

ELECTRICAL MATERIAL QUANTITIES

MULLAN RD & MARY JANE BLVD		
MATERIAL	TOTAL	UNIT
CONDUIT - PLASTIC 2 INCH	2,525	LNFT
PULL BOX - COMPOSITE TYPE 2	14	EACH
CABLE-COPPER 3 AWG12-600V *	250	LNFT
FOUNDATION CONCRETE	7.4	CUYD
CONDUCTOR - COPPER 8 AWG - 600V	11,275	LNFT
CONDUCTOR - COPPER 10 AWG - 600V *	1,650	LNFT
DECORATIVE LUMINAIRE POLE	14	EACH
SERVICE ASSEMBLY - 200 AMP	1	EACH

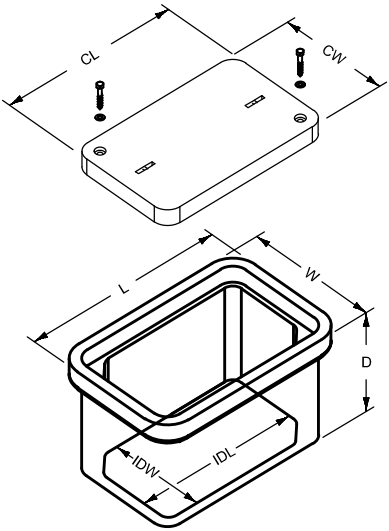
* - FOR REFERENCE ONLY, INCIDENTAL TO COST OF OTHER ITEMS

MULLAN RD & GEORGE ELMER DR		
MATERIAL	TOTAL	UNIT
CONDUIT - PLASTIC 2 INCH	2,800	LNFT
PULL BOX - COMPOSITE TYPE 2	19	EACH
CABLE-COPPER 3 AWG12-600V *	175	LNFT
FOUNDATION CONCRETE	6.9	CUYD
CONDUCTOR - COPPER 8 AWG - 600V	12,625	LNFT
CONDUCTOR - COPPER 10 AWG - 600V *	2,050	LNFT
STANDARD - STL TYPE 10-A-500-6	9	EACH
HIGH EFFICACY LUMINAIRE LED	9	EACH
DECORATIVE LUMINAIRE POLE	4	EACH
SERVICE ASSEMBLY - 200 AMP	1	EACH

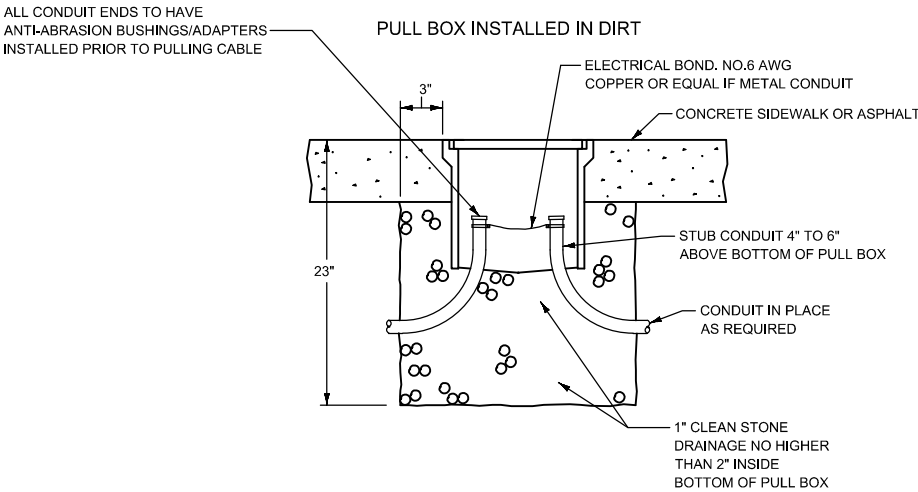
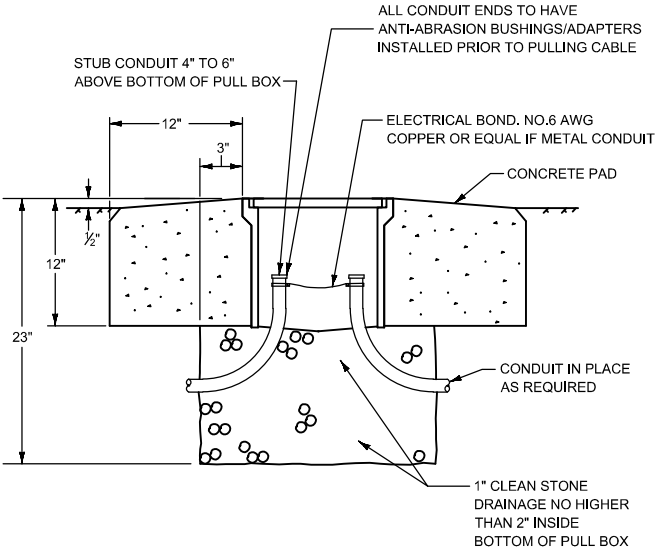
* - FOR REFERENCE ONLY, INCIDENTAL TO COST OF OTHER ITEMS

FLYNN LN & ENGLAND BLVD, CAMDEN ST		
MATERIAL	TOTAL	UNIT
CONDUIT - PLASTIC 2 INCH	925	LNFT
PULL BOX - COMPOSITE TYPE 1	4	EACH
PULL BOX - COMPOSITE TYPE 2	10	EACH

ENGLAND BLVD & GEORGE ELMER DR		
MATERIAL	TOTAL	UNIT
CONDUIT - PLASTIC 2 INCH	875	LNFT
PULL BOX - COMPOSITE TYPE 1	8	EACH
PULL BOX - COMPOSITE TYPE 2	12	EACH



PULL BOX - COMPOSITE MINIMUM DIMENSIONS		
TYPE 1	TYPE 2	TYPE 3
L = 20"	L = 25"	L = 32"
W = 13"	W = 15"	W = 19"
D = 12"	D = 12"	D = 12"
IDL = 17"	IDL = 21"	IDL = 28"
IDW = 10"	IDW = 11"	IDW = 15"
CL = 18"	CL = 23"	CL = 30"
CW = 11"	CW = 13"	CW = 17"



PULL BOX INSTALLED IN A SIDEWALK OR ASPHALT

PULL BOX-COMPOSITE
TYPE 1,2 & 3
NO SCALE

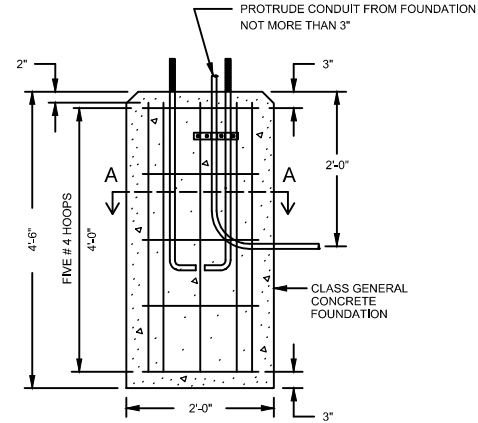
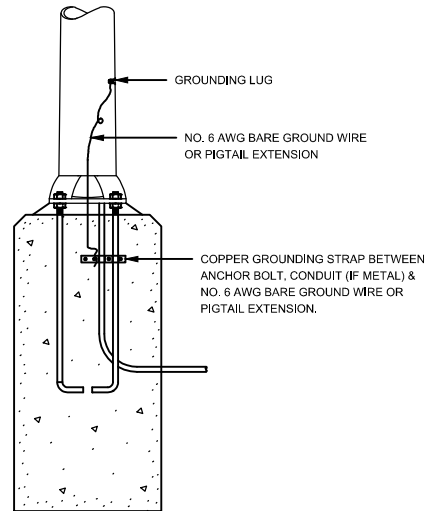
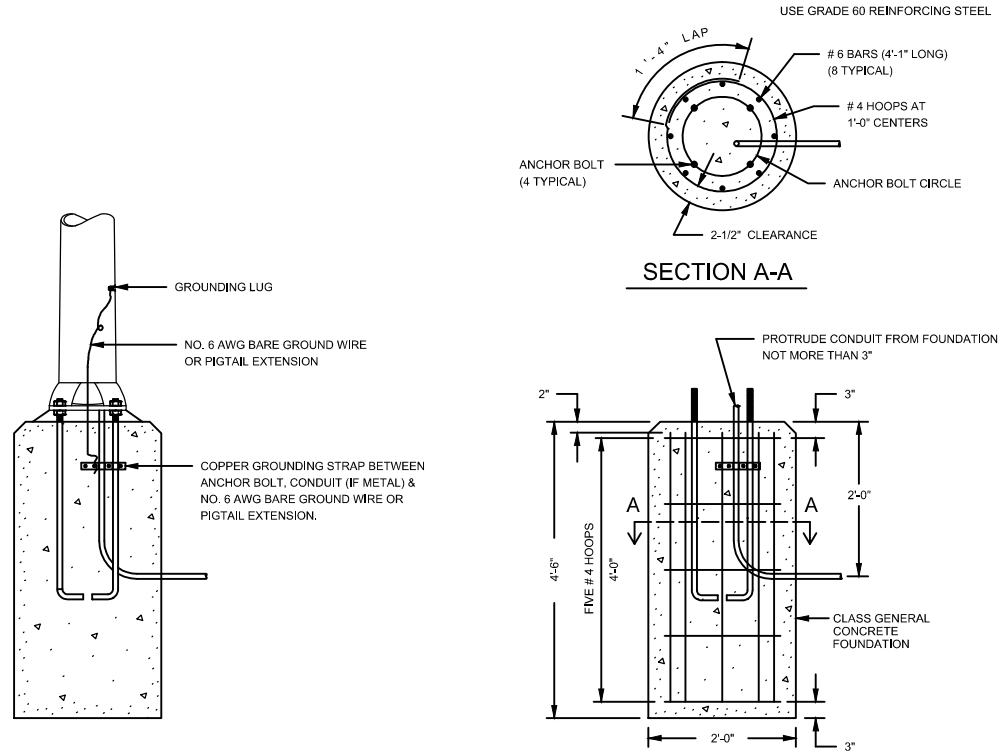
REVISION	DATE	DESCRIPTION

DESIGNER	-	PROJ. NO.	-
DRAWN	-	DATE	-
CHECKED	-	SURVEYED	DJ&A P.C.

