0

0

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

F.A.S. SECTION COUNTY TOTAL SHEET F.A.U. 747 8813 (57.58.59)RS-2 JERSEY 60 1

D-98-018-18



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED

20 21

REGIONAL ENGINEER

October 1

October 2

October 2

October 3

October 3

October 3

October 3

October 4

October 4

October 3

October 3

October 3

October 3

October 4

October 4

October 3

October 4

October 3

October 3

October 3

October 3

October 4

October 4

October 4

October 5

October 5

October 6

October 7

October 7

October 7

October 7

October 8

October 8

October 9

Oct

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

BRIDGE OMISSION					
STRUCTURE NO.	LOCATION	DECK LENGTH			
042-0025	5.82 M.S 5.84 M.S.	125 FT.			

	US 67 - W. COUNTY RD.	W. COUN	
ADT (CONSTRUCTION YR):	3600		7300
MU%	0.8		1.4
SU%	2.3		3.5
20 YR, ESAL'S:	0.88		0.88
	BLUEBIRD LN CRYSTAL L	AKE RD.	CRYSTAL LAKE RD IL
ADT (CONSTRUCTION YR):	3900		3800
MU%	1.5		0.5

TRAFFIC DATA

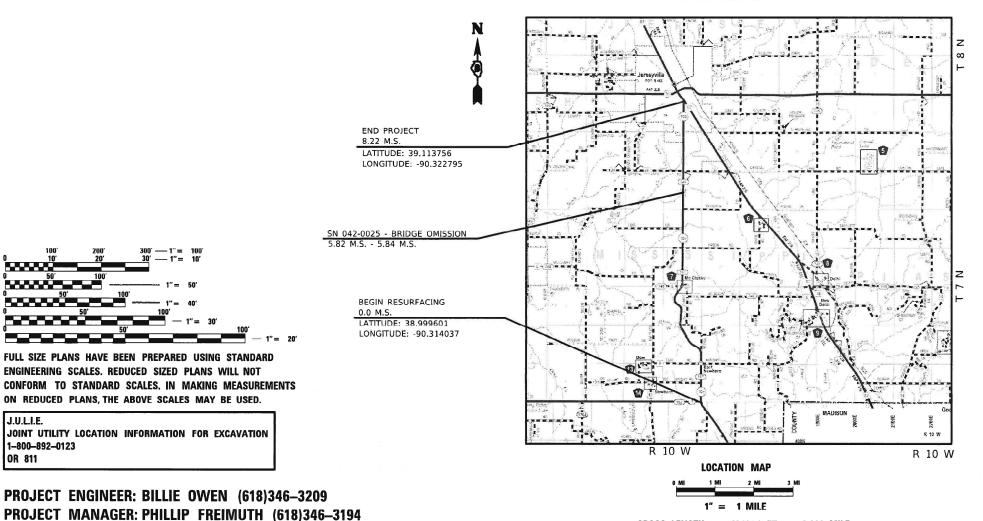
PROPOSED HIGHWAY PLANS

FAS ROUTE 747/FAU ROUTE 8813 (IL 109) SECTION (57,58,59)RS-2 PROJECT COVD-SZOE(494) RESURFACING - STANDARD OVERLAY AND ADA IMPROVEMENTS JERSEY COUNTY

C-98-158-18

GROSS LENGTH = 43401.6 FT. = 8.220 MILE

NET LENGTH = 43276.6 FT. = 8.200 MILE



CONTRACT NO. 76L10

INDEX OF SHEETS

- INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES & COMMITMENTS
- SUMMARY OF QUANTITIES
- TYPICAL SECTIONS SCHEDULE OF QUANTITIES
- SURVEY MONUMENT LOCATIONS
- 17-20
- 22-26 PLAT OF HIGHWAYS
- ADA DETAILS
- 28-29
- DETECTOR LOOP DETAILS
 BUTT JOINT, TRANSITION, SIDEROAD & ENTRANCE DETAILS 30-31
- 32 AERIAL SPEED CHECK ZONE DETAIL 33-60 CULVERT REPLACEMENT PLANS
- HIGHWAY STANDARDS (ALSO SEE ADDITIONAL HIGHWAY STANDARDS ON THIS PAGE)
- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 424001-11 PERPENDICULAR CURB RAMPS FOR SIDEWALKS
- 442201-03 CLASS C AND D PATCHES
- 542001-06 CONCRETE END SECTIONS FOR PIPE CULVERTS 15" (375MM) THRU 84" (2100 MM) DIAMETER
- REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS, 15" (375MM) THRU 36" (900MM) DIAMETER SKEWED WITH ROADWAY 542201-02
- 542301-03 PRECAST REINFORCED CONCRETE FLARED END SECTION
- 542401-04 METAL FLARED END SECTION FOR PIPE CULVERTS
- SLOPED METAL END SECTIONS FOR PIPE CULVERTS 15" (375MM) THRU 60" (1500 MM) DIAMETER
- 602701-02 MANHOLE STEPS
- 606001-07 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 635001-02 DELINEATORS
- 642006-01 SHOULDER RUMBLE STRIPS, 8 IN
- 701001-02 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
- 701006-05 OFF-RD OPERATIONS, 2L, 2W, 15' (4.5M) TO 24" (600MM) FROM PAVEMENT EDGE
- 701011-04 OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701201-05 LANE CLOSURE, 2L, 2W DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701301-04 LANE CLOSURE, 2L, 2W SHORT TERM OPERATIONS
- LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS \geq 45 MPH
- 701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS DAY ONLY
- 701326-04 LANE CLOSURE, 2L, 2W PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
- 701501-06 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701801-06 SIDEWALK, CORNER OR CROSSWALK CLOSURE
- 701901-08 TRAFFIC CONTROL DEVICES
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 781001-04 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 886001-01 DETECTOR LOOP INSTALLATIONS
- 886006-01 TYPICAL LAYOUTS FOR DETECTOR LOOPS
- B.L.R. 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- **GENERAL NOTES**
- 1. UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA

UTILITY		BELOW GROUND
AMEREN ILLINOIS (GAS & ELECTRIC)	X	X
GRAFTON TELEPHONE COMPANY	Χ	X
FRONTIER COMMUNICATIONS	Χ	X
AT&T ILLINOIS (COMMUNICATIONS)	Χ	X
JERSEY COUNTY RURAL WATER COMPANY		X
CITY OF JERSEYVILLE (WATER & SANITARY SEWER)		X
M.J.M. ELECTRIC COOPERATIVE, INC.	Χ	X
NEWWAVE COMMUNICATIONS (CABLE TV)	Χ	X
NUSTAR PIPELINE OPERATING PARTNERSHIP L.P.		X

- 2. NO SURVEY WAS PERFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS
- THE PROPOSED PAVEMENT MARKING SHALL MATCH THE SAME LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
- ONLY SHORT TERM PAVEMENT MARKING REMOVAL FROM FINAL SURFACE SHALL BE PAID FOR AS SHORT TERM PAVEMENT MARKING REMOVAL.
- AN EMPTIED MATERIAL TRANSFER DEVICE IS ALLOWED OVER STRUCTURES SN 042-0025, SN 042-2006, SN 042-2462, SN 042-2463, SN 042-2464, SN 042-2465, SN 042-2466 AND
- IF THE PROPOSED SURFACE REMOVAL ON THIS PROJECT PRODUCES A MILLED EDGE NEAR CENTERLINE GREATER THAN 1.5 INCHES OR IF THE PROPOSED RESURFACING RESULTS IN AN ELEVATION DIFFERENCE GREATER THAN 2 INCHES NEAR THE CENTERLINE BETWEEN ADJACENT OPEN LANES OF TRAFFIC, ONE OF THE FOLLOWING SHALL APPLY:
 - * THE CONTRACTOR SHALL ORGANIZE THE WORK TO AVOID THE ELEVATION DIFFERENCES MENTIONED ABOVE.
 - * THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY HOT MIX ASPHALT WEDGE ALONG THE CENTERLINE TO AVOID THE ELEVATION DIFFERENCES MENTIONED ABOVE.
- * THE CONTRACTOR SHALL CONSTRUCT A MILLED SLOPE EDGE (MINIMUM 1:3) ALONG THE CENTERLINE TO AVOID THE ELEVATION DIFFERENCES MENTIONED ABOVE.

THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST PER SOUARE YARD FOR HOT-MIX ASPHALT SURFACE REMOVAL OF THE DEPTH SPECIFIED OR IN THE COST PER TON FOR THE HOT-MIX ASPHALT RESURFACING MIXES SPECIFIED IN THE PLANS.

- THE RESIDENT ENGINEER SHALL VERIFY THE EXISTENCE OF HIGHWAY LIGHTING AND/OR INTELLIGENT TRANSPORTATION SYSTEMS (I.T.S.) UTILITIES WITHIN THE PROJECT LIMITS. IF HIGHWAY LIGHTING AND/OR I.T.S. EXISTS WITHIN THE PROJECT LIMITS, AND IF THESE ITEMS REOUIRE LOCATING. THE CONTRACTOR SHALL BE DIRECTED TO DO SO ACCORDING TO SECTION 803 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS
- 8. THE RIGHT-OF-WAY OR PROPERTY CORNER IS MONUMENTED WITH A 5/8" IRON ROD, THIRTY INCHES (30") IN LENGTH, WITH AN IDOT ALUMINUM CAP THAT SHALL NOT BE REMOVED, DAMAGED OR DISTURBED WHEN SETTING THE RIGHT-OF-WAY MARKER. THE RIGHT-OF-WAY MARKER SHALL BE INSTALLED SO THAT THE BACK OF THE POST IS TWELVE INCHES (12") INSIDE THE RIGHT-OF-WAY BOUNDARY. THE RIGHT-OF-WAY MARKER SHALL BE A WITNESS TO THE MONUMENT

COMMITMENTS

- TREES THREE (3) INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 30.
- THERE IS FIELD DRAIN TILE LOCATED ON PARCEL 8006002, WEST OF SN 042-2403. THE DRAIN TILE CURRENTLY TIES INTO A RETAINING WALL THAT WILL BE REMOVED FOR THE CULVERT EXTENSION. THE DRAIN TILE SHALL REMAIN OPEN AT ALL TIMES. THE DRAIN TILE SHALL BE CUT BACK FOR THE NEW SLOPES AND THE NEW FLOWLINE SHALL BE LINED WITH RIPRAP.
- PARCEL 8006001 HALL FAMILY TRUST PLEASE CONTACT EITHER CAROL SKASICK (CO-TRUSTEE, HALL FAMILY TRUST) (618) 616-6353 OR KEVIN HALL (CO-TRUSTEE, HALL FAMILY TRUST) - (618) 946-1015 (CELL); (618) 885-5815 (LANDLINE) ONE MONTH BEFORE CONSTRUCTION IS SET TO BEGIN.

ADDITIONAL HIGHWAY STANDARDS

- 602416-09 PRECAST MANHOLE, TYPE A, 8' (2. 44M) DIAMETER
- 604001-05 FRAME AND LIDS, TYPE 1
- 666001-01 RIGHT OF WAY MARKERS

- IF THE CONTRACTOR, FOR HIS CONSTRUCTION ACTIVITY, REMOVES TREES WITHIN THE RIGHT-OF-WAY LIMITS WHICH ARE NOT DESIGNATED ON THE PLANS FOR REMOVAL, I.E. IN ORDER TO GAIN ACCESS TO THE PROJECT SITE; IT WILL BE HIS RESPONSIBILITY TO REPLACE THE TREES AT A 1:1 RATIO. THE TREES WILL BE REPLACED WITH A 1 GALLON NATIVE ILLINOIS TREE SPECIES AND SHALL BE APPROVED BY THE ENGINEER. THE TREE REMOVAL AND TREE REPLACEMENT WILL BE THE CONTRACTOR'S EXPENSE, AND NO ADDITIONAL COMPENSATION WILL BE
- 10. THE DISTRIC LAND ACQUISTION SECTION SHALL BE CONTACTED IF DIFFERENCES ARE IDENTIFIED BETWEEN ANY PROPOSED RIGHT-OF-WAY OR EASEMENT SHOWN ON THE ENGINEERING PLAN SHEETS AS COMPARED TO THE SAME PROPOSED RIGHT-OF-WAY OR EASEMENT SHOWN ON THE PLAT OF HIGHWAYS QUESTIONS OR CONCERNS REGARDING THESE ITEMS SHOULD BE DIRECTED TO CLINT MARSHALL AT (618)346-3124.
- 11. ALL EXISTING AND PROPOSED RIGHT-OF-WAY LINES AND PROPERTY LINES SHOWN ON THE ROADWAY PLAN SHEETS ARE GRAPHICAL REPRESENTATIONS AND SHALL NOT BE USED AS A MEANS TO ESTABLISH OWNERSHIP. IN ALL MATTERS RELATING TO RIGHT-OF-WAY. THE PLAT OF HIGHWAYS SHALL BE THE CONTROLLING DOCUMENT
- 12. IF ANY SECTION OR SUB-SECTION MONUMENT (I.E. STONE, BRASS PLUG, ALUMINUM DISK, IRON PIPE OR PIN, MAG NAIL, CROSS, ETC.), IS ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENT IS REMOVED OR RESURFACED OVER. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE THE MONUMENT IN PLACE UNTIL AN ILLINOIS PROFESSIONAL LAND SURVEY WITH A DEPARTMENT PREQUALIFICATION I "SPECIAL SERVICES - SURVEYING" HAS REFERENCED ITS LOCATION.
- 13. ANY MONUMENT OR PROPERTY CORNER TO BE SET SHALL BE SET BY AN ILLINOIS PROFESSIONAL LAND SURVEYOR WITH A DEPARTMENT PREQUALIFICATION IN "SPECIAL SERVICES- SURVEYING".
- 14. THE RIGHT-OF-WAY, PERMANENT EASMENTS AND TEMPORARY EASEMENTS SHALL BE STAKED PRIOR TO ANY CONSTRUCTION OPERATIONS. STAKES SHALL BE PLACED SUCH THAT THEY ARE VISIBLE FROM EACH OTHER AND ARE SUFFICIENTLY SPACED TO DETERMINE THE LOCATION OF THE RIGHT-OF WAY OR EASEMENT IN ANY LOCATION. THE RIGHT-OF-WAY SHALL BE STAKED BY AN ILLINOIS PROFESSIONAL LAND SURVEYOR WITH A DEPARTMENT PREQUALIFICATION IN "SPECIAL SERVICES - SURVEYING". THIS WORK SHALL BE INCLUDED IN THE LUMP SUM COST FOR CONSTRUCTION LAYOUT

MIXTURE REQUIREMENTS

ROUTE	FAP 747/FAP 8813 (IL 109)
SECTION	(57,58,59)RS-2
COUNTY	JERSEY
CONTRACT	76L10

DESCRIPTION RESURFACING - STANDARD OVERLAY - IL 109 FROM IL 3 TO US 67 IN JERSEYVILLE

ADT (CONSTRUCTION YR):	4450
MU%	1.8
SU%	2.3
20 YR. ESAL'S:	0.87

MIXTURE USE	SURFACE	BINDER	PATCHING	
AC/PG	PG 64-22	PG 64-22	PG 64-22	
RAP % (MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	
DESIGN AIR VOIDS	4.0%@ Ndes=70	4.0% Ndes=70	4 . 0‰ Ndes=70	
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5	IL 9.5FG	IL 19.0	
FRICTION AGG	MIXTURE "C"	MIXTURE "C"	MIXTURE "B"	
QUALITY MGMT PROGRAM	QCP	QCP	QC/QA	

MIXTURE USE	SHOULDERS (LOWER)	SHOULDERS (SURFACE)	INCIDENTAL
AC/PG	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISIO	SIEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0% @ Ndes=30	4.0% @ Ndes=30	4.0% @ Ndes=70
MIX COMPOSITION (GRADATION MIXTURE)	IL 19.0L	IL 9.5L	IL 9.5
FRICTION AGG			
QUALITY MGMT PROGRAM	QC/QA	QC/QA	QC/QA

TO STA.

REV. - MS

DESIGNED SER NAME = murrayda REVISED DRAWN REVISED LOT SCALE = 2.0000 ' / in HECKED REVISED OT DATE = 9/1/2021 REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** INDEX OF SHEETS, HIGHWAY STANDARDS **GENERAL NOTES & COMMITMENTS**

OF 1 SHEETS STA.

SECTION COUNTY (57.58.59)RS-2 JERSEY 60 CONTRACT NO. 76L10

				CONSTRUCTION CODE			
			100% FEDERAL	FAS RTF 747	FAS RTF 747	FAS RTE 747	FAU RTE 8813
		Т		ROADWAY		BOX CULVERT	ROADWAY
CODE			TOTAL	0005	0005	0004	0005
NO.	ITEM	UNIT	QUANTITY	RURAL	URBAN	042-2403	URB <u>AN</u>
						RURAL	
20100500	TREE REMOVAL, ACRES	ACRE	0.75	0.40		0.35	
20200100	EARTH EXCAVATION	CU YD	840	610		230	
20300100	CHANNEL EXCAVATION	CU YD	170	20		150	
20400800	FURNISHED EXCAVATION	CU YD	210			210	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	168	95		73	
20800150	TRENCH BACKFILL	CU YD	49	10		39	
25000200	SEEDING, CLASS 2	ACRE	0.75	0.40		0.35	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	56	30		26	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	56	30		26	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	56	30		26	
25100115	MULCUL METHOD 2	ACRE	0.75	0.40		0.35	
25100115	MULCH, METHOD 2	AURE	0.75	0.40		0.35	
25100630	EROSION CONTROL BLANKET	SQ YD	1170	506		664	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	30	13		17	
28000305	TEMPORARY DITCH CHECKS	FOOT	370	186		184	
2300000	TEM START BITOTI GILLORG	1 301	370	150		107	
	<u> </u>						

DESIGNED -REVISED DRAWN REVISED PLOT SCALE = 2.0000 ' / in. CHECKED -REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION SUMMARY OF QUANTITIES (57,58,59)RS-2 SHEET 1 OF 7 SHEETS STA. ___ TO STA. _

COUNTY SHEETS NO.

JERSEY 60 3

CONTRACT NO. 76L10

	100%		CONSTRUCTION CODE				
			FEDERAL	EAS DTE 747	EAS DTE 747	FAS RTE 747	FAU RTE 8813
	T			ROADWAY	ROADWAY	BOX CULVERT	ROADWAY
CODE			TOTAL	0005	0005	0004	0005
NO.	ITEM	UNIT	QUANTITY	RURAL	URBAN	042-2403	URBAN
						RURAL	
28100109	STONE RIPRAP, CLASS A5	SQ YD	254	207		47	
28200200	FILTER FABRIC	SQ YD	254	207		47	
35101400	AGGREGATE BASE COURSE, TYPE B	TON	6				6
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	16	16			
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	11	11			
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	220	108			112
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	90401	70648	11199	16	8538
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	601	461	47		93
40600990	TEMPORARY RAMP	SQ YD	993	449	53		491
40602970	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N70	TON	8082	6279	995		808
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	9699	7534	1195		970
40800029	BITUMINOUS MATERIALS (TACK COAT)	POUND	362	291	29		42
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	36	29.5	2.6		3.9
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	126				126
	ONE WAS CEIVELY CONCRETE SIDEWALK 4 INOT		120				120

MODEL: \$MODELNAME\$
FILE NAME: ow:\\oldsymbol{v} on:\Oldsymbol{v} on:\Oldsy

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

 SUMMARY OF QUANTITIES
 F.A.S. F.A.U. F.A.U. 747 8813
 SECTION 747 8813
 (57,58,59)

 SHEET 2 OF 7 SHEETS STA. _____ TO STA. _____
 III
 III

CONSTRUCTION CODE

A.S. A.U. SECTION COUNTY TOTAL SHEETS NO. 74/47 (57,58,59)RS-2 JERSEY 60 4 CONTRACT NO. 76L10

			100%		CONSTRU	JCTION CODE	
			FEDERAL	FAS RTE 747	FAS RTE 747	FAS RTE 747	FAU RTE 8813
				ROADWAY	ROADWAY	BOX CULVERT	ROADWAY
CODE			TOTAL	0005	0005	0004	0005
NO.	ITEM	UNIT	QUANTITY	RURAL	URBAN	042-2403	URBAN
						RURAL	
42400800	DETECTABLE WARNINGS	SQ FT	28				28
44000100	PAVEMENT REMOVAL	SQ YD	152				152
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	138160	17776	112112		8272
44000450	LIGT MIX A OPLIAL T OUPEA OF PEMOVAL OF A 1/9"	00.45	4000				4000
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	4928				4928
44000600	SIDEWALK REMOVAL	SQ FT	93				93
		<u> </u>		<u> </u>			
44004250	PAVED SHOULDER REMOVAL	SQ YD	50	28		22	
44200211	PAVEMENT PATCHING, TYPE IV, 18 INCH	SQ YD	192	107		85	
40400400	A CODE OF THE WEBSE OF SHOULDED THE B	TOM	0500	4000	040		050
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	2532	1966	312	2	252
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	50	28		22	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	4256	3453	548		255
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1			1	
50102400	CONCRETE REMOVAL	CU YD	5	2		3	
50105220	PIPE CULVERT REMOVAL	FOOT	98	98		<u> </u>	
		+		-			
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2			2	

MODEL: \$MODELNAME\$
FILE NAME: overNolanroom det illinois ener PM

USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED
PLOT DATE = 8/11/2021	DATE -	REVISED -

STATE OF	ILLINOIS
DEPARTMENT OF	TRANSPORTATION

	F.A.S. F.A.U.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES	747 8813	(57,58,59)RS-2		JERSEY	60	5
				CONTRACT	NO. 76	5L10
SHEET 3 OF 7 SHEETS STA TO STA		ILLINOIS F	FED. AID	D PROJECT		

			100%		CONSTRU	ICTION CODE	
CODE			FEDERAL	ROADWAY	ROADWAY	FAS RTE 747 BOX CULVERT	ROADWAY
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0005 RURAL	0005 URBAN	0004 042-2403 RURAL	0005 URBAN
54001002	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	2	2			
54010505	PRECAST CONCRETE BOX CULVERTS 5' X 5'	FOOT	91	91			
54010605	PRECAST CONCRETE BOX CULVERTS 6' X 5'	FOOT	67			67	
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	131	131			
54213450	END SECTIONS 15"	EACH	2	2			
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	141	68		73	
60224459	MANHOLES, TYPE A, 8'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1			
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	43				43
63500105	DELINEATORS	EACH	4	2		2	
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	86809	67481	10666		8662
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	16	16			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	9.4	1.4		1.2
67100100	MOBILIZATION	L SUM	1	0.8	0.1		0.1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.8	0.1		0.1

FILE NAME: pw:\\planroom.dot.illin

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

 SUMMARY OF QUANTITIES
 F.A.S. F.A.U. 747 8813
 (5:

 ____ SHEET 4 OF 7 SHEETS STA. ____ TO STA. ____
 _____ TO STA. _____
 ______ TO STA. ______

F.A.S. F.A.U. SECTION COUNTY TOTAL SHEETS NO. 747 (57.58,59)RS-2 JERSEY 60 6 CONTRACT NO. 76L10

	70100460
	70100500
	70102620
	70102640
	7010702
	70300100
	70300150
	70300220
	70300260
	70300280
	72400200
*	72400600
*	78000200
*	78000600

			100%		CONSTRU	CONSTRUCTION CODE							
	1		100% FEDERAL	FAS RTE 747 ROADWAY	FAS RTE 747 ROADWAY	FAS RTE 747 BOX CULVERT	FAU RTE 8813 ROADWAY						
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0005 RURAL	0005 URBAN	0004 042-2403 RURAL	0005 URBAN						
						RUKAL							
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	0.8	0.1		0.1						
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1				1						
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.8	0.1		0.1						
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1				1						
70107025	CHANGEABLE MESSAGE SIGN	CAL DAY	56	28		28							
70300100	SHORT TERM PAVEMENT MARKING	FOOT	12840	9900	1470		1470						
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1460	1122	164		174						
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	123628	98827	11900		12901						
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	277				277						
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	35				35						
72400200	REMOVE SIGN PANEL ASSEMBLY - TYPE B	EACH	1				1						
72400600	RELOCATE SIGN PANEL ASSEMBLY - TYPE B	EACH	1				1						
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	123628	98827	11900		12901						
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	277				277						

★ SPECIALTY ITEM

USER NAME = murrayda	DESIGNED -	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED
PLOT DATE = 8/11/2021	DATE -	REVISED -

STATE	OI	FILLINOIS
DEPARTMENT	OF	TRANSPORTATION

							F.A.S. F.A.U.	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
	SUN	/IIVI A	NKY	OF QUA	ANTITIES		747 8813	(57,58,5	9)RS-2		JERSEY	60	7
											CONTRACT	NO. 76	5L10
 SHEET 5	5	OF	7	SHEETS	STA	TO STA			ILLINOIS	FED. Al	D PROJECT		

			100%		C HON CODE	,DL			
			FEDERAL	EAC DTE 747	FAS RTE 747	FAS RTE 747	EALL DTE 004		
	r	Ť	T	ROADWAY	ROADWAY	BOX CULVERT	FAU RTE 88° ROADWAY		
CODE			TOTAL	0005	0005	0004	0005		
NO.	ITEM	UNIT	QUANTITY	RURAL	URBAN	042-2403	URBAN		
140.	TIEW	ONT	QOANTITI	KOKAL	OKBAN	RURAL	ONDAN		
78000620	THERMOPLASTIC PAVEMENT MARKING - LINE 18"	FOOT	48	48					
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	35				35		
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	552	428	68		56		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	552	428	68		56		
38600600	DETECTOR LOOP REPLACEMENT	FOOT	662				662		
		1001	302				002		
(0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	141	68		73			
< 6660445	RIGHT-OF-WAY AND PROPERTY CORNERS	EACH	1	1					
K7 011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	0.5		0.5			
K7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	41585	32962	3967		4656		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5		0.5			
20016702	DETOUR SIGNING	L SUM	1	0.5		0.5			
20023500	FILLING EXISTING CULVERTS	CU YD	49	49					
Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	43296	33634	5332		4330		
20034105	MATERIAL TRANSFER DEVICE	TON	17781	13813	2190		1778		
Z0054517	ROCK FILL - FOUNDATION	TON	59	39		20			

CONSTRUCTION CODE

* SPECIALTY ITEM

REV. - MS

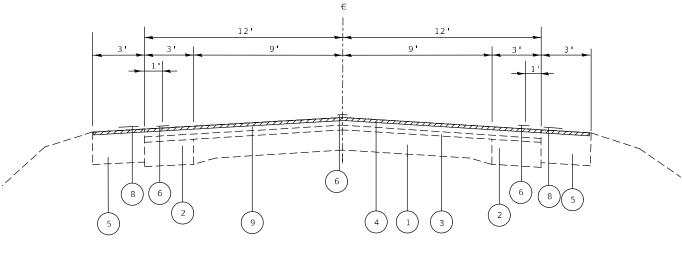
USER NAME = murrayda	DESIGNED	REVISED =					F.A.S.	SECTION	COUNTY	TOTAL	SHEET
	DRAWN	REVISED	STATE OF ILLINOIS	1	SUMMARY OF QUANTITIES		747 8813	(57,58,59)RS-2	JERSEY	60	8
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED	DEPARTMENT OF TRANSPORTATION				1 0013		CONTRAC	T NO. 70	5L10
PLOT DATE = 8/11/2021	DATE	REVISED		SCALE:	SHEET 6 OF 7 SHEETS STA.	TO STA		ILLINOIS FED. A	ID PROJECT		

