

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	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
1-800-992-0123
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, 2019

Anthony J. Dwyer/MS
REGIONAL ENGINEER

May 10, 2019
E.E.K.
ENGINEER OF DESIGN AND ENVIRONMENT

May 19, 2019
Paul L. Ch...
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

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INDEX OF SHEETS

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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 GLENWOOD, 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					



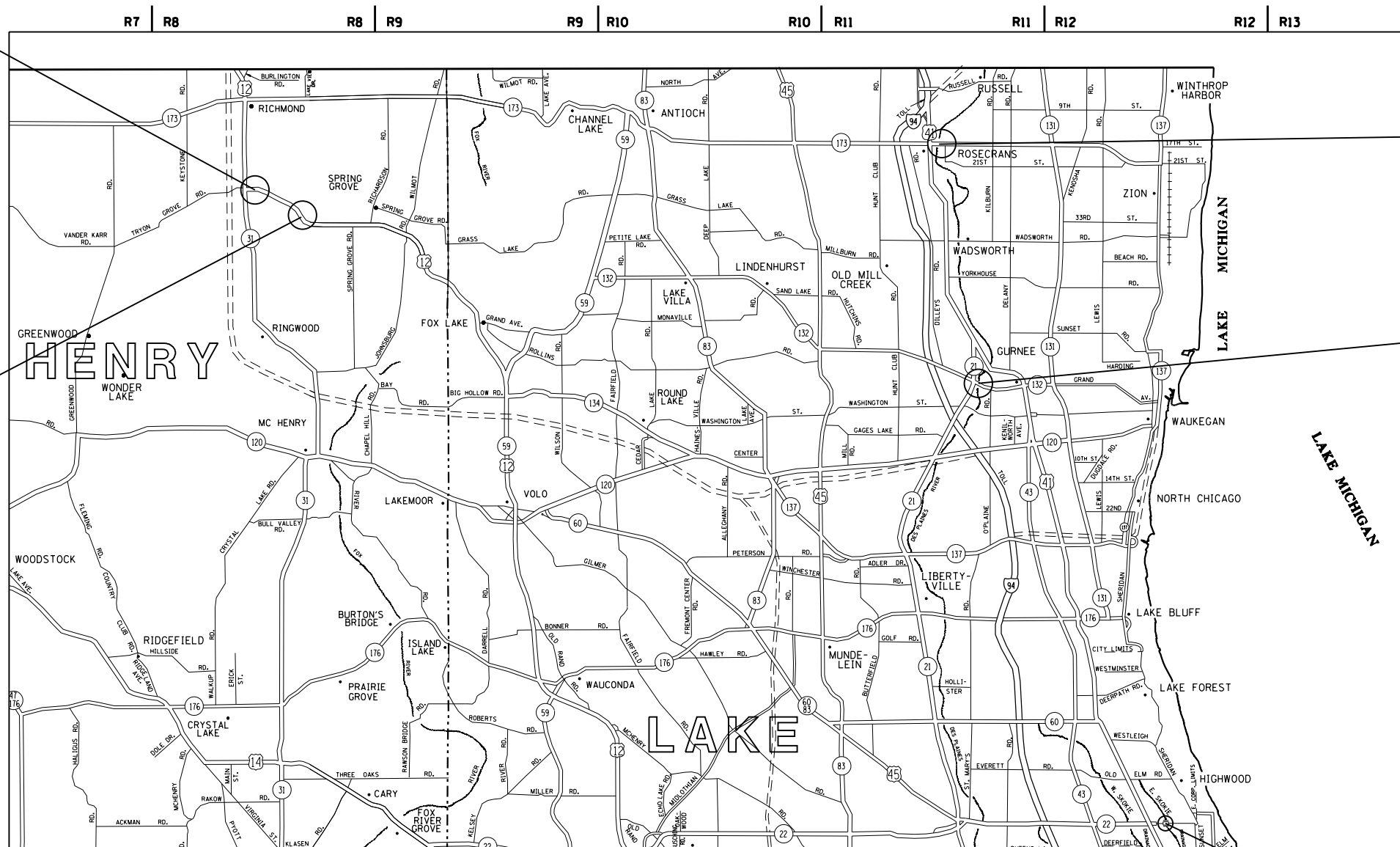
LOCATION OF PROJECT:
26. US ROUTE 12 OVER
NORTH BRANCH NIPPERSINK CREEK
VILLAGE OF RICHMOND
STRUCTURE NO. 056-0056
ADT = 8,350 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
21. IL ROUTE 173 OVER
DES PLAINES RIVER
VILLAGE OF WADSWORTH
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:
25. US ROUTE 12 OVER
NIPPERSINK CREEK
VILLAGE OF SOLON MILLS
STRUCTURE NO. 056-0019
ADT = 10,400 (2017)
POSTED SPEED LIMIT = 45 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

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PLOT DATE = 2/6/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LOCATION MAP

SCALE:	SHEET 1	OF 4	SHEETS	STA.	TO STA
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	5
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

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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

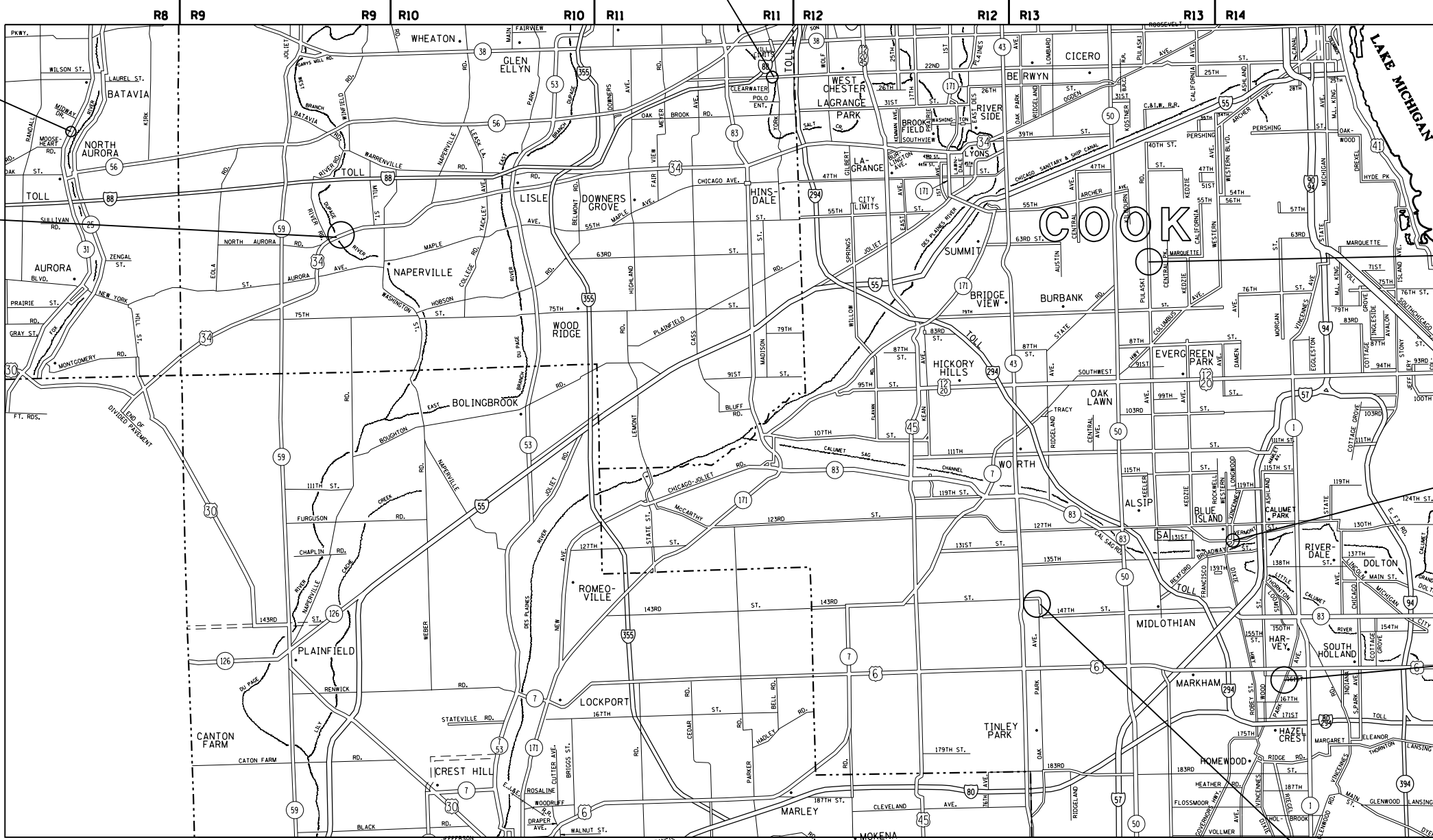
LOCATION OF PROJECT:
15. US ROUTE 34 OVER
WEST BRANCH DUPAGE RIVER
VILLAGE OF NAPERVILLE
STRUCTURE NO. 022-0040
ADT = 32,100 (2017)
POSTED SPEED LIMIT = 40 MPH

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

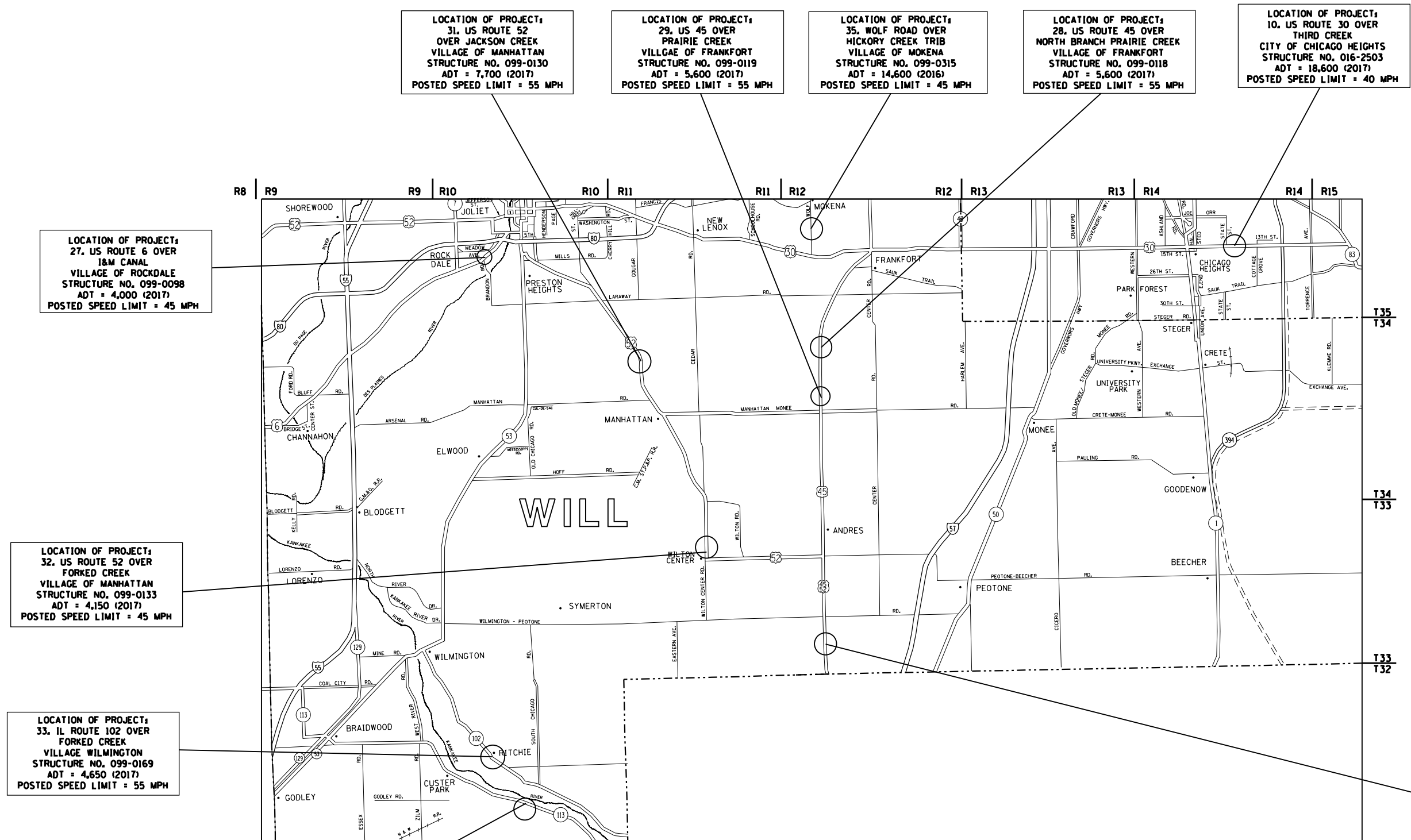
LOCATION MAP

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 -



BLOOM. JOLIET, GREEN GARDEN. PEOTONE, MANHATTAN, WILTON,
WESLEY, CUSTER AND FRANKFORT TOWNSHIPS

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

LOCATION OF PROJECT:
33. IL ROUTE 102 OVER
FORKED CREEK
VILLAGE WILMINGTON
STRUCTURE NO. 099-0169
ADT = 4,650 (2017)
POSTED SPEED LIMIT = 55 MPH

LOCATION OF PROJECT:
32. US ROUTE 52 OVER
FORKED CREEK
VILLAGE OF MANHATTAN
STRUCTURE NO. 099-0133
ADT = 4,150 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
27. US ROUTE 6 OVER
I&M CANAL
VILLAGE OF ROCKDALE
STRUCTURE NO. 099-0098
ADT = 4,000 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
31. US ROUTE 52
OVER JACKSON CREEK
VILLAGE OF MANHATTAN
STRUCTURE NO. 099-0130
ADT = 7,700 (2017)
POSTED SPEED LIMIT = 55 MPH

LOCATION OF PROJECT:
29. US 45 OVER
PRAIRIE CREEK
VILLAGE OF FRANKFORT
STRUCTURE NO. 099-0119
ADT = 5,600 (2017)
POSTED SPEED LIMIT = 55 MPH

LOCATION OF PROJECT:
35. WOLF ROAD OVER
HICKORY CREEK TRIB
VILLAGE OF MOKENA
STRUCTURE NO. 099-0315
ADT = 14,600 (2016)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
28. US ROUTE 45 OVER
NORTH BRANCH PRAIRIE CREEK
VILLAGE OF FRANKFORT
STRUCTURE NO. 099-0118
ADT = 5,600 (2017)
POSTED SPEED LIMIT = 55 MPH

LOCATION OF PROJECT:
10. US ROUTE 30 OVER
THIRD CREEK
CITY OF CHICAGO HEIGHTS
STRUCTURE NO. 016-2503
ADT = 18,600 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
30. US ROUTE 45/52 OVER
SMALL STREAM
VILLAGE OF PEOTONE
STRUCTURE NO. 099-0122
ADT = 7,600 (2017)
POSTED SPEED LIMIT = 55 MPH

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PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 2/6/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

LOCATION MSP

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

FOR INFORMATION ONLY

Donahmark: 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'-0" out to out of superstructure.
Substructure was modified accordingly. Superstructure was resurfaced and railing replaced in 1996. Minor repairs were made to substructure.
Salvage: None for removal components except existing name plates.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
116 20		COOK	22	8
10 SHEETS				

Contract # 62618

INDEX OF SHEETS

- General Plan & Elevation
- General Notes and Total Bill of Material
- Stage Construction
- Temporary Concrete Barrier for Stage Construction
- Superstructure Details - 17" Deck Beams
- Superstructure Details - Scotches & Joint Details
- Rail Fast Spacing & Concrete Wearing Surface Plan
- Steel Railing, Type SM With Concrete Wearing Surface and Curb
- Bar Splice Assembly Details
- Substructure Repairs General Plan & Elevation

LOADING HS20-44

No Allowance for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

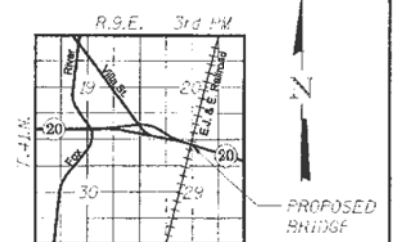
DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_a = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" low lax strands)
 $f'_s = 201,960$ psi (1/2" low lax strands)



RAILROAD DATA

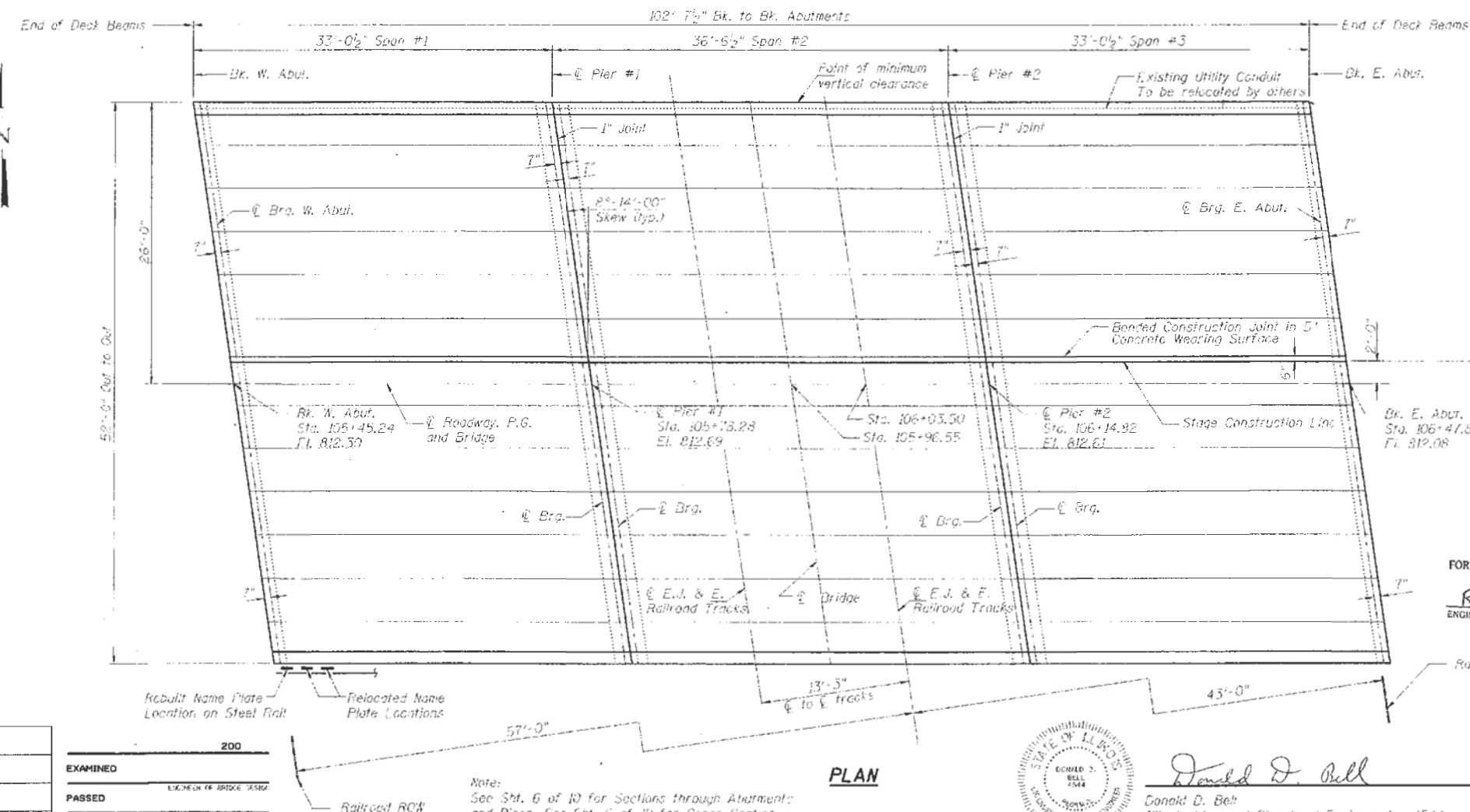
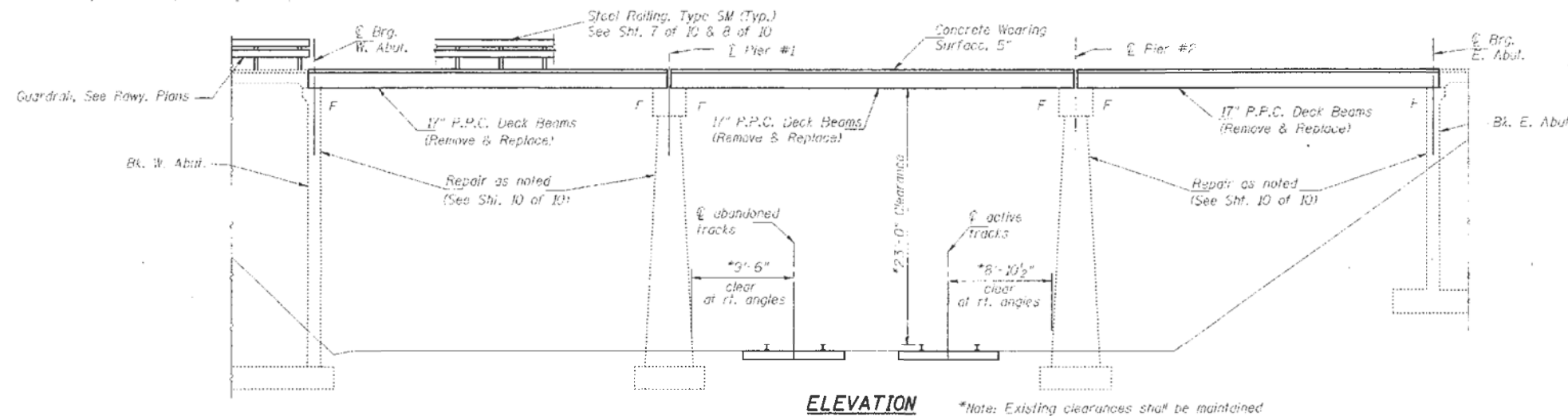
Crossing: DOT/AAR No. 260 5291.
Mile Post: 38.57

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

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



DESIGNED	CDB
CHECKED	LLV
DRAWN	MCM
CHECKED	LLV

EXAMINED	
PASSED	

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0219

SCALE: SHEET OF SHEETS STA. TO STA.

VAR.	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I		VARIOUS	86	9
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ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

[illegible]

The figure contains two technical cross-section drawings of bridge structures. The left drawing, titled 'SECTION THRU FIXED PIERS', shows a central pier with two 17" PPC Deck Beams. Above the beams is a concrete wearing surface (5" min.) and a 1/4" x 3/4" formed joint with a concrete joint sealer. Below the beams is a fabric bearing pad (1'-9" x 1 1/2" x 2'-11" or (9" x 1'-5 1/2") and 1" diameter x 2'-6" dowel rods in 1 1/2" diameter holes. The right drawing, titled 'SECTION THRU FIXED ABUTMENTS', shows an abutment structure with a similar 17" PPC Deck Beam and concrete wearing surface. It includes a fabric bearing pad and 1" diameter x 2'-6" dowel rods. Both drawings show a 1/2" x 6" F.F.F. full width base. Annotations include 'Proposed Approach Pavement to match top of Concrete Wearing Surface. See Roadway Plans.' and '*53-#5 W/E bars Ed. Abut. Space at 12" along abut. Included in Bill of Material on sheet 7 of 10.'

Location	CWS Depth	Bk. W. Abut.	Span #1	Pier #1	Span #2	Pier #2	Span #3	Bk. E. Abut.
Left Fascia Beam	5'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"
CWS Construction Joint	6'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"
E Profile Grade	6'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"
Right Fascia Beam	5'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"	6'-0"	5'-0"

Diagram showing the elevation view of the bridge deck. The deck is supported by three spans: Span #1 (53'-0 1/2'), Span #2 (36'-5 1/2"), and Span #3 (33'-0 1/2"). The deck is labeled "Top of Deck Beam" and "Top of CWS". The spans are separated by piers labeled "Pier #1", "Pier #2", and "Pier #3". The deck is shown with a 5" Min. clearance (See Table) above the water level. The deck is labeled "Deck" at both ends.

Technical drawing of a cross-section of a reinforced concrete slab with a steel beam and various reinforcement details. The drawing includes the following labels and dimensions:

- Top Reinforcement:**
 - 4-3" ϕ x 6' Running Head bolts
 - 1/2" and 1/4" of rebar extend in head with double 6' first washers
 - 6" ϕ holes in below structural section may be drilled in the field
- Steel Beam:**
 - MS 6 x 4 x 3/4
 - MS 6 x 4 x 3/4
- Dimensions:**
 - Overall width: 2'-0"
 - Overall height: 2'-0"
 - Beam height: 1'-0"
 - Slab thickness: 8"
 - Rebar spacing: 1'-0"
 - Rebar diameter: 3/4"
 - Rebar diameter: 1/2"
 - Rebar diameter: 1/4"
 - Rebar diameter: 1/8"
 - Rebar diameter: 1/16"
 - Rebar diameter: 1/32"
 - Rebar diameter: 1/64"
 - Rebar diameter: 1/128"
 - Rebar diameter: 1/256"
 - Rebar diameter: 1/512"
 - Rebar diameter: 1/1024"
 - Rebar diameter: 1/2048"
 - Rebar diameter: 1/4096"
 - Rebar diameter: 1/8192"
 - Rebar diameter: 1/16384"
 - Rebar diameter: 1/32768"
 - Rebar diameter: 1/65536"
 - Rebar diameter: 1/131072"
 - Rebar diameter: 1/262144"
 - Rebar diameter: 1/524288"
 - Rebar diameter: 1/1048576"
 - Rebar diameter: 1/2097152"
 - Rebar diameter: 1/4194304"
 - Rebar diameter: 1/8388608"
 - Rebar diameter: 1/16777216"
 - Rebar diameter: 1/33554432"
 - Rebar diameter: 1/67108864"
 - Rebar diameter: 1/134217728"
 - Rebar diameter: 1/268435456"
 - Rebar diameter: 1/536870912"
 - Rebar diameter: 1/1073741824"
 - Rebar diameter: 1/2147483648"
 - Rebar diameter: 1/4294967296"
 - Rebar diameter: 1/8589934592"
 - Rebar diameter: 1/17179869184"
 - Rebar diameter: 1/34359738368"
 - Rebar diameter: 1/68719476736"
 - Rebar diameter: 1/137438953472"
 - Rebar diameter: 1/274877906944"
 - Rebar diameter: 1/549755813888"
 - Rebar diameter: 1/1099511627776"
 - Rebar diameter: 1/2199023255552"
 - Rebar diameter: 1/4398046511104"
 - Rebar diameter: 1/8796093022208"
 - Rebar diameter: 1/17592186044416"
 - Rebar diameter: 1/35184372088832"
 - Rebar diameter: 1/70368744177664"
 - Rebar diameter: 1/140737488355328"
 - Rebar diameter: 1/281474976710656"
 - Rebar diameter: 1/562949953421312"
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 - Rebar diameter: 1/4503599627370496"
 - Rebar diameter: 1/9007199254740992"
 - Rebar diameter: 1/18014398509481984"
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 - Rebar diameter: 1/144115188075855872"
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DESIGNED <i>DGP</i>	200
CHECKED <i>LLV</i>	EXAMINED
DRAWN <i>MGM</i>	DATE OF EXAM. <i>10/10/80</i>
CHECKED <i>LLV</i>	PASSED
	ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

STS Consultants
111 NE Jefferson Ave.
Peoria, Illinois 61602
PH 309/676-8461
FAX 309/676-5445
E-Design, Firms Reg. No. 164-071518

FOR INFORMATION ONLY

BENCH MARK: (Existing Shown in 1969 Plans)

Standard County Disc set in Concrete Monument in triangle at intersection of Milwaukee Avenue, Glenview Road and Dearlove Road, Elev. 674.444

Existing Structure: S.N. 016-0243, was originally built in 1969 as F.A. Route 22 (S.B.I. Route 21), Section 211-KVX-W & BR. In 1998 the Structure was repaired, at that time the Bituminous Concrete Overlay was replaced with a Reinforced Concrete Overlay. The Existing three span structure consists of Precast Prestressed Concrete Deck Beams supported by open abutments and two (2) Column Piers. Dimensions are 166'-4⁵/₈" bk. to bk. Abutments and 82'-0" out to out with a 1'-54"-3.5" Skew.

PROPOSED APPROVEMENT:

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

Salvage: None

SCOPE OF WORK:

Remove and replace P.P.C. Deck Beam Superstructure with 5" min. Concrete Overlay and repair Substructure.

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

NEW CONSTRUCTION

$f'_c = 3,500$ 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)

SEISMIC DATA

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

ELEVATION TABLE

TOP OF RAIL

ELEVATION

At Station 1 667.30

At Station 4 667.12

VERTICAL CLEARANCE RAIL

FROM TOP OF RAIL

VERTICAL CLEARANCE

At Station 1 22'-2"

At Station 2 22'-2"

At Station 3 22'-3³/₈"

At Station 4 22'-4³/₈"

At Station 5 22'-4³/₈"

At Station 6 22'-4³/₈"

At Station 7 22'-6⁵/₈"

At Station 8 22'-7¹/₈"

CURVE DATA

(Milwaukee Ave.)

$\Delta = 0^\circ-45'-20''$

$D = 0^\circ-04'-54''$

$R = 70,141.13'$

$T = 462.44'$

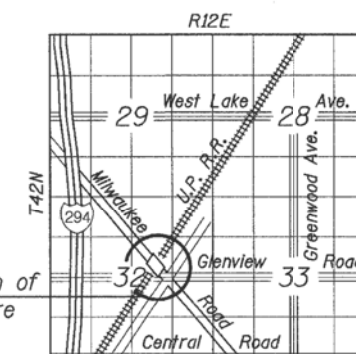
$L = 925.00'$

$E = 1.52'$

P.C. STA. = 27+05.91

P.T. STA. = 36+30.91

Location of
Structure



LOCATION SKETCH

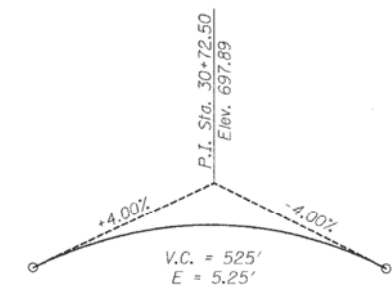
SHEET 51 OF 513

FED. AID DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE. 374 (IL. RTE. 21)	211-K-V-X-B	COOK	38	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60C20

INDEX OF SHEETS

- 1 GENERAL PLAN & ELEVATION
- 2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- 3 CONSTRUCTION STAGING-I
- 4 CONSTRUCTION STAGING-II
- 5 REINFORCEMENT PLAN
- 6 PARAPET DETAILS
- 7 JOINT DETAILS
- 8 P.P.C. DECK BEAM DETAILS
- 9 ALUMINUM RAILING, TYPE L
- 10 ABUTMENT REPAIR
- 11 PIER REPAIR
- 12 BAR SPLICER ASSEMBLY DETAILS
- 13 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION



PROFILE S.B.I. RTE. 21

(Milwaukee Ave.)
(Existing Shown in 1969 Plans)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



BB Shah
BHADRESH N. SHAH
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. NO. 081-004476
EXPIRES: 11-30-08

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
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: JULY 23, 2007
DATE: JULY 23, 2007

CHRISTIAN-ROGE & ASSOC., INC.
CHICAGO ILLINOIS

REVISIONS	
NAME	DATE
	09-10-07

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: 016-0243

SCALE: SHEET OF SHEETS STA. TO STA.

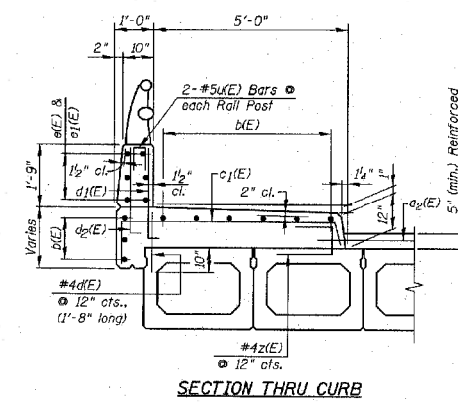
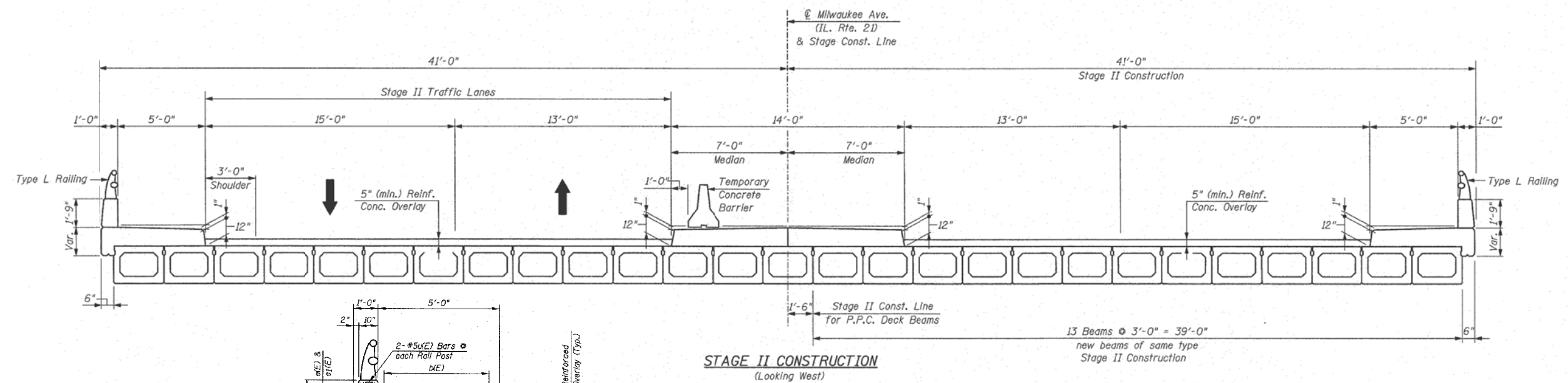
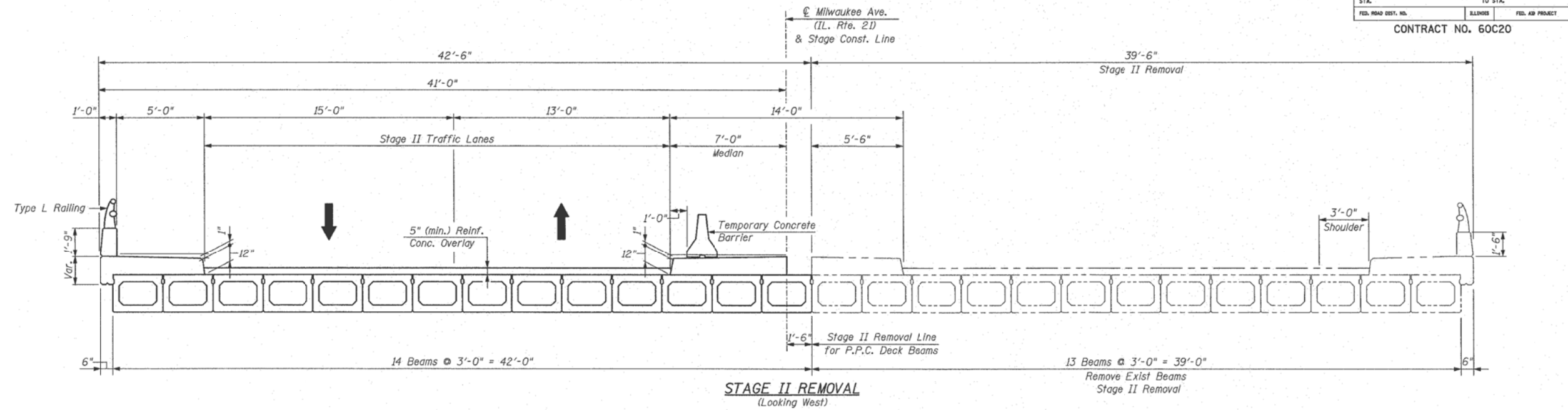
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	11
				CONTRACT NO. 62H78
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

SHEET S4 OF S13

FED. AID PROJ. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE. 374 (IL. RTE. 21)	211-K-V-X-B	COOK	38	18
STA.	TO STA.			
FED. ROAD DIST. NO.	BLINDS	FED. AID PROJECT		

CONTRACT NO. 60C20



CONSTRUCTION STAGING

NOTE:
Quantity for Temporary Barrier is included
with Roadway Plans

REVISIONS	NAME	DATE

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: DATE: JUNE 12, 2007
DRAWN BY: F.M. CHECKED BY: B.N.S.
CHRISTIAN-ROGE & ASSOC., INC.
CHICAGO ILLINOIS

USER NAME = diaza	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 2/4/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0243

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	12
				CONTRACT NO. 62H78
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

BENCH MARK:

Existing Structure: S.N. 016-0349, was originally built in 1968 as S.B.I. Route 58, Section 582-R-1. In 1994 the Structure was repaired, at that time the Bituminous Concrete Surface was removed and replaced. In 2002 the Structure was patched and the Existing Bituminous Surface was removed and replaced with Concrete Wearing Surface, 4". In 2006 Beams 26 thru 30 were removed and replaced and a Bike Path with a Bicycle Railing were added. The Existing single span structure consists of Precast Prestressed Concrete Deck Beams supported by closed abutments. Dimensions are 1'-11" bk. to bk. Abutments and 90'-3" out to out with a 27°-30' Skew.

PROPOSED IMPROVEMENT:

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

Salvage: None

SCOPE OF WORK:

Remove and replace the P.P.C. Deck Beam Superstructure and the Concrete Wearing Surface, 4" 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 NORTH PARAPET DETAILS
- S7 SOUTH PARAPET DETAILS & JOINT DETAILS
- S8 BICYCLE & PARAPET RAILING
- S9 P.P.C. DECK BEAM DETAILS
- S10 ABUTMENT REPAIR
- S11 BAR SPLICER ASSEMBLY DETAILS
- S12 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

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 1968 PLANS)
Drainage Area 21,760 acres
Character Level
Required Opening 50 yr flood
Present Opening
Future Prop. Opening 548 Sq. Ft.
 $Q = 1,050$ cfs

SEISMIC DATA

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

PROFILE GOLF ROAD (@ Median Edge)

STATION 1053+18.00
REBUILT 2008 BY
STATE OF ILLINOIS
F.A.P. RTE. 559 SEC. 2008-007-B
LOADING HS20
STRUCTURE NO. 016-0349

NAME PLATE

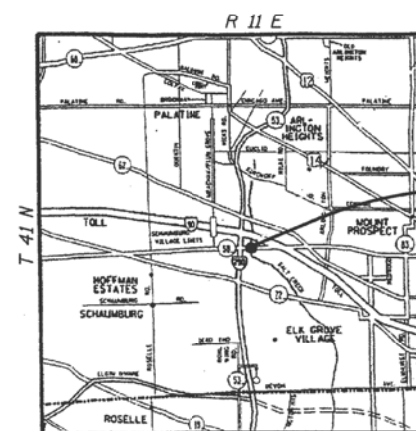
See Std. 515001

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



Bhadresh N. Shah
BHADRESH N. SHAH
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. NO. 081-004476
EXPIRES: 11-30-08

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



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Niderman (TSD)
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
GOLF ROAD (IL RTE. 58) OVER SALT CREEK

S.N. 016-0349

SCALE: NONE SHEET NO. S1 OF S12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
559/341	2008-007 B	COOK	39	12
CONTRACT NO. 60D55				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

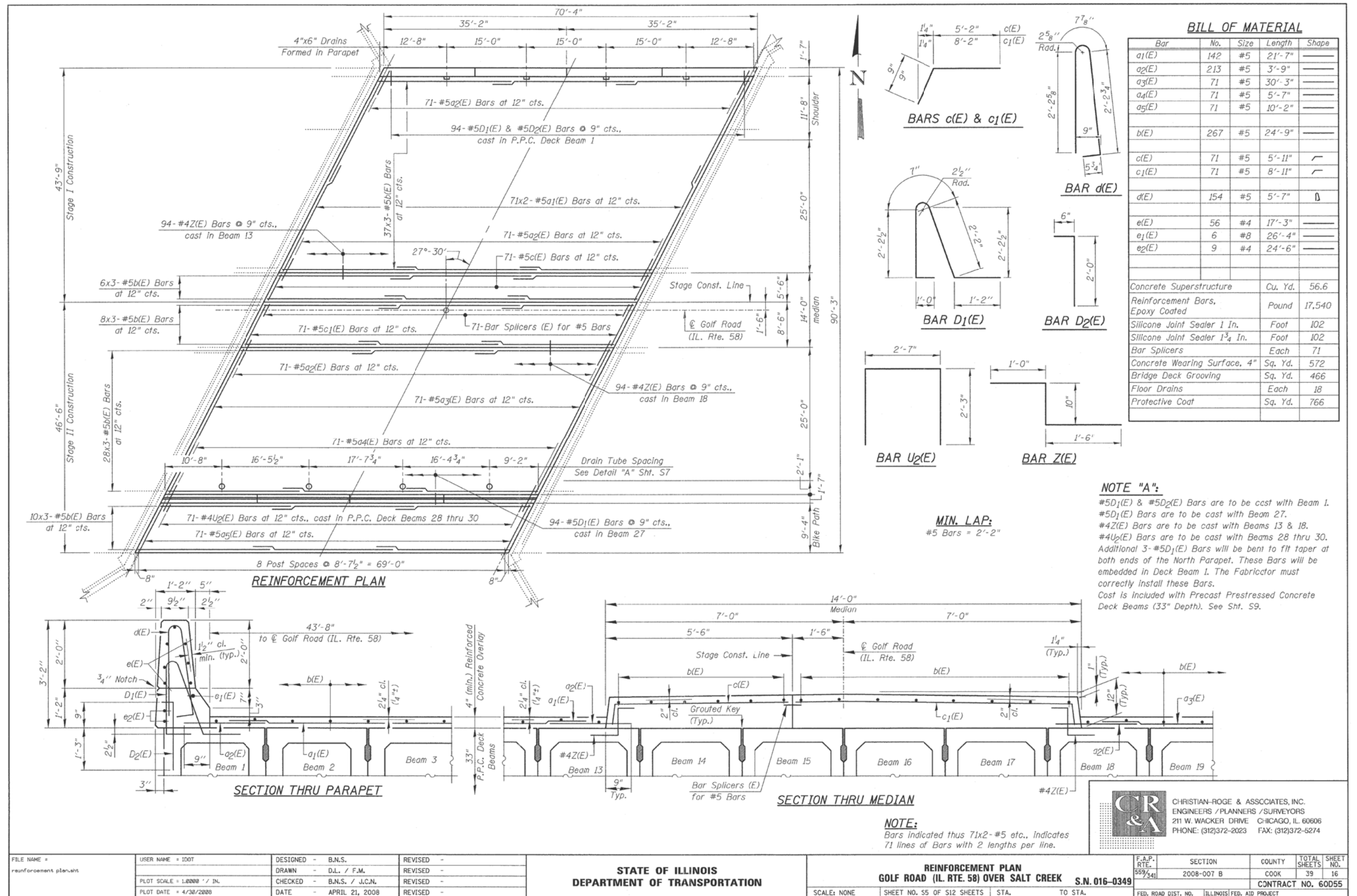
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL 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	13
CONTRACT NO. 62H78				
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.