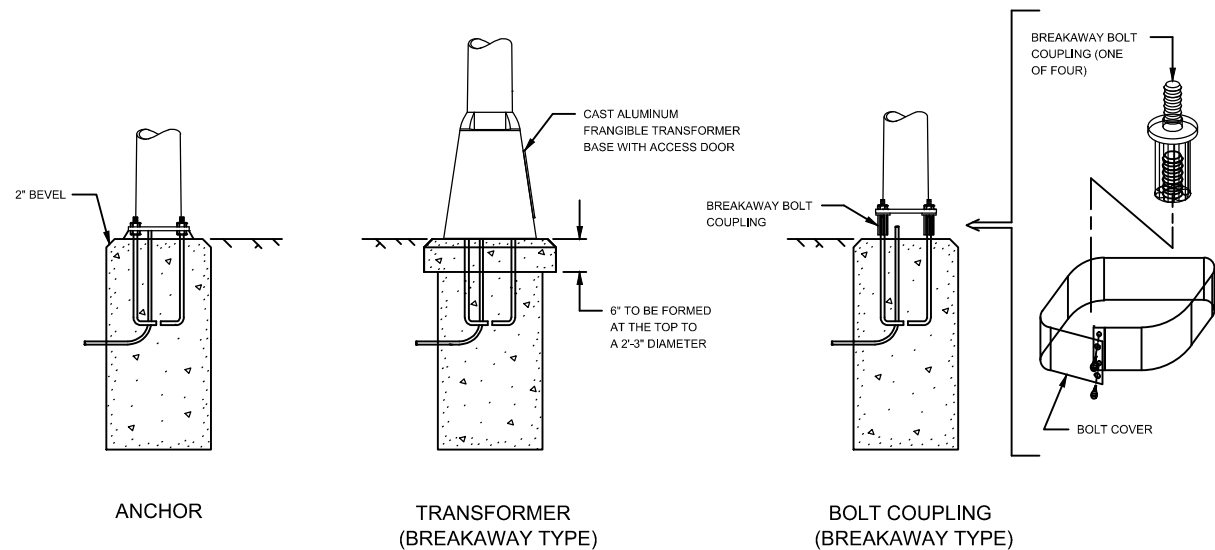


Mullan BUILD - Lighting & Electrical
100% - BID PLANS

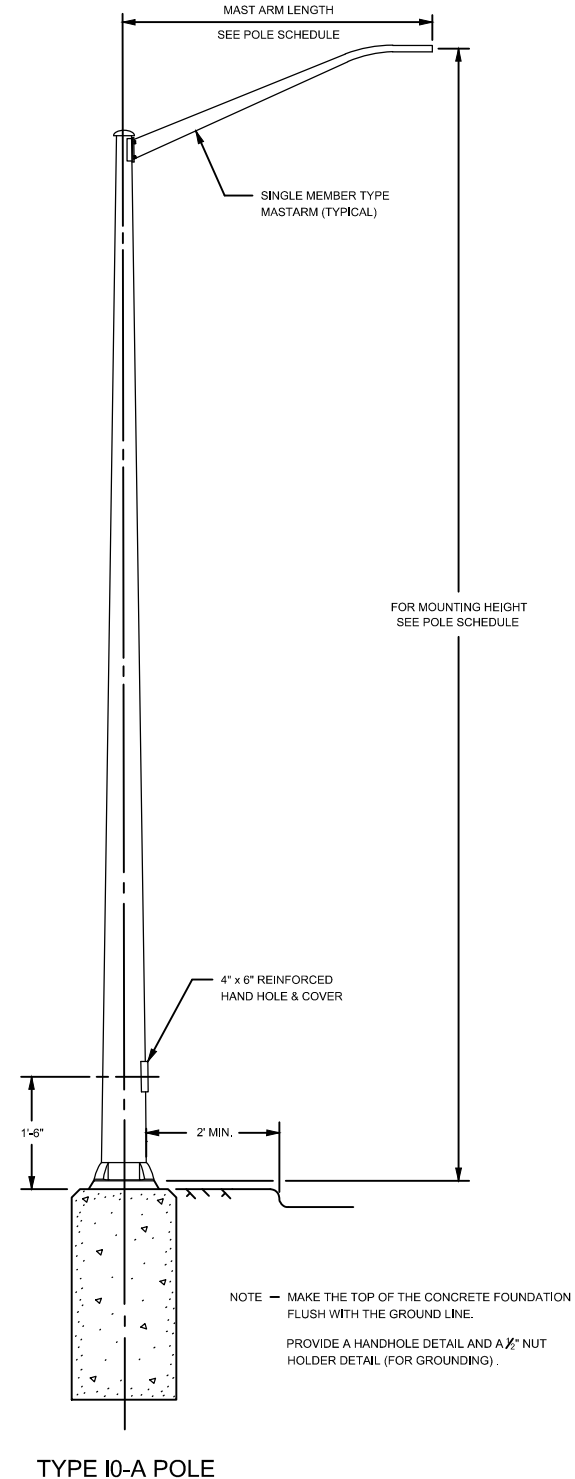
Electrical Details - Material Quantities



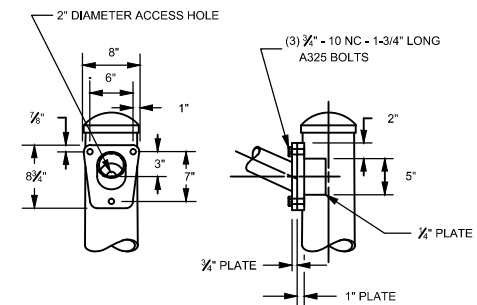
TYPICAL OF ALL FOUNDATIONS



BASE TYPES FOR LUMINAIRE STANDARDS



TYPE 10-A POLE



LUMINAIRE ARM CONNECTION
4' THROUGH 12' LUMINAIRE ARMS

TYPE 10-A LUMINAIRE STANDARDS,
POLE BASES & FOUNDATION DETAILS
NO SCALE

REVISION	DATE	DESCRIPTION

DESIGNER		PROJ. NO.	
DRAWN		DATE	
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Mullan BUILD - Lighting & Electrical
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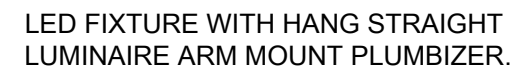
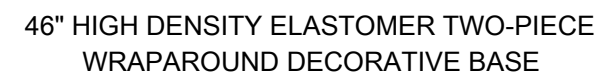
Electrical Details - 02

SHEET	OF
J2	J12



TRENCH WIDTH	
NO. CONDUITS	W (INCHES)
1	12"
2	18"
3	24"

- NOTES:**
1. ADJUST CONDUIT SPACING, DEPTH, AND ALIGNMENT AS NECESSARY.
 2. BACKFILL MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR TEST.



NO SCALE

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DESIGNER _____ PROJ. NO. _____
DRAWN _____ DATE _____
CHECKED _____ SURVEYED DJ&A, P.C.

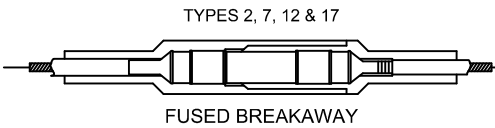
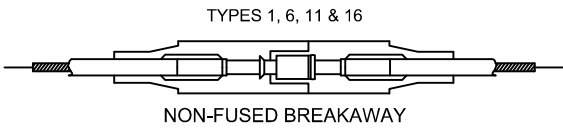


Mullan BUILD - Lighting & Electrical
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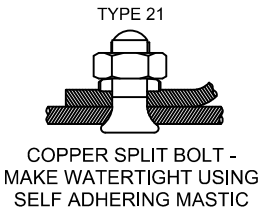
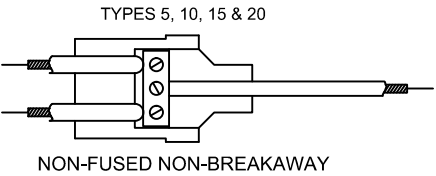
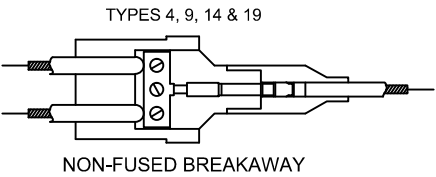
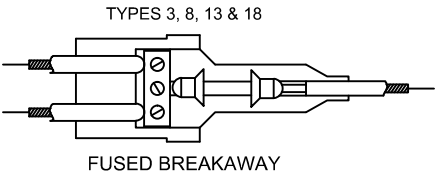
Electrical Details - Underground Service Assembly Std. Details

SHEET	
OF	
13	J12

WATERTIGHT CONNECTORS



IDENTITY NO.	DESCRIPTIVE SYMBOL & WIRE SIZES
1	8 8
2	8 10
3	8 10
4	8 8
5	8 8
6	6 6
7	6 10
8	6 10
9	6 6
10	6 6
11	4 4
12	4 10
13	4 10
14	4 4
15	4 4
16	10 10
17	10 10
18	10 10
19	10 10
20	10 10
21	VARIES VARIES

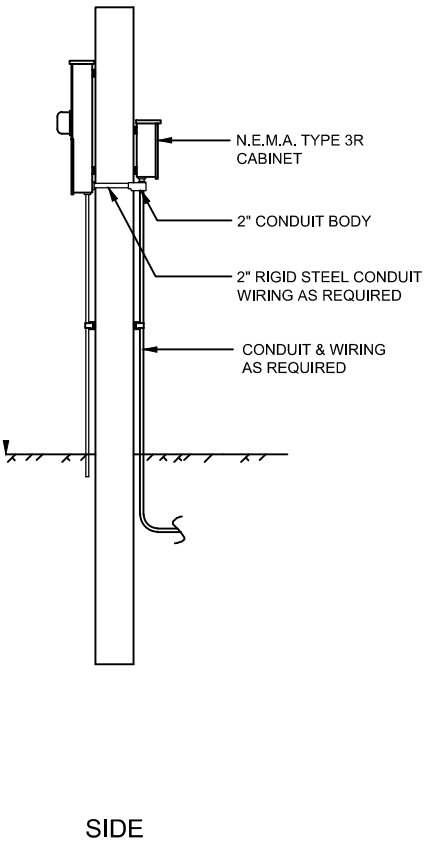
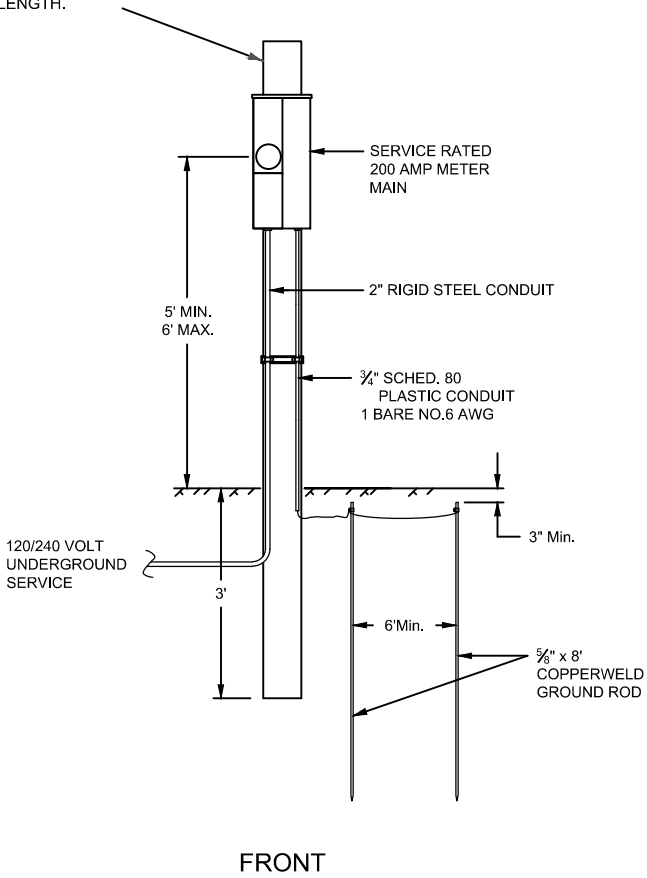


PROVIDE A PLUG AND RECEPTACLE HOUSED IN WATER-RESISTANT, SYNTHETIC RUBBER CAPABLE OF BURIAL IN THE GROUND OR INSTALLATION IN SUNLIGHT. THE HOUSING, CONSISTING OF 2 SECTIONS, PROVIDES A WATERTIGHT SEAL AROUND THE CABLE AND A WATERTIGHT SEAL BETWEEN THE TWO SECTIONS AT THE POINT OF DISCONNECTION. SUPPLY EACH KIT WITH SUFFICIENT SILICONE COMPOUND TO LUBRICATE METAL PARTS AND THE RUBBER HOUSINGS FOR EASY ASSEMBLY.