				100%		CONSTRU	JCTION CODE	
				100% FEDERAL	FAS RTE 747	FAS RTE 747	FAS RTE 747	FAU RTE 8813
	0005			TOTAL	ROADWAY	ROADWAY	BOX CULVERT	ROADWAY
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0005 RURAL	0005 URBAN	0004 042-2403	0005 URBAN
	110.	TEW	Oitii	QO/MITTI	ROIGAL	OKBAR	RURAL	ORDAN
	Z0070100	CURVEY MONUMENT COVER A CCEMPLY	FACIL	40	10	4		
	20070100	SURVEY MONUMENT COVER ASSEMBLY	EACH	13	10	1		2
		_			_			
5	Z0076600	TRAINEES	HOUR	1000	1000			
5	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000			
,	20070004	TRAINEES TRAINING PROGRAW GRADUATE	HOUK	1000	1000			
		_						
							_	

Ø 0042

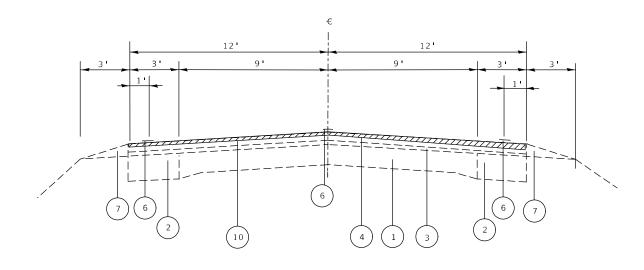
REV. - MS

USER NAME = murrayda	DESIGNED	REVISED								F.A.S.	SECTION	COUNTY	TOTAL	SHEET
	DRAWN	REVISED	STATE OF ILLINOIS		S	UMMARY	Y OF QL	JANTITIES		747	(57,58,59)RS-2	JERSEY	60	9
PLOT SCALE = 2.0000 ' / in.	CHECKED	REVISED	DEPARTMENT OF TRANSPORTATION							00131		CONTRAC	T NO. 7	/6L10
PLOT DATE = 8/11/2021	DATE	REVISED -		SCALE:	SHEET 7	OF 7	SHEETS	STA	TO STA		ILLINOIS FED. A	AID PROJECT		



EXISTING TYPICAL SECTION

IL 109
MILE STATION 0.0 TO MILE STATION 7.87



EXISTING TYPICAL SECTION

IL 109
MILE STATION 7.87 TO MILE STATION 8.22

LEGEND

1 EXISTING CONCRETE PAVEMENT (9"-6"-9")

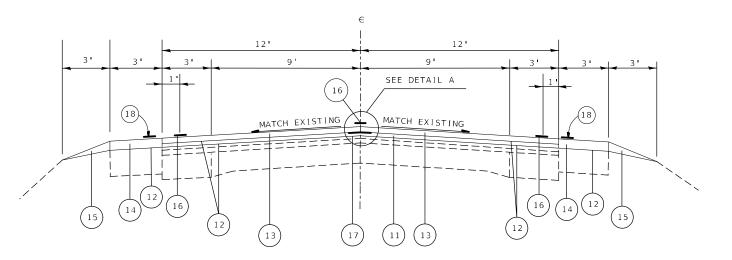
18) PROPOSED SHOULDER RUMBLE STRIPS, 8"

(2	EXISTING BASE COURSE WIDENING (BITUMINOUS), 9"
(3	EXISTING LEVELING BINDER, TYPE 2, VAR 0" TO 3 1/4"
(4	EXISTING BITUMINOUS OVERLAY, VAR. 6 1/2" TO 8"
(5	EXISTING HOT-MIX ASPHALT SHOULDERS, 8"
(6	EXISTING THERMOPLASTIC PAVEMENT MARKING - LINE 4"
(7	EXISTING AGGREGATE WEDGE, TYPE A
(8	EXISTING SHOULDER RUMBLE STRIPS, 8"
(9	PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2"
(10	PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
(1	PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL - 9.5FG, N70, 1 1/4"
(1)	PROPOSED BITUMINOUS MATERIALS (TACK COAT)
(1)	PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 1/2"
1	PROPOSED HOT-MIX ASPHALT SHOULDERS
(1	PROPOSED AGGREGATE WEDGE SHOULDERS, TYPE B
(10	PROPOSED THERMOPLASTIC PAVEMENT MARKING - LINE 4"
(1	PROPOSED LONGITUDINAL JOINT SEALANT
~	

USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in	CHECKED	REVISED
PLOT DATE = 8/2/2021	DATE	REVISED

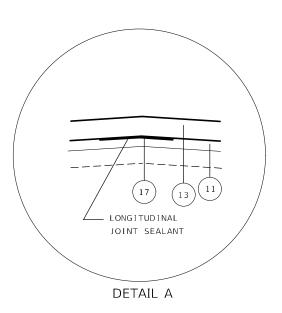
STATE C	F ILLINOIS
DEPARTMENT OF	TRANSPORTATION

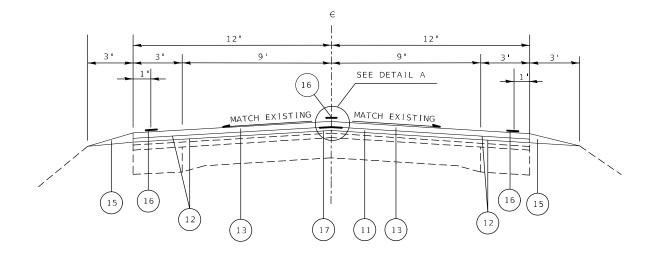
		TYPICA	L SECT	F.A.S. SECTION			COUNTY	TOTAL SHEETS	SHEET NO.			
						747 8813	(57,58,5	9) RS-2		JERSEY	60	10
										CONTRACT	NO. 76	5L10
CALE:	SHEET 1	OF 2	SHEETS	STA	TO STA			ILLINOIS	FED. AI	ID PROJECT		



PROPOSED TYPICAL SECTION

IL 109 MILE STA. 0.00 TO MILE STA. 7.87





LEGEND

- 1 EXISTING CONCRETE PAVEMENT (9"-6"-9")
- 2 EXISTING BASE COURSE WIDENING (BITUMINOUS), 9"
 3 EXISTING LEVELING BINDER, TYPE 2, VAR 0" TO 3 1/4"
- (4) EXISTING BITUMINOUS OVERLAY, VAR. 6 1/2" TO 8"
 - EXISTING HOT-MIX ASPHALT SHOULDERS, 8"
- 6 EXISTING THERMOPLASTIC PAVEMENT MARKING LINE 4"
- (7) EXISTING AGGREGATE WEDGE, TYPE A
- (8) EXISTING SHOULDER RUMBLE STRIPS, 8"
- (9) PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- (10) PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- (11) PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL 9.5FG, N70, 1 1/4"
- 12) PROPOSED BITUMINOUS MATERIALS (TACK COAT)
- 13) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 1/2"

- 14) PROPOSED HOT-MIX ASPHALT SHOULDERS
 15) PROPOSED AGGREGATE WEDGE SHOULDERS, TYPE B
 16) PROPOSED THERMOPLASTIC PAVEMENT MARKING LINE 4"
- 17) PROPOSED LONGITUDINAL JOINT SEALANT
- 18) PROPOSED SHOULDER RUMBLE STRIPS, 8"

PROPOSED TYPICAL SECTION

IL 109

MILE STATION 7.87 TO MILE STATION 8.22

USER NAME = murrayda	DESIGNED	REVISED							F.A.S. F.A.U	SECTION	COUNTY	TOTAL S
	DRAWN	REVISED	STATE OF ILLINOIS				AL SECTIONS		747	(57,58,59) RS-2	JERSEY	60
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED	DEPARTMENT OF TRANSPORTATION						88131		CONTRAC	T NO. 761
PLOT DATE = 8/2/2021	DATE	REVISED		SCALE:	SHEET 2	OF 2	SHEETS STA	TO STA.		ILLINOIS FED	AID PROJECT	

	eets\D87	
	ita\CADsh	
	0\CADDa	
	s\D876L1	
	District 8\Projects\D876L10\CADData\CADsheet	
	T Offices\District 8	
	ents/IDO	
	ow:\\planroom.dot.illinois.gov:PWIDOT\Docume	
	t.illinois.gov:	
AMMES.	planroom, do	
1001	: pw://	ŀ
	AME: p	ı

306	TOTAL.		0
TC	DTAL:	·	6
USER NAME = murrayda	DESIGNED	REVISED	\Box
	DRAWN	REVISED	
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED	
PLOT DATE = 7/29/2021	DATE	REVISED	

RESURFACING SCHEDULE

BITUMINOUS

MATERIALS

(TACK COAT)

POUND

665

54648

7413

1140

10740

285

2946

95

111

9108

1236

190

1790

90367

HMA SURFACE | HMA SURFACE

REMOVAL

2.5 "

SQ YD

422

4365

141

4928

REMOVAL

SQ YD

986

80960

10982

1690

15910

246

20240

2746

422

3978

138160

DIMENSION

WIDTH

FOOT

24

24

24

24

24

24

24

MILE STATION TO MILE

MAINLINE

SHOULDERS 0.00 - 0.07

0.07

5.82

5.84

6.62

6.74

7.87

7.90

8.21

5.82

5.84

6.62

6.74

7.87

7.90

8.21

8.22

TOTAL:

8.22

0.00

0.07

5.82

5.84

6.62

6.74

7.87

7.90

8.21

0.07

5.82

5.84

6.62

6.74

7.87

7.90

8.21

HMA

SURFACE

C, N70

TON

82.8

6800.6

922.5

141.9

1336.5

35.5

366.6

11.8

9699

COURSE, MIX SHOULDERS

HMA

TON

37.9

3117.0

422.8

65.0

612.6

4256

BINDER

COURSE,

IL-9.5FG,

N70

TON

69.0

5667.2

768.8

118.3

1113.7

29.6

305.5

9.9

8082

LONGITUDINAL

JOINT SEALANT

FOOT

370

30360

4118

634

5966

158

1637

53

43296

BRIDGE OMISSION

BRIDGE OMISSION

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

	_	F.A.S. F.A.U.	SEC ⁻	ПОИ		CO				
	S	747 8813	(57,58,5	9) RS-2		JE				
										COI
LE:	SHEET 1	OF 5	SHEETS	STA	TO STA			ILLINOIS	FED. AI	D PROJ

		120	7.17	31.3					
	310			163			299		
	993								
 •	•	•		•			•		
					F.A.S. F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	SCHEDUL	E OF QUANTIT	IES		747 8813	(57,58,59) RS-2	JERSEY	60	12
					CONTRAC	T NO. 7	6L10		

								BUTT JOINT SCH	HEDULE									
	LOCATION	DIRECTION	EXISTING MATERIAL		HMA SURFACE REMOVAL BUTT-JOINT		TEMPORARY RAMPS, 2.50"			TEMI	PORARY RAMPS, 2	2"	TEMF	PORARY RAMPS	, 1.25"	TEM	IPORARY RAMPS	3, .75"
MILE STATION	NAME			WIDTH	LENGTH	SQ YD	WIDTH	LENGTH	SQ YD	WIDTH	LENGTH	SQ YD	WIDTH	LENGTH	SQ YD	WIDTH	LENGTH	SQ YD
0.00	BEGIN OF PROJECT	MAINLINE	HMA	24	15	40.0				24	6.7	17.8				24	2.5	6.7
0.02	IL 3	LEFT	HMA	50	3.5	19.4				50	2	11.1				50	2	11.1
0.23	NELLIES RIDGE	LEFT	PCCP							80	2	17.8				80	2	17.8
0.51	JOE KNIGHT RD.	LEFT	HMA	70	3.5	27.2				70	2	15.6				70	2	15.6
1.02	DOW RD.	LEFT	HMA	70	3.5	27.2				70	2	15.6				70	2	15.6
1.02	AIRPORT RD.	RIGHT	HMA	65	3.5	25.3				65	2	14.4				65	2	14.4
2.24	BETHEL LN.	LEFT	HMA	50	3.5	19.4				50	2	11.1				50	2	11.1
2.24	BETHEL LN.	RIGHT	HMA	70	3.5	27.2				70	2	15.6				70	2	15.6
3.37	MCCLUSKY RD.	LEFT	HMA	85	3.5	33.1				85	2	18.9				85	2	18.9
3.37	MCCLUSKY RD.	RIGHT	HMA	105	3.5	40.8				105	2	23.3				105	2	23.3
3.43	MCCLUSKY TR.	RIGHT	HMA	55	3.5	21.4				55	2	12.2				55	2	12.2
4.38	HAGEN RD.	LEFT	HMA	70	3.5	27.2				70	2	15.6				70	2	15.6
4.38	HAGEN RD.	RIGHT	HMA	75	3.5	29.2				75	2	16.7				75	2	16.7
4.88	LODI RD.	LEFT	HMA	65	3.5	25.3				65	2	14.4				65	2	14.4
5.39	DAVIDSON RD.	RIGHT	HMA	45	3.5	17.5				45	2	10.0				45	2	10.0
5.82	SN 042-0025	MAINLINE	HMA	24	15	40.0												
5.84	SN 042-0025	MAINLINE	HMA	24	15	40.0												
6.39	CRYSTAL LAKE RD.	LEFT	HMA	60	3.5	23.3				60	2	13.3				60	2	13.3
6.39	CRYSTAL LAKE RD.	RIGHT	HMA	60	3.5	23.3				60	2	13.3				60	2	13.3
7.40	BLUEBIRD LN.	LEFT	HMA	35	3.5	13.6				35	2	7.8				35	2	7.8
7.68	COMMERCE BLVD.	LEFT	HMA	70	3.5	27.2				70	2	15.6				70	2	15.6
7.79	ESSEX ST.	RIGHT	HMA	90	3.5	35.0				90	2	20.0				90	2	20.0
7.85	ROSEWOOD DR.	RIGHT	HMA	45	3.5	17.5				45	2	10.0				45	2	10.0
7.87	W COUNTY RD.	LEFT	HMA				85	2	18.9				85	2	18.9			
7.87	W COUNTY RD.	RIGHT	HMA				75	2	16.7				75	2	16.7			
7.96	KIRBY ST.	RIGHT	HMA				50	2	11.1				50	2	11.1			
8.02	MARION ST.	RIGHT	HMA				40	2	8.9				40	2	8.9			
8.03	WALTON AVE.	LEFT	HMA				50	2	11.1				50	2	11.1			
8.07	HAZEL ST.	RIGHT	HMA				50	2	11.1				50	2	11.1			
8.09	LEONARD AVE.	LEFT	HMA				42	2	9.3				42	2	9.3			
8.15	FLETCHER ST.	LEFT	HMA				45	2	10.0				45	2	10.0			
8.20	ANDREW AVE.	LEFT	HMA				35	2	7.8				35	2	7.8			
8.22	END OF PROJECT	MAINLINE	HMA				125	8.33	115.7				125	4.17	57.9			
		SUBTOTAL:				601			221			310			163			299
		TOTAL:				601						993				•		

AGGREGATE

WEDGE

SHOULDER

TYPE B

TON

21.6

1771.0

240.2

37.0

348.0

9.2

95.5

3.1

2526

	\IDOT Offices\District 8\Projects\D876L10\CADD	
MODEL: \$MODELNAME\$	FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 8\Projects\D876L10\CADE	

		ENT	TRANCE SCHEDU	JLE			
LOCA	ATION	LENGTH	WIDTH	AREA	BITUMINOUS MATERIALS (TACK COAT)	INCIDENTAL HMA SURFACING	
MILE STATION	DIRECTION	FOOT	FOOT	SQ YD	POUND	TON	
1.15	LEFT	30	3	10.0	4.5	0.4	
1.29	LEFT	50	3	16.7	7.5	0.7	
1.42	LEFT	26	3	8.7	3.9	0.4	
1.51	LEFT	27.5	3	9.2	4.1	0.4	
1.55	LEFT	32.5	3	10.8	4.9	0.5	
2.49	LEFT	31.5	3	10.5	4.7	0.4	
2.84	RIGHT	17.5	3	5.8	2.6	0.2	
2.85	RIGHT	17.5	3	5.8	2.6	0.2	
2.91	RIGHT	31.5	3	10.5	4.7	0.4	
3.09	LEFT	47.5	3	15.8	7.1	0.7	
3.23	RIGHT	24	3	8.0	3.6	0.3	
3.37	LEFT	27.5	3	9.2	4.1	0.4	
3.56	LEFT	31.5	3	10.5	4.7	0.4	
3.77	LEFT	24	3	8.0	3.6	0.3	
3.82	LEFT	55	3	18.3	8.3	0.8	
3.89	LEFT	130	3	43.3	19.5	1.8	
4.38	RIGHT	14.5	3	4.8	2.2	0.2	
4.41	RIGHT	14	3	4.7	2.1	0.2	
5.46	RIGHT	35	3	11.7	5.3	0.5	
5.50	LEFT	15	3	5.0	2.3	0.2	
5.54	LEFT	23	3	7.7	3.5	0.3	
5.57	LEFT	28.5	3	9.5	4.3	0.4	
5.65	RIGHT	12.5	3	4.2	1.9	0.4	
5.65	LEFT	17.5	3	5.8	2.6	0.2	
5.68	LEFT	16.5	3	5.5	2.5	0.2	
	RIGHT	16.5	3	5.5	2.5	0.2	
5.68	RIGHT	13	3	4.3	2.5	0.2	
			3	5.5		0.2	
5.73 5.75	LEFT LEFT	16.5 15	3	5.0	2.5	0.2	
5.77	LEFT	17.5	3	5.8	2.6	0.2	
5.77	RIGHT	14	3	4.7	2.1	0.2	
5.86	LEFT	12.5	3	4.2	1.9	0.2	
5.87	LEFT	12	3	4.0	1.8	0.2	
5.95	RIGHT	17.5	3	5.8	2.6	0.2	
6.72	LEFT	24	3	8.0	3.6	0.3	
7.13	LEFT	23.5	3	7.8	3.5	0.3	
		TOTAL:			145	13	

DESIGNED -

CHECKED -

DRAWN

PLOT SCALE = 2.0000 ' / in.

REVISED

REVISED

REVISED

2.24	BE	ΓHEL LN.		LEFT	HMA	50	3.5	8.8
2.24	BE ⁻	ΓHEL LN.		RIGHT	HMA	70	3.5	12.3
3.37	MCCI	USKY RD.		LEFT	HMA	85	3.5	14.9
3.37	MCCL	USKY RD.		RIGHT	HMA	105	3.5	18.4
3.43	MCCI	USKY TR.		RIGHT	HMA	55	3.5	9.7
4.38	HA	GEN RD.		LEFT	HMA	70	3.5	12.3
4.38	HA	GEN RD.		RIGHT	HMA	75	3.5	13.2
4.88	LC	DDI RD.		LEFT	HMA	65	3.5	11.4
5.39	DAVI	DSON RD.		RIGHT	HMA	45	3.5	7.9
6.39	CRYST	AL LAKE RD.		LEFT	HMA	60	3.5	10.
6.39	CRYST	AL LAKE RD.		RIGHT	HMA	60	3.5	10.
7.40	BLU	EBIRD LN.		LEFT	HMA	35	3.5	6.2
7.68	COMM	RCE BLVD.		LEFT	HMA	70	3.5	12.3
7.79	ES	SEX ST.		RIGHT	HMA	90	3.5	15.8
7.85	ROSE	WOOD DR.		RIGHT	HMA	45	3.5	7.9
			TO	TAL:				217
		ROW SCHEE	DULE					
DESCRIPTION/LOCATION	STATION	OFFSET	DIRECTION	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	RIGHT-OF-WAY AND PROPERTY CORNERS			
				EACH	EACH	1		
DOW ROAD	69+00.00	30.21	LT	1				
DOW ROAD	69+00.00	29.79	RT	1				
DOW ROAD	69+75.00	90.00	RT	1		-		
DOW ROAD	70+00.00	80.00	LT	1		-		
DOW ROAD	70+50.00	80.00	LT	1		-		
DOW ROAD	70+50.00	90.00	RT	1		-		
DOW ROAD	71+30.00	30.35	I IT	1 1	I	1		

16

SCHEDULE OF QUANTITIES

TO STA. _

SHEET 2 OF 5 SHEETS STA. ___

COUNTY TOTAL SHEET NO.

JERSEY 60 13

CONTRACT NO. 76L10

SECTION

(57,58,59) RS-2

1.10		OLX O1.			INOITI	1 11 4 4 4	
7.85	ROSE	WOOD DR.		F	RIGHT	HMA	
			-	TOT	ĀL:		
							7
		ROW SCHEE	DULE				
DESCRIPTION/LOCATION	STATION	OFFSET	DIRECTION		FURNISHING AND ERECTING RIGHT OF WAY MARKERS	RIGHT-OF-WAY AND PROPERTY CORNERS	- 1
					EACH	EACH	
DOW ROAD	69+00.00	30.21	LT		1		╛
DOW ROAD	69+00.00	29.79	RT		1		
DOW ROAD	69+75.00	90.00	RT		1		
DOW ROAD	70+00.00	80.00	LT		1		٦
DOW ROAD	70+50.00	80.00	LT		1		1
DOW ROAD	70+50.00	90.00	RT		1		٦
DOW ROAD	71+30.00	30.35	LT		1		1
DOW ROAD	71+40.00	29.64	RT		1		1
HAGEN ROAD	245+10.00	29.74	RT		1		1
HAGEN ROAD	245+75.00	30.28	LT		1	1	1
HAGEN ROAD	246+00.00	90.00	RT		1		1
HAGEN ROAD	246+55.00	95.00	LT		1		1
HAGEN ROAD	246+75.00	90.00	RT		1		1
HAGEN ROAD	247+00.00	95.00	LT		1		1
HAGEN ROAD	247+55.00	30.28	LT		1		1
HAGEN ROAD	247+60.00	29.75	RT		1		1

TOTAL:

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

	LOCATION	DIRECTION	EXISTING MATERIAL	LENGTH	WIDTH	BITUMINOUS MATERIALS (TACK COAT)	INCIDENTAL HMA SURFACING
MILE STATION	NAME			FOOT	FOOT	POUND	TON
0.02	IL 3	LEFT	HMA	50	3.5	8.8	0.8
0.51	JOE KNIGHT RD.	LEFT	HMA	70	3.5	12.3	1.1
1.02	DOW RD.	LEFT	HMA	70	3.5	12.3	1.1
1.02	AIRPORT RD.	RIGHT	HMA	65	3.5	11.4	1.1
2.24	BETHEL LN.	LEFT	HMA	50	3.5	8.8	0.8
2.24	BETHEL LN.	RIGHT	HMA	70	3.5	12.3	1.1
3.37	MCCLUSKY RD.	LEFT	HMA	85	3.5	14.9	1.4
3.37	MCCLUSKY RD.	RIGHT	HMA	105	3.5	18.4	1.7
3.43	MCCLUSKY TR.	RIGHT	HMA	55	3.5	9.7	0.9
4.38	HAGEN RD.	LEFT	HMA	70	3.5	12.3	1.1
4.38	HAGEN RD.	RIGHT	HMA	75	3.5	13.2	1.2
4.88	LODI RD.	LEFT	HMA	65	3.5	11.4	1.1
5.39	DAVIDSON RD.	RIGHT	HMA	45	3.5	7.9	0.7
6.39	CRYSTAL LAKE RD.	LEFT	HMA	60	3.5	10.5	1.0
6.39	CRYSTAL LAKE RD.	RIGHT	HMA	60	3.5	10.5	1.0
7.40	BLUEBIRD LN.	LEFT	HMA	35	3.5	6.2	0.6
7.68	COMMERCE BLVD.	LEFT	HMA	70	3.5	12.3	1.1
7.79	ESSEX ST.	RIGHT	HMA	90	3.5	15.8	1.5
7.85	ROSEWOOD DR.	RIGHT	HMA	45	3.5	7.9	0.7
		TOTAL:				217	20

SIDEROAD SCHEDULE

	ADA SCHEDULE													
LOCATION	PAVEMENT REMOVAL	SIDEWALK REMOVAL	AGGREGATE BASE COURSE, TYPE B	PC CONCRETE SIDEWALK 4 INCH	DETECTABLE	COMBINATION CURB AND GUTTER, TYPE B6.24	PANEI	RELOCATE SIGN PANEL ASSEMBLY, TYPE B						
	SQ YD	SQ FT	TON	SQ FT	SQ FT	FOOT	EACH	EACH						
NE QUADRANT HWY 109 AND W. COUNTY RD	81	52	3.5	75	20	23	1	1						
NW QUADRANT HWY 109 AND W. COUNTY RD	71	41	2.5	51	8	20								
TOTAL:	152	93	6	126	28	43	1	1						

		PAVEM	IENT MARKING SCHEI	DULE					
MILE	DESCRIPTION	TEMPORARY PA	VEMENT MARKING	TEMPORARY PAVEMENT MARKING	THERMOPLASTIC PAVEMENT MARKI				
STATION	DESCRIPTION	12" SOLID WHITE	24" SOLID WHITE	REMOVAL	12" SOLID WHITE	24" SOLID WHITE			
		FOOT	FOOT	SQ FT	FOOT	FOOT			
8.22	IL 109 - STOP BAR		35	70	0	35			
8.22	IL 109 - CROSSWALK	172		172	172				
8.22	US 67 - CROSSWALK	105		105	105				
	TOTAL:	277	35	347	277	35			

PAVEMENT N	MARKING SCHEDULE
	THERMOPLASTIC PAVEMENT MARKING
MILE STATION	18" SOLID WHITE
	FOOT
0.602	8
0.727	8
0.852	8
3.844	8
3.969	8
4.094	8
TOTAL:	48

MODEL: \$MODELNAME\$ FILE NAME: pw:\\planroom.dot.illinois.gov:			
DDE DW:	USER NAME = murrayda	DESIGNED	REVISED -
AME:		DRAWN	REVISED -
DDEL E N	PLOT SCALE = 2.0000 / in	CHECKED	REVISED -
ΣĒ	PLOT DATE = 7/29/2021	DATE	REVISED

						F.A.S. F.A.U.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
S	CHED	ULE	OF QUA	ANTITIES		747 8813	(57,58,59) RS-2		JERSEY	60	14
									CONTRACT	NO. 76	5L10
 SHEET 3	OF	5	SHEETS	STA	TO STA		ILLINOIS	FED. AI	D PROJECT		

m.dat.illinois.gov:PWIDOT\Documents\IDOT Offices\District 8\Projects\D876L10\CADDa

\$MODELNAME\$	
MODEL:	

USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in	CHECKED -	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

			=				F A	۱.U.	S	ECT	ION		COUN	ITY
	SCHI	:D	ULE	OF QUA	ANTITIES		74 88		(57,5	8,5	9) RS-2		JERSE	EY
							\perp						CONT	RAC
 SHEET 4	. (DF	5	SHEETS	STA	TO STA					ILLINOIS	FED.	AID PROJECT	_

F.A.S. F.A.U.	SEC ⁻	LION		COUNTY	TOTAL SHEETS	SHEET NO.
747 8813	(57,58,5	9) RS-2		JERSEY	60	15
				CONTRACT	NO. 76	5L10
		ILLINOIS	FED. A	ID PROJECT		

