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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PROPOSED  
HIGHWAY PLANS**

**FAP ROUTE SECTION (121, 16)L 554 (IL 107)**

**BROWN COUNTY  
C-96-162-10**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(121, 16)L	BROWN	7	3
FED. ROAD DIST. NO. -		ILLINOIS	CONTRACT NO. 72D34	

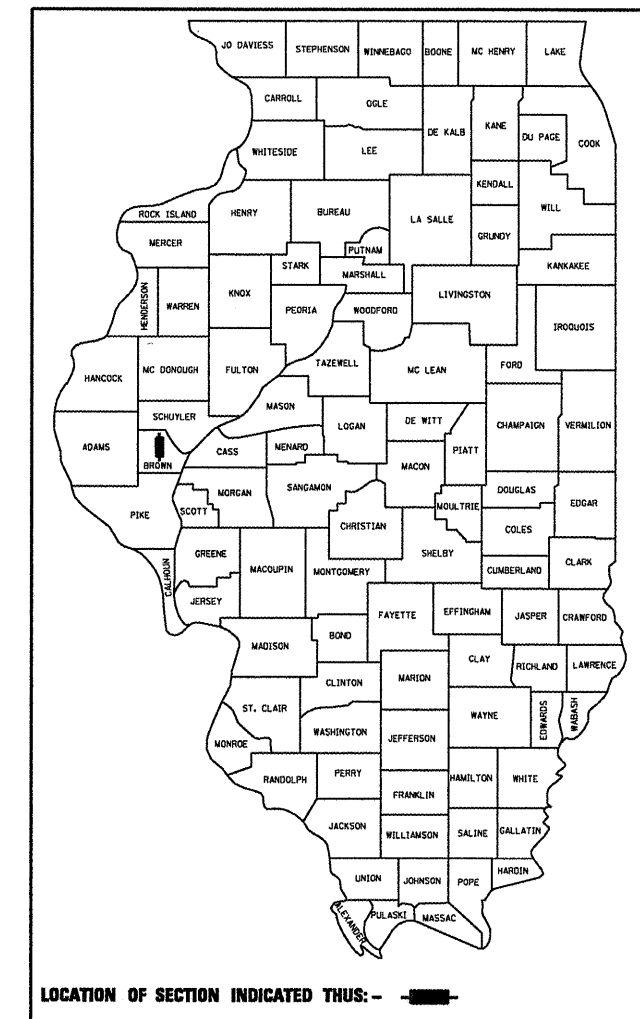
\* FAP 2585 (IL 99) & FAP 554 (IL 107)

**D-96-162-10**      **\*\* 7+1=8**

**HIGHWAY STANDARDS**

- 000001-05
- 701001-02
- 701006-03
- 701301-03
- 701901-01

- 825001
- 836001



**ADT'S**  
 IL 99 (N OF IL 107) - 6,100 (2007)  
 IL 99 (S OF IL 107) - 2,650 (2007)  
 IL 107 - 1,750 (2007)

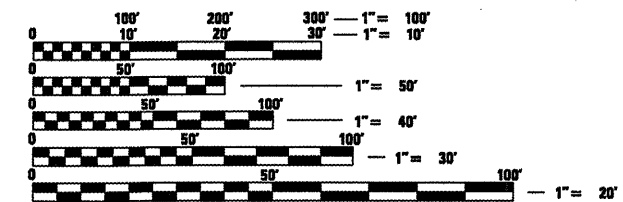
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

SUBMITTED March 3 2010  
Roger Z. Oriskany  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 7 2010  
Scott E. Stitt, P.E. /s/  
 acting ENGINEER OF DESIGN AND ENVIRONMENT