WHERE INDICATED, CRIMP A COPPER PIN AND A COPPER RECEPTACLE TO THE CABLE. THE RECEPTACLE IS TO ESTABLISH CONTACT PRESSURE WITH THE PIN THROUGH THE USE OF A COPPER BERYLLIUM SPRING AND BE EQUIPPED WITH A DISPOSABLE MOUNTING PIN. THE PIN IS TO BE CONSTRUCTED OF AT LEAST HALF-HARD MATERIAL. THE CRIMPING PORTION IS TO BE FULLY ANNEALED WHILE THE REST OF THE PIN IS MAINTAINED IN ITS ORIGINAL STATE OF HARDNESS. THE RECEPTACLE IS TO BE FULLY ANNEALED. THE PIN AND RECEPTACLE ARE TO LOCK TOGETHER SO THE CONNECTION IS MAINTAINED WHEN A MINIMUM FORCE OF 20 POUNDS TENSION IS APPLIED TO THE ATTACHED CABLES.

PROVIDE FUSED CONNECTOR KITS CONTAINING A PAIR OF SPRING LOADED 90% CONDUCTIVITY CONTACTS FOR GRIPPING A STANDARD MIDGET FERRULE TYPE FUSE. THE CONTACTS MUST BE FULLY ANNEALED AND ADAPTED TO BE CRIMPED TO THE CABLE.

6" x 6" PRESSURE TREATED
WOOD POST 10' IN LENGTH.



UNDERGROUND SERVICE ASSEMBLY DETAIL

WATERTIGHT CONNECTORS
NO SCALE

REVISION	DATE	DESCRIPTION

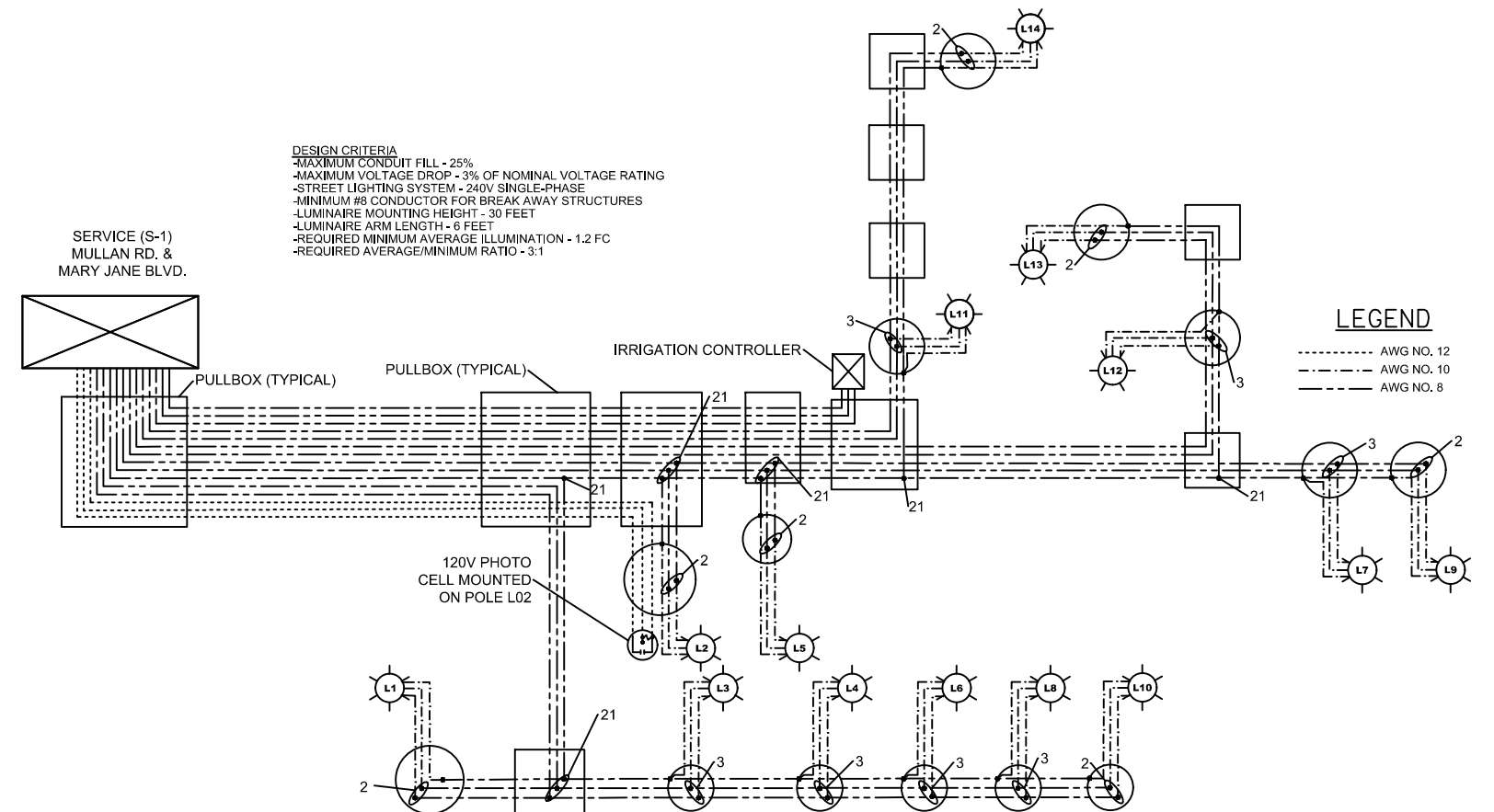
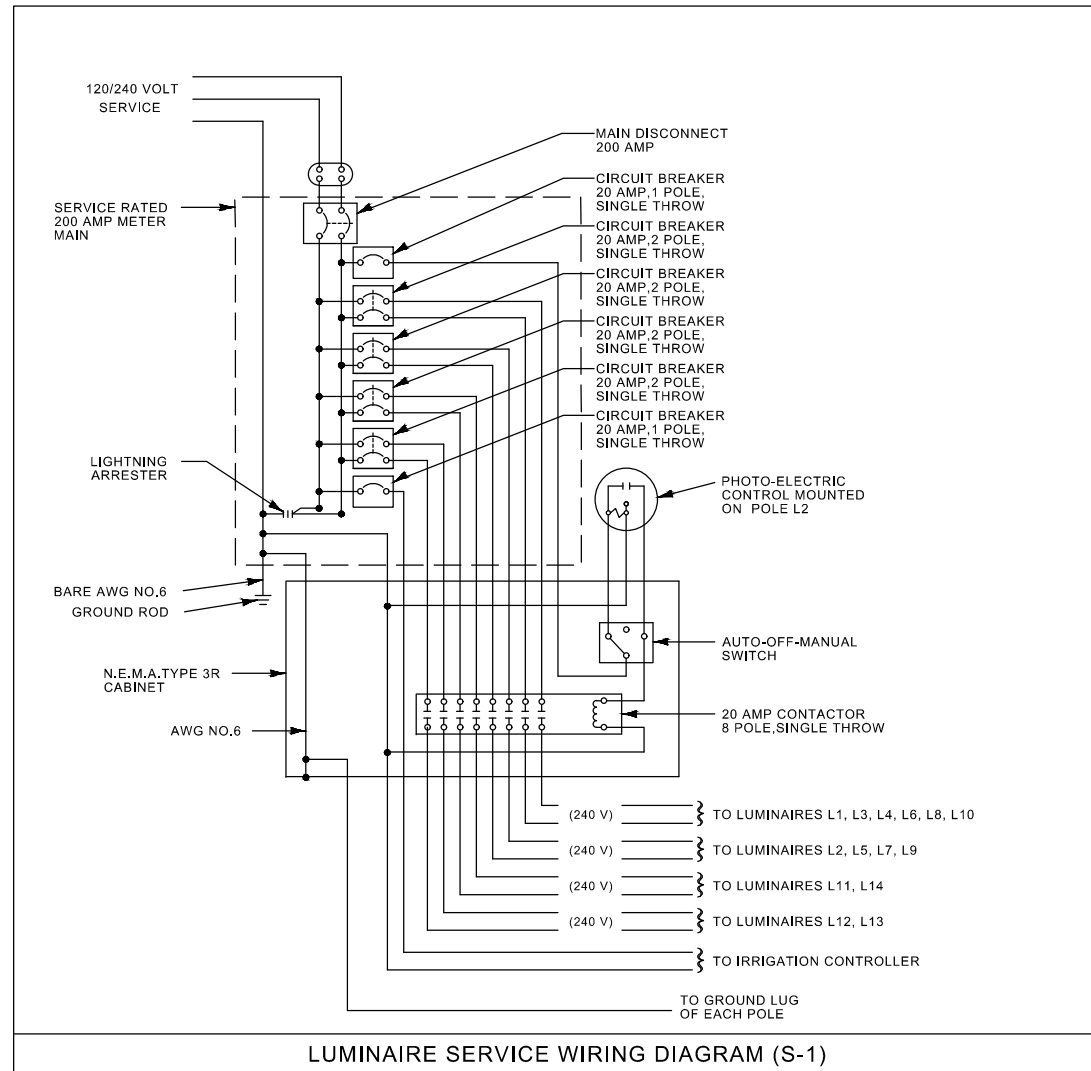
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DRAWN	-	DATE	-
CHECKED	-	SURVEYED	DJ&A P.C.



