06-17-11 LETTING ITEM 062

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00084-00-BR	LAKE	16	1

CONTRACT NO. 63587

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

JUNIPER COURT
OVER THE WEST FORK, NORTH BRANCH CHICAGO RIVER
BRIDGE REHABILITATION
SECTION 09–00084–00–BR
PROJECT BROS–9003 (295)
VILLAGE OF DEERFIELD
LAKE COUNTY, ILLINOIS
JOB C–91–514–09

INDEX OF SHEETS

PROJECT LOCATED IN VILLAGE OF DEERFIELD

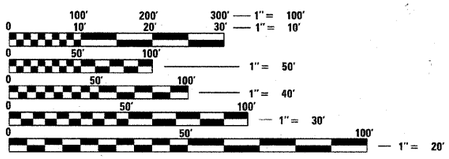
PROPOSED IMPROVEMENT: NEW CONSTRUCTION AND RECONSTRUCTION OF HOT–MIX ASPHALT ROADWAY PAVEMENT, BRIDGE AND BRIDGE APPROACH PAVEMENT CONSTRUCTION.

TRAFFIC DATA

ADT (2009) = 309
POSTED SPEED = 25 MPH

DESIGN DESIGNATION

FUNCTIONAL CLASSIFICATION = LOCAL
ADT (2030) ADT = 1,000



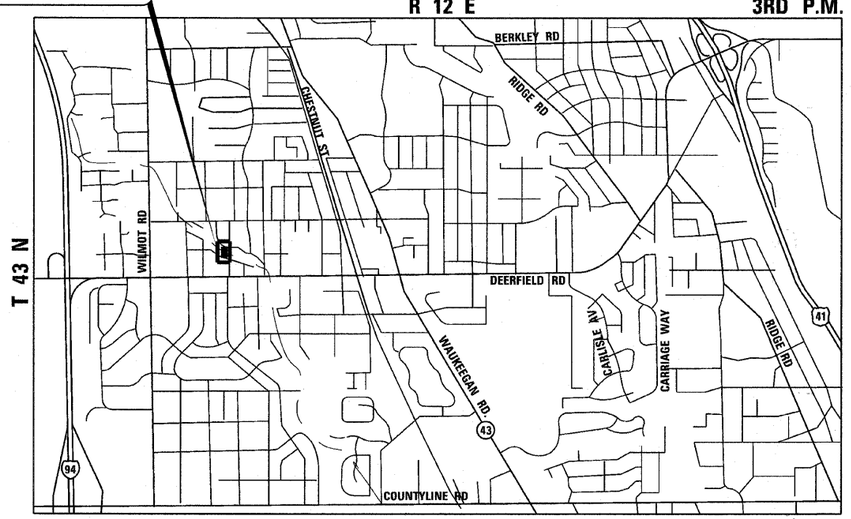
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

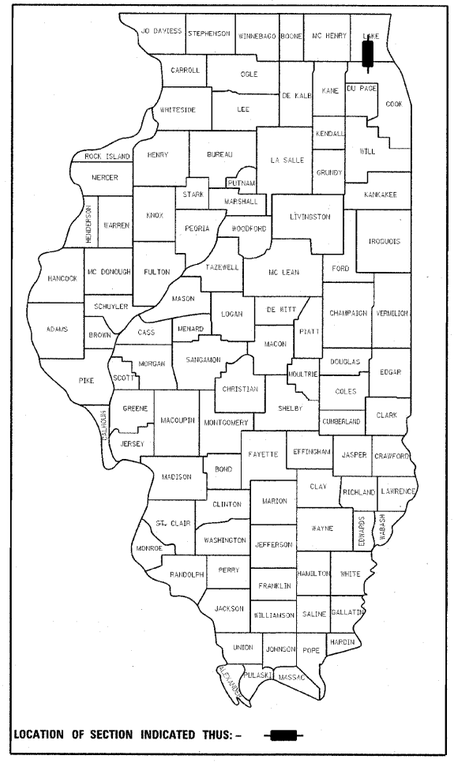
CONTRACT NO. 63587

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. 847–705–4406 SCHAUMBURG, IL

JUNIPER COURT BRIDGE
STA. 1+16.01 TO STA. 2+11.35
STRUCTURE NO. 049–6153
W. FORK, N. BRANCH OF THE CHICAGO RIVER



LOCATION MAP
NOT TO SCALE



LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved MARCH 28 20 11
Rick W Phillips
VILLAGE OF DEERFIELD

Passed April 13 20 11
Christopher Hoult
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

Releasing for Bid Based on Limited Review April 13, 20 11
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

TOTAL GROSS LENGTH OF PROJECT	146.75 FT (0.038 MILES)
TOTAL NET LENGTH OF PROJECT	146.75 FT (0.038 MILES)

JAMES R. TIPPETT 062-050888 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
Exp. 11/30/11
James R. Tippett DATE: 3-18-11
JAMES R. TIPPETT, P.E.
LICENSE NO.: 062-050888
EXPIRES: NOVEMBER 30, 2011

PLANS PREPARED BY:

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

01 - CoverSHT.dgn 3/25/2011 10:11:53 AM

GENERAL NOTES

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007. (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2011; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS; THE "DETAILS" ON THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS. ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 OR 811 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)

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

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

THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS.

BENCHMARKS FOR THE PROJECT ARE DESCRIBED IN THE PLANS AND ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). ALL BEARINGS AND COORDINATES REFERENCED IN THE PLAN DRAWINGS AND ALL CONTROL COORDINATES ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83 (2007).

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REESTABLISH THE CENTERLINE ALIGNMENT FOR NEW CONSTRUCTION BASED UPON THE EXISTING ALIGNMENT OF THE BRIDGE BEING REPLACED. EXISTING CENTER OF BRIDGE SHALL BE PROPOSED CENTER OF BRIDGE, AND THE EXISTING CENTER OF ABUTMENTS SHALL BE ON THE CENTERLINE ALIGNMENT.

NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS ARE MET.

CONSTRUCTION TRAFFIC SHALL OBEY ALL LOAD POSTING LIMITS ON ALL HAUL ROADS.

WARNING SIGNS (OVERHEAD ELECTRIC) SHALL BE PLACED AT LOCATIONS OF OVERHEAD ELECTRIC LINES CROSSING THE ROADWAY CENTERLINE. SIGNS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR.

THE CONTRACTOR SHALL DEVELOP A PLAN TO ACCOMPLISH THIS WORK AND MINIMIZE DISRUPTION OF ACCESS. THIS PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL USE THE FOLLOWING METHOD TO ALLAY DUST AND PREVENT A NUISANCE WITHIN THE LIMITS OF THE CONSTRUCTION SITE. DUST SHALL BE CONTROLLED BY THE UNIFORM APPLICATION OF SPRINKLED WATER AND SHALL BE APPLIED ONLY WHEN DIRECTED BY THE ENGINEER, IN A MANNER MEETING HIS APPROVAL. CALCIUM CHLORIDE SHALL NOT BE USED FOR THIS PURPOSE. ALL EQUIPMENT USED FOR THIS WORK SHALL MEET WITH THE ENGINEER'S APPROVAL. THIS WORK SHALL CONSIST OF THE EXCLUSIVE CONTROL OF DUST RESULTING FROM CONSTRUCTION OPERATIONS AND IS NOT INTENDED FOR USE IN THE COMPACTION OF EARTH EMBANKMENTS, AS SPECIFIED UNDER ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS. NO EXTRA COMPENSATION SHALL BE ALLOWED THE CONTRACTOR FOR THIS WORK.

THE CONTRACTOR SHALL KEEP EXISTING ADJACENT STREETS CLEAN OF DIRT, MUD, AND OTHER DEBRIS AND, WHEN NECESSARY, CLEAN SAID PAVEMENTS ON A DAILY BASIS OR WHEN DIRECTED BY THE ENGINEER. NO EXTRA COMPENSATION SHALL BE ALLOWED THE CONTRACTOR FOR THIS WORK.

THE CONTRACTOR SHALL MAINTAIN THE SITE IN A CLEAN AND ORDERLY MANNER. DEBRIS AND ANY SURPLUS MATERIAL SHALL BE REMOVED AND RESTORATION SHALL PROCEED AS THE WORK PROCEEDS. IF THE ENGINEER SO DIRECTS, THE CONTRACTOR SHALL STOP ALL OTHER WORK AND CONCENTRATE ON CLEAN-UP. DEBRIS AND SURPLUS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED OFF-SITE DISPOSAL AREA.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS PRIOR TO BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM PAY ITEMS.

EXISTING UTILITIES ARE SHOWN ON THE PLANS ACCORDING TO INFORMATION OBTAINED FROM THE LOCAL AGENCIES, OWNERS, AND FIELD SURVEYS. THE ACCURACY AND COMPLETENESS OF SAID INFORMATION IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTENCE, NATURE AND EXACT LOCATIONS OF ALL UTILITY LINES AND APPURTENANCES WITHIN THE LIMITS OF THE IMPROVEMENTS.

THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES REQUIRED TO MAINTAIN EXISTING UTILITIES, SEWERS AND APPURTENANCES THAT MUST BE KEPT IN OPERATION. IN PARTICULAR, THE CONTRACTOR WILL TAKE ADEQUATE MEASURES TO PREVENT THE UNDERMINING OF UTILITIES AND SEWERS WHICH ARE STILL IN SERVICE.

LENGTHS AND SIZES OF EXISTING STORM SEWERS AS SHOWN ON THE PLANS SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION OF PROPOSED DRAINAGE ITEMS. THE INVERTS OF PROPOSED DRAINAGE ITEMS CONNECTING TO EXISTING SEWERS OR STRUCTURES MAY REQUIRE REVISIONS TO MEET EXISTING FIELD CONDITIONS. ANY ADJUSTMENTS SHALL BE AS DIRECTED BY THE ENGINEER.

TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND PROTECTED UNDER THE PROVISIONS OF ARTICLE 201.05 OF THE STANDARDS SPECIFICATIONS.

THE CONTRACTOR SHALL TAKE EXTRA CARE IN GRADING AND EXCAVATING NEAR TREES WHICH ARE NOT MARKED FOR REMOVAL SO AS NOT TO CAUSE INJURY TO THE ROOT SYSTEM OR TRUNKS. ANY DAMAGED DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE.

ALL EXCESS MATERIAL (BROKEN CONCRETE, CULVERT PIPE, WASTE ROADWAY EXCAVATION, SURPLUS MATERIAL, ETC...) SHALL BE LEGALLY DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS.

10-FOOT 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.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HOT-MIX ASPHALT LIFTS.

THE CONTRACTOR SHALL MAKE ALL FULL DEPTH SAW CUTS REQUIRED FOR THE REMOVAL OF PAVEMENTS, CONCRETE CURB AND GUTTERS, SIDEWALKS AND DRIVEWAYS AS SPECIFIED, OR AS DIRECTED BY THE ENGINEER. THE COST SHALL BE CONSIDERED INCLUDED IN THE COST FOR REMOVAL OF THE SPECIFIED ITEM IN THE CONTRACT.

THE CONTRACTOR SHALL PROVIDE DEPRESSED CURB AT EACH DRIVEWAY ENTRANCE.

THE CONTRACTOR SHALL REMOVE BRICK PAVERS AND STORE ON-SITE DURING DRIVEWAY PAVEMENT REMOVAL.