				SHORT TERM							_		Γ		_		Τ
				PAVEMENT MARKING	TEMP	ORARY PAVEMENT	MARKING		RAISED REFLECTIVE	RAISED REFLECTIVE	SHORT TERM PAVEMENT	TEMPORARY PAVEMENT	THERMO	PLASTIC PAV	'EMENT I	MARKING	SHOULDER
	STAT E STA	OT NO	LENGTH	4" SKIP-DASH	4" SOLID	4" SKIP-DASH	NO PAS	SING ZONE	PAVEMENT	PAVEMENT MARKERS	MARKING	MARKING	4" SOLID	4" SKIP-	NO PAS	SSING ZONE	RUMBLE STRIP, 8"
IVIIL	E 51 <i>F</i>	TION		YELLOW	WHITE	YELLOW		SOLID LLOW	MARKER REMOVAL	CRYSTAL	REMOVAL	REMOVAL	WHITE	DASH YELLOW		SOLID ELLOW	OTIVII, O
			FOOT	FOOT	FOOT	FOOT	DIR	FOOT	EACH	EACH	SQ FT	SQ FT	FOOT	FOOT	DIR	FOOT	FOOT
0.00	-	0.01	53	30	106		вотн	106	1	1	4	71	106		вотн	106	106
0.01	-	0.07	317	90	634	80	SB	317	4	4	10	344	634	80	SB	317	634
0.07	-	0.18	581	180	1162		вотн	1162	7	7	20	775	1162		вотн	1162	1162
0.18	-	0.22	211	60	422	60	NB	211	3	3	7	232	422	60	NB	211	422
0.22	-	0.23	53	30	53	20	NB	53	1	1	4	42	53	20	NB	53	106
0.23	-	0.25	106	30	211	30	NB	106	1	1	4	116	211	30	NB	106	211
0.25	-	0.29	211	60	422	60			3	3	7	161	422	60			422
0.29	-	0.41	634	180	1267	160	SB	634	8	8	20	687	1267	160	SB	634	1267
0.41	-	0.51	528	150	1056	140			7	7	17	399	1056	140			1056
0.51	-	0.52	53	30	53	20			1	1	4	25	53	20			106
0.52	-	0.86	1795	510	3590	450	<u> </u>		22	22	57	1347	3590	450			3590
0.86	-	0.98	634	180	1267	160	NB	634	8	8	20	687	1267	160	NB	634	1267
0.98	-	1.01	158	60	317	40			2	2	7	119	317	40	-		317
1.01	-	1.03	106	30	700	30			1 -	1	4	10		30			211
1.03	-	1.10	370	120	739	100	05	500	5	5	14	280	739	100	0.0	500	739
1.10	-	1.20	528	150	1056	140	SB	528	7	7	17	575	1056	140	SB	528	1056
1.20	-	1.48	1478	420	2957	370	ND	4400	18	18	47	1109	2957	370	ND	4400	2957
1.48	-	1.69	1109	330	2218	280	NB	1109	14	14	37	1203	2218	280	NB	1109	2218
1.69	-	1.73	211 1056	60 300	422 2112	270	BOTH	422 1056	3	3 13	34	282 1146	422 2112	270	BOTH	422 1056	422 2112
1.73	-	1.93	317	90	634	80	36	1056	13	4	10	238	634	80	SB	1056	634
1.99	<u> </u>	2.12	686	210	1373	180	NB	686	9	9	24	747	1373	180	NB	686	1373
2.12	+-	2.12	634	180	1267	100	BOTH	1267	8	8	20	845	1267	100	BOTH	1267	1267
2.12	+-	2.25	53	30	1207		ВОТН	106	1	1	4	36	1207		вотн	106	106
2.25	-	2.26	53	30	106		ВОТН	106	1 1	1	4	71	106		ВОТН	106	106
2.26	-	2.46	1056	300	2112	270	SB	1056	13	13	34	1146	2112	270	SB	1056	2112
2.46	-	2.47	53	30	106	270	вотн	106	1	1	4	71	106	2,0	ВОТН	106	106
2.47	-	2.66	1003	300	2006	260	NB	1003	13	13	34	1090	2006	260	NB	1003	2006
2.66	 -	3.08	2218	630	4435		вотн	4435	28	28	70	2957	4435		вотн	4435	4435
3.08	-	3.29	1109	330	2218	280	SB	1109	14	14	37	1203	2218	280	SB	1109	2218
3.29	-	3.36	370	120	739	100			5	5	14	280	739	100			739
3.36	-	3.38	106	30		30			1	1	4	10		30			211
3.38	-	3.42	211	60	422	60			3	3	7	161	422	60			422
3.42	-	3.43	53	30	53	20			1	1	4	25	53	20			106
3.43	-	4.25	4330	1200	8659	1090			54	54	134	3250	8659	1090			8659
4.25	-	4.38	686	210	1373	180	NB	686	9	9	24	747	1373	180	NB	686	1373
4.38	-	4.39	53	30		20	NB	53			4	25		20	NB	53	106
4.39	-	4.46	370	120	739	100	NB	370	5	5	14	403	739	100	NB	370	739
		TOTAL (6930	46306	5080		17321	299	299	787	22915	46306	5080		17321	47099
	T	OTAL (1)	:	6930		68707			299	299	787	22915		68707	7		47099

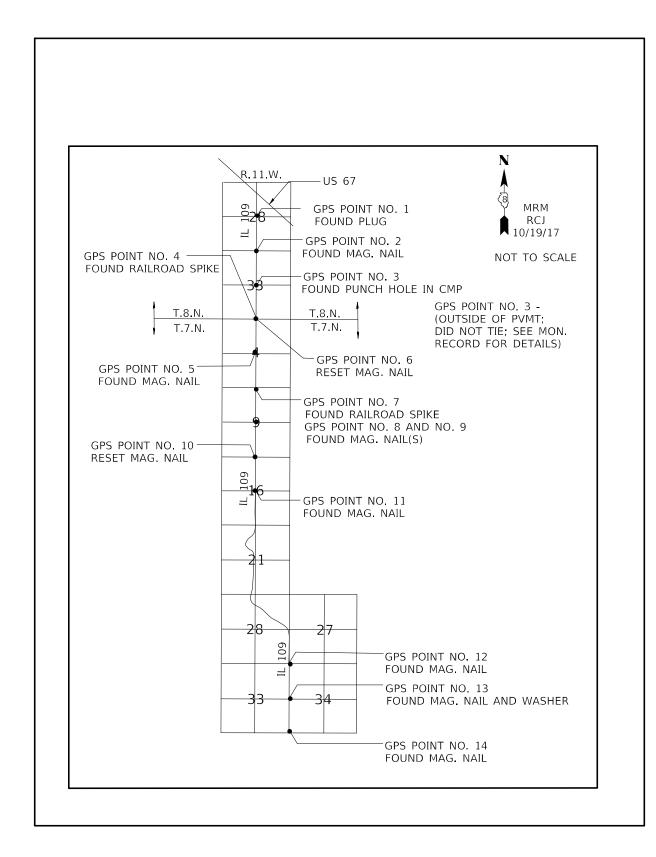
PAVEMENT MARKING SCHEDULE

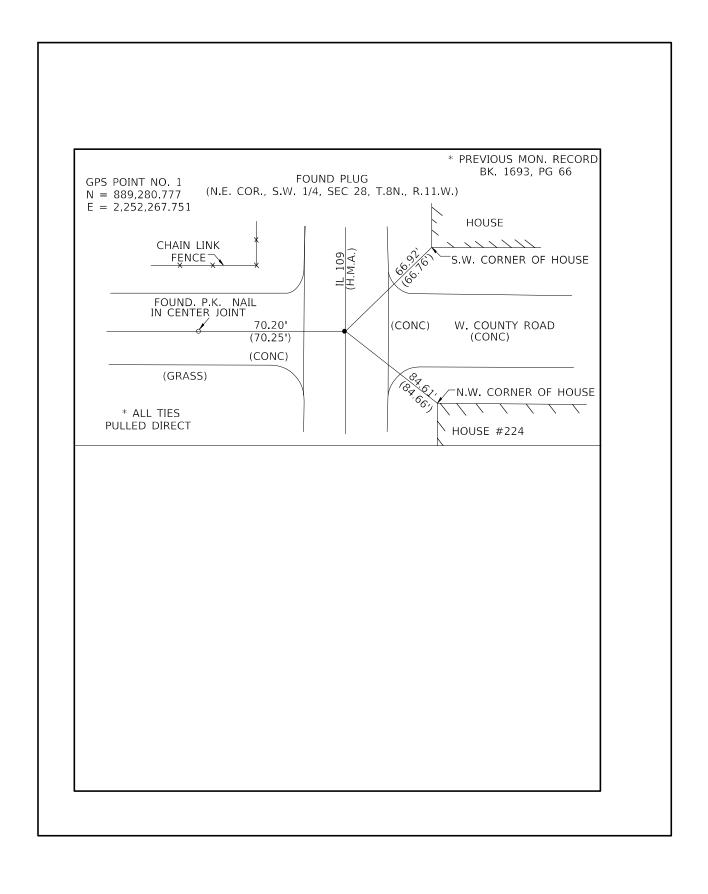
PAVEMENT MARKING SCHEDULE																			
				SHORT TERM PAVEMENT MARKING	TEMP	ORARY PAVEMEI	NT MARK	ING	RAISED REFLECTIVE	RAISED REFLECTIVE	SHORT TERM PAVEMENT	TEMPORARY PAVEMENT	THERM	OPLASTIC PAVEN	MENT MAR	KING	SHOULDER		
MILES					411 01415 5 4 011	411.001.15	411 OLGE E 4 OLG	NO PAS	SSING ZONE	PAVEMENT MARKER	PAVEMENT MARKERS	MARKING	MARKING	411 O O L ID	411 01415 5 4 011	NO PAS	SING ZONE	RUMBLE STRIP, 8"	
MILE STATION		1	4" SKIP-DAS YELLOW			4" SKIP-DASH	4" SOLID WHITE	4" SKIP-DASH YELLOW	4"	SOLID	REMOVAL	CRYSTAL	REMOVAL	REMOVAL	4" SOLID WHITE	4" SKIP-DASH YELLOW	4"	SOLID	STRIP, 0
				TELLOVV		TELLOVV	YE	ELLOW					VVIIII	TELLOVV	YE	LLOW			
			FOOT	FOOT	FOOT	FOOT	DIR	FOOT	EACH	EACH	SQ FT	SQ FT	FOOT	FOOT	DIR	FOOT	FOOT		
4.46	-	4.70	1267	360	2534		вотн	2534	16	16	40	1690	2534		вотн	2534	2534		
4.70	-	4.86	845	240	1690	220	SB	845	11	11	27	919	1690	220	SB	845	1690		
4.86	-	4.89	158	60	158		вотн	317	2	2	7	159	158		вотн	317	317		
4.89	-	5.10	1109	330	2218	280	NB	1109	14	14	37	1203	2218	280	NB	1109	2218		
5.10	-	5.11	53	30	106	070	BOTH	106	1	1	4	71	106	070	BOTH	106	106		
5.11		5.31	1056	300 120	2112 739	270	SB	1056	13 5	13 5	34 14	1146	2112 739	270 100	SB	1056	2112 739		
5.31 5.38		5.38 5.39	370 53	30	53	100			1	1	4	280 25	53	20	+		106		
5.39		6.00	3221	900	6442	810			40	40	100	2418	6442	810	+ +		6442		
6.00		6.16	845	240	1690	220	NB	845	11	11	27	919	1690	220	NB	845	1690		
6.16		6.20	211	60	422	60	IND	043	3	3	7	161	422	60	IND	043	422		
6.20		6.37	898	270	1795	230	SB	898	11	11	30	975	1795	230	SB	898	1795		
6.37	-	6.39	106	30	211	30			1	1	4	81	211	30	1 00		211		
6.39		6.40	53	30		20			1	1	4	7		20			106		
6.40	-	7.67	6706	1830	13411	1680			84	84	204	5031	13411	1680			13411		
7.67	-	7.69	106	30	106	30			1	1	4	46	106	30			211		
7.69	-	7.78	475	150	950	120			6	6	17	357	950	120			950		
7.78	-	7.80	106	30	106	30			1	1	4	46	106	30			211		
7.80	-	7.84	211	60	422		вотн	422	3	3	7	282	422		вотн	422	422		
7.84	-	7.85	53	30	53		вотн	106	1	1	4	53	53		вотн	106	106		
7.85	-	7.90	264	90	528		вотн	528	3	3	10	353	528		вотн	528	528		
7.90	-	7.91	53	30	106				1	1	4	36	106				106		
7.91	-	7.95	211	60	422		BOTH	422	3	3	7	282	422		вотн	422	422		
7.95	-	7.96	53	30	53		вотн	106	1	1	4	53	53		вотн	106	106		
7.96	-	8.01	264	90	528		вотн	528	3	3	10	352	528		вотн	528	528		
8.01	-	8.02	53	30	53		вотн	106	1	1	4	53	53		вотн	106	106		
8.02	-	8.03	53	30	106		вотн	106	1	1	4	71	106		вотн	106	106		
8.03	-	8.04	53	30	53		BOTH	106	1	1	4	53	53		BOTH	106	106		
8.04	-	8.07	158	60	317		BOTH	317	2	2	7	212	317		BOTH	317	317		
8.07	-	8.08	53	30	53		BOTH	106	1	1	4	53	53		BOTH	106	106		
8.08	-	8.09	53	30	106		BOTH	106	1	1	4	71	106		BOTH	106	106		
8.09		8.10	53	30	53		BOTH	106	1	1 2	4	53	53		BOTH	106	106		
8.10 8.15		8.15 8.16	264	90	528 53		BOTH BOTH	528 106	3	3	10	353 53	528 53		BOTH BOTH	528 106	528 106		
8.16		8.21	53 264	90	528		BOTH	528	3	3	10	353	528	 	BOTH	528	528		
8.21	-	8.22	53	30	53		ВОТН	106	1	1	4	53	53		ВОТН	106	106		
0.21		JBTOTA		5910	38758	4120	50111	12043	253	253	673	18323	38758	4120		12043	39710		
		TOTAL (5910	00700	54921		12070	253	253	673	18323	33730	54921		120-10	39710		
		OTAL (1		12840		123628			552	552	1460	41238		123628			86809		
		<i>→</i> u= (1	-/·			120020								120020					

USER NAME = murrayda	DESIGNED -	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

COUEDINE OF CHARITITIES					F.A.S. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
SCHEDULE OF QUANTITIES			747 8813 (57,58,59) RS-2 JERSEY		60	16				
								CONTRACT	NO. 76	iL10
IEET 5 OF	5	SHEETS	STA	TO STA		ILLINOIS	FED. All	D PROJECT		
	_						_			

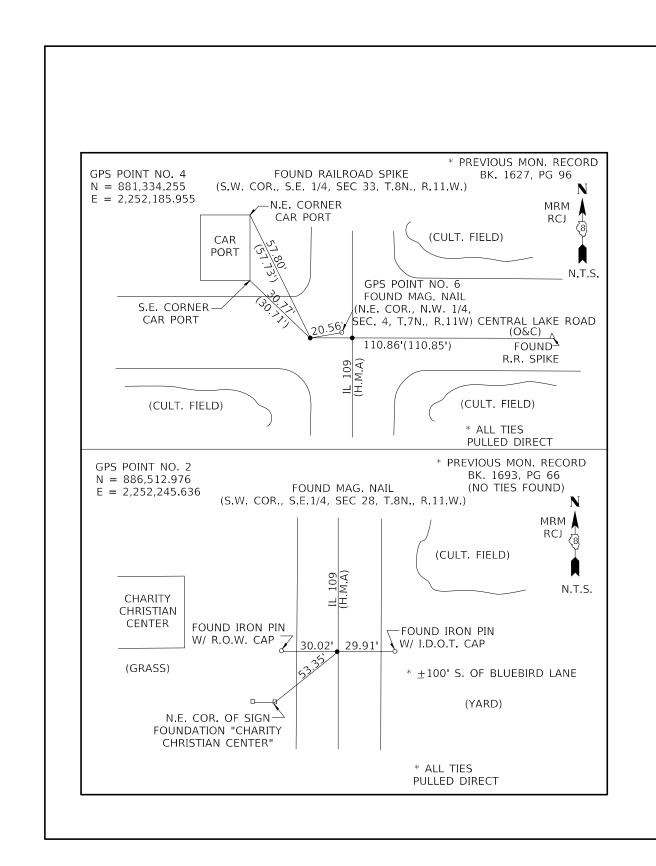
MODEL: \$MODELNAME\$
File NAME: own/blancoom dot:illingis.com/blwfDOTUD

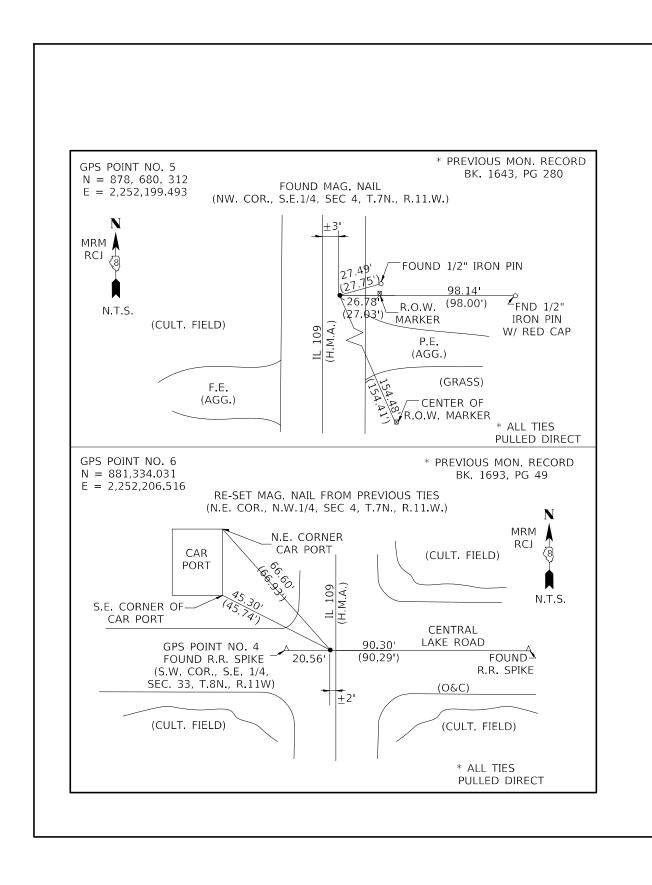




USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

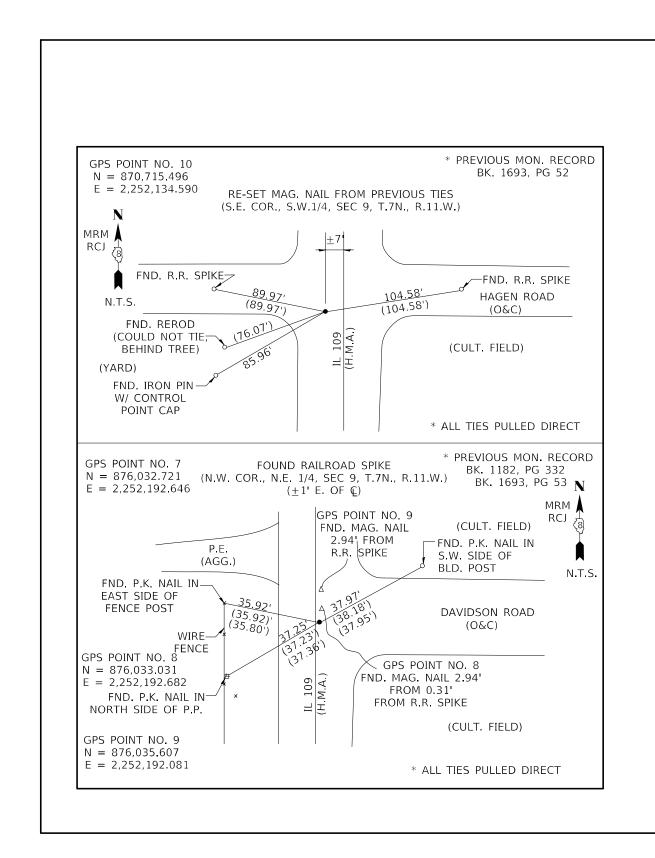
SECTION **SURVEY MONUMENT LOCATIONS** (57,58,59)RS-2 JERSEY 60 17 CONTRACT NO. 76L10 SHEET 1 OF 4 SHEETS STA. _

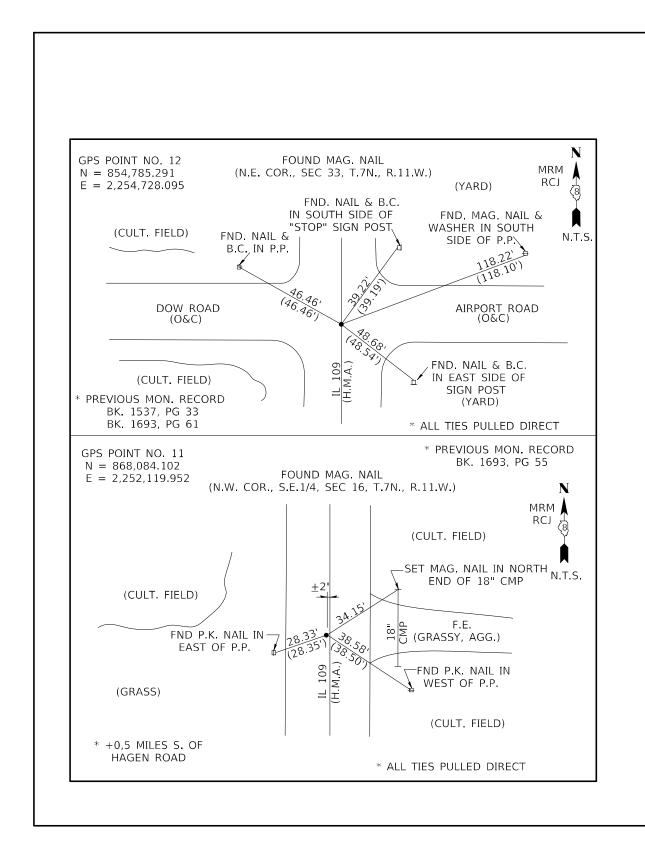




USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

SECTION SURVEY MONUMENT LOCATIONS (57,58,59)RS-2 JERSEY 60 18 CONTRACT NO. 76L10 SHEET 2 OF 4 SHEETS STA. _

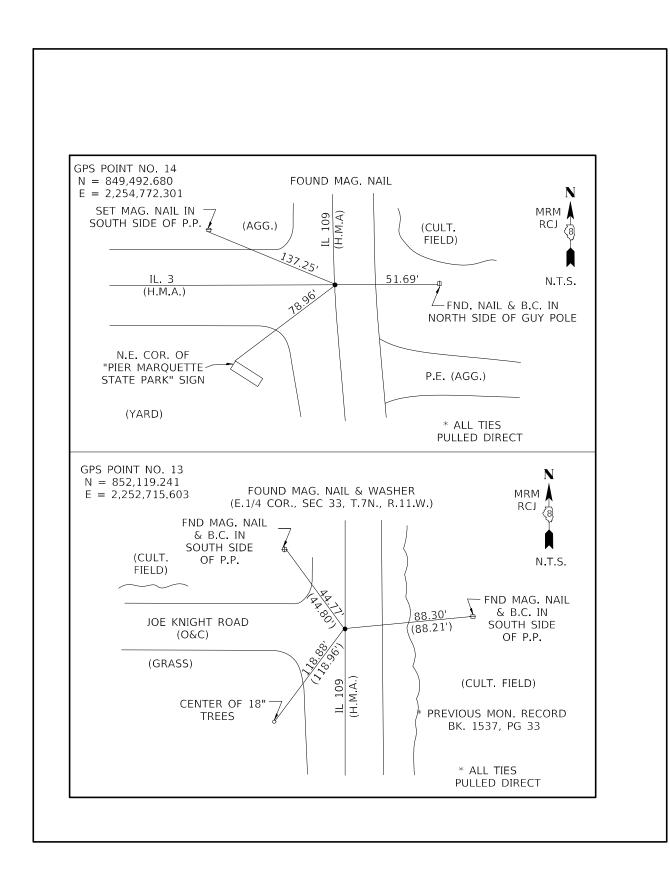




USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in.	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

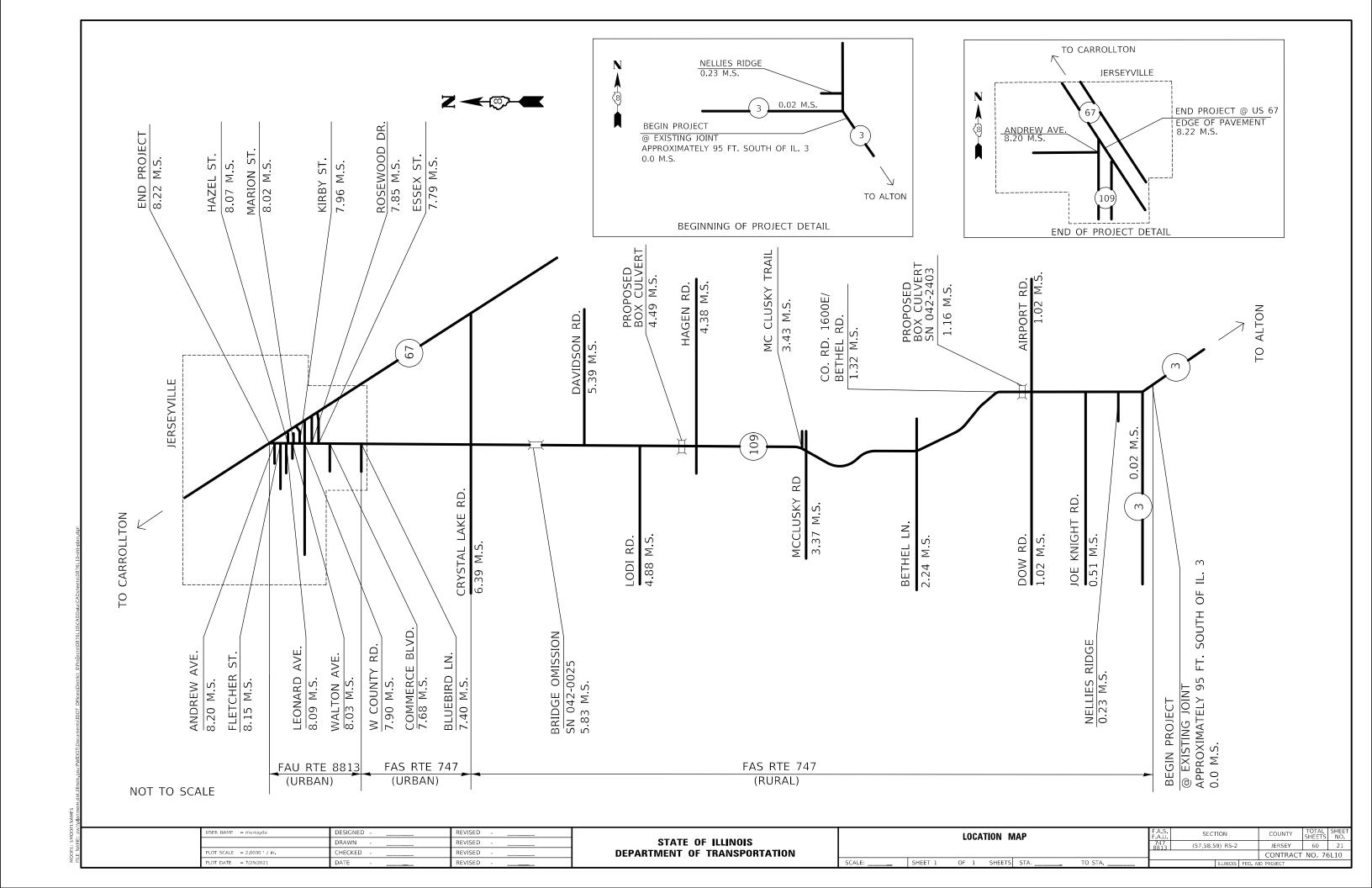
STATE 0	F ILLINOIS
DEPARTMENT OF	TRANSPORTATION