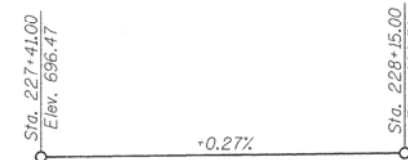
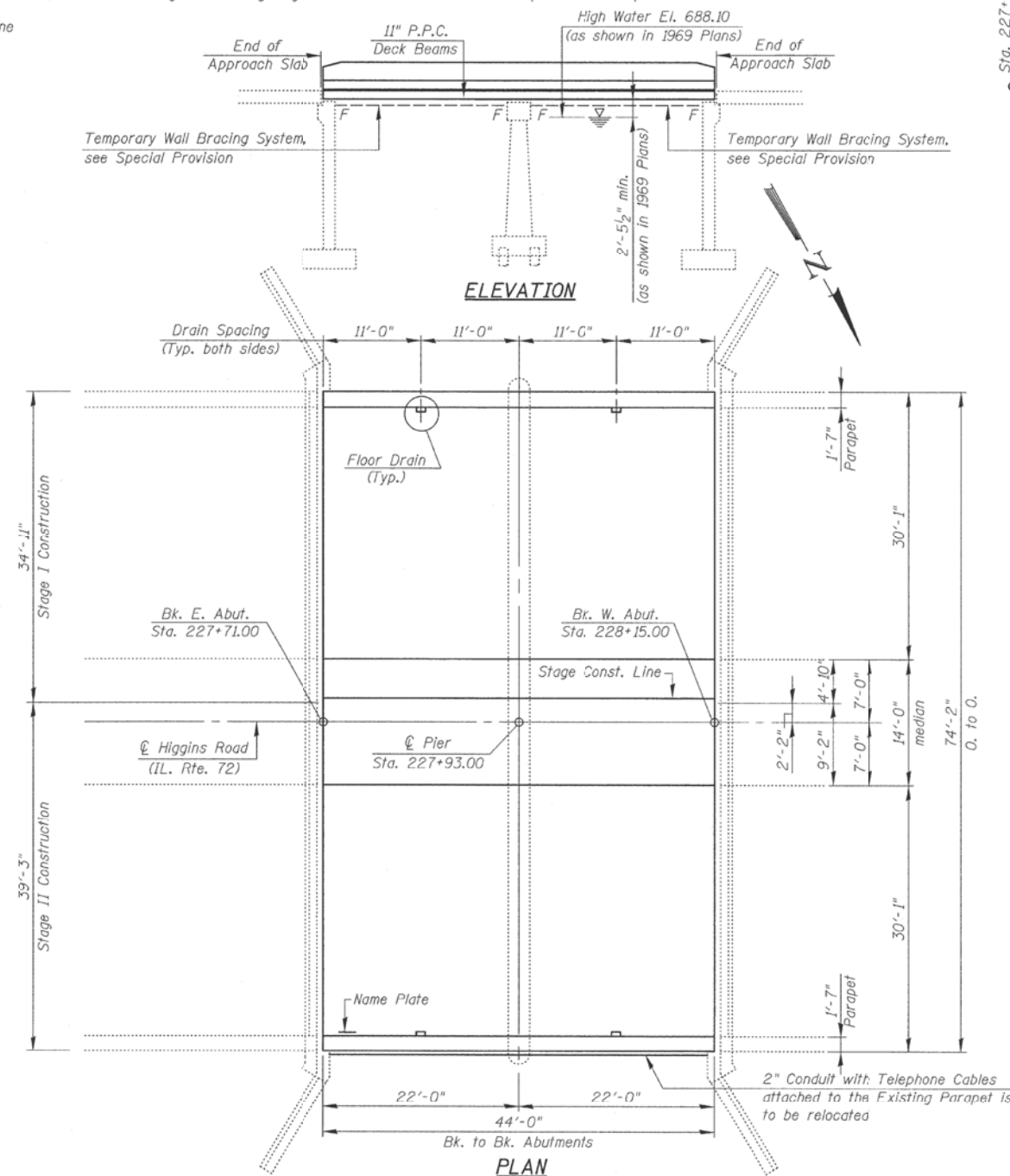
Salvage: None

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)

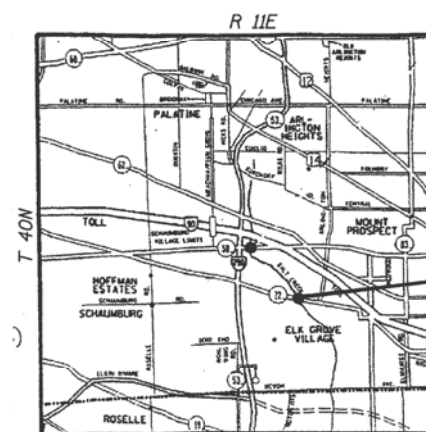
WATERWAY INFORMATION

(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



LOCATION SKETCH

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



Bhadresh N. Shah
BHADRESH 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 = IOOT	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. 341	SECTION 2008-007 B	COUNTY COOK	TOTAL SHEETS 39	SHEET NO. 24
		DRAWN - D.L. / F.M.	REVISED -										
	PLOT SCALE = 1:8000' / IN.	CHECKED - B.N.S. / J.C.N.	REVISED -										
	PLOT DATE = 6/30/2008	DATE - JUNE 30, 2008	REVISED -										
CONTRACT NO. 60D55													

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

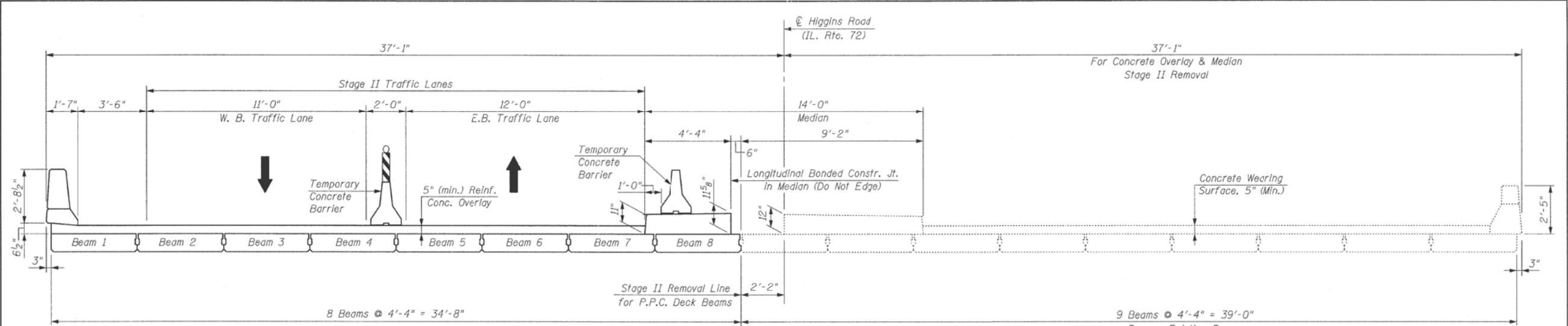
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0504

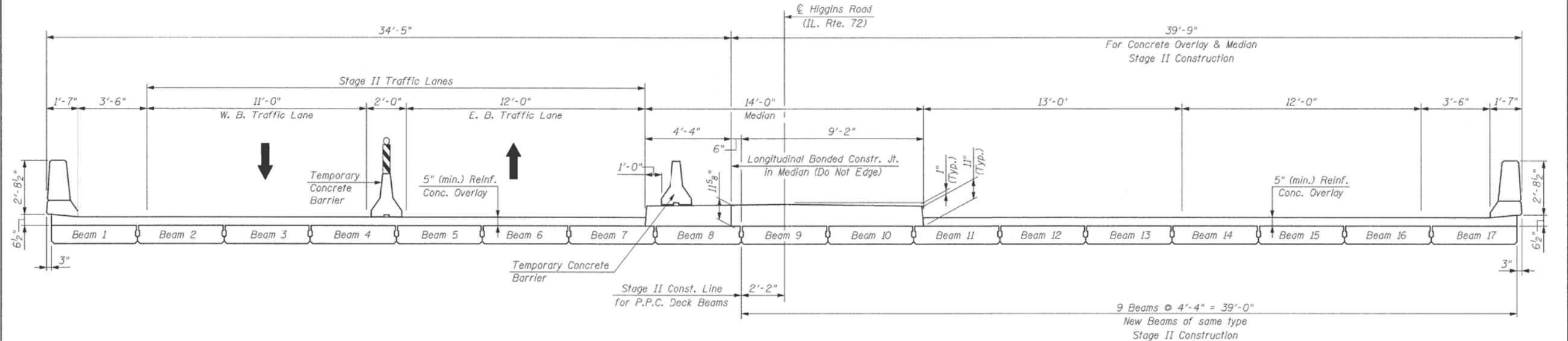
SCALE: SHEET OF SHEETS STA. TO STA.

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

FOR INFORMATION ONLY



STAGE II REMOVAL
(Looking West)



STAGE II CONSTRUCTION
(Looking West)

CONSTRUCTION STAGING

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

CR & A

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. 559/41	SECTION 2008-007 B	COUNTY COOK	TOTAL SHEETS 39	SHEET NO. 27
SCALE: NONE			CONTRACT NO. 60D55	

FILE NAME = staging sheet.II.aht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -
		DRAWN - D.L. / F.M.	REVISED -
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PLOT DATE = 4/30/2008		DATE - APRIL 21, 2008	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION STAGING - II
HIGGINS ROAD (IL. RTE. 72) OVER SALT CREEK S.N. 016-0504

SHEET NO. S4 OF S12 SHEETS STA. TO STA.

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

CROSS SECTION	SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
SN: 016-0504							

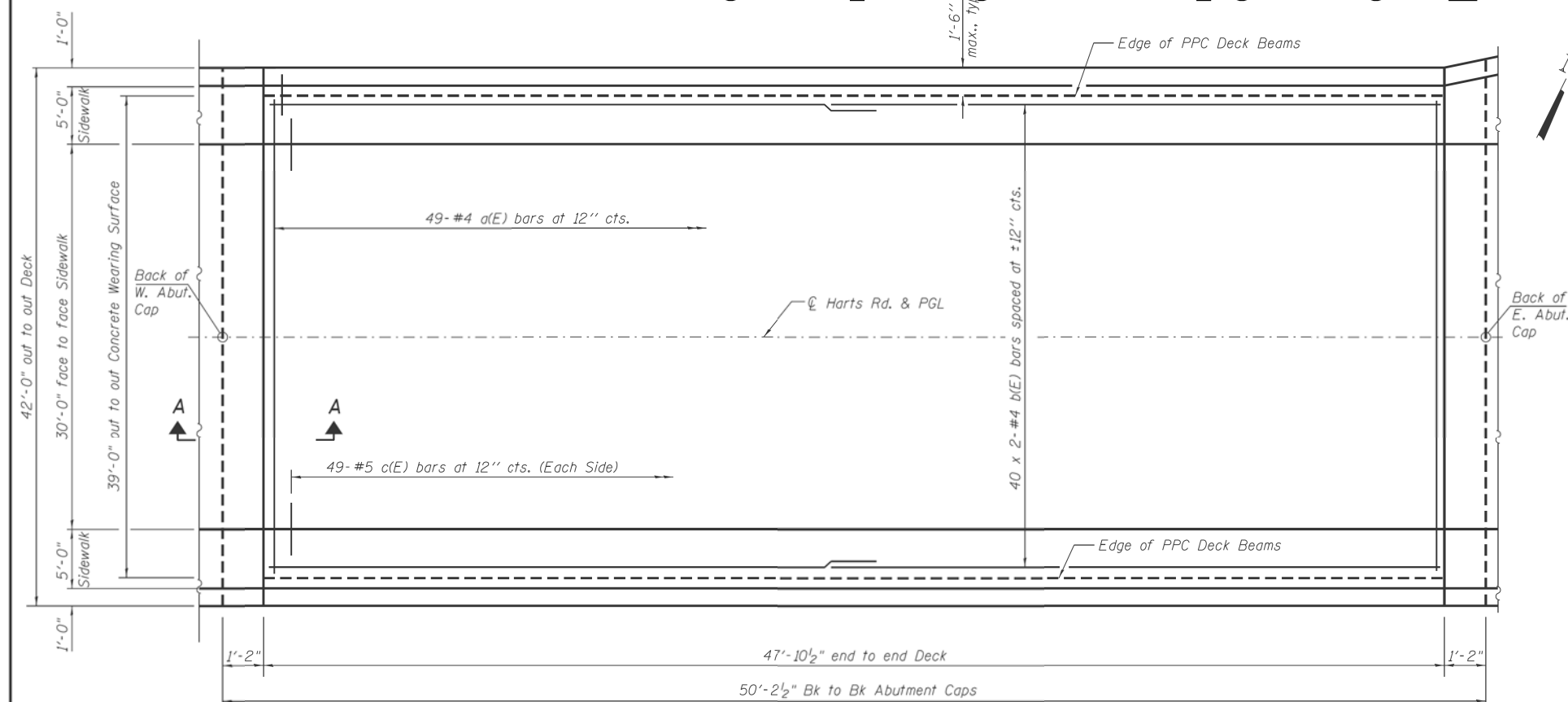
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	17
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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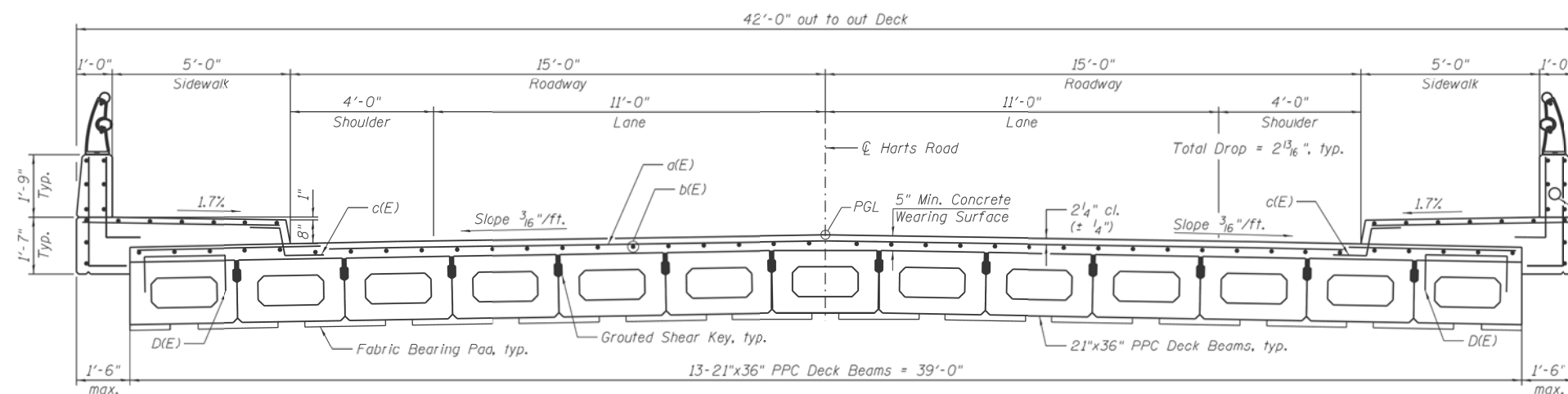


SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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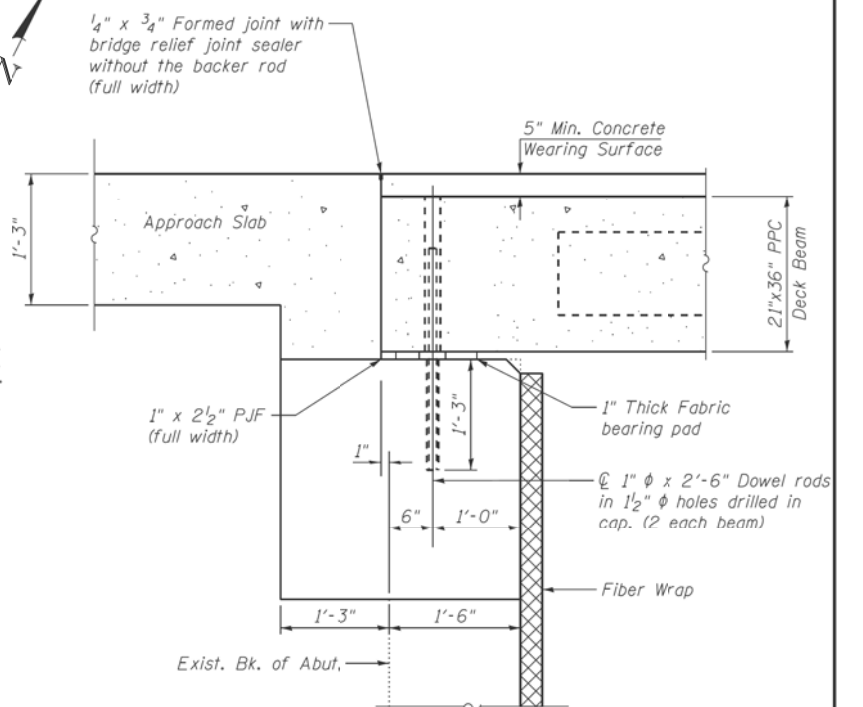
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	18
		CONTRACT NO. 62H78		
ILLINOIS		FED. AID PROJECT		



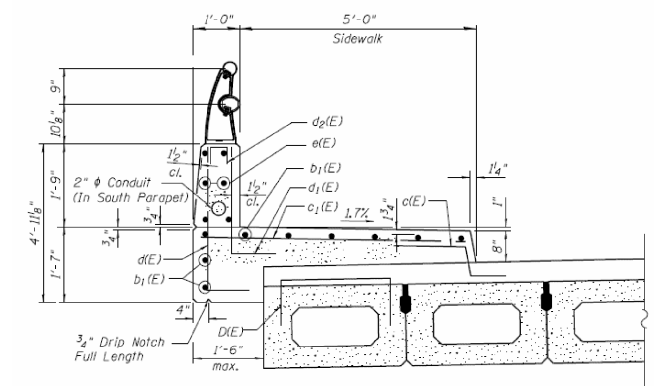
PLAN



DECK CROSS SECTION
(Looking East)



SECTION A - A



SECTION THRU SIDEWALK

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.

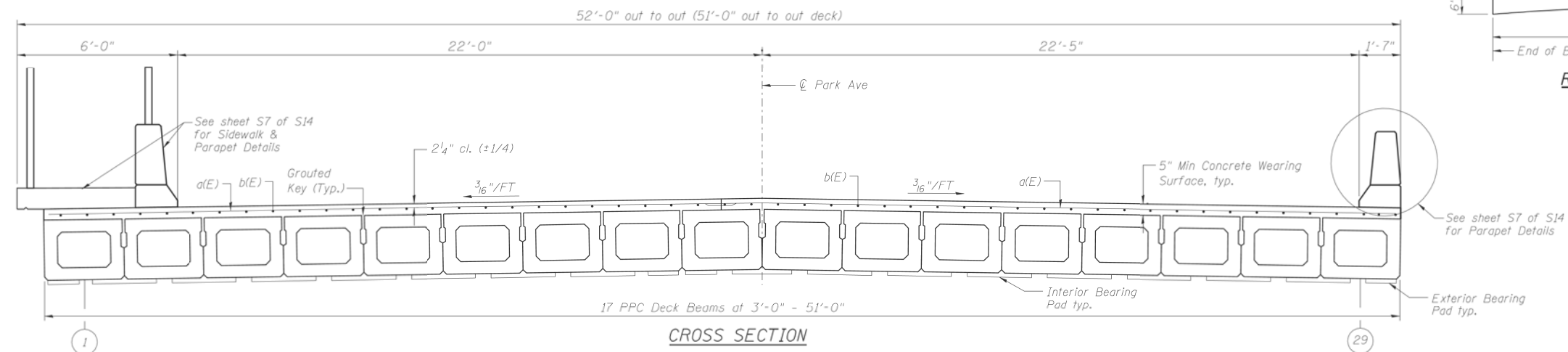
MINIMUM BAR LAP
#4 bar = 2'-5"

FILE NAME = 016-0726.dwg	 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
		PLCT SCALE = *SCALE*	DRAWN - JN	REVISED		SHEET NO. 5 OF 21 SHEETS				CONTRACT NO. 60X41				
		PLCT DATE = *DATE*	CHECKED - SAT	REVISED						ILLINOIS FED. AID PROJECT				

	USER NAME = d02da	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
	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.				CONTRACT NO. 62H78				
	PLOT DATE = 2/4/2019	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				

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FOR INFORMATION ONLY



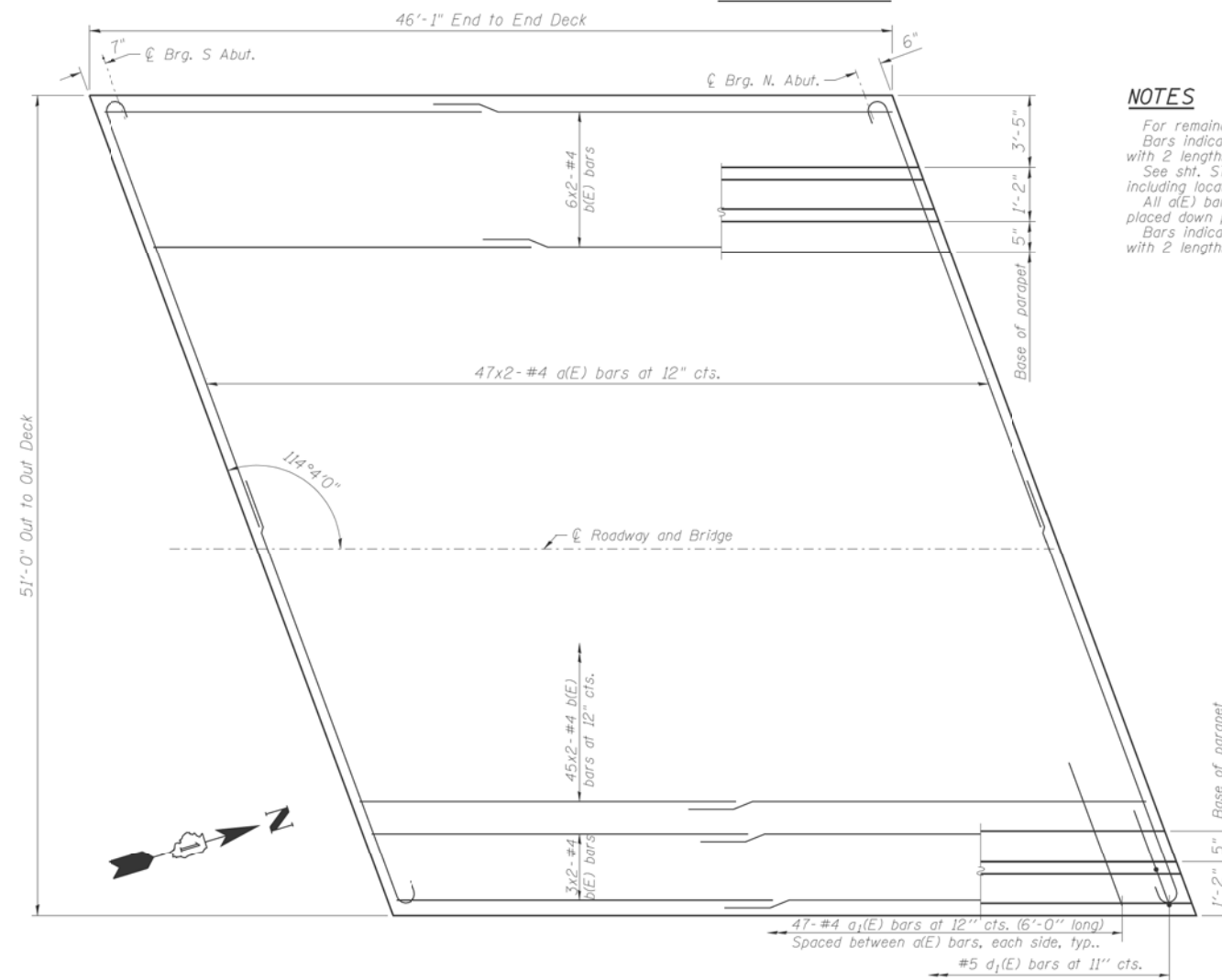
REINFORCED CONCRETE WEARING
SURFACE PROFILE

BILL OF MATERIAL

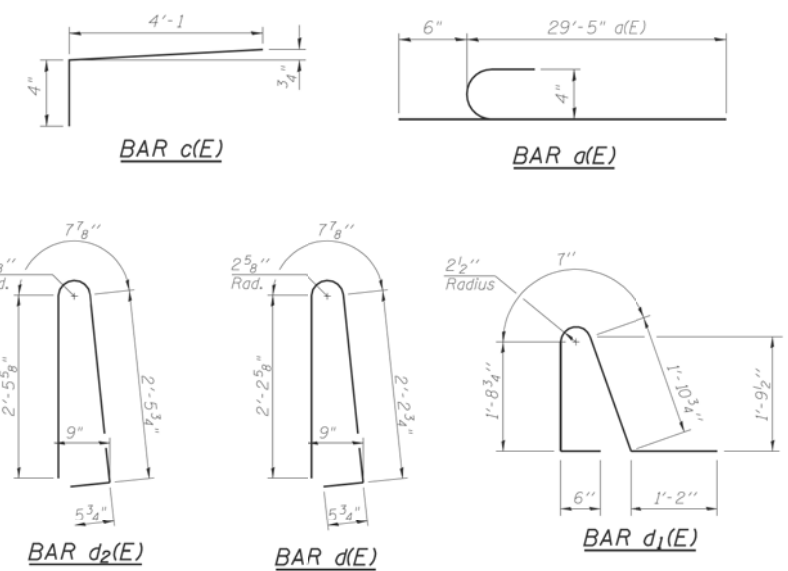
Bar	No.	Size	Length	Shape
a(E)	94	#4	29'-11"	
a1(E)	94	#5	6'-0"	
b(E)	108	#4	23'-11"	
b1(E)	10	#5	24'-2"	
c(E)	47	#5	4'-6"	
d(E)	51	#5	5'-7"	
d1(E)	102	#4	5'-11"	
d2(E)	51	#5	6'-1"	
e(E)	42	#4	15'-0"	
e1(E)	2	#8	45'-9"	
e2(E)	2	#4	23'-10"	
Concrete Wearing Surface, 5"			Sq. Yd.	262
Concrete Superstructure			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 ϕ roadway, but placed down parallel to skew.
Bars indicated thus 47x2-#4 etc, indicates 47 lines of bars with 2 lengths per line.



CONCRETE WEARING SURFACE PLAN



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

LONGO, 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.U. RTE. 3597	SECTION 0710 B	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 14
	CHECKED - MJM	REVISED -			D-91-292-09				
	DRAWN - SLV	REVISED -			CONTRACT NO. 60F95				
	CHECKED - MJM	REVISED -			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 -

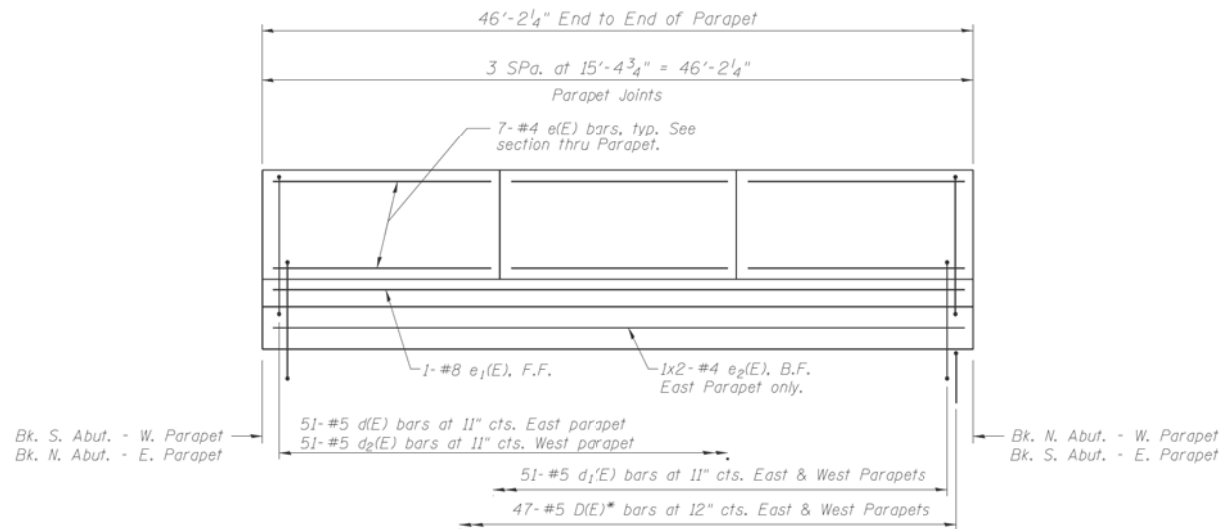
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0771

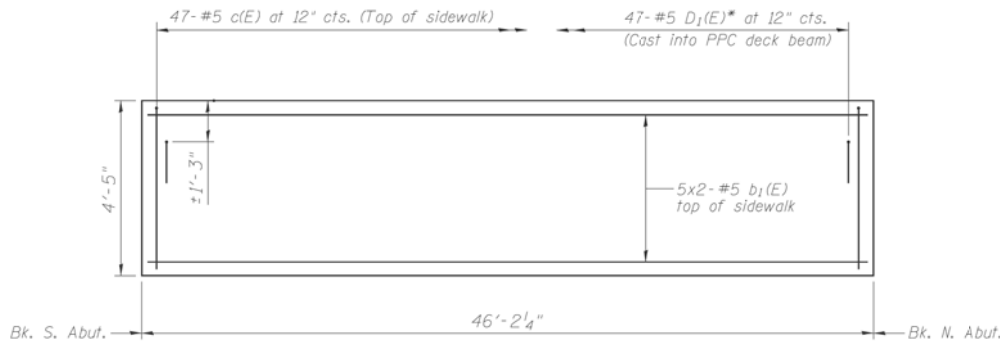
SCALE: SHEET OF SHEETS STA. TO STA.

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



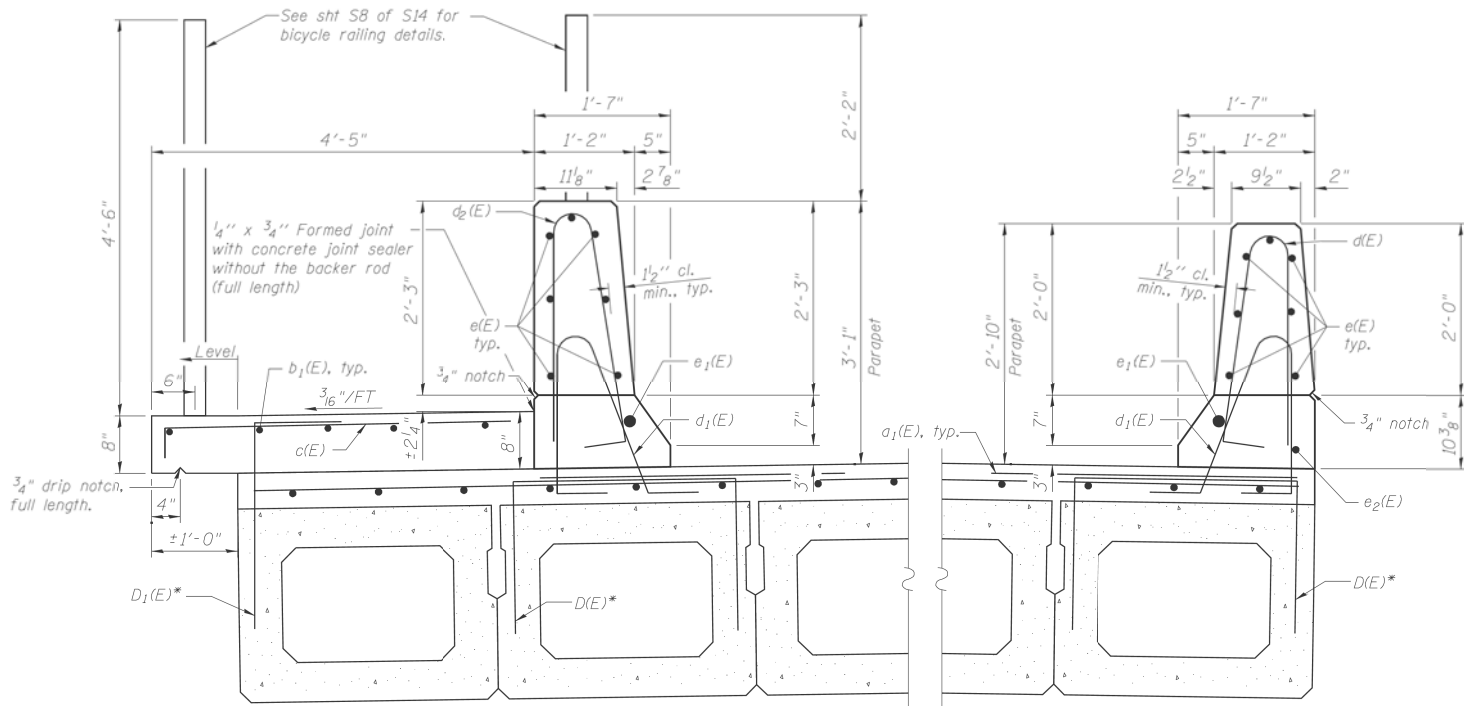
INSIDE PARAPET ELEVATION



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 -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PARAPET DETAILS STRUCTURE NO. 016-0771	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MJM	REVISED -			3597	0710 B	COOK	30	16
		DRAWN - SLV	REVISED -			D-91-292-09		CONTRACT NO. 60F95		
		CHECKED - MJM	REVISED -			SHEET NO. S7 OF S14 SHEETS		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: 016-0771

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	23
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

Benchmark:

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

Existing Structure No. 016-0776 was built in 1962. The existing superstructure consists of a bituminous wearing surface on 42"x36" (11 x 11) PPC Deck beams. The width is 70'-4 1/2" out to out.

The existing superstructure is to be removed and replaced using staged construction.

No Salvage.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAP 370	01031-2	COOK	9	10 SHEETS
FED. ROAD DIST. NO. 1	P.A. NO. 1	FED. AID PROJECT		

Contract # 62362

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes & Total Bill of Materials
3. Stage 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

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 11th ed.

LOADING HS20-44

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

DESIGN STRESSES

FIELD UNITS

$f'_c = 5,000$ psi

$f_y = 60,000$ psi (reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi

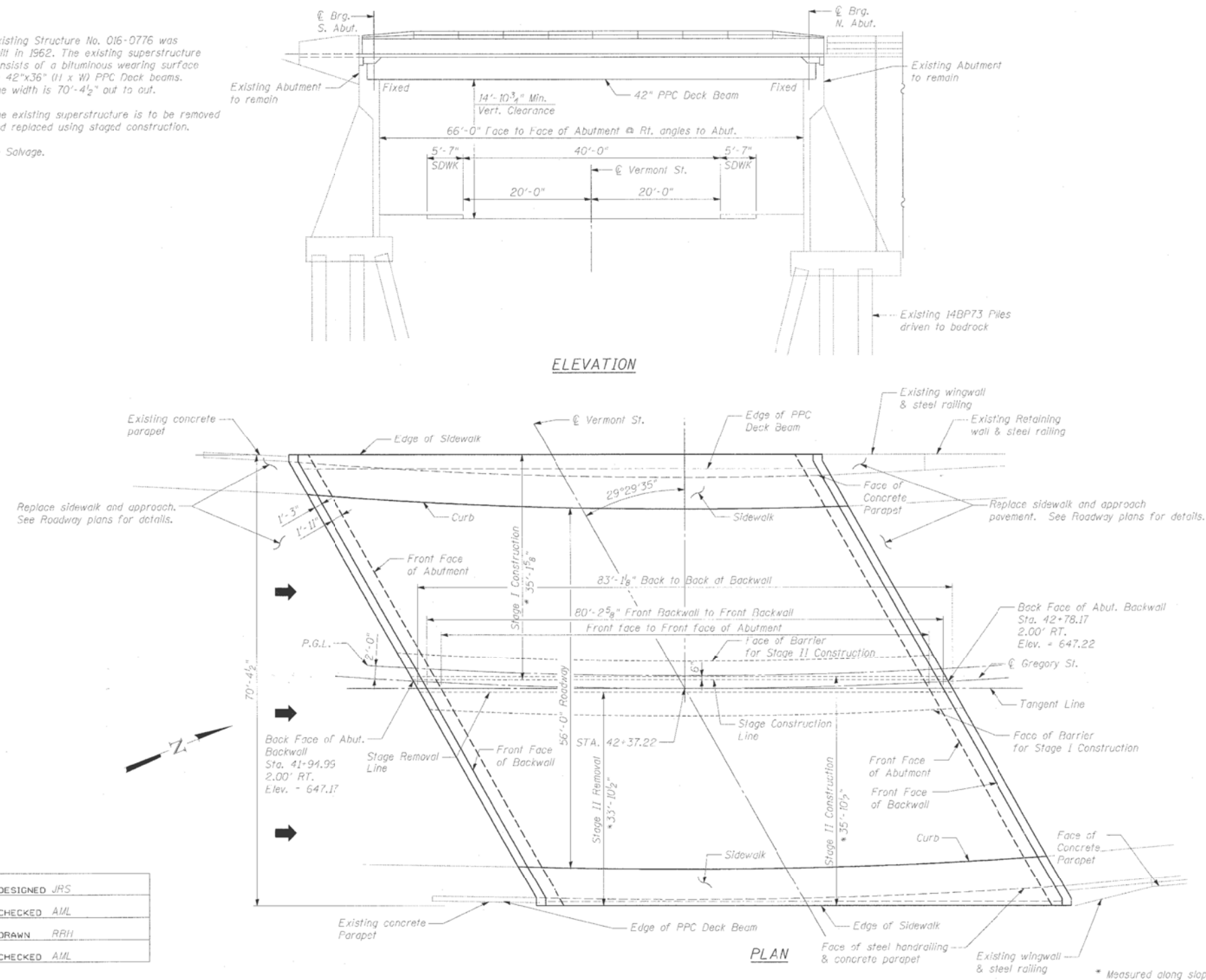
$f'_ci = 4,000$ psi

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

$f'_si = 201,960$ psi (5/8" low lax strands)

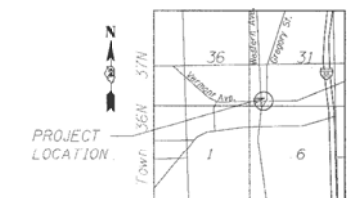
PILE DATA (2-ABUTS.)

