01-21-2022 LETTING ITEM 007

STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 

FOR INDEX OF SHEETS, SEE SHEET NO. 2 FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

**PROPOSED** HIGHWAY PLANS

**FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL** POSTED SPEED: 55 MPH

ADT: 5,050 (2019)

FAP ROUTE 852 /US ROUTE 52 (CEDAR ROAD) OVER DITCH NORTH OF FORKED CREEK (2.9 MILE S OF HOFF ROAD)

**SECTION 2020-258-CR** PROJECT NO. STP-N8D8(427)

**CULVERT REPLACEMENT** 

**WILL COUNTY** 

PROJECT END

STA. 55+00

C-91-086-21

APPLIES TO SHEETS 1-23, 32-33 LICENSED CIVIL ENGINEER, STATE OF ILLINOIS EXPIRES: 11/30/2021 **APPLIES TO SHEETS 24-31** LICENSED STRUCTURAL ENGINEER, STATE OF ILLINOIS EXPIRES: 11/30/2022

**MUNICIPALITIES: UNINCORPORATED WILTON TOWNSHIP** 

> REPLACE EXISTING SN 099-0922 **CONSTRUCT PROPOSED** SN 099-8326

**PROJECT BEGINS** STA. 45 + 00

WILTON TOWNSHIP

GROSS LENGTH = 1000 FT. = 0.19 MILE

**R.11E** 

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

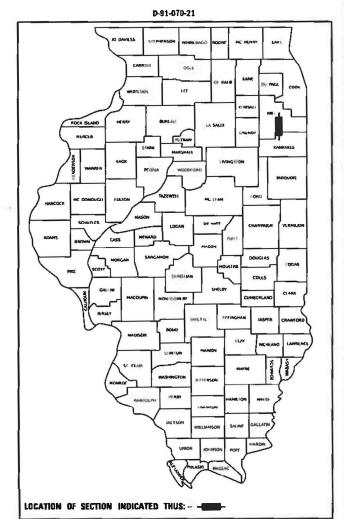
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS THE ABOVE SCALES MAY BE USED.