	F.A.S F.A.U	U. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SURVEY MONUMENT LOCATIONS	747 8813	(57,58,59)RS-2	JERSEY	60	19
			CONTRACT	NO. 76	5L10
SHEET 3 OF 4 SHEETS STA.	TO STA	ILLINOIS F	ED. AID PROJECT		



USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0000 / in	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

	F.A.S. F.A.U.	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
SURVEY MONUMENT LOCATIONS	747 8813	(57,58,5	9)RS-2		JERSEY	60	20
					CONTRAC	T NO. 76	5L10
SHEET 4 OF 4 SHEETS STA TO STA			ILLINOIS	FED. AI	ID PROJECT		



SHEET INDEX STATION to STATION DESCRIPTION COVER SHEET ROW PLAT TIE POINTS

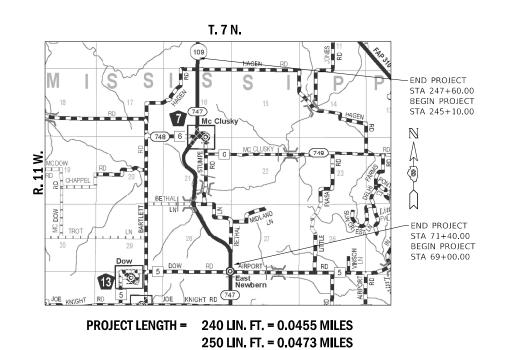
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

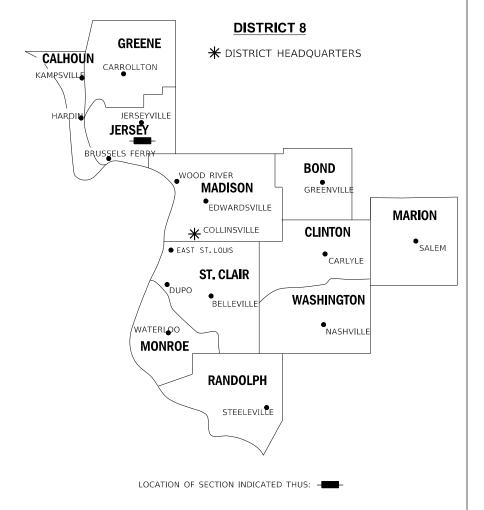
RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER

PLAT OF HIGHWAYS

F.A.S. 747/F.A.U. 8813 (IL ROUTE 109) SECTION (57,58,59)RS-2 **JERSEY COUNTY** JOB NO. R-98-006-20





PRELIMINARY

SHEET 1 OF 5

ILLINOIS DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION S/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

RTE.	SECTION			COUNTY	SHEETS	NO.	
AS747/ AU8813	(57,58,59)RS-2			JERSEY 60 22			
			CONTRA	ACT NO.	76L10		
FED. R	ROAD DIST. NO. ILLINOI:			FED. A	AID PROJ	ECT	

Veenstra & Kimm, Inc. 2417 West White Oaks Dr. Springfield, IL 62704

217-544-8033

PREPARED BY:

SHAYLA E. PFAFFE, PLS NO. 35-003411 LICENSE EXPIRATION DATE: 11/30/2022

LEGEND FOR EXISTING TOPOGRAPHIC SYMBOLS

TRAFFIC SIGNAL GULFBOX	0	DRAINAGE FLOW LINE	ե
TRAFFIC SIGNAL HANDHOLE		RIP RAP	105000000
TRAFFIC SIGNAL SIGNAL POST	0	HEADWALL	-
TRAFFIC SIGNAL STEEL MAST ARM	0	CULVERT END SECTION	△
TRAFFIC SIGNAL PEDESTRIAN PUSH BUTTON	•	DRAINAGE MANHOLE	0
TRAFFIC SIGNAL WOODEN POLE	8	INLET	
TRAFFIC SIGNAL VEHICLE DETECTION PRIORITY	⋖	ROADWAY DITCH FLOW	- >→
TRAFFIC SIGNAL VEHICLE DETECTION MAGNET		VEGETATION LINE	~~~
TRAFFIC SIGNAL JUNCTION BOX	0	STUMP	R
TRAFFIC SIGNAL CONTROLLER	⊠	SHRUB	0
TRAFFIC SIGNAL HEAVY DUTY HANDHOLE	H	EVERGREEN TREE	Ø
RAILROAD CANTILEVER MAST ARM	XOX X	DECIDUOUS TREE	•
RAILROAD CROSSBUCK	X+	WOODS/BUSH LINE	
RAILROAD TRACK	<u> </u>	TRAFFIC SIGN	þ
TOTAL TOTAL TOTAL (TOTAL DOTAL D)	#==:	GUARDRAIL POST	0
RAILROAD CROSSGATE	X0X>	GUARDRAIL	0 0 0 0
RAILROAD CONTROL BOX	\boxtimes	FIELD LINE	E
RAILROAD FLASHING SIGNAL	X⊕X	LEVEE/NOISE BARRIER	
UTILITY TELEPHONE SPLICE BOX	H	FENCE	-x - x - x - x - x -
UTILITY POWER POLE		MAIL BOX	Ρ
UTILITY TRAFFIC SIGNAL	Ф	ADVERTISING SIGN	þ
UTILITY LIGHT POLE	¤	MARSH	يتلتن
UTILITY FIRE HYDRANT	α	LIGHTING HANDHOLE	
UTILITY MANHOLE	0	LIGHTING POWER POLE	-0-
UTILITY TELEPHONE POLE	-0-	LIGHTING JUNCTION BOX	0
UTILITY GUY ANCHOR	←	LIGHTING HEAVYDUTY HANDHOLE	H
UTILITY PIPELINE WARNING SIGN	þ	LIGHTING CONTROLLER	⊠
UTILITY HANDHOLE		LIGHTING PULL POINT	®
UTILITY SPLICE BOX	EH .	HIGHWAY LIGHTING ELECTRICAL GROUND	→
UTILITY JUNCTION BOX	0	HIGHWAY LIGHTING SINGLE UNIT	\longrightarrow
UTILITY HEAVY DUTY HANDHOLE	H	HIGHWAY LIGHTING DOUBLE UNIT	\bigcirc
UTILITY DOUBLE HANDHOLE	D D	EXISTING CONCRETE BARRIER	
UTILITY CONTROLLER	⊠	EXISTING CREEK OR DITCH	
UTILITY WATER METER	0	EXISTING EDGE OF PAVEMENT	

BASIS OF COORDINATE & BEARING STATEMENT

THE COORDINATES AND BEARINGS FOR THIS SURVEY ARE BASED ON THE PROJECT SURVEY CONTROL DATA ESTABLISHED AND PROVIDED TO THE SURVEYOR BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GRID VALUES BASED ON THE FOLLOWING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT GRID DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES.

LOW DISTORTION PROJECTION - JERSEY & GREENE COUNTIES PROJECTION PARAMETERS

LINEAR UNIT: US SURVEY FEET GEODETIC DATUM: NAO 1983 (2011)- EPOCH: 2010 VERTICAL DATUM: NAVD 1988 PROJECTION: TRANSVERSE MERCATOR LATITUDE OF ORIGIN: 38°54'00"N CENTRAL MERIDIAN: 90°20'00"W FALSE NORTHING: 0.000 SFT FALSE EASTING: 88,000 SFT CM SCALE FACTOR: 1.00002152

THE SURVEY WAS REFERENCED TO THE NATIONAL SPATIAL REFERENCE SYSTEM BY DIRECT CONNECTION TO THE FOLLOWING MONUMENTS.

CONTROL: No. 6 LATITUDE: N39°04'20.78673" NORTHING: 62808.3172 SFT LONGITUDE: W90°19'22.05978" EASTING: 90992 2488 SET ELLIPSOIDAL HEIGHT: 510.4534 SFT ORTHO HT.: 614.2563 SFT (GEOID 12B)

CONTROL: No. 106 LATITUDE: N38°59'46.99471" NORTHING: 35109.0233 SFT LONGITUDE: W90°17'49.95303" EASTING: 98267.4744 SFT ELLIPSOIDAL HEIGHT: 496.8124 SFT ORTHO HT.: 600.3836 (G'EOID 12B)

PROJECT SURVEY CONTROL DATA **GROUND SURFACE COORDINATE SYSTEM**

COORDINATES PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION JOB NO. D-98-006-20 / CONTRACT NO. 76L10									
POINT NO.	NORTH (FEET)	EAST (FEET)	DESCRIPTION						
100	42,397.6870	90,714.5879	IRON PIN W/ALUM CAP						
102	41,981.2368	93,470.0244	IRON PIN W/PLASTIC CAP						
103	41,530.4929	92,188.2172	IRON PIN W/ALUM CAP						
104	41,509.9798	94,996.8377	IRON PIN W/ALUM CAP						
1	57,424.9627	90,907.8137	IRON PIN W/CAP						
2	57,943.9721	90918.5836	IRON PIN W/CAP						
5	58,705.0013	90,865.3434	IRON PIN W/CAP						
7	57,452.0066	95,129.3304	IRON PIN W/CAP						
9	60,160.0814	85,565.9604	IRON PIN W/CAP						

RIGHT-OF-WAY LEGEND







	EXISTING CENTERLINE
	EXISTING RIGHT-OF-WAY LINE
	FORMER RIGHT-OF-WAY LINE
	EXISTING IDOT EASEMENT LINE
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EXISTING EASEMENT LINE
	BUILDING SETBACK LINE
AC	EXISTING ACCESS CONTROL LINE
AC	EXISTING RIGHT-OF-WAY & PROPOSED ACCESS CONTROL LINE
——— — AC — ———	PROPOSED ACCESS CONTROL LINE
	PROPOSED CENTERLINE
	PROPOSED RIGHT-OF-WAY LINE
<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>	PROPOSED TEMPORARY EASEMENT LINE
·/////////////////////////////////////	PROPOSED PERMANENT EASEMENT LINE
	SECTION LINE
	QUARTER SECTION LINE
	QUARTER QUARTER SECTION LINE
<u> </u>	PROPERTY LINE (TITLE)
	RECORDED PLAT/DEED LINE

APPARENT PROPERTY LINE SAME OWNERSHIP 121.45 MEASURED DIMENSION (121.45') RECORDED DIMENSION FOUND STONE

FOUND IRON PIPE OR IRON ROD AT CORNER UNLESS OTHERWISE NOTED SET 5/8 INCH IRON ROD WITH PLASTIC CAP IDENTIFIED BY SURVEYORS LICENSE NUMBER AT CORNER UNLESS OTHERWISE NOTED

PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 667101 (TO BE SET BY OTHERS)

SET 5/8 INCH IRON ROD AS SURVEY CONTROL UNLESS OTHERWISE NOTED FOUND CUT CROSS SET CUT CROSS

□ STAKING OF PROPOSED RIGHT-OF-WAY AND PERMANENT EASEMENT CORNERS. SET 5/8 INCH METAL ROD WITH DEPARTMENT OF TRANSPORTATION SURVEY ALUMINUM CAP TO MONUMENT THE POSITION SHOWN IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS LICENSE NUMBER

STAKING OF PROPOSED RIGHT-OF-WAY AND PERMANENT EASEMENT CORNERS IN CULTIVATED AREA, A MINIMUM OF 20 INCHES BELOW THE GROUND SURFACE. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY ALUMINUM CAP TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS LICENSE NUMBER.

TOTAL HOLDING AREA SOURCE TABLE

1	AREA	ACCOF	DING	TO	THE	SURVEY	PERFORMED	BY	THE	CONSULTANT.	
2	ARFA	LISTED	IN RI	- ((RDF	DEED					Π

3 AREA ACCORDING TO A RECORDED SUBDIVISION PLAT.

4 AREA ACCORDING TO A PLAT OF SURVEY.

AREA CALCULATED FROM RECORDED DEEDS OR TITLE COMMITMENTS - NOT SURVEYED.

6 AREA ACCORDING TO COUNTY TAX MAPS AND COUNTY ASSESSMENT RECORDS.
7 AREA ACCORDING TO OTHER RECORDS, SEE NOTE ON THE PLAT OF HIGHWAYS

TOPOGRAPHIC STATEMENT

THE TOPOGRAPHY SHOWN HEREON WAS PROVIDED TO THE SURVEYOR BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION. THE SURVEYOR VISUALLY FIELD VERIFIED THE EXISTENCE OF THE TOPOGRAPHY SHOWN HEREON. IN ADDITION THE SURVEYOR PHYSICALLY LOCATED IN THE FIELD THE FOLLOWING ITEMS ON 05/19/21:

- 1. RESIDENTIAL HOUSES AND OUT BUILDINGS

LEGEND FOR ABBREVIATIONS

A/C	ACCESS CONTROL
AC	ACRE
AVE	AVENUE
ВК	ВООК
BLVD	BOULEVARD
Q.	CENTERLINE
CAB	CABINET
CH	COUNTY HIGHWAY
Ch	CHAIN
CP	CONTROL POINT
CPS	COTTON PICKER SPINDLE
DB	DEED BOOK
Е	EAST
EX	EXISTING
FA	FEDERAL AID
FAI	FEDERAL AID INTERSTATE
FAP	FEDERAL AID PRIMARY
FAS	FEDERAL AID SECONDARY
FAU	FEDERAL AID URBAN
FND	FOUND
ha	HECTARE
IP	IRON PIPE
IR	IRON ROD
LT	LEFT
m²	METER
m	SOUARE METERS
N	NORTH
N/F	NOW OR FORMERLY
N & BC	NAIL AND BOTTLE CAP
N & C	NAIL AND CAP
N & W	NAIL AND WASHER
NE	NORTHEAST
NW	NORTHWEST
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
POT	POINT ON TANGENT
P	PROPERTY LINE
PR	PROPOSED
R	RANGE
RD	ROAD
REC	RECORD
ROW	RIGHT-OF-WAY
RR	RAILROAD
RRS	RAILROAD SPIKE
RT	RIGHT
RTE	ROUTE
S	SOUTH
SBI	STATE BOND ISSUE
	COLUMNICA

SOUTHEAST

SQUARE FEET

STATE ROUTE

SURVEY MARKER

TOWNSHIP ROAD

U.S. GEOLOGICAL SURVEY

SOUTHWEST

TOWNSHIP

WEST

SECTION

STREET

STATION

SE

SR

STA

SMK

SW

TR

USGS

SEC

SQ FT

PREPARED BY:

RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER

PROPOSED FEE SIMPLE ACQUISITION

POINT OF CURVATURE

RADIUS OF CURVE

LENGTH OF CURVE

DEGREE OF CURVE

EXTERNAL ORDINATE

CHORD BEARING

CHORD LENGTH

CENTRAL ANGLE

POINT OF INTERSECTION POINT OF TANGENCY

POINT OF REVERSE CURVE POINT OF COMPOUND CURVE

PROPOSED TEMPORARY EASEMENT

PROPOSED PARCEL NUMBER LEGEND

CURVE ABBREVIATIONS

8001001

8001001TE

PRC

PCC

СВ

PRELIMINARY



Veenstra & Kimm, Inc. 2417 West White Oaks Dr. Springfield, IL 62704 217-544-8033

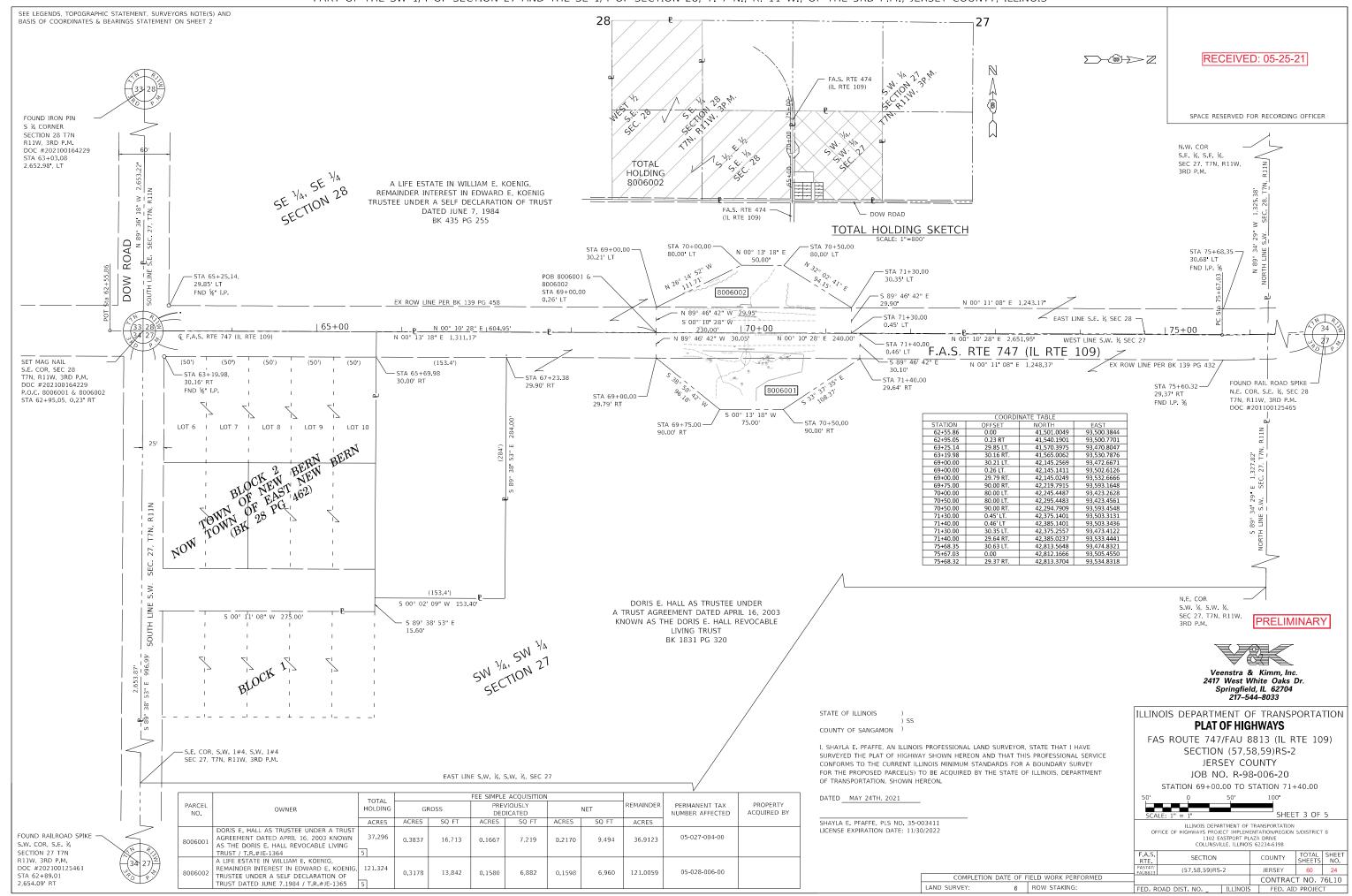
ILLINOIS DEPARTMENT OF TRANSPORTATION PLAT OF HIGHWAYS

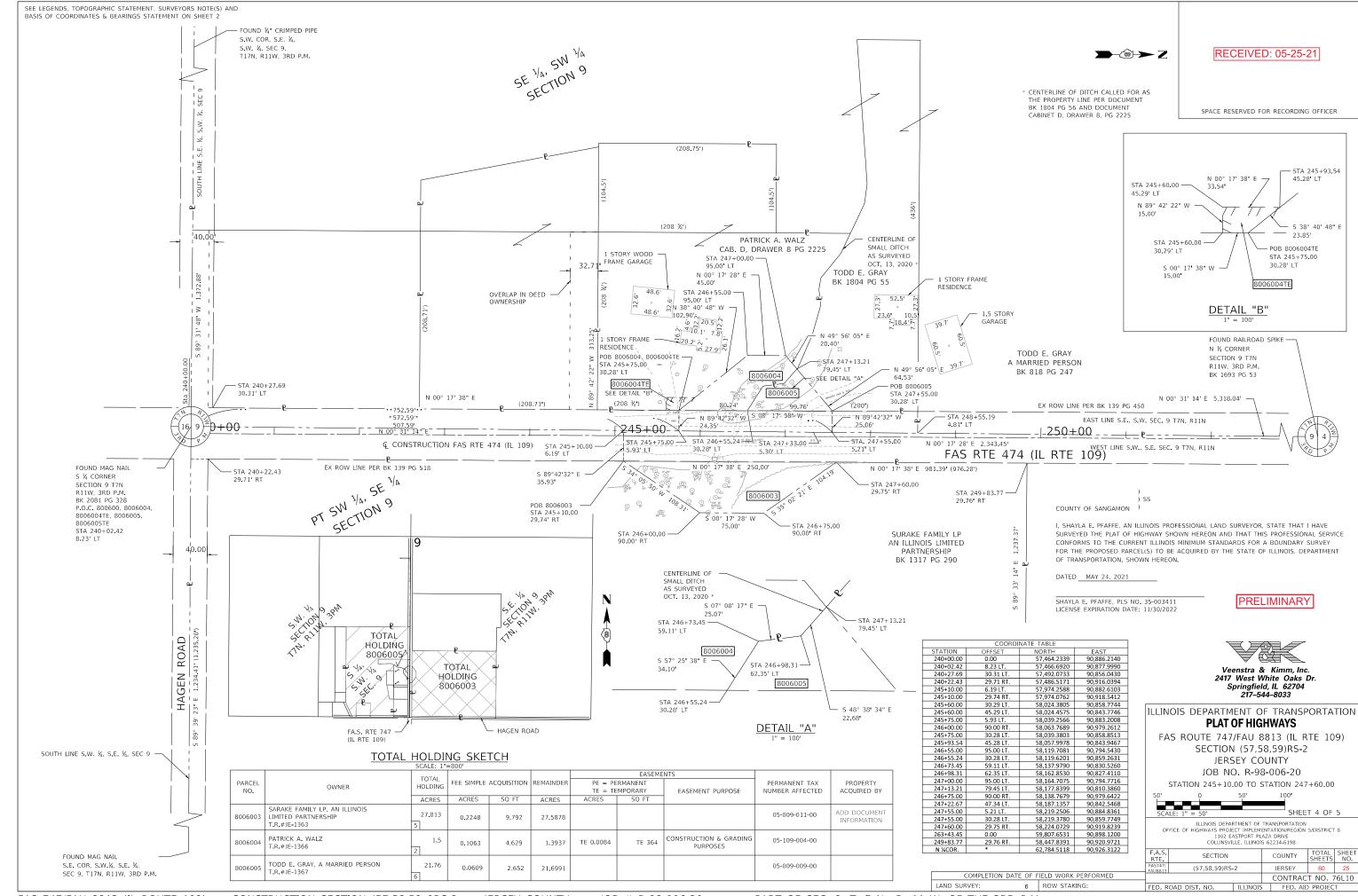
FAS 747/FAU8813 (IL ROUTE 109) SECTION (57,58,59)RS-2 JERSEY COUNTY JOB NO. R-98-006-20 STATION 00+00 TO STATION 00+00

ILLINOIS DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION S/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

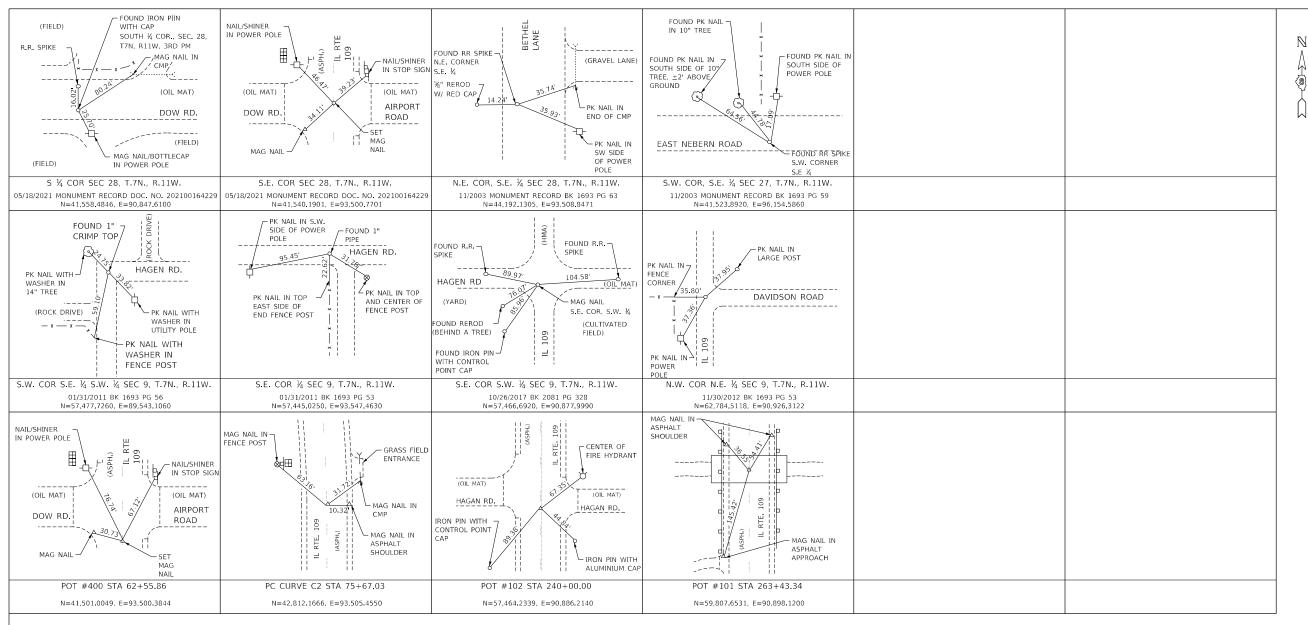
F.A.S. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
FAS747/ FAU8813	(57,58,59)RS-	2	JERSEY	60	23
			CONTR	ACT NO.	76L10
FED B	OAD DIST, NO.	THINOIS	FED. AID	PROJEC	Т

FAS 747/FAU8813 (IL ROUTE 109)





SECTION CORNER AND CENTERLINE TIE SHEET



PRELIMINARY

RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER

NOTE: STATE AND COUNTY WHERE PLATS WERE

SIGNED AND SEALED SHOULD FILLED IN BELOW

Veenstra & Kimm, Inc. 2417 West White Oaks Dr. Springfield, IL 62704 217–544–8033

ILLINOIS DEPARTMENT OF TRANSPORTATION PLAT OF HIGHWAYS

FAS 747/FAU8813 (IL ROUTE 109)
SECTION (57,58,59)RS-2
JERSEY COUNTY
JOB NO. R-98-006-20
STATION 00+00 TO STATION 00+00

T TO CCALE

SHEET 5 OF 5

ILLINOIS DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION 5/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

	F.A.S. RTE	RTE. SECTION			COUNTY	TOTAL SHEETS	SHEET NO.
	FAS747/ FAU8813				JERSEY	60	26
_				CONTR	RACT NO.	. 76L10	
	FED. R	OAD DIST. NO.	ILLINOIS		FED. AID	PROJEC	Т

STATE OF ILLINOIS)
) SS

I, SHAYLA E. PFAFFE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, STATE THAT I HAVE SURVEYED THE PLAT OF HIGHWAY SHOWN HEREON AND THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY FOR THE PROPOSED PARCEL(S) TO BE ACQUIRED BY THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, SHOWN HEREON.

