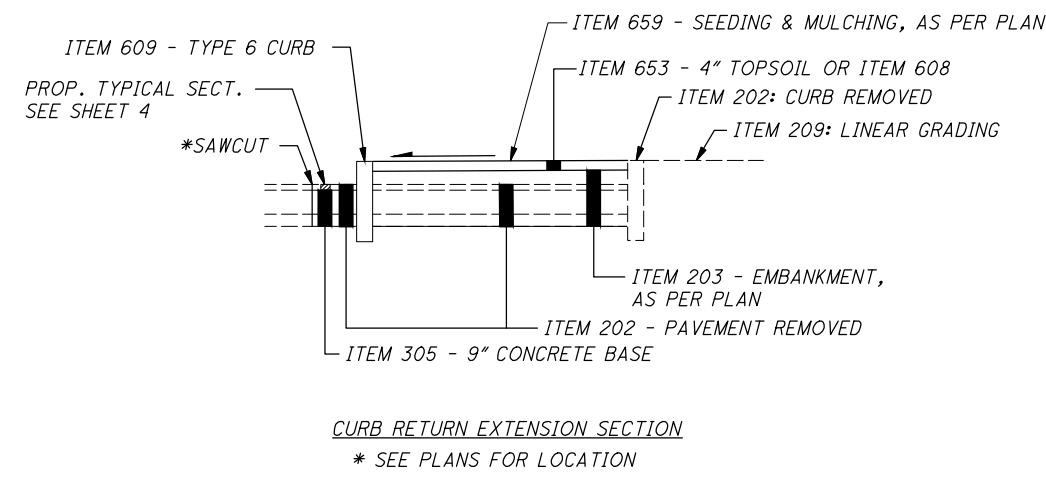
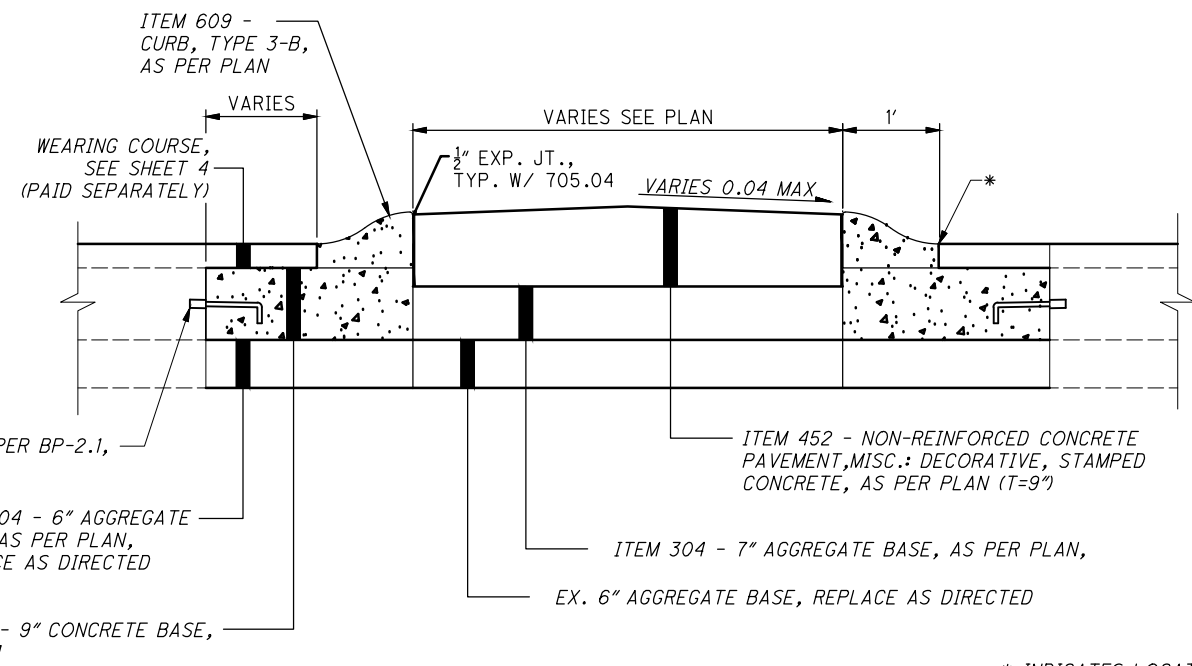


REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

CALCULATED  
CSK  
CHECKED  
AWD

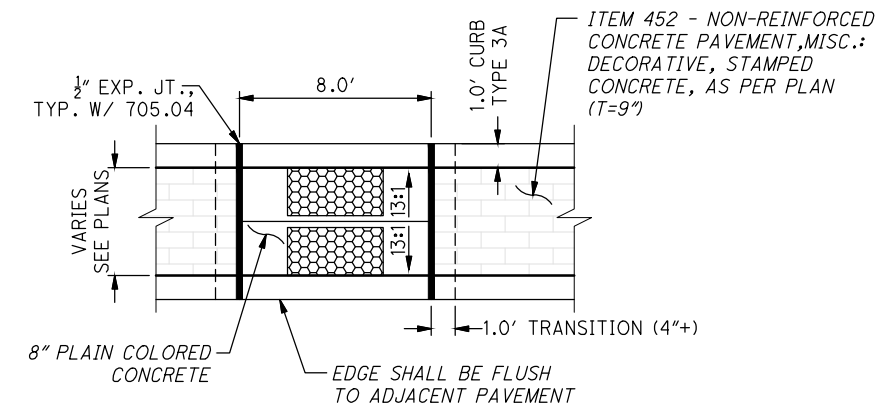


**CURB RETURN EXTENSION SECTION**  
\* SEE PLANS FOR LOCATION



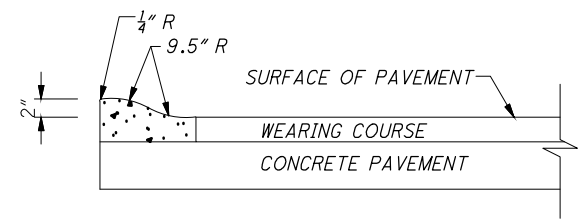
**SPLITTER ISLAND SECTION (TRANSVERSE VIEW)**  
NOT TO SCALE

\* INDICATES LOCATION OF LAYOUT REFERENCE POINT

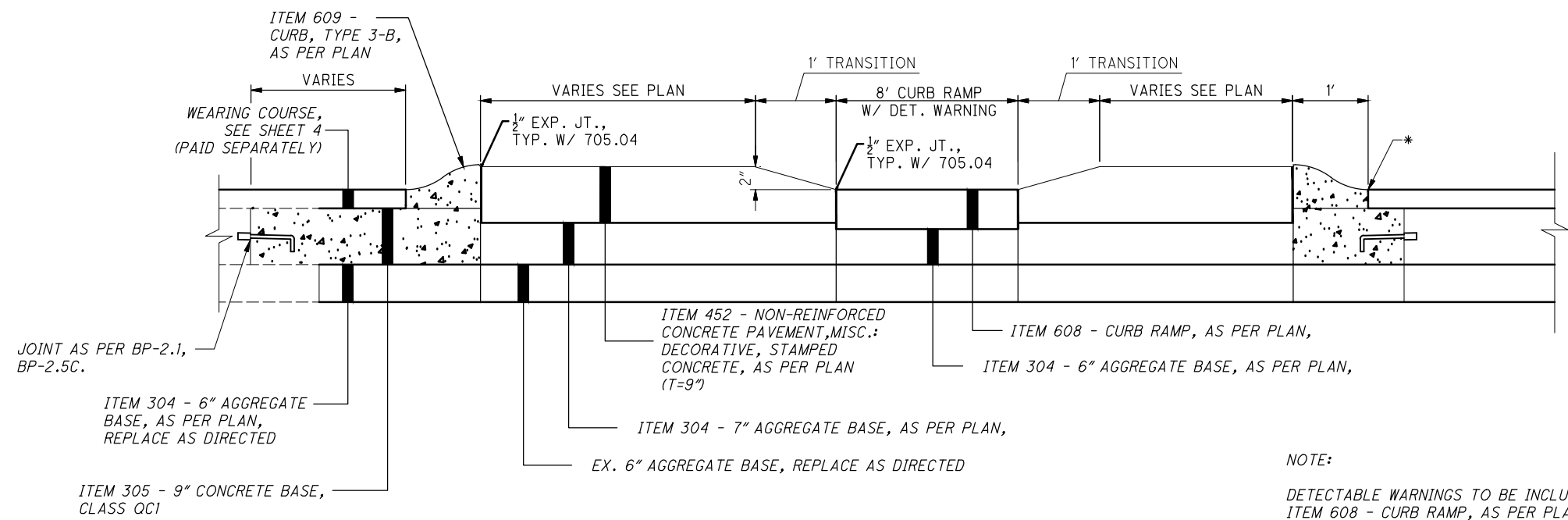


**SPLITTER ISLAND CURB RAMP (PLAN VIEW)**  
NOT TO SCALE

NOTE:  
COST OF CURB RAMP SHALL INCLUDE DETECTABLE WARNING. LAYOUT, FORM WORK, AND OTHER WORK NECESSARY FOR THE COMPLETE INSTALLATION OF THE RAMP.



