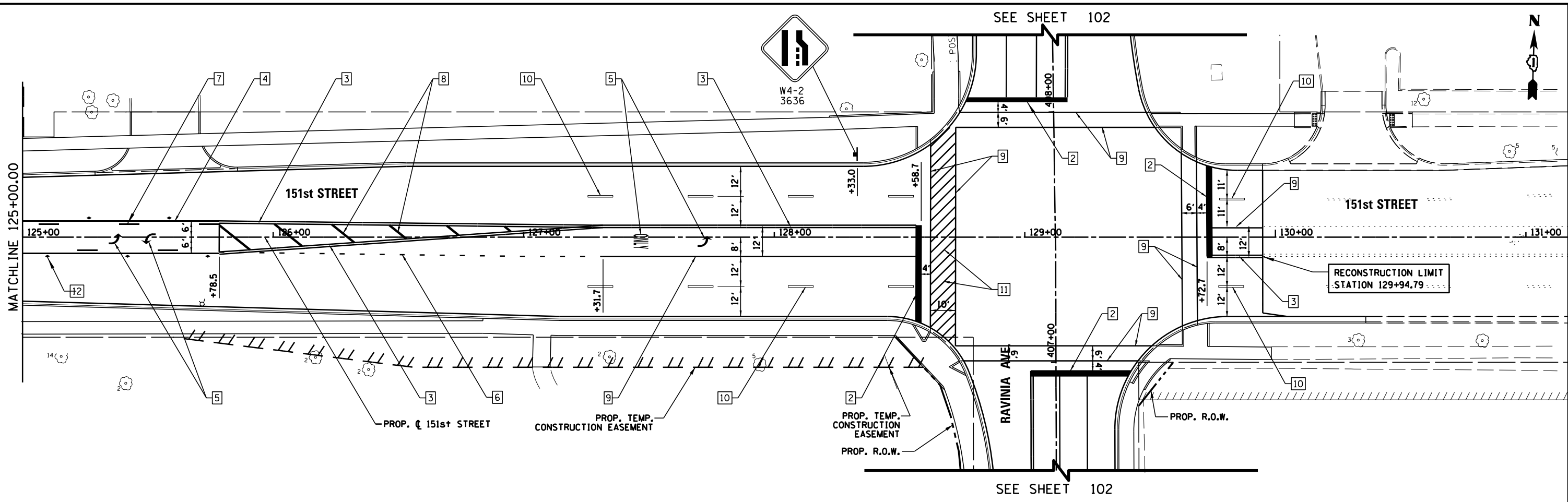


SEE SHEET 102



SEE SHEET 102

**LEGEND**

1	PAVEMENT MARKING - LINE, 12" (WHITE, 90 DEGREES @ 3' C-C)
2	PAVEMENT MARKING - LINE, 24" (WHITE)
3	PAVEMENT MARKING - LINE, 4" (DOUBLE YELLOW, 11" C-C)
4	PAVEMENT MARKING - LINE, 4" (YELLOW)
5	PAVEMENT MARKING - LETTERS AND SYMBOLS
6	PAVEMENT MARKING - LINE, 6" (WHITE, SKIP-DASH, 2' DASH - 6' SKIP)
7	PAVEMENT MARKING - LINE, 4" (YELLOW, SKIP-DASH, 10' DASH - 30' SKIP)
8	PAVEMENT MARKING - LINE, 12" (YELLOW DIAGNALS @ 45 DEGREES, 20' C-C)
9	PAVEMENT MARKING - LINE, 6" (WHITE)
10	PAVEMENT MARKING - LINE, 4" (WHITE, SKIP-DASH, 10' DASH - 30' SKIP)
11	PAVEMENT MARKING - LINE, 12" (WHITE DIAGNALS @ 45 DEGREES, 3' C-C)
12	RAISED REFLECTIVE PAVEMENT MARKER - ONE WAY CRYSTAL @ 40' O.C.
13	PAVEMENT MARKING - LINE, 8" (WHITE, SKIP-DASH, 2' DASH - 6' SKIP)

**NOTE:** CONTRACTOR TO REINSTATE ALL PAVEMENT MARKINGS OUTSIDE PROJECT LIMITS THAT WERE REMOVED DURING MAINTENANCE OF TRAFFIC.

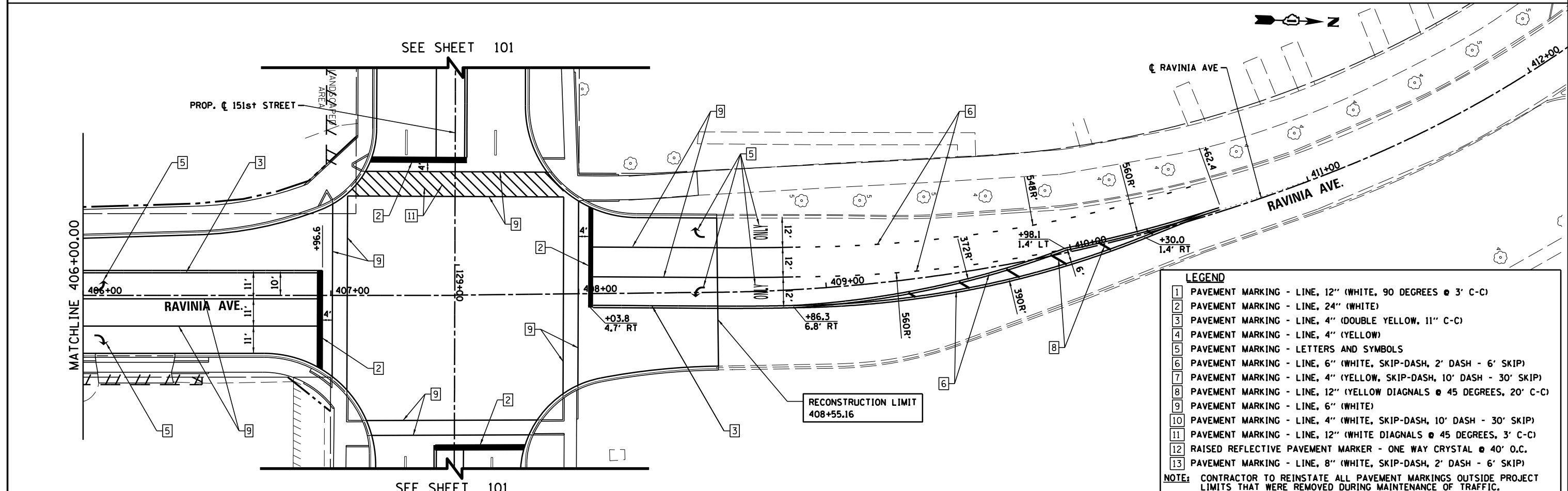
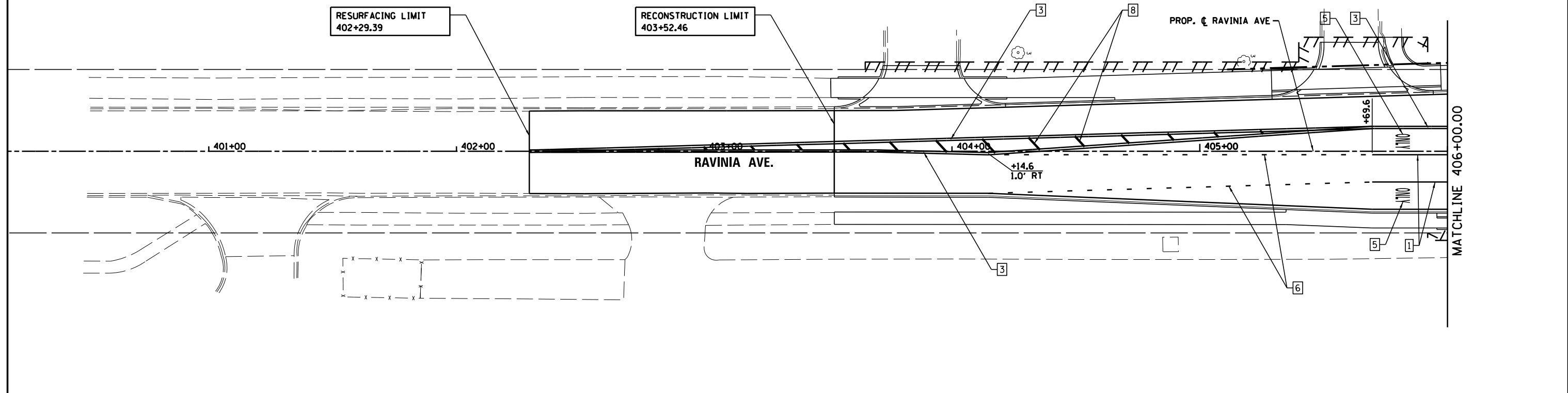
FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
N:\ORLANDPARK\150272.ph2\Consultants\1007\Cadd_Deliverable\151F86-sht-PMK-04.dgn		DRAWN -	REVISED -
Default	PLOT SCALE = 48"	CHECKED -	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN  
151st STREET**

SCALE: 1" = 20' SHEET 4 OF 5 SHEETS STA. 125+00.00 TO STA. END

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	101
<b>CONTRACT NO. 61F86</b>				
ILLINOIS FED. AID PROJECT				



**LEGEND**

1	PAVEMENT MARKING - LINE, 12" (WHITE, 90 DEGREES @ 3' C-C)
2	PAVEMENT MARKING - LINE, 24" (WHITE)
3	PAVEMENT MARKING - LINE, 4" (DOUBLE YELLOW, 11" C-C)
4	PAVEMENT MARKING - LINE, 4" (YELLOW)
5	PAVEMENT MARKING - LETTERS AND SYMBOLS
6	PAVEMENT MARKING - LINE, 6" (WHITE, SKIP-DASH, 2' DASH - 6' SKIP)
7	PAVEMENT MARKING - LINE, 4" (YELLOW, SKIP-DASH, 10' DASH - 30' SKIP)
8	PAVEMENT MARKING - LINE, 12" (YELLOW DIAGONALS @ 45 DEGREES, 20' C-C)
9	PAVEMENT MARKING - LINE, 6" (WHITE)
10	PAVEMENT MARKING - LINE, 4" (WHITE, SKIP-DASH, 10' DASH - 30' SKIP)
11	PAVEMENT MARKING - LINE, 12" (WHITE DIAGONALS @ 45 DEGREES, 3' C-C)
12	RAISED REFLECTIVE PAVEMENT MARKER - ONE WAY CRYSTAL @ 40' O.C.
13	PAVEMENT MARKING - LINE, 8" (WHITE, SKIP-DASH, 2' DASH - 6' SKIP)

**NOTE:** CONTRACTOR TO REINSTATE ALL PAVEMENT MARKINGS OUTSIDE PROJECT LIMITS THAT WERE REMOVED DURING MAINTENANCE OF TRAFFIC.

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
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Default	PLOT SCALE = 48"	CHECKED -	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN  
RAVINIA AVE**

SCALE: 1" = 20'    SHEET 5 OF 5 SHEETS    STA. 401+00 TO STA. 411+00

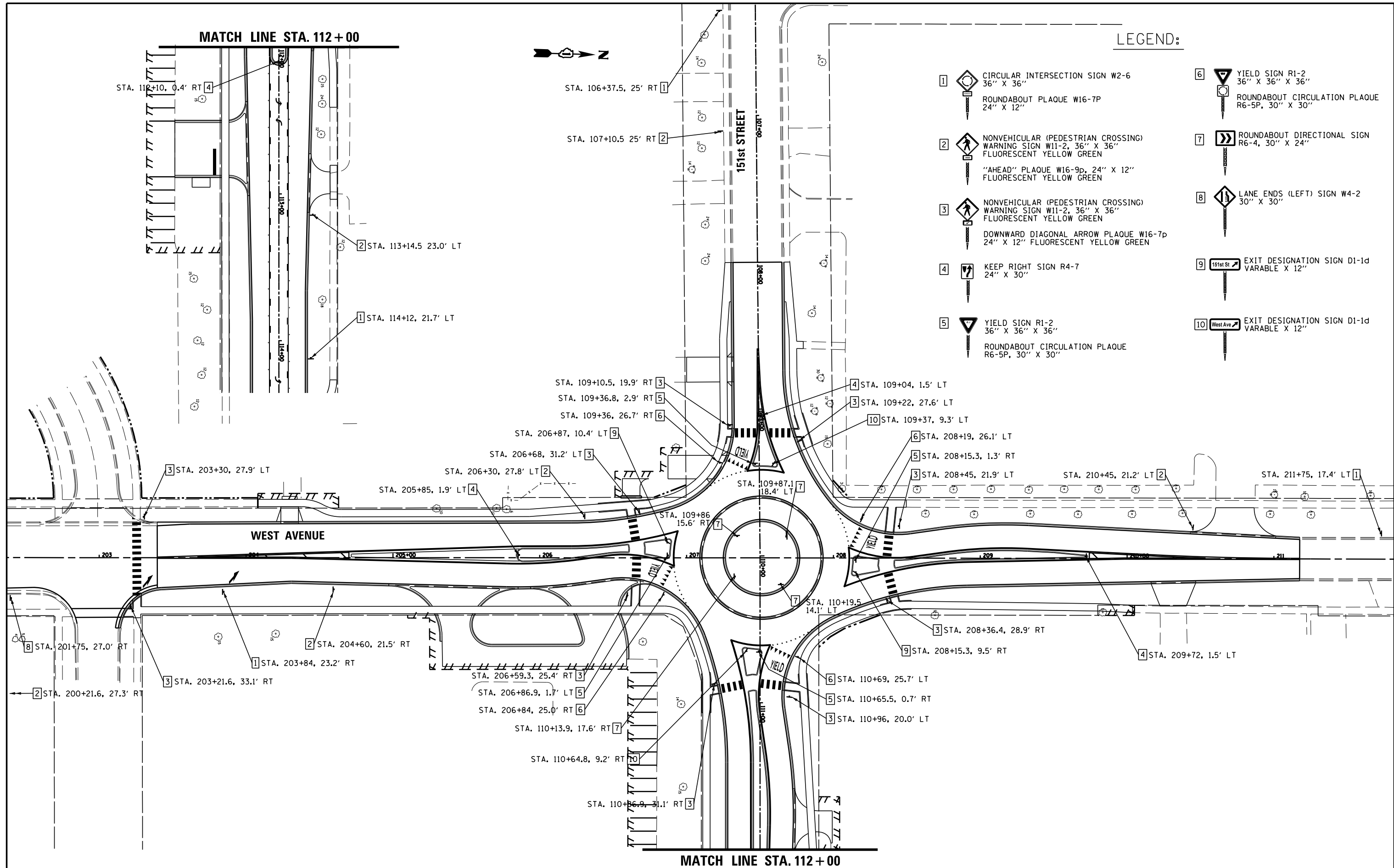
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1709	13-00071-00-WR	COOK	162	102
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				

MATCH LINE STA. 112 + 00

LEGEND:

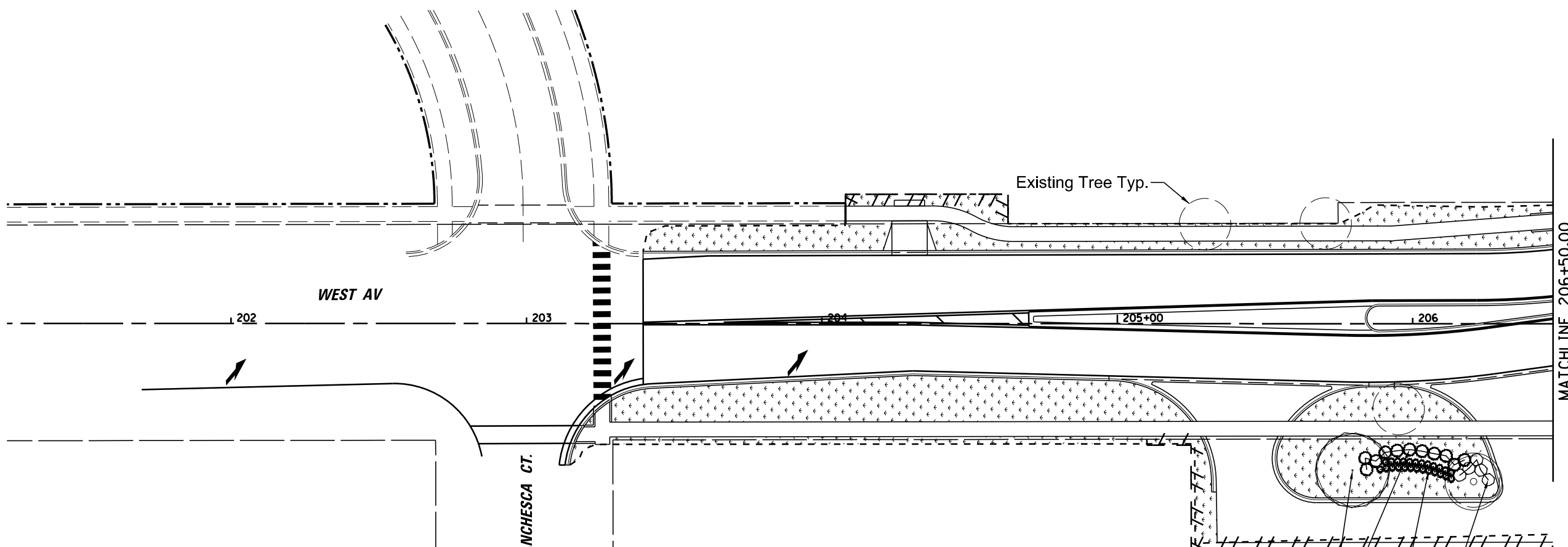


- 1 CIRCULAR INTERSECTION SIGN W2-6  
36" X 36"  
ROUNDABOT PLAQUE W16-7P  
24" X 12"
- 2 NONVEHICULAR (PEDESTRIAN CROSSING)  
WARNING SIGN W11-2, 36" X 36"  
FLUORESCENT YELLOW GREEN  
"AHEAD" PLAQUE W16-9p, 24" X 12"  
FLUORESCENT YELLOW GREEN
- 3 NONVEHICULAR (PEDESTRIAN CROSSING)  
WARNING SIGN W11-2, 36" X 36"  
FLUORESCENT YELLOW GREEN  
DOWNWARD DIAGONAL ARROW PLAQUE W16-7p  
24" X 12" FLUORESCENT YELLOW GREEN
- 4 KEEP RIGHT SIGN R4-7  
24" X 30"
- 5 YIELD SIGN R1-2  
36" X 36" X 36"  
ROUNDABOT CIRCULATION PLAQUE  
R6-5P, 30" X 30"
- 6 YIELD SIGN R1-2  
36" X 36" X 36"  
ROUNDABOT CIRCULATION PLAQUE  
R6-5P, 30" X 30"
- 7 ROUNDABOT DIRECTIONAL SIGN  
R6-4, 30" X 24"
- 8 LANE ENDS (LEFT) SIGN W4-2  
30" X 30"
- 9 151st St EXIT DESIGNATION SIGN D1-1d  
VARIABLE X 12"
- 10 West Ave EXIT DESIGNATION SIGN D1-1d  
VARIABLE X 12"



MATCH LINE STA. 112 + 00

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SIGNAGE PLAN</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\ORLANDPARK\150272.ph2\Consultants\1007\Cadd_Deliverable\161F86-shr-sign-01.dgn		DRAWN -	REVISED -		<b>151st STREET / WEST AVE.</b>			1603	13-00071-00-WR	COOK	162	103
Default	PLOT SCALE = 68'	CHECKED -	REVISED -		SCALE: 20H 5V    SHEET    OF    SHEETS    STA.    TO    STA.			<b>CONTRACT NO. 61F86</b>				
	PLOT DATE = 7/11/2019	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



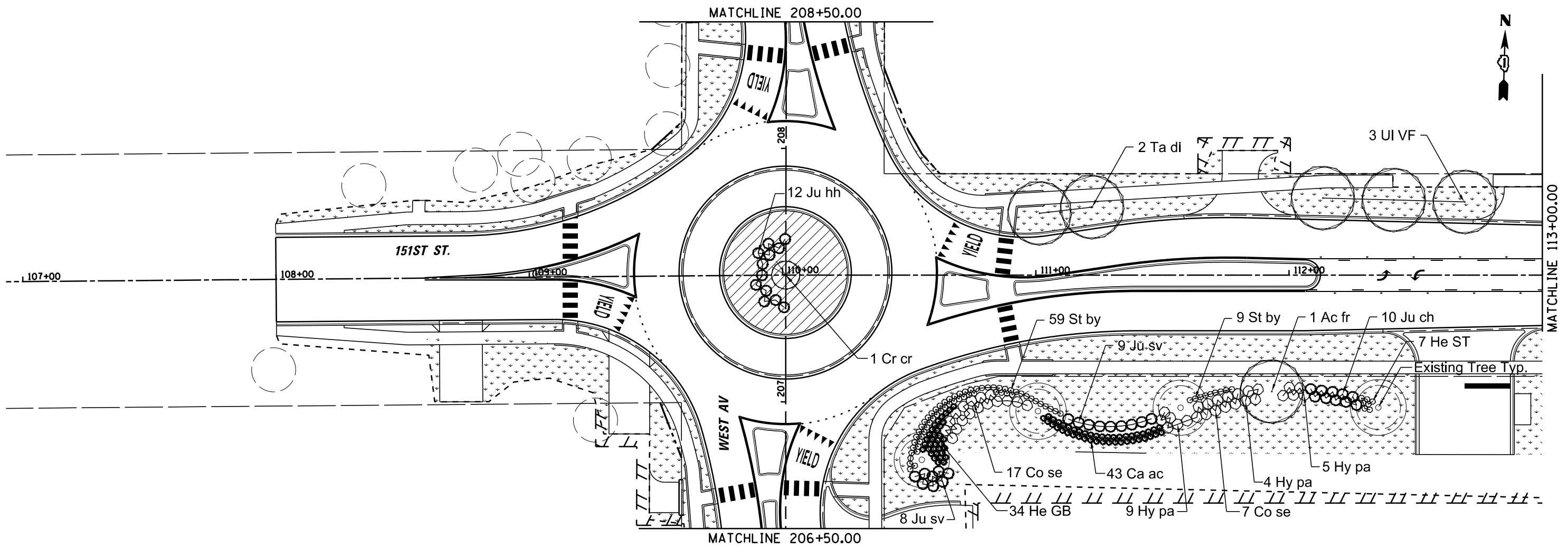
PLANT LIST						
Coded	Sym.	Botanical Name	Common Name	Qty.	Size	Cond.
<b>Pay Item Large Deciduous Trees</b>						
A2000118	Ac fr	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	6	3"	B & B
A2004621	Gl tr	Gleditsia tricanthos inermis 'Imperial'	Imperial Honeylocust	5	3"	B & B
A2005424	Li tu	Liquidambar tulipifera	Tulip Tree	5	3"	B & B
A2007624	Ta di	Taxodium distichum	Common Blad Cypress	5	3"	B & B
A2008819	Ul VF	Ulmus Americana 'Valley Forge'	Valley Forge American Elm	6	2.5"	B & B
<b>Pay Item Small Ornamental Trees</b>						
B2001624	Cr cr	Crataegus crusgalli inermis	Thornless Cockspur Hawthorn	9	3"	B & B
B2002724	Ma Ad	Malus Adirondack	Adirondack Crab	8	3"	B & B
B2004124	Ma Pf	Malus Prairiefire	Prairiefire Crabapple	7	3"	B & B
B2006124	Sy pe	Syringa pekinensis 'Morton'	China Snow Peking Lilac	8	3"	B & B
<b>Pay Item Deciduous Shrubs</b>						
C2C01836	Co se	Cornus sericea 'Isanti'	Isanti Dogwood	24	5 gal	Cont.
C2003600	Hy pa	Hydrangea paniculata 'Little Quick Fire'	Little Quick Fire Hydrangea	23	5 gal	Cont.
<b>Pay Item Evergreen Shrubs</b>						
C2015300	Ju ch	Juniperus chinensis 'Kallay's Compact'	Kallay's Compact Juniper	10	3 gal.	Cont.
D2C00724	Ju sv	Juniperus chinensis var. sargentii viridis	Green Sargent Juniper	28	5 gal	Cont.
D2C00918	Ju hh	Juniperus horizontalis 'Hughes'	Hughes Creeping Juniper	12	18"	Cont.
<b>Pay Item Perennials</b>						
K0012990	Ca ac	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	73	1 gal	Cont.
K0012990	He GB	Hemerocallis 'Going Bananas	Goiong Bananas Daylily	34	1 gal	Cont.
K0012990	He ST	Heucherella 'Sweet Tea'	Sweet Tea Foamy Bells	7	1 gal	Cont.
K0012990	St by	Stachys byzantina 'Big Ears'	Lambs Ear	68	1 gal	Cont.

1 Ac fr  
11 Ju sv  
25 Ca ac  
5 Hy pa

**LEGEND**

	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 4"		PROP. TREE PLANTING
	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 24"		EXIST. TREE TO REMAIN
	PROP. SHRUB OR PERENNIAL		

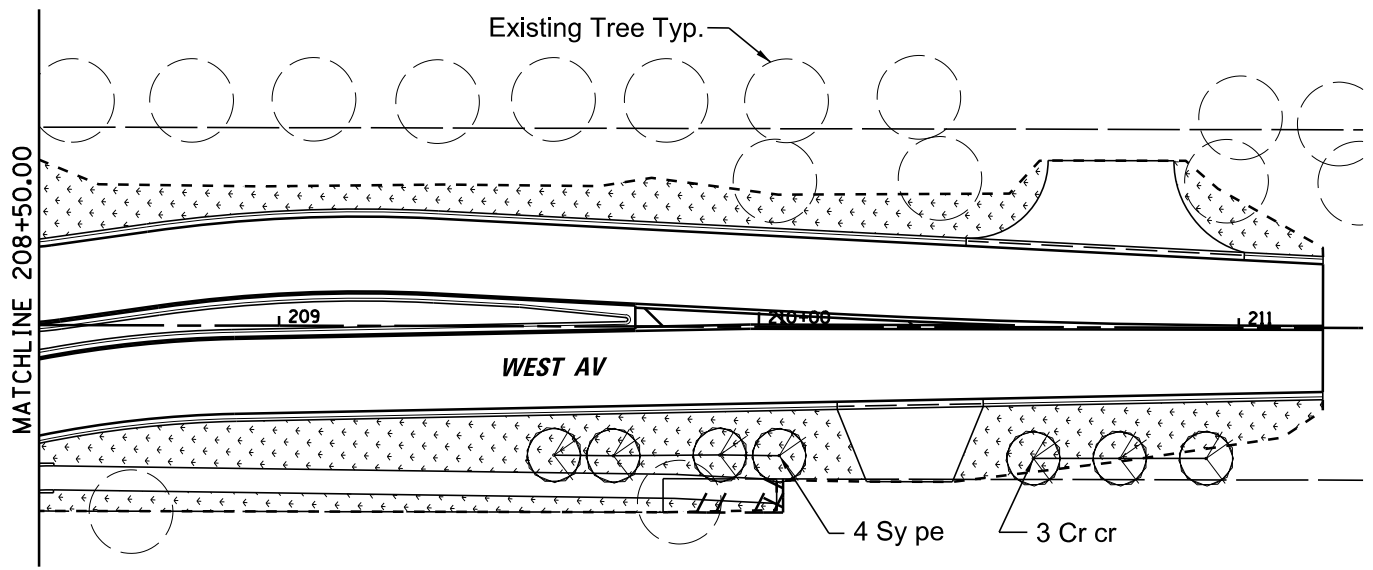
NOTE: CONTRACTOR SHALL PROVIDE SPADED EDGES FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A 5 FOOT DIAMETER MULCH RING AROUND THE TREE



**LEGEND**

	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 4"		PROP. TREE PLANTING
	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 24"		EXIST. TREE TO REMAIN
	PROP. SHRUB OR PERENNIAL		

NOTE: CONTRACTOR SHALL PROVIDE SPADED EDGES FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A 5 FOOT DIAMETER MULCH RING AROUND THE TREE



FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
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	PLOT DATE = 7/11/2019	DATE -	REVISED -

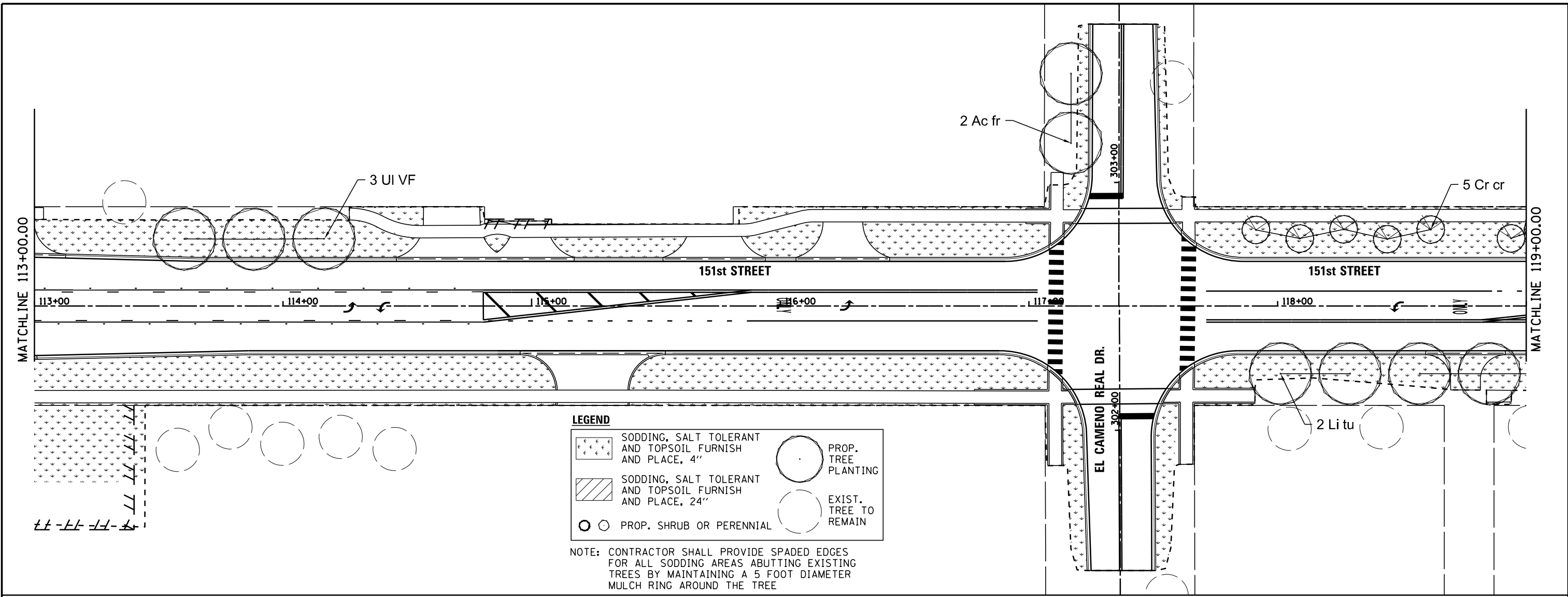
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN  
151st STREET






SCALE: 1" = 20' SHEET 2 OF 5 SHEETS STA. 108+00.00 TO STA. 113+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	105
CONTRACT NO. 61F86				

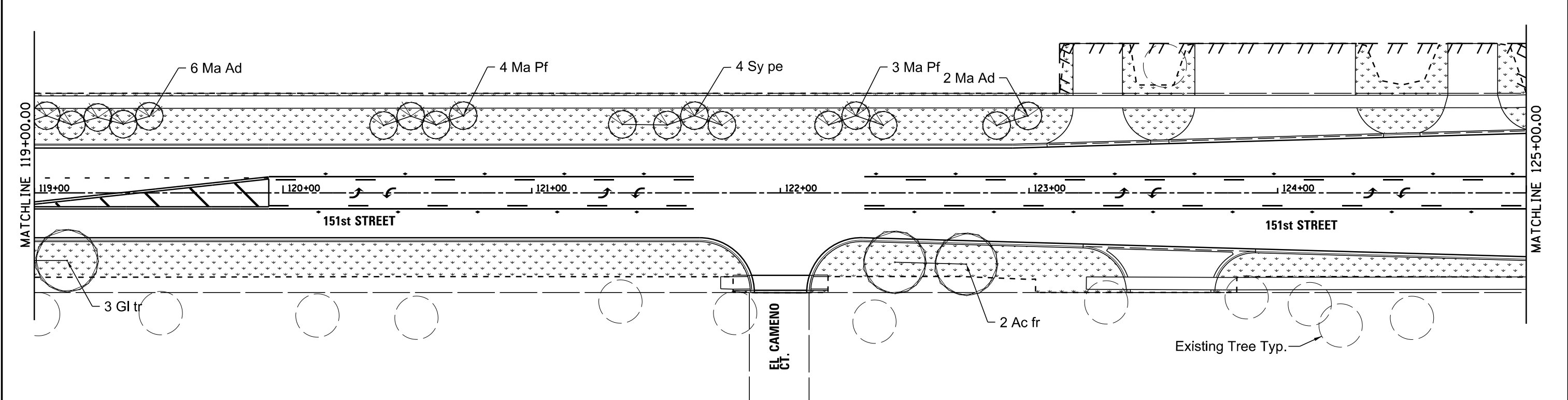
ILLINOIS FED. AID PROJECT



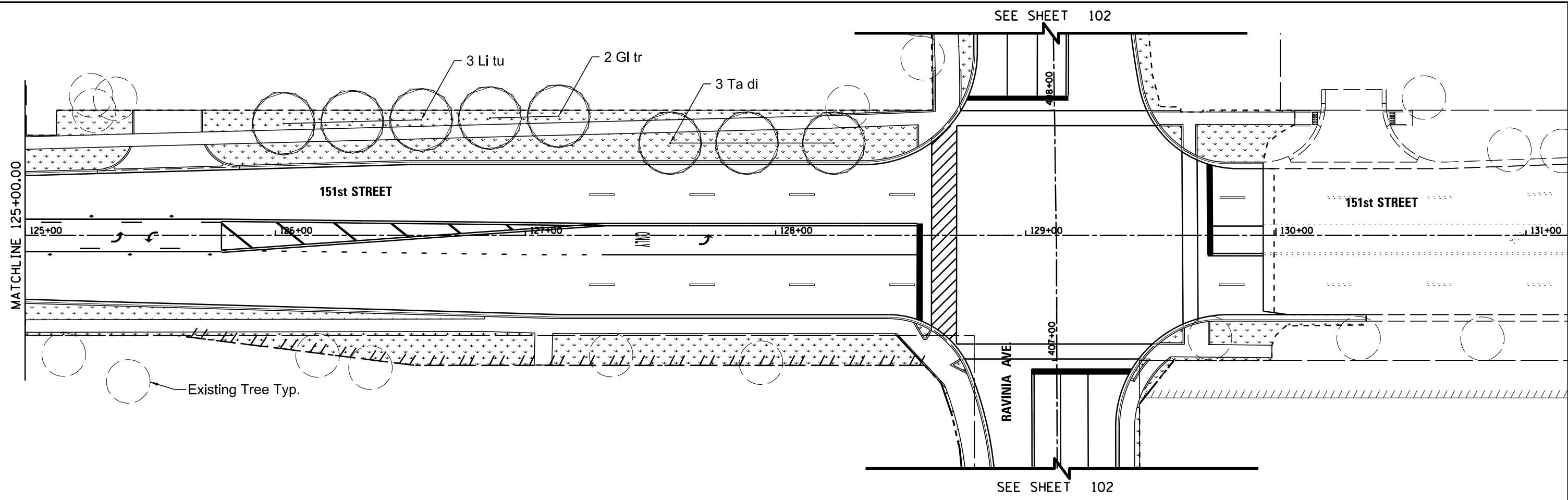
**LEGEND**

	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 4"		PROP. TREE PLANTING
	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 24"		EXIST. TREE TO REMAIN
	PROP. SHRUB OR PERENNIAL		

NOTE: CONTRACTOR SHALL PROVIDE SPADED EDGES FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A 5 FOOT DIAMETER MULCH RING AROUND THE TREE



FILE NAME = N:\ORLANDPARK\150272.ph2\Consultants\1007\Cadd_Deliverable\161F86-sh1-LSCP-03.dgn	USER NAME = pmagnelli	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LANDSCAPING PLAN 151st STREET</b>	F.A.U. R.T.E. = 1603	SECTION = 13-00071-00-WR	COUNTY = COOK	TOTAL SHEETS = 162	SHEET NO. = 106		
Default	PLOT SCALE = 48"	CHECKED -	REVISED -			SCALE: 1" = 20'	SHEET 1 OF 5 SHEETS	STA. 113+00.00 TO STA. 125+00.00		<b>CONTRACT NO. 61F86</b>		
	PLOT DATE = 7/11/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						



**LEGEND**

	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 4"		PROP. TREE PLANTING
	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 24"		EXIST. TREE TO REMAIN
	PROP. SHRUB OR PERENNIAL		

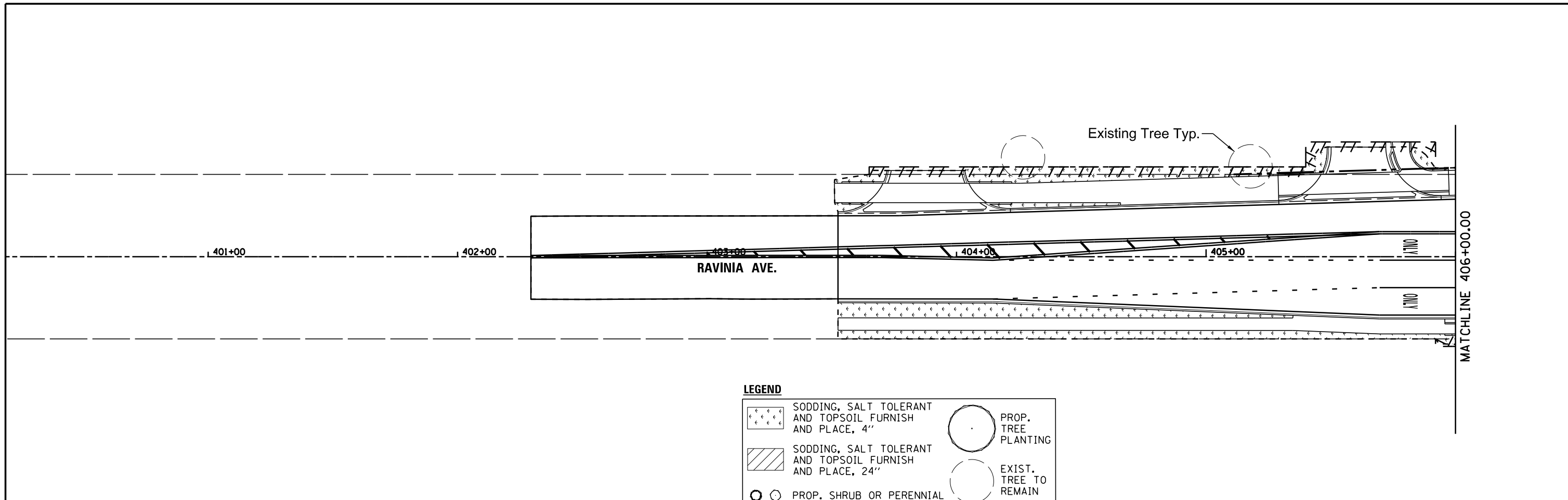
NOTE: CONTRACTOR SHALL PROVIDE SPADED EDGES FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A 5 FOOT DIAMETER MULCH RING AROUND THE TREE

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
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	PLOT DATE = 7/11/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>LANDSCAPING PLAN</b>			
<b>151st STREET</b>			
SCALE: 1" = 20'	SHEET 4	OF 5 SHEETS	STA. 125+00.00 TO STA. END

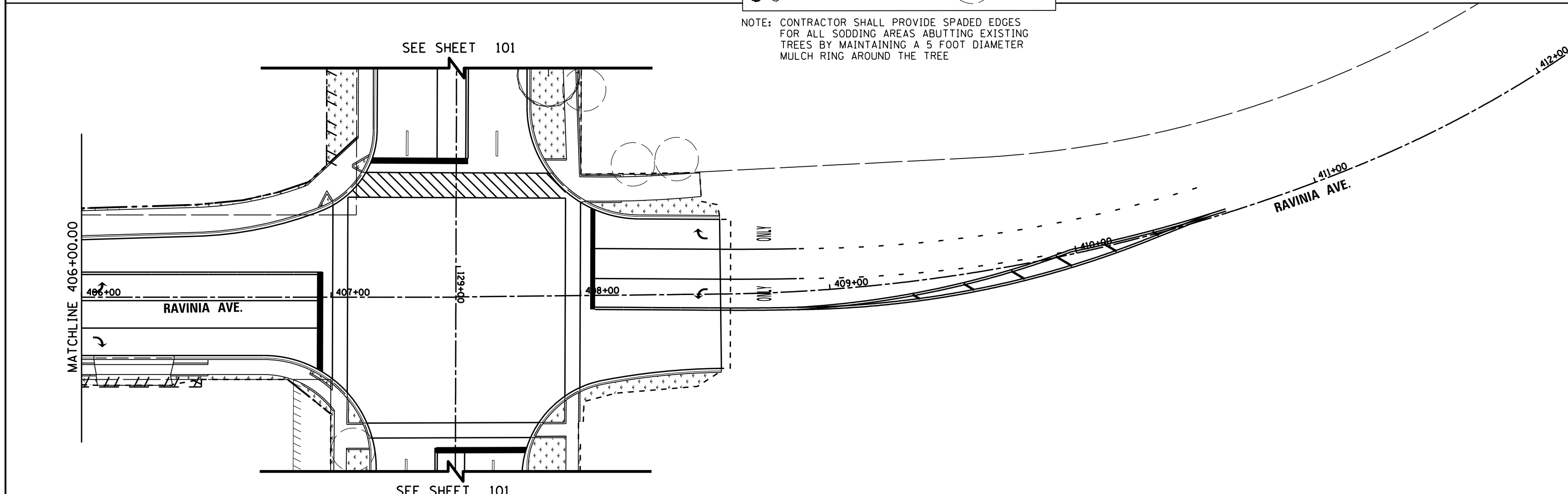
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	107
<b>CONTRACT NO. 61F86</b>				
<small>ILLINOIS FED. AID PROJECT</small>				



**LEGEND**

	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 4"		PROP. TREE PLANTING
	SODDING, SALT TOLERANT AND TOPSOIL FURNISH AND PLACE, 24"		EXIST. TREE TO REMAIN
	PROP. SHRUB OR PERENNIAL		

NOTE: CONTRACTOR SHALL PROVIDE SPADED EDGES FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A 5 FOOT DIAMETER MULCH RING AROUND THE TREE



FILE NAME = N:\ORLANDPARK\150272.ph2\Consultants\1001\Cadd_Deliverable\DI61F86-sh1-LSCP-05.dgn	USER NAME = pmagnelli	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LANDSCAPING PLAN RAVINIA AVE</b>			F.A.U. RTE. 1709	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 108
Default	PLOT SCALE = 48"	DRAWN -	REVISED -		SCALE: 1" = 20'	SHEET 5	OF 5 SHEETS	STA. 401+00	TO STA. 411+00	<b>CONTRACT NO. 61F86</b>		
	PLOT DATE = 7/11/2019	CHECKED -	REVISED -							ILLINOIS FED. AID PROJECT		
		DATE -	REVISED -									



# TRAFFIC SIGNAL LEGEND

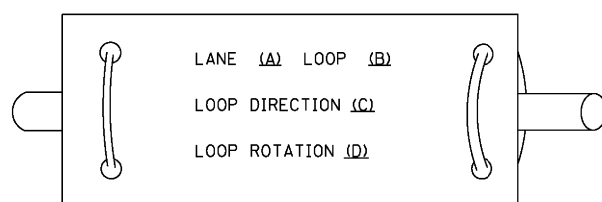
(NOT TO SCALE)

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								

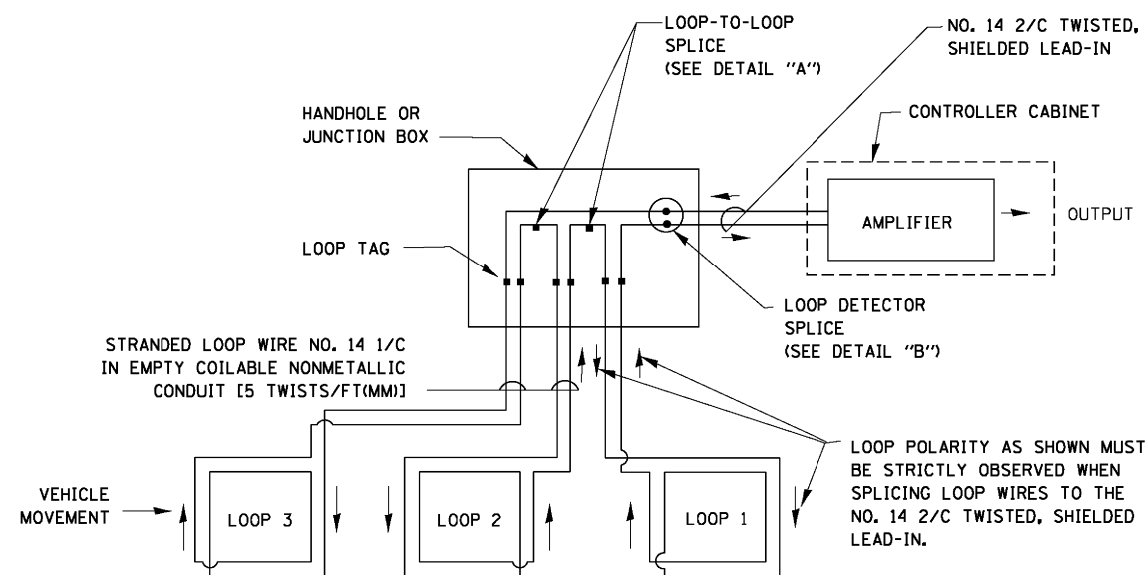
**LOOP DETECTOR NOTES**

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**

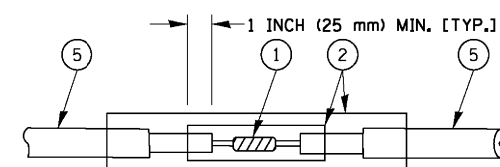


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

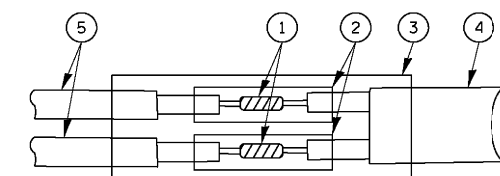


**DETECTOR LOOP WIRING SCHEMATIC**

- 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.

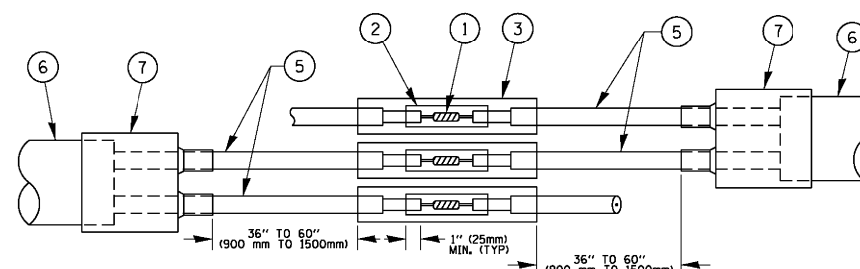


DETAIL "A"  
LOOP-TO-LOOP SPLICE

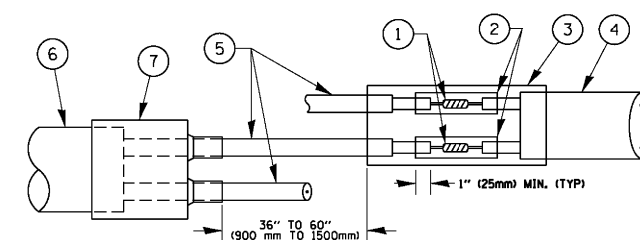


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

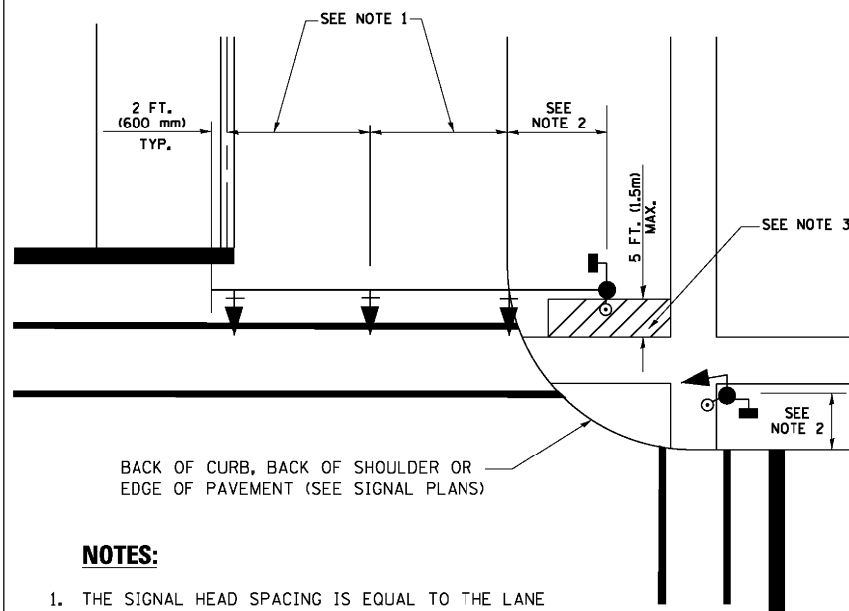
**PREFORMED LOOP**

**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 LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. ~~TYPE CBR 2 OR APPROVED EQUAL~~

FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			F.A.J. RTE. 1603/3000	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 110
et:\pwwork\pwi\dott\footemj\d0108315\ts05.dgn	PLOT SCALE = 50.0000' / in.	DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 2 OF 7 SHEETS	STA. TO STA.	<b>TS-05</b>		CONTRACT NO. 61F86		
	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
		DATE - 10-28-09	REVISED -									

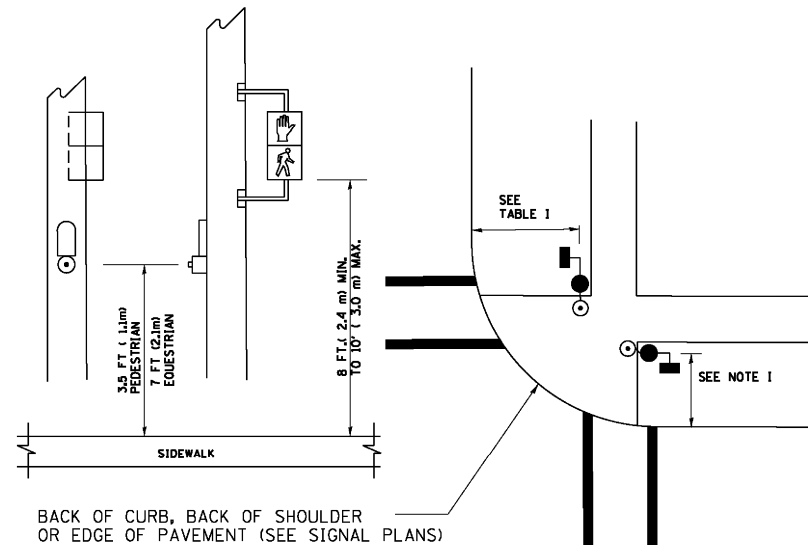
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST  
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR  
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN  
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



**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."

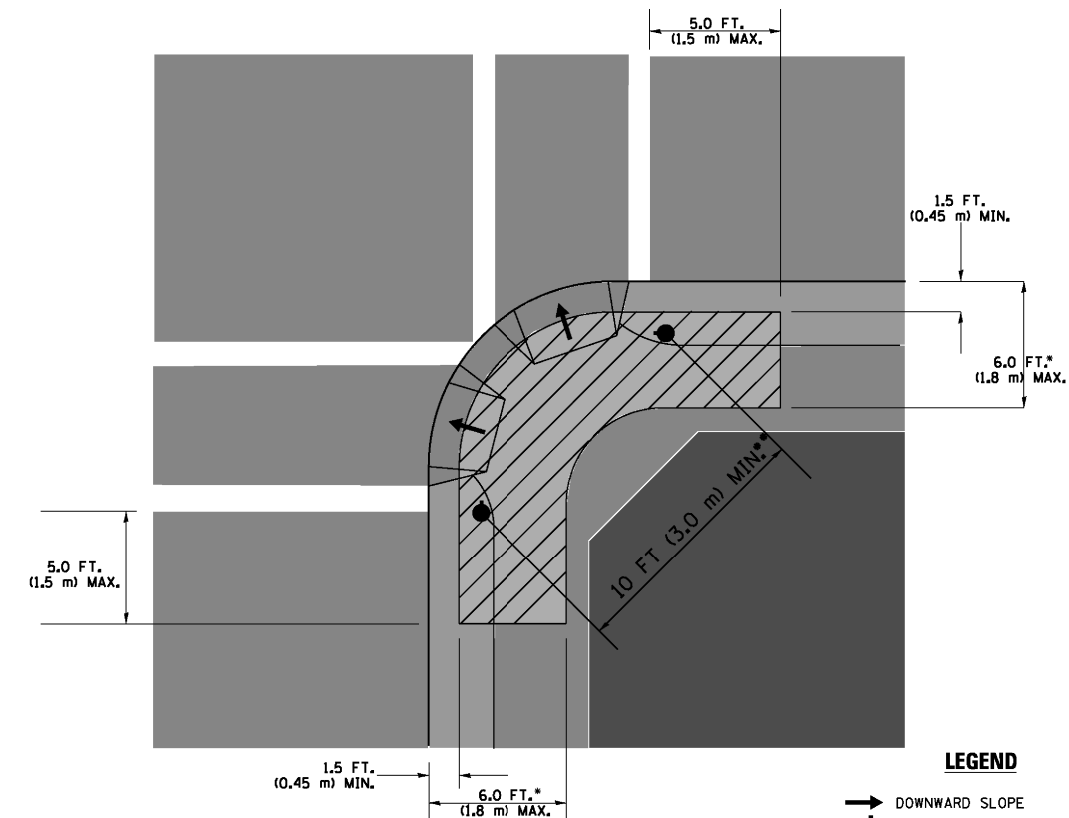
**PEDESTRIAN SIGNAL POST  
AND  
PEDESTRIAN PUSH BUTTON POST**



**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) SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

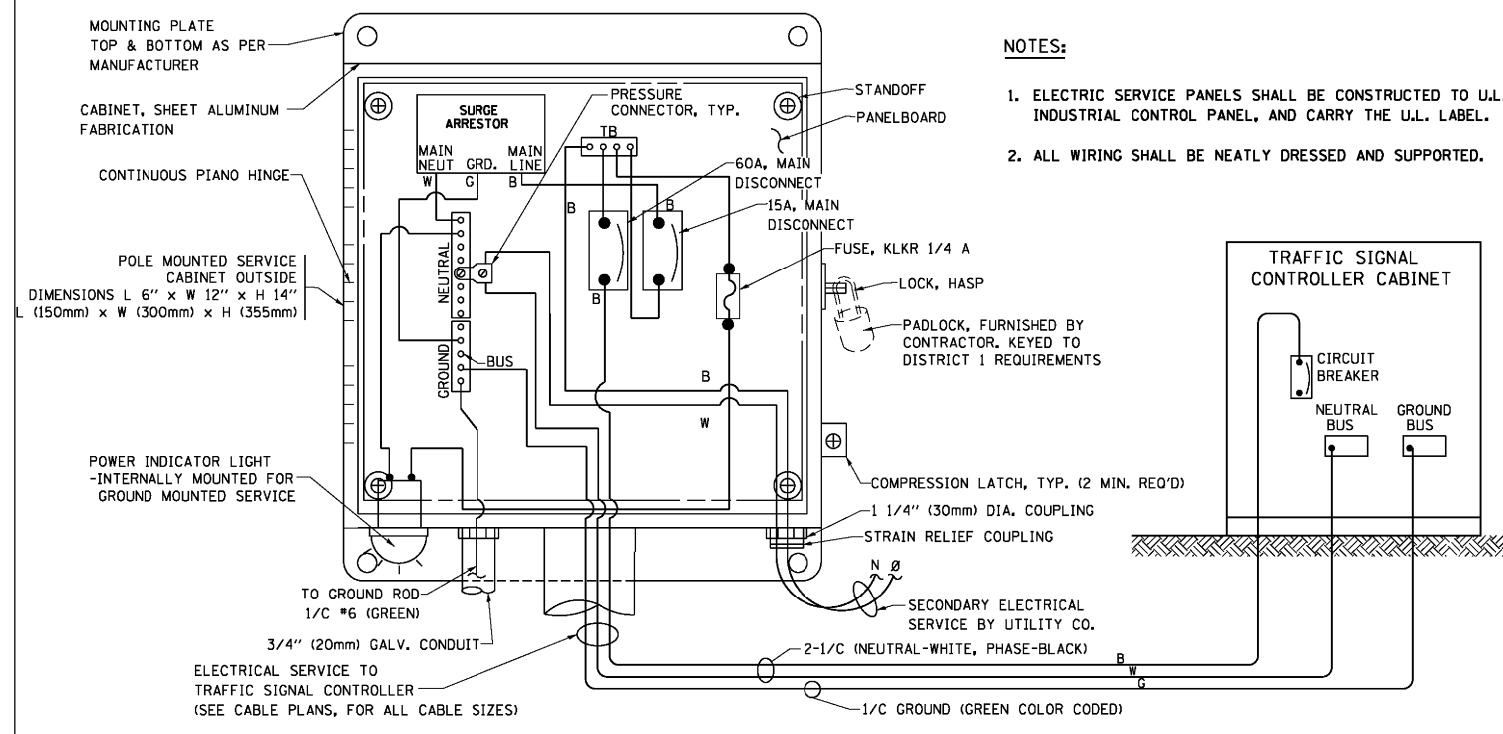
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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**

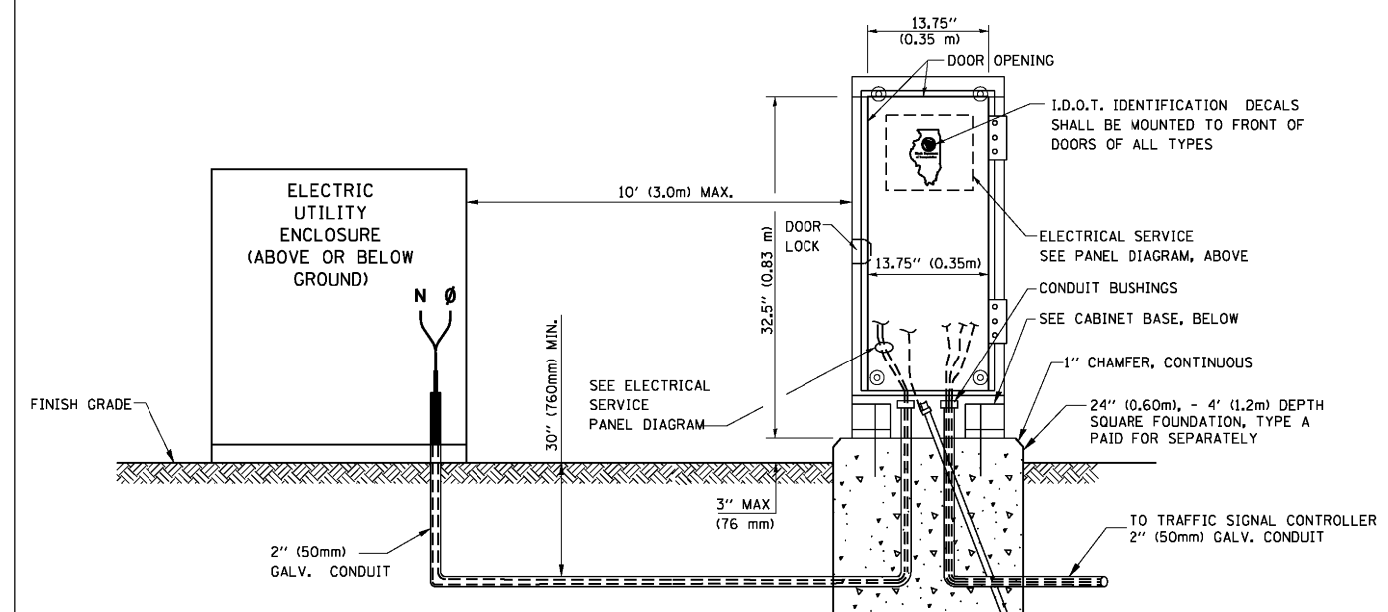
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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.