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT

PROJECT ENGINEER: PRAVEEN KAINI, PE (847)-705-4237 PROJECT MANAGER: J. ALAIN MIDY, PE (847)-221-3056

CONTRACT NO. 62N28

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

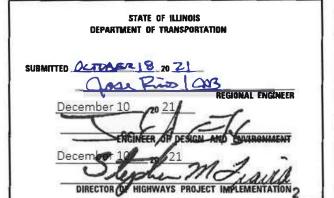


SECTION

2020-258-CR

WILL | 42 | 1 IN INOIS CONTRACT NO. 62N28

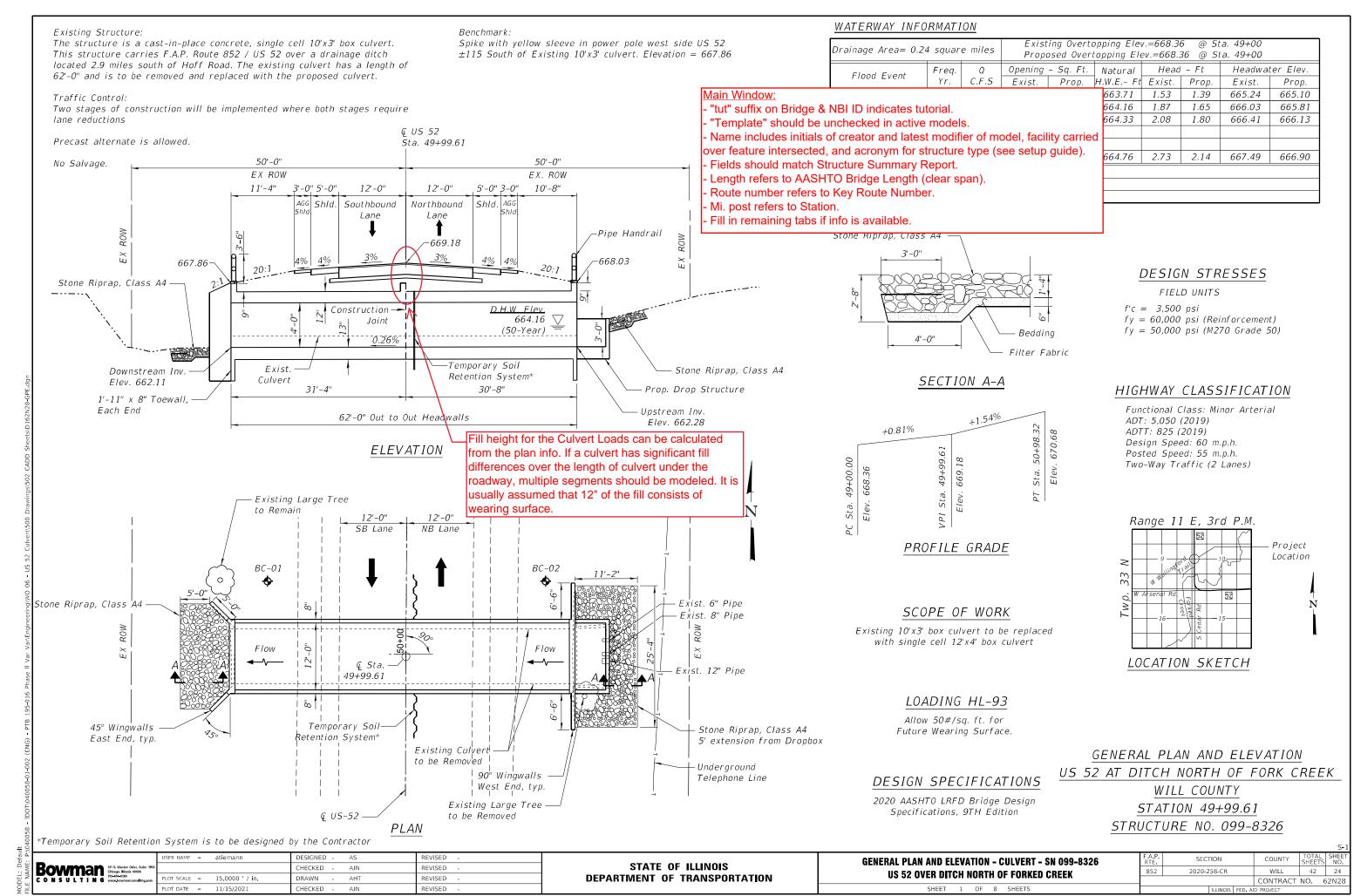
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#### GENERAL NOTES

## Cast-In-Place Concrete

 All exposed concrete edges shall have a ¾" x 45° chamfer, except where shown otherwise. chamfer on vertical edges shall be continued a minimum of one foot within finished ground level.

#### Reinforcement Bars

- 1. Reinforcement bars, including epoxy-coated reinforcement bars, shall conform to the requirements of AASHTO M-31 (ASTM A70), grade 60, deformed bars.
- 2. Reinforcement bars designated "(E)" shall be epoxy coated.
- 3. Reinforcement bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures, ACI 315.
- 4. Reinforcement bar bending dimensions are out to out.
- 5. Cover from the face of concrete to face of reinforcement bars shall be 3" for surfaces formed against earth and 2" for all other surfaces unless otherwise shown.

#### Construction

- 1. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
- 2. Contractor shall not scale dimensions from the Contract Plans for construction purposes. Scales shown are for information only.
- 3. No construction joints except those shown on the plans shall be allowed unless approved by the Engineer.
- 4. No concrete cutting shall be permitted until the cutting limits have been outlined by the Contractor and approved by the Engineer.
- 5. It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
- 6. Temporary Soil Retention System shall be designed by the Contractor.

# TOTAL BILL OF MATERIAL

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
20700220	POROUS GRANULAR EMBANKMENT	CU YD	127
28100107	STONE RIPRAP, CLASS A4	SQ YD	39.3
28200200	FILTER FABRIC	SQ YD	61.3
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	374
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	20,660
50800515	BAR SPLICERS	EACH	62
50901760	PIPE HANDRAIL	FOOT	24.5
51500100	NAME PLATES	EACH	1
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	432
54003000	CONCRETE BOX CULVERTS	CU YD	82.2
X0900064	MEMBRANE WATERPROOFING FOR BURIED STRUCTURES	SQ YD	119.5
Z0054400	ROCK FILL	CU YD	19.5

