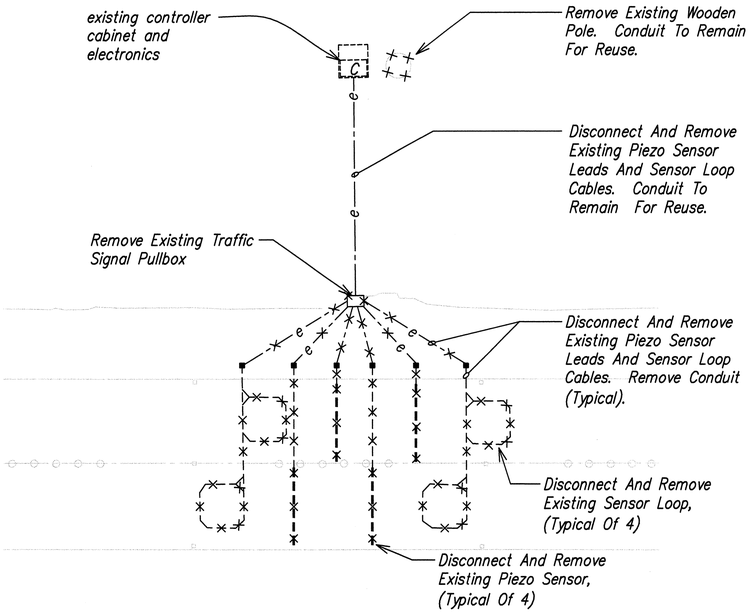
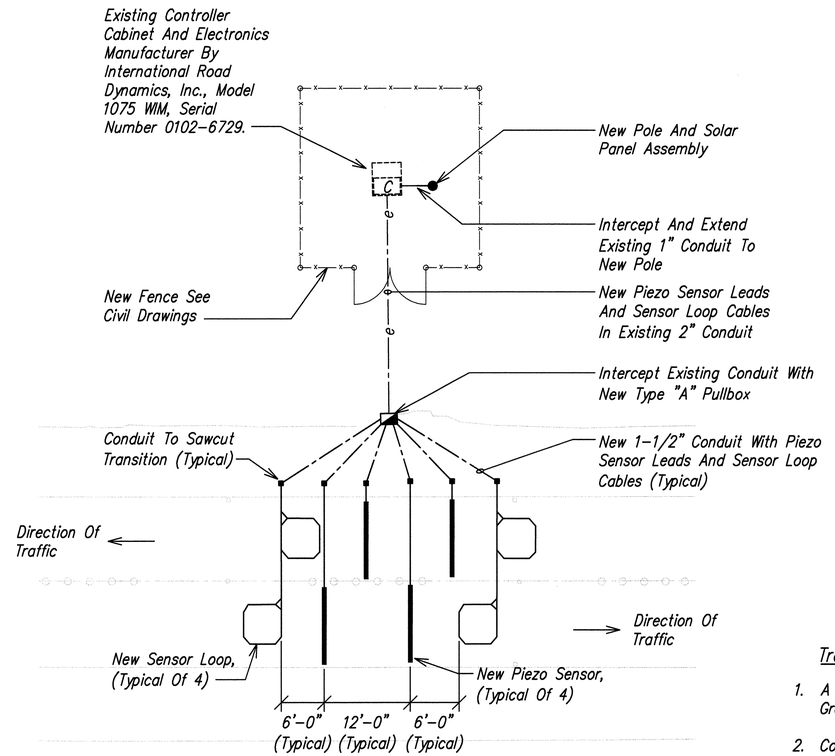
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	71	74



ELECTRICAL DEMOLITION PLAN

Scale: 1" = 10'-0"



ELECTRICAL SITE PLAN

Scale: 1" = 10'-0"

Note:

See Civil Drawings For Locations of Piezo Sensors And Sensor Loops

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	Existing Traffic Signal Pullbox
	New Type "A" Pullbox
C	Existing Controller Cabinet
—e—	Existing Ductline
	New Ductline
	Conduit To Sawcut Transition
	Existing Sensor Loop
	New Sensor Loop
	Existing Piezo Sensor
	New Piezo Sensor
	Existing Sawcut And Cables/Leads
	New Sawcut And Cables/Leads
	New Pole And Solar Panel Assembly
	Ground
×	Denotes Demolition/Removal

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 Agencies 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 Pullboxes, Conduits, Piezo Sensors 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 Millennium Edition", Federal Highway Administration (2000) 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 Millennium Edition, Federal Highway Administration (2000) 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. A Representative Of The Piezo Sensor's Manufacturer Shall Be Present To Supervise The Installation And Testing Of The Piezo Sensors. Coordination And Costs Associated With The Abovementioned Item Are The Responsibility Of The Contractor.
9. See Civil Drawings For Additional Information Regarding Existing Site Conditions.

Traffic Signal Notes:

1. A Solid #8 Bare Copper Wire Shall Be Pulled Within All Conduits For Equipment Ground. Cost Shall Be Incidental To The Installation Of The Cable.
2. Conduits And Pullbox Location As Shown On The Plans Are Schematic. They May Be Modified By The Contractor With The Approval Of The Engineer.
3. All Work For The Installation Or Modification Of The Weigh-In-Motion System Shall Conform To The Latest Revisions Of The "Hawaii Standard Specifications for Road And Bridge Construction, 1994" And The "Standard Plans" Of The Department Of Transportation, Highways Division And As Shown On These Drawings.
4. 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.
5. All Cable And Elements For Grounding Shall Be New.
6. Contractor Shall Verify Condition And Operation Of The Existing Controller And Associated Electronics Prior To Making Any Modifications. Provision Of Power, Labor And Materials For Verification Of Operation Is The Responsibility Of The Contractor. Contractor Shall Submit Written Procedures For Verifying Operation Of The Existing Controller And Items Requiring Remediation To The Engineer For Approval.

