11-06-2026 LETTING ITEM 084

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	(T)CLV	MACOUPIN	8	1
	ILLINOIS	CONTRACT NO. 72E77		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

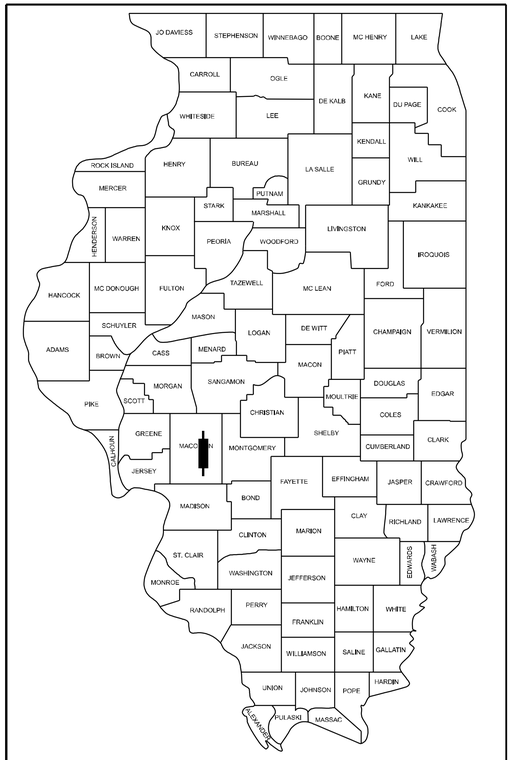
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FOR INDEX OF SHEETS, SEE SHEET NO. 2

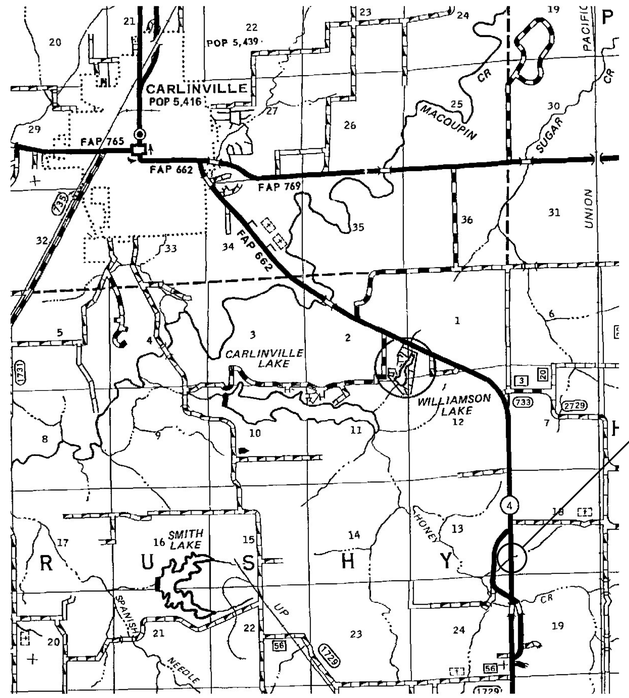
PROPOSED
CONTRACT MAINTENANCE

FAP ROUTE 662 (IL 4)
SECTION (T)CLV
PROJECT (STATE ONLY)
CULVERT REPAIR
MACOUPIN COUNTY

C-96-068-26



LOCATION OF SECTION INDICATED THUS: -



PROJECT LOCATION:
SN 059-7015
IL 4 OVER DITCH
5.4 MI S IL 108
N39.2226 W089.8131

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

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

PROJECT ENGINEER: BRANDON DUDLEY - (217) 785-9290
PROJECT MANAGER

CONTRACT NO. 72E77

GROSS LENGTH = XX FT. = XX MILE
NET LENGTH = XX FT. = XX MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 13, 2026
Teresa C. Price
REGIONAL ENGINEER

October 2 26
ENGINEER OF DESIGN AND ENVIRONMENT

October 2 26
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX, STANDARDS, GENERAL NOTES & SIGNATURES
3	SUMMARY OF QUANTITIES
4	GENERAL PLAN
5-8	BRIDGE PLANS, SN 059-7015

HIGHWAY STANDARDS

000001-09
001001-02
001006
701001-02
701006-05
701201-05
701901-11

GENERAL NOTES:

AREAS OF TREE REMOVAL SHALL BE FERTILIZED (INCLUDING AG LIME) AND SEEDED WITH CLASS 2 SEED PER SECTION 250 OF THE STANDARD SPECIFICATIONS. THE COST OF FERTILIZING AND SEEDING SHALL BE INLCUDED IN THE BID PRICE FOR TREE REMOVAL.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED August 7, 20 26
ENGINEER OF OPERATIONS

EXAMINED August 6, 20 26
ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED August 12, 20 26
ENGINEER OF PROGRAM DEVELOPMENT

MODEL: index [Sheet]
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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 8/12/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS
GENERAL NOTES, & SIGNATURES

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	T(CLV)	MACOUPIN	8	2
		CONTRACT NO. 72E77		
	ILLINOIS	FED. AID PROJECT		

			0-02181-6002 SN 059-7015 100% STATE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0004-RURAL MACOUPIN
20100500	TREE REMOVAL, ACRES	ACRE	0.1	0.1
25100630	EROSION CONTROL BLANKET	SQYD	145	145
28100805	STONE DUMPED RIPRAP, CLASS A3	TON	15	15
50102400	CONCRETE REMOVAL	CUYD	3.4	3.4
50200100	STRUCTURE EXCAVATION	CUYD	9	9
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	210	210
50300225	CONCRETE STRUCTURES	CUYD	3.4	3.4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1630	1630
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQFT	340	340
67100100	MOBILIZATION	LSUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	1
70107025	CHANGEABLE MESSAGE SIGNS	CAL DAY	50	50
X0323992	HELICAL GROUND ANCHORS	EACH	2	2

REV. SK

Mcad SOQ [Sheet]
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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE a 8/12/2026	DATE -	REVISED -	

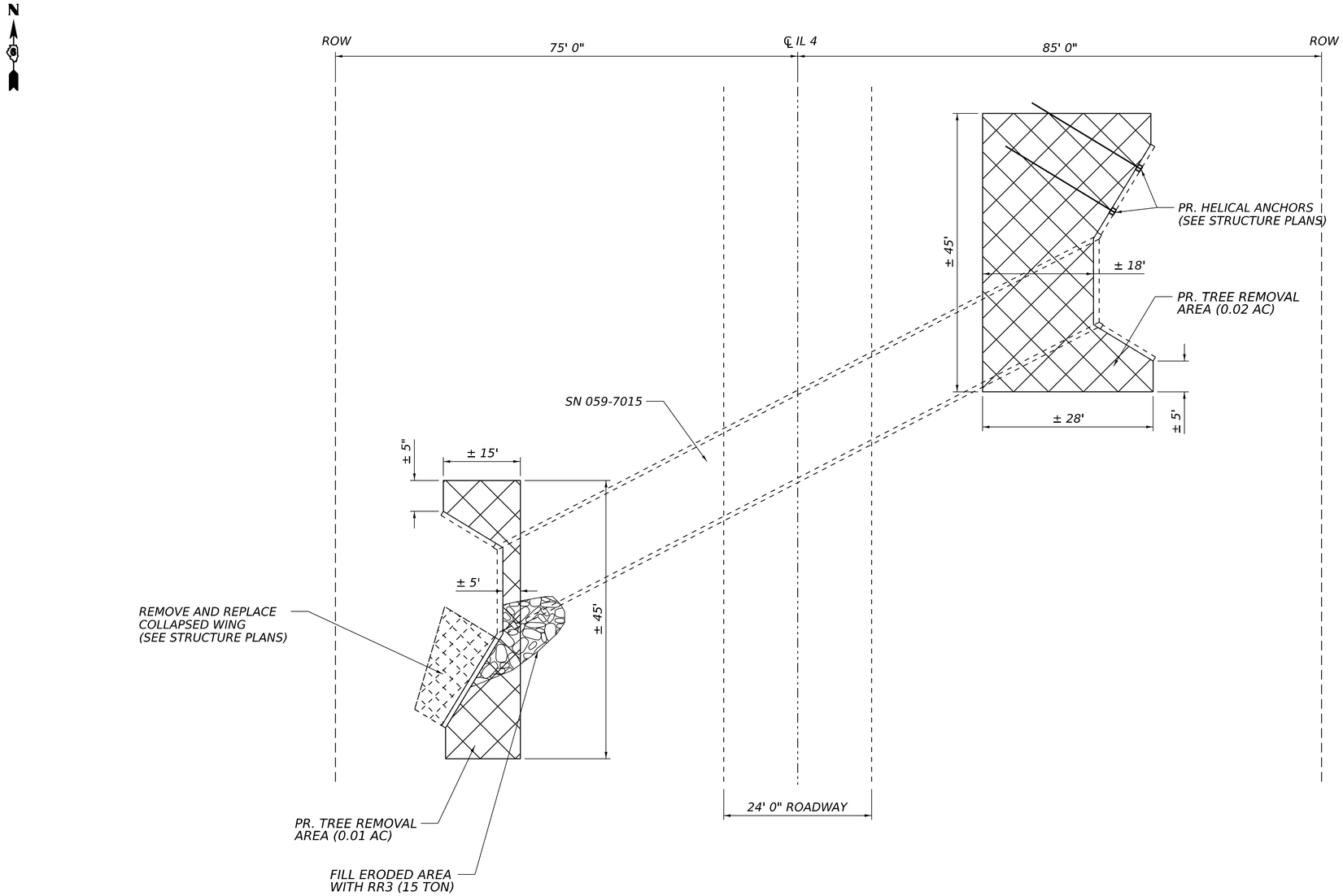
SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	T(CLV)	MACOUPIN	8	3

