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PROJECT REFERENCE NO.	SHEET NO.
U-5606	E-18

SHEET TITLE: LIGHTING & ELECTRICAL DETAILS

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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

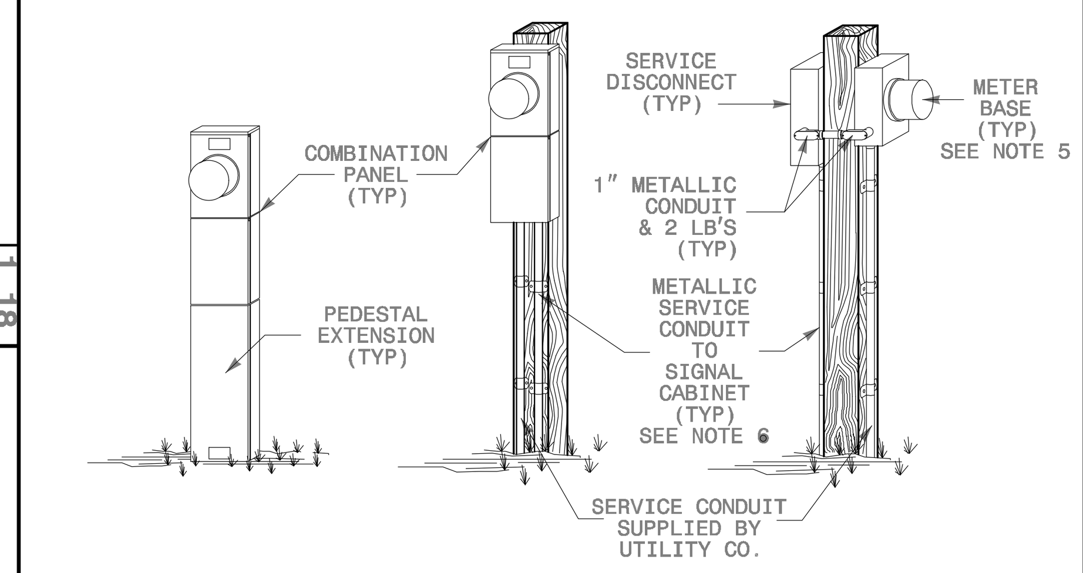
REVISIONS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

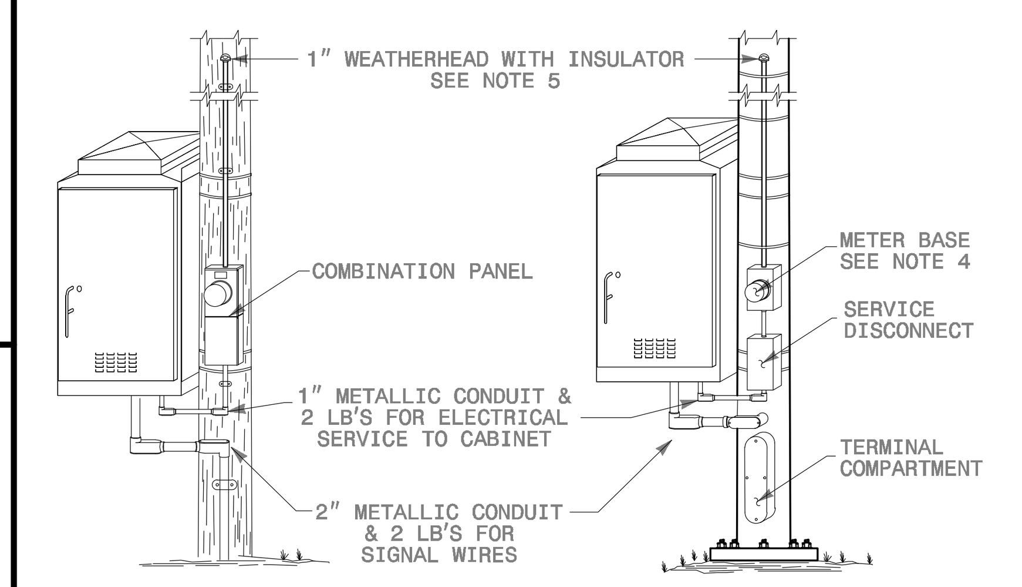
ROADWAY STANDARD DRAWING FOR
ELECTRICAL SERVICE OPTIONS

