

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

Land Development Division

December 9, 2019

Date

ADDENDUM NO. 2
TO
INVITATION FOR BIDS
IFB-20-HHL-004

KEOKEA-WAIOHULI DRAINAGE IMPROVEMENTS

Notice to All Prospective Offerors

This addendum is hereby made a part of the contract documents for Keokea-Waiohuli Drainage Improvements, IFB-20-HHL-004, and it shall amend the said contract documents as detailed within this Addendum document.

APPROVED:



Stewart Matsunaga, Acting Administrator
Land Development Division
Department of Hawaiian Home Lands

Please execute and immediately return the receipt below to the Department of Hawaiian Home Lands via facsimile to: **(808) 620-9299, Mr. Bryan Toda, Land Development Division, or scan and E-mail to: Bryan.toda@hawaii.gov.**

Receipt of Addendum No. 2 for Various Lot Improvements in Keokea-Waiohuli Drainage Improvements, Invitation for Bids No.: IFB-20-HHL-004, is hereby acknowledged.

Signature: _____
Print Name: _____

Title

Name of Firm/Company

Date

ADDENDUM NO. 2
IFB NO.: IFB-20-HHL-004
Keokea-Waiohuli Drainage Improvements

INCLUSIONS

This Addendum No. 2 shall incorporate the following amendments to IFB-20-HHL-004:

1. Meeting Minutes from Pre-Bid Conference on 12/3/19, Including Pre-Bid Conference Attendance Sheets; Questions & Answers during and after Pre-Bid Conference and Site Visit, on December 3, 2019, and those submitted to DHHL via E-mail by the due date for Questions on December 4, 2019;

*Note: On page 4 of the Meeting Minutes, the deadlines for Notice of Intention to Bid, Standard Qualification Questionnaire, and Bid Opening date have been amended via Addendum No. 1.

2. Bid Offer Form {Revised}
This revised Bid Offer Form replaces the original Bid Offer Form in IFB-20-HHL-004 published on the State's HANDS website on November 19, 2019.
3. Special Conditions {Revised}
This revised Special Conditions replaces the original Special Conditions in IFB-20-HHL-004 published on the State's HANDS website on November 19, 2019.
4. As-built Plans of Keokea-Waiohuli Development, Phase I

**Keokea-Waiohuli Drainage Improvements
(IFB-20-HHL-004)**

Pre-bid Conference & Site Inspection

9:00 a.m., Tuesday, December 3, 2019

Waiohuli Community Center

881 Lauie Drive, Kula, Maui 96790

MEETING MINUTES

1. INTRODUCTIONS

Department of Hawaiian Home Lands (DHHL)

- Stewart Matsunaga, Project Manager
- Robert Ing, Land Agent
- ~~Bryan Toda, LDD Engineer~~
- Frank Camacho, P.E., Community Planning and Engineering, Inc. (CP&E)
- ~~Brooks Aoki, Deputy Manager/CM, SSFM International, Inc. (SSFM)~~
- Cory Uchima, Construction Manager (SSFM)
- *(See Attached sign-in Sheet)*

2. PURPOSE OF PRE-BID CONFERENCE

- Project overview and job site visit
- Review procurement requirements
- Clarify bid documents.
- Submittal Schedule (Below). (Also, Pages 1-3, -Instructions for Bid Submittal).

3. SCOPE OF WORK (General Description)

a. Lot 59 & 60 Drainage Improvements

- Clearing, grubbing, handling & removal of vegetation.
- Installation, maintenance, monitoring, and removal of BMP, including silt fence.
- Excavation, embankment, erosion control
- Construction of GRP swale and drain inlet and pipe

b. Olakino Street Drainage Improvements

- Clearing, grubbing, handling & removal of vegetation.
- Installation, maintenance, monitoring, and removal of BMP, including silt fence.
- Excavation, embankment, erosion control
- Demolition and removal of existing guardrails, drain pipe, and headwalls
- Construction of underground drainage system

General

- All work must be performed in accordance with the Technical Specifications and Plans included in this IFB.
- All work and responsibilities listed in the Plans -General Construction Notes are incidental to the bid proposal and are made part of this contract.

4. PROCUREMENT REMINDERS

- This project is exempt from the General Excise Tax (GET).
- The Apprenticeship Agreement Preference for public works projects shall apply to this IFB, in accordance with HRS §103-55.6, concerning projects with an estimated value of \$250,000 or more. *It is anticipated that the project will be more than \$250,000, therefore the Apprenticeship Agreement Preference shall apply for this project.*
- This project is subject to Chapter 104 HRS, Department of Labor and Industrial Relations (DLIR) prevailing wages and salaries;
- After bid opening and prior to award of the contract, DHHL shall verify compliance with Sections 103D-310 and 103D-328 HRS via Hawaii Compliance Express (HCE) for the bidder and all subcontractors. Therefore, the bidder and all subcontractors should register with HCE. Instructions for registration are at the HCE website: <http://vendors.ehawaii.gov>;
- Failure by the bidder and/or any subcontractor to rectify a non-compliant status within ten business days of notification will be considered as sufficient for the disqualification of the bidder and rejection of its proposal;
- In accordance with the provisions of Chapter 104-25, Hawaii Revised Statutes, there are contractors who have been suspended from doing any work on State or County public work construction project. An updated list can be found at this web link: <http://labor.hawaii.gov/wsd/prevaling-wages-on-public-works/contractors-suspended-under-chapter-104-hawaii-revised-statutes/>

5. COMPLETION SCHEDULE AND LIQUIDATED DAMAGES

- Time to complete: Six (6) months (180 calendar days)
- Liquidated damages: \$500 per calendar day

6. QUESTIONS/ANSWERS ISSUED BY LAST ADDENDA

- A written summary of this pre-bid conference will be issued as an Addendum.
- Requests for clarifications and any questions after this meeting shall be made in writing and faxed to 808-620-9299, no later than 4:30 p.m., December 4, 2019.

- Written answers to questions will be provided to all potential bidders via addenda on the State's HANDS (Hawaii Awards Notice Data System) website; any verbal responses to questions by DHHL and its Consultant shall not be binding.

Link- <https://hands.ehawaii.gov/hands/opportunities/opportunity-details/15317>

- Interested bidders are responsible to check the HANDS website for the issuance of any addenda up until the due date for bids.

7. **DEADLINES** (See table below)

8. **QUESTIONS AND ANSWERS**

a. Is a Geotech Report available?

Ans.: A preliminary Geotechnical exploration report is included in the bidding document.

b. Are As-Builts available?

Ans.: As-Builts will be made available as part of the bid documents, in an Addendum.

c. Are Work to Perform (WTP) or grading permits required?

Ans.: Yes, the Contractor is responsible for acquiring all required permits from the County.

d. Is a staging area available for the contractor?

Ans.: A conditional staging area may be available with the review and approval from DHHL. The staging area available is located along the lower side of Kaopu'upu'u Street between the future road "stub-out" and Olakino Street or at the end of the future road "stub-out" at Kaopu'upu'u Street (see attached aerial photo). Specific location to be determined at Pre-Construction meeting onsite. BMP and erosion control measures will be required for the staging area and the area is to be restored to the original or better condition.

e. Can you existing 48" drain pipe remain in place?

Ans.: The existing drain pipe could remain in-place but will need to be filled with an Engineered approved backfill material.

f. What type of backfill material is required for filling in the existing inlet/outlet depressions/grading area?

Ans.: General fill material as approved by the Soils Engineer, subject to Contractor RFI and submittal.

9. **SITE INSPECTION TO FOLLOW PRE-BID CONFERENCE**

Various Lot Improvements for Waiehu Kou
 and Paukukalo Subdivisions
 IFB No. IFB-20-HHL-012
 December 3, 2019

DEADLINES FOR SUBMITTALS

Various Lot Improvements for Waiehu Kou
 and Paukukalo Subdivisions
 IFB-20-HHL-012

SUBMITTAL	DEADLINE
Hawaii Products Preference Request (Form SPO-038)	4:30 P.M., December 4, 2019
Request for Substitutions (See Item H, -Instructions for Bid Submittalø)	4:30 P.M., December 4, 2019
Notice of Intention to Bid	4:30 P.M., December 9, 2019
Written questions (Requests for Clarification)	4:30 P.M., December 4, 2019
Standard Qualification Questionnaire (SPO Form-21) (SQQø for previous projects are NOT valid)	4:30 P.M., December 9, 2019
Issuance of Last Addendum- * However, interested bidders are required to check the HANDS website for any Addenda issued up until the Bid Opening date.	December 6, 2019
Bid Opening <ul style="list-style-type: none"> • Sealed bids due by <u>10:00 A.M., December 17, 2019</u> at the DHHL Maui District Office, at 655 Kaunualii Street, Suite 1, Wailuku, Hawaii 96793, according to its time clock. • Bids <u>WILL NOT</u> be accepted at the DHHLø Main Office in Kapolei, Oahu. Bids to be submitted at DHHL Maui District Office, at 655 Kaunualii Street, Suite 1, Wailuku, Maui, HI 96793 • Bids will be opened shortly after 10:00 A.M. and read aloud in a designated area to be determined. (Bidders are welcome to attend). • Bids submitted after 10:00 A.M., <u>December 17, 2019</u> will be time-stamped, but not accepted or opened. • All the required bid forms are included in the IFB package. 	10:00 A.M, December 19, 2019

Pre-Bid Conference & Site Visit Schedule

(IFB-20-HHL-004 and IFB-20-HHL-012)

December 3, 2019

When	What	Estimated Time
9:00 a.m.	Pre-Bid Conference for IFB-20-HHL-004 (Keokea-Waiohuli Drainage Improvements)	45 mins.
9:45 a.m.	Pre-Bid Conference for IFB-20-HHL-012 (Various Lot Improvements for Waiehu Kou & Paukukalo Subdivisions)	45 mins.
10:30 a.m.	Conferences Pau	
10:45 a.m. - 11:10 a.m.	Site Visit #1 (Corner of Olakino & Koapu'upu'u Street) (5 minute commute)	25 mins.
11:15 a.m. - 11:45 a.m.	Site Visit #2 (695 & 733 Keanuhea Street)	30 mins.
11:45 a.m. - 1:00 p.m.	Lunch	
1:45 p.m. - 2:10 p.m.	Site Visit #3 (Lot 58, WK3; 169 Limu Ele'ele St.) (10 minute commute)	25 mins.
2:20 p.m. - 2:45 p.m.	Site Visit #4 (Waiehu Kou Frontage Walls; Kahekili Hwy between Hoola Hou St. and Kohomua St.) (15 minute commute)	25 mins.
3:00 p.m. - 3:40 p.m.	Site Visit #5 (Lot 4, Paukukalo; 893 Kuhio Pl.)	40 mins.
4:05 p.m.	Return to Airport	

Keokea-Waiohuli Drainage Improvements

IFB-20-HHL-004

Pre Bid Conference Sign In Sheet

DECEMBER 3, 2019 at 9:00 a.m. - Waiohuli Community Center (881 Lauie Drive, Kula, HI)

Name	Organization	Phone No.	Cell No.	Email
1 Stewart Matsunaga	DHHL	620-9283	439-2124/382-1937	Stewart.T.Matsunaga@hawaii.gov
2 Bryan Toda	DHHL	620-9281	358-9976	bryan.toda@hawaii.gov
3 Robert Ing PI	DHHL	620-9277	392-4614	Robert.M.Ing@hawaii.gov
4 Brooks Aoki	SSFM International	244-7630	357-4787	baoki@ssfm.com
5 Cory Uchima	SSFM International	244-7630	268-8116	cuchima@ssfm.com
6 Frank Camacho	Community Planning and Engineering	531-4252		fcamacho@cpe-hawaii.com
7 Rodney Akou	Akou Construction	344-1770	344-1770	ra.akouconstruction@gmail.com
8 Grace Juhre	ATA	533-7046		gjuhre@atahawaii.com
9 Nikki Luong	ATA	533-3646		nluong@atahawaii.com
10 Gabe Hoefken	Tom's Backhoe	357-2727	878-6237	gabe@tomsbackhoe.com
11 Jason Kusaka	SSFM	244-7630		jkusaka@ssfm.com
12 John Barrick	Global Specialty	551-3351		jbarrick@globalspecialty.net
13				
14				
15				



Staging area

Olakino Street Drain
Improvements



Olakino Street Drain Improvements



Olakino Street Drain Improvements



Lot 59 / 60
Drain
Improvements



Lot 59 / 60
Drain
Improvements

**STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS**

BID OFFER FORM FOR

KEOKEA-WAIOHULI DRAINAGE IMPROVEMENTS

KEOKEA & WAIOHULI, MAKAWAO, MAUI

TAX MAP KEYS: (02) 2-2-32: 56, 59, 60, & 71 AND (02) 2-2-33: 11

IFB NO.: IFB-20-HHL-004

Mr. William Aila, Jr., Chairman
Hawaiian Homes Commission
Department of Hawaiian Home Lands
91-5420 Kapolei Parkway
Kapolei, Hawaii 96707

Dear Mr. Aila:

The undersigned has carefully examined, read, and understands the terms and conditions in the Plans and Specifications, Special Conditions attached hereto, DHHL Construction General Conditions, and General Conditions specified in the Invitation for Bids (IFB) No. IFB-20-HHL-004. The State of Hawaii's (State) Contract for Goods and Services Based on Competitive Sealed Bids AG-003 Rev. 6/22/2009, AG-008 103D General Conditions, are included by reference and made part hereof and available upon written request to the Procurement Officer. The undersigned hereby submits the following offer to perform the work for IFB No. IFB-20-HHL-004 as specified herein, all in accordance with the true intent and meaning thereof.

The undersigned understands and agrees that:

1. The State reserves the right to reject any and all offers and to waive any items that are defective when, in the State's opinion, such rejection or waiver will be in the best interest of the State. A solicitation may be rejected in whole or part when in the best interest of the State.
2. If awarded the contract, all services will be in accordance with Hawaii Revised Statutes (HRS) § 103-55.5.
3. In submitting this offer, the Offeror is not in violation of HRS Chapter 84, Standards of Conduct.
4. By submitting this offer, the Offeror certifies that the offer was independently arrived at without collusion and the Offeror did not participate in any practices to restrict competition.
5. It is understood that the failure to receive any addendum shall not relieve the Offeror from any obligation under this IFB.

Date: _____

The undersigned represents that it is: **(Check ✓ one only)**

A **Hawaii business** incorporated or organized under the laws of the State of Hawaii; **OR**

A **Compliant Non-Hawaii business** not incorporated or organized under the laws of the State of Hawaii, is or shall be registered at the State of Hawaii Department of Commerce and Consumer Affairs Business Registration Division (DCCA-BREG) to do business in the State of Hawaii.

State of incorporation: _____

Offeror is:

Sole Proprietor Partnership Corporation Joint Venture Other: _____

Federal ID No.: _____

Hawaii General Excise Tax ID No.: _____

Telephone No.: _____

Fax No.: _____

E-Mail Address.: _____

Payment address (other than street address below)

(Street Address, City, State, Zip Code)

Business address

(Street Address, City, State, Zip Code)

Respectfully submitted:

Authorized (Original) Signature

Name and Title (Please Type or Print)

* _____
Exact Legal Name of Company (Offeror)

*If Offeror shown above is a "dba" or a "division" of a corporation, furnish the exact legal name of the corporation under which the awarded contract will be executed:

The following bid is hereby submitted for IFB-20-HHL-004 for the Department of Hawaiian Home Lands.

OLAKINO STREET DRAINAGE IMPROVEMENTS

The prices bid herein for the following items shall include all materials, labor, tools, equipment, machinery and all incidentals necessary to install or to construct these items in place complete, all in accordance with the plans and specifications. Note: Prices are exclusive of general excise tax (GET).

Item No.	Estimated Quantity	Description	Unit Price	Total
<u>SITE WORK</u>				
1.	L.S.	Clearing and Grubbing (0.2 acre ±), including handling and removal of vegetation, unsuitable material, and debris off of DHHL Lands.		
		Lump Sum	\$ _____	\$ _____
2.	L.S.	Installation, Maintenance, Monitoring and Removal of BMP, Including Filter Sock, Temporary Erosion Control, and Sediment Control Filter; In place complete.		
		Lump Sum	\$ _____	\$ _____
3.	L.S.	Demolition and Removal of Existing Drainage Structures, Including existing cement rubble masonry (CRM) structures, grouted rubble paving (GRP) swale, 48-inch corrugated aluminum pipe (CAP), and guardrail and post; In place complete.		
		Lump Sum	\$ _____	\$ _____
4.	810	Cu. Yds., Grading, inclusive of Hauling, Placing and Compacting. Approximate Embankment = 810 cubic yards.		
		Per Cu. Yds.	\$ _____	\$ _____
5.	680	Grassing of Exposed Graded Areas.		
		Per Sq. Yds.	\$ _____	\$ _____
6.	L.S.	Backfill of demolished drainage pipe.		
		Lump Sum	\$ _____	\$ _____
7.	185	Sq. Yds., Asphaltic Concrete pavement, 1-1/2ö thick.		
		Per Sq. Yds.	\$ _____	\$ _____
8.	500	Sq. Yds., Asphaltic Concrete pavement, 2ö thick.		
		Per Sq. Yds.	\$ _____	\$ _____

9.	105	Cu. Yds., Aggregate Base Course, 6ö thick.		
			Per Cu. Yds.	\$ _____ \$ _____
10.	75	Cu. Yds., Aggregate Subbase Course, 6ö thick.		
			Per Cu. Yds.	\$ _____ \$ _____
11.	L.S.	CLSM.		
			Lump Sum.	\$ _____ \$ _____
12.	L.S.	Restriping of roadway, Including centerline pavement striping, edge pavement striping, and intersection markings; In place complete.		
			Lump Sum	\$ _____ \$ _____

DRAINAGE SYSTEM

13.	700	Lin. Ft. 48ö High Density Polyethylene Pipe, including Trench Excavation, Pipe Cushion and Backfill; In place complete.		
			Per Lin. Ft.	\$ _____ \$ _____
14.	1	Each, Special Reinforced Concrete Catch Basin öA-1ö, Type öBö, inclusive of connection to existing and new drainage pipe, In place complete.		
			Each	\$ _____ \$ _____
15.	1	Each, Special Reinforced Concrete Drain Manhole öA-2ö, inclusive of connection to new drainage pipe, In place complete.		
			Each	\$ _____ \$ _____
16.	1	Each, Special Reinforced Concrete Drain Manhole, öA-3ö, inclusive of connection to new drainage pipe, In place complete.		
			Each	\$ _____ \$ _____
17.	1	Each, Special Reinforced Concrete Drain Manhole öA-4ö, inclusive of connection to new drainage pipe, In place complete.		
			Each	\$ _____ \$ _____
18.	1	Each, Special Reinforced Concrete Drain Manhole öA-5ö, inclusive of connection to existing and new drainage pipe, In place complete.		
			Each	\$ _____ \$ _____

MISCELLANEOUS ITEMS

19.	L.S.	Temporary Traffic Control	Lump Sum	\$ _____	\$ _____
20.	L.S.	Project Sign including installation and removal; In place complete.	Lump Sum	\$ _____	\$ _____
21.	L.S.	Mobilization and demobilization, including installation and removal; In place complete.	Lump Sum	\$ _____	\$ _____
TOTAL SUM BID – OLAKINO STREET DRAINAGE IMPROVEMENTS (Items 1 to 21, inclusive)					\$ _____

LOT 59 & 60 DRAINAGE IMPROVEMENTS

The prices bid herein for the following items shall include all materials, labor, tools, equipment, machinery and all incidentals necessary to install or to construct these items in place complete, all in accordance with the plans and specifications. Note: Prices are exclusive of general excise tax (GET).

Item No.	Estimated Quantity	Description	Unit Price	Total
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SITE WORK

22.	L.S.	Clearing and Grubbing (0.1 acre ±), including handling and removal of vegetation, unsuitable material, and debris off of DHHL Lands.	Lump Sum	\$ _____	\$ _____
23.	L.S.	Installation, Maintenance, Monitoring and Removal of BMP, Including Filter Sock, Temporary Erosion Control, Dust Control, and Sediment Control Filter; In place complete.	Lump Sum	\$ _____	\$ _____
24.	L.S.	Mass Grading, inclusive of placing and compacting (per the recommendations in the soils report) approximately 387 Cu. Yds. Of embankment and excavation.	Lump Sum	\$ _____	\$ _____

25.	367	Cu. Yds., Grading, inclusive of Hauling, Placing and Compacting. Approximate Excavation = 387 cubic yards.	Per Cu. Yds.	\$ _____	\$ _____
26.	L.S.	Remove, salvage, and restore existing wooden fence (approximately 35 Lin. Ft.) and wire fence (approximately 285 Lin Ft.).	Lump Sum	\$ _____	\$ _____

DRAINAGE SYSTEM

27.	104	Cu. Yds., Unclassified Excavation for Catch Basin and Drain Line including Backfill.	Per Cu. Yds.	\$ _____	\$ _____
28.	72	Lin. Ft. 24" Corrugated Aluminum Pipe, inclusive of Trench Excavation, Pipe Cushion, Backfill, and connecting to existing Catch Basin 14". In place complete.	Per Lin. Ft.	\$ _____	\$ _____
29.	1	Each, Special Reinforced Grated Inlet 14", inclusive of connection to new drainage pipe, In place complete .	Each	\$ _____	\$ _____
30.	290	Lin. Ft. Construction of Trapezoidal GRP swale (3' bottom width x 3' depth), slopes and inverts where shown on the drawings. Inclusive of 10 LF top transition, 17.5 LF bottom transition, and connection to grated inlet 14". In place complete.	Per Lin. Ft.	\$ _____	\$ _____
31.	183	Sq. Yds., Hydro-Mulch Seeding and 90-day Maintenance.	Per Sq. Yds.	\$ _____	\$ _____

MISCELLANEOUS ITEMS

32.	L.S.	Temporary Traffic Control	Lump Sum	\$ _____	\$ _____
33.	L.S.	Project Sign including installation and removal; In place complete.	Lump Sum	\$ _____	\$ _____

34. L.S. Mobilization and Demobilization; In place complete.

Lump Sum \$ _____ \$ _____

TOTAL SUM BID – LOT 59 & 60 DRAINAGE IMPROVEMENTS (Items 22 to 34, inclusive) \$ _____

RECAPITULATION

OLAKINO STREET DRAINAGE IMPROVEMENTS (Items 1 to 21, inclusive) \$ _____

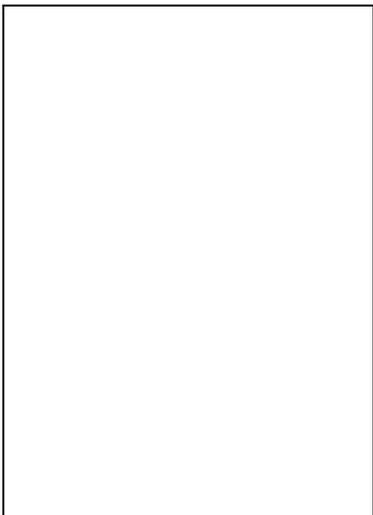
LOT 59 & 60 DRAINAGE IMPROVEMENTS (Items 22 to 34, inclusive) \$ _____

TOTAL SUM BID = \$ _____

GET = \$ _____
(Note: GET @ 4.1667%)

GRAND TOTAL = \$ _____
(With GET)

Dollars (\$ _____) .