Mullan BUILD - Lighting & Electrical
100% - BID PLANS

Electrical Details - Connectors, Pull Box Std. Details

SHEET
OF
J4 J12



REVISION	DATE	DESCRIPTION

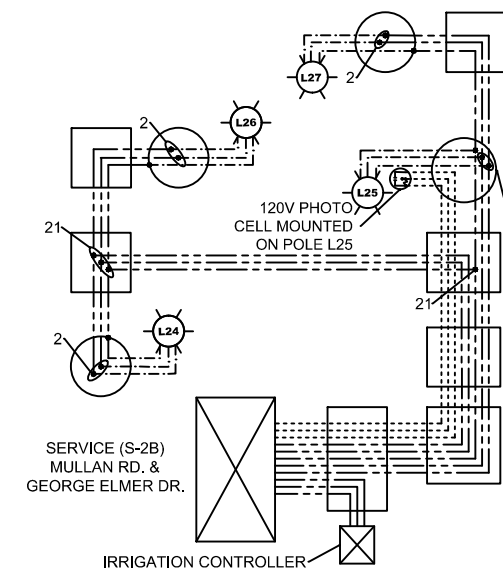
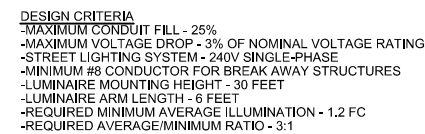
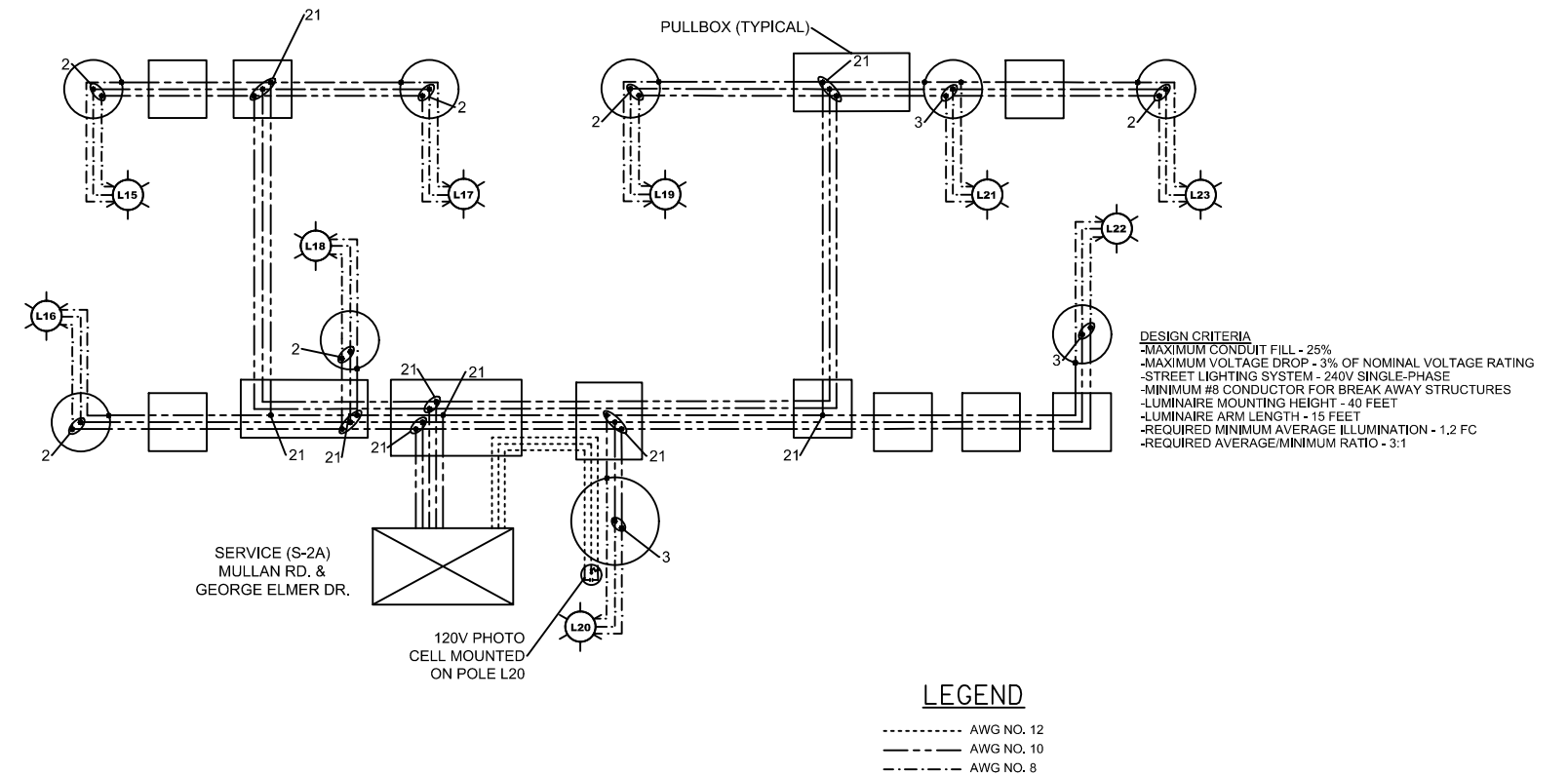
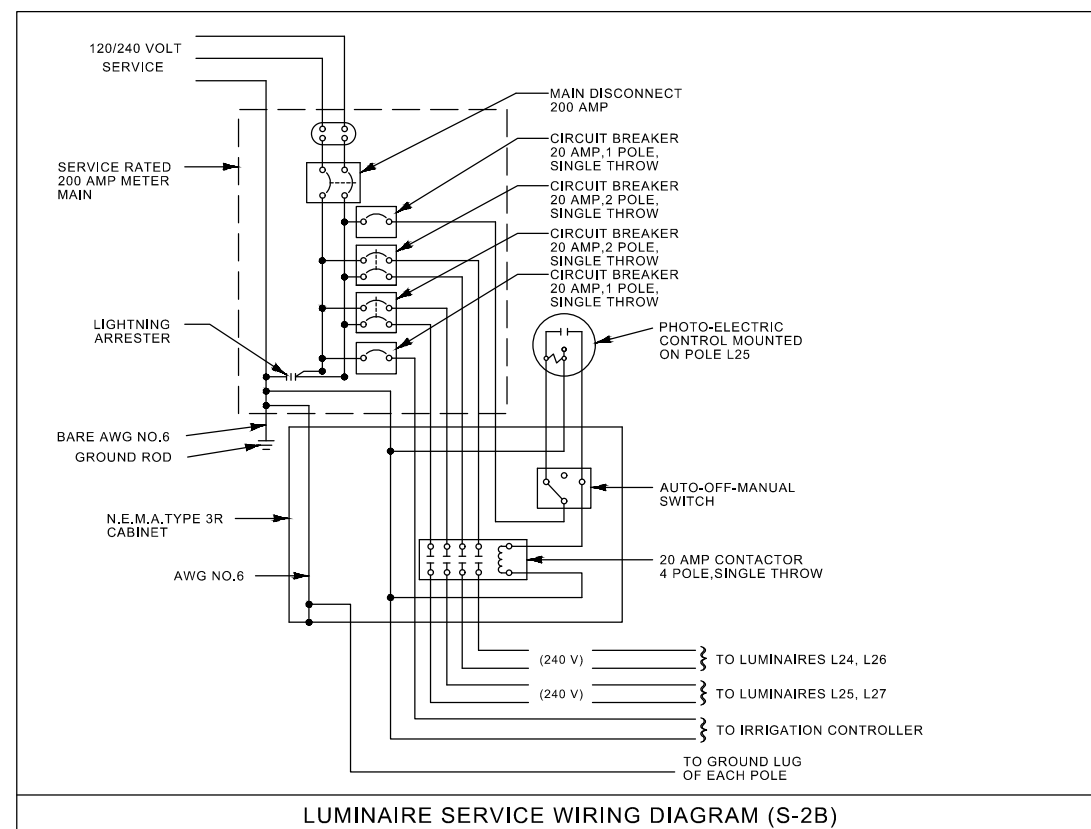
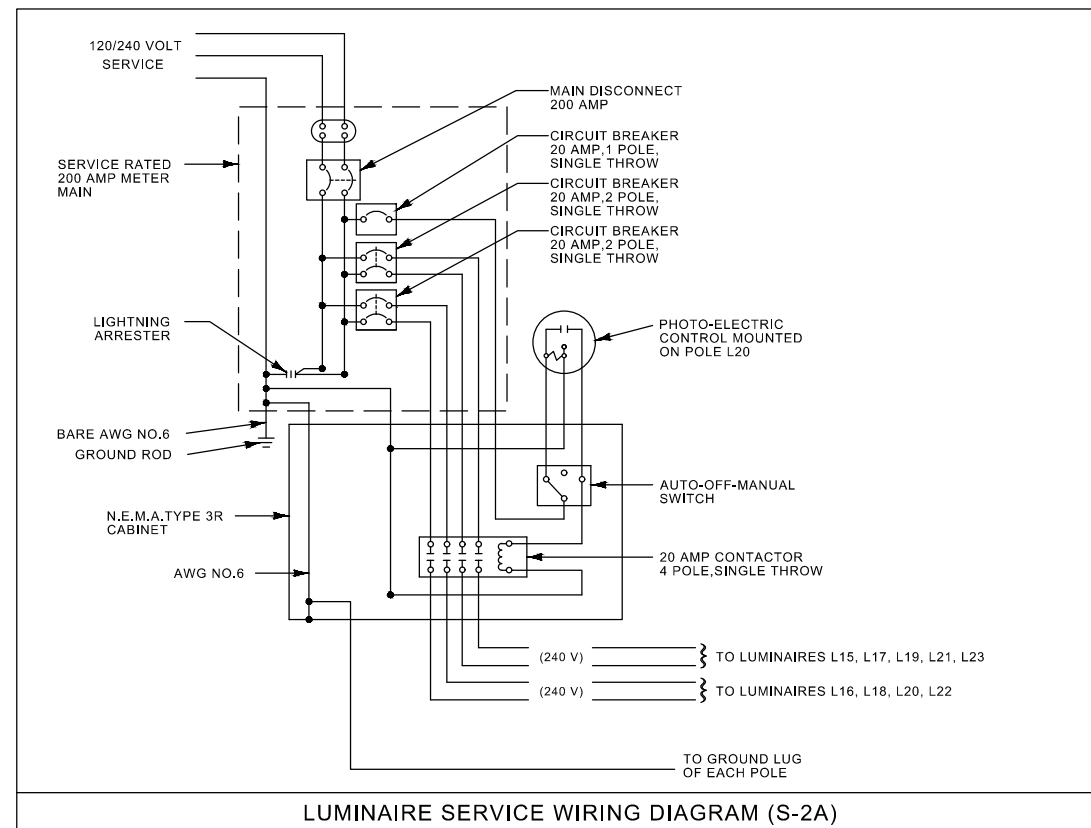
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CHECKED	-	SURVEYED	DJ&A P.C.