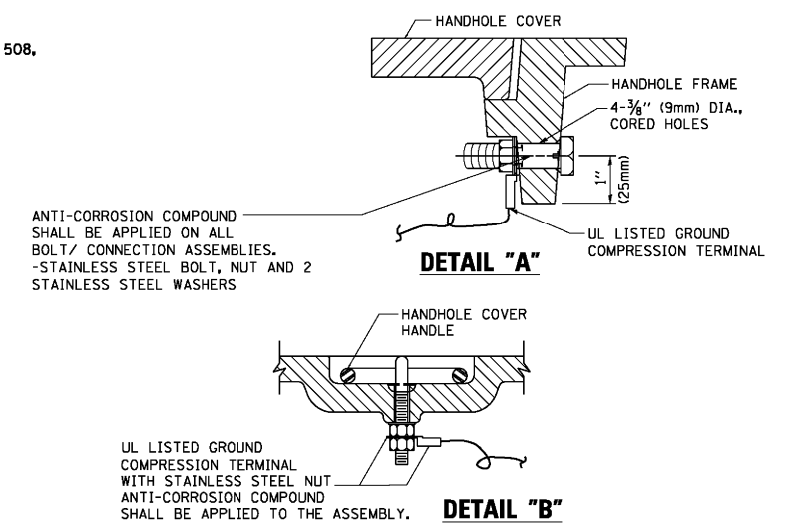
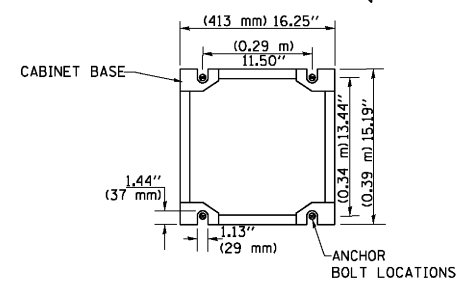


**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)**



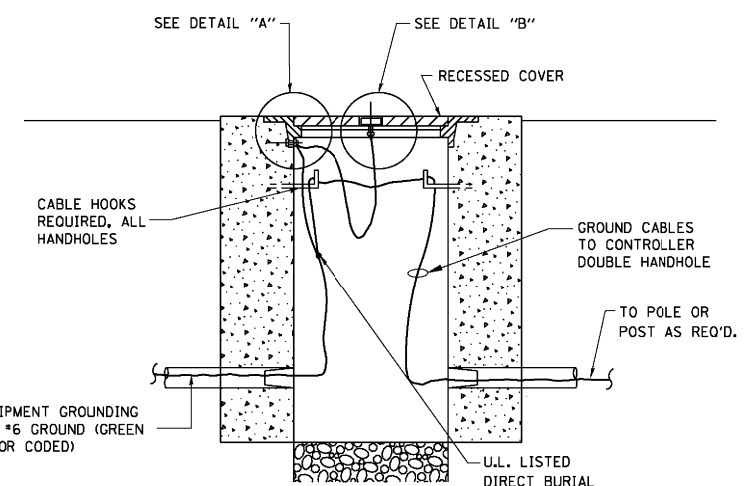
**SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)**

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

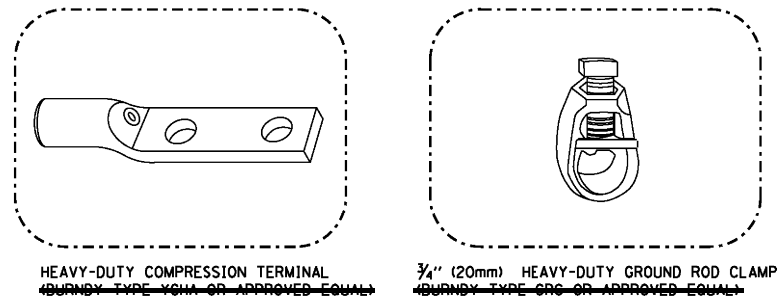


**NOTES:**  
**GROUNDING SYSTEM**

- 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.

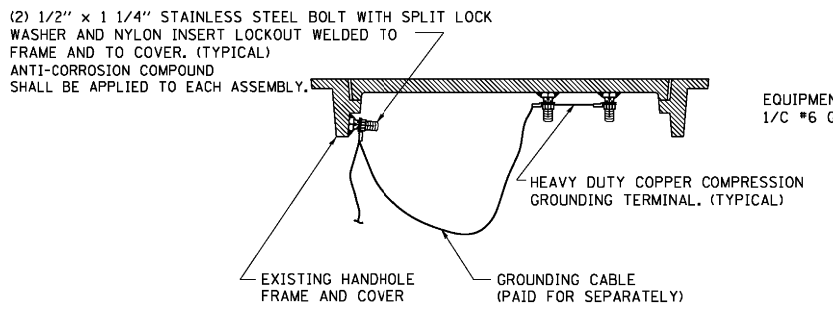


**HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)**

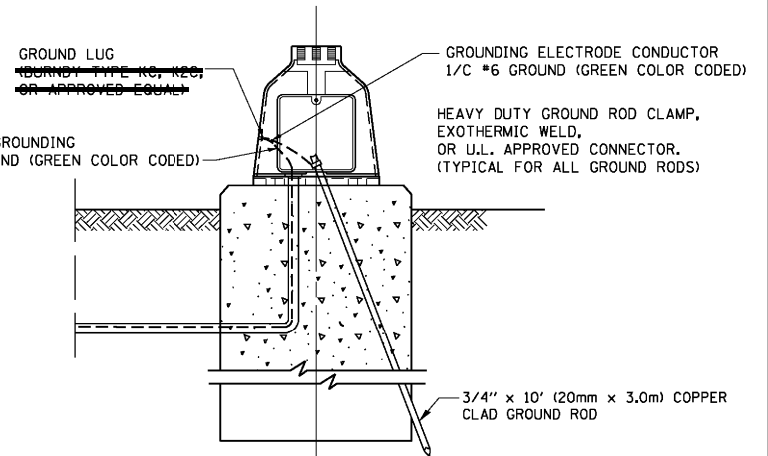


**NOTES:**

- 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.

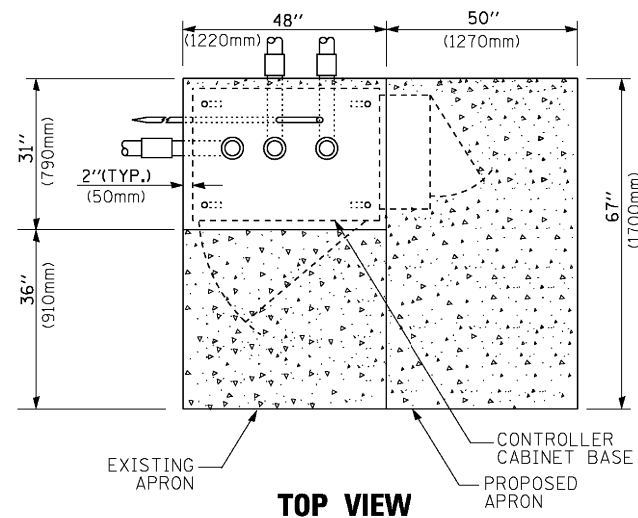


**EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)**

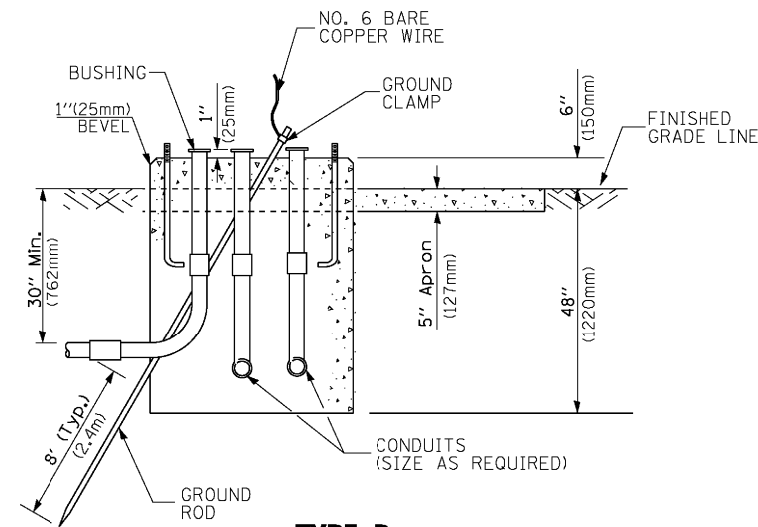


**MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)**

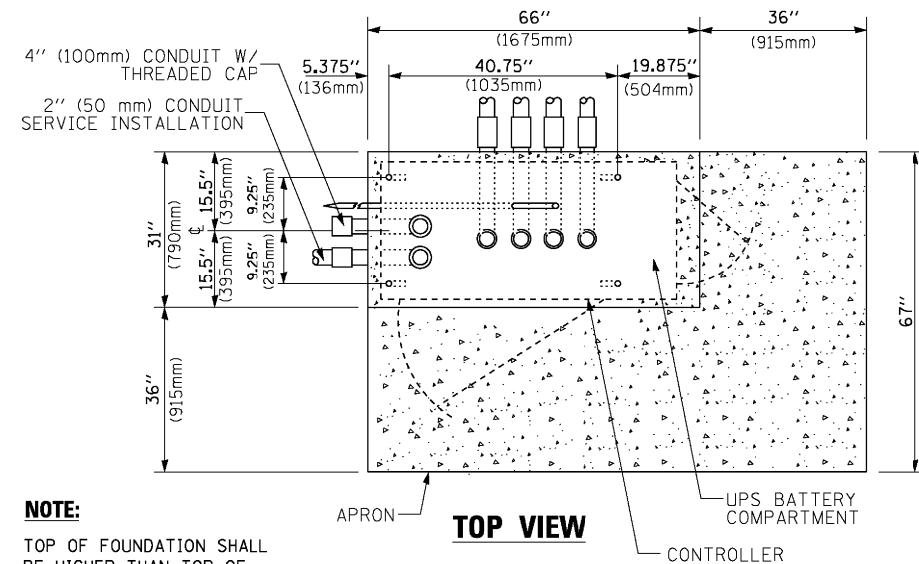
FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 1/13/2014	DATE - 10-28-09	CHECKED - DAD	REVISED -			<b>TS-05</b>					
						CONTRACT NO. 61F86					
						SCALE: NONE SHEET NO. 4 OF 7 SHEETS STA. TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



**TOP VIEW**



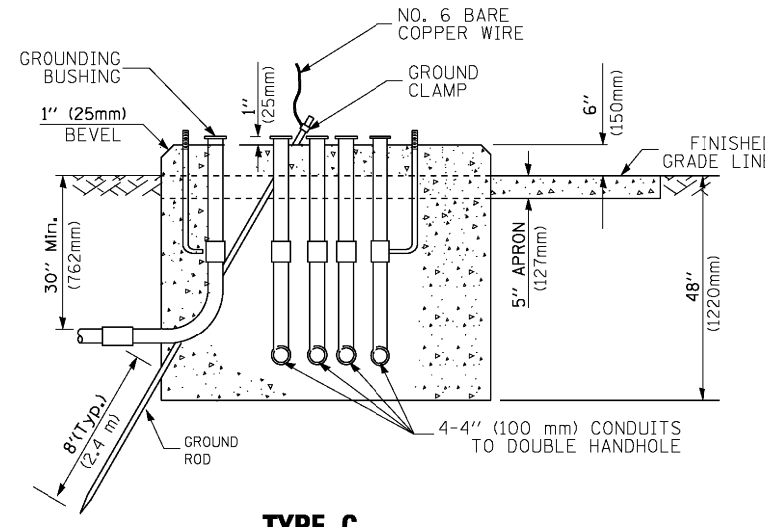
**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**



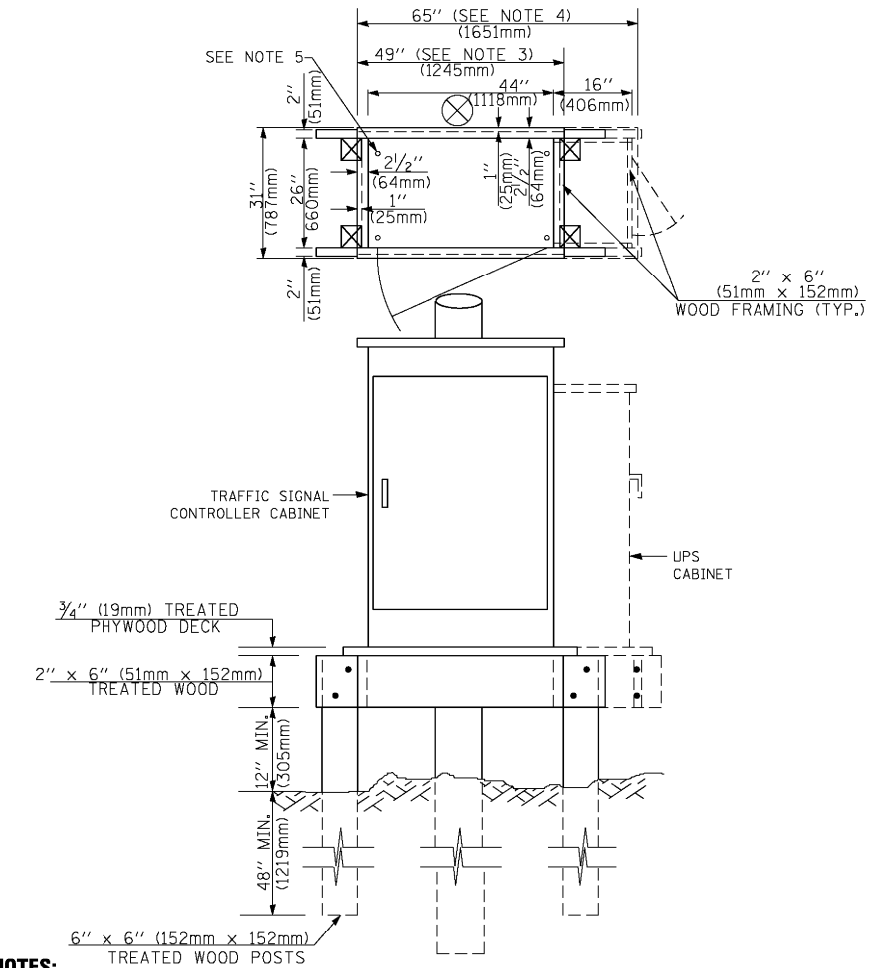
**TOP VIEW**

**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:**

1. 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.
2. 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.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. 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.
6. 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)

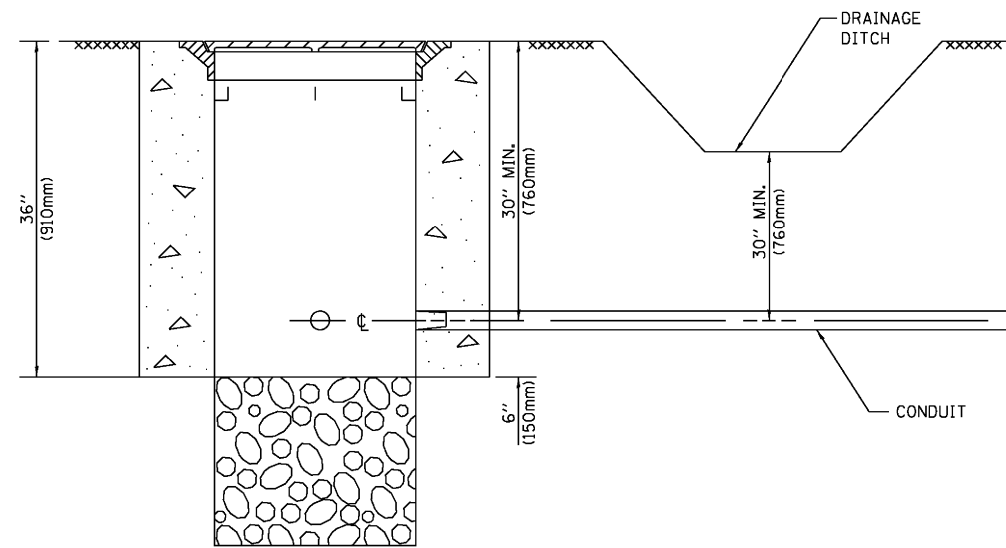
**DEPTH OF FOUNDATION**

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)	24" (600mm)	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 less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

**NOTES:**

1. 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.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001..

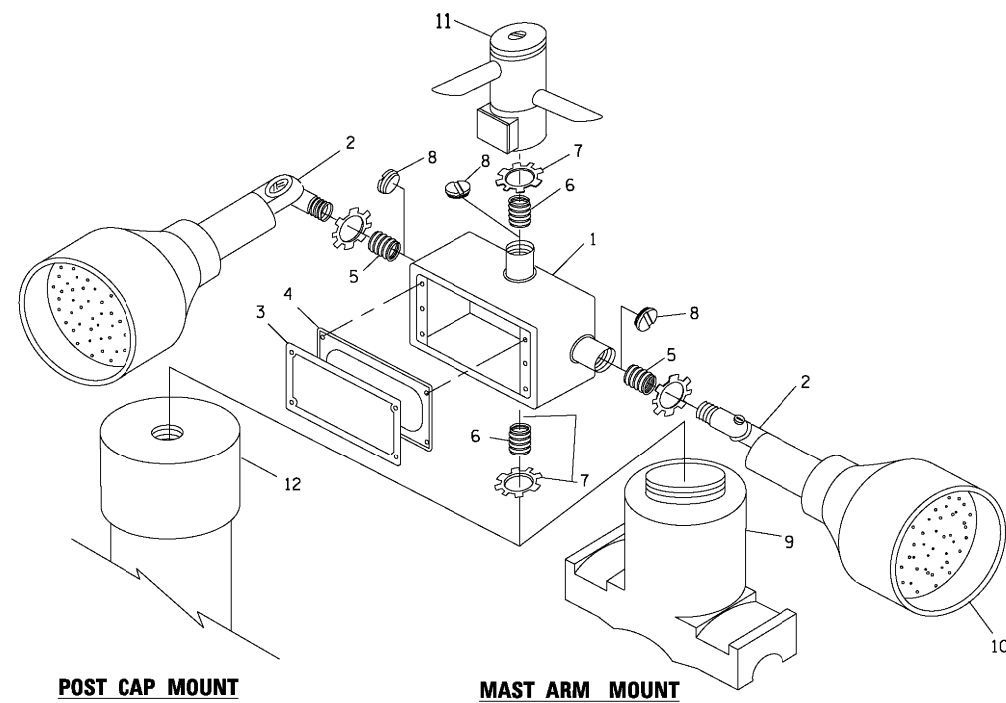
**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**



**NOTES:**

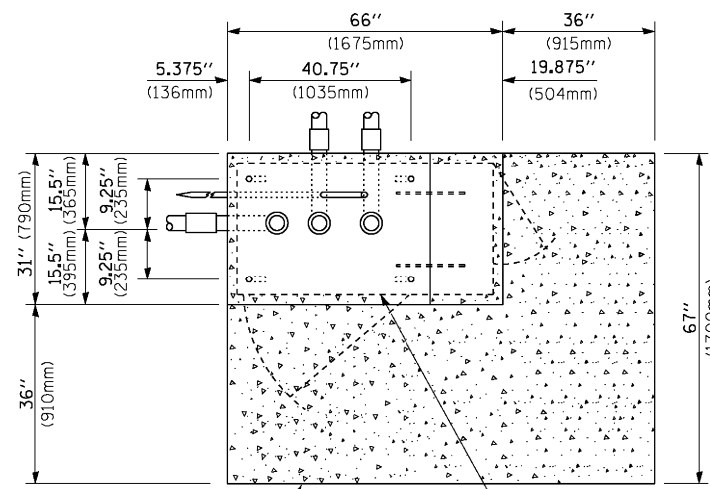
1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY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

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

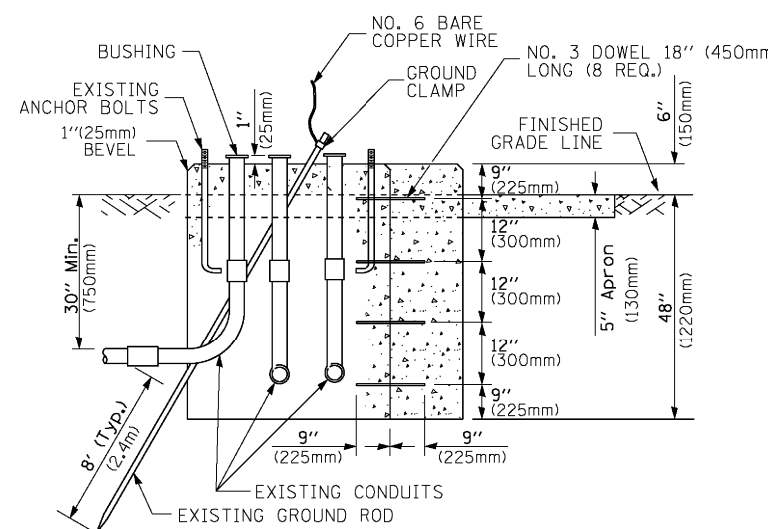


**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL**

FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14
ca:\pwwork\pwwork\footemj\d0108315\ts05.dgn		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000' / 1"	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -



**TOP VIEW**  
(NOT TO SCALE)

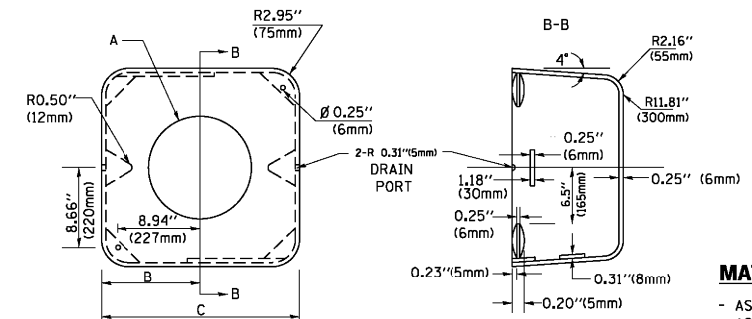


**MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION**  
(NOT TO SCALE)

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 02/SEDNEY FG 1 50 OR EQUIVALENT~~  
~~ITEM #2 MULBERRY CON 0 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.



**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)

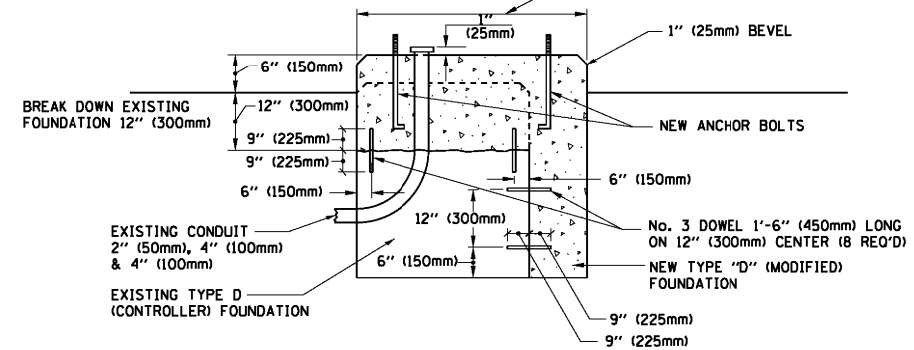
**SHROUD**

**NOTES:**

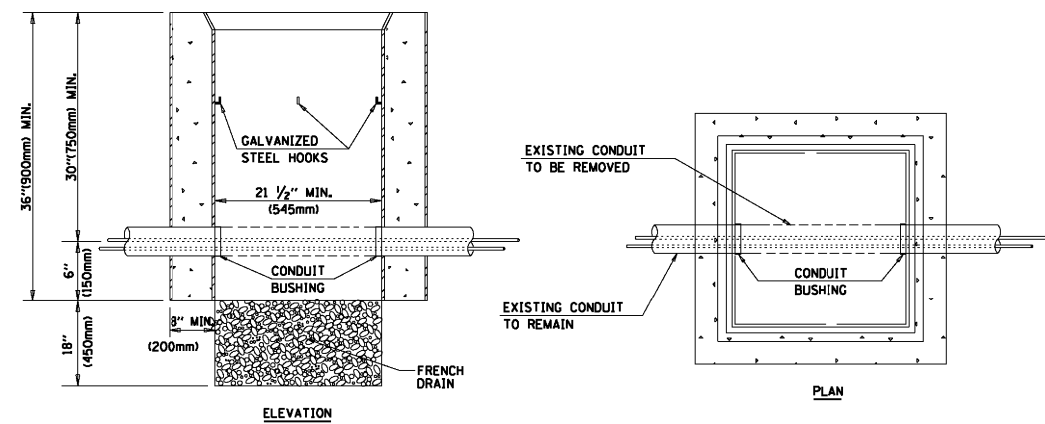
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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



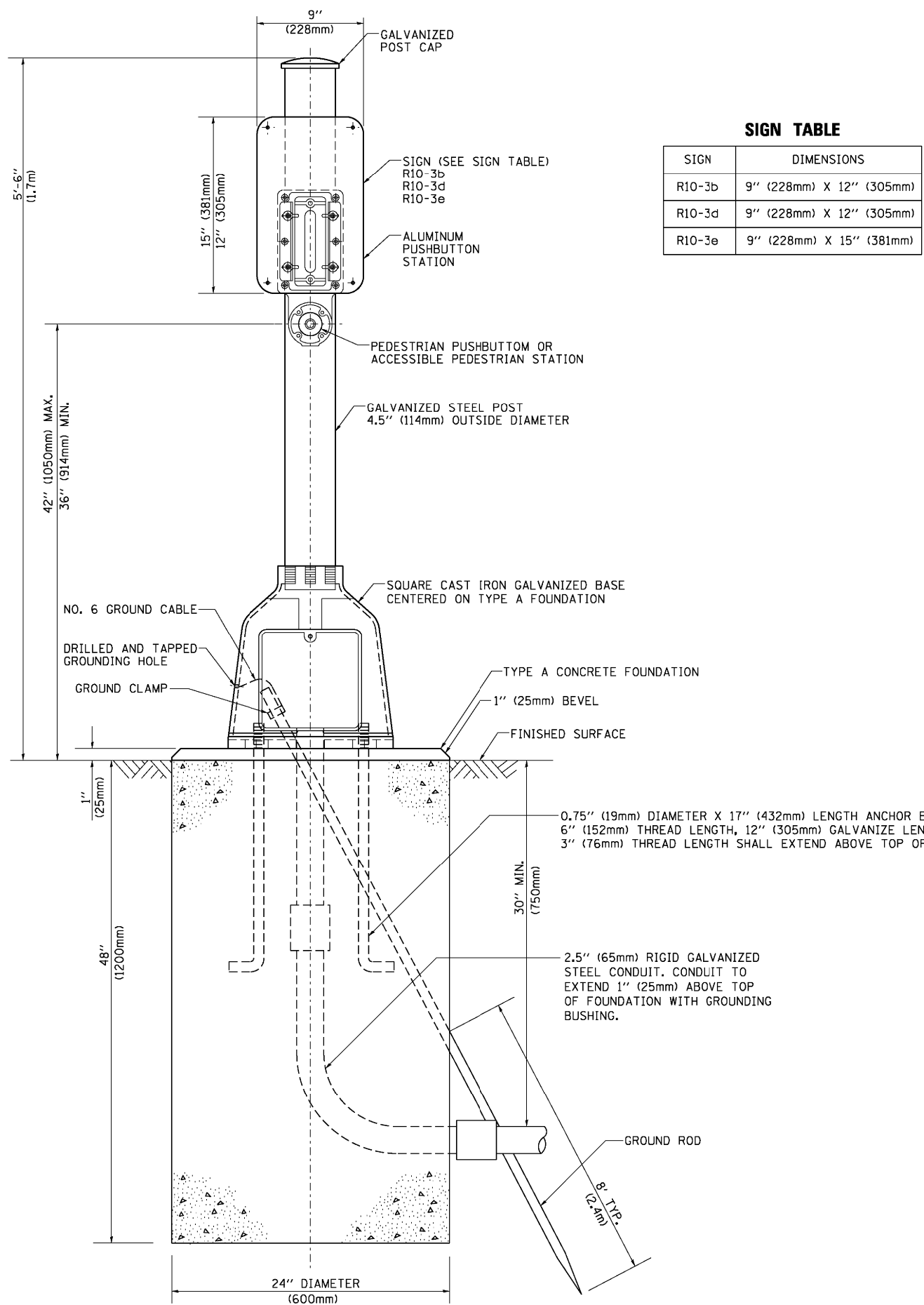
**NOTES:**

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**

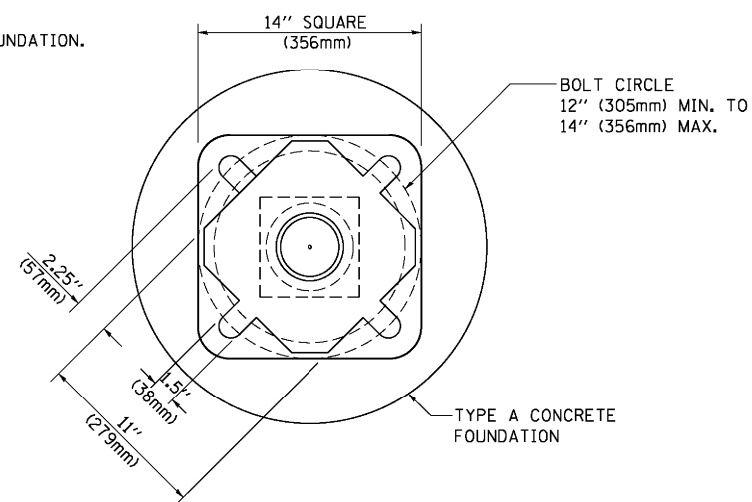
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE**  
**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**



**SIGN TABLE**

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



**BOLT PATTERN**

**PEDESTRIAN PUSH BUTTON POST, TYPE A**

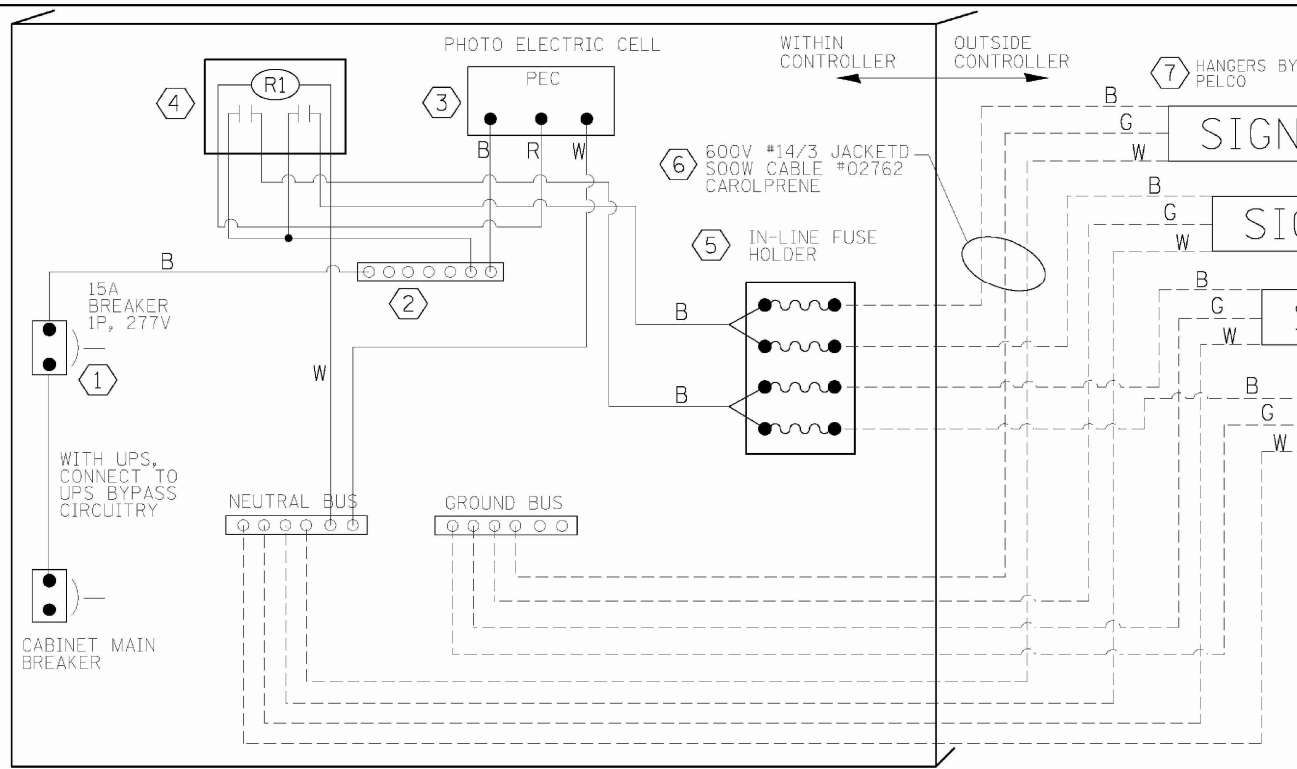
FILE NAME =	USER NAME = footemj	DESIGNED - DAG	REVISED - DAG 1-1-14
ct:\pwork\pwi\dot\footemj\d0108315\ts05.dgn		DRAWN - GND	REVISED -
	PLOT SCALE = 50.0000' / 1"	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 7 OF 7 SHEETS STA. TO STA.

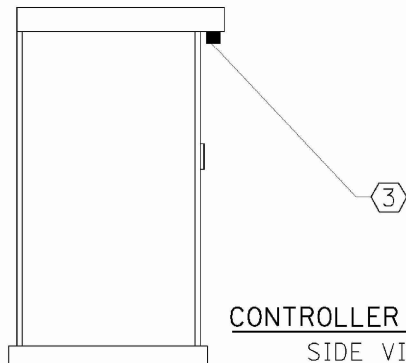
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	115
<b>TS-05</b>			<b>CONTRACT NO. 61F86</b>	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



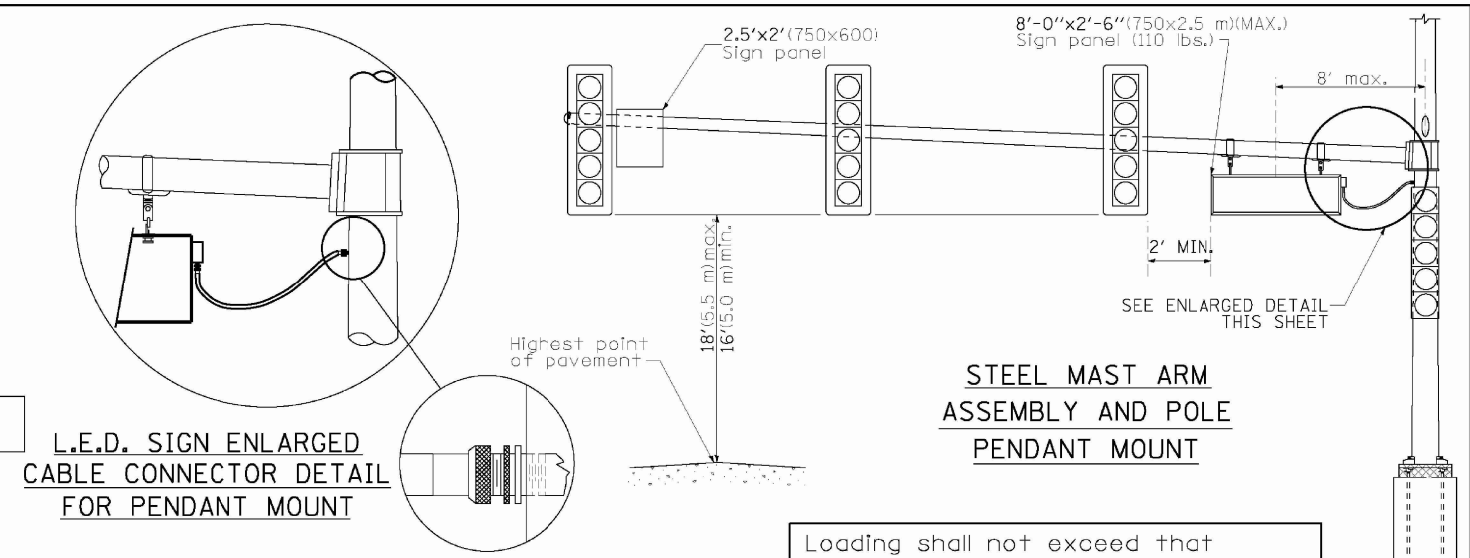
LED SIGN WIRING DETAIL

BILL OF MATERIALS

DESCRIPTION	MANUFACTURER	MODEL	NOTES
① CIRCUIT BREAKER		15 AMPERE	Molded case, Thermal Mag. min. R.I. of 14K R.M.S. symmetrical ampere at 277V.
② TERMINAL BLOCK	<del>MARATHON</del>	<del>1502-DJ5V</del>	
③ PHOTO ELECTRIC CONTROL	<del>FISHER PIERCE</del>	<del>B124 1.5 07762</del>	
④ CONTROL RELAY	<del>SQUARE D</del>	<del>8501X020V02</del>	BOLT ON W/SCREW TERMINAL
⑤ INLINE FUSE HOLDER WITH 5 AMP FUSE	<del>BUSSMAN</del>	<del>S 8000 BK/S 0 3 4 R</del>	
⑥ ELECTRIC CABLE, NO. 14, 3/C (BLACK, WHITE, GREEN)	CAROLPRENE/500W	02762	
⑦ SIGN MOUNTING HARDWARE	<del>PELCO</del>	Pendant ( <del>SE 5015</del> ) Direct mount ( <del>AD 0104 L SP</del> ) Additional sign stiffeners may be required for direct mounted signs.	S.S. HARDWARE



CONTROLLER CABINET SIDE VIEW

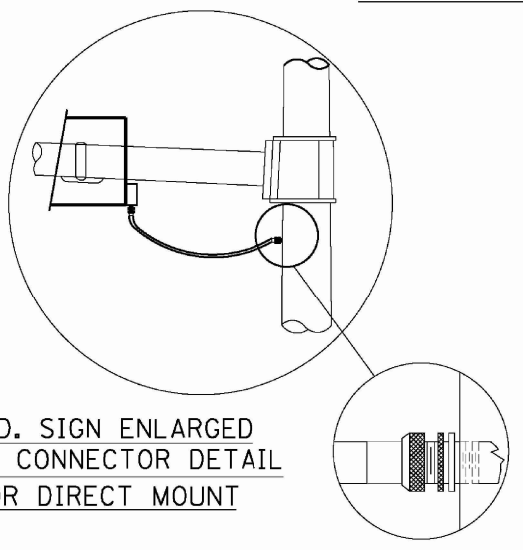


L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL FOR PENDANT MOUNT

L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL

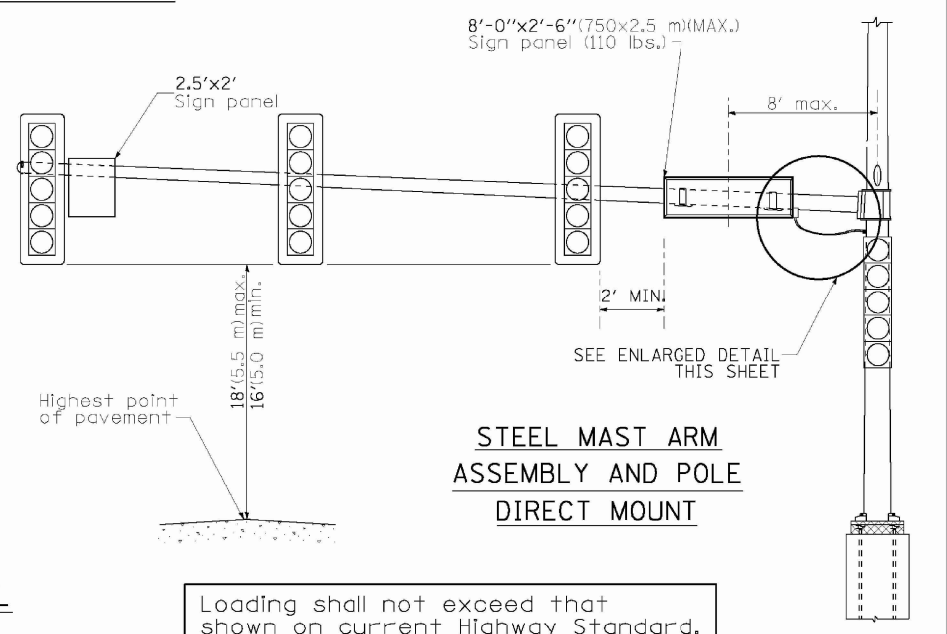
STEEL MAST ARM ASSEMBLY AND POLE PENDANT MOUNT

Loading shall not exceed that shown on current Highway Standard.



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL FOR DIRECT MOUNT

L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL



STEEL MAST ARM ASSEMBLY AND POLE DIRECT MOUNT

Loading shall not exceed that shown on current Highway Standard.



LED ILLUMINATED SIGN PANEL

8'0 x 2'6" (750 mm x 2.5 mm)(MAX)  
C or D FONT

NOTES:

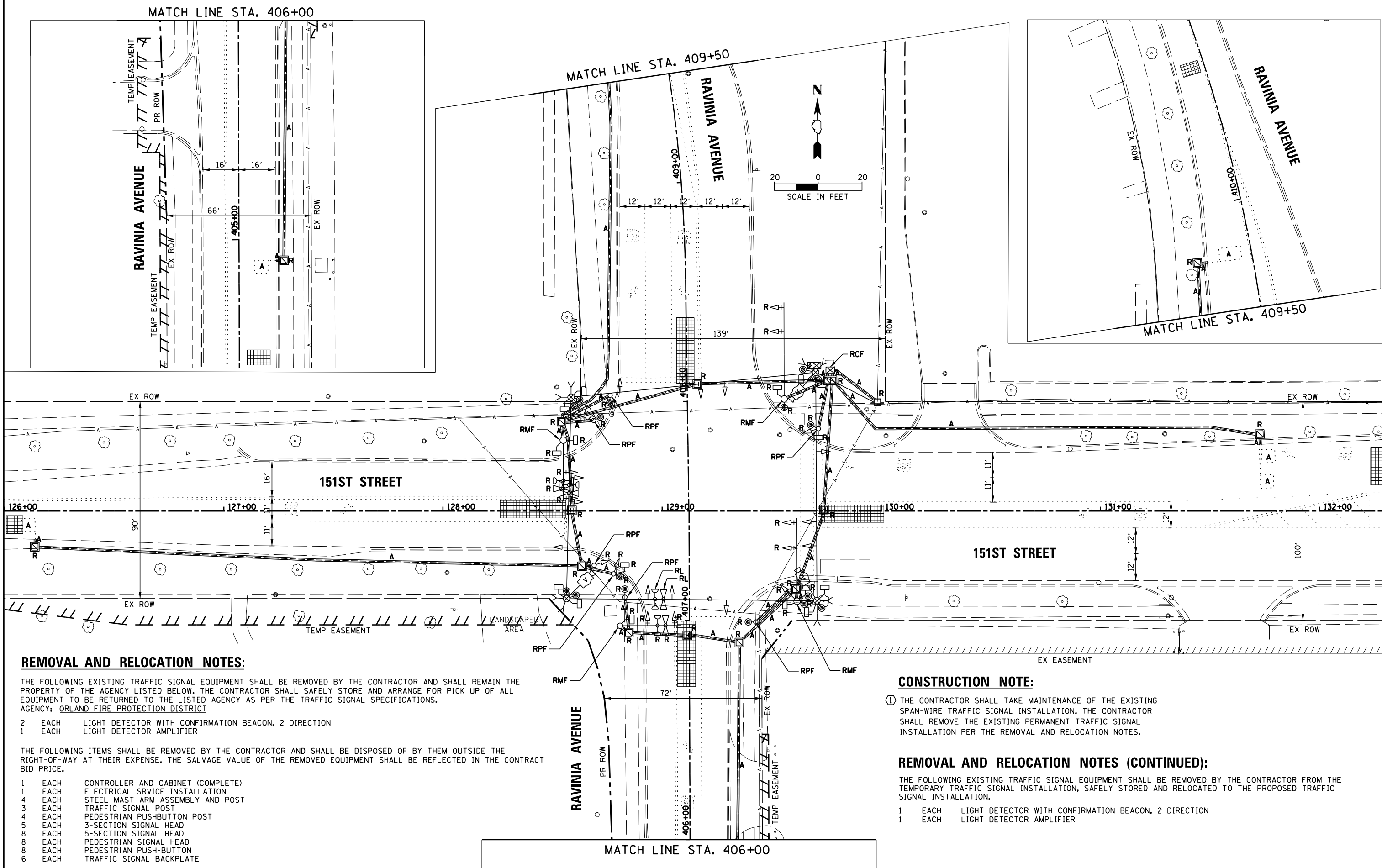
- SIGNS SHALL BE SINGLE SIDED FOR DIRECT MOUNT AND DOUBLE SIDED FOR PENDANT MOUNT.
- CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN. VERIFY WITH ENGINEER.
- SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS. THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:  
R = RED BL = BLUE W = WHITE  
B = BLACK Y = YELLOW G = GREEN
- ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #14AWG STRANDED UNLESS OTHERWISE INDICATED.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



PLAN	NO. _____
DATE	_____
BY	_____
SURVEYED	_____
PLOTTED	_____
ALIGNED	_____
CHECKED	_____
FILE NAME	_____

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1500 N. WILSON AVENUE, SUITE 400  
 CHICAGO, ILLINOIS 60642  
 (847) 823-9500

PROFILE	NO. _____
DATE	_____
BY	_____
SURVEYED	_____
PLOTTED	_____
GRADES CHECKED	_____
STRUCTURE	_____
NOTATIONS	_____



**REMOVAL AND RELOCATION NOTES:**

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.  
 AGENCY: ORLAND FIRE PROTECTION DISTRICT

- 2 EACH LIGHT DETECTOR WITH CONFIRMATION BEACON, 2 DIRECTION
- 1 EACH LIGHT DETECTOR AMPLIFIER

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 CONTROLLER AND CABINET (COMPLETE)
- 1 EACH ELECTRICAL SERVICE INSTALLATION
- 4 EACH STEEL MAST ARM ASSEMBLY AND POST
- 3 EACH TRAFFIC SIGNAL POST
- 4 EACH PEDESTRIAN PUSHBUTTON POST
- 5 EACH 3-SECTION SIGNAL HEAD
- 8 EACH 5-SECTION SIGNAL HEAD
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 6 EACH TRAFFIC SIGNAL BACKPLATE

**CONSTRUCTION NOTE:**

- ① THE CONTRACTOR SHALL TAKE MAINTENANCE OF THE EXISTING SPAN-WIRE TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL REMOVE THE EXISTING PERMANENT TRAFFIC SIGNAL INSTALLATION PER THE REMOVAL AND RELOCATION NOTES.

**REMOVAL AND RELOCATION NOTES (CONTINUED):**

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, SAFELY STORED AND RELOCATED TO THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

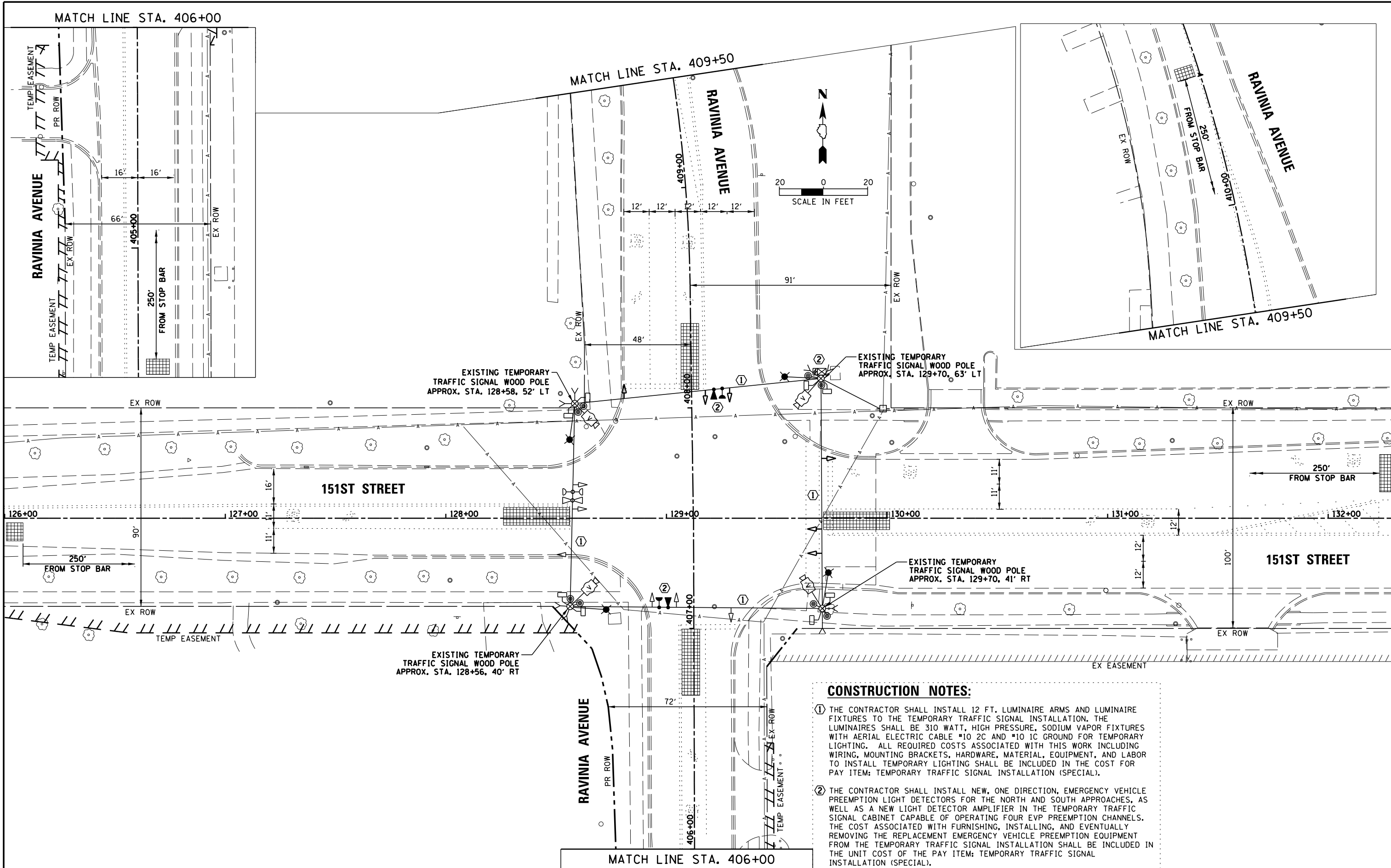
- 1 EACH LIGHT DETECTOR WITH CONFIRMATION BEACON, 2 DIRECTION
- 1 EACH LIGHT DETECTOR AMPLIFIER

FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN 151ST STREET AND RAVINIA AVENUE</b>	F.A.U. R.T.E. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\ORLANDPARK\1502722_ph2\Consultants\1001	Cadd_Deliverable\DI61F86-sht-TS-01.REM.dgn	DRAWN - FPB	REVISED -			1603/3000	13-00071-00-WR	COOK	162	117
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			<b>CONTRACT NO. 61F86</b>				
	PLOT DATE = 7/11/2019	DATE -	REVISED -			SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	NOTE BOOK		
	NO.		
	CHECKED		
	FILE NAME		

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1100 N. WILSON AVENUE, SUITE 600  
 CHICAGO, ILLINOIS 60642  
 (847) 823-9500

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	NOTE BOOK		
	NO.		
	CHECKED		
	NOTATION		



**CONSTRUCTION NOTES:**

① THE CONTRACTOR SHALL INSTALL 12 FT. LUMINAIRE ARMS AND LUMINAIRE FIXTURES TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE LUMINAIRES SHALL BE 310 WATT, HIGH PRESSURE, SODIUM VAPOR FIXTURES WITH AERIAL ELECTRIC CABLE #10 2C AND #10 1C GROUND FOR TEMPORARY LIGHTING. ALL REQUIRED COSTS ASSOCIATED WITH THIS WORK INCLUDING WIRING, MOUNTING BRACKETS, HARDWARE, MATERIAL, EQUIPMENT, AND LABOR TO INSTALL TEMPORARY LIGHTING SHALL BE INCLUDED IN THE COST FOR PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL).

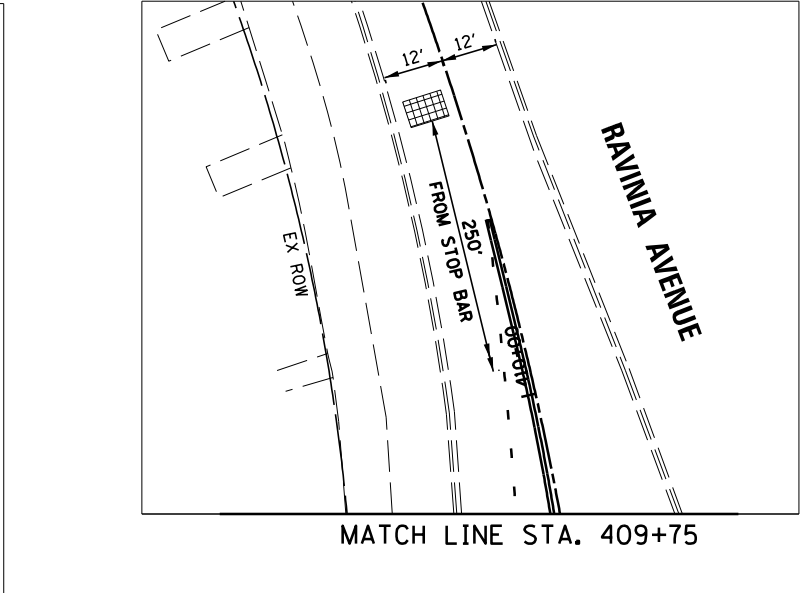
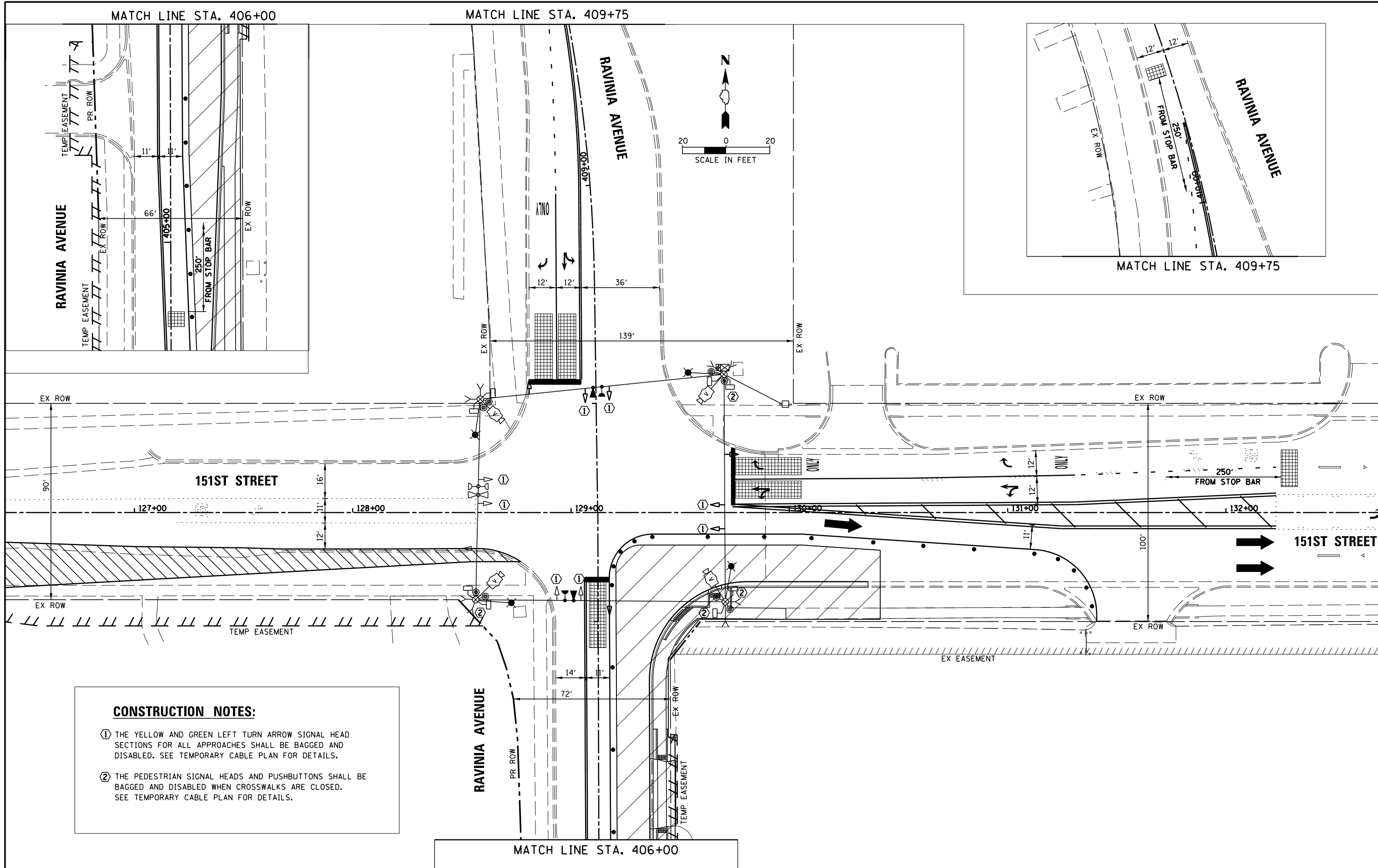
② THE CONTRACTOR SHALL INSTALL NEW, ONE DIRECTION, EMERGENCY VEHICLE PREEMPTION LIGHT DETECTORS FOR THE NORTH AND SOUTH APPROACHES, AS WELL AS A NEW LIGHT DETECTOR AMPLIFIER IN THE TEMPORARY TRAFFIC SIGNAL CABINET CAPABLE OF OPERATING FOUR EVP PREEMPTION CHANNELS. THE COST ASSOCIATED WITH FURNISHING, INSTALLING, AND EVENTUALLY REMOVING THE REPLACEMENT EMERGENCY VEHICLE PREEMPTION EQUIPMENT FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE INCLUDED IN THE UNIT COST OF THE PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL).

FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL MODIFICATION PLAN</b> <b>151ST STREET AND RAVINIA AVENUE</b>	F.A.U. RT. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\ORLANDPARK\1502722.ph2\Consultants\1001	Cadd\Deliverable\DI61F86-sh1-TS-02.TMP.dgn	DRAWN - FPB	REVISED -			1603/3000	13-00071-00-WR	COOK	162	118
Default	PLOT SCALE = 48'	CHECKED - GMZ	REVISED -			<b>CONTRACT NO. 61F86</b>				
	PLOT DATE = 7/11/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	FILED	
	NO. _____	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1511 W. 151ST STREET, SUITE 600  
 ROSEMONT, ILLINOIS 60018  
 (630) 823-9500

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO. _____	



**CONSTRUCTION NOTES:**

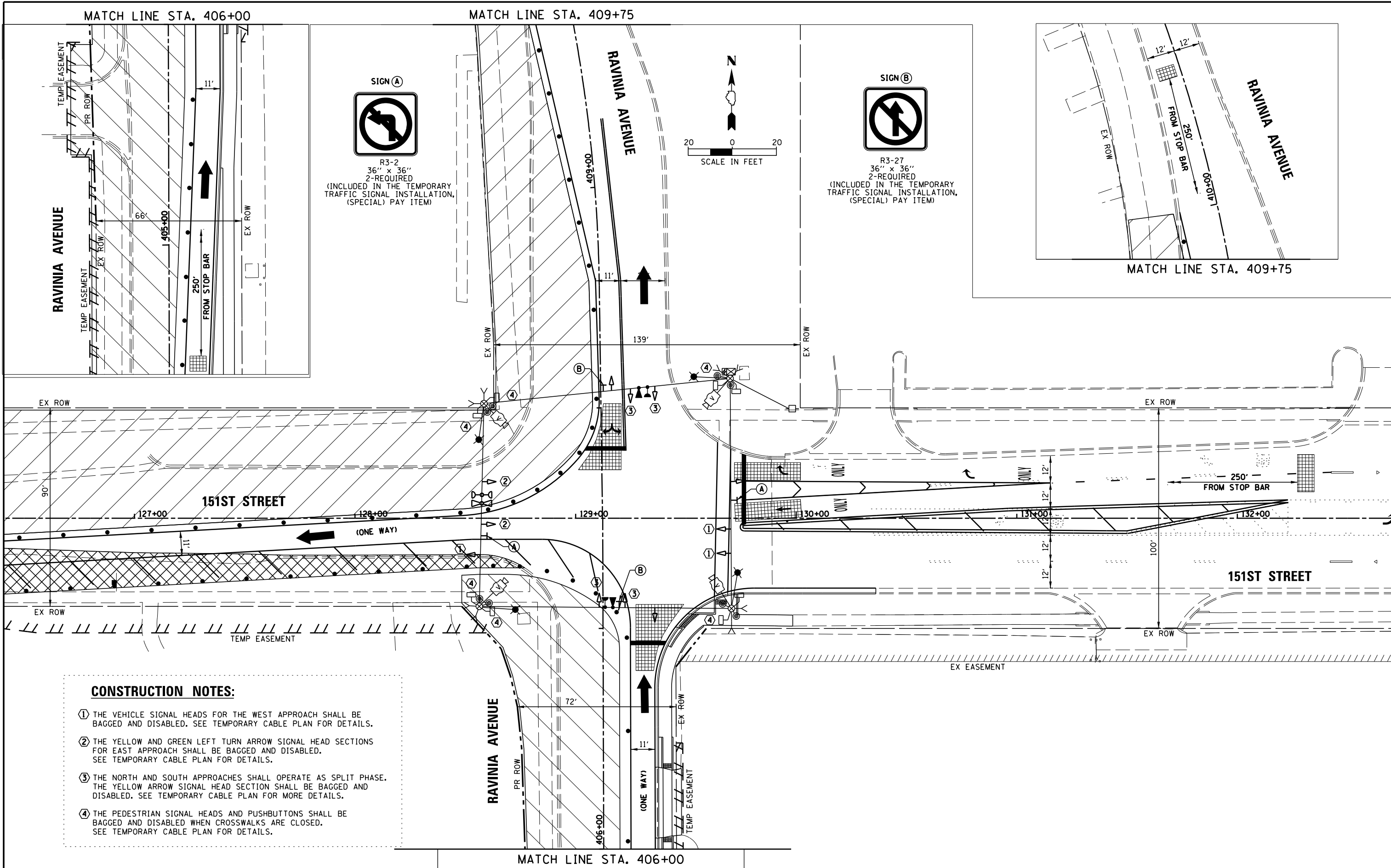
- ① THE YELLOW AND GREEN LEFT TURN ARROW SIGNAL HEAD SECTIONS FOR ALL APPROACHES SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
- ② THE PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS SHALL BE BAGGED AND DISABLED WHEN CROSSWALKS ARE CLOSED. SEE TEMPORARY CABLE PLAN FOR DETAILS.

FILE NAME = N:\ORLANDPARK\1502722_ph2\Consultants\1001	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC PRE-STAGING PLAN 151ST STREET AND RAVINIA AVENUE</b>	F.A.U. R.T.E. = 1603/3000	SECTION = 13-00071-00-WR	COUNTY = COOK	TOTAL SHEETS = 162	SHEET NO. = 119		
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			SHEET OF SHEETS	STA. TO STA.	<b>CONTRACT NO. 61F86</b>				
	PLOT DATE = 7/11/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	FILED	
	CARD FILE NAME	
	NO.	

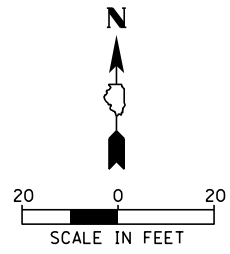
CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1000 N. LAUREL AVENUE, SUITE 600  
 ROSEMOUNT, ILLINOIS 60018  
 (847) 823-9500

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



**SIGN A**  
 R3-2  
 36" x 36"  
 2-REQUIRED  
 (INCLUDED IN THE TEMPORARY  
 TRAFFIC SIGNAL INSTALLATION,  
 (SPECIAL) PAY ITEM)

**SIGN B**  
 R3-27  
 36" x 36"  
 2-REQUIRED  
 (INCLUDED IN THE TEMPORARY  
 TRAFFIC SIGNAL INSTALLATION,  
 (SPECIAL) PAY ITEM)



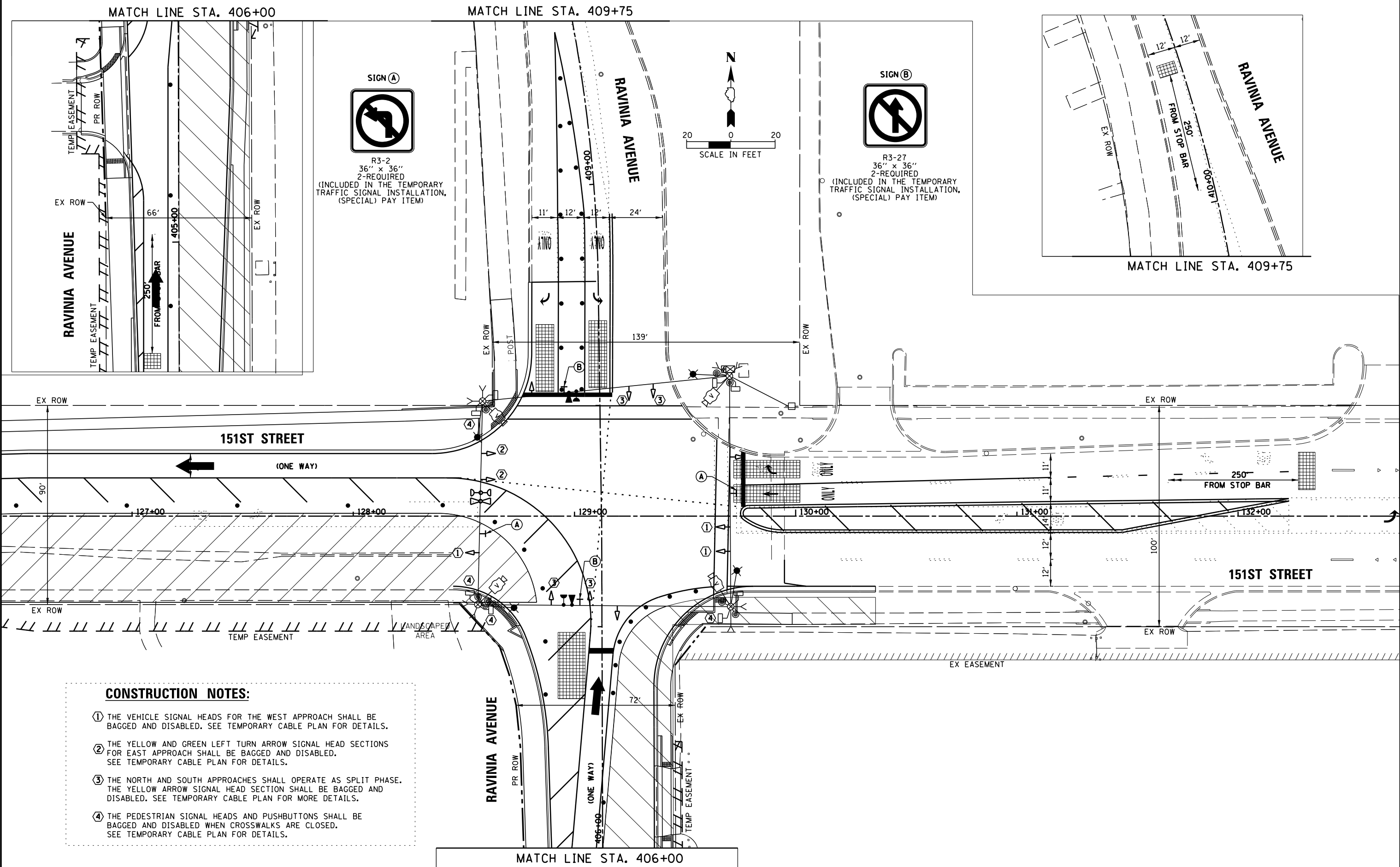
- CONSTRUCTION NOTES:**
- 1 THE VEHICLE SIGNAL HEADS FOR THE WEST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
  - 2 THE YELLOW AND GREEN LEFT TURN ARROW SIGNAL HEAD SECTIONS FOR EAST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
  - 3 THE NORTH AND SOUTH APPROACHES SHALL OPERATE AS SPLIT PHASE. THE YELLOW ARROW SIGNAL HEAD SECTION SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR MORE DETAILS.
  - 4 THE PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS SHALL BE BAGGED AND DISABLED WHEN CROSSWALKS ARE CLOSED. SEE TEMPORARY CABLE PLAN FOR DETAILS.

FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC - STAGE 1 151ST STREET AND RAVINIA AVENUE</b>	F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\ORLANDPARK\1502722_ph2\Consultants\1001	Cadd_Deliverable\DI61F86-shr-TS-04_MOT-Stage	DRAWN - FPB	REVISED -			1603/3000	13-00071-00-WR	COOK	162	120
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			<b>CONTRACT NO. 61F86</b>				
	PLOT DATE = 7/11/2019	DATE -	REVISED -			SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	NOTED	
	FILED	
	CARD	
	FILE	
	NAME	
	NO.	

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 ROSEMONT, ILLINOIS 60018  
 (630) 823-9500

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES	
	CHECKED	
	NOTED	
	FILED	
	CARD	
	FILE	
	NAME	
	NO.	



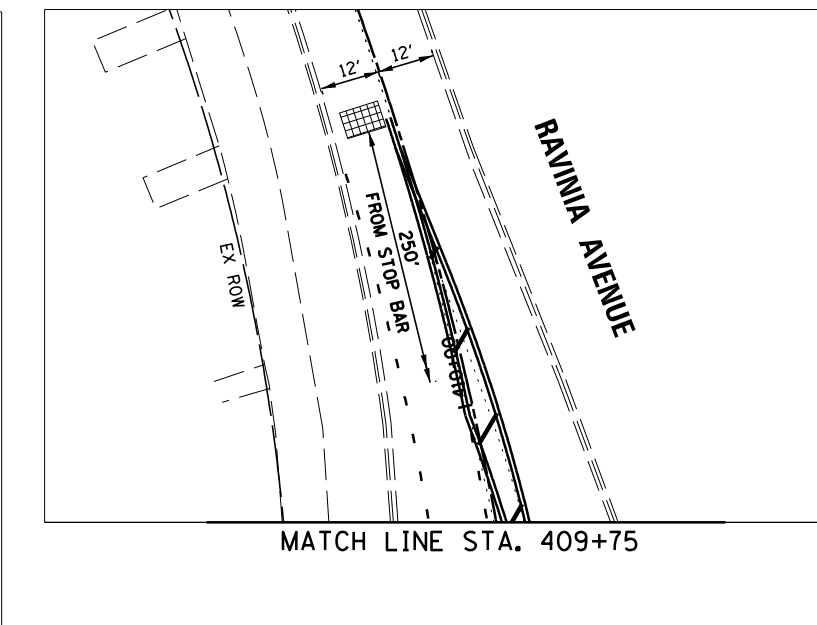
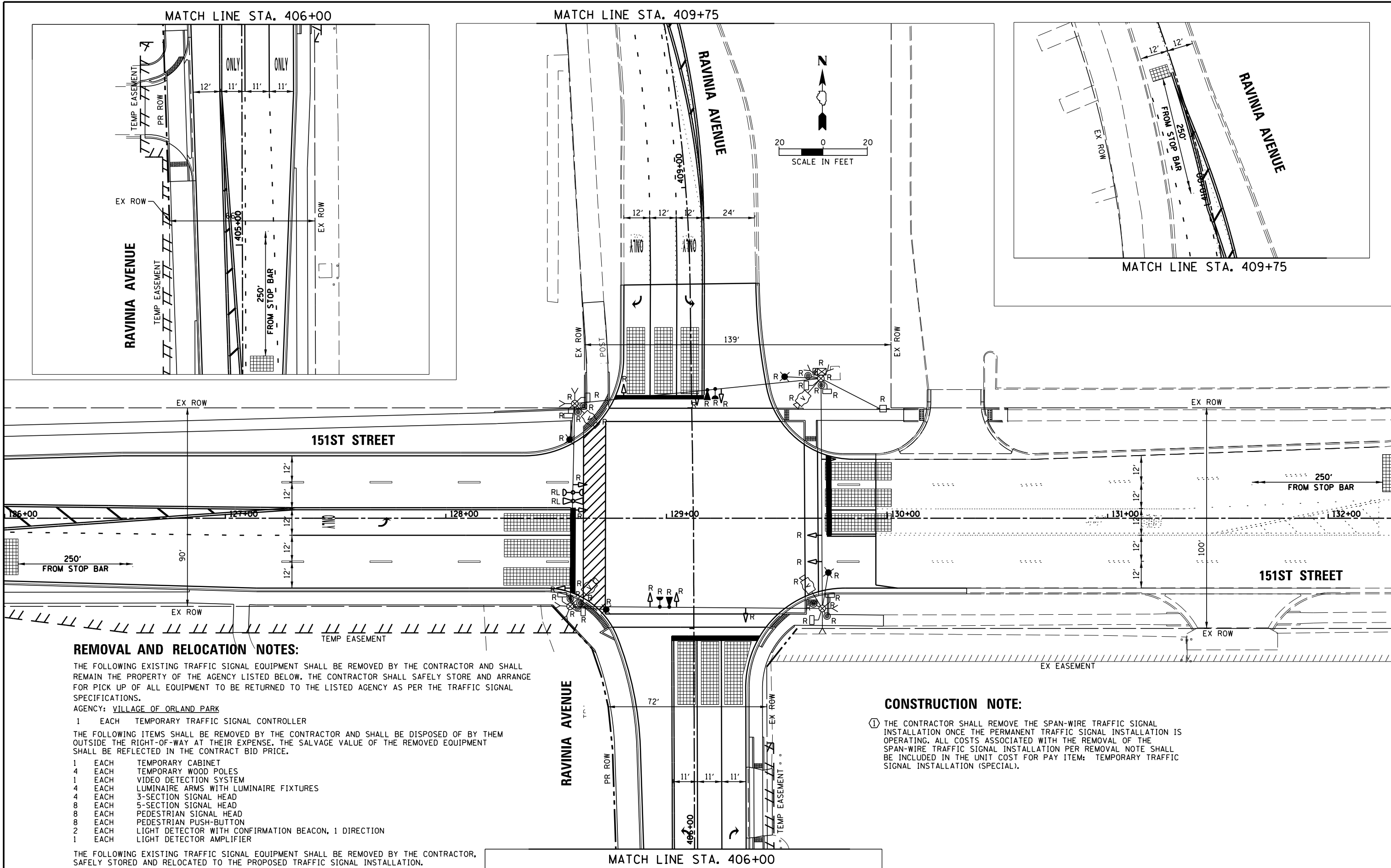
- CONSTRUCTION NOTES:**
- 1 THE VEHICLE SIGNAL HEADS FOR THE WEST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
  - 2 THE YELLOW AND GREEN LEFT TURN ARROW SIGNAL HEAD SECTIONS FOR EAST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
  - 3 THE NORTH AND SOUTH APPROACHES SHALL OPERATE AS SPLIT PHASE. THE YELLOW ARROW SIGNAL HEAD SECTION SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR MORE DETAILS.
  - 4 THE PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS SHALL BE BAGGED AND DISABLED WHEN CROSSWALKS ARE CLOSED. SEE TEMPORARY CABLE PLAN FOR DETAILS.

FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC - STAGE 2 151ST STREET AND RAVINIA AVENUE	F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\ORLANDPARK\1502722_ph2\Consultants\1001	Cadd_Deliverable\DI61F86-sht-TS-05_MOT-Stage	DRAWN - FPB	REVISED -			1603/3000	13-00071-00-WR	COOK	162	121
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			CONTRACT NO. 61F86				
	PLOT DATE = 7/11/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	NO.	
	CHECKED	
	CADD FILE NAME	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1000 N. STATE ST., SUITE 600  
 ORLAND PARK, IL 60451  
 (815) 823-9500

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



**REMOVAL AND RELOCATION NOTES:**

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: VILLAGE OF ORLAND PARK

- 1 EACH TEMPORARY TRAFFIC SIGNAL CONTROLLER

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 TEMPORARY CABINET
- 4 EACH TEMPORARY WOOD POLES
- 1 EACH VIDEO DETECTION SYSTEM
- 4 EACH LUMINAIRE ARMS WITH LUMINAIRE FIXTURES
- 4 EACH 3-SECTION SIGNAL HEAD
- 8 EACH 5-SECTION SIGNAL HEAD
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 2 EACH LIGHT DETECTOR WITH CONFIRMATION BEACON, 1 DIRECTION
- 1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

- 1 EACH LIGHT DETECTOR WITH CONFIRMATION BEACON, 2 DIRECTION

**CONSTRUCTION NOTE:**

- ① THE CONTRACTOR SHALL REMOVE THE SPAN-WIRE TRAFFIC SIGNAL INSTALLATION ONCE THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS OPERATING. ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE SPAN-WIRE TRAFFIC SIGNAL INSTALLATION PER REMOVAL NOTE SHALL BE INCLUDED IN THE UNIT COST FOR PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL).

FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC - FINAL STAGE 151ST STREET AND RAVINIA AVENUE	F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\ORLANDPARK\1502722_ph2\Consultants\1001	Cadd_Deliverable\DI61F86-shr-TS-06_MOT-Stage	DRAWN - FPB	REVISED -			1603/3000	13-00071-00-WR	COOK	162	122
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			CONTRACT NO. 61F86				
	PLOT DATE = 7/11/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

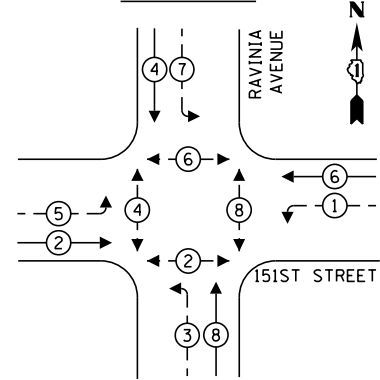
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 BY: \_\_\_\_\_  
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 PLAN NO. \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 NO. \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 FILE NAME \_\_\_\_\_

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1801 W. 111TH STREET, SUITE 600  
 BOSTON, ILLINOIS 60018  
 (815) 823-9500

DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 GRADES CHECKED \_\_\_\_\_  
 PROFILE NO. \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 NO. \_\_\_\_\_  
 STRUCTURE NOTATIONS CHECKED \_\_\_\_\_

**TEMPORARY CONTROLLER**

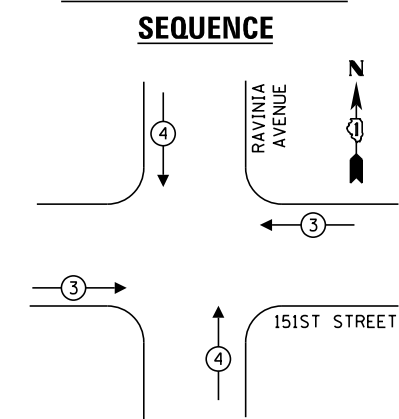
**SEQUENCE**



**LEGEND:**

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

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
ARROW	16	10	10	16.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	4	310	50	620.0
TOTAL =				1213.8

ENERGY COSTS TO:

VILLAGE OF ORLAND PARK  
 14700 RAVINIA AVENUE  
 ORLAND PARK, ILLINOIS 60462

ENERGY SUPPLY: CONTACT: NEW BUSINESS  
 PHONE: NEW PHONE  
 COMPANY: COMMONWEALTH EDISON  
 ACCOUNT NUMBER: ---

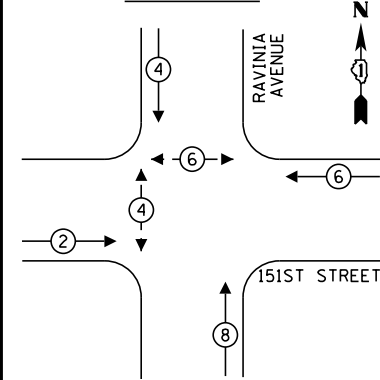
**EXISTING AND FINAL GEOMETRY TEMPORARY CABLE PLAN**  
 (NOT TO SCALE)

**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL INSTALL 12 FT. LUMINAIRE ARMS AND LUMINAIRE FIXTURES TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE LUMINAIRES SHALL BE 310 WATT, HIGH PRESSURE, SODIUM VAPOR FIXTURES WITH AERIAL ELECTRIC CABLE #10 2C AND #10 1C GROUND FOR TEMPORARY LIGHTING. ALL REQUIRED COSTS ASSOCIATED WITH THIS WORK INCLUDING WIRING, MOUNTING BRACKETS, HARDWARE, MATERIAL, EQUIPMENT, AND LABOR TO INSTALL TEMPORARY LIGHTING SHALL BE INCLUDED IN THE COST FOR PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL).
- ② THE CONTRACTOR SHALL INSTALL NEW, ONE DIRECTION, EMERGENCY VEHICLE PREEMPTION LIGHT DETECTORS FOR THE NORTH AND SOUTH APPROACHES, AS WELL AS A NEW LIGHT DETECTOR AMPLIFIER IN THE TEMPORARY TRAFFIC SIGNAL CABINET CAPABLE OF OPERATING FOUR EVP PREEMPTION CHANNELS. THE COST ASSOCIATED WITH FURNISHING, INSTALLING, AND EVENTUALLY REMOVING THE REPLACEMENT EMERGENCY VEHICLE PREEMPTION EQUIPMENT FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE INCLUDED IN THE UNIT COST OF THE PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL).

**TEMPORARY CONTROLLER**

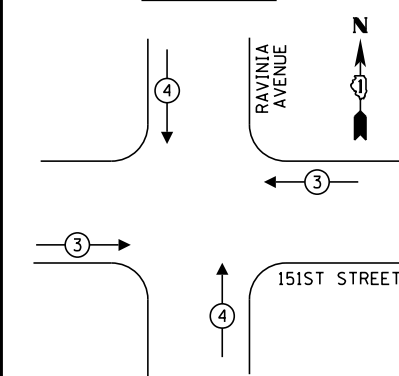
**SEQUENCE**



**LEGEND:**

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

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
ARROW	-	10	10	-
PED. SIGNAL	4	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	4	310	50	620.0
TOTAL =				1117.8

ENERGY COSTS TO:

VILLAGE OF ORLAND PARK  
 14700 RAVINIA AVENUE  
 ORLAND PARK, ILLINOIS 60462

ENERGY SUPPLY: CONTACT: NEW BUSINESS  
 PHONE: NEW PHONE  
 COMPANY: COMMONWEALTH EDISON  
 ACCOUNT NUMBER: ---

**LEGEND:**

= BAGGED AND DISABLED

**PRE-STAGING PLAN TEMPORARY CABLE PLAN**  
 (NOT TO SCALE)

**CONSTRUCTION NOTES:**

- ① THE YELLOW AND GREEN LEFT TURN ARROW SIGNAL HEAD SECTIONS FOR ALL APPROACHES SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
- ② THE PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS SHALL BE BAGGED AND DISABLED WHEN CROSSWALKS ARE CLOSED. SEE TEMPORARY CABLE PLAN FOR DETAILS.

FILE NAME = \_\_\_\_\_  
 \*FILEL# = \_\_\_\_\_  
 Default

DESIGNED - EAJ  
 DRAWN - FPB  
 CHECKED - GMZ  
 DATE - \_\_\_\_\_

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - TEMPORARY CABLE PLAN  
 EXISTING GEOMETRY, PRE-STAGING, AND FINAL GEOMETRY  
 151ST STREET AND RAVINIA AVENUE

N.T.S. SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 1603/3000 SECTION 13-00071-00-WR COUNTY COOK TOTAL SHEETS 162 SHEET NO. 123  
 ILLINOIS FED. AID PROJECT CONTRACT NO. 61F86

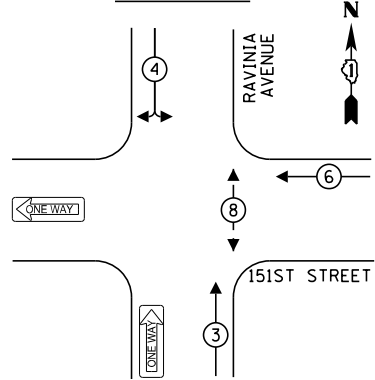
DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 PLAN SURVEYED PLOTTED  
 NOTE BOOK ALIGNED CHECKED  
 NO. \_\_\_\_\_ CARD FILE NAME \_\_\_\_\_

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 14700 RAVINIA AVENUE, SUITE 600  
 ORLAND PARK, ILLINOIS 60462  
 (815) 823-9500

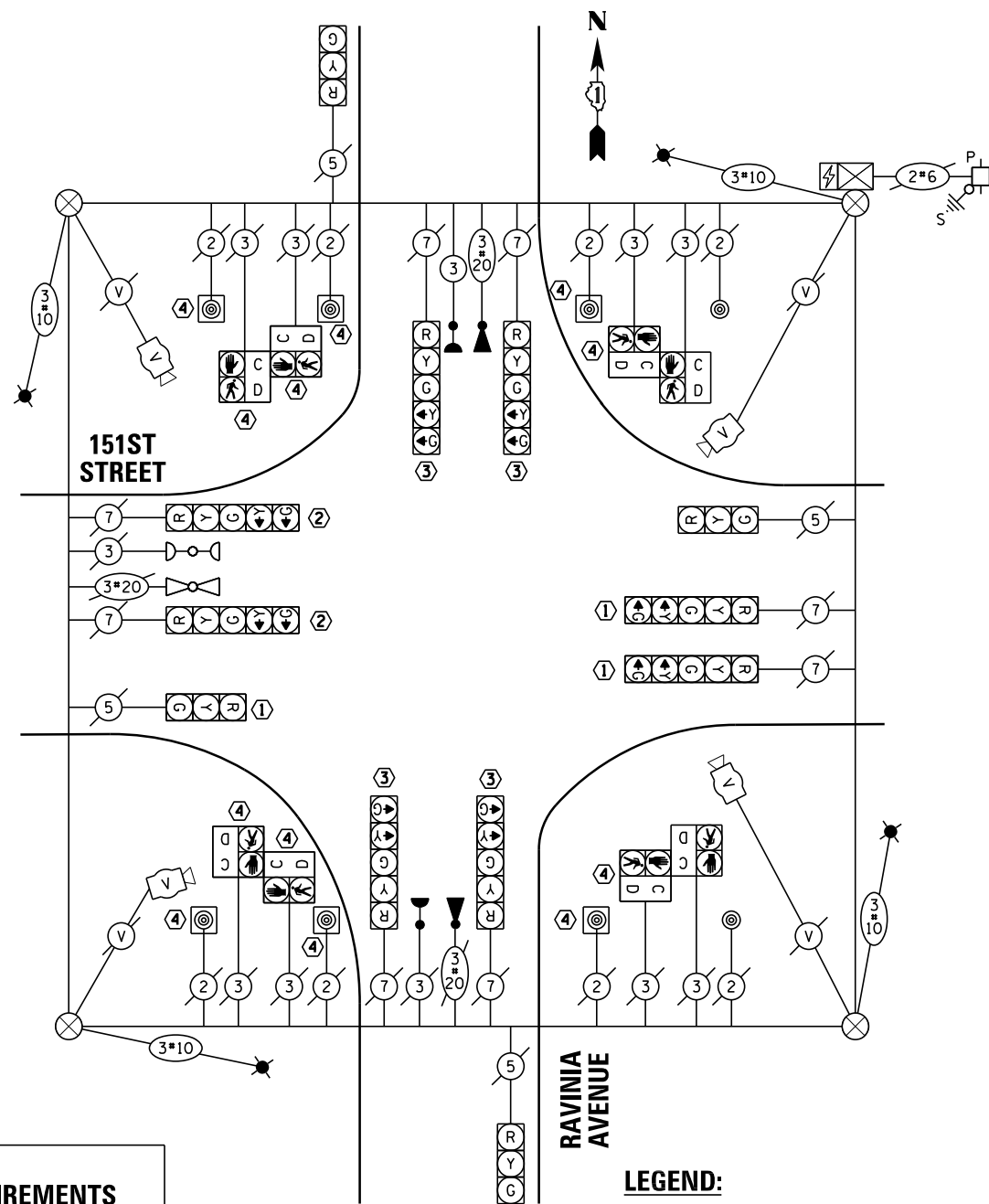
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 BY: \_\_\_\_\_  
 PROFILE SURVEYED PLOTTED  
 NOTE BOOK GRADES CHECKED  
 NO. \_\_\_\_\_ STRUCTURE NOTATIONS CHECKED

**TEMPORARY CONTROLLER**

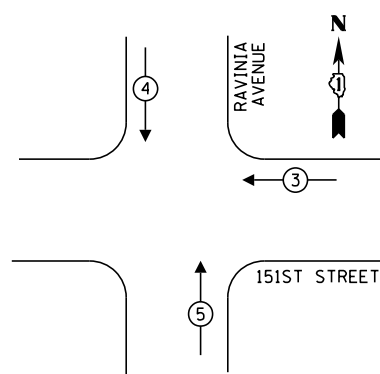
**SEQUENCE**



- LEGEND:**
- ← \* → PROTECTED PHASE
  - ← \* - - PROTECTED/PERMITTED PHASE
  - ← \* → PEDESTRIAN PHASE
  - ← \* OL → OVERLAP



**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	9	11	50	49.5
(YELLOW)	9	20	5	9.0
(GREEN)	13	12	45	70.2
ARROW	-	10	10	-
PED. SIGNAL	2	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	4	310	50	620.0
<b>TOTAL =</b>				<b>1063.7</b>

ENERGY COSTS TO:

VILLAGE OF ORLAND PARK  
 14700 RAVINIA AVENUE  
 ORLAND PARK, ILLINOIS 60462

ENERGY SUPPLY: CONTACT: NEW BUSINESS  
 PHONE: NEW PHONE  
 COMPANY: COMMONWEALTH EDISON  
 ACCOUNT NUMBER: ---

**MOT STAGE 1 TEMPORARY CABLE PLAN**  
 (NOT TO SCALE)

**CONSTRUCTION NOTES:**

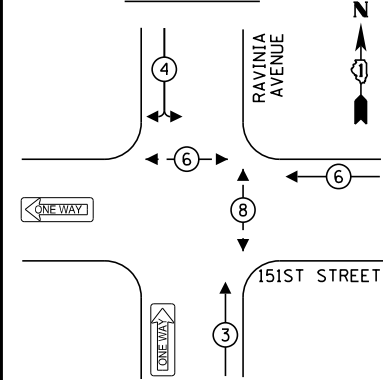
- ① THE VEHICLE SIGNAL HEADS FOR THE WEST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
- ② THE YELLOW AND GREEN LEFT TURN ARROW SIGNAL HEAD SECTIONS FOR EAST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
- ③ THE NORTH AND SOUTH APPROACHES SHALL OPERATE AS SPLIT PHASE. THE YELLOW ARROW SIGNAL HEAD SECTION SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR MORE DETAILS.
- ④ THE PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS SHALL BE BAGGED AND DISABLED WHEN CROSSWALKS ARE CLOSED. SEE TEMPORARY CABLE PLAN FOR DETAILS.

DESIGNED - EAJ	REVISED -
DRAWN - FPB	REVISED -
CHECKED - GMZ	REVISED -
DATE -	REVISED -

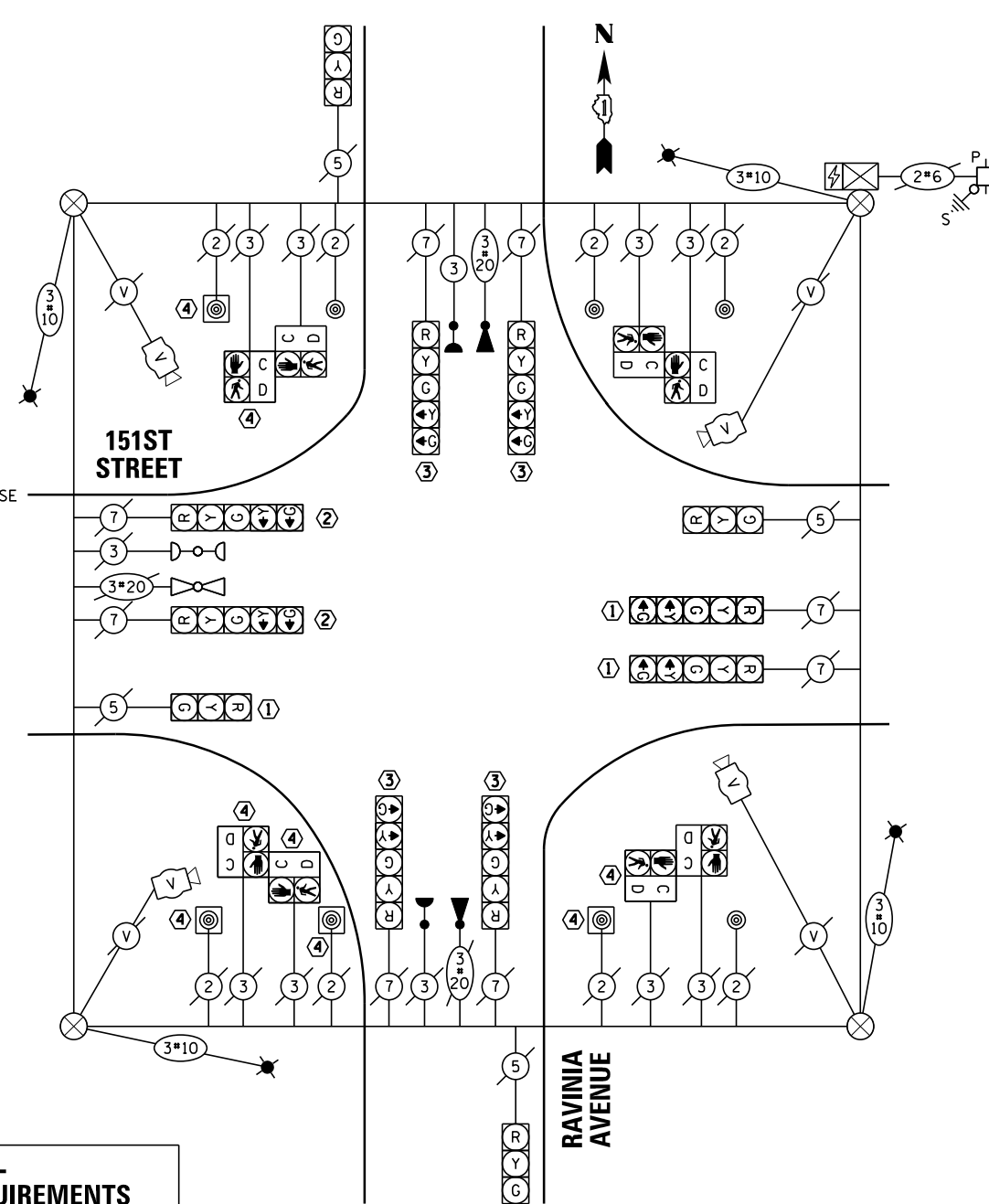
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**TEMPORARY CONTROLLER**

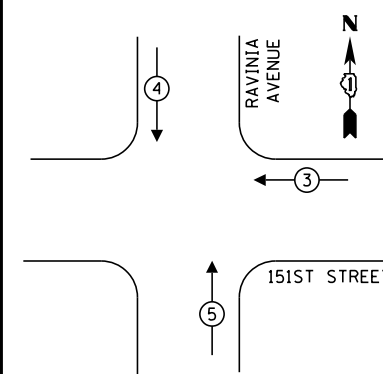
**SEQUENCE**



- LEGEND:**
- ← \* → PROTECTED PHASE
  - ← \* - - PROTECTED/PERMITTED PHASE
  - ← \* → PEDESTRIAN PHASE
  - ← \* OL → OVERLAP



**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	9	11	50	49.5
(YELLOW)	9	20	5	9.0
(GREEN)	13	12	45	70.2
ARROW	-	10	10	-
PED. SIGNAL	4	20	100	80.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	4	310	50	620.0
<b>TOTAL =</b>				<b>1103.7</b>

ENERGY COSTS TO:

VILLAGE OF ORLAND PARK  
 14700 RAVINIA AVENUE  
 ORLAND PARK, ILLINOIS 60462

ENERGY SUPPLY: CONTACT: NEW BUSINESS  
 PHONE: NEW PHONE  
 COMPANY: COMMONWEALTH EDISON  
 ACCOUNT NUMBER: ---

**MOT STAGE 2 TEMPORARY CABLE PLAN**  
 (NOT TO SCALE)

**CONSTRUCTION NOTES:**

- ① THE VEHICLE SIGNAL HEADS FOR THE WEST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
- ② THE YELLOW AND GREEN LEFT TURN ARROW SIGNAL HEAD SECTIONS FOR EAST APPROACH SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR DETAILS.
- ③ THE NORTH AND SOUTH APPROACHES SHALL OPERATE AS SPLIT PHASE. THE YELLOW ARROW SIGNAL HEAD SECTION SHALL BE BAGGED AND DISABLED. SEE TEMPORARY CABLE PLAN FOR MORE DETAILS.
- ④ THE PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS SHALL BE BAGGED AND DISABLED WHEN CROSSWALKS ARE CLOSED. SEE TEMPORARY CABLE PLAN FOR DETAILS.

FILE NAME =  
 \*FILEL#

USER NAME = \*USER#  
 PLOT SCALE = \*SCALE#  
 PLOT DATE = \*DATE#

MAINTENANCE OF TRAFFIC - TEMPORARY CABLE PLAN  
 STAGE 1 AND STAGE 2  
 151ST STREET AND RAVINIA AVENUE

N.T.S. SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 1603/3000	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 124
CONTRACT NO. 61F86				

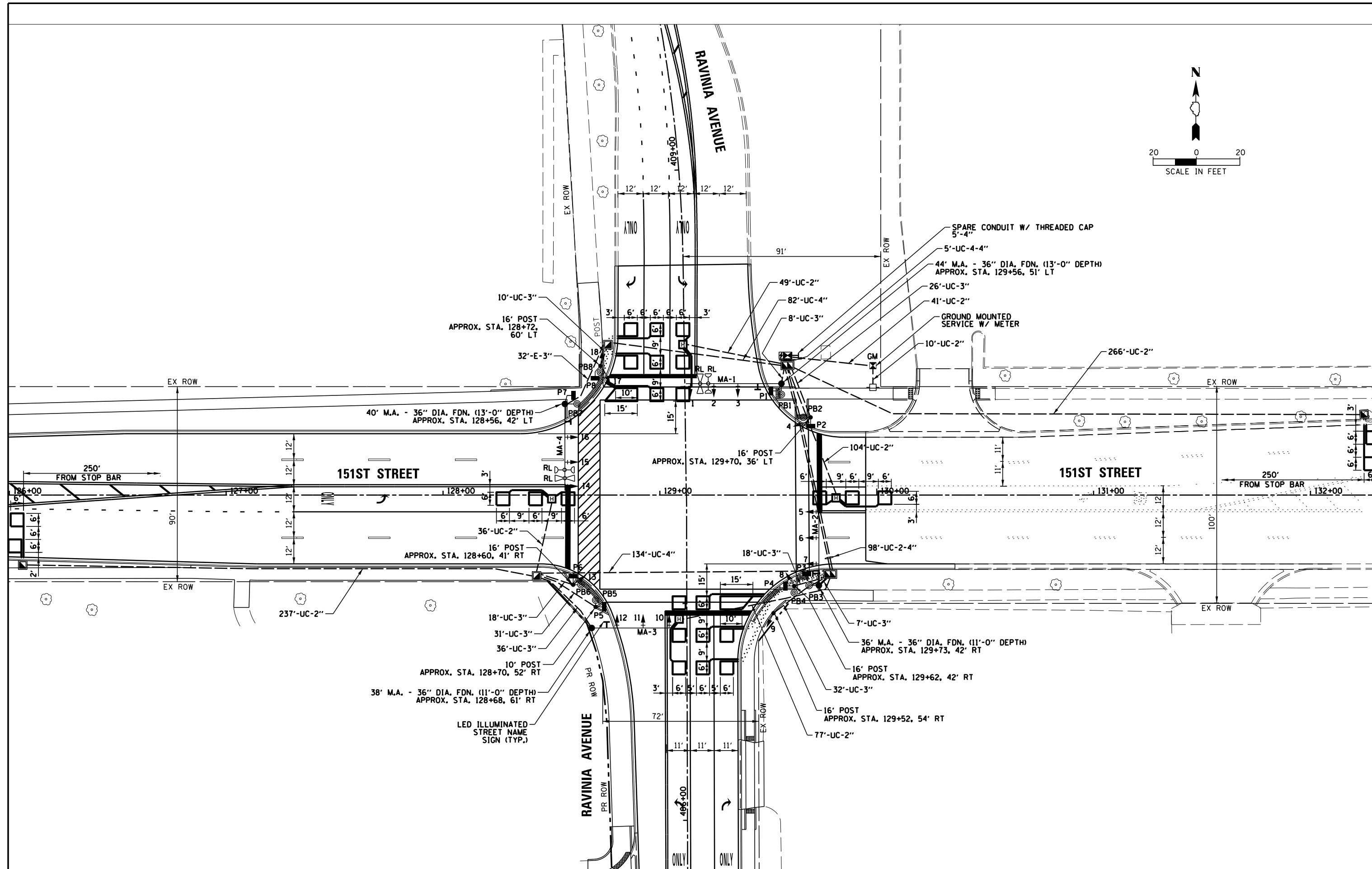
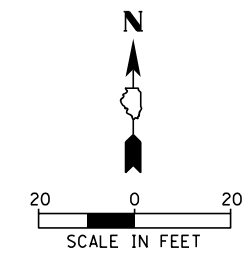
ILLINOIS FED. AID PROJECT



DATE	BY
PLAN	SURVEYED
NOTE BOOK NO.	PLOTTED
	ALIGNMENT CHECKED
	CONSTRUCTION CHECKED
	CADD FILE NAME

**CHRISTOPHER B. BURKE ENGINEERING LTD.**  
 1000 W. Lake Street, Suite 600  
 Rosemont, Illinois 60018  
 (847) 823-9500

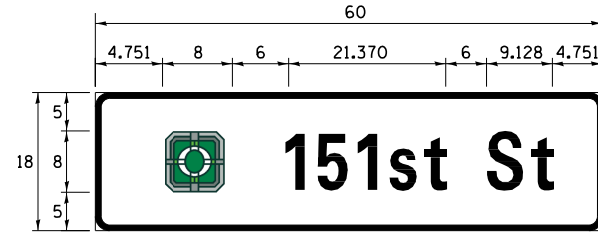
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PROFILE	SURVEYED
NOTE BOOK NO.	GRADES CHECKED
	STRUCTURE NOTATIONS CHECKED



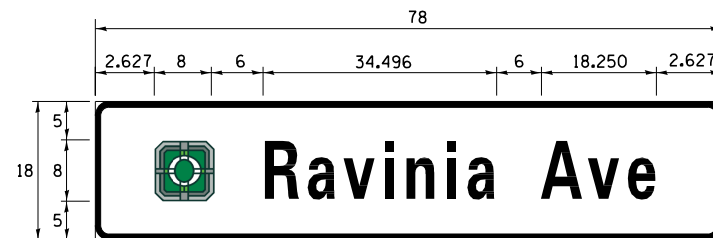
FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL INSTALLATION PLAN 151ST STREET AND RAVINIA AVENUE</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\ORLANDPARK\1502722.ph2\Consultants\1001\Cadd\Deliverable\DI61F86-sht-TS-09.TSD.dgn	PLOT SCALE = 48"	DRAWN - FPB	REVISED -			1603/3000	13-00071-00-WR	COOK	162	125	
Default	PLOT DATE = 7/11/2019	CHECKED - GMZ	REVISED -			<b>CONTRACT NO. 61F86</b>					
		DATE -	REVISED -			SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			



**ILLUMINATED MAST ARM MOUNTED STREET NAME SIGN**

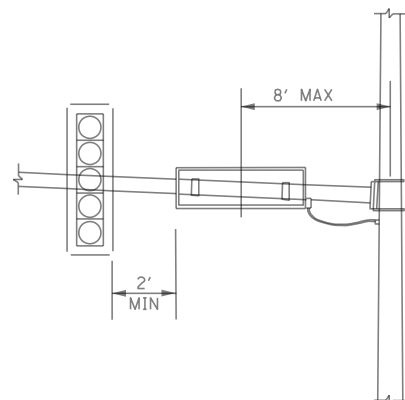


DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	7.5	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	9.75	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE ILLUMINATED STREET NAME SIGN DETAIL.



**DIRECT MOUNT ILLUMINATED STREET NAME SIGN**

NOTE: LED STREET NAME SIGN SHALL BE 1-SIDED AND DIRECT MOUNT TO THE STEEL MAST ARM ASSEMBLY.

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	820
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	218
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	437
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,320
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,672
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,190
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,308
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2,046
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	92
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1,062
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	5
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	28
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	48
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	12
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	1,010
PEDESTRIAN PUSH-BUTTON	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	15
REMOVE EXISTING CONCRETE FOUNDATION	EACH	12
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	296
SIGNAL TIMING	LSUM	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL)	EACH	1
RELOCATE LIGHT DETECTOR	EACH	2
RELOCATE LIGHT DETECTOR AMPLIFIER	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
CABLE, SPECIAL	FOOT	766

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOT AT THIS OFFICE	
NOTE BOOK NO.	

**CHRISTOPHER B. BURKE ENGINEERING LTD.**  
 1000 W. Lake Street, Suite 600  
 Rosemont, Illinois 60018  
 (847) 823-0500

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOT AT THIS OFFICE	
NOTE BOOK NO.	

FILE NAME =	USER NAME = pmagnelli	DESIGNED - EAJ	REVISED -
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Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES AND  
ILLUMINATED MAST ARM MOUNTED STREET NAME SIGN  
151ST STREET AND RAVINIA AVENUE**

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	127
<b>CONTRACT NO. 61F86</b>				
ILLINOIS FED. AID PROJECT				

## LIGHTING GENERAL NOTES

1. THE EXACT LOCATIONS OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY EQUIPMENT. FOR THE LOCATIONS OF THE UTILITIES, CALL JULIE TOLL FREE AT (800) 892-0123.
2. BEFORE INSTALLING LIGHT STANDARDS NEAR OVERHEAD AND UNDERGROUND ELECTRIC UTILITIES SHALL CALL COM ED FOR LOCATION APPROVAL AND MINIMUM CLEARANCE REQUIREMENTS.
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AS WELL AS SUPERVISION/ DIRECTION AND MEANS/METHODS OF CONSTRUCTION.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS, WHICH ARE HEREBY MADE A PART HEREOF:
  - A. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AS PREPARED BY IDOT.
  - B. "THE NATIONAL ELECTRICAL CODE".
  - C. MUNICIPAL CODES & STANDARDS.
  - D. COMED STANDARDS
5. NO MATERIALS SHALL BE DELIVERED TO THE JOB SITE UNTIL ALL PERTINENT EQUIPMENT SUBMITTALS HAVE BEEN REVIEWED BY THE ENGINEER.
6. ALL UNDERGROUND WIRING SHALL BE XLP TYPE-USE, EXTRA ABRASION RESISTANCE, 600 VOLTS, BURIED A MINIMUM 30 INCHES BELOW FINISHED GRADE, FOLLOWING THE ROADWAY OR SIDEWALK EDGE.
7. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, (IF APPLICABLE) AND HAVE BEEN REVIEWED BY THE ENGINEER.
8. TO MAINTAIN THE STRUCTURAL INTEGRITY OF LIGHT POLES WITH MAST ARMS, THEY SHALL NOT BE ERECTED AND LEFT TO STAND WITHOUT LUMINAIRES.
9. ALL POLE HANDHOLES SHALL FACE AWAY FROM TRAFFIC.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF THE TOP OF FOUNDATION ELEVATION WITH THE FINISHED GRADE.
11. THE ELECTRICAL CONTRACTOR SHALL FURNISH TWO SETS OF FULL SIZE RECORD DRAWINGS TO THE ENGINEER UPON COMPLETION OF THE LIGHTING AND ELECTRICAL IMPROVEMENTS. THE DRAWINGS SHALL SHOW THE INSTALLED LOCATIONS OF ALL LIGHT POLES, UNDERGROUND CONDUITS/WIRING, HANDHOLES, JUNCTION BOXES & CONTROLLER CABINETS. THE DRAWINGS WILL BE REVIEWED BY THE ENGINEER.
12. UPON COMPLETION OF THE PROPOSED LIGHTING IMPROVEMENTS, THE CONTRACTOR SHALL PERFORM ELECTRICAL TESTING AND VERIFY THAT THE INSTALLATION COMPLIES WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TIMELY NOTIFICATION AND ALL COORDINATION WITH COM ED FOR NEW ELECTRIC SERVICE TO THE PROPOSED LIGHTING CONTROLLER.
14. THE CONTRACTOR SHALL LABEL ALL WIRES WITH WIRE MARKERS INDICATING THE CIRCUIT ID IN EVERY CONTROLLER, POLE BASE, HAND HOLE AND SPLICE/CONNECTION POINT. WIRE MARKERS SHALL BE WHITE NYLON WITH INTEGRAL MECHANICAL FASTENER WITH MINIMUM 3/4" X 1" WRITEABLE AREA.
15. THERE ARE LOCATIONS THROUGHOUT THE PROJECT WHERE EXISTING UNDERGROUND UTILITIES ARE WITHIN CLOSE PROXIMITY TO THE PROPOSED LIGHT POLE FOUNDATIONS. CONTRACTOR SHALL LOCATE THE EDGE OF THE UTILITY IN THESE LOCATIONS AS DIRECTED BY THE ENGINEER USING THE HYDRO EXCAVATION METHOD (SEE SPECIAL PROVISION FOR "EXPLORATION EXCAVATION (UTILITY)").

## BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY
TRENCH BACKFILL	CU YD	10
ELECTRIC SERVICE INSTALLATION	EACH	1
ELECTRIC UTILITY SERVICE CONNECTION	LSUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	35
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	745
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1/2" DIA.	FOOT	3065
HANDHOLE, COMPOSITE CONCRETE	EACH	5
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	9305
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 4	FOOT	6620
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2	FOOT	105
• LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION E	EACH	9
• LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	10
LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 100 AMP	EACH	1
LIGHT POLE, ALUMINUM, 30FT. M.H., 12 FT. MAST ARM	EACH	10
LIGHT POLE, ALUMINUM, 40FT. M.H., 12 FT. MAST ARM	EACH	9
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	170
BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	9
REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	5
REMOVAL OF POLE FOUNDATION	EACH	6
RELOCATE EXISTING LIGHTING UNIT	EACH	1
REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	2
• OUTLET SPECIAL	EACH	1
• LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	45
• EXPLORATION EXCAVATION (UTILITY)	FOOT	100
• MAINTAIN EXISTING LIGHTING SYSTEM	LSUM	1
• SEE SPECIAL PROVISION		

## ABBREVIATIONS

A	AMPS
BOC	BACK OF CURB
CKT	CIRCUIT
FT	FOOT
FOC	FACE OF CURB
GND	GROUND
HDPE	HIGH DENSITY POLYETHYLENE
HPS	HIGH PRESSURE SODIUM
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
V	VOLTS
W	WATTS

### CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THE LOCATION AND/OR ELEVATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THESE PLANS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ENGINEER OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS.

THE VILLAGE OF ORLAND PARK WILL OWN AND MAINTAIN THE PROPOSED LIGHTING SYSTEM.

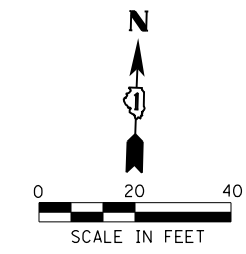
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SURVEYED PLOTTED GRADES CHECKED STRUCTURE NOTATIONS CHECKED	BY
NOTE BOOK NO.	DATE

PROFILE	DATE
SURVEYED PLOTTED GRADES CHECKED STRUCTURE NOTATIONS CHECKED	BY
NOTE BOOK NO.	DATE

FILE NAME =	USER NAME = #USER*	DESIGNED AJD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIGHTING GENERAL NOTES 151st STREET</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL\$		DRAWN RJJ	REVISED -			1603	13-00071-00-WR	COOK	162	128	
Default		CHECKED AJD	REVISED -			CONTRACT NO. 61F86					
	PLOT SCALE = #SCALE*	DATE 12/4/18	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO

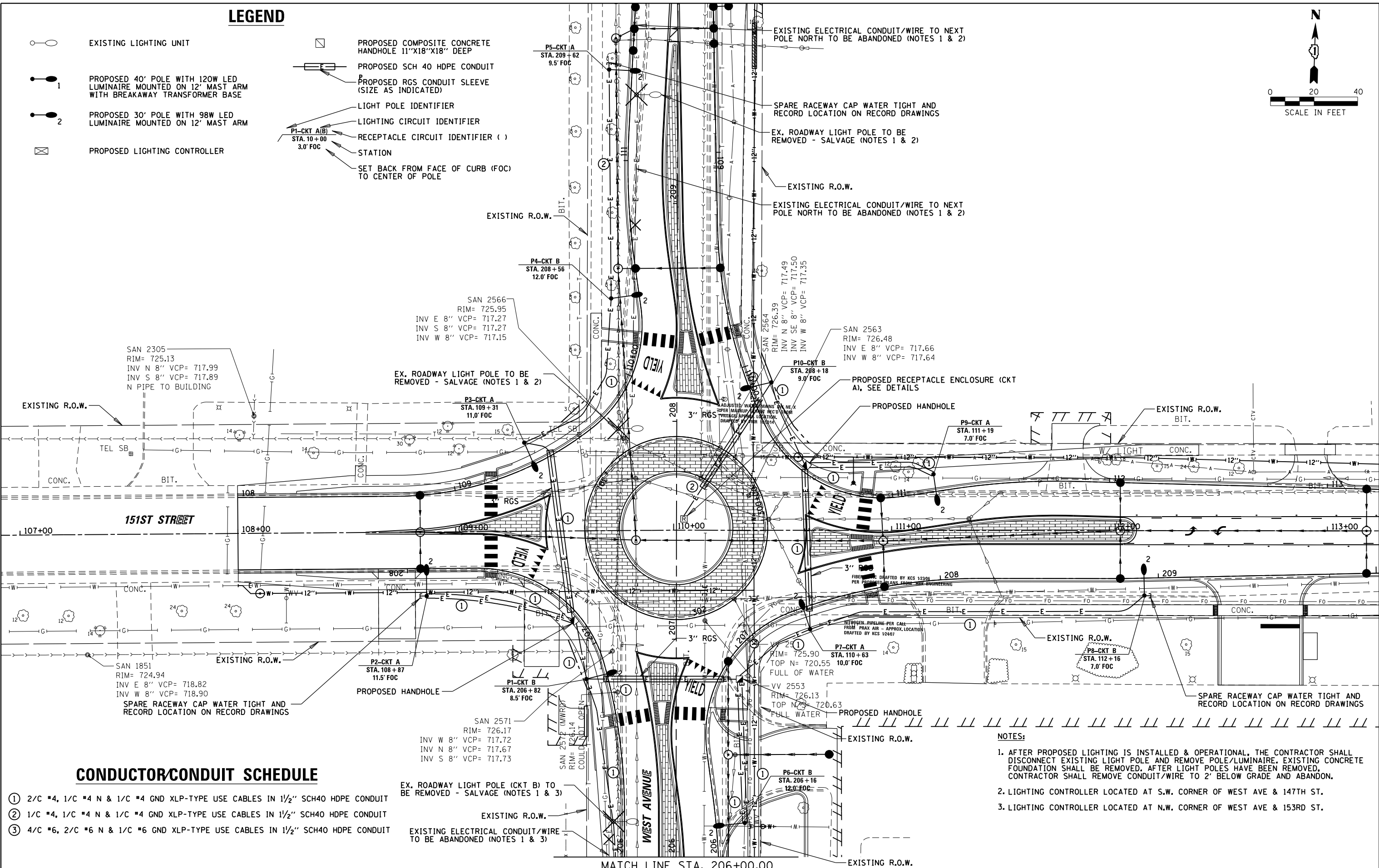
**LEGEND**

- EXISTING LIGHTING UNIT
- 1 PROPOSED 40' POLE WITH 120W LED LUMINAIRE MOUNTED ON 12' MAST ARM WITH BREAKAWAY TRANSFORMER BASE
- 2 PROPOSED 30' POLE WITH 98W LED LUMINAIRE MOUNTED ON 12' MAST ARM
- ⊠ PROPOSED LIGHTING CONTROLLER
- PROPOSED COMPOSITE CONCRETE HANDHOLE 11"X18"X18" DEEP
- ▬ PROPOSED SCH 40 HDPE CONDUIT
- ▬ PROPOSED RGS CONDUIT SLEEVE (SIZE AS INDICATED)
- ① LIGHT POLE IDENTIFIER
- ② LIGHTING CIRCUIT IDENTIFIER
- ③ RECEPTACLE CIRCUIT IDENTIFIER ( )
- ④ STATION
- ⑤ SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE



PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	NO.
	CHECKED	
	FILED	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	NO.
	STRUCTURE NOTATIONS CHECKED	
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











**CONDUCTOR/CONDUIT SCHEDULE**

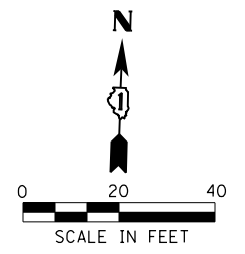
- ① 2/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ② 1/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ③ 4/C #6, 2/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT

- NOTES:**
- AFTER PROPOSED LIGHTING IS INSTALLED & OPERATIONAL, THE CONTRACTOR SHALL DISCONNECT EXISTING LIGHT POLE AND REMOVE POLE/LUMINAIRE. EXISTING CONCRETE FOUNDATION SHALL BE REMOVED. AFTER LIGHT POLES HAVE BEEN REMOVED, CONTRACTOR SHALL REMOVE CONDUIT/WIRE TO 2' BELOW GRADE AND ABANDON.
  - LIGHTING CONTROLLER LOCATED AT S.W. CORNER OF WEST AVE & 147TH ST.
  - LIGHTING CONTROLLER LOCATED AT N.W. CORNER OF WEST AVE & 153RD ST.

