

**NOTES:**

1. THE USE OF CONTROLLED DENSITY FILL (CDF) OR LEAN CONCRETE OR CRUSHED 5/8" TOP COURSE GRAVEL IS ACCEPTABLE AND MAY BE USED FOR BACKFILL. IF SOIL BACKFILL IS USED, THE BACKFILL SHOULD MEET RICHLAND STANDARD SPECIFICATION SECTION 2.3.1B AND BE COMPACTED IN 8" LIFTS. IN-PLACE DENSITY TESTS SHOULD BE PERFORMED AT NOT MORE THAN 1 FT. INTERVALS TO DETERMINE COMPACTION. COMPACTION SHOULD MEET ASTM D-698. TO ACHIEVE THE FULL STRENGTH WIND LOADING, THE EXCAVATED AREA SHOULD BE AT LEAST 4 FT ON EACH SIDE. BECAUSE THE DEPTH OF THE EXCAVATION IS GREATER THAN 4 FT. ON EACH SIDE. BECAUSE THE DEPTH OF THE EXCAVATION IS GREATER THAN 4 FT., THE EXCAVATION WALLS MUST BE SLOPED AS REQUIRED BY STATE & FEDERAL REGULATIONS, IF PERSONNEL WILL BE REQUIRED TO ENTER THE EXCAVATION.