Mullan BUILD - Lighting & Electrical
100% - BID PLANS

Electrical Details - Mary Jane & Mullan One-line

SHEET
OF
J5 J12



REVISION	DATE	DESCRIPTION
-	-	-

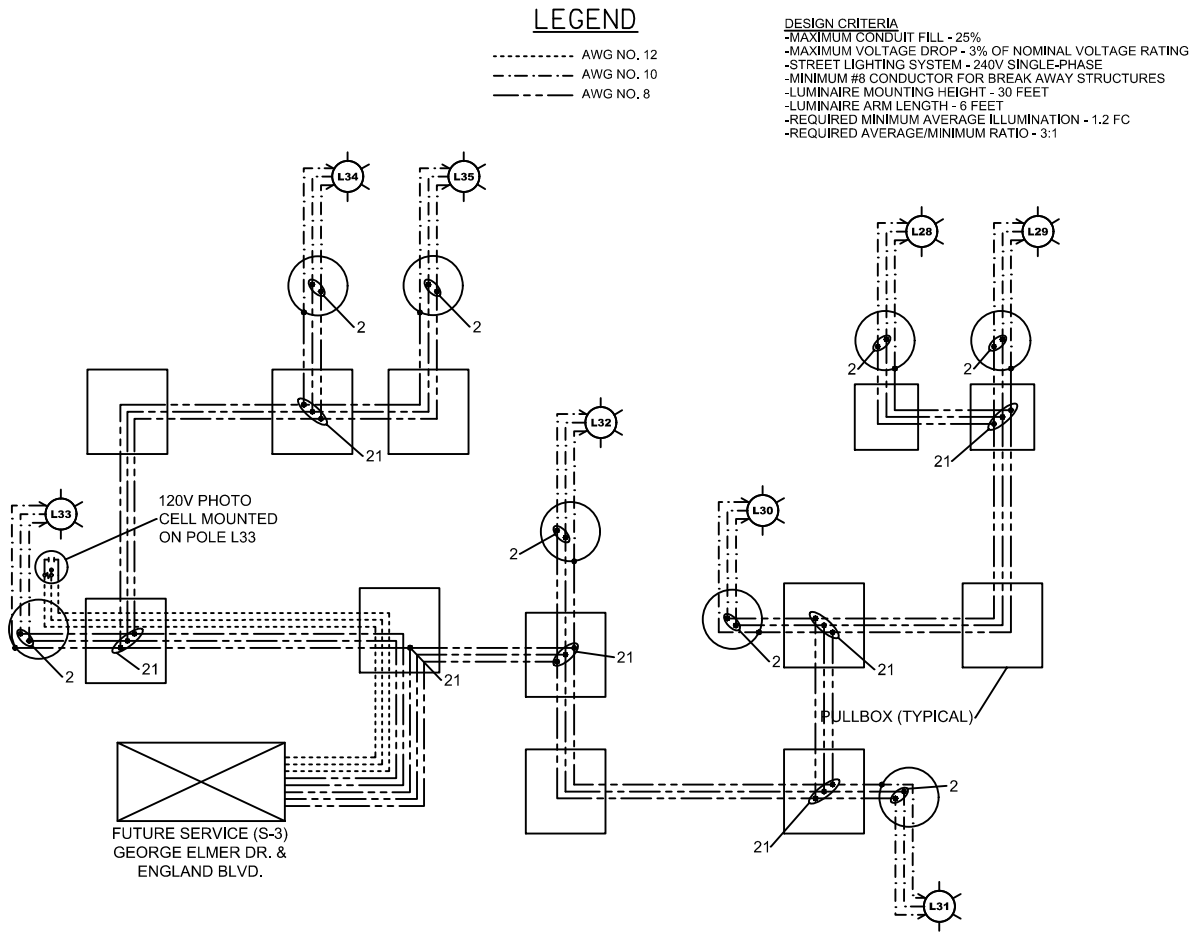
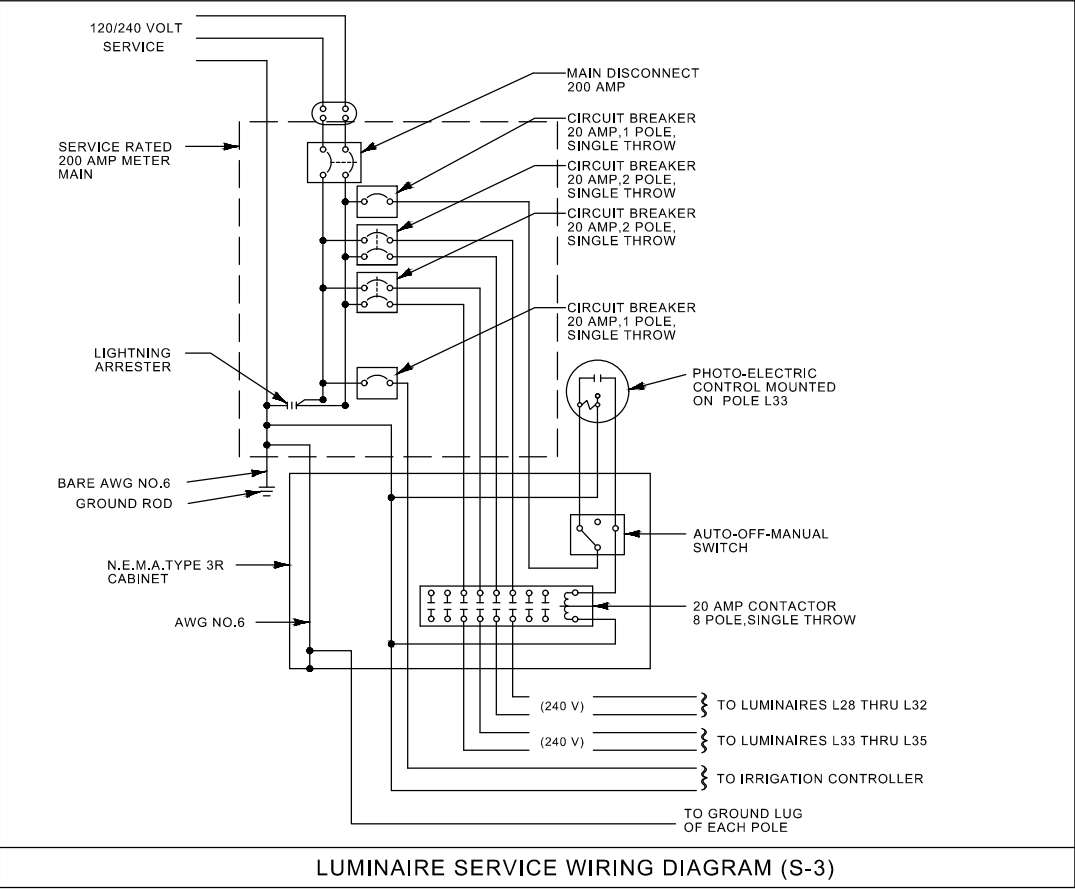
DESIGNER _____ PROJ. NO. _____
DRAWN _____ DATE _____
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Mullan BUILD - Lighting & Electrical
100% - BID PLANS

Electrical Details - England & Mary Jane One-line

SHEET	
OF	
J6	J12



REVISION	DATE	DESCRIPTION

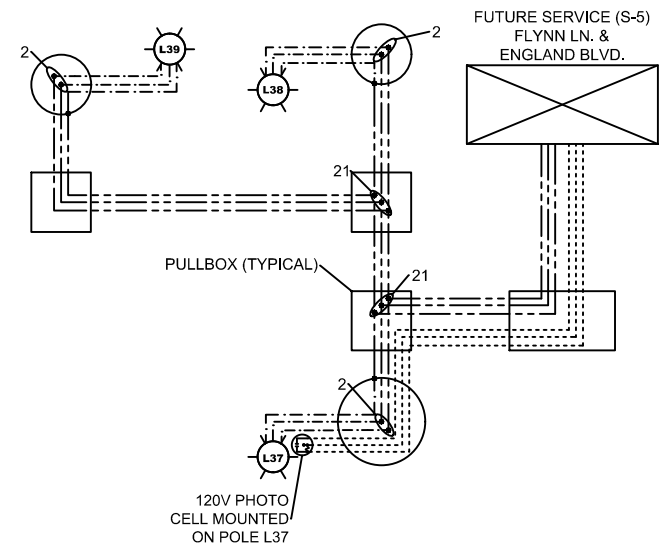
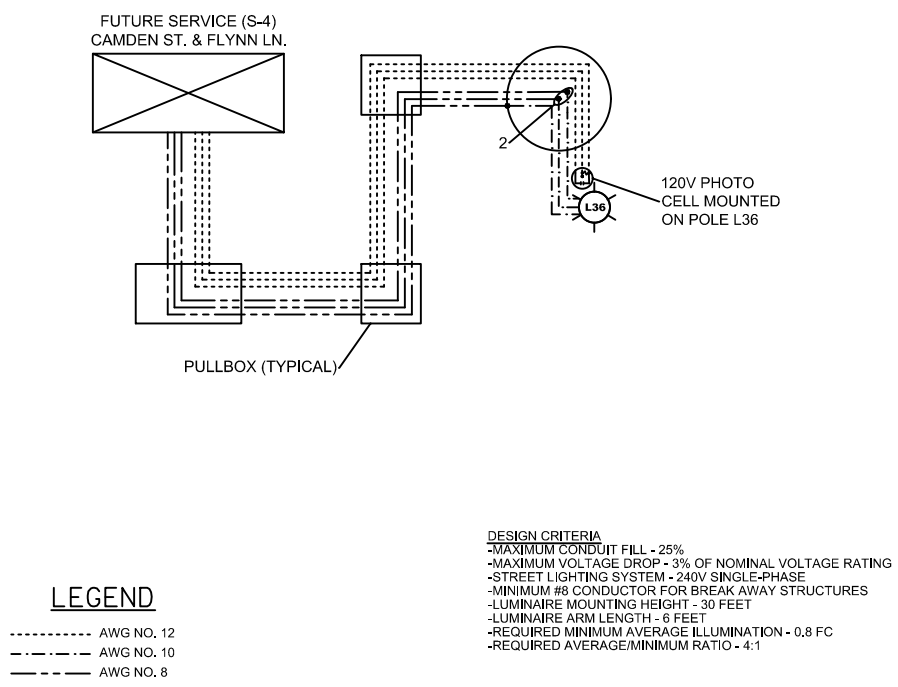
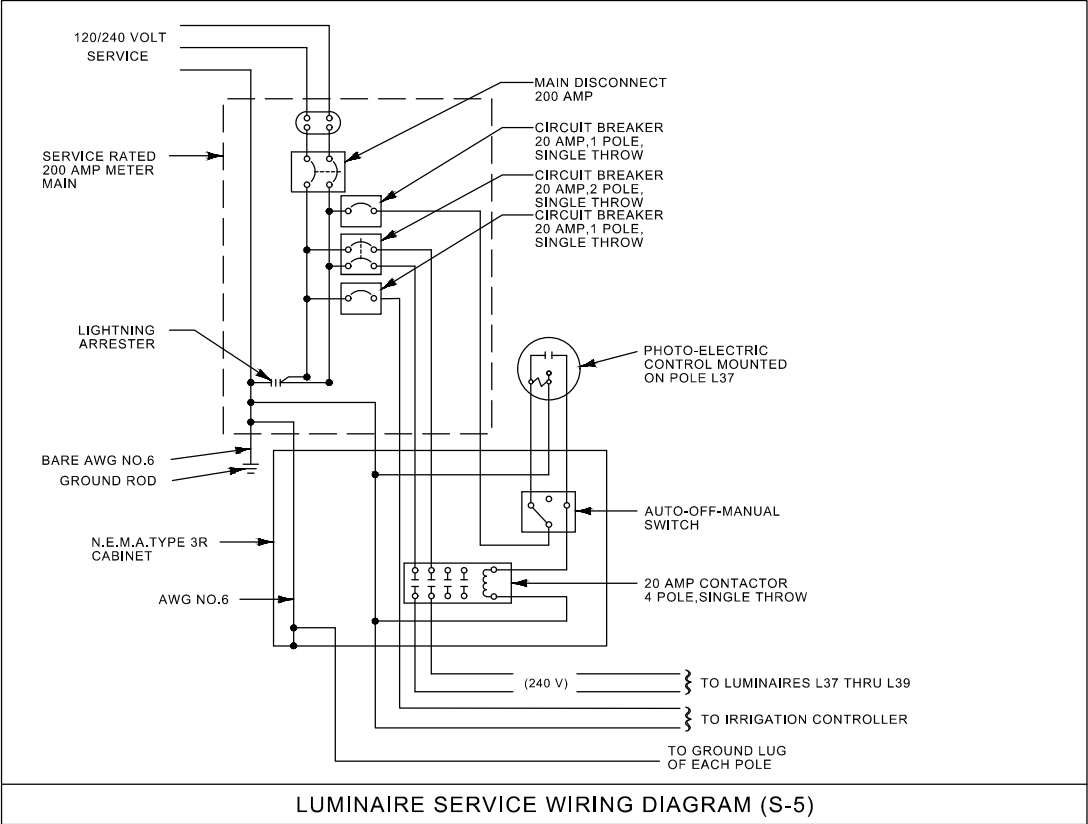
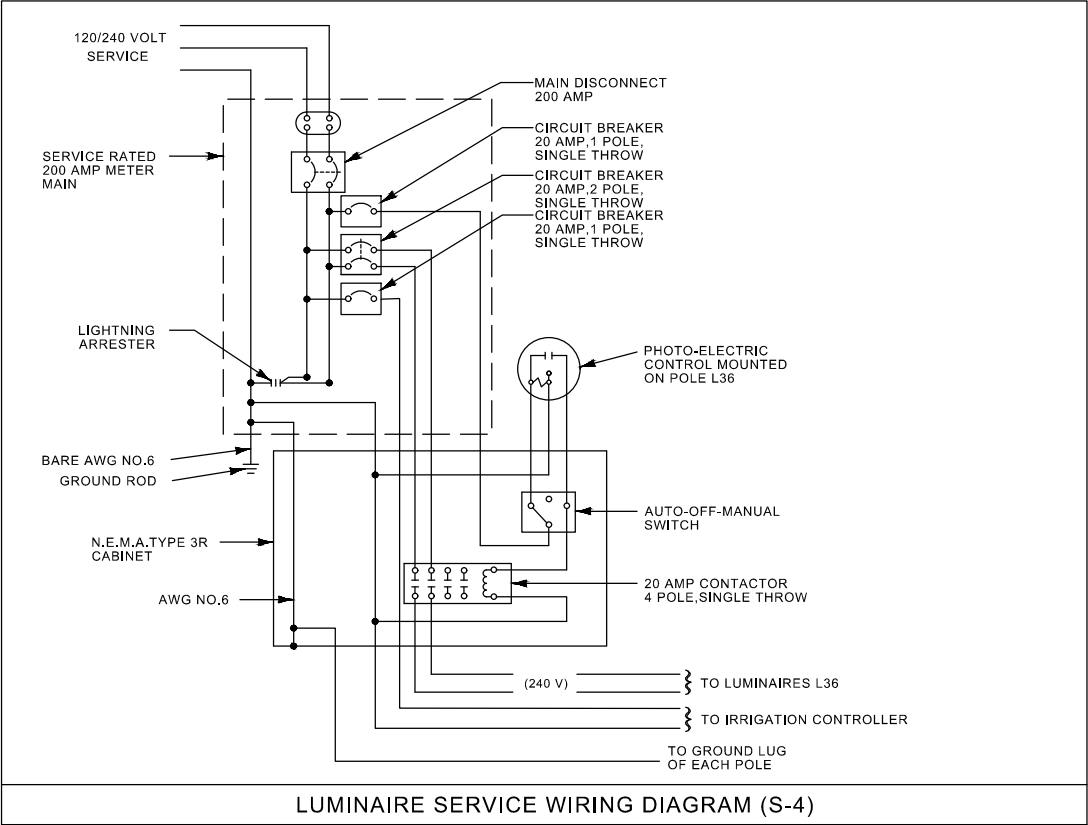
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Mullan BUILD - Lighting & Electrical
100% - BID PLANS