**CURB TYPE 3-B, AS PER PLAN**  
NOT TO SCALE



**SPLITTER ISLAND SECTION (LONGITUDINAL VIEW)**  
NOT TO SCALE

NOTE:  
DETECTABLE WARNINGS TO BE INCLUDED WITH ITEM 608 - CURB RAMP, AS PER PLAN.  
\* INDICATES LOCATION OF LAYOUT REFERENCE POINT

G:\2020\20-191\_CLE FRANKLIN BLVD REHABILITATION\Drawg\_Set\20-191-PG-07 Typical Section Repair\_Detail.dwg 04-Feb-22 3:14 PM

PAVEMENT REPAIR DETAILS

CUY-FRANKLIN BLVD.

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SHEET NUMBER											ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.			
9	10	11	12	13	14	15	24	25	26							01/MPO/PV	02/MPO/OT	
													<b>ROADWAY</b>					
LS											LS		201	LS	-	CLEARING AND GRUBBING	9 & 15	
								4,118				4118	202	4118	SY	PAVEMENT REMOVED, AS PER PLAN	9	
50								1,093			50	1093	202	1143	FT	CURB REMOVED, AS PER PLAN	9	
250							15,038				250	15038	202	15288	SF	WALK REMOVED, AS PER PLAN	9	
			2					2			2	2	202	4	EACH	CATCH BASIN REMOVED		
							2				2		202	2	EACH	MONUMENT ASSEMBLY REMOVED		
				30				2			30	2	203	32	CY	EXCAVATION		
								59				59	203	59	CY	EMBANKMENT		
	0.22											0.22	209	0.22	MILE	LINEAR GRADING, AS PER PLAN	10	
250							11,803				250	11803	608	12053	SF	4" CONCRETE WALK, AS PER PLAN	9	
							5,304					5304	608	5304	SF	CURB RAMP, AS PER PLAN	9	
	100											100	608	100	SF	DETECTABLE WARNING, AS PER PLAN	10	
											30		623	30	EACH	MONUMENT MISC.: MONUMENT REFERENCING	10	
											4		623	7	EACH	MONUMENT ASSEMBLY, AS PER PLAN	10	
											3		623	27	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	10	
													<b>EROSION CONTROL</b>					
			6					24				30	653	30	CY	4" TOPSOIL FURNISHED AND PLACED		
												1	659	1	EACH	SOIL ANALYSIS TEST	11	
												504	554	554	SY	SEEDING AND MULCHING, CLASS 1 (HIGH QUALITY), AS PER PLAN	11	
												0.10	659	0.10	TON	COMMERCIAL FERTILIZER	11	
												0.20	659	0.20	ACRE	LIME	11	
												6	659	6	MGAL	WATER	11	
												15,000	15000	15000	EACH	EROSION CONTROL, AS PER PLAN	11	
													<b>DRAINAGE</b>					
												200	605	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	11	
												50	611	50	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		
												77	611	77	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	11	
												20	611	22	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	11	
												52	611	52	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	11	
												15	611	21	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	11	
												2	611	4	EACH	CATCH BASIN, MISC.: CITY OF CLEVELAND, NO. 1, AS PER PLAN	12	
												50000	SPECIAL	50000	LB	SPECIAL - MISCELLANEOUS METAL	12	
												50	613	50	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 1)	12	
													<b>PAVEMENT</b>					
												2250	251	2250	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN	12	
												32578	254	32578	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (T = 3.0")	13	
												3350	255	3350	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC1, AS PER PLAN	13	
												100	255	593	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, MISC.: BUS PAD REPAIR	6, 13	
												30	304	201	CY	AGGREGATE BASE, AS PER PLAN	13	
													3013	3013	SY	9" CONCRETE BASE, CLASS QC1		
													3152	3152	GAL	NON-TRACKING TACK COAT		
													2632	2633	GAL	TACK COAT, 702.13		
													1090	1090	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG 70-22M, AS PER PLAN	13	
													1538	1538	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446), PG 64-22, AS PER PLAN	13	
													140	140	CY	ASPHALT CONCRETE, MISC.: ASPHALT CONCRETE LEVELING COURSE, AS DIRECTED BY THE ENGINEER	13	
													791	791	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: DECORATIVE, STAMPED CONCRETE, AS PER PLAN (T=9")	14	
													50	50	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS, AS PER PLAN	14	
													50	50	ST	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS, AS PER PLAN	14	
													1260	1260	FT	CURB, TYPE 3B, AS PER PLAN	7, 13	
													50	1458	FT	CURB, TYPE 6, AS PER PLAN	13	
													474	474	FT	CURB MISC.: TYPE 9, 12" GUTTER, AS PER PLAN	6	
													328	328	FT	CURB MISC.: TYPE 9, 20" GUTTER, AS PER PLAN	6	
													100	SPECIAL	100	CY	SPECIAL - CLASS QC MS CONCRETE (MATERIAL SURCHARGE ONLY)	14
													9948	872	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	13	

GENERAL SUMMARY

FRANKLIN BLVD.

REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

O:\2019\2019331\_Cleveland\_GES\13\_Franklin\_Design\Traffic\Sheets\201933113TS001.1-61.dwg 02-Feb-22 1:10 PM

SHEET NUMBER									PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
69	70	85	98	01/MPO/PV	02/MPO/OT											
		146							146	621	00101	146	EACH	RPM, AS PER PLAN	69	
									8	625	32000	8	EACH	GROUND ROD		
									697.6	630	02100	697.6	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
									1753.3	630	03100	1753.3	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
									427.7	630	04101	427.7	FT	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN	69	
									53	630	08600	53	EACH	SIGN POST REFLECTOR		
									75	630	79500	75	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED		
									1785.9	630	80100	1785.9	SF	SIGN, FLAT SHEET		
									6	630	80511	6	EACH	SIGN, STREET NAME, AS PER PLAN	69	
									52	630	84900	52	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		
									35	630	86002	35	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
									4	630	87401	4	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL, AS PER PLAN	69	
									97	630	87500	97	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL		
									10	630	87520	10	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION		
									8	630	97700	8	EACH	SIGNING, MISC.: SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY	70	
									2	631	93250	2	EACH	SCHOOL SPEED LIMIT SIGN ASSEMBLY MISC.: 36" X 56"	71	
									2	631	94490	2	EACH	REMOVAL, MISC.: SCHOOL SPEED LIMIT SIGN ASSEMBLY	71	
									4	631	94490	4	EACH	REMOVAL, MISC.: REMOVAL OF SIGN SERVICE	69	
		2							2	632	26501	2	EACH	DETECTOR LOOP, AS PER PLAN	70	
									9	632	64021	9	EACH	PEDESTAL FOUNDATION, AS PER PLAN	69	
			7000						7000	632	90030	7000	FT	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: AERIAL INTERCONNECT	70	
		8							8	632	90101	8	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	69	
		682							682	642	30001	682	FT	REMOVAL OF PAVEMENT MARKING, AS PER PLAN	69	
				1.65					1.65	644	00100	1.65	MILE	EDGE LINE, 4"		
				0.02					0.02	644	00200	0.02	MILE	LANE LINE, 4"		
				2.04					2.04	644	00300	2.04	MILE	CENTER LINE		
				285					285	644	00400	285	FT	CHANNELIZING LINE, 8"		
				261					261	644	00404	261	FT	CHANNELIZING LINE, 12"		
				364					364	644	00500	364	FT	STOP LINE		
				1549					1549	644	00620	1549	FT	CROSSWALK LINE, 12"		
				4372					4372	644	00621	4372	FT	CROSSWALK LINE, 12", AS PER PLAN	69	
				2095					2095	644	00700	2095	FT	TRANSVERSE/DIAGONAL LINE		
				34					34	644	01300	34	EACH	LANE ARROW		
				252					252	644	01500	252	FT	DOTTED LINE, 4"		
				1					1	644	01630	1	EACH	BIKE LANE SYMBOL MARKING		
				83					83	644	19000	83	EACH	SHARED LANE SYMBOL		
				375					375	644	50300	375	FT	PAVEMENT MARKING, MISC.: SEPARATOR CURB ASSEMBLY	69	
				563					563	644	50300	563	FT	PAVEMENT MARKING, MISC.: DOTTED LINE, 12"	69	
				0.32					0.32	646	10000	0.32	MILE	EDGE LINE, 4"		
				0.03					0.03	646	10100	0.03	MILE	LANE LINE, 4"		
				0.30					0.30	646	10200	0.30	MILE	CENTER LINE		
				16					16	646	10400	16	FT	STOP LINE		
				1262					1262	646	10511	1262	FT	CROSSWALK LINE, 12", AS PER PLAN	69	
				528					528	646	10600	528	FT	TRANSVERSE/DIAGONAL LINE		
				1					1	646	20600	1	EACH	BIKE LANE SYMBOL MARKING		
				20					20	646	20650	20	EACH	SHARED LANE SYMBOL		
				22					22	646	20800	22	FT	YIELD LINE		

GENERAL SUMMARY

CUY-FRANKLIN BLVD.

