

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

1. The Permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.

2. Cones or delineators shall be extended to a point where they are visible to approaching

3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.

4. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered.

5. All signs shall be restored upon completion of the work.
6. Flaggers and/or police officers shall be in sight of each other or in direct communications

7. When required by the issuing office, the Permitee shall install a flashing arrow signal as shown on the traffic control plans.

8. Signs spacing (I), taper lengths (t) and spacings of cones or delineators shall be as shown in table 1, unless otherwise noted on the traffic control plans.

9. All traffic lanes shall be a minimum of 10 feet wide. All construction warning signs shall

be promptly removed or covered whenever the message is not applicable or not in use.

10. The backs of all signs used for traffic control shall be appropriately covered to preclude

the display of inapplicable sign messages (i.e. when signs have messages on both faces). 11. At the end of each day's work or as soon as the work is completed, the Permittee shall

remove all traffic control devices no longer needed to permit free and safe passage of public traffic.

12. Removal shall be in the reverse order or installation.

13. Replace permanent pavement markings and traffic signs upon completion of work.

FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	NH-030-1(38)	2010	167	213

CONTRUCTION NOTES WITHIN COUNTY RIGHT-OF-WAY

Contractor shall obtain a permit to perform work on County highways from the development services administration two weeks prior to the commencement of work.

2. Standard detail drawings and standard specifications of the Department of Public Works shall be included as part of the construction plans.

3. All construction work shall strictly conform to the applicable sections of the 1994 Hawaii Standard Specifications for Road, Bridge and Public Works Construction, and the September 1984 "Standard Details" for Public Works Construction of the Department of Public Works.

4. If existing utilities, whether or not shown on plans, are damaged during construction, the Contractor shall at his own expense be required to repair such utilities.

Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, and other protective devices for the protection, safety and convenience of the public, according to the "Manual of Uniform Traffic Control Device for Streets and Highways", dated 2000 and to the rules and regulations governing the use of traffic control devices at worksites and/or adjacent to public streets and highways adopted by the highway safety coordinator and the U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Highway Construction and Maintenance Operations" "Manual on Uniform Traffic Control Devices for Highway Construction and Maintenance Operations" dated 2001.

6. The Director Public Works and/or the Director of the Department of Water Supply has the right to stop construction should any work be found contrary to the approved construction plan or detrimental to the public's interest.

7. The Contractor shall schedule a pre-construction meeting with the Development Services Administration five (5) days prior to the commencement of construction.

8. The Contractor shall, at his own expense, keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with Air Pollution Control Standards and regulations of

the State Department of Health and County Grading Ordinance.

9. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action ordered by the Director of Public Works shall be paid by the Contractor.

10. Construction debris and wastes shall be deposited at an appropriate work site. The Contractor shall inform the Director of Public Works of the location of the disposal sites. The disposal site must

fulfill the requirements of the grading ordinance.

11. The Contractor shall submit a tiff and five (5) copies of the "as-built" drawings prior to the final approval of the improvements.

12. If the clearance between a wastewater line and a new or existing waterline is eighteen inches (18") or less, the wastewater line shall be concrete-jacketed in accordance with the Standard Details of Public Works Construction dated September 1984.

13. Should historic sites such as walls, platforms, pavements, or mounds, or remains such as artifacts burials, concentration of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The contractor and/or landowner shall immediately contact the State Historic Preservation Division @ 243-5169 which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

Pursuant of Maui County Code section 3.44.015(c), the County of Maui is not responsible for any park, roadway, easement (including but not limited to drainage, sewer, access, reclaimed water, or avigation easement), or any other interest in real property shown on this map or shown on these plans, unless the Maui County Council has accepted its dedication by a resolution approved by a majority of Council's members at a regular or special meeting of the Maui County Council.

DATE

Table I for Traffic Control Plan Spacing of Cones or Taper Length (t) Longitudinal | Posted Speed | Sign Spacing (d) Delineators (feet) *Buffer* Space (8) W = 12' W = Greater or Less (1) Than 12' (1) Work Taper Tangent (feet) 250 250 250 W X 17 W X 20 W X 20 *350* W X 30 W X 45 220 50 55 W X 50 280 1000 W X 55

Notes:

W = Width of Lane, Shoulder, or Offset

TRAFFIC CONTROL PLAN Not to Scale

Testing of materials shall be conducted by an approved independent testing agency in accordance with ASTM standard methods or as specified by the Department of Public Works, Engineering Division, as

Embankment/select borrow and subgrade materials: one(1) Compaction test per 600 square yards per lift

2. Contractor shall submit all testing reports including results to the County's inspection agency for review and approval prior to County's acceptance of work.

correct each failure prior to proceeding to the next phase of construction.

GENERAL NOTES:

Plans subject to review and approval of utility companies.

2. Install conduit marking for all stub-out locations

3. Underground utilities to be installed outside of the road right of way, within a utility

easement running through the edge of the new lots.

4. The Contractor/utility company shall contact the Department of Water Supply at phone # 270-7340 one (1) week prior to commencement of work.

* 270-7340 one (i) week prior to commencement of work.
5. The Contractor/utility company shall be responsible to verify the exact depth and location of existing waterlines in the project area prior to commencement of work and shall meet with the Department of Water Supply personnel out in the field to help locate the existing waterlines in the project area if necessary.
6. Maintain a minimum of three (3) feet clear horizontal separation between existing waterlines and installed utilities.
7. Maintain a minimum of civ (6) inches clear vertical congretion between existing

7. Maintain a minimum of six (6) inches clear vertical separation between existing waterlines and installed utilities at all crossings.

8. Any installed utility crossing an existing waterline shall be concrete jacketed a minimum of five (5) feet on both sides of the crossing.

Approvals:

DIRECTOR - DEPARTMENT OF PUBLIC WORKS & ENVIRONMENTAL MANANGEMENT (APPROVAL FOR WORK WITHIN COUNTY

ENGINEER No. 8991-E

LICENSED PROFESSIONAL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL NOTES \$ **DETAILS** HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1

Lahainaluna Rd. to Hokiokio Pl. Federal Aid Project NO. NH-030-1(38) Scale: As Noted Date: November 23, 2009

SHEET No. 1 OF 8 SHEETS

ADD. 167

ADD. No. 1 - Revised Text Hts. ♦ Fonts

REVISION

or Match Existing Pavement Structure Which Ever Is Greater — Compacted Backfill *Electrical Conduit Electrical Conduit Electri* 6" Cushion 1. Contractor shall provide a temporary cold mix patch if permanent restoration cannot be made within 24 hours of backfill 2. All exposed areas to be grassed. 3. Minimum Cover: A) Under road pavement = 36" B) Under shoulder area:

Paved Unpaved

covered when no work is being performed and lane is not closed.

TWO-LANE HIGHWAY - ONE LANE CLOSED

FIGURE I - TRAFFIC CONTROL PLAN

4. The advisory speed (XX) shall be determined by the Engineer.

5. Cones or delineators shall be installed at 25' o.c. max. on tapers.

B1) Smaller than 4" = 24" *B2)* 4" = 30"

Sawcut prior ----

to excavating

Sawcut 12" back -

prior to paving

Exist. Pavement —

Structure

B3) 6" and larger = 36" . Any damages to existing utilities shall be replaced and/or restored to its original condition at no additional cost to the owner.

TRENCH RESTORATION DETAIL

Not to Scale (County Right-of-way) COMPACTION REQUIREMENTS

follows:

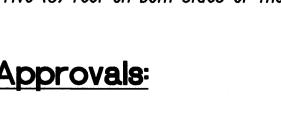
B. Aggregate subbase course: one (1) compaction test per 400 square yards; one (1) gradation and sand equivalent test per project.

C. Aggregate base course: one (1) compaction test per 300 square yards; one (1) gradation and sand equivalent test per project.

D. Asphalt concrete pavement or asphalt treated base course: Three (3) a.c. cores for thickness and density tests per project.