FILE NAME =	USER NAME = *USER*	DESIGNED AJD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIGHTING PLAN (1 OF 4) 151st STREET</b>		F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
*FILEL*		DRAWN RJJ	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	1603	13-00071-00-WR	COOK	162	129
*MODELNAME*		CHECKED AJD	REVISED -										CONTRACT NO. 61F86			
		DATE 12/4/18	REVISED -										ILLINOIS FED. AID PROJECT			

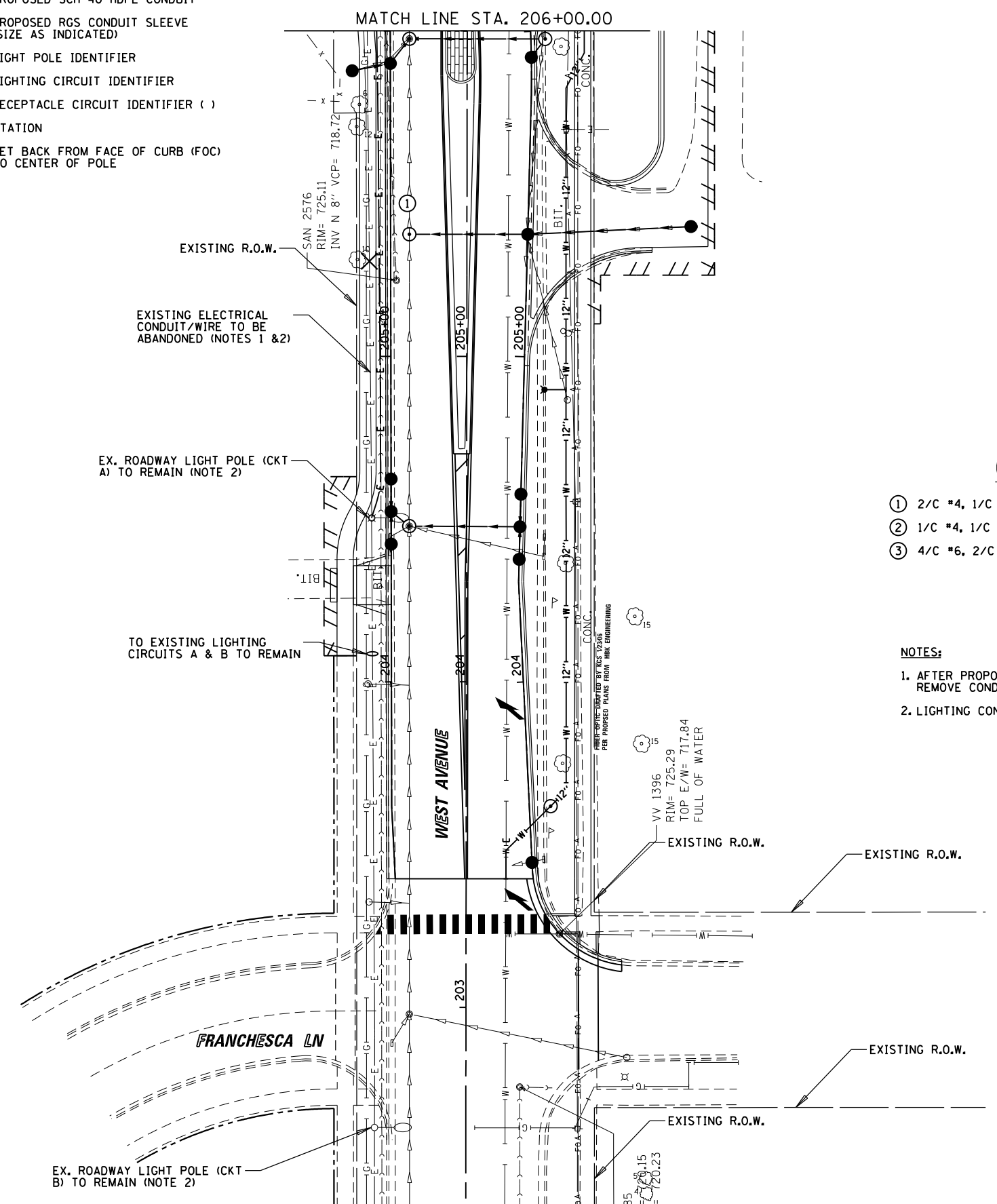
# LEGEND

-  EXISTING LIGHTING UNIT
-  1 PROPOSED 40' POLE WITH 120W LED LUMINAIRE MOUNTED ON 12' MAST ARM WITH BREAKAWAY TRANSFORMER BASE
-  2 PROPOSED 30' POLE WITH 98W LED LUMINAIRE MOUNTED ON 12' MAST ARM
-  PROPOSED LIGHTING CONTROLLER
-  PROPOSED COMPOSITE CONCRETE HANDHOLE 11"x18"x18" DEEP
-  PROPOSED SCH 40 HDPE CONDUIT
-  PROPOSED RGS CONDUIT SLEEVE (SIZE AS INDICATED)
-  LIGHT POLE IDENTIFIER
-  LIGHTING CIRCUIT IDENTIFIER
-  RECEPTACLE CIRCUIT IDENTIFIER ( )
-  STATION
-  SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE



PLAN	SURVEYED	DATE
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	CHECKED	
	ALIGNMENT	
	STRUCTURE	
	ROAD FILE NAME	
NOTE BOOK NO.		

PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	GRADES	
	STRUCTURE	
	NOTATIONS	
NOTE BOOK NO.		



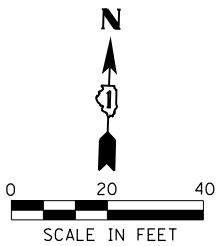
## CONDUCTOR/CONDUIT SCHEDULE

- ① 2/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ② 1/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ③ 4/C #6, 2/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT

### NOTES:

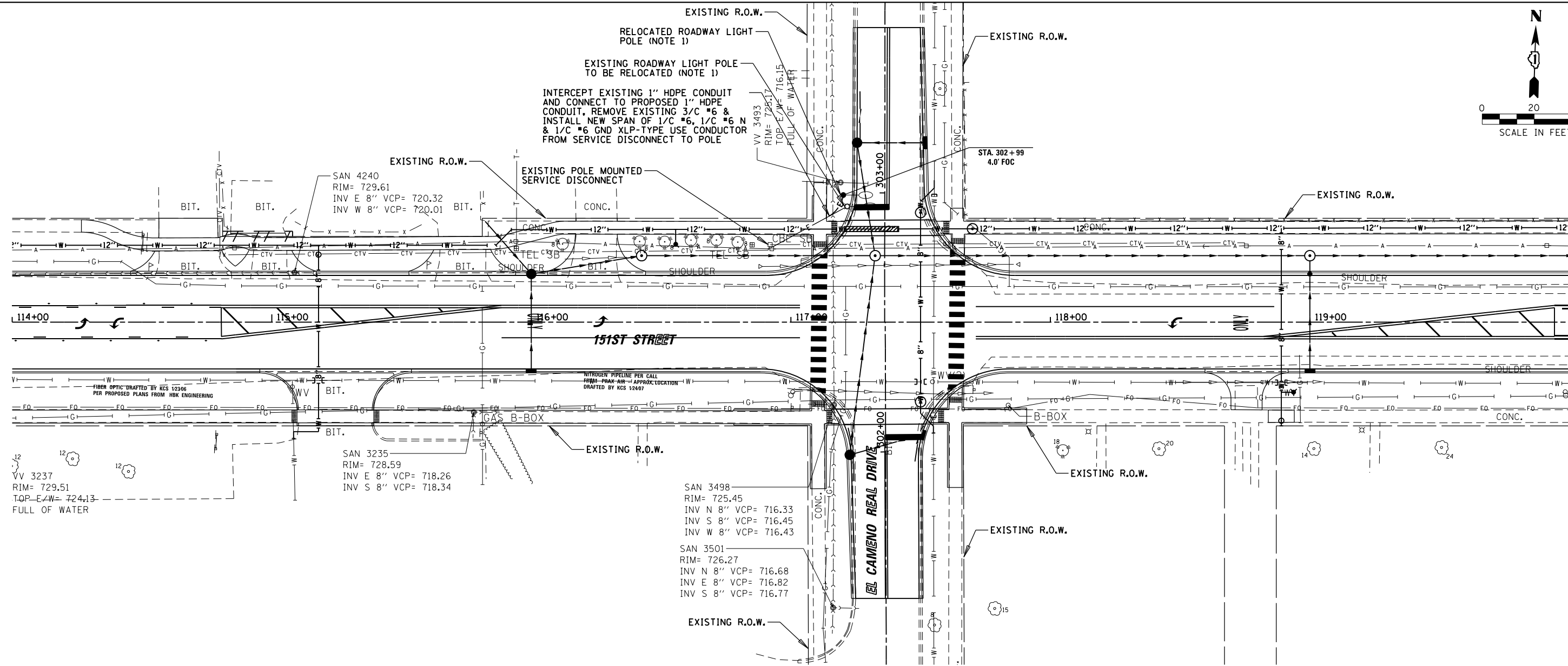
1. AFTER PROPOSED LIGHTING IS INSTALLED & OPERATIONAL THE CONTRACTOR SHALL REMOVE CONDUIT/WIRE TO 2' BELOW GRADE AND ABANDON.
2. LIGHTING CONTROLLER LOCATED AT N.W. CORNER OF WEST AVE & 153RD ST.

FILE NAME =	USER NAME = #USER#	DESIGNED AJD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIGHTING PLAN (2 OF 4) 151st STREET</b>				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*FILEL#		DRAWN RJJ	REVISED -		1603	13-00071-00-WR	COOK	162	130				
*MODELNAME#		CHECKED AJD	REVISED -		CONTRACT NO. 61F86								
		DATE 12/4/18	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	ILLINOIS FED. AID PROJECT	



PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
NOTE BOOK NO.	BY	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
NOTE BOOK NO.	BY	



INTERCEPT EXISTING 1" HDPE CONDUIT AND CONNECT TO PROPOSED 1" HDPE CONDUIT. REMOVE EXISTING 3/C #6 & INSTALL NEW SPAN OF 1/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CONDUCTOR FROM SERVICE DISCONNECT TO POLE

**LEGEND**

- EXISTING LIGHTING UNIT
- PROPOSED 40' POLE WITH 120W LED LUMINAIRE MOUNTED ON 12' MAST ARM WITH BREAKAWAY TRANSFORMER BASE
- PROPOSED 30' POLE WITH 98W LED LUMINAIRE MOUNTED ON 12' MAST ARM
- PROPOSED LIGHTING CONTROLLER
- PROPOSED COMPOSITE CONCRETE HANDHOLE 11"X18"X18" DEEP
- PROPOSED SCH 40 HDPE CONDUIT
- PROPOSED RGS CONDUIT SLEEVE (SIZE AS INDICATED)
- LIGHT POLE IDENTIFIER
- LIGHTING CIRCUIT IDENTIFIER
- RECEPTACLE CIRCUIT IDENTIFIER ( )
- STATION
- SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE

**CONDUCTOR/CONDUIT SCHEDULE**

- ① 2/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ② 1/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ③ 4/C #6, 2/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT

NOTES:  
 1. CONTRACTOR SHALL RELOCATE LIGHT POLE ON NEW CONCRETE FOUNDATION, POLE SHALL BE DISCONNECTED/RELOCATED/RECONNECTED SAME DAY SO ALL LIGHTS ARE FUNCTIONAL EVERY NIGHT FROM DUSK TO DAWN.

FILE NAME =	USER NAME = #USER#	DESIGNED AJD	REVISED -
#FILEL#		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
#MODELNAME#		DATE 12/4/18	REVISED -

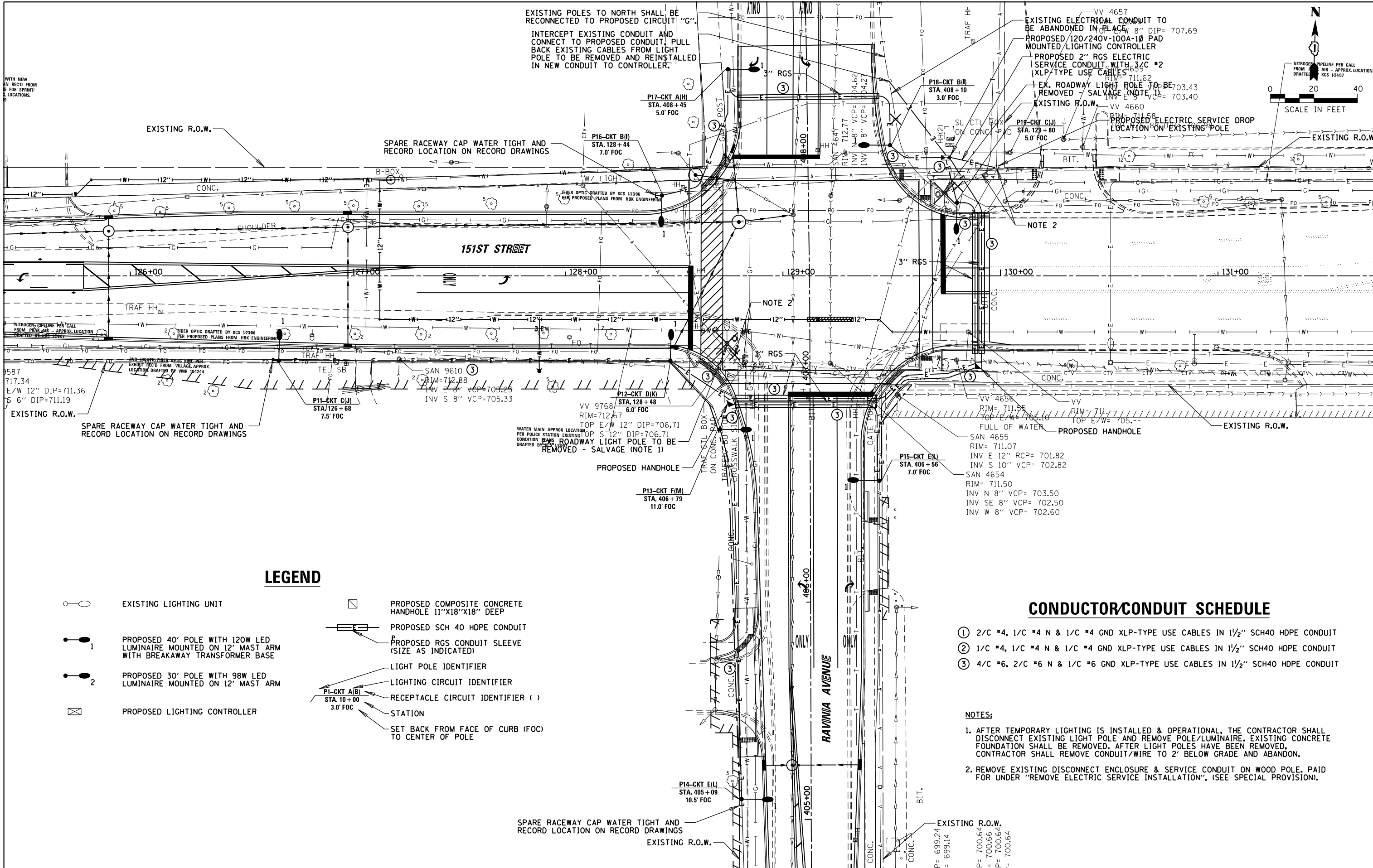
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

LIGHTING PLAN (3 OF 4)			
151st STREET			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	131
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				

DATE	
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PROFILE	
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**LEGEND**

- EXISTING LIGHTING UNIT
- PROPOSED 40' POLE WITH 120W LED LUMINAIRE MOUNTED ON 12' MAST ARM WITH BREAKAWAY TRANSFORMER BASE
- PROPOSED 30' POLE WITH 98W LED LUMINAIRE MOUNTED ON 12' MAST ARM
- PROPOSED LIGHTING CONTROLLER
- PROPOSED COMPOSITE CONCRETE HANDHOLE 11"x18"x18" DEEP
- PROPOSED SCH 40 HDPE CONDUIT
- PROPOSED RGS CONDUIT SLEEVE (SIZE AS INDICATED)
- LIGHT POLE IDENTIFIER
- LIGHTING CIRCUIT IDENTIFIER
- RECEPTACLE CIRCUIT IDENTIFIER ( )
- STATION
- SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE

**CONDUCTOR/CONDUIT SCHEDULE**

- ① 2/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ② 1/C #4, 1/C #4 N & 1/C #4 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT
- ③ 4/C #6, 2/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1/2" SCH40 HDPE CONDUIT

**NOTES:**

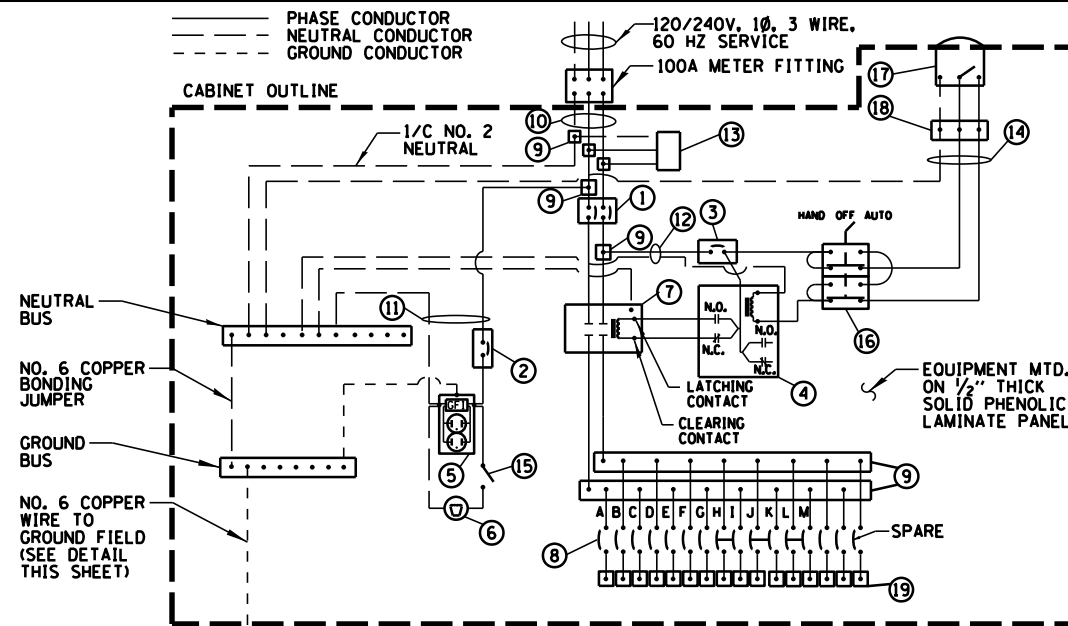
1. AFTER TEMPORARY LIGHTING IS INSTALLED & OPERATIONAL, THE CONTRACTOR SHALL DISCONNECT EXISTING LIGHT POLE AND REMOVE POLE/LUMINAIRE. EXISTING CONCRETE FOUNDATION SHALL BE REMOVED. AFTER LIGHT POLES HAVE BEEN REMOVED, CONTRACTOR SHALL REMOVE CONDUIT/WIRE TO 2' BELOW GRADE AND ABANDON.
2. REMOVE EXISTING DISCONNECT ENCLOSURE & SERVICE CONDUIT ON WOOD POLE. PAID FOR UNDER "REMOVE ELECTRIC SERVICE INSTALLATION", (SEE SPECIAL PROVISION).

FILE NAME =	USER NAME = #USER#	DESIGNED AJD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIGHTING PLAN (4 OF 4) 151st STREET</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#		DRAWN RJJ	REVISED -			1603	13-00071-00-WR	COOK	162	132	
#MODELNAME#		CHECKED AJD	REVISED -			CONTRACT NO. 61F86					
		DATE 12/4/18	REVISED -			ILLINOIS FED. AID PROJECT					



DATE	
BY	
REVIEWED	
PLANNED	
NOTED	
FILED	
NO.	

ITEM	SPECIFICATION
1 MAIN CIRCUIT BREAKER	100 AMPERE, 2P, 240V SERVICE RATING, 10KAIC
2 LAMPHOLDER CIRCUIT BREAKER	20 AMPERE, 1P, 120V RATING, 10KAIC
3 PHOTOELECTRIC CONTROL CIRCUIT BREAKER	15 AMPERE, 1P, 120V RATING, 10KAIC
4 AUXILIARY RELAY	120 V OPERATED DPDT 60 HZ COIL 2 NO & 2 NC CONTACTS
5 CABINET RECEPTACLE AND BOX	COMMERCIAL GRADE GFCI 20A/120V, MOUNTED IN A WEATHERPROOF CAST ALUMINUM SINGLE GANG BOX WITH WEATHERPROOF COVER
6 CABINET LIGHT	5 WATT LED STRIP LIGHT, 60K HOUR RATING, 65K COLOR TEMPERATURE, DOOR SWITCH CONTROLLED, FASTENED TO TOP OF CABINET
7 CONTACTOR	100 AMPERE, 2P, 120V COIL, MECHANICALLY HELD
8 BRANCH LINE CIRCUIT BREAKERS	(10) 30A, 1P, 120V RATING, 10KAIC (LUMINAIRES) (3) 20A, 2P, 240V RATING, 10KAIC (FESTOON RECP.TS.)
9 POWER DISTRIBUTION BLOCK	600 VOLT, INSULATED, SIZE AS REQ'D, 10KAIC
10 SERVICE CABLES	3-600V (XLP-TYPE USE) NO. #2
11 LAMPHOLDER WIRE	2-600V XLP NO. 12
12 CONTROL WIRE	2-600V XLP NO. 12
13 SURGE ARRESTOR	10 K AMPERE RATING
14 PHOTOELECTRIC CONTROL WIRE	3-600V XLP NO. 12
15 DOOR SWITCH	20A/120V, DOOR MOUNTED SNAP ACTION TYPE PLUNGER SWITCH
16 HAND-AUTO-OFF CONTROL SWITCH	20A, 3 POS. MTD IN CAST ALUM. ENCLOSURE
17 PHOTOCCELL	120V, MTD. ON CABINET, DELAY TYPE, SPST-NC
18 TERMINAL BLOCK	3 TERMINAL, SCREW TYPE, MAX. #10 WIRE SIZE
19 CIRCUIT BREAKER DIST. BLOCKS	30A, 600V, 10 KAIC - WIRE RANGE: LINE SIDE LUG (1) #2/0-#14 AWG, LOAD SIDE LUGS (2) #4-#14 AWG



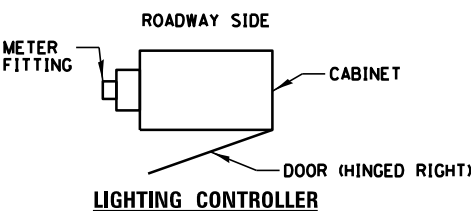
- NOTES:
- ALL GROUND CONDUCTORS SHALL BE GREEN AND NEUTRAL CONDUCTORS SHALL BE WHITE. PHASE CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH SECTION 1066.02 OF THE STANDARD SPECIFICATIONS. CONTRACTOR SHALL ONLY USE SOLID COLOR CODED INSULATIONS. COLOR STRIPPING OF PHASE CONDUCTORS SHALL NOT BE ALLOWED.
  - IN ADDITION TO THE TERMINATIONS SHOWN, THE NEUTRAL AND GROUND BUS BARS SHALL EACH ACCOMMODATE A MINIMUM OF 8 ADDITIONAL TERMINATIONS (#2-#14).

### LIGHTING CONTROLLER WIRING DETAIL

N.T.S.

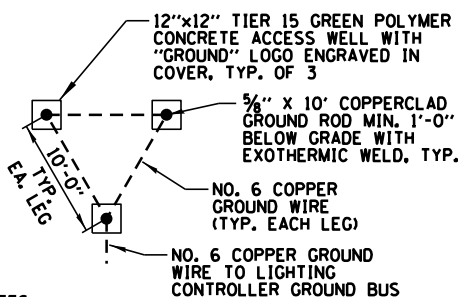
- NOTES:
- ALL ITEMS LISTED IN LIGHTING CONTROLLER COMPONENT SCHEDULE SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 100 AMP" INCLUDING CABINET AND FOUNDATION.
  - THE LIGHTING CONTROLLER TOGETHER WITH ALL OF ITS COMPONENTS SHALL BE UL LISTED AS AN "ENCLOSED INDUSTRIAL CONTROL PANEL" UNDER UL508A.
  - CONNECTION OF SURGE ARRESTOR TO LINE SIDE OF MAIN CIRCUIT BREAKER SHALL NOT BE "DOUBLE LUGGED."
  - THE MAIN CIRCUIT BREAKER SHALL BE LABELED "SERVICE DISCONNECT".
  - ALL SWITCHES AND CONTROLS SHALL BE IDENTIFIED USING TWO COLOR ENGRAVED NAMEPLATES.
  - THE PANEL MANUFACTURER SHALL LABEL THE CABINET WITH THE APPROPRIATE ARC FLASH WARNING AND PERSONNEL PROTECTION EQUIPMENT REQUIRED FOR SERVICING.
  - ALL EXPOSED BUS BARS SHALL BE INSULATED.
  - ALL WIRING SHALL BE COPPER.

### LIGHTING CONTROLLER COMPONENT SCHEDULE

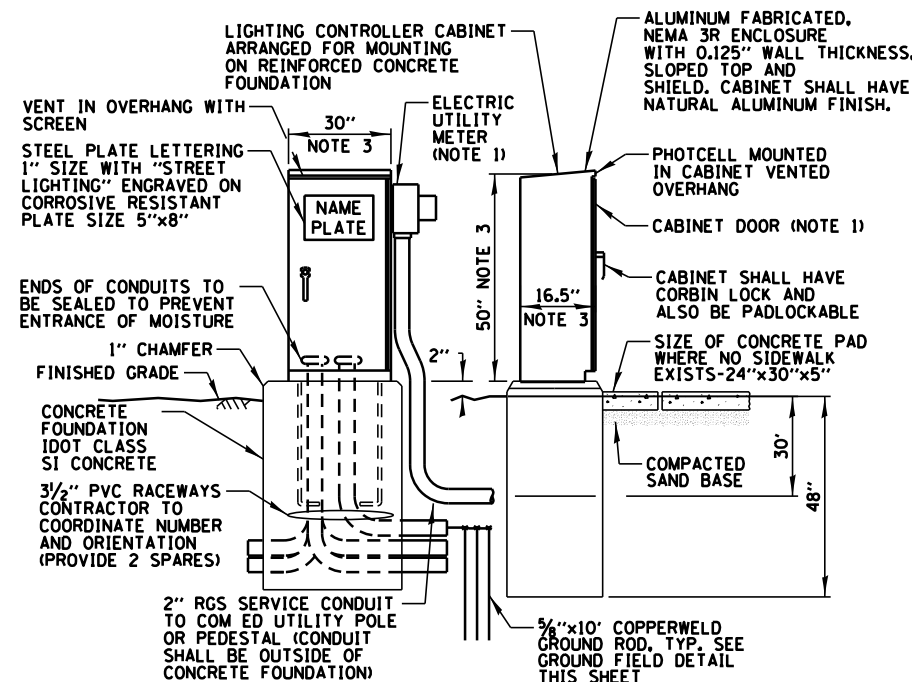


### CABINET METER FITTING & DOOR ORIENTATION

N.T.S.



- NOTES:
- ACCESS WELLS SHALL BE INCLUDED IN THE LIGHTING CONTROLLER PAY ITEM.
- ### GROUND FIELD DETAIL (TYP.)
- N.T.S.



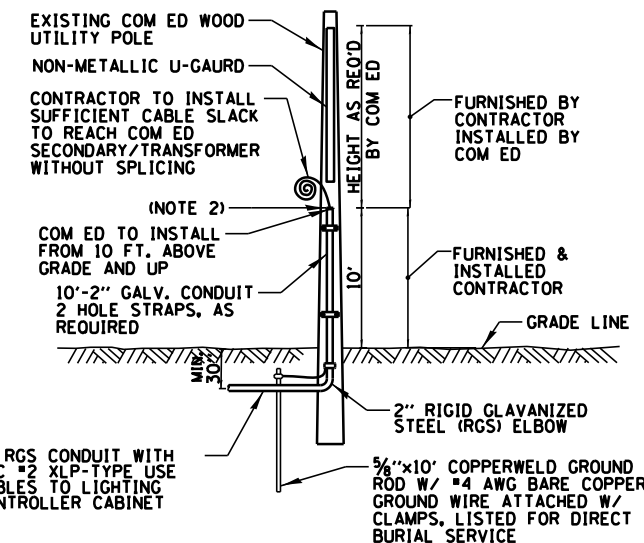
- NOTES:
- SEE DETAIL THIS SHEET FOR CABINET METER FITTING & DOOR ORIENTATION. METER AND DISCONNECT SHALL BE CECHA APPROVED.
  - ALL ITEMS SHOWN ABOVE (INCLUDING FOUNDATION, ELECTRIC METER & GROUND FIELD) SHALL BE INCLUDED IN THE PRICE BID FOR "LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 100 AMP", EXCEPT FOR THE SERVICE CONDUIT/WIRE WHICH WILL BE PAID FOR SEPARATELY.
  - CABINET DIMENSIONS SHOWN ARE APPROXIMATE, CABINET SHALL BE AS COMPACT AS POSSIBLE, CONTRACTOR TO COORDINATE.

### LIGHTING CONTROLLER CABINET AND FOUNDATION

N.T.S.

CIRCUIT ID	120W LED LUMINAIRE		180W RECEPTACLE		TOTAL CIRCUIT LOAD	
	QTY.	LOAD/FIXT. (WATTS)	QTY.	LOAD/REC. (WATTS)	(WATTS)	AMPS (VOLTS)
A	1	120 W	0	180 W	120 W	1.0A (120V)
B	2	120 W	0	180 W	240 W	2.0A (120V)
C	2	120 W	0	180 W	240 W	2.0A (120V)
D	1	120 W	0	180 W	120 W	1.0A (120V)
E	2	120 W	0	180 W	240 W	2.0A (120V)
F	1	120 W	0	180 W	120 W	1.0A (120V)
G	7	120 W	7	180 W	2100 W	17.5A (120V)
H	0	120 W	1	180 W	180 W	1.5A (120V)
I	0	120 W	2	180 W	360 W	3.0A (120V)
J	0	120 W	2	180 W	360 W	3.0A (120V)
K	0	120 W	1	180 W	180 W	1.5A (120V)
L	0	120 W	2	180 W	360 W	3.0A (120V)
M	0	120 W	1	180 W	180 W	1.5A (120V)
TOTAL	15	N/A	15	N/A	4,800 W	20.0A (240V)

### PROPOSED LIGHTING/ELECTRICAL CIRCUIT LOADS

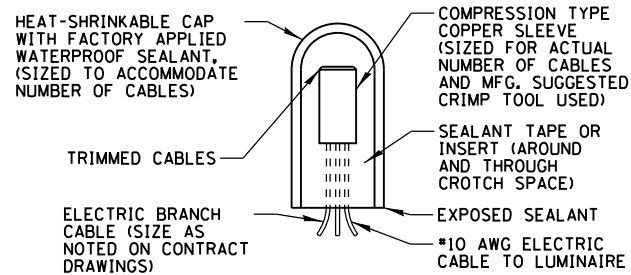


- NOTES:
- ALL WORK SHALL CONFORM TO COM ED'S BOOK OF "INFORMATION AND REQUIREMENTS FOR THE SUPPLY OF ELECTRIC SERVICE."
  - CONTRACTOR SHALL PROVIDE CONDUIT BUSHING AND SEALING COMPOUND AT TOP OF RISER.
  - ALL MATERIAL ABOVE (EXCEPT FOR POLE) SHALL BE INCLUDED IN THE PRICE BID FOR "ELECTRIC SERVICE INSTALLATION"; THE HORIZONTAL SERVICE CONDUIT AND WIRING FROM POLE TO CONTROLLER SHALL BE PAID FOR SEPARATELY.

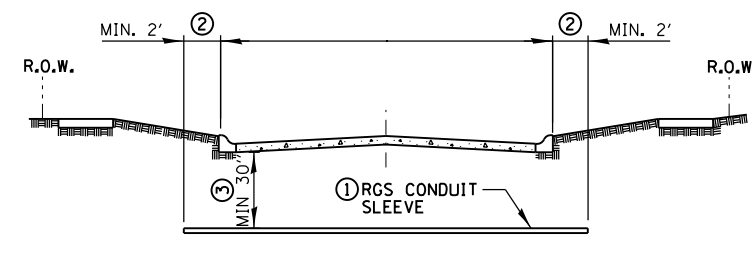
### COM ED OVERHEAD CONNECTION POLE

N.T.S.

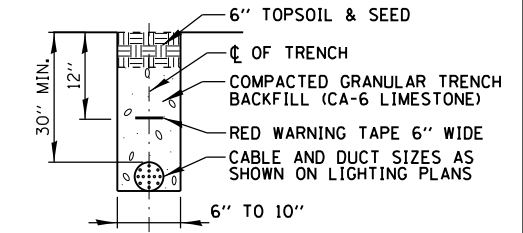
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N:\ORLANDPARK\150272-ph2\CADD_Sheets\012222-sh1-1d101.dgn	DRAWN RJJ	REVISOR -	REVISED -	DEPARTMENT OF TRANSPORTATION	151st STREET	1603	13-00071-00-WR	COOK	162	133
Default	PLOT SCALE = 48"	CHECKED AJD	REVISED -		SCALE:	SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 61F86		
	PLOT DATE = 7/9/2019	DATE 12/4/18	REVISED -			ILLINOIS FED. AID PROJECT				



**SPlicing ELECTRIC CABLE**  
N.T.S.



**ROADWAY CROSSING**



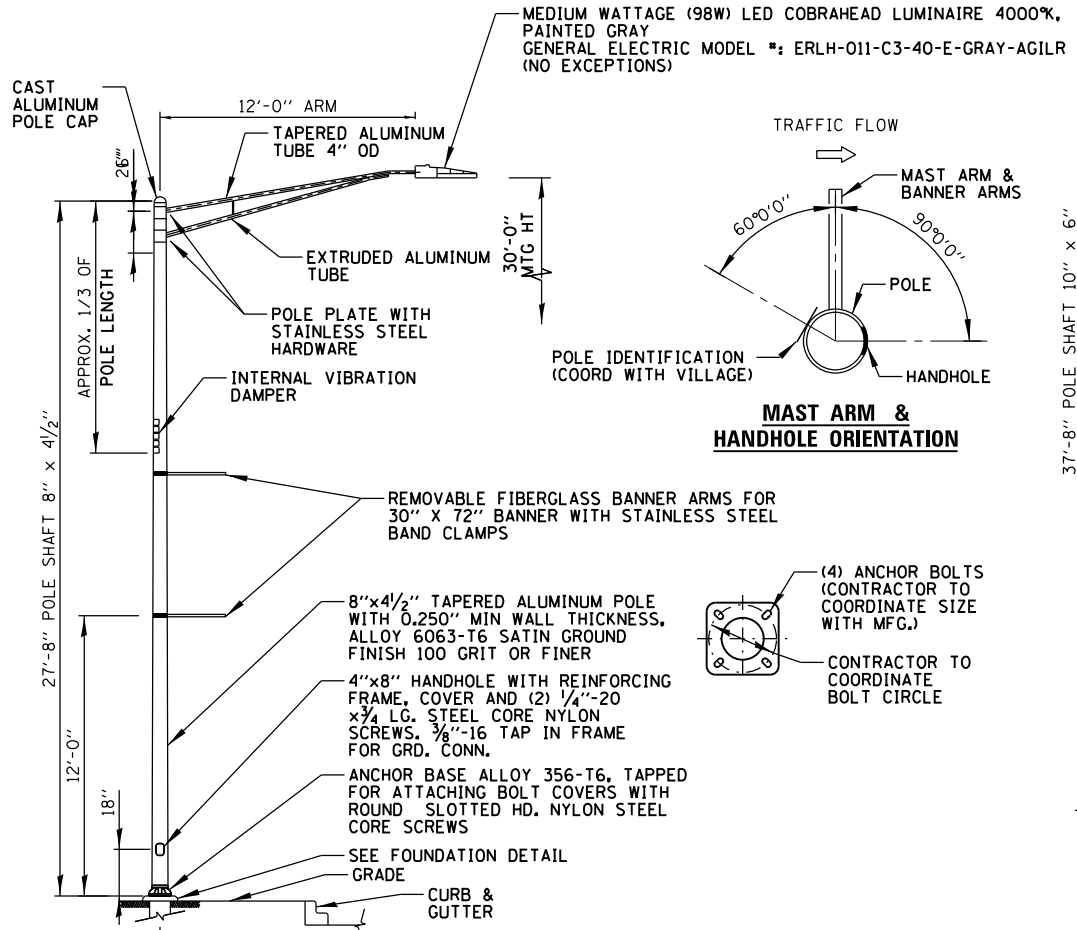
**TRENCH CROSS SECTION**

- ① SLEEVE SHALL BE HEAVY WALL RIGID GALVANIZED STEEL (RGS) CONDUIT.
- ② SLEEVE SHALL EXTEND A MINIMUM OF 2 FT. BEYOND BACK OF CURB.
- ③ SLEEVE SHALL BE A MINIMUM OF 30" BELOW ROADWAY OR CURB BOTTOM.

**ELECTRIC CONDUIT INSTALLATION**  
N.T.S.

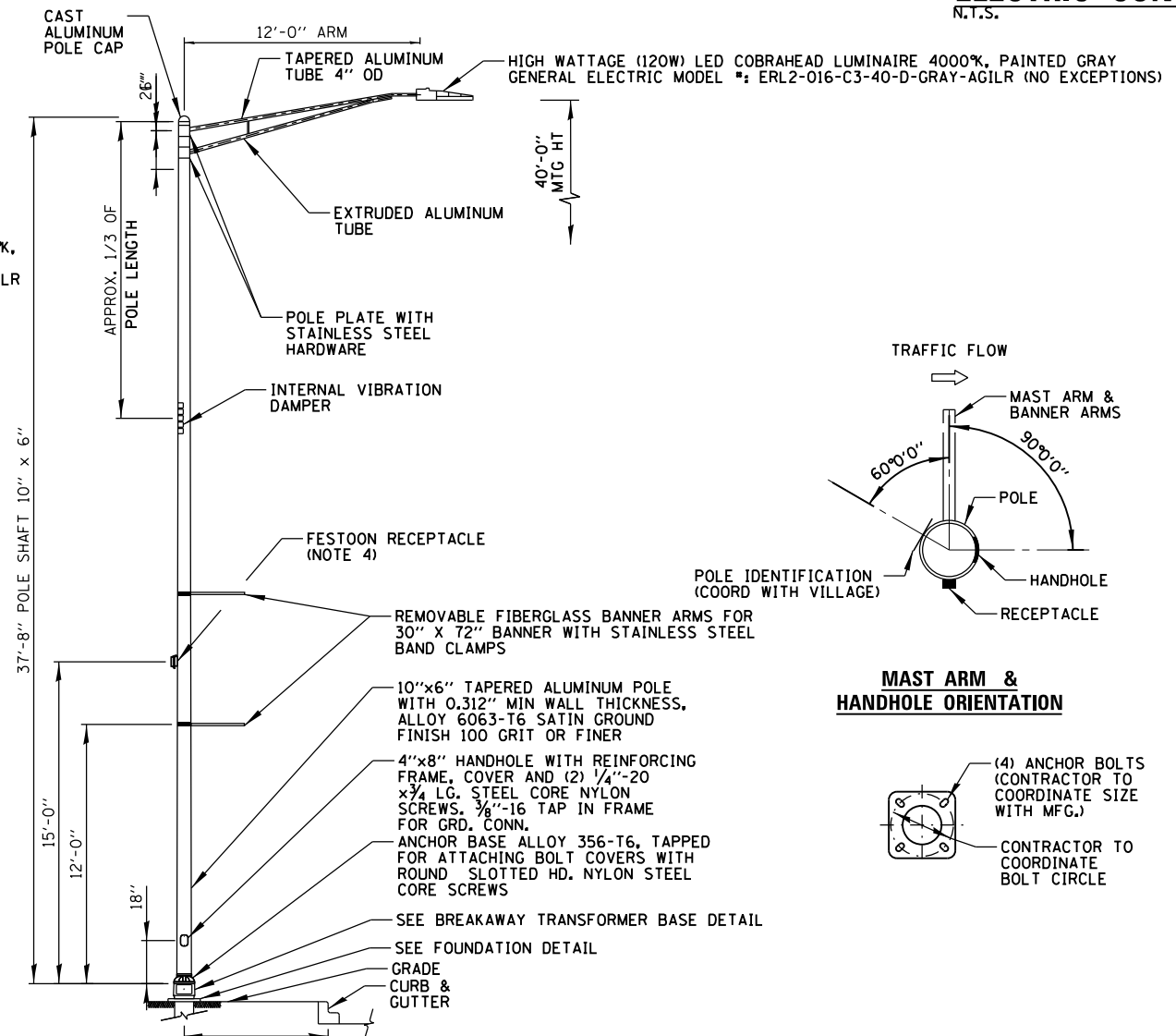
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BY	
PLAN	SURVEYED
	PLOTTED
	GRADES CHECKED
	STRUCTURE NOTED THIS OFF
	NO. 1
	NO. 2
	NO. 3
	NO. 4
	NO. 5
	NO. 6
	NO. 7
	NO. 8
	NO. 9
	NO. 10

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PROFILE	SURVEYED
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	GRADES CHECKED
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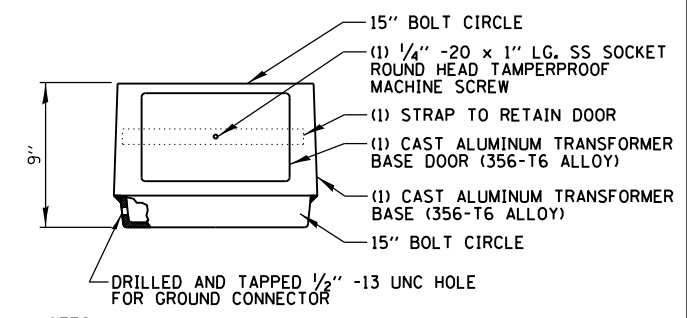
- NOTES:
- LIGHT POLES SHALL MEET WIND LOADING & VIBRATION REQUIREMENTS ACCORDING TO THE LATEST AASHTO STANDARDS AND ARTICLE 1069.01 IN STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
  - POLE HANDHOLE SHALL FACE AWAY FROM TRAFFIC.
  - LED LUMINAIRE SHALL BE PAID FOR UNDER "LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION E".

**LIGHT POLE TYPE 1 DETAIL**  
N.T.S.



- NOTES:
- LIGHT POLES SHALL MEET WIND LOADING & VIBRATION REQUIREMENTS ACCORDING TO THE LATEST AASHTO STANDARDS AND ARTICLE 1069.01 IN STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
  - POLE HANDHOLE SHALL FACE AWAY FROM TRAFFIC.
  - LED LUMINAIRE SHALL BE PAID FOR UNDER "LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H".
  - ALL PROPOSED LIGHTING UNITS SHALL HAVE A 20A, 120V, GFCI RECEPTACLE WITH IN-USE WEATHERPROOF RUGGED U.V. RESISTANT POLYCARBONATE COVER INSTALLED ON BACK OF POLE.

**LIGHT POLE TYPE 2 DETAIL**  
N.T.S.



- NOTES:
- BEFORE INSTALLATION OF BREAKAWAY BASE, USER SHOULD CONSULT WITH AUTHORIZED DISTRIBUTOR REGARDING USERS PROPOSED APPLICATION, LOAD REQUIREMENTS AND INSTALLATION METHODS. FAILURES CAN RESULT FROM USERS MISAPPLICATION OR IMPROPER INSTALLATION. TO APPROACH OPTIMUM STATIC LOADS, USE THE LARGEST POSSIBLE BOLT CIRCLES. SHIMS SHALL NOT BE ALLOWED.

**BREAKAWAY TRANSFORMER BASE**  
N.T.S.

FILE NAME =	USER NAME = *USER*	DESIGNED AJD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIGHTING DETAIL (2 OF 7) 151st STREET</b>	F.A.U. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
*FILEL*		DRAWN RJJ	REVISED -			1603	13-00071-00-WR	COOK	162	134	
*MODELNAME*		CHECKED AJD	REVISED -			CONTRACT NO. 61F86					
		DATE 12/4/18	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO

# PROPOSED LUMINAIRE AND POLE SCHEDULE

LIGHT POLE IDENTIFIER	POLE TYPE	LUMINAIRE		RECEPTACLE		LOCATION	
		WATTAGE	CKT ID	WATTAGE	CKT ID	STATION	OFFSET
P1	1	98W	B	N/A	N/A	206+82L	8.5' F.O.C.
P2	1	98W	A	N/A	N/A	108+87R	11.5' F.O.C.
P3	1	98W	A	N/A	N/A	109+31L	11.0' F.O.C.
P4	1	98W	B	N/A	N/A	208+56L	12.0' F.O.C.
P5	1	98W	A	N/A	N/A	209+62L	9.5' F.O.C.
P6	1	98W	B	N/A	N/A	206+16R	12.0' F.O.C.
P7	1	98W	A	N/A	N/A	110+63R	10.0' F.O.C.
P8	1	98W	B	N/A	N/A	112+16R	7.0' F.O.C.
P9	1	98W	A	N/A	N/A	111+19L	7.0' F.O.C.
P10	1	98W	B	N/A	N/A	208+18R	9.0' F.O.C.
P11	2	120W	C	180W	J	126+68R	7.5' F.O.C.
P12	2	120W	D	180W	K	128+48R	6.0' F.O.C.
P13	2	120W	F	180W	M	406+79L	11.0' F.O.C.
P14	2	120W	E	180W	L	405+09L	10.5' F.O.C.
P15	2	120W	E	180W	L	406+56R	7.0' F.O.C.
P16	2	120W	B	180W	I	128+44L	7.0' F.O.C.
P17	2	120W	A	180W	H	408+45L	5.0' F.O.C.
P18	2	120W	B	180W	I	408+10R	3.0' F.O.C.
P19	2	120W	C	180W	J	129+80L	5.0' F.O.C.

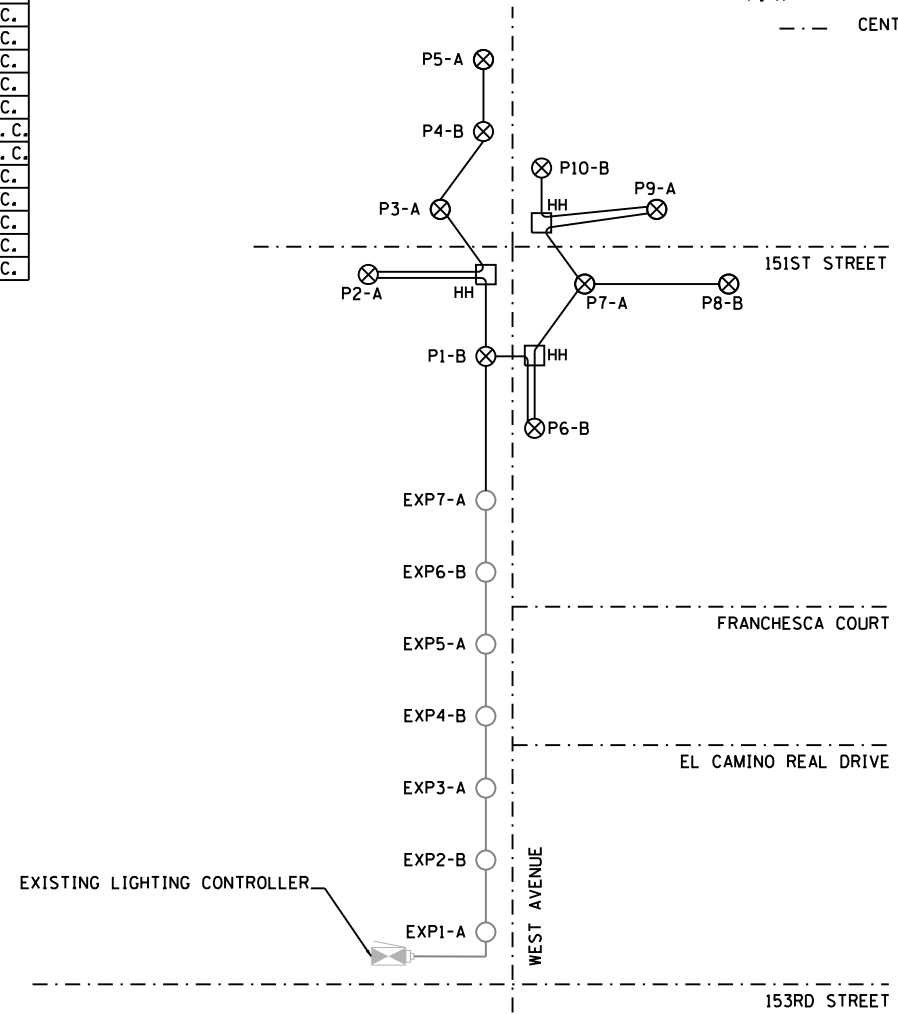
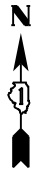
F.O.C. - FACE OF CURB  
E.O.P. - EDGE OF TRAVELED PAVEMENT

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	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
	NOTE BOOK	
	CADD FILE NAME	

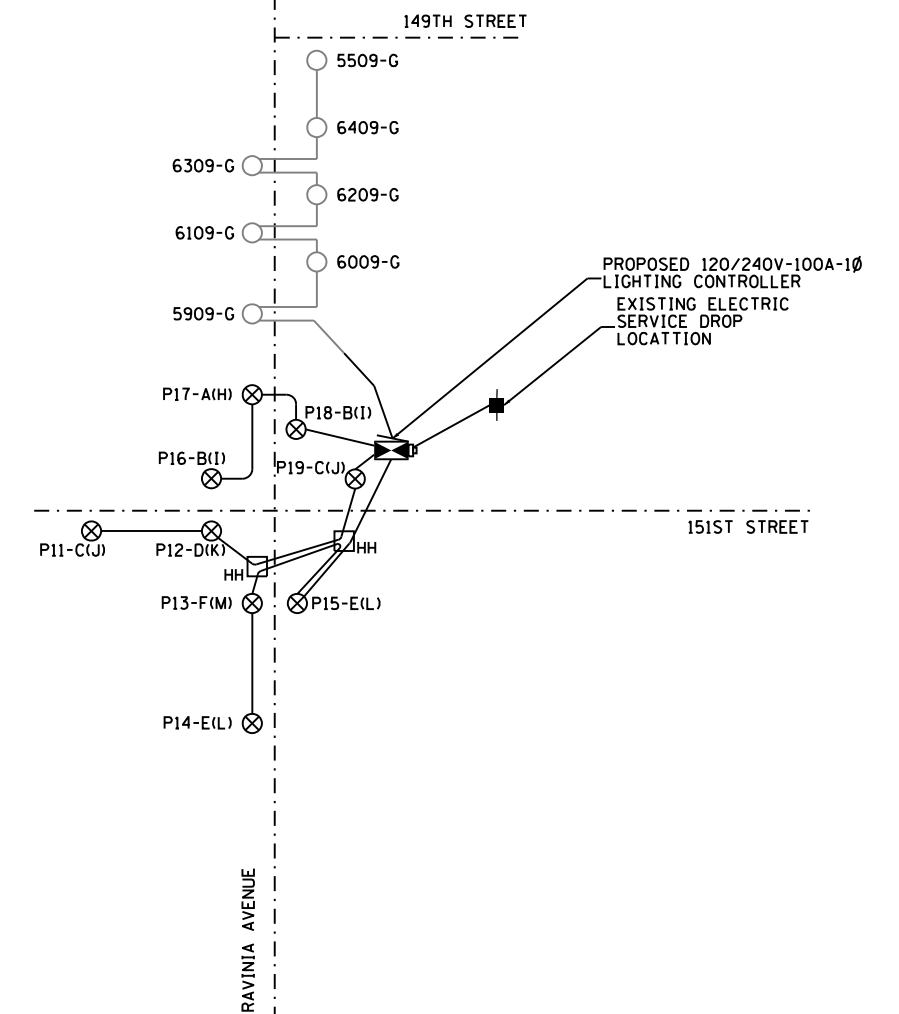
PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
	NOTE BOOK	
	CADD FILE NAME	

## ONE-LINE LEGEND

- EXISTING LIGHT POLE
- ⊗ PROPOSED LIGHT POLE
- ELECTRIC CABLE IN CONDUIT
- ⊡ LIGHTING CONTROLLER
- ELECTRIC SERVICE INSTALLATION
- HANDHOLE
- POLE NUMBER
- CIRCUIT IDENTIFIER
- CENTERLINE OF ROADWAY



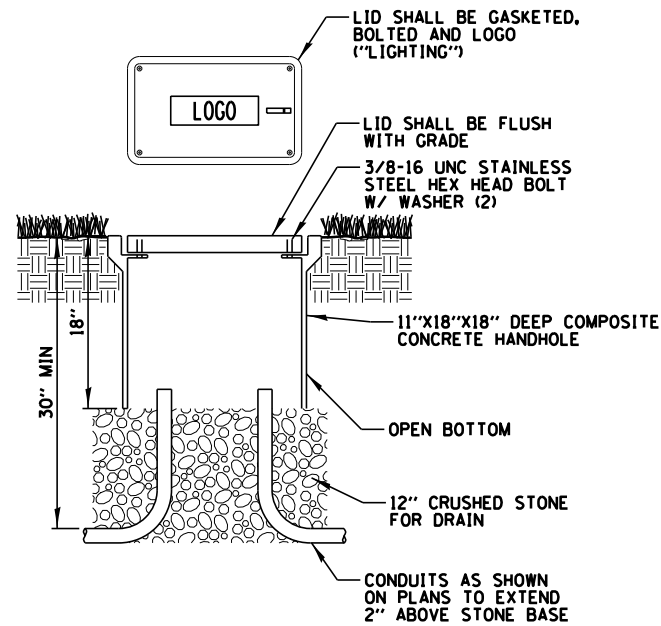
**EXISTING LIGHTING CONTROLLER ONE-LINE DIAGRAM**  
N.T.S.



**PROPOSED LIGHTING CONTROLLER ONE-LINE DIAGRAM**  
N.T.S.

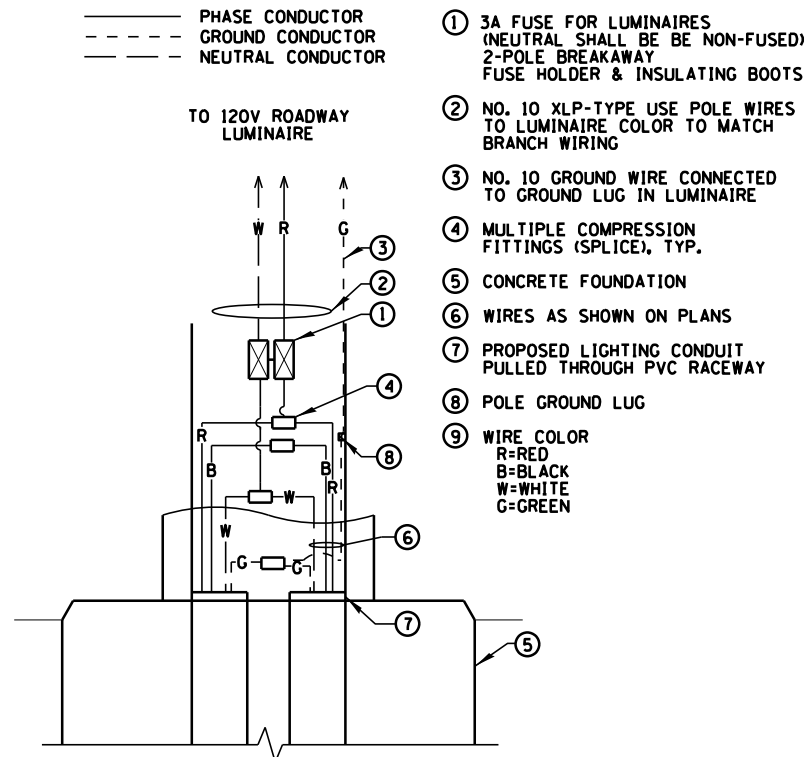
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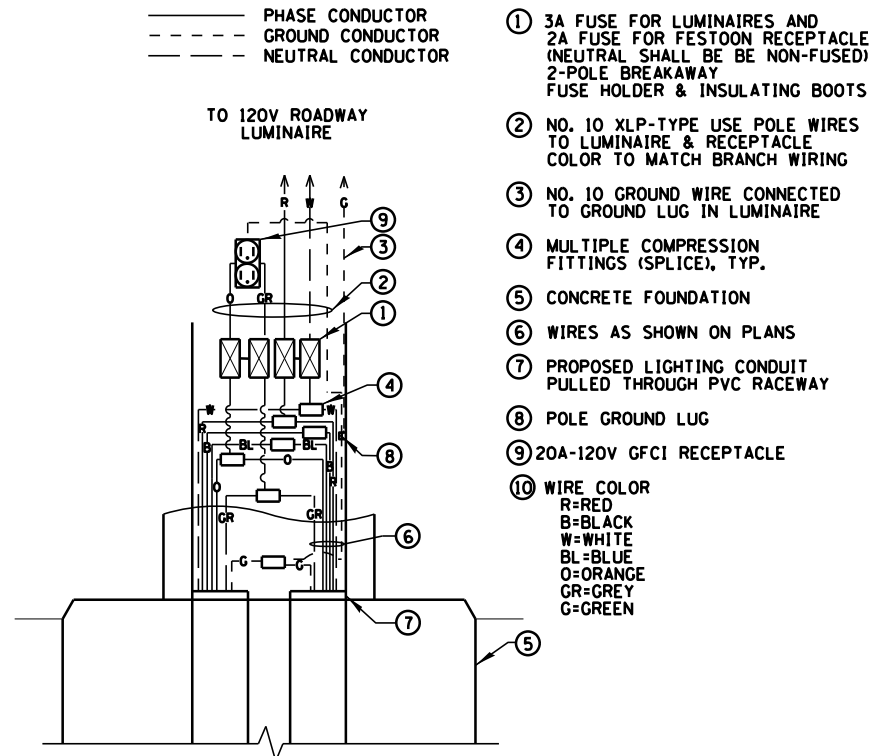


- NOTES:
1. NO SPLICING ALLOWED IN HANDHOLES.
  2. HANDHOLE AND LID SHALL BE GREY.
  3. BOX & LID SHALL MEET/EXCEED ANSI TIER 15 LOADING REQUIREMENTS, AND BE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE ANSI/SCTE 77 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY", AND THE PROVISIONS OF PARAGRAPHS 5.2.3 AND 5.2.4 OF WESTERN UNDERGROUND COMMITTEE GUIDE 3.6.
  4. HANDHOLES PAID FOR AS "HANDHOLE, COMPOSITE CONCRETE".