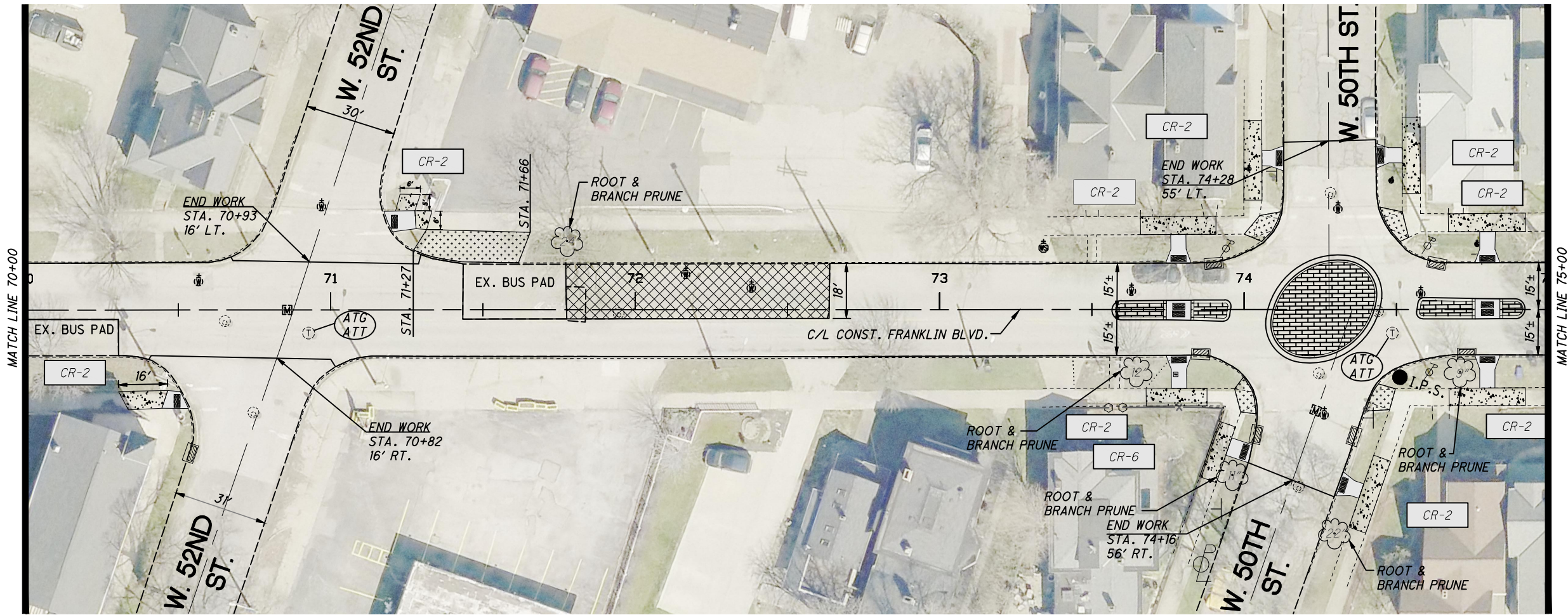
REV. NO.	INITIALS	DATE	DESCRIPTION
1	AKF	2/4/22	QUANTITY REVISIONS



SHEET NO.	202	202	202	203	203	304	305	452	609	609	609	609	611	611	611	202	638	653
	PAVEMENT REMOVED, AS PER PLAN	CATCH BASIN REMOVED	CURB REMOVED, AS PER PLAN	EXCAVATION	EMBANKMENT	AGGREGATE BASE, AS PER PLAN	CONCRETE BASE, CLASS QC1	NON-REINFORCED CONCRETE PAVEMENT, MISC.: DECORATIVE, STAMPED CONCRETE, AS PER PLAN (T=9')	CURB, TYPE 3B, AS PER PLAN	CURB, TYPE 6, AS PER PLAN	CURB MISC.: TYPE 9, 12" GUTTER, AS PER PLAN	CURB MISC.: TYPE 9, 20" GUTTER, AS PER PLAN	12" CONDUIT, TYPE B, AS PER PLAN	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	CATCH BASIN MISC.: CITY OF CLEVELAND, NO. 1, AS PER PLAN	HYDRANT REMOVED, AS PER PLAN	6" FIRE HYDRANT, AS PER PLAN	4" TOPSOIL FURNISHED AND PLACED
	SY	EA	FT	CY	CY	CY	SY	SY	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	CY
49	47		208		10					335								4
50	68		110		14					132								6
51	19		51		4					61								2
52	541	1	148	2	5	22	369	99	165	117		107						2
54	604		128		5	23	509	107	194	113	127							4
56	596	1	114		5	23	481	110	185	168	111		10	1	1			2
58	396					26	266	112	166			116						
60	638		109		5	24	508	112	194	200	107							2
62	589		143		5	23	475	98	177	159		105		1				2
64	558		82			30	405	153	179	82	129							
66																1	1	
39	62				6					41								
TOTALS CARRIED TO GENERAL SUMMARY	4118	2	1093	2	59	171	3013	791	1260	1408	474	328	10	2	2	1	1	24

CALCULATED CSK CHECKED AWD  
 INTERSECTION SUBSUMMARY  
 CUY-FRANKLIN BLVD.

REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS



CALCULATED  
CSK  
CHECKED  
AWD

REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

**NOTE:**

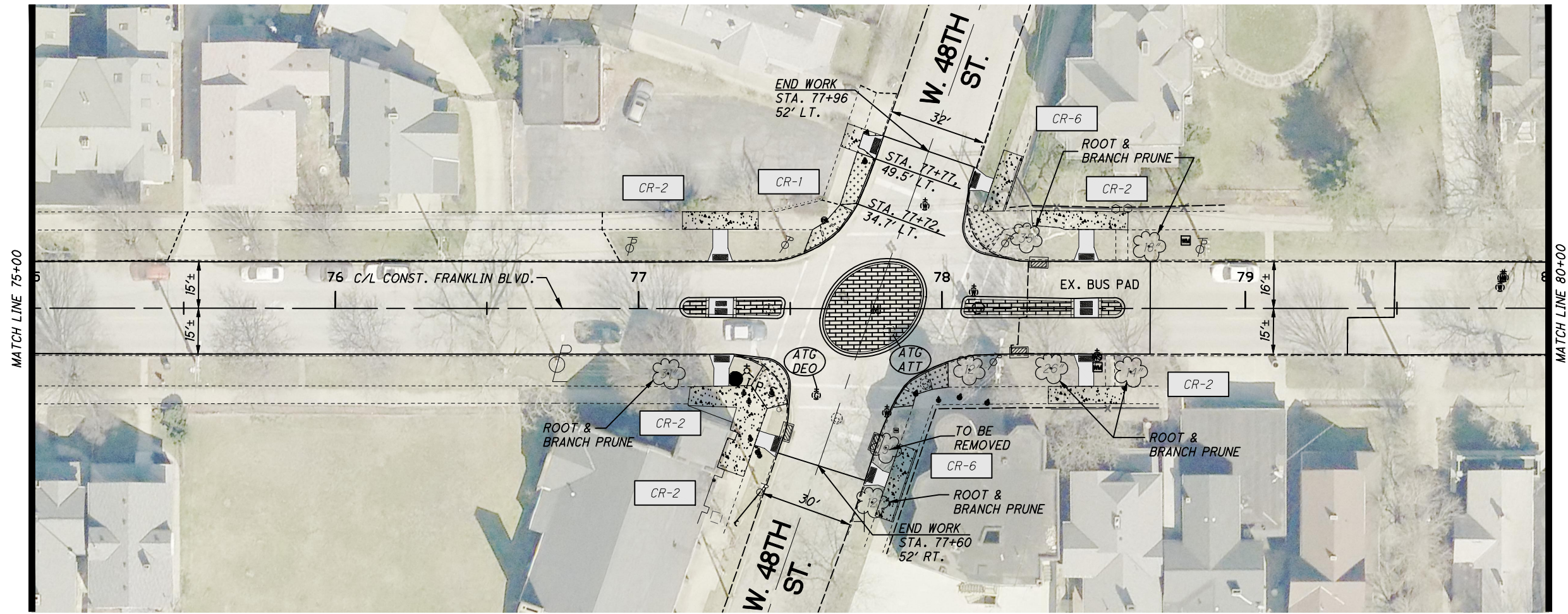
1. FOR LEGEND SEE SHEET 27.
2. SEE SHEETS 58-59 FOR ADDITIONAL DETAILS & QUANTITIES.
3. REMOVE EX. APRON STA. 71+27 TO STA. 71+68, TO BE PAID FOR UNDER ITEM 202: PAVEMENT REMOVED, AS PER PLAN.
4. STA. 71+27 TO STA. 71+62 INSTALL NEW TYPE 6 CURB.

REF.	SHEET	STATION		SIDE	202	202	255	608	608	611	611	623	623	638	638	659	202	203	609
		FROM	TO		WALK REMOVED, AS PER PLAN	MONUMENT ASSEMBLY REMOVED	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, MISC.: BUS PAD REPAIR	4" CONCRETE WALK, AS PER PLAN	CURB RAMP, AS PER PLAN	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	MONUMENT ASSEMBLY, AS PER PLAN	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	WATER WORK, MISC.: WATER MANHOLE ADJUSTED TO GRADE, AS PER PLAN	SEEDING AND MULCHING, CLASS 1 (HIGH QUALITY), AS PER PLAN	PAVEMENT REMOVED, AS PER PLAN	EMBANKMENT	CURB, TYPE 6, AS PER PLAN
		SF	EACH	SY	SF	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SY	CY	CY			
	39	70+00	75+00	LT / RT					6	4		2	7						
	39	70+00	75+00	LT / RT			172												
	39	70+00	75+00	LT / RT	1586			1264	622						62				
	39	71+27	71+66	LT											37	6	41		
<b>TOTALS CARRIED TO SUBSUMMARY</b>					1586		172	1264	622	6	4	2	7	62	37	6	41		

PLAN  
STA. 70+00 TO STA. 75+00

FRANKLIN BLVD.

