

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PROPOSED  
HIGHWAY PLANS**

F.A.U. ROUTE 8962  
BROWN STREET  
SECTION 20-00241-00-BR  
PROJ. NO. T6KC(309)  
**STRUCTURE REHABILITATION  
STRUCTURE NO. 060-6104  
MADISON COUNTY**

C-98-025-24

SECTION 20-00241-00-BR  
STRUCTURE CARRYING BROWN  
ST OVER SHIELDS BRANCH  
STATION 101+42.55  
SN 060-6104

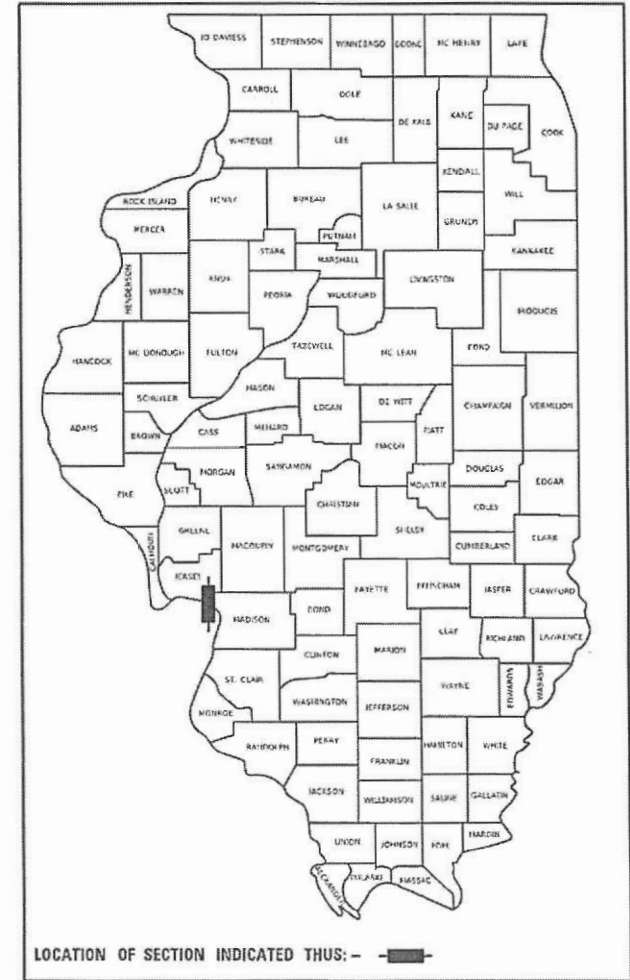
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	1
		ILLINOIS	CONTRACT NO. 97836	

**INDEX OF SHEETS**

SHEET NO.	ITEM
1	COVER SHEET
2	GENERAL NOTES & COMMITMENTS
3-4	SUMMARY OF QUANTITIES
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7	SCHEDULES OF QUANTITIES
8	PLAN AND PROFILE SHEET
9	WARPING PLAN & DRAINAGE SHEET
10	CONSTRUCTION DETAILS
11-13	TRAFFIC CONTROL PLAN
14	RIGHT OF WAY PLAN
15	PAVEMENT MARKING AND EROSION CONTROL SHEET
16-24	STRUCTURE PLANS

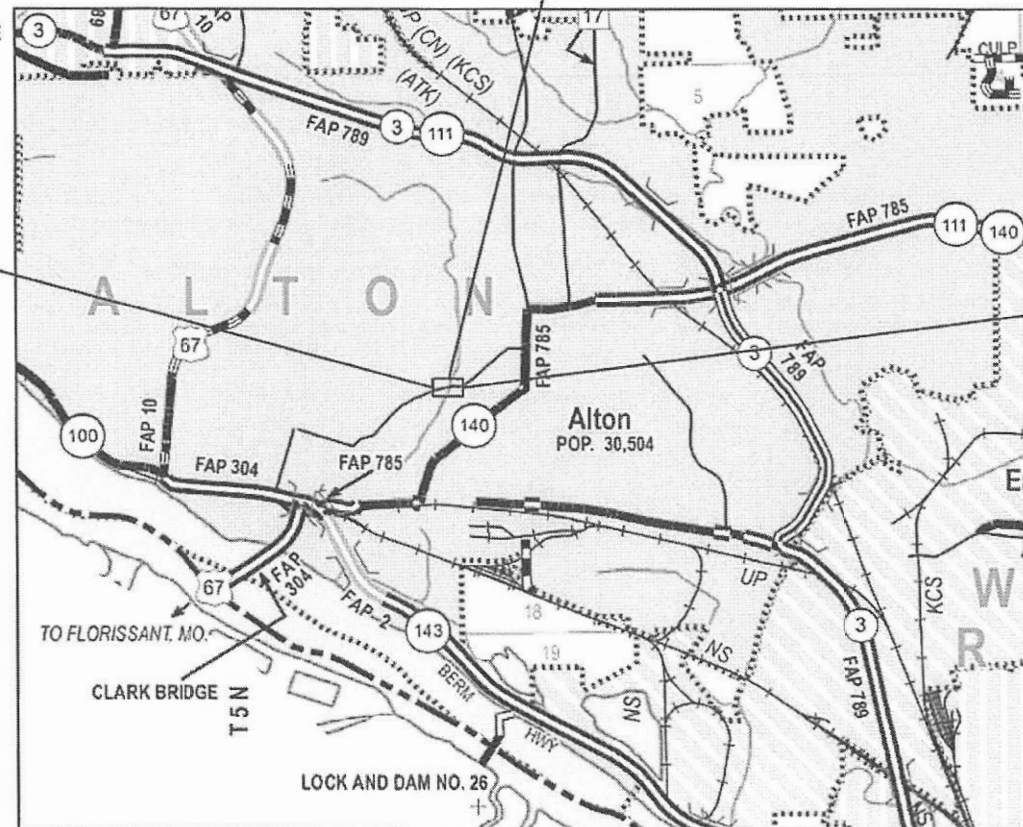
**HIGHWAY STANDARDS**

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMALS OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-10	PAVEMENT JOINTS
515001-04	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
602701-02	MANHOLE STEPS
606001-08	CONCRETE CURB TYPE B AND COMBINATION CURB AND GUTTER
630001-13	STEEL PLATE BEAM GUARDRAIL
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-09	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS



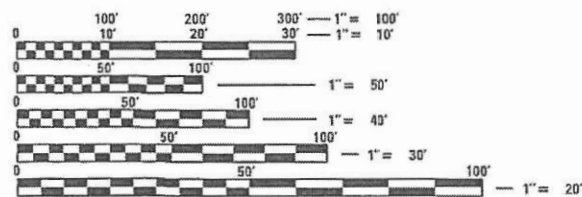
BEGIN SECTION  
STA 101+18.45

END SECTION  
STA 101+77.97



**LOCATION MAP**  
NOT TO SCALE

LENGTH OF PROJECT  
GROSS LENGTH = 60 FT. (0.011 MILES)  
NET LENGTH = 60 FT. (0.011 MILES)

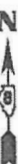


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

ROADWAY CLASSIFICATION = MAJOR COLLECTOR (URBAN)  
DESIGN SPEED = 30 MPH  
CURRENT TRAFFIC ADT (2021) = 4,050  
DESIGN YEAR ADT (2046) = 4,334

**CONTRACT NO. 97836**



Daniel G. Lutz, P.E.  
License Expires 11/30/2025

04-02-2024  
Date

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE
<i>David Goins</i>	4/11/24
DAVID GOINS	MAYOR OF ALTON
PASSED	DATE
<i>[Signature]</i>	4-12-24
DISTRICT 8 ENGINEER OF LOCAL ROADS & STREETS	
RELEASING FOR BID BASED ON LIMITED REVIEW	DATE
<i>[Signature]</i>	4-12-24
	REGION 5 ENGINEER

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Collinsville, IL 62234  
618.345.2200

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St. Louis, MO 63101  
314.588.8381

Belleville  
20 East Main Street  
Belleville, IL 62220  
618.416.4588  
www.oatesassociates.com

St. Charles  
820 South Main, Suite 309  
St. Charles, MO 63301  
636.493.6277

ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115

# GENERAL NOTES

## UTILITIES

- THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION WHICH MAY REQUIRE ADJUSTMENT, RELOCATION OR REMOVAL. REFER TO THE "STATUS OF UTILITIES TO BE ADJUSTED" SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

AMEREN (ELECTRIC & GAS)  
700 OAKWOOD AVENUE  
ALTON, IL 62002  
(618) 463-4030 (ELECTRIC)  
(618) 806-3436 (GAS)

CHARTER COMMUNICATIONS (COMMUNICATIONS)  
815 CHARTER COMMONS  
TOWN & COUNTRY, MO 63017  
314-393-5028

CITY OF ALTON (STORM SEWER)  
2 EMMA KAUS LANE  
ALTON, IL 62002  
(618) 463-9358

ILLINOIS AMERICAN WATER (WATER & SANITARY SEWER)  
4436 INDUSTRIAL DRIVE  
ALTON, IL 62002  
(618) 467-2609  
(618) 467-2608 (WATER)  
(618) 365-0910 (SANITARY SEWER)

AT&T (COMMUNICATIONS)  
203 GEOTHE STREET  
COLLINSVILLE, IL 62234  
(618) 292-8622

## GENERAL

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.
- IN CASE OF CONFLICT BETWEEN THE CONSTRUCTION PLANS AND THE RIGHT OF WAY PLANS, THE RIGHT OF WAY PLANS SHALL TAKE PRECEDENCE IN MATTERS CONCERNING RIGHT OF WAY AND EASEMENTS. THE CONSTRUCTION PLANS SHALL TAKE PRECEDENCE IN MATTERS CONCERNING CONSTRUCTION ITEMS.
- THE CONTRACTOR SHALL STAGE ALL WORK IN SUCH A WAY AS TO MAINTAIN INGRESS AND EGRESS TO ALL ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THIS PROVISION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT.
- THE CONTRACTOR SHALL CONFINE ALL OPERATIONS TO THE CONSTRUCTION LIMITS LINE SHOWN ON THE PLANS. ANY AREA DISTURBED BEYOND THESE LIMITS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL FERTILIZE, SEED AND MULCH ALL EARTH SURFACES DISTURBED BY CONSTRUCTION. FERTILIZER, SEEDING AND MULCH WITHIN THE CONSTRUCTION LIMITS WILL BE PAID FOR AS PROVIDED IN THE CONTRACT. FERTILIZER, SEEDING AND MULCH OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT. SEE THE SEEDING SCHEDULE FOR ESTIMATED PLAN QUANTITIES.
- WHERE TREE REMOVAL CONFLICTS WITH EXISTING UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CUT THE TREE OFF AT THE GROUND LINE AND GRIND THE STUMP AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS TREE REMOVAL ITEMS INCLUDED IN THE CONTRACT.
- IF ASH TREES ARE TO BE REMOVED FROM THE PROJECT, THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS SPECIFIED BY THE ILLINOIS DEPARTMENT OF AGRICULTURE (IDOA) TO PREVENT THE SPREAD OF THE EMERALD ASH BORER.
- ALL EXISTING ROADWAY FEATURES INCLUDING, BUT NOT LIMITED TO, PAVEMENT, RIPRAP, WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR UNLESS NOTED OTHERWISE ON THE PLANS. ALL FEATURES WHICH ARE TO BE REMOVED AND FOR WHICH THERE IS NO SPECIFIC PAY ITEM, WILL NOT BE MEASURED SEPARATELY FOR PAYMENT AND THE COST OF THIS REMOVAL WORK SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION.
- WATER DIVERSION FOR CULVERT INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 540.04 OF THE STANDARD SPECIFICATIONS.
- SEE SPECIAL PROVISIONS FOR SALVAGE OF GUARDRAIL AND BRICK PAVERS.

## EARTHWORK

- THE CONTRACTOR SHALL BENCH THE PROPOSED EMBANKMENT INTO THE EXISTING SLOPES TO THE SATISFACTION OF THE ENGINEER. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION.
- ALL EXCAVATION REQUIRED IN THE CHANNEL SHALL BE PAID FOR AS REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES.
- DITCH CHECKS ARE NOT REQUIRED AT RIPRAP AREAS. HOWEVER, IF CONSTRUCTION OF DITCHES ARE NOT IMMEDIATELY FOLLOWED BY THE PLACEMENT OF RIPRAP, DITCH CHECKS SHALL BE PLACED AS DIRECTED BY THE ENGINEER WITH THE COST INCLUDED IN THE UNIT COST OF STONE RIPRAP, CLASS A4.

## APPROXIMATE QUANTITIES, SYMBOLS & ABBREVIATIONS

- THE FOLLOWING SYMBOLS AND ABBREVIATIONS SUPPLEMENT OR SUPERSEDE HIGHWAY STANDARD 000001:

CONSTR	CONSTRUCTION
CP	CONTROL POINT
ESMT	EASEMENT
ELEV	ELEVATION
O/C	OIL AND CHIP
PERM	PERMANENT
TYP	TYPICAL
W	WIDTH

## COMMITMENTS

- TREES THREE INCHES OR GREATER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 30 OF ANY GIVEN YEAR.
- THE BRIDGE BAT ASSESSMENT EXPIRES 04/10/2026. A VALID ASSESSMENT IS REQUIRED PRIOR TO PERFORMING ANY WORK BELOW THE EXISTING BRIDGE DECK SURFACE.

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	DRAWN -	REVISED -
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PLOT DATE = 4/11/2024	DATE -	REVISED -

**CITY OF ALTON**

**GENERAL NOTES & COMMITMENTS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	2
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				

MODEL: Default  
FILE NAME: I:\0220021 - Brown Street Bridge Rehabilitation\CADD\Microstation\CADD Drawings\Final Plans\0220021-Sht-003-Summary of Quantities.dgn

SI	SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
		20200100	EARTH EXCAVATION	CU YD	10
		20400800	FURNISHED EXCAVATION	CU YD	175
		20700220	POROUS GRANULAR EMBANKMENT	CU YD	56
		20800150	TRENCH BACKFILL	CU YD	10
		25000200	SEEDING, CLASS 2	ACRE	0.25
		25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23
		25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23
		25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23
		25100115	MULCH, METHOD 2	ACRE	0.25
		25100630	EROSION CONTROL BLANKET	SQ YD	533
		28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	25
		28000400	PERIMETER EROSION BARRIER	FOOT	180
		28100107	STONE RIPRAP, CLASS A4	SQ YD	327
		28200200	FILTER FABRIC	SQ YD	327
		35100500	AGGREGATE BASE COURSE, TYPE A 6"	SQ YD	258

SI	SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
		42000900	HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	238
		42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	9
		42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	636
		44000100	PAVEMENT REMOVAL	SQ YD	175
		44000300	CURB REMOVAL	FOOT	119
		44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	50
		44000600	SIDEWALK REMOVAL	SQ FT	600
		50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
		50102400	CONCRETE REMOVAL	CU YD	19.9
		50200100	STRUCTURE EXCAVATION	CU YD	97
		50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	52
		50300225	CONCRETE STRUCTURES	CU YD	14.3
		50300255	CONCRETE SUPERSTRUCTURE	CU YD	21.3
		50300300	PROTECTIVE COAT	SQ YD	40
		50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,730

\* SPECIALTY ITEM



USER NAME = Octavio.Ramirez  
 PLOT SCALE = 2.0000' / in.  
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CITY OF ALTON

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 97836	

SI	SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
*		50900105	ALUMINUM RAILING, TYPE L	FOOT	32
*		50900805	PEDESTRIAN RAILING	FOOT	52
		51500100	NAME PLATES	EACH	1
		52200600	GEOTEXTILE RETAINING WALL	SQ FT	30
		54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	1
		54001002	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	1
		54011008	PRECAST CONCRETE BOX CULVERTS 10' X 8'	FOOT	52
		54011010	PRECAST CONCRETE BOX CULVERTS 10' X 10'	FOOT	47
		54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	2
		550B0360	STORM SEWERS, CLASS B, TYPE 2 15"	FOOT	48
		59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	138
		60255500	MANHOLES TO BE ADJUSTED	EACH	1
		60600605	CONCRETE CURB, TYPE B	FOOT	119
		60603900	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (ABUTTING EXISTING PAVEMENT)	FOOT	50
*		63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50

SI	SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
*		63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1
*		63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2
		63200310	GUARDRAIL REMOVAL	FOOT	75
		67100100	MOBILIZATION	L SUM	1
		70107006	PAVEMENT MARKING BLACKOUT TAPE, 6"	FOOT	220
		70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	718
		70307120	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	FOOT	498
*		78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	9
*		78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	178
		Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	126
		Z0013798	CONSTRUCTION LAYOUT	L SUM	1
		Z0054406	ROCK FILL - FOUNDATION	CU YD	124
		X6024240	INLETS (SPECIAL)	EACH	2
		X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
#		Z0076600	TRAINEES	HOUR	500
#		Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500

\* SPECIALTY ITEM # 0042

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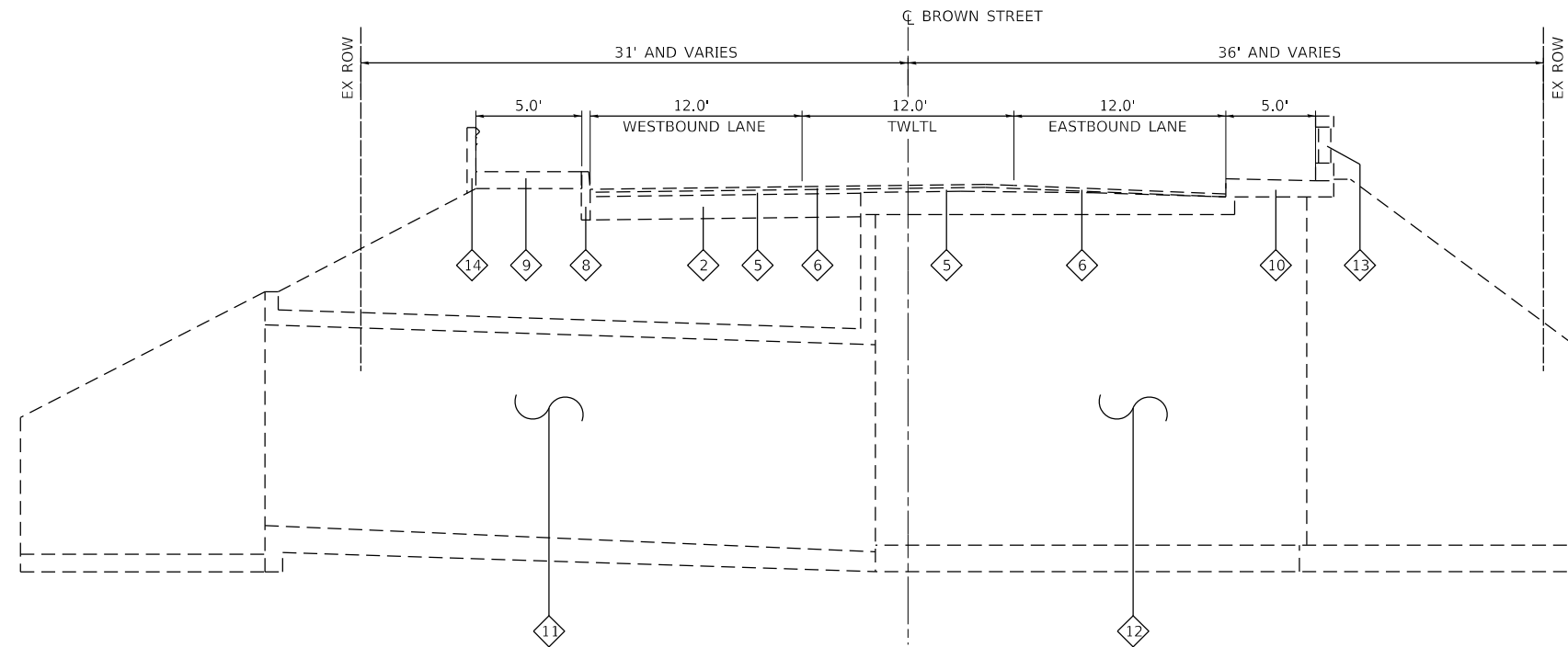
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CITY OF ALTON

