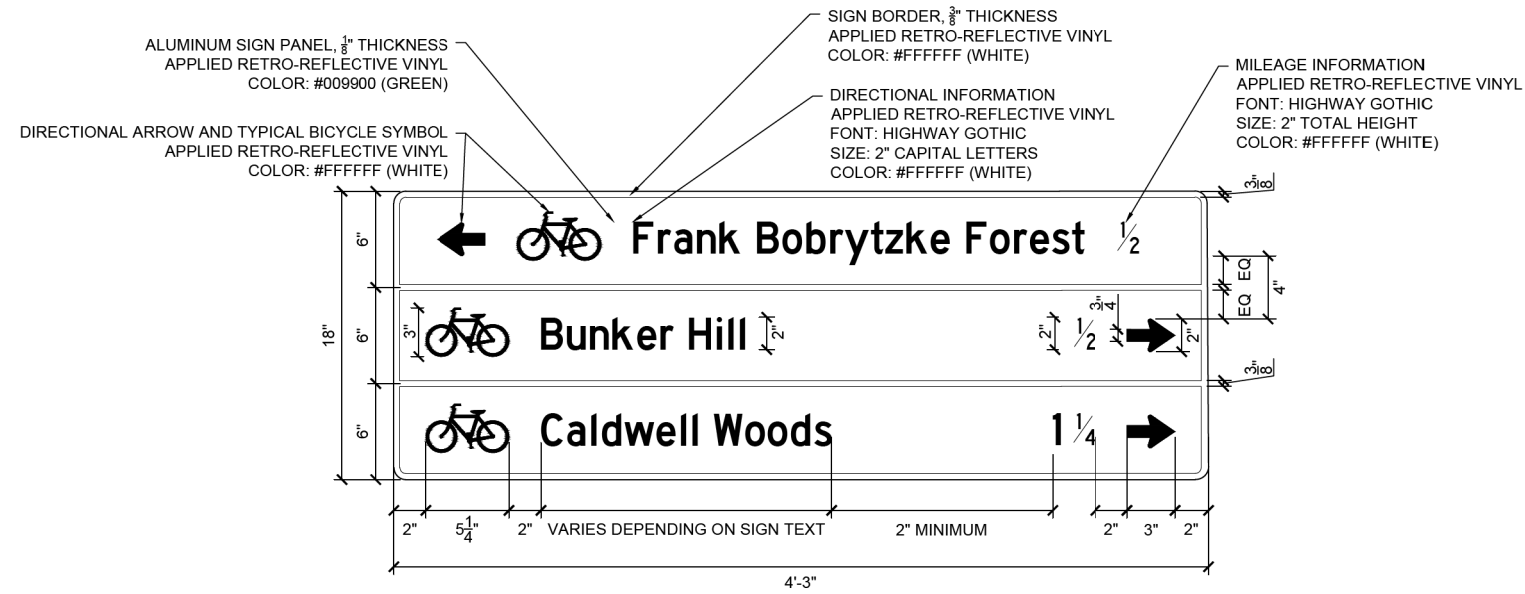


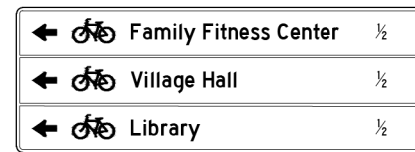
PLAN	SURVEYED	DATE
	PLOTTED	
	NOTED	
	CHECKED	
	APPROVED	
	FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



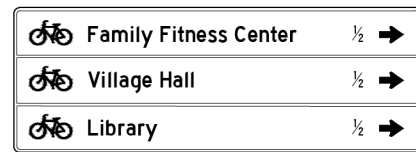
TYPICAL BICYCLE DIRECTIONAL SIGN

2" = 1'-0"



BW-1 LAYOUT

1" = 1'-0"



BW-2 LAYOUT

1" = 1'-0"



BW-3 LAYOUT

1" = 1'-0"



BW-4 LAYOUT

1" = 1'-0"



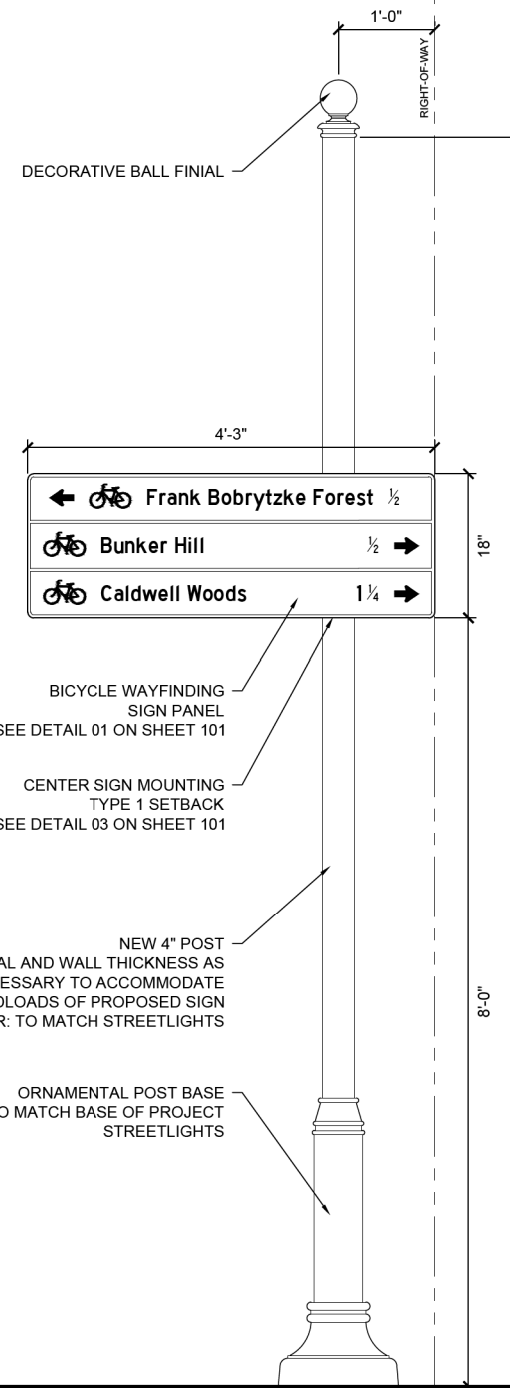
BW-5 LAYOUT

1" = 1'-0"



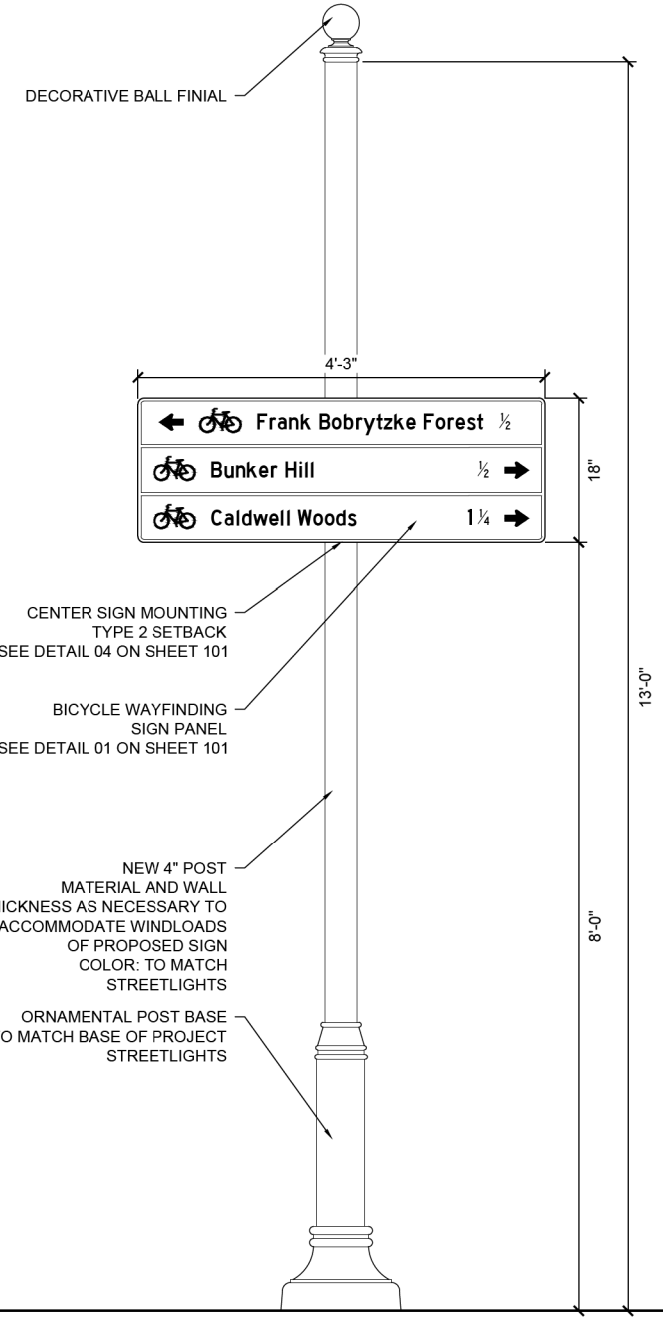
BW-6 LAYOUT

1" = 1'-0"



BICYCLE WAYFINDING ASSEMBLY -
TYPE 1 SETBACK

1" = 1'-0"



BICYCLE WAYFINDING ASSEMBLY -
TYPE 2 SETBACK

1" = 1'-0"

FILE NAME =	USER NAME = rhowellindgren	DESIGNED -	REVISED -
N:\NILES\180016\Civ1\1\SP_180016_02.SHT		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

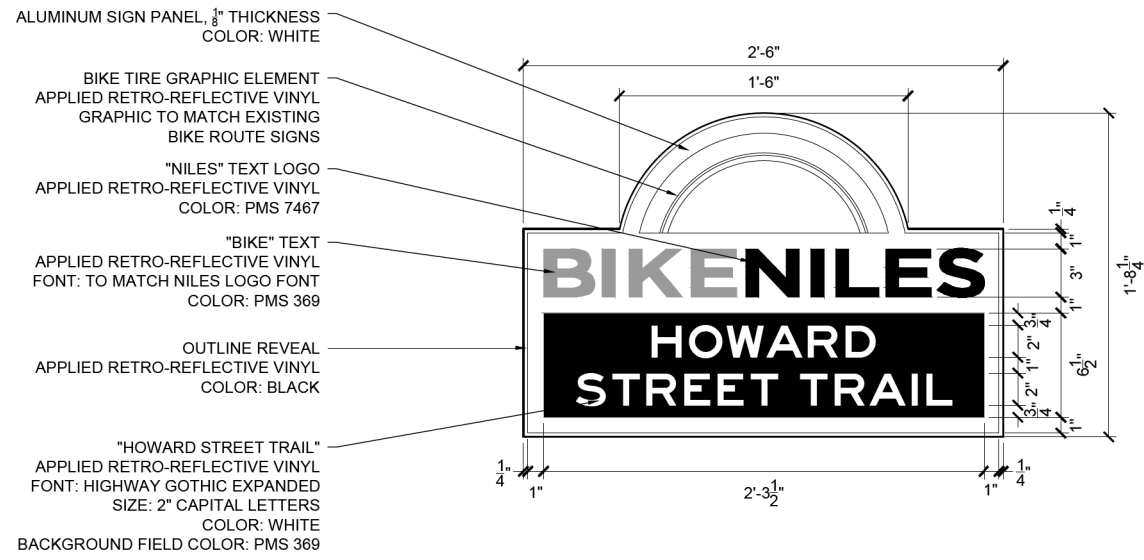
HOWARD STREET IMPROVEMENTS
WAYFINDING SIGN DETAILS

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	105
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

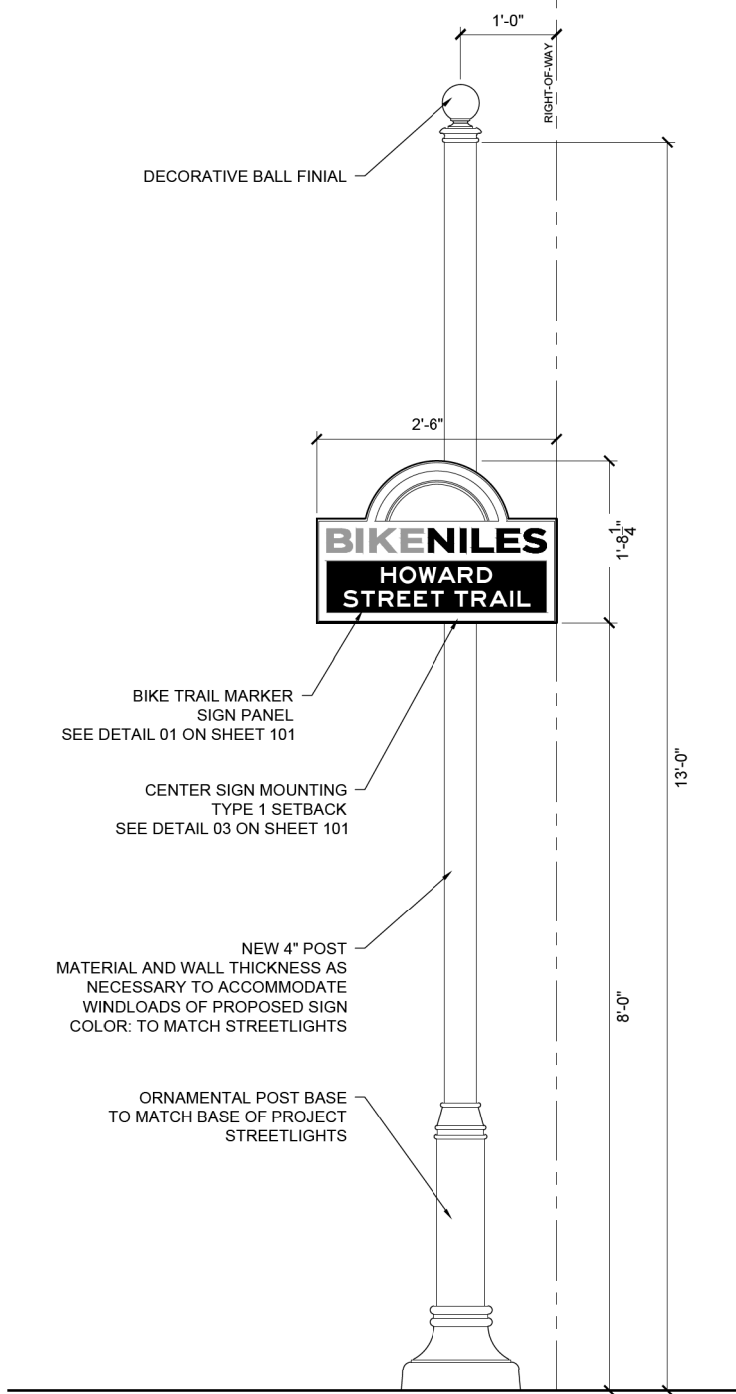
PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	ALIGNMENT CHECKED	
	STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.	FILE NAME	

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



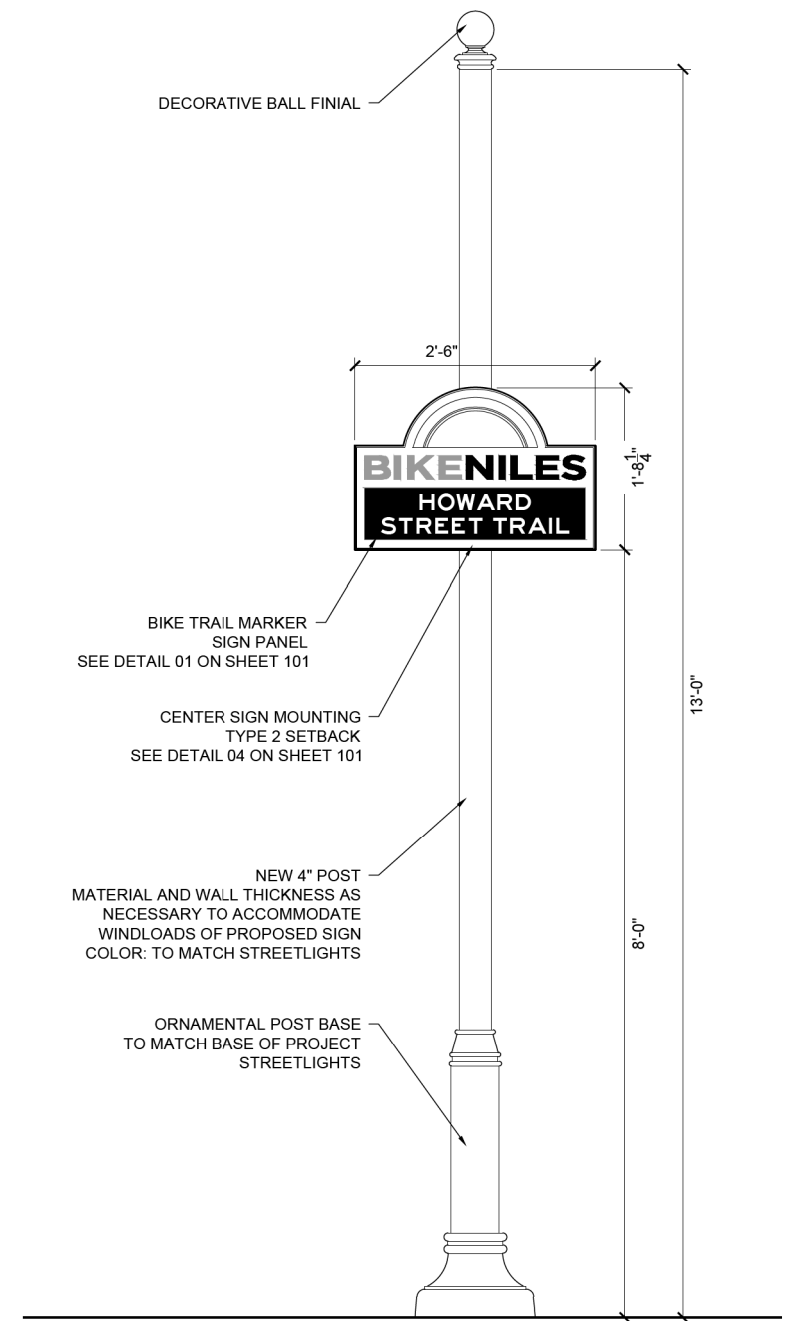
BTM-1 - TYPICAL BIKE TRAIL MARKER SIGN

2" = 1'-0"



BIKE TRAIL MARKER ASSEMBLY - TYPE 1 SETBACK

1" = 1'-0"



BIKE TRAIL MARKER ASSEMBLY - TYPE 2 SETBACK

1" = 1'-0"

FILE NAME =	USER NAME = rhowellindgren	DESIGNED -	REVISED -
N:\NILES\180016\Civ1\1\SP_180016_04.SHT		DRAWN -	REVISED -
Default	PLOT DATE = 11/21/2019	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOWARD STREET IMPROVEMENTS			
WAYFINDING SIGN DETAILS			
SCALE: 1" = 20'	SHEET	OF SHEETS	STA. TO STA.

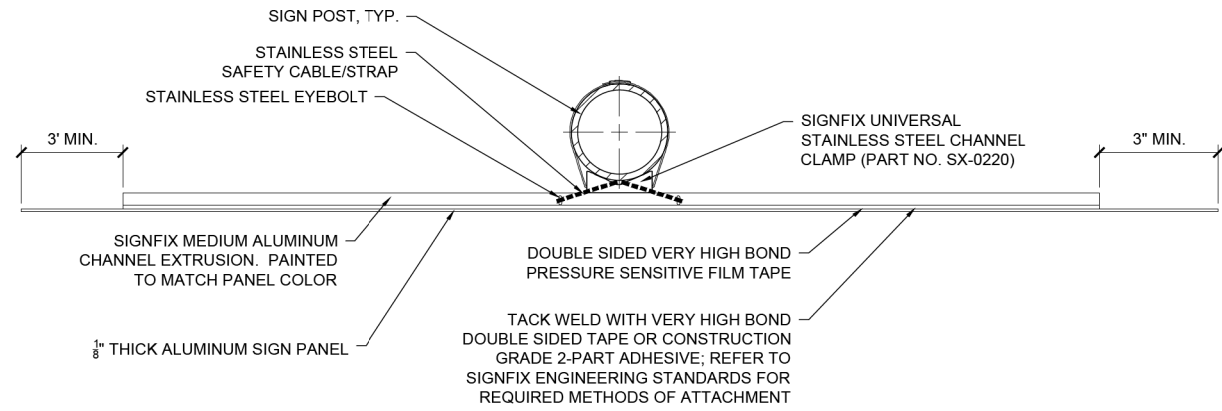
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	107
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

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

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

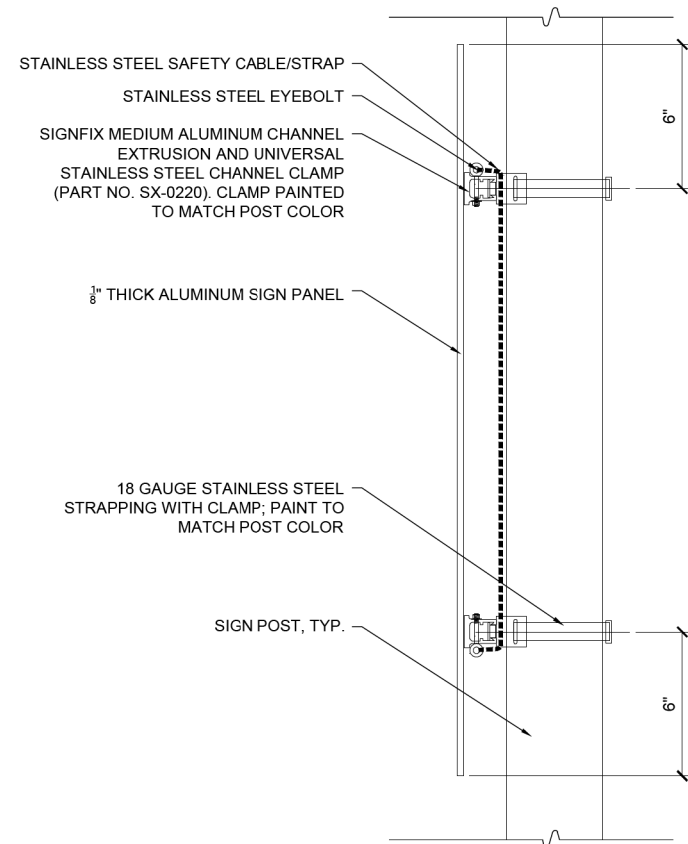
NOTES:

1. ALL SIGN PANELS TO BE VANDAL RESISTANT
2. NO HARDWARE SHALL BE VISIBLE FROM THE FRONT OF SIGN
3. SIGN CONTRACTOR SHALL CREATE AND PROVIDE SAMPLES AND/OR MOCK-UPS OF ALL MATERIALS FOR APPROVAL PRIOR TO FABRICATION
4. FINAL ARTWORK AND SHOP DRAWINGS SHALL BE SUBMITTED FOR VILLAGE AND LANDSCAPE ARCHITECT REVIEW AND APPROVAL PRIOR TO FABRICATION
5. SIGN CONTRACTOR SHALL BE REQUIRED TO DETERMINE PROPER POLE SIZE AND FOUNDATION AND SUBMIT STAMPED STRUCTURAL ENGINEERING DRAWINGS
6. SIGN CONTRACTOR SHALL BE REQUIRED TO DETERMINE PROPER SUPPORT EXTRUSION AND UNIVERSAL CHANNEL CLAMP. SIGN CONTRACTOR SHALL DETERMINE THE PROPER QUANTITY AND SPACING OF SUPPORTS REQUIRED FOR EACH PROPOSED SIGN SIZE.
7. SIGN CONTRACTOR SHALL BE RESPONSIBLE FOR USING PROPER AND RECOMMENDED MANUFACTURING METHODS FOR SECURING ALL SIGN ELEMENTS FROM EXISTING ENVIRONMENTAL CONDITIONS



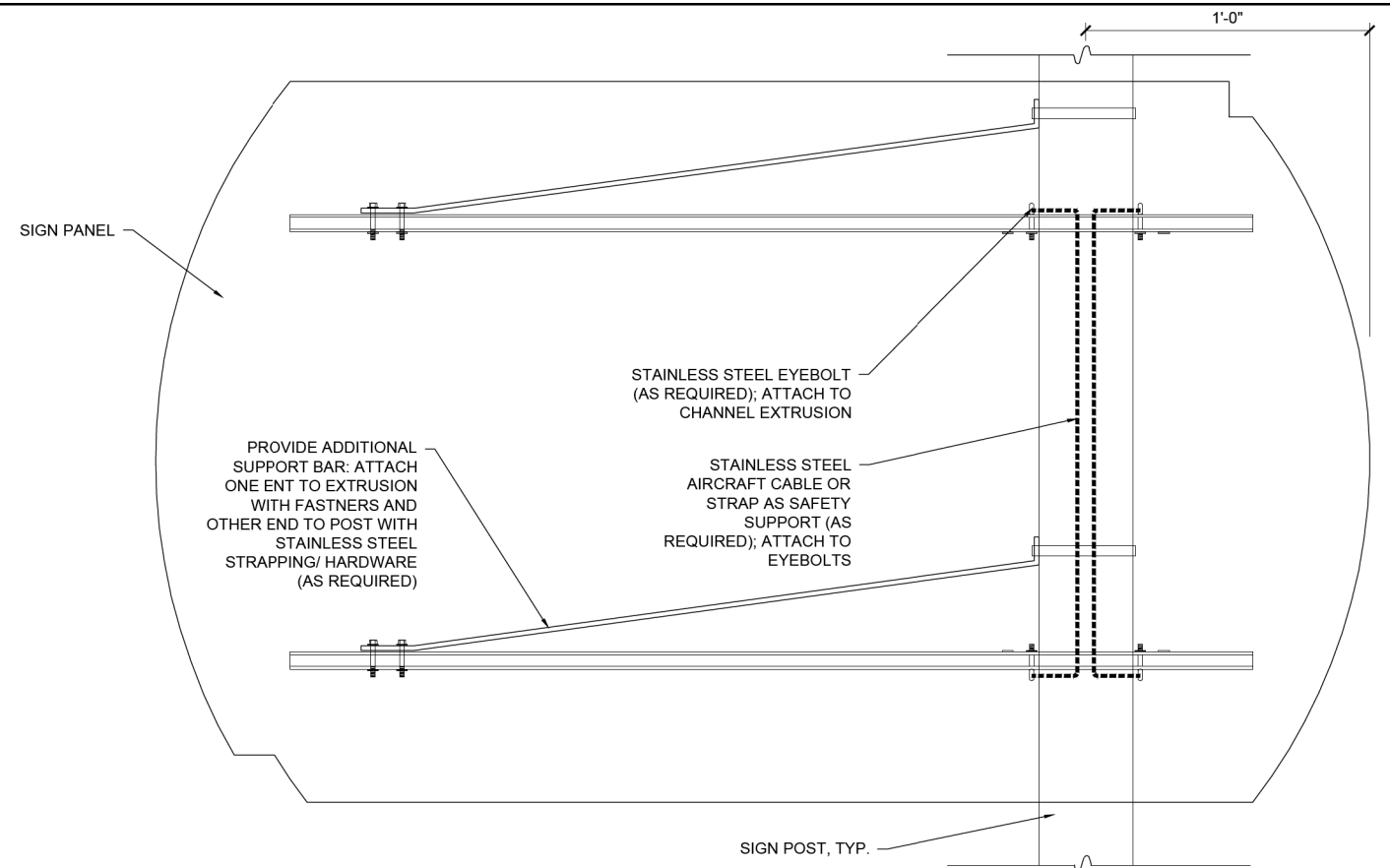
01 SIGN CENTER MOUNT - PLAN DETAIL

3" = 1'-0"



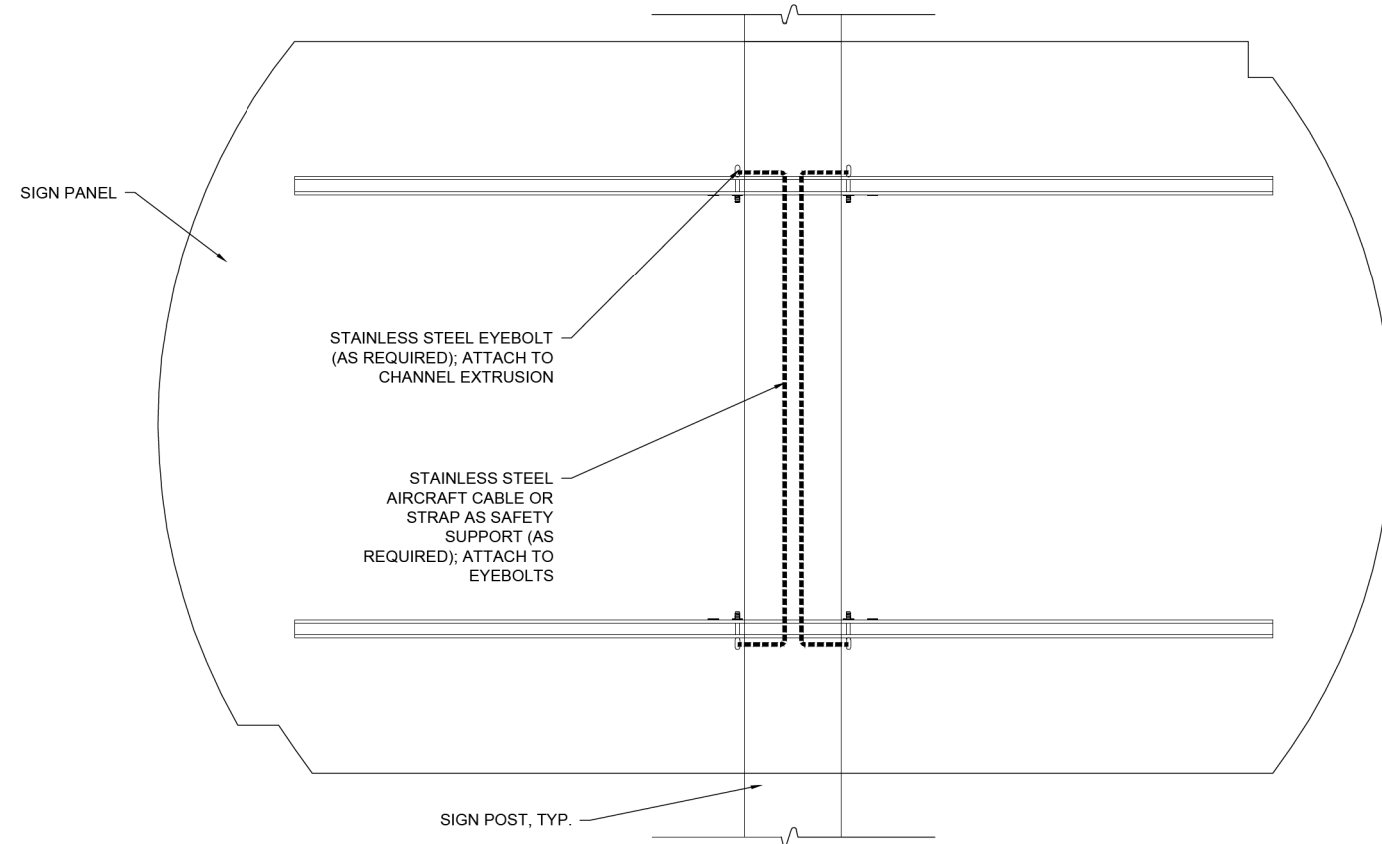
02 SIGN CENTER MOUNT - SIDE DETAIL

3" = 1'-0"



03 SIGN CENTER MOUNT - TYPE 1 SETBACK - BACK DETAIL

3" = 1'-0"



04 SIGN CENTER MOUNT - TYPE 2 SETBACK - BACK DETAIL

3" = 1'-0"

FILE NAME =	USER NAME = rhowellindgren	DESIGNED -	REVISED -
N:\NILES\180016\Civ1\1\SP_180016_05.SHT		DRAWN -	REVISED -
Default		CHECKED -	REVISED -
		DATE -	REVISED -

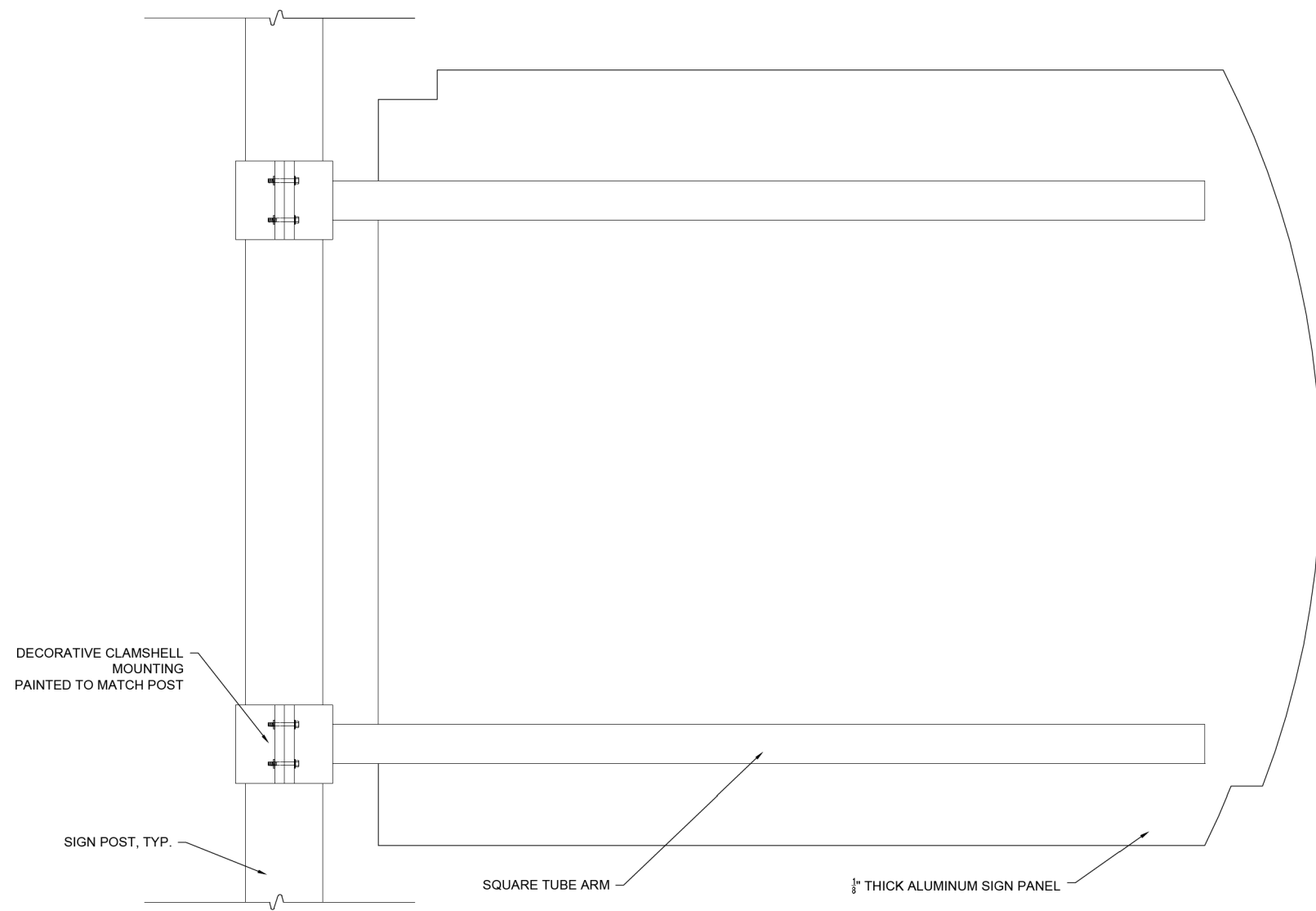
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOWARD STREET IMPROVEMENTS			
WAYFINDING SIGN MOUNTING DETAILS			
SCALE: 1" = 20'	SHEET	OF SHEETS	STA. TO STA.

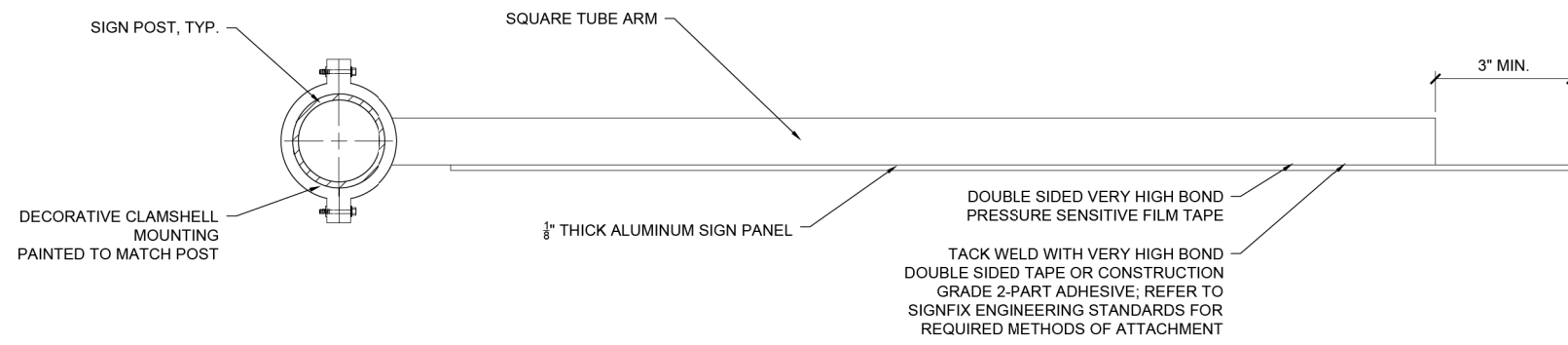
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	108
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		



01 SIGN CANTILEVER MOUNT - BACK DETAIL
3" = 1'-0"



02 SIGN CANTILEVER MOUNT - PLAN DETAIL
3" = 1'-0"

FILE NAME = N:\NILES\1800016\Civ1\1\LSP_1800016_06.SHT
Default

USER NAME = rhowellindgren	DESIGNED -	REVISED -
PLOT SCALE = 2'	DRAWN -	REVISED -
PLOT DATE = 11/21/2019	CHECKED -	REVISED -
	DATE -	REVISED -

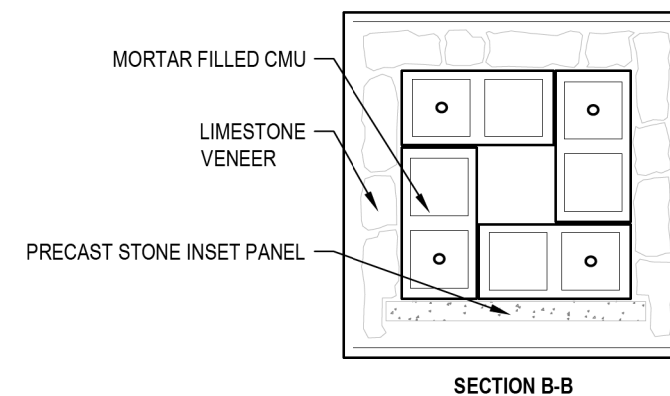
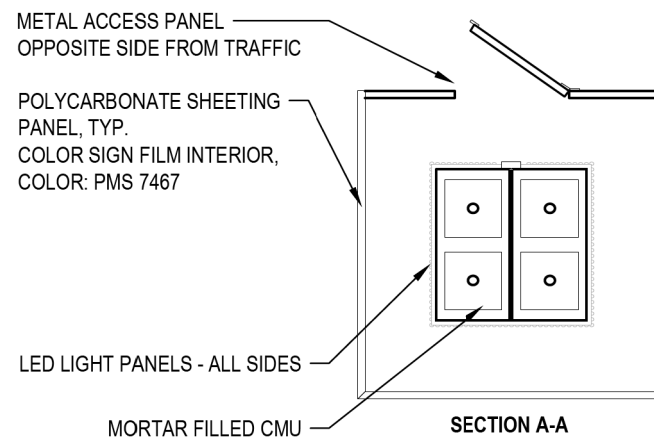
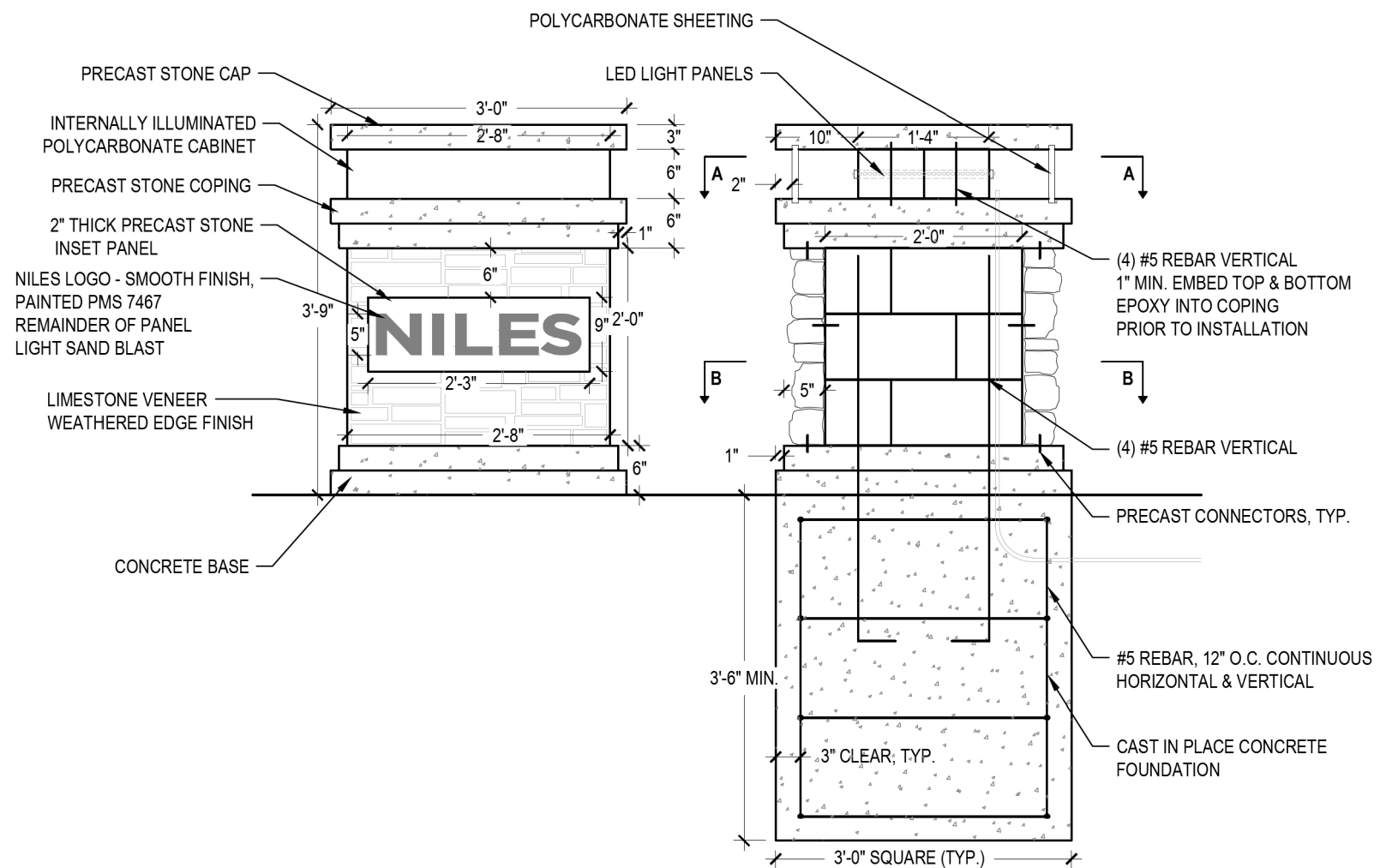
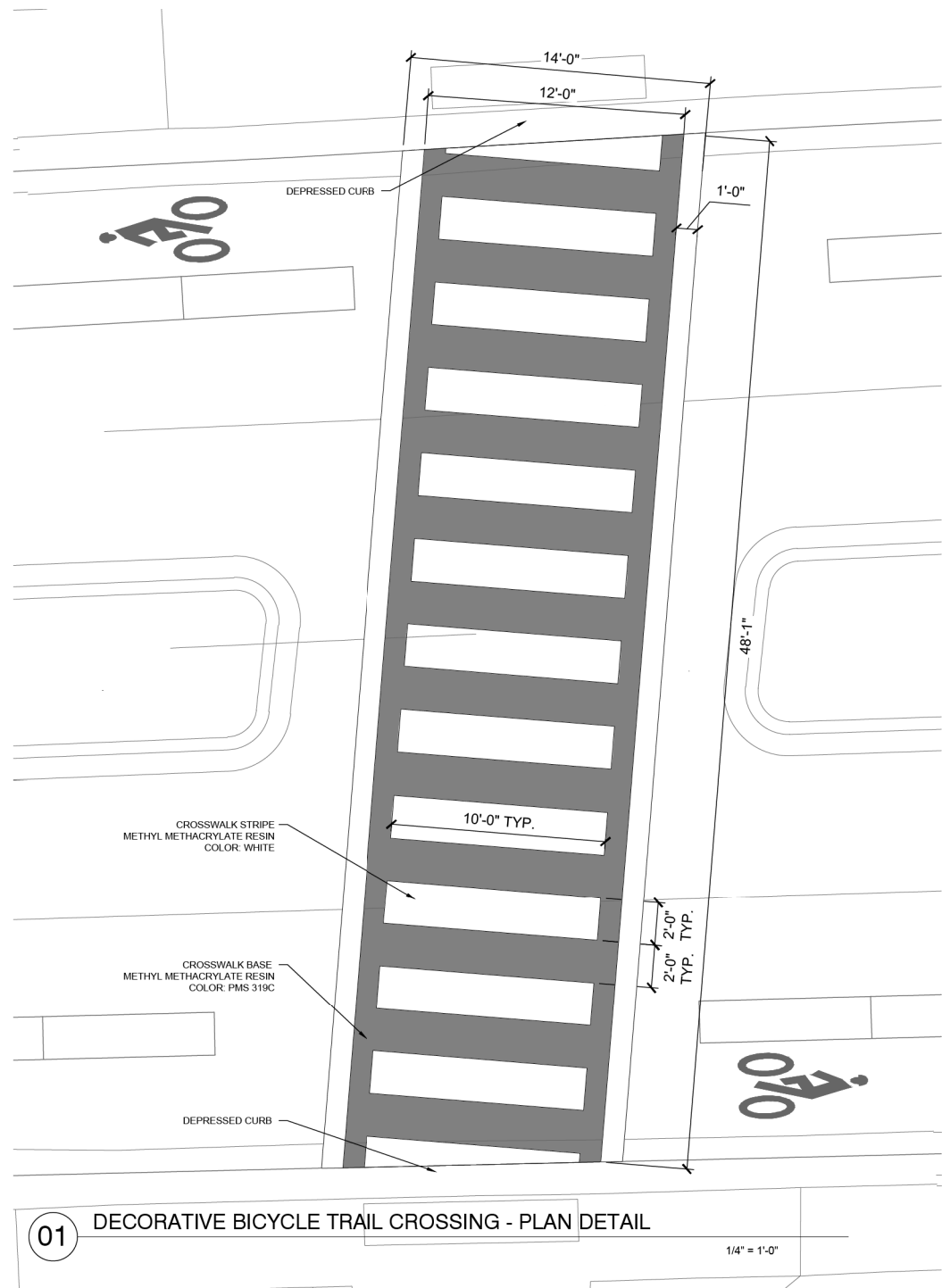
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

HOWARD STREET IMPROVEMENTS WAYFINDING SIGN MOUNTING DETAILS			
SCALE: 1" = 20'	SHEET	OF	SHEETS
STA.	TO STA.		

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	109
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	ALIGNMENT CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	ALIGNMENT CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	FILE NAME	
	NO.	



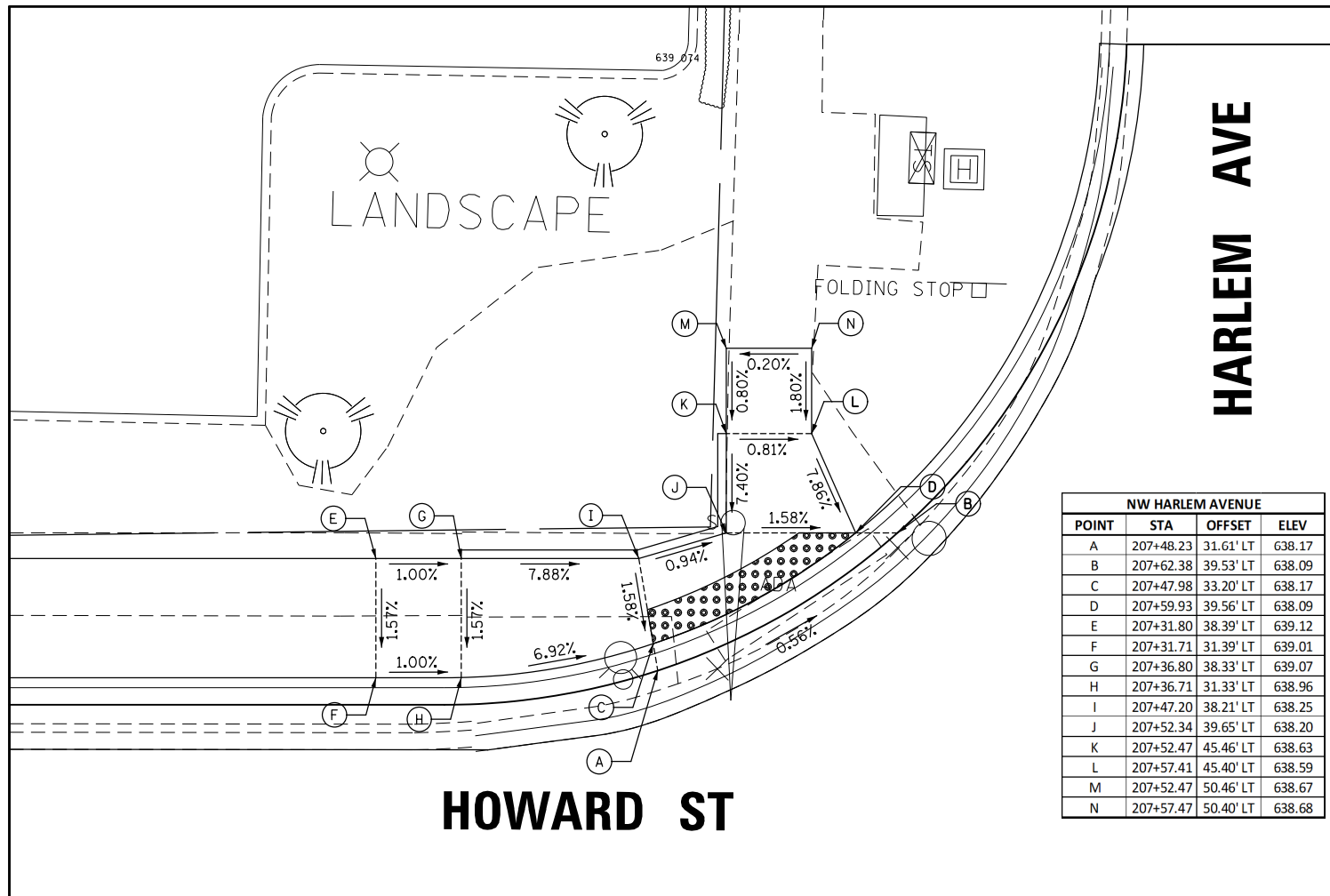
02 BRIDGE ENHANCEMENT COLUMN

FILE NAME =	USER NAME = rhowellindgren	DESIGNED -	REVISED -
N:\NILES\180016\Civ1\LS\SP_180016_07.SHT		DRAWN -	REVISED -
Default	PLOT DATE = 11/21/2019	CHECKED -	REVISED -
		DATE -	REVISED -

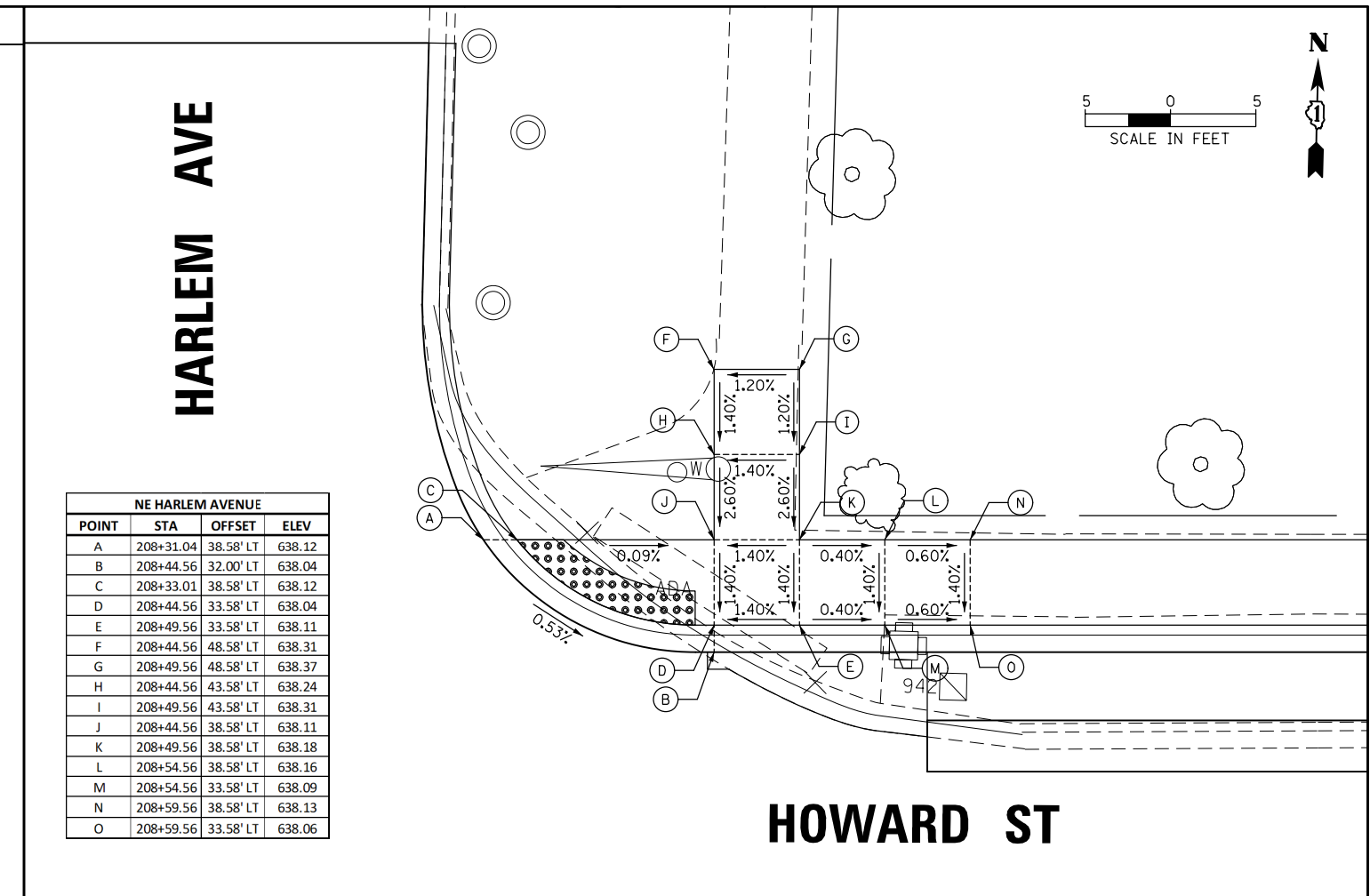
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOWARD STREET IMPROVEMENTS
GATEWAY MONUMENT SIGN & CROSSWALK DETAILS
SCALE: 1" = 20' SHEET OF SHEETS STA. TO STA.

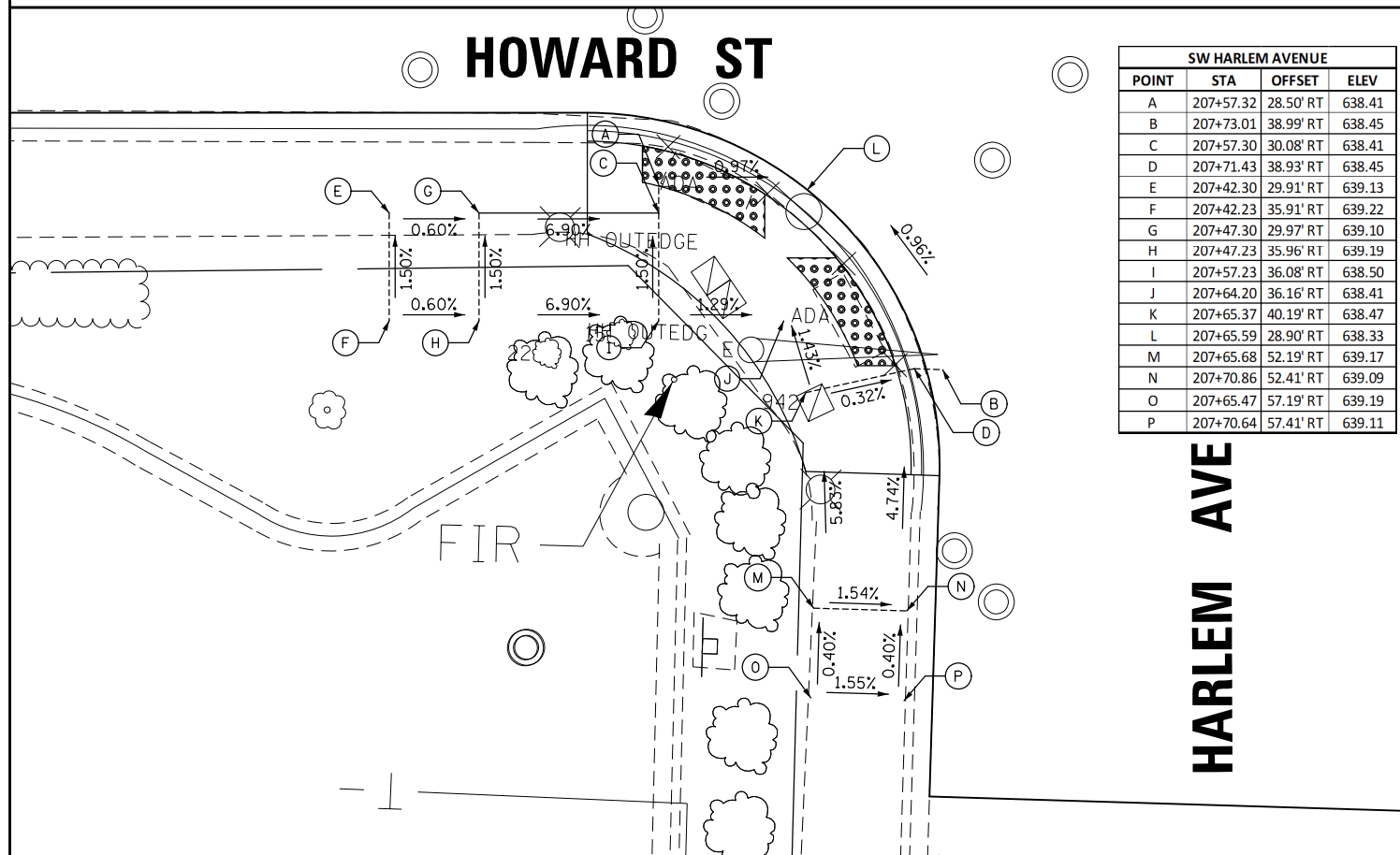
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	110
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				



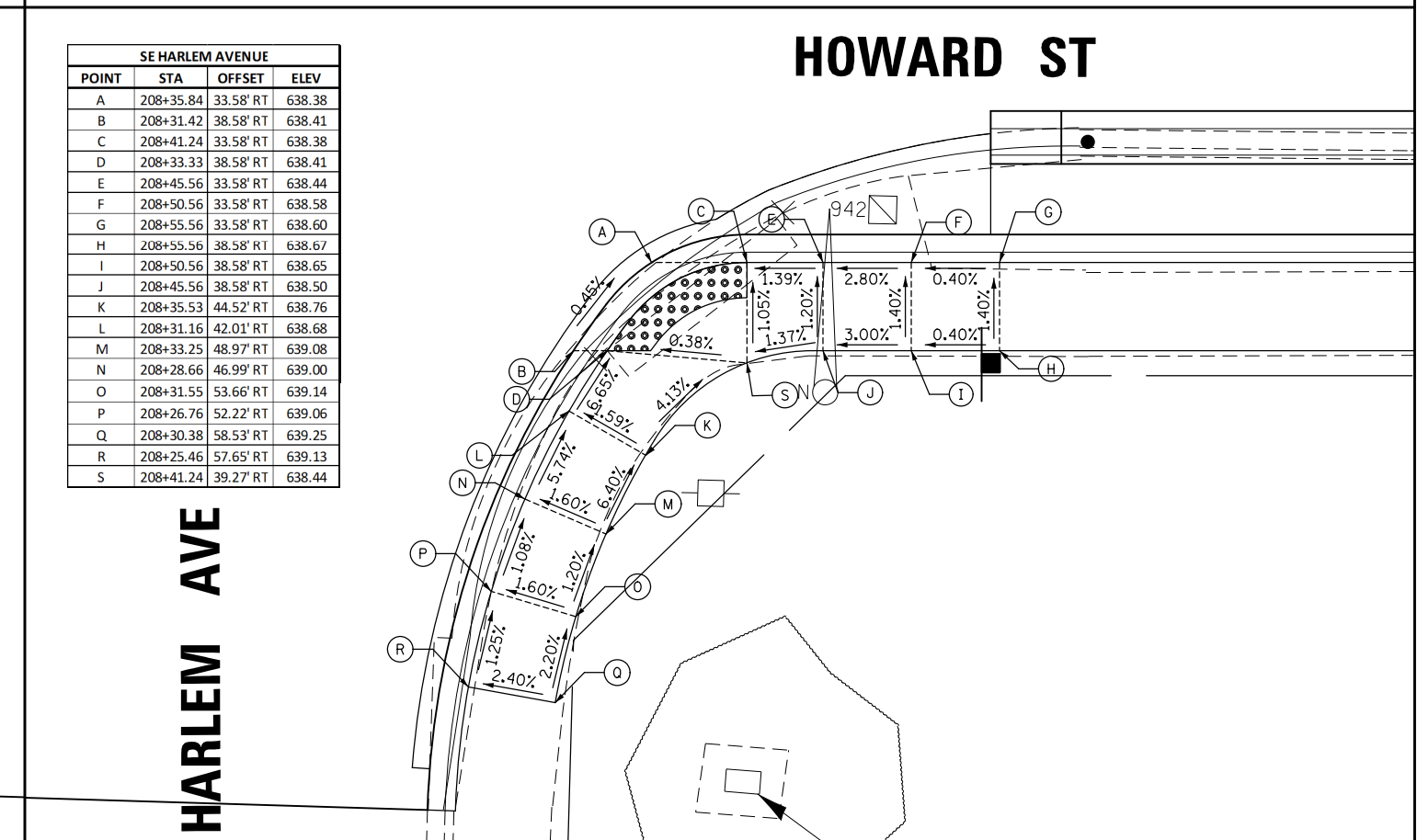
NW HARLEM AVENUE			
POINT	STA	OFFSET	ELEV
A	207+48.23	31.61' LT	638.17
B	207+62.38	39.53' LT	638.09
C	207+47.98	33.20' LT	638.17
D	207+59.93	39.56' LT	638.09
E	207+31.80	38.39' LT	639.12
F	207+31.71	31.39' LT	639.01
G	207+36.80	38.33' LT	639.07
H	207+36.71	31.33' LT	638.96
I	207+47.20	38.21' LT	638.25
J	207+52.34	39.65' LT	638.20
K	207+52.47	45.46' LT	638.63
L	207+57.41	45.40' LT	638.59
M	207+52.47	50.46' LT	638.67
N	207+57.47	50.40' LT	638.68



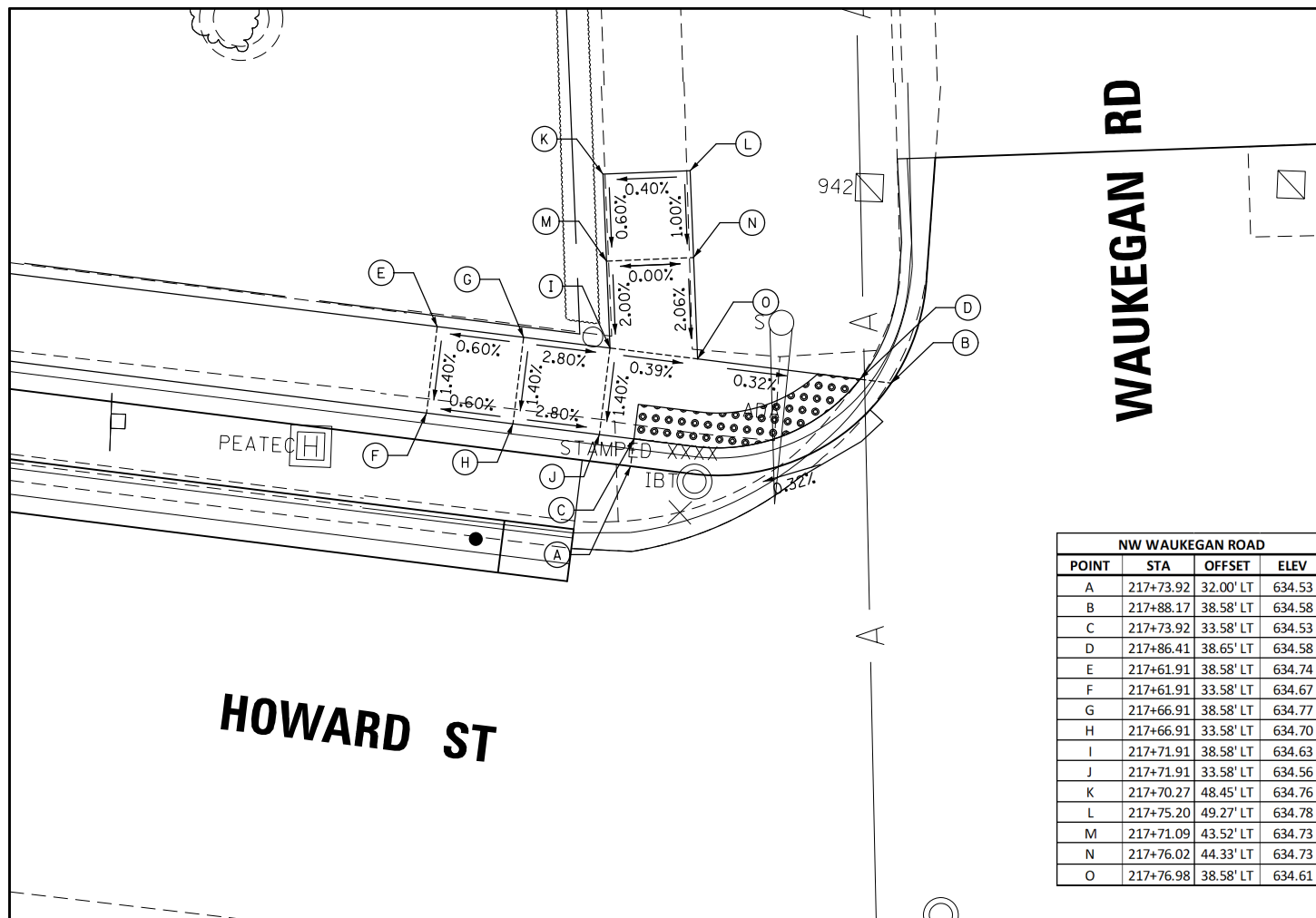
NE HARLEM AVENUE			
POINT	STA	OFFSET	ELEV
A	208+31.04	38.58' LT	638.12
B	208+44.56	32.00' LT	638.04
C	208+33.01	38.58' LT	638.12
D	208+44.56	33.58' LT	638.04
E	208+49.56	33.58' LT	638.11
F	208+44.56	48.58' LT	638.31
G	208+49.56	48.58' LT	638.37
H	208+44.56	43.58' LT	638.24
I	208+49.56	43.58' LT	638.31
J	208+44.56	38.58' LT	638.11
K	208+49.56	38.58' LT	638.18
L	208+54.56	38.58' LT	638.16
M	208+54.56	33.58' LT	638.09
N	208+59.56	38.58' LT	638.13
O	208+59.56	33.58' LT	638.06



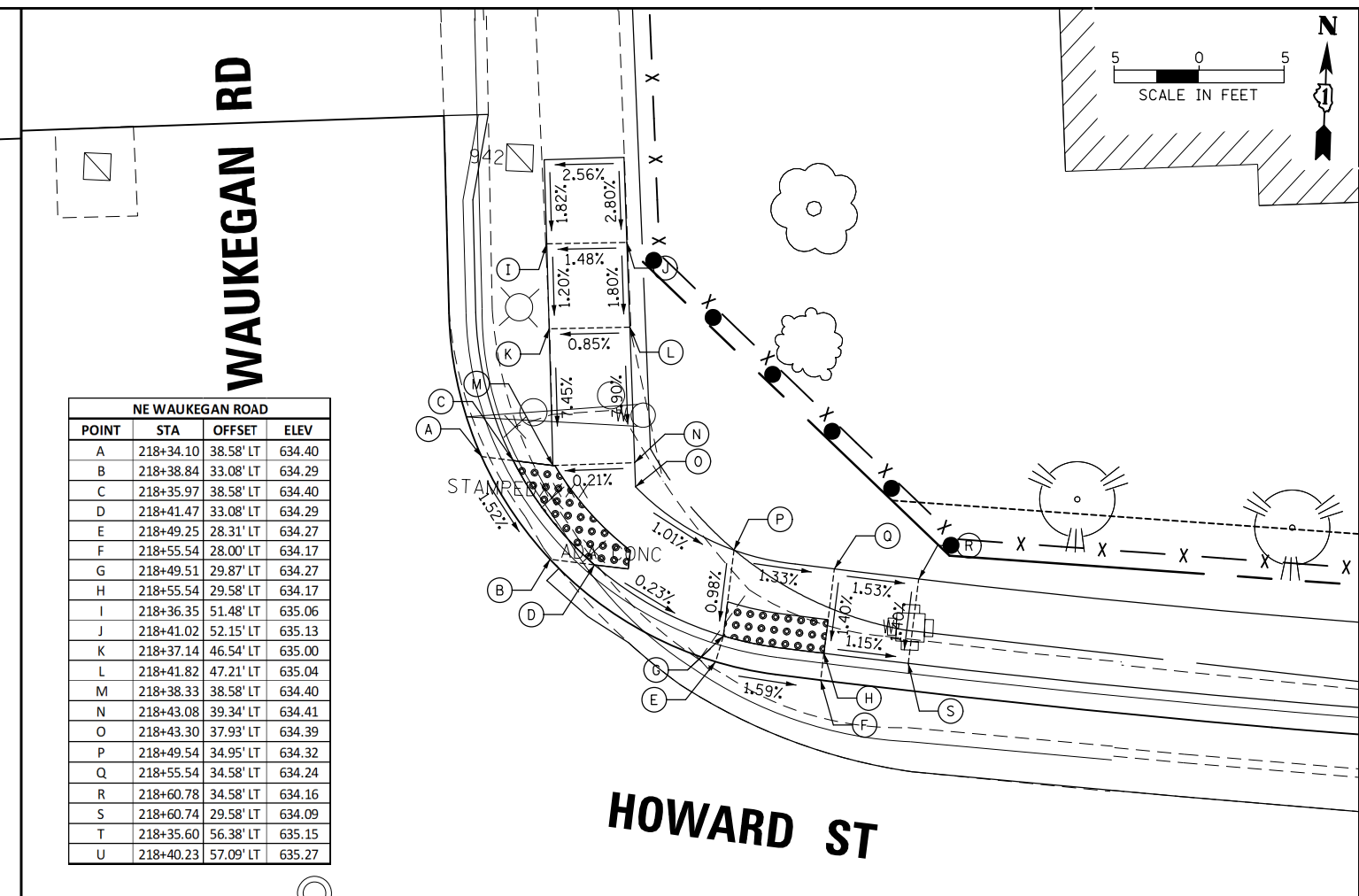
SW HARLEM AVENUE			
POINT	STA	OFFSET	ELEV
A	207+57.32	28.50' RT	638.41
B	207+73.01	38.99' RT	638.45
C	207+57.30	30.08' RT	638.41
D	207+71.43	38.93' RT	638.45
E	207+42.30	29.91' RT	639.13
F	207+42.23	35.91' RT	639.22
G	207+47.30	29.97' RT	639.10
H	207+47.23	35.96' RT	639.19
I	207+57.23	36.08' RT	638.50
J	207+64.20	36.16' RT	638.41
K	207+65.37	40.19' RT	638.47
L	207+65.59	28.90' RT	638.33
M	207+65.68	52.19' RT	639.17
N	207+70.86	52.41' RT	639.09
O	207+65.47	57.19' RT	639.19
P	207+70.64	57.41' RT	639.11