May 7 2010  
Christine M. Reed /s/  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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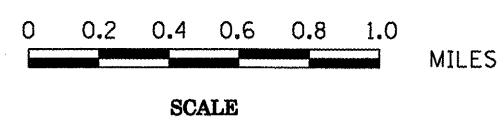
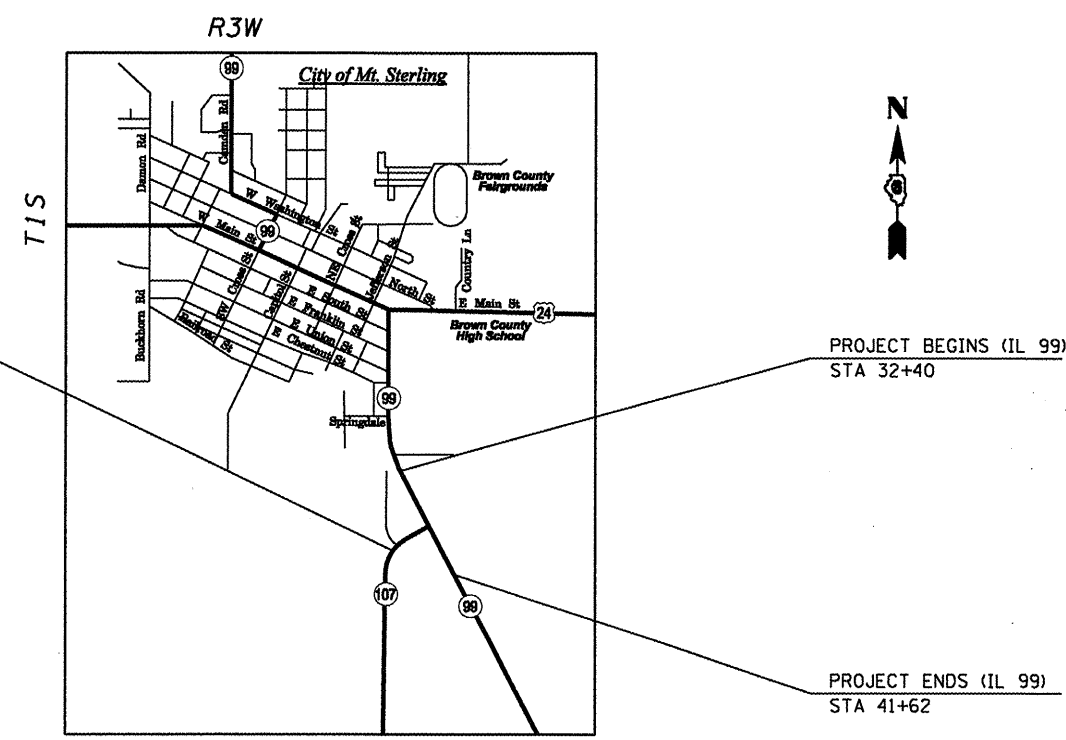


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

**PROJECT ENGINEER: SAL MADONIA PH 217-782-4761**  
**TEAM ENGINEER: JEFF MYERS PH 217-524-7940**

**CONTRACT NO. 72D34**



GROSS LENGTH OF PROJECT = 1,176 FEET = 0.22 MILES  
 NET LENGTH OF PROJECT = 1,176 FEET = 0.22 MILES

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED. ANY DAMAGE TO THE UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE, INCLUDING TEMPORARY REPAIRS WHICH MAY BE REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS.
2. THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTIONS PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
4. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
5. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
6. UNLESS NOTED OTHERWISE, STATIONS AND OFFSETS REFER TO CENTERLINE OF PROJECT.
7. IN ADDITION TO FIELD SURVEYS AND AERIAL SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
8. ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
10. THE CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM OVERHEAD UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING CLEARANCES PER THE NATIONAL ELECTRICAL SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS INCLUDED WITH THE PAY ITEM "TRENCH AND BACKFILL FOR ELECTRICAL WORK".
12. ALL PROPOSED LIGHT POLES ARE TO BE INSTALLED A MINIMUM OF 15 FEET FROM THE EDGE OF PAVEMENT. NO POLES ARE TO BE INSTALLED IN THE FLOWLINE OF DITCHES. THE POLE SET BACK SHALL BE INCREASED IF NECESSARY AS DIRECTED BY THE ENGINEER.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE LIGHTING SYSTEM UNTIL IDOT HAS TAKEN ACCEPTANCE OF THE SYSTEM. ALL CIRCUITS AND CABLES TO THE LIGHT POLES SHALL BE MAINTAINED AS NEEDED. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