10' 5' 0 10' 20'

SCALE: 1"= 10'

ORIGINAL PLAN | NOTE BOOK | No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

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PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SITE PLAN

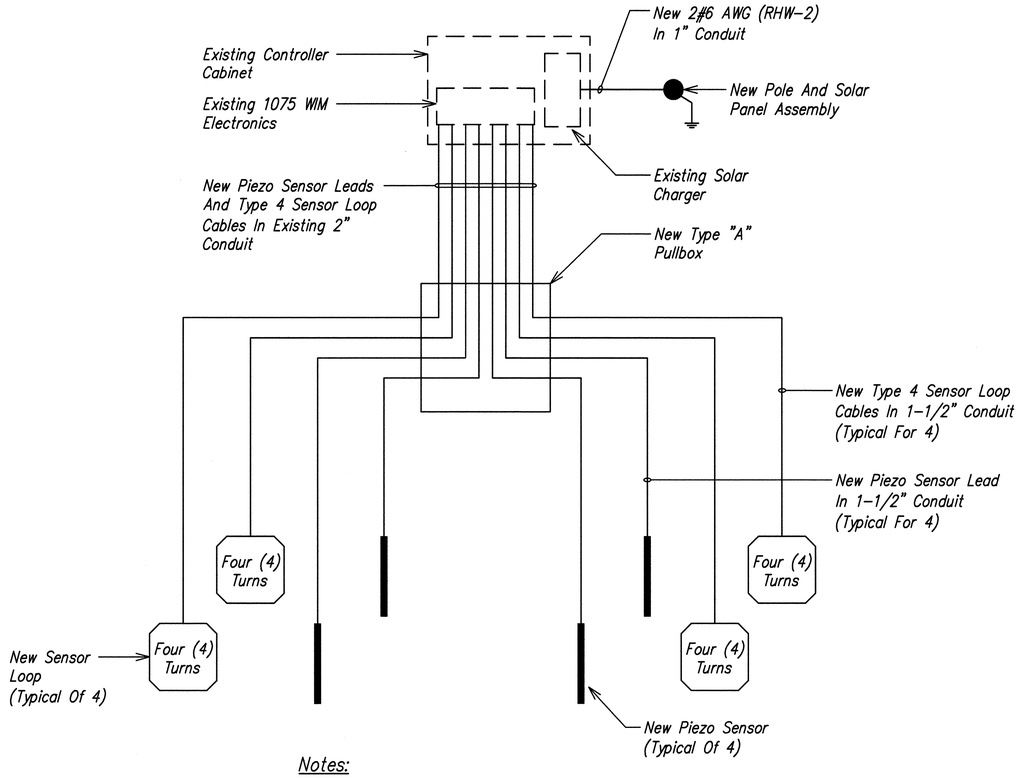
Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

SHEET No. E-1 OF 4 SHEETS

3/5/03-13:47 Y:\087\e87-93\87-93S01.dwg

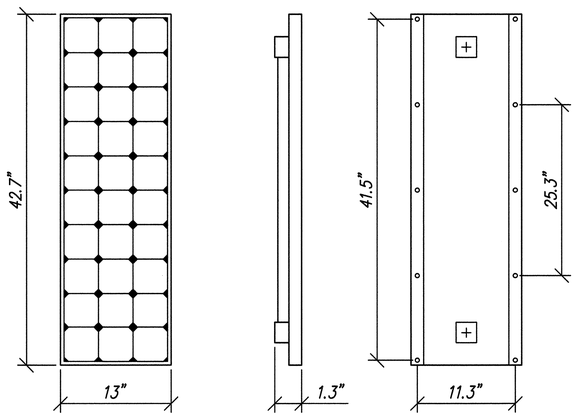
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	72	74



Notes:

1. Piezo Sensors And Sensor Loops Shall Be Compatible With Existing Controller.
2. Piezo Sensor Leads And Type 4 Sensor Loop Cables Per Manufacturer's Recommendations.

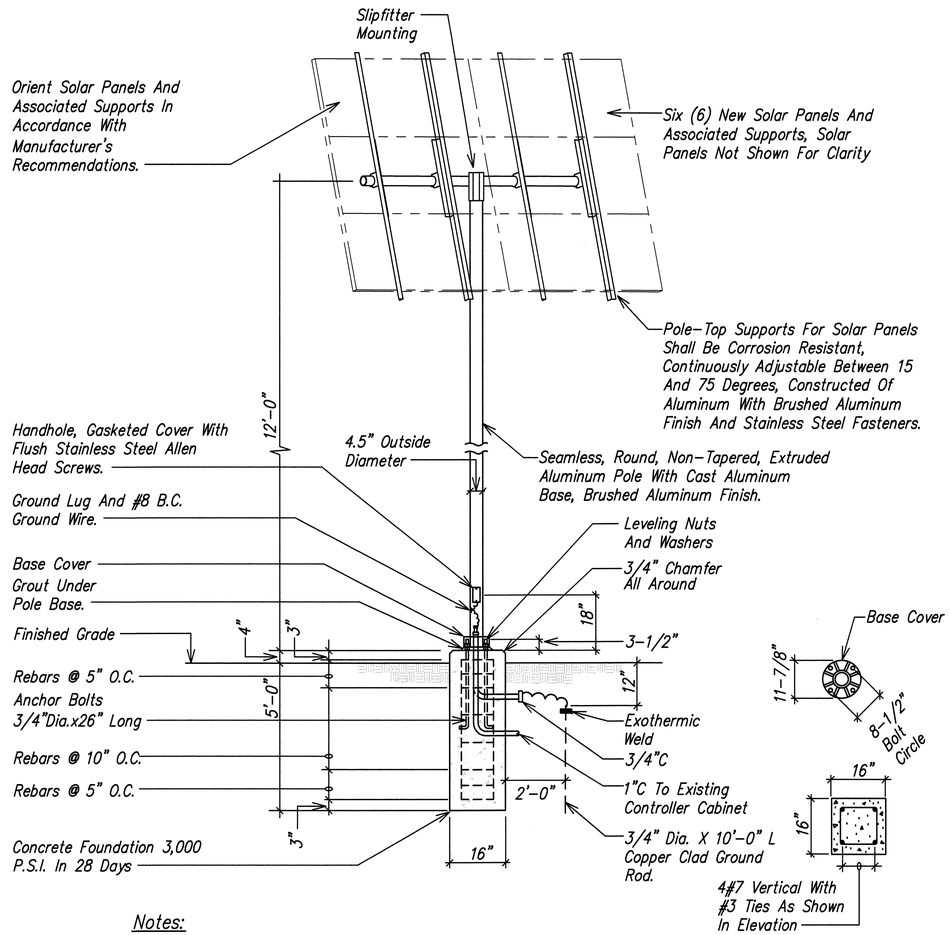
WIRING DIAGRAM
Not To Scale



SOLAR PANEL
Not To Scale

Notes:

1. Solar Panels Shall Be Siemens Solar Module SM46 Or Approved Equivalent.
2. Provide Wiring Between Solar Panels In Accordance With Manufacturer's Recommendations.



Notes:

1. Pole And Solar Panel Assembly, Including Pole, Solar Panel And Foundation Shall Withstand Winds Up To 108 Mph Gusting Without Permanent Deformation.
2. Submit Shop Drawings Of Pole And Solar Panel Assembly For Approval Prior To Ordering Materials. Shop Drawings Shall Include Information On Foundation, Pole, Wiring, Solar Panels And Associated Supports.