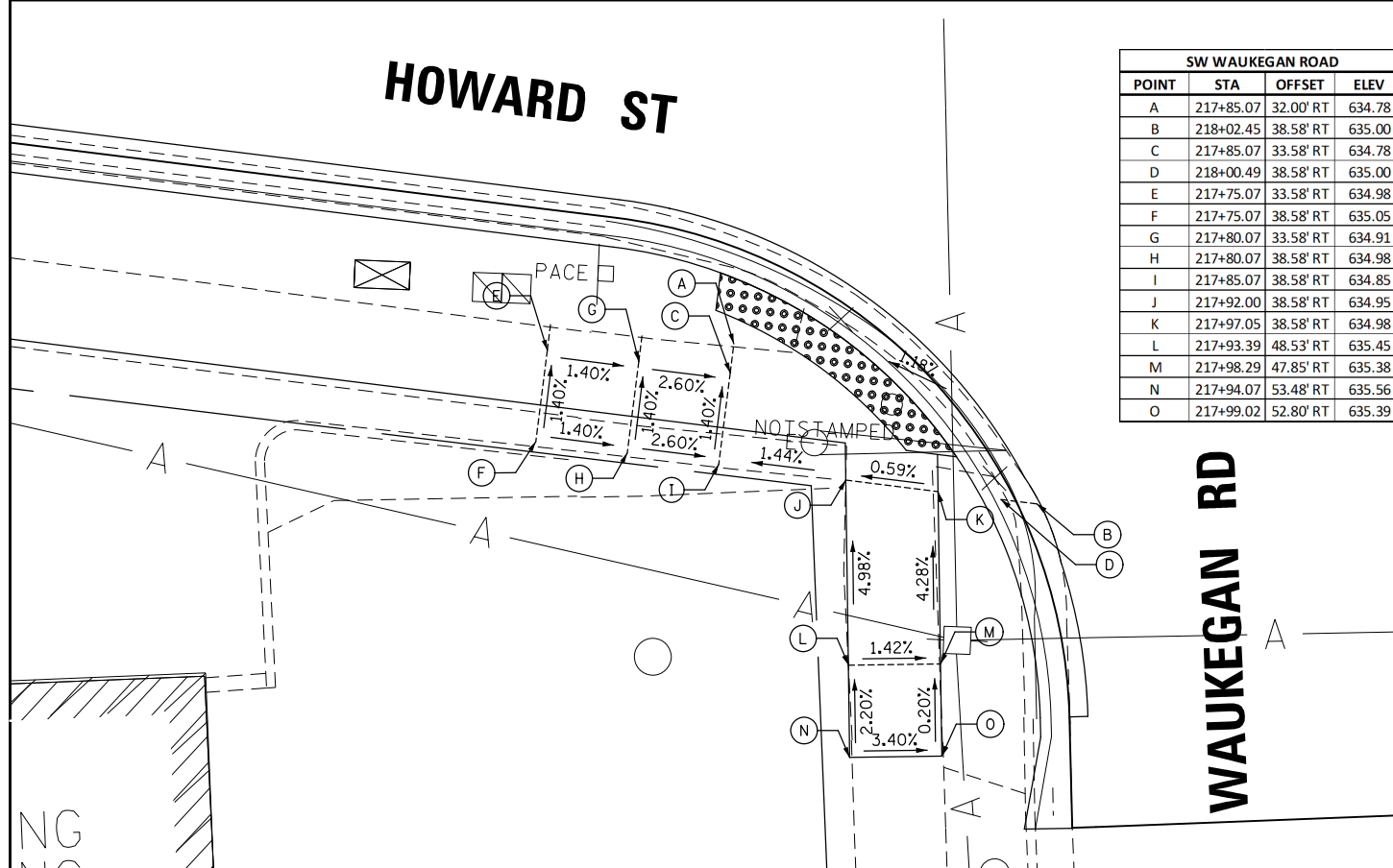
SE HARLEM AVENUE			
POINT	STA	OFFSET	ELEV
A	208+35.84	33.58' RT	638.38
B	208+31.42	38.58' RT	638.41
C	208+41.24	33.58' RT	638.38
D	208+33.33	38.58' RT	638.41
E	208+45.56	33.58' RT	638.44
F	208+50.56	33.58' RT	638.58
G	208+55.56	33.58' RT	638.60
H	208+55.56	38.58' RT	638.67
I	208+50.56	38.58' RT	638.65
J	208+45.56	38.58' RT	638.50
K	208+35.53	44.52' RT	638.76
L	208+31.16	42.01' RT	638.68
M	208+33.25	48.97' RT	639.08
N	208+28.66	46.99' RT	639.00
O	208+31.55	53.66' RT	639.14
P	208+26.76	52.22' RT	639.06
Q	208+30.38	58.53' RT	639.25
R	208+25.46	57.65' RT	639.13
S	208+41.24	39.27' RT	638.44



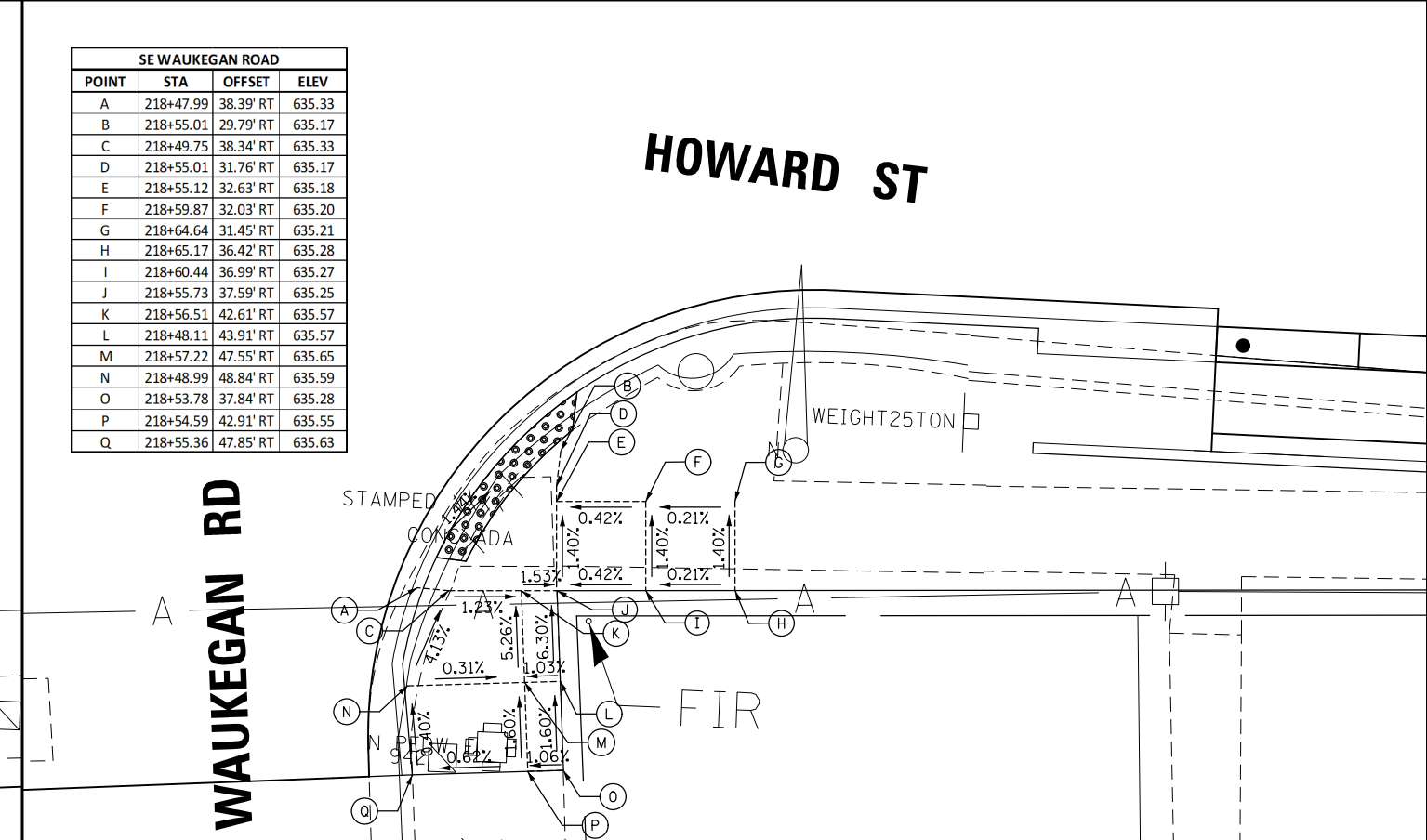
NW WAUKEGAN ROAD			
POINT	STA	OFFSET	ELEV
A	217+73.92	32.00' LT	634.53
B	217+88.17	38.58' LT	634.58
C	217+73.92	33.58' LT	634.53
D	217+86.41	38.65' LT	634.58
E	217+61.91	38.58' LT	634.74
F	217+61.91	33.58' LT	634.67
G	217+66.91	38.58' LT	634.77
H	217+66.91	33.58' LT	634.70
I	217+71.91	38.58' LT	634.63
J	217+71.91	33.58' LT	634.56
K	217+70.27	48.45' LT	634.76
L	217+75.20	49.27' LT	634.78
M	217+71.09	43.52' LT	634.73
N	217+76.02	44.33' LT	634.73
O	217+76.98	38.58' LT	634.61



NE WAUKEGAN ROAD			
POINT	STA	OFFSET	ELEV
A	218+34.10	38.58' LT	634.40
B	218+38.84	33.08' LT	634.29
C	218+35.97	38.58' LT	634.40
D	218+41.47	33.08' LT	634.29
E	218+49.25	28.31' LT	634.27
F	218+55.54	28.00' LT	634.17
G	218+49.51	29.87' LT	634.27
H	218+55.54	29.58' LT	634.17
I	218+36.35	51.48' LT	635.06
J	218+41.02	52.15' LT	635.13
K	218+37.14	46.54' LT	635.00
L	218+41.82	47.21' LT	635.04
M	218+38.33	38.58' LT	634.40
N	218+43.08	39.34' LT	634.41
O	218+43.30	37.93' LT	634.39
P	218+49.54	34.95' LT	634.32
Q	218+55.54	34.58' LT	634.24
R	218+60.78	34.58' LT	634.16
S	218+60.74	29.58' LT	634.09
T	218+35.60	56.38' LT	635.15
U	218+40.23	57.09' LT	635.27



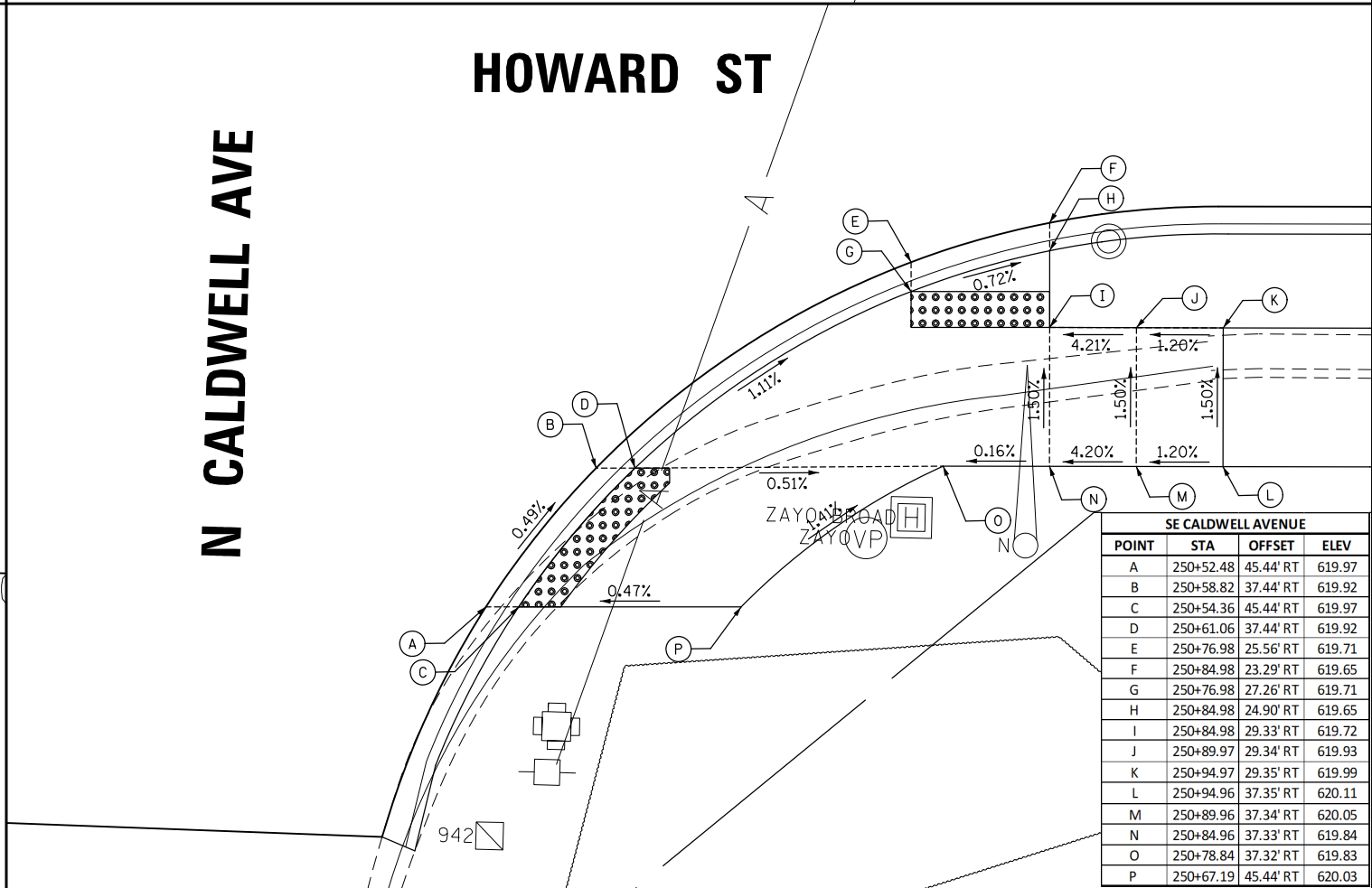
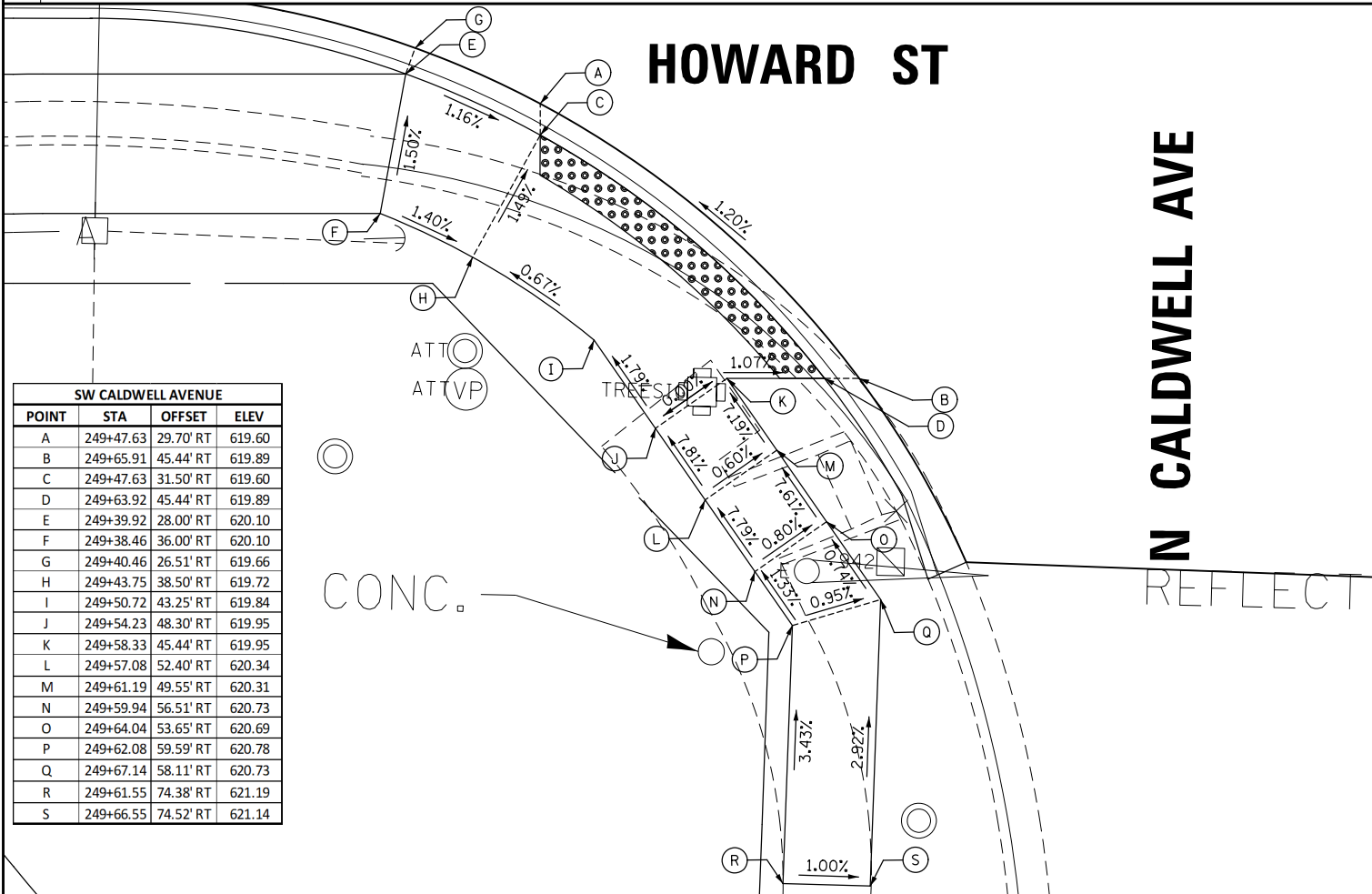
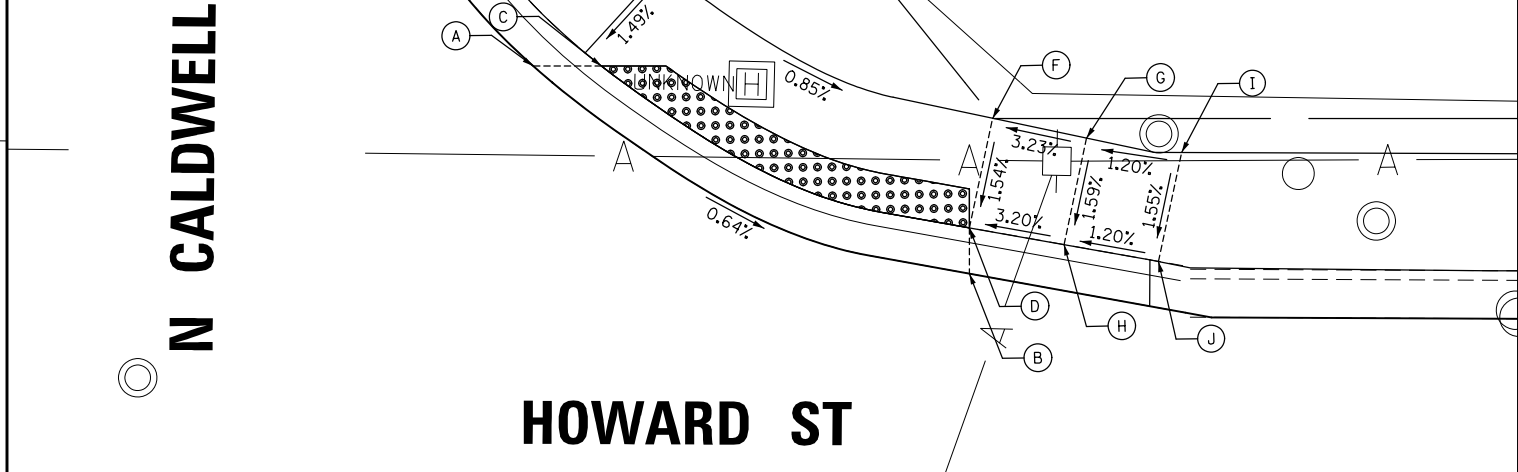
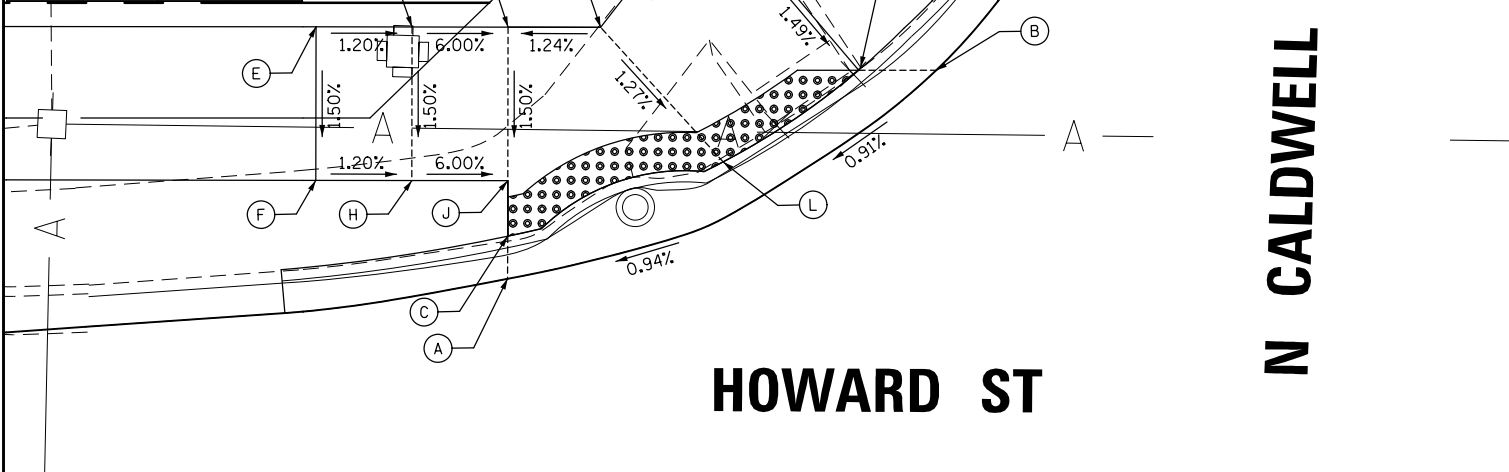
SW WAUKEGAN ROAD			
POINT	STA	OFFSET	ELEV
A	217+85.07	32.00' RT	634.78
B	218+02.45	38.58' RT	635.00
C	217+85.07	33.58' RT	634.78
D	218+00.49	38.58' RT	635.00
E	217+75.07	33.58' RT	634.98
F	217+75.07	38.58' RT	635.05
G	217+80.07	33.58' RT	634.91
H	217+80.07	38.58' RT	634.98
I	217+85.07	38.58' RT	634.85
J	217+92.00	38.58' RT	634.95
K	217+97.05	38.58' RT	634.98
L	217+93.39	48.53' RT	635.45
M	217+98.29	47.85' RT	635.38
N	217+94.07	53.48' RT	635.56
O	217+99.02	52.80' RT	635.39



SE WAUKEGAN ROAD			
POINT	STA	OFFSET	ELEV
A	218+47.99	38.39' RT	635.33
B	218+55.01	29.79' RT	635.17
C	218+49.75	38.34' RT	635.33
D	218+55.01	31.76' RT	635.17
E	218+55.12	32.63' RT	635.18
F	218+59.87	32.03' RT	635.20
G	218+64.64	31.45' RT	635.21
H	218+65.17	36.42' RT	635.28
I	218+60.44	36.99' RT	635.27
J	218+55.73	37.59' RT	635.25
K	218+56.51	42.61' RT	635.57
L	218+48.11	43.91' RT	635.57
M	218+57.22	47.55' RT	635.65
N	218+48.99	48.84' RT	635.59
O	218+53.78	37.84' RT	635.28
P	218+54.59	42.91' RT	635.55
Q	218+55.36	47.85' RT	635.63

NW CALDWELL AVENUE			
POINT	STA	OFFSET	ELEV
A	249+47.46	31.61' LT	619.31
B	249+69.81	42.49' LT	619.50
C	249+47.47	33.84' LT	619.31
D	249+65.77	42.49' LT	619.50
E	249+37.49	44.74' LT	619.84
F	249+37.48	36.74' LT	619.72
G	249+42.49	44.74' LT	619.78
H	249+42.48	36.74' LT	619.66
I	249+47.49	44.73' LT	619.48
J	249+47.48	36.73' LT	619.36
K	249+52.31	44.72' LT	619.54
L	249+58.50	37.61' LT	619.42
M	249+57.22	51.03' LT	619.68
N	249+60.98	48.10' LT	619.61
O	249+60.61	55.33' LT	620.02
P	249+64.35	52.46' LT	619.95
Q	249+63.68	59.31' LT	620.05
R	249+67.42	56.41' LT	620.01

NE CALDWELL AVENUE			
POINT	STA	OFFSET	ELEV
A	250+62.24	42.74' LT	619.42
B	250+84.98	31.92' LT	619.26
C	250+65.80	42.74' LT	619.42
D	250+84.98	34.30' LT	619.26
E	250+69.02	47.85' LT	619.51
F	250+86.24	40.00' LT	619.35
G	250+91.08	38.98' LT	619.51
H	250+89.91	33.43' LT	619.42
I	250+96.03	38.23' LT	619.57
J	250+94.83	32.56' LT	619.48



SW CALDWELL AVENUE			
POINT	STA	OFFSET	ELEV
A	249+47.63	29.70' RT	619.60
B	249+65.91	45.44' RT	619.89
C	249+47.63	31.50' RT	619.60
D	249+63.92	45.44' RT	619.89
E	249+39.92	28.00' RT	620.10
F	249+38.46	36.00' RT	620.10
G	249+40.46	26.51' RT	619.66
H	249+43.75	38.50' RT	619.72
I	249+50.72	43.25' RT	619.84
J	249+54.23	48.30' RT	619.95
K	249+58.33	45.44' RT	619.95
L	249+57.08	52.40' RT	620.34
M	249+61.19	49.55' RT	620.31
N	249+59.94	56.51' RT	620.73
O	249+64.04	53.65' RT	620.69
P	249+62.08	59.59' RT	620.78
Q	249+67.14	58.11' RT	620.73
R	249+61.55	74.38' RT	621.19
S	249+66.55	74.52' RT	621.14

SE CALDWELL AVENUE			
POINT	STA	OFFSET	ELEV
A	250+52.48	45.44' RT	619.97
B	250+58.82	37.44' RT	619.92
C	250+54.36	45.44' RT	619.97
D	250+61.06	37.44' RT	619.92
E	250+76.98	25.56' RT	619.71
F	250+84.98	23.29' RT	619.65
G	250+76.98	27.26' RT	619.71
H	250+84.98	24.90' RT	619.65
I	250+84.98	29.33' RT	619.72
J	250+89.97	29.34' RT	619.93
K	250+94.97	29.35' RT	619.99
L	250+94.96	37.35' RT	620.11
M	250+89.96	37.34' RT	620.05
N	250+84.96	37.33' RT	619.84
O	250+78.84	37.32' RT	619.83
P	250+67.19	45.44' RT	620.03

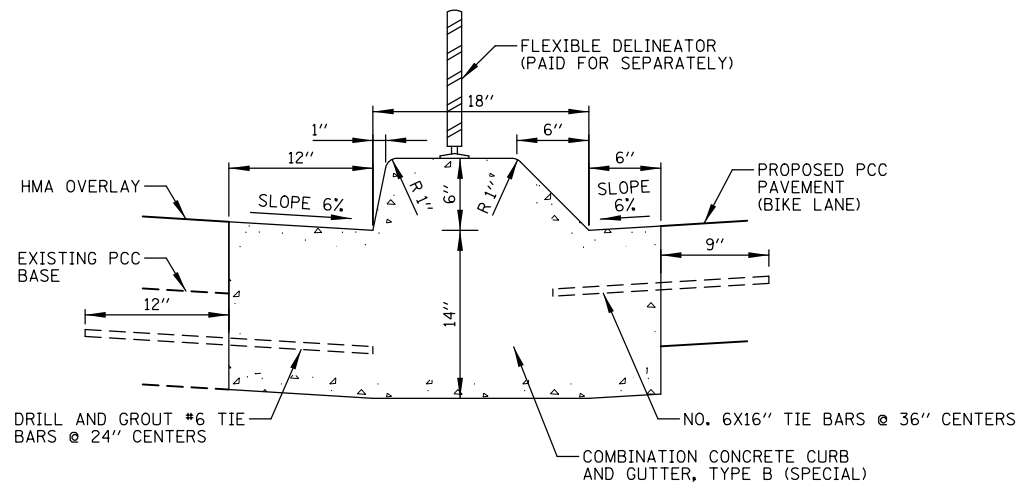
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Default	PLOT SCALE = 18"	CHECKED -	REVISED -
	PLOT DATE = 11/21/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

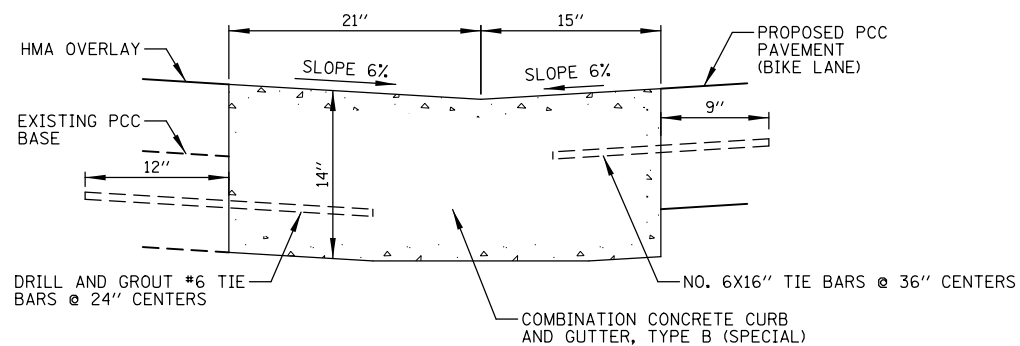
**HOWARD STREET IMPROVEMENTS
SIDEWALK RAMP DETAILS**

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

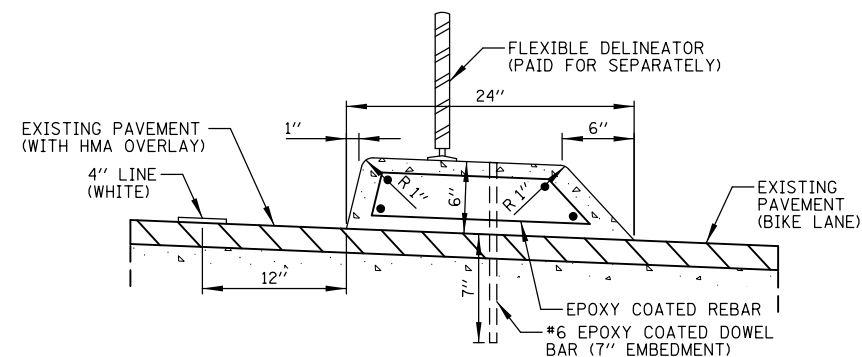
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	114
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



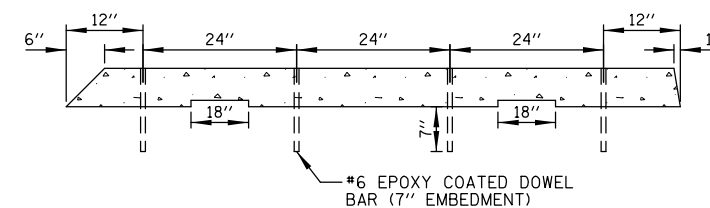
COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL)



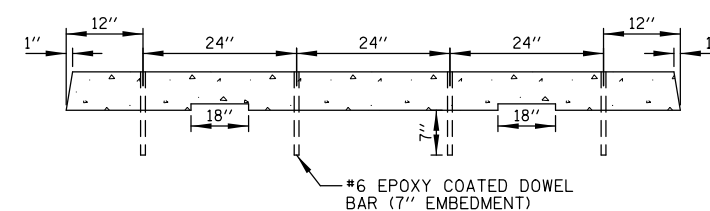
COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL) DEPRESSED SECTION



TYPICAL SECTION

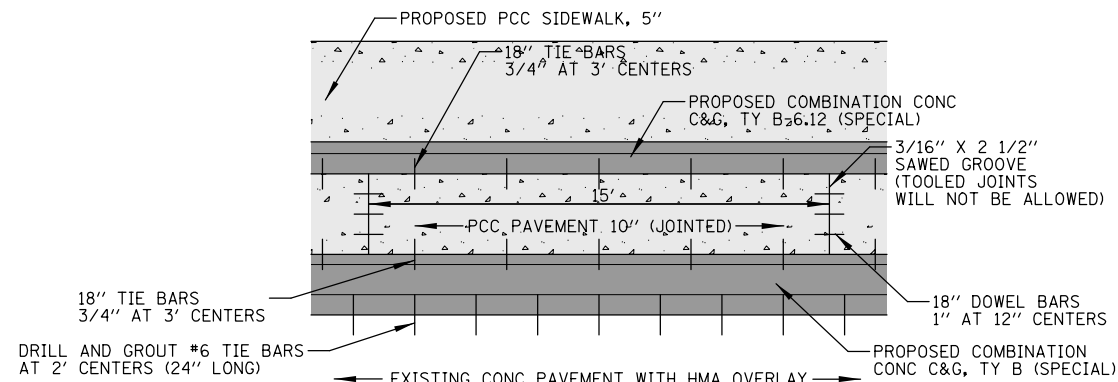


END SECTION (PROFILE VIEW)



MID SECTION (PROFILE VIEW)

PRECAST CONCRETE CURB

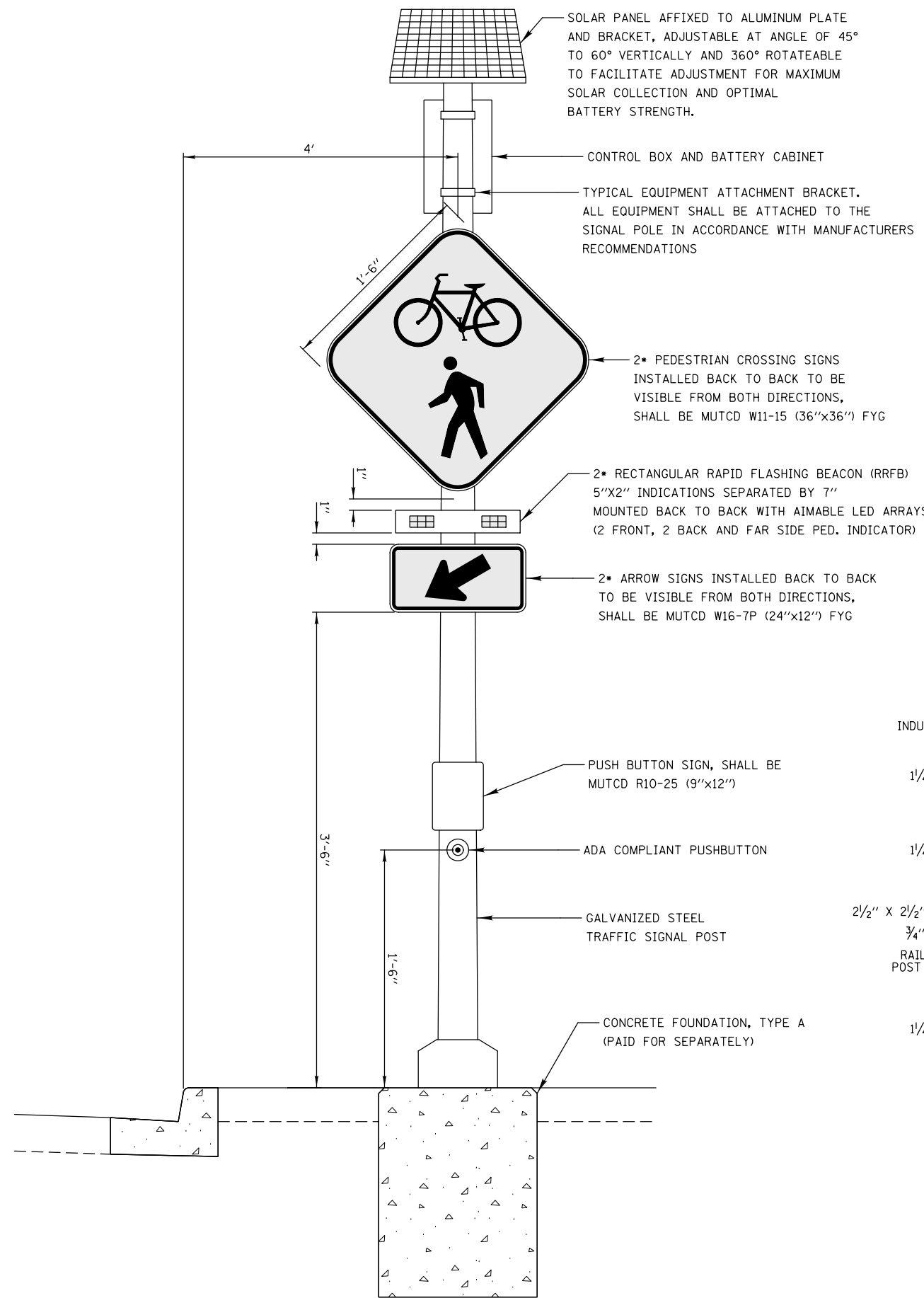


ON-ROAD BIKE PATH JOINTING DETAIL

HOWARD STREET
HARLEM AVENUE TO WAUKEGAN ROAD

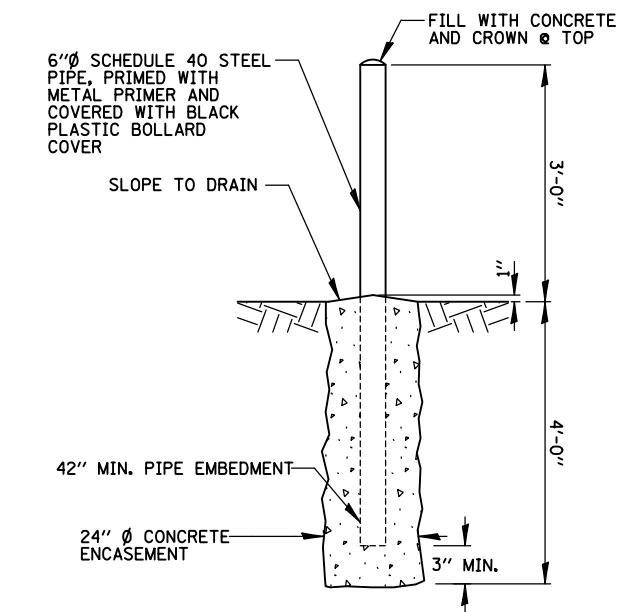
NOTE: JOINTING ON CURB AND GUTTER SHALL FOLLOW IDOT STANDARD 606001

FILE NAME = N:\NILES\180016\Civil\DET.180016.01.sht	USER NAME = rhowellindgren	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HOWARD STREET IMPROVEMENTS CONSTRUCTION DETAILS			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	PLOT SCALE = 20'	DRAWN -	REVISED -					1334	13-00116-00-TL	COOK	221	115
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		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				



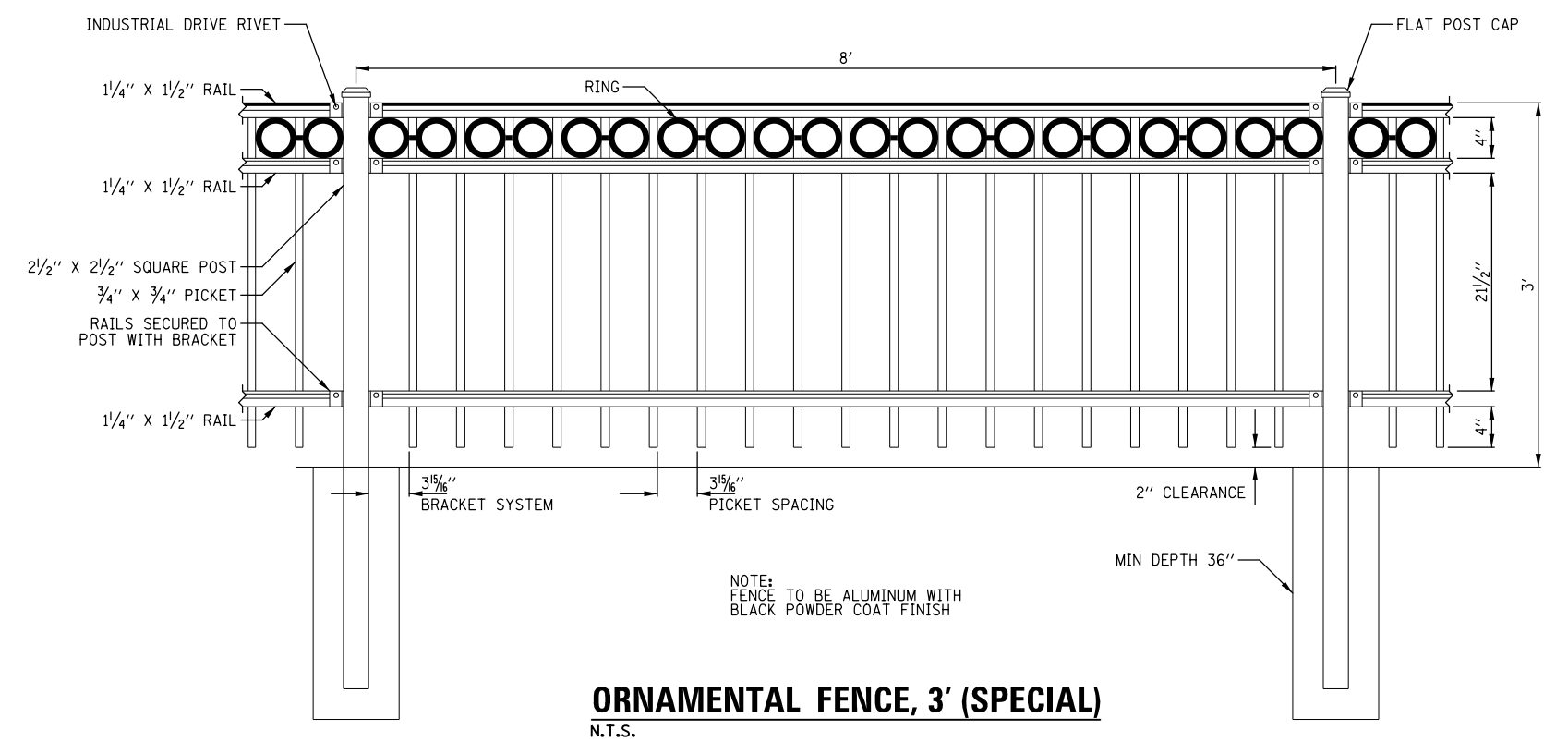
SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE)

* BEACON ASSEMBLIES LOCATED IN THE MEDIAN SHALL BE SINGLE SIDED.



- NOTES:**
1. SEE SITE DRAWING FOR LOCATION.
 2. THIS WORK PAID FOR UNDER "BOLLARDS", (SEE SPECIAL PROVISIONS).

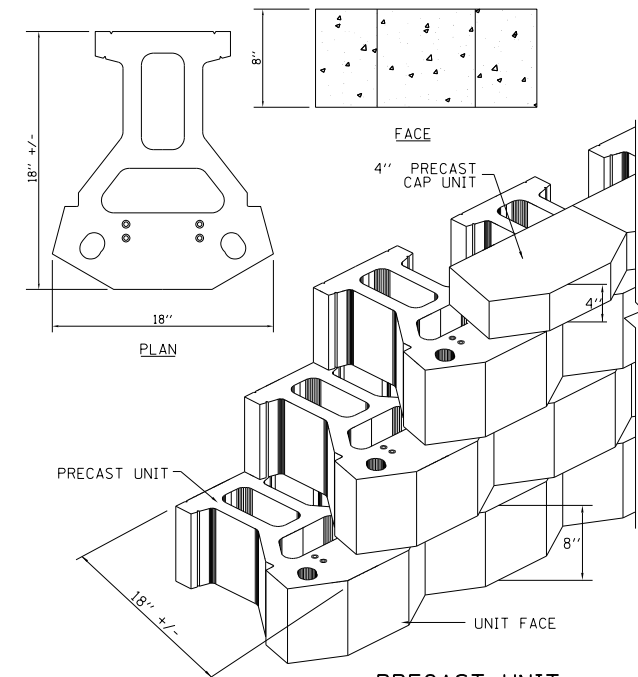
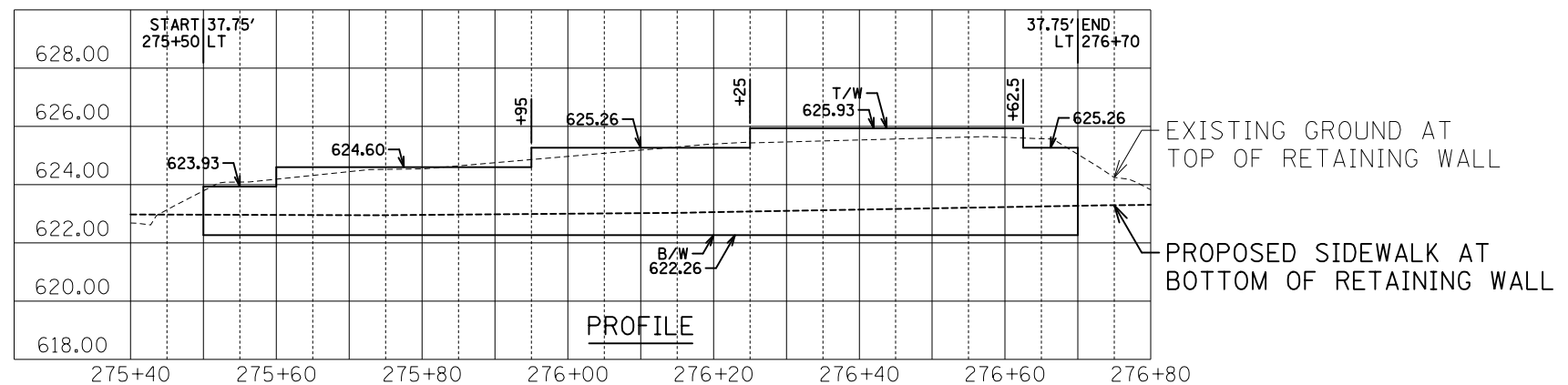
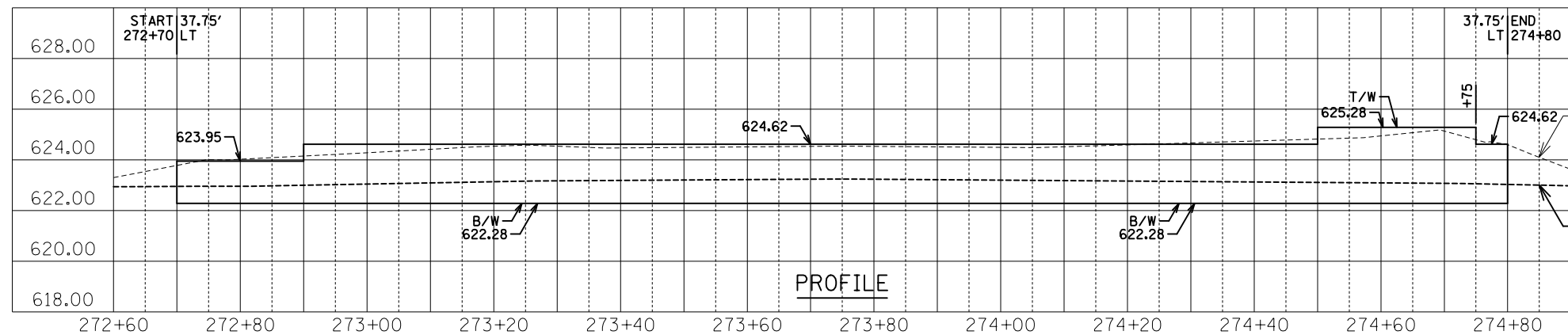
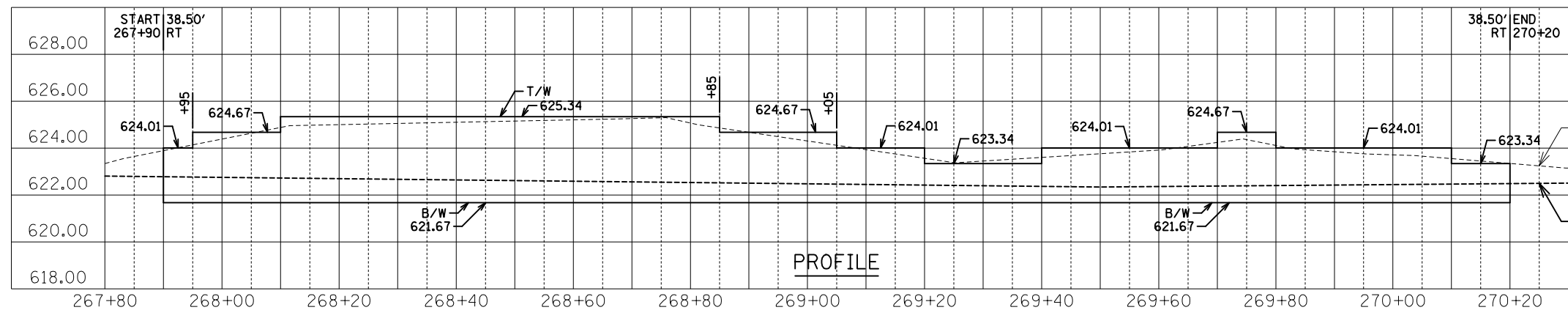
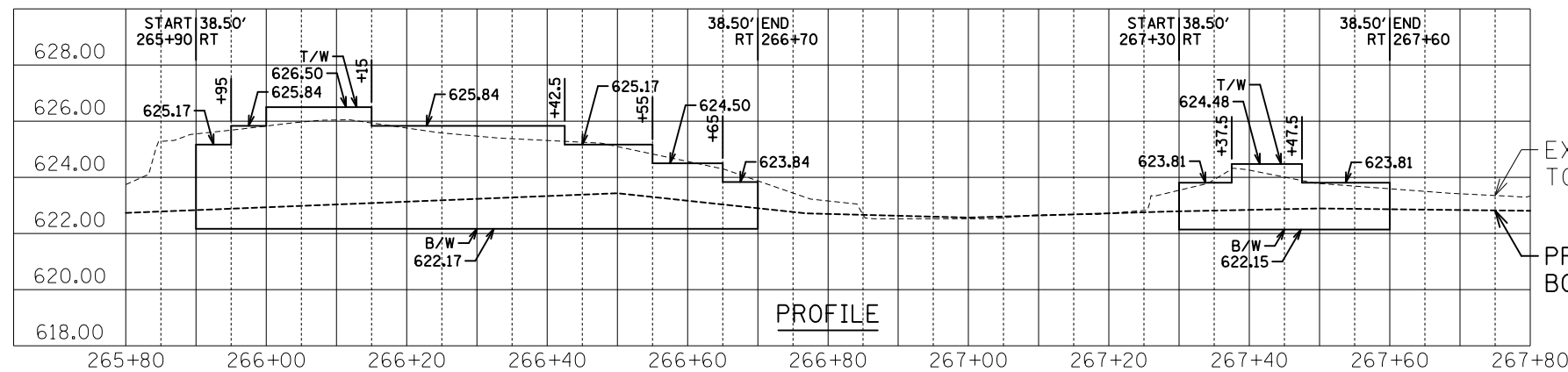
BOLLARD DETAIL
N.T.S.



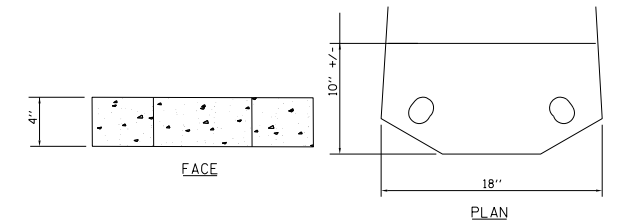
ORNAMENTAL FENCE, 3' (SPECIAL)
N.T.S.

FILE NAME = N:\NILES\180016\Civil\DET_180016_02.sht	USER NAME = rhowellindgren	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HOWARD STREET IMPROVEMENTS CONSTRUCTION DETAILS			F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 116			
Default	PLOT SCALE = 28'	DRAWN -	REVISED -					SCALE: 1" = 20'	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 61G08
	PLOT DATE = 11/21/2019	CHECKED -	REVISED -												ILLINOIS FED. AID PROJECT
		DATE -	REVISED -												

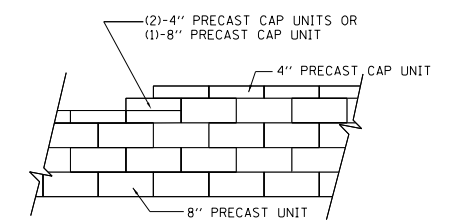
PRECAST MODULAR RETAINING WALL (52200700)



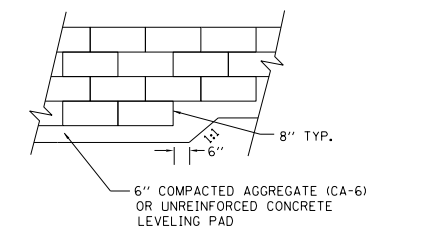
PRECAST UNIT
N.T.S.



PRECAST CAP UNIT
N.T.S.



TOP OF WALL STEPS
N.T.S.



LEVELING PAD AND STEP
N.T.S.

FILE NAME = N:\NILES\180016\Civil\DET_180016_03.sht	USER NAME = rhowellindgren	DESIGNED -	REVISED -
	PLOT SCALE = 12'	DRAWN -	REVISED -
	PLOT DATE = 11/21/2019	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
CONSTRUCTION DETAILS**

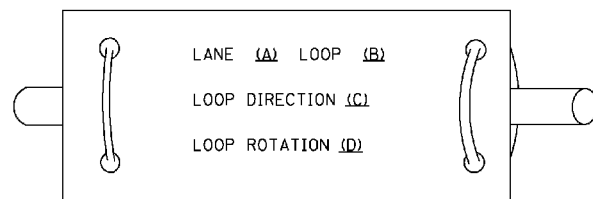
SCALE: 1" = 20' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	117
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

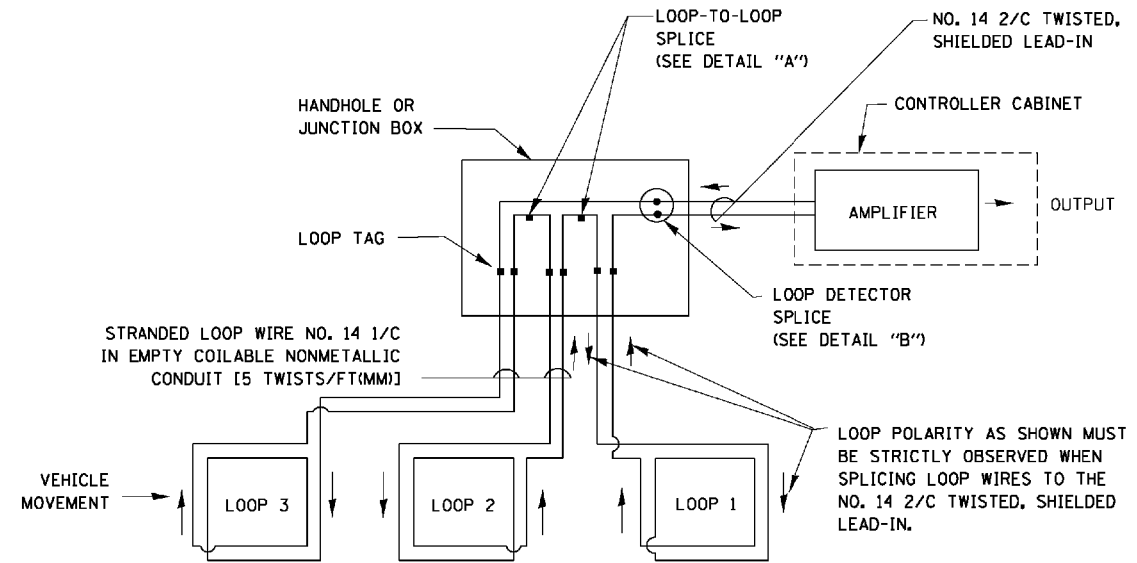
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES 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

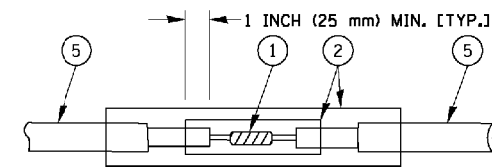


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

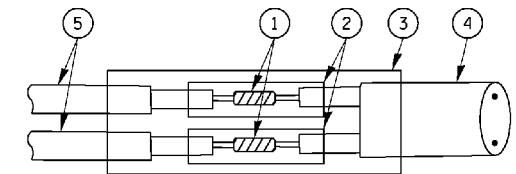


DETECTOR LOOP WIRING SCHEMATIC

- 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.

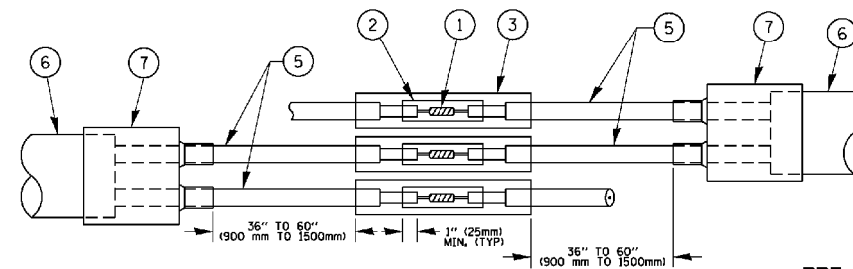


DETAIL "A"
LOOP-TO-LOOP SPLICE

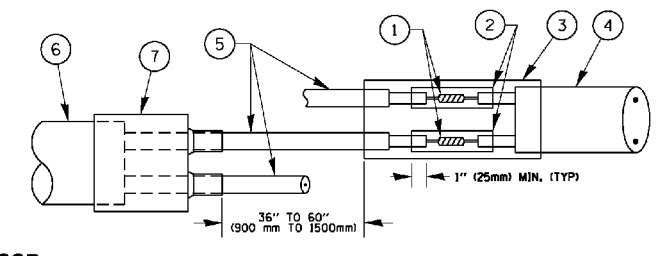


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PREFORMED LOOP

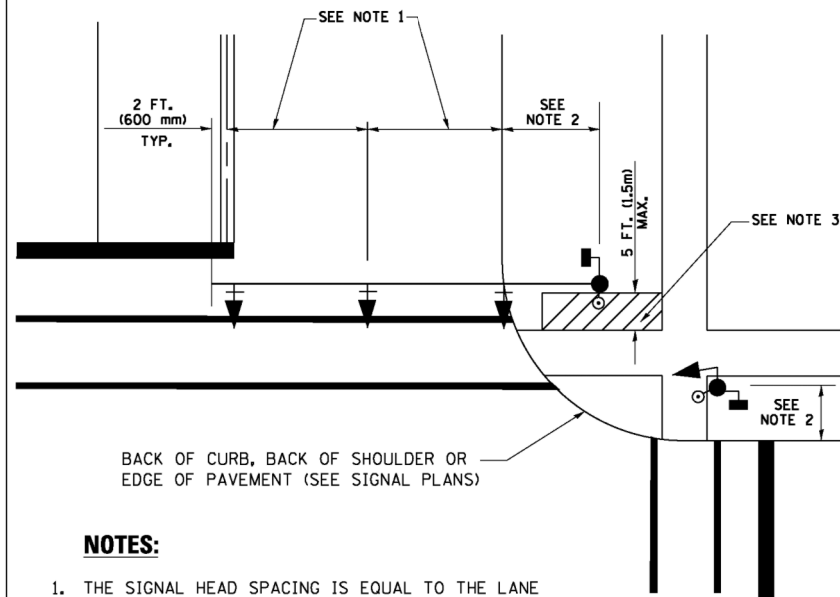
LOOP DETECTOR SPLICE

- 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. TYCO CBR-2 OR APPROVED EQUAL

TS SHT NO. 2

FILE NAME - c:\p\work\p\dot\Footm\j\d0100315\ts05.dgn	USER NAME - Footm_j	DESIGNED - DAD	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 119
PLOT SCALE = 58.0000' / in.	CHECKED - DAD	REVISIED -	REVISIED -		SCALE: NONE	SHEET NO. 2 OF 7 SHEETS	STA.	TS-05		CONTRACT NO. 61G08		
PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISIED -	REVISIED -					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

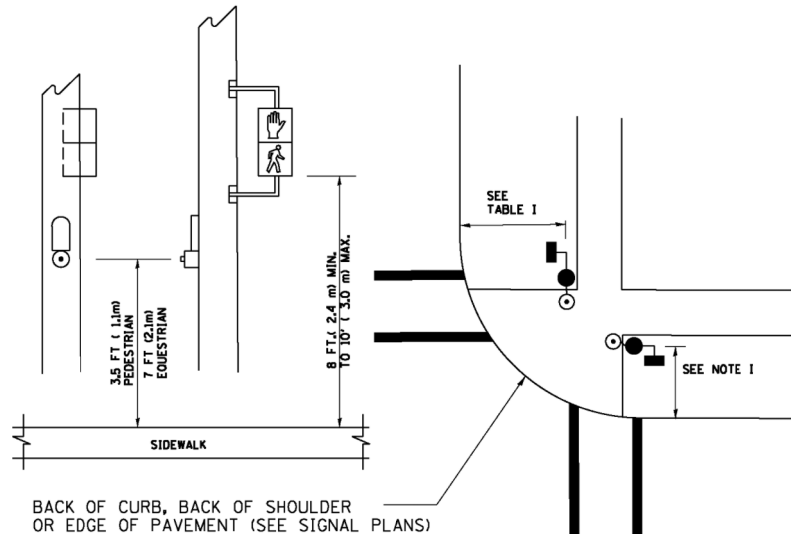
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



NOTES:

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

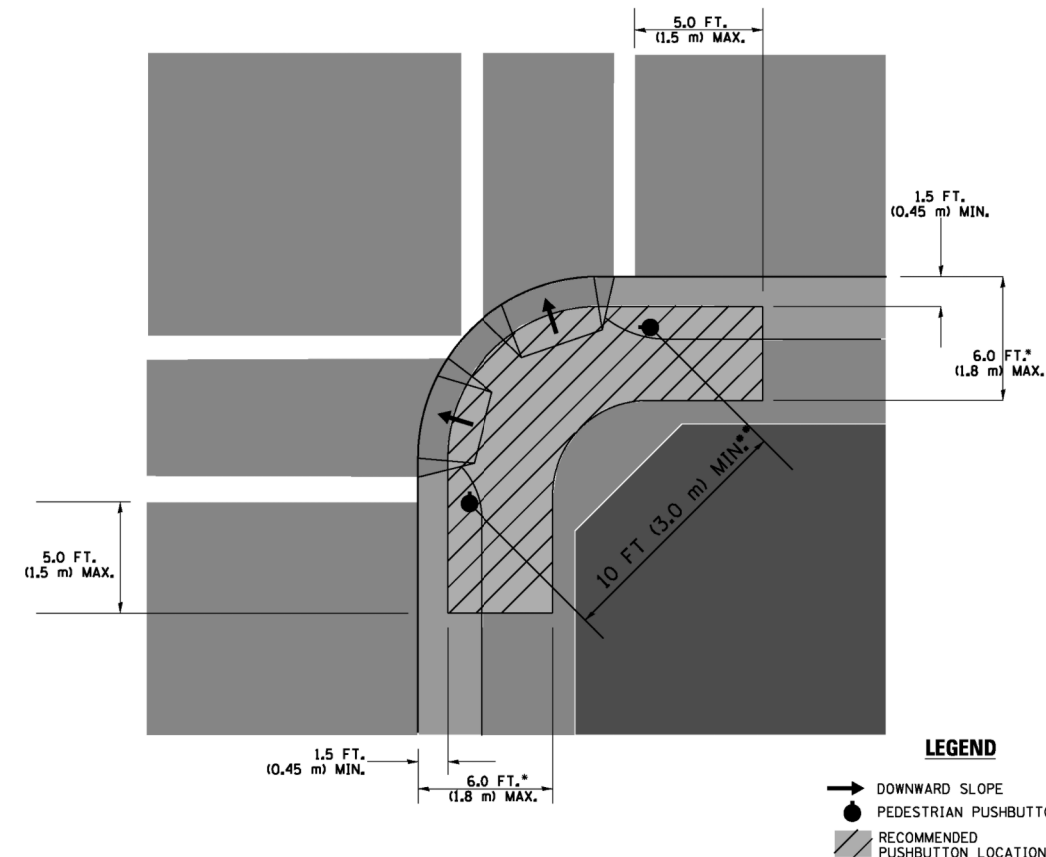
**PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST**



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

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

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

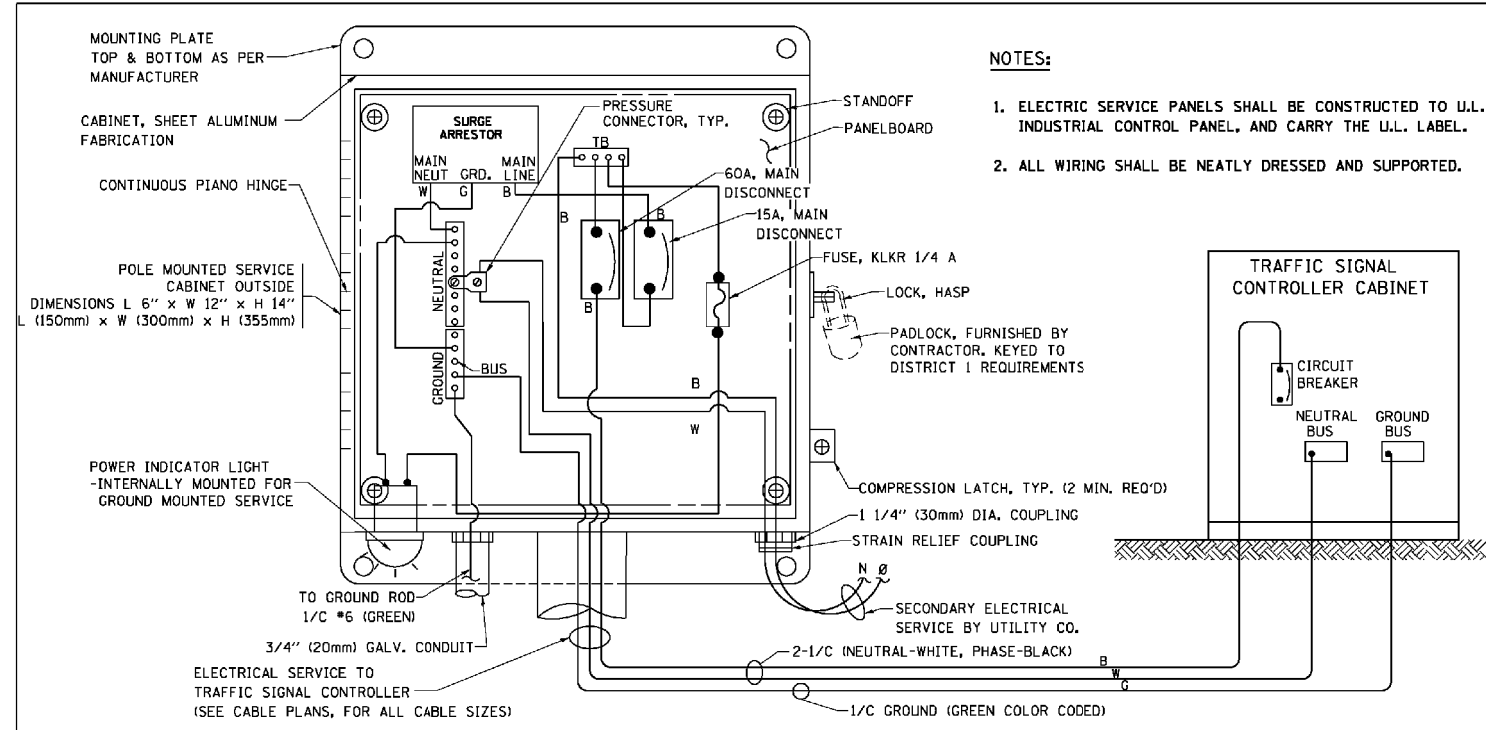
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

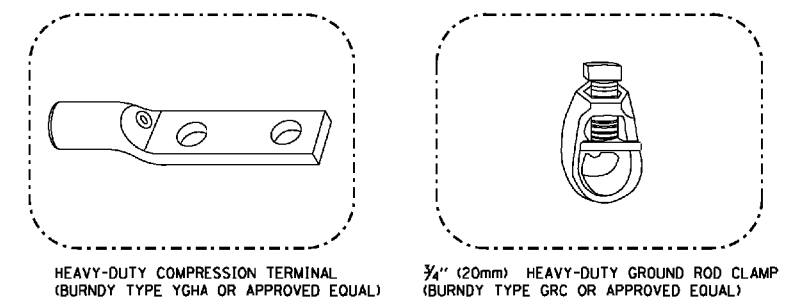
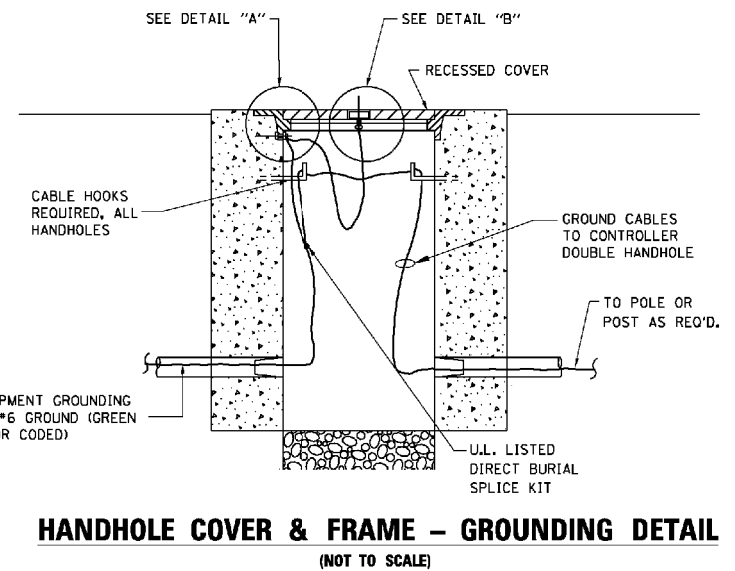
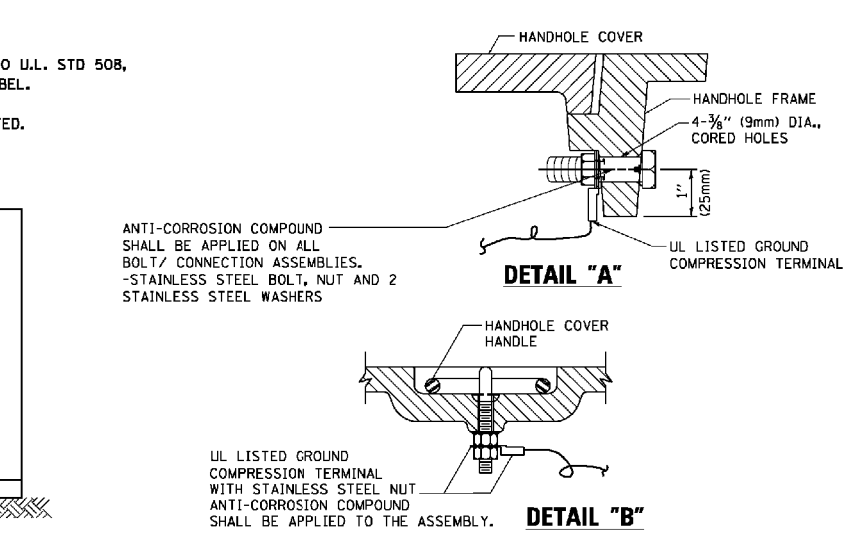
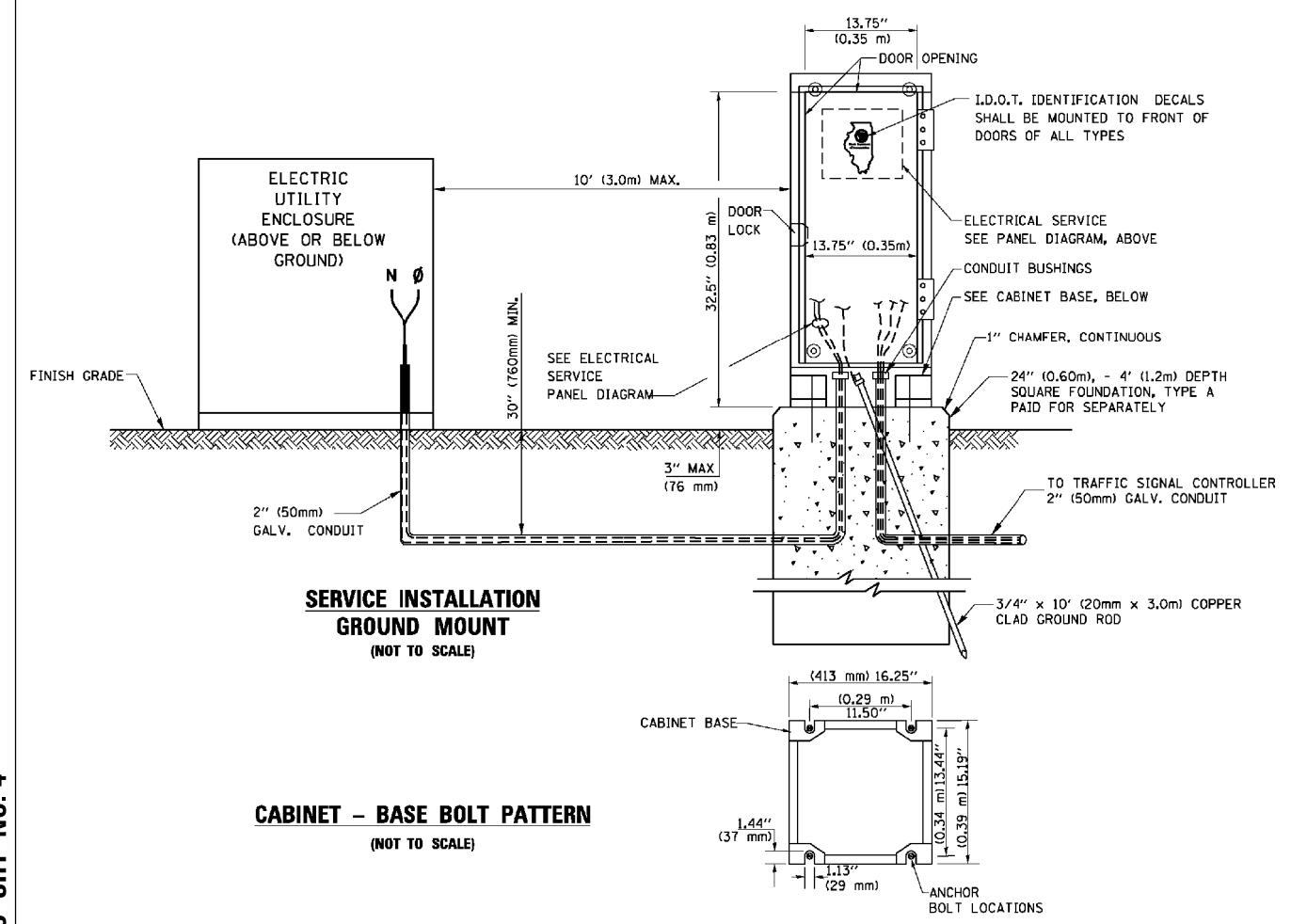
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM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

TS SHT NO. 3

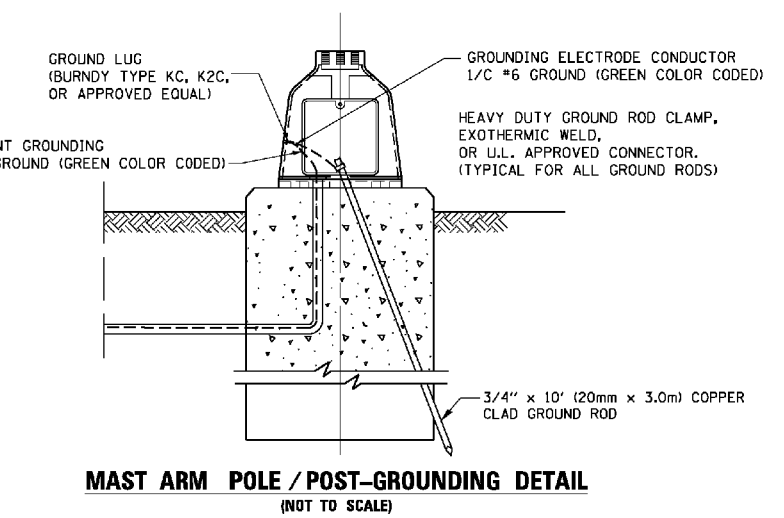
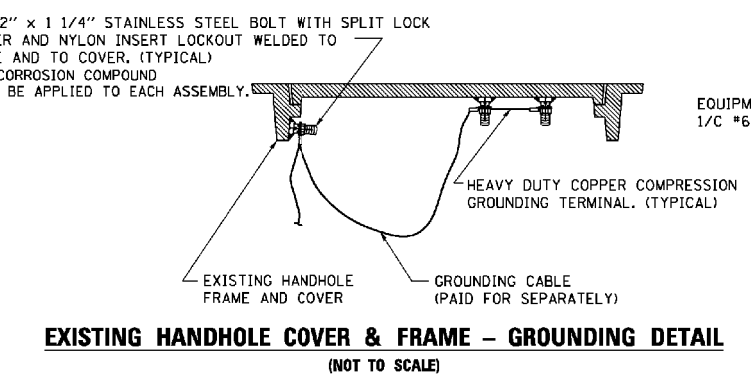
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PLOT SCALE = 58.0000' / in.		CHECKED - DAD	REVISED -		TS-05				CONTRACT NO. 61G08			
PLOT DATE = 1/13/2014		DATE - 10-28-09	REVISED -		SCALE: NONE	SHEET NO. 3 OF 7 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (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.