2. IF HOLES ARE AUGURED THEN AN ABSOLUTE MIN. OF A 24" DIA. AUGER MUST BE USED. BACKFILL PER NOTE 1.



**STREET LIGHTING  
DIRECT BURIED POLE  
30/40 FT**

**PUBLIC WORKS ENGINEERING**

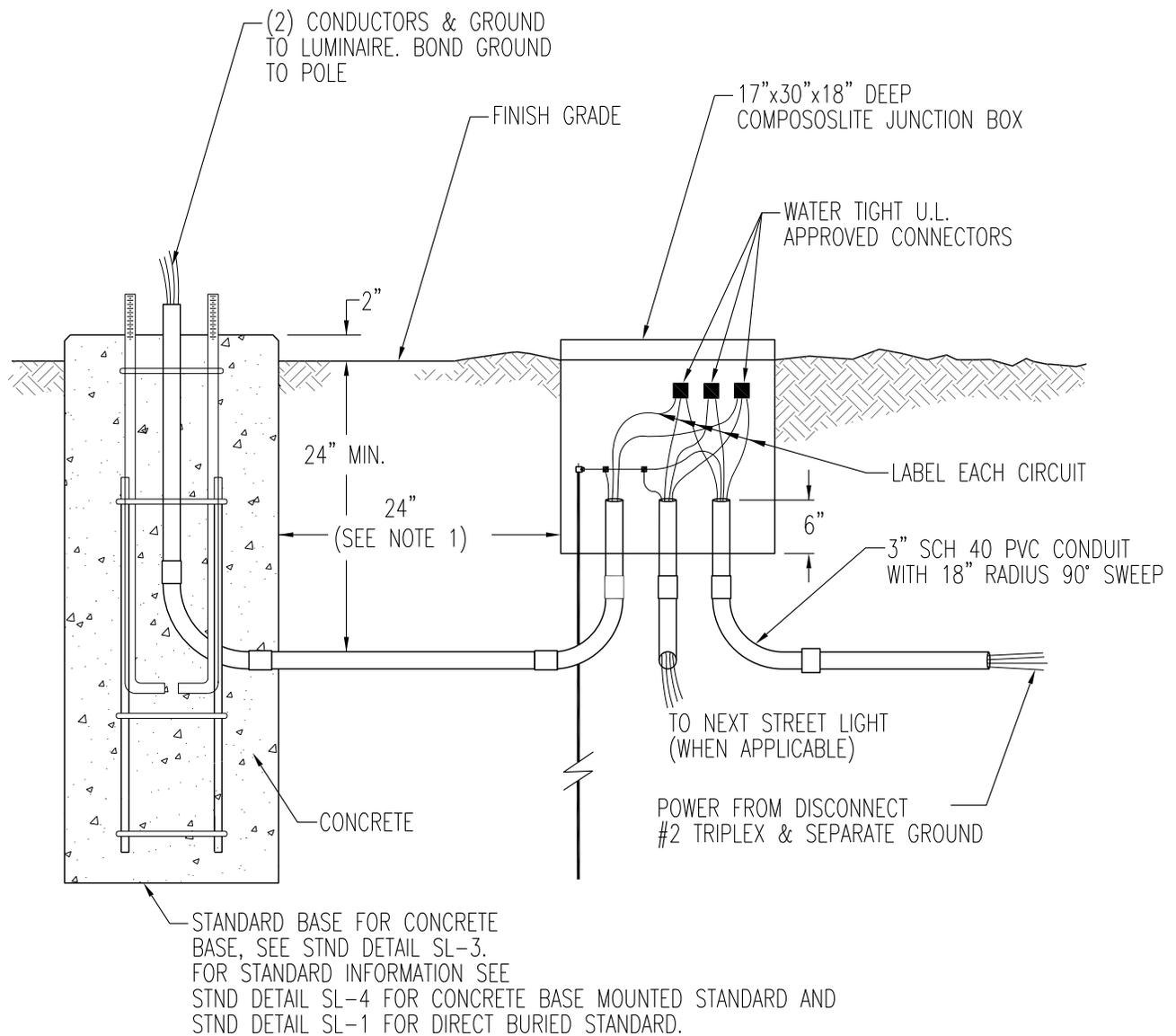
APPR. BY: PKR

DATE: 11.15

DRAWN BY: LD

DWG: SL-1

CAD FILE: 2015\_SL1\_11\_2015



**NOTES:**

1. SET JUNCTION BOX IN THE PROPER LOCATION SUCH THAT IT IS AS LITTLE OVER 24" FROM STREET LIGHT FOUNDATION AS POSSIBLE. SOIL UNDER BOX SHALL BE RESTORED TO 95% COMPACTION. SET BOX AT AN ELEVATION SUCH THAT THE TOP OF THE BOX COVER IS APPROXIMATELY 2" ABOVE FINISHED GRADE UNLESS BOX IS TO BE SURROUNDED BY ASPHALT OR CONCRETE. SET BOX LEVEL WITH AND PARALLEL TO STREET.
2. SWEEP CONDUIT UP INTO JUNCTION BOX A MINIMUM OF 6". INSTALL BELL ENDS OR BUSHINGS ON ALL EXPOSED CONDUIT ENDS IN JUNCTION BOX.
3. ALLOW SUFFICIENT SLACK IN CONDUCTORS SUCH THAT SPLICES MAY BE REMOVED A MINIMUM OF 36" FROM SPLICE BOX.
4. JUNCTION BOXES SHALL BE COMPOSOLITE AS MANUFACTURED BY QUAZITE CORPORATION OR APPROVED EQUAL. BOXES SHALL BE CONCRETE GRAY COLOR IN APPEARANCE. COVER SHALL UTILIZE A PENTA-HEAD BOLD TO SECURE IT TO BOX. THE COVER SHALL HAVE THE LOGO "ELECTRICAL" PERMANENTLY MARKED ON IT.