The prices herein for the above items shall include all materials, labor, tools, equipment, machinery and all incidentals necessary, inclusive of general excise tax to install or to construct these items in place complete and in accordance with the plans and specifications contained in this IFB.

The CONTRACTOR shall complete all work as specified or indicated in the Contract Documents on or before One Hundred Eighty (180) calendar days after receiving written Notice to Proceed, subject to extensions, as may be granted.

HAWAII PRODUCTS PREFERENCE

Section 103D-1002, Hawaii Revised Statutes (HRS), as amended by Act 175 (Session Laws of Hawaii 2009), provides preference for Hawaii products. The previous Hawaii products list established pursuant to HRS §103D-1002 was suspended effective July 1, 2009, and a new list has been published by the State Procurement Office (SPO). DHHL will be supplementing the list with additional approved products for this solicitation.

Pursuant to HRS §103D-1002(b) (2) and Procurement Circular No. 2009-13, bidders intending to use Hawaii products should distribute the attached SPO-38, *Certification for Hawaii Product Preference*, to each of the manufacturers and producers of such products which bidders intend to use if the manufacturers and producers and their products are not listed on the SPO Hawaii Products List or in the DHHL's list below. The manufacturers and producers must complete and submit SPO-38 to DHHL. The form must be received by DHHL no later than **4:30 p.m., December 4th, 2019**. Submittal by facsimile (808 620-9299) is acceptable. If DHHL receives and approves SPO-38s relating to this solicitation DHHL will issue an addendum listing the additional certified and qualified Hawaii products by **4:30 p.m., December 6th, 2019**.

Bidders may claim a Hawaii product preference for products that it manufactures or produces with its own workforce and equipment. The SPO-38, *Certification for Hawaii Product Preference*, must be submitted in accordance with the procedures described above in order for Bidder to claim a Hawaii product preference for such Hawaii products Bidder intends to use in this work.

A partial list of approved products is provided below. The complete current list as compiled by the State Procurement Office is available at:

<http://www4.hawaii.gov/spoh/HiProducts/hiProducts.htm>

Preferences, Hawaii Products

CONSTRUCTION PRODUCTS AND SOIL AMENDMENTS/PRODUCTS

Aggregates – Basaltic Termite Barrier							
Product Subcategory as applicable	Effective	Revised	Manufacturer	Oahu	Maui	Hawaii	Kauai
Aggregates and Sand – Basalt, Rock, Cinder, Limestone and Coral							
Product Subcategory as applicable	Effective	Revised	Manufacturer	Oahu	Maui	Hawaii	Kauai

Aggregates – Recycled Asphalt and Concrete

Product Subcategory as applicable	Effective	Revised	Manufacturer	Oahu	Maui	Hawaii	Kauai

Asphalt and Paving Materials - HI Products

Product Subcategory as applicable	Effective	Revised	Manufacturer	Oahu	Maui	Hawaii	Kauai

Cement and Concrete Products

Product Subcategory as applicable	Effective Date	Last Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai

Precast Concrete Products							
Product Subcategory <i>as applicable</i>	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai
Environmental Sewage-Treatment Innovative System (ESIS) Individual Wastewater System which utilizes anaerobic/aerobic processing to treat wastewater to R-2 quality at discharge							
Product Subcategory <i>as applicable</i>	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai
Hot Dip Galvanizing							
Product Subcategory <i>as applicable</i>	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai
Pipes-Aluminum and Galvanized							
Product Subcategory <i>as applicable</i>	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai
Aluminum Docks, Floating, etc. - Miscellaneous							
Product Subcategory <i>as applicable</i>	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai
Playground Surfaces							
Product Subcategory	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai

as applicable							
Signs - Traffic, Regulatory and Construction							
Product Subcategory as applicable	Effective	Revised	Manufacturer	Oahu	Maui	Hawaii	Kauai
Veneer							
Product Subcategory as applicable	Effective	Revised	Manufacturer	Oahu	Maui	Hawaii	Kauai
Soil Amendments, Mulch, Compost							
Product Subcategory as applicable	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai
Compost Filter							
Product Subcategory as applicable	Effective Date	Revised Date	Manufacturer	Oahu	Maui	Hawaii	Kauai

SCHEDULE OF ACCEPTABLE HAWAII PRODUCTS AND DESIGNATION OF HAWAII PRODUCTS TO BE USED			
ACCEPTABLE HAWAII PRODUCTS		HAWAII PRODUCTS TO BE USED Cost FOB Jobsite, Unloaded Including Applicable General Excise and Use Taxes	
Description	Manufacturer	Base Bid	Additive Alternate
		\$ _____	\$ _____
		\$ _____	\$ _____
		\$ _____	\$ _____

		\$ _____	\$ _____
		\$ _____	\$ _____
		\$ _____	\$ _____
		\$ _____	\$ _____
		\$ _____	\$ _____
		\$ _____	\$ _____
		\$ _____	\$ _____

It is further understood by the Bidder that if upon being granted Hawaii Products, and being awarded the contract, if the Bidder fails to use such products or meet the requirements of such preference, the Bidder shall be subject to penalties, if applicable.

APPRENTICESHIP AGREEMENT PREFERENCE

Section 103-55.6, HRS, (ACT 17, SLH 2009) provides for a Hawai'i Apprenticeship Preference for public works contracts having an estimated value of \$250,000.00 or more. The preference shall be in the form of a 5% bid adjustment applied to the bidder's amount for bidders that are parties to apprenticeship agreements. The estimated value of this public works contract is \$250,000.00 or more and the apprenticeship agreement preference **shall** apply.

To be eligible for the preference, the bidder shall:

1. Be a party to an apprenticeship agreement registered with the DLIR at the time the bid is made for each apprenticeable trade the bidder will employ to construct the public works project for which the bid is being made.
 - a. The apprenticeship agreement shall be registered and conform to the requirements of HRS Chapter 372.
 - b. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain the preference.
 - c. The bidder is not required to have apprentices in its employ at the time the bid is submitted to qualify for the preference.
 - d. If a bidder's employee is multi-skilled and able to perform work in more than one trade (for example, a project requires a carpenter and a laborer, and the employee is a carpenter, but is also able to perform the work of a laborer), the bidder need only be a party to the carpenter's apprenticeship agreement and does not need to be a party to the laborer's apprenticeship agreement in order to qualify for the preference. The bidder is not "employing" a laborer, only a carpenter, and so only needs to be a party to the carpenter's apprenticeship agreement.
 - e. Qualification for the preference is given on a project-by-project basis and depends upon the specific offer for a specific project. A bidder's employees may vary from project to project and may qualify for the preference on one project but may not qualify on another project. For example, on one project, if the bidder only employs carpenters to perform work in the carpentry and labor trades, then the bidder only needs to be a party to the carpenter's apprenticeship agreement in order to qualify for the preference. However, on another project if the same bidder employs both carpenters and laborers, then the bidder will not qualify for the preference if the bidder is only a party to the carpenter's apprenticeship agreement and not the laborer's apprenticeship agreement.
2. State the trades the bidder will employ to perform the work;
3. For each trade to be employed to perform the work, the bidder shall submit a completed signed original *CERTIFICATION OF BIDDER'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17 (Certification Form 1)* verifying the

participation in an apprenticeship program registered with the State Department of Labor and Industrial Relations (DLIR);

4. The *Certification Form 1* shall be authorized by an apprenticeship sponsor of the DLIR list of registered apprenticeship programs. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor; and
5. The completed *Certification Form 1* for each trade must be submitted by the bidder with the offer. A facsimile or copy is acceptable to be submitted with the offer; however, the completed **signed original** must be submitted within five (5) working days of the due date of the offer. If the signed original is not received within this timeframe, the preference may be denied. Previous certifications shall not apply.

Failure to comply with ALL of the conditions noted above, without exception, shall disqualify the Bidder from qualifying for, and thus receiving, benefit of the Hawai'i Apprenticeship Preference.

The *Certification Form 1* and the List of Construction Trades in Registered Apprenticeship Programs is available on the DLIR website at: <http://labor.hawaii.gov/wdd/>.

Upon receiving *Certification Form 1*, the DHHL will verify with DLIR that the apprenticeship program is on the list of apprenticeship programs registered with the DLIR. If the program(s) are not confirmed by the DLIR, the bidder will not qualify for the preference.

If the bidder is certified to participate in an apprenticeship program for each trade which will be employed by the bidder for the project, a preference will be applied to decrease the bidder's total bid amount by five per cent (5%) for evaluation purposes.

Should the bidder qualify for other preferences (for example, Hawaii Products Preference), all applicable preferences shall be applied to the bid amount.

While for the Hawai'i Apprenticeship Agreement Preference will be taken into consideration to determine the low bidder, the contract awarded shall be the original bid amount, exclusive of any preferences. The preference is only for evaluation purposes.

The bidder hereby certifies that it will employ the following apprenticeable trades to perform the work for this project:

METHOD OF AWARD

Bidder is required to bid on the entire project. The low bidder shall be determined by the procedures outlined in items 1) through 4) below:

- 1) Prior to opening of bids, the State will determine the amount of funds available for the project. This amount will be designated the "control amount". The control amount shall be announced at, and prior to the opening of bids.
- 2) The Base Bid and Alternate, if any, of each Bidder will be adjusted to reflect the applicable preferences in accordance with Chapter 103D, HRS. The Alternate, if any, will then be added to the Base Bid and compared with the control amount.
- 3) The low bidder shall be the Bidder having the lowest aggregate amount, within the control amount (after application of the various preferences), for the Base Bid plus the Alternate, if any.
- 4) If adding the Alternate, if any, would make the aggregate amount exceed the control amount for all Bidders, the low bidder shall be the Bidder having the lowest Base Bid after application of the various preferences.

It is further understood and agreed that:

- 1) The Chairman reserves the right to reject any and/or all bids and waive any defects when, in his opinion, such rejection or waiver will be in the best interest of the State.
- 2) After determining the low bidder, an award may be made either on the amount of the Base Bid alone, or including the Alternate (exclusive of preferences), if:
 - a. It is in the best interest of the State;
 - b. Funds are available at time of the award; and
 - c. The combination of the Base Bid plus Alternate does not change the apparent low bidder.
- 3) In the event the Base Bid for all Bidders exceed the control amount, the Chairman reserves the right to negotiate with the lowest responsible and responsive bidder to award a contract within available funds.
- 4) In the event the award is made for the Base Bid alone, the Chairman reserves the right to amend the contract at a later date to include the Alternate should funds subsequently become available.

OTHER CONDITIONS

- 1) The liquidated damages per working day for failure to complete the work on time have been determined and are noted in the Special Conditions of the sample contract.
- 2) By submitting this bid, the undersigned is declaring that his firm has not been assisted or represented on this matter by an individual who has, in a State capacity, been involved in the subject matter of this contract in the past one (1) year.
- 3) By submitting this bid, the undersigned is declaring that Bidder's own organization will perform at least 20% of the contractor's work. For the purposes of this section, the Contractor's work is defined as: direct cost labor for contractor's forces; direct cost materials installed by the contractor's direct cost labor force; direct cost equipment, either owned or leased, used by the contractor's direct cost labor force; and field overhead cost to include: field supervision, field office trailer (if any), field office equipment and supplies, etc.
- 4) Upon the acceptance of the bid by the Chairman, the undersigned must enter into and execute a contract for the same and furnish a Performance and Payment Bond, as required by law. These bonds shall conform to the provisions of Sections 103D-324 and 325, HRS, and any law applicable thereto.
- 5) The quantities given herewith are approximate only and are subject to increase or decrease.
- 6) The estimated quantities shown for items for which a UNIT PRICE is asked in this bid are only for the purpose of comparing on a uniform basis bids offered for the work under this contract. No claim shall be filed for anticipated profit or loss because of any difference between the quantities of the various classes of work done or the materials and equipment actually installed and the said estimated quantities. Payment on UNIT PRICE items will be made only for the actual number of units incorporated into the finished project at the contract UNIT PRICE.
- 7) If the product of the UNIT PRICE BID and the number of units does not equal the total amount stated by the undersigned in the Bid for any item, it will be assumed that the error was made in computing the total amount. For the purpose of determining the lowest Bidder, the stated UNIT PRICE alone will be considered as representing the Bidder's intention and the total amount bid on such items shall be considered to be the amount arrived at by multiplying the UNIT PRICE by the number of units.
- 8) Certification for Safety and Health Programs for Bids in Excess of \$100,000. In accordance with Sections 103D-327 and 396-18, HRS, by submitting this bid, the undersigned certifies that his firm will have a written Safety and Health Plan for this project that will be available and implemented by the Notice to Proceed date of this project. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational, Safety and Health Division.

- 9) Any contract arising out of this offer is subject to the approval of the Department of the Attorney General as to form, and to all further approvals, including the approval of the Governor, required by statute, regulation, rule, order, or other directive.

Receipt of the following addenda issued by the Department is acknowledged by the date(s) of receipt indicated below:

	Date		Date
Addendum No. 1	_____	Addendum No. 5	_____
Addendum No. 2	_____	Addendum No. 6	_____
Addendum No. 3	_____	Addendum No. 7	_____
Addendum No. 4	_____	Addendum No. 8	_____

It is understood that failure to receive any such addendum shall not relieve the Contractor from any obligation under this IFB as submitted.

Bid Security in the amount of: _____

_____ DOLLARS (\$ _____)

as required by law, is enclosed herewith in the form of:

- | | |
|------------------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Surety Bond (*1) | <input type="checkbox"/> Official Check (*3) |
| <input type="checkbox"/> Legal Tender (*2) | <input type="checkbox"/> Share Certificate (*3) |
| <input type="checkbox"/> Cashier's Check (*3) | <input type="checkbox"/> Teller's Check (*3) |
| <input type="checkbox"/> Certificate of Deposit (*3) | <input type="checkbox"/> Treasurer's Check (*3) |
| <input type="checkbox"/> Certified Check (*3) | |

Respectfully submitted,

Name of Company, Joint Venture or Partnership

License No.

By _____
Signature (*4)

Title: _____

Date: _____

Address: _____

Telephone No.: _____

(IF A CORPORATION, AFFIX CORPORATE SEAL TO SIGNATURE, BE SURE TO FILL IN ATTACHED LIST OF SUBCONTRACTORS. THIS BID FORM MAY NOT BE ALTERED AND BIDDERS MAY NOT QUALIFY OR CONDITION THEIR BIDS IN ANY WAY.)

PLEASE FILL OUT THE ATTACHED CERTIFICATE OF RESOLUTION GIVING EVIDENCE OF THE AUTHORITY OF THIS OFFICER TO SUBMIT BIDS ON BEHALF OF THE COMPANY.

NOTES:

- *1. Surety bond underwritten by a company licensed to issue bonds in this State;
- *2. Legal tender; or
- *3. A certificate of deposit; share certificate; or cashier's, treasurer's, teller's, or official check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation of the National Credit Union Administration.
 - A. These instruments may be utilized only to a maximum of \$100,000.
 - B. If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be accepted.
- *4. Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.
- *5. Fill in all blank spaces with information asked for or bid may be invalidated. **BID MUST BE INTACT; MISSING PAGES MAY INVALIDATE YOUR BID.**

CERTIFICATE OF RESOLUTION

I, _____, Secretary of _____, a Hawaii Corporation, do hereby certify that the following is a full, true and correct copy of a resolution duly adopted by the Board of Directors of said Corporation, at its meeting duly called and held at the office of the Corporation _____, Hawaii, on _____ day of _____, 20____, at which a quorum was present and acting throughout; and that said resolution has not been modified, amended or rescinded and continues in full force and effect.

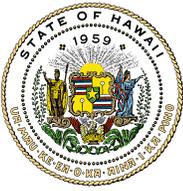
RESOLVED that any individual at the time holding the position(s) of _____, be, and each of them hereby is, authorized to execute on behalf of the Corporation any bid, proposal or contract for the sale or rental of the products of the Corporation or for the services to be performed by the Corporation and to execute any bond required by any such bid, proposal or contract with the United States Government or the State of Hawaii or the City and County of Honolulu, or any County of Municipal Government of said State, or any department or subdivision of any of them.

IN WITNESS THEREOF, I have hereunto set my hand and affixed the corporate seal of said

_____ this _____ day of _____, 20____.

Secretary

END OF BID



STATE OF HAWAII
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Project: Keokea-Waiohuli Drainage Improvements
Location: Keokea & Waiohuli, Makawao, Island of Maui
Contractor: TBD

SC-01 INTERCHANGEABLE TERMS

The following terms are one and the same:

- a. Contract and Agreement.
- b. Department of Hawaiian Home Lands Department DHHL and STATE.

SC-02 INSURANCE COVERAGE

The CONTRACTOR shall obtain separate insurance coverage for this project that complies with the requirements set forth in the DHHL Construction General Conditions, Article 7, Section 7.3, as amended. Payment for all work required to comply with this item will not be paid for separately but shall be considered incidental to the various contract items.

CONTRACTOR shall maintain insurance acceptable to the STATE in full force and effect throughout the term of this Contract. The policies of insurance maintained by CONTRACTOR shall provide the following minimum coverage:

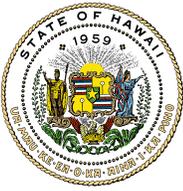
<u>Coverage</u>	<u>Limit</u>
General Liability Insurance (occurrence form)	Bodily Injury and Property Damage (combined single limit): <u>\$1,000,000</u> per occurrence and <u>\$2,000,000</u> aggregate Personal Injury: <u>\$1,000,000</u> per occurrence and <u>\$2,000,000</u> aggregate
Automobile Insurance (covering all owned, non-owned and hired automobiles)	Bodily Injury: <u>\$1,000,000</u> per person and <u>\$1,000,000</u> per occurrence. Property Damage: <u>\$1,000,000</u> per accident or combined single limit of <u>\$2,000,000</u> .
Workers Compensation (statutory limit is required by laws of the State of Hawaii)	Insurance to include Employer's Liability. Both such coverages shall apply to all employees of the CONTRACTOR and, in case any subcontractor fails to provide adequate similar protection for all his employees, to all employees of subcontractors.
Builder's Risk covering the CONTRACTOR and all subcontractors	100% Replacement Value



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SPECIAL CONDITIONS

Fire and extended coverage	100% Replacement Value
Malicious Mischief	100% Replacement Value
Flood Insurance , if applicable	Maximum Coverage available

- a. The State of Hawaii, Department of Hawaiian Home Lands, its elected and appointed officials, officers, employees, and agents shall be named as additional insured with respect to operations, services or products provided to the State of Hawaii. CONTRACTOR agrees to provide to the DHHL, before the effective date of the Contract, certificate(s) of insurance necessary to evidence compliance with insurance provisions of this Contract. CONTRACTOR shall keep such insurance in effect and the certificate(s) on deposit with DHHL during the entire term of this Contract. Upon request by the STATE, CONTRACTOR shall furnish a copy of the policy or policies.
- b. Failure of CONTRACTOR to provide and keep in force such insurance shall be regarded as a material default under this Contract. The STATE shall be entitled to exercise any or all of the remedies provided in this Contract for default of CONTRACTOR.
- c. The procuring of such required policy or policies of insurance shall not be construed to limit CONTRACTOR's liability under this Contract or to fulfill the indemnification provisions and requirements of this Contract. Notwithstanding said policy or policies of insurance, CONTRACTOR shall be obliged for the full and total amount of any damage, injury, or loss caused by negligence or neglect connected with this Contract.
- d. CONTRACTOR shall immediately provide written notice to the contracting department or agency should any of the insurance policies evidenced on its Certificate of Insurance form be cancelled, limited in scope, or not renewed upon expiration.
- e. DHHL is a self insured State agency. CONTRACTOR's insurance shall be primary. Any insurance maintained by the State of Hawaii shall apply in excess of, and shall not contribute with, insurance provided by CONTRACTOR.
- f. The CONTRACTOR shall require all subcontractors to have in full force and effect the same insurance coverage as required of the CONTRACTOR. Such insurance shall name the State of Hawaii, Department of Hawaiian Home Lands, its elected and appointed officials, officers, employees, and agents as additional insured with respect to operations, services or products provided to the State of Hawaii. The CONTRACTOR shall be responsible to enforce its subcontractors' compliance with these insurance requirements and CONTRACTOR shall, upon request, provide the STATE a copy of the policy or policies of insurance for any subcontractor.



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SC-03 COMPLETION SCHEDULE AND LIQUIDATED DAMAGES

The CONTRACTOR shall complete all work as specified or indicated in the Contract Documents on or before One Hundred Eighty (180) Calendar Days after receiving written Notice to Proceed, subject to extensions, as may be granted.

