11-06-2026 LETTING ITEM 086

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	28CLV	HANCOCK	7	1
	ILLINOIS	CONTRACT NO. 72E79		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

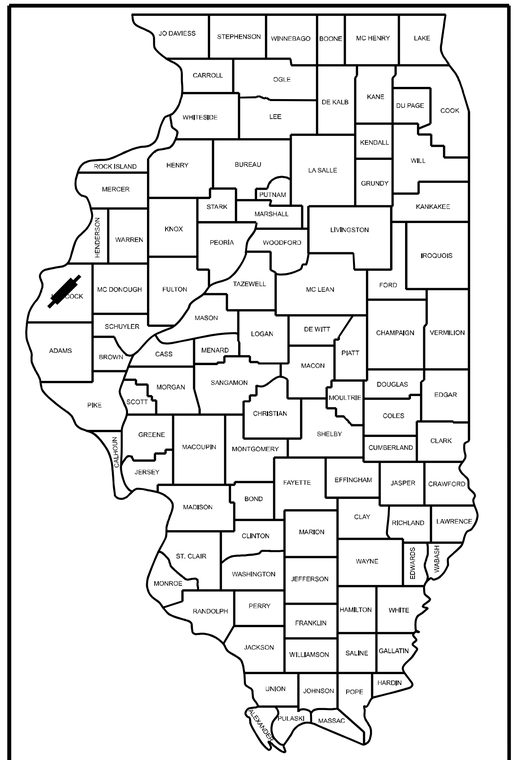
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
CONTRACT MAINTENANCE

FAP ROUTE 315 (US 136)
SECTION 28CLV
PROJECT (STATE ONLY)
CULVERT REPAIR
HANCOCK COUNTY

C-96-070-26

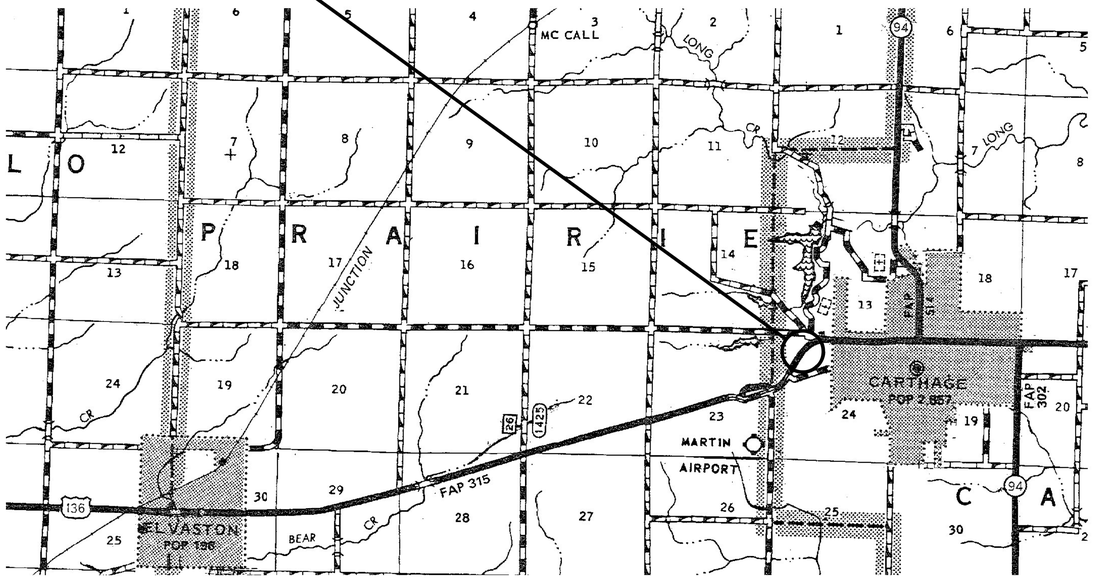
D-96-033-26



LOCATION OF SECTION INDICATED THUS: -

N

PROJECT LOCATION
SN 034-7043
US 136 OVER DITCH
1 MI W IL 94 IN CARTHAGE
N40.4146 W091.1549



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. 72E79

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 13, 20 26
Teresa C. Price
REGIONAL ENGINEER

October 2 20 26
ENGINEER OF DESIGN AND ENVIRONMENT

October 2 20 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
5-7	BRIDGE PLANS, SN 034-7043

HIGHWAY STANDARDS

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

GENERAL NOTES:

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 = 5/5/2026	DATE -	REVISED -	