**STREET LIGHTING  
JUNCTION BOX &  
MOUNTING BASE**

PUBLIC WORKS ENGINEERING

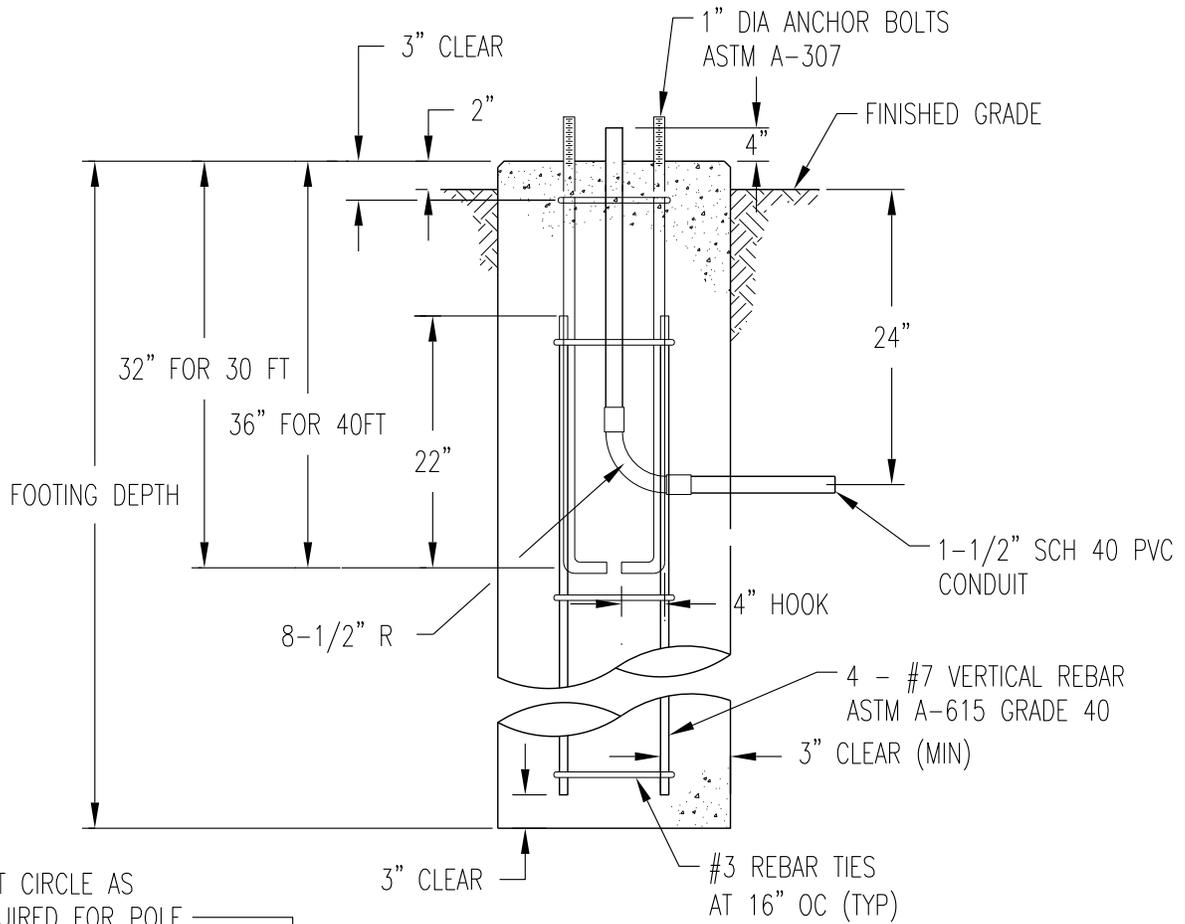
APPR. BY: PKR

DATE: 11.15

DRAWN BY: LD

DWG: SL-2

CAD FILE: 2015\_SL2\_11\_2015



**MOUNTING BASE DETAIL**

NOTE:  
 CONCRETE STRENGTH = 4000 PSI CONCRETE CLASS 4000P.  
 CONCRETE STRENGTH = 2400 PSI PRIOR TO SETTING POLE.

**MOUNTING BASE  
TOP VIEW**

POLE LENGTH (FEET)	MINIMUM FOOTING DEPTH IN FEET SEE SOIL TABLE		
	A	B	C
30	5'0"	6'6"	8'0"
40	5'6"	7'0"	8'6"

NOTE:

FORMING MATERIALS (SONOTUBE) SHALL BE REMOVED FROM THE TOP OF THE FOUNDATION TO SIX INCHES BELOW FINISHED GRADE AFTER CONCRETE HAS HAD A CHANCE TO SET UP.

SOIL BELOW MOUNTING BASE TO BE UNDISTURBED.

SOIL TYPE	CLASS OF MATERIAL (UNIFORM BUILDING CODE)
A	GOOD-COMPACT WELL-GRADED SAND AND GRAVEL. HARD CLAY WELL-GRADED FINE AND COARSE SAND (ALL DRAINED SO WATER WILL NOT STAND)
B	AVERAGE-COMPACT FINE SAND MEDIUM CLAY COMPACT SANDY LOAM LOOSE COARSE SAND AND GRAVEL (ALL DRAINED SO WATER WILL NOT STAND.)
C	POOR-SOFT CLAY CLAY LOAM POORLY COMPACTED SAND CLAYS CONTAINING LARGE AMOUNTS OF SILT (WATER STANDS DURING WET SEASON)