Electrical Details - Mullan & George Elmer One-line

SHEET	OF
J7	J12



REVISION	DATE	DESCRIPTION

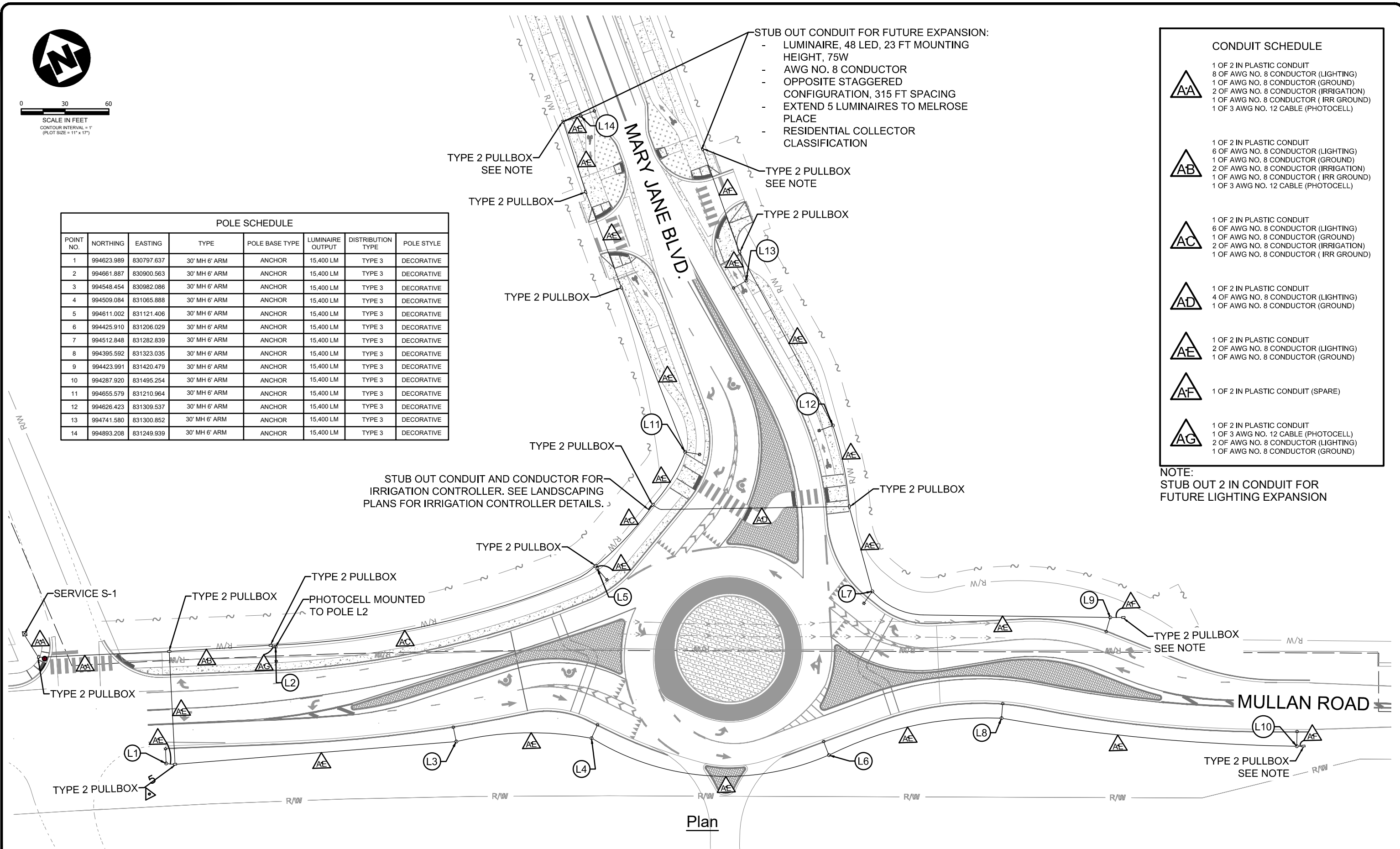
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DRAWN		DATE	
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Mullan BUILD - Lighting & Electrical
100% - BID PLANS

Electrical Details - Flynn & England One-line

SHEET	OF
J8	J12



POLE SCHEDULE							
POINT NO.	NORTHING	EASTING	TYPE	POLE BASE TYPE	LUMINAIRE OUTPUT	DISTRIBUTION TYPE	POLE STYLE
1	994623.989	830797.637	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
2	994661.887	830900.563	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
3	994548.454	830982.086	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
4	994509.084	831065.888	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
5	994611.002	831121.406	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
6	994425.910	831206.029	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
7	994512.848	831282.839	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
8	994395.592	831323.035	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
9	994423.991	831420.479	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
10	994287.920	831495.254	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
11	994655.579	831210.964	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
12	994626.423	831309.537	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
13	994741.580	831300.852	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
14	994893.208	831249.939	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE

- STUB OUT CONDUIT FOR FUTURE EXPANSION:
- LUMINAIRE, 48 LED, 23 FT MOUNTING HEIGHT, 75W
 - AWG NO. 8 CONDUCTOR
 - OPPOSITE STAGGERED CONFIGURATION, 315 FT SPACING
 - EXTEND 5 LUMINAIRES TO MELROSE PLACE
 - RESIDENTIAL COLLECTOR CLASSIFICATION

CONDUIT SCHEDULE

	1 OF 2 IN PLASTIC CONDUIT 8 OF AWG NO. 8 CONDUCTOR (LIGHTING) 1 OF AWG NO. 8 CONDUCTOR (GROUND) 2 OF AWG NO. 8 CONDUCTOR (IRRIGATION) 1 OF AWG NO. 8 CONDUCTOR (IRR GROUND) 1 OF 3 AWG NO. 12 CABLE (PHOTOCELL)
	1 OF 2 IN PLASTIC CONDUIT 6 OF AWG NO. 8 CONDUCTOR (LIGHTING) 1 OF AWG NO. 8 CONDUCTOR (GROUND) 2 OF AWG NO. 8 CONDUCTOR (IRRIGATION) 1 OF AWG NO. 8 CONDUCTOR (IRR GROUND) 1 OF 3 AWG NO. 12 CABLE (PHOTOCELL)
	1 OF 2 IN PLASTIC CONDUIT 6 OF AWG NO. 8 CONDUCTOR (LIGHTING) 1 OF AWG NO. 8 CONDUCTOR (GROUND) 2 OF AWG NO. 8 CONDUCTOR (IRRIGATION) 1 OF AWG NO. 8 CONDUCTOR (IRR GROUND)
	1 OF 2 IN PLASTIC CONDUIT 4 OF AWG NO. 8 CONDUCTOR (LIGHTING) 1 OF AWG NO. 8 CONDUCTOR (GROUND)
	1 OF 2 IN PLASTIC CONDUIT 2 OF AWG NO. 8 CONDUCTOR (LIGHTING) 1 OF AWG NO. 8 CONDUCTOR (GROUND)
	1 OF 2 IN PLASTIC CONDUIT (SPARE)
	1 OF 2 IN PLASTIC CONDUIT 1 OF 3 AWG NO. 12 CABLE (PHOTOCELL) 2 OF AWG NO. 8 CONDUCTOR (LIGHTING) 1 OF AWG NO. 8 CONDUCTOR (GROUND)

NOTE:
STUB OUT 2 IN CONDUIT FOR
FUTURE LIGHTING EXPANSION

STUB OUT CONDUIT AND CONDUCTOR FOR-
IRRIGATION CONTROLLER. SEE LANDSCAPING
PLANS FOR IRRIGATION CONTROLLER DETAILS.

TYPE 2 PULLBOX

TYPE 2 PULLBOX
SEE NOTE

TYPE 2 PULLBOX
SEE NOTE

Plan

[illegible]

DESIGNER _____ PROJ. NO. _____
DRAWN _____ DATE _____
CHECKED _____ SURVEYED DJA P.C.



Mullan BUILD - Lighting & Electrical
100% - BID PLANS

Mullan Rd. & Mary Jane Blvd.

