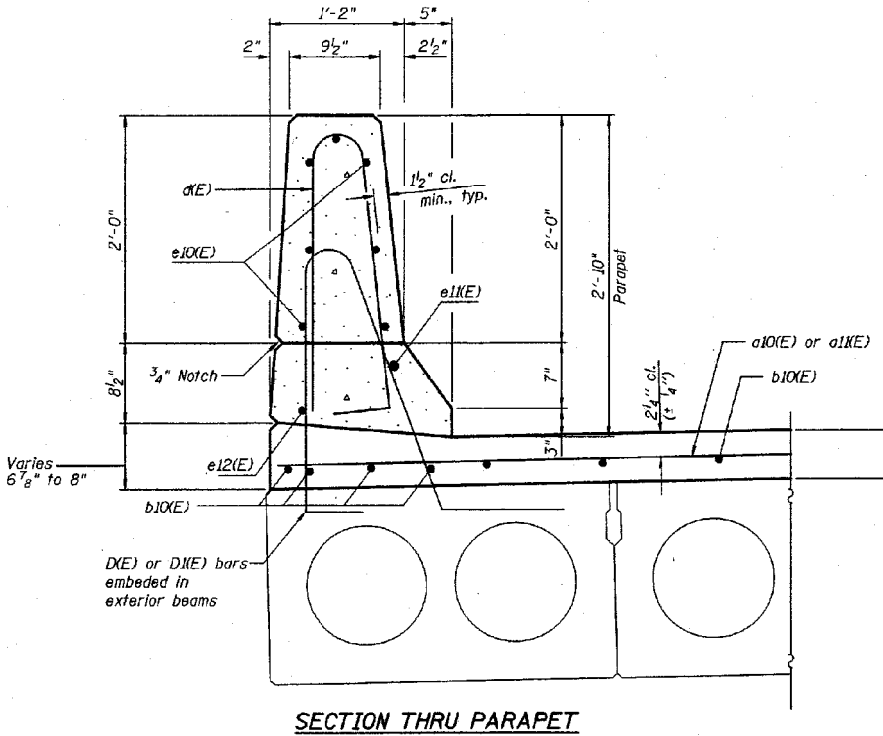
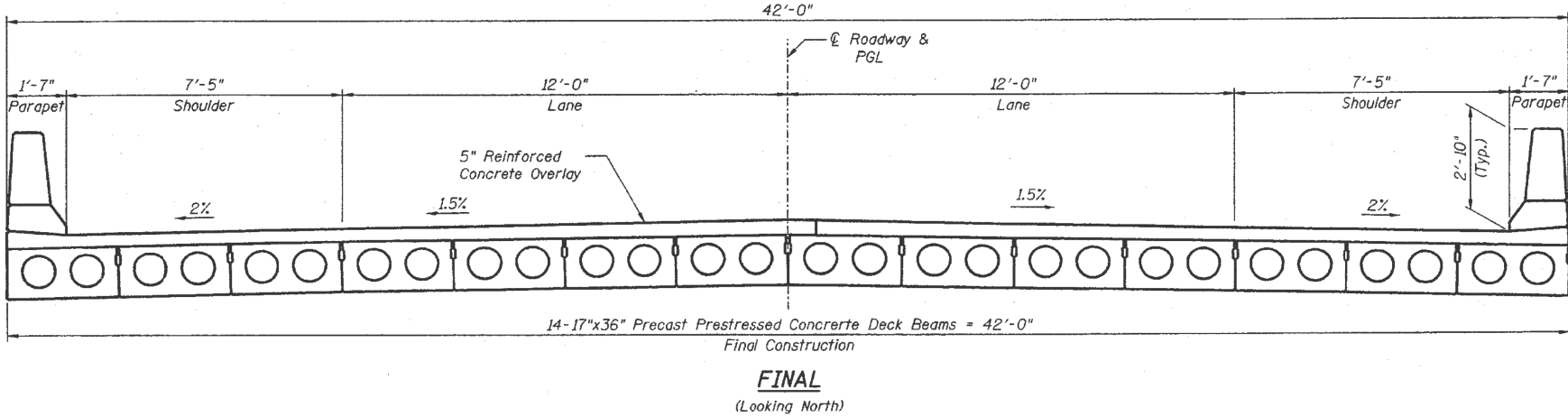
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STA.		TO STA.	

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CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY



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DRAWN -	REVISED -	
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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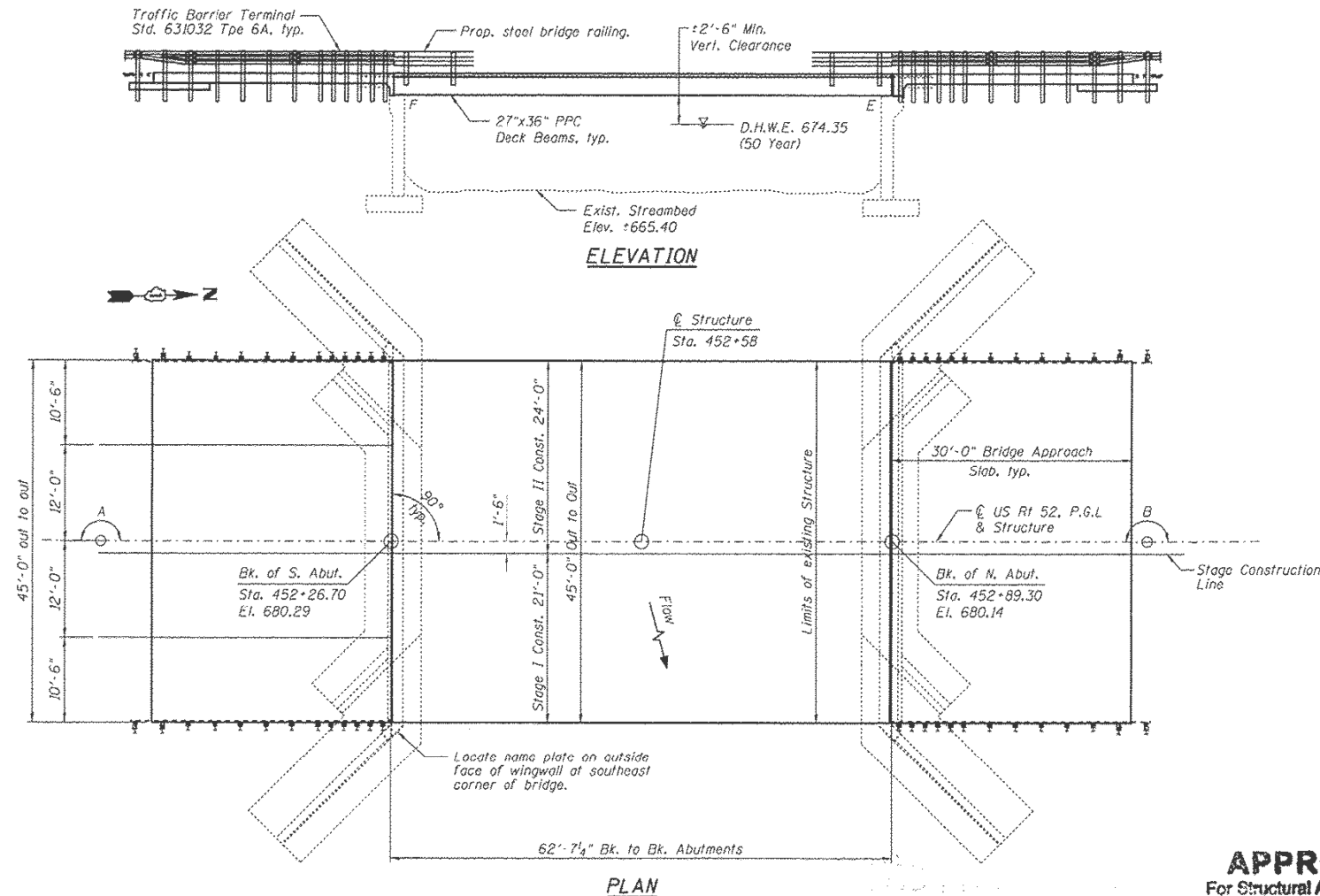
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VAR.	2018-0148-1	VARIOUS	86	71
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

Benchmark : Benchmark #1 - Brass Tablet at northwest corner of bridge.
Sta = 452+89.24' left, Elevation = 679.46'

Existing Structure: S.N. 099-0130 built in 1916 and widened and complete superstructure replacement in 1980 as a single span 27"x36" PPC Deck Beam bridge with 2 1/2" bituminous wearing surface on closed abutments on spread footings. The structure measures 62'-7 1/4" back to back abutments and 45'-0" out to out. Wingwalls were added in the 1980 widening to accommodate the new superstructure. Traffic is to be maintained utilizing stage construction. One lane of alternating two-way traffic is to be maintained using traffic signals.

Salvage: Existing Steel Bridge Rail



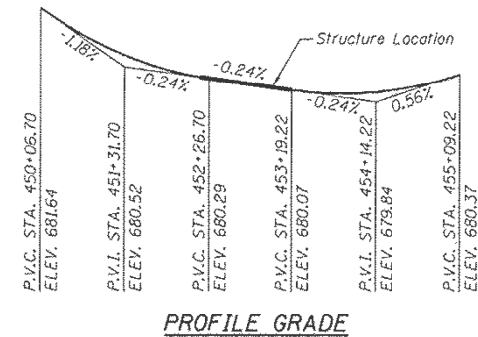
NOTE:
The roadway on the bridge is built on a straight chord between kinks A & B.