### LEGEND

—— т—— Existing Telephone Line

STATION 49+99.61 BUILT 202\_ BY STATE OF ILLINOIS LOADING HL-93 STRUCTURE NO. 099-8326

NAME PLATE
See Std. 515001

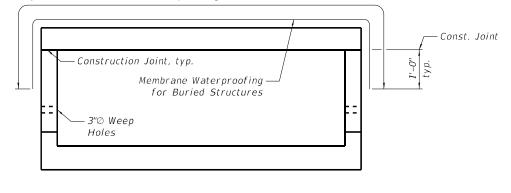
#### LIST OF ABBREVIATIONS

E const. E.F. exist. F.F. jt. max. no. PGL req'd. sect. spec. std. typ.	Baseline Centerline Constant Each Face Existing Front Face Joint Maximum Number Profile Grade Line Required Section Specification Standard Typical	B.F. cl. CUL ⊘ elev. f. I.F. long. min. O.F. prop. rte. spa. sta. struct.	Back Face Clearance Culvert Diameter Elevation Flow Line Inside Face Iongitudinal Minimum Outside Face Proposed Route Spaces Station Structure
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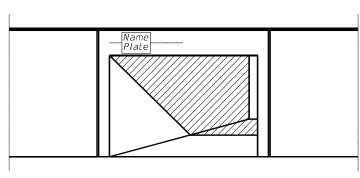
#### INDEX OF SHEETS

- S-1 General Plan & Elevation S-2 General Notes & Total Bill of Material
- S-3 Stage Construction
- S-4 Culvert Details I S-5 Culvert Details II
- S-5 Culvert Details I. S-6 Handrail Details
- S-7 Bar Splicer Assembly Details
- S-8 Soil Borings

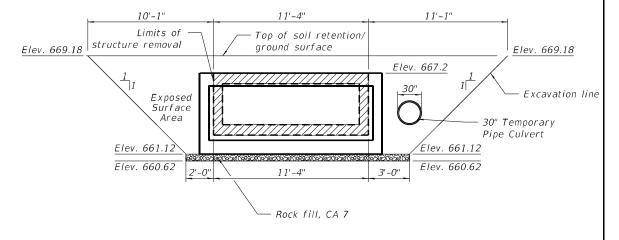
Pay Limits for Membrane Waterproofing for Buried Concrete Structures



MEMBRANE WATERPROOFING DETAIL



NAME PLATE LOCATION



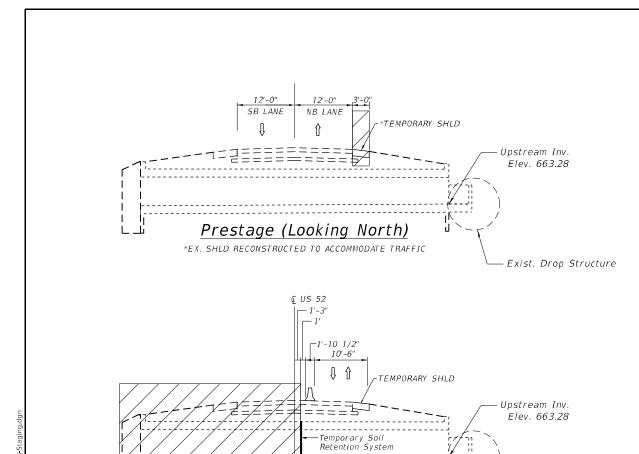
TEMPORARY SOIL RETENTION DETAIL

Bowman 311, Weeker Orlen, Suite 1959 Cheape, Mininda 60060 Track-1, Suite 1950 Con N S U L T I N 6 Weeker Orlen, Suite 1950 Weeker Orlen, Suite 19

	USER NAME = at	tiemann	DESIGNED	-	AS	REVISED	-
1950			CHECKED	-	AJN	REVISED	-
om	PLOT SCALE = 20	0.0000 ' / in.	DRAWN	-	AHT	REVISED	-
	PLOT DATE = 1	1/15/2021	CHECKED	-	AJN	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES - CULVERT - SN 099-8326 US 52 OVER DITCH NORTH OF FORKED CREEK

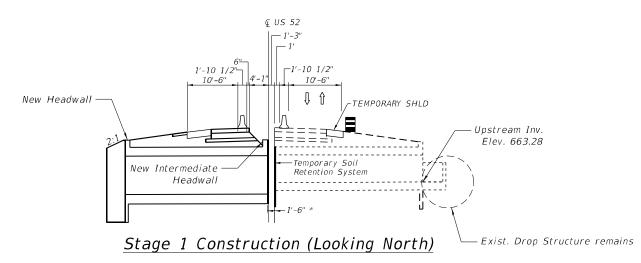


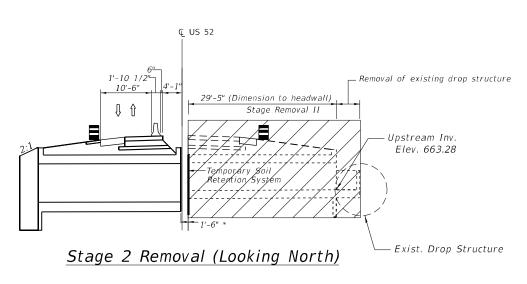
Stage 1 Removal (Looking North)

