

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 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 PC30 JUNCTION BOXES ARE 30" L X 17" W X 18" H.
7. TYPE PC36 JUNCTION BOXES ARE 36" L X 24" W X 18" H.

SCOPE OF WORK

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

DESIGN CRITERIA

2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE
 2009 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION, 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 90 MPH
 DESIGN HIGH MOUNT STANDARD FOUNDATION FOR BASIC WIND SPEED OF 110 MPH. ANY CONTRACTOR-DESIGNED SITE SPECIFIC FOUNDATION DESIGN SHALL BE DESIGNED FOR THE SAME WIND SPEED
 2012 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 JANUARY 2012 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
1404.01	LIGHT STANDARDS
1405.01	STANDARD FOUNDATION
1406.01	LIGHT STANDARD LUMINAIRES
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 JANUARY 2012.

LEGEND

- PROPOSED 120' HIGH MAST STANDARD W/ HM FOUNDATION & (8) HM LUMINAIRES 750W HPS, MEDIUM, CUTOFF, TYPE V
- PROPOSED LIGHT STANDARD TYPE MTLT 45' WITH 15' SINGLE ARM. INCLUDES STANDARD FOUNDATION TYPE R1 OR R2 & 250W HPS FLAT GLASS ROADWAY LUMINAIRE. IES DISTRIBUTION: MEDIUM, CUTOFF, TYPE III
- PROPOSED CONTROL SYSTEM WITH PC36 JUNCTION BOX. 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 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

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 #10G	2 AWG SIZE 6 CONDUCTOR (BK & RD) 1 AWG SIZE 8 GROUNDING CONDUCTOR	2 - 6 W/G FEEDER CIRCUIT

NUMBER	LOCATION	TYPE	SHEET
JB1	STA. 419+63 -L- 95' LT	PC18	E2
JB2	STA. 419+60 -L- 10' LT	PC18	E2
JB3	STA. 22+20 -RAMPD- 35' RT	PC30	E2
JB4	STA. 22+20 -RAMPD- 30' LT	PC30	E2
JB5	STA. 162+87 -GWL- 100' RT	PC30	E2
JB6	STA. 163+18 -GWL- 110' LT	PC18	E2
JB7	STA. 415+20 36' -L NB- 45' LT	PC18	E2
JB8	STA. 415+20 36' -L NB- 26' RT	PC18	E2
JB9	STA. 23+16 -RAMPAREV- 50' LT	PC18	E2
JB10	STA. 23+16 -RAMPAREV- 30' RT	PC18	E2
JB11	STA. 410+62 -L- 75' LT	PC18	E2
JB12	STA. 410+62 -L- 75' RT	PC18	E2
JB13	STA. 424+00 -L- 75' LT	PC18	E2
JB14	STA.424+00 -L- 75' RT	PC18	E2
TOTALS		11	3

LOCATION	RACEWAY	SHEET	TYPE					
			JACKED (JA) FEET			BURIED (BD) FEET		
			SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"
STA. 23+50 -SPURD-		E2						45
STA. 419+46 -L NB-		E2						45
STA. 22+20 -RAMPDREV-		E2						40
STA. 22+20 -RAMPDREV-	JB3 - JB4	E2				70		
STA. 163+00 -GWL-		E2		180				
STA. 163+00 -GWL-	JB5 - JB6	E2				210		
STA. 415+20 -L NB-		E2	55					
STA. 23+16 -RAMPAREV-		E2					75	
STA. 424+00 -L-		E2					135	
STA. 410+62 -L-		E2					130	
TOTALS			55	180		280	430	40