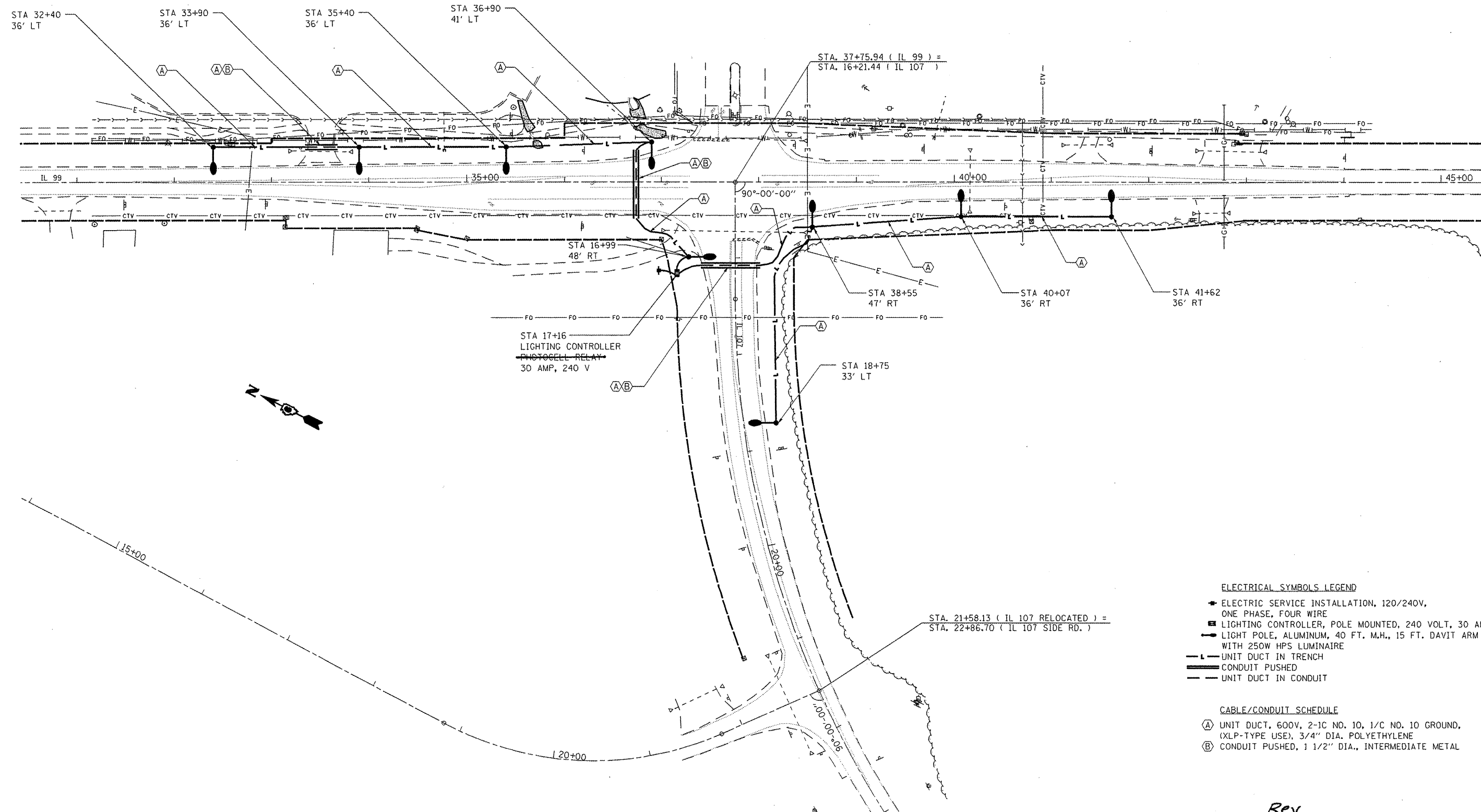
COMMITMENTS:

THERE ARE NO COMMITMENTS ON THIS PROJECT.

