

PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

NOTES

- △ INSTALL ALL BORE PITS OUTSIDE THE CLEAR ZONE, AS DEFINED BY THE 2002 AASHTO ROADSIDE DESIGN GUIDE OR AS DIRECTED BY THE ENGINEER.
- △ LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
- △ LOCATE PROPOSED CONTROL SYSTEM IN AN AREA ACCESSIBLE FOR MAINTENANCE VEHICLES AND OUTSIDE OF CLEAR ZONE AS DEFINED BY THE 2002 AASHTO ROADSIDE DESIGN GUIDE.
- △ TYPE PC18 JUNCTION BOXES ARE 457mm L X 305mm W X 457mm H.

SCOPE OF WORK

PLACE ROADWAY LIGHTING SYSTEM INTO SERVICE BY PROVIDING AND INSTALLING 13.7M LIGHT STANDARDS WITH HIGH PRESSURE SODIUM LUMINAIRES ON 4.6M ARMS, UNDERGROUND CIRCUITRY, CONTROL SYSTEM AND JUNCTION BOXES.

DESIGN CRITERIA

- 2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE
- 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, AND LATEST INTERIM SPECIFICATIONS VALID AT THE TIME OF LETTING
- DESIGN LIGHT STANDARDS FOR BASIC WINDSPEED OF 31.3 M/S (70 MPH) SHOWN IN AASHTO.
- FATIGUE CATEGORY II SHALL BE USED IN DESIGN
- 2008 NATIONAL ELECTRICAL CODE
- 2002 AASHTO ROADSIDE DESIGN GUIDE

ROADWAY STANDARDS

THE FOLLOWING ROADWAY METRIC STANDARDS AS APPEAR IN "NCDOT ROADWAY STANDARD DRAWINGS", ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD NO.	TITLE
1404.01	LIGHT STANDARDS
1405.01	STANDARD FOUNDATION
1406.01	LIGHT STANDARD LUMINAIRES
1407.01	ELECTRIC SERVICE POLE AND LATERAL
1409.01	ELECTRICAL DUCT
1410.01	FEEDER CIRCUITS
1411.01	ELECTRICAL JUNCTION BOXES

ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JULY 2006.

LEGEND

- PROPOSED LIGHT STANDARD TYPE MLT 13.7M WITH 4.6M SINGLE ARM. INCLUDES STANDARD FOUNDATION TYPE R1 & 250W HPS FLAT GLASS ROADWAY LUMINAIRE. IES DISTRIBUTION: MEDIUM, CUTOFF, TYPE III
- PROPOSED CONTROL SYSTEM, SEE DETAIL SHEET E3. BREAKER SIZE SHOWN IN LOAD SCHEDULE, SHEET E2
- PROPOSED ELECTRICAL JUNCTION BOX SEE DETAILS & TABLE B, THIS SHEET
- REFERENCE TO CORRESPONDING NOTE AS NUMBERED
- PROPOSED FEEDER CIRCUIT CONTROL SYSTEM(A), CIRCUIT(1) PLAN SYMBOL (6) SEE TABLE A, THIS SHEET
- PROPOSED SERVICE POLE AND LATERAL 9.1M CLASS 4 3#1/0 USE CONDUCTORS TS2 CONDUIT
- PROPOSED ELECTRICAL DUCT SIZE TS2, TS3 OR TS4 TYPE (JA) OR (BD) LOCATION: SEE TABLE C, THIS SHEET

TS2, TS3 OR TS4 ELEC. DUCT JA & BD

PLAN SYMBOL	DESCRIPTION	CONTRACT ITEM
8	2#8 Ø 1 #10G 1.5" P	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR 2 - 8 W/G FEEDER CIRCUIT IN 1.5" CONDUIT 1.5" PVC CONDUIT
*8	2#8 Ø 1 #10G	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR 2 - 8 W/G FEEDER CIRCUIT

NUMBER	LOCATION	TYPE	SHEET
JB1	27+62 -L-, 8.6M RT	PC18	E2
JB2	10+80 -Y9-, 8.6M LT	PC18	E2
JB3	26+78 -L-, 8.6M LT	PC18	E2
TOTALS		3	

LOCATION	SHEET	TYPE					
		JACKED (JA) METER			BURIED (BD) FEET		
		SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"
27+62 -L-, 8.6M RT	E2		11.7				
10+80 -Y9-, 8.6M LT	E2		9.8				
26+78 -L-, 8.6M LT	E2		11.4				
TOTALS			32.9				

TRADE SIZE	METRIC	ENGLISH
1/2	16mm	1/2"
3/4	21mm	3/4"
1	27mm	1"
1.5	41mm	1 1/2"
2	53mm	2"
3	78mm	3"

BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGF	RIGID GALVANIZED STEEL CONDUIT
JA	JACKED	C	CONDUIT
MH	MOUNTING HEIGHT	CKT	CIRCUIT
Ø	PHASE	N	NEUTRAL
SER LAT	SERVICE LATERAL	G	GROUND
		HM	HIGH MAST