E. Trench backfill material: one (1) test for each 300 lineal feet of trench per lift of material.

3. The Contractor shall notify the County of any testing failures and



RIGHT OF WAY ONLY)

DIRECTOR — DEPARTMENT OF WATER SUPPLY. COUNTY OF MAUI (APPROVAL LIMITED TO WATER IMPROVEMENTS WHICH WILL BE DEDICATED TO THE DEPARTMENT OF WATER SUPPLY)

NOTE:

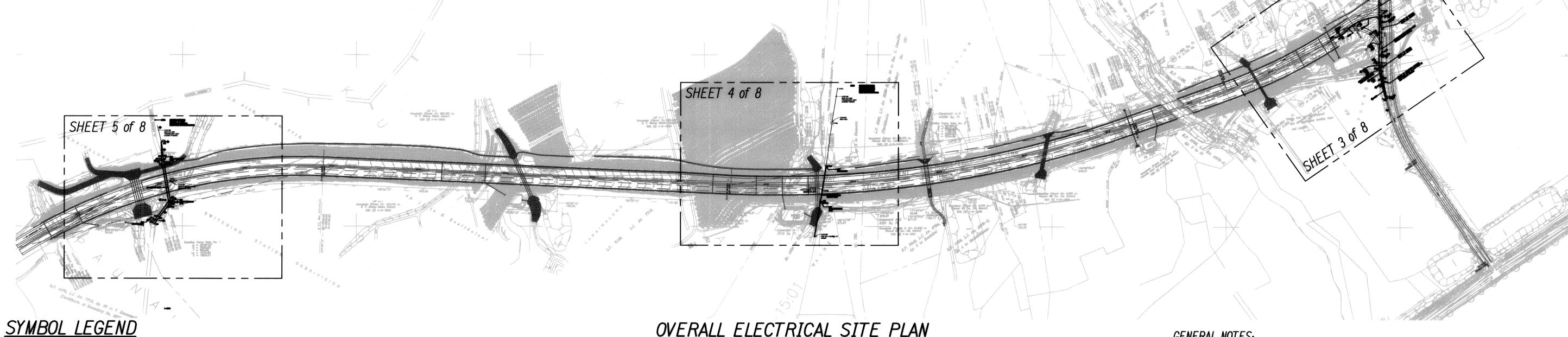
Should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentration of charcoal or shells are encountered during construction work, work shall cease in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall immediately contact the State Historic Preservation Division (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

A Utility Co. Standby Man is required to be at the site at the time any non-utility co. personnel will be breaking into or entering any facilities that contain energized utility co. equipment or cables.

Three working days advance notice is required by the utility co. for any inspection service or Standby Man.

Call MECO -- Ph: 871-7777

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
HAWAII	HAW.	NH-030-1(38)	2010	168	213	



New 250W HPS MECO St. Light Pole, Full Cut-off EP Electrical Primary Ducts, Qty. and Size as

- New 250W HPS MECO Pole Mounted Street Light, Full Cut-off & Shielded
 - New Pole
 - Existing Pole

♦ Shielded

- ⊢- New Anchor
- Stub-out Conduit, Cap, and Concrete Marker
- Handhole Group (existing)
- Handhole Group (new)
- New Transformer Pad (MECO)
- Existing Switchgear Pad (MECO)

- ES Electrical Secondary Ducts, Qty. and Size as
- Telephone Ducts, Qty. and Size as Indicated
- TV CATV Ducts, Qty. and Size as Indicated
- SL Street Light Ducts, Qty. and Size as Indicated
- E-2 Electrical 2'x4' Handhole, MECO Dwg. 30-2005.
- E-4 Electrical 4'x6' Handhole, MECO Dwg. 101024/101028/101029.
- E-5 Electrical 5'x7' Handhole, MECO Dwg. 102302/101028/101029.
- T-2 Telephone Pullbox, Type 435TB (2'x4') HTCO Dwg. 34056.
- T-3 Telephone Pullbox , Type 180045 (3'x5') HTCO Dwg. 34110A.
- C-2 CATV Pullbox, Similar to HTCO Type 435TB, HTCO Dwg. 34056.
- C-3 CATV Pullbox, Similar to HTCO Type 3660TB (3'x5')

OVERALL ELECTRICAL SITE PLAN

Scale: 1" = 300'-0"

PLAN NOTES:

- Existing utility pole to remain.
- Existing utility overhead lines to remain.
- Existing utility infrastructure to remain.
- A New pole and related anchor to be installed by MECO.
- E-3 Electrical 3'x5' Handhole, MECO Dwg. 101020/101028/101029. <5> Coordinate with MECO to remove UG conductors where applicable prior to removal or relocation of existing MECO pullboxes and related facilities.
 - 6 Connect re-routed conduit.
 - Equipment located in private property to be covered by easements (refer to MECO Dwg. No. 8-1-405).
 - <8> State owned street light.
 - <9> County owned street light.

MAUI COUNTY CODE CHAPTER 20.35

THE ELECTRICAL OUTDOOR LIGHTING SYSTEM AND EQUIPMENT HAVE BEEN REVIEWED BY ME AN TO THE BEST OF MY
KNOWLEDGE, THIS DESIGN SUBSTANTIALLY CONFORMS TO THE
REQUIREMENTS SPECIFIED IN MAUI COUNTY CODE CHAPTER 20.35
OUTDOOR LIGHTING.

MARK P. RICKARD NAME (PRINT)

STATE OF HAWAII P.E. LICENSE NUMBER

PROJECT ENGINEER

APPROVALS: MAUI ELECTRIC COMPANY DATE DATE HAWAIIAN TELCOM DATE OCEANIC TIME WARNER CABLE

NOTE: PLAN NOT FOR CONSTRUCTION UNLESS APPROVED

GENERAL NOTES;

- 1. Plans subject to review and approval of utility companies.
- 2. Grade beyond the MECO boxes shall not exceed 2" rise per foot within a 2'-0" wide area property side of each box, otherwise a retaining wall will be required.
- 3. Developer shall be responsible for the full cost to relocate MECO facilities as required.



SYMBOL LEGEND \notin NOTES

DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION OVERALL ELECTRICAL SITE PLAN

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1 Lahainaluna Rd. to Hokiokio Pl.

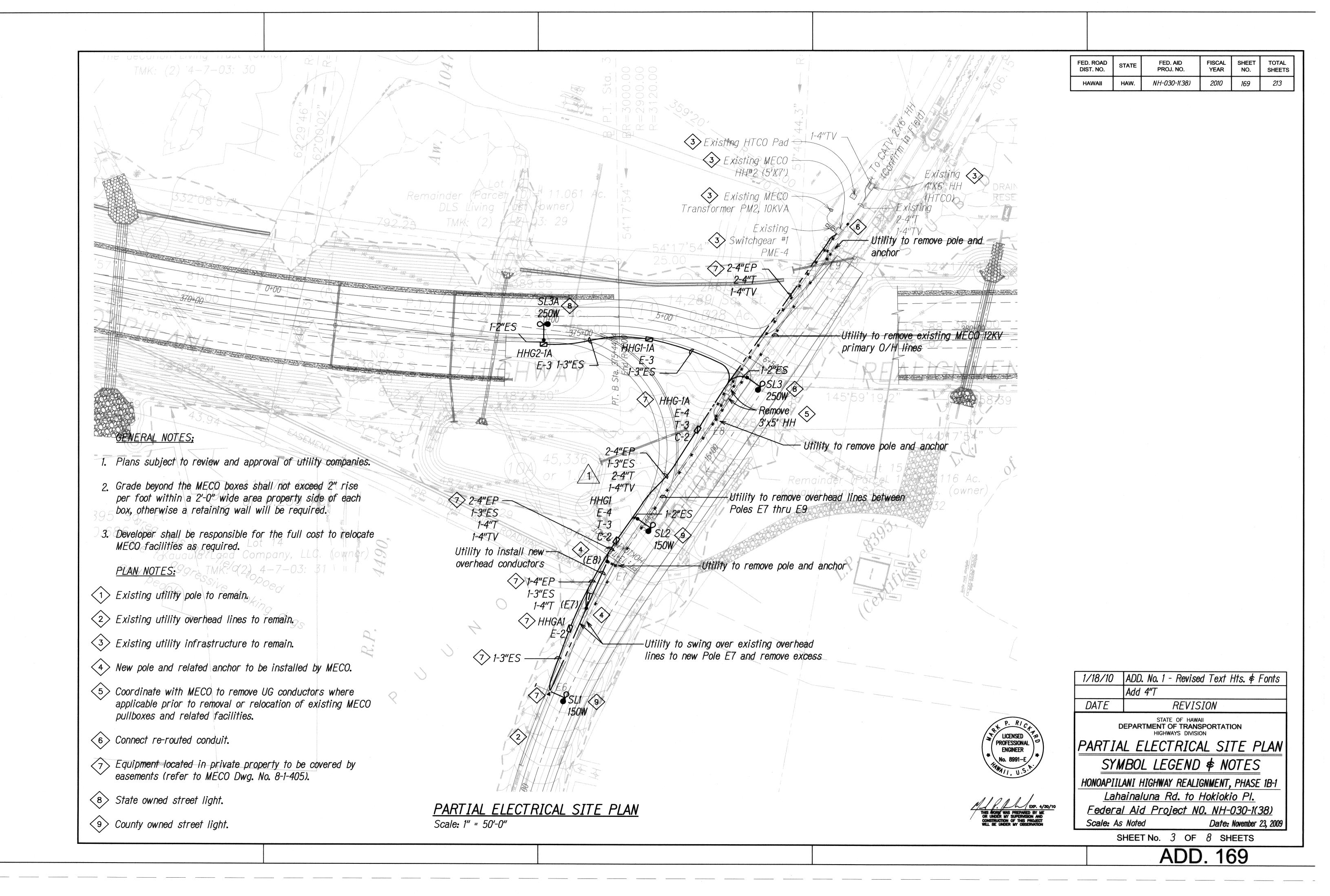
Federal Aid Project NO. NH-030-1(38) Scale: As Noted Date: November 23, 2009