SUMMARY OF QUANTITIES

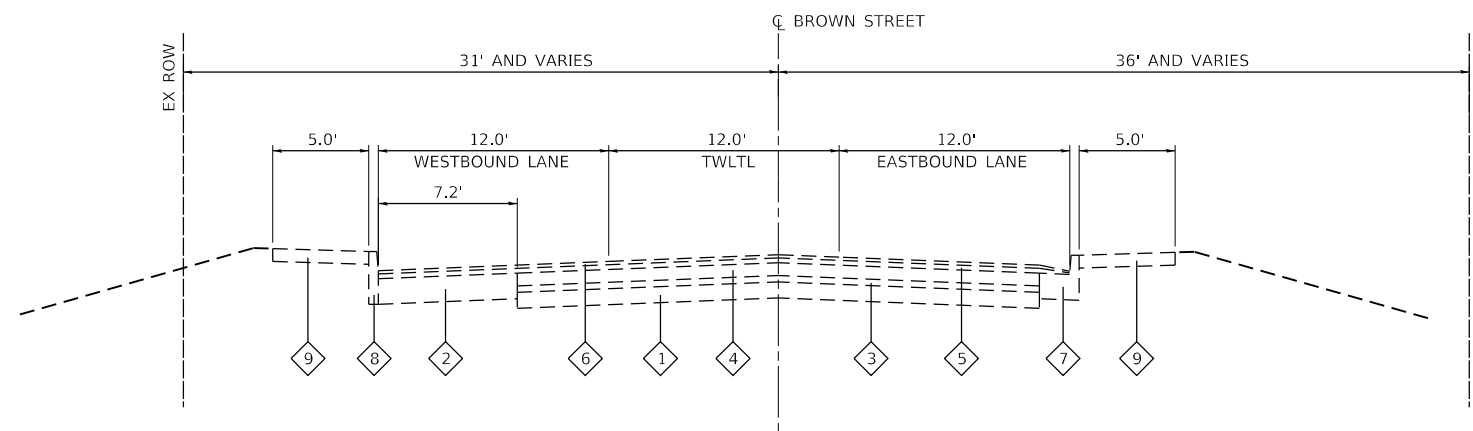
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 97836	



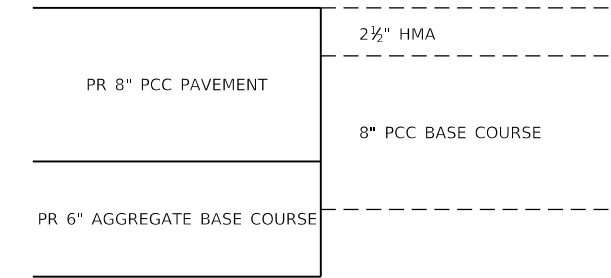
**EXISTING TYPICAL SECTION**

BROWN STREET  
STA 101+33 TO STA 101+61



**EXISTING TYPICAL SECTION**

BROWN STREET  
STA 101+18 TO STA 101+33  
STA 101+61 TO STA 101+78

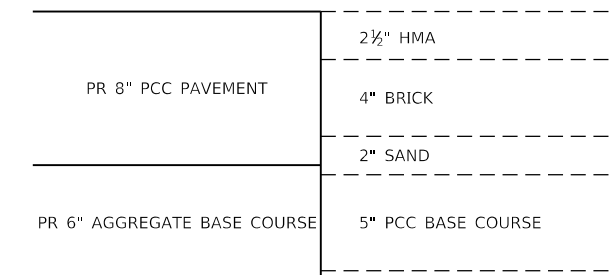


**EXISTING PAVEMENT STRUCTURE**

BROWN STREET  
STA 101+33 TO STA 101+61

**TYPICAL SECTION LEGEND**

- 1 EXISTING PCC BASE COURSE, 5"
- 2 EXISTING PCC BASE COURSE WIDENING, 8"
- 3 EXISTING SAND CUSHION, 2"
- 4 EXISTING BRICK PAVERS, 4"
- 5 EXISTING HMA BINDER COURSE, 1.5" AND VARIES
- 6 EXISTING HMA SURFACE COURSE, 1"
- 7 EXISTING COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.18
- 8 EXISTING CONCRETE CURB TYPE B
- 9 EXISTING PCC SIDEWALK, 4"
- 10 EXISTING PCC SIDEWALK, MONOLITHIC WITH STRUCTURE
- 11 EXISTING CONCRETE BOX CULVERTS
- 12 EXISTING STRUCTURE
- 13 EXISTING MASONRY WALL
- 14 EXISTING GUARDRAIL



**EXISTING PAVEMENT STRUCTURE**

BROWN STREET  
STA 101+18 TO STA 101+33  
STA 101+61 TO STA 101+78

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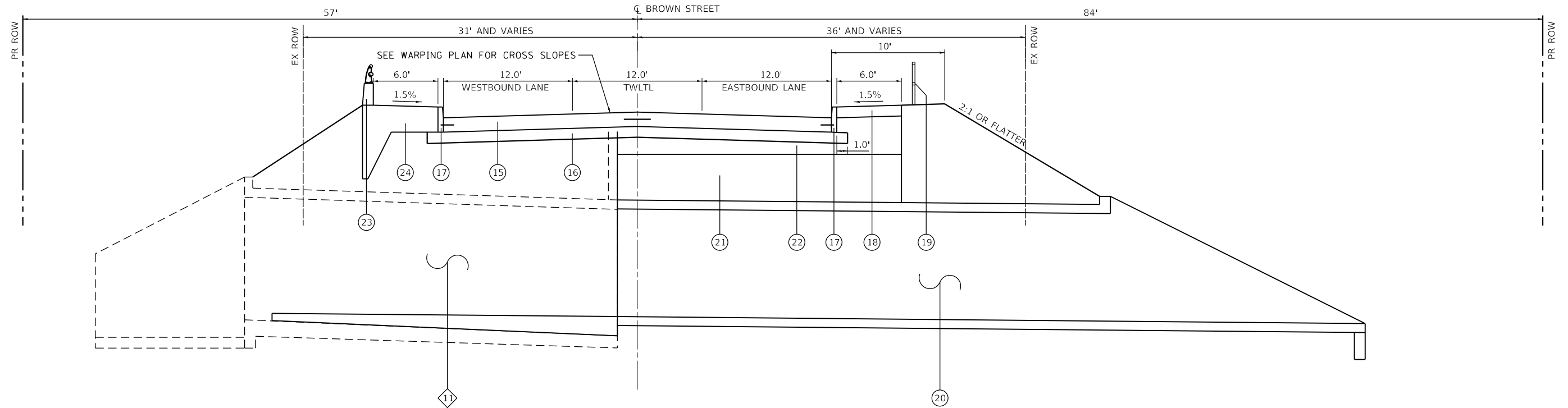
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	DATE -	REVISED -

**CITY OF ALTON**

**TYPICAL SECTIONS**

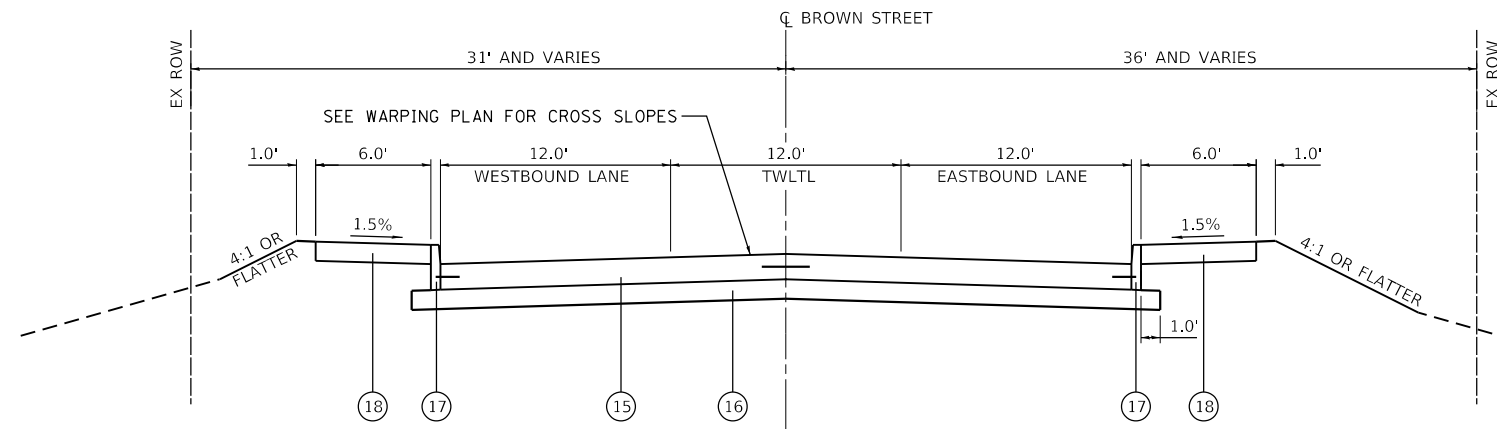
SCALE: NTS SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	5
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				



**PROPOSED TYPICAL SECTION**

BROWN STREET  
STA 101+33 TO STA 101+61



**PROPOSED TYPICAL SECTION**

BROWN STREET  
STA 101+18 TO STA 101+33  
STA 101+61 TO STA 101+78

**TYPICAL SECTION LEGEND**

- 1 EXISTING PCC BASE COURSE, 5"
- 2 EXISTING PCC BASE COURSE WIDENING, 8"
- 3 EXISTING SAND CUSHION, 2"
- 4 EXISTING BRICK PAVERS, 4"
- 5 EXISTING HMA BINDER COURSE, 1.5" AND VARIES
- 6 EXISTING HMA SURFACE COURSE, 1"
- 7 EXISTING COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.18
- 8 EXISTING CONCRETE CURB TYPE B
- 9 EXISTING PCC SIDEWALK, 4"
- 10 EXISTING PCC SIDEWALK, MONOLITHIC WITH STRUCTURE
- 11 EXISTING CONCRETE BOX CULVERTS
- 12 EXISTING STRUCTURE
- 13 EXISTING MASONRY WALL
- 14 EXISTING GUARDRAIL
- 15 PROPOSED HES PCC PAVEMENT, 8"
- 16 PROPOSED AGGREGATE BASE COURSE, 6"
- 17 PROPOSED CONCRETE CURB TYPE B
- 18 PROPOSED PCC SIDEWALK, 4"
- 19 PROPOSED PEDESTRIAN HANDRAIL
- 20 PROPOSED CONCRETE BOX CULVERTS
- 21 PROPOSED CONTROLLED LOW-STRENGTH MATERIAL
- 22 PROPOSED POROUS GRANULAR EMBANKMENT
- 23 PROPOSED BRIDGE RAILING
- 24 PROPOSED ANCHORAGE SLAB, SEE STRUCTURE PLANS

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PLOT DATE = 4/10/2024	CHECKED -	REVISED -
	DATE -	REVISED -

**CITY OF ALTON**

**TYPICAL SECTIONS**

SCALE: NTS SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	6
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				

**PAVEMENT & CURB**

STATION	STATION	OFFSET	AGG BASE CSE A 6 (SQ. YD.)	HES PCC PVT 8 (SQ. YD.)	PCC DRIVEWAY PAVT 6 (SQ. YD.)	PC CONC SIDEWALK 4 (SQ. FT.)	PAVEMENT REM (SQ. YD.)	CURB REM (FOOT)	COMB CURB GUTTER REM (FOOT)	SIDEWALK REM (SQ. FT.)	PEDESTRIAN RAIL (FOOT)	CONC CURB TB (FOOT)	COMB CC&G TB6.12 AEP (FOOT)
101+18	101+78	LT				93		62		298		62	
101+18	101+78	LT/RT	258	238			175						
101+18	101+78	RT				321		57		108	52	57	
101+78	102+31	RT			9	222			50	194			50
TOTAL			258	238	9	636	175	119	50	600	52	119	50

**PAVEMENT MARKING**

STATION	STATION	OFFSET	COMMENT	PAVT MK BLKOUT TAPE 6 (FOOT)	SHRT TRM PAVT MK REM (NOTE 1) (FOOT)	TMP PVT MK L4 T4 TAPE (NOTE 1) (FOOT)	PT PVT MK LTRS & SYMB (SQ. FT.)	PAINT PVT MK LINE 4 (FOOT)
100+28	101+18	RT	DOTTED TAPER LINE, WHITE		45	45		
100+50	101+09	LT	DOTTED LANE LINE, YELLOW		30	30		
101+09	101+18	RT	EXISTING DOUBLE LINE	18	18			
101+09	103+58	LT	EXISTING LANE LINE		251	251		
101+18	101+78	RT	DOUBLE LINE, YELLOW					118
101+18	101+78	LT	LANE LINE, WHITE					60
101+44	101+44	LT/RT	LEFT TURN ARROW, WHITE				9	
101+68	103+69	RT	EXISTING DOUBLE LINE	202	202			
102+68	103+69	LT	TAPER LINE, YELLOW		101	101		
103+58	104+29	LT	TAPER LINE, YELLOW		71	71		
TOTAL				220	718	498	9	178

**PAVEMENT MARKING NOTES:**

1. QUANTITIES FOR DOTTED LINES ASSUME 2' DASHES WITH 2' GAPS.

**SEEDING & EROSION CONTROL**

STATION	STATION	OFFSET	SEEDING CL 2 (NOTE 1) (ACRE)	NITROGEN FERT NUTR (POUND)	PHOSPHORUS FERT NUTR (POUND)	POTASSIUM FERT NUTR (POUND)	MULCH METHOD 2 (NOTES 1 & 2) (ACRE)	EROSION CONTR BLANKET (SQ. YD.)	TEMP EROS CONTR SEED (POUND)	PERIMETER EROS BAR (FOOT)
101+02	101+26	LT	0.02	2	2	2		97	2	
101+07	102+31	RT	0.21	19	19	19	0.21	436	21	180
101+68	101+96	LT	0.02	2	2	2	0.04		2	
TOTAL			0.25	23	23	23	0.25	533	25	180

**SEEDING & EROSION CONTROL NOTES:**

1. QUANTITY ROUNDED TO NEAREST 0.25 ACRE.
2. THE MULCH QUANTITY SHOWN ASSUMES 2 SEPARATE APPLICATIONS.

**RIPRAP**

STATION	STATION	OFFSET	STONE RIPRAP CL A4 (SQ. YD.)	FILTER FABRIC (SQ. YD.)
101+09	101+43	LT/RT	327	327
TOTAL			327	327

**GUARDRAIL**

STATION	STATION	OFFSET	SPBGR TY A 6FT POSTS (FOOT)	TRAF BAR TERM T2 (EACH)	TRAF BAR TERM T5 (EACH)	GUARDRAIL REMOV (FOOT)
101+03	101+25	LT	37.5		1	
101+03	101+63	LT				75.0
101+63	101+85	LT	12.5	1	1	
TOTAL			50.0	1	2	75.0

**EARTHWORK**

STATION	STATION	EARTH EXCAVATION (CU YD)	STRUCTURE EXCAVATION (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (NOTE 1) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
		10	97	0	175	-175
TOTAL		10	97	0	175	-175

**EARTHWORK NOTES:**

1. EARTHWORK SCHEDULE CONSERVATIVELY ASSUMES NO EXCAVATION WILL BE AVAILABLE FOR USE AS EMBANKMENT DUE TO STAGING OF OPERATIONS. CONTRACTOR WILL BE PAID FOR ACTUAL FURNISHED EXCAVATION PROVIDED.

**SEWER**

STATION	STATION	OFFSET	TRENCH BACKFILL (CU YD)	PRC FLAR END SEC 15 (EACH)	STORM SEW CL B 2 15 (FOOT)	MAN ADJUST (EACH)	INLETS SPL (EACH)
101+17	101+23	LT	5	1	23		1
101+66	101+71	RT	5	1	25	1	1
TOTAL			10	2	48	1	2

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	DRAWN -	REVISED -
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PLOT DATE = 4/19/2024	DATE -	REVISED -

**CITY OF ALTON**

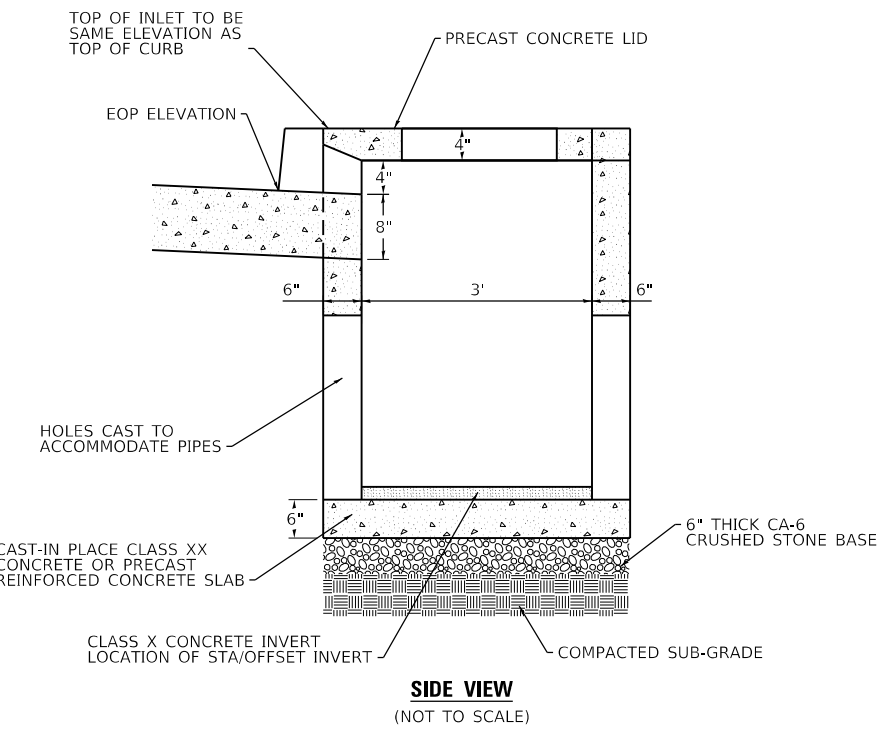
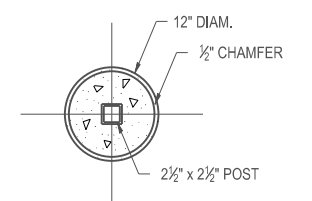
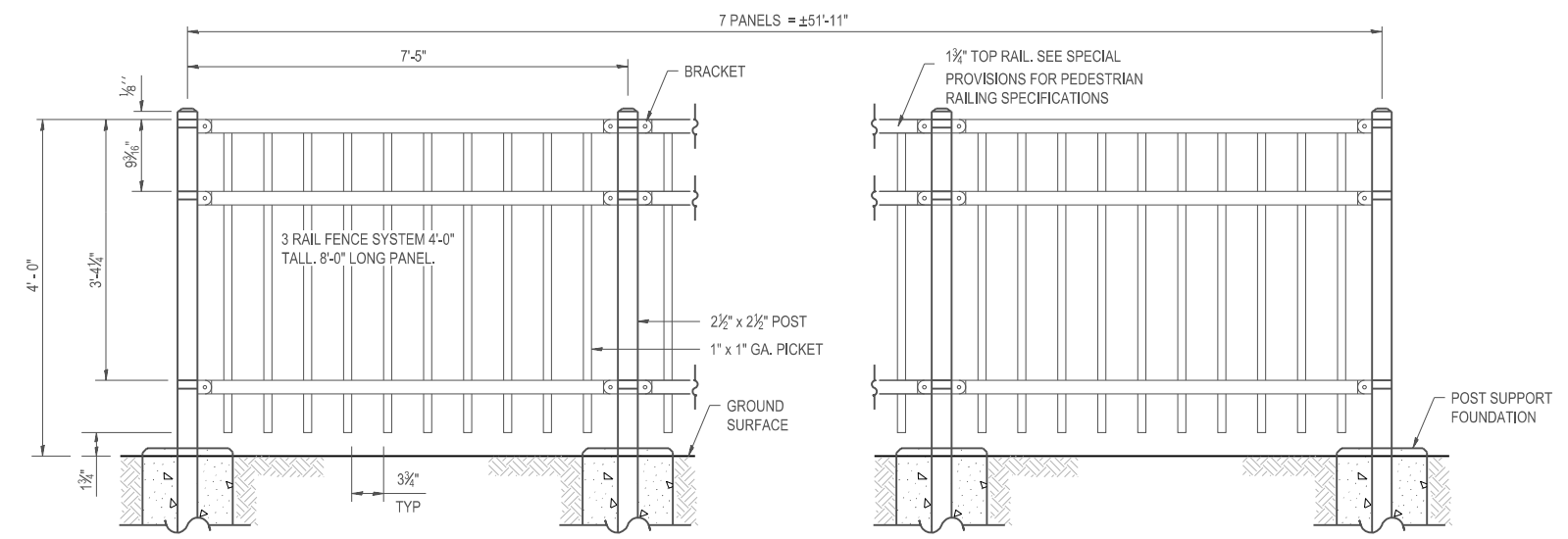
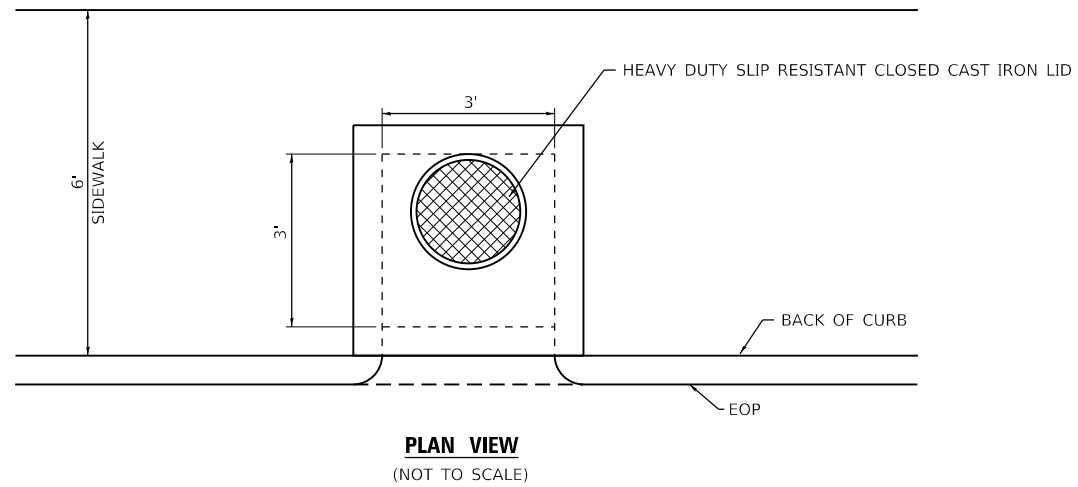
SCHEDULES OF QUANTITIES			
SCALE:	SHEET	OF	SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	7
CONTRACT NO. 97836				
		ILLINOIS	FED. AID PROJECT	









