

PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

NOTES

- 1 AT THESE LOCATIONS, PROVIDE ELECTRICAL DUCT IN ACCORDANCE WITH NEC EQUIRMENTS FOR AN APPROVED RACEWAY FOR ELECTRICAL CIRCUITS. SEE TABLE "C"
- 2 INSTALL ALL BORE PITS OUTSIDE THE CLEAR ZONE, AS DEFINED BY THE 2002 AASHTO ROADSIDE DESIGN GUIDE OR AS DIRECTED BY THE ENGINEER.
- 3 LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE, A MINIMUM 25' FROM EDGE OF PAVEMENT AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
- 4 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.
- 5 TYPE PC18 JUNCTION BOXES ARE 18" L X 12" W X 18" H.
- 6 TYPE PC36 JUNCTION BOXES ARE 36" L X 24" W X 18" H.
- 7 MEASUREMENTS SHOWN ARE FROM THE CENTER OF THE HIGH MAST FOUNDATION TO A POINT PERPENDICULAR TO THE EDGE OF TRAVEL LANE.

SCOPE OF WORK

PLACE ROADWAY LIGHTING SYSTEM INTO SERVICE BY PROVIDING AND INSTALLING 120' HIGH MOUNT STANDARDS WITH HIGH PRESSURE SODIUM LUMINAIRES, UNDERGROUND CIRCUITRY, CONTROL SYSTEM AND JUNCTION BOXES.

DESIGN CRITERIA

- 2005 AASHTO ROADSIDE 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
- FATIGUE CATEGORY II SHALL BE USED IN DESIGN
- DESIGN HIGH MOUNT SUPPORT FOR BASIC WIND SPEED OF 100 MPH
- DESIGN HIGH MOUNT STANDARD FOUNDATION FOR BASIC WIND SPEED OF 130 MPH. ANY CONTRACTOR-DESIGNED SITE SPECIFIC FOUNDATION DESIGN SHALL BE DESIGNED FOR THE SAME WIND SPEED
- 2011 NATIONAL ELECTRICAL CODE
- 2002 AASHTO ROADSIDE DESIGN GUIDE

ROADWAY STANDARDS

THE FOLLOWING ROADWAY ENGLISH 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
1401.01	HIGH MOUNT STANDARD
1402.01	HIGH MOUNT FOUNDATION
1403.01	HIGH MOUNT LUMINAIRES
1407.01	ELECTRIC SERVICE POLE AND LATERAL
1408.01	LIGHT CONTROL SYSTEM
(USE ATTACHED DETAIL SHEET 1408D01 IN LIEU OF STANDARD DRAWING 1408.01 SHEET 2)	
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 120' HIGH MAST STANDARD W/ HM FOUNDATION & (8) HM LUMINAIRES 750W HPS, MEDIUM, CUTOFF, TYPE V
- PROPOSED CONTROL SYSTEM WITH PC36 JUNCTION BOX. BREAKER SIZE SHOWN IN LOAD SCHEDULE, SHEET E3
- 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 30' CLASS 4 3#1/0 USE CONDUCTORS 2" CONDUIT
- PROPOSED ELECTRICAL DUCT SIZE 2", 3" OR 4" TYPE (JA) OR (BD) LOCATION: SEE TABLE C, THIS SHEET

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 1.5" PVC CONDUIT	2 - 8 W/G FEEDER CIRCUIT IN 1.5" 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
4	2 #4 Ø 1 #6G 1.5" P	2 AWG SIZE 4 CONDUCTOR (BK & RD) 1 AWG SIZE 6 GROUNDING CONDUCTOR 1.5" PVC CONDUIT	2 - 4 W/G FEEDER CIRCUIT IN 1.5" CONDUIT
*4	2 #4 Ø 1 #6G	2 AWG SIZE 4 CONDUCTOR (BK & RD) 1 AWG SIZE 6 GROUNDING CONDUCTOR	2 - 4 W/G FEEDER CIRCUIT
2	2 #2 Ø 1 #4G 1.5" P	2 AWG SIZE 2 CONDUCTOR (BK & RD) 1 AWG SIZE 4 GROUNDING CONDUCTOR 1.5" PVC CONDUIT	2 - 2 W/G FEEDER CIRCUIT IN 1.5" CONDUIT
*2	2 #2 Ø 1 #4G	2 AWG SIZE 2 CONDUCTOR (BK & RD) 1 AWG SIZE 4 GROUNDING CONDUCTOR	2 - 2 W/G FEEDER CIRCUIT

