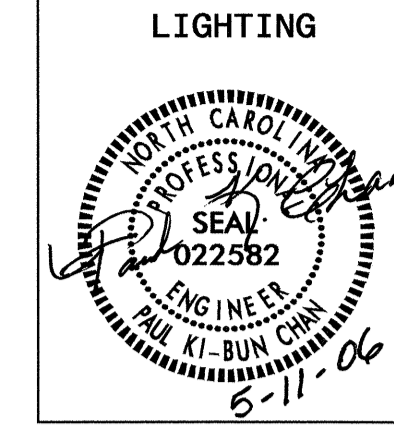


PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION



NOTES

- ⚠ AT THESE LOCATIONS, PROVIDE ELECTRICAL DUCT IN ACCORDANCE WITH NEC REQUIREMENTS FOR AN APPROVED RACEWAY FOR ELECTRICAL CIRCUITS. SEE TABLE "C"
- ⚠ LOCATE PROPOSED ELECTRICAL DUCT BENEATH RAMPS AND LOOPS FOR BEST ALIGNMENT OF CIRCUITS. LOCATE ALL BORE PITS OUTSIDE THE CLEAR ZONE, AS DEFINED BY THE 2002 AASHTO ROADSIDE DESIGN GUIDE OR AS DIRECTED BY THE ENGINEER. PROVIDE TRAFFIC CONTROL DEVICES AS REQUIRED WHEN TRENCHING CIRCUITRY.
- ⚠ INSTALL HM4 50' FROM EDGE OF TRAVEL (EOT) OF I-40 EASTBOUND.
- ⚠ LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AS DEFINED BY THE 2002 AASHTO ROADSIDE DESIGN GUIDE 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. INSTALL CLOSE TO EXISTING POWER POLE.
- ⚠ TYPE PC18 JUNCTION BOXES ARE 18" L X 12" W X 18" H.
- ⚠ INSTALL HM3 APPROXIMATELY 85' FROM EOT OF RAMP "A". MAINTAIN A MINIMUM DISTANCE OF 12' FROM EDGE OF HM FOUNDATION TO THE TOP OF CUT SLOPE.
- ⚠ RAMP "A", -LRT- AND -LLT- STATION NUMBERS ARE STAMPED INTO THE EXISTING CONCETE. SURVEY DATA AND STATION NUMBERS FOR RAMP "A", -LRT- AND -LLT- TAKEN FROM PLANS FOR TIP PROJECT I-3306B.

SCOPE OF WORK

PROVIDE ROADWAY LIGHTING BY PROVIDING AND INSTALLING HIGH PRESSURE SODIUM LUMINAIRES ON 100' HIGH MOUNT STANDARDS, INCLUDING 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
- 2005 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 LUMINAIRE
1407.01	ELECTRIC SERVICE POLE AND LATERAL
1408.01	LIGHT CONTROL SYSTEM
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 100' HIGH MAST STANDARD W/ HM FOUNDATION & (6) HM LUMINAIRES 750W HPS, MEDIUM, CUTOFF, TYPE V DESIGNED FOR 110 MPH WINDSPEED
- PROPOSED CONTROL SYSTEM. BREAKER SIZE SHOWN IN LOAD SCHEDULE, SHEET E2
- PROPOSED ELECTRICAL JUNCTION BOX TYPE PC18 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 2" CONDUIT
- PROPOSED ELECTRICAL DUCT SIZE 2", 3" OR 4" TYPE (JA) OR (BD) LOCATION: SEE TABLE C, THIS SHEET

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

TABLE "B" JUNCTION BOX SUMMARY				
NUMBER	LOCATION	TYPE	SHEET	
JB1	11+30 -RPA- 30' LT EOT	PC18	E2	E2
JB2	11+30 -RPA- 45' RT EOT	PC18	E2	E2
JB3	39+74 -LRT- 131' RT	PC18	E2	E2
JB4	37+77 -LRT- 80' RT	PC18	E2	E2
JB5	9+53 -L- 114' RT	PC18	E2	E2
JB6	46+18 -LRT- 60' RT	PC18	E2	E2
JB7	46+34 -LLT- 90' LT	PC18	E2	E2
JB8	48+38 -LLT- 87' LT	PC18	E2	E2
JB9	50+92 -LLT- 72' LT	PC18	E2	E2
TOTALS		9		

TABLE "C" ELECTRICAL DUCT SUMMARY (ESTIMATED LENGTH IN FEET)								
LOCATION	RACEWAY	SHEET	TYPE					
			JACKED (JA) FEET			BURIED (BD) FEET		
			SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"
11+30 -RPA-	JB1 - JB2	E2				112		
11+30 -RPA-		E2			64			
9+23 -L-	JB6 - JB7	E2				350		
9+23 -L-		E2			160			
46+34 -LLT-	JB2 - JB5	E2				197		
46+34 -LLT-		E2			132			
TOTALS					356	659		

2", 3" OR 4" ELEC. DUCT JA & BD

EQUIVALENTS		
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"

- ### ABBREVIATIONS
- BD BURIED
 - LT LIGHT
 - JA JACKED
 - MH MOUNTING HEIGHT
 - Ø PHASE
 - SER LAT SERVICE LATERAL
 - PVC PVC SCHEDULE 40 CONDUIT
 - RGC RIGID GALVANIZED STEEL CONDUIT
 - C CONDUIT
 - CKT CIRCUIT
 - N NEUTRAL
 - G GROUND

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