CONTRACT NO. 72E77

ILLINOIS | FED. AID PROJECT



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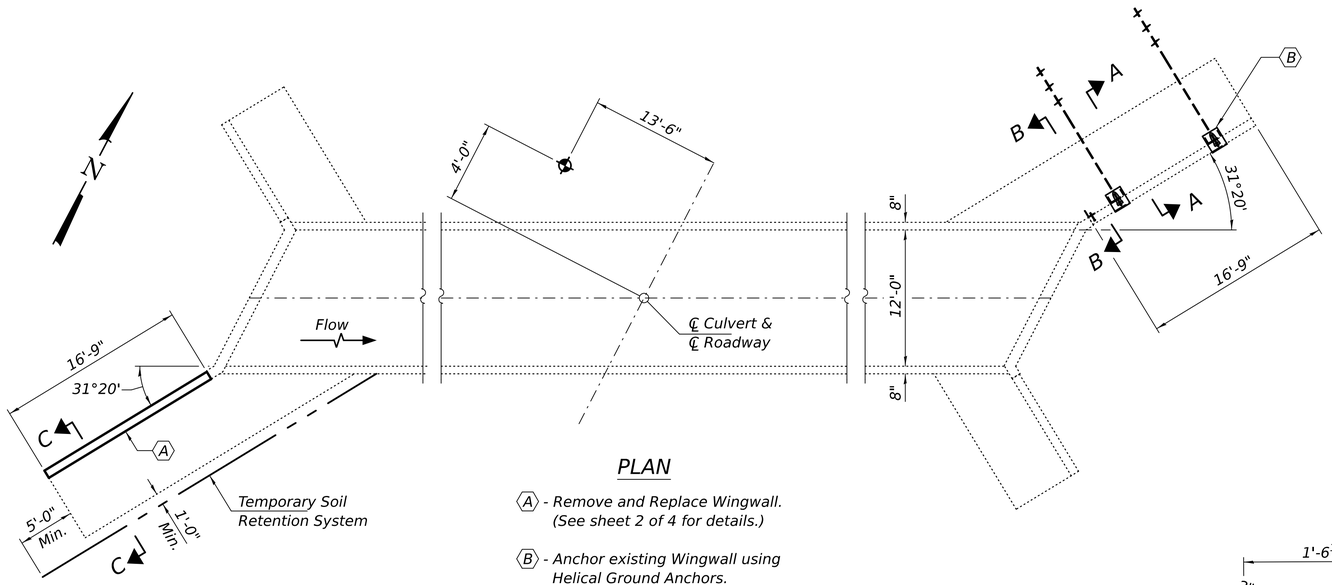
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	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 8/12/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	T(CLV)	MACOUPIN	8	4
		CONTRACT NO. 72E77		
	ILLINOIS	FED. AID PROJECT		



PLAN

(A) - Remove and Replace Wingwall. (See sheet 2 of 4 for details.)