KINK	DIMENSION	STATION
A	179°13'08"	451+90.48
B	179°40'40"	453+21.18

WATERWAY INFORMATION

Drainage Area = 14.1 mi ²			Exist. Low Grade Elev. = 679.32 ft. @ Sta. 452+98						
			Prop. Low Grade Elev. = 679.56 ft. @ Sta. 452+98						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
	ID	1510	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	50	2400	492	492	673.37	0.07	0.07	673.44	673.44
Base	100	2960	530	530	674.35	0.25	0.25	674.60	674.60
Overlapping	>500				674.99	0.44	0.44	675.43	675.43
Max. Calc.	500	4220	596	596	676.09	0.73	0.73	676.82	676.82
10-Yr Velocity through Existing Bridge = 3.5 fps									
10-Yr Velocity through Proposed Bridge = 3.5 fps									

10-Yr Velocity through Existing Bridge = 3.5 fps
10-Yr Velocity through Proposed Bridge = 3.5 fps



PROFILE GRADE

STATION 452+58
REBUILT 20... BY
STATE OF ILLINOIS
F.A.P. ROUTE 852 SEC 18-B-4-R-2
LOADING HL-93
STRUCTURE NO. 099-0130

NAME PLATE

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

APPROVED
For Structural Adequacy Only
William H. Epp, S.E.
Engineer of Bridges & Structures

WILLIAM H. EPP, S.E.
IL. LIC. NO. 081-005150
EXP. 11-30-14
DATE 1-9-13

SCOUR ELEVATION TABLE

Scour Elevation (Ft.)	S. Abut	N. Abut
	662.75	662.67

NOTE:
Elevations are the assumed bottom of footing elevations

LOADING HL-93

DESIGN SPECIFICATIONS (NEW CONST.)

2010 AASHTO LRFD Bridge Design Specifications,
5th Edition, with 2010 Interims

DESIGN STRESSES

FIELD UNITS (NEW CONST.)

f'c = 3,500 psi
f'ci = 5000 psi (Concrete Wearing Surface)
fy = 60000 psi (Reinforcement)

FIELD UNITS (EXISTING)

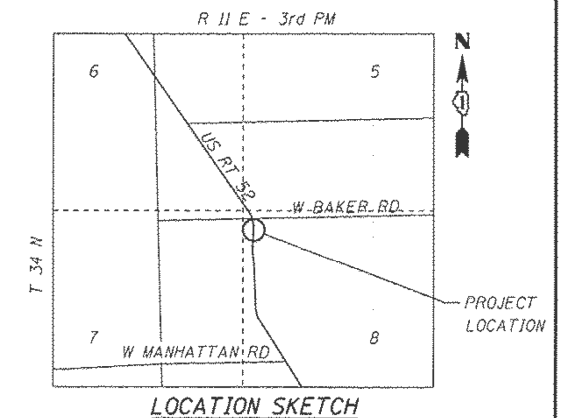
f'c = 3,500 psi
f'ci = 5000 psi (Concrete Wearing Surface)

PRECAST PRESTRESSED UNITS

f'c = 6000 psi
f'ci = 5000 psi
fpu = 270,000 psi (1/2" low lax. strands)
fpsi = 201,960 psi (1/2" low lax. strands)

SEISMIC DATA (EXISTING)

Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04g
Site Coefficient (S) = 1.2



GENERAL PLAN AND ELEVATION

US 52 OVER JACKSON CREEK

F.A.P. RT. 852

SECTION 18-B-4-R-2

WILL COUNTY

STA. 452+58

STRUCTURE NO. 099-0130

benesch
engineers - scientists - planners
Atrid Benesch & Company
1500 West St. Suite 222
Naperville, Illinois 60563
630-577-3100 Job No. 10259.00

DESIGNED -	SLV	REVISED -	
CHECKED -	MJM	REVISED -	
DRAWN -	SLV	REVISED -	
CHECKED -	MJM	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 099-0130

SHEET NO. 51 OF 516 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
852	18-B-4-R-2	WILL	44	18
				CONTRACT NO. 60N20
ILLINOIS FED. AID PROJECT				

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PLOT DATE = 1/30/2019	DATE -	REVISED -

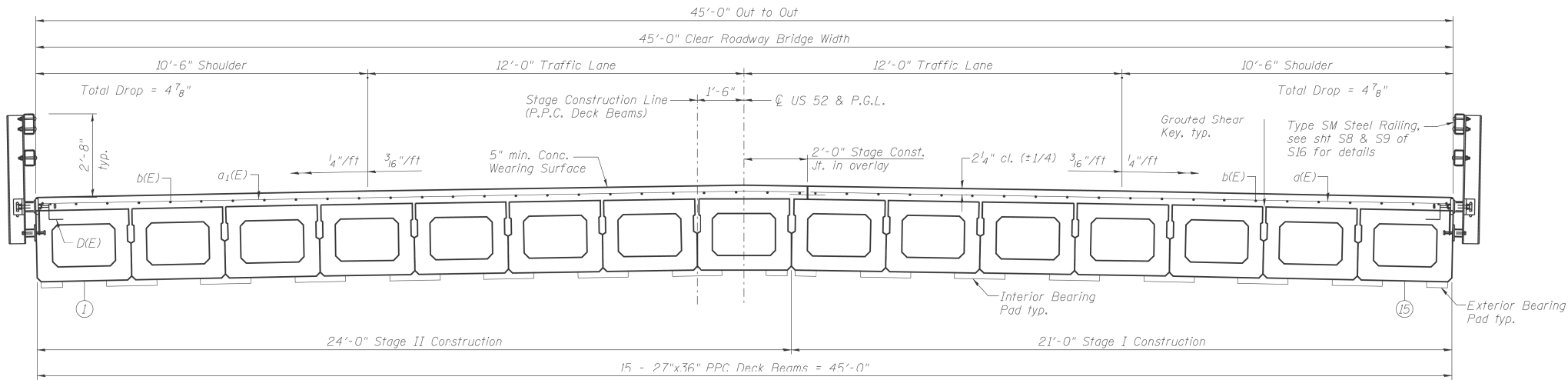
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 099-0130

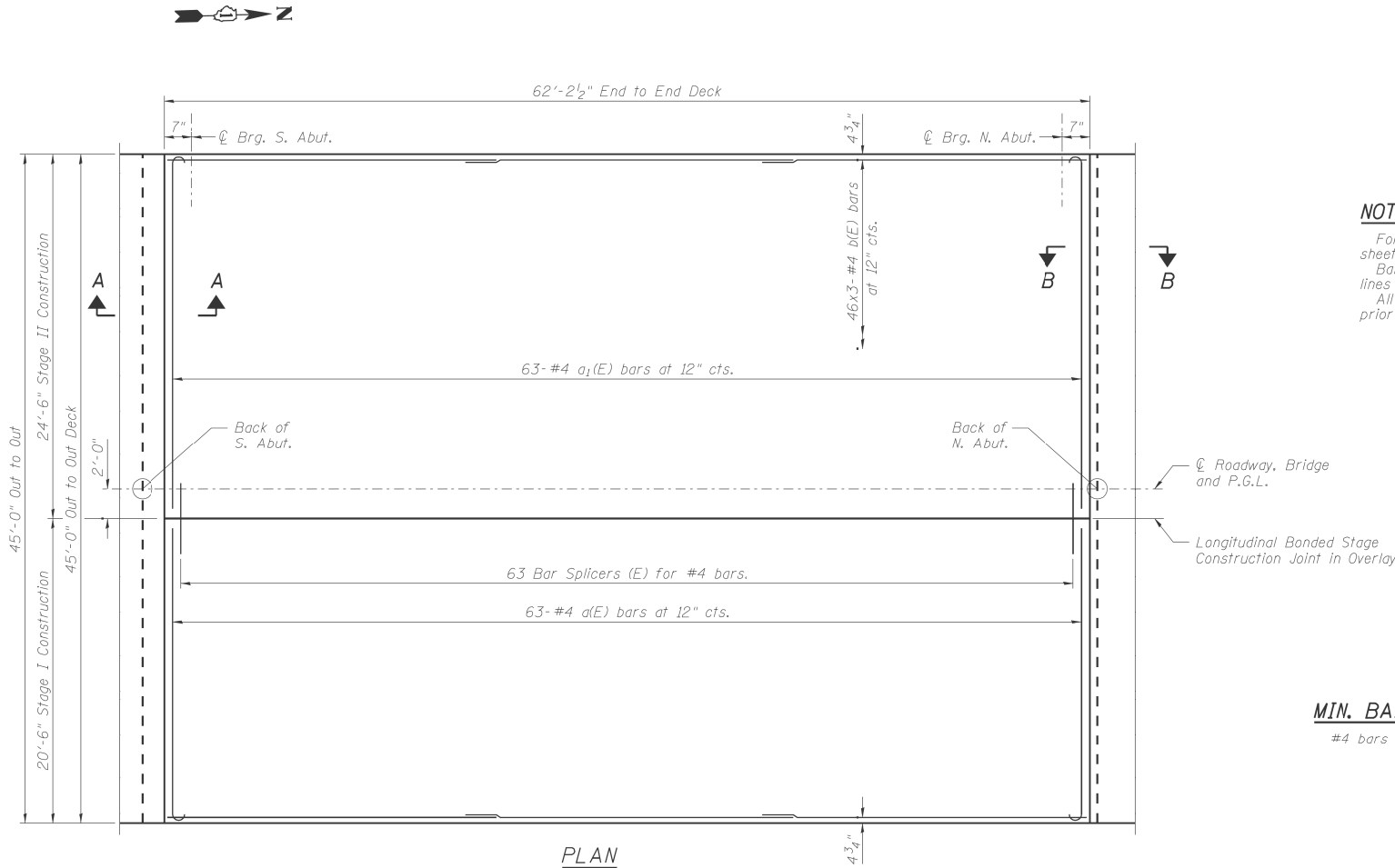
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	74
				CONTRACT NO. 62H78
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



CROSS SECTION
(Looking North)

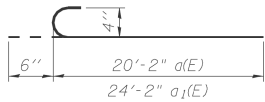


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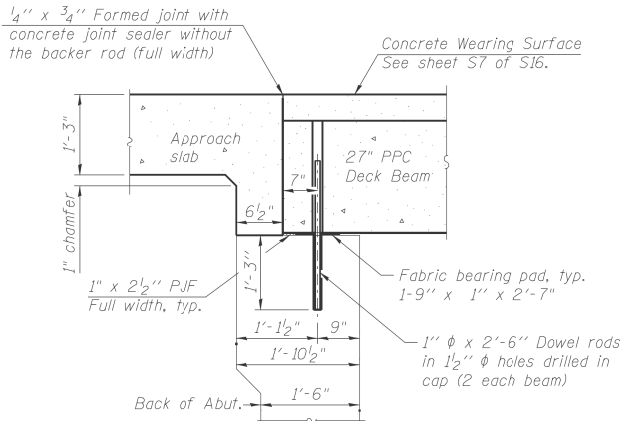
For remainder of Superstructure Details see sheet S8 of S16, including expansion joint details. Bars indicated thus 46x3-#4, etc, indicates 46 lines of bars with 3 lengths per line. All concrete wearing surfaces shall be placed prior to casting the approach slabs.