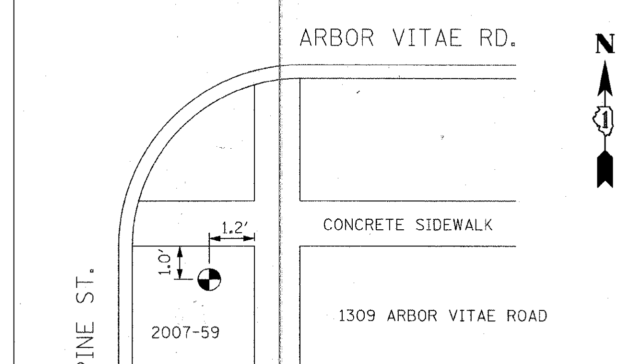
THERE IS AN ABANDONED 4" GAS MAIN ATTACHED TO THE WEST SIDE OF THE EXISTING SUPERSTRUCTURE TO BE REMOVED. ANY INQUIRIES INTO THIS ABANDONED SERVICE CAN BE MADE TO MR. STEVE WARMINGTON OF NORTH SHORE GAS AT 847-263-4666. THE COST FOR REMOVAL SHALL BE INCLUDED IN THE COST OF REMOVAL OF EXISTING SUPERSTRUCTURES.

THERE IS AN OVERHEAD COMCAST AERIAL SERVICE CROSSING JUNIPER COURT SOUTH OF THE BRIDGE. THIS AERIAL IS NOT IN CONFLICT WITH THE PROPOSED WORK HOWEVER, ANY INQUIRIES CAN BE MADE TO MR. TONY CURTIS AT 847-789-0972.

IDOT STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
424001-05	CURB RAMPS FOR SIDEWALKS
515001-03	NAME PLATE FOR BRIDGES
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701801-04	LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES

BENCHMARK INFORMATION



LOCATION ADDRESS
1309 ARBOR VITAE ROAD
DEERFIELD, ILLINOIS

MONUMENT
2007-59

DEPTH
10'

ELEVATION
655.59

DESCRIPTION
SOUTHEAST CORNER OF ARBOR VITAE ROAD AND PINE STREET (1309 ARBOR VITAE ROAD) (SOUTHEAST OF PROJECT LOCATION)

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

USER NAME =	DESIGNED L. LAWS	REVISED -	
	DRAWN 1/15/11	REVISED -	
PLOT SCALE = $SCALE$	CHECKED J. BUCHOLC	REVISED	
PLOT DATE = $DATE$	DATE 1/28/11	REVISED -	

VILLAGE OF DEERFIELD
JUNIPER COURT OVER THE WEST FORK, NORTH BRANCH OF THE CHICAGO RIVER

GENERAL NOTES AND STANDARDS

SCALE: | SHEET NO. 2 OF 16 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00084-00-BR	LAKE	16	2

CONTRACT NO. 63587

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

SUMMARY OF QUANTITIES

SPECIALTY ITEMS	CODE NUMBER	PAY ITEM	UNIT	QUANTITY	Construction Code Type 0014
*	28000400	PERIMETER EROSION BARRIER	FOOT	380	380
*	31101300	SUBBASE GRANULAR MATERIAL, TYPE B 5"	SQ YD	141	141
*	31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	53	53
*	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	35	35
*	40701871	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 9 1/2"	SQ YD	105	105
*	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	33	33
*	42300100	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 5 INCH	SQ YD	53	53
*	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	400	400
*	44000100	PAVEMENT REMOVAL	SQ YD	306	306
*	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	53	53
*	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	210.8	210.8
*	44000600	SIDEWALK REMOVAL	SQ FT	400	400
	50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1
	50102400	CONCRETE REMOVAL	CU YD	0.8	0.8
	50300225	CONCRETE STRUCTURES	CU YD	16.4	16.4
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	84.8	84.8
	50300260	BRIDGE DECK GROOVING	SQ YD	248	248
	50300300	PROTECTIVE COAT	SQ YD	401	401
	50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1130	1130
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	22700	22700
	50800515	BAR SPLICERS	EACH	54	54
	51500100	NAME PLATES	EACH	1	1
*	60251730	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 23 FRAME AND GRATE	EACH	2	2
*	60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	1
	67100100	MOBILIZATION	L SUM	1	1
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
*	X0325670	CONCRETE BRIDGE RAIL, SIDEWALK MOUNTED	FOOT	71	71
	X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	99	99
*	X6063401	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12	FOOT	210.8	210.8
	X6640304	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	40	40
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	196	196
	Z0073700	TEMPORARY WALL BRACING SYSTEM	L SUM	1	1
	XX006119	TRAFFIC CONTROL AND PROTECTION (DETOUR)	L SUM	1	1

PLAN: SURVEYED, PLOTTED, HORIZONTAL CHECKED, NOTE BOOK, NO. ____, BY, DATE

PROFILE: SURVEYED, PLOTTED, CROSS CHECKED, SAM. NOTED, STRUCTURE NOTATIONS CHKD, NOTE BOOK, NO. ____, BY, DATE

FILE NAME: =FILE#

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

USER NAME = | PLOT SCALE = $SCALE$ | PLOT DATE = $DATE$

DESIGNED	L. LAWS	REVISED	-
DRAWN	1/15/11	REVISED	-
CHECKED	J. BUCHOLC	REVISED	-
DATE	1/28/11	REVISED	-

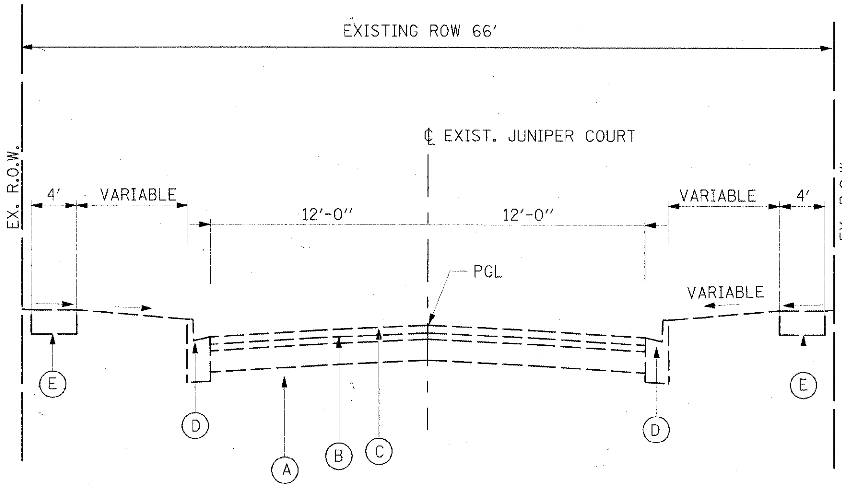
VILLAGE OF DEERFIELD
JUNIPER COURT OVER THE WEST FORK, NORTH BRANCH OF THE CHICAGO RIVER

SUMMARY OF QUANTITIES

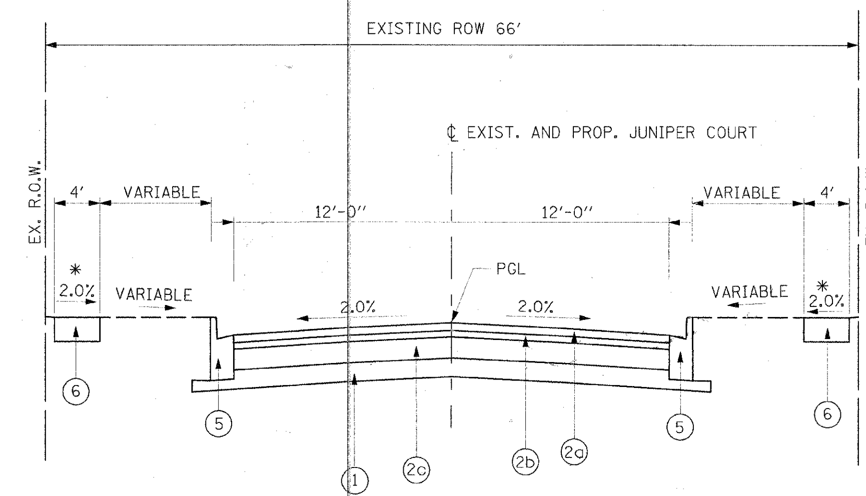
SCALE: | SHEET NO. 3 OF 16 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00084-00-BR	LAKE	16	3
	CONTRACT NO. 63587			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

03 - Summary of Quantities.dgn 4/4/2011 11:00:43 AM



EXISTING TYPICAL SECTION
JUNIPER COURT



PROPOSED TYPICAL SECTION
JUNIPER COURT

NOTE:
* 1% MINIMUM

LEGEND (EXISTING):

- (A) 10" AGGREGATE BASE COURSE
- (B) 1-1/2" BINDER COURSE
- (C) 1-1/2" BITUMINOUS CONC. SURFACE COURSE
- (D) COMBINATION CURB AND GUTTER, TYPE B-6.12
- (E) P.C.C. SIDEWALK

LEGEND (PROPOSED):

- (1) SUB-BASE GRANULAR MATERIAL, TYPE B (5")
- (2) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH) 9-1/2"
  - (2a) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (1-1/2")
  - (2b) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (2-1/4")
  - (2c) HOT MIX ASPHALT BASE COURSE 5-1/4"
- (5) COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12
- (6) PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

ITEM	VOIDS
ROADWAY PAVEMENT	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL9.5MM) 2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 2-1/4"	4% @ 50 Gyr.
HOT-MIX ASPHALT BASE COURSE (IN 2 LIFTS) (HMA BINDER, IL-19.0) 5-1/4"	4% @ 50 Gyr.
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL9.5MM) 2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 2-1/4"	4% @ 50 Gyr.
HOT-MIX ASPHALT BASE COURSE (IN 3 LIFTS) (HMA BINDER, IL-19.0) VARIES 5-1/4" TO 10-3/4"	4% @ 50 Gyr.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/ SQ YD/IN

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22", AND FOR NON-POLYMERIZED HMA, THE "AC TYPE" SHALL BE PG 64-22, UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR "PERCENT OF RAP", SEE DISTRICT ONE SPECIAL PROVISIONS.

