

01-19-2024 LETTING ITEM 049

# STATE OF ILLINOIS

## DEPARTMENT OF TRANSPORTATION

# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

**FAU RTE 1256 (CENTRAL AVE) AT HICKORY STREET  
INTERSECTION IMPROVEMENT  
SECTION NO.: 21-00142-00-TL  
PROJECT NO.: 91YE(332)  
CITY OF HIGHLAND PARK  
LAKE COUNTY  
C-91-215-23**

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

**CENTRAL AVE**  
DESIGN DESIGNATION = MINOR ARTERIAL  
POSTED SPEED = 25 MPH  
2019 ADT = 14,100 VPD

**HICKORY ST**  
DESIGN DESIGNATION = LOCAL ROAD  
POSTED SPEED = 25 MPH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	1
CONTRACT NO. 61J82				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

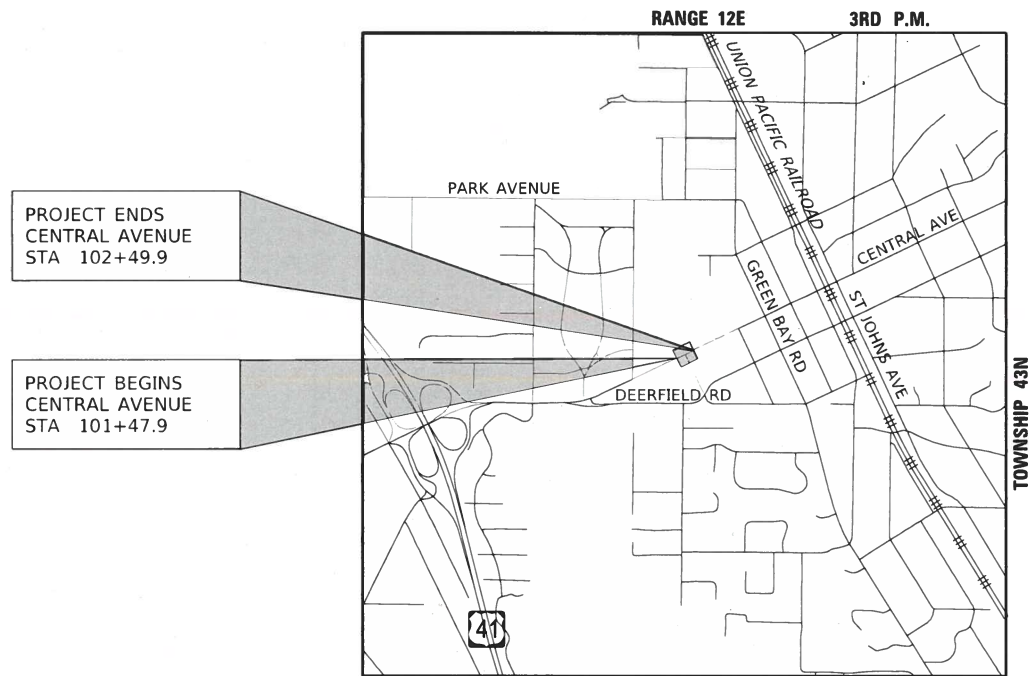


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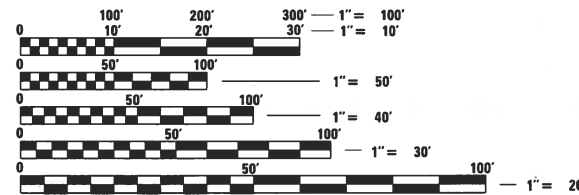
Approved: 08/04/2023  
*Carmel Bong*  
City of Highland Park

Passed: NOVEMBER 1, 2023  
*C.F. Rivale*  
District One Engineer of Local Roads & Streets

Releasing for Bid Based on Limited Review: NOVEMBER 1, 2023  
*Jose Rios Lopez*  
Regional Engineer



**PROJECT LOCATION**  
NOT TO SCALE



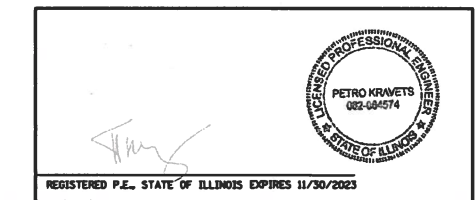
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

**PROJECT LENGTH:**  
GROSS & NET LENGTH - 102.0 FT (0.02 MILES)

FEDERAL AID PROGRAM ENGINEER: CARMEN E. RAMOS, PE, SCHAUMBURG, IL

CONTRACT NO.: 61J82



PLANS PREPARED BY:  
**CIVILTECH**  
Two Pierce Place, Suite 1400 - Itasca, Illinois 60143  
Tel: 630.773.3900 - Fax: 630.773.3975  
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## CITY OF HIGHLAND PARK STANDARDS

FOR-1041	TREE PROTECTION DETAIL
STR-1031	TYPICAL DRIVEWAY & SIDEWALK DETAIL
STR-1037	INLET PROTECTION (TYPE B - W/O CURB BOX; TYPE C - W/ CURB BOX) TUFTILE DETECTABLE WARNING PRODUCTS 2' X 4' WET SET TACTILE TILE

## IDOT HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS ABBREVIATIONS & PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-11	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
442201-03	CLASS C AND D PATCHES
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" AWAY FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40 MPH
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-09	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
728001-01	TELESCOPING STEEL SIGN SUPPORT
780001-05	TYPICAL PAVEMENT MARKINGS
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
878001-11	CONCRETE FOUNDATION DETAILS

## IDOT DISTRICT ONE STANDARDS

BD-08	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING
BD-22	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
BD-24	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
BD-32	BUTT JOINT AND HMA TAPER DETAILS
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC-22	ARTERIAL ROAD INFORMATION SIGN

## GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE DETAILS IN THE PLANS, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS, AND THE FOLLOWING STATE OF ILLINOIS SPECIFICATIONS: "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED JANUARY 1, 2022, (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," AND THE "MANUAL OF TEST PROCEDURES OF MATERIALS", IN EFFECT ON THE DATE OF INVITATION FOR BIDS, AND THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" LATEST EDITION WHICH APPLY TO AND GOVERN THE CONSTRUCTION OF THE ABOVE NAMES SECTION, AND IN CASE OF CONFLICT WITH ANY PARTS, OR PARTS OF SAID SPECIFICATIONS, THE SAID SPECIAL PROVISIONS SHALL TAKE PRECEDENCE AND SHALL GOVERN.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO THE COMMENCEMENT OF WORK AND SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH THE ENGINEER.
- NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS AND EROSION CONTROL DEVICES ARE MET TO THE SATISFACTION OF THE ENGINEER.
- PROPOSED LINES AND GRADES SHOWN ON THE CONSTRUCTION PLANS REPRESENT FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS, INCLUDING RADII, ARE GIVEN TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. WHERE NEW WORK IS PROPOSED TO MEET EXISTING FEATURES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD CHECK ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
- CURB AND GUTTER JOINTS SHALL BE PLACED AS PER STANDARD 606001 AND IN ADDITION ONE INCH EXPANSION JOINTS SHALL BE PLACED EVERY 75 FT. AT LEAST ONE EXPANSION JOINT SHALL BE PLACED IN EACH SEGMENT OF CURB REMOVAL AND REPLACEMENT.
- CONCRETE TRUCK WASHOUT FACILITY SHOULD BE PROVIDED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS" AND SPECIAL PROVISIONS IN THE FIELD BY THE CONTRACTOR AT A LOCATION OR LOCATIONS APPROVED BY THE ENGINEER. WASHING CONCRETE AT CURB AND GUTTER IS STRICTLY PROHIBITED. NO CONCRETE WASHOUT PERMITTED AT ANY OPEN EXCAVATION, SUBJECT TO EROSION CONTROL DEFICIENCY ACCORDING TO ARTICLE 105.03.
- THE CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE ALL UNSUITABLE EXCAVATED MATERIAL. THIS MATERIAL WILL BE CLASSIFIED AS ALL MATERIAL THAT THE ENGINEER DEEMS UNSUITABLE, SUCH AS REBAR, ABANDONED WIRE, ETC. THE WASTE EXCAVATED MATERIAL SHALL NOT BE DEPOSITED ON PUBLIC OR PRIVATE PROPERTY UNLESS THE CONTRACTOR FIRST OBTAINS THE WRITTEN PERMISSION FROM THE PROPERTY OWNER OR THE AUTHORIZED REPRESENTATIVE OF THE APPROPRIATE PUBLIC AGENCY. PROVISIONS OF ARTICLE 202.03 STANDARD SPECIFICATIONS SHALL BE ADHERED TO. THE DISPOSAL AREA LOCATION SHALL BE DISCLOSED TO THE ENGINEER. ALL REMOVAL ITEMS, INCLUDING EARTH EXCAVATION, AND REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS SHALL BE REMOVED AT THE END OF THE DAY. THE CONTRACTOR MUST REQUEST IN WRITING A LOCATION FOR STORAGE OF SUITABLE EXCAVATED MATERIALS THAT WILL BE INCORPORATED INTO THE PROJECT.
- THE THICKNESSES OF HMA MIXTURES SHOWN ON THE PLANS ARE NOMINAL. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE COURSE UPON WHICH THE HMA MATERIALS ARE PLACED.
- THE CONTRACTOR SHALL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON CITY PROPERTY WITHOUT WRITTEN CONSENT FROM THE CITY.

## SURVEY

- BEARINGS AND COORDINATES ARE REFERENCED TO THE ILLINOIS COORDINATE SYSTEM NAD 83(2011) EAST ZONE.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR ANY AGENT HAS WITNESSED OR OTHERWISE REFERENCED EACH LOCATION.

## STORM SEWERS, STRUCTURES AND UTILITIES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION IS REQUIRED).
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- THE LOCATION OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THE ENGINEER DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR WILL BE REQUIRED TO ASCERTAIN THE EXACT LOCATION OF SUCH UTILITIES AND EXERCISE CARE DURING HIS CONSTRUCTION OPERATIONS SO AS NOT TO DAMAGE THEM IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND APPLICABLE ARTICLES INCLUDED IN THE "STANDARD SPECIFICATIONS" INCLUDING, BUT NOT LIMITED TO, ARTICLES 105.07 AND 107.39. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL EXISTING UTILITIES SO THAT THEIR FACILITIES MAY BE LOCATED AND ADJUSTED OR MOVED, IF NECESSARY, PRIOR TO THE START OF THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOCAL AGENCIES MAINTAINING STORM & SANITARY SEWERS AND WATER MAINS TO VERIFY THE MATERIALS AND METHODS ALLOWED FOR THE ADJUSTMENT OR RELOCATION OF THEIR FACILITIES, IF NECESSARY.
- ONLY PRECAST CONCRETE ADJUSTMENT RINGS, MAXIMUM OF 12" IN HEIGHT, WILL BE ALLOWED IN THE ADJUSTMENT OR RECONSTRUCTION OF CATCH BASIN, MANHOLE, INLET AND VALVE VAULT STRUCTURES, UNLESS INDICATED OTHERWISE ON THE PLANS OR AS DIRECTED BY THE ENGINEER. COMMON BRICK WILL NOT BE ALLOWED. ALL TYPE 8 GRATES ON RESTRICTED DEPTH DRAINAGE STRUCTURES SHALL BE ADJUSTED TO PLAN GRADE WITH 4" MINIMUM CONCRETE ADJUSTMENT RINGS.

## MAINTENANCE OF TRAFFIC

- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE APPLICABLE HIGHWAY STANDARDS.
- THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE CITY TO REDUCE IMPACT TO MAJOR HOLIDAYS AND SPECIAL EVENTS. THE CONTRACTOR SHALL OBSERVE ALL LOCAL NOISE ORDINANCES UNLESS OTHERWISE APPROVED BY THE ENGINEER AND THE CITY.
- DURING TRAFFIC OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES THAT ARE OPEN TO TRAFFIC FROM DEBRIS GENERATED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR REMOVING DEBRIS FROM THE ADJACENT TRAVELED LANE SURFACE. STREET SWEEPING, AS SPECIFIED BY THE ENGINEER, SHALL BE CONSIDERED INCLUDED IN THE CONTRACT.

## SIGNING, STRIPING, AND LANDSCAPING

- ITEMS UNDER THE GENERAL HEADING OF "THERMOPLASTIC PAVEMENT MARKING" PROVIDE FOR ONE APPLICATION.
- PER THE ILLINOIS LAWN CARE PRODUCTS APPLICATION NOTICE ACT 096-1005, PHOSPHORUS FERTILIZER NUTRIENT SHALL NOT BE USED.
- THE PRESERVATION OF EXISTING TREES IS OF UTMOST IMPORTANCE. AT NO TIME SHALL THE CONTRACTOR PRUNE OR REMOVE ANY TREES UNLESS SPECIFICALLY DIRECTED BY THE ENGINEER.
- WHEN DIRECTED BY THE ENGINEER, SUPPLEMENTAL WATERING SHALL BE APPLIED TO ALL SEEDED/SODDED AREAS PRIOR TO FINAL ACCEPTANCE AT A RATE SPECIFIED BY THE ENGINEER AND IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS" AND SPECIAL PROVISIONS.

**COMMITMENTS**

NO COMMITMENTS AS PART OF THIS PROJECT.

**CONTACTS**

CITY OF HIGHLAND PARK  
DEPARTMENT OF PUBLIC WORKS  
EMMANUEL GOMEZ, P.E.  
CITY ENGINEER  
1150 HALF DAY ROAD  
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(224) 229-5862  
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HIGHLAND PARK, IL 60035  
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COMMONWEALTH EDISON COMPANY  
AXL DAVIS  
ONE LINCOLN CENTRE  
OAKBROOK TERRACE, IL 60181  
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jay.hammer@northshoregasdelivery.com

TDS METROCOM  
MATT SCHULTE  
(262) 754-3063  
Matt.Schulte@tdstelecom.com

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AIR VOIDS @ Ndes	QUALITY MANAGEMENT PLAN (QMP)
PAVEMENT RESURFACING		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70, 1-1/2"	4% @ 70 Gyr.	LR 1030-2
PAVEMENT PATCHING		
CLASS D PATCHES (HMA BINDER IL-19 mm); 9"	4% @ 70 Gyr.	LR 1030-2
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) PER LR 1030-2		

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LB/SQ YD/ IN.  
THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	HSIP FUNDS		100% LOCAL
				90% FED 10% LOCAL	ROADWAY 0021	
						NON-PARTICIPATING
20200100	EARTH EXCAVATION	CU YD	33	33		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	192	192		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	3	3		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	3	3		
25200110	SODDING, SALT TOLERANT	SQ YD	192	192		
25200200	SUPPLEMENTAL WATERING	UNIT	1	1		
28000510	INLET FILTERS	EACH	6	6		
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	132	132		
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	9	9		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	172	172		
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGWAYS	TON	1	1		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	66	66		
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	33	33		
42001300	PROTECTIVE COAT	SQ YD	123	123		
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	9	9		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	898	898		

^ DENOTES SPECIALTY ITEM



Two Pierce Place, Suite 1400  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - PK	REVISED - 10/25/2023
DRAWN - JMG	REVISED -
CHECKED - JRV	REVISED -
DATE - 8/4/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT  
SUMMARY OF QUANTITIES**

SHEET 1 OF 5 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	4
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT			CONTRACT NO. 61J82	

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	HSIP FUNDS		100% LOCAL NON-PARTICIPATING
				90% FED 10% LOCAL		
				ROADWAY 0021		
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	383	383		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	13	13		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	62	62		
44000600	SIDEWALK REMOVAL	SQ FT	671	671		
44201749	CLASS D PATCHES, TYPE I, 9 INCH	SQ YD	10	10		
60600605	CONCRETE CURB, TYPE B	FOOT	17	17		
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	29	29		
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	17	17		
^ 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	34	34		
^ 66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2		
^ 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1		
^ 66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1		
^ 66901006	REGULATED SUBSTANCES MONITORING	CAL DA	10	10		
67100100	MOBILIZATION	L SUM	1	1		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1		

^ DENOTES SPECIALTY ITEM

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**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT  
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1256	21-00142-00-TL	LAKE	34	5
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				

SHEET 2 OF 5 SHEETS | STA. TO STA.

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	HSIP FUNDS		100% LOCAL
				90% FED 10% LOCAL		
				ROADWAY 0021	NON-PARTICIPATING	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	42	42		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	329	329		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	382	382		
^ 72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	1	1		
^ 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	12	12		
^ 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	276	276		
^ 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	53	53		
^ 78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	26	26		
^ 81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	63	63		
^ 81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	5	5		
^ 83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	10	10		
^ 84200804	REMOVAL OF POLE FOUNDATION	EACH	1	1		
^ 84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	1	1		
^ 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1		
^ 85100100	PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1			1
^ 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	785	785		

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**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT  
SUMMARY OF QUANTITIES**

SHEET 3 OF 5 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	6
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 61J82	

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	HSIP FUNDS		100% LOCAL
				90% FED 10% LOCAL	ROADWAY 0021	
^ 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	834	834		
^ 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	110	110		
^ 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	4	4		
^ 87900200	DRILL EXISTING HANDHOLE	EACH	7	7		
^ 88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8	8		
^ 89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	2	2		
^ 89501150	RELOCATE EXISTING TRAFFIC SIGNAL POST	EACH	1	1		
^ 89502200	MODIFY EXISTING CONTROLLER	EACH	1	1		
^ 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	665	665		
^ 89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	46	46		
^ 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1		
^ 89502376	REBUILD EXISTING HANDHOLE	EACH	3	3		
^ 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	2	2		
^ X1400367	PEDESTRIAN SIGNAL POST, 10 FT.	EACH	6	6		
X2130010	EXPLORATION TRENCH (SPECIAL)	FOOT	50	50		
X4240800	DETECTABLE WARNINGS (SPECIAL)	SQ FT	71	71		

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SUMMARY OF QUANTITIES**

SHEET 4 OF 5 SHEETS STA. TO STA.

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1256	21-00142-00-TL	LAKE	34	7
FED. ROAD DIST. NO. 1			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 61J82				

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	HSIP FUNDS		100% LOCAL
				90% FED 10% LOCAL	ROADWAY 0021	
						NON-PARTICIPATING
X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	6	6		
^ X8161000	EXPOSE AND RELOCATE EXISTING UNIT DUCT	FOOT	20	20		
^ X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8	8		
^ X8780012	CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER	FOOT	24	24		
XX003668	PRECONSTRUCTION VIDEO TAPING	L SUM	1			1
XX006698	TREE PROTECTION AND PRESERVATION	EACH	3	3		
^ XX008171	SPRINKLER SYSTEM REPAIR	L SUM	1	1		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0017400	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	2	2		
Z0017700	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED	EACH	1	1		
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	78	78		
^ Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1	1		

^ DENOTES SPECIALTY ITEM

**CIVILTECH**  
 Two Pierce Place, Suite 1400  
 Itasca, Illinois 60143  
 Tel. 630.773.3900 Fax: 630.773.3975  
 www.civiltechinc.com

DESIGNED - PK	REVISED - 10/25/2023
DRAWN - JMG	REVISED -
CHECKED - JRV	REVISED -
DATE - 8/4/2023	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT  
 SUMMARY OF QUANTITIES**

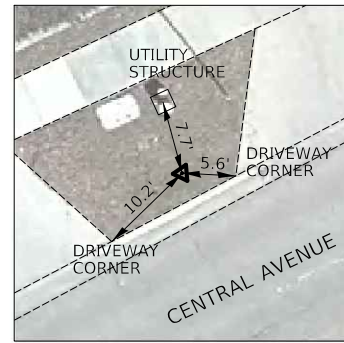
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	8
CONTRACT NO. 61/82				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SHEET 5 OF 5 SHEETS STA. TO STA.

