

TRAFFIC SIGNAL NOTES

- All traffic signal equipment shall be completely wired in the cabinet and shall control the traffic signals as called for in the Plans.
- The loop detector amplifier units furnished for this project shall be capable of operating the loop detector configurations shown on the Plans.
- Restoration of existing pavements and improvements unavoidably damaged shall be incidental to the various contract items. Restoration shall be to original or better condition.
- All traffic signal work shall conform to the requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways," Federal Highway Administration (1988) and amendments.
- Maintenance of Traffic through the construction area shall be in accordance with Part VI of the "Manual on Uniform Traffic Control Devices for Streets and Highways," Federal Highway Administration (1988) and as specified in the Special Provisions. The Contractor shall furnish and maintain adequate barricades, blinkers, construction signs, etc., for the safety of all public and pedestrian traffic.
- Traffic signal system/head down-time shall be kept to a minimum and with the approval of the Engineer.
- Any down-time for any traffic signal system/head shall be during non-peak traffic hours.
- Peak traffic hours are between 6:00 a.m. to 8:30 a.m. and 3:30 p.m. to 6:00 p.m.
- Contractor shall repair, plug, touch-up paint, etc. all holes and damages due to the removal/relocation of the Electric Meter and appurtenances. All materials used to plug holes shall be stainless steel or bronze and water tight. The work shall not be measure or paid for separately but shall be incidental to other items in the Proposal.
- The Contractor shall provide off-duty police officer(s) to control the flow of traffic as required by the Engineer.

CONSTRUCTION NOTES

- All construction work shall be done in accordance with these plans, all applicable sections of the Standard Specifications for Road and Bridge Construction, dated 1994 as amended, of the State Highways Division, Department of Transportation, and the project's Special Provisions, unless otherwise specified.
- The Contractor shall provide, install, and maintain all necessary signs, lights, flares, temporary guardrails, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection & for the convenience & safety of all public and pedestrian traffic. All such protective facilities and precautions to be taken shall conform with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites On or Adjacent to Public Streets and Highways" adopted by the Highway Coordinator and the U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI-Traffic Controls for Highway Construction and Maintenance Operations," dated 1988, and amendments.
- Full compensation for all additional materials and labor, not specifically shown or called for which are necessary to complete the construction of the project, shall be considered incidental to the various contract items in the Proposal & no additional compensation will be allowed therefor.
- The underground pipes, cables, or ductlines known to exist by the Engineer from his search of records are indicated on the Plans. The Contractor shall verify the location and depth of the facilities and exercise proper care in excavating in the area.
- The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways, and other areas. The costs incurred for any necessary remedial action by the Engineer shall be payable by the Contractor.
- The Contractor, at his own expense, shall keep the project area and surrounding area from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.

GENERAL NOTES

- The Contractor is reminded of the requirements of Subsection 108.01-Subletting of Contract, which requires him to perform work amounting to not less than 50 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- The Contractor's attention is directed to the following sections of the Special Provisions:
Subsection 107.13-Public Convenience and Safety
Subsection 107.21-Contractor's Responsibility for Utility Property and Services
Section 645 -Traffic Control
- All necessary permits shall be obtained by the Contractor at his own cost.
- The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Law (DOSH).
- Locations of existing underground structures and utilities such as pipelines, conduits, cables, manholes, monuments, and structures shown on the Plans are approximate only. It is not the intent of these Plans to show the exact location of all underground utilities and structures. It is the responsibility of the Contractor to verify the locations of all existing utilities with the respective owners. Existing utilities damaged by the Contractor shall be repaired by the Contractor at his own cost.

SCOPE OF WORK for this project consists of installing a new traffic signal system with appurtenances; modernizing by replacing standards, signal heads, and mountings; installing emergency optical preemption system; interconnecting existing and new traffic signal systems; and installing pavement striping, markings, and signing.