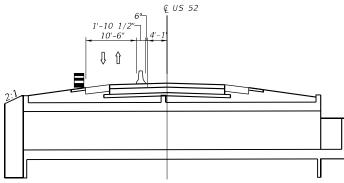
Exist. Drop Structure

32'-7" (Dimension to headwall)

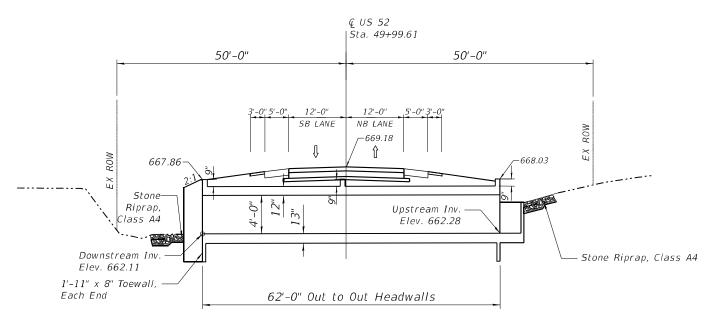
Stage Removal I







Stage 2 Construction (Looking North)



Final (Looking North)

\* Spacing between stage construction line and removal

 P	_	USER NAME =	khejtmanek	DESIGNED -	AS	REVISED -	
ME	Bowman 311 S. Wacker Drive, Suite 1950 Chicago, Illinois 60606			CHECKED -	AJN	REVISED -	
Ň	Bowman 311 S. Wicker Drivo, Sulte 1959 Chicago, Illinois 60000 1304-04000 www.bowmanconsulting.com	PLOT SCALE =	20.0000 ' / in.	DRAWN -	AHT	REVISED -	
Ξ		PLOT DATE =	06/04/2021	CHECKED -	AJN	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION - CULVERT - SN 099-8326
US 52 OVER DITCH NORTH OF FORKED CREEK