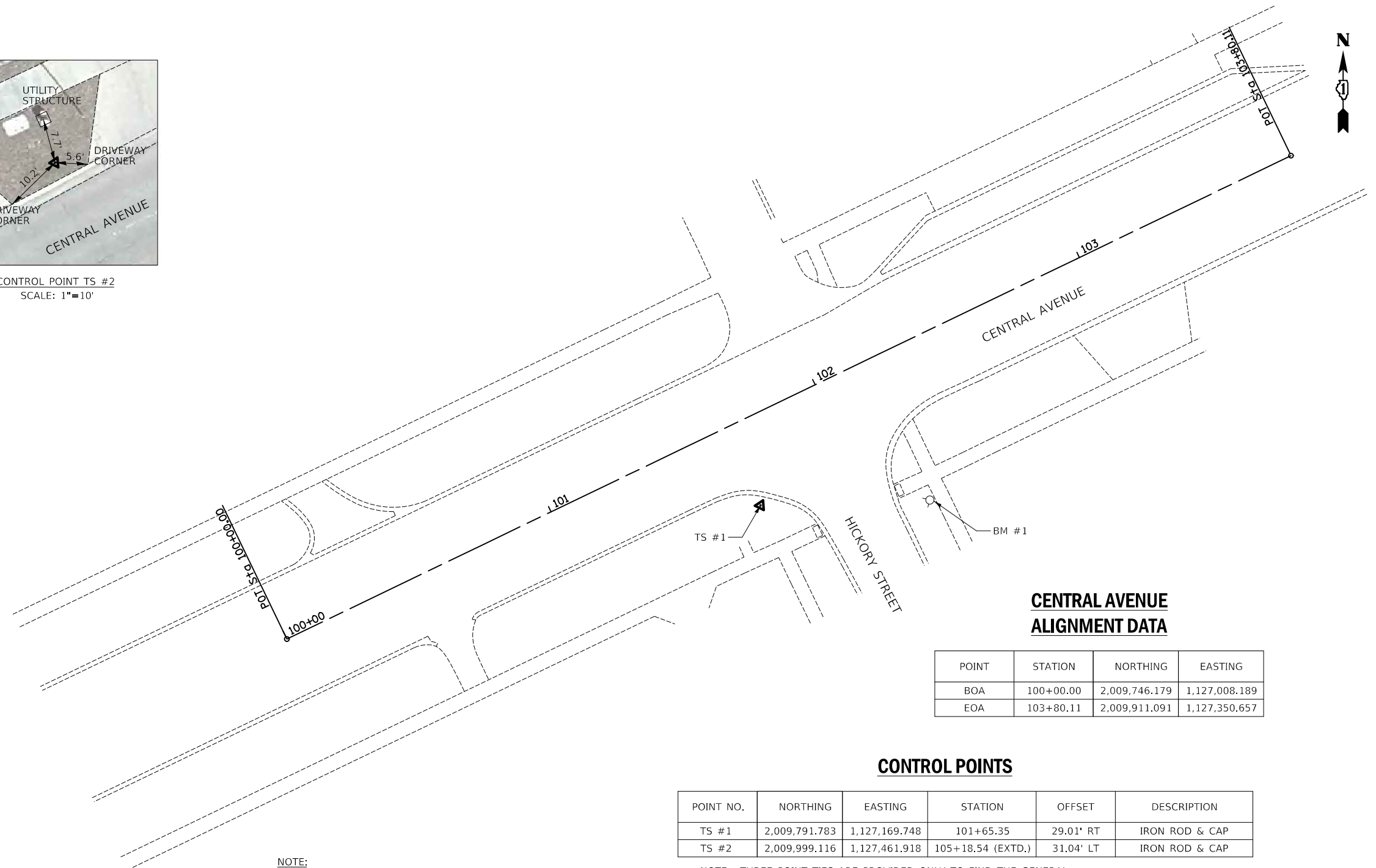




CONTROL POINT TS #1  
SCALE: 1"=10'



CONTROL POINT TS #2  
SCALE: 1"=10'



**CENTRAL AVENUE  
ALIGNMENT DATA**

POINT	STATION	NORTHING	EASTING
BOA	100+00.00	2,009,746.179	1,127,008.189
EOA	103+80.11	2,009,911.091	1,127,350.657

**CONTROL POINTS**

POINT NO.	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
TS #1	2,009,791.783	1,127,169.748	101+65.35	29.01' RT	IRON ROD & CAP
TS #2	2,009,999.116	1,127,461.918	105+18.54 (EXTD.)	31.04' LT	IRON ROD & CAP

NOTE: THREE POINT TIES ARE PROVIDED ONLY TO FIND THE GENERAL LOCATION OF CONTROL POINT, NOT TO ACCURATELY ESTABLISH THE POINT.

▲ CONTROL POINT

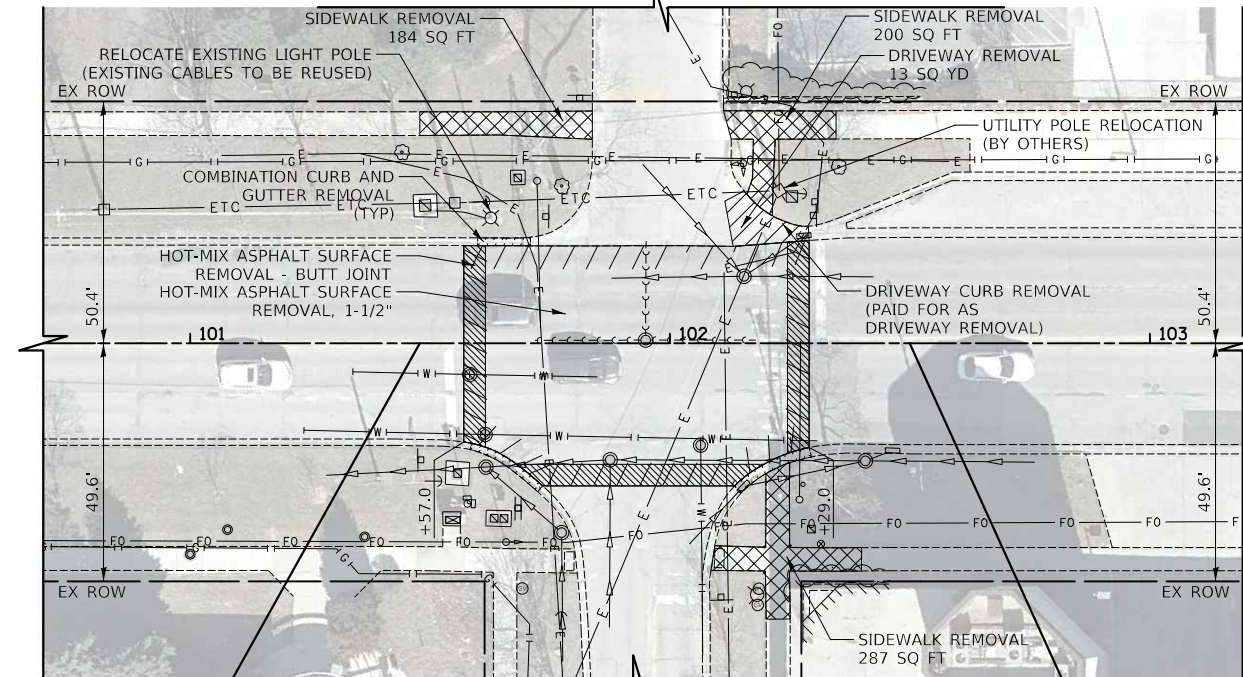
**NOTE:**

- ELEVATIONS ARE BASED MULTIPLE G.P.S. OBSERVATIONS AT TRAVERSE STATION #1 AND TRAVERSE STATION #2 MEASURED ON AUGUST 2, 2022.
- BEARINGS AND COORDINATES ARE REFERENCED TO THE ILLINOIS COORDINATE SYSTEM NAD 83(2011) EAST ZONE.
- ALL MEASURED DISTANCES ARE GRID NOT GROUND. TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN BY THE COMBINED FACTOR OF 0.9999721786.

**BENCHMARKS**

BENCHMARK NO.	LOCATION	ELEVATION	DESCRIPTION
BM #1	STA. 102+18.91, 52.93' RT	657.64	CROSS CUT (SET) IN NORTHERLY FLANGE BOLT OF FIRE HYDRANT IN THE SOUTHEAST QUADRANT OF THE INTERSECTION OF CENTRAL AVENUE & HICKORY STREET. NAVD '88 ELEVATION.

HIGHLAND PARK  
POST OFFICE DRIVEWAY



BEGIN  
IMPROVEMENTS  
STA 101+47.9  
(MATCH EXISTING)

END  
IMPROVEMENTS  
STA 102+49.9  
(MATCH EXISTING)

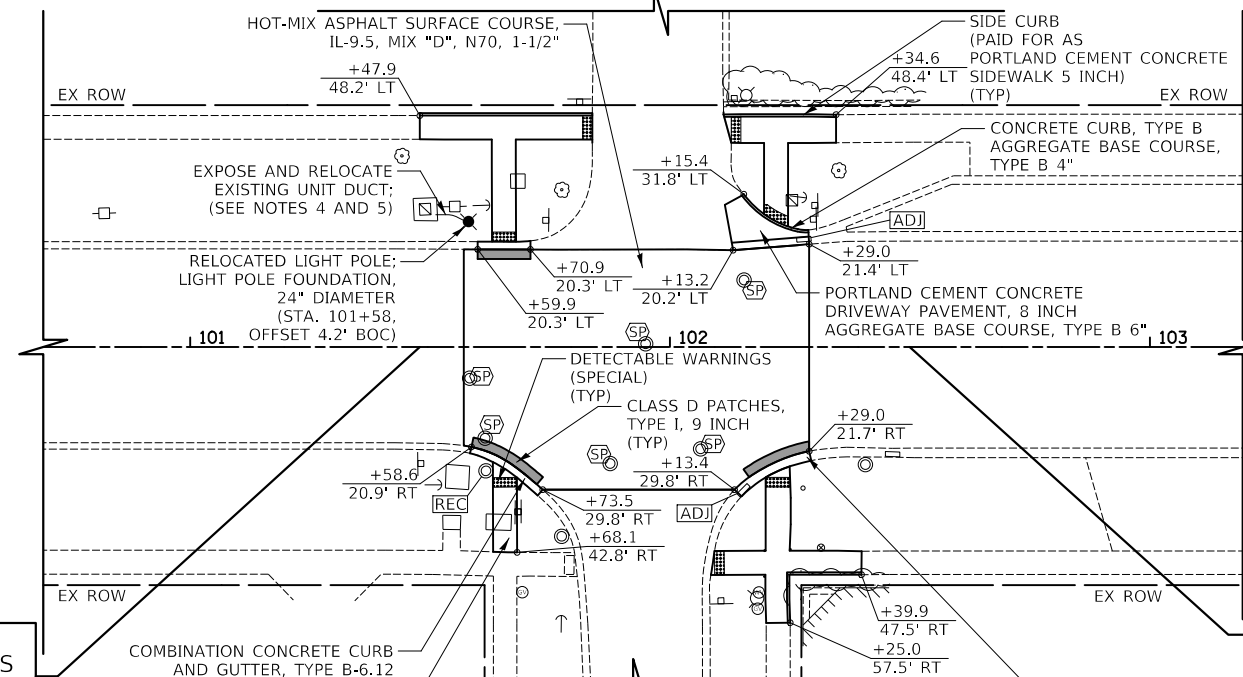
EXISTING  
CENTRAL AVENUE

LEGEND	
	HOT-MIX ASPHALT SURFACE REMOVAL
	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT
	SIDEWALK REMOVAL
	DRIVEWAY REMOVAL
	PAVEMENT PATCHING
	CURB AND GUTTER REMOVAL
	DETECTABLE WARNINGS (SPECIAL)
	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED
	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED

NOTES:

- FOR SIDEWALK LAYOUT SEE CURB RAMP DETAIL SHEETS.
- CONTRACTOR SHALL MILL FIRST BEFORE PATCHING.
- EXISTING LIGHTING WILL REMAIN OPERATIONAL UNTIL THE PROPOSED LIGHT POLE FOUNDATION IS POURED AND CURED AND READY TO RELOCATE THE EXISTING LIGHT POLE ONTO THE NEW FOUNDATION. THE RELOCATION PROCESS WILL BE COORDINATED AND COMPLETED ON THE SAME DAY WITHOUT ANY INTERRUPTION OF OPERATION OF THE LIGHT POLE FOR THAT SAME EVENING.
- REUSE AND SPLICE EXISTING CABLES FROM HANDHOLE (WEST) IN RELOCATED LIGHT POLE.
- SPLICING OF CABLES AT THE RELOCATED LIGHT POLE WILL BE IN LIGHT POLE HANDHOLE WITH NEW WATERPROOF SPLICES AND NEW FUSE KIT. FUSE SIZE SHALL MATCH EXISTING. NO UNDERGROUND SPLICING WILL BE ALLOWED. THIS WORK WILL BE INCLUDED AND PAID FOR AS EXPOSE AND RELOCATE EXISTING UNIT DUCT.

HIGHLAND PARK  
POST OFFICE DRIVEWAY



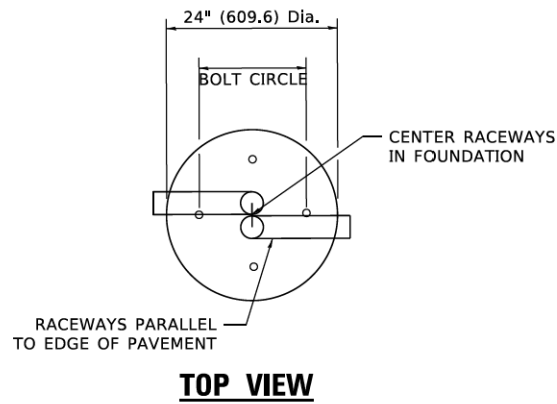
BEGIN  
IMPROVEMENTS  
STA 101+47.9  
(MATCH EXISTING)

END  
IMPROVEMENTS  
STA 102+49.9  
(MATCH EXISTING)

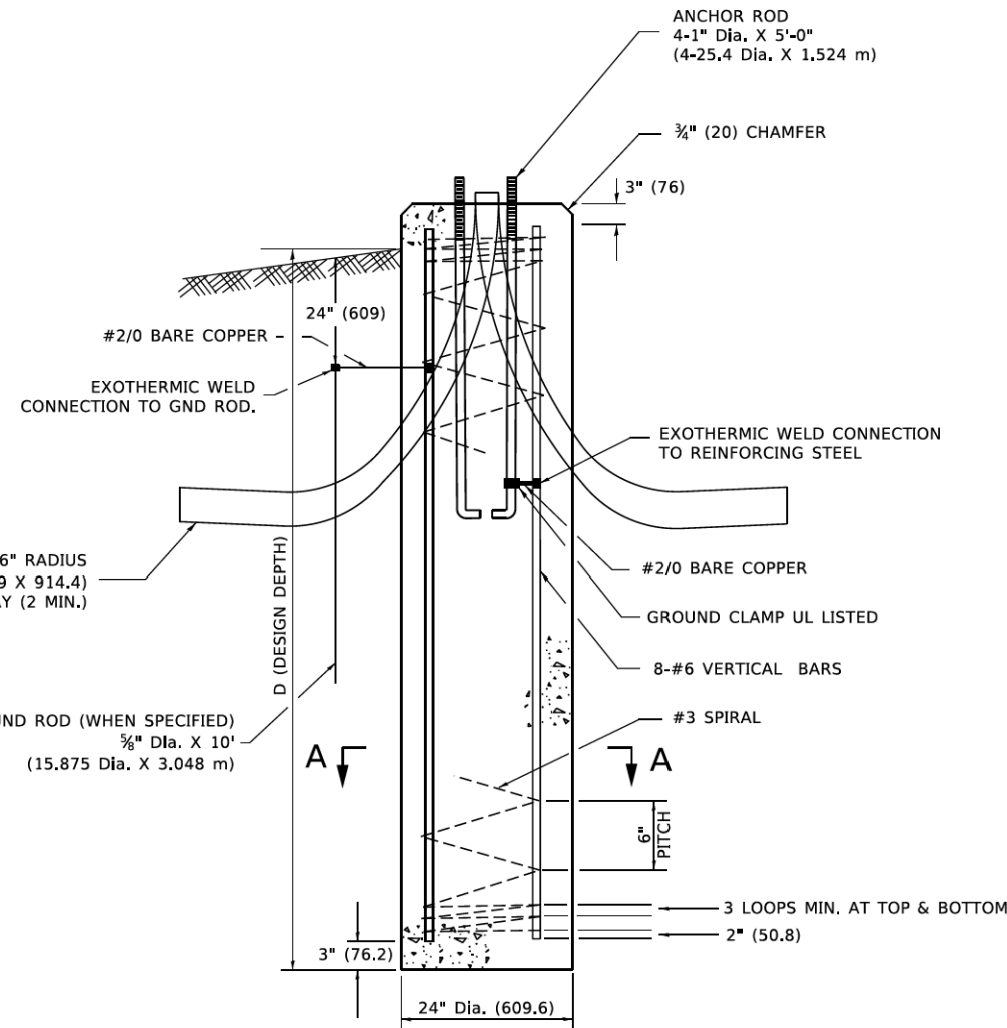
PROPOSED  
CENTRAL AVENUE

LIGHT POLE FOUNDATION DEPTH TABLE

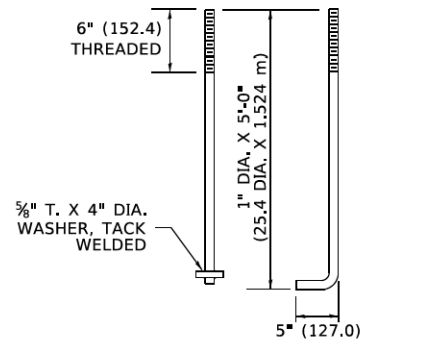
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT.	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND φ = 34°	9'-6" (2.90 m)	10'-7" (3.22 m)
MEDIUM SAND φ = 37.5°	9'-0" (2.74 m)	9'-10" (2.99 m)
DENSE SAND φ = 40°	8'-3" (2.51 m)	9'-7" (2.91 m)



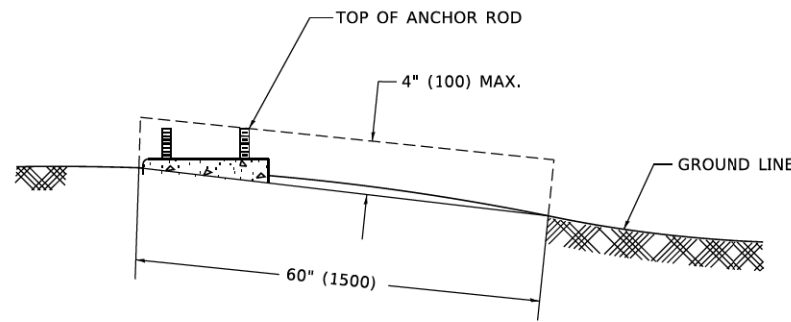
TOP VIEW



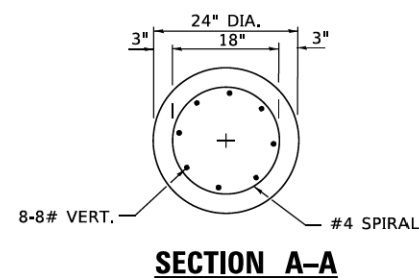
FOUNDATION DETAIL



ANCHOR BOLT DETAIL



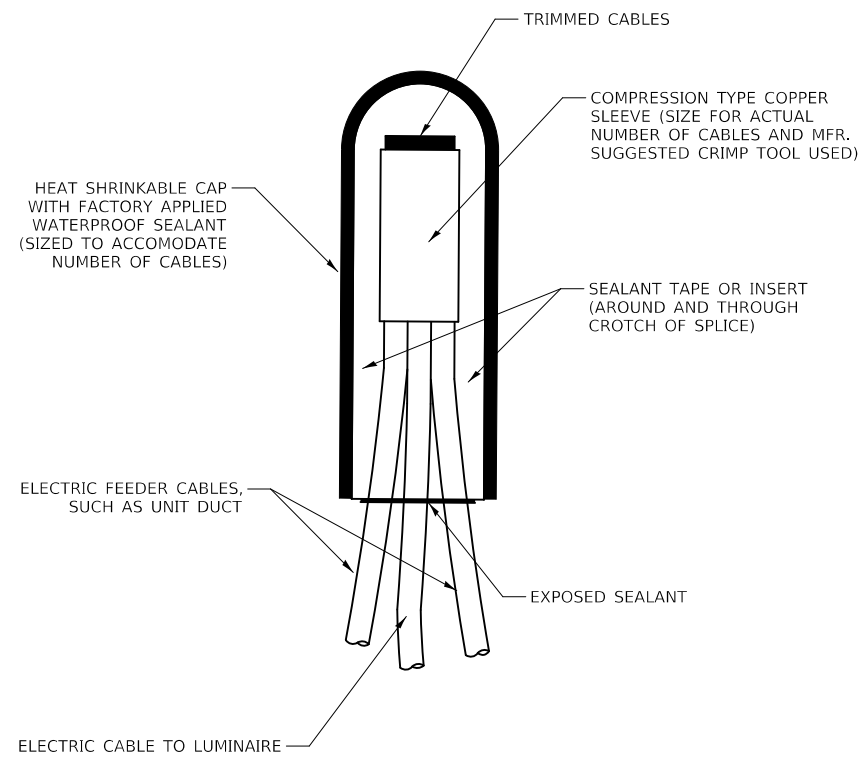
FOUNDATION EXTENSION DETAIL



SECTION A-A

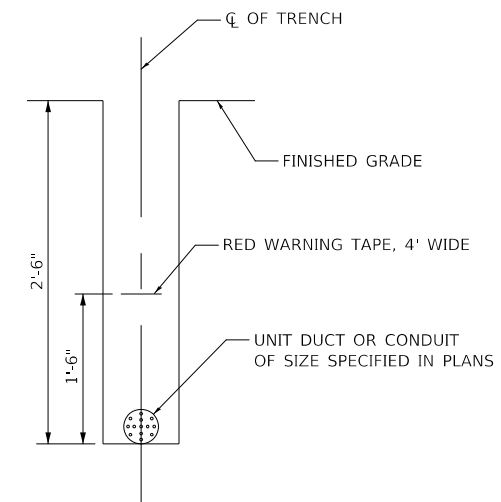
**NOTES**

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 4 IN. (100 mm) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 23#4\* (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

