09–20–2024 LETTING ITEM 039

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	1
	ILLINOIS	CONTRACT NO. 74858		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO. 2

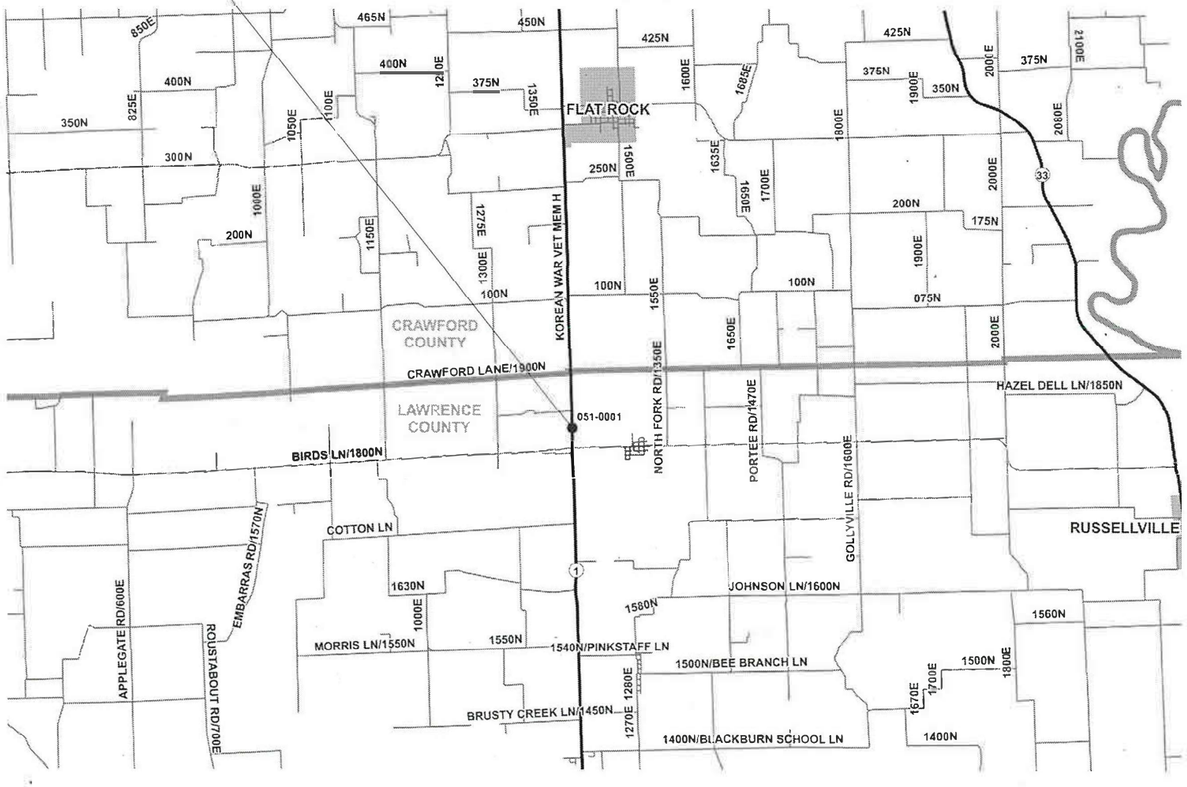
ADT = 4050 (2024)
ADTT = 749 (2024)

PROPOSED HIGHWAY PLANS

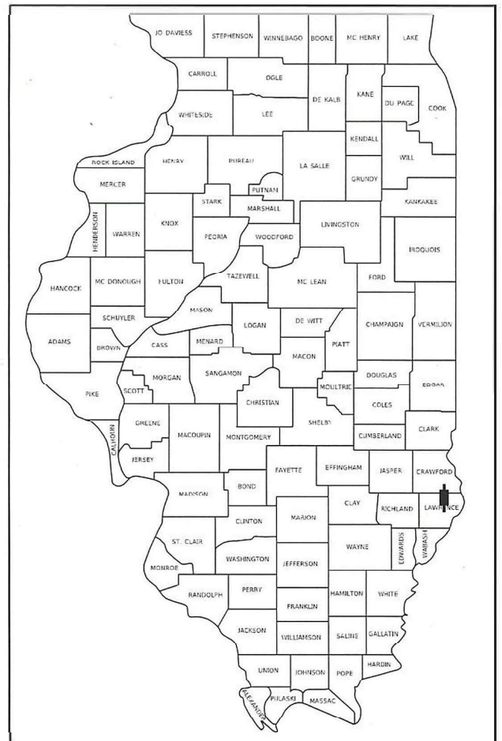
FAP ROUTE 332 (IL 1)
SECTION 18B–1
PROJECT NHPP–K387(682)
BRIDGE REPLACEMENT
LAWRENCE COUNTY

C–97–084–18

LOCATION OF PROPOSED IMPROVEMENT



NET LENGTH = 94 FT. = 0.018 MILE



LOCATION OF SECTION INDICATED THUS: –

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 EXCAVATORS
1–800–892–0123
OR 811

PROJECT ENGINEER BRIAN LEWIS
PROJECT MANAGER GARRETT HIXENBAUGH

CONTRACT NO. 74858

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 26 20 24
Jeffrey P Myers
REGIONAL ENGINEER

August 16, 2024
ENGINEER OF DESIGN AND ENVIRONMENT

August 16, 2024
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV - MS

GENERAL NOTES

THIS PROJECT IS LOCATED ON FAP ROUTE 332 (ILL 1) IN LAWRENCE COUNTY, APPROXIMATELY 0.3 MILES NORTH OF BIRDS ROAD. THE WORK INCLUDED IN SECTION 18B-1 CONSISTS OF REPLACING THE EXISTING BRIDGE STRUCTURE (051-0001) WITH A CAST-IN-PLACE BOX CULVERT STRUCTURE (051-2011) INCLUDING REPLACEMENT OF GUARDRAIL AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

SHORT TERM PAVEMENT MARKING SHALL BE TAPE.

PCC BASE COURSE 8 INCH INCLUDES EXCAVATION FOR THE CONSTRUCTION OF THE BASE COURSE AND GRADING EXCAVATED MATERIAL AS BACKFILL TO ELIMINATE DROP-OFF.

CHANNEL EXCAVATION INCLUDES EXCAVATION FOR PROPOSED RIPRAP TO THE ELEVATIONS SHOWN ON THE CULVERT PLANS AND REMOVAL OF SILT UNDER THE EXISTING BRIDGE DOWN TO THE ELEVATION AT WHICH REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES BEGINS.

EARTH EXCAVATION CONSISTS OF REMOVAL OF THE EXISTING FIELD ENTRANCE. EXCAVATION FOR CONSTRUCTION OF PROPOSED BOX CULVERT WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH SECTION 502 OF THE STANDARD SPECIFICATIONS.

TREES THREE (3) INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1ST THROUGH SEPTEMBER 30TH OF ANY GIVEN YEAR.

INDEX OF SHEETS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLOWING THE LAST NUMBERED SHEET OF THE PLANS.

000001 - 08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001 - 02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001 - 10	PAVEMENT JOINTS
420101 - 07	24" JOINTED PCC PAVEMENT
483001 - 06	PCC SHOULDER
515001 - 04	NAME PLATE FOR BRIDGES
542401 - 04	METAL FLARED END SECTION FOR PIPE CULVERTS
630001 - 13	STEEL PLATE BEAM GUARDRAIL
630301 - 09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
630101 - 11	STRONG POST GUARDRAIL ATTACHED TO CULVERT
631011 - 10	TRAFFIC BARRIER TERMINAL, TYPE 2
701001 - 02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006 - 05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701201 - 05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301 - 04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311 - 03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321 - 18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326 - 04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING >= 45 MPH
701901 - 09	TRAFFIC CONTROL DEVICES
704001 - 08	TEMPORARY CONCRETE BARRIER
725001 - 01	OBJECT AND TERMINAL MARKERS
780001 - 05	TYPICAL PAVEMENT MARKINGS
782006 - 01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

REV - MS

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES, LIST OF STANDARDS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	2
		CONTRACT NO. 74858		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010		
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	13	13		
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	23	23		
20200100	EARTH EXCAVATION	CU YD	140	140		
20200500	EARTH EXCAVATION (WIDENING)	CU YD	103	103		
20300100	CHANNEL EXCAVATION	CU YD	454	454		
20700110	POROUS GRANULAR EMBANKMENT	TON	1056	1056		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40	40		
28100109	STONE RIPRAP, CLASS A5	SQ YD	159	159		
28200200	FILTER FABRIC	SQ YD	159	159		
35400300	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING	SQ YD	482	482		
	8"					
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	42	42		
42000501	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	251	251		
	(JOINTED)					
44000100	PAVEMENT REMOVAL	SQ YD	251	251		

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010		
44004250	PAVED SHOULDER REMOVAL	SQ YD	115	115		
48300500	PORTLAND CEMENT CONCRETE SHOULDERS 10"	SQ YD	167	167		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1		
50105220	PIPE CULVERT REMOVAL	FOOT	44	44		
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	205	205		
	FOR STRUCTURES					
50800105	REINFORCEMENT BARS	POUND	35260	35260		
50800515	BAR SPLICERS	EACH	172	172		
51500100	NAME PLATES	EACH	1	1		
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	325	325		
54003000	CONCRETE BOX CULVERTS	CU YD	206.1	206.1		
54262736	METAL FLARED END SECTIONS 36"	EACH	2	2		
542C0241	PIPE CULVERTS, CLASS C, TYPE 1 36"	FOOT	64	64		
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	196	196		

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADData\CADSheets\D774858-sht-SOQ.dgn

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	3
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

80% FED
20% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010		
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT	FOOT	350	350		
		POSTS					
*	63000007	STEEL PLATE BEAM GUARDRAIL, TYPE B, 6 FOOT	FOOT	50	50		
		POSTS					
*	63000030	STRONG POST GUARDRAIL ATTACHED TO CULVERT	FOOT	75	75		
*	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1	1		
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL)	EACH	3	3		
		TANGENT					
	63200310	GUARDRAIL REMOVAL	FOOT	489	489		
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	9		
	67100100	MOBILIZATION	L SUM	1	1		
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	1	1		
		701321					
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1		
		701201					
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1		
		701326					

80% FED
20% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010		
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	3	3		
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
	70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	1216	1216		
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28		
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	506	506		
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	475	475		
	70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	60	60		
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	375	375		
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	2	2		
		REDIRECTIVE), TEST LEVEL 3					
	70600350	IMPACT ATTENUATORS, RELOCATE (NON-	EACH	2	2		
		REDIRECTIVE), TEST LEVEL 3					
*	72500200	OBJECT MARKER - TYPE 2	EACH	1	1		
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3		
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1773	1773		

* SPECIALTY ITEM

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\District 7\Projects\74858\CADData\CADSheets\D774858-sht-500.dgn

USER NAME = Jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	4
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

80% FED
20% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010		
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	7	7		
	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25	0.25		
	X5810103	MEMBRANE WATERPROOFING SYSTEM FOR BURIED	SQ YD	196	196		
		STRUCTURES					
*	X6330725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	25	25		
*	Z0054505	ROCK FILL - REPLACEMENT	TON	369	369		

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010		

* SPECIALTY ITEM

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

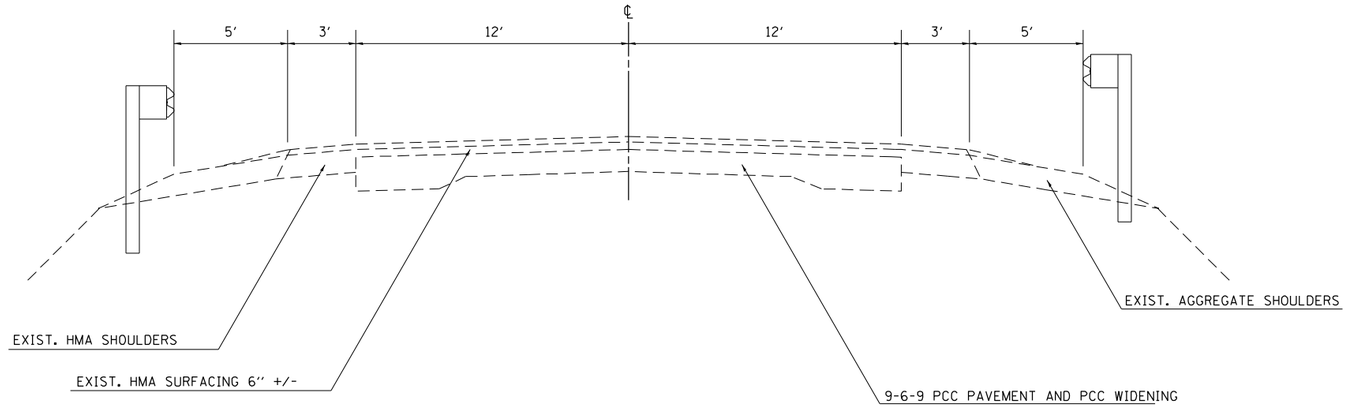
SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	5
		CONTRACT NO. 74858		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\District 7\Projects\74858\CADData\CADsheets\D7748581-sht-500.dgn

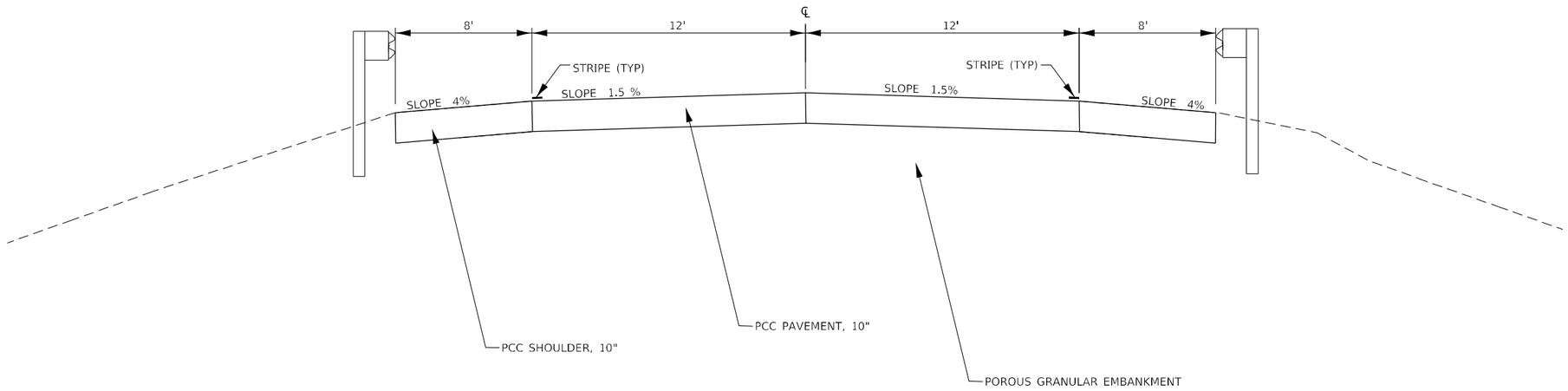
EXISTING TYPICAL SECTION



NOTE: NOT DRAWN TO SCALE

PROPOSED TYPICAL SECTION

400+18 TO 401+12



NOTE: NOT DRAWN TO SCALE

MODEL: Default
FILE NAME: pw:\\dist-pw.tenkey.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADData\CADsheets\074858-sht-typicalt.dgn

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18R-1	LAWRENCE	29	6
		74858		
	ILLINOIS	FED. AID PROJECT		