COMPUTED BY: RGH DATE: 6/109
CHECKED BY: _____ DATE: _____

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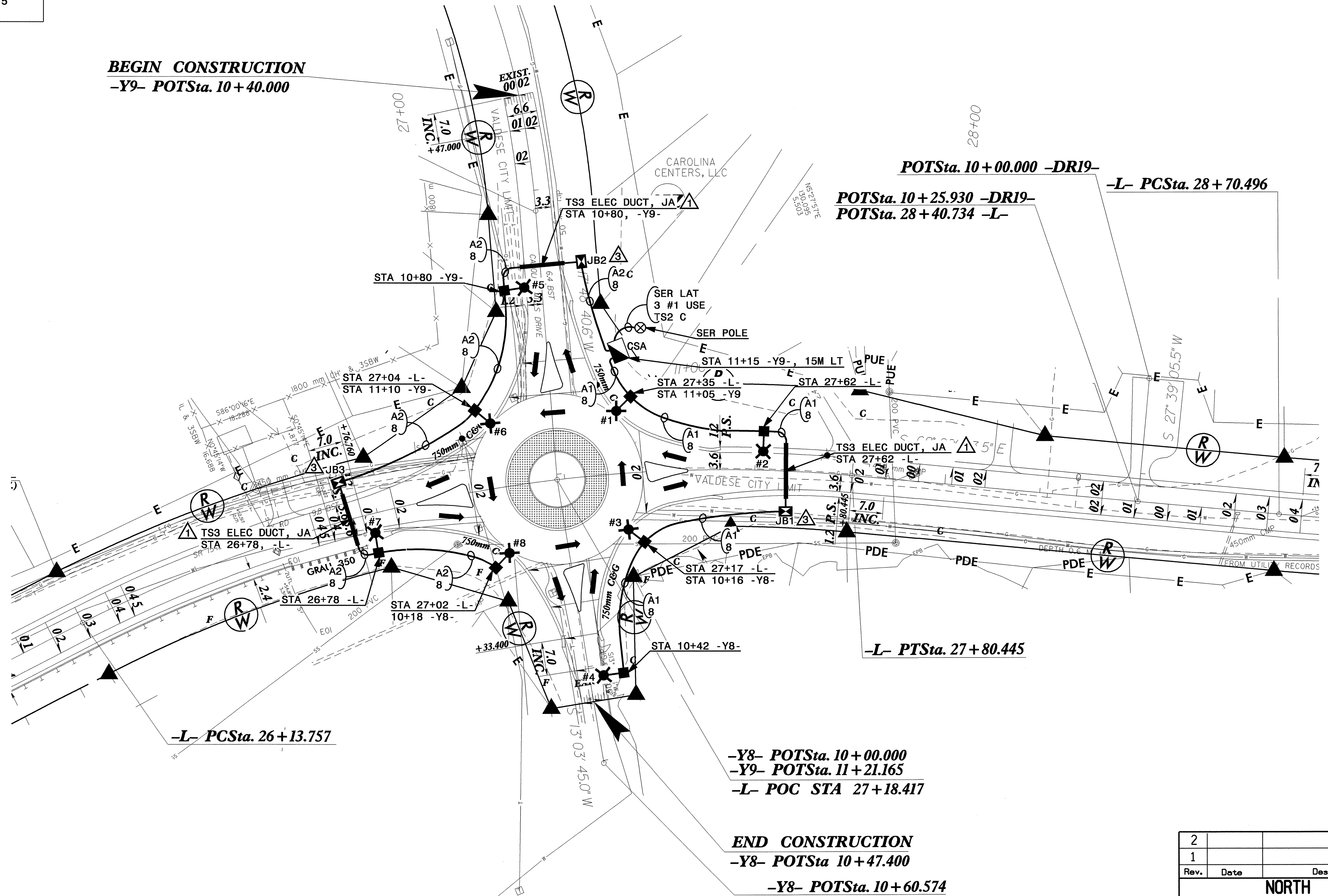
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**LOAD SCHEDULE
 NE CORNER OF LOVELADY RD/KATHY DR ROUNDABOUT
 1Ø, 3W, 120/240 VAC CONTROL SYSTEM "A"**

CKT	SINGLE ARM 1 @ 250W HPS	AMPS @ 240V	KW LOAD	BREAKER SIZE (AMPS)
A1	1, 2, 3, 4	5.2	1.25	15
A2	5, 6, 7, 8	5.2	1.25	15
TOTAL	8	10.4	2.5	

