

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU 1263 HAZEL AVENUE OVER W. FORK, N. BRANCH CHICAGO RIVER
FAU 2718 WILMOT ROAD OVER W. FORK, N. BRANCH CHICAGO RIVER
BRIDGE REHABILITATION
SECTION 08-00081-00-BR
PROJECT BRM-9003 (051)
JOB C-91-483-08
VILLAGE OF DEERFIELD
LAKE COUNTY

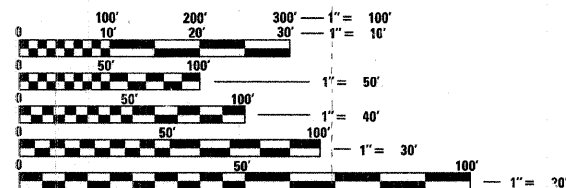
INDEX OF SHEETS

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19	26	HAZEL BRIDGE

TRAFFIC DATA

ADT (2008) = 2300 HAZEL AVE
ADT (2008) = 6200 WILMOT ROAD

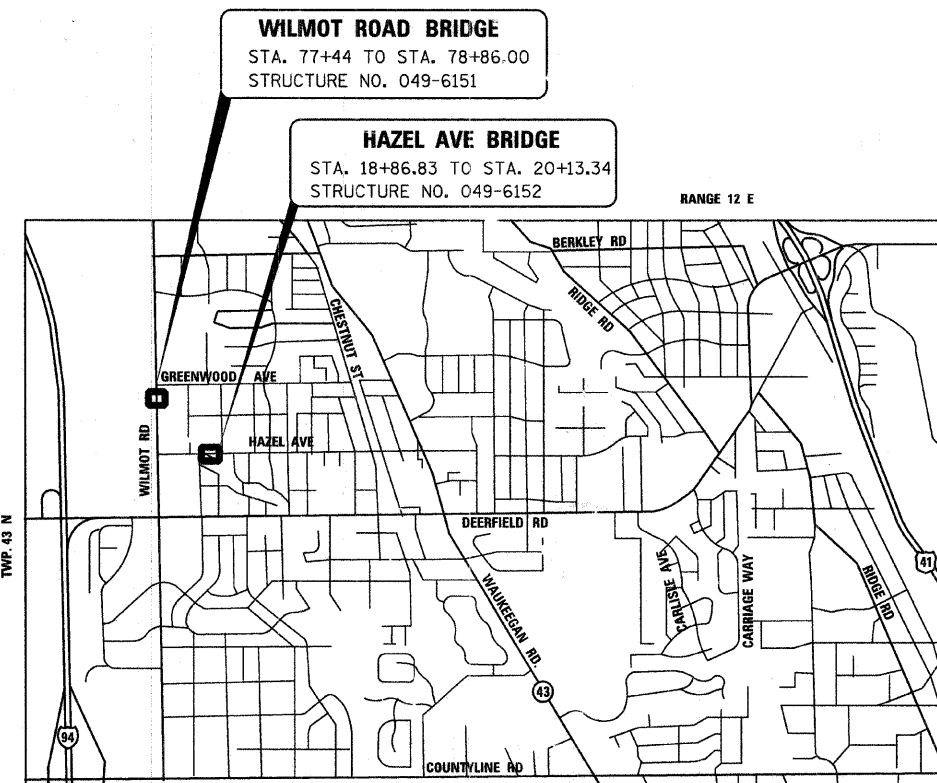
PLAN: 1" = 20'
PROFILE, HORIZ.: 1" = 20'
PROFILE, VERT.: 1" = 2'
CROSS SECTIONS, HORIZ.: 1" = 10'
CROSS SECTIONS, VERT.: 1" = 5'



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

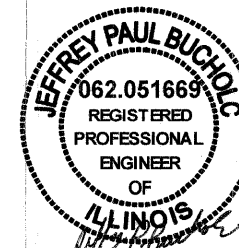
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811

CONTRACT NO. 63085

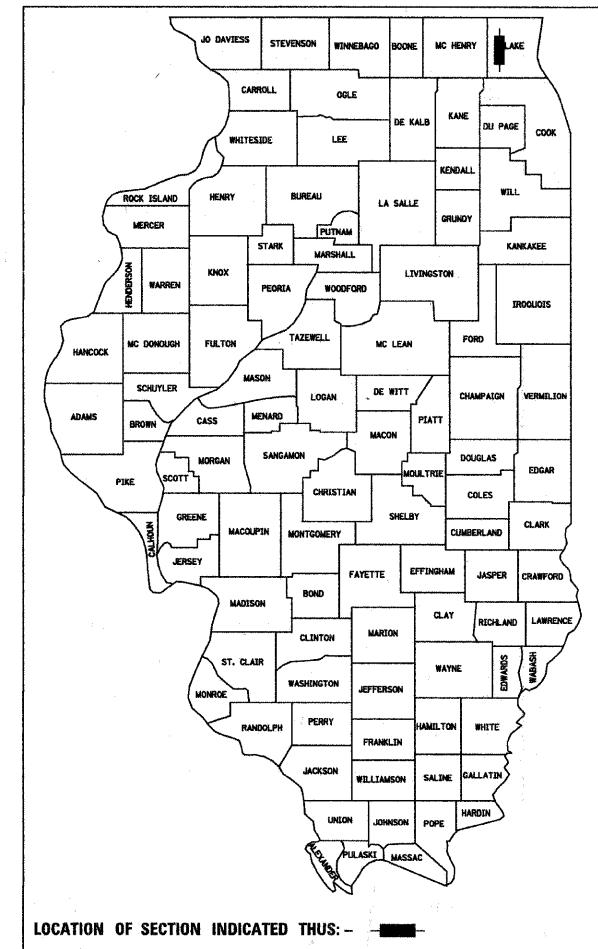


LOCATION MAP
(NOT TO SCALE)

WILMOT ROAD (STRUCTURE NO. 049-6151)
GROSS LENGTH OF IMPROVEMENT: 142 FEET
HAZEL AVENUE (STRUCTURE NO. 049-6152)
GROSS LENGTH OF IMPROVEMENT: 126.5 FEET
TOTAL NET LENGTH: 268.5 FEET



11/30/2009
EXPIRES: 10/21/08



LOCATION OF SECTION INDICATED THUS: - ■ -

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

State of Illinois
Department of Transportation
Division of Highways

Approved October 21, 2008 *[Signature]* P.E.
Village of Deerfield

Passed NOVEMBER 5, 2008
[Signature] CHRISTOPHER HOLT
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

Releasing for Bid Based on Limited Review NOVEMBER 5, 2008
[Signature] DEBRA M. O'NEAL
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PLANS PREPARED BY:

URS
100 S WACKER DR, SUITE 500 TEL (312) 939-1000
CHICAGO IL. 60606 FAX (312) 939-4198

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

63085

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007. THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", AND THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITIONS. THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2008

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. THE CONTRACTOR SHALL CALL VILLAGE OF DEERFIELD PUBLIC WORKS AT 847-317-7245 FOR VILLAGE OWNED UTILITIES. (48 HOURS NOTIFICATIONS REQUIRED)

ALL UTILITIES, SCHOOL DISTRICTS, LOCAL POLICE, AND FIRE DEPARTMENTS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS ARE MET.

10 FEET TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE ITEM OF WORK SPECIFIED.

TREES NOT TO BE MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND PROTECTED UNDER THE PROVISIONS OF ARTICLE 201.5 OF THE STANDARDS SPECIFICATIONS.

WORK HOURS ARE RESTRICTED FROM 7:30 AM TO 7:00 PM, MONDAY THROUGH FRIDAY AND SATURDAY FROM 9:00 AM TO 5:00 PM, NO WORK ON SUNDAY.

FOR STABILIZATION, CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR II BARRICADES AND FOUR (4) ON EACH TYPE III BARRICADES.

STORM SEWER, WATER MAIN REQUIREMENTS IS TO BE USED AT LOCATIONS WHERE LATERAL SEPARATION BETWEEN THE SEWER AND WATER MAIN IS LESS THAN 10 FEET AND THE WATER MAIN INVERT IS LESS THAN 18 INCHES ABOVE THE STORM SEWER CROWN.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

THE BITUMINOUS MATERIAL PRIME COAT QUANTITIES HAVE BEEN DETERMINED USING A RATE OF 0.1 GALLONS PER SQUARE YARD.

ANY REFERENCE TO A STANDARD IN THESE PLANS WILL BE INTERPRETED TO MEAN THE LATEST EDITION, REGARDLES OF THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER AND AUTHORIZED SURVEYOR OR AGENT HAS A WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION

THE SAWING OF PAVEMENT, DRIVEWAYS PAVEMENT, CURB AND GUTTER, SIDEWALK WILL NOT BE PAID FOR SEPARATELY, THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED AND NO EXTRA COMPENSATION WILL BE ALLOWED.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS

THE CONTRACTOR SHALL ARRANGE WITH THE VARIOUS UTILITY COMPANIES FOR THE LOCATION AND ANY NECESSARY ADJUSTING OF THE PRIVATELY OWNED OVERHEAD OR UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION.

UNDERGROUND UTILITIES: THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD SURVEYS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THIS DATA IS ESSENTIALLY CORRECT, BUT THE VILLAGE OF DEERFIELD AND OTHER AGENCIES ASSOCIATED WITH THE DEVELOPMENT OF THESE PLANS DO NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE EXACT LOCATION OF EACH FACILITY WITH THE UTILITY COMPANY WHEN THE POTENTIAL EXISTS FOR INVOLVEMENT AND SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY SUCH FACILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

MAINTENANCE OF TRAFFIC-GENERAL: TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO RESTRICT MODIFY, OR REMOVE CLOSURES OR CHANNELIZATIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND WITHIN 2 HOURS FROM THE TIME OF NOTIFICATION BY THE ENGINEER TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION, IMPROVEMENT OR MODIFICATION OF THE MAINTENANCE OF TRAFFIC CONTROL DEVICES. FAILURE TO RESPOND WITHIN THE ABOVE TIME LIMIT WILL RESULT IN A \$500.00 PENALTY PER INCIDENT, WHENEVER THE ENGINEER DETERMINES THAT THE CONTRACTOR OR HIS SUB-CONTRACTOR HAVE NOT COMPLIED.

MAINTENANCE OF TRAFFIC: THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL OF THE ENGINEER FOR ANY METHODS OF MAINTENANCE OF TRAFFIC DIFFERENT THAN THAT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL SCHEDULE HIS CONSTRUCTION STAGING TO CONFORM TO THE DETAILS SHOWN IN THE DRAWINGS.

POLLUTION CONTROL: THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. HE WILL NOT BE ALLOWED TO BUILD FIRES ON THE SITE.

THIS WORK INVOLVES BRIDGE RECONSTRUCTION UTILIZING A DETOUR ROUTE FOR TWO BRIDGE LOCATIONS. ONLY ONE BRIDGE/DETOUR CONSTRUCTION WILL BE ALLOWED AT A TIME. SEE SPECIAL PROVISION "CONTRACT COMPLETION DATE AND INTERIM COMPLETION DATE.

DISTRICT STANDARDS

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
 PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
 FIRE HYDRANT TO BE MOVED
 BUTT JOINT AND BITUMINOUS TAPER DETAILS
 TYPICAL PAVEMENT MARKING
 DETAIL FOR TEMPORARY ACCESS DRIVEWAY AND SIDE STREETS

STATE STANDARDS

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 280001-04 TEMPORARY EROSION CONTROL SYSTEM
- 420001-07 PAVEMENT JOINTS
- 420401-07 BRIDGE APPROACH PAVEMENT
- 421001-02 BAR REINFORCEMENT
- 424001-05 CURB RAMPS FOR SIDEWALK
- 482011-03 HMA BITUMINOUS SHOULDER STRIPS / SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
- 515001-03 NAME PLATE FOR BRIDGES
- 542301-02 PRECAST REINFORCED CONCRETE FLARED END SECTION
- 542311-01 GRATING FOR CONCRETE FLARED END SECTION (FOR 600 MM (24") THRU 1350 MM (54") PIPE)
- 542606-01 REINFORCED CONCRETE PIPE TEE
- 602601-02 PRECAST REINFORCED CONCRETE FLAT SLAB TOP
- 602701-02 CAST IRON STEPS
- 606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 701501-05 URBAN LANE CLOSURE 2-LANE, 2-WAY UNDIVIDED FOR SPEEDS < 45 MPH
- 701901-01 TRAFFIC CONTROL DEVICES

DATE	BY	REVISIONS

DATE	BY	REVISIONS

REVISIONS	
NAME	DATE

URS 100 SOUTH WACKER DRIVE
 SUITE 500 TEL (312) 939-1000
 CHICAGO, IL 60606 FAX (312) 939-4198

VILLAGE OF DEERFIELD

GENERAL NOTES
AND STANDARDS

SCALE: VERT. NONE
 HORIZ. NONE
 DATE: 9/12/2008

DRAWN BY: MIA
 CHECKED BY: MLMHL

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CODE NUMBER	PAY ITEM	UNITS	Total Quantity	Wimot Road	Hazel Avenue
				S/N 049-6151 X080-2A	S/N 049-6152 X080-2A
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	40	20	20
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	16		16
28000400	PERIMETER EROSION BARRIER	FOOT	1117	565	552
40600100	BITUMINOUS MATERIALS, PRIME COAT	GAL	10	10	
40600625	LEVELING BINDER (MACHINE METHOD) N-50	TON	4	4	
40600982	HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ. YD.	17	17	
40603335	HOT MIX ASPHALT SURFACE COURSE MIX "D" N50	TON	9	9	
42001165	BRIDGE APPROACH PAVEMENT	SQ. YD.	381	201	180
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ. YD.	76	40	36
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5" INCH	SQ. FT.	400	200	200
44000100	PAVEMENT REMOVAL	SQ. YD.	433	241	192
44000198	HOT MIX ASPHALT SURFACE REMOVAL - VARIABLE DEPTH	SQ. YD.	83	83	
44000500	COMBINATION CURB & GUTTER REMOVAL	FOOT	324	164	160
44000600	SIDEWALK REMOVAL	SQ. FT.	360	200	160
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2	1	1
50102400	CONCRETE REMOVAL	CU. YD.	6	1.0	5.0
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	58	22	36
50300260	BRIDGE DECK GROOVING	SQ. YD.	224	109	115
50300300	PROTECTIVE COAT	SQ. YD.	803	391	412
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ. FT.	1383	1383	
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ. FT.	1565		1565
50800205	REINFORCEMENT BARS, EPOXY COATED	POUNDS	8390	3360	5030
51500100	NAME PLATES	EACH	2	1	1
58700300	CONCRETE SEALER	SQ. FT.	354	142	212
60250400	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID	EA	1	1	
60300105	FRAME AND GRATES TO BE ADJUSTED	EA	3	1	2
60300305	FRAME AND LIDS TO BE ADJUSTED	EA	1	1	
60404300	FRAME AND GRATES, TYPE 3	EA	3	1	2
60406000	FRAME AND LIDS, TYPE 1, OPEN LID	EA	1	1	
60603800	COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12	FOOT	120	96	24
66410400	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	80	40	40
67000500	ENGINEERS FIELD OFFICE TYPE B	CAL. MO.	4	2	2
67100100	MOBILIZATION	L. SUM	1	0.5	0.5
70102550	TRAFFIC CONTROL & PROTECTION-TEMPORARY DETOUR	EA	2	1	1
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5) INCHES	SQ. FT.	223	152	71.0
X0325670	CONCRETE BRIDGE RAIL, SIDEWALK MOUNTED	FOOT	159	66	93
X5030305	CONCRETE WEARING SURFACE, 5"	SQ. YD.	244	117	127
Z0073700	TEMPORARY WALL BRACING SYSTEM	L. SUM	1	1	
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	11		11

PLAN	DATE
BY	
REVISIONS	
PLOTTED	
ALIGNMENT CHECKED	
NOTE BOOK	
NO.	
CADD FILE NAME	

PROFILE	DATE
BY	
REVISIONS	
PLOTTED	
GRADES CHECKED	
NOTE BOOK	
NO.	
STRUCTURE NOTATIONS CHECKED	

REVISIONS	
NAME	DATE

URS 100 SOUTH WACKER DRIVE TEL (312) 939-1000
 SUITE 500 CHICAGO, IL 60606 FAX (312) 939-4198

VILLAGE OF DEERFIELD

**SUMMARY OF QUANTITIES
WILMOT & HAZEL BRIDGE**

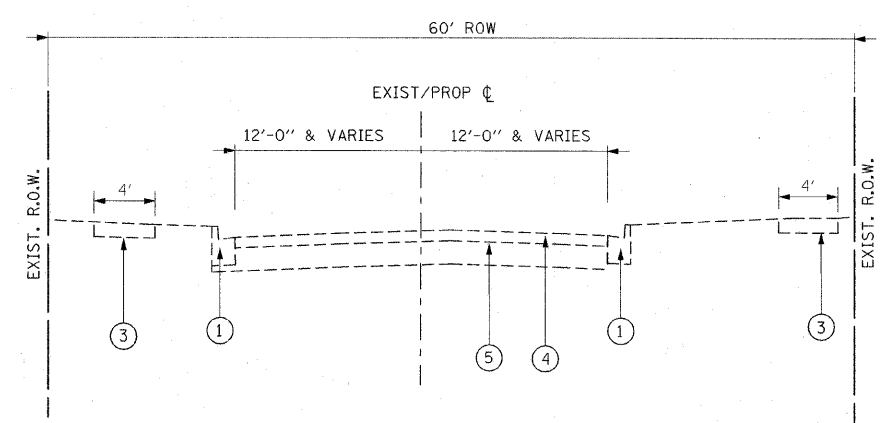
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 HORIZ. 1"=50'
 DATE: 9/12/2008

DRAWN BY: MIA
 CHECKED BY: MHL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

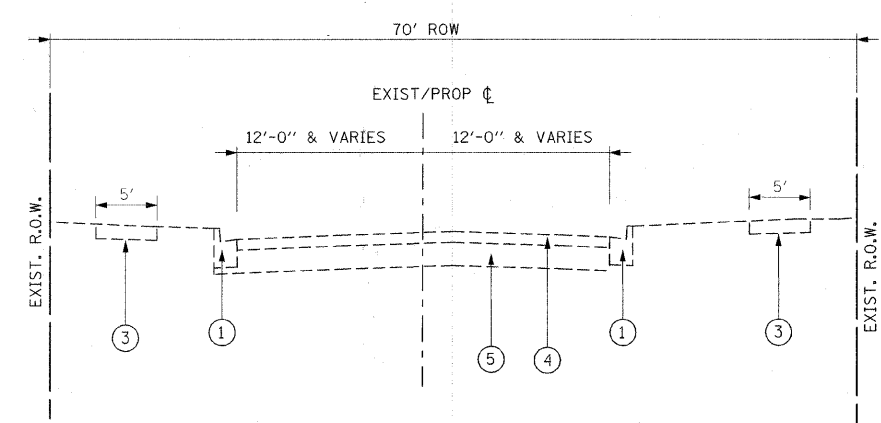
63085

- LEGEND (EXISTING):**
- ① COMBINATION CURB AND GUTTER, TYPE B-6,12
 - ③ P.C.C. SIDEWALK
 - ④ ASPHALT PAVEMENT, 3" +/-
 - ⑤ AGGREGATE BASE COURSE (THICKNESS VARIES)



**EXISTING TYPICAL SECTION
HAZEL AVENUE**

FOR INFORMATION ONLY



**EXISTING TYPICAL SECTION
STA. 77+44 TO STA. 78+86
WILMOT ROAD**

PLAN

BY	DATE

NO. _____

PROFILE

BY	DATE

NO. _____

REVISIONS	
NAME	DATE

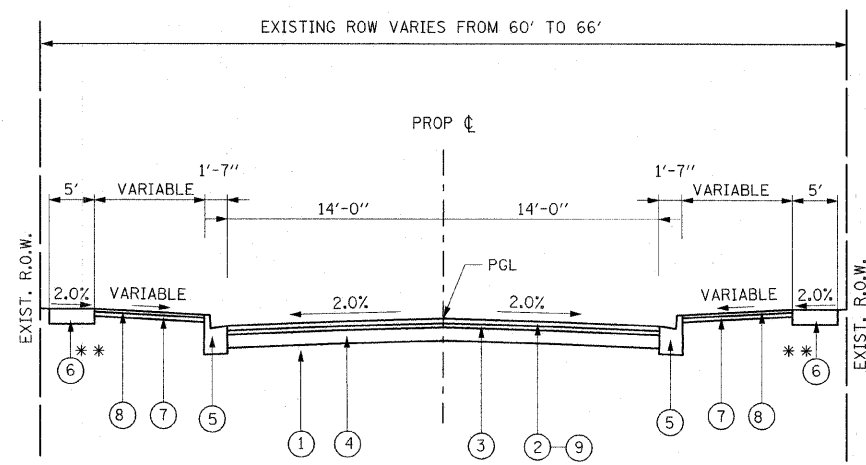
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 SUITE 500 CHICAGO, IL 60606 FAX (312) 939-4198

VILLAGE OF DEERFIELD

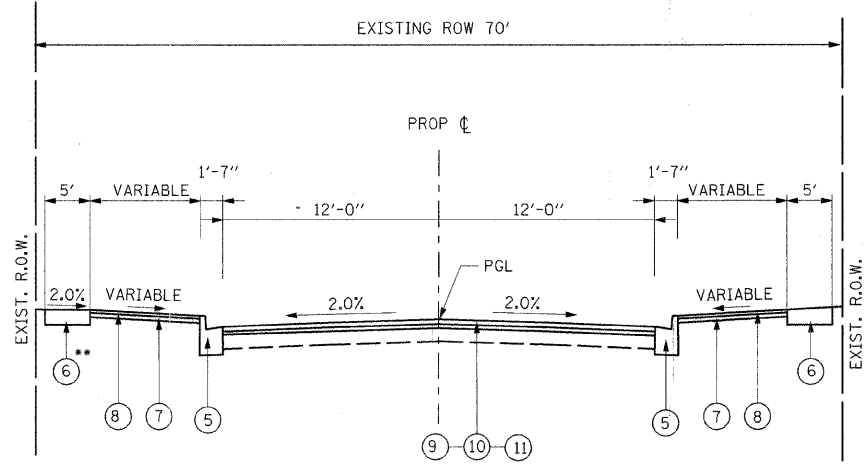
EXISTING TYPICAL SECTIONS

SCALE: VERT. NONE
 HORIZ. NONE
 DATE: 9/12/2008

DRAWN BY: MIA
 CHECKED BY: MHL



* PROPOSED TYPICAL SECTION
HAZEL AVENUE



PROPOSED TYPICAL SECTION
STA. 77+44 TO STA. 77+64.54
STA. 78+58.46 TO STA. 78+86.00
WILMOT ROAD

* FOR INFORMATION ONLY
CONSTRUCTION IS PART OF
SEPARATE CONSTRUCTION CONTRACT

** PCC SIDEWALK THICKNESS IN
DRIVEWAYS ARE 6" WITHIN THE
LIMITS OF RESIDENTIAL
DRIVEWAYS.

** PCC SIDEWALK THICKNESS IN
DRIVEWAYS ARE 6" WITHIN THE
LIMITS OF RESIDENTIAL
DRIVEWAYS.

LEGEND (PROPOSED):

- ① SUB-BASE GRANULAR MATERIAL, TYPE B. 6"
- ② HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL9.5MM) 2"
- ③ HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 2.5"
- ④ HOT MIX ASPHALT BASE COURSE 4.5"
- ⑤ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
REMOVAL AND REPLACEMENT
- ⑥ PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
- ⑦ FURNISHING AND PLACING TOP SOIL, 4 INCH (INCLUDED IN SIDEWALK, SEE NOTE)
- ⑧ SODDING, SALT TOLERANT (INCLUDED IN SIDEWALK SEE NOTE)
- ⑨ BITUMINOUS MATERIAL (PRIME COAT)
- ⑩ HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50 (1-1/2")
- ⑪ LEVELING BINDER (MACHINE METHOD N50, 3/4")

NOTE:

ANY TURF RESTORATION WORK REQUIRED AS PART OF SIDEWALK
CONSTRUCTION, INCLUDING TOPSOIL, SOD, AND FERTILIZER PLACEMENT
SHALL BE INCLUDED IN THE WORK INVOLVED FOR SIDEWALK CONSTRUCTION.
SEE SPECIAL PROVISION.
"PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH"

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

ITEM	AC TYPE	VOIDS
ROADWAY HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	PG 64-22	4% @ 50 Cyp.
DRIVEWAYS HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL9.5MM) 2"	PG 64-22 *	4% @ 50 Cyp.
ROADWAY LEVELING BINDER (M.M.), N50 (IL 9.5MM)	PG 64-22 / 58-22	4% @ 50 Cyp.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/ SQ YD/IN
* WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

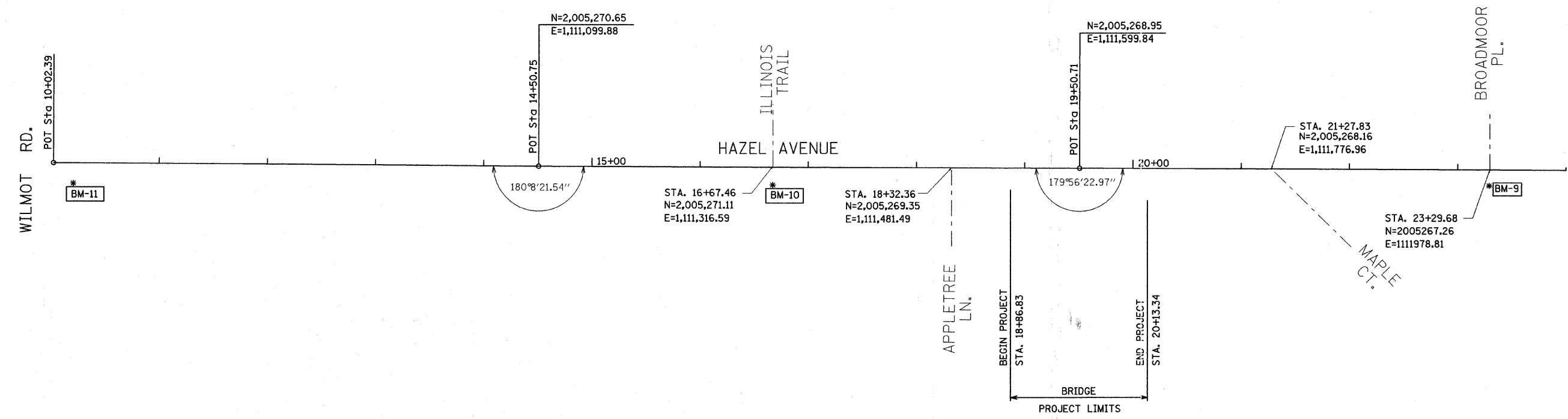
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CHECKED	
DATE	

PROFILE	DATE
BY	
CHECKED	
DATE	

<p>URS</p> <p>100 SOUTH WACKER DRIVE SUITE 500 CHICAGO, IL 60606</p> <p>TEL (312) 939-1000 FAX (312) 939-4198</p>		<p>VILLAGE OF DEERFIELD</p>	
		<p>PROPOSED TYPICAL SECTIONS HAZEL AVE. & WILMOT ROAD</p>	
<p>SCALE: VERT. NONE HORIZ. NONE DATE: 9/12/2008</p>		<p>DRAWN BY: MIA CHECKED BY: MHL</p>	

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

63085



BENCHMARK 2007-70 (ALL ELEVATIONS ARE NAVD88 DATUM.)