EARTHWORK SCHEDULE				
				EARTHWORK
		EXCAVATION TO BE		BALANCE
	EARTH	USED IN EMBANKMENT		WASTE(+)
LOCATION	EXCAVATION	ADJUSTED FOR SHRINKAGE	EMBANKMENT	SHORTAGE(-)
	CU.YD.	CU.YD.	CU.YD.	CU.YD.
EXISTING FIELD ENTRANCE	140	105		105
EARTH EX. WIDENING	103	77		77
PROPOSED FIELD ENTRANCE		0	209	-209
REM. & DISP. UNSUITABLE MATL	205	154		154
CHANNEL EXCAVATION	454	341		341
TOTALS	902	677	209	468

TREE REMOVAL (6 TO 15 UNITS DIAMETER)	
41' LT STA 400+49	13 UNIT

TREE REMOVAL (OVER 15 UNITS DIAMETER)	
41' LT STA 400+88	23 UNIT

SEEDING, CLASS 2 (SPECIAL)	
LT STA 401+35 TO 403+00	0.25 ACRE

PAINT PAVEMENT MARKING - LINE 4"				4" SOLID	4" YELLOW
				WHITE EDGE	SKIP DASH
STATIONING		LENGTH	SIDE	LINE	LINE
FROM	TO	FOOT		(FOOT)	(FOOT)
396+68	404+56	788.0	CL		197
396+68	404+56	788.0	LT/RT	1576	
			TOTALS=	1,576	197
			OVERALL TOTAL=	1,773	

SUGGESTED SEQUENCE OF OPERATIONS:
STAGE 1:
REMOVE TREES SHOWN IN SCHEDULE
CONSTRUCT WIDENING FOR STAGE 1
DEPLOY TRAFFIC CONTROL STANDARD 701321
CONSTRUCT UPSTREAM PORTION OF BOX CULVERT
CONSTRUCT PAVEMENT AND SHOULDER FOR SOUTHBOUND
REMOVE EXISTING FIELD ENTRANCE AND RECONSTRUCT
CONSTRUCT WIDENING FOR STAGE 2
INSTALL GUARDRAIL ON WEST SIDE OF ROAD
STAGE 2:
RELOCATE BARRIER FOR STAGE 2 AND MOVE TRAFFIC TO NEW PAVEMENT
CONSTRUCT DOWNSTREAM PORTION OF BOX CULVERT
CONSTRUCT PAVEMENT AND SHOULDER FOR NORTHBOUND
INSTALL GUARDRAIL ON EAST SIDE OF ROAD
REMOVE BARRIER AND RESTORE TWO-WAY TRAFFIC
CONSTRUCT SEEDING, RIPRAP AND PAVEMENT MARKING

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADData\CADSheets\D7748S8-pht-sched_tk.dgn

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	7
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

BENCHMARK: BM 802
ELEV: 450.53
STA. 400+80, 24' RT.
DESCRIPTION: CHISELED SQUARE ON
NORTHEAST WINGWALL OF SN 051-0001

EXISTING R.O.W.

℄ PROP. STRUCTURE
STA. 400+65.00
ELEV. 450.33
NO SKEW

EX. 36" T.B.R.
EX. F.E. T.B.R.

PROP. 36" PIPE CULV.

+28
50' LT.
ELEV. 442.8

+92
45' LT.
ELEV. 443.4

24'

20' R

LIMITS OF CONSTRUCTION

PI Sta 398+82.00

398 | FAP 332 (ILL ROUTE 1) | 399 | 400+00 | 401 | 402 | FAP 332 (ILL ROUTE 1) | 403

+18

+12

TRAFFIC BARRIER TERMINAL,
TYPE 1 (SPECIAL) TANGENT, TYP.

STEEL PLATE BEAM GUARDRAIL,
TYPE A, 6 FOOT POSTS, TYP.

PROPOSED RIPRAP CLASS A5

LIMITS OF CONSTRUCTION

EXISTING R.O.W.

PAVEMENT AND PAVED
SHOULDER REMOVAL

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O. WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
R.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

452
450
448
446
444
442
440
438
436

450.38
450.26

-0.06%
-0.06%

450.48	450.47	450.46	450.45	450.43	450.42	450.41	450.40	450.39	450.38 / 450.38	450.37 / 450.37	450.35 / 450.35	450.34 / 450.34	450.32 / 450.33	450.30 / 450.32	450.28 / 450.31	450.27 / 450.29	450.27 / 450.28	450.26 / 450.27	450.26 / 450.26	450.25	450.23	450.20	450.16	450.13	450.10

398+00 | 398+50 | 399+00 | 399+50 | 400+00 | 400+50 | 401+00 | 401+50 | 402+00 | 402+50 | 403+00

MODEL: Default
FILE NAME: pw:\\illiodraw.bentley.com:FVIIDOT\Documents\IDOT Offices\District 7\Projects\74858\CAD\data\CAD\sheets\D774858sht-plan.dgn

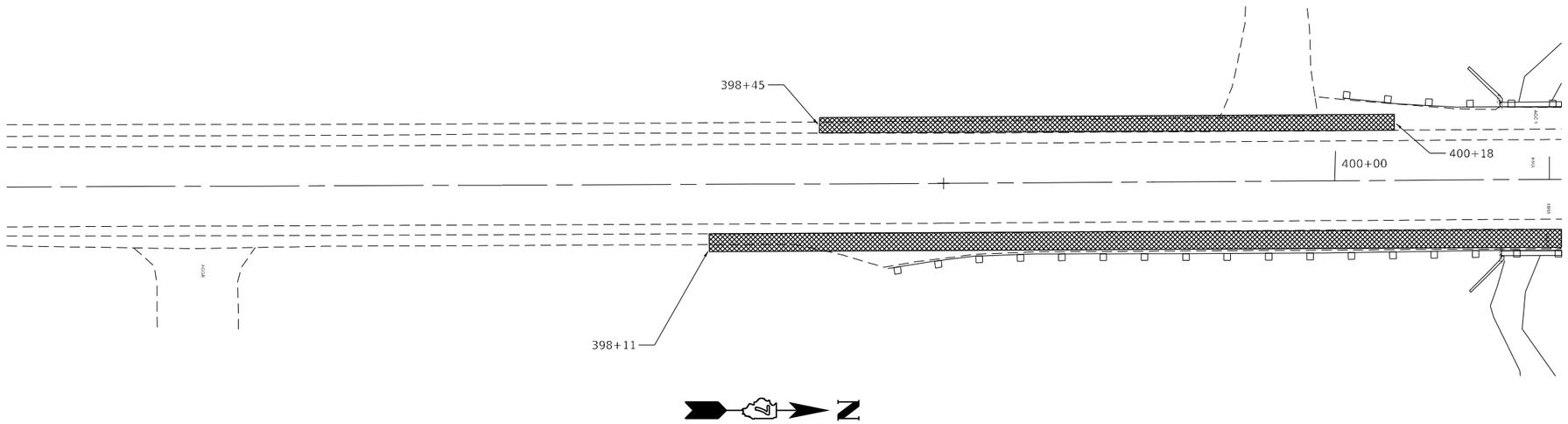
USER NAME = Jessica.hille	DESIGNED - LMH	REVISED -
	DRAWN - LMH	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/25/2024	DATE - 6/25/2024	REVISED -

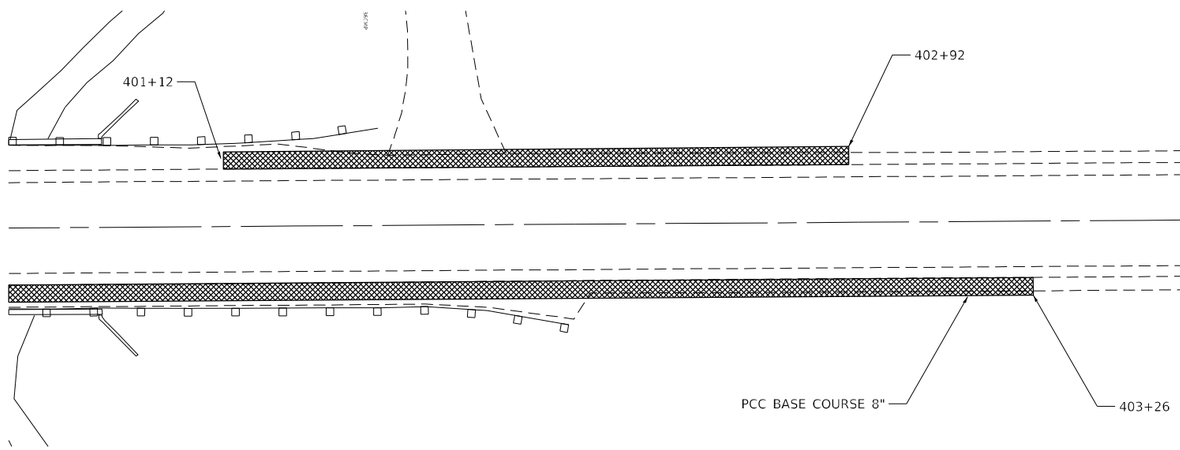
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE SHEET
SN 051-2011

SCALE: 40.0000 ' / in. | SHEET | OF | SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	188-1	LAWRENCE	29	8
		CONTRACT NO. 74858		
	ILLINOIS FED. AID PROJECT			





PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 8"					
STATIONING		WIDENING WIDTH	WIDENING LENGTH	WIDENING AREA	SIDE
FROM	TO	(FOOT)	(FOOT)	(SQ YD)	
398+11	403+26	5	515.0	286.1	RT
398+45	400+18	5	173.0	96.1	LT
401+12	402+92	5	180.0	100.0	LT
			TOTAL=	482	

SYMBOLS

EARTH EXCAVATION (WIDENING)

MODEL: Default
FILE NAME: z:\Wilde-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADD\Data\CADsheets\D774858-sht-staging.dgn

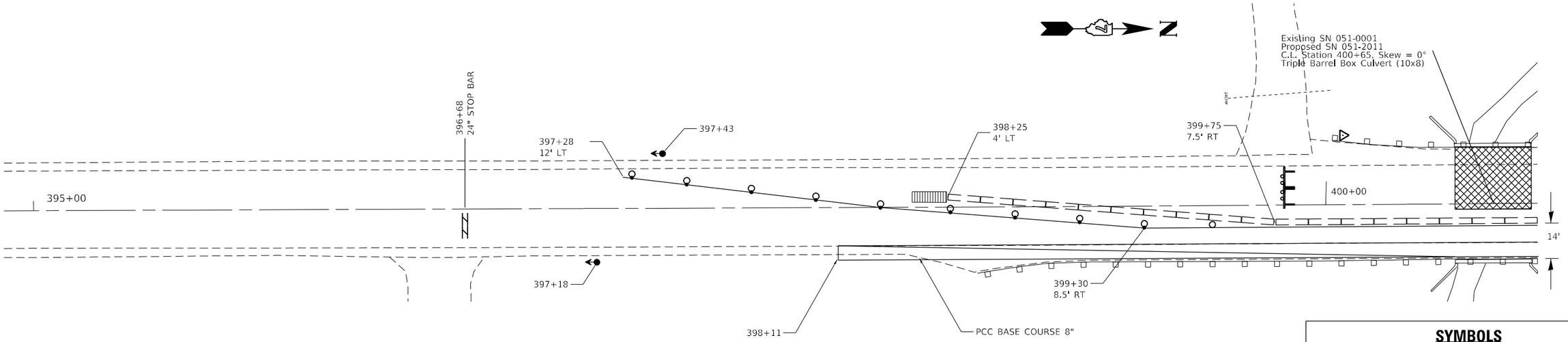
USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/25/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIDENING DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	9
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		



TEMPORARY CONCRETE BARRIER			
STAGE 1			
398+25	403+00	475	FOOT
	TOTAL=	475	FOOT

IMPACT ATTENUATORS, TEMP (NON-REDIRECTIVE) TL 3			
STAGE 1			
0398+53		1	EACH
0402+77		1	EACH
TOTALS		2	EACH

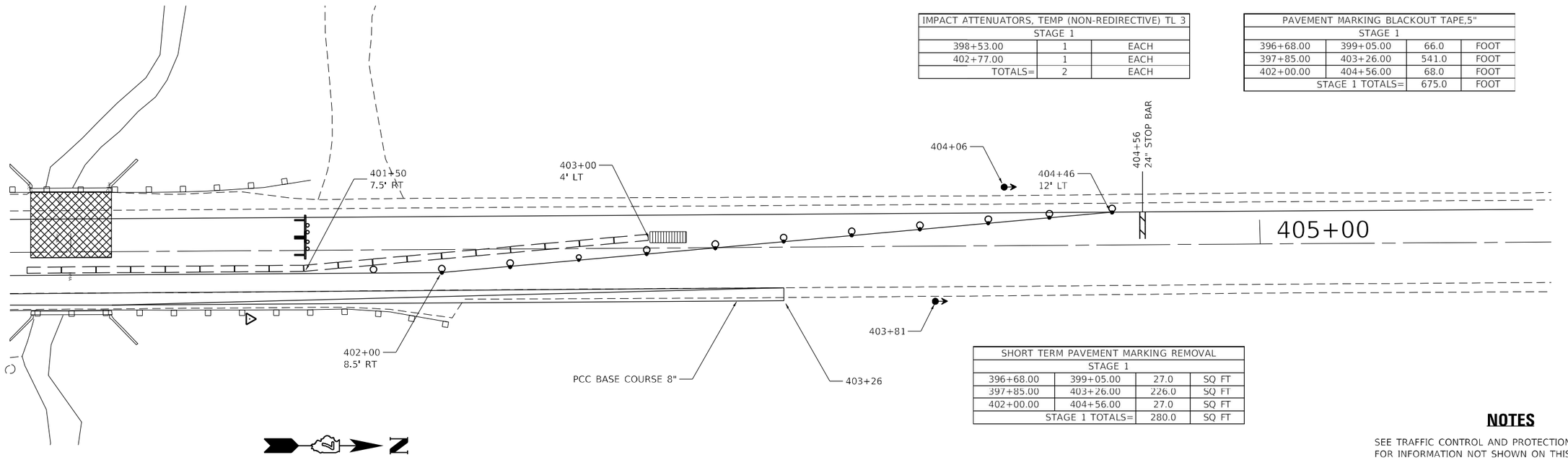
NOTE: PIN 8 SECTIONS OF TCB IN THE PORTION PARALLEL TO CENTERLINE, TRANSITION PIN TWO SECTIONS ON EITHER SIDE OF THOSE.