NUMBER	LOCATION	TYPE	SHEET
JB1	9+75 -RAMPC- 25' LT	PC36	E2
JB2	51+75 -L- 80' RT	PC18	E2
JB3	9+80 -RAMPD- 35' RT	PC18	E2
JB4	6+65 -RAMPD- 40' RT	PC18	E2
JB5	53+65 -L- 165' LT	PC36	E2
JB6	US64 EB, 25' EOP, 350' FROM STRUCTURE	PC18	E2
JB7	US64 WB, 25' EOP, 305' FROM STRUCTURE	PC18	E2
JB8	0+35 -LPA- 110' LT	PC18	E2
JB9	8+55 -LPA- 30' LT	PC18	E3
JB10	8+55 -LPA- 25' RT	PC18	E3
JB11	US64 WB, 25' EOP, 260' FROM JB10	PC18	E3
JB12	WITHIN 50' OF HM4	PC18	E3
TOTALS		10	2

LOCATION	RACEWAY	SHEET	TYPE					
			JACKED (JA) FEET			BURIED (BD) FEET		
			SIZE 3"	SIZE 4"	SIZE 6"	SIZE 2"	SIZE 3"	SIZE 4"
9+75 -RAMPC-		E2			60			
9+75 -RAMPC-	CSA - JB1	E2					105	
51+75 -L-		E2	130					
US64, 350'W OF STRUCTURE		E3		190				
US64, 350'W OF STRUCTURE	JB6 - JB7	E3				220		
8+55 -LPA-		E3	35					
TOTALS			165	190	60	220	105	

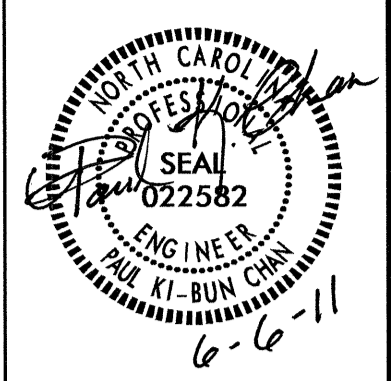
ABBREVIATIONS

BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGC	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

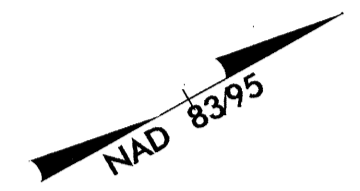
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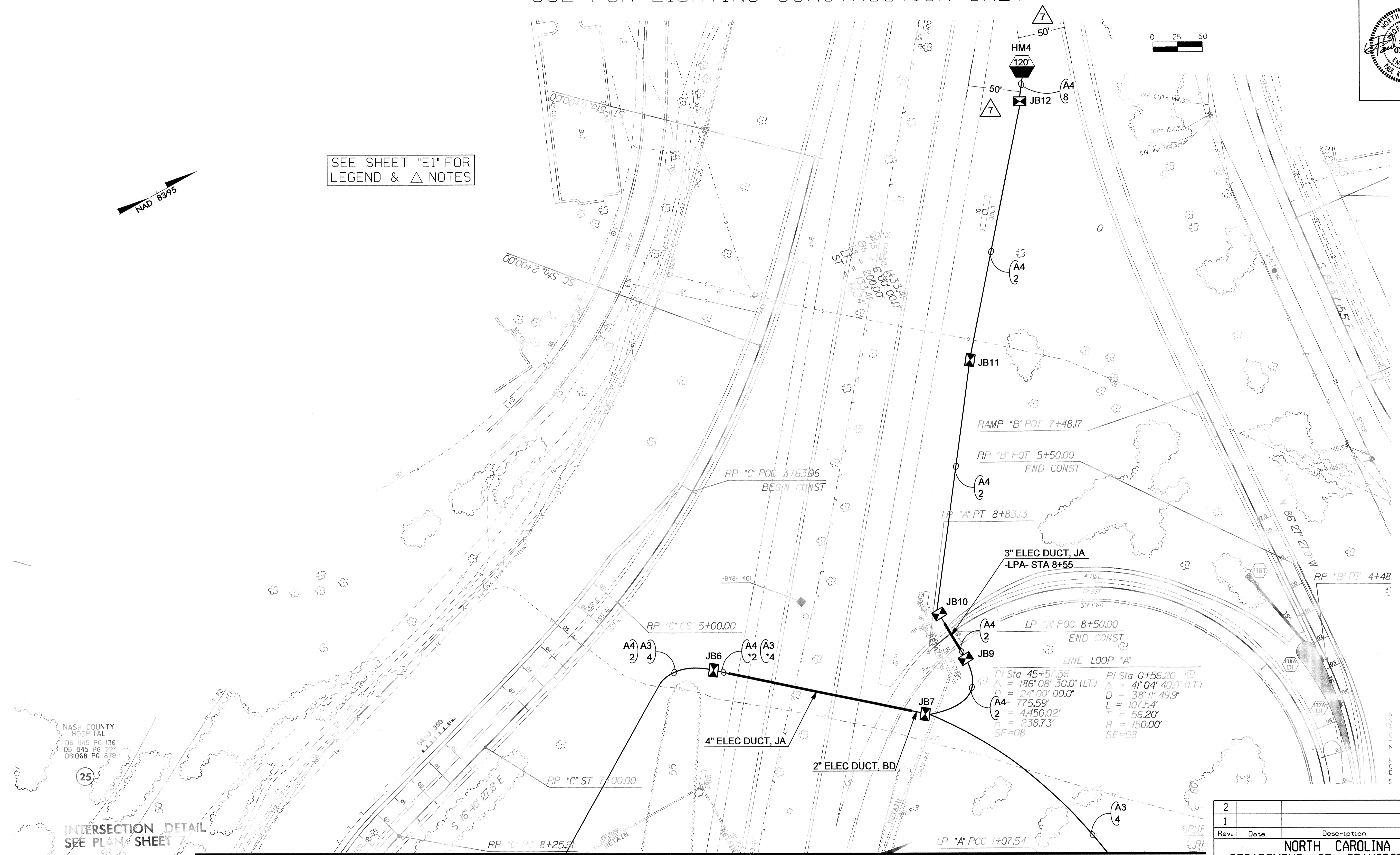
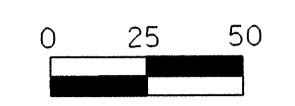
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USE FOR LIGHTING CONSTRUCTION ONLY