DATED MAY 24TH, 2021

SHAYLA E. PFAFFE, PLS NO. 35-003411 LICENSE EXPIRATION DATE: 11/30/2022

COMPLETION DATE OF FIELD WORK PERFORMED

LAND SURVEY: ROW STAKING:

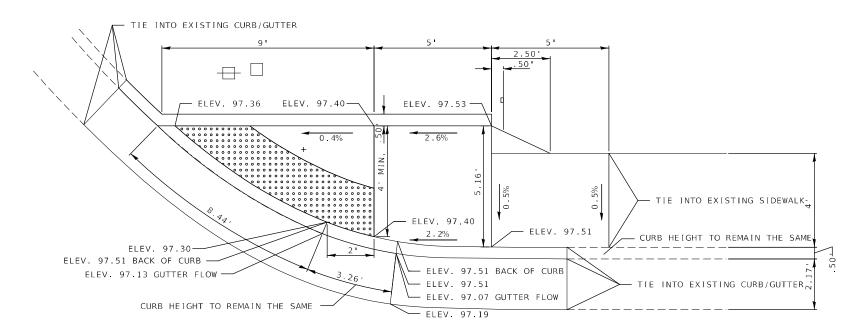
FAS 747/FAU8813 (IL ROUTE 109) C

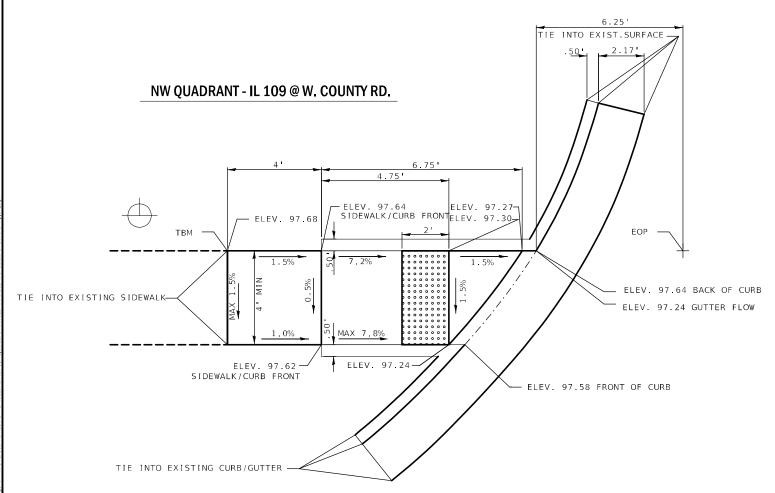
CONSTRUCTION SECTION (57,58,59)RS-2

JERSEY COUNTY

JOB # R-98-006-20

NE QUADRANT - IL 109 @ W. COUNTY RD.





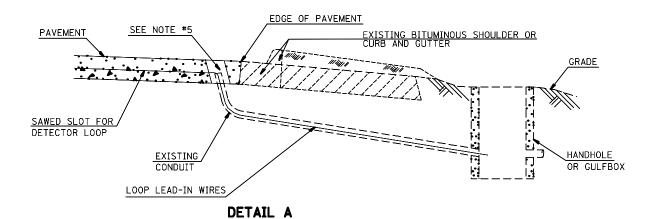
NOTE: ALL AREAS DISTURBED FOR ANY REASON SHALL BE PERMANENTLY SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

NOTE: ALL DIMENSIONS AND ELEVATIONS IN FT.

USER NAME = murrayda	DESIGNED	REVISED							F.A.S. F Δ II	SECTION	COUNTY TO	TAL SHEET
	DRAWN	REVISED	STATE OF ILLINOIS			ADA DET	AILS		747	(57.58.59) RS-2	JERSEY 6	60 27
PLOT SCALE = 2.0006 ' / in.	CHECKED	REVISED	DEPARTMENT OF TRANSPORTATION						0013	(,,,	CONTRACT NO	O. 76L10
PLOT DATE = 7/29/2021	DATE	REVISED		SCALE:	SHEET 1	OF 1 SHEE	ΓS STA	TO STA		ILLINOIS FED.	AID PROJECT	-

SEE TABLE "DETECTOR LOOP REQUIREMENTS AND CALCULATIONS" FOR LOOP SIZE AND CALCULATED NUMBER OF TURNS. SEE "DETAIL A" FOR INSTALLING DETECTOR LOOP WIRES IN EXISTING CONDUITS.

				IL 109
	SCHEDULE OF QUANTITIES		TOTAL QUANTITIES	& US 67
CODE NO	ITEM	UNIT		
88600600	DETECTOR LOOP REPLACEMENT	FOOT	662	662



INSTALLING DETECTOR LOOP WIRES IN EXISTING CONDUIT

- 1. DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
- 2. REMOVE EXISTING DETECTOR LOOP WIRES TO HANDHOLE OR GULFBOX.
- 3. INSTALL NEW LOOP LEAD-IN WIRES IN EXISTING CONDUIT.
- 4. SPLICE NEW DETECTOR LOOP WIRES TO EXISTING LOOP LEAD-IN CABLE IN HANDHOLE OR GULFBOX.
- 5. FILL HOLE WITH APPROVED SEALER. PREVENT SEALER FROM ENTERING INTO CONDUIT.

NOT A PAY ITEM. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "DETECTOR LOOP REPLACEMENT"

DETECTOR LOOP REPLACEMENT LEGEND

☑ EX. HANDHOLE

[_____ EX. DETECTOR LOOP

EX. TRAFFIC SIGNAL CONTROLLER

EXISTING CONDUIT

☐ PROPOSED DETECTOR LOOP

USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0017 / in.	CHECKED -	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

0T/Documents\IDOT_Offices\District_8\Projects\D876L10\CADData\CADsheets\D876L10-s

MODEL: \$MODELNAME\$
EII F NAME: packyolaproom dot illings goverbing

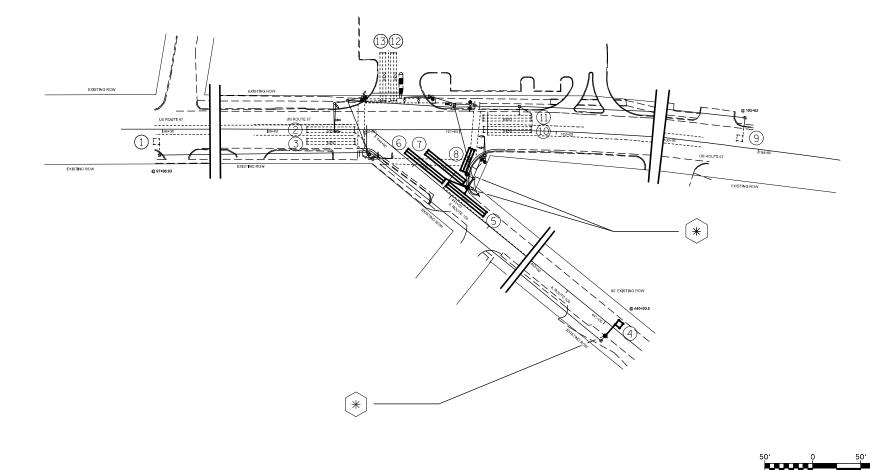
DETECTOR LOOP REQUIREMENTS AND CALCULATIONS

LOOP#	PHASE # (Φ)	LOOP SIZE (FT. X FT.)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (µH)	CALCULATED RESISTANCE OHMS (Ω)
1. EB CCO	2	6′ × 6′	6	256	0.4
2. EBLT CD	2	6' x 50'(0)	3-6-3	789	1.7
3. EB THRU CD	2	6' × 50'(Q)	3-6-3	788	1.6
4. NB CCO	3	6′ × 6′	6	258	0.4
5. NBLT CD	3	6' × 50'(Q)	3-6-3	786	1.6
6. NBLT CD	3	6' × 50'(Q)	3-6-3	792	1.7
7. NB THRU CD	3	6' × 50'(Q)	3-6-3	787	1.6
8. NBRT CD	3	6' × 25'(Q)	3-6-3	412	0.9
9. WB CCO	6	6′ × 6′	6	256	0.4
10. WBLT CD	6	6' × 50'(Q)	3-6-3	787	1.6
11. WB THRU CD	6	6' × 50'(0)	3-6-3	786	1.6
12. SBLT CD	4	6' × 50'(Q)	3-6-3	792	1.7
13. SB_THRU CD	4	6' × 50'(Q)	3-6-3	790	1.7

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

Q=QUADRAPOLE

* =SEE DETAIL "A"



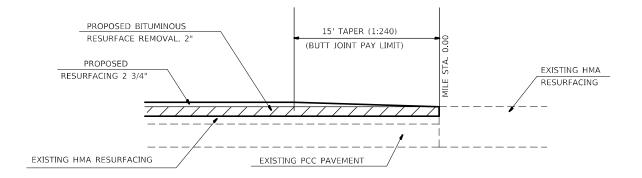
USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0037 / in	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

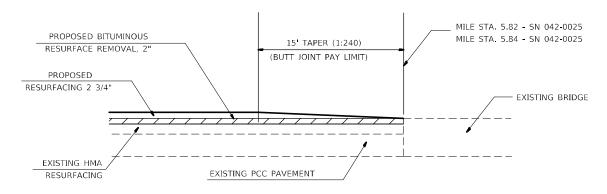
ı	DETEC	 LO(109	 	PLACEMEN 67	Т

F.A. RTE	SEC	TION		COUNTY	TOTAL SHEETS	SHEE NO.
*	(57,58,	59)RS-2		JERSEY	60	29
*FAS	747/FAU 8813			CONTRACT	NO. 76	5L10
		ILLINOIS	FED. A	ID PROJECT		

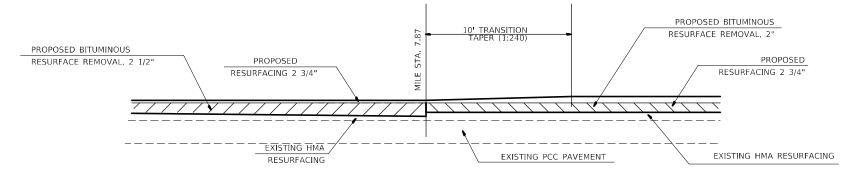
MODEL: \$MODELNAMES



BUTT JOINT DETAIL AT THE BEGINNING OF THE PROJECT

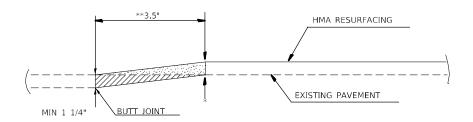


BUTT JOINT DETAIL AT BRIDGE OMISSIONS - SN 042-0025



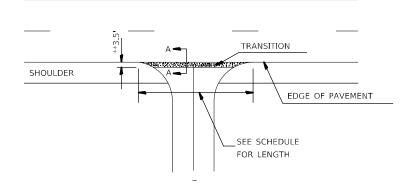
TRANSITION DETAIL AT W. COUNTY ROAD

USER NAME = murrayda	DESIGNED	REVISED					F.A.S. F.A.U.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
	DRAWN	REVISED	STATE OF ILLINOIS	BUTT JOINT, TRANSITION, SIDEROAD & ENTRANCE DETAILS TAGE			60 30			
PLOT SCALE = 2.0037 / in.	CHECKED	REVISED	DEPARTMENT OF TRANSPORTATION			F	0013	(,,	CONTRAC	T NO. 76L10
PLOT DATE = 7/29/2021	DATE	REVISED		SCALE:	SHEET 1 OF 2 SHEETS STA TO STA.			ILLINOIS FED.	AID PROJECT	



TRANSITION DETAIL SECTION A-A

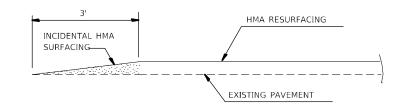
BUTT-JOINT ADDITION



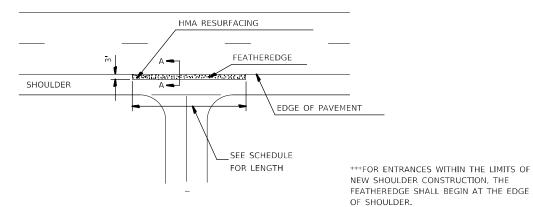
SIDEROAD DETAIL

*EOP	**TOTAL
ELEVATION	TRANSITION
CHANGE	LENGTH
1/2"	3.0'
3/4"	3.5'
1"	5'
1-1/2"	7.5'
2"	10'
2-1/2"	12.5'
3"	15'
3-1/2"	17.5
4"	20'
4-1/2"	22.5'
5"	25'
5-1/2"	27.5
6"	30 '

NOTE:
WHERE THE HMA TRANSITION IS MATCHING
INTO AN EXISTING HMA SIDE ROAD
SURFACE, A MILLED BUTT JOINT SHALL
BE CONSTRUCTED WITHIN THE LIMITS
OF THE TOTAL TRANSITION LENGTH
ON THE LOCAL ROUTE.



FEATHEREDGE DETAIL SECTION A-A



ENTRANCE DETAIL***

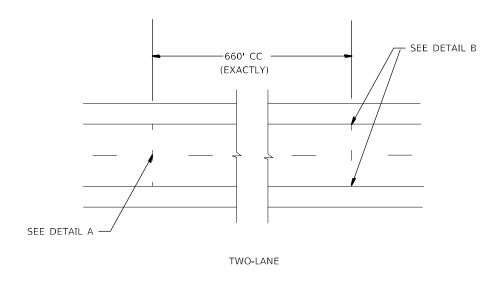
A.S. SECTION COUNTY TOTAL SHEET NO. 147 (57.58.59) RS-2 JERSEY 60 31 CONTRACT NO. 76L10

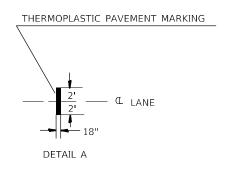
USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 1.9944 / in.	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE -	REVISED -

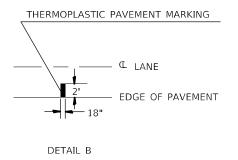
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT, TRANSITION, SIDEROAD & ENTRANCE DETAILS

SHEET 2 OF 2 SHEETS STA. _____ TO STA. _____







AERIAL SPEED CHECK ZONE DETAIL

NOTE: EXISTING AERIAL SPEED CHECK LOCATIONS ARE WITHIN THE RURAL SECTION

BETWEEN IL ROUTE 3 AND HAGEN RD. PROPOSED AERIAL SPEED CHECK LOCATIONS ARE

APPROXIMATED ON THE SCHEDULE AND IN ACCORDANCE TO THE DETAIL AND SHALL BE

PLACED IN THE SAME LOCATIONS AS EXISTING AS DIRECTED BY THE ENGINEER.

NOT TO SCALE

USER NAME = murrayda	DESIGNED	REVISED
	DRAWN	REVISED
PLOT SCALE = 2.0009 ' / in.	CHECKED	REVISED
PLOT DATE = 7/29/2021	DATE	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	AFRIAL OPER OUTOV ZONE DETAIL							SEC.	TION		COUNTY	TOTAL SHEETS	SHEET NO.
AERIAL SPEED CHECK ZONE DETAIL					747 8813	(57,58,5	9) RS - 2		JERSEY	60	32		
											CONTRAC	T NO. 76	5L10
SHEET 1	OF	1	SHEETS	STA.		TO STA.			ILLINOIS	EED A	D PROJECT		

ents\IDOT Offices\District 8\Projects\D876L10\CADData\CADsheets\C

GENERAL NOTES

- 1. IF THE CONTRACTOR, FOR HIS CONSTRUCTION ACTIVITY, REMOVES TREES WITHIN THE RIGHT-OF-WAY LIMITS WHICH ARE NOT DESIGNATED ON THE PLANS FOR REMOVAL, I.E. IN ORDER TO GAIN ACCESS TO THE PROJECT SITE; IT WILL BE HIS RESPONSIBILITY TO REPLACE THE TREES AT A 1:1 RATIO. THE TREES WILL BE REPLACED WITH A 1 GALLON NATIVE ILLINOIS TREE SPECIES AND SHALL BE APPROVED BY THE ENGINEER. THE TREE REMOVAL AND TREE REPLACEMENT WILL BE AT THE CONTRACTOR'S EXPENSE, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 2. TREES THREE (3) INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 30.
- 3. TWO CHANGEABLE MESSAGE BOARDS SHALL BE REQUIRED FOR THIS PROJECT AND SET UP TWICE, ONE FOR EACH CLOSURE. THEY SHALL BE PLACED TWO WEEKS PRIOR TO EACH ROAD CLOSURE. THE CHANGEABLE MESSAGE SHALL BE PLACED ALONG IL ROUTE 109 APPROXIMATELY 1 MILE NORTH AND SOUTH OF EACH ROAD CLOSURE LOCATION AS DIRECTED OF THE ENGINEER.
- 4. ALL ELEVATIONS REFER TO THE USGS MEAN SEA LEVEL DATUM.

BILL OF MATERIALS

PAY ITEM	CODED PAY ITEM	UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.75
20200100	EARTH EXCAVATION	CU YD	840
20300100	CHANNEL EXCAVATION	CU YD	170
20400800	FURNISHED EXCAVATION	CU YD	210
20700220	POROUS GRANULAR EMBANKMENT	CU YD	168
20800150	TRENCH BACKFILL	CU YD	49
25000200	SEEDING, CLASS 2	ACRE	0.75
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	56
2\$0005 0 0	PHOSPHORUS FERTILIZER NUTRIENT	POUND	56
	POTASSIUM FERTILIZER NUTRIENT	POUND	56
	MULCH, METHOD 2	ACRE	0.75
	EROSION CONTROL BLANKET	SQ YD	1170
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	30
	TEMPORARY DITCH CHECKS	FOOT	370
	STONE RIPRAP, CLASS A5	SQ YD	254
	FILTER FABRIC	SQ YD	254
	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	16
	AGGREGATE SURFACE COURSE, TYPE B	TON	11
	BITUMINOUS MATERIALS (PRIME COAT)	POUND	220
	BITUMINOUS MATERIALS (TACK COAT)	POUND	34
	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	3
	PAVED SHOULDER REMOVAL	SQ YD	50
	PAVEMENT PATCHING, TYPE IV, 18 INCH	SQ YD	192
	AGGREGATE WEDGE SHOULDER, TYPE B	TON	6
	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	50
	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1
	CONCRETE REMOVAL	CU YD	5
	PIPE CULVERT REMOVAL	FOOT	98
	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2
	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	2
	PRECAST CONCRETE BOX CULVERTS 5' X 5'	FOOT	91
	PRECAST CONCRETE BOX CULVERTS 6' X 5'	FOOT	67
	END SECTIONS 15"	EACH	2
	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	131
	GEOCOMPOSITE WALL DRAIN	SQ YD	141
	MANHOLES, TYPE A, 8'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1
	DELINEATORS	EACH	4
	CHANGEABLE MESSAGE SIGN	CAL DA	56
	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	141
	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
	DETOUR SIGNING	L SUM	1
	FILLING EXISTING CULVERTS	CU YD	49
[Z0054517]	ROCK FILL - FOUNDATION	TON	59

HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND D PATCHES
542001-06	CONCRETE END SECTIONS FOR PIPE CULVERTS 15" (375 MM) THRU 84"
	(2100 MM) DIAMETER
542201-02	REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS, 15" (375 MM) THRU 36"
	(900 MM) DIAMETER SKEWED WITH ROADWAY
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542401-04	METAL FLARED END SECTION FOR PIPE CULVERTS
542411	SLOPED METAL END SECTIONS FOR PIPE CULVERTS 15" (375 MM) THRU 60"
	(1500 MM) DIAMETER
602701-02	MANHOLE STEPS
635001-02	DELINEATORS
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
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701901-08	TRAFFIC CONTROL DEVICES
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL
	LOCAL HIGHWAYS

INDEX OF SHEETS

33	GENERAL NOTES, COMMITMENTS, HIGHWAY STANDARDS, TOTAL BILL OF MATERIALS & INDEX OF SHEETS
34 - 35	SCHEDULES OF QUANTITIES
36 - 37	PLAN & PROFILE SHEETS
38 - 49	CULVERT PLANS
50 - 51	ROAD CLOSURE DETAILS
52 - 53	DETOUR SIGNING SHEETS
54	ENTRANCE DETAIL
55 - 60	CROSS SECTIONS

JSER NAME = default DESIGNED -REVISED DRAWN REVISED CHECKED REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, HIGHWAY STANDARDS, TOTAL BILL OF MATERIAL AND INDEX OF SHEETS IL ROUTE 109 CULVERT REPLACEMENTS

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

SECTION (57,58,59) RS-2 JERSEY 60 33 CONTRACT NO. 76L10

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

7	TREE REMOVAL SCHEDULE										
	LO	CATION		TREE REMOVAL, ACRES							
STATION	то	STATION	SIDE	ACRE							
69+44	то	71+13	RT	0.15							
69+48	то	71+12	LT	0.13							
245+41	то	247+26	RT	0.17							
245+74	то	247+49	LT	0.15							
	SUBTOTAL 0.60										
			TOTAL	0.75							

				EARTHWO	RK SCHEDULI	Ē		
CULVERT NOF	RTH (OF DOW ROAD						
LOCATION		ON	EARTH EXCAVATION	SHRINKAGE	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	WASTE (+) OR SHORTAGE (-)	CHANNEL EXCAVATION
STATION	ТО	STATION	CU YD		CU YD	CU YD	CU YD	CU YD
69+55.00	ТО	70+00.00	126,79	25%	95.09	213.60	-118.50	
70+18.20	ТО	70+29.36	120.73	2370	33.03	22.10	-22.10	149.06
70+18.20	ТО	71+00.00	96.88	25%	72.66	136.14	-63.48	149.00
		SUBTOTAL	223.68		167.76	371.84	-204.08	149.06
		ROUNDED					-210.00	
E	ARTI	H EXCAVATION					230	
CHA	NNE	L EXCAVATION						150
FURNISHED EXCAVATION							210	
CULVERT NO	RTH	OF HAGEN RO	 AD					
LC	CATI	ON	EARTH EXCAVATION	SHRINKAGE	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	WASTE (+) OR SHORTAGE (-)	CHANNEL EXCAVATION
STATION	ТО	STATION	CU YD		CU YD	CU YD	CU YD	CU YD
245 - 60 00	TO	246 : 40 00	206.71	250/	222.52	100.65	112.00	
245+60.00 246+41.09	TO	246+40.00 246+51.84	296.71	25%	222.53	108.65 26.92	113.88 -26.92	14.13
246+41.09	TO	240+31.84	305.49	25%	229.12	118.14	110.98	14.13
240+00.00	110	247+20.00	303.49	2370	229.12	110.14	110.98	
		SUBTOTAL	602.20		451.65	253.71	197.94	
		ROUNDED					200.00	
-	· ^ D.T.	L EVCAVATION					610	
		L EXCAVATION					610	20
CITA		LINCAVATION						
TOTAL E	ARTI	H EXCAVATION					840	
TOTAL CHA	NNE	L EXCAVATION						170
TOTAL FURN	ISHE	D EXCAVATION					210	

SEEDING SCHEDULE													
	LOC	ATION		SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2					
STATION	ТО	STATION	SIDE	ACRE	POUND	POUND	POUND	ACRE					
69+44	ТО	71+13	RT	0.15	14	14	14	0.15					
69+48	ТО	71+12	LT	0.13	12	12	12	0.13					
245+41	ТО	247+26	RT	0.17	16	16	16	0.17					
245+74	то	247+49	LT	0.15	14	14	14	0.15					
		SU	JBTOTAL	0.60	56	56	56	0.60					
			TOTAL	0.75	56	56	56	0.75					

EROSION CONTROL SCHEDULE							
	LO	CATION		EROSION CONTROL BLANKET	* TEMPORARY EROSION CONTROL SEEDING		
STATION	ТО	STATION	SIDE	SQ YD	POUND		
69+50	ТО	69+80	RT	33	1		
69+50	ТО	71+00	LT	209	5		
69+50	ТО	71+00	RT	259	6		
69+60	ТО	70+30	LT	85	2		
70+31	ТО	71+01	RT	50	2		
70+31	ТО	71+00	LT	28	1		
245+59	то	246+22	RT	174	4		
245+87	то	245+97	LT	13	1		
245+87	то	246+55	LT	60	2		
246+33	ТО	247+05	RT	225	5		
246+80	ТО	247+17	LT	34	1		
		SU	BTOTAL	1,170	30		
	TOTAL 1,170 30						
* SEEDING TO BE PLACED IN THREE (3) APPLICATIONS.							

* SEEDING TO BE PLACED IN THREE (3) APPLICATIONS.

TEMPORARY DITCH CHECK SCHEDULE							
LOCATION	ı	TEMPORARY DITCH CHECKS					
STATION	SIDE	FOOT					
NORTH OF DOW R	OAD						
69+63	LT	18					
69+85	LT	18					
70+07	LT	18					
70+34	LT	18					
70+47	LT	18					
70+60	LT	17					
70+73	LT	17					
70+03	RT	15					
70+43	RT	15					
70+58	RT	15					
70+73	RT	15					
SUBTOTAL		184					
NORTH OF HAGEN	ROAD						
245+60	RT	24					
245+77	RT	24					
245+94	RT	27					
246+11	RT	29					
246+40	RT	46					
246+55	RT	36					
SUBTOTAL		186					
TOTAL		370					

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)



USER NAME = default	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/30/2021	DATE -	REVISED -

ENTRANCE SCHEDULE						
LOCATIC	N	AGGREGATE BASE COURSE, TYPE B COURSE, TYPE B		INCIDENTAL HOT-MIX ASPHALT SURFACING		
STATION	SIDE	SQ YD	TON	TON		
247+10	LT	16	11	3		
SUBTOTAL		16	11	3		
TOTAL		16	11	3		

	PAVEMENT SCHEDULE									
	LOC	CATION		TRENCH BACKFILL	PAVED SHOULDER REMOVAL	PAVEMENT PATCHING, TYPE IV, 18 INCH	BITUMINOUS MATERIALS (PRIME COAT)	HOT-MIX ASPHALT SHOULDERS, 8"	BITUMINOUS MATERIALS (TACK COAT)	AGGREGATE WEDGE SHOULDER, TYPE B
STATION	ТО	STATION	SIDE	CU YD	SQ YD	SQ YD	POUND	SQ YD	POUND	TON
70+08	ТО	70+40		39		85	112			
70+08	ТО	70+40	LT		11			11	8	1
70+08	ТО	70+40	RT		11			11	8	1
246+25	ТО	246+65		10		107	108			
246+25	ТО	246+65	LT		14			14	9	2
246+25	ТО	246+65	RT		14			14	9	2
		SU	JBTOTAL	49	50	192	220	50	34	6
			TOTAL	49	50	192	220	50	34	6

(1) PLACE BETWEEN LIFTS AT A RATE OF 0.025 POUNDS PER SQUARE FOOT. 3 LIFTS REQUIRED.