SHEET	
OF	
J9	J12

- LUMINAIRE, 48 LED, 23 FT MOUNTING HEIGHT, 75W
- AWG NO. 8 CONDUCTOR
- OPPOSITE STAGGERED CONFIGURATION, 315 FT SPACING
- EXTEND 5 LUMINAIRES TO BELL TOWER ROAD
- RESIDENTIAL COLLECTOR CLASSIFICATION

- LUMINAIRE, 48 LED, 23 FT MOUNTING HEIGHT, 75W
- AWG NO. 8 CONDUCTOR
- OPPOSITE STAGGERED CONFIGURATION, 315 FT SPACING
- EXTEND 5 LUMINAIRES TO BELL TOWER ROAD
- RESIDENTIAL COLLECTOR CLASSIFICATION



0 30
SCALE IN FEET
CONTOUR INTERVAL = 1'
(PLOT SIZE = 11" x 17")

POLE SCHEDULE							
POINT NO.	NORTHING	EASTING	TYPE	POLE BASE TYPE	LUMINAIRE OUTPUT	DISTRIBUTION TYPE	POLE STYLE
15	994742.841	827102.104	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
16	994716.249	827291.628	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
17	994862.702	827414.081	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
18	994746.815	827423.989	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
19	994910.485	827589.538	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
20	994770.314	827620.819	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
21	994878.419	827707.481	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
22	994786.250	827853.877	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
23	994871.622	828054.009	40' MH 15' ARM	BREAKAWAY	23,000 LM	TYPE 2	10-A STAND
24	994954.939	827473.954	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
25	995026.866	827562.692	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
26	995099.832	827479.281	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE
27	995199.375	827559.321	30' MH 6' ARM	ANCHOR	15,400 LM	TYPE 3	DECORATIVE

 1 OF 2 IN PLASTIC CONDUIT
 4 OF AWG NO. 8 CONDUCTOR (LIGHTING)
 1 OF AWG NO. 8 CONDUCTOR (GROUND)
 1 OF 3 AWG NO. 12 CABLE (PHOTOCELL)
 2 OF AWG NO. 8 CONDUCTOR (IRRIGATION)
 1 OF AWG NO. 8 CONDUCTOR (IRR GROUND)

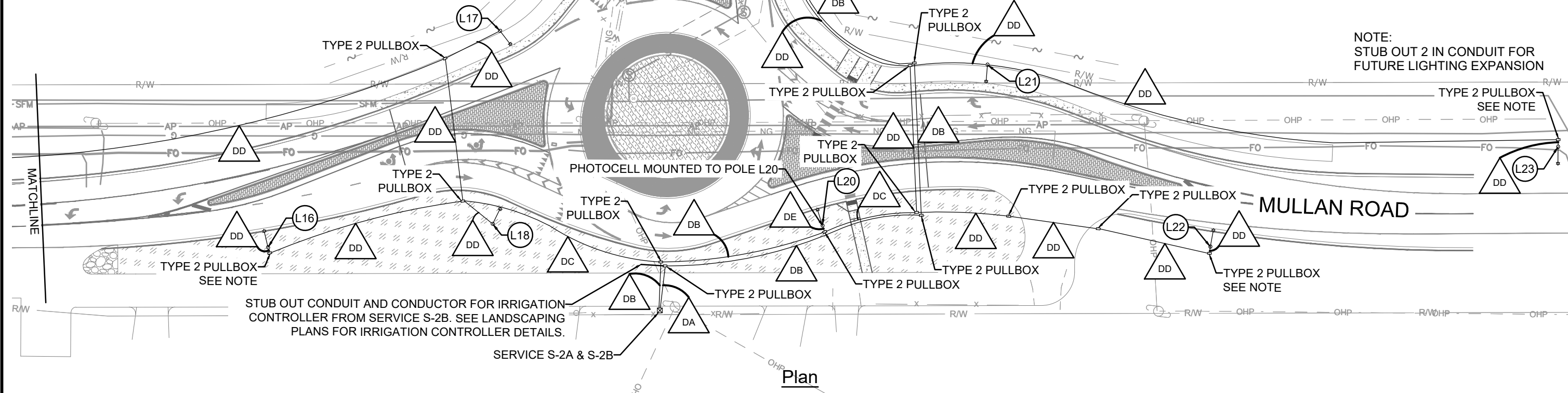
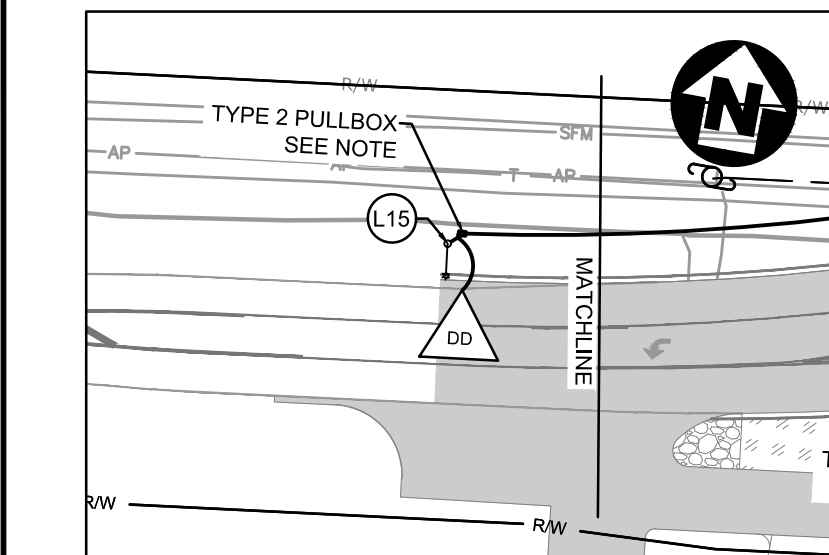

 1 OF 2 IN PLASTIC CONDUIT
 4 OF AWG NO. 8 CONDUCTOR (LIGHTING)
 1 OF AWG NO. 8 CONDUCTOR (GROUND)
 1 OF 3 AWG NO. 12 CABLE (PHOTOCELL)

 1 OF 2 IN PLASTIC CONDUIT
4 OF AWG NO. 8 CONDUCTOR (LIGHTING)
1 OF AWG NO. 8 CONDUCTOR (GROUND)

 1 OF 2 IN PLASTIC CONDUIT
2 OF AWG NO. 8 CONDUCTOR (LIGHTING)
1 OF AWG NO. 8 CONDUCTOR (GROUND)

1 OF 2 IN PLASTIC CONDUIT
2 OF AWG NO. 8 CONDUCTOR (LIGHTING)
1 OF AWG NO. 8 CONDUCTOR (GROUND)
1 OF 3 AWG NO. 12 CABLE (PHOTOCELL)

NOTE:
STUB OUT 2 IN CONDUIT FOR
FUTURE LIGHTING EXPANSION

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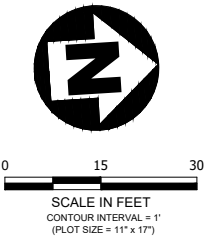
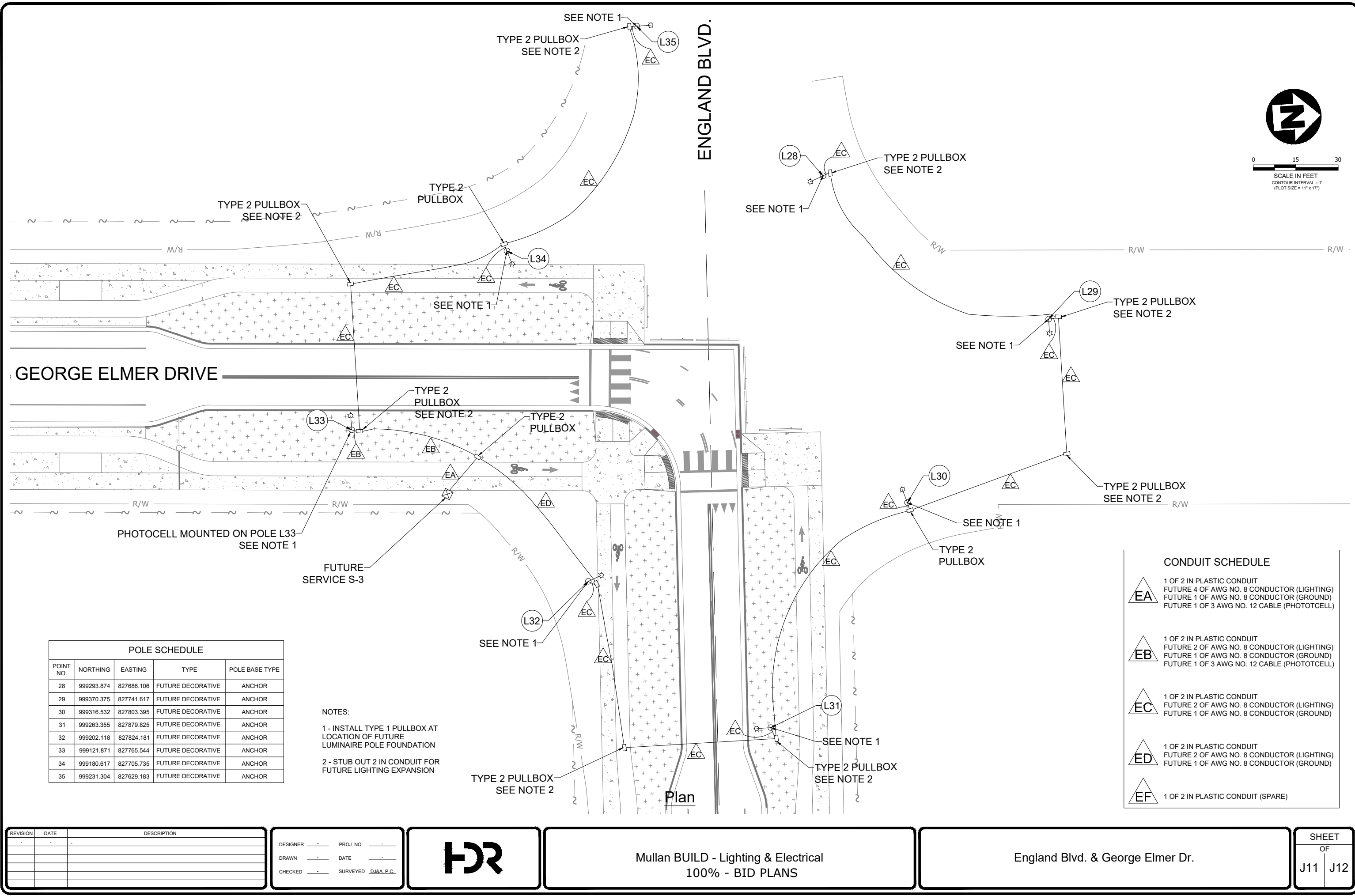
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DRAWN - DATE -
CHECKED - SURVEYED DJA P.C.



Mullan BUILD -Lighting & Electrical
100% - BID PLANS

Mullan Rd. & George Elmer Dr.

SHEET
OF
J10 J12



GEORGE ELMER DRIVE

ENGLAND BLVD.