POLE AND SOLAR PANEL ASSEMBLY
Not To Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

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APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WIRING DIAGRAM, POLE AND SOLAR PANEL ASSEMBLY

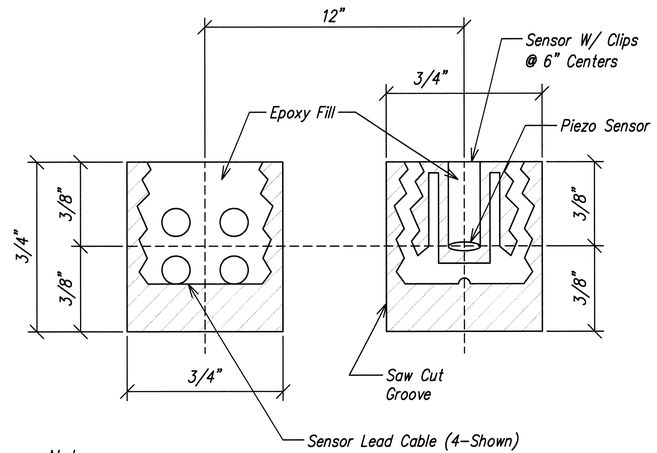
Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

SHEET No. E-2 OF 4 SHEETS

3/5/03-13:45 Y:\087\e87-93\87-93D01.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	73	74

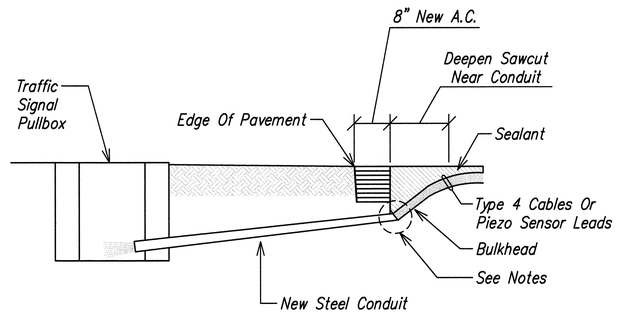


Note:

Piezo Sensors Shall Be 12', Class 1, BL, Unencapsulated, With Custom Length Lead-In Coaxial Cable And Pre-Made Termination Connectors.

PIEZO SENSOR AND LEAD INSTALLATION DETAIL

Not To Scale

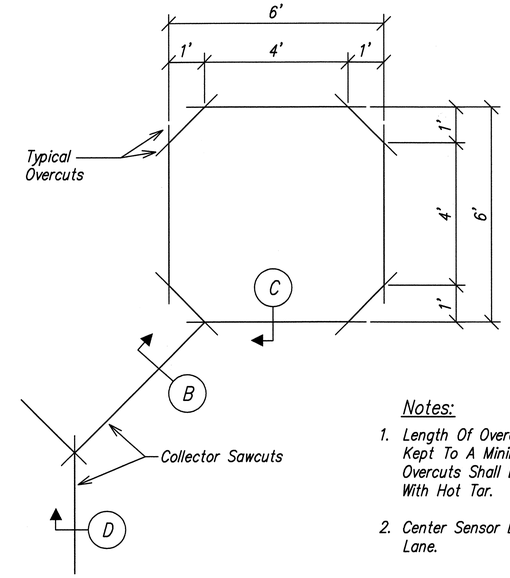


Notes:

1. Seal Roadway End Of Conduit After Installation Of Conductors
2. Install Bulkhead Across Conduit Trench.
3. Place Hot Tar In Sawcut.
4. Backfill Over Conduit With New A.C.

CONDUIT TO SAWCUT TRANSITION

Not To Scale

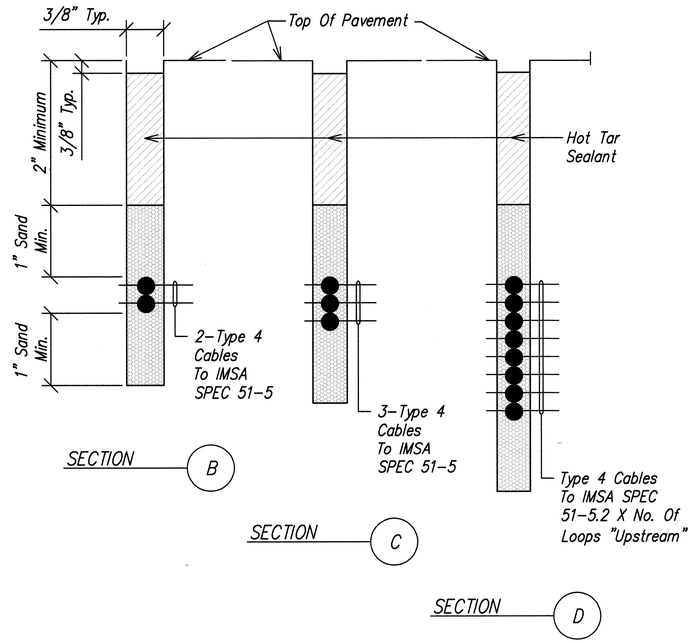


Notes:

1. Length Of Overcuts Shall Be Kept To A Minimum. All Overcuts Shall Be Backfilled With Hot Tar.
2. Center Sensor Loop Within Lane.

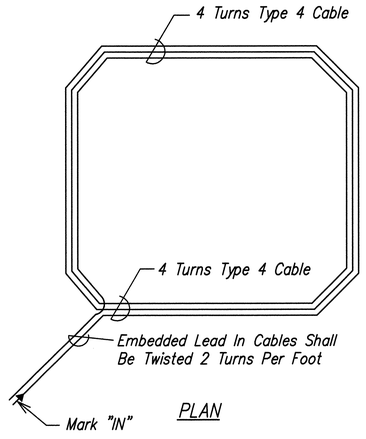
TYPICAL SENSOR LOOP SAWCUT DETAIL

Not To Scale



TYPICAL SECTION THROUGH SENSOR LOOP

Not To Scale



TYPICAL SENSOR LOOP WIRING DIAGRAM

Not To Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE	
	DRAWN BY		
NOTE BOOK	TRACED BY		
No.	DESIGNED BY		
	QUANTITIES BY		
	CHECKED BY		

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PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS

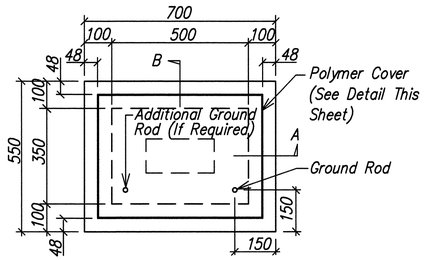
Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