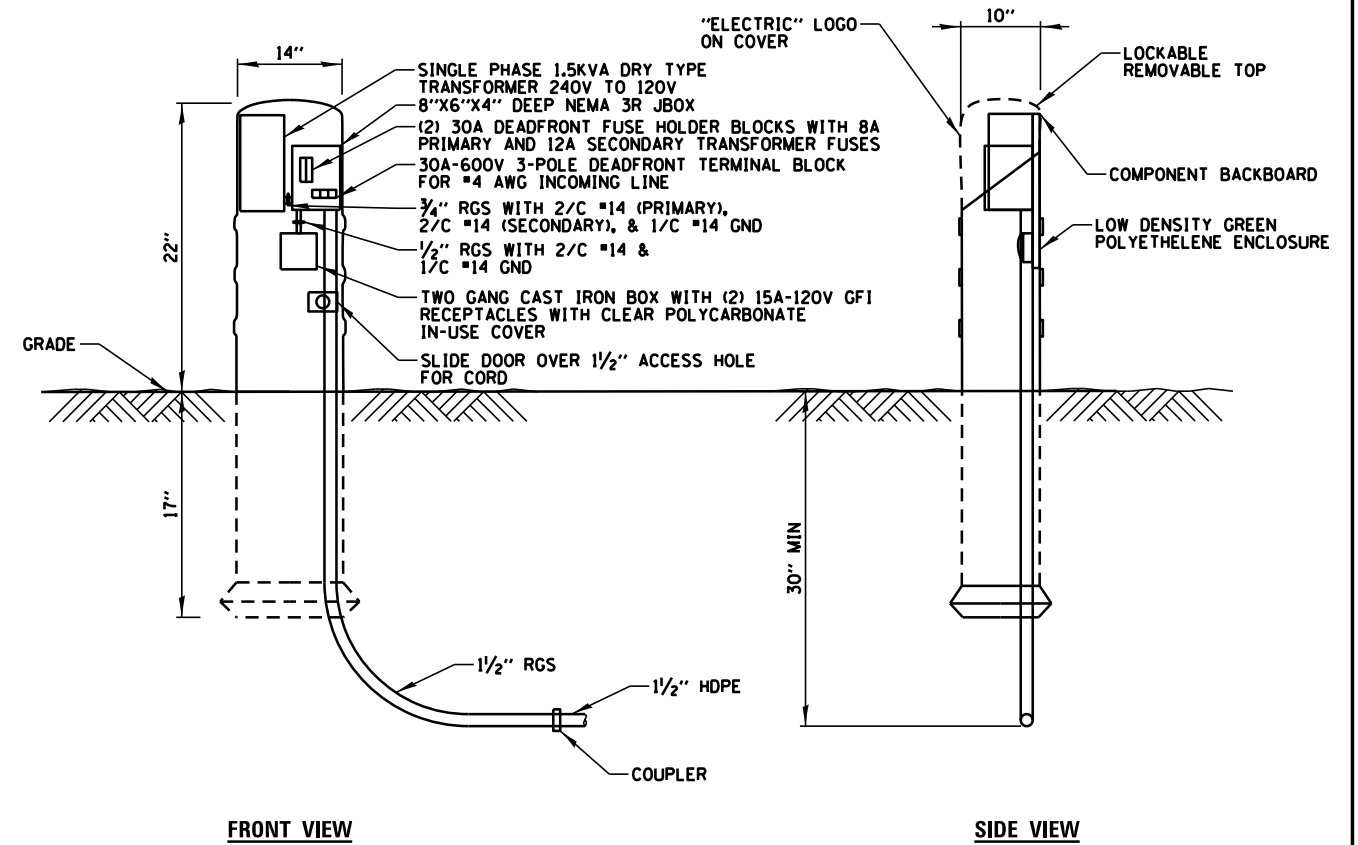
**COMPOSITE CONCRETE HANDHOLE**  
N.T.S.



**POLE TYPE 1 HANDHOLE WIRING DIAGRAM**  
N.T.S.



**POLE TYPE 2 HANDHOLE WIRING DIAGRAM**  
N.T.S.



- NOTES:
1. ALL ITEMS SHOWN ABOVE SHALL BE INCLUDED IN PAY ITEM "OUTLET SPECIAL" (SEE SPECIAL PROVISION). 1/2" HDPE CONDUIT & #4AWG WIRING TO LIGHT POLE PAID FOR SEPARATELY.
  2. ALL WIRING SHALL BE XLP-TYPE USE COPPER.
  3. FUSING SHALL BE LABELED "PRIMARY" & "SECONDARY" WITH TWO COLOR ENGRAVED NAME PLATES.
  4. ALL EXPOSED PARTS SHALL BE INSULATED.

**RECEPTACLE ENCLOSURE**  
N.T.S.

FILE NAME =	USER NAME = rjezerny	DESIGNED AJD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING DETAIL (4 OF 7) 151st STREET	F.A.U. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\ORLANDPARK\1502722_ph2\CADD_Sheets\012222-sh1-1dt04.dgn	DRAWN RJJ	REVISED -	1603			13-00071-00-WR	COOK	162	136		
Default	PLOT SCALE = 48"	CHECKED AJD	REVISED -			CONTRACT NO. 61F86					
	PLOT DATE = 7/9/2019	DATE 12/4/18	REVISED -			ILLINOIS FED. AID PROJECT					



FOUNDATION DESIGN TABLE

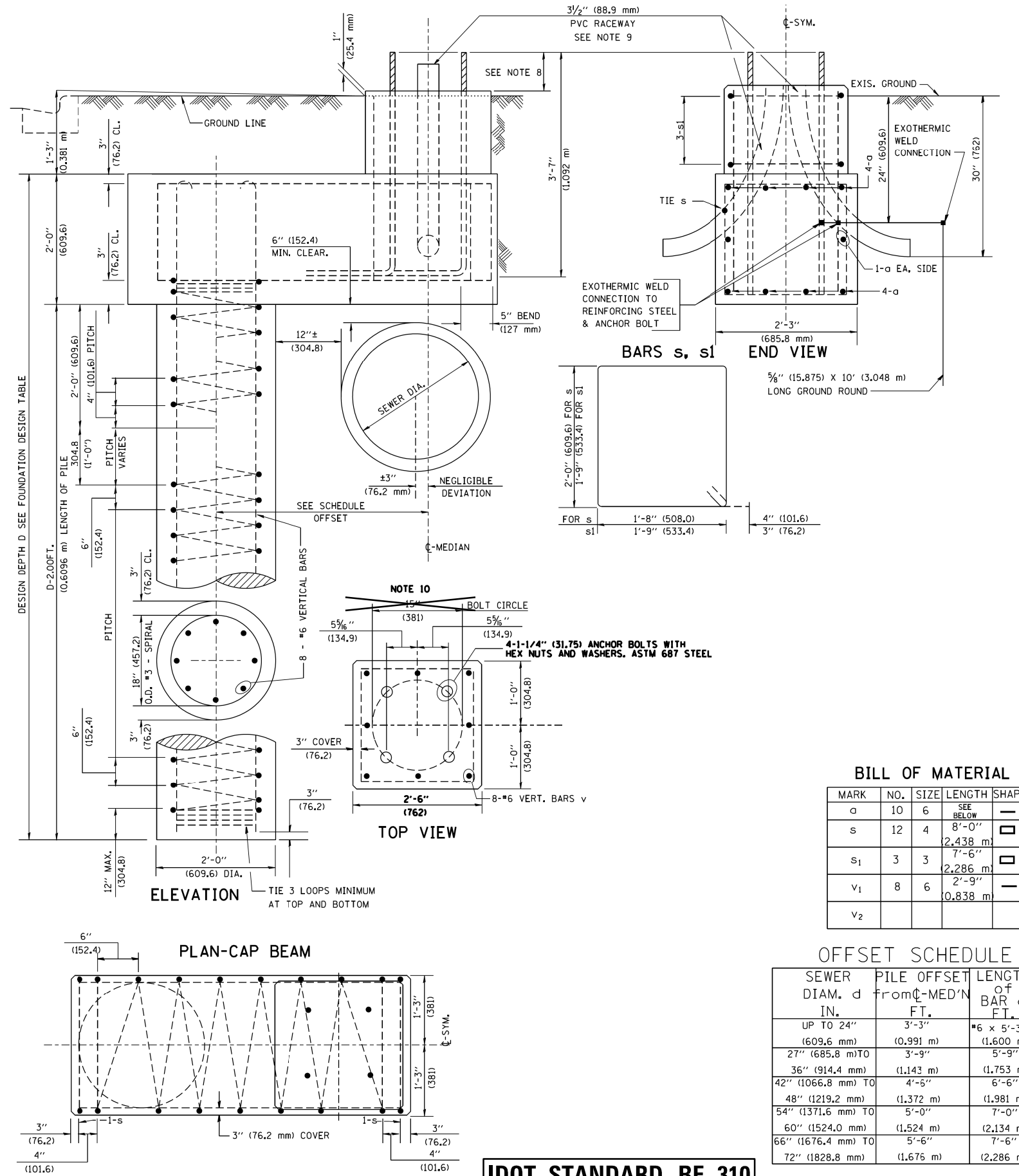
TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3.962 m)	15'-0" (4.572 m)	8-#6X12'-6" (3.810 m)	#3X122' (37.186 m)	8-#6X14'-3" (4.343 m)	#3X141' (42.977 m)
MEDIUM CLAY	9'-6" (2.896 m)	10'-9" (3.277 m)	8-#6X9'-0" (2.743 m)	#3X90' (27.432 m)	8-#6X10'-0" (3.048 m)	#3X100' (30.480 m)
STIFF CLAY	7'-0" (2.134 m)	8'-0" (2.438 m)	8-#6X6'-6" (1.981 m)	#3X66' (20.112 m)	8-#6X7'-6" (2.286 m)	#3X76' (23.165 m)
LOOSE SAND	9'-0" (2.743 m)	10'-0" (3.048 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)	8-#6X9'-6" (2.896 m)	#3X94' (28.651 m)
MEDIUM SAND	8'-3" (2.515 m)	9'-0" (2.743 m)	8-#6X8'-0" (2.438 m)	#3X78' (23.774 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
DENSE SAND	7'-9" (2.362 m)	9'-0" (2.743 m)	8-#6X7'-6" (2.286 m)	#3X73' (22.250 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
ROCK OR SOLIDIFIED SLAG	5'-0" (1.524 m)	5'-0" (1.524 m)	NONE	NONE	NONE	NONE

CONTRACTOR SHALL USE A STANDARD CONCRETE FOUNDATION WHEREVER POSSIBLE. IF UTILITY CONFLICTS PROHIBIT THE USE OF A STANDARD CONCRETE FOUNDATION, THE CONTRACTOR SHALL CONSULT WITH OWNER'S REPRESENTATIVE PRIOR TO THE USE OF AN OFFSET FOUNDATION.

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
- 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.
- THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
- RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.
- CONTRACTOR SHALL COORDINATE BOLT CIRCLE.

PAID FOR UNDER "LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET" (SEE SPECIAL PROVISION).



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" (2,438 m)	□
s1	3	3	7'-6" (2,286 m)	□
v1	8	6	2'-9" (0,838 m)	—
v2				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from C-MED'N FT.	LENGTH of BAR a FT.
UP TO 24" (609.6 mm)	3'-3" (0.991 m)	#6 x 5'-3" (1.600 m)
27" (685.8 mm) TO	3'-9" (1.143 m)	5'-9" (1.753 m)
36" (914.4 mm) TO	4'-5" (1.372 m)	6'-6" (1.981 m)
42" (1066.8 mm) TO	5'-0" (1.524 m)	7'-0" (2.134 m)
48" (1219.2 mm) TO	5'-6" (1.676 m)	7'-6" (2.286 m)
54" (1371.6 mm) TO	6'-0" (1.828 m)	8'-0" (2.438 m)
60" (1524.0 mm) TO	6'-6" (1.981 m)	8'-6" (2.591 m)
66" (1676.4 mm) TO	7'-0" (2.134 m)	9'-0" (2.743 m)
72" (1828.8 mm) TO	7'-6" (2.286 m)	9'-6" (2.896 m)

IDOT STANDARD BE-310

DATE	BY	SURVEYED	PLOTTED	CHECKED	FILED

DATE	BY	SURVEYED	PLOTTED	CHECKED	FILED

FILE NAME =	USER NAME = rjezerny	DESIGNED AJD	REVISED -
N:\ORLANDPARK\1502722-ph2\CADD_Sheets\DI2222-sh1-1d106.dgn		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE 12/4/18	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAIL (6 OF 7)  
151st STREET

SCALE: SHEET OF SHEETS STA. TO STA.

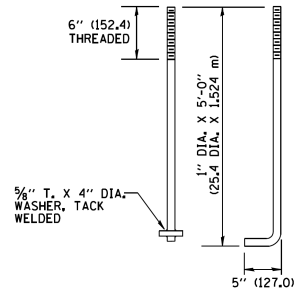
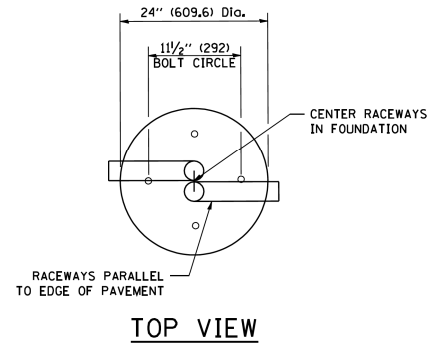
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	138
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				

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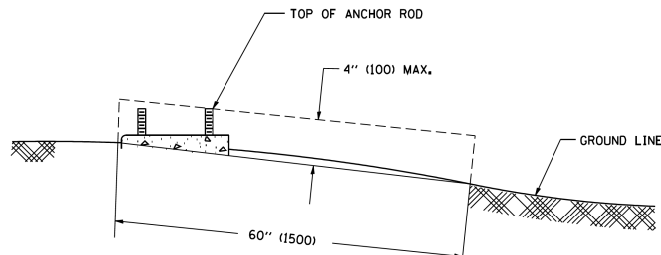
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**LIGHT POLE FOUNDATION DEPTH TABLE**  
30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT

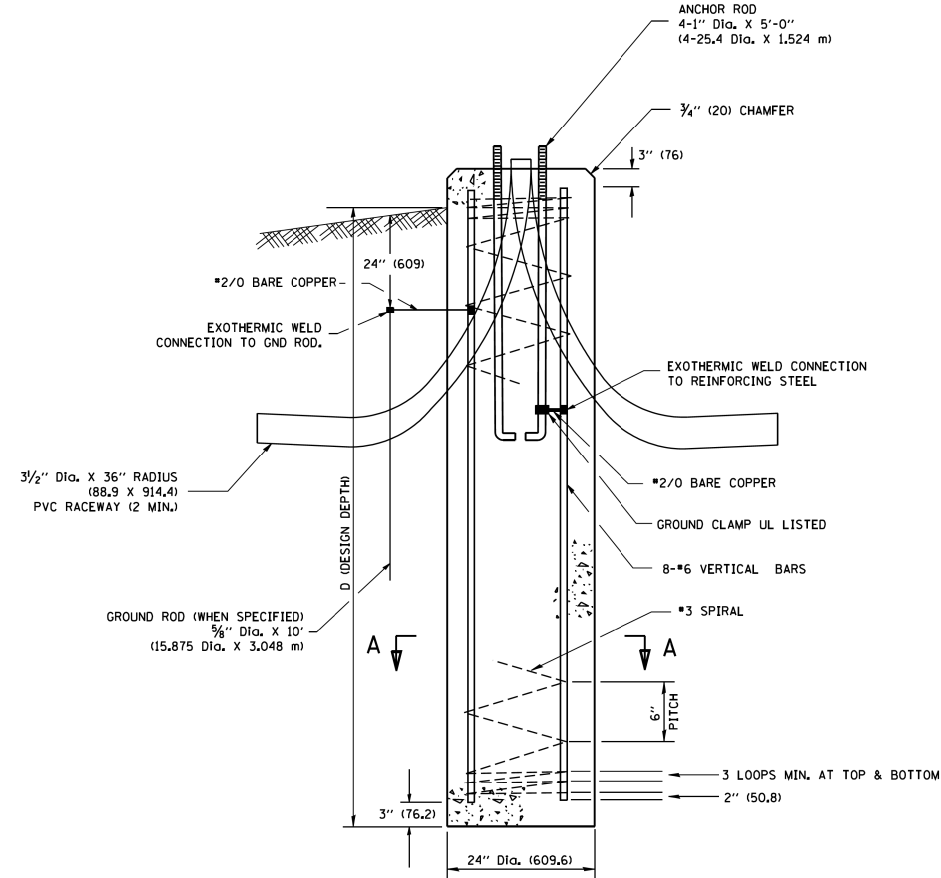
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Ou = 0.375 TON/SQ. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Ou = 0.75 TON/SQ.FT	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Ou = 1.50 TON/SQ. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND φ = 34°	9'-6" (2.90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



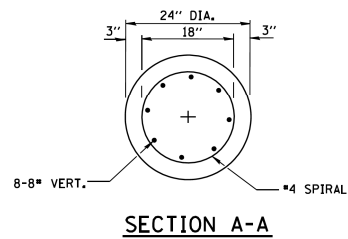
**ANCHOR BOLT DETAIL**



**FOUNDATION EXTENSION DETAIL**



**FOUNDATION DETAIL**



**SECTION A-A**

PAID FOR UNDER "LIGHT POLE FOUNDATION, 24" DIAMETER".

**IDOT STANDARDS BE-300**  
**REVISED 1-4-2008**

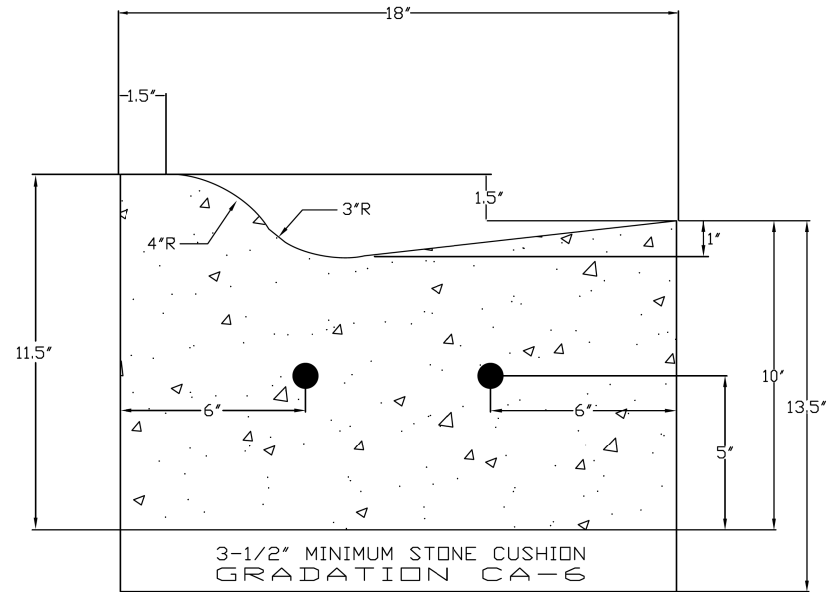
**NOTES**

- 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 S1. 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.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105), NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- 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 2 3/4" (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.

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	ALIGNED
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	NO.

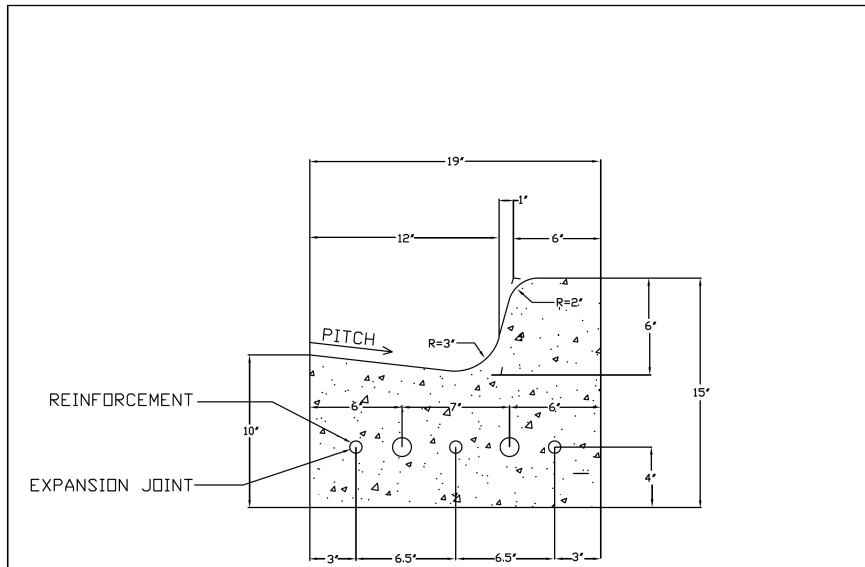
CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1000 N. WISCONSIN ST. SUITE 600  
 ROSEMOUNT, ILLINOIS 60018  
 (815) 823-9500

DATE	
BY	
PROFILE	SURVEYED
	PLOTTED
	GRADES CHECKED
	STRUCTURE NOTATIONS OK'D
	NO.



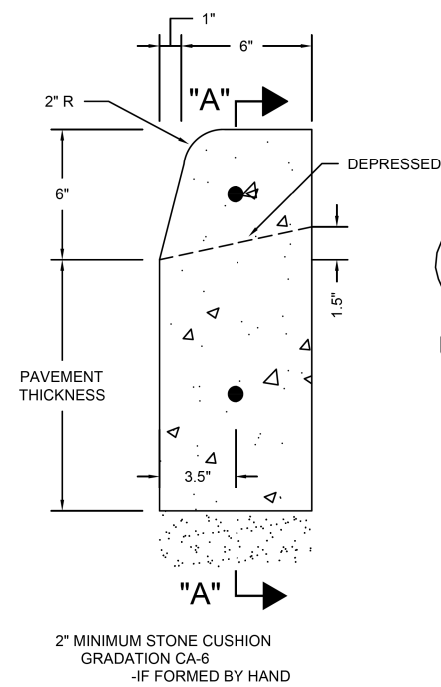
- NOTES:
1. REINFORCEMENT: PROVIDE TWO (2) #4 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
  2. EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
  3. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
  4. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

CURB AND GUTTER DETAIL (RESIDENTIAL)		
CURB.DWG	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED: 2-14-08 JP
Engineering Department		REVISED: 8-27-07 MS
		DRAWING NO. STR-03

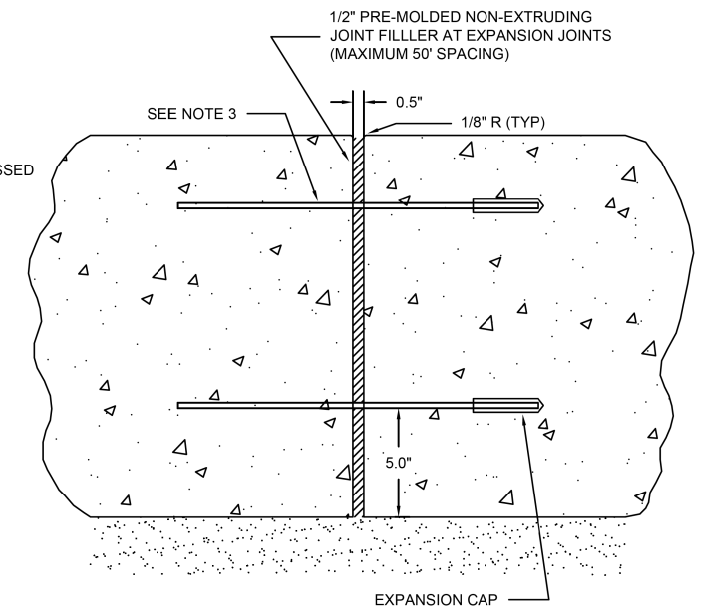


- NOTES:
1. REINFORCEMENT SHALL BE THREE (3) #5 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
  2. EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
  3. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
  4. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

B - 6.12 CURB AND GUTTER		
B-612.DWG	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED: 2-14-08 JP
Engineering Department		REVISED: 2-8-08 KTL
		DRAWING NO. STR-04



**X-SECTION**



**SECTION "A-A"**

- NOTE:
1. PROVIDE TWO #4 BARS (10' LONG) CENTERED IN EACH UTILITY TRENCH.
  2. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB.
  3. PROVIDE TWO #6 SMOOTH BARS W/EXPANSION CAPS AT EACH EXPANSION JOINT.
  4. CONTRACTION JOINTS - TWO CONTRACTION JOINTS SHALL BE PLACED AT EQUAL SPACES BETWEEN NORMAL EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW CUT IN THE UPPER 1/3 OF CURB WITHIN 7 DAYS OF PLACEMENT.

VERTICAL CURB (TYPE B)		
B-6.DWG	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		
Engineering Department		DRAWING NO. STR-05

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
N:\ORLANDPARK\150272.ph2\Consultants\100T\Cadd_Deliverable\DI61F86-shr-Standards.dgn		DRAWN -	REVISED -
Default	PLOT SCALE = 100'	CHECKED -	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

151ST STREET WEST AVENUE TO RAVINIA AVENUE  
 STANDARD DETAILS

SHEET OF SHEETS STA. TO STA.

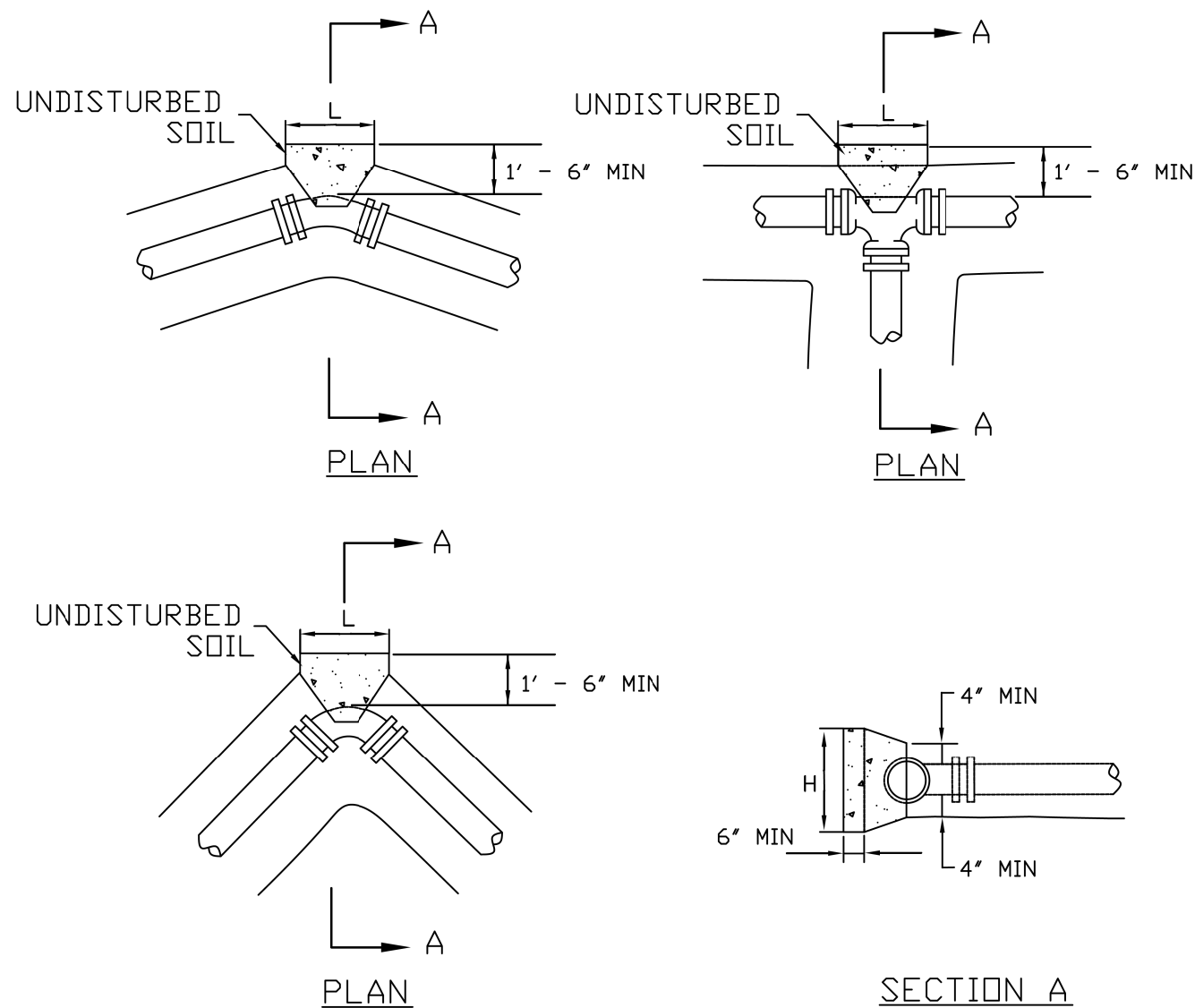
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	140
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
DATE	
PLAN	
NOTE BOOK	
NO.	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1000 N. WILSON AVENUE  
 ROSEMONT, ILLINOIS 60018  
 (847) 823-0500

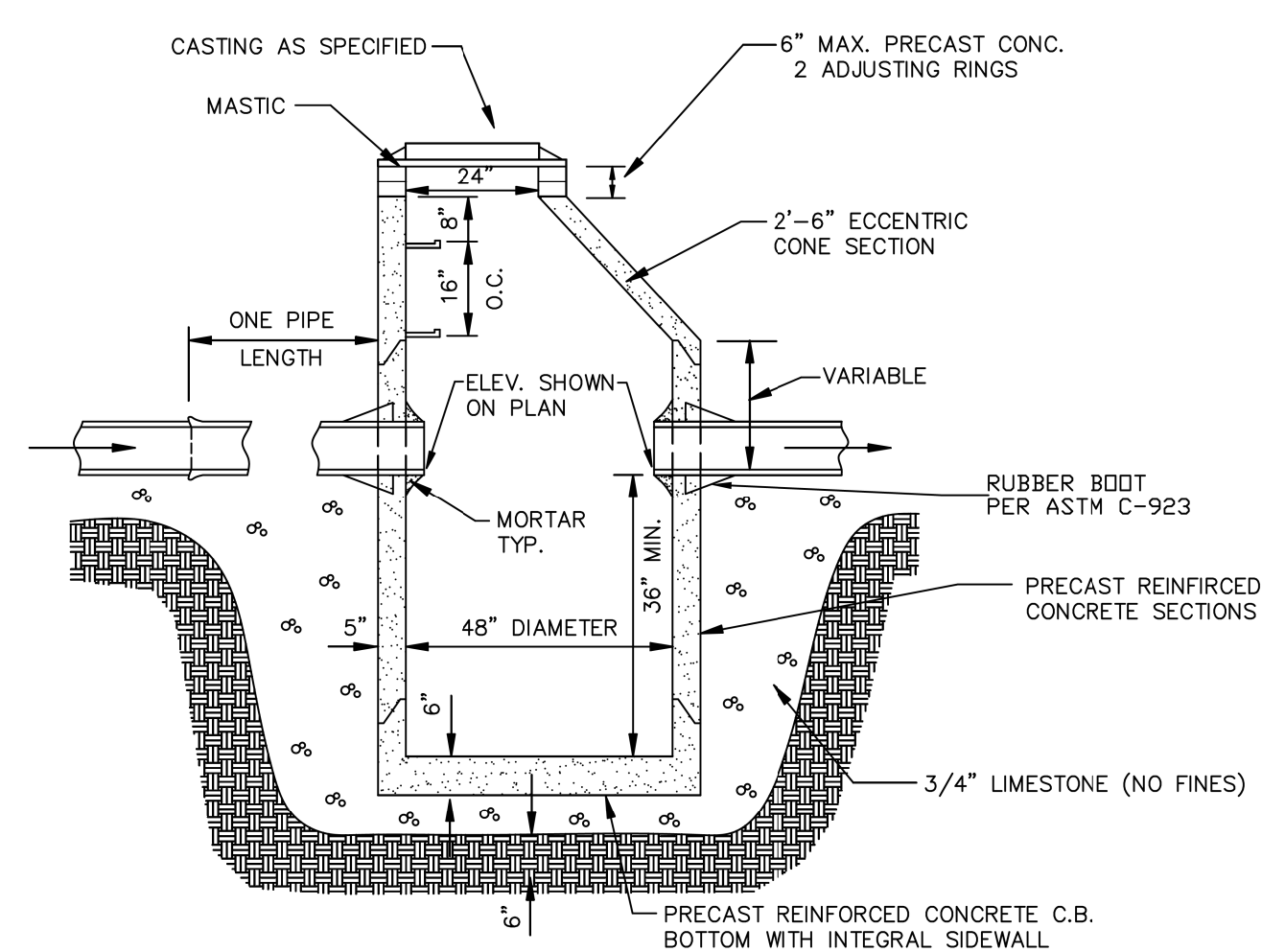
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BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
NOTE BOOK	
NO.	
PROFILE	
STRUCTURE	
NOTATIONS	



CONCRETE THRUST BLOCK DIMENSIONS										
PIPE SIZE	11-15° BEND		22-30° BEND		45°-BEND		90°-BEND		TEE & PLUG	
	H	L	H	L	H	L	H	L	H	L
≤ 8"	1'-6"	1'-6"	2'-0"	2'-6"	2'-6"	3'-0"	3'-6"	4'-0"	3'-0"	3'-6"
≤ 12"	1'-6"	2'-0"	2'-3"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	3'-6"	4'-0"
≤ 16"	2'-0"	2'-0"	2'-6"	3'-0"	4'-0"	4'-6"	5'-0"	6'-0"	4'-6"	5'-6"

- ALL BLOCKING SHALL BE CONSTRUCTED WITH POURED CL. X CONCRETE AGAINST UNDISTURBED VERTICAL EARTH FACE WITH A MINIMUM WIDTH OF 12 INCHES.
- THRUST BLOCKS TO BE USED AT ALL BENDS 11 1/4 DEGREES OR GREATER.
- MECHANICAL JOINT RETAINER GLANDS MAY BE USED AS AN ALTERNATIVE TO CONCRETE THRUST BLOCK INSTALLATION WHEN APPROVED BY THE VILLAGE ENGINEER.
- TEST PRESSURE 150 PSI.

CONCRETE THRUST BLOCK DETAILS		
TB2.DWG	WATER MAIN IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Engineering Department		DRAWING NO. WM-10



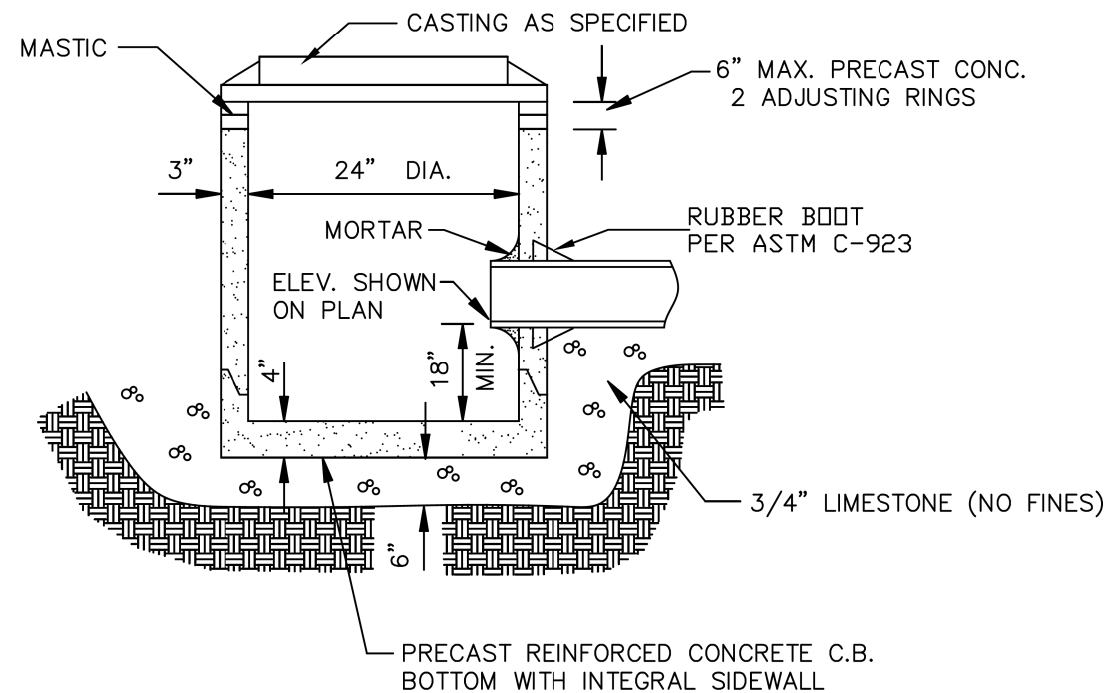
- NOTES:**
- Adjustment:** Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
  - Pipe and frame seals:** All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
  - Sealing:** All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
  - All bottom sections shall be monolithically precast including bases and invert flowlines.
  - Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas for subgrade.

CATCHBASIN TYPE A		
CBASIN_A.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Engineering Department		DRAWING NO. STS-02

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CHECKED	
FILE NAME	

**CHRISTOPHER B. BURKE** ENGINEERING LTD.  
 1000 N. WILSON AVENUE, SUITE 600  
 CHICAGO, ILLINOIS 60611  
 (847) 823-9500

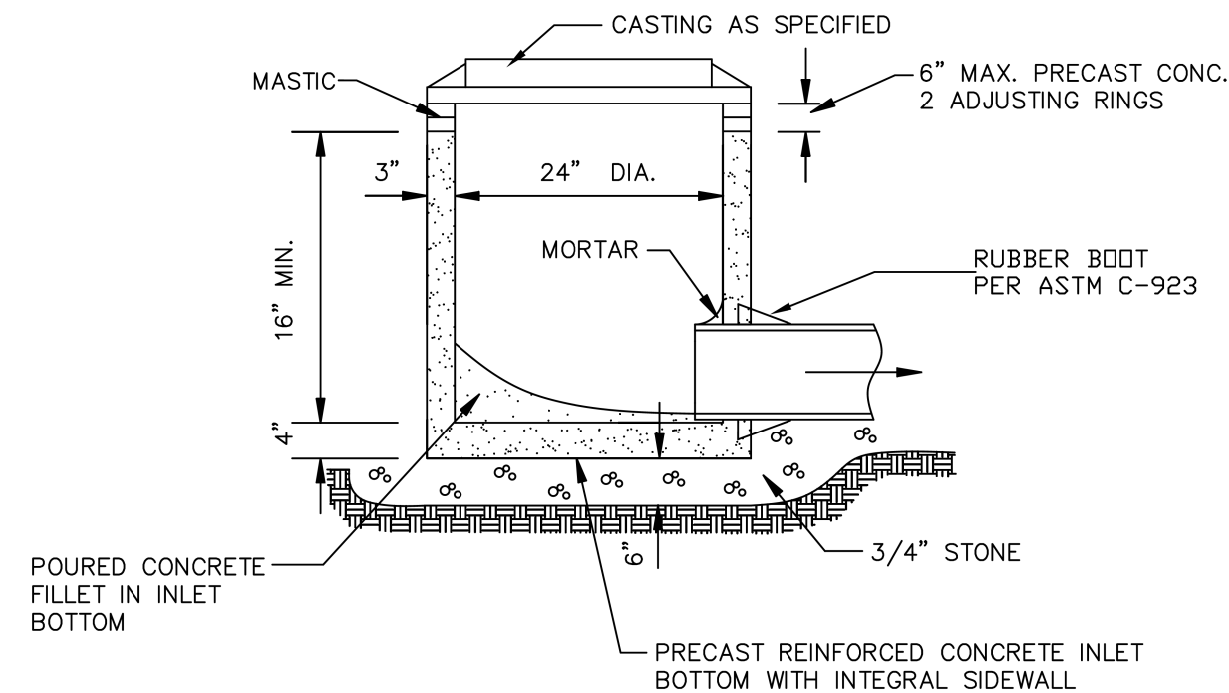
DATE	
BY	
PROFILE	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CHECKED	
NOT AT THIS OFFICE	



**NOTES:**

- Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
- Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
- Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
- All bottom sections shall be monolithically precast including bases and invert flowlines.
- Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas for subgrade.

CATCHBASIN TYPE C		
CBASIN_C.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of <b>ORLAND PARK</b>		REVISED:
Engineering Department		DRAWING NO. STS-04



**NOTES:**

- Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
- Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
- Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber Adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames
- All bottom sections shall be monolithically precast including bases and invert flowlines.
- Provide CA-6 aggregate backfill around inlet to subgrade elevation in paved areas for subgrade.

INLET TYPE A		
INLET_A.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of <b>ORLAND PARK</b>		REVISED:
Engineering Department		DRAWING NO. STS-05

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
N:\ORLANDPARK\150272.ph2\Consultants\1001	Cadd_Deliverable\DI61F86-shr-Standards.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 100'	CHECKED -	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**151ST STREET WEST AVENUE TO RAVINIA AVENUE  
STANDARD DETAILS**

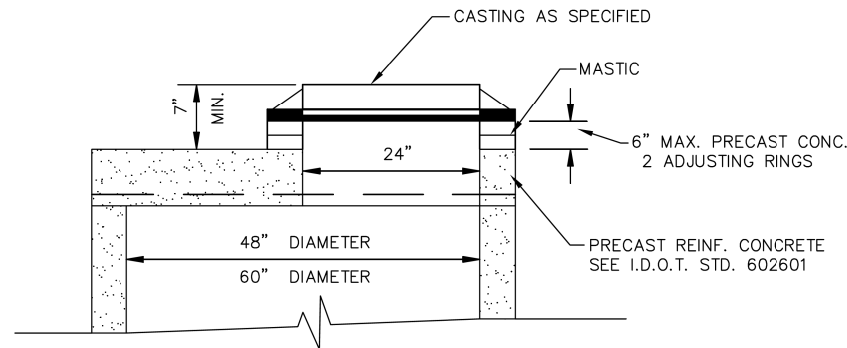
SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	142
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
PLAN	
NO.	
CHECKED	
DATE	
BY	
NO.	
CHECKED	
DATE	
BY	
NO.	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1871 S. 19th Street, Suite 600  
 Rosemont, Illinois 60018  
 (630) 823-0500

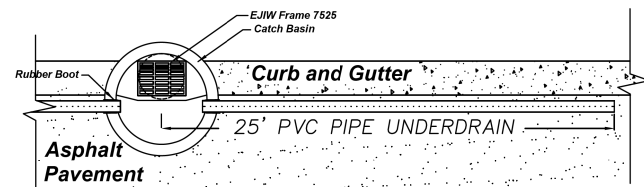
DATE	
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PROFILE	
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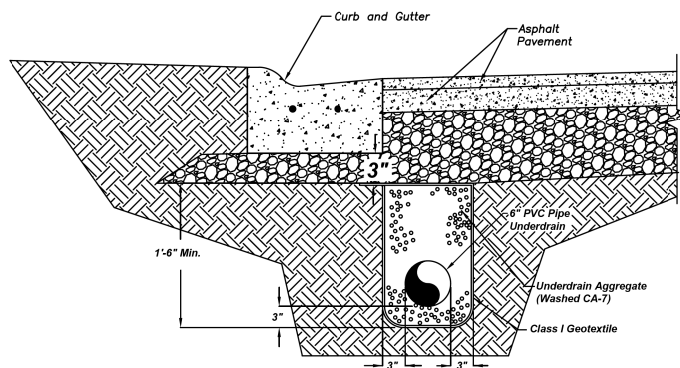
**NOTES:**

- Adjustment:** Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
- Sealing:** All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames.

FLAT SLAB TOP		
FILE NAME	STORM SEWER IMPROVEMENT	DATE
DESIGNED BY		REVISIONS
Engineering Department		STS-06



**PLAN VIEW**  
SCALE: N.T.S.

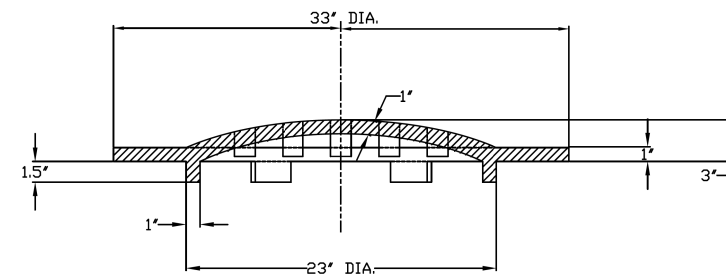
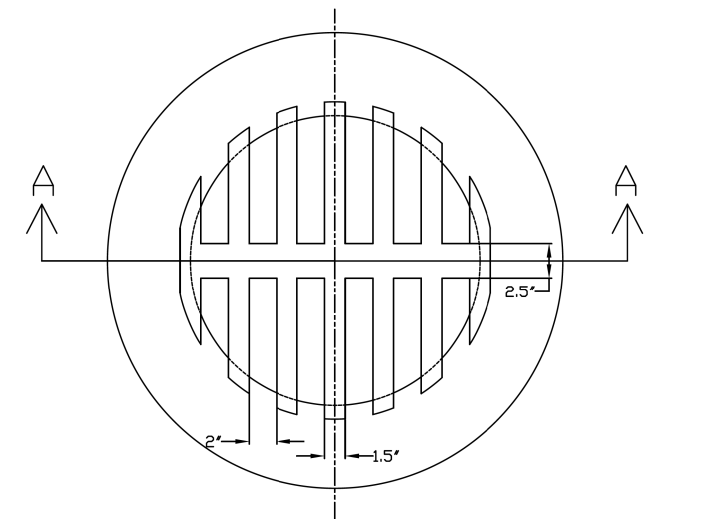


**PIPE UNDERDRAIN FRONT OF CURB**  
SCALE: N.T.S.

**Underdrain Notes:**

- The installation of the underdrains shall conform to section 601.04 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.
- Pipe material shall be 6" perforated PVC, per article 1040.03 of the IDOT Standard Specifications.
- The underdrains shall be installed just below the bottom of the existing curb (or as necessary to provide positive flow), with the drain perforations down. All underdrains shall be held in the center of the trench by mechanical means while placing compacted trench backfill of washed CA-7.
- After the underdrain pipe is installed, the geotextile shall be folded over the underdrain aggregate and overlapped a minimum of 12".
- The underdrains shall have watertight joints, and be tied into the nearest storm sewer inlet, as designated by the Village.

CURB UNDERDRAIN DETAIL - Front of Curb		
Underdrain-fe.dwg	STREET & PAVEMENT	DATE: 11/19/2008
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED: 2-14-08 rp
Public Works Department		STR-___



**SECTION A-A**  
**CAST GRATE**  
**WT. 200 LBS.**

THE CAST GRATE MAY BE EITHER GRAY IRON OR DUCTILE IRON CONFORMING TO THE STANDARD SPECIFICATIONS. DUCTILE IRON CASTING SHALL BE GRADE 65-45-12.

GRATE TYPE 8		
GRATE-8.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Engineering Department		STS-07

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
N:\ORLANDPARK\1502272_ph2\Consultants\1001	Cadd\Deliverable\DI61F86-shr-Standards.dgn	DRAWN -	REVISED -
Default	PLOT SCALE = 1/8"	CHECKED -	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

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

**151ST STREET WEST AVENUE TO RAVINIA AVENUE**  
**STANDARD DETAILS**

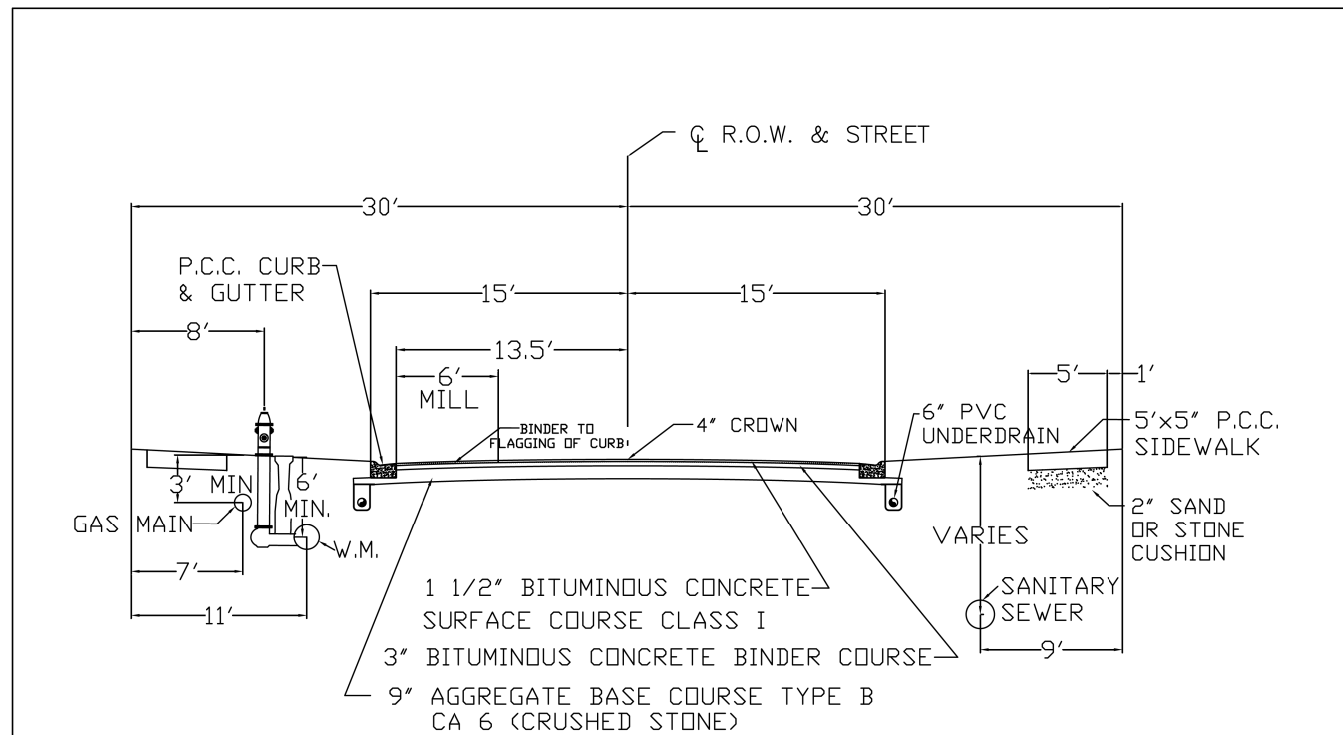
SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 1603/3000	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 143
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
NOTE BOOK	
NO.	
PLAN	
NOTE BOOK	
NO.	

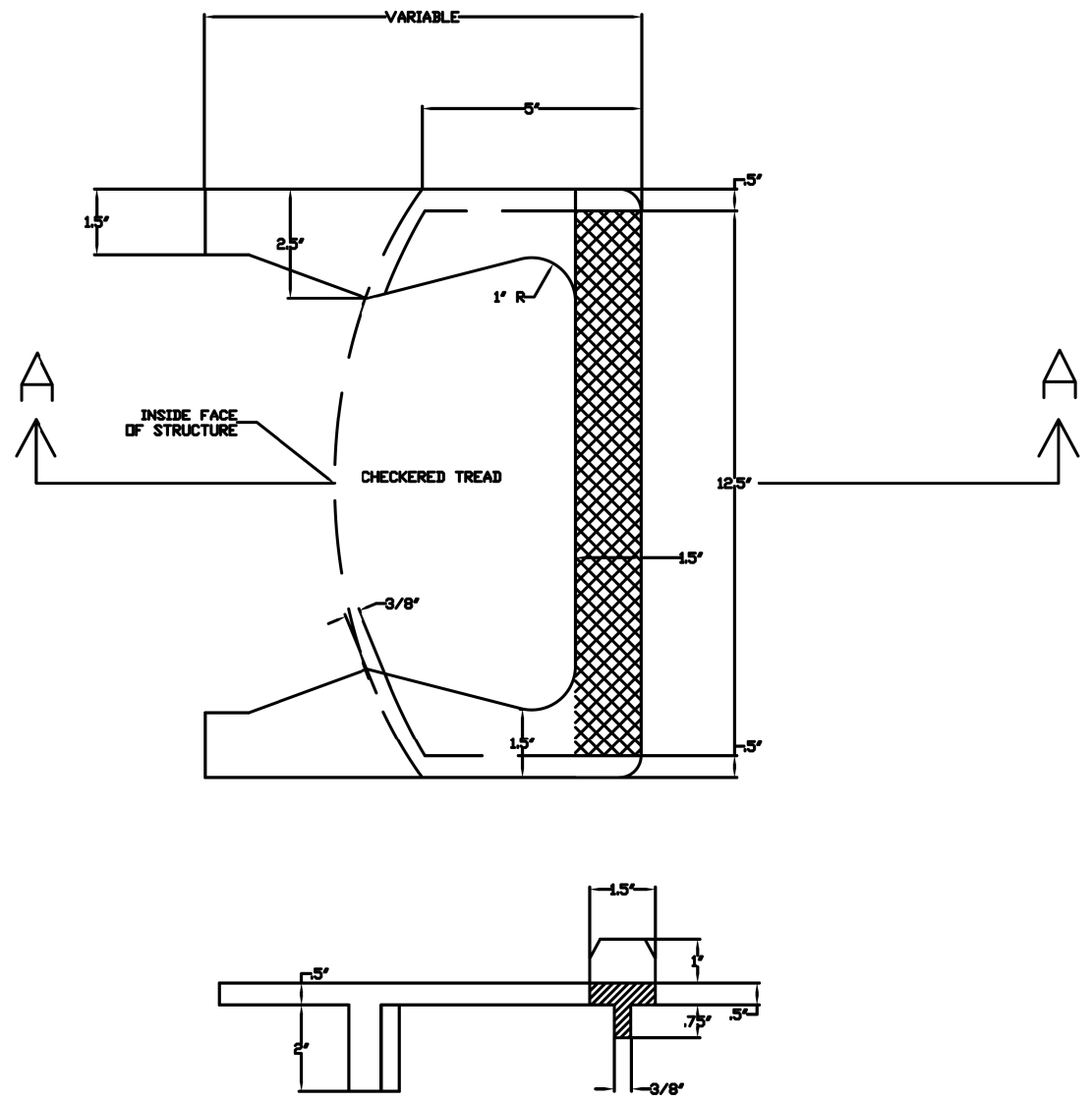
**CHRISTOPHER B. BURKE** ENGINEERING LTD.  
 1000 N. RANDOLPH ST., SUITE 600  
 CHICAGO, ILLINOIS 60608  
 (847) 823-0500

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
NOTE BOOK	
NO.	
PROFILE	
NOTE BOOK	
NO.	



**Binder Course** The binder course on all public roadways shall be initially constructed flush with the top of the front of the curb. The finished grade of the binder cross-section will allow water to flow unobstructed from the asphalt to the gutter of the curb. The additional binder placed along the front of curb will be removed by milling before placement of the final surface course.

TYPICAL STREET SECTION (RESIDENTIAL)	
Street_Xsection-Rev1.dwg	DATE: 11/20/06
DRAWN BY:	REVISED:
Village of <b>ORLAND PARK</b>	REVISED:
Engineering Department	DRAWING NO. STR-01



SECTION A-A  
CAST IRON STEPS

- NOTES:**
- STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF 3 INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.
  - CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 710.7 OF THE STANDARD SPECS.
  - STEEL REINFORCED PLASTIC MANHOLE STEPS SHALL BE MADE WITH AN APPROVED PLASTIC SUCH AS COPOLYMER POLYPROPYLENE MEETING WITH THE REQUIREMENTS OF ASTM DESIGNATION 2146 TYPE II GRADE 49108, REINFORCED WITH A DEFORMED 3/8 INCH DIAMETER REINFORCING BAR WHICH CONFORMS TO THE REQUIREMENTS OF ASTM DESIGNATION A-615 GRADE 60.

CATCH BASIN-TYPE A STEP DETAIL		
STEPDETAIL.DWG	STORM SEWER	DATE:
DRAWN BY:		REVISED:
Village of <b>ORLAND PARK</b>		REVISED:
Engineering Department		DRAWING NO. STS-03

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
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Default	PLOT SCALE = 100'	CHECKED -	REVISED -
	PLOT DATE = 7/10/2019	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

151ST STREET WEST AVENUE TO RAVINIA AVENUE  
STANDARD DETAILS

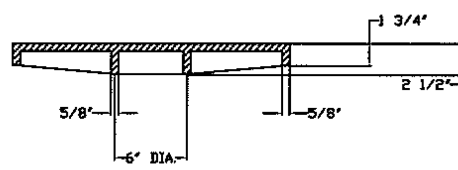
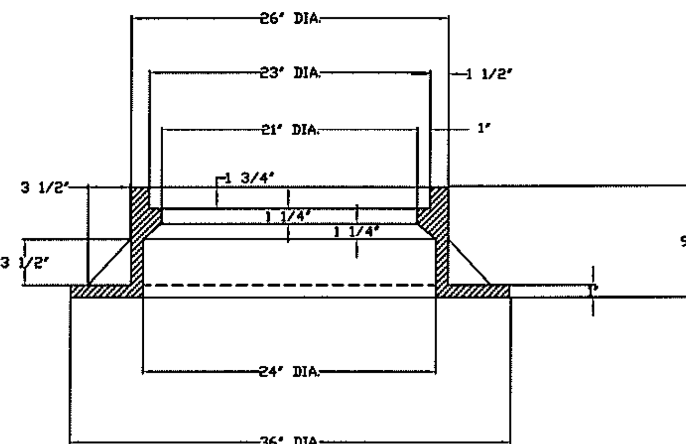
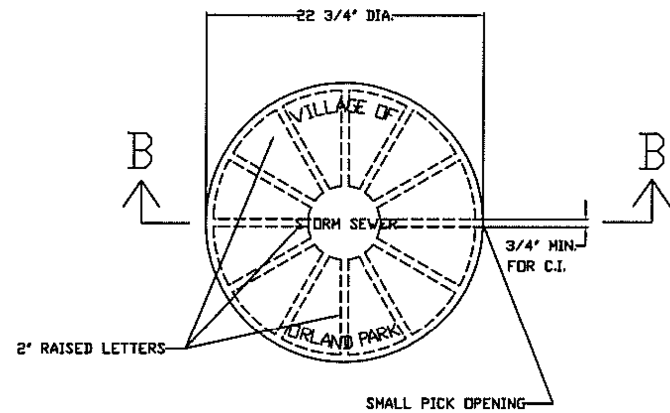
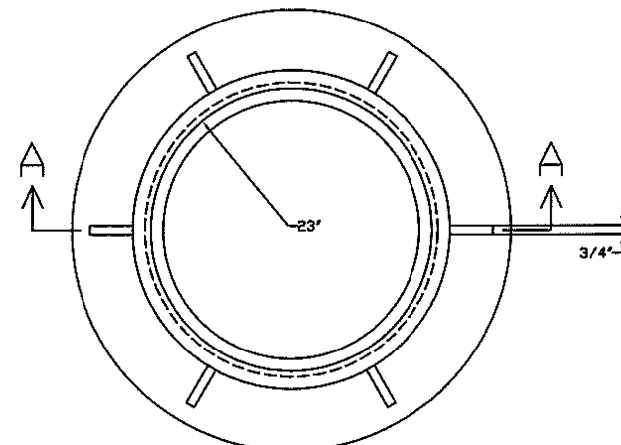
SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	144
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.	
PLAN	
NOTE BOOK NO.	
DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1801 823-0500  
 1801 823-0500

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.	
PROFILE	
NOTE BOOK NO.	
DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
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NOTE BOOK NO.	