SEE SHEET "E1" FOR
LEGEND & △ NOTES



NASH COUNTY
HOSPITAL
DB 845 PG 136
DB 845 PG 224
DB 868 PG 878

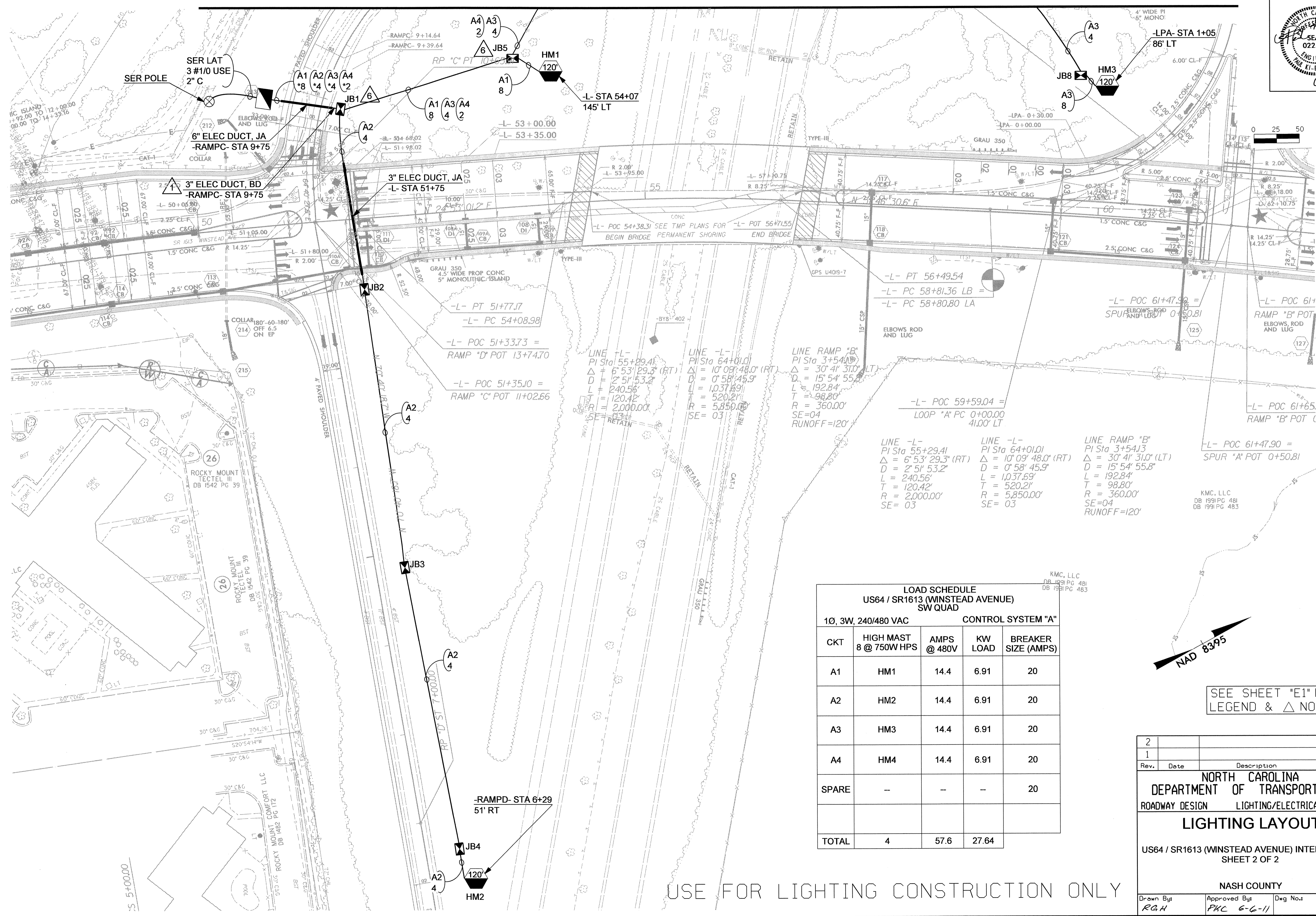
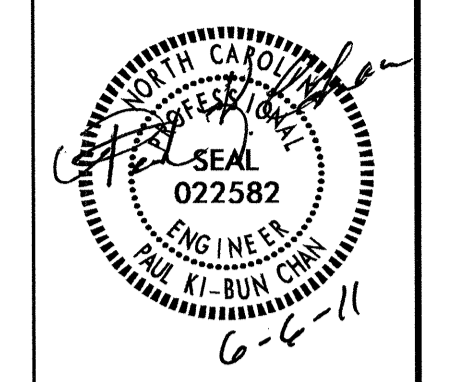
INTERSECTION DETAIL
SEE PLAN SHEET 7

SEE MATCHLINE, SHEET E3

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION LIGHTING LAYOUT US64 / SR1613 (WINSTEAD AVENUE) INTERCHANGE SHEET 1 OF 2 NASH COUNTY			
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		Dwg No.:	

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SEE MATCHLINE SHEET E2



LOAD SCHEDULE
US64 / SR1613 (WINSTEAD AVENUE)
SW QUAD