SYMBOLS

- WORK AREA
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TRAFFIC SIGNAL
- IMPACT ATTENUATOR
- DRUM

IMPACT ATTENUATORS, TEMP (NON-REDIRECTIVE) TL 3		
STAGE 1		
398+53.00	1	EACH
402+77.00	1	EACH
TOTALS=	2	EACH

PAVEMENT MARKING BLACKOUT TAPE,5"			
STAGE 1			
396+68.00	399+05.00	66.0	FOOT
397+85.00	403+26.00	541.0	FOOT
402+00.00	404+56.00	68.0	FOOT
STAGE 1 TOTALS=		675.0	FOOT



SHORT TERM PAVEMENT MARKING REMOVAL			
STAGE 1			
396+68.00	399+05.00	27.0	SQ FT
397+85.00	403+26.00	226.0	SQ FT
402+00.00	404+56.00	27.0	SQ FT
STAGE 1 TOTALS=		280.0	SQ FT

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

MODEL: Default
FILE NAME: c:\Willet-pw.bentley.com:PWIDOT Documents\IDOT Offices\District 7\Projects\74858\CADData\CADsheets\D774858-sht-stagingv5.dgn

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 TRAFFIC CONTROL

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

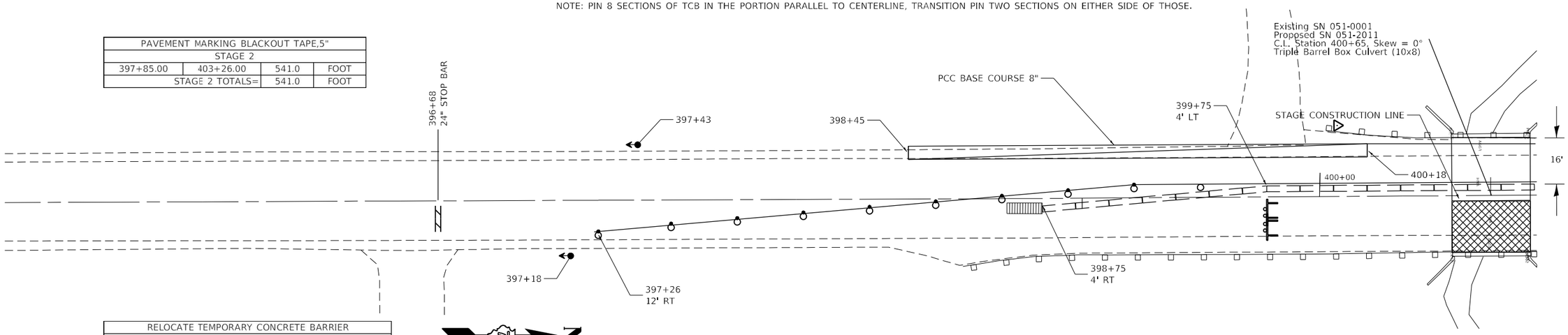
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	10
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

NOTE: PIN 8 SECTIONS OF TCB IN THE PORTION PARALLEL TO CENTERLINE, TRANSITION PIN TWO SECTIONS ON EITHER SIDE OF THOSE.

PAVEMENT MARKING BLACKOUT TAPE,5"			
STAGE 2			
397+85.00	403+26.00	541.0	FOOT
STAGE 2 TOTALS=		541.0	FOOT

RELOCATE TEMPORARY CONCRETE BARRIER			
STAGE 2			
398+75	402+50	375	FOOT
TOTAL=		375	FOOT

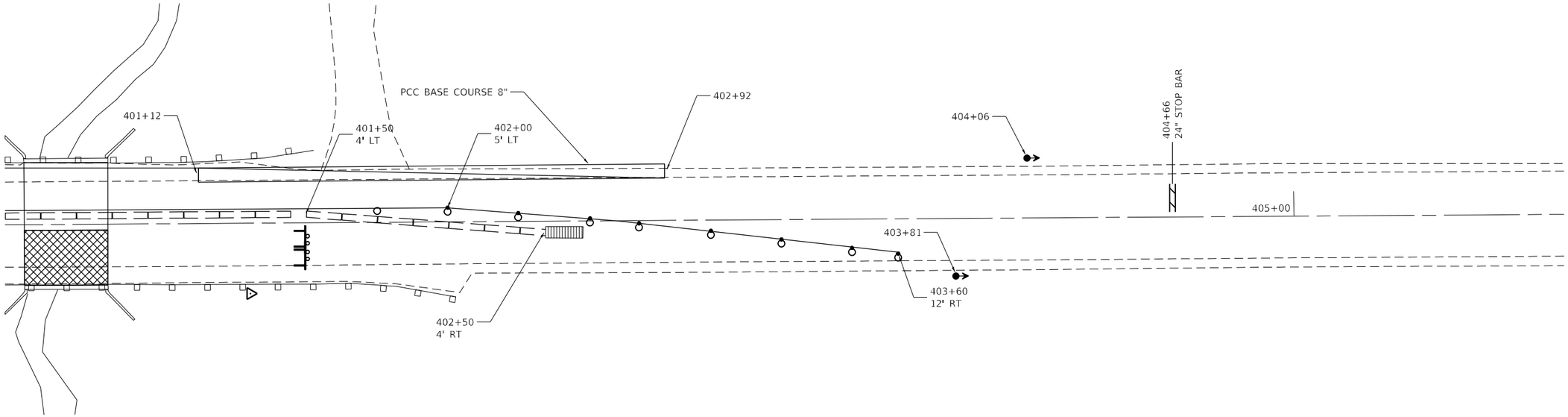
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE) TL 3		
STAGE 2		
398+95	1	EACH
402+35	1	EACH
TOTALS=	2	EACH



SHORT TERM PAVEMENT MARKING REMOVAL			
STAGE 2			
397+85.00	403+26.00	226.0	SQ FT
STAGE 2 TOTALS=		226.0	SQ FT

SYMBOLS

- WORK AREA
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TRAFFIC SIGNAL
- IMPACT ATTENUATOR
- DRUM



NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWDOT\Documents\IDOT Offices\District 7\Projects\74858\CADD\stat\CADDsheets\D774858-sht-staging.dgn

USER NAME = Jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

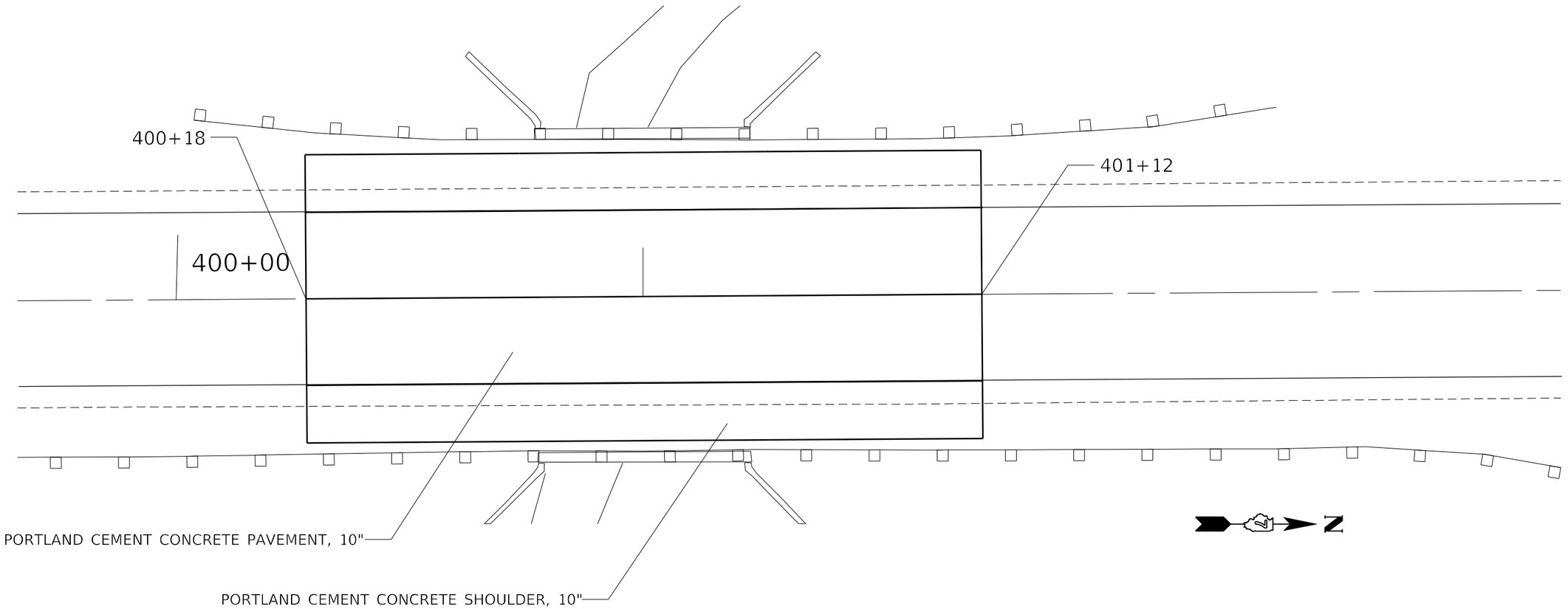
STAGE 2 TRAFFIC CONTROL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	188-1	LAWRENCE	29	11
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

PCC PAVT 10" (JOINTED)						
STATION	TO	STATION	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)	NOTE
400+18.00	TO	401+12.00	94	24	250.7	NB AND SB LANES
				TOTAL=	251	SQ YD

PCC SHOULDERS, 10"							
SN	NB/SB	STATION	STATION	LENGTH	WIDTH (FT)	AREA (SQ FT)	SQ YD
051-2011	NB	400+18	401+12	94	8	752.0	83.6
	SB	400+18	401+12	94	8	752.0	83.6
					TOTAL=		167



PAVEMENT REMOVAL						
SIDE	STATION	TO	STATION	AREA (SQ FT)	AREA (SQ YD)	NOTES
LT/RT	400+18.00	TO	401+12	2256.0	250.7	
				TOTAL=	251	SQ YD

PAVED SHOULDER REMOVAL				
STATIONING		WIDTH	LENGTH	AREA
FROM	TO	(FOOT)	(FOOT)	(SQ YD)
LEFT				
400+18.00	401+12.00	3	94.0	31.3
RIGHT				
400+18.00	401+12.00	8	94.0	83.6
			TOTAL=	115

NOTES

DRAWING NOT TO SCALE

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\District 7\Projects\74858\CADData\CADSheets\0774858-sht-staging.dgn

USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/25/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED PAVEMENT AND SHOULDER

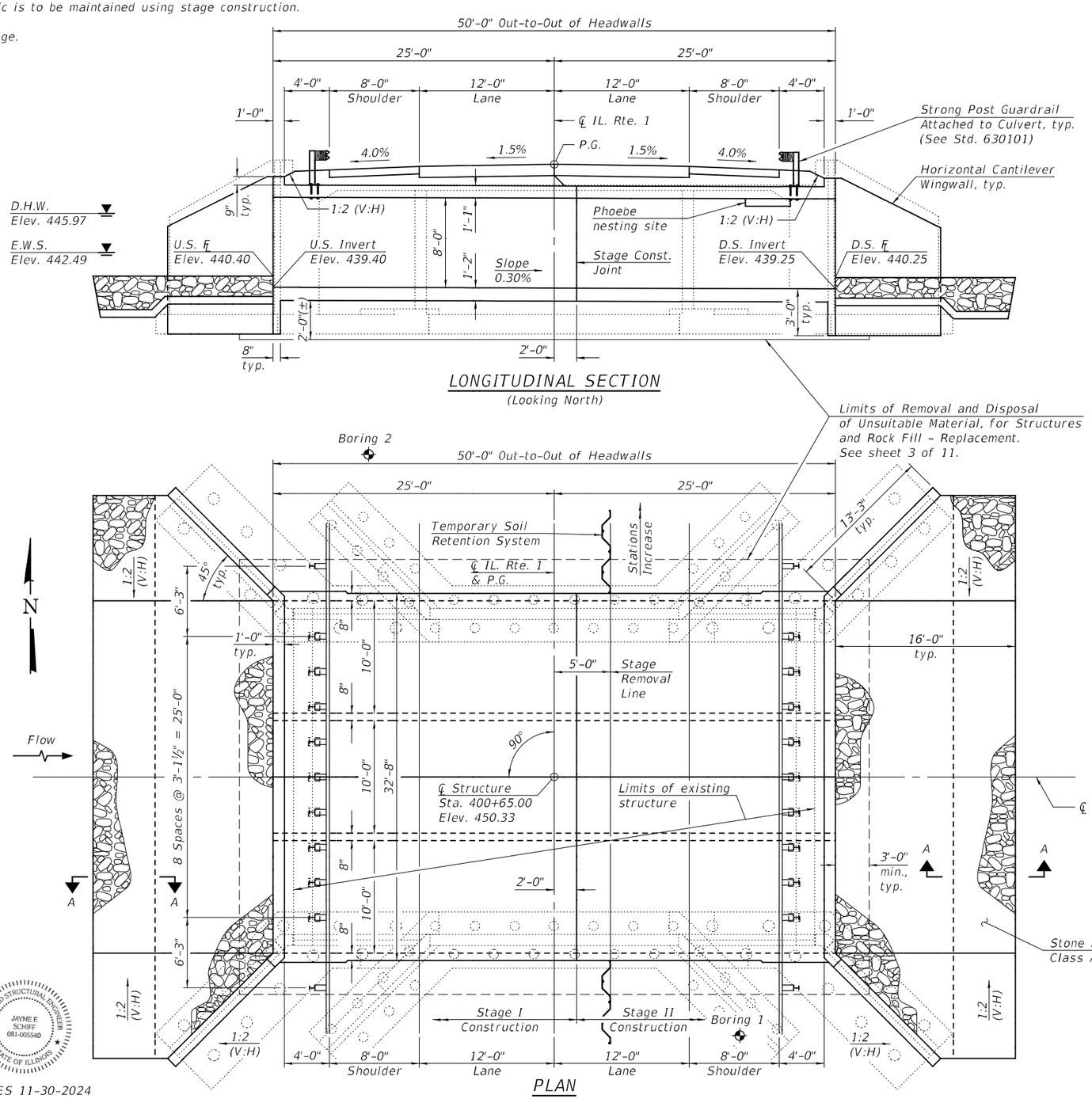
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	12
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

Benchmark: BM 802 – Chiseled square on northeast wingwall of S.N. 051-0001, Sta. 400+80, Offset 24' Rt. Elev = 450.53

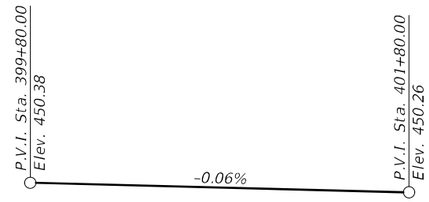
Existing Structure: S.N. 051-0001 was originally constructed in 1921 under S.B.I. Rte. 1 Section 18 A&B and consisted of a reinforced concrete slab superstructure supported on closed abutments and untreated timber piles. The original structure was widened in 1962 and consists of a single-span slab bridge with a back-to-back abutment length of 30'-0" and an out-to-out width of 46'-4". The structure has no skew. The existing structure is to be removed and replaced. Traffic is to be maintained using stage construction.

No Salvage.



LONGITUDINAL SECTION
(Looking North)

PLAN



PROFILE GRADE
(Along ℄ IL. Rte. 1)

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

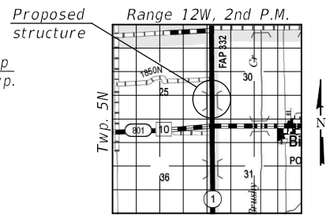
DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

LOADING HL-93

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

INDEX OF SHEETS



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 1 OVER UNNAMED CREEK
F.A.P. ROUTE 332 – SECTION 18B-1
LAWRENCE COUNTY
STATION 400+65.00
STRUCTURE NO. 051-2011

JAYME F. SCHIFF 081-005540 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

EXPIRES 11-30-2024

MODEL: $MODELNAME$
FILE NAME: $FILE$

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOSHUA S. FLAIG
DRAWN	-	ANTHONY J. NOVELLO / D.A.P.
CHECKED	-	R.P.N. / J.S.F.

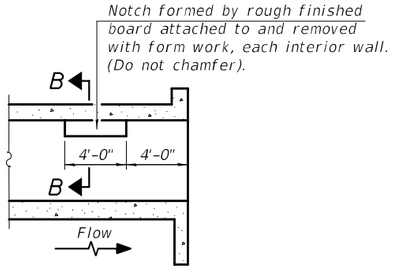
$DATE$ $TIME$

EXAMINED — ENGINEER OF BRIDGES DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - August 21, 2024
REVISED -
REVISED -

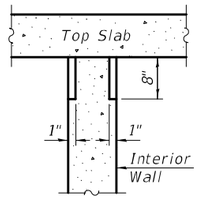
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	13
		CONTRACT NO. 74858		
		ILLINOIS	FED. AID PROJECT	



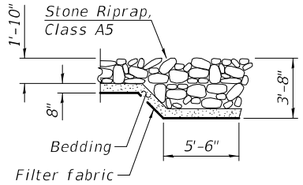
LONGITUDINAL SECTION



SECTION B-B

PHOEBE NESTING SITE DETAILS

(Downstream End Only)



SECTION A-A

GENERAL NOTES

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Precast option is not allowed.