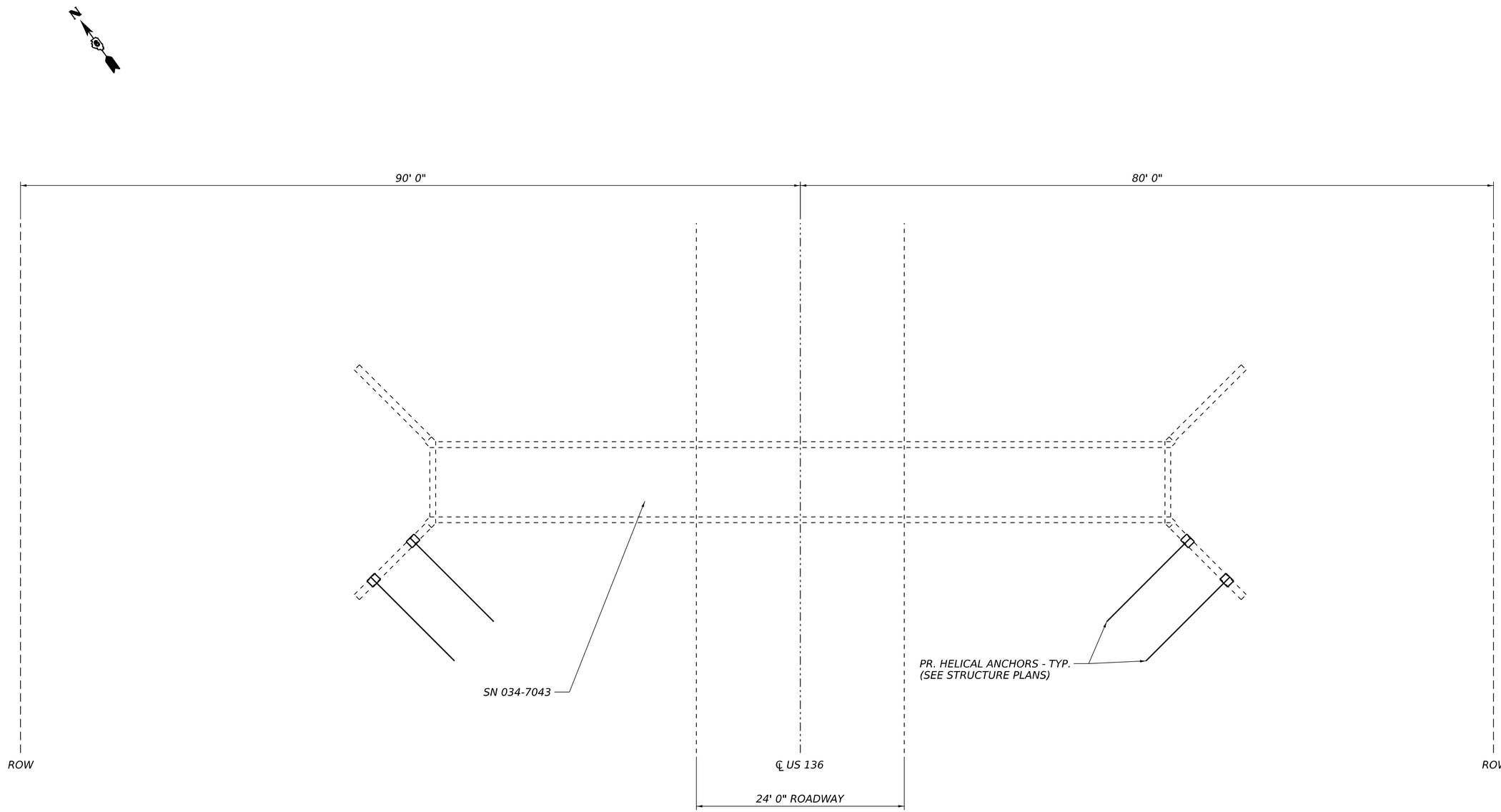
INDEX OF SHEETS, HIGHWAY STANDARDS
GENERAL NOTES, & SIGNATURES

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	28CLV	HANCOCK	7	2
		CONTRACT NO. 72E79		
	ILLINOIS	FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-02181-6004 SN 034-7043 100% STATE BRIDGE 0004-RURAL HANCOCK
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	420	420
67100100	MOBILIZATION	L SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGNS	CAL DAY	50	50
X0323992	HELICAL GROUND ANCHORS	EACH	4	4