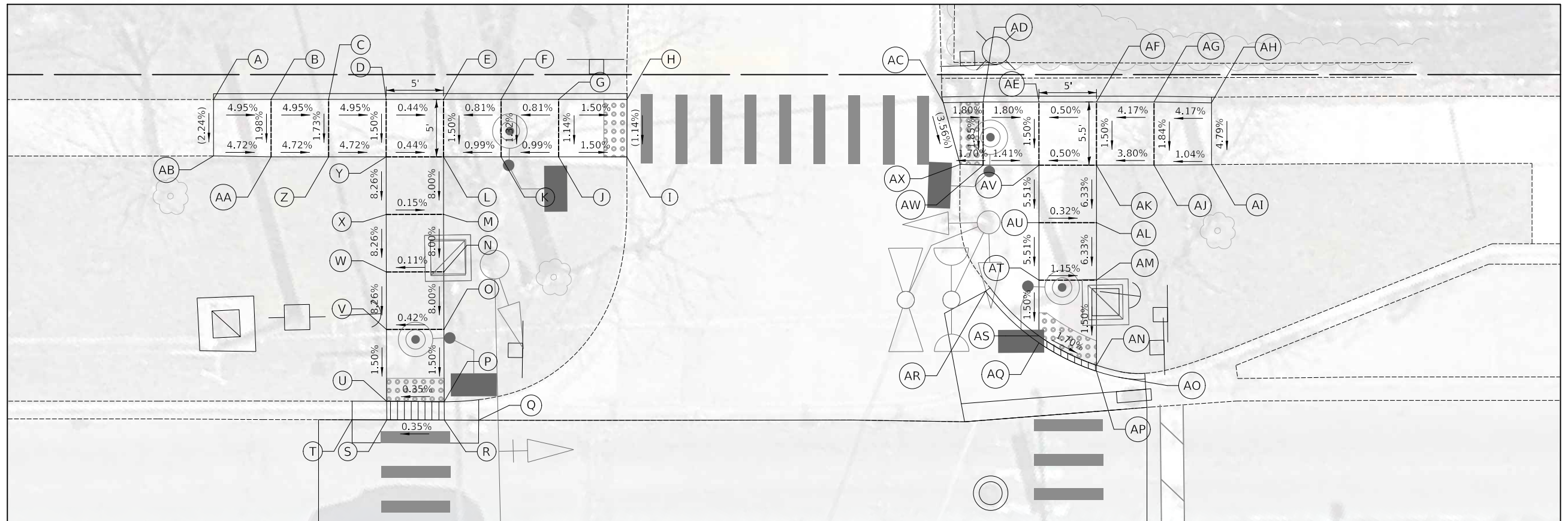


NOTE: NUMBER OF CABLES IN SPLICE MAY VARY

SPLICING ELECTRIC CABLES BASIC MATERIALS AND METHODS



TRENCH CROSS SECTION







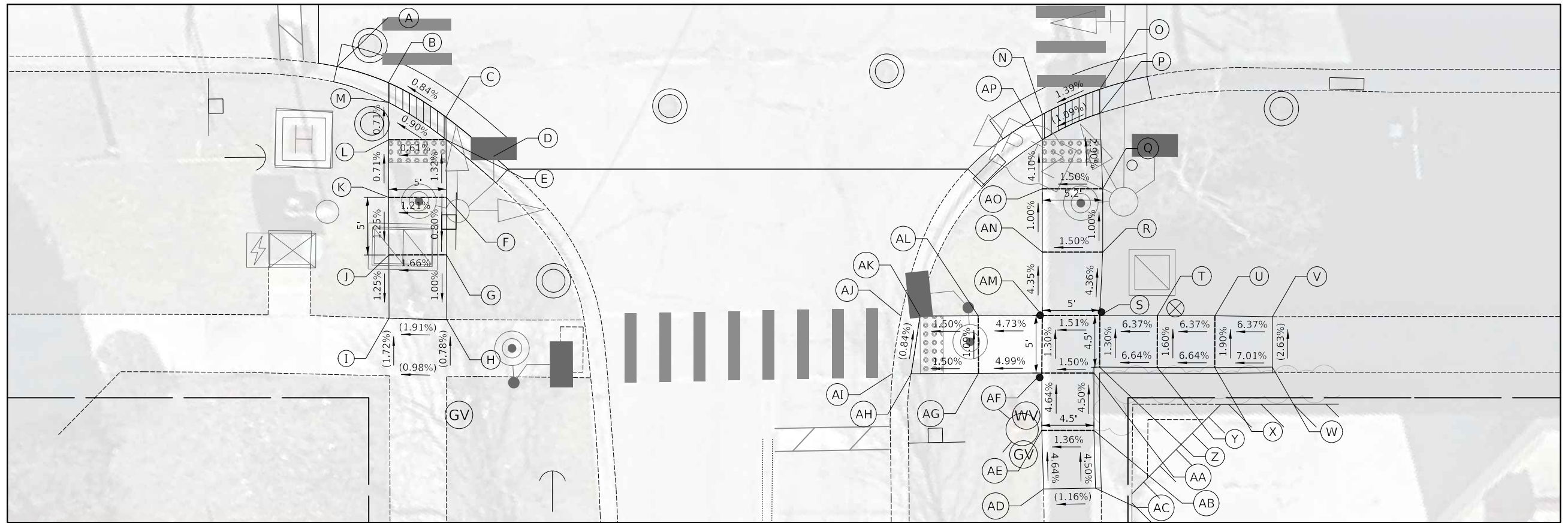
NORTH LEG CROSSWALK  
CENTRAL AVENUE AND HICKORY STREET

POINT	STATION	OFFSET	ELEVATION	TOP OF CURB ELEVATION
A	101+47.9	48.2' L	(656.27)	(656.27)
B	101+52.9	48.2' L	656.02	(656.22)
C	101+57.9	48.2' L	655.77	(656.16)
D	101+62.9	48.2' L	655.53	(656.11)
E	101+67.9	48.2' L	655.50	(655.99)
F	101+72.9	48.2' L	655.54	(655.84)
G	101+77.9	48.2' L	655.58	(655.68)
H	101+83.8	48.2' L	(655.50)	(655.50)
I	101+83.8	43.2' L	(655.44)	
J	101+77.9	43.2' L	655.53	
K	101+72.9	43.2' L	655.48	
L	101+67.9	43.2' L	655.43	
M	101+67.9	38.2' L	655.03	
N	101+67.9	33.2' L	654.63	
O	101+67.9	28.2' L	654.23	
P	101+67.9	21.9' L	654.13	
Q	101+70.9	20.3' L	654.07	
R	101+67.9	20.3' L	654.06	
S	101+62.9	20.3' L	654.04	
T	101+59.9	20.3' L	654.03	
U	101+62.9	21.9' L	654.12	
V	101+62.9	28.2' L	654.21	
W	101+62.9	33.2' L	654.62	
X	101+62.9	38.2' L	655.04	
Y	101+62.9	43.2' L	655.45	
Z	101+57.9	43.2' L	655.69	
AA	101+52.9	43.2' L	655.92	
AB	101+47.9	43.3' L	(656.16)	

POINT	STATION	OFFSET	ELEVATION	TOP OF CURB ELEVATION
AC	102+11.3	47.9' L	(655.70)	(655.72)
AD	102+14.8	48.0' L	655.63	(655.76)
AE	102+19.6	48.0' L	655.55	(655.82)
AF	102+24.6	48.0' L	655.57	(655.88)
AG	102+29.6	48.0' L	655.78	(655.93)
AH	102+34.6	47.9' L	(655.99)	(656.01)
AI	102+34.6	42.5' L	(655.73)	
AJ	102+29.6	42.5' L	655.68	
AK	102+24.6	42.5' L	655.49	
AL	102+24.6	37.5' L	655.17	
AM	102+24.6	32.5' L	654.86	
AN	102+24.6	25.1' L	654.75	
AO	102+26.6	24.0' L	(654.72)	
AP	102+24.6	24.5' L	654.76	
AQ	102+19.6	27.0' L	654.83	
AR	102+15.0	31.5' L	(655.11)	
AS	102+19.6	27.6' L	654.84	
AT	102+19.6	32.5' L	654.91	
AU	102+19.6	37.5' L	655.19	
AV	102+19.6	42.5' L	655.47	
AW	102+14.8	42.5' L	655.53	
AX	102+12.8	42.5' L	(655.50)	

**LEGEND**

-  PROPOSED SIDE CURB (PAID FOR AS PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH)
-  DETECTABLE WARNINGS (SPECIAL)
-  DEPRESSED CURB AND GUTTER
-  ( ) EXISTING ELEVATION / SLOPE







**SOUTH LEG CROSSWALK  
CENTRAL AVENUE AND HICKORY STREET**





POINT	STATION	OFFSET	ELEVATION	TOP OF CURB ELEVATION
A	101+58.6	20.9' R	(654.00)	
B	101+63.1	22.3' R	654.04	
C	101+68.1	25.3' R	654.08	
D	101+72.2	28.7' R	(654.13)	
E	101+68.1	27.2' R	654.17	
F	101+68.1	32.2' R	654.24	
G	101+68.1	37.2' R	654.20	
H	101+68.1	42.8' R	(654.14)	
I	101+63.1	42.7' R	(654.04)	
J	101+63.1	37.2' R	654.11	
K	101+63.1	32.2' R	654.17	
L	101+63.1	27.2' R	654.14	
M	101+63.1	24.0' R	654.12	

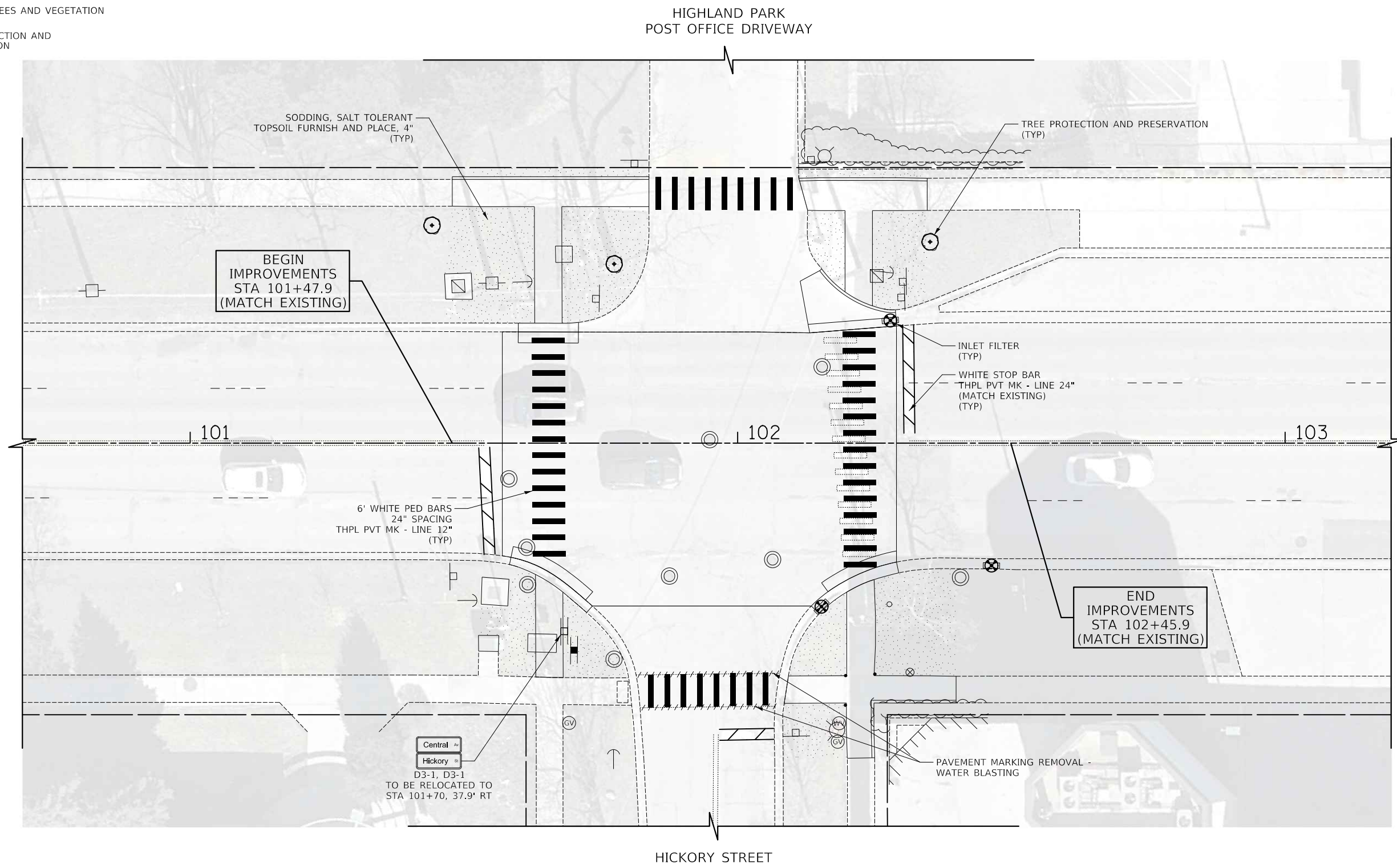
POINT	STATION	OFFSET	ELEVATION	TOP OF CURB ELEVATION
N	102+19.9	25.0' R	(654.45)	
O	102+24.9	22.8' R	(654.53)	
P	102+24.9	24.9' R	654.54	
Q	102+25.2	31.5' R	654.73	
R	102+25.2	37.0' R	654.78	
S	102+24.9	42.5' R	655.02	
T	102+29.9	42.5' R	655.34	
U	102+34.9	42.5' R	655.66	
V	102+39.9	42.6' R	(655.98)	
W	102+39.9	47.0' R	(656.10)	(656.11)
X	102+34.9	47.0' R	655.75	(655.94)
Y	102+29.9	47.0' R	655.42	(655.73)
Z	102+24.9	47.0' R	655.08	(655.52)
AA	102+24.4	47.5' R	655.08	(655.52)
AB	102+24.4	52.5' R	655.31	(655.51)
AC	102+24.5	57.5' R	(655.53)	(655.54)
AD	102+20.0	57.6' R	(655.48)	
AE	102+19.9	52.5' R	655.25	
AF	102+19.9	47.5' R	655.01	
AG	102+14.4	47.5' R	654.74	
AH	102+08.5	47.5' R	(654.65)	
AI	102+06.9	47.5' R	(654.59)	
AJ	102+07.6	42.5' R	(654.54)	
AK	102+09.3	42.5' R	(654.61)	
AL	102+14.3	42.5' R	654.69	
AM	102+19.9	42.5' R	654.95	
AN	102+19.9	37.0' R	654.71	
AO	102+19.9	31.5' R	654.65	
AP	102+19.9	27.2' R	654.48	

**LEGEND**

-  PROPOSED SIDE CURB (PAID FOR AS PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH)
-  DETECTABLE WARNINGS (SPECIAL)
-  DEPRESSED CURB AND GUTTER
-  ( ) EXISTING ELEVATION / SLOPE

**LEGEND**

-  SODDING, SALT TOLERANT TOPSOIL FURNISH AND PLACE, 4"
-  INLET FILTER
-  EXISTING TREES AND VEGETATION
-  TREE PROTECTION AND PRESERVATION



BEGIN  
IMPROVEMENTS  
STA 101+47.9  
(MATCH EXISTING)

END  
IMPROVEMENTS  
STA 102+45.9  
(MATCH EXISTING)

6" WHITE PED BARS  
24" SPACING  
THPL PVT MK - LINE 12"  
(TYP)

INLET FILTER  
(TYP)  
WHITE STOP BAR  
THPL PVT MK - LINE 24"  
(MATCH EXISTING)  
(TYP)

Central Av  
Hickory St  
D3-1, D3-1  
TO BE RELOCATED TO  
STA 101+70, 37.9' RT

PAVEMENT MARKING REMOVAL -  
WATER BLASTING

# TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
CONTROLLER CABINET			HANDHOLE -SQUARE -ROUND			SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD		
COMMUNICATION CABINET			HEAVY DUTY HANDHOLE -SQUARE -ROUND			SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		
MASTER CONTROLLER			DOUBLE HANDHOLE			PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
MASTER MASTER CONTROLLER			JUNCTION BOX			PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
UNINTERRUPTABLE POWER SUPPLY			RAILROAD CANTILEVER MAST ARM			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
SERVICE INSTALLATION -(P) POLE MOUNTED			RAILROAD FLASHING SIGNAL			NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED		
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED			RAILROAD CROSSING GATE			GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)		
TELEPHONE CONNECTION			RAILROAD CROSSBUCK			ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
STEEL MAST ARM ASSEMBLY AND POLE			RAILROAD CONTROLLER CABINET			COAXIAL CABLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL			VENDOR CABLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY			SYSTEM ITEM			FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		
WOOD POLE			INTERSECTION ITEM			GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE		
GUY WIRE			REMOVE ITEM					
SIGNAL HEAD			RELOCATE ITEM					
SIGNAL HEAD WITH BACKPLATE			ABANDON ITEM					
SIGNAL HEAD OPTICALLY PROGRAMMED			CONTROLLER CABINET AND FOUNDATION TO BE REMOVED					
FLASHER INSTALLATION -(FS) SOLAR POWERED			MAST ARM POLE AND FOUNDATION TO BE REMOVED					
PEDESTRIAN SIGNAL HEAD			SIGNAL POST AND FOUNDATION TO BE REMOVED					
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			DETECTOR LOOP, TYPE I					
RADAR DETECTION SENSOR			PREFORMED DETECTOR LOOP					
VIDEO DETECTION CAMERA			SAMPLING (SYSTEM) DETECTOR					
RADAR/VIDEO DETECTION ZONE			INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
PAN, TILT, ZOOM (PTZ) CAMERA			QUEUE AND SAMPLING (SYSTEM) DETECTOR					
EMERGENCY VEHICLE LIGHT DETECTOR			WIRELESS DETECTOR SENSOR					
CONFIRMATION BEACON			WIRELESS ACCESS POINT					
WIRELESS INTERCONNECT								
WIRELESS INTERCONNECT RADIO REPEATER								

MODEL: D:\inf\...  
 FILE NAME: ...  
 PROJECT: ...  
 DATE: ...

USER NAME	DESIGNED - IP	REVISED -
DESIGNED - IP	DRAWN - IP	REVISED -
CHECKED - LP	DATE - 9/29/2016	REVISED -
PLOT SCALE - 50,0000' / in.		
PLOT DATE - 3/4/2019		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DISTRICT ONE</b>			
<b>STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			
SCALE: NONE	SHEET 1	OF 7 SHEETS	STA. TO STA.