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REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

REF.	SHEET	STATION		SIDE	202	202	255	608	608	611	611	611	623	623	638	638	659
		FROM	TO		WALK REMOVED, AS PER PLAN	MONUMENT ASSEMBLY REMOVED	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, MISC.: BUS PAD REPAIR	4" CONCRETE WALK, AS PER PLAN	CURB RAMP, AS PER PLAN	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	MONUMENT ASSEMBLY, AS PER PLAN	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	WATER WORK, MISC.: WATER MANHOLE ADJUSTED TO GRADE, AS PER PLAN	SEEDING AND MULCHING, CLASS 1 (HIGH QUALITY), AS PER PLAN
		SF	EACH	SY	SF	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SY	
40		75+00	80+00	LT / RT						4	1	2	1		6		
40		75+00	80+00	LT / RT													
40		75+00	80+00	LT / RT	1536			1178	467								62
TOTALS CARRIED TO SUBSUMMARY					1536			1178	467	4	1	2	1		6		62

**NOTE:**  
 1. FOR LEGEND SEE SHEET 27.  
 2. SEE SHEETS 60-61 FOR ADDITIONAL DETAILS & QUANTITIES.  
 3. REMOVE EX. APRON STA. 77+72, 34.7' LT. TO STA. 77+77, 49.5' LT., TO BE PAID FOR UNDER ITEM 202: PAVEMENT REMOVED, AS PER PLAN, AND INSTALL NEW TYPE 6 CURB.

PLAN

STA. 75+00 TO STA. 80+00

CUY-FRANKLIN BLVD.

40

154

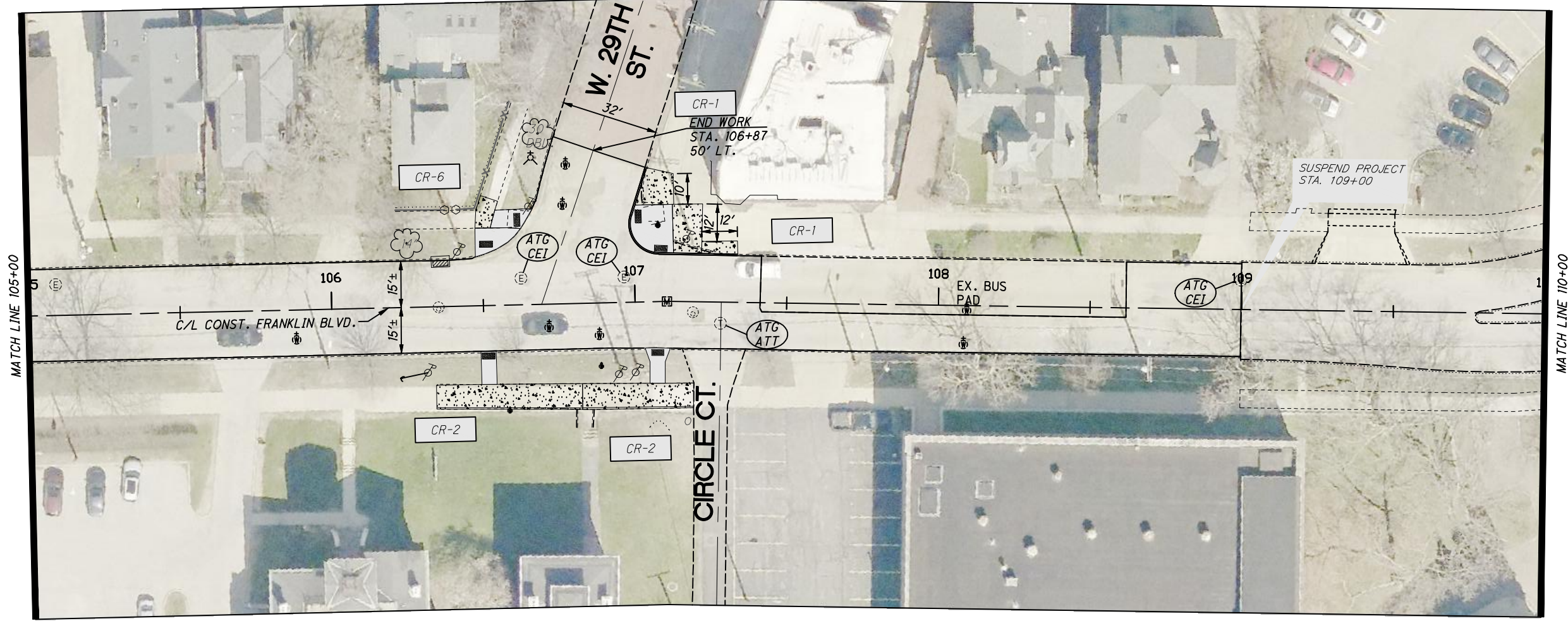
CALCULATED 0

CSK 10

CHECKED 40

AWD HORIZONTAL SCALE IN FEET

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CALCULATED  
CSK  
CHECKED  
AWD

0 10 20 40  
HORIZONTAL  
SCALE IN FEET

PLAN  
STA. 105+00 TO STA. 110+00

REF.	SHEET	STATION		SIDE	202	202	255	608	608	611	611	623	623	638	638	659
		FROM	TO		WALK REMOVED, AS PER PLAN SF	MONUMENT ASSEMBLY REMOVED EACH	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, MISC.: BUS PAD REPAIR SY	4" CONCRETE WALK, AS PER PLAN SF	CURB RAMP, AS PER PLAN SF	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN EACH	MONUMENT ASSEMBLY, AS PER PLAN EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN EACH	WATER WORK, MISC.: WATER MANHOLE ADJUSTED TO GRADE, AS PER PLAN EACH	SEEDING AND MULCHING, CLASS 1 (HIGH QUALITY), AS PER PLAN SY
	46	105+00	109+00	LT / RT						1			1	7		
	46	105+00	109+00	LT / RT												
	46	105+00	109+00	LT / RT	730			1095	478							
TOTALS CARRIED TO SUBSUMMARY					730			1095	478	1			1	7		

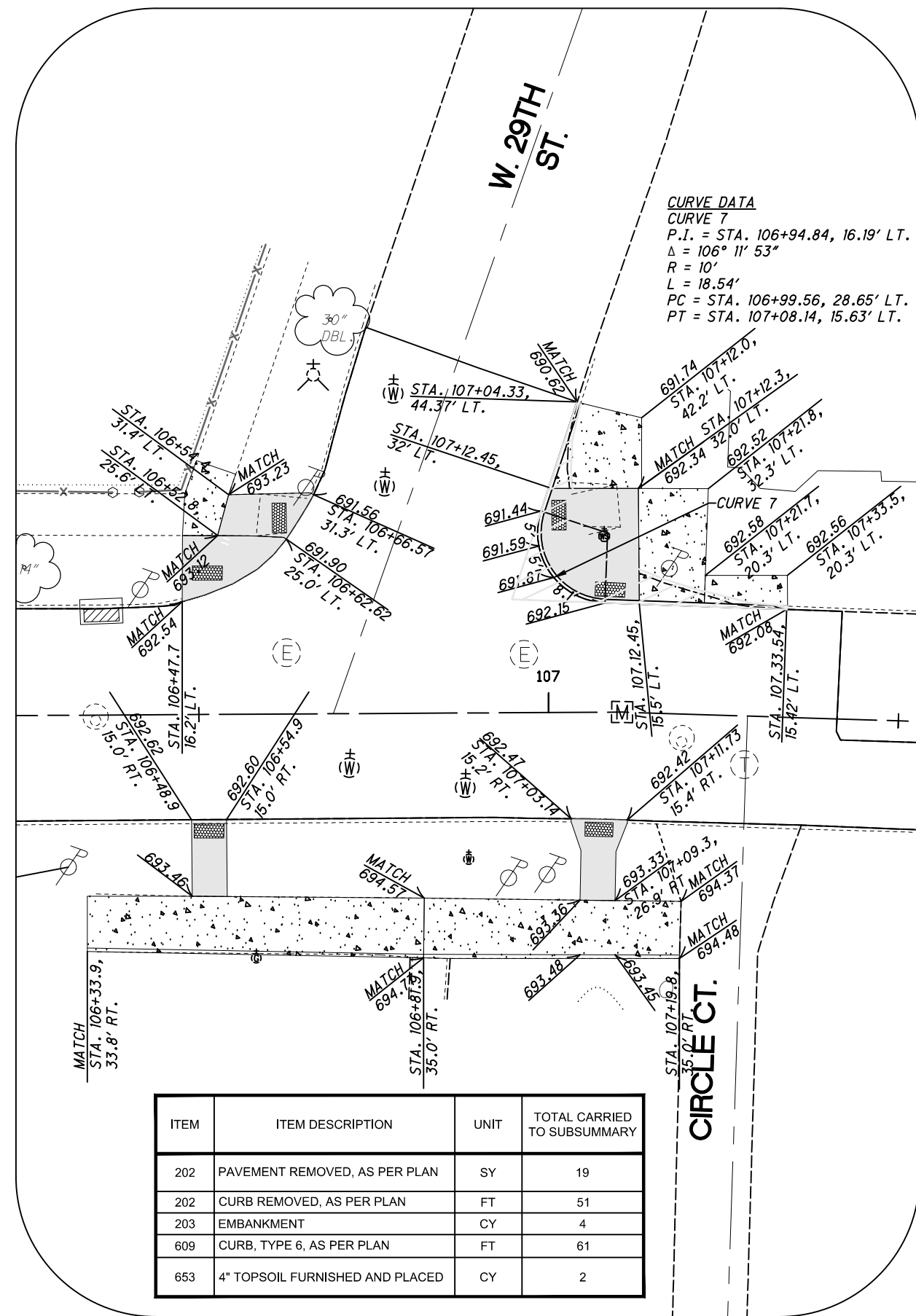
**NOTE:**  
 1. FOR LEGEND SEE SHEET 27.  
 2. SEE SHEETS 62-63 FOR ADDITIONAL DETAILS & QUANTITIES.

REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

CUY-FRANKLIN BLVD.

46  
154





**NOTE:**

1. FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
2. SEE SHEET 7 FOR REMOVAL AND RESTORATION DETAIL.
3. FOR LEGEND SEE SHEET 27.

CALCULATED  
CSK  
CHECKED  
AWD

0 5 10 20  
HORIZONTAL  
SCALE IN FEET

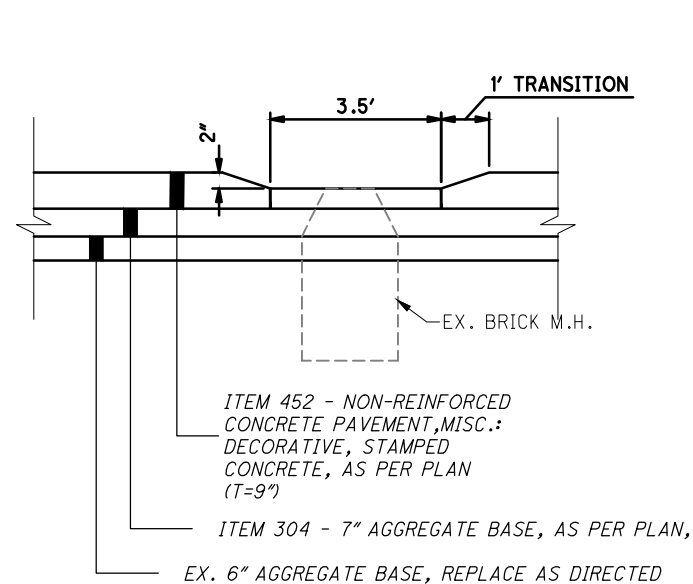
INTERSECTION DETAIL  
 WEST FRANKLIN BLVD. & W. 29TH ST.

CUY-FRANKLIN BLVD.

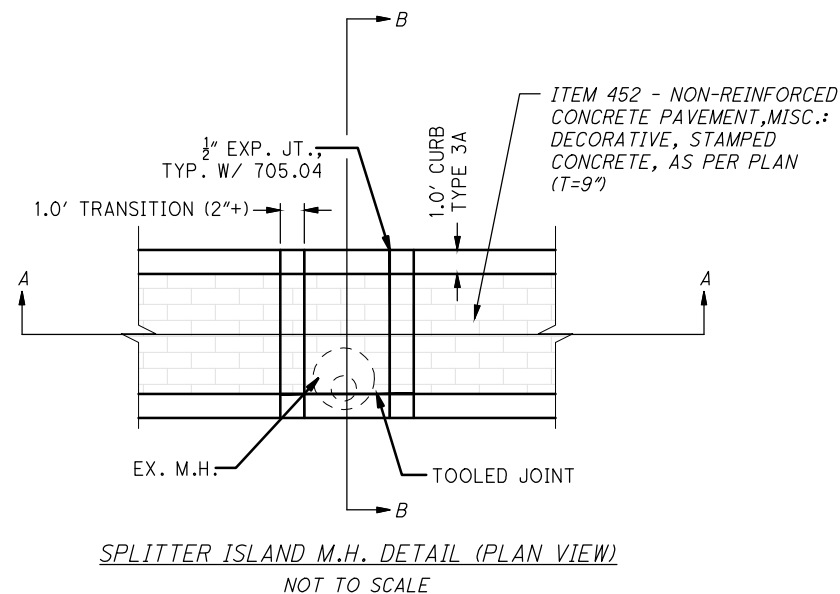
REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

CALCULATED  
CSK  
CHECKED  
AWD



SPLITTER ISLAND M.H. DETAIL (SECTION A-A)  
NOT TO SCALE

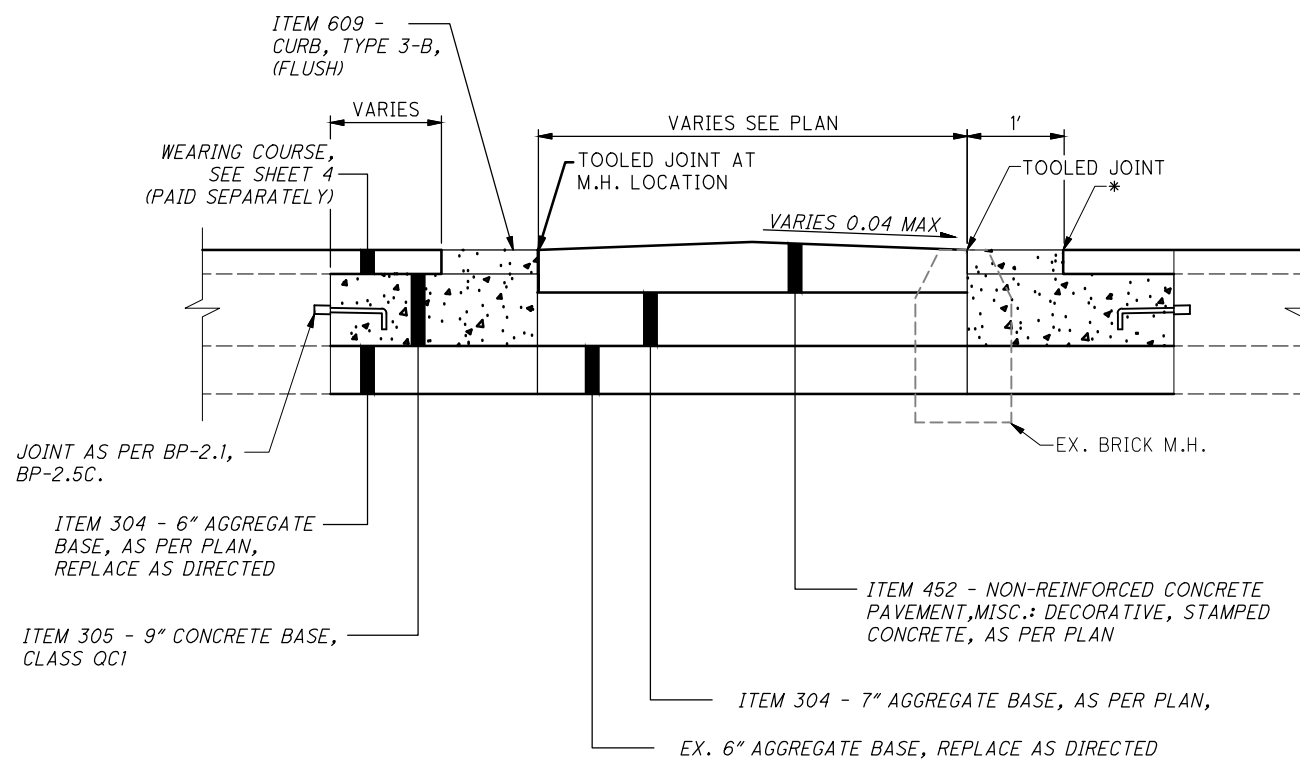


SPLITTER ISLAND M.H. DETAIL (PLAN VIEW)  
NOT TO SCALE

**NOTE:**

THE COST TO TRANSITION THE SPLITTER ISLAND TO GRADE AT THE LOCATIONS OF THE EXISTING MANHOLES IS TO BE INCLUDED IN THE SQUARE YARD UNIT COST FOR ITEM 452: NON-REINFORCED CONCRETE PAVEMENT, MISC.: DECORATIVE, STAMPED CONCRETE, AS PER PLAN (T=9").

NO ADDITIONAL COMPENSATION WILL BE GRANTED.



SPLITTER ISLAND M.H. DETAIL (SECTION B-B)  
NOT TO SCALE

\* INDICATES LOCATION OF LAYOUT REFERENCE POINT

G:\2020\20-191\_CLE FRANKLIN BLVD REHABILITATION\Draw Set\20-191-PG-57A Typical Section Repair Detail.dwg 04-Feb-22 3:39 PM

FRANKLIN & W. 54TH MINI-ROUNDBOUT DETAILS

CUY-FRANKLIN BLVD.

