

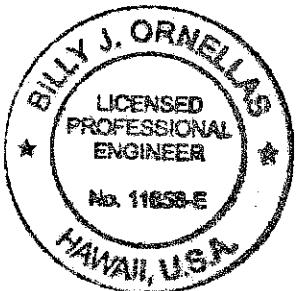
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0450(8)	2011	84	93

ELECTRICAL CONSTRUCTION NOTES

- A. All work shall be done in accordance with the "Hawaii Standard Specifications For Road, Bridge, and Public Works Construction", 2005, State of Hawaii Department of Transportation, Highways Division, except as modified herein or in the Special Provisions.
- B. The Contractor shall verify with the respective utility companies and Government agencies the locations of all electric, telephone, roadway light, water, sewer, drain and other lines crossing the excavation path or in excavation areas.
- C. The Contractor shall notify all affected utility companies and Government agencies of their intent to begin construction on any intersection or street at least two (2) weeks prior to the start of such construction.
- D. Underground utilities shown hereon are for information only. No guarantee is made on the accuracy or completeness of said information.
- E. Where necessary, reconstruction of sidewalk, gutter and driveway areas shall conform to the standard details of the governmental agency having jurisdiction over the work.
- F. The Contractor shall be responsible for removal of all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.
- G. The Contractor, at his own expense, shall keep the project area free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health.

ELECTRICAL SYMBOLS		
EXIST	NEW	DESCRIPTION
○	○	Utility Pole
----->	——>	Guy Anchor
--e/OH--	E/OH	Overhead Electric Utility Cable
	T/OH	Temporary Overhead Electric Utility Cable
----e----	-----	Conduit Concealed Below Grade

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Roadway	Text for as-built posting



*B.O.*  
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL SYMBOLS  
GENERAL NOTES  
KAMEHAMEHA V HIGHWAY  
Kawela Bridge Replacement  
Federal Aid Project No. BR-0450(8)

Scale: As Shown      Date: OCTOBER 2010

SHEET No. E-1 OF 7 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0450(8)	2011	85	93

MAUI ELECTRIC COMPANY NOTES

1. LOCATION OF MECO FACILITIES

The Location Of MECO's Overhead Facilities Shown On The Plans Are From Existing Records With Varying Degrees Of Accuracy And Are Not Guaranteed As Shown. The Contractor Shall Verify In The Field The Locations Of The Facilities And Shall Exercise Proper Care In Excavating And Working In The Area. Wherever Connections Of New Utilities To Existing Utilities And Utility Crossings Are Shown, The Contractor Shall Expose The Existing Lines At The Proposed Connections And Crossings To Verify The Depths Prior To Excavation For The New Lines. The Contractor Shall Be Responsible For Any Damages To MECO's Facilities Whether Shown Or Not Shown On The Plans.

2. COMPLIANCE WITH HAWAII OCCUPATIONAL SAFETY AND HEALTH LAWS

The Contractor Shall Comply With The State Of Hawaii's Occupational Safety And Health Laws And Regulations, Including Without Limitation, Those Related To Working On Or Near Exposed Or Energized Electrical Lines And Equipment.

3. EXCAVATION PERMIT

The Contractor Shall Obtain An Excavation Permit From MECO Two Weeks Prior To Starting Construction. Please Refer To Our Request Number At That Time.

4. CAUTION!!! ELECTRICAL HAZARD!!!

Existing MECO Overhead Lines Are Energized And Will Remain Energized During Construction Unless Prior Special Arrangements Have Been Made With MECO. Only MECO Personnel Are To Handle These Energized Lines And Erect Temporary Guards To Protect These Lines From Damage. The Contractor Shall Work Cautiously At All Times To Avoid Accidents And Damage To Existing MECO Facilities Which Can Result In Electrocutation.

5. OVERHEAD LINES

State Law Requires That A Worker And The Longest Object He Or She May Contact Cannot Come Closer Than A Minimum Radial Clearance Of 10 Feet When Working Close To Or Under Any Overhead Lines Rated 50KV And Below. For Each Additional 1KV Above 50KV, An Additional 0.4 Inch Shall Be Added To The 10-foot Clearance Requirement. The Preceding Information On Line Clearance Requiements Is Provided As A Convenience And It Is The Contractor's Responsibility To Be Informed Of And Comply With Any Revisions Or Amendments To The Law.