VILLAGE OF DEERFIELD STANDARD MONUMENT LOCATED AT THE SOUTHEAST CORNER OF WILMOT ROAD AND SCHOOL STREET, AT 1313 WILMOT ROAD. THE MONUMENT IS 13.0 FEET EAST OF THE BACK OF WALK ON WILMOT ROAD AND 16.0 FEET SOUTH OF THE BACK OF ASPHALT PATH ON SCHOOL STREET. ELEVATION IS 668.29 NAVD88

- * BM-11
RAILROAD SPIKE IN POWER POLE AT THE SOUTHEAST CORNER OF HAZEL AND WILMOT ROAD
ELEVATIONS IS 660.30
- * BM-10
RAILROAD SPIKE IN POWER POLE AT THE SOUTHWEST CORNER OF HAZEL AND ILLINOIS TRAIL.
ELEVATIONS IS 658.85
- * BM-9
RAILROAD SPIKE IN POWER POLE AT THE NORTHWEST CORNER OF HAZEL AND BROADMOOR PLACE.
ELEVATIONS IS 659.21

PLAN	DATE
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DATE	
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DATE	
NO.	

PROFILE	DATE
NO.	
BY	
DATE	
NO.	
BY	
DATE	
NO.	

REVISIONS	
NAME	DATE

URS 100 SOUTH WACKER DRIVE TEL (312) 939-1000
SUITE 500 CHICAGO, IL 60606 FAX (312) 939-4198

VILLAGE OF DEERFIELD
ALIGNMENT & TIES
HAZEL AVENUE
STA. 10+02.39 TO STA. 39+00
SCALE: VERT. 1"=20'
HORIZ. 1"=50'
DATE: 9/12/2008
DRAWN BY: MIA
CHECKED BY: MHL

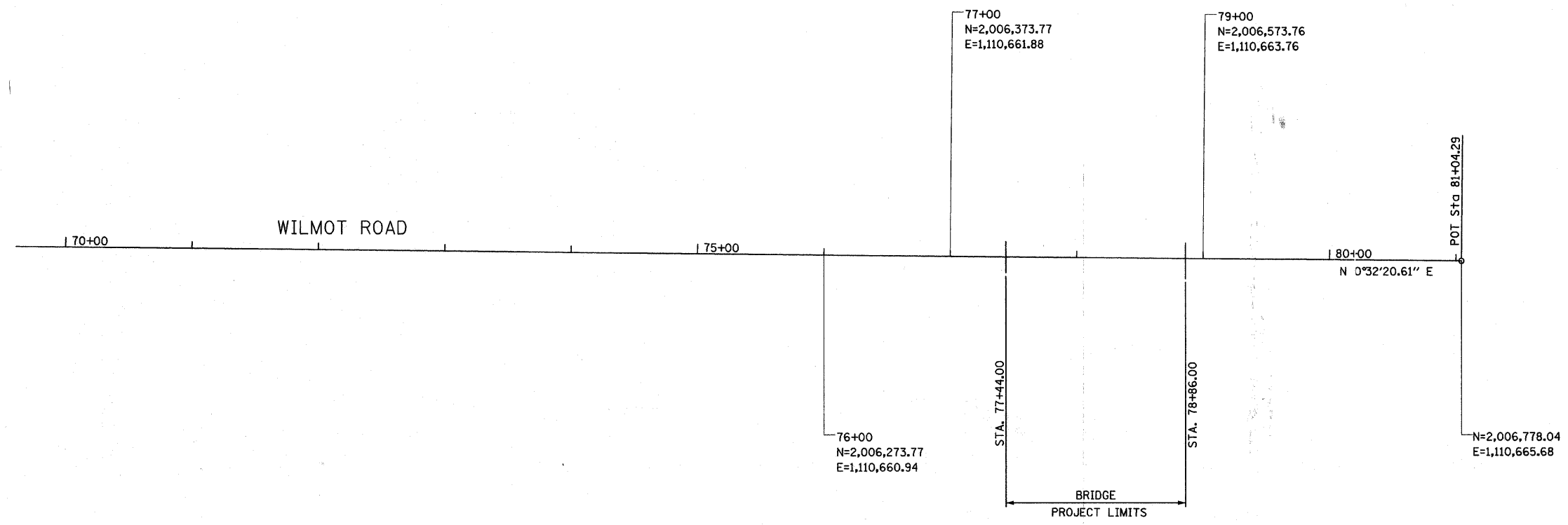
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

63085



PLAN	SURVEYED	BY	DATE
NOTE BOOK NO.	ALIGNMENT CHECKED		
	BY: M.A. WILSON		
	DATE: 11/14/08		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	GRADES CHECKED		
	BY: M.A. WILSON		
	DATE: 11/14/08		



REVISIONS	
NAME	DATE

URS 100 SOUTH WACKER DRIVE TEL (312) 939-1000
 SUITE 500 CHICAGO, IL 60606 FAX (312) 939-4198

VILLAGE OF DEERFIELD

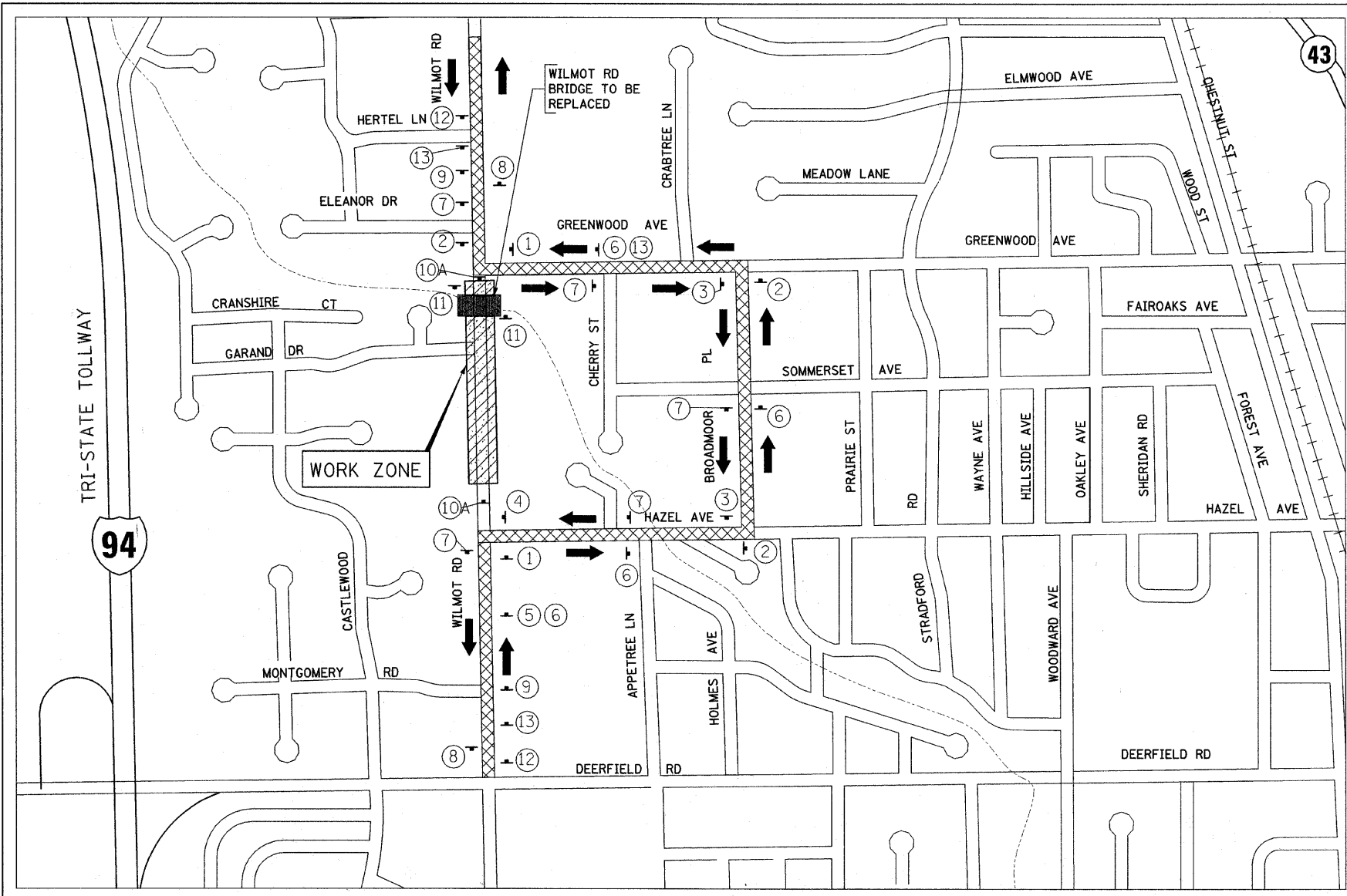
ALIGNMENT & TIES
 WILMOT ROAD
 STA. 77+44.00 TO STA. 78+86.00

SCALE: VERT. DRAWN BY: MIA
 HORIZ. 1"=50' CHECKED BY: MHL
 DATE: 9/12/2008

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
63085				

PLAN	DATE	BY
SURVEYED		
GRADES CHECKED		
ALIGNMENT CHECKED		
NOTE BOOK NO.		
DATE		
BY		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
ALIGNMENT CHECKED		
NOTE BOOK NO.		
DATE		
BY		



WILMOT ROAD DETOUR ROUTE MAP

SIGN LEGEND

LEGEND

- ▲ TEMPORARY TRAFFIC ADVISORY SIGN
- ⑥ SIGN LEGEND NUMBER (SEE SIGN LEGEND)
- ▨ CONSTRUCTION WORK ZONE
- ▩ APPROVED DETOUR ROUTE

DETOUR NOTES

- 1) THE CONTRACTOR SHALL COMPLETELY COVER ANY EXISTING SIGNS ALONG THE DETOUR ROUTE THAT ARE IN CONFLICT WITH DETOUR.
- 2) THE CONTRACTOR SHALL MAKE ANY ADJUSTMENT TO THE EXISTING TRAFFIC SIGNS, DETOUR SIGNING OR PAVEMENT MARKING ALONG THE DETOUR ROUTE AS NECESSARY OR AS DIRECTED BY ENGINEER.
- 3) ALL SIGNS SHALL HAVE TYPE A FLASHING LIGHT
- 4) DETOUR ROUTE TO BE IMPLEMENTED ONLY AFTER HAZEL AVENUE BRIDGE IS COMPLETED.

REVISIONS	
NAME	DATE

URS 100 SOUTH WACKER DRIVE
SUITE 500 CHICAGO, IL 60606 TEL (312) 939-1000 FAX (312) 939-4198

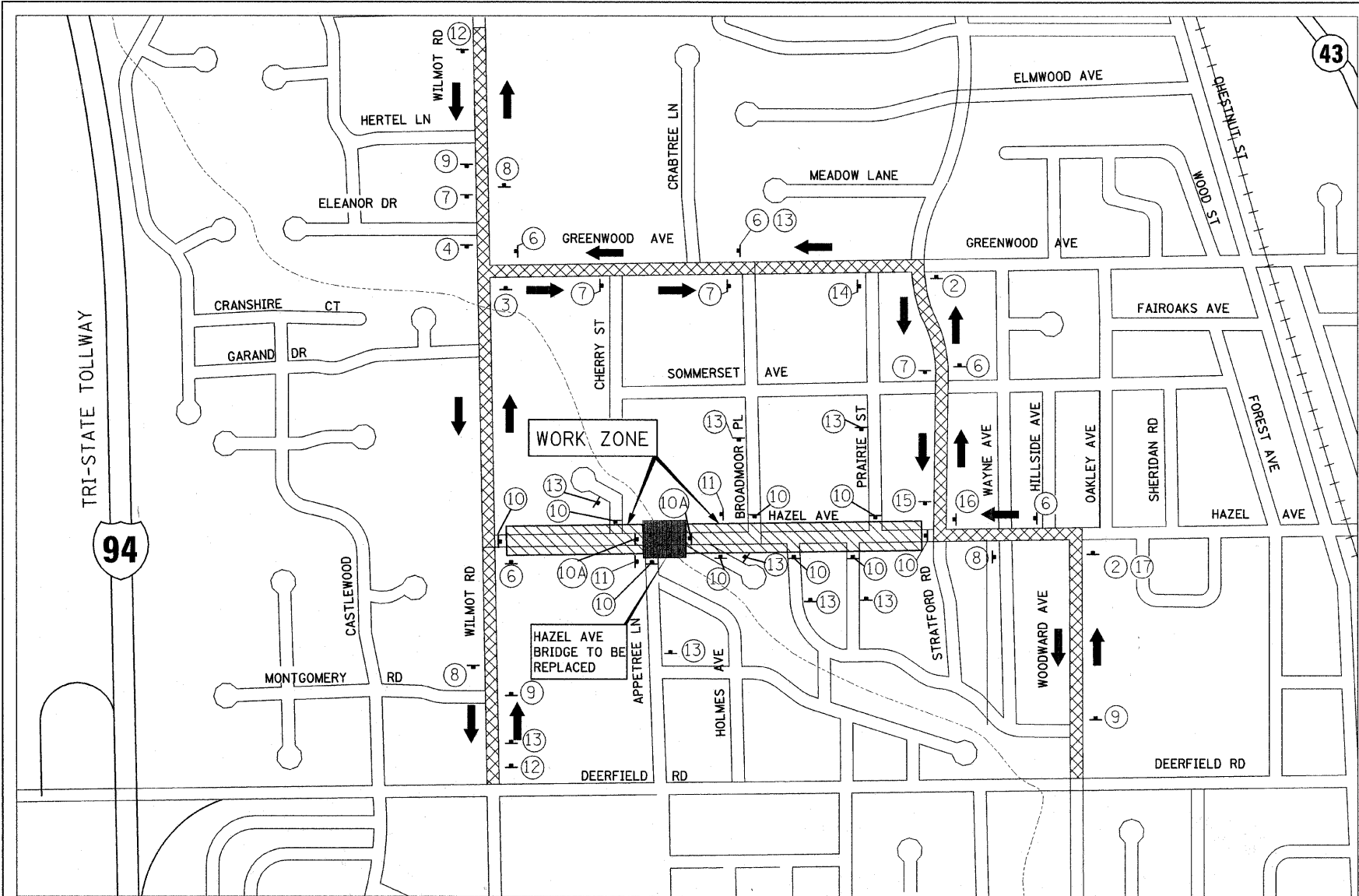
VILLAGE OF DEERFIELD

DETOUR PLAN FOR WILMOT ROAD BRIDGE

SCALE: NONE DATE: 9/12/20083 DRAWN BY: MIA CHECKED BY: MHL

PLAN	DATE	BY
SURVEYED		
ALIGNMENT CHECKED		
NOTE BOOK NO.		
DATE OF PLAN CHECKED		
DATE OF FIELD WORK		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
NOTE BOOK NO.		
DATE OF PROFILE CHECKED		
DATE OF FIELD WORK		



LEGEND

- ▲ TEMPORARY TRAFFIC ADVISORY SIGN
- ⑥ SIGN LEGEND NUMBER (SEE SIGN LEGEND)
- ▨ CONSTRUCTION WORK ZONE
- ▩ APPROVED DETOUR ROUTE

DETOUR NOTES

- 1) THE CONTRACTOR SHALL COMPLETELY COVER ANY EXISTING SIGNS ALONG THE DETOUR ROUTE THAT ARE IN CONFLICT WITH DETOUR.
- 2) THE CONTRACTOR SHALL MAKE ANY ADJUSTMENT TO THE EXISTING TRAFFIC SIGNS, DETOUR SIGNING OR PAVEMENT MARKING ALONG THE DETOUR ROUTE AS NECESSARY OR AS DIRECTED BY ENGINEER.
- 3) ALL SIGNS SHALL HAVE TYPE A FLASHING LIGHT
- 4) SEE NOTE #4 IN DETOUR PLAN FOR WILMOT ROAD;

SIGN LEGEND

The sign legend lists 17 numbered signs with their codes and dimensions:

- 1. HAZEL AVE DETOUR WEST: M4-9R, 30 X 24
- 2. HAZEL AVE DETOUR EAST: M4-9L, 30 X 24
- 3. HAZEL AVE DETOUR WEST: M3-2, 24 X 12
- 4. HAZEL AVE DETOUR EAST: M3-4, 24 X 12
- 5. DETOUR AHEAD: W20-2, 48 X 48
- 6. HAZEL AVE DETOUR EAST: M3-2, 24 X 12
- 7. HAZEL AVE DETOUR EAST: M3-4, 24 X 12
- 8. END DETOUR: M4-8g, 48 X 36
- 9. ROAD CLOSED AHEAD: W20-1, 48 X 48
- 10. ROAD CLOSED TO THRU TRAFFIC: R11-4, 60 X 30
- 11. ROAD CLOSED: R11-2
- 10A. BRIDGE OUT: R11-2
- 12. DETOUR 500 FT: W20-2, 48 X 48
- 13. ROAD CONSTRUCTION AHEAD: W20-1, 48 X 48
- 14. HAZEL AVE DETOUR EAST: M3-4, 24 X 12
- 15. HAZEL AVE DETOUR WEST: M3-2, 24 X 12
- 16. HAZEL AVE DETOUR WEST: M4-8, 30 X 24
- 17. HAZEL AVE DETOUR EAST: M3-2, 24 X 12

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

63085

URS 100 SOUTH WACKER DRIVE
SUITE 500 CHICAGO, IL 60606 TEL (312) 939-1000 FAX (312) 939-4198

VILLAGE OF DEERFIELD

DETOUR PLAN FOR HAZEL AVE BRIDGE

REVISIONS	
NAME	DATE

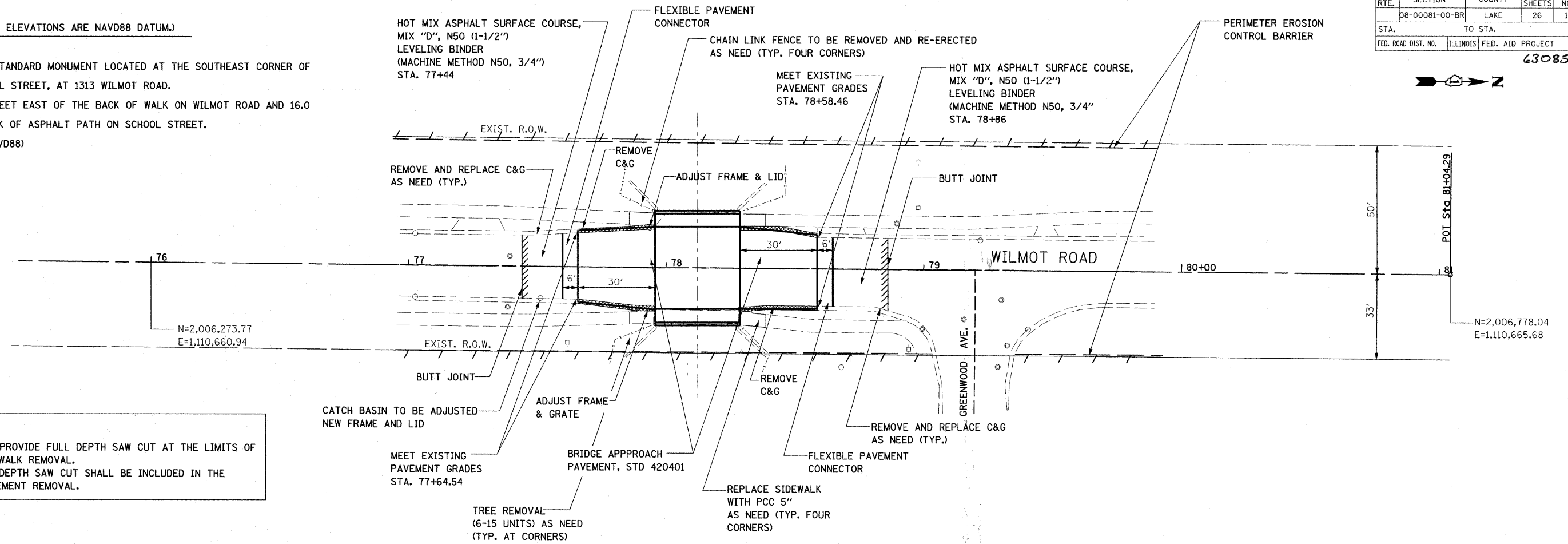
SCALE: NONE DATE: 9/12/2008 DRAWN BY: MIA CHECKED BY: MHL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-00081-00-BR	LAKE	26	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
63085				

BENCHMARK 2007-70 (ALL ELEVATIONS ARE NAVD88 DATUM.)

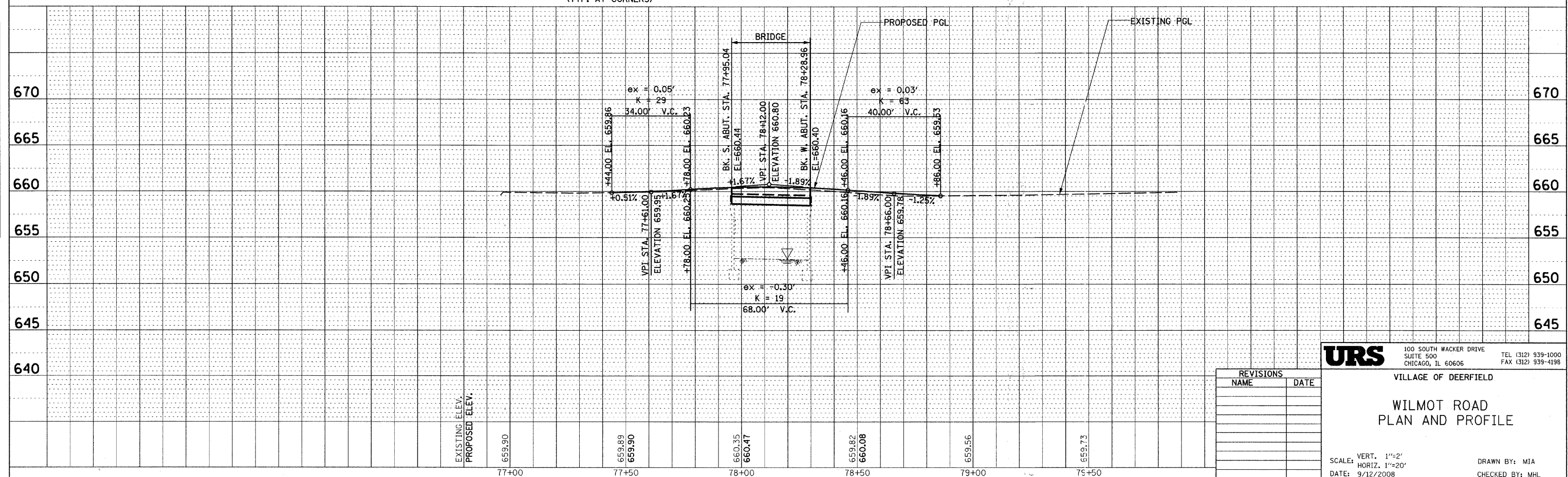
VILLAGE OF DEERFIELD STANDARD MONUMENT LOCATED AT THE SOUTHEAST CORNER OF WILMOT ROAD AND SCHOOL STREET, AT 1313 WILMOT ROAD. THE MONUMENT IS 13.0 FEET EAST OF THE BACK OF WALK ON WILMOT ROAD AND 16.0 FEET SOUTH OF THE BACK OF ASPHALT PATH ON SCHOOL STREET. ELEVATION IS 668.29 NAVD88)

PLAN	DATE
BY	
CHECKED	
DATE	
NO.	



NOTE:
CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT AT THE LIMITS OF PAVEMENT AND SIDEWALK REMOVAL. THE COST OF FULL DEPTH SAW CUT SHALL BE INCLUDED IN THE UNIT PRICE OF PAVEMENT REMOVAL.

PROFILE	DATE
BY	
CHECKED	
DATE	
NO.	