Existing 14BP73 piles for abutments



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

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



LOCATION SKETCH

GENERAL PLAN & ELEVATION
GREGORY STREET
OVER VERMONT STREET
SECTION 01031-2
COOK COUNTY
STRUCTURE NO. 016-0776
STATION 42+37.22

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

DESIGNED	JRS
CHECKED	AML
DRAWN	RRH
CHECKED	AML

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN SN: 016-0776

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	24
CONTRACT NO. 62H78				

ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Contract # 62362



Bar	No.	Size	Length	Shape
$h_i(E)$	48	#5	28'-9"	_____
Concrete Superstructure			Cu. Yd.	29.2
Reinforcement Bars, Epoxy Coated			Pound	1440

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.

Preformed joint filler is incidental to "Precast Prestressed Concrete Deck Beams (42" Depth)" bid item.

See sheet 5 of 10 for bearing pad details.

SUPERSTRUCTURE DETAILS
SECTIONS AND JOINT DETAILS

GREGORY STREET
OVER VERMONT STREET

SECTION 01031-2
COOK COUNTY
STRUCTURE NO. 016-0776
STATION 42+37.22



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

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: 016-0776

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

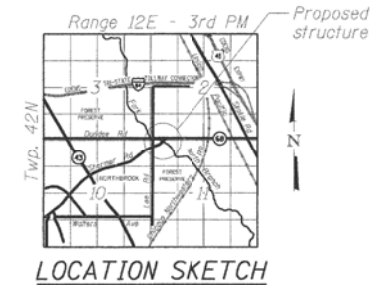
Benchmark - Spike found in south face of power pole at southwest corner of Illinois Rte. 68 and Shermer Road. Elev = 647.74.

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

$f_y = 5,000$ psi

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

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

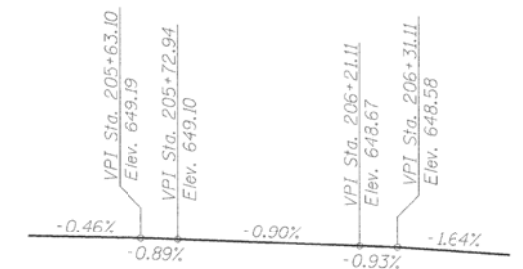
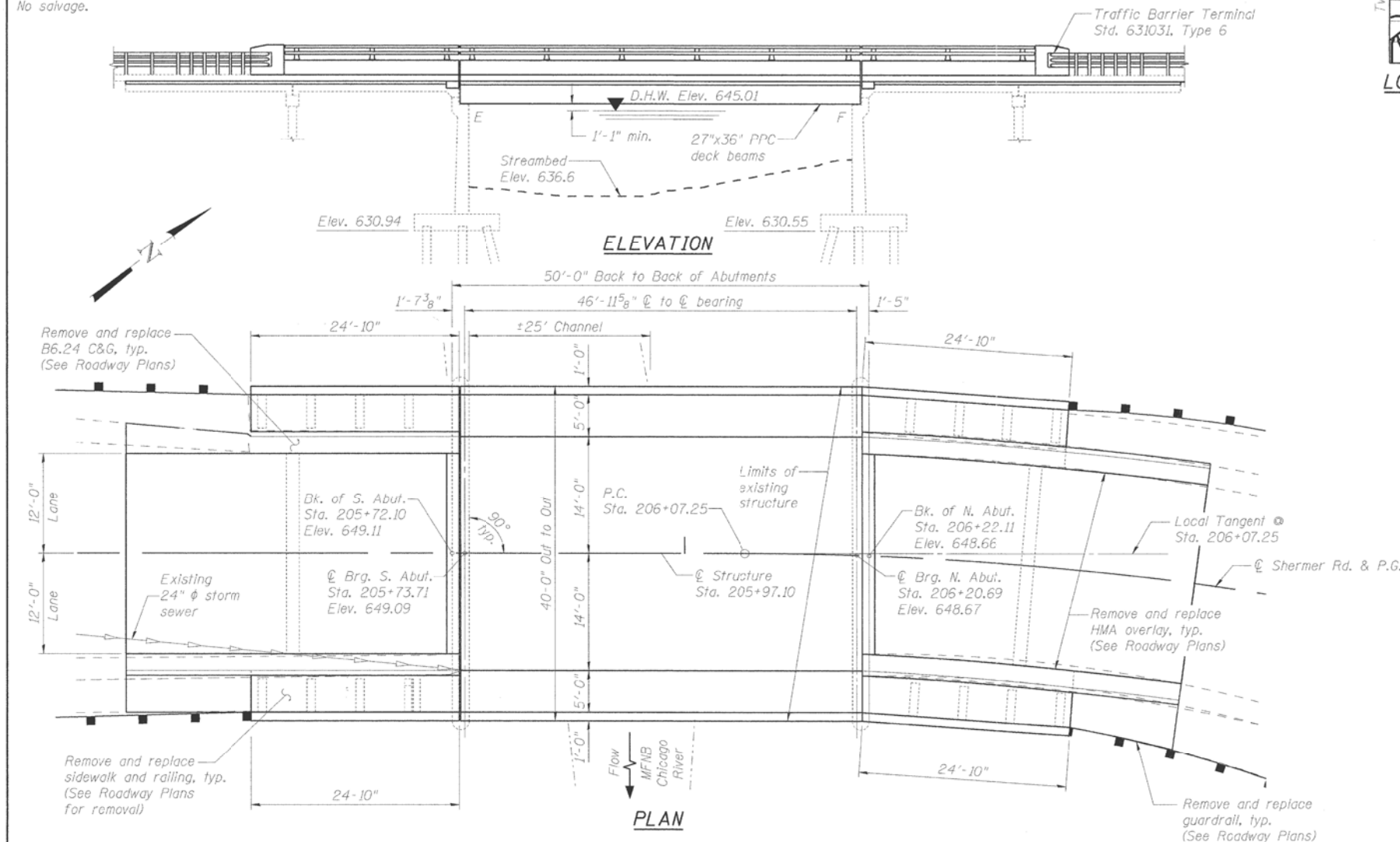
SEISMIC DATA

(Existing Construction)

Seismic Performance Zone (SPC) = A

Bedrock Acceleration Coefficient (A) = 0.04g

Site Coefficient (S) = 1.0



PROFILE GRADE

(Along ϕ Shermer Rd.)

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BRAD H. SAYERS, S.E.
IL. LIC. NO. 081-006267
ENGINEER OF BRIDGES AND STRUCTURES



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

EXP 11/30/12

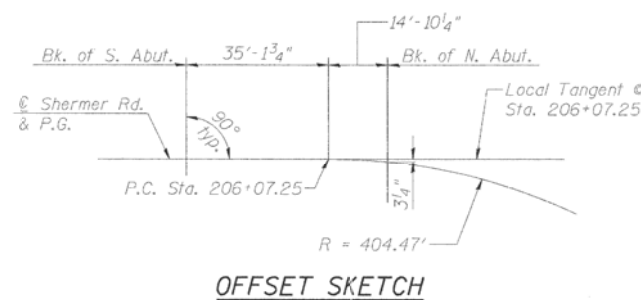
DATE 10/12/11

WATERWAY INFORMATION

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

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	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 = 2wagorb
PLOT SCALE = N/A
PLOT DATE = 10/6/2011

DESIGNED - BPS
CHECKED - BHS
DRAWN - BPS
CHECKED - GSP

REVISED -
REVISED -
REVISED -
REVISED -

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

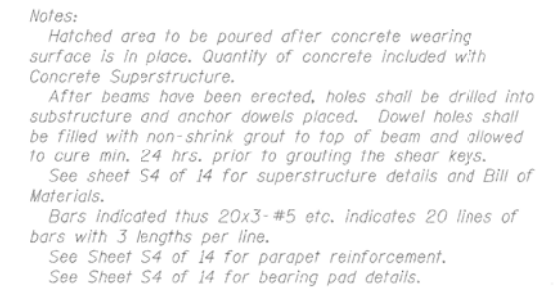
GENERAL PLAN
SN: 016-0814

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

MODEL: Default
FILE NAME: c:\nw\11084FERINDTEG_1111look.com\pau\DOT\Documents\DOT_Offices\District_1\Proferts\DOT111419-shr-plan.doc



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

USER NAME = diazda	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN SN: 016-0814				VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -						VAR.	2018-0148-I	VARIOUS	86	27
PLOT SCALE = 100.0000' = 1 in.	CHECKED -	REVISED -		SCALE:				CONTRACT NO. 62H78				
PLOT DATE = 1/25/2019	DATE -	REVISED -		SHEET	OF	SHEETS	STA.	ILLINOIS FED. AID PROJECT				

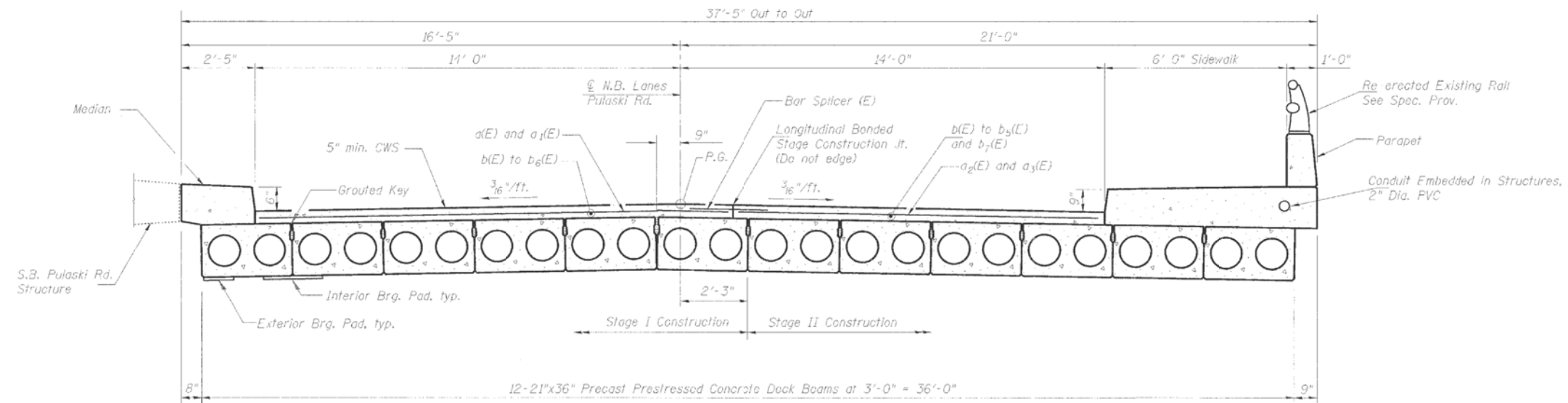
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FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

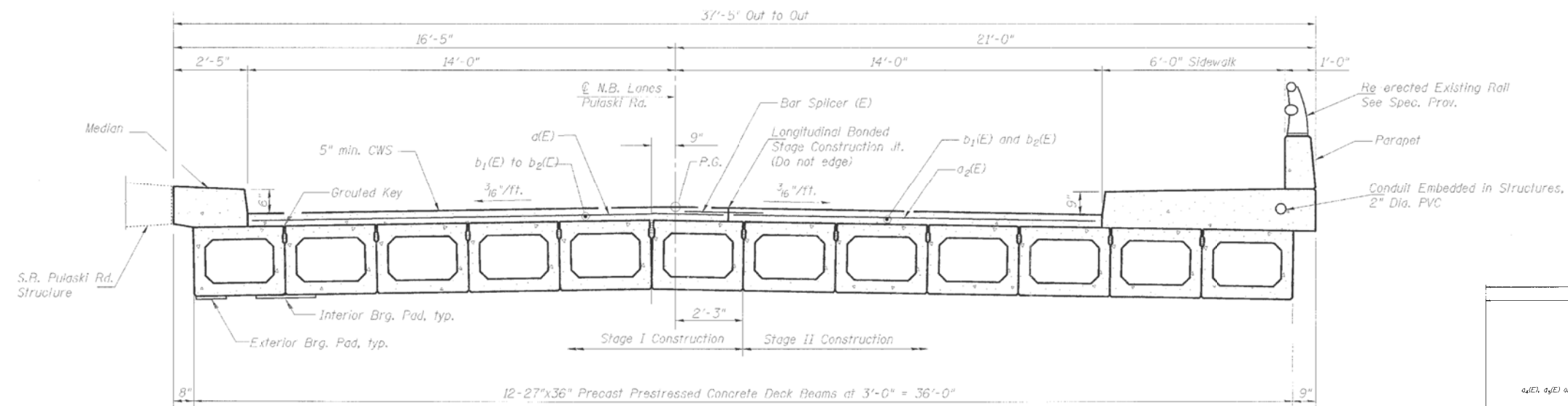
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 388	1919 VB-R-1	Cook	47	17
Contract # 60C11				

28 SHEETS



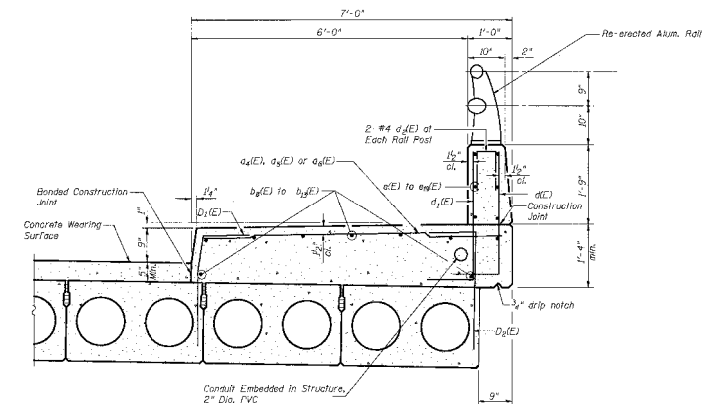
CROSS SECTION

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



CROSS SECTION

Span 2 and Span 3
(Looking North)



SECTION THRU SIDEWALK

DESIGNED	DDB
CHECKED	LLV
DRAWN	MSM
CHECKED	DDB

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: 016-1020

SCALE: SHEET OF SHEETS STA. TO STA.

VAR.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	29
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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 ϕ low relax. strands)
 $f_{pu} = 270,000$ psi (1/2 ϕ 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}) = 0.095g
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.	Head - Ft.	Exist.	Prop.	Headwater EL.
Design	10	849	173.3	173.3	642.06	0.00	0.00	642.05	642.06
Design	50	1059	177.7	177.7	642.44	0.07	0.07	642.51	642.51
Base	100	1112	177.7	177.7	642.54	0.06	0.06	642.60	642.60
Overtopping	>500								
Max. Calc.	500	1406	177.7	177.7	643.02	0.18	0.18	643.20	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

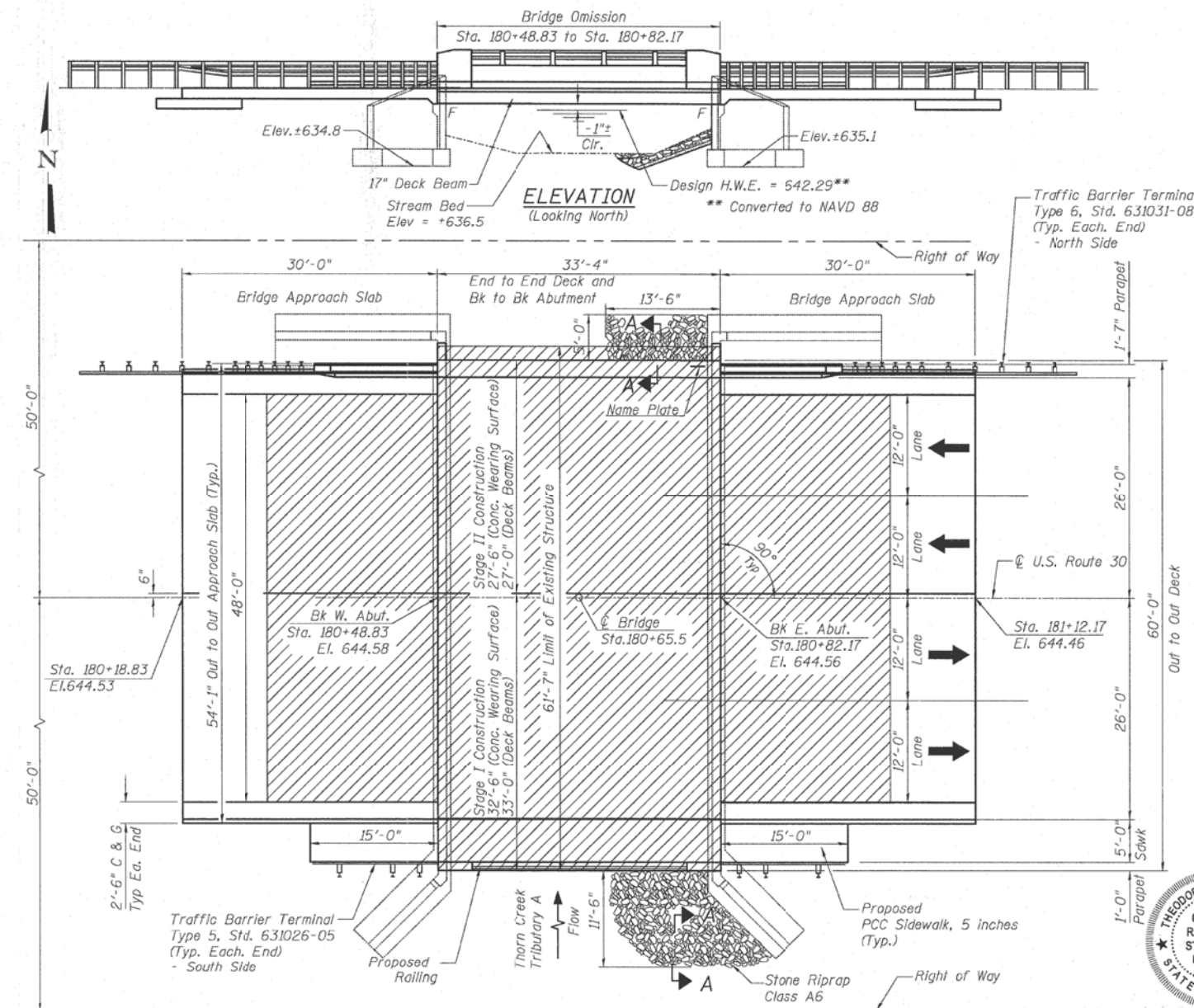
Existing Name Plate shall be cleaned and relocated next to new Name Plate.
Cost Included with Name Plates.

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

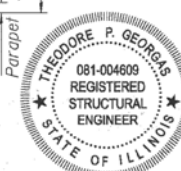
DESIGNED JPM
CHECKED TG
DRAWN MPS
CHECKED JPM, TG

Primera
100 S. WACKER DRIVE, SUITE 700, CHICAGO, IL 60606, P.312-686-8700 F.312-686-8445

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



LOCATION SKETCH

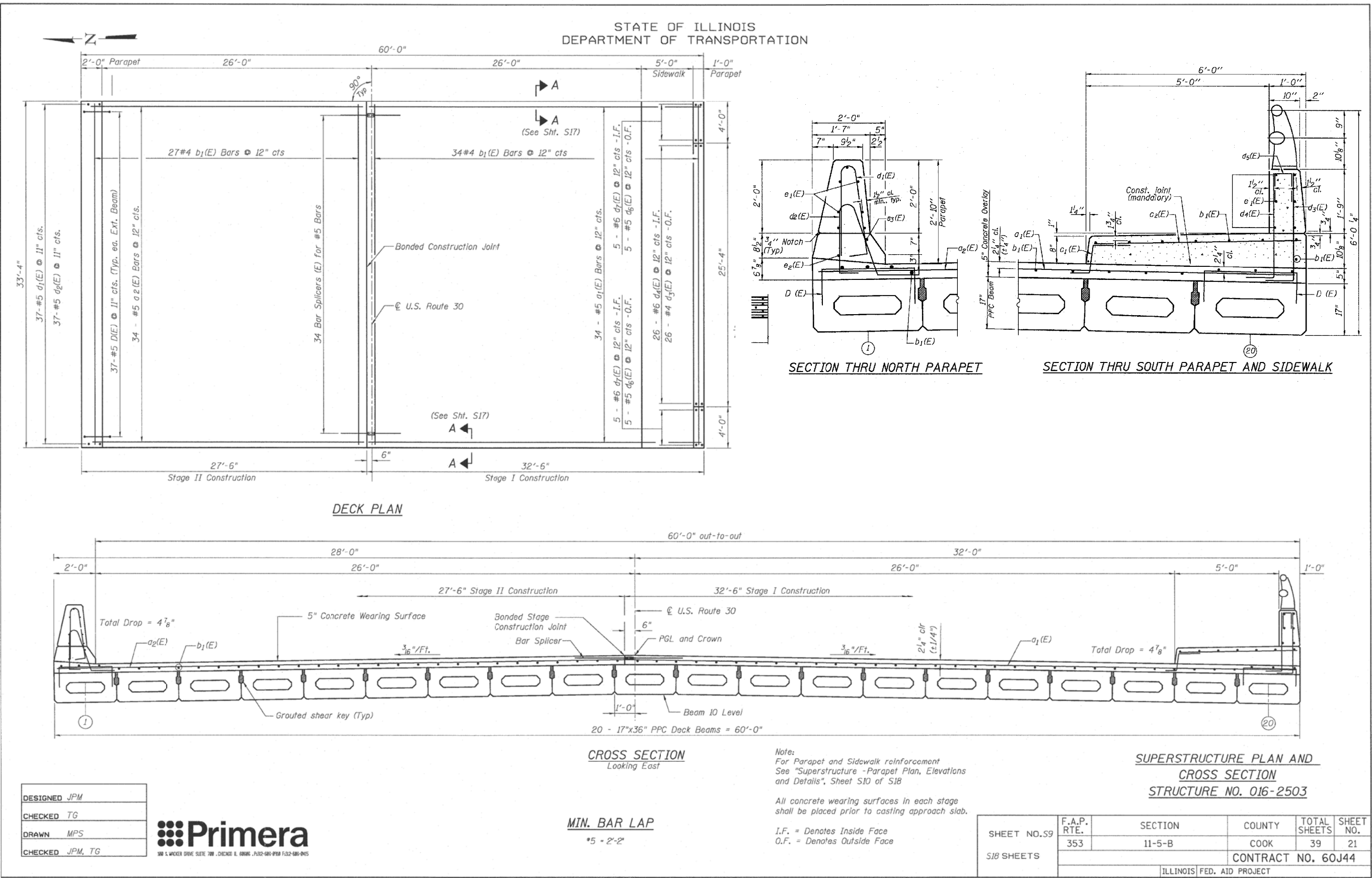
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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



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 "C" 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

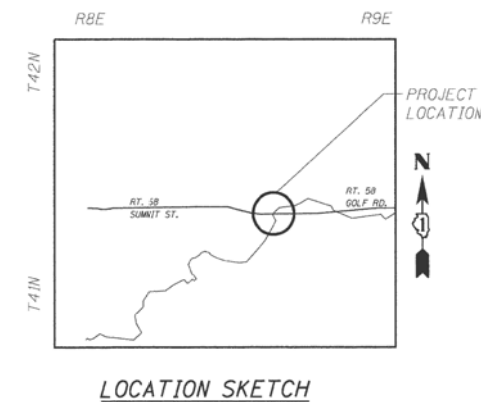
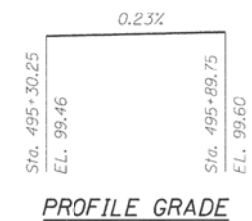
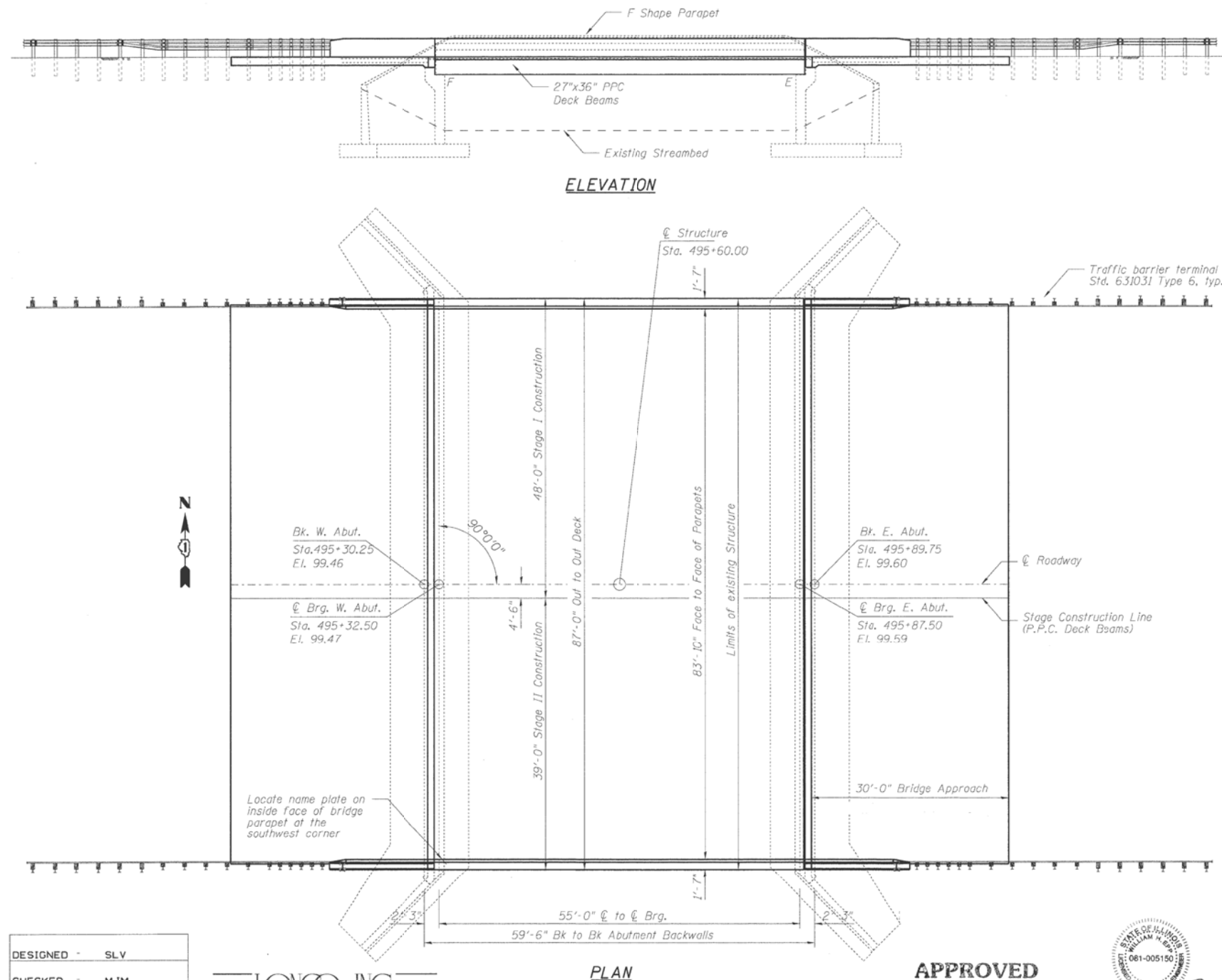
$f'_c = 3,500$ psi
 $f'_c = 5000$ psi (Concrete Wearing Surface)
 $f_y = 60000$ psi (Reinforcement)

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

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

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



Expires 11/20/10

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

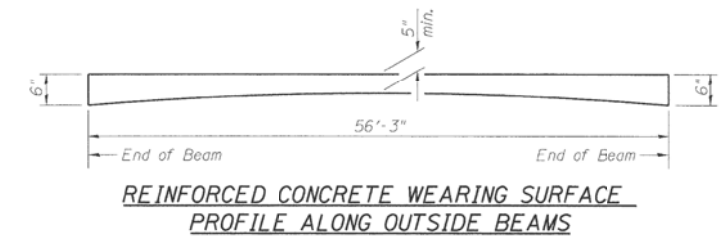
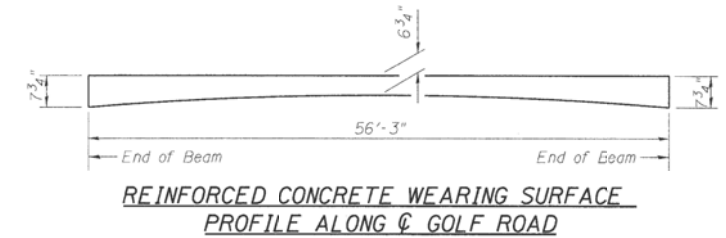
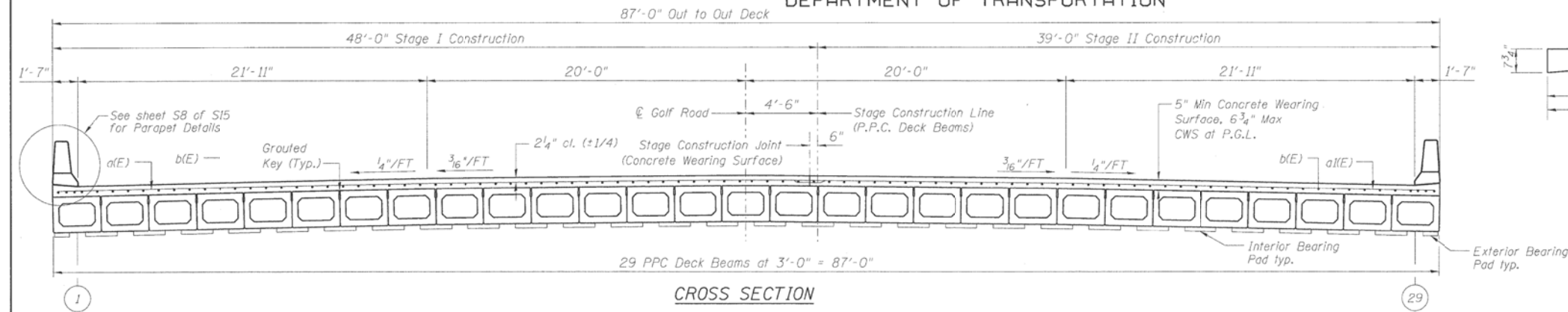
GENERAL PLAN
SN: 016-2514

SCALE: SHEET OF SHEETS STA. TO STA.

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

FOR INFORMATION ONLY

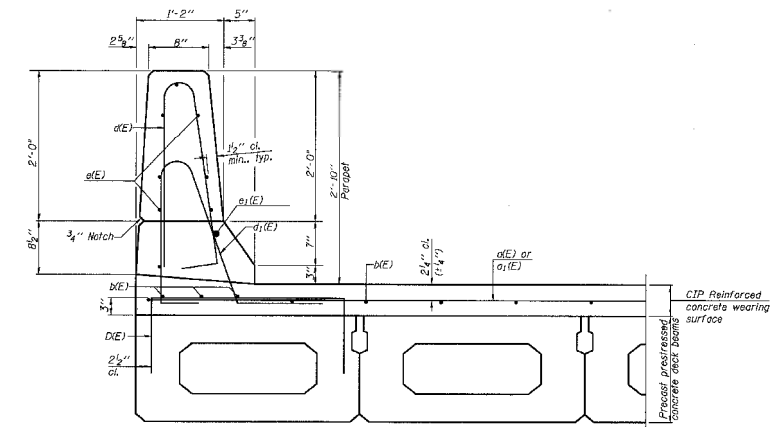
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



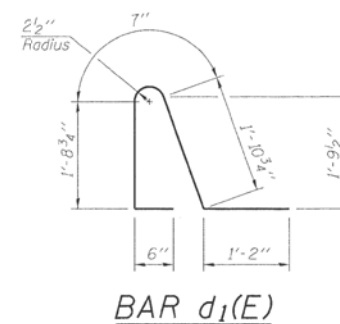
NOTES

For remainder of Superstructure Details see Sheet S8 of S15.

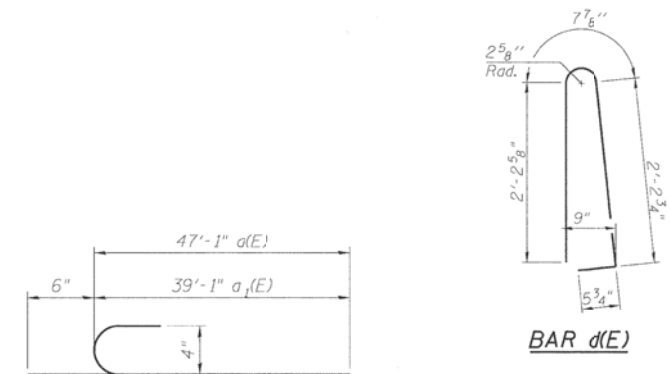
Bars indicated thus 84x2-#4, etc., indicates 84 lines of bars with 2 lengths per line.



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



BAR d1(E)



BAR a(E) & a1(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. NC.	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 "X" 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.

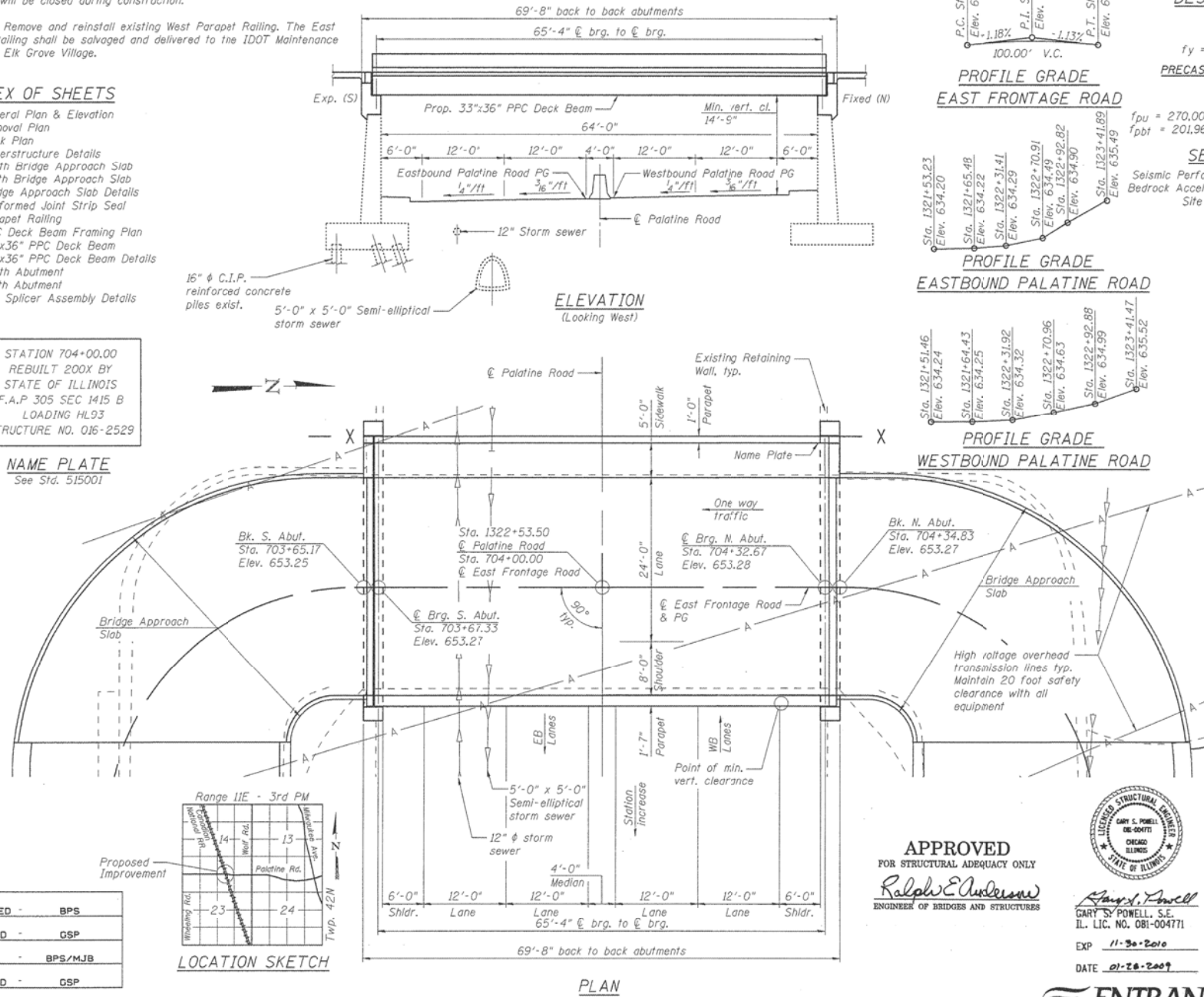
Salvage - Remove and reinstall existing West Parapet Railing. The East Parapet Railing shall be salvaged and delivered to the IDOT Maintenance Facility in Elk Grove Village.

INDEX OF SHEETS

1. General Plan & Elevation
2. Removal Plan
3. Deck Plan
4. Superstructure Details
5. South Bridge Approach Slab
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



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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 Pad 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

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

ENTRAN

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

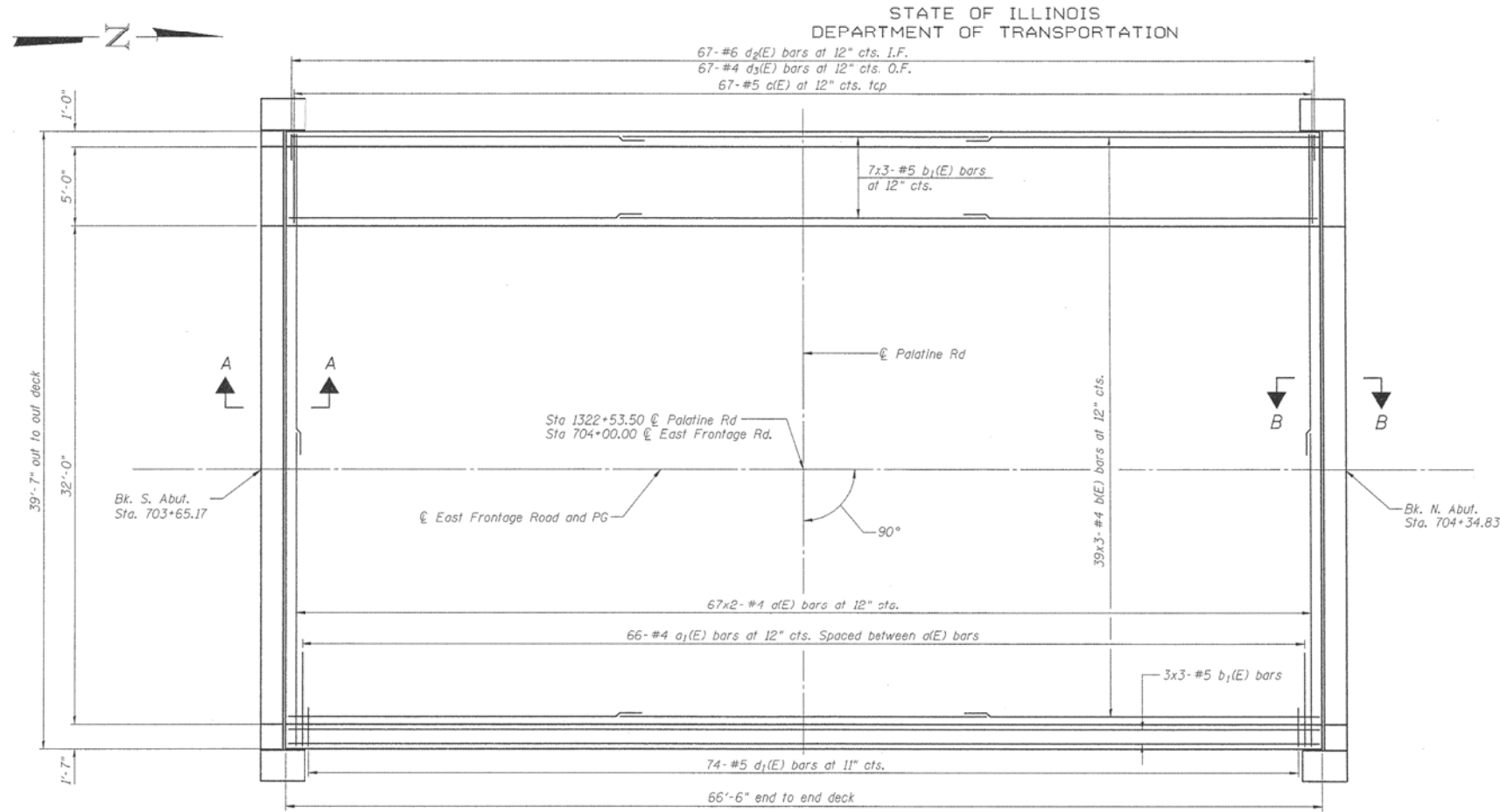
GENERAL PLAN
SN: 016-2529

SCALE: SHEET OF SHEETS STA. TO STA.