<b>DISTRICT SIX</b>	
EXAMINED <u>Feb 2</u> 20 <u>10</u>	<i>Randy Houri</i>
OPERATIONS ENGINEER	
EXAMINED <u>Feb 1</u> 20 <u>10</u>	<i>Randy Houri</i>
PROGRAM IMPLEMENTATION ENGINEER	
EXAMINED <u>March 1</u> 20 <u>10</u>	<i>JRM LIL</i>
PROGRAM DEVELOPMENT ENGINEER	

FILE NAME =	USER NAME = leughlinr1	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
cd:\pv\work\PWIDOT\LAUGHLINR1\01691001	leughlinr1	DRAWN -	REVISED -			554	(12L, 16L)	BROWN	7	2	
PLOT SCALE = 100.0000' / IN.	leughlinr1	CHECKED -	REVISED -			CONTRACT NO. 72D34					
PLOT DATE = Mar-01-2010 11:19:00AM	leughlinr1	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.





**ELECTRICAL SYMBOLS LEGEND**

- ELECTRIC SERVICE INSTALLATION, 120/240V, ONE PHASE, FOUR WIRE
- ⊞ LIGHTING CONTROLLER, POLE MOUNTED, 240 VOLT, 30 AMP
- ⊞ LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. DAVIT ARM WITH 250W HPS LUMINAIRE
- L — UNIT DUCT IN TRENCH
- P — CONDUIT PUSHED
- C — UNIT DUCT IN CONDUIT

**CABLE/CONDUIT SCHEDULE**

- Ⓐ UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE
- Ⓑ CONDUIT PUSHED, 1 1/2" DIA., INTERMEDIATE METAL

FILE NAME =  
 c:\pwork\PWIDOT\LAUGHLIN\16169100\

USER NAME = laughlin  
 72034-sh1-lighting-1.dgn  
 PLOT SCALE = 100.0000' / IN.  
 PLOT DATE = Mar-04-2010 11:38:40AM

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

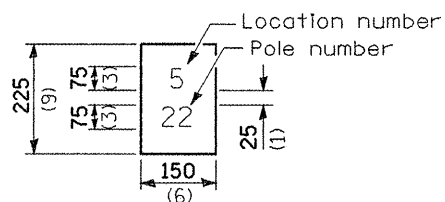
REVISED -  
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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 99 & IL 107 INTERSECTION  
 LIGHTING PLAN SHEET**  
 SCALE: 1" = 50' SHEET NO. OF SHEETS STA. TO STA.

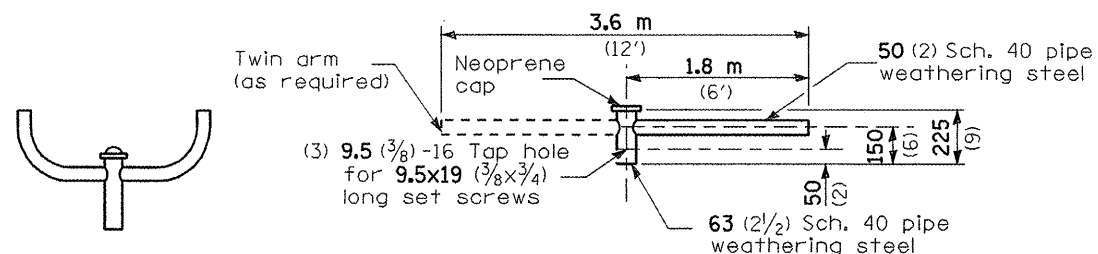
Rev.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
554	02L 16/L	BROWN	7	4
CONTRACT NO. 72034				
ILLINOIS FED. AID PROJECT				



The contractor shall furnish and install a light pole identification of each new light pole, as shown above, incidental to the respective light pole pay item. The numerals shall be 75 (3) series "D", black, screened on silver-white type B pressure sensitive reflective sheeting conforming to the requirements of section T602.01 of the Standard Specifications for Traffic Control Items. The numerals shall conform to the FHWA "Standard Alphabets for Highway Signs".