REV - MS



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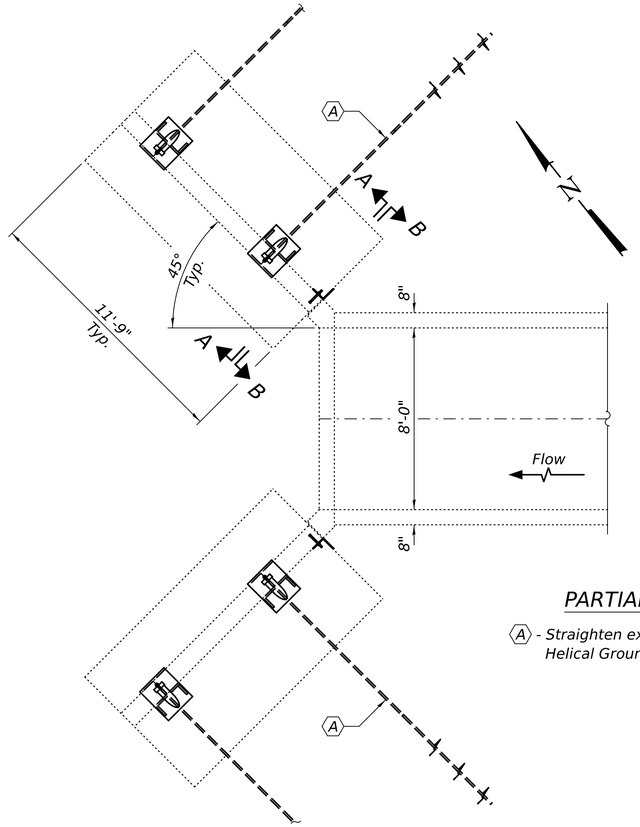
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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 5/5/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SITE PLAN

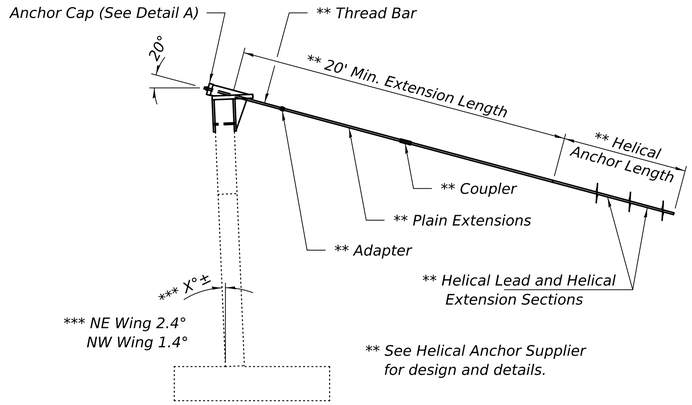
SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	28CLV	HANCOCK	7	4
		CONTRACT NO. 72E79		
	ILLINOIS	FED. AID PROJECT		



PARTIAL PLAN

Ⓐ - Straighten existing wingwalls 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.

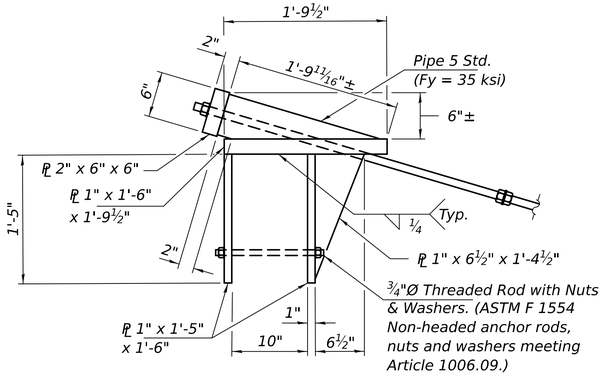
Helical Ground Anchor design load (Service) = 6.0 K/Anchor.

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

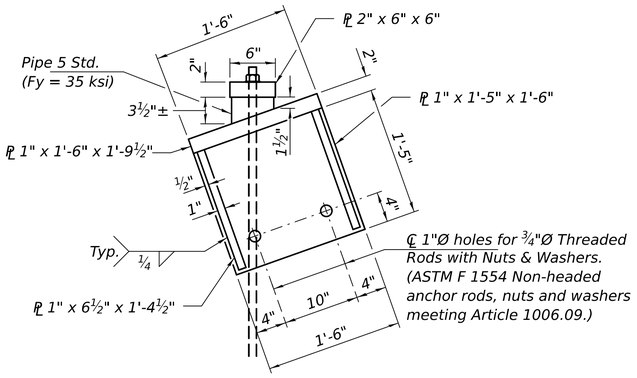
Cost of the Anchor Cap, steel plates, threaded rod, washers, and nuts included in the cost of Helical Ground Anchors.