STATION 400+65.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P RTE. 332 SEC. 18B-1
LOADING HL-93
STRUCTURE NO. 051-2011

NAME PLATE

See Std. 515001

WATERWAY INFORMATION

Existing Overtopping Elev. 449.19 ft. at Sta. 407+97
Drainage Area = 0.89 Sq. Mi. Proposed Overtopping Elev. 449.19 ft. at Sta. 407+97

Flood	Freq. Yr.	Q C.F.S.	Opening Ft² Exist.	Opening Ft² Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Ten-Year	10	654	90	148	445.33	1.64	0.31	446.97	445.64
Design	50	1120	108	167	445.97	2.60	0.64	448.57	446.61
Base	100	1340	114	174	446.19	2.73	0.88	448.92	447.07
Overtopping (E)	110	1387	115	175	446.22	2.84	0.95	449.06	447.17
Max. Calc.	500	1890	126	186	446.59	2.94	1.59	449.53	448.18

10-Year outlet velocity from existing structure = 7.3 fps
10-Year outlet velocity from proposed structure = 4.4 fps

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. Yd.	159
Filter Fabric	Sq. Yd.	159
Removal of Existing Structures	Each	1
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	205
Reinforcement Bars	Pound	35,260
Bar Splicers	Each	172
Name Plates	Each	1
Temporary Soil Retention System	Sq. Ft.	325
Concrete Box Culverts	Cu. Yd.	206.1
Geocomposite Wall Drain	Sq. Yd.	196
Strong Post Guardrail Attached to Culvert	Foot	75
Membrane Waterproofing System for Buried Structures	Sq. Yd.	196
Rock Fill - Replacement	Ton	369

DESIGNED - RYAN P. NEGANGARD
CHECKED - JOSHUA S. FLAIG
DRAWN - DENNIS A. POP
CHECKED - R.P.N. / J.S.F.

EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

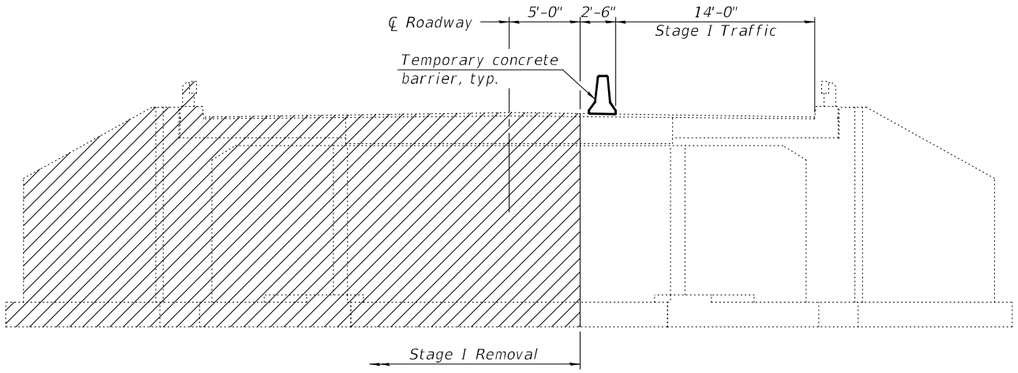
DATE - August 21, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

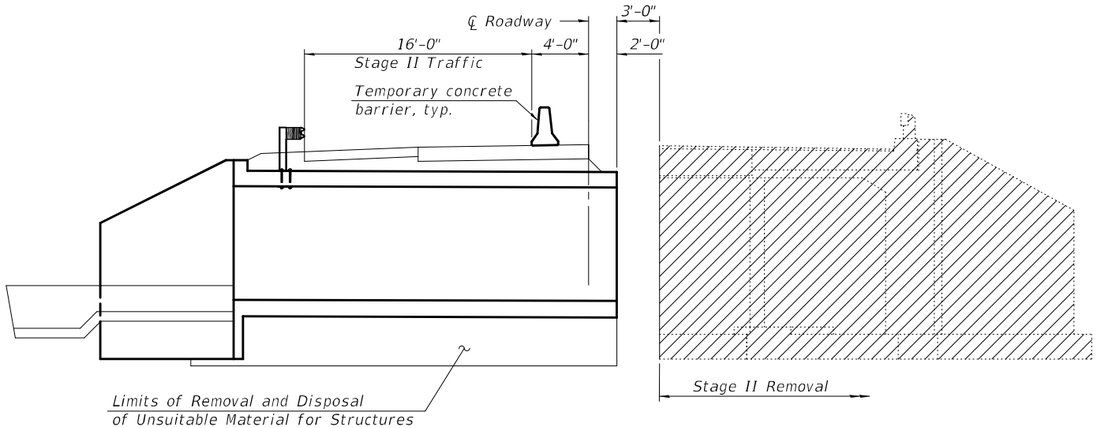
GENERAL DATA
STRUCTURE NO. 051-2011
SHEET 2 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	14
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

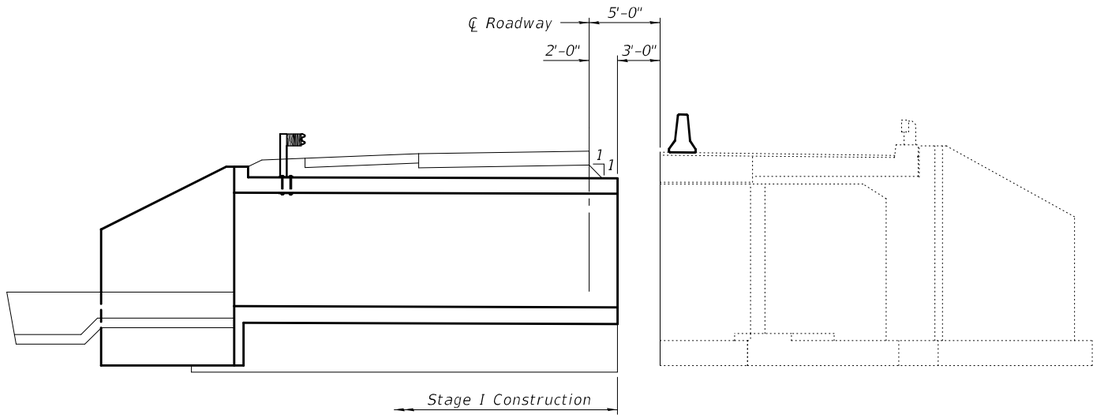
MODEL: 0512011-74858-002
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0512011\CADD Plans\0512011-74858
8/22/2024 10:26:35 AM



STAGE I REMOVAL

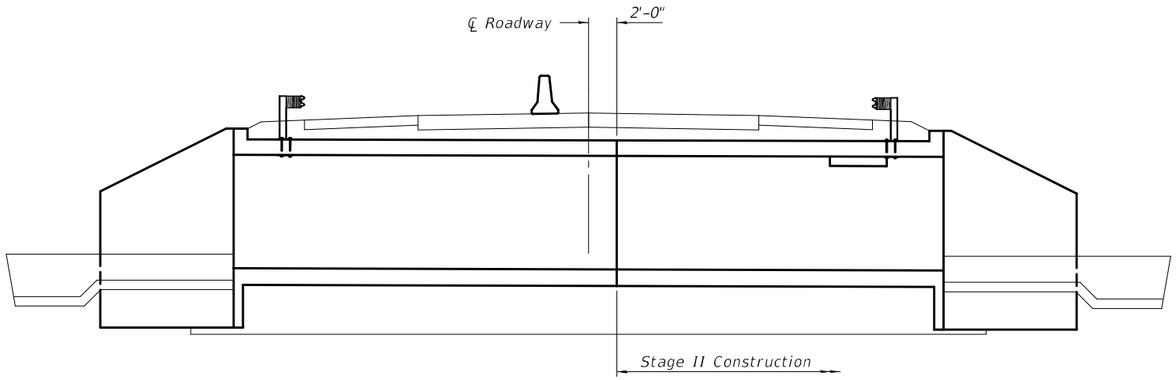


STAGE II REMOVAL



STAGE I CONSTRUCTION

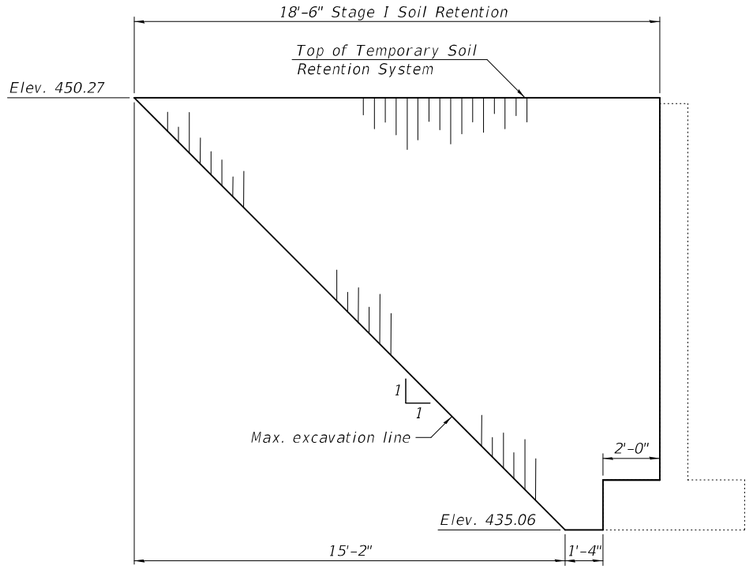
Notes:
- Hatched areas indicate Removal of Existing Structures.
- For quantity of Temporary Concrete Barrier, see Roadway Plans.
- All cross sections are looking North.
- For details of Temporary Concrete Barrier see sheet 5 of 11.

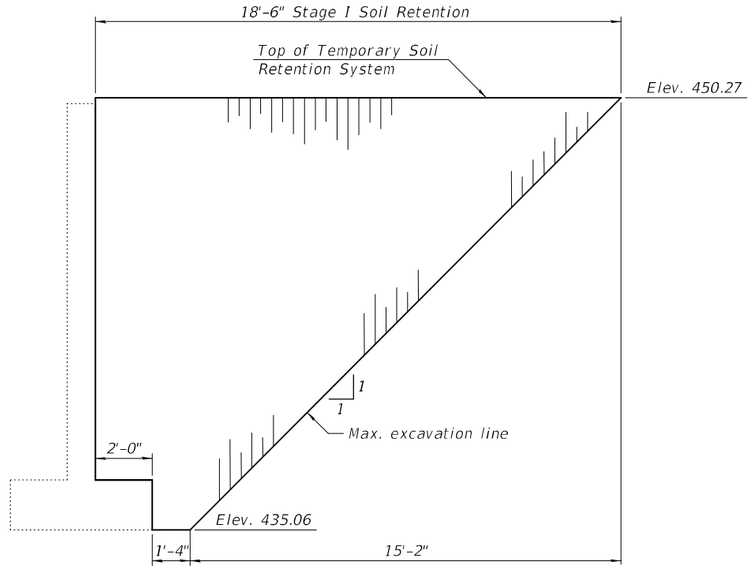


STAGE II CONSTRUCTION

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - August 21, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 051-2011	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOSHUA S. FLAIG					332	18B-1	LAWRENCE	29	15
DRAWN - DENNIS A. POP	PASSED	REVISED -		SHEET 3 OF 11 SHEETS			CONTRACT NO. 74858		
CHECKED - R.P.N. / J.S.F.	ENGINEER OF BRIDGE DESIGN	REVISED -				ILLINOIS	FED. AID PROJECT		
8/22/2024 10:25:47 AM	ENGINEER OF BRIDGES AND STRUCTURES								

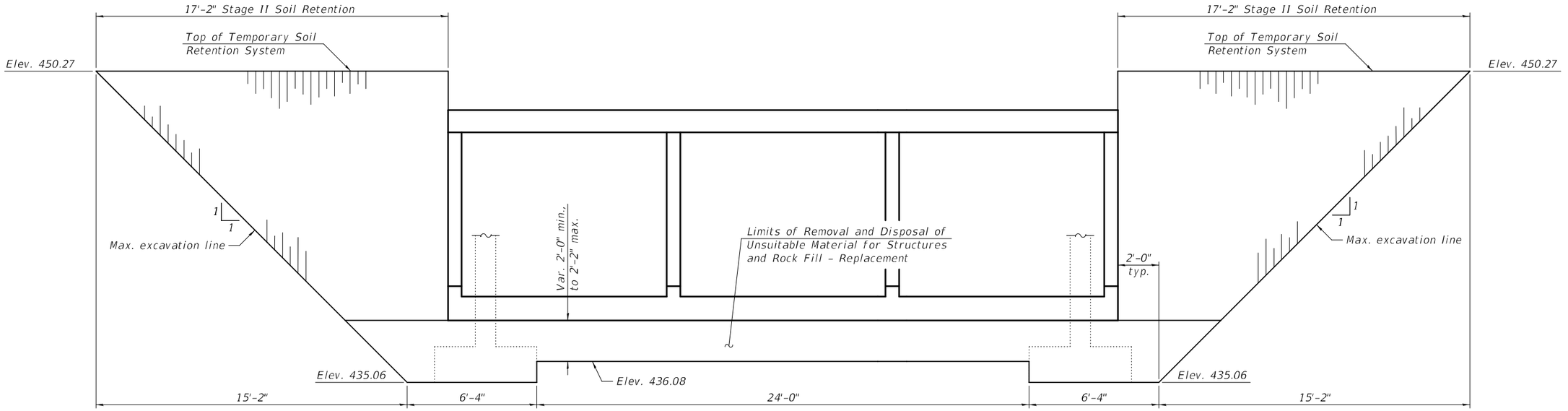
MODEL: 051201I-74858-003
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051201I\CADD Plans\051201I-74858





STAGE I TEMPORARY SOIL RETENTION SYSTEM

(Looking East)



STAGE II TEMPORARY SOIL RETENTION SYSTEM

(Looking East)

Notes:

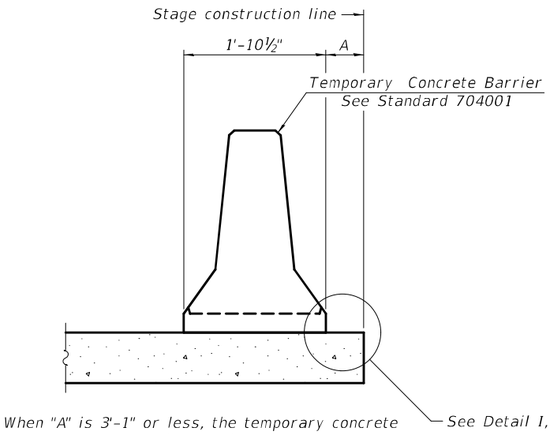
A canitlevered sheet piling design does not appear to be feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

The existing abutment and wingwall footings shall be completely removed within 3'-0" of the proposed culvert and wingwalls. Cost included with Removal of Existing Structures.

The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.