MIN. BAR LAP

#4 bars = 2'-7"

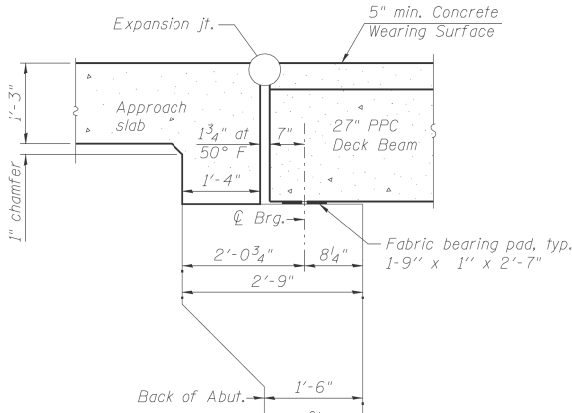


BAR a(E)
& a₁(E)



SECTION A-A
SECTION THRU FIXED ABUTMENT

Notes:
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys. All horizontal dimensions are at right angles to beam ends. See sheet S13 of S16 for fabric bearing pad details.



SECTION B-B
SECTION THRU EXP. ABUTMENT

Notes:
All horizontal dimensions are at right angles to beam ends. See sheet S13 of S16 for fabric bearing pad details.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	63	#4	20'-8"	C
a ₁ (E)	63	#4	24'-8"	C
b(E)	138	#4	22'-5"	C
Concrete Wearing Surface 5"				Sq. Yd. 312
Reinforcement Bars, Epoxy Coated				Pound 3970



DESIGNED -	SLV	REVISED -	
CHECKED -	MJM	REVISED -	
DRAWN -	SLV	REVISED -	
CHECKED -	MJM	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 099-0130

SHEET NO. S7 OF S16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
852	18-B-4-R-2	WILL	44	24
CONTRACT NO. 60N20				

ILLINOIS FED. AID PROJECT

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PLOT SCALE	= 100.0000 ' / in.
PLOT DATE	= 1/30/2019

DESIGNED -		REVISED -	
DRAWN -		REVISED -	
CHECKED -		REVISED -	
DATE -		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 099-0130

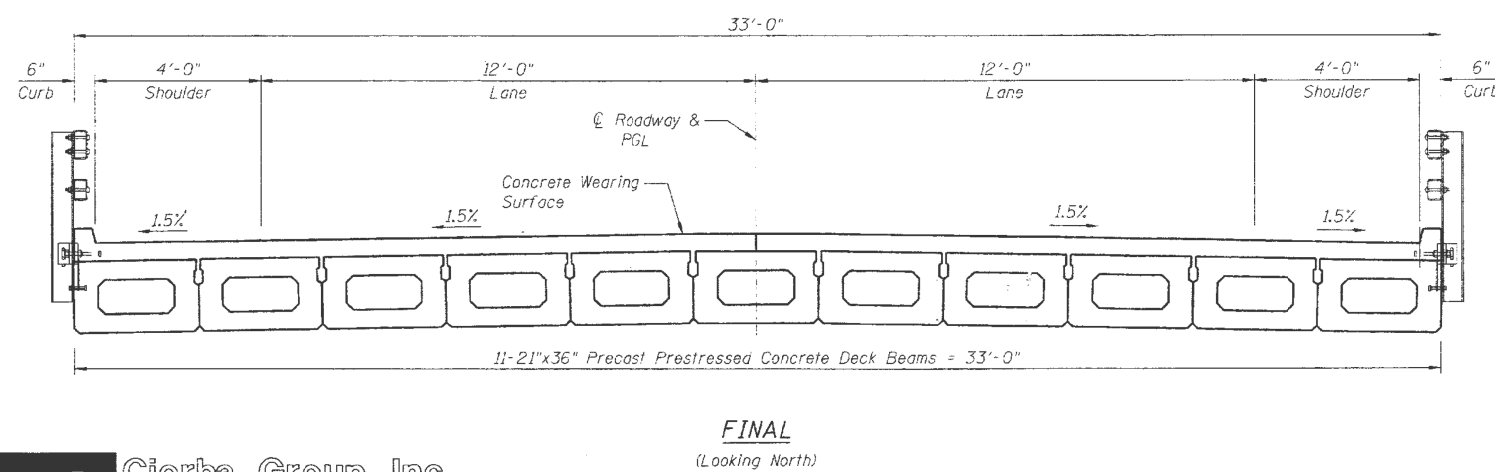
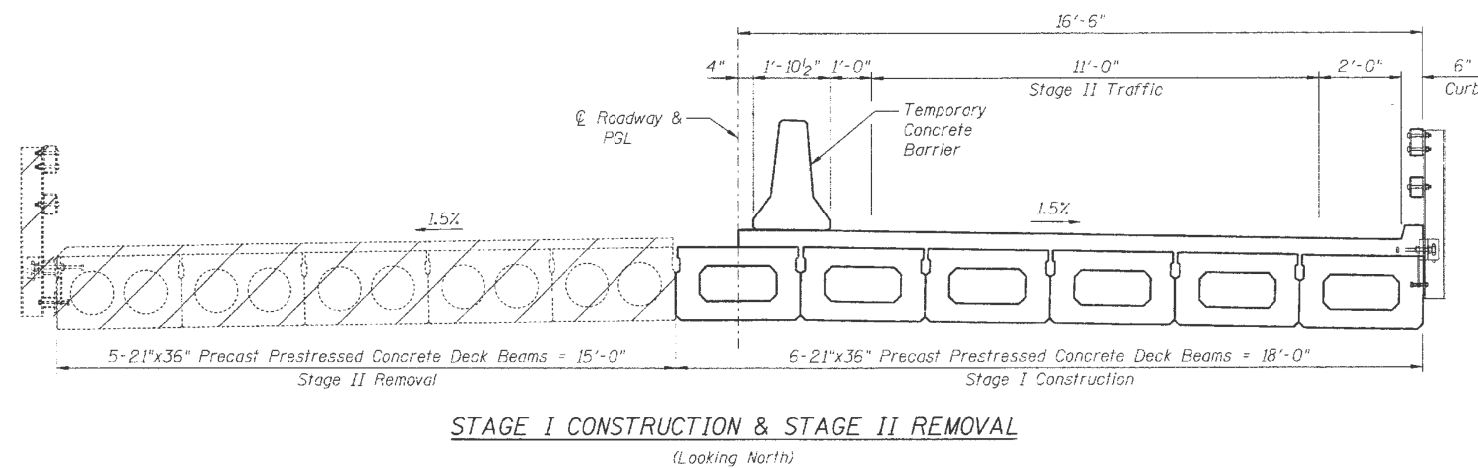
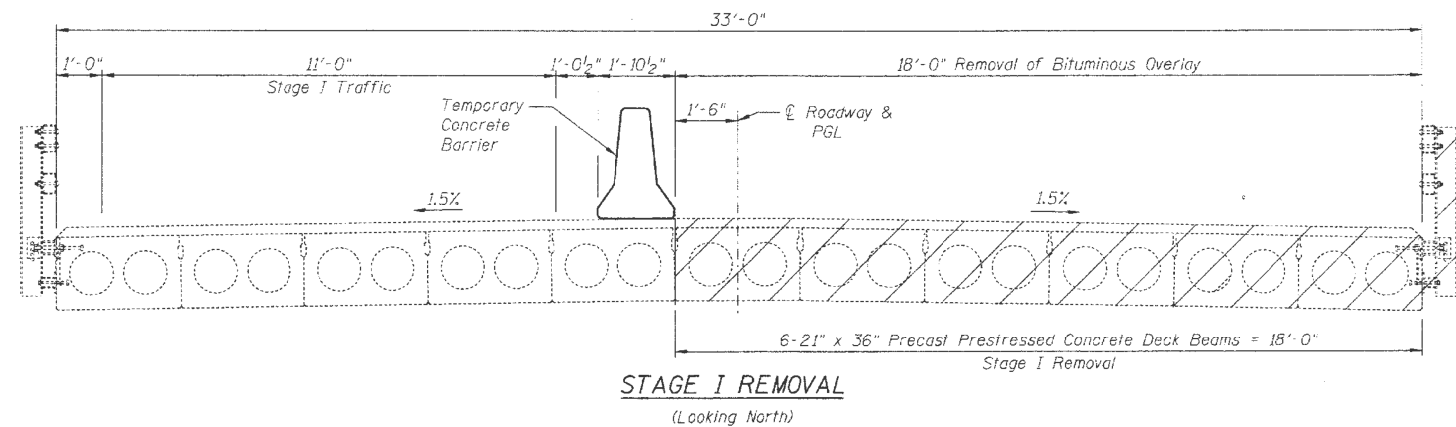
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				