| F.A.P. | SECTION | 852 | 2020-258-CR

P. SECTION COUNTY TOTAL SHEET NO.

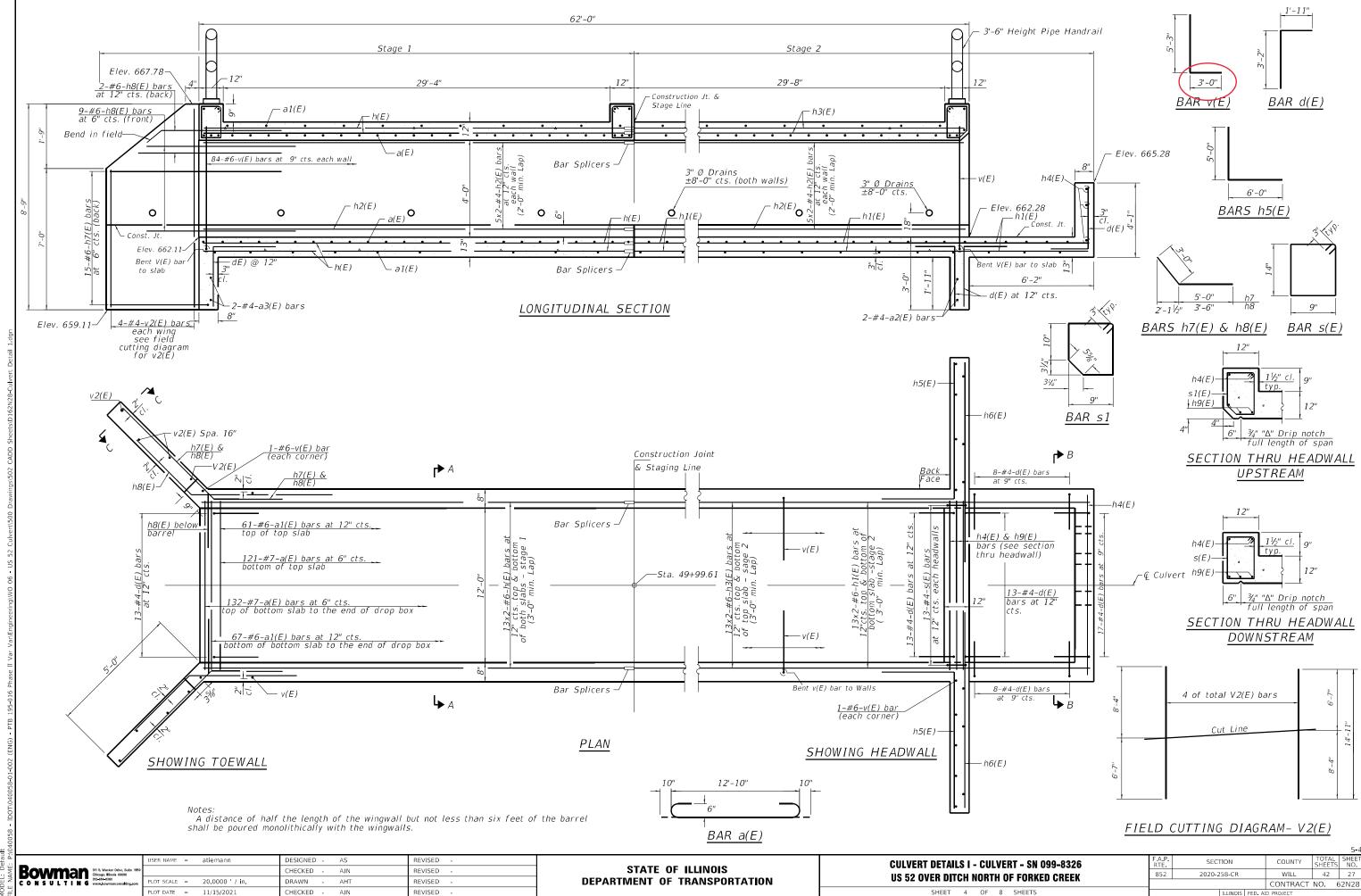
12 2020-258-CR WILL 42 26

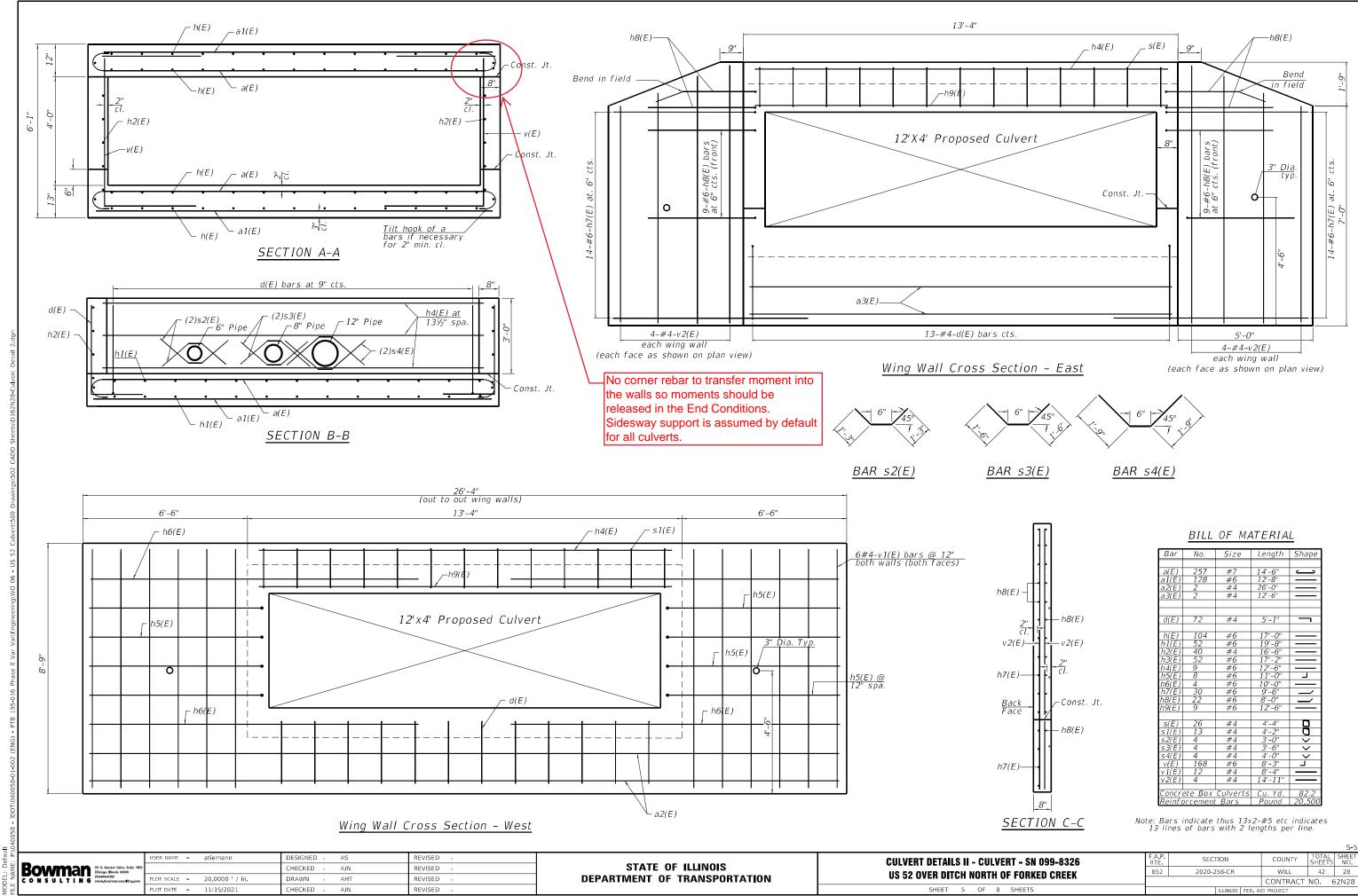
CONTRACT NO. 62N28

06/04/2021 1:30:21 PM

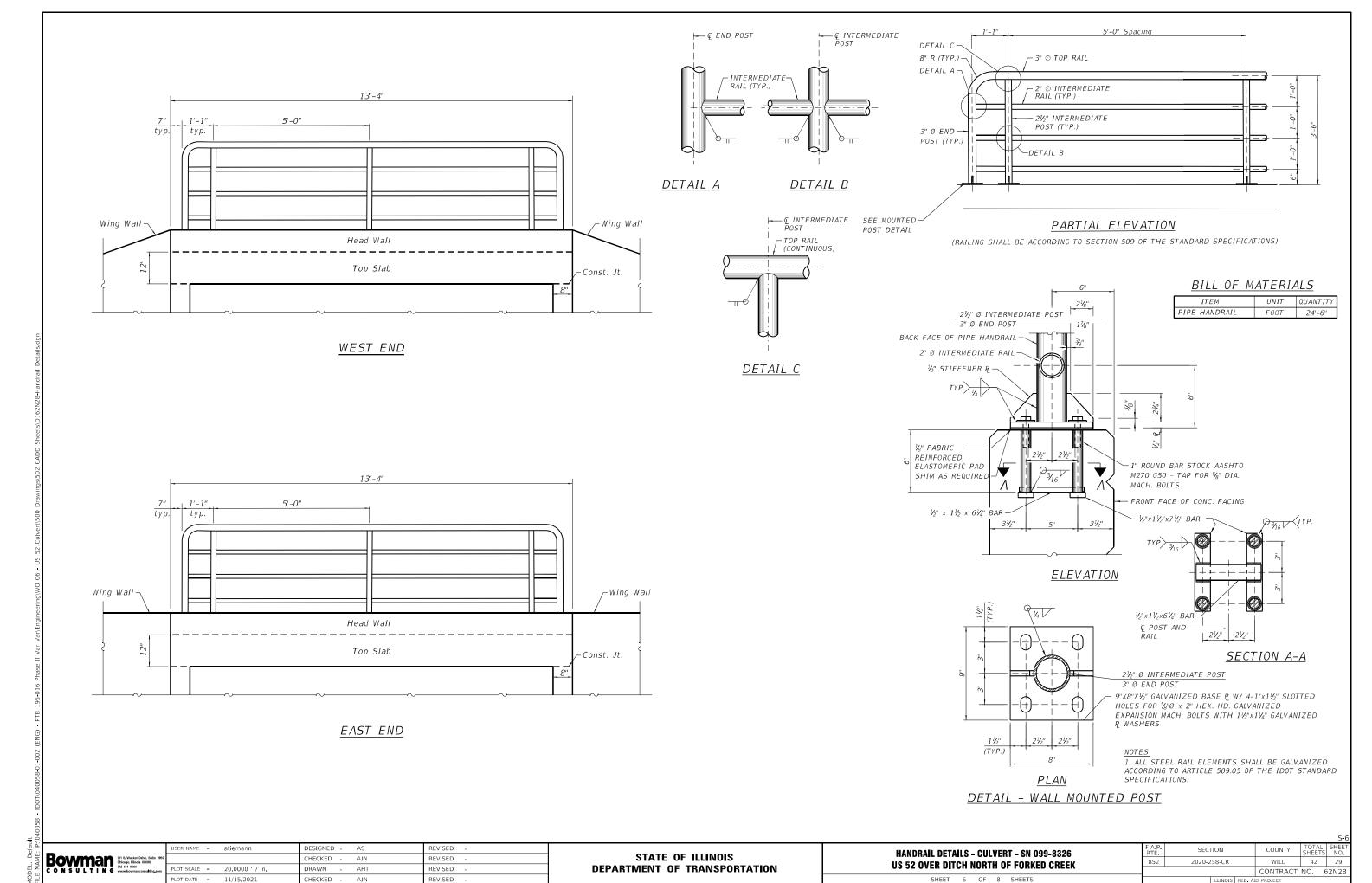
Wing wall removal—

58 - IDOT/040058-01-002 (ENG) - PTB 195-016 Phase II





11/15/2021 3:02:33 PM



11/15/2021 3:02:33 PM

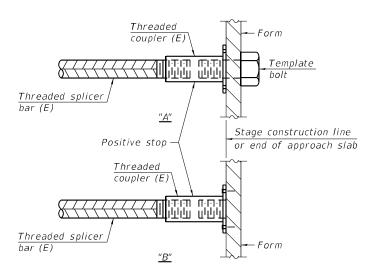
#### STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length +  $1\frac{1}{2}$ " + thread length

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

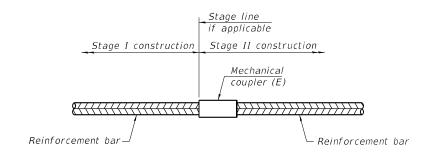
Location	Bar size	No. assemblies required	Minimum lap length
Bottom Slab	#6	26	3'-0"
Top Slab	#6	26	3'-0"
Sidewalls	#4	10	2'-0"



## 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

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 approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-1-2020

	USER NAME = atiemann	DESIGNED - AS	REVISED -
Bowman St. S. Wecker Drive, Sulte 1950 Chicago, Illinois 60606		CHECKED - AJN	REVISED -
CONSULTING www.bowmanconsulting.com	PLOT SCALE = 2.0000 / in	DRAWN - AHT	REVISED -