**STREET LIGHTING  
MOUNTING BASE DETAILS  
CONCRETE SUPPORT**

**PUBLIC WORKS ENGINEERING**

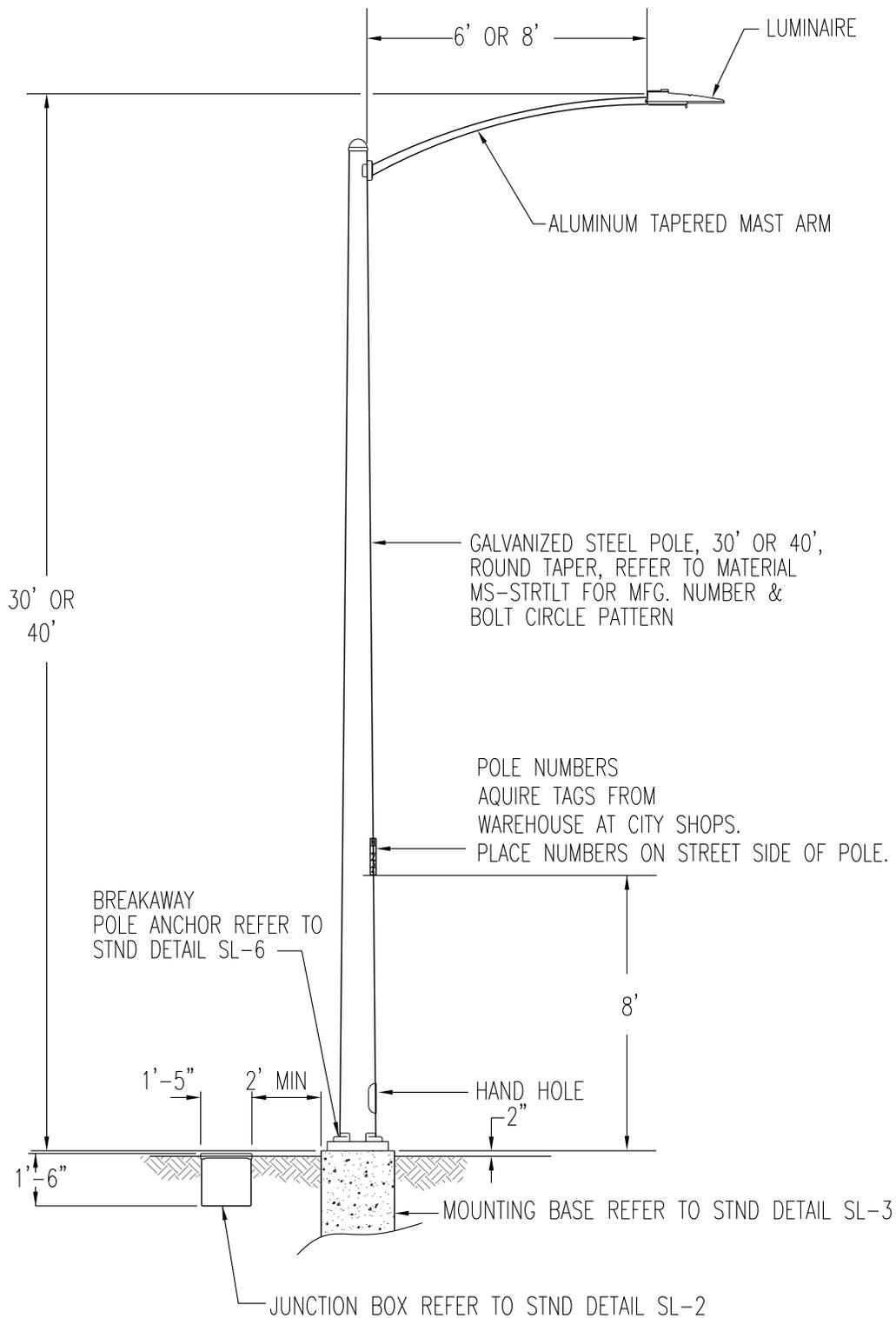
APPR. BY: PKR

DATE: 11.15

DRAWN BY: LD

DWG: SL-3

CAD FILE: 2015\_SL3\_11\_2015



SEE TECHNICAL SPECIFICATION TS-STRTLT FOR DESIGN INFORMATION  
 SEE MATERIAL SPECIFICATION MS-STRTLT FOR MANUFACTURING AND MATERIALS INFORMATION