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FOR INFORMATION ONLY

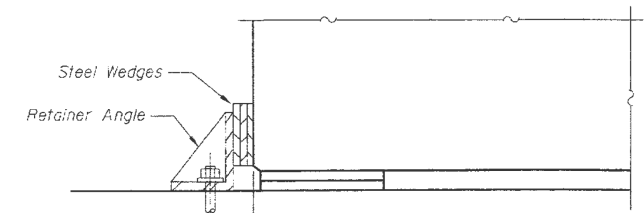
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DESIGNED *B. Sauter*
CHECKED *E. Mroczek*
DRAWN *R. Danley*
CHECKED *B. Sauter*

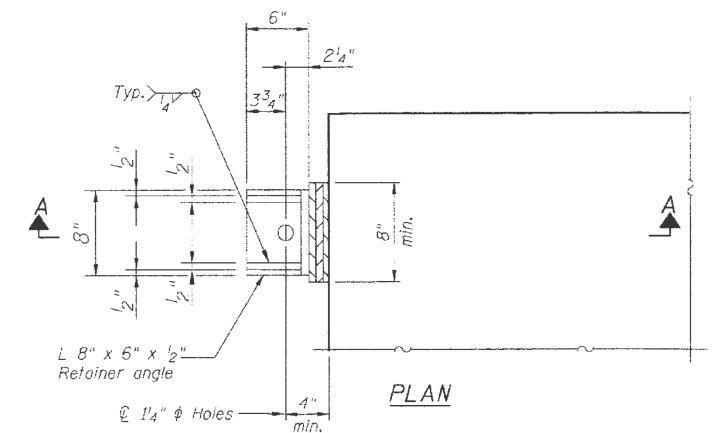


Giorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@giorba.com



*1" ϕ x 12" Galv.
anchor bolt with
2 1/2" x 2 1/2" x 5/16" P
washer under nut

SECTION A-A



PLAN

TEMPORARY RETAINER ANGLE

- * Retainer angle to be placed adjacent to center beam at South and East Abutments right after Stage I center beam is removed. Retainer angle shall be removed right before installation of the new stage I beams. Repeat procedure for stage II. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams.

LEGEND:

Removal of Existing Superstructure

NOTES:

1. See Sheet S-3 for Temporary Concrete Barrier Details.
2. The Contractor is ultimately responsible of means and methods to ensure the complete stability of the structural members during construction.
3. Existing Bearing removal to be paid for under "Asbestos Bearing Pad Removal".

STAGE CONSTRUCTION DETAILS
US 52 OVER FORKED CREEK
STA. 65+70
S.N. 099-0133

SHEET NO. S-2	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-13 SHEETS	852	18B	WILL	31	17
CONTRACT NO. 60087					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

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PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/30/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 099-0133

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	77
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

Benchmark: Chiseled "X" S-E Wingwall, Offset 19'-7" RT. Sta. 820+59 Elev. 557.86

Existing Structure: Rebuilt in 1971 as a 2 span 21" x 36" and 21" x 48" PPC Deck Beam Bridge with 3" bituminous wearing surface on closed abutments and a pier. The substructure is supported on H piles. The structure measures 102'-0" Bk. to Bk. Abutments and 34'-0" Out to Out Deck. Bridge was rehabilitated in 2000 with one beam replacement. Traffic is to be maintained utilizing stage construction. One lane for both directions will be provided by using temporary traffic signals.

Salvage: None.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STATION 821+12.20
REBUILT 20 BY
STATE OF ILLINOIS
FAP 631 SEC. III N-1 B
LOADING HL93
STR. NO. 099-0169

SCOPE OF WORK

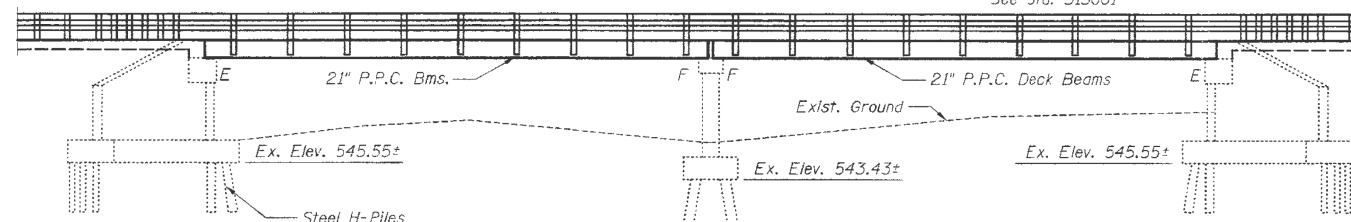
1. Total Superstructure Removal and Replacement
2. Substructure Repairs
3. Approach Slab Removal and Replacement

INDEX OF SHEETS

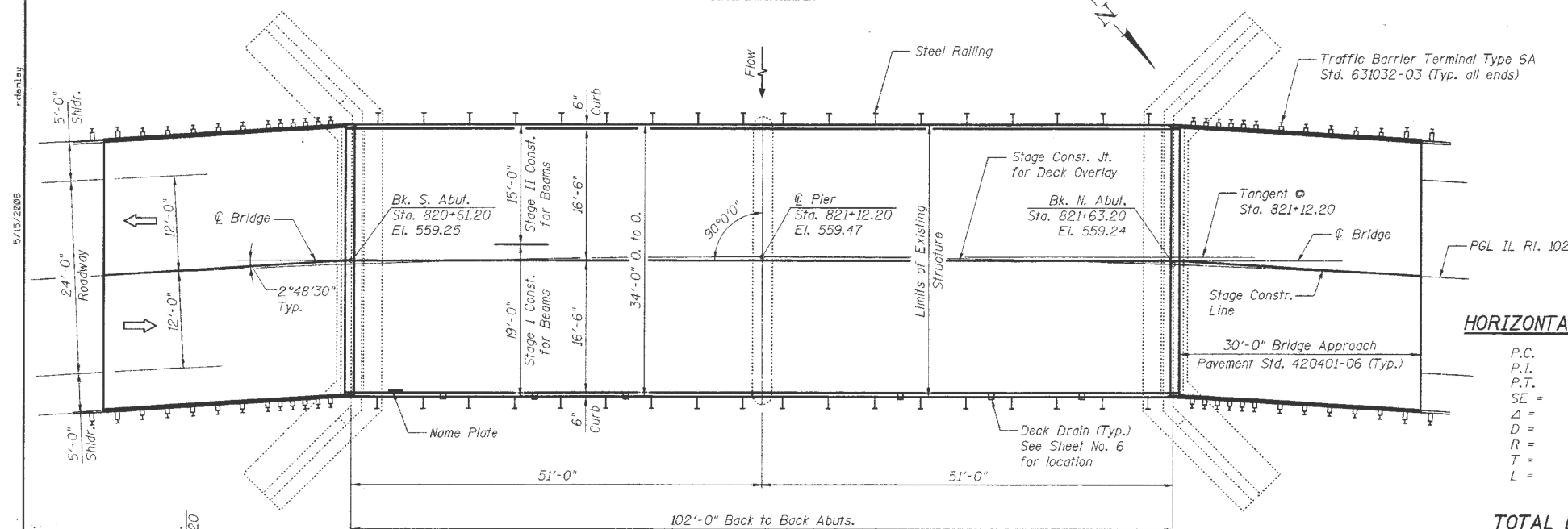
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2. Stage Construction Details
3. Temporary Concrete Barrier
4. Beam Details (21"x36") Details No. 1
5. Beam Details (21"x36") Details No. 2
6. Beam Details (21"x48") Details No. 1
7. Beam Details (21"x48") Details No. 2
8. Superstructure Details No. 1
9. Superstructure Details No. 2
10. Steel Railing, Type SM
11. Pier Repairs
12. North & South Abutment Repairs
13. North & South Abutment
14. Bar Splicer Details

NAME PLATE

See Std. 515001



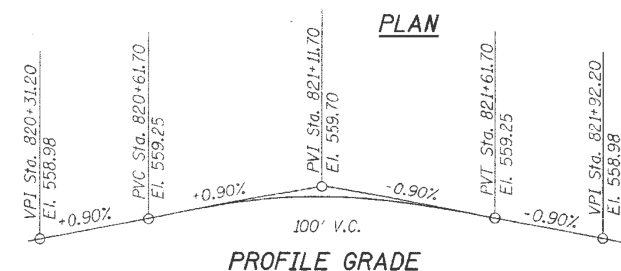
ELEVATION



OFFSET SKETCH

DESIGNED	B. Sauter
CHECKED	E. Mroczek
DRAWN	R. Danley
CHECKED	B. Sauter

PLAN



PROFILE GRADE

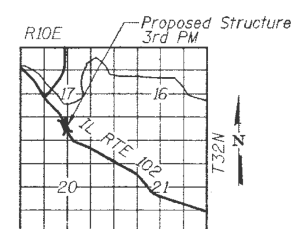


Giorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60655
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@giorba.com



APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TS)
ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

HORIZONTAL CURVE DATA

P.C.	818+02.03
P.I.	822+99.23
P.T.	827+60.13
SE	7.4%
Δ	37°-47'19"
D	3°-56'39"
R	1452.69
T	497.20'
L	958.10'

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu. Yd.	4.5
Concrete Superstructure	Cu. Yd.	6.4
Bridge Deck Grooving	Sq. Yd.	353
Protective Coat	Sq. Yd.	383
Concrete Wearing Surface (5")	Sq. Yd.	383
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3,443
Reinforcement Bars, Epoxy Coated	Pound	5,850
Bar Splicers	Each	116
Steel Railing, Type SM	Foot	204
Name Plates	Each	1
Preformed Joint Strip Seal	Foot	68
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.	71
Asbestos Bearing Pad Removal	Each	24

* Special Provision

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See Special Provisions.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Attach new Name Plate to the inside face of steel rail as shown. Existing name plate is to be left in place.

Reinforcement Bars designated (E) shall be epoxy coated.