In case of failure on the part of the CONTRACTOR to complete the work within the time specified, the CONTRACTOR shall pay to DHHL as liquidated damages, and not as a penalty, \$500.00 per calendar day for each day that the project, in its entirety, remains incomplete.

SC-04 PROCESS THROUGH DHHL

Any and all submittals, reports, requests, claims and notices under the contract shall be processed through Land Development Division Project Manager, at Hale Kalaniana'ole, 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707.

SC-05 SURVEYING SERVICES

Any surveying services required shall be the responsibility of the CONTRACTOR and considered incidental to the scope of work under this contract and therefore covered under the terms of this contract. No separate payment shall be made.

Upon completion, the CONTRACTOR shall prepare an as-built plan for the project site in which the finished grades are certified by a Registered Land Surveyor. Six (6) copies of the as-built plan shall be submitted to the Construction Manager and Engineer. The as-built plan shall be incidental to the contract. No separate payment shall be made.

SC-06 ALLOWANCES

The proposal may contain payment items designated as allowances. Funds listed in allowance items are to be spent at the direction of DHHL. The allowance is an estimate only and is subject to increase or decrease depending on the actual cost of the item. The funds are for the direct costs of an item and all pricing, submittal and review, overhead, installation, profit, insurance, surety, processing of the issuance of checks for payment to other parties, and all other costs will be included. No payment will be made for incidental costs.

Allowances specifically set aside for construction work and materials will be negotiated when the scope of work is determined. Any unspent allowance costs will be deducted from the contract by change order prior to final payment.



STATE OF HAWAII
SPECIAL CONDITIONS

SC-07 PERMITS AND FEES

The CONTRACTOR shall apply and pay for all permits and inspection fees as required by all governmental agencies having jurisdiction over this project.

SC-08 COORDINATION WITH OTHER PARTIES

The CONTRACTOR shall coordinate all the necessary work for temporary utility services, permanent service and appurtenances with the appropriate agencies, including but not limited to the Maui County Department of Water Supply and Department of Public Works, and the Maui Electric Company, Inc.

SC-09 CONTRACTOR'S LICENSING

It is the CONTRACTOR's sole responsibility to review the requirements of this project and determine the appropriate CONTRACTOR's licenses that are required to complete the project. If the CONTRACTOR does not hold all of the licenses required to perform a particular item of work on this project with its own workers, when bidding, he must list subcontractors that hold the appropriate licenses in its proposal.

SC-10 WATER CHARGES AND REQUIREMENTS

The CONTRACTOR shall be solely responsible for obtaining water to meet any requirements of the contract. Unless otherwise indicated or provided for, any work, costs, charges and fees necessary to obtain water for this contract shall not be paid for separately but shall be considered incidental to the various contract items; no separate or additional payment will be made therefore.

SC-11 SOIL AND DUST CONTROL

To control the dust during construction, the CONTRACTOR shall have an adequate supply of water for dust control and if necessary, moisture conditioning of fill material at all times. The CONTRACTOR shall institute an erosion control program and dust control program to minimize soil erosion and wind erosion and airborne fugitive dust nuisance, respectively for the entire duration of this project.

SC-12 FINAL INSPECTION

Throughout the construction period, the work may be subject to periodic inspection by the Department, designated Construction Inspector, the County of Maui and other applicable government agencies. Once work has been satisfactorily completed, the County and/or the Department and Construction Inspector, will make the final inspection to determine whether all work has been done in complete compliance with the requirements of the plans and these specifications.



STATE OF HAWAII

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The CONTRACTOR shall therefore schedule the final inspection with the County of Maui, Department of Public Works and notify the Department's Project Manager two (2) weeks prior to said inspection.

Neither the scheduling nor the conduct of the aforementioned final inspection shall be deemed a waiver of the Department's right to subsequently require CONTRACTOR to complete all unfinished or defective work to the satisfaction of the Department.

SC-13 GENERAL CONDITIONS

In the event of conflicts and/or discrepancies, the DHHL Interim General Conditions shall govern over Form AG-008, 103D General Conditions (eff. 10/17/13)

SC-14 CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS

CONTRACTORS are hereby notified of the applicability of Section 11-355, HRS, which states that campaign contributions from specified State or County government CONTRACTORS during the term of the contract if the CONTRACTORS are paid with funds appropriated by a legislative body.

SC-15 STANDARD SPECIFICATIONS AND STANDARD DETAILS

The "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986," of the Departments of Public Works, County of Kauai, City and County of Honolulu, County of Maui, and County of Hawaii, of the State of Hawaii, and the "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984," of the Departments of Public Works, County of Kauai, City and County of Honolulu, County of Maui, and County of Hawaii, of the State of Hawaii, and all subsequent amendments and additions, are by reference incorporated herein and made a part of these specifications. The term "DPW Standard Specifications" used hereinafter refers to "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986," and the term "DPW Standard Details" used hereinafter refers to "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984." Copies of the DPW Standard Specifications and DPW Standard Details may be purchased at the Division of Purchasing during regular business hours of the City and County of Honolulu.

The work embraced herein shall be done in accordance with the DPW Standard Specifications and DPW Standard Details, insofar as they may apply.

SC-16 STATE STANDARD SPECIFICATIONS

The "Hawaii Standard Specifications for Road, Bridge and Public Works Construction," Highways Division, Department of Transportation, State of Hawaii, 2005, as amended,



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and hereinafter referred to as the "State Standard Specifications" is by reference incorporated herein and made a part of these contract documents.

SC- 17 CONTRACTOR'S DAILY REPORT

The Contractor shall submit a daily report electronically, for DHHL review. The report shall include:

1. Date
2. Weather
3. Activity at the site for the Contractor
 - a. Labor ó who and what classification, i.e., carpenter, laborer, supervisor, etc.
 - b. Equipment
 - c. Materials delivered
 - d. Work performed
4. Activity at the site for subcontractors
 - a. Labor ó who and what classification, i.e., carpenter, laborer, supervisor, etc.
 - b. Equipment
 - c. Materials delivered
 - d. Work performed
5. Visitors to the site ó Construction Manager, Inspectors, etc.
6. Problems or Questions (including suggested resolutions, if any)
7. Safety report status
8. Quality control report status

SC-18 APPRENTICESHIP AGREEMENT PREFERENCE – CONTRACTOR'S RESPONSIBILITY

1. For the duration of the contract awarded utilizing the Hawai'i Apprenticeship Preference, the CONTRACTOR shall certify each month that work is being conducted on the project, that it continues to be a participant in the relevant apprenticeship program for each trade it employs.
2. Monthly certification shall be made on *MONTHLY REPORT OF CONTRACTOR'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17 (Monthly Certification Form 2)* prepared and made available by the DLIR. *Monthly Certification Form 2* shall be a signed original by the respective apprenticeship program sponsor's authorized official, and submitted by the CONTRACTOR with its monthly payment requests. *Monthly Certification Form 2* is available on the DLIR website at: <http://hawaii.gov/labor/wdd>
3. Should the CONTRACTOR fail or refuse to submit its monthly certification forms, or at any time during the construction of the project, cease to be a party to a registered



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apprenticeship agreement for each apprenticeable trade the CONTRACTOR employs, the CONTRACTOR will be subject to the following sanctions:

- a. Withholding of the requested payment until the required form(s) are submitted;
 - b. Temporary or permanent cessation of work on the project, without recourse to breach of contract claims by the CONTRACTOR; provided the DHHL shall be entitled to restitution for nonperformance or liquidated damages claims; or
 - c. Proceed to debar pursuant to HRS §103D-702.
4. If events such as ðacts of God,ð acts of a public enemy, acts of the State or any other governmental body in its sovereign or contractual capacity, fires, floods, epidemics, freight embargoes, unusually severe weather, or strikes or other labor disputes prevent the CONTRACTOR from submitting the certification forms, the CONTRACTOR shall not be penalized as provided herein, provided the CONTRACTOR completely and expeditiously complies with the certification process when the event is over.

SC-19 ARCHAEOLOGICAL SITES

The CONTRACTOR should be aware that archaeological sites may be encountered during the construction of this project. If the CONTRACTOR encounters a potential archaeological site during construction, he shall immediately cease all operations in the area and contact the Project Manager and the State Historic Preservation Division.

SC-20 INADVERTENT DISCOVERY OF HUMAN BURIALS

Although not expected, in the event human burials are inadvertently discovered, the CONTRACTOR shall immediately stop work in the vicinity of the burial and contact the following parties and agencies immediately: State Historic Preservation Division, DHHL Project Manager, Office of Hawaiian Affairs and the Maui - Lanai Islands Burial Council.

DHHL shall provide the CONTRACTOR with a Supplemental Agreement for additional time added to the CONTRACTOR's performance schedule for the mitigation of any inadvertent discovery of human remains.

SC-21 GEOTECHNICAL ENGINEER

The services of a geotechnical engineering firm are anticipated. The CONTRACTOR may engage the services of a geotechnical consultant at its own cost. Any geotechnical costs shall be incidental to the contract. No separate payment shall be made.



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SC-22 FIRE PREVENTION PLAN

The site is dry and subject to fires. As such, the CONTRACTOR shall prepare a Comprehensive Fire Prevention Plan, submit a copy to the Construction Manager, inform all workers, including subcontractor personnel assigned, post the regulations clearly at the site and enforce the plan.

SC-23 FIELD OFFICE

A field office for exclusive use of DHHL personnel or their representatives is not required. CONTRACTOR may provide a field office at their own expense.

SC-24 EARTHWORK QUANTITIES

Prior to any grading operations, the CONTRACTOR shall submit to the Project Manager a list of estimated quantities for excavation/embankment to complete the drainage grading work. The CONTRACTOR is responsible to dispose of all excavated material offsite unless otherwise approved by the Project Manager. Borrow material may be imported prior to completion of all excavation work; however, CONTRACTOR is responsible to ensure that the imported material meets the project specifications and testing results are provided to the Project Manager, then authorized by the Project Manager. The CONTRACTOR is responsible to ensure that there is adequate site area to store imported materials. The CONTRACTOR is responsible to restore the area used to store imported materials to similar or better condition.

SC-25 COUNTY OF MAUI INSPECTION

All work within the proposed well site and any County maintained easements and roadways shall be inspected and approved by the applicable agencies of the County of Maui. The CONTRACTOR shall make arrangements directly with the appropriate agencies to arrange for inspection of work. All work and/or fees necessary to comply with this item shall be considered incidental to the various contract items. No separate payment shall be made.



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SC-26 STATE GENERAL EXCISE TAX

This project is not exempt from the State of Hawaii General Excise Tax. The CONTRACTOR'S prices shall include the General Excise Tax for all work.

SC-27 COORDINATION WITH LESSEES

Due to the presence of Lessees living on properties contained within this project, CONTRACTOR is responsible for communicating with all responsible owners of the subject properties from the beginning to end of the project term.

SC-28 ACCEPTANCE

The term "acceptance" as used in the Contract Documents means that the work of improvement is acceptable to Owner and shall occur when each and all of the following events have been accomplished:

1. All labor has been performed and all materials supplied and incorporated into the work of improvement as provided in the Contract Documents in a good and workmanlike manner.
2. The project and the job site are in a "clean" condition completely free of all trash, rubbish, debris, dirt, smudges, etc., and all of CONTRACTOR'S and subcontractors' tools and equipment, as well as any leftover materials and inventory, have been removed from the project and the job site.
3. All persons, firms and corporations, including all laborers, materialmen, suppliers and subcontractors who have furnished equipment, supplied materials or performed work for or in connection with the construction, including, but not limited to, all persons who could file a claim of lien, have been paid in full and have submitted their final statements (Final Contractor's, Subcontractor's, and/or Materialmen's Voucher Release and Waiver of Lien) with a waiver of all rights to mechanic's lien, stop notice or recourse against the surety on the bond, if any, in form and substance acceptable to the Owner in its sole discretion.
4. CONTRACTOR submits to the Department an affidavit that such waiver of lien rights or releases includes all of the labor and materials for which any lien could be filed.
5. All work requiring inspection by any governmental authority has been duly inspected and written approval by such authority is received by the Construction Manager.
6. All requisite certificates of occupancy and other governmental approvals, letters of acceptance, licenses and permits have been issued and received by the Construction Manager.

The Department has received one complete set of "as-built" drawings and CONTRACTOR'S certification.



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7. The Department and/or Construction Manager have certified the completion of the project is in accordance with the plans and specifications.

SC-29 FINAL SETTLEMENT OF CONTRACT

The following shall be made additional conditions of compliance with DHHL Construction General Condition 7.33:

1. The CONTRACTOR shall coordinate with all government agencies and utility companies on behalf of DHHL to obtain letter(s) from each respective government agency or utility company indicating that acceptance of the contract work for the project has been granted to DHHL. Copies of the letters shall be submitted to DHHL.
2. Signature, execution, and return of the "Record Drawing" Title tracings.

Payment for all work required to comply with the above items will not be paid for separately but shall be considered incidental to the various contract items.

SC-30 PROJECT SIGN

The Contractor shall furnish, erect, maintain and remove one project sign for each job site.

The project signboard shall be 3/4 inch thick, "AC" exterior grade fir plywood, 4 feet in height and 7 feet long each. All lettering type and size and color selection shall be as specified by DHHL (refer to Exhibit "A").

All paints used shall be exterior enamel paints manufactured either by Ameritone-Devoe, Boysen, DuPont, Dutch Boy Fuller-O'Brien, Glidden, Pittsburg, Sherwin-Williams, Sinclair, or approved equal, and made primarily for the purpose for which they are used, and shall be prepared and applied strictly in accordance with the manufacturer's directions. Signs shall be painted with one prime coat and two finish coats.

Final layout shall be based upon sign plans submitted by the Contractor and approved by the DHHL.

The Project Sign shall be erected at a location directed by the DHHL and shall be adequately braced in such a way that does not interfere with the viewing of the signs. The sign shall be maintained in good condition throughout the progress of the work until final completion of the project. The project sign shall be erected within five (5) days after approval of the sign layout. After the final approval of the construction work by the DHHL, the project sign shall be removed from the site and shall become the property of the Contractor.

Payment will be made for one project sign painted, with lettering specified by DHHL, in



STATE OF HAWAII
SPECIAL CONDITIONS

place complete (see attachment). Payment for sign removal shall be incidental to said item.



STATE OF HAWAII
SPECIAL CONDITIONS

SC-31 ENDANGERED SPECIES

The CONTRACTOR shall abide by the Endangered Species Act of 1973. A critical habitat area (CHA) has been established west of the project site for the endangered Blackburn's Sphinx Moth. In addition, correspondence from the U.S. Fish and Wildlife Service suggests that five federally listed species including the endangered Hawaiian hoary bat, Hawaiian goose, Blackburn's sphinx moth, Hawaiian petrel, and the threatened Newell's shearwater are known to transit through the construction site. In the event that the CONTRACTOR encounters any of the species listed above, the following avoidance measures are proposed based on USFWS suggestions:

Hawaiian hoary bat:

1. No trees greater than 15 feet tall shall be removed or trimmed during the bat breeding and pupping season of June 1 to September 15.
2. Federal funds shall not be used for the purchase or installation of barbed wire fencing.

Hawaiian goose:

1. If a Hawaiian goose appears within 100 feet of ongoing work, all activity shall be temporarily suspended until the bird moves off to a safe distance of its own volition.
2. A biologist shall survey the area around proposed construction areas during the Hawaiian goose breeding season (October to March) prior to the initiation of any work or after any subsequent delay of work of three or more days. If a nest is discovered within a radius of 100 feet of proposed construction activity, or a previously undiscovered nest is found within said radius after work has begun, all work shall cease and the Service will be contacted for further guidance.

Blackburn's sphinx moth:

1. A biologist shall survey the areas proposed for vegetation removal during the wettest portion of the year (November through April). If host plants are discovered in the area affected by the activity, host plants will not be cut or removed and the soil within 10 meters (33 feet) of the host plants not be disturbed. Upon soil disturbance, the site will be kept clear of host plants, with particular attention to ensuring that the non-native tree tobacco does not colonize the site.

Hawaiian petrel (seabirds) & Newell's shearwater



STATE OF HAWAII

SPECIAL CONDITIONS

1. Any outdoor lighting will utilize systems which employ the lowest possible wattage for the application and be constructed in a manner that fully shields lighting sources and directs lighting completely downwards.

SC-32 SOLID WASTE DISPOSAL/RECYCLING

The CONTRACTOR shall dispose of all solid waste generated during construction.

SC-33 RECORD DRAWINGS

Field Posted As-Built Drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be prepared and submitted by the CONTRACTOR. To accomplish this, the following procedure shall be followed by the CONTRACTOR:

1. A full-size set of field posted as-built drawings shall be neatly maintained at the job site. All deviations from alignments, elevations and dimensions which are stipulated on the drawings and authorizations given by the Engineer to deviate from the drawings shall be clearly and accurately recorded by the CONTRACTOR on this set of record drawings.
2. Changes shall be recorded immediately after they are constructed in place to assure they are not forgotten. Record the changes using erasable colored pencil and refer to the authorizing document (RFI, Shop Drawing, Field Modification) or Change Order. The following color codes shall be used to document these changes on the drawings:

Additions	-	RED
Deletions	-	GREEN
Comments	-	BLUE
Dimensions	-	GRAPHITE*

* Legibly mark to record actual depths, horizontal and vertical location of utilities and structures relative to permanent surface improvements.

The field posted as-built drawings shall be made available to the Construction Manager and Engineer during normal working hours at the CONTRACTOR'S field office so that its clarity and accuracy can be monitored.

A monthly log of all the record changes shall be submitted with each progress payment request. The CONTRACTOR shall not be entitled to any progress payment until he has provided a completed log which accurately reflects the work that was done. The log shall identify each revision by drawing number and a



STATE OF HAWAII

SPECIAL CONDITIONS

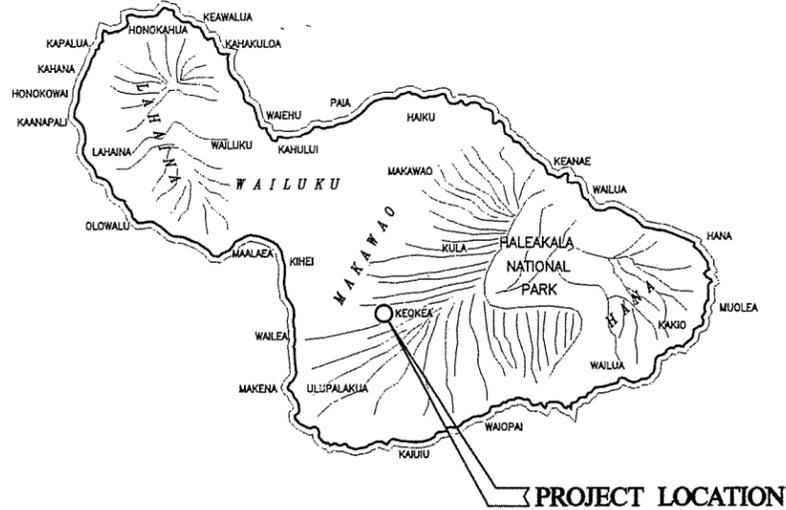
description of the revision. The CONTRACTOR and Construction Manager shall schedule a day each month to meet and review the log and drawings together.

3. The words "FIELD POSTED AS-BUILT" shall be labeled on the title sheet and certified by the CONTRACTOR as to accuracy and completeness as shown below:

FIELD POSTED AS-BUILT

Certified By: _____ Date: _____
Contractor (Include name and company)

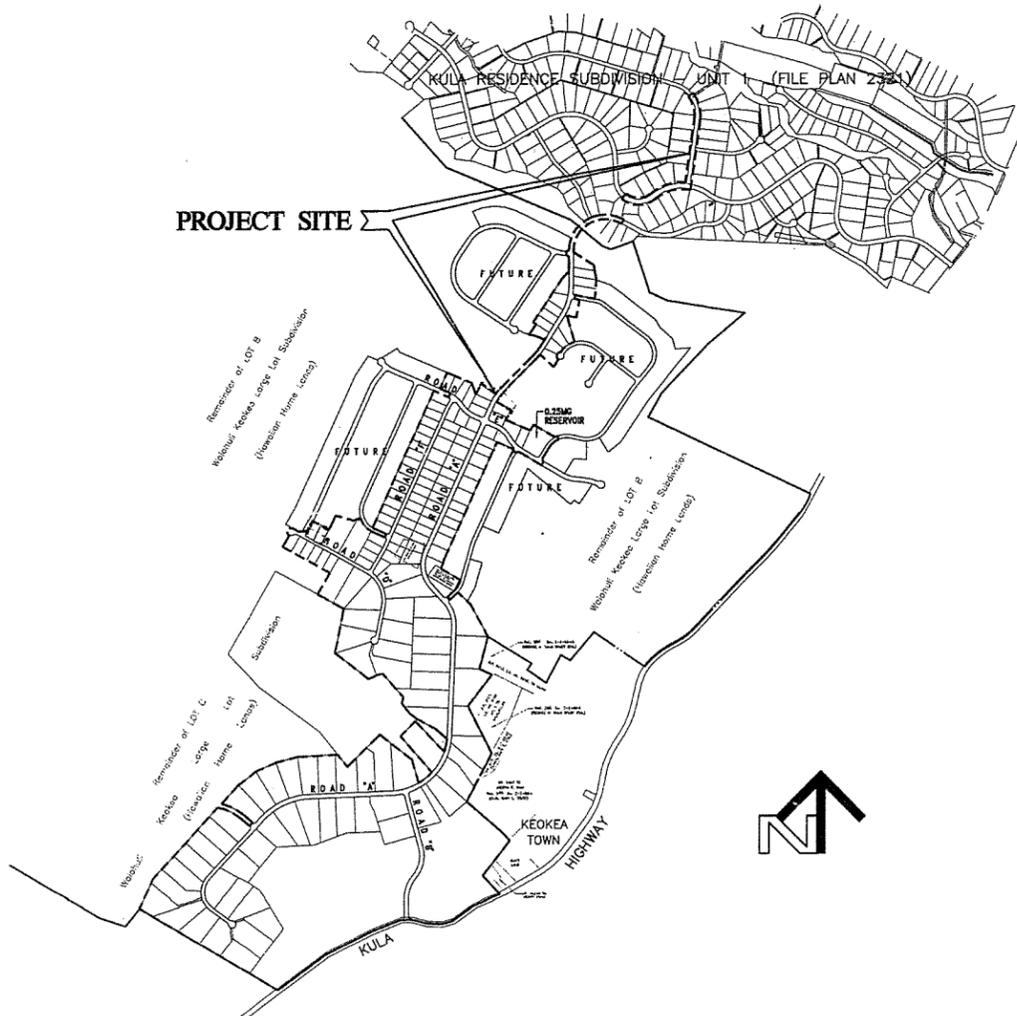
4. The words "FIELD POSTED AS-BUILT" shall be labeled on all sheets in the margin space to the right of the sheet number written from the bottom upward.
5. The Index to Drawings shall be revised with the label "FIELD POSTED AS-BUILT" for each sheet. The index shall conclude with the following note: "A COMPLETE SET CONTAINS ____ SHEETS" with the total number of sheets comprising the set to be placed in the blank.
6. Any "FIELD POSTED AS-BUILT" drawing which the Construction Manager or Engineer determines does not accurately record the deviation, or is not legible, will be rejected and returned to the CONTRACTOR for corrections. Drawings that are ripped or have excessive eraser marks from changes shall be replaced with a clean set of drawings.
7. Submit the set of approved "FIELD POSTED AS-BUILT" drawings to the Engineer no later than five (5) calendar days prior to the date of final inspection.
8. "RECORD DRAWINGS" will be prepared by the design consultant using the "FIELD POSTED AS-BUILT." Both sets of drawings will be sent to the CONTRACTOR for review and approval. The CONTRACTOR will have one (1) week to review and approve the drawings. After the CONTRACTOR is satisfied the Record Drawings are correct, the CONTRACTOR shall certify changes by signing the tracings.



