






Traffic Signal Notes




























1. All traffic signal controller equipment shall be completely wired in the cabinet and shall control the traffic signals as called for in the plans.
2. Signal indications during clearance interval:
 - A. If a signal is G or  and will remain G or  during the next phase, it shall be G or  during the clearance interval.
 - B. If a signal is G or  and will become R or extinguished during the next phase, it shall be Y or  during the clearance interval.
 - C. If a signal is R and will remain R or becomes G during the next phase, it shall remain R during the clearance interval.
3. The loop amplifier units furnished for this project shall be capable of operating the loop detector configurations shown on the plans. Cost for the loop amplifier shall be incidental to the installation of the loop detector.
4. A solid #8 bare copper wire shall be pulled with the traffic control cable for equipment ground. Cost shall be incidental to the installation of the control cable.
5. Conduits and pullbox locations as shown on the plans are schematic. They may be modified by the contractor with the approval of the engineer.
6. All work for the installation or modification of the traffic signal system shall conform to the latest revisions of the "Hawaii Standard Specifications For Road And Bridge Construction, 2005", the "Standard Plans" of the Department of Transportation, Highways Division, Contract Documents, and as shown on these drawings.
7. Type II Traffic Signal Standards shall confirm to AASHTO's "LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", 1st edition (2015) including all subsequent interim revisions and editions.
8. All splicing shall be done in the pullboxes.
9. Furnishing and installing the conduit stubouts (pullboxes to edge of pavement) will not be paid for separately, but shall be considered incidental to the various contract items.
10. The concrete jacket for the conduit by-pass detail shown on TE-36 shall not be paid for separately but considered incidental to the various contract items. The engineer shall determine if a concrete jacket is required.
11. All cable and elements for grounding shall be new.
12. Cables between signal faces, pedestrian heads, pedestrian push buttons, and EVP detectors and the nearest pullbox are NOT called out on the plan, but shall be furnished and installed in sufficient numbers and lengths as required. Cost shall be incidental to various traffic signal contract items.
13. Conduits between the traffic signal standard and the pullbox shall be in sufficient number as required. Cost shall be incidental to the installation of the traffic signal standard foundation.
14. The contractor shall salvage all existing heads, standards, and cables not used in the new system. Cost shall be incidental to the various contract items.
15. While modifying the existing traffic signal system, the contractor shall keep the existing system operational until the new traffic signal system can be put into service.
16. Unless otherwise specified, all conduits shall be concrete encased PVC Schedule 40.

17. Contractor shall integrate signal control software for those traffic signal controllers that are interconnected by hardware and/or fiber optic cables with the City's Joint Traffic Management Center. Cost shall be considered incidental to the various contract items.
18. The contractor shall notify the Transportation Technology Division, Department of Transportation Services, three (3) working days prior to commencing work on the traffic signal system (Phone: 768-8387).
19. All traffic signal hardware removed from the intersection shall be stockpiled and delivered to a location determined by the engineer.
20. Traffic signal heads on mast arms shall have a back plate 5" wide with 1-inch retro-reflective border all around.


Construction Notes

1. Locations of existing underground structures and utilities such as pipelines, conduits, cables, etc., shown on 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.
2. The contractor shall verify and check all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the engineer for clarification.
3. The contractor shall notify all companies to verify, tone and locate their existing utilities within the project area prior to excavating. The contractor shall coordinate all work.
4. The locations of the new traffic signal standards, traffic signal standards with mastarm, pedestrian push buttons, traffic controller, pullboxes, conduits and loop detectors shall be staked out in the field by the contractor and approval of the locations shall be obtained from the engineer prior to construction and installation.
5. All traffic signal work shall conform to the requirements of the "Manual On Uniform Traffic Control Devices," Federal Highway Administration (2009) and Amendments.
6. Maintenance of traffic through the construction area shall be in accordance with part VI of the "Manual On Uniform Traffic Control Devices," Federal Highway Administration (2009) as amended and as specified in the special provisions. the contractor shall furnish and maintain adequate barricades, blinkers, construction signs, etc., for the safety of the motoring public.
7. At the end of each day's work, the contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
8. The contractor shall provide a 2-foot minimum vertical clearance between traffic signal conduit and all existing utility lines.
9. For work within the City's right-of-way, minimum depths for traffic signal ductlines shall comply to the City's Engineering and Policy Memorandum No. CEB-I-08 (dated 2/15/2008).

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2023	69	87

New	Legend	Existing
	12" R Y G Standard Traffic Signal Head	
	12" R Y  Standard Traffic Signal Head	
	Standard Traffic and Pedestrian Signal Heads Mounted On Type I Signal Standard, Height=10'	
	12"   Standard Traffic Signal Head	
	12"   Programmed Visibility TS Head	
	Pedestrian Signal Head	
	EVP Detector	
	Type "A" Pullbox	
	Type "B" Pullbox	
	Type "C" Pullbox	
	Replace Existing Type "B" Pullbox	
	Loop Detector	
	CCTV Camera	
	Controller Cabinet On Base	
	CCTV Cabinet On Base	
	Sign	
	Traffic Signal Heads With Back Plate 5" Wide With a 1" Retro-reflective Border, Mounted On Type II Signal Standard 30' M.A. : 8' Between Heads	
	Conduit(s) With Size, Number and Type Of New Cables As Indicated.	-----

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE BY	
NOTED BY	
DATE	

 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. <i>Signature</i> 4/20/24 DATE	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRAFFIC SIGNAL NOTES AND LEGEND KAILUA ROAD INTERSECTION IMPROVEMENTS Vicinity of Ulukou Street and Uluamanu Drive Project No. 61D-01-23 Scale: NTS Date: Dec, 2023
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SHEET No. 1 OF 1 SHEETS