

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-056-K54	2010	46	48

LEGEND

NEW	EXISTING
Standard traffic signal heads mounted on Type I Signal Standard, height=10'	
12" R Y G Traffic signal head	
12" R Y ← Traffic signal head	
12" ← ← ← Traffic signal head	
Programmed visibility head (PVH)	
Traffic signal heads mounted on Type II Signal Standard 40" M.A. : 10' between heads	
EVP Detector	
Type "A" pullbox	
Type "B" pullbox	
Type "C" pullbox	
Existing pullbox	
Replace existing pullbox with new Type "A" pullbox	
Replace existing pullbox with new Type "B" pullbox	
Replace existing pullbox with new Type "C" pullbox	
Exist. Model 170 controller	
New Model 170 controller on new base	
Loop detectors	
KIUC Meter pedestal	
Sign	
Traffic signal conduits (underground)	

TRAFFIC SIGNAL NOTES

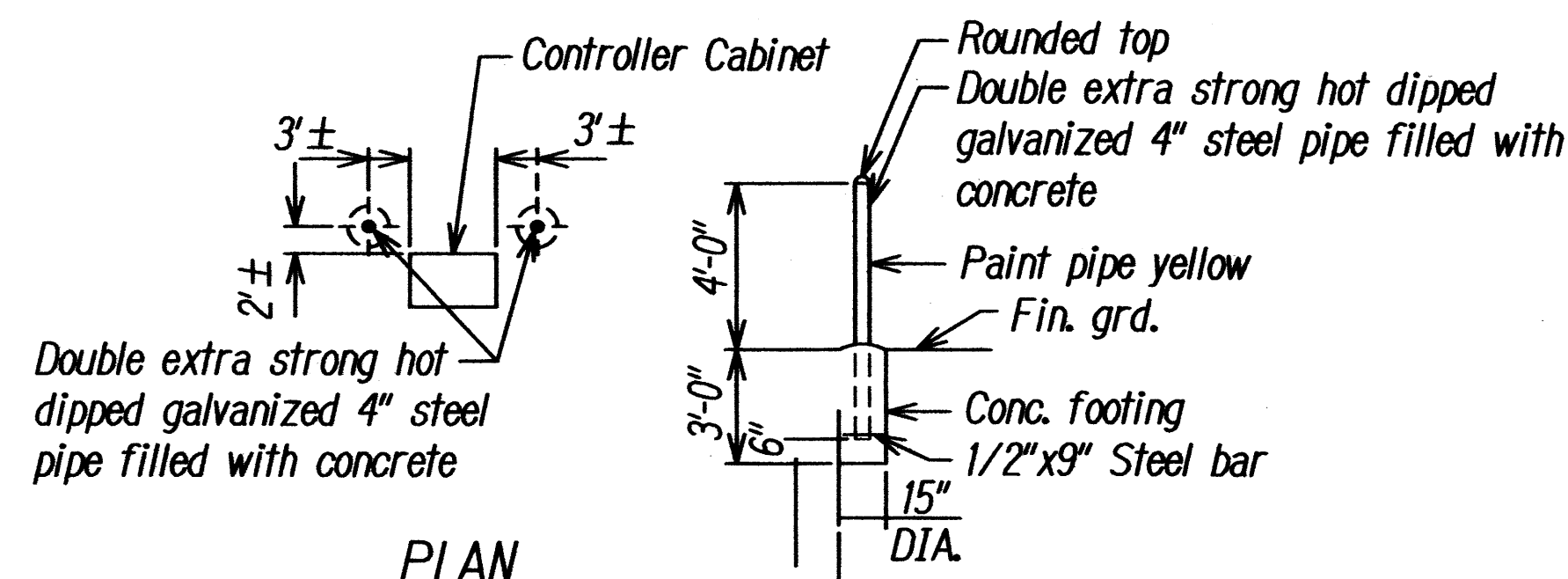
- All traffic signal controller equipment shall be completely wired in the cabinet and shall control the traffic signals as called for in the plans.
- Signal indications during clearance interval:
 - If a signal is G or ←G and will remain G or ←G during the next phase, it shall be G or ←G during the clearance interval.
 - If a signal is G or ←G and will become R or extinguished during the next phase, it shall be Y or ←Y during the clearance interval.
 - If a signal is R and will remain R or becomes G during the next phase, it shall remain R during the clearance interval.
- 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.
- 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.
- Conduits and pullbox locations as shown on the plans are schematic. They may be modified by the contractor with the approval of the engineer.
- The contractor shall install the controller and cabinet in the indicated location.
- 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 and the "Standard Plans" of the Department of Transportation, Highways Division and as shown on these drawings.
- All splicing shall be done in the pullboxes.
- 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.
- The concrete jacket for the conduit by-pass detail shown this sheet shall not be paid for separately but considered incidental to the various contract items. The engineer shall determine if a concrete jacket is required.
- All cable and elements for grounding shall be new.
- Cables between signal faces, pedestrian heads, 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.
- 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.
- Unless otherwise specified, all conduits shall be concrete encased PVC schedule 80.
- The traffic signal standards shall be designed and constructed in conformance with the current edition of "Standard Specifications for Structural supports for Highway Signs, Luminaries and Traffic Signals" of the American Association of State Highways and Transportation Officials (AASHTO).
- All mounting brackets for signal heads, ped heads and all other equipment attached to signal standards shall be brass, bronze or stainless steel. No steel parts shall be used including setscrews. Hub plates and other items may be aluminum if not available in brass, bronze or stainless steel.
- Loop Detectors shall be installed before final layer of pavement.

CONSTRUCTION NOTES

- Locations of existing underground structures and utilities such as pipe-lines, 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.
- 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.
- The contractor shall notify all agencies to verify, tone and locate their existing utilities within the project area prior to excavating. The contractor shall coordinate all work.
- The locations of the new traffic signal standards, traffic signal standards with mast-arm, 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.
- All traffic signal work shall conform to the requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition", Federal Highway Administration (2009) as amended.
- 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, 2009 Edition", 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.
- At the end of each day's work, the contractor shall remove all equipment and other obstruction to permit free and safe passage of public traffic.

NOTES

- The contractor shall furnish and install 1-3C*6 between secondary at KIUC pullbox and meter socket.
- Contractor shall make all electrical connections to controller, provide breaker, ground and concrete-encased 2" PVC Sch. 40 conduit.
- All conduits to contain a polyolefin pull like (jet line CAT. #232 or equivalent).
- Contractor shall provide KIUC one week advance notice for any work be done by KIUC, trenching to be inspected by KIUC before backfilling/concrete encasing.
- Before ordering materials and starting work on electrical lines, the contractor shall coordinate his work and contact Mr. Bernard Naea of KIUC at 246-2323.
- Contractor to obtain county permit and electrical service account for testing. After county inspection, state will take over electrical service account.



NOTE:

Cost of conc. filled galvanized posts shall be incidental to other items of work.

PIPE GUARD DETAIL

NOT TO SCALE

DATE	_____
DESIGNED BY	_____
TRACED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NO.	_____

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	TRAFFIC SIGNAL NOTES AND
	LEGEND
	KUHIO HIGHWAY
Intersection Improvements at Kapule Highway Federal-Aid Project No. HSIP-056-K(54)	
Date: December 2010	

SHEET No. 46 OF 48 SHEETS