Should The Contractor Anticipate That His Work Will Result In The Need To Encroach Within The Minimum Required Clearance At Any Time, The Contractor Shall Notify MECO At Least Four (4) Weeks Prior To The Planned Encroachment So That, If Feasible, The Necessary Protections (e.g. Relocate, De-energize, Or Blanket MECO Lines) Can Be Put In Place. MECO's Cost Of Safeguarding Its Lines Will Be Charged To The Contractor.

Contact MECO's Engineering Department At 871-2390 For Assistance In Identifying And Safeguarding Overhead Power Lines.

Refer To Section X Of MECO's Electrical Service Installation Manual For Additional Guidelines When Working Around MECO's Facilities. A Copy May Be Obtained From MECO's Engineering Department.

6. POLE BRACING

A Minimum Clearance Of 10 Feet Must Be Maintained When Excavating Around Utility Poles And/or Their Anchor System To Prevent Weakening Or Pole Support Failure. Should Work Require Excavating Within 10-feet Of A Pole And/or Its Anchor System, The Contractor Shall Protect, Support, Secure, And Take All Other Precautions To Prevent Damage To Or Leaning Of These Poles. The Contractor Is Responsible For All Associated Costs To Brace, Repair, Or Straighten Poles. All Means Of Structural Support For The Poles Proposed By The Contractor Shall First Be Reviewed By MECO Before Implementation. For Pole Bracing Instructions, The Contractor Shall Request Pole Bracing Instructions From MECO A Minimum Of Two (2) Weeks In Advance.

7. EXCAVATIONS

When Trench Excavation Is Adjacent To Or Beneath MECO's Existing Structures Or Facilities, The Contractor Is Responsible For:

- A) Sheetting And Bracing The Excavation And Stabilizing The Existing Ground To Render It Safe And Secure And To Prevent Possible Slides, Cave-ins, And Settlements.
- B) Properly Supporting Existing Structures Or Facilities With Beams, Struts, Or Under-pinnings To Fully Protect It From Damage.
- C) Backfilling With Proper Backfill Material Including Special Thermal Backfill Where Existing (refer To Engineering Department For Thermal Backfill Specifications).

8. RELOCATION OF MECO FACILITIES

Any Work Required To Relocate Or Modify MECO Facilities Shall Be Done By MECO, Or By The Contractor Under MECO's Supervision. The Contractor Shall Be Responsible For All Coordination, And Shall Provide Necessary Support For MECO's Work, Which May Include, But Not Limited To, Excavation And Backfill, Permits And Traffic Control, Barricading, And Restoration Of Pavement, Sidewalks, And Other Facilities.

All Costs Associated With Any Relocation Or Modification (either Temporary Or Permanent) For The Convenience Of The Contractor, Or To Enable The Contractor To Perform His Work In A Safe And Expedious Manner In Fulfilling His Contract Obligations Shall Be Borne By The Contractor.

9. CONFLICTS

Any Redesign Or Relocation Of MECO's Facilities Not Shown On The Plans May Be Cause For Lengthy Delays. The Contractor Acknowledges That MECO Is Not Responsible For Any Delay Or Damage That May Arise As A Result Of Any Conflicts Discovered Or Identified With Respect To The Location Or Construction Of MECO's Electrical Facilities In The Field, Regardless Of Whether The Contractor Has Met The Requested Minimum Advance Notices. In Order To Minimize Any Delay Or Impact Arising From Such Conflicts, MECO Should Be Notified Immediately Upon Discovery Of Identification Of Such Conflict.

10. DAMAGE TO MECO FACILITIES

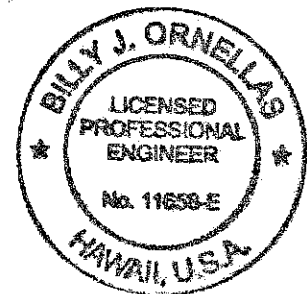
The Contractor Shall Be Responsible For The Protection Of All MECO Surface And Subsurface Utilities And Shall Be Responsible For Any Damages To MECO's Facilities As A Result Of His Operations. The Contractor Shall Immediately Report Such Damages To MECO. Repair Work Shall Be Done By MECO Or By The Contractor Under MECO's Supervision. Cost For Damages To MECO's Facilities Shall Be Borne By The Contractor.