VICINITY MAP



PROJECT SITE



LOCATION MAP

NOT TO SCALE



CONSTRUCTION PLANS

FOR

KEOKEA - WAIOHULI DEVELOPMENT
PHASE I

KEOKEA & WAIOHULI, MAKAWAO, MAUI

OWNER AND DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS

TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

DSA SUBDIVISION FILE NO. 2.2894

DWS FILE NO. 05-29

RECORD DRAWING TRACINGS	
CERTIFIED BY: <i>[Signature]</i>	DATE: 9/1/07
E.C. NO. ABC 12087	
CERTIFIED BY:	DATE:
SUBMITTED BY: <i>[Signature]</i>	DATE: 9/10/07
CIVILITY PLANNING AND ENGINEERING, INC.	
APPROVED BY:	DATE:

CONSULTANTS

CIVIL ENGINEER:
COMMUNITY PLANNING AND ENGINEERING, INC.

ELECTRICAL ENGINEER:
RONALD N.S. HO AND ASSOCIATES, INC.

STRUCTURAL ENGINEER:
TANIMURA AND ASSOCIATES, INC.

SOILS ENGINEER:
PSC CONSULTANTS, LLC

APPROVED

<i>[Signature]</i>	3/12/07
CHAIRMAN, HAWAIIAN HOMES COMMISSION DEPARTMENT OF HAWAIIAN HOME LANDS STATE OF HAWAII	DATE
<i>[Signature]</i>	4/2/07
DIRECTOR, DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL MANAGEMENT COUNTY OF MAUI	DATE
<i>[Signature]</i>	4/2/07
DIRECTOR, DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI (APPROVAL LIMITED TO IMPROVEMENTS WHICH WILL BE DEDICATED TO THE DEPARTMENT OF WATER SUPPLY)	DATE
<i>[Signature]</i>	8/11/06
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION DEPARTMENT OF HEALTH, STATE OF HAWAII	DATE
<i>[Signature]</i>	9/27/07
ADMINISTRATOR, HIGHWAYS DIVISION, STATE DEPARTMENT OF TRANSPORTATION (APPROVAL GRANTED FOR WORK WITHIN STATE RIGHT-OF-WAY ONLY) I. D. NO. ME 01-82 LETTER OF APPROVAL NO. HWY-W 2360-06 DATED: 9-28-2006	DATE

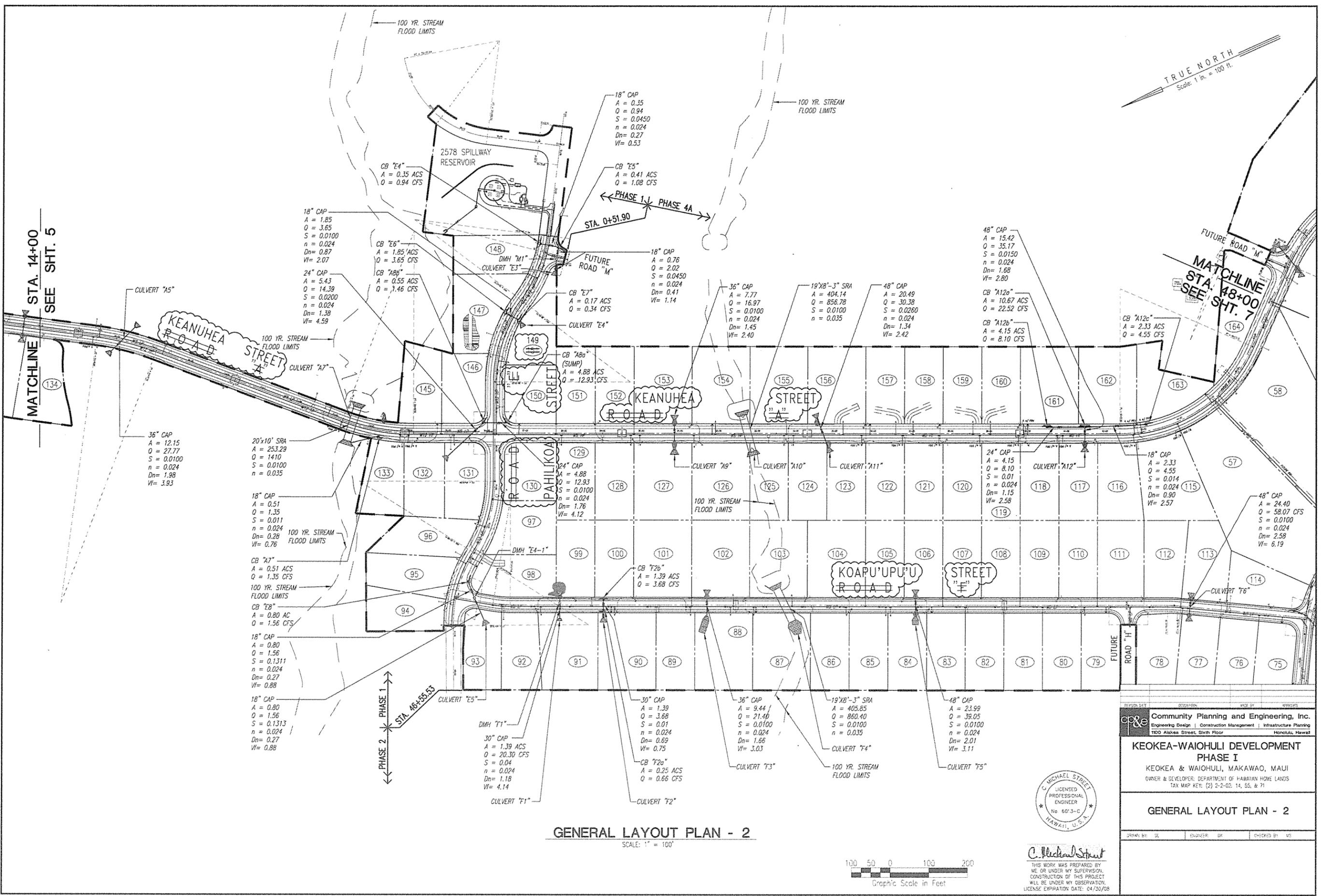
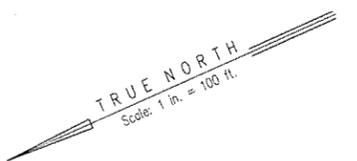
INDEX OF DRAWINGS

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03	INDEX OF DRAWINGS	87	SCADA LOGIC DIAGRAM, INSTRUMENTATION SCHEDULE, AND ANTENNA MOUNTING DETAIL
04	GENERAL NOTES		PRV ASSEMBLY AND CHLORINE FEED SYSTEM PLAN AND SECTIONS
05	GENERAL NOTES		
06	GENERAL LAYOUT PLAN - 1	88	STRUCTURAL
07	GENERAL LAYOUT PLAN - 2	89	GENERAL NOTES
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09	GENERAL LAYOUT PLAN - 4	91	ABUTMENT DETAILS
10	09A STOCKPILES 1, 2, 3 & 4	92	DECK CROSS SECTION & DETAILS
11	CIVIL	93	INTERMEDIATE DIAPHRAGM SECTION & MISC. DETAILS
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14	GRADING PLAN ROAD #1 STA. 21+00 TO 45+00 KEANUHEA STREET	96	RAILING DETAILS
15	GRADING PLAN ROAD #1 STA. 45+00 TO 64+50 KEANUHEA STREET	97	RAILING DETAIL
16	GRADING PLAN ROAD #1 STA. 64+50 TO 86+00 KEANUHEA STREET	98	WING & END WALL DETAILS
17	GRADING PLAN ROAD #1 STA. 86+00 TO 97+00 KEANUHEA STREET	99	GENERAL NOTES
18	GRADING PLAN ROAD #1 STA. 97+00 TO END KEANUHEA STREET	100	TYPICAL DETAILS
19	GRADING PLAN ROAD #2 KA'AMANA STREET	101	FLOOR AND ROOF PLAN
20	GRADING PLAN ROAD #2 OLAKINO STREET & PLACE	102	FOUNDATION PLAN
20A	GRADING PLAN ROAD #2 PAHILIKOA STREET	103	ROOF FRAMING PLAN
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29	PLAN AND PROFILE ROAD #1 STA. 40+00 TO 50+00 KEANUHEA STREET	115	ELECTRICAL DISTRIBUTION PARTIAL ROAD #1 PLAN V & VI KEANUHEA STREET
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32	PLAN AND PROFILE ROAD #1 STA. 71+50 TO 79+50 KEANUHEA STREET	118	ELECTRICAL DISTRIBUTION PARTIAL ROAD #1 PLAN XI & XII KEANUHEA STREET
33	PLAN AND PROFILE ROAD #1 STA. 79+50 TO 89+00 KEANUHEA STREET	119	ELECTRICAL DISTRIBUTION PARTIAL ROAD #1 PLAN I & II KEANUHEA STREET
34	PLAN AND PROFILE ROAD #1 STA. 89+00 TO 97+00 KEANUHEA STREET	120	ELECTRICAL DISTRIBUTION PARTIAL ROAD #1 PLAN I & II OLAKINO STREET & PLACE
35	PLAN AND PROFILE ROAD #2 STA. 0+00 TO 10+00 KA'AMANA STREET	121	ELECTRICAL DISTRIBUTION PARTIAL ROAD #1 PLAN I & II PAHILIKOA STREET
36	PLAN AND PROFILE ROAD #2 STA. 10+00 TO END KA'AMANA STREET	122	ELECTRICAL DISTRIBUTION PARTIAL ROAD #1 PLAN I & II KOAPU'UPU'U STREET
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38	PLAN AND PROFILE ROAD #2 STA. 9+50 TO END OLAKINO STREET & PLACE	124	TYPICAL LOT SERVICE DETAILS
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60	PLAN AND PROFILE DRAIN CULVERTS "B2" AND "B3"		
61	PLAN AND PROFILE DRAIN CULVERT "D2"		
62	PLAN AND PROFILE DRAIN CULVERTS "D3" AND "D4"		
63	PLAN AND PROFILE DRAIN CULVERTS "E3" AND "E4"		
64	PLAN AND PROFILE DRAIN CULVERTS "E5"		
65	PLAN AND PROFILE DRAIN CULVERTS "F1" AND "F2"		
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82	0.25 MG RESERVOIR UTILITY PLAN		
83	0.25 MG RESERVOIR GRADING PLAN		
84	0.25 MG RESERVOIR EROSION CONTROL PLAN		
85	0.25 MG RESERVOIR ACCESS ROAD PROFILE AND GRADING SECTIONS		
86	0.25 MG RESERVOIR WATER TANK PIPING PROFILES		
	0.25 MG RESERVOIR MISCELLANEOUS DETAILS		
	0.25 MG RESERVOIR SECTIONS		
	FLOW METER VAULT AND ALTITUDE VALVE ASSEMBLY PLAN AND SECTIONS		



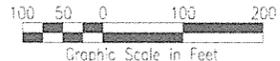
C. Michael Street
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<p style="font-size: small;">Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii</p>			
<p>KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71</p>			
<p>INDEX OF DRAWINGS</p>			
DRAWN BY: ER	ENGINEER: VF	CHECKED BY: MS	



GENERAL LAYOUT PLAN - 2

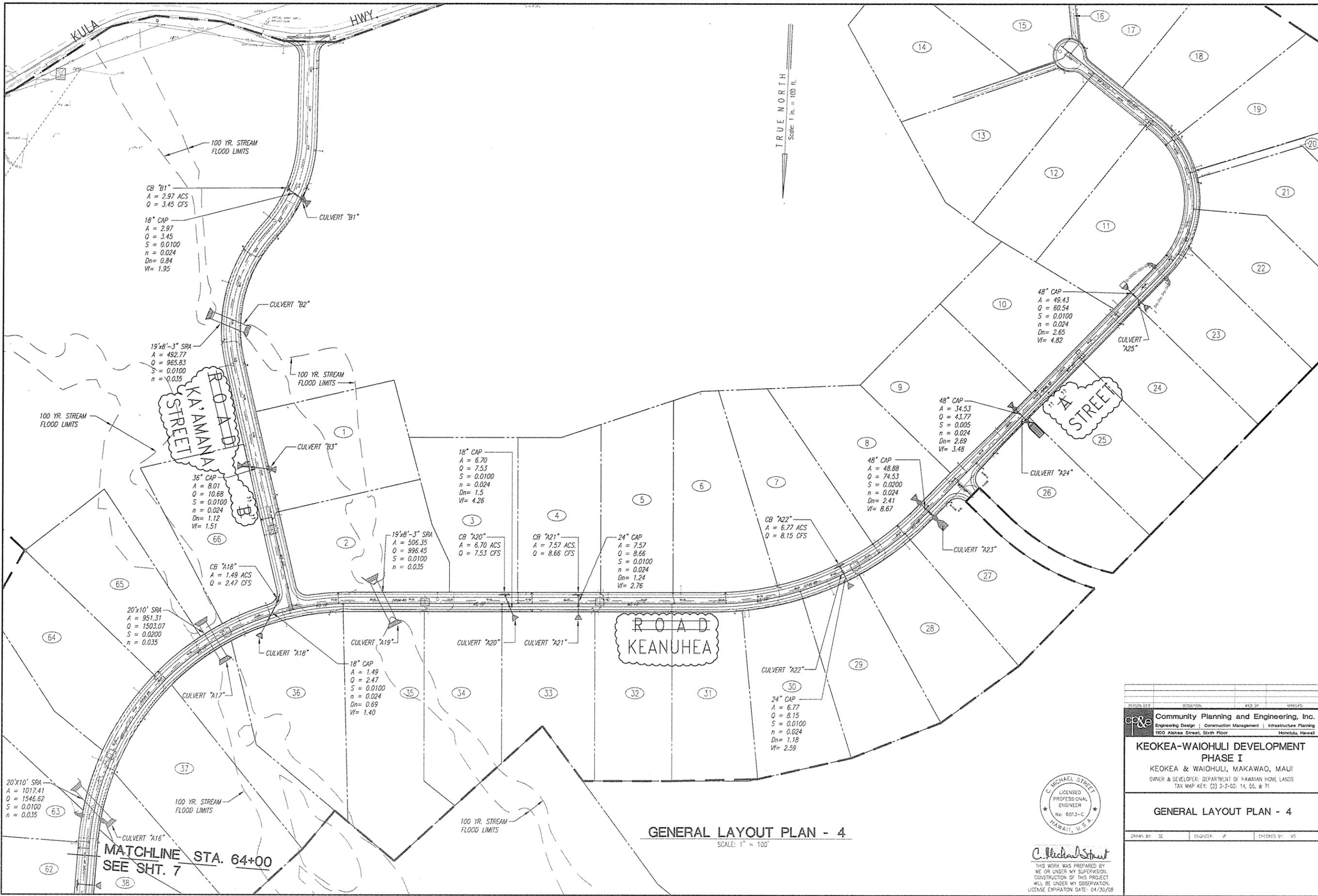
SCALE: 1" = 100'



C. Michael Street
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08

DESIGNED BY	DEVELOPER	MADE BY	APPROVED
Community Planning and Engineering, Inc.			
Engineering Design Construction Management Infrastructure Planning 100 Aiekes Street, Sixth Floor Honolulu, Hawaii			
KEOKEA-WAIOHULI DEVELOPMENT PHASE I			
KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02, 14, 55, & 71			
GENERAL LAYOUT PLAN - 2			
DRAWN BY: DL	ENGINEER: BK	CHECKED BY: MS	

RECORD DRAWINGS



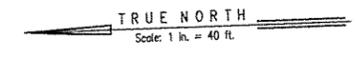
GENERAL LAYOUT PLAN - 4

SCALE: 1" = 100'



C. Michael Street
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08

DESIGNED BY	DATE	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71			
GENERAL LAYOUT PLAN - 4			
DRAWN BY: SE	ENGINEER: JF	CHECKED BY: MS	

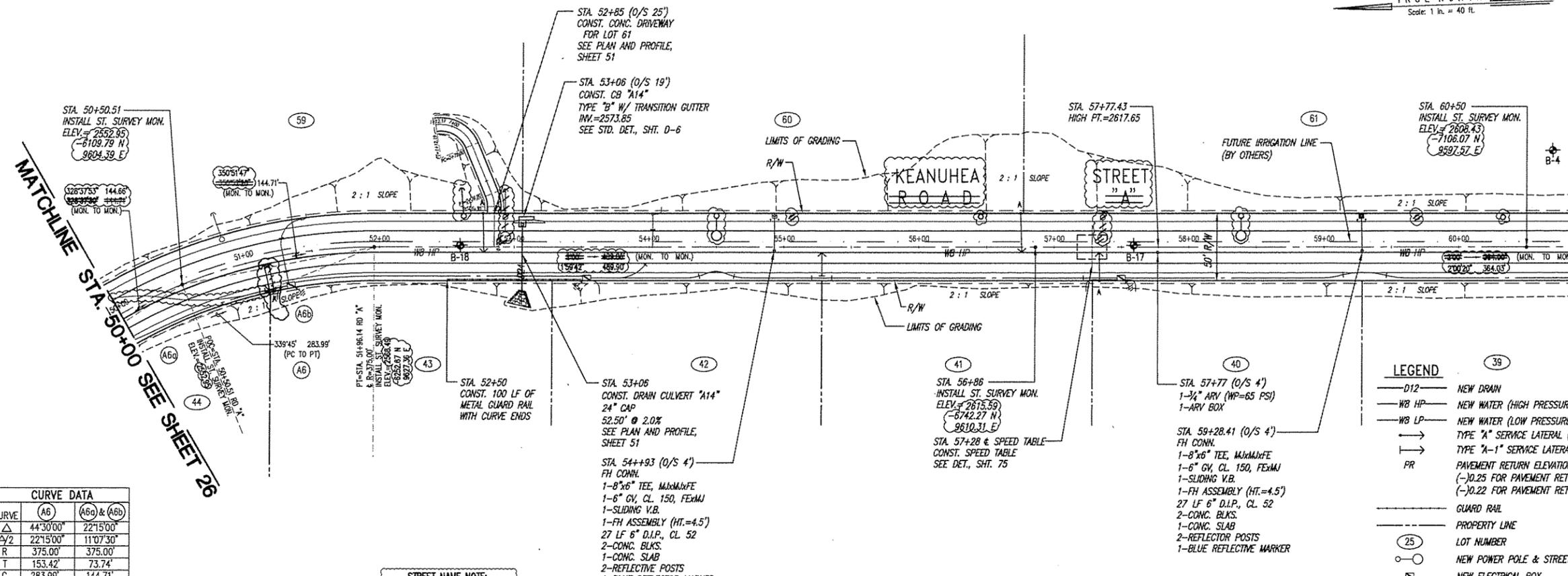


MATCHLINE STA. 50+00 SEE SHEET 26

MATCHLINE STA. 61+00 SEE SHEET 28

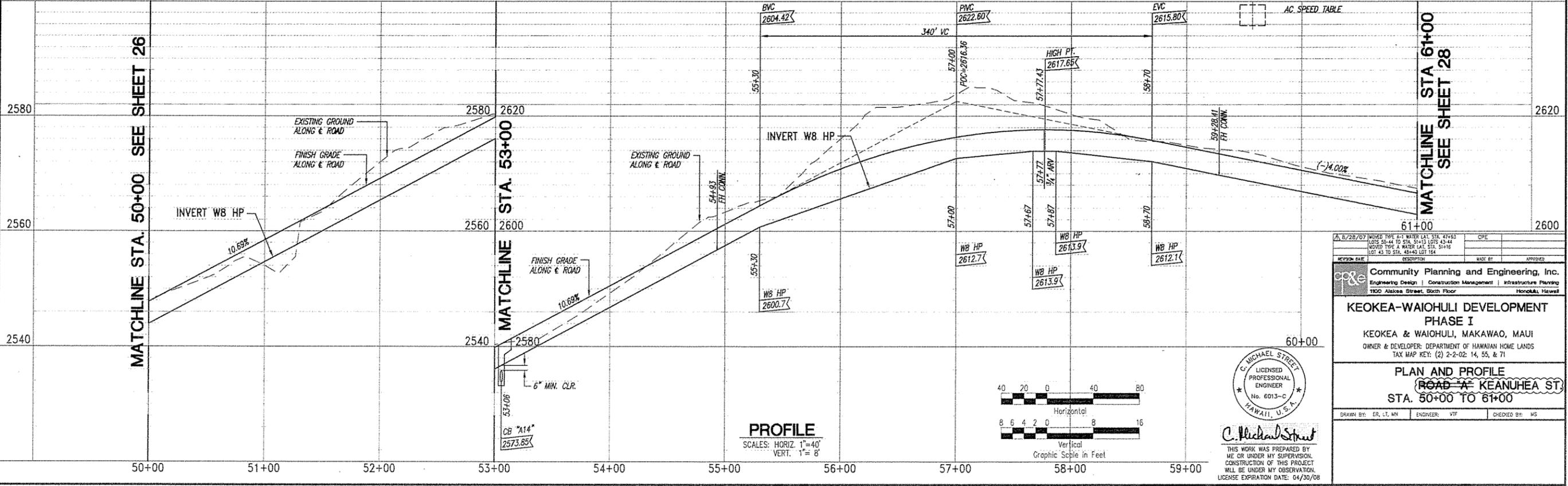
CURVE DATA		
CURVE	(A6)	(A6a) & (A6b)
Δ	44°30'00"	22°15'00"
Δ/2	22°15'00"	11°07'30"
R	375.00'	375.00'
T	153.42'	73.74'
C	283.99'	144.71'
L	291.25'	145.63'