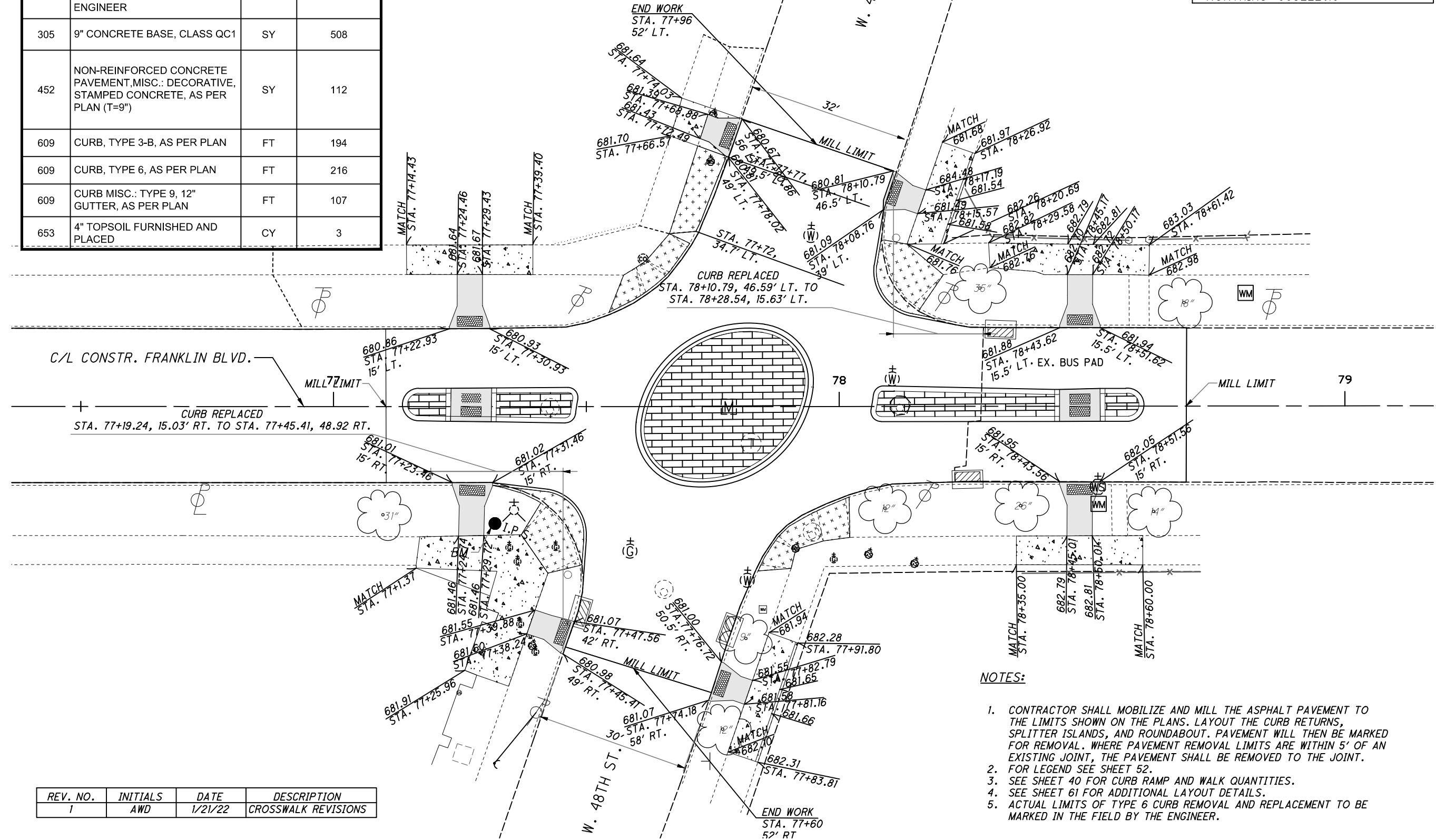
ITEM	ITEM DESCRIPTION	UNIT	TOTAL CARRIED TO SUBSUMMARY
202	PAVEMENT REMOVED, AS PER PLAN	SY	638
202	CURB REMOVED, AS PER PLAN	FT	109
203	EMBANKMENT	CY	7
304	AGGREGATE BASE, AS PER PLAN, AS DIRECTED BY THE ENGINEER	CY	24
305	9" CONCRETE BASE, CLASS QC1	SY	508
452	NON-REINFORCED CONCRETE PAVEMENT, MISC.: DECORATIVE, STAMPED CONCRETE, AS PER PLAN (T=9")	SY	112
609	CURB, TYPE 3-B, AS PER PLAN	FT	194
609	CURB, TYPE 6, AS PER PLAN	FT	216
609	CURB MISC.: TYPE 9, 12" GUTTER, AS PER PLAN	FT	107
653	4" TOPSOIL FURNISHED AND PLACED	CY	3

**BENCHMARK**  
 IRON PIN SET  
 STA. 77+30.09, 23.12' RT.  
 ELEV. = 681.58  
 EASTING: 2182157.71  
 NORTHING: 663222.16



PLAN - W. 48TH INTERSECTION  
 INTERSECTION DETAILS

CUY-FRANKLIN BLVD.



REV. NO.	INITIALS	DATE	DESCRIPTION
1	AWD	1/21/22	CROSSWALK REVISIONS

- NOTES:**
1. CONTRACTOR SHALL MOBILIZE AND MILL THE ASPHALT PAVEMENT TO THE LIMITS SHOWN ON THE PLANS. LAYOUT THE CURB RETURNS, SPLITTER ISLANDS, AND ROUNDABOUT. PAVEMENT WILL THEN BE MARKED FOR REMOVAL. WHERE PAVEMENT REMOVAL LIMITS ARE WITHIN 5' OF AN EXISTING JOINT, THE PAVEMENT SHALL BE REMOVED TO THE JOINT.
  2. FOR LEGEND SEE SHEET 52.
  3. SEE SHEET 40 FOR CURB RAMP AND WALK QUANTITIES.
  4. SEE SHEET 61 FOR ADDITIONAL LAYOUT DETAILS.
  5. ACTUAL LIMITS OF TYPE 6 CURB REMOVAL AND REPLACEMENT TO BE MARKED IN THE FIELD BY THE ENGINEER.

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ITEM 630 - SIGNING, MISC.: RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY. THE FLASHING UNIT SHALL BE SOLAR POWERED, PEDESTRIAN ACTIVATED AND 2-SIDED WITH TWO LED ARRAY BASED YELLOW INDICATIONS ON EACH SIDE. MULTIPLE UNITS SHALL BE WIRELESSLY CONTROLLED AND SYNCHRONIZED. THE UNIT SHALL BE COMPLIANT WITH THE MOST CURRENT OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) AND FHWA INTERIM APPROVAL FOR RRFBS (IA-21).

GENERAL REQUIREMENTS -

EACH RRFB SHALL CONSIST OF TWO RAPIDLY FLASHED RECTANGULAR-SHAPED YELLOW INDICATIONS HAVING LED ARRAY BASED LIGHT SOURCE.

EACH RRFB SHALL BE A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.).

EACH RRFB SHALL CONTAIN A PEDESTRIAN INDICATION LIGHT VISIBLE BY THE PEDESTRIAN IN THE DIRECTION OF TRAVEL.

FUNCTIONAL REQUIREMENTS -

EACH RRFB SHALL UTILIZE SOLAR POWER.

EACH RRFB SHALL BE ACTIVATED BY ADA COMPLIANT PUSHBUTTONS.

THE RRFB SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AFTER A PREDETERMINED TIME LIMIT (BASED ON OMUTCD PROCEDURES).

EACH REMOTE RRFB SHALL BE WIRELESSLY ACTIVATED.

ALL RRFB LIGHT INDICATIONS SHALL BE WIRELESSLY SYNCHRONIZED (ALL LIGHTS WILL TURN ON WITHIN 120 MSEC AND REMAIN SYNCHRONIZED THROUGHOUT THE DURATION OF THE FLASHING CYCLE).

THE UNIT SHALL BE CAPABLE OF RUNNING 14 DAYS WITHOUT SUNLIGHT.

MATERIALS -

FURNISH A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS, POLE MOUNTED CONTROLLER, AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.). THE RRFB ASSEMBLY INCLUDES THE FOLLOWING ITEMS:

1. RRFB INDICATIONS

A. EACH RRFB INDICATION LENS SHALL BE A MINIMUM SIZE OF APPROXIMATELY 5" WIDE X 2" HIGH.

B. THE RRFB INDICATIONS SHALL BE ALIGNED HORIZONTALLY, WITH THE LONGER DIMENSION OF THE INDICATION HORIZONTAL. THERE SHALL BE TWO INDICATIONS ON THE FRONT AND TWO INDICATIONS ON THE BACK.

C. EACH RRFB SHALL BE SUPPLIED WITH ALL REQUIRED HARDWARE TO INSTALL ASSEMBLY. ALL EXPOSED HARDWARE SHALL BE ANTI-VANDAL.

D. EACH RRFB SHALL BE LOCATED BETWEEN THE BOTTOM OF THE CROSSING WARNING SIGN AND THE TOP OF THE SUPPLEMENTAL DOWNWARD DIAGONAL ARROW PLAQUE.

E. THE LIGHT INTENSITY OF THE YELLOW INDICATIONS SHALL MEET THE MINIMUM CLASS 1 SPECIFICATIONS OF SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J595 (DIRECTIONAL FLASHING OPTICAL WARNING DEVICES FOR AUTHORIZED EMERGENCY, MAINTENANCE, AND SERVICE VEHICLES) DATED JANUARY, 2005.

F. TO MINIMIZE EXCESSIVE GLARE DURING NIGHTTIME CONDITIONS, AN AUTOMATIC SIGNAL DIMMING DEVICE SHALL BE USED TO REDUCE THE BRILLIANCE OF THE RRFB INDICATIONS.

G. A SMALL LED CONFIRMATION LIGHT DIRECTED AT AND VISIBLE TO PEDESTRIANS IN THE CROSSWALK SHALL BE INSTALLED INTEGRAL TO THE RRFB OR PUSHBUTTON TO GIVE CONFIRMATION THAT THE RRFB IS IN OPERATION.

ITEM 630 - SIGNING, MISC.: RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY (CONT.)