11. MECO STAND-BY PERSONNEL

The Contractor May Request MECO To Provide An Inspector To Stand-by During Construction Near MECO's Facilities. The Cost Of Such Inspection Will Be Charged To The Contractor.

The Contractor Shall Call MECO A Minimum Of 5 Working Days In Advance To Arrange For MECO Stand-By Personnel.

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Roadway	Text for as-built posting



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HIGHWAYS DIVISION




MECO NOTES

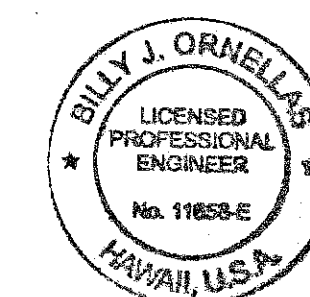
KAMEHAMEHA V HIGHWAY
Kawela Bridge Replacement
Federal Aid Project No. BR-0450(8)
Scale: As Shown Date: OCTOBER 2010

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13. *The Contractor Shall Indemnify, Defend And Hold Harmless MECO From And Against All Losses, Damages, Claims, And Actions, Including But Not Limited To Reasonable Attorney's Fees And Costs Based Upon Or Arising Out Of Damage To Property Or Injuries To Persons, Or Other Tortious Acts Caused By Contributed To By Contractor Or Anyone Acting Under Its Direction Or Control Or On Its Behalf; Provided Contractor's Indemnity Shall Not Be Applicable To Any Liability Based Upon The Sole Negligence Of MECO.*

<u>Structure Type</u>	<u>Minimum Clearance (inches)</u>
Water Lines, Parallel	36(A)
Water Lines, Crossing	12(B)
Sewer Lines, Parallel	36(C)
Sewer Lines, Crossing	24(D)
Drain Lines, Parallel	12
Drain Lines, Crossing	6(E)
Electrical and Gas Lines, Parallel	12
Electrical and Gas Lines, Crossing	12
Telephone Lines, Parallel	6(E)
Telephone Lines, Crossing	6(E)
Chevron Oil Lines, Parallel	36
Chevron Oil Lines, Crossing	48 BELOW OIL LINE (F)

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posting |



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MECO NOTES

Scale: As Shown Date: OCTOBER 2010

SHEET No. *F-3* OF 7 SHEETS

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HAWAIIAN TELCOM TELEPHONE COMPANY NOTES:

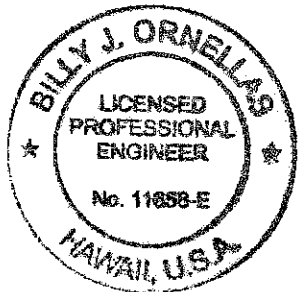
- 1. The Location Of Hawaiian Telcom's Existing Facilities Are Approximate Only. The Contractor Shall Exercise Extreme Caution And Shall Maintain Proper Clearances Whenever Construction Crosses Or Is In Close Proximity To Hawaiian Telcom's Facilities. The Contractor Shall Verify Their Locations And Shall Be Liable For Any Damages To Hawaiian Telcom Facilities. Any Damages Shall Be Reported Immediately To Hawaiian Telcom's During During Normal Work Day Hours, Monday Thru Friday, Except Holidays.
- 2. The Contractor Shall Take Necessary Precautions Not To Damage Existing Cables. Any Work Involving Existing Hawaiian Telcom Cables Shall Be Done In The Presence Of A Hawaiian Telcom Inspector Or Designated Representative.
- 3. The Contractor Shall Notify Hawaiian Telcom's Inspector Or Designated Representative a Minimum of 72 Hours Prior To Bracing Of Hawaiian Telcom's Structures Or Facilities.
- 4. Should It Become Necessary To Relocate Any Hawaiian Telcom Facilities, The Work Shall be Done By Hawaiian Telcom. The The Contractor Shall Be Responsible For All Coordination And Costs Associated With The Relocation.
- 5. Should Field Conditions And Construction Procedures Require That Utility Poles Be Braced, The Contractor Shall Contact Hawaiian Telcom For Pole Bracing Instructions A Minimum Of 72 Hours In Advance Of Actual Required Bracing.