REVISIONS NAME	DATE

URS 100 SOUTH WACKER DRIVE SUITE 500 CHICAGO, IL 60606 TEL (312) 939-1000 FAX (312) 939-4198

VILLAGE OF DEERFIELD

WILMOT ROAD PLAN AND PROFILE

SCALE: VERT. 1"=2'
HORIZ. 1"=20'

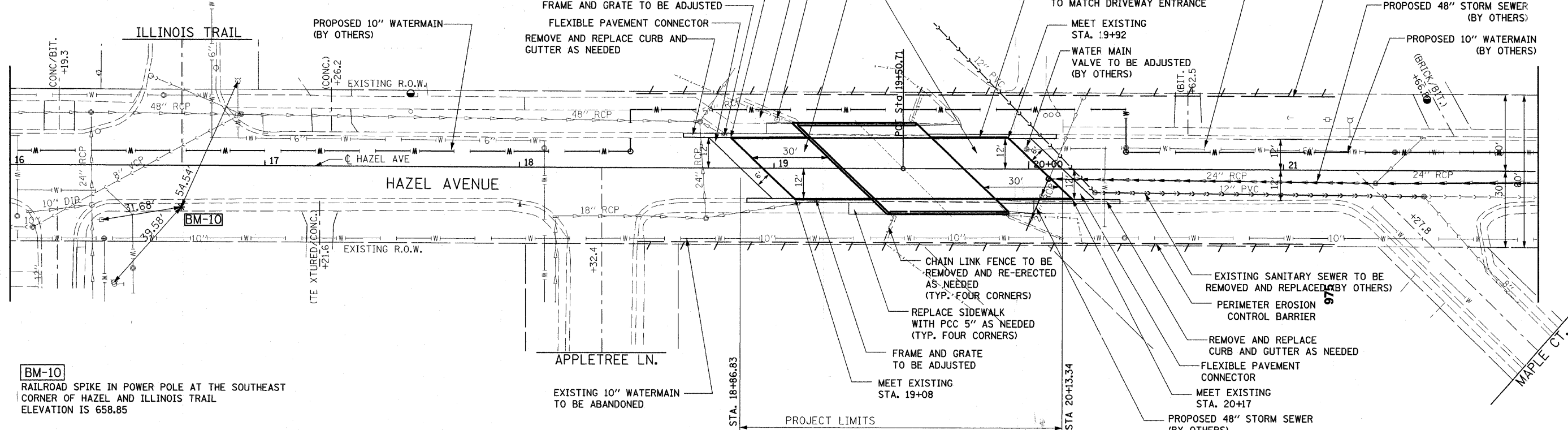
DATE: 9/12/2008

DRAWN BY: MIA
CHECKED BY: MHL

63085



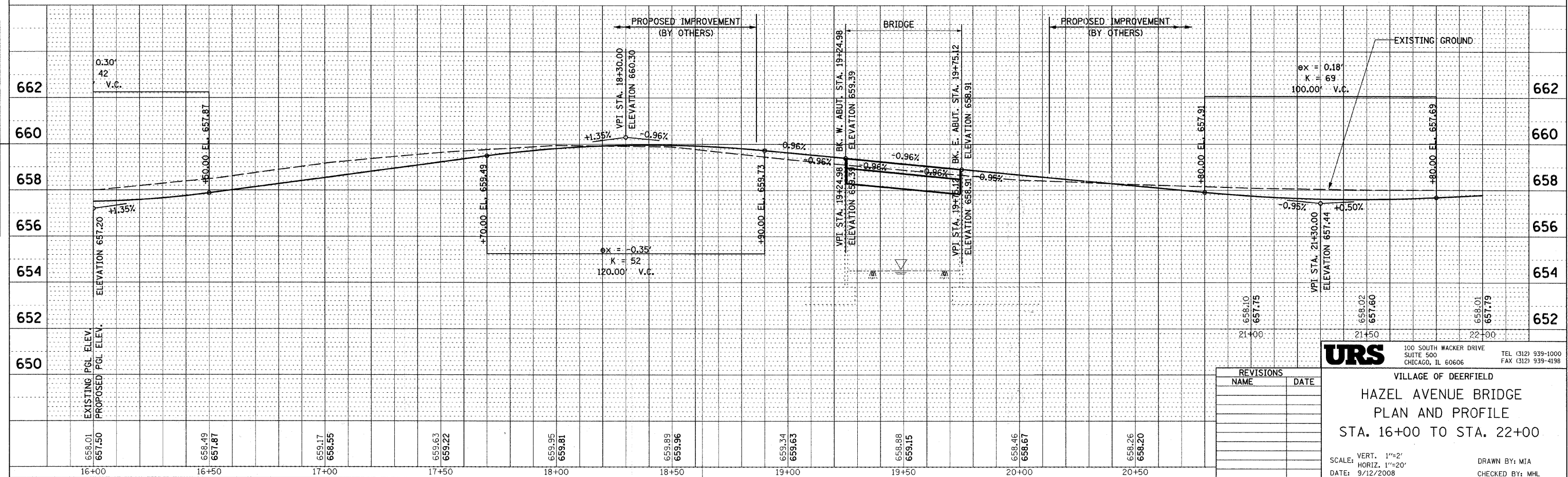
NOTE:
 CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT AT THE LIMITS OF PAVEMENT AND SIDEWALK REMOVAL. THE COST OF FULL DEPTH SAW CUT SHALL BE INCLUDED IN THE UNIT PRICE OF PAVEMENT REMOVAL



BM-10
 RAILROAD SPIKE IN POWER POLE AT THE SOUTHEAST CORNER OF HAZEL AND ILLINOIS TRAIL ELEVATION IS 658.85

DATE	BY
DATE	BY

DATE	BY
DATE	BY



REVISIONS	
NAME	DATE

URS
 100 SOUTH WACKER DRIVE
 SUITE 500
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4198

VILLAGE OF DEERFIELD
HAZEL AVENUE BRIDGE
 PLAN AND PROFILE
 STA. 16+00 TO STA. 22+00

SCALE: VERT. 1"=2'
 HORIZ. 1"=20'
 DATE: 9/12/2008
 DRAWN BY: MIA
 CHECKED BY: MHL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark: Old chiseled square on northeast abutment Elev. 661.80

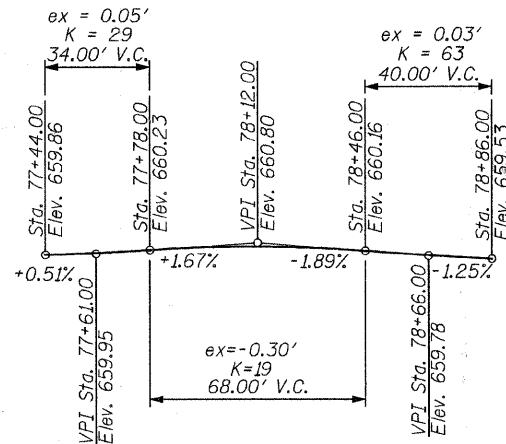
Existing Structure: S/N. 049-6151 was originally built in 1963 by Deerfield Township. It consists of a single span 17" deep precast prestressed concrete deck beam superstructure. The superstructure is supported on closed concrete abutments founded on spread footings. The structure length measures 33'-11" from back-to-back of abutments and the roadway width measures 32'-0" from face-to-face of curb. The existing superstructure will be removed and replaced. Temp bracing is required to support the abutments during superstructure removal. The roadway will be closed during construction. Traffic will utilize a detour.

Salvage: Remove portions of the existing fence at each quadrant of the bridge to facilitate removal and replacement operations. The fence shall be reinstalled by the Contractor after all work is completed.

WATERWAY INFORMATION

Drainage Area = 3603 Ac. Low Grade Elev. 660.40 Sta. 78+28.96

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	121	158	158				654.92	654.92
Base	30	220	189	189				656.05	656.05
Overtopping	100	533	243	243				658.72	658.72
Max. Calc.	500	892	243	243				660.62	660.62



PROFILE GRADE LINE - WILMOT ROAD

RE-BUILT 2009 BY
VILLAGE OF DEERFIELD
SEC. 08-00081-00-BR
STATION 78+12.00
STR. NO. 049-6151 LOADING HS20

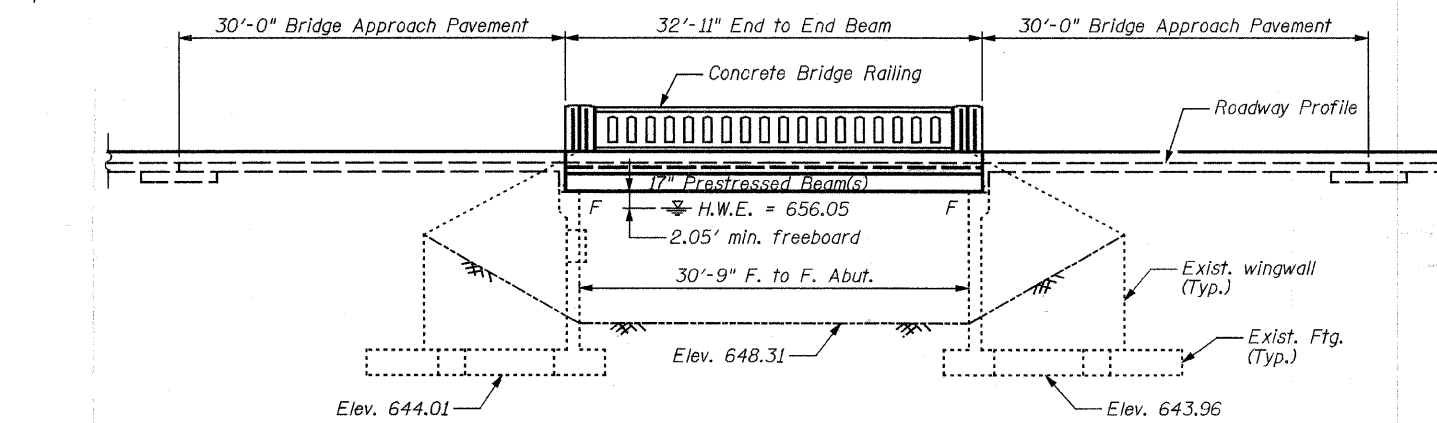
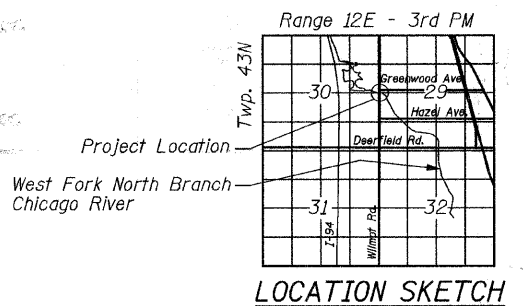
NAME PLATE
See Std. 515001

INDEX OF SHEETS

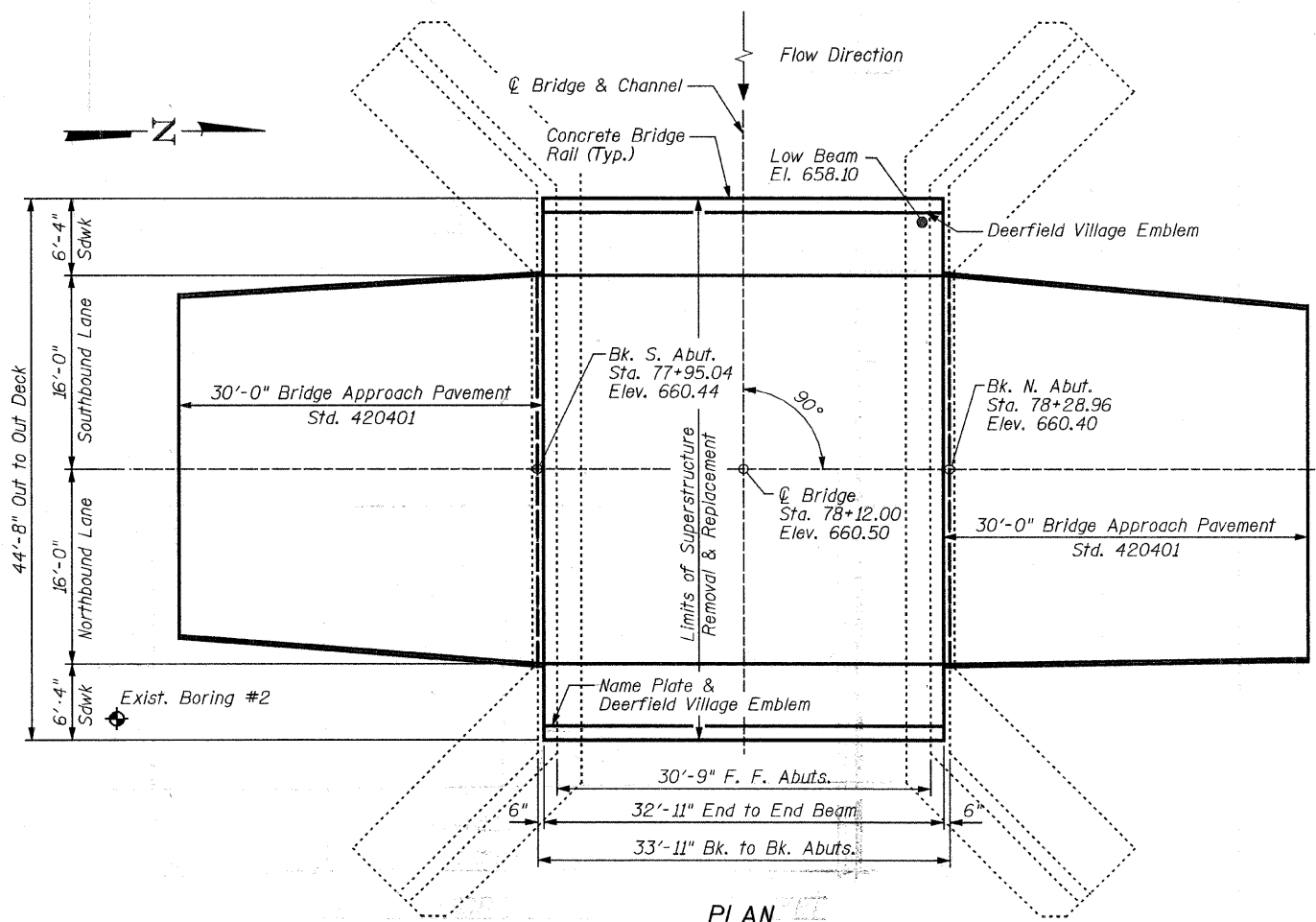
- 1 General Plan & Elevation
- 2 Top of Approach Slab Elevations
- 3 Deck Plan & Section
- 4 Superstructure & Railing Details
- 5-6 PPC Deck Beam Details
- 7 Substructure Repairs & Details

Exist. Boring #1

Wilmot Rd. & P.G.L.



ELEVATION



PLAN

DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

LEGEND

Existing Boring Location

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	L Sum	1		1
Concrete Removal	Cu. Yd.		1.0	1.0
Concrete Superstructure	Cu. Yd.	21.6		21.6
Bridge Deck Grooving	Sq. Yd.	109		109
Protective Coat	Sq. Yd.	190		190
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,383		1,383
Reinforcement Bars, Epoxy Coated	Pound	3,150	210	3,360
Name Plates	Each	1		1
Concrete Sealer	Sq. Ft.		142	142
Structural Repair of Concrete (Depth less than or equal to 5")	Sq. Ft.		151.9	151.9
Concrete Bridge Rail, Sidewalk Mounted	Foot	66		66
Concrete Wearing Surface, 5"	Sq. Yd.	117		117
Temporary Wall Bracing System	L Sum		1	1

* See Special Provisions

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- 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.
- The existing superstructure has a ±4.0" bituminous concrete overlay that will be removed. Cost included with Removal of Existing Superstructure.
- Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
- Contractor shall install two Village of Deerfield Emblems provided by the Village at the locations shown. Cost included with Name Plates.

SCOPE OF WORK

- Remove the existing superstructure and replace with new 17" PPC deck beams and a new 5" R.C. wearing surface.
- Incorporate new sidewalks and decorative bridge railings.
- Repair deteriorated concrete with Structural Repair of Concrete at each abutment.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification

DESIGN STRESSES

FIELD UNITS

- f'c = 3,500 psi
 - fy = 60,000 psi (Reinforcement)
 - fy = 50,000 psi (M270 Grade 50)
- PRECAST PRESTRESSED UNITS
- f'c = 6,000 psi
 - f'ci = 5,000 psi
 - f's = 270,000 psi (1/2" φ low lax strands)
 - f'si = 201,960 psi (1/2" φ low lax strands)
- FIELD UNITS (EXISTING)
- f'c = 1,400 psi (Super)
 - f'c = 1,000 psi (Sub)
 - vc = 75 psi (Ftg)
 - fs = 20,000 psi (Reinforcement)

SUPERSTRUCTURE LOADING HS 25

SUBSTRUCTURE LOADING HS 20

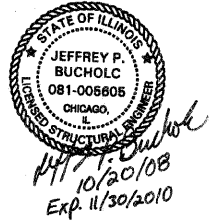
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

- Seismic Performance Zone (SPZ) = 1
- Bedrock Acceleration Coefficient (A) = 0.040g
- Site Coefficient (S) = 1.0

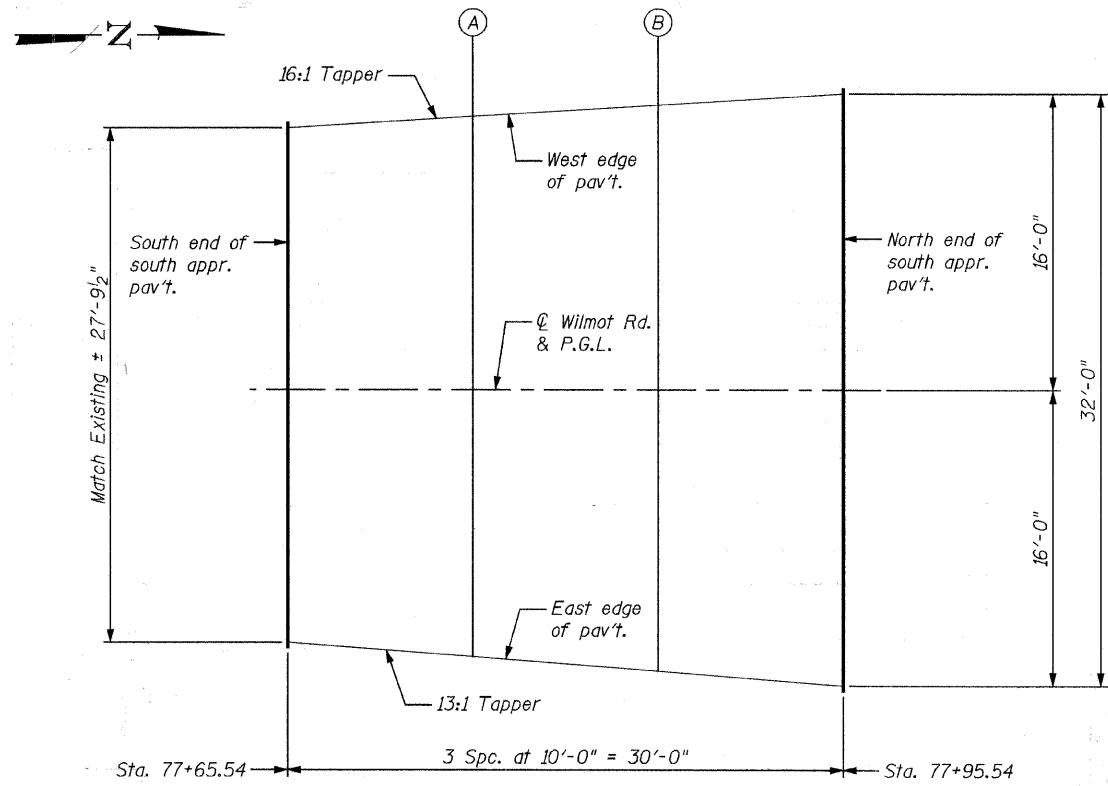
GENERAL PLAN & ELEVATION

STRUCTURE NO. 049-6151

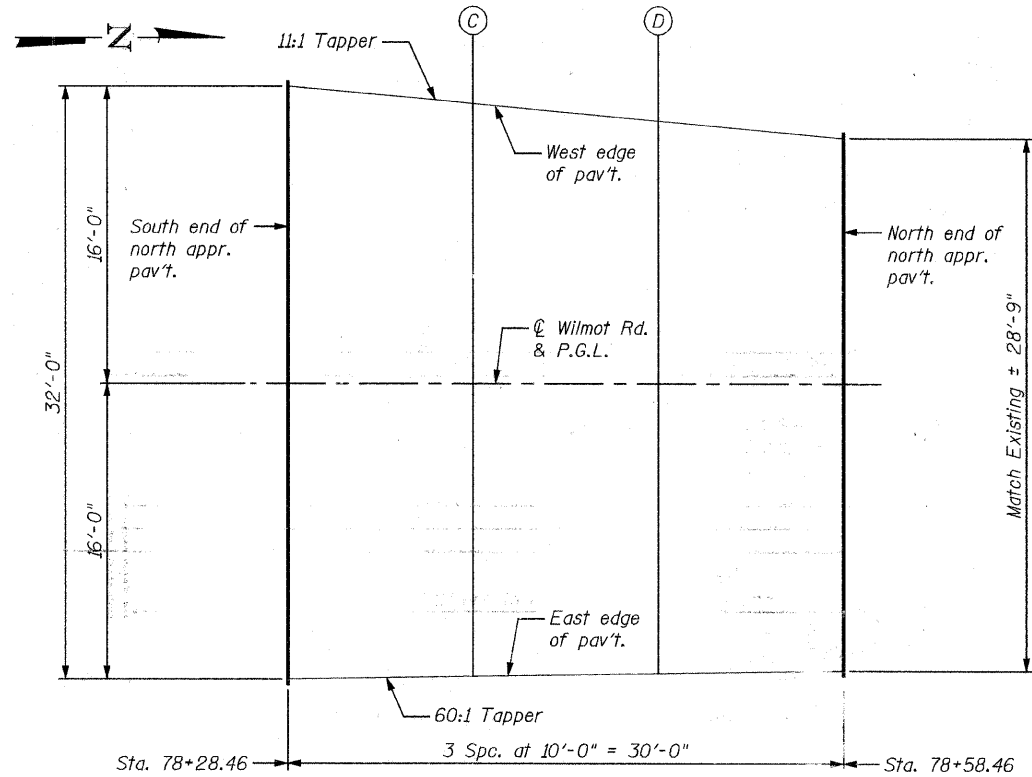


SHEET NO. 1 7 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2718	08-00081-00-BR	LAKE	26	12
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
			CONTRACT NO. 63085		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - SOUTH APPROACH PAVEMENT



PLAN - NORTH APPROACH PAVEMENT

SOUTH APPROACH SLAB
WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end south appr. pav't.	77+65.54	-14.13	659.76
A	77+75.54	-14.75	659.88
B	77+85.54	-15.38	660.02
N. end south appr. pav't.	77+95.54	-16.00	660.11

NORTH APPROACH SLAB
WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end north appr. pav't.	78+28.46	-16.00	660.08
C	78+38.46	-15.08	659.97
D	78+48.46	-14.15	659.82
N. end north appr. pav't.	78+58.46	-13.23	659.66

SOUTH APPROACH SLAB
@ WILMOT ROAD & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
S. end south appr. pav't.	77+65.54	0.00	660.05
A	77+75.54	0.00	660.19
B	77+85.54	0.00	660.34
N. end south appr. pav't.	77+95.54	0.00	660.44

NORTH APPROACH SLAB
@ WILMOT ROAD & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
S. end north appr. pav't.	78+28.46	0.00	660.41
C	78+38.46	0.00	660.29
D	78+48.46	0.00	660.11
N. end north appr. pav't.	78+58.46	0.00	659.94

SOUTH APPROACH SLAB
EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end south appr. pav't.	77+65.54	13.67	659.77
A	77+75.54	14.46	659.89
B	77+85.54	15.23	660.02
N. end south appr. pav't.	77+95.54	16.00	660.11

NORTH APPROACH SLAB
EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end north appr. pav't.	78+28.46	16.00	660.08
C	78+38.46	15.83	659.96
D	78+48.46	15.69	659.79
N. end north appr. pav't.	78+58.46	15.54	659.61

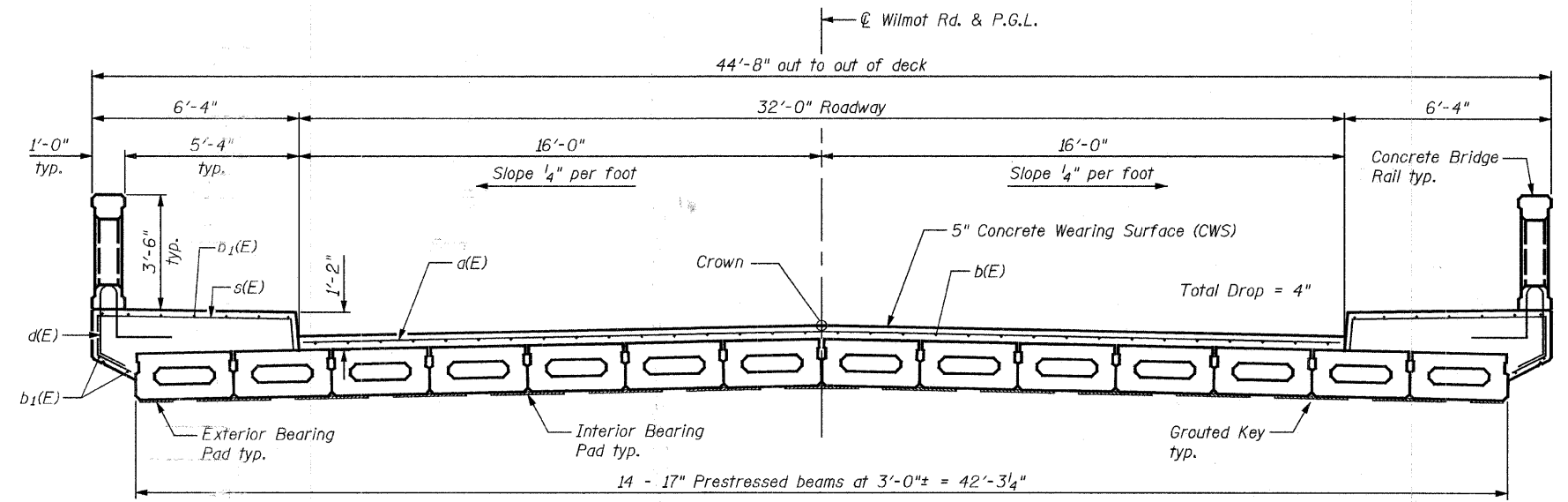
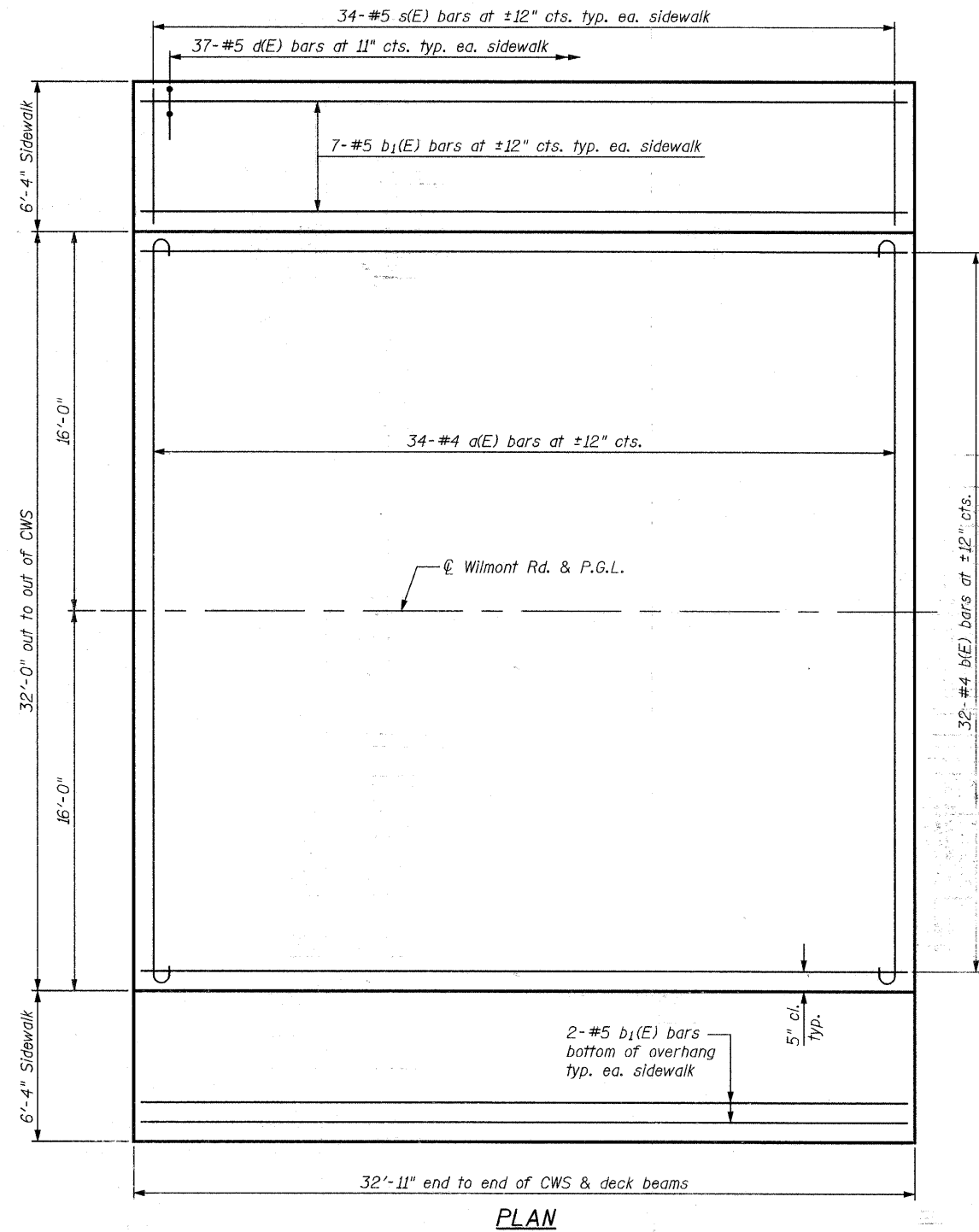
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 049-6151

DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

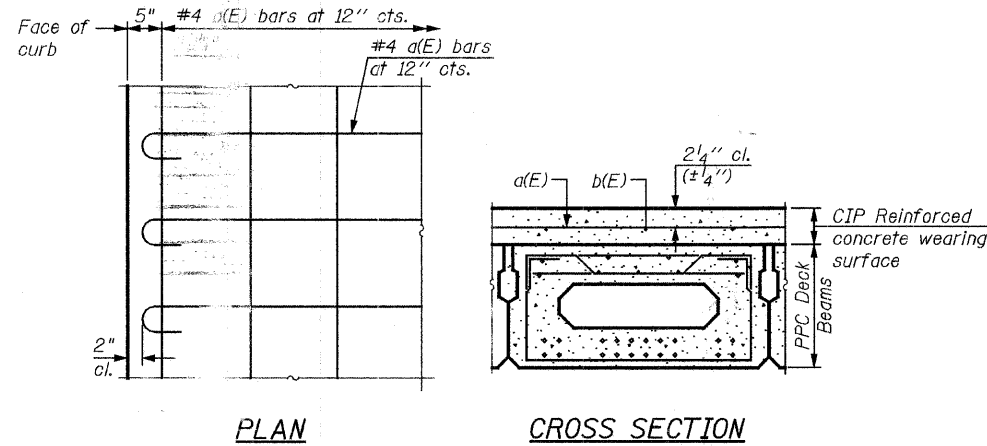
URS
100 South Wacker Drive, Suite 500
Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

SHEET NO. 2 7 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 63085					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

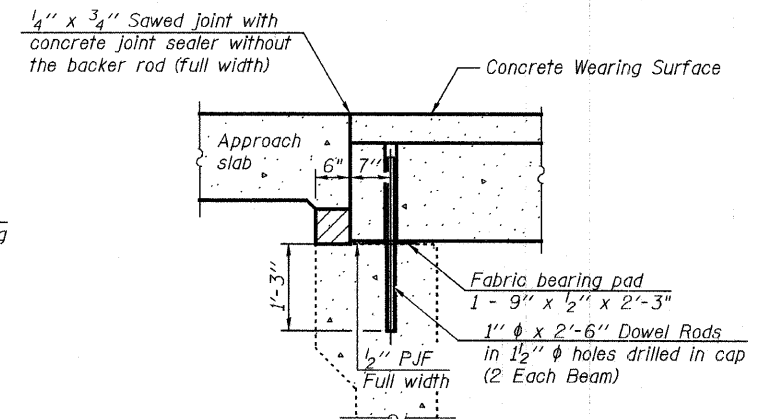
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



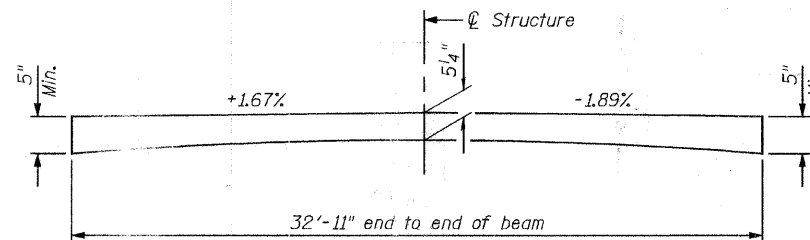
CROSS SECTION
(Looking upstation)



REINFORCED CONCRETE WEARING SURFACE DETAILS



SECTION THRU ABUTMENT



REINFORCED CONCRETE WEARING SURFACE PROFILE

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.
Burn existing dowel rods flush with existing concrete surface. Grind existing dowel rod smooth and seal with epoxy.
All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after Precast Prestressed Concrete Deck Beams have been erected. Quantity of concrete included with Concrete Superstructure.
See Sheet Nos. 5 & 6 for beam & bearing pad details.

Notes:
See Sheet No. 4 for superstructure details and Bill of Material.
See Sheet No. 4 for concrete bridge rail reinforcement.

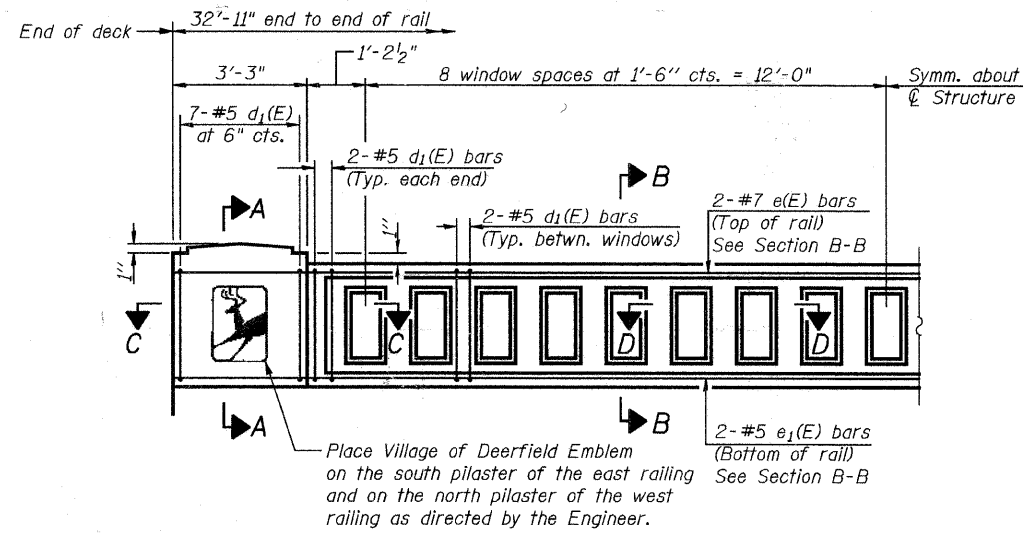
DESIGNED	SHELBIAN
CHECKED	JBUCHOLC
DRAWN	SHELBIAN
CHECKED	JBUCHOLC

URS
100 South Wacker Drive, Suite 500
Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

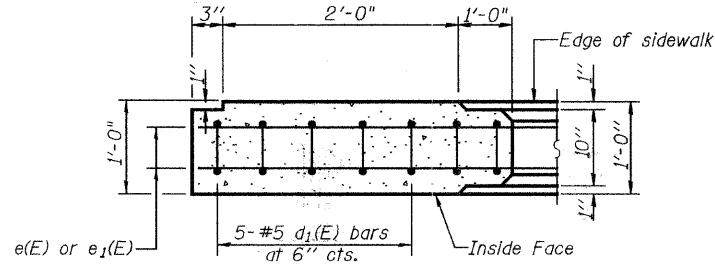
DECK PLAN & SECTION
STRUCTURE NO. 049-6151

SHEET NO. 3 7 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 63085					

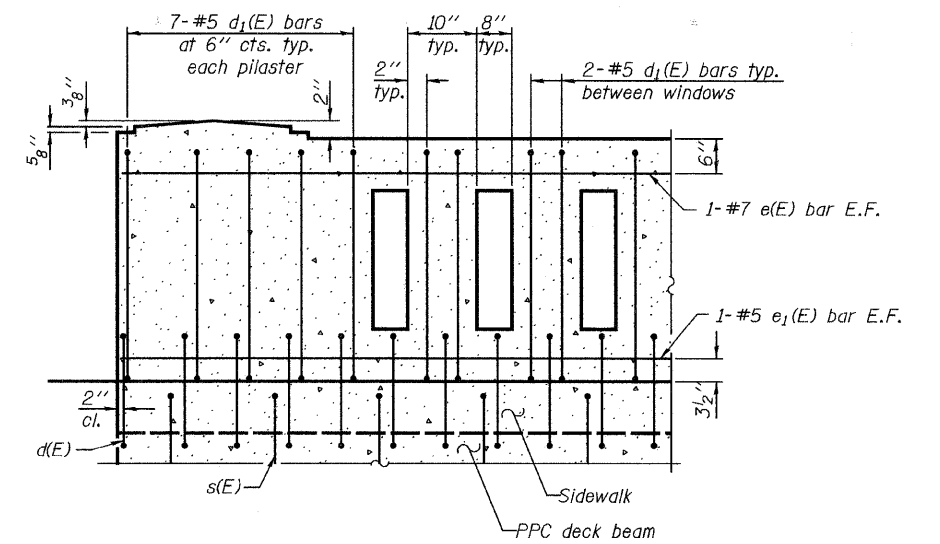
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



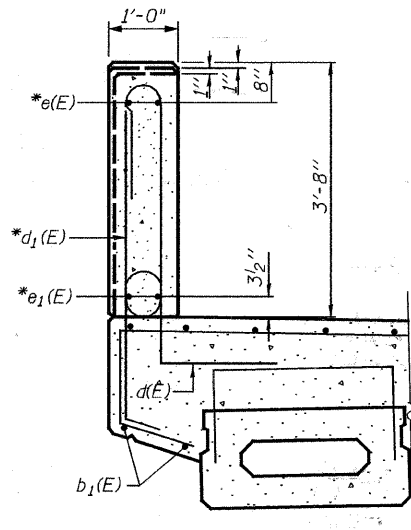
INSIDE ELEVATION OF RAIL



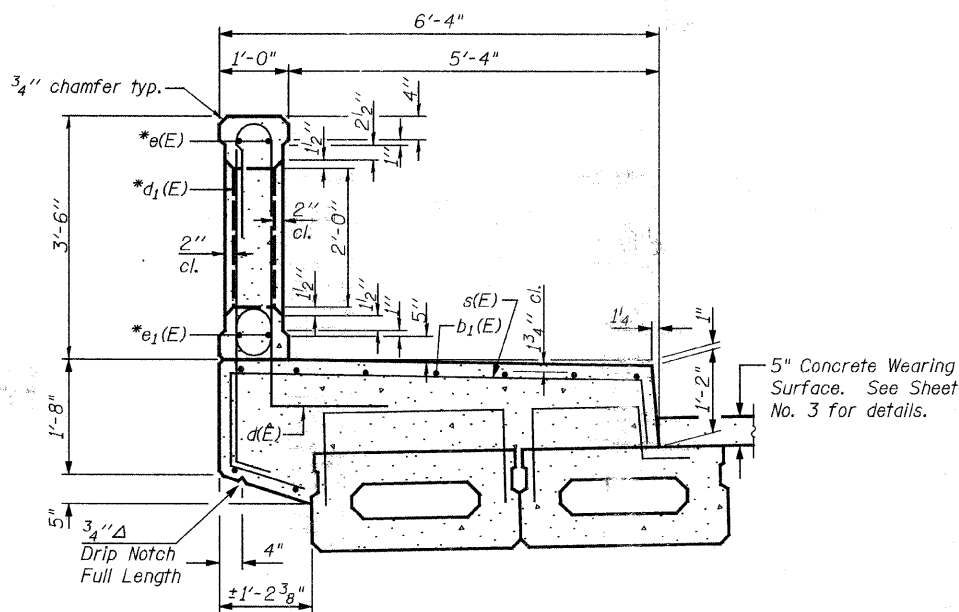
SECTION C-C



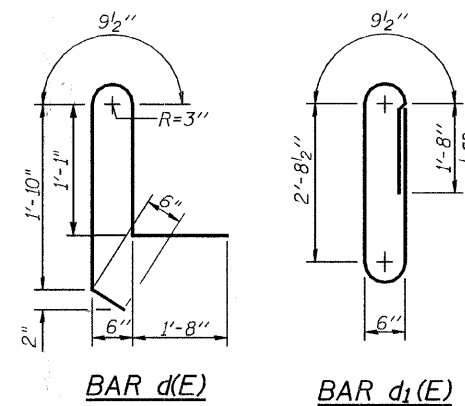
TYPICAL REINFORCEMENT PLACEMENT
(Inside Face)



SECTION A-A

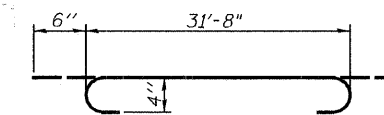


SECTION B-B

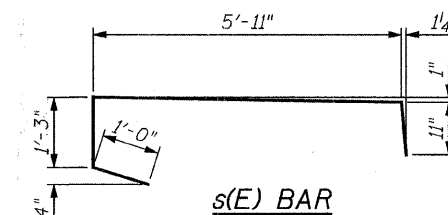


BAR d(E)

BAR d1(E)



d(E) BAR



s(E) BAR

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	34	#4	32'-8"	
b(E)	32	#4	32'-7"	
b1(E)	18	#5	32'-7"	
d(E)	74	#5	5'-10"	
s(E)	68	#5	9'-1"	
Reinforcement Bars, Epoxy Coated			Pound	3,150
Concrete Superstructure			Cu. Yds.	21.6
Bridge Deck Grooving			Sq. Yds.	109
Protective Coat			Sq. Yds.	190
Concrete Wearing Surface, 5"			Sq. Yds.	117
Concrete Bridge Railing, Sidewalk Mounted			Foot	66

* See Special Provisions

RAILING BAR LIST
ONE RAILING ONLY

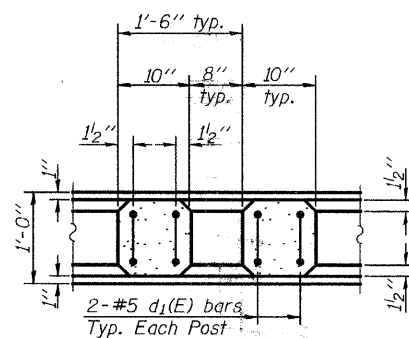
(For Information Only)

Bar	No.	Size	Length	Shape
d1(E)	50	#5	8'-8"	
e(E)	2	#7	32'-7"	
e1(E)	2	#5	32'-7"	

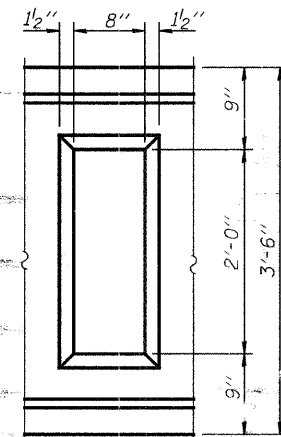
*Bars e(E) thru e1(E) and d1(E) are included in the cost of Concrete Bridge Railing, Sidewalk Mounted.

Notes:

All concrete for railing wall shall be Class BS according to Article 1020.04 of the Standard Specifications. Surface of railing shall receive a rubbed finish according to Article 503.15(b) of the Standard Specifications.
All parts of the railing including concrete and reinforcing will be paid for at the contract unit price per foot for Concrete Bridge Railing, Sidewalk Mounted. Holes and recesses must be formed or cored. Drilling is not permitted. All construction joints shall be bonded unless otherwise noted. Work this sheet with Sheet No. 3.



SECTION D-D



WINDOW DETAIL

DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

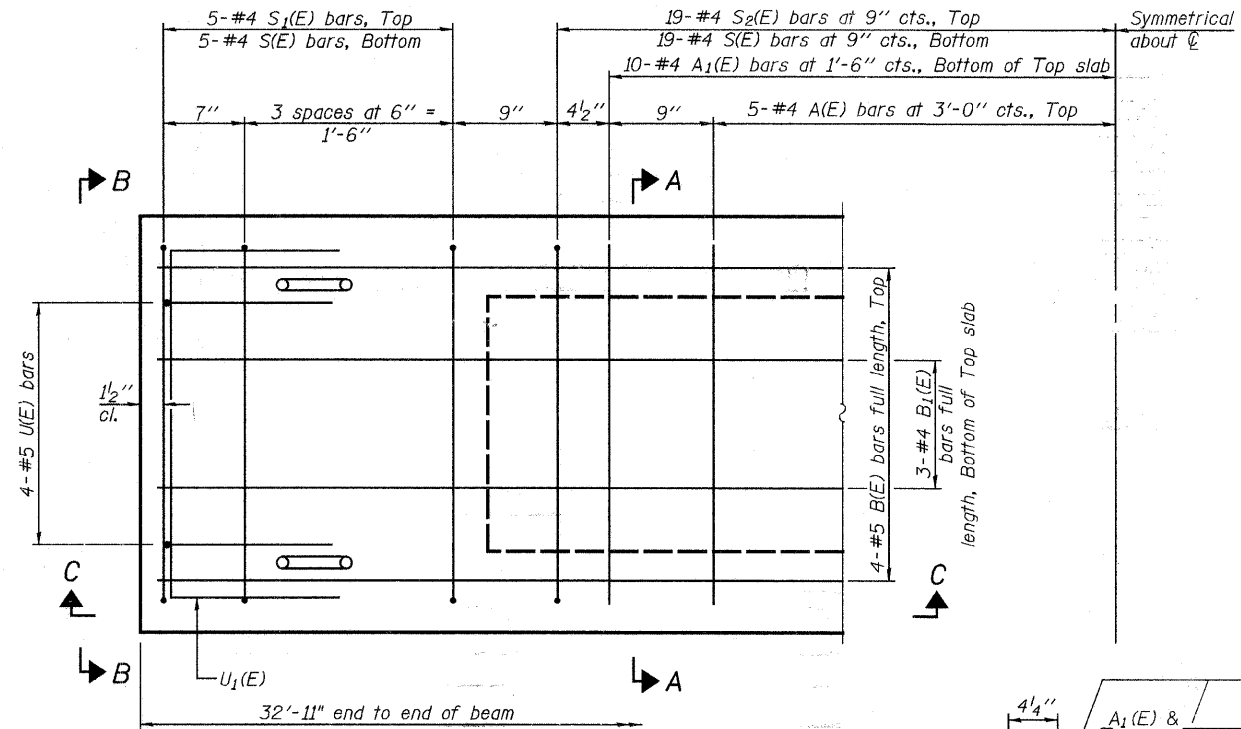


100 South Wacker Drive, Suite 500
Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

SUPERSTRUCTURE & RAILING DETAILS
STRUCTURE NO. 049-6151

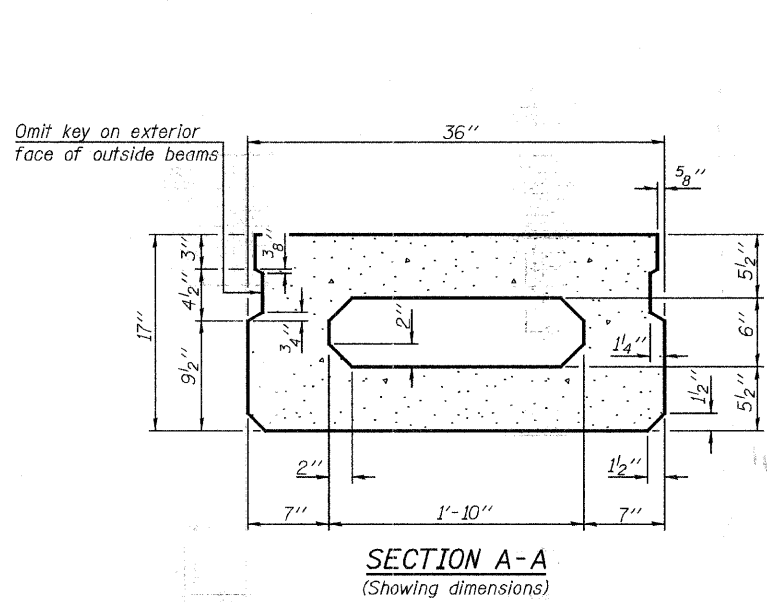
SHEET NO. 4 7 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2718	08-00081-00-BR	LAKE	26	15
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 63085					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

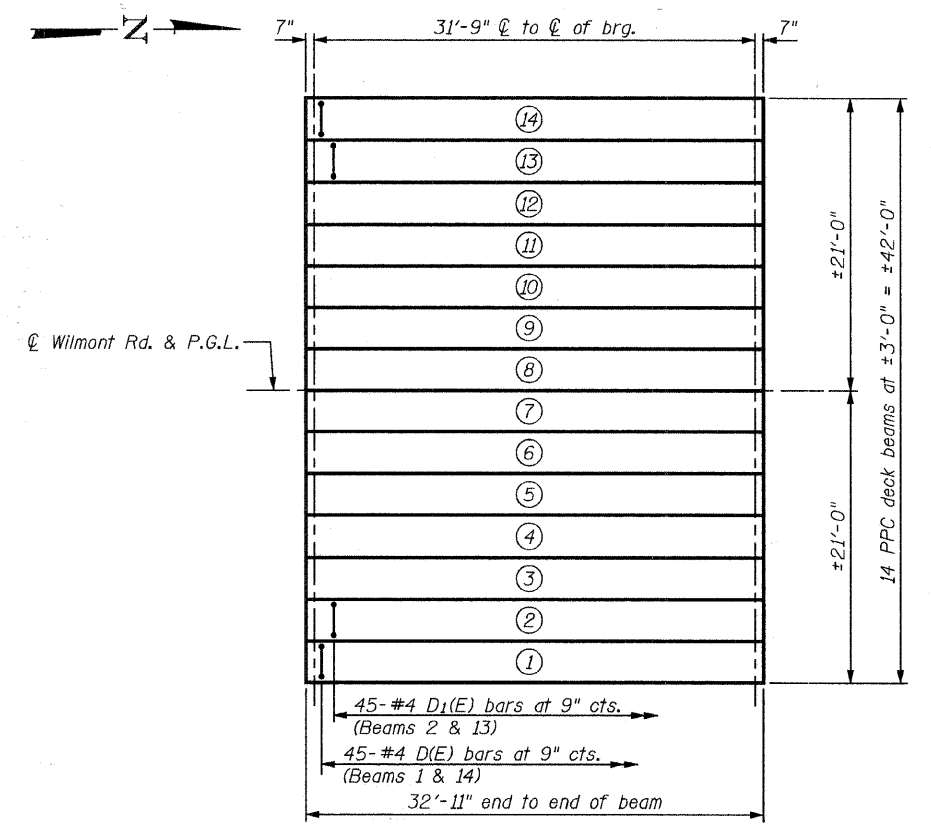


PLAN VIEW

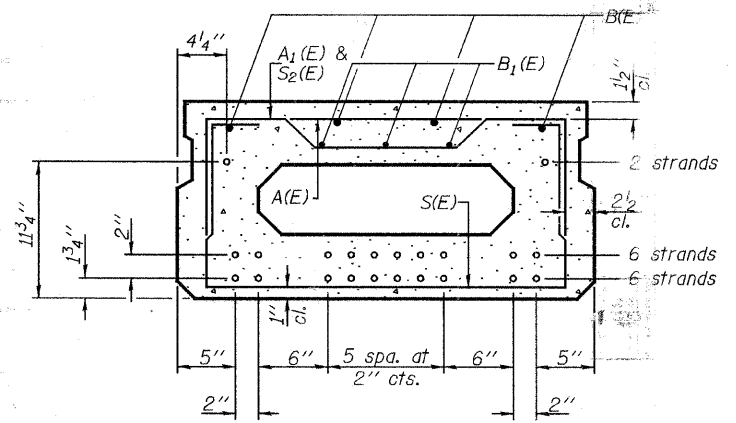
Note: Spacing of S(E) and S₂(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION A-A
(Showing dimensions)

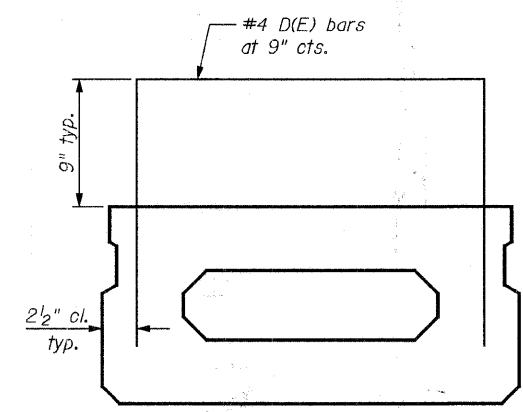


FRAMING PLAN

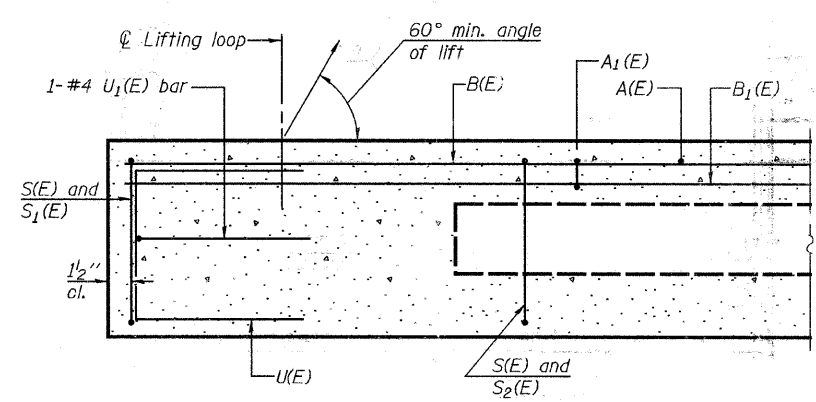


SECTION A-A
(Showing reinforcement and permissible strand locations.)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

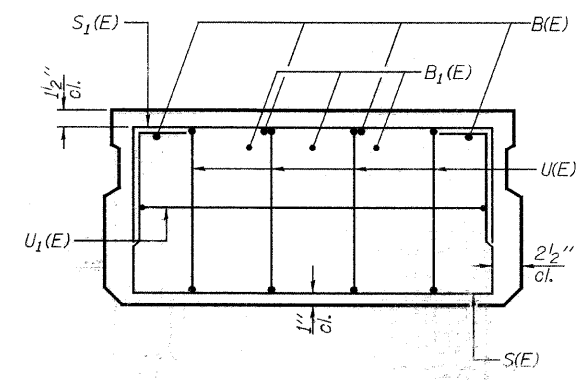


DECK BEAMS 1 & 14
(Showing additional reinforcement)

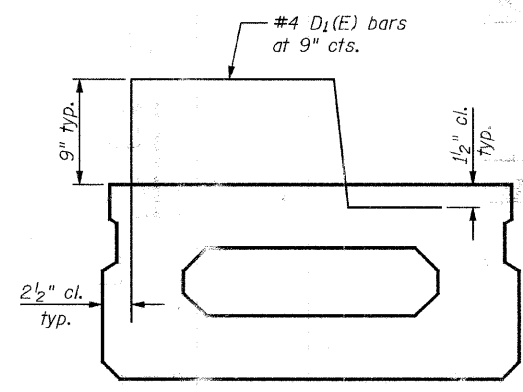


SECTION C-C

Notes:
Work this sheet with Sheet No. 6.