H. THE PEDESTRIAN CONFIRMATION LIGHT SHALL BE NO SMALLER THAN 2" IN DIAMETER AND CONTAIN A MINIMUM ILLUMINANCE OF 100 LUX MEASURED AT 30 CM.

2. SIGNS

A. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.

B. PEDESTRIAN PUSHBUTTONS SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON TO TURN ON WARNING LIGHTS". SIGNS SHOULD BE MOUNTED ADJACENT TO OR INTEGRAL WITH EACH PEDESTRIAN PUSHBUTTON.

C. TWO SETS OF SIGNS SHALL BE REQUIRED PER UNIT FOR VIEW FROM EACH APPROACH.

D. ASSURE SIGN MEETS THE REQUIREMENTS OF C&MS 630.

3. CONTROL CIRCUIT

A. THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF INDEPENDENTLY FLASHING UP TO TWO INDEPENDENT OUTPUTS. THE LED LIGHT OUTPUTS AND FLASH PATTERN SHALL BE COMPLETELY PROGRAMMABLE.

B. THE CONTROL CIRCUIT SHALL BE SEALED WATERTIGHT TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS.

C. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURE AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS.

4. BATTERY AND SOLAR PANELS

A. BATTERY UNIT SHALL BE A 12VDC, 35 AHR MINIMUM, SEALED GEL OR AGM LEAD ACID BATTERY. BATTERIES SHALL HAVE A WRITTEN TWO YEAR FULL REPLACEMENT WARRANTY.

B. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 40 WATTS PEAK TOTAL OUTPUT.

C. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45 DEGREES - 60 DEGREES TO PROVIDE MAXIMUM OUTPUT.

D. ALL FASTENERS USED SHALL BE ANTI-VANDAL.

5. WIRELESS RADIO

A. RADIO CONTROL SHALL OPERATE ON A 900 MHZ FREQUENCY HOPPING SPREAD SPECTRUM NETWORK, WI-FI OR APPROVED EQUAL.

B. RADIO SHALL INTEGRATE COMMUNICATION OF RRFB CONTROL CIRCUIT TO ACTIVATE SIGN FROM PUSHBUTTON INPUT.

C. THE RADIO SHALL BE SYNCHRONIZED SO ALL OF THE REMOTE RRFB LIGHT INDICATIONS WILL TURN ON WITHIN 120 MSEC OF EACH OTHER AND REMAIN SYNCHRONIZED THROUGH-OUT THE DURATION OF THE FLASHING CYCLE.

6. PUSHBUTTON

A. THE PUSHBUTTON SHALL BE CAPABLE OF CONTINUOUS OPERATION OVER A TEMPERATURE RANGE OF - 30 DEGREES F TO +165 DEGREES F.

B. PUSHBUTTON SHALL BE ADA COMPLIANT.

ITEM 630 - SIGNING, MISC.: RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY (CONT.)

7. PEDESTAL SHAFT AND BASE - MOUNT ON A STANDARD 4.5-INCH OD ALUMINUM PEDESTAL POLE WITH BREAKAWAY BASE OR RELOCATED LIGHT POLE. A 14 FOOT POLE SHALL BE PROVIDED AND FIELD ADJUSTED AND CAPPED TO MAINTAIN THE PROPER SIGN MOUNTING HEIGHTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS. POLE AND BASE MANUFACTURER SHALL BE LISTED ON ODOT'S QUALIFIED PRODUCTS LIST.

CONSTRUCTION -

THE RRFB SHALL BE ASSEMBLED AND CONSTRUCTED BY THE CONTRACTOR AS SHOWN AND SPECIFIED ON THE PLANS. T

WARRANTY -

WARRANTY SHALL BE TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.

MEASUREMENT -

THE DEPARTMENT WILL MEASURE THE ITEM COMPLETE IN PLACE, INCLUDING ALL MATERIALS, TESTING, LABOR AND SOFTWARE FOR A FULLY FUNCTIONAL UNIT.

PAYMENT -

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 630 - SIGNING, MISC.: RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY.

ITEM 632 - REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: AERIAL INTERCONNECT

THIS ITEM OF WORK SHALL CONSIST OF REMOVING EXISTING AERIAL INTERCONNECT CABLE IN ACCORDANCE WITH C&MS 632.26.

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF CLEVELAND DIVISION OF TRAFFIC ENGINEERING AT (216) 664-3194 FOR THE LOCATION OF THE AERIAL INTERCONNECT CABLE TO BE REMOVED WITHIN THE PROJECT LIMITS. REMOVAL OF INTERCONNECT SHALL BE BETWEEN E. 32ND STREET TO E. 74TH STREET. THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE DIVISION OF TRAFFIC ENGINEERING 48 HOURS PRIOR TO THE REMOVAL OF ANY EXISTING EQUIPMENT. ALL REMOVALS SHALL BE PERFORMED IN THE PRESENCE OF A DESIGNATED REPRESENTATIVE OF THE CITY OF CLEVELAND.

ALL REMOVED MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR.

ALL LABOR, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 632 - REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: AERIAL INTERCONNECT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 632 - REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: AERIAL INTERCONNECT 7000 FT

ITEM 632 - DETECTOR LOOP, AS PER PLAN

ANY EXISTING LOOP DETECTORS THAT ARE NOT VISIBLE PRIOR TO THE CONSTRUCTION BUT ARE DISTURBED DURING THE PAVEMENT PLANING / REMOVAL OPERATIONS SHALL BE LOGGED IN AN INVENTORY AND INSTALLED INTO THE INTERMEDIATE COURSE.

THE ENGINEER WILL COORDINATE THE INSTALLATION OF DETECTOR LOOPS WITH:

CITY OF CLEVELAND DEPARTMENT OF PUBLIC WORKS  
DIVISION OF TRAFFIC ENGINEERING  
ANDREW R. CROSS, P.E., PTOE, CONSULTING ENGINEER  
(216) 664-3197

REPLACE ALL EXISTING STOP LINE INDUCTANCE DETECTOR LOOPS PER THE POWERHEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE 35 FEET. THE STOP LINE DETECTOR LOOPS SHALL NOT BE WIRED TO ANY OTHER LOOPS AND SHALL HAVE ITS OWN DETECTOR CHANNEL. THE LOCATION OF THESE LOOPS SHALL BE SUCH THAT THE POWERHEAD IS LOCATED AT THE STOP LINE, NOT PAST IT.

SYSTEM LOOP DIMENSIONS SHALL BE 6 FEET X 6 FEET, CENTERED IN THE LANE AND THE ANGULAR DESIGN (ADD) LOOP AS SHOWN ON TC-82.10

ALL STOP LINE DETECTION SHALL BE TESTED FOR A BICYCLE TARGET AND ALL DILEMMA ZONES SHALL BE TESTED FOR A MOTORCYCLE TARGET.

CENTER EACH LOOP IN THE LANE.

THE INSTALLATION OF POURED EPOXY INSULATED SPLICES BETWEEN THE LOOP DETECTOR WIRES AND THE EXISTING LOOP DETECTOR LEAD IN CABLE SHALL BE CONSIDERED AS INCIDENTAL TO THIS ITEM OF WORK. NO SEPARATE PAYMENT FOR THESE SPLICES WILL BE MADE.

A CONTINGENCY QUANTITY OF 2 HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 632 - DETECTOR LOOP, AS PER PLAN.

REV. NO.	INITIALS	DATE	DESCRIPTION
1	AK	2/4/22	NOTE ADDED

CALCULATED  
AML  
CHECKED  
AKF

TRAFFIC CONTROL NOTES

CUY-FRANKLIN BLVD.

