

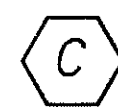


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-00M	2000	2	3

GENERAL NOTES

- The scope of work for this project consists of the removal and installation of flourescent fixtures.
- Existing plans do not indicate complete existing wiring conditions. The Contractor shall verify existing conditions prior to start of work.
- Before any wiring is cut, the Contractor shall verify usage of wiring to assure that services required are not discontinued, and provide additional wiring devices and other accessories to ensure continuity of service to other parts of installation to remain.
- Remove all existing wiring not to remain in service.
- Remove all conduits no longer required.
- Phase work to assure continuity of electrical, telephone and signal services to parts of facilitties that will remain in use.
- Remove all existing lighting fixtures, receptacles and switches indicated to be removed or no longer required, blank outlets and plug all holes in boxes and cabinets.
- Deliver all salvageable material as determined by the Engineer at no additional cost to the State. Pack material in boxes. Coil all cables and ties.
- Abandon conduits below grade no longer required. Pull out all wires in abandoned conduits.
- Return all removed light fixtures to the State, deliver and stack items in locations determined by the Engineer.

TYPE	DESCRIPTION	LAMP
	Fluorescent low-profile wrap around, wide body, Acrylic Prismatic diffuser with sonic welded baked white enamel finished. Solid state ballast lithonia 2LB-2-32-120-55B.	2-32wt8 4100 k
	Fluorescent low-profile wrap around, wide body, Acrylic Prismatic diffuser with sonic welded baked white enamel finished. Solid state ballast lithonia LB4-4-32-120-SSBI/4.	4-32wt8 4100 k
	Fluorescent low-profile wrap around, wide body, Acrylic Prismatic diffuser with sonic welded baked white enamel finished. Solid state ballast lithonia LB4-4-32-120-SSBI/4.	1-32wt8 4100 k

LEGEND



New Flourescent Luminaire



Luminaire Designation, Type "A" Indicated.

ELECTRICAL NOTES

- Entire installation to conform to the provisions of the National Electrical Code, Local Electric Bureau and Local Utility Companies. Obtain and pay for permits and deliver certificates of completion and inspection to Engineer.
- Materials and workmanship to be very best quality of its kind.
- Substitute materials to be equal in quality to specified item. If substitute materials are proposed, submit six (6) copies of shop drawings for approval prior to ordering. Provide samples of substitute materials, if requested, to evaluate equality of proposed substitution.
- Guarantee: The entire installation shall be guaranteed for one year after acceptance by the Engineer against defective materials and workmanship. When notified by the Engineer of failure of any part of the installation during the guarantee
- Testing: An operational test shall be performed after the completion of the installation, to assure proper operation of all items of the work.
- Installation and Workmanship:
 - All work shall be neatly executed, workmanlike in appearance, symmetrical, plumb, uniform, properly aligned and secured in place.
 - Wiring Methods:
 - Use EMT, IMC, or Conduit in dry interior locations. Use conduit in damp locations.
 - Use sealtite flex for connections to equipment.
 - Attach to concrete and masonry with expansion anchors and to wood with wood screws.
 - Support raceways per National Electrical Code.
 - Do not support raceways and boxes from and on mechanical system.
 - Cables will not be permitted.
 - Conductors:
 - Crimp connect all wires.
 - Tape all splices with scotch no. 33 vinyl tape or equal.
 - Form wire neatly in enclosures.
 - Identify conductors by color code. - Neutral wire to be white and ground wire to be green.
 - Cut, drill and patch as required. Repair any surfaces damaged or marred - cutting, repairs and refinishing shall be subject to the approval of the Engineer.
 - Clean all surfaces to receive paint. Paint surface damaged during installation.
 - Repair all surfaces damaged during the installation of the work subject to the approval of the Engineer.
 - Coordinate wiring requirements of equipment furnished by others prior to rough-in work. Provide proper size wiring and connections for all equipment as required. Provide disconnects for all motorized equipment. Provide starters with overload protection on each line for all motorized equipment for which starters are not provided by other trades.

- Materials:
 - Conduit - Rigid galvanized steel, 3/4" minimum.
 - EMT - Galvanized steel, 3/4" minimum.
 - Intermediate metallic conduit, 3/4" minimum.
- Conductors:
 - Minimum size - No. 12 AWG copper 500V.
 - Copper Type XHHW, TW or THWH - Branch circuits.
- Wiring Devices:
 - Switches: 20A - Poles as indicated 120/277V. AC - Arrow No. 199X series color to match device plate.
 - Receptacles: Duplex - 3W15A, 125V. - Arrow #5262 color to match device plate.
- Fixtures - Install fixtures indicated in luminaire schedule complete with lamps, hangers, supports, ballasts and accessories. All fluorescent ballasts - electronic type with full lumen output.
- Device Plates - Plastic - Color to Match Surrounding Finish.
- Outlets - Provide outlet boxes to suit conditions encountered. Boxes to be ample size to accommodate conductors per National Electric Code minimum size of box for use with raceway systems to be 4" square by 1 - 1/2" deep.
- Circuit breakers and safety switches - general, electric, square D, ITE, Westinghouse or Challenger, safety switch - heavy duty type.
- Pullboxes, cabinets and gutter - code gage galvanized sheet steel.
- Submit following equipment for approval and resubmit until approval is received:
 - Circuit breakers
 - Disconnect switches
 - Light fixtures
 - Any built-to-order equipment

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

BUILDING RENOVATIONS - LIGHTS

MATERIAL TESTING AND
RESEARCH BRANCH

Project No. HWY-0-01-00M

Date: May, 2000

SHEET No. 1 OF 1 SHEETS