STREET NAME NOTE:
ROAD "A" = KEANUHEA STREET

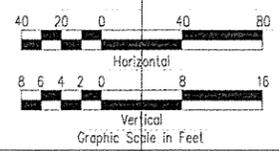


- LEGEND**
- D12— NEW DRAIN
 - WB HP— NEW WATER (HIGH PRESSURE)
 - WB LP— NEW WATER (LOW PRESSURE)
 - >>> TYPE "A" SERVICE LATERAL (SEE DET., SHT. 41)
 - >>> TYPE "A-1" SERVICE LATERAL (SEE DET., SHT. 41)
 - PR— PAVEMENT RETURN ELEVATION AT CENTERLINE
 - (-).025 FOR PAVEMENT RETURN ELEVATION (50 FT. RW)
 - (-).022 FOR PAVEMENT RETURN ELEVATION (40 FT. RW)
 - — — — — GUARD RAIL
 - — — — — PROPERTY LINE
 - (25) LOT NUMBER
 - NEW POWER POLE & STREET LIGHT
 - NEW ELECTRICAL BOX
 - ⊗ B-15 BORING PIT LOCATION
 - ⊕ TP-42 TEST PIT LOCATION
 - AC SPEED TABLE

PLAN
SCALE: 1"=40'



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=8'



C. MICHAEL STREET
LICENSED PROFESSIONAL ENGINEER
No. 6013-C
HAWAII, U.S.A.

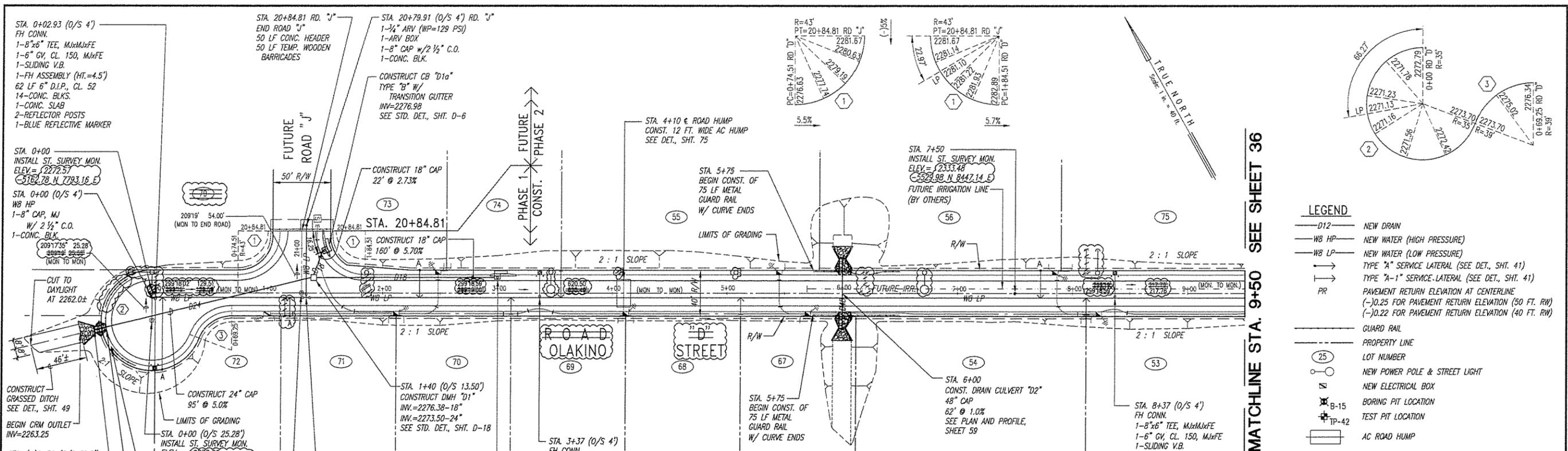
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/08

REVISION DATE: 8/28/07
DESCRIPTION: WATER MAIN & DRAINAGE FOR LOTS 43-44 & 45-46
DRAWN BY: ER, LT, MN
ENGINEER: VTF
CHECKED BY: MS

Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alahehe Street, Sixth Floor, Honolulu, Hawaii

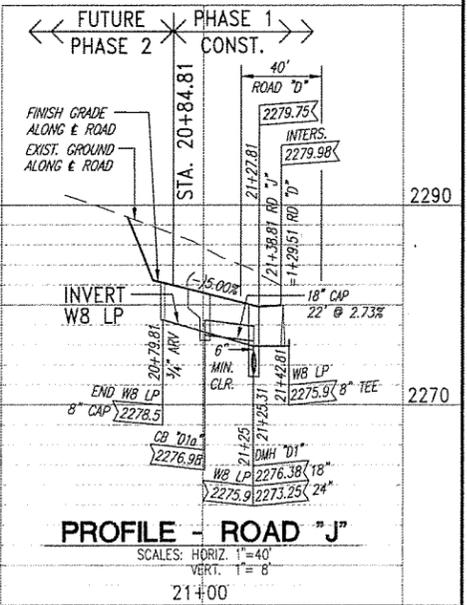
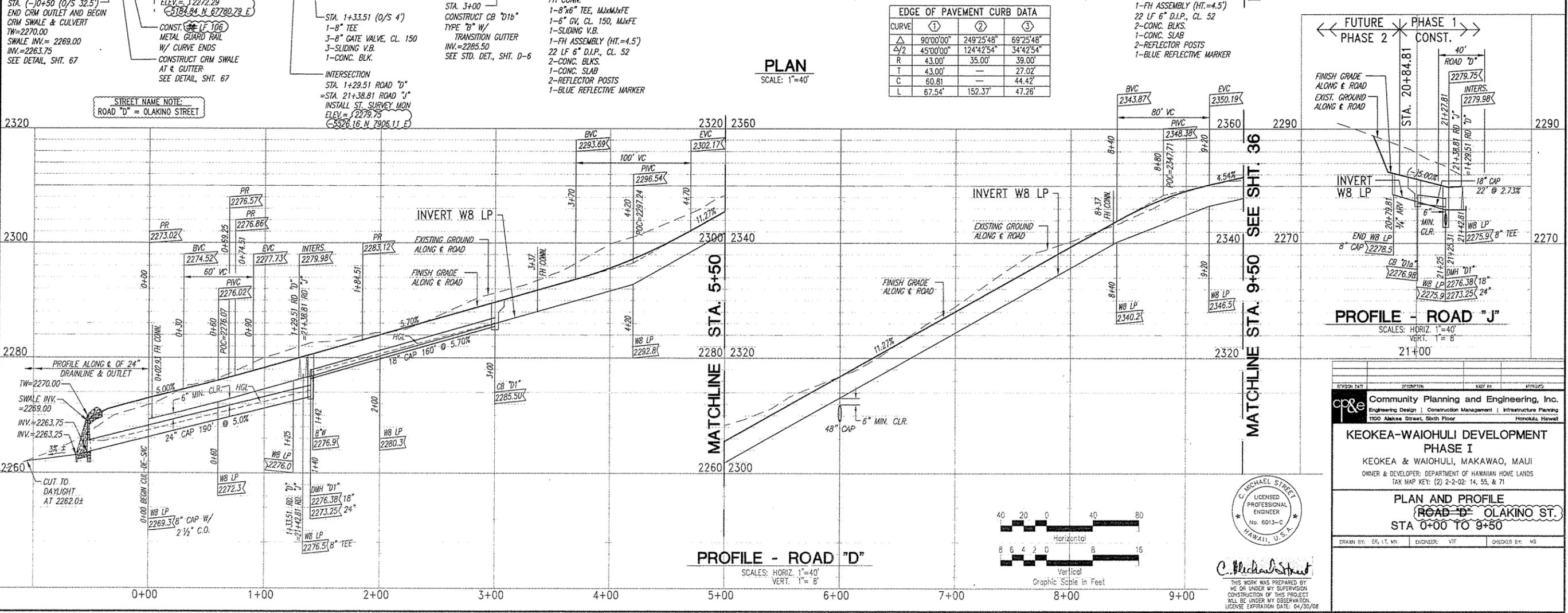
KEOKEA-WAIOHULI DEVELOPMENT PHASE I
KEOKEA & WAIOHULI, MAKAWAO, MAUI
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

PLAN AND PROFILE
ROAD "A" KEANUHEA ST.
STA. 50+00 TO 61+00



EDGE OF PAVEMENT CURB DATA

CURVE	①	②	③
Δ	90°00'00"	249°25'48"	69°25'48"
Δ/2	45°00'00"	124°42'54"	34°42'54"
R	43.00'	35.00'	39.00'
T	43.00'	—	27.02'
L	60.81'	—	44.42'
C	67.54'	152.37'	47.26'



LEGEND

- D12 NEW DRAIN
- WB HP NEW WATER (HIGH PRESSURE)
- WB LP NEW WATER (LOW PRESSURE)
- TYPE "A" SERVICE LATERAL (SEE DET., SHT. 41)
- TYPE "A-1" SERVICE LATERAL (SEE DET., SHT. 41)
- PR PAVEMENT RETURN ELEVATION AT CENTERLINE (-0.25 FOR PAVEMENT RETURN ELEVATION (50 FT. RW) (-0.22 FOR PAVEMENT RETURN ELEVATION (40 FT. RW)
- GUARD RAIL
- PROPERTY LINE
- ②5 LOT NUMBER
- NEW POWER POLE & STREET LIGHT
- NEW ELECTRICAL BOX
- ⊕ B-15 BORING PIT LOCATION
- ⊕ TP-42 TEST PIT LOCATION
- ▭ AC ROAD HUMP

PLAN
SCALE: 1"=40'

PROFILE - ROAD "D"
SCALE: HORIZ. 1"=40'
VERT. 1"=8'

PROFILE - ROAD "J"
SCALE: HORIZ. 1"=40'
VERT. 1"=8'

COMMUNITY PLANNING AND ENGINEERING, INC.
Engineering Design | Construction Management | Infrastructure Planning
1100 Aiea Street, Sixth Floor, Honolulu, Hawaii

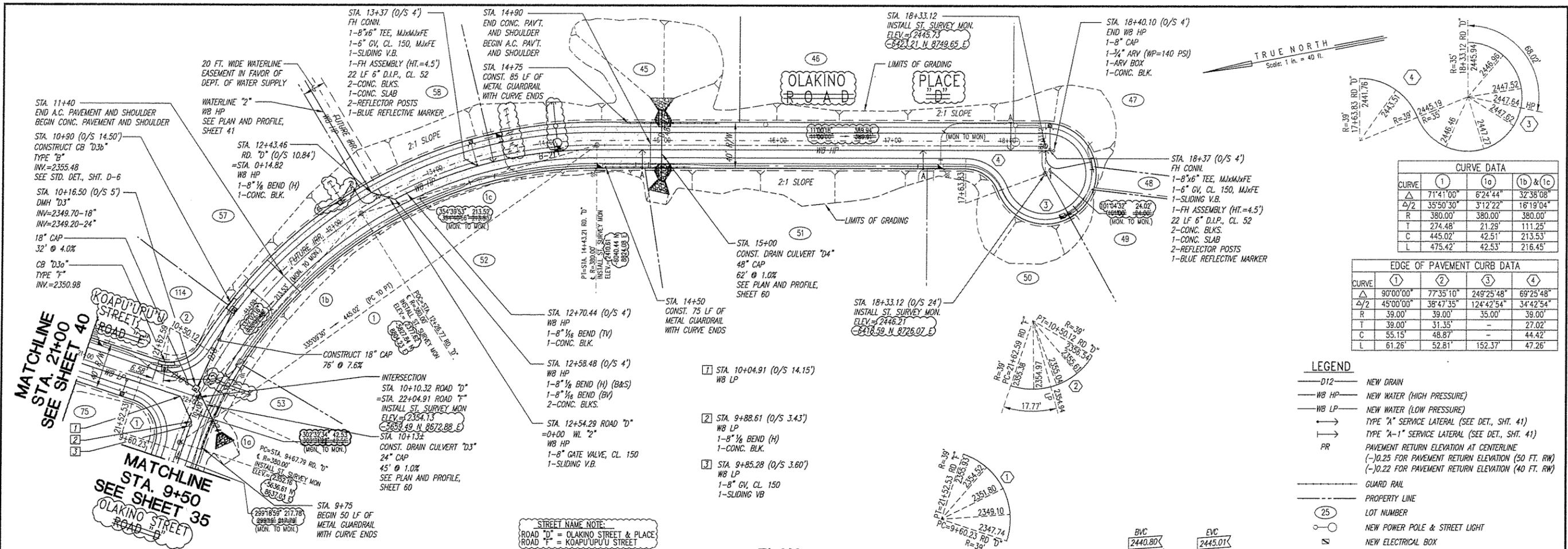
KEOKEA-WAIOHULI DEVELOPMENT PHASE I
KEOKEA & WAIOHULI, MAKAWAO, MAUI
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (2) 2-2-02: 14, 55, 8, 71

PLAN AND PROFILE
ROAD "D" OLAKINO ST.
STA 0+00 TO 9+50

DRAWN BY: EA, LT, MN ENGINEER: VTF CHECKED BY: MS

C. MICHAEL STREET
LICENSED PROFESSIONAL ENGINEER
No. 6013-C
HAWAII, U.S.A.

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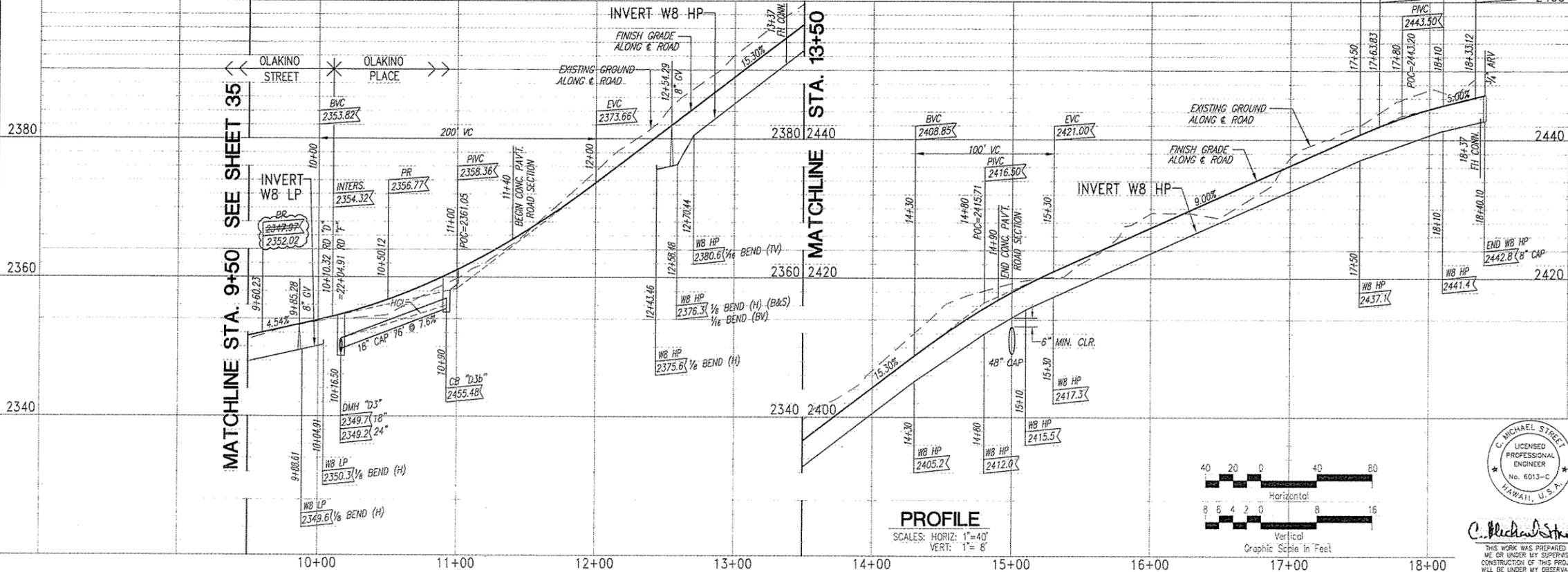
CURVE DATA

CURVE	1	1a	1b & 1c
Δ	71°41'00"	6°24'44"	32°38'08"
Δ/2	35°50'30"	3°12'22"	16°19'04"
R	380.00'	380.00'	380.00'
T	274.48'	21.29'	111.25'
C	445.02'	42.51'	213.53'
L	475.42'	42.53'	216.45'

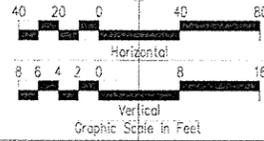
EDGE OF PAVEMENT CURB DATA

CURVE	1	2	3	4
Δ	90°00'00"	77°35'10"	249°25'48"	69°25'48"
Δ/2	45°00'00"	38°47'35"	124°42'54"	34°42'54"
R	39.00'	39.00'	35.00'	39.00'
T	39.00'	31.35'	-	27.02'
C	55.15'	48.87'	-	44.42'
L	61.26'	52.81'	152.37'	47.26'

PLAN
SCALE: 1"=40'



PROFILE
 SCALES: HORIZ: 1"=40'
 VERT: 1"=8'



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 Engineering Design | Construction Management | Infrastructure Planning
 1100 Alakea Street, Sixth Floor Honolulu, Hawaii

KEOKEA-WAIOHULI DEVELOPMENT PHASE I
 KEOKEA & WAIOHULI, MAKAWAO, MAUI
 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
 TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

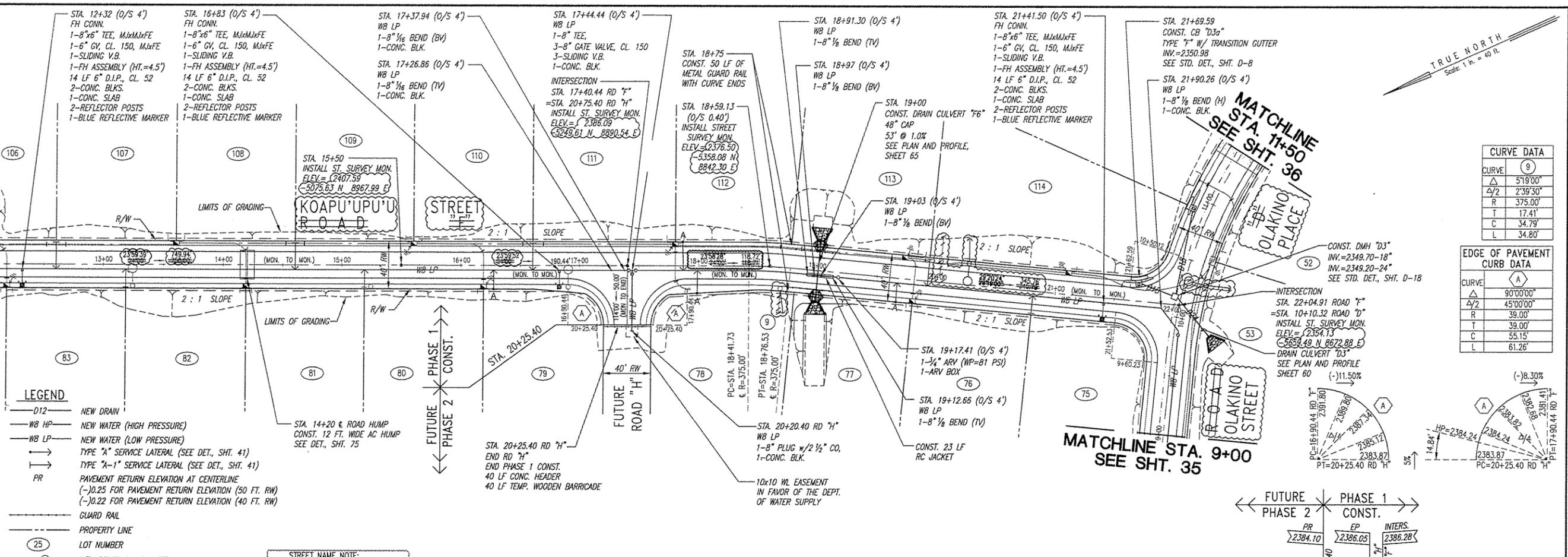
PLAN AND PROFILE
 ROAD "D" OLAKINO ST. & PL.
 STA 9+50 TO END