	PLOT DATE = 11/15/2021	CHECKED - AJN	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  BAR SPLICER ASSEMBLY DETAILS - CULVERT - SN 099-8326 **US 52 OVER DITCH NORTH OF FORKED CREEK** SHEET 7 OF 8 SHEETS

SECTION COUNTY 2020-258-CR 852 WILL 42 30 CONTRACT NO. 62N28

11/15/2021 4:40:57 PM

# **SOIL BORING LOG**

Page <u>1</u> of <u>1</u>

Date 3/15/21

ROUTE US ROUTE 52	DES	SCRI	PTION		JS 52 E	Box Culvert - Ditch over	Forked Creek	LO	GGE	D BY	Eric S	Slusser
SECTION		_	LOCA	ATION	Nort	th of Culvert, west side of	of US 52					
COUNTY Will County DI	RILLING	ME	THOD		lollow S	Stem Auger	_ HAMMER TYPE	= _		Auto	matic	
STRUCT. NO. SN 099-8326 Station	_	D E P	B L O	U C S	M O I	Surface Water Elev. Stream Bed Elev.	ft		D E P	ОГВ	w ∩ ⊂	M 0 -
BORING NO. B-01 Station Offset		H	w s	Qu	S T	Groundwater Elev.: First Encounter Upon Completion	655.5 ft	▼	H	W S	Qu	S T
Ground Surface Elev. 667.50	ft	(ft)	(/6")	(tsf)	(%)	After Hrs.	ft	Ť	(ft)	(/6")	(tsf)	(%)
Very Stiff, black, brown and gray CLAY LOAM FILL, trace to little			4		15.0	WEATHERED BEDR (continued)	OCK		_			
large to fine gravel, Moist			3 5	2.5	15.8	Auger refusal at 21.0 Compotent bedrock a		.50				
Color change to brown, gray and black at 4.0 feet.		_	6 9	Р		EOB@ 21.0 feet  Backfill boring with so		-				
Color change to brown and gray at 8.0 feet. Asphalt pieces in sample			7 5	2.7	18.1	bentonite chips,	<b>3</b>	-				