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

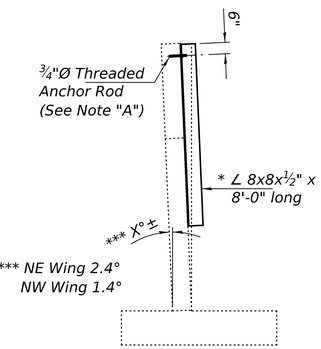
SECTION A-A



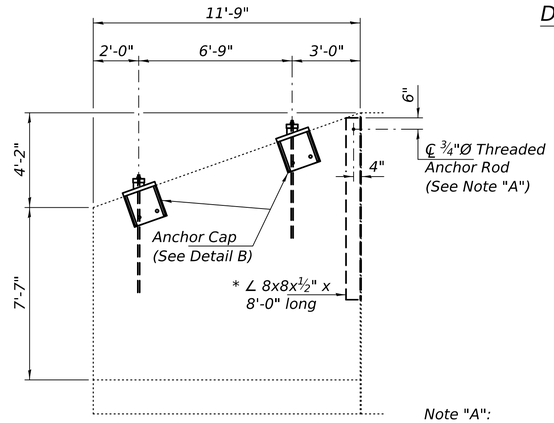
DETAIL "A"



DETAIL "B"



SECTION B-B



ELEVATION

(Inside Face)

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

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".

DESIGN STRESSES

FIELD UNITS

fy = 35 ksi (Pipes)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Helical Ground Anchor	Each	4
Furnishing & Erecting Structural Steel	Pound	420

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

Expires: November 30, 2026

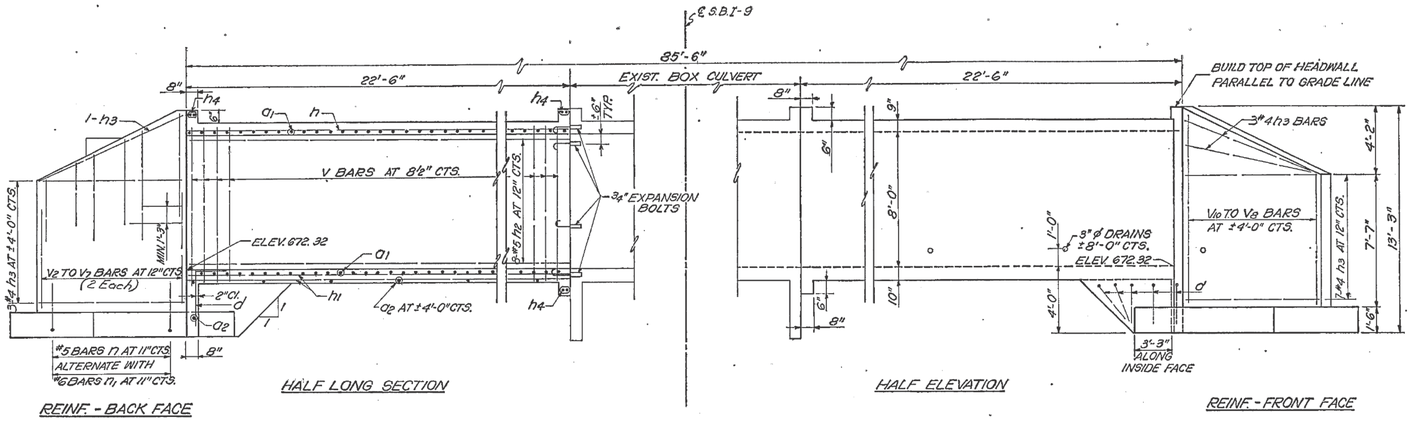
DESIGNED - Chi-Cheung Chau	EXAMINED	DATE - OCTOBER 2, 2026	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - Jeffrey S. Burke	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - EMS / STEFFEN	PASSED	REVISED -	**HELICAL ANCHOR DETAIL SN 034-7043**
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET 1 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	28CLV	HANCOCK	7	5
		CONTRACT NO. 72E79		
	ILLINOIS	FED. AID PROJECT		