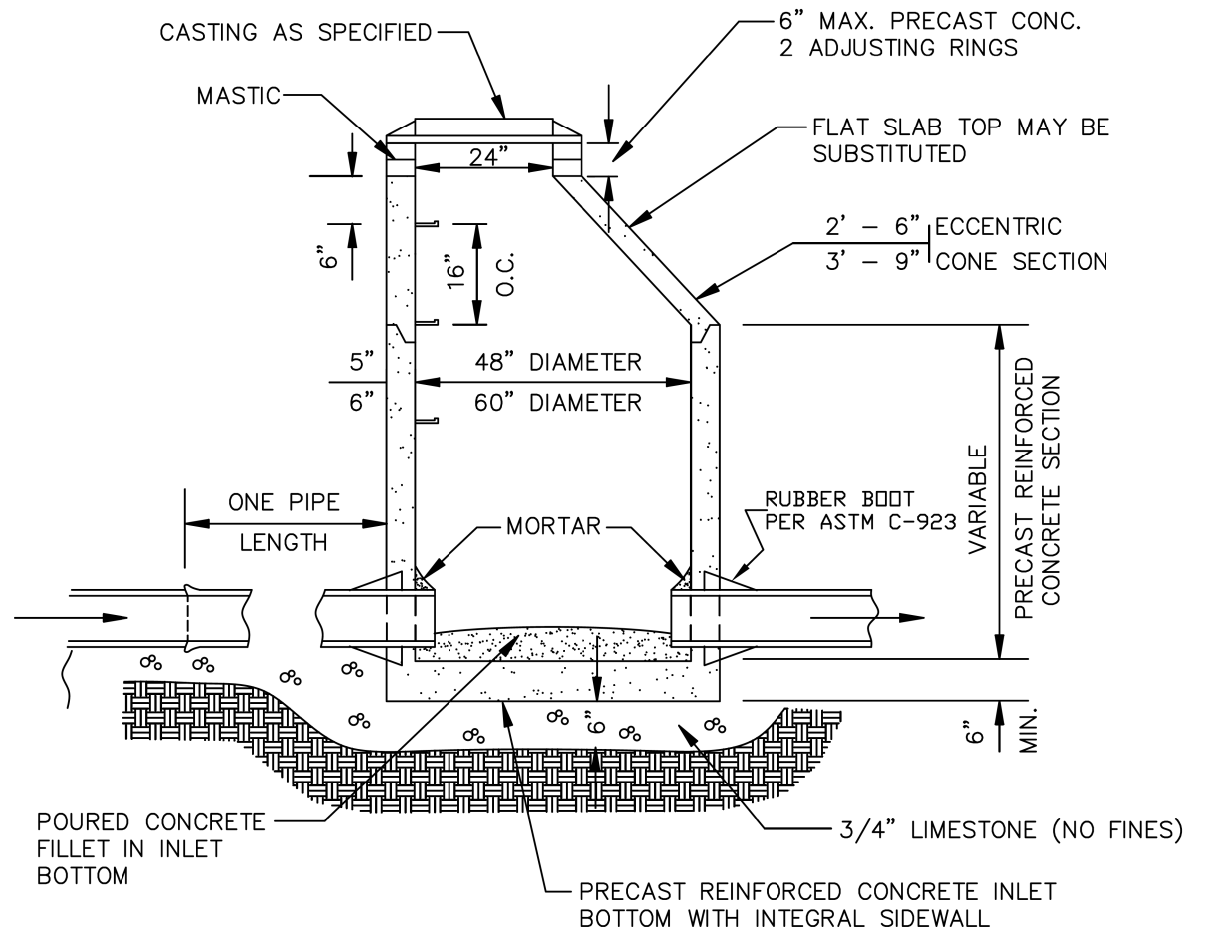


SECTION A-A  
CAST FRAME

SECTION B-B  
CAST CLOSED LID

- NOTES:
- DUCTILE IRON CASTINGS SHALL BE GRADE 60-40-18 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
  - ALL LIDS AND COVERS SHALL BE MACHINED.
  - THE MANHOLE COVERS SHALL HAVE RAISED LETTERS AS SHOWN.
  - ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED.
  - MINIMUM WEIGHTS FOR CASTINGS AS SHOWN.

STORM SEWER FRAME & COVER		
FRAME&CO.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Engineering Department		REVISED:
		DRAWING NO. STS-14



NOTES:

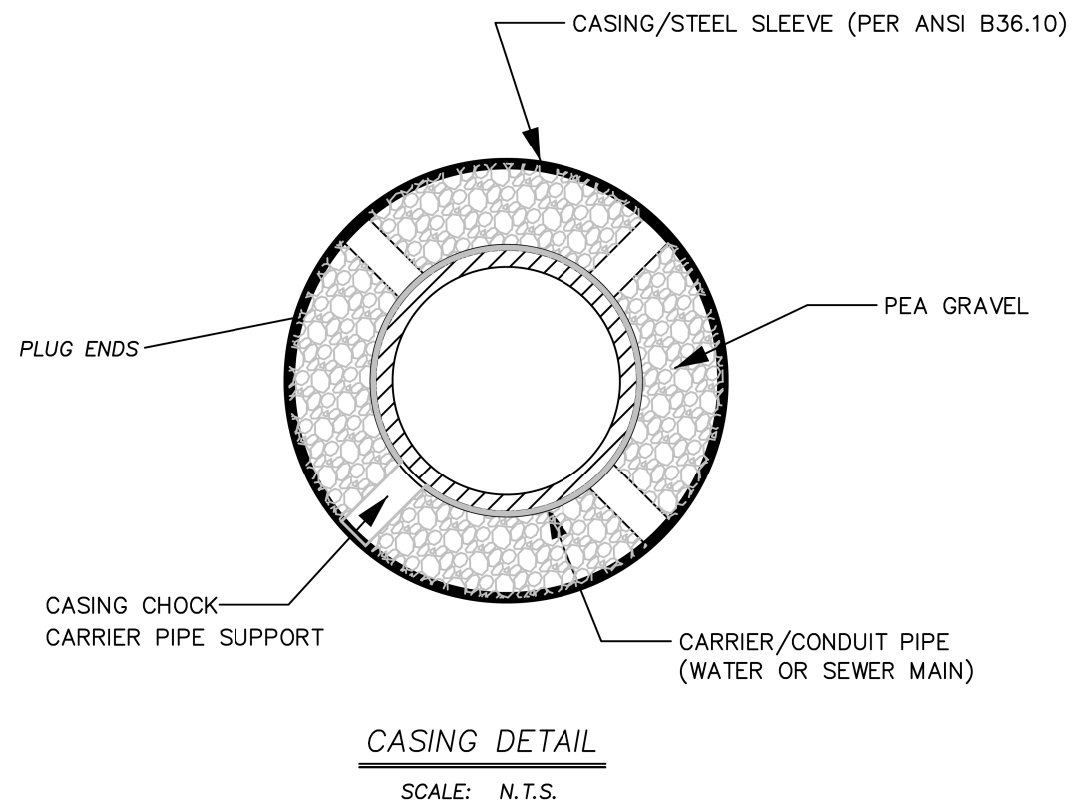
- Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
- Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
- Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
- All bottom sections shall be monolithically precast including bases and invert flowlines.
- Provide CA-6 aggregate backfill around manhole to subgrade elevation in paved areas for subgrade.

STORM MANHOLE		
STORMMH.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Engineering Department		REVISED:
		DRAWING NO. STS-01

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CADD FILE NAME	

**CHRISTOPHER B. BURKE** ENGINEERING LTD.  
 1000 N. W. 10th St., Suite 600  
 Rosemead, Illinois 60018  
 (847) 823-0500

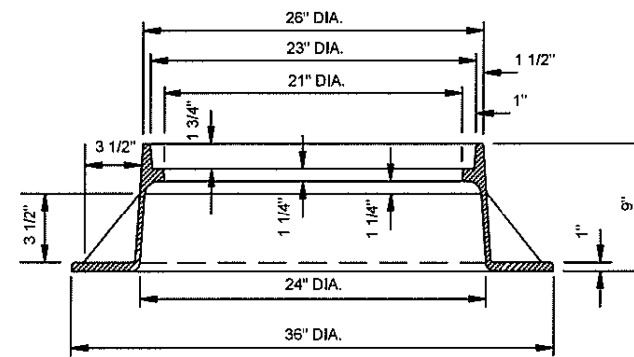
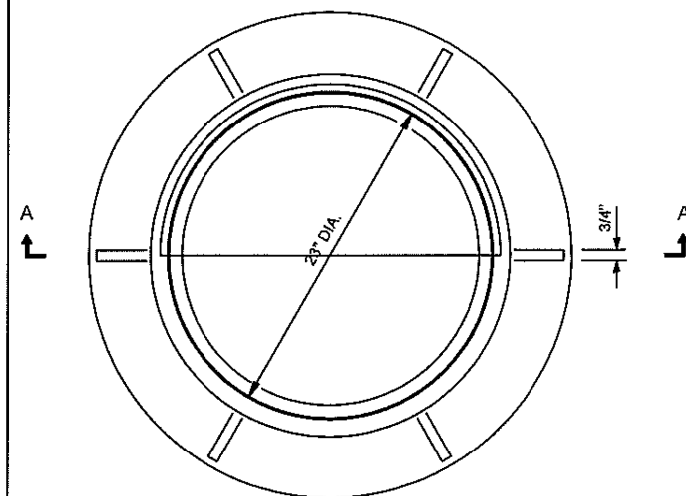
DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CADD FILE NAME	



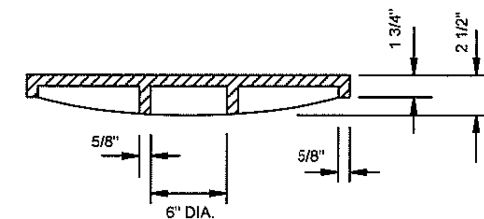
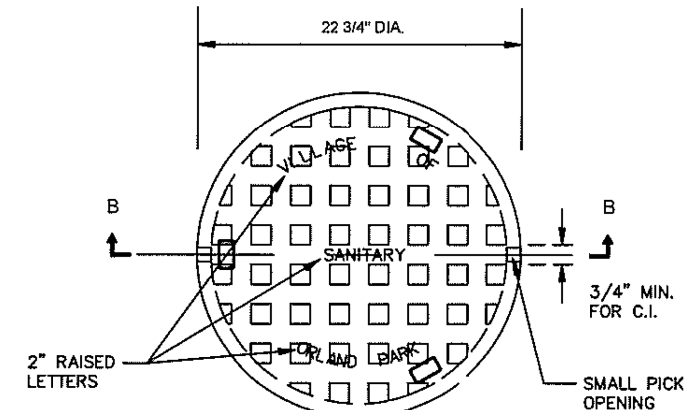
Casing Notes:

1. Casing pipe shall be welded steel pipe meeting ASTM A 139.
2. Minimum thickness = 3/8 inch.
3. Joints should be continuous field-welded butt joints per AWWA C206.
4. The casing pipe shall conform to ANSI B36.10.
5. The carrier pipe support system shall be Cascade Water Works stainless steel spacers, or approved equal, installed at 10 foot intervals through the casing pipe.
6. Casing ends shall be sealed with a non-shrink grout cap.
7. All annular space between the carrier pipe and casing pipe shall be filled with pea gravel.
8. If voids are created around the exterior of the casing pipe, they shall be filled with Mearl Geoform liquid concentrate low density cellular concrete grout having a minimum density of 45 pounds per cubic foot and a minimum compressive strength at 28 days of 160 pounds per square inch.

CASING DETAIL		
Casing Detail.dwg	STREET & PAVEMENT	DATE: 10/30/2007
DRAWN BY:		REVISED:
Village of <b>ORLAND PARK</b>		REVISED:
Public Works Department		DRAWING NO. STR-?



**SECTION A-A**  
**CAST FRAME**  
WT. = 330 LBS.



**SECTION B-B**  
**CAST CLOSED LID**

1. DUCTILE IRON CASTINGS SHALL BE GRADE 60-40-18 & SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.

SANITARY MANHOLE FRAME & COVER			
MANHFRM.DWG	SANITARY SEWER IMPROVEMENT	DATE:	
DRAWN BY:	Village of <b>ORLAND PARK</b>	REVISED:	
Engineering Department		REVISED:	
		DRAWING NO.	SS-04

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
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Default	PLOT SCALE = 100'	CHECKED -	REVISED -
	PLOT DATE = 7/11/2019	DATE -	REVISED -

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

**151ST STREET WEST AVENUE TO RAVINIA AVENUE**  
**STANDARD DETAILS**

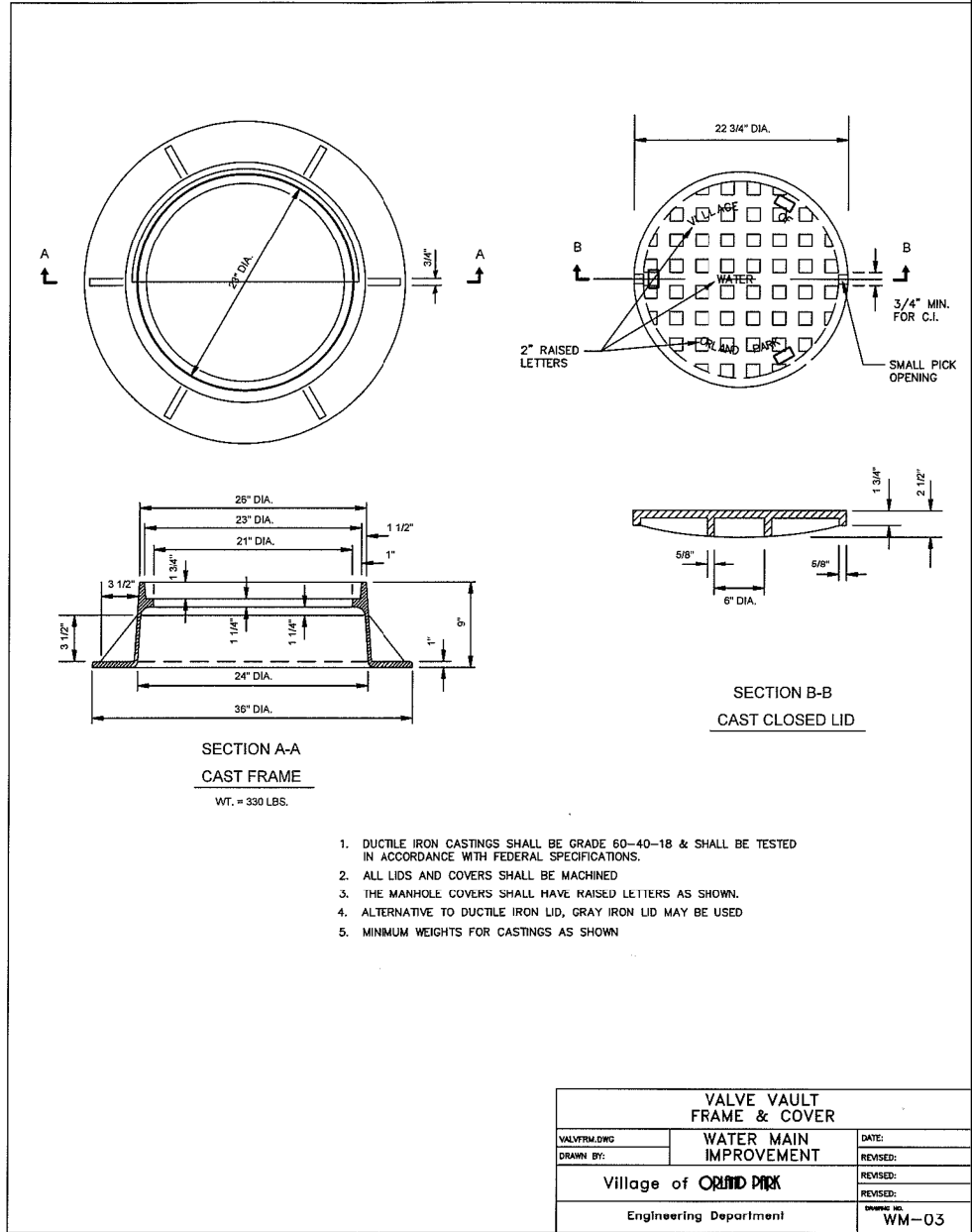
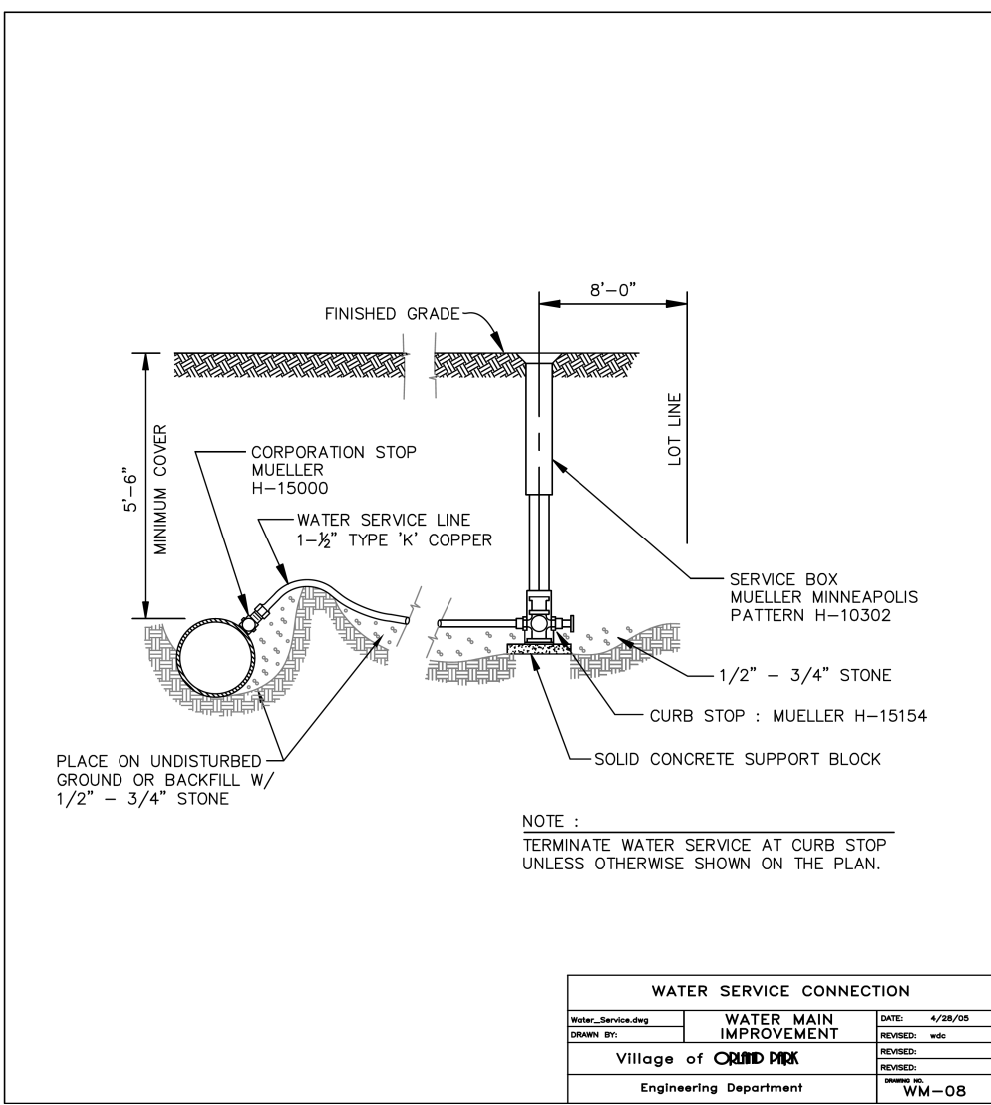
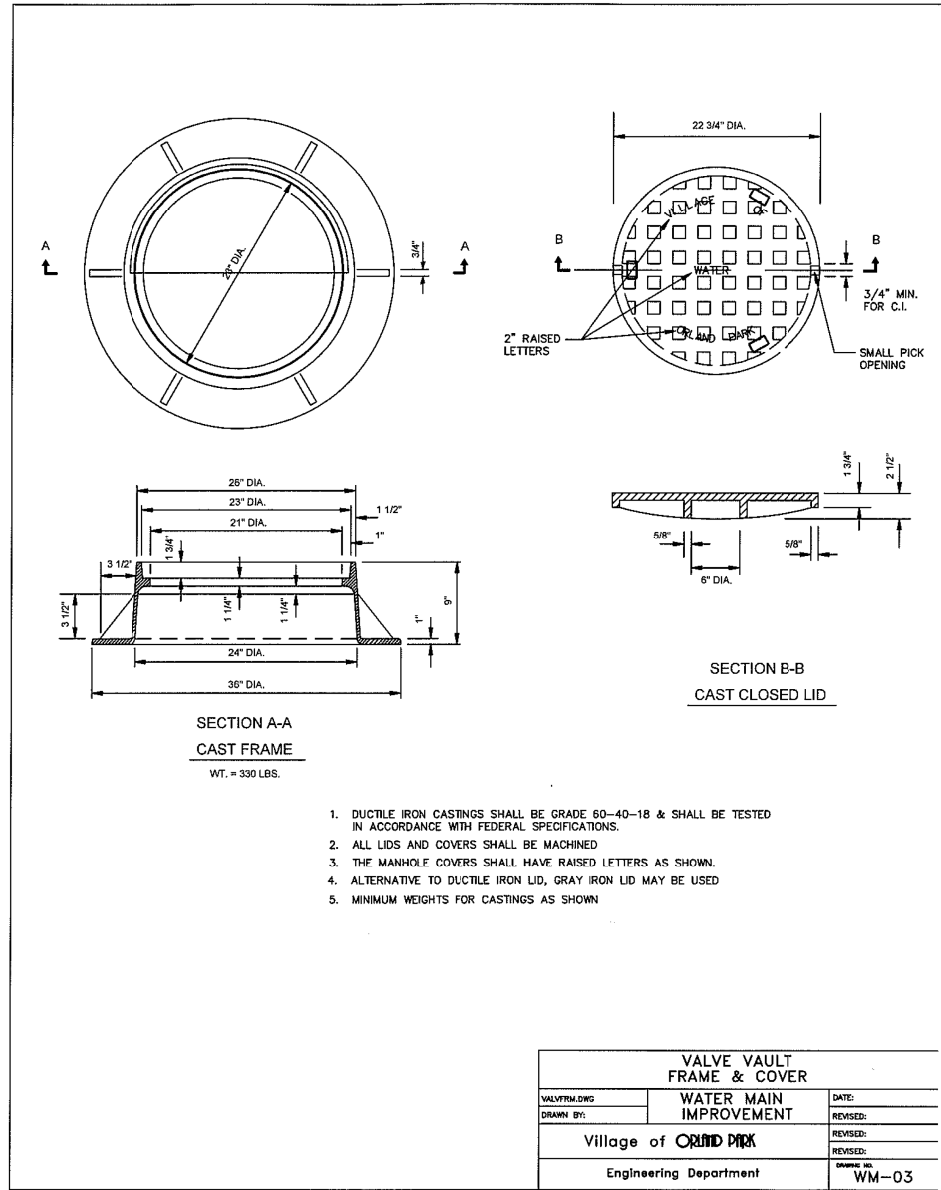
SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	146
				CONTRACT NO. 61F86
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	NO. _____	
	NOTE BOOK	
	NO. _____	
	CADD FILE NAME	
	NO. _____	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1000 West Lake Street, Suite 600  
 Rosemont, Illinois 60018  
 (847) 823-9500

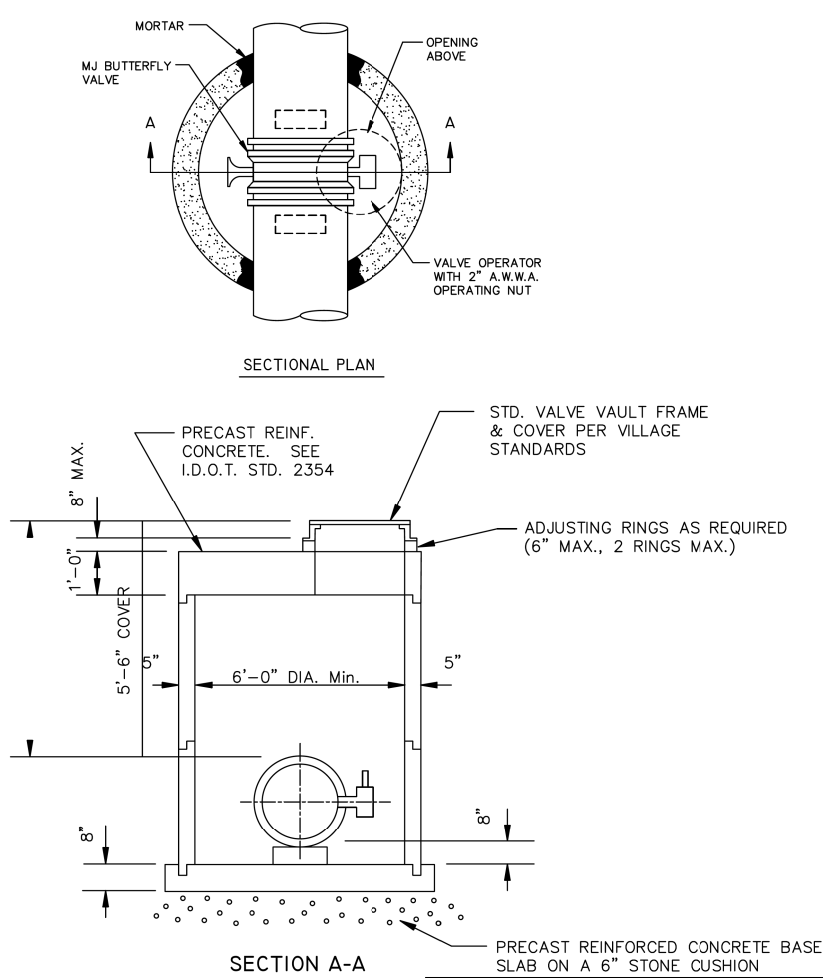
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	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO. _____	



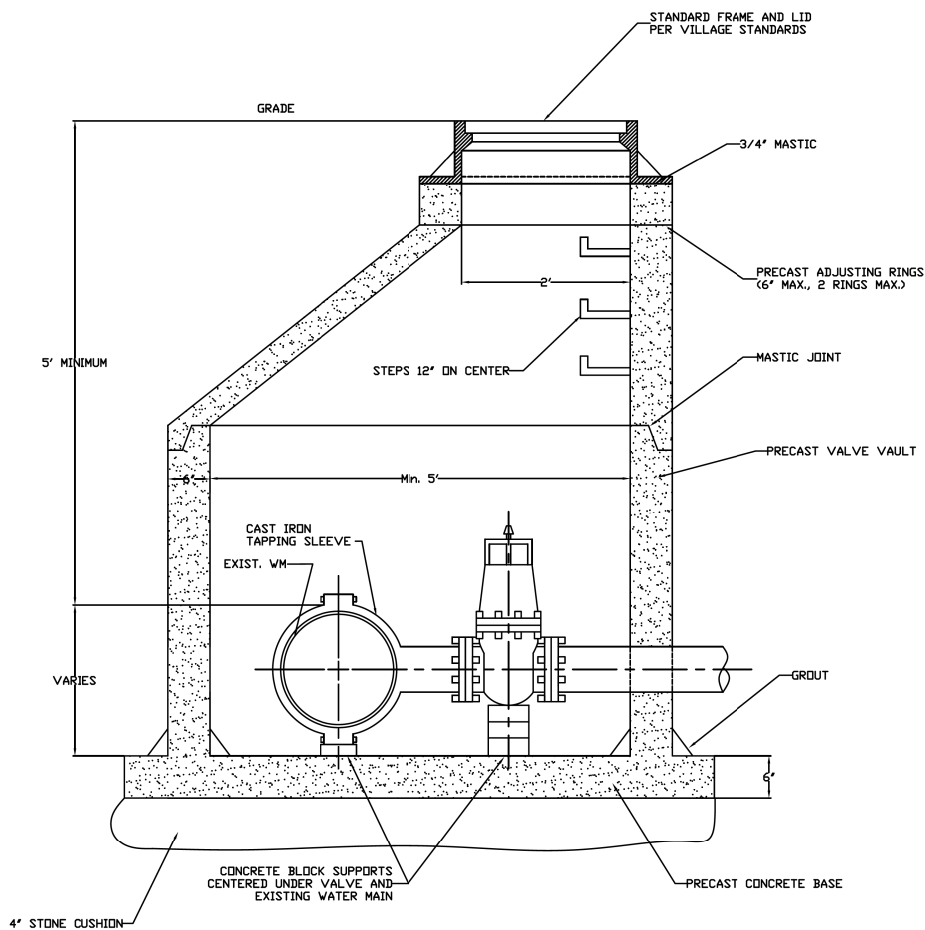
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BY	
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
CAD FILE NAME	
NO.	
PLAN	
NOTE BOOK	
NO.	

CHRISTOPHER B. BURKE ENGINEERING LTD.  
 1000 N. RANDOLPH AVENUE SUITE 600  
 CHICAGO, ILLINOIS 60606  
 (847) 823-9500

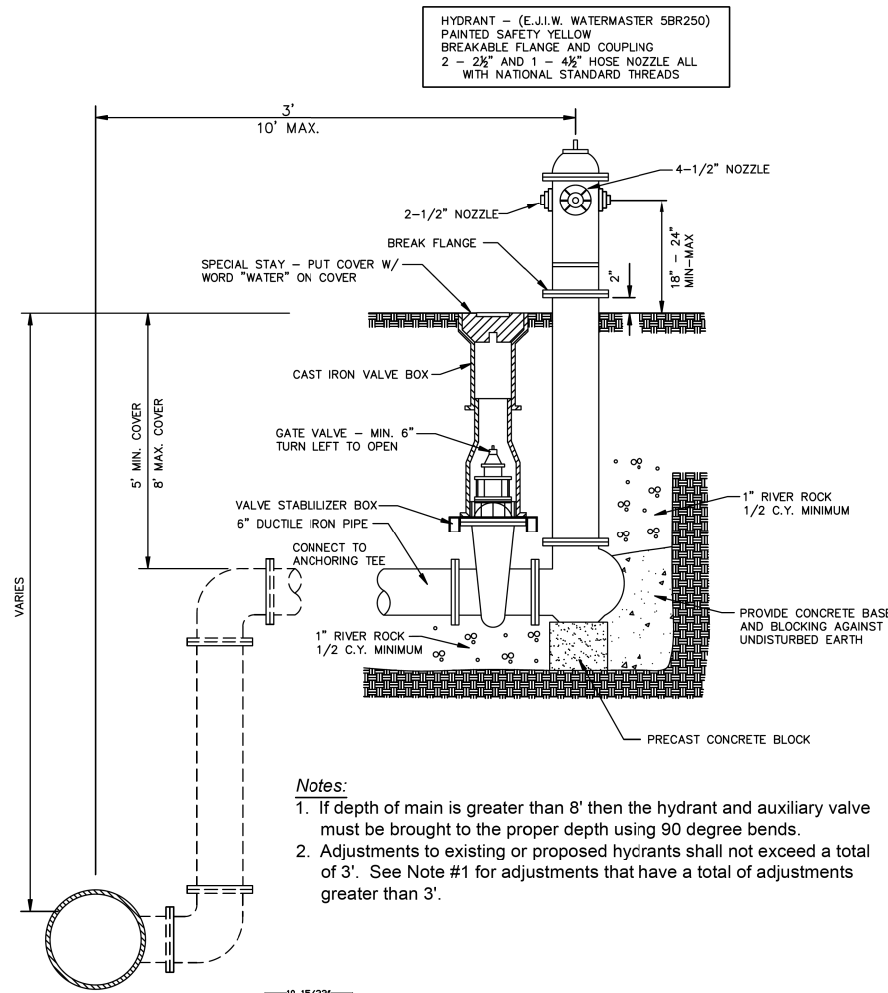
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BY	
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GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK	
NO.	
PROFILE	
NOTE BOOK	
NO.	



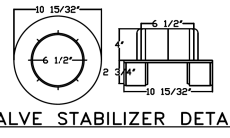
BUTTERFLY VALVE VAULT		
BUTTERFLY.DWG	WATER MAIN IMPROVEMENT	DATE: 2/24/05
DRAWN BY:	REVISOR:	REVISION: 2/24/05
Village of ORLAND PARK	REVISOR:	REVISION:
Engineering Department	DRAWING NO.	WM-04



PRESSURE CONNECTION		
PRESSURE.DWG	WATER MAIN IMPROVEMENT	DATE: 2/24/05
DRAWN BY:	REVISOR:	REVISION: 2/24/05
Village of ORLAND PARK	REVISOR:	REVISION:
Engineering Department	DRAWING NO.	WM-05



**Notes:**  
 1. If depth of main is greater than 8' then the hydrant and auxiliary valve must be brought to the proper depth using 90 degree bends.  
 2. Adjustments to existing or proposed hydrants shall not exceed a total of 3'. See Note #1 for adjustments that have a total of adjustments greater than 3'.



HYDRANT INSTALLATION		
HDR.DWG	WATER MAIN IMPROVEMENT	DATE: 4/24/06
DRAWN BY:	REVISOR:	REVISION: wdc 11/29/07
Village of ORLAND PARK	REVISOR:	REVISION:
Engineering Department	DRAWING NO.	WM-06

FILE NAME =	USER NAME = pmagnelli	DESIGNED -	REVISED -
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Default	PLOT SCALE = 100'	CHECKED -	REVISED -
	PLOT DATE = 7/10/2019	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

151ST STREET WEST AVENUE TO RAVINIA AVENUE  
 STANDARD DETAILS

SHEET OF SHEETS STA. TO STA.

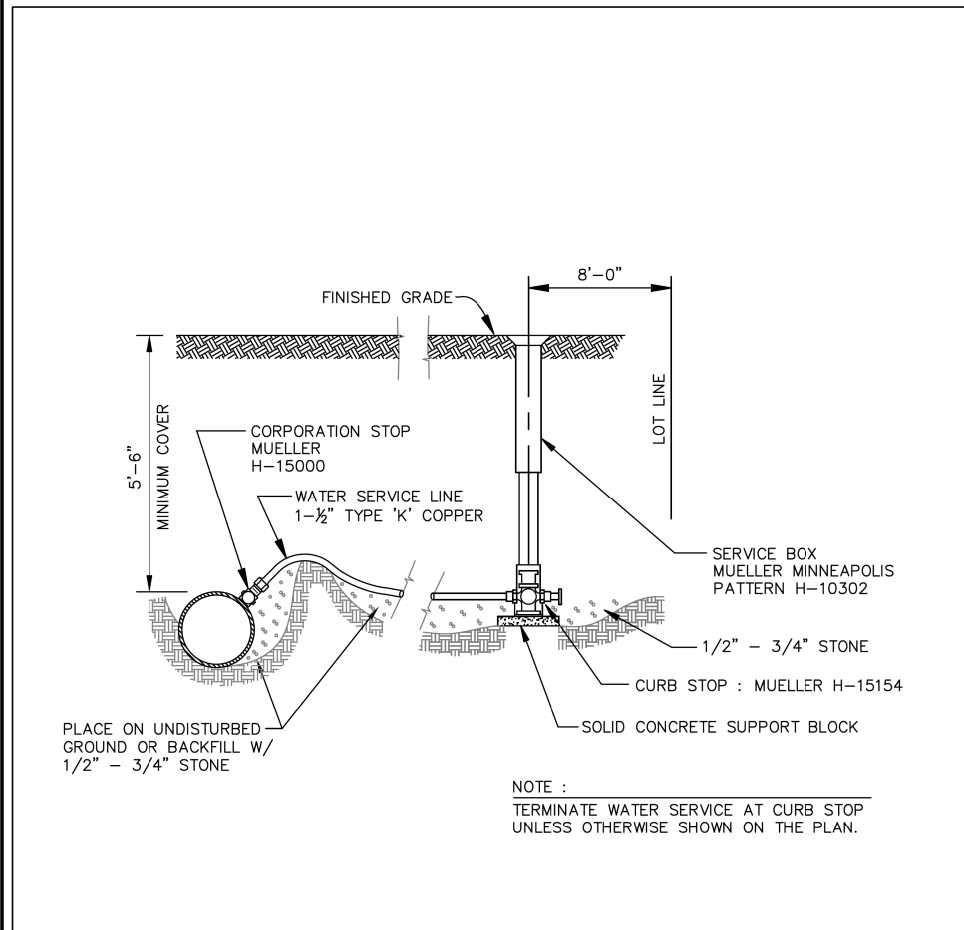
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603/3000	13-00071-00-WR	COOK	162	148
CONTRACT NO. 61F86				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
PLAN	
NOTE BOOK NO.	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
CONSTRUCTION CHECKED	
ROAD FILE NAME	

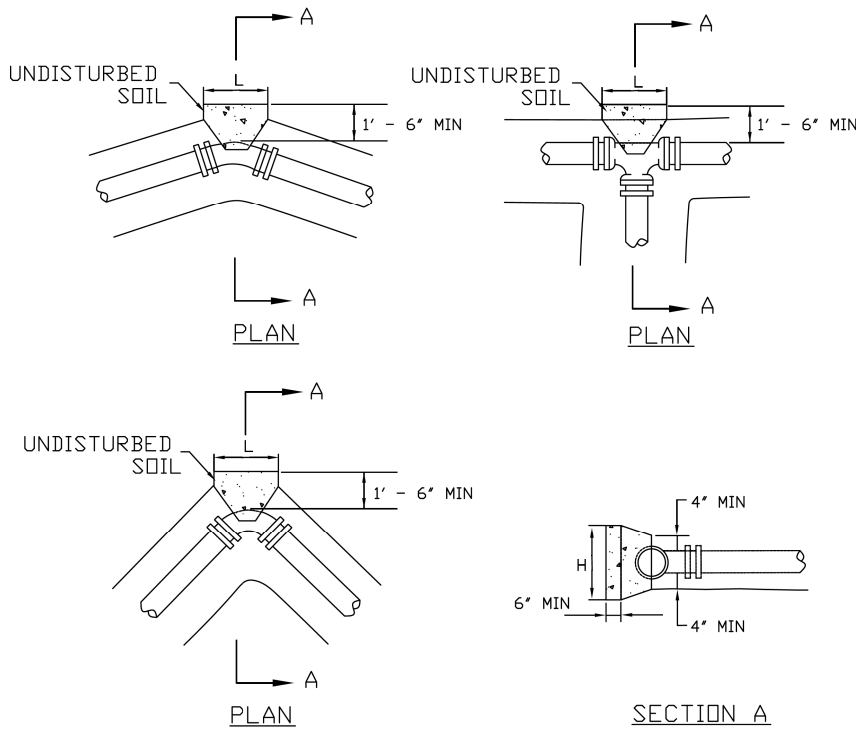
CHRISTOPHER B. BURKE ENGINEERING LTD.  
 Registered Professional Engineer  
 No. 0437 823-9500

DATE	
BY	
PROFILE	
NOTE BOOK NO.	
SURVEYED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	



NOTE :  
 TERMINATE WATER SERVICE AT CURB STOP UNLESS OTHERWISE SHOWN ON THE PLAN.

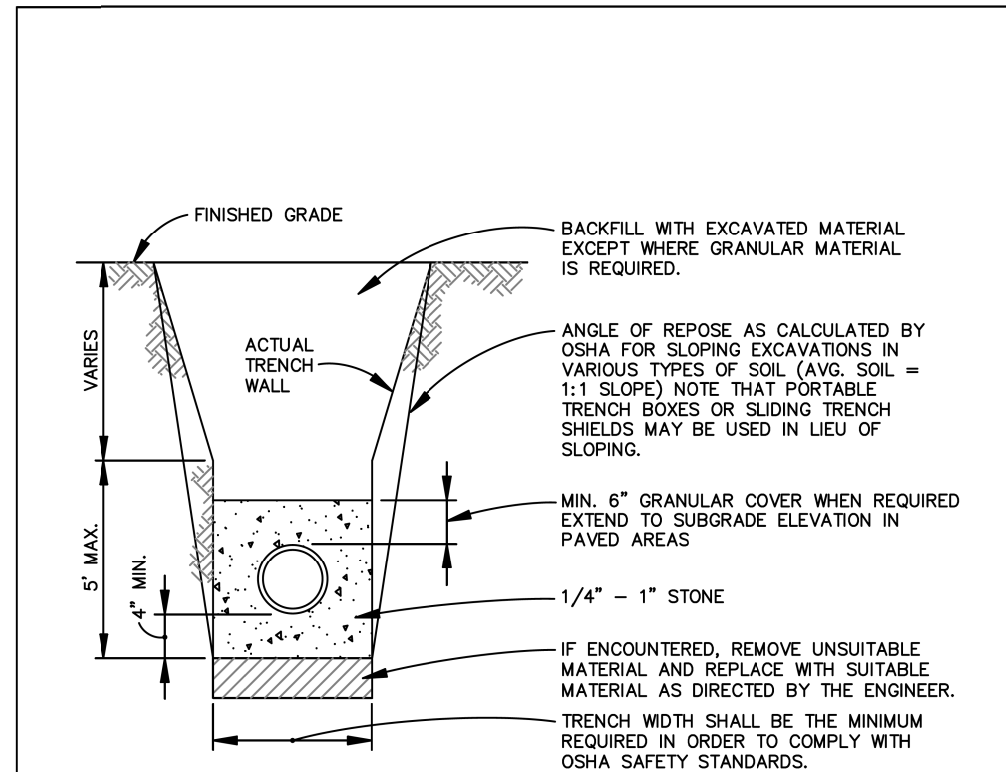
WATER SERVICE CONNECTION		
Water_Service.dwg	WATER MAIN IMPROVEMENT	DATE: 4/28/05
DRAWN BY:	REVISIONS:	
Village of <b>ORLAND PARK</b>		
Engineering Department		WM-08



CONCRETE THRUST BLOCK DIMENSIONS										
PIPE SIZE	11-15° BEND		22-30° BEND		45°-BEND		90°-BEND		TEE & PLUG	
DIAMETER	H	L	H	L	H	L	H	L	H	L
≤ 8"	1'-6"	1'-6"	2'-0"	2'-6"	2'-6"	3'-0"	3'-6"	4'-0"	3'-0"	3'-6"
≤ 12"	1'-6"	2'-0"	2'-3"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	3'-6"	4'-0"
≤ 16"	2'-0"	2'-0"	2'-6"	3'-0"	4'-0"	4'-6"	5'-0"	6'-0"	4'-6"	5'-6"

- ALL BLOCKING SHALL BE CONSTRUCTED WITH POURED CL- X CONCRETE AGAINST UNDISTURBED VERTICAL EARTH FACE WITH A MINIMUM WIDTH OF 12 INCHES.
- THRUST BLOCKS TO BE USED AT ALL BENDS 11 1/4 DEGREES OR GREATER.
- MECHANICAL JOINT RETAINER GLANDS MAY BE USED AS AN ALTERNATIVE TO CONCRETE THRUST BLOCK INSTALLATION WHEN APPROVED BY THE VILLAGE ENGINEER.
- TEST PRESSURE 150 PSI.

CONCRETE THRUST BLOCK DETAILS		
TB2.DWG	WATER MAIN IMPROVEMENT	DATE:
DRAWN BY:	REVISIONS:	
Village of <b>ORLAND PARK</b>		
Engineering Department		DRAWING NO. WM-10



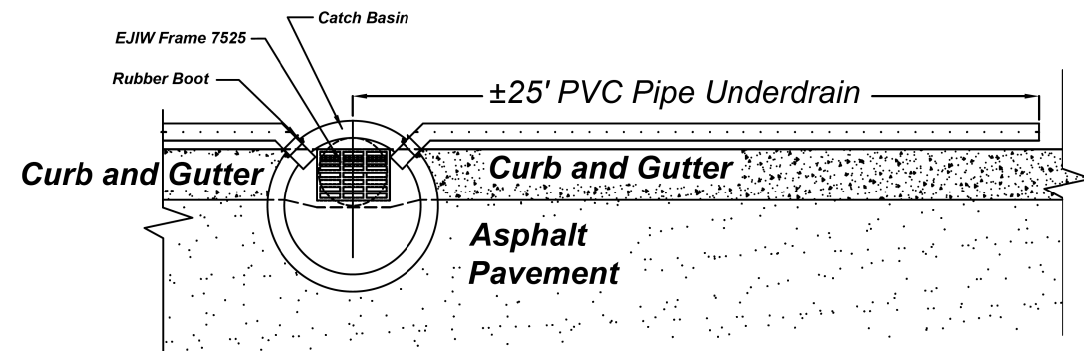
DIP AND PVC WHEN USED AS WATER MAIN SHALL NOT REQUIRE GRANULAR BEDDING OR COVER. PROVIDE UNIFORM AND CONTINUOUS SUPPORT OF PIPE BARREL BETWEEN BELL HOLES

TRENCH SECTION (WATER MAIN)		
WATRENCH.DWG	WATER MAIN IMPROVEMENT	DATE:
DRAWN BY:	REVISIONS:	
Village of <b>ORLAND PARK</b>		
Engineering Department		DRAWING NO. WM-11

DATE	BY	SURVEYED	CHECKED
		ALIGNMENT	PLAN
		NOTES	NO.
		CADD FILE NAME	

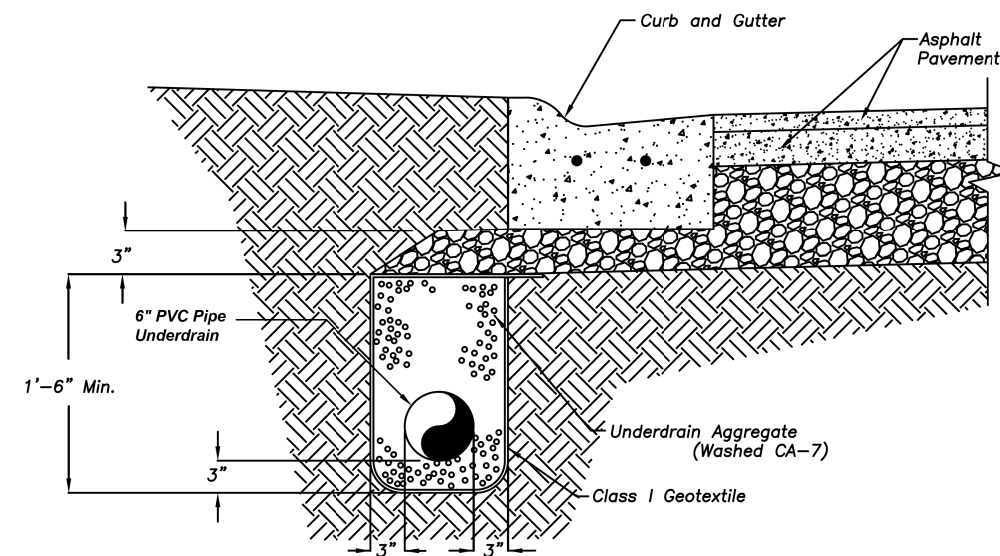
**CHRISTOPHER B. BURKE ENGINEERING LTD.**  
 Professional Engineer  
 Registration No. 0018  
 (847) 823-0500

DATE	BY	SURVEYED	CHECKED
		GRADES	STRUCTURE
		NOT AT THIS OFFICE	
		NOTE BOOK	NO.



PLAN VIEW

SCALE: N.T.S.



PIPE UNDERDRAIN BEHIND CURB

SCALE: N.T.S.

Underdrain Notes:

1. The installation of the underdrains shall conform to section 601.04 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Pipe material shall be 6" perforated PVC, per article 1040.03 of the IDOT Standard Specifications.
3. The underdrains shall be installed with the drain perforations down. All underdrains shall be held in the center of the trench by mechanical means while placing compacted trench backfill of washed CA-7.
4. After the underdrain pipe is installed, the geotextile shall be folded over the underdrain aggregate and overlapped a minimum of 12".
5. The underdrains shall have watertight joints, and be tied into the nearest storm sewer inlet. The connection to the inlet structure shall conform to ASTM C-923.

CURB UNDERDRAIN DETAIL - Back of Curb			
Underdrain-bc.dwg	STREET & PAVEMENT	DATE: 11/20/2006	
DRAWN BY:		REVISED:	
Village of ORLAND PARK		REVISED:	REVISED: 2-14-08 rjr
Public Works Department		DRAWING NO.:	STR-20

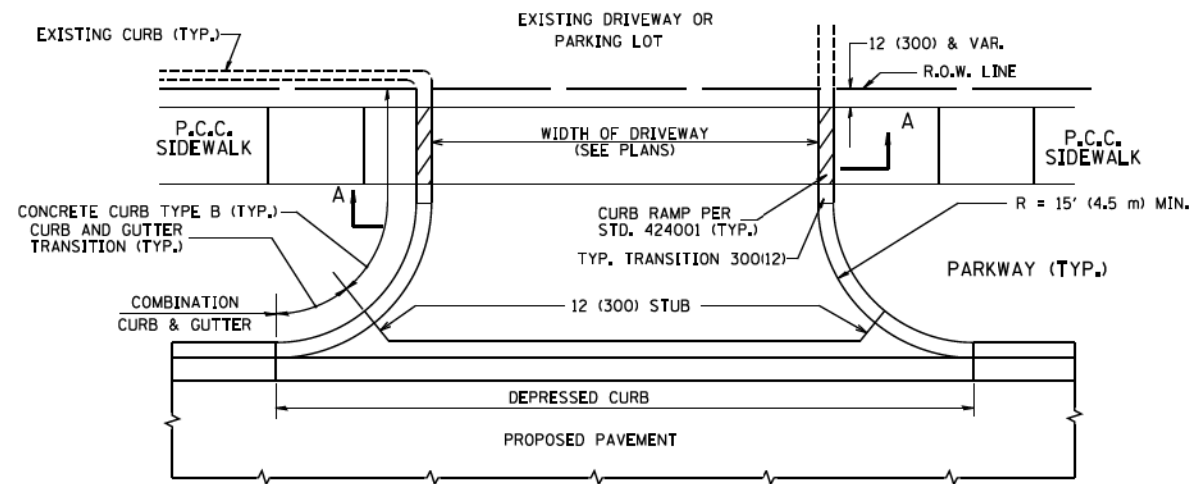
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	PLOT DATE = 7/10/2019	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

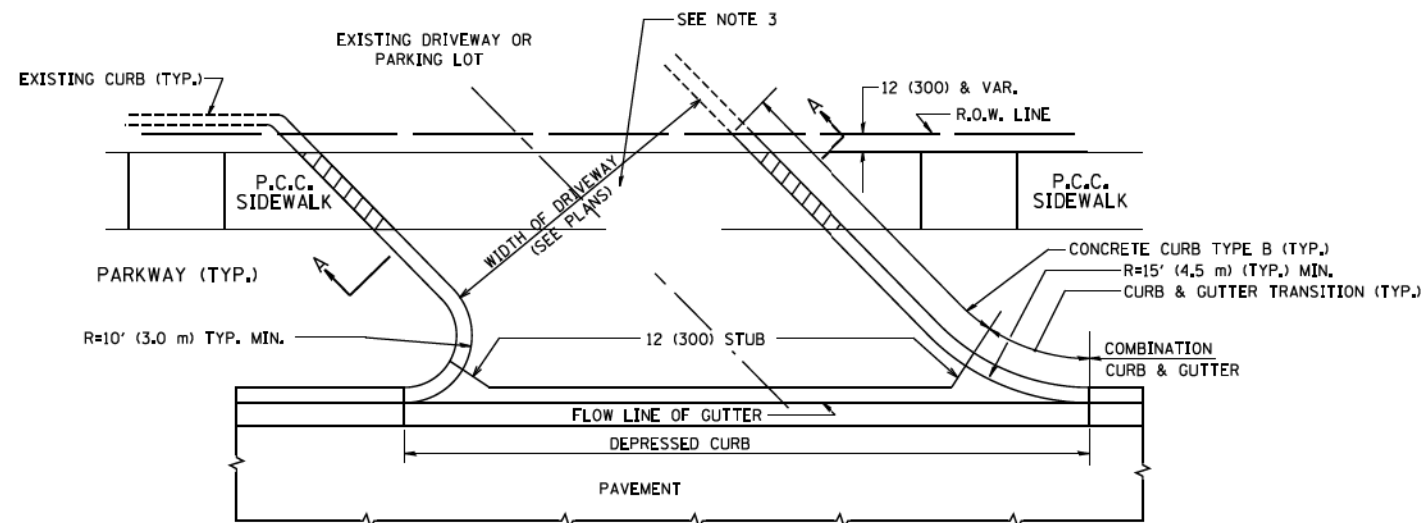
151ST STREET WEST AVENUE TO RAVINIA AVENUE  
STANDARD DETAILS

SHEET OF SHEETS STA. TO STA.