from 8.0-12.0 feet. Saturated at	663.50		8 5	В				-				
12.0 feet.		<u>-</u> 5	5		16.3							
Color change to black, yellowish brown and light gray at 12.0 feet.	661.50		9 8					-	_			
Medium Dense, black SANDY LOAM FILL, trace to little large to	001.00		2									
fine gravel, sand course to fine, Moist			2	2.4	25.3			-				
Very Stiff to Hard, gray and yellowish brown CLAY, trace fine	659.50		3	В				-				
gravel, Moist Stiff, gray SILTY CLAY (A-6(14),	_	_			21.0			20-				
trace to little medium to fine,		_	]	1.8				-	-30			
gravel, Moist-Wet, Sd=12.4%, Si=50.3%, Cl=37.3%, LL=35	657.50	-10	4	Р				-	-30			
PL=19 PI=16	]	_	4		17.6				$\dashv$			
Hard, gray CLAY LOAM, trace to little medium to fine gravel,		_	5	4.9				-				
Moist-Wet	7	<b>V</b>	6	В				_				
			8		100				_			
			10 10	5.8	16.8			-				
		_	12	3.6 B					$\dashv$			
			4	_				-				
		-15	7		17.4				-35			
		_	9	5.3								
Madium Danas CANDY	651.50		9	В								
Medium Dense, gray SANDY LOAM, little large to fine gravel,		_	4 5		12.4				_			
sand course to fine, Saturated			5		12,7			-				
WEATHERED BEDROCK	649.50		-					83 <del></del>	$\dashv$			
			50/3"					_				
		-20							<del>-</del> 40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)