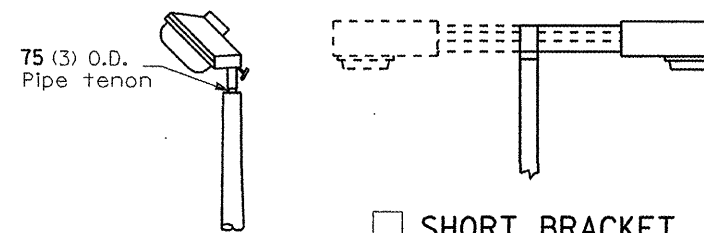
The light pole identification shall be applied to sign base material as specified in section 1069.06 of the Standard Specifications, approximately 180 (7) above the adjacent pavement grade visible to approaching traffic in accordance with Highway Standard 720001.



TWIN TENON

TENON MOUNT BRACKET ARM

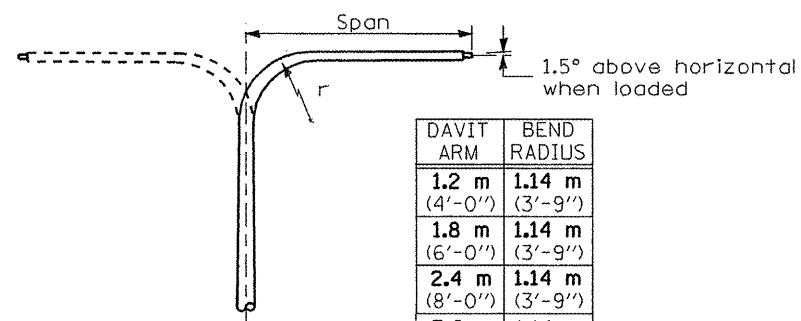
NOTE: Single or twin arm assembly shall be tilted 3° above horizontal.



TENON

SHORT BRACKET

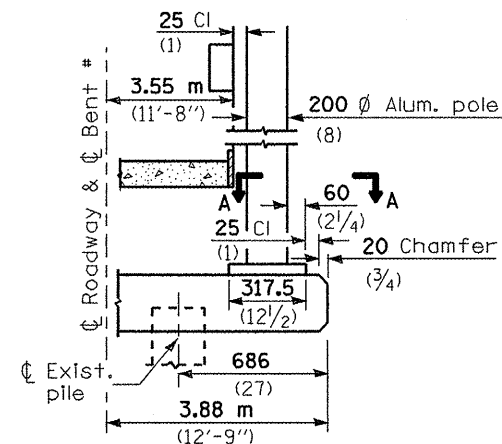
SHORT BRACKET - TWIN



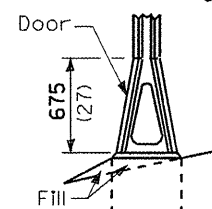
DAVIT ARM	BEND RADIUS
1.2 m (4'-0")	1.14 m (3'-9")
1.8 m (6'-0")	1.14 m (3'-9")
2.4 m (8'-0")	1.14 m (3'-9")
3.6 m (12'-0")	1.14 m (3'-9")

DAVIT ARM

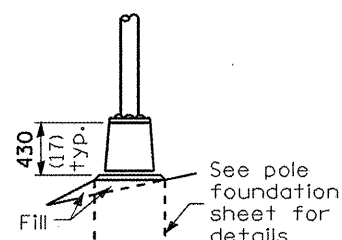
DAVIT ARM-TWIN



BENT # (Looking )