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

DESIGNED	L. LAWS	REVISED	-
DRAWN	1/15/11	REVISED	-
CHECKED	J. BUCHOLC	REVISED	-
DATE	1/28/11	REVISED	-

VILLAGE OF DEERFIELD
JUNIPER COURT OVER THE WEST FORK, NORTH BRANCH OF THE CHICAGO RIVER

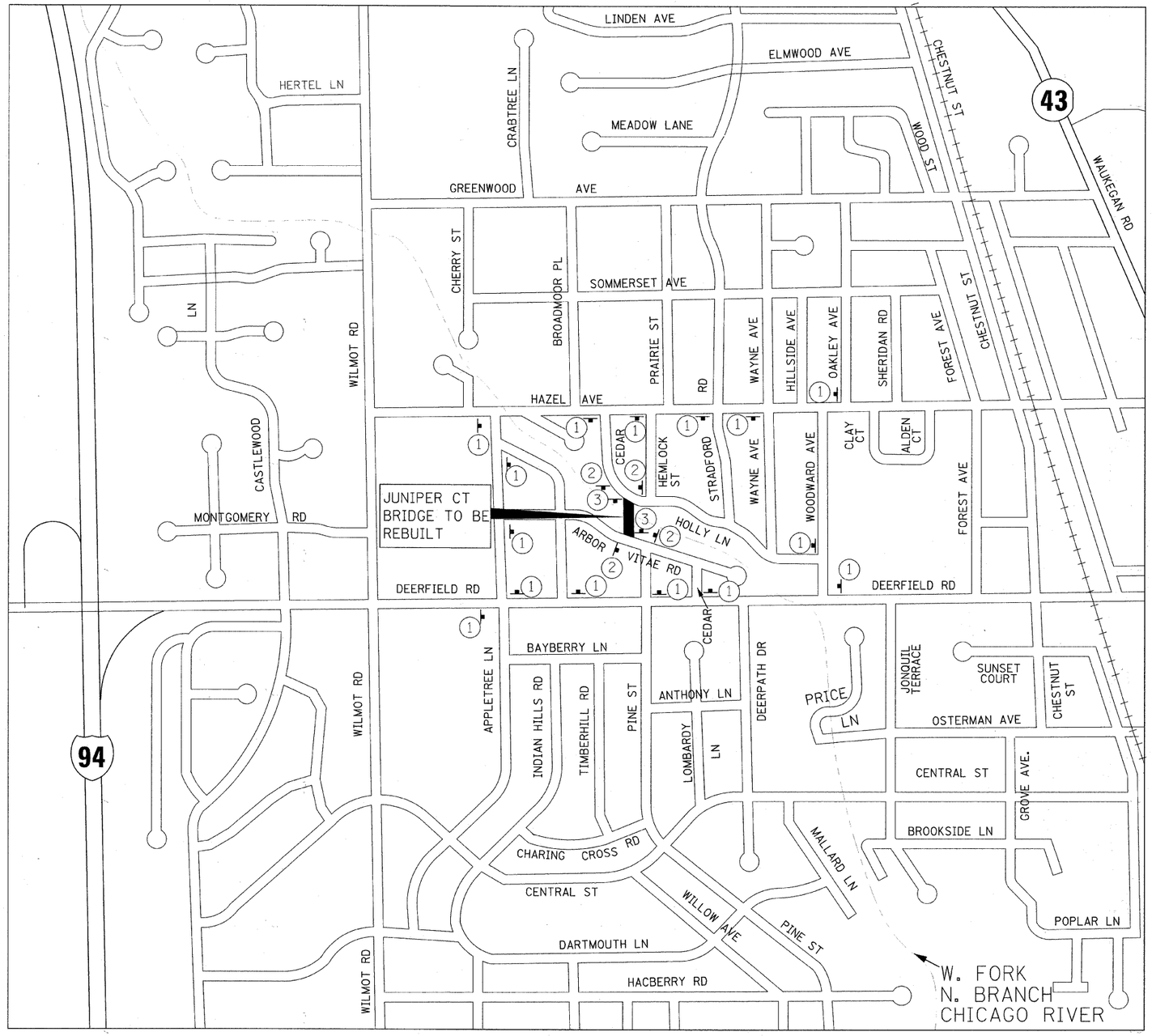
TYPICAL SECTIONS

SCALE: NTS | SHEET NO. 4 OF 16 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00084-00-BR	LAKE	16	4

CONTRACT NO. 63587

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



N

LEGEND

BRIDGE CONSTRUCTION (WORK ZONE)

PROPOSED SIGNAGE

① JUNIPER COURT
CLOSED AT N. BRANCH
CHICAGO RIVER
USE WOODWARD AVENUE
OR WILMOT ROAD

② ROAD CLOSED AHEAD
W20-1
48 X 48
JUNIPER COURT

③ BRIDGE OUT R11-2
(MOUNTED ON TYPE III BARRICADE)

NOTE: CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS SOUTH OF BRIDGE CONSTRUCTION.

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

USER NAME =	DESIGNED L. LAWS	REVISED	
	DRAWN 1/15/11	REVISED	
PLOT SCALE = [SCALE]	CHECKED J. BUCHOLC	REVISED	
PLOT DATE = [DATE]	DATE 1/28/11	REVISED	

VILLAGE OF DEERFIELD
JUNIPER COURT OVER THE WEST FORK, NORTH BRANCH OF THE CHICAGO RIVER

TRAFFIC CONTROL AND DETOUR PLAN

SCALE: NTS | SHEET NO. 5 OF 16 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00084-00-BR	LAKE	16	5
	CONTRACT NO. 63587			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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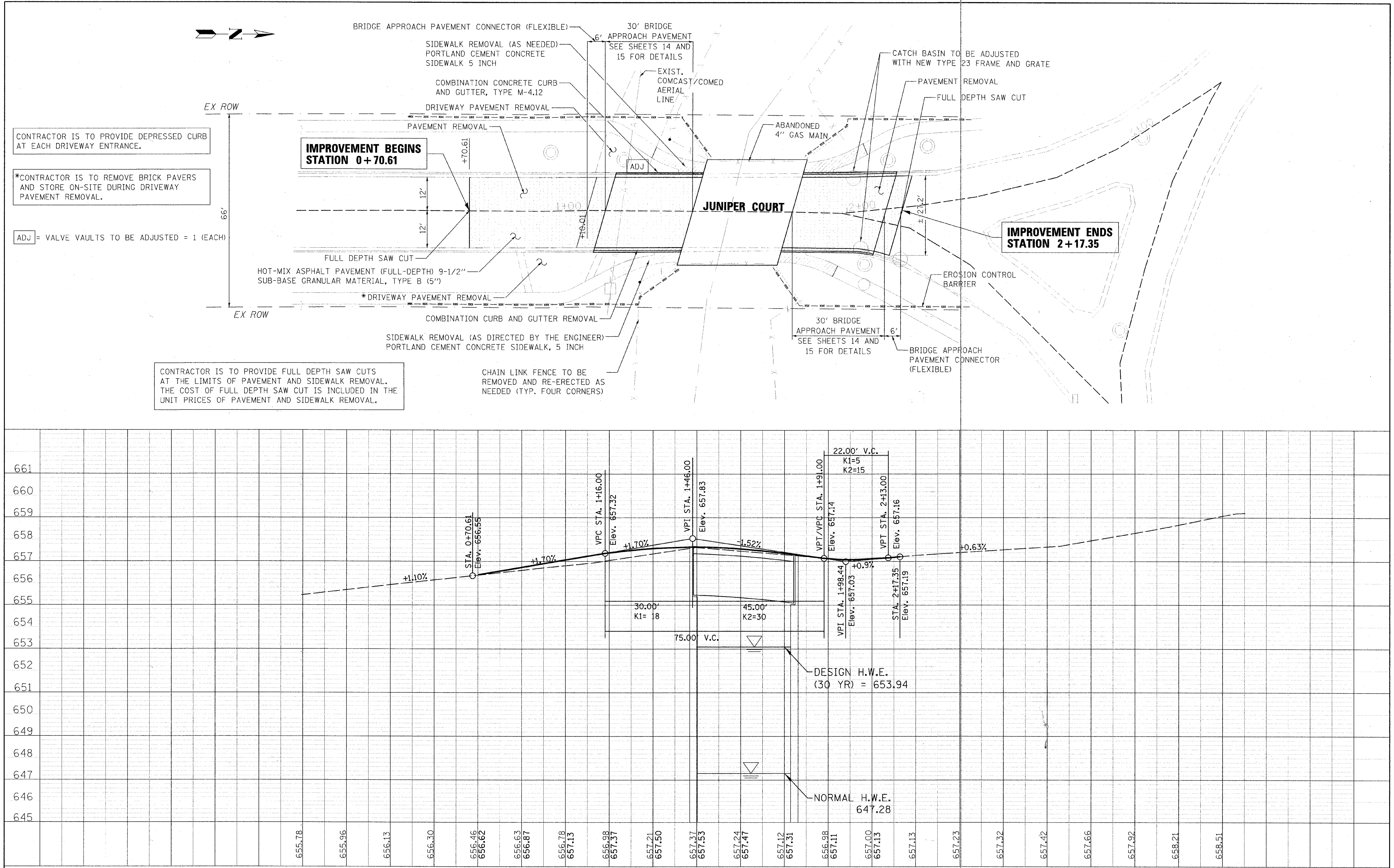


URS 100 S.WACKER DR., SUITE 500 CHICAGO IL.60606 TEL (312)-939-1000 FAX (312)-939-4198

USER NAME =	DESIGNED L. LAWS	REVISED -	
	DRAWN 1/15/11	REVISED -	
PLOT SCALE = $SCALE$	CHECKED J. BUCHOLC	REVISED -	
PLOT DATE = $DATE$	DATE 1/28/11	REVISED -	

VILLAGE OF DEERFIELD
JUNIPER COURT OVER THE WEST FORK, NORTH BRANCH OF THE CHICAGO RIVER

ROADWAY PLAN AND PROFILE

SCALE: 1"=15' | SHEET NO. 6 OF 16 SHEETS | STA. 0+70.61 TO STA. 2+17.35

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00084-00-BR	LAKE	16	6
CONTRACT NO. 63587				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

06 - Plan & Profile.dgn 4/4/2011 11:08:23 AM

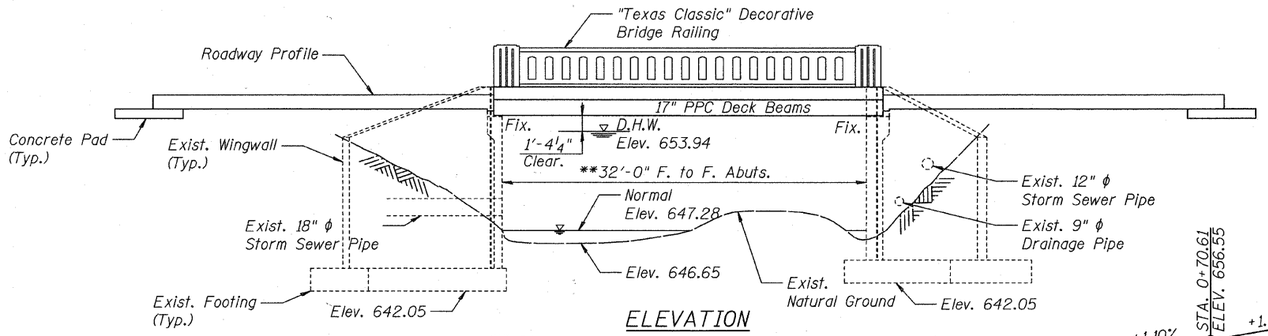
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark:
Village B.M. 2007-53 at SW corner of Jonquil Terrace & Osterman Avenue. Elevation 660.63

Existing Structure:

S/N: 049-6153 was originally built in 1965 by the Village of Deerfield. 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 35'-3 1/2"" 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.
No Salvage

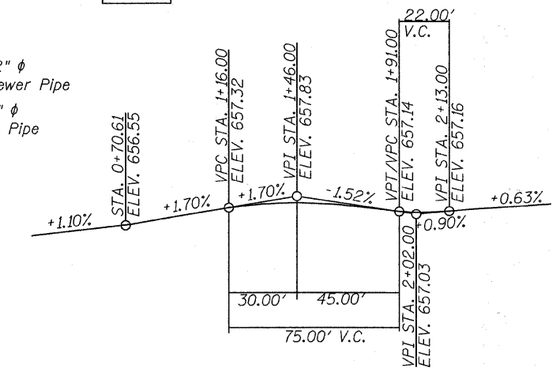
RE-BUILT 2011 BY
VILLAGE OF DEERFIELD
SEC. 09-00084-00-BR
STATION 1+46.01
STR. NO. 049-6153 LOADING HS20