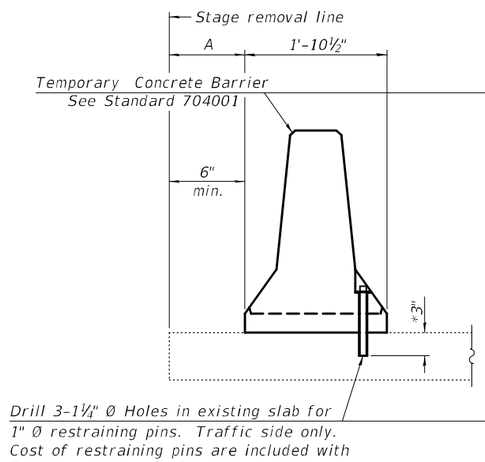
MODEL: 051201I-74858-004
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051201I\CADD Plans\051201I-74858

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - August 21, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TEMPORARY SOIL RETENTION SYSTEM STRUCTURE NO. 051-2011**	F.A.P. RTE. 332 / SECTION 18B-1 / COUNTY LAWRENCE / TOTAL SHEETS 29 / SHEET NO. 16
CHECKED - JOSHUA S. FLAIG					CONTRACT NO. 74858
DRAWN - DENNIS A. POP	PASSED	REVISED -		SHEET 4 OF 11 SHEETS	ILLINOIS / FED. AID PROJECT
CHECKED - R.P.N. / J.S.F.	ENGINEER OF BRIDGE DESIGN	REVISED -			
8/22/2024 10:28:51 AM	ENGINEER OF BRIDGES AND STRUCTURES				



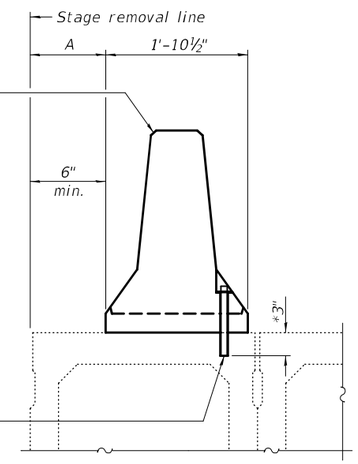
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

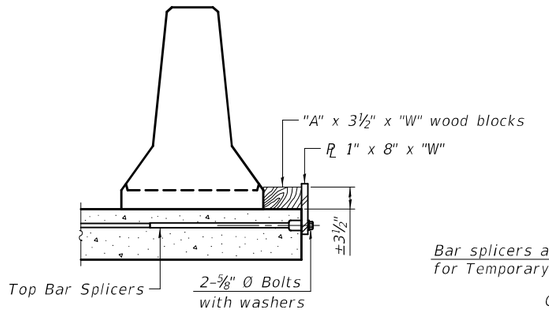
EXISTING SLAB



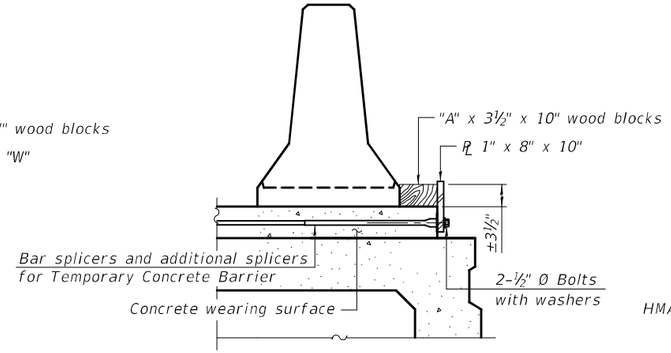
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

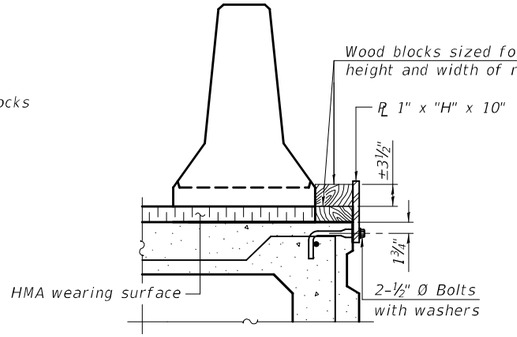
SECTIONS THRU SLAB OR DECK BEAM



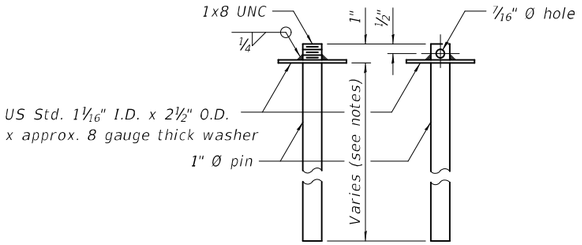
DETAIL I



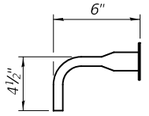
DETAIL II



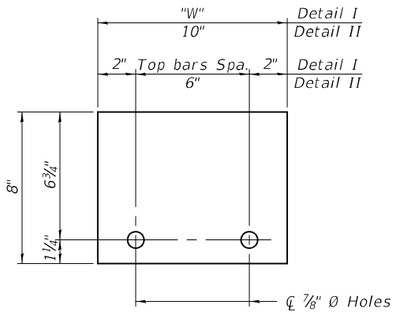
DETAIL III



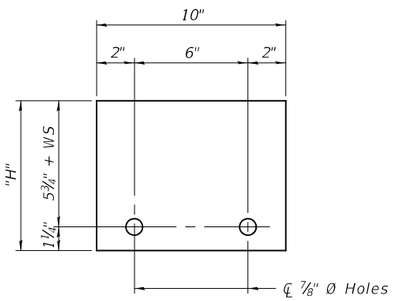
RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER ℄ 1" x "H" x 10"
(Detail III)

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

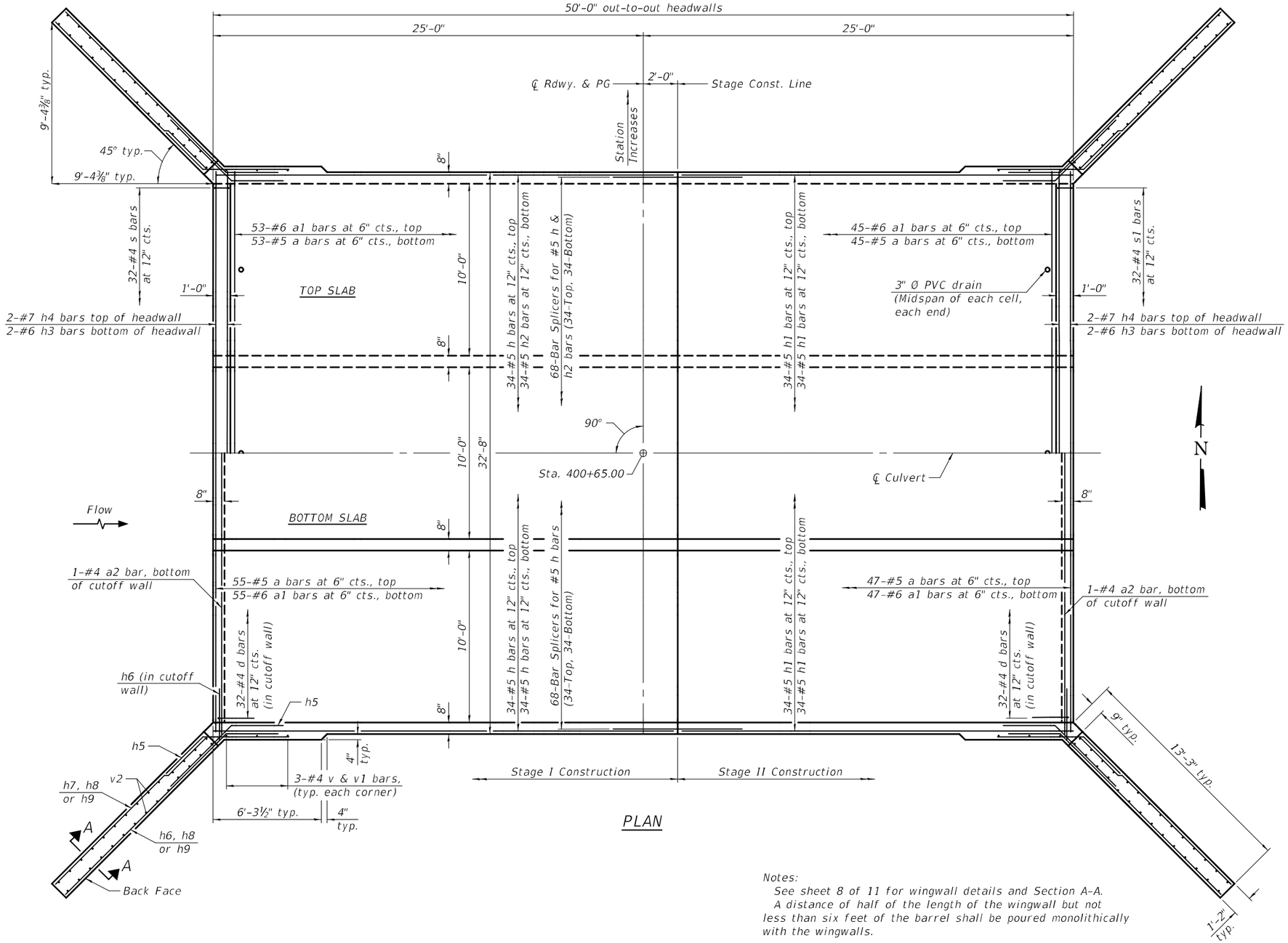
R-27

10-12-2021

DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - August 21, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER STRUCTURE NO. 051-2011	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOSHUA S. FLAIG	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 5 OF 11 SHEETS	332	18B-1	LAWRENCE	29	17
DRAWN - DENNIS A. POP		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					CONTRACT NO. 74858		
CHECKED - R.P.N. / J.S.F.								ILLINOIS FED. AID PROJECT		

MODEL: 051201I-74858-005
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051201I\CADD Plans\051201I-74858

8/22/2024 10:29:48 AM



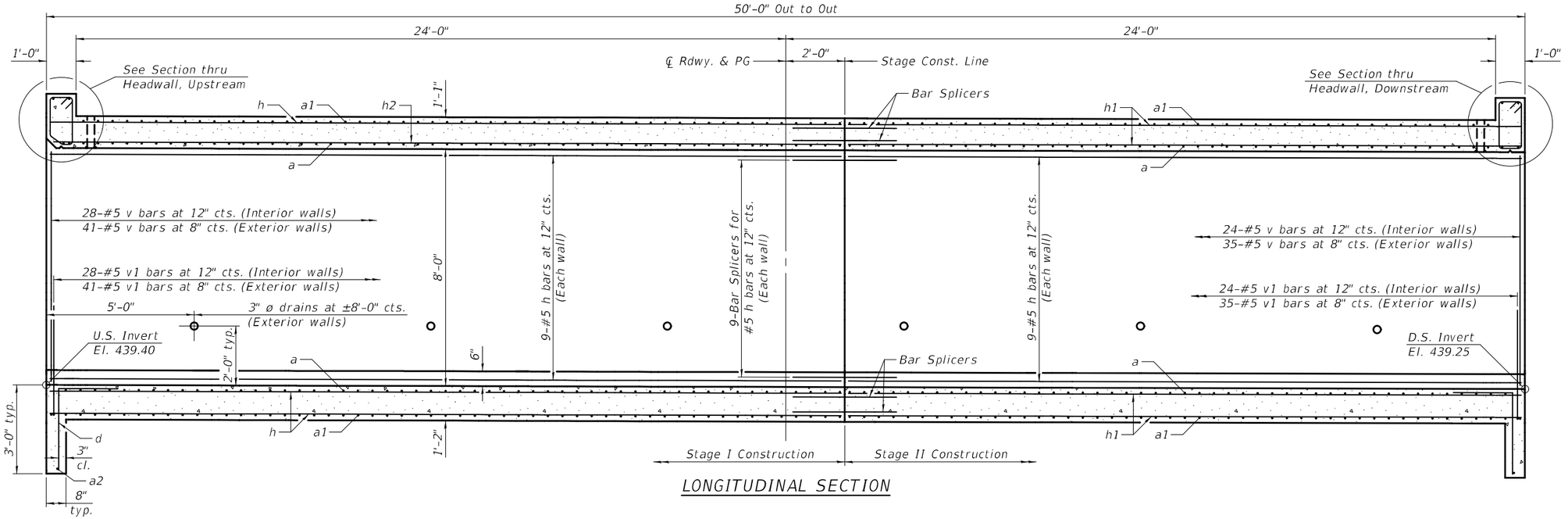
PLAN

Notes:
See sheet 8 of 11 for wingwall details and Section A-A.
A distance of half of the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

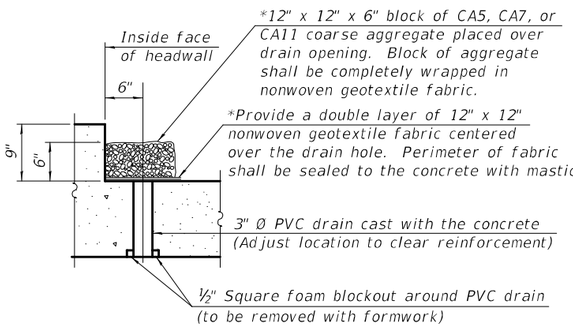
MODEL: 0512011-74858-006
FILE NAME: pw:\\dot-pw.bentley.com:PWDOTDocuments\IDOT Offices\Bureau of Bridges and Structures\Projects\0512011\CADD Plans\0512011-74858

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - August 21, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP AND BOTTOM SLAB STRUCTURE NO. 051-2011	F.A.P. RTE. 332 · SECTION 18B-1 · COUNTY LAWRENCE · TOTAL SHEETS 29 · SHEET NO. 18
CHECKED - JOSHUA S. FLAIG					CONTRACT NO. 74858
DRAWN - DENNIS A. POP	PASSED	REVISED -		SHEET 6 OF 11 SHEETS	ILLINOIS · FED. AID PROJECT
CHECKED - R.P.N. / J.S.F.	ENGINEER OF BRIDGE DESIGN ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			

8/22/2024 10:30:23 AM



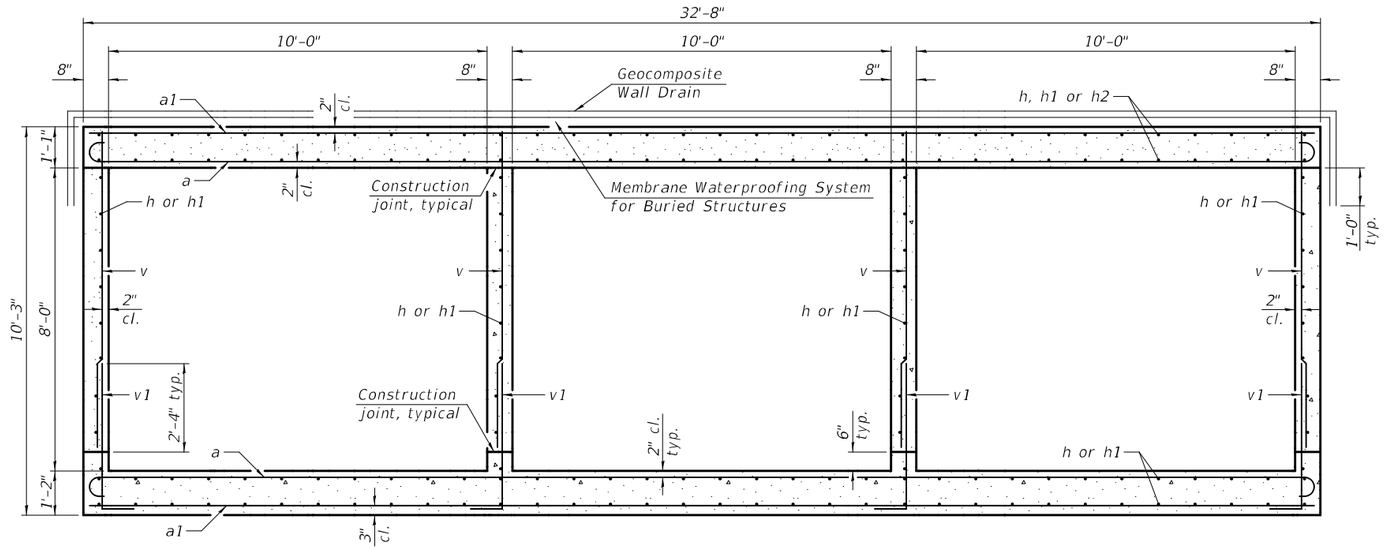
LONGITUDINAL SECTION



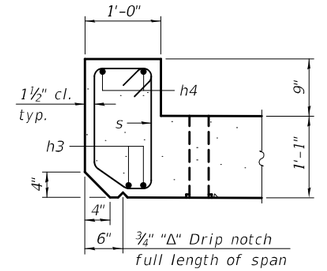
DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