TS SHT NO. 4

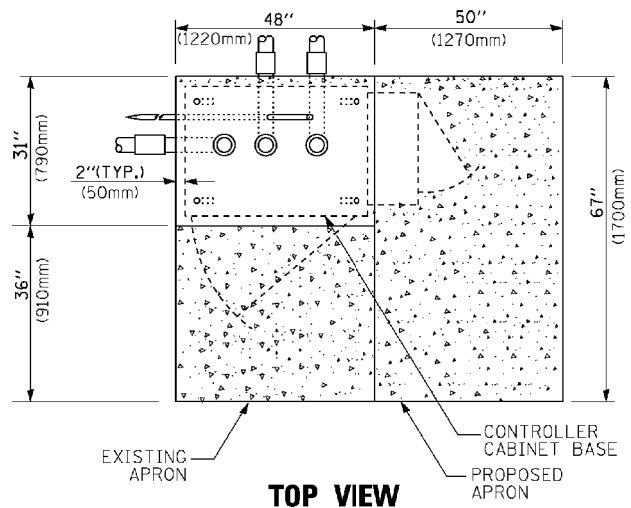
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		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

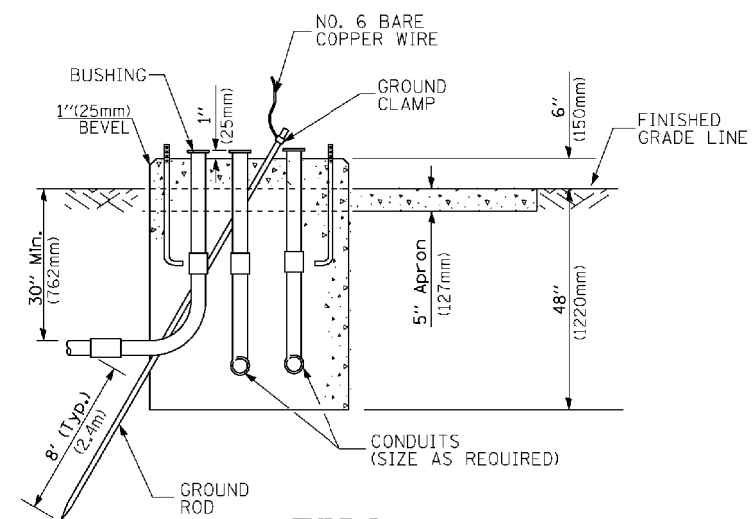
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE SHEET NO. 4 OF 7 SHEETS STA. TO STA.

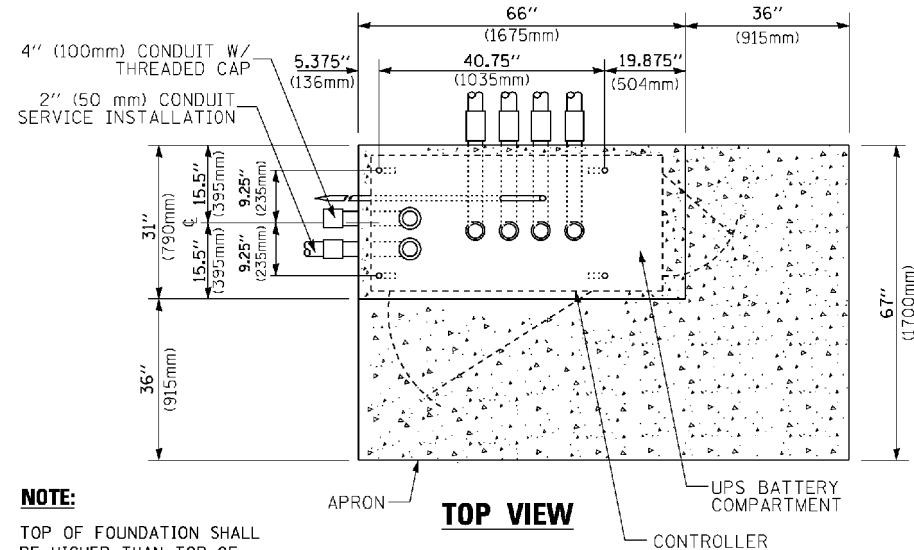
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	121
TS-05		CONTRACT NO. 61G08		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TOP VIEW

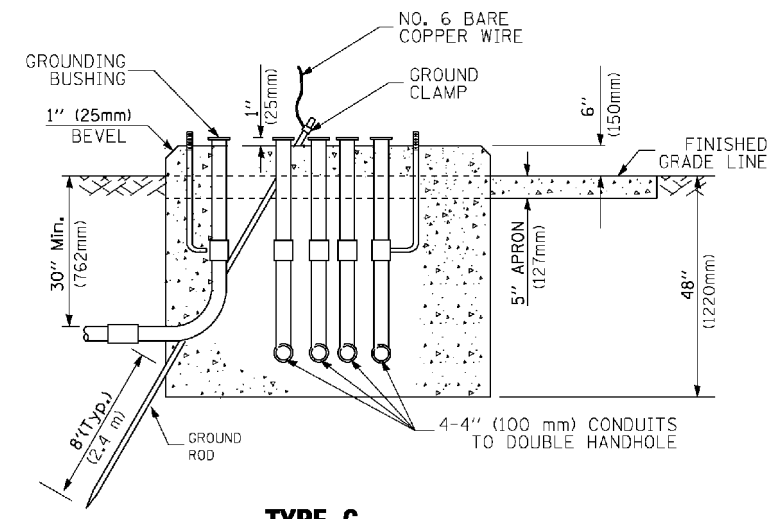


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

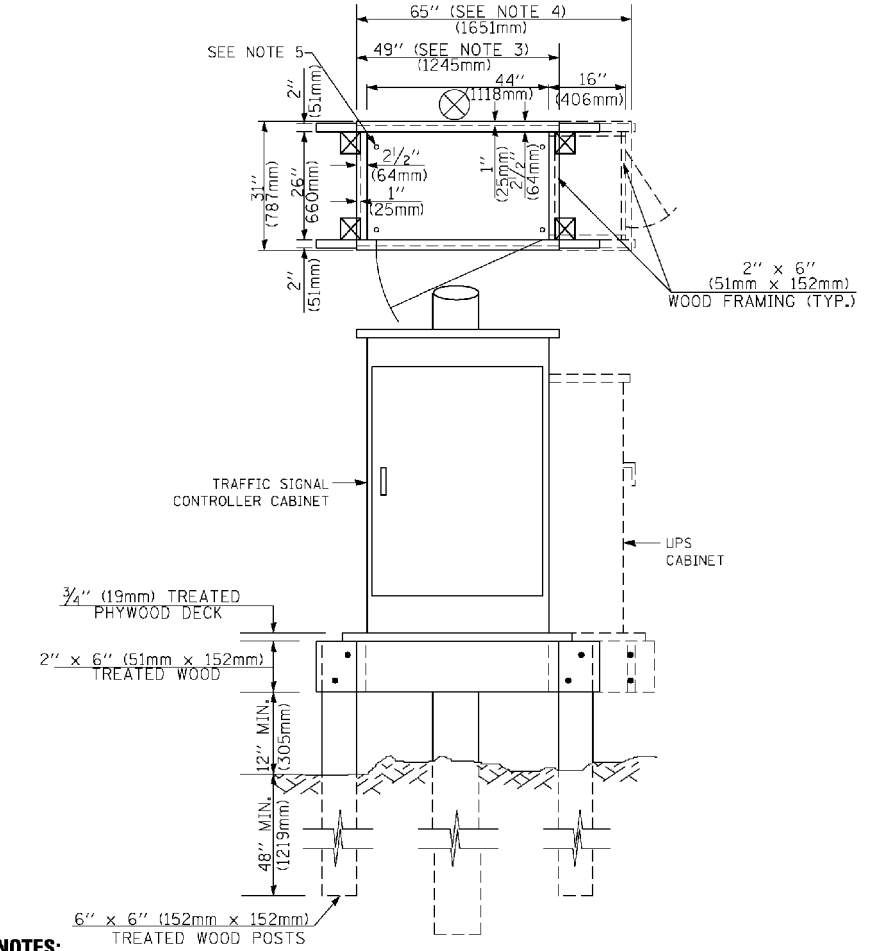


TOP VIEW

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:

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

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

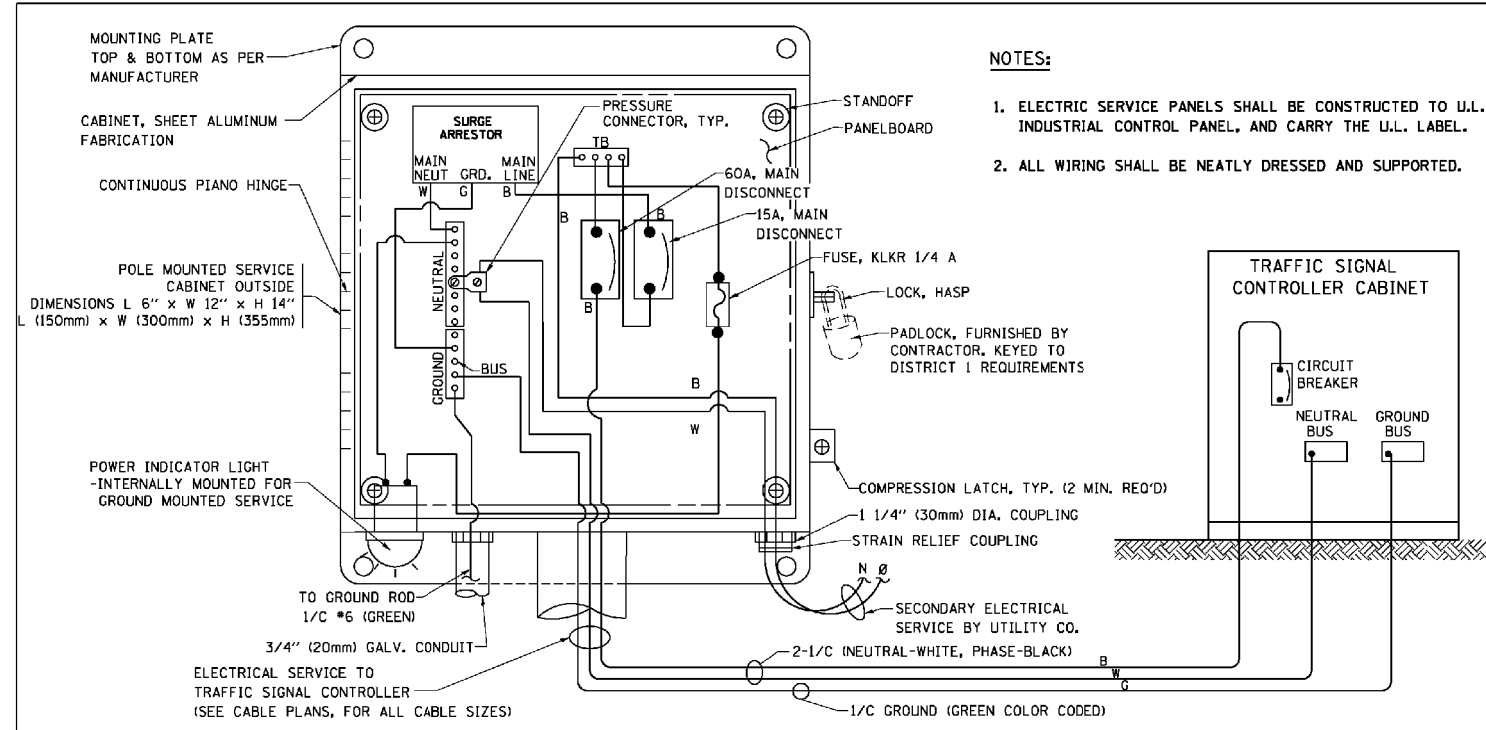
TS SHT NO. 5

FILE NAME -	USER NAME - Footonj	DESIGNED - DAG	REVISED - DAG 1-1-14
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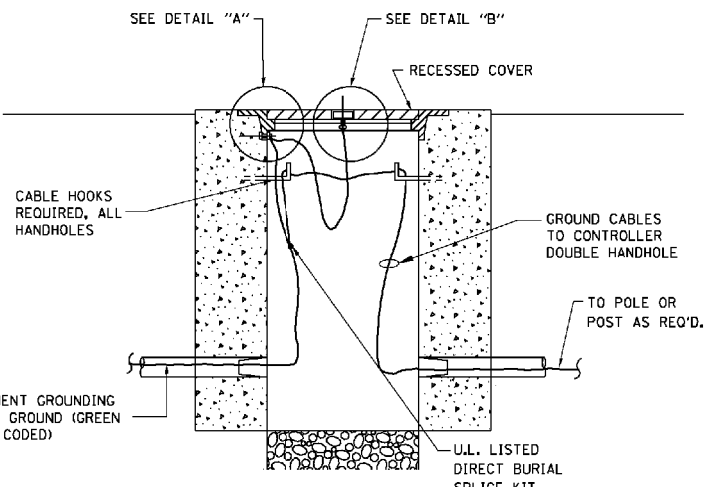
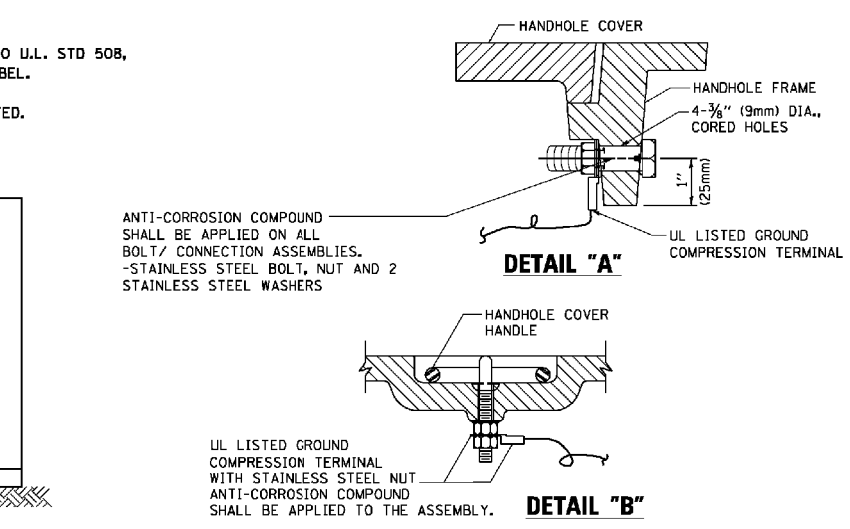
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 5 OF 7 SHEETS	STA.	TO STA.

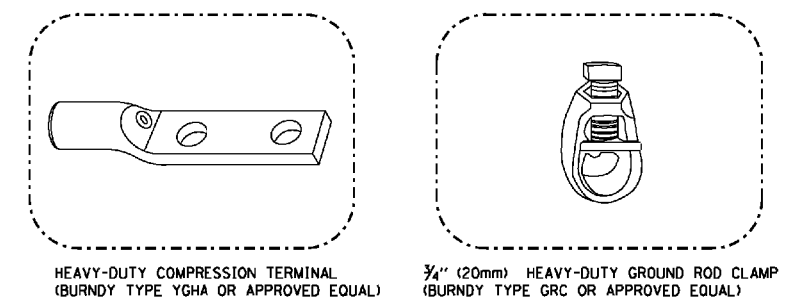
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TS-05			CONTRACT NO. 61G08	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



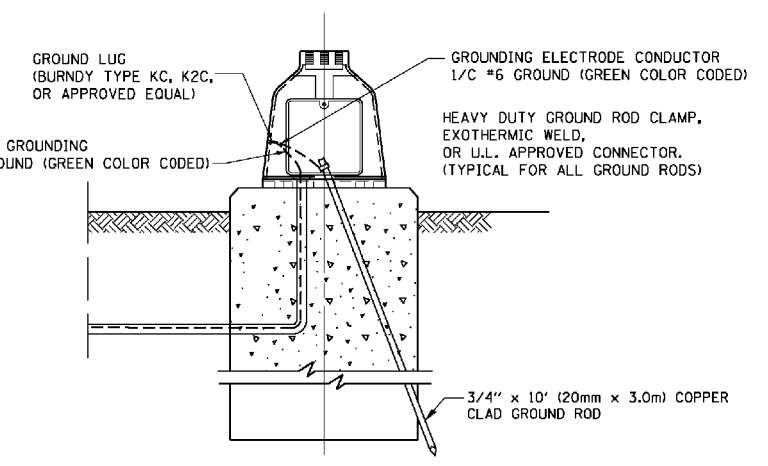
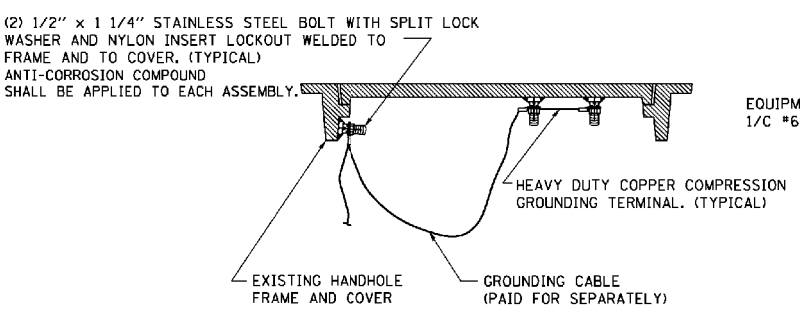
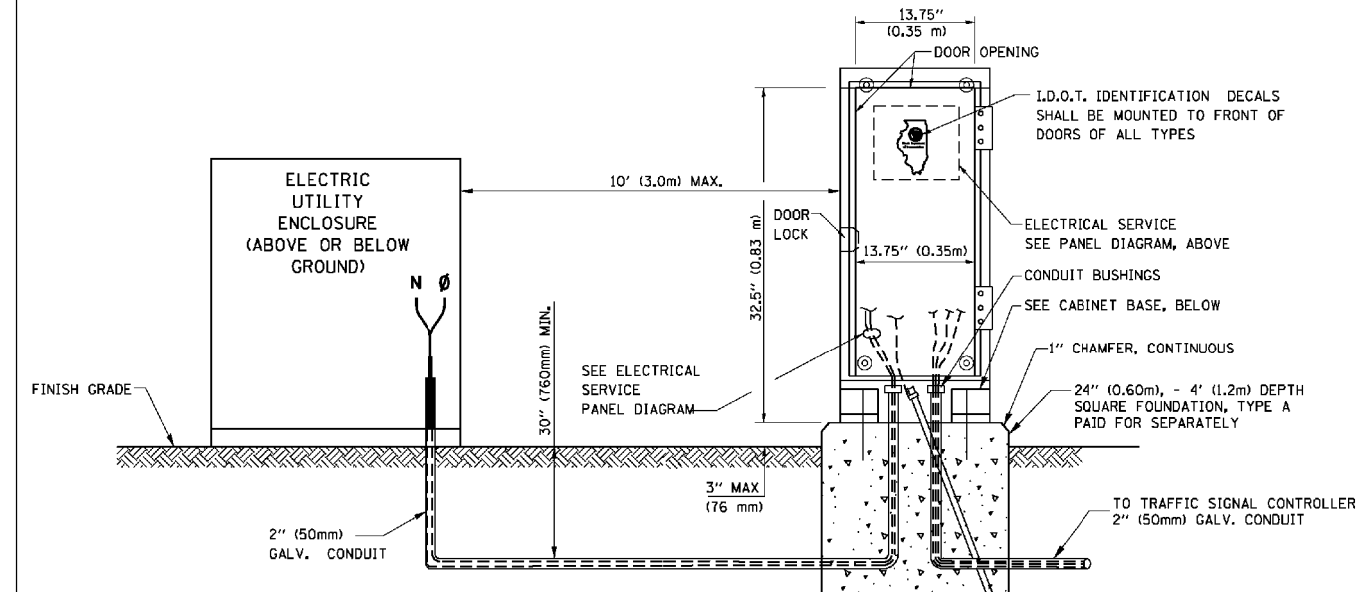
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



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

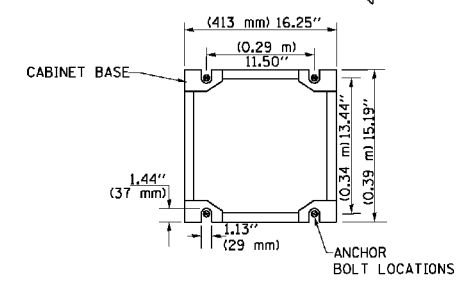


- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



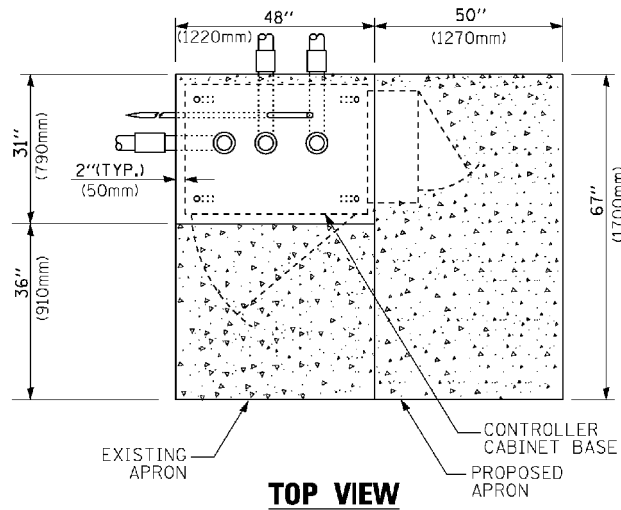
TS SHT NO. 6

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		DATE - 10-28-09	REVISED -

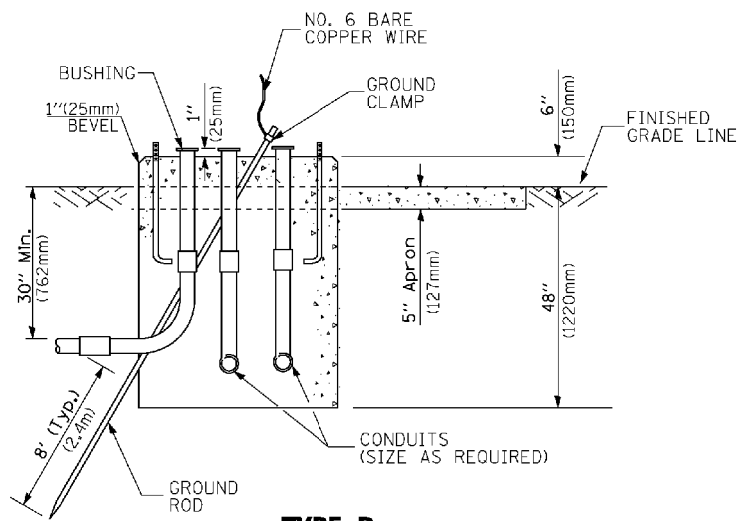
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 4 OF 7 SHEETS	STA.	TO STA.

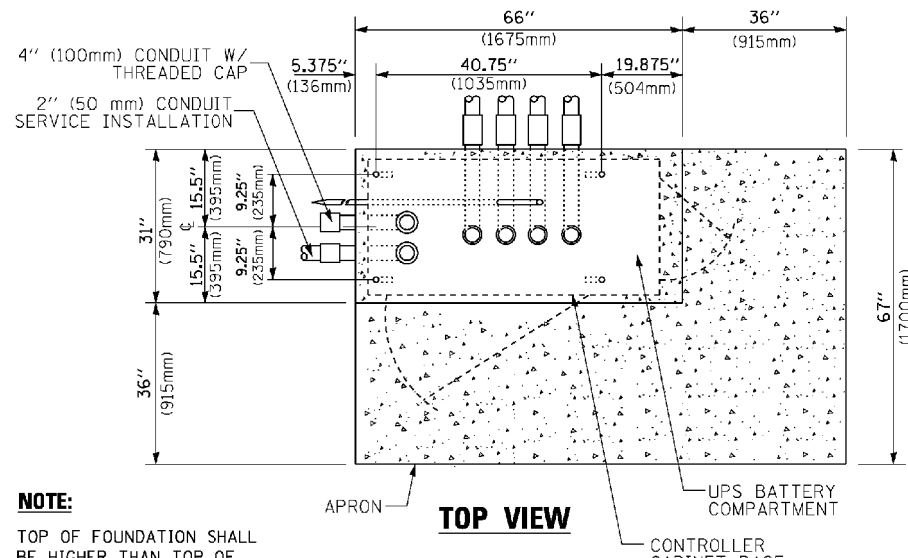
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TS-05		CONTRACT NO. 61G08		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TOP VIEW

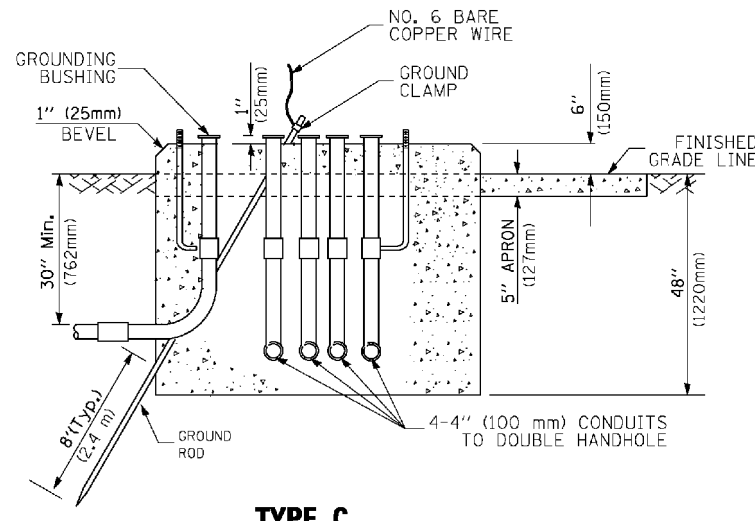


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

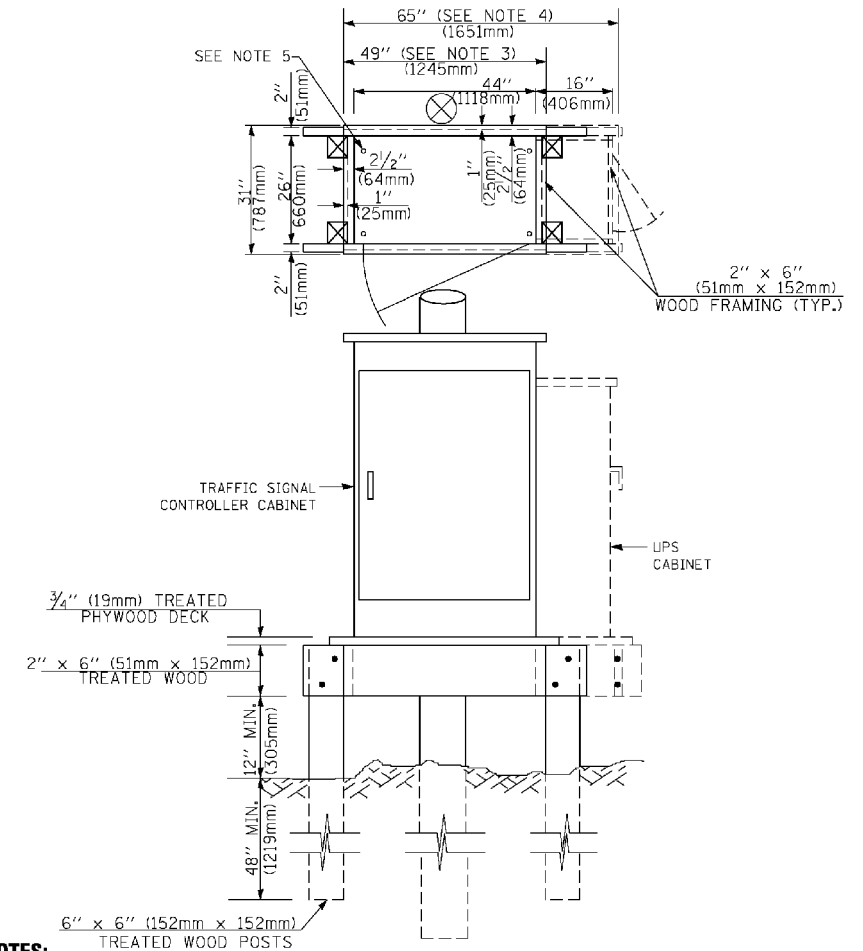


TOP VIEW

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:

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

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

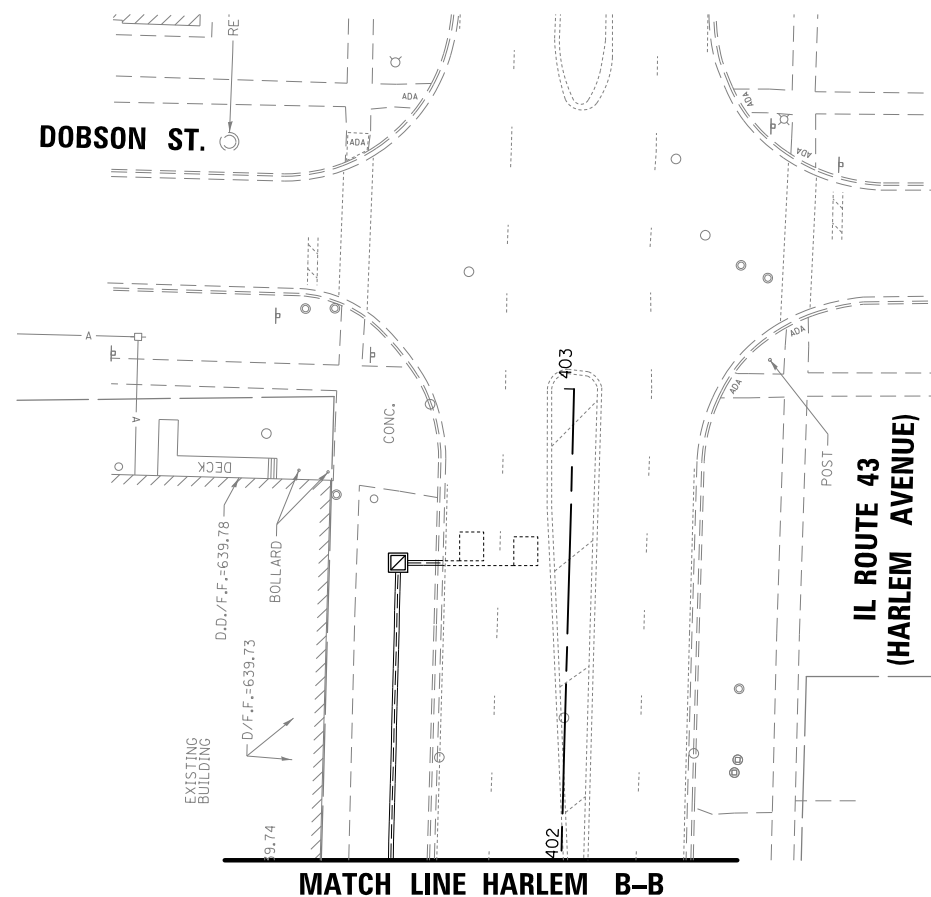
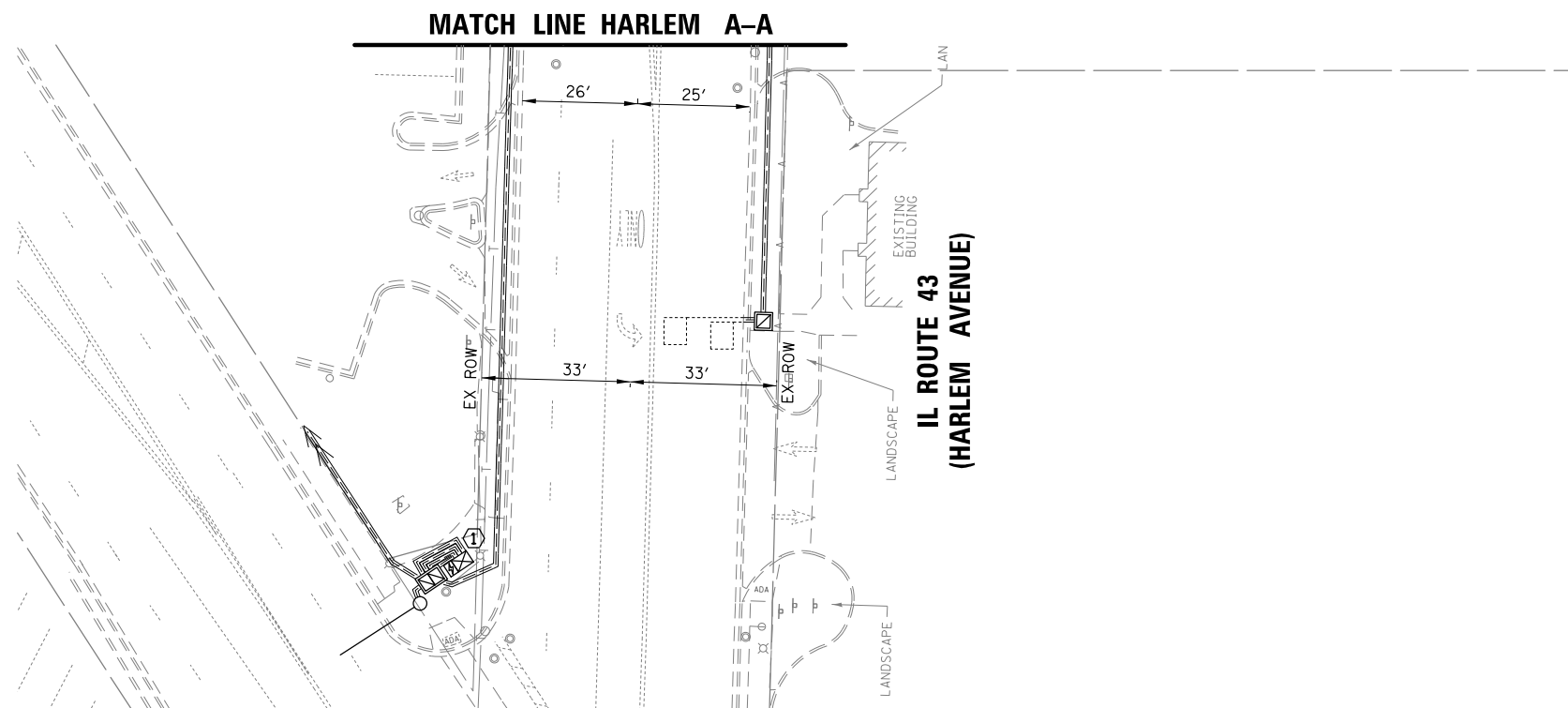
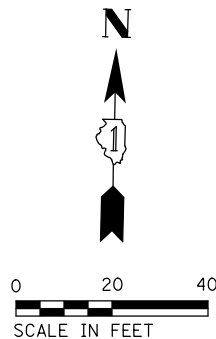
TS SHT NO. 7

FILE NAME -	USER NAME - Footonj	DESIGNED - DAG	REVISED - DAG 1-1-14
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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 5 OF 7 SHEETS	STA.	TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	124
TS-05			CONTRACT NO. 61G08	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TS SHT NO. 10

TS 2330
EAGLE 1A

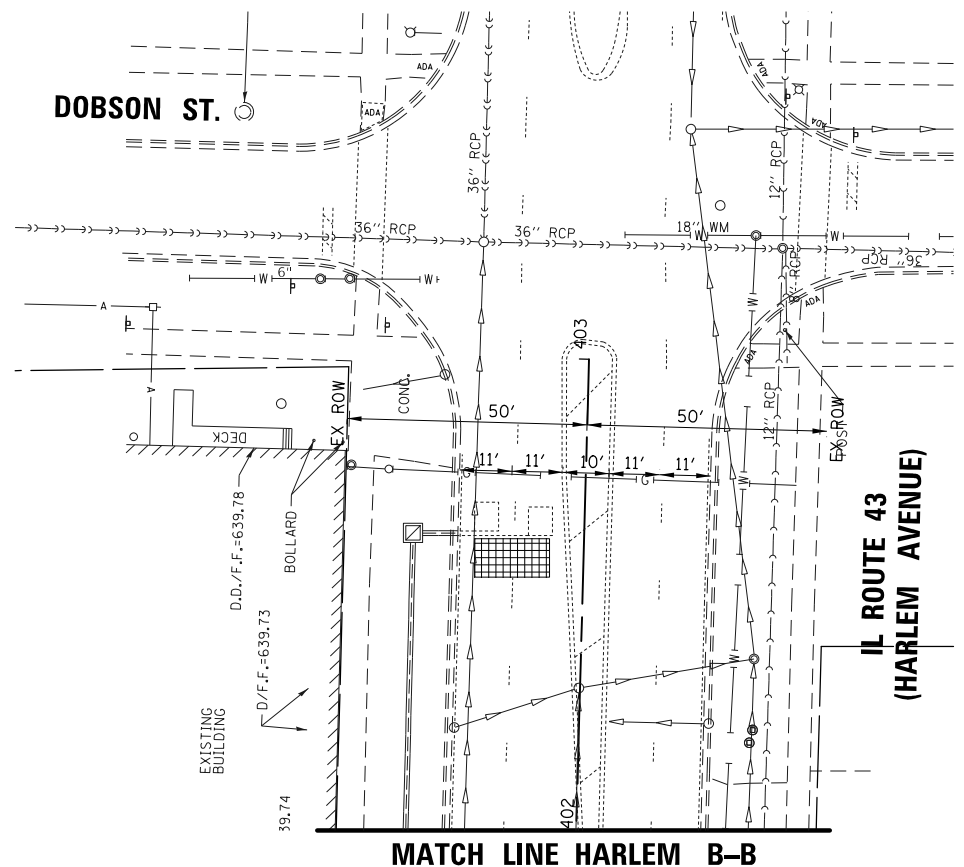
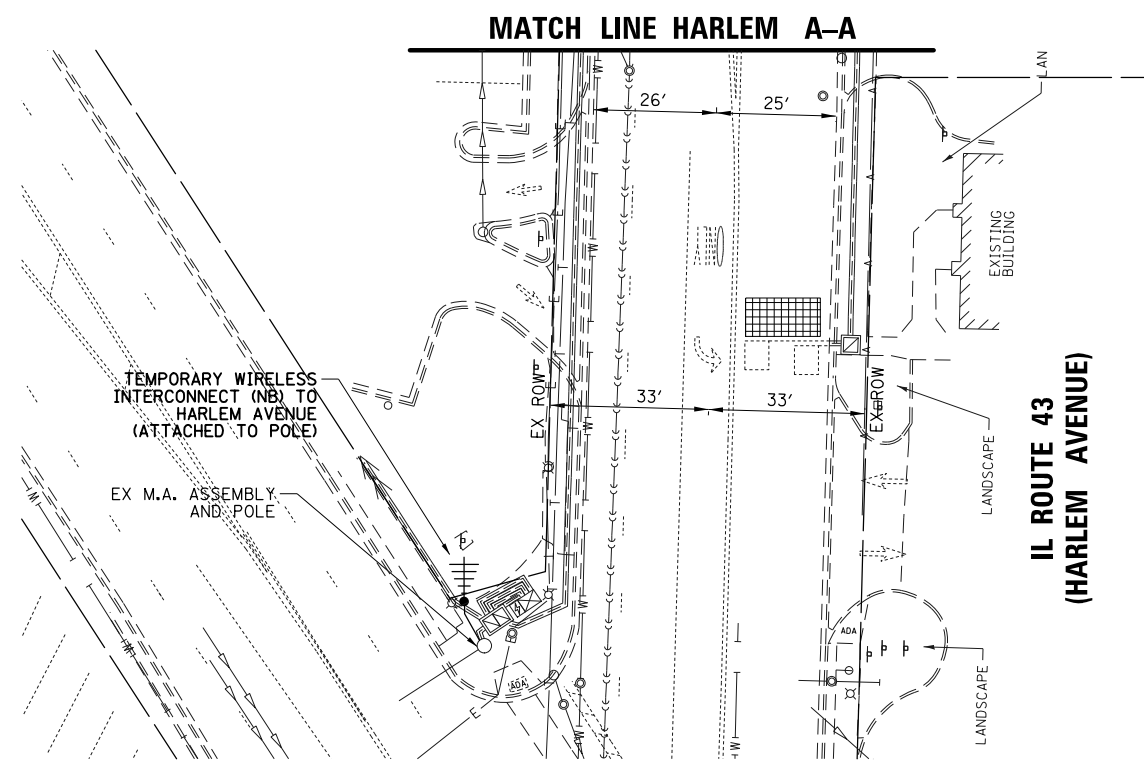
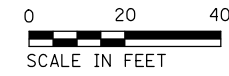
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Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	127
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



TS SHT NO. 12

**TS 2330
EAGLE 1A**

FILE NAME = N:\NILES\180016\Traffic\HARLEM_Sht-04_TNP-02.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
		CHECKED - GMZ	REVISED -
		DATE -	REVISED -
Default	PLOT DATE = 11/21/2019		

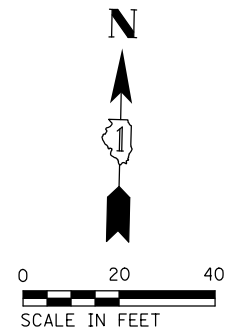
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

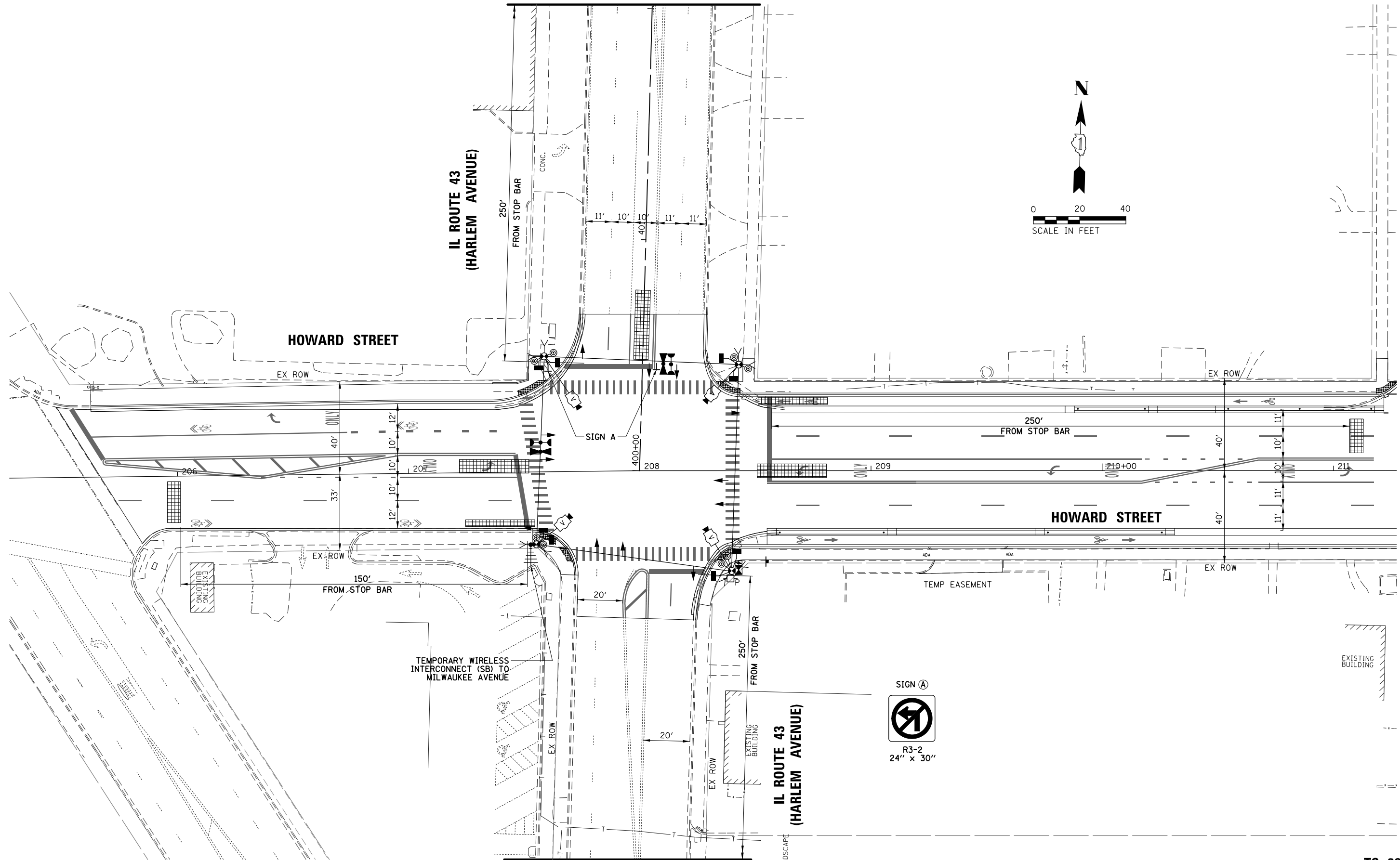
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	129
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

MATCH LINE HARLEM B-B



IL ROUTE 43
(HARLEM AVENUE)

HOWARD STREET



MATCH LINE HARLEM A-A

TS SHT NO. 13

TS 2330
EAGLE 1A

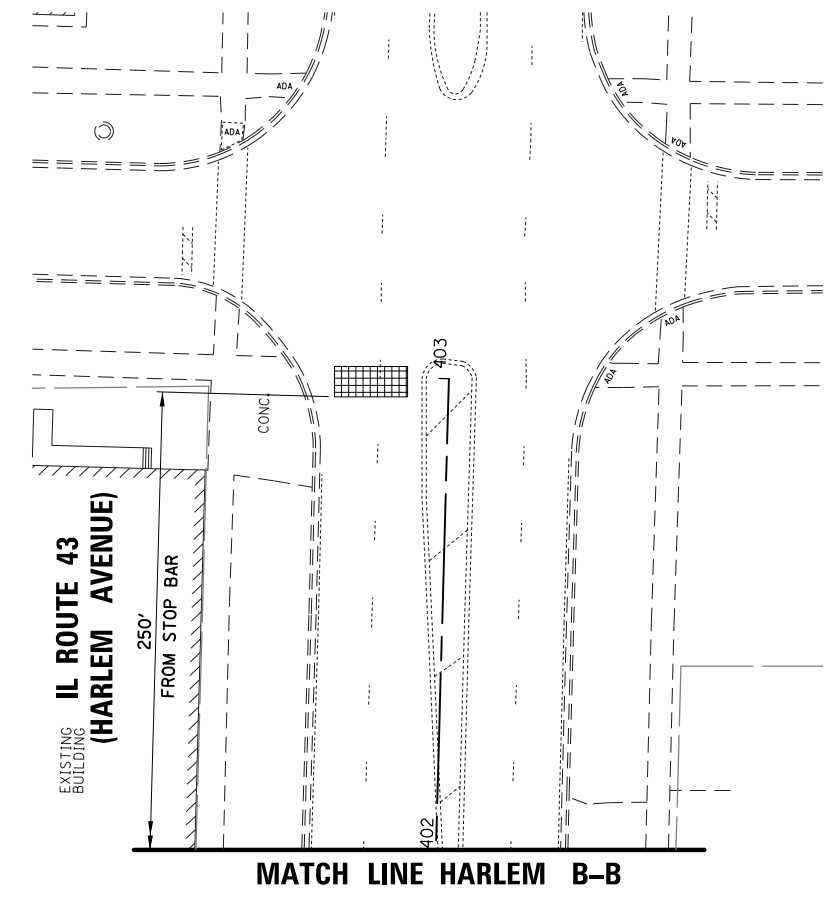
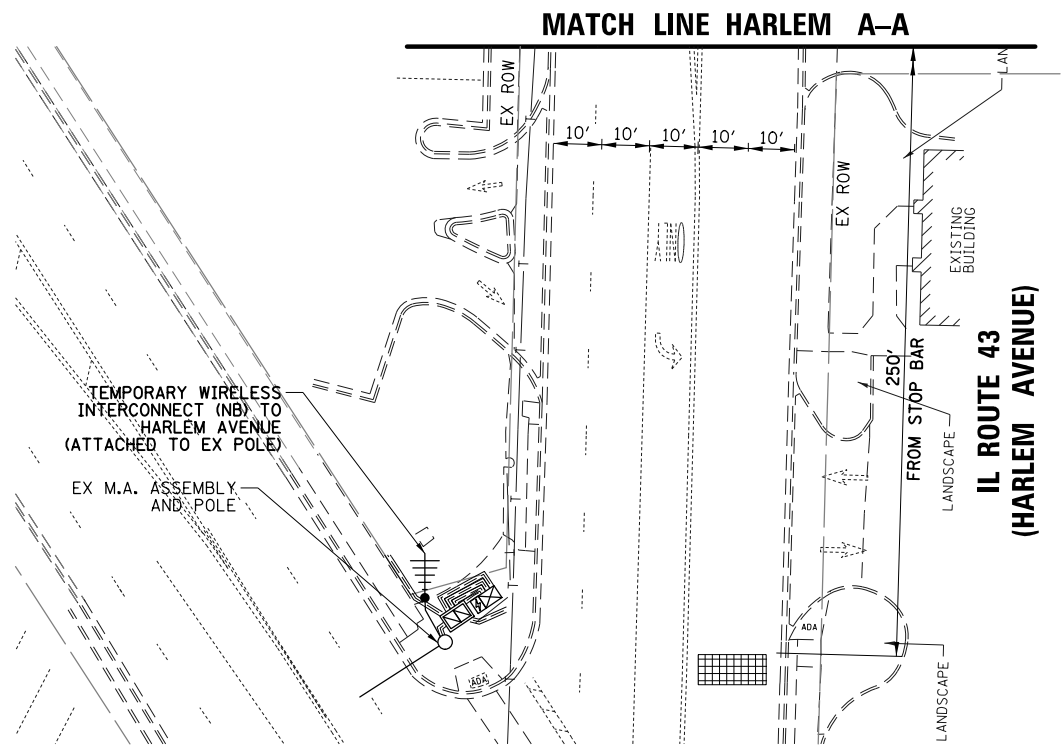
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Default	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN - FINAL GEOMETRY
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	130
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



TS SHT NO. 14

**TS 2330
EAGLE 1A**

FILE NAME = N:\NILES\180016\Traffic\HARLEM_Sht-06.TMP-Fin01-02.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED - -
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Default	PLOT DATE = 11/21/2019		

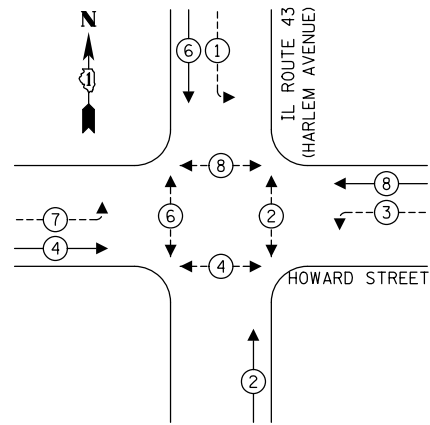
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN - FINAL GEOMETRY
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	131
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

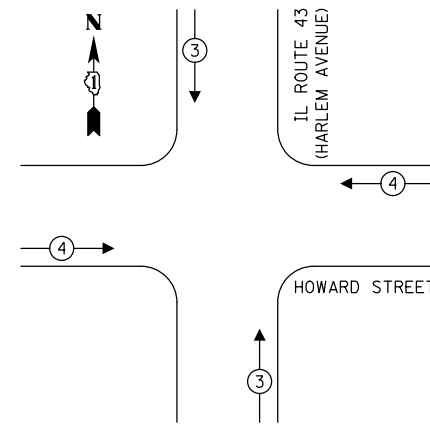
TEMPORARY CONTROLLER SEQUENCE



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
PERMISSIVE ARROW	12	10	10	12.0
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	-	-	-	-
TOTAL =				589.8

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

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

TS SHT NO. 15

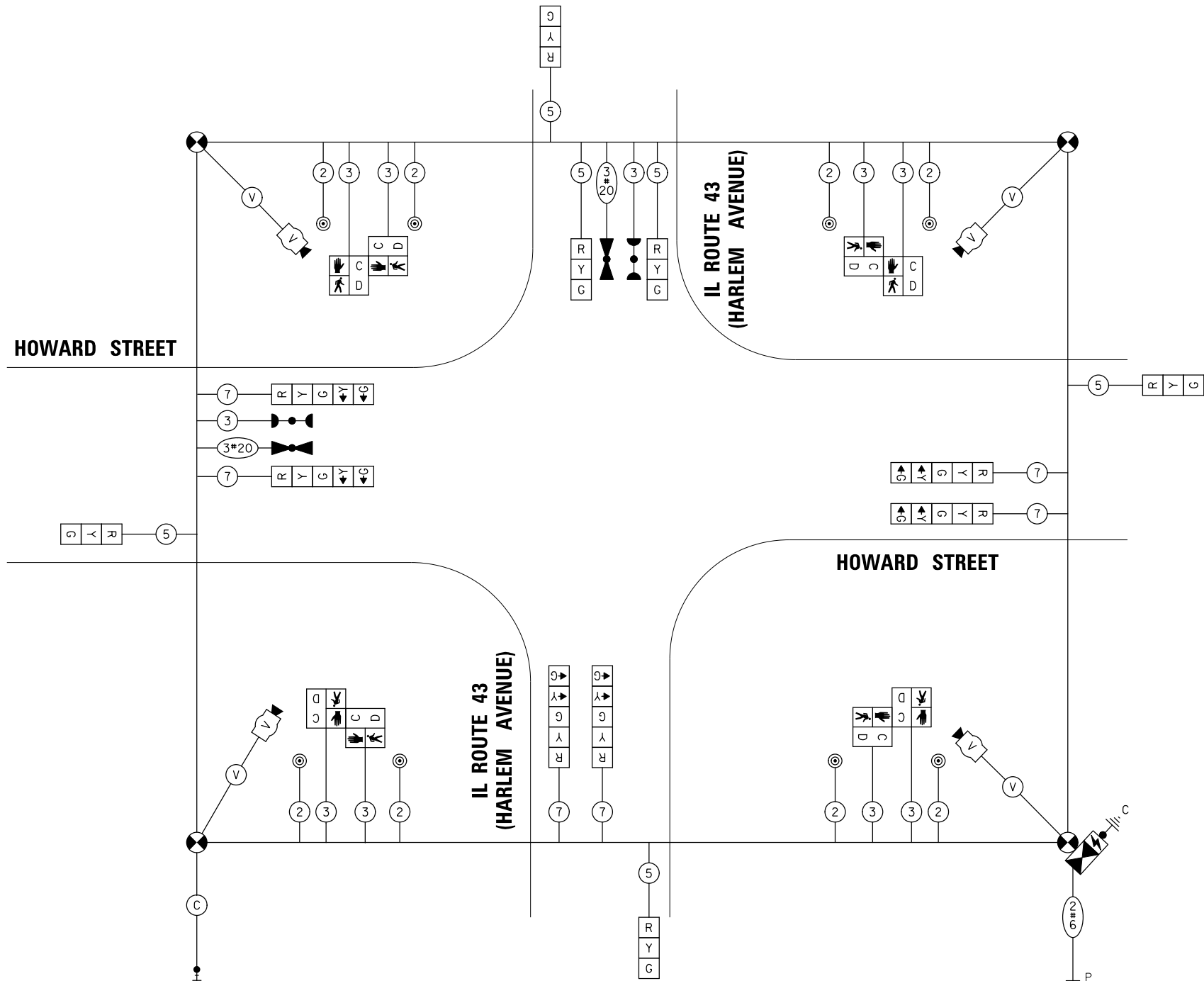
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Default	PLOT DATE = 11/21/2019

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

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CABLE PLAN
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	132
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



TEMPORARY WIRELESS INTERCONNECT TO MILWAUKEE AVENUE

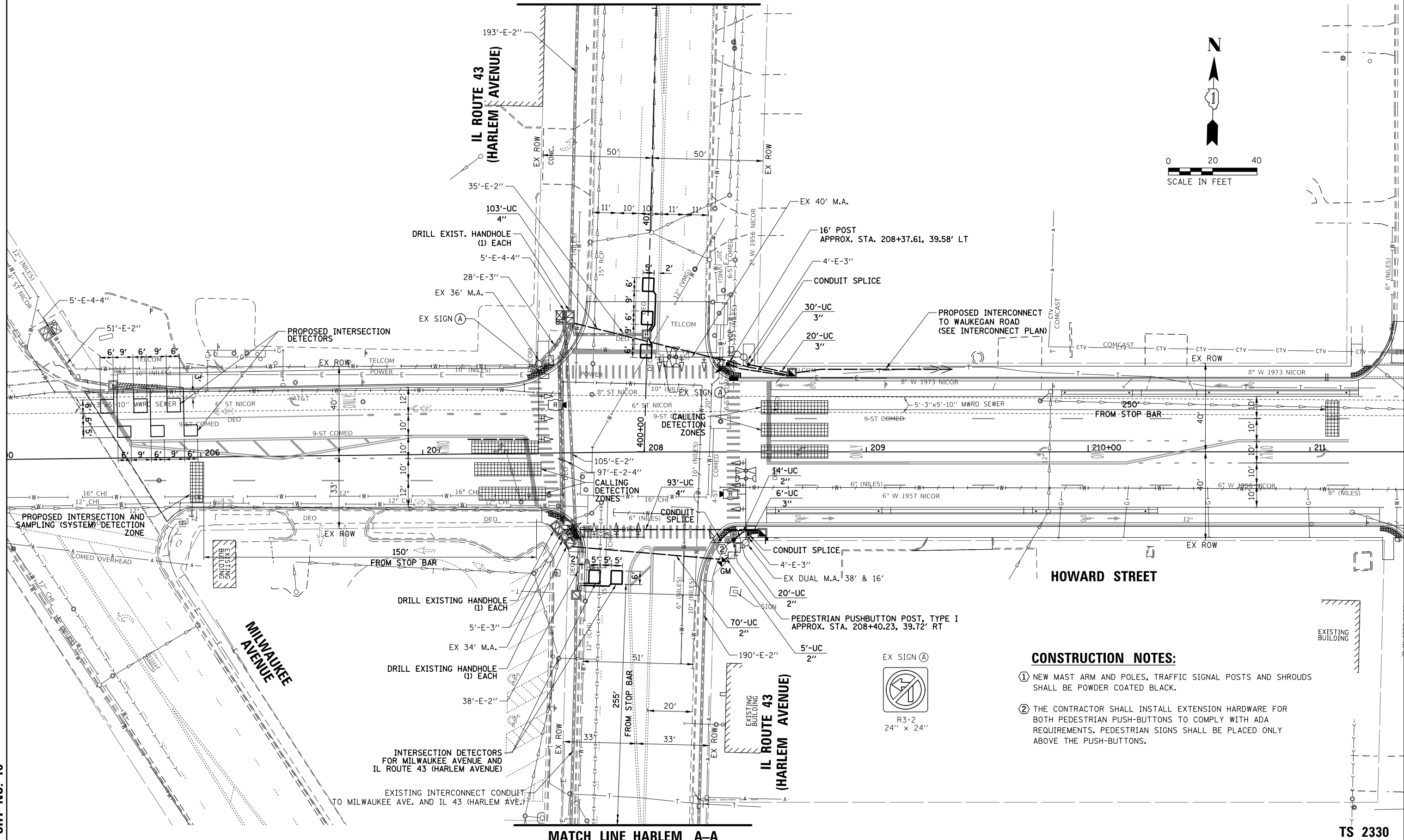
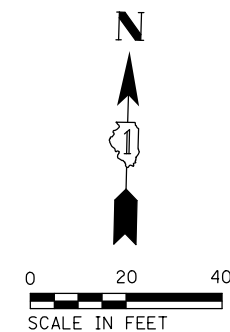
NOTE:
THE TRAFFIC SIGNAL CONTROLLER FOR THIS PROJECT SHALL MATCH THE EXISTING ADJACENT SYSTEM.

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

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

**TS 2330
EAGLE 1A**

MATCH LINE HARLEM B-B



MATCH LINE HARLEM A-A

CONSTRUCTION NOTES:

- ① NEW MAST ARM AND POLES, TRAFFIC SIGNAL POSTS AND SHROUDS SHALL BE POWDER COATED BLACK.
- ② THE CONTRACTOR SHALL INSTALL EXTENSION HARDWARE FOR BOTH PEDESTRIAN PUSH-BUTTONS TO COMPLY WITH ADA REQUIREMENTS. PEDESTRIAN SIGNS SHALL BE PLACED ONLY ABOVE THE PUSH-BUTTONS.



TS SHT NO. 16

TS 2330
EAGLE 1A

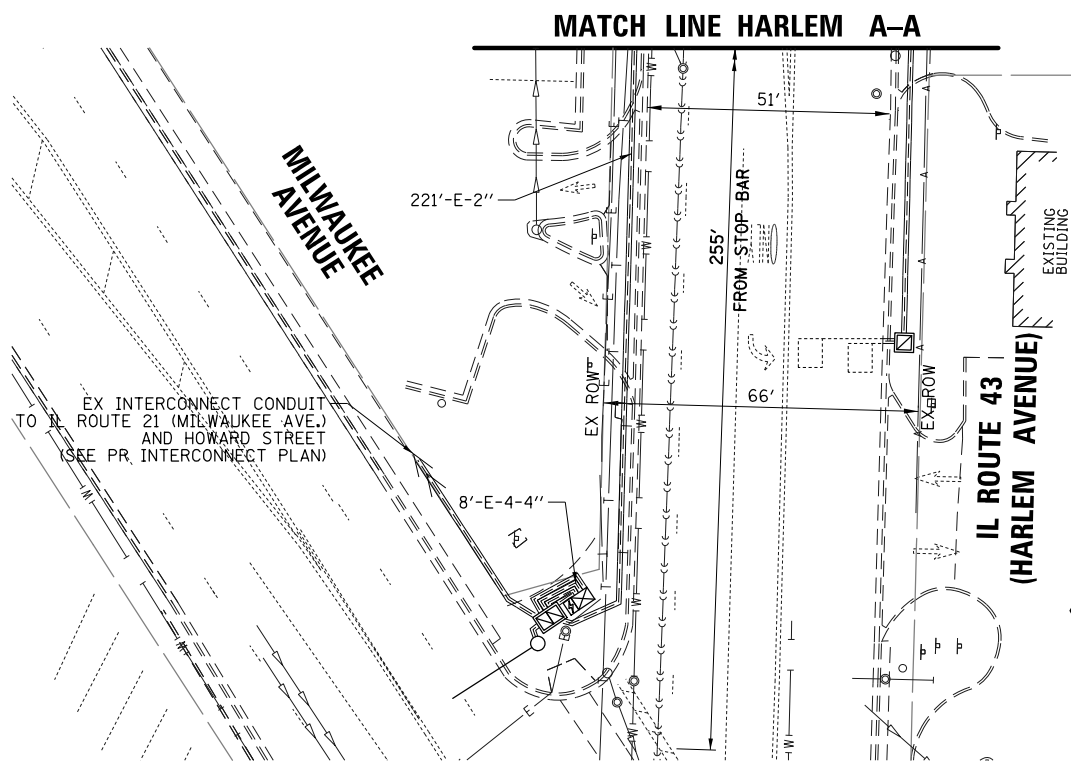
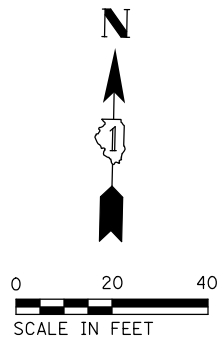
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N:\NILES\180016\Traffic\HARLEM_Sht-08_M0-01.dgn		DRAWN - FPB	REVISED -
Default	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)

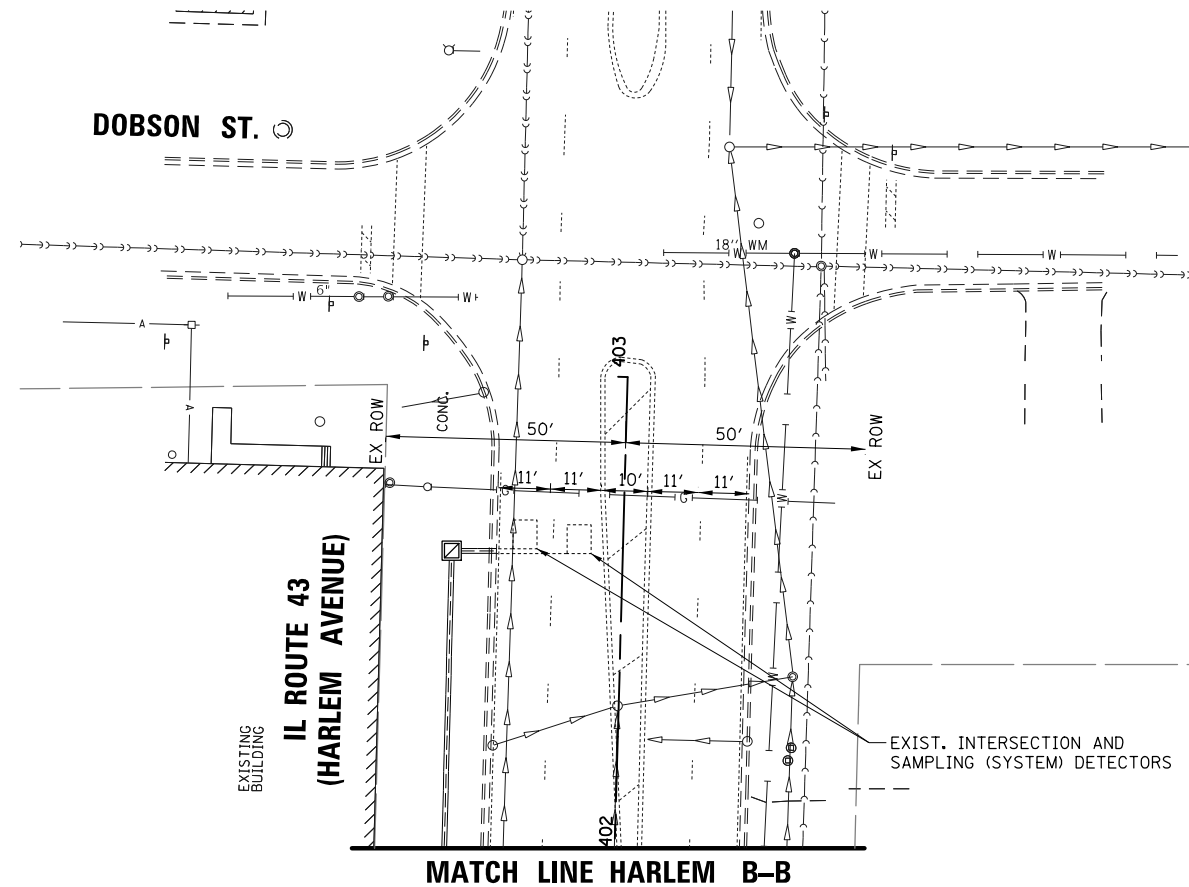
SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	133
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



CONSTRUCTION NOTES:

- ① NEW TRAFFIC SIGNAL POSTS AND SHROUDS SHALL BE POWDER COATED BLACK.