No in-stream work will be allowed on this project.

The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Repair of the substructure shall be completed prior to placement of the new deck beams.

After the removal of the existing beams for stage I removal, the Contractor shall re-connect or re-engage the transverse ties in the existing beams for stage I traffic.

Burn or cut the existing dowel rods flush with existing bearing seat. Grind the existing dowel rods smooth and seal with epoxy. The cost of this work shall be included with "Removal of Existing Superstructures".

LOADING HL-93

Allow 25 psf for future wearing surface

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications
(4th Edition, 2007)

DESIGN STRESSES

FIELD UNITS	PRESTRESSED UNITS
$f'_c = 3,500$ psi	$f'_c = 6,000$ psi
$f_y = 60,000$ psi	$f'_ci = 5,000$ psi
	$f'_s = 270,000$ psi (1/2" ϕ low lax. strands)
	$f'_si = 201,900$ psi (1/2" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04g
Site Coefficient (S) = 1.2

GENERAL PLAN AND ELEVATION

FAP 631 (ILL. RTE. 102)

OVER FORKED CREEK OVERFLOW

SECTION III N-1 B

WILL COUNTY

STA. 821+12.20

S.N. 099-0169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

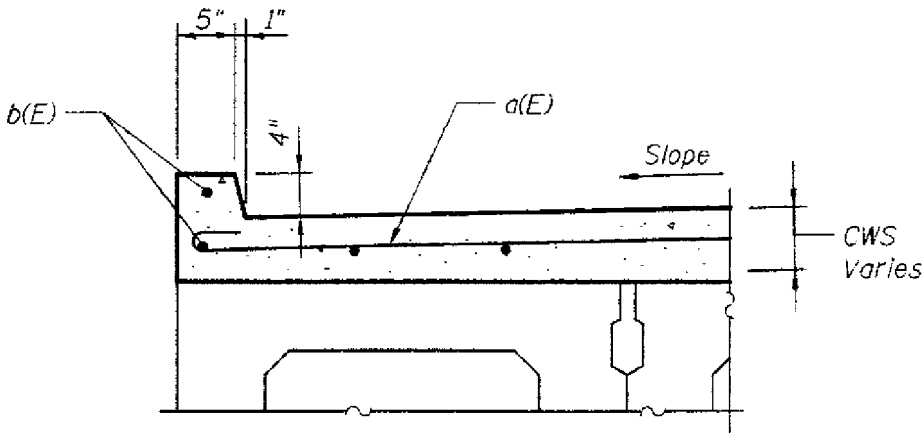
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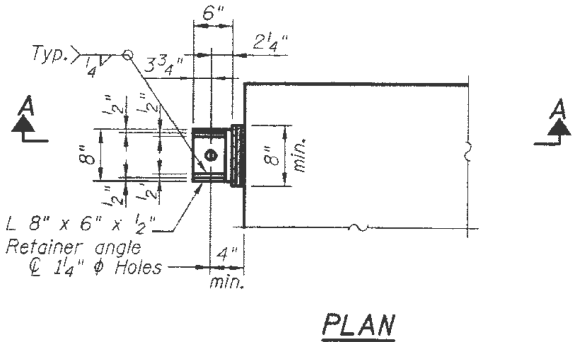
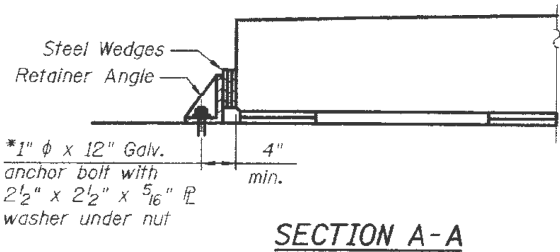
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ILLINOIS FED. AID PROJECT				

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PLOT DATE = 1/30/2019	DATE -	REVISED -

FOR INFORMATION ONLY

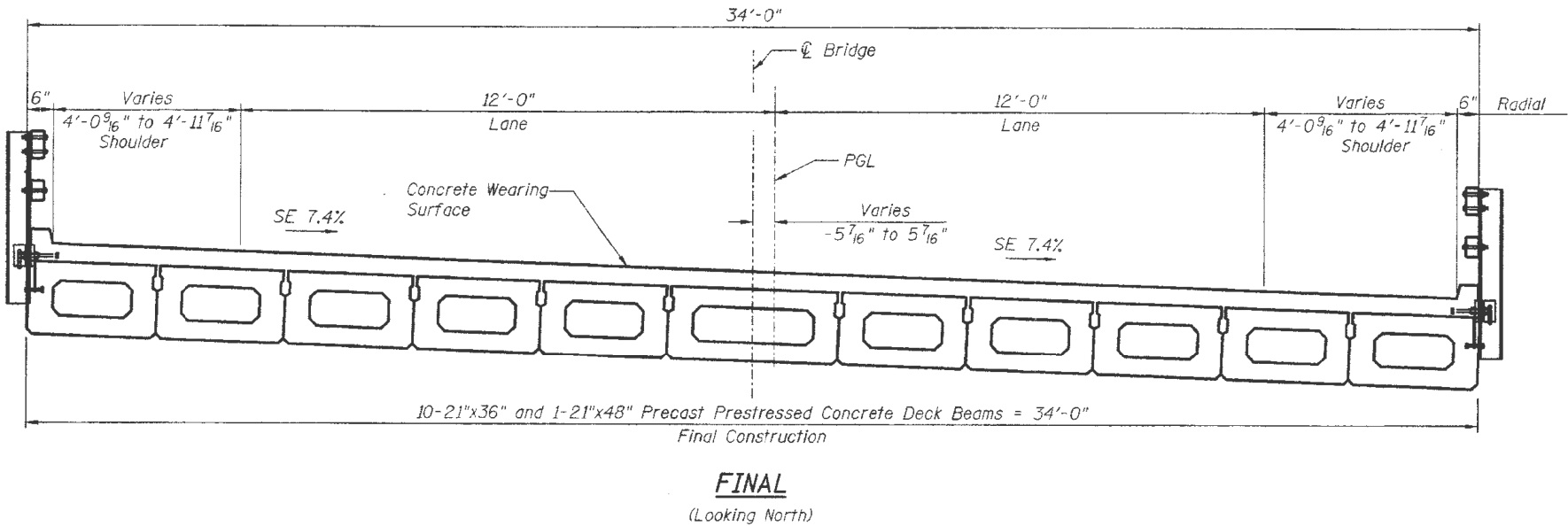


SECTION THRU CURB
Curbs shall be poured in the field.



TEMPORARY RETAINER ANGLE

* Retainer angle to be placed adjacent to beam at stage line at abutments right after Stage I center beam is removed. Retainer angle shall be removed right before installation of the new stage I beams. Repeat procedure for Stage II. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams.



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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

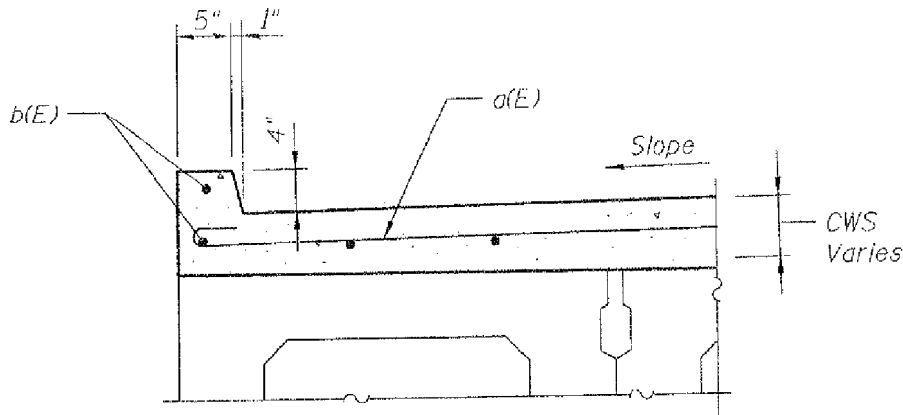
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STA.	TO	STA.	TO

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

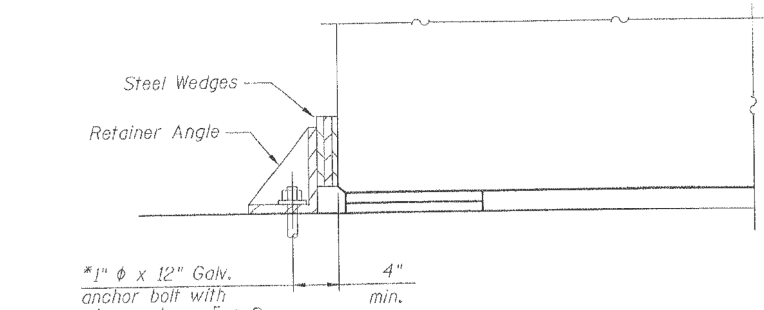
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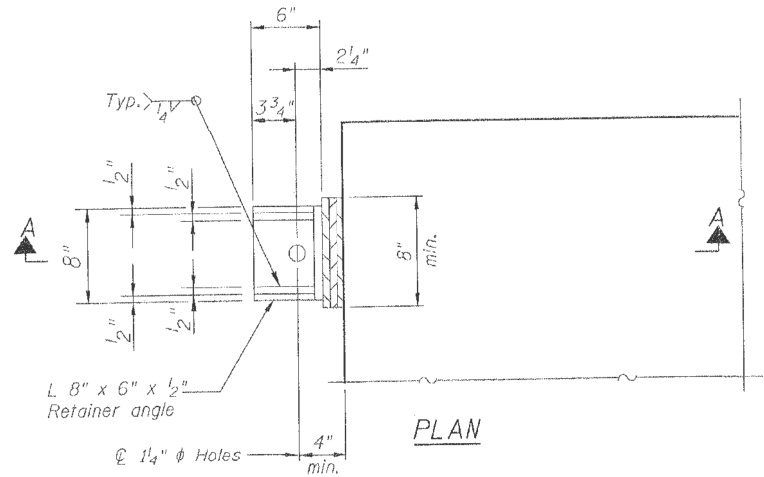
FOR INFORMATION ONLY



SECTION THRU CURB
Curbs shall be poured in the field.