VIEW B-B



DECK BEAMS 2 & 13
(Showing additional reinforcement
(Deck Beam 2 shown, Deck Beam 13 opposite hand))

	0.5 Span
I	(in ⁴) 13,924
S _b	(in ³) 1,655.6
S _t	(in ³) 1,621.0
ℓ	(k/ft) 0.713
Mℓ	(k) 89.9
sℓ	(k/ft) 0.511
M _s ℓ	(k) 64.4
Mℓ	(k) 103.6
Mℓ	(k) 31.0

	Abut.
Rℓ	(k) 11.4
R _s ℓ	(k) 8.1
Rℓ	(k) 32.5
Rℓ	(k) 9.8
R _{Total}	(k) 61.8

I: Non-composite moment of inertia of beam section (in⁴).
 S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
 S_t: Non-composite section modulus for the top fiber of the prestressed beam (in³).
 ℓ: Un-factored non-composite dead load (kips/ft.).
 Mℓ: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
 sℓ: Un-factored long-term composite (superimposed) dead load (kips/ft.).
 M_sℓ: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 Mℓ: Un-factored live load moment (kip-ft.).
 Mℓ: Un-factored moment due to impact (kip-ft.).

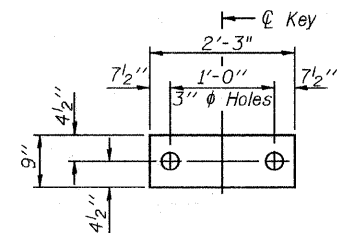
PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6151

DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

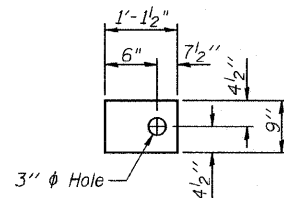
SHEET NO. 5 7 SHEETS	F.A.U. RTE. 2718	SECTION 08-00081+00-BR	COUNTY LAKE	TOTAL SHEETS 26	SHEET NO. 16
	CONTRACT NO. 63085			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT	

URS
100 South Wacker Drive, Suite 500
Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

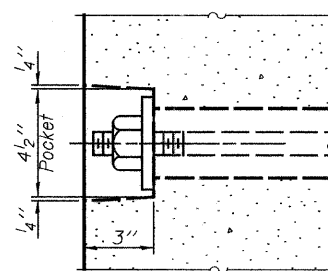


FABRIC BEARING PAD
(Interior)

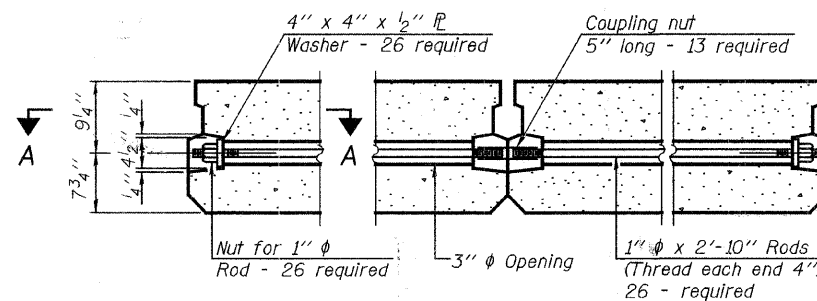


FABRIC BEARING PAD
(Exterior)

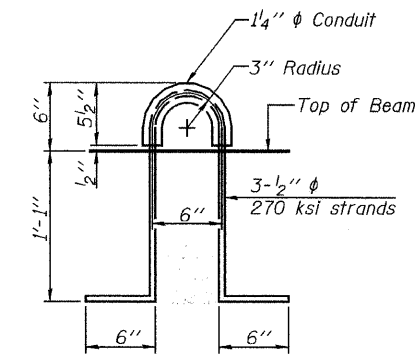
FIXED



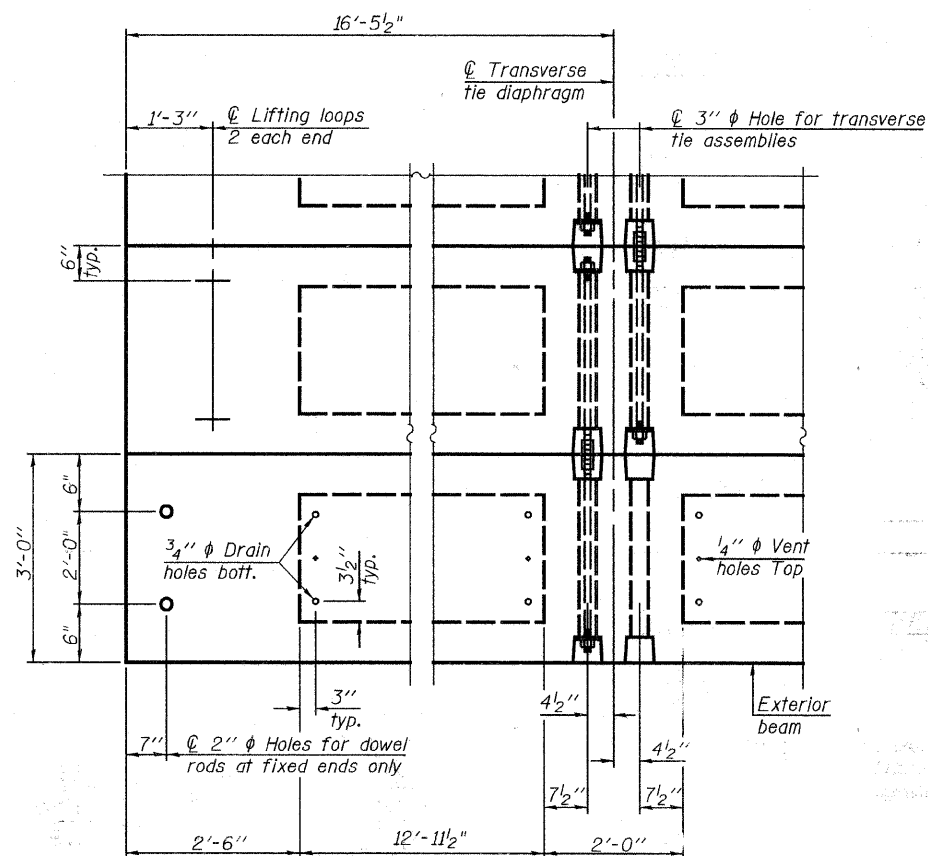
SECTION A-A



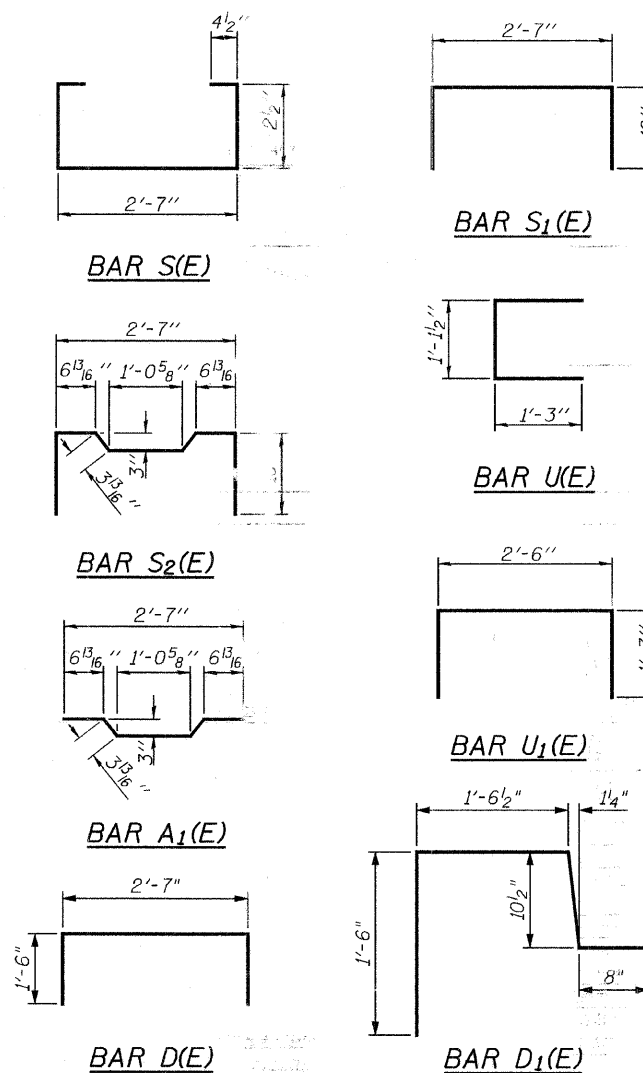
TYPICAL TRANSVERSE TIE ASSEMBLY



LIFTING LOOP DETAIL



PLAN VIEW



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	10	#4	2'-7"	—
A ₁ (E)	20	#4	2'-11"	—
B(E)	4	#5	32'-8"	—
B ₁ (E)	3	#4	32'-8"	—
D(E)	45	#4	5'-7"	—
D ₁ (E)	45	#4	4'-7"	—
S(E)	48	#4	5'-9"	—
S ₁ (E)	10	#4	4'-3"	—
S ₂ (E)	38	#4	4'-6"	—
U(E)	8	#5	3'-8"	—
U ₁ (E)	2	#4	5'-0"	—

Beams 1 & 14 Only
Beams 2 & 13 Only

Notes:

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- See Sheet No. 5 for additional details.

BILL OF MATERIAL

* Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1383
---	---------	------

* See Special Provisions

PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6151

DESIGNED	SHELBIAN
CHECKED	JBUCHOLC
DRAWN	SHELBIAN
CHECKED	JBUCHOLC

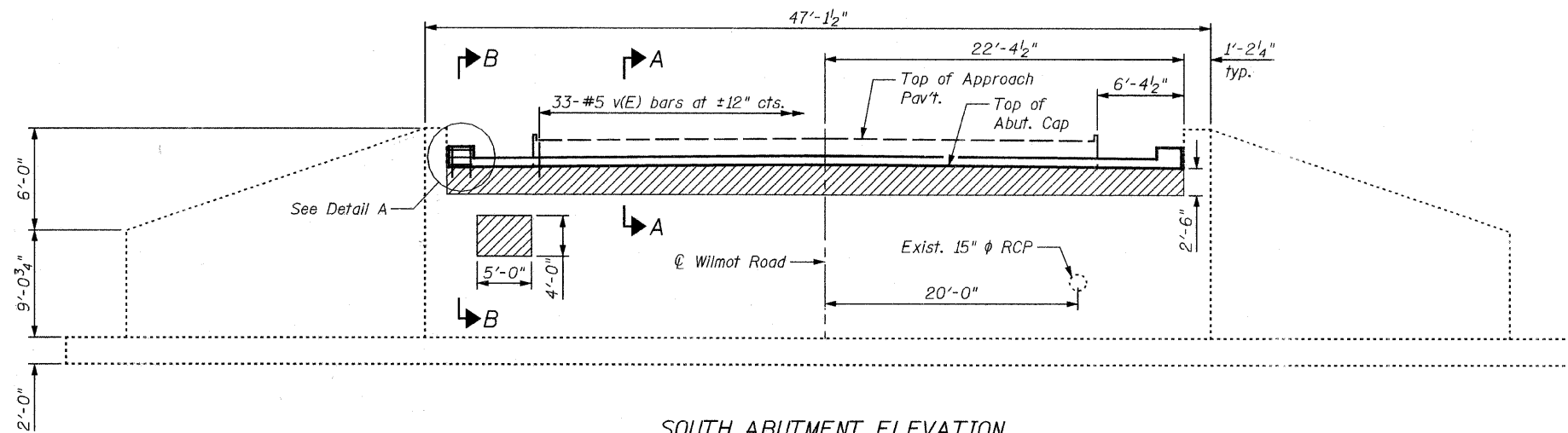
URS

100 South Wacker Drive, Suite 500
Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

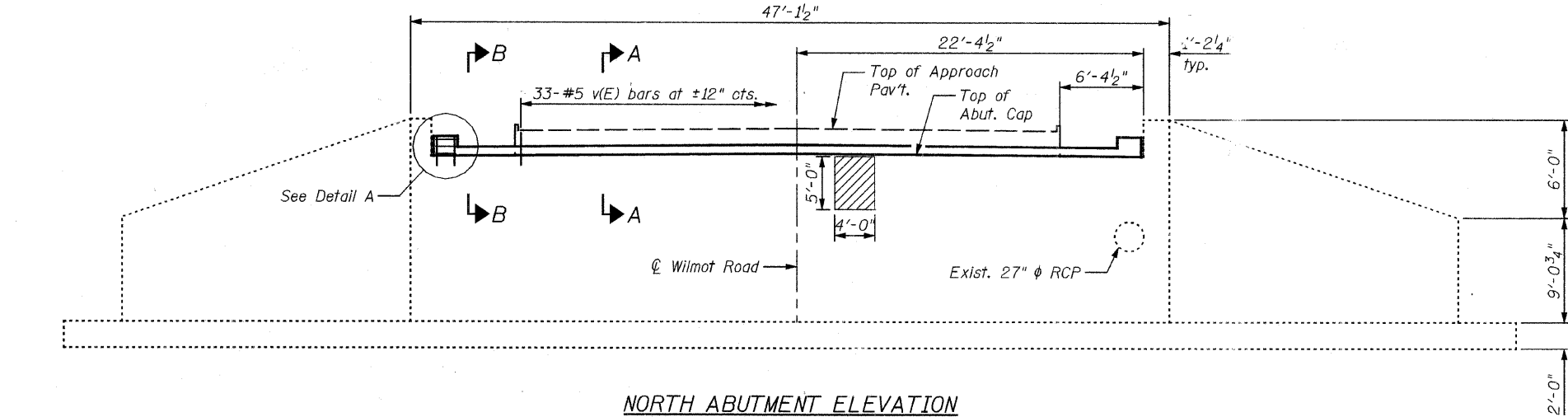
SHEET NO. 6 7 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2718	08-00081-00-BR	LAKE	26	17
FED. ROAD DIST. NO. - ILLINOIS			FED. AID. PROJECT		
CONTRACT NO. 63085					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

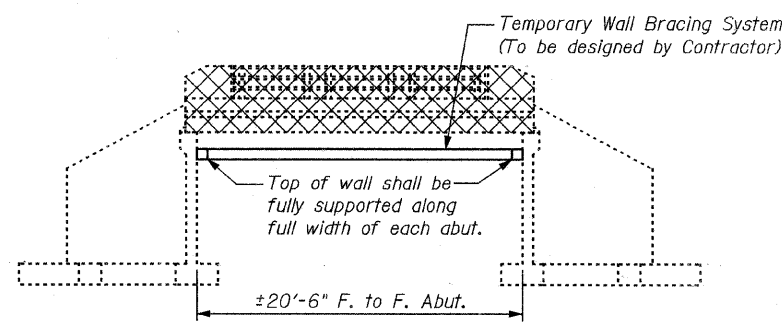
63085



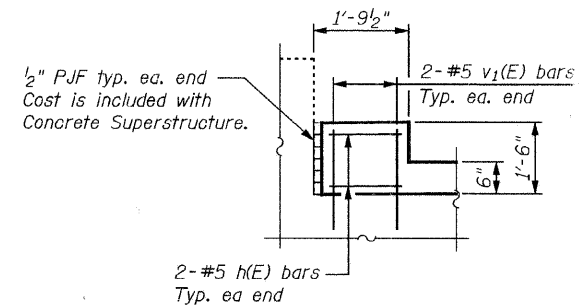
SOUTH ABUTMENT ELEVATION
(Facing South)



NORTH ABUTMENT ELEVATION
(Facing North)



TEMPORARY WALL BRACING SYSTEM



DETAIL A

Notes:
Prior to removing the existing superstructure, a temporary wall bracing system shall be installed to brace each abutment wall to resist potential overturning. The Contractor shall submit a temporary support system design including plan details and calculations for review and acceptance by the Engineer. See Special Provisions.
Existing reinforcement bars that have been cut and/or damaged during repair operations shall be supplemented by new in kind reinforcing bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. A mechanical bar splicer shall be used when it is not feasible to provide the minimum bar lap. No welding of bars shall be performed. See Special Provisions.
Concrete Sealer shall be applied to each abutment cap according to Section 587 of the Standard Specifications.
All construction joints shall be bonded unless otherwise noted.

DESIGNED	SHELBIAN
CHECKED	JBUCHOLC
DRAWN	SHELBIAN
CHECKED	JBUCHOLC

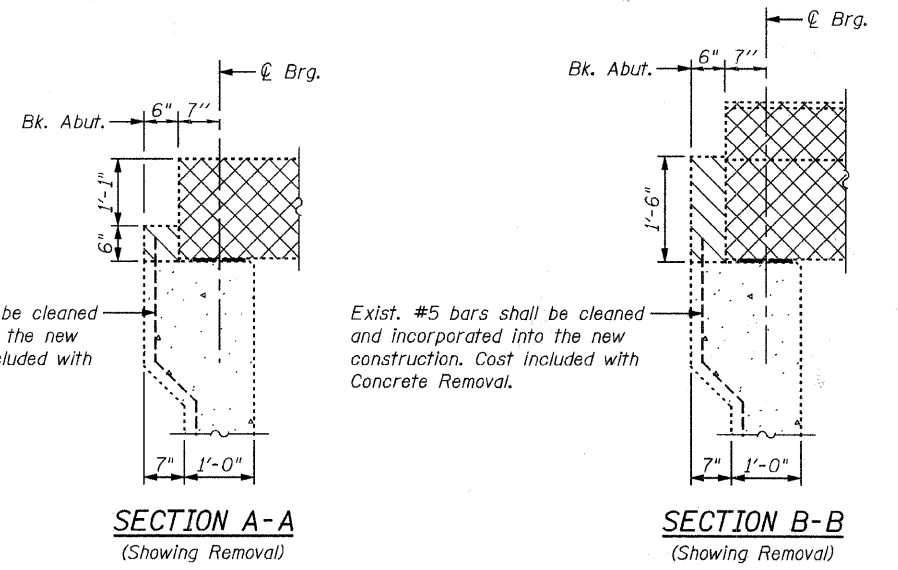
LEGEND

	Removal of Existing Superstructure
	Concrete Removal
	Structural Repair of Concrete Depth equal to or less than 5"

**ABUTMENTS
BILL OF MATERIAL**

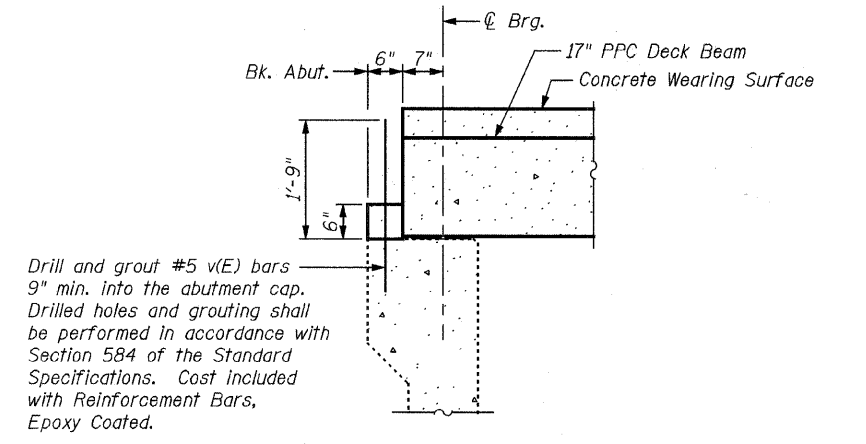
Bar	No.	Size	Length	Shape
h(E)	8	#5	1'-5"	
v(E)	66	#5	2'-6"	
v1(E)	8	#5	2'-1"	
Reinforcement Bars, Epoxy Coated		Pound	2.10	
Concrete Removal		Cu. Yd.	1.0	
Structural Repair of Concrete (<=5")		Sq. Ft.	151.9	
Concrete Sealer		Sq. Ft.	142	
Temporary Wall Bracing System		L Sum	1	

* See Special Provisions



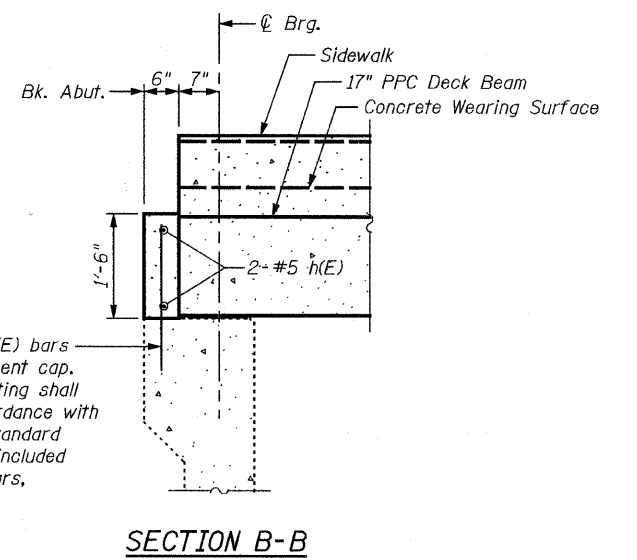
SECTION A-A
(Showing Removal)

SECTION B-B
(Showing Removal)



Drill and grout #5 v(E) bars 9" min. into the abutment cap. Drilled holes and grouting shall be performed in accordance with Section 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

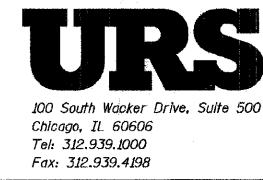
SECTION A-A



SECTION B-B

**SUBSTRUCTURE REPAIRS & DETAILS
STRUCTURE NO. 049-6151**

SHEET NO. 7 7 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2718	08-00081-00-BR	LAKE	26	18
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RE-BUILT 2009 BY
VILLAGE OF DEERFIELD
SEC. 08-00081-00-BR
STATION 19+50.71
STR. NO. 049-6152 LOADING HS20

WATERWAY INFORMATION

Drainage Area = 3767 Ac.		Low Grade Elev. 658.91 @ Sta. 19+75.78			
Flood	Freq. Yr.	Opening C.F.S.	Sq. Ft. Nat. H.W.E.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
	10	140	159.41		654.22 654.22
Design	30	232	191.30		655.23 655.23
Base	100	542	219.88		657.22 657.22
Overtopping					
Max. Calc.	500	916	226.98		658.82 658.82

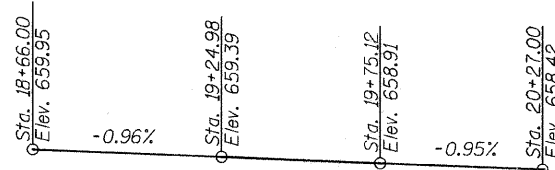
Benchmark:
BM #1 - Top of hydrant at Sta. 16+88.71, 32 ft. Lt.
Elev. 660.17

BM #2 - Top of hydrant at Sta. 21.26.71, 20 ft. Lt.
Elev. 660.54

Existing Structure: S/N. 049-6152 was originally built in 1968 by the Village of Deerfield. It consists of a single span 21" deep precast prestressed concrete deck beam superstructure. The superstructure is supported on closed concrete abutments founded on spread footings. The structure length measures 50'-1 3/4" from back-to-back of abutments and the roadway width measures 26'-0" from face-to-face of curb. The existing superstructure will be removed and replaced. The roadway will be closed during construction. Traffic will utilize a detour.

Salvage: Remove portions of the existing fence at each quadrant of the bridge to facilitate removal and replacement operations. The fence shall be reinstalled by the Contractor after all work is completed.