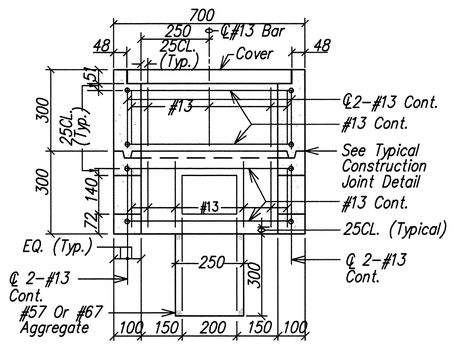
SHEET No. **E-3** OF **4** SHEETS

3/5/03-13:48 Y:\087\e87-93\87-93T01.dwg

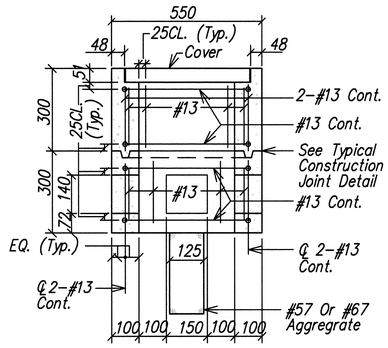
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	74	74



PLAN



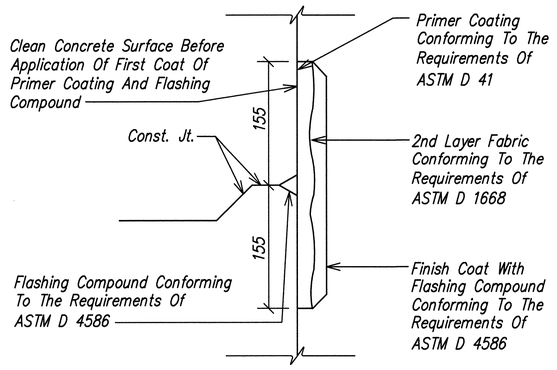
SECTION A-A



SECTION B-B

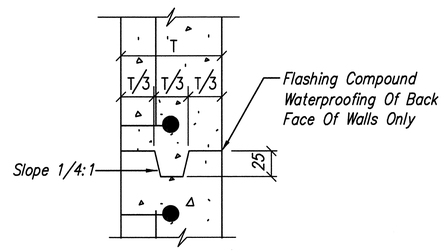
TYPE "A" PULLBOX

Not To Scale



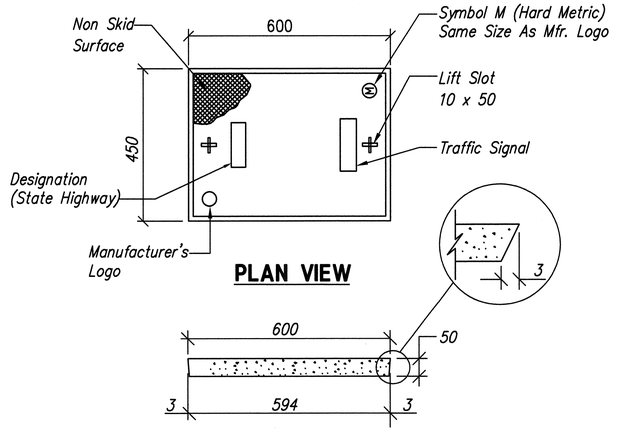
TYPICAL FLASHING COMPOUND WATERPROOFING DETAILS

Not To Scale



TYPICAL CONSTRUCTION JOINT DETAIL

Not To Scale



POLYMER CONCRETE COVER

Not To Scale

General Notes:

1. Provide A Minimum Of One 16Ø ~ X 2.5m Copperweld Ground Rod In Each Pullbox. When Directed By The Traffic Signal Inspector/Engineer, Install Additional Ground Rods. Cost Of Ground Rods Shall Be Incidental To The Pullboxes.
2. All Pre-Cast Concrete Pullboxes Shall Be Manufactured In Two Pieces.
3. The Pullbox With Cover Shall Be Capable Of Supporting An MS 18 Loading.
4. The Maximum Weight Of The Pullbox Cover Shall Not Exceed 27 Kilograms.
5. The Openings For The Conduits On All Pullboxes Shall Be Pre-Cast Concrete Knockouts.
6. After Installing The Conduits In The Openings Of The Pullboxes, The Contractor Shall Fill The Excess Opening In The Pre-Cast Knockouts With Concrete Mortar.
7. Prior To Installing The Pullboxes, The Contractor Shall Level The Bottom Of The Trench And Achieve A Minimum Of 95% Relative Compaction Of The Bottom Of The Trench.
8. All Concrete Shall Be Class A (25Mpa, Minimum)
9. Rebars Shall Be Grade 300 And All Lapped Splices Shall Be 360mm Minimum.
10. The #57 Or #67 Size Aggregate Shall Conform To Latest Version Of AASHTO M43 (ASTM D 448).
11. Dimension Are In Metric.

ORIGINAL PLAN | NOTE BOOK | No.

SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

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PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PULLBOX DETAILS

Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

SHEET No. E-4 OF 4 SHEETS

3/5/03-13:49 Y:\087\e87-93\87-93T02.dwg

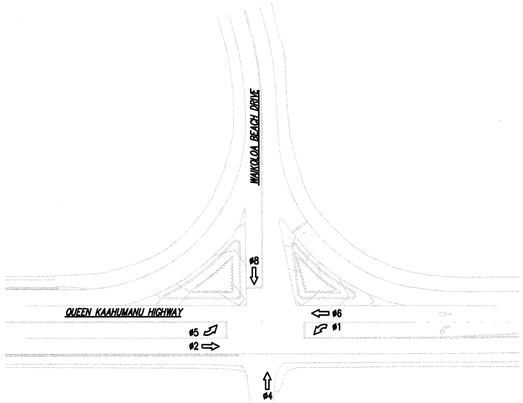
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	74S-1	74

Construction Notes:

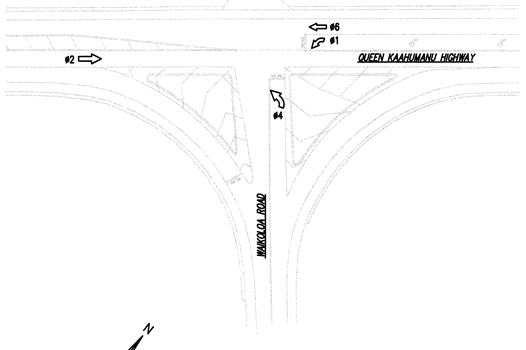
1. Refer To Sheet E-1 For Additional Construction Notes.
2. All Necessary Permits Shall Be Obtained By The Contractor At His Own Cost.
3. All Work Shall Be Constructed In Accordance With The Following Construction Standards And Specifications.
   a. General Order No. 6 And No. 10 Public Utilities Commission, State Of Hawaii.
   b. Construction Standards Of Department Of Transportation, State Of Hawaii.
   c. Current Standard Specifications For Road And Bridge Construction, State of Hawaii.
   d. Standard Details For Public Works Construction, Department Of Public Works, County Of Hawaii.
4. The Contractor Shall Exercise Proper Care When Excavating In Areas With Existing Underground Facilities, Damages To The Existing Facilities Shall Be Immediately Reported To The Respective Utility Companies, County Or State Agency. The Repair Work Shall Be Provided At No Additional Cost To This Project.
5. See Civil Drawings For Additional Information Regarding Existing And New Site Conditions And Locations Of Intersections.