**NOTES**

RAILING SHALL BE ACCORDING TO SECTION 509 OF THE IDOT STANDARD SPECIFICATIONS, EXCEPT AS NOTED.

HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 500, GRADE B, STRUCTURAL STEEL TUBING.

ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 36.

ALL POSTS, RAILING, SPLICES, ANCHOR DEVICES AND PLATES SHALL BE CLEANED AND PAINTED AFTER SHOP FABRICATION IN ACCORDANCE WITH SECTION 506 OF THE STANDARD SPECIFICATIONS. COLOR OF PAINT SHALL BE BLACK.

THE PEDESTRIAN RAILING SHALL CONSIST OF 3 HORIZONTAL RAIL PANEL SYSTEM AS SHOWN ON PLANS. THE TOP RAIL OF THE PANEL SHALL HAVE 0.125" DIAMETER GALVANIZED INTERNAL RETAINING ROD TO ADJOIN THE PICKET TO THE RAIL. NO PICKETS SHALL EXTEND ABOVE THE TOP RAIL AND THE POSTS SHALL BE CAPPED. THE RAILS, POSTS AND PICKETS SHALL ALL HAVE THE FOUR COATINGS DESCRIBED AS FOLLOWS:

THE BOTTOM COATING SHALL BE HOT-DIP GALVANIZED STEEL. A ZINC-PHOSPHATE LAYER SHALL BE PLACED ATOP THE GALVANIZATION WITH AN EPOXY POWDER COAT ON TOP OF THE ZINC-PHOSPHATE. THE TOP LAYER SHALL CONSIST OF THE POLYESTER COLOR COAT. ALL RAILINGS AND HARDWARE COMPONENTS SHALL BE BLACK. COLOR SAMPLES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE PEDESTRIAN RAILING AND COMPONENTS SHALL HAVE A MINIMUM 10 YEAR WARRANTY.

THE TOP CHANNEL RAIL SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS:

EFFECTIVE WALL THICKNESS	0.160	IN
SECTION MODULUS (VERTICAL)	0.1624	CU IN
SECTION MODULUS (HORIZONTAL)	0.367	CU IN
RAIL WEIGHT	2.55	LBS./FT.
YIELD STRENGTH (FY)	50,000	PSI
ULTIMATE VERTICAL LOAD (8' SPAN)	506	LBS.
ULTIMATE HORIZONTAL LOAD (8' SPAN)	765	LBS.

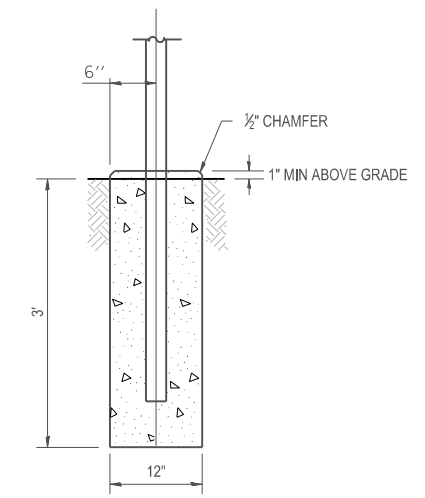
STEEL MATERIAL FOR PEDESTRIAN RAILING FRAMEWORK SHALL CONFORM TO REQUIREMENTS OF ASTM A924/A924M WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI. THE STEEL SHALL BE HOT-DIP GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A653/A653M WITH A MINIMUM ZINC COATING WEIGHT OF 0.90 OZ/FT, COATING DESIGNATION G-90.

THE HARDWARE REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PEDESTRIAN RAILING SHALL MEET THE REQUIREMENTS OF THE RAILING PANEL MANUFACTURER AND AS APPROVED BY THE ENGINEER.

COMPLETED PANELS SHALL BE CAPABLE OF SUPPORTING A 600 LB. LOAD (APPLIED AT MIDSPAN) WITHOUT PERMANENT DEFORMATION. THE PANELS, POSTS AND ASSEMBLY SHALL BE CAPABLE OF MEETING THE REQUIREMENTS FOR HANDRAILS IN THE 2003 IBC.

CONSTRUCTION. PRIOR TO ORDERING MATERIAL OR BEGINNING FABRICATION, THE CONTRACTOR SHALL SUBMIT TWO SETS OF SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL. THE PEDESTRIAN RAILING AND POST SUPPORT FOUNDATIONS SHALL BE HANDLED AND INSTALLED ACCORDING TO THE MANUFACTURER RECOMMENDATIONS AND AS SHOWN ON THE PLANS.

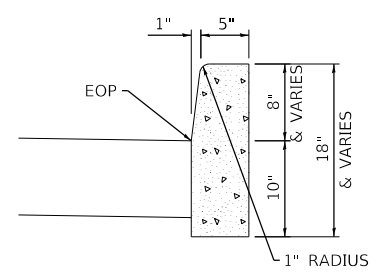
**POST SUPPORT FOUNDATION TOP VIEW**  
(NOT TO SCALE)



**POST SUPPORT FOUNDATION ELEVATION**  
(NOT TO SCALE)

**NOTES**  
INSTALL STEPS PER HIGHWAY STANDARD 602701.

**INLET SPECIAL DETAIL**



**TYPE B CURB DETAIL**  
(NOT TO SCALE)

**PEDESTRIAN RAILING DETAIL**

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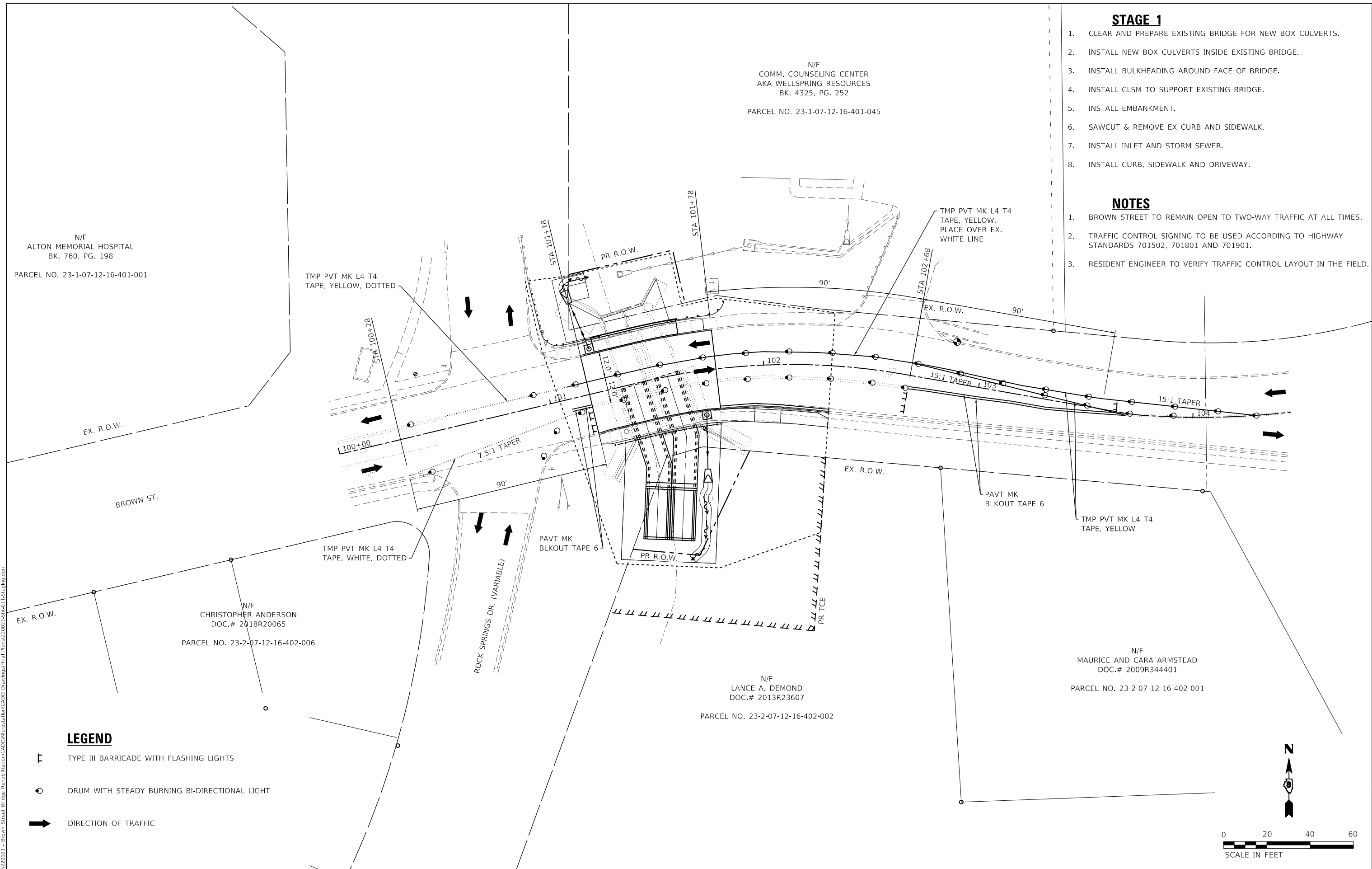
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	DATE -	REVISED -

**CITY OF ALTON**

**CONSTRUCTION DETAILS**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	10
CONTRACT NO. 97836			ILLINOIS FED. AID PROJECT	



N/F  
ALTON MEMORIAL HOSPITAL  
BK. 760, PG. 198  
PARCEL NO. 23-1-07-12-16-401-001

N/F  
COMM. COUNSELING CENTER  
AKA WELLSRING RESOURCES  
BK. 4325, PG. 252  
PARCEL NO. 23-1-07-12-16-401-045

N/F  
CHRISTOPHER ANDERSON  
DOC.# 2018R20065  
PARCEL NO. 23-2-07-12-16-402-006

N/F  
LANCE A. DEMOND  
DOC.# 2013R23607  
PARCEL NO. 23-2-07-12-16-402-002

N/F  
MAURICE AND CARA ARMSTEAD  
DOC.# 2009R344401  
PARCEL NO. 23-2-07-12-16-402-001

- STAGE 1**
- CLEAR AND PREPARE EXISTING BRIDGE FOR NEW BOX CULVERTS.
  - INSTALL NEW BOX CULVERTS INSIDE EXISTING BRIDGE.
  - INSTALL BULKHEADING AROUND FACE OF BRIDGE.
  - INSTALL CLSM TO SUPPORT EXISTING BRIDGE.
  - INSTALL EMBANKMENT.
  - SAWCUT & REMOVE EX CURB AND SIDEWALK.
  - INSTALL INLET AND STORM SEWER.
  - INSTALL CURB, SIDEWALK AND DRIVEWAY.
- NOTES**
- BROWN STREET TO REMAIN OPEN TO TWO-WAY TRAFFIC AT ALL TIMES.
  - TRAFFIC CONTROL SIGNING TO BE USED ACCORDING TO HIGHWAY STANDARDS 701502, 701801 AND 701901.
  - RESIDENT ENGINEER TO VERIFY TRAFFIC CONTROL LAYOUT IN THE FIELD.

- LEGEND**
- TYPE III BARRICADE WITH FLASHING LIGHTS
  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
  - DIRECTION OF TRAFFIC

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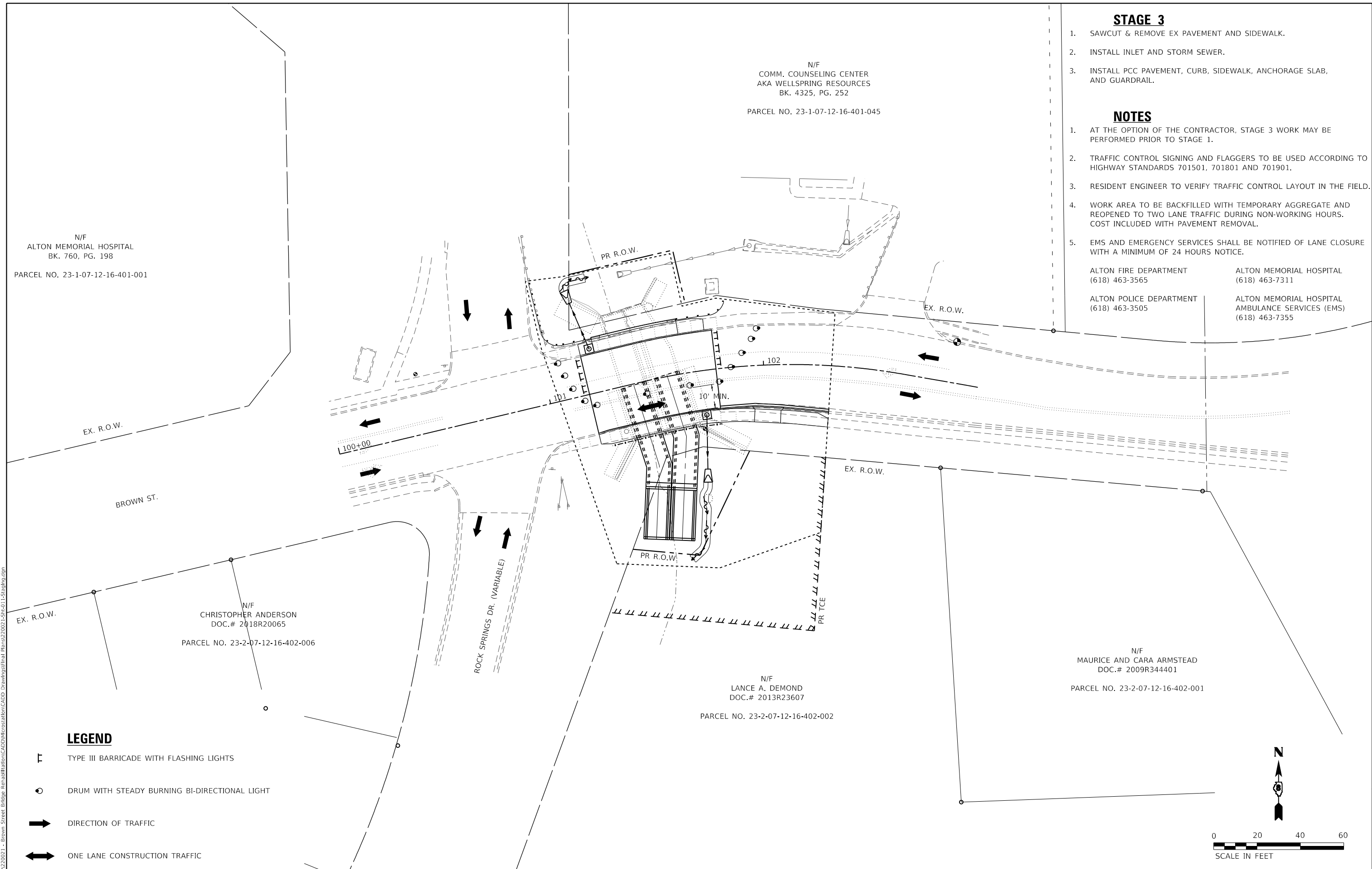
**CITY OF ALTON**

**TRAFFIC CONTROL PLAN  
STAGE 1**

SCALE: 1" = 20'    SHEET 1 OF 3 SHEETS    STA.    TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	11
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				





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PARCEL NO. 23-1-07-12-16-401-001

N/F  
COMM. COUNSELING CENTER  
AKA WELLSRING RESOURCES  
BK. 4325, PG. 252  
PARCEL NO. 23-1-07-12-16-401-045

N/F  
CHRISTOPHER ANDERSON  
DOC.# 2018R20065  
PARCEL NO. 23-2-07-12-16-402-006

N/F  
LANCE A. DEMOND  
DOC.# 2013R23607  
PARCEL NO. 23-2-07-12-16-402-002

N/F  
MAURICE AND CARA ARMSTEAD  
DOC.# 2009R344401  
PARCEL NO. 23-2-07-12-16-402-001

**STAGE 3**

1. SAWCUT & REMOVE EX PAVEMENT AND SIDEWALK.
2. INSTALL INLET AND STORM SEWER.
3. INSTALL PCC PAVEMENT, CURB, SIDEWALK, ANCHORAGE SLAB, AND GUARDRAIL.