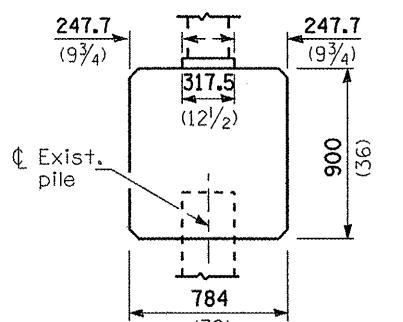


STAINLESS STEEL FLAIR BASE

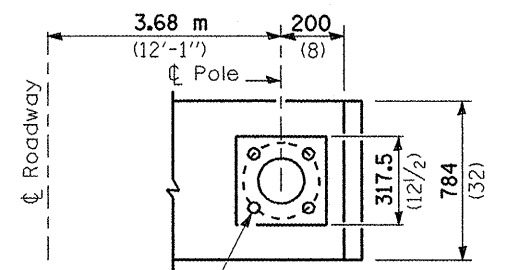


TRANSFORMER BASE

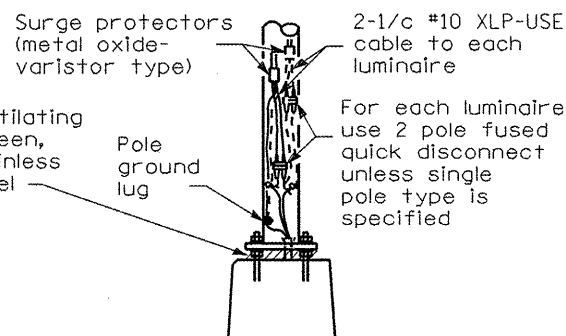
FRANGIBLE



BRIDGE PIER MOUNT



SECTION A-A



ANCHOR

METAL

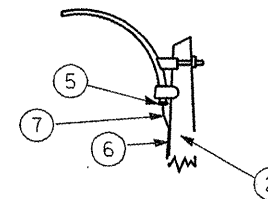
OR

CONCRETE

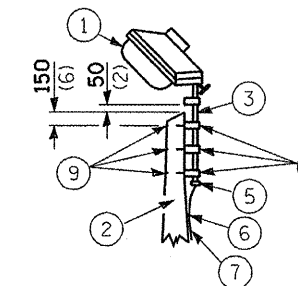
Details for underground distribution if required

- ① Luminaire
- ② Wood pole, class 3 or better
- ③ 63 (2 1/2) Galv. steel conduit
- ④ Single offset pole band
- ⑤ Conduit bushing
- ⑥ Cable clamps on 600 (24) centers
- ⑦ 2/c #12 Type use cable
- ⑧ 25 (1) Galv. steel conduit 3.0 m (10') in length

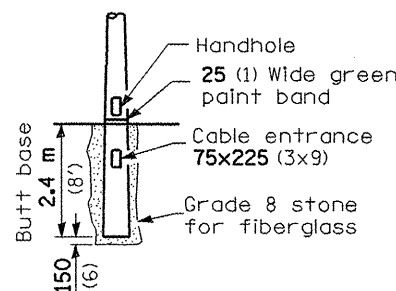
- ⑨ 16 (5/8) Ø hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- ⑩ Conduit clamps on 900 (36) centers
- ⑪ Unit duct
- ⑫ Threaded reducer
- ⑬ "C" Condulet, threaded
- ⑭ 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