Traffic Signal Notes:

1. Refer To Sheet E-1 For Additional Traffic Signal Notes.
2. Restoration Of Existing Pavements And Improvements Unavoidably Damaged Shall Be Incidental To The Various Contract Items. Restoration Shall Be Equal To Original Or Better Than Original Condition.
3. Contractor Shall Verify Condition And Operation Of Existing Controller And Electronics Prior To Making Any Modifications. Provision Of Labor And Materials For Verification Of Operation Is The Responsibility Of The Contractor. Contractor Shall Submit Written Procedures For Verifying Operation Of The Existing Controller And Items Requiring Remediation To The Engineer For Approval.
4. Contractor Shall Provide Necessary Labor And Materials To Program And Test Existing Controller After New Loop Detectors Are Provided. Refer To Phase Assignment Diagrams.



WAIKOLOA BEACH DRIVE

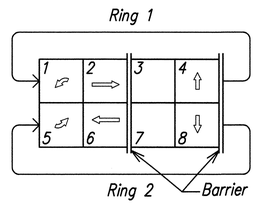


WAIKOLOA ROAD

Note:

Phase Assignment Diagrams Obtained From Queen Kaahumanu Highway Traffic Operational Improvements At Waikoloa Beach Drive And Waikoloa Road, Project No. 19C-01-02, Construction Drawings.

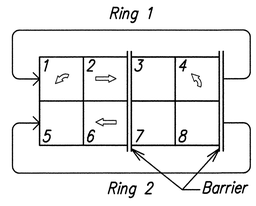
PHASE ASSIGNMENTS
Not To Scale



PHASE DIAGRAM

LOOP DETECTOR ASSIGNMENTS

LD-#	AMPLIFIER UNIT	CHANNEL	PHASE-NOTES
1 & 2	A	1	ø6 Or ø2 (Hand Wired Together)
3	A	1	ø1 & ø6 (Internally Switched)
4	B	3	ø4
5 & 6	B	2	ø2 & ø6 (Hand Wired Together)
7	A	2	ø5 Or ø2 (Internally Switched)
8	C	1	ø8
2A	C	1	Programmable Extend
6A	D	1	Programmable Extend



PHASE DIAGRAM

LOOP DETECTOR ASSIGNMENTS

LD-#	AMPLIFIER UNIT	CHANNEL	PHASE-NOTES
1,2	A	1	ø6
3	A	2	ø1 & ø6 (Internally Switched)
4	B	1	ø4 Queue W/Externally Programmable Delay & Inhibit (Internally Switched)
5,6	A	3	ø2
2A	C	1	Programmable Extend
6A	D	1	Programmable Extend

ELECTRICAL SYMBOL LIST

SYMBOL EXISTING	SYMBOL NEW	DESCRIPTION
C		Traffic Signal Controller And Cabinet
M		Metering Equipment
U		Uninterruptible Power Supply Unit
T		Transformer
		Traffic Signal Standard
		Street Light Standard
		Traffic Signal Pullbox, Type "A"
		Traffic Signal Pullbox, Type "B"
		Traffic Signal Pullbox, Type "C" Or Electrical Handhole
		Loop Detector
-e---		Underground Traffic Signal/Electrical Ductline
	1	Note Indicator

Note:

Electrical Symbol List On This Sheet Applies To Sheet No. E-4A To E-4E Only.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

6/9/03-9:34 Y:\087\e87-93\87-93 B01.dwg

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PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

DATE	REV.	DESCRIPTION
6/10/03		Sheet Added To Contract Plan Per Addendum No.1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SYMBOL LIST, PHASE ASSIGNMENTS AND ADDITIONAL NOTES

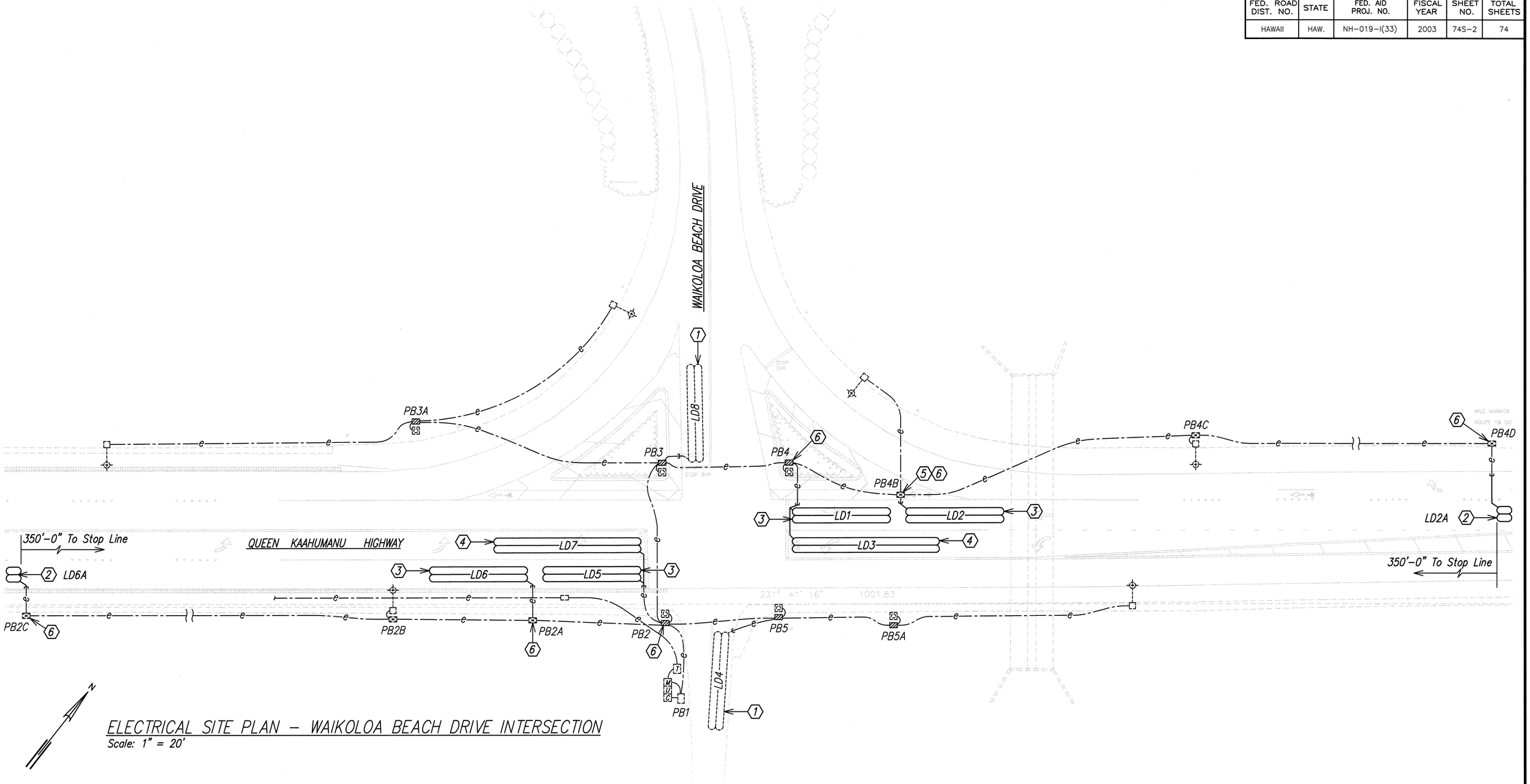
Queen Kaahumanu Highway Resurfacing Kekaha Kai State Park to Hapuna Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