TS SHT NO. 17

**TS 2330
EAGLE 1A**

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\HARLEM_Sht-09.MXD	0-02.dgn	DRAWN - FPB	REVISED -
Default	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

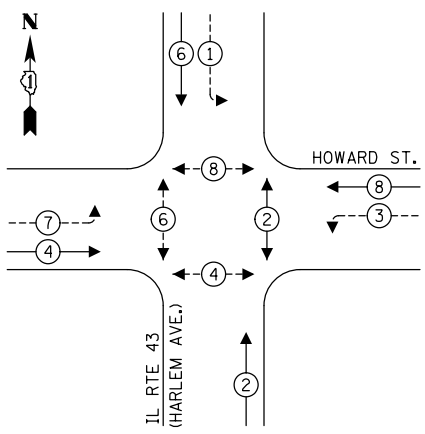
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	134
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

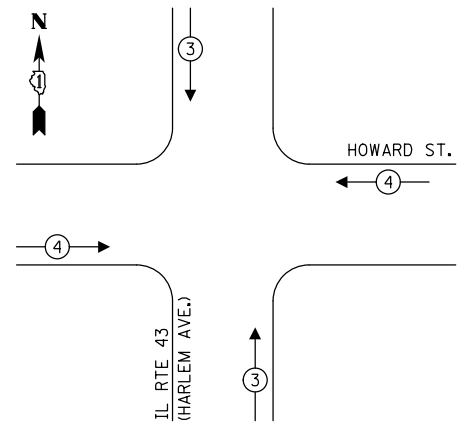
EXISTING CONTROLLER SEQUENCE



LEGEND:

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

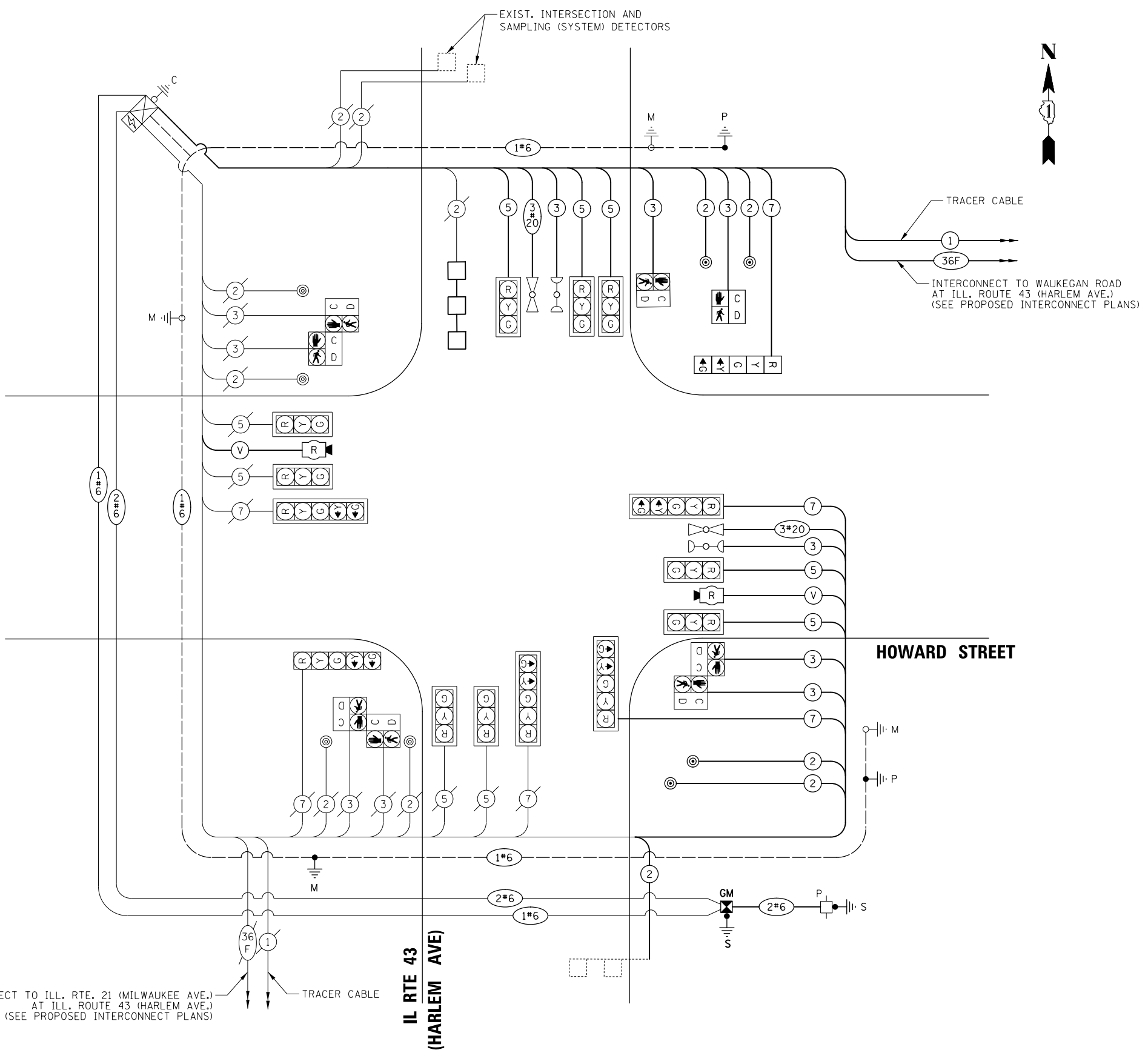
EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	15	11	50	82.5
(YELLOW)	15	20	5	15.0
(GREEN)	15	12	45	81.0
PERMISSIVE ARROW	12	10	10	12.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				475.5

ENERGY COSTS TO:
 VILLAGE OF NILES
 1000 CIVIC CENTER DRIVE
 NILES, IL 60714
 ENERGY SUPPLY: CONTACT: NEW BUSINESS
 PHONE: NEW PHONE
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: ---



CABLE PLAN
(NOT TO SCALE)

TS SHT NO. 18

TS 2330
EAGLE 1A

FILE NAME = N:\NILES\180016\Traffic\HARLEM_Sht-18.CAD	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)	F.A. RTE. = 1334	SECTION = 13-00116-00-TL	COUNTY = COOK	TOTAL SHEETS = 221	SHEET NO. = 135	
PLOT SCALE = 48"	CHECKED - GMZ	REVISED -	SCALE: N.T.S.			SHEET OF SHEETS	STA. TO STA.	CONTRACT NO. 61G08		ILLINOIS FED. AID PROJECT	
PLOT DATE = 11/21/2019	DATE -	REVISED -									

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	109
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	56
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	196
HANDHOLE	EACH	2
PAINT NEW TRAFFIC SIGNAL POST	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	860
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,385
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,219
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	775
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	449
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	240
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	463
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
PEDESTRIAN PUSH-BUTTON POST, TYPE I	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	12
DRILL EXISTING HANDHOLE	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
DETECTOR LOOP, TYPE I	FOOT	91
PEDESTRIAN PUSH-BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3,983
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	6
REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	511
• ROD AND CLEAN EXISTING CONDUIT	FOOT	500
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
CONDUIT SPLICE	EACH	3
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	2

• NOMINAL QUANTITY TO BE USED AS NEEDED AND AS APPROVED BY THE ENGINEER

TS SHT NO. 19

**TS 2330
EAGLE 1A**

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES HOWARD STREET AND IL ROUTE 43 (HARLEM AVENUE)	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\NILES\180016\Traffic\HARLEM_Sht-11.STN.dgn	DRAWN - FPB	REVISED -	1334			13-00116-00-TL	COOK	221	136		
Default	PLOT SCALE = 48'	CHECKED - GMZ	REVISED -			CONTRACT NO. 61G08					
	PLOT DATE = 11/21/2019	DATE -	REVISED -			SCALE: N.T.S.	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		

REMOVAL NOTES:

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

- 1 EACH TRAFFIC SIGNAL CABINET
- 1 EACH UNINTERRUPTIBLE POWER SUPPLY (UPS)
- 4 EACH STEEL MAST ARM ASSEMBLY AND POST
- 2 EACH TRAFFIC SIGNAL POST
- 12 EACH 3-SECTION SIGNAL HEAD
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION
- 8 EACH TRAFFIC SIGNAL BACKPLATE

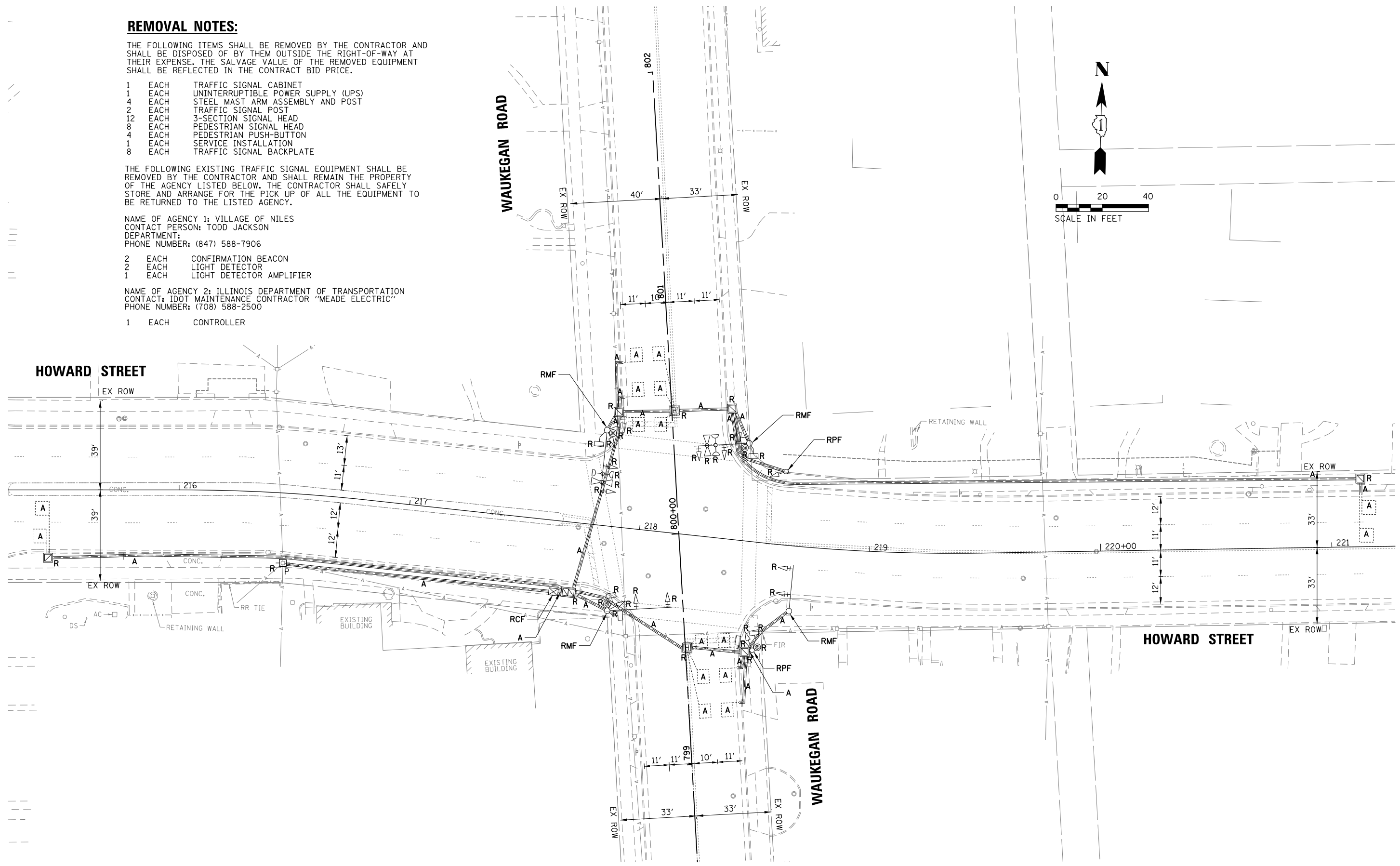
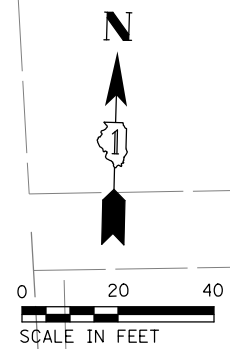
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR THE PICK UP OF ALL THE EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY.

NAME OF AGENCY 1: VILLAGE OF NILES
 CONTACT PERSON: TODD JACKSON
 DEPARTMENT:
 PHONE NUMBER: (847) 588-7906

- 2 EACH CONFIRMATION BEACON
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

NAME OF AGENCY 2: ILLINOIS DEPARTMENT OF TRANSPORTATION
 CONTACT: IDOT MAINTENANCE CONTRACTOR "MEADE ELECTRIC"
 PHONE NUMBER: (708) 588-2500

- 1 EACH CONTROLLER

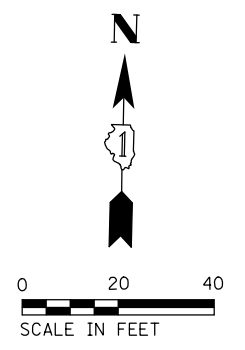
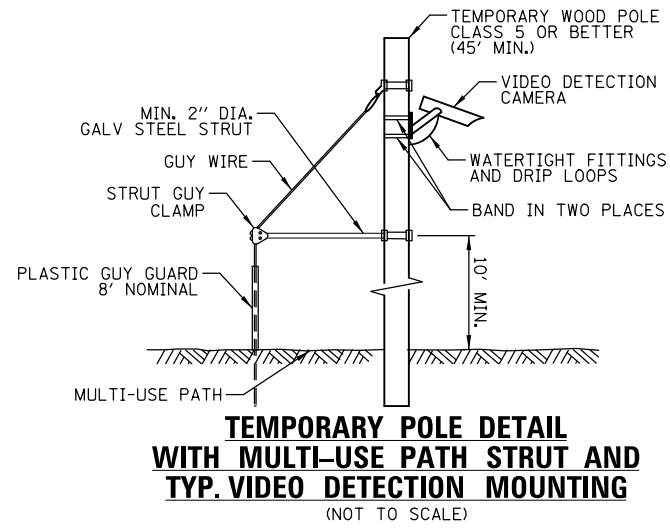
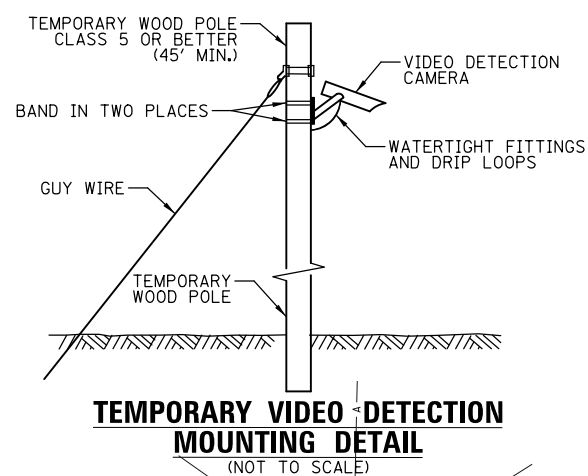
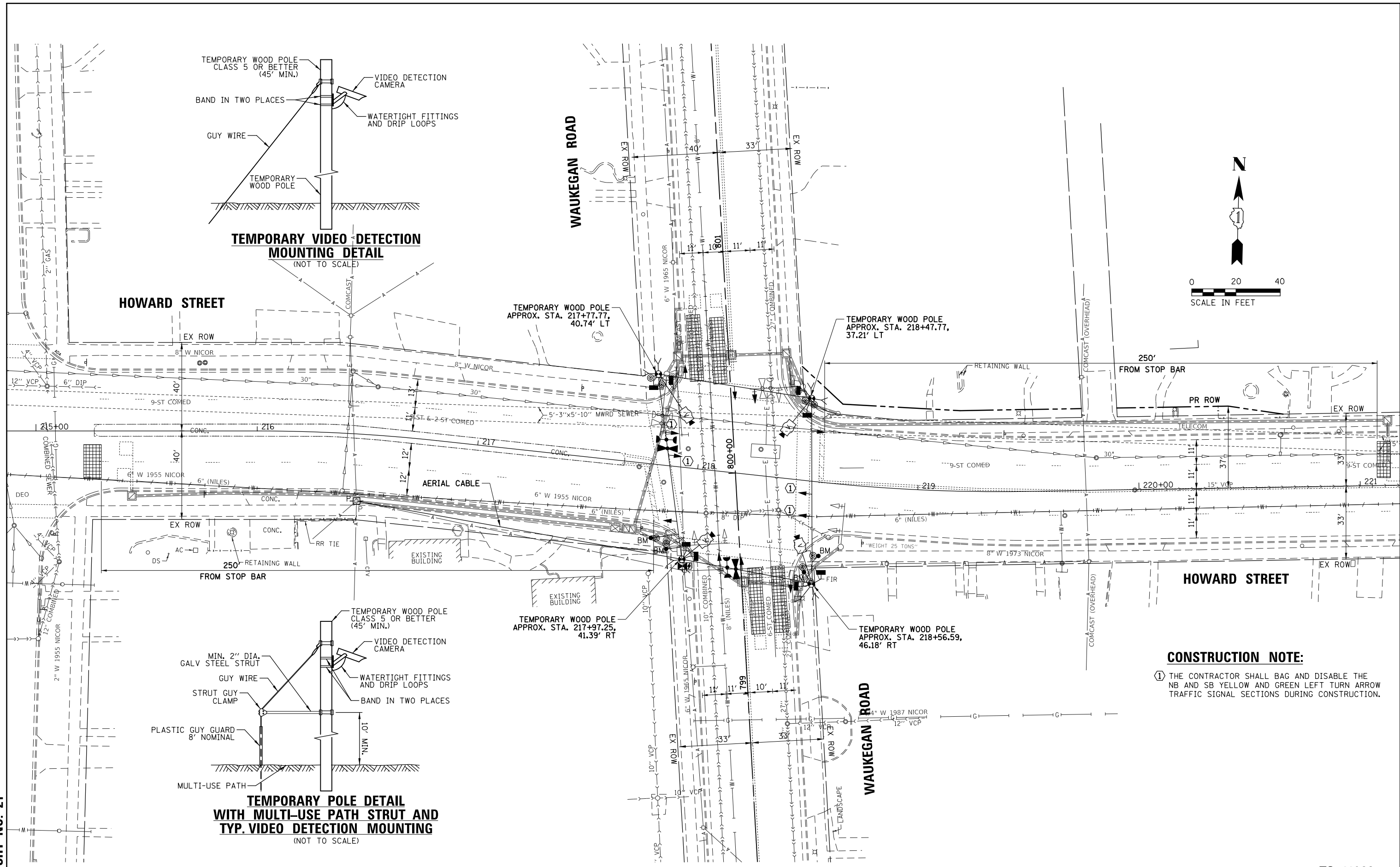


TS SHT NO. 20

TS 11260

FILE NAME = N:\NILES\180016\Traffic\WAUKEGAN_Sht-01	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN HOWARD STREET AND WAUKEGAN ROAD	F.A.S. RTE. = 1334	SECTION = 13-00116-00-TL	COUNTY = COOK	TOTAL SHEETS = 221	SHEET NO. = 137
	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			SCALE: 1" = 40'	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT	
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -							

TS SHT NO. 21



CONSTRUCTION NOTE:
 (1) THE CONTRACTOR SHALL BAG AND DISABLE THE NB AND SB YELLOW AND GREEN LEFT TURN ARROW TRAFFIC SIGNAL SECTIONS DURING CONSTRUCTION.

FILE NAME = N:\NILES\180016\Traffic\WAUKEGAN_Sht-02.TMP.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
PLLOT SCALE = 48'	PLLOT DATE = 11/21/2019	DRAWN - FPB	REVISED -
		CHECKED - GMZ	REVISED -
		DATE -	REVISED -

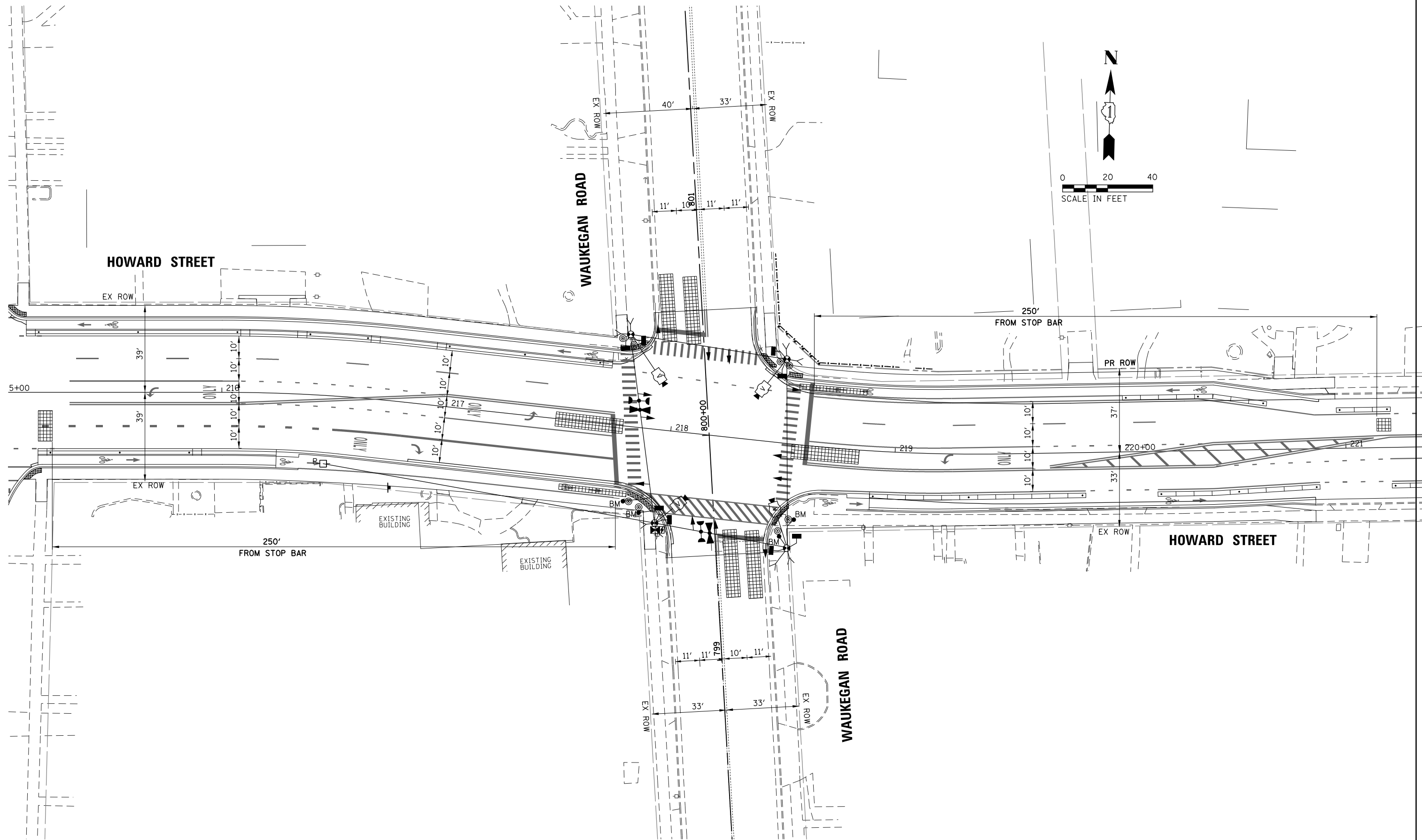
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION EXISTING GEOMETRY HOWARD STREET AND WAUKEGAN ROAD			
SCALE: 1" = 40'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 138
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

TS 11260

TS SHT NO. 22



TS 11260

FILE NAME = N:\NILES\180016\Traffic\WAUKEGAN_Sht-03	USER NAME = rhowellindgren TMP-Final.dgn	DESIGNED - TFS	REVISED -
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		DATE -	REVISED -

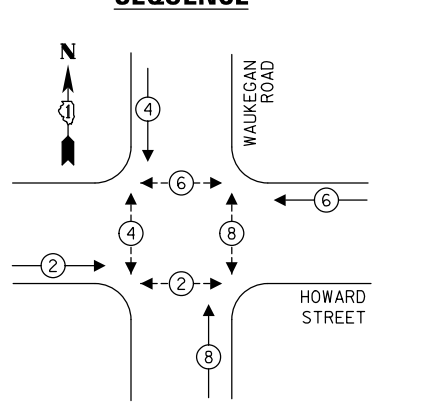
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION
FINAL GEOMETRY
HOWARD STREET AND WAUKEGAN ROAD**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	139
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

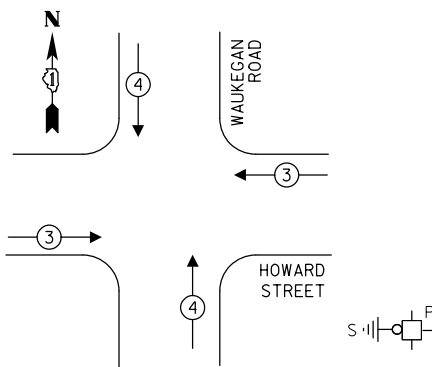
TEMPORARY CONTROLLER SEQUENCE



LEGEND:

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

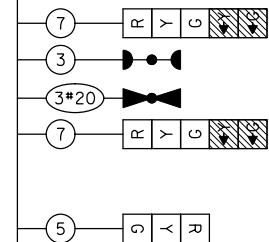
TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

▨ = BAGGED AND DISABLED

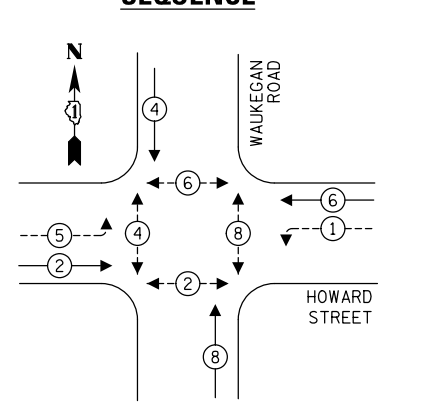
HOWARD STREET



WAUKEGAN ROAD

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

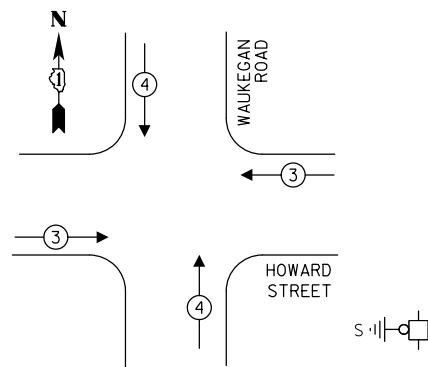
TEMPORARY CONTROLLER SEQUENCE



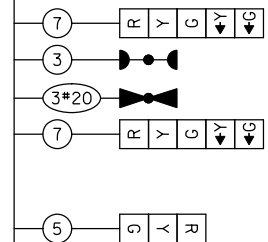
LEGEND:

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

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



HOWARD STREET



WAUKEGAN ROAD

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

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
PERMISSIVE ARROW	-	10	10	-
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	-	-	-	-
TOTAL =				577.8

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY: CONTACT: NEW BUSINESS
PHONE: NEW PHONE
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

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
PERMISSIVE ARROW	8	10	10	8.0
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	-	-	-	-
TOTAL =				585.8

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY: CONTACT: NEW BUSINESS
PHONE: NEW PHONE
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

TS SHT NO. 23

FILE NAME =	USER NAME = rhowellindgren
N:\NILES\180016\Traffic\WAUKEGAN_Sht-04	TCB.dgn
Default	PLOT SCALE = 48"
	PLOT DATE = 11/21/2019

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

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
HOWARD STREET AND WAUKEGAN ROAD**

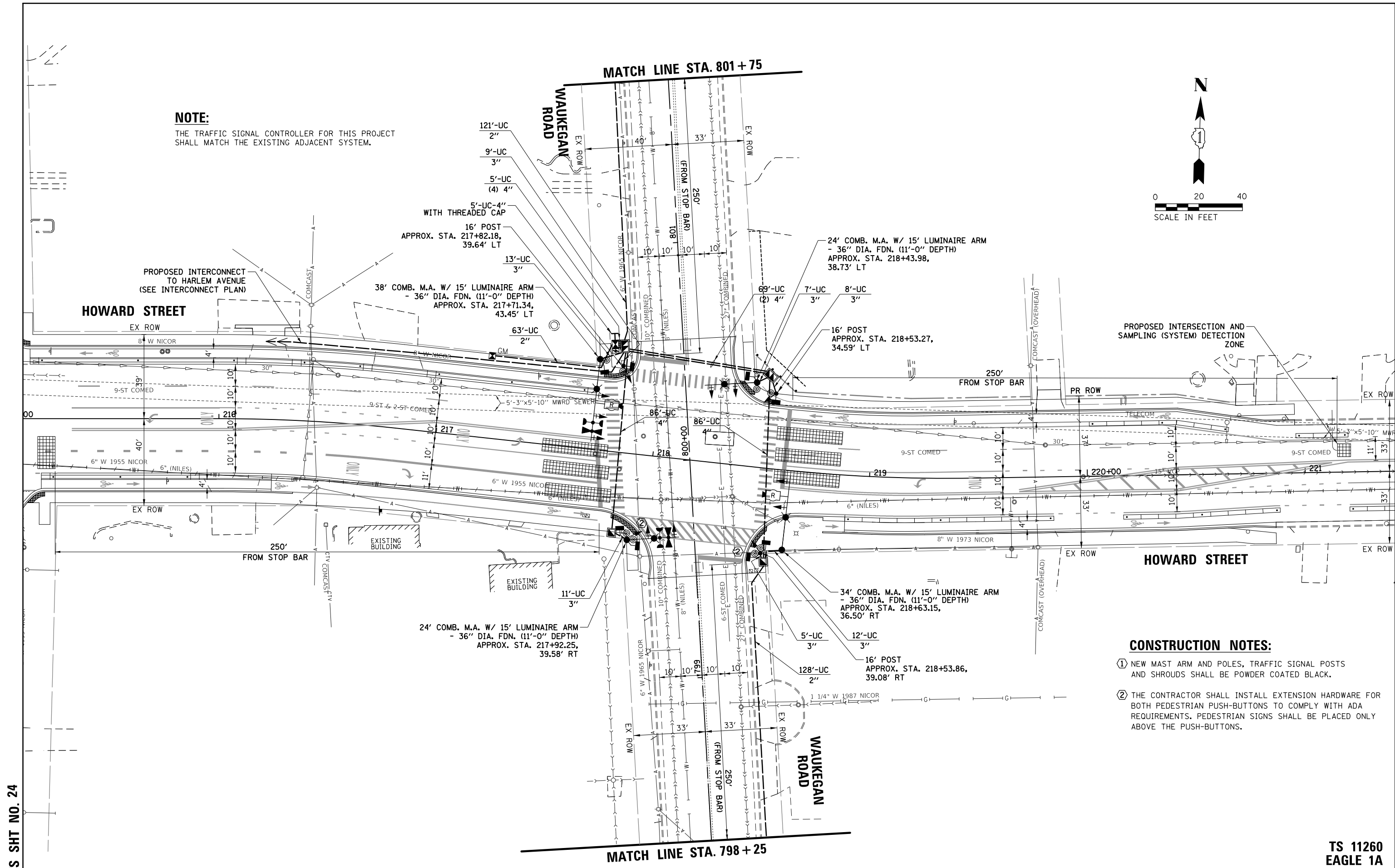
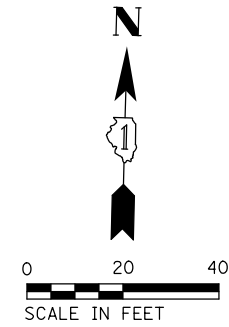
SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	140
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

TS 11260

NOTE:

THE TRAFFIC SIGNAL CONTROLLER FOR THIS PROJECT SHALL MATCH THE EXISTING ADJACENT SYSTEM.



CONSTRUCTION NOTES:

- ① NEW MAST ARM AND POLES, TRAFFIC SIGNAL POSTS AND SHROUDS SHALL BE POWDER COATED BLACK.
- ② THE CONTRACTOR SHALL INSTALL EXTENSION HARDWARE FOR BOTH PEDESTRIAN PUSH-BUTTONS TO COMPLY WITH ADA REQUIREMENTS. PEDESTRIAN SIGNS SHALL BE PLACED ONLY ABOVE THE PUSH-BUTTONS.

TS SHT NO. 24

**TS 11260
EAGLE 1A**

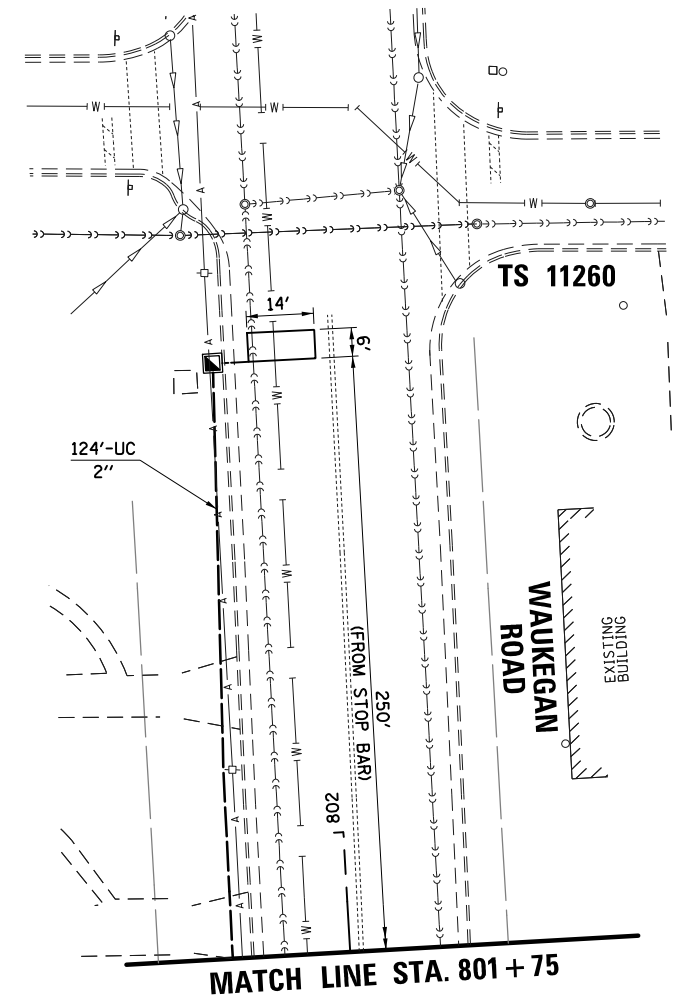
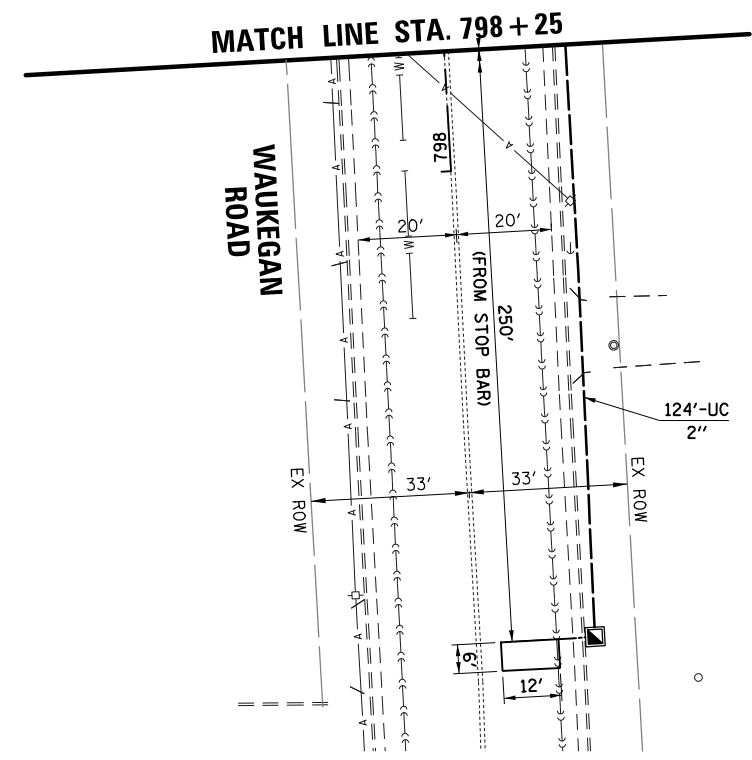
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Default	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
HOWARD STREET AND WAUKEGAN ROAD**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	141
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



TS SHT NO. 25

**TS 11260
EAGLE 1A**

FILE NAME = N:\NILES\180016\Traffic\WAUKEGAN_Sht-06	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
MOD2.dgn		DRAWN - FPB	REVISED -
PLOT SCALE = 48"		CHECKED - GMZ	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

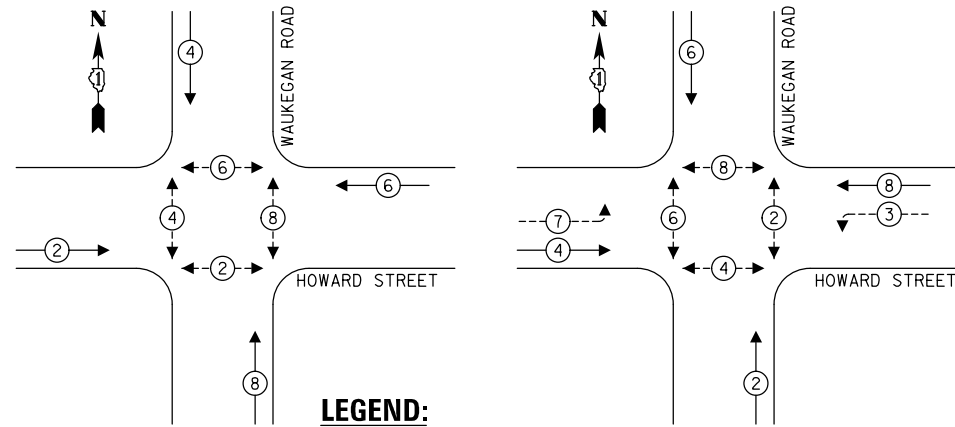
**TRAFFIC SIGNAL MODERNIZATION PLAN
HOWARD STREET AND WAUKEGAN ROAD**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	142
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

EXISTING CONTROLLER SEQUENCE

PROPOSED CONTROLLER SEQUENCE

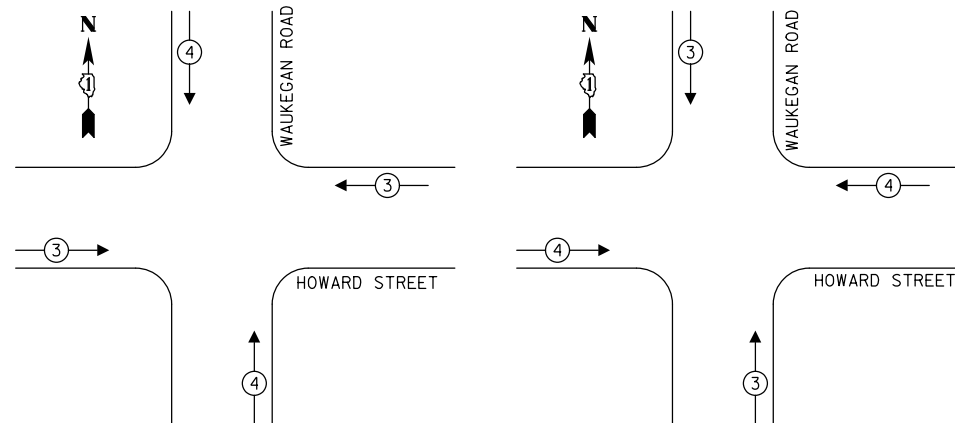


LEGEND:

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

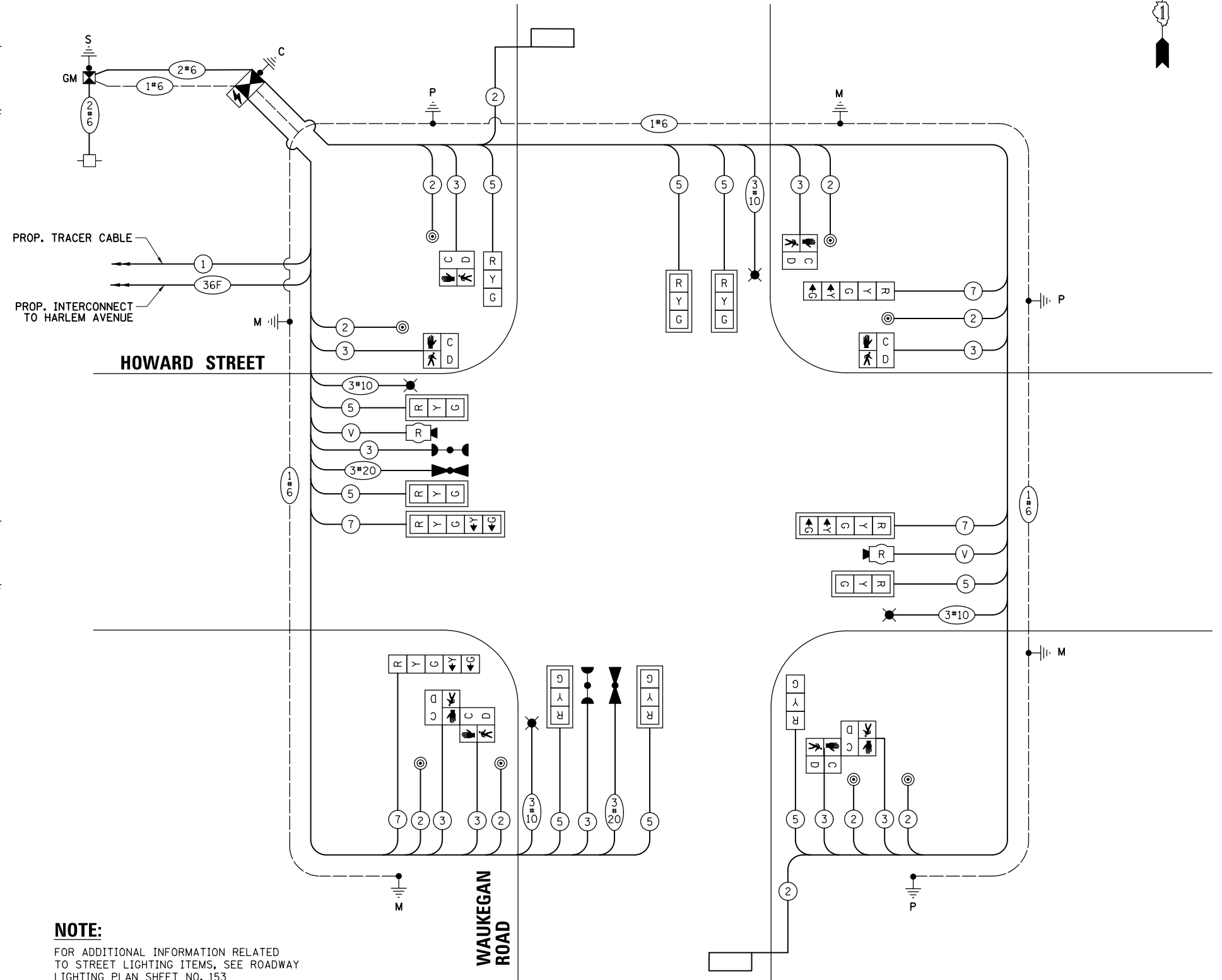
EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTE:

THE TRAFFIC SIGNAL CONTROLLER FOR THIS PROJECT SHALL MATCH THE EXISTING ADJACENT SYSTEM.



NOTE:

FOR ADDITIONAL INFORMATION RELATED TO STREET LIGHTING ITEMS, SEE ROADWAY LIGHTING PLAN SHEET NO. 153

CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	13	20	5	13.0
(GREEN)	13	12	45	70.2
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				447.7

ENERGY COSTS TO:
VILLAGE OF NILES
1000 CIVIC CENTER DRIVE
NILES, IL 60714

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

TS SHT NO. 26

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\WAUKEGAN_Sht-07	CAB.dgn	DRAWN - PJA	REVISED -
	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND
EMERGENCY VEHICLE PREEMPTION SEQUENCE
HOWARD STREET AND WAUKEGAN ROAD

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

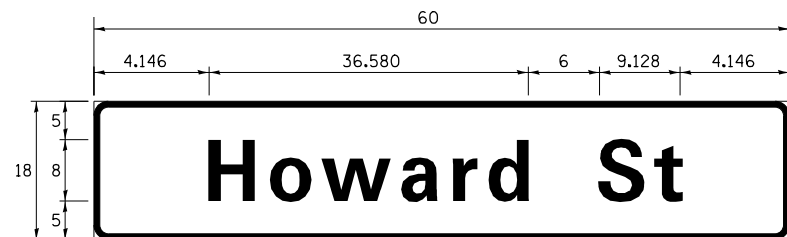
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	143
CONTRACT NO. 61G08				

TS 11260
EAGLE 1A

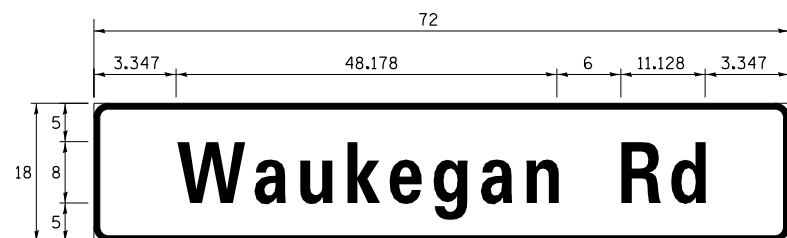
ILLINOIS FED. AID PROJECT

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	7.5	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.0	1	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SIGN PANEL - TYPE 1	SQ FT	33
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	560
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	65
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	339
HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	2
PAINT NEW TRAFFIC SIGNAL POST	EACH	3
PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1043
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1375
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1357
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	637
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	752
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	198
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	781
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT.	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	44
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	9
INDUCTIVE LOOP DETECTOR	EACH	2
DETECTOR LOOP, TYPE I	FOOT	82
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	9
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	276
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	2

TS SHT NO. 27

**TS 11260
EAGLE 1A**

FILE NAME = N:\NILES\180016\Traffic\WAUKEGAN_Sht-08	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES AND MAST ARM MOUNTED STREET NAME SIGN HOWARD STREET AND WAUKEGAN ROAD	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	STN.dgn	DRAWN - FPB	REVISED -			1334	13-00116-00-TL	COOK	221	144	
	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			CONTRACT NO. 61G08					
	PLOT DATE = 11/21/2019	DATE -	REVISED -			SCALE: N.T.S.	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		

REMOVAL NOTES:

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

- 1 EACH TRAFFIC SIGNAL CABINET
- 1 EACH UNINTERRUPTIBLE POWER SUPPLY (UPS)
- 4 EACH STEEL MAST ARM ASSEMBLY AND POST
- 4 EACH TRAFFIC SIGNAL POST
- 4 EACH 3-SECTION SIGNAL HEAD
- 8 EACH 5-SECTION SIGNAL HEAD
- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION
- 8 EACH TRAFFIC SIGNAL BACKPLATE

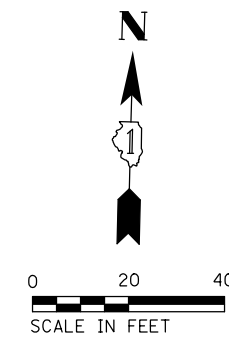
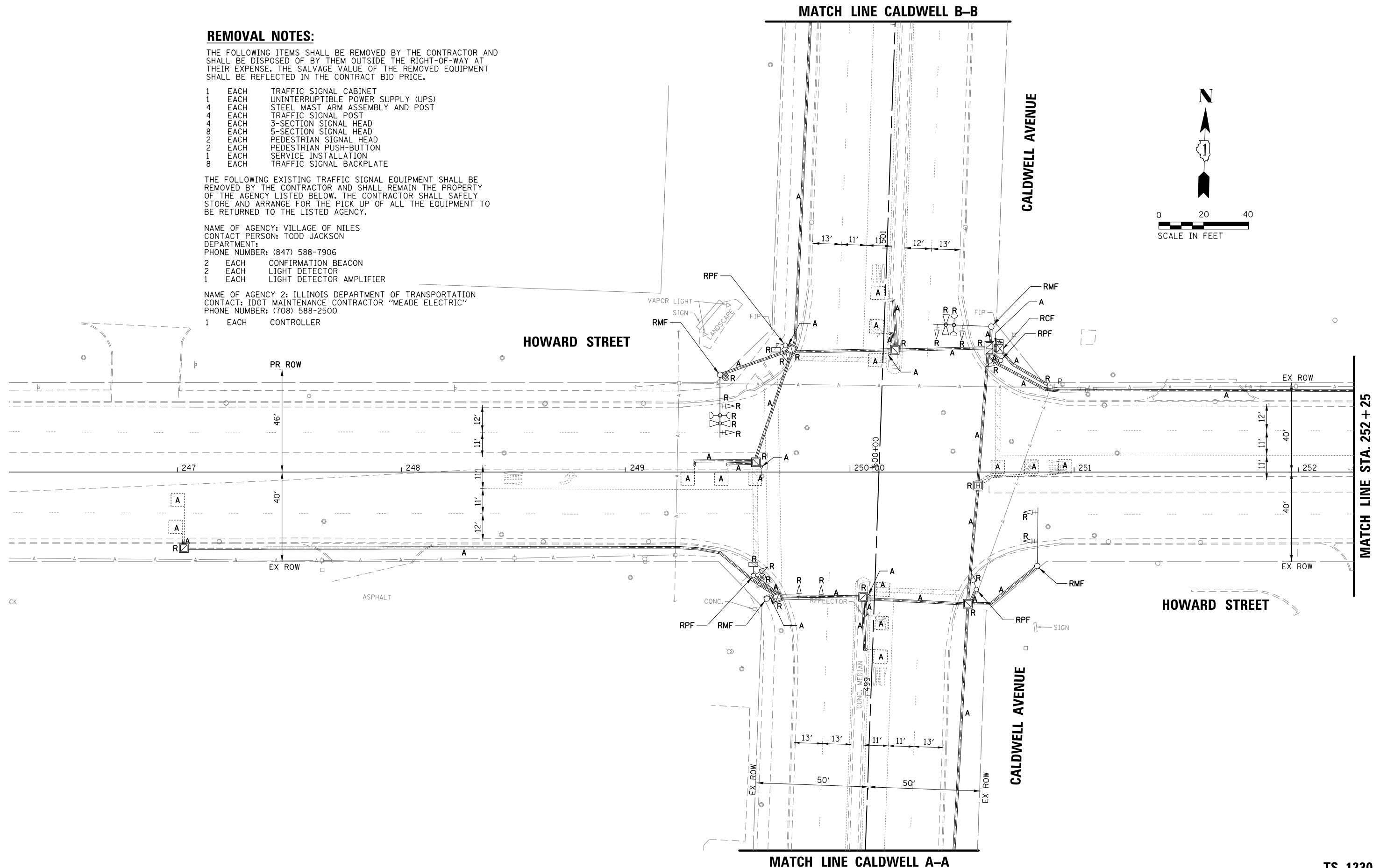
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR THE PICK UP OF ALL THE EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY.

NAME OF AGENCY: VILLAGE OF NILES
 CONTACT PERSON: TODD JACKSON
 DEPARTMENT:
 PHONE NUMBER: (847) 588-7906

- 2 EACH CONFIRMATION BEACON
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

NAME OF AGENCY 2: ILLINOIS DEPARTMENT OF TRANSPORTATION
 CONTACT: IDOT MAINTENANCE CONTRACTOR "MEADE ELECTRIC"
 PHONE NUMBER: (708) 588-2500

- 1 EACH CONTROLLER



TS SHT NO. 28

TS 1230

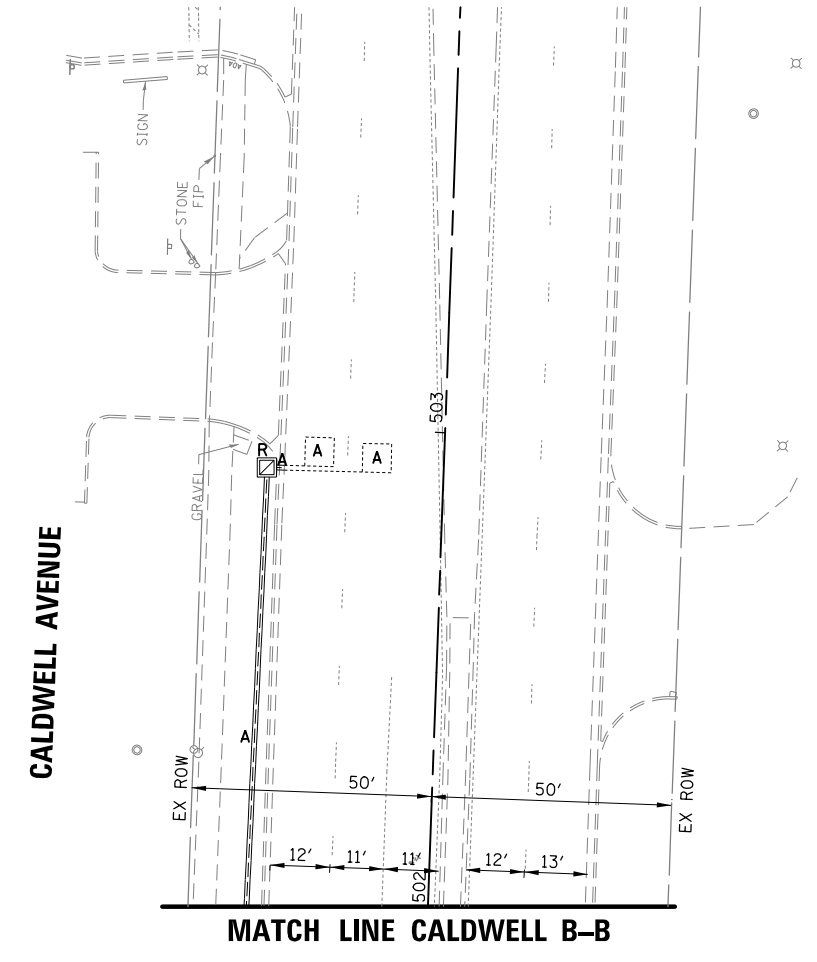
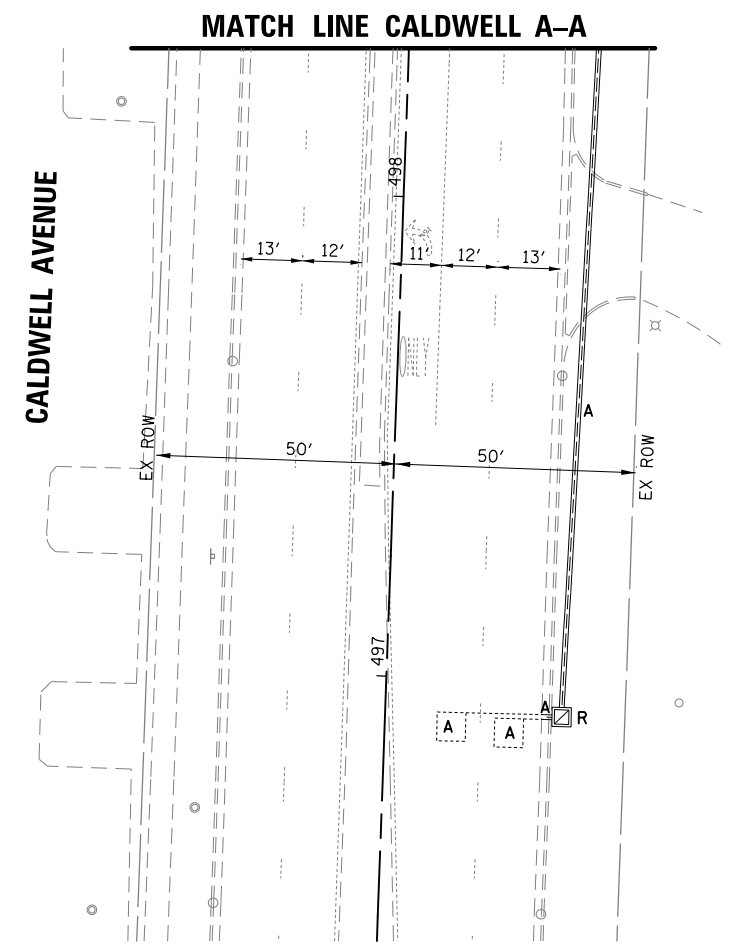
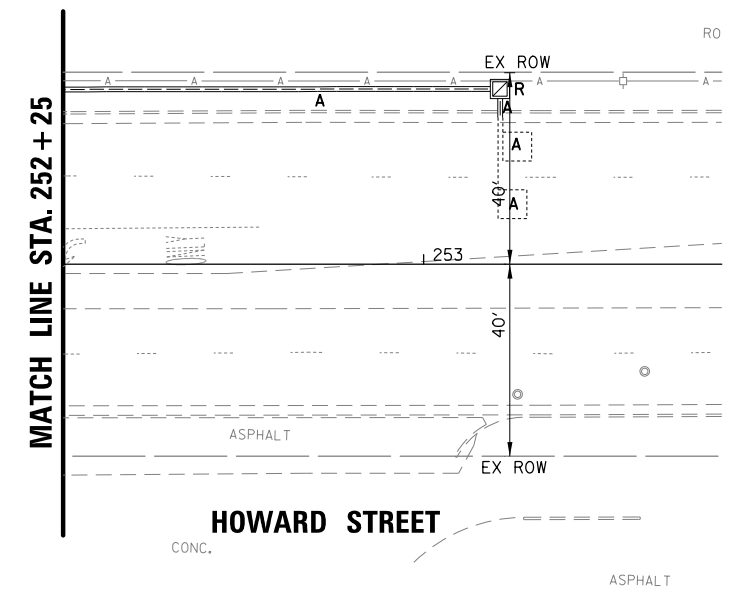
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REM-01.dgn		DRAWN - FPB	REVISED -
PLOT SCALE = 48'		CHECKED - GMZ	REVISED -
PLOT DATE = 11/21/2019		DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN
 HOWARD STREET AND CALDWELL AVENUE

SCALE: 1" = 40' SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	145
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	



TS SHT NO. 29

TS 1230

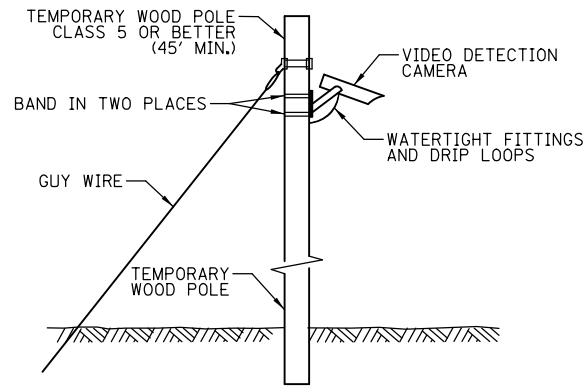
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Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
	PLOT DATE = 11/21/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

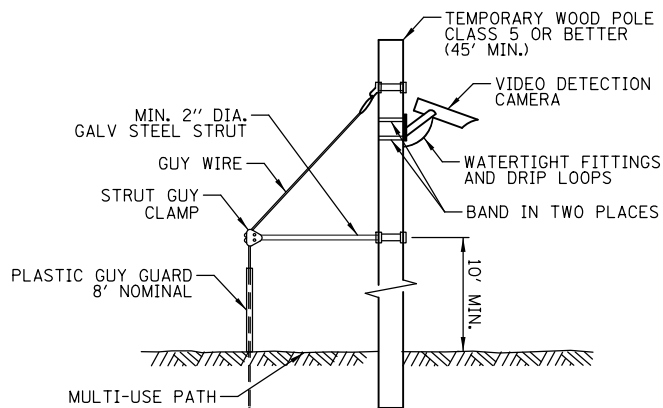
**TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN
HOWARD STREET AND CALDWELL AVENUE**

SCALE: 1" = 40'	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	146
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



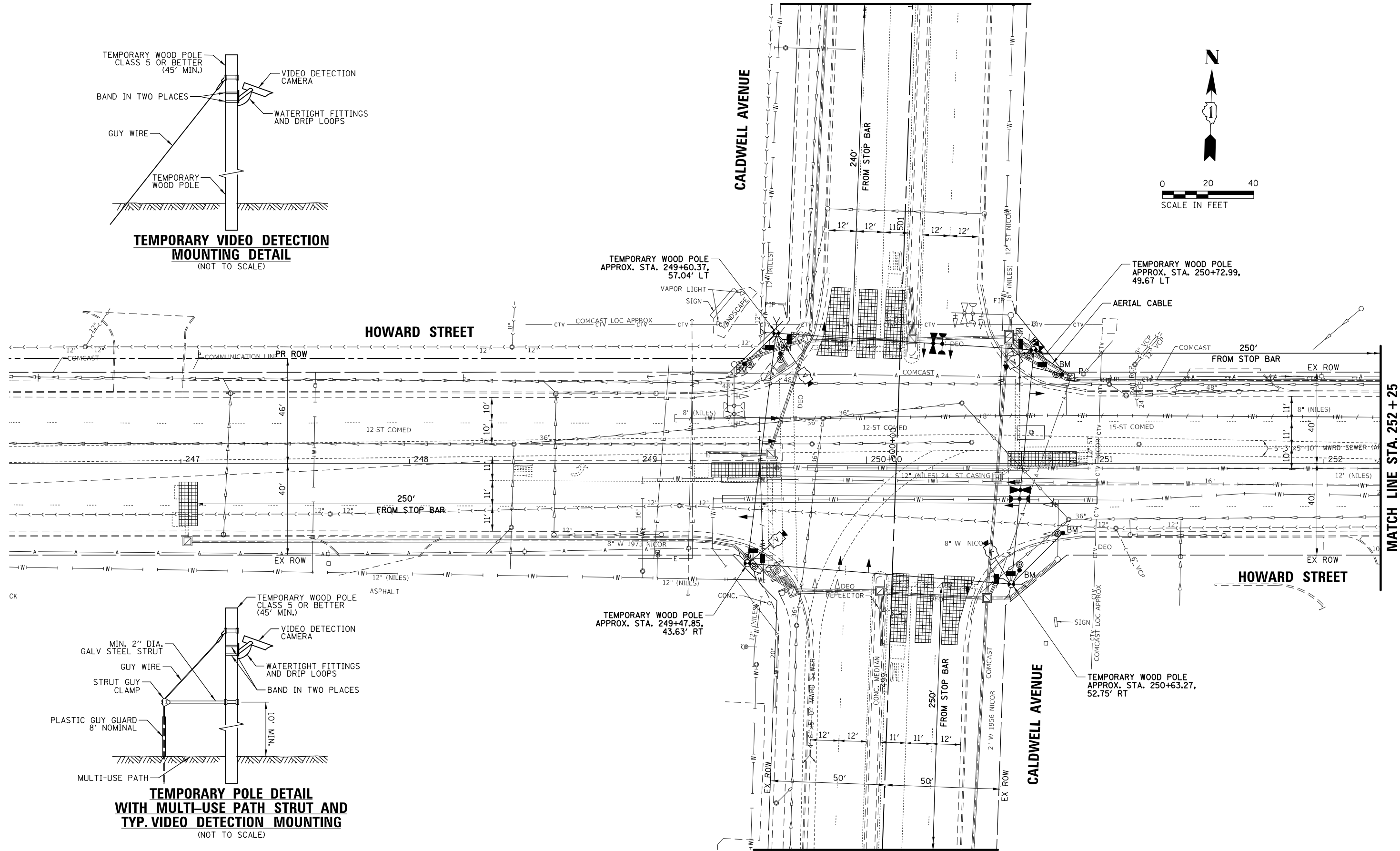
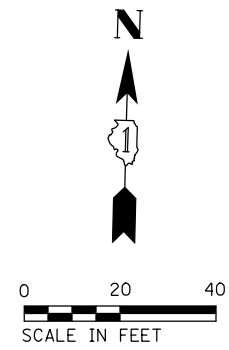
TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)



TEMPORARY POLE DETAIL WITH MULTI-USE PATH STRUT AND TYP. VIDEO DETECTION MOUNTING
(NOT TO SCALE)

MATCH LINE CALDWELL B-B

CALDWELL AVENUE



MATCH LINE CALDWELL A-A

MATCH LINE STA. 252 + 25

TS SHT NO. 30

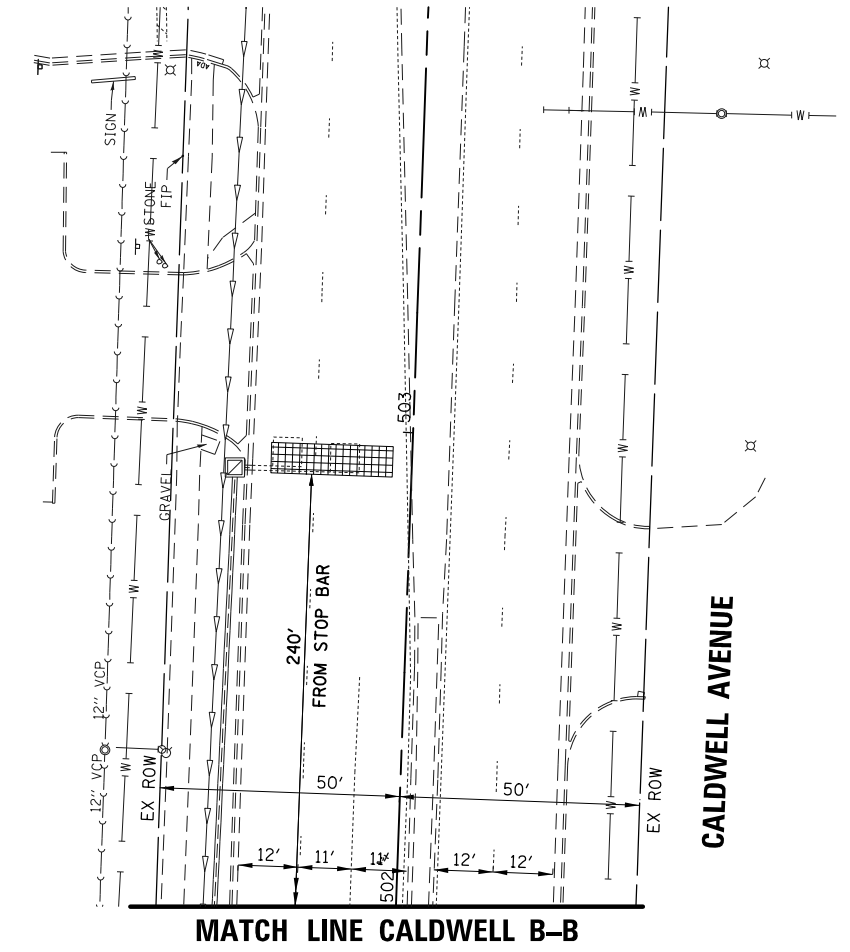
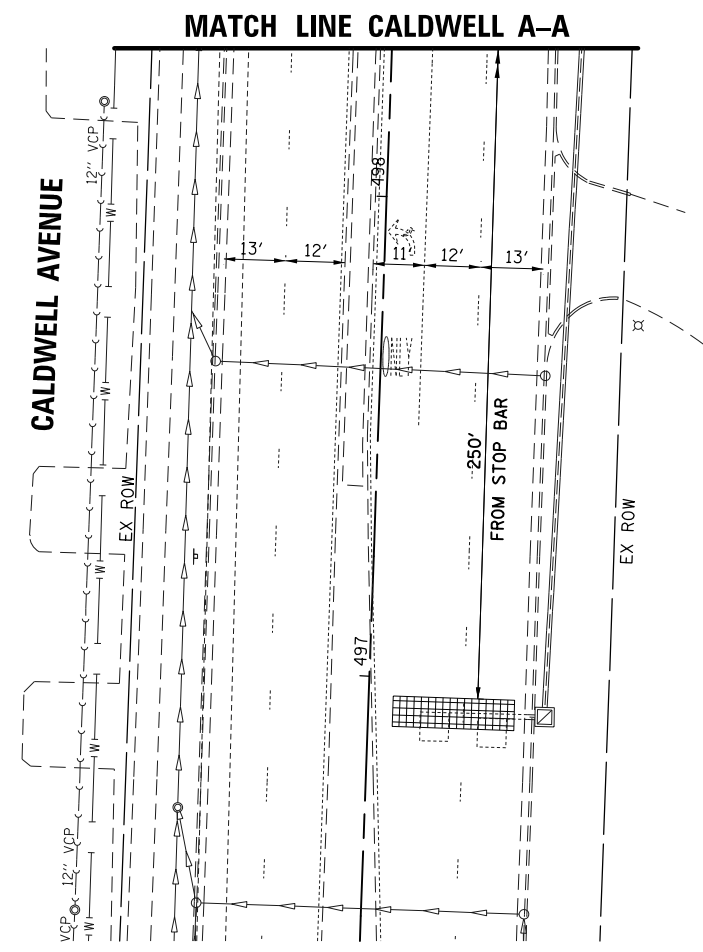
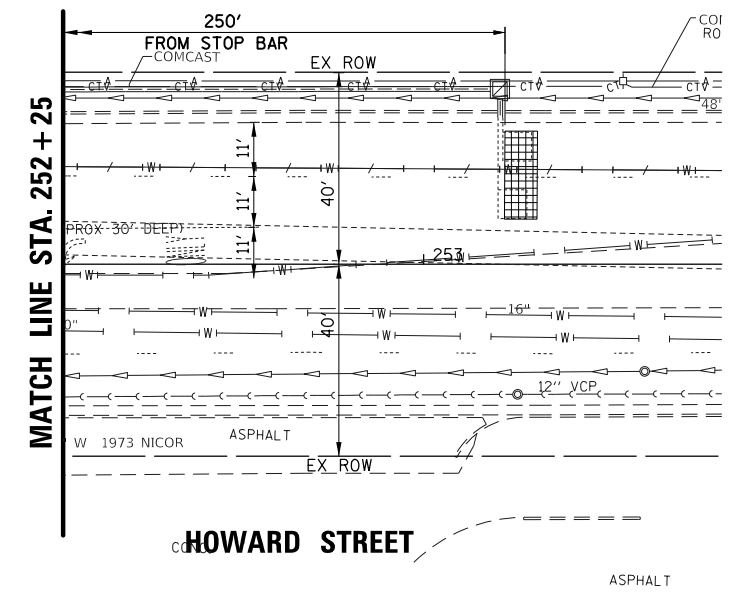
TS 1230

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Default	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION			
EXISTING GEOMETRY			
HOWARD STREET AND CALDWELL AVENUE			
SCALE: 1" = 40'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	147
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				



TS SHT NO. 31

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	PLOT SCALE = 48"	DRAWN - FPB	REVISED -
	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

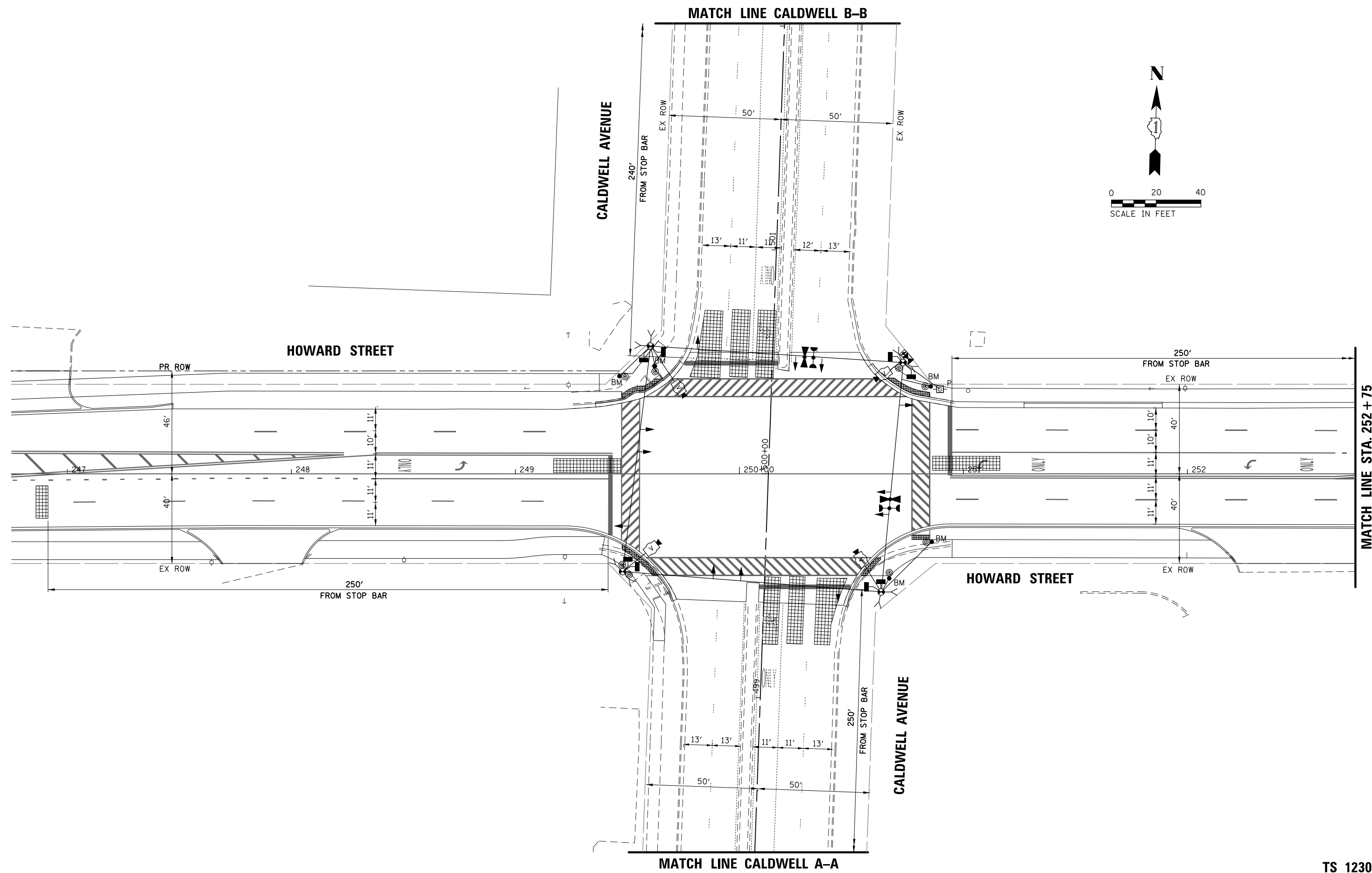
**TEMPORARY TRAFFIC SIGNAL INSTALLATION
EXISTING GEOMETRY
HOWARD STREET AND CALDWELL AVENUE**

SCALE: 1" = 40'	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	148
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G08	

TS 1230

TS SHT NO. 32



TS 1230

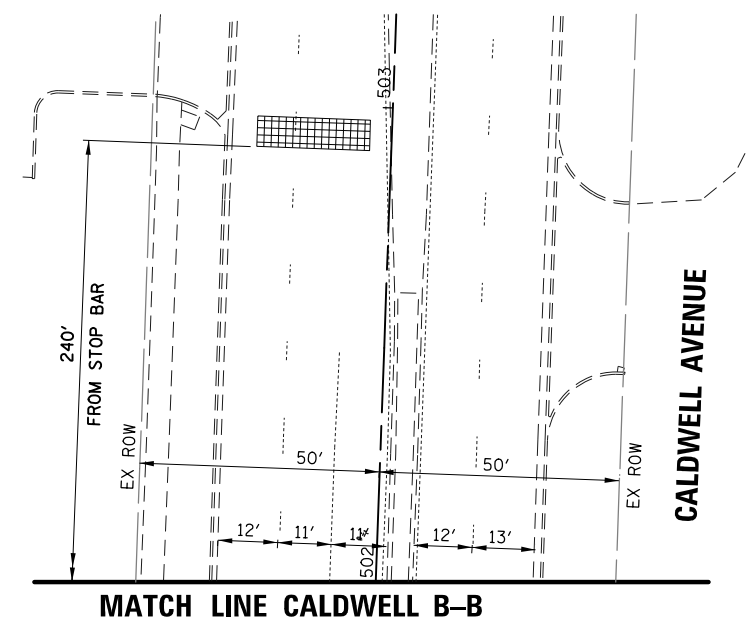
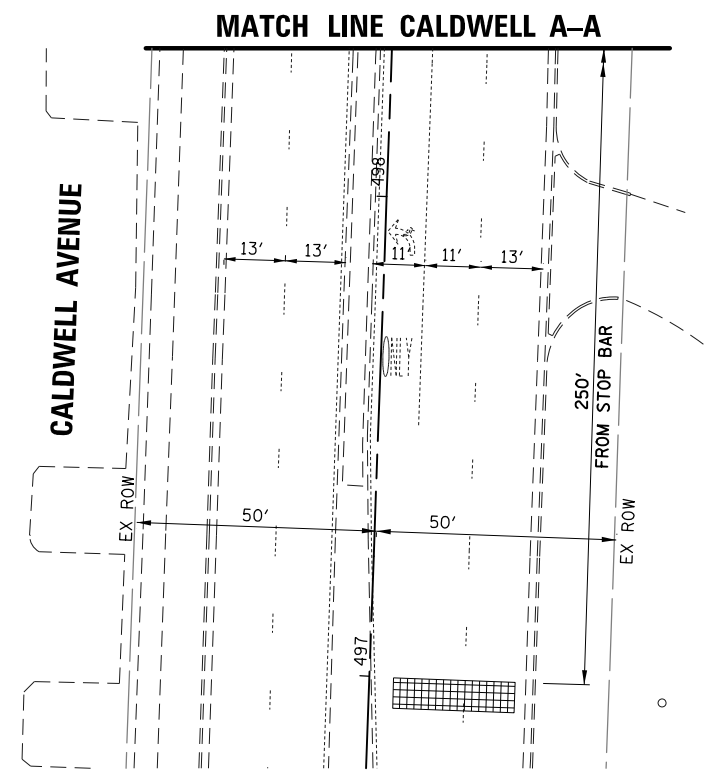
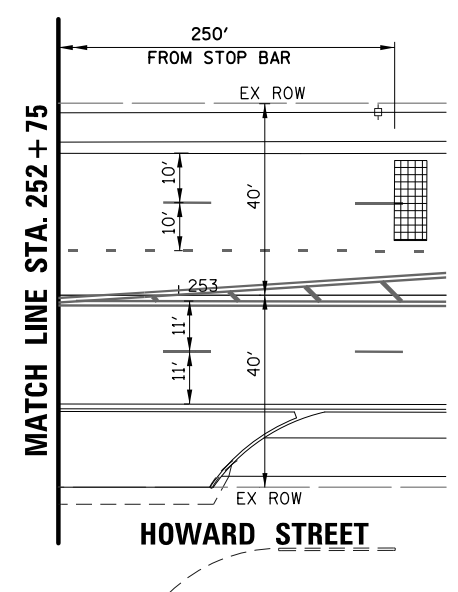
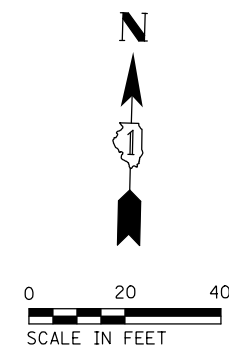
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Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
FINAL GEOMETRY
HOWARD STREET AND CALDWELL AVENUE