PROFILE GRADE LINE - HAZEL AVENUE



NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	L Sum	1		1
Concrete Removal	Cu. Yd.		4.8	4.8
Concrete Superstructure	Cu. Yd.	35.1		35.1
Bridge Deck Grooving	Sq. Yd.	115		115
Protective Coat	Sq. Yd.	232		232
* Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,565		1,565
* Reinforcement Bars, Epoxy Coated	Pound	4,360	670	5,030
Name Plates	Each	1		1
Concrete Sealer	Sq. Ft.		212	212
* Structural Repair of Concrete (Depth less than or equal to 5")	Sq. Ft.		71.0	71.0
Concrete Bridge Rail, Sidewalk Mounted	Foot	93		93
* Concrete Wearing Surface, 5"	Sq. Yd.	127		127
* Asbestos Bearing Pad Removal	Each	11		11

* See Special Provisions

GENERAL NOTES

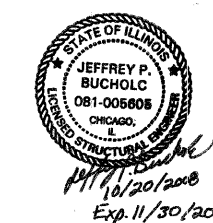
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing 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.
- The existing superstructure has a ±4.3" bituminous concrete overlay that will be removed. Cost included with Removal of Existing Superstructure.
- Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
- Contractor shall install two Village of Deerfield emblems provided by the Village at the locations shown. Cost included with Name Plates.

SCOPE OF WORK

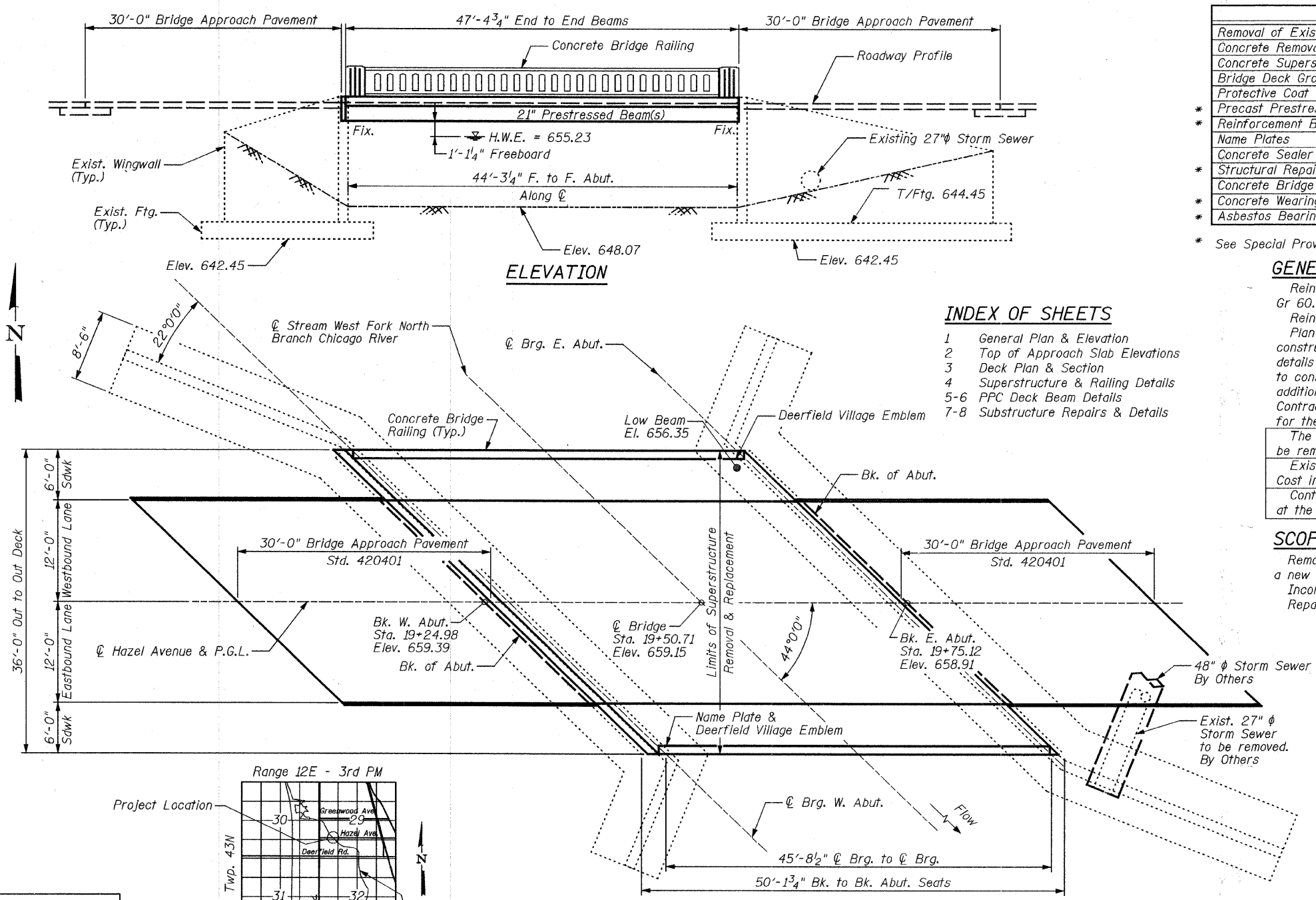
- Remove the existing superstructure and replace with new 21" PPC deck beams and a new 5" R.C. wearing surface.
- Incorporate new sidewalks and decorative bridge railings.
- Repair deteriorated concrete with Structural Repair of Concrete at each abutment.

DESIGN STRESSES

- FIELD UNITS
- f'c = 3,500 psi
 - fy = 60,000 psi (Reinforcement)
 - fy = 50,000 psi (M270 Grade 50)
- PRECAST PRESTRESSED UNITS
- f'c = 6,000 psi
 - f'ci = 5,000 psi
 - f's = 270,000 psi (1/2" φ low lax strands)
 - f'si = 201,960 psi (1/2" φ low lax strands)
- FIELD UNITS (EXISTING)
- f'c = 1,400 psi (Super)
 - f'c = 1,000 psi (Sub)
 - vc = 75 psi (Ftg)
 - fs = 20,000 psi (Reinforcement)

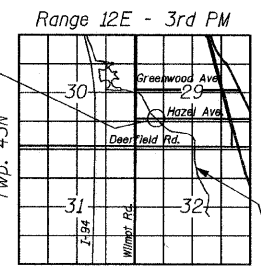


GENERAL PLAN & ELEVATION
STRUCTURE NO. 049-6152



INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 Top of Approach Slab Elevations
- 3 Deck Plan & Section
- 4 Superstructure & Railing Details
- 5-6 PPC Deck Beam Details
- 7-8 Substructure Repairs & Details



LOCATION SKETCH

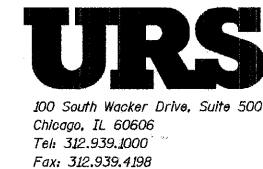
DESIGN SPECIFICATIONS
2002 AASHTO Standard Specification

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coeff. (A) = 0.040g
Site Coefficient (S) = 1.0

SUPERSTRUCTURE LOADING HS 25

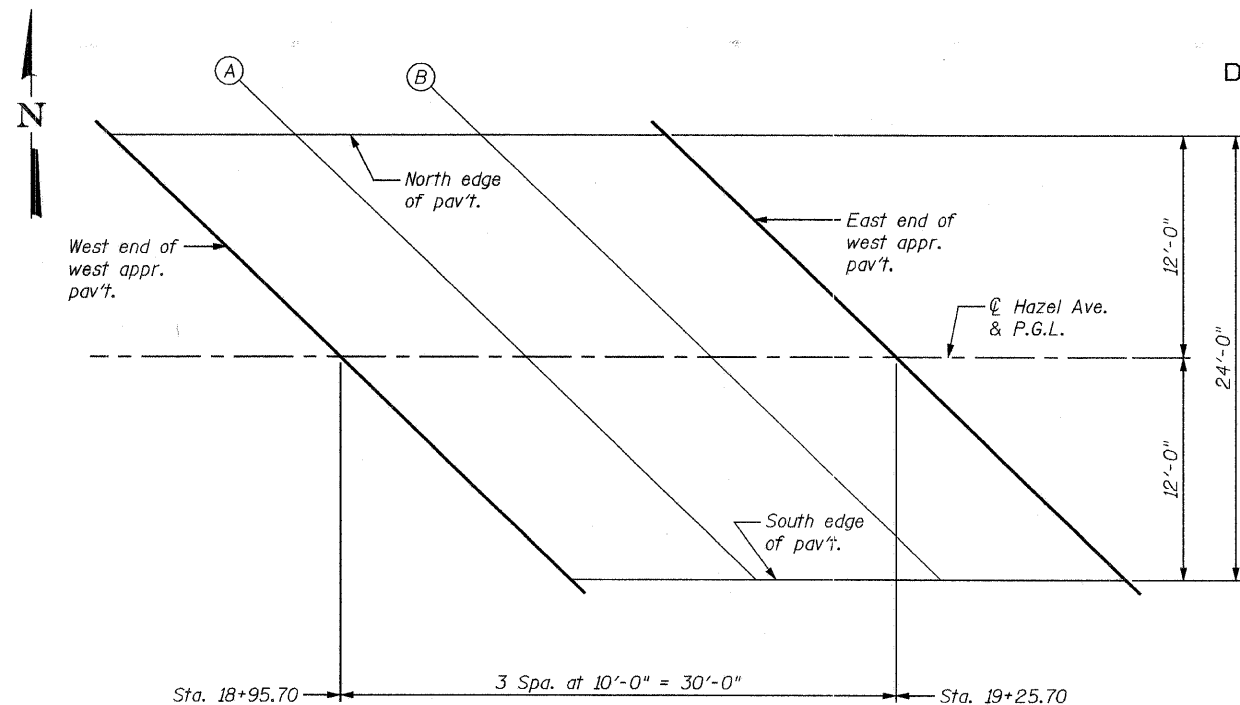
SUBSTRUCTURE LOADING HS 20
Allow 50#/sq. ft. for future wearing surface.



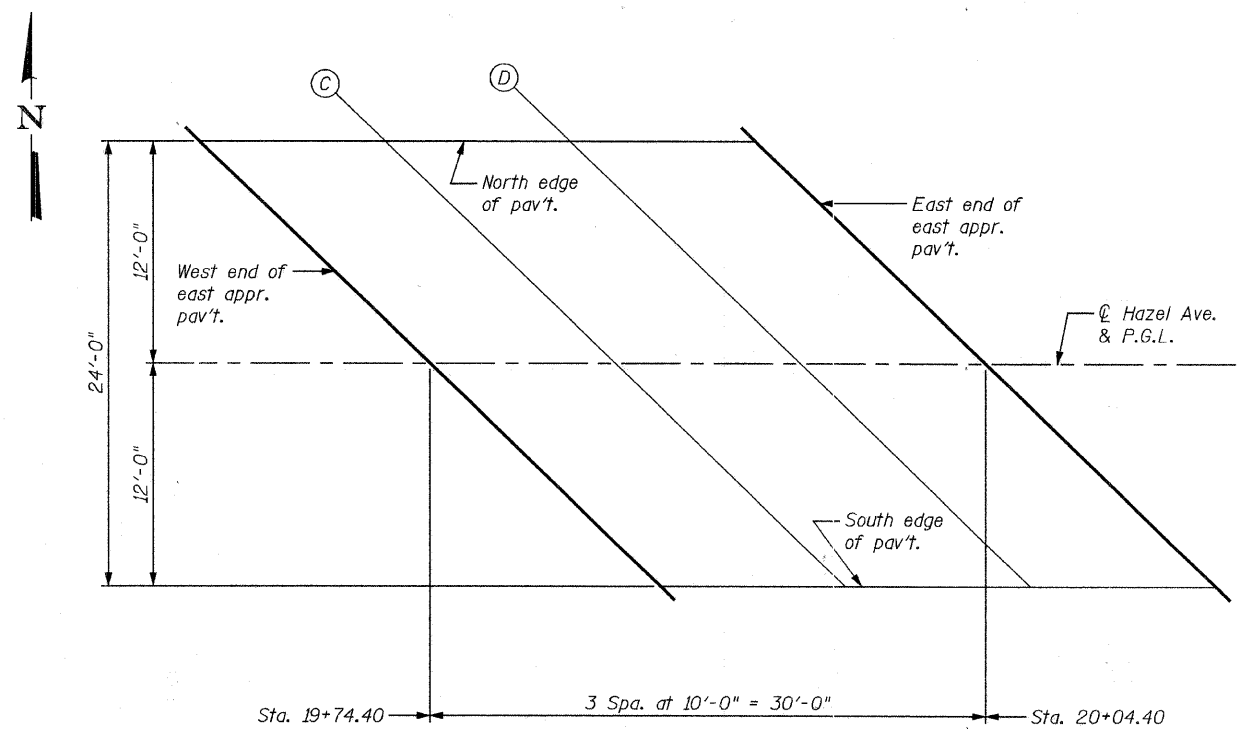
DESIGNED	SCHSELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHSELBIAN
CHECKED	JBUCHOLC

SHEET NO. 1 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1263	08-00081-00-BR	LAKE	26	19
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 63085					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - WEST APPROACH PAVEMENT



PLAN - EAST APPROACH PAVEMENT

WEST APPROACH SLAB
NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end west appr. pav't.	18+83.27	-12.00	659.54
A	18+93.27	-12.00	659.45
B	19+03.27	-12.00	659.35
E. end west appr. pav't.	19+13.27	-12.00	659.26

EAST APPROACH SLAB
NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end east appr. pav't.	19+61.97	-12.00	658.76
C	19+71.97	-12.00	658.67
D	19+81.97	-12.00	658.57
E. end east appr. pav't.	19+91.97	-12.00	658.48

WEST APPROACH SLAB
Hazel Ave. & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
W. end west appr. pav't.	18+95.70	0.00	659.67
A	19+05.70	0.00	659.58
B	19+15.70	0.00	659.48
E. end west appr. pav't.	19+25.70	0.00	659.39

EAST APPROACH SLAB
Hazel Ave. & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
W. end east appr. pav't.	19+74.40	0.00	658.92
C	19+84.40	0.00	658.80
D	19+94.40	0.00	658.71
E. end east appr. pav't.	20+04.40	0.00	658.61

WEST APPROACH SLAB
SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end west appr. pav't.	18+96.74	12.00	659.41
A	19+06.74	12.00	659.32
B	19+16.74	12.00	659.22
E. end west appr. pav't.	19+26.74	12.00	659.13

EAST APPROACH SLAB
SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end east appr. pav't.	19+86.83	12.00	658.53
C	19+96.83	12.00	658.44
D	20+06.83	12.00	658.34
E. end east appr. pav't.	20+16.83	12.00	658.25

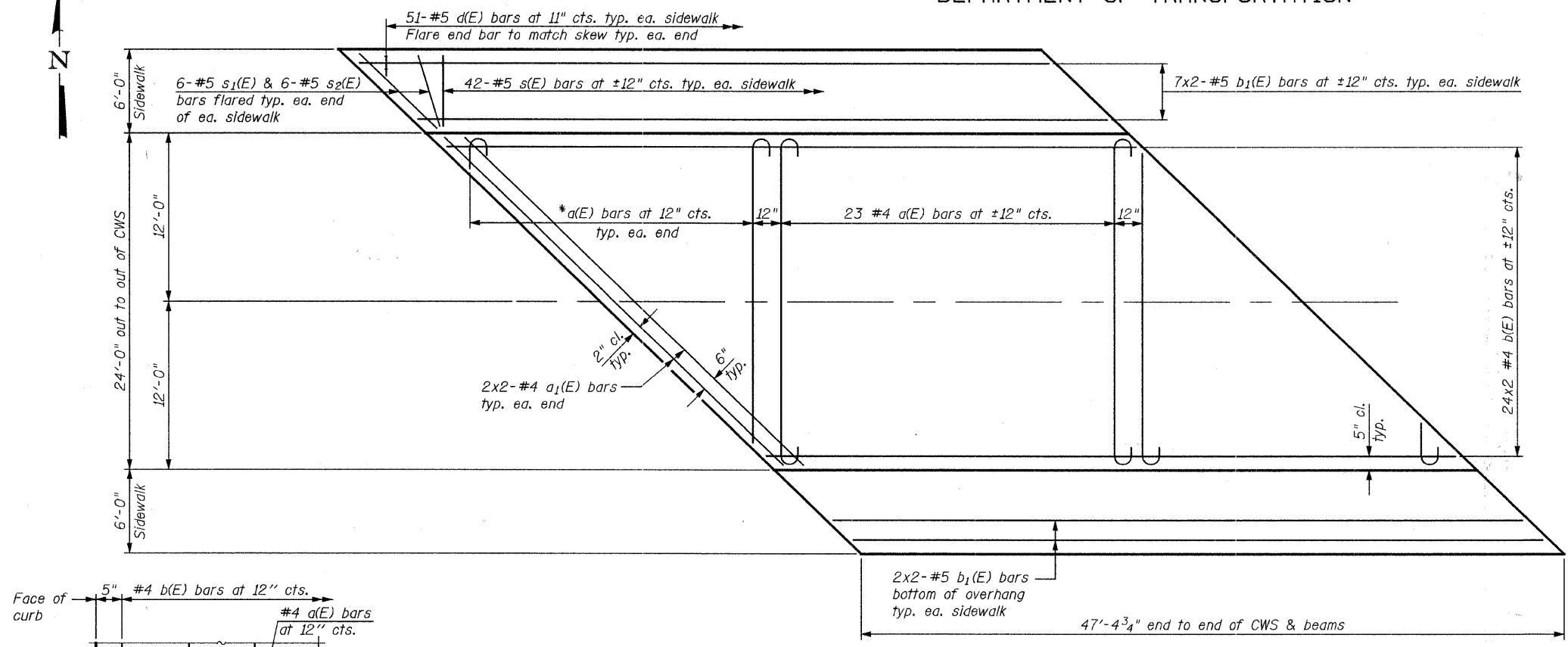
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CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC



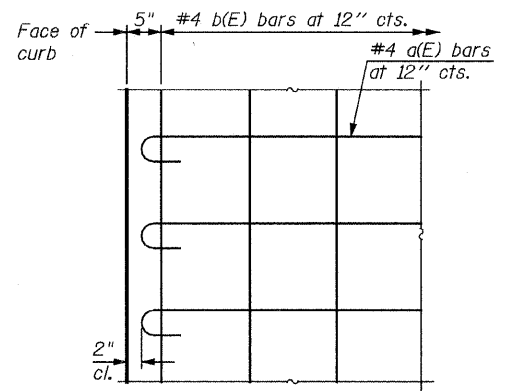
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 049-6152

SHEET NO. 2 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 63085					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

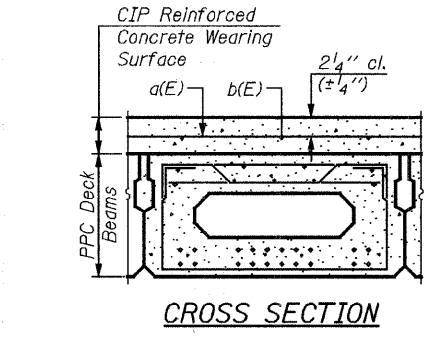
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



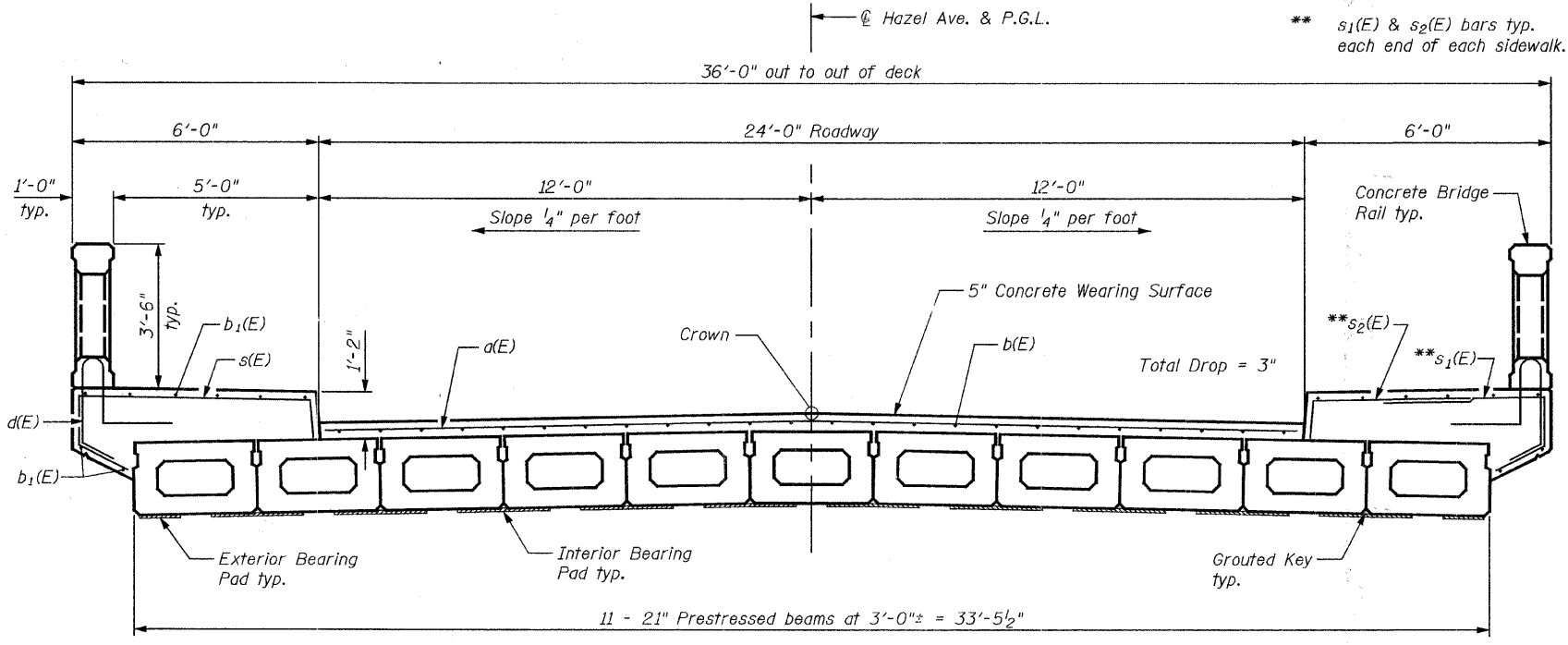
PLAN



CROSS SECTION

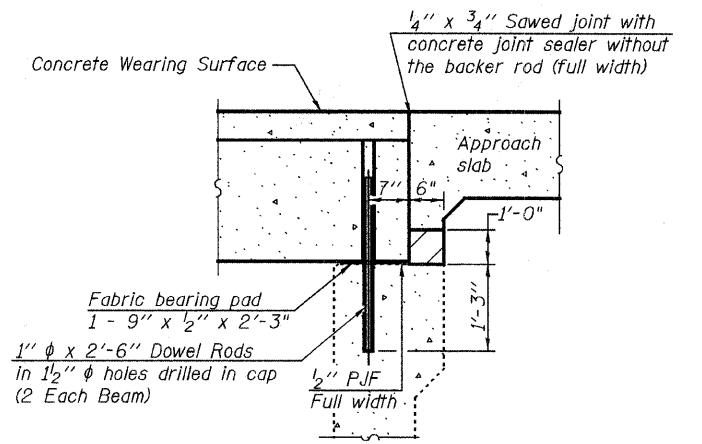
REINFORCED CONCRETE WEARING SURFACE DETAILS

* Order an additional 25 - a(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

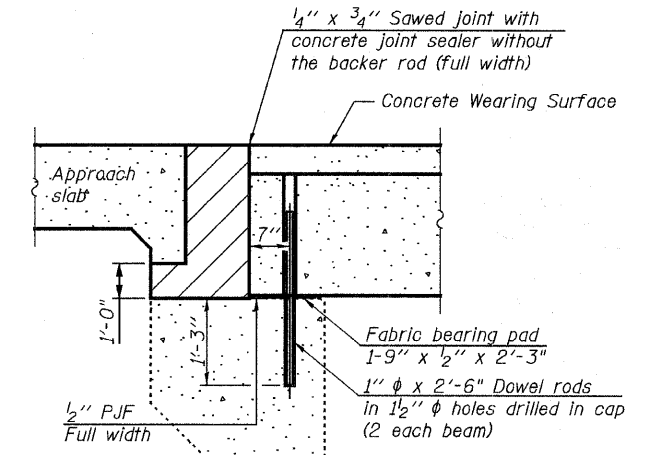


CROSS SECTION
(Looking upstream)

MINIMUM BAR LAP
(R.C. Wearing Surface & Sidewalk)
#4 Bar = 1'-8"
#5 Bar = 2'-2"

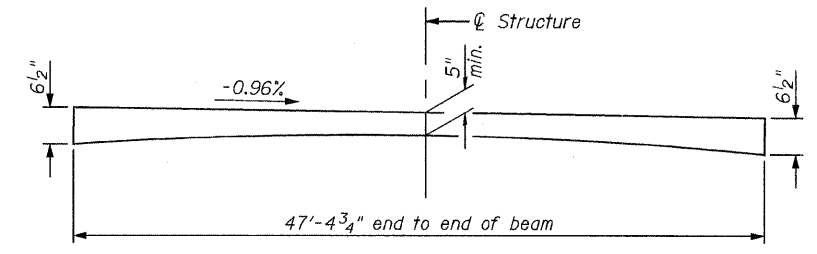


SECTION THRU EAST ABUTMENT



SECTION THRU WEST ABUTMENT

Notes:
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
Burn existing dowel rods flush with existing concrete surface. Grind existing dowel rod smooth and seal with epoxy.
All horizontal dimensions are at right angles to beam ends. Hatched areas to be poured after concrete wearing surface is in place. Quantity of concrete included with Concrete Superstructure.
See Sheet Nos. 5 & 6 for beam and bearing pad details.