SHEET No. **E-4A** OF **4** SHEETS

ADD. 74S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	74S-2	74



ELECTRICAL SITE PLAN – WAIKOLOA BEACH DRIVE INTERSECTION

Scale: 1" = 20'

Notes:

1. Existing 1-6'X40' (2-4-2) Loop Detector.
2. 1-6'X6' (2-4-2) Loop Detector Centered In Lane.
3. 1-6'X40' (2-4-2) Loop Detector Centered In Lane.
4. 1-6'X60' (2-4-2) Loop Detector Centered In Lane.
5. Adjust Existing Type "A" Traffic Signal Pullbox To Match New Finished Grade, See Detail 1/E-4E.
6. Intercept And Extend Existing Loop Detector Cable In Traffic Signal Pullbox To New Loop Detector.

20' 10' 0 20' 40'

SCALE: 1"= 20'

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

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PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

DATE	REV.	DESCRIPTION
6/10/03		Sheet Added To Contract Plan Per Addendum No.1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SITE PLAN – WAIKOLOA BEACH DRIVE INTERSECTION

Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

SHEET No. **E-4B** OF **4** SHEETS

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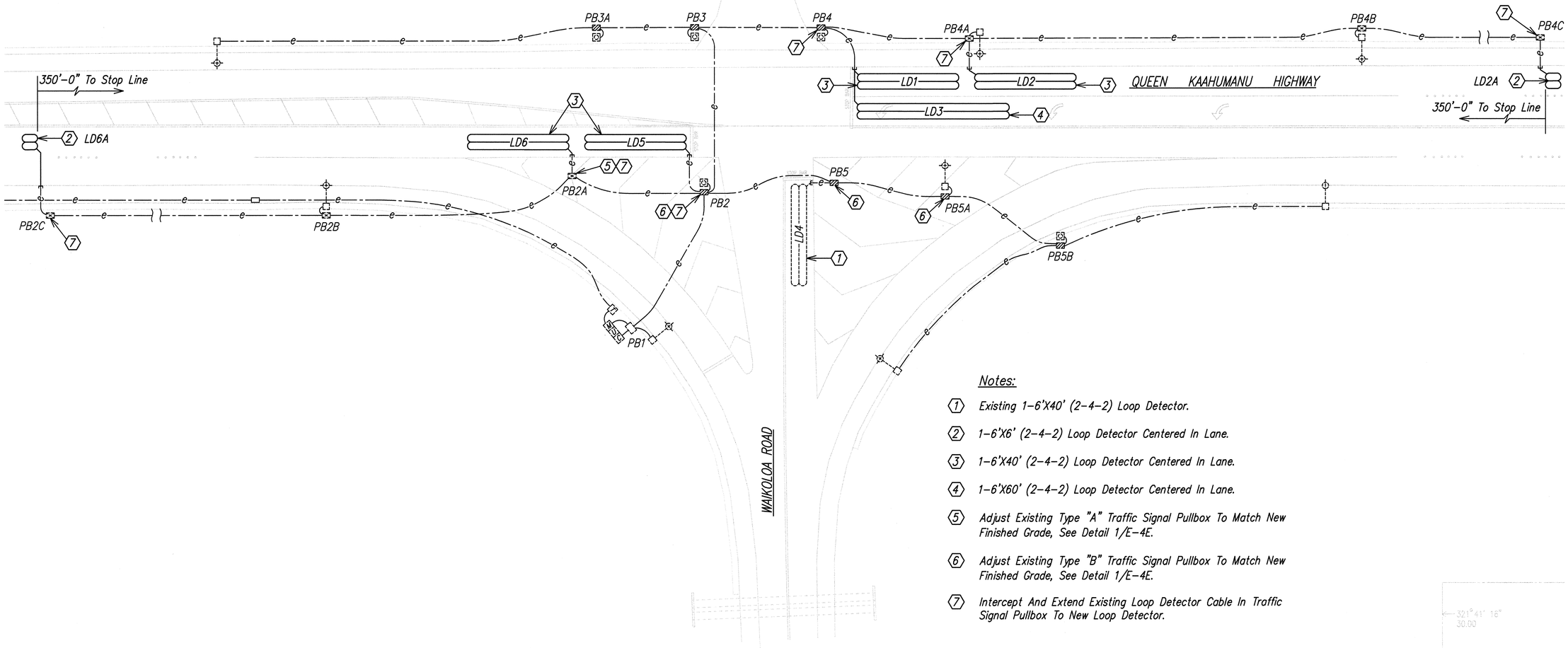
ADD. 74S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	74S-3	74



Notes:

⟨7⟩ *Existing 1-6'X40' (2-4-2) Loop Detector.*

⟨2⟩ *1-6'X6' (2-4-2) Loop Detector Centered In Lane.*

⟨3⟩ *1-6'X40' (2-4-2) Loop Detector Centered In Lane.*

⟨4⟩ *1-6'X60' (2-4-2) Loop Detector Centered In Lane.*

⟨5⟩ *Adjust Existing Type "A" Traffic Signal Pullbox To Match New Finished Grade, See Detail 1/E-4E.*

⟨6⟩ *Adjust Existing Type "B" Traffic Signal Pullbox To Match New Finished Grade, See Detail 1/E-4E.*

⟨7⟩ *Intercept And Extend Existing Loop Detector Cable In Traffic Signal Pullbox To New Loop Detector.*