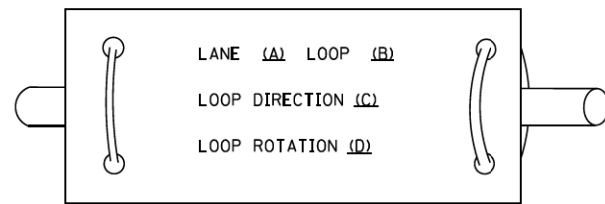
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	16
<b>TS-05</b>		CONTRACT NO. 61J82		
ILLINOIS   FED. AID PROJECT				



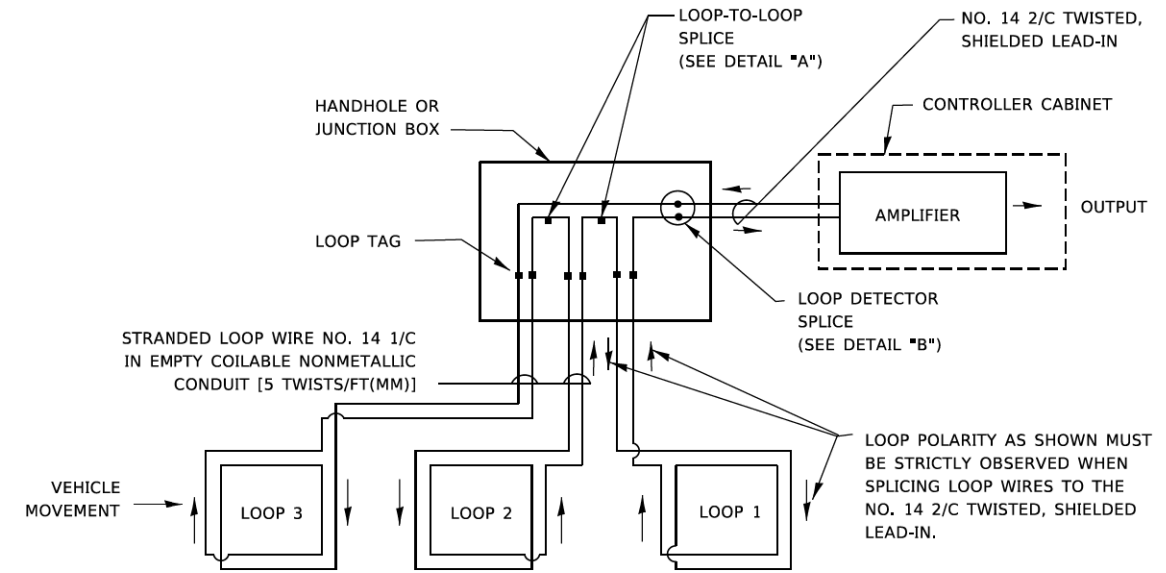
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

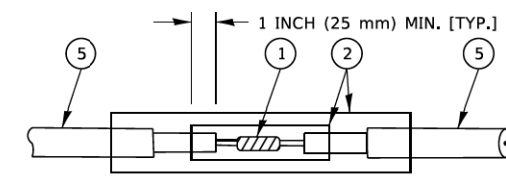


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

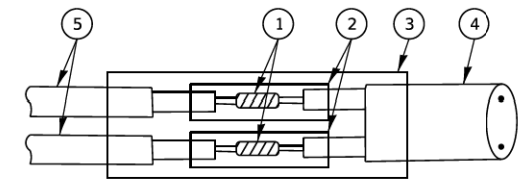


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES. SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm), IF IN CONCRETE,
- THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

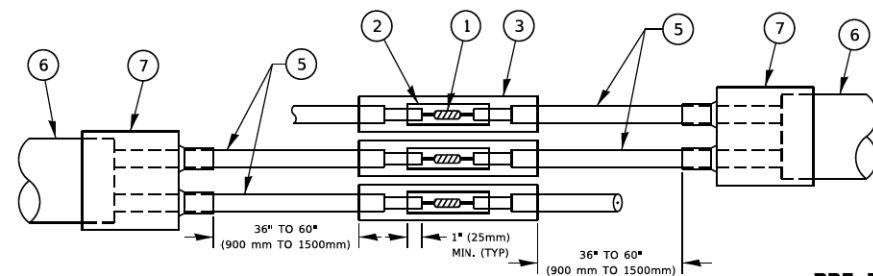


**DETAIL "A"**  
LOOP-TO-LOOP SPLICE

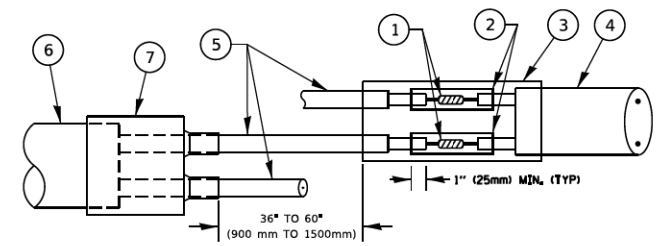


**DETAIL "B"**  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



**DETAIL "A"**  
LOOP-TO-LOOP SPLICE



**DETAIL "B"**  
LOOP-TO-CONTROLLER SPLICE

**PREFORMED LOOP**

**LOOP DETECTOR SPLICE**

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED CABLE.
- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PREFORMED LOOP
- ⑥ XL POLYOLEFIN 2 CONDUCTOR
- ⑦ BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

STATE OF ILLINOIS  
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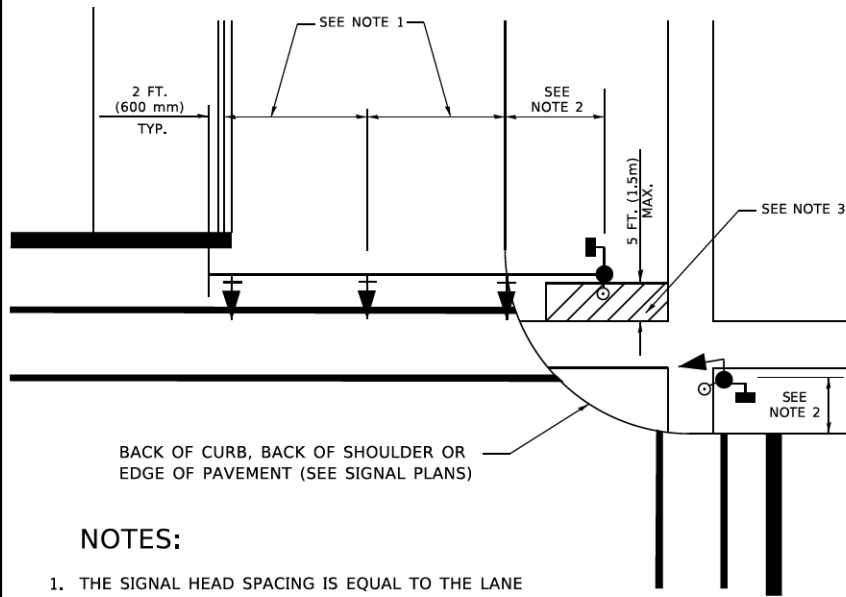
DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

F.A.U. RTE. 1256	SECTION 21-00142-00-TL	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 17
TS-05		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				

SCALE: NONE SHEET 2 OF 7 SHEETS STA. TO STA.

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

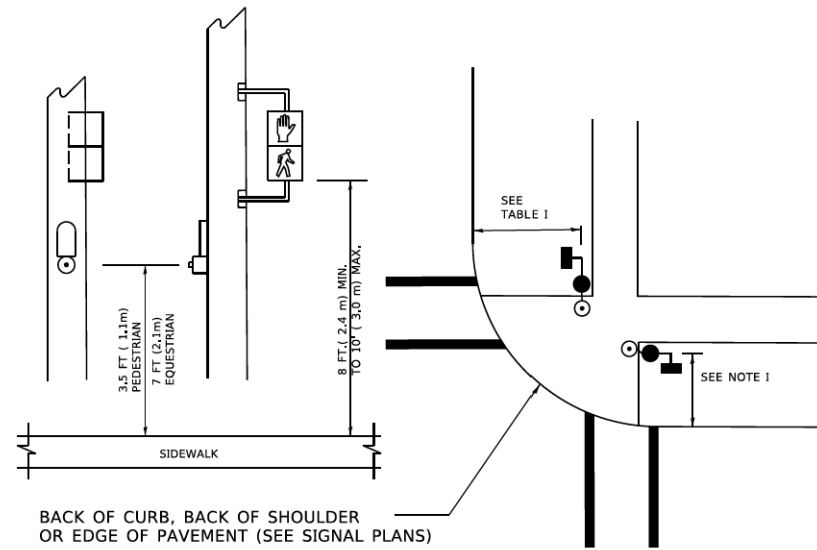
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

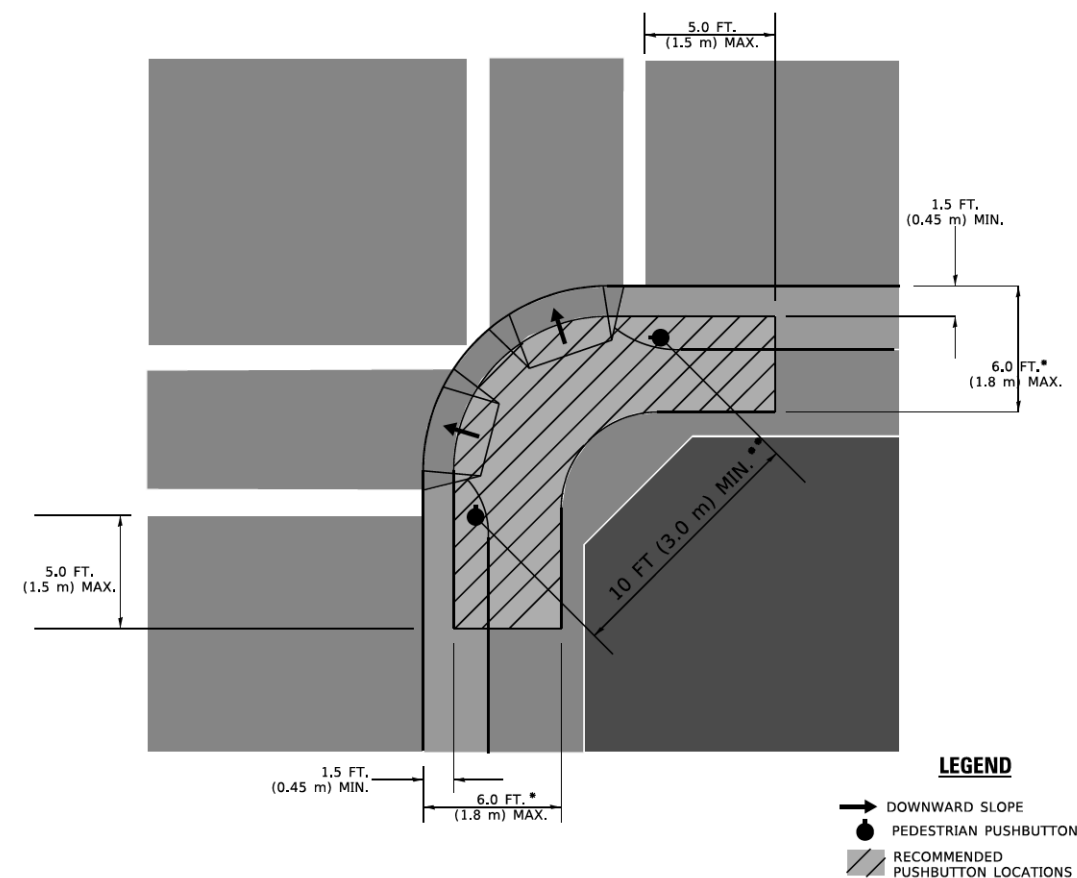
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



**LEGEND**

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT ( 1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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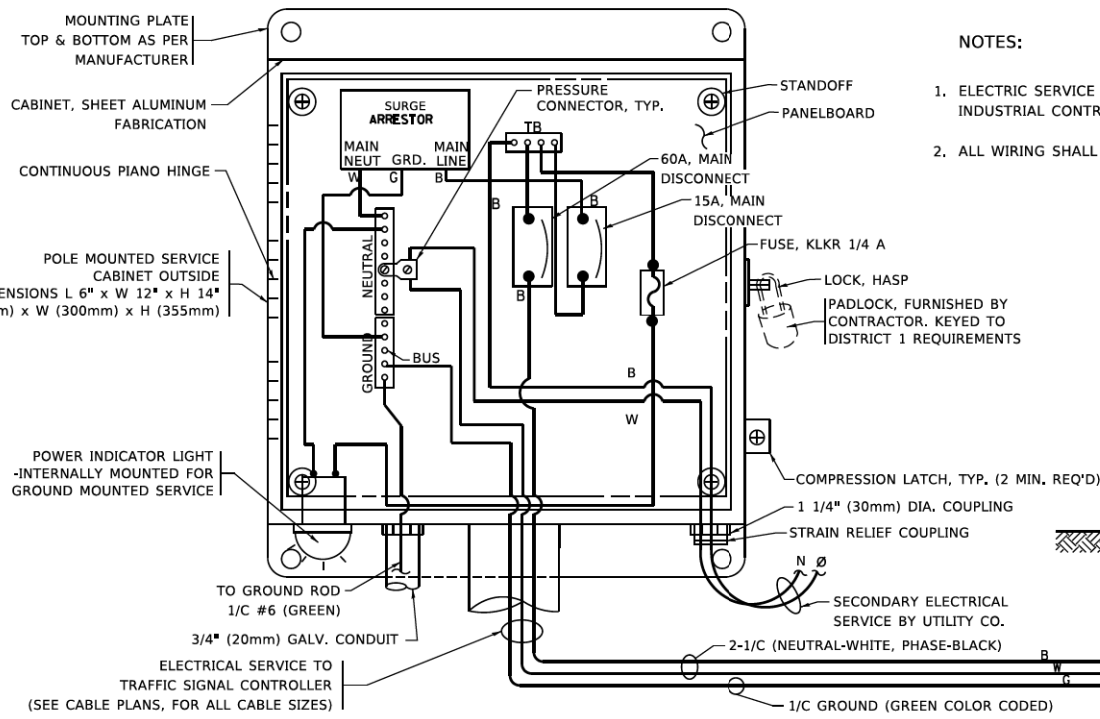
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

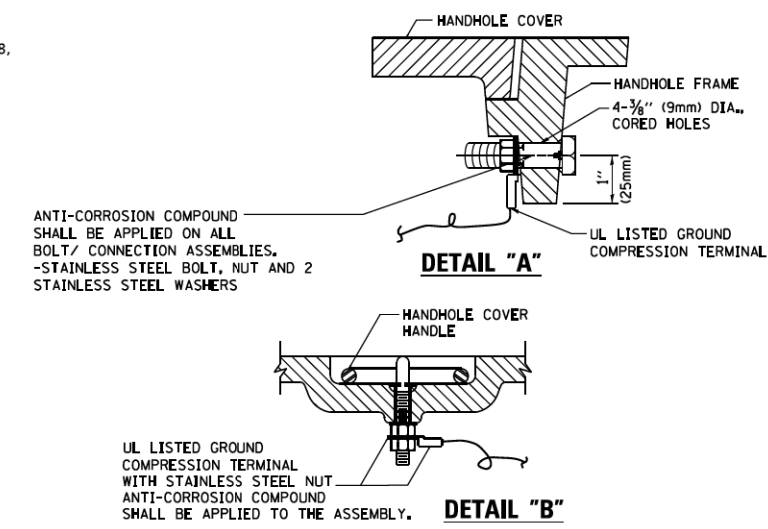
**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	18
<b>TS-05</b>		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				

SCALE: NONE SHEET 3 OF 7 SHEETS STA. TO STA.

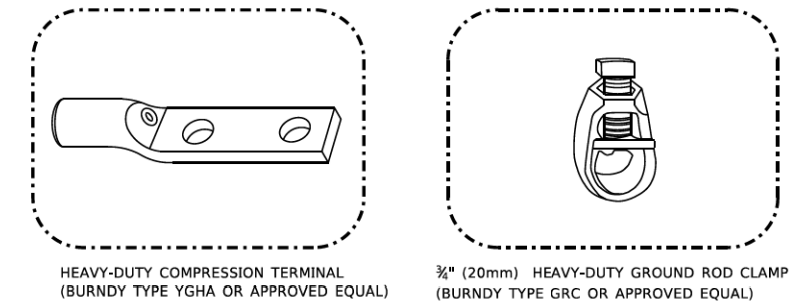


**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



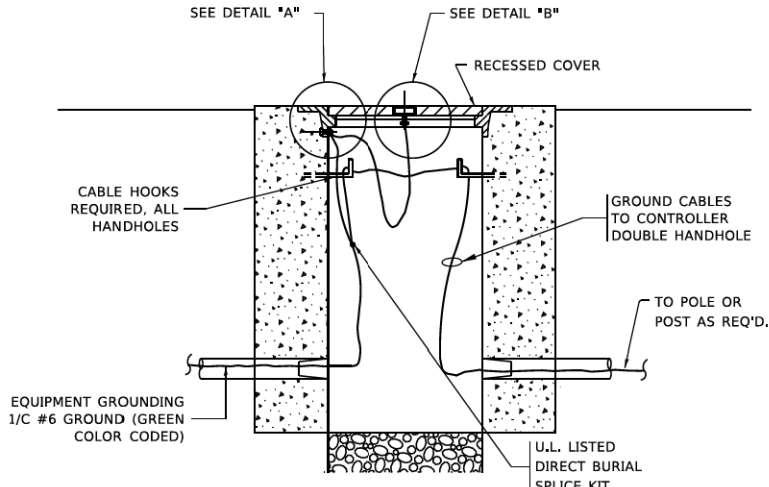
**NOTES:**  
**GROUNDING SYSTEM**

- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
- THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



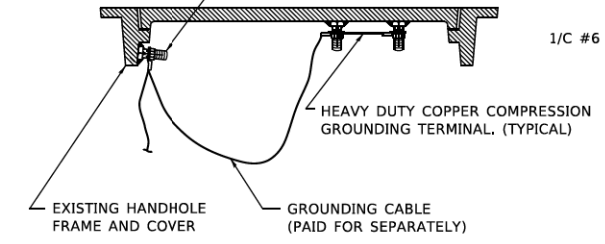
**NOTES:**

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

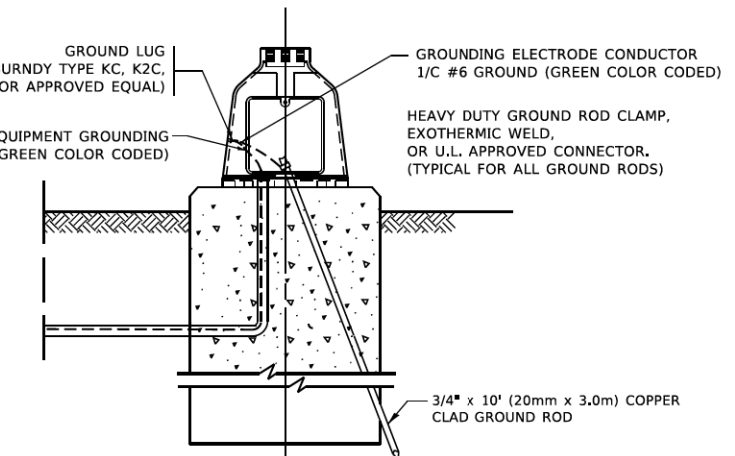


**HANDHOLE COVER & FRAME – GROUNDING DETAIL**  
 (NOT TO SCALE)

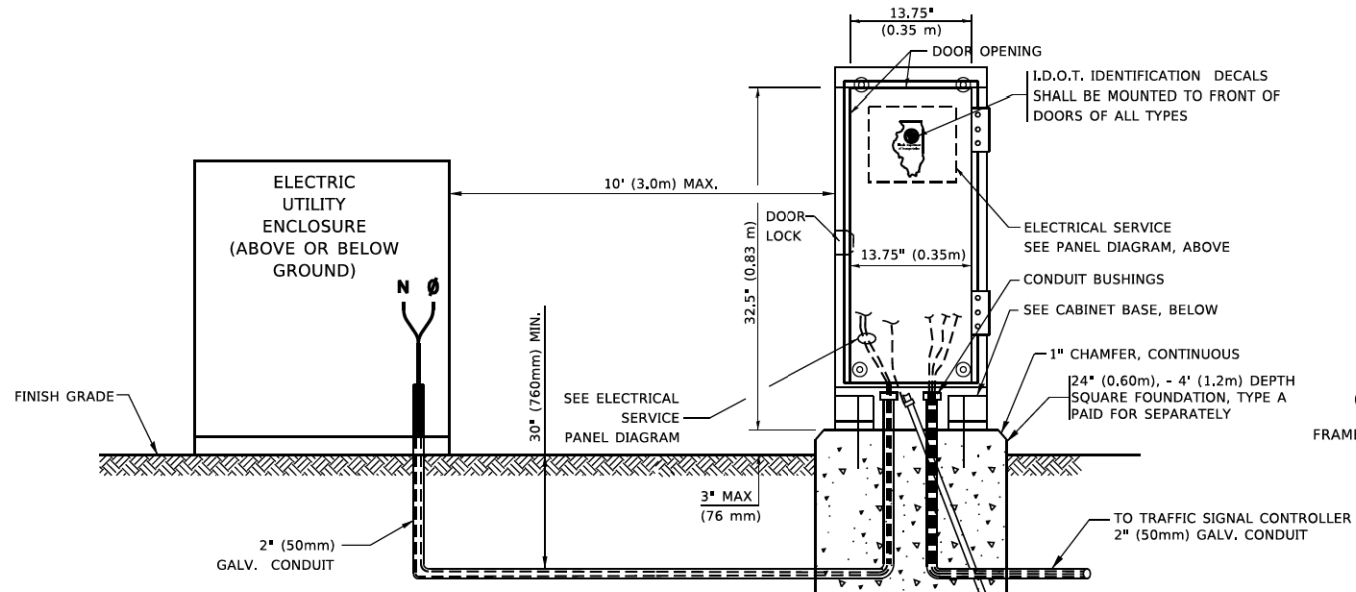
(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL). ANTI-CORROSION COMPOUND SHALL BE APPLIED TO EACH ASSEMBLY.



**EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL**  
 (NOT TO SCALE)

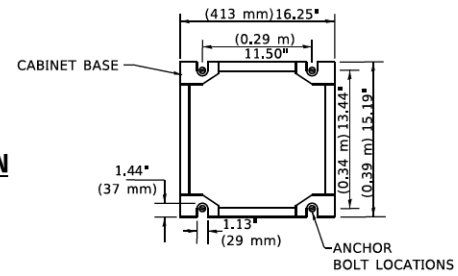


**MAST ARM POLE /POST-GROUNDING DETAIL**  
 (NOT TO SCALE)



**SERVICE INSTALLATION GROUND MOUNT**  
 (NOT TO SCALE)

**CABINET – BASE BOLT PATTERN**  
 (NOT TO SCALE)



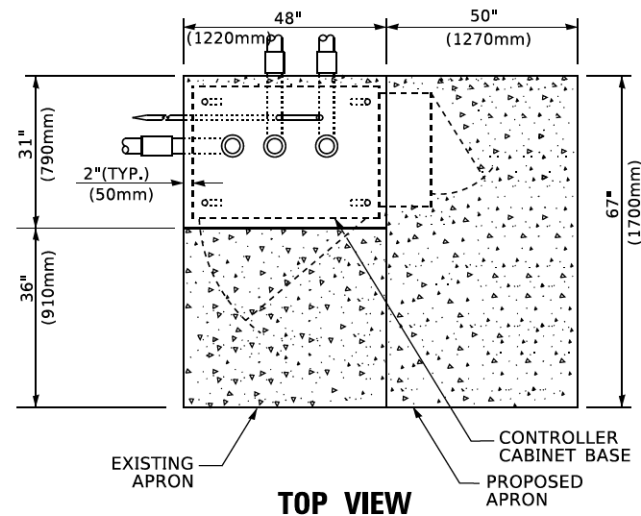
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

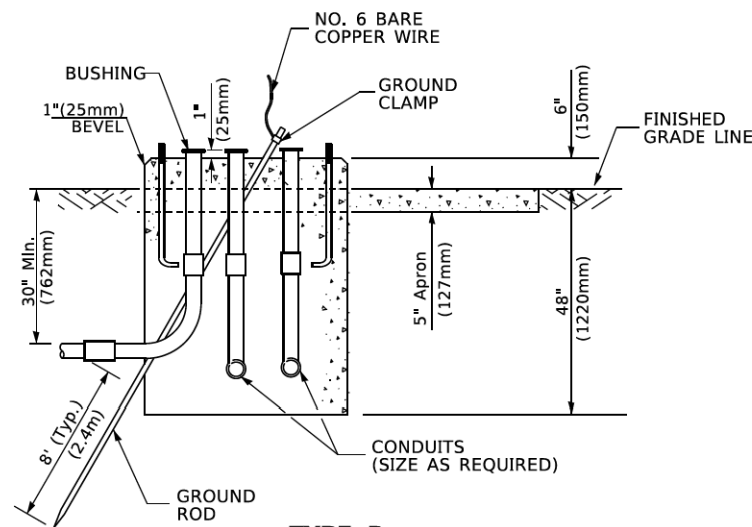
SCALE: NONE SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.U. RTE. 1256	SECTION 21-00142-00-TL	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 19
TS-05		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				

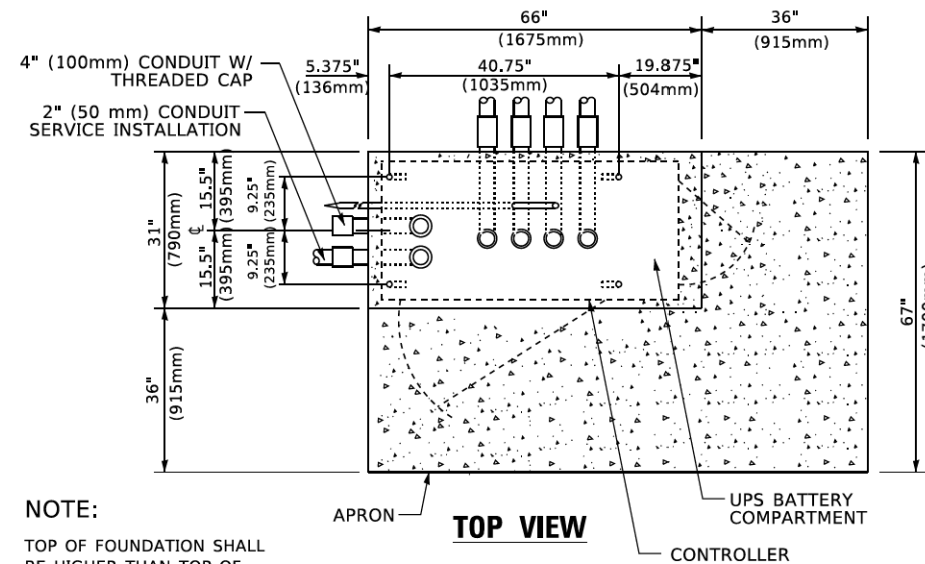
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**TOP VIEW**

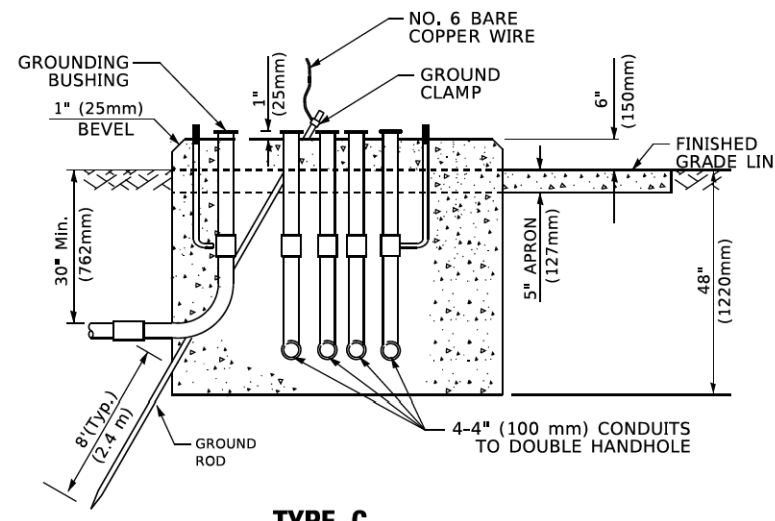


**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**

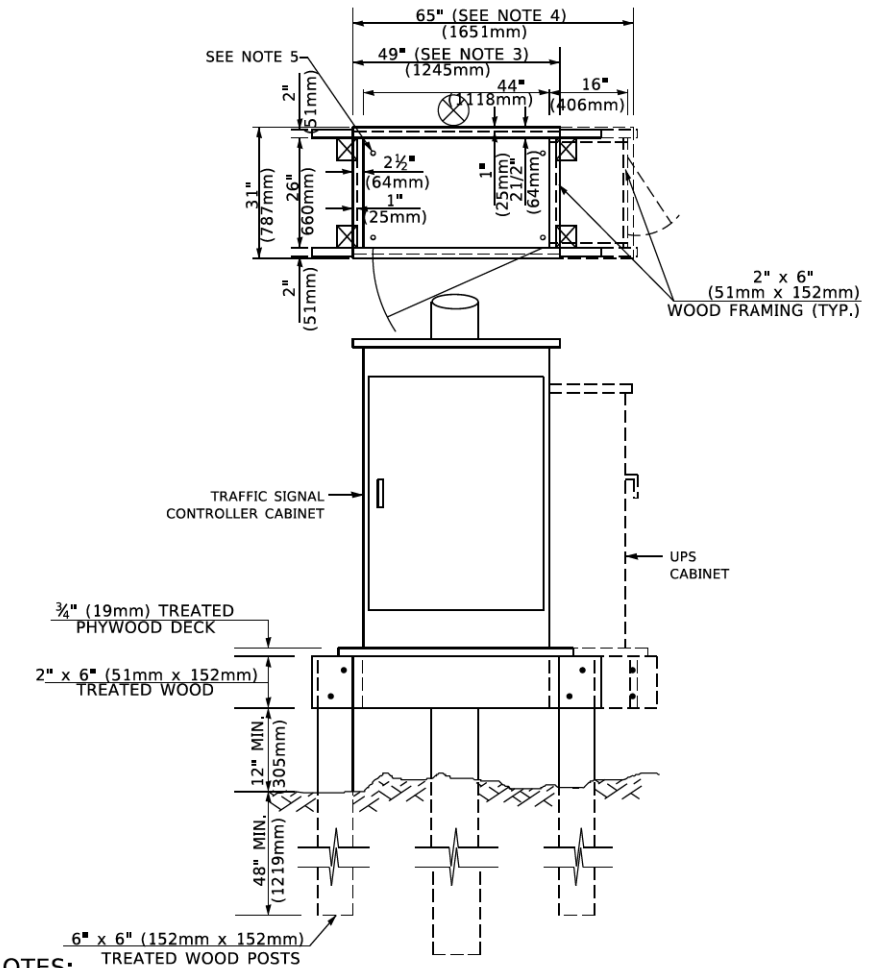


**TOP VIEW**

**NOTE:**  
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C  
FOR GROUND MOUNTED  
SUPER P (TYPE IV) AND SUPER R (TYPE V)  
CONTROLLER CABINETS**



**NOTES:**

- BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

**CABLE SLACK**

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD)		
(L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

**VERTICAL CABLE LENGTH**

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

**DEPTH OF FOUNDATION**

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 56' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

**NOTES:**

- These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
- Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
- For mast arm assemblies with dual arms refer to state standard 878001..

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**

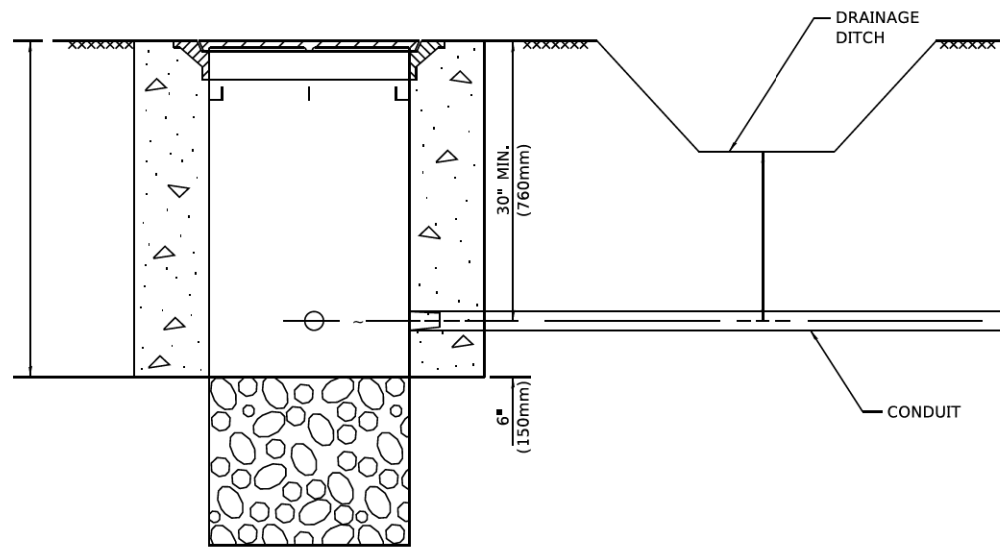
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 FILE NAME: ...  
 PROJECT: ...  
 DATE: 3/4/2019

USER NAME - [footem]	DESIGNED -	REVISED -
PLOT SCALE - 50,0000' / in.	DRAWN -	REVISED -
PLOT DATE - 3/4/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DISTRICT ONE</b>	
<b>STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>	
SCALE: NONE	SHEET 5 OF 7 SHEETS
STA. TO STA.	

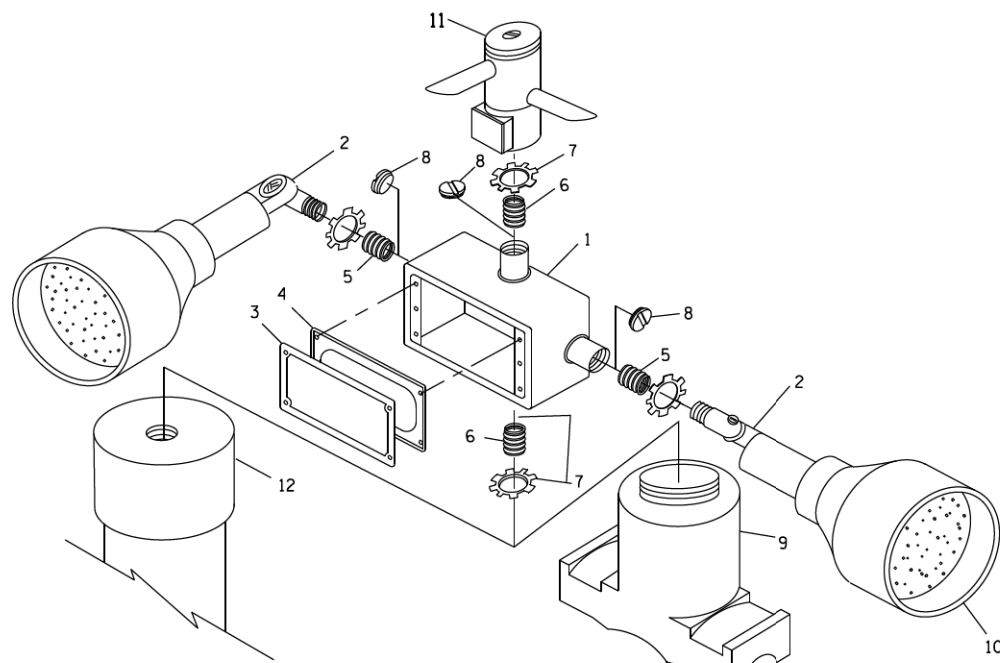
F.A.U. RTE. 1256	SECTION 21-00142-00-TL	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 20
<b>TS-05</b>		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				



**NOTES:**

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

**HANDHOLE WITH MINIMUM CONDUIT DEPTH**  
(NOT TO SCALE)

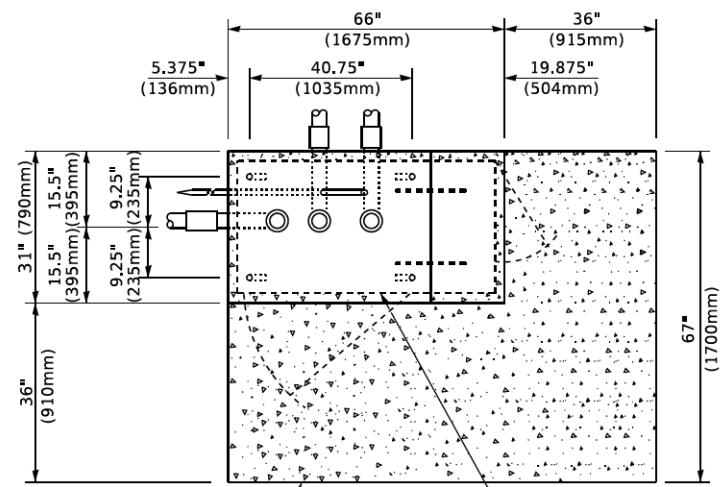


**POST CAP MOUNT**      **MAST ARM MOUNT**  
**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION**  
**BEACON MOUNTING DETAIL**

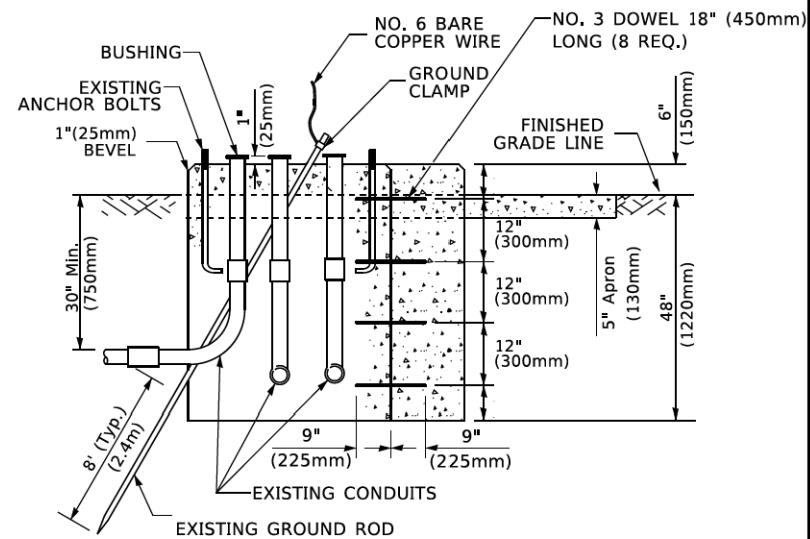
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

**NOTES:**

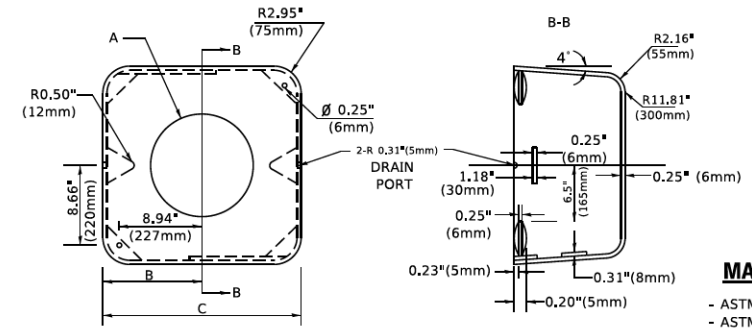
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



**TOP VIEW**  
(NOT TO SCALE)



**MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION**  
(NOT TO SCALE)



**MATERIAL**  
- ASTM A36 STEEL  
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

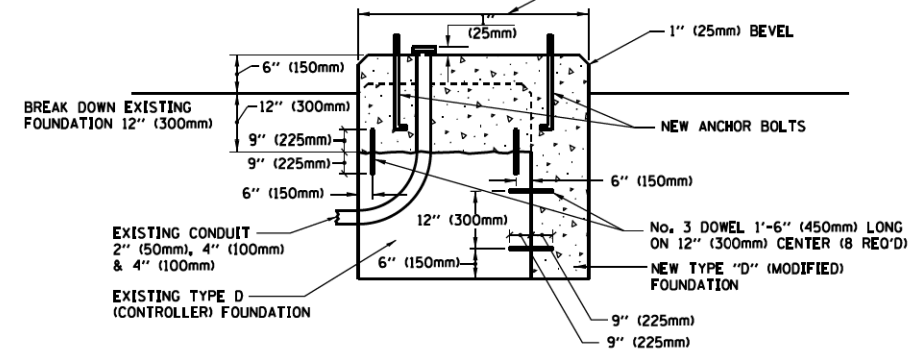
**SHROUD**

**NOTES:**

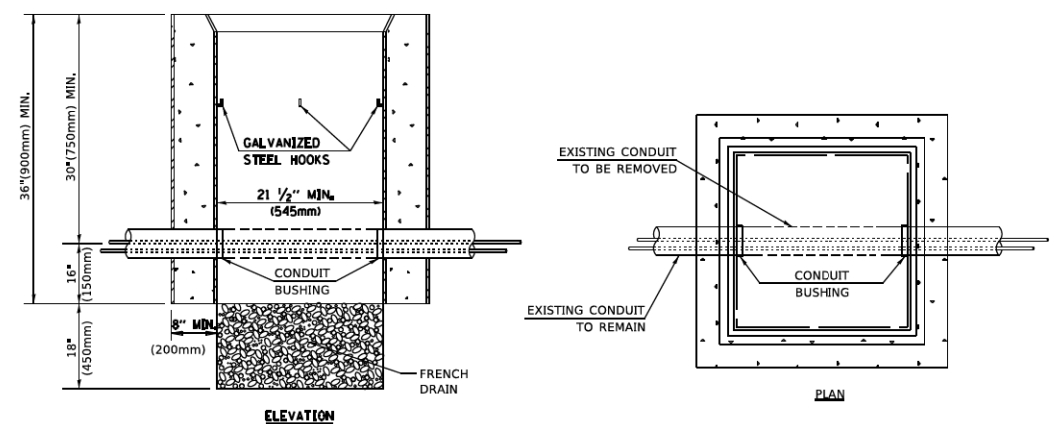
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

**NOTE:**

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



**MODIFY EXISTING TYPE "D" FOUNDATION**



**NOTES:**

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

**HANDHOLE TO INTERCEPT EXISTING CONDUIT**

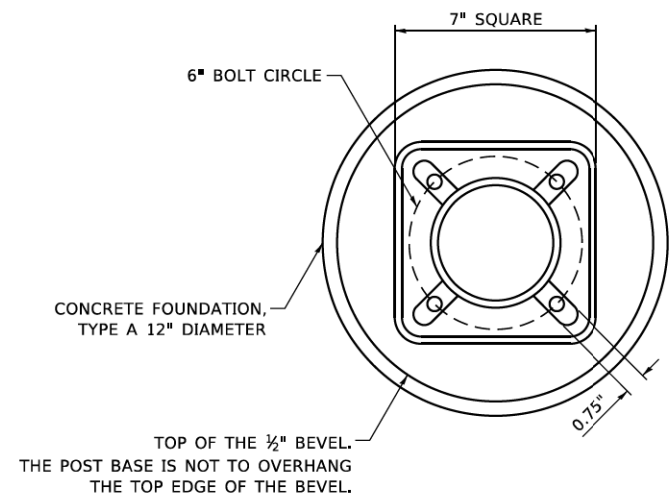
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 FILE NAME: ...  
 PROJECT: ...  
 DATE: 3/4/2019