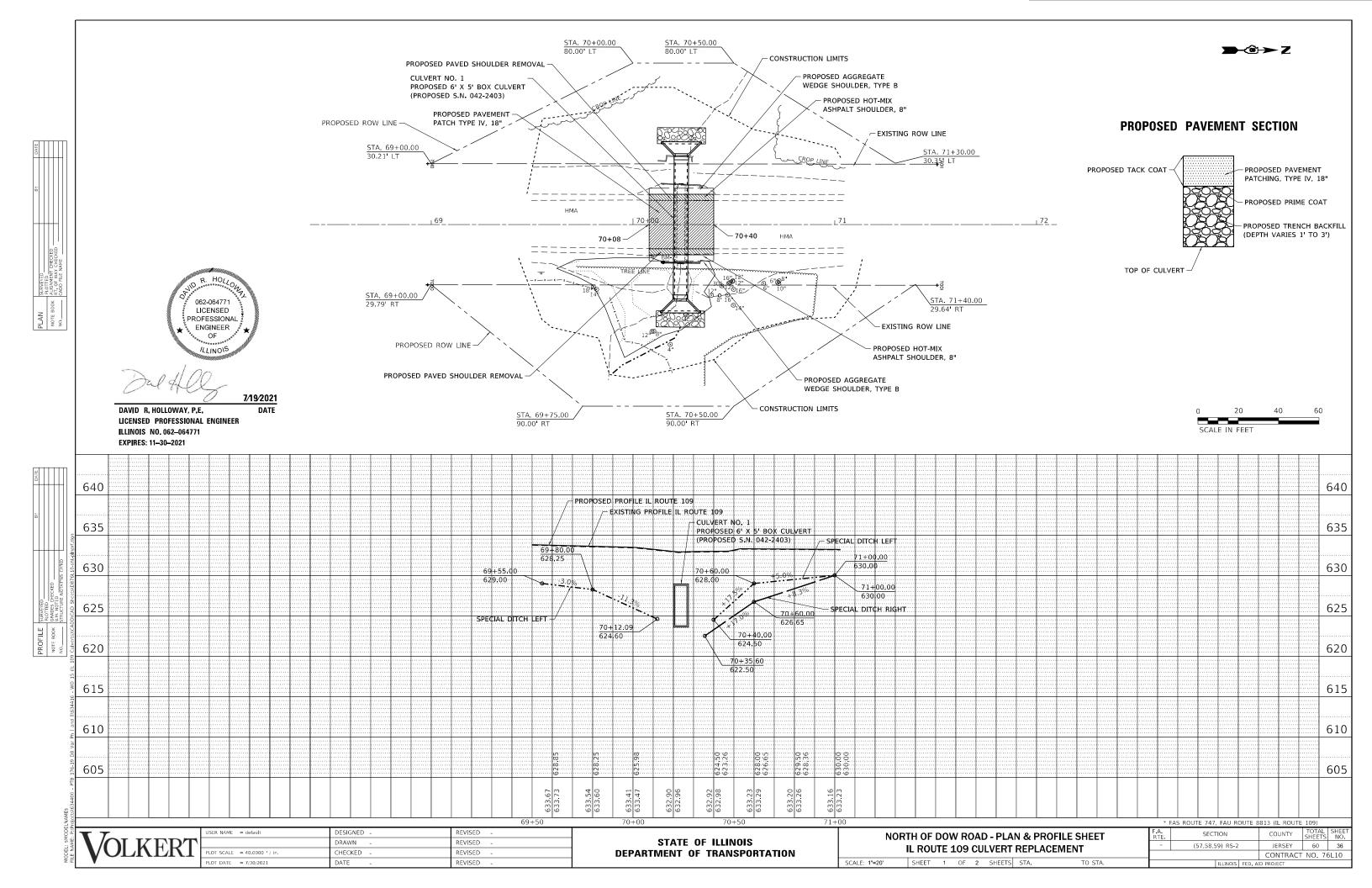
- /	1	١		
(1)		

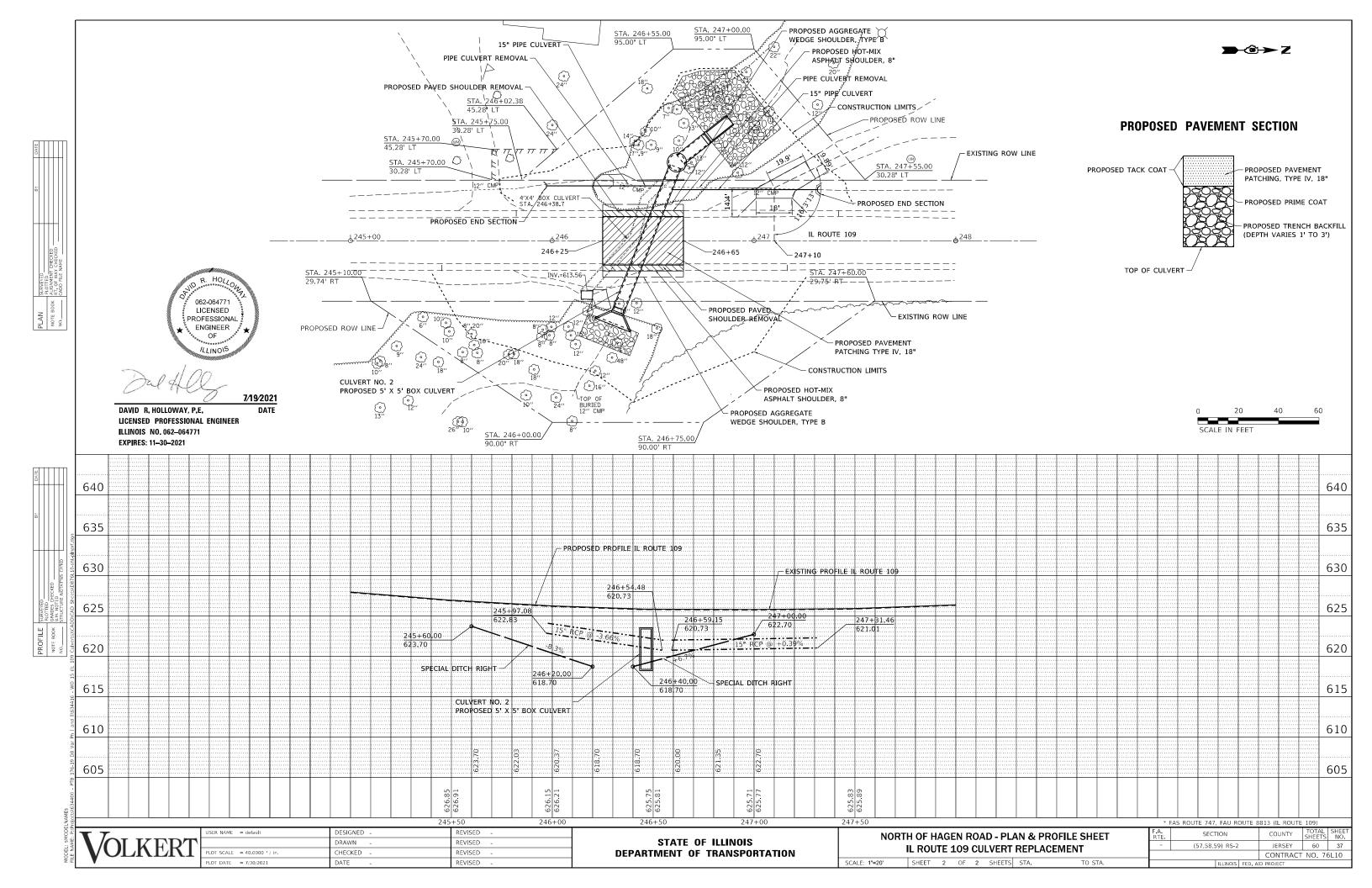
DRAINAGE SCHEDULE						
LOCATION				PIPE CULVERT REMOVAL	END SECTIONS 15"	PIPE CULVERTS, CLASS D, TYPE 1 15"
STATION	то	STATION	SIDE	FOOT	EACH	FOOT
245+97.08			LT		1	
245+97.08	то	246+54.48	LT			58
246+29.69	то	246+49.21	LT	20		
246+54.20	то	247+31.46	LT	78		
246+59.15	то	247+31.46	LT			73
247+31.46			LT		1	
	SUBTOTAL			98	2	131
			TOTAL	98	2	131

	TRAFFIC CONTROL SCHEDULE						
LOCATIO	N	DELINEATORS	CHANGEABLE MESSAGE SIGN	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	DETOUR SIGNING		
STATION	SIDE	EACH	CAL DA	L SUM	L SUM		
70+20.00	RT	1					
70+27.00	LT	1					
246+29.80	RT	1					
246+66.25	LT	1					
	TOTAL	4	56	1	1		

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

USER NAME = default	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 2.0000 ' / in	CHECKED -	REVISED -
PLOT DATE = 7/30/2021	DATE -	REVISED -

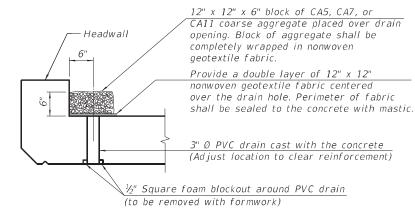




Benchmark: BM-1, Cut " \Box " in top of east headwall, 1' \pm north of south end of box culvert, Elev. 629.82. INDEX OF SHEETS Existing Structure: The existing 4'-0" x 5'-0" reinforced concrete box culvert was built at an unknown date. Existing structure is a single cell box culvert with a 5'-0" overall width and a 6'-0" overall height that is 38'-113/8" long out to out of headwalls. The existing culvert will be removed and replaced. Roadway General Plan and Elevation VINCENT will be closed and traffic detoured during construction. General Data P. TABOR No Salvage. Precast Apron End Section Details Soil Boring Logs 73'-0" 7/16/2021 Vincent Vincent P. Tabor 19'-11" 12'-0" 12'-0' Licensed Structural Engineer State of Illinois No. 081-007047 Shldr Lane Lane Shldr. Expires 11/30/2022 8'-103/4" 32'-1" 34'-11" 8'-103/4" Pay Limits for Precast Concrete Box Culverts Pay Limits for Precast Concrete Box Culverts Pay Limits for Pay Limits for DESIGN SPECIFICATIONS Box Culvert Box Culvert 2017 AASHTO LRFD Bridge Design End Sections End Sections Specifications, 8th Edition € IL 109 1'-0" 1V:6H LOADING HL-93 Existing Ground — Allow 50#/sq. ft. for future wearing surface. 1'-0" *2'-0" width of P.G.E. to be installed full length of proposed culvert, to 3'-0" from the end of the proposed wingwalls. Adjacent to culvert, vertical limits are Existing from bottom of bottom slab to top of top Ground slab. Along wingwalls, vertical limits are U.S. F 624.83 from bottom of culvert bottom slab to -U.S. Inv. 624.58 1'-0" below top of wingwall. P.G.E. shall 2.39% be capped with a 12" thick layer of D.S. Inv. 622.55 impervious material. Cost of impervious material shall be included in the cost of 6" Porous Granular Material Porous Granular Embankment. Stone Riprap, Class A5 LONGITUDINAL SECTION -Existing scour hole to be filled with Rock Fill-Foundation. See Special Provisions. Minimum elevation from 12'-0" 6'-0" Beddina -6'-0" 12'-0" survey is 619.16. 5'-6" Shldr. Shldr. Lane Lane Filter Fabric SECTION A-A Boring #2 Boring #3 Existing R.O.W. • DESIGN STRESSES 73'-0" Out-to-Out of Headwalls PRECAST UNITS (New Construction) 50505 f'c = 5,000 psify =65,000 psi (Welded Wire Reinforcement) Boring #1 Removal of 1V:2H Existing Structures No. 1 FIELD UNITS (New Construction) f'c = 3.500 psify = 60,000 psi (Reinforcement)1V:2H 38'-11%" Limits of Existing Structure Range 11W, 3rd PM 88888 1'-0" Flow © Existing and Proposed Structures `— Ç Culvert Sta. 70+23.79 Elev. 632.89 LOCATION SKETCH <u>1V:2H</u> GENERAL PLAN AND ELEVATION IL 109 OVER UNNAMED DITCH 1V:2H Existing R.O.W. G IL 109 Remove existing wall to at least and the F.A.S. RTE. 747 SEC. (57,58,59) RS-2 1 ft. below bottom of Porous Granular Approximate limits Material in accordance with Section of existing scour JERSEY COUNTY 8'-0" typ. 501 of the Standard Specifications. STATION 70+23.79 Paid for as Concrete Removal. PLANS.N. 042-2403 USER NAME = LIN06-PC DESIGNED - VPT GENERAL PLAN AND ELEVATION REVISED SECTION COUNTY LIN ENGINEERING LTC STATE OF ILLINOIS CHECKED - AML REVISED **STATION** 70 + 23,79 747 (57,58,59) RS-2 JERSEY 60 38 Consulting Engineers PLOT TIME = 6:56:18 AM DRAWN REVISED **DEPARTMENT OF TRANSPORTATION STRUCTURE NO. 042-2403** CONTRACT NO. 76L10 CHECKED - VPT SHEET 1 OF 5 SHEETS PLOT DATE = 7/30/2021 REVISED 7/30/2021 6:56:18 AM

LIMITS OF MEMBRANE WATERPROOFING

Longitudinal limits of membrane waterproofing for the precast concrete culvert are along the full length between the headwalls.



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.)

GENERAL NOTES

The precast box culvert sections shall conform to the requirements of ASTM C 1577.

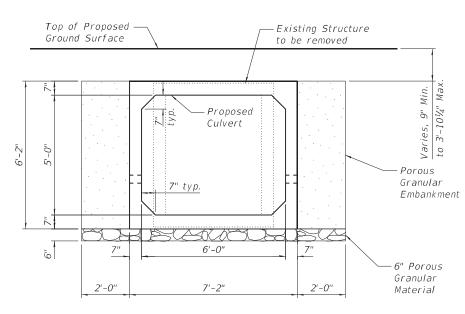
Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard, unless noted otherwise.

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.

See Special Provisions and Roadway and Maintenance of Traffic plans for time restrictions relative to installation of the structure.



SECTION THROUGH PRECAST BOX CULVERT

TOTAL BILL OF MATERIAL

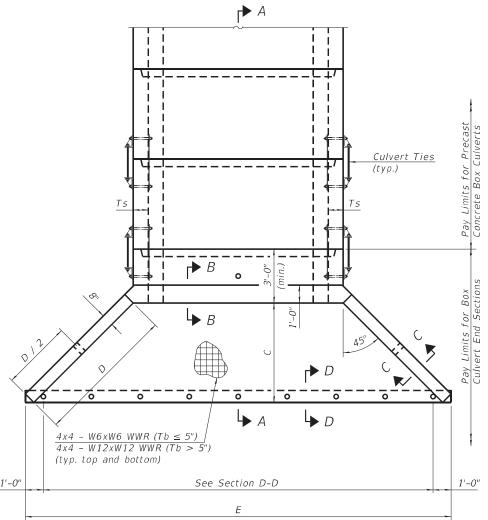
ITEM NO.	ITEM	UNIT	TOTAL
20700220	Porous Granular Embankment	Cu. Yd.	73
2810010/9	Stone Riprap, Class A5	Sq. Yd.	47
28,2002,00	Filter Fabric	Sq. Yd.	47
501,00800	Removal of Existing Structures No. 1	Each	1
50102400	Concrete Removal	Cu. Yd.	3
54001001	Box Culvert End Sections, Culvert No. 1	Each	2
54010605	Precast Concrete Box Culverts 6'x5'	Foot	67.0
59100100	Geocomposite Wall Drain	Sq. Yd.	73
X0900064	Membrane Waterproofing System for Buried Structures	Sq. Yd.	73
Z005451X	Rock Fill - Foundation	Ton	20

PRECAST BOX CULVERT SCHEDULE (ASTM C1577)

ſ	Station	Size	Skew	Design Fill			
ı	Station	(Span x Height)	SKEW	Min.	Мах.		
ĺ	70+23.79	6'-0" x 5'-0"	<i>0</i> °	2'-81/2"	3'-101/4"		

The Design Fill heights shown in the culvert schedule are located between the outside edges of the paved shoulders.

END VIEW



PLAN

SCB-AES 2-17-2017

USER NAME = LIN06-PC DESIGNED - VPT REVISED . LIN ENGINEERING LTC CHECKED - AML REVISED Consulting Engineers PLOT TIME = 6:56:23 AM RAWN REVISED PLOT DATE = 7/30/2021 CHECKED - VPT REVISED

 $6'-0'' \ min. \ (R \le 3'-0'')$ See General Notes 10'-0'' min. (R > 3'-0'')regarding culvert ties. 0

GENERAL NOTES

SECTION A-A

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be ncreased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for 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.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

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 unit price for Box Culvert End Sections of the culvert number specified.

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than $\frac{1}{2}$ " nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included on the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

APRON END SECTION DIMENSIONS

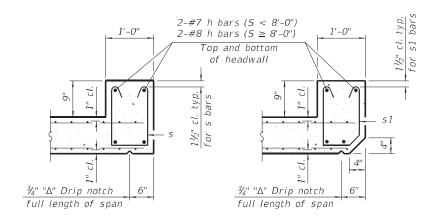
					TON LIVE	JULCI	1011 211	·IL IV J1 C			
Span (S)	Rise (R)	Tt	Tb	Ts	А	В	С	D	Е	Concrete Cu. Yd.	Culvert Ties Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-105/8"	4'-1"	10'-45/8"	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-71/8"	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-105/8"	5'-6"	12-45/8"	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-71/8"	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-41/2"	2'-21/2"	2'-113/8"	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-81/2"	3'-10"	11'-23/8"	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-41/2"	2'-81/2"	3'-11%"	5'-7"	13'-81/8"	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-81/2"	5'-3"	13'-23/8"	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 ¹ / ₂ "	3'-21/2"	4'-113%"	7'-0"	15'-81/8"	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-85/8"	6'-8"	15'-2 ¹ / ₂ "	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-113/8"	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-71/4"	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-113/8	5'-7"	14'-101/8"	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-71/4"	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-113/8"	7'-0"	16'-101/8"	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-91/4"	6'-9"	16'-57/8"	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-113/8"	8'-5"	18'-101/8"	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-91/4"	8'-2"	18'-57/8"	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-113/8"	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-105/8"	4'-1"	13'-105/8"	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-113/8"	5'-7"	16'-01/8"	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-105/8"	5'-6"	15'-105%"	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-113/8"	7'-0"	18'-01/8"	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-103/4"	6'-11"	17'-103/4"	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-113/8"	8'-5"	20'-01/8"	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-103/4"	8'-4"	19'-103/4"	7.8	Yes
6'-0"	6'-0"	8"	7"	7"	7'-5"	4'-3"	6'-111/2"	9'-10"	22'-01/4"	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-103/4"	9'-9"	21'-103/4"	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-113/8"	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-113/8"	5'-7"	17'-21/8"	6.1	Yes
7'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-113/8"	7'-0"	19'-21/8"	7.4	Yes
7'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-113/8"	8'-5"	21'-21/8"	8.9	Yes
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-111/2"	9'-10"	23'-21/4"	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"		4'-2"	16'-2"	5.3	Yes
8'-0"			8"				2'-113/8"				
	3'-0"	8"		8"	4'-5"	2'-9"	3'-113/8"	5'-7"	18'-21/8"	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 ³ / ₈ " 5'-11 ³ / ₈ "	7'-0"	20'-21/8"	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"		8'-5"	22'-21/8"	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-111/2"	9'-10"	24'-21/4"	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-03/4"	4'-4"	17'-67/8"	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-03/4"	5'-9"	19'-67/8"	7.5	Yes
9'-0"	4'-0"	9'	9"	9"	5'-6"	3'-3"	5'-03/4"	7'-2"	21'-67/8"	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-07/8"	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-01/8"	9'-11"	25'-5\%''	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-11/2"	4'-5"	18'-101/4"	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-11/2"	5'-10"	20'-101/4"	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-11/2"	7'-3"	22'-103/8"	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-11/2"	8'-8"	24'-10%"	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4"	7'-1½"	10'-1"	26'-103/8"	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-27/8"	4'-7"	20'-31/8"	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-27/8"	6'-0"	22'-31/8"	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-21/4"	7'-4"	24'-13/4"	11.5	Yes
11'-0"	5'-0"	11"	11"	11"	6'-8"	3'-10"	6'-21/4"	8'-9"	26'-13/4"	13.3	Yes
11'-0"	6'-0"	11"	11"	11"	7'-8"	4'-4"	7'-21/4"	10'-2"	28'-17/8"	15.5	Yes
12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-35/8"	4'-8"	21'-61/2"	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-35/8"	6'-1"	23'-6 ¹ / ₂ "	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-35%"	7'-6"	25'-6 ⁵ %''	13.0	Yes
12'-0"	5'-0"	12"	12"	12"	6'-9"	3'-11"	6'-35/8"	8'-11"	27'-65/8"	14.1	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-35/8"	10'-4"	29'-65%''	17.4	Yes
Note.											
Two	sets of	anro	n end	sectio	nn dimensi	ons are si	nown above	for some	hox culve	ert sizes i	due to the t

Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft (Sheet 1 of 2)

		10110	Ct I	UI	۷)				
PRECAST CONCRETE	BOX	CULV	ERT	AP	RON	END	SECTION	DETAILS	
	S1	ΓΑΤΙΟ	N 7	0 + 3	23.79				
	STRU	ICTUR	E N	0.0	42-24	403			
	QUEET		ΩE	6	CHE	TC			

SECTION COUNTY (57,58,59) RS-2 JERSEY 60 40 CONTRACT NO. 76L10

7/30/2021 6:56:23 AM



SECTION B-B (Top slab at downstream end)

SECTION E-E

31/8"

BAR s1

2-17-2017

#4 s or s1 bars at spacing = Tt

(Spacing need not be less than 8")

SECTION B-B (Top slab at upstream end) 1 1 1 1/ 1'-6" min. Optional lap splice. See General Notes for reinforcement requirements.

> SECTION B-B (Bottom Slab)

SECTION C-C

1'-6"

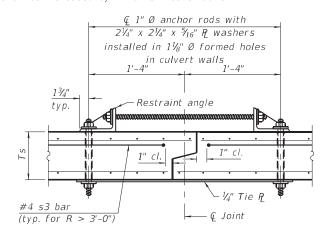
1" cl.

Bonded construction joint

3" Ø corrugated PE pipe per Article 1040.04 of the Standard Specifications. Fill with non-shrink grout 6-#5 h1 bars placed as shown #4 v1 bars drilled and epoxy grouted into toewall in 9" min. deep holes at 1'-6" cts., max. #4 s2 bars at 1'-0" cts., max. typ. 1'-0"

SECTION D-D

*** This dimension shall be increased by 2" for CIP construction.

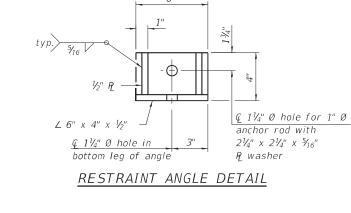


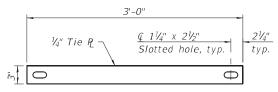
SECTION F-F (Showing culvert tie details)

TOEWALL CONSTRUCTION SEQUENCE

- 1. Perform excavation and construct toewall.
- 2. Backfill accordingly and place bedding for precast box culvert end sections.
- 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 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.

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the 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. $2\frac{1}{4}$ " $\times 2\frac{1}{4}$ " $\times 2\frac{1}{4}$ " $\times 2\frac{1}{6}$ " 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 ½ 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.





TIE PLATE DETAIL

SCB-AES

LIN ENGINEERING LTD Consulting Engineers

9"

BAR s

USER NAME = LIN06-PC DESIGNED - VPT REVISED CHECKED - AML REVISED PLOT TIME = 6:56:25 AM RAWN REVISED PLOT DATE = 7/30/2021 CHECKED - VPT REVISED

9"

BAR s2

BAR s3

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS SECTION COUNTY **STATION** 70 + 23.79 (57,58,59) RS-2 JERSEY 60 41 **STRUCTURE NO. 042-2403** CONTRACT NO. 76L10 SHEET 4 OF 5 SHEETS

7/30/2021 6:56:25 AM

(W) IIIi	nois Departn Transportati on of Highways	on	nt	IL	Vicesia	OIL BORING LOG ver Tributary to Little Piasa Creek, 1 mi		Page		of 9/01
ROUTE	FAS 747 DE	SCRI	PTION				.OGG	ED BY	Larry	y Ford
SECTION	(57,58,59)RS-1	_	LOCAT	ION	SW 1	4, SEC. 21, TWP. 7N, RNG. 11W, 3 rd PM, ade , Longitude				
COUNTYJe	ersey DRILLING	MET	THOD			llow Stem Auger HAMMER TYPE		140# A	utoma	itic
STRUCT. NO. Station BORING NO. Station Offset Ground Surface E	#1 SB Lane 134+28 7.0 ft Rt	D E P T H	B L O W s	U C S Qu (tsf)	M O I S T	Surface Water Elev. ft Stream Bed Elev. ft Groundwater Elev.: First Encounter Upon Completion 587.7 ft After Hrs. ft	D E P T H	B L O W S	U C S Qu (tsf)	M O I S T
Asphalt and Concre	ote Pavement	-				Brown and Gray Silty CLAY (continued)	-	6	1.7 S/15	21
Asphal and Concre	609,68	-				589.6	3	- 8:	0,10	
	nus.	_				Con Ciby Cl AV (organism)		0	0.7	
Brown Silt LOAM (f	111)	_	1			Gray Silty CLAY (organics)	-	2	S/15	24
		_				587.8	y			
		-5				Gray & Brown Weathered SHALE	-25	7		
			4	1.6 S/10	20	with weathered LIMESTONE gravel		14 14	1.6 S/10	16
	604.68					585.1	3			
			1			Red and Brown SHALE		13		
Brown Silty Clay LC	DAM (fill)	_	2	0.4 S/10	25	583.6	3	37 50	2.7 S/5	17
		_				Gray LIMESTONE (hard drilling) 582.6	3			
		-10	2			End of Boring	-30			
			2	0.6	0202	End of Boring	-50			
	600.18		2	S/15	25		-			
			1				=			
Brown Silty CLAY (fill)	-	2	1.0		_	-			
		_	4	S/15	20		-			
		-								
		-15	2				-35			
			4	1.0 S/15	19					
		_	4	8/15	19	-	-			
		_					_			
		-	2	1.3		-	5			
			5	S/15	23					

ne Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Pend	etrometer)
ne SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)	
	BBS, form 137 (Rev. 8-99)

Division of Highways DOT FAS 747	DES	SCRI	PTION	IL	109 o	ver Tributary to Little Pi South of McClush		Date LOGGED BY	7/9/01 Larry For
SECTION (57,58,59)RS-1 COUNTY Jersey DRIL				ION _	SW 1/ Latitu	4, SEC. 21, TWP. 7N, I de , Longitude Hand Auger	RNG. 11W, 3 rd PM,		
STRUCT. NO. Station Station Station #2 Station 134+24 Offset 54.5 ft RT CL Ground Surface Elev. 589.48	ft	D E P T H	B L O W S	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. Stream Bed Elev. Groundwater Elev.: First Encounter Upon Completion After Hrs.		Z	
Brown and Gray SILTY SAND		-		NC					
Brown and Gray SILTY CLAY	36.48	_		NC 1.5	25				
Brown and Gray CLAY LOAM	35.48	-		3.0	22				
Refusal at GRAVEL and Glacial TILL End of Hand Auger Due to inaccessability or buried		-5		2.5	23				
utilites, Hand Augers were used. End of Boring		-10							
		-15							
		-							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetromater)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99) Illinois Department of Transportation

ROUTE

COUNTY

STRUCT, NO.