BBS, from 137 (Rev. 8-99)



**US ROUTE 52** 

Very stiff gray CLAY, trace fine gravel, Moist

Hard, gray CLAY LOAM, trace to little medium to fine gravel Moist

WEATHERED BEDROCK

ROUTE

# **SOIL BORING LOG**

DESCRIPTION US 52 Box Culvert - Ditch over Forked Creek LOGGED BY Eric Slusser

Page <u>1</u> of <u>1</u>

Date 3/15/21

SECTION	_	LOCA	TION	Nort	h of Culvert, east side	of US 52				
COUNTY Will County DRILLING					Stem Auger			Auto	omatic	
STRUCT. NO. SN 099-8326 Station	D E P	вго	U C S	- 0 M	Surface Water Elev. Stream Bed Elev.	ft	D E P	вго	w o c	-0⊠
BORING NO.         B-02           Station         Offset	H	W S	Qu	S T	Groundwater Elev.: First Encounter Upon Completion	656.0 ft ▼ 656.0 ft ♀	H	W S	Qu	S T
Ground Surface Elev. 666.00 ft	(ft)	(/6")	(tsf)	(%)	After Hrs.	<u>f</u> t	(ft)	(/6")	(tsf)	(%)
Loose, black CRUSHED ASPHALT (grindings)	+	5 4		15.8	WEATHERED BEDF (continued)	ROCK 645.50	_			
Very Stiff, black and yellowish brown CLAY LOAM FILL, little large		5 6		10.0	Auger refusal at 20.5 Compotent bedrock a EOB @ 20.5 feet					
to fine gravel, Moist Very Stiff, black TOPSOIL (buried)	$\neg$	4			Backfill boring with so	oil cutting and				
-	_	5 5 8 4	2.5 P	26.9	bentonite chips					
Soft to Very Stiff, yellowish brown and gray SILTY CLAY (A-7(19)), trace fine gravel, Moist	<u>-5</u>	5 6 5	2.5 P	34.7						
Color change to brown, gray and black at 6.0 feet. Shelby tube 6.0-8.0 feet. Sd=14.8%,		3	1.0 P	26.5						
Si=48.4%, Cl=36.8% LL=41 PL=20 Pl=21		3 2 3	2.4 B	20.3			_			
Hard, yellowish brown and gray CLAY LOAM, trace to little medium to fine gravel, Moist	-10	8 1 10 12	8.7 B	16.4			30			
- - 652,00		10 14 5 6	9.2 B	17.2						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)

2.4

В

4.9

6

4 6 13

19 / В

50/5"

650.00

648.00

BBS, from 137 (Rev. 8-99)

852

Bowman 311 S. Wacker Drive, Chicago, Illinois 606/ 312-814-0360 c o N S U L T I N G www.bowman.com

khejtmanek DESIGNED -REVISED CHECKED -AJN REVISED LOT SCALE = 2.0000 / in. DRAWN REVISED PLOT DATE = 06/04/2021 REVISED CHECKED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SOIL BORINGS - CULVERT - SN 099-8326 **US 52 OVER DITCH NORTH OF FORKED CREEK** 

SECTION 2020-258-CR WILL 42 31 CONTRACT NO. 62N28