**NOTES**

1. AT THE OPTION OF THE CONTRACTOR, STAGE 3 WORK MAY BE PERFORMED PRIOR TO STAGE 1.
2. TRAFFIC CONTROL SIGNING AND FLAGGERS TO BE USED ACCORDING TO HIGHWAY STANDARDS 701501, 701801 AND 701901.
3. RESIDENT ENGINEER TO VERIFY TRAFFIC CONTROL LAYOUT IN THE FIELD.
4. WORK AREA TO BE BACKFILLED WITH TEMPORARY AGGREGATE AND REOPENED TO TWO LANE TRAFFIC DURING NON-WORKING HOURS. COST INCLUDED WITH PAVEMENT REMOVAL.
5. EMS AND EMERGENCY SERVICES SHALL BE NOTIFIED OF LANE CLOSURE WITH A MINIMUM OF 24 HOURS NOTICE.

ALTON FIRE DEPARTMENT (618) 463-3565	ALTON MEMORIAL HOSPITAL (618) 463-7311
ALTON POLICE DEPARTMENT (618) 463-3505	ALTON MEMORIAL HOSPITAL AMBULANCE SERVICES (EMS) (618) 463-7355

**LEGEND**

- TYPE III BARRICADE WITH FLASHING LIGHTS
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- DIRECTION OF TRAFFIC
- ONE LANE CONSTRUCTION TRAFFIC

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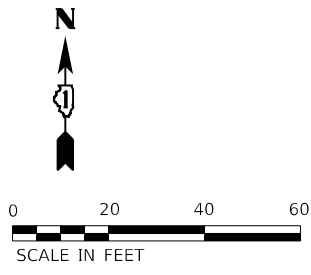
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PLOT DATE = 4/10/2024	DATE -	REVISED -

**CITY OF ALTON**

**TRAFFIC CONTROL PLAN  
STAGE 3**

SCALE: 1" = 20'    SHEET 3    OF 3    SHEETS    STA.    TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	13
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				



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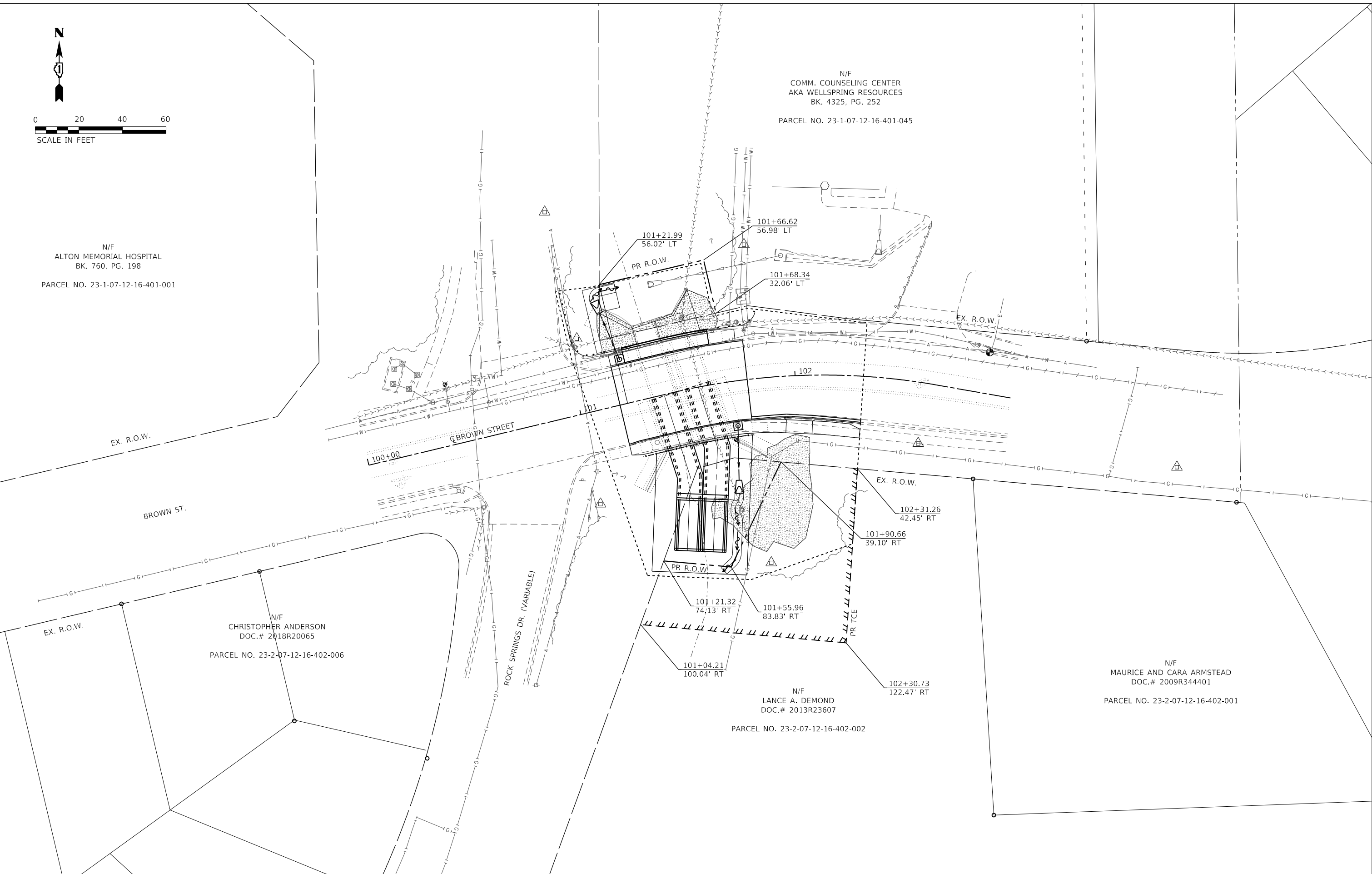
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COMM. COUNSELING CENTER  
AKA WELLSRING RESOURCES  
BK. 4325, PG. 252  
PARCEL NO. 23-1-07-12-16-401-045

N/F  
CHRISTOPHER ANDERSON  
DOC.# 2018R20065  
PARCEL NO. 23-2-07-12-16-402-006

N/F  
LANCE A. DEMOND  
DOC.# 2013R23607  
PARCEL NO. 23-2-07-12-16-402-002

N/F  
MAURICE AND CARA ARMSTEAD  
DOC.# 2009R344401  
PARCEL NO. 23-2-07-12-16-402-001

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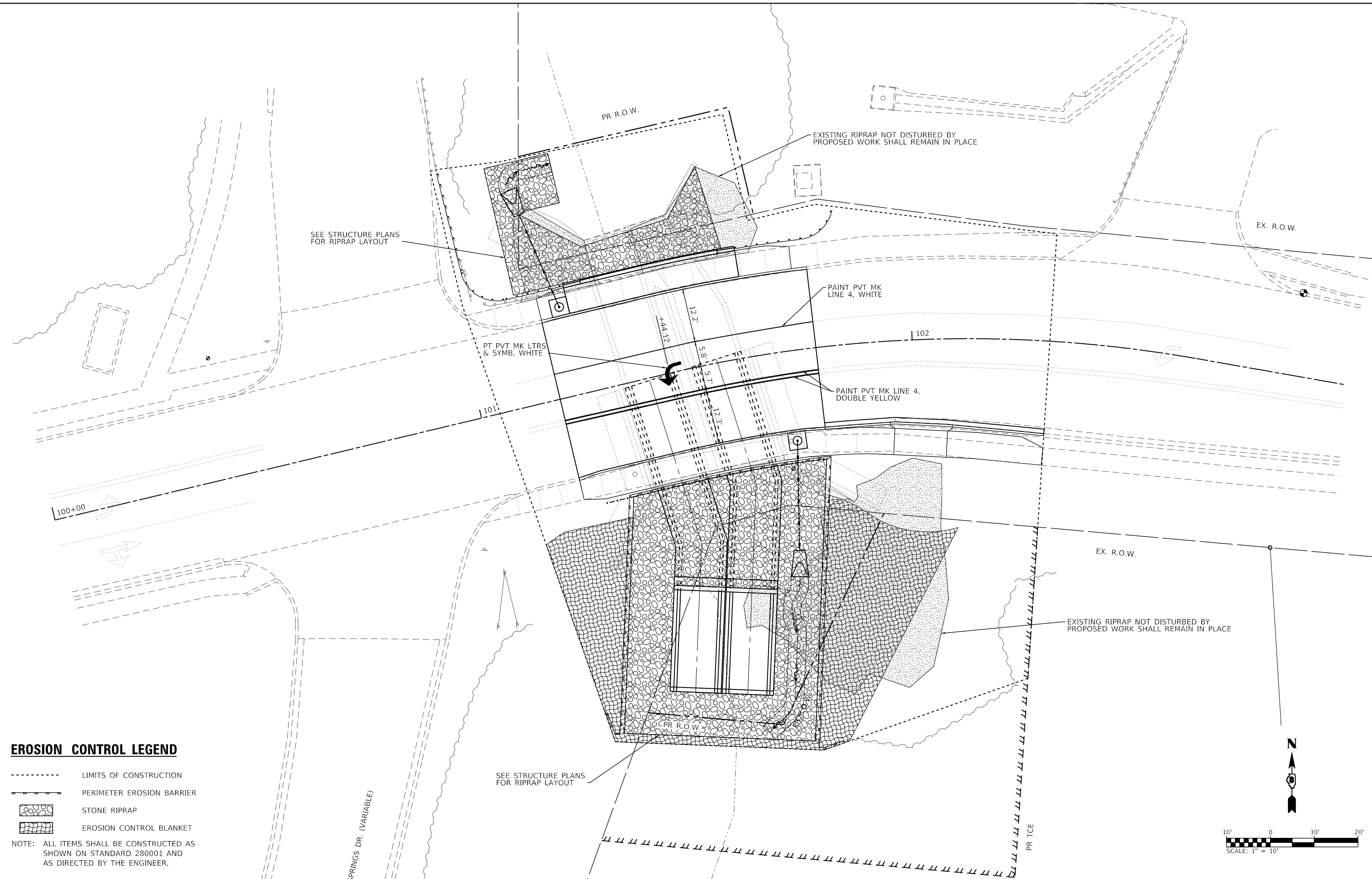
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**RIGHT OF WAY PLAN**

SCALE: 1"=20'      SHEET      OF      SHEETS      STA.      TO      STA.

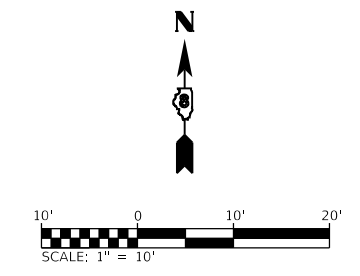
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8962	20-00241-00-BR	MADISON	24	14
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				



**EROSION CONTROL LEGEND**

- LIMITS OF CONSTRUCTION
- PERIMETER EROSION BARRIER
- STONE RIPRAP
- EROSION CONTROL BLANKET

NOTE: ALL ITEMS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD 280001 AND AS DIRECTED BY THE ENGINEER.



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PLOT DATE = 4/10/2024	CHECKED -	REVISED -
	DATE -	REVISED -

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**CITY OF ALTON**

**PAVEMENT MARKING AND EROSION CONTROL SHEET**

SCALE: 1" = 10'    SHEET 1 OF 1 SHEETS    STA. 100+00 TO STA. 103+00

F.A.U. RTE. 8962	SECTION 20-00241-00-BR	COUNTY MADISON	TOTAL SHEETS 24	SHEET NO. 15
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

Benchmark: BM 6 - RR spike in south face of power pole, Sta. 102+87.41, 19.00' Lt., Elev. 461.21.

Existing Structure: S.N. 060-6104 F.A.U. Route 8962 was originally built in an unknown year and route as a two span reinforced concrete slab superstructure, stone abutments, and a solid wall pier of unknown material. In 1920 the structure was extended south with a two span reinforced concrete slab superstructure, reinforced concrete closed abutments on spread footings, and reinforced concrete solid wall pier on spread footing founded on bedrock. In 1955 the original structure was replaced with a double barrel cast in place reinforced concrete box culvert. In 1969 the roadway was widened to the north and concrete spillway was constructed to allow roadway drainage to pass to the creek. The 1955 structure is to be extended with precast concrete box culverts and removal shall consist of the entire 1920 superstructure.

Traffic Control: Traffic will be maintained utilizing flaggers as needed.

Salvage: See Special Provisions for salvage of guardrail and brick pavers.

**WATERWAY INFORMATION**

Drainage Area = 1.2 sq. mi. Low Grade Elev. - 458.35 @ Sta. - 101+64.13									
Flood	Freq. Yr.	Q C.F.S.	Opening Ft <sup>2</sup>		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Exist.	Prop.	Exist.	Prop.
Overtopping	2	638	61	61	444.06	0.0	0.0	444.06	444.06
	10	1,340	100	100	446.01	1.7	1.7	447.71	447.71
	25	1,720	118	118	446.69	2.8	2.8	449.49	449.49
Design	30	1,788	140	140	446.82	3.0	3.0	449.82	449.82
Base	100	2,260	151	151	447.61	4.9	4.9	452.51	452.51
Max. Calc.	500	3,030	164	164	448.75	6.4	6.6	455.15	455.35

**INDEX OF SHEETS**

Sheet No.	Description
1	General Plan & Elevation
2	General Data
3	Longitudinal Sections
4	Barrier & Anchorage Slab Details
5	Aluminum Railing, Type L
6	Concrete Repairs
7-8	Precast Tapered End Section
9	Soil Boring Logs

**DESIGN STRESSES**

**FIELD UNITS**

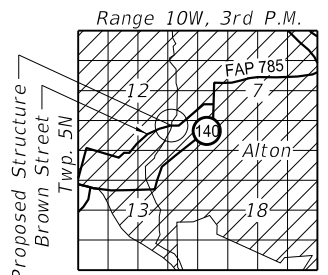
f'c = 3,500 psi  
 f'c = 5,000 psi (precast)  
 fy = 60,000 psi (Reinforcement)

**DESIGN SPECIFICATIONS**

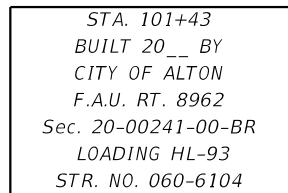
2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

**LOADING HL-93**

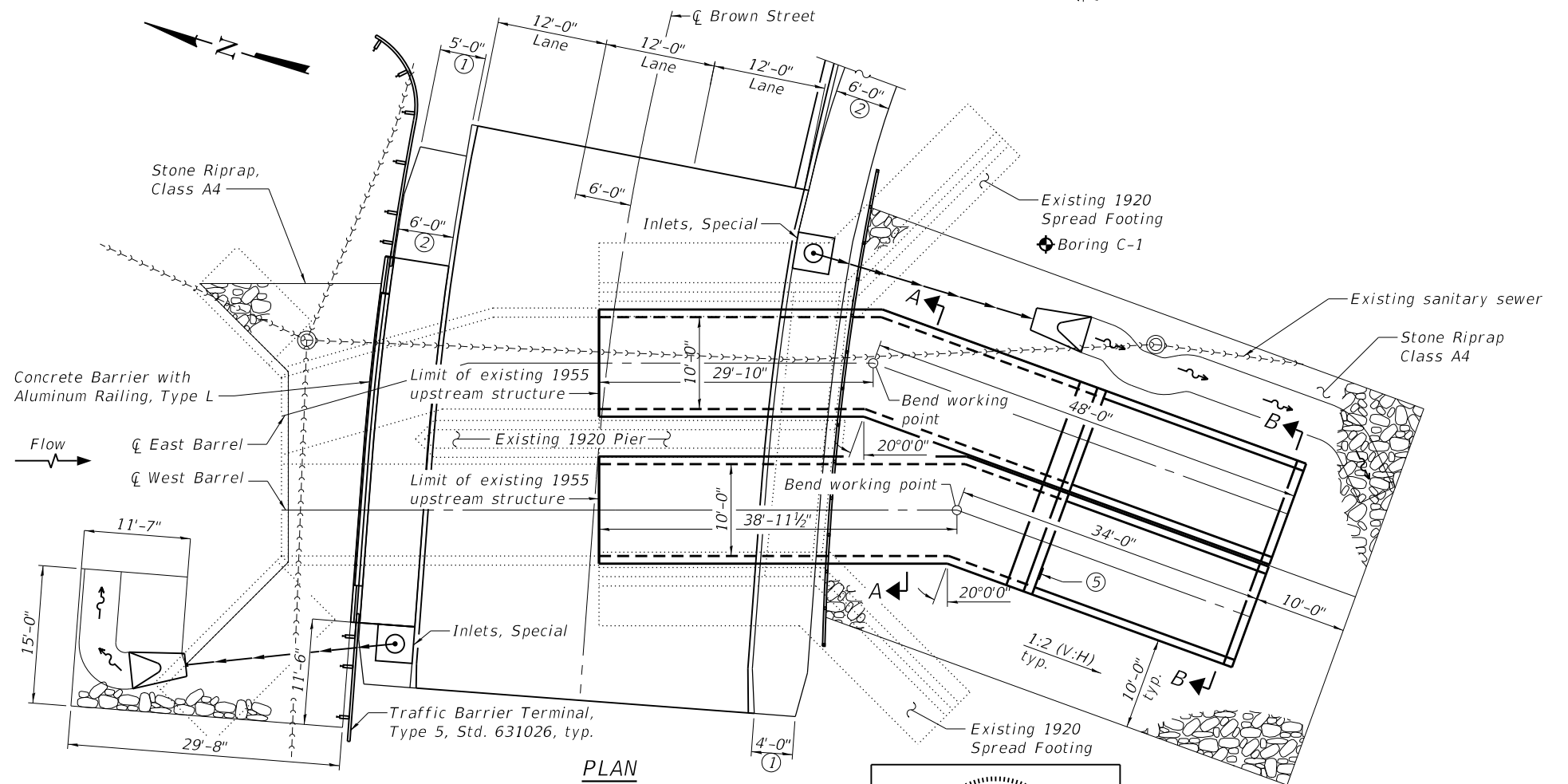
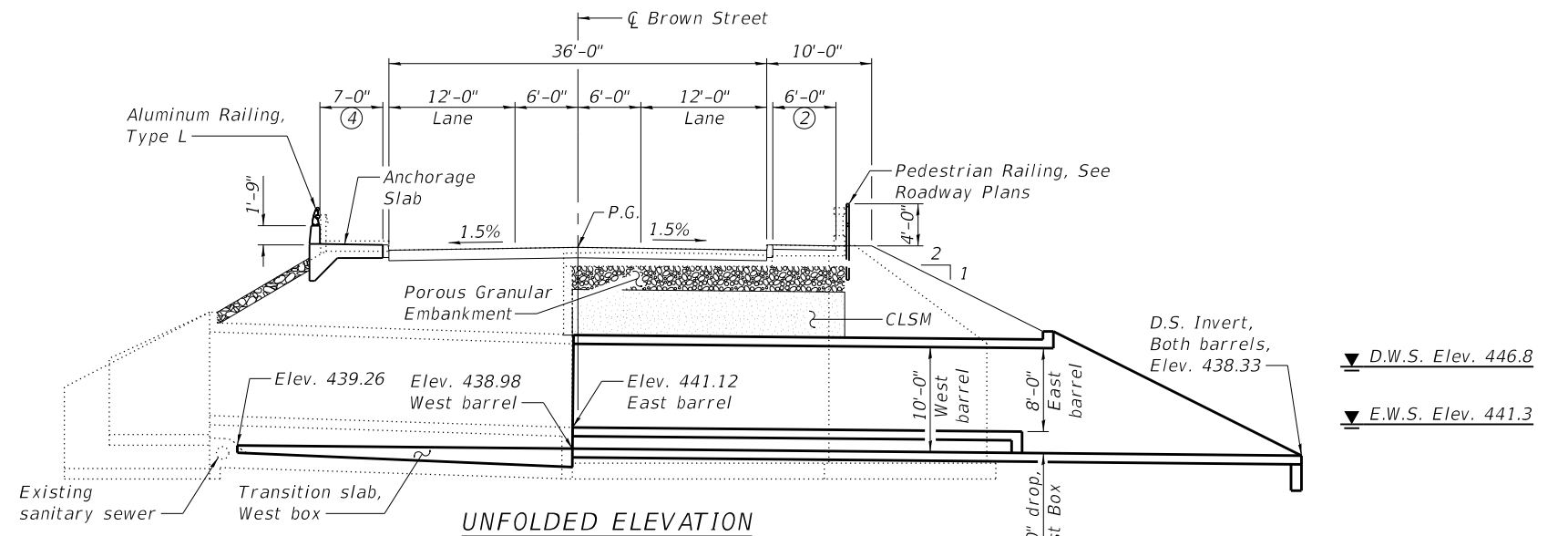
Allow 50#/sq. ft. for future wearing surface



LOCATION SKETCH



NAME PLATE  
See Std. 515001



PLAN

- Notes:
- Existing sidewalk.
  - Proposed sidewalk. A flared transition panel shall be provided at each end.
  - For details of Section A-A and Section B-B, see sheet 2 of 9.
  - For details of Anchorage Slab and Barrier, see sheet 4 of 9.
  - For location of Name Plate, see Sheet 8 of 9.