SHEET 1 OF 2
1700.01

GROUND MOUNTED SERVICE EQUIPMENT OPTIONS FOR UNDERGROUND ELECTRICAL SERVICE



POLE MOUNTED SERVICE EQUIPMENT OPTIONS FOR OVERHEAD ELECTRICAL SERVICE



NOTES

1. LOCATE THE SERVICE EQUIPMENT NEAR THE SIGNAL CABINET IN A MANNER THAT WILL ALLOW EASY ACCESS TO THE SERVICE DISCONNECT. LOCATE SERVICE EQUIPMENT SO AS NOT TO OBSTRUCT SIGHT DISTANCE OF VEHICLES TURNING RIGHT ON RED.
2. FOR GROUND MOUNTED ELECTRICAL SERVICE INSTALLATIONS WHEN POST MOUNTING IS CHOSEN, INSTALL TREATED WOOD POSTS A MINIMUM OF 3 FEET INTO THE GROUND.
3. INSTALL ALL METER BASES MOUNTED IN PEDESTALS AT A HEIGHT NOT TO EXCEED 5 FEET AS MEASURED FROM THE CENTER OF THE METER. INSTALL ALL OTHER METER BASES AT A HEIGHT BETWEEN 4 FEET AND 5 FEET AS MEASURED FROM THE CENTER OF THE METER. SEAL ANY UNUSED MOUNTING HOLES ON COMBINATION PANELS, METER BASES AND SERVICE DISCONNECTS.
4. INSTALL OVERHEAD ELECTRICAL SERVICE ON POLES AS SHOWN WHEN UNDERGROUND SOURCE IS NOT AN OPTION. COMBINATION PANELS, OR METER BASES AND SERVICE DISCONNECTS, MAY BE INSTALLED ON POLES WHEN POLE MOUNTED SIGNAL CABINETS ARE REQUIRED FOR THE INSTALLATION. DO NOT ROUTE UNFUSED OVERHEAD ELECTRICAL SERVICE CONDUCTOR INSIDE OF METAL POLES.
5. TYPICAL POINT OF DELIVERY FOR UNDERGROUND SERVICE IS INSIDE OF METER BASE. TYPICAL POINT OF DELIVERY FOR OVERHEAD SERVICE IS AT THE WEATHERHEAD ENTRANCE AT THE TOP OF THE SERVICE RISER.
6. THE ABOVE GROUND PORTION OF ELECTRICAL SERVICE CONDUIT TO THE SIGNAL CABINET MUST BE METALLIC. THE BELOW GROUND PORTION MAY BE METALLIC OR PVC.

1 / E-18 ELECTRICAL SERVICE OPTIONS N.T.S.

CONDUIT AND CONDUCTOR SCHEDULE

1. PROVIDE (1) 2" RGC. CONDUCTORS PROVIDED BY GUC.
2. PROVIDE (1) 2" RGC W/ (3) 1/0 AWG CONDUCTORS AND (1) 1/0 AWG GROUND.
3. PROVIDE (1) 2" RGC. RGC TO PVC ADAPTER. (1) 2" PVC CONDUIT W/ (4) #12 AWG CONDUCTORS AND (1) #12 AWG GND.
4. PROVIDE (1) 2" RGC. RGC TO PVC ADAPTER. (1) 2" PVC CONDUIT W/ (2) #12 AWG CONDUCTORS AND (1) #12 AWG GND.
5. PROVIDE (1) 3/4" PVC CONDUIT W/ (4) #12 AWG CONDUCTORS AND (1) #12 AWG GND.
6. PROVIDE (1) 3/4" PVC CONDUIT W/ (2) #12 AWG CONDUCTORS AND (1) #12 AWG GND.

PANEL: LC1

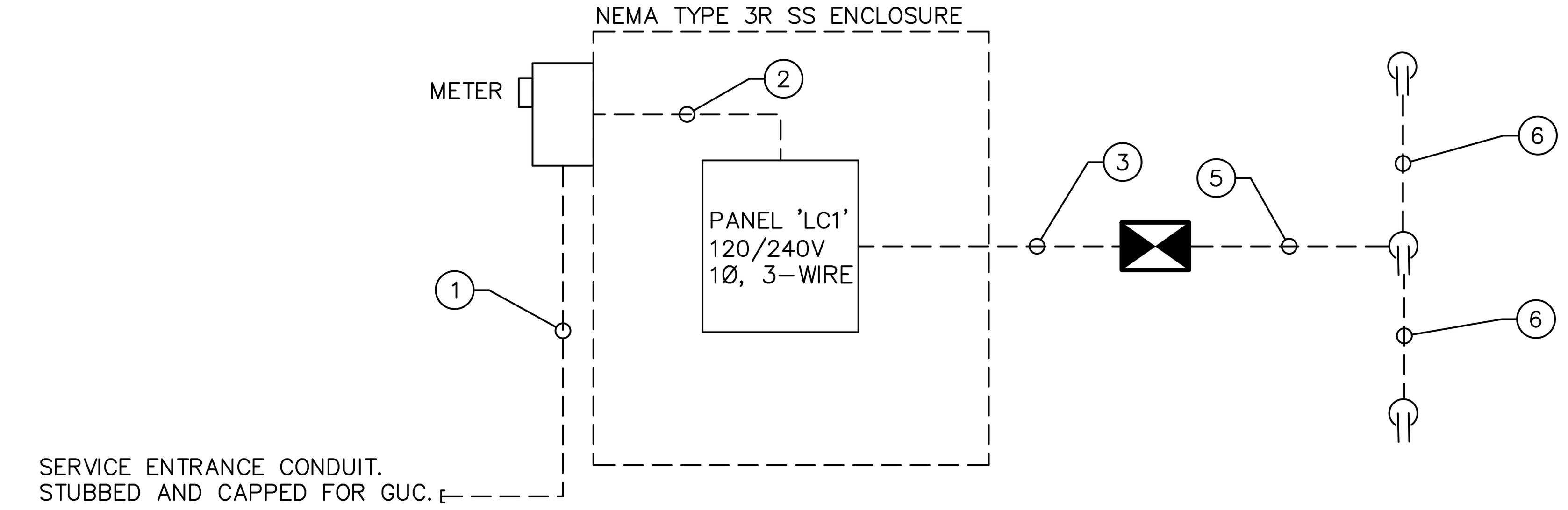
VOLTAGE: 120/240 — PANEL BUS: 200 AMPS
PHASE, WIRES: 1ø, 3W — MAIN: 200 BREAKER
SCCR (AMPS):
SOURCE: GUC TRXM