USER NAME	DESIGNED	REVISED
footemf	-	-
	DRAWN	REVISED
	CHECKED	REVISED
	DATE	REVISED

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

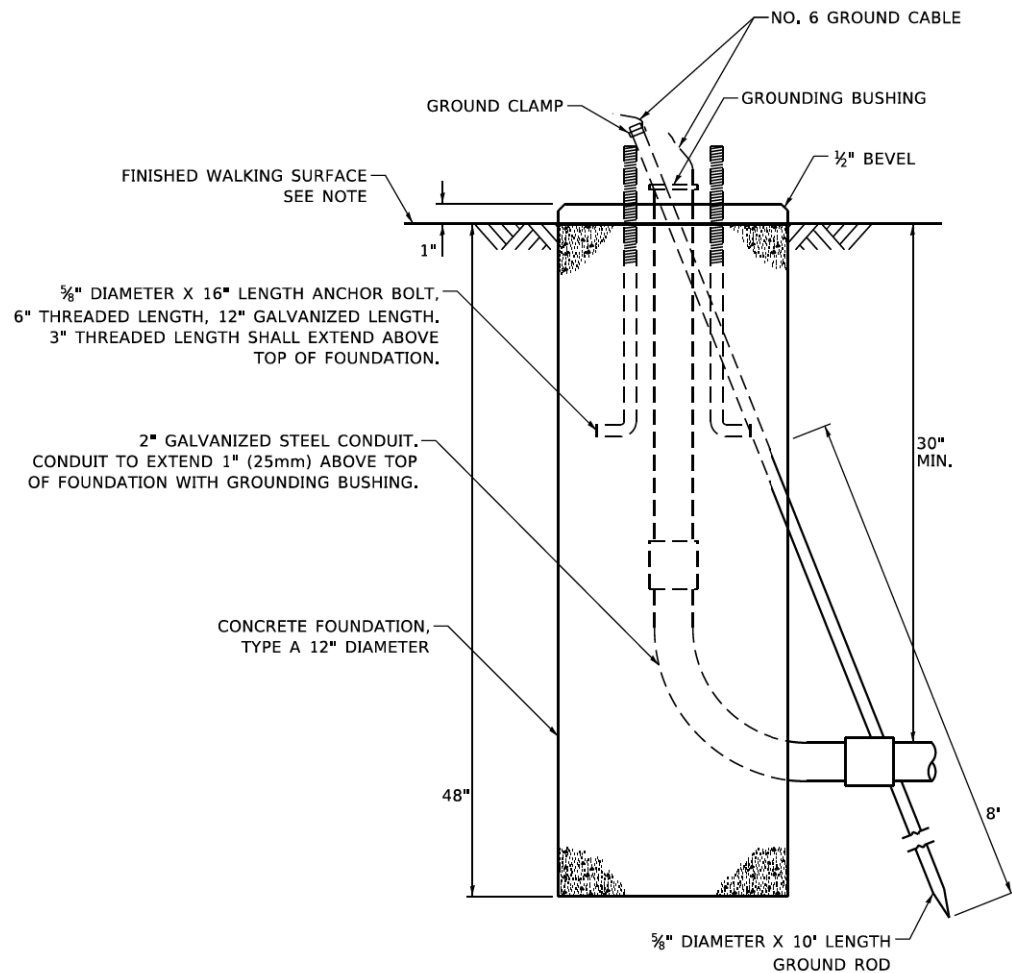
**DISTRICT ONE**  
**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**  
SCALE: NONE    SHEET 6 OF 7 SHEETS    STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	21
<b>TS-05</b>		CONTRACT NO.	61J82	
ILLINOIS / FED. AID PROJECT				

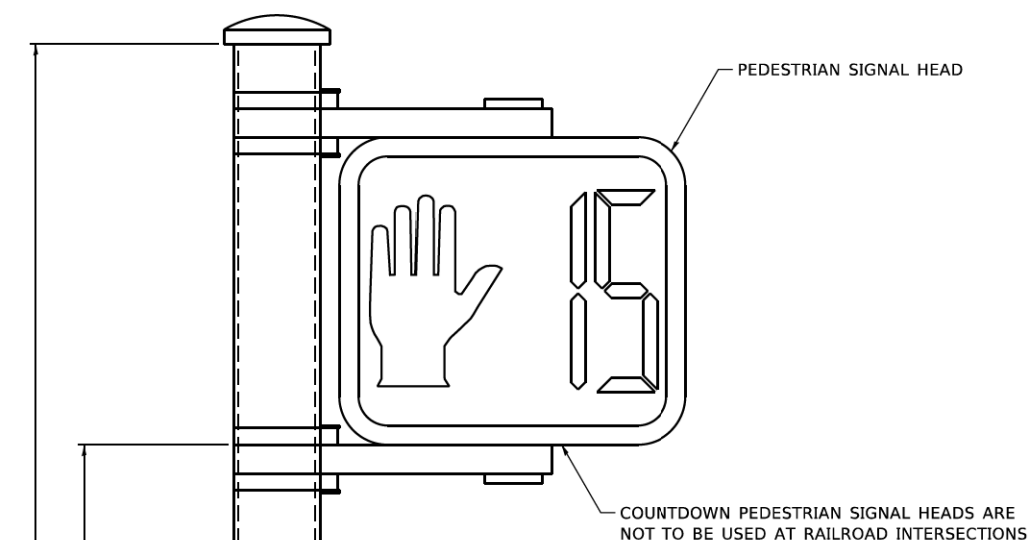


**BOLT PATTERN**

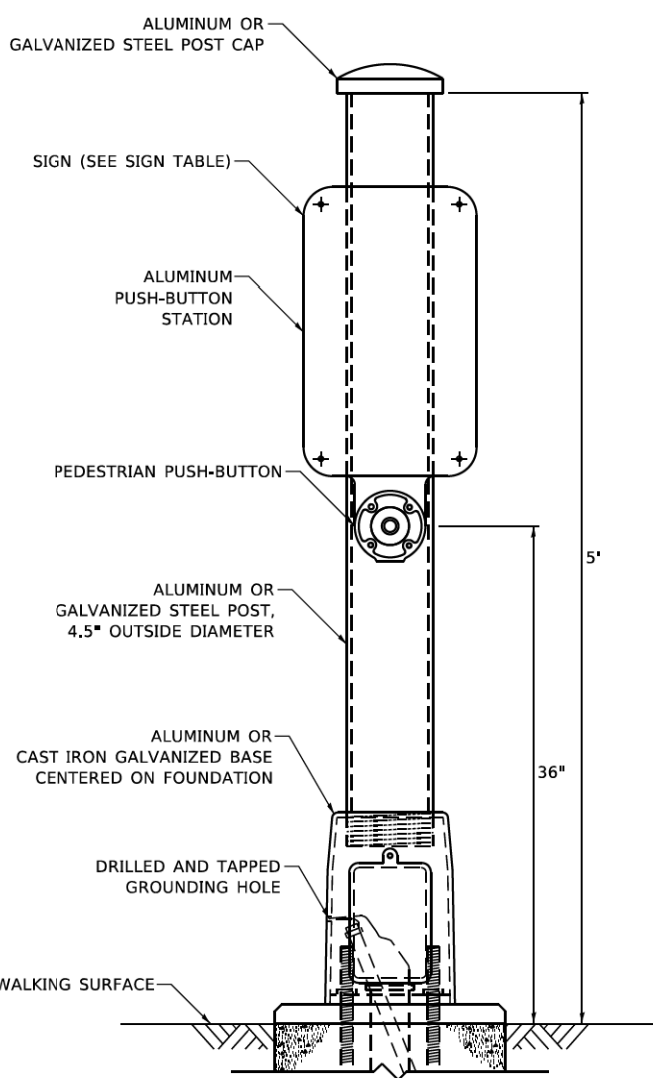
NOTE:  
 1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



**CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER**



**PEDESTRIAN SIGNAL POST, 10 FT.**



**PEDESTRIAN SIGNAL POST, 5 FT.**



**SIGN TABLE**

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 15"

NOTES:  
 1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.  
 2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.  
 3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

MODEL: Default  
 FILE: Model: 3000PedestrianPostPedestrianSignalPost\_WorkingFile.dwg-10/15/2020

USER NAME = plasenciai	DESIGNED - IP	REVISED - 10/15/2020
PLOT SCALE = 100,0000' / in.	DRAWN - IP	REVISED -
PLOT DATE = 11/17/2020	CHECKED - LP	REVISED -
	DATE - 10/15/2018	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NTS    SHEET NO. 7 OF 7 SHEETS    STA.    TO STA.

F.A.U. RTE. 1256	SECTION 21-00142-00-TL	COUNTY LAKE	TOTAL SHEETS 34	SHEET NO. 22
TS-05		CONTRACT NO. 61J82		
ILLINOIS   FED. AID PROJECT				



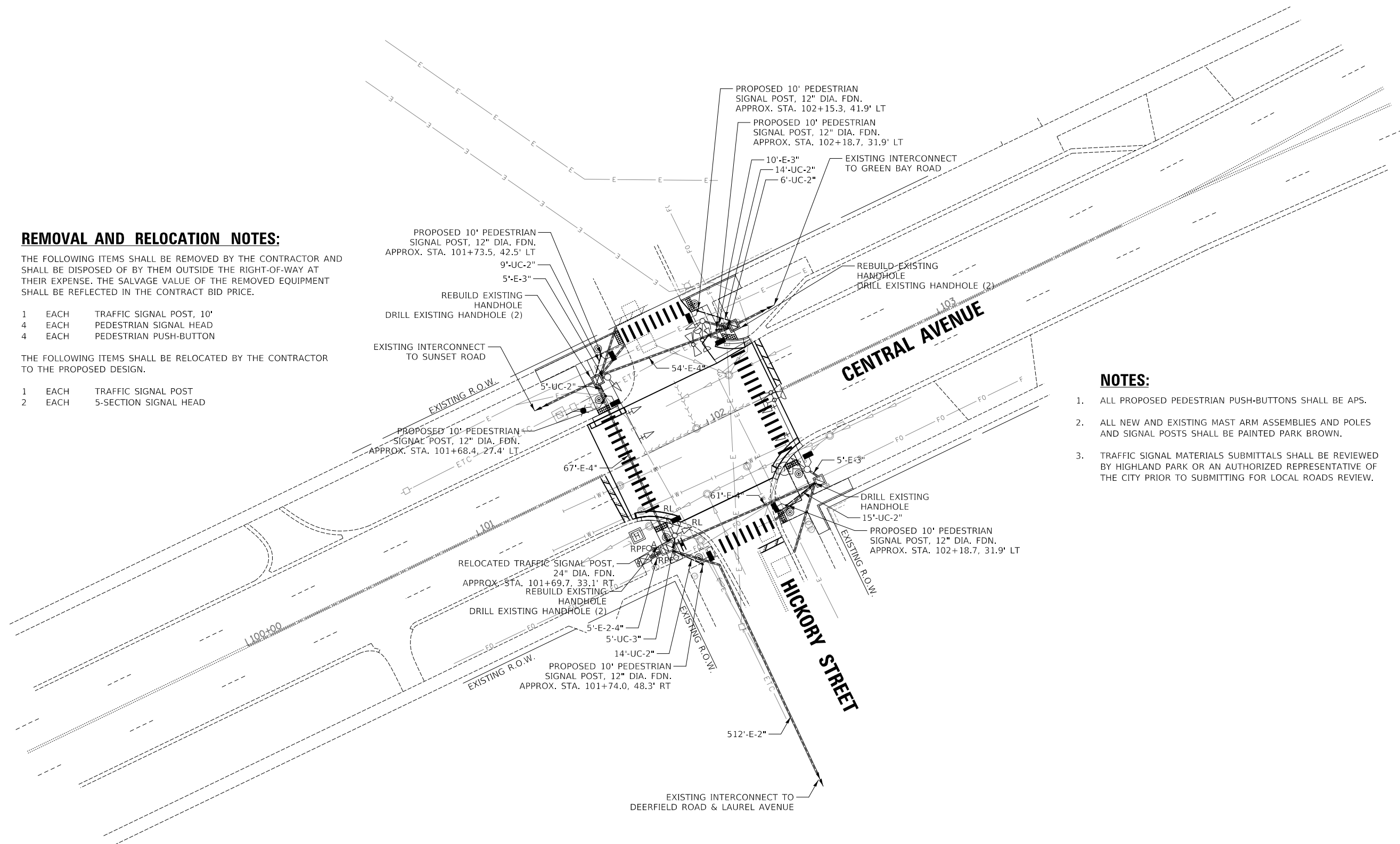
**REMOVAL AND RELOCATION NOTES:**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH TRAFFIC SIGNAL POST, 10'
- 4 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

THE FOLLOWING ITEMS SHALL BE RELOCATED BY THE CONTRACTOR TO THE PROPOSED DESIGN.

- 1 EACH TRAFFIC SIGNAL POST
- 2 EACH 5-SECTION SIGNAL HEAD



**NOTES:**

1. ALL PROPOSED PEDESTRIAN PUSH-BUTTONS SHALL BE APS.
2. ALL NEW AND EXISTING MAST ARM ASSEMBLIES AND POLES AND SIGNAL POSTS SHALL BE PAINTED PARK BROWN.
3. TRAFFIC SIGNAL MATERIALS SUBMITTALS SHALL BE REVIEWED BY HIGHLAND PARK OR AN AUTHORIZED REPRESENTATIVE OF THE CITY PRIOR TO SUBMITTING FOR LOCAL ROADS REVIEW.

Two Pierce Place, Suite 1400  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - PK	REVISED - 10/25/2023
DRAWN - LEP	REVISED -
CHECKED - JJE	REVISED -
DATE - 8/4/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**



**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT  
TRAFFIC SIGNAL MODIFICATION PLAN**

SHEET OF SHEETS STA. TO STA.

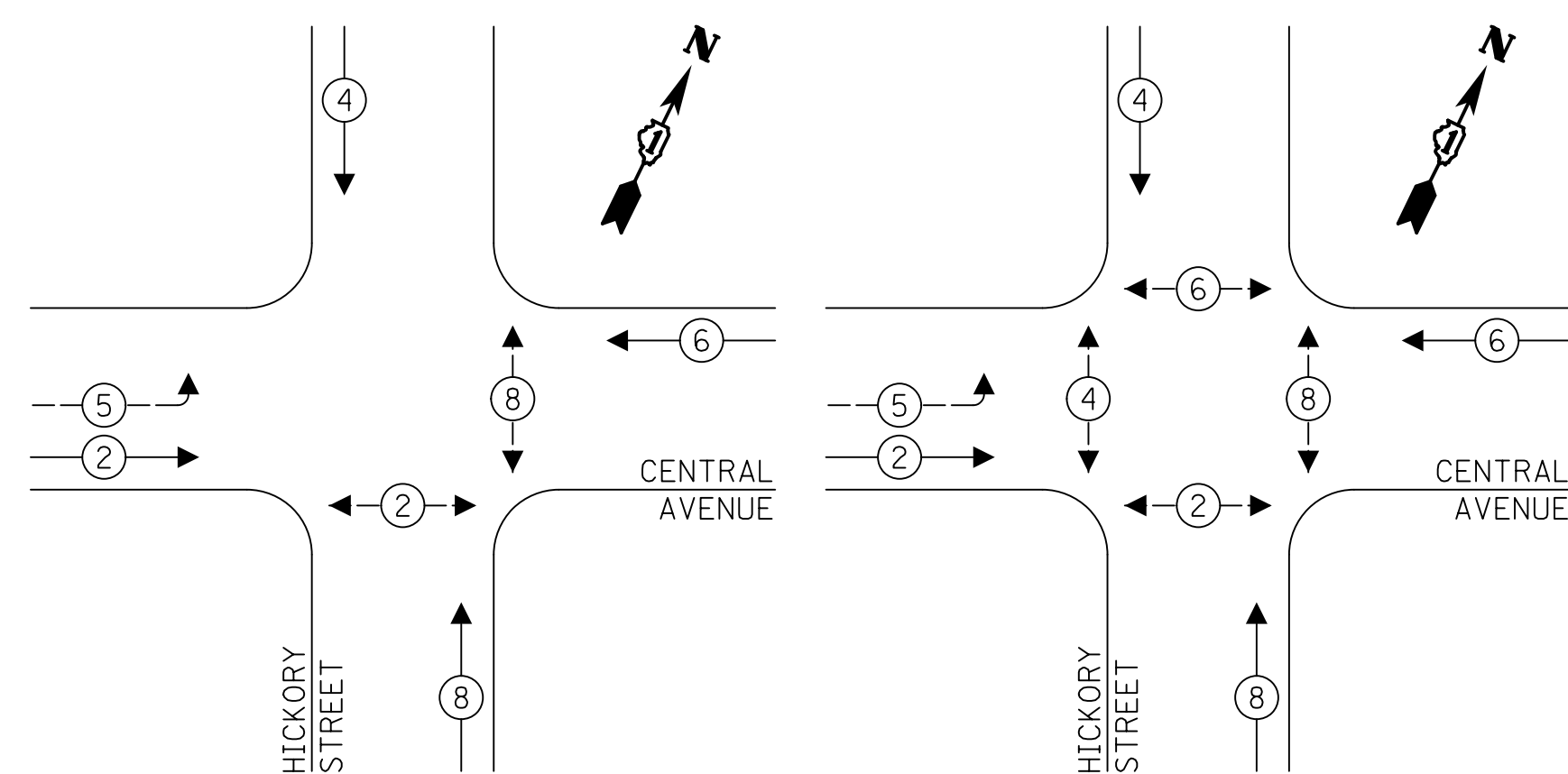
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	23
CONTRACT NO. 61J82				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**EXISTING CONTROLLER SEQUENCE**

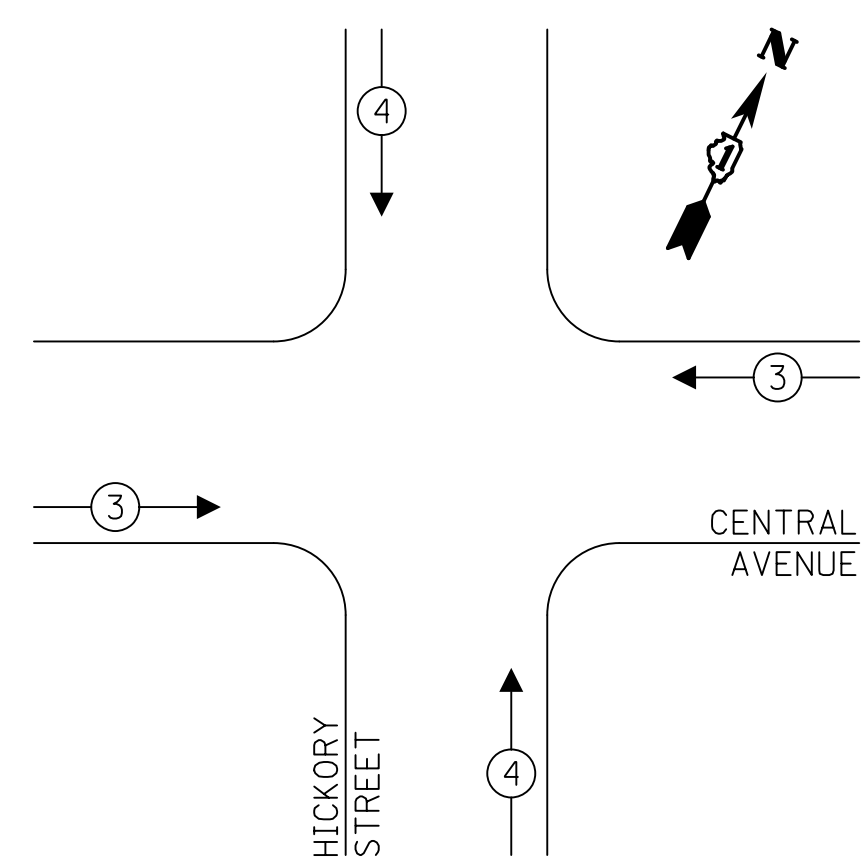
**PROPOSED CONTROLLER SEQUENCE**

**LEGEND:**

- ← ⊙ ← PROTECTED PHASE
- ← ⊙ → PROTECTED/PERMITTED PHASE
- ← ⊙ → PEDESTRIAN PHASE
- ← ⊙ → OL OVERLAP



**PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**SCHEDULE OF QUANTITIES**

PAY ITEM	UNIT	QNTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	63
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	785
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	834
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	110
CONCRETE FOUNDATION, TYPE A	FOOT	4
DRILL EXISTING HANDHOLE	EACH	7
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
RELOCATE EXISTING SIGNAL HEAD	EACH	2
RELOCATE EXISTING TRAFFIC SIGNAL POST	EACH	1
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	665
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	46
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REBUILD EXISTING HANDHOLE	EACH	3
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
PEDESTRIAN SIGNAL POST, 10 FT.	EACH	6
ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER	FOOT	24
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1