**LICENSED STRUCTURAL ENGINEER**  
 DANIEL GEORGE LUTZ  
 081 006772  
 STATE OF ILLINOIS

DATE: 4/10/2024  
 EXPIRATION: 11/30/2024

**BROWN STREET OVER SHIELDS BRANCH**  
**F.A.U. RTE. 8962 - SEC 20-00241-00-BR**  
**MADISON COUNTY**  
**STATION 101+42.55**  
**STRUCTURE NO. 060-6104**

FILE NAME: H:\P220021 - Brown Street Bridge Rehabilitation\Bridg\Final Plans\Microstation\0606104-001-General Plan & Elevation.dgn

**OATES ASSOCIATES**  
 www.oatesassociates.com  
 ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

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PLOT DATE = 4/10/2024	DRAWN - KBC	REVISIONS -
	CHECKED - DGL	REVISIONS -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

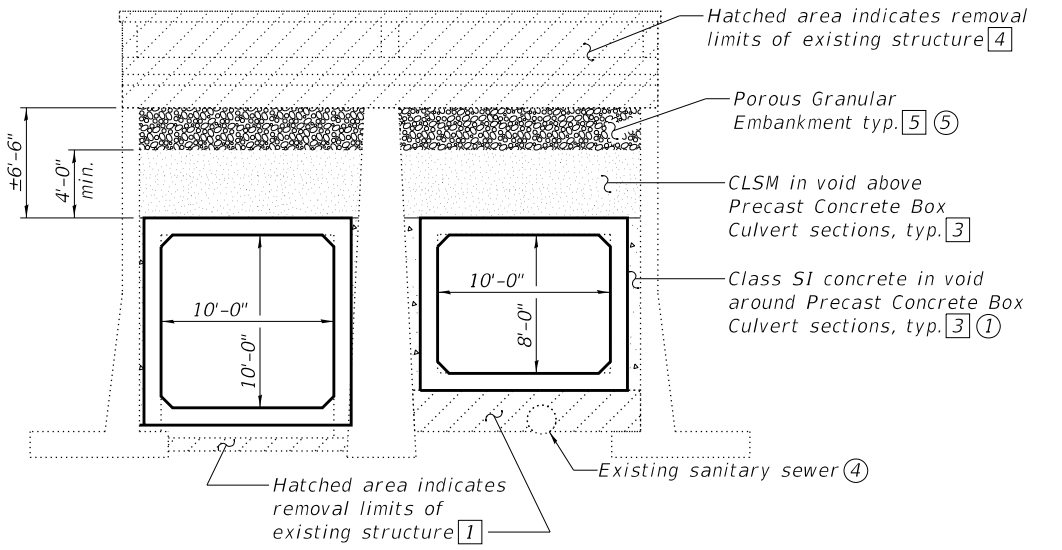
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**STRUCTURE NO. 060-6104**

SHEET 1 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	16
CONTRACT NO. 97836				

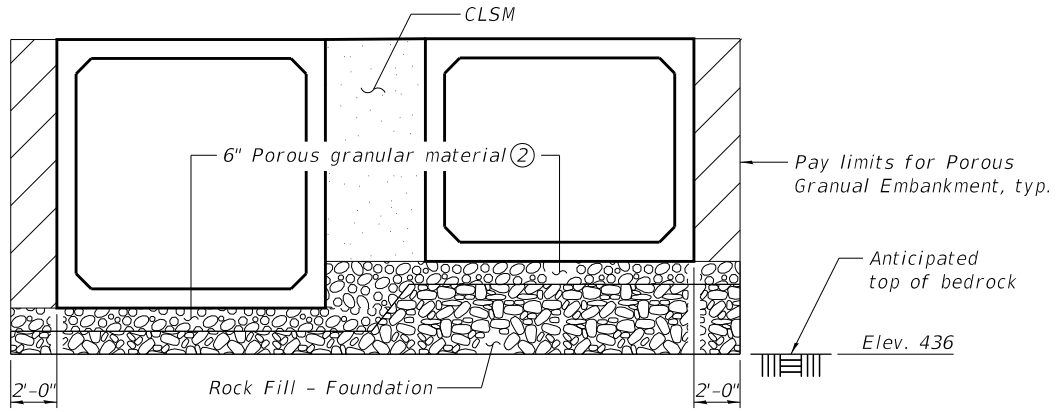
ILLINOIS FED. AID PROJECT



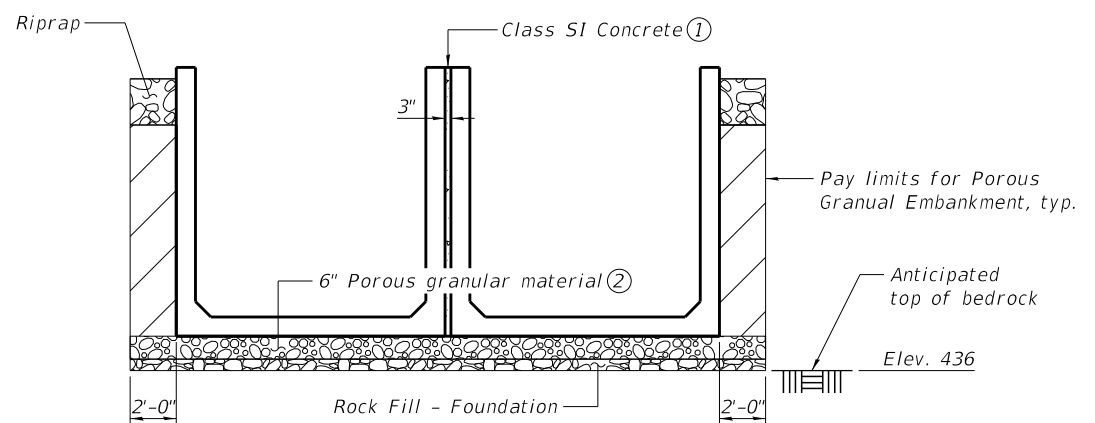


**SECTION THRU STRUCTURE**

- Sequence of Construction:
- 1 Remove existing concrete slab and fill void with CLSM.
  - 2 Install Precast Concrete Box Culverts inside existing structure using pushing/pulling operation.
  - 3 Fill voids within existing structure.
  - 4 Remove existing superstructure.
  - 5 Place Porous Granular Embankment.
  - 6 Construct roadway.



**SECTION A-A**



**SECTION B-B**

**GENERAL NOTES**

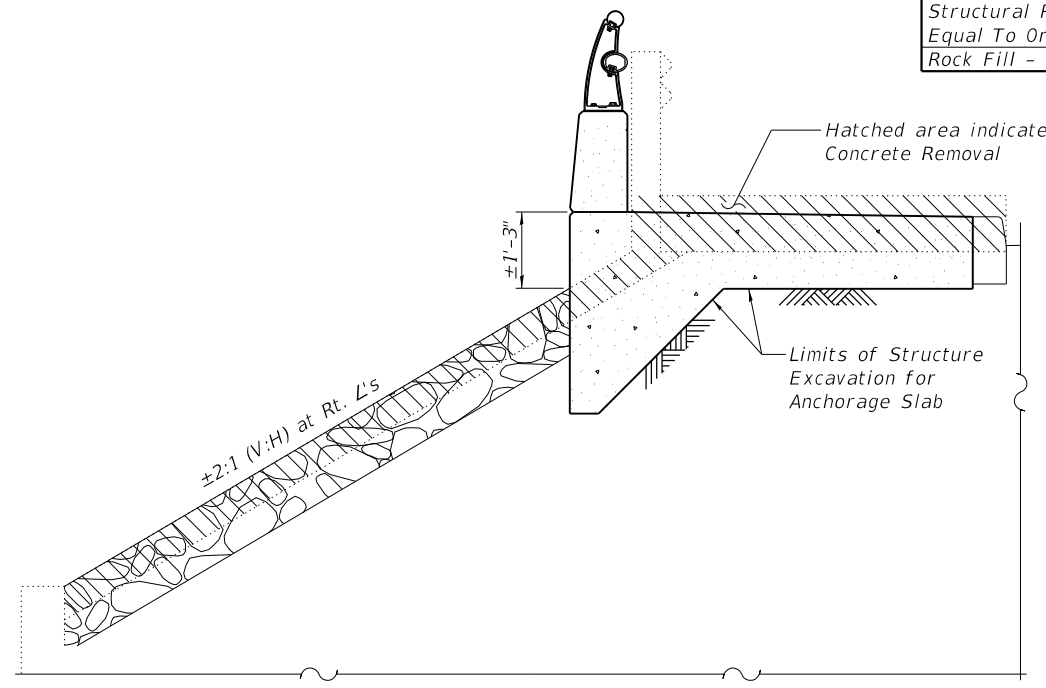
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars designated (E) shall be epoxy coated.

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

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu. Yd.	56
Stone Riprap, Class A4	Sq. Yd.	327
Filter Fabric	Sq. Yd.	327
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu. Yd.	19.9
Structure Excavation	Cu. Yd.	97
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	52
Concrete Structures	Cu. Yd.	14.3
Concrete Superstructure	Cu. Yd.	21.3
Protective Coat	Sq. Yd.	40
Reinforcement Bars, Epoxy Coated	Pound	2,730
Aluminum Railing, Type L	Foot	32
Name Plates	Each	1
Geotextile Retaining Wall	Sq. Ft.	30
Box Culvert End Sections, Culvert No. 1	Each	1
Box Culvert End Sections, Culvert No. 2	Each	1
Precast Concrete Box Culverts 10' X 8'	Foot	52
Precast Concrete Box Culverts 10' X 10'	Foot	47
Controlled Low-Strength Material	Cu. Yd.	138
Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq. Ft.	126
Rock Fill - Foundation	Cu. Yd.	124



**SECTION THRU ANCHORAGE SLAB**

**Notes:**

- 1 The space between adjacent precast box culverts, adjacent box culvert end sections, and box culvert & existing structure shall be filled with Class SI concrete in accordance with Article 540.06 of the Standard Specifications. Cost included with associated work.
- 2 Porous granular material in accordance with Article 540.06 of the Standard Specifications. Cost included with associated work.
- 3 Hatched area represents pay limits for Porous Granular Embankment.
- 4 The Contractor shall take special care in removing material around pipe. Any damage shall be repaired at no additional cost to the City.
- 5 CLSM shall be placed a minimum of 4' above the top of proposed box culverts before the existing bridge deck is removed. Contractor has the option to extend CLSM to the bottom of the existing bridge deck. Pay limit for CSLM is 4' above the top of proposed box culverts. The remaining fill will be paid for at the Porous Granular Embankment unit price regardless of material used.
- 6 Bedrock anticipated at Elev 436. Outside the limits of the existing bridge, existing material above bedrock shall be excavated and paid for as Removal and Disposal of Unsuitable Material for Structures. Rock Fill - Foundation shall be used to bring the grade up to the bottom of the proposed 6" Porous granular material.
- 7 No more than half of the existing slab may be removed at a time. CLSM placed immediately after removal and shall have hardened to the satisfaction of the Engineer before proceeding with the removal of the second half.

FILE NAME: H:\P220021 - Brown Street Bridge Rehabilitation\Bridge\Final Plans\Microstation\06061.04-002-General Data.dgn



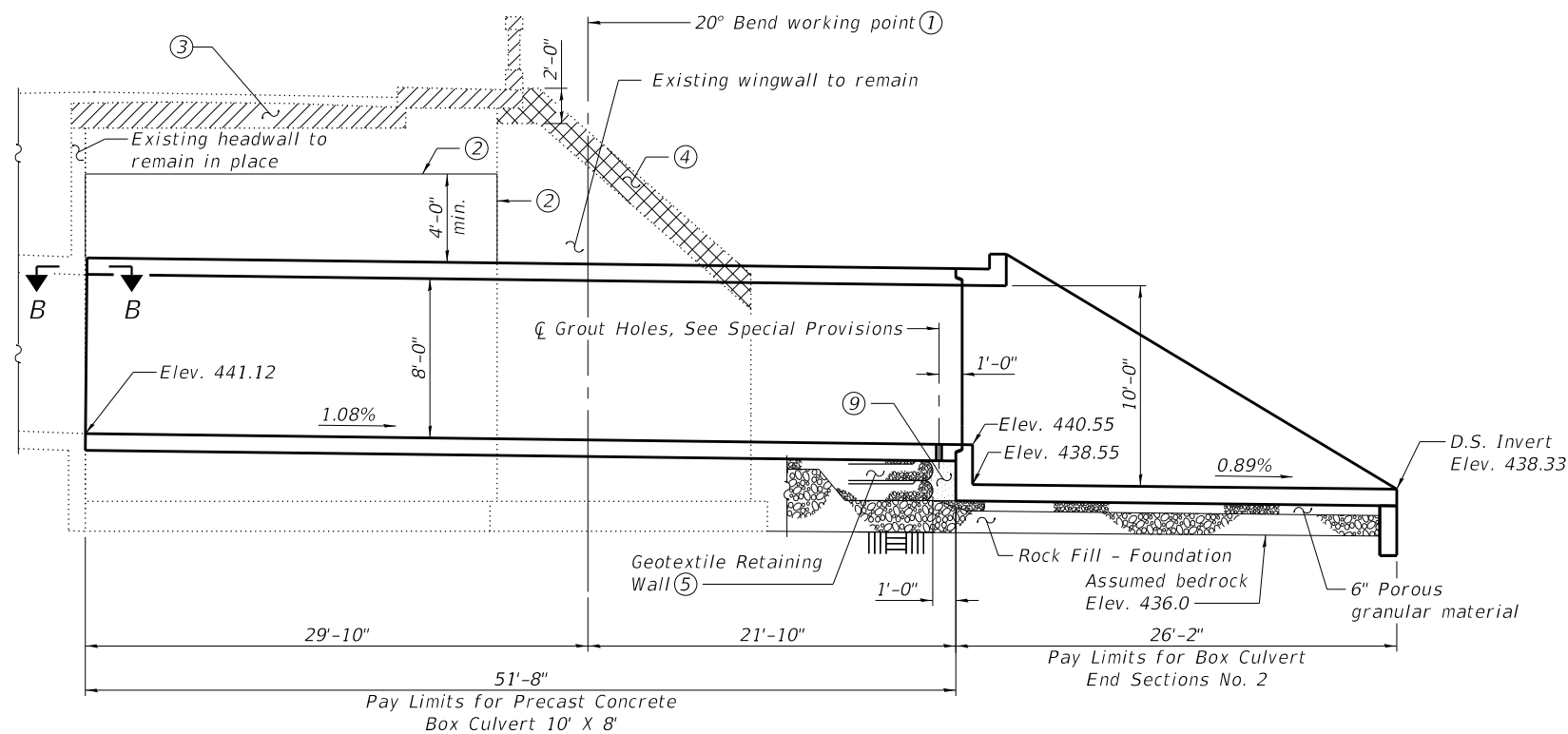
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PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 4/10/2024	DRAWN -	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

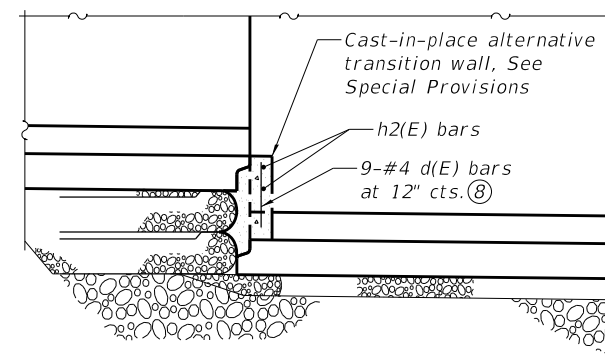
**GENERAL DATA  
STRUCTURE NO. 060-6104**

SHEET 2 OF 9 SHEETS

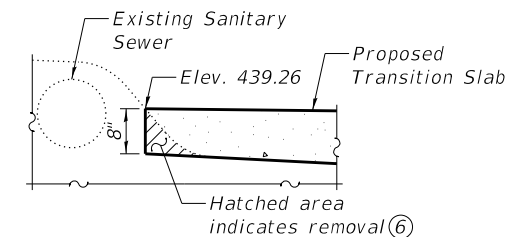
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	17
CONTRACT NO. 97836			ILLINOIS FED. AID PROJECT	



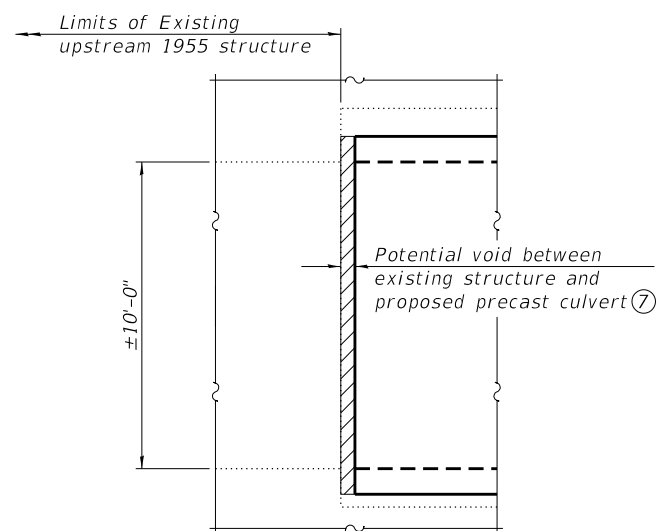
UNFOLDED LONGITUDINAL SECTION-EAST BOX



CAST IN PLACE ALTERNATIVE



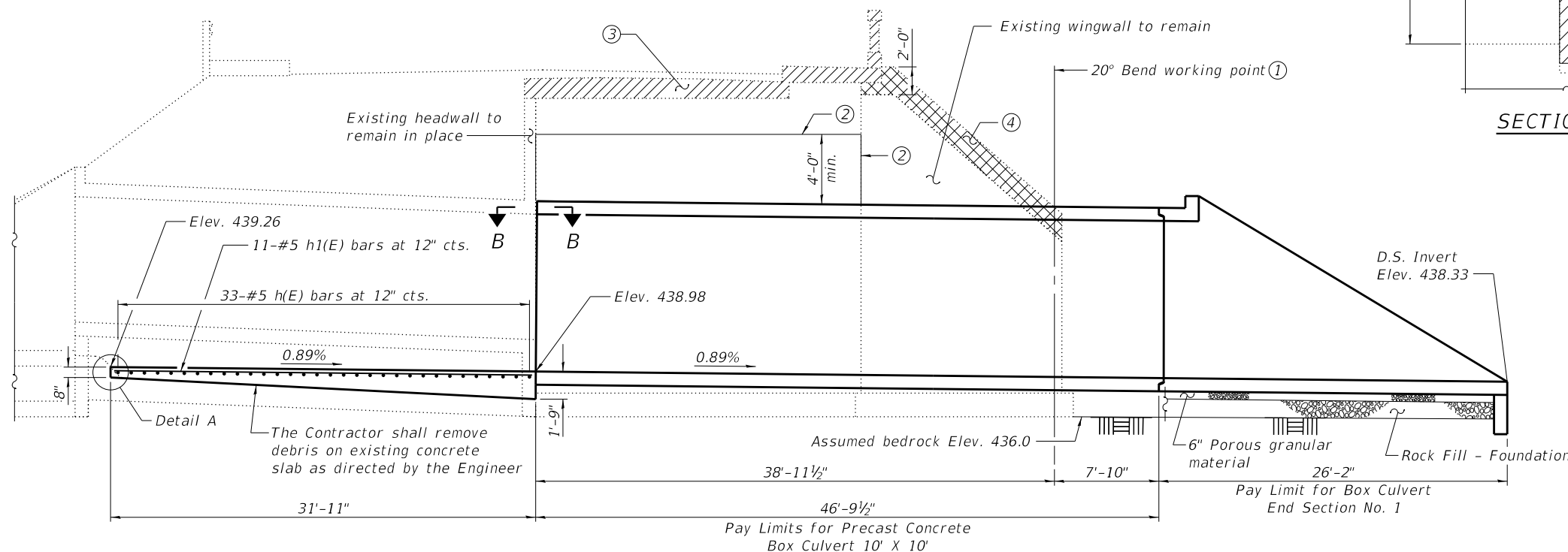
DETAIL A



SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	33	#5	9'-8"	—
h1(E)	11	#5	31'-7"	—
Reinforcement Bars, Epoxy Coated			Pound	700
Concrete Structures			Cu. Yd.	14.3



UNFOLDED LONGITUDINAL SECTION-WEST BOX

Notes:

- ① Longitudinal locations of 20° Bend Working Point measured along  $\phi$  of each box.
- ② Pay limits of Controlled Low-Strength Material.
- ③ Hatched area indicates limits of removal. Cost included in Removal of Existing Superstructures. Removal shall not begin until the CLSM has attained a compressive strength of 30 psi.
- ④ Cross hatched area indicates limits of existing wingwall removal. Cost included in Concrete Removal.
- ⑤ At the Contractor's option, the Geotextile Retaining Wall may be replaced by Controlled Low-Strength Material at no additional cost.
- ⑥ The Contractor shall take special care in removing material around pipe. Any damage shall be repaired at no additional cost to the City.
- ⑦ The Contractor shall line up the inside faces of the proposed precast culverts with the existing upstream structure to achieve a smooth transition as directed by the Engineer. Voids between the existing structure and proposed precast culverts shall be filled with grout. Cost included with associated work.
- ⑧ Epoxy grout d(E) bars according Section 584 of the Standard Specifications. Minimum embedment is 5".
- ⑨ Grout to be pumped after setting Box Culvert End Sections, No. 2. Cost included with associated work.