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	149
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

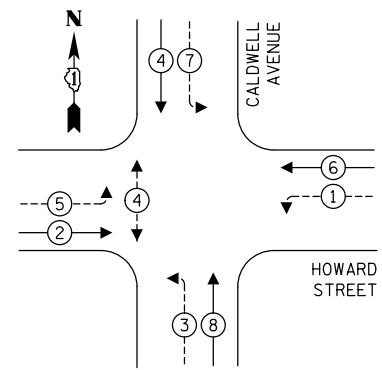


TS SHT NO. 33

TS 1230

FILE NAME = N:\NILES\180016\Traffic\CALDWELL_Sht-06	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION FINAL GEOMETRY HOWARD STREET AND CALDWELL AVENUE	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TMP-Final-02.dgn	DRAWN - FPB	REVISED -			1334	13-00116-00-TL	COOK	221	150
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -	SCALE: 1" = 40'	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			
	PLOT DATE = 11/21/2019	DATE -	REVISED -				CONTRACT NO. 61G08			

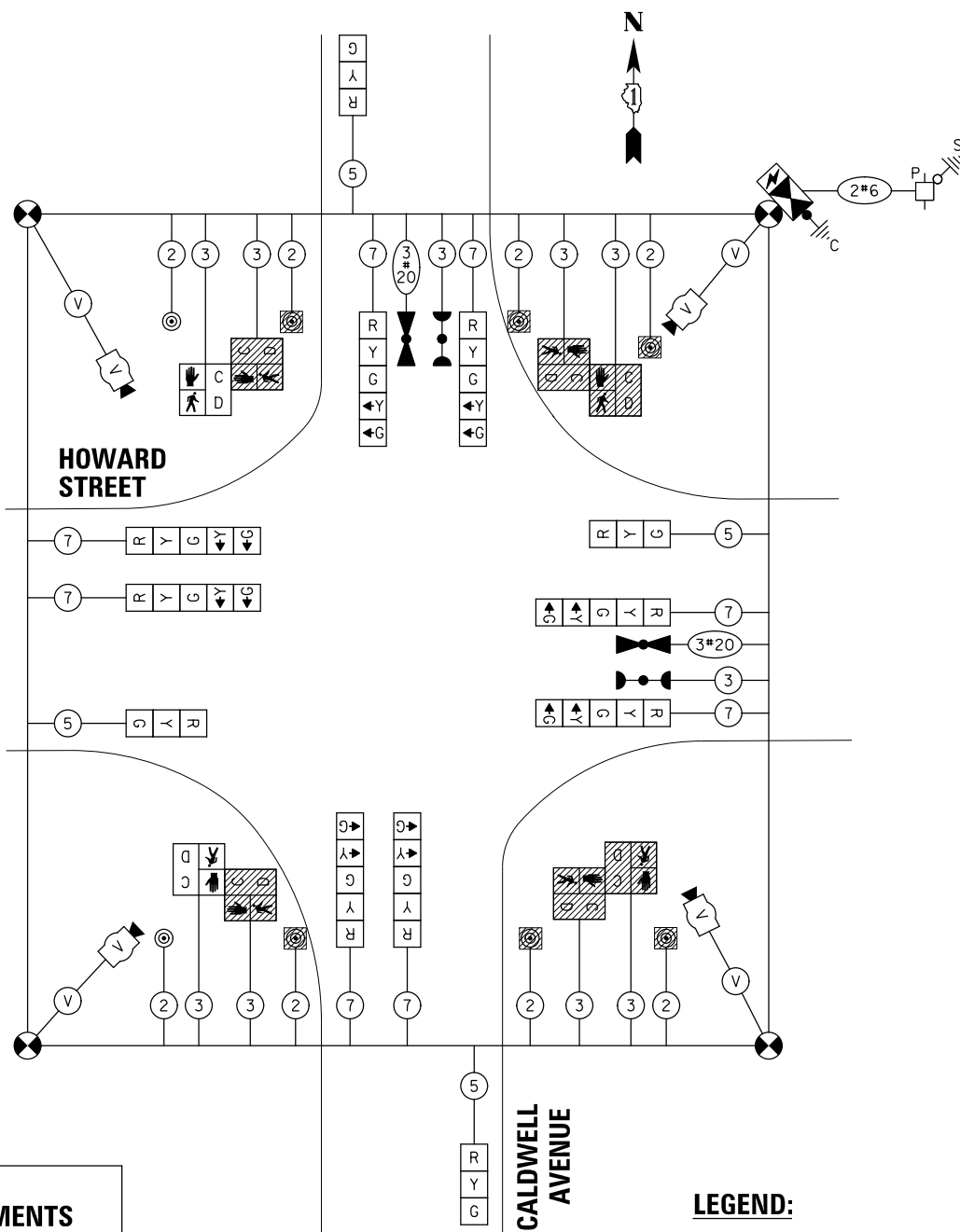
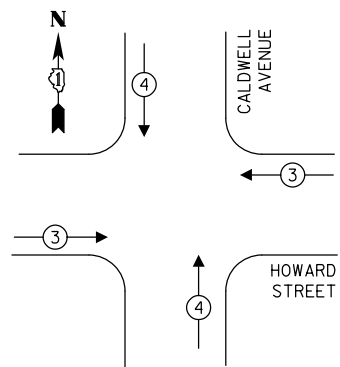
TEMPORARY CONTROLLER SEQUENCE



LEGEND:

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

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



HOWARD STREET

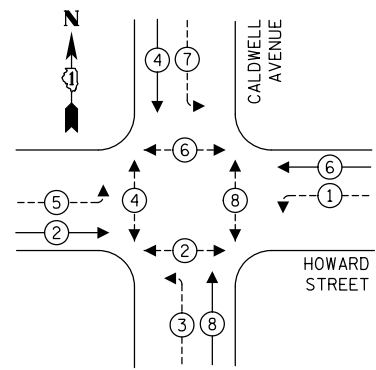
CALDWELL AVENUE

LEGEND:

- ▨ = BAGGED AND DISABLED

EXISTING GEOMETRY TEMPORARY CABLE PLAN
(NOT TO SCALE)

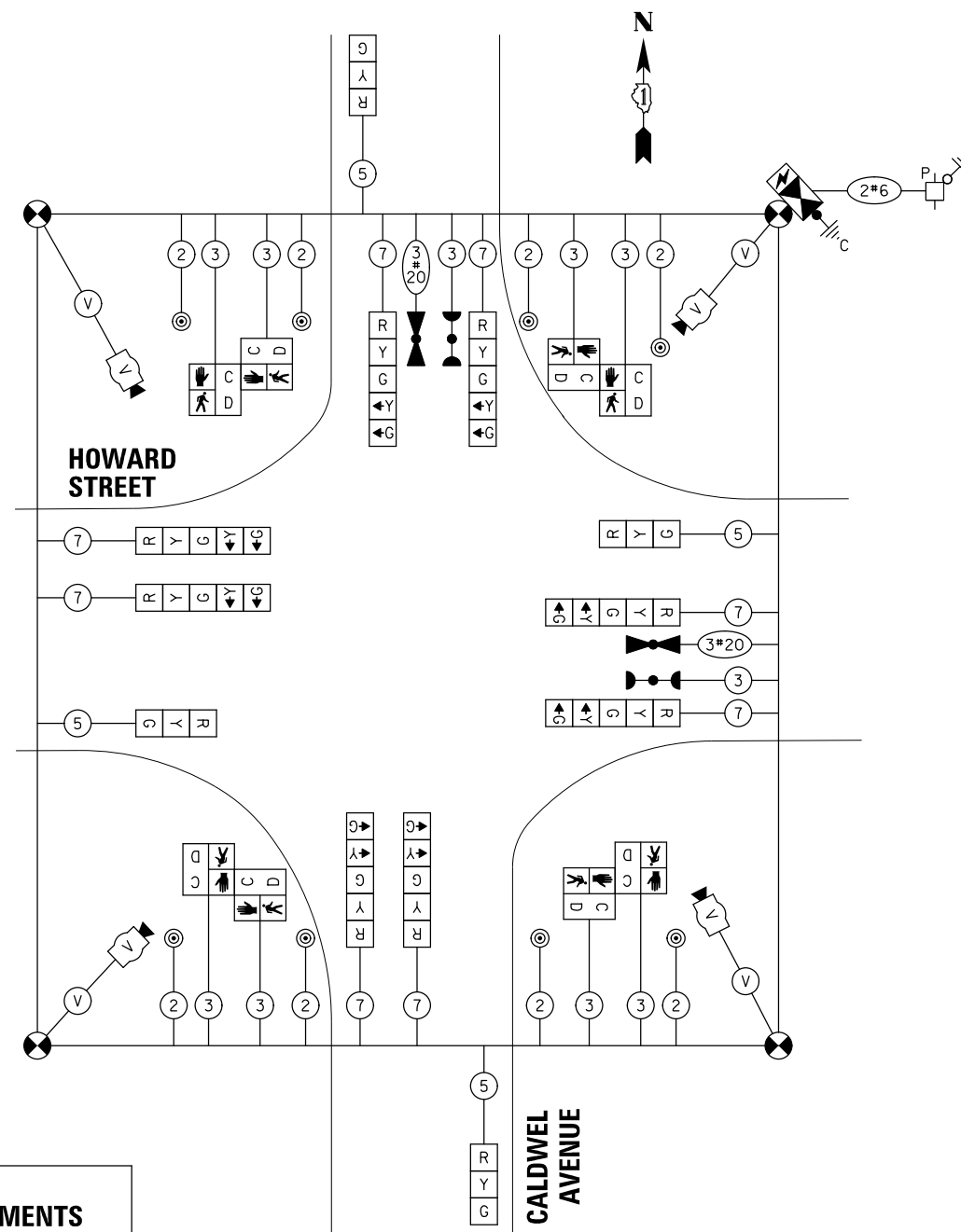
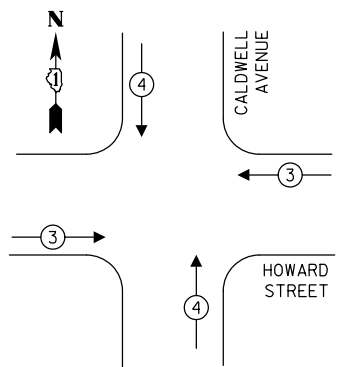
TEMPORARY CONTROLLER SEQUENCE



LEGEND:

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

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



HOWARD STREET

CALDWELL AVENUE

FINAL GEOMETRY TEMPORARY CABLE PLAN
(NOT TO SCALE)

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
PERMISSIVE 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	-	-	-	-
TOTAL =				593.8

ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY: CONTACT: NEW BUSINESS
PHONE: NEW PHONE
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

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
PERMISSIVE ARROW	16	10	10	16.0
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	-	-	-	-
TOTAL =				473.8

ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY: CONTACT: NEW BUSINESS
PHONE: NEW PHONE
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

TS SHT NO. 34

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\CALDWELL_Sht-07	TCB.dgn	DRAWN - FPB	REVISED -
	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN
HOWARD STREET AND CALDWELL AVENUE

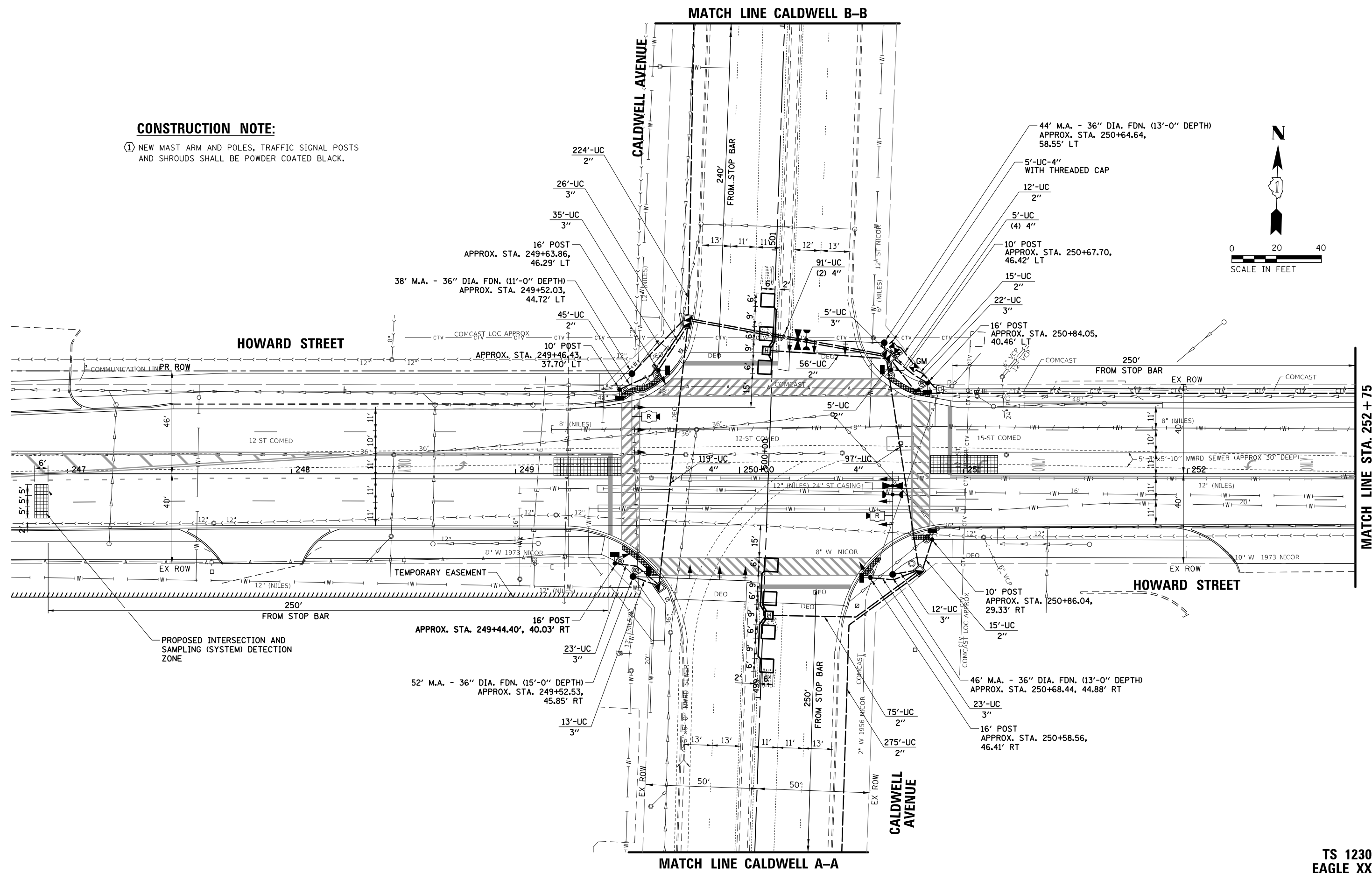
SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	151
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

TS 1230

CONSTRUCTION NOTE:

- ① NEW MAST ARM AND POLES, TRAFFIC SIGNAL POSTS AND SHROUDS SHALL BE POWDER COATED BLACK.



TS SHT NO. 35

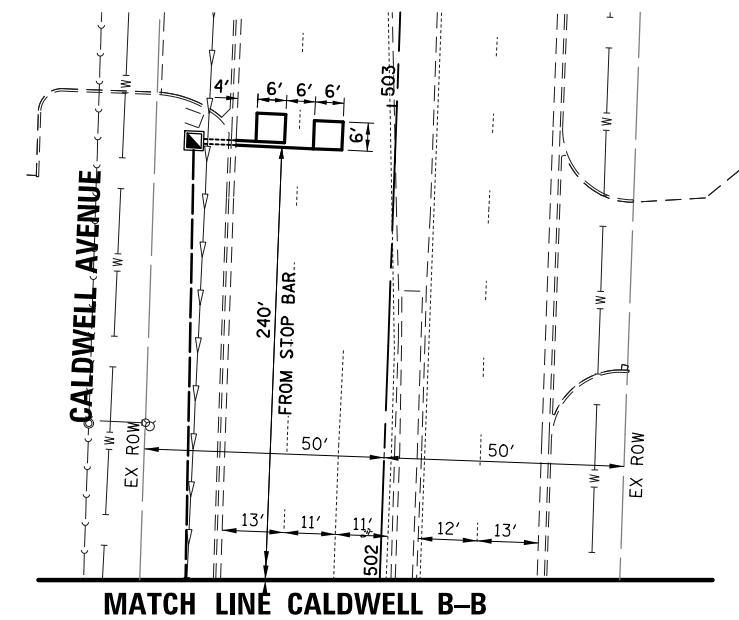
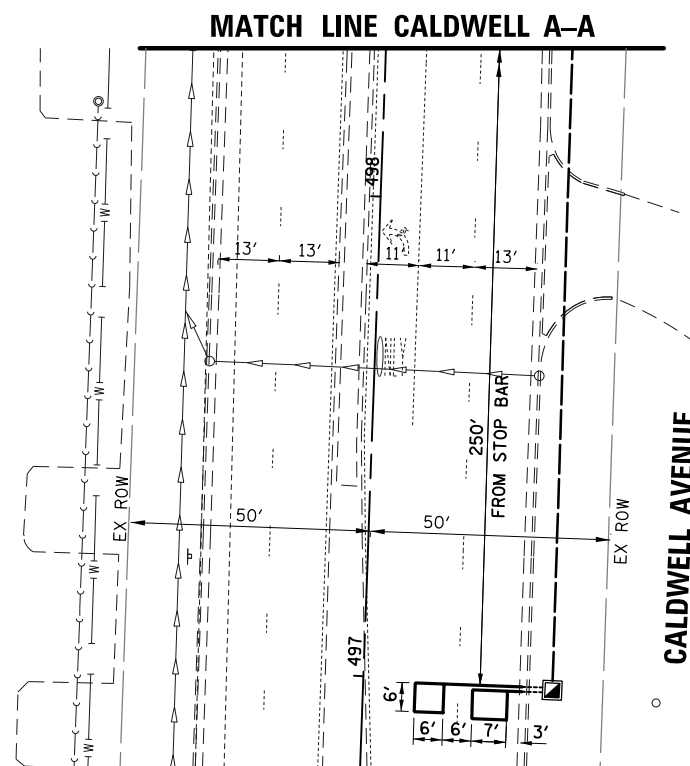
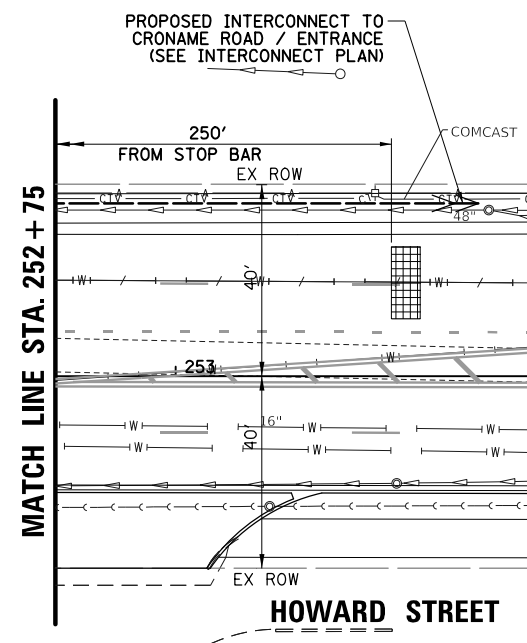
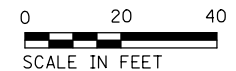
MATCH LINE STA. 252 + 75

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
HOWARD STREET AND CALDWELL AVENUE

TS 1230
EAGLE XX

FILE NAME = N:\NILES\180016\Traffic\CALDWELL_Sht-08	USER NAME = rhowellindgren MOD-01.dgn	DESIGNED - TFS	REVISED -	SCALE: 1" = 40'	SHEET OF SHEETS STA. TO STA.	F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 152		
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -			CONTRACT NO. 61G08		ILLINOIS FED. AID PROJECT				
	PLOT DATE = 11/21/2019	DATE -	REVISED -									



TS SHT NO. 36

**TS 1230
EAGLE XX**

FILE NAME = N:\NILES\180016\Traffic\CALDWELL_Sht-09	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
MOD-02.dgn		DRAWN - FPB	REVISED -
	PLLOT SCALE = 48'	CHECKED - GMZ	REVISED -
Default	PLLOT DATE = 11/21/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

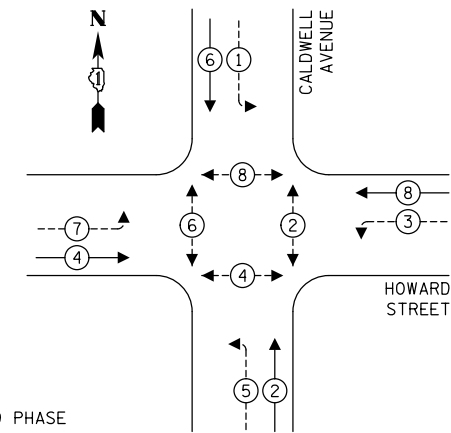
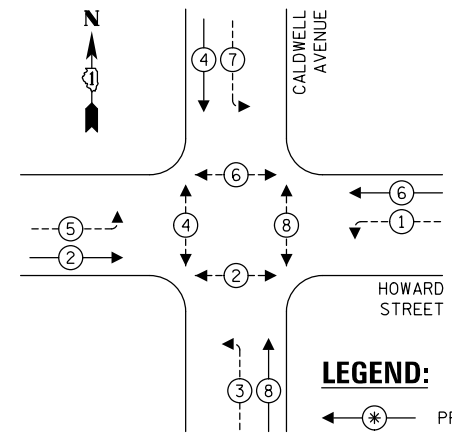
**TRAFFIC SIGNAL MODERNIZATION PLAN
HOWARD STREET AND CALDWELL AVENUE**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	153
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

EXISTING CONTROLLER SEQUENCE

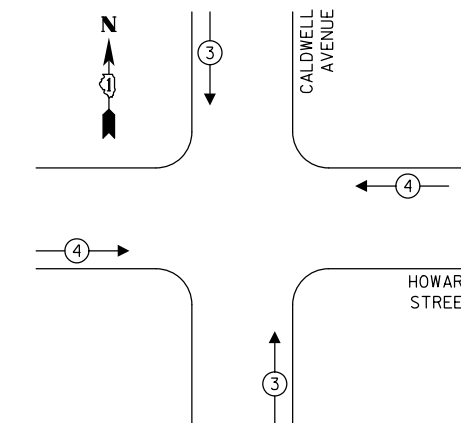
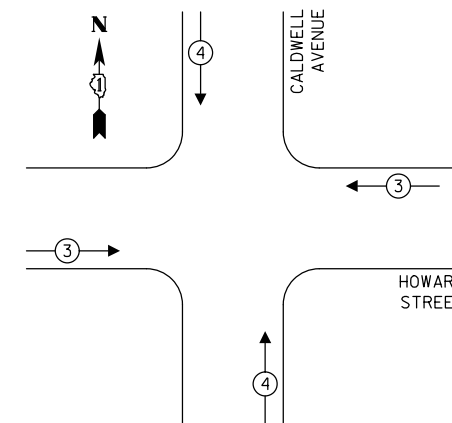
PROPOSED CONTROLLER SEQUENCE



- LEGEND:**
- ⊙ — PROTECTED PHASE
 - ⊙ — PROTECTED/PERMITTED PHASE
 - ⊙ — PEDESTRIAN PHASE
 - ⊙ — OL — OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

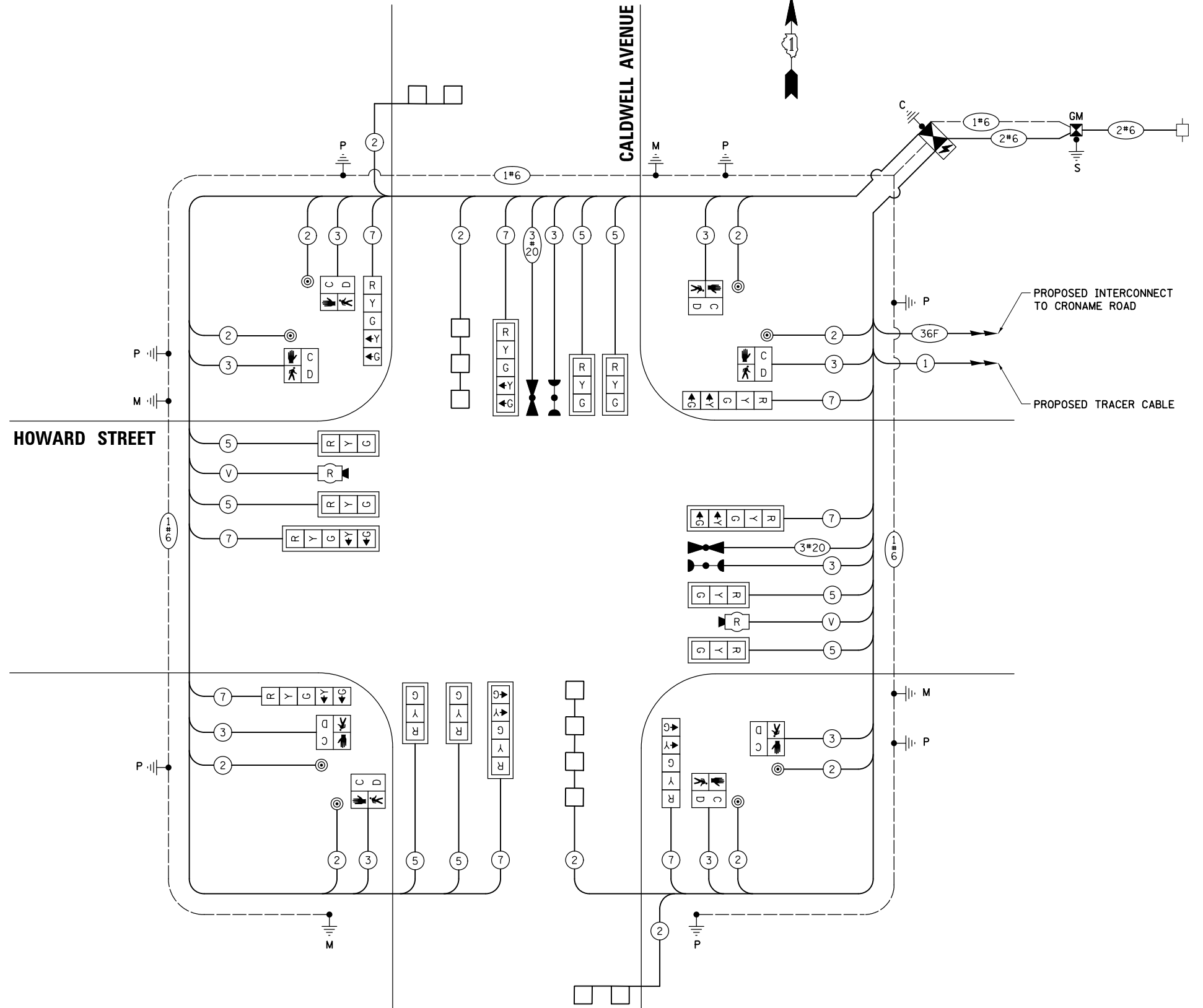
PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88.0
(YELLOW)	16	20	5	16.0
(GREEN)	16	12	45	86.4
PERMISSIVE 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	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				491.4

ENERGY COSTS TO:
 VILLAGE OF NILES
 1000 CIVIC CENTER DRIVE
 NILES, IL 60714
 ENERGY SUPPLY: CONTACT: NEW BUSINESS
 PHONE: NEW PHONE
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: ---



CABLE PLAN
(NOT TO SCALE)

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE HOWARD STREET AND CALDWELL AVENUE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	154
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

TS SHT NO. 37

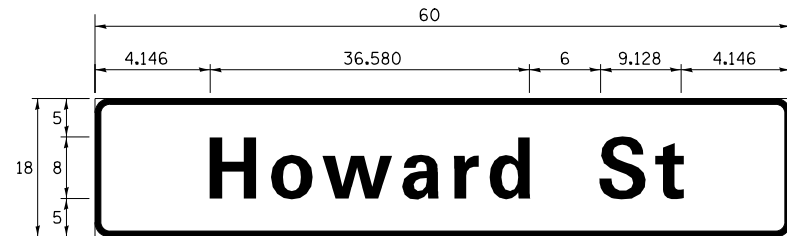
TS 1230
 EAGLE XX

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
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		CHECKED - GMZ	REVISED -
		DATE -	REVISED -

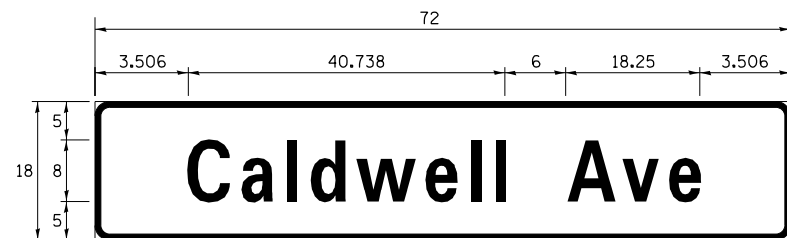
SCALE: N.T.S. SHEET OF SHEETS STA. TO STA.

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	7.5	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.0	1	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SIGN PANEL - TYPE 1	SQ FT	33
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	720
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	159
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	423
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	2
PAINT NEW TRAFFIC SIGNAL POST	EACH	7
PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT	EACH	1
PAINT NEW MAST ARM AND POLE, 40 FOOT AND OVER	EACH	3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1298
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1643
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1606
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1554
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1057
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	69
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1042
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	3
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	32
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	52
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
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	4
DETECTOR LOOP, TYPE I	FOOT	350
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	13
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	290
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	2
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

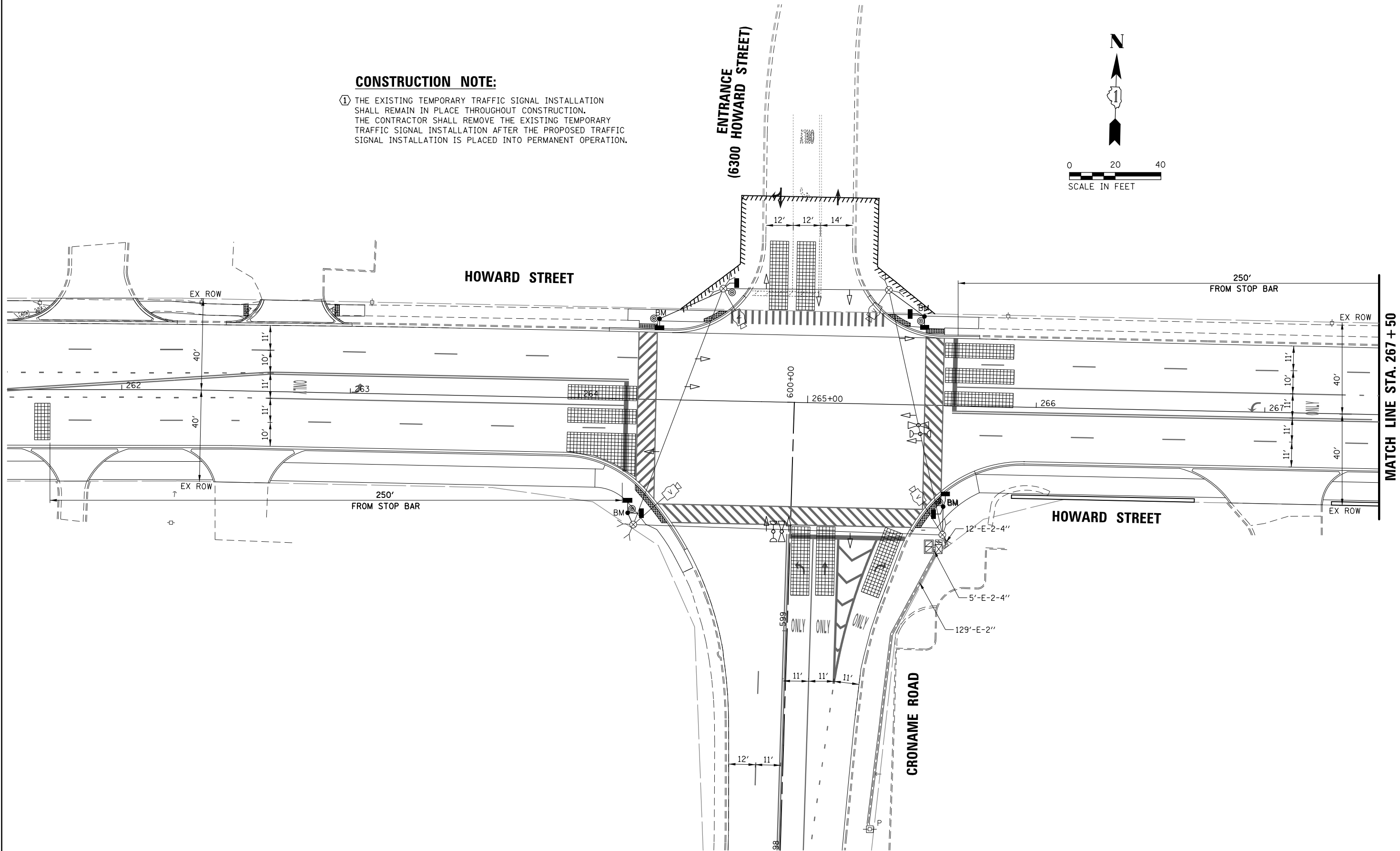
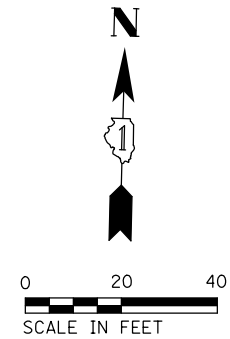
TS SHT NO. 38

EAGLE XX

FILE NAME = N:\NILES\180016\Traffic\CALDWELL_Sht-11.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES AND MAST ARM MOUNTED STREET NAME SIGN HOWARD STREET AND CALDWELL AVENUE	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	PLOT SCALE = 48"	DRAWN - FPB	REVISED -			1334	13-00116-00-TL	COOK	221	155	
	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -			SCALE: N.T.S. SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 61G08			
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

CONSTRUCTION NOTE:

① THE EXISTING TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL REMOVE THE EXISTING TEMPORARY TRAFFIC SIGNAL INSTALLATION AFTER THE PROPOSED TRAFFIC SIGNAL INSTALLATION IS PLACED INTO PERMANENT OPERATION.



TS SHT NO. 39

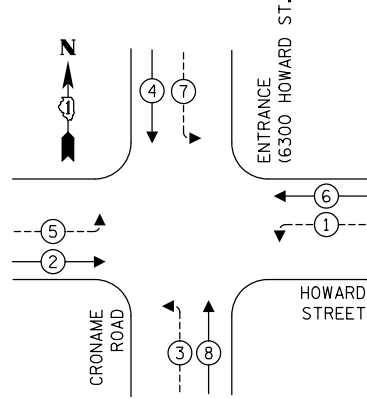
FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\Croname_Sht-01.dgn	MP-Final.dgn	DRAWN - FPB	REVISED -
Default	PLOT DATE = 11/21/2019	CHECKED - GMZ	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY TRAFFIC SIGNAL MODIFICATION PLAN - FINAL GEOMETRY HOWARD STREET AND CRONAME RD./ENTRANCE (6300 HOWARD ST.)			
SCALE: 1" = 40'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	156
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	

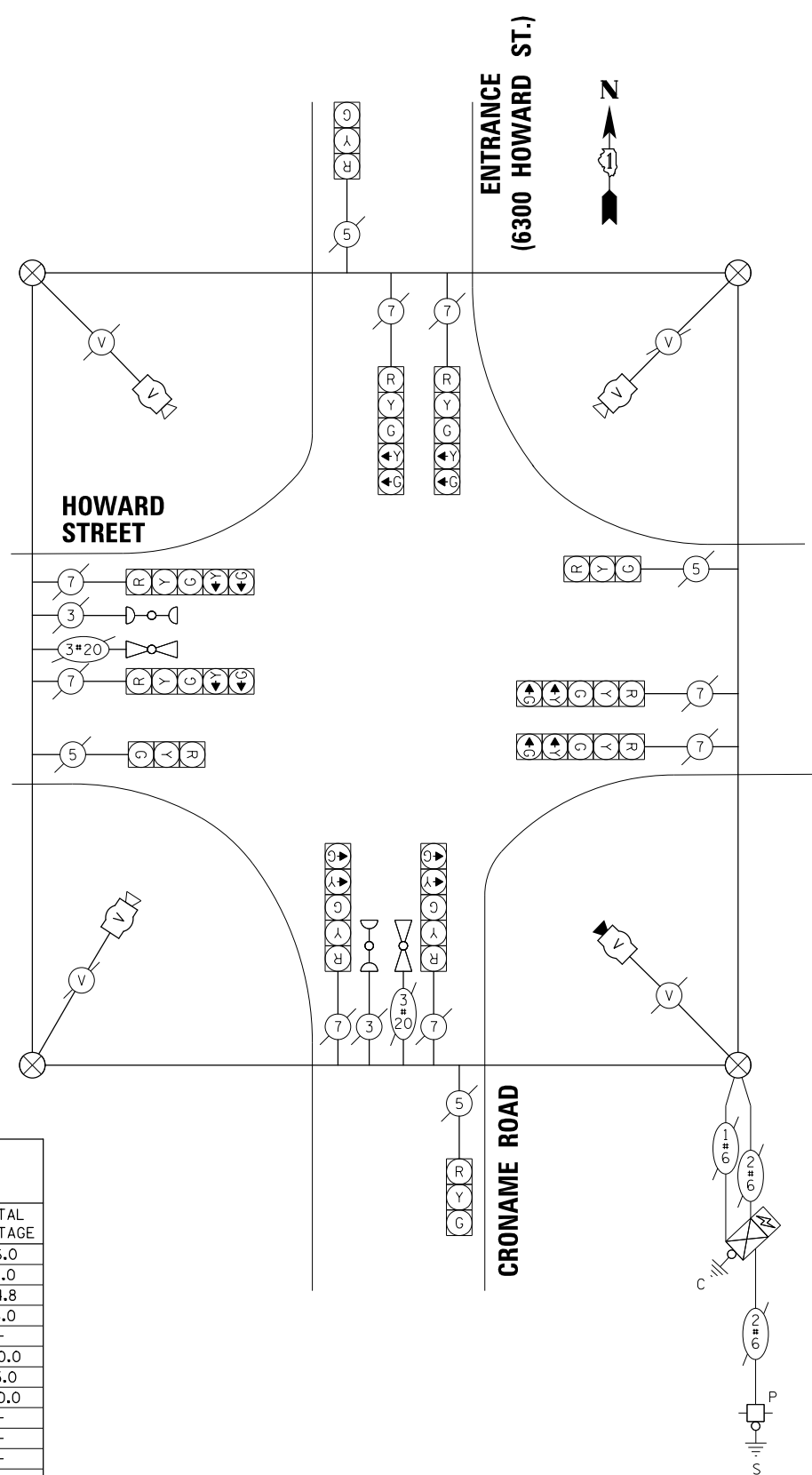
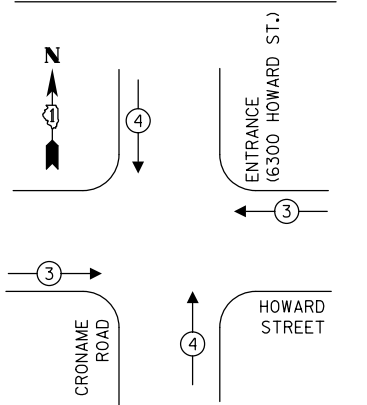
EXISTING TEMPORARY CONTROLLER SEQUENCE



LEGEND:

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

EXISTING TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

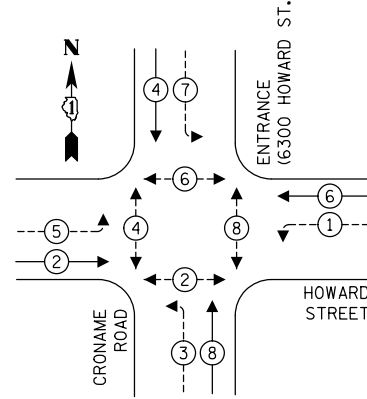


TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

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
PERMISSIVE ARROW	16	10	10	16.0
PED. SIGNAL	-	20	100	-
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	-	-	-	-
TOTAL =				433.8

EXISTING GEOMETRY TEMPORARY CABLE PLAN
(NOT TO SCALE)

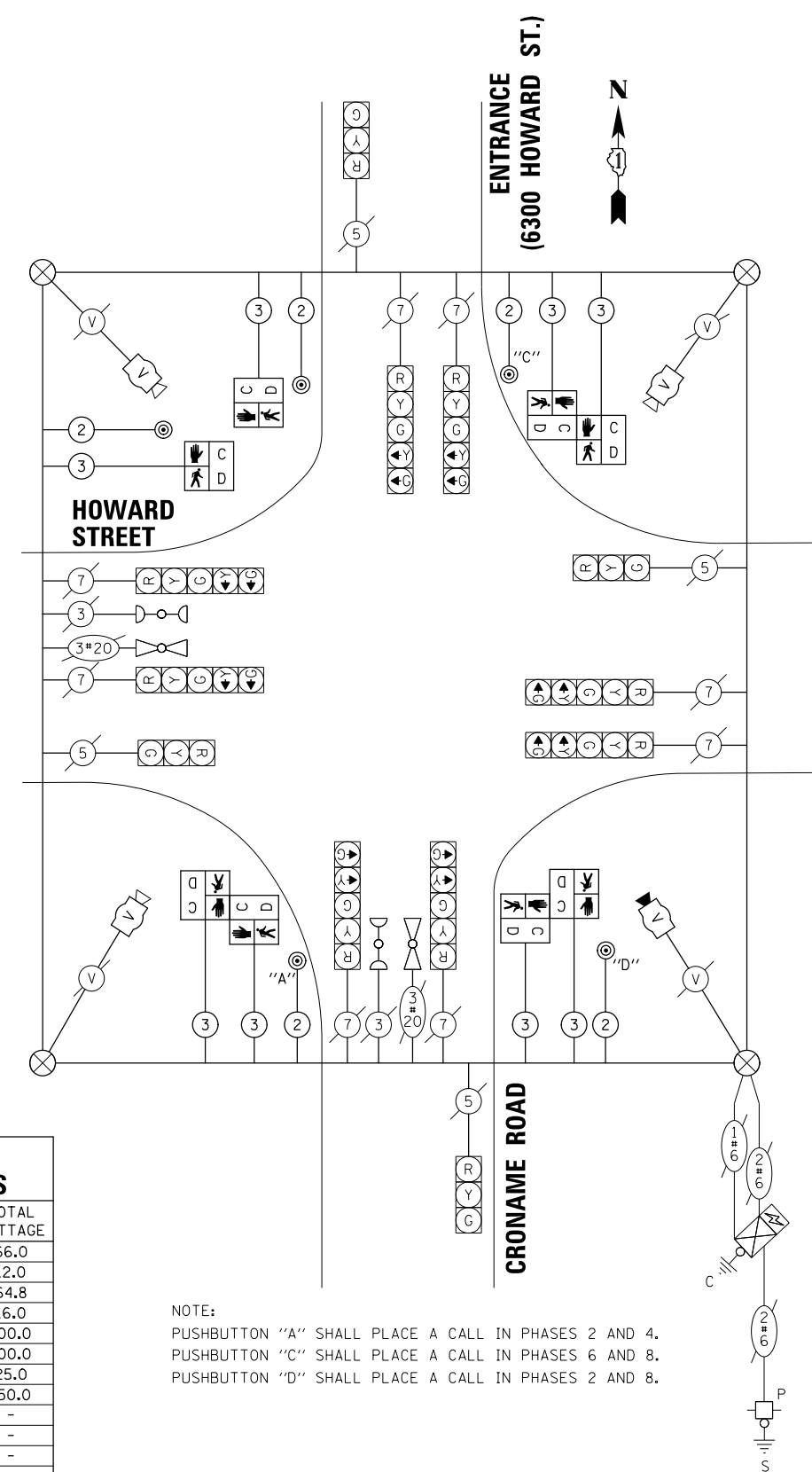
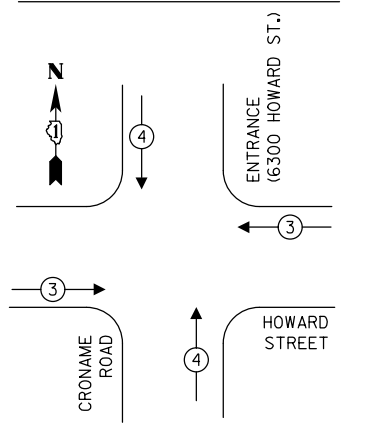
EXISTING TEMPORARY CONTROLLER SEQUENCE



LEGEND:

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

EXISTING 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
PERMISSIVE ARROW	16	10	10	16.0
PED. SIGNAL	5	20	100	100.0
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	-	-	-	-
TOTAL =				533.8

NOTE:
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.
PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

FINAL GEOMETRY TEMPORARY CABLE PLAN
(NOT TO SCALE)

TS SHT NO. 40

ENERGY COSTS TO:
VILLAGE OF NILES
1000 CIVIC CENTER DRIVE
NILES, IL 60714
ENERGY SUPPLY: CONTACT: NEW BUSINESS
PHONE: NEW PHONE
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

FILE NAME =	USER NAME = rhowellindgren
N:\NILES\180016\Traffic\Croname_Sht-02.dgn	
PLOT SCALE = 48"	
PLOT DATE = 11/21/2019	

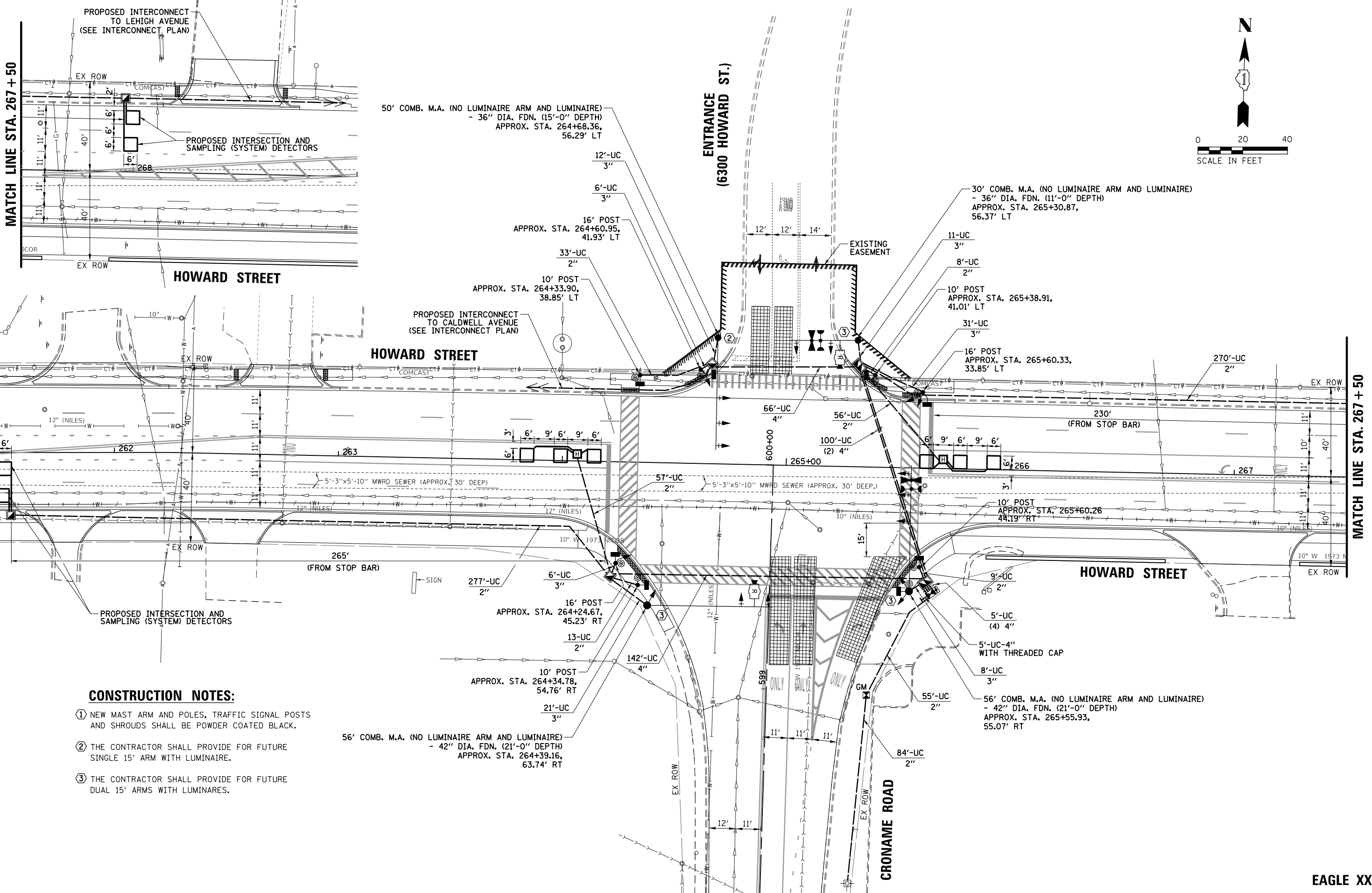
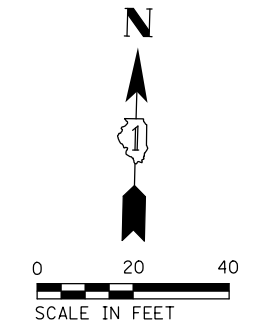
DESIGNED - TFS	REVISED -
DRAWN - FPB	REVISED -
CHECKED - GMZ	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
HOWARD STREET AND CRONAME RD./ENTRANCE (6300 HOWARD ST.)

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	157
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 267+50

MATCH LINE STA. 267+50

CONSTRUCTION NOTES:

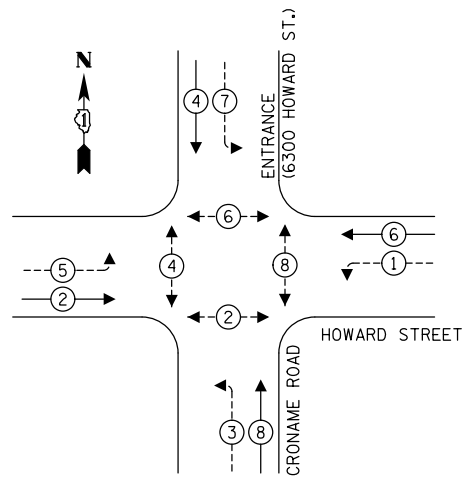
- ① NEW MAST ARM AND POLES, TRAFFIC SIGNAL POSTS AND SHROUDS SHALL BE POWDER COATED BLACK.
- ② THE CONTRACTOR SHALL PROVIDE FOR FUTURE SINGLE 15' ARM WITH LUMINAIRE.
- ③ THE CONTRACTOR SHALL PROVIDE FOR FUTURE DUAL 15' ARMS WITH LUMINAIRES.

TS SHT NO. 41

FILE NAME = N:\NILES\180016\Traffic\Croname_Sht-03.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN HOWARD STREET AND CRONAME RD./ENTRANCE (6300 HOWARD ST.)	F.A.S. RTE. = 1334	SECTION = 13-00116-00-TL	COUNTY = COOK	TOTAL SHEETS = 221	SHEET NO. = 158		
Default	PLOT SCALE = 48'	CHECKED - GMZ	REVISED -			SCALE: 1" = 40'	SHEET OF SHEETS	STA. TO STA.	CONTRACT NO. 61G08			
	PLOT DATE = 11/21/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						

EAGLE XX

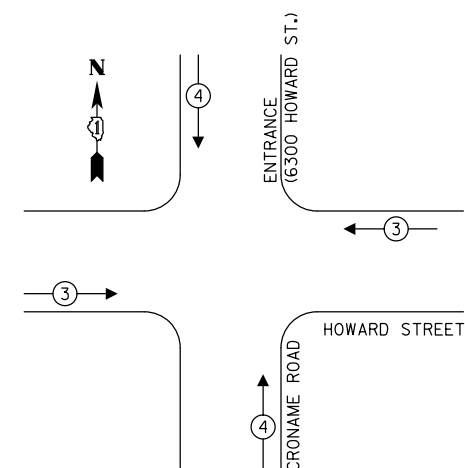
PROPOSED CONTROLLER SEQUENCE



LEGEND:

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

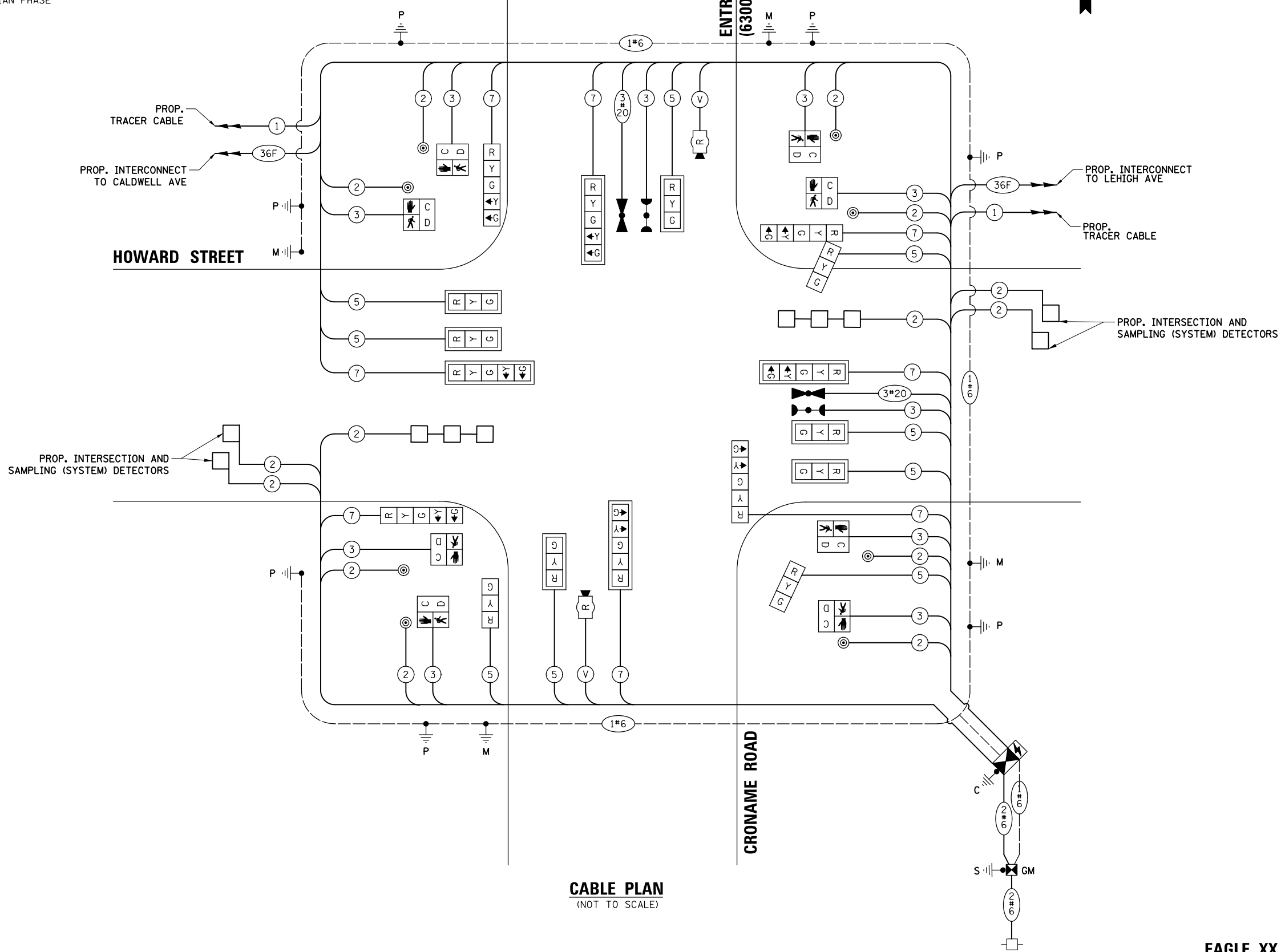
PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88.0
(YELLOW)	16	20	5	16.0
(GREEN)	16	12	45	86.4
PERMISSIVE 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	-	-	-	-
TOTAL =				641.4

ENERGY COSTS TO:
 VILLAGE OF NILES
 1000 CIVIC CENTER DRIVE
 NILES, IL 60714
 ENERGY SUPPLY: CONTACT: NEW BUSINESS
 PHONE: NEW PHONE
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: ---



TS SHT NO. 42

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\Croname_Sht-04.dwg		DRAWN - PJA	REVISED -
		CHECKED - GMZ	REVISED -
		DATE -	REVISED -

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\Croname_Sht-04.dwg		DRAWN - PJA	REVISED -
		CHECKED - GMZ	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN, PHASE DESIGNATION DIAGRAM AND
 EMERGENCY VEHICLE PREEMPTION SEQUENCE
 HOWARD STREET AND CRONAME RD./ENTRANCE (6300 HOWARD ST.)**

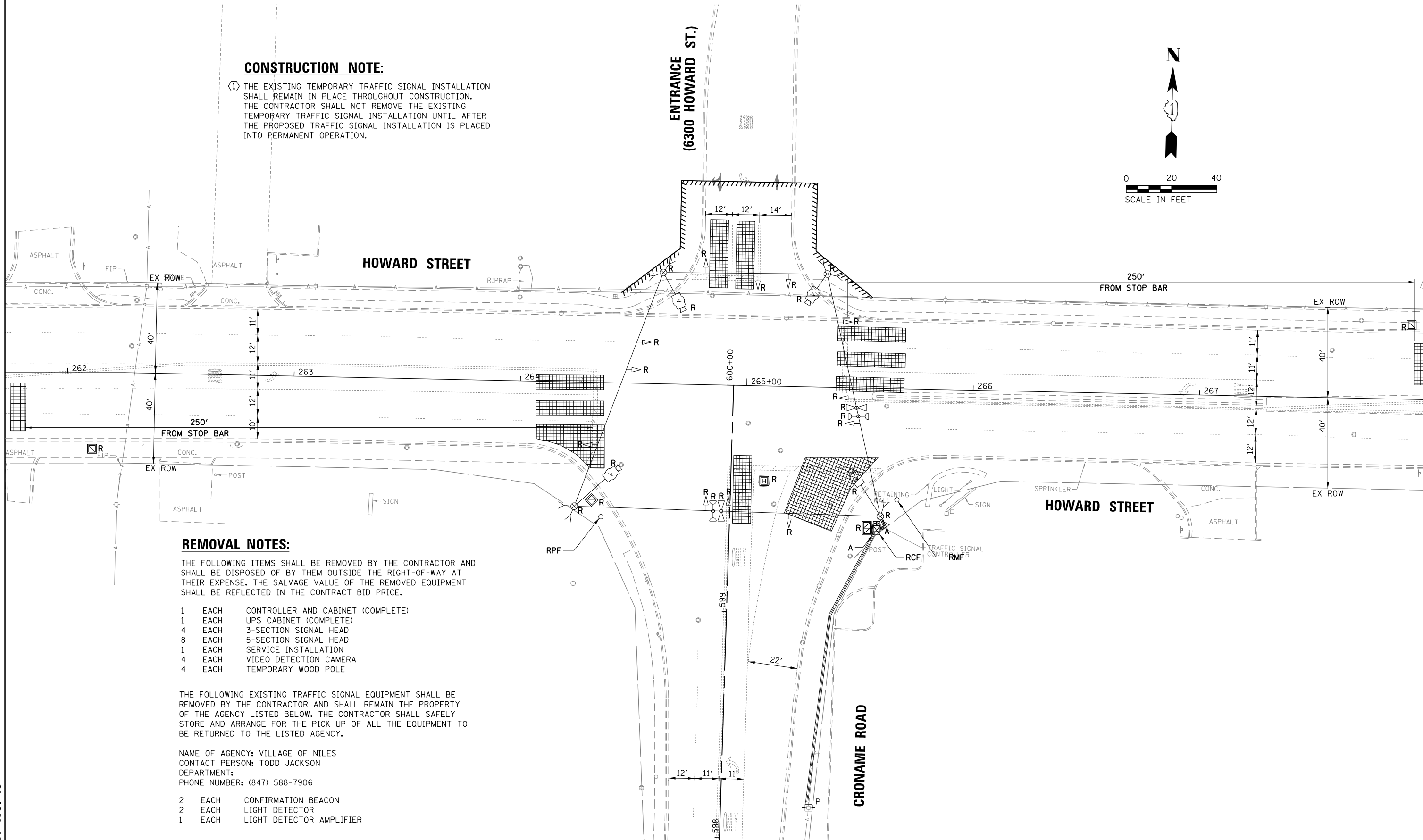
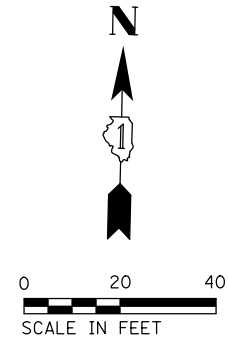
SCALE: N.T.S. SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	159
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

EAGLE XX

CONSTRUCTION NOTE:

- ① THE EXISTING TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL NOT REMOVE THE EXISTING TEMPORARY TRAFFIC SIGNAL INSTALLATION UNTIL AFTER THE PROPOSED TRAFFIC SIGNAL INSTALLATION IS PLACED INTO PERMANENT OPERATION.



REMOVAL NOTES:

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

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 1 EACH UPS CABINET (COMPLETE)
- 4 EACH 3-SECTION SIGNAL HEAD
- 8 EACH 5-SECTION SIGNAL HEAD
- 1 EACH SERVICE INSTALLATION
- 4 EACH VIDEO DETECTION CAMERA
- 4 EACH TEMPORARY WOOD POLE

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 THE PICK UP OF ALL THE EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY.

NAME OF AGENCY: VILLAGE OF NILES
 CONTACT PERSON: TODD JACKSON
 DEPARTMENT:
 PHONE NUMBER: (847) 588-7906

- 2 EACH CONFIRMATION BEACON
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

TS SHT NO. 43

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\Croname_Sht-05-FEM.dgn		DRAWN - FPB	REVISED -
Default	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
	PLOT DATE = 11/21/2019	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

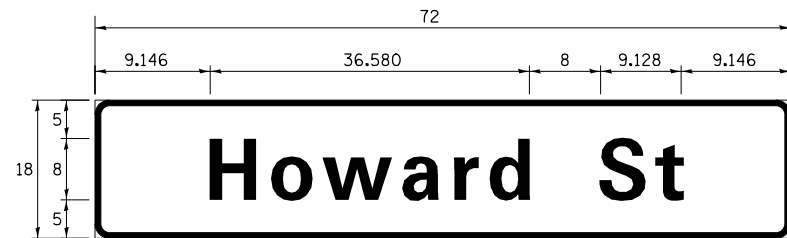
**TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN
 HOWARD STREET AND CRONAME RD./ENTRANCE (6300 HOWARD ST.)**

SCALE: 1" = 40' SHEET OF SHEETS STA. TO STA.

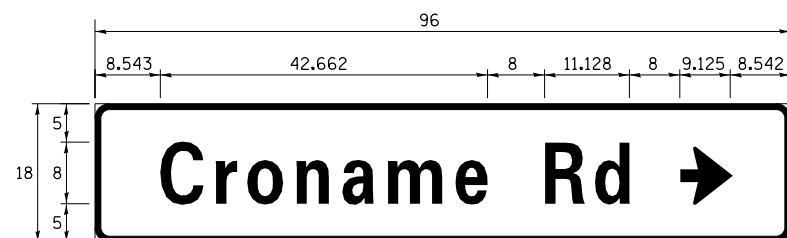
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	160
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	

SIGN PANEL – TYPE 1 OR TYPE 2

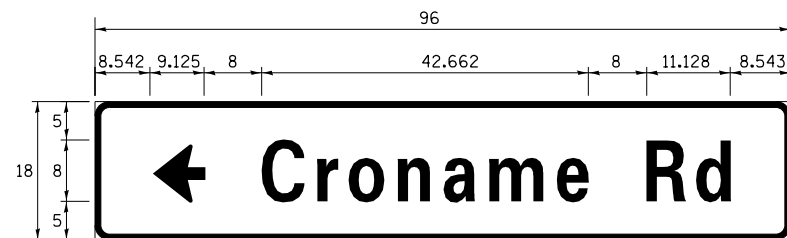
ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.0	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	12.0	2	ZZ	1



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	12.0	2	ZZ	1

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

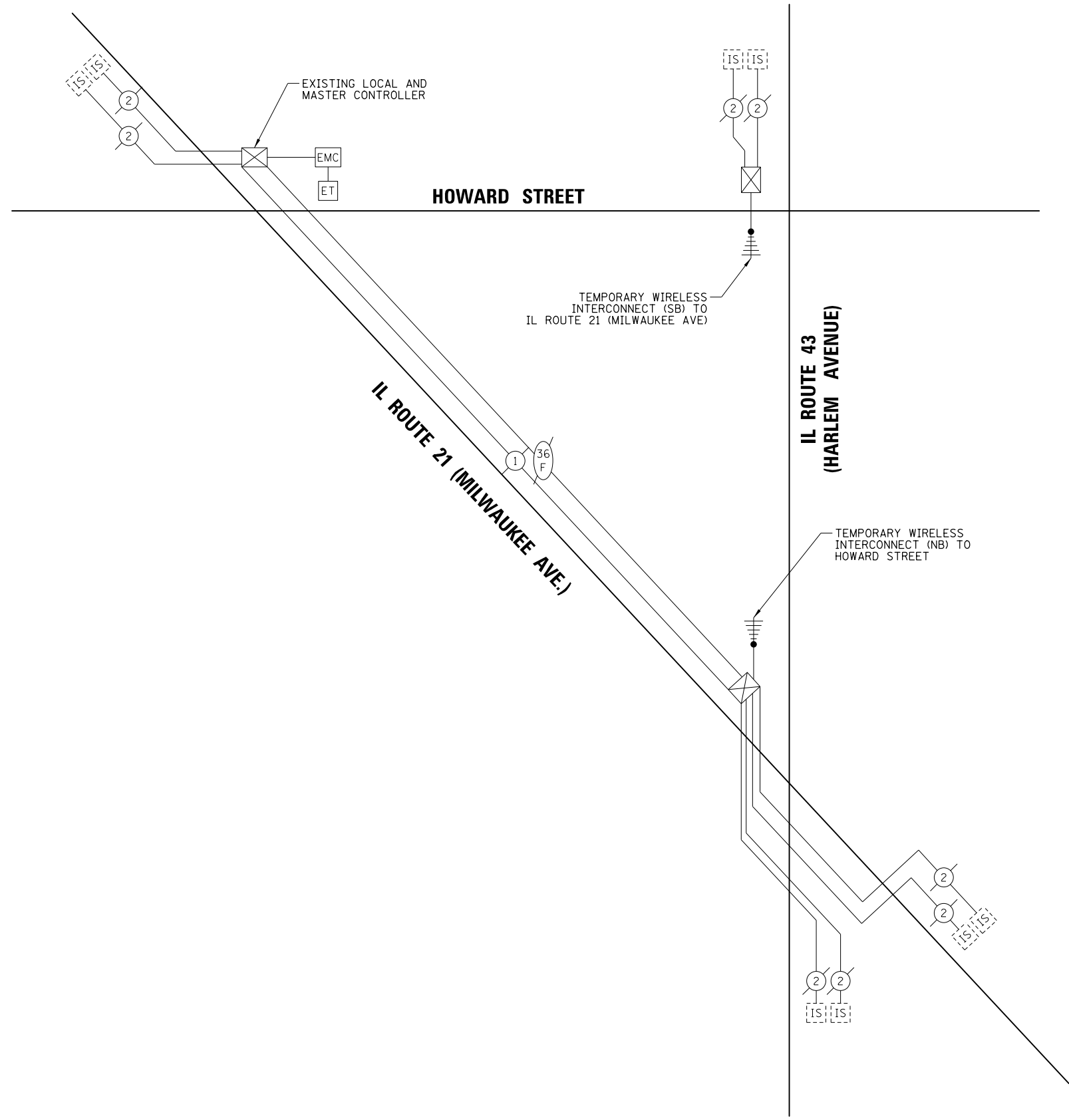
SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SIGN PANEL - TYPE 1	SQ FT	18
SIGN PANEL - TYPE 2	SQ FT	24
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	862
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	95
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	433
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	2
PAINT NEW TRAFFIC SIGNAL POST	EACH	7
PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	1
PAINT NEW COMBINATION MAST ARM AND POLE, 40 FOOT AND OVER	EACH	3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1292
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1652
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1577
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1543
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1312
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	183
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	991
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 56 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	FOOT	32
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	26
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	42
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	8
DETECTOR LOOP, TYPE I	FOOT	304
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
REMOVE EXISTING HANDHOLE	EACH	6
REMOVE EXISTING CONCRETE FOUNDATION	EACH	3
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	294
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR	EACH	2
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
MAINTENANCE OF EXISTING TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TEMPORARY TRAFFIC SIGNAL EQUIPMENT	EACH	1
MODIFY TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

TS SHT NO. 44

EAGLE XX

FILE NAME = N:\NILES\180016\Traffic\Croname_Sht-06.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES AND MAST ARM MOUNTED STREET NAME SIGN HOWARD STREET AND CRONAME RD./ENTRANCE (6300 HOWARD ST.)	F.A.S. RTE. = 1334	SECTION = 13-00116-00-TL	COUNTY = COOK	TOTAL SHEETS = 221	SHEET NO. = 161		
PLLOT SCALE = 48"	CHECKED - GMZ	REVISIED -	SCALE: N.T.S.			SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				
PLLOT DATE = 11/21/2019	DATE -	REVISIED -										
Default												

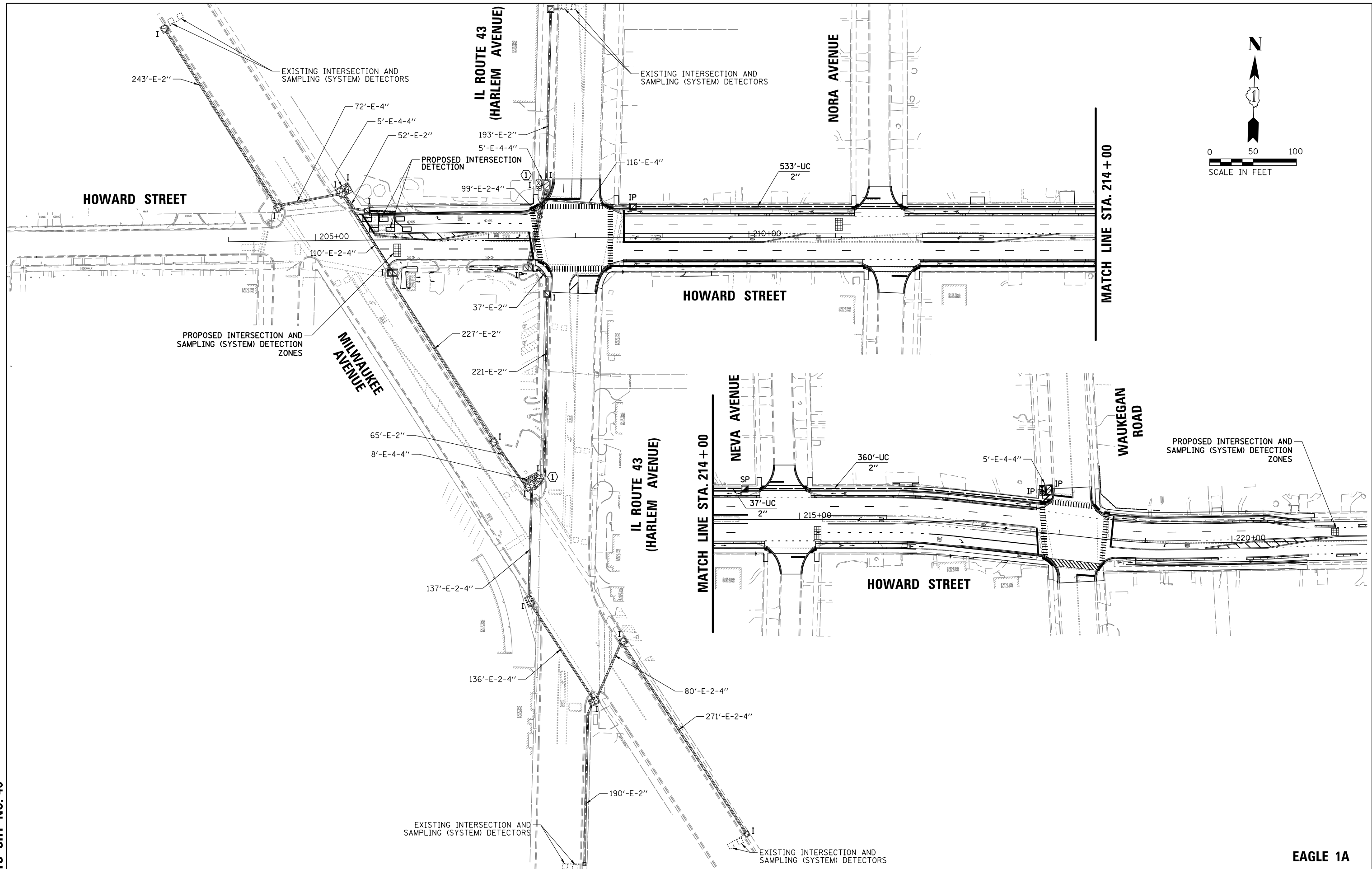


TS SHT NO. 45

EAGLE 1A

FILE NAME = N:\NILES\180016\Traffic\HOWARD_Sht-01.TMP-Sch.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY INTERCONNECT SCHEMATIC HOWARD STREET FROM IL ROUTE 43 (HARLEM AVENUE) TO IL ROUTE 21 (MILWAUKEE AVENUE)	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLotted SCALE = 100'	CHECKED - GMZ	REVISED -			1334	13-00116-00-TL	COOK	221	162
Default	PLotted DATE = 11/21/2019	DATE -	REVISED -	SCALE: N.T.S. SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT CONTRACT NO. 61G08				

TS SHT NO. 46



FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\HOWARD_Sht-02.dgn		DRAWN - FPB	REVISED -
Default		CHECKED - GMZ	REVISED -
	PLOT DATE = 11/21/2019	DATE -	REVISED -

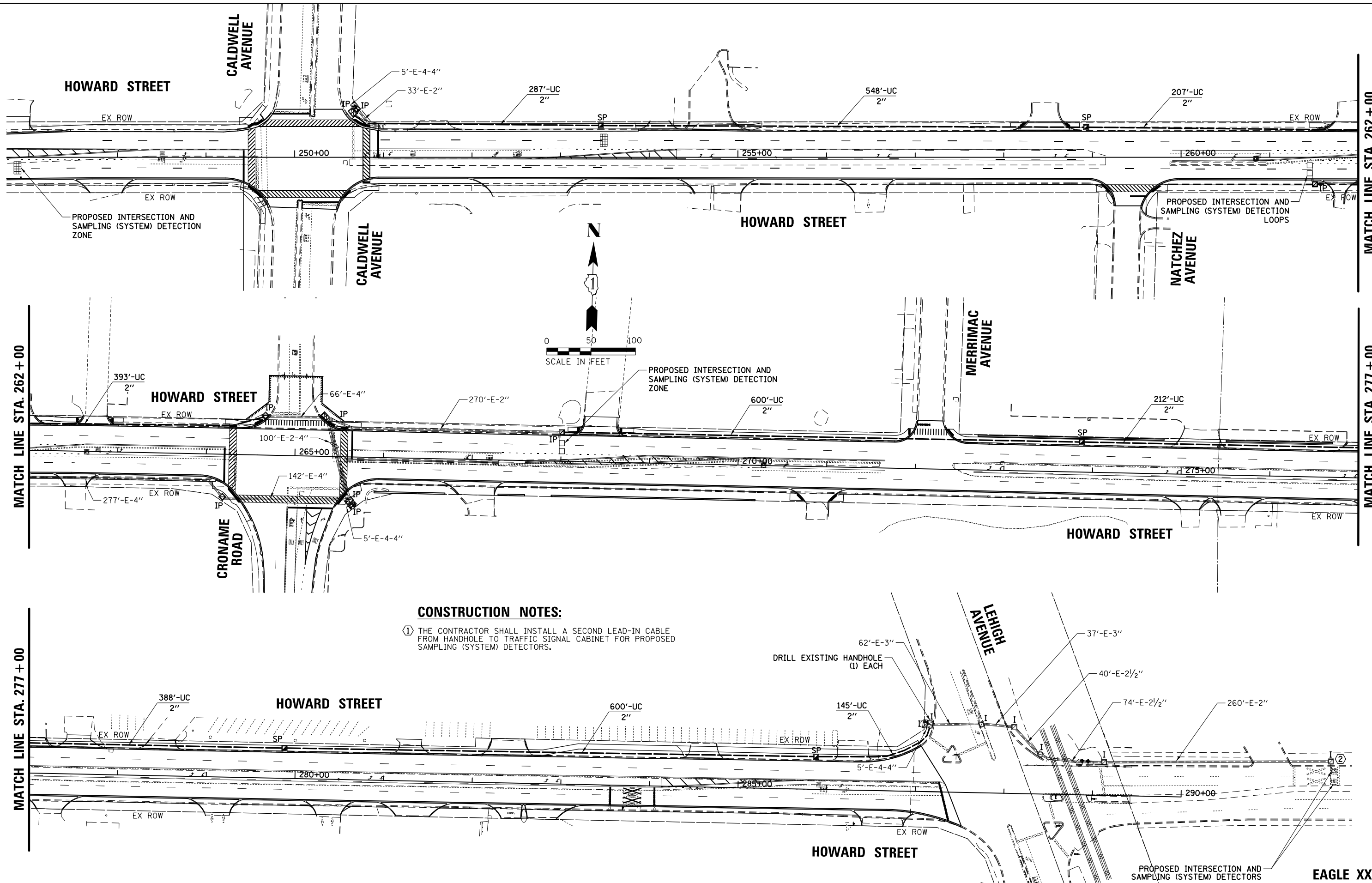
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN
HOWARD STREET
FROM IL ROUTE 43 (HARLEM AVENUE) TO WAUKEGAN ROAD**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	163
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

EAGLE 1A

TS SHT NO. 47



CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL INSTALL A SECOND LEAD-IN CABLE FROM HANDHOLE TO TRAFFIC SIGNAL CABINET FOR PROPOSED SAMPLING (SYSTEM) DETECTORS.