POLE SCHEDULE

POINT NO.	NORTHING	EASTING	TYPE	POLE BASE TYPE
28	999293.874	827686.106	FUTURE DECORATIVE	ANCHOR
29	999370.375	827741.617	FUTURE DECORATIVE	ANCHOR
30	999316.532	827803.395	FUTURE DECORATIVE	ANCHOR
31	999263.355	827879.825	FUTURE DECORATIVE	ANCHOR
32	999202.118	827824.181	FUTURE DECORATIVE	ANCHOR
33	999121.871	827765.544	FUTURE DECORATIVE	ANCHOR
34	999180.617	827705.735	FUTURE DECORATIVE	ANCHOR
35	999231.304	827629.183	FUTURE DECORATIVE	ANCHOR

NOTES:

- 1 - INSTALL TYPE 1 PULLBOX AT LOCATION OF FUTURE LUMINAIRE POLE FOUNDATION
- 2 - STUB OUT 2 IN CONDUIT FOR FUTURE LIGHTING EXPANSION

CONDUIT SCHEDULE

- EA** 1 OF 2 IN PLASTIC CONDUIT
FUTURE 4 OF AWG NO. 8 CONDUCTOR (LIGHTING)
FUTURE 1 OF AWG NO. 8 CONDUCTOR (GROUND)
FUTURE 1 OF 3 AWG NO. 12 CABLE (PHOTOTCELL)
- EB** 1 OF 2 IN PLASTIC CONDUIT
FUTURE 2 OF AWG NO. 8 CONDUCTOR (LIGHTING)
FUTURE 1 OF AWG NO. 8 CONDUCTOR (GROUND)
FUTURE 1 OF 3 AWG NO. 12 CABLE (PHOTOTCELL)
- EC** 1 OF 2 IN PLASTIC CONDUIT
FUTURE 2 OF AWG NO. 8 CONDUCTOR (LIGHTING)
FUTURE 1 OF AWG NO. 8 CONDUCTOR (GROUND)
- ED** 1 OF 2 IN PLASTIC CONDUIT
FUTURE 2 OF AWG NO. 8 CONDUCTOR (LIGHTING)
FUTURE 1 OF AWG NO. 8 CONDUCTOR (GROUND)
- EF** 1 OF 2 IN PLASTIC CONDUIT (SPARE)

REVISION	DATE	DESCRIPTION

DESIGNER		PROJ. NO.	
DRAWN		DATE	
CHECKED		SURVEYED	DJ&A, P.C.

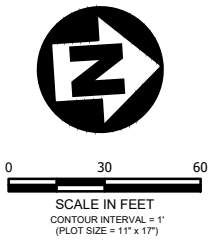


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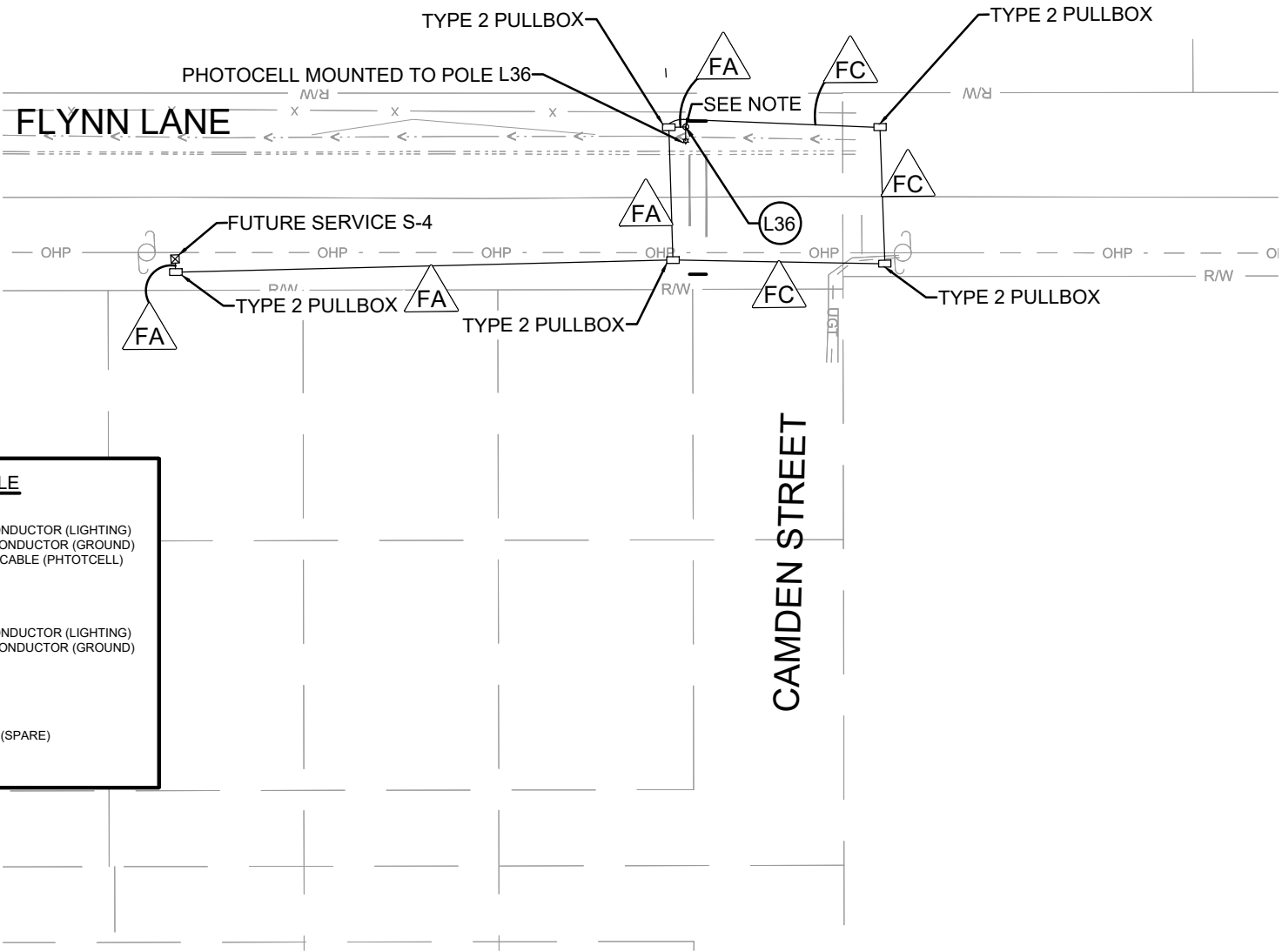
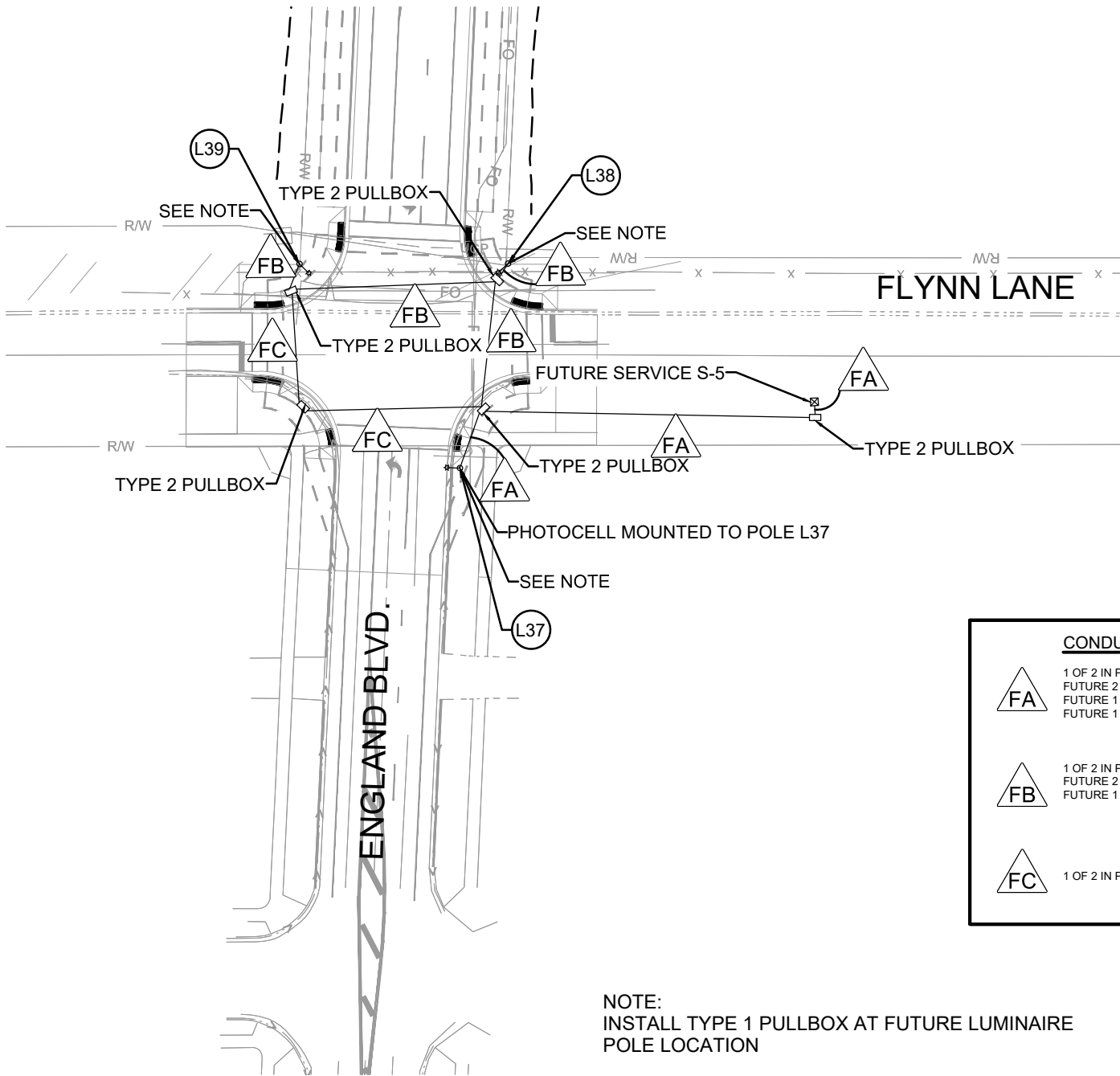
England Blvd. & George Elmer Dr.

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OF
J11 J12

POLE SCHEDULE				
POINT NO.	NORTHING	EASTING	TYPE	POLE BASE TYPE
37	998245.956	831041.587	FUTURE DECORATIVE	ANCHOR
38	998269.338	830963.312	FUTURE DECORATIVE	ANCHOR
39	998188.413	830958.592	FUTURE DECORATIVE	ANCHOR



POLE SCHEDULE				
POINT NO.	NORTHING	EASTING	TYPE	POLE BASE TYPE
36	999431.885	831043.266	FUTURE DECORATIVE	ANCHOR



CONDUIT SCHEDULE	
	1 OF 2 IN PLASTIC CONDUIT FUTURE 2 OF AWG NO. 8 CONDUCTOR (LIGHTING) FUTURE 1 OF AWG NO. 10 CONDUCTOR (GROUND) FUTURE 1 OF 3 AWG NO. 12 CABLE (PHTOTCELL)
	1 OF 2 IN PLASTIC CONDUIT FUTURE 2 OF AWG NO. 8 CONDUCTOR (LIGHTING) FUTURE 1 OF AWG NO. 10 CONDUCTOR (GROUND)
	1 OF 2 IN PLASTIC CONDUIT (SPARE)

NOTE:
INSTALL TYPE 1 PULLBOX AT FUTURE LUMINAIRE
POLE LOCATION

REVISION	DATE	DESCRIPTION

DESIGNER		PROJ. NO.	
DRAWN		DATE	
CHECKED		SURVEYED	DJ&A P.C.



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Flynn Ln. Pedestrian Crossings

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