SOIL BORING LOG

Page 1 of 1

Date 7/9/01

IL 109 over Tributary to Little Piasa Creek, 1 mi South of McClusky LOGGED BY Larry Ford FAS 747 DESCRIPTION LOCATION SW 1/4, SEC. 21, TWP. 7N, RNG. 11W, 3rd PM, Latitude , Longitude SECTION (57,58,59)RS-1 Jersey DRILLING METHOD Hand Auger HAMMER TYPE

Surface Water Elev.

D B U M E L C O P O S I T W S H S Qu T Groundwater Elev.: First Encounter Upon Completion After Hrs. BORING NO. Station ____ Offset 73.0 ft LT CL Ground Surface Elev. 592.72 ft (ft) (/6") (tsf) (%) 1.0 23 Gray SILTY CLAY Gray SANDY LOAM NC 590.72 1.0 26 Gray SILTY CLAY 589.72 Brown and Gray CLAY LOAM with 589.22 SAND and GRAVEL NC / 20 Glacial TILL CLAY LOAM 2.5 3.5 18

587.72 -5

Refusal at LIMESTONE End of Hand Auger Due to inaccessability or buried utilities, Hand Augers were used. End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

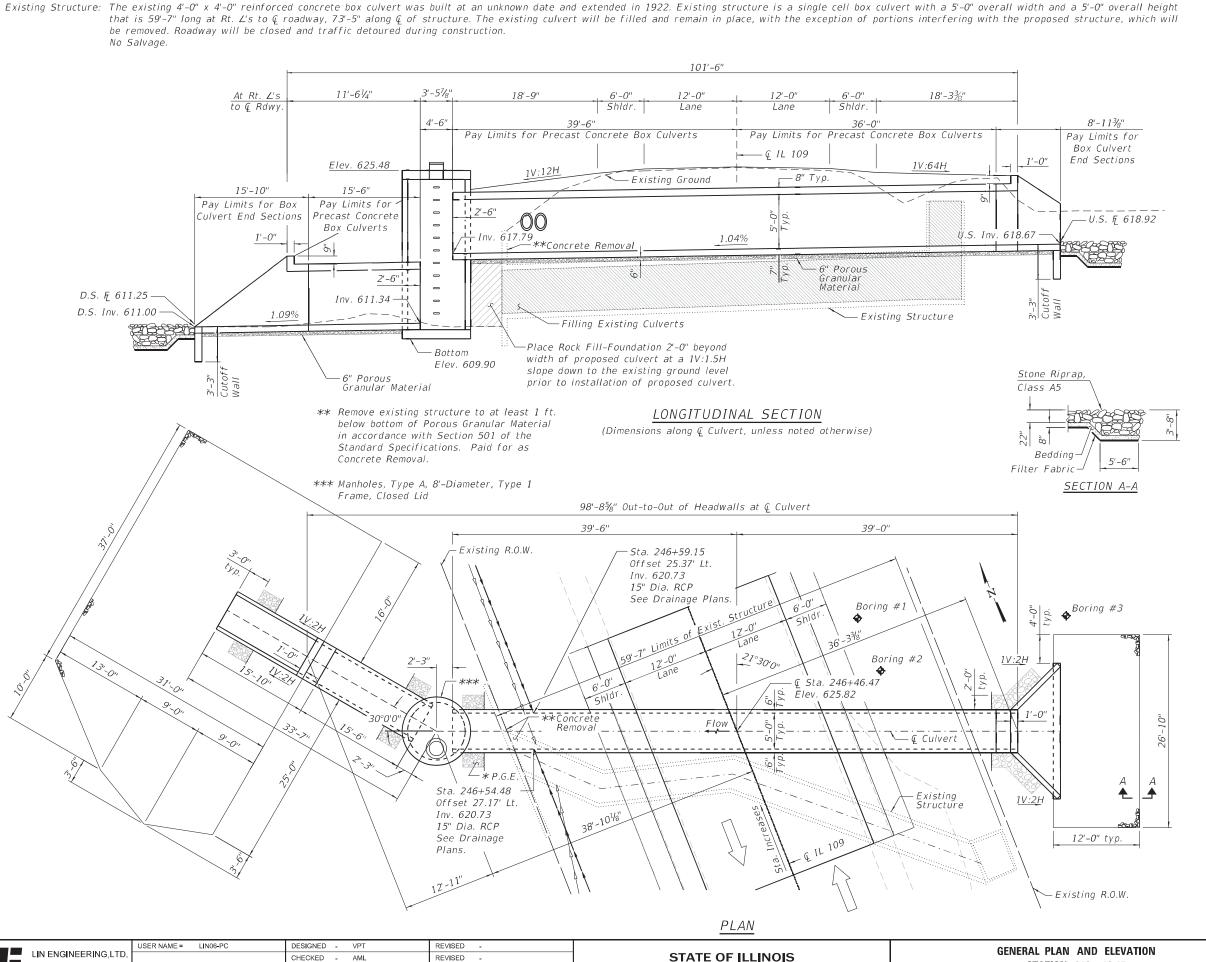
The boring logs represent point information.

Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



Brown and Gray Silty CLAY

	USER NAME = LIN06-PC	DESIGNED - VPT	REVISED -
LTD.		CHECKED - AML	REVISED -
rs	PLOT TIME = 6:56:27 AM	DRAWN - AML	REVISED -
	PLOT DATE = 7/30/2021	CHECKED - VPT	REVISED -



Benchmark: BM 109-7, Cut "" on the center top of the N. headwall over a 12" CMP culvert located on the W. side of IL 109, approx. 720' North of Hagen Road, approx. 4.65 miles North of IL Rte. 3; Elev. 623.17.

* 2'-0" width of P.G.E. to be installed full length of proposed culvert, to 3'-0" from the end of the proposed wingwalls. Adjacent to culvert, vertical limits are from bottom of bottom slab to top of top slab. Along wingwalls, vertical limits are from bottom of culvert bottom slab to 1'-0" below top of wingwall. P.G.E. shall be capped with a 12" thick layer of impervious material. Cost of impervious material shall be included in the cost of Porous Granular Embankment.

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

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

DESIGN STRESSES

PRECAST UNITS (New Construction)

 $f'c = 5,000 \ psi$

fy = 65,000 psi (Welded Wire Reinforcement)

FIELD UNITS (New Construction) f'c = 3,500 psi

fy = 60,000 psi (Reinforcement)

INDEX OF SHEETS

- 1. General Plan and Elevation
- General Data
- -4. Precast Tapered End Section Details
- 5.-6. Precast Apron End Section Details
- 7. Soil Boring Logs



7/16/2021

Date

Vincent P. Tabor Licensed Structural Engineer State of Illinois No. 081-007047 Expires 11/30/2022

GENERAL PLAN AND ELEVATION

IL 109 OVER UNNAMED DITCH

F.A.S. RTE. 747 SEC. (57,58,59) RS-2

JERSEY COUNTY

STATION 246+46.47

LIN ENGINEERING,LTI
Consulting Engineers
Springfield, Illinois

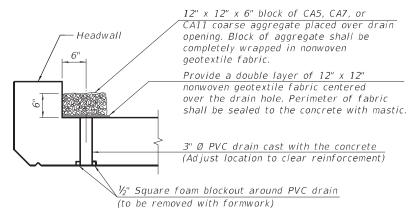
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STATION 246 + 46.47

SHEET 1 OF 7 SHEETS

LIMITS OF MEMBRANE WATERPROOFING

Longitudinal limits of membrane waterproofing for the precast concrete culvert are between the east side of the manhole and the east headwall.



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.)

GENERAL NOTES

The precast box culvert sections shall conform to the requirements of ASTM C 1577.

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

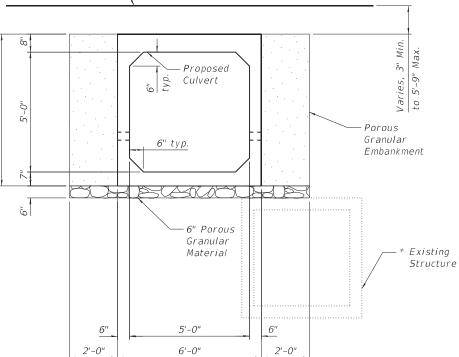
The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard, unless noted otherwise.

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.

See Special Provisions and Roadway and Maintenance of Traffic plans for time restrictions relative to installation of the structure.

Top of Proposed — Ground Surface



SECTION THROUGH PRECAST BOX CULVERT

TOTAL BILL OF MATERIAL

ITEM NO.	ITEM	UNIT	TOTAL
20700220	Porous Granular Embankment	Cu. Yd.	95
28100109	Stone Riprap, Class A5	Sq. Yd.	207
282002Ø0	Filter Fabric	Sq. Yd.	207
50102400	Concrete Removal	Cu. Yd.	2
54001/002	Box Culvert End Sections, Culvert No. 2	Each	2
5401/0505	Precast Concrete Box Culverts 5'x5'	Foot	91.0
591,00,100	Geocomposite Wall Drain	Sq. Yd.	68
60224459	Manholes, Type A, 8'-Diameter, Type 1 Frame, Closed Lid	Each	1
XØ900064	Membrane Waterproofing System for Buried Structures	Sq. Yd.	68
Z0023500	Filling Existing Culverts	Cu. Yd.	49
Z005451X	Rock Fill - Foundation	Ton	39

* Existing Structure to remain in place and be filled with a flowable fill. Paid for as Filling Existing Culverts. Where interference between the existing and proposed structures occurs, remove existing structure to at least 1 ft. below bottom of Porous Granular Material in accordance with Section 501 of the Standard Specifications. Paid for as Concrete Removal.

<u>PRECAST BOX CULVERT</u> <u>SCHEDULE (ASTM C1577)</u>

Station	Size	Skew	Design Fill			
	(Span x Height)	JKCW	Min.	Max.		
246+46.47	5'-0" x 5'-0"	21.5°	1'-5"	1'-111/2"		

The Design Fill heights shown in the culvert schedule are located between the outside edges of the paved shoulders.

E

LIN ENGINEERING,LTD.
Consulting Engineers
Springfleld, Illinois

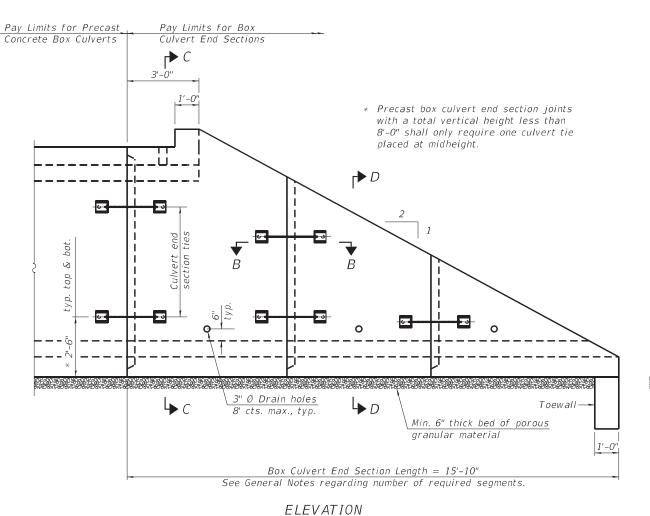
 USER NAME =
 LIN06-PC
 DESIGNED
 VPT
 REVISED

 CHECKED
 AML
 REVISED

 PLOT TIME =
 6:56:32 AM
 DRAWN
 AML
 REVISED

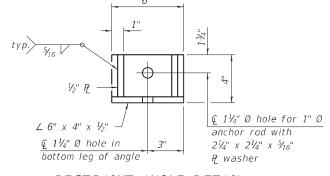
 PLOT DATE =
 7/30/2021
 CHECKED
 VPT
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

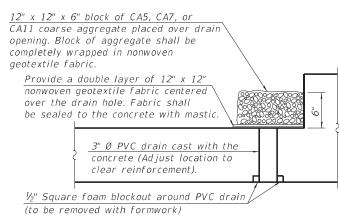


Headwall -2'-0" typ. Span Porous granular

END VIEW



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.) (Sheet 1 of 2)

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.

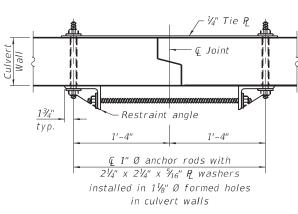
1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. $2\frac{1}{4}$ " x $2\frac{1}{4}$ " x $\frac{5}{16}$ " 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 ½ 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.

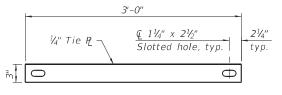
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

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.



SECTION B-B (Showing end section tie details)



TIE PLATE DETAIL

LIN ENGINEERING LTC Consulting Engineers

Q 3" Ø Drain hole→

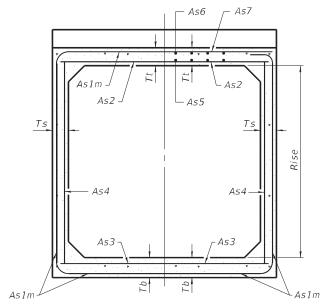
USER NAME = LIN06-PC DESIGNED - VPT REVISED CHECKED - AML REVISED PLOT TIME = 6:56:34 AM RAWN REVISED PLOT DATE = 7/30/2021 CHECKED - VPT REVISED

PLAN

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS **STATION 246 + 46,47** SHEET 3 OF 7 SHEETS

SECTION COUNTY (57,58,59) RS-2 JERSEY 60 45 CONTRACT NO. 76L10

7/30/2021 6:56:34 AM



(Design Earth Cover < 2 ft)

SECTION C-C

3" Ø corrugated PE pipe

Standard Specifications.

Fill with non-shrink grout

#4 v1 bars drilled and grouted into toewall in 9" min.

deep holes at 1'-6" cts., max.

per Article 1040.04 of the

6-#5 h1 bars

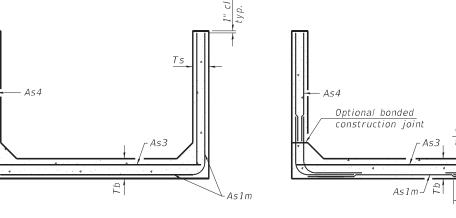
placed as shown

#4 s1 bars at

1'-0" cts., max.

SECTION E-E

(Design Earth Cover ≥ 2 ft)



SECTION D-D ALTERNATE SECTION D-D

7" cl.			<u> </u>	ls1m	REIN (in.	IF0R(²/ ft)	СЕМЕ	<u>NT</u>				
	Rise (ft)	2	3	4	5	6	7	8	9	10	11	12
	4	0.19	0.17									
<u>Ts</u>	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						
As1m	8	0.40	0.35	0.43	0.39	0.36	0.34	0.40				
ptional bonded	9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48			
onstruction joint v2	10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56		
<u> </u>	11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65	
$\int As3 \int typ.$	12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75
(As1	m reinforcement ba	sed up	on wel	ded wi	re rein	forcem	ent cor	nformir	ng to A	ASHT0	M 55	or M 22

ℓ, DIMENSION

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

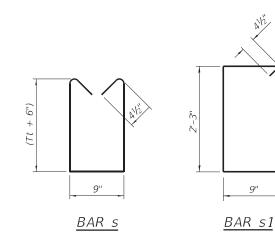
by construction of the sidewalls using conventional forming methods Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D. The size and spacing of the v2 bars shall provide a minimum

Alternate Section D-D is provided to allow the Contractor the

option of casting the bottom slab of the end section first followed

reinforcement area along each face of the walls (in.2/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.

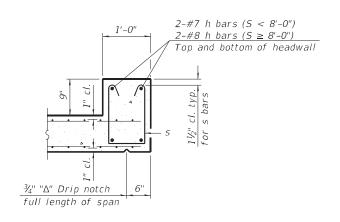
Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.



#4 s bars at spacing = Tt (Spacing need not be less than 8") 4-h bars (See Section F-F) HEADWALL ELEVATION (Allow sidewall reinforcement to extend into end of headwall.)

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 F-F

SCB-TES

2-17-2017

1'-0"

1½" cI.

typ.

000	120	
		U
	LIN ENGINEERING,LTD.	
	Consulting Engineers	Р
	Springfield, Illinois	_
		P

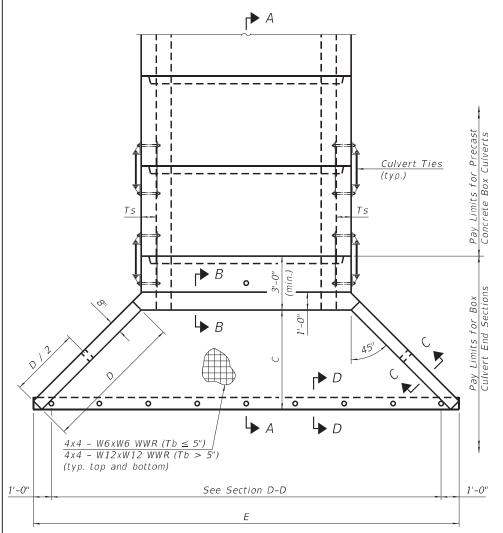
	USER NAME =	LIN06-PC	DESIGNED	-	VPT	REVISED	-
ا .			CHECKED	-	AML	REVISED	-
	PLOT TIME =	6:56:36 AM	DRAWN	-	AML	REVISED	-
	PLOT DATE =	7/30/2021	CHECKED	-	VPT	REVISED	-

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

(Sheet 2 of 2)					
SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STATION 246 + 46.47	747	(57,58,59) RS-2	JERSEY	60	46
31A110N 240 + 40,47			CONTRAC	CT NO. 7	6L10
SHEET 4 OF 7 SHEETS		ILLINOIS FED. A	D PROJECT		

7/30/2021 6:56:36 AM

END VIEW



PLAN

SCB-AES 2-17-2017

USER NAME = LIN06-PC DESIGNED - VPT REVISED LIN ENGINEERING LTC CHECKED - AML REVISED Consulting Engineers PLOT TIME = 6:56:37 AM REVISED PLOT DATE = 7/30/2021 CHECKED - VPT REVISED

 $6'-0'' \ min. \ (R \le 3'-0'')$ See General Notes 10'-0'' min. (R > 3'-0'')regarding culvert ties. 0 SECTION A-A

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be ncreased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for 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.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

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 unit price for Box Culvert End Sections of the culvert number specified.

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than $\frac{1}{2}$ " nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included on the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

APRON END SECTION DIMENSIONS

Span (S)	Rise (R)	Tt	Tb	Ts	A	В	С	D	Ε	Concrete Cu. Yd.	Culvert Ties
		711	CII	411	2/ 4//	2/ 2//	21 105/11	41 411	7.01 45411		Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-105/8"	4'-1"	10'-45%''	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-77/8"	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-105/8"	5'-6"	12-45/8"	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-71/8"	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-41/2"	2'-21/2"	2'-113/8"	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-81/2"	3'-10"	11'-23/8"	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-41/2"	2'-81/2"	3'-113/8"	5'-7"	13'-81/8"	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-81/2"	5'-3"	13'-23/8"	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 ¹ / ₂ "	3'-2 ¹ / ₂ "	4'-113/8"	7'-0"	15'-81/8"	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-85/8"	6'-8"	15'-2 ¹ / ₂ "	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-113/8"	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-71/4"	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-113/8	5'-7"	14'-101/8"	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-71/4"	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-113%"	7'-0"	16'-10 ¹ / ₈ "	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-91/4"	6'-9"	16'-5 ⁷ / ₈ "	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-11 ³ / ₈ "	8'-5"	18'-101/8"	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-91/4"	8'-2"	18'-57/8"	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-113/8"	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-105/8"	4'-1"	13'-105/8"	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-113/8"	5'-7"	16'-01/8"	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-105/8"	5'-6"	15'-105/8"	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-113/8"	7'-0"	18'-01/8"	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-103/4"	6'-11"	17'-103/4"	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-113/8"	8'-5"	20'-01/8"	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-103/4"	8'-4"	19'-103/4"	7.8	Yes
6'-0"	6'-0"	8"	7''	7"	7'-5"	4'-3"	6'-111/2"	9'-10"	22'-01/4"	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-10 ³ / ₄ "	9'-9"	21'-103/4"	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-113/8"	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-113/8"	5'-7"	17'-21/8"	6.1	Yes
		8"	8"	8"	5'-5"	3'-3"	3-117 ₈ 4'-11 ³ / ₈ "	7'-0"			Yes
7'-0" 7'-0"	4'-0"	8"	8"	8"	6'-5"	3'-9"		8'-5"	19'-21/8"	7.4 8.9	Yes
	5'-0"						5'-113/8"		21'-21/8"		
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11½"	9'-10"	23'-21/4"	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-113/8"	4'-2"	16'-2"	5.3	Yes
8'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-113/8"	5'-7"	18'-21/8"	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-113/8"	7'-0"	20'-21/8"	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-113/8"	8'-5"	22'-21/8"	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-111/2"	9'-10"	24'-21/4"	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-03/4"	4'-4"	17'-67/8"	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-0¾''	5'-9"	19'-67/8"	7.5	Yes
9'-0"	4'-0"	9'	9"	9"	5'-6"	3'-3"	5'-03/4"	7'-2"	21'-67/8"	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-07/8"	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-01/8"	9'-11"	25'-5%''	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-11/2"	4'-5"	18'-101/4"	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-11/2"	5'-10"	20'-101/4"	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-1½"	7'-3"	22'-103/8"	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-11/2"	8'-8"	24'-103/8"	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4''	7'-1½"	10'-1"	26'-10¾"	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-27/8"	4'-7"	20'-3½"	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-21/8"	6'-0"	22'-3 ¹ / ₈ "	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-21/4"	7'-4"	24'-13/4"	11.5	Yes
11'-0"	5'-0"	11"	11"	11"	6'-8"	3'-10"	6'-21/4"	8'-9"	26'-13/4"	13.3	Yes
11'-0"	6'-0"	11"	11"	11"	7'-8"	4'-4"	7'-21/4"	10'-2"	28'-17/8"	15.5	Yes
12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-35/8"	4'-8"	21'-61/2"	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-35/8"	6'-1"	23'-61/2"	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-35/8"	7'-6"	25'-65%"	13.0	Yes
12'-0"	5'-0"	12"	12"	12"	6'-9"	3'-11"	6'-35/8"	8'-11"	27'-65%"	14.1	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-35%"	10'-4"	29'-65%"	17.4	Yes
Note.	:						-				
		anro	n end	sectio	on dimensi	ons are si	hown above	e for some	o hox culve	ert sizes i	due to the to

Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft (Sheet 1 of 2)

COUNTY

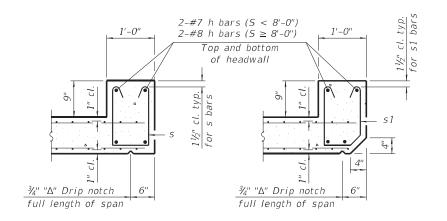
JERSEY 60 47

CONTRACT NO. 76L10

SECTION PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS (57,58,59) RS-2 **STATION 246 + 46,47** SHEET 5 OF 7 SHEETS

7/30/2021 6:56:37 AM

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



SECTION B-B (Top slab at downstream end)

SECTION B-B (Top slab at upstream end) 1 1 1 1/ , , , , , , , , 1'-6" min. Optional lap splice. See General Notes for reinforcement requirements.

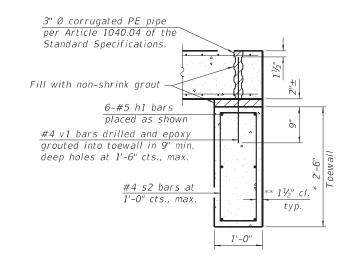
> SECTION B-B (Bottom Slab)

SECTION C-C

1'-6"

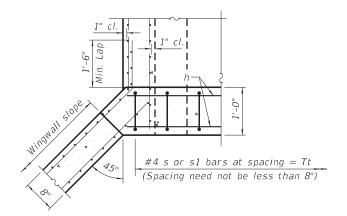
1" cl.

Bonded construction joint



SECTION D-D

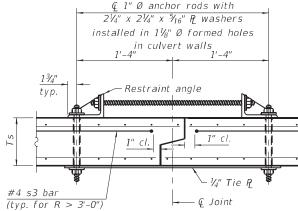
*** This dimension shall be increased by 2" for CIP construction.



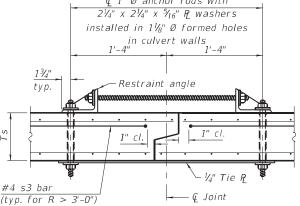
SECTION E-E

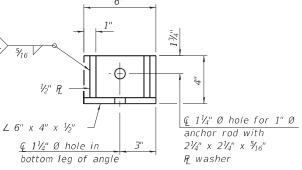
31/8"

BAR s1

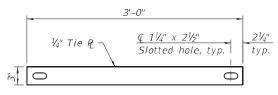


SECTION F-F (Showing culvert tie details)





RESTRAINT ANGLE DETAIL



TIE PLATE DETAIL

TOEWALL CONSTRUCTION SEQUENCE

- 1. Perform excavation and construct toewall.
- 2. Backfill accordingly and place bedding for precast box culvert end sections.
- 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 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.

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the 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. $2\frac{1}{4}$ " $\times 2\frac{1}{4}$ " $\times 2\frac{1}{4}$ " $\times 2\frac{1}{6}$ " 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 ½ 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.

SCB-AES

LIN ENGINEERING LTD Consulting Engineers

9"

BAR s

2-17-2017 USER NAME = LIN06-PC DESIGNED - VPT REVISED CHECKED - AML REVISED PLOT TIME = 6:56:39 AM RAWN REVISED PLOT DATE = 7/30/2021 CHECKED - VPT REVISED

9"

BAR s2

BAR s3

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

(Sheet 2 of 2) SECTION COUNTY PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS (57,58,59) RS-2 JERSEY 60 48 STATION 246 + 46.47 CONTRACT NO. 76L10 SHEET 6 OF 7 SHEETS

7/30/2021 6:56:39 AM

(W)	Illinois Depa of Transport	rtmen tation
ROUTE	FAS 747	DESCRIP
SECTION	(57 50 50)PC 2	

SOIL BORING LOG

Page	<u>1</u> of <u>1</u>	Illinois Departme of Transportation
Date	4/9/19	Division of Highways

FAS 747

(57,58,59)RS-2

Offset 20.0 ft EOP
Ground Surface Elev. 100+00 ft (ft) (/6") (tsf) (%)

93.00

86.00

DESCRIPTION

D B U C P O S T W H S Qu

1.5 32

2.0 24 2.0 27 1.5 29 0.8 27 2.0 27 1.5 27

2.0 25

2.5 21 2.5 17 2.5 16

2.5 15 2.5 16 2.5 17

DRILLING METHOD

ROUTE

SECTION

STRUCT, NO.