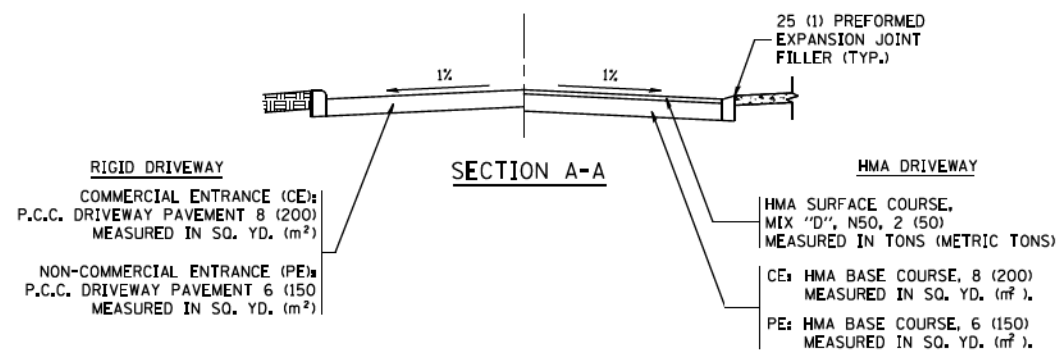
F.A.U. RTE. 1603/3000	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150
CONTRACT NO. 61F86				ILLINOIS FED. AID PROJECT



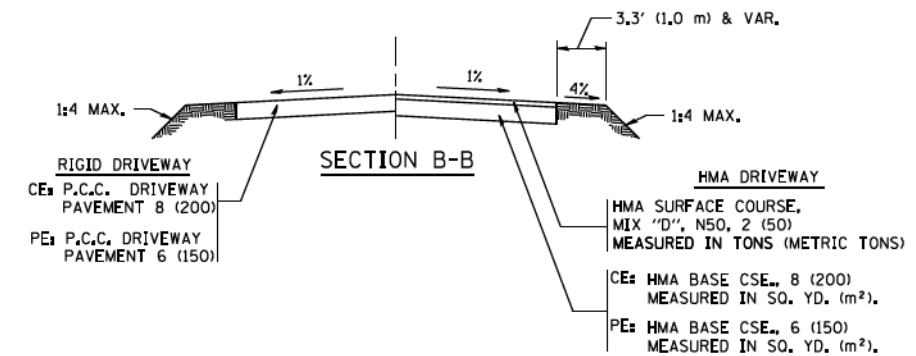
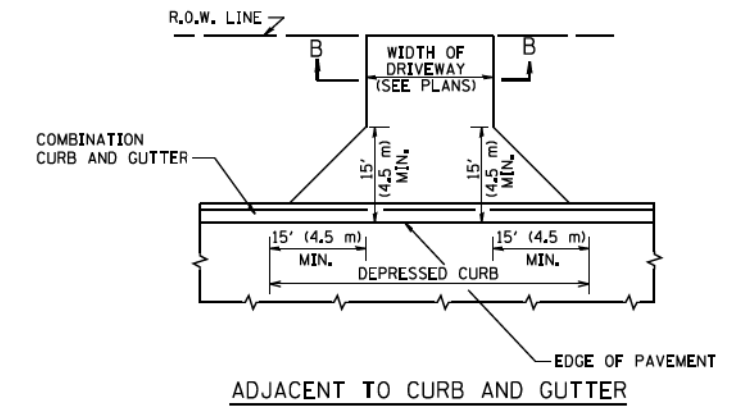
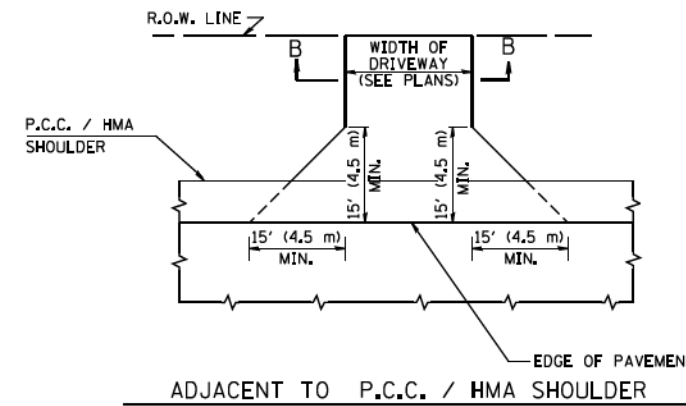
WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



SECTION A-A



SECTION B-B

RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE,  
MIX "D", N50, 2 (50)  
MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200)  
MEASURED IN SQ. YD. (m<sup>2</sup>)

**GENERAL NOTES:**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

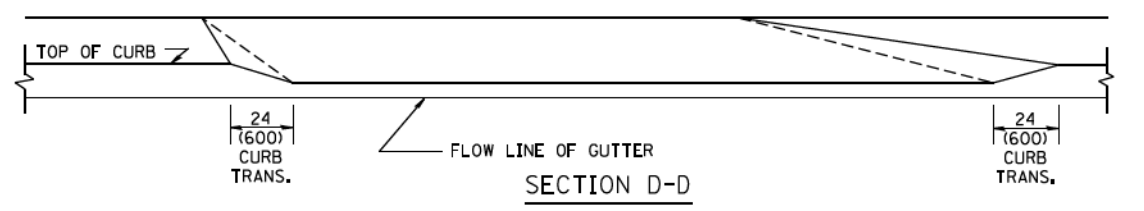
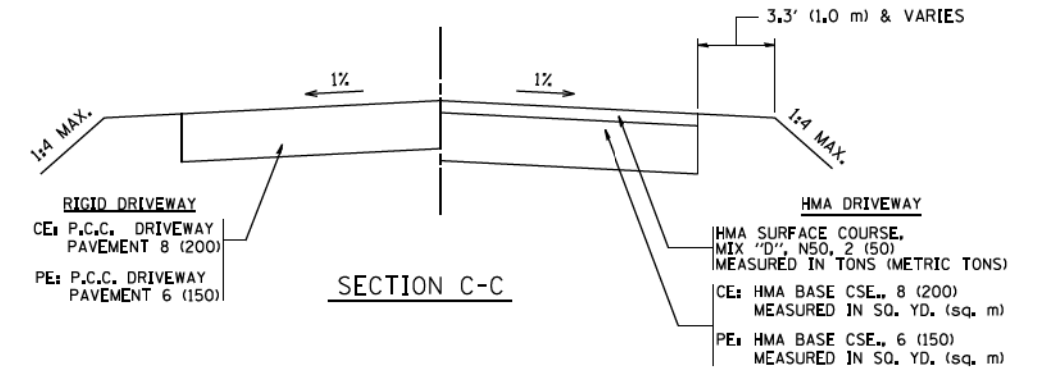
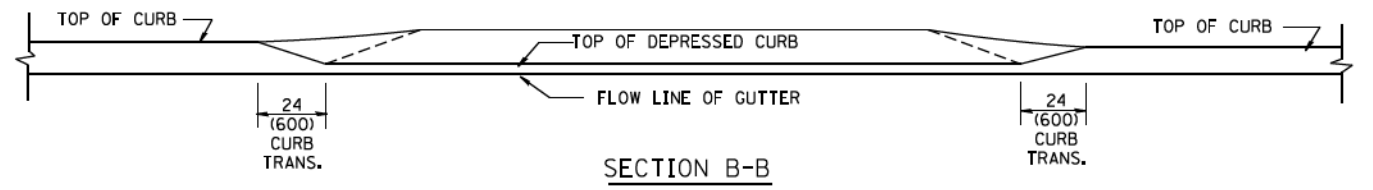
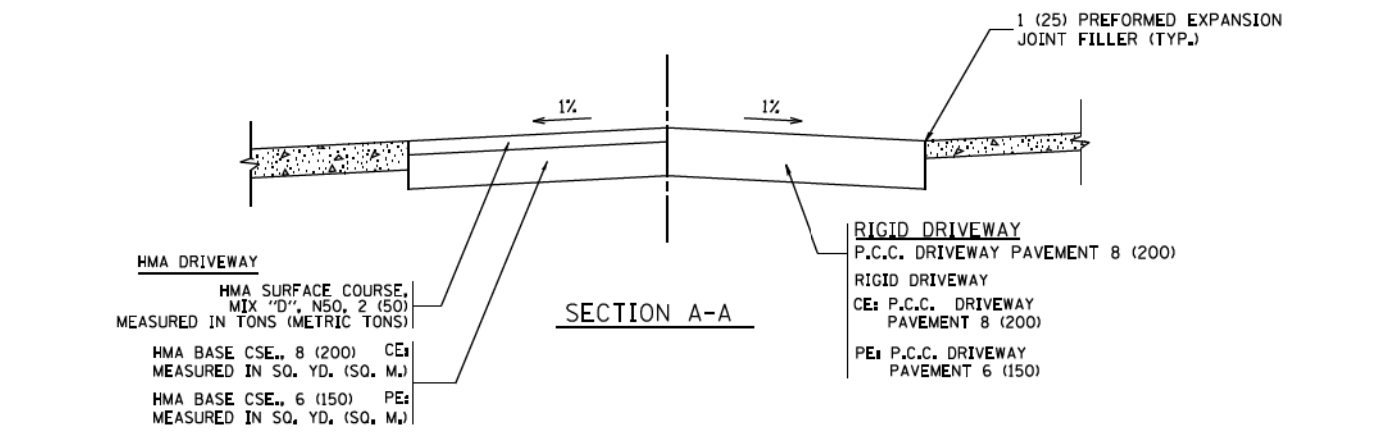
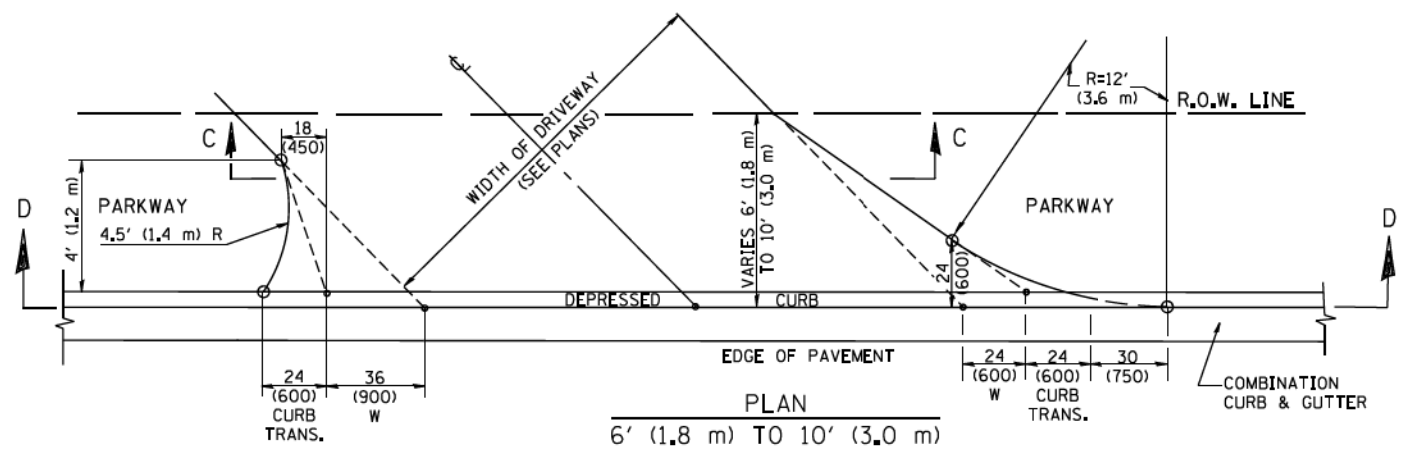
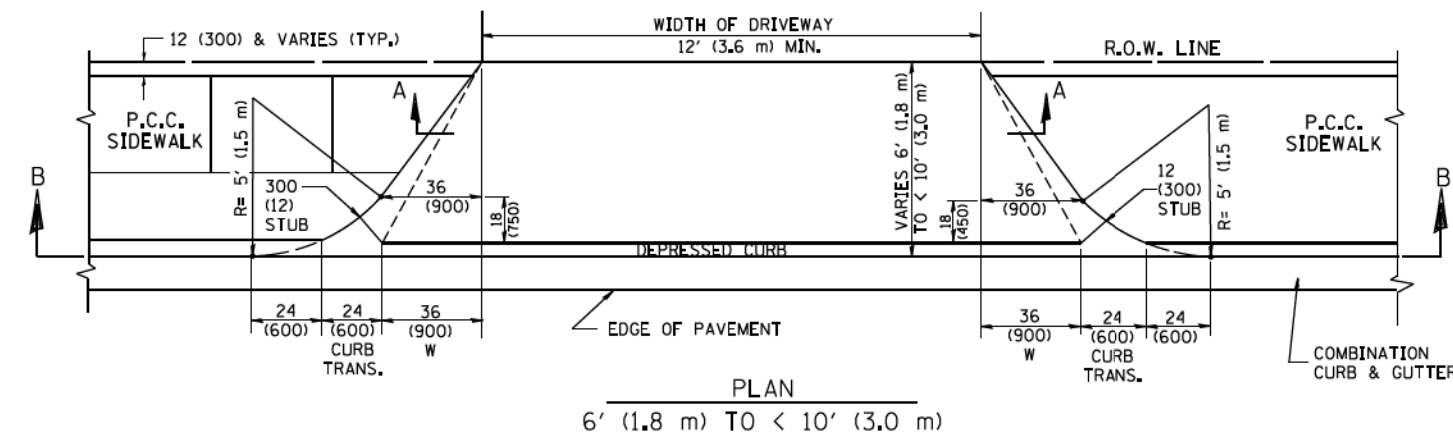
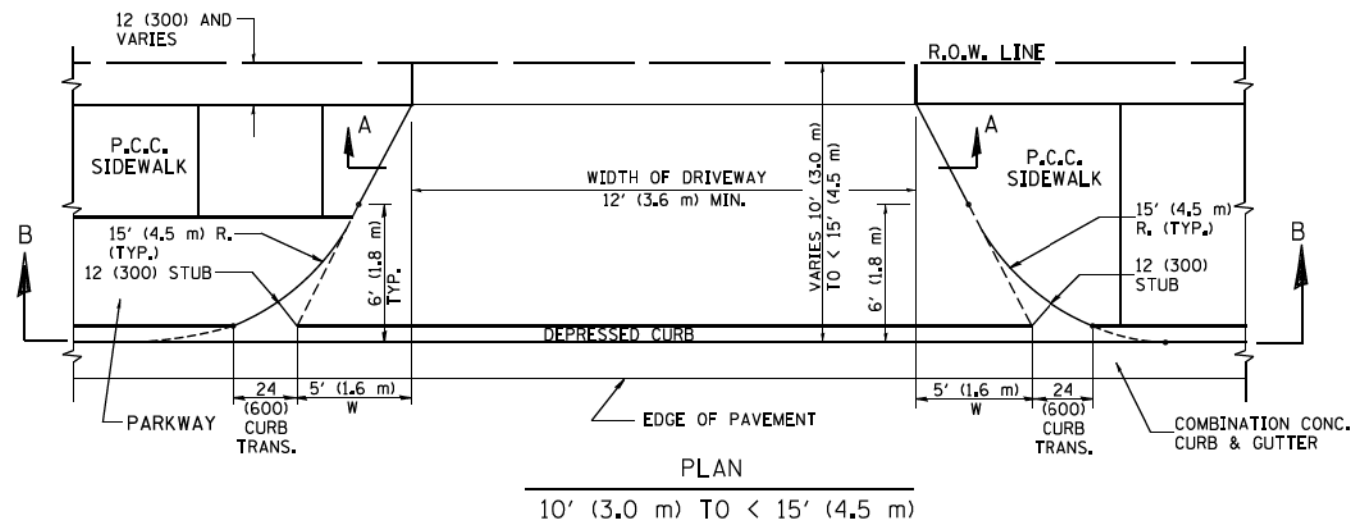
THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED, SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

FILE NAME = c:\pwork\psidot\leyse\d0108315\bd01.dgn	USER NAME = leyse	DESIGNED - R. SHAH	REVISED - P. LOFLUER 04-15-03	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB &amp; EDGE OF SHOULDER &gt;= 15' (4.5 m)</b>			F.A.U. RTE. 1603	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150A
PLOT SCALE = 50.0000' / 1"	CHECKED -	REVISOR - R. BORO 01-01-07	REVISOR - R. BORO 06-11-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BD0156-07 (BD-01) CONTRACT NO. 61F86			
PLOT DATE = 9/6/2011	DATE = 11-04-95	REVISOR - R. BORO 09-06-11			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
FILE NAME = N:\ORLANDPARK\150272.ph2\Consultants\1DOT\Cadd\Deliverable\0161F86-sh1-Dist1Detail-01.dgn												



**GENERAL NOTES**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

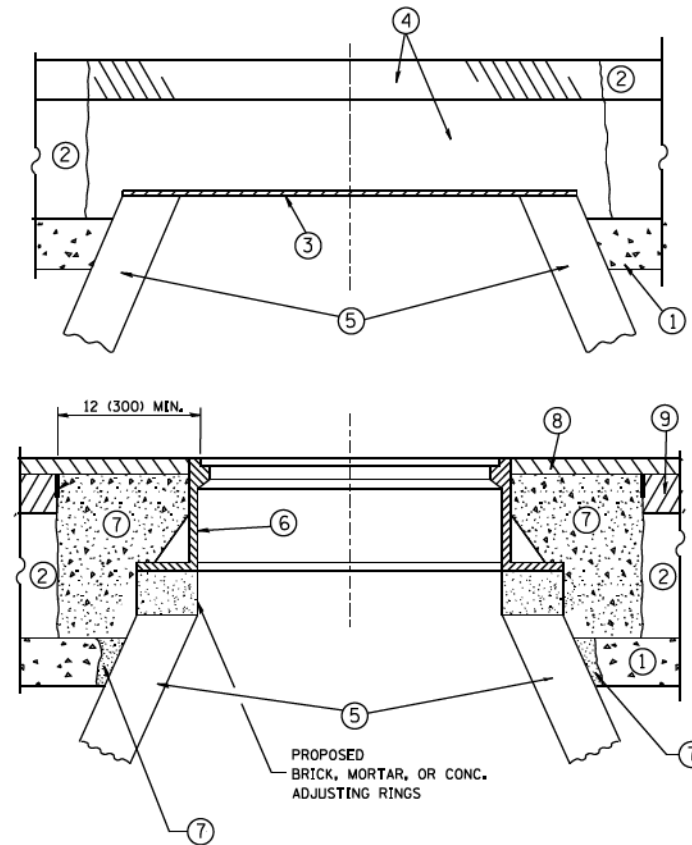
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

FILE NAME =	USER NAME = leyse	DESIGNED - R. SHAH	REVISED - M. GOMEZ 04-06-01
ca:\pwork\psidot\leyse\d0108315\bd02.dgn		DRAWN -	REVISED - P. LOFLEUR 04-15-03
	PLOT SCALE = 50.0000' / 1"	CHECKED -	REVISED - R. BORO 01-01-07
	PLOT DATE = 10/28/2011	DATE - 11-06-95	REVISED - R. BORO 09-06-11

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

DRIVEWAY DETAILS			
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.U. RTE. 1603	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150B
BD400-02 (BD-02)		CONTRACT NO. 61F86		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**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 A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

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

**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:**

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).'

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

**NOTES:**

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.

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.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

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.

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

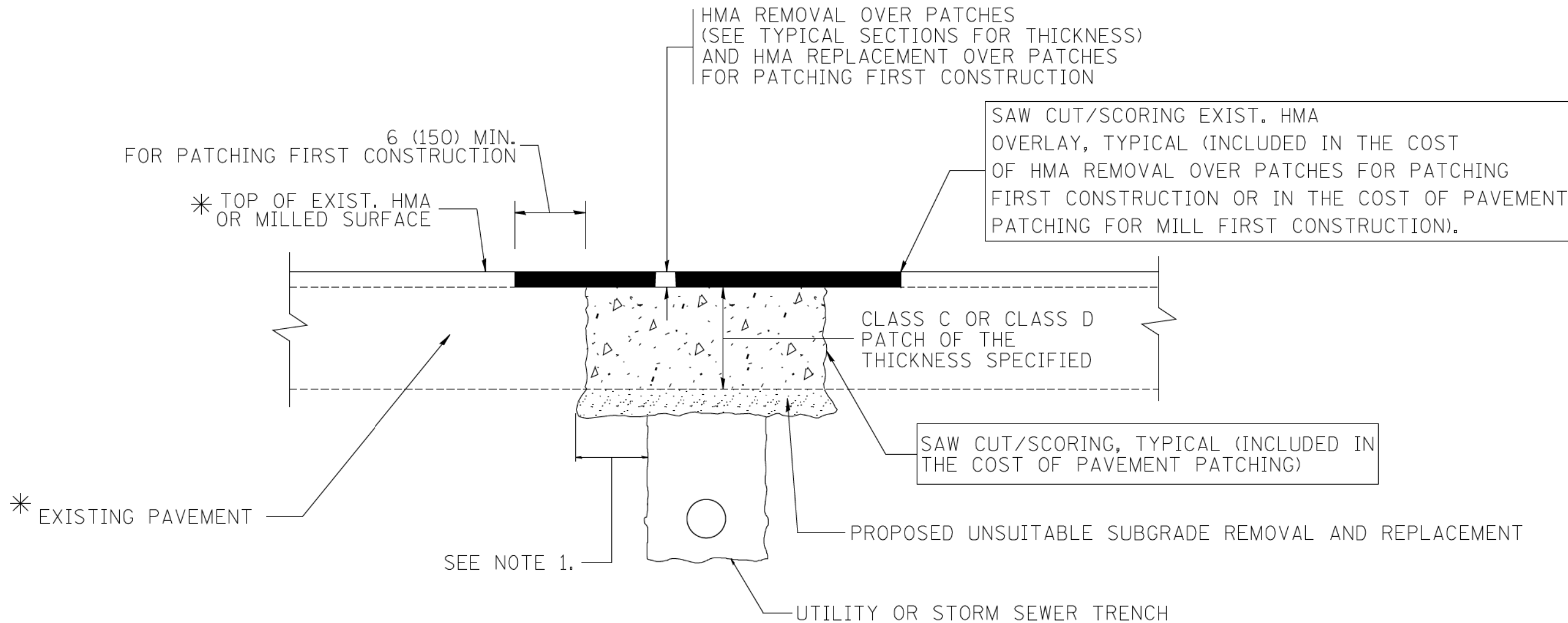
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	PLOT DATE = 12/6/2011	DATE - 10-25-94	REVISED - R. BORO 12-06-11

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 1603	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150C
BD600-03 (BD-8)		CONTRACT NO. 61F86		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**NOTES:**

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

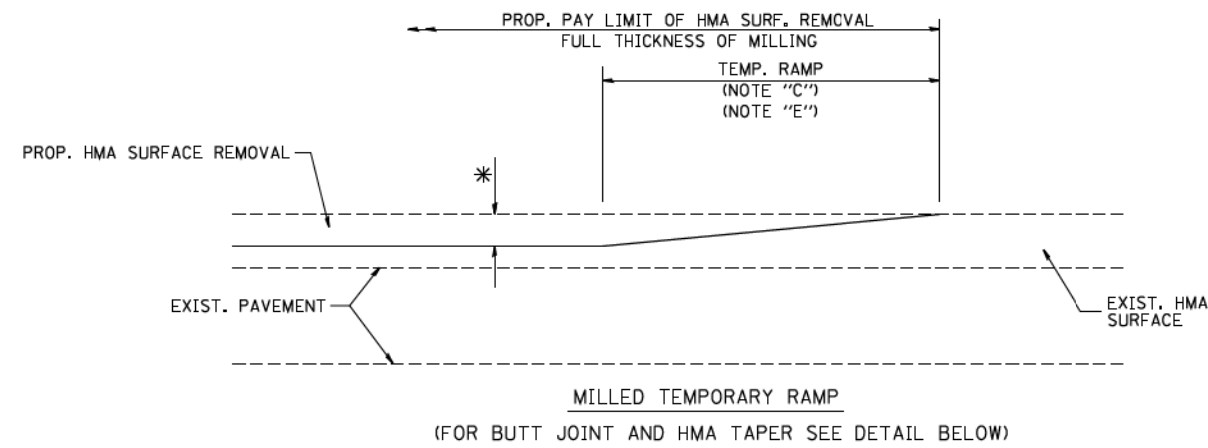
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

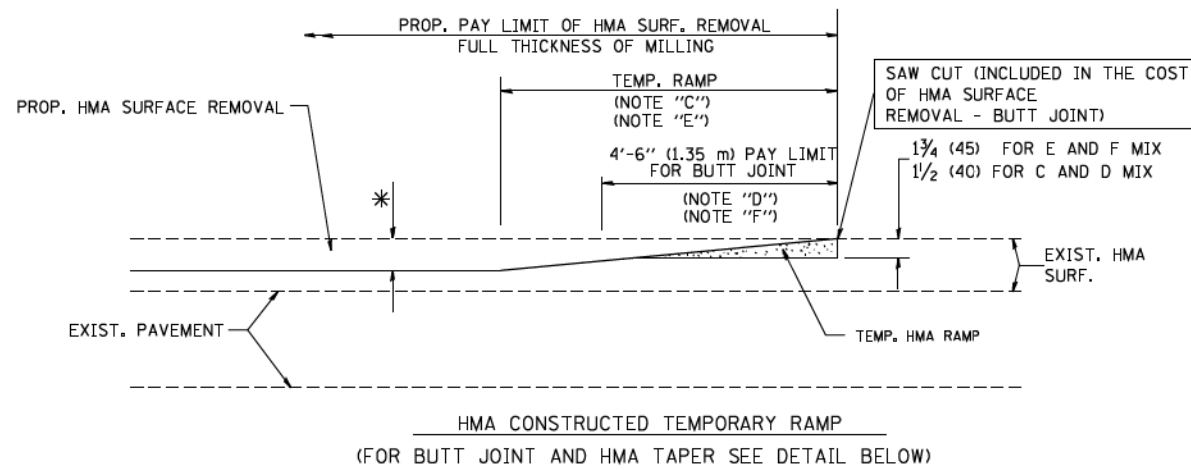
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

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PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
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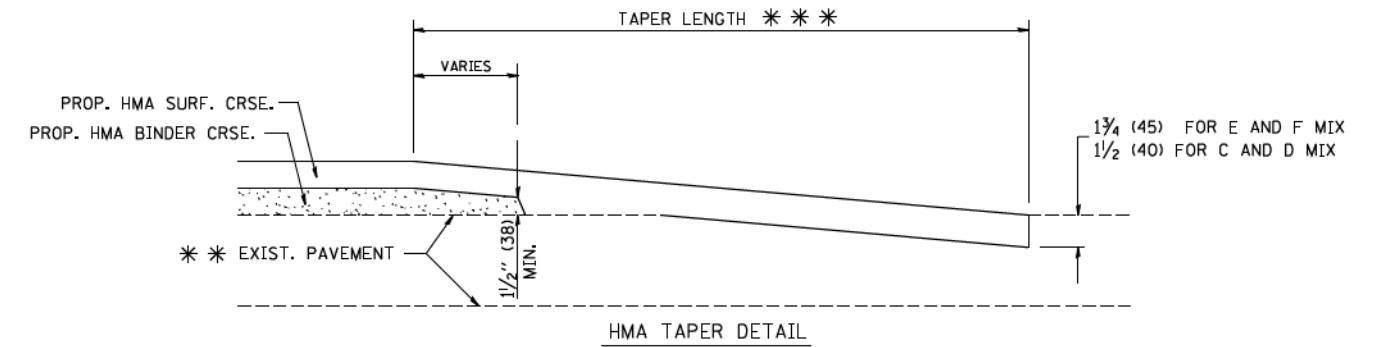
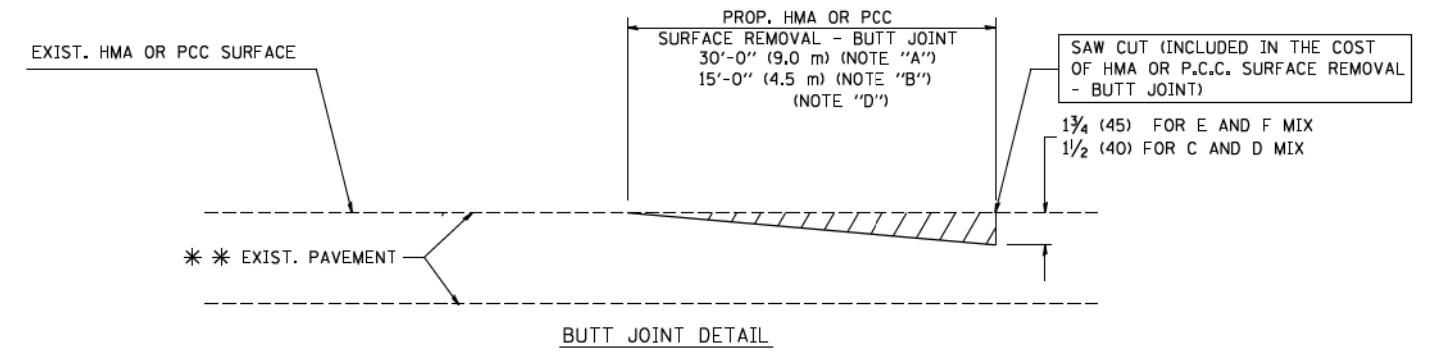


**OPTION 1**



**OPTION 2**

**TYPICAL TEMPORARY RAMP**



**TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY**

\*\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

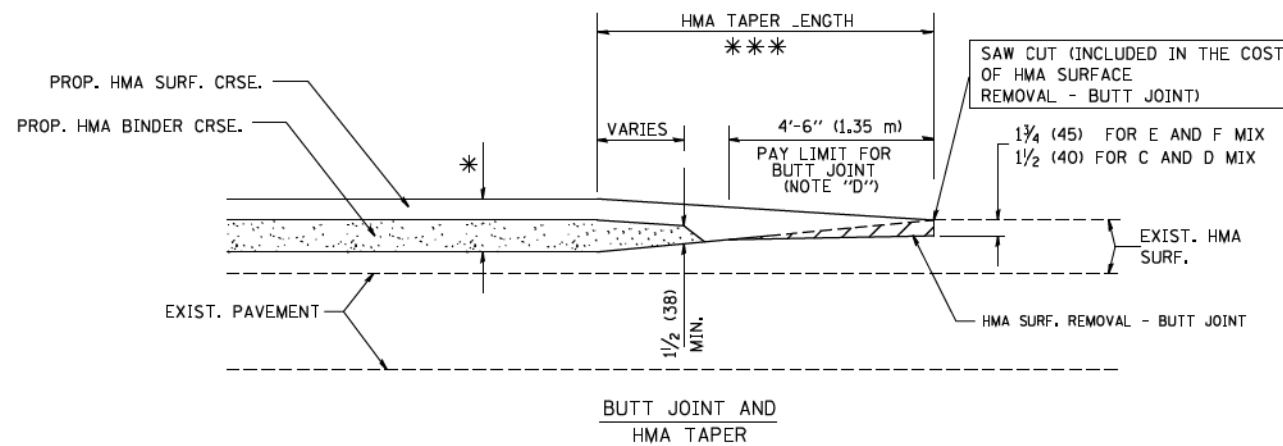
**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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



**TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING**

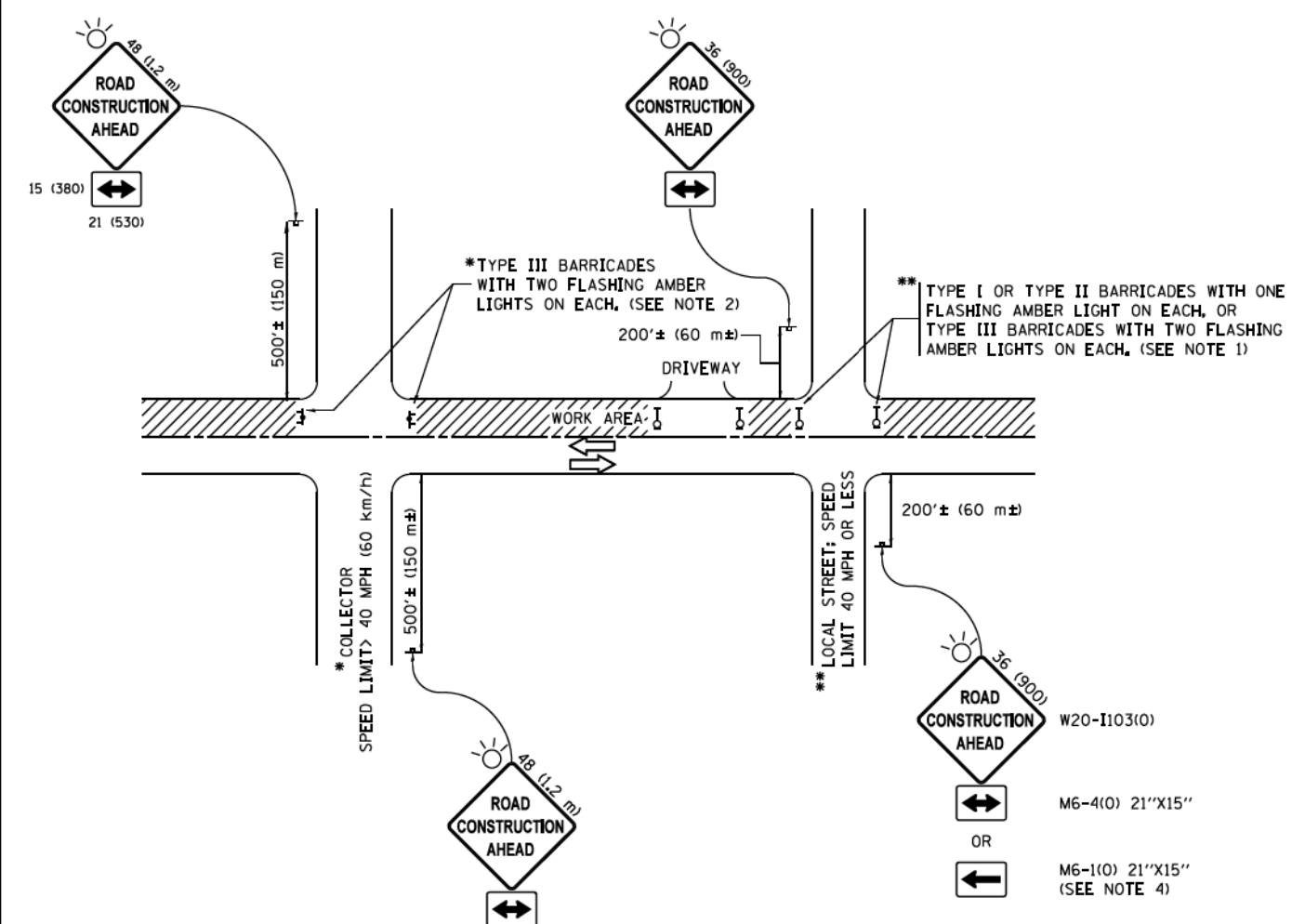
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	PLOT DATE = 1/4/2008	CHECKED - M. GOMEZ 04-06-01	REVISED - M. GOMEZ 04-06-01
		DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND  
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 1603	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150E
BD400-05 BD32		CONTRACT NO. 61F86		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**NOTES:**

1. 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:
  - a) 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.
  - b) 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.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) 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.
  - b) 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.
3. 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.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. 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.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. 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.

FILE NAME =	USER NAME = footemj	DESIGNED - LJA	REVISED - A, HOUSEH 10-15-96
per\IL084EBIDINTEG\Illinois.gov\IDOT\Documents\IDOT Offices\District 1\Projects\Dist 1\BZ\BZ\BZ\CAD\Detail\CADsheets\1018.dgn		CHECKED -	REVISED - T. RAMMACHER 01-06-00
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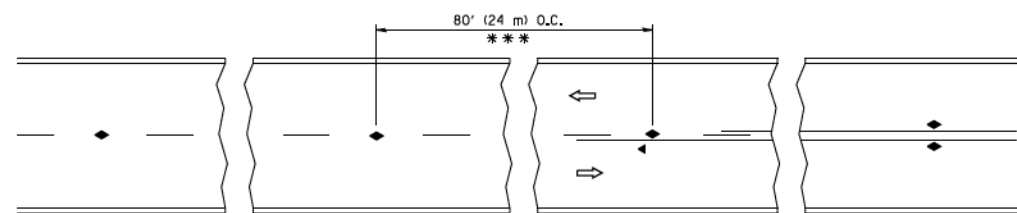
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

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

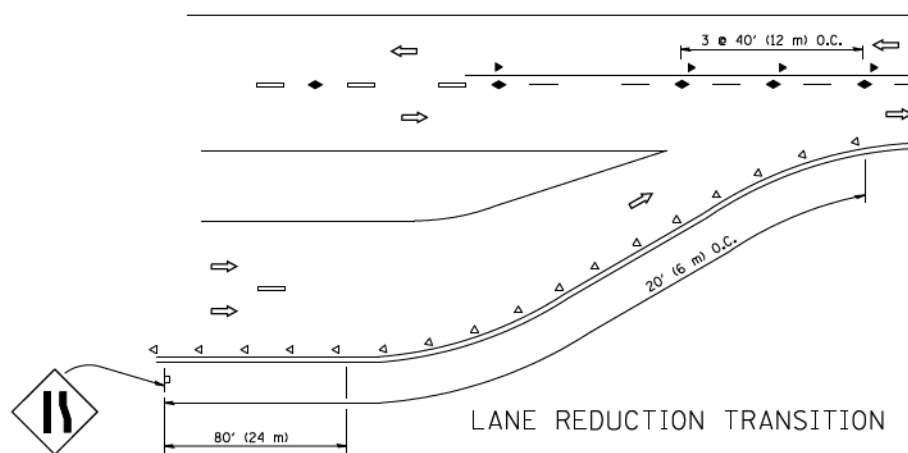
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TC-10			CONTRACT NO. 61F86	
ILLINOIS FED. AID PROJECT				



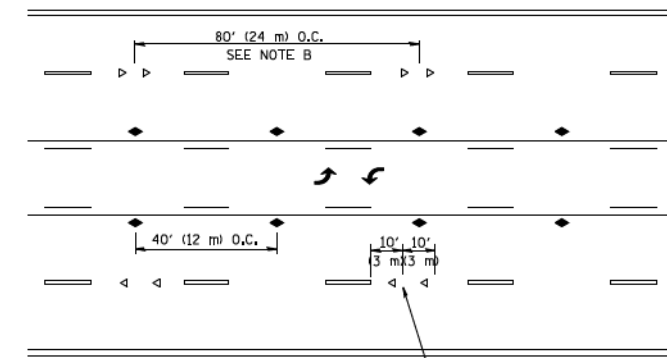


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

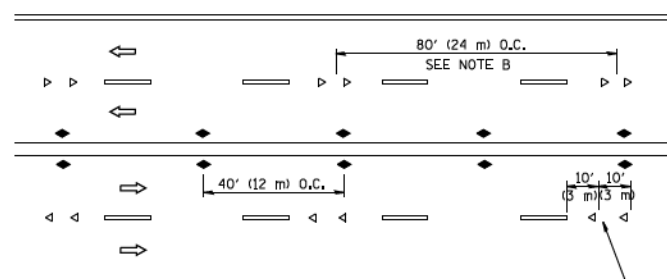
TWO-LANE/TWO-WAY



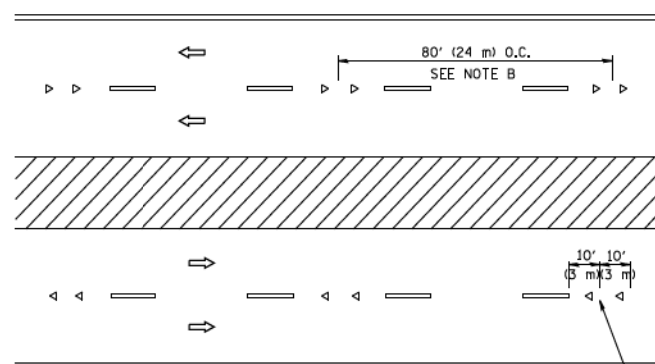
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

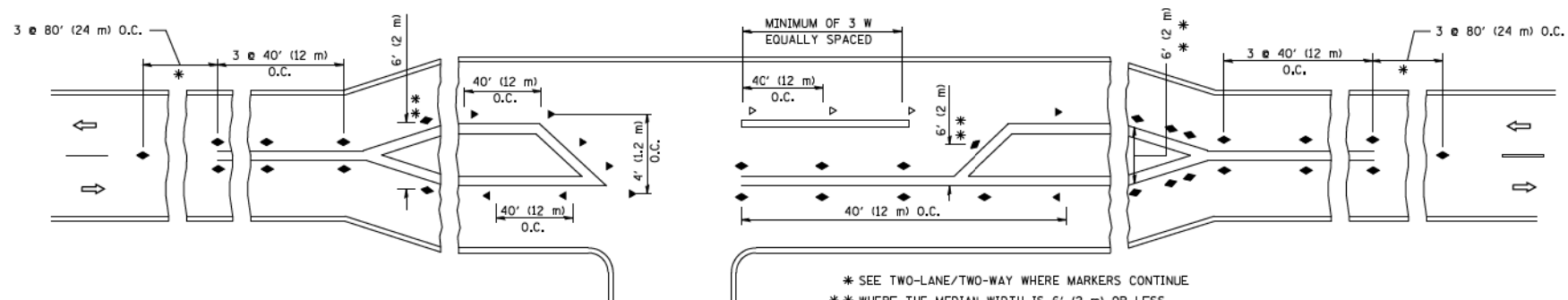
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

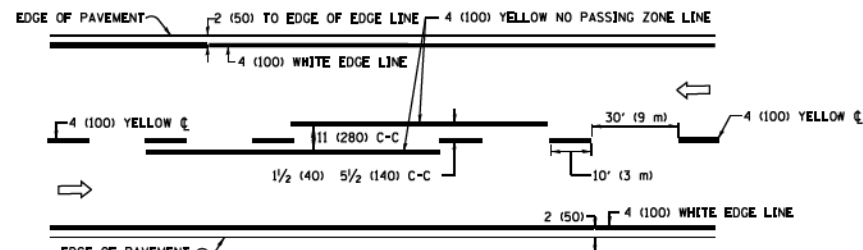
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

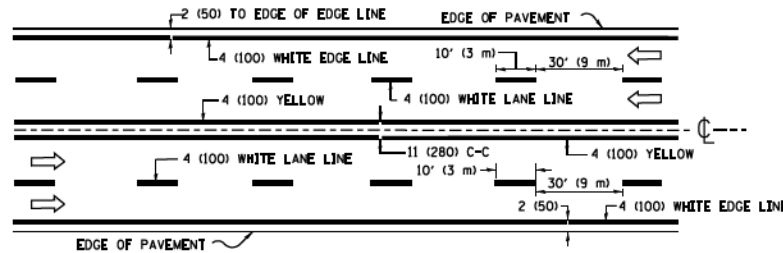
TYPICAL APPLICATIONS  
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

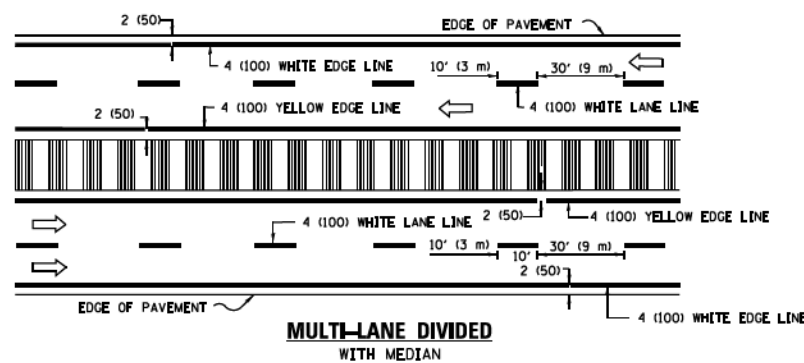
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TC-11			CONTRACT NO. 61F86	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**2-LANE ROADWAY**

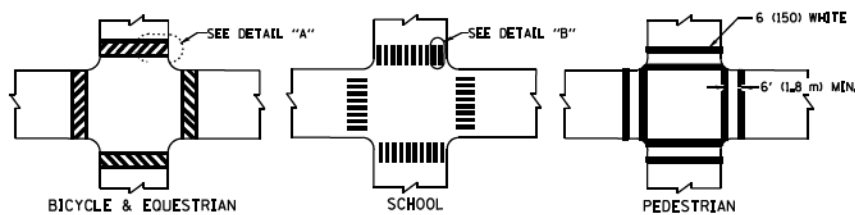


**MULTI-LANE UNDIVIDED**



**MULTI-LANE DIVIDED WITH MEDIAN**

**TYPICAL LANE AND EDGE LINE MARKING**

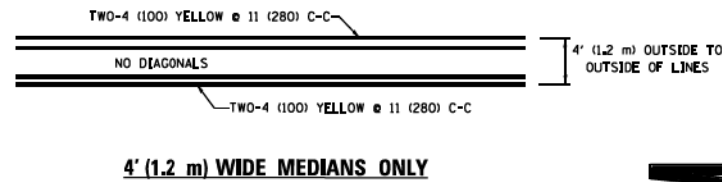


**DETAIL "A"**

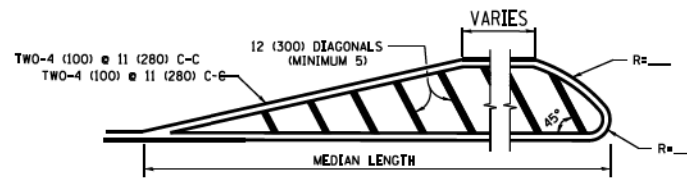
**DETAIL "B"**

**TYPICAL CROSSWALK MARKING**

\* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

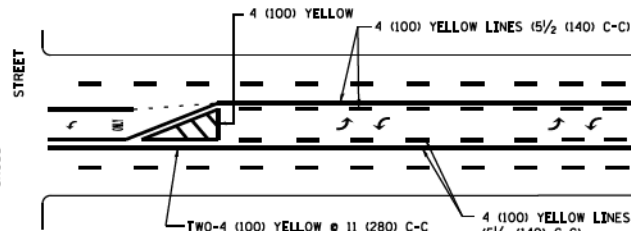


**4' (1.2 m) WIDE MEDIANS ONLY**

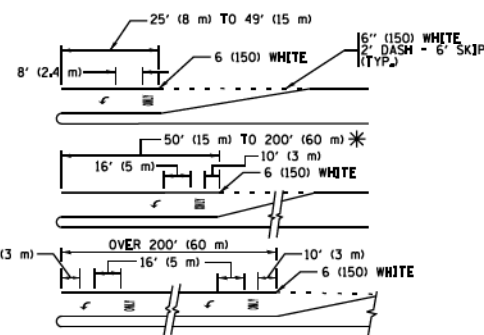


**MEDIANS OVER 4' (1.2 m) WIDE**

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))



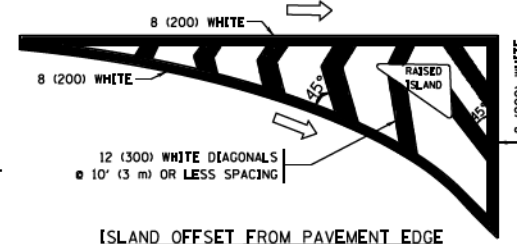
**MEDIAN WITH TWO-WAY LEFT TURN LANE  
TYPICAL PAINTED MEDIAN MARKING**



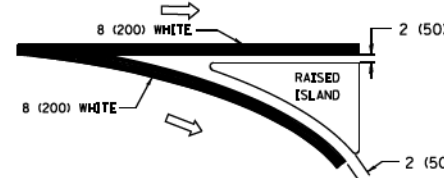
**TYPICAL LEFT (OR RIGHT) TURN LANE**

**TYPICAL TURN LANE MARKING**

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

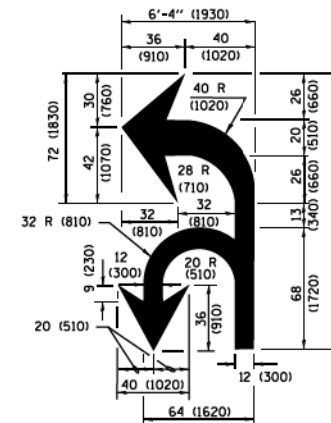


**ISLAND OFFSET FROM PAVEMENT EDGE**

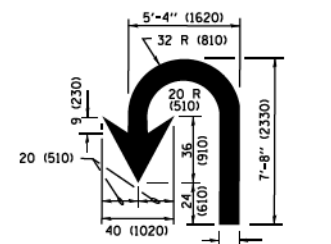


**ISLAND AT PAVEMENT EDGE**

**TYPICAL ISLAND MARKING**



**COMBINATION LEFT AND U-TURN**



**U-TURN**

**LANE REDUCTION TRANSITION**

\* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS 18" (2.4m)	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF "RR" IS 3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X" IS 6.0 SQ. FT. (0.56 m <sup>2</sup> )
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

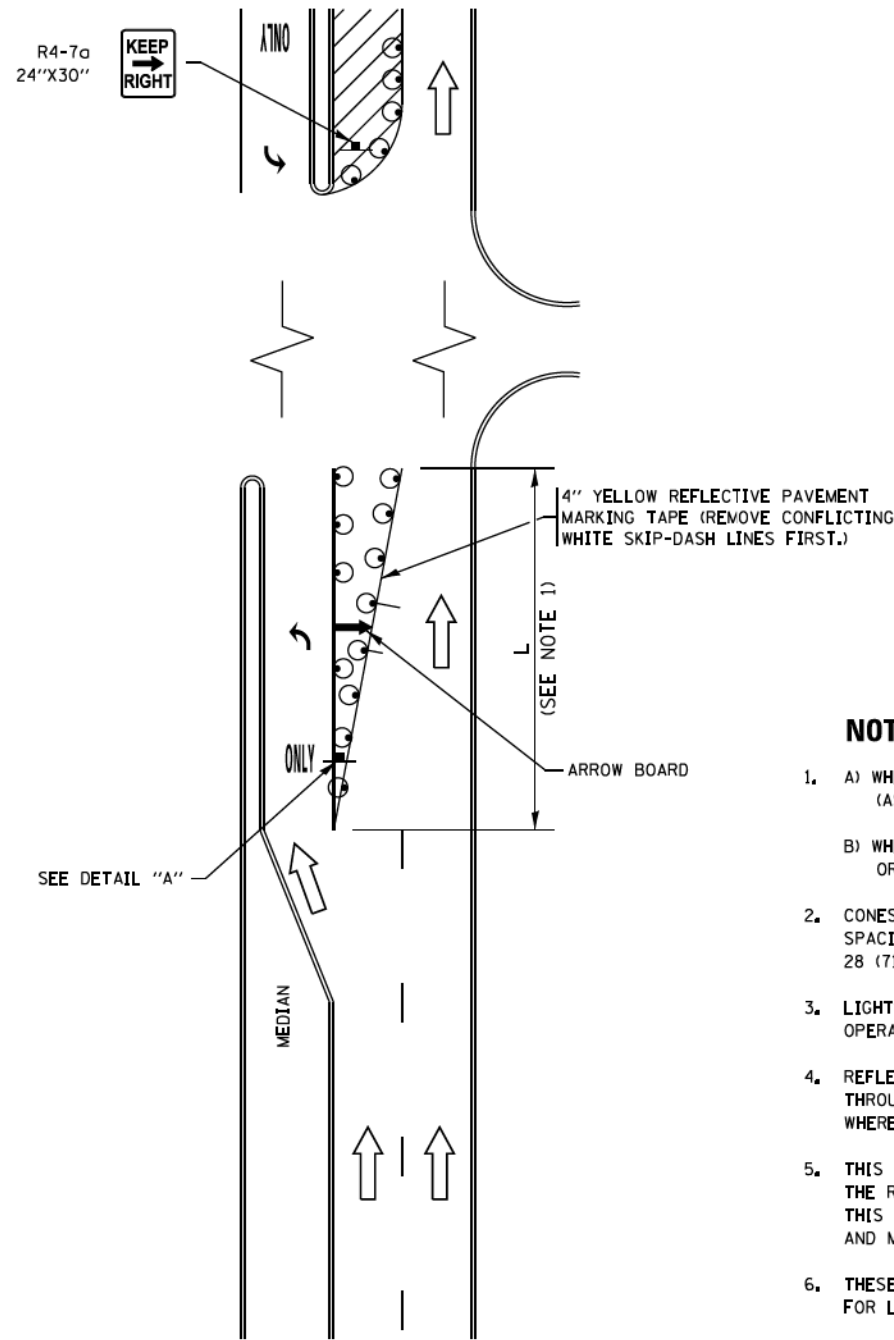
All dimensions are in inches (millimeters) unless otherwise shown.

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

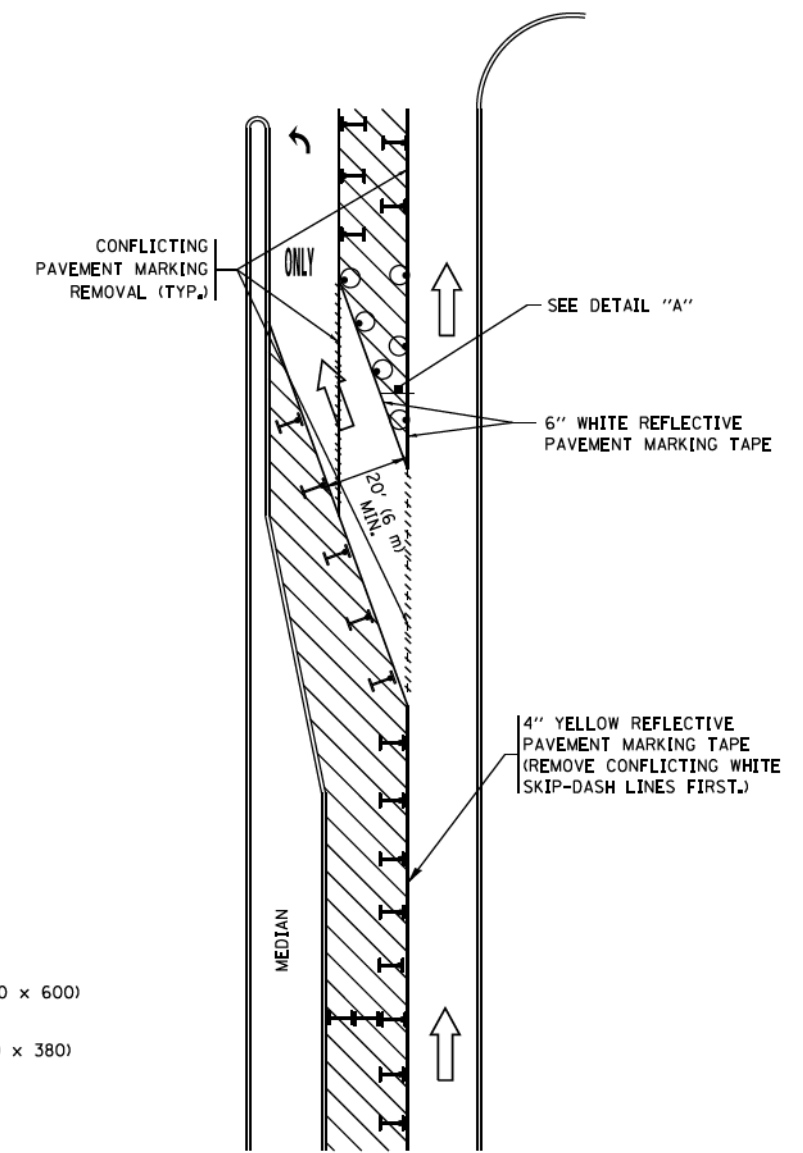
DISTRICT ONE		F.A.U. RTE. 1603	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150H
TYPICAL PAVEMENT MARKINGS		TC-13		CONTRACT NO. 61F86		
SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

# TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER



**FIGURE 1**

# TURN BAY ENTRANCE WITHIN A LANE CLOSURE



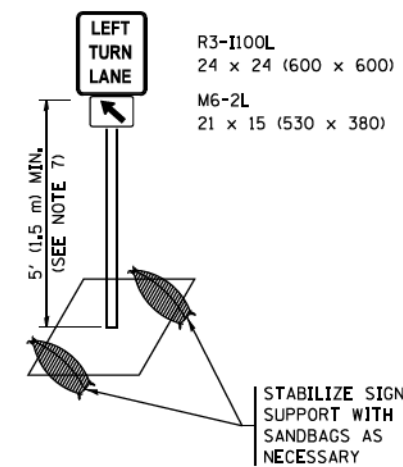
**FIGURE 2**

### LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

### NOTES:

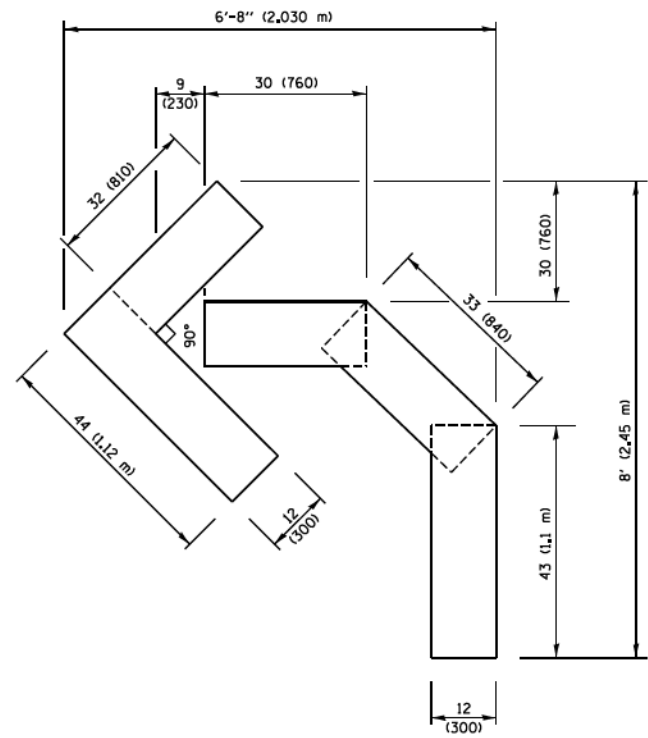
1. A) WHEN "L" IS  $\leq$  THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.  
 B) WHEN "L" IS  $>$  THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN, UNDER THIS CONDITION, "RIGHT TURN LANE" R3-1100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH REQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



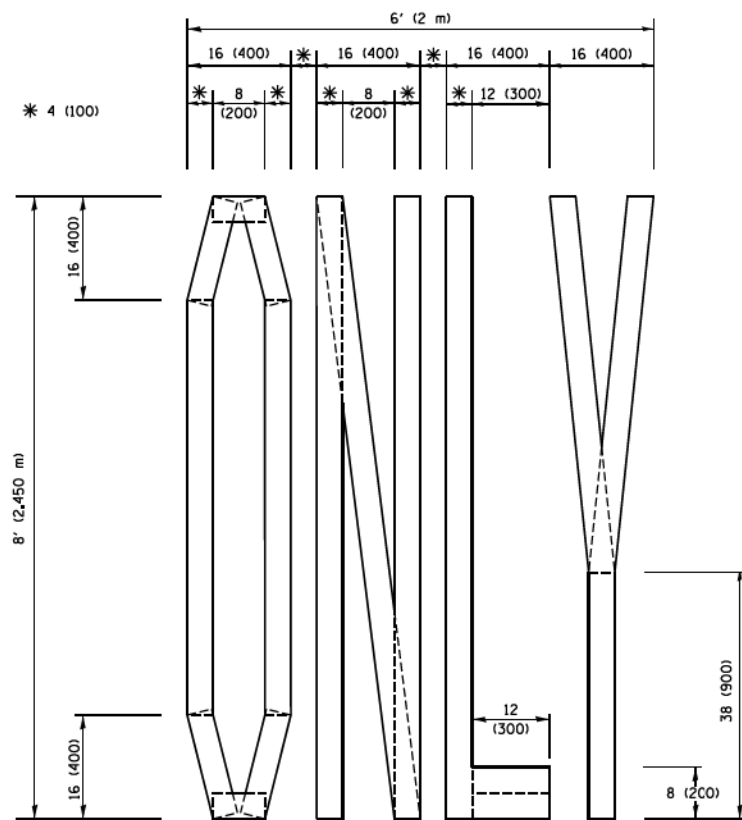
**DETAIL A**

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

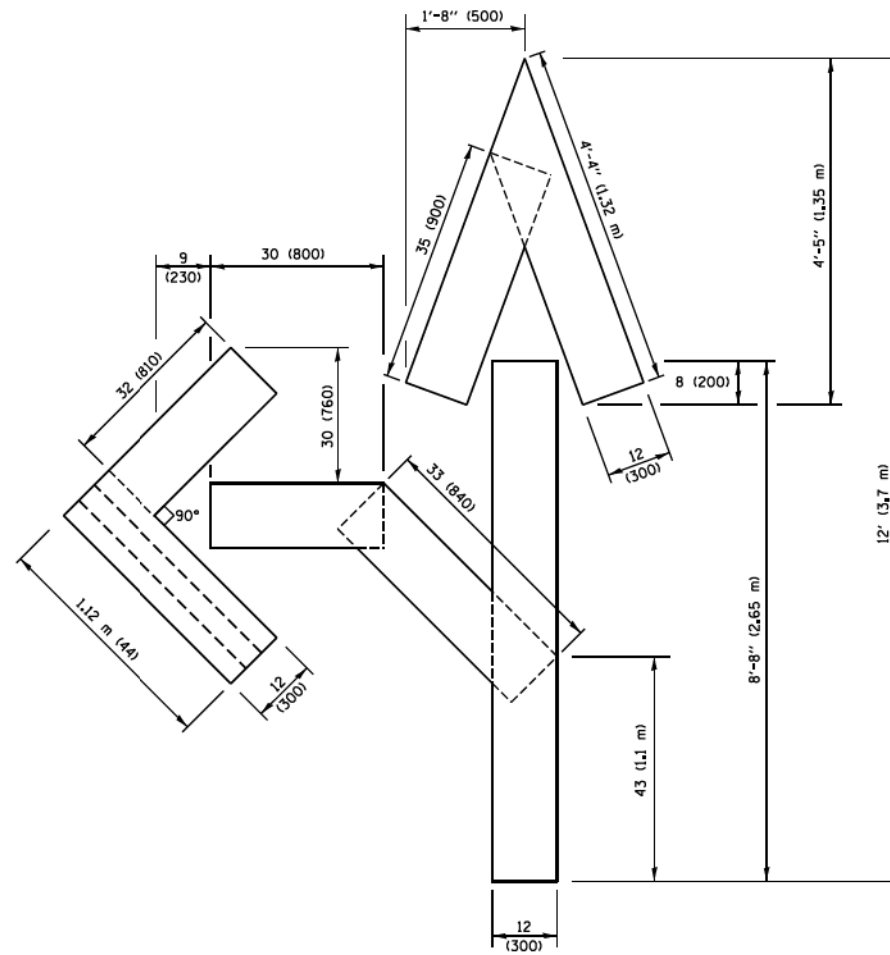
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Default	Default	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 07-01-13			1603	13-00071-00-WR	COOK	162	1501
Default	Default	REVISED - T. RAMMACHER 01-06-00	REVISED - A. SCHUETZE 09-15-16			TC-14				CONTRACT NO. 61F86
SCALE: NONE					SHEET 1	OF 1	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT



**QUANTITY**  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.41 sq. m)



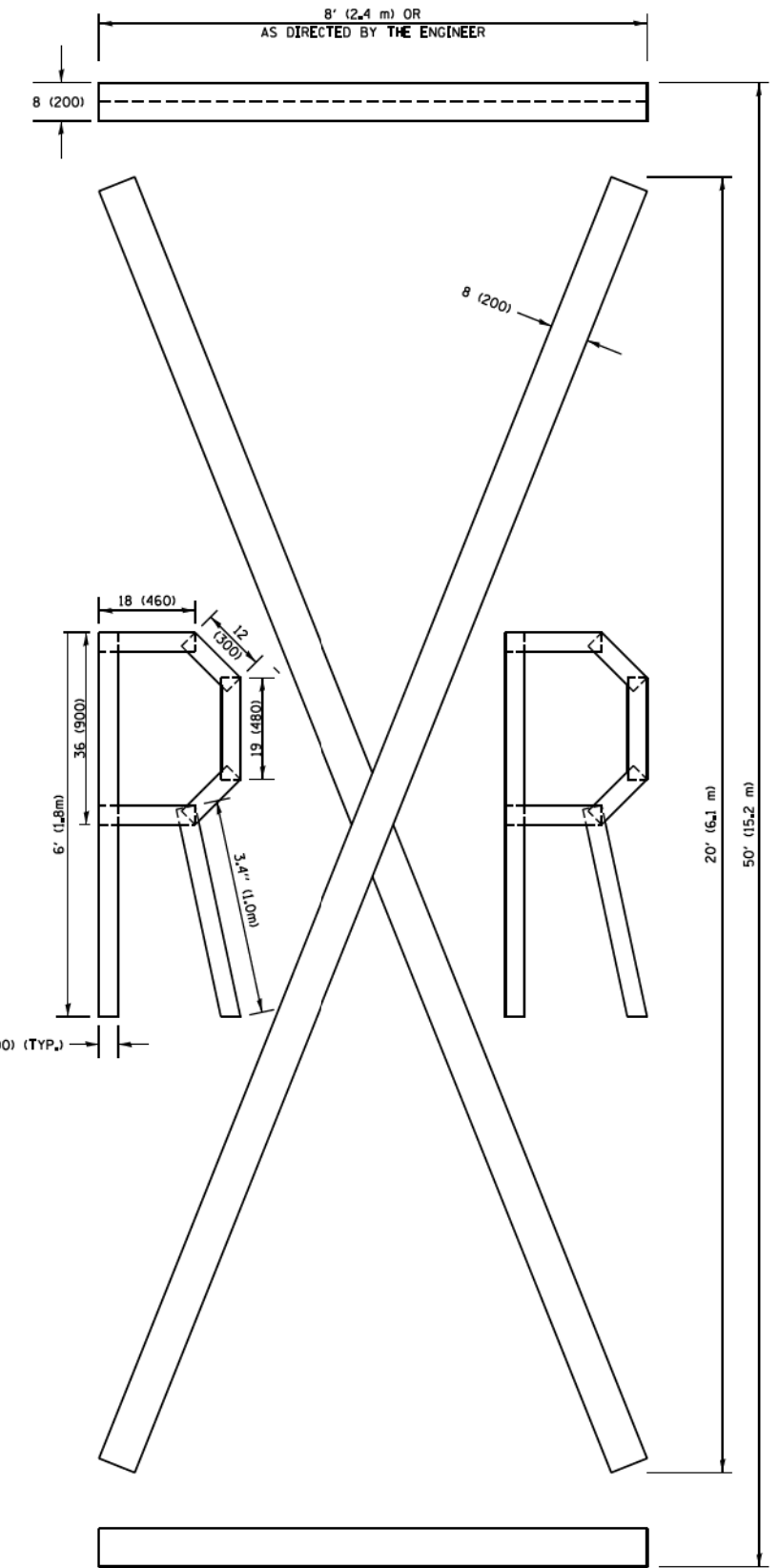
**QUANTITY**  
 4 (100) LINE = 64.1 ft. (19.5 m)  
 21.4 sq. ft. (1.99 sq. m)



**QUANTITY**  
 4 (100) LINE = 82.5 ft. (25.1 m)  
 27.5 sq. ft. (2.53 sq. m)

**NOTE:**

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



**QUANTITY**  
 4 (100) LINE = 225.9 ft. (68.9 m)  
 75.3 sq. ft. (6.99 sq. m)

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

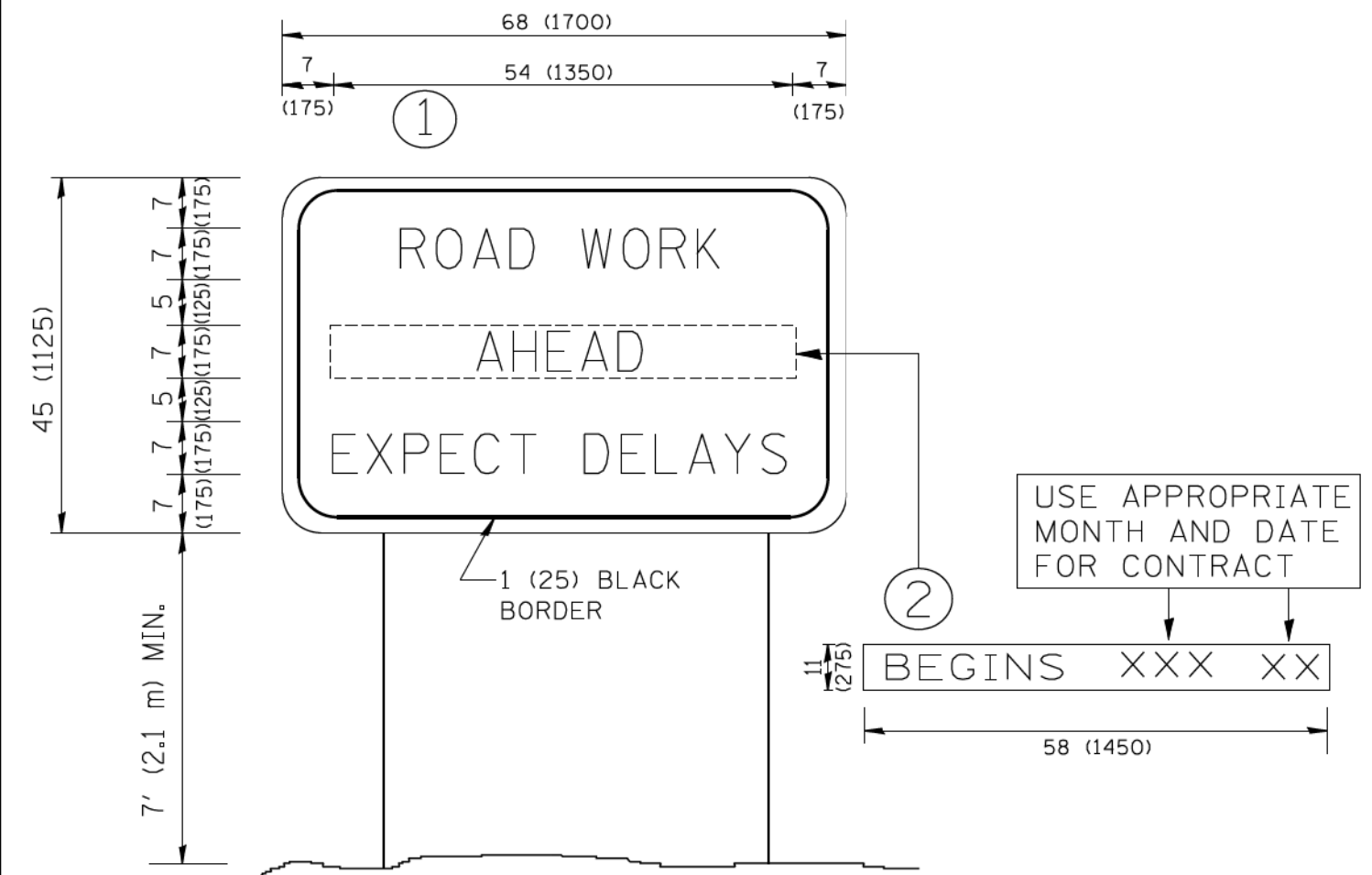
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		DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00
			REVISED -A. SCHUETZE 09-15-16

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	150J
TC-16			CONTRACT NO. 61F86	
FED. ROAD DIST. NO. 1 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.