70  
154





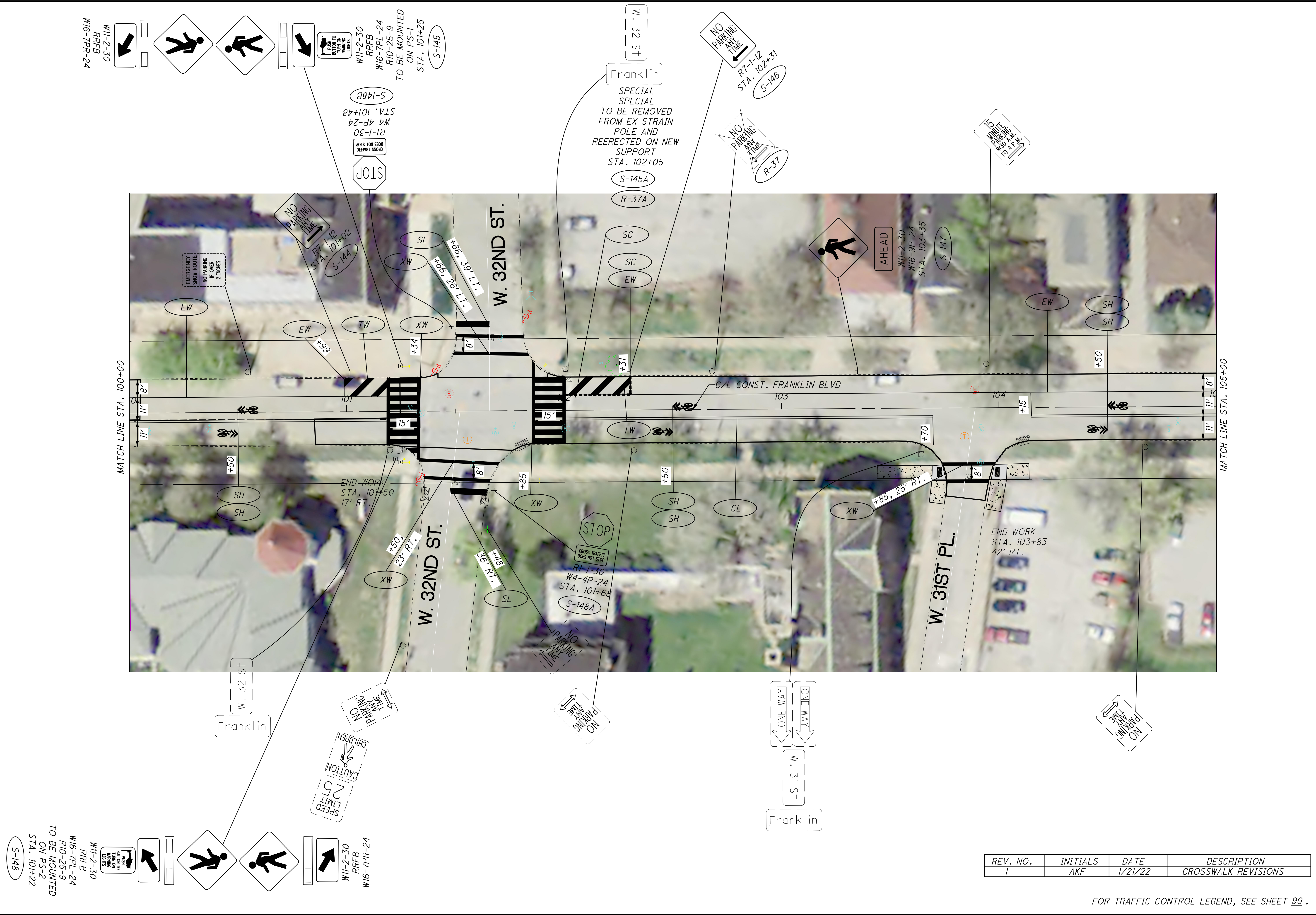












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1	AKF	1/21/22	CROSSWALK REVISIONS

FOR TRAFFIC CONTROL LEGEND, SEE SHEET 99.

**CUY-FRANKLIN BLVD.**

**TRAFFIC CONTROL PLAN**  
**STA. 100+00 TO STA. 105+00**

CALCULATED 0  
DLS  
CHECKED AKF

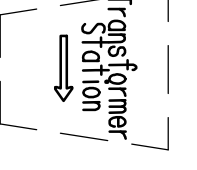
0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

117  
154

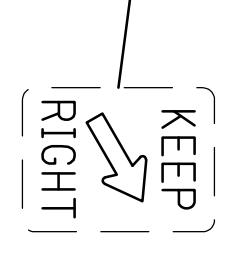
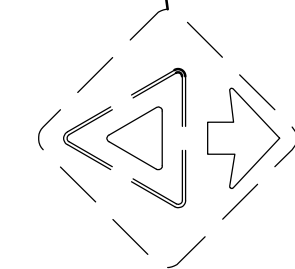
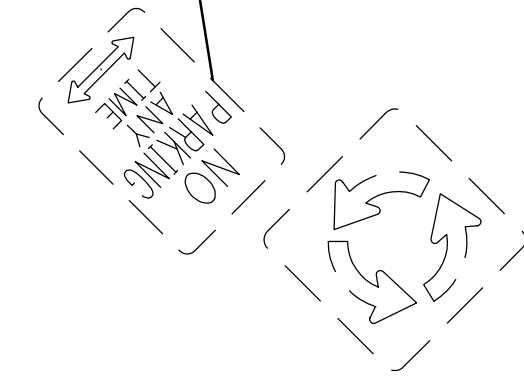
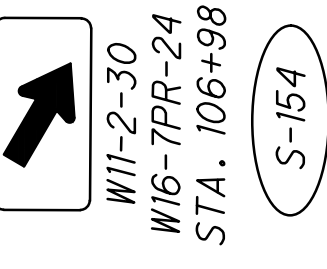
S-153  
 W11-2-30  
 W16-9P-24  
 STA. 105+01  
 AHEAD



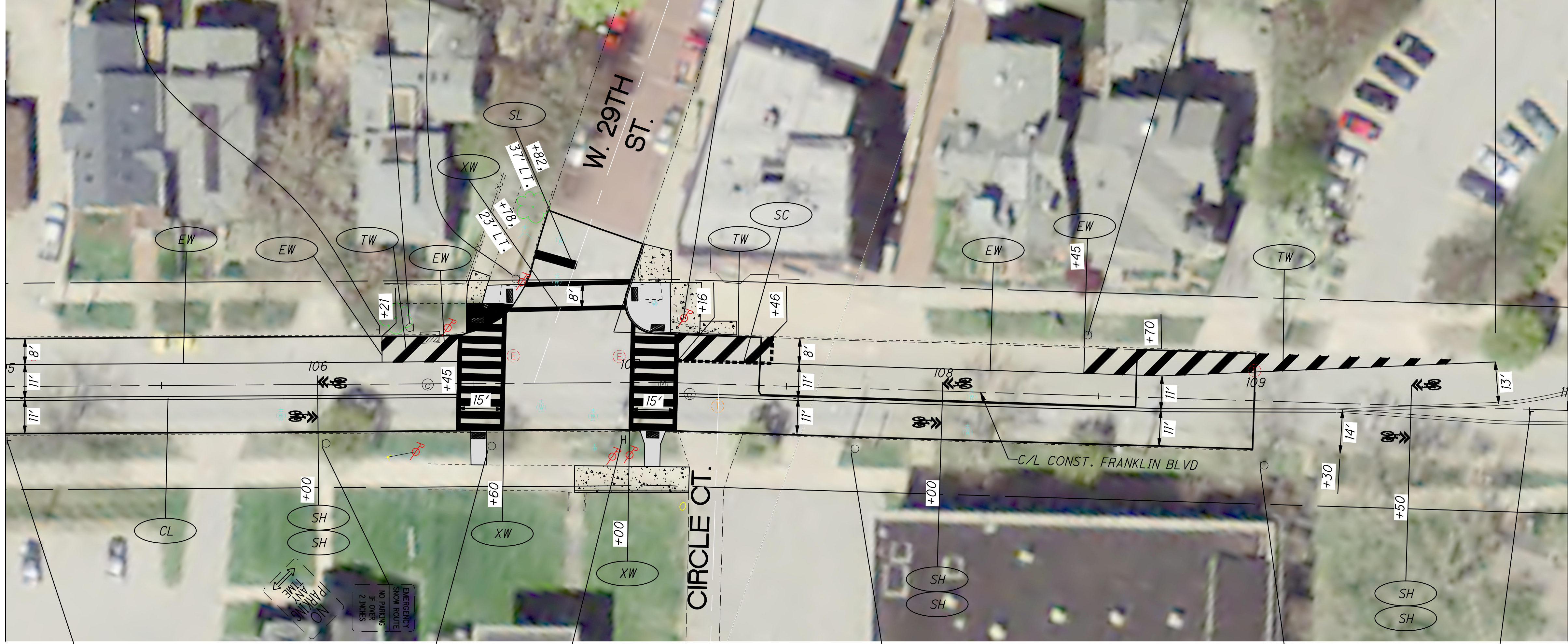
S-154C  
 W11-2-30  
 W16-7PL-24  
 STA. 106+54



S-154  
 W11-2-30  
 W16-7PR-24  
 STA. 106+98

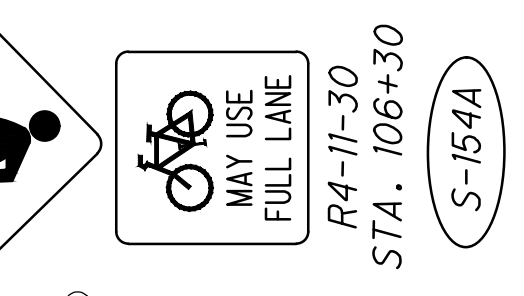


MATCH LINE STA. 105+00

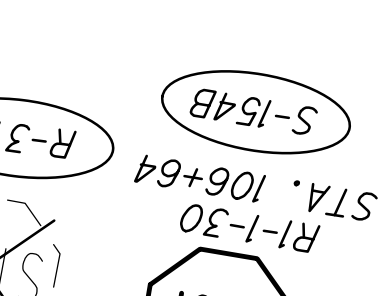


MATCH LINE STA. 110+00

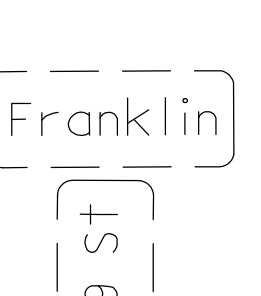
S-149  
 R7-1-12  
 STA. 106+21  
 NO PARKING ANY TIME



S-154A  
 R4-11-30  
 STA. 106+30  
 BICYCLE MAY USE FULL LANE



S-154B  
 R1-30  
 STA. 106+64  
 STOP



S-150  
 W11-2-30  
 W16-7PL-24  
 STA. 107+17



S-152  
 W11-2-30  
 W16-9P-24  
 R7-1-12  
 STA. 108+45



S-150  
 W11-2-30  
 W16-7PL-24  
 STA. 107+17



SUSPEND PROPOSED PAVEMENT MARKINGS  
 STA. 109+77

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1	AKF	1/21/22	CROSSWALK REVISIONS