# STREET LIGHTING STEEL POLE 30/40FT CONCRETE BASE

PUBLIC WORKS ENGINEERING

APPR. BY: PKR

DATE: 11.15

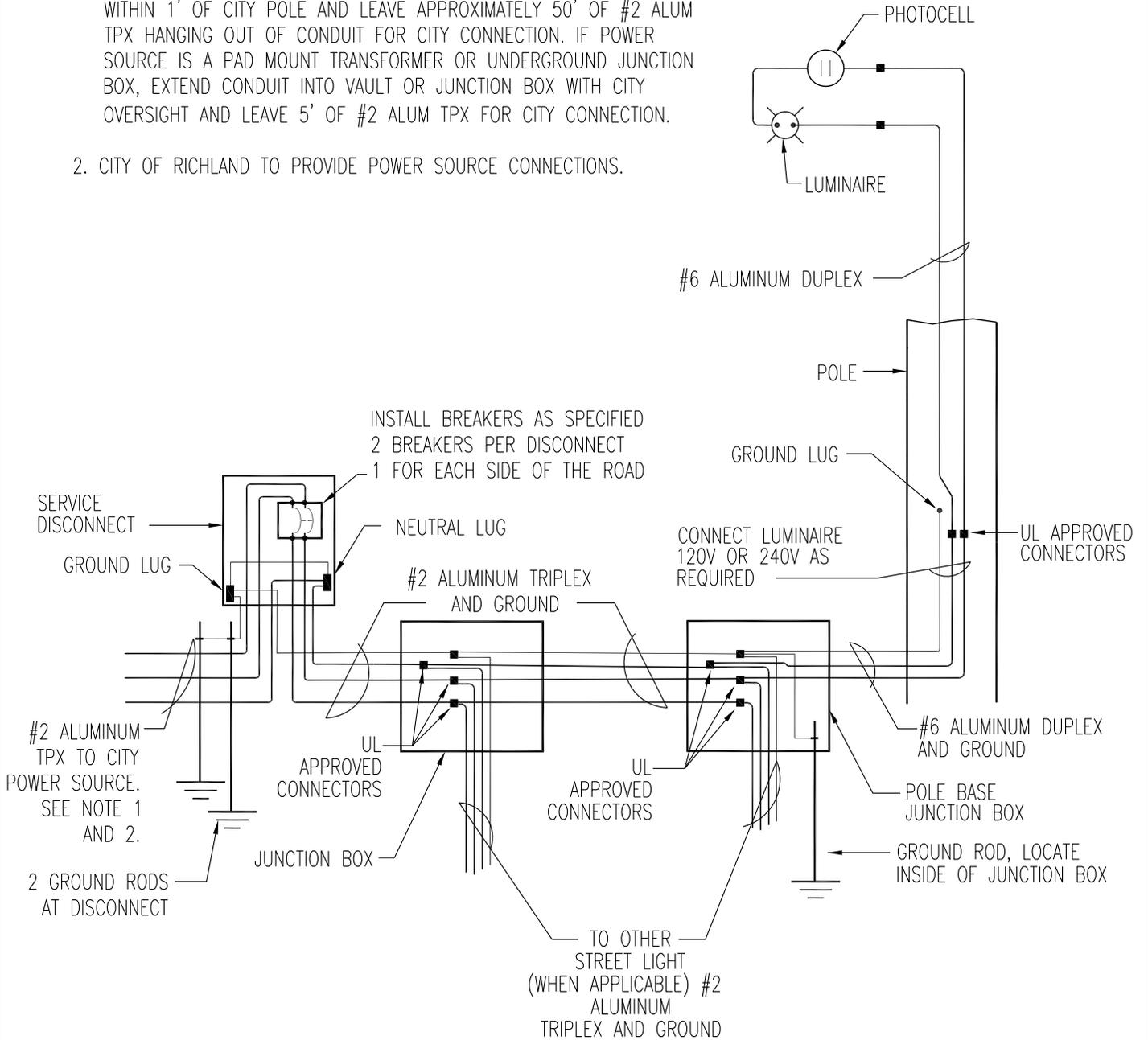
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DWG: SL-4