DRAWN BY: SP, LP, WP ENGINEER: VTF CHECKED BY: MS

MATCHLINE STA. 12+00 SEE SHEET 39

MATCHLINE STA. 12+00 SEE SHT. 39

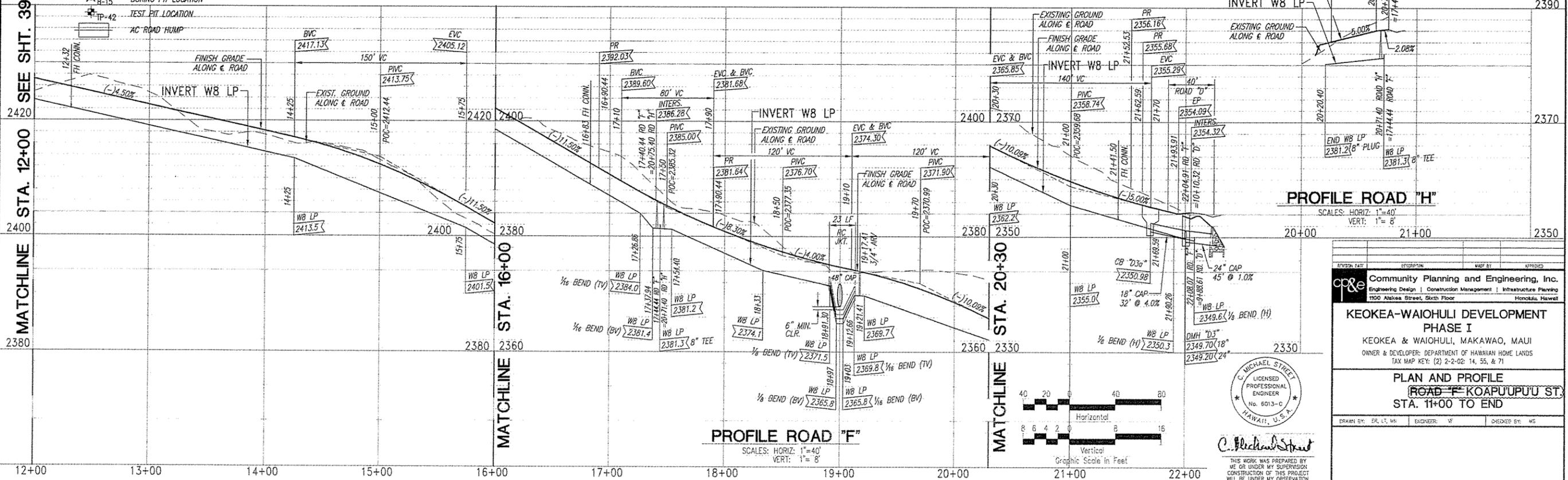
MATCHLINE STA. 12+00



- LEGEND**
- D12 NEW DRAIN
 - WB HP NEW WATER (HIGH PRESSURE)
 - WB LP NEW WATER (LOW PRESSURE)
 - TYPE "A" SERVICE LATERAL (SEE DET., SHT. 41)
 - TYPE "A-1" SERVICE LATERAL (SEE DET., SHT. 41)
 - PR PAVEMENT RETURN ELEVATION AT CENTERLINE
 - (-)0.25 FOR PAVEMENT RETURN ELEVATION (50 FT. RW)
 - (-)0.22 FOR PAVEMENT RETURN ELEVATION (40 FT. RW)
 - GUARD RAIL
 - PROPERTY LINE
 - 25 LOT NUMBER
 - NEW POWER POLE & STREET LIGHT
 - NEW ELECTRICAL BOX
 - ⊗ B-15 BORING PIT LOCATION
 - ⊕ TP-42 TEST PIT LOCATION
 - ▭ AC ROAD HUMP

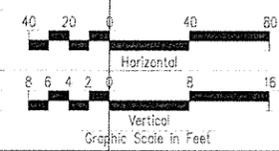
STREET NAME NOTE:
 ROAD "F" = KOAPOUPU'U STREET
 ROAD "D" = OLAKINO STREET & PLACE

PLAN
 SCALE: 1"=40'



PROFILE ROAD "F"
 SCALES: HORIZ: 1"=40'
 VERT: 1"=8'

PROFILE ROAD "H"
 SCALES: HORIZ: 1"=40'
 VERT: 1"=8'



C. Michael Street
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 1000 Alakea Street, Sixth Floor
 Honolulu, Hawaii

**KEOKEA-WAIOHULI DEVELOPMENT
 PHASE I**
 KEOKEA & WAIOHULI, MAKAWAO, MAUI
 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
 TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

**PLAN AND PROFILE
 ROAD "F" KOAPOUPU'U ST.
 STA. 11+00 TO END**

DRAWN BY: ER, LT, MR ENGINEER: VF CHECKED BY: WS

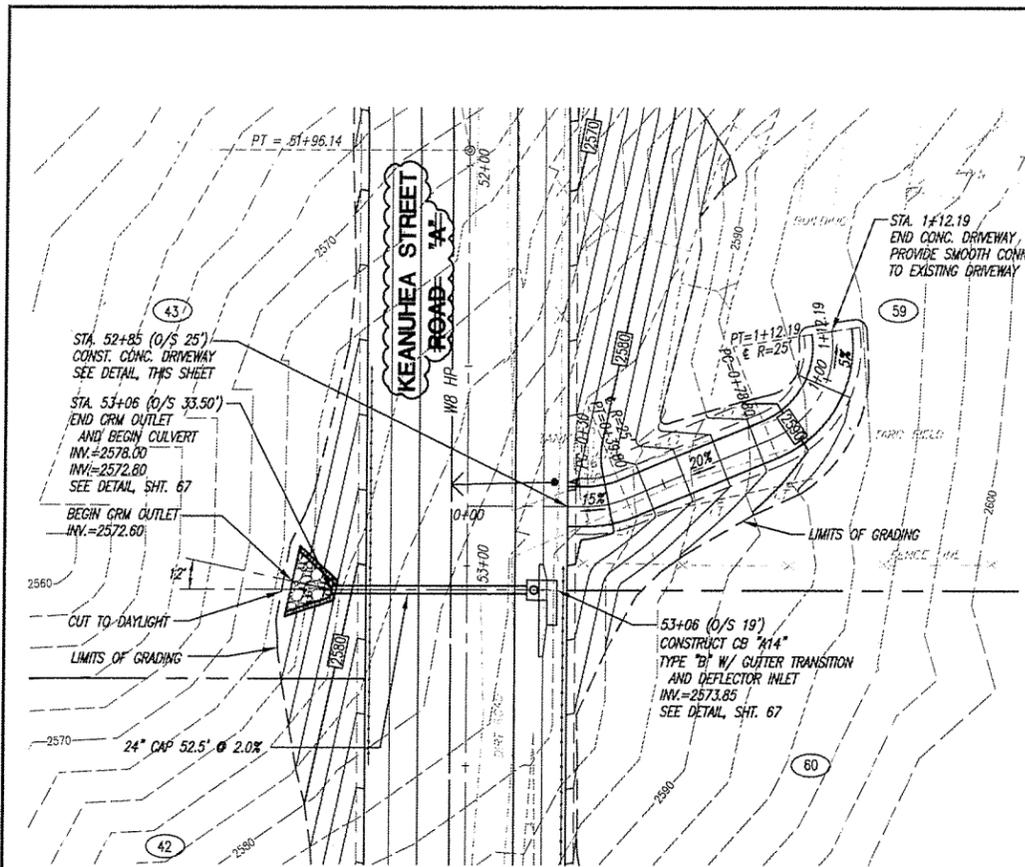
CURVE DATA

CURVE	(9)
Δ	5'19"00"
Δ/2	2'39"30"
R	375.00'
T	17.41'
C	34.79'
L	34.80'

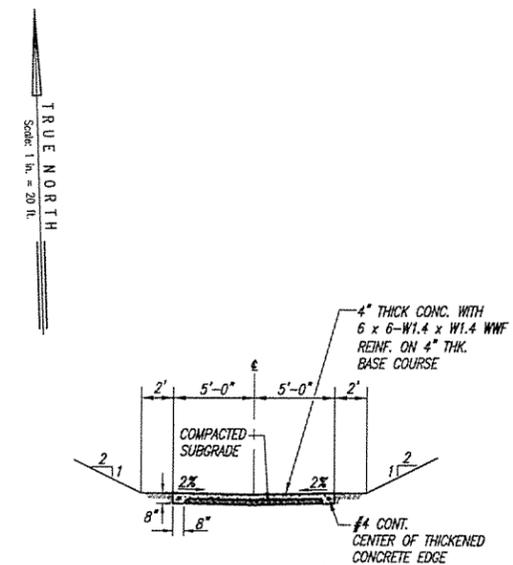
EDGE OF PAVEMENT CURB DATA

CURVE	(A)
Δ	90'00"00"
Δ/2	45'00"00"
R	39.00'
T	55.15'
L	61.26'



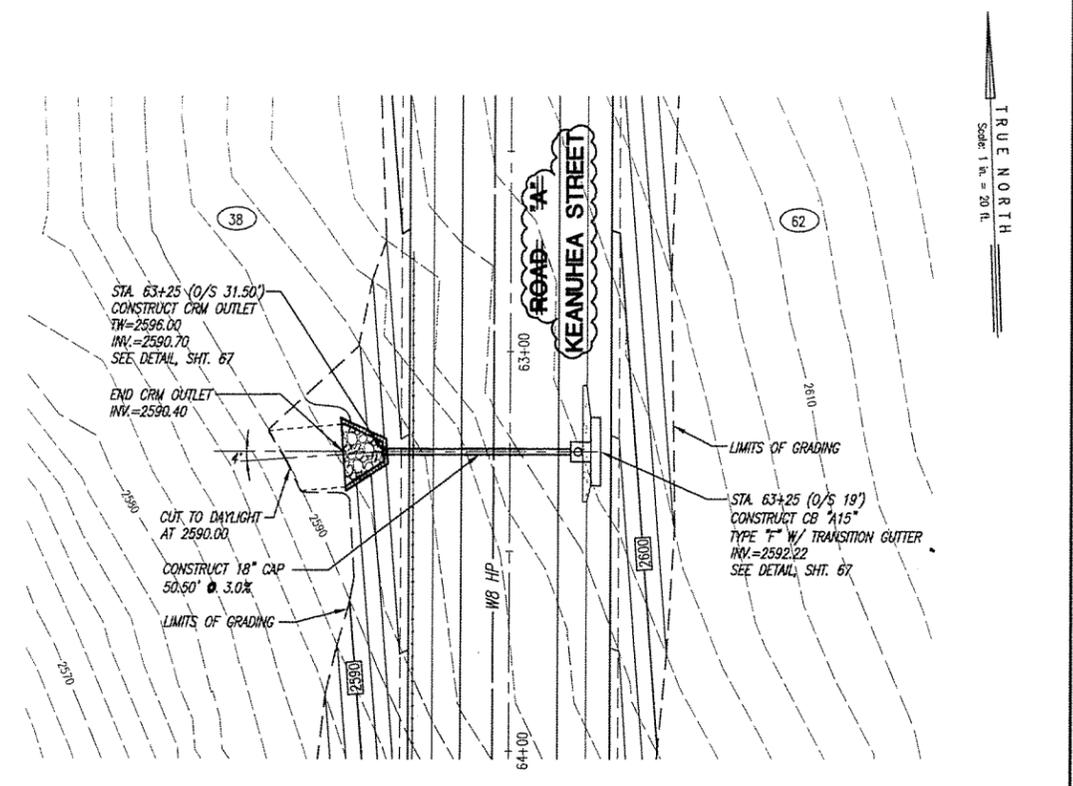


PLAN - CULVERT "A14" AND DRIVEWAY FOR LOT 59
SCALE: 1"=20'

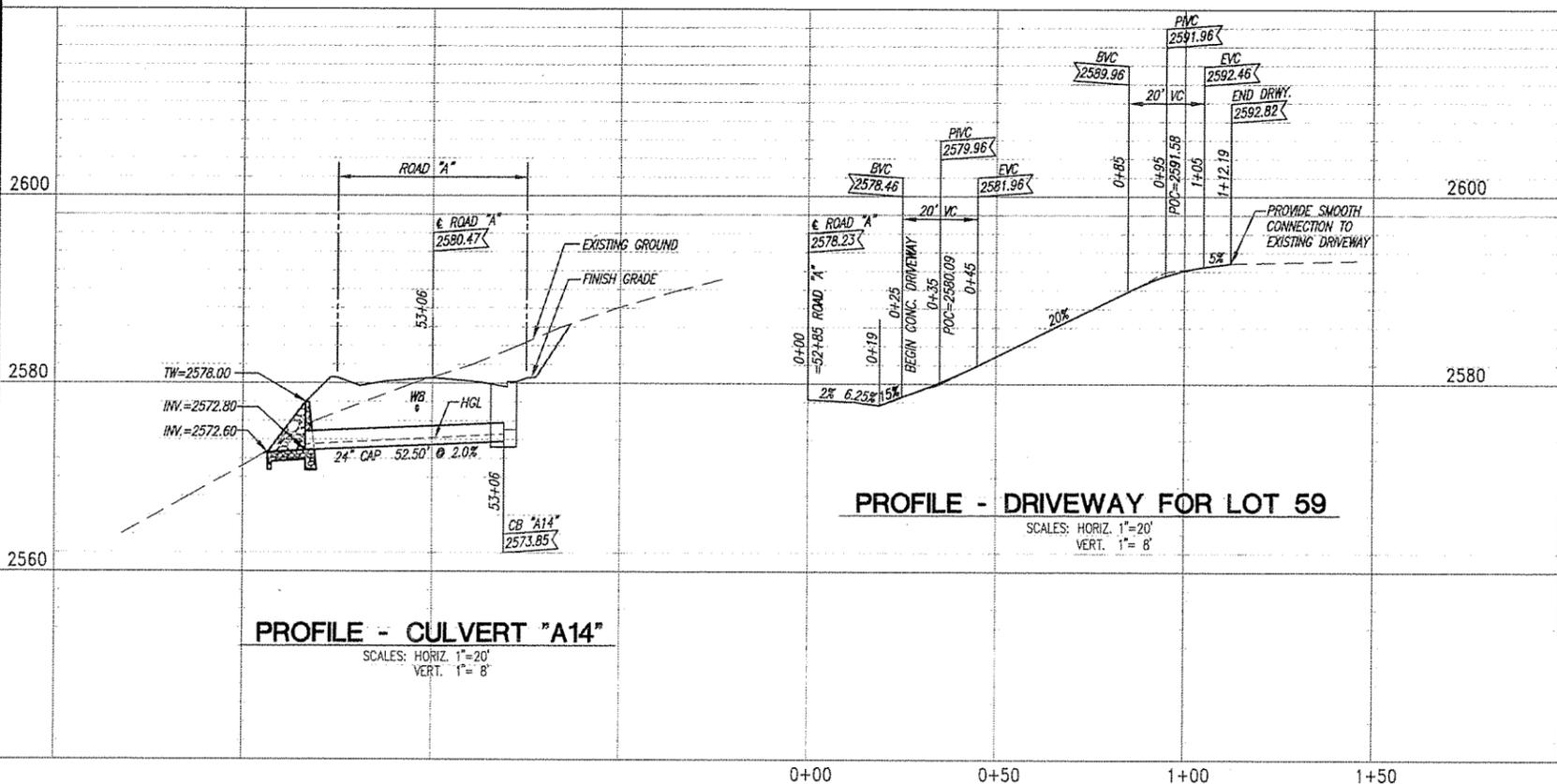


DETAIL - CONCRETE DRIVEWAY
SCALE: 1"=5'-0"

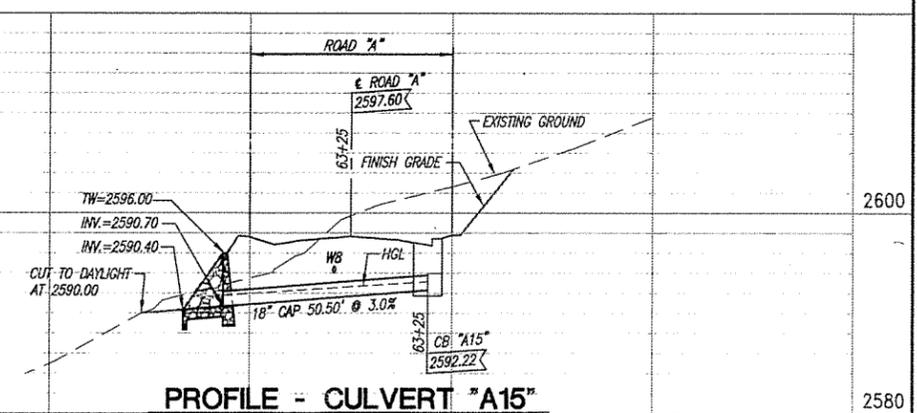
- LEGEND**
- 2500 EXISTING GRADE CONTOUR
 - 2450 FINISH GRADE CONTOUR
 - WB NEW WATER
 - TYPE "A" SERVICE LATERAL
 - TYPE "A-1" SERVICE LATERAL
 - GUARD RAIL
 - PROPERTY LINE
 - 59 LOT NUMBER



PLAN - CULVERT "A15"
SCALE: 1"=20'

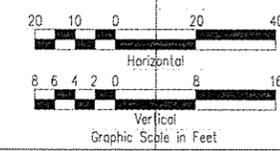


PROFILE - DRIVEWAY FOR LOT 59
SCALES: HORIZ. 1"=20'
VERT. 1"= 8'



PROFILE - CULVERT "A15"
SCALES: HORIZ. 1"=20'
VERT. 1"= 8'

PROFILE - CULVERT "A14"
SCALES: HORIZ. 1"=20'
VERT. 1"= 8'

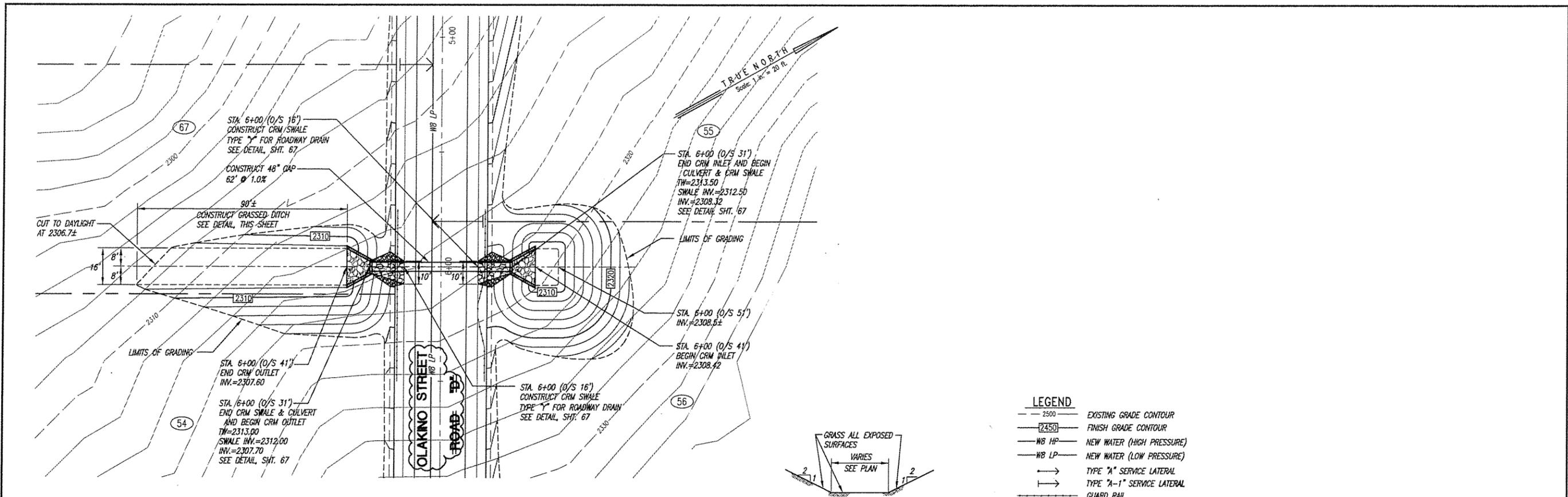


C. MICHAEL STREET
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HAWAII, U.S.A.

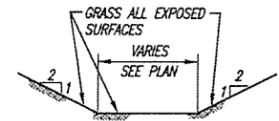
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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<p>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Makae Street, Sixth Floor Honolulu, Hawaii</p>			
<p>KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71</p>			
<p>PLAN AND PROFILE DRAIN CULVERTS "A14" AND "A15" AND DRIVEWAY FOR LOT 59</p>			
DRAWN BY: LT	ENGINEER: BPK	CHECKED BY: MS	

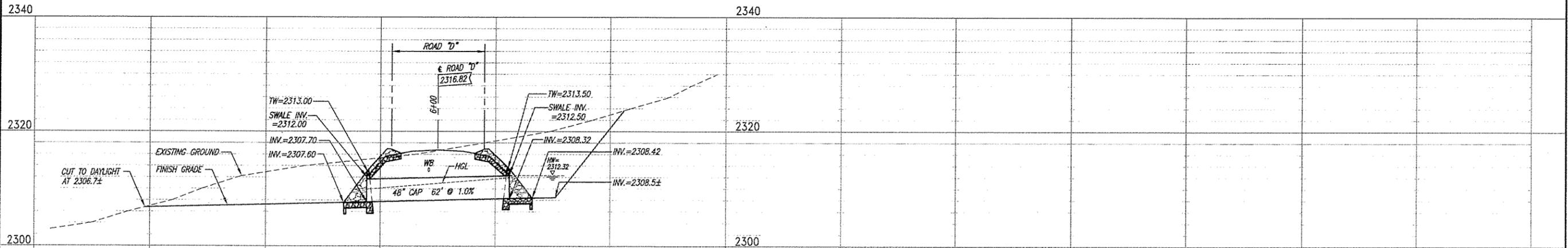


PLAN - CULVERT "D2"
SCALE: 1"=20'