FILE NAME: H:\P220021 - Brown Street Bridge Rehabilitation\Bridge\Final Plans\Microstation\0606104-003-Longitudinal Sections.dgn



USER NAME =	DESIGNED -	REVISED -
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	CHECKED -	REVISED -

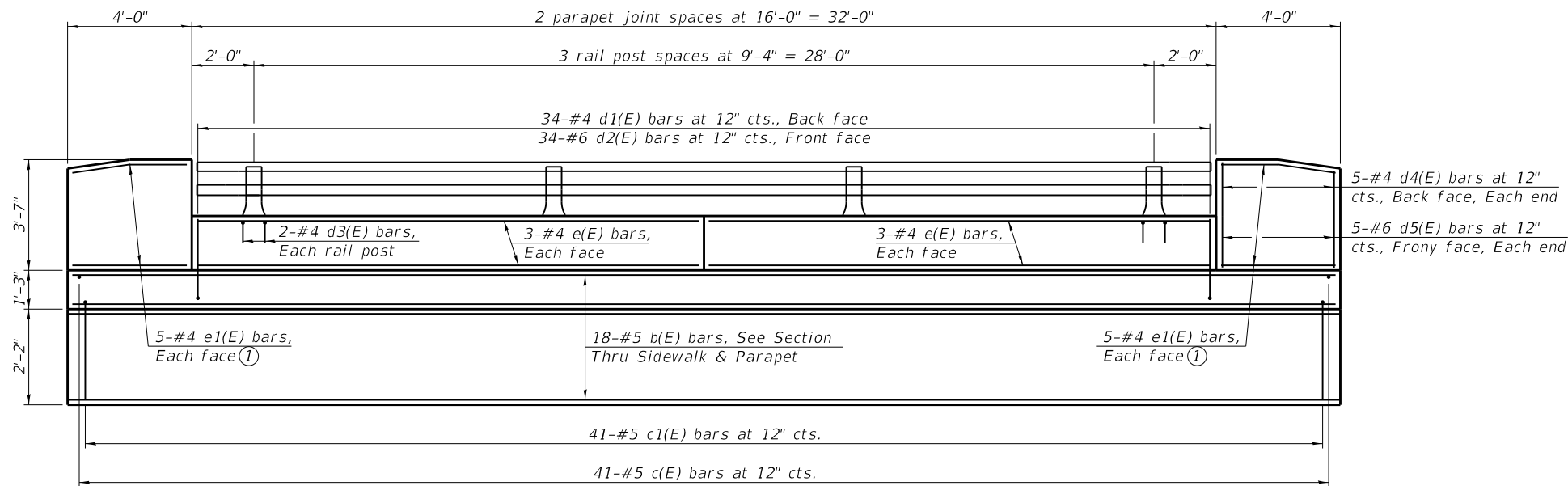
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

LONGITUDINAL SECTIONS  
STRUCTURE NO. 060-6104

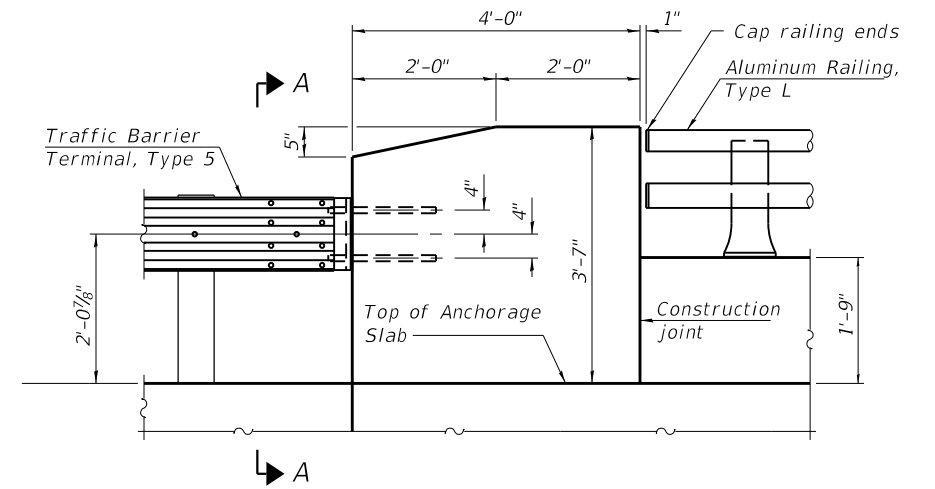
SHEET 3 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	18
CONTRACT NO. 97836				

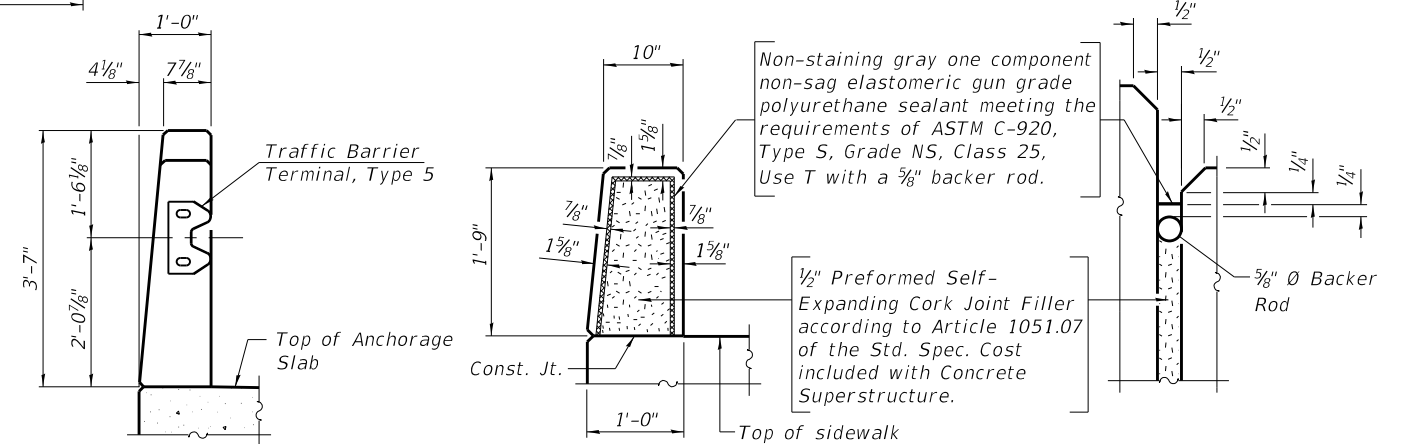
ILLINOIS FED. AID PROJECT



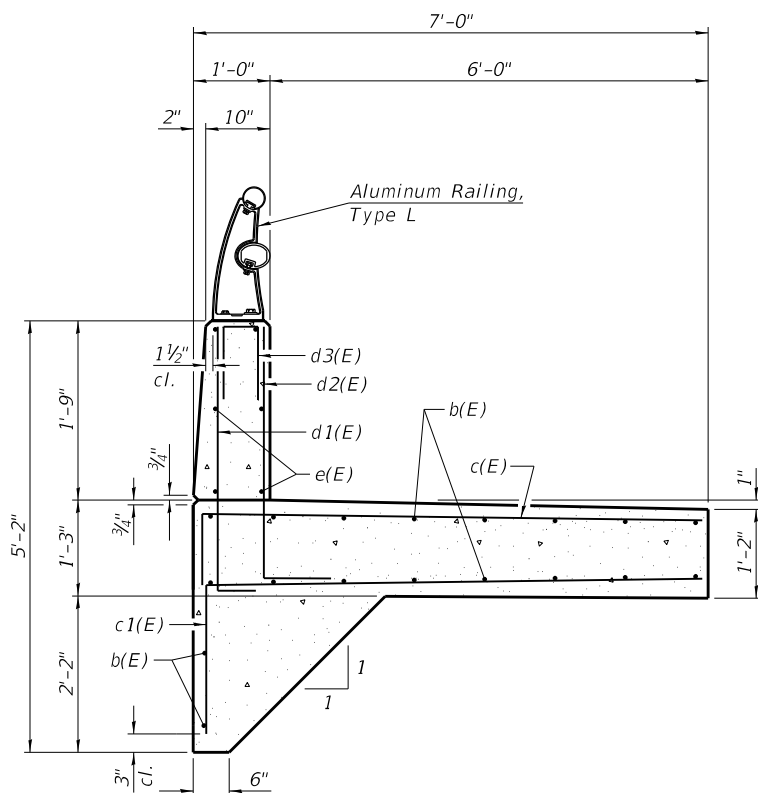
**INSIDE ELEVATION OF PARAPET & ANCHORAGE SLAB**



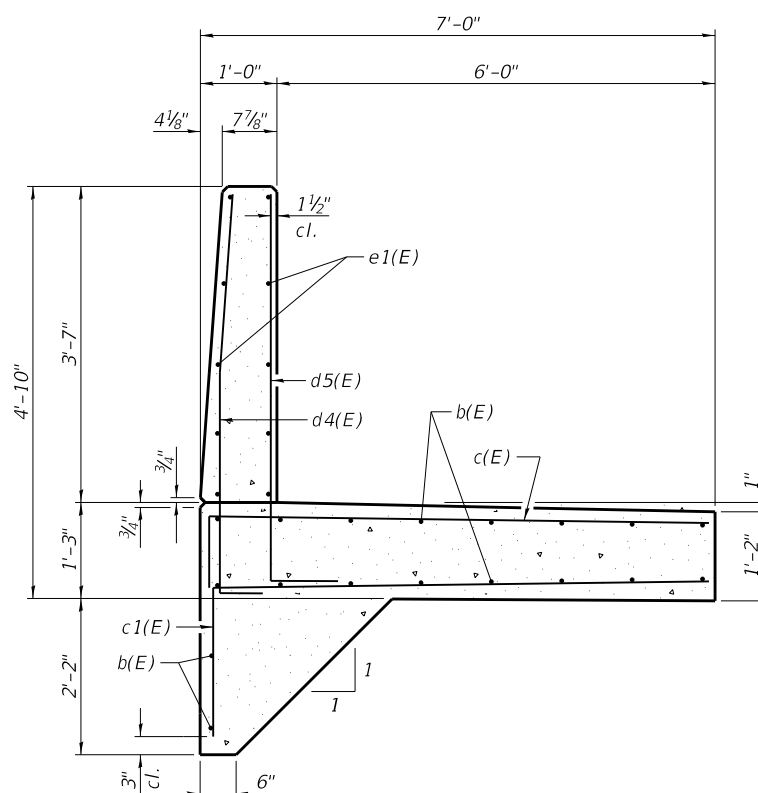
**ELEVATION**



**PARAPET JOINT DETAILS**

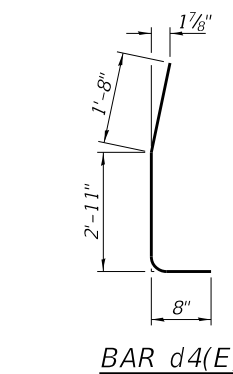


**SECTION THRU PARAPET**

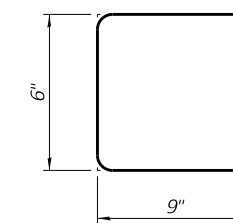


**SECTION THRU END POST**

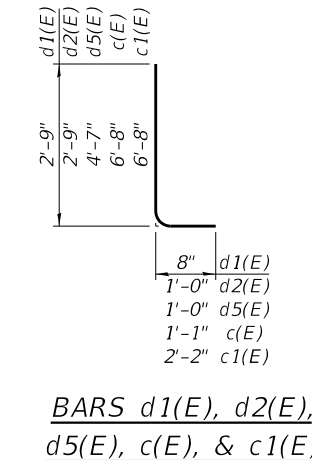
**SECTION A-A**



**BAR d4(E)**



**BAR d3(E)**



**BARS d1(E), d2(E), d5(E), c(E), & c1(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b(E)	18	#5	39'-8"	—
c(E)	41	#5	7'-9"	┌
c1(E)	41	#5	8'-10"	┌
d1(E)	34	#4	3'-5"	┌
d2(E)	34	#6	3'-9"	┌
d3(E)	8	#4	2'-0"	┌
d4(E)	10	#4	5'-3"	┌
d5(E)	10	#6	5'-7"	┌
e(E)	12	#4	15'-8"	—
e1(E)	20	#4	3'-8"	—
Reinforcement Bars, Epoxy Coated			Pound	2,030
Concrete Superstructure			Cu. Yd.	21.3

- Notes:
- The top bars shall be bent in the field as required.
  - The top surface of the slabs shall be finished according to Article 424.06. of the Standard Specifications.

FILE NAME: H:\P220021 - Brown Street Bridge Rehabilitation\Bridg\Final Plans\Microstation\0606104-004-Barrier & Anchorage Slab Details.dgn



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DESIGNED - NBB  
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CHECKED - KBC  
REVISED -

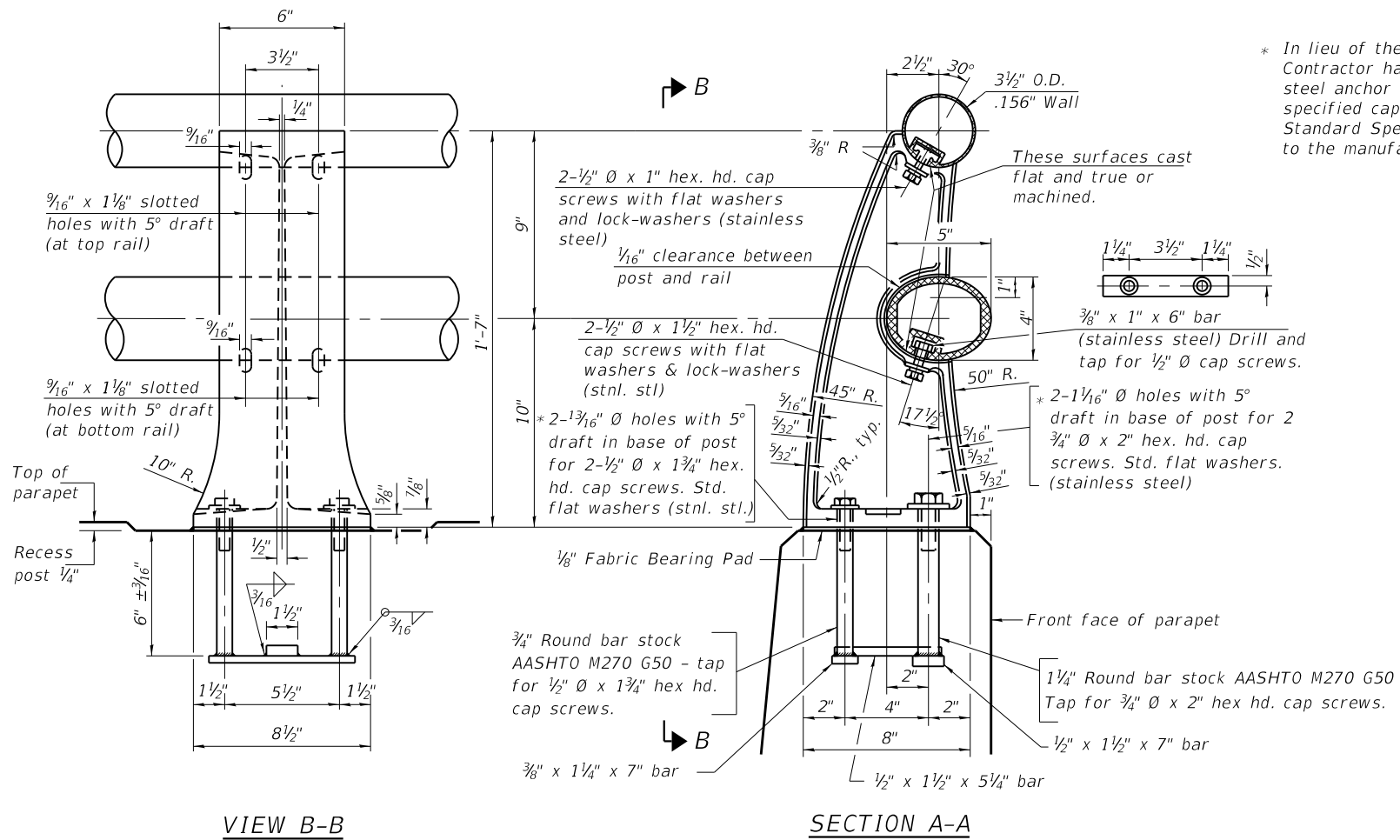
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PARAPET & ANCHORAGE SLAB DETAILS  
STRUCTURE NO. 060-6104

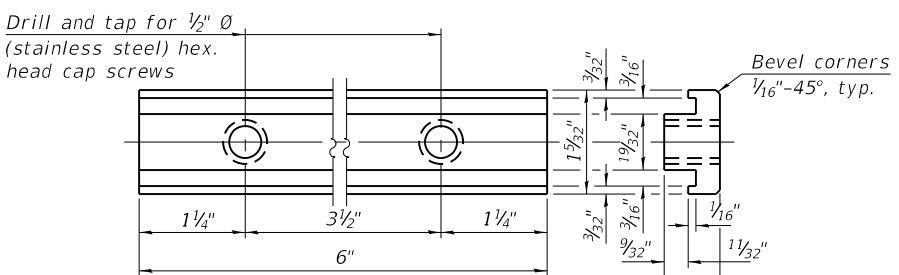
SHEET 4 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	19
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				