CAD FILE: 2015\_SL4\_11\_2015

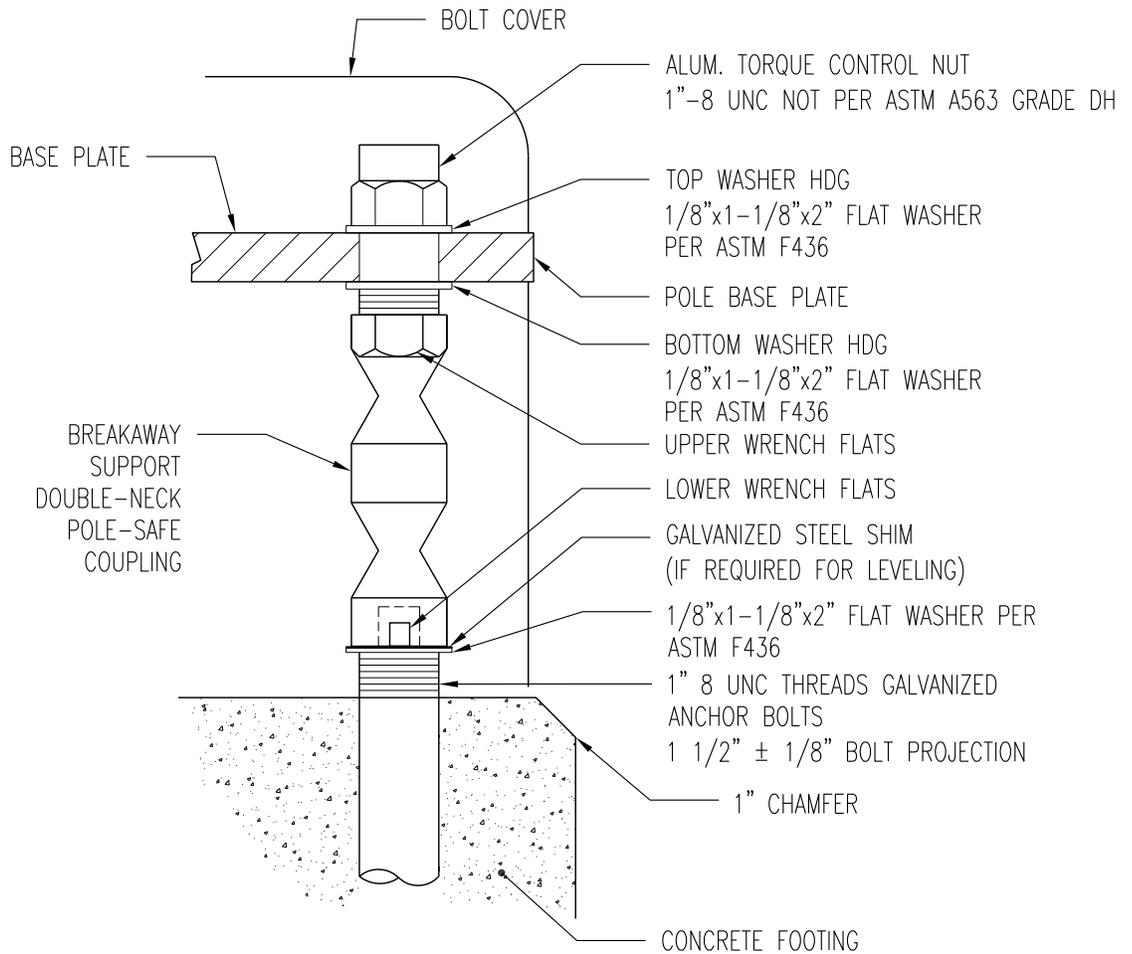
NOTES:

1. IF POWER SOURCE IS OVERHEAD POWER LINE EXTEND CONDUIT TO WITHIN 1' OF CITY POLE AND LEAVE APPROXIMATELY 50' OF #2 ALUM TPX HANGING OUT OF CONDUIT FOR CITY CONNECTION. IF POWER SOURCE IS A PAD MOUNT TRANSFORMER OR UNDERGROUND JUNCTION BOX, EXTEND CONDUIT INTO VAULT OR JUNCTION BOX WITH CITY OVERSIGHT AND LEAVE 5' OF #2 ALUM TPX FOR CITY CONNECTION.
2. CITY OF RICHLAND TO PROVIDE POWER SOURCE CONNECTIONS.