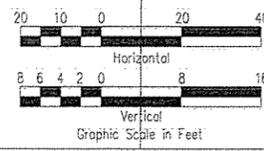


DETAIL-GRASSED DITCH
NOT TO SCALE

- LEGEND**
- 2500 — EXISTING GRADE CONTOUR
 - 2310 — FINISH GRADE CONTOUR
 - WB HP — NEW WATER (HIGH PRESSURE)
 - WB LP — NEW WATER (LOW PRESSURE)
 - TYPE "A" SERVICE LATERAL
 - TYPE "A-1" SERVICE LATERAL
 - — — — — GUARD RAIL
 - — — — — PROPERTY LINE
 - ⊙ 25 ⊙ LOT NUMBER



PROFILE - CULVERT "D2"
SCALES: HORIZ. 1"=20'
VERT. 1"=8'

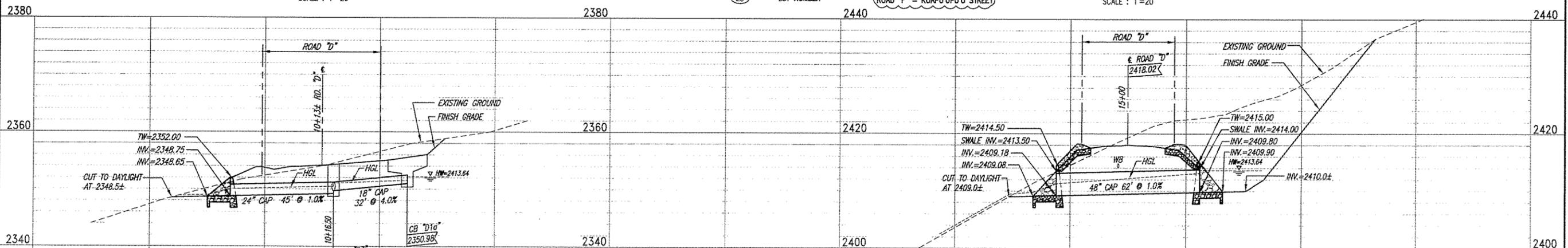
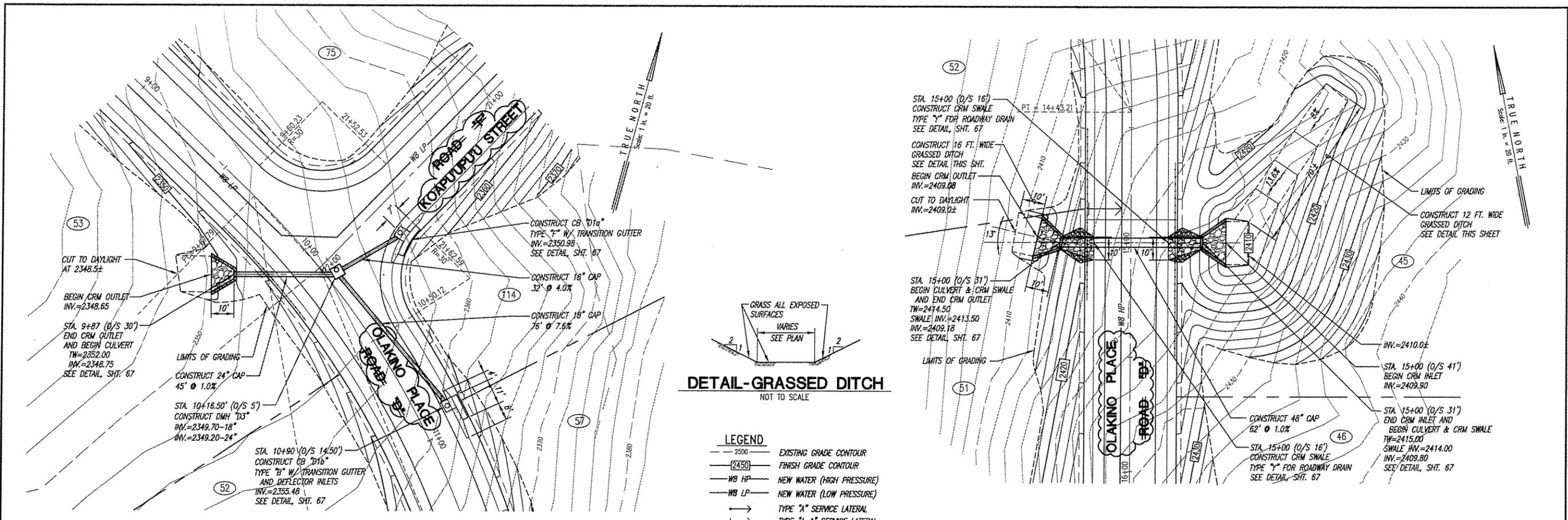


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LICENSED PROFESSIONAL ENGINEER
No. 6013-C
HAWAII, U.S.A.

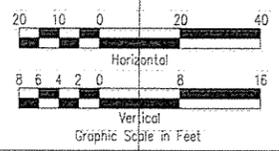
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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<p>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Ala Moana Street, Sixth Floor Honolulu, Hawaii</p>			
<p>KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71</p>			
<p>PLAN AND PROFILE DRAIN CULVERT "D2"</p>			
DRAWN BY: LT, ER	ENGINEER: DK	CHECKED BY: MS	



NOTE: SEE ROAD "D" PLAN AND PROFILE FOR HGL FROM DMH "D3" TO CB "D15".



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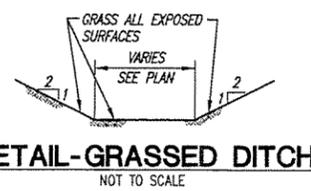
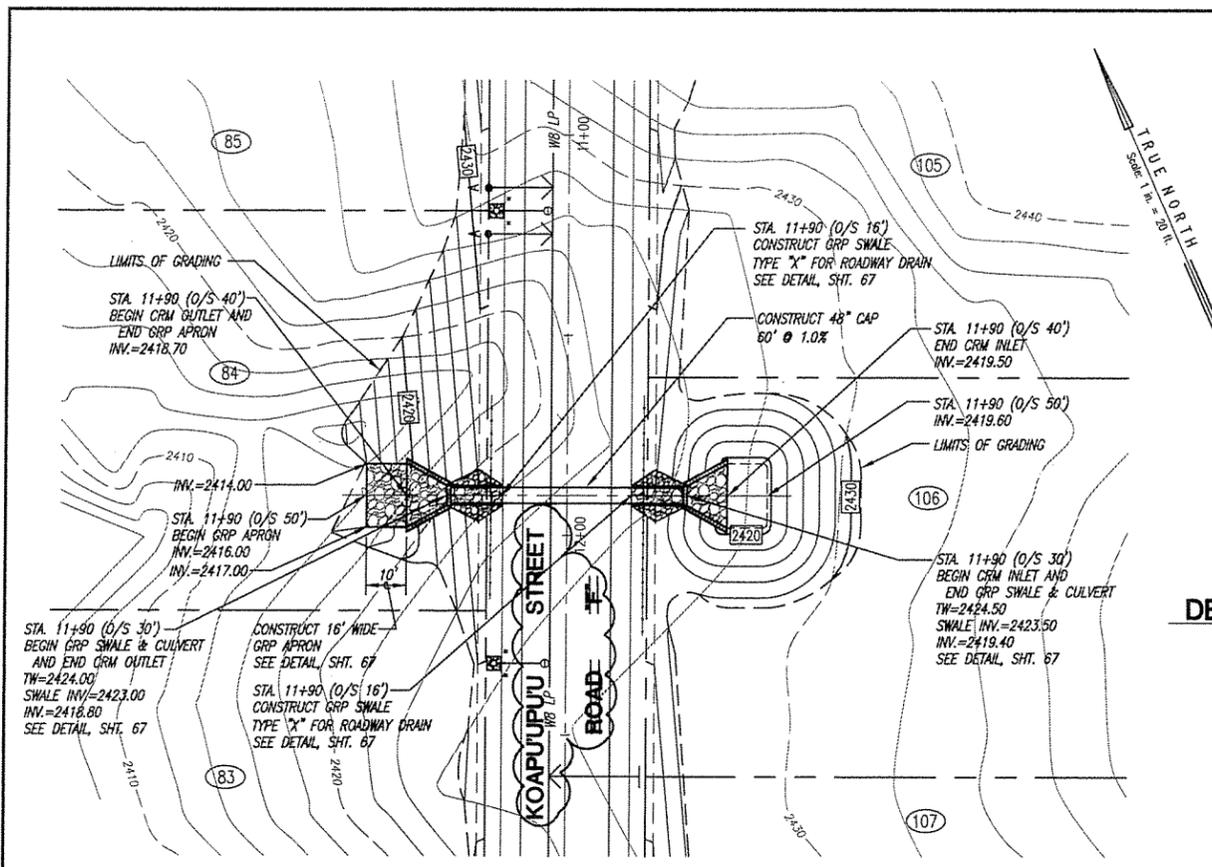
REVISED DATE	DESCRIPTION	MADE BY	APPROVED

Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
7200 Alaheka Street, Sixth Floor, Honolulu, Hawaii

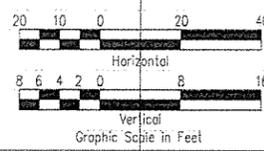
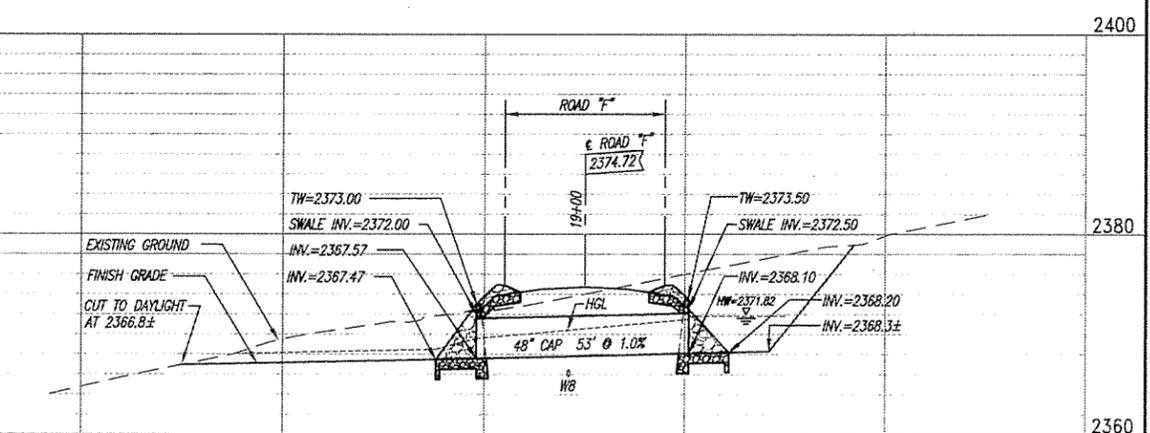
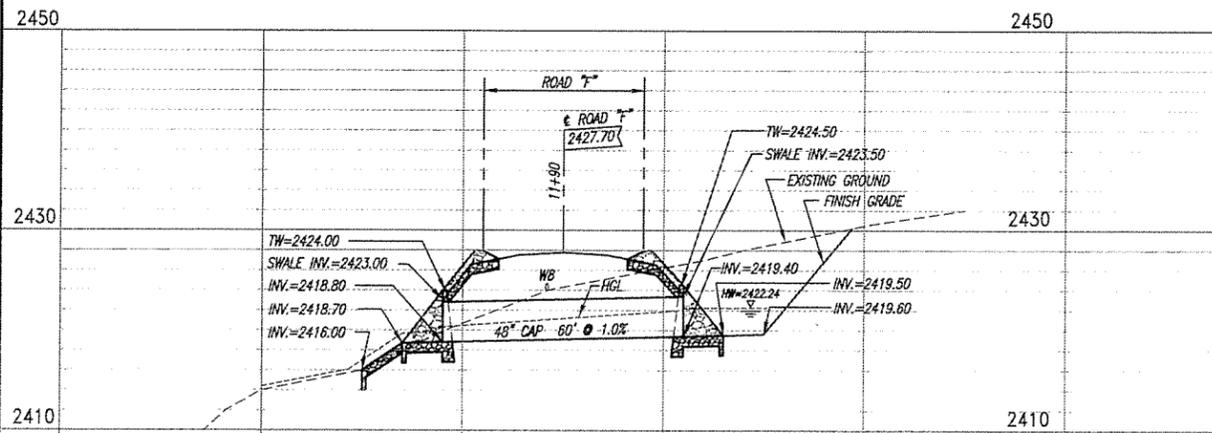
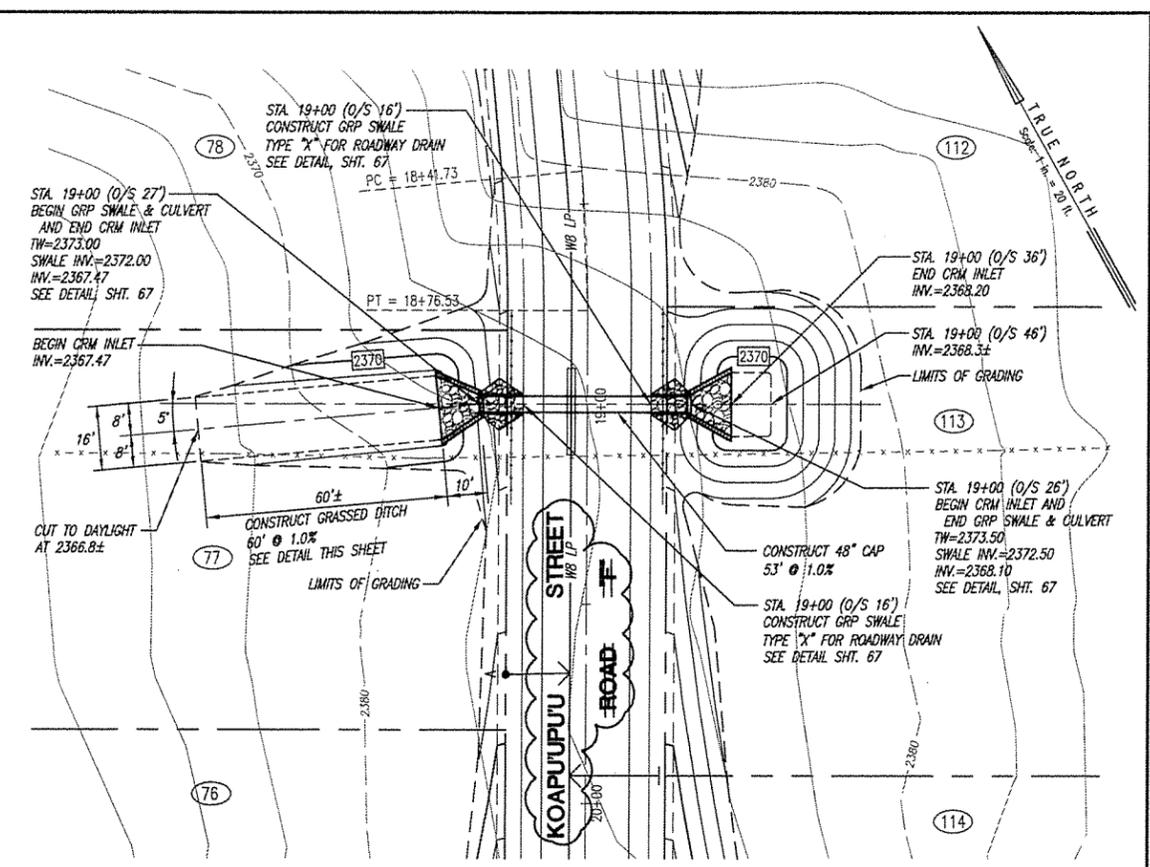
KEOKEA-WAIOHULI DEVELOPMENT PHASE I
KEOKEA & WAIOHULI, MAKAWAO, MAUI
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

PLAN AND PROFILE DRAIN CULVERTS "D3" AND "D4"

DRAWN BY: ER ENGINEER: DK CHECKED BY: MS



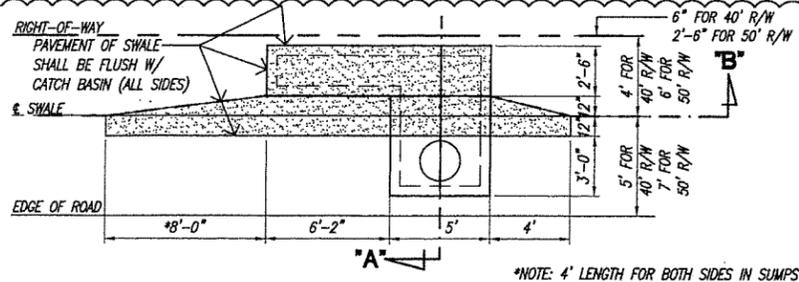
- LEGEND
- 2500 — EXISTING GRADE CONTOUR
 - 2450 — FINISH GRADE CONTOUR
 - WB HP — NEW WATER (HIGH PRESSURE)
 - WB LP — NEW WATER (LOW PRESSURE)
 - TYPE "A" SERVICE LATERAL
 - TYPE "A-1" SERVICE LATERAL
 - GUARD RAIL
 - PROPERTY LINE
 - (25) LOT NUMBER



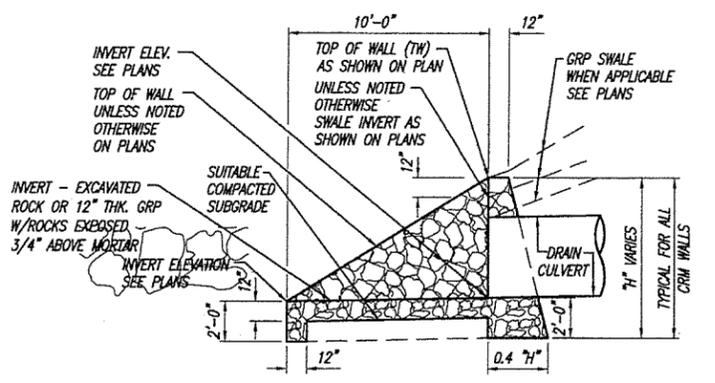
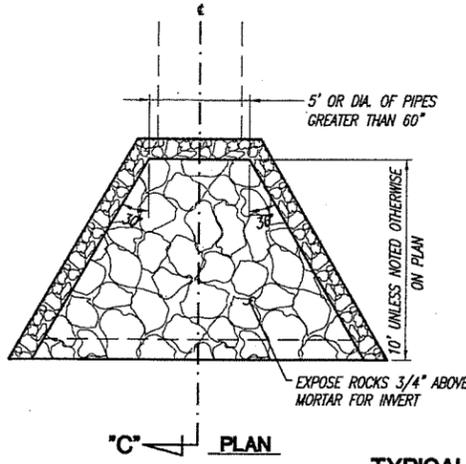
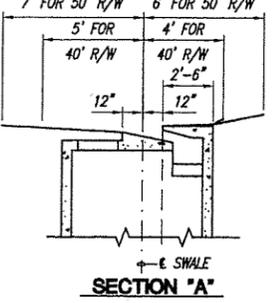
C. MICHAEL STREET
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No. 6013-C
HAWAII, U.S.A.

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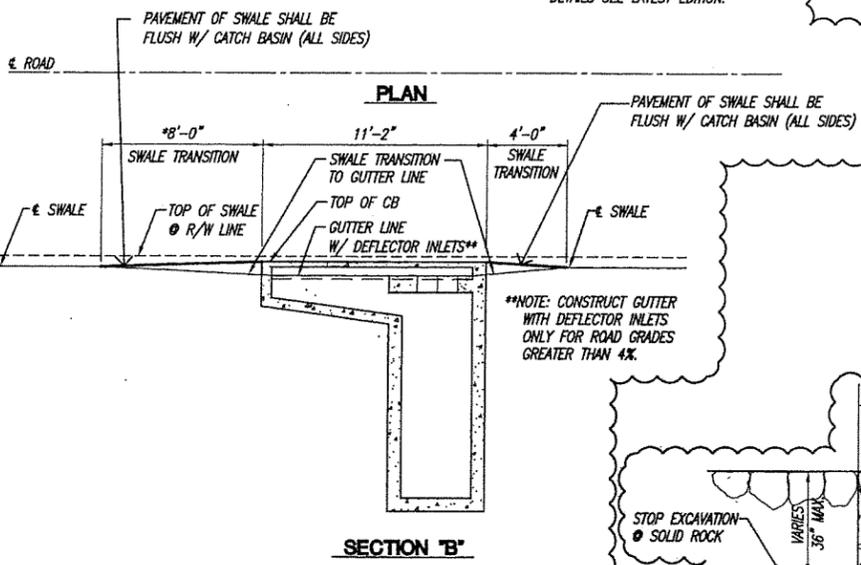
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<p>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii</p> <p>KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71</p> <p>PLAN AND PROFILE DRAIN CULVERTS "F5" AND "F6"</p>			
DRAWN BY: LT	ENGINEER: DK	CHECKED BY: MS	



*NOTE: 4' LENGTH FOR BOTH SIDES IN SUMPS
SEE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION STORM DRAINS, SHEETS D-1 THRU D-31, FOR ADDITIONAL DETAILS SEE LATEST EDITION.