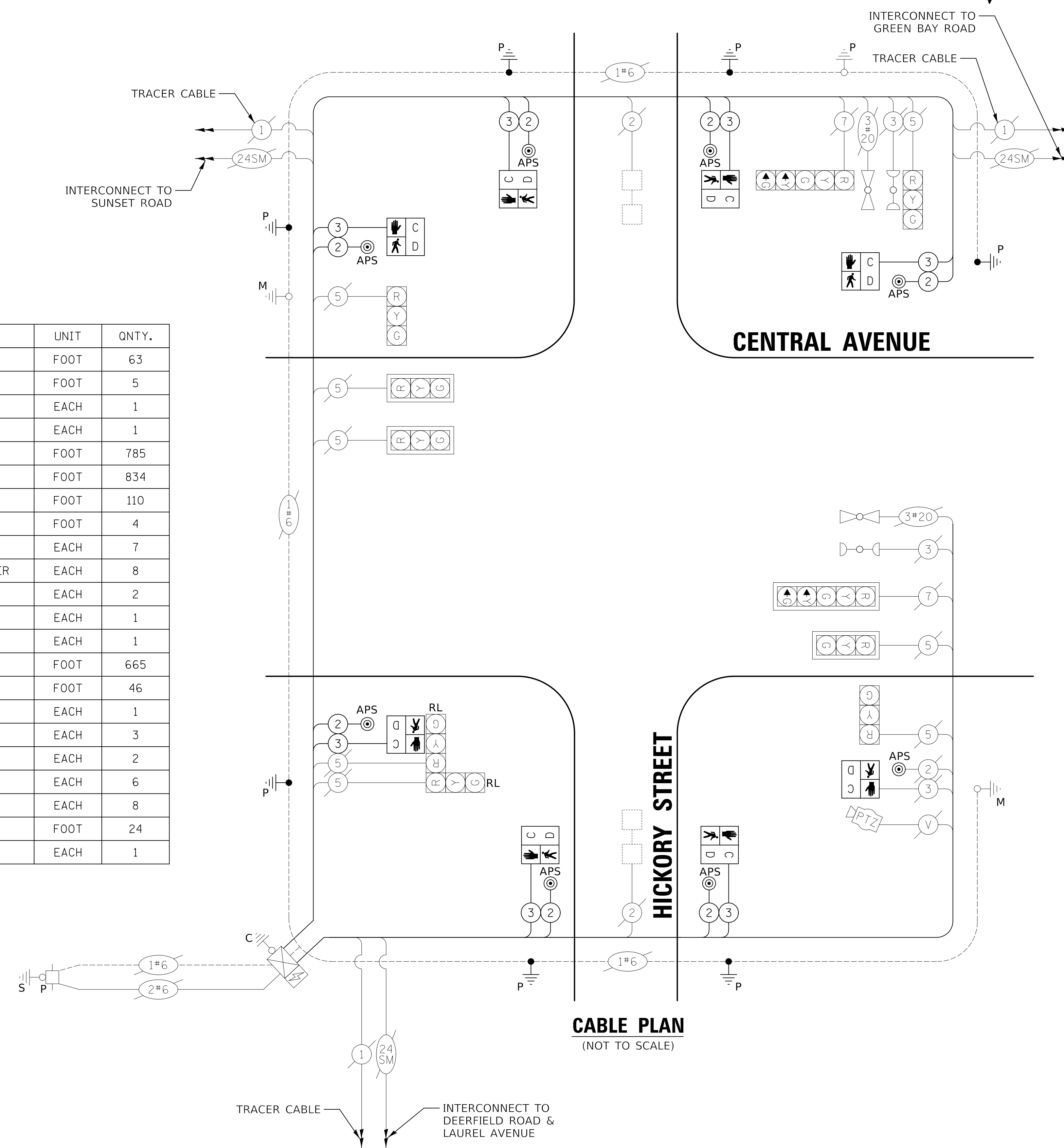
**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	11	50	55.0
(YELLOW)	10	20	5	10.0
(GREEN)	10	12	45	54.0
PROT-PERM ARROW	4	10	12	4.8
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	250	50	-
<b>TOTAL =</b>				<b>408.8</b>

ENERGY COSTS TO:

CITY OF HIGHLAND PARK  
1707 ST JOHNS AVENUE  
HIGHLAND PARK, IL 60035

ENERGY SUPPLY: CONTACT: COMED  
PHONE: (866) 639-3532  
COMPANY: COMED  
ACCOUNT NUMBER:



**CABLE PLAN**  
(NOT TO SCALE)

Two Pierce Place, Suite 1400  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - PK	REVISED -
DRAWN - LEP	REVISED -
CHECKED - JJE	REVISED -
DATE - 8/4/2023	REVISED -

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

**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT**  
**TRAFFIC SIGNAL MODIFICATION CABLE PLAN**

SHEET OF SHEETS STA. TO STA.

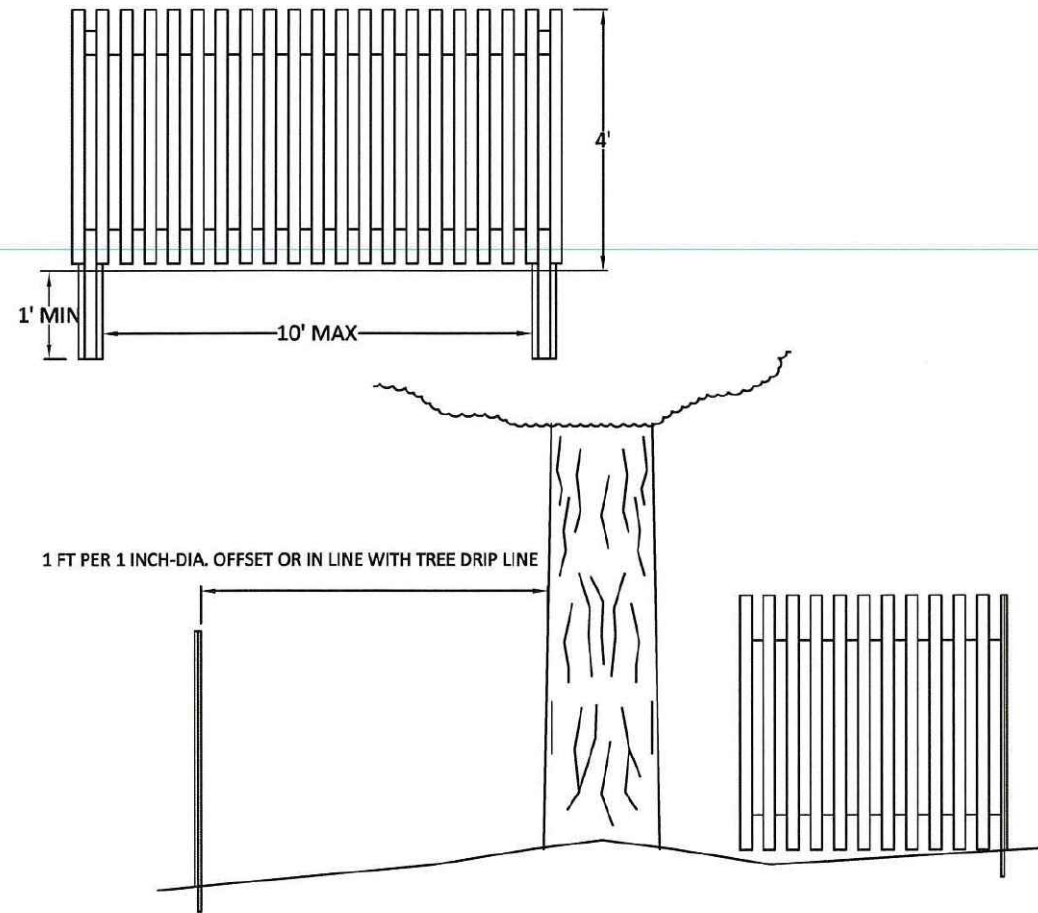
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	24
CONTRACT NO. 61J82				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



Install & maintain 4' tall wooden slat fence secured to metal posts spaced a maximum of 10' apart. The tree fence shall be 1 foot from the tree trunk for each inch of diameter measured 4.5' from ground level. The fence must be secured to the metal post with a minimum of 4 ties.

Installation shall be approved by the CITY FORESTER before the start of the project.

Failure to install and maintain protective tree fencing in accordance with City Standards will result in a ticket or a "STOP WORK ORDER" on the project.



City of Highland Park  
Department of Public Works  
1150 Half Day Rd, Highland Park, IL 60035

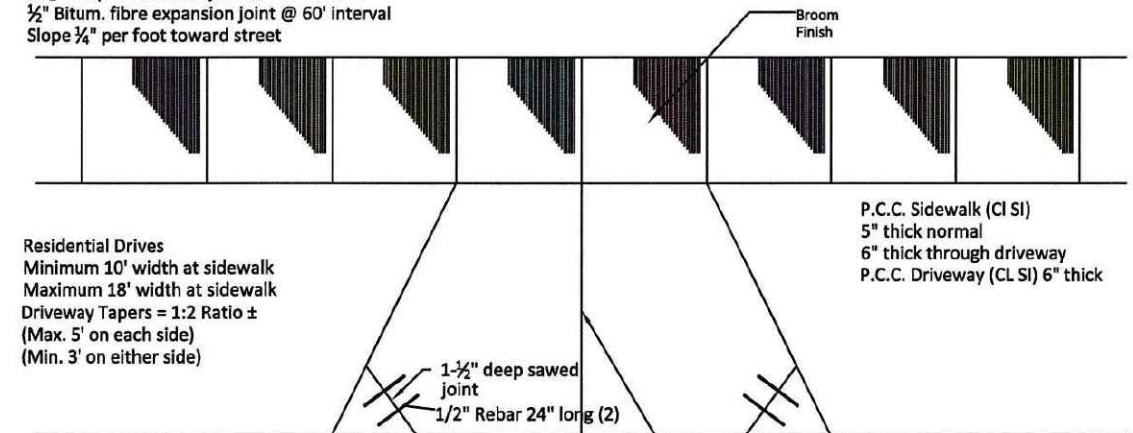
### TREE PROTECTION DETAIL

H.P. DWG. No. FOR-1041  
Drawn By: M.B.  
Revised By: E.J.

DATE: 27th Sept. 2013  
Approved By: J.M.W.



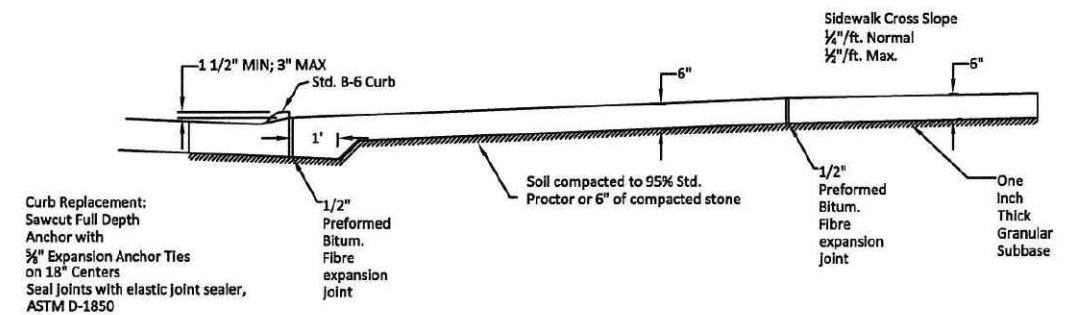
Dummy Contraction Joint every 5'  
1-1/2" deep contraction joint @ 15' interval  
1/2" Bitum. fibre expansion joint @ 60' interval  
Slope 1/4" per foot toward street



All construction to be per Illinois Standard Specifications for Road and Bridge construction.

1-1/2" deep sawed contraction joint(s), maintain width to length ratios of less than 1:1-1/2

### Plan View



### Cross Section View



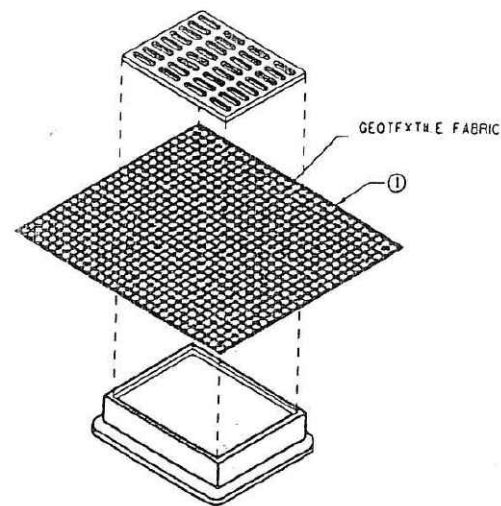
City of Highland Park  
Department of Public Works  
1150 Half Day Rd, Highland Park, IL 60035

### TYPICAL DRIVEWAY & SIDEWALK DETAIL

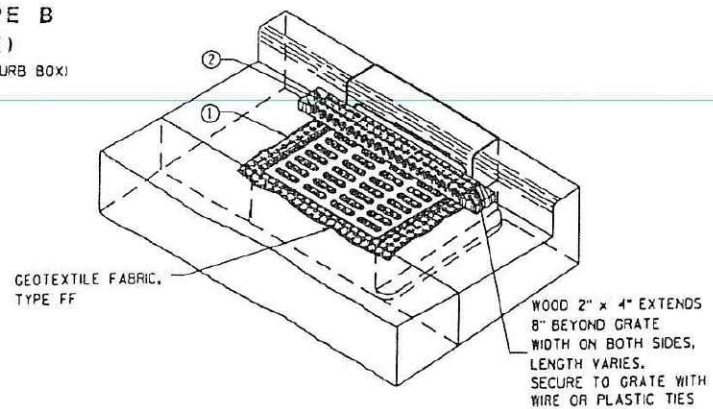
H.P. DWG. No. STR-1031  
Drawn By: M.B.  
Revised By: E.J.

DATE: 27th Sept. 2013  
Approved By: J.M.W.





**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**  
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES:**

1. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.
2. TYPE C SHALL BE UTILIZED WITH CURB HEADS, A 1½" X 3½" MINIMUM, PIECE OF LUMBER SHALL BE WRAPPED AND SECURED IN THE FABRIC AND PLACED IN FRONT OF THE CURB HEAD AS SHOWN ON THE PLAN. THE LUMBER SHALL NOT BLOCK THE ENTIRE OPENING OF THE CURB BOX AND BE SECURED TO THE GRATE WITH WIRE OR PLASTIC TIES.
3. ALL FABRICS USED AS PART OF AN INLET PROTECTION DEVICE MUST BE SELECTED FROM THE LIST OF APPROVED FABRICS CERTIFIED FOR INLET PROTECTION, GEO-TEXTILE FABRIC, IN ACCORDANCE WITH STATE STANDARD SPECS FOR ROAD AND BRIDGES CONSTRUCTION - JANUARY 1, 2012, ARTICLE 1080.05 ON PAGE 971.



City of Highland Park  
Department of Public Works  
1150 Half Day Rd., Highland Park, IL 60035

**INLET PROTECTION (TYPE B - W/O CURB  
BOX; TYPE C - W/ CURB BOX)**

H.P. DWG. No. STR-1037  
Drawn By: M.B.  
Revised By: E.J.



DATE: 27th Sept. 2013  
Approved By: J.M.W.



Two Pierce Place, Suite 1400  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - PK	REVISED -
DRAWN - JMG	REVISED -
CHECKED - JRV	REVISED -
DATE - 8/4/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE AND HICKORY STREET INTERSECTION IMPROVEMENT  
CITY STANDARD DETAILS**

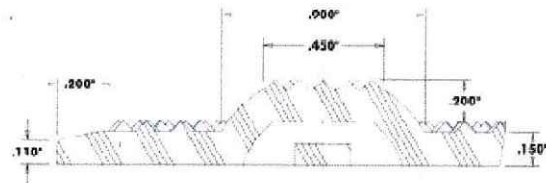
SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	26
CONTRACT NO. 61J82				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

## PHYSICAL CHARACTERISTICS - POLYMER

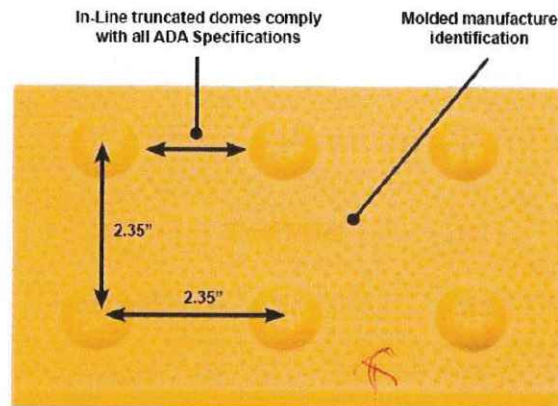
### DOME GEOMETRY

ADA (R305.1.1) specifies truncated domes shall have a base diameter of 0.9" minimum, a top diameter of 50% of the base diameter minimum, and a height of 0.2".



### DOME SPACING

ADA (R305.1.2) specifies truncated domes shall have a center-center of 1.6" to 2.4"



### POLYMER WET-SET (REPLACEABLE) / SURFACE APPLIED (REPLACEABLE) Material - Proprietary Thermoplastic Polyolefin

ASTM C 501	Abrasion Resistance	124 (lower number = better wear properties)
ASTM C 1028	Slip Resistance	Dry 1.28, Wet 1.23
ASTM D 570	Water Absorption	0.04%
ASTM D 1308	Chemical Stain Effects	No Effect
	-70Hrs/70° C	No Effect
	-Motor Oil	No Effect
	-Antifreeze	No Effect
	-Coffee	No Effect
ASTM B 117	Salt Spray (200 Hrs)	No Change
ASTM D 790	Flexural Strength	3901 psi
ASTM D 638	Tensile Strength	2885 psi
ASTM D 695	Compressive Properties	6844 psi
RCRA-C	Non-Hazardous Classification	Non-Hazardous
ASTM D 1709 (modified)	(Dart Drop Impact Test: 48 lb steel dart with spherical head and 1.8" diameter radius dropped from 2 feet equaling 100ft/lbs of force)	Nubs flattened on tile, tile did not crack

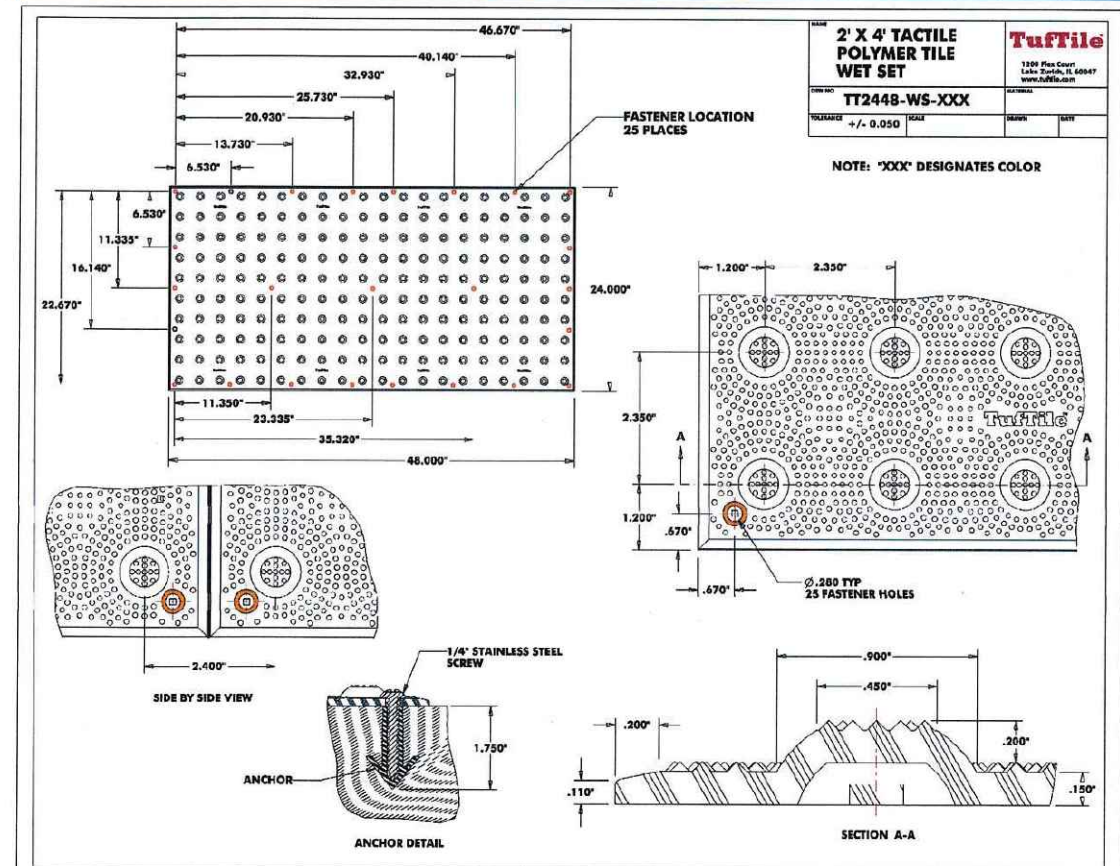
*Colonial Red*

## 2' X 4' WET SET

(REPLACEABLE)

## TACTILE TILE 2.350 DOME SPACING

TEL 888-960-8897 FAX 847-550-8004 www.tuftile.com

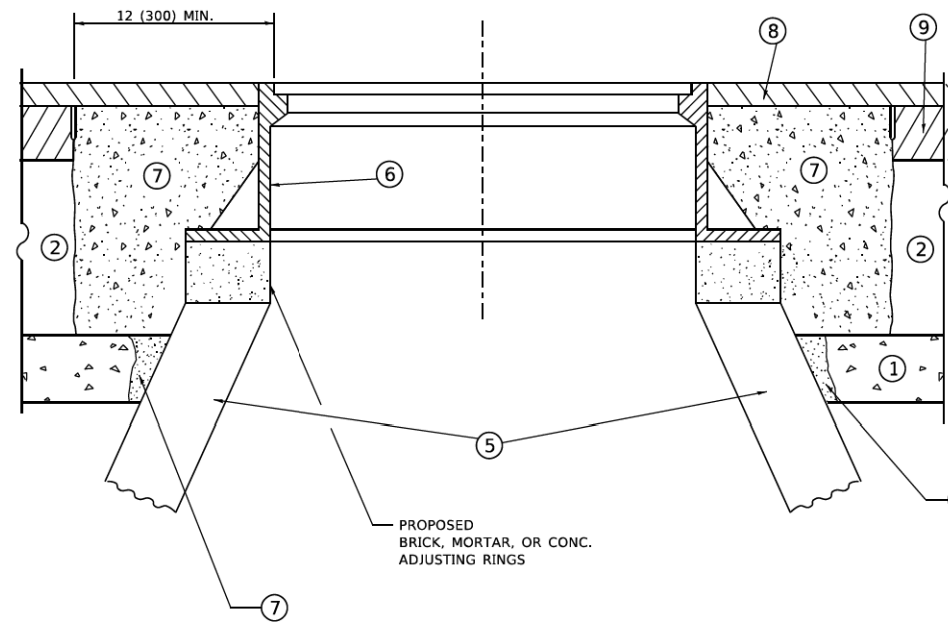
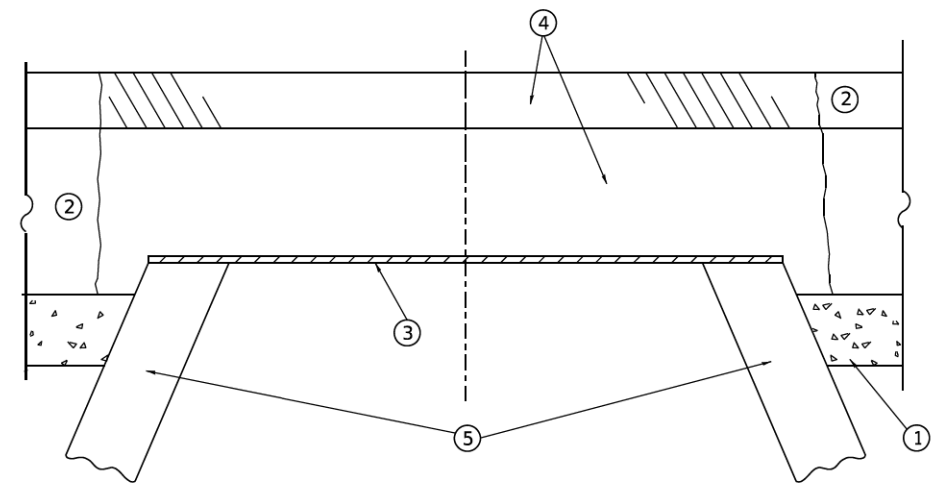


*Colonial Red (City of Highland Park)  
04/23/2015*

*3/2*



*1/2*



**DETAILS FOR FRAMES AND LIDS ADJUSTMENT  
WITH MILLING**

**NOTES**

1. EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.
2. IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.
3. CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.
4. THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES BY THE END OF EACH WORK SHIFT.