CKT	10, 3W, 240/480 VAC		CONTROL SYSTEM "A"	
	HIGH MAST 8 @ 750W HPS	AMPS @ 480V	KW LOAD	BREAKER SIZE (AMPS)
A1	HM1	14.4	6.91	20
A2	HM2	14.4	6.91	20
A3	HM3	14.4	6.91	20
A4	HM4	14.4	6.91	20
SPARE	--	--	--	20
TOTAL	4	57.6	27.64	

SEE SHEET "E1" FOR
LEGEND & △ NOTES

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION LIGHTING LAYOUT US64 / SR1613 (WINSTEAD AVENUE) INTERCHANGE SHEET 2 OF 2 NASH COUNTY			
Drawn By R.G.H.	Approved By PHC 6-6-11	Dwg No.:	

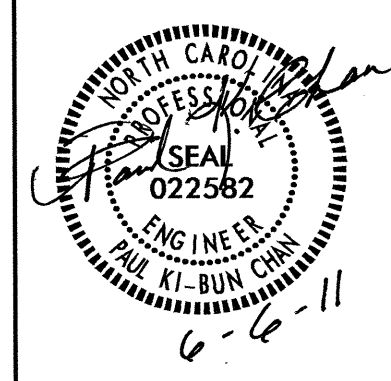
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PROJECT REFERENCE NO.	SHEET NO.
U-4019	E4