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*(28,29)WRS-2 28BR & 29BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 9	*	HANCOCK	123	56
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

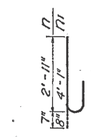


REINF. - BACK FACE

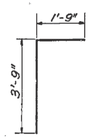
HALF LONG SECTION

HALF ELEVATION

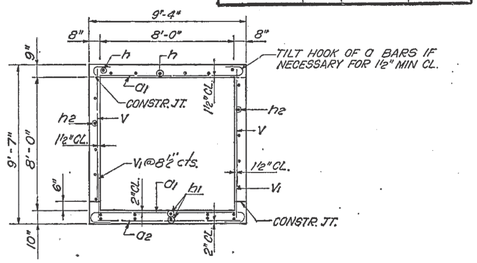
REINF. - FRONT FACE



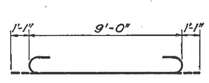
BARS n & n1



BAR d



SECTION THRU BARREL



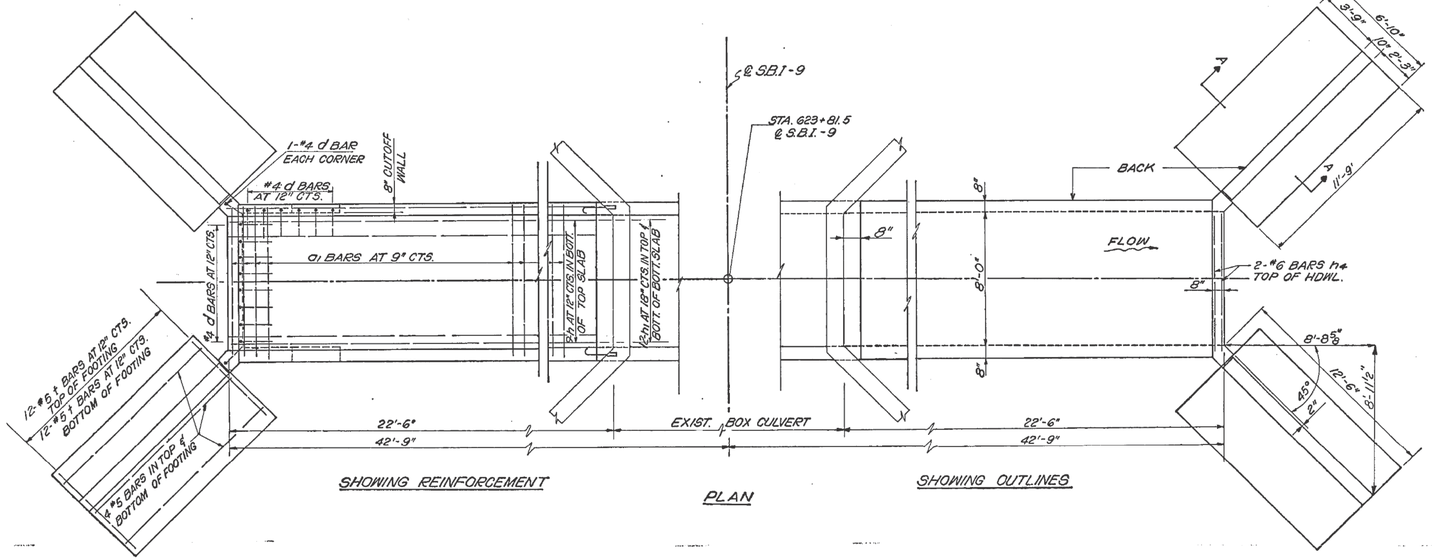
BAR a1

3/4" EXPANSION BOLTS REQUIRED

SIDE	NO.	SPACING
8'-0"	5	21"
TOTAL LT. & RT. :	40	

BILL OF MATERIAL

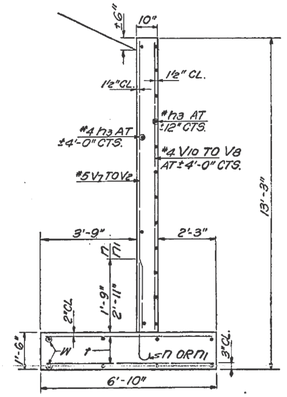
BAR	NO.	SIZE	LENGTH	BAR	NO.	SIZE	LENGTH
a1	120	8	11'-2"	V	128	5	8'-0"
a2	14	4	8'-3"	V1	128	5	2'-2"
				V2	8	5	6'-3"
d	44	4	5'-6"	V3	8	5	7'-0"
				V4	8	5	7'-9"
h	22	6	22'-3"	V5	8	5	8'-6"
h1	24	5	22'-3"	V6	8	5	9'-3"
h2	32	5	22'-3"	V7	8	5	9'-9"
h3	56	4	11'-6"	V8	4	4	7'-9"
h4	12	6	9'-0"	V9	8	4	9'-0"
				V10	4	4	10'-6"
n	48	5	3'-6"				
n1	52	6	4'-9"	t	96	5	6'-7"
				W	32	5	11'-6"
CLASS X CONCRETE				CU. YDS.			78.5
REINFORCEMENT BARS				LBS.			9,890