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\HOWARD_Sht-03.INF-02.dgn		DRAWN - FPB	REVISED -
		CHECKED - GMZ	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

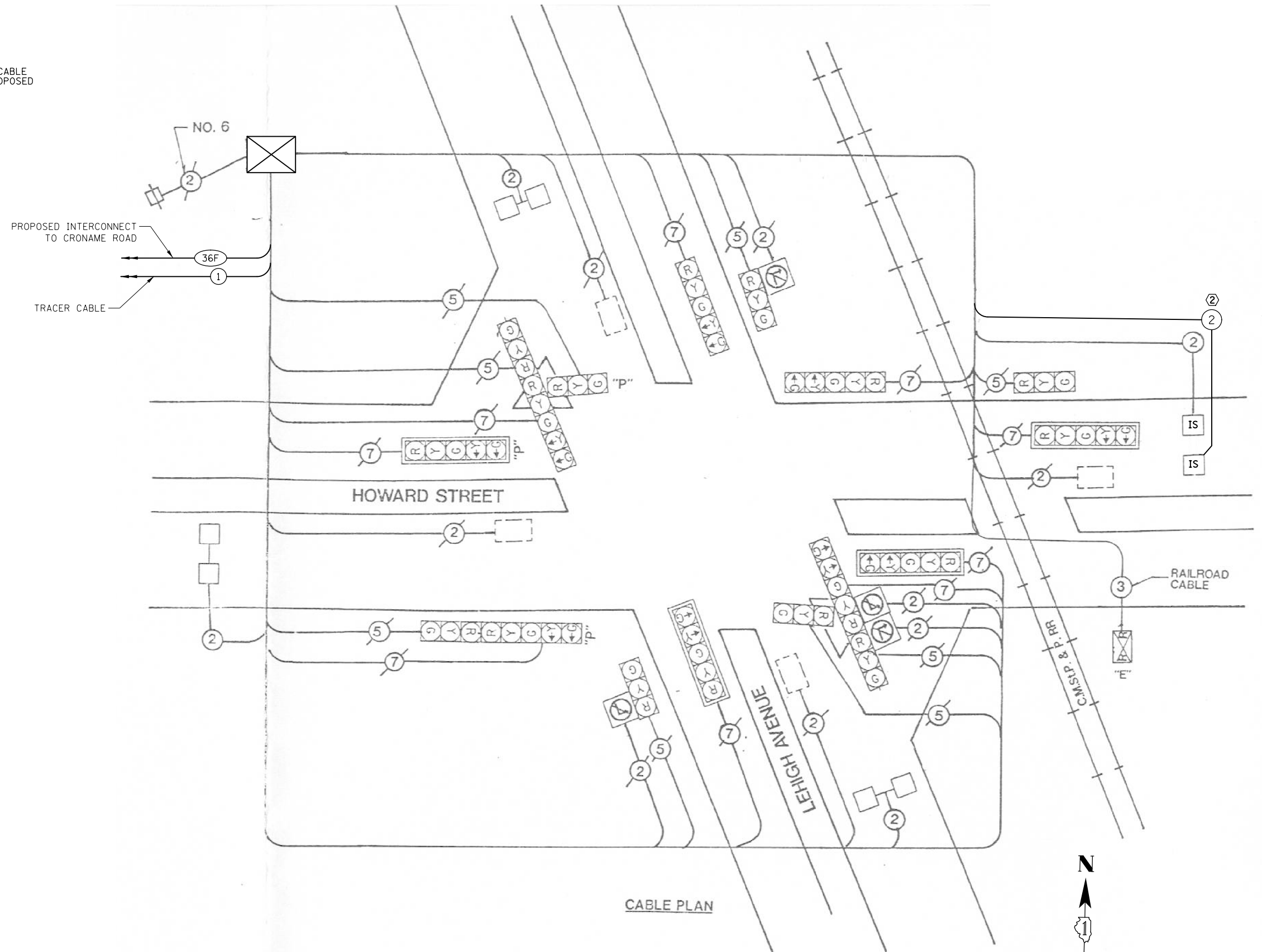
PROPOSED INTERCONNECT PLAN HOWARD STREET FROM CALDWELL AVENUE TO LEHIGH AVENUE			
SCALE: 1" = 100'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	164
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

EAGLE XX

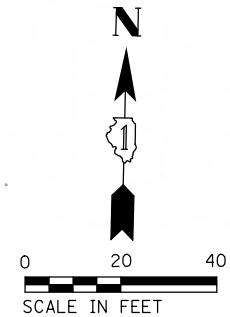
CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL INSTALL A SECOND LEAD-IN CABLE FROM HANDHOLE TO TRAFFIC SIGNAL CABINET FOR PROPOSED SAMPLING (SYSTEM) DETECTORS.



TS SHT NO. 48

CABLE PLAN



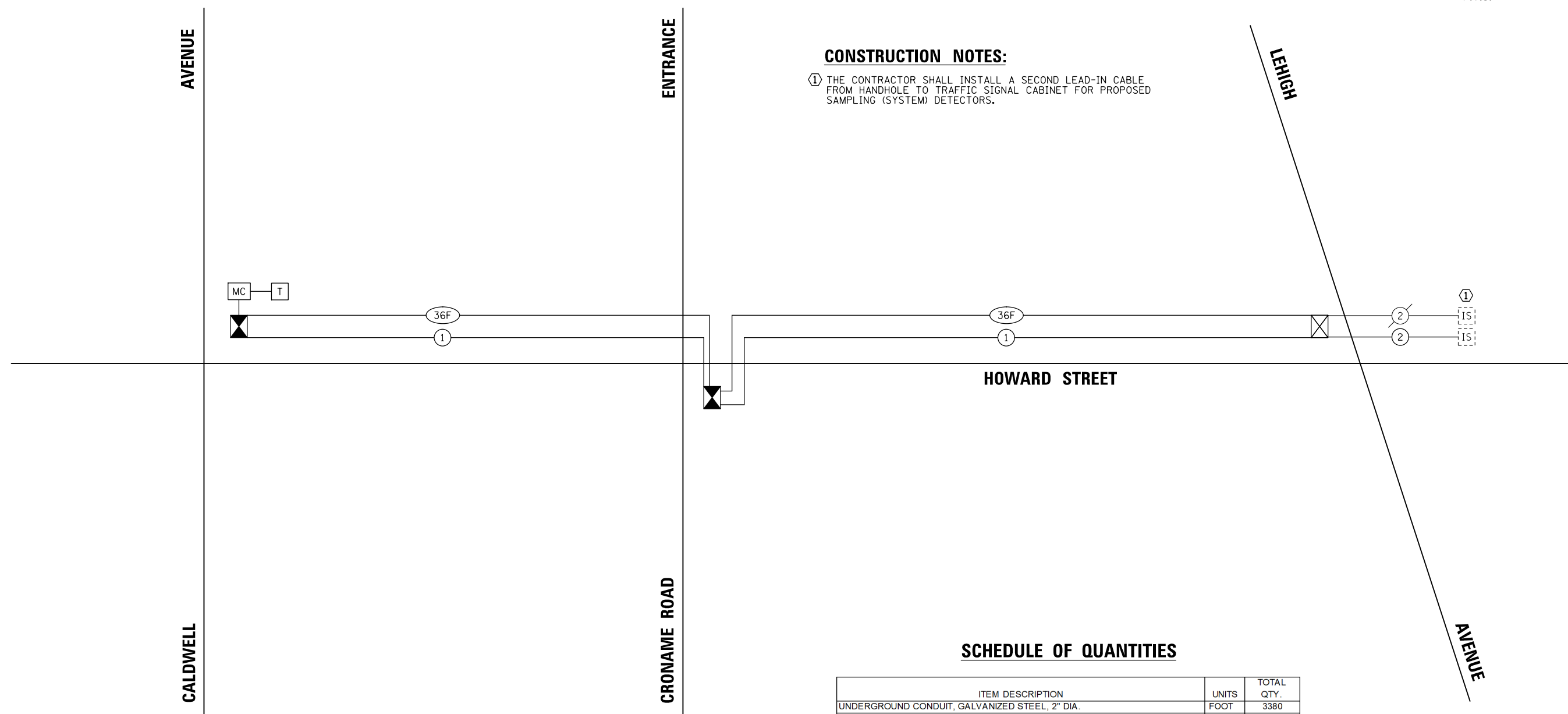
TS 5335
EAGLE XX

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
N:\NILES\180016\Traffic\HOWARD_Sht-04_Lehigh CAB.dgn		DRAWN - FPB	REVISED -
	PLOT SCALE = 48"	CHECKED - GMZ	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN			
HOWARD STREET AND LEHIGH AVENUE			
SCALE: 1" = 40'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	165
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



CONSTRUCTION NOTES:
 ① THE CONTRACTOR SHALL INSTALL A SECOND LEAD-IN CABLE FROM HANDHOLE TO TRAFFIC SIGNAL CABINET FOR PROPOSED SAMPLING (SYSTEM) DETECTORS.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	3380
HANDHOLE	EACH	5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MASTER CONTROLLER	EACH	1
TRANSCIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	4028
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	528
DRILL EXISTING HANDHOLE	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	4119
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

TS SHT NO. 50

FILE NAME = N:\NILES\180016\Traffic\HOWARD_Sht-06.INF-Sch2.dgn	USER NAME = rhowellindgren	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
		CHECKED - GMZ	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC
 HOWARD STREET FROM CALDWELL AVENUE
 TO LEHIGH AVENUE**

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

F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 167
CONTRACT NO. 61G08				ILLINOIS FED. AID PROJECT

EAGLE XX

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 AT (800) 892-0123 AND DIGGER AT (312) 744-7000.
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.
5. NO MATERIALS SHALL BE DELIVERED TO THE JOB SITE UNTIL ALL PERTINENT EQUIPMENT SUBMITTALS HAVE BEEN REVIEWED BY THE ENGINEER.
6. ALL UNDERGROUND CONDUITS SHALL BE INSTALLED BY DIRECTIONAL BORING METHOD. SOME LOCATIONS MAY REQUIRE TRENCHING AND/OR HAND DIGGING. CONTRACTOR SHALL PROVIDE PRIOR NOTICE TO ENGINEER BEFORE TRENCHING.
7. 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.
8. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, (IF APPLICABLE) AND HAVE BEEN REVIEWED BY THE ENGINEER.
9. TO MAINTAIN THE STRUCTURAL INTEGRITY OF LIGHT POLES WITH MAST ARMS, THEY SHALL NOT BE ERECTED AND LEFT TO STAND WITHOUT LUMINAIRES.
10. ALL POLE HANDHOLES SHALL FACE AWAY FROM TRAFFIC.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF THE TOP OF FOUNDATION ELEVATION WITH THE FINISHED GRADE.
12. THE CONTRACTOR SHALL LOCATE ALL PROPOSED EQUIPMENT FOR REVIEW BY ENGINEER. ALL UTILITIES SHALL BE LOCATED PRIOR TO MARKING PROPOSED LOCATIONS.
13. 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.
14. 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.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TIMELY NOTIFICATION AND ALL COORDINATION WITH COM ED FOR NEW ELECTRIC SERVICE TO THE PROPOSED LIGHTING CONTROLLER.
16. 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.
17. THE LIGHT POLE LOCATIONS SHALL COMPLY WITH THE MINIMUM CLEAR WIDTH FOR AN ACCESSIBLE ROUTE FOR SIDEWALKS PER CURRENT AMERICAN WITH DISABILITIES ACT (ADA) REQUIREMENTS.
18. THERE ARE LOCATIONS THROUGHOUT THE PROJECT WHERE EXISTING WATERMAINS OR SEWERS 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)"/2).
19. THE CONTRACTOR SHALL USE A STANDARD FOUNDATION WHENEVER POSSIBLE. WHEN UTILITY CONFLICT PROHIBITS USE OF STANDARD FOUNDATION THE CONTRACTOR MAY USE AN OFFSET FOUNDATION AT THE DIRECTION OF THE ENGINEER

ABBREVIATIONS

A	AMPS	HH	HAND HOLE
BOC	BACK OF CURB	HPS	HIGH PRESSURE SODIUM
CKT	CIRCUIT	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER	RGS	RIGID GALVANIZED STEEL
FT	FOOT	ROW	RIGHT OF WAY
FOC	FACE OF CURB	STA	STATION
GND	GROUND	V	VOLTS
HD	HEAVY DUTY	W	WATTS
HDPE	HIGH DENSITY POLYETHYLENE		

**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 NILES WILL OWN AND MAINTAIN THE PROPOSED LIGHTING SYSTEM.

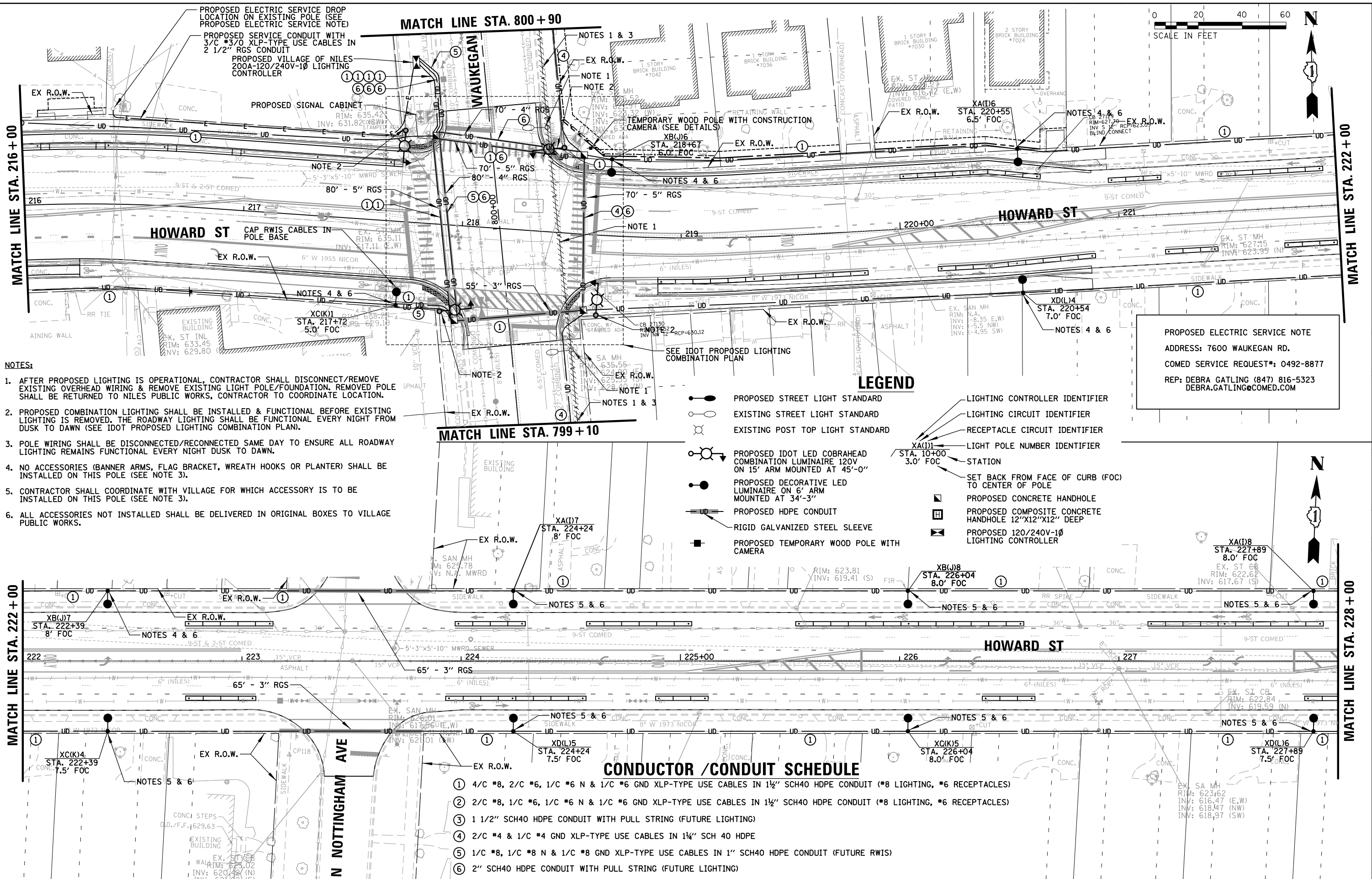
IDOT WILL OWN AND MAINTAIN THE PROPOSED COMBINATION LIGHTING AT HOWARD ST. & WAUKEGAN AVE.

LIGHTING BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY
TRENCH BACKFILL	CU YD	50
ELECTRIC SERVICE INSTALLATION	EACH	1
• ELECTRIC UTILITY SERVICE CONNECTION	LSUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.	FOOT	180
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	1280
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	165
UNDERGROUND CONDUIT, GALVANIZED STEEL, 5" DIA.	FOOT	625
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1" DIA.	FOOT	190
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1¼" DIA.	FOOT	400
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1½" DIA.	FOOT	19185
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	450
HANDHOLE	EACH	13
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	28650
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	28880
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 4	FOOT	1390
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 3/0	FOOT	480
LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 200AMP	EACH	1
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	10
REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	2
REMOVAL OF POLE FOUNDATION	EACH	3
DRILL EXISTING FOUNDATION	EACH	2
• LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION E	EACH	4
• CCTV SYSTEM	LSUM	1
• ROADWAY LIGHT POLE, INSTALL ONLY	EACH	1
• HANDHOLE, COMPOSITE CONCRETE (SPECIAL)	FOOT	12
• COMBINATION LIGHTING CONTROLLER	EACH	1
• LIGHTING UNIT COMPLETE, SPECIAL	EACH	37
• LIGHT POLE FOUNDATION, 24" DIAMETER, SPECIAL	FOOT	340
• LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	64
• REMOVE AERIAL CABLE	FOOT	370
• EXPLORATION EXCAVATION (UTILITY)	FOOT	90
• CABLE, SPECIAL	FOOT	12100
• LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	4
• MAINTENANCE OF LIGHTING SYSTEM	CAL MO	12
ELECTRIC CABLE ASSEMBLY IN CONDUIT, 600V (XLP-TYPE TC)2/C NO. 10	EACH	540

• SEE SPECIAL PROVISION

FILE NAME = N:\NILES\180016\Mech\GN.180016.01.sht	USER NAME = rhowellindgren	DESIGNED AJD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HOWARD STREET IMPROVEMENTS LIGHTING GENERAL NOTES	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN RJJ	REVISED -			1334	13-00116-00-TL	COOK	221	168	
		CHECKED AJD	REVISED -			CONTRACT NO. 61G08					
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -			SCALE: 1" = 20'	SHEET OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

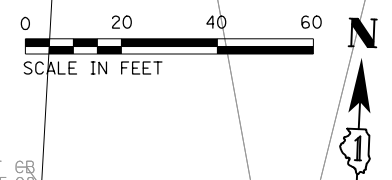
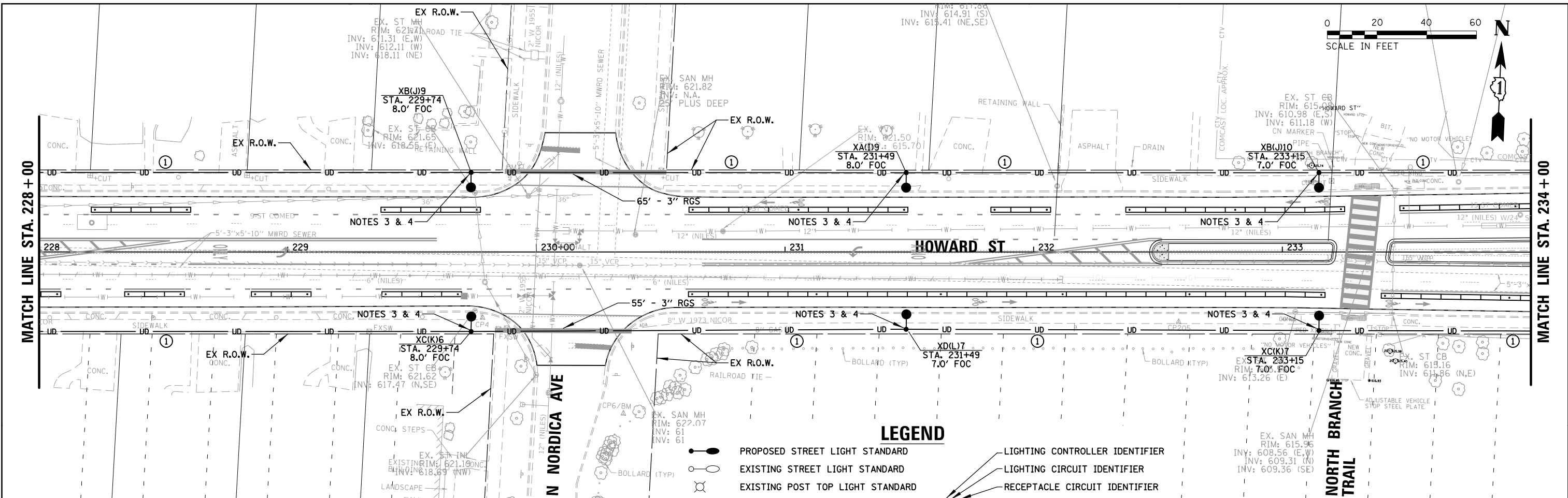


- NOTES:**
1. AFTER PROPOSED LIGHTING IS OPERATIONAL, CONTRACTOR SHALL DISCONNECT/REMOVE EXISTING OVERHEAD WIRING & REMOVE EXISTING LIGHT POLE/FOUNDATION. REMOVED POLE SHALL BE RETURNED TO NILES PUBLIC WORKS, CONTRACTOR TO COORDINATE LOCATION.
 2. PROPOSED COMBINATION LIGHTING SHALL BE INSTALLED & FUNCTIONAL BEFORE EXISTING LIGHTING IS REMOVED. THE ROADWAY LIGHTING SHALL BE FUNCTIONAL EVERY NIGHT FROM DUSK TO DAWN (SEE IDOT PROPOSED LIGHTING COMBINATION PLAN).
 3. POLE WIRING SHALL BE DISCONNECTED/RECONNECTED SAME DAY TO ENSURE ALL ROADWAY LIGHTING REMAINS FUNCTIONAL EVERY NIGHT DUSK TO DAWN.
 4. NO ACCESSORIES (BANNER ARMS, FLAG BRACKET, WREATH HOOKS OR PLANTER) SHALL BE INSTALLED ON THIS POLE (SEE NOTE 3).
 5. CONTRACTOR SHALL COORDINATE WITH VILLAGE FOR WHICH ACCESSORY IS TO BE INSTALLED ON THIS POLE (SEE NOTE 3).
 6. ALL ACCESSORIES NOT INSTALLED SHALL BE DELIVERED IN ORIGINAL BOXES TO VILLAGE PUBLIC WORKS.

CONDUCTOR /CONDUIT SCHEDULE

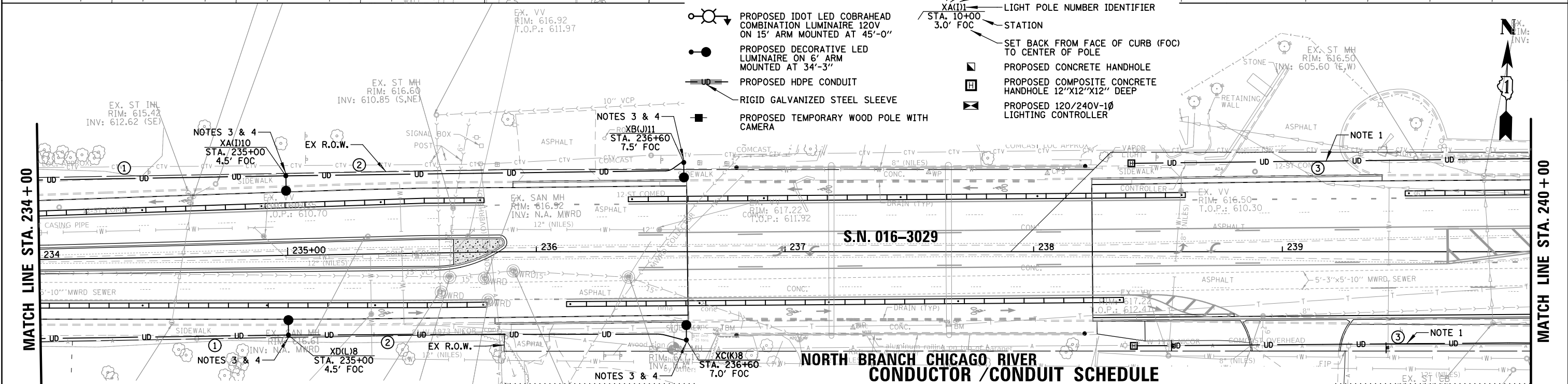
- ① 4/C #8, 2/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
- ② 2/C #8, 1/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
- ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
- ④ 2/C #4 & 1/C #4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
- ⑤ 1/C #8, 1/C #8 N & 1/C #8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
- ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

PROPOSED ELECTRIC SERVICE NOTE
 ADDRESS: 7600 WAUKEGAN RD.
 COMED SERVICE REQUEST#: 0492-8877
 REP: DEBRA GATLING (847) 816-5323
 DEBRA.GATLING@COMED.COM



LEGEND

- PROPOSED STREET LIGHT STANDARD
- EXISTING STREET LIGHT STANDARD
- ⊗ EXISTING POST TOP LIGHT STANDARD
- ⊙ PROPOSED IDOT LED COBRAHEAD COMBINATION LUMINAIRE 120V ON 15' ARM MOUNTED AT 45'-0"
- PROPOSED DECORATIVE LED LUMINAIRE ON 6' ARM MOUNTED AT 34'-3"
- PROPOSED HDPE CONDUIT
- RIGID GALVANIZED STEEL SLEEVE
- PROPOSED TEMPORARY WOOD POLE WITH CAMERA
- LIGHTING CONTROLLER IDENTIFIER
- LIGHTING CIRCUIT IDENTIFIER
- RECEPTACLE CIRCUIT IDENTIFIER
- LIGHT POLE NUMBER IDENTIFIER
- STATION
- SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE
- PROPOSED CONCRETE HANDHOLE
- PROPOSED COMPOSITE CONCRETE HANDHOLE 12"X12"X12" DEEP
- PROPOSED 120/240V-1Ø LIGHTING CONTROLLER



NOTES:

1. PROVIDE PULL STRING WITH INTEGRAL TRACER WIRE. PAID FOR UNDER "CABLE, SPECIAL" (SEE SPECIAL PROVISION).
2. NO ACCESSORIES (BANNER ARMS, FLAG BRACKET, WREATH HOOKS OR PLANTER) SHALL BE INSTALLED ON THIS POLE (SEE NOTE 3).
3. CONTRACTOR SHALL COORDINATE WITH VILLAGE FOR WHICH ACCESSORY IS TO BE INSTALLED ON THIS POLE (SEE NOTE 3).
4. ALL ACCESSORIES NOT INSTALLED SHALL BE DELIVERED IN ORIGINAL BOXES TO VILLAGE PUBLIC WORKS.

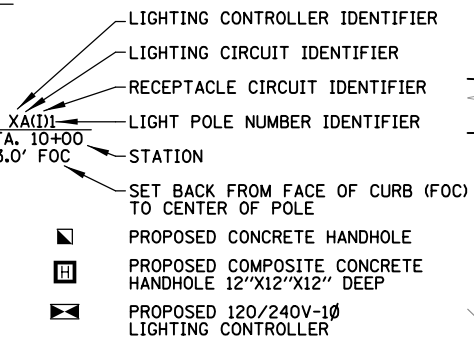
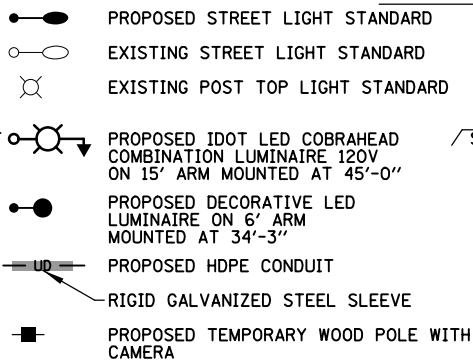
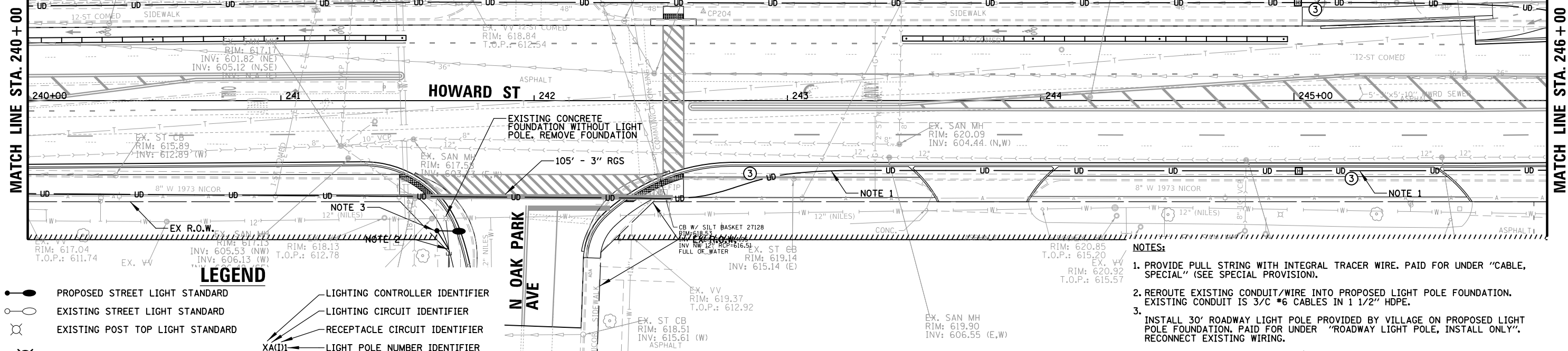
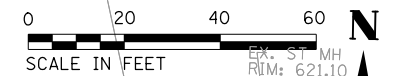
- ① 4/C #8, 2/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
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- ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
- ④ 2/C #4 & 1/C #4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
- ⑤ 1/C #8, 1/C #8 N & 1/C #8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
- ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

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Default	PLOT SCALE = 48"	DRAWN RJJ	REVISED -		SCALE: 1" = 20'	SHEET	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
	PLOT DATE = 11/21/2019	CHECKED AJD	REVISED -							CONTRACT NO. 61G08		
		DATE -	REVISED -							CONTRACT NO. 61G08		

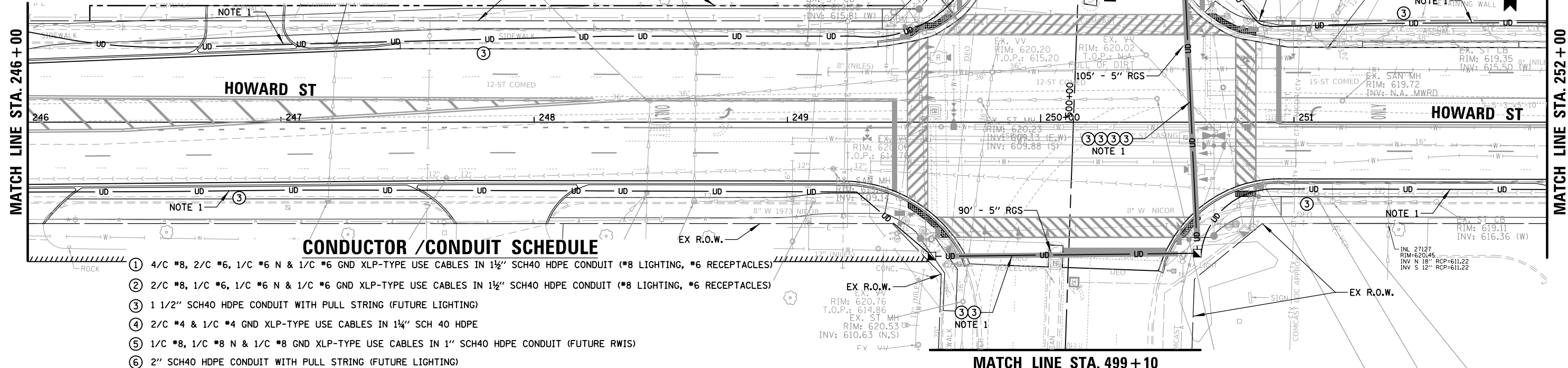
ST CB
615.89
613.09 (E,W,S)

EX. VV
RIM: 614.42
T.O.P.: 608.42

EX. ST MH
RIM: 618.99
INV: 607.49 (E,W)
INV: 612.89 (SW,NW)



- NOTES:**
1. PROVIDE PULL STRING WITH INTEGRAL TRACER WIRE. PAID FOR UNDER "CABLE, SPECIAL" (SEE SPECIAL PROVISION).
 2. REROUTE EXISTING CONDUIT/WIRE INTO PROPOSED LIGHT POLE FOUNDATION. EXISTING CONDUIT IS 3/C #6 CABLES IN 1 1/2" HDPE.
 3. INSTALL 30' ROADWAY LIGHT POLE PROVIDED BY VILLAGE ON PROPOSED LIGHT POLE FOUNDATION. PAID FOR UNDER "ROADWAY LIGHT POLE, INSTALL ONLY". RECONNECT EXISTING WIRING.



- CONDUCTOR / CONDUIT SCHEDULE**
- 1 4/C #8, 2/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
 - 2 2/C #8, 1/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
 - 3 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
 - 4 2/C #4 & 1/C #4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
 - 5 1/C #8, 1/C #8 N & 1/C #8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
 - 6 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

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N:\NILES\180016\Mech\LGT_180016_04.sht		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
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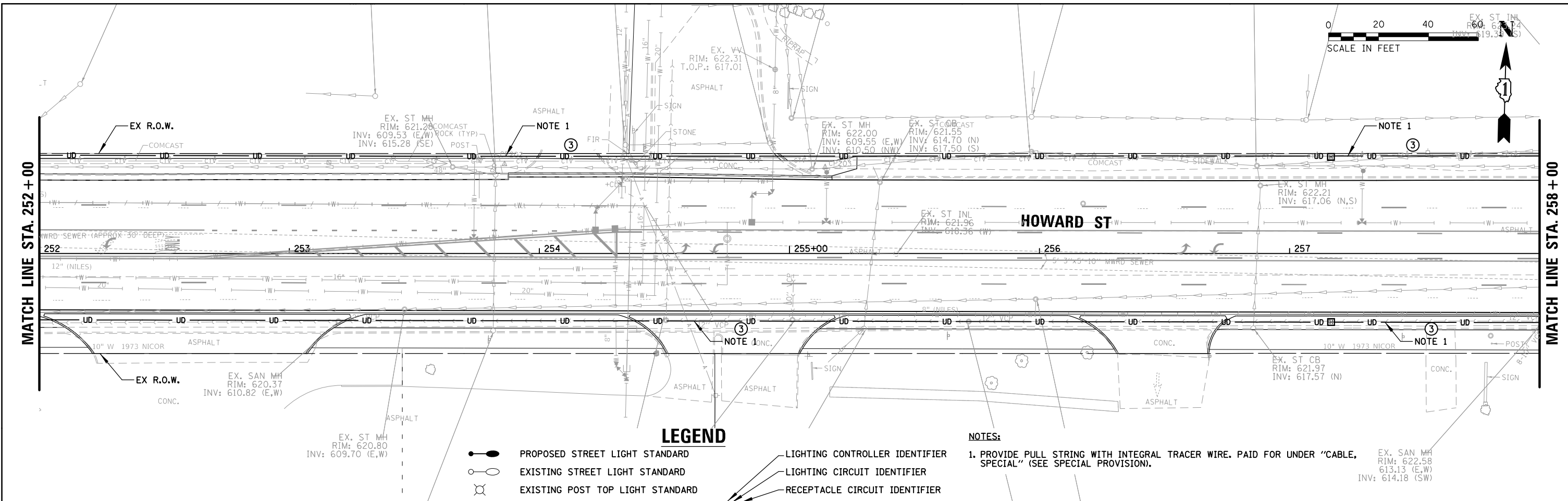
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
PROPOSED LIGHTING PLAN (4 OF 9)**

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	172
CONTRACT NO. 61G08				

ILLINOIS FED. AID PROJECT

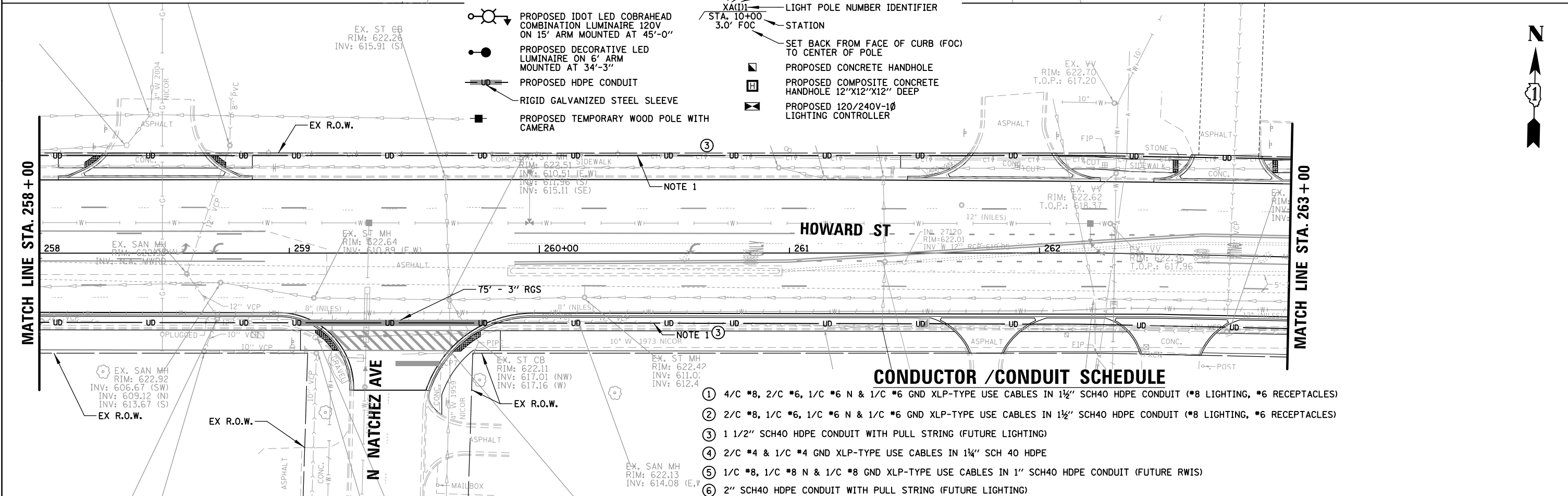


LEGEND

- PROPOSED STREET LIGHT STANDARD
- EXISTING STREET LIGHT STANDARD
- ⊗ EXISTING POST TOP LIGHT STANDARD
- ⊙ PROPOSED IDOT LED COBRAHEAD COMBINATION LUMINAIRE 120V ON 15' ARM MOUNTED AT 45'-0"
- PROPOSED DECORATIVE LED LUMINAIRE ON 6' ARM MOUNTED AT 34'-3"
- PROPOSED HDPE CONDUIT
- RIGID GALVANIZED STEEL SLEEVE
- PROPOSED TEMPORARY WOOD POLE WITH CAMERA
- ⊙ LIGHTING CONTROLLER IDENTIFIER
- LIGHTING CIRCUIT IDENTIFIER
- ⊗ RECEPTACLE CIRCUIT IDENTIFIER
- ⊙ LIGHT POLE NUMBER IDENTIFIER
- STATION
- SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE
- PROPOSED CONCRETE HANDHOLE
- PROPOSED COMPOSITE CONCRETE HANDHOLE 12"x12"x12" DEEP
- PROPOSED 120/240V-1Ø LIGHTING CONTROLLER

NOTES:

1. PROVIDE PULL STRING WITH INTEGRAL TRACER WIRE. PAID FOR UNDER "CABLE, SPECIAL" (SEE SPECIAL PROVISION).



CONDUCTOR /CONDUIT SCHEDULE

- ① 4/C #8, 2/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (*8 LIGHTING, *6 RECEPTACLES)
- ② 2/C #8, 1/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (*8 LIGHTING, *6 RECEPTACLES)
- ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
- ④ 2/C #4 & 1/C #4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
- ⑤ 1/C #8, 1/C #8 N & 1/C #8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
- ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

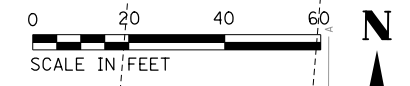
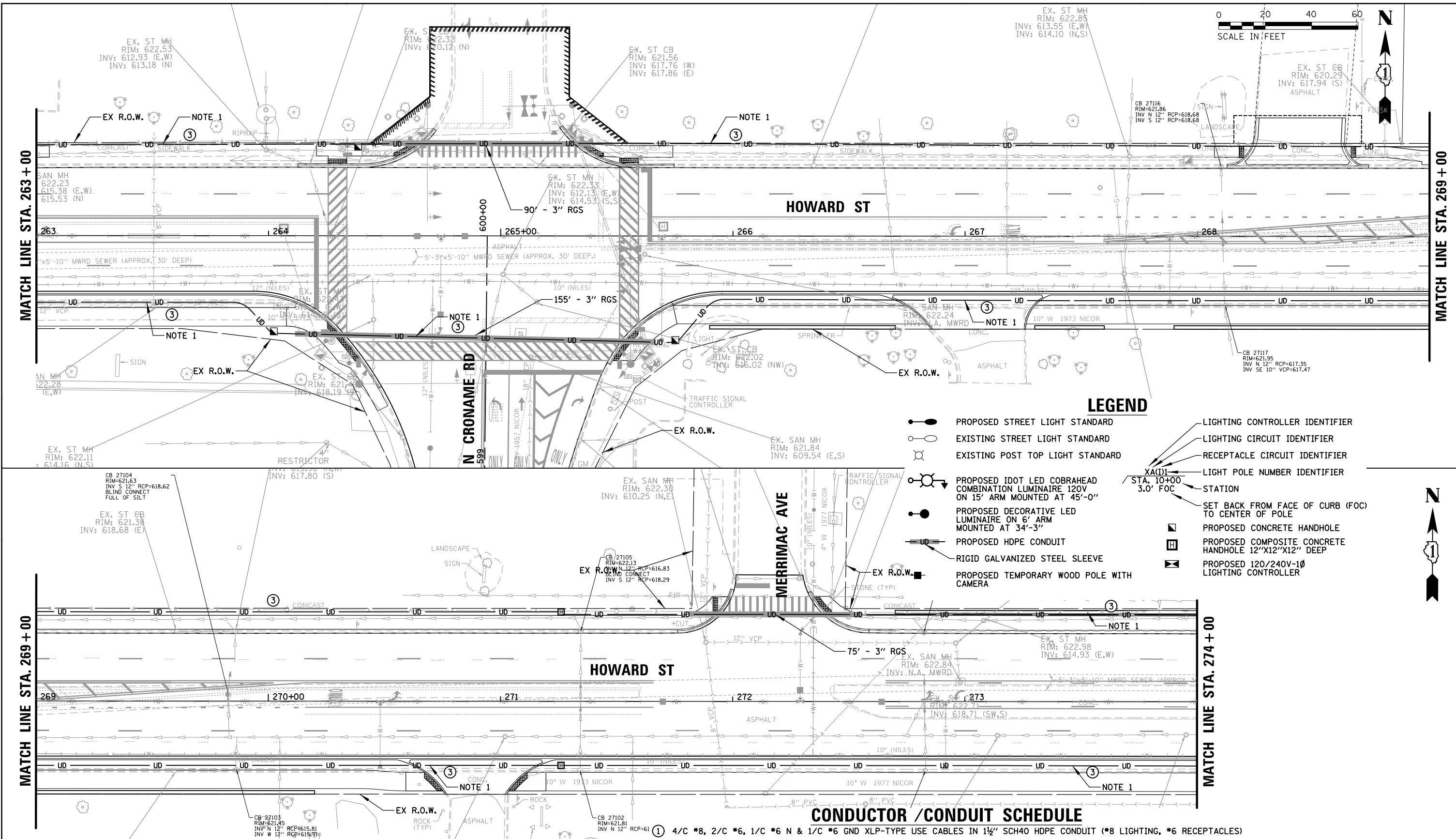
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		CHECKED AJD	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
PROPOSED LIGHTING PLAN (5 OF 9)**

F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 173
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

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



LEGEND

- PROPOSED STREET LIGHT STANDARD
- EXISTING STREET LIGHT STANDARD
- ⊙ EXISTING POST TOP LIGHT STANDARD
- ⊙ PROPOSED IDOT LED COBRAHEAD COMBINATION LUMINAIRE 120V ON 15' ARM MOUNTED AT 45'-0"
- PROPOSED DECORATIVE LED LUMINAIRE ON 6' ARM MOUNTED AT 34'-3"
- PROPOSED HDPE CONDUIT
- RIGID GALVANIZED STEEL SLEEVE
- PROPOSED TEMPORARY WOOD POLE WITH CAMERA
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- LIGHTING CIRCUIT IDENTIFIER
- RECEPTACLE CIRCUIT IDENTIFIER
- LIGHT POLE NUMBER IDENTIFIER
- STATION
- SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE
- PROPOSED CONCRETE HANDHOLE
- PROPOSED COMPOSITE CONCRETE HANDHOLE 12"x12"x12" DEEP
- PROPOSED 120/240V-1Ø LIGHTING CONTROLLER

CONDUCTOR /CONDUIT SCHEDULE

- ① 4/C *8, 2/C *6, 1/C *6 N & 1/C *6 GND XLP-TYPE USE CABLES IN 1½" SCH40 HDPE CONDUIT (*8 LIGHTING, *6 RECEPTACLES)
- ② 2/C *8, 1/C *6, 1/C *6 N & 1/C *6 GND XLP-TYPE USE CABLES IN 1½" SCH40 HDPE CONDUIT (*8 LIGHTING, *6 RECEPTACLES)
- ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
- ④ 2/C *4 & 1/C *4 GND XLP-TYPE USE CABLES IN 1¼" SCH 40 HDPE
- ⑤ 1/C *8, 1/C *8 N & 1/C *8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
- ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

NOTES:

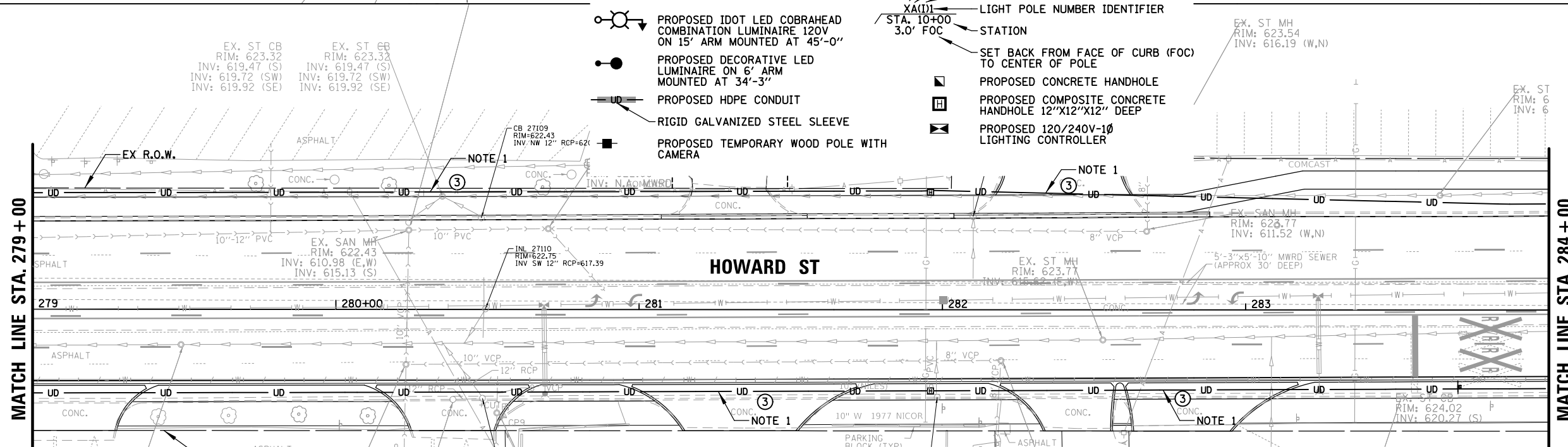
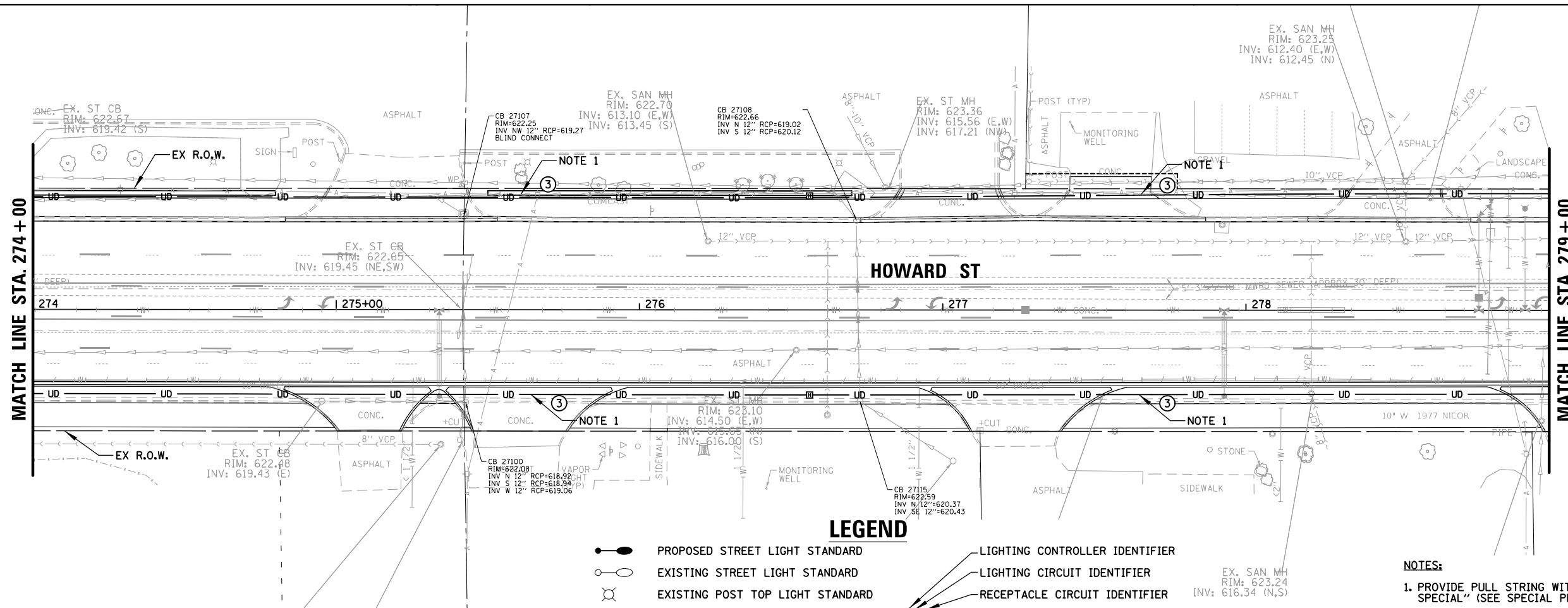
- 1. PROVIDE PULL STRING WITH INTEGRAL TRACER WIRE. PAID FOR UNDER "CABLE, SPECIAL" (SEE SPECIAL PROVISION).

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		CHECKED AJD	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

HOWARD STREET IMPROVEMENTS PROPOSED LIGHTING PLAN (6 OF 9)			
SCALE: 1" = 20'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	174
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	



LEGEND

- PROPOSED STREET LIGHT STANDARD
- EXISTING STREET LIGHT STANDARD
- ⊗ EXISTING POST TOP LIGHT STANDARD
- ⊙ PROPOSED IDOT LED COBRAHEAD COMBINATION LUMINAIRE 120V ON 15' ARM MOUNTED AT 45'-0"
- PROPOSED DECORATIVE LED LUMINAIRE ON 6' ARM MOUNTED AT 34'-3"
- HDPE CONDUIT
- RIGID GALVANIZED STEEL SLEEVE
- PROPOSED TEMPORARY WOOD POLE WITH CAMERA
- LIGHTING CONTROLLER IDENTIFIER
- LIGHTING CIRCUIT IDENTIFIER
- RECEPTACLE CIRCUIT IDENTIFIER
- LIGHT POLE NUMBER IDENTIFIER
- STATION
- SET BACK FROM FACE OF CURB (FOC) TO CENTER OF POLE
- PROPOSED CONCRETE HANDHOLE
- PROPOSED COMPOSITE CONCRETE HANDHOLE 12"x12"x12" DEEP
- PROPOSED 120/240V-1Ø LIGHTING CONTROLLER

NOTES:
 1. PROVIDE PULL STRING WITH INTEGRAL TRACER WIRE. PAID FOR UNDER "CABLE, SPECIAL" (SEE SPECIAL PROVISION).

CONDUCTOR /CONDUIT SCHEDULE

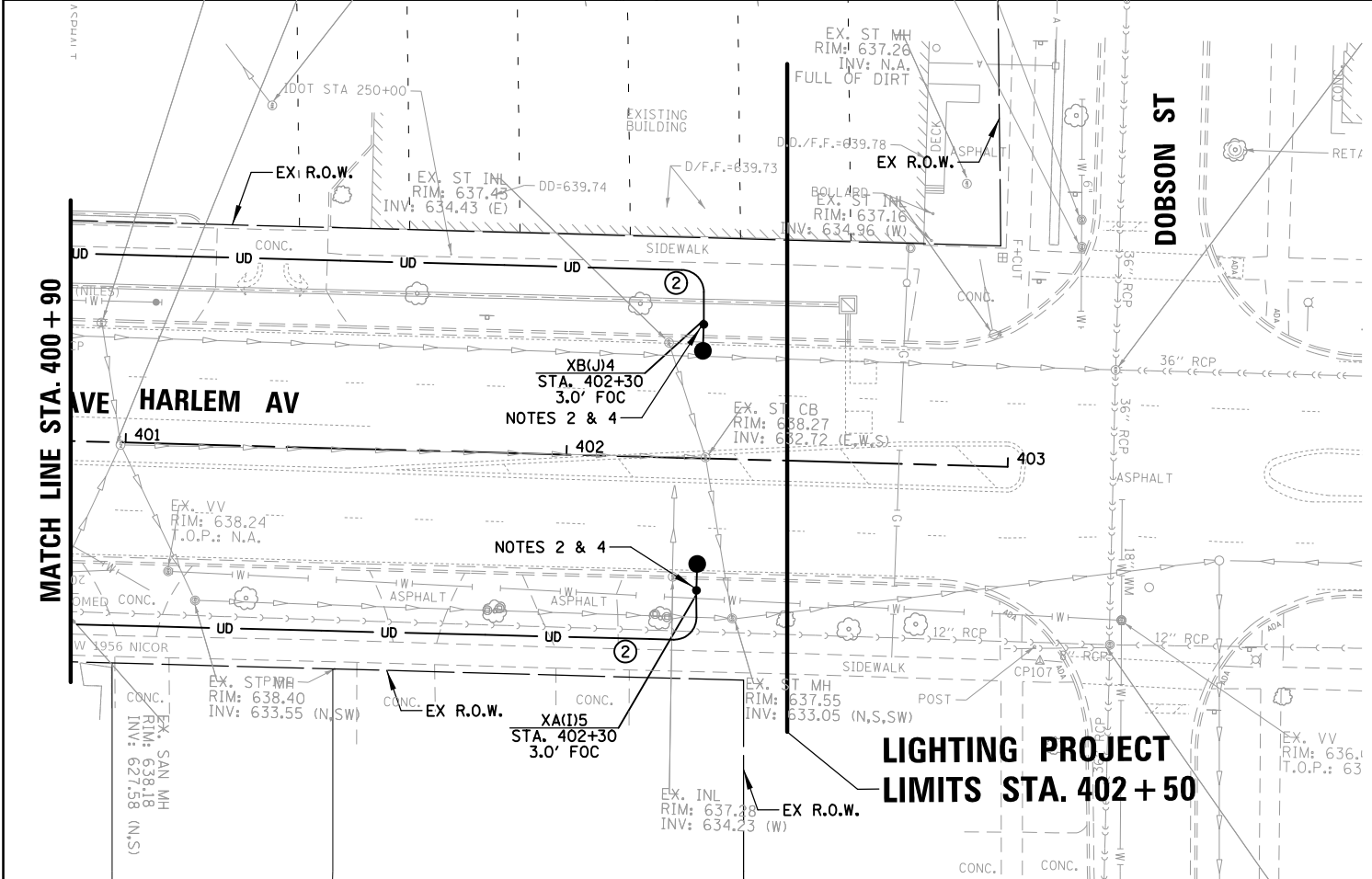
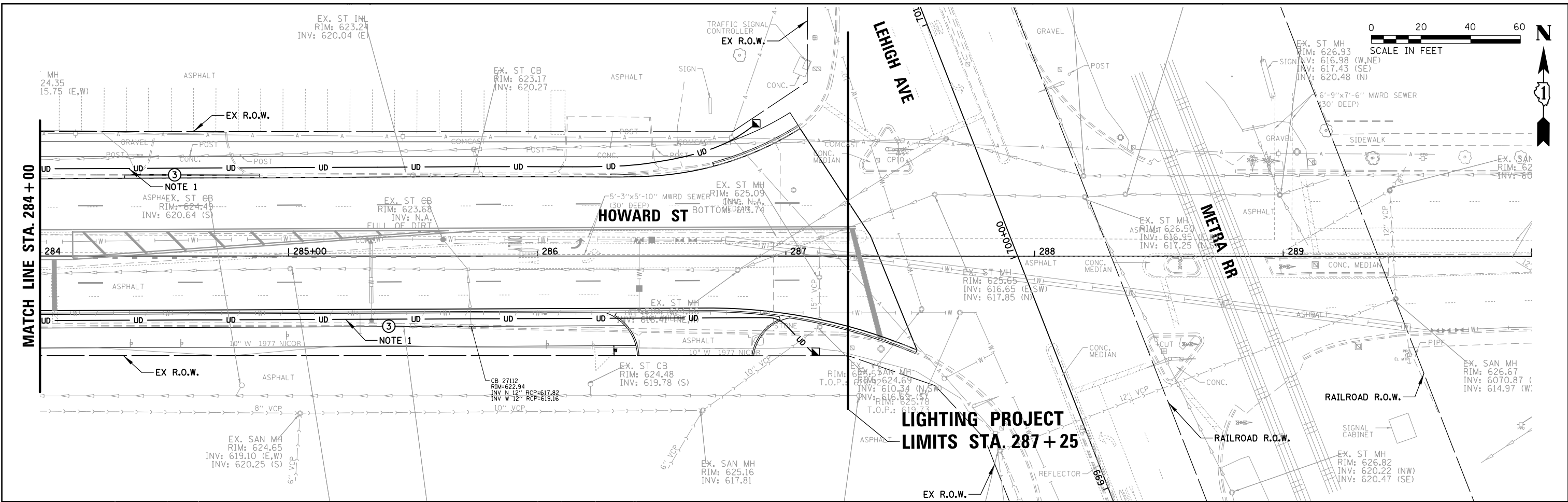
- ① 4/C *8, 2/C *6, 1/C *6 N & 1/C *6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (*8 LIGHTING, *6 RECEPTACLES)
- ② 2/C *8, 1/C *6, 1/C *6 N & 1/C *6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (*8 LIGHTING, *6 RECEPTACLES)
- ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
- ④ 2/C *4 & 1/C *4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
- ⑤ 1/C *8, 1/C *8 N & 1/C *8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
- ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

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		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

HOWARD STREET IMPROVEMENTS PROPOSED LIGHTING PLAN (7 OF 9)			
SCALE: 1" = 20'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	175
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				



**LIGHTING PROJECT
LIMITS STA. 287 + 25**

**LIGHTING PROJECT
LIMITS STA. 402 + 50**

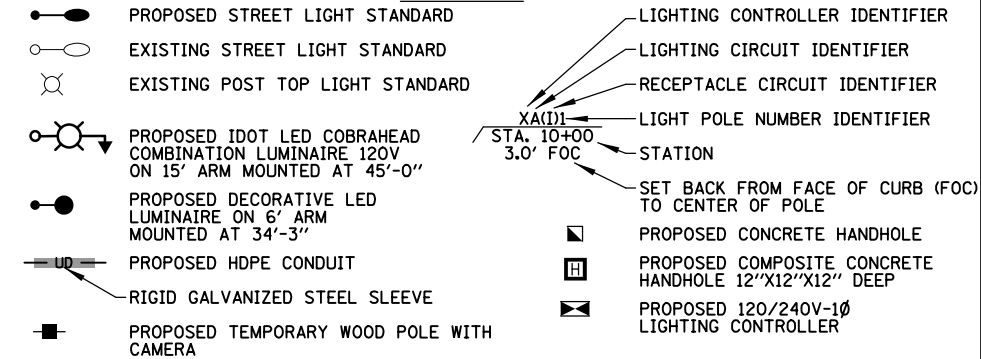
NOTES:

1. PROVIDE PULL STRING WITH INTEGRAL TRACER WIRE. PAID FOR UNDER "CABLE, SPECIAL" (SEE SPECIAL PROVISION).
2. NO ACCESSORIES (BANNER ARMS, FLAG BRACKET, WREATH HOOKS OR PLANTER) SHALL BE INSTALLED ON THIS POLE (SEE NOTE 3).
3. CONTRACTOR SHALL COORDINATE WITH VILLAGE FOR WHICH ACCESSORY IS TO BE INSTALLED ON THIS POLE (SEE NOTE 3).
4. ALL ACCESSORIES NOT INSTALLED SHALL BE DELIVERED IN ORIGINAL BOXES TO VILLAGE PUBLIC WORKS.

CONDUCTOR /CONDUIT SCHEDULE

- ① 4/C #8, 2/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
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- ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
- ④ 2/C #4 & 1/C #4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
- ⑤ 1/C #8, 1/C #8 N & 1/C #8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
- ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)

LEGEND

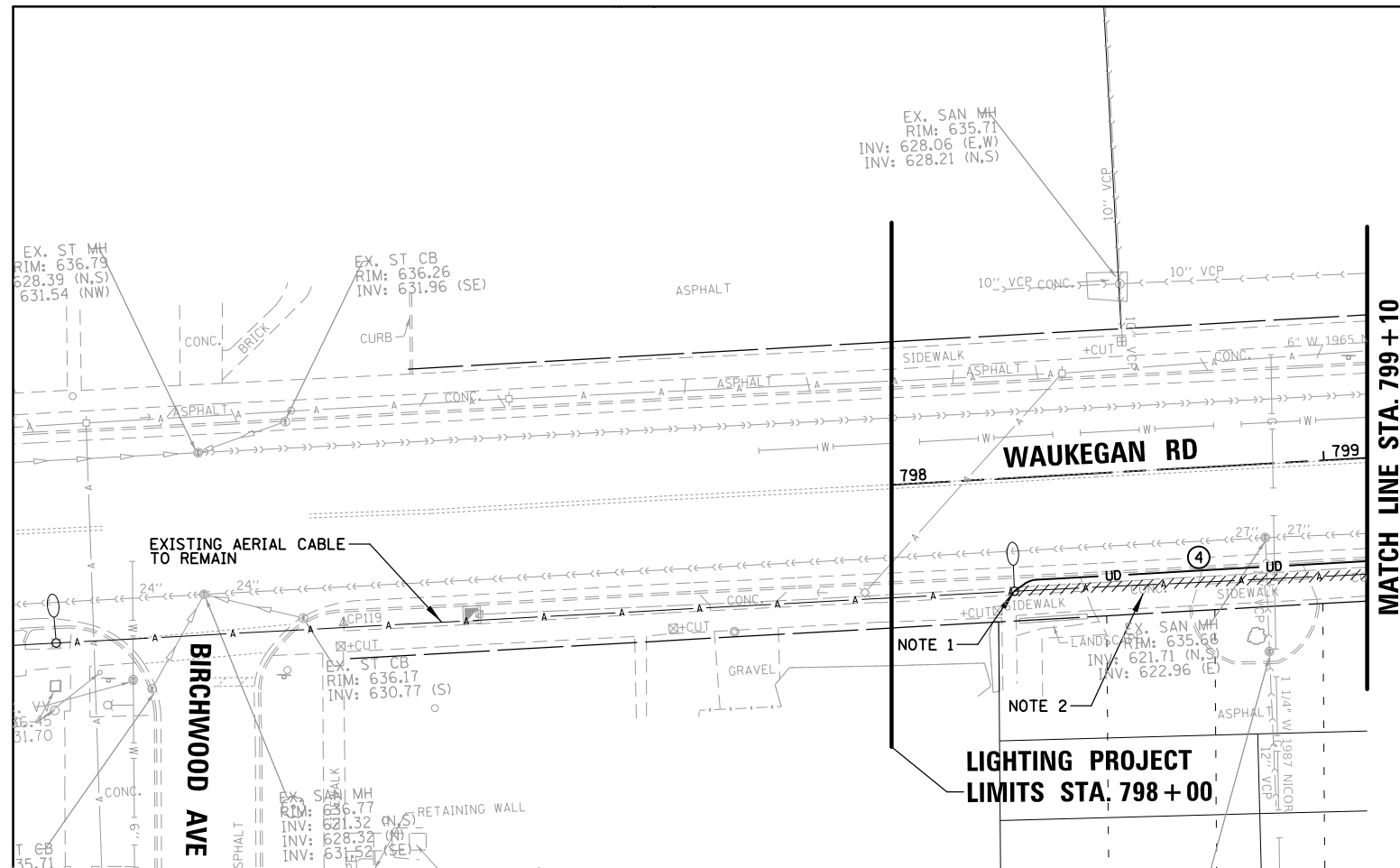


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		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE -	REVISED -

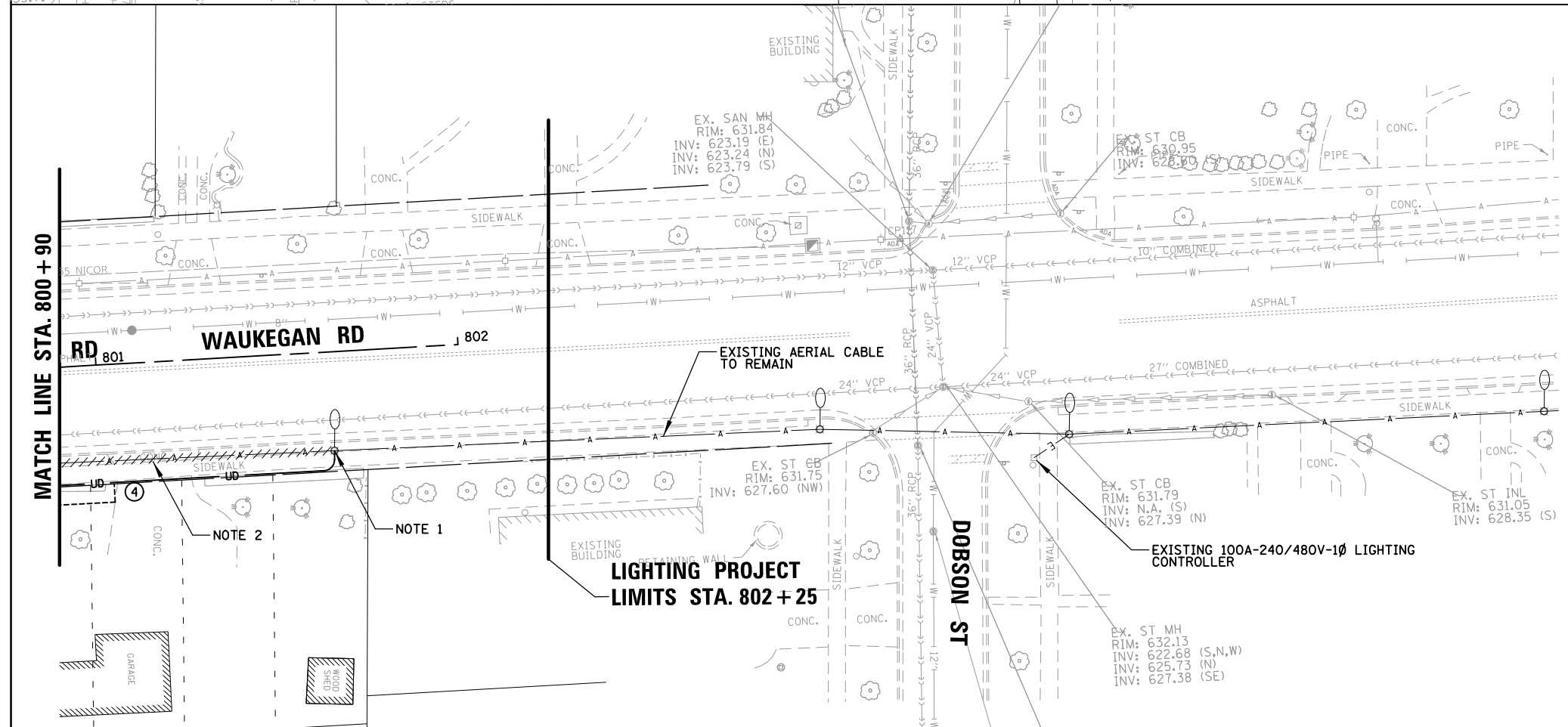
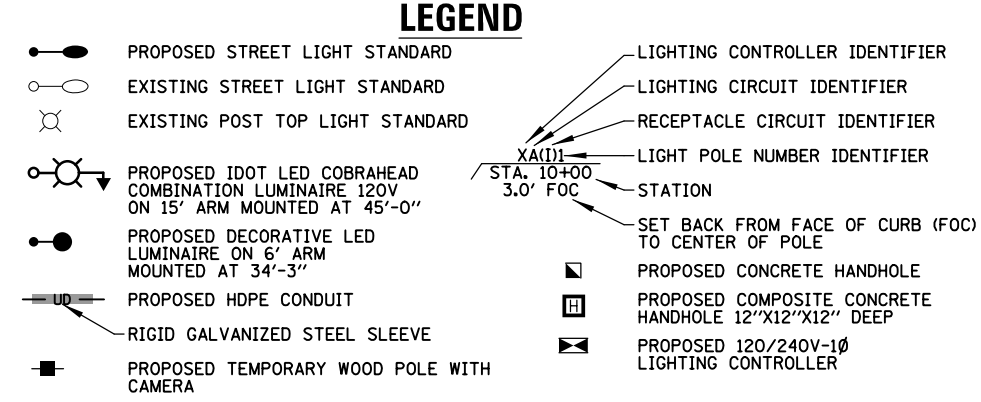
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

HOWARD STREET IMPROVEMENTS PROPOSED LIGHTING PLAN (8 OF 9)			
SCALE: 1" = 20'	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 176
ILLINOIS FED. AID PROJECT				CONTRACT NO. 61G08

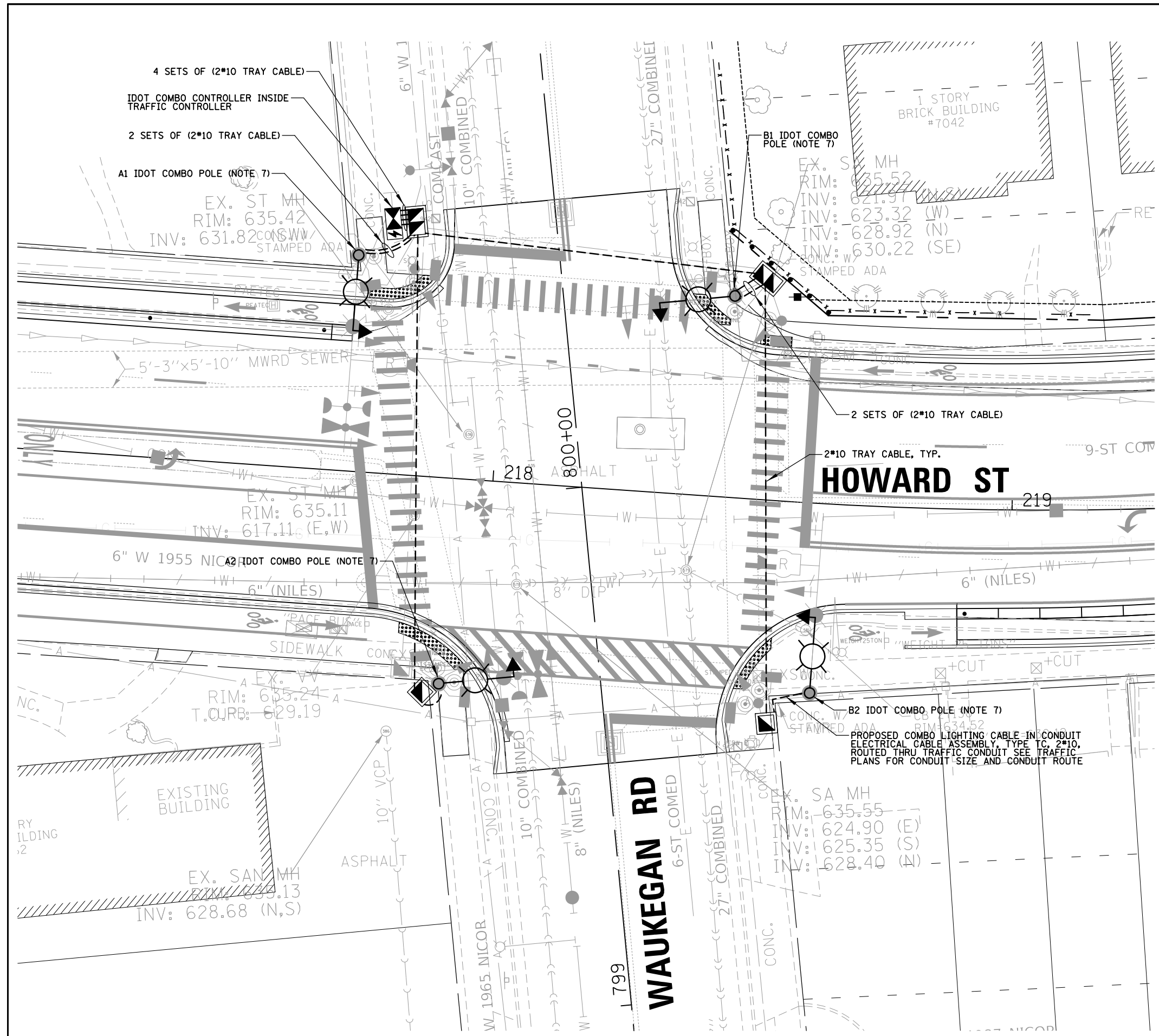
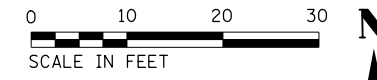


- ### CONDUCTOR / CONDUIT SCHEDULE
- ① 4/C #8, 2/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
 - ② 2/C #8, 1/C #6, 1/C #6 N & 1/C #6 GND XLP-TYPE USE CABLES IN 1 1/2" SCH40 HDPE CONDUIT (#8 LIGHTING, #6 RECEPTACLES)
 - ③ 1 1/2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)
 - ④ 2/C #4 & 1/C #4 GND XLP-TYPE USE CABLES IN 1 1/4" SCH 40 HDPE
 - ⑤ 1/C #8, 1/C #8 N & 1/C #8 GND XLP-TYPE USE CABLES IN 1" SCH40 HDPE CONDUIT (FUTURE RWIS)
 - ⑥ 2" SCH40 HDPE CONDUIT WITH PULL STRING (FUTURE LIGHTING)



- ### NOTES:
1. CONTRACTOR SHALL DRILL EXISTING LIGHTING FOUNDATION FOR INSTALLATION OF 1 1/4" HDPE CONDUIT (PAID FOR UNDER "DRILL EXISTING FOUNDATION").
 2. AFTER PROPOSED LIGHTING IS OPERATIONAL, CONTRACTOR SHALL DISCONNECT/REMOVE EXISTING OVERHEAD WIRING (PAID FOR UNDER "REMOVE AERIAL CABLE").

FILE NAME = N:\NILES\180016\Mech\LGT_180016_09.sht	USER NAME = rhowellindgren	DESIGNED AJD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HOWARD STREET IMPROVEMENTS PROPOSED LIGHTING PLAN (9 OF 9)	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	PLOT SCALE = 48'	DRAWN RJJ	REVISED -			1334	13-00116-00-TL	COOK	221	177	
	PLOT DATE = 11/21/2019	CHECKED AJD	REVISED -			CONTRACT NO. 61G08					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					



LEGEND

IDOT COMBINATION LIGHT POLE 45 FT LUMINAIRE MOUNTING HEIGHT 15 FT LUMINAIRE ARM LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION E, MC3, 120V, WITH 6 AMP FUSE & NEUTRAL SLUG

IDOT COMBO LIGHTING SCHEDULE OF QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
COMBINATION LIGHTING CONTROLLER	EACH	1
LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	4
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION E	EACH	4
ELECTRIC CABLE ASSEMBLY IN CONDUIT, 600V (XLP-TYPE TC)2/C NO. 10	FOOT	540

NOTES:

1. THE IDOT COMBO LIGHTING CIRCUITS SHALL NOT BE CONNECTED TO THE ROADWAY LIGHTING CIRCUITS.
2. LUMINAIRES ARE POWERED FROM IDOT TRAFFIC CONTROLLER. SEE DETAIL BE-240.
3. THE COMBO LIGHTING CABLE AND SIGNAL CABLES WILL BE IN SHARED CONDUIT.
4. SEE TRAFFIC PLANS FOR LOCATION OF COMBO POLES, HANDHOLES AND CONDUIT.
5. CIRCUIT DECALS SHALL NOT BE INSTALLED ON COMBO POLES. CIRCUITING SHOWN IS FOR ELECTRICAL CONNECTIONS ONLY.
6. SPLICING NOT ALLOWED IN BELOW GRADE HANDHOLES.
7. COMBINATION LUMINAIRES SHALL HAVE LUMINAIRE SAFETY CABLE.

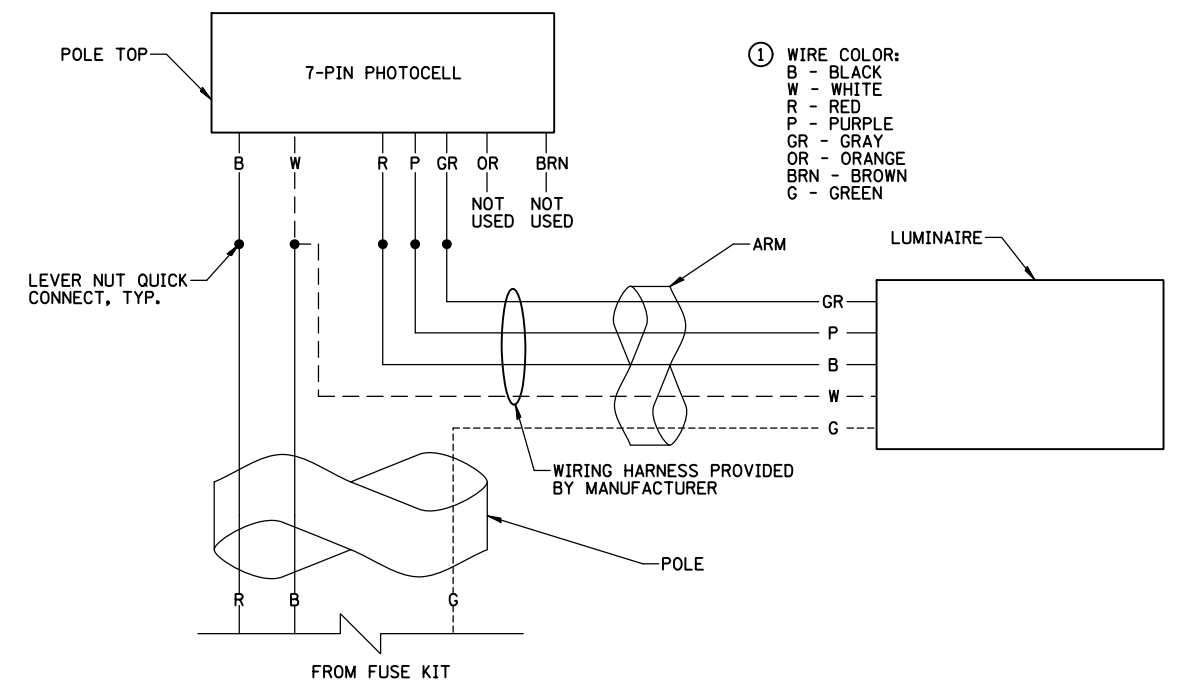
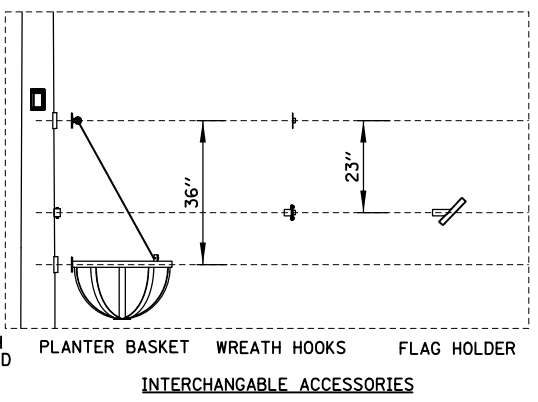
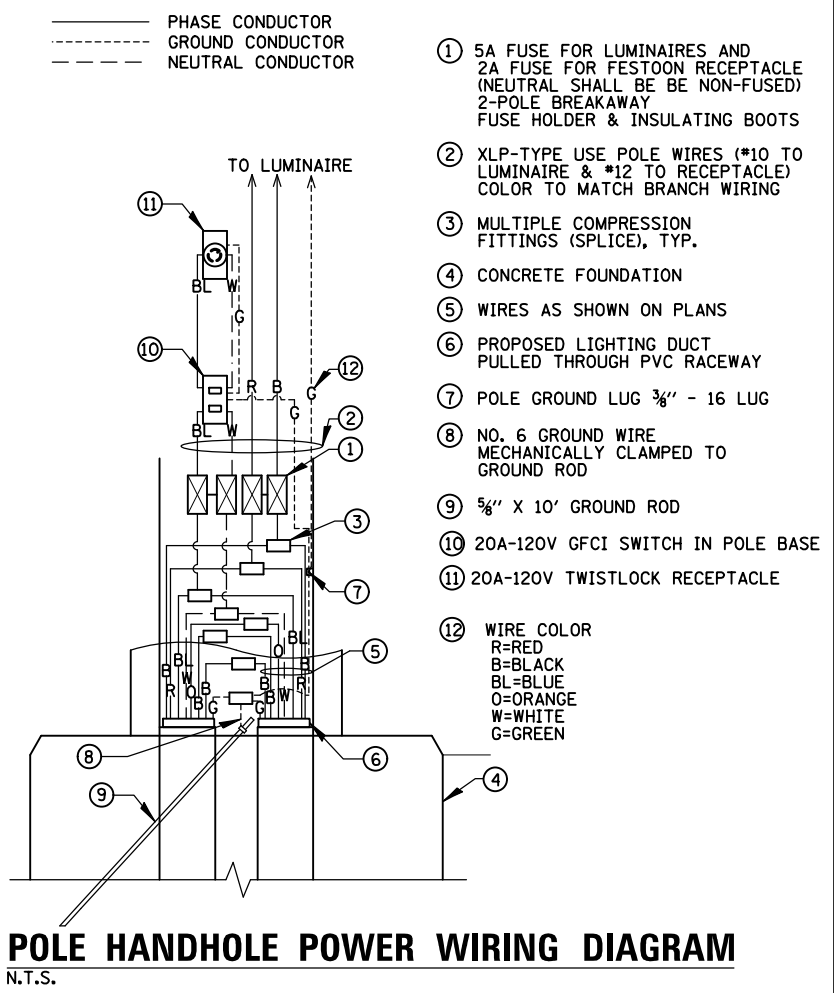
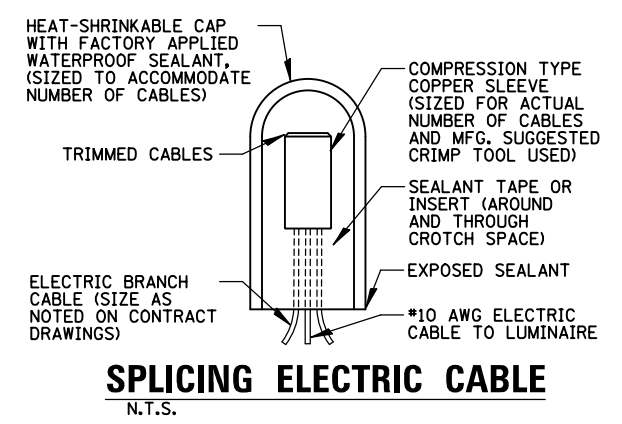
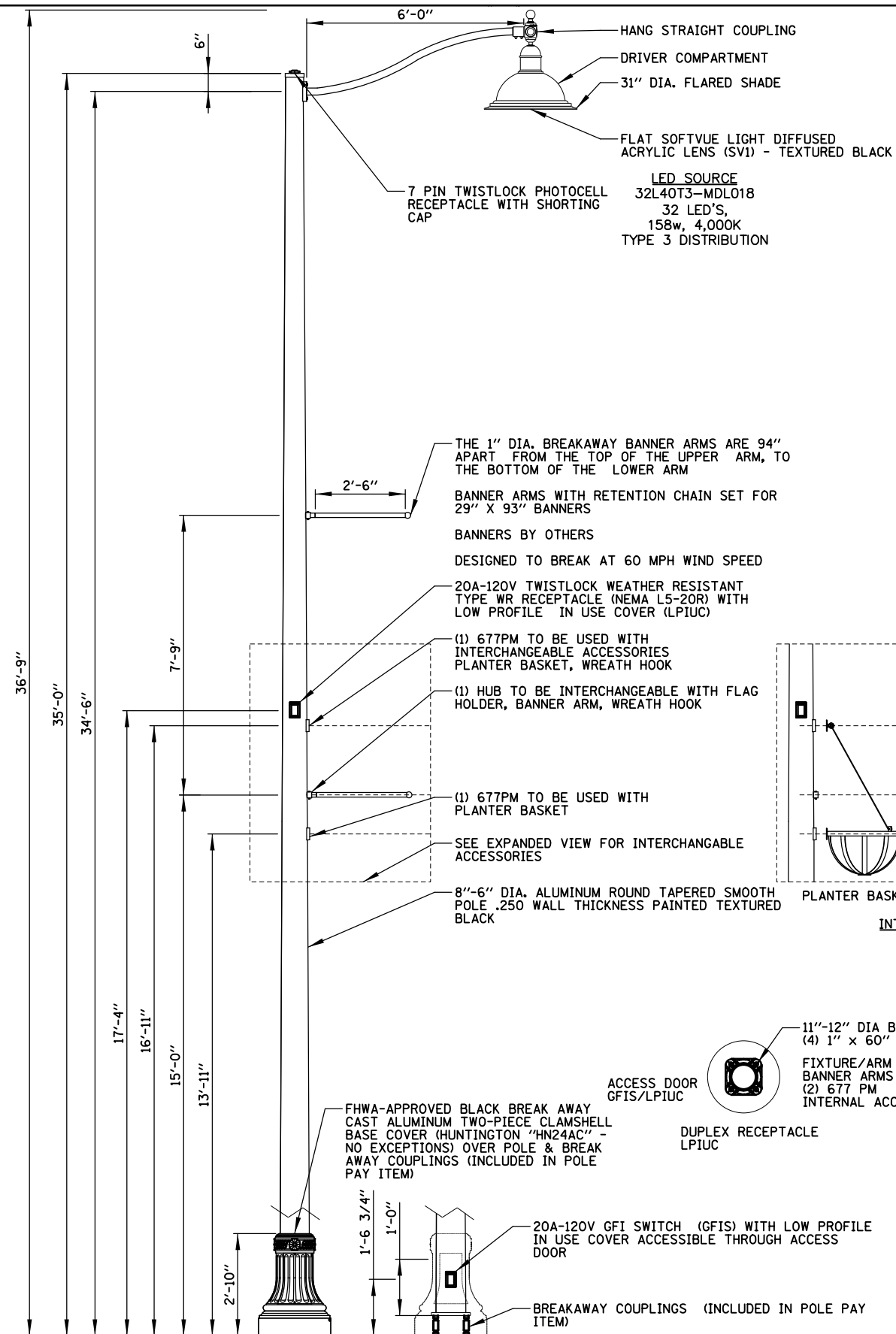
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		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
IDOT PROPOSED LIGHTING COMBINATION PLAN**

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	178
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



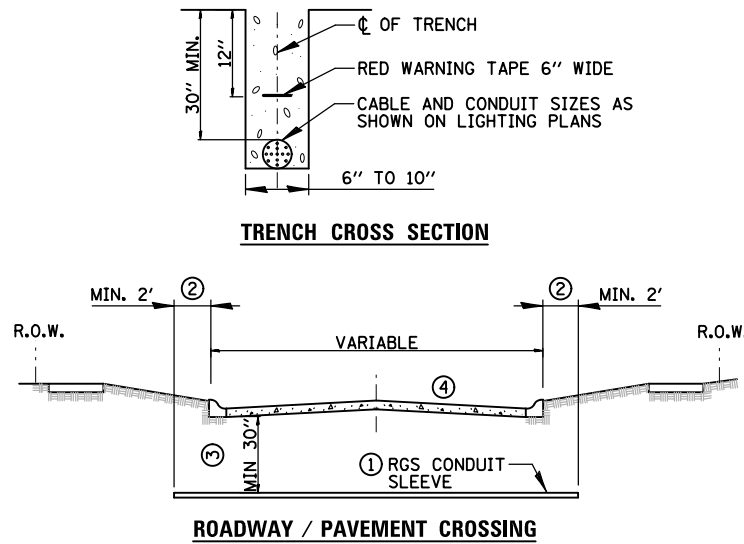
NOTES:
 1. LIGHT POLE ASSEMBLY SHALL BE STERNBERG MODEL NO. 1A-1531LED-F-32L40T3-MDL018-SV1-HSHB/CA6/HUSB/-35'ARTS-PCC-R7-SC-ABC(1'')-BDBA6-TLDPL LPIUC-(2)677PM/BKT (NO EXCEPTIONS).
 2. PAID FOR UNDER "LIGHTING UNIT COMPLETE, SPECIAL", WHICH SHALL INCLUDE EVERYTHING SHOWN (SEE SPECIAL PROVISION).

FILE NAME =	USER NAME = rhowellindgren	DESIGNED AJD	REVISED -
N:\NILES\180016\Mech\LDT\180016_02.sht		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
 LIGHTING DETAILS**
 SCALE: 1" = 20' SHEET OF SHEETS STA. TO STA.

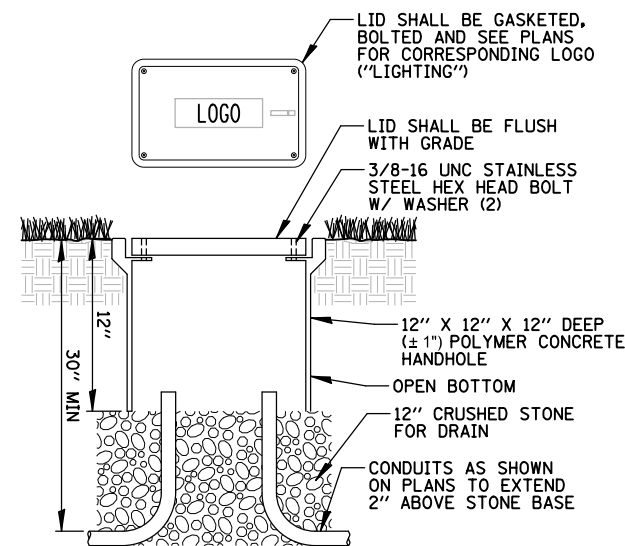
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	180
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



- 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.
- ④ CONTRACTOR SHALL PERFORM EXPLORATORY POTHOLES IN PAVEMENT IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND AS DIRECTED BY THE ENGINEER.

ELECTRIC CONDUIT INSTALLATION

N.T.S.

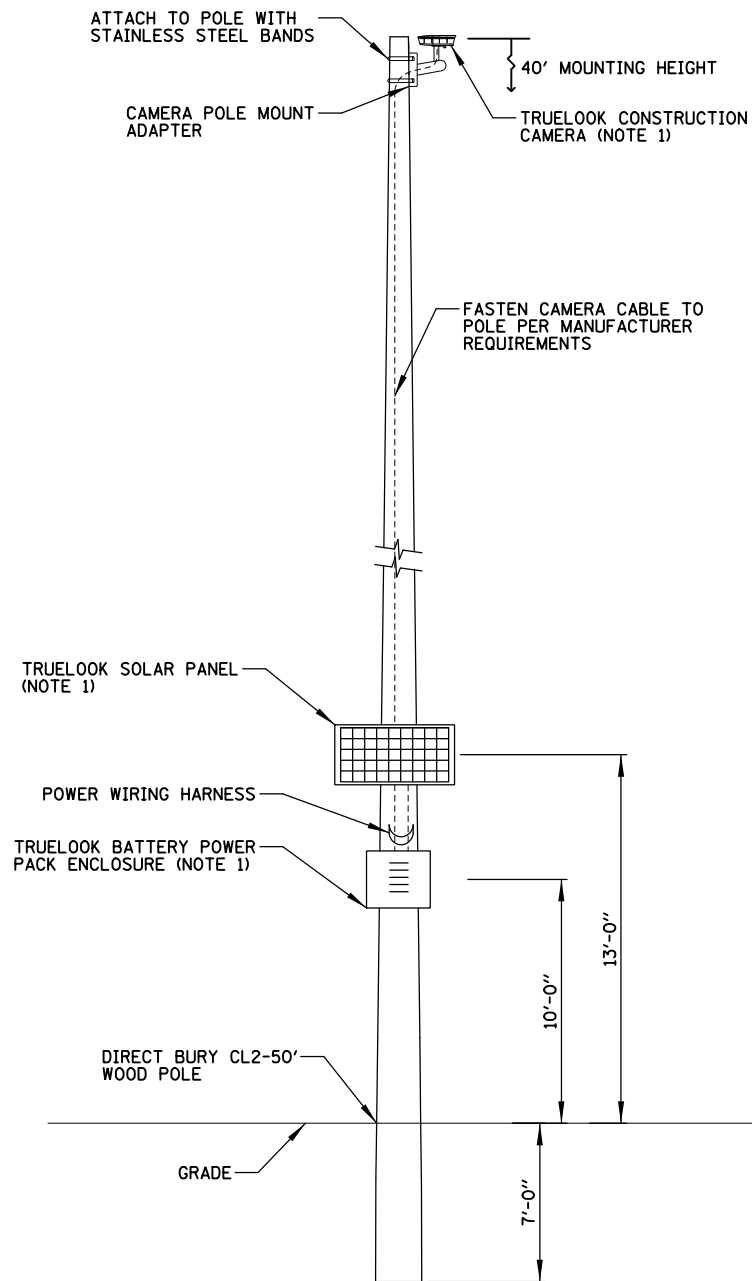


NOTES:

1. NO SPLICING TO BE DONE IN HANDHOLE.
2. POLYMER CONCRETE HANDHOLE AND LID SHALL BE GRAY.
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.

COMPOSITE CONCRETE HANDHOLE

N.T.S.

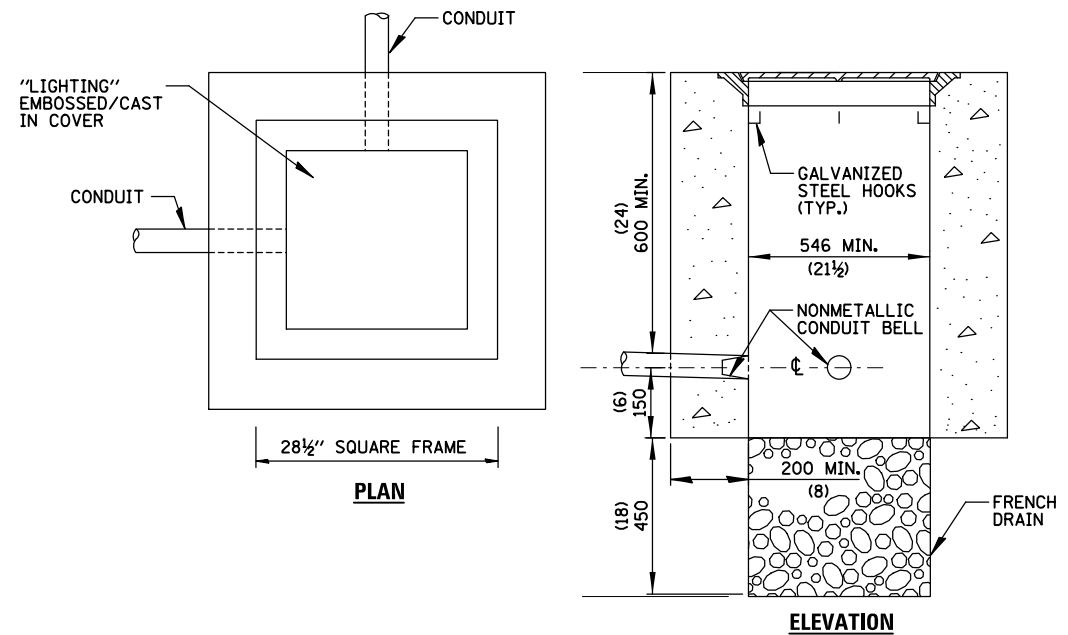


NOTES:

1. ALL MATERIAL ABOVE (EXCEPT FOR POLE) SHALL BE PROVIDED BY THE VILLAGE AND INCLUDED IN THE PRICE BID FOR "CCTV SYSTEM" (SEE SPECIAL PROVISION).
2. POLE/CAMERA SHALL BE INSTALLED AT START OF PROJECT & REMOVED AT END OF PROJECT.

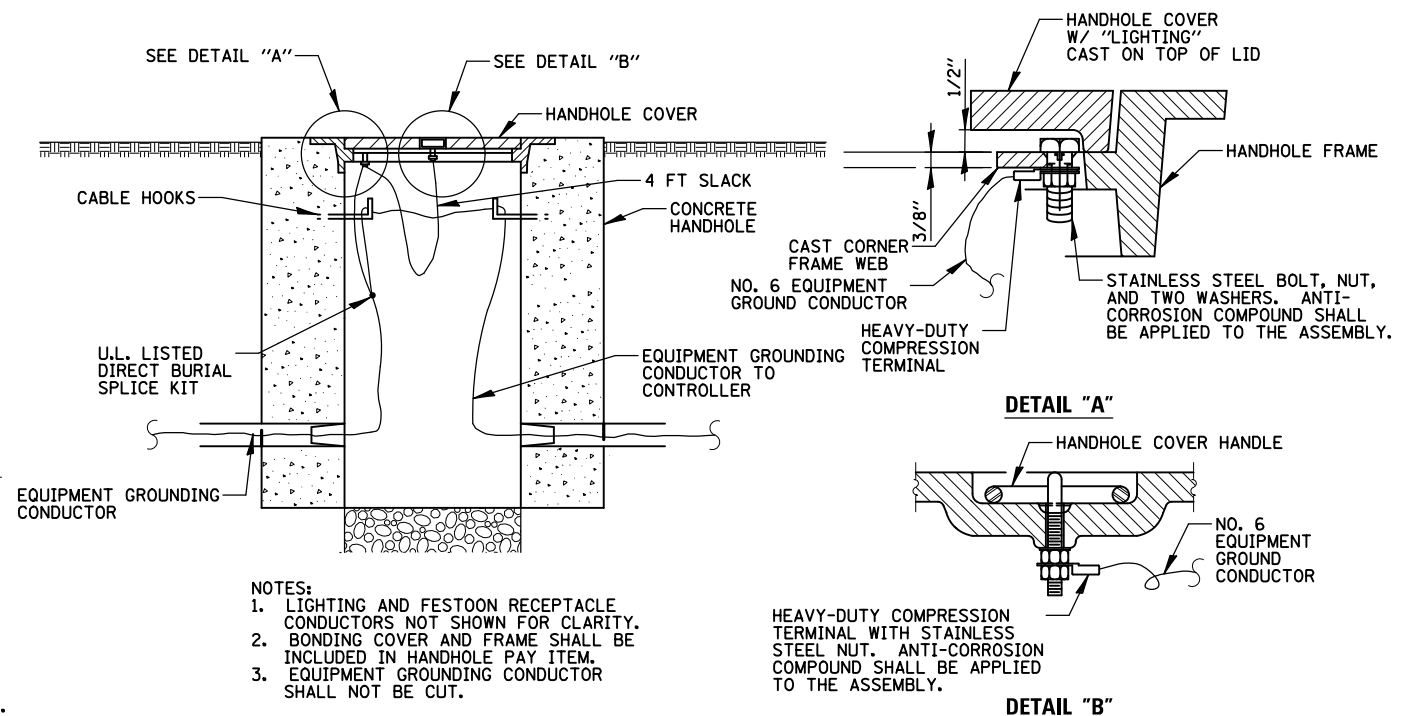
CCTV SYSTEM

N.T.S.



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. FRAME AND COVER CAN BARE 64 KG (140 LBS.) MIN. LOAD.



NOTES:

1. LIGHTING AND FESTOON RECEPTACLE CONDUCTORS NOT SHOWN FOR CLARITY.
2. BONDING COVER AND FRAME SHALL BE INCLUDED IN HANDHOLE PAY ITEM.
3. EQUIPMENT GROUNDING CONDUCTOR SHALL NOT BE CUT.

HEAVY-DUTY COMPRESSION TERMINAL WITH STAINLESS STEEL NUT. ANTI-CORROSION COMPOUND SHALL BE APPLIED TO THE ASSEMBLY.

LIGHTING HANDHOLE DETAIL

N.T.S.

FILE NAME =	USER NAME = rhowellindgren	DESIGNED AJD	REVISED -
N:\NILES\180016\Mech\LDT.180016.03.sht		DRAWN RJJ	REVISED -
	PLOT SCALE = 48"	CHECKED AJD	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOWARD STREET IMPROVEMENTS
LIGHTING DETAILS

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	181
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	

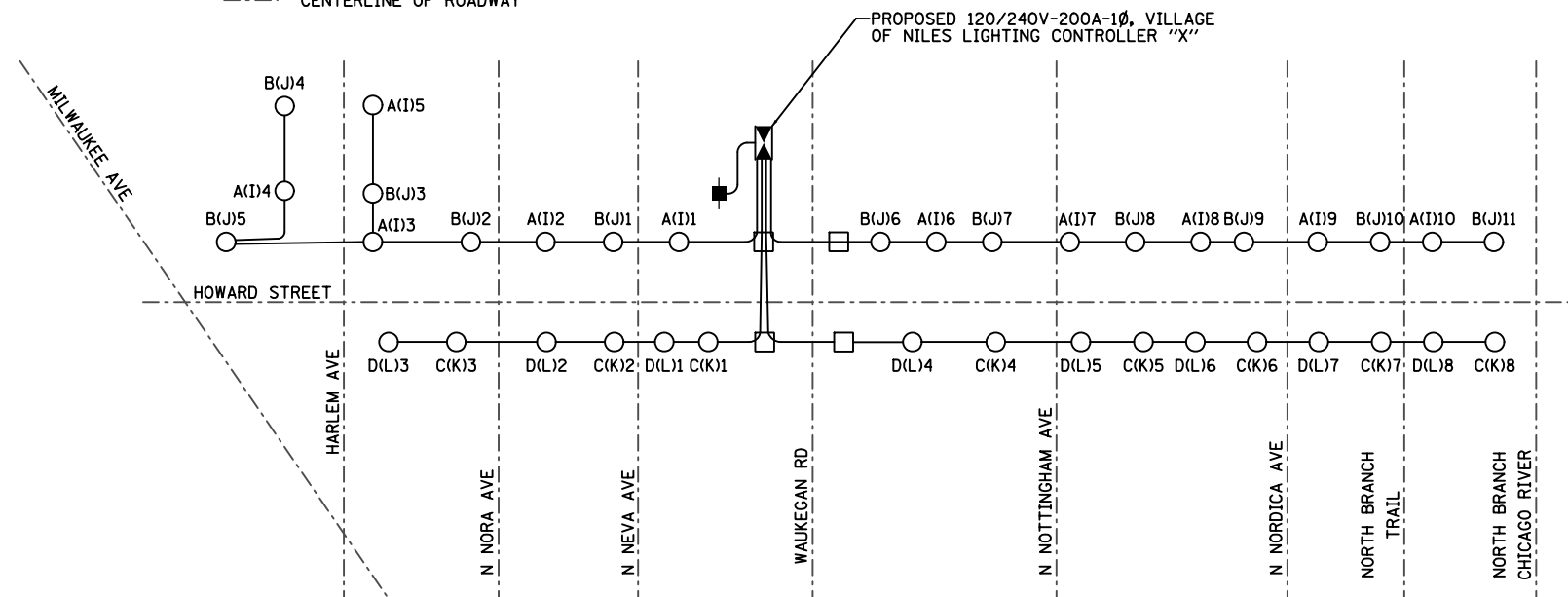
LIGHT POLE IDENTIFIER	LUMINAIRE CKT	FESTOON CKT	LOCATION	
			STATION	OFFSET
A1	A	I	215+81L	6.0' F.O.C.
B1	B	J	213+96L	6.0' F.O.C.
A2	A	I	212+11L	6.0' F.O.C.
B2	B	J	210+21L	6.0' F.O.C.
A3	A	I	208+50L	6.5' F.O.C.
B3	B	J	400+65R	14.5' F.O.C.
A4	A	I	400+70L	10.0' F.O.C.
B4	B	J	402+30L	3.0' F.O.C.
A5	A	I	402+30R	3.0' F.O.C.
B5	B	J	207+25L	3.0' F.O.C.
A6	A	I	220+55L	6.5' F.O.C.
B6	B	J	218+67L	6.0' F.O.C.
A7	A	I	224+24L	8.0' F.O.C.
B7	B	J	222+39L	8.0' F.O.C.
A8	A	I	227+89L	8.0' F.O.C.
B8	B	J	226+04L	8.0' F.O.C.
A9	A	I	231+49L	8.0' F.O.C.
B9	B	J	229+74L	8.0' F.O.C.
A10	A	I	235+00L	4.5' F.O.C.
B10	B	J	233+15L	7.0' F.O.C.
B11	B	J	236+60L	7.5' F.O.C.
C1	C	K	217+72R	5.0' F.O.C.
D1	D	L	215+82R	6.0' F.O.C.
C2	C	K	213+97R	6.0' F.O.C.
D2	D	L	212+11R	6.0' F.O.C.
C3	C	K	210+21R	6.0' F.O.C.
D3	D	L	208+37R	6.5' F.O.C.
C4	C	K	222+39R	7.5' F.O.C.
D4	D	L	220+54R	7.0' F.O.C.
C5	C	K	226+04R	8.0' F.O.C.
D5	D	L	224+24R	7.5' F.O.C.
C6	C	K	229+74R	8.0' F.O.C.
D6	D	L	227+89R	7.5' F.O.C.
C7	C	K	233+15R	7.0' F.O.C.
D7	D	L	231+49R	7.0' F.O.C.
C8	C	K	236+60R	7.0' F.O.C.
D8	D	L	235+00R	4.5' F.O.C.

F.O.C. - FACE OF CURB

LUMINAIRE AND POLE SCHEDULE

ONE-LINE LEGEND

- PROPOSED LIGHT POLE
- ELECTRIC CABLE IN CONDUIT
- ⊠ LIGHTING CONTROLLER
- ELECTRIC SERVICE INSTALLATION
- HANDHOLE
- ↗ ROADWAY CIRCUIT IDENTIFIER
- ↘ FESTOON CIRCUIT IDENTIFIER
- A(I)1 ← POLE NUMBER
- - - CENTERLINE OF ROADWAY



CONTROLLER "X" LIGHTING ONE-LINE DIAGRAM N.T.S.

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		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

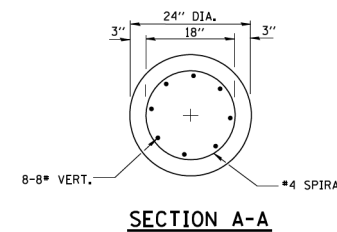
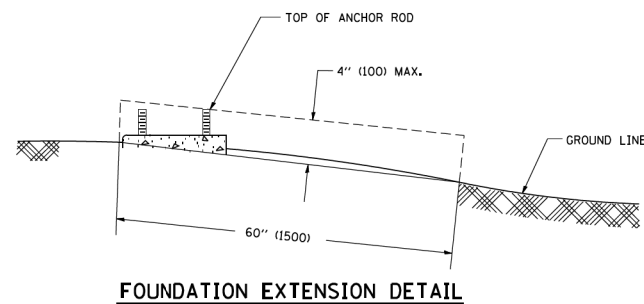
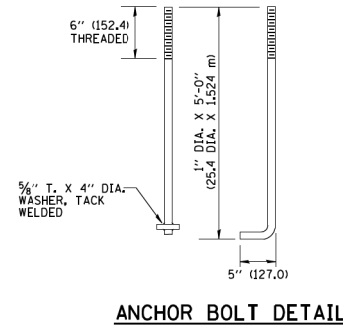
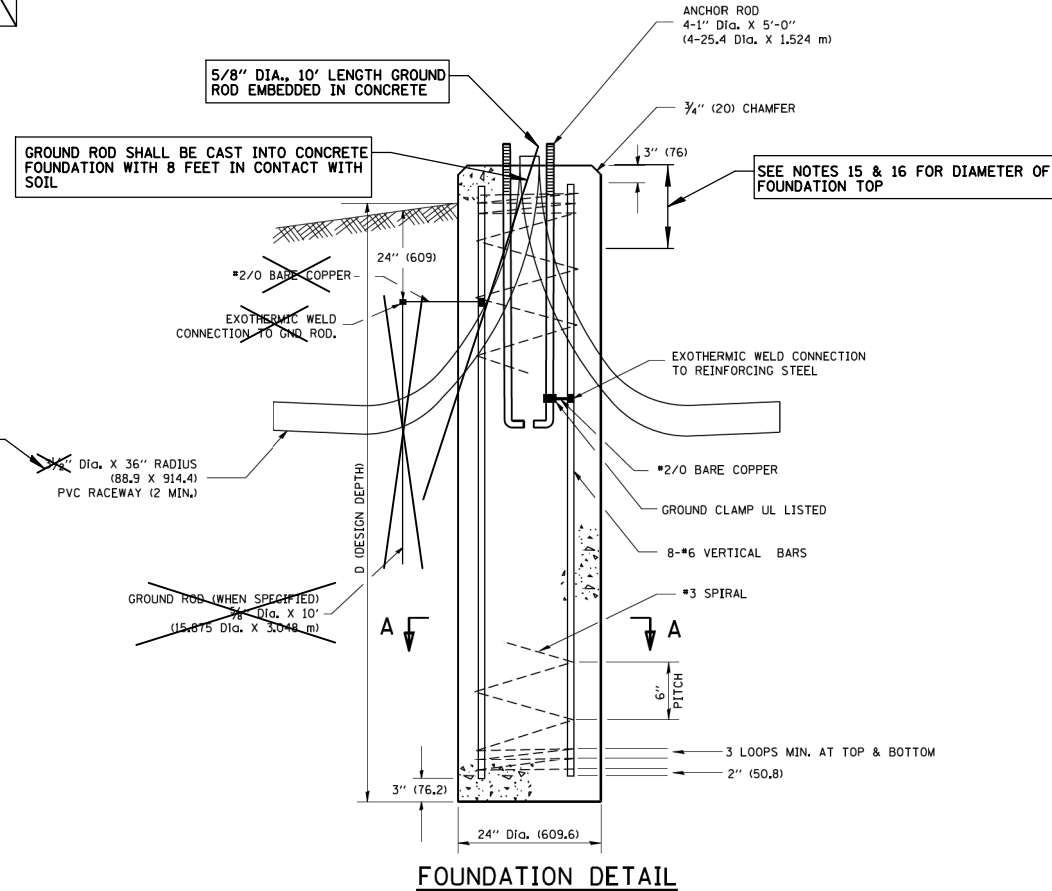
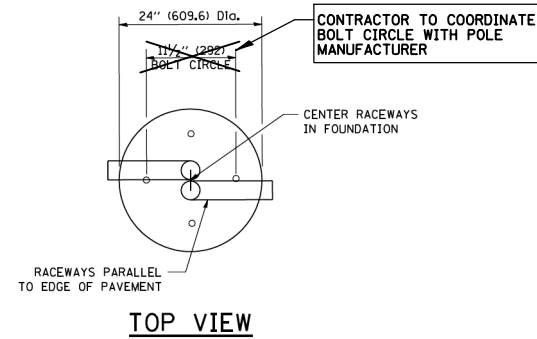
HOWARD STREET IMPROVEMENTS
LIGHTING DETAILS

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

F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 182
CONTRACT NO. 61G08				ILLINOIS FED. AID PROJECT

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 Qu = 0.375 TON/SO. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Qu = 0.75 TON/SO. FT.	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Qu = 1.50 TON/SO. FT.	7'-6" (2.29 m)	8'-7" (2.6 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)



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.
- TOP 12" OF FOUNDATIONS SHALL BE 28" DIAMETER FOR 35' DECORATIVE POLES (PAID FOR UNDER "LIGHT POLE FOUNDATION, 24" DIAMETER, SPECIAL").
- ENTIRE FOUNDATION SHALL BE 24" DIAMETER FOR 30' ROADWAY POLE AT HOWARD / OAK PARK (PAID FOR UNDER "LIGHT POLE FOUNDATION, 24" DIAMETER").

**IDOT STANDARD BE-300
MODIFIED FOR THIS PROJECT**

LIGHT POLE FOUNDATION
N.T.S.

FILE NAME = N:\NILES\180016\Mech\LDT_180016_05.sht	USER NAME = rhowellindgren	DESIGNED AJD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HOWARD STREET IMPROVEMENTS LIGHTING DETAILS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	PLOT SCALE = 48"	DRAWN RJJ	REVISED -			1334	13-00116-00-TL	COOK	221	183	
	PLOT DATE = 11/21/2019	CHECKED AJD	REVISED -			CONTRACT NO. 61G08					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

FUNDATION DESIGN TABLE

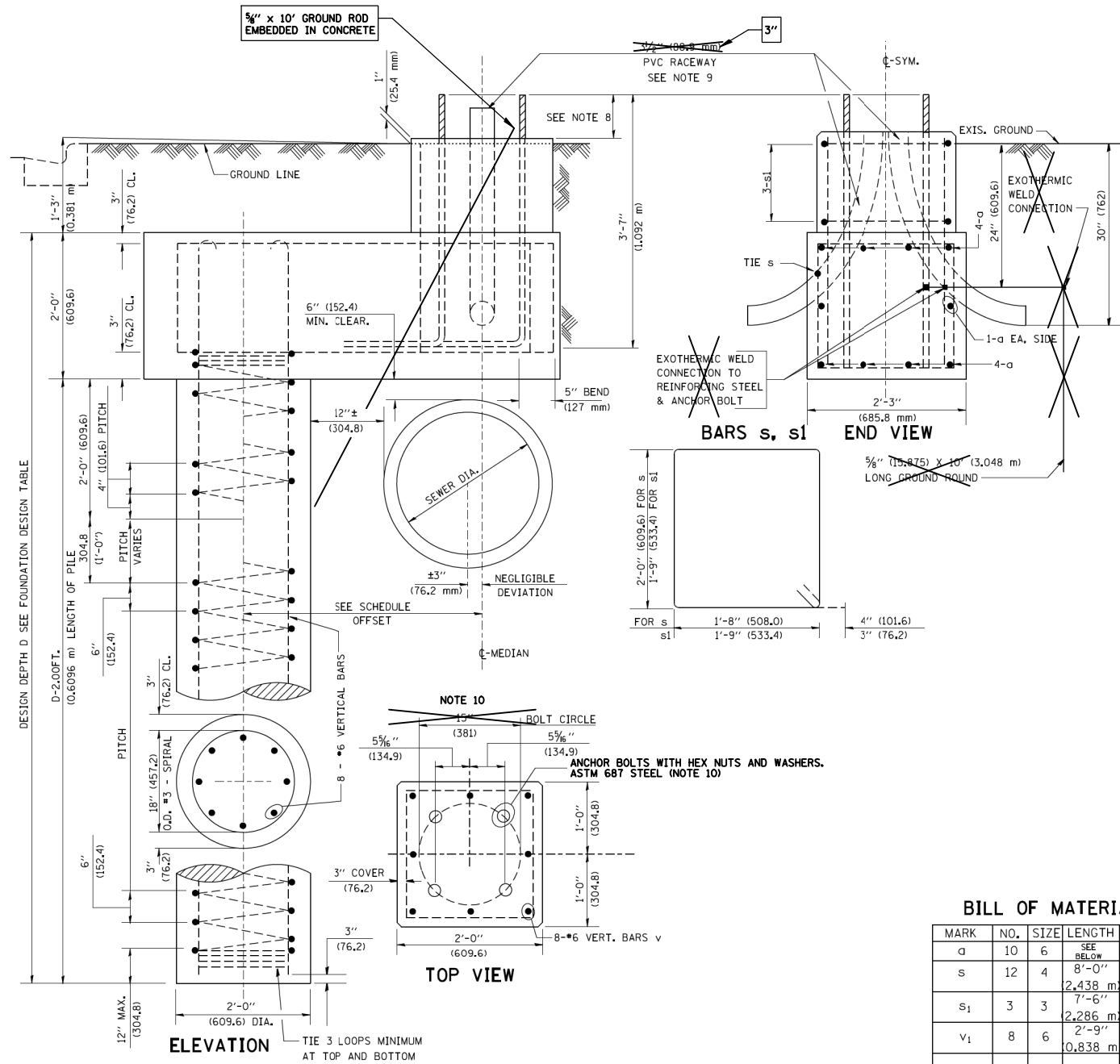
TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3,962 m)	15'-0" (4,572 m)	8-#6X12'-6" (3,810 m)	#3X122' (37,186 m)	8-#6X14'-3" (4,343 m)	#3X141' (42,977 m)
MEDIUM CLAY	9'-6" (2,896 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 ENGINEER 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 ERCTED.
- CONTRACTOR SHALL COORDINATE BOLT CIRCLE AND BOLT DIAMETER.

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



BILL OF MATERIAL

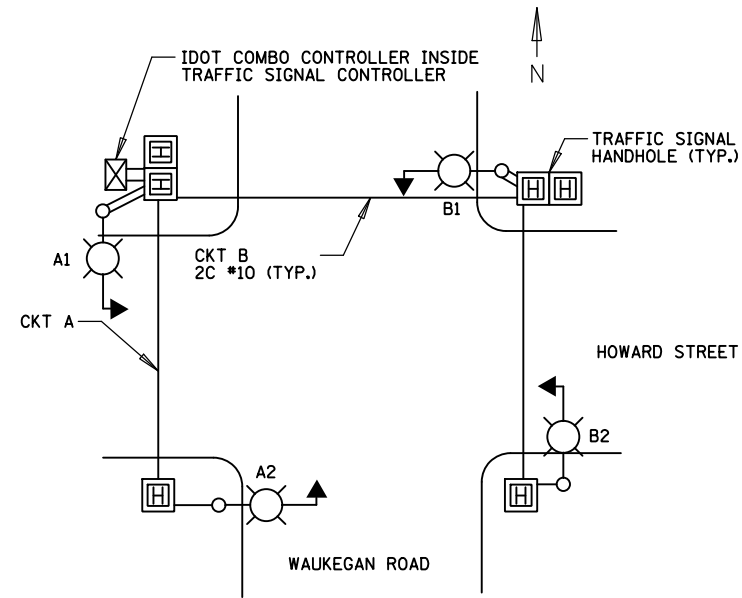
MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" (2,438 m)	□
s ₁	3	3	7'-6" (2,286 m)	□
v ₁	8	6	2'-9" (0,838 m)	—
v ₂				

OFFSET SCHEDULE

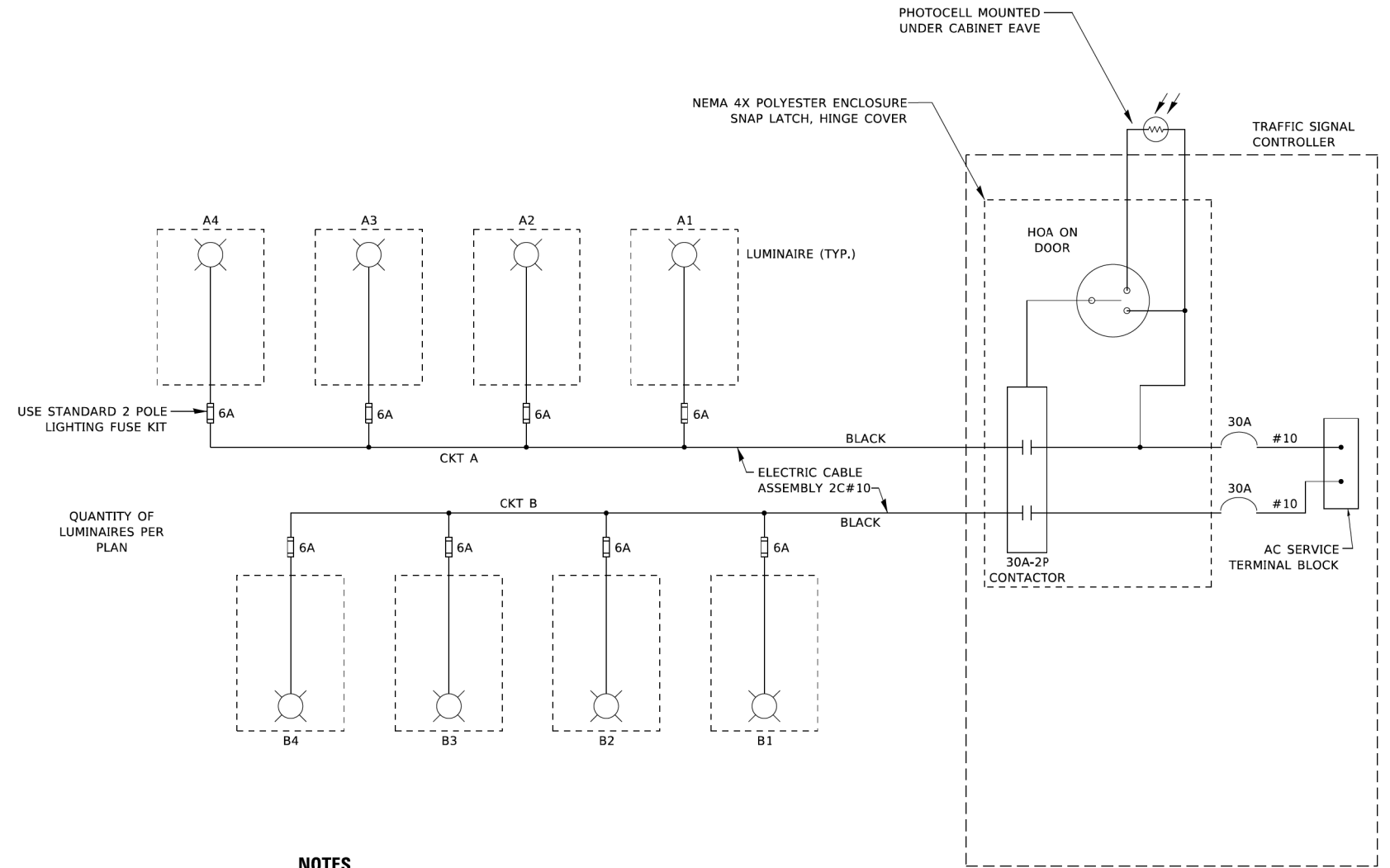
SEWER DIAM. d IN.	PILE OFFSET FROM C-MEDIAN FT.	LENGTH OF BAR a FT.
UP TO 24" (609.6 mm)	3'-3" (0,991 m)	*6 x 5'-3" (1,600 m)
27" (685.8 mm) TO 36" (914.4 mm)	3'-9" (1,143 m)	5'-9" (1,753 m)
42" (1066.8 mm) TO 48" (1219.2 mm)	4'-6" (1,372 m)	6'-6" (1,981 m)
54" (1371.6 mm) TO 60" (1524.0 mm)	5'-0" (1,524 m)	7'-0" (2,134 m)
66" (1676.4 mm) TO 72" (1828.8 mm)	5'-6" (1,676 m)	7'-6" (2,286 m)

IDOT STANDARD BE-310 MODIFIED FOR THIS PROJECT

LIGHT POLE FOUNDATION OFFSET
N.T.S.



TYPICAL LIGHTING CIRCUIT
(NOT TO SCALE)

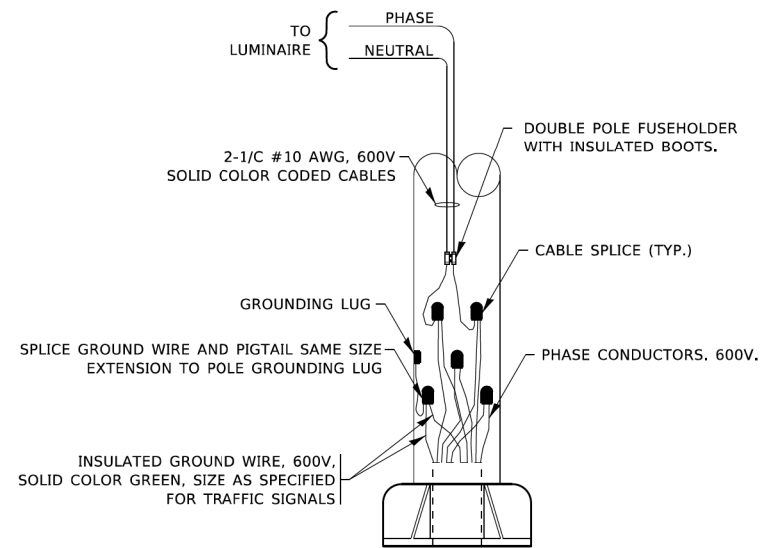


QUANTITY OF LUMINAIRES PER PLAN

NOTES

1. 4 LUMINAIRES PER CIRCUIT, MAXIMUM.
2. MULTI-CONDUCTOR CABLE ASSEMBLY FOR LIGHTING CIRCUITS.
3. ROUTE LIGHTING CIRCUITS IN TRAFFIC SIGNAL CONDUIT SYSTEM.
4. ALL SPLICES AND CONNECTIONS FOR ROADWAY LIGHTING SHALL BE AT POLE BASE ONLY.
5. ALL CONTROLLERS TO HAVE TWO CIRCUIT BREAKERS.
6. ALL WIRING SHALL BE NEATLY DRESSED, IDENTIFIED BY TAGS, AND SUPPORTED. (UNDERGROUND SPLICING OF LIGHTING CONDUCTORS IS NOT PERMITTED).
7. THE H.O.A. SWITCH SHALL BE LABELED AS "LIGHTING CONTROL" WITH THE POSITIONS "AUTO", "OFF" AND "TEST" WITH ENGRAVED NAME PLATES.
8. LIGHTING CONNECTED TO UPS BYPASS CIRCUIT.
9. COMBINATION LIGHTING MUST BE INSTALLED PRIOR TO SIGNAL TURN ON.
10. LUMINAIRE VOLTAGE SHALL BE 120V

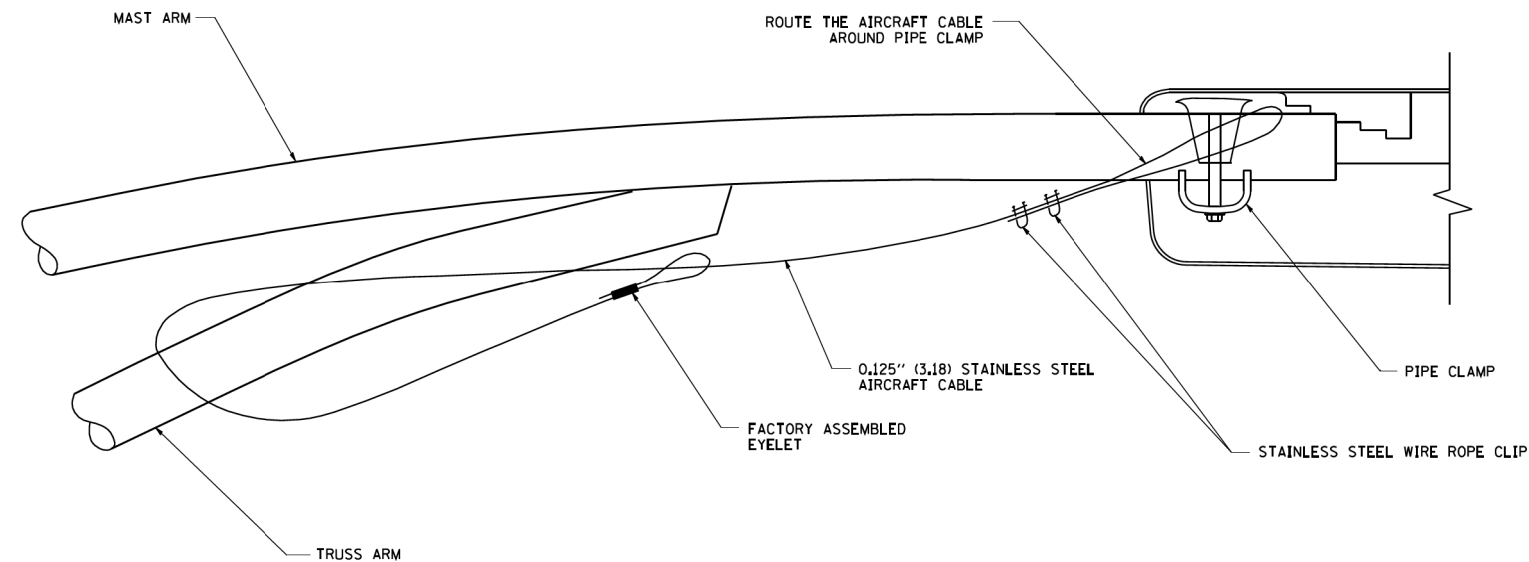
IDOT STANDARD BE-240
REVISED 3-22-2018



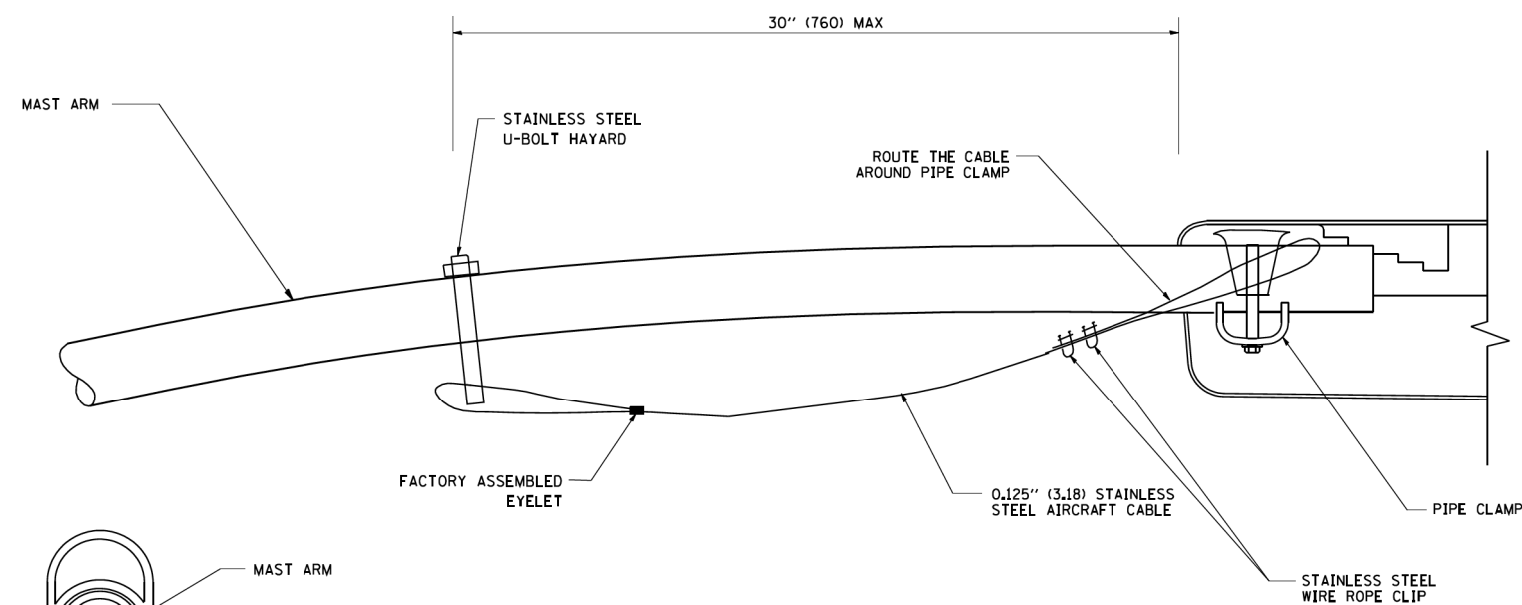
COMBINATION POLE WIRING DETAIL
(NOT TO SCALE)

COMBINATION LIGHTING, TRAFFIC SIGNAL SCHEMATIC

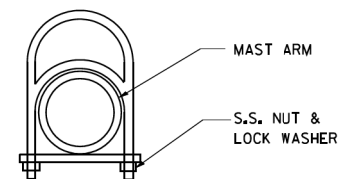
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Default	PLLOT SCALE = 48"	DRAWN RJJ	REVISED -					1334	13-00116-00-TL	COOK	221	185
	PLLOT DATE = 11/21/2019	CHECKED AJD	REVISED -		SCALE: 1" = 20'			SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 61G08		
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



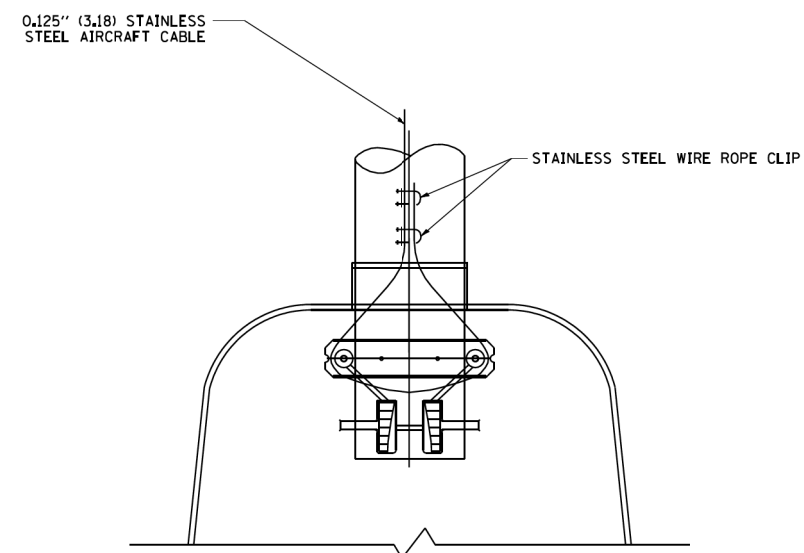
SIDE VIEW (TRUSS ARM)
N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.



STAINLESS STEEL
U-BOLT HAYARD



BOTTOM VIEW
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

**IDOT STANDARD BE-701
REVISED 8-8-2003**

LUMINAIRE SAFETY CABLE

FILE NAME = N:\NILES\180016\Mech\LDT.180016.08.sht	USER NAME = rhowellindgren	DESIGNED AJD	REVISED -
		DRAWN RJJ	REVISED -
		CHECKED AJD	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
LIGHTING DETAILS**

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	186
				CONTRACT NO. 61G08
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction, Adopted April 1, 2016, and latest Supplemental Specifications and Recurring Special Provisions are all to be considered as part of the Contract. Incidental Items or Accessories necessary to complete this work may not be specifically noted but are considered a part of this Contract.
2. No Construction Plans shall be used for Construction unless specifically marked For Construction. Prior to commencement of construction, the Contractor shall verify all dimensions and conditions affecting the work with the actual conditions. If there are discrepancies between the job site and what is shown on the construction plans, the contractor must immediately report to Engineer before doing any work, otherwise the Contractor shall assume full responsibility. In the event of disagreement between the plans and existing conditions and or details, the Contractor shall secure written instruction from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. In failing to secure such instruction, the Contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or questions arising with respect to the true meaning of the Construction Plans or Specifications, the decision of the Engineer shall be final and conclusive.
3. Contractor shall verify all topographic information and grade elevations adjacent to bridge prior to proceeding, inform Engineer of any variation.
4. All details and sections shown on the drawings are typical and shall be used wherever a similar condition occurs unless noted otherwise.

CONSTRUCTION

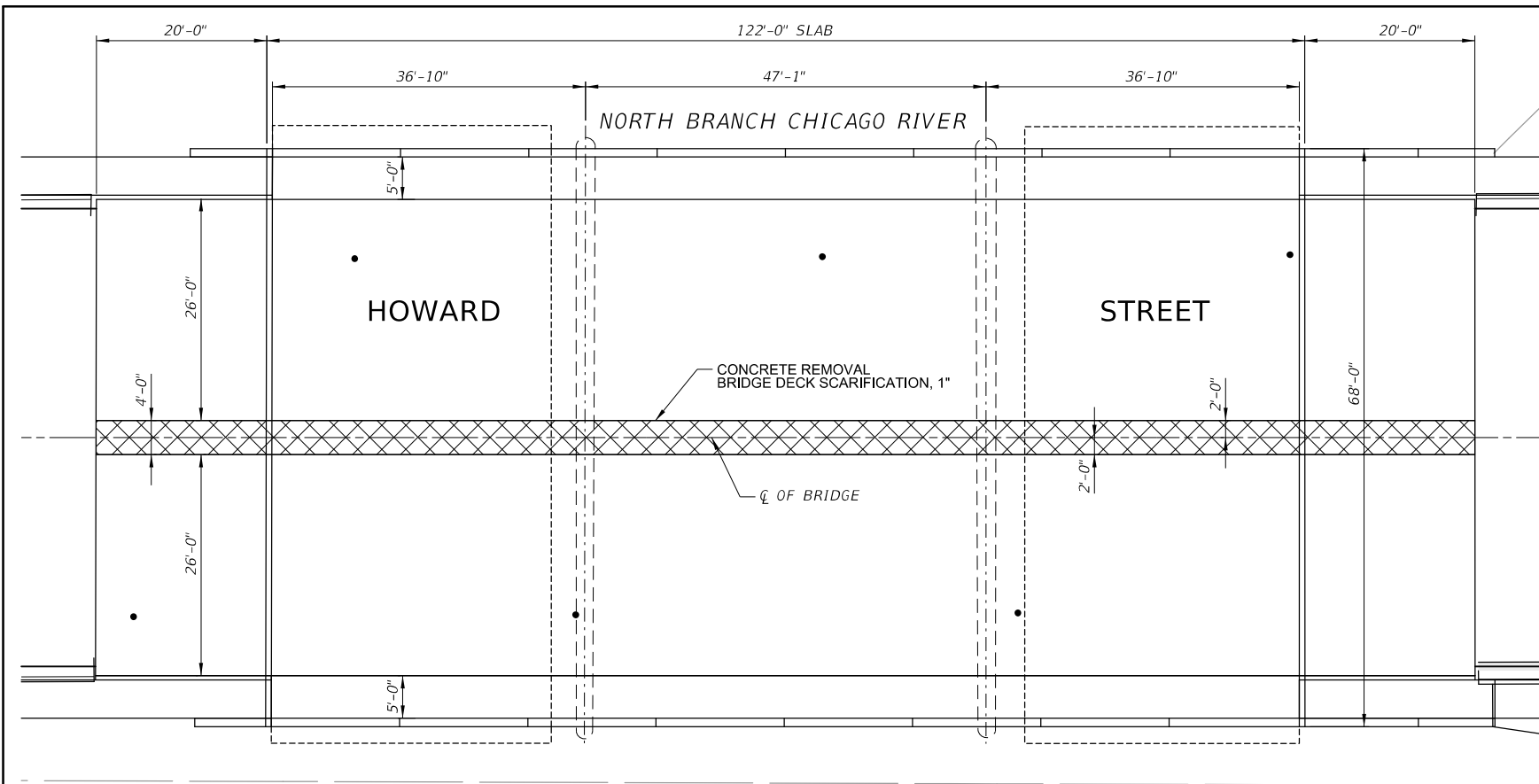
1. All work shall be done in accordance with Illinois Department of Transportation (IDOT) Standard Specification For Road and Bridge Construction, Adopted April 1, 2016, and latest Supplemental Specifications and Recurring Special Provisions, unless noted otherwise.
2. Do not scale dimensions for construction. Scale, if shown, applies only to full size drawings.
3. Any information concerning type or location of underground and other utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making his own determinations as to the type and location of the utilities as may be necessary to avoid damage thereto. Contractor shall call J.U.L.I.E. and Village of Niles Public Works prior to excavation.
4. Shop working or layout drawings pertaining to the construction of the work, as may be required, shall be submitted to the Engineer for approval prior to the start of construction.
5. Upon completion, the contractor shall collect and remove all construction debris and excess material from the site. Damaged trees, shrubs, and other landscape features resulting from construction activities shall be replaced or repaired.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
42400200	Portland Cement Concrete Sidewalk, 5"	Sq Ft	45
44000600	Sidewalk Removal	Sq Ft	45
50162400	Concrete Removal	Cu Yd	10
50300260	Bridge Deck Grooving	Sq Yd	75
Z0006020	Bridge Deck Latex Concrete Overlay, 3-1/2"	Sq Yd	75
Z0012144	Bridge Deck Scarification, 1"	Sq Yd	75
Z0012754	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	375

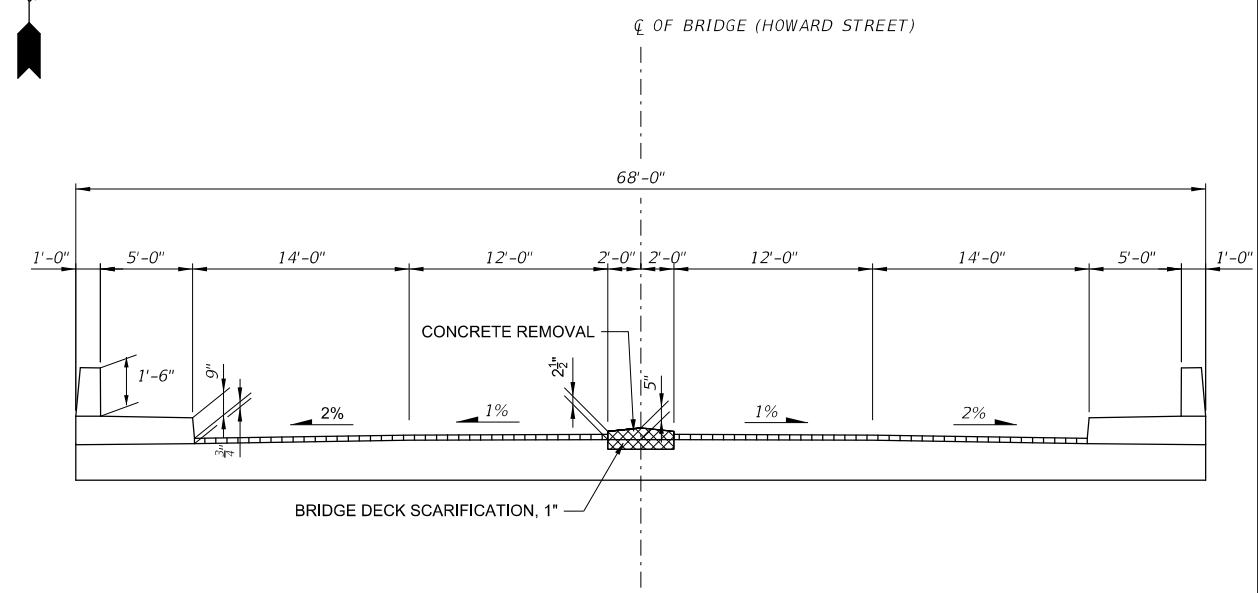
REMOVAL AND PROTECTION

1. Provide shoring and bracing for the existing structural elements during partial removal to avoid any damage to the other existing facilities.
2. Existing structures shall be protected from overloading due to construction loadings.
3. Damage to adjacent facilities during construction shall be repaired at no additional cost to the owner.



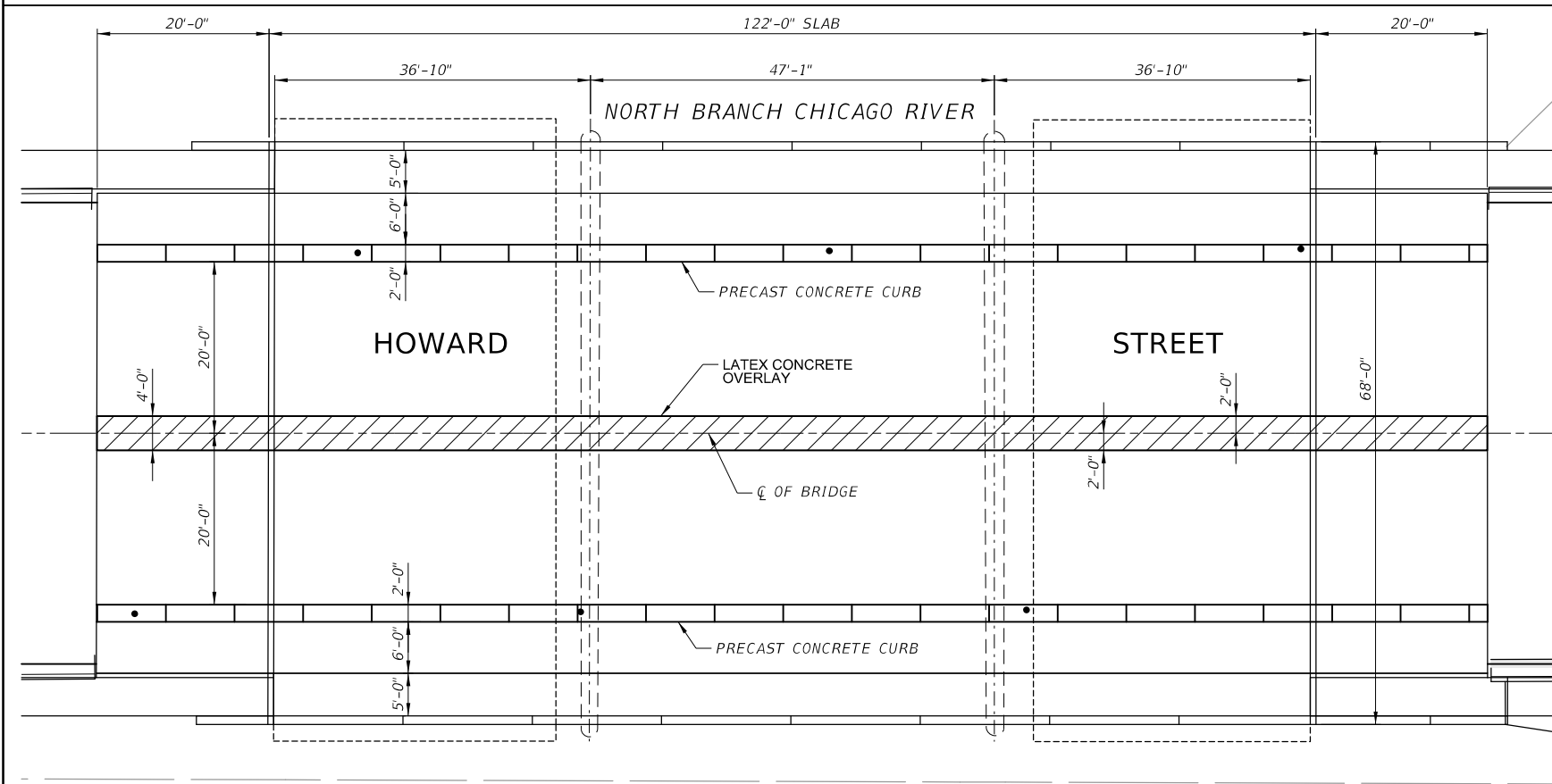
EXISTING PLAN

SCALE: 1"=10'



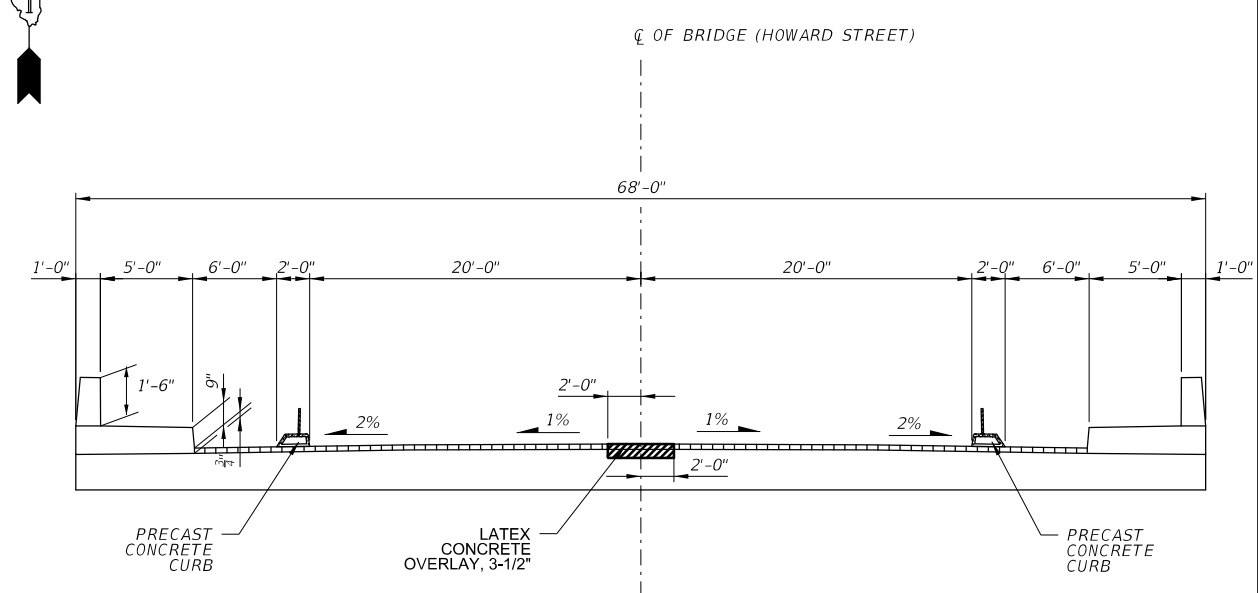
EXISTING CROSS-SECTION

N.T.S.



PROPOSED PLAN

SCALE: 1"=10'



PROPOSED CROSS-SECTION

N.T.S.

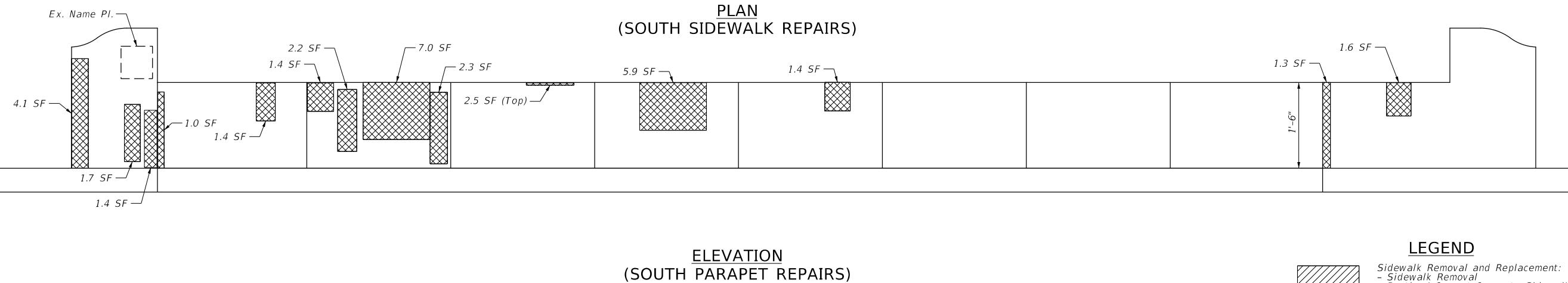
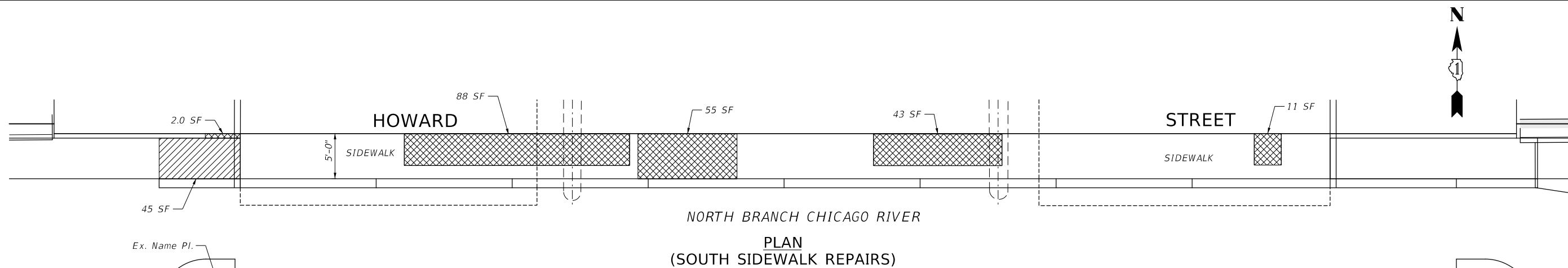
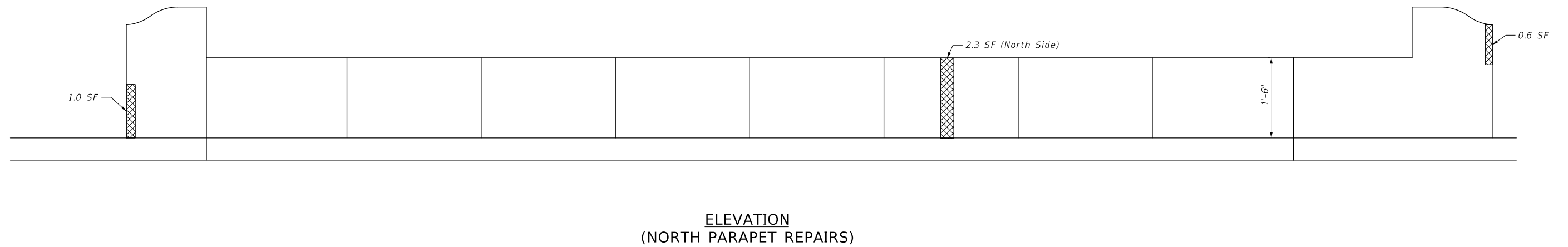
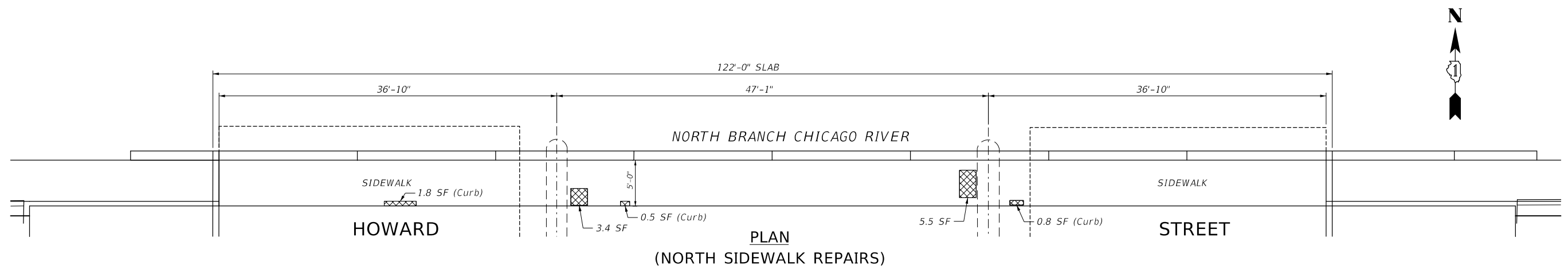
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		CHECKED - MM	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
HOWARD STREET OVER N. BRANCH OF CHICAGO RIVER (SN 016-3029)
MEDIAN AND CURB MODIFICATIONS**

SCALE: NTS SHEET 2 OF 3 SHEETS STA. 236+61.16 TO STA. 238+25.54

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	188
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	



LEGEND

	Sidewalk Removal and Replacement: - Sidewalk Removal - Portland Cement Concrete Sidewalk 5 Inch
	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

FILE NAME =	USER NAME = rhowellindgren	DESIGNED - JMB/CPF	REVISED -
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Default	PLOT SCALE = 12'	CHECKED - MM	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

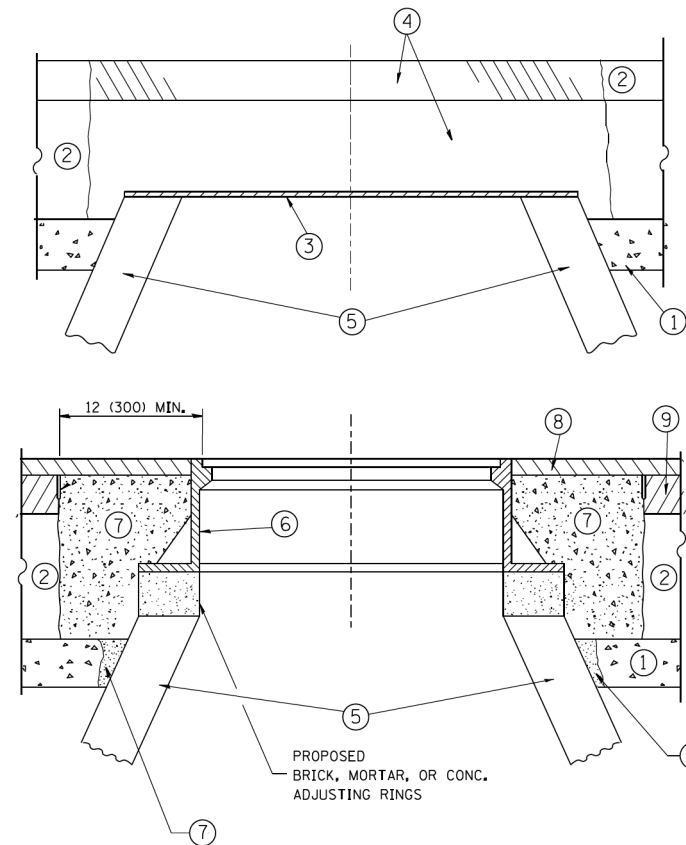
HOWARD STREET IMPROVEMENTS
HOWARD STREET OVER N. BRANCH OF CHICAGO RIVER (SN 016-3029)
SIDEWALK AND PARAPET REPAIRS

SCALE: NTS	SHEET 3 OF 3 SHEETS	STA. 236+61.16 TO STA. 238+25.54
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	189
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	DATE
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	NOTE BOOK	
	NO.	
	CADD FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NOTE BOOK	
	NO.	
	STRUCTURE	
	NOTATION	



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

FILE NAME =	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - R. WIEDEMAN 05-14-04
ca:\p\work\p\dot\bauerdl\d0108315\bd08.dgn		DRAWN -	REVISED - R. BORO 01-01-07
		CHECKED -	REVISED - R. BORO 03-09-11
		DATE - 10-25-94	REVISED - R. BORO 12-06-11

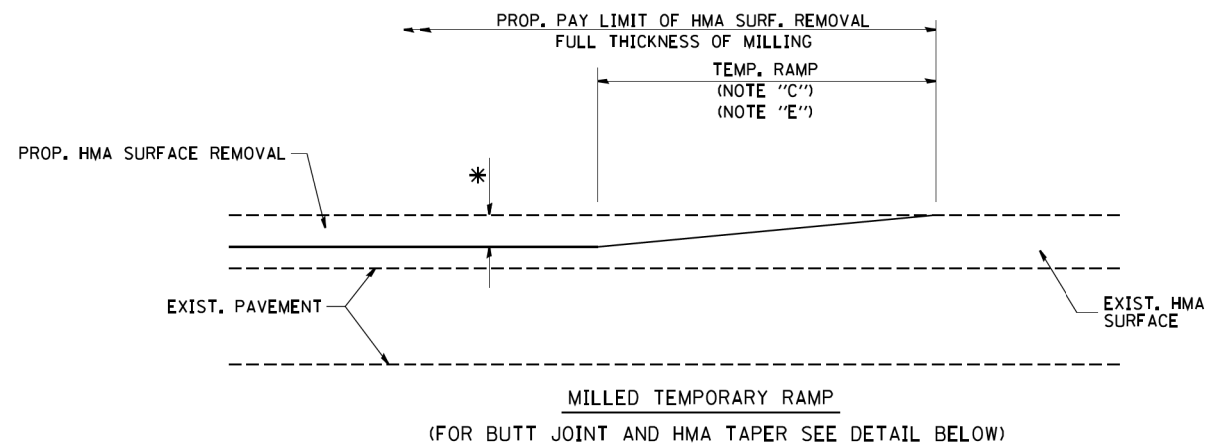
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING	
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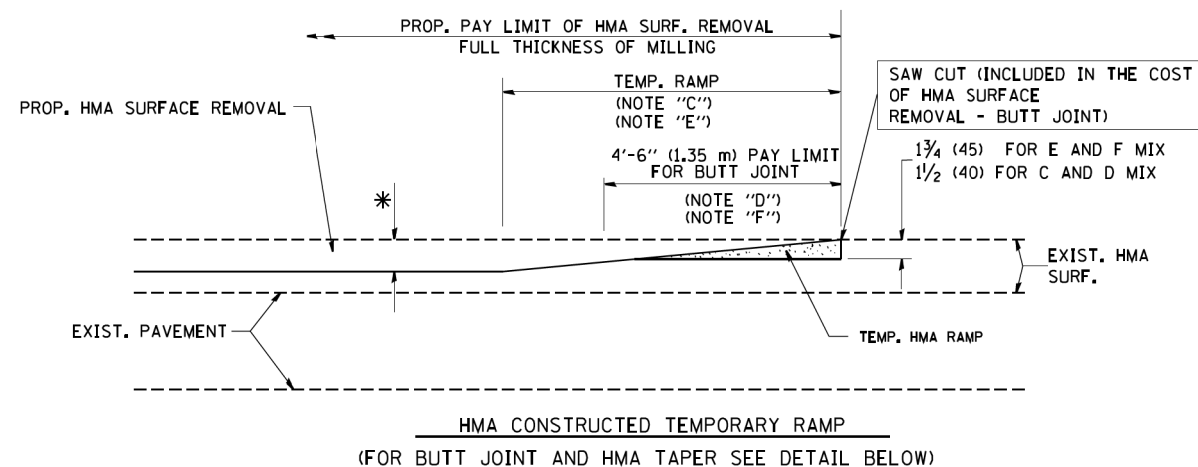
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	190
BD600-03 (BD-8)		CONTRACT NO. 61G08		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
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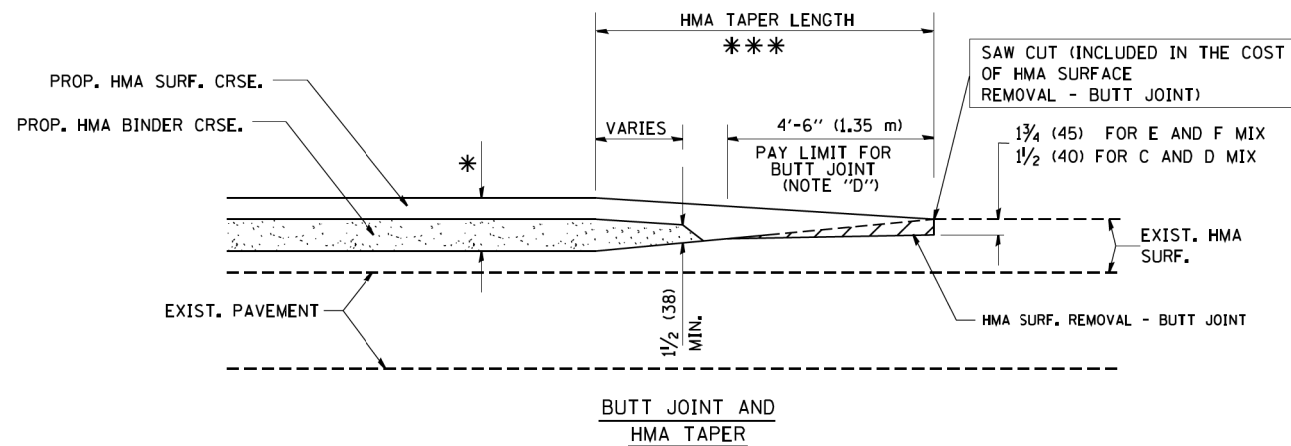


OPTION 1

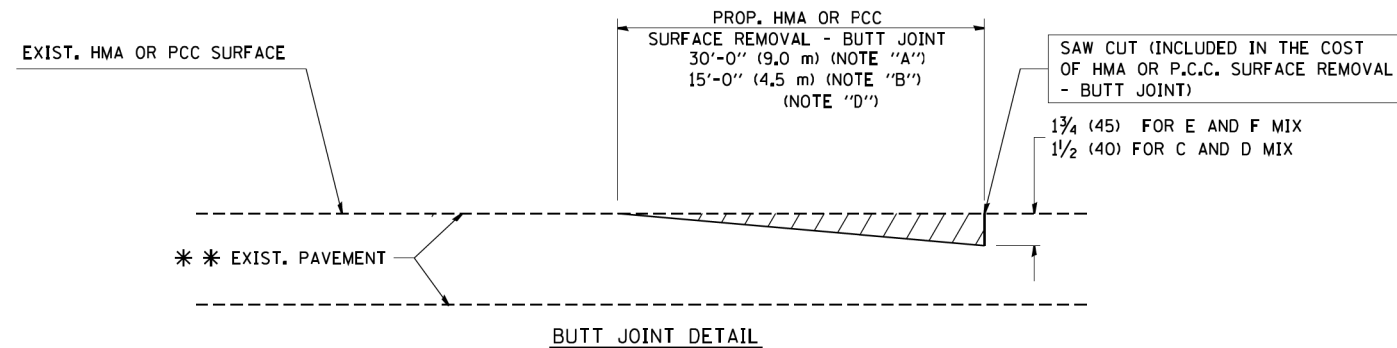


OPTION 2

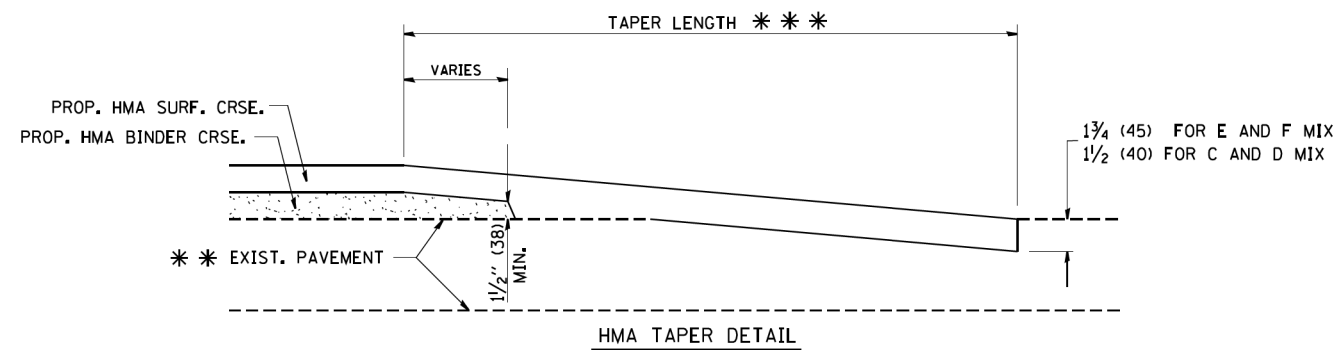
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

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.

FILE NAME =	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
W:\diststa\22x34\bd32.dgn		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

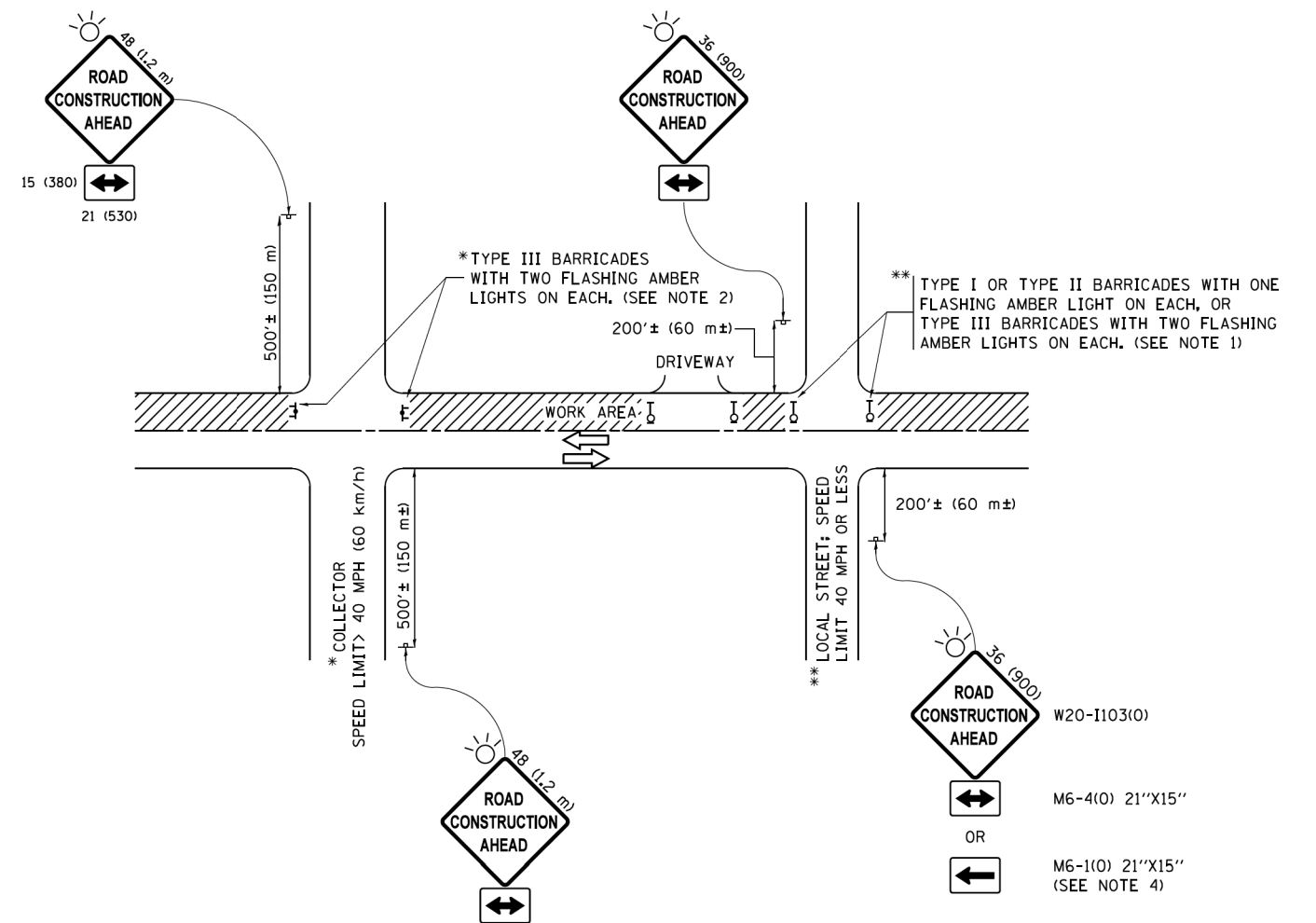
**BUTT JOINT AND
HMA TAPER DETAILS**

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	191
BD400-05 BD32		CONTRACT NO. 61G08		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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

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



NOTES:

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

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

FILE NAME =	USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
p:\IL084E8ID\INTEG\illinois.gov\FWIDOT\Documents\DOT Offices\District 1\Projects\Dist 1\Projects\CADD\to\CAD\sheets\to\0.dgn		DRAWN	REVISED - T. RAMMACHER 01-06-00
Default	PLOT SCALE = 50.000' / 1" =	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

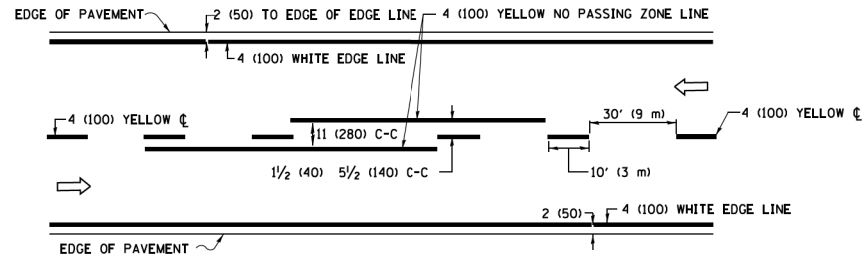
**TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

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

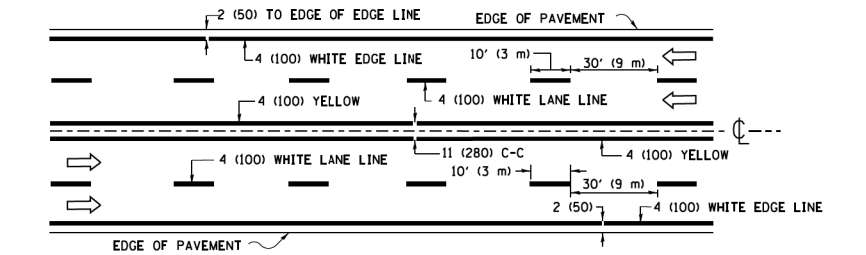
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	192
TC-10		CONTRACT NO. 61G08		
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
ALIGNMENT CHECKED	
STRUCTURE NOTATION OK'D	
NOTE BOOK NO.	
FILE NAME	
PLAN NO.	

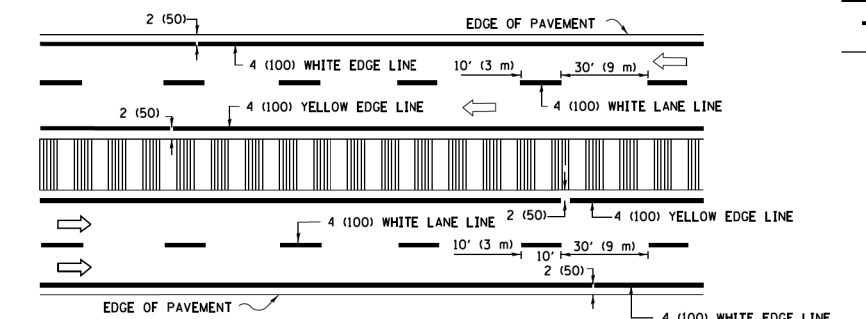
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BY	
SURVEYED	
PLOTTED	
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NOTE BOOK NO.	
FILE NAME	
PROFILE NO.	



2-LANE ROADWAY

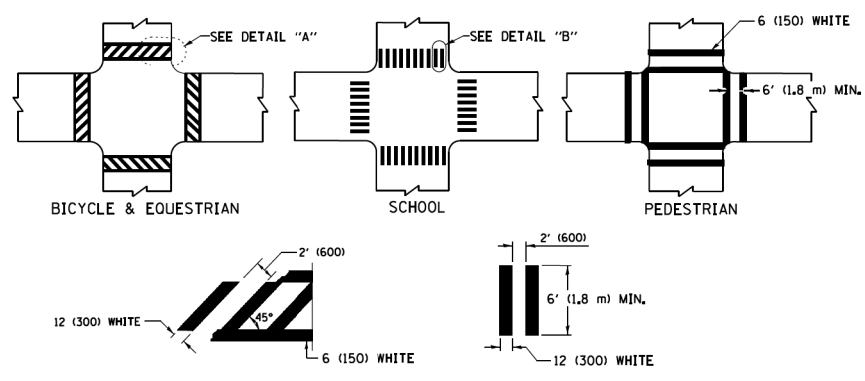


MULTI-LANE UNDIVIDED



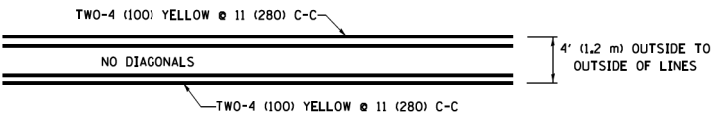
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

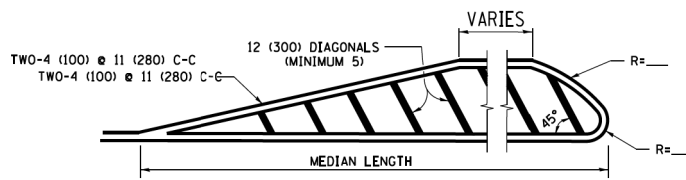


DETAIL "A" TYPICAL CROSSWALK MARKING

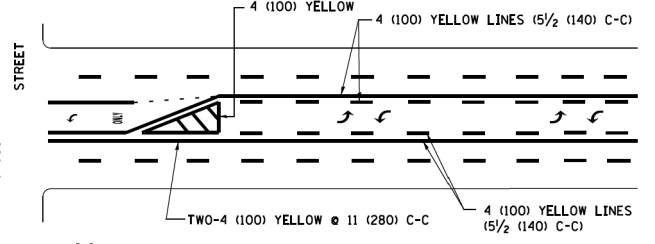
* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



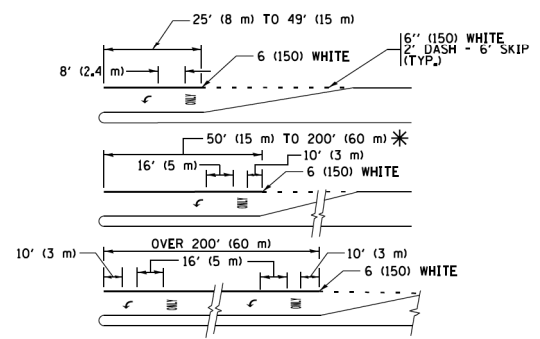
4' (1.2 m) WIDE MEDIANS ONLY



MEDIANS OVER 4' (1.2 m) WIDE



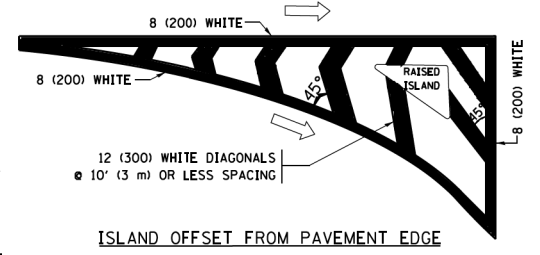
MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING



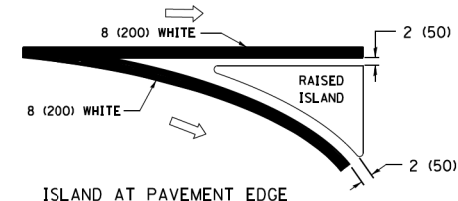
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

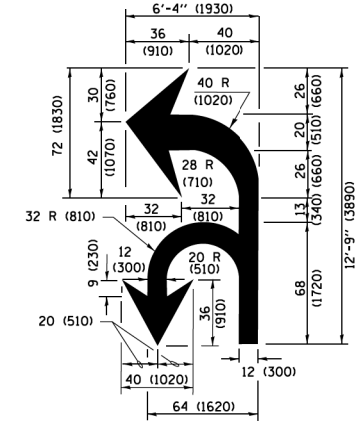
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".



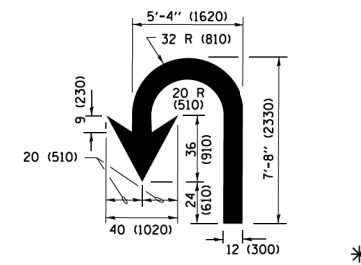
ISLAND OFFSET FROM PAVEMENT EDGE



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 (8' (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; WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE 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 (30 MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE AREA OF "RR" IS 6' (1.8 m) LETTERS: 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF "RR" IS 6' (1.8 m) LETTERS: 16 (400) LINE FOR "X"
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.

FILE NAME =	USER NAME = lryss	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09	
W:\dstad\22x34\1013.dgn		DRAWN -	REVISED - C. JUCIUS 07-01-13	
		PLOT SCALE = 50,000' / in.	CHECKED -	REVISED - C. JUCIUS 12-21-15
Default		PLOT DATE = 6/23/2017	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	193
	TC-13	CONTRACT NO. 61G08		
		ILLINOIS FED. AID PROJECT		

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

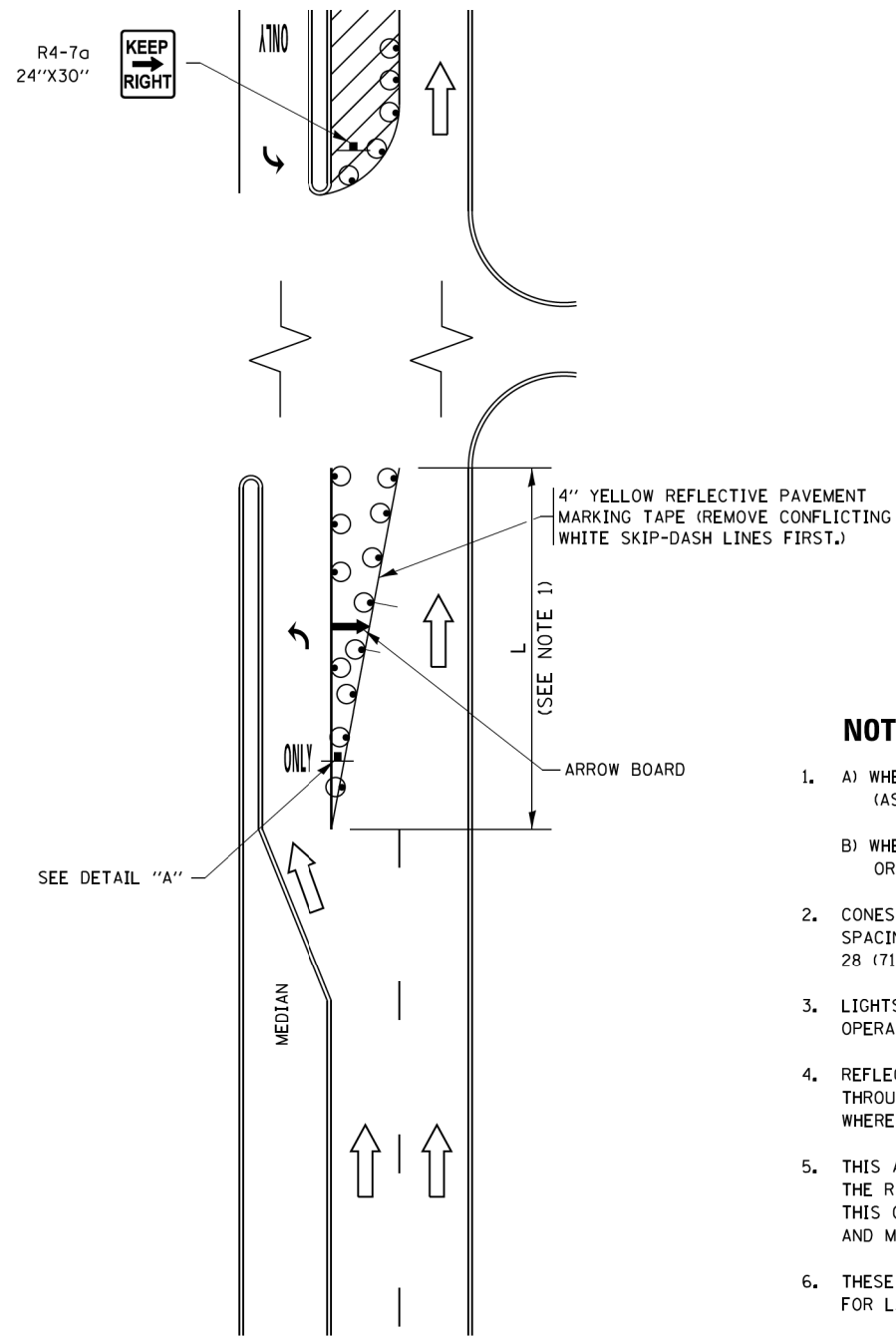


FIGURE 1

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

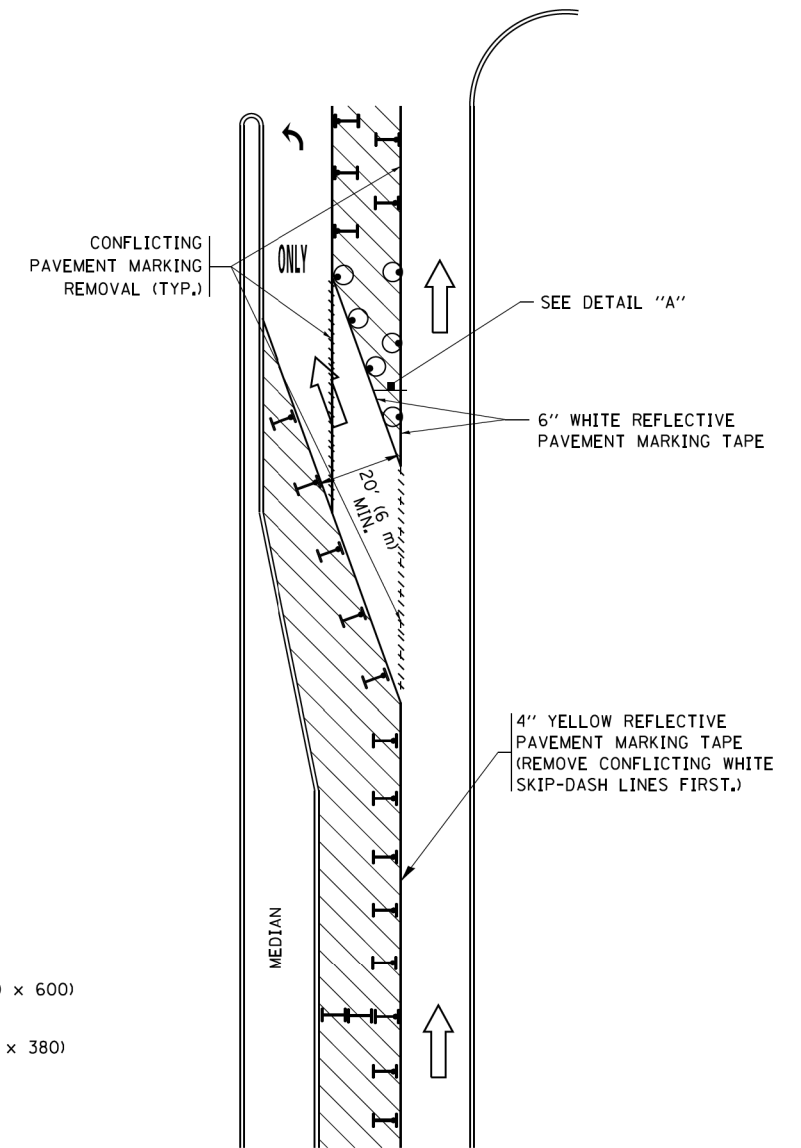


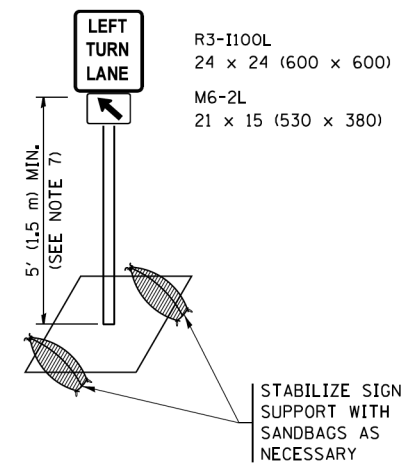
FIGURE 2

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 PREQUIREMENTS.
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.

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

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

FILE NAME =	USER NAME = footemj	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
p:\1\084E81D\INTEG\illinois.gov\FWIDOT\Documents\DOT Offices\District 1\Projects\Dist 1\REVISED ADD\CA\HOUSEH\10-07-95		REVISED - A. HOUSEH 10-07-95	REVISED - A. SCHUETZE 07-01-13
Default	PLOT SCALE = 50,0000' / 1in.	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16
	PLOT DATE = 9/15/2016	REVISED - T. RAMMACHER 01-06-00	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

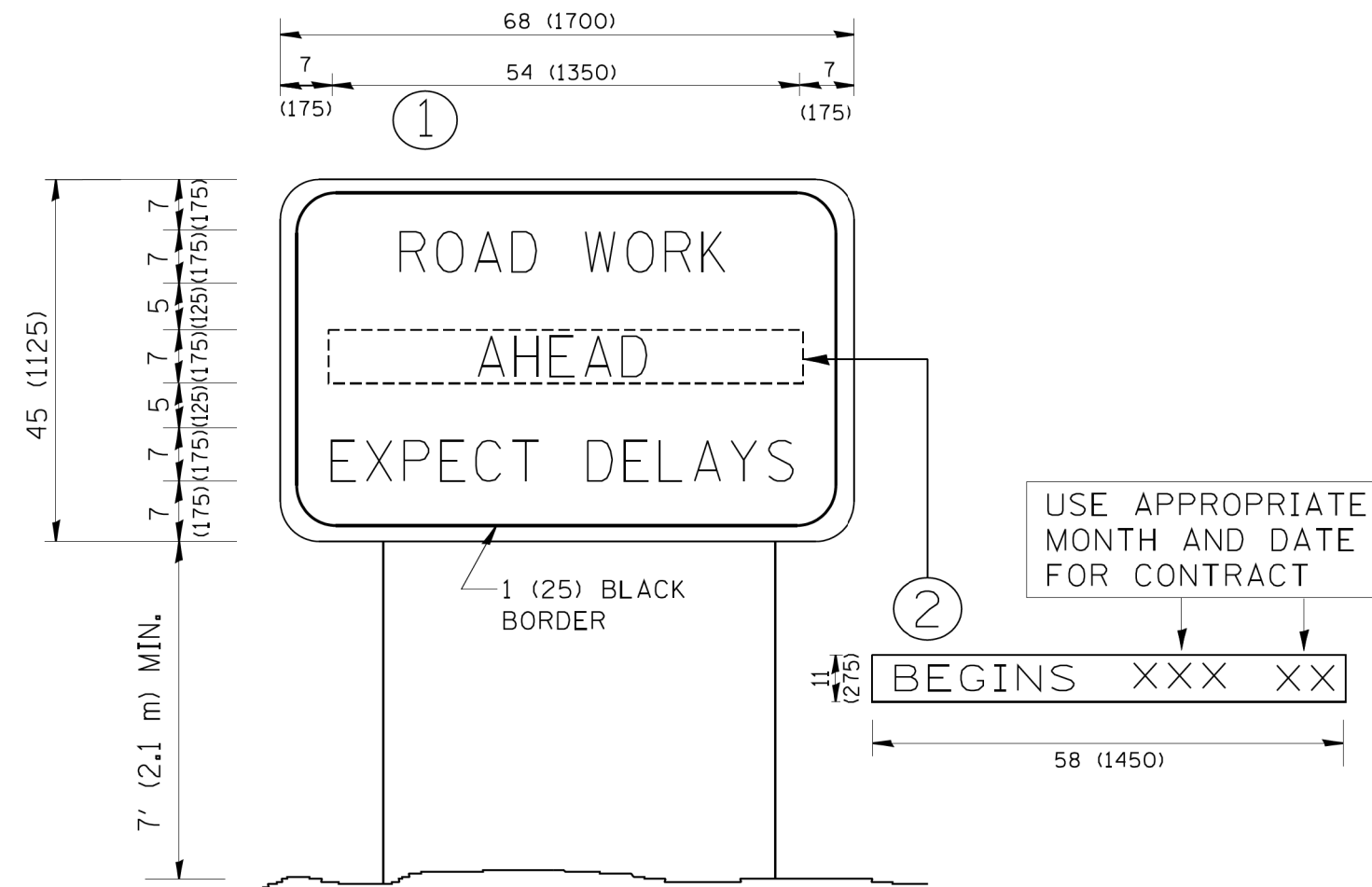
TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	194
TC-14		CONTRACT NO. 61G08		
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	FIELD FILE NAME		

PROFILE	SURVEYED	BY	DATE
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	NOTE BOOK NO.		
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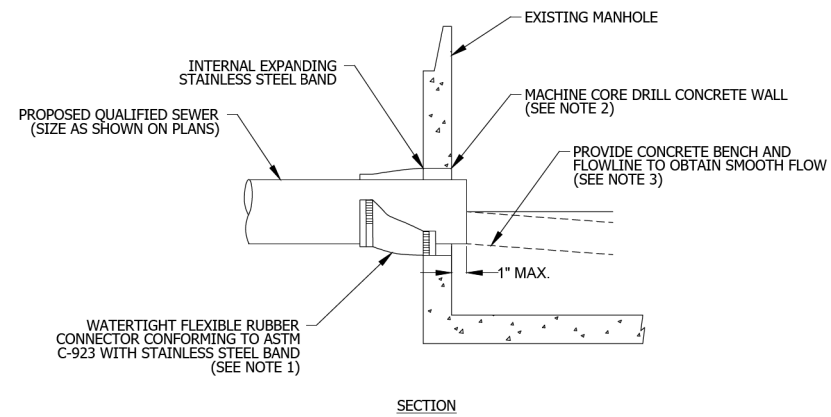


NOTES:

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.

FILE NAME = W:\diststd\22x34\te22.dgn	USER NAME = gegljanobt	DESIGNED - DRAWN -	REVISED - R. MIRS 09-15-97 REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN			F.A.S. RTE. 1334	SECTION 13-00116-00-TL	COUNTY COOK	TOTAL SHEETS 221	SHEET NO. 195
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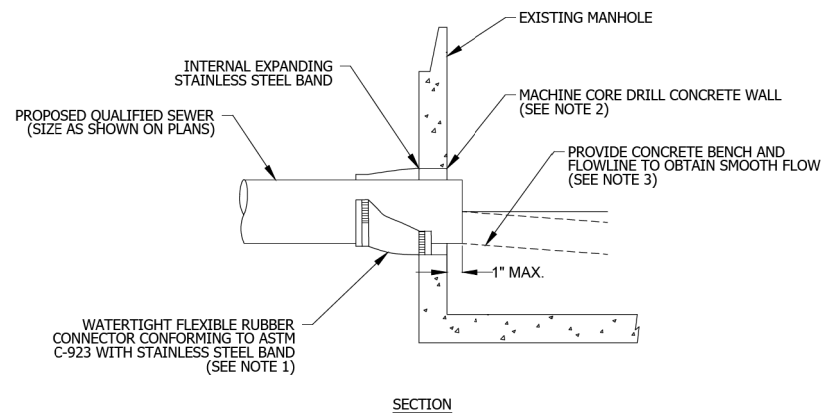


- NOTES:
1. RESILIENT CONNECTOR COMPLYING WITH ASTM STANDARD C-923 (MOST RECENT EDITION) SHALL BE USED.
 2. MACHINE CORE/DRILL CIRCULAR OPENING IN STRUCTURE WALL. OPENING DIAMETER TO FIT THE REQUIRED RESILIENT CONNECTOR PER MANUFACTURER'S RECOMMENDATION.
 3. CUT, SHAPE, AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW.
 4. CLEAN EXISTING STRUCTURE AND SEWER PIPE OF ANY DIRT, CONCRETE, OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.
 5. ANY DAMAGE TO THE EXISTING MANHOLE SHALL BE REPAIRED BY THE CONTRACTOR.
 6. REINFORCED CONCRETE COLLAR MAY BE SUBSTITUTED FOR PIPE DIAMETERS LARGER THAN 36-INCHES.

NOT TO SCALE



TECHNICAL GUIDANCE MANUAL	10/02/18
PIPE TO EXISTING MANHOLE CONNECTION DETAIL	STD. DWG. NO. 42
	PAGE NO. 43



- NOTES:
1. RESILIENT CONNECTOR COMPLYING WITH ASTM STANDARD C-923 (MOST RECENT EDITION) SHALL BE USED.
 2. MACHINE CORE/DRILL CIRCULAR OPENING IN STRUCTURE WALL. OPENING DIAMETER TO FIT THE REQUIRED RESILIENT CONNECTOR PER MANUFACTURER'S RECOMMENDATION.
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NOT TO SCALE



TECHNICAL GUIDANCE MANUAL	10/02/18
PIPE TO EXISTING MANHOLE CONNECTION DETAIL	STD. DWG. NO. 42
	PAGE NO. 43

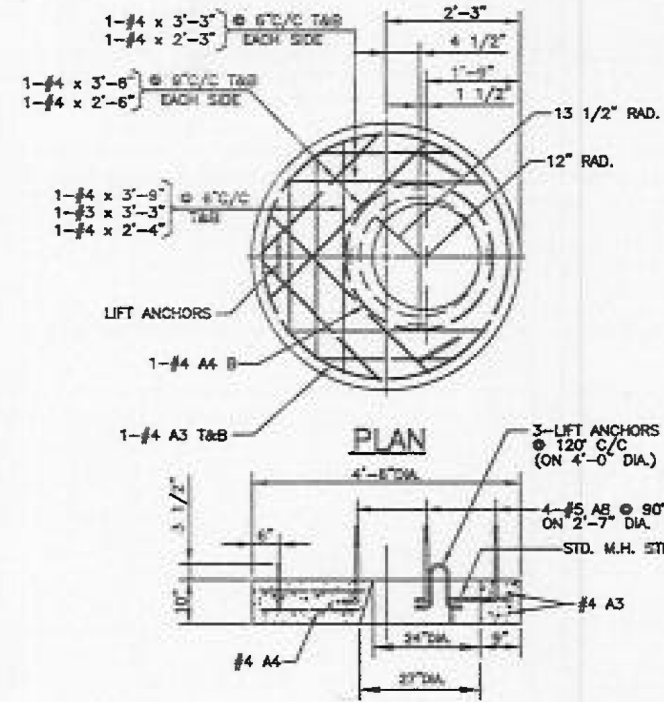
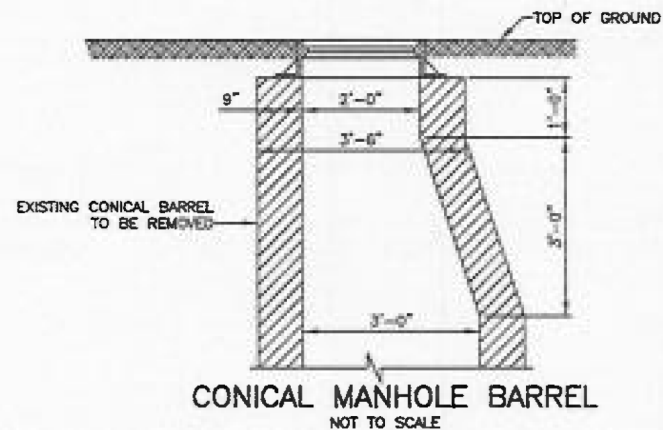
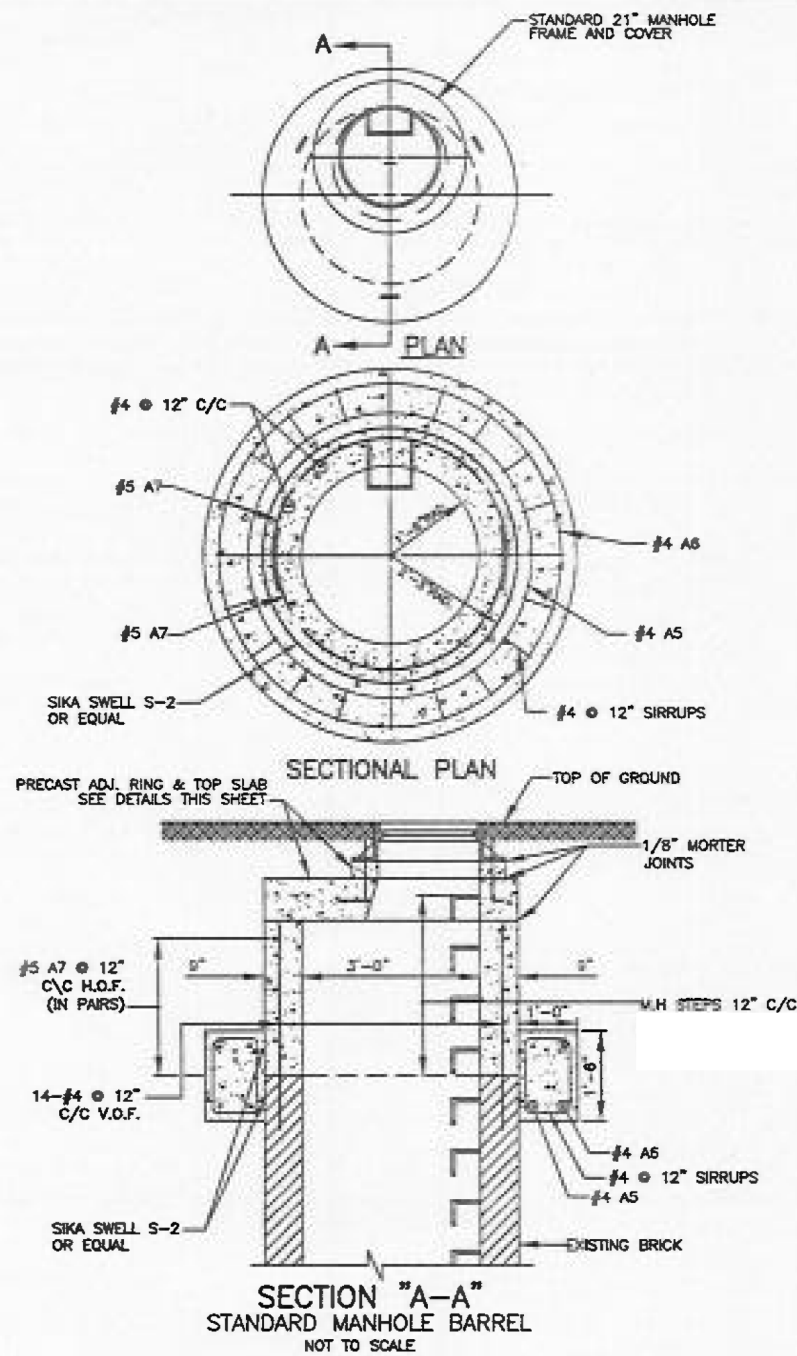
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	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOWARD STREET IMPROVEMENTS
CONSTRUCTION DETAILS

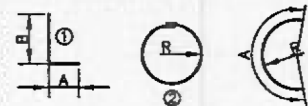
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	196
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				



SECTION
PRECAST TOP SLAB DETAIL
NOT TO SCALE

RE-BAR BENDING DETAILS						
MARK	SIZE	LENGTH	TYPE	A	B	R
A1	#2	7'-6"	⓪	-	-	13 1/2"
A2	#2	9'-6"	⓪	-	-	17"
A3	#2	13'-3"	⓪	-	-	24"
A4	#2	9'-3"	⓪	-	-	16 1/2"
A5	#2	16'-3"	⓪	-	-	30"
A6	#4	19'-4"	⓪	-	-	38"
A7	#5	7'-10"	⓪	7'-10"	-	24"
A8	#5	2'-0"	⓪	6"	1'-6"	-



NOTE:

9" THICK PRECAST CONCRETE RINGS WITH CAST IN PLACE RUNGS MAY BE USED IN PLACE OF CAST IN PLACE CONCRETE WHEN EXTENDING THE HEIGHT OF THE MANHOLE BARREL. ALL EXTENSION SHALL BE IN ONE PIECE AND IN INCREMENTS OF 12".

ALL JOINTS SHALL BE CLEANED, SQUARED AND GROUTED IN A MANNER TO PRECLUDE POSSIBILITY OF LEAKS AT JOINT.

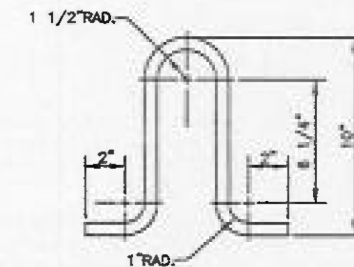
THE PRECAST TOP SLAB SHALL BE REMOVED AND REPLACED AS REQUIRED.

ALL ELEMENTS OF THE MANHOLE DISTURBED OR DAMAGED DURING ALTERATION SHALL BE CORRECTED OR REPLACED TO MEET THE STANDARD HEREIN SHOWN AND SPECIFIED.

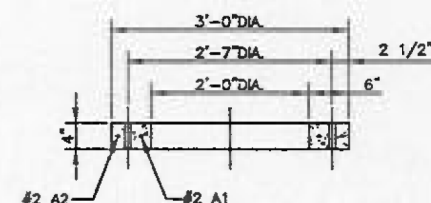
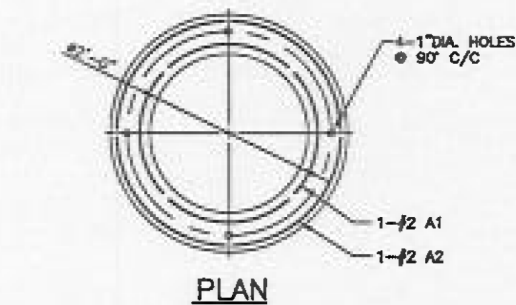
ALL CONCRETE SHALL BE CLASS "A".

ALL GROUT SHALL BE 1 PART CEMENT TO 3 PARTS SAND WITH MINIMUM WATER TO ACHIEVE A STIFF PLASTIC CONSISTANCY WITH ZERO SLUMP.

ALL WORKMANSHIP AND MATERIALS NOT SPECIFIED SHALL BE AS PER STANDARD PREPRINTED MWRDGC SPECIFICATIONS TITLED:
 GENERAL SPECIFICATIONS - CONSTRUCTION CONTRACTS
 GENERAL SPECIFICATIONS - SEWERS
 GENERAL SPECIFICATIONS - CONCRETE



LIFT ANCHOR DETAIL
NOT TO SCALE
MATERIAL:
5/8" DIA. x 2'-3"A-36 STEEL
ROD GALVANIZED AFTER FABRICATION



SECTION
PRECAST ADJUSTMENT RING DETAIL
NOT TO SCALE

PROCEDURE:

- A) TO RAISE ELEVATION 0" TO 8" MAX., ADD 4" THICK ADJUSTMENT RINGS AS DETAILED, INCREMENTS OF LESS THAN 4" SHALL BE OBTAINED BY HAND PACKING A DRY CEMENT GROUT OVER 100% OF THE BEARING AREA.
- B) TO RAISE ELEVATION OVER 8" AND LESS THAN 12", REMOVE THE 4" ADJUSTMENT RING AND EXTEND THE 9" THICK MANHOLE BARREL 12" WITH CAST IN PLACE CONCRETE REINFORCED AS DETAILED AND WITH LADDER RUNG AS DETAILED. TOP OF EXISTING CONCRETE TO BE CLEANED AND ROUGHENED AND NEW CONCRETE PLACED IN A MANNER TO INSURE BONDING AND NO LEAKAGE. FOR INCREMENTS BETWEEN 8" AND 12" PLACE GROUT FILLER AS IN (A) ABOVE.

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO			
Designed by:	Checked by:	Date:	Correct:
Drawn by:	JJ	XX	Engineer of Sewer Design
SDO	Reviewed by:	Scale:	Approved:
AS NOTED	KMF	AS NOTED	Assistant Director of Engineering
XX	Drawing code:	XX	

PROCEDURE FOR ADJUST. ELEV. OF EXIST.
 36" DIA. MANHOLE WITH CONICAL TOP

FILE NAME =	USER NAME = rhowellindgren	DESIGNED -	REVISED -
N:\NILES\180016\Civil\MWRD_DET.180016_03.dwg		DRAWN -	REVISED -
PLOT SCALE = 20'		CHECKED -	REVISED -
Default	PLOT DATE = 11/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

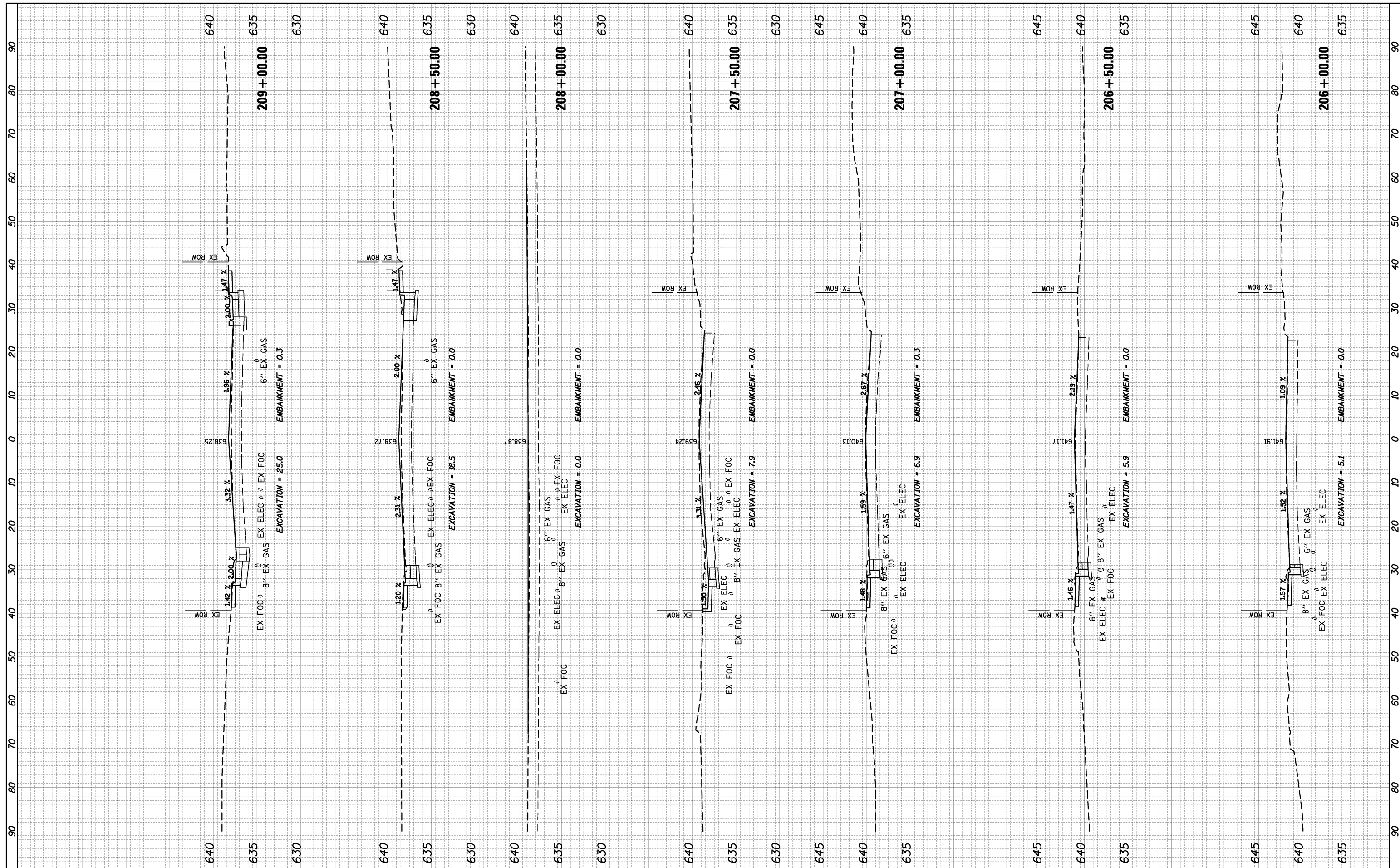
HOWARD STREET IMPROVEMENTS
CONSTRUCTION DETAILS

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	198
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		



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 USER NAME = rhowellindgren
 PLOT SCALE = 20'
 PLOT DATE = 11/21/2019

DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

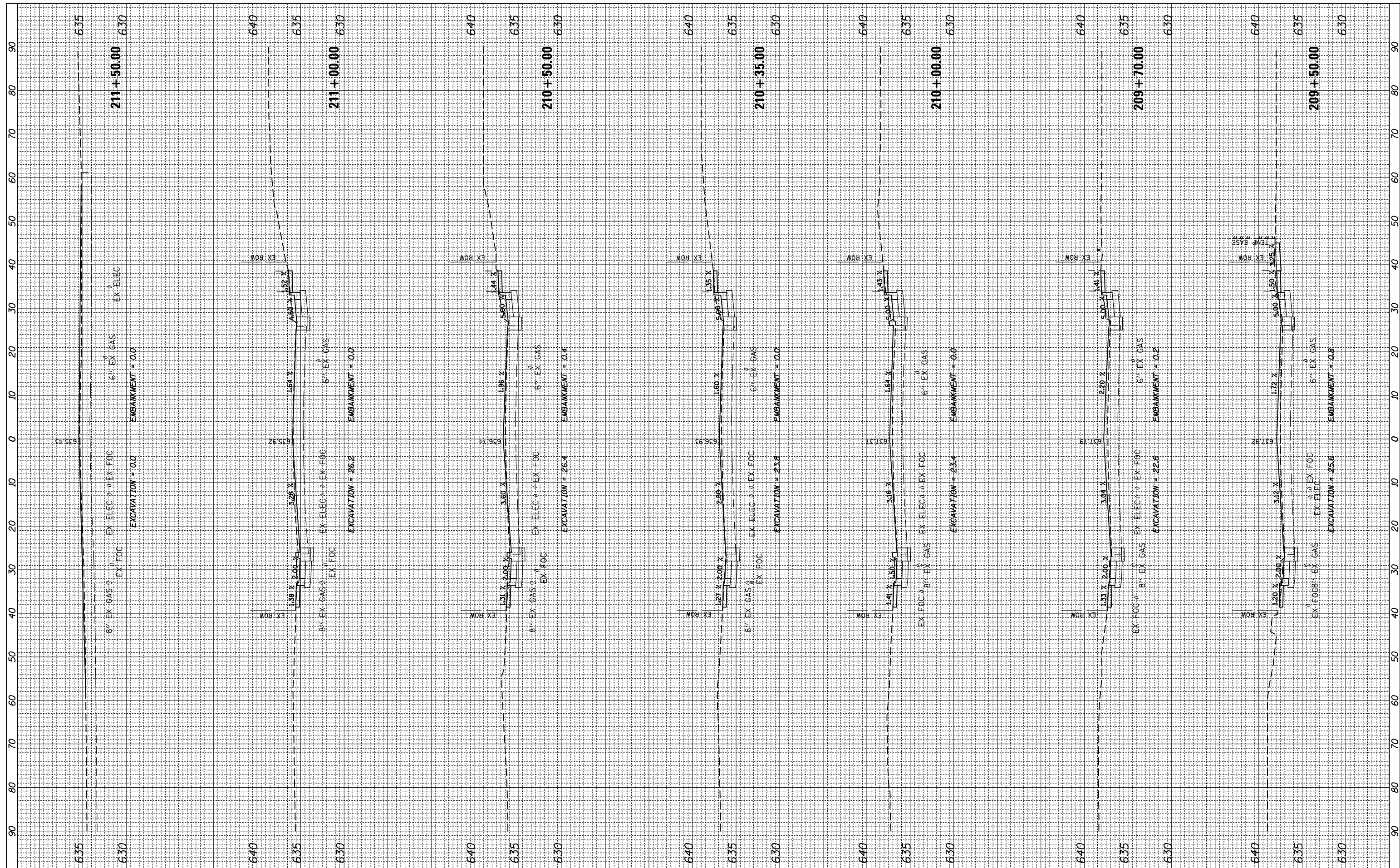
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HOWARD STREET IMPROVEMENTS
CROSS SECTIONS**
 SCALE: SHEET OF SHEETS STA. 206+00.00 TO STA. 209+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	199
CONTRACT NO. 61G08				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		



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 Default

USER NAME = rhowellindgren
 PLOT SCALE = 20'
 PLOT DATE = 11/21/2019

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 209+50.00 TO STA. 211+50.00

**HOWARD STREET IMPROVEMENTS
 CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1334	13-00116-00-TL	COOK	221	200
CONTRACT NO. 61G08			ILLINOIS FED. AID PROJECT	