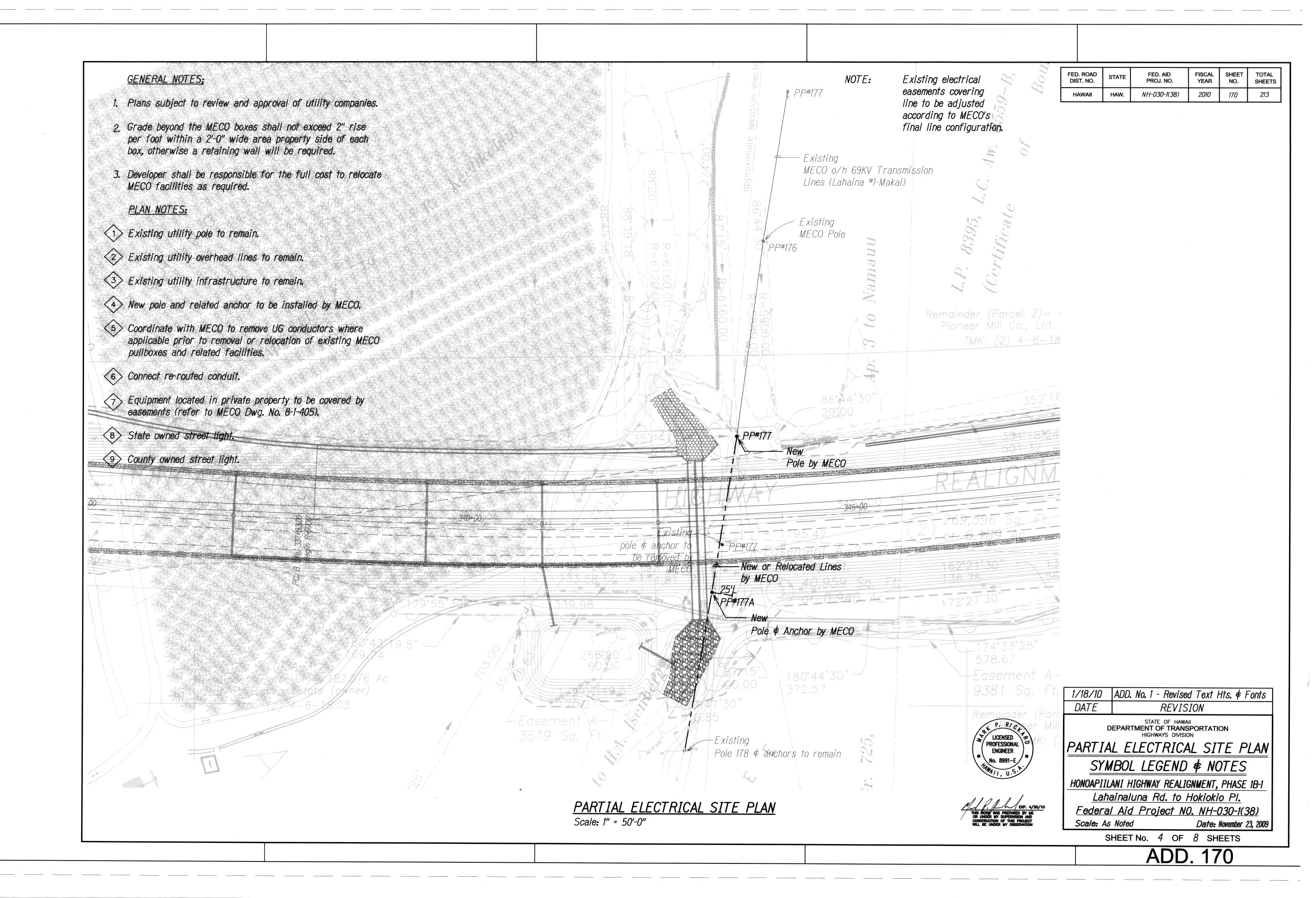
SHEET No. 2 OF 8 SHEETS

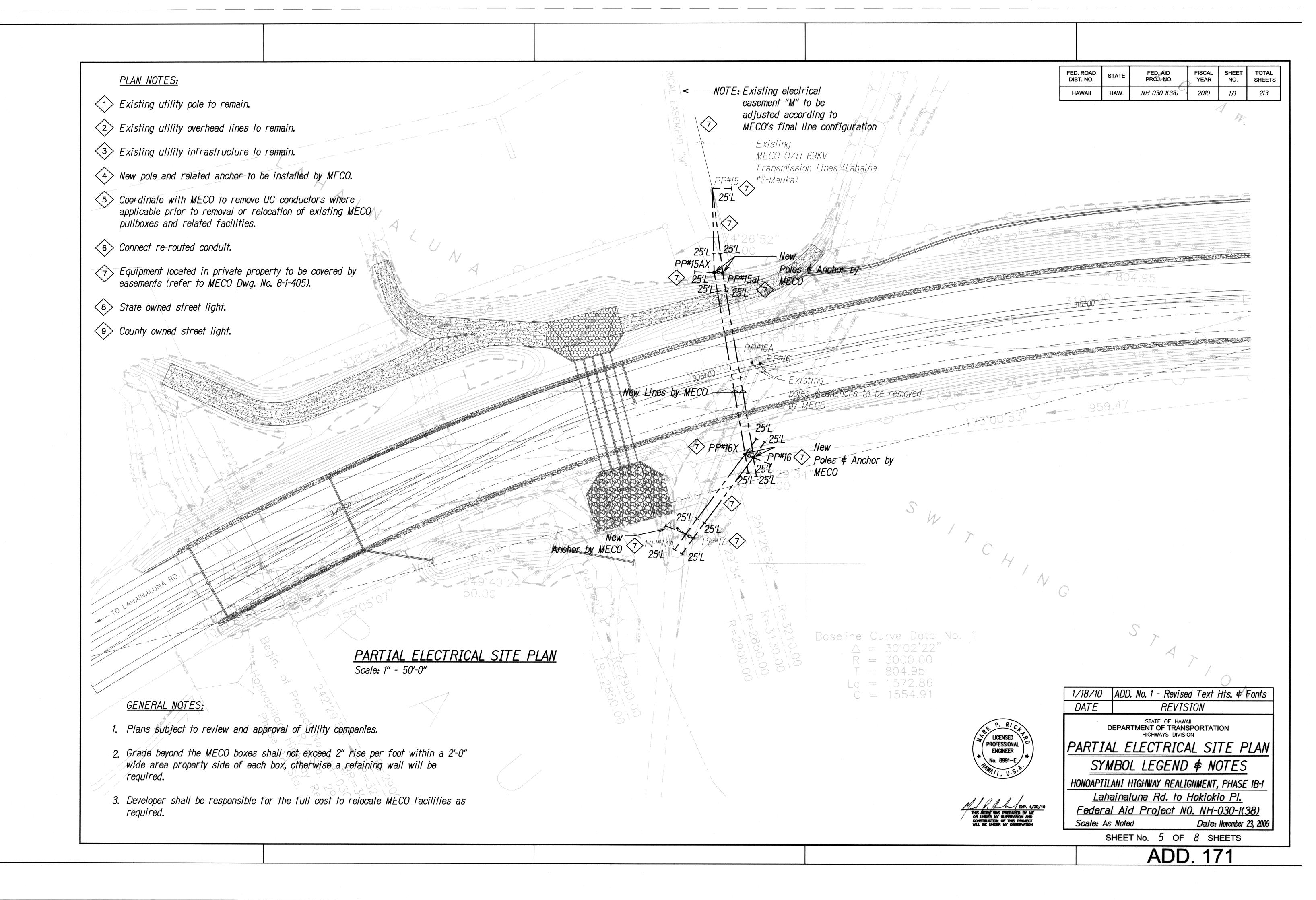
ADD. 168

ADD. No. 1 - Revised Text Hts. \$ Fonts

REVISION



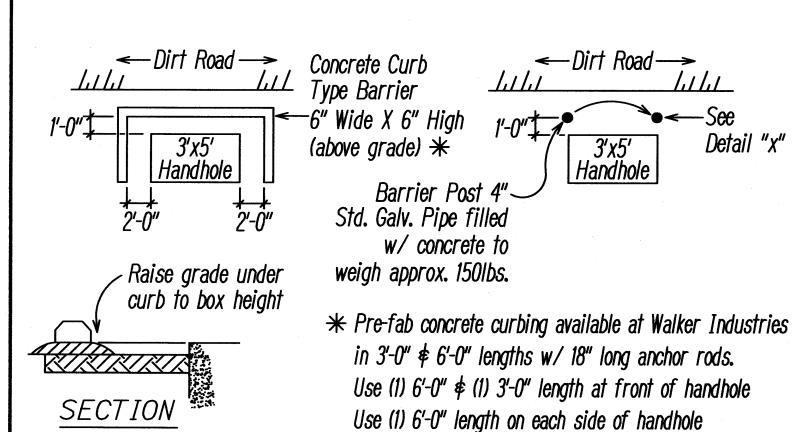




HAWAIIAN TELCOM GENERAL NOTES:

- Installation of HTCO and communications ductline system shall be in conformance the requirements of HTCO "Standard Specifications for Placing Underground" Telecommunications Systems", May 1992, unless otherwise modified in these plans. Check with HTCO prior to ordering material for the ductline system installation work.
- 2. The Contractor will provide a 5/8" x 8' galvanized ground rod in each handhole and/or pullbox and below a telephone cabinet. Minimum telephone cabinet size is 18" x 24" x 6".
- 3. All conduits will enter and leave the handhole/pullbox at 90 degrees to the face of the box.
- 4. The maximum size conduit that may enter the side wall of a handhole/pullbox is 2".
- 5. All conduits will be terminated with a bell end, grouted around the conduit. The bell end shall be flush with the inside face of the handhole/pullbox wall. No protrusion of the bell end will be permitted. The inside surface shall be finished smooth and flush with the existing wall surface.
- 6. All conduits shall have an 1800#, polyester mule tape (NEPTCO WP 1800P, HTCO Material Code No. 751154) installed throughout its entire length. All conduits shall be capped with a temporary cap to prevent the entry of foreign material during construction. The temporary caps shall remain installed on each conduit entering a handhole/pull box at the completion of the installation.
- 7. All conduit handhole/pull box installed by the Contractor for the use by HTCO will be subject to inspection. The inspection shall take place prior to back fill or concrete encasement. Inspections must be scheduled 3 working days in advance.
- 8. All handhole/pull boxes installed in non-sidewalk areas will require a 10" x 5" thick concrete collar around the entire frame, feathered to finished grade, placed on a compacted 6" base of sand or HTCO Type "B" backfill.
- 9. After ductline has been completed, a mandrel not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct shall be pulled through each duct.
- 10. A HTCO Standby Man is required to be at the job site anytime non-utility co. personnel will be dreaking into or entering any structures that contain communication facilities. Three working days notice is required for any inspection or Standby Man. Five working days advance notice is required for underground cable locating and marking.
- 11. All conduits will enter telephone cabinets from the extreme left knockout.
- 12. The Developer will be responsible for all revisions required on telephone design due to field conditions.