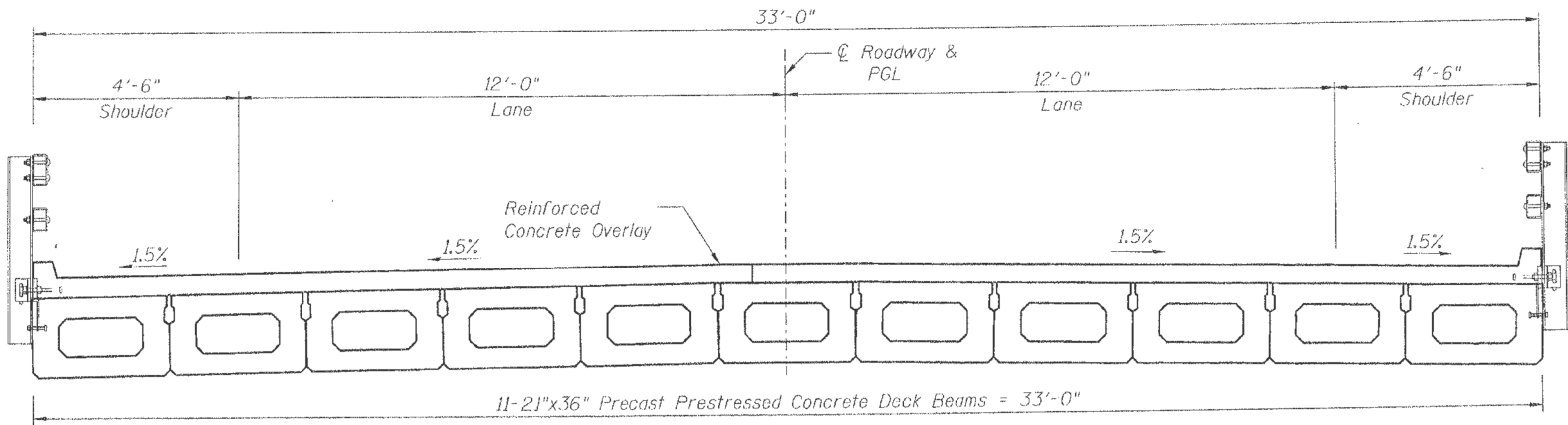
SECTION A-A



PLAN

TEMPORARY RETAINER ANGLE

* Retainer angle to be placed adjacent to center beam at West Abutment right after Stage I center beam is removed. Retainer angle shall be removed right before installation of the new stage I beams. Repeat procedure for stage II. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams.



FINAL
(Looking West)

MODEL Default
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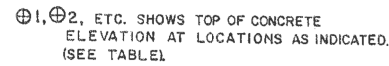
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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION SN: 099-0172			
SCALE:	SHEET	OF	SHEETS
TO STA.		TO STA.	

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	81
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				


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LOCATION	ELEVATION
1	EL.669.86
2	EL.670.24
3	EL.670.64
4	EL.670.83
5	EL.671.21
6	EL.671.61
7	EL.671.81
8	EL.672.19
9	EL.672.59

BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	46	# 4	18'-2"	_____
a ₁ (E)	46	# 4	18'-4"	_____
b (E)	38	# 4	44'-6"	_____
d (E)	96	# 6	3'-6"	_____
d ₁ (E)	96	# 4	3'-6"	_____
e (E)	36	# 4	15'-9"	_____
e ₁ (E)	8	# 8	26'-8"	_____
e ₂ (E)	16	# 5	25'-8"	_____

ITEM	UNIT	TOTAL
CONCRETE SUPERSTRUCTURES	CU.YD	12.8
REINFORCEMENT BARS EPOXY COATED	L.BS.	4340
CONCRETE WEARING SURFACE	SQ.YD.	185
PROTECTIVE COAT	SQ.YD.	35

* PROTECTIVE COAT	SQ YD.
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INTERIOR SURFACE OF PARAPET ONLY

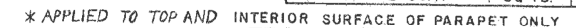
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE
DECK PLAN AND SECTION**

WOLF ROAD
OVER HICKORY CREEK TRIBUTARY
F.A.S. 163 SECTION (44, 44X, 44B-1 & 2) R
WILL COUNTY

STA 158+55.00 STRUCTURE NO. 099-0315
SCALE: NONE DRAWN BY CBD

DATE: 6-28-94 CHECKED BY M.H.



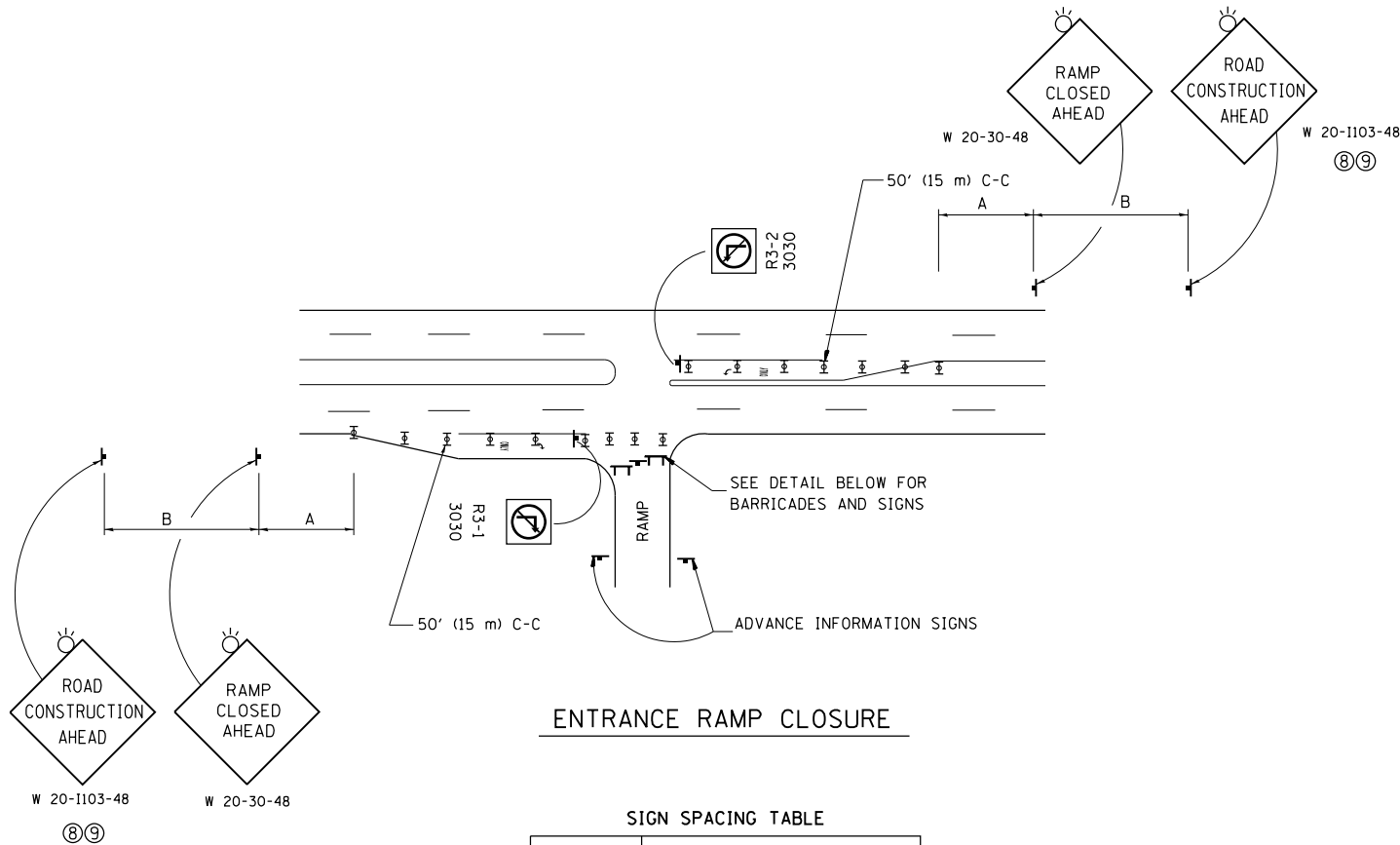
REVISIONS	
NAME	DATE

FOR REINFORCING
DETAILS IN PARAPET
SEE SHEET S-4

E J M Engineering, P.C.
411 South Wells Suite 800
Chicago, Illinois 60607

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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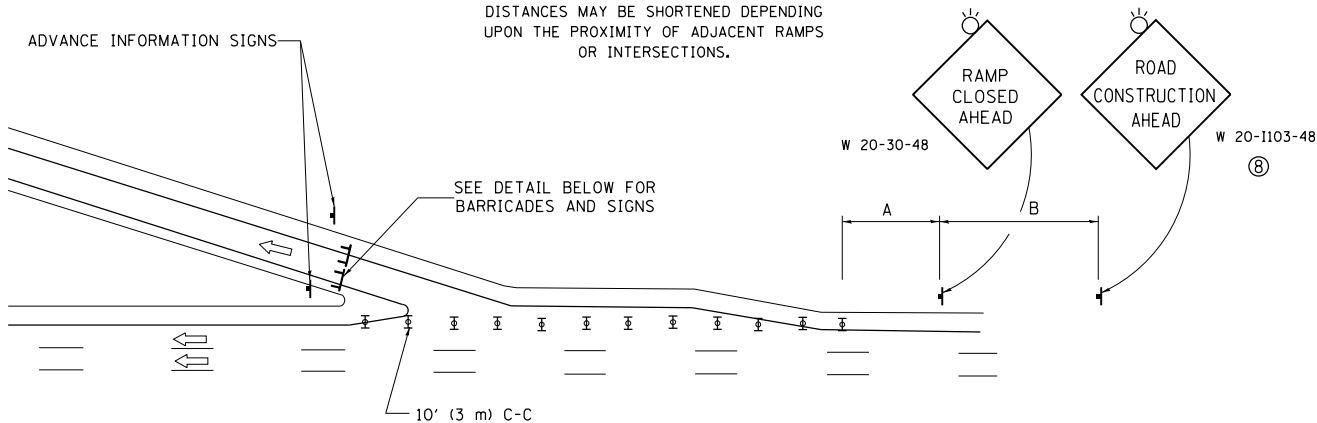
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	83
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	