(B) - Anchor existing Wingwall using Helical Ground Anchors.

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to the existing structure have been taken from existing plans and 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.

All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".

Helical Ground Anchor shall be designed by manufacturer. (See Special Provisions).

The Contractor shall submit design calculations and shop drawing for the proposed Helical Ground Anchor to the Engineer for review and approval.

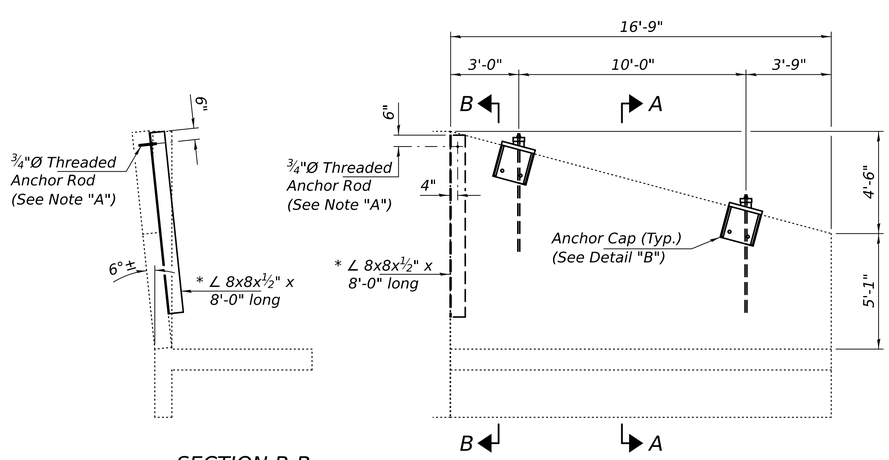
Helical Ground Anchor design load (Service) = 9.0 K/Anchor.

All anchor components shall be galvanized according to AASHTO M111. (See Special Provisions.)

Cost of the Anchor Cap, steel plates, threaded rod, washers, and nuts included in the cost of Helical Ground Anchors.

Cost of the threaded anchor rod, nuts, and washers for attaching the L8x8x½ are included in the cost of Furnishing & Erecting Structural Steel.

For Section C-C, see sheet 2 of 4.

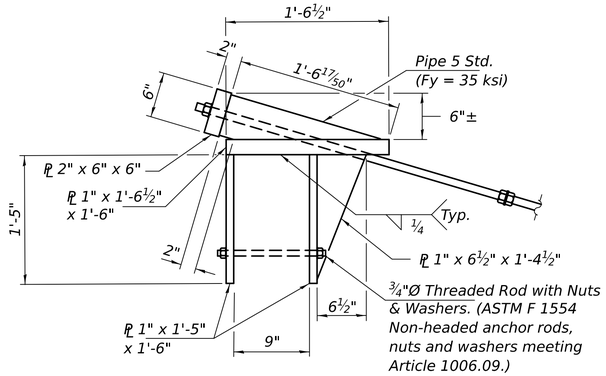


SECTION B-B

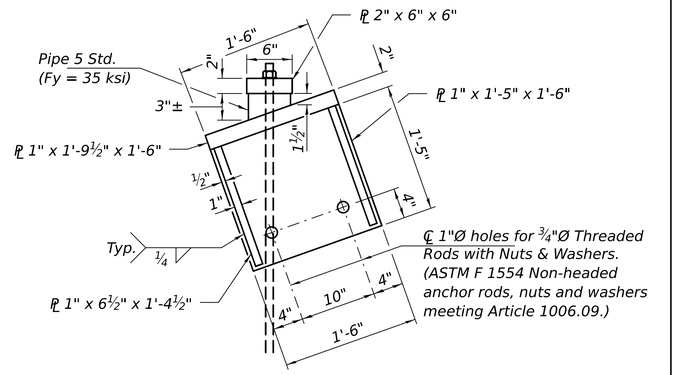
ELEVATION

(Inside Face)