BORING NO.

Brown Clay Soil

Gray Clay Soil w/Sand

Brown Clay w/Sand

End of Hand Auger- No penetration hard Pocket Penetrometers Used for Strength Testing End of Boring

SOIL BORING LOG

IL 109

LOCATION SW 1/4, SEC. 21, TWP. 7N, RNG. 11W, 3^{rt} PM, Latitude , Longitude

Hand Auger

M Surface Water Elev.
O Stream Bed Elev.

Groundwater Elev.: First Encounter Upon Completion After Hrs.

Page <u>1</u> of <u>1</u>	(Illinois Departme
Date 4/9/19	Illinois Departme of Transportation

SOIL BORING LOG

Page 1 of 1

O	OOT								Date	4/10/19
ROUTE	FAS 747	DI	ESCR	IPTION	-		IL 109		LOGGED BY	VPG
	10000				ION _	SW 1/ Latitu	4, SEC. 21, TWP. 7N, R de , Longitude		r.	
COUNTY	Jersey	DRILLIN	G ME	IHOD	_		Hand Auger	HAMMER TYPE		
STRUCT. NO. Station	N/A N/A		DE	B L	U	M	Surface Water Elev. Stream Bed Elev.			
BORING NO. Station	#3		P T H	W S	S	S	Groundwater Elev.: First Encounter	97.5 ft.	7	
Offset	60.0 ft EO e Elev. 100		(ft)	(/6")	(tsf)	(%)	Upon Completion After Hrs.	ft	-	
Brown Clayey S	oil w/ Rocks	99.0			1.0	38				
		99.0	_		0.8	42	-			
Brown Clayey S	oil w/ Sand		¥		0.3	36				
			-	-	0.3	42				
		96.0	0	-	2.5	23				
Brown Clay w/S 6')	and (very hard	at	-5		3.0	24				
0)					3.0	26				
					200	1000				
			-		3.0	27				
		91.0	0 -		3.3	27				
Black Clay Soil	w/ Sand		-10		3.3	27				
					3.5	27				
		88.0	0		3.5	29				
Gray Clay w/Sar	nd	86.5	_		3.5	27				
End of Hand Au Pocket Penetro Strength Testing End of Boring	meters Used for	0.000.000	-15							

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

BBS, form 137 (Rev. 8-99)

ROUTE FAS 747	DESCR	IPTION	_		IL 109		LOGGED BY VPG
SECTION (57,58,59)R	:S-2	LOCAT	ION	SW 1/	4, SEC. 21, TWP. 7N, R	NG. 11W, 3 rd PM,	
				Latitu	de , Longitude		
COUNTY Jersey	DRILLING ME	THOD			Hand Auger	HAMMER TYPE	·
STRUCT. NO. N/A	D	В	U	М	Surface Water Elev.		
Station N/A	E	L	C	0	Stream Bed Elev.	N/A ft	
BORING NO. #1	Ť	w	ಿ	s	Groundwater Elev.:		
Station	н	S	Qu	Т	First Encounter	99.5 ft	▼.
Offset 17.5 ft EOF				*****		ft	
Ground Surface Elev. 100	+00 ft (ft)	(/6")	(tsf)	(%)	After Hrs.	ft	
Brown Loamy Soil	Y _		0.5	29			
		-	0.5	32			
	98.00	1	0.0	52			
	TO THE STATE OF TH		1.5	28			
Gray Clay w/ Sand				222.5			
	96.50		0.8	35			
Black Clay w/ Sand	_	-	0.5	41			
black olay w/ Sallu	-5		0.0	835.5			
			0.5	28			
	_						
			0.5	25			
			1.0	29			
	12	1	1.5	20			
			8.0	24			
			4.0	40			
	90.00 -10		1.0	19			
	50.00 -10		3.0	27			
Brown Clay w/ Soil	_		0.210.298				
	122		3.5	20			
	-	-	3.0	17			
	87.00	-	3.0	10			
	01.00						
End of Hand Auger- too hard to							
retrieve sample Pocket Penetrometers Used for							
Strength Testing	-15	4					
End of Boring	_	-					
		1					
	-	1					
	_						
	-	+					
	20	+					

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

BBS, form 137 (Rev. 8-99)

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

BBS, form 137 (Rev. 8-99)

Date

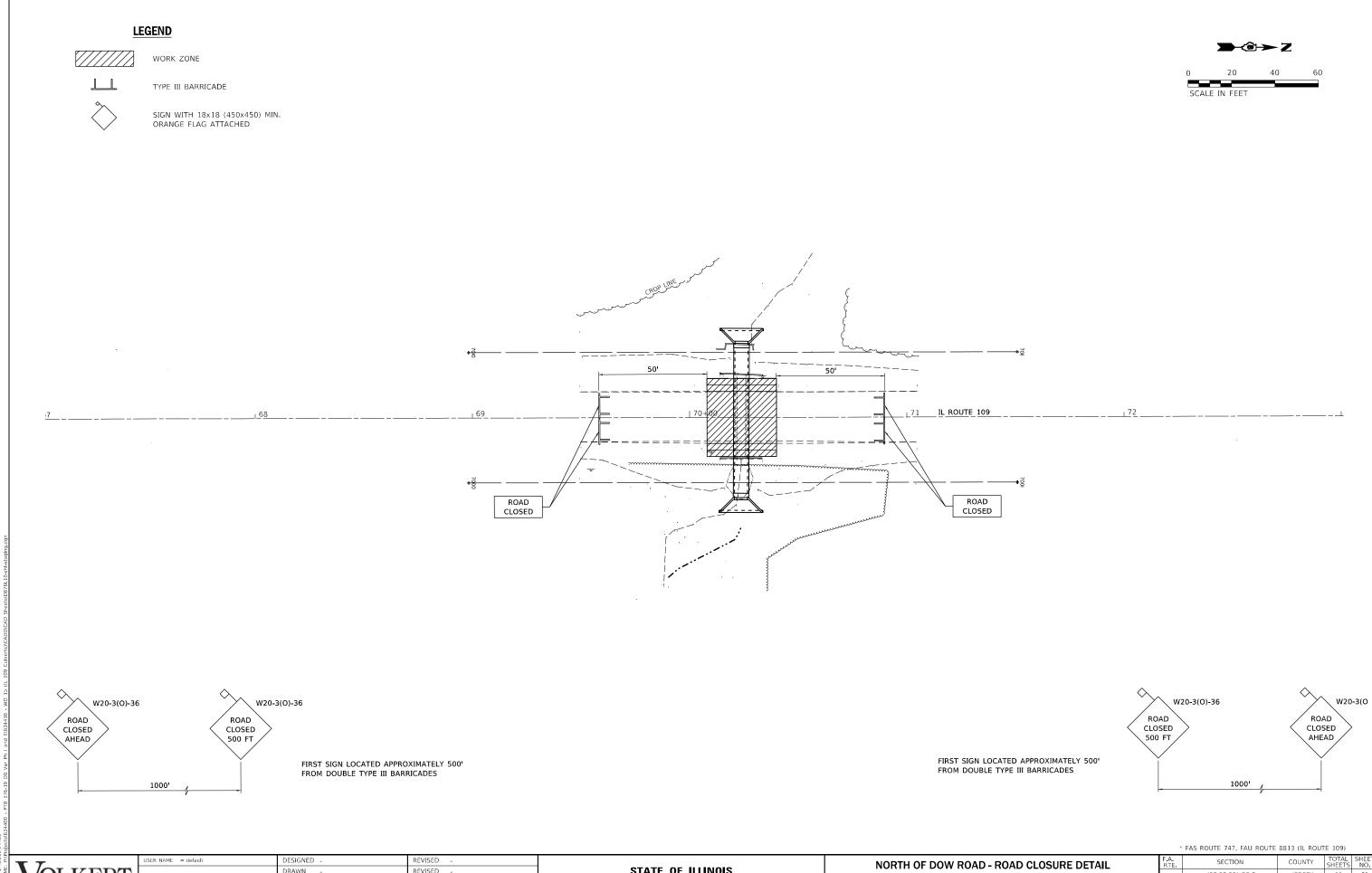
92.5 ft▼

LOGGED BY VPG

The boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

E

	U
IN ENGINEERING,LTD.	
Consulting Engineers	Р
Springfield, Illinois	

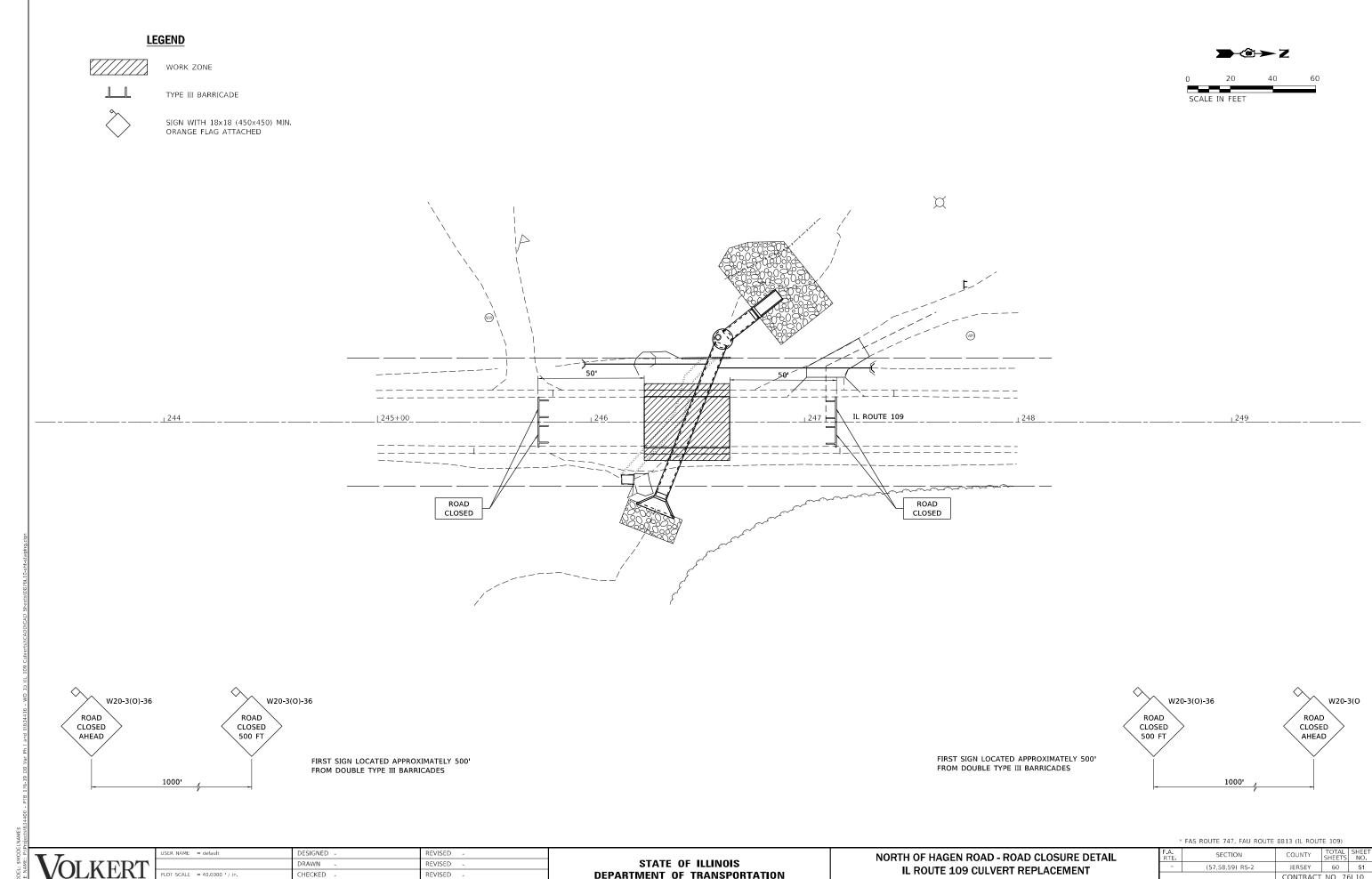


REVISED CHECKED REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

IL ROUTE 109 CULVERT REPLACEMENT SHEET 1 OF 2 SHEETS STA.

(57,58,59) RS-2 JERSEY 60 50 CONTRACT NO. 76L10

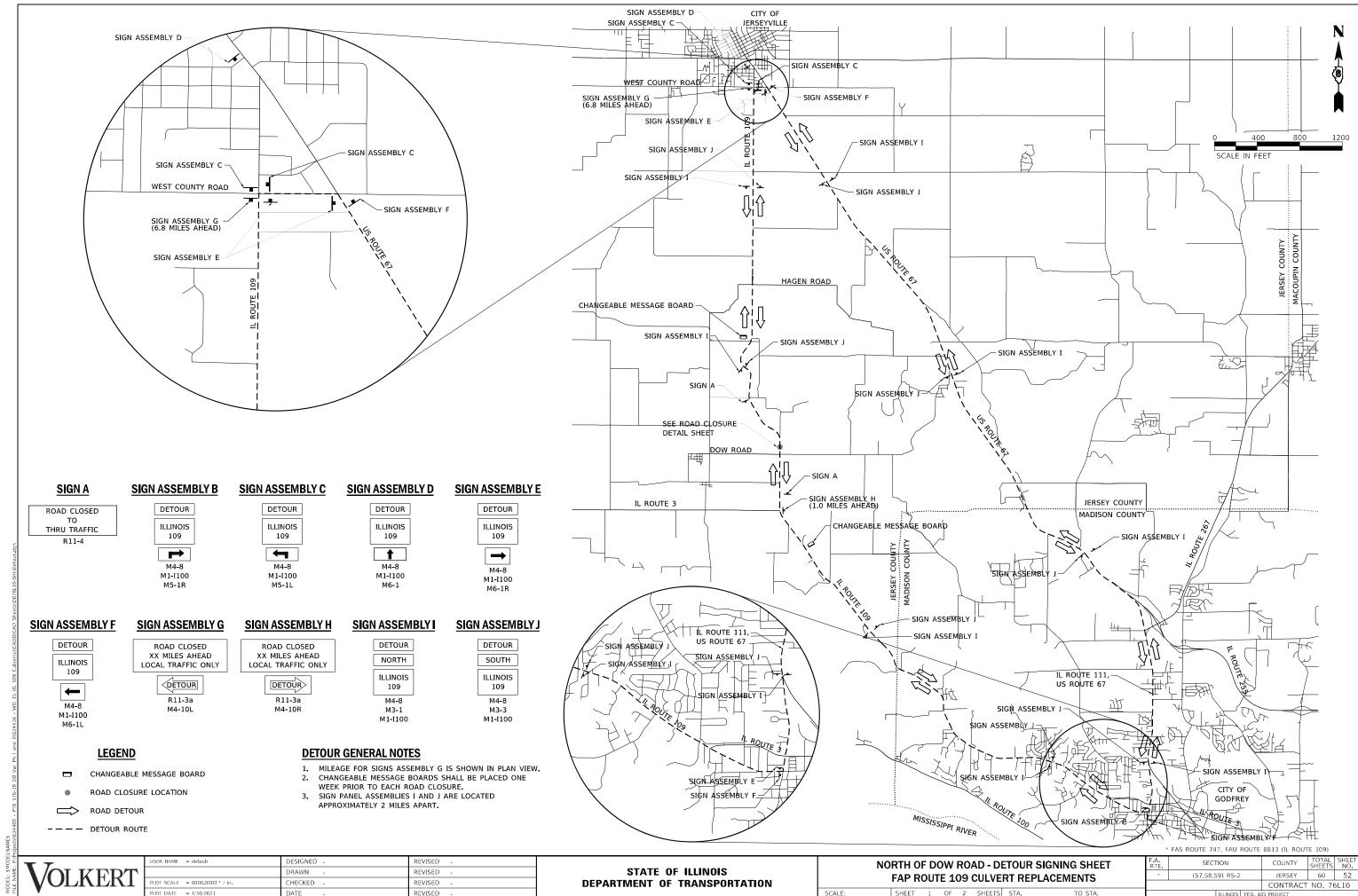


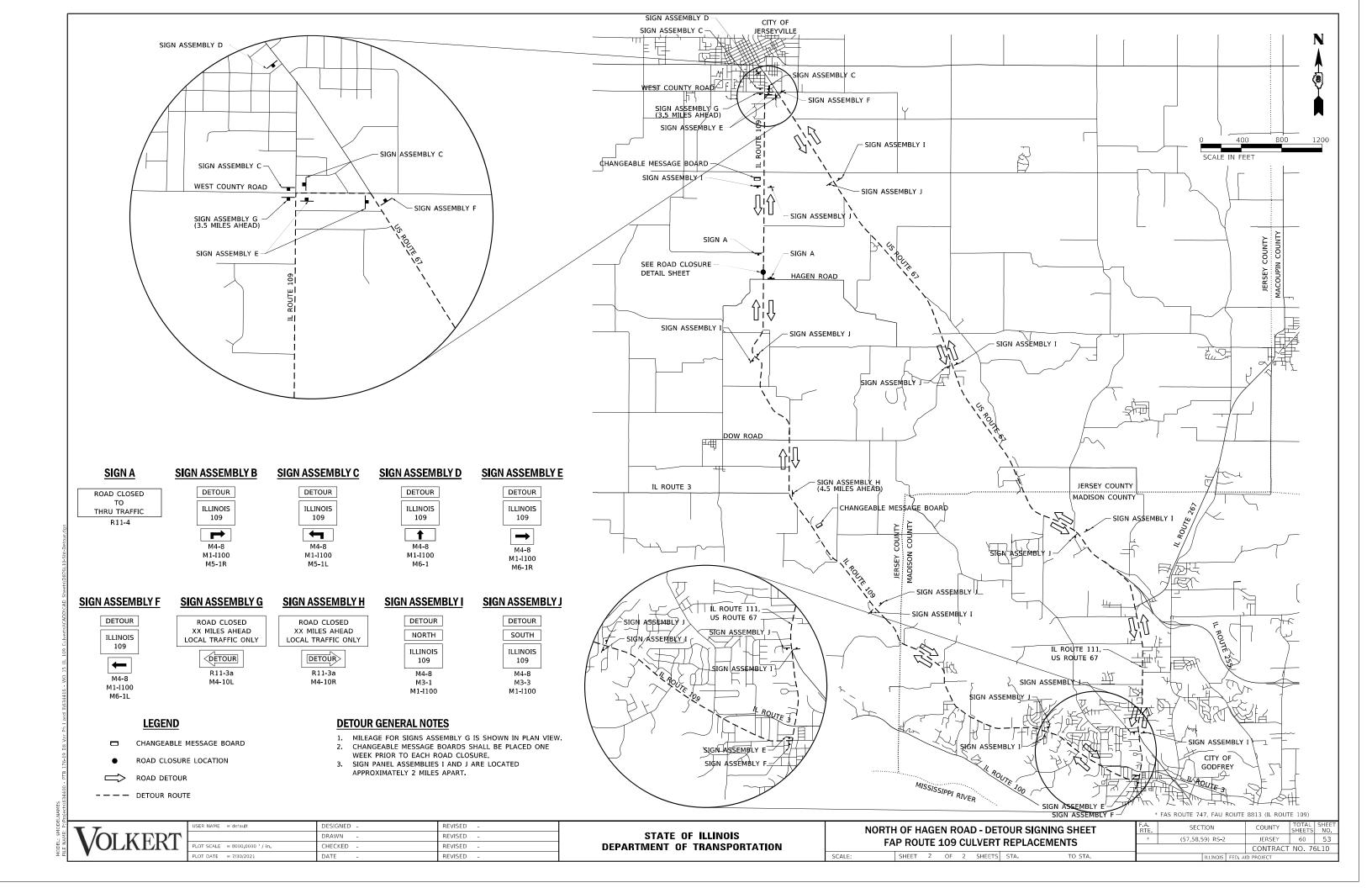
DATE

DEPARTMENT OF TRANSPORTATION

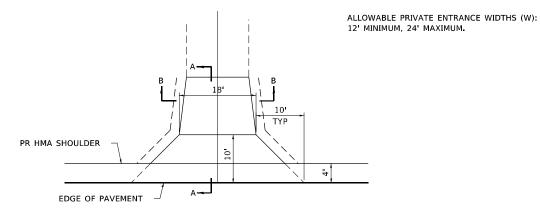
SHEET 2 OF 2 SHEETS STA.

CONTRACT NO. 76L10

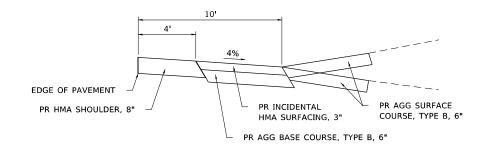




AGGREGATE PRIVATE/COMMERCIAL ENTRANCE DETAIL

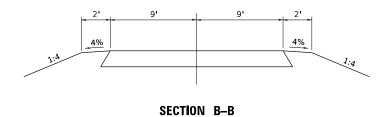


PLAN



SECTION A-A PRIVATE ENTRANCE

(NOT TO SCALE)



(NOT TO SCALE)

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

VOLKERT

JSER NAME = default	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/30/2021	DATE -	REVISED -

640 630 625 645 640 635 620 615 645 625 635 089 625 620 635 620 615 019 630 640 630 620 645 640 BE BOW **B** 69 + 80.00 R1 **8** 70 + 00.00 69 + 55.0000.09 + 69PR ROW PR ROW 70 06.819 = 84.74 SQ FT = 38.84 SQ FT C = 95.96 SQ FT F = 35.20 SQ FTC = 41.62 SQ F F = 106.90 SQ F40 40 20 20 20 £0'£E9 61.559 06.289 91.559 05.EE9 £†'££9 LI.EE9 Lt'EE9 6Z'EE9 55.559 65'889 09.559 EL'EE9 *LL'EE9* 6Z'EE9 Z#'EE9 55.559 65.559 LI EE9 08.889 £t'EE9 Lt'EE9 06.259 E0'EE9 91.559 61.559 20 20 40 86.229 NON NA 80 MON NO 635 625 620 DESIGNED **OLKERT** DOW ROAD CROSS SECTIONS STATE OF ILLINOIS DRAWN REVISED **IL ROUTE 109 CULVERT REPLACEMENT** LOT SCALE = 20.0000 ' / in. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 76L10 SHEET 1 OF 6 SHEETS STA. 69+55.00 R1 TO STA. 70+00.00 R1 * FAS 747, FAU 8813 (IL 109

640 615 610 630 625 620 640 635 630 620 640 635 630 625 620 640 635 630 620 615 640 635 630 625 620 70 + 40.00 R1 71 + 00.00 R1 **8** 70 + 80.00 R1 - MOH HA 80 70 + 60.0070 + 23.7970 70 C = 27.50 SQ FT F = 76.48 SQ FT C = 139.55 SQ FTF = 53.46 SQ FT09 MON H 50 50 OH 40 40 EE.8|Z9 100 08 20 99.289 69.789 ZL'ZE9 14.258 *₽E'ZE9* £6.2E9 96.289 89.289 66'789 19.289 E7.2E9 50.558 80.EE8 08.2£8 I I 'EE9 0 EZ.EE8 97.EE9 62.559 86'789 16.289 50.559 EZ'ZE9 80[.]EE9 ΙΙ'*Ε*Ε9 08.289 £6'7E9 66'789 89.289 19.289 96'7E9 99.789 69[.]7£9 *₹8.*7€9 ZL'ZE9 14.289 20 EX BOM 00[.]0E9 00.649 40 50 B BOW Z PR ROW 80 610 640 625 DESIGNED DOW ROAD CROSS SECTIONS OLKERT STATE OF ILLINOIS DRAWN REVISED IL ROUTE 109 CULVERT REPLACEMENT LOT SCALE = 20.0000 ' / in. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 76L10

620 635 625 620 610 605 640 635 030 625 615 640 630 2 + 00.00 +80.00 245 + 60.00245 = 86.90 Sq. = 31.40 Sq. | de dicionale ZE:0Z9 02 929 61 979 Lt 979 16'579 E0 979 1E 9Z9 65 979 E0 979 IE 9Z9 65 979 16 579 t l 979 9t 979 t9'5Z9 MON NO. 1847 ""TWS I WAT" """"" ""TWS FLOWS TOWN"" 610 635 615 640 625 **J**OLKERT DESIGNED REVISED HAGEN ROAD CROSS SECTIONS DRAWN STATE OF ILLINOIS REVISED IL ROUTE 109 CULVERT REPLACEMENT LOT SCALE = 20.0000 ' / in. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 76L10 SHEET 3 OF 6 SHEETS STA. 245+60.00 R1 TO STA. 246+00.00 R1

ILLINOIS FED. AID PROJECT
* FAS 747, FAU 8813 (IL 109)

640 019 620 615 630 625 620 615 605 630 620 605 635 630 625 605 640 635 246+46.47 R1 " LEFT SKEWED) **B B**1 246 + 40.00246 + 20.00C = 41.26 Sq. Ft F = 67.62 Sq. Ft 85 98 Sq 71 53 Sq ..00.08.89) Ш II 79:819 1 07.818 95 579 95 579 t L 579 L9 579 89.229 98 579 89529 9529 t 2529 15 579 67 579 47 579 77.579 0 01 779 640 640 610 630 615 635 630 620 615 620 615 605 **O**LKERT REVISED HAGEN ROAD CROSS SECTIONS DRAWN STATE OF ILLINOIS REVISED **IL ROUTE 109 CULVERT REPLACEMENT** LOT SCALE = 20.0000 '/ in. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 76L10 SHEET 4 OF 6 SHEETS STA. 246+20.00 R1 TO STA. 246+40.00 R1

640 019 615 605 630 625 620 615 605 630 620 625 640 635 MON No. 8 **B R** +80.00 00'09+ + 00.00 PR ROW 246 246 205.64.5g. Ft. 141.61.5g. Ft. ال ال عان :Mair 47 579 67 579 19'979 £9'5Z9 65 579 19529 19529 67529 £9'579 47 579 15 579 ZZ SZ9 72.229 12 529 \circ 0 05 / 19 640 615 640 630 615 620 **O**LKERT HAGEN ROAD CROSS SECTIONS DRAWN STATE OF ILLINOIS REVISED IL ROUTE 109 CULVERT REPLACEMENT **DEPARTMENT OF TRANSPORTATION** LOT SCALE = 20.0000 ' / in. CHECKED REVISED CONTRACT NO. 76L10 SHEET 5 OF 6 SHEETS STA. 246+46.47 R1 TO STA. 246+60.00 R1

640 620 610 630 625 620 615 630 605 **R**1 **B** 247 + 40.00247 + 20.000.00 Sq. 0.00 Sq. MOH Hd 11 II U LL EZ 5Z9 \$7.579 89 579 19579 89 579 t9'579 47 579 25 529 52 529 \circ 98 E Z 9 640 620 615 DESIGNED REVISED COUNTY TOTAL SHEETS NO.

JERSEY 60 60

CONTRACT NO. 76L10 HAGEN ROAD CROSS SECTIONS DRAWN STATE OF ILLINOIS REVISED IL ROUTE 109 CULVERT REPLACEMENT **DEPARTMENT OF TRANSPORTATION** LOT SCALE = 20.0000 ' / in. CHECKED REVISED

SHEET 6 OF 6 SHEETS STA. 247+20.00 R1 TO STA. 247+40.00 R1