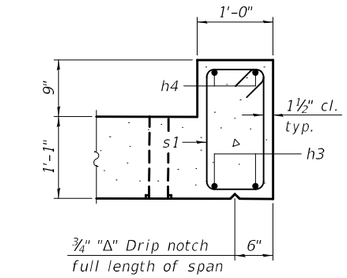
* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



SECTION THRU BARREL



UPSTREAM



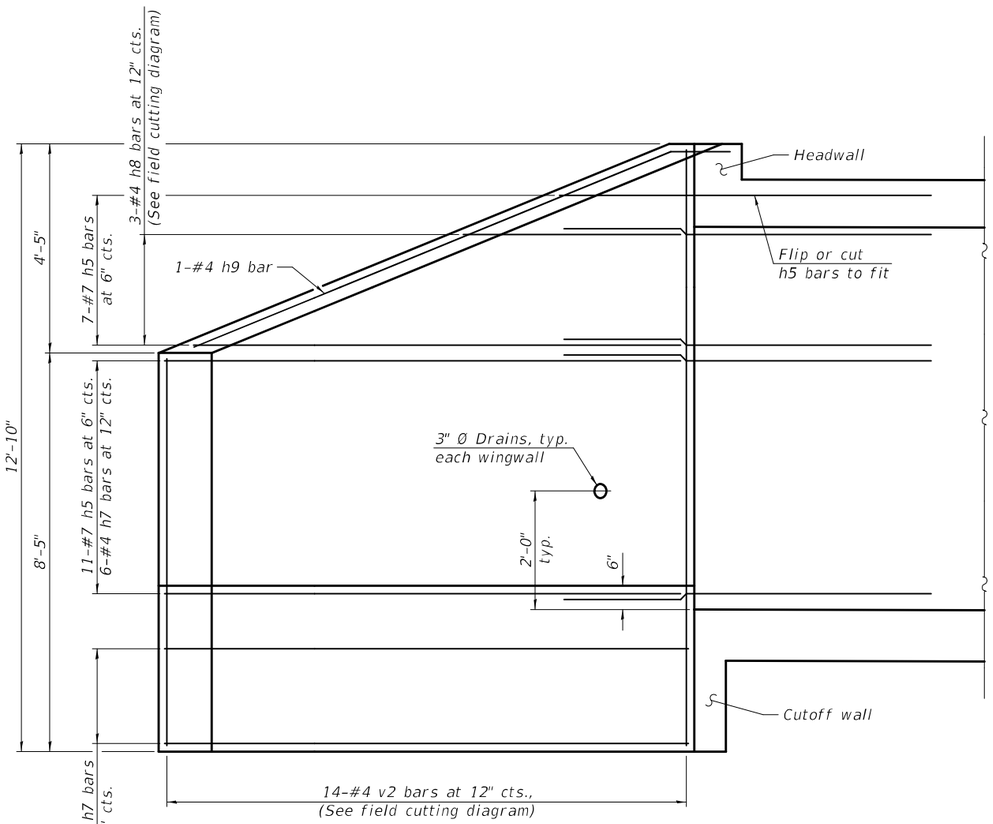
DOWNSTREAM

SECTION THRU HEADWALL

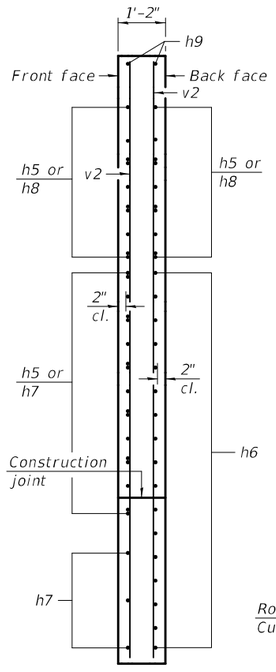
DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - August 21, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT SECTIONS STRUCTURE NO. 051-2011	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOSHUA S. FLAIG		ENGINEER OF BRIDGE DESIGN				332	18B-1	LAWRENCE	29	19
DRAWN - DENNIS A. POP	PASSED		REVISED -		SHEET 7 OF 11 SHEETS				CONTRACT NO. 74858	
CHECKED - R.P.N. / J.S.F.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS	FED. AID PROJECT	

MODEL: 051201I-74858-007
FILE NAME: pw:\\dot-pwbentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051201I\CADD Plans\051201I-74858

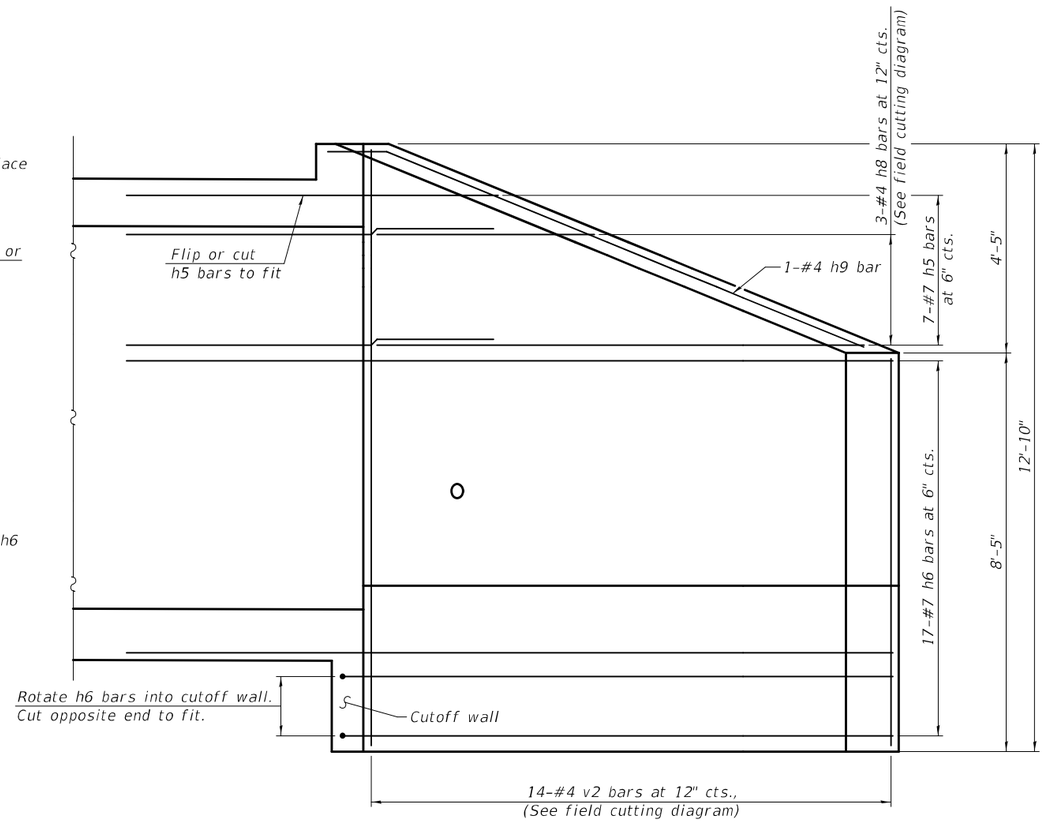
8/22/2024 10:31:12 AM



ELEVATION
(Showing reinforcement in the front face)



SECTION A-A



ELEVATION
(Showing reinforcement in the back face)

MODEL: 0512011-74858-008
FILE NAME: pw:\\fdot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0512011\CADD Plans\0512011-74858
8/22/2024 10:32:11 AM

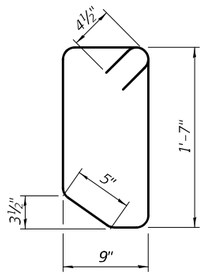
DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - August 21, 2024
CHECKED -	JOSHUA S. FLAIG		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / J.S.F.		REVISED -

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

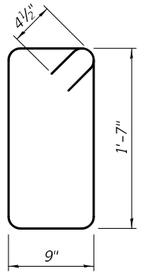
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WINGWALL DETAILS
STRUCTURE NO. 051-2011
SHEET 8 OF 11 SHEETS

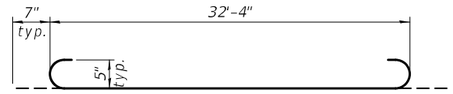
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	20
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		



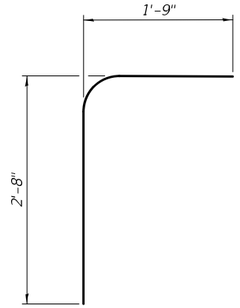
BAR s



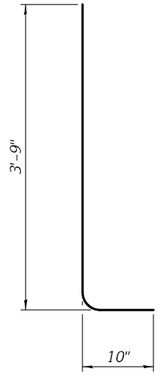
BAR s1



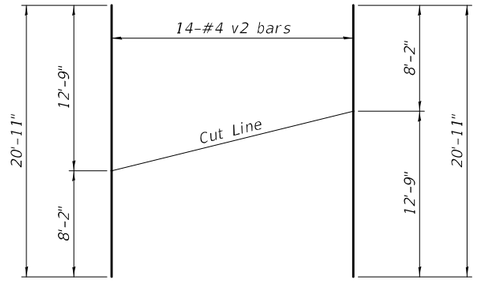
BAR a



BAR d

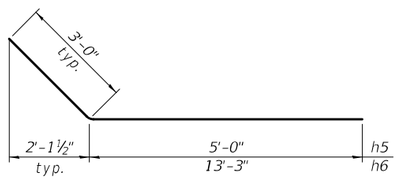


BAR v1

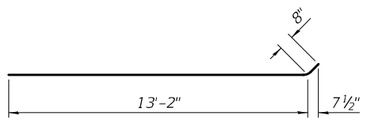


FIELD CUTTING DIAGRAM

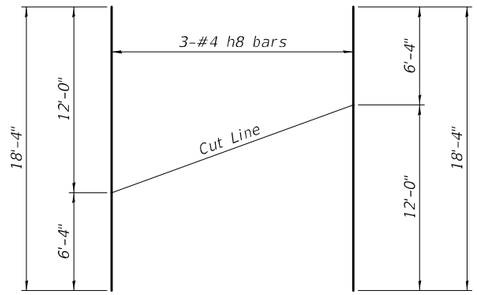
Order v2 bars full length. Cut as shown and use remainder of bars in opposite face of wingwall.



BARS h5 & h6



BAR h9



FIELD CUTTING DIAGRAM

Order h8 bars full length. Cut as shown and use remainder of bars in opposite face.

Note:
At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	200	#5	33'-6"	
a1	200	#6	32'-4"	
a2	2	#4	32'-4"	
d	64	#4	4'-5"	
h	138	#5	26'-8"	
h1	172	#5	22'-8"	
h2	34	#5	26'-6"	
h3	4	#6	32'-4"	
h4	4	#7	32'-4"	
h5	100	#7	8'-0"	
h6	68	#7	16'-3"	
h7	36	#4	13'-1"	
h8	12	#4	18'-4"	
h9	8	#4	13'-10"	
s	32	#4	5'-3"	
s1	32	#4	5'-5"	
v	268	#5	8'-3"	
v1	268	#5	4'-7"	
v2	56	#4	20'-11"	
Concrete Box Culverts		Cu. Yd.	206.1	
Reinforcement Bars		Pound	35,260	

DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOSHUA S. FLAIG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / J.S.F.	

EXAMINED — ENGINEER OF BRIDGE DESIGN

PASSED — ENGINEER OF BRIDGES AND STRUCTURES

DATE - August 21, 2024

REVISED -

REVISED -

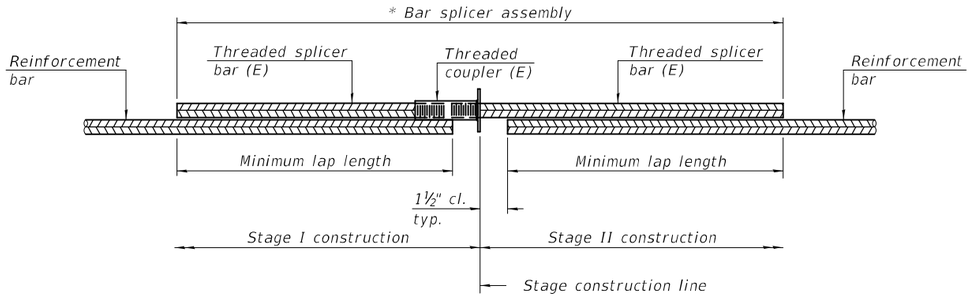
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS
STRUCTURE NO. 051-2011

SHEET 9 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	21
		CONTRACT NO. 74858		
	ILLINOIS FED. AID PROJECT			

MODEL: 0512011-74858-009
FILE NAME: pw:\\fdot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0512011\CADD Plans\0512011-74858
8/22/2024 10:32:58 AM



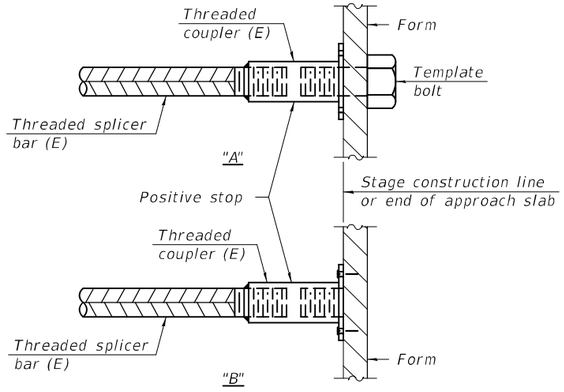
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

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

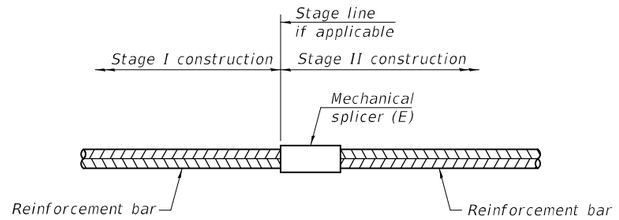
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top slab	#5	68	2'-2"
Walls	#5	36	2'-9"
Bottom slab	#5	68	2'-2"



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 2-1-2023

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - August 21, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - JOSHUA S. FLAIG	ENGINEER OF BRIDGE DESIGN		
DRAWN - DENNIS A. POP	PASSED	REVISED -	**BAR SPLICER ASSEMBLY DETAILS STRUCTURE NO. 051-2011**
CHECKED - R.P.N. / J.S.F.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET 10 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	22
		CONTRACT NO. 74858		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051201I-74858-010
FILE NAME: pw:\\fdot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051201I\CADD Plans\051201I-74858

8/22/2024 10:34:00 AM

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 6/4/20

ROUTE FAP 332 (IL 1) DESCRIPTION Stream 0.3 miles North of Birds Road LOGGED BYE. Sandschafer

SECTION 18B-1 LOCATION SW 1/4, SEC. 30, TWP. 5N, RNG. 11W, 3rd PM,
Latitude N 38.840866, Longitude W 87.684478

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER Auto 140#

STRUCT. NO. 051-0001 (Existing) 051-2011 (Proposed)
Station 400+65

BORING NO. B1 South Abutment
Station 400+42
Offset 16.5 ft RT
Ground Surface Elev. 449.87 ft

Surface Water Elev. 439.80 ft
Stream Bed Elev. 439.73 ft

Groundwater Elev.:
First Encounter 431.9 ft ▼
Upon Completion 430.9 ft ▽
After 24 Hrs. 440.9 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
10" Aggregate 449.07				Hard, moist, grey, SANDY CLAY SHALE	4 9	4.0 P	15
Brown, CLAY LOAM	2				12		
Very stiff, grey	3 3	1.8 B	15	Very dense (Sample broken)	50 3-3/4"		7
-5	2				50 2"		
Medium	2 2	0.7 B	21	(Sample broken) -25	25		
442.87				423.87	50 3-1/4"		6
Soft, moist, grey, SILTY CLAY	1 2 2	0.5 B	22	Benchmark: BM 802 Chiseled square on the Northeast wingwall of SN 051-0001, Sta. 401+10, 33' RT, Elevation 450.53 ft. End of Boring	50 2-1/4"		
440.37 ▽							
Soft, moist, grey, SILTY CLAY LOAM -10	0 1 2	0.5 B	17	-30			
437.87							
Very soft, moist, grey, SILTY LOAM	0 0 0	0.2 B	17				
435.37							
Very soft, moist, grey, SILT -15	0 0 0	0.1 B	12	-35			
432.87							
Stiff, moist, brown, SANDY CLAY ▼	0 1 2	1.6 B	10				
▽							
429.87-20	1			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), WH-Weight of Hammer,
NT-Not Tested.