REINFORCED CONCRETE WEARING SURFACE PROFILE

DECK PLAN & SECTION
STRUCTURE NO. 049-6152

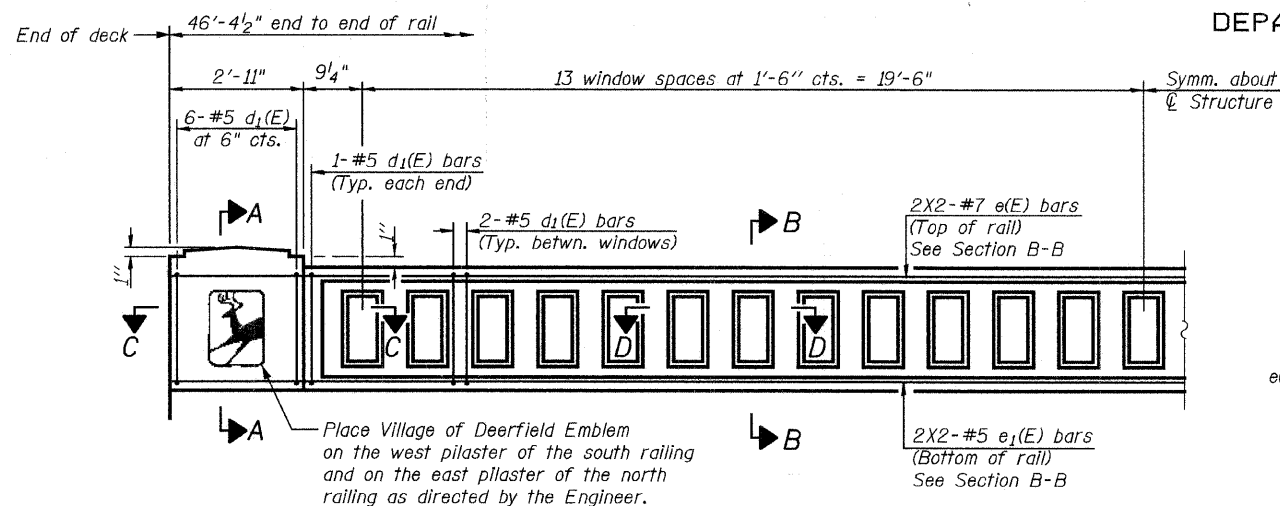
DESIGNED	SHELBIAN
CHECKED	JBUCHOLC
DRAWN	SHELBIAN
CHECKED	JBUCHOLC

Notes:
See Sheet No. 4 for superstructure details and Bill of Material.
See Sheet No. 4 for concrete bridge rail reinforcement.
Bars indicated thus 24x2-#4 etc. indicates 24 lines of bars with 2 lengths per line.

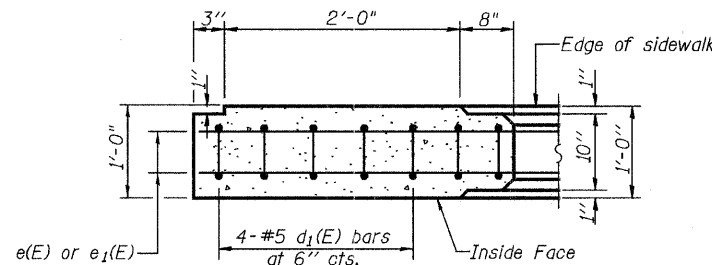
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Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

SHEET NO. 3 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1263	08-00081-00-BR	LAKE	26	21
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 63085					

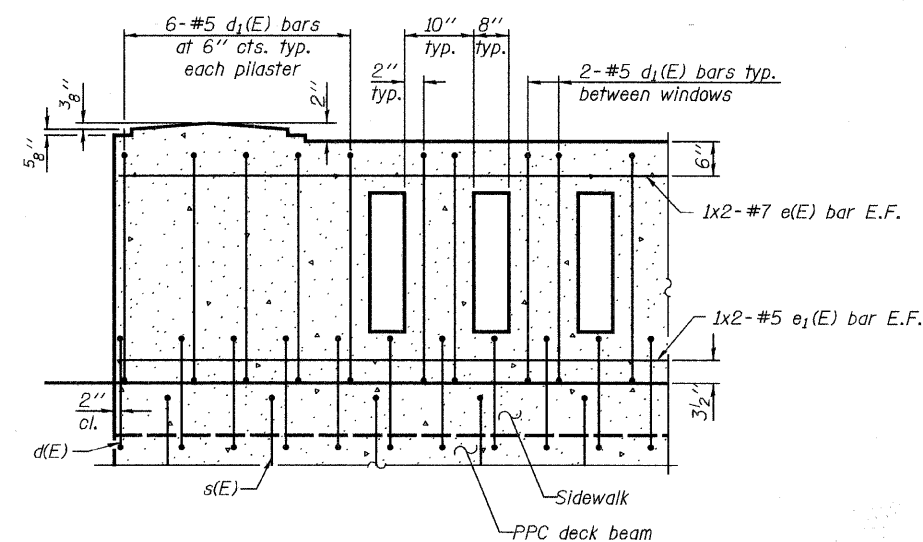
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



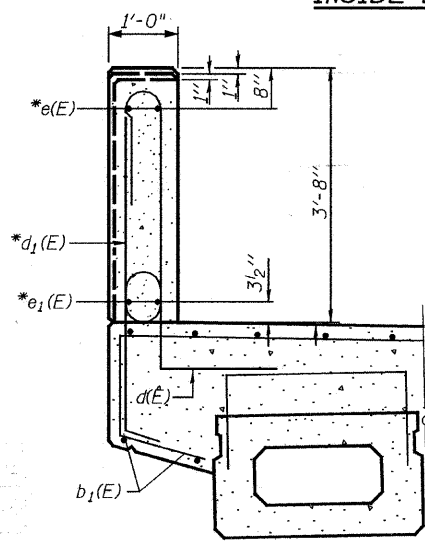
INSIDE ELEVATION OF RAIL



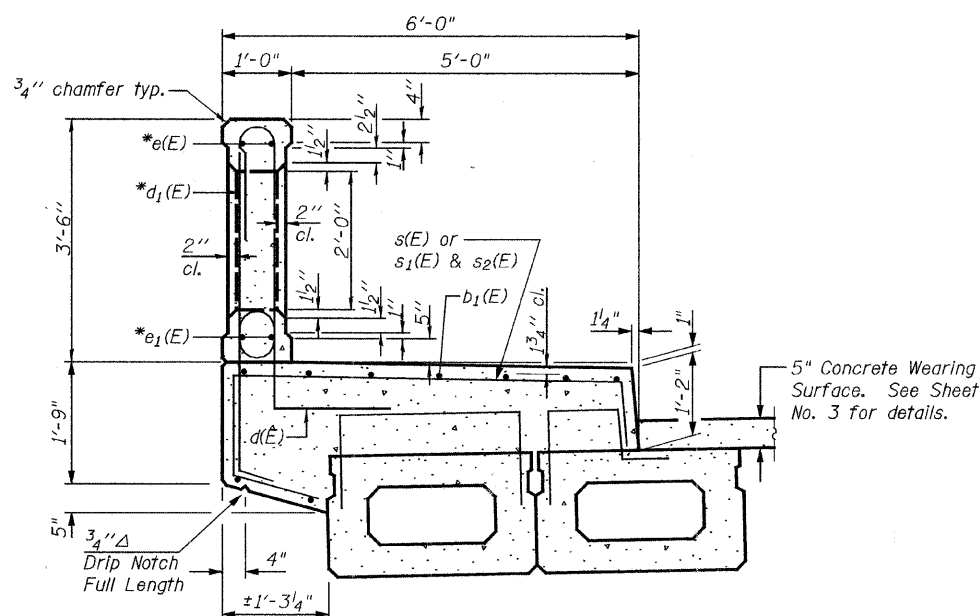
SECTION C-C



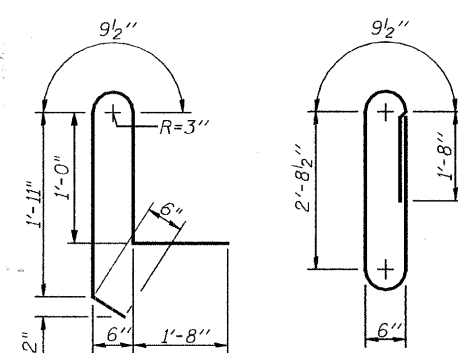
TYPICAL REINFORCEMENT PLACEMENT



SECTION A-A

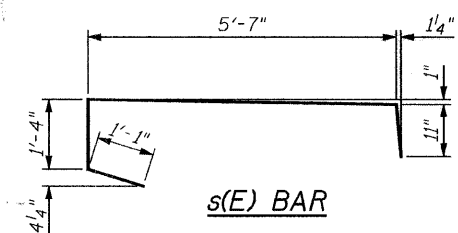


SECTION B-B

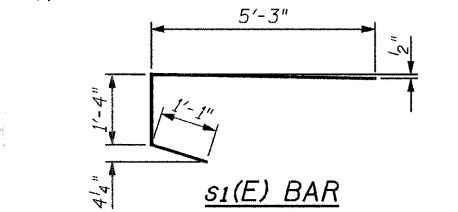


BAR d(E)

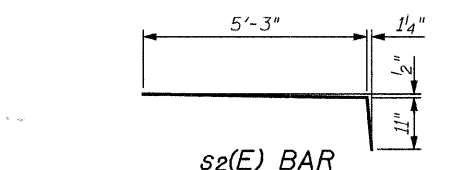
BAR d1(E)



s(E) BAR



s1(E) BAR

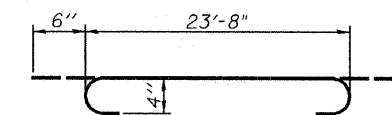


s2(E) BAR

SUPERSTRUCTURE
BILL OF MATERIAL

Bar No.	Size	Length	Shape
d(E)	48 #4	24'-8"	
d1(E)	8 #4	18'-0"	
b(E)	48 #4	24'-5"	
b1(E)	36 #5	24'-8"	
d(E)	102 #5	5'-11"	
s(E)	84 #5	8'-11"	
s1(E)	24 #5	7'-8"	
s2(E)	24 #5	6'-2"	
* Reinforcement Bars, Epoxy Coated			Pound 4,360
Concrete Superstructure			Cu. Yds. 35.1
Bridge Deck Grooving			Sq. Yds. 115
Protective Coat			Sq. Yds. 232
* Concrete Wearing Surface, 5"			Sq. Yds. 127
Concrete Bridge Railing, Sidewalk Mounted			Foot 93

* See Special Provisions



d(E) BAR

MINIMUM BAR LAP

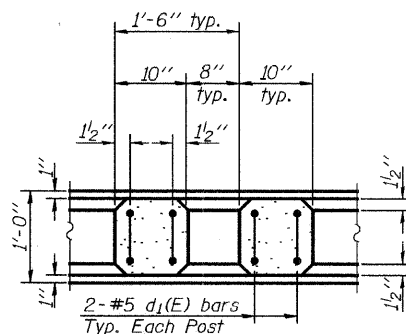
(Concrete Bridge Rail Bar Lap)
#5 Bar = 1'-8"
#7 Bar = 2'-8"

RAILING BAR LIST
ONLY ONE RAILING

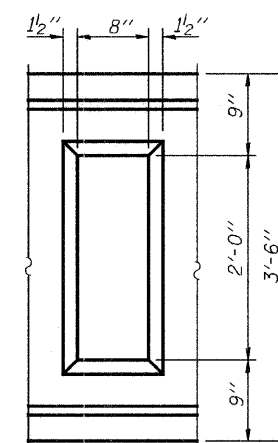
(For Information Only)

Bar	No.	Size	Length	Shape
d1(E)	66	#5	8'-8"	
e(E)	4	#7	24'-5"	
e1(E)	4	#5	23'-11"	

Notes:
Bars indicated thus 2x2-#5 etc. indicate 2 lines of bars with 2 lengths per line.
All concrete for railing wall shall be Class BS according to Article 1020.04 of the Standard Specifications. Surface of railing shall receive a rubbed finish according to Article 503.15(b) of the Standard Specifications.
All parts of the railing including concrete and reinforcing will be paid for at the contract unit price per foot for Concrete Bridge Railing, Sidewalk Mounted. Holes and recesses must be formed or cored. Drilling is not permitted.
All construction joints shall be bonded unless otherwise noted.
Work this sheet with Sheet No. 3.



SECTION D-D



WINDOW DETAIL



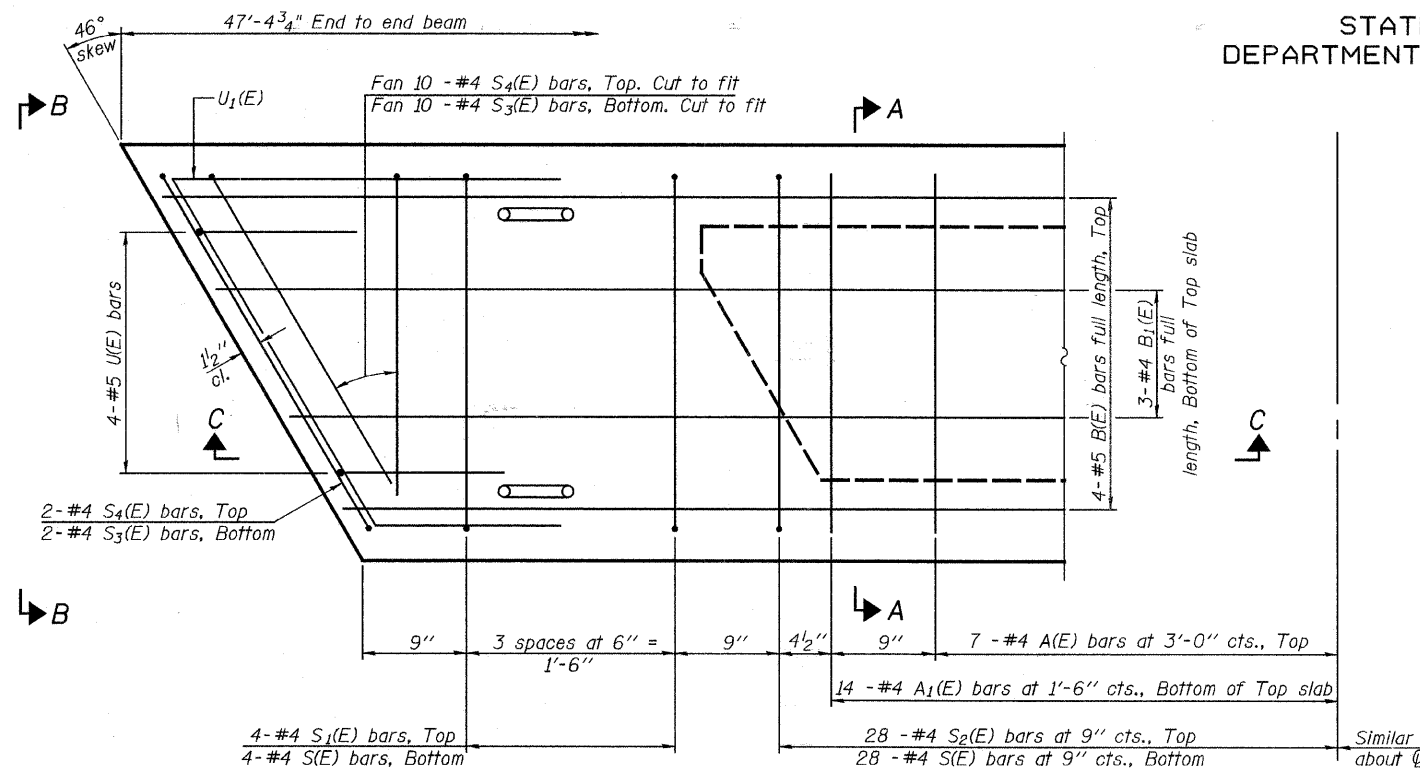
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Chicago, IL 60606
Tel. 312.939.1000
Fax. 312.939.4198

SUPERSTRUCTURE & RAILING DETAILS
STRUCTURE NO. 049-6152

DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

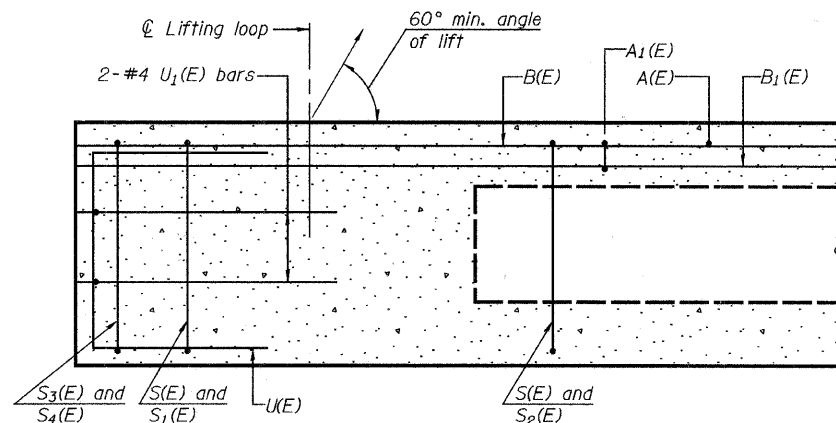
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			CONTRACT NO. 63085		
FED. ROAD DIST. NO. _		ILLINOIS		FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Note: Spacing of S(E) and S₂(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

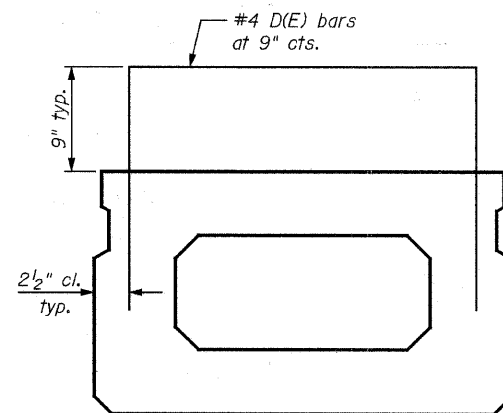
PLAN VIEW



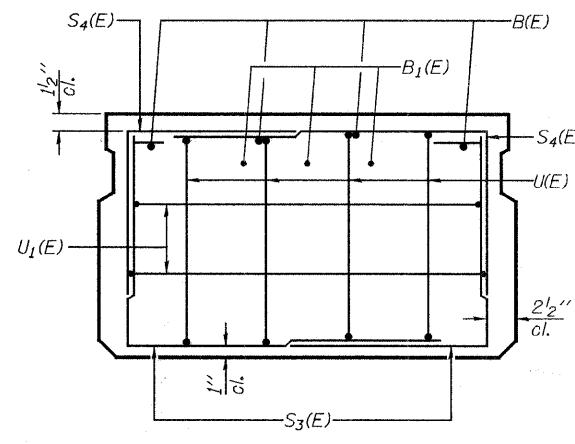
SECTION C-C

Notes:
Work this sheet with Sheet No. 6.

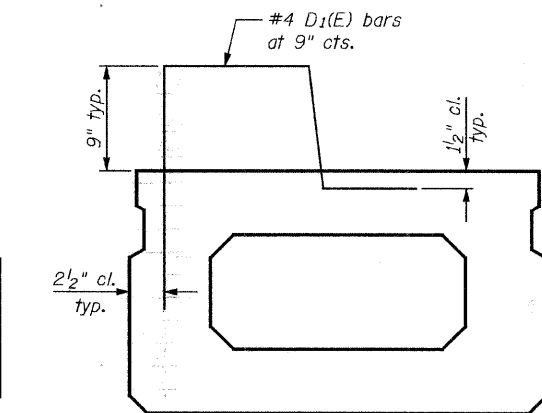
DESIGNED	SHELBIAN
CHECKED	JBUCHOLC
DRAWN	SHELBIAN
CHECKED	JBUCHOLC



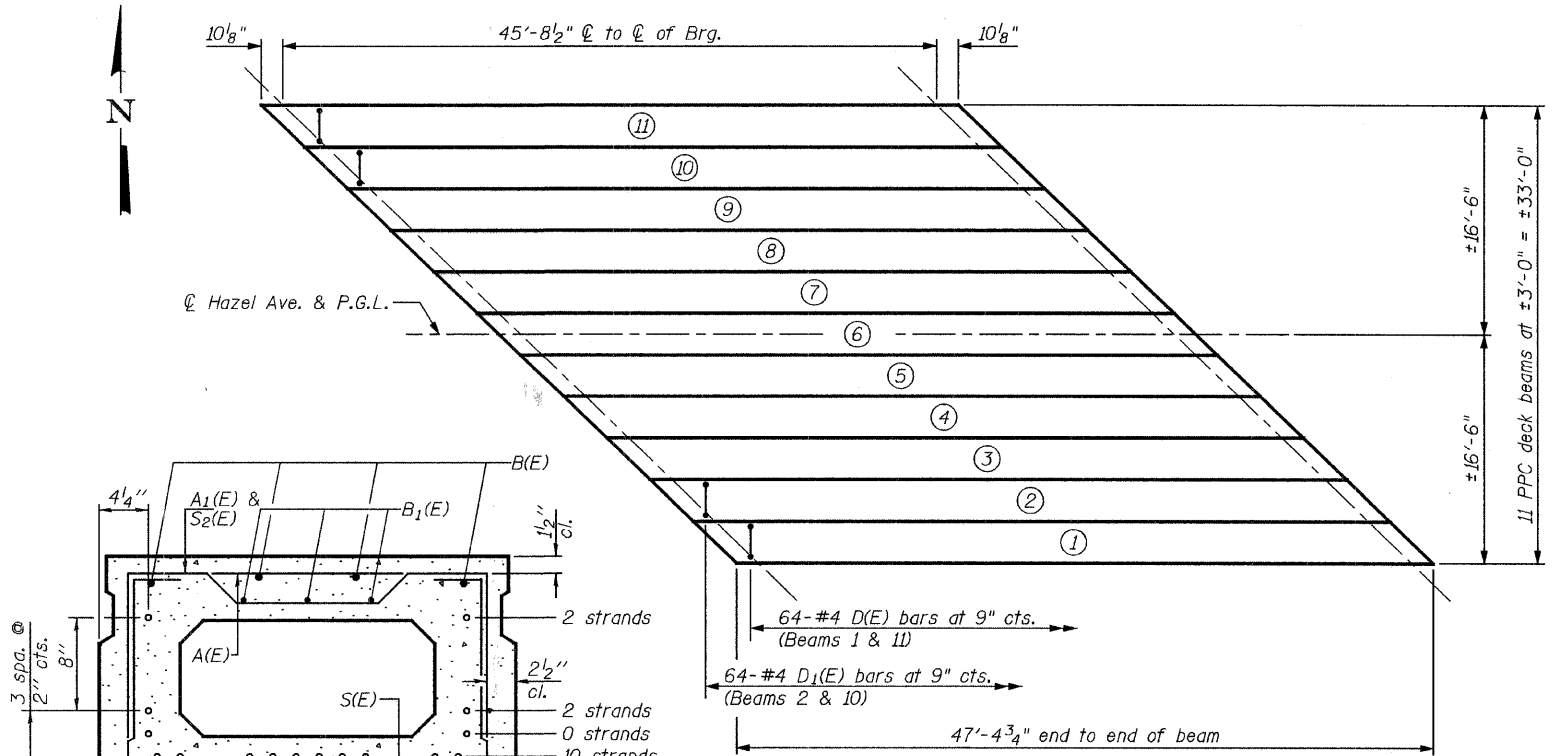
DECK BEAMS 1 & 11
Showing additional reinforcement



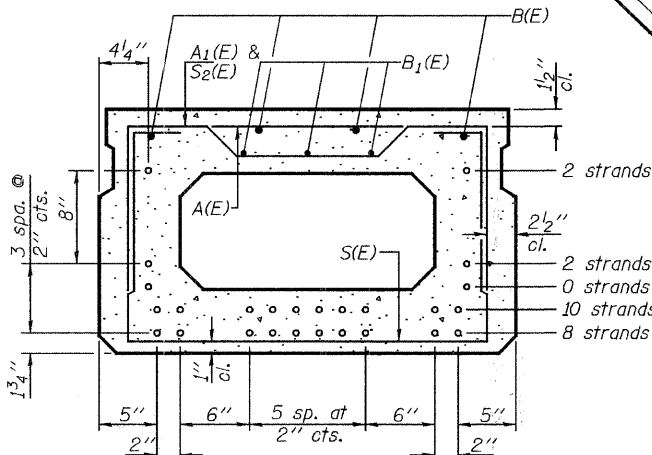
VIEW B-B



DECK BEAMS 2 & 10
Showing additional reinforcement
(Deck Beam 10 shown, Deck Beam 2 opposite hand)

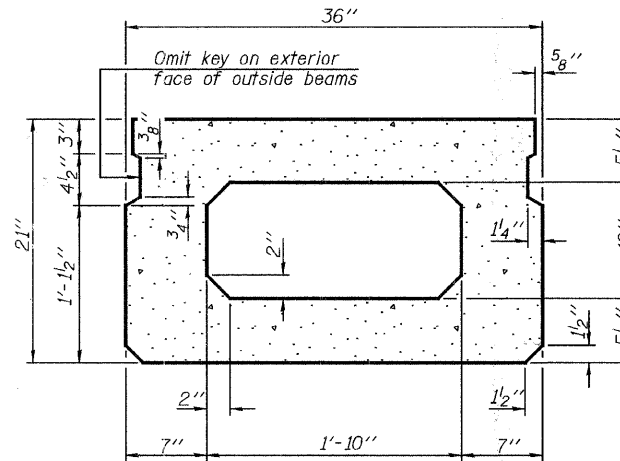


FRAMING PLAN



SECTION A-A

(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.



SECTION A-A
(Showing dimensions)

		0.5 Span
I	(in ⁴)	25,255
S _b	(in ³)	2434.0
S _t	(in ³)	2377.2
Q	(k/ft)	0.771
M _P	(k)	201.4
s _P	(k/ft)	0.499
M _s	(k)	130.3
M _L	(k)	187.9
M _I	(k)	54.5

		Abut.
R _P	(k)	17.6
R _s	(k)	11.4
R _L	(k)	36.9
R _I	(k)	10.7
R _{Total}	(k)	76.6

I: Non-composite moment of inertia of beam section (in⁴).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
S_t: Non-composite section modulus for the top fiber of the prestressed beam (in³).
Q: Un-factored non-composite dead load (kips/ft.).
M_P: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
s_P: Un-factored long-term composite (superimposed) dead load (kips/ft.).
M_s: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
M_L: Un-factored live load moment (kip-ft.).
M_I: Un-factored moment due to impact (kip-ft.).