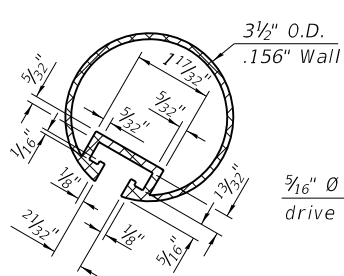
\* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



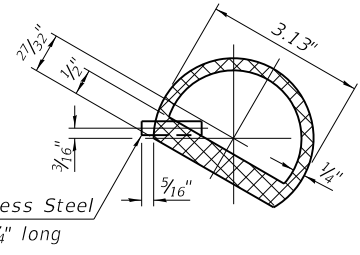
RAIL POST DETAILS



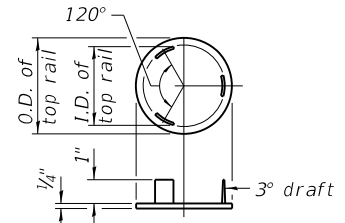
RAIL POST CLAMP BAR



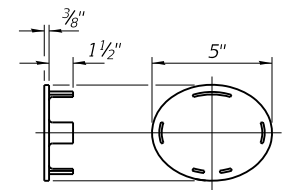
SECTION THRU TOP RAIL



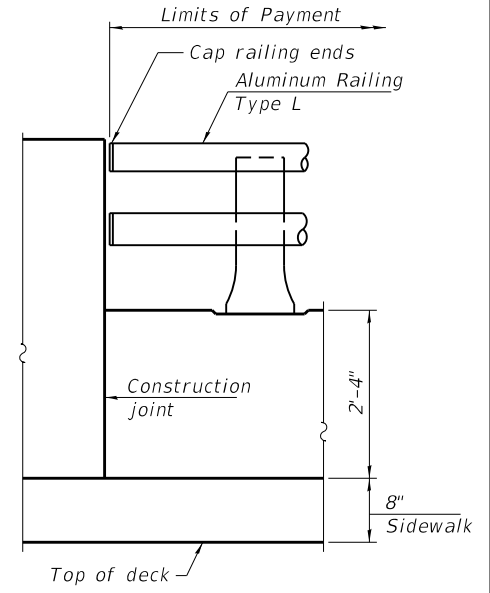
SECTION THRU TOP RAIL SPLICE



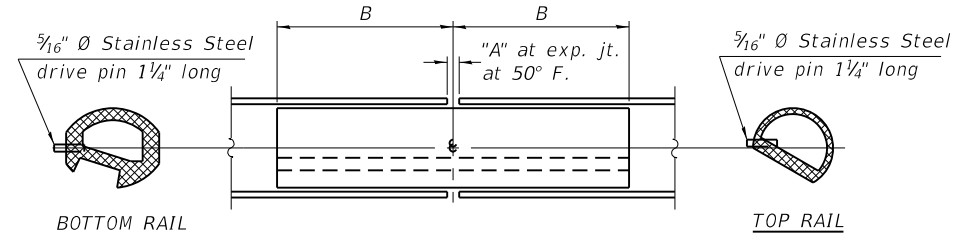
CAST END CAP For top rail Drive Fit Type



CAST END CAP For bottom rail Drive Fit Type



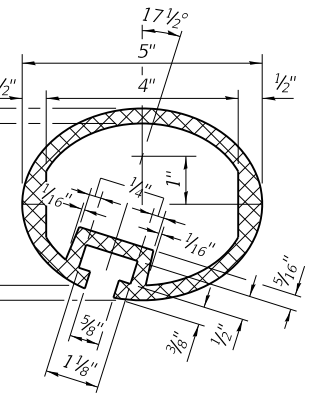
RAIL END TREATMENT FOR TYPE 5 AND 6 TERMINAL



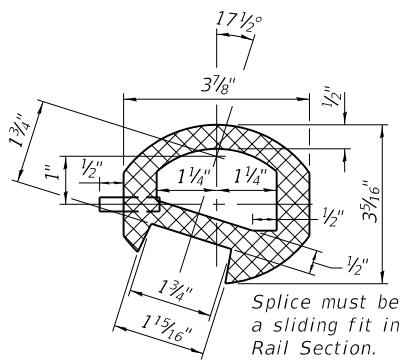
RAIL SPLICE

SPLICE DIMENSIONS

Location	T	A	B
All locs. not over exp. jts.	0	3/8"	1'-2"
Over Strip Seal Jt.	≤4"	2 1/2"	1'-2"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	1'-7 3/4"
Over Finger or Modular Jt.	≤15"	8 1/4"	2'-1 1/4"



SECTION THRU BOTTOM RAIL



SECTION THRU BOTTOM RAIL SPLICE

Notes:  
 All Posts shall be normal to parapet.  
 All joints in rail shall be spliced per detail.  
 All exposed rail ends shall be capped per detail.  
 Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade, high spots shall be ground and low spots shimmed.  
 Place reinforcement bars to miss anchor rod locations.  
 See sheet 4 of 9 for rail post spacing.

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	32

**RAILING CRITERIA**

NCHRP 350 Test Level	4
Post Spacing Range	7'-0" - 10'-0"
Rail Weight (plf)	40

R-20 10-12-2021

FILE NAME: H:\P220021 - Brown Street Bridge Rehabilitation\Bridge\Final Plans\Microstation\06061.04-005-Aluminum Railing\_Type L.dgn



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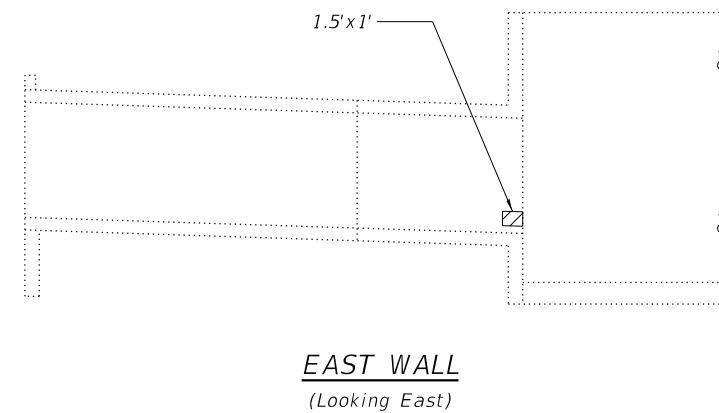
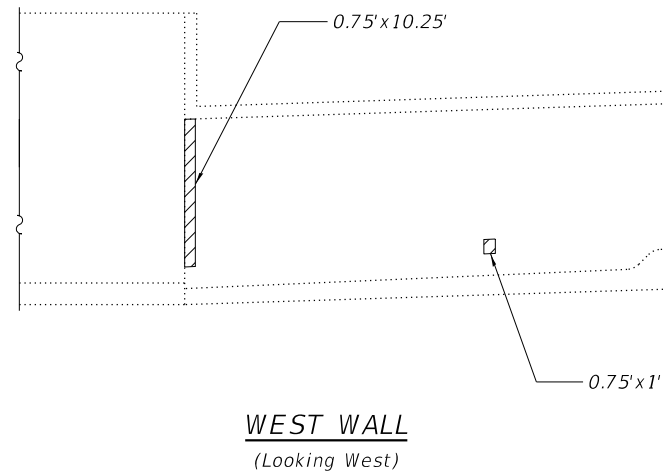
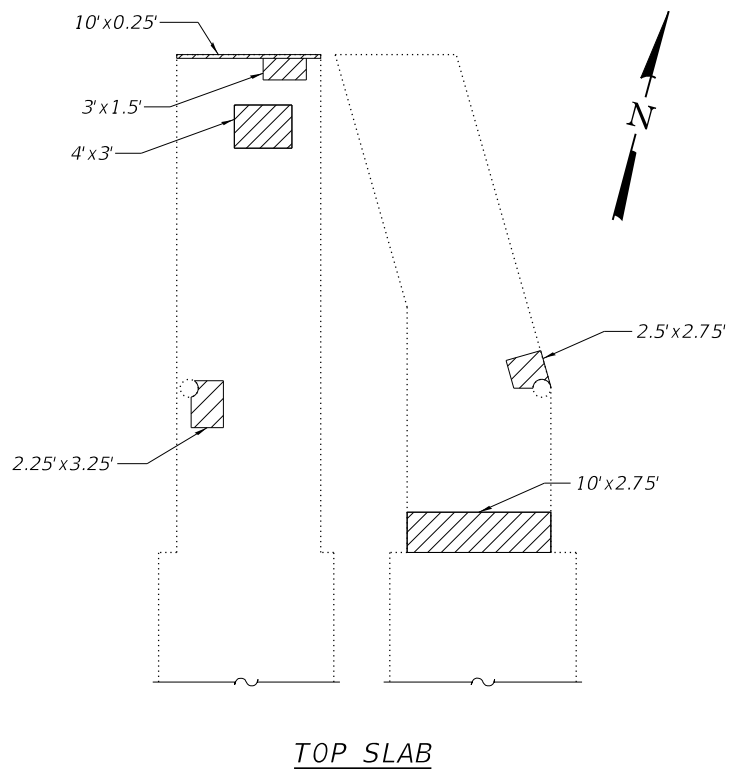
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ALUMINUM RAILING, TYPE L  
 STRUCTURE NO. 060-6104

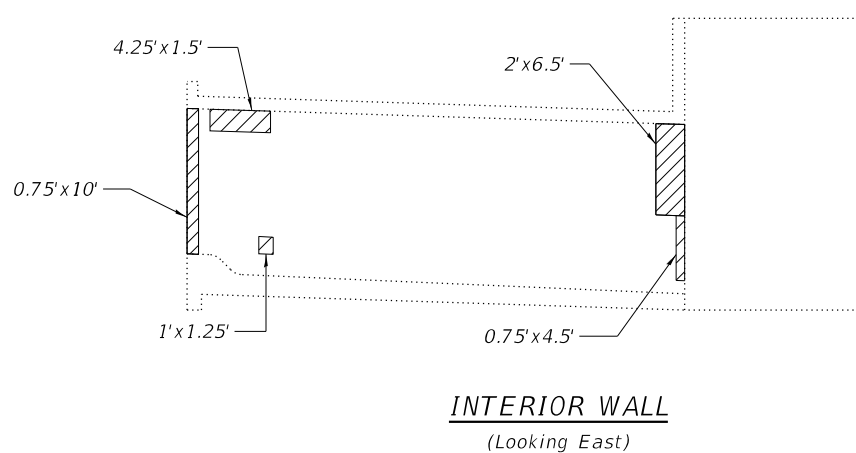
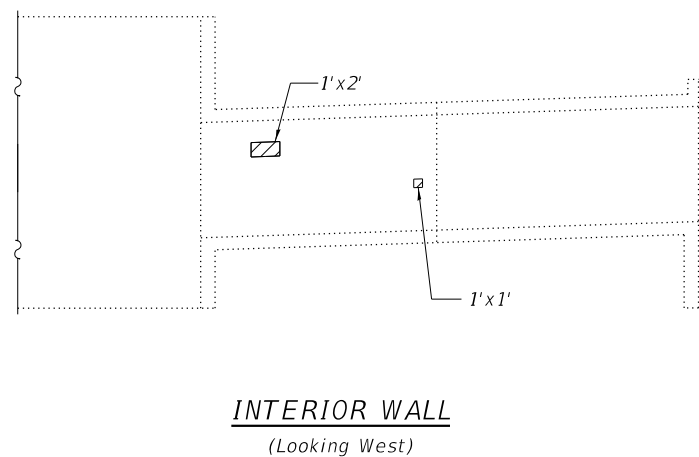
SHEET 5 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	20
				CONTRACT NO. 97836

ILLINOIS FED. AID PROJECT



 Structural Repair of Concrete  
(Depth Equal to or Less than 5 Inches)



**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	126

Notes:  
 ① Repair areas shown are estimated. The Engineer shall determine the repair areas and show actual locations on the as-built plans

FILE NAME: H:\P220021 - Brown Street Bridge Rehabilitation\Bridge\Final Plans\Microstation\0606104-006-Concrete Repairs.dgn



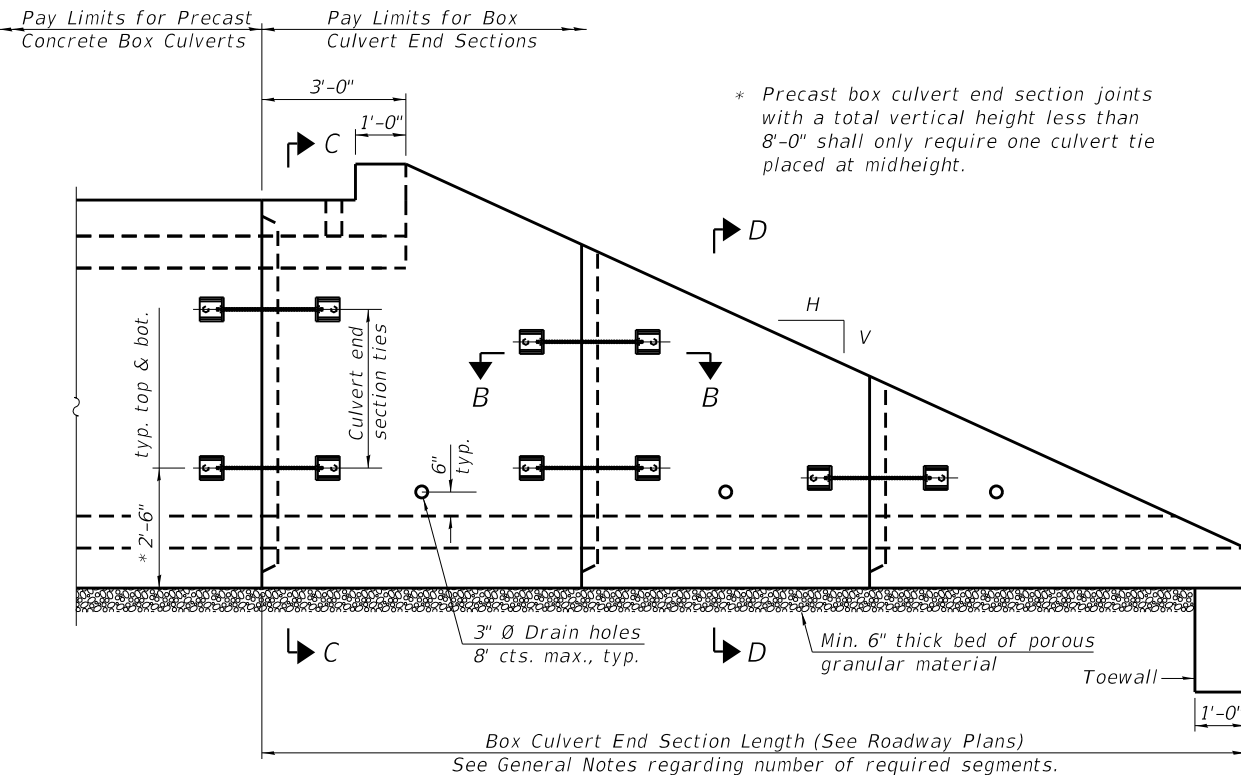
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PLOT DATE = 4/10/2024	CHECKED - KBC	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

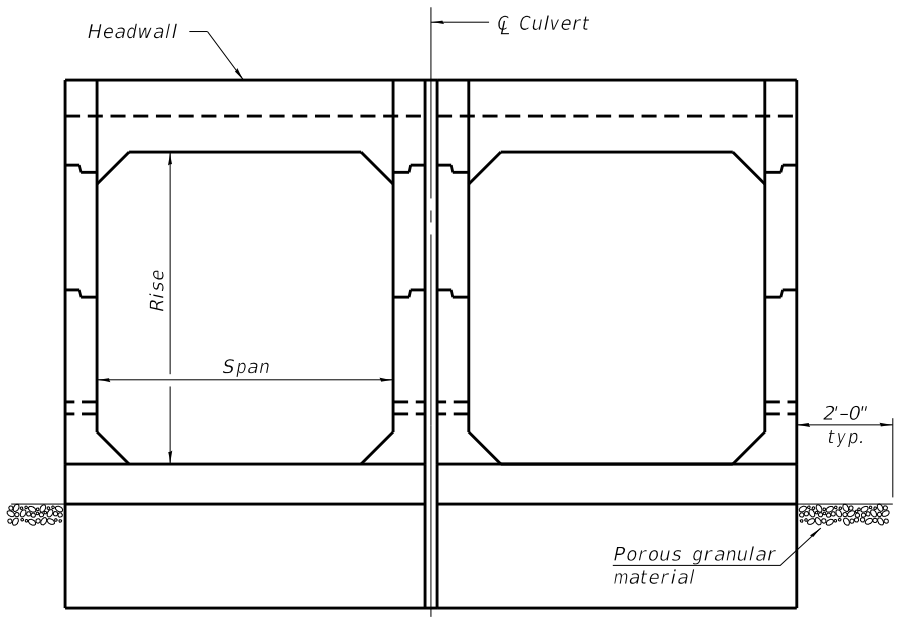
CONCRETE REPAIRS  
STRUCTURE NO. 060-6104

SHEET 7 OF 10 SHEETS

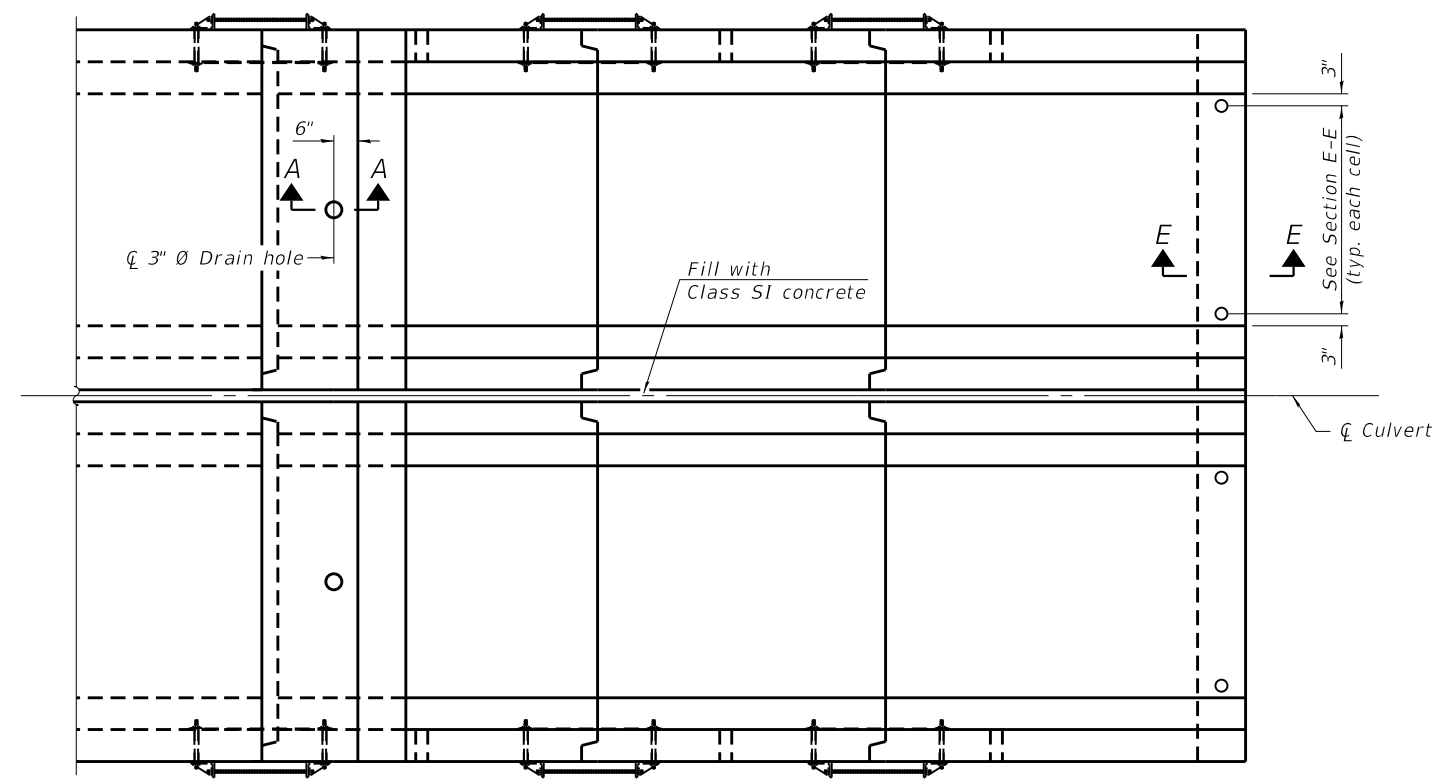
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8962	20-00241-00-BR	MADISON	24	21
ILLINOIS FED. AID PROJECT			CONTRACT NO. 97836	