BBS, form 137 (Rev. 8-99)

SOIL BORING 051-0001 SOIL ROCK 2020.GPJ IL_DOT.GDT 5/19/23

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 6/4/20

ROUTE FAP 332 (IL 1) DESCRIPTION Stream 0.3 miles North of Birds Road LOGGED BYE. Sandschafer

SECTION 18B-1 LOCATION SW 1/4, SEC. 30, TWP. 5N, RNG. 11W, 3rd PM,
Latitude N 38.840989, Longitude W 87.684553

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER Auto 140#

STRUCT. NO. 051-0001 (Existing) 051-2011 (Proposed)
Station 400+65

BORING NO. B2 North Abutment
Station 401+01
Offset 16.5 ft LT
Ground Surface Elev. 449.77 ft

Surface Water Elev. 439.80 ft
Stream Bed Elev. 439.73 ft

Groundwater Elev.:
First Encounter 430.3 ft ▼
Upon Completion 430.8 ft ▽
After 24 Hrs. 442.8 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
10" Aggregate 448.97				Soft, moist, brown, SANDY LOAM	0 2	0.4 B	12
Brown, CLAY	1			427.77			
427.77				Very dense, moist, grey, CLAY SHALE	7 47 50 3"		6
Medium, moist, grey, SILTY CLAY -5	1 2 2	0.7 B	9	-25	17		
445.27				423.77	50 3" 50 1-3/8"		7
Soft, moist, grey, SILTY CLAY	1 2 2	0.6 B	10	Benchmark: BM 802 Chiseled square on the Northeast wingwall of SN 051-0001, Sta. 401+10, 33' RT, Elevation 450.53 ft. End of Boring			
▽							
-10	1 2 2	0.6 B	14	-30			
Soft, moist, grey, SILTY CLAY LOAM	1 1 2	0.6 B	8				
437.77							
Soft, moist, grey, SILTY LOAM	1 0 1	0.3 B	20				
435.27							
Soft, moist, brown, SILTY CLAY -15	2 3 2	0.5 B	7	-35			
432.77							
Stiff, moist, brown, CLAY	1 2 3	1.3 B	10				
▽ ▼							
429.77-20	1			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), WH-Weight of Hammer,
NT-Not Tested.

BBS, form 137 (Rev. 8-99)

SOIL BORING 051-0001 SOIL ROCK 2020.GPJ IL_DOT.GDT 5/19/23

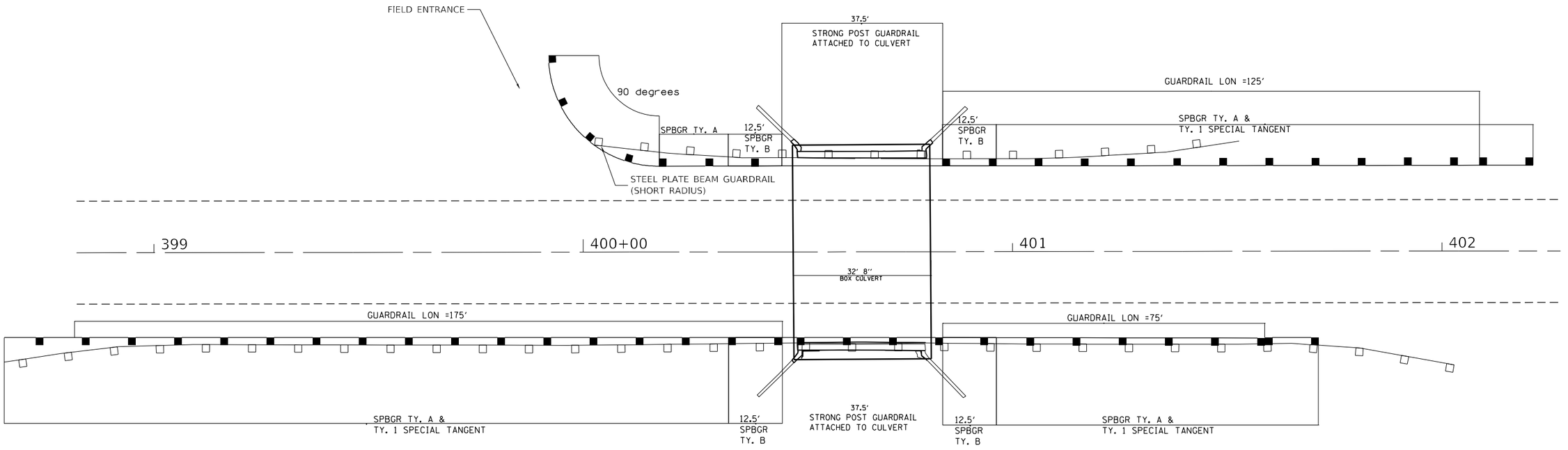
MODEL: 051201I-74858-011
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051201I\CADD Plans\051201I-74858

DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - August 21, 2024
CHECKED -	JOSHUA S. FLAIG		ENGINEER OF BRIDGE DESIGN
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / J.S.F.		REVISED -
8/22/2024	10:34:45 AM		ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-2011
SHEET 11 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	23
		CONTRACT NO. 74858		
		ILLINOIS	FED. AID PROJECT	



STATION	TO	STATION	LOCATION	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	STEEL PLATE BEAM GUARDRAIL, TYPE B, 6 FOOT POSTS	STRONG POST GUARDRAIL ATTACHED TO CULVERT	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL)	TRAFFIC BARRIER TERMINAL, TYPE 2	GUARDRAIL REFLECTORS, TYPE A	TERMINAL MARKER - DIRECT APPLIED	OBJECT MARKER - TYPE 2
				63200310	63000001	X6330725	63000007	63000030	63100167	63100045	78200005	72501000	72500200
				FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
400+02.00	TO	401+53.00	LT	151.0									
398+65.00	TO	402+03.00	RT	338.0									
			LT			25.0				1			1
400+21.25	TO	400+33.75	LT		12.5								
400+33.75	TO	400+46.25	LT				12.5						
400+46.25	TO	400+83.75	LT					37.5					
400+83.75	TO	400+96.25	LT				12.5						
400+96.25	TO	402+08.75	LT		112.5								
402+08.75	TO	402+21.25	LT						1		3	1	
398+58.75	TO	398+71.25	RT						1			1	
398+71.25	TO	400+33.75	RT		162.5								
400+33.75	TO	400+46.25	RT				12.5						
400+46.25	TO	400+83.75	RT					37.5					
400+83.75	TO	400+96.25	RT				12.5						
400+96.25	TO	401+58.75	RT		62.5								
401+58.75	TO	401+71.25	RT						1		4	1	
			TOTALS=	489	350	25	50	75	3	1	7	3	1

NOTES

DRAWING NOT TO SCALE
FACE OF RAIL 8' OFF EDGELINE

FOR STRONG POST GUARDRAIL ATTACHED TO CULVERT:
ELEVATION OF TOP OF PROPOSED BOX AT FACE OF LEFT RAIL WILL BE 448.46 +/-
ELEVATION OF TOP OF PROPOSED BOX AT FACE OF RIGHT RAIL WILL BE 448.34 +/-
LEFT AND RIGHT CENTER OF RAIL ELEVATIONS WILL BE 451.90

SYMBOLS

EXISTING GUARDRAIL

PROPOSED GUARDRAIL

MODEL: Default
FILE NAME: z:\bllod-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADD\data\CADD\sheets\074858-sht-staging.dgn

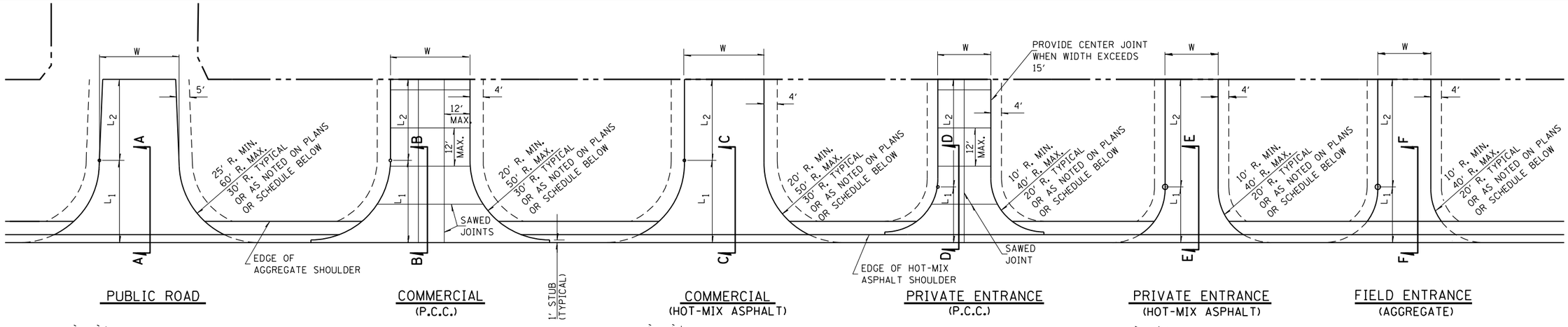
USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

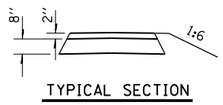
GUARDRAIL DETAILS

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

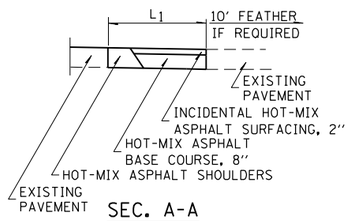
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	24
		CONTRACT NO. 74858		
		ILLINOIS	FED. AID PROJECT	



PUBLIC ROAD

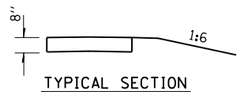


TYPICAL SECTION

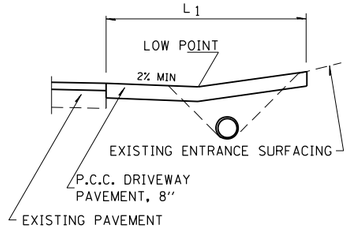


SEC. A-A

COMMERCIAL (P.C.C.)

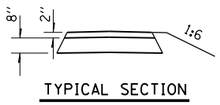


TYPICAL SECTION

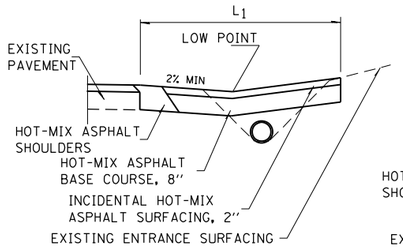


SEC. B-B

COMMERCIAL (HOT-MIX ASPHALT)

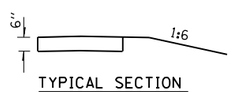


TYPICAL SECTION

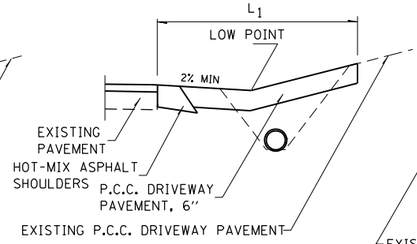


SEC. C-C

PRIVATE ENTRANCE (P.C.C.)

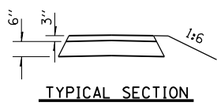


TYPICAL SECTION

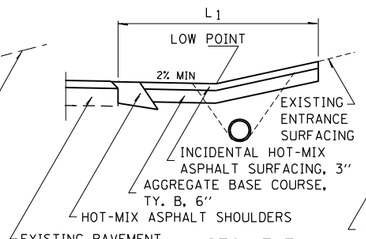


SEC. D-D

PRIVATE ENTRANCE (HOT-MIX ASPHALT)

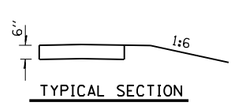


TYPICAL SECTION

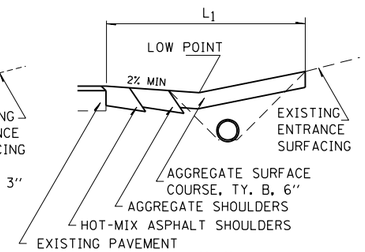


SEC. E-E

FIELD ENTRANCE (AGGREGATE)



TYPICAL SECTION



SEC. F-F

ENTRANCE SCHEDULE

TYPE	SIDE/ STATION	WIDTH	LENGTH		RADII	AGGREGATE BASE, COURSE. TY. B, 6"	HOT-MIX APSHALT BASE COURSE, 8"	AGGREGATE SURFACE COURSE. TYPE B	INCIDENTAL HOT-MIX ASPHALT SURFACING	P.C.C. DRIVEWAY PAVEMENT		PCC PAVEMENT 8"
			L_1	L_2						6"	8"	
						TON	SQ. YD.	TON	TON	SQ. YD.		SQ. YD.
FE	LT 402+60	24'	20'	32.7'	20'			42				

NOTES

L_1 = DISTANCE FROM EDGE OF PAVEMENT TO RADIUS POINT OR MAXIMUM DISTANCE OF 30'.
L_2 = DISTANCE FROM RADIUS POINT OR MAXIMUM DISTANCE OF 30' FROM EDGE OF PAVEMENT TO R.O.W. LINE
MATERIAL USED TO CONSTRUCT L_2 LENGTH SHALL BE THE SAME TYPE OF MATERIAL AS THE EXISTING ENTRANCE

THE THICKNESS OF THE HOT-MIX ASPHALT SHOULDERS THROUGH COMMERCIAL ENTRANCES (HOT-MIX ASPHALT) AND PUBLIC ROADS SHALL BE 10". THE COST OF THE EXTRA THICKNESS SHALL BE INCLUDED WITH THE HOT-MIX ASPHALT SHOULDERS PAY ITEM.