321°41' 16"
30.00

N

ELECTRICAL SITE PLAN - WAIKOLOA ROAD INTERSECTION

Scale: 1" = 20'-0"

20' 10' 0 20' 40'

SCALE: 1"= 20'

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

LEANNOX K. NISHIMURA
LICENSED PROFESSIONAL ENGINEER
No. 3880-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

DATE	REV.	DESCRIPTION
6/10/03		Sheet Added To Contract Plan Per Addendum No.1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SITE PLAN - WAIKOLOA ROAD INTERSECTION

Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

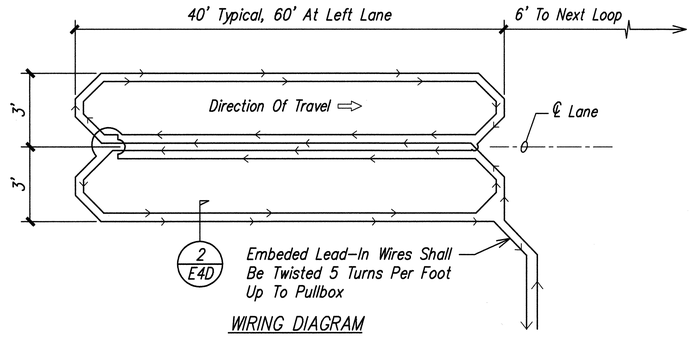
Scale: As Noted Date: March 2003

SHEET No. **E-4C** OF **4** SHEETS

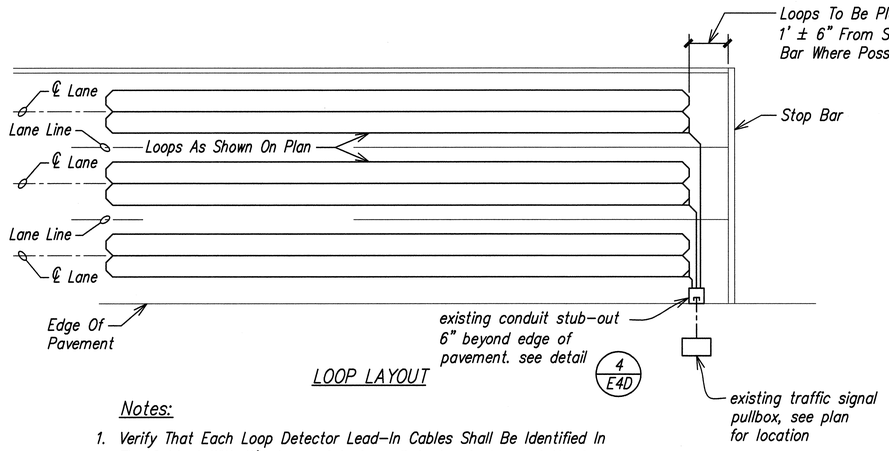
ADD. 74S-3

6/9/03-9:36 Y:\087\e87-93\87-93 S03.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	74S-4	74



WIRING DIAGRAM

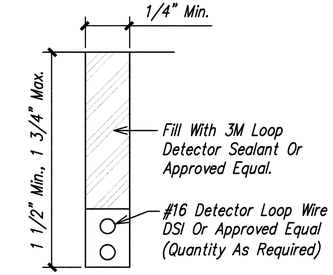


LOOP LAYOUT

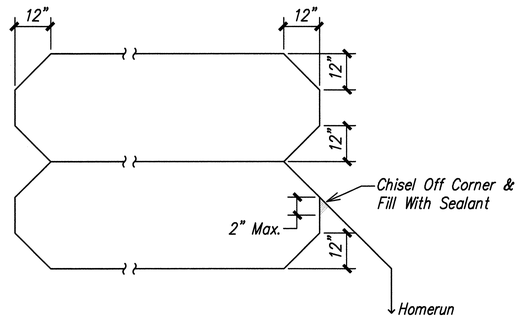
Notes:

1. Verify That Each Loop Detector Lead-In Cables Shall Be Identified In The Cabinet With It's Appropriate Loop Detector Assignment Number Per Plans.
2. When Hot Sealants Are Used. Only Polyester Insulation With A Minimum 400° Melting Point Will Be Permitted.

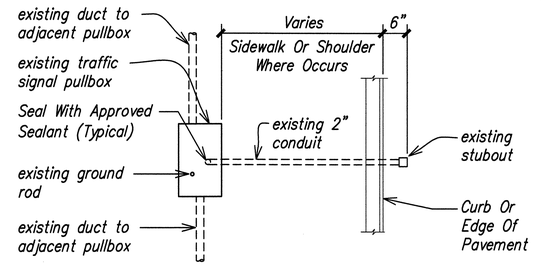
1 E-4D LOOP DETECTOR (TYPICAL)
Not To Scale



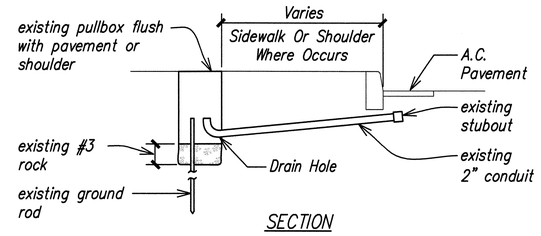
2 E-4D SECTION "A"
Not To Scale



3 E-4D TYPICAL LOOP DETECTOR SAWCUT PLAN
Not To Scale

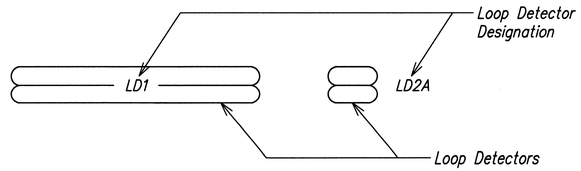


PLAN



SECTION

4 E-4D EXISTING LOOP DETECTOR STUBOUT
Not To Scale



5 E-4D LOOP DETECTOR LEGEND
Not To Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	CHECKED BY	

LEANNOX K. NISHIMURA
LICENSED PROFESSIONAL ENGINEER
No. 3880-E
HAWAII, U.S.A.

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PROJECT ENGINEER for ECS, Inc.