ENTRANCE RAMP CLOSURE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

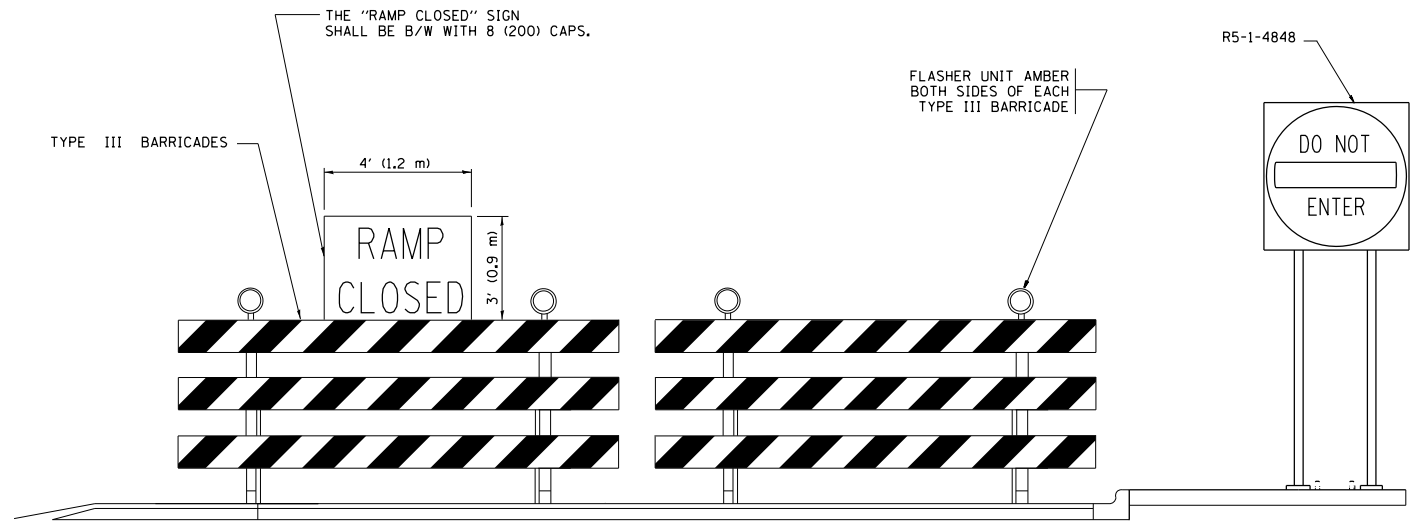
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



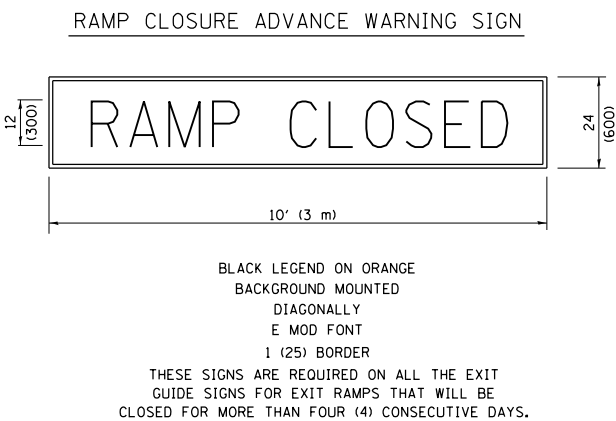
EXIT RAMP CLOSURE

SYMBOLS

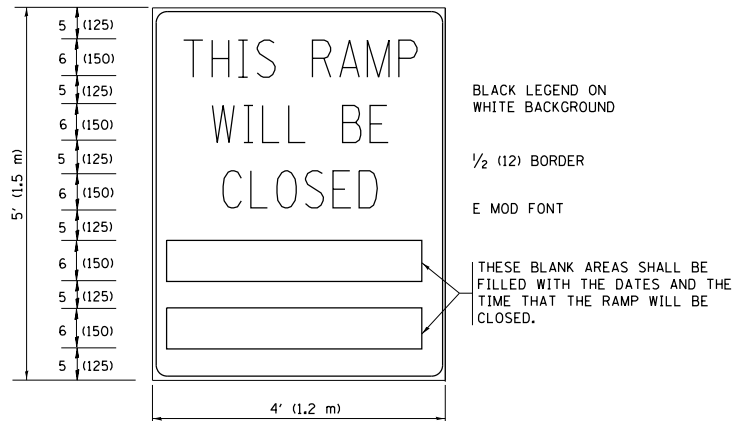
- TYPE II BARRICADE OR DRUM
- TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS



RAMP CLOSURE ADVANCE INFORMATION SIGN



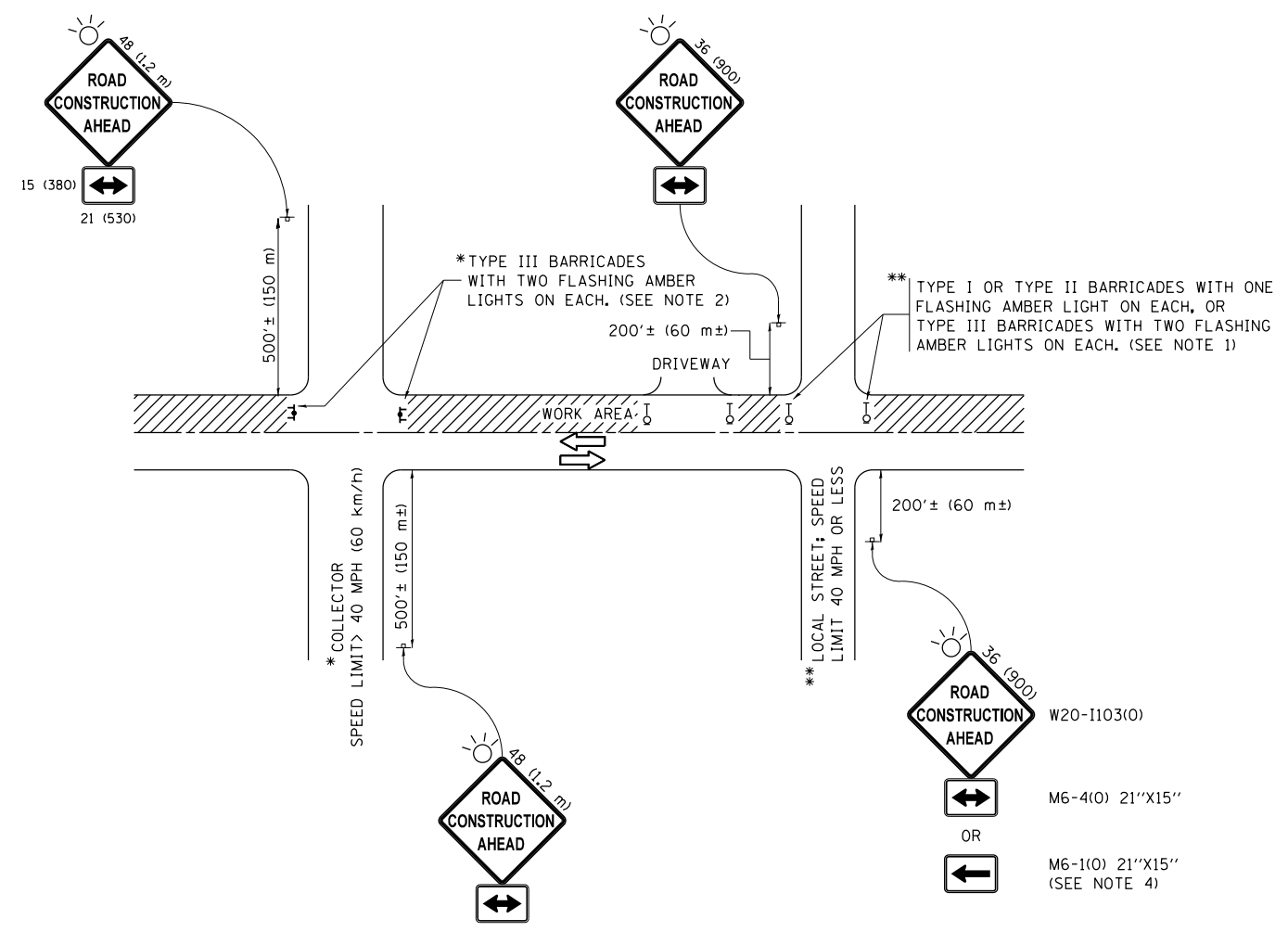
THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
- A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH.
- ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = diazio	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pwt\11\084EBID\INTEG\Illinois.gov\PI\DOT\Documents\IDOT Offices\District 1\Projects\DI1141\084EBID\Design\DistStd.dgn	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - T. RAMMACH 01-06-00						VAR.	2018-0148-I	VARIOUS	86	85
Default	PLOT DATE = 1/30/2019	DATE - 06-89	REVISED - A. SCHUETZE 07-01-13		TC-10		CONTRACT NO. 62H78						
		REVISED - A. SCHUETZE 09-15-16	SCALE: NONE		SHEET 1	OF 1	SHEETS	STA.	TO STA.				
				ILLINOIS FED. AID PROJECT									