DESCRIPTION	VA	CB	CKT	A	B	CKT	CB	VA	DESCRIPTION
RECEPTACLES	180	20/1P	1	4.5		2			SPACE
SPACE			3		0.0	4			SPACE
SPACE			5	0.0		6			SPACE
SPACE			7		0.0	8			SPACE
			TOTALS	4.5	0.0	AMPS			

LOAD CALCULATIONS:
SUBTOTAL (VA): 180
+25% PER NEC (VA): 45
TOTAL (VA): 225 @ 240V, 1Ø = 1 AMPS

2 / E-18 PANEL SCHEDULE – PANEL "LC1"

NEMA TYPE 3R SS ENCLOSURE



3 / E-18 LC1 ONE LINE DIAGRAM–POWER

PANEL: LC2

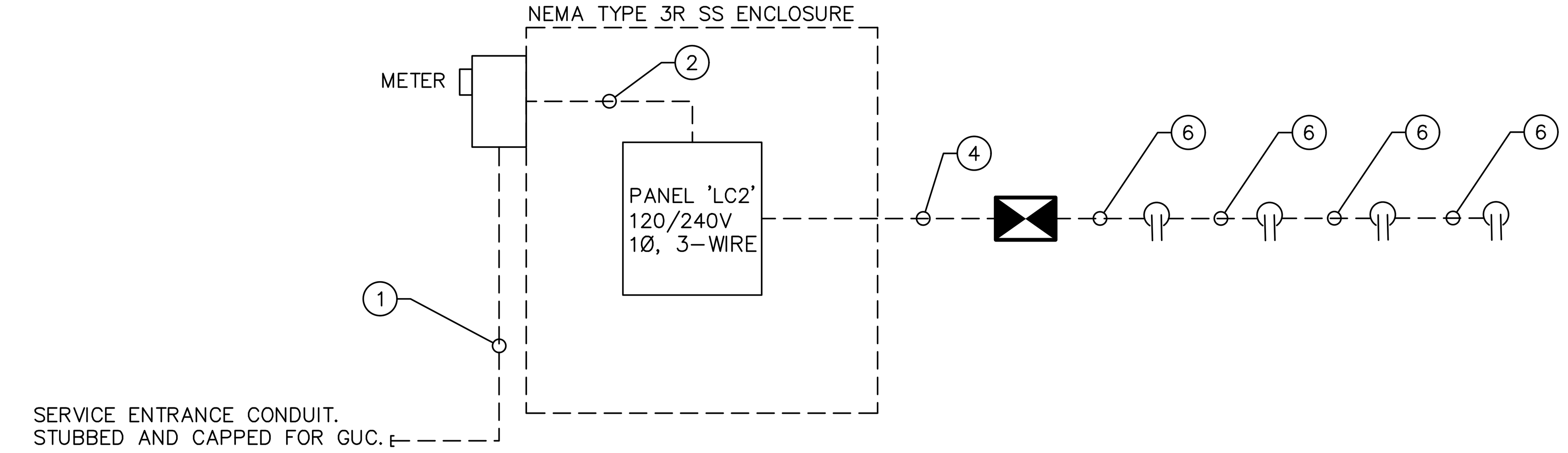
VOLTAGE: 120/240 — PANEL BUS: 200 AMPS
PHASE, WIRES: 1ø, 3W — MAIN: 200 BREAKER
SCCR (AMPS):
SOURCE: GUC TRXM

DESCRIPTION	VA	CB	CKT	A	B	CKT	CB	VA	DESCRIPTION
RECEPTACLES	180	20/1P	1	6.0		2			RECEPTACLES
SPACE			3		0.0	4			SPACE
SPACE			5	0.0		6			SPACE
SPACE			7		0.0	8			SPACE
			TOTALS	6.0	0.0	AMPS			

LOAD CALCULATIONS:
SUBTOTAL (VA): 180
+25% PER NEC (VA): 45
TOTAL (VA): 225 @ 240V, 1Ø = 1 AMPS

4 / E-18 PANEL SCHEDULE – PANEL "B"

NEMA TYPE 3R SS ENCLOSURE



5 / E-18 LC2 ONE LINE DIAGRAM–POWER