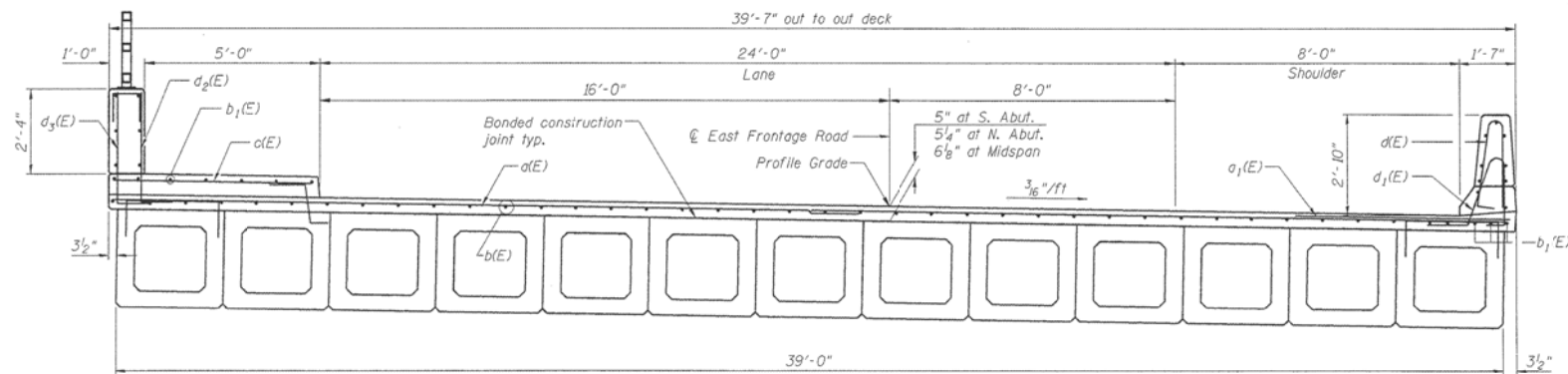
VAR.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	34
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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

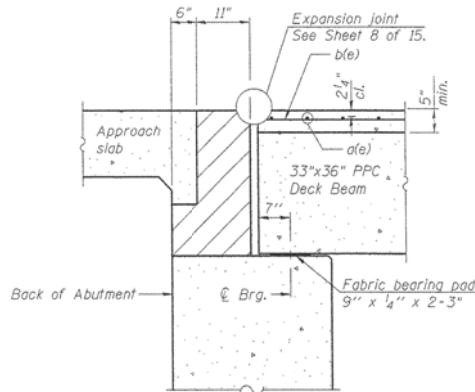
FOR INFORMATION ONLY



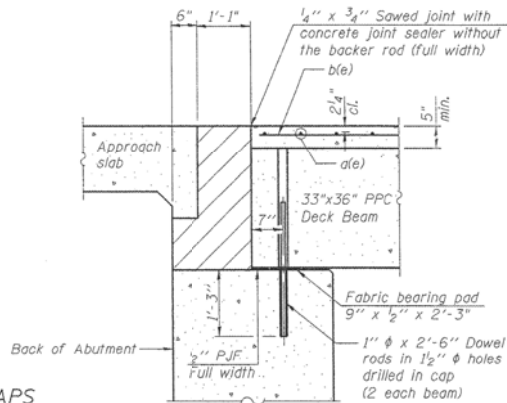
DECK PLAN



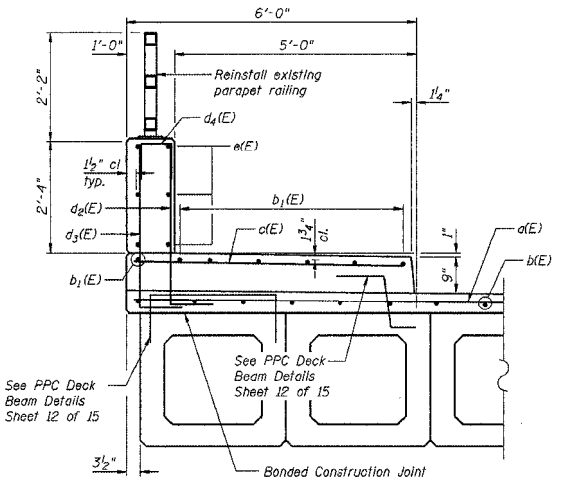
DECK CROSS SECTION
(Looking Upstation)



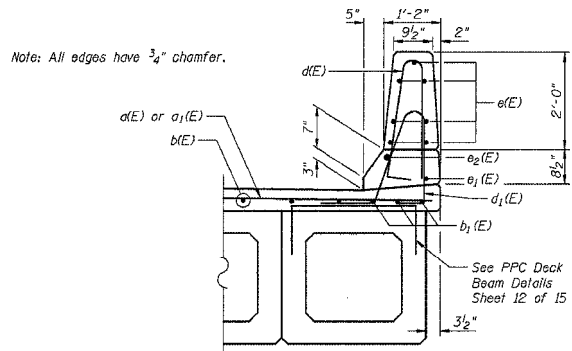
SECTION A-A



SECTION B-B



SECTION THRU SIDEWALK PARAPET AND SIDEWALK



SECTION THRU ROADWAY PARAPET

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

MODEL Default
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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

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 E 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
 $f'_c = 5,000$ 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

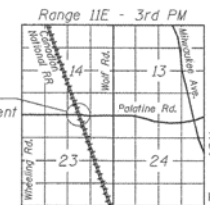
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify 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

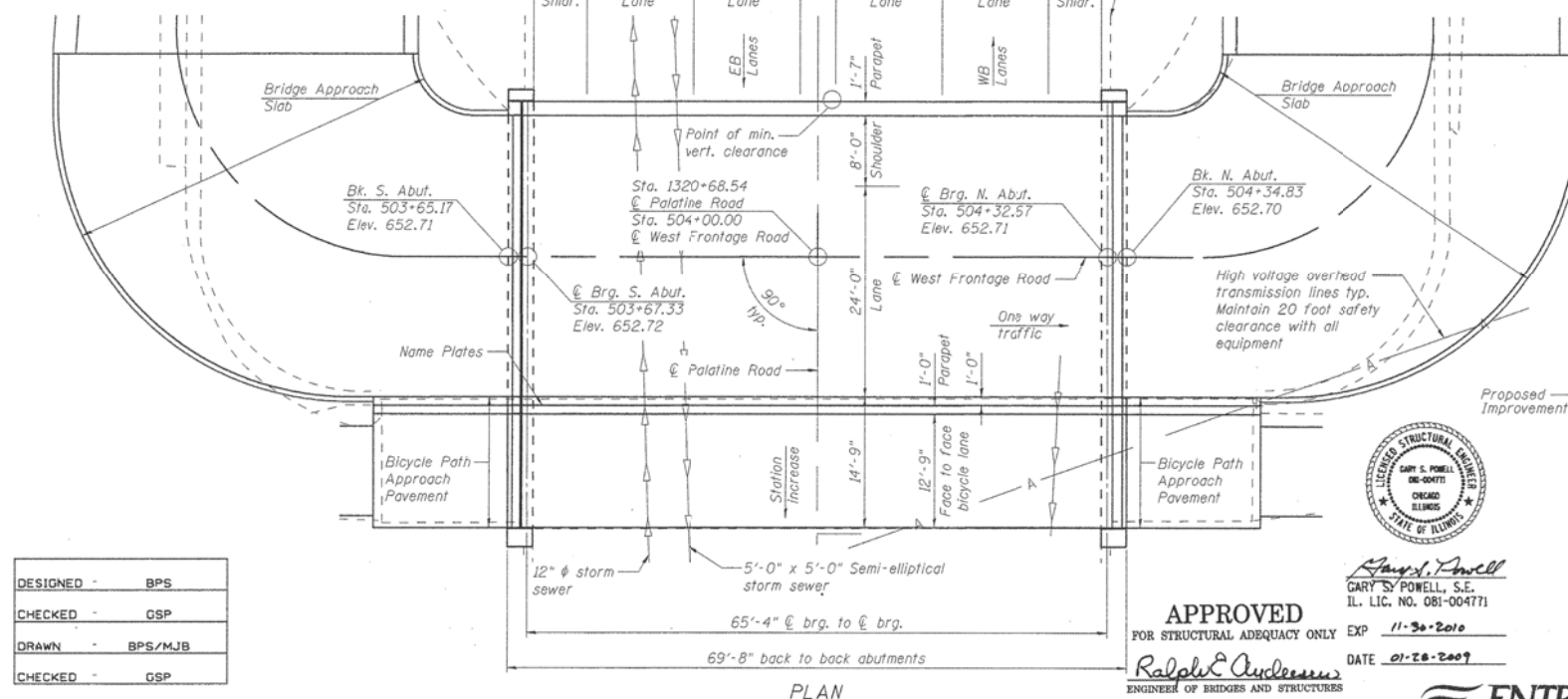
LOCATION SKETCH



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
EXP. 11-30-2010
DATE 01-28-2009
Ralph C. 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 -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

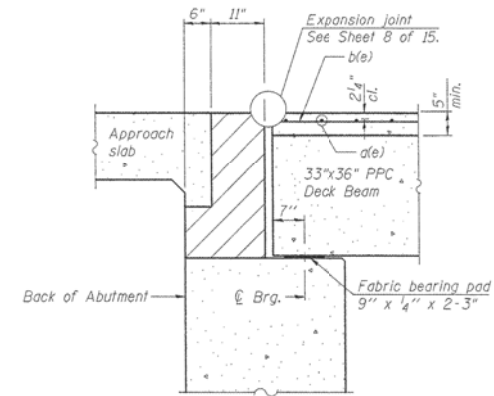
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2530

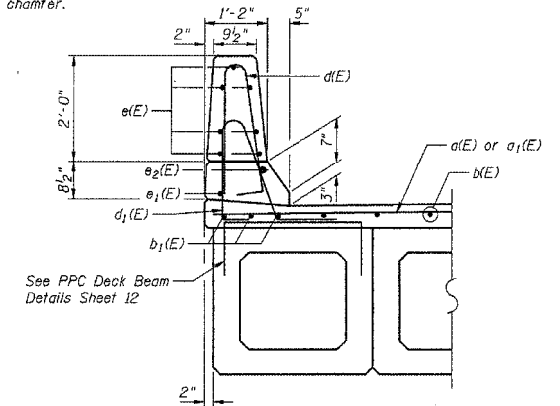
SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	36
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

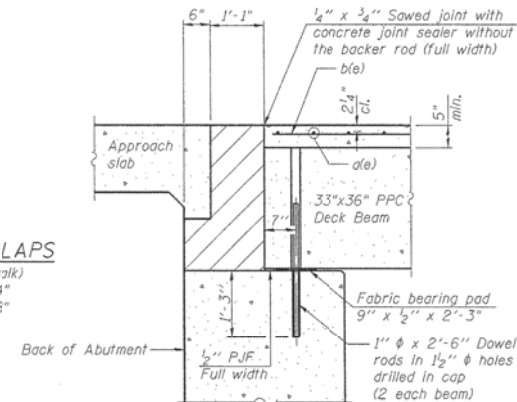
74- #5 d₁(E) bars at 11" cts.



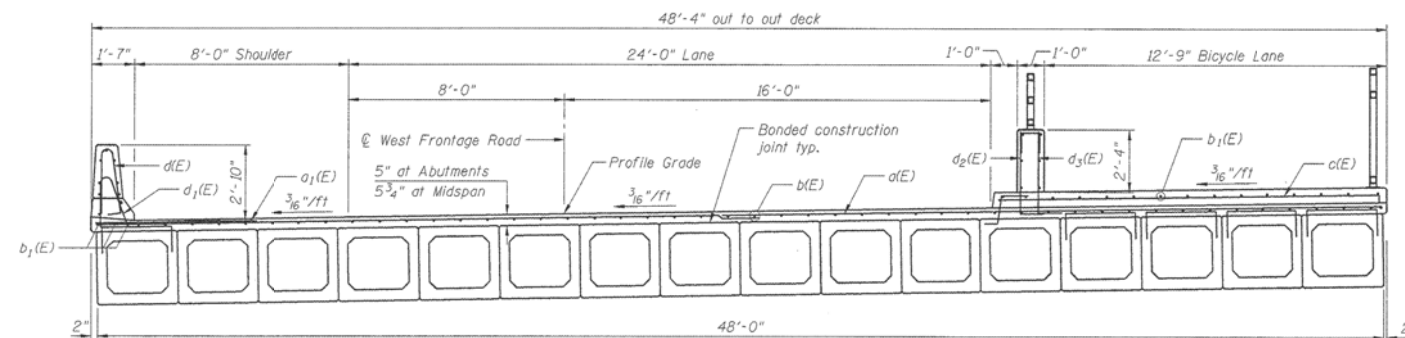
All edges should have $\frac{3}{4}$ " chamfer.



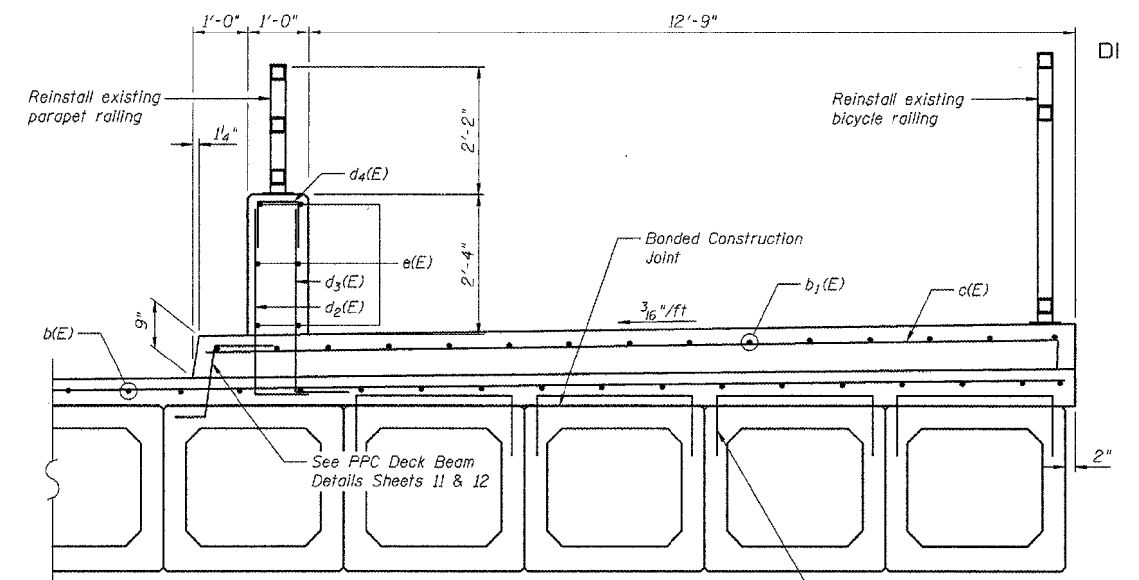
(Deck and Sidewalk)



DECK PLAN



DECK CROSS SECTION
(Looking Upstation)



SECTION THRU BICYCLE PATH

- See PPC Deck Beam
Details Sheets 11 & 12

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

MODEL: Default
FILE NAME: c:\u084EBID\INTEG.III\Inols-qov\PWIDOT\Documents\DOT Offices\District 1\Projects\0111419\CADData\Design\0111419-sh-plan.dgn

FOR INFORMATION ONLY

Bench Mark: Pk nail at top west head wall of culvert carrying Oak Park Avenue over Tinley Creek. Elevation = 194.590.

Existing Structure:

The existing structure No. 016-0572 was built in 1922 carrying Route F.A.U. 2274 over Tinley Creek in Cook County. The structure is a single span reinforced concrete slab structure measuring 7.92 m back to back of abutments with out to out deck width of 7.96m.

The structure has closed abutments. The existing bridge to be removed and replaced with a new 18.4m single span bridge with open abutments and 686mm P. P. C Deck Beams. Traffic signal conduit attached to existing bridge. No Salvage.

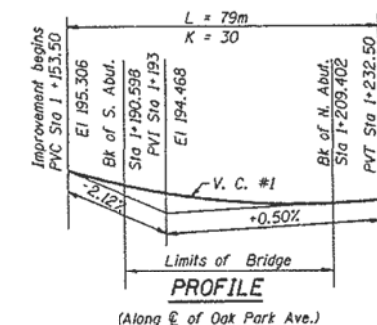
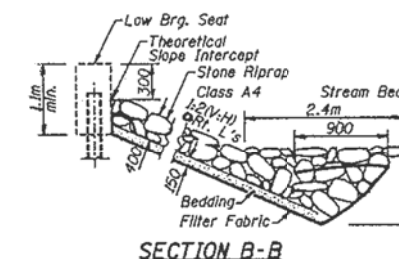
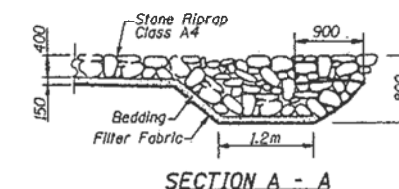
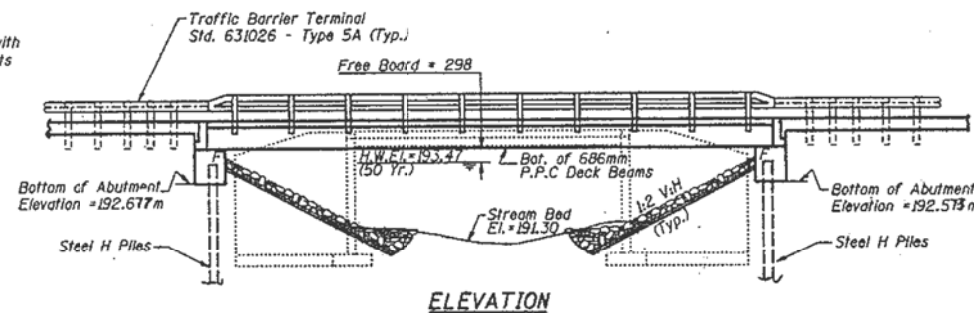
Notes:

All dimensions are in millimeters (mm) except as noted.

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.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEETS
2774	808	COOK	26	11
SHEET NO. 51				



LEGEND

F - Fixed Bearing

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
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

STATION 1+200.000
BUILT 199 BY
STATE OF ILLINOIS
F.A.U. RT. 2774 SEC. 808
F.A. PROJ. ACNH-F-330(2)
LOADING MS18
STRUCTURE No. 016-2711

NAME PLATE
SEE STD. 515001

DESIGN SPECIFICATIONS

1996 AASHTO & 1997 Interim.

LOADING MS 18

Allow 2.4 kN/m² for future wearing surface.

DESIGN STRESSES FIELD UNITS

f'_c = 24 MPa (Concrete)
 f_y = 400 MPa (Reinforcing Steel)

Pre-cast Pre-stressed Units

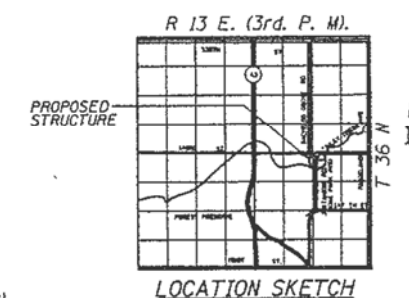
f'_c = 35 MPa
 f'_cl = 28 MPa
 f'_s = 1860 MPa (12.7mm dia stress relieved strands)
 f_{si} = 1302 MPa (12.7mm dia stress relieved strands)

SEISMIC DATA

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

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ENGINEER OF BRIDGES AND STRUCTURES



ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION

OAK PARK AVENUE
OVER TINLEY CREEK
F.A.U. ROUTE 2774 - SEC. 808
COOK COUNTY
STATION 1+200.000
STRUCTURE No. 016-2711

SCALE: NONE
DATE: August 26, 1998

DELTA ENGINEERING INC.
CORPORATE ENGINEERS, DESIGN ILLINOIS

WATERWAY INFORMATION

Flood	Freq. Yr.	Q m ³ /s	Opening m ²		Nat. H.W.E.	Head - m		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	20.5	13.0	22.9	193.31	0.09	0.00	193.40	193.31
Base	50	27.3	14.0	25.4	193.47	0.12	0.03	193.59	193.50
Overtopping	100	30.3	14.4	26.4	193.55	0.15	0.03	193.70	193.58
Max. Calc.	500	41.9	17.4	28.9	193.70	0.37	0.03	194.07	193.73

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2711

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	38
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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```

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 311	625A-B R 1	DuPage	29	15
FILL PHOTO MOUNTING		SHEETS		

Contract #60C53

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. Ems.
7. 21" x 48" PPC Dk. Ems.
8. Precast Approach Beams
9. Concrete Wearing Surface
10. Sidewalks
11. Porapets
12. Railing
13. Expansion Joint Details
14. Abutments and Pier Details
15. Substructure Repairs
16. Bar Splicer Details

No Allowance for future wearing surface

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications

FIELD UNITS

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

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



LOCATION SKETCH

STRUCTURE NO. 022-0040



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

DESIGNED *DOB*
CHECKED *LLV*
DRAWN *MGM*
CHECKED *DOB*

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES



 License Expires: 11/30/08

 Date Signed: 11-8-07

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

PLAN

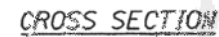
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN
SN: 022-0040

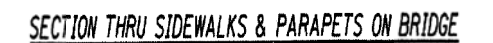
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	40
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

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(looking east)



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

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.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

- 1 General Plan & Elevations
- 2-3 Stage Construction Details
- 4 Temporary Concrete Barrier for Stage Construction
- 5 Superstructure - Plan
- 6 Superstructure - Cross Section
- 7 Superstructure Details
- 8 Beam Details
- 9 Bicycle Railing
- 10 Preformed Joint Strip Seal
- 11 Bar Splicer Assembly Details
- 12-14 Concrete Structural Repair

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAU 1453	552B-BR	DUPAGE	142	14 SHEETS

ISTHA Contract No. I-06-5518

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.5	0.5
Concrete Structures	Cu. Yd.	0.5		0.5
Concrete Superstructure	Cu. Yd.	44.4		44.4
Bridge Deck Grooving	Sq. Yd.	1351		1351
Protective Coat	Sq. Yd.	1832		1832
Concrete Wearing Surface, 5"	Sq. Yd.	1749		1749
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	15710		15710
Reinforcement Bars, Epoxy Coated	Pound	41940		41940
Bar Splicers	Each	477		477
Bicycle Railing	Foot	159		159
Parapet Railing	Foot	159		159
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	198		198
Epoxy Crack Injection	Foot		34	34
Asbestos Bearing Pad Removal	Each	146		146
Structural Repair of Concrete (Depth = 5")	Sq. Ft.		312	312
Structural Repair of Concrete (Depth = 5")	Sq. Ft.		14	14
Concrete Sealer	Sq. Ft.	517		517

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 A 706, Gr. 60 (IL Modified). See Special Provisions.

Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into 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.

For stage construction details see Roadway Plans.

Reinforcement bars designated (E) shall be epoxy coated.

Slip forming of the parapets is not allowed on this project.

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.

If the Contractor's procedures for existing beam removal or replacement of new beams involves placement of heavy equipment on the new or 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 load. Cost included with Removal of Existing Structures.

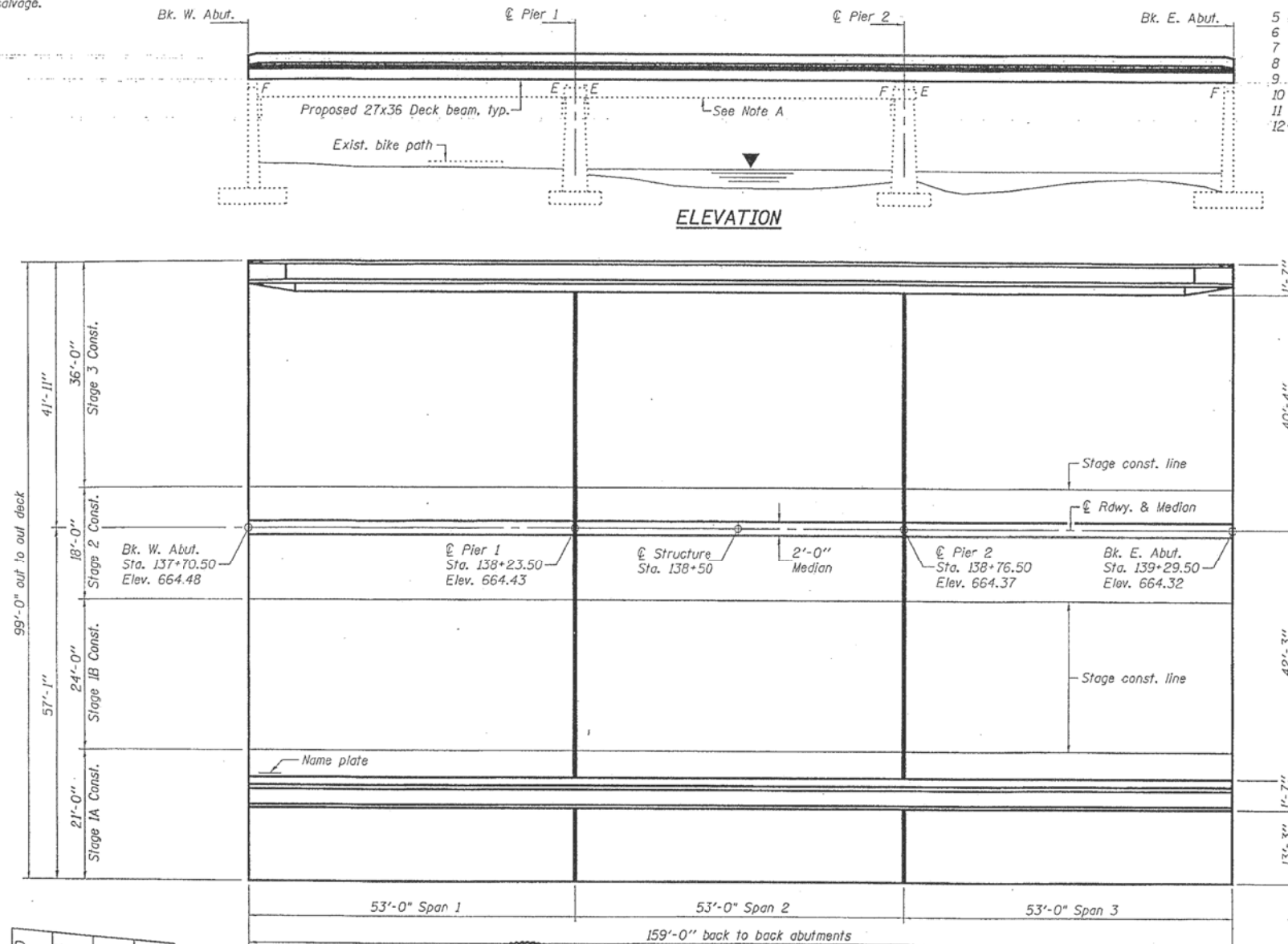
For equipment loads on new deck beams:

To distribute loads to multiple beams and to protect the concrete beams, a double layer mat of heavy timbers shall be used under heavy equipment tracks, wheels, or 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 transverse ties shall be installed and fully tightened, the dowel rods shall be grouted and cured a minimum of 24 hours, and the shear keys shall be grouted and cured.

Repair of the pier caps shall be completed prior to placement of the new deck.

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

The existing Water Quality Monitoring Device attached to the existing Pier 1 shall be removed and reattached by others. Cost of removal and reattachment of the device shall be paid for by the DuPage River Salt Creek Work Group.

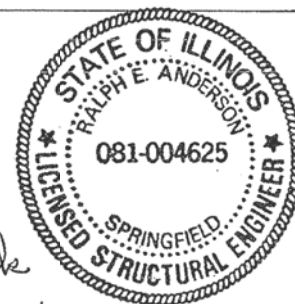


Sta. 137+50 Elev. 664.50	Sta. 138+00 Elev. 664.45	Sta. 138+50 Elev. 664.40	Sta. 139+00 Elev. 664.35	Sta. 139+50 Elev. 664.30
-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------

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

PLAN

Note A:
The Contractor shall remove all 12 exist. 33WF41 beams, brackets and anchor bolts after staged construction and prior to placing proposed PPC Deck Beams. All anchor bolts shall be burnt flush and covered with epoxy. Cost included with Removal of Existing Superstructures. The Contractor shall deliver the salvaged steel to the D-1 Bridge Office in Elk Grove Village as directed by the Engineer. The cost of removal and transporting the salvaged steel shall be included with Removal of Existing Superstructures. Total weight of steel to be removed = 93220 lbs.

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

$f'_s = 270,000$ ($\frac{1}{2}$ low relaxation strands)

$f'_{si} = 201,960$ ($\frac{1}{2}$ low relaxation strands)

$f = 60,000$ psi (reinforcement bars)

FIELD UNITS

$f'_s = 60,000$ psi (reinforcement bars)

$f'_c = 5,000$ 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

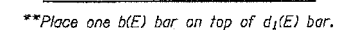
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

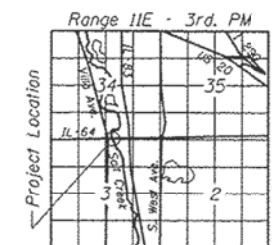
Traffic to be maintained utilizing staged construction. During the demolition and setting of the beams, the existing bike path under the bridge will be closed.

No Salvage.

SCOPE OF WORK

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

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.



LOCATION SKETCH

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

*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)

$f'_c = 3,500 \text{ psi}$
 $f'_c = 5,000 \text{ psi (CWS only)}$
 $f_y = 60,000 \text{ psi (Reinforcement)}$

FIELD UNITS (EXISTING)

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

PRECAST PRESTRESSED UNITS (PROPOSED)

$f'_c = 7,000 \text{ psi}$
 $f'_{ci} = 6,000 \text{ psi}$
 $f_{pu} = 270,000 \text{ psi } (1/2" \phi \text{ Strands})$
 $f_{obt} = 201,960 \text{ psi } (1/2" \phi \text{ Strands})$

APPROVED
For Structural Adequacy Only

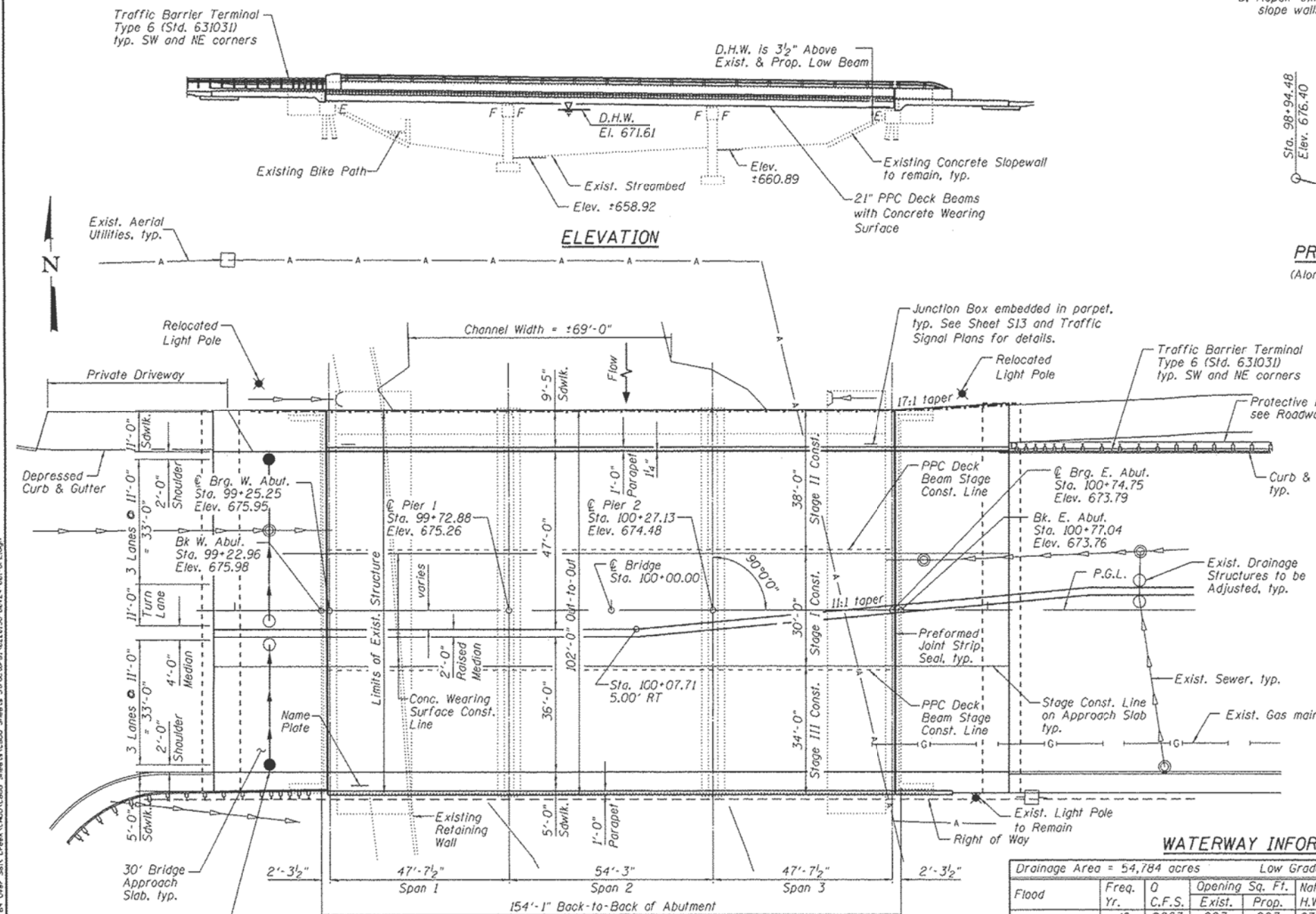
Dr. Carl Krueger
Engineer of Bridges & Structures



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

GENERAL PLAN

IL RTE. 64 OVER SALT CREEK
F.A.P. RTE. 307 - SEC. 131B-BR
DuPAGE COUNTY
STATION 100+00.00
STRUCTURE NO. 022-0158



WATERWAY INFORMATION

Drainage Area = 54,784 acres			Low Grade Elev. 671.76 @ Sta. 103+00						
Flood	Freq. Yr.	0 C.F.S.	Opening Exist.	Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Fl. Prop.	Headwater Elev. Prop.	Headwater Elev.
	10	2263	923	923	670.31	0.00	0.00	670.31	670.31
Design	50	3341	1067	1067	671.61	0.00	0.00	671.61	671.61
Base	100	3846	1067	1067	672.21	0.00	0.00	672.21	672.21
Overtopping	<50								
Max. Calc.	500	5224	1067	1067	673.21	0.00	0.00	673.21	673.21

COLLINS ENGINEERS 123 W. Wacker Dr.
Suite 900
Chicago, IL 60606
Tel: (312) 704-4300
Fax: (312) 704-9520
www.collinsengr.com
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 084-00000

USER NAME *	DESIGNED - LJ	REVISED
	CHECKED - EKM	REVISED
PLOT SCALE *	DRAWN - DR	REVISED
PLOT DATE *	CHECKED - LJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 022-0158

SHEET NO. S1 OF S26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	1318-BR	00PAGE	111	70
CONTRACT NO. 60V2				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

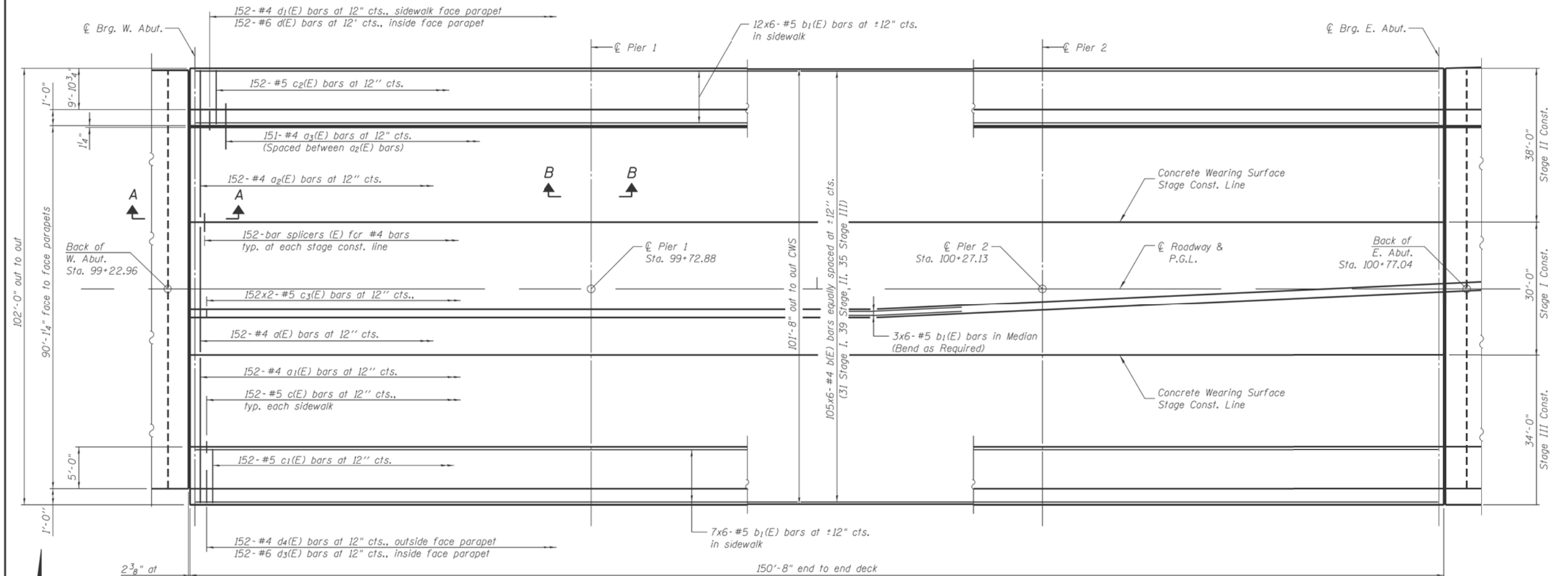
GENERAL PLAN
SN: 022-0158

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	44
				CONTRACT NO. 62H78	
	ILLINOIS FED. AID PROJECT				

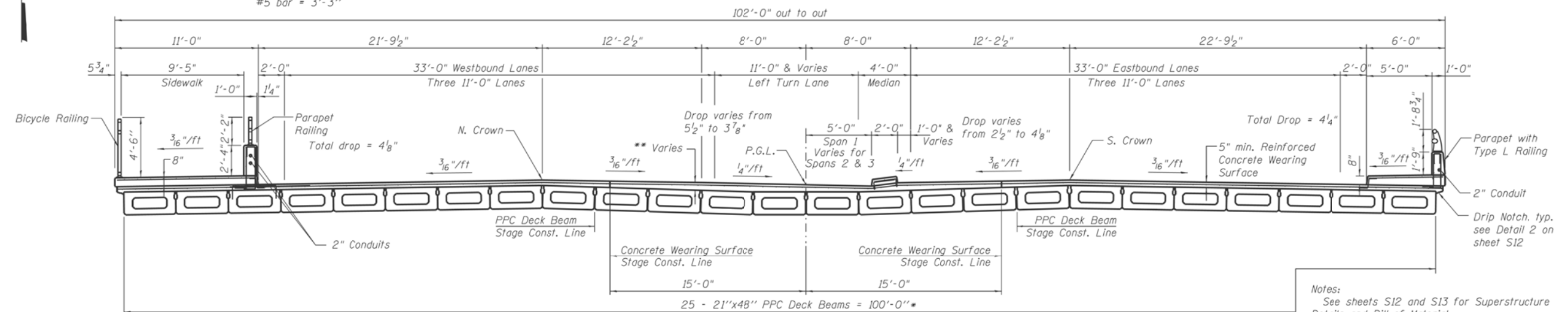
MODEL: Default

FOR INFORMATION ONLY



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

PLAN



CROSS SECTION
(Looking East)

COLLINS ENGINEERS 121 N. Rockwell St. Suite 900 Chicago, IL 60606 Tel: (312) 754-1300 Fax: (312) 754-1320 www.collinsengr.com ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 04-000993	USER NAME =	DESIGNED - LJ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 022-0158	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLCT SCALE =	CHECKED - EKM	REVISED			307	131B-BR	DuPAGE	111	80
	PLCT DATE =	DRAWN - DR	REVISED			CONTRACT NO. 60V24				
		CHECKED - LJ	REVISED			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 -

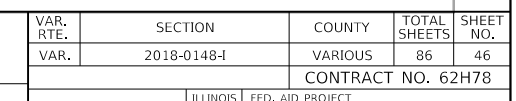
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 022-0158

SCALE: SHEET OF SHEETS STA. TO STA.