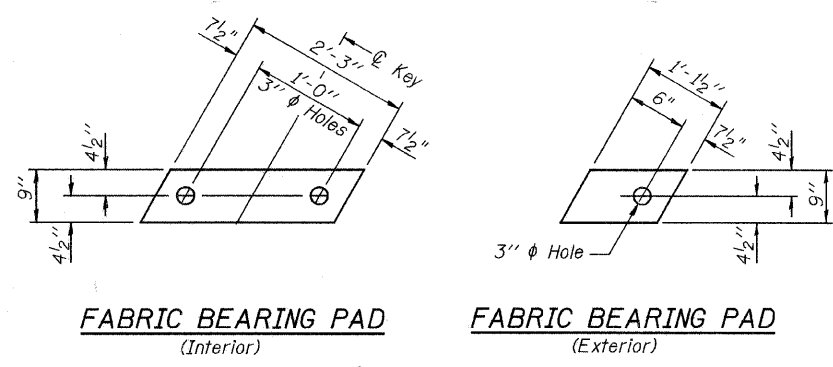
PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6152



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SHEET NO. 5 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 63085					

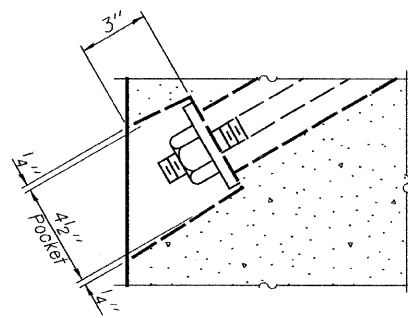
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



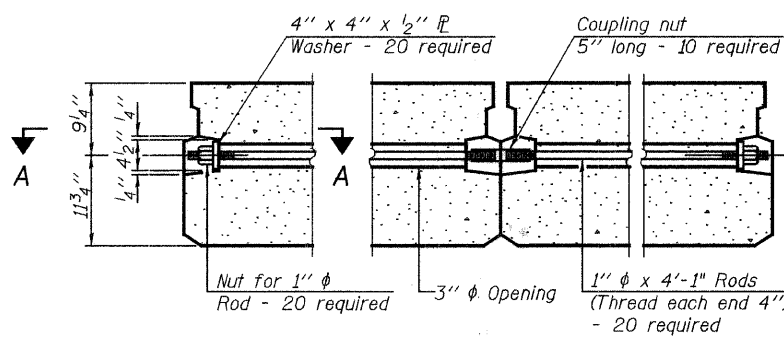
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

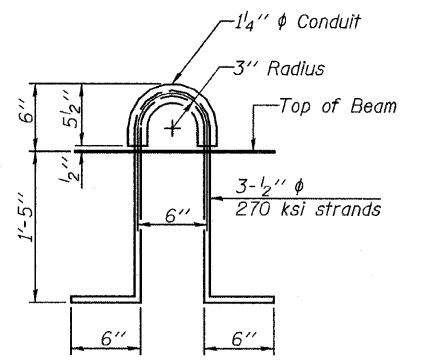
FIXED



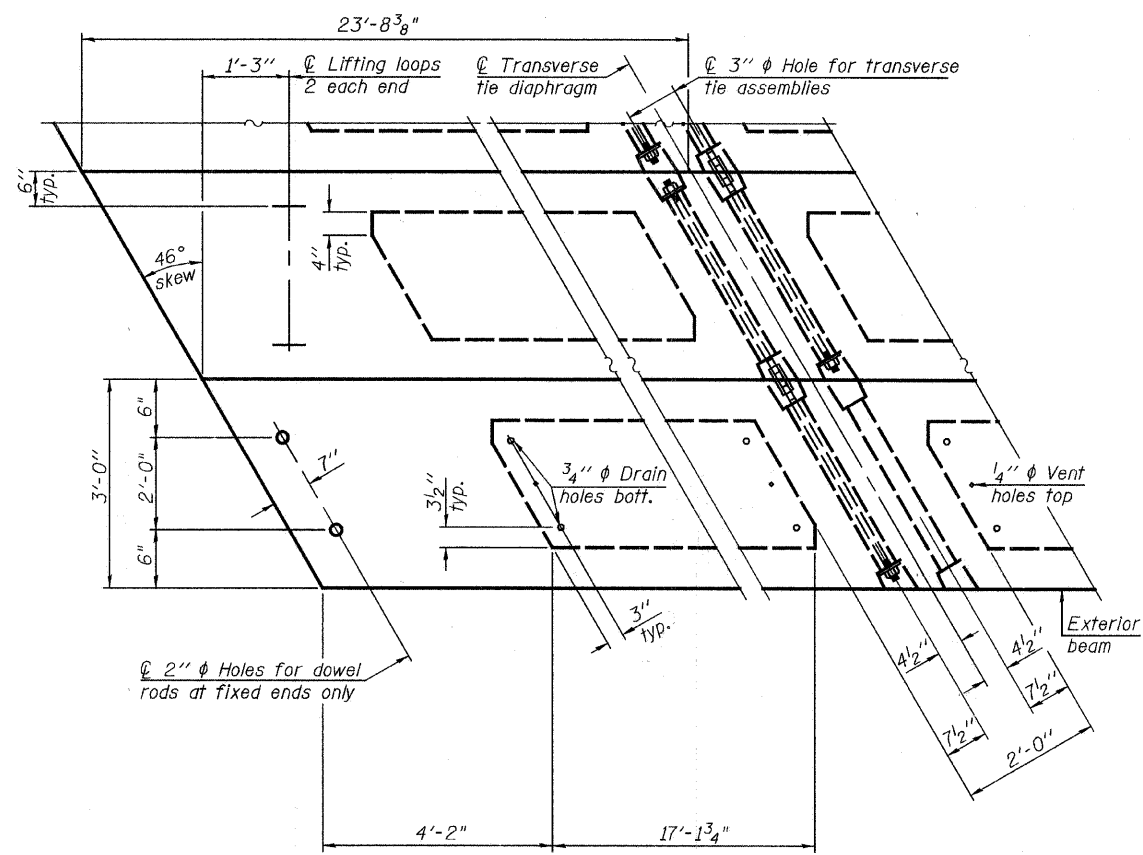
SECTION A-A



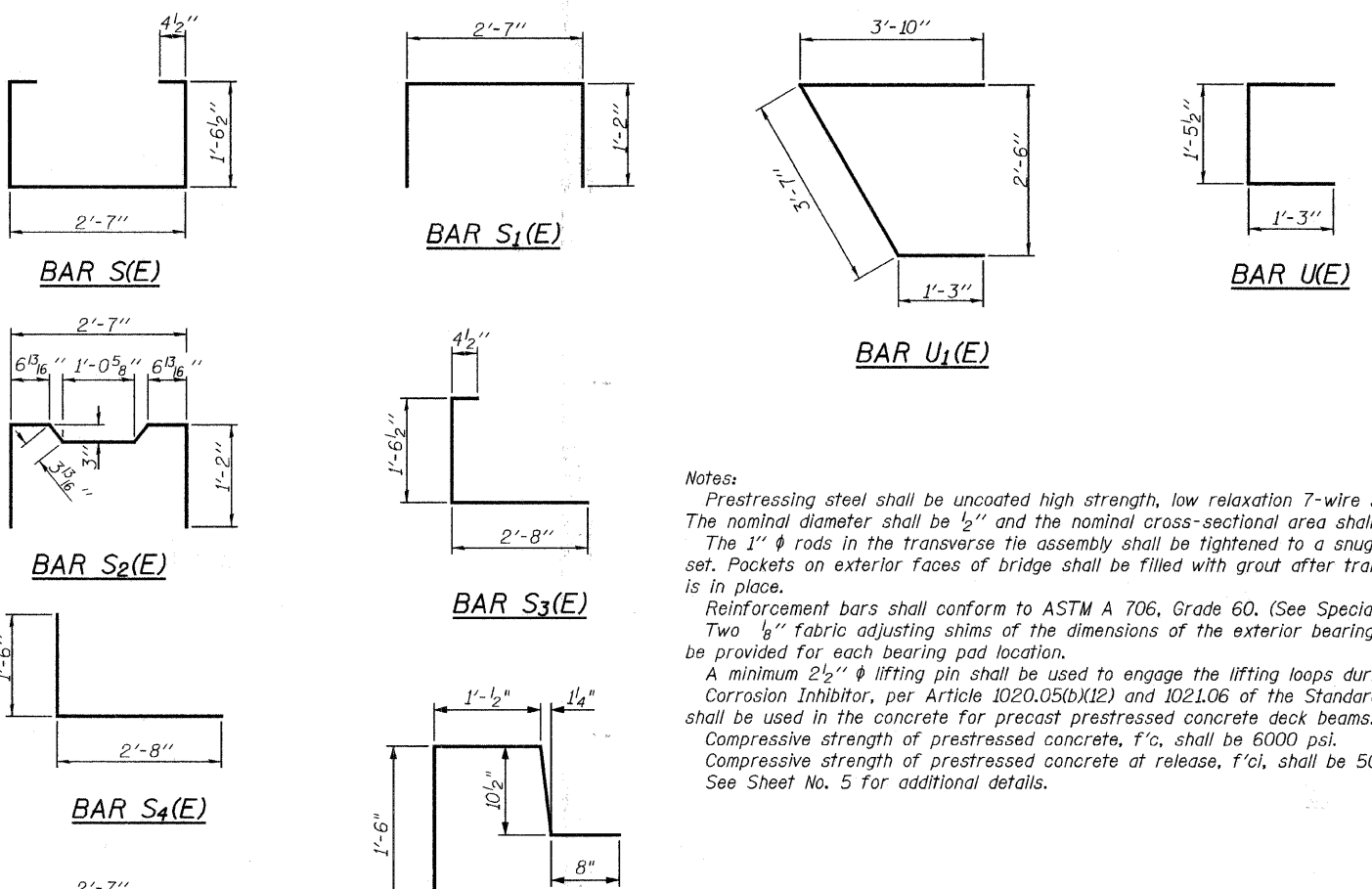
TYPICAL TRANSVERSE TIE ASSEMBLY



LIFTING LOOP DETAIL



PLAN VIEW



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A ₁ (E)	28	#4	2'-11"	—
B(E)	4	#5	47'-1"	—
B ₁ (E)	3	#4	47'-1"	—
D(E)	64	#4	5'-7"	□
D ₁ (E)	64	#4	4'-1"	□
S(E)	64	#4	6'-5"	□
S ₁ (E)	8	#4	4'-11"	□
S ₂ (E)	56	#4	5'-2"	□
S ₃ (E)	24	#4	4'-7"	□
S ₄ (E)	24	#4	4'-2"	□
U(E)	8	#5	4'-0"	□
U ₁ (E)	4	#4	8'-8"	□

Beams 1 & 11 Only
Beams 2 & 10 Only

Notes:
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
See Sheet No. 5 for additional details.

BILL OF MATERIAL

	Sq. Ft.	1,565
* Precast Prestressed Conc. Deck Bms. (21" depth)		

* See Special Provisions

PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6152

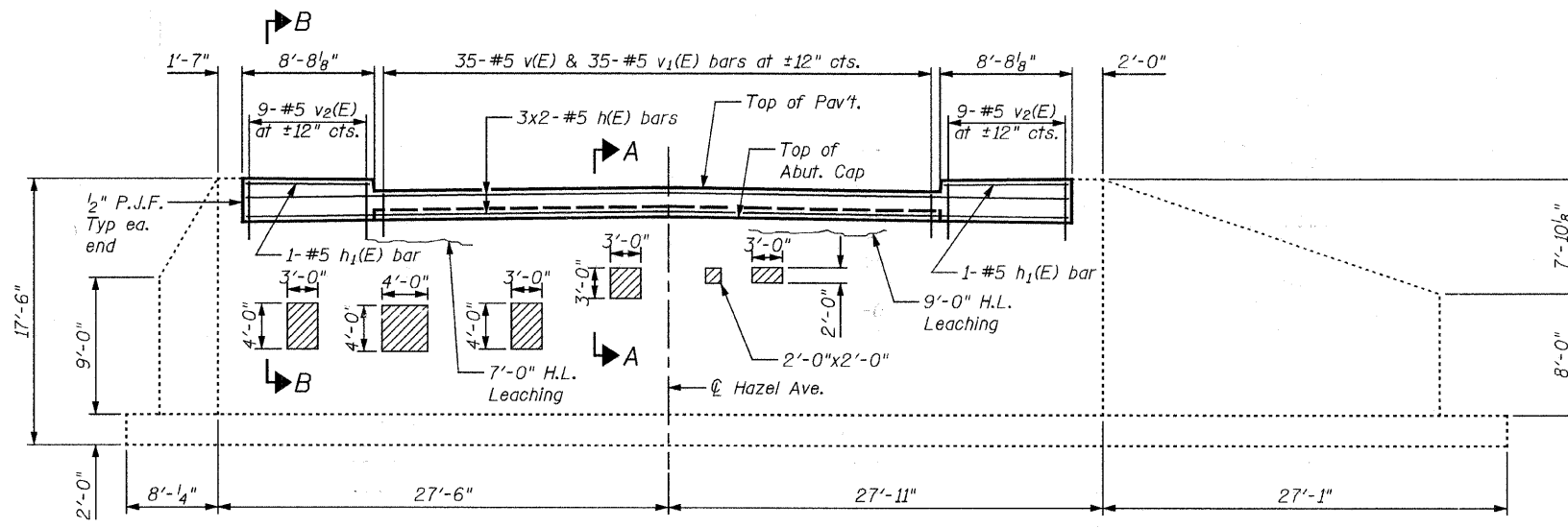
DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

Note: Connect beams in pairs with the transverse tie configuration shown.

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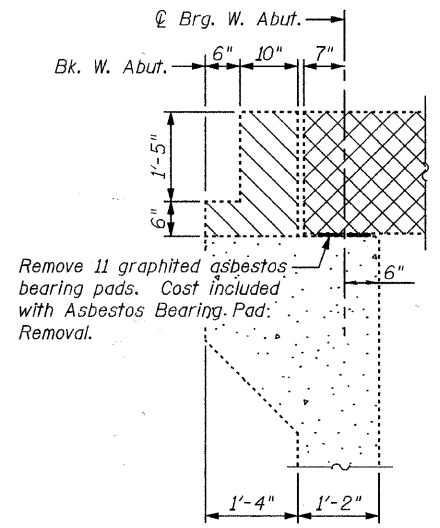
SHEET NO. 6 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 63085					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

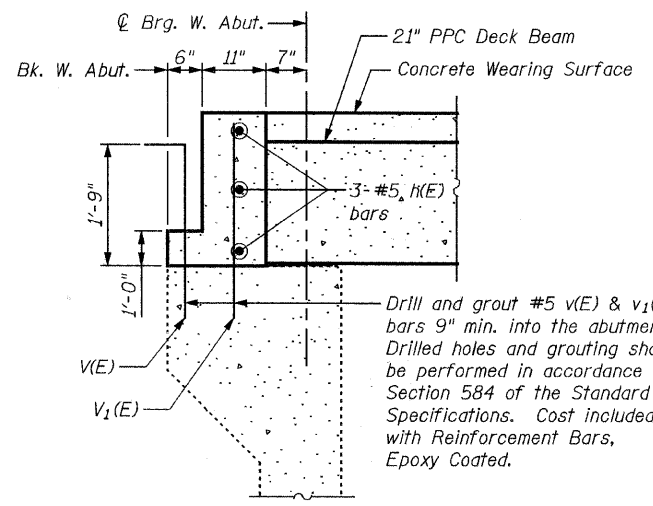


ELEVATION WEST ABUTMENT
(Looking West)

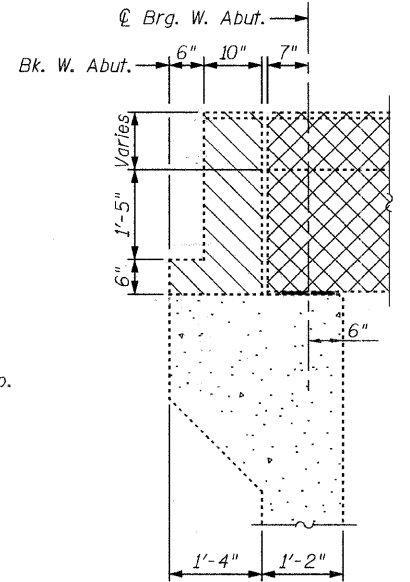
Notes:
 Bars indicated thus 3x2-#5 etc. indicate 3 lines of bars with 2 lengths per line. Existing reinforcement bars that have been cut and/or damaged during repair operations shall be supplemented by new in kind reinforcing bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. A mechanical bar splicer shall be used when it is not feasible to provide the minimum bar lap. No welding of bars shall be performed. See Special Provisions.
 Concrete Sealer shall be applied to each abutment cap according to Section 587 of the Standard Specifications.
 All construction joints shall be bonded unless otherwise noted.
 Work this sheet with Sheet No. 8.



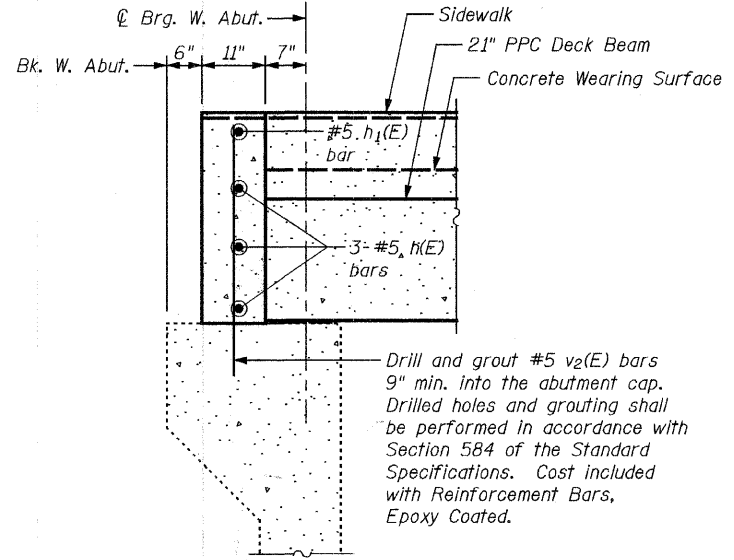
SECTION A-A
(Showing Removal)



SECTION A-A



SECTION B-B
(Showing Removal)



SECTION B-B

**WEST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	6	#5	26'-10"	—
h1(E)	2	#5	8'-2"	—
v(E)	35	#5	3'-9"	—
v1(E)	35	#5	2'-11"	—
v2(E)	18	#5	3'-8"	—
* Reinforcement Bars, Epoxy Coated			Pound	500
* Concrete Removal			Cu. Yd.	4.1
* Structural Repair of Concrete (<=5")			Sq. Ft.	59.0
* Concrete Sealer			Sq. Ft.	130
* Asbestos Bearing Pad Removal			Each	11

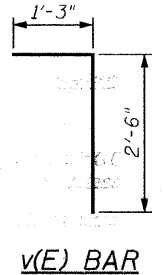
* See Special Provisions

MINIMUM BAR LAP

(West Abutment)
#5 Bar = 2'-2"

LEGEND

- Removal of Existing Superstructure
- Concrete Removal
- Structural Repair of Concrete
Depth equal to or less than 5"
- Hairline Leaching Crack - Not to be sealed



v(E) BAR

DESIGNED	SCHELBIAN
CHECKED	JBUCHOLC
DRAWN	SCHELBIAN
CHECKED	JBUCHOLC

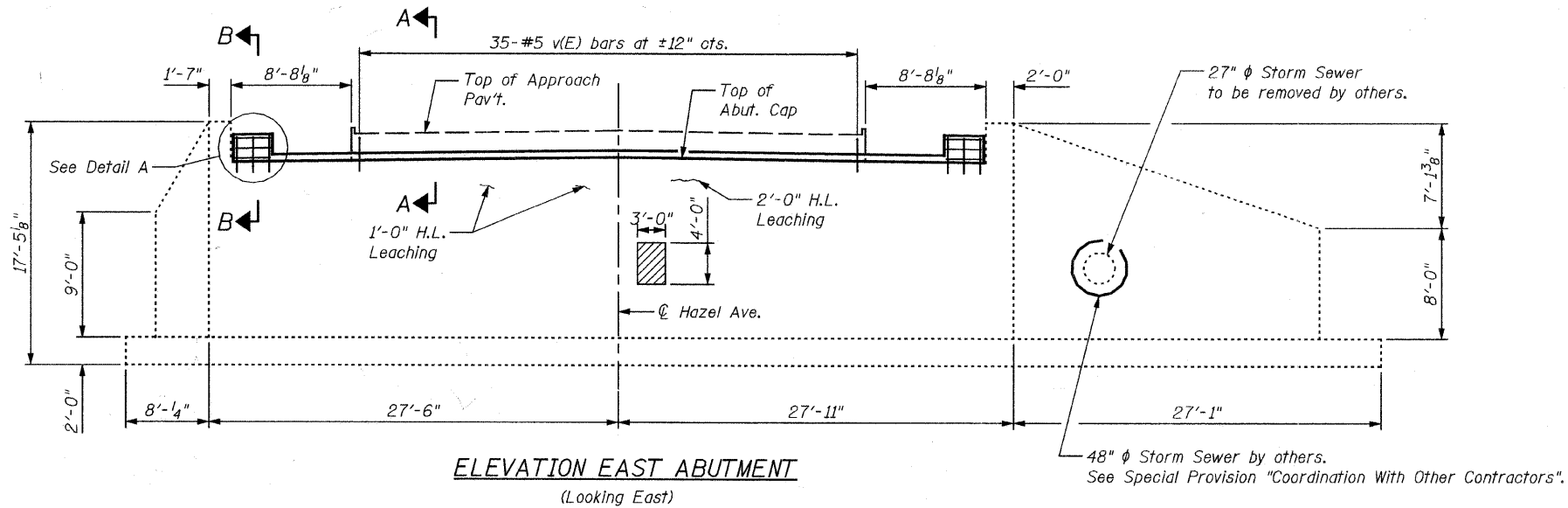


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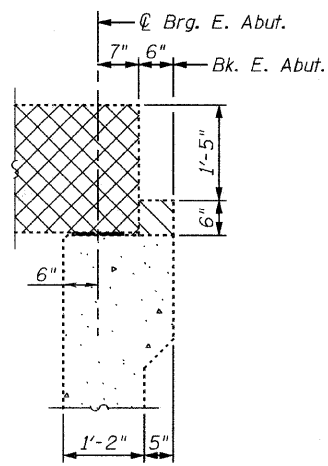
**SUBSTRUCTURE REPAIRS & DETAILS
STRUCTURE NO. 049-6152**

SHEET NO. 7 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 63085		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

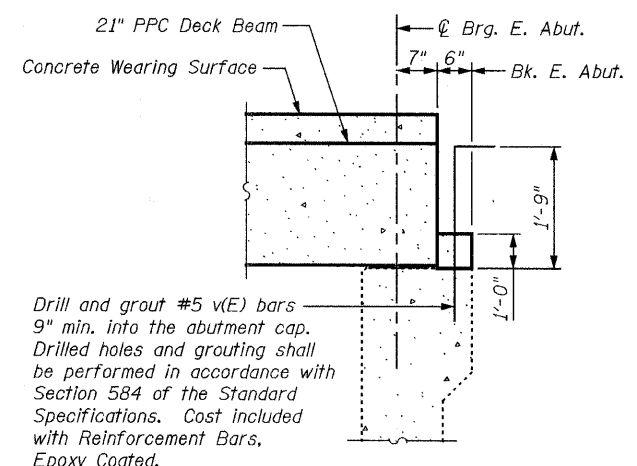
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



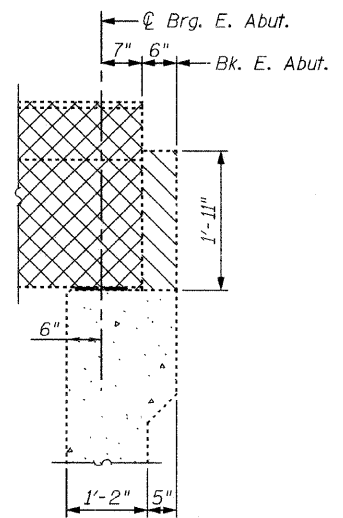
Notes:
Existing reinforcement bars that have been cut and/or damaged during repair operations shall be supplemented by new in kind reinforcing bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. A mechanical bar splicer shall be used when it is not feasible to provide the minimum bar lap. No welding of bars shall be performed. See Special Provisions.
Concrete Sealer shall be applied to each abutment cap according to Section 587 of the Standard Specifications.
All construction joints shall be bonded unless otherwise noted.
Work this sheet with Sheet No. 7.



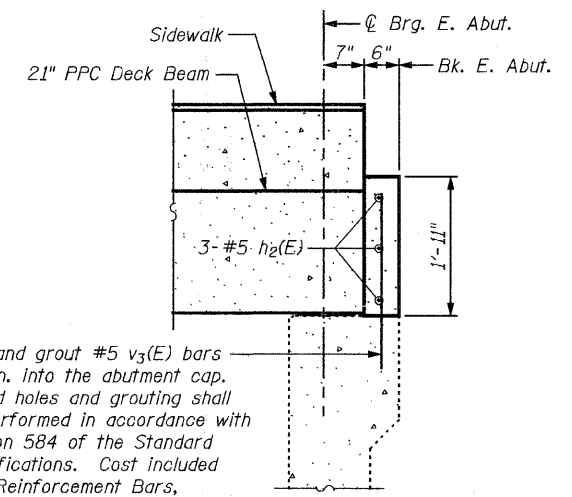
SECTION A-A
(Showing Removal)



SECTION A-A



SECTION B-B
(Showing Removal)

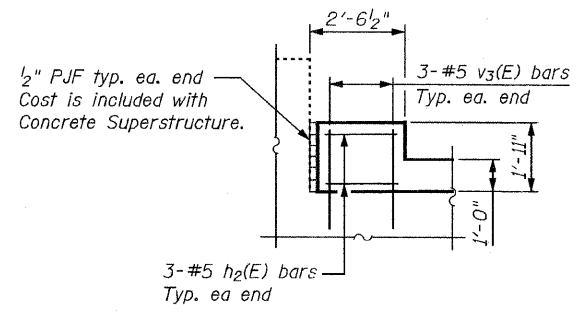


SECTION B-B

EAST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₂ (E)	6	#5	2'-2"	—
v(E)	35	#5	3'-9"	—
v ₃ (E)	6	#5	2'-6"	—
* Reinforcement Bars, Epoxy Coated			Pound	170
* Concrete Removal			Cu. Yd.	0.7
* Structural Repair of Concrete (<=5")			Sq. Ft.	12.0
* Concrete Sealer			Sq. Ft.	82

* See Special Provisions



DETAIL A

LEGEND
 Removal of Existing Superstructure
 Concrete Removal
 Structural Repair of Concrete Depth equal to or less than 5"
 Hairline Leaching Crack - Not to be sealed

DESIGNED	SHELBIAN
CHECKED	JBUCHOLC
DRAWN	SHELBIAN
CHECKED	JBUCHOLC

SUBSTRUCTURE REPAIRS & DETAILS
STRUCTURE NO. 049-6152

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SHEET NO. 8 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 63085		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					