THE COST OF THE BITUMINOUS MATERIALS AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROAD APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

MODEL: Default
FILE NAME: pw:\\ild-pw.bentley.com:PWIDOT1Documents\IDOT Offices\District 7\Projects\74858\CADData\CADSheets\D7748SB-int-details.dgn

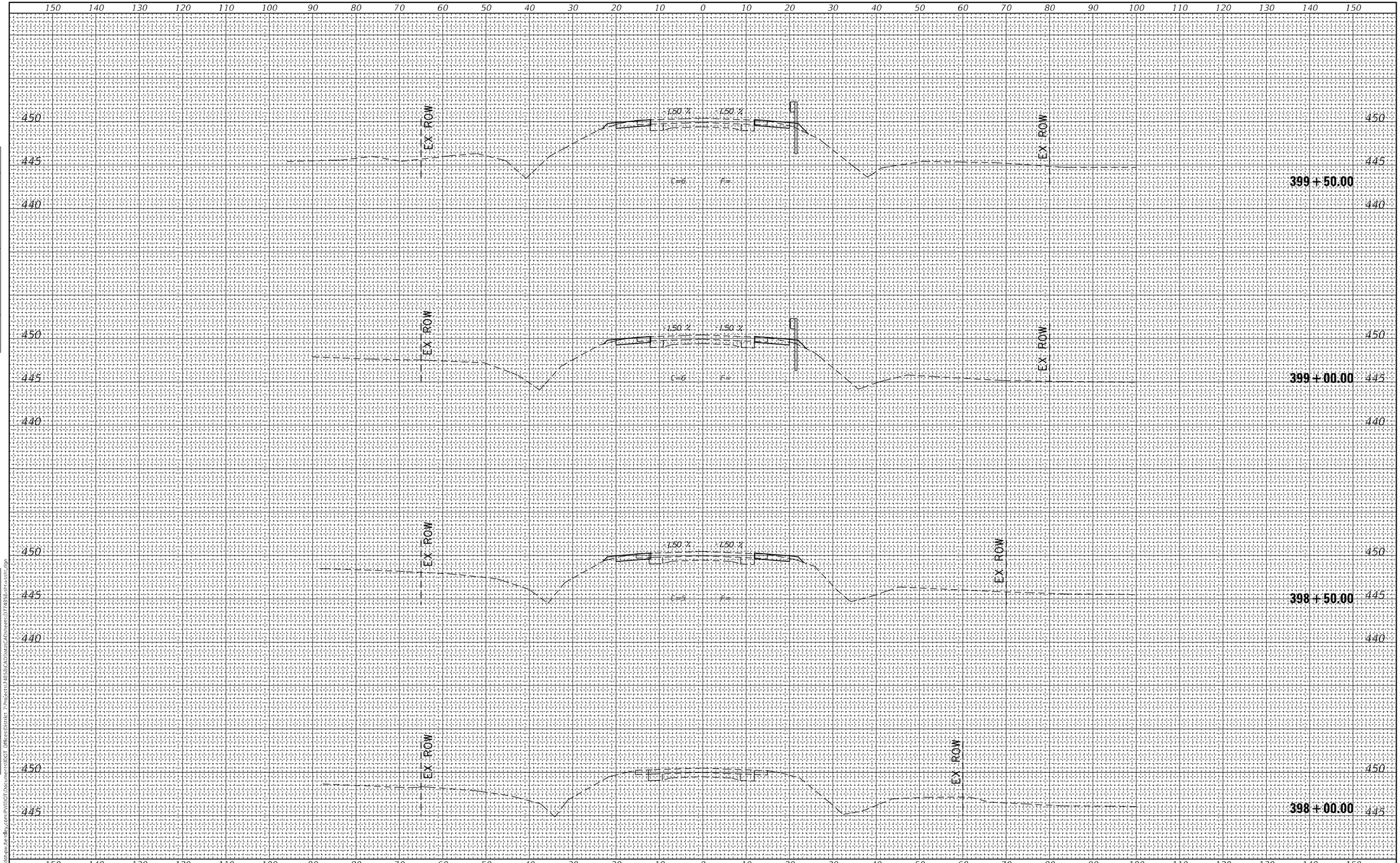
USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/25/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTRANCE DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	25
		CONTRACT NO. 74858		
		ILLINOIS FED. AID PROJECT		



FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADData\CADsheets\D774858-sht-xssln.dgn

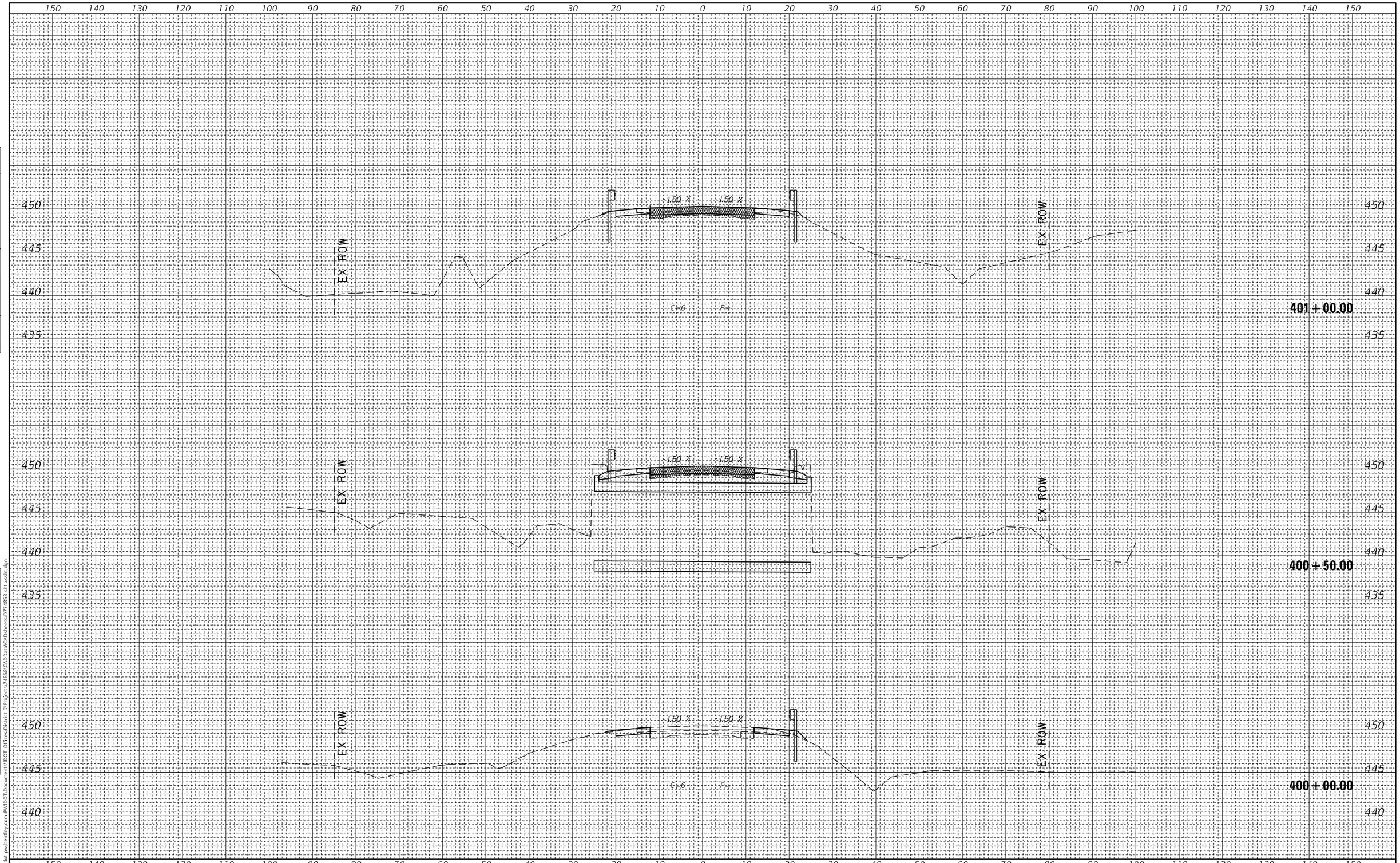
USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	26
		CONTRACT NO. 74858		
		ILLINOIS FED. AID PROJECT		



USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

CROSS SECTIONS

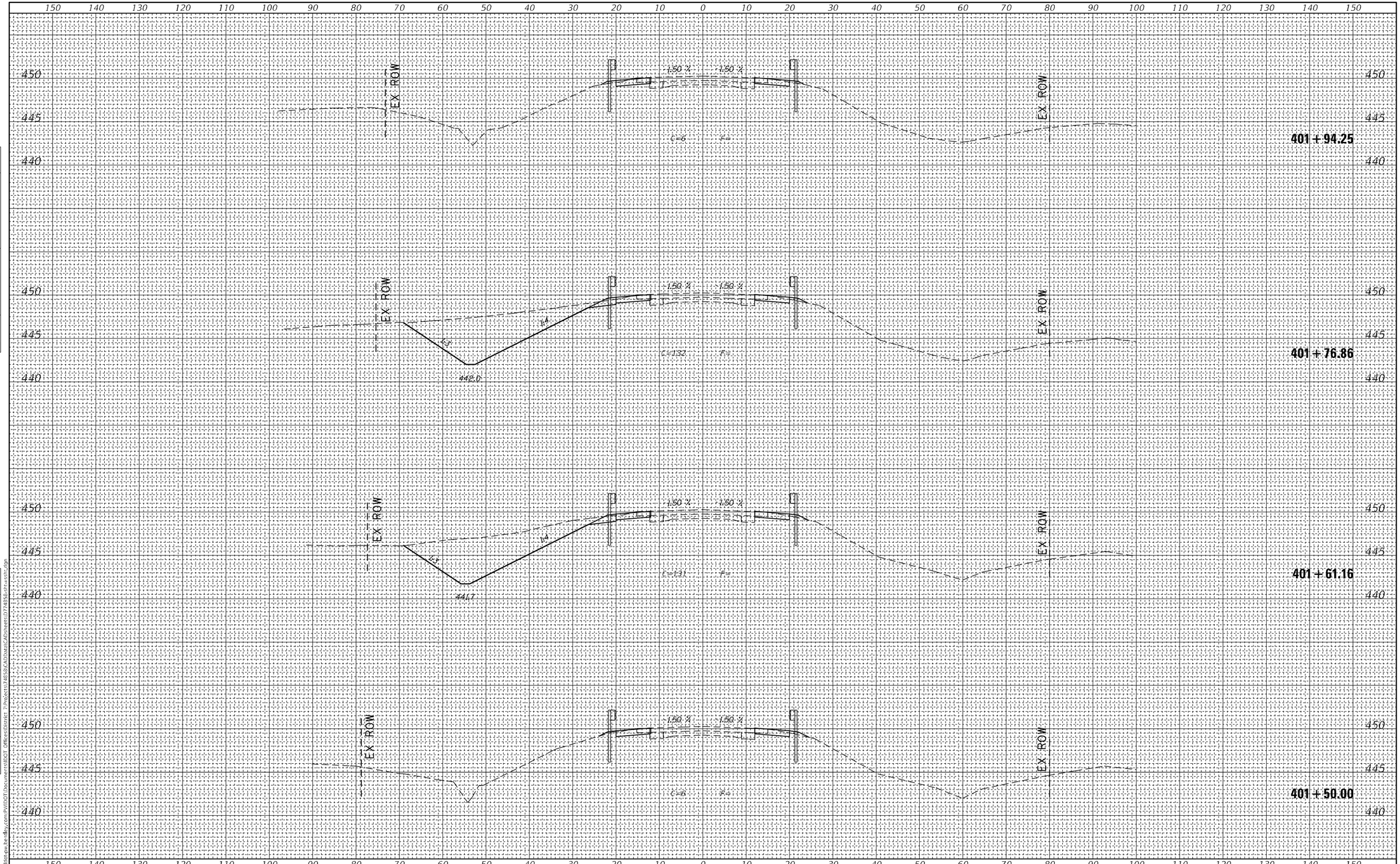
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	27
		CONTRACT NO. 74858		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

MODEL: Default
FILE NAME: p:\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CAD\Data\CAD\sheets\074858-sht-xsht.dgn



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

MODEL: Default
FILE NAME: p:\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CADData\CADsheets\D774858-sht-xssln.dgn

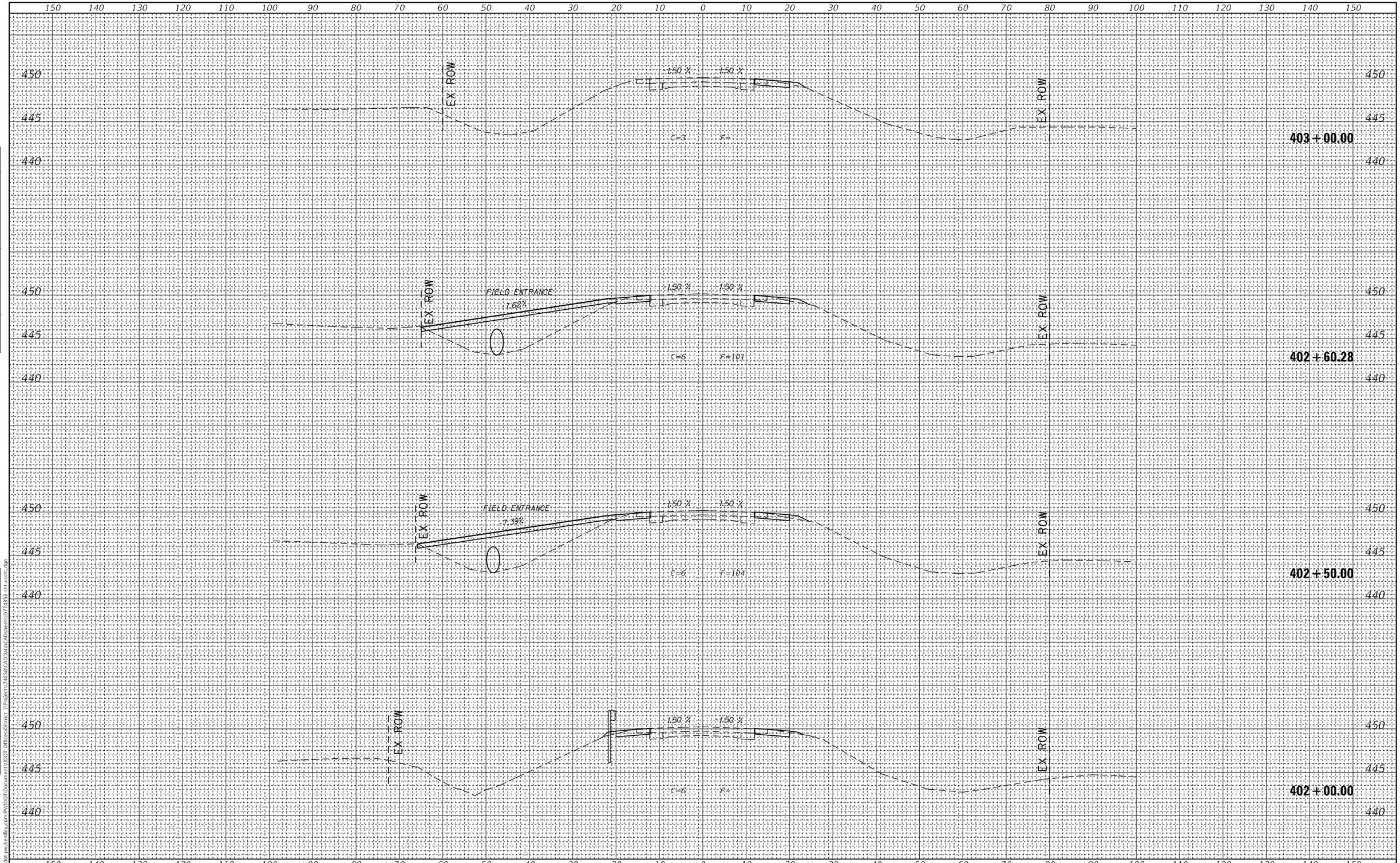
USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/25/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	28
		CONTRACT NO. 74858		
		ILLINOIS FED. AID PROJECT		



USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 6/25/2024	DATE -	REVISED -	

CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B-1	LAWRENCE	29	29
		CONTRACT NO. 74858		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74858\CAD\Data\CADsheets\D774858-sht-xssln.dgn