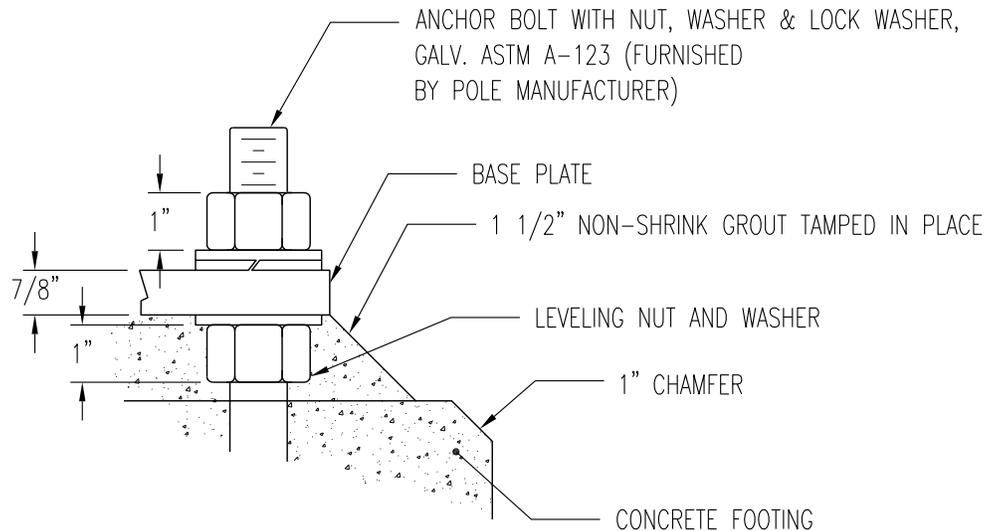


# STREET LIGHTING WIRING DIAGRAM

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APPR. BY: PKR	DATE: 07.17
DRAWN BY: LD	DWG: SL-5
CAD FILE: 2015_SL5_07_2017	