**CONSTRUCTION PROCEDURES**

**STAGE 1 (BEFORE PAVEMENT MILLING)**

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND HMA SURFACE MIX APPROVED BY THE ENGINEER. (MIN. 3 (80) HMA TO REMAIN AFTER MILLING).

**STAGE 2 (AFTER PAVEMENT MILLING)**

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-2\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

\* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

**LEGEND**

- |  |                               |
|--|-------------------------------|
| ① SUB-BASE GRANULAR MATERIAL                 | ⑥ FRAME AND LID (SEE NOTES)   |
| ② EXISTING PAVEMENT                          | ⑦ CLASS PP-2* CONCRETE        |
| ③ 36 (900) DIAMETER METAL PLATE              | ⑧ PROPOSED HMA SURFACE COURSE |
| ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX | ⑨ PROPOSED HMA BINDER COURSE  |
| ⑤ EXISTING STRUCTURE                         |                               |

**LOCATION OF STRUCTURES**

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

**BASIS OF PAYMENT**

1. REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."
2. THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.
3. NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.
4. WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

MODEL: Default  
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USER NAME = Lawrence,DeManche	DESIGNED - R. SHAH	REVISED - R. BORO 03-09-11
	DRAWN -	REVISED - R. BORO 12-06-11
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED - K. SMITH 11-18-22
PLOT DATE = 9/15/2023	DATE - 10-25-94	REVISED - K. SMITH 09-15-23

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DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR  
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

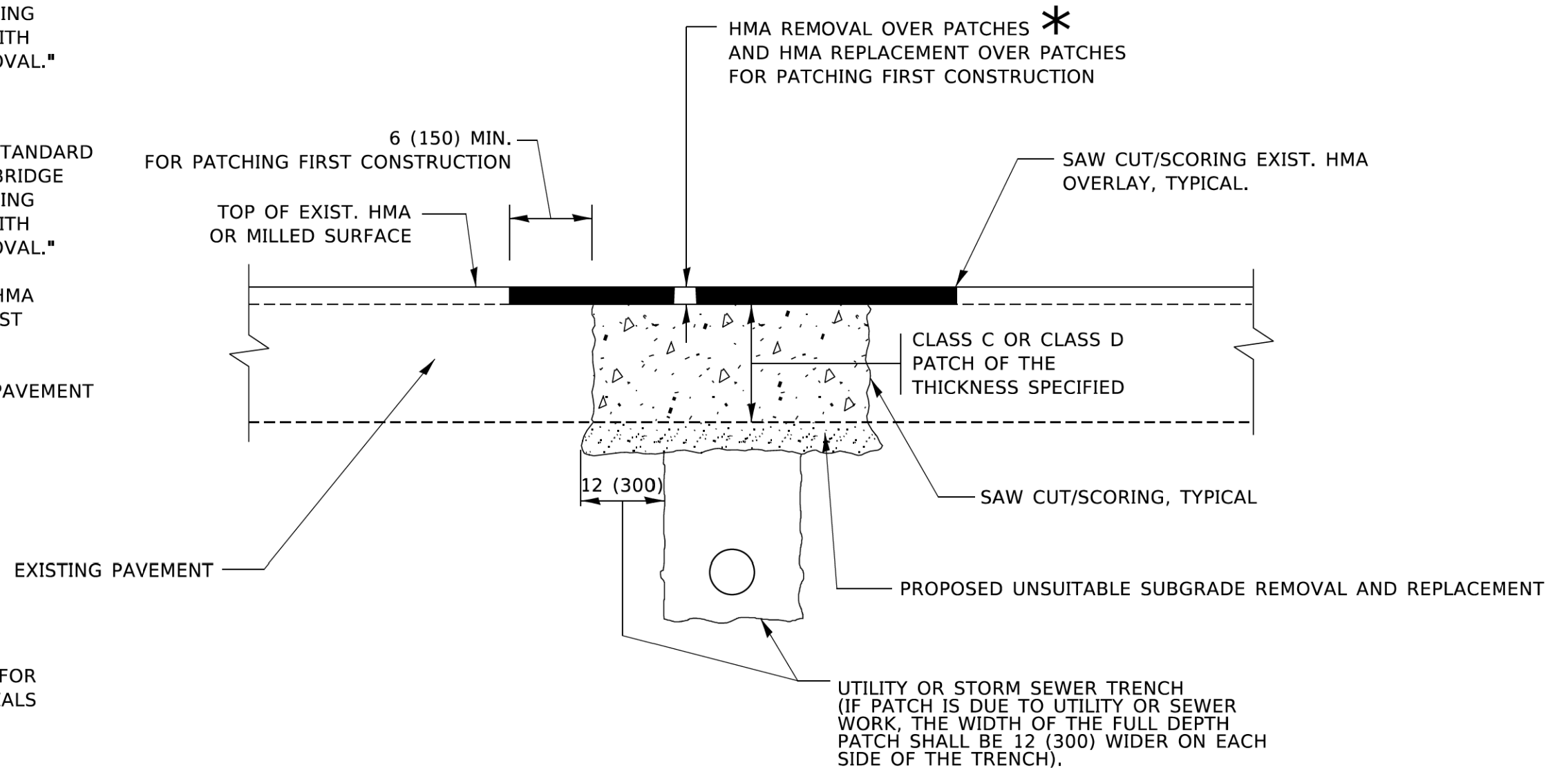
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	28
BD600-03 (BD-08)			CONTRACT NO. 61J82	
ILLINOIS FED. AID PROJECT				

**METHOD OF MEASUREMENT**

REFER TO SECTION 442 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL."

**BASIS OF PAYMENT**

1. REFER TO SECTION 442 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL."
2. SAW CUT/SCORING OF EXISTING HMA OVERLAY IS INCLUDED IN THE COST OF PAVEMENT PATCHING.
3. SAW CUT/SCORING OF EXISTING PAVEMENT IS INCLUDED IN THE COST OF PAVEMENT PATCHING.



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**SEQUENCE OF CONSTRUCTION (PATCHING FIRST)**

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

**SEQUENCE OF CONSTRUCTION (MILLING FIRST)**

1. MILL HMA FIRST IF THERE IS AT LEAST 4½ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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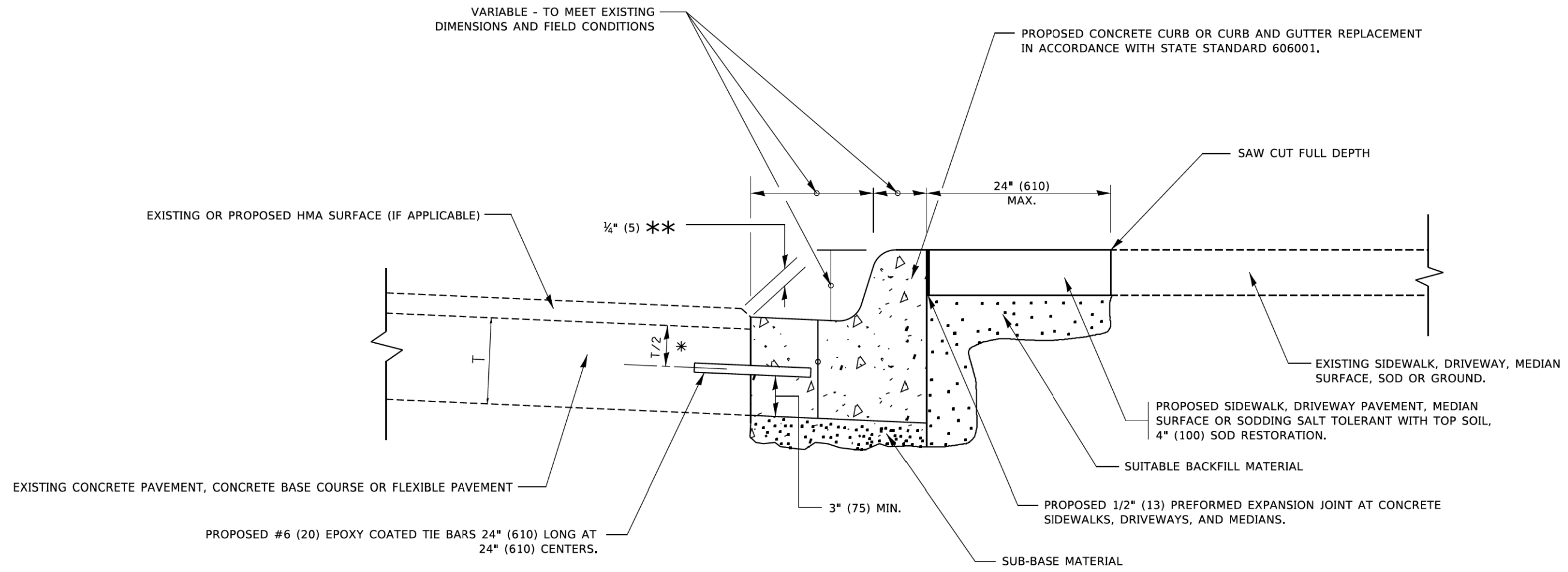
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	DRAWN -	REVISED - R. BORO 09-04-07
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED - K. ENG 10-27-08
PLOT DATE = 11/18/2022	DATE - 10-25-94	REVISED - K. SMITH 11-18-22

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PAVEMENT PATCHING FOR  
HMA SURFACED PAVEMENT

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	29
BD400-04 (BD-22)		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				



- \* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- \*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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	DRAWN -	REVISED - M. GOMEZ 01-22-01
PLOT SCALE = 50,0000' / in.	CHECKED -	REVISED - R. BORO 12-15-09
PLOT DATE = 7/11/2019	DATE - 03-11-94	REVISED - K. SMITH 07-11-19

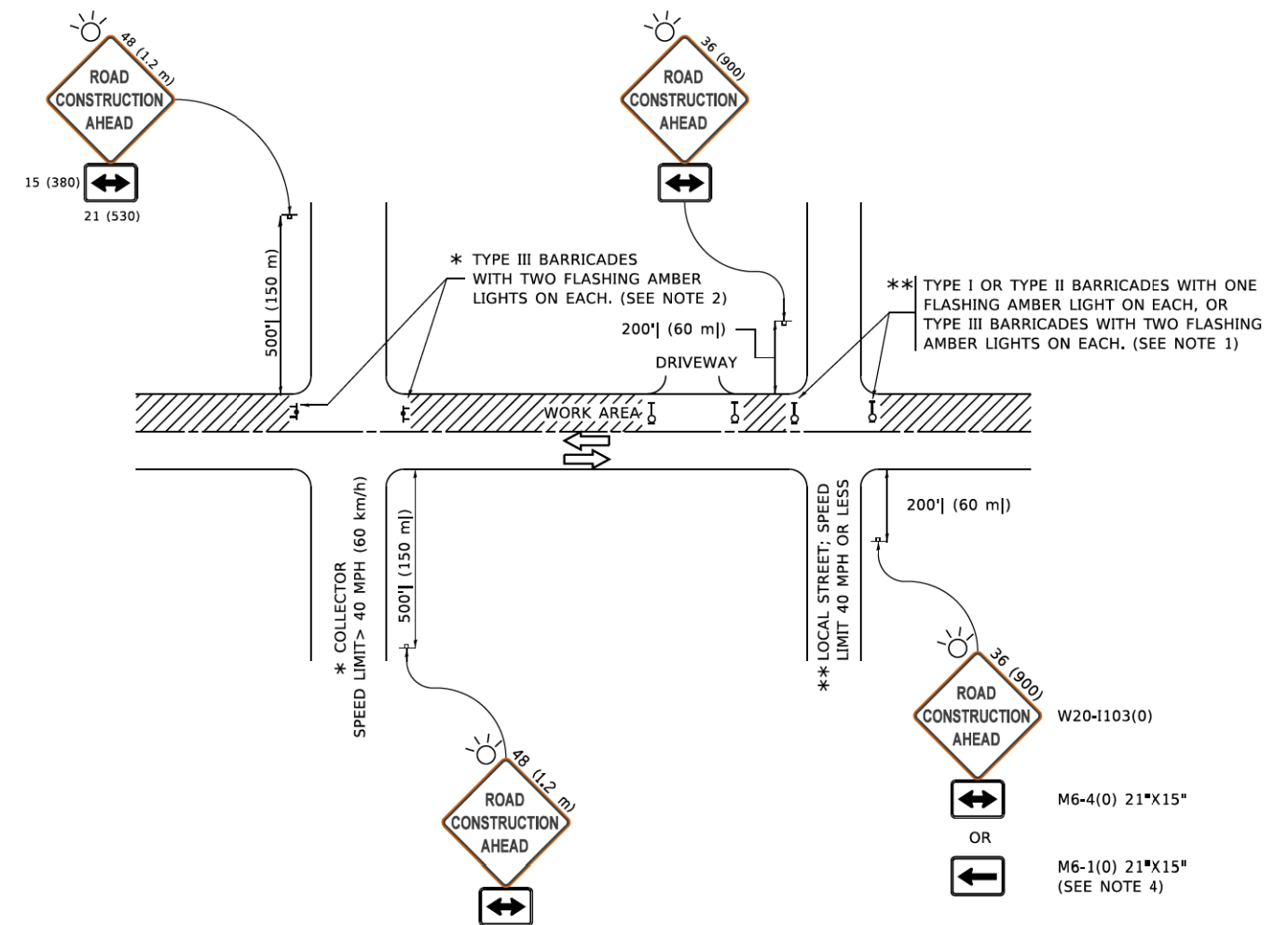
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CURB OR CURB AND GUTTER  
REMOVAL AND REPLACEMENT**

SCALE: NONE    SHEET 1 OF 1 SHEETS    STA.    TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	30
<b>BD600-06 (BD-24)</b>		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				





**NOTES:**

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

MODEL: D:\draft\...  
FILE NAME: P:\01\04\EB\DOT\...  
PROJECT: ...

USER NAME	DESIGNED	REVISED
footemj	L.H.A.	A. HOUSEH 10-15-96
	DRAWN	REVISED
	-	T. RAMMACHER 01-06-00
PLOT SCALE	CHECKED	REVISED
50,0000' / in.	-	A. SCHUETZE 07-01-13
PLOT DATE	DATE	REVISED
3/4/2019	06-89	A. SCHUETZE 09-15-16

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

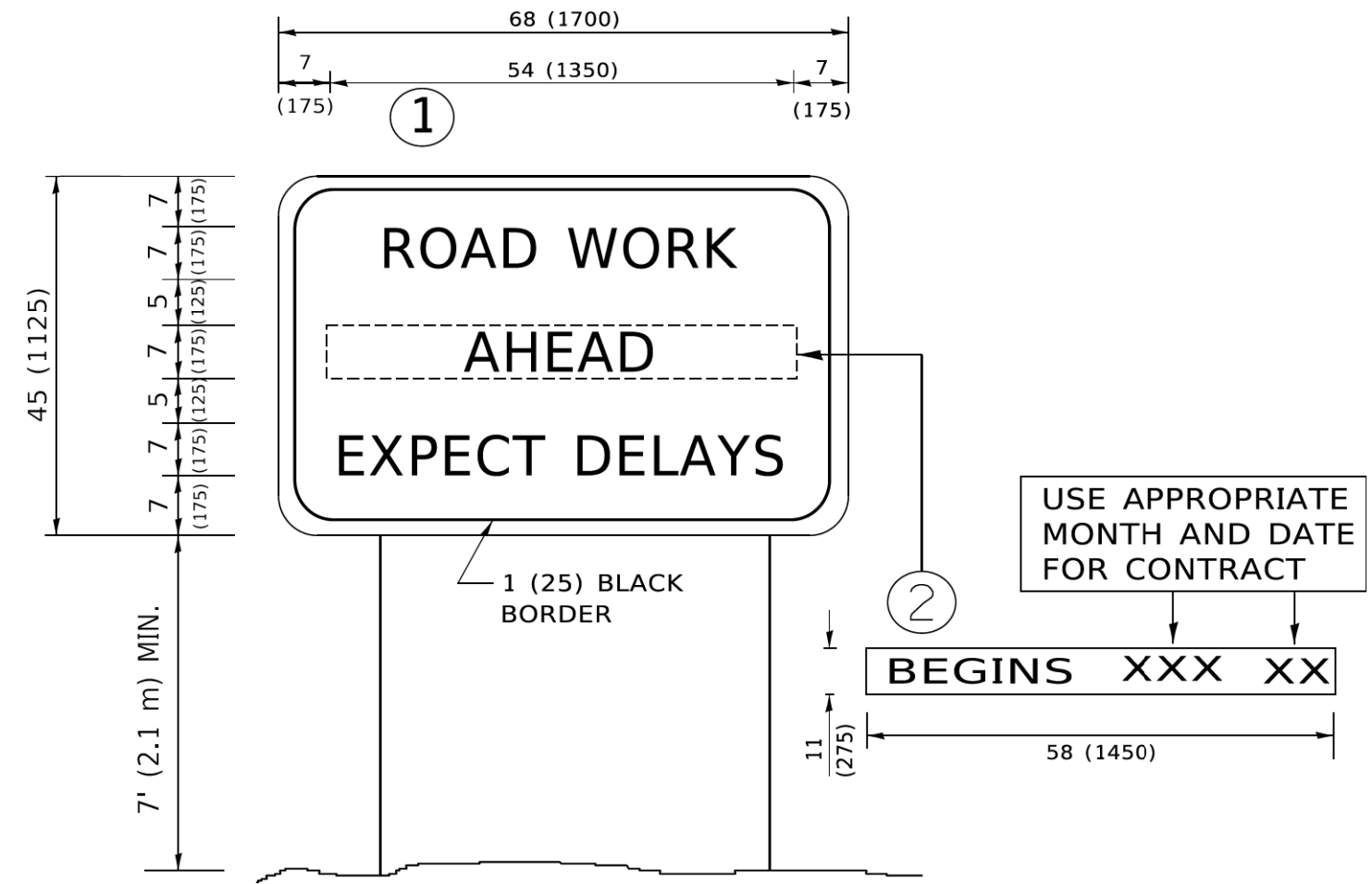
**TRAFFIC CONTROL AND PROTECTION FOR  
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	32
TC-10		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				







**NOTES:**

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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USER NAME	footemj	DESIGNED	-	REVISED	- R, MIRS 09-15-97
		DRAWN	-	REVISED	- R, MIRS 12-11-97
PLOT SCALE	50,0000 * / in.	CHECKED	-	REVISED	- T. RAMMACHER 02-02-99
PLOT DATE	3/4/2019	DATE	-	REVISED	- C, JUCIUS 01-31-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD  
INFORMATION SIGN**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1256	21-00142-00-TL	LAKE	34	34
TC-22		CONTRACT NO. 61J82		
ILLINOIS FED. AID PROJECT				