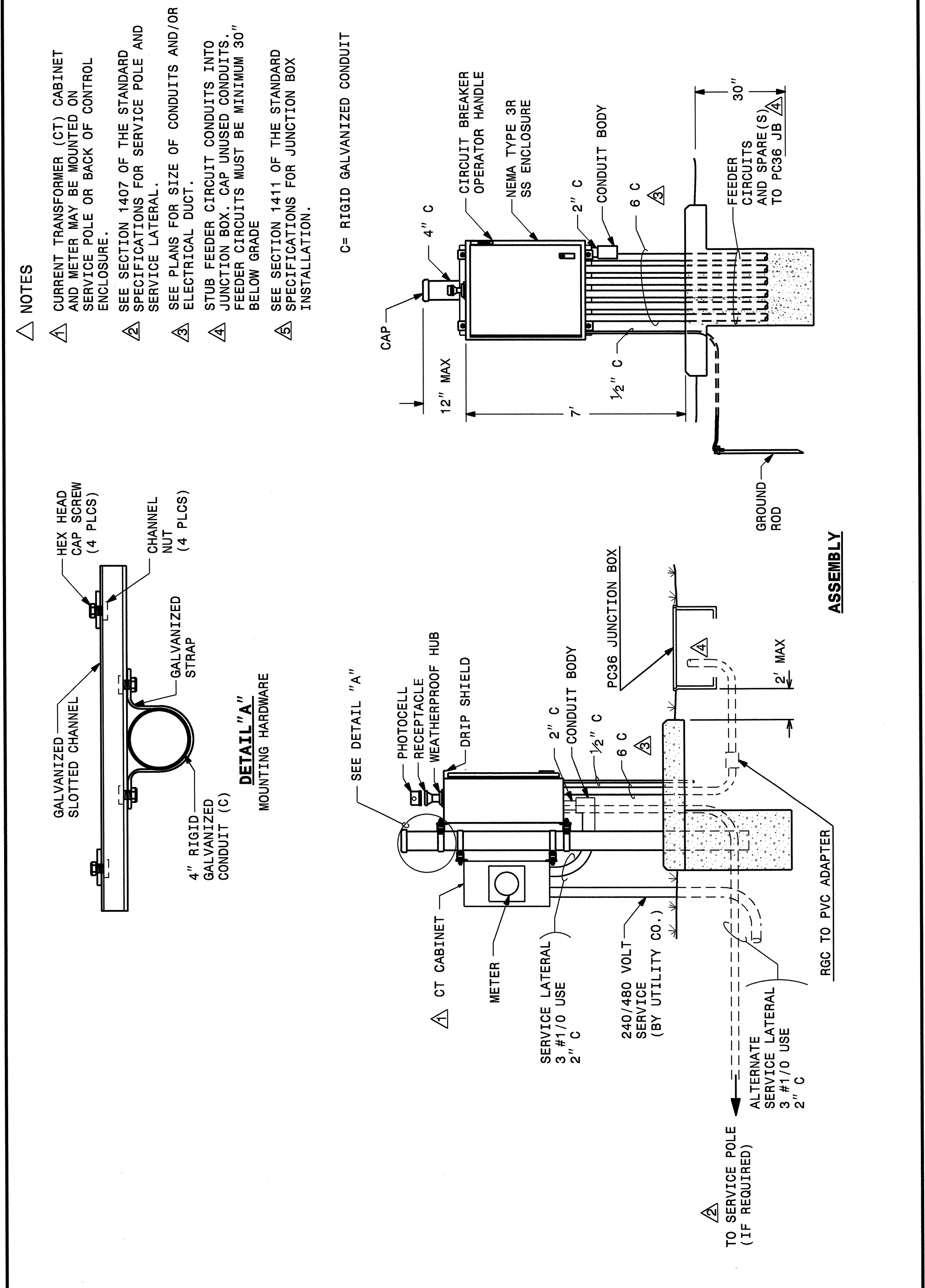
USE FOR LIGHTING CONSTRUCTION ONLY

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

7-06

ENGLISH STANDARD DRAWING FOR
LIGHT CONTROL SYSTEM
 ASSEMBLY

SHEET 2 OF 3
1408D01



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

7-06

ENGLISH STANDARD DRAWING FOR
LIGHT CONTROL SYSTEM
 ASSEMBLY

SHEET 2 OF 3
1408D01

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION			
LIGHT CONTROL ASSEMBLY SPECIAL DETAILS			
Drawn By:	RGH	Approved By:	Dwg No.: