

UNDERPASS LIGHTING GENERAL NOTES

- LG1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES HAVING JURISDICTION. WHERE CONFLICTS OCCUR, THE MORE STRINGENT SHALL APPLY.
- LG2 BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER WITH TYPE "THHN/THWN-2" INSULATION RATED AT 600 VOLTS. CONDUCTORS #10 AND SMALLER SHALL BE SOLID.
- LG3 DO NOT SCALE THESE DRAWINGS. ROUGHING IN SHALL BE DONE FROM FIELD CONDITIONS AND DIMENSIONS ON ROADWAY DRAWINGS AND EQUIPMENT SHOP DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL ITEMS.
- LG4 CONDUITS RUN EXPOSED SHALL BE FULL WEIGHT RIGID GALVANIZED STEEL (RGSC).
- LG5 THE LIGHTING CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN WARRANTY FOR PARTS AND DEFECTIVE WORKMANSHIP ON ALL LUMINAIRES AND ALL OTHER ELECTRICAL EQUIPMENT.
- LG6 ALL ELECTRICAL MATERIALS, SUCH AS CONDUIT, CABLES, WIRES AND JUNCTION BOXES, SHALL BE NEW U.L. LISTED AND MEET REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND THE AMERICAN NATIONAL STANDARDS INSTITUTE.
- LG7 IF THE CONTRACTOR SPECIFIES ANY LUMINAIRE OR FIXTURE OTHER THAN THOSE SPECIFIED ON PLANS IN THE LIGHTING FIXTURE SCHEDULE, THE CONTRACTOR SHALL SUBMIT TO THE PROJECT CONSTRUCTION ENGINEER PRODUCT DATA SHEETS, PHOTOMETRIC DATA AND DESIGN CALCULATIONS FOR THE PROPOSED LUMINAIRES TO VERIFY THE LIGHTING DESIGN CRITERIA.
- LG8 THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY DIGGING. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CLIENT.
- LG9 THE LIGHTING CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR.
- LG10 ALL SHOP DRAWINGS FOR LUMINAIRES, CONDUIT, WIRING, ETC. MUST BE SUBMITTED TO THE PROJECT CONSTRUCTION ENGINEER FOR REVIEW AND SIGNED APPROVAL PRIOR TO CONSTRUCTION.
- LG11 ALL CONDUIT RUNS UNDER THE BRIDGE DECK STRUCTURE, OTHER THAN ON THE PIER CAPS, SHALL BE LOCATED ABOVE THE STRUCTURE METAL GIRDERS AND SHALL NOT PROJECT BELOW THE STRUCTURE SURFACE ABOVE TRAVEL LANES AND SHOULDERS. CONDUIT SUPPORTS CONSISTING OF PIPE CLAMPS AND METAL BEAM PIPE CLAMPS SHALL BE HOT DIPPED GALVANIZED MALLEABLE IRON.
- LG12 RIGID CONDUIT INSTALLED ON STRUCTURES SHALL BE SUPPORTED AT LEAST TEN FEET AND WITHIN THREE FEET OF JUNCTION BOXES, LUMINAIRES, ETC., AND AS PER ARTICLE 344.30 OF THE NATIONAL ELECTRICAL CODE.
- LG13 PROVIDE RIGID METAL CONDUIT EXPANSION COUPLINGS AT ALL LOCATIONS WHERE CONDUITS PASS THROUGH OR ACROSS EXPANSION/CONTRACTION JOINTS OF THE BRIDGE STRUCTURE.
- LG14 COLOR OF NEW #10 BRANCH CIRCUIT WIRING OUTER INSULATION SHALL MATCH THE COLOR CODING OF THE EXISTING BRANCH CIRCUITS.

EXISTING LIGHTING FEEDER AND NEW BRANCH CIRCUIT LOAD ANALYSIS - NEW UNDERPASS LIGHTS

- 1. NEW BRANCH CIRCUIT SERVED FROM SERVICE POINT "FPA":
  - A. EXISTING LOAD: TWO (2) 250 WATT HIGH PRESSURE SODIUM WALLPACK LUMINAIRES = 2 LUMINAIRES X 305 WATTS PER LUMINAIRE (LAMP WATTAGE PLUS BALLAST) = 610 WATTS
  - B. NEW LOAD: EIGHT (8) LED WALLPACK LUMINAIRES @ 72 WATTS EACH = 8 LUMINAIRES X 72 WATTS PER LUMINAIRE = 576 WATTS
  - C. NEW CONNECTED LOAD IS LESS THAN THE EXISTING CONNECTED LOAD
- 2. NEW BRANCH CIRCUIT SERVED FROM SERVICE POINT "FPB":
  - A. EXISTING LOAD: TWO (2) 250 WATT HIGH PRESSURE SODIUM WALLPACK LUMINAIRES = 2 LUMINAIRES X 305 WATTS PER LUMINAIRE (LAMP WATTAGE PLUS BALLAST) = 610 WATTS
  - B. NEW LOAD: EIGHT (8) LED WALLPACK LUMINAIRES @ 72 WATTS EACH = 8 LUMINAIRES X 72 WATTS PER LUMINAIRE = 576 WATTS
  - C. NEW CONNECTED LOAD IS LESS THAN THE EXISTING CONNECTED LOAD

ESTIMATED QUANTITIES FOR UNDERPASS LIGHTING

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT
682-1304	CABLE, TYPE THWN-2, AWG NO 10	4,200	L.F.
682-9020	ELECTRICAL JUNCTION BOX *	4	EACH
682-6108	CONDUIT, RIGID, 3/4 IN	1,245	L.F.
681-6900	LUMINAIRE - LED UNDERPASS WALL PACK MOUNTED ON STRUCTURE	16	EACH

\* CONNECT BRANCH CIRCUIT TO FEEDER TAP IN EXISTING JUNCTION BOX

THE LIGHT FIXTURE SHALL BE INSTALLED ON THE CONCRETE PIER CAP PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONDUIT ENTRY SHALL BE IN THE TOP OF THE FIXTURE HOUSING FOR A WATERTIGHT INSTALLATION. SEE "WALL PACK LED INSTALLATION MANUAL" IM-345-A.PDF LOCATED ON HOLOPHANE WEB SITE.

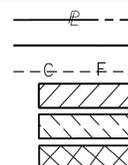


LED ROADWAY LUMINAIRE - "WM"  
TYPE III DISTRIBUTION  
N.T.S.

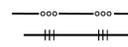
LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	FINISH	LAMPS		VOLTAGE	REMARKS
				TYPE	WATTS		
WM	HOLOPHANE	W4G-20C-1000-40K-T3M-XXX-BZ	BRONZE	LED	72	480	LED TYPE III MEDIUM LIGHT DISTRIBUTION. MOUNTED AT TOP OF EXISTING PIER CAP TO MATCH EXISTING UNITS THAT ARE TO BE REMOVED. UNIT SHALL HAVE GLASS LENS, 20 LENS WITH TWO ENGINES, 1000 mA DRIVE CURRENT AND 4000K COLOR TEMPERATURE.

PROPERTY AND EXISTING R/W LINE  
REQUIRED R/W LINE  
CONSTRUCTION LIMITS  
EASEMENT FOR CONSTR  
& MAINTENANCE OF SLOPES  
EASEMENT FOR CONSTR OF SLOPES  
EASEMENT FOR CONSTR OF DRIVES



BEGIN LIMIT OF ACCESS.....BLA  
END LIMIT OF ACCESS.....ELA  
LIMIT OF ACCESS  
REQ'D R/W & LIMIT OF ACCESS



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NOT TO SCALE

REVISION DATES

NO.	DATE	DESCRIPTION

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: INNOVATIVE DELIVERY  
LIGHTING PLANS

1-95 AT SR 21 DIVERGING  
DIAMOND INTERCHANGE PROJECT

DRAWING No.  
25-003