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

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FOR INFORMATION ONLY

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.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL	SHEET NO.
3887	AR-B	KANE	43	17	16 SHEETS
Contract #60C23					

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

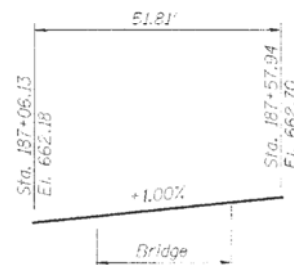
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST/PRESTRESSED UNITS

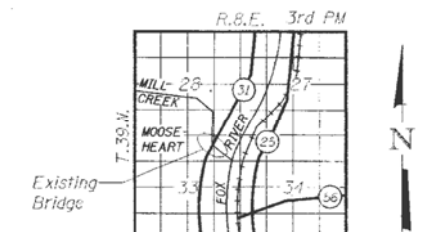
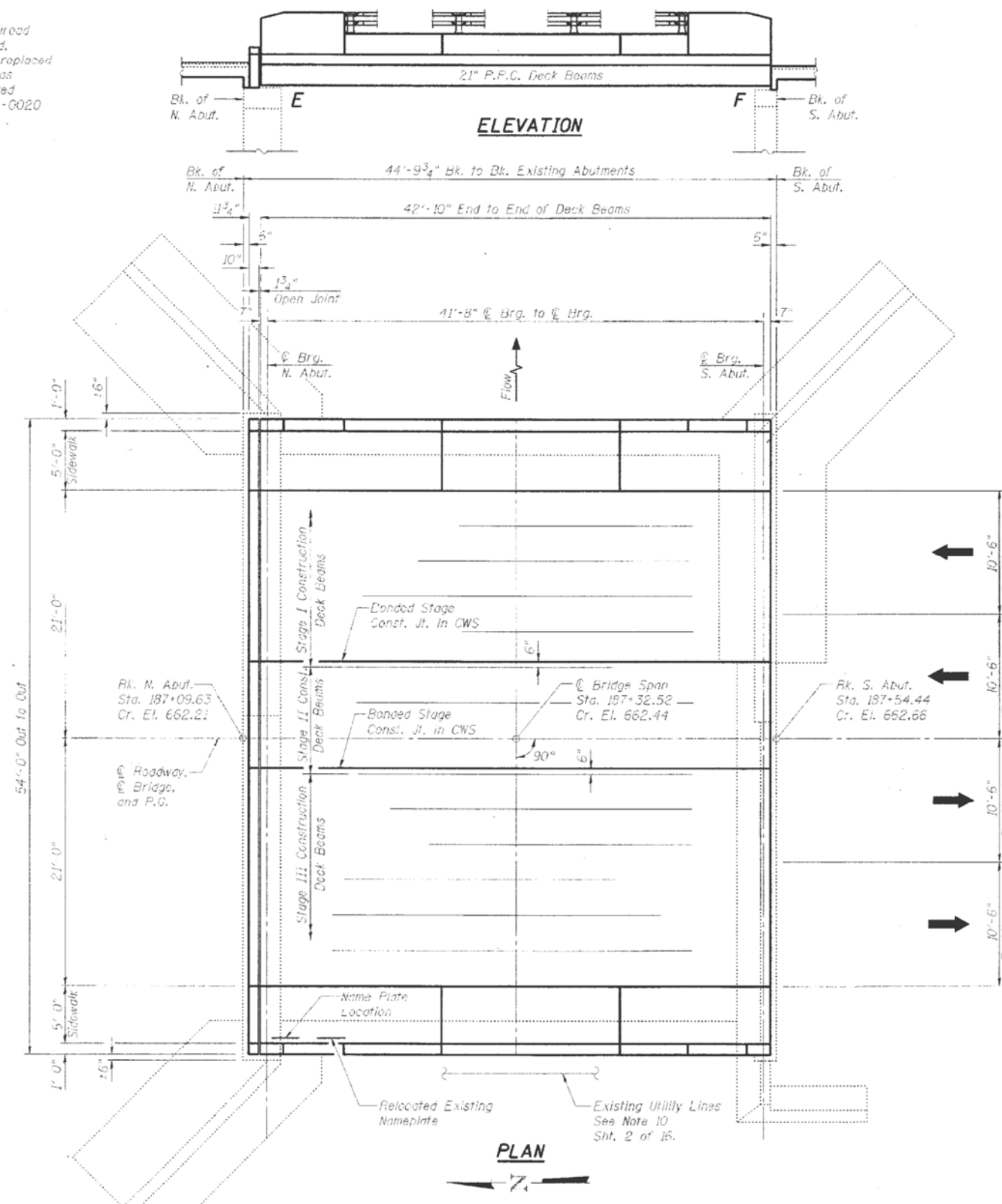
$f'_c = 4,000$ psi
 $f_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax strands)
 $f_{si} = 201,960$ psi (1/2" ϕ low lax strands)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



PROFILE GRADE
at Roadway
(For Bridge Only)



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

DESIGNED	LLV
CHECKED	DDB
DRAWN	MGM
CHECKED	LLV

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: 045-0020

SCALE: SHEET OF SHEETS STA. TO STA.

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET(S)	SHEET NO.	SHEET NO. 1 RO SHEETS
SA 13		Kane	27	7	
FED. ROAD DIST. NO. 7	ROADS		FED. AID PROJECT		

Contract # 60B81

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 Railing, 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

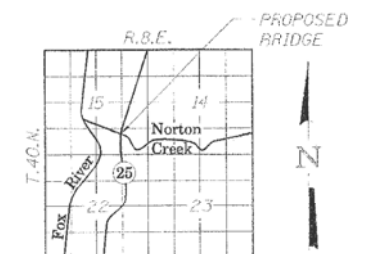
FIELD UNITS

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

60,000 *psi* (reinforced)

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

PRECAST PRESTRESSED UNITS

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


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

200

EXAMINED

PASSED

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

—New Name Plate and re-logged Name Plate location

PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



License Expires: 11/30/08

Date Signed: 6-4-07



STS CONSULTANTS

111 NE Jefferson Ave.

Peoria, Illinois 61602
Pl-(309)676-8464

Ph(309)676-8464
FAX(309)676-5445

IL Design Firm Reg. No. 184-001518

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: 045-0045

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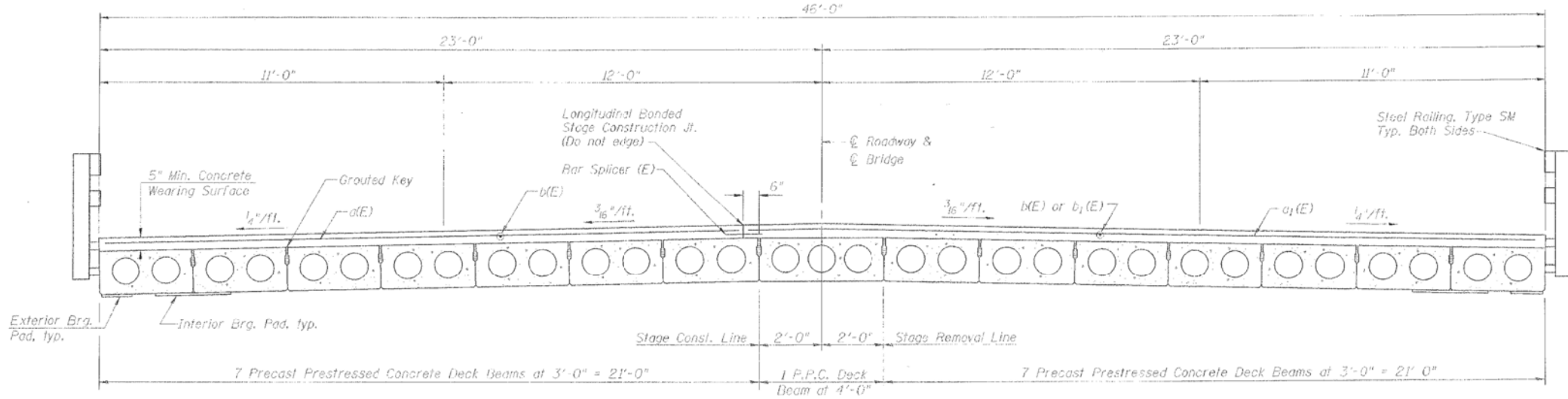
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CONTRACT NO. 62H78				
ILLINOIS		FED. AID PROJECT		

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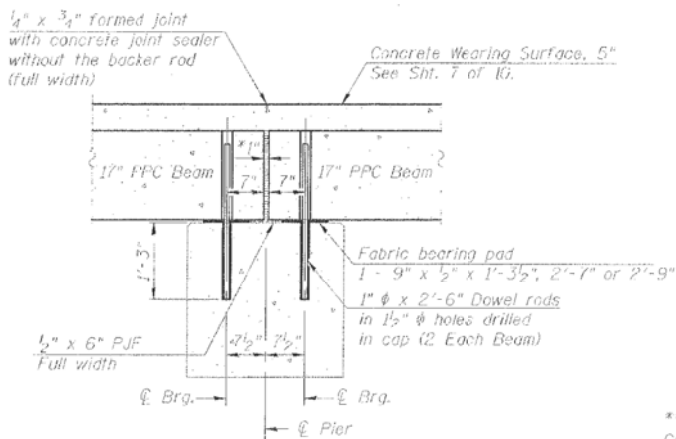
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

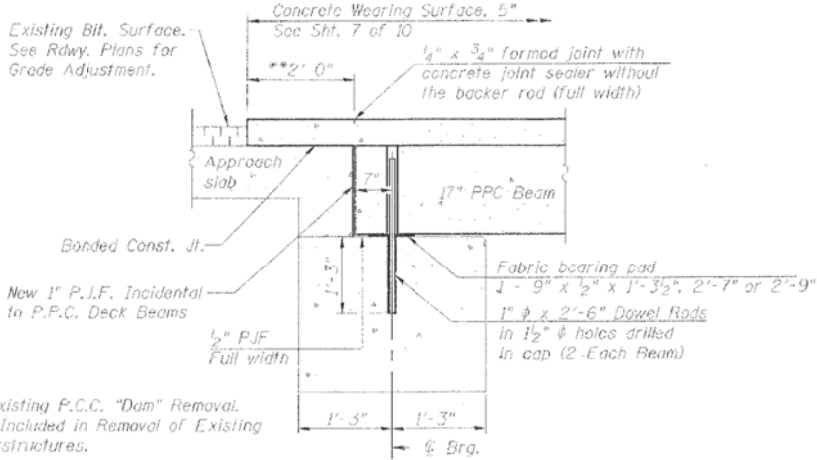


CROSS SECTION
(Looking South)

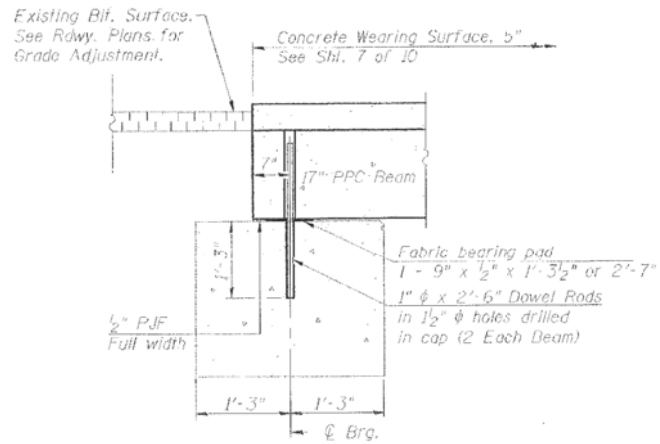


SECTION THRU FIXED PIER

* 1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.



SECTION THRU ABUTMENT
AT APPROACH SLAB



SECTION THRU ABUTMENT
AT SHOULDERS

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

STS Consultants
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph(309)676-8464
FAX(309)676-6446
IL Design Firm Reg. No. 184-001518

- Notes:
1. 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.
 2. All horizontal dimensions are at right angles to beam ends.
 3. See Sht. 5 of 10 for bearing pad details.
 4. Existing dowel rods shall be burned off flush with the top of the abutment or pier.

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

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-I	VARIOUS	86	50
CONTRACT NO. 62H78				

MODEL Default
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PROJECT: 2018-0148-0045
SHEET: 50 OF 86
DATE: 1/25/2019

FOR INFORMATION ONLY

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STATE 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 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, 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)

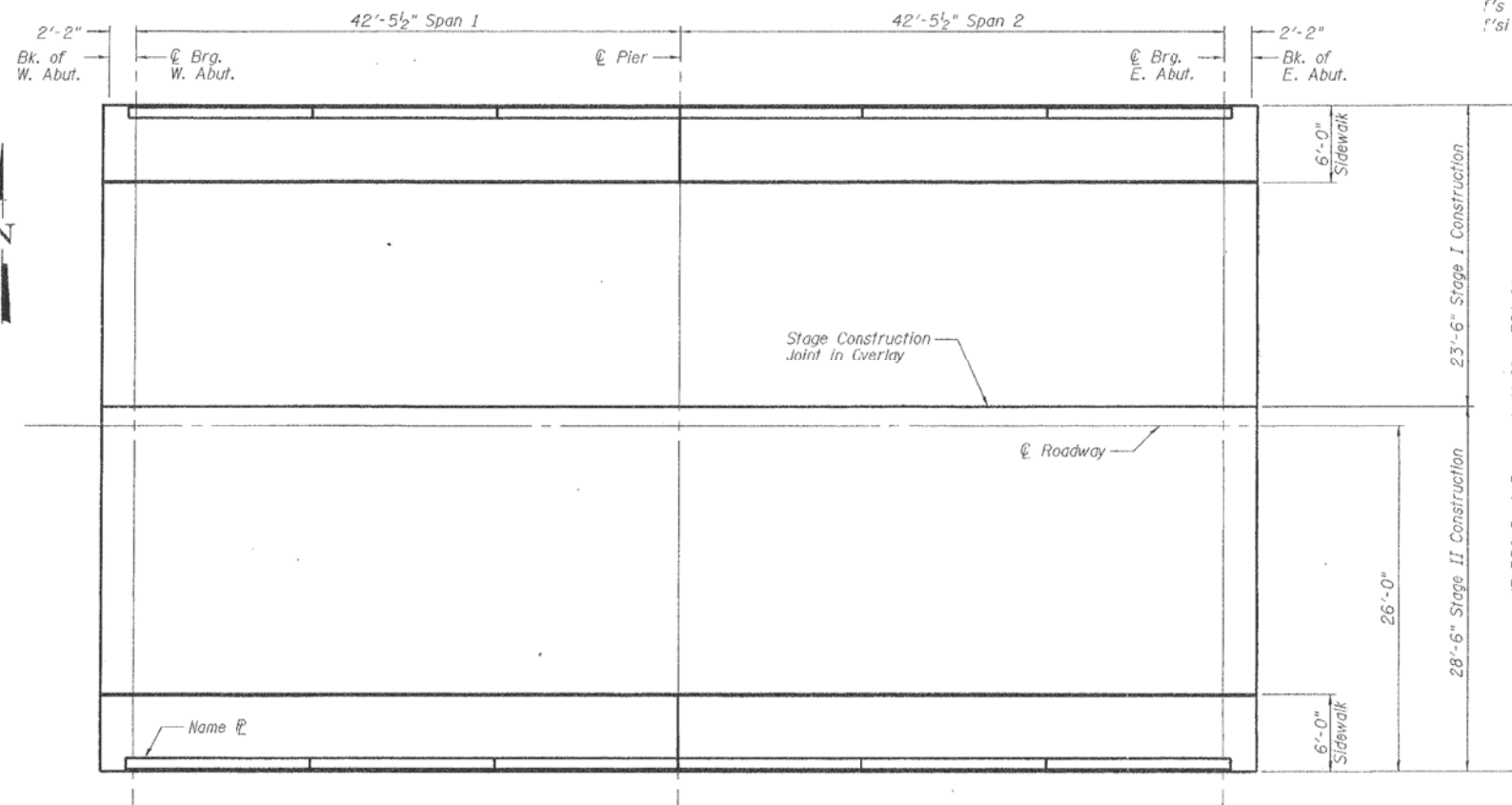
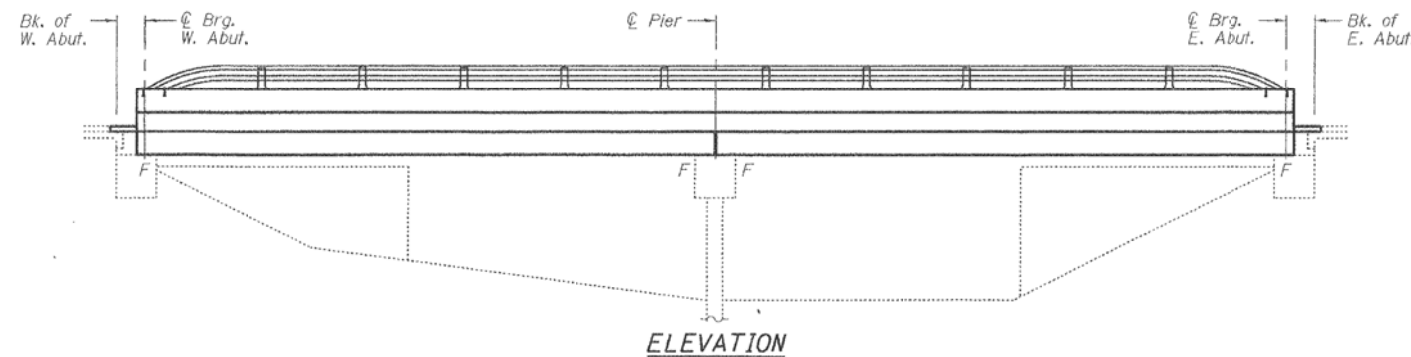
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ 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 Splicers	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 <i>John T. Holloway</i>	September 21, 2006
CHECKED <i>John A. Morris</i>	EXAMINED <i>John A. Morris</i>
DRAWN <i>John A. Morris</i>	PASSED <i>John A. Morris</i>
CHECKED <i>ATW</i>	STB



Expires: November 30, 2006

SLT-91-001-06

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN SN: 049-0011

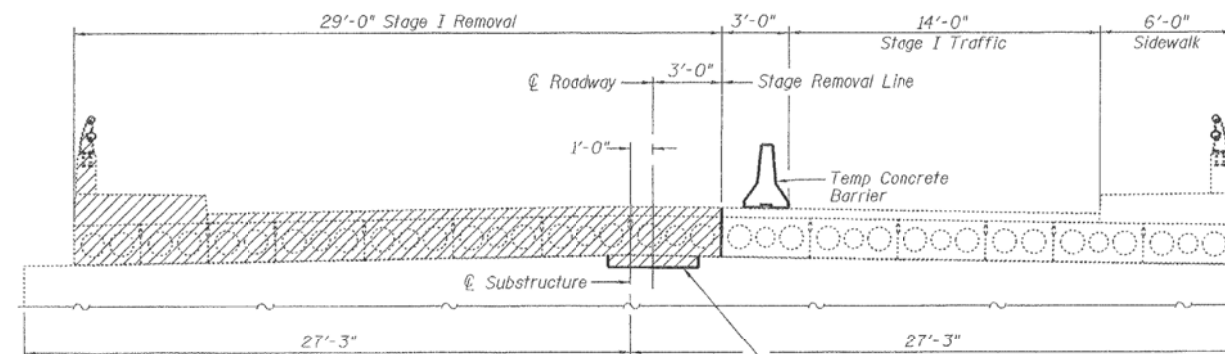
SCALE: SHEET OF SHEETS STA. TO STA.

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

FOR INFORMATION ONLY

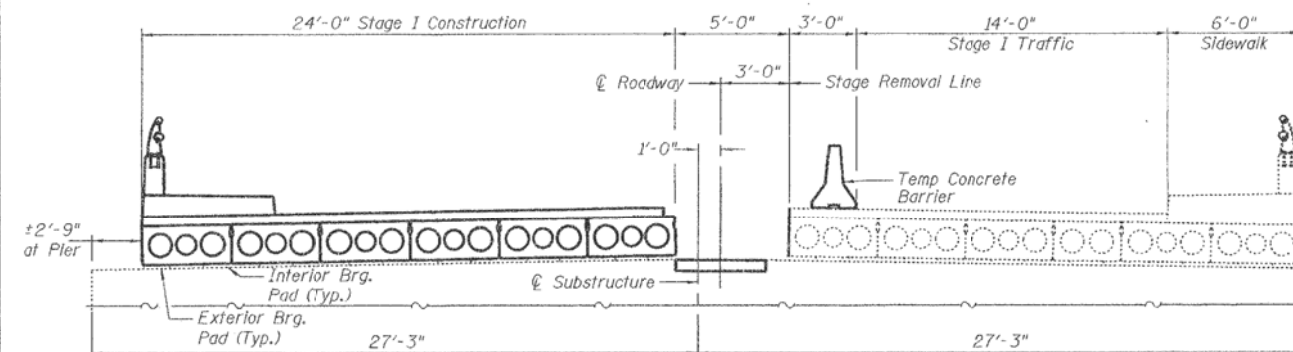
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

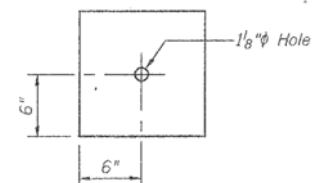


STAGE I REMOVAL

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

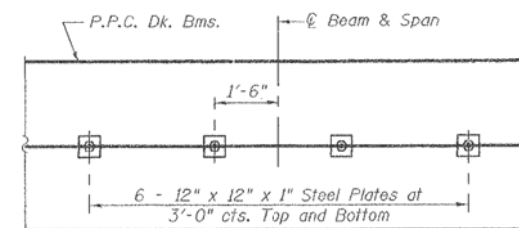
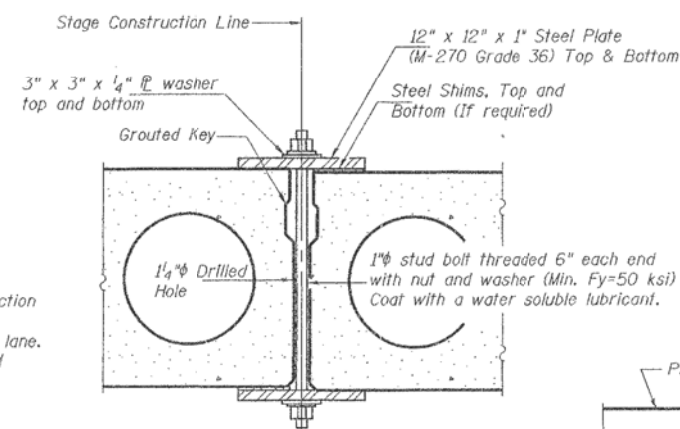


STAGE I CONSTRUCTION

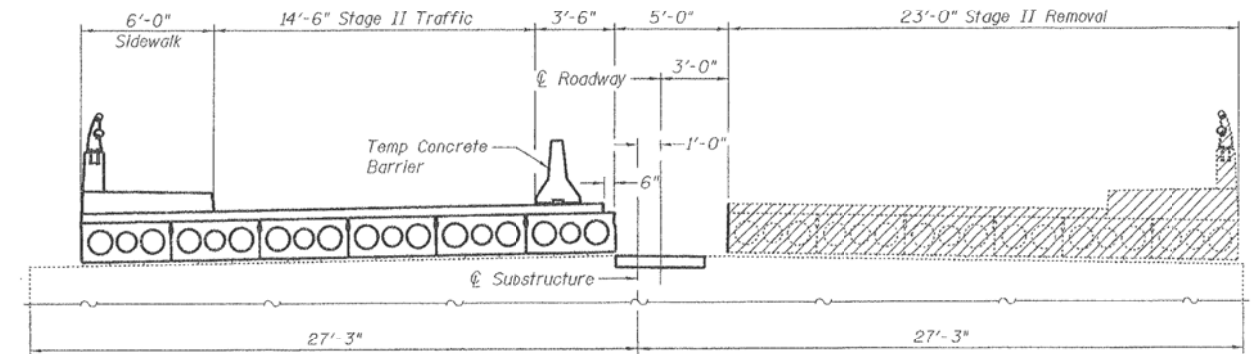


CLAMPING PLATE

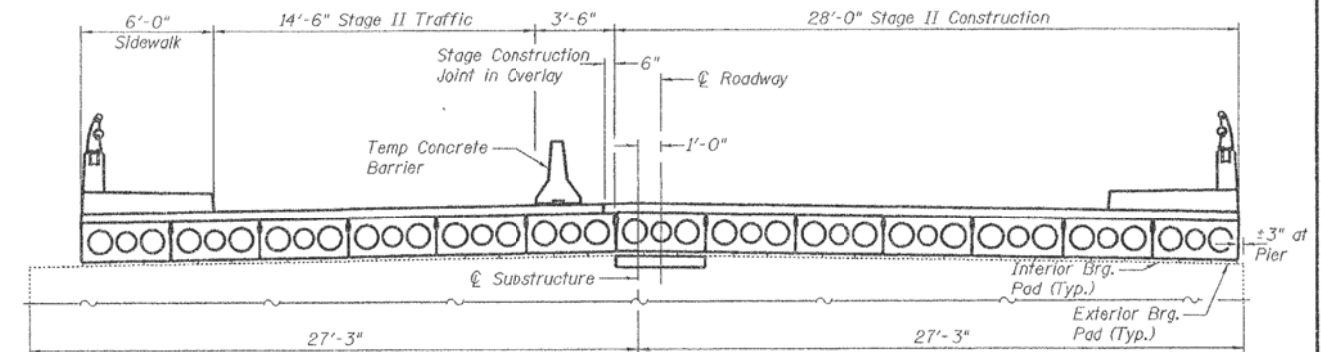
Notes:
See Special Provisions for Stage Construction
Precast Prestressed Concrete Deck Beams.
See Stage Construction Detail for traffic lane.
Cost is included with Precast Prestressed
Concrete Deck Beams.



**PLAN AT STAGE
CONSTRUCTION LINE**

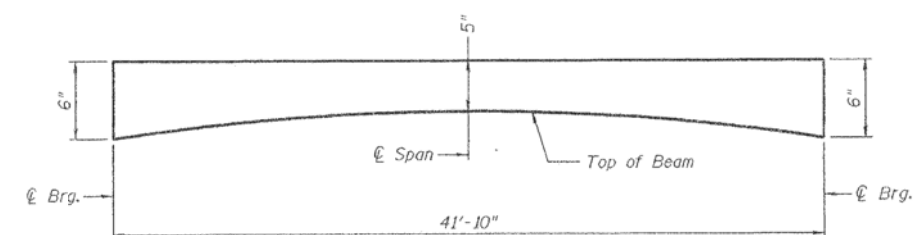


STAGE II REMOVAL



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!

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*
ENGINEER OF BRIDGES AND STRUCTURES

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				

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

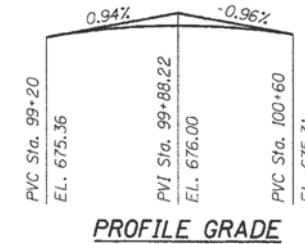
FOR INFORMATION ONLY

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

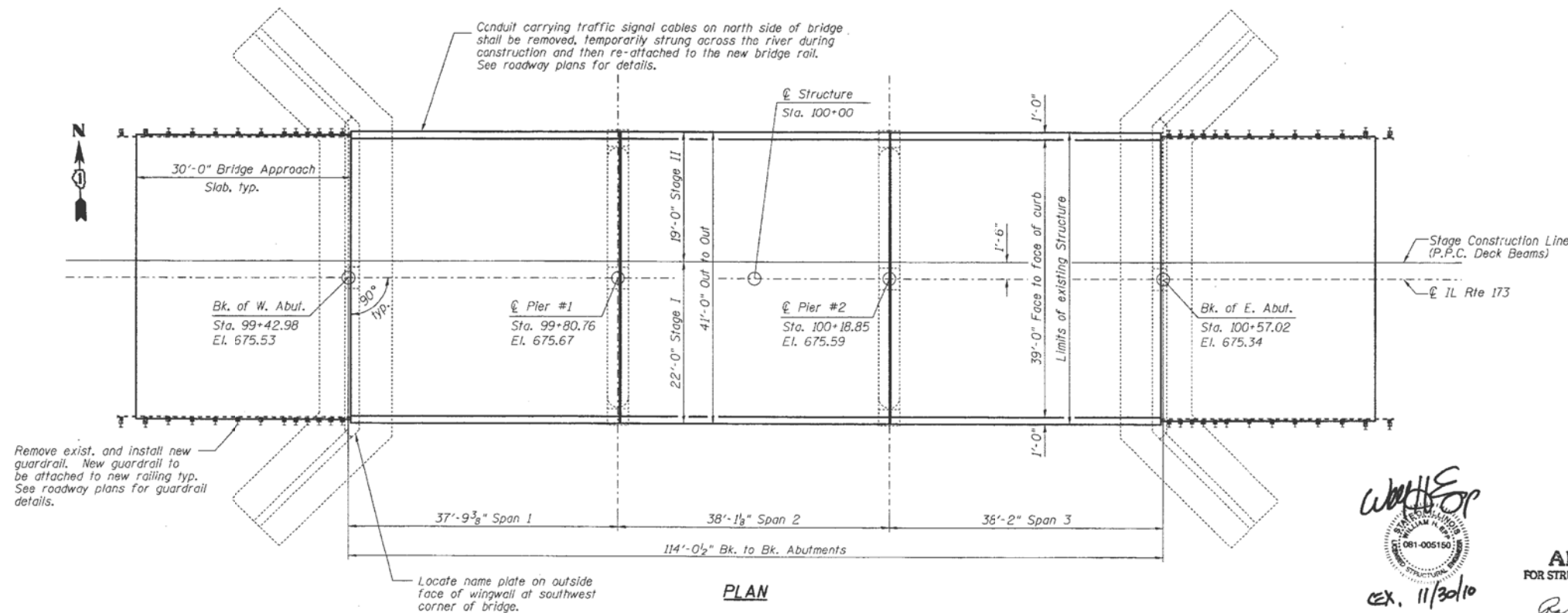
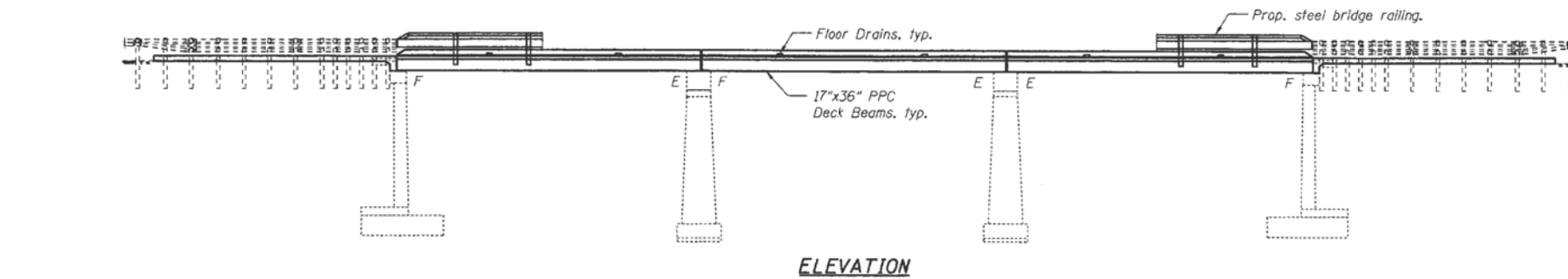
Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2

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

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Miller
ENGINEER OF BRIDGES AND STRUCTURES

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

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

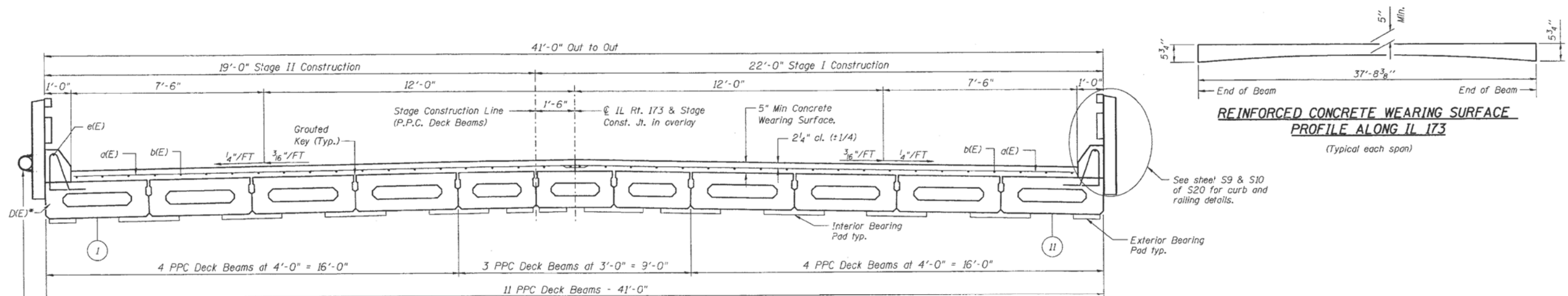
GENERAL PLAN
SN: 049-0059

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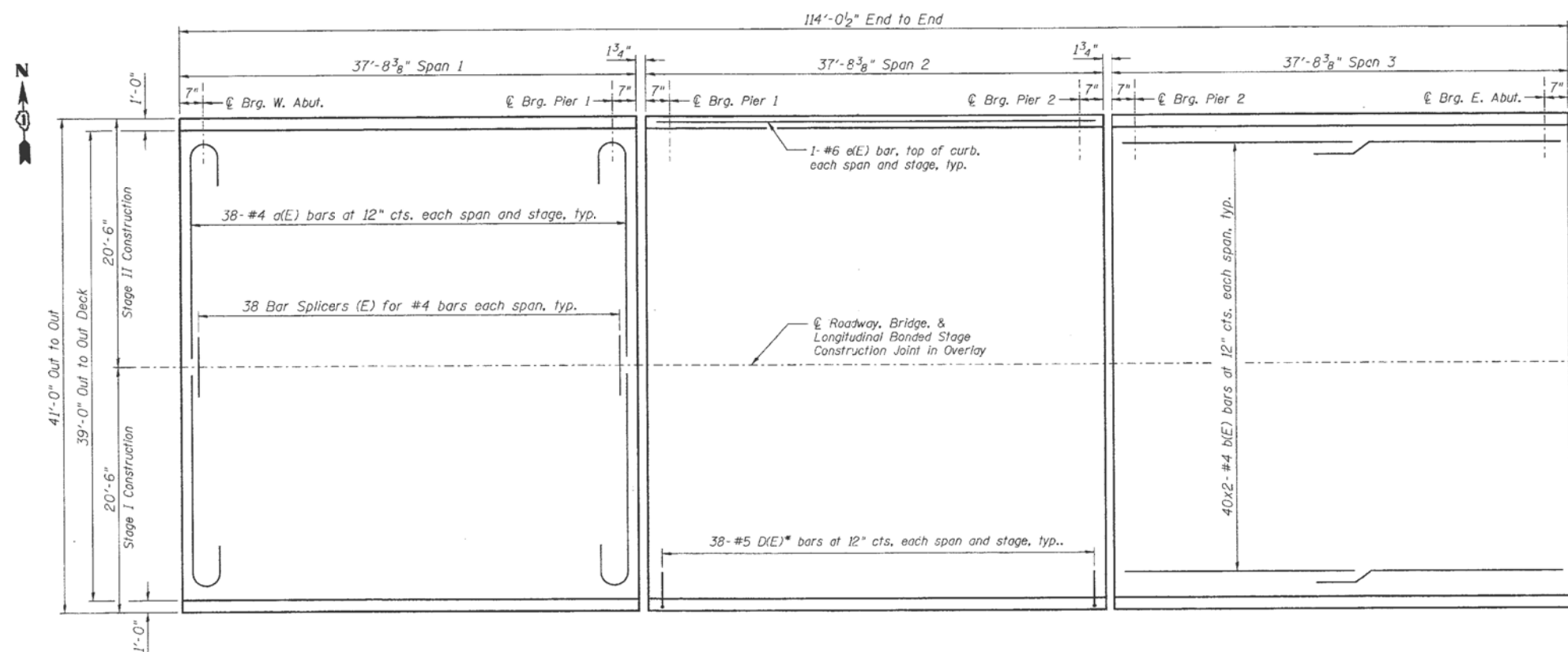
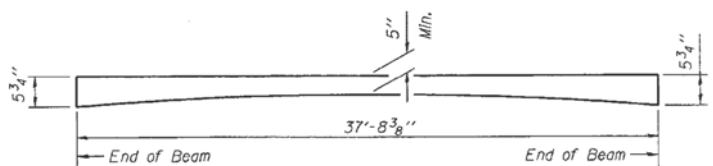
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	54
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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

FOR INFORMATION ONLY



REINFORCED CONCRETE WEARING SURFACE
PROFILE ALONG IL 173
(Typical each span)



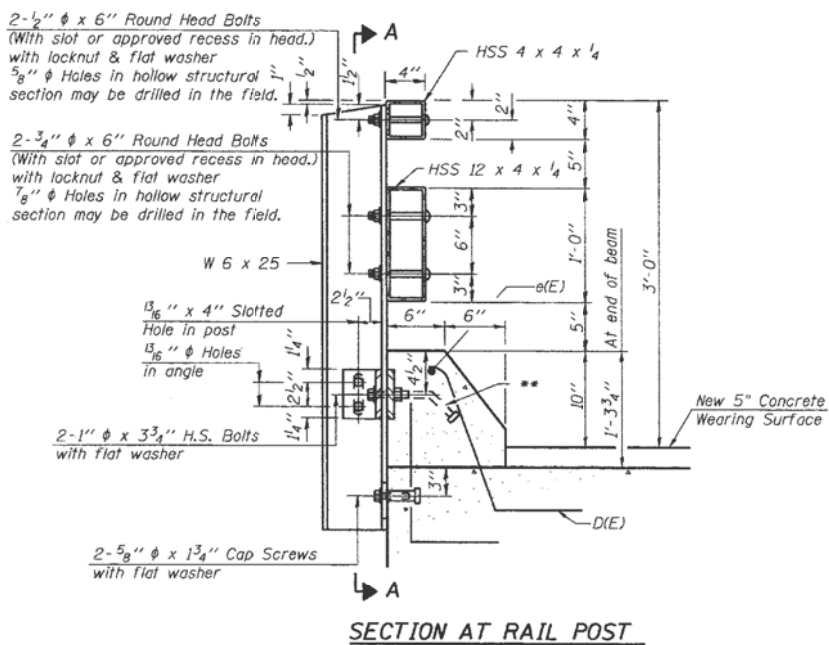
MIN. BAR LAP
#4 bars = 2'-1"

CONCRETE WEARING SURFACE PLAN

*D(E) bars cast-in-place in each outside beam. See sht. S13 of S20 for details.

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.