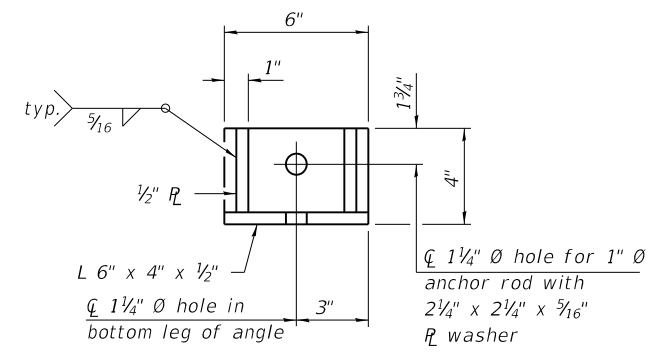
**ELEVATION**



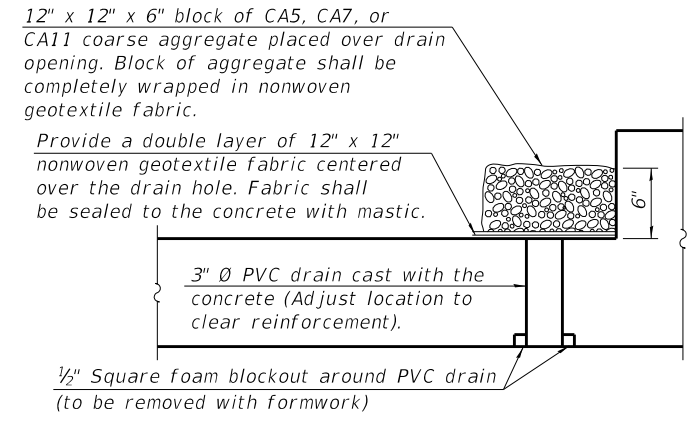
**END VIEW**



**PLAN**



**RESTRAINT ANGLE DETAIL**



**SECTION A-A**

(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.)

**GENERAL NOTES**

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H).

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 5/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

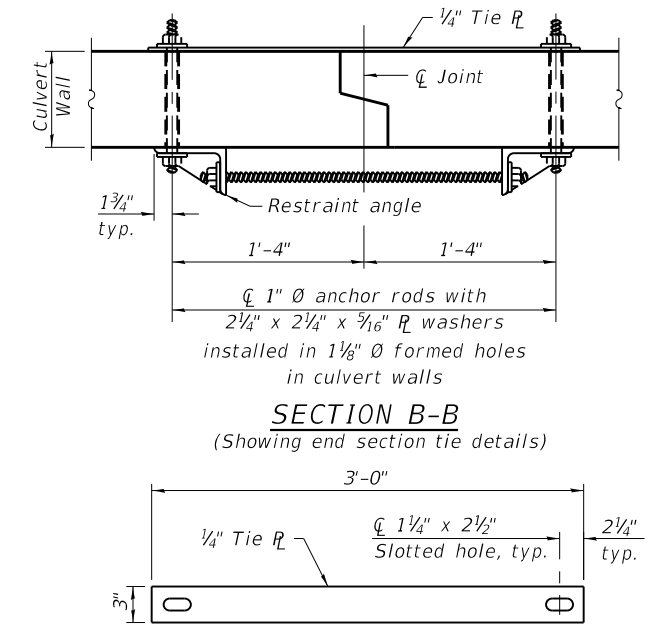
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

The 3" nominal space between adjacent end sections shall be filled with Class SI concrete in accordance with Article 540.06 of the Standard Specifications. Cost included with Box Culvert End Sections.

Details for double cell box culvert shown. Details for other multi-cell box culverts similar.



**TIE PLATE DETAIL**

MCB-TES

2-17-2017

(Sheet 1 of 2)



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	CHECKED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

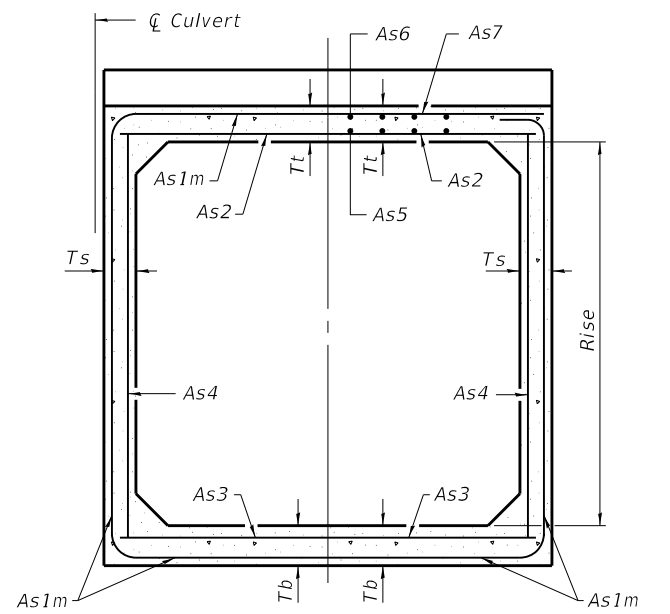
**PRECAST TAPERED END SECTION  
STRUCTURE NO. 060-6104**

SHEET 7 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	22
CONTRACT NO. 97836				

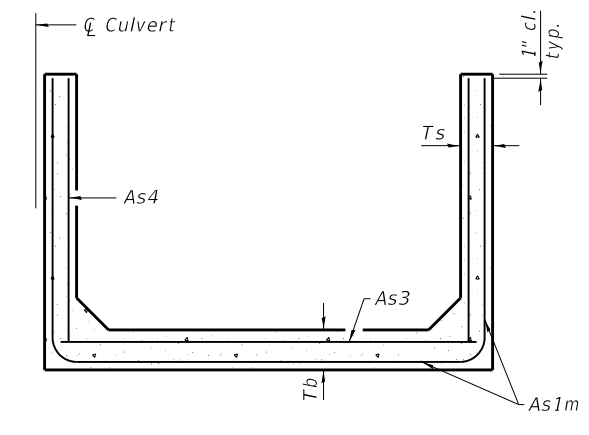
ILLINOIS FED. AID PROJECT

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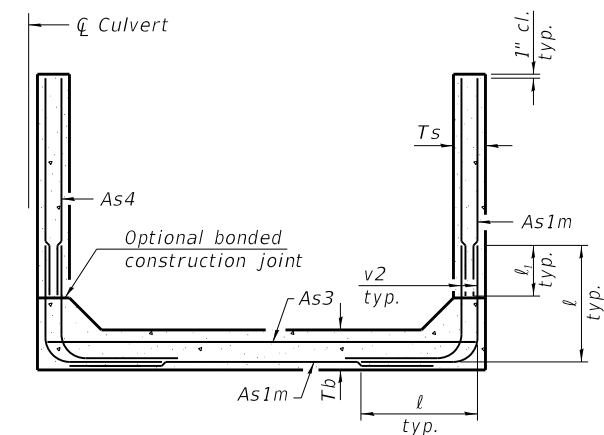


(Design Earth Cover  $\geq$  2 ft) (Design Earth Cover < 2 ft)

**SECTION C-C**



**SECTION D-D**



**ALTERNATE SECTION D-D**

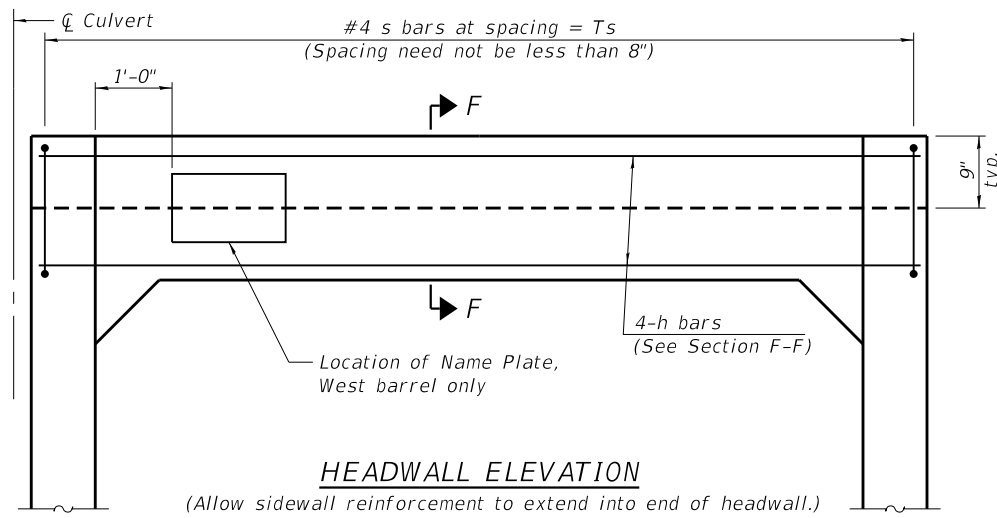
		<b>As1m REINFORCEMENT</b>										
		(in. <sup>2</sup> /ft)										
Rise (ft)	Ts (in.)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17										
5	0.26	0.21	0.18									
6	0.22	0.26	0.23	0.22								
7	0.25	0.33	0.59	0.27	0.28							
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40					
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48				
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56			
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65		
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75	

(As1m reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

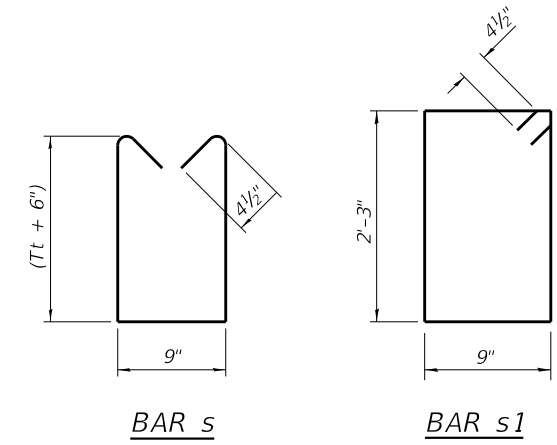
**1 DIMENSION**

- #3 bar = 2'-0"
- #4 bar = 2'-8"
- #5 bar = 3'-4"
- #6 bar = 3'-11"

Notes:  
 Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.  
 The size and spacing of the v2 bars shall provide a minimum reinforcement area along each face of the walls (in.<sup>2</sup>/ft.) equal to 1.10\*(As1m). v2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.  
 Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.  
 Sections C-C, D-D, and Headwall Elevation are symmetric about  $\bar{C}$  culvert through 180° rotation.



**HEADWALL ELEVATION**

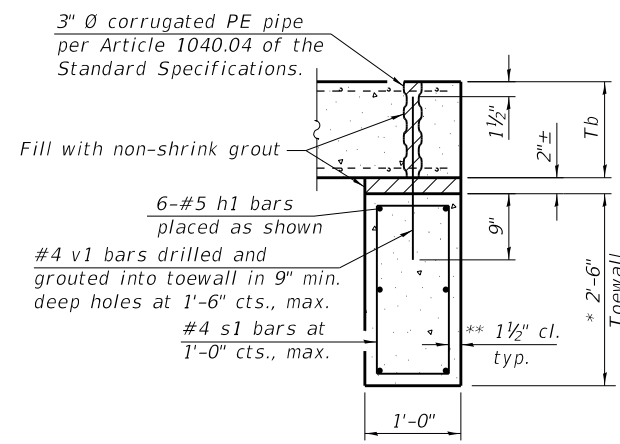


**BAR s**

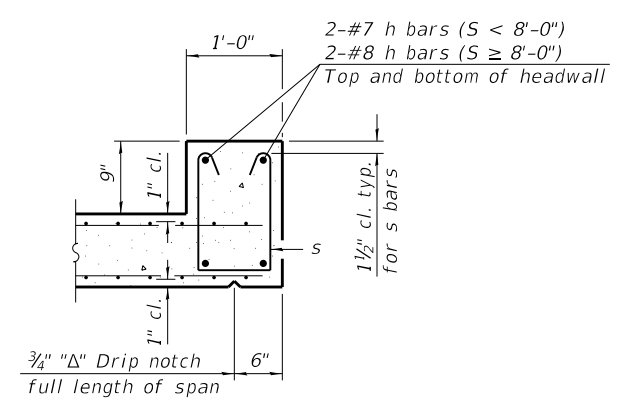
**BAR s1**

**TOEWALL CONSTRUCTION SEQUENCE**

1. Perform excavation and construct toewall.
  2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
  3. Set precast box culvert end section.
  4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
  5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.
- \* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.
- \*\* If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



**SECTION E-E**



**SECTION F-F**

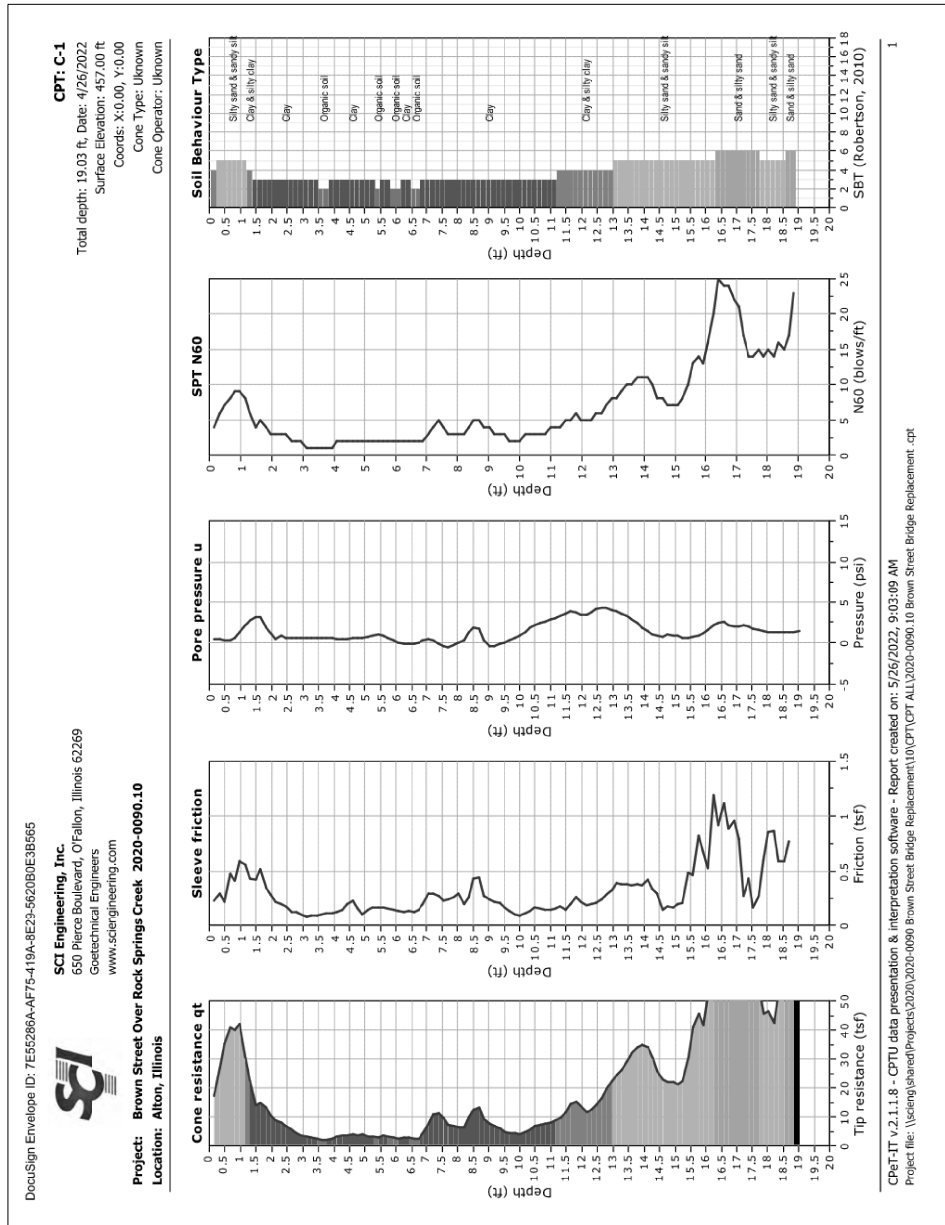
(Sheet 2 of 2)

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 4/10/2024	DRAWN -	REVISED -
	CHECKED -	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	23
CONTRACT NO. 97836				
ILLINOIS FED. AID PROJECT				

USER NAME =	DESIGNED -	REVISED -
CHECKED -	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE = 4/10/2024	CHECKED -	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8962	20-00241-00-BR	MADISON	24	24
CONTRACT NO. 97836				
ILLINOIS		FED. AID PROJECT		



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**PROJECT** Brown Street Over Rock Springs Creek  
**LOCATION** Alton, Illinois  
**DRILLER** SCI Engineering, Inc.  
**EQUIPMENT** Vertek S4 CPT w/Discrete Sampler

**BORING NUMBER** C-1  
**SHEET** 1 of 1  
**PROJECT NO.** 2020-0090.10  
**HAMMER** N/A  
**ELEVATION** 457±  
**DATE DRILLED** 04/26/2022

**BORING LOG**

DEPTH (ft)	SAMPLE				DESCRIPTION (UNIFIED SOIL CLASSIFICATION)	GRAPHIC	SEE REMARK NO.	LABORATORY TEST RESULTS							ELEVATION (ft)	
	NUMBER	TYPE	RECOVERY (ft/m)	BLOWS (per 6 in)				MOISTURE CONTENT (%)	DRY DENSITY (pcf)	HAND PENETROMETER (pcf)	UNCONFINED COMPRESSIVE STRENGTH (ksf)	LIQUID LIMIT	PLASTICITY INDEX			
0.5					5.5" TOPSOIL											
1	DP		36/48		FILL: Brown, lean clay, trace crushed rock			22		2.0						456
3																453
6	DP		24/48		LEAN CLAY (CL); Brown			22		2.0		32	11			450
9								23		3.0						447
12					Become dark brown, trace fine- to coarse-grained sand			24		3.0				29	8	444
15	DP		24/48		SANDY LEAN CLAY (CL); Brown, sand is fine- to coarse-grained			18		3.0						441
18					LEAN CLAY (CL); Brown, with fine- to coarse-grained sand			25		2.0						438
19.03	DP		24/48		Sampler refusal at a depth of 19 feet.											

**WATER LEVEL:**  
 X NONE OBSERVED WHILE DRILLING  
 ft WHILE DRILLING  
 ft HRS AFTER DRILLING  
 ft DAYS AFTER DRILLING

**REMARKS:**  
 1) Percent passing the No. 200 sieve: 79.23%