OCEANIC TIME WARNER CABLE NOTES:

- 1. The Contractor Shall Take Necessary Precaution Not To Damage Existing Cables. Any Work Involving Existing Cables Shall Be Done In The Presence Of The Oceanic's Inspector Or His Representative.
- 2. Any Work Required To Relocate CATV Facilities Shall Be Done By Oceanic Time Warner Cable And The Contractor Shall Be Responsible For All Coordination Requirements And Associated Costs.
- 3. Any Damage To Oceanic's Facilities Shall Be Reported To Mr. Bill Hanke at (808) 877-4425 ext. 838.
- 4. All Construction Must Be Inspected And Approved By Oceanic Time Warner Cable Prior To The Installation Of Any Of Its Facilities And The Energizing Of Its System.
- 5. Contractor And/Or Customer Shall Provide Oceanic Time Warner Cable With Sufficient Installation Time In Their Occupancy Time Table.

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HAWAII	HAW.	BR-0450(8)	2011	87	93

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Roadway	Text for as-built posting



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HIGHWAYS DIVISION

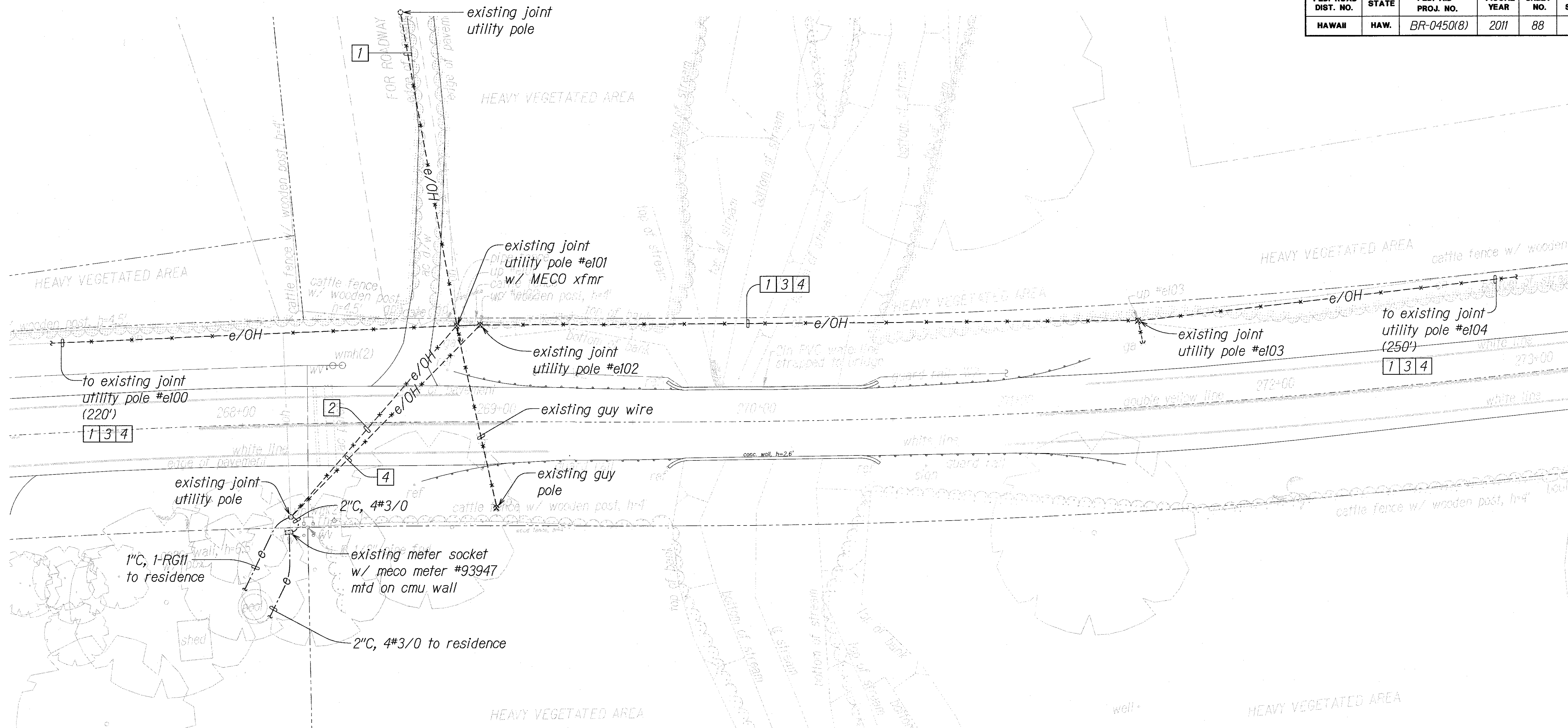
HAWAIIAN TELCOM NOTES  
OCEANIC CABLE NOTES  
KAMEHAMEHA V HIGHWAY  
Kawela Bridge Replacement  
Federal Aid Project No. BR-0450(8)