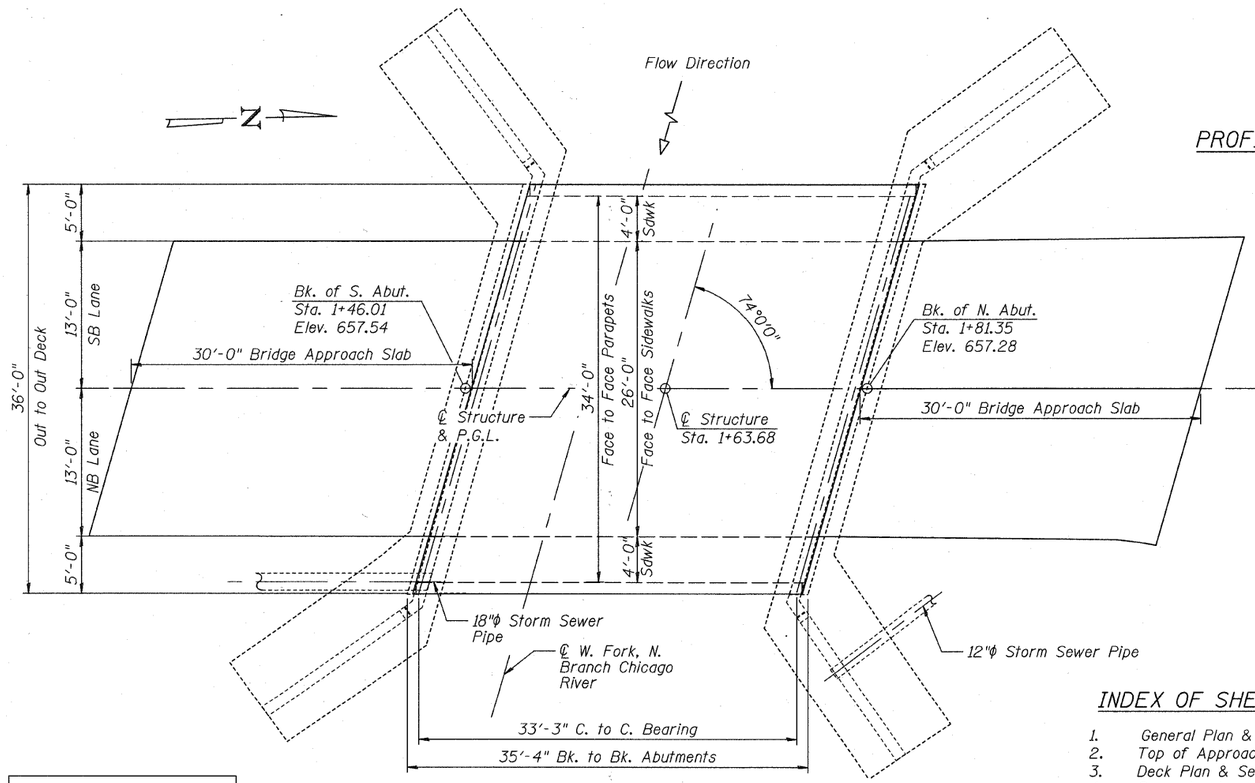
ELEVATION

(** Dimensions are perpendicular to the face of abutments)

NAME PLATE
See Std. 515001



PROFILE GRADE LINE - JUNIPER COURT



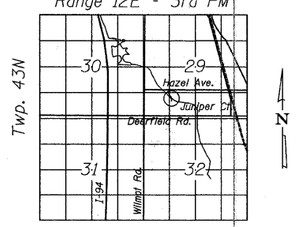
PLAN

DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC

INDEX OF SHEETS

3/25/11
EXP 11/30/12

I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.



LOCATION SKETCH

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

WATERWAY INFORMATION

Drainage Area = 3532.8 Ac Low Grade Elev. 657.10

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	113	148	152	653.27	0.00	0.01	653.27	653.28
Design	30	216	166	171	653.93	0.01	0.01	653.94	653.94
	50	318	186	192	654.70	0.01	0.01	654.71	654.71
Base	100	529	208	236	656.18	0.10	0.11	656.28	656.29
Overtopping									
Max. Calc.	500	881	241	296	657.91	0.49	0.50	658.40	658.41

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Removal of Existing Superstructures	EACH	1		1
	Concrete Removal	CY		0.8	0.8
	Concrete Structures	CY		16.4	16.4
	Concrete Superstructure	CY	84.8		84.8
	Bridge Deck Grooving	SY	248		248
	Protective Coat	SY	401		401
*	Precast Prestressed Concrete Deck Beams (17" Depth)	SF	1130		1130
*	Reinforcement Bars, Epoxy Coated	POUND	19,460	3,240	22,700
	Name Plates	EACH	1		1
	Structural Repair of Concrete (Depth less than or equal to 5")	SF		196	196
	Concrete Bridge Rail, Sidewalk Mounted	FOOT	71		71
*	Concrete Wearing Surface, 5"	SY	99		99
*	Temporary Wall Bracing System	LS	1		1
	Bar Splicers	EACH	54		54

* See Special Provisions

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. The existing superstructure has a ±4.0" bituminous concrete overlay that will be removed. Cost included with Removal of Existing Superstructure.
5. Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
7. 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.

DESIGN SPECIFICATIONS

2002 AASHTO LFD Bridge Design
With Interim Updates

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

DESIGN STRESSES

FIELD UNITS

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

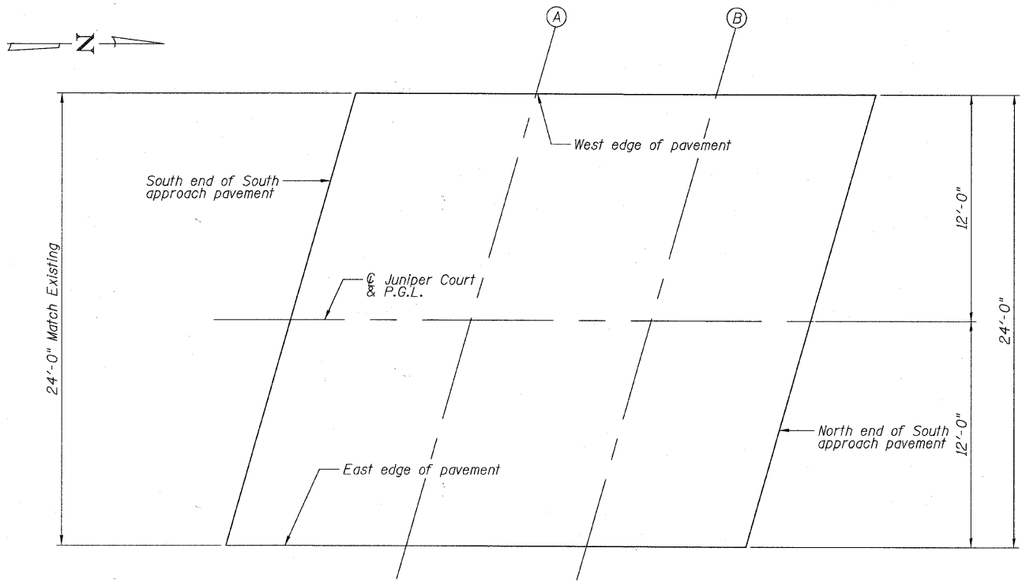
FIELD UNITS (EXISTING)

f'_c = 1,400 psi (Super)
f'_c = 1,000 psi (Sub)
v_b = 75 psi (Footing)
f_s = 20,000 psi (Reinfocement)

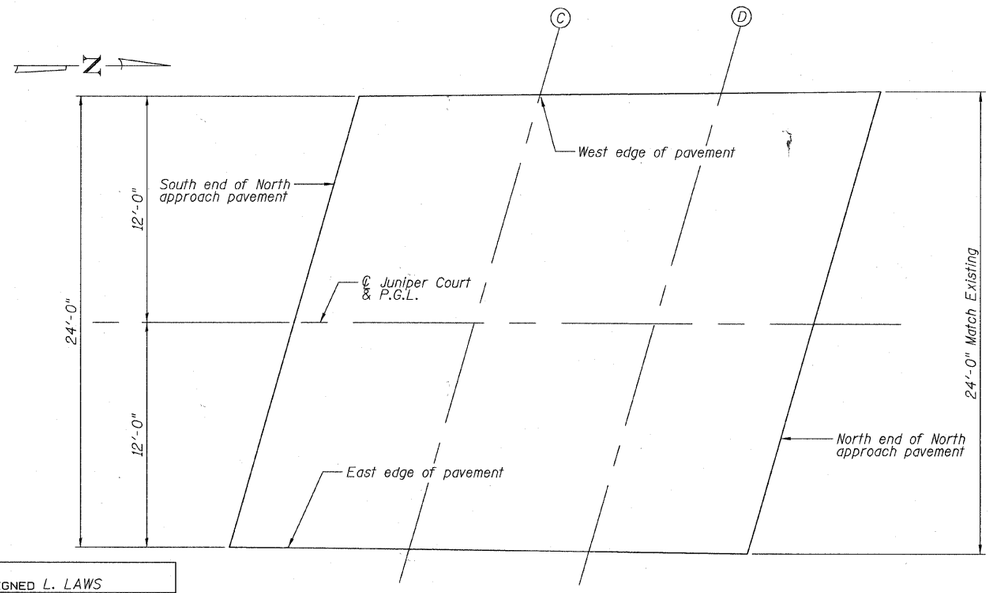
GENERAL PLAN & ELEVATION
STRUCTURE NO. 049-6153

	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET NO. 1		09-00084-00-BR	LAKE	16	7
10 SHEETS			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - SOUTH APPROACH PAVEMENT



PLAN - NORTH APPROACH PAVEMENT

DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC

SOUTH APPROACH SLAB
WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end south appr. pav't.	1+19.95	-12.00	657.14
A	1+29.95	-12.00	657.25
B	1+39.95	-12.00	657.30
N. end south appr. pav't.	1+49.95	-12.00	657.29

NORTH APPROACH SLAB
WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end north appr. pav't.	1+84.29	-12.00	657.00
C	1+94.29	-12.00	656.87
D	2+04.29	-12.00	656.85
N. end north appr. pav't.	2+14.09	-12.00	656.93

SOUTH APPROACH SLAB
℄ JUNIPER CT. & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
S. end south appr. pav't.	1+16.51	0.00	657.33
A	1+26.51	0.00	657.46
B	1+36.51	0.00	657.53
N. end south appr. pav't.	1+46.51	0.00	657.54

NORTH APPROACH SLAB
℄ JUNIPER CT. & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
S. end north appr. pav't.	1+80.85	0.00	657.28
C	1+90.85	0.00	657.14
D	2+00.85	0.00	657.09
N. end north appr. pav't.	2+10.85	0.00	657.14

SOUTH APPROACH SLAB
EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end south appr. pav't.	1+13.07	12.00	657.03
A	1+23.07	12.00	657.18
B	1+33.07	12.00	657.28
N. end south appr. pav't.	1+43.07	12.00	657.30

NORTH APPROACH SLAB
EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. end north appr. pav't.	1+77.41	12.00	657.08
C	1+87.41	12.00	656.95
D	1+97.41	12.00	656.86
N. end north appr. pav't.	2+07.41	12.00	656.86