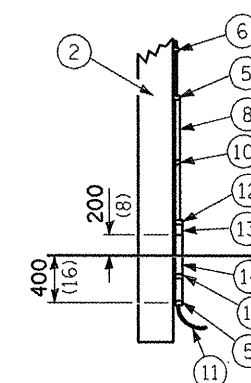
MAST ARM



TENON



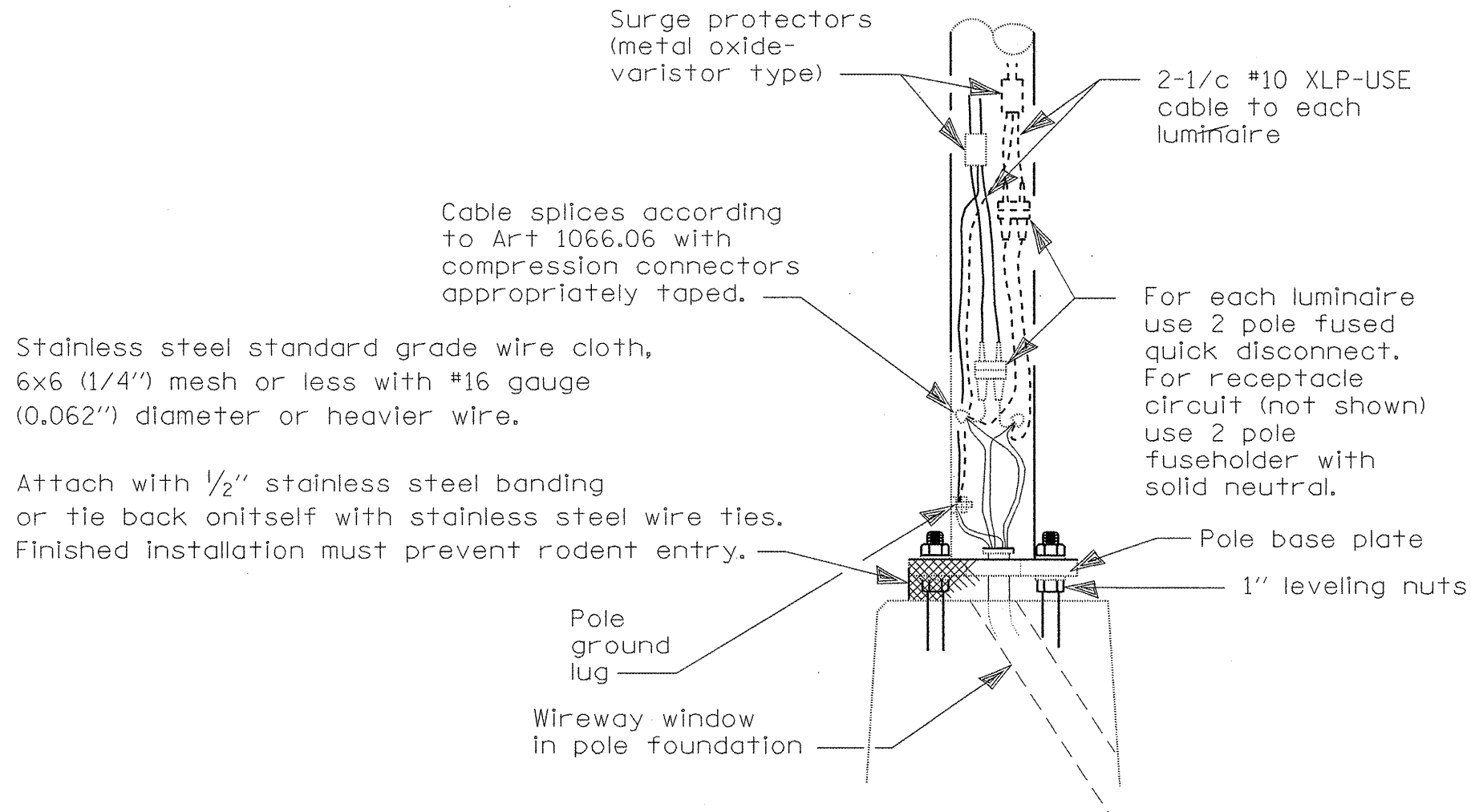
BUTT BASE



POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.8 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

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



Stainless steel standard grade wire cloth,  
6x6 (1/4") mesh or less with #16 gauge  
(0.062") diameter or heavier wire.

Attach with 1/2" stainless steel banding  
or tie back on itself with stainless steel wire ties.  
Finished installation must prevent rodent entry.

Cable splices according  
to Art 1066.06 with  
compression connectors  
appropriately taped.

2-1/c #10 XLP-USE  
cable to each  
luminaire

For each luminaire  
use 2 pole fused  
quick disconnect.  
For receptacle  
circuit (not shown)  
use 2 pole  
fuseholder with  
solid neutral.

Pole base plate

1" leveling nuts

Pole  
ground  
lug

Wireway window  
in pole foundation

# WIRING DETAIL

NO SCALE

## GENERAL NOTES

All taped splices shall use 2 layers of electrical tape  
over 3 layers of rubber tape as required by the  
Standard Specifications. Coat the finished taped  
splice with bonding compound.

All cable splices shall be taped unless another method  
has been specifically approved by the Engineer.

For example purposes the pole is shown on an anchor base.  
If the pole is required to be set on a breakaway base,  
consult the Standard Specifications.