**BREAKAWAY POLE ANCHOR DETAIL**

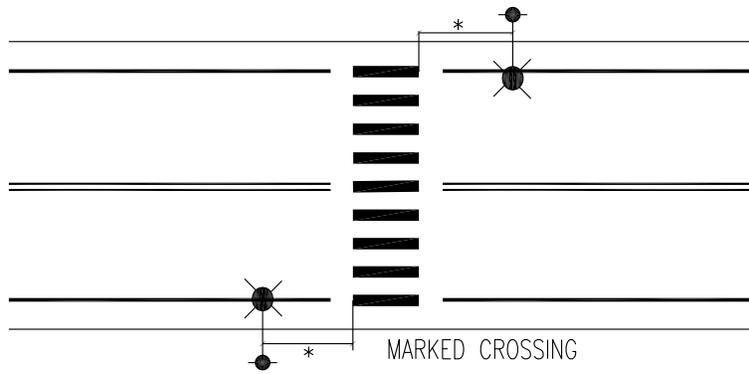


**NON-BREAKAWAY ANCHOR DETAIL**

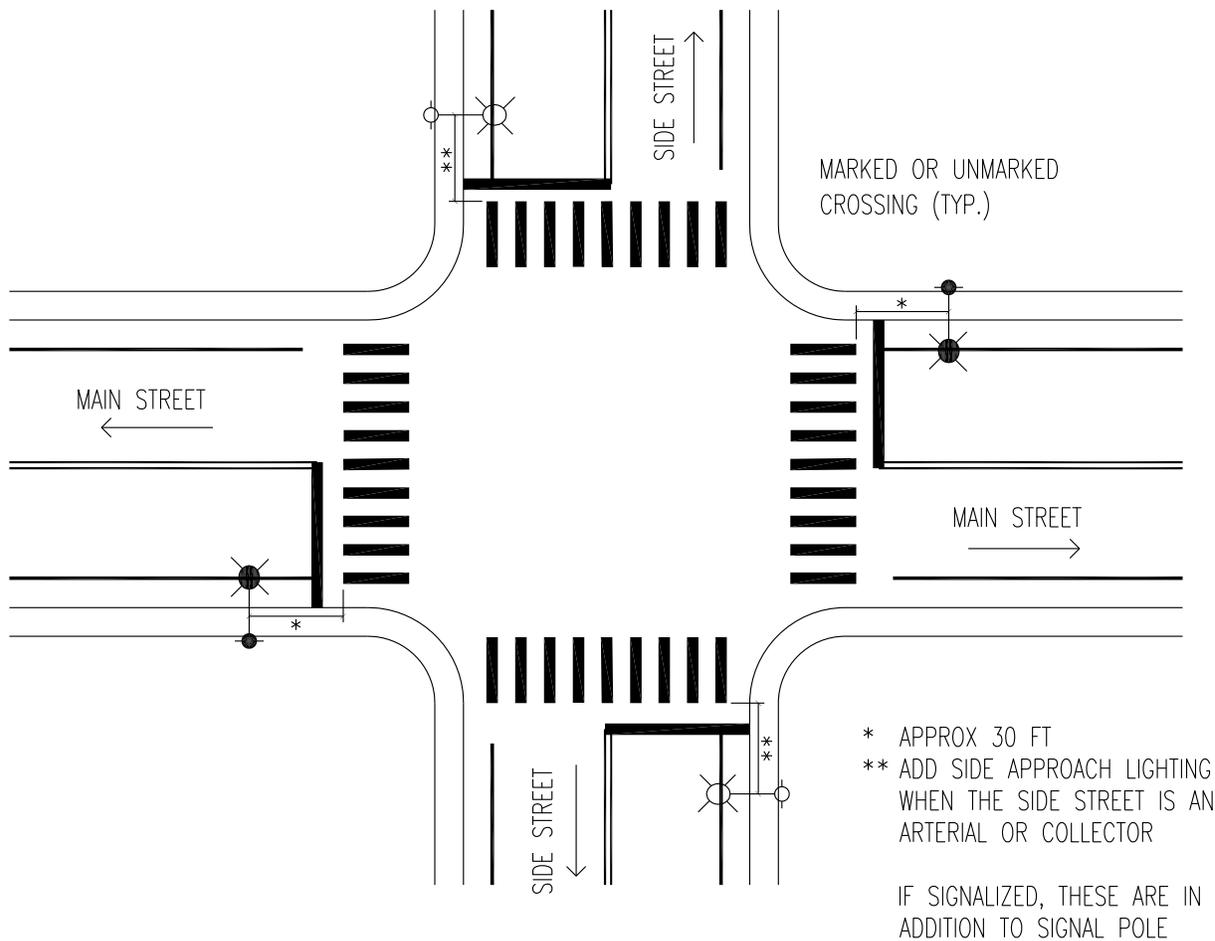


**STREET LIGHTING  
POLE ANCHOR  
CONCRETE SUPPORT**

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 07.17
DRAWN BY: LD	DWG: SL-6
CAD FILE: 2015_SL6_07_2017	



### MIDBLOCK CROSSWALK LIGHTING



### INTERSECTION LIGHTING



## MIDBLOCK LIGHTING INTERSECTION LIGHTING

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 05.20
DRAWN BY: EY	DWG: SL-7
CAD FILE: 2020_SL7_05_2020	



# STREET LIGHT DESIGN CRITERIA

PUBLIC WORKS ENGINEERING

APPR. BY: PKR

DATE: 05.20

DRAWN BY: EY

DWG: SL-8

CAD FILE: 2020\_SL8\_05\_2020

City of Richland Street Light Design Criteria	Roadway Classification												
	Principal Arterial Roadway			Minor Arterial Roadway			Collector Roadway			Local Street			
Pedestrian Conflict Area	High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low	
Average Maintained Luminance (cd/m <sup>2</sup> )	1.2	0.9	0.6	1.2	0.9	0.6	0.8	0.6	0.4	0.6	0.5	0.3	
Luminance Uniformity	Ave/Min	3.0	3.0	3.5	3.0	3.5	3.0	3.5	4.0	6.0	6.0	6.0	
	Max/Min	5.0	5.0	6.0	5.0	6.0	5.0	6.0	8.0	10.0	10.0	10.0	
Average Maintained Illuminance for curved roadway sections (fc)†	1.7	1.3	0.9	1.7	1.3	0.9	1.2	0.9	0.6	0.9	0.7	0.4	
Illuminance Uniformity	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	6.0	6.0	6.0	
Site Characteristics	Maximum Pole spacing for LED Lighting (ft)‡	180	220	280	150	200	300	220	280	340	260	350	
	Setback (ft)	8			8			8 or 2.5			8 or 2.5		
Configuration	Staggered* or Opposite			Staggered* or Opposite			Staggered*			Staggered*			
LED Luminaire Characteristics	Luminaire Distribution	III			II			II			II		
	Max Fixture Wattage	270			170			110			70		
	Color Temperature	4100K (±200)			4100K (±200)			4100K (±200)			4100K (±200)		
	Minimum LLD (100,000 hrs)	0.75			0.75			0.75			0.75		
Max BUG Rating	B3 U0 G3			B2 U0 G3			B2 U0 G3			B1 U0 G2			
Pole Characteristics	Mounting Height (ft)	38			38			28			28		
	Arm Length (ft)	8 or 12			8 or 12			8			8		

\* Staggered spacing measured between luminaires on the same side of the road.

† For R2 and R3 Pavement

‡ Maximum spacing requirement may be revised periodically to better reflect the capabilities of new LED lighting technology.