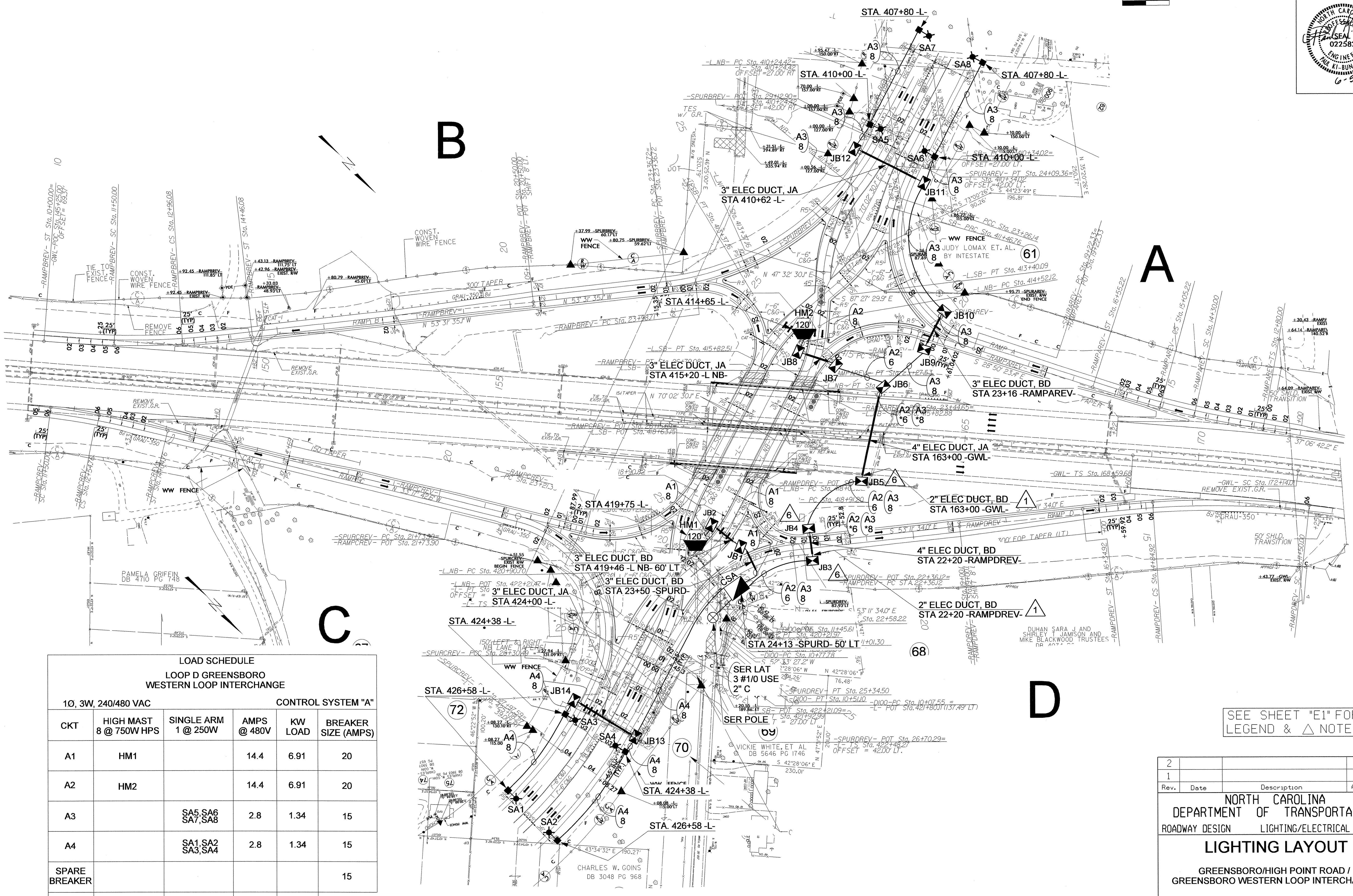
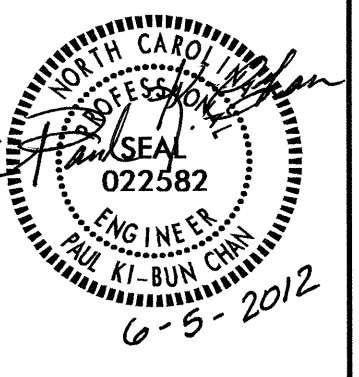
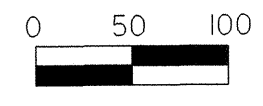
BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGC	RIGID GALVANIZED STEEL CONDUIT
JA	JACKED	C	CONDUIT
MH	MOUNTING HEIGHT	CKT	CIRCUIT
Ø	PHASE	N	NEUTRAL
SER LAT	SERVICE LATERAL	G	GROUND
		HM	HIGH MAST

COMPUTED BY: AB DATE: 6/5/12
 CHECKED BY: PMC DATE: 6-5-2012

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USE FOR LIGHTING CONSTRUCTION ONLY



LOAD SCHEDULE
LOOP D GREENSBORO
WESTERN LOOP INTERCHANGE

CKT	10, 3W, 240/480 VAC		CONTROL SYSTEM "A"		
	HIGH MAST 8 @ 750W HPS	SINGLE ARM 1 @ 250W	AMPS @ 480V	KW LOAD	BREAKER SIZE (AMPS)
A1	HM1		14.4	6.91	20
A2	HM2		14.4	6.91	20
A3		SA5, SA6 SA7, SA8	2.8	1.34	15
A4		SA1, SA2 SA3, SA4	2.8	1.34	15
SPARE BREAKER					15
TOTAL	2	8	34.4	16.5	

SEE SHEET "E1" FOR
LEGEND & △ NOTES

Rev.	Date	Description	Approved
2			
1			

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION

LIGHTING LAYOUT
GREENSBORO/HIGH POINT ROAD /
GREENSBORO WESTERN LOOP INTERCHANGE

GUILFORD COUNTY

Drawn By: AB	Approved By: PIC	Dwg No.:
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