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

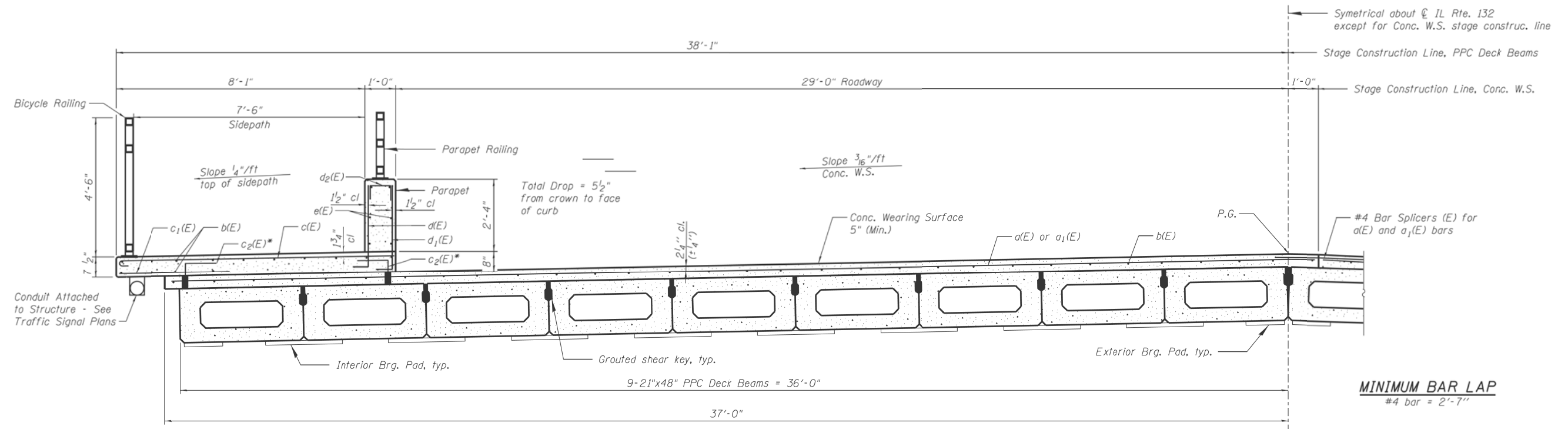
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SN: 049-0059

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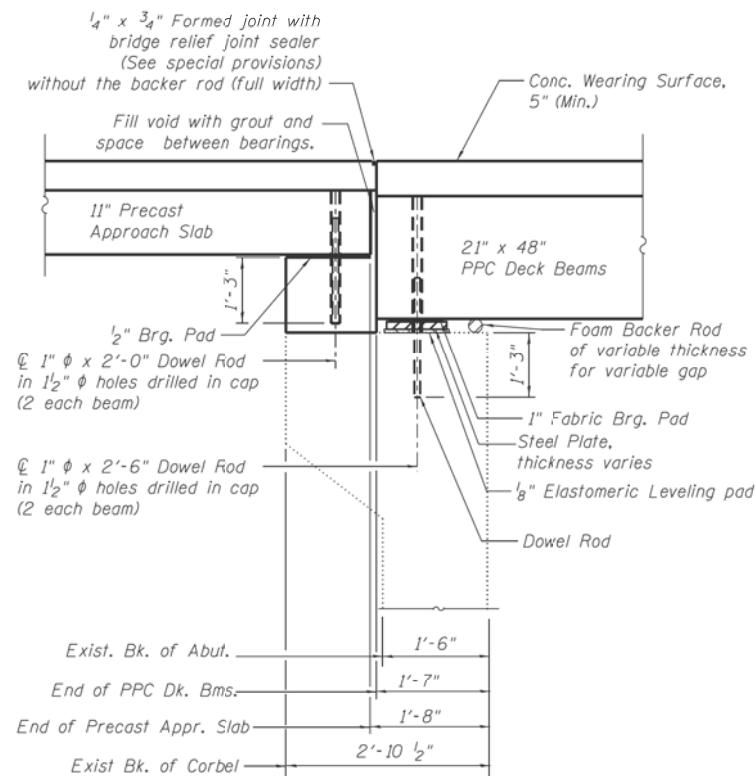
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VAR.		2018-0148-I	VARIOUS	86	55
CONTRACT NO. 62H78					
ILLINOIS FED. AID PROJECT					

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

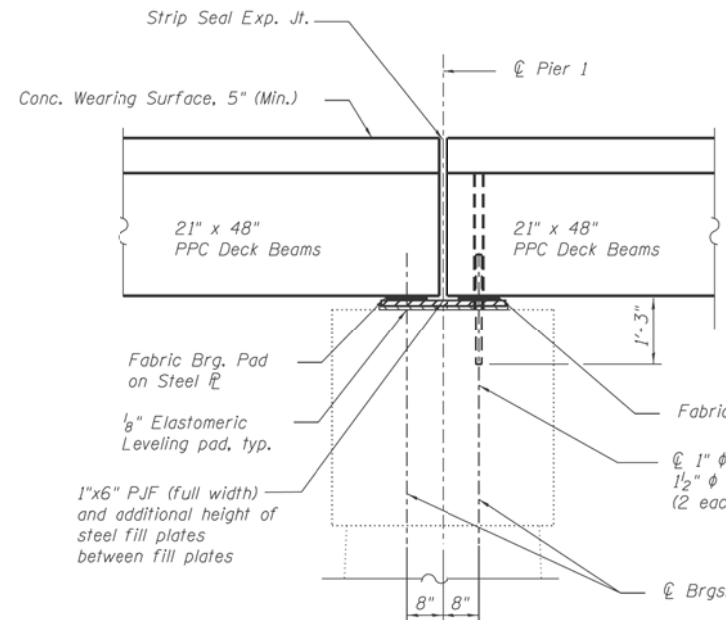
FOR INFORMATION ONLY



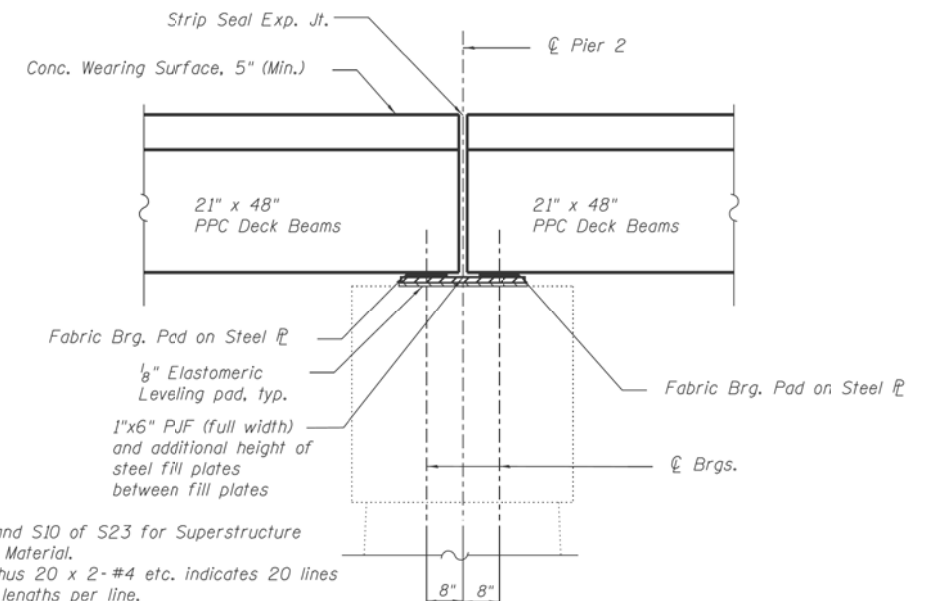
CROSS SECTION
(Looking East)



SECTION A-A
(Dimensions are at Rt. L's)



SECTION B-B
(Dimensions are at Rt. L's)



SECTION C-C
(Dimensions are at Rt. L's)

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 centerline 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.
Cost of grout included in PPC Deck Beams, 21" Depth.
1/8" Elastomeric leveling pads shall have material properties according to Art. 1052.02 of the Standard Specifications.

	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 = diaza	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTION SN: 049-0062				VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISION -	REVISED -						VAR.	2018-0148-I	VARIOUS	86	57
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -		CONTRACT NO. 62H78								
PLOT DATE = 1/25/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	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 1/2", 72'-7 1/4", 35'-8 3/4"). 145'-3 5/8" 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 Railing

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

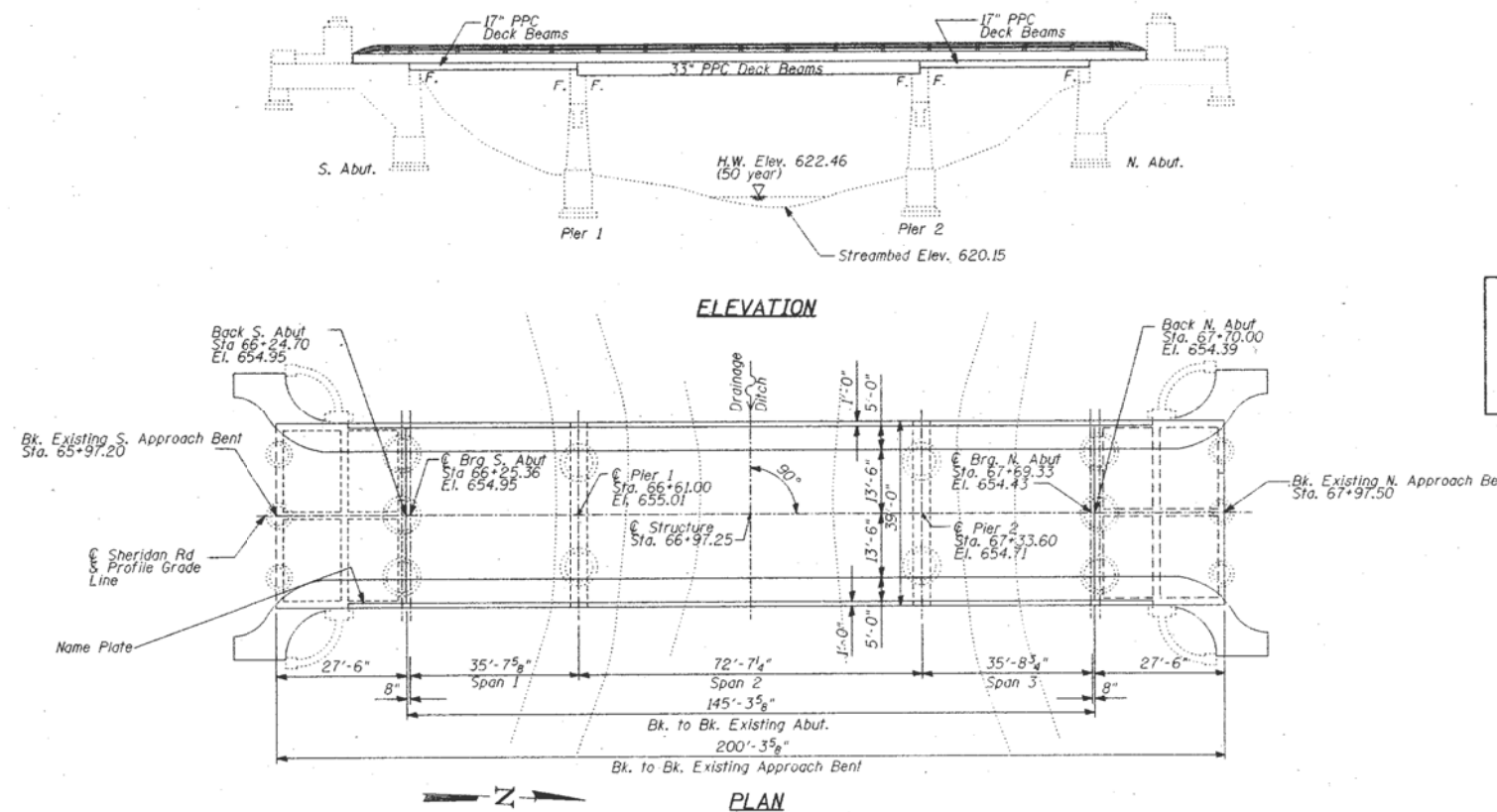
STATION 66+97.25
Rebuilt 200 By
State of Illinois
S.B.I. RT. 42 Sec 112X-BR
Loading HS 20
STR. No. 049-0083

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".

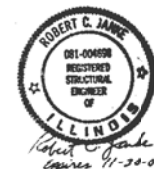
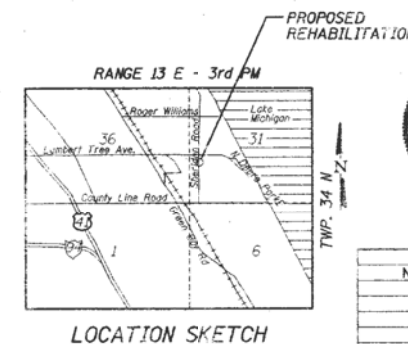


WATERWAY INFORMATION

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	622.69	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



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

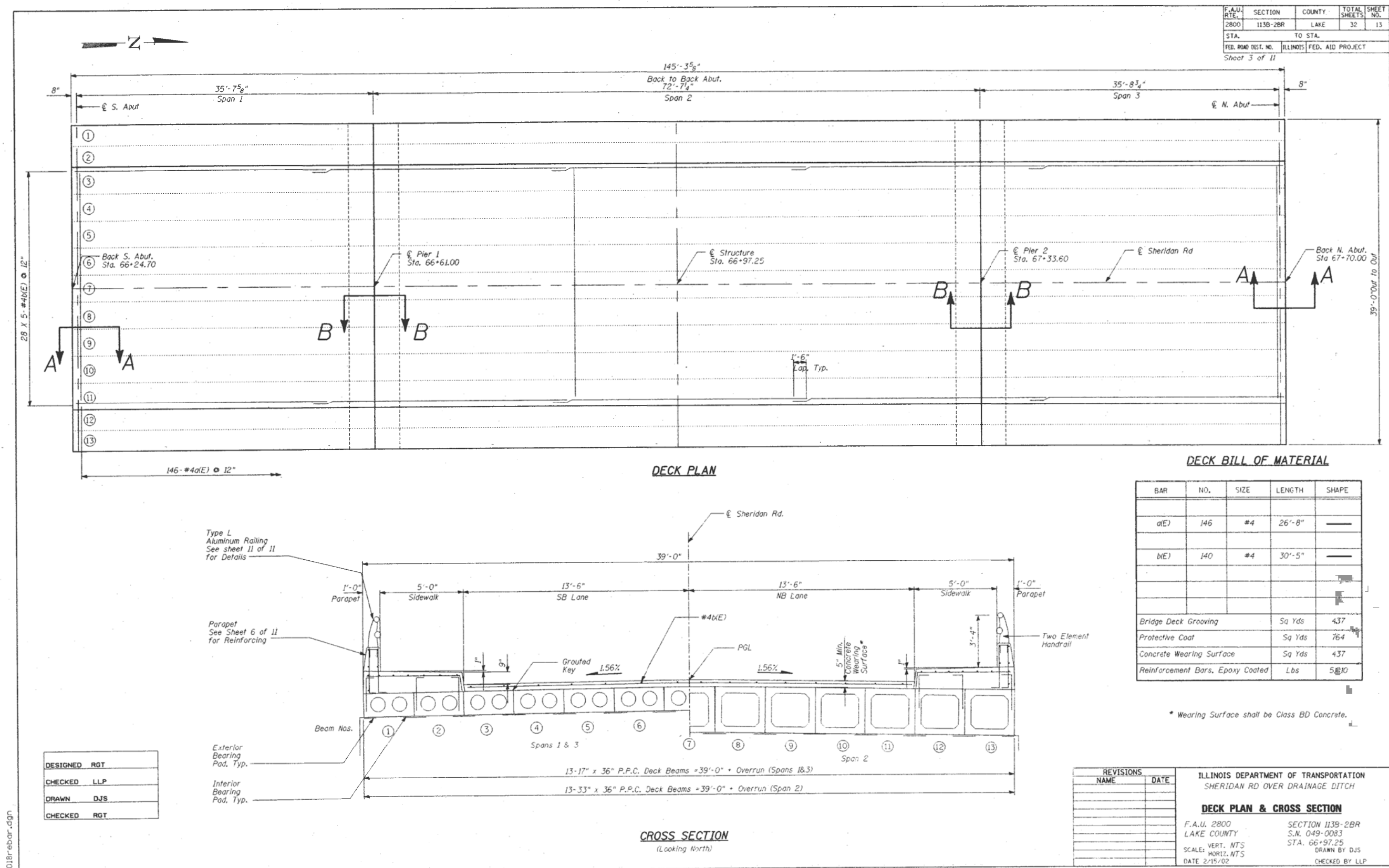
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN SN: 049-0083

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-1	VARIOUS	86	58
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



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: 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				

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	145	105	9 SHEETS
F. H. W. 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	11,30	2860	13,990
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. 770.70 AT STA. 123+00		HEADWATER EL. 772.10		HEADWATER EL. 772.10	
FLOOD	REQ.	Q	OPENING SQ. FT.	NAT.	HEAD-FT.	PROPR.	EXIST. PROP.
DESIGN	50	6377	855	855	766.4	0.0	766.40/766.40
BASE	100	7506	938	938	767.2	0.0	767.20/767.20
OVERTOPPING	EXCEEDS 5000						
MAX. CALC.	500	11942	1199	1199	769.7	0.0	769.70/769.70

STATION 123+69
BUILT 198 BY
STATE OF ILLINOIS
FAS ROUTE 029 SECTION 116R-84
PROJ. ACIX-0003(48)
LOADING HS-20
STRUCTURE NO. 056-0019

BRIDGE NAME PLATE

SEE STD. DWG. 2113

OLD S.N. 056-0019
NEW S.N. 056-0062



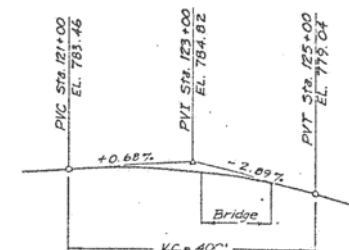
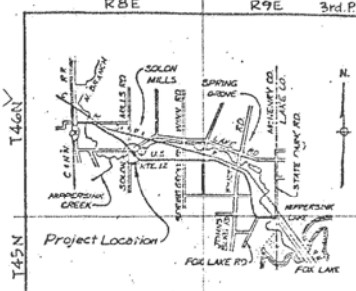
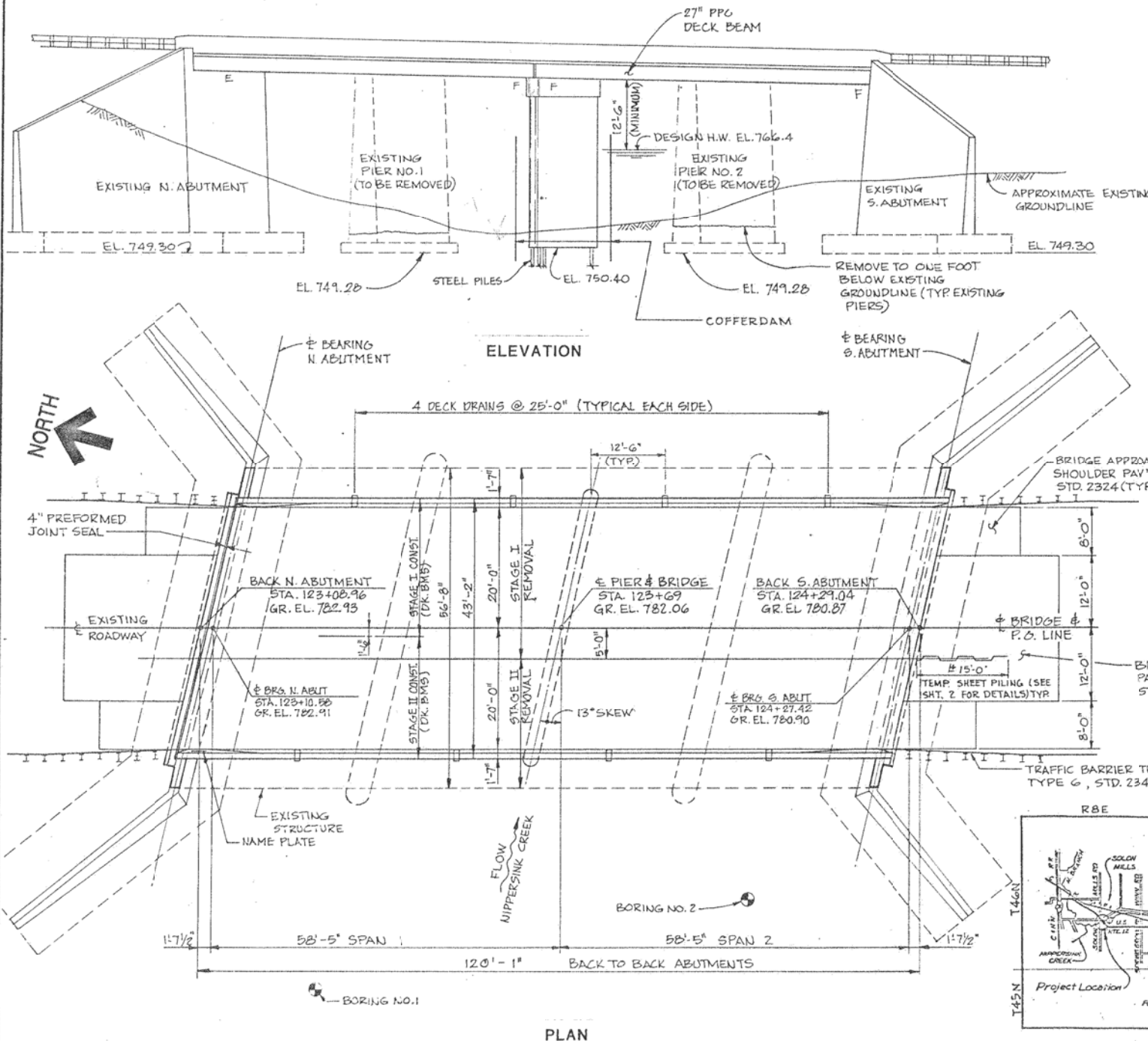
GENERAL PLAN AND ELEVATION

SECTION 116R-84

FAS ROUTE 029 (US 12) OVER NIPPERSINK CREEK

MC HENRY COUNTY

STATION 123+69



PROPOSED PROFILE GRADE

LOCATION MAP

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

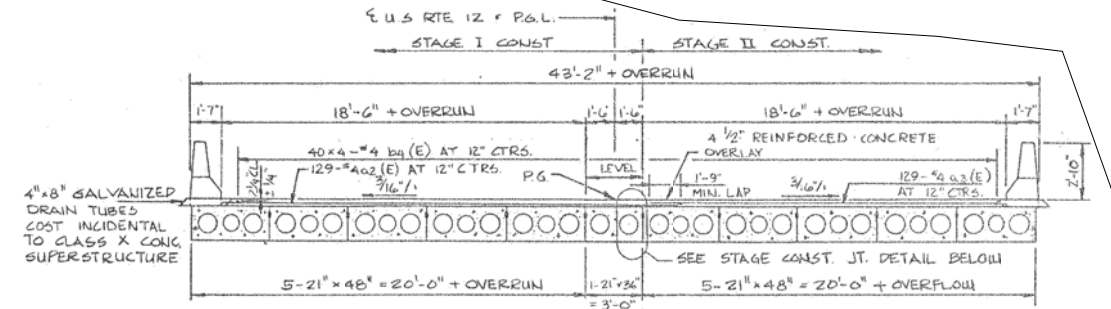
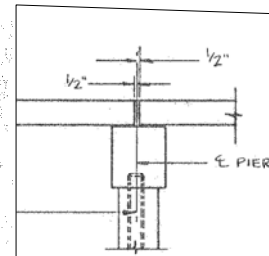
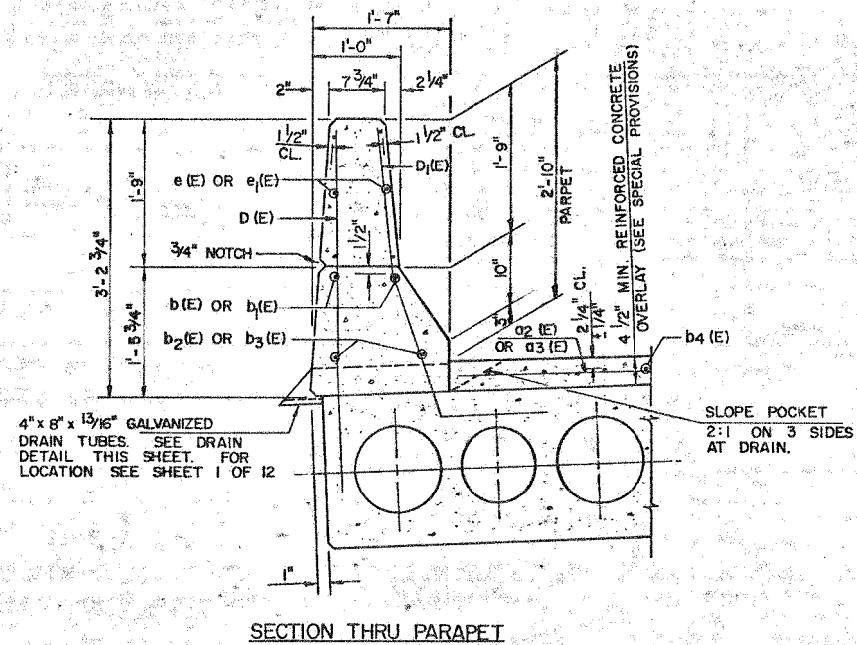
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	63
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

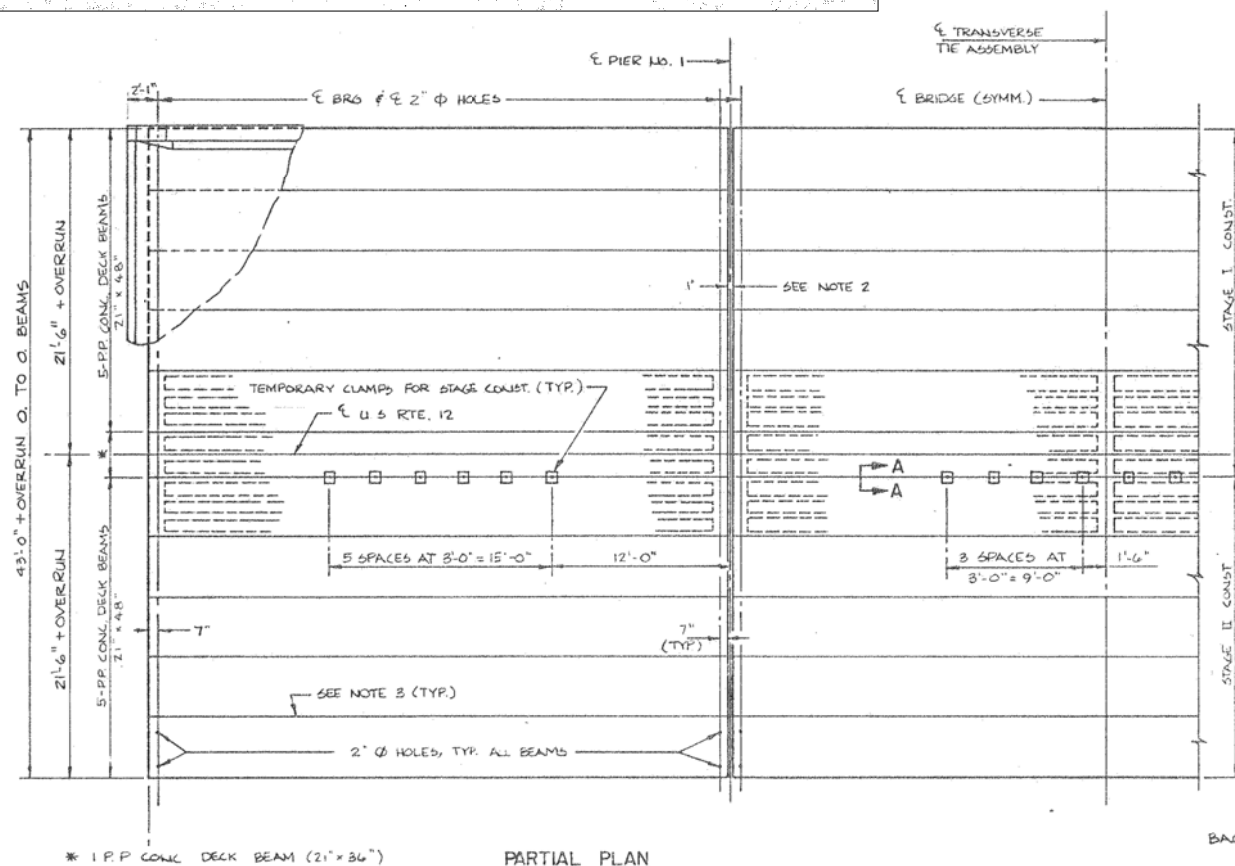
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FOR INFORMATION ONLY



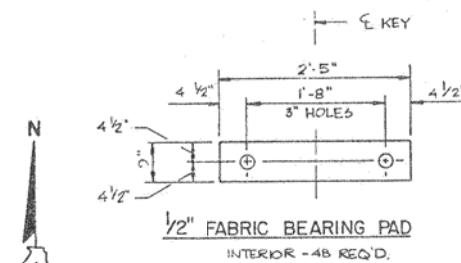
CROSS SECTION
(LOOKING UP STATION)

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

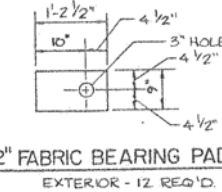


NOTES

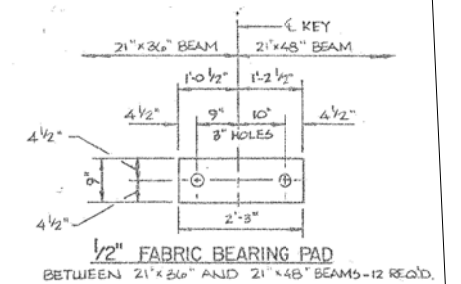
- AFTER BEAMS HAVE BEEN ERECTED, HOLES SHALL BE DRILLED INTO SUBSTRUCTURE AND ANCHOR DOWELS PLACED. DOWEL HOLES SHALL BE FILLED WITH NON-SHRINK GROUT TO TOP OF BEAM ALLOWED TO CURE MIN. 24 HRS. PRIOR TO GROUTING THE SHEAR KEYS.
- NOMINAL 1" JOINT AT PIER SHALL BE FILLED WITH NON-SHRINK GROUT.
- LONGITUDINAL KEYS SHALL BE GROUTED.
- THE 1" Ø 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.
- THE BEARING SEAT SURFACES SHALL BE ADJUSTED BY SHIMMING TO ASSURE FIRM AND EVEN BEARING. TWO 1/8" FABRIC BEARING PADS OF THE DIMENSIONS OF THE EXTERIOR BEARING PAD SHALL BE PROVIDED FOR EACH BEARING.



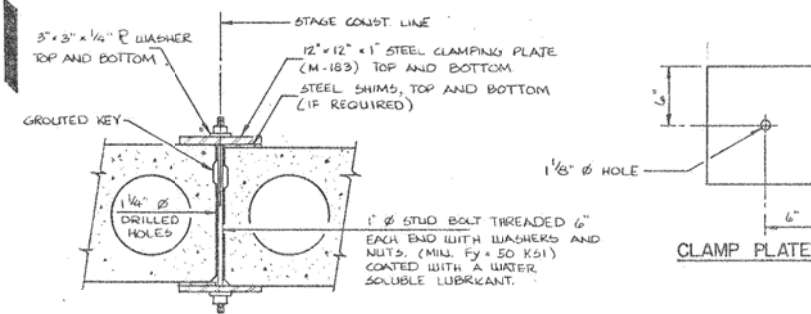
1/2" FABRIC BEARING PAD
INTERIOR - 48 REQ'D.



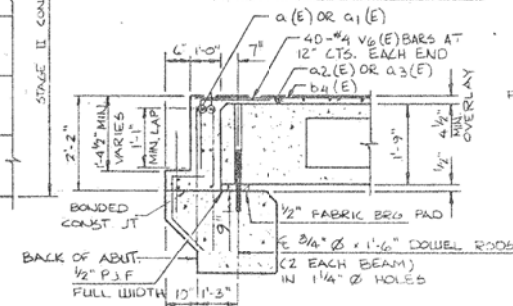
1/2" FABRIC BEARING PAD
EXTERIOR - 12 REQ'D.



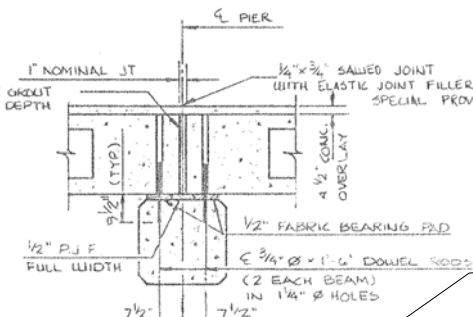
1/2" FABRIC BEARING PAD
BETWEEN 21\"/>



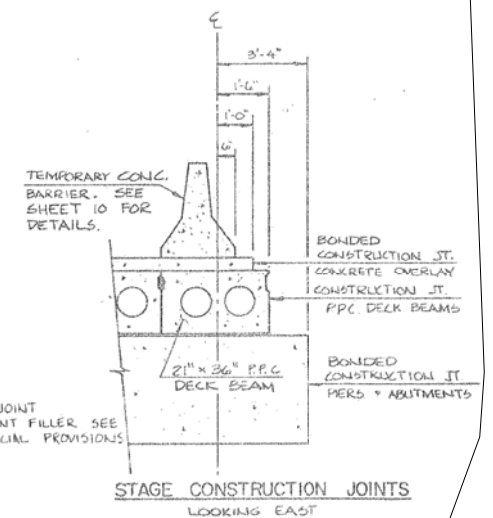
SECTION A-A
CLAMP FOR STAGE CONSTRUCTION



SECTION AT ABUTMENTS



SECTION AT PIERS



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 056-0056

SCALE: SHEET OF SHEETS STA. TO STA.

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

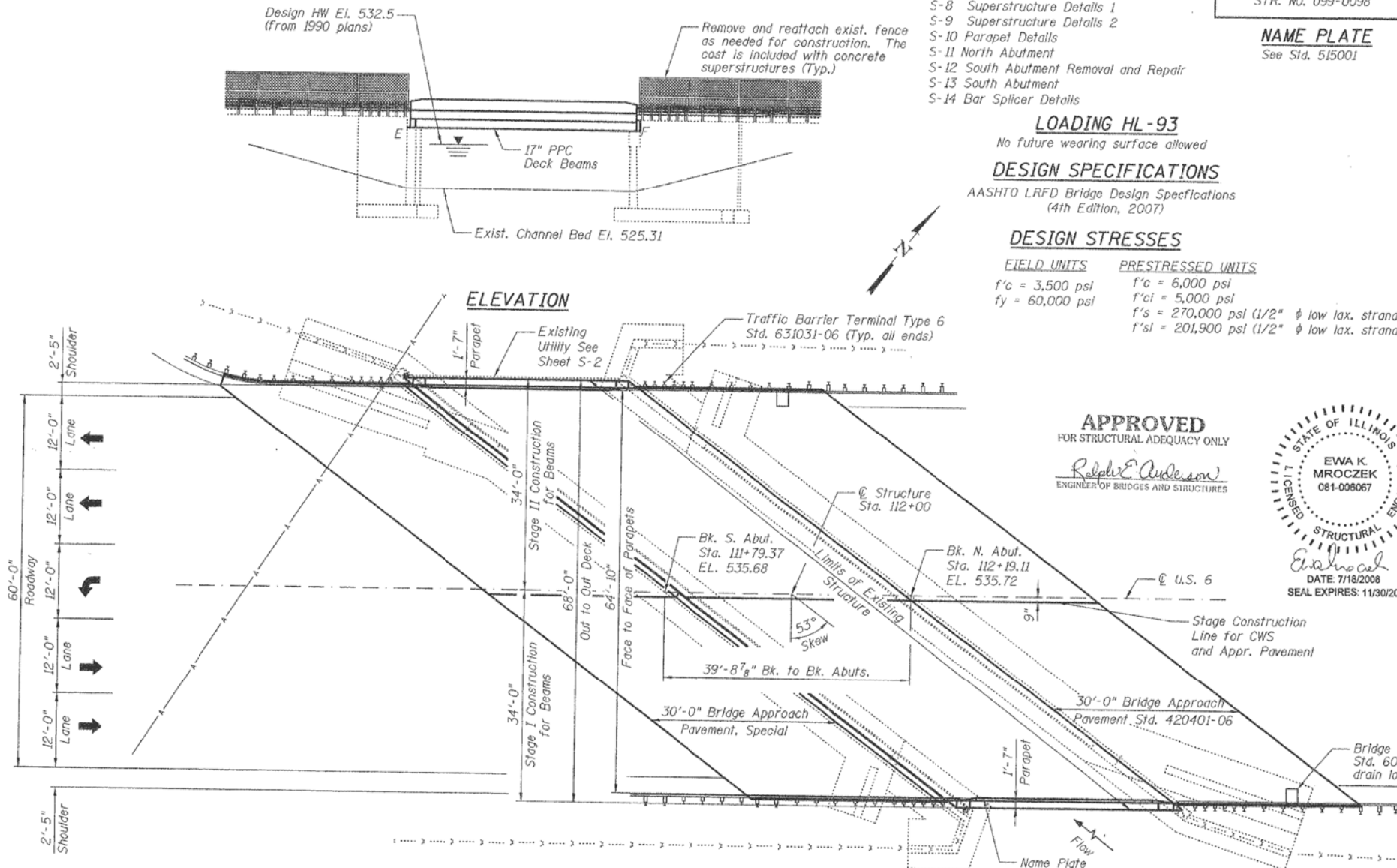
ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu. Yd.	6.1
Concrete Superstructure	Cu. Yd.	15.9
Bridge Deck Grooving	Sq. Yd.	263
Protective Coat	Sq. Yd.	321
Concrete Wearing Surface 5"	Sq. Yd.	300
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,468
Reinforcement 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

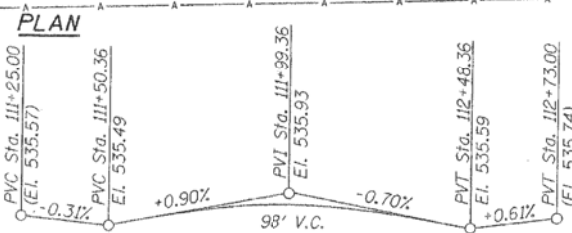
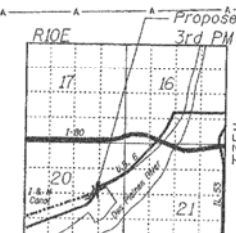
STA. 112+00
S.N. 099-0098

SHEET NO. S-1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-14 SHEETS	0318	DB-1-R-B	WILL	40	23
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60D88	



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

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



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

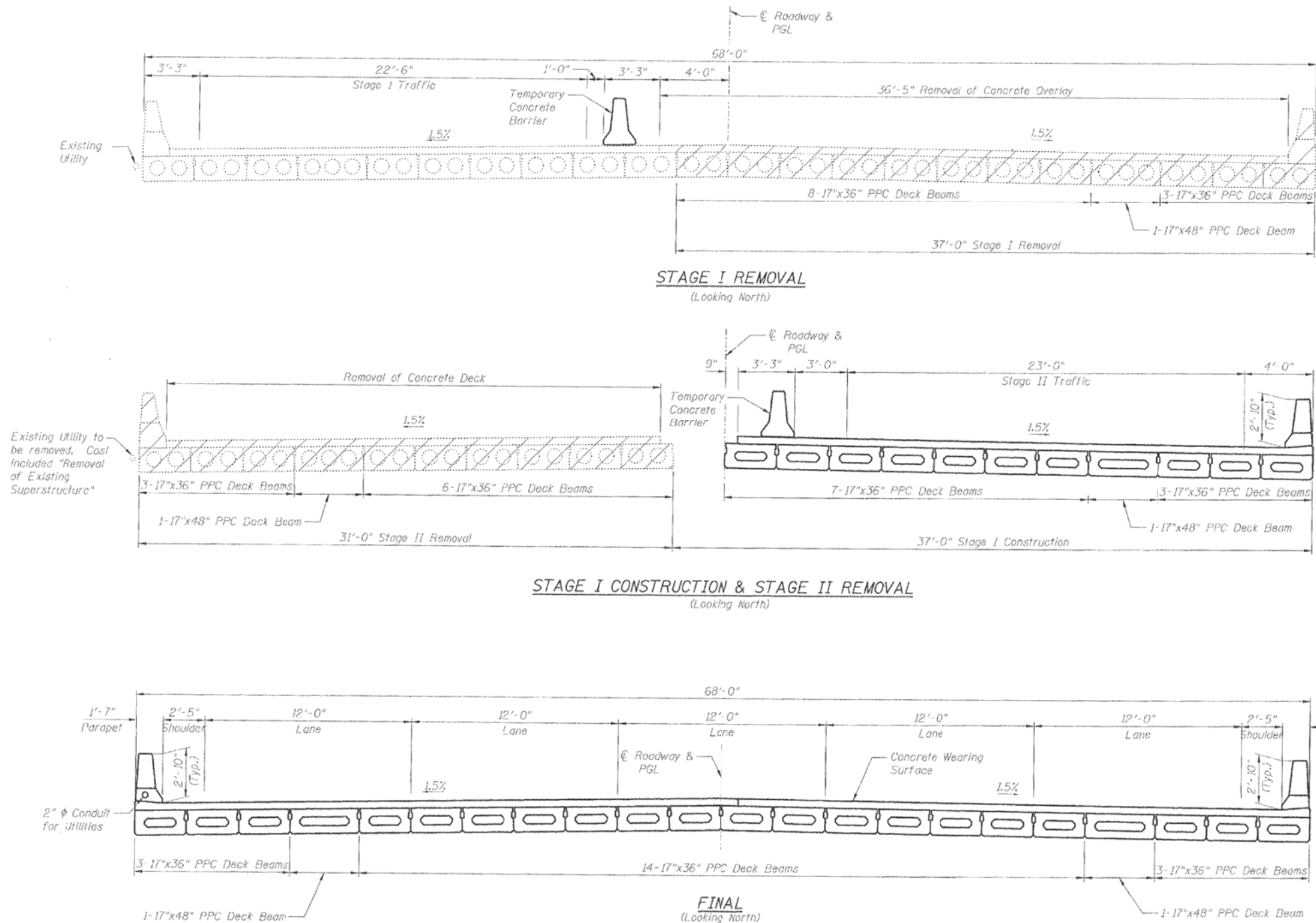
GENERAL PLAN SN: 099-0098

SCALE: SHEET OF SHEETS STA. TO STA.

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

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PLOT SCALE = 100,000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/30/2019	CHECKED -	REVISED -
	DATE -	REVISED -

FOR INFORMATION ONLY

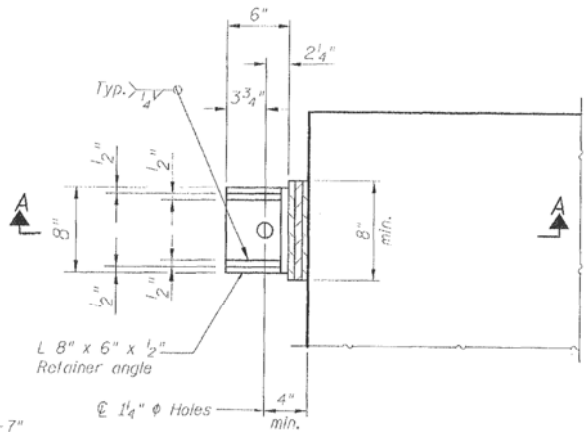
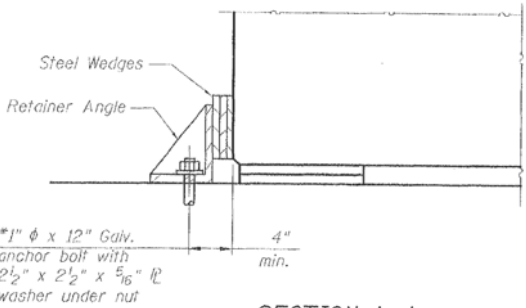
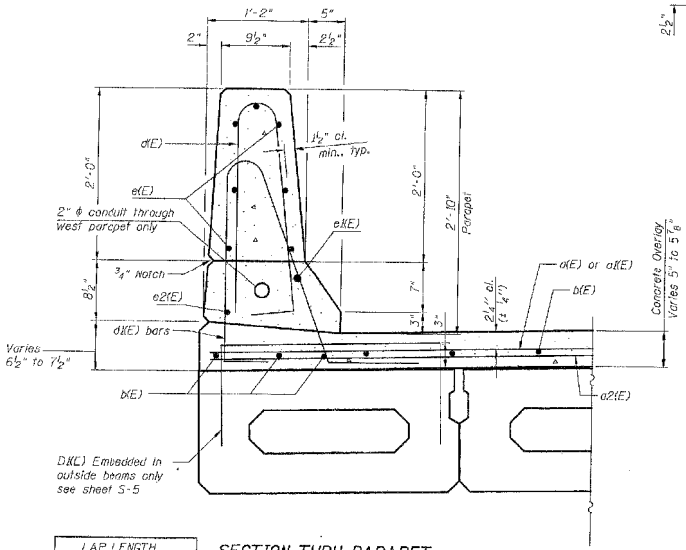


LEGEND:

Removal of Existing Superstructure

NOTES:

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



TEMPORARY RETAINER ANGLE

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

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PROJECT: 111419-0000

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

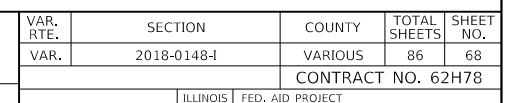
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SN: 099-0098

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CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	



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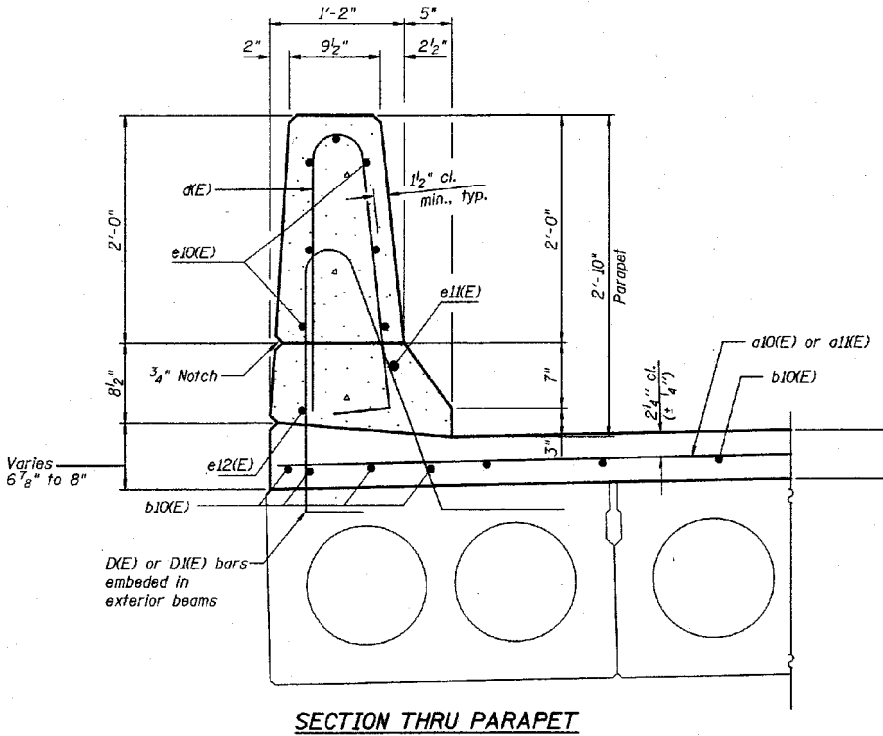
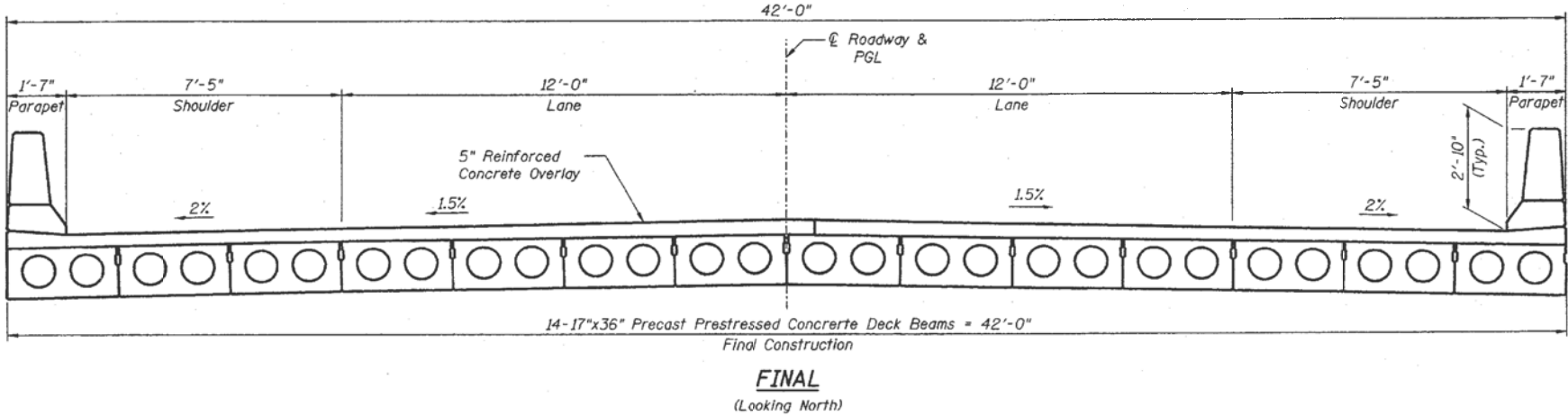
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION SN: 099-0118					VAR. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
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					CONTRACT NO. 62H78					
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.					
					ILLINOIS		FED. AID PROJECT			

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CONTRACT NO. 62H78				
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY



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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: 099-0119

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	71
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

BENCH MARK:

Chisled "L" on top of Northwest Wingwall, Elev. 675.14

EXISTING STRUCTURE:

S.N. 099-0122, was originally built in 1968 as F.A. Route 45, Section 17B-1. In 2002 the Structure was repaired, at that time the Bituminous Concrete Surface and 12 of 15 P.P.C. Deck Beams were removed and replaced. The Existing single span structure consists of Precast Prestressed Concrete Deck Beams supported by closed abutments. Dimensions are 38'-3" bk. to bk. Abutments and 46'-0" out to out with a 35° Skew.

PROPOSED IMPROVEMENT:

During Stage I Construction, the existing Hot-Mix Asphalt Surface on the West half of the Bridge shall be removed. The existing West Concrete Parapet shall be removed. Precast Prestressed Concrete Deck Beam No's. 1 & 6 shall be removed and replaced with new Beams. A new 5" (Min.) Reinforced Concrete Overlay shall be placed utilizing the existing Alignment and Profile. A new Reinforced Concrete Parapet on the West end of the Deck shall be Constructed.

During Stage II Construction, the existing Hot-Mix Asphalt Surface on the East half of the Bridge shall be removed. Portions of the existing East Concrete Parapet shall be removed. Precast Prestressed Concrete Deck Beam No. 10 shall be removed and replaced with a new Beam. A new 5" (Min.) Reinforced Concrete Overlay shall be placed utilizing the existing Alignment and Profile. The East Parapet shall be Reconstructed.

Perform Substructure Repairs

Salvage: None

LOADING HS20-44

No Future Wearing Surface will be allowed

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

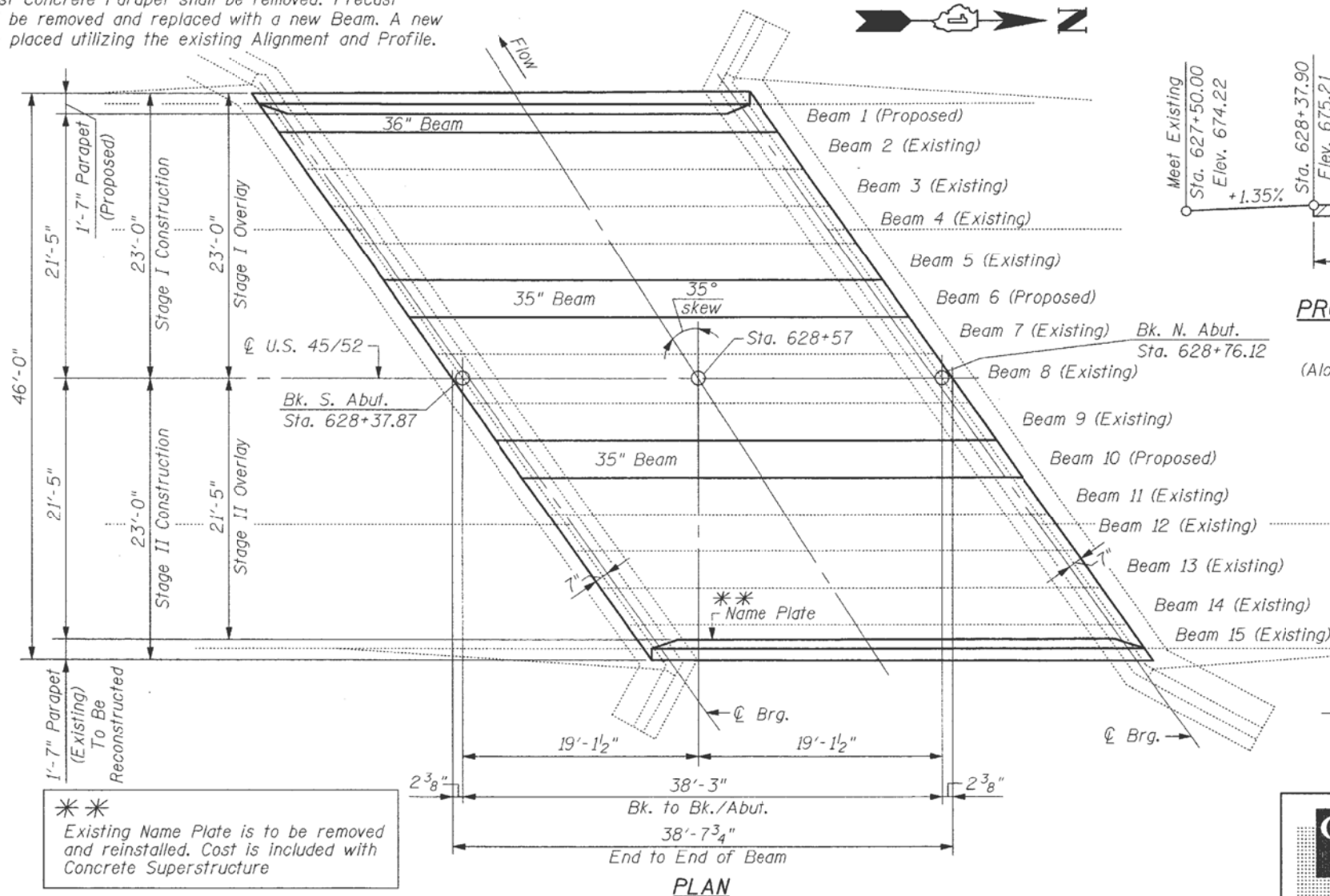
BEAM NO'S. 1, 6 & 10 (PROPOSED)

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ Low Relax Strands)
 $f_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ Low Relax Strands)

WATERWAY INFORMATION

(AS SHOWN IN 1967 PLANS)

Drainage Area 1,100 acres
Character Level & Rolling, Sand, Loam = 110 Sq. Ft.
Required Opening 50 yr flood
Present Opening 60 Sq. Ft.
Proposed Opening 10 Sq. Ft.



**
Existing Name Plate is to be removed and reinstalled. Cost is included with Concrete Superstructure

Proposed Traffic Barrier Terminal
Std. 63103i - Type 6 (Typ.)

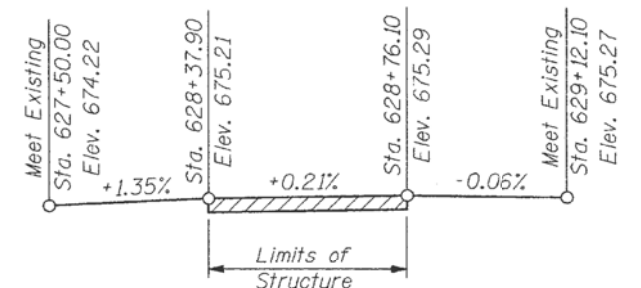
*
Classification Line
Elev. 670.25

ELEVATION

*
As shown in 1967 Plans

INDEX OF SHEETS

- S1 GENERAL PLAN & ELEVATION
- S2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- S3 DECK CROSS SECTIONS
- S4 REINFORCEMENT PLAN
- S5 WEST PARAPET ELEVATION & DETAILS
- S6 EAST PARAPET ELEVATION & DETAILS
- S7 P.P.C. DECK BEAM DETAILS-I
- S8 P.P.C. DECK BEAM DETAILS-II
- S9 ABUTMENT REPAIRS
- S10 BAR SPLICER ASSEMBLY DETAILS
- S11 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION



PROFILE GRADE

U.S. 45/52

(Along $\angle$ of Roadway)



Bh. Shah N. Shah
BHADRESH N. SHAH 07/07/08
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.elevaht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION U.S. 45 / 52 OVER SMALL STREAM S.N. 099-0122	F.A.P. RTE. 330	SECTION 17 B-1-I-1	COUNTY WILL	TOTAL SHEETS 29	SHEET NO. 13	CONTRACT NO. 60668
PLOT SCALE = 50.0000' / IN.	CHECKED - B.N.S. / J.C.N.	DATE - JULY 7, 2008	REVISED -	SCALE:	SHEET NO. S1 OF S11 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

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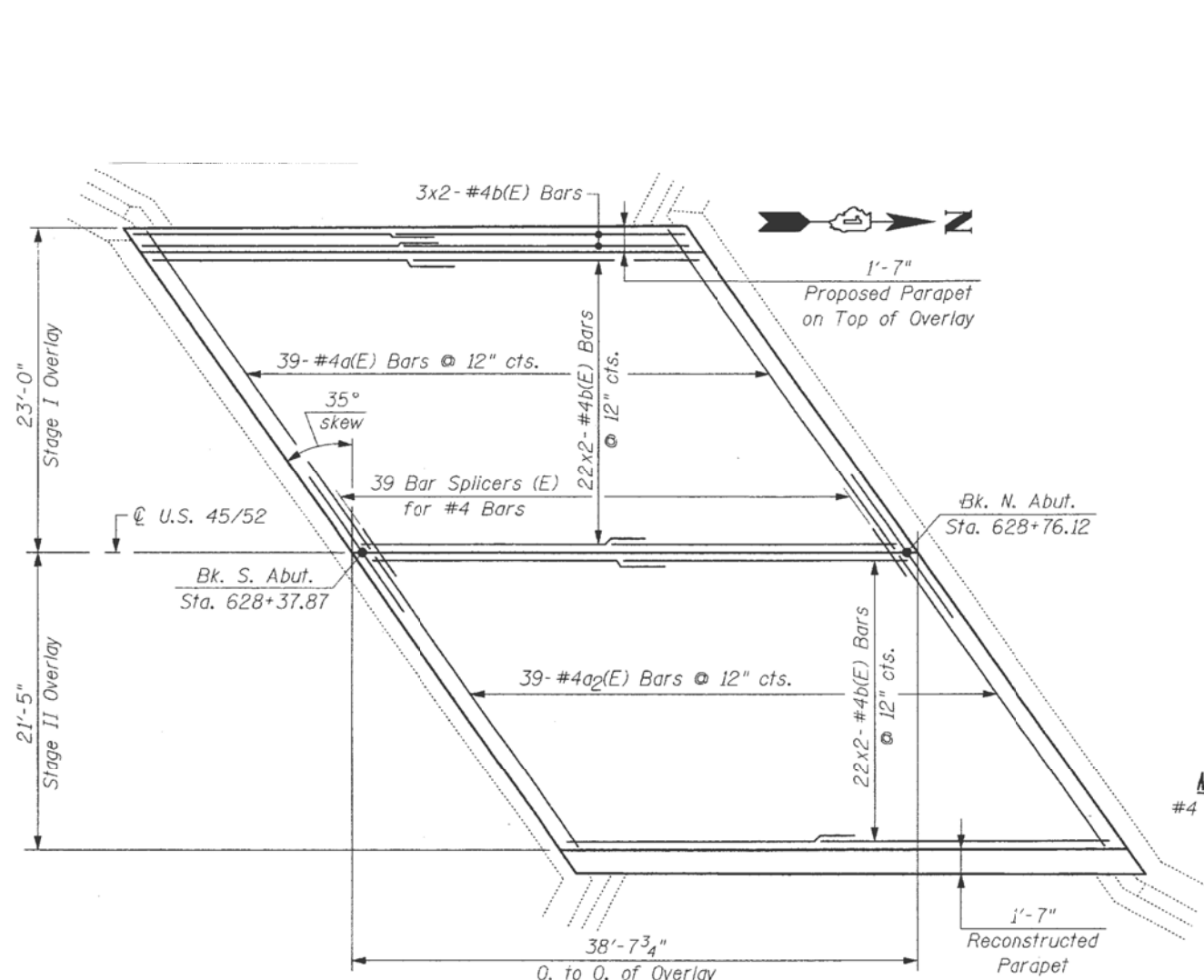
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 099-0122

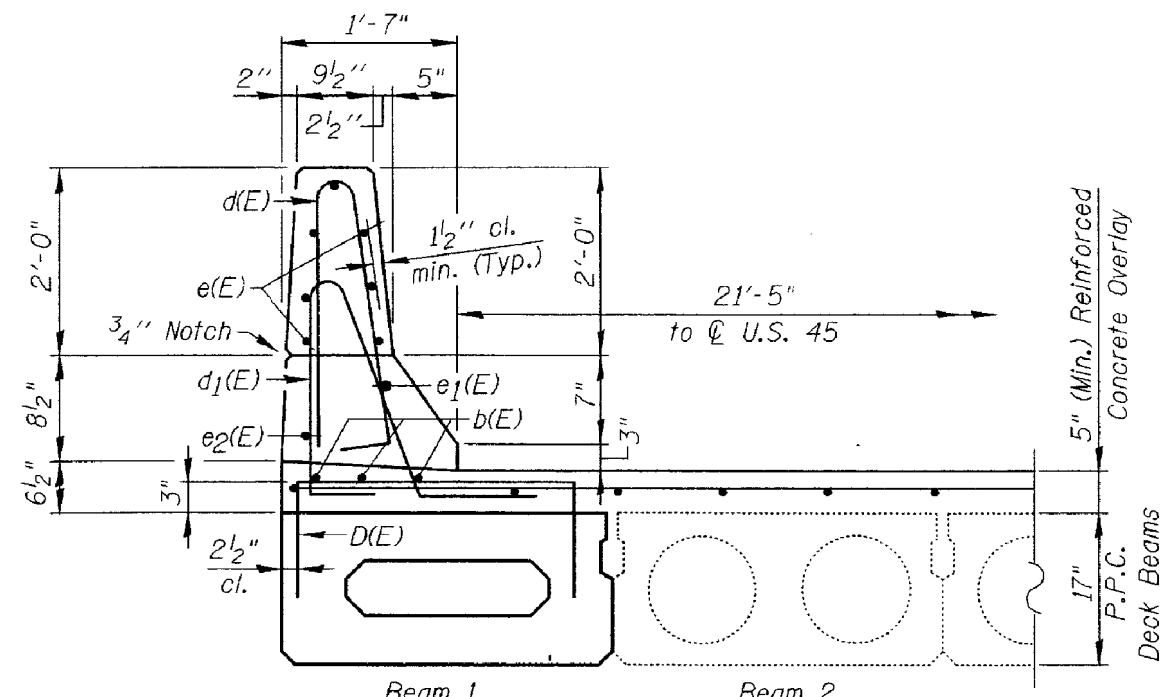
SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	72
				CONTRACT NO. 62H78
		ILLINOIS	FED. AID PROJECT	

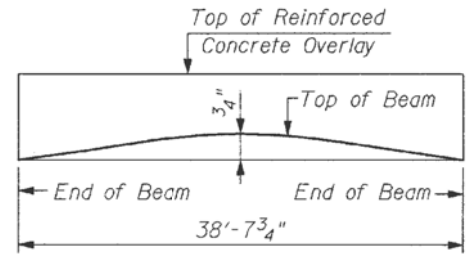
FOR INFORMATION ONLY



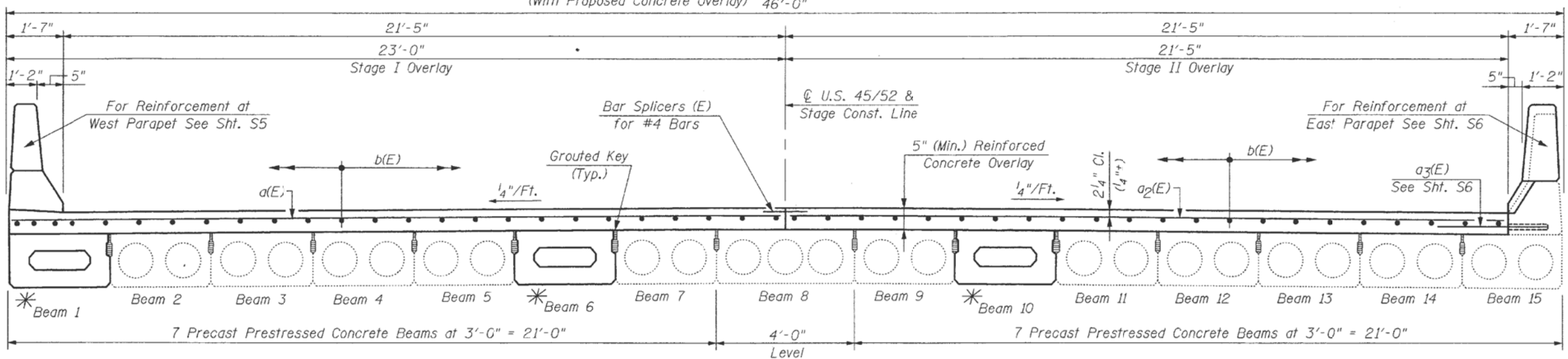
REINFORCEMENT PLAN
(With Proposed Concrete Overlay) 46'-0"



SECTION THRU PARAPET



REINFORCED CONCRETE WEARING SURFACE PROFILE



PROPOSED DECK CROSS SECTION
(Looking North)

* Proposed Precast Prestressed
Concrete Deck Beams (17" Depth)

MODEL Default
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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: 099-0122

SCALE: SHEET OF SHEETS STA. TO STA.

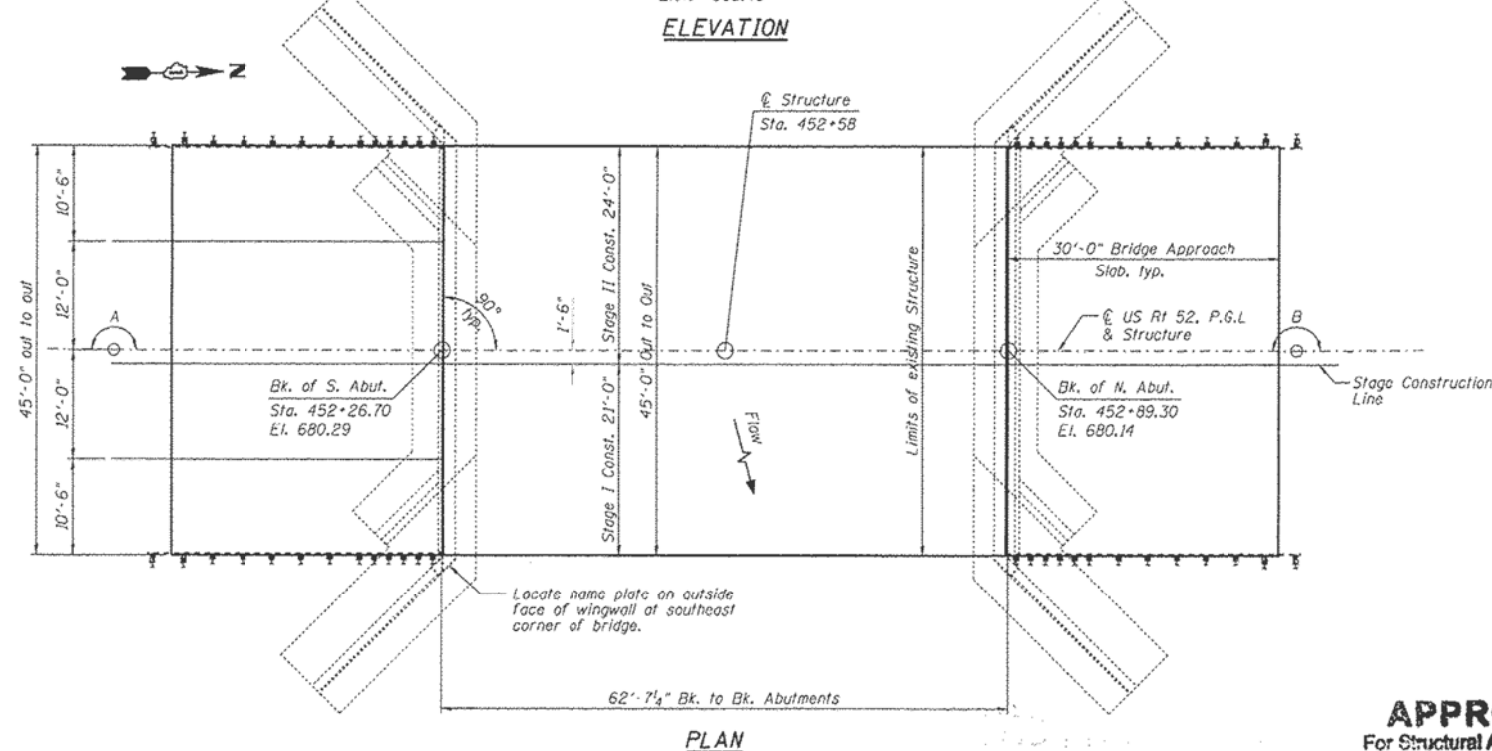
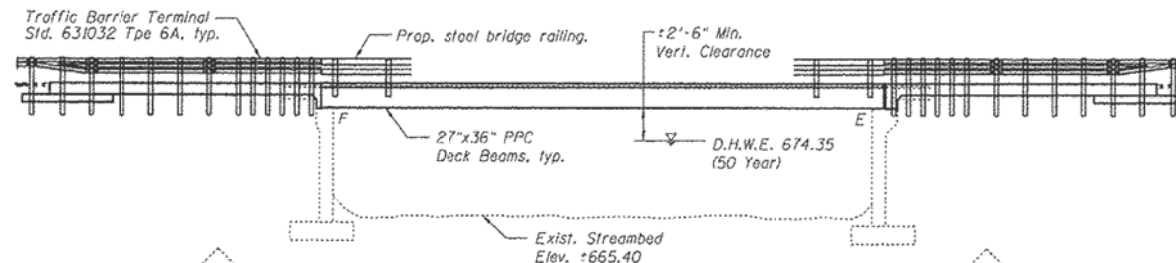
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VAR.	2018-0148-1	VARIOUS	86	73
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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

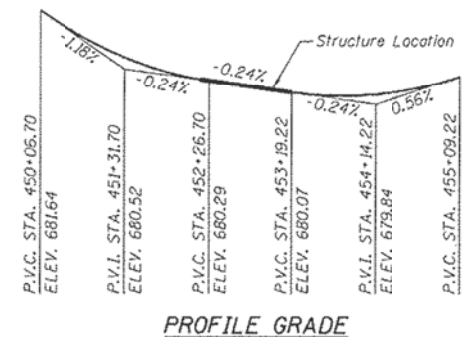


NOTE:
The roadway on the bridge is built on a straight chord between kinks A & B.

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.	Nat. H.W.E. Exist.	Head - Ft. Exist.	Headwater El. Exist.	Prop.		
	10	1510	432	432	673.37	0.07	0.07	673.44	673.44
Design	50	2400	492	492	674.35	0.25	0.25	674.60	674.60
Base	100	2960	530	530	674.99	0.44	0.44	675.43	675.43
Overlapping	>500								
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									



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. L.I.C. 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'_c = 5000 psi (Concrete Wearing Surface)
 f_y = 60000 psi (Reinforcement)

FIELD UNITS (EXISTING)

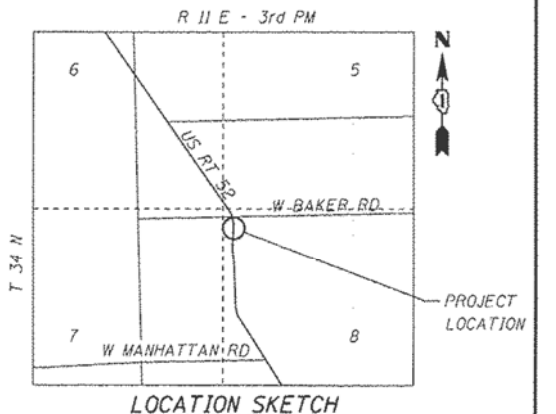
f'_c = 3,500 psi
 f'_c = 5000 psi (Concrete Wearing Surface)

PRECAST PRESTRESSED UNITS

f'_c = 6000 psi
 f'_c = 5000 psi
 f_{pu} = 270,000 psi (1/2" ϕ low lax. strands)
 f_{pb} = 201,960 psi (1/2" ϕ 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

 Arlene Benesch & Company 1500 West St. Suite 222 Naperville, Illinois 60563 630-777-1100 Job No. 12259.00	DESIGNED - SLV	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 099-0130	SHEET NO. 51 OF 516 SHEETS	F.A.P. RTE. 852	SECTION 18-B-4-R-2	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 18	CONTRACT NO. 60N20
	CHECKED - MJM	REVISD -									
	DRAWN - SLV	REVISD -									
	CHECKED - MJM	REVISD -									

USER NAME = diaza	DESIGNED -	REVISD -
	DRAWN -	REVISD -
PLOT SCALE = 100,000' / in.	CHECKED -	REVISD -
PLOT DATE = 1/30/2019	DATE -	REVISD -

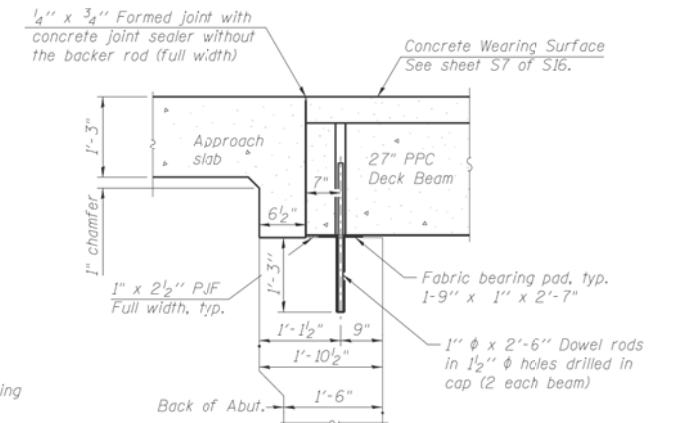
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 099-0130

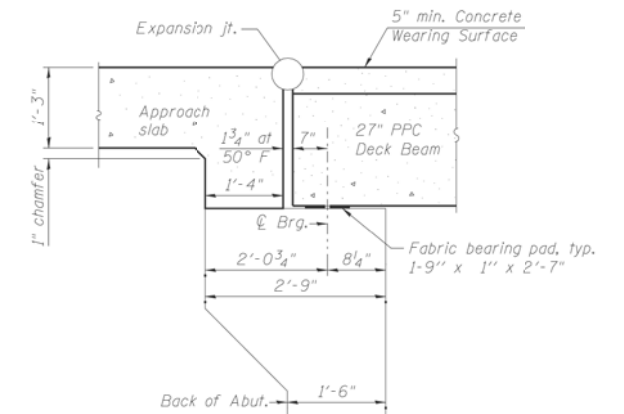
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	74
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw:\\L084EBID\\INTEG, IllInols.gov:PWIDOT\\Documents\\IDOT_Offices\\District_1\\Projects\\D111419\\CADDData\\Design\\D111419-erepar.dgn



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.



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

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.

Diagram of a reinforced concrete beam cross-section. The beam has a total width of 24 inches and a total height of 20 inches. The effective depth is 18 inches (20 inches minus 2 inches of concrete cover). The diagram shows a top reinforcement bar with a diameter of 4 inches and a bottom reinforcement bar with a diameter of 6 inches. The top bar is labeled "20'-2" $a(E)$ " and the bottom bar is labeled "24'-2" $a_1(E)$ ". Below the diagram, the text "BAR $a(E)$ & $a_1(E)$ " is written.

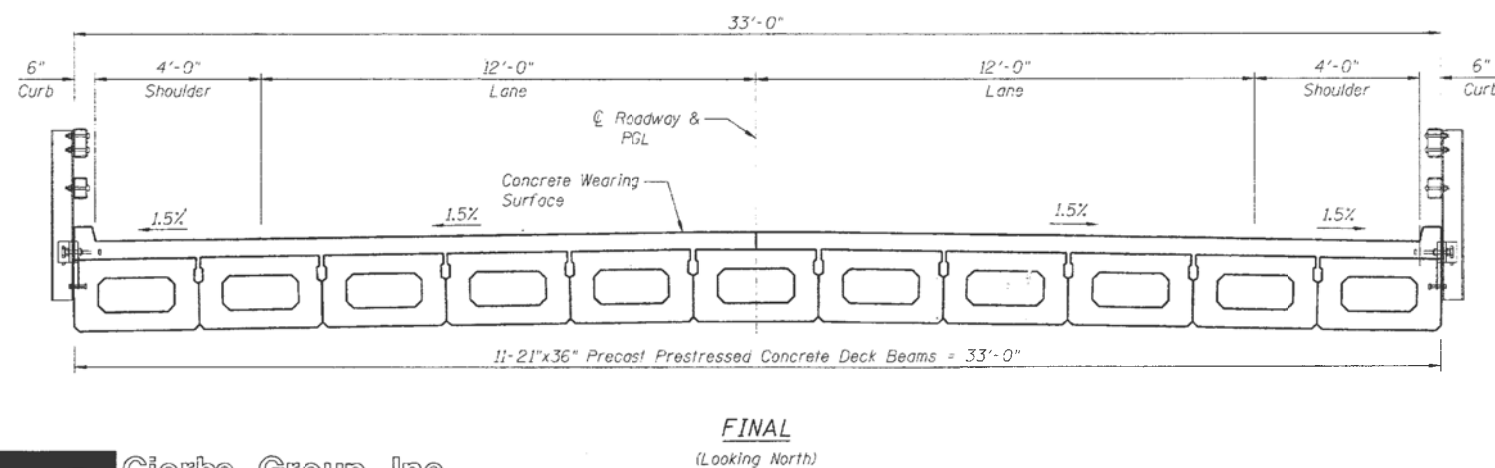
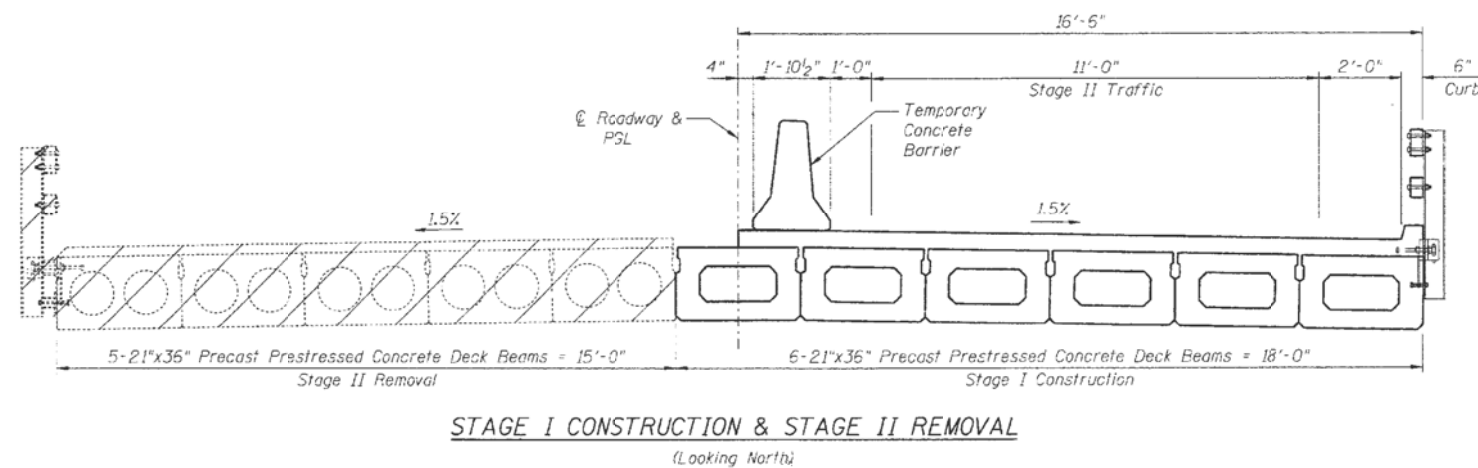
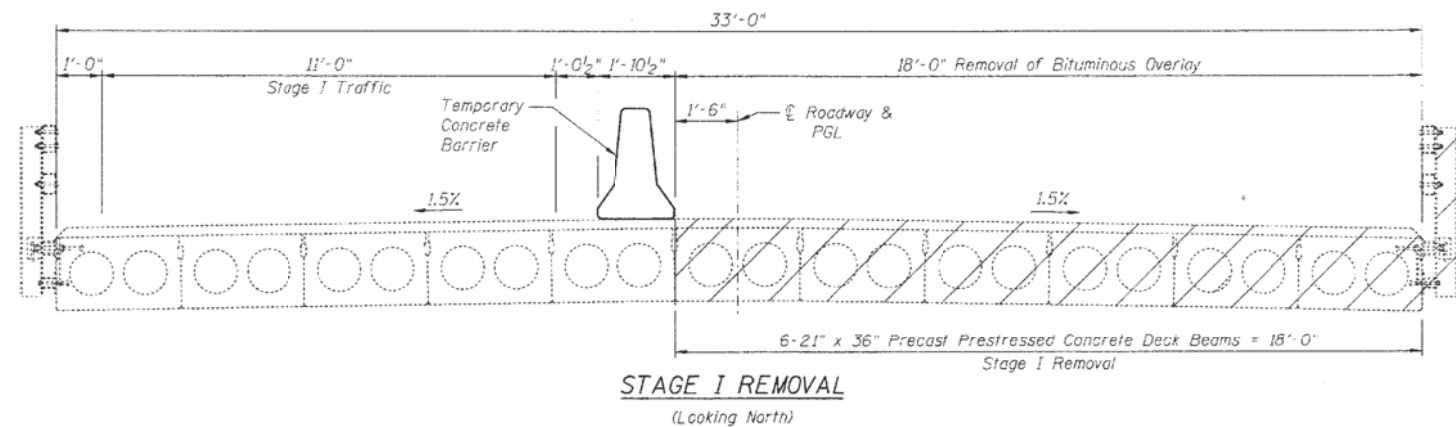
Bar	No.	Size	Length	Shape
a(E)	63	#4	20'-8"	
a ₁ (E)	63	#4	24'-8"	
b(E)	138	#4	22'-5"	
Concrete Wearing Surface 5"			Sq. Yd.	312
Reinforcement Bars, Epoxy Coated			Pound	3970

	USER NAME = diaza	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTION SN: 099-0130				VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -		VAR.	2018-0148-4	VARIOUS	86	75				
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -	CONTRACT NO. 62H78										
PLOT DATE = 1/30/2019	DATE	REVISED -	SCALE:		SHEET	OF	SHEETS	STA.	TO STA.				

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	76
		CONTRACT NO. 62H78		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

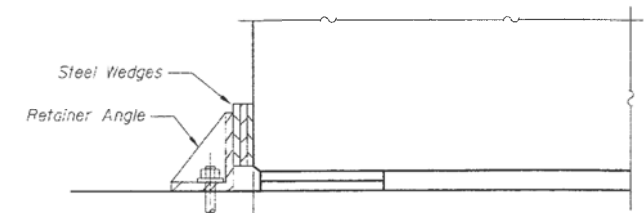
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



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

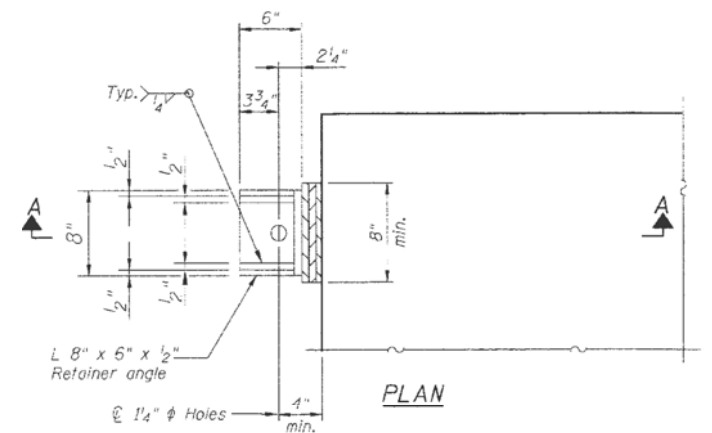


Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com



*1" ϕ x 12" Galv.
anchor bolt with
2 1/2" x 2 1/2" x 5/8" 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. 60D87					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

USER NAME = diaza	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	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

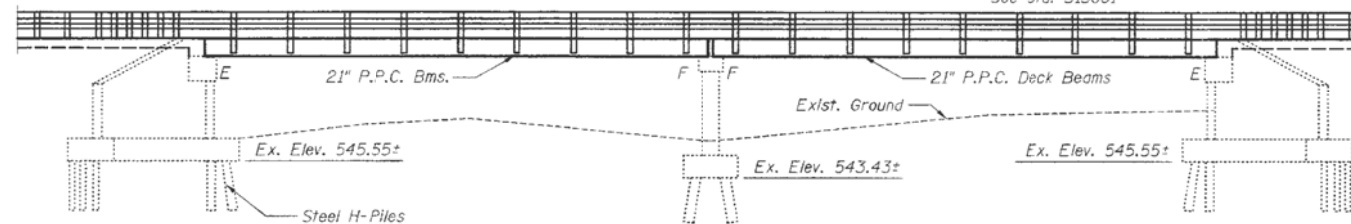
1. Total Superstructure Removal and Replacement
2. Substructure Repairs
3. Approach Slab Removal and Replacement

INDEX OF SHEETS

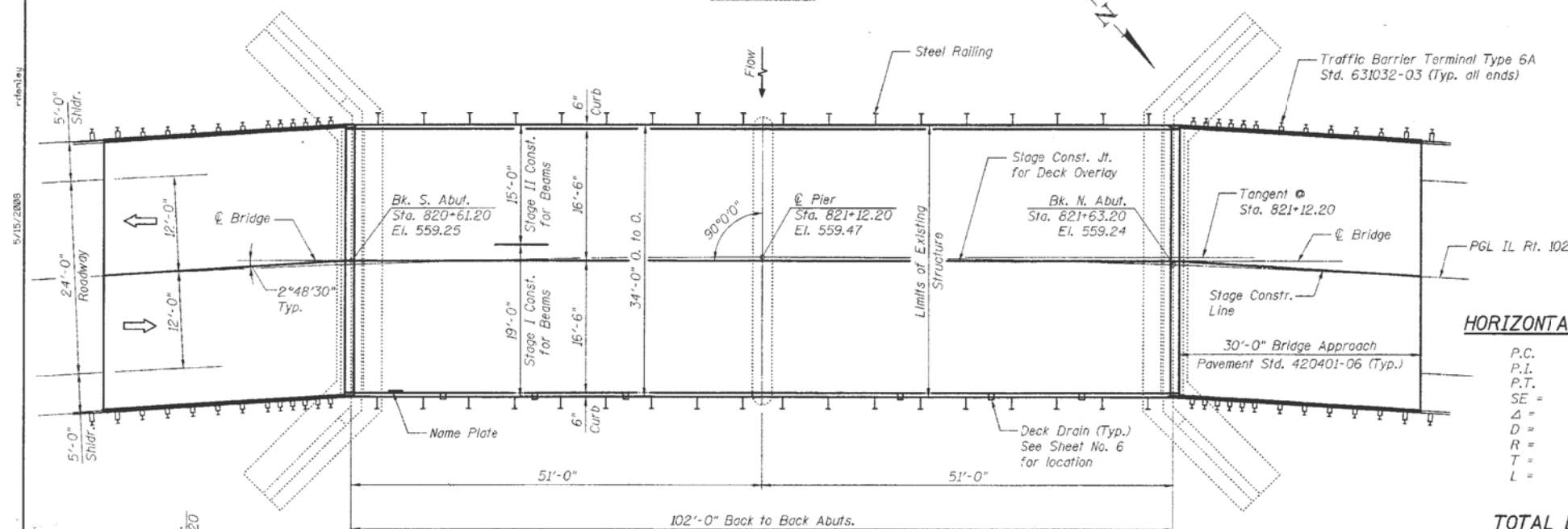
1. General Plan & Elevation
2. Stage Construction Details
3. Temporary Concrete Barrier
4. Beam Details (21"x36") Details No. 1
5. Beam Details (21"x36") Details No. 2
6. Beam Details (21"x48") Details No. 1
7. Beam Details (21"x48") Details No. 2
8. Superstructure Details No. 1
9. Superstructure Details 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



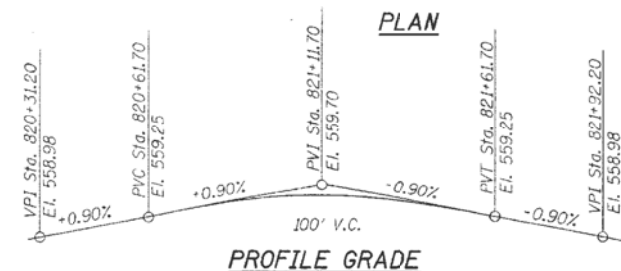
ELEVATION



OFFSET SKETCH

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

PLAN



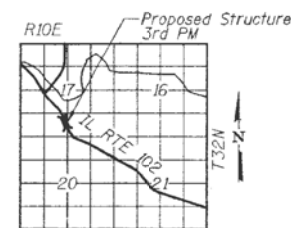
PROFILE GRADE



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Tel. 773.775.4009 Fax 773.775.4014 Email chicago@clorba.com

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson (P.E.)
ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

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

SEISMIC DATA

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

HORIZONTAL CURVE DATA

P.C.	818+02.03
P.L.	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 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

GENERAL PLAN
SN: 099-0169

SCALE: SHEET OF SHEETS STA. TO STA.

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	78
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

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	DRAWN -	REVISED -
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

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* 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.



CROSS SECTION
SN: 099-0169

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	79
		CONTRACT NO. 62H78		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Benchmark: Pipe in NW Shoulder Sta. 784+74.54 Offset 13ft Lt El. 554.29

Existing Structure: SN 099-0172, Sta. 784+13 built in 1927 as S.B.I. RT. 113 Section III.
Existing R.C. Deck Girder was removed and replaced in 1973 with a single span 21" x 36" PPC Deck Beam Bridge with 4" concrete wearing surface on closed abutments on spread footing. Abutments were widened to accommodate the new Superstructure. The structure measures 43'-0" Bk. to Bk. Abutments and 33'-0" Out to Out Deck. The bridge was rehabilitated in 2000 with two exterior beams replaced. 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

INDEX OF SHEETS

- S-1 General Plan & Elevation
- S-2 Stage Construction Details
- S-3 Temporary Concrete Barrier
- S-4 21"x36" PCC Deck Beam
- S-5 21"x36" PCC Deck Beam Details
- S-6 Superstructure Details 1
- S-7 Superstructure Details 2
- S-8 Steel Railing, Type SM with Concrete Wearing Surface and Curb
- S-9 East Abutment Repairs
- S-10 East Abutment
- S-11 West Abutment Repairs
- S-12 West Abutment
- S-13 Bar Splicer Details

SCOPE OF WORK

1. Total superstructure removal and replacement.
2. Substructure repairs.
3. Approach slab removal and replacement. See Roadway sheets for details.

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.

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"

Attach new Name Plate to the inside face of steel rail 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.

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.

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)

LOADING HL-93

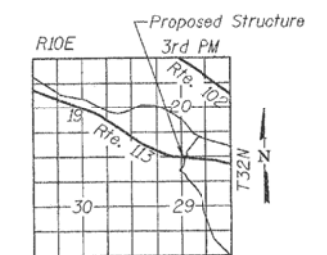
No future wearing surface allowed

DESIGN SPECIFICATIONS

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu. Yd.	4.0
Concrete Structures	Cu. Yd.	5.0
Concrete Superstructure	Cu. Yd.	5
Bridge Deck Grooving	Sq. Yd.	139
Protective Coat	Sq. Yd.	155
Concrete Wearing Surface	Sq. Yd.	155
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,397
Reinforcement Bars, Epoxy Coated	Pound	3,090
Bar Splicers	Each	55
Steel Railing, Type SM	Foot	92
Name Plates	Each	1
Preformed Joint Strip Seal	Foot	33
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	50
Asbestos Bearing Pad Removal	Each	24
* Special Provision		



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

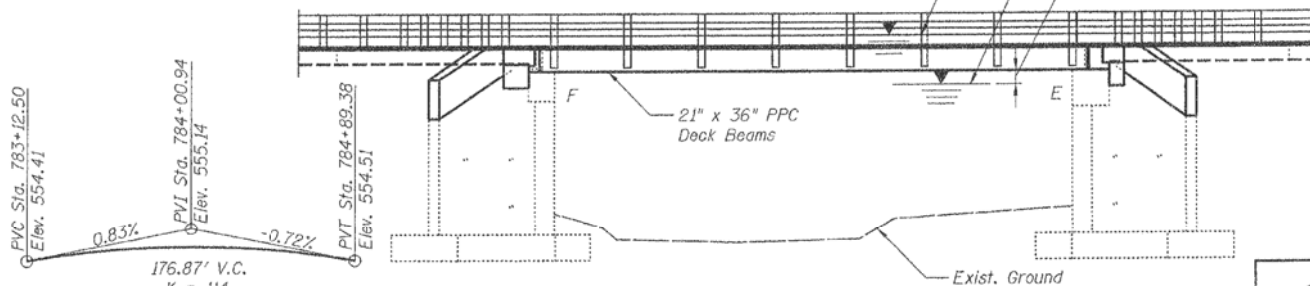
FAS 1317 (IL RTE 113)

OVER TERRY CREEK

STA. 784+13.00

S.N. 099-0172

SHEET NO. S-1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-13 SHEETS	1317	III B-2	WILL	32	16
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 60D86		



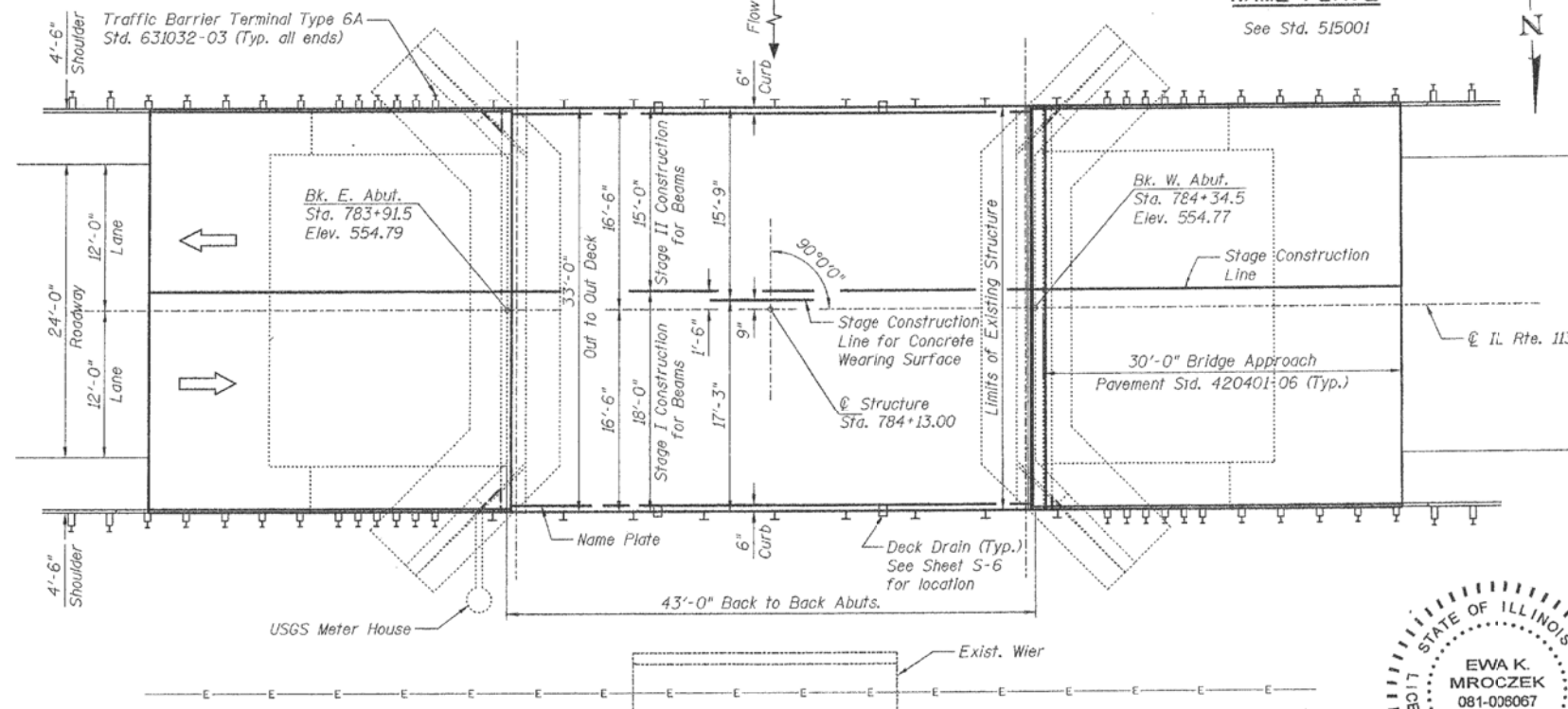
PROPOSED PROFILE

ELEVATION

STATION 784+13.00
REBUILT 20 BY
STATE OF ILLINOIS
IL RT. 113 SEC. III-B-2
LOADING HL 93
STR. NO. 099-0172

NAME PLATE

See Std. 515001



PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Rafael C. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



B. Sauter
E. Mroczek
R. Danley
B. Sauter



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

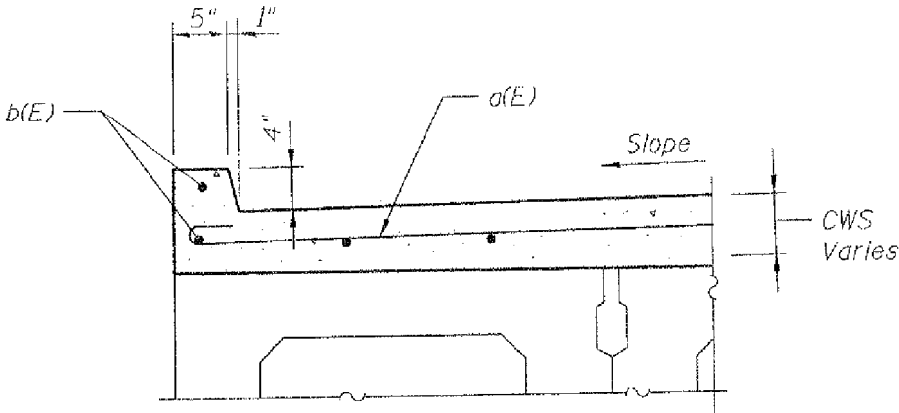
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SN: 099-0172

SCALE: SHEET OF SHEETS STA. TO STA.

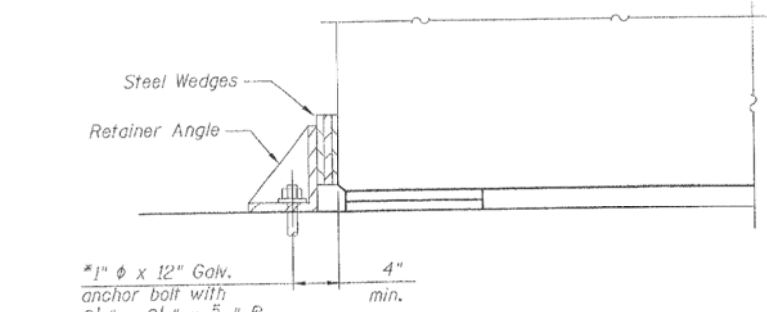
VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-0148-I	VARIOUS	86	80
CONTRACT NO. 62H78				
ILLINOIS FED. AID PROJECT				

USER NAME = diaza	DESIGNED -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

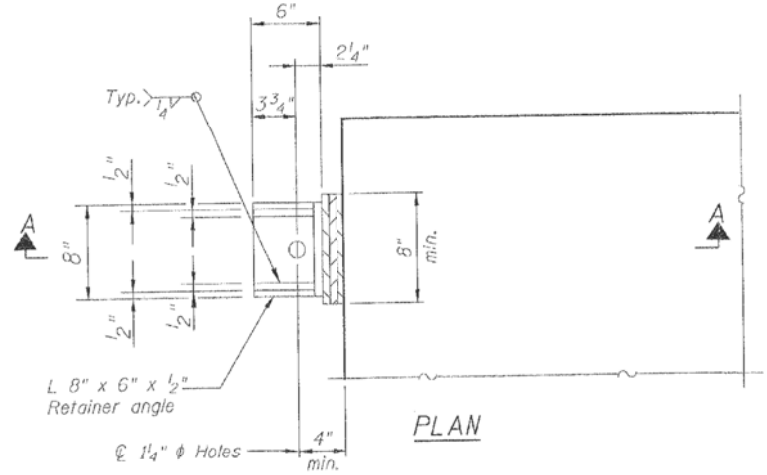
FOR INFORMATION ONLY



SECTION THRU CURB
Curbs shall be poured in the field.



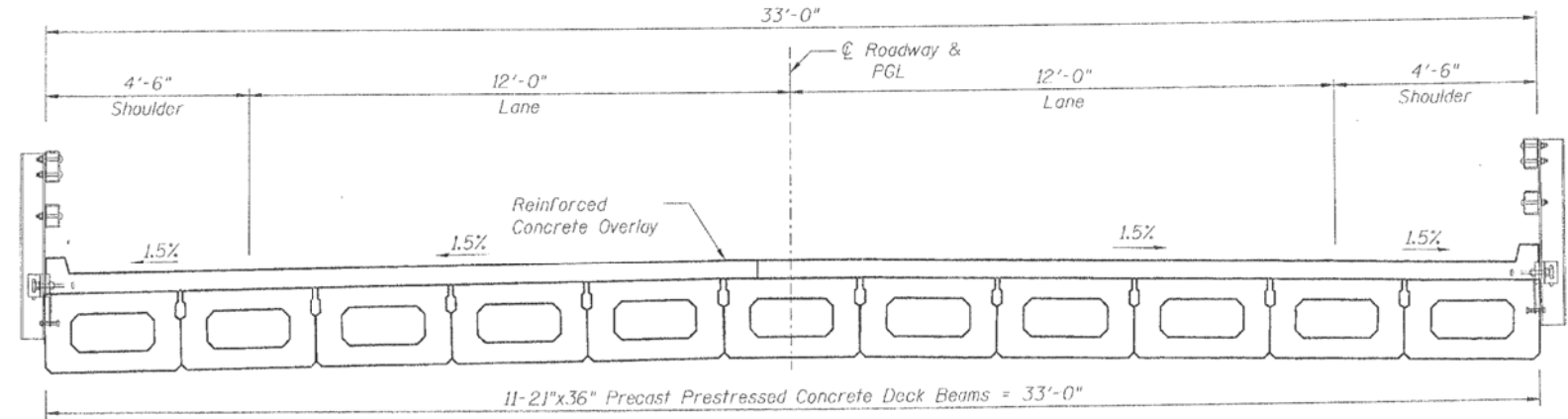
SECTION A-A



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 099-0172

SCALE: SHEET OF SHEETS 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				

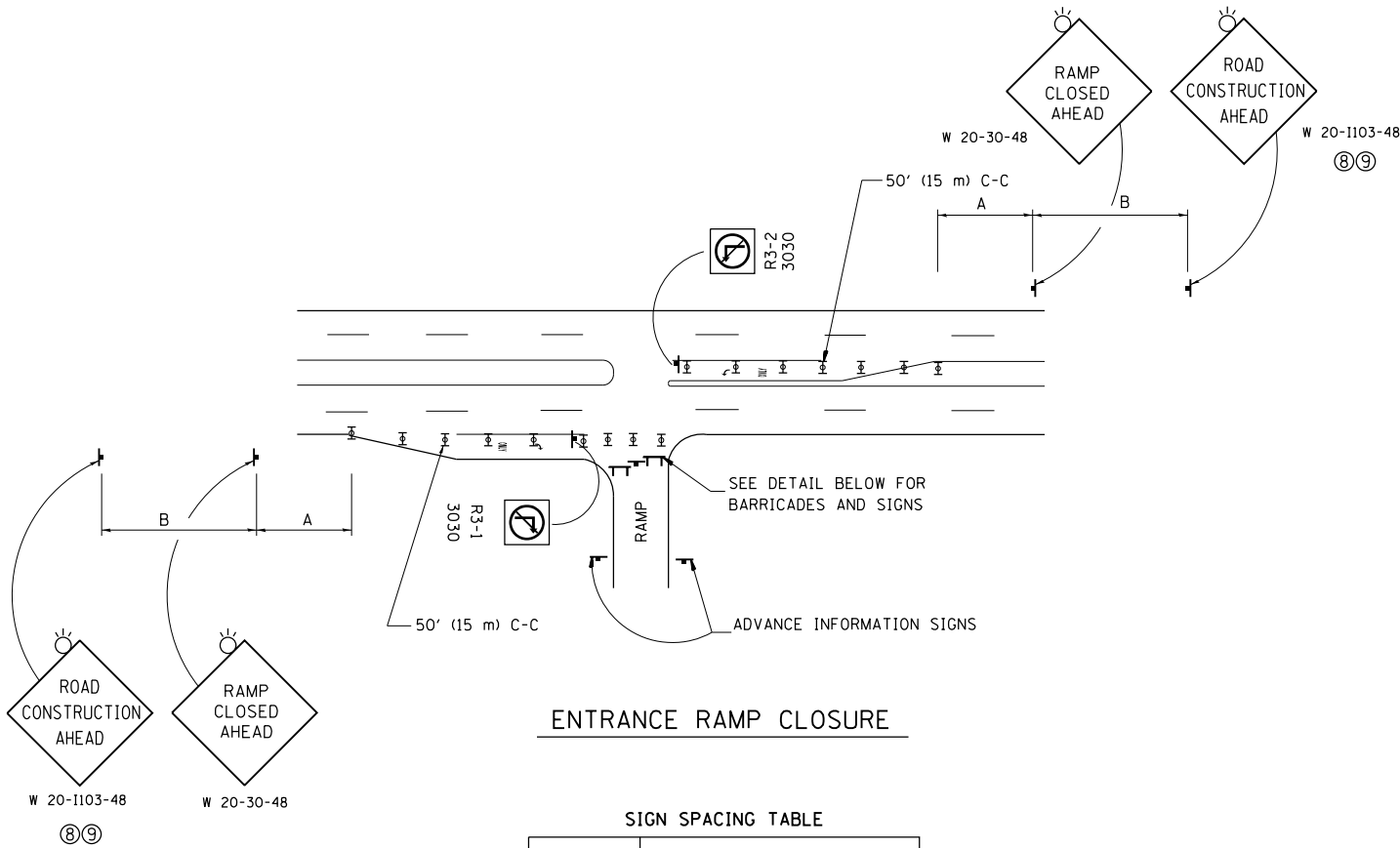
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VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 62H78		
		ILLINOIS FED. AID PROJECT		

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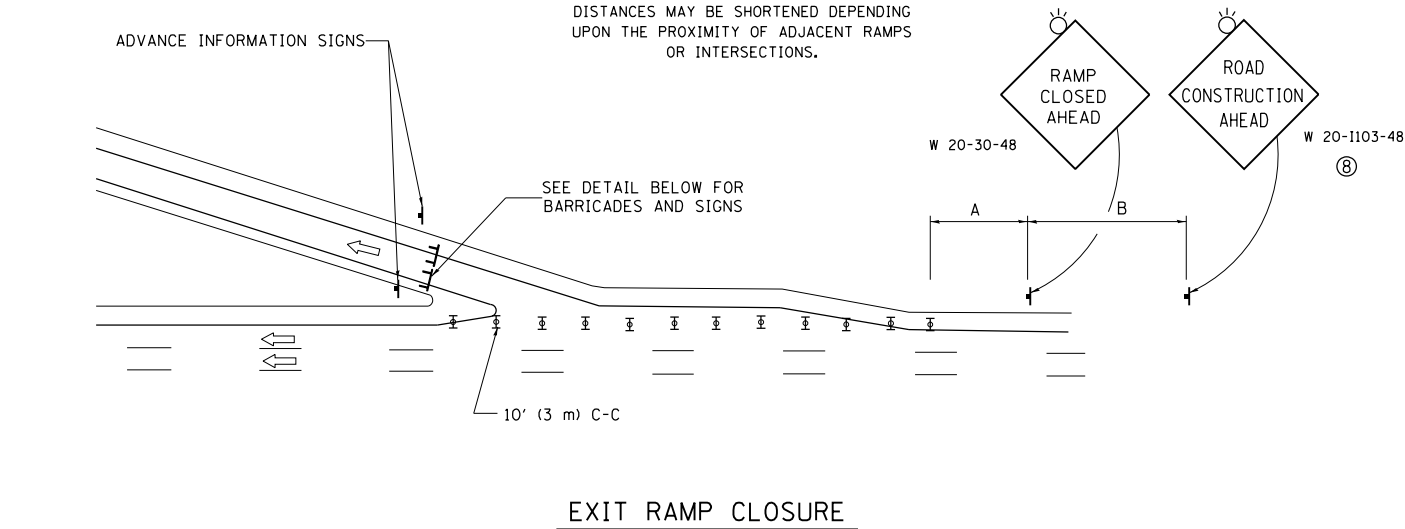
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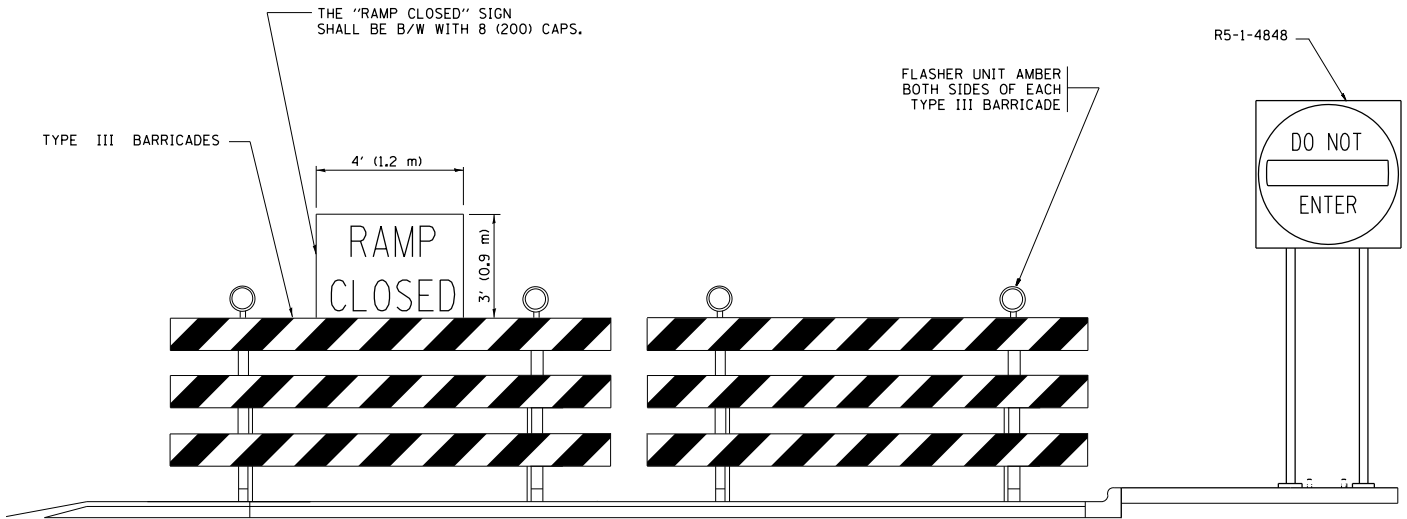


FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

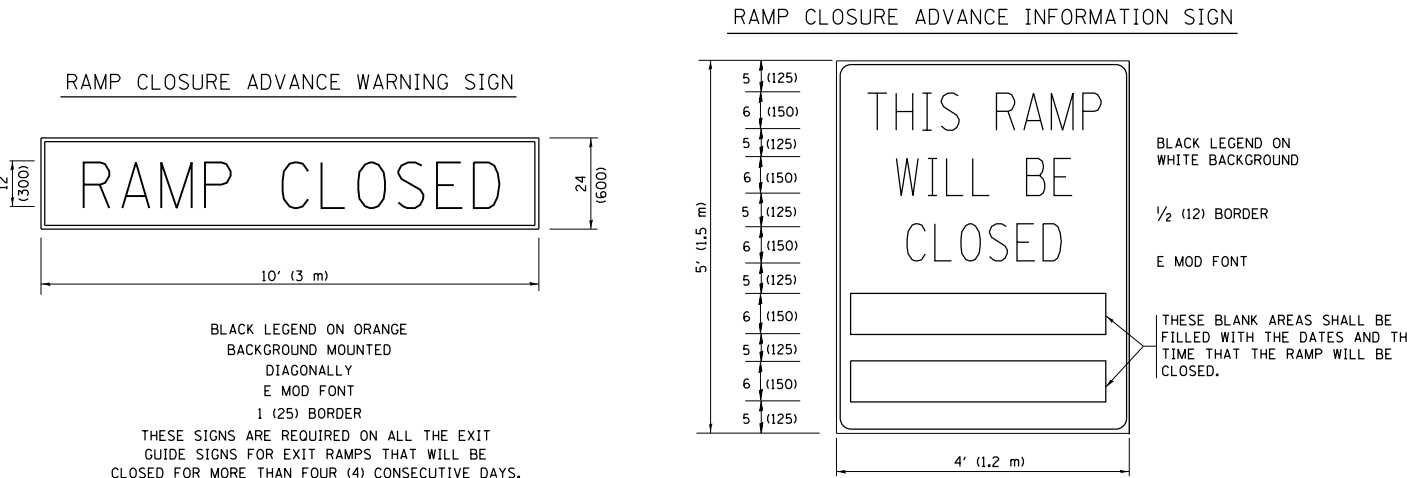
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



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



DETAIL FOR REQUIRED BARRICADES & SIGNS



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.

TURN BAY ENTRANCE AT START
OF LANE CLOSURE TAPER

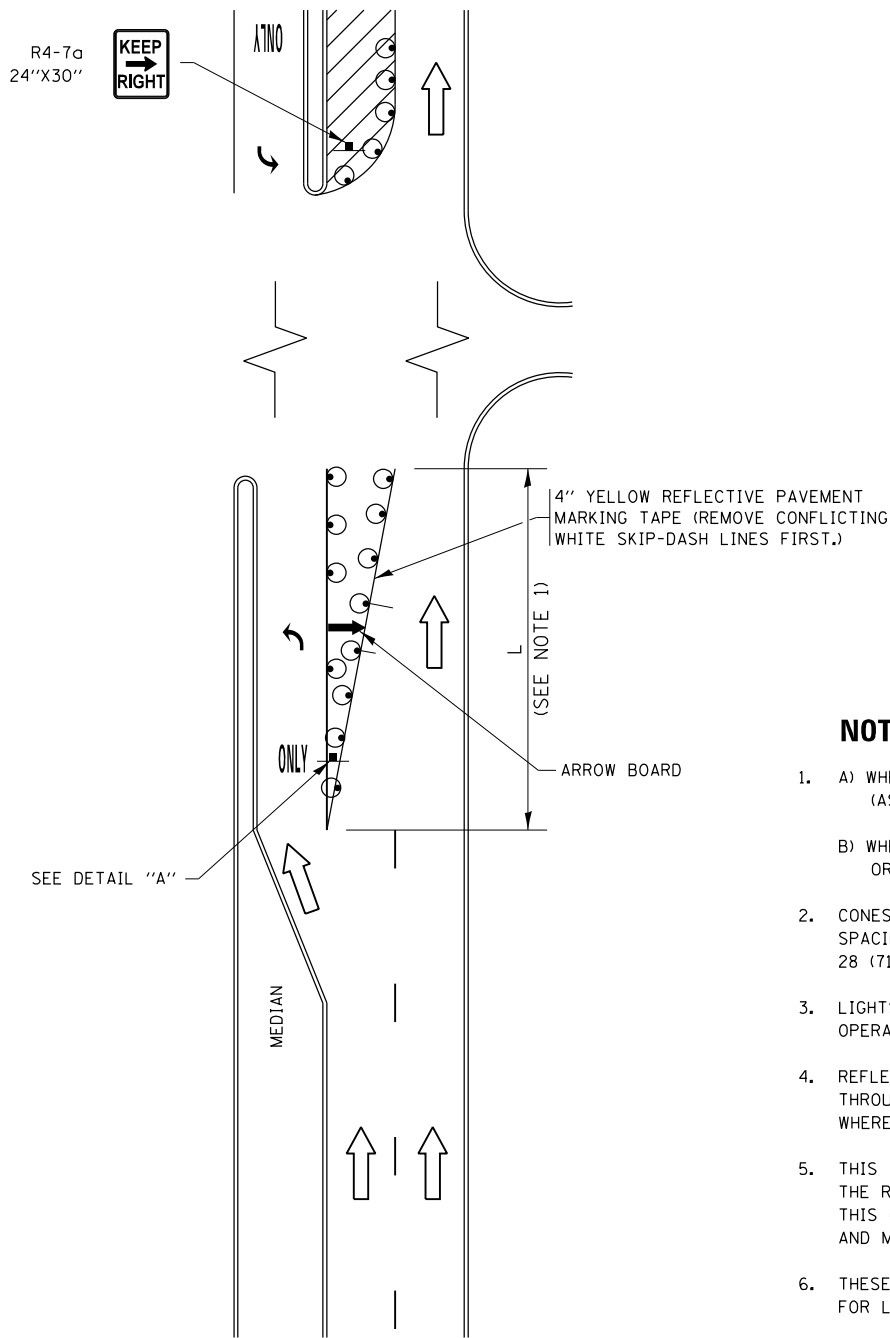
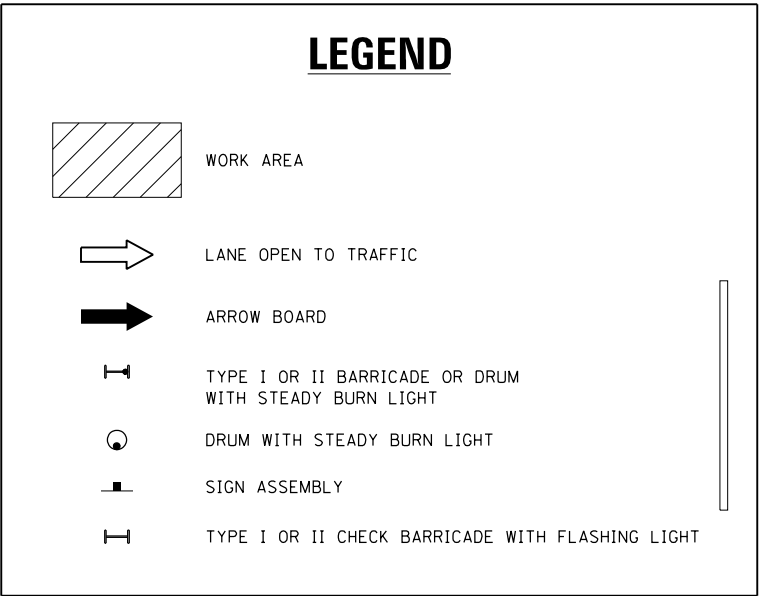


FIGURE 1

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

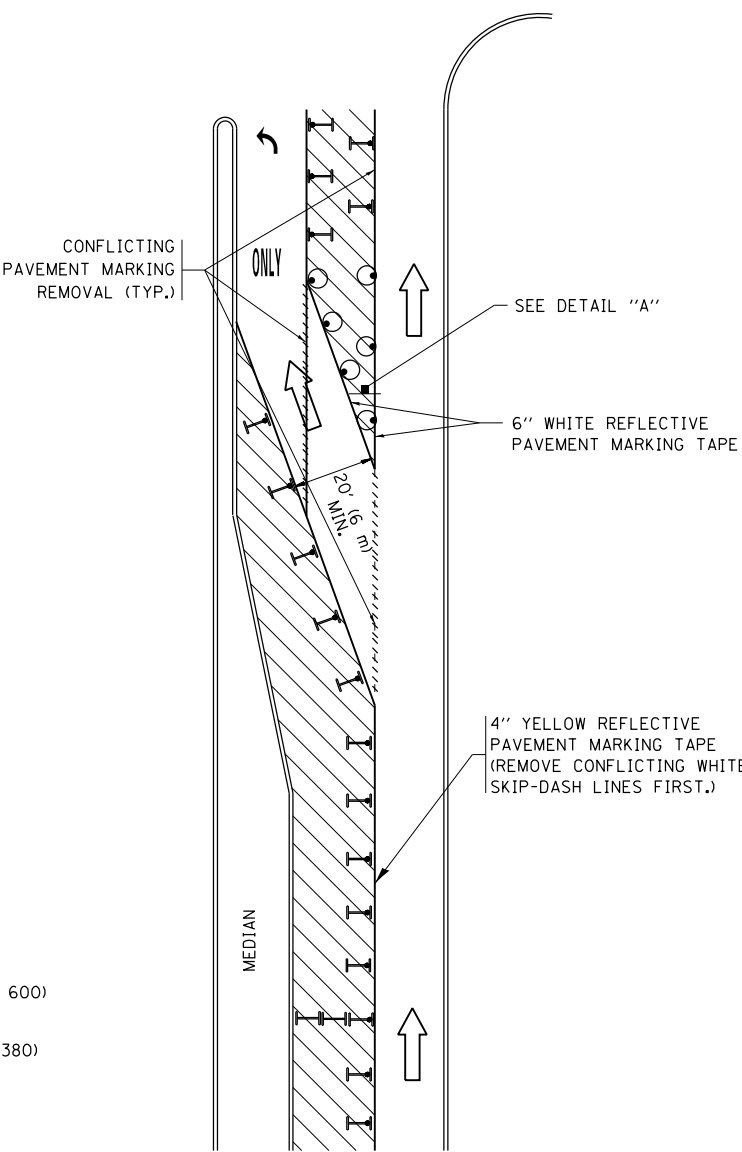
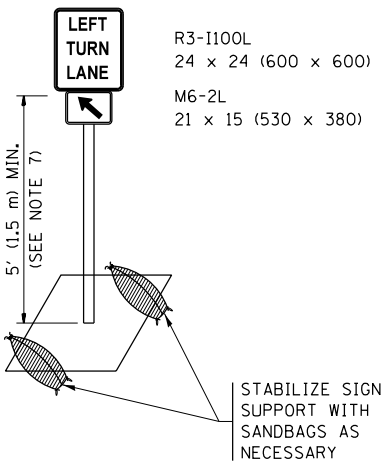


FIGURE 2



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)	SCALE: NONE	SHEET 1	OF 1	SHEETS	STA.	TO STA.	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-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				