Scale: As Shown      Date: OCTOBER 2010

SHEET No. E-4 OF 7 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0450(8)	2011	88	93



# Notes:

- "X" Thru Item Denotes "Existing Item To Be Removed".
- Coordinate All Utility Work With Respective Utility Companies.
- 1

MECO Primary Electric Line.
- 2

MECO Secondary Electric Line.
- 3

Hawaiian Telcom Telephone Line.
- 4

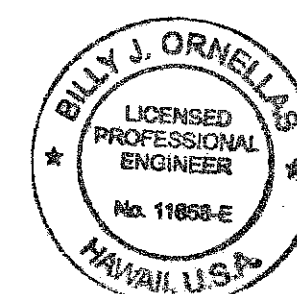
Oceanic Time Warner Cable CATV line.

## ELECTRICAL DEMOLITION PLAN

Scale: 1"=20'

20' 10' 0 20' 40' 60'  
Scale: 1"=20'  
Graphic Scale

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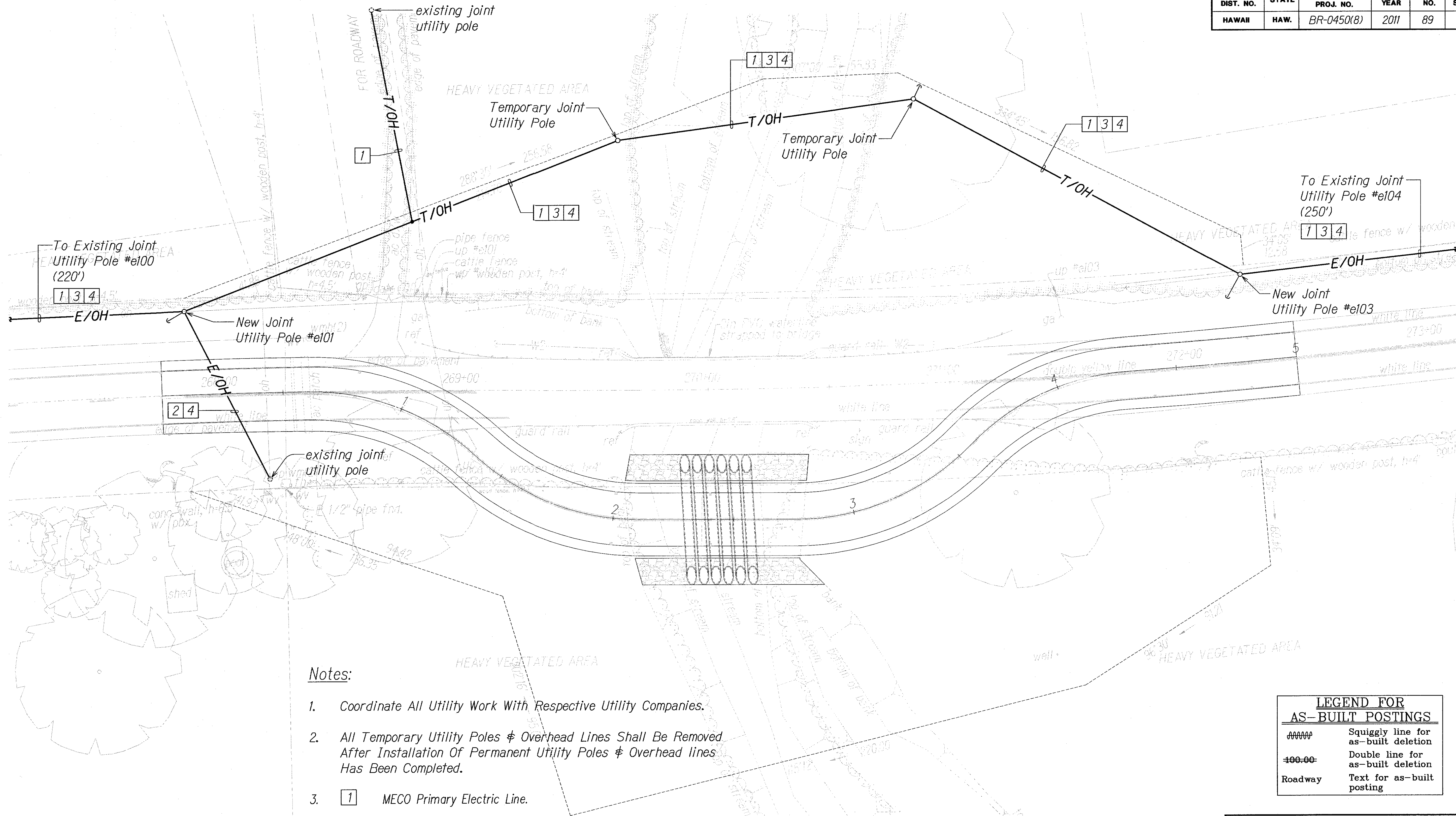
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HIGHWAYS DIVISION