- The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.
- The overhead and underground lines and facilities shall be protected at all times by the Contractor during construction. Costs for any damage repairs to lines and facilities shall be borne by the Contractor.
- All saw cutting work shall be considered incidental to other items of work in the Proposal.
- Pedestrian walkways shall be maintained in passable condition or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.
- Driveways shall be kept open unless the owner(s) of the property using these rights-of-way are otherwise provided for satisfactorily.
- No material and/or equipment shall be stockpiled or otherwise stored within roadway right-of-way except at locations designated and approved in writing by the Engineer.
- All lanes shall be open to traffic during the morning peak hours from 6:00 a.m. to 8:30 a.m. and during the afternoon peak hours from 3:30 p.m. to 6:00 p.m. and during off-work hours.
- At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of all public and pedestrian traffic.

LEGEND

EXISTING

- Traffic Signal Controller & Cabinet
- Traffic Signal Head
- Type I Traffic Signal Standard
- Type II Traffic Signal Standard w/ Mast Arm
- Pedestrian Signal Head
- Pullbox
- Loop Detectors
- Traffic Signal Conduits & Cables
- Drain Line
- Sewer Line, Size, & Manhole

NEW

- Traffic Signal Controller & Cabinet
- Pipe/Angle Iron Electric Meter Pedestal
- Traffic Signal Head
- Type I Traffic Signal Standard (Head as specified)
- Type II Traffic Signal Standard w/ Mast Arm (Mast Arm Length, Signal Head Spacing, and Head as specified)
- Type C Pullbox (Metric)
- Type B Pullbox (Metric)
- Loop Detectors
- Traffic Signals Conduits and Cables
- Preemption Detector
- Pedestrian Signal Head

MARKING, STRIPING, AND SIGNING NOTES

- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- Existing pavement markings and stripings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The removal of the existing pavement markings shall not be paid for separately but shall be considered incidental to various pavement marking items.
- Raised pavement markers shall not be installed within crosswalks.
- Final location of signs shall be approved by the Engineer prior to any installation work.
- Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans or directed by the Engineer shall not be paid for and shall be considered incidental to various signing items.
- Final locations of all stop lines shall be approved by the Engineer prior to installation.
- All pavement striping shall be as noted on the Legend or Plans.
- All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
- Stop signs indicated to be removed shall be removed after the traffic signal is operational.
- Removal of existing delineators, signs, and posts as directed by the Engineer shall be considered incidental to the various signing items.
- Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
- Backing for all new regulatory and warning signs shall not be spliced.
- All sign panels shall conform to Section 621 of Special Provisions and the latest editions and amendments of the following FHWA publications:
a. "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD).
b. "Standard Highway Plans".
c. "Standard Alphabets for Highways Signs".
- All new and relocated signs and markers installed on pipe post or light standard are to be mounted with band brackets and steel braces.
- The Contractor shall erect at the beginning and end of the project advance construction warning signs as directed by the Engineer for the duration of the project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645-Traffic Control.

LEGEND FOR PAVEMENT MARKING & STRIPING

- 4' each Type A Raised Pavement Markers
- Type C Raised Pavement Markers @ 40'-0" o.c.
- 8' White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4' Double Solid Yellow Stripes with Type D Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4' or 8' White Edge Stripe with Type C Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
- 4' White or Yellow Guide Lines (Tape, Type II or Thermoplastic Extrusion except for bus bays)
- Transverse Median Marking (Tape, Type II or Thermoplastic Extrusion)
- Crosswalk and Stop Line. All Stop Lines shall be 10'-0" from Crosswalk unless otherwise noted. The circle number indicates the number of lanes for payment. (Tape, Type III or Thermoplastic Extrusion)
- Pavement Arrow (Tape, Type III or Thermoplastic Extrusion)
- STOP
- Pavement Word (Tape, Type III or Thermoplastic Extrusion)

10/8/98 Revised Legend to change to metric pullboxes.

DATE REVISION

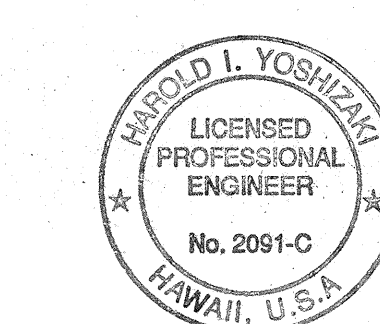
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES & LEGEND

KUHIO HIGHWAY
TRAFFIC SIGNAL MODERNIZATION
FEDERAL AID PROJECT NO. STP-056-1(39)

DATE: June 1997

SHEET No. 1 OF 1 SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
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