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

FILE NAME = c:\pwwork\pwwid001\LAUGHLINRL\j0169180\	USER NAME = laughtlrr1 t-deta1.dgn	DESIGNED - DRAWN -	REVISED - 7/31/2008 REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>POLE HANDHOLE WIRING (LGT008A.DGN)</b>			F.A.P. RTE. 554	SECTION 021, 16JL	COUNTY BROWN	TOTAL SHEETS 7	SHEET NO. 6
PLOT SCALE = 48,0000' / IN.		CHECKED -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 72D34	
PLOT DATE = Mar-01-2010 11:19:09AM		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



ILLINOIS DEPARTMENT OF TRANSPORTATION  
LUMINAIRE PERFORMANCE TABLE

1/1/03

GIVEN CONDITIONS

<b>ROADWAY DATA:</b>	Pavement Width	<u>48 FT</u>
	Number Of Lanes	<u>4</u>
	Median Width	<u>0 FT</u>
	IES Surface Classification	<u>R3</u>
	Q-Zero Value	<u>.07</u>
<b>LIGHT POLE DATA:</b>	Mounting Height	<u>40 FT</u>
	Mast Arm Length	<u>15 FT</u>
	Pole Set-Back From Edge Of Pavement	<u>15 FT</u>
<b>LUMINAIRE DATA:</b>	Lamp Type	<u>HPS</u>
	Lamp Lumens	<u>28000</u>
	IES Vertical Distribution	<u>M</u>
	IES Control Of Distribution	<u>FC</u>
	IES Lateral Distribution	<u>3</u>
	Total Light Loss Factor	<u>0.684</u>
<b>LAYOUT DATA:</b>	Spacing	<u>150 FT</u>
	Configuration	<u>Single Side</u>
	Luminaire Overhang Over Edge Of Pavement Lane	<u>0 FT</u>

NOTE: Variations from the above specified IES distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

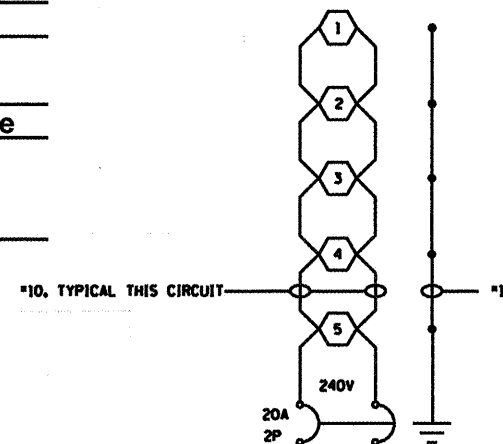
NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

<b>ILLUMINATION:</b>	Average Horizontal Illumination, ( $E_{Ave}$ )	<u>9.0 Lux</u>
	Uniformity Ratio, ( $E_{Ave}/E_{Min}$ )	<u>3.0</u>
<b>LUMINANCE:</b>	Average Luminance: ( $L_{Ave}$ )	<u>0.6 Cd/m<sup>2</sup></u>
	Uniformity Ratios: ( $L_{Ave}/L_{Min}$ )	<u>3.5</u>
	( $L_{Max}/L_{Min}$ )	<u>6.0</u>
	Maximum Veiling Luminance Ratio: ( $L_v/L_{Ave}$ )	<u>0.3</u>

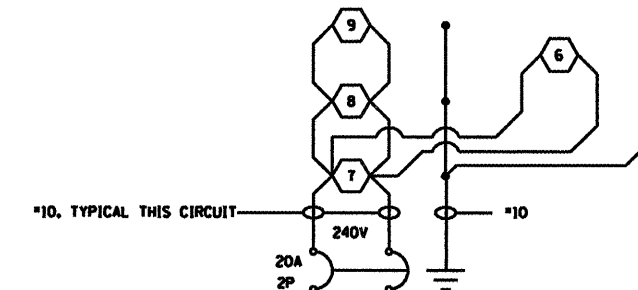
NOTES:

- ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

⬡ 250W ROADWAY LUMINAIRE



LIGHTING CKT 1  
PROPOSED LIGHTING CONTROLLER NO. 1



LIGHTING CKT 2  
PROPOSED LIGHTING CONTROLLER NO. 1