ELECTRICAL
DEMOLITION PLAN
KAMEHAMEHA V HIGHWAY
Kawela Bridge Replacement
Federal Aid Project No. BR-0450(8)
Scale: As Shown Date: OCTOBER 2010

SHEET No. E-5 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0450(8)	2011	89	93



Notes:

- Coordinate All Utility Work With Respective Utility Companies.
- All Temporary Utility Poles & Overhead Lines Shall Be Removed After Installation Of Permanent Utility Poles & Overhead lines Has Been Completed.
- 1

MECO Primary Electric Line.

2

MECO Secondary Electric Line.

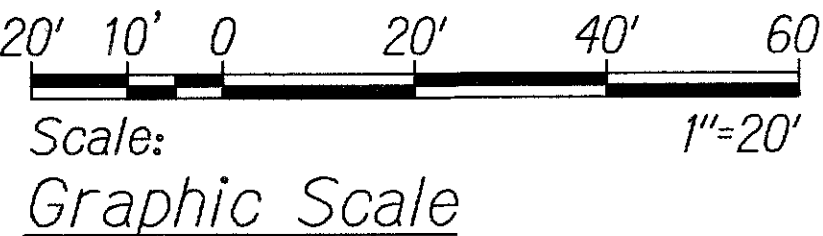
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Hawaiian Telcom Telephone Line.

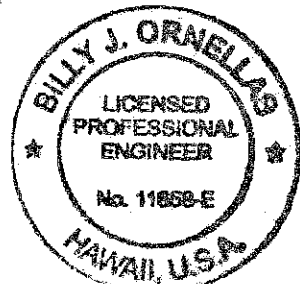
4

Oceanic Time Warner Cable CATV line.

TEMPORARY ELECTRICAL PLAN
Scale: 1"=20'