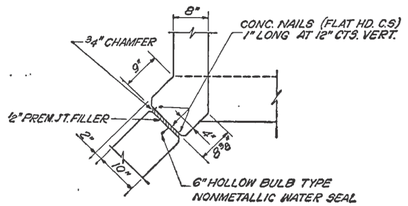
SHOWING REINFORCEMENT

PLAN

SHOWING OUTLINES



SECTION A-A



CORNER DETAIL

GENERAL NOTES

CLASS X CONCRETE SHALL BE USED THROUGHOUT.
EXPOSED EDGES SHALL BE BEVELED ¾".
FOR BACKFILLING AND EMBANKMENT SEE ST'D. SPEC'S.
ALL BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SPECIFIED.
THE TOP OF THE CULVERT, THE BACKS OF THE SIDEWALLS ABOVE THE LOWER CONSTRUCTION JOINT AND BACKS OF THE WINGS ABOVE THE TOPS OF THE FOOTINGS SHALL BE WATERPROOFED IN ACCORDANCE WITH ART. 503.11 OF THE ST'D. SPEC'S.
NONMETALLIC WATER SEAL USED IN THE WINGWALL JOINTS SHALL EXTEND FROM THE TOP OF THE FOOTING TO WITHIN 6" AT THE TOP OF THE HEADWALL. EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND ¾" ø HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE.

f'c = 20,000 PSI
fc = 1,400 PSI (BARREL)
fc = 1,000 PSI (WINGS)
Vc = 90 PSI (BARREL)
Vc = 75 PSI (FOOTING)
n = 10

LOADING HS20-44

MAX. SOIL PRESSURE UNDER FOOTINGS = 2620 P.S.F.

BOX CULVERT EXTENSION AT STA. 623+81.5

MISCELLANEOUS DETAILS
BOX CULVERT EXTENSION
AT STA. 623+81.5

SBI ROUTE 9
HANCOCK COUNTY

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	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/5/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS (FOR INFORMATION ONLY)
SN 034-7043

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	28CLV	HANCOCK	7	6
		CONTRACT NO. 72E79		
		ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
IL Department of Transportation

SOIL BORING LOG

Date 4/23/26

ROUTE US 136 DESCRIPTION NW Wingwall of Box Culvert 1 mile West of Carthage on US 136 LOGGED BY S. Burke

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

COUNTY Hancock DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 034-7043
Station _____

BORING NO. NW-WW
Station 623+86.5
Offset 22.0 ft LT
Ground Surface Elev. 684.38 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter No Encounter ft
Upon Completion No Encounter ft
After _____ Hrs. plugged ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dk Gray and Brown Mottled Moist CLAY LOAM (FILL)		3		
		2 4	2.1 B	28
		2		
	-5	2 2	1.6 B	26
		0		
Dk Gray V. Moist CLAY LOAM poor recovery		0 2	0.5 P	26
	676.38			
Dk Gray Moist SILTY CLAY LOAM (TILL)		0		
	-10	1 3	0.4 B	31
	673.38			
Gray Moist CLAY LOAM (TILL)		1		
		3 3	2.1 B	22
		2		
	-15	4 5	2.8 B	19
		1		
		3 6	2.1 B	17
		4		
Dry		6	6.6	15
	664.38 -20	11	B	

End of Boring

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 034-7043 WW.GPJ IL_DOT.GDT 4/30/26

MODEL: 72E79-007
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10/2/2026 3:55:29 PM

DESIGNED - CCC	EXAMINED	DATE - OCTOBER 2, 2026	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - STEFFEN	PASSED	REVISED -	
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

SOIL BORING LOG
SN 034-7043
SHEET 2 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	28CLV	HANCOCK	7	7
		CONTRACT NO. 72E79		
	ILLINOIS	FED. AID PROJECT		