TURN BAY ENTRANCE AT START
OF LANE CLOSURE TAPER

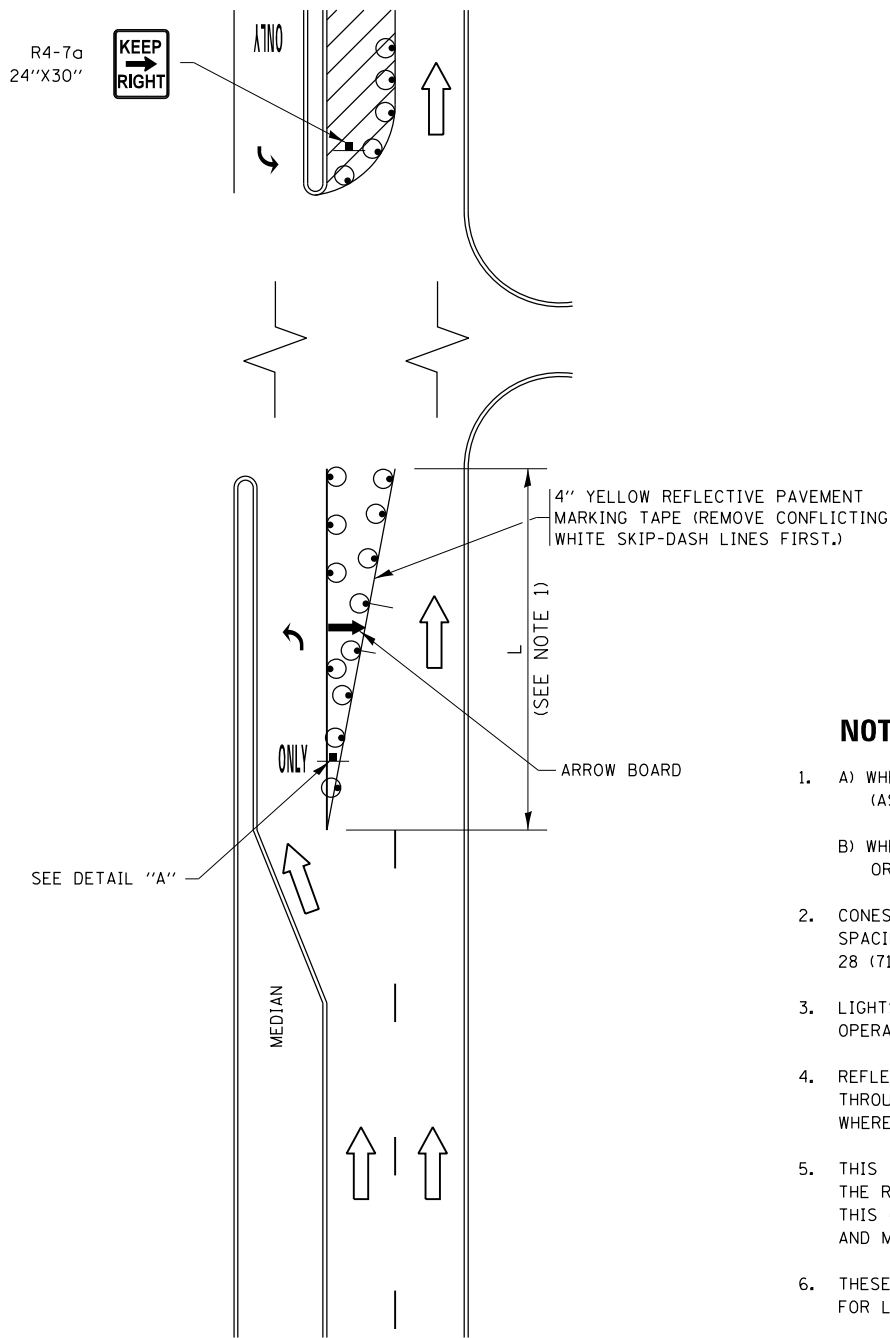
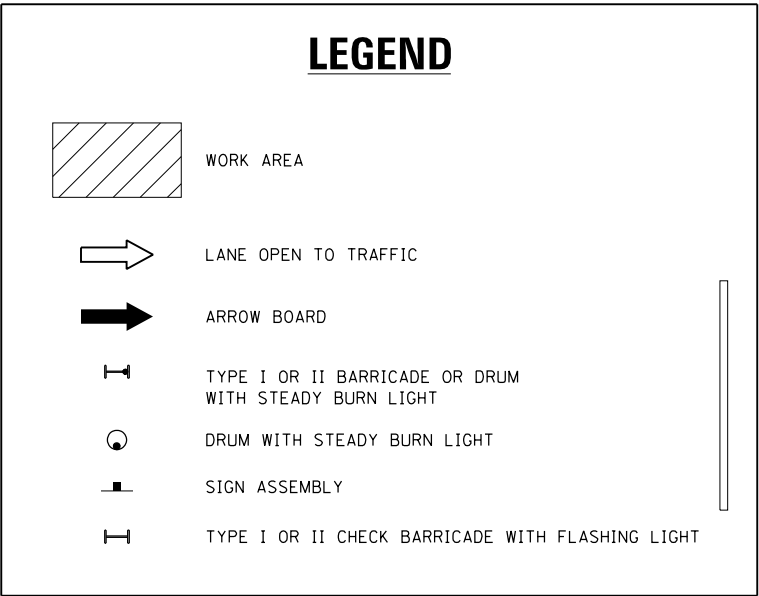


FIGURE 1

LEGEND



NOTES:

1. A) WHEN "L" IS $\leq$ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.
B) WHEN "L" IS $>$ THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-1100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

TURN BAY ENTRANCE
WITHIN A LANE CLOSURE

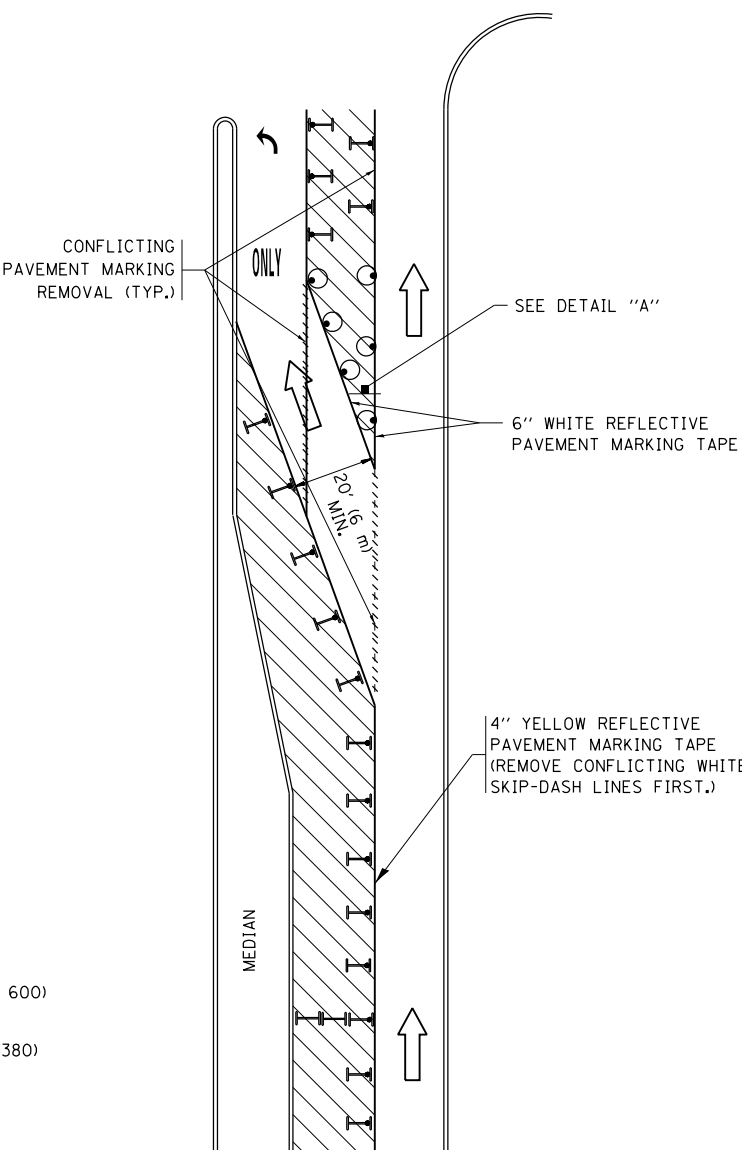
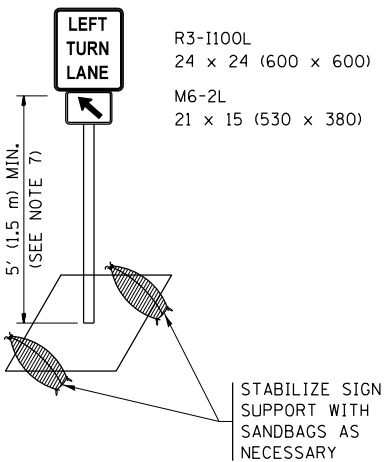


FIGURE 2



DETAIL A

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = diazo	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
p:\1\1084EBID\INTEG\Illinois.gov\PI\DOT\Documents\DOT Offices\District 1\Projects\DI1141\REVISED\Design\A-1100\HOUSEH 11-07-95	REVISOR = A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13	REVISED - A. SCHUETZE 07-01-13			VAR.	2018-0148-I	VARIOUS	86	86
Default	PLOT SCALE = 100.0000' / in.	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16			TC-14		CONTRACT NO. 62H78		
	PLOT DATE = 1/30/2019	REVISED - T. RAMMACHER 01-06-00	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE: NONE						SHEET 1	OF 1	SHEETS	STA.	TO STA.