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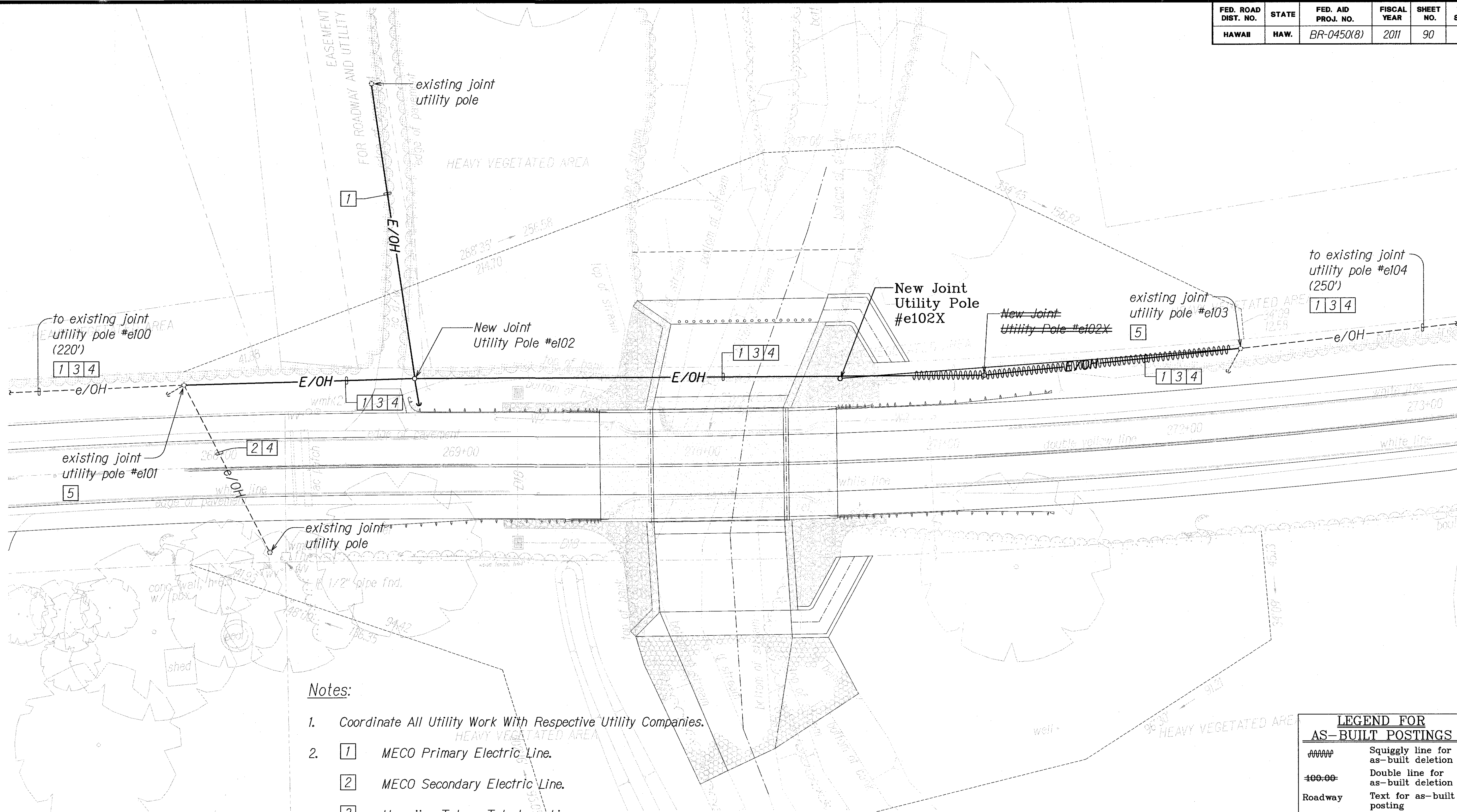
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TEMPORARY
ELECTRICAL PLAN**
*Kamehameha V Highway
Kawela Bridge Replacement*
Federal Aid Project No. BR-0450(8)

Scale: As Shown Date: OCTOBER 2010

SHEET No. E-6 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0450(8)	2011	90	93

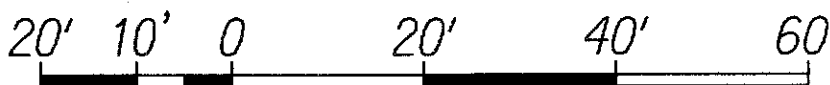


Notes:

- Coordinate All Utility Work With Respective Utility Companies.
- MECO Primary Electric Line.
 - MECO Secondary Electric Line.
 - Hawaiian Telcom Telephone Line.
 - Oceanic Time Warner Cable CATV line.
 - Utility Pole Installed During Installation of Temporary Overhead Utility Lines.

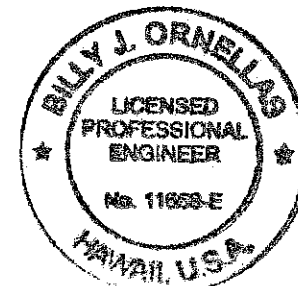
ELECTRICAL PLAN

Scale: 1"=20'



Scale: 1"=20'

Graphic Scale



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HIGHWAYS DIVISION

ELECTRICAL PLAN

KAMEHAMEHA V HIGHWAY
Kawela Bridge Replacement
Federal Aid Project No. BR-0450(8)

Scale: As Shown

Date: OCTOBER 2010

SHEET No. E-7 OF 7 SHEETS

"AS-BUILT"