- 13. One piece 2' x 4' pullboxes are non HTCO standard and will not be accepted.
- 14. The approval of the subject drawing(s) is good for a period of 180 days. If construction activities have not commenced with the 180 days of HTCO approved date, the approval will be void. Should this occur the Contractor will be notified upon receipt for inspection of underground.

Not to Scale



HANDHOLE PROTECTION DETAILS

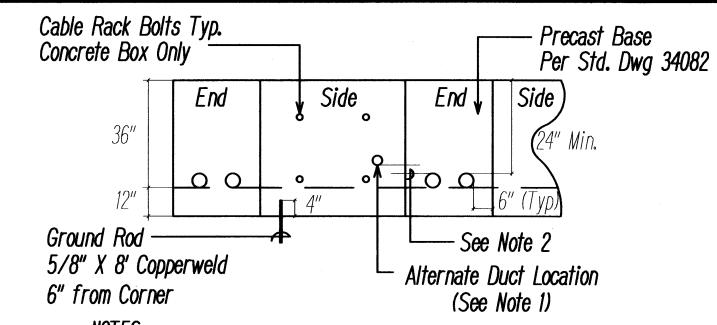
ELECTRICAL NOTES

- For the construction of the utility companies' pull boxes or handholes, refer to their appropriate standard drawings.
- The utility companies' standard drawings, specifications and construction practices indicated or referred to in the drawings and specifications shall be applicable to this project.
- The Contractor shall be responsible for coordinating and detailed scheduling of the site inspection work by utility companies and all other concerned parties and agencies.
- 4. The Contractor shall familiarize himself with the project's construction plans and shall coordinate his work with that of the General Contractor.
- Work under this contract shall include that of the electrical distribution system.
- 6. Install a polyolefin pull line in all ductlines.
- Comply with the latest applicable rules, regulations, requirements, and specifications of the local laws and ordinances, State and Federal laws, National Electrical Code, County of Maui Electrical Ordinance, State Fire Marshall, Underwriter's Laboratory, Electrical Safety Code, and Life Safety Code.
- Contractor to obtain and pay for the electrical permit as required by local ordinances and arrange for periodic inspection by local authorities as work progresses.
- Provide protection for material and equipment from loss, damage, corrosion and effects of moisture. Repair or replace damaged items at no additional cost to the Owner.
- 10. Visit project site prior to bid submittal to ascertain conditions and cost allowances that affect the proposed work.
- Install materials and equipment in workmanlike manner and in strict accordance with manufacturer's recommendations, unless otherwise specified or directed by the Engineer.
- 12. Materials and workmanship subject to inspection at any time by the owner or his representative; correct any work or materials not in accordance with drawings or found to be deficient or defective in a manner satisfactory to the Owner at no additional cost.
- 13. Provide all first quality, new materials, free from defects suitable for space provided and approved by UL where standards have been provided by that agency.
- 14. Provide standard materials and equipment of manufacturer's regularly engaged in the production of these products. Provide products of a single manufacturer where two or more units of the same call are required.

4" Standard Galvanized Pipe to be filled with concrete to weigh approximately 150 lbs.—— Minimum Finish -Grade Concrete — **NOTES:**

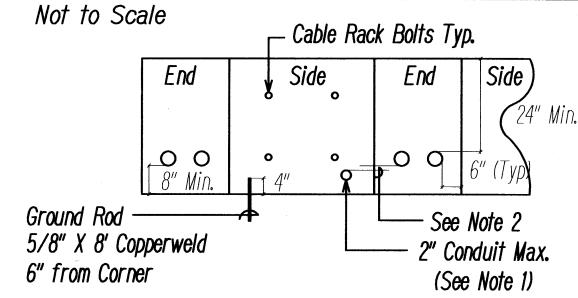
Barrier posts are to be painted yellow according to ANSI Spec. Z53.1 to comply with OSHA Standards for Coloring Code.

PIPE STANCHION DETAIL Not to Scale



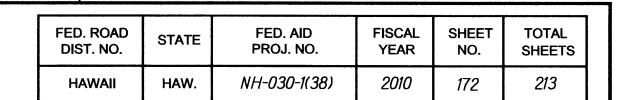
- A maximum of one 4"C. per quadrant will be permitted to enter the side wall of a pullbox. When 2"C. is used for service laterals two conduits may be permitted per Engineer specifications.
- 2. When a conduit enters the sidewall of a pullbox the conduit will be installed such that the difference in elevation between the outside surface of the conduit entering the end wall is 1".
- A maximum of 2-4"C. shall enter the wall end of a 3' x 5' pullbox. No conduit will be permitted to enter the pullbox at locations other than those specified by the Engineer.
- Conduits will enter the pullbox perpendicular to the wall at which they enter. No exceptions will be permitted.
- All conduits will be terminated with a bell end. The bell end shall be installed flush with the inside surface of the of the pullbox. No protrusion into the pullbox will be permitted.
- 6. All openings made in the pullbox for the purpose of installing conduit will be securely sealed with concrete grout. The grout will be a minimum of 4" thick and in no case less than the thickness of the pullbox wall. The inside of the box will be finished smooth and flush with existing surface.
- 7. One 5/8" x 8' copperciad ground rod will be installed in the pullbox as per the detail attached.

3' x 5' TEL. PULLBOX FOLD OUT DETAIL



- A maximum of one 2"C. per quadrant will be permitted to enter the side wall of a pullbox. When 2"C. is used for service laterals two conduits may be permitted per Engineer specifications.
- 2. When a conduit enters the sidewall of a pullbox the conduit will be installed such that the difference in elevation between the outside surface of the conduit entering the end wall is 1".
- 3. A maximum of 2-4"C. shall enter the wall end of a 2' x 4' pullbox. No conduit will be permitted to enter the pullbox at locations other than those specified by the Engineer.
- 4. Conduits will enter the pullbox perpendicular to the wall at which they enter. No exceptions will be permitted.
- 5. All conduits will be terminated with a bell end. The bell end shall be installed flush with the inside surface of the of the pullbox. No protrusion into the pullbox will be permitted.
- 6. All openings made in the pullbox for the purpose of installing conduit will be securely sealed with concrete grout. The grout will be a minimum of 4" thick and in no case less than the thickness of the pullbox wall. The inside of the box will be finished smooth and flush with existing surface.
- 7. One 5/8" x 8' coppercial ground rod will be installed in the pullbox as per the detail attached.

2' x 4' TEL. PULLBOX FOLD OUT DETAIL Not to Scale



ALONG OR WITHIN ROAD

BACKFILL TYPES:

TYPE "B" BACKFILL:

Type "A" - Beach sand, earth, or earth and gravel.

If earth and gravel, the maximum

rock size shall be 1" \$ the mixture

shall contain not more than 50% by

Beach sand, earth or earth and

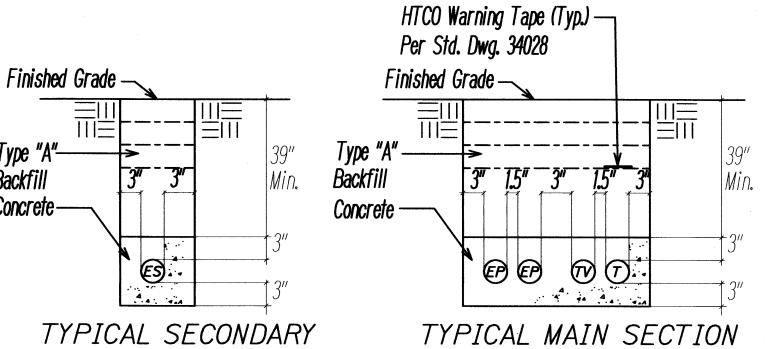
mixture must pass a 1/2" mesh

screen and contain not more than

gravel. If and gravel, the

20 of rocks particles

volume of rock particles.



DUCTLINE NOTES:

Type "A"—

Concrete —

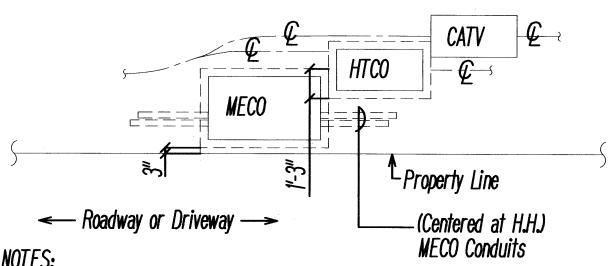
Backfill

Refer to electrical plan for duct sizes and quantities.

ALONG OR WITHIN ROAD

- Concrete encased conduits shall be PVC Type 'EB' or Sched. 40 PVC. ABS Type 'DB' pipes are also acceptable.
- 3. Direct buried conduits shall be PVC Sch. 40 pipes.
- Concrete encased conduits of like use may be separated by 1 1/2". A minimum of 3" separation must be maintained between electrical ducts and tel/tv ducts.
- 5. Direct buried conduits of like use shall be separated by a minimum of 3". A minimum separation of 12" must be maintained between direct buried electrical conduits and tel/tv conduits.
- Concrete comprehensive strength shall be 2,500 psi in 28 days.
- Ductline trenches may be backfilled 24 hours after concrete is poured.
- Contractor shall coordinate ductline and trenching details with utility company's project plan.
- 9. Reference specification: MECO Spec. CS7001 with latest revision.

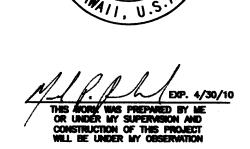
TYPICAL DUCTLINE AND TRENCHING DETAILS Not to Scale



1. Handhole sizes per plan

TYPICAL HANDHOLE GROUPING Not to Scale





ADD. No. 1 - Revised Text Hts. ♦ Fonts DATE REVISION STATE OF HAWAII

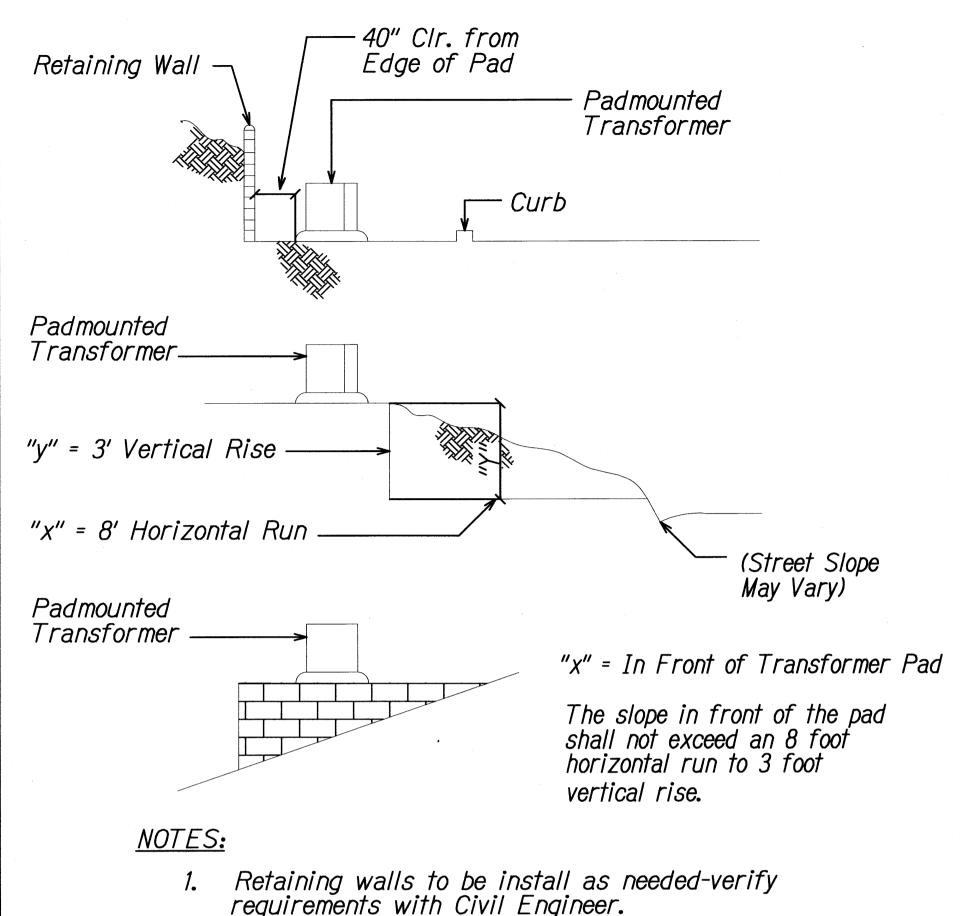
DEPARTMENT OF TRANSPORTATION

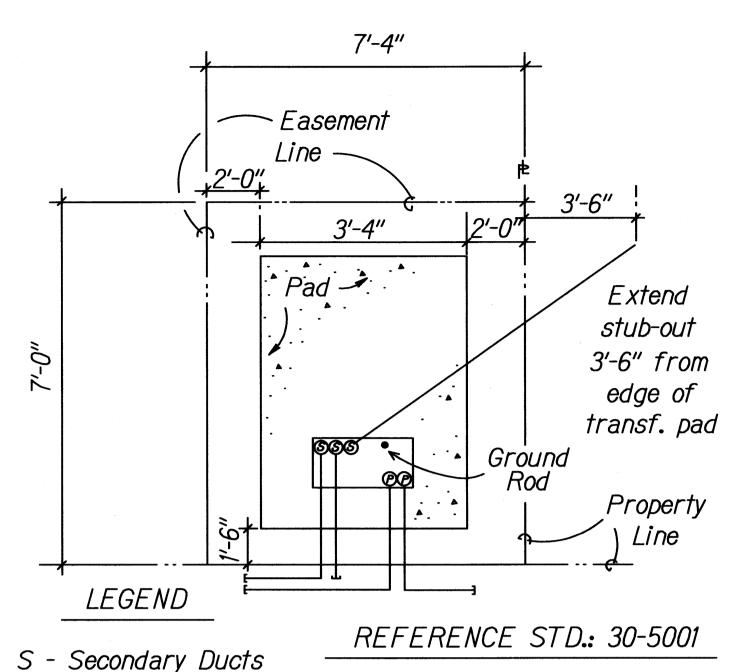
HIGHWAYS DIVISION DETAILS & NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1 Lahainaluna Rd. to Hokiokio Pl. Federal Aid Project NO. NH-030-1(38) Scale: As Noted Date: November 23, 2009

SHEET No. 6 OF 8 SHEETS

ADD. 172

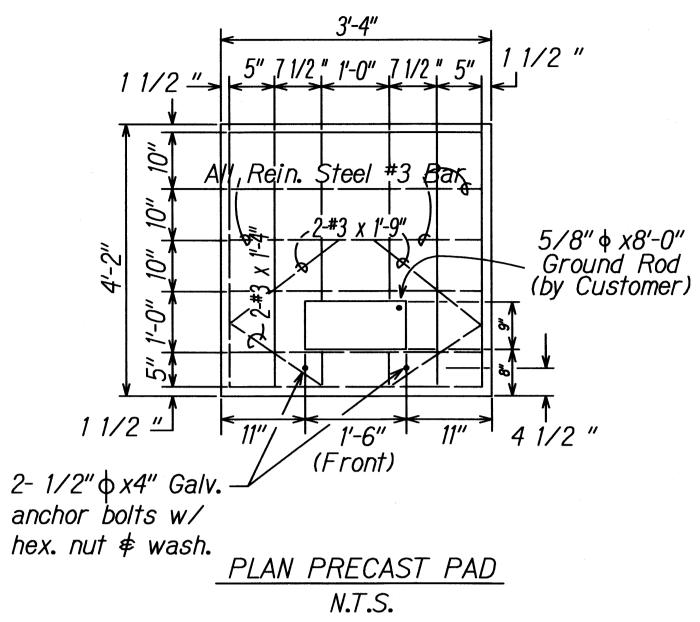


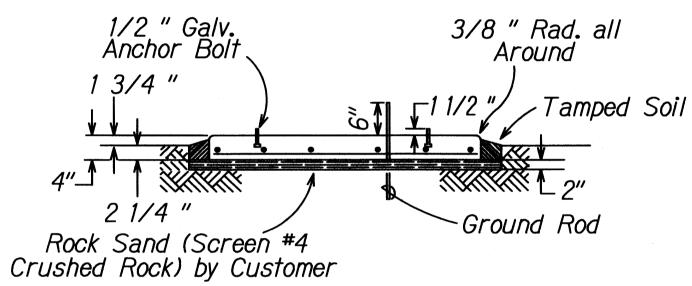


P - Primary Ducts

1 \(\phi\) TRANSFORMER PAD/CONDUIT LAYOUT

N.T.S.





ELEVATION
N.Ţ.S.

CONCRETE PAD FOR PADMOUNT TRANSFORMER Not to Scale

CONTRACTOR NOTES:

Not to Scale

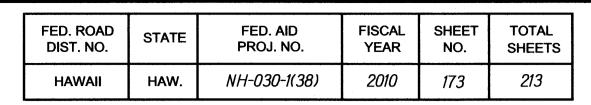
The Contractor is to furnish materials and construct the facilities for the padmount transformer including the concrete pad, primary and secondary ducts and anchor bolts. Concrete curb and rock fill around the pad, when required, shall also be furnished and installed by the Contractor.

TRANSFORMER MOUNTING DETAILS

- 2. Grade sufficiently around the lot site to prevent future filling in of the lot. When required, the Contractor shall construct a retaining wall of suitable material to prevent future filling in of the lot. Ref. 3/E-3.4
- 3. Compact by rolling the site in accordance with City and County Standard Specifications for Compacting Sidewalk Areas.
- 4. MECO shall have 24-hour access to the transformer without going through locked areas.
- 5. MECO shall have a minimum of 10 feet wide vehicular access to the transformer installation.
- 6. Bends due to changes of grade are to have minimum radius of 20 feet. The duct is to be PVC schedule 40 pipe. The Contractor is to install duct from the pad to the riser pole or handhole as designated on the plan.

- One copperweld ground rod 5/8 inch diam. X 8 feet long is to be provided and installed by the Contractor. The rod is to extend 6 inches above the finished pad. Tie the rod to a water pipe with #1/0 copper wire. This tie may be eliminated where the water pipe is more than 25 feet away.
- 8. No permanent or temporary structure or object shall be erected or placed within two feet of the edge of the concrete pad and 8 feet in front.
- 9. When the concrete pad is located in the vicinity of existing or future combustible material, combustible buildings, the Contractor shall provide safeguards a outlined in the NEC latest revision subject to the approval of the City & County building inspectors.
- 10. The front side of the concrete pad shall always be located to face the vehicular access and shall be free of any obstructions at all times.
- When parts of building structures are located directly over the concrete pad, a minimum clearance of 9 feet from the pad grade is required. The customer shall provide adequate safeguards as outlined in the NEC, latest revision, and is subject to approval of the City & County building inspectors.

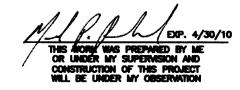
- 12. All ductlines shall contain a "Mule Tape" Pull Line (WESCO Cat. #072592000 or equivalent).
- 13. After the conduits are installed, the Contractor shall pass a smooth bullet-shaped wooden test mandrel through the entire length of each conduit to test for freedom of burrs and obstructions.
- 14. Select Backfill: As specified in this manual.
- 15. Inspection: Three working days advance notice required by MECO for any inspection service.



NOTES:

- . Compressive strength of concrete shall be 3,000 P.S.I. at 28 days
- 2. Top of pad shall be smooth, true, level and other exposed surfaces shall be smooth and free from defects.
- 3. Concrete shall be cured by approved method (ASTM A15).
- 4. Reinf. bars shall be clean deformed bars.
- 5. Precast pad made by Ameron, Maui.
- 6. All items shall be furnished in place complete by customer.
- 7. Pad site shall be graded and compacted. Compaction shall meet the requirements of the County of Maui "Standard Specifications for Compacting Sidewalk Area." The higher front or sidewalk corner shall match the adjacent sidewalk grade. Slope shall be towards the sidewalk or road, not exceeding 1/2" per foot.
- 8. Area surrounding the transformer site shall be sufficiently graded or a suitable retaining wall built to prevent future filling in of the lot.
- 9. An area 3'-8" x 4'-6" and 2" deep shall be excavated after compaction. This area shall be filled with the 2" base material and compacted (see elevation).
- 10. After the conduits are installed, the customer shall pass a smooth bullet-shaped wooden test mandrel through the entire length of each conduit to test for freedom of burrs and obstructions.





1/18/10 ADD. No. 1 - Revised Text Hts. \$ Fonts

DATE REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

DETAILS \$ NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1

Lahainaluna Rd. to Hokiokio Pl.

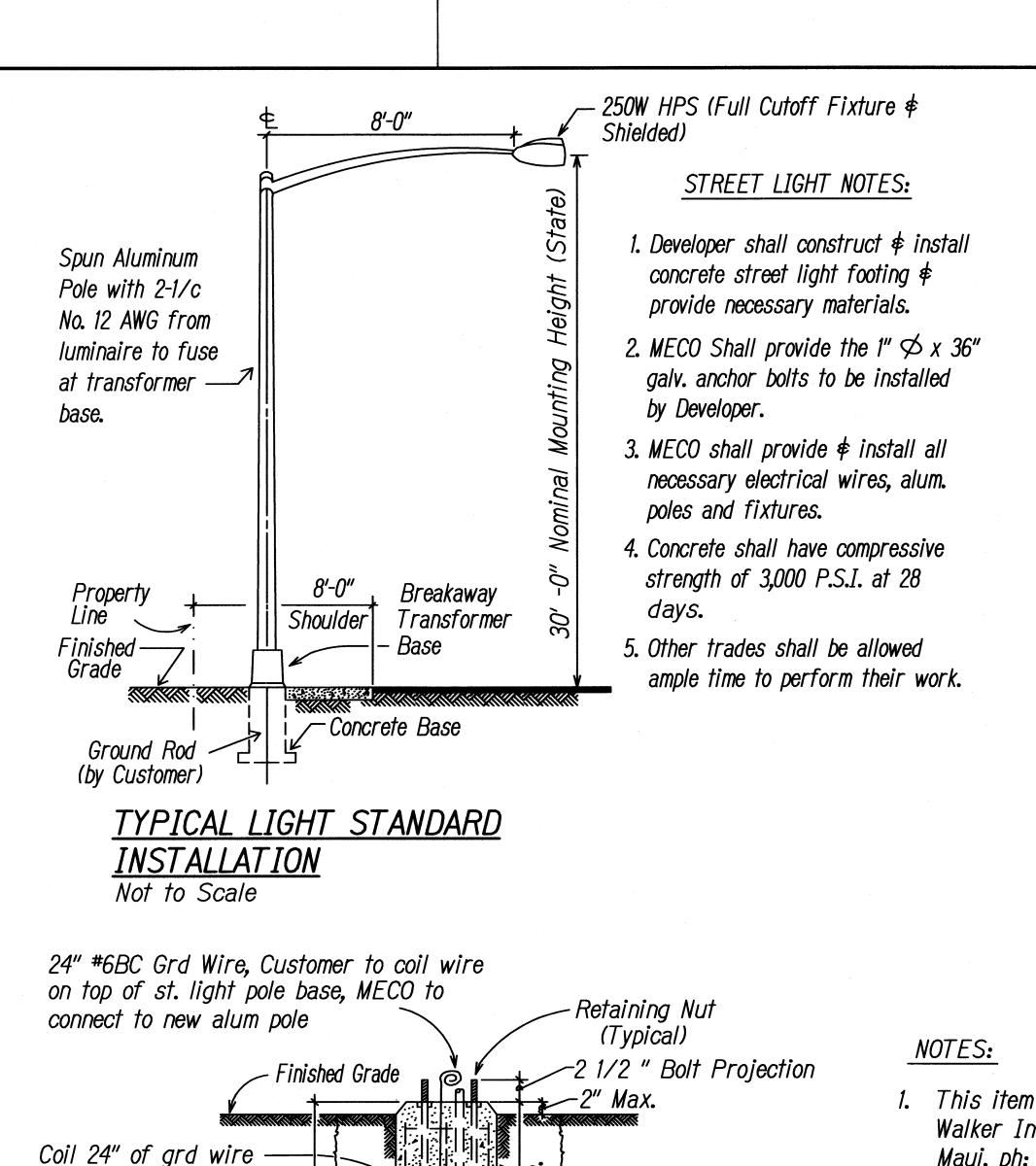
Federal Aid Project NO. NH-030-1(38)

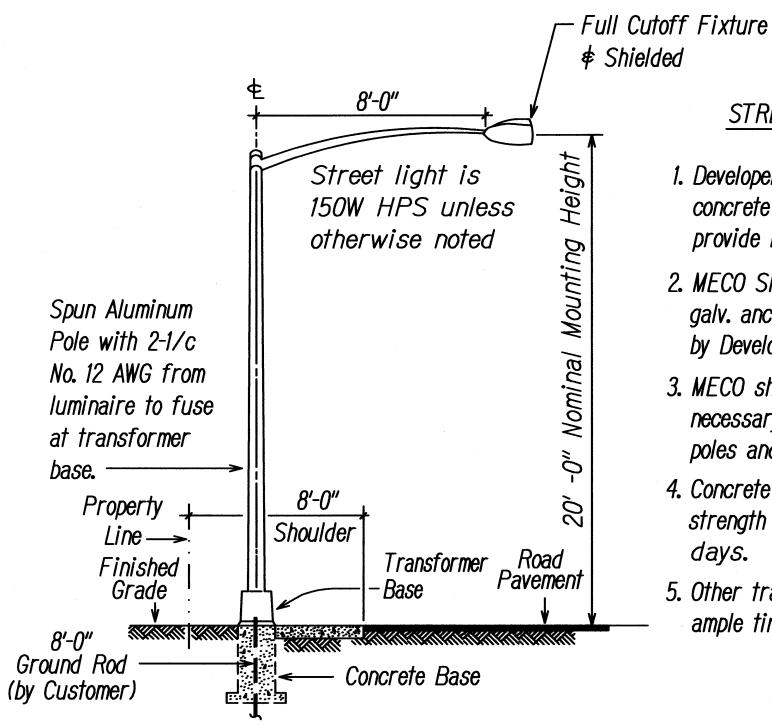
SHEET No. 7 OF 8 SHEETS

Scale: As Noted

ADD, 173

Date: November 23, 2009

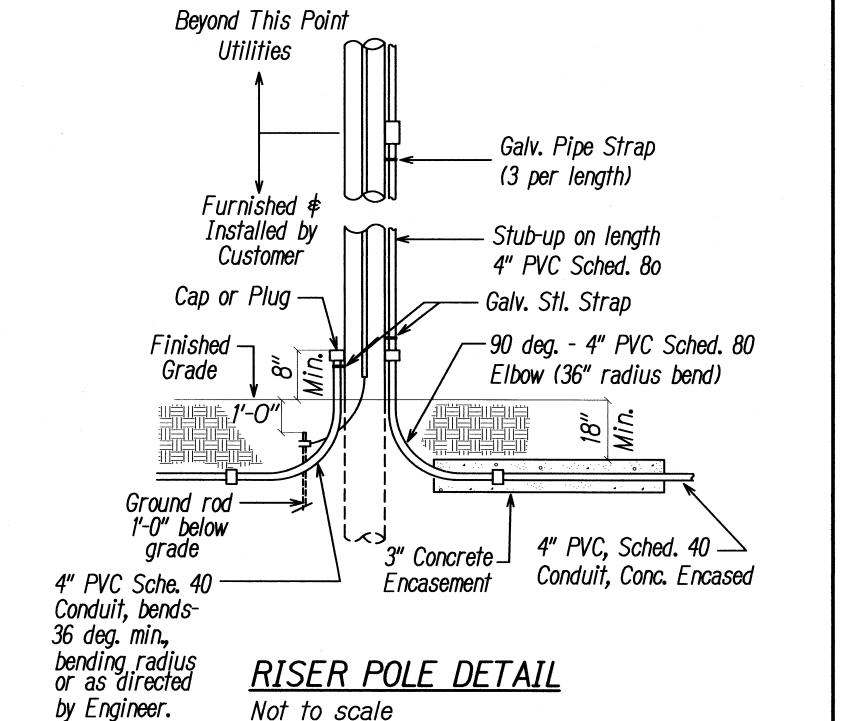




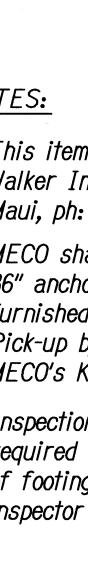
STREET LIGHT NOTES:

- 1. Developer shall construct \$\phi\$ install concrete street light footing \$ provide necessary materials.
- 2. MECO Shall provide the 1" $\not \sim x$ 36" galv. anchor bolts to be installed by Developer.
- 3. MECO shall provide \$ install all necessary electrical wires, alum. poles and fixtures.
- 4. Concrete shall have compressive strength of 3,000 P.S.I. at 28 days.
- 5. Other trades shall be allowed ample time to perform their work.

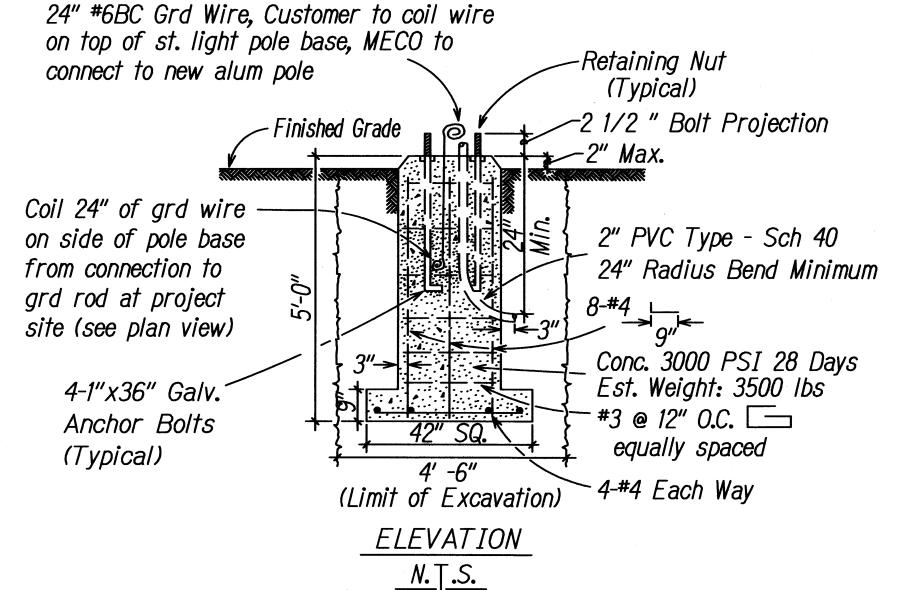
FED. ROAD DIST. NO. FISCAL YEAR FED. AID SHEET PROJ. NO. NO. SHEETS NH-030-1(38) 2010 174 213 HAW.



TYPICAL LIGHT STANDARD SINGLE FIXTURE INSTALLATION Not to Scale



- 1. This item prefabricated by Walker Industries at Ameron Maui, ph: 877-5068
- MECO shall provide 1" dia. X 36" anchor bolts (4 each) as furnished by Manufacturer. Pick-up by Customer at MECO's Kahului warehouse.
- 3. Inspection by MECO inspector required prior to fabrication of footing, contact MECO inspector (ph: 871-8461)

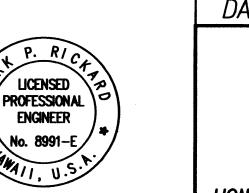


<u>N.</u> T.S. 4-1" Dia. X 36" Galv. 42" SQ. Anc. Bolts W/ 24" SQ. Retaining Nuts 2" PVC-type Sch. 40 24" Radius Bend (min.) 15" Dia. -Bolt Circle 5/8 " Dia. X 8'-0" Copper #6BC Grd Wire -Grd Rod And Clamp By Customer furnished and installed by Customer including Coil 24" #6BC grd wire connection Grd Wire at project site.

PRECAST CONCRETE FOOTING STREET LIGHT POLE BASE TRANSFORMER TYPE (COUNTY ROADWAY)



- 1. This item prefabricated by Walker Industries at Ameron Maui, ph: 877-5068
- 2. MECO shall provide 1" dia. X 36" anchor bolts (4 each) as furnished by Manufacturer. Pick-up by Customer at MECO's Kahului warehouse.
- Inspection by MECO inspector required prior to fabrication of footing, contact MECO inspector (ph: 871-8461)

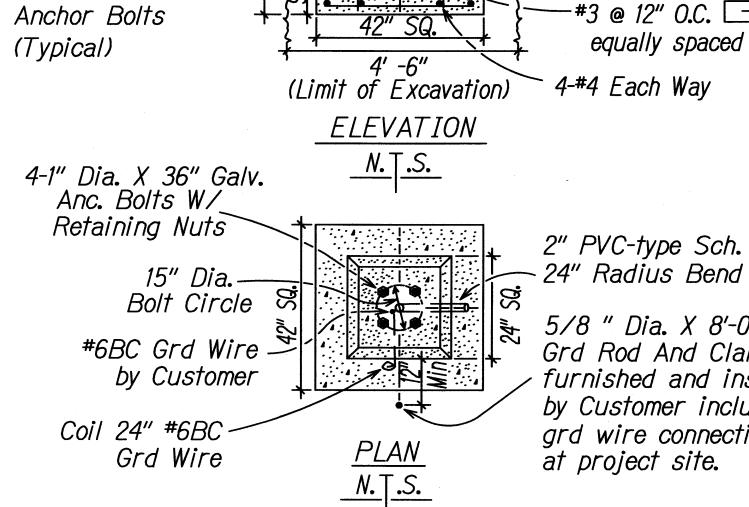


ADD. No. 1 - Revised Text Hts. \$ Fonts DATE REVISION STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION DETAILS & NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1 Lahainaluna Rd. to Hokiokio Pl. Federal Aid Project NO. NH-030-1(38) Scale: As Noted Date: November 23, 2009

SHEET No. 8 OF 8 SHEETS

ADD. 174



on side of pole base

from connection to

grd rod at project

site (see plan view)

4-1"x36" Galv.

2" PVC-type Sch. 40 24" Radius Bend (min.)

2" PVC Type - Sch 40

24" Radius Bend Minimum

Conc. 3000 PSI 28 Days

Est. Weight: 3500 lbs

−#3 @ 12" O.C. 🗀

5/8 " Dia. X 8'-0" Copper Grd Rod And Clamp furnished and installed by Customer including grd wire connection at project site.

PRECAST CONCRETE FOOTING STREET LIGHT POLE BASE TRANSFORMER TYPE-WITH BREAKAWAY COUPLING (STATE HIGHWAY)