APRIL 30, 2004
EXPIRATION DATE OF THE LICENSE

DATE	REV.	DESCRIPTION
6/10/03		Sheet Added To Contract Plan Per Addendum No.1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS

Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

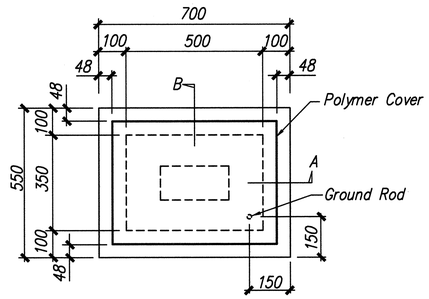
Scale: As Noted Date: March 2003

SHEET No. **E-4D** OF **4** SHEETS

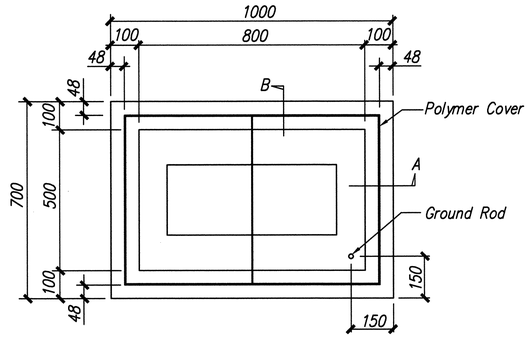
6/9/03-9:34 Y:\087\e87-93\87-93 B02.dwg

ADD. 74S-4

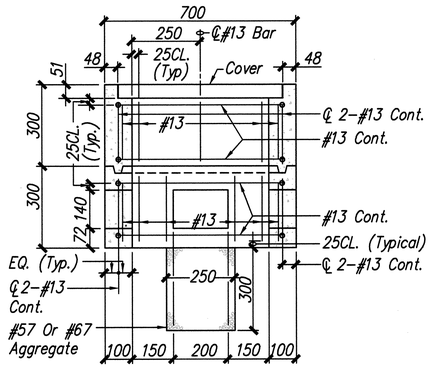
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(33)	2003	74S-5	74



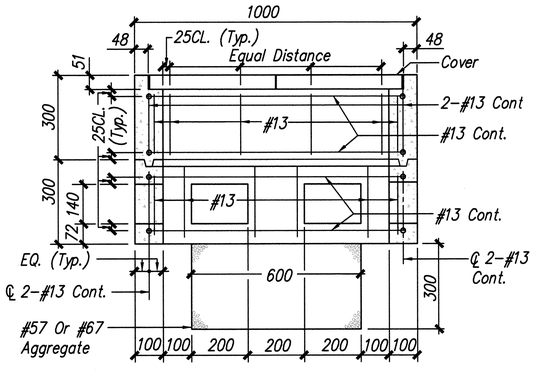
PLAN



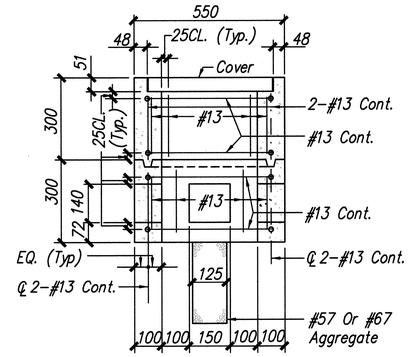
PLAN



SECTION A-A

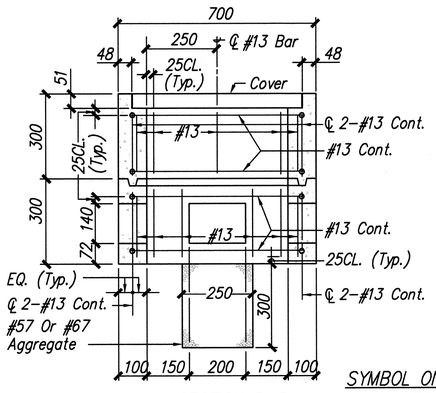


SECTION A-A



SECTION B-B

SYMBOL ON PLAN:



SECTION B-B

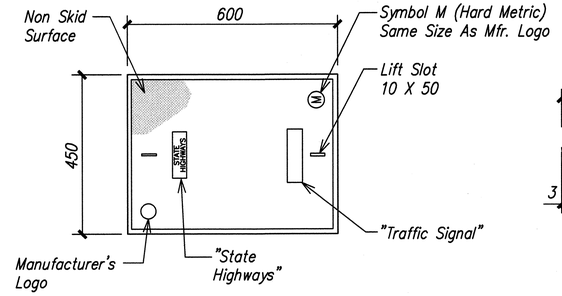
SYMBOL ON PLAN:

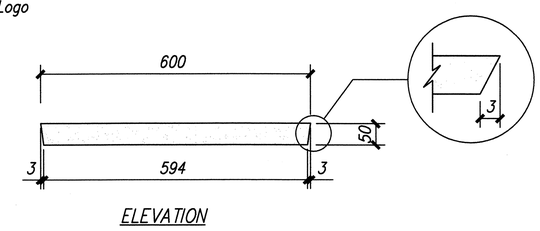
EXISTING TYPE "A" PULLBOX (OLD TYPE "B")

Not To Scale

EXISTING TYPE "B" PULLBOX (OLD TYPE "C")

Not To Scale

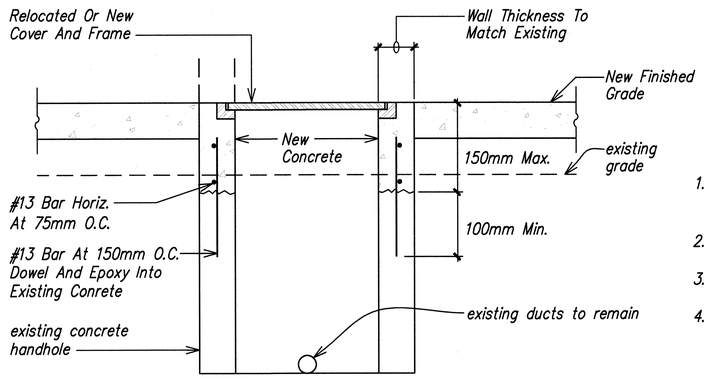




ELEVATION

EXISTING POLYMER CONCRETE COVER

Not To Scale



Notes:

1. The Pullbox With Cover Shall Be Capable Of Supporting An MS18 Loading.
2. All Concrete Shall Be Class A (25MPa Minimum).
3. Rebars Shall Be Grade 300.
4. Slope Of Relocated Or New Cover And Frame Shall Match Slope Of New Finished Grade.

1 / E-4E EXISTING HANDHOLE ADJUSTMENT

Not To Scale

General Notes: (This Sheet Only)

1. All Dimensions Are In Millimeters Unless Otherwise Indicated.
2. Details Of Type "A" and "B" Traffic Signal Pullboxes Provided For Informational Purposes Only.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	QUANTITIES BY	
	CHECKED BY	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING HANHOLE ADJUSTMENT DETAILS

Queen Kaahumanu Highway Resurfacing
Kekaha Kai State Park to Hapuna
Federal-Aid Project No. NH-019-1(33)

Scale: As Noted Date: March 2003

SHEET No. **E-4E** OF **4** SHEETS

6/9/03-9:34 Y:\087\e87-93\87-93 B03.dwg

ADD. 74S-5