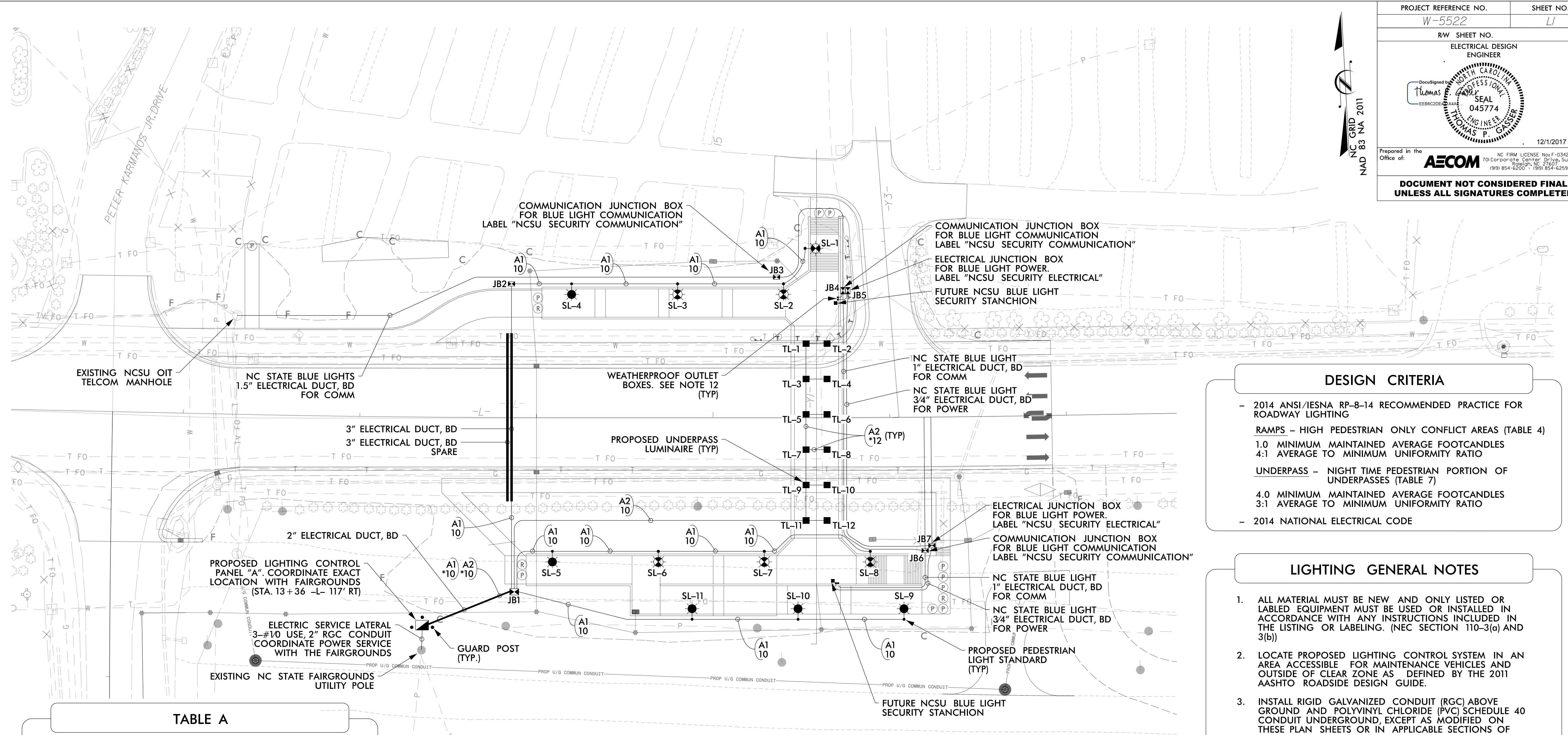


8/17/99

REVISIONS

PROJECT REFERENCE NO. W-5522	SHEET NO. LI
RW SHEET NO.	
ELECTRICAL DESIGN ENGINEER	
12/1/2017	
Prepared in the Office of:	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



DESIGN CRITERIA

- 2014 ANSI/IESNA RP-8-14 RECOMMENDED PRACTICE FOR ROADWAY LIGHTING
- RAMPS - HIGH PEDESTRIAN ONLY CONFLICT AREAS (TABLE 4)
- 1.0 MINIMUM MAINTAINED AVERAGE FOOTCANDLES
- 4:1 AVERAGE TO MINIMUM UNIFORMITY RATIO
- UNDERPASS - NIGHT TIME PEDESTRIAN PORTION OF UNDERPASSES (TABLE 7)
- 4.0 MINIMUM MAINTAINED AVERAGE FOOTCANDLES
- 3:1 AVERAGE TO MINIMUM UNIFORMITY RATIO
- 2014 NATIONAL ELECTRICAL CODE

LIGHTING GENERAL NOTES

1. ALL MATERIAL MUST BE NEW AND ONLY LISTED OR LABELED EQUIPMENT MUST BE USED OR INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING. (NEC SECTION 110-3(a) AND 3(b))
2. LOCATE PROPOSED LIGHTING CONTROL SYSTEM IN AN AREA ACCESSIBLE FOR MAINTENANCE VEHICLES AND OUTSIDE OF CLEAR ZONE AS DEFINED BY THE 2011 AASHTO ROADSIDE DESIGN GUIDE.
3. INSTALL RIGID GALVANIZED CONDUIT (RGC) ABOVE GROUND AND POLYVINYL CHLORIDE (PVC) SCHEDULE 40 CONDUIT UNDERGROUND, EXCEPT AS MODIFIED ON THESE PLAN SHEETS OR IN APPLICABLE SECTIONS OF THE ROADWAY STANDARD DRAWINGS FOR THIS PROJECT.
4. TYPE IG11 JUNCTION BOXES ARE 12" X 12" W X 18"H.
5. TYPE IG18 JUNCTION BOXES ARE 18" X 12" W X 18"H.
6. LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
7. ONLY APPROVED SPLICE KITS SHALL BE ALLOWED AT SPLICE POINTS INDICATED ON THE PLANS.
8. ALL CABLES AND CONDUCTORS MUST BE INSTALLED IN A CONTINUOUS UNCLUT LENGTH BETWEEN HANDHOLES AND LIGHT STANDARDS.
9. COLOR CODE ALL CONDUCTORS AS REQUIRED IN DIV. 14 SPECIFICATION AND PER NEC.
10. FURNISH AND INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CIRCUIT FEEDER CONDUITS.
11. ALL LIGHT STANDARDS AND UNDERPASS LUMINAIRES FURNISHED ON THIS PROJECT MUST BE OF THE SAME STYLE AND MATERIAL AND FROM THE SAME MANUFACTURER.
12. PROVIDE 2-GANG, DIE-CAST ALUMINUM WEATHERPROOF BOXES WITH BLANK COVERS AND TAMPER-RESISTANT SCREWS FOR ELECTRICAL AND COMMUNICATION CONNECTIONS TO FUTURE BLUE LIGHT. PROVIDE BOXES WITH BACK AND END OUTLET HUBS, 1" FOR COMM. AND 3/4" FOR POWER. MOUNT BOXES TO RETAINING WALL 24" ABOVE FINISHED SIDEWALK AS SHOWN. INCLUDE COST OF BOXES WITH BLUE LIGHT RACEWAY. COORDINATE EXACT REQUIREMENTS WITH NCSU SECURITY APPLICATIONS AND TECHNOLOGIES (SAT).

TABLE A

PLAN SYMBOL	CIRCUITRY CONDUCTOR CONDUIT TYPE & SIZE	
10	2 #10 1 #10G 1.5" P	2 AWG SIZE 10 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR 1.5" PVC CONDUIT
*10	2 #10 1 #10G	2 AWG SIZE 10 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR
*12	2 #12 1 #12G	2 AWG SIZE 12 CONDUCTOR (BK & RD) 1 AWG SIZE 12 GROUNDING CONDUCTOR

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1405.01	STANDARD FOUNDATION
1406.01	LIGHT STANDARD LUMINAIRES (WIRING DIAGRAM)
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 JANUARY 2018.

ELECTRICAL EQUIPMENT SUMMARY

JUNCTION BOX	STATION NUMBER	TYPE
JB1	STA. 13+87, -L- 99' RT	IG18
JB2	STA. 13+87, -L- 76' LT	IG11
JB3	STA. 15+36, -L- 79' LT	IG18
JB4	STA. 15+74, -L- 72' LT	IG18
JB5	STA. 15+76, -L- 72' LT	IG18
JB6	STA. 16+20, -L- 75' RT	IG18
JB7	STA. 16+23, -L- 73' RT	IG18

LIGHT STANDARD	STATION NUMBER	FOUNDATION
SL-1	STA. 15+52, -L- 95.75' LT	TYPE R1
SL-2	STA. 15+40, -L- 75.50' LT	TYPE R1
SL-3	STA. 14+80, -L- 75.50' LT	TYPE R1
SL-4	STA. 14+20, -L- 75.50' LT	TYPE R1
SL-5	STA. 14+09, -L- 75.75' RT	TYPE R1
SL-6	STA. 14+69, -L- 75.75' RT	TYPE R1
SL-7	STA. 15+29, -L- 75.75' RT	TYPE R1
SL-8	STA. 15+89, -L- 75.75' RT	TYPE R1
SL-9	STA. 16+08, -L- 114.25' RT	TYPE R1
SL-10	STA. 15+48, -L- 114.25' RT	TYPE R1
SL-11	STA. 14+88, -L- 114.25' RT	TYPE R1

REFER TO LIGHTING DETAILS FOR LOCATION OF UNDERPASS LUMINAIRES.

ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JANUARY 2018.

LIGHTING LEGEND

- PROPOSED LIGHTING CONTROL PANEL
120/240V, 1P, 3W, 100A
- PROPOSED ELECTRICAL JUNCTION BOX
- PROPOSED ARCHITECTURAL LIGHT STANDARD WITH 60W MAX. LED LUMINAIRE, TYPE II DISTRIBUTION, 4000K, 4400 LUMEN MIN., 16" ROUND SHAFT, GRAY FINISH
- PROPOSED ARCHITECTURAL LIGHT STANDARD WITH 100W MAX. LED LUMINAIRE, TYPE II DISTRIBUTION, 4000K, 7800 LUMEN MIN., 16" ROUND SHAFT, GRAY FINISH
- PROPOSED VANDEL RESISTANT LED LUMINAIRE, 20W MAX., TYPE V DISTRIBUTION, 4000K, 1400 LUMEN MIN., BRONZE FINISH
- PROPOSED ELECTRICAL FEEDER CIRCUIT CONTROL SYSTEM (A), CIRCUIT (1), PLAN SYMBOL (10) SEE TABLE A THIS SHEET
- PROPOSED BURIED ELECTRICAL DUCT, RIGID PVC
- ELEC. DUCT