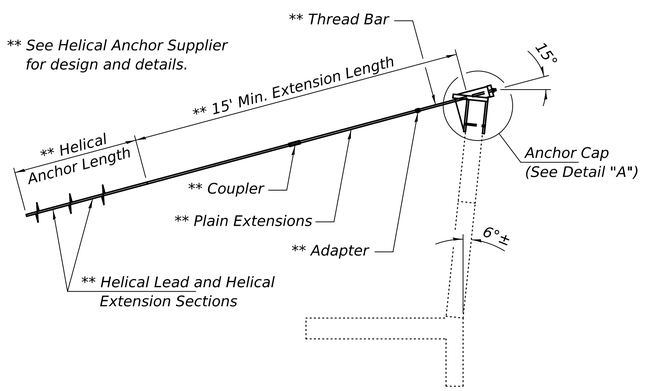
* Install the outer leg of angle flush and against the existing Culvert Wall.



DETAIL "A"



DETAIL "B"



SECTION A-A

DESIGN STRESSES

FIELD UNITS

f 'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)
fy = 35 ksi (Pipes)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Helical Ground Anchor	Each	2
Furnishing & Erecting Structural Steel	Pound	210
Concrete Removal	Cu. Yd.	3.4
Concrete Structures	Cu. Yd.	3.4
Reinforcement Bars, Epoxy Coated	Pound	1630
Temporary Soil Retention System	Sq. Ft.	340
Structure Excavation	Cu. Yd.	9.0

Note "A":
All-threaded anchor rod shall conform to ASTM F1554 Grade 105, ¾"Ø x 9" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 6".

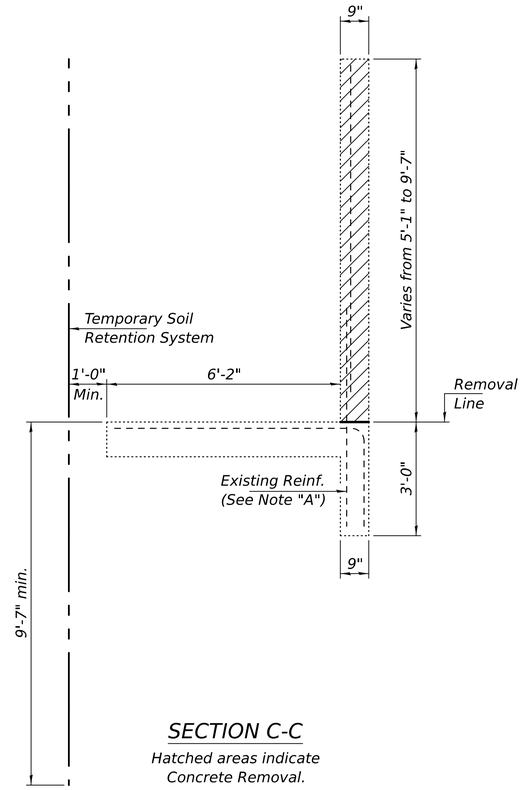
LICENSED STRUCTURAL ENGINEER
MARK D. SHAFFER
081-006508
STATE OF ILLINOIS

Expires: November 30, 2026

DESIGNED - Chi-Cheung Chau	EXAMINED	DATE - OCTOBER 2, 2026	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
CHECKED - Jeffrey S. Burke	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - EMS / Steffen	PASSED	REVISED -	**GENERAL PLAN AND REPAIR DETAILS** **ILLINOIS ROUTE 4 OVER DITCH** **SN 059-7015**
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET 1 OF 4 SHEETS

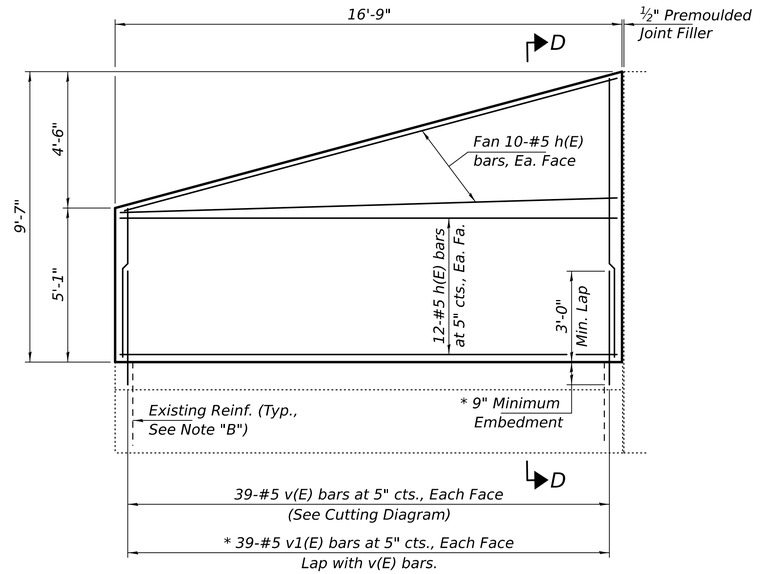
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	T(CLV)	MACOUPIN	8	5
		CONTRACT NO. 72E77		
	ILLINOIS	FED. AID PROJECT		

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SECTION C-C

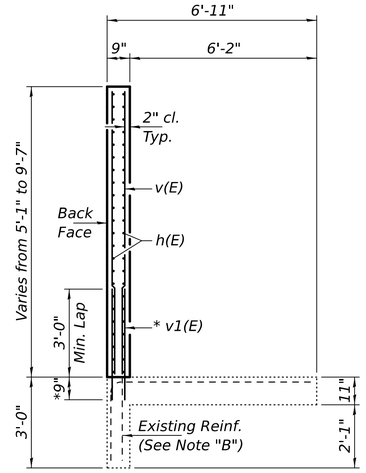
Hatched areas indicate Concrete Removal.



WINGWALL ELEVATION

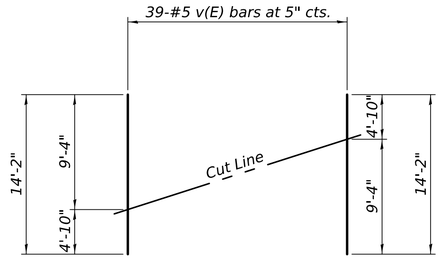
(Outside Face)

Note "B":
Cut flush existing reinforcement extending into new construction prior to epoxy grouting new bars. Cost included with Reinforcement Bars, Epoxy Coated.



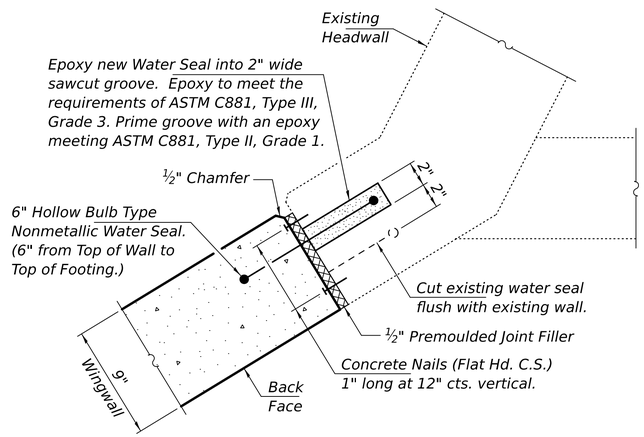
SECTION D-D

** Epoxy grout v1(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.*



FIELD CUTTING DIAGRAM

Order bars shown full length. Cut as shown and use remainder of bars in opposite face.



CORNER DETAIL

Note:
Cost of furnishing and installing the Bulb Type Water Seal (including grooving existing concrete headwall, Bulb Water Seal, Nails, and Premoulded Joint Filler) shall be included in the cost of Concrete Structures.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#5	16'-5"	———
v(E)	39	#5	14'-2"	———
v1(E)	78	#5	3'-9"	———
Concrete Removal			Cu. Yd.	3.4
Concrete Structures			Cu. Yd.	3.4
Reinforcement Bars, Epoxy Coated			Pound	1630

DESIGNED	-	CCC	
CHECKED	-	JSB	
DRAWN	-	EMS / Steffen	
CHECKED	-	CCC JSB	

EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - OCTOBER 2, 2026
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 059-7015
SHEET 2 OF 4 SHEETS

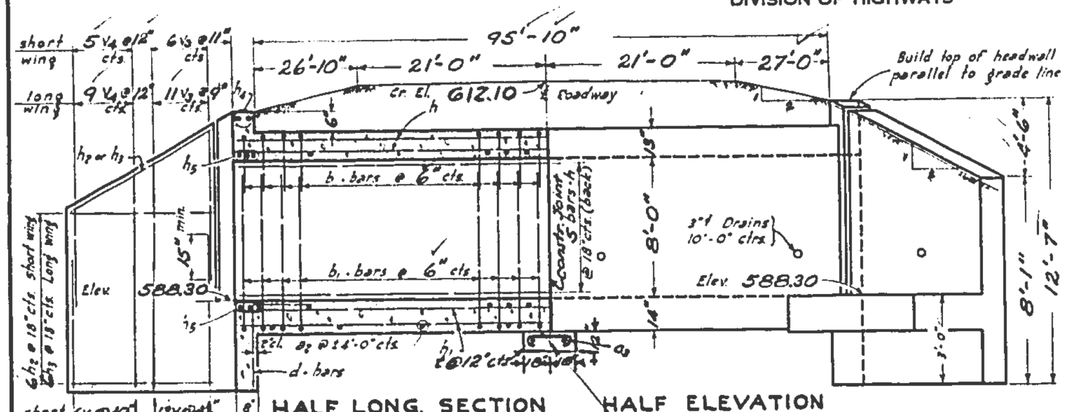
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		CONTRACT NO. 72E77		
	ILLINOIS	FED. AID PROJECT		

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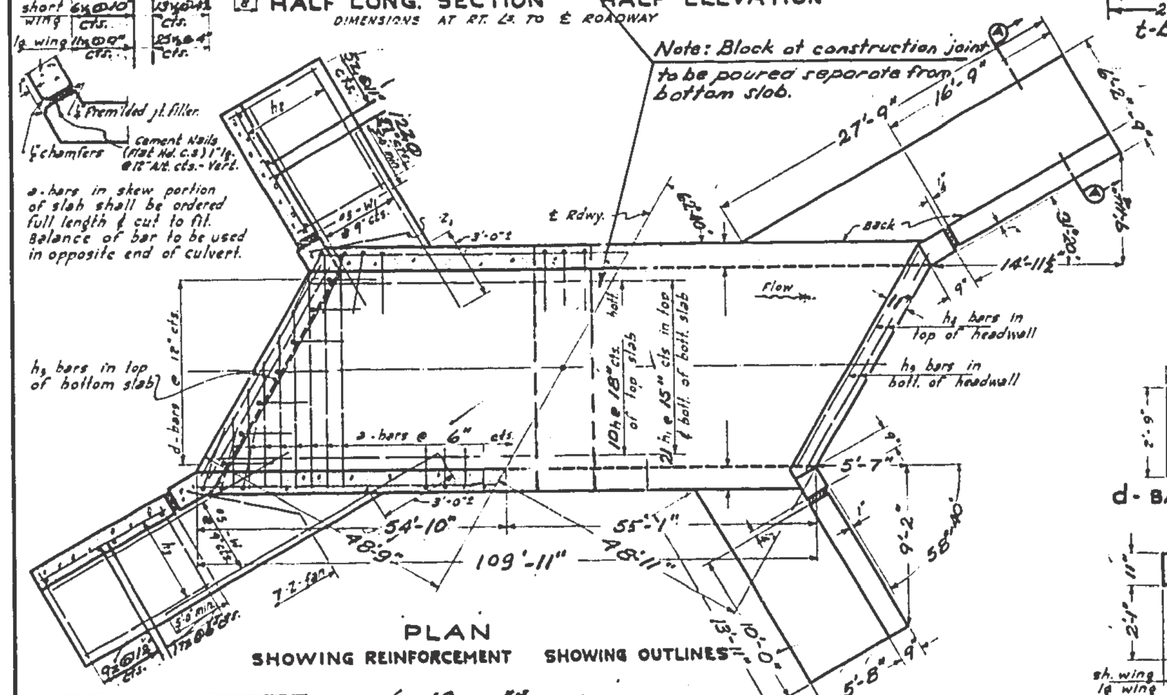
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SBI 4 (V,T)R	Macoupin	95	27

SHEET NO 27
SHEETS 95



HALF LONG. SECTION HALF ELEVATION
DIMENSIONS AT RT. ⊿s TO ℄ ROADWAY



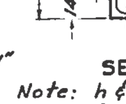
PLAN
SHOWING REINFORCEMENT SHOWING OUTLINES

STANDARD	COMPUTED	
	CHECKED	
	DRAWN	B.H. WOOD.
	CHECKED	
SPECIAL	ASSEMBLED	D.M. LOUKS
	CHECKED	H. TOYAMA

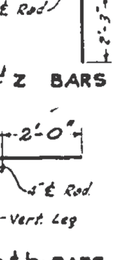
EXAMINED 6-18-37
V. M. Rowland
DISTRICT ENGINEER
APPROVED [signature]
Chief Highway Engineer

GENERAL NOTES
Class X concrete shall be used thru-out. Exposed edges shall be beveled ¾". For backfilling & embankment, see standard specifications.

Footing & Reinf. Revised - 11-50 - J.S.K.



t-BAR



Z, & z BARS



b & b1 BARS



SECTION A-A

SECTION THRU BARREL

Note: h & h1 bars shall be ordered for length along centerline. Bars cut off in short side to be used in long side

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH
a	430	#8	12'-9"
a2	27	#4	9'-6"
b	490	#5	5'-0"
b1	490	#5	10'-9"
d	14	#3	5'-5"
h	88	#3	29'-3"
h1	84	#5	29'-6"
h2	9	#4	9'-9"
h3	9	#3	16'-6"
h4	4	#6	13'-9"
h5	12	#6	14'-9"
a3	2	#5	13'-0"
V1	110	#4	5'-6"
V3	34	#4	8'-6"
V4	28	#4	6'-9"
t	14	#5	4'-9"
W	16	#3	30'-0"
W1	16	#3	16'-0"
z	66	#6	9'-0"
z1	36	#5	8'-6"
class 'x' concrete	cu. Yds	194.3	
Reinforcement Bars	Lbs	29,380	

Note:- All bars shall be round ASTM A305-49. The size number is the number of ⅛ inches in the nominal diameter.

f's = 20000 #/□"
fc = 1200 #/□"
n = 10
H- 20 Loading

12 x 8 Box Culvert
Sta. 421+21
SBI Rte. 4 Sec. (V,T)-R
Macoupin County
STANDARD 2034

W.S.K. 9-1

USER NAME = brandon.dudley	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 8/12/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS (FOR INFORMATION ONLY)
SN 059-7015

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	T(CLV)	MACOUPIN	8	7
		CONTRACT NO. 72E77		
		ILLINOIS	FED. AID PROJECT	

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Illinois Department of Transportation
Division of Highways
IL Department of Transportation

SOIL BORING LOG

Date 4/30/26

ROUTE IL 4 DESCRIPTION Southwest Wingwall at box culvert 5.4 miles south of IL 108 LOGGED BY S. Burke

SECTION LOCATION , SEC. , TWP. , RNG. , Latitude , Longitude

COUNTY Macoupin DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 059-7015
Station 421+21

BORING NO. SW-WW
Station 421+05
Offset 13.5 ft LT
Ground Surface Elev. 611.62 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 587.6 ft ▼
Upon Completion plugged ft
After Hrs. plugged ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Tan and Gray Dry CLAY LOAM TILL
	2			
	3 4	1.4 B	21	
608.62				
				Tan and Gray Moist CLAY LOAM TILL
	1			
-5	3 4	2.4 B	16	
	1			
	3 5	1.8 B	16	
	1			
-10	3 5	1.5 B	19	
	2			
	2 4	1.4 B	20	Brown
	2			
-15	2 4	1.9 B	18	
	2			
	3 6	1.9 B	19	
593.62				Dk Gray Moist SILTY CLAY LOAM
	2			Gray Dry SILT LOAM
-20	4 6	1.9 B	19	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
591.12				Fine to Med Grained Wet SAND
	0			
	1 2	-	20	
588.62				Gray Wet SILTY CLAY LOAM FREE WATER ▼
	0			
-25	0 2	0.2 B	22	
				End of Boring
-30				
-35				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING 059-7015 WW.GPJ IL_DOT.GDT 5/4/26

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DESIGNED - CCC	EXAMINED	DATE - OCTOBER 2, 2026	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - EMS / Steffen	PASSED	REVISED -	BORING LOG SN 059-7015
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET 4 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	T(CLV)	MACOUPIN	8	8
		CONTRACT NO. 72E77		
	ILLINOIS	FED. AID PROJECT		