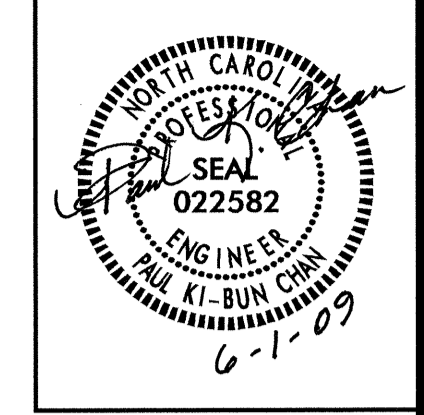
USE FOR LIGHTING CONSTRUCTION ONLY

**SEE SHEET "E1" FOR
 LEGEND & Δ NOTES**

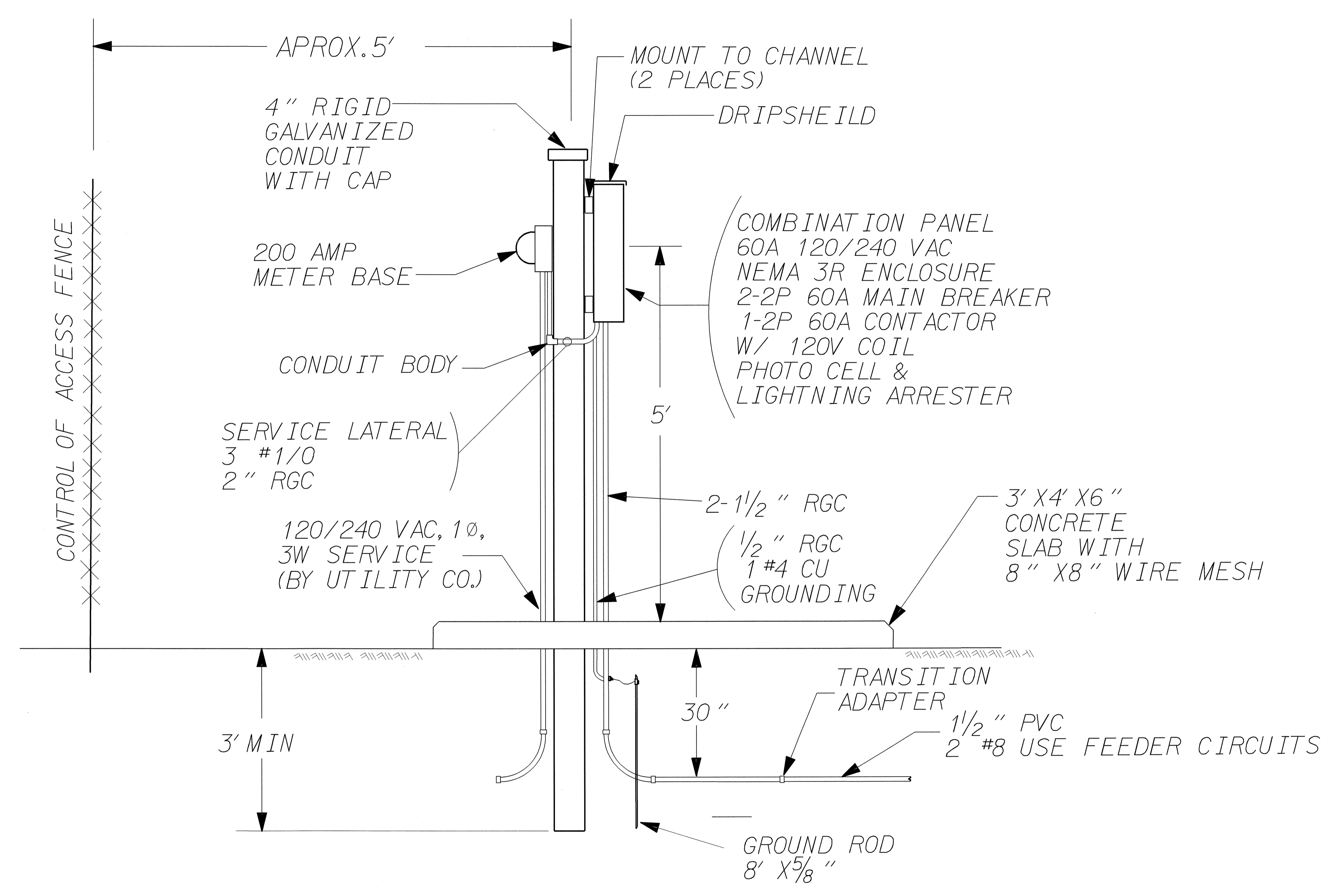


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Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION			
LIGHTING LAYOUT LOVELADY RD/KATHY DR ROUNDABOUT			
Drawn By:	RGH	Approved By:	[Signature]



USE FOR LIGHTING CONSTRUCTION ONLY



LIGHTING CONTROLLER/SERVICE ENTRANCE EQUIPMENT
 SQUARE D NIGHT-MASTER CLASS 8903 OR APPROVED EQUAL

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Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION			
ELECTRICAL LIGHTING CONTROL SYSTEM DETAILS			
Drawn By	RGH	Approved By	Dwg No.

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