URS
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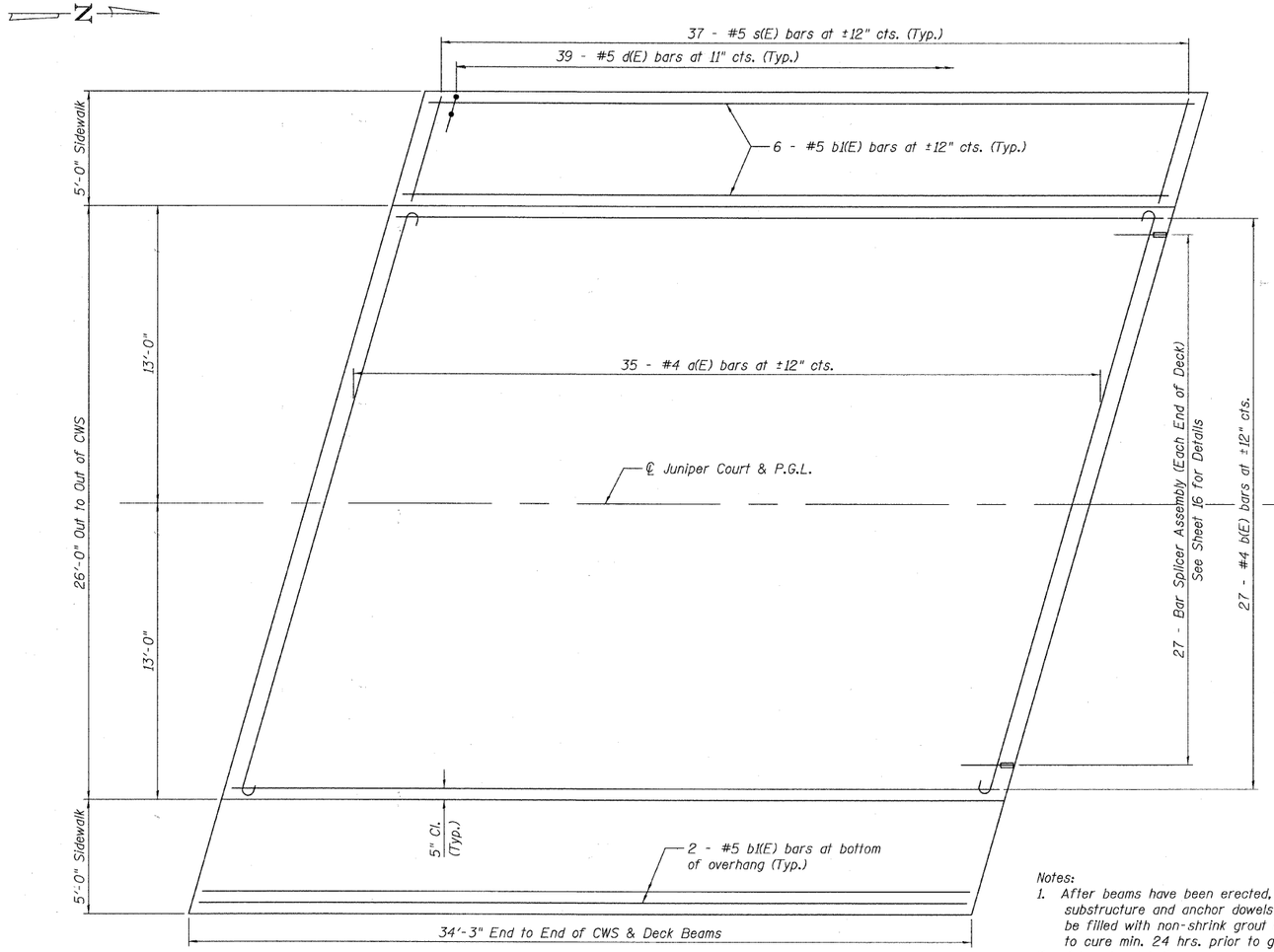
Fax: 312.939.4198

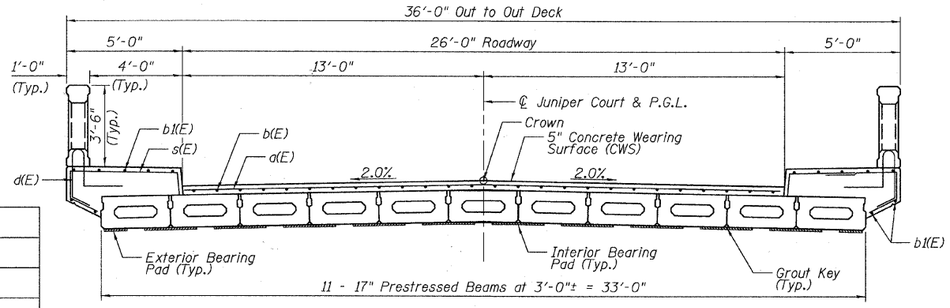
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 049-6153

SHEET NO. 2	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS		09-00084-00-BR	LAKE	16	8
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



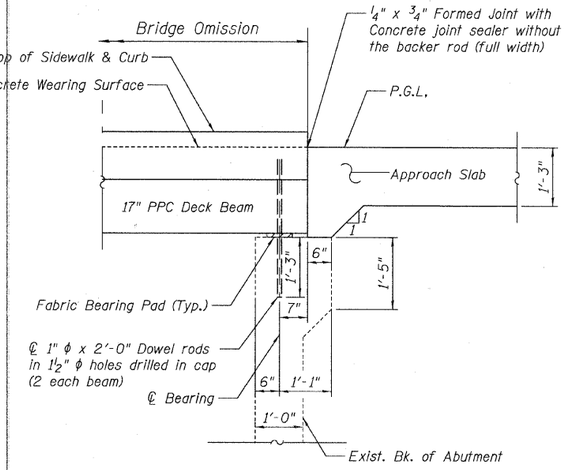
PLAN



CROSS SECTION
(Looking Upstation)

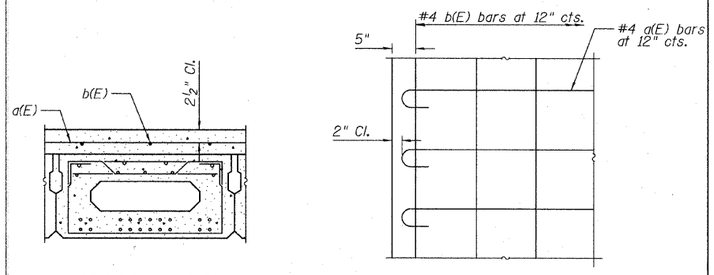
DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC

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. Hatched area to be poured after Precast Prestressed Concrete Deck Beams have been erected. Quantity of concrete included with Concrete Superstructure.
4. See Sheet Nos. 5 & 6 for beam & bearing pad details.
5. See Sheet No. 4 for superstructure details and Bill of Material.
6. See Sheet No. 4 for concrete bridge rail reinforcement.



SECTION THRU EXISTING ABUTMENT

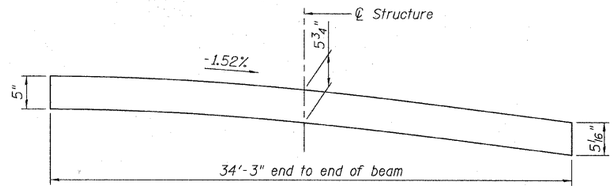
(Horizontal dim. @ Rt. L's)



CROSS SECTION

PLAN

REINFORCED CONCRETE WEARING SURFACE DETAILS



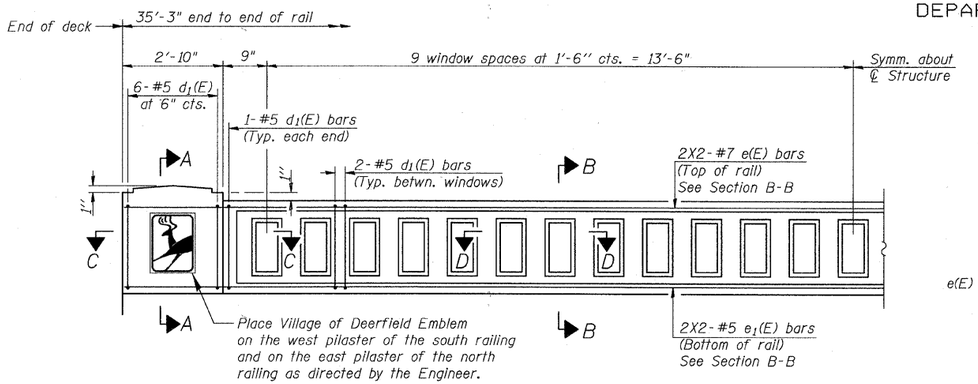
REINFORCED CONCRETE WEARING SURFACE PROFILE

DECK PLAN & SECTION
STRUCTURE NO. 049-6153

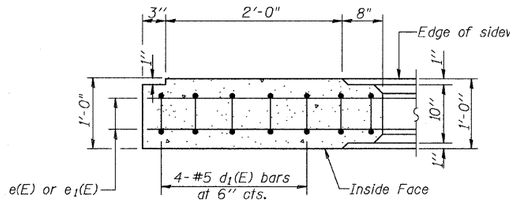
URS
100 South Wacker Drive, Suite 500
Chicago, IL 60606
Tel: 312.939.1000
Fax: 312.939.4198

SHEET NO. 3	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS		09-00084-00-BR	LAKE	16	9
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

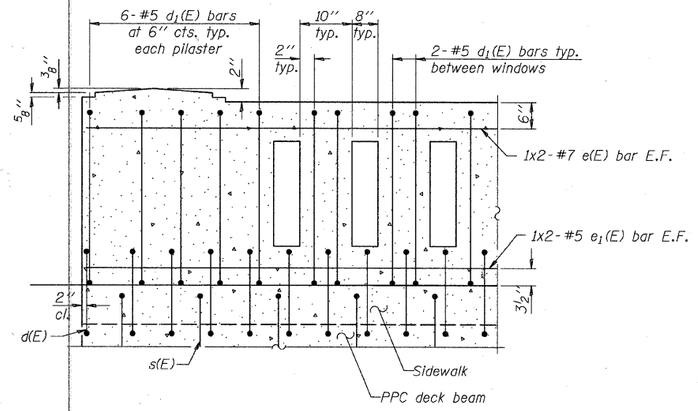
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



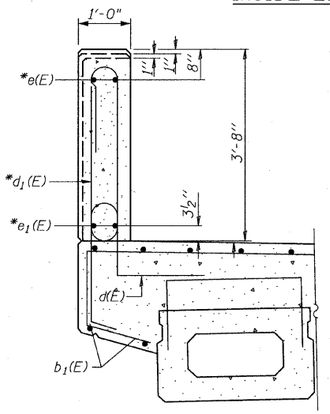
INSIDE ELEVATION OF RAIL



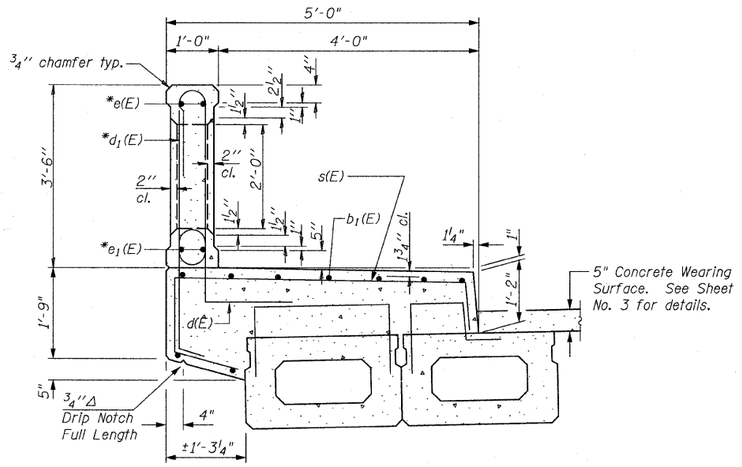
SECTION C-C



TYPICAL REINFORCEMENT PLACEMENT
(Inside Face)



SECTION A-A



SECTION B-B

RAILING BAR LIST
ONLY ONE RAILING
(For Information Only)

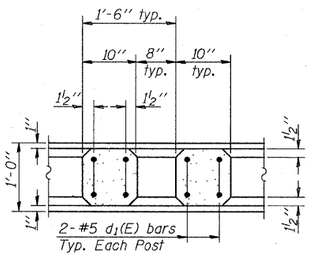
Bar	No.	Size	Length	Shape
$d_1(E)$	50	#5	8'-8"	
e(E)	4	#7	35'-0"	
$e_1(E)$	4	#5	35'-0"	

*Bars e(E) thru $e_1(E)$ and $d_1(E)$ are included in the cost of Concrete Bridge Railing, Sidewalk Mounted.

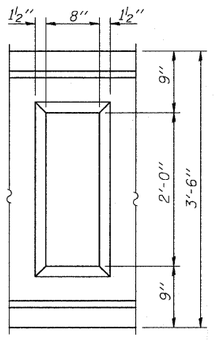
Notes:

1. 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.
2. 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.
3. Holes and recesses must be formed or cored. Drilling is not permitted.
4. All Construction joints shall be bonded unless otherwise noted.
5. Work this sheet with Sheet No. 3.

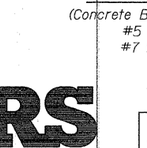
DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC



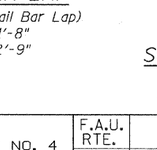
SECTION D-D



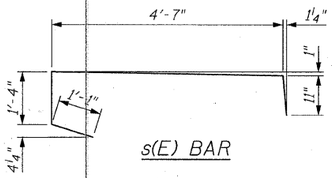
WINDOW DETAIL



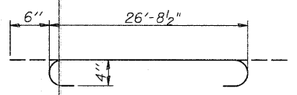
BAR d(E)



BAR $d_1(E)$



s(E) BAR



d(E) BAR

MINIMUM BAR LAP
(Concrete Bridge Rail Bar Lap)
#5 Bar = 1'-8"
#7 Bar = 2'-9"

SUPERSTRUCTURE
BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	d(E)	35	#4	27'-8½"	
	b(E)	27	#4	33'-11"	
	$b_1(E)$	18	#5	33'-11"	
	d(E)	78	#5	6'-0 ½"	
	s(E)	74	#5	7'-11"	
*	Reinforcement Bars, Epoxy Coated		Pound	2980	
	Concrete Superstructure		Cu. Yds.	18.1	
	Bridge Deck Grooving		Sq. Yds.	88	
	Protective Coat		Sq. Yds.	241	
*	Concrete Wearing Surface, 5"		Sq. Yds.	99	
	Concrete Bridge Railing, Sidewalk Mounted		Foot	71	
	Bar Splicers		Each	54	

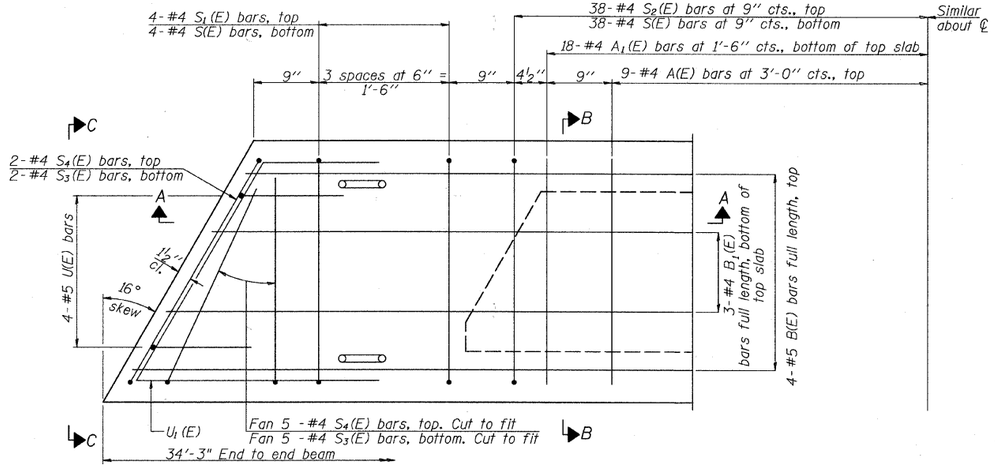
* See Special Provisions

SUPERSTRUCTURE & RAILING DETAILS
STRUCTURE NO. 049-6153

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

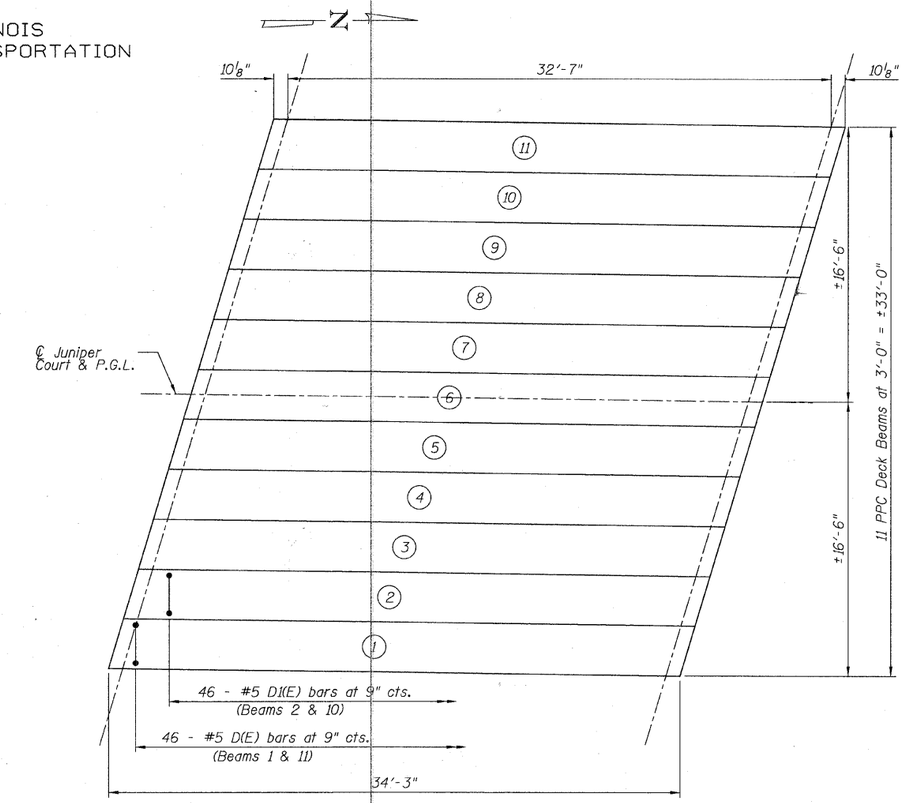
SHEET NO. 4	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS		09-00084-00-BR	LAKE	16	10
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

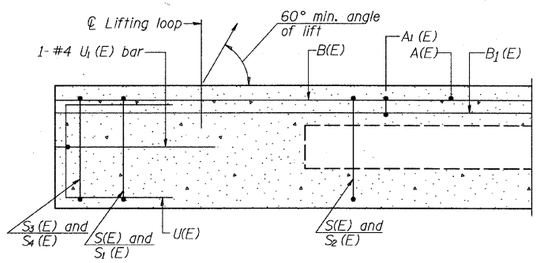


PLAN VIEW

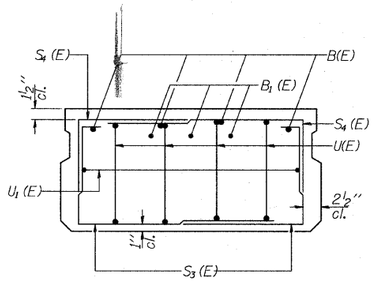
Note: Spacing of S(E) and S_2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



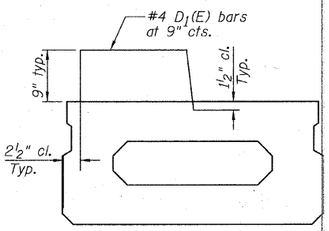
FRAMING PLAN



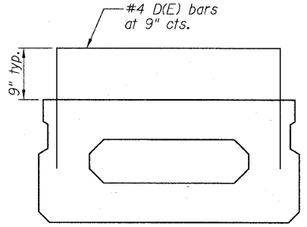
SECTION A-A



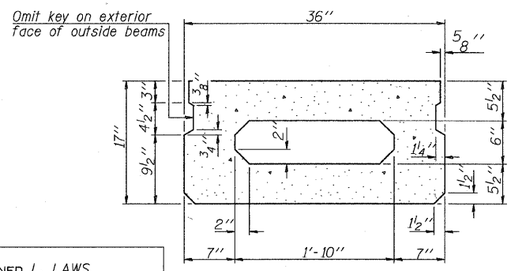
VIEW C-C



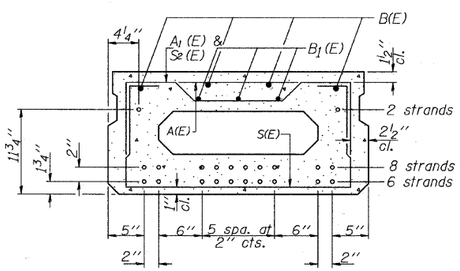
DECK BEAMS 2 & 10
Showing additional reinforcement
(Deck Beam 10 shown, Deck Beam 2 opposite hand)



DECK BEAMS 1 & 11
Showing additional reinforcement



SECTION B-B
(Showing dimensions)



SECTION B-B

(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.

DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC

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Chicago, IL 60606
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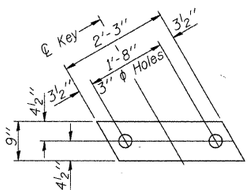
Fax: 312.939.4198

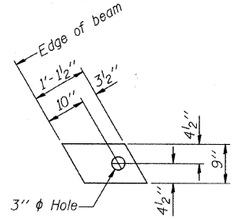
PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6153

SHEET NO. 5	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS	.	09-00084-00-BR	LAKE	16	11
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



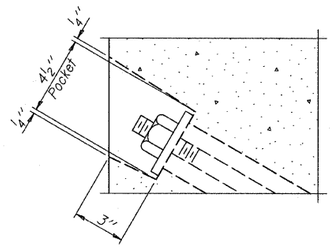
FABRIC BEARING PAD
(Interior)



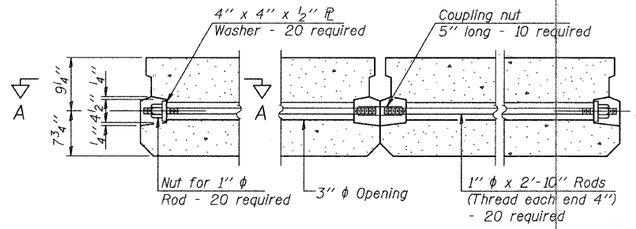
FABRIC BEARING PAD
(Exterior)

FIXED

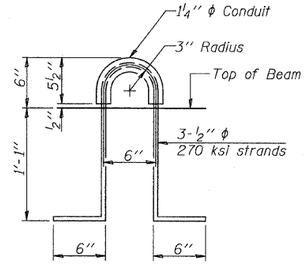
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



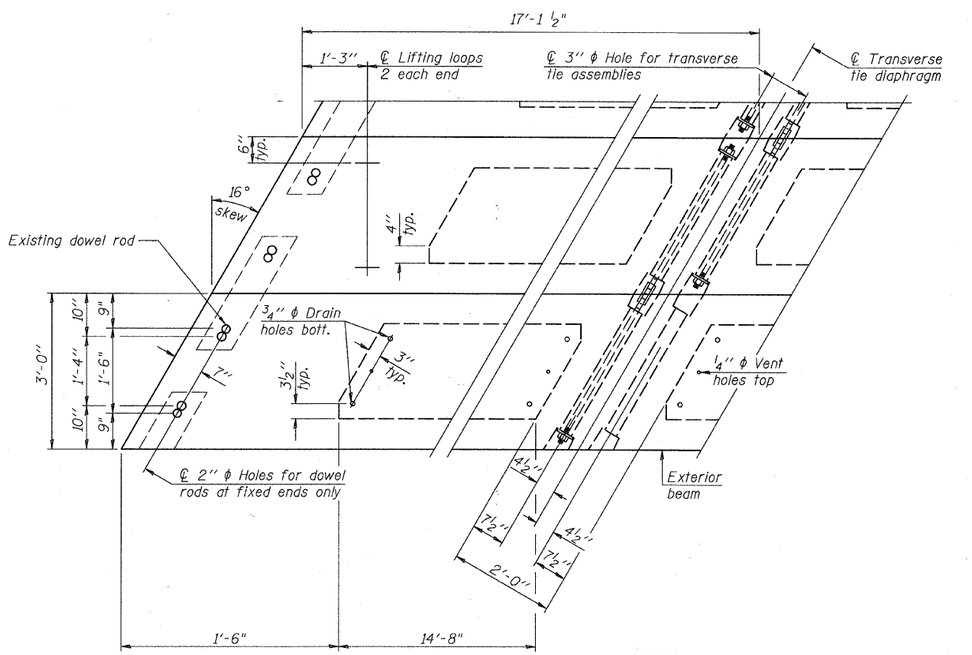
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



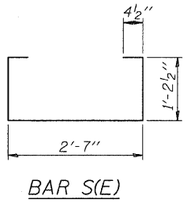
LIFTING LOOP DETAIL



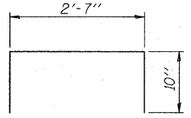
PLAN VIEW

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

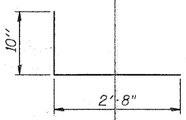
DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC



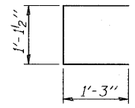
BAR S(E)



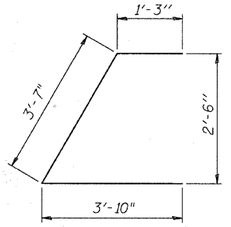
BAR S_1(E)



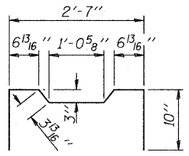
BAR S_4(E)



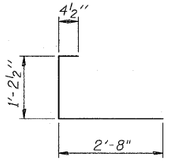
BAR U(E)



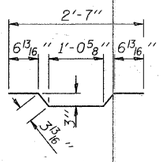
BAR U_1(E)



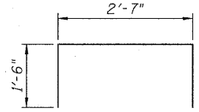
BAR S_2(E)



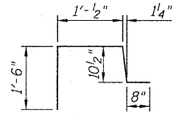
BAR S_3(E)



BAR A_1(E)



BAR D(E)



BAR D_1(E)

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	33'-11"	—
	B_1(E)	4	#4	33'-11"	—
#	D(E)	47	#4	5'-7"	⊓
##	D_1(E)	47	#4	4'-7"	⊓
	S(E)	44	#4	5'-9"	⊔
	S_1(E)	8	#4	4'-3"	⊓
	S_2(E)	40	#4	4'-6"	⊓
	S_3(E)	13	#4	4'-7"	⊐
	S_4(E)	13	#4	4'-2"	⊐
	U(E)	8	#5	3'-8"	⊏
	U_1(E)	4	#4	8'-8"	⊏

\# Beams 1 & 11 Only
\## Beams 2 & 10 Only

NOTES

1. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
2. The 1" ϕ 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.
3. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
4. Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
5. A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.
6. 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.
7. Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
8. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1130

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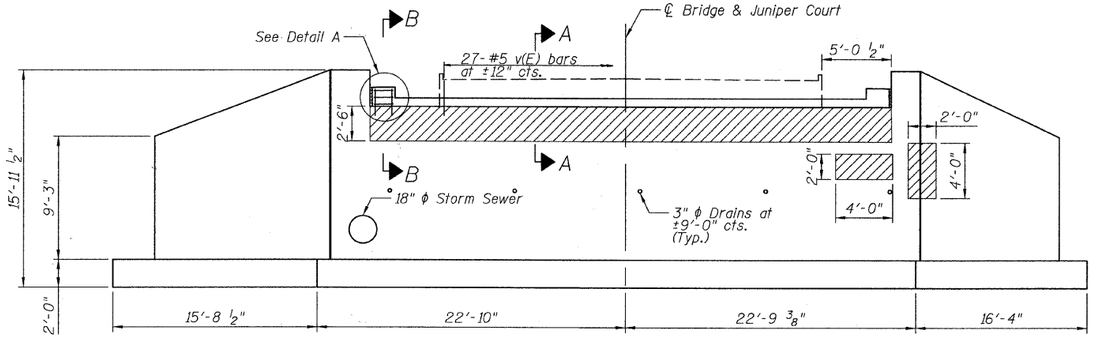
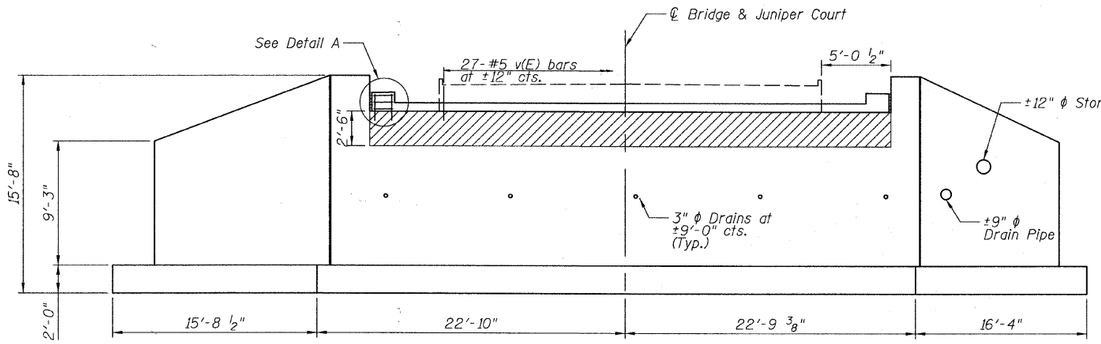
PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6153

SHEET NO. 6	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS		09-00084-00-BR	LAKE	16	12
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

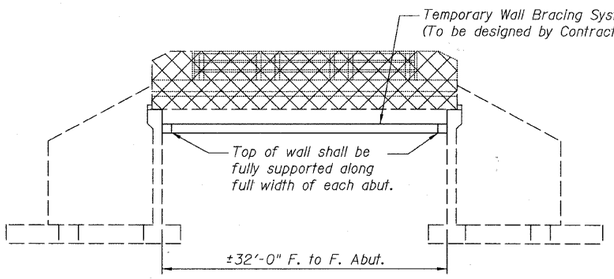
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SOUTH ABUTMENT
(Looking South)



NORTH ABUTMENT
(Looking North)

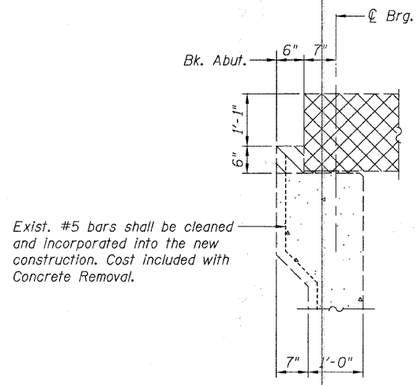


TEMPORARY WALL BRACING SYSTEM

ABUTMENTS
BILL OF MATERIAL

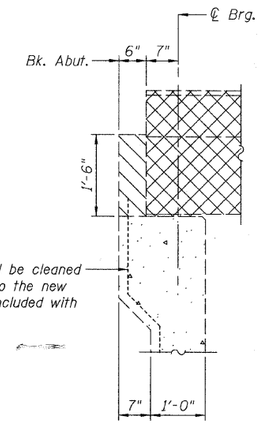
	Bar	No.	Size	Length	Shape
	h(E)	8	#5	1'-5"	———
	v(E)	66	#5	5'-1"	⌐
	v_1(E)	8	#5	2'-1"	———
*	Reinforcement Bars, Epoxy Coated			Pound	380
	Concrete Removal			Cu. Yd.	0.8
*	Structural Repair of Concrete (<=5")			Sq. Ft.	196
*	Temporary Wall Bracing System			L Sum	1

* See Special Provisions



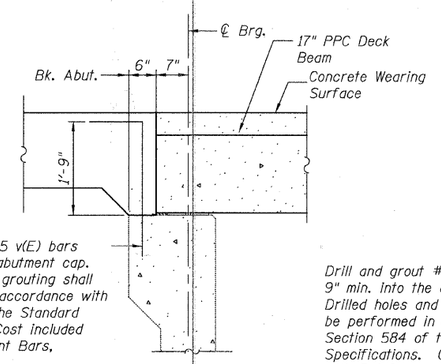
Exist. #5 bars shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

SECTION A-A
(Showing Removal)



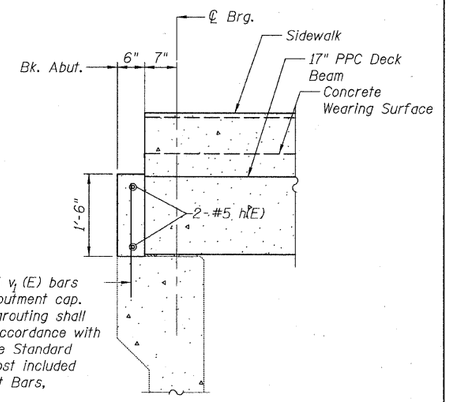
Exist. #5 bars shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

SECTION B-B
(Showing Removal)



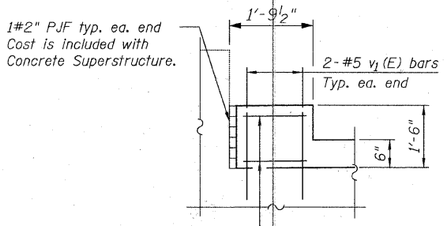
Drill and grout #5 v(E) bars 9" min. into the abutment cap. Drilled holes and grouting shall be performed in accordance with Section 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

SECTION A-A

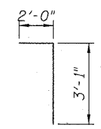


Drill and grout #5 v_1(E) bars 9" min. into the abutment cap. Drilled holes and grouting shall be performed in accordance with Section 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

SECTION B-B



DETAIL A



BAR v(E)

LEGEND

Removal of Existing Substructure

Concrete Removal

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

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.
All construction joints shall be bonded unless otherwise noted.

DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC

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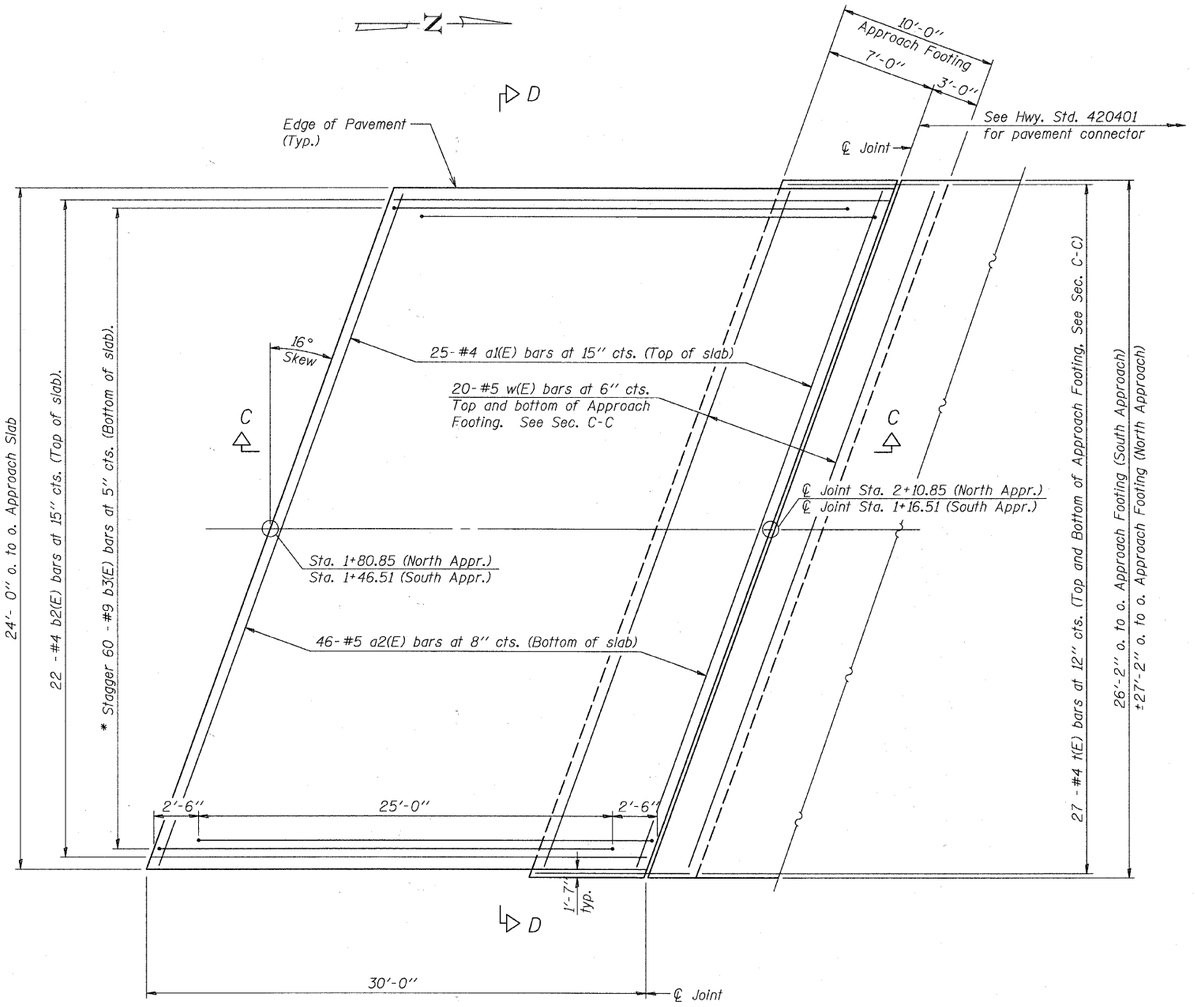
SUBSTRUCTURE REPAIRS & DETAILS
STRUCTURE NO. 049-6153

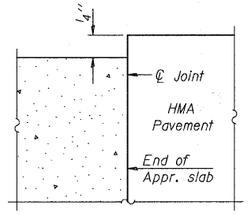
SHEET NO. 7	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS		09-00084-00-BR	LAKE	16	13
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

* Tilt #9 b3(E) bars as required to maintain clearance.



FLEXIBLE PAVEMENT

DETAIL A

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

Notes:
See sheet 9 for Sections C-C & D-D.
a1(E) and a2(E) bar spacings measured along ℄ Rdwy.

DESIGNED	L. LAWS
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DRAWN	L. LAWS
CHECKED	J. BUCHOLC

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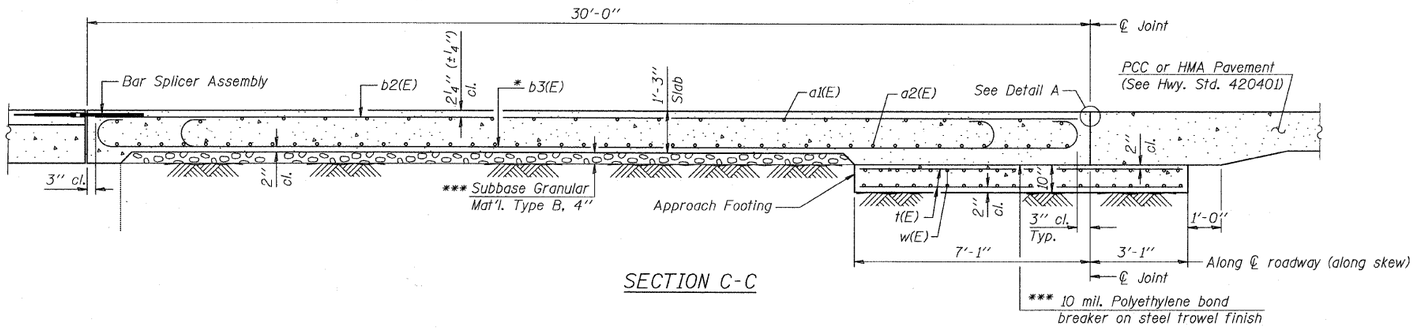
(Sheet 1 of 2)

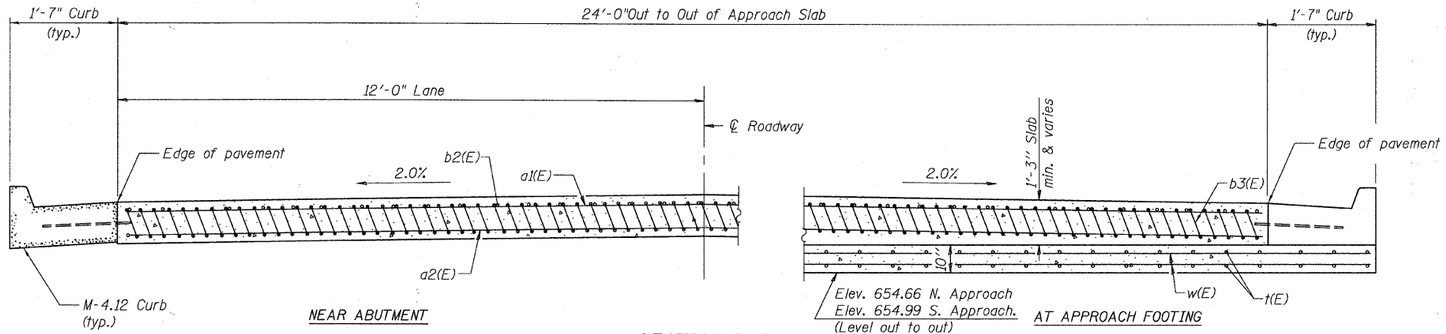
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 049-6153

SHEET NO. 8 10 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00084-00-BR	LAKE	16	14
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C



SECTION D-D
(See Plan for dimensions not shown)

Notes:
See sheet 14 for Detail A.
Approach slab shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

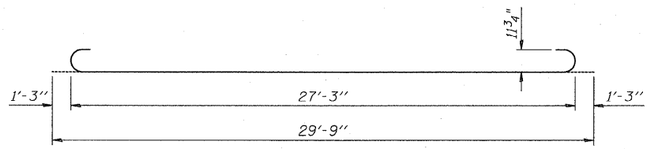
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 16.
Cost of excavation for approach footing included with Concrete Structures.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	50	#4	23'-8"	——
a2(E)	92	#5	23'-8"	——
b2(E)	44	#4	29'-8"	——
b3(E)	120	#9	30'-9"	⊂——⊃
t(E)	108	#4	9'-8"	——
w(E)	80	#5	25'-10"	——
Protective Coat			Sq. Yd.	160
Concrete Superstructure			Cu. Yd.	66.7
Concrete Structures			Cu. Yd.	16.4
Bridge Deck Grooving			Sq. Yd.	160
Reinforcement Bars, Epoxy Coated			Pound	19,340

* Tilt #9 b3(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.



BAR b3(E)

DESIGNED	L. LAWS
CHECKED	J. BUCHOLC
DRAWN	L. LAWS
CHECKED	J. BUCHOLC

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Chicago, IL 60606
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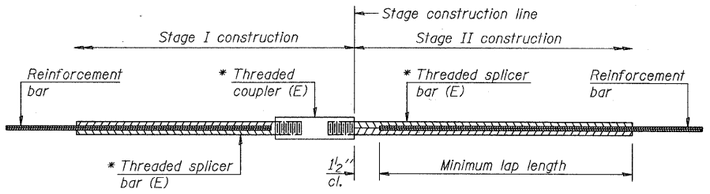
(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 049-6153

SHEET NO. 9 10 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00084-00-BR	LAKE	16	15
			CONTRACT NO. 63587		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

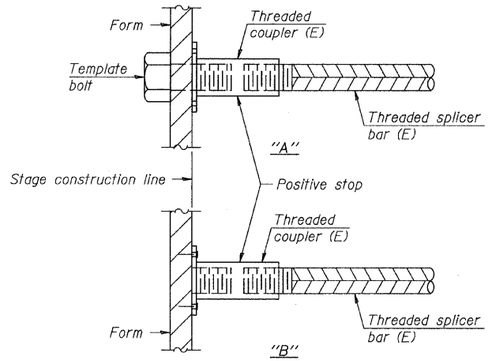
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1½" + thread length

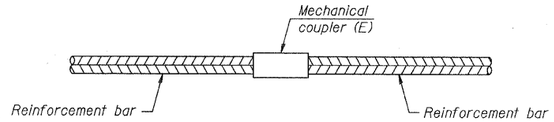
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



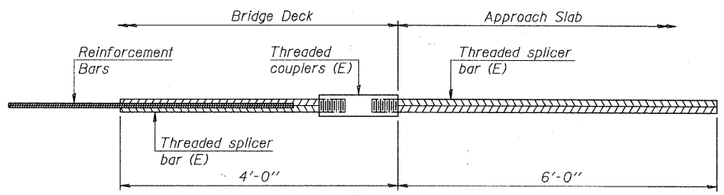
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



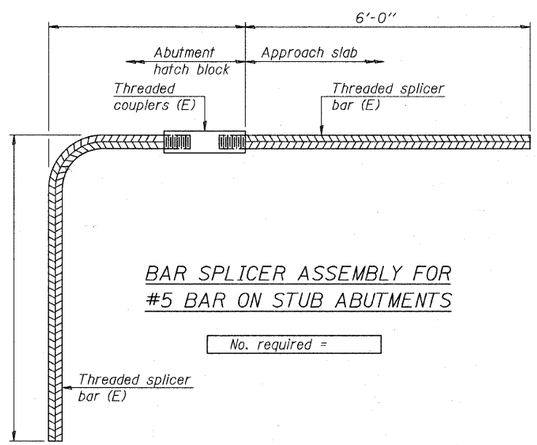
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 54



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See special provision for Mechanical Splicers.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 049-6153

DESIGNED L. LAWS	SHEET NO. 1Ø	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED J. BUCHOLC			09-00084-00-BR	LAKE	16	16
DRAWN L. LAWS	1Ø SHEETS			CONTRACT NO. 63587		
CHECKED J. BUCHOLC		FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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