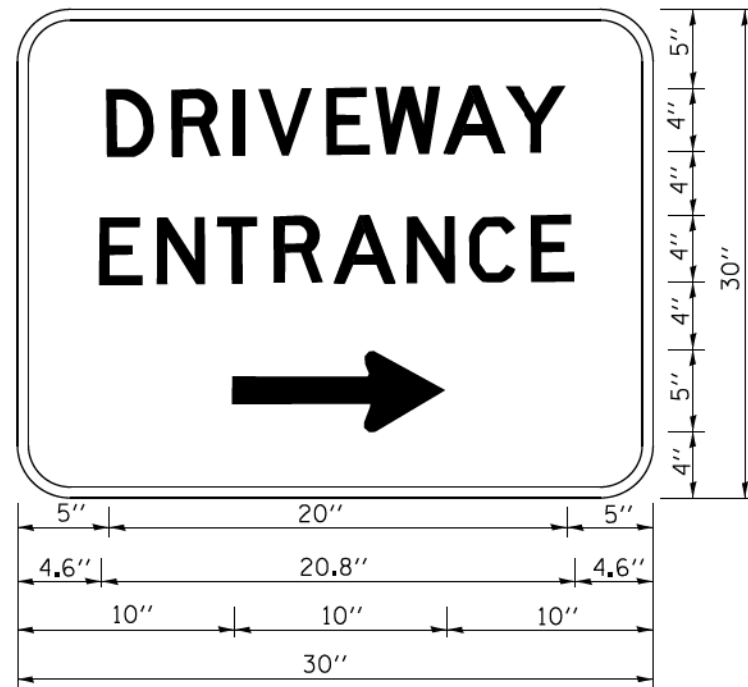
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD  
INFORMATION SIGN**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 1603	SECTION 13-00071-00-WR	COUNTY COOK	TOTAL SHEETS 162	SHEET NO. 150K
TC-22		CONTRACT NO. 61F86		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED  
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

**NOTES:**

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

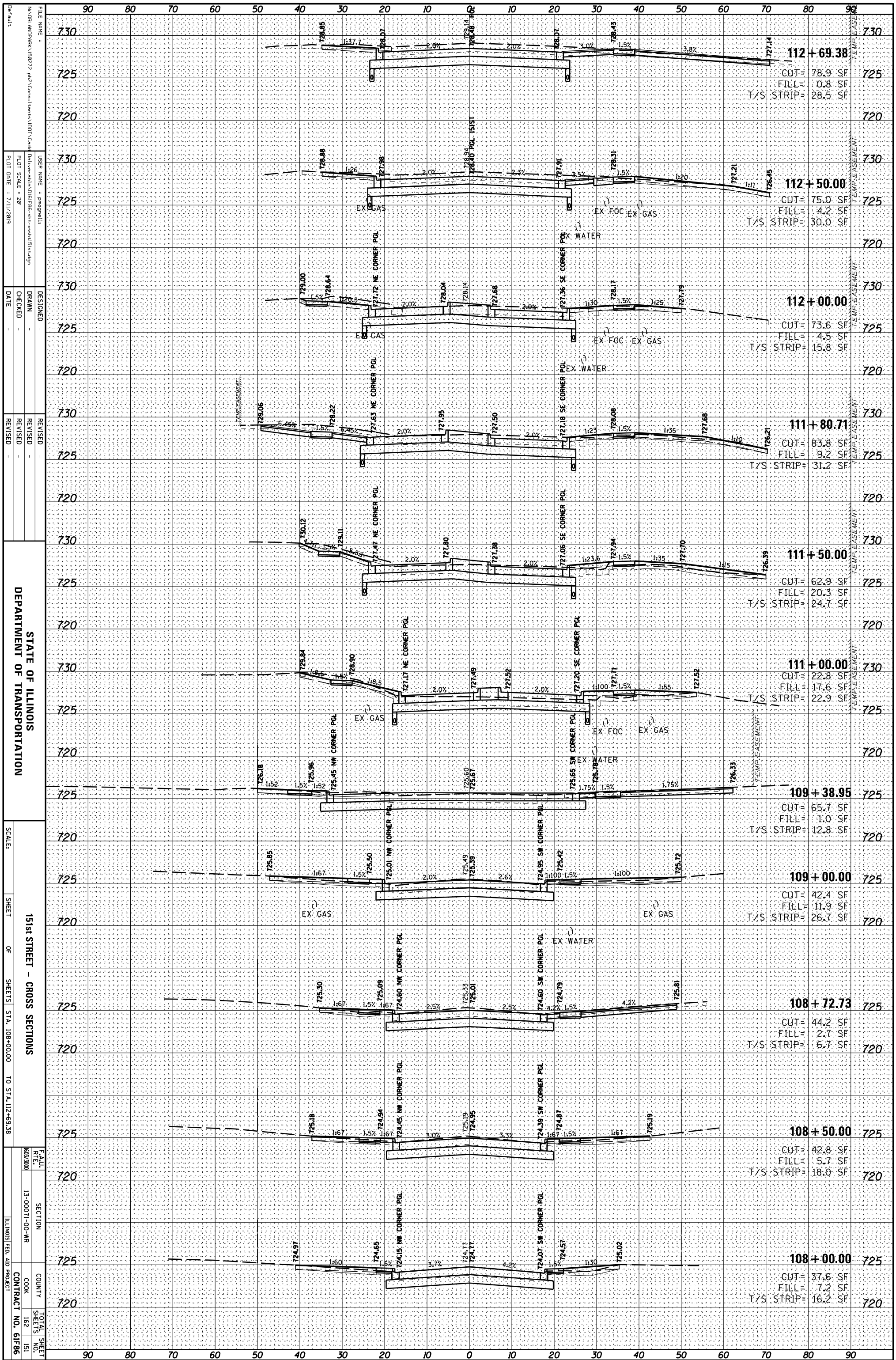
**DRIVEWAY ENTRANCE SIGNING**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1603	13-00071-00-WR	COOK	162	150L
TC-26		CONTRACT NO. 61F86		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		



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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

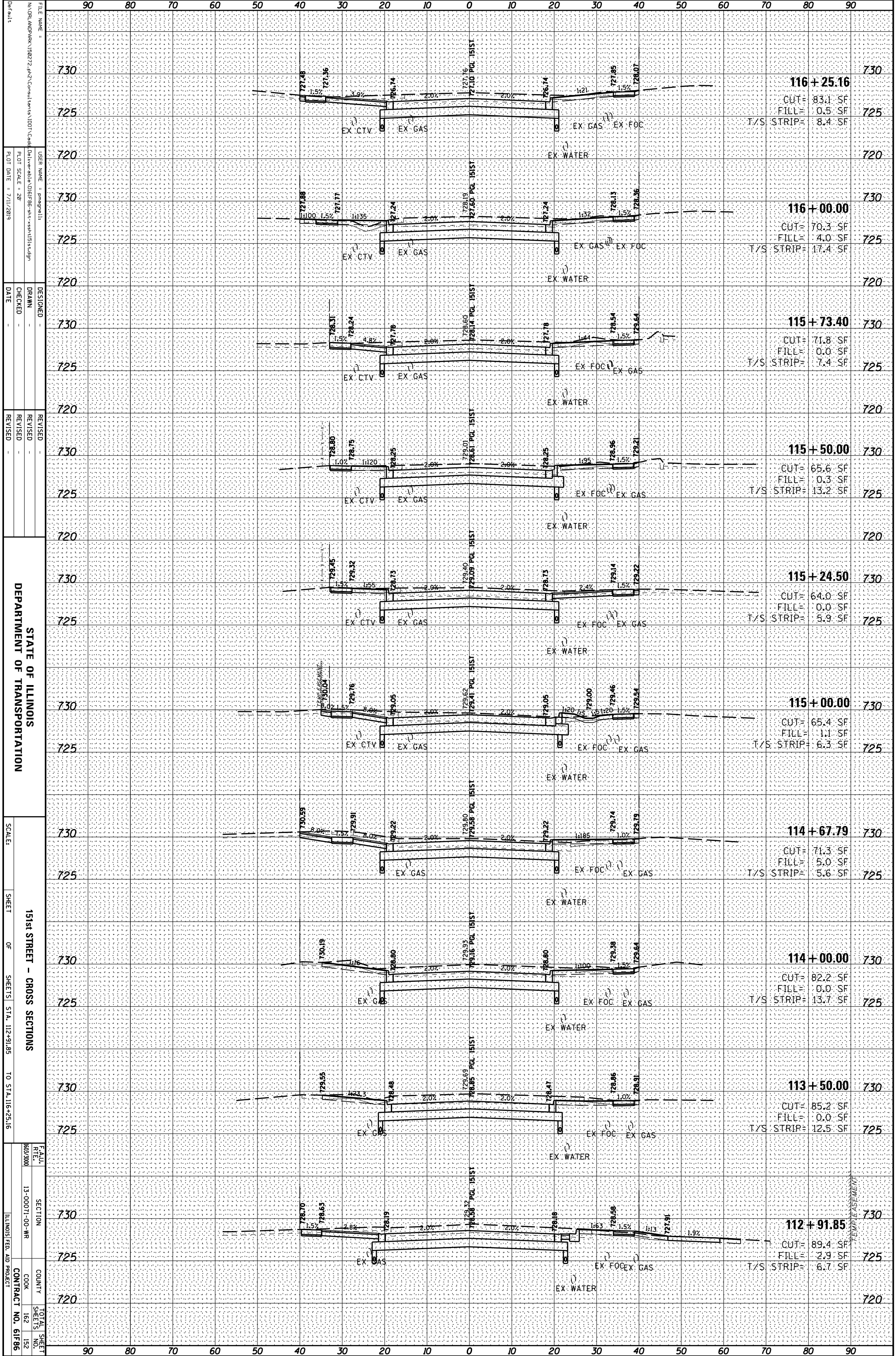
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151st STREET - CROSS SECTIONS

F.A.U. SECTION COUNTY TOTAL SHEET  
 R.F.E. NO. 13-00071-00-WR COOK 162 151  
 ILLINOIS FED. AID PROJECT CONTRACT NO. 61F86

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
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	AREAS CHECKED		



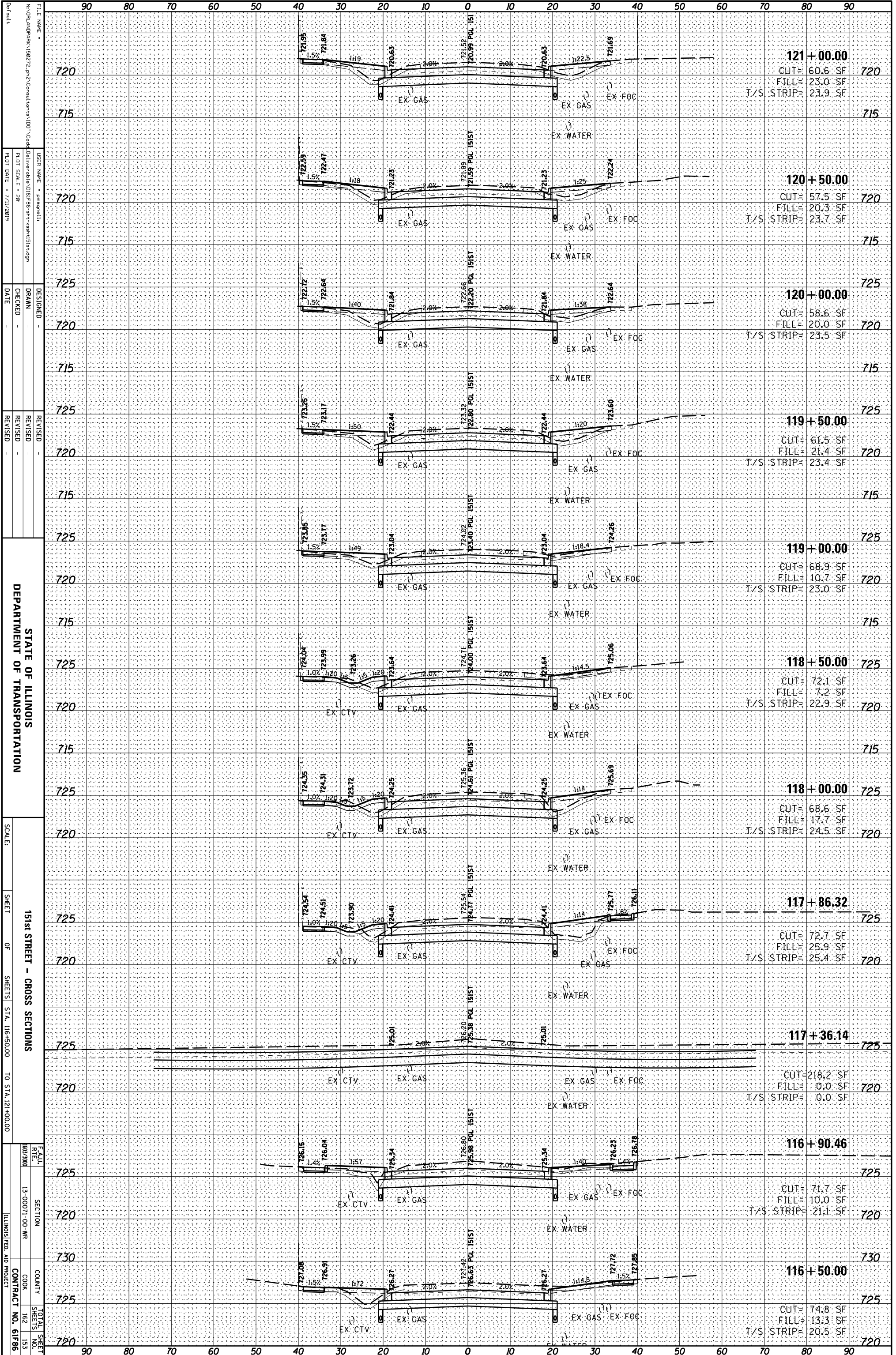
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 COUNTY: COOK  
 CONTRACT NO. 61F86

TEMP MEASUREMENT



ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
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NOTE BOOK	PLOTTED _____		
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

151st STREET - CROSS SECTIONS  
 SHEET OF SHEETS STA. 116+50.00 TO STA. 121+00.00

SCALE:  
 SHEET NO. 151  
 TOTAL SHEETS 153

CONTRACT NO. 61F86  
 COUNTY COOK  
 COUNTY NO. 162

SECTION 13-00071-00-WR  
 COUNTY COOK  
 COUNTY NO. 162

CONTRACT NO. 61F86  
 COUNTY COOK  
 COUNTY NO. 162

SECTION 13-00071-00-WR  
 COUNTY COOK  
 COUNTY NO. 162

CONTRACT NO. 61F86  
 COUNTY COOK  
 COUNTY NO. 162

SECTION 13-00071-00-WR  
 COUNTY COOK  
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CONTRACT NO. 61F86  
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SECTION 13-00071-00-WR  
 COUNTY COOK  
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SECTION 13-00071-00-WR  
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SECTION 13-00071-00-WR  
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CONTRACT NO. 61F86  
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SECTION 13-00071-00-WR  
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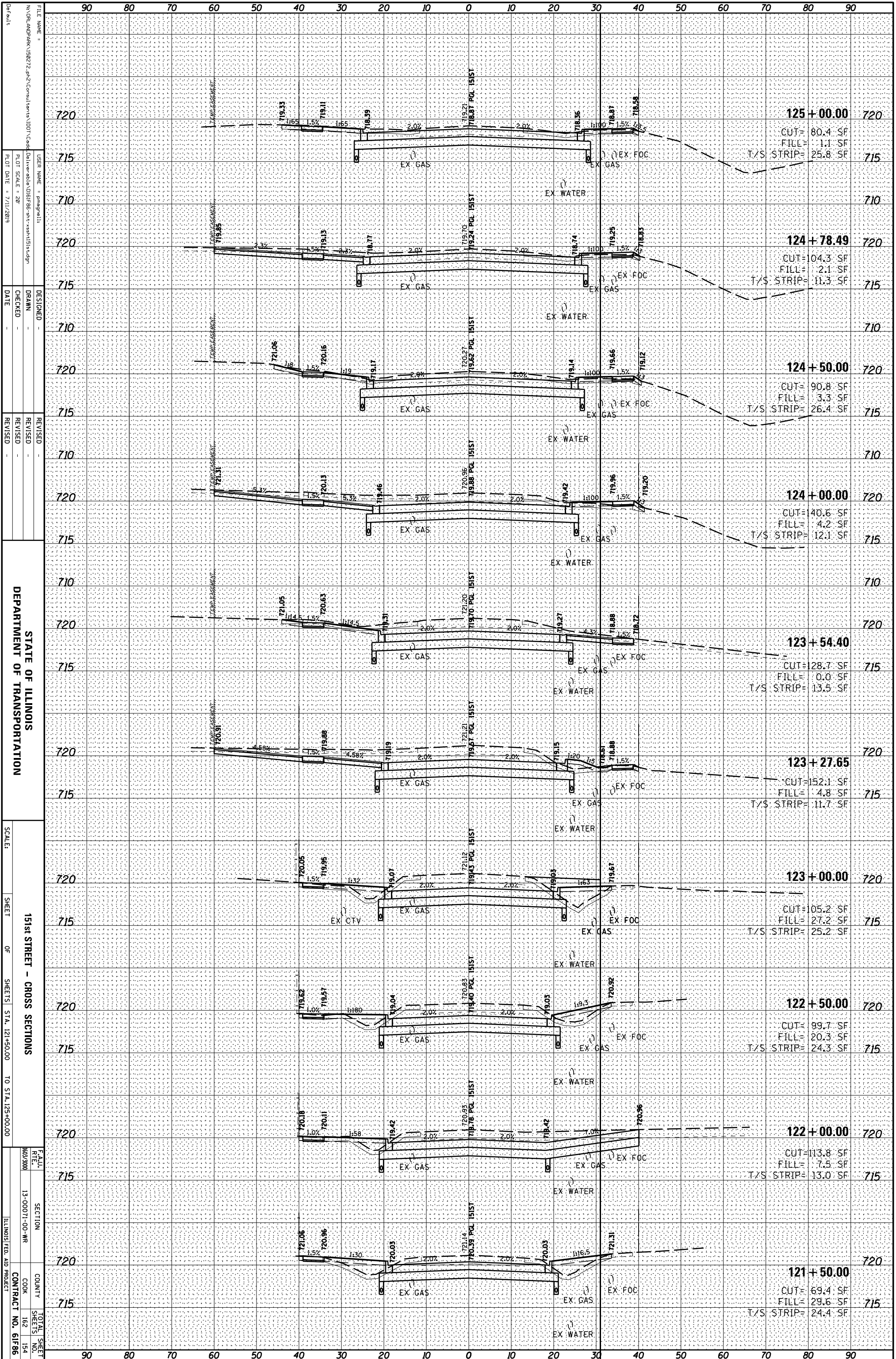
CONTRACT NO. 61F86  
 COUNTY COOK  
 COUNTY NO. 162

SECTION 13-00071-00-WR  
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 COUNTY NO. 162

CONTRACT NO. 61F86  
 COUNTY COOK  
 COUNTY NO. 162

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

151st STREET - CROSS SECTIONS

CONTRACT NO. 61F86

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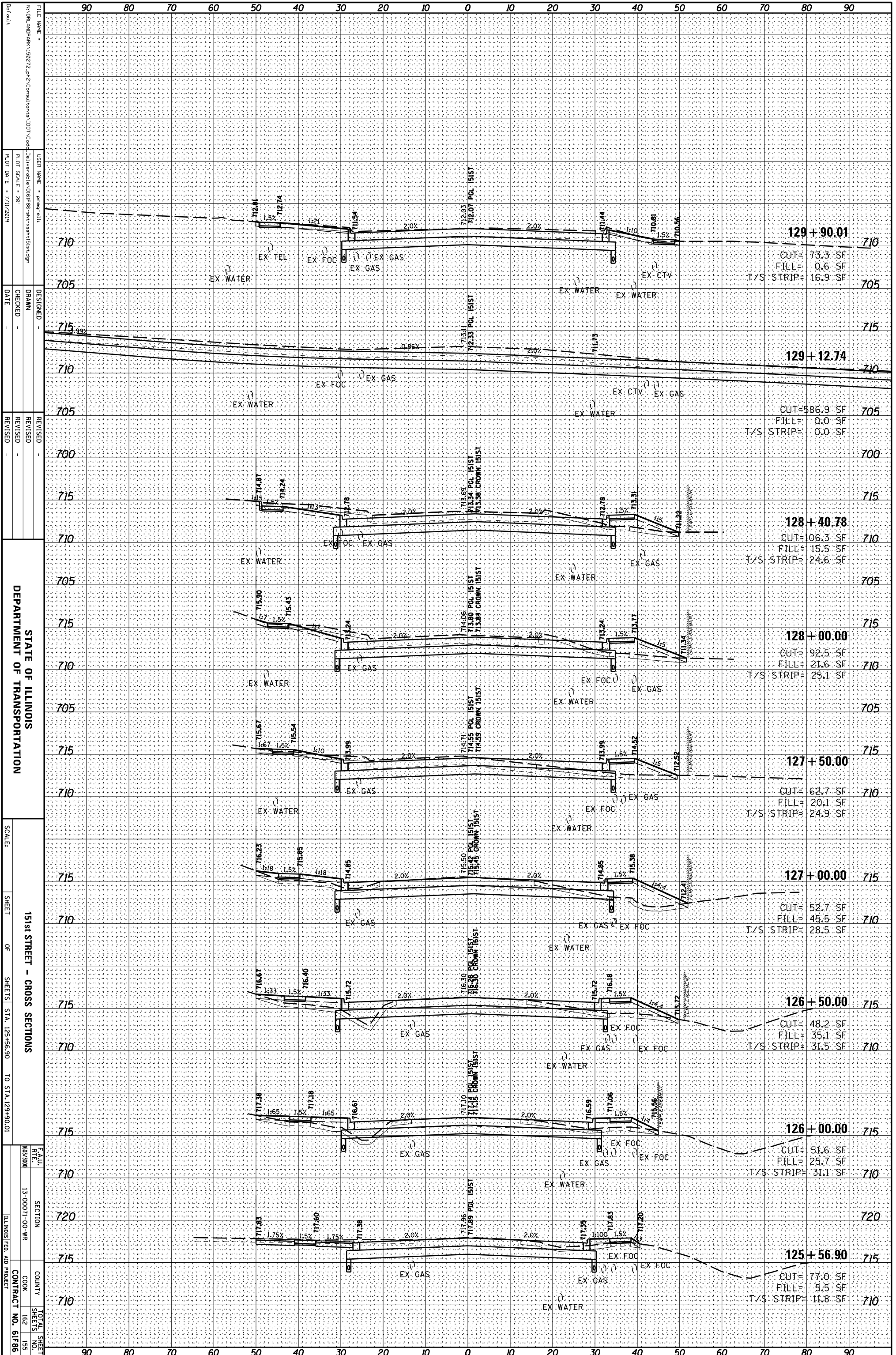
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SHEET NO.: 162  
TOTAL SHEETS: 154

ORIGINAL SURVEY	SURVEYED	BY	DATE
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FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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	CHECKED		



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

151st STREET - CROSS SECTIONS  
SHEET OF SHEETS STA. 125+56.90 TO STA. 129+90.01

SCALE: SHEET OF SHEETS STA. 125+56.90 TO STA. 129+90.01

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CONTRACT NO. 61F86

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TOTAL SHEET SHEETS NO. 152

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SECTION 13-0001-00-WR

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ILLINOIS FED. AID PROJECT

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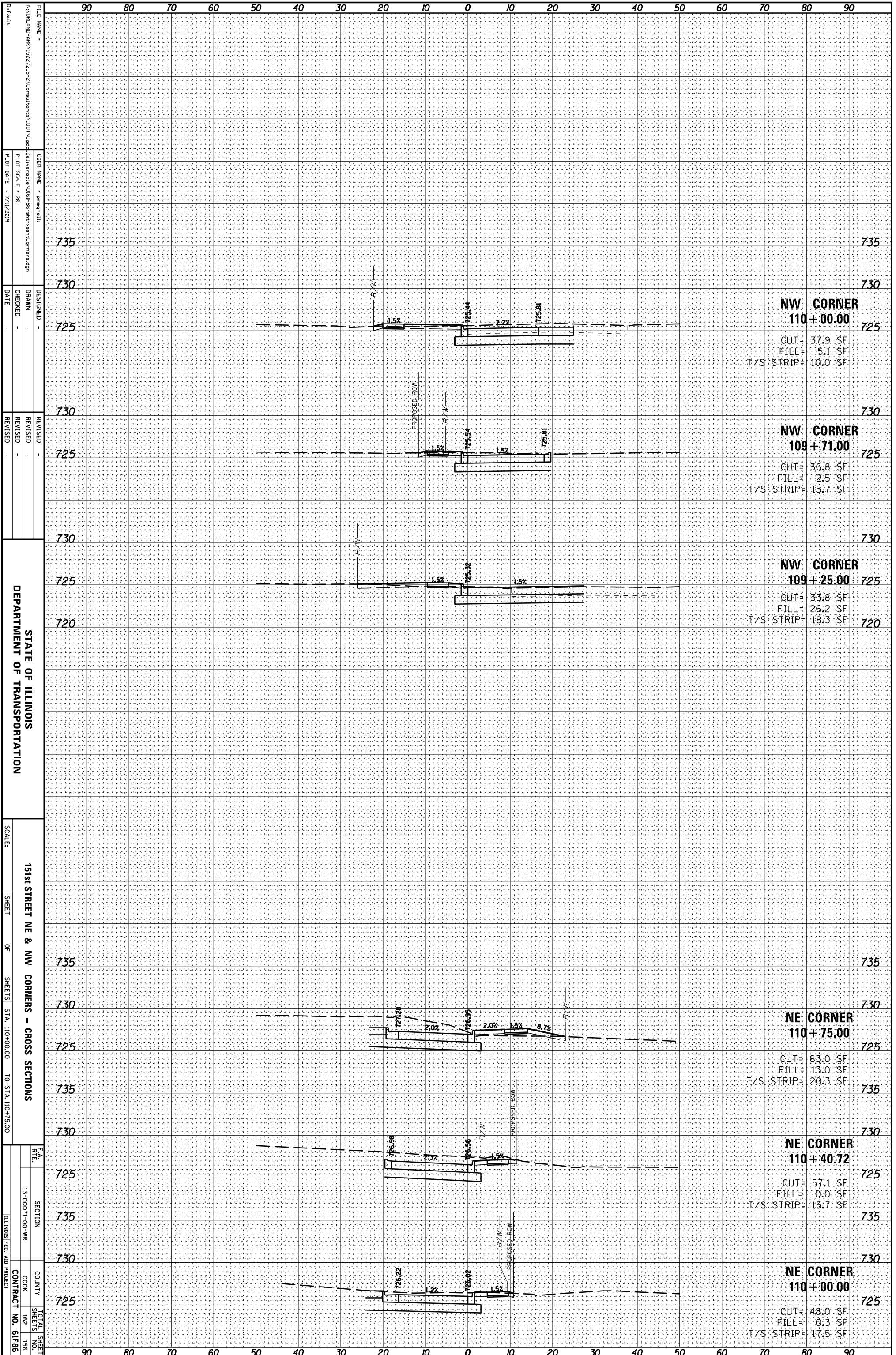
ILLINOIS FED. AID PROJECT

ILLINOIS FED. AID PROJECT

ILLINOIS FED. AID PROJECT

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

151st STREET NE & NW CORNERS - CROSS SECTIONS

SCALE: SHEET OF SHEETS STA. 110+00.00 TO STA. 110+75.00

SECTION	COUNTY	TOTAL SHEET NO.
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		156

CONTRACT NO. 61F86 ILLINOIS FED. AID PROJECT

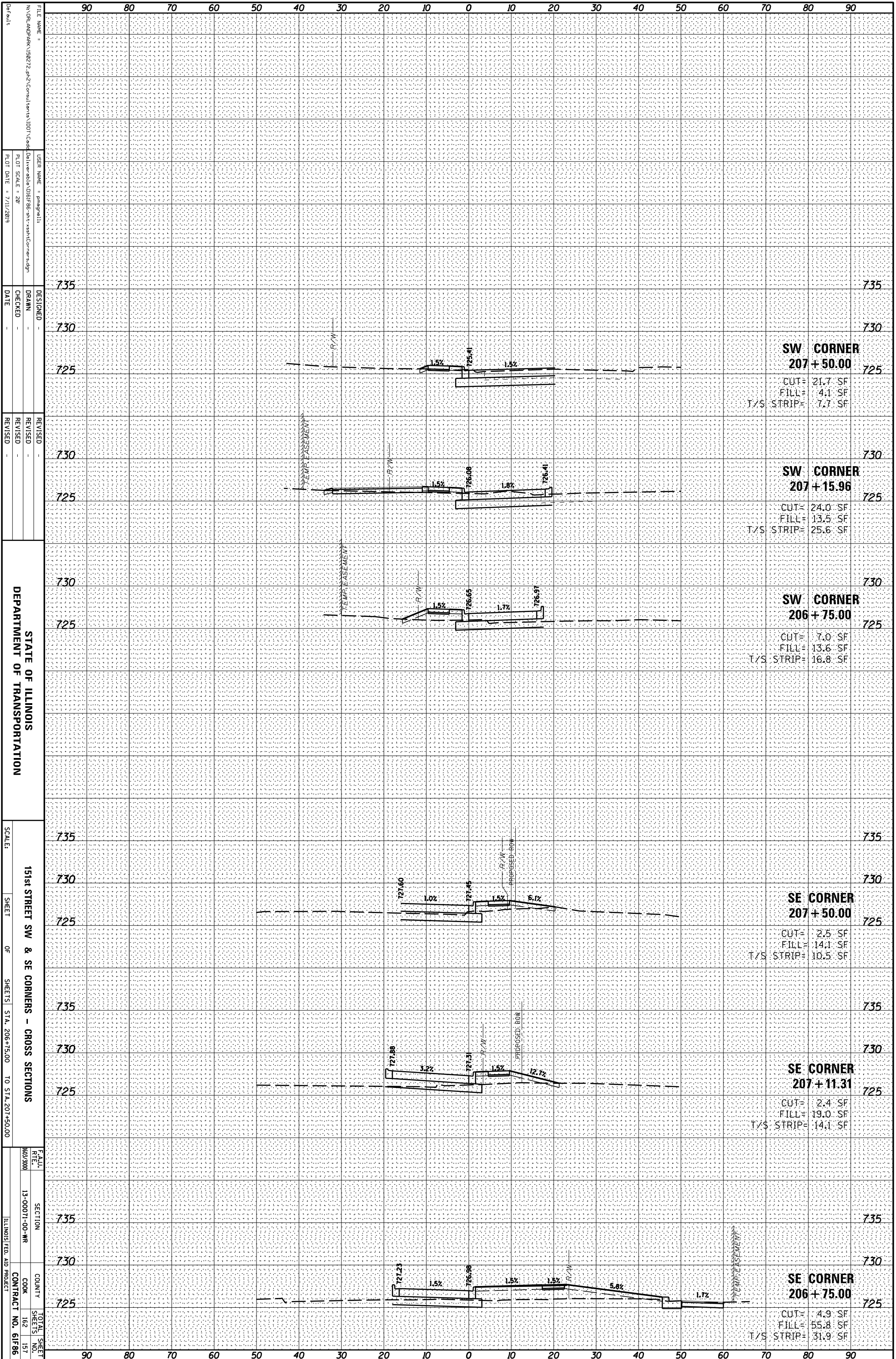
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USER NAME: pmagnall  
DESIGNED: DRAWN: CHECKED: DATE: 7/11/2019

REVISIONS:

NO.	DATE	DESCRIPTION

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		



FILE NAME =  
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 CHECKED =  
 DATE =  
 REVISIONS =

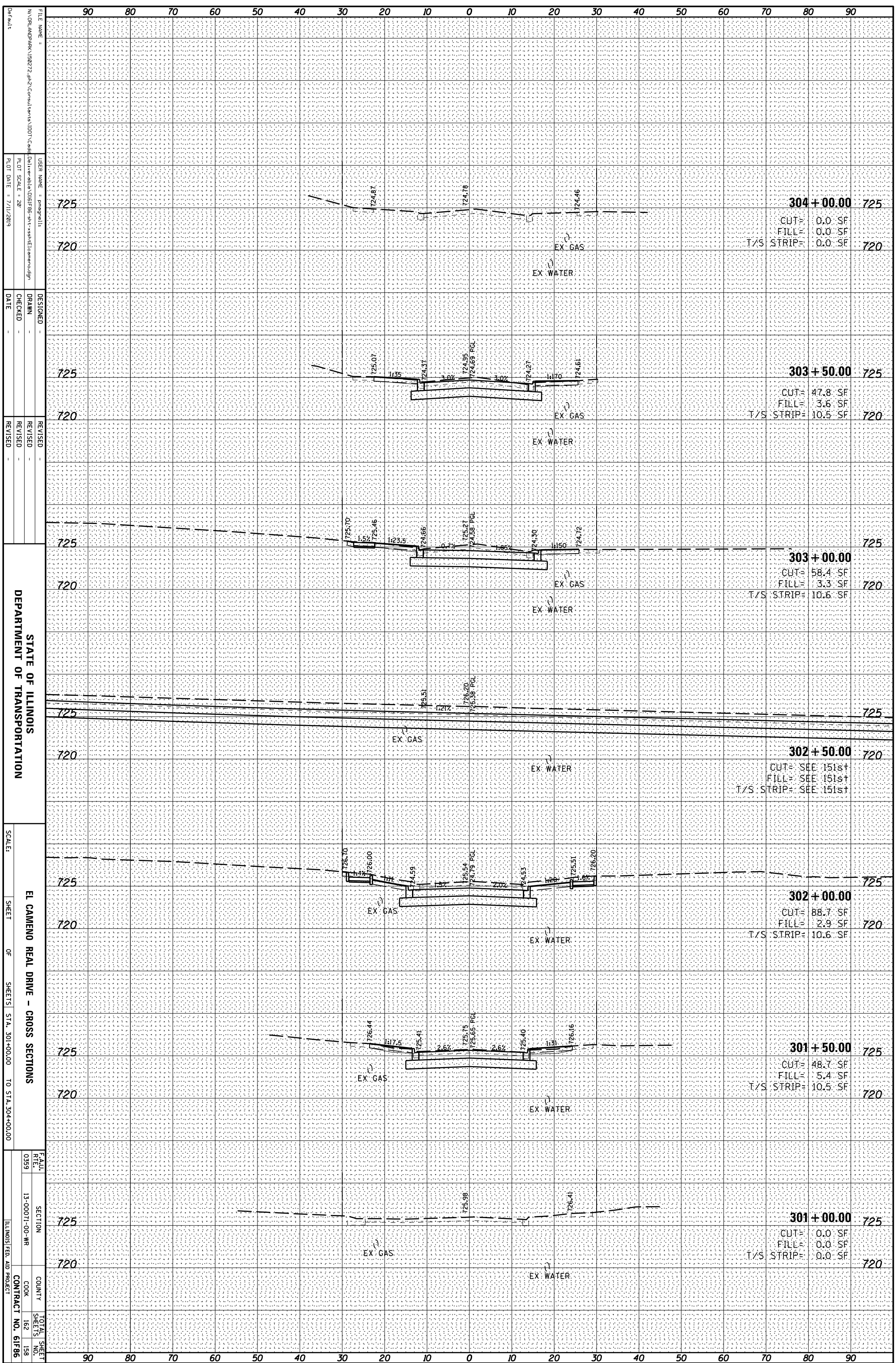
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCALE: 1" = 20'  
 SHEET 151st STREET SW & SE CORNERS - CROSS SECTIONS  
 OF 151st STREET SW & SE CORNERS - CROSS SECTIONS  
 SHEETS STA. 206+75.00 TO STA. 207+50.00

SECTION 13-00071-00-WR  
 COUNTY COOK  
 CONTRACT NO. 61F86  
 TOTAL SHEET NO. 157

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

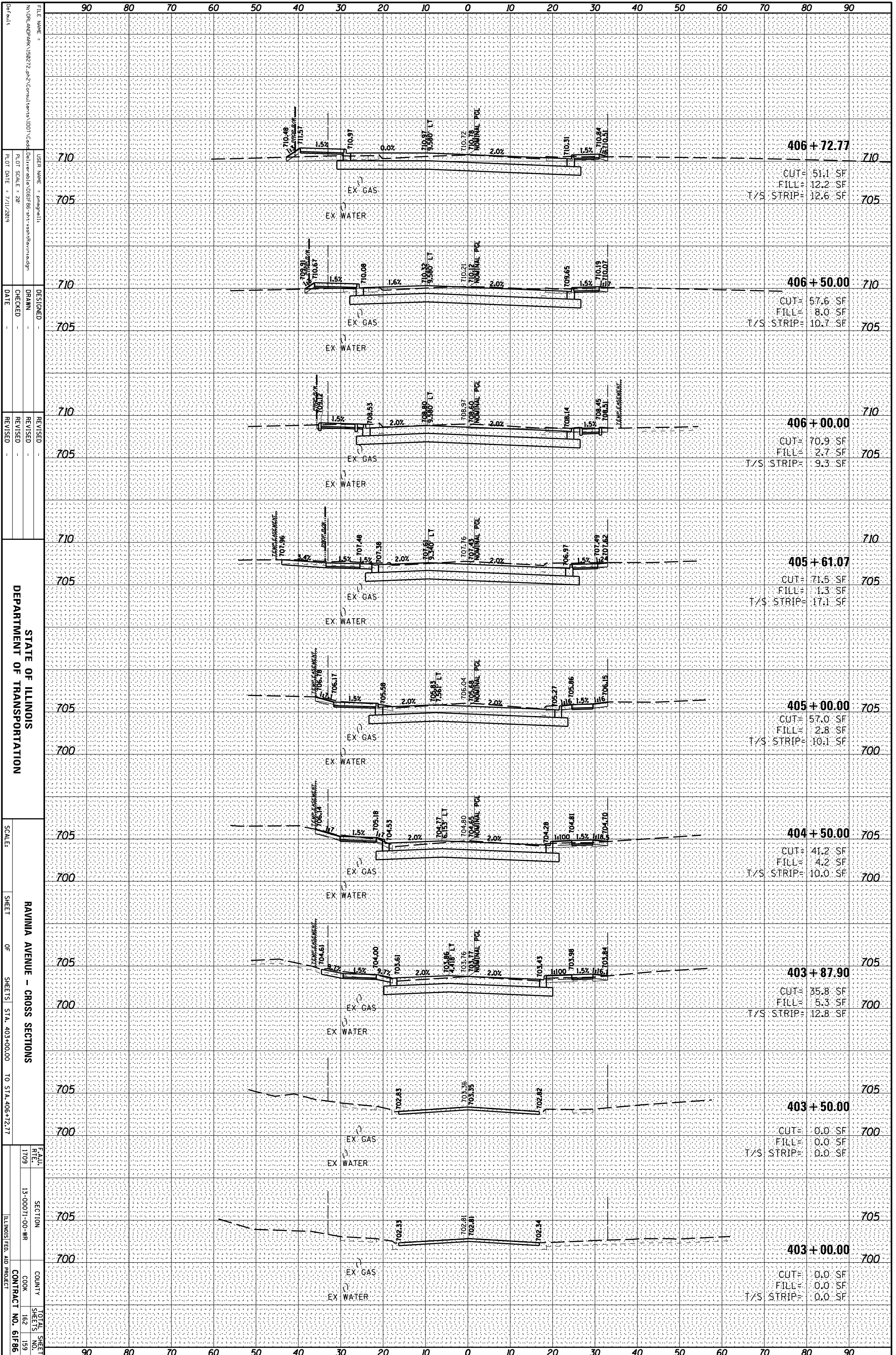
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NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



FILE NAME:   
 USER NAME:   
 DESIGNER:   
 DRAWN:   
 CHECKED:   
 DATE:   
 REVISIONS:   
 REVISION:   
 DATE:   
 SCALE:   
 SHEET OF SHEETS: STA. 301+00.00 TO STA. 304+00.00   
 DEPARTMENT OF TRANSPORTATION   
 EL CAMENO REAL DRIVE - CROSS SECTIONS   
 COUNTY: COOK   
 CONTRACT NO. 61F86   
 TOTAL SHEET NO. 158   
 SECTION 13-00071-00-WR   
 ILLINOIS FED. AID PROJECT

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
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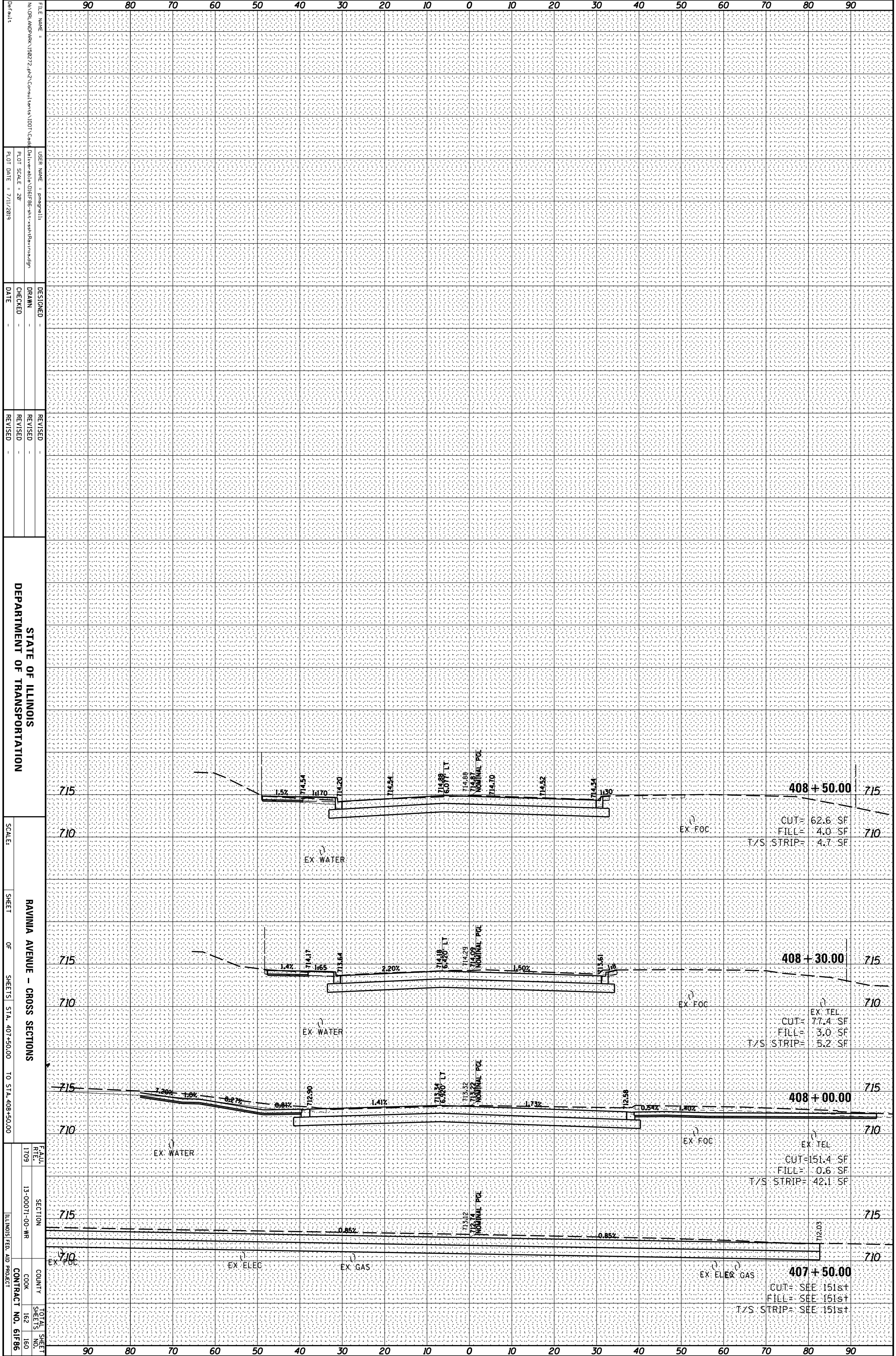


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 DRAWN =  
 CHECKED =  
 DATE =  
 REVISION =  
 REVISED =  
 REVISION =  
 REVISED =  
 SCALE: 1" = 20'  
 SHEET OF SHEETS STA. 403+00.00 TO STA. 406+72.77

STATION	CUT (SF)	FILL (SF)	T/S STRIP (SF)
406 + 72.77	51.1	12.2	12.6
406 + 50.00	57.6	8.0	10.7
406 + 00.00	70.9	2.7	9.3
405 + 61.07	71.5	1.3	17.1
405 + 00.00	57.0	2.8	10.1
404 + 50.00	41.2	4.2	10.0
403 + 87.90	35.8	5.3	12.8
403 + 50.00	0.0	0.0	0.0
403 + 00.00	0.0	0.0	0.0

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



FILE NAME =  
 USER NAME = pmegalli  
 DESIGNER =  
 DRAWN =  
 CHECKED =  
 DATE =  
 REVISIONS =

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

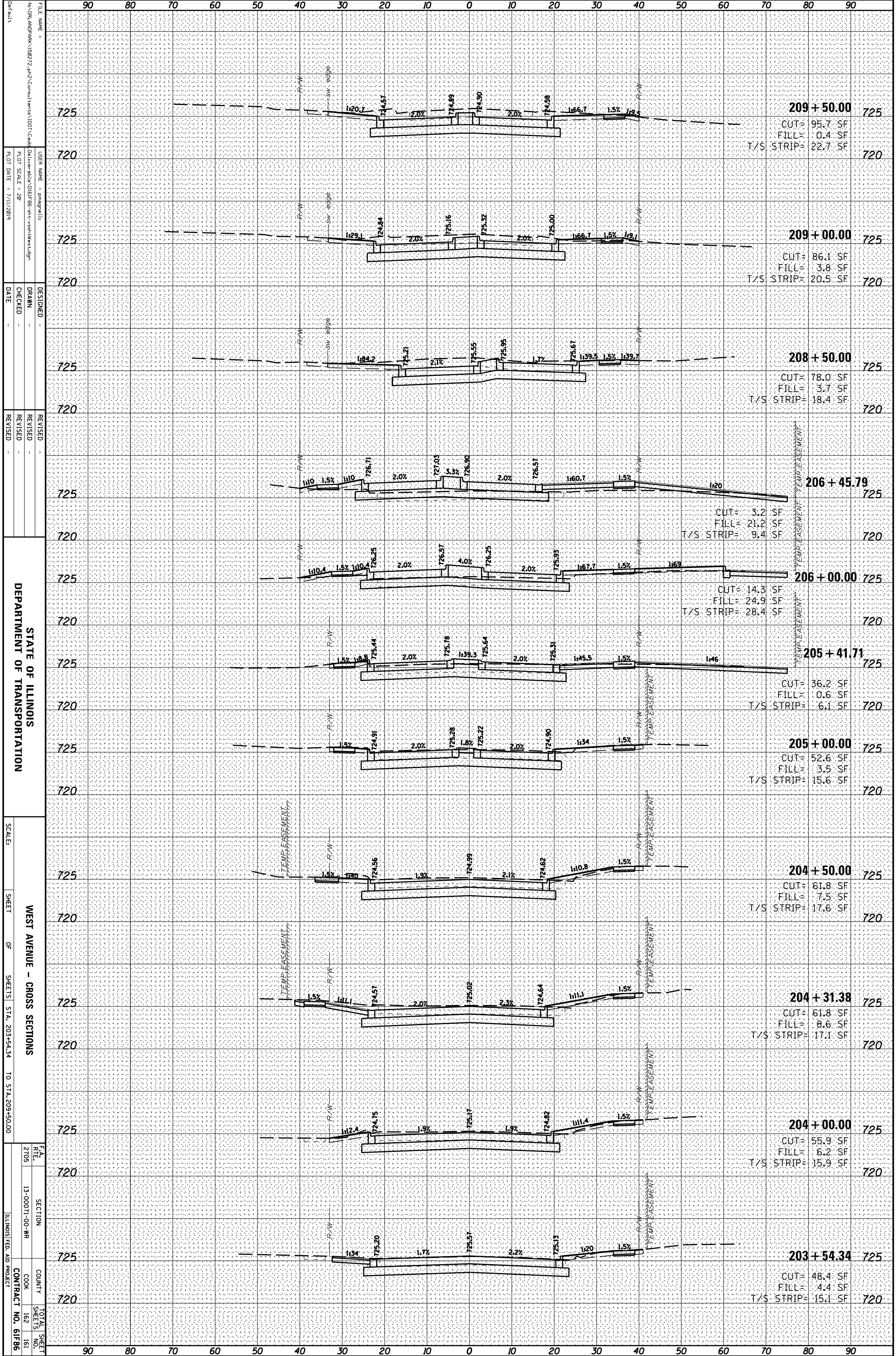
RAVINIA AVENUE - CROSS SECTIONS  
 SHEET OF SHEETS STA. 407+50.00 TO STA. 408+50.00

SECTION 13-00071-00-WR  
 COUNTY COOK  
 CONTRACT NO. 61F86  
 TOTAL SHEET SHEETS NO. 162 OF 160



ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



FILE NAME: N:\DR\JMD\ARK\150272.dwg; Consultant: I\DOT; Cadd: Daliver; abla; D:\B\F86-ark-xsh\kshasdn

USER NAME: pmg@atli

DESIGNED: DRAWN: CHECKED: DATE:

REVISOR: REVISION: DATE:

SCALE: 1" = 20'

PLLOT DATE: 7/11/2019

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCALE: SHEET OF SHEETS STA. 203+54.34 TO STA. 209+50.00

WEST AVENUE - CROSS SECTIONS

SECTION 13-00071-00-WR

COUNTY COOK

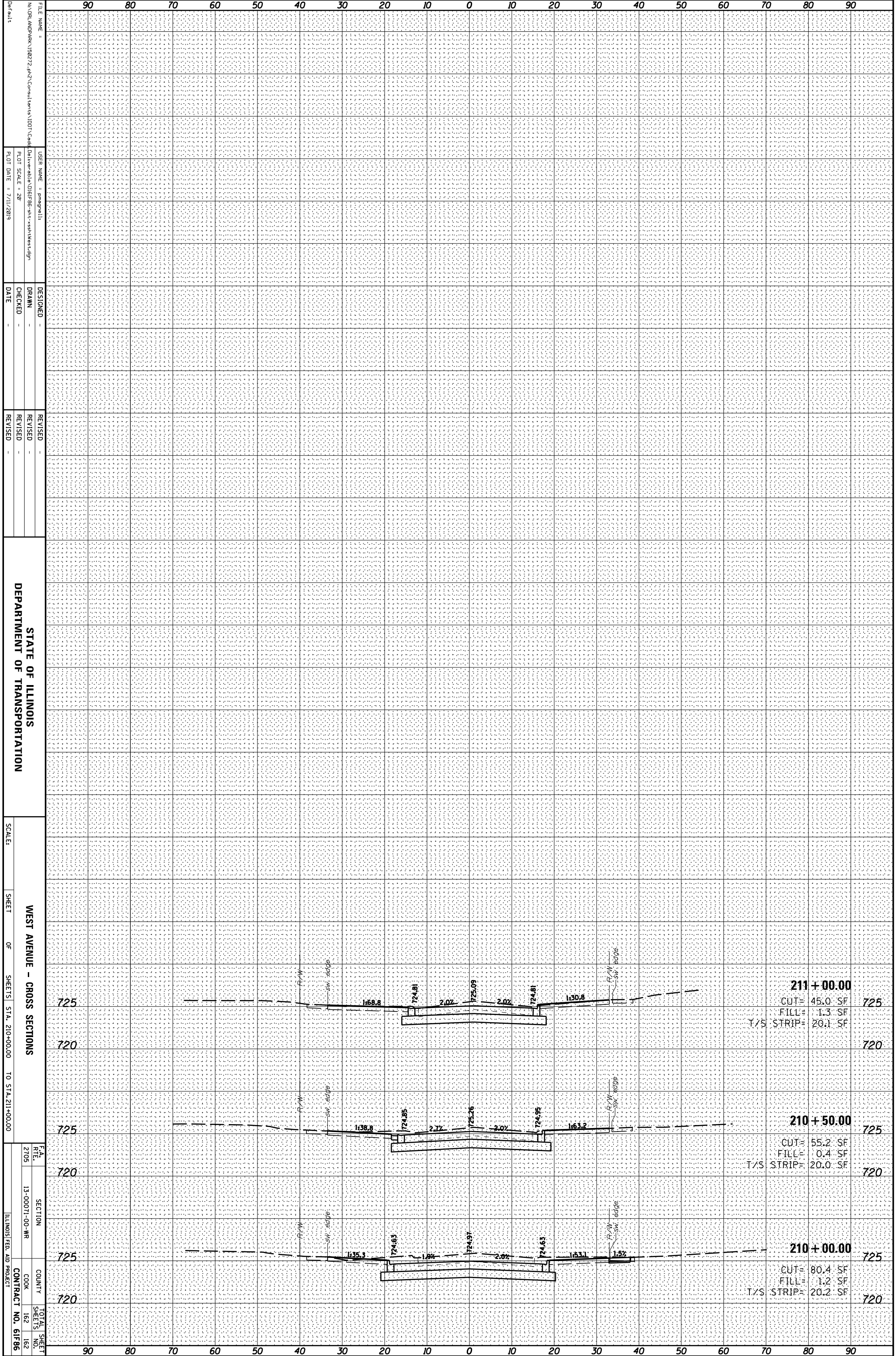
CONTRACT NO. 61F86

TOTAL SHEET NO. 161

ILLINOIS FED. AID PROJECT

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



FILE NAME =  
 USER NAME = pmg@ra11  
 DESIGNER =  
 DRAWN =  
 CHECKED =  
 DATE =  
 REVISION =  
 REVISED =  
 REVISED =  
 REVISED =

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCALE:  
 SHEET OF SHEETS  
 WEST AVENUE - CROSS SECTIONS  
 STA. 210+00.00 TO STA. 211+00.00

SECTION  
 COUNTY  
 CONTRACT NO. 61F86  
 TOTAL SHEET SHEETS NO. 162 162