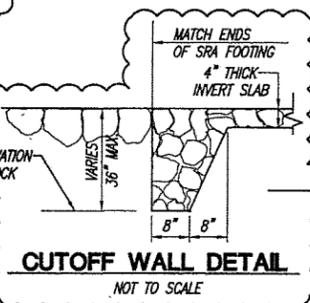


TYPICAL DETAIL - CRM INLET AND OUTLET FOR CAP CULVERTS AND CRM WALL
SCALE: 1/4" = 1'-0"

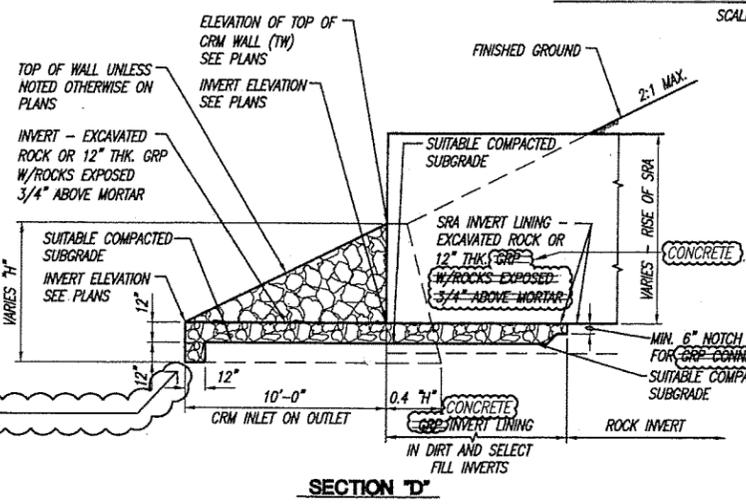


**NOTE: CONSTRUCT GUTTER WITH DEFLECTOR INLETS ONLY FOR ROAD GRADES GREATER THAN 4%.

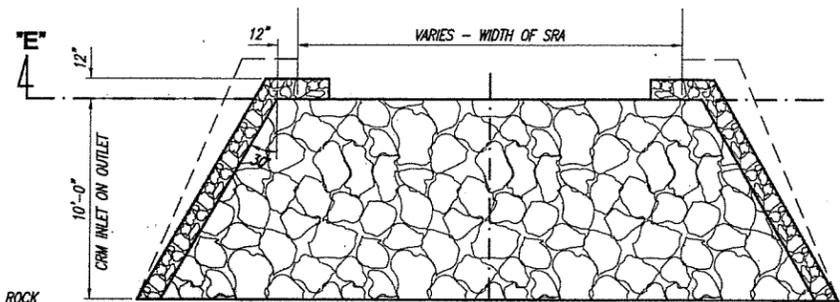
DETAIL - TRANSITION GUTTER FOR CATCH BASINS
SCALE: 1/4" = 1'-0"



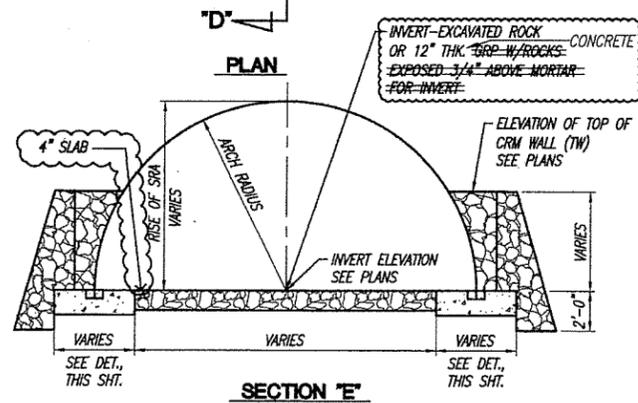
CUTOFF WALL DETAIL
NOT TO SCALE



SECTION 'D'

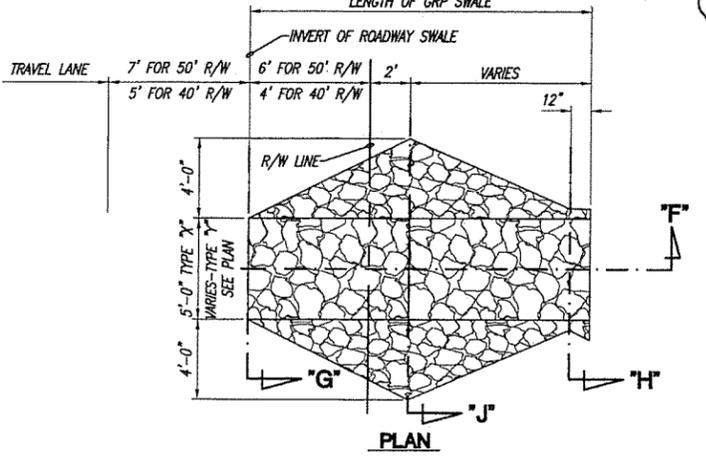


SECTION 'E'

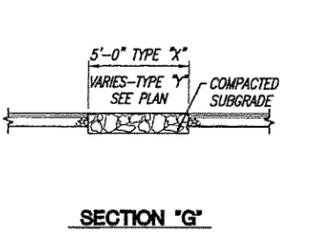


SECTION 'F'

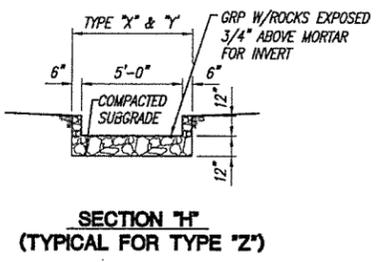
TYPICAL DETAIL - CRM INLET AND OUTLET AND INVERT LINING FOR SRA CULVERTS
SCALE: 1/4" = 1'-0"



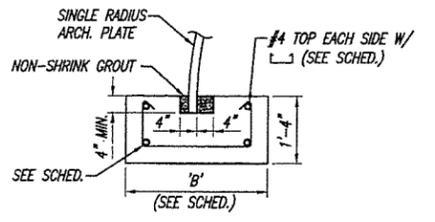
SECTION 'G'



SECTION 'H'



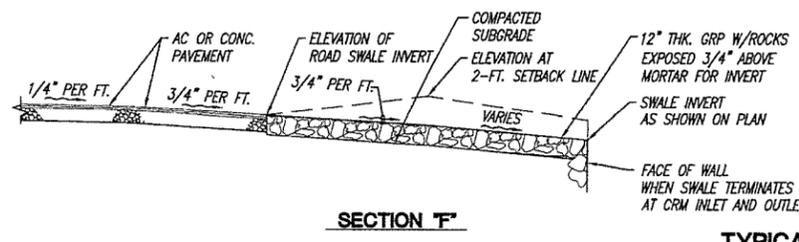
SECTION 'I' (TYPICAL FOR TYPE 'Z')



FOOTING SCHEDULE

SPAN x RISE	FOOTING ON ENGINEERED FILL		FOOTING ON BASALTIC ROCK		PLATE THICKNESS
	'B'	REIN.	'B'	REIN.	
19'-0" x 8'-3"	4'-6"	#5@12" O.C.	4'-5"	#5@12" O.C.	0.125" WITH TYPE IV RIBS @ 54" O.C.
20'-0" x 10'-0"	4'-0"	#5@12" O.C.	4'-5"	#5@12" O.C.	0.200"

SRA FOOTING DETAIL AND SCHEDULE
SCALE: NOT TO SCALE



SECTION 'J'

TYPICAL DETAIL - GRP SWALE
SCALE: 1/4" = 1'-0"

- SINGLE RADIUS ARCH CULVERTS:**
1. ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (LATEST).
 2. SINGLE RADIUS ARCH CULVERTS SHALL BE FURNISHED AND DESIGNED BY CONTECH CONSTRUCTION PRODUCTS, INC.
 3. METAL CULVERTS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES. CULVERTS SHALL BE DESIGNED FOR AN HS-20-44 TRUCK.
 4. CONCRETE FOR FOOTINGS SHALL BE CLASS A, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
 5. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
 6. MINIMUM COVER IN INCHES FOR REBARS FOR CAST-IN-PLACE CONCRETE:
CONCRETE CAST AGAINST EARTH 3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER 2"
 7. UNLESS OTHERWISE NOTED, SPLICES, LAPS, DOWEL EXTENSIONS AND EMBEDMENTS SHALL BE 40 BAR DIAMETERS.



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RECORD DRAWINGS

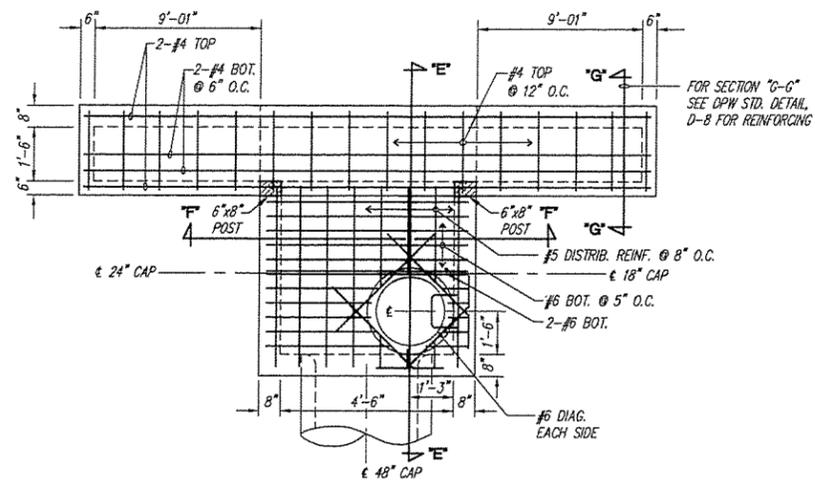
Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alaska Street, 8th Floor Honolulu, Hawaii

KEOKEA-WAIOHULI DEVELOPMENT PHASE I
KEOKEA & WAIOHULI, MAKAWAO, MAUI
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

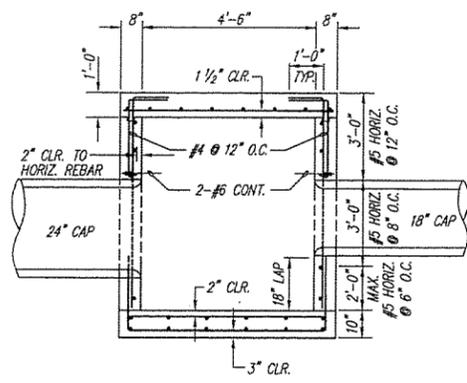
DRAINAGE DETAILS - 1

DRAWN BY: ER ENGINEER: VF CHECKED BY: MS

P:\Land Projects\DHHL\KeoKea Farm_Land\Correspondence\Sent\Hon HOA\Government Review#2-Record Drawings 6-8-08\Drainage Details-1 (05282).dwg, Drainage Details, 08/20/08 8:42:08 AM, 1:1

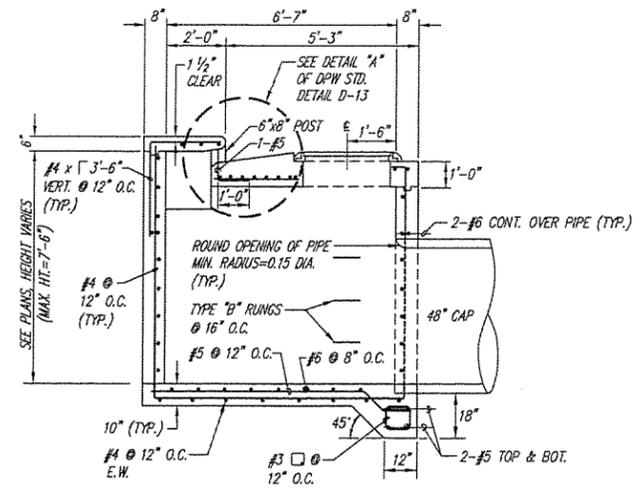


TOP SLAB REINFORCING PLAN

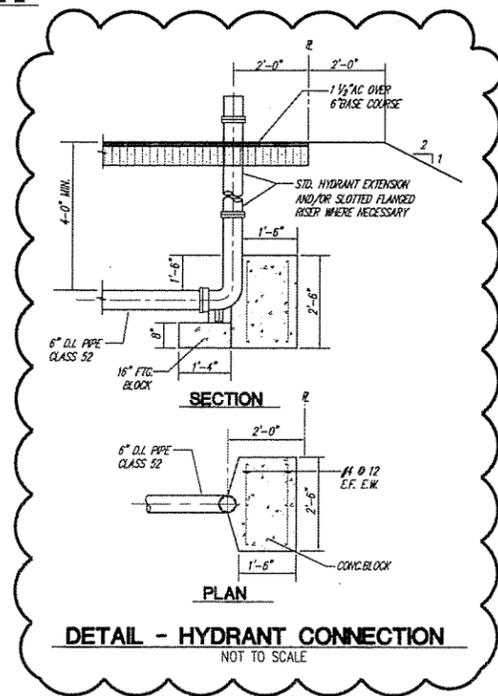


SECTION T-T

DETAIL - MODIFIED TYPE T' CATCH BASIN
NOT TO SCALE



SECTION E-E



DETAIL - HYDRANT CONNECTION
NOT TO SCALE

- REINFORCED CONCRETE NOTES:**
1. ALL CONCRETE SHALL BE CLASS "A", CONFORMING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST).
 2. ALL REINFORCING STEEL EXCEPT TIES, AND STIRRUPS SHALL CONFORM TO ASTM A615 GRADE 60. TIES AND STIRRUPS SHALL CONFORM TO ASTM A615 GRADE 40.
 3. UNLESS OTHERWISE NOTED, SPLICES, LAPS, DWEL EXTENSIONS AND EMBEDMENTS SHALL BE 40 BAR DIAMETERS MINIMUM.
 4. STAGGER ALL SPLICES WHERE POSSIBLE.
 5. REBARS SHALL BE SUPPORTED, BENT AND PLACED AS PER "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" ACI 315 (LATEST).
 6. MINIMUM COVER IN INCHES FOR REBARS CAST-IN-PLACE CONCRETE: CONCRETE CAST AGAINST EARTH 3" FORMED CONCRETE EXPOSED TO EARTH OR WEATHER . . . 2"
 7. AT THE TIME CONCRETE IS PLACED, REINFORCING SHALL BE FREE FROM MUD, OIL, LANTANCE OR OTHER COATINGS ADVERSELY AFFECTING BOND CAPACITY.
 8. REINFORCEMENT, ANCHOR BOLTS, DWELS AND ALL OTHER EMBEDDED ITEMS SHALL BE POSITIVELY SECURED BEFORE POURING.
- DESIGN CRITERIA:**
1. AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES SIXTEENTH EDITION 1996 AND ALL SUBSEQUENT INTERIMS.
LIVE LOAD HS20-44
ACTIVE LATERAL EARTH PRESSURE 60 PCF (RESTRAINED CONDITION)
 2. THE FOUNDATION IS BASED ON THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT BY PSC ASSOCIATES INC., DATED MARCH 2005.



C. Michael Street
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<p>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alaiea Street, Sixth Floor Honolulu, Hawaii</p> <p>KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71</p>			
DRAINAGE DETAILS - 2			
DRAWN BY: LT	ENGINEER: DK	CHECKED BY: MS	

DRAINAGE STRUCTURE NOTES

- ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (LATEST).
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH & A MAXIMUM WATER TO CEMENT RATIO AS FOLLOWS:

STRENGTH	W/C RATIO
DMH'S & CB'S	4,000 PSI 0.48
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
- MINIMUM COVER IN INCHES FOR REBARS FOR CAST-IN-PLACE AND PRECAST CONCRETE:

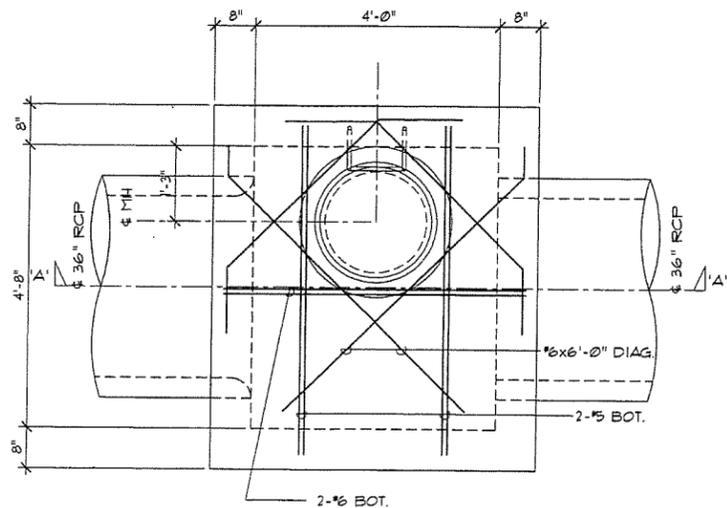
CONCRETE CAST AGAINST EARTH (C.I.P.)	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	2"
- UNLESS OTHERWISE NOTED, SPLICES, LAPS, DOWEL EXTENSIONS AND EMBEDMENTS SHALL BE 40 BAR DIAMETERS MINIMUM.
- ALL REINFORCING BARS MARKED 'CONT.' OR 'TEMP.' SHALL BE LAPPED 40 BAR DIAMETERS MINIMUM.
- STAGGER ALL SPLICES WHERE POSSIBLE.
- REBARS SHALL BE SUPPORTED, BENT AND PLACED AS PER "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" ACI 315 (LATEST).
- AT TIME CONCRETE IS PLACED, REINFORCING SHALL BE FREE FROM MUD, OIL, LAITANCE OR OTHER SUBSTANCES ADVERSELY AFFECTING BOND CAPACITY.
- FOR REINFORCING NOT SHOWN ON THE PLANS, FOLLOW LATEST APPROVED VERSION OF THE "STANDARD DETAILS FOR PUBLIC WORK CONSTRUCTION" (STANDARD DETAILS).
- REINFORCEMENT, ANCHOR BOLTS, DOWELS AND ALL OTHER EMBEDDED ITEMS SHALL BE POSITIVELY SECURED BEFORE POURING.

DESIGN CRITERIA

- AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES SEVENTEENTH EDITION 2002.

LIVE LOAD HS20-44

60 PCF ACTIVE PRESSURE (TOP RESTRAINED)

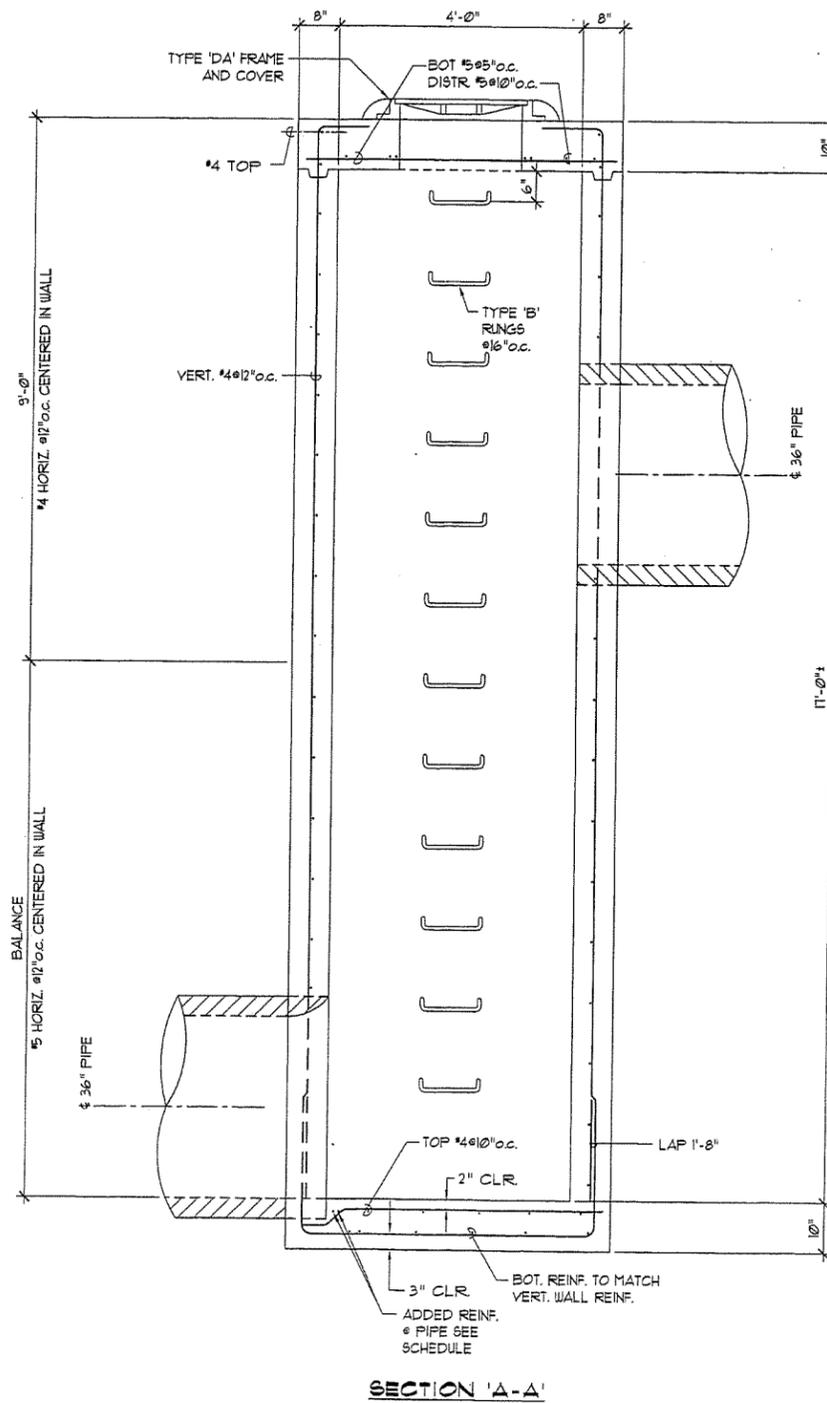


NOTE: FOR BALANCE OF TOP SLAB REINF. SEE SECT. 'A-A'

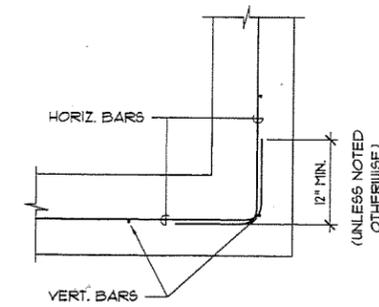
PLAN

SPECIAL DRAIN MANHOLE DETAIL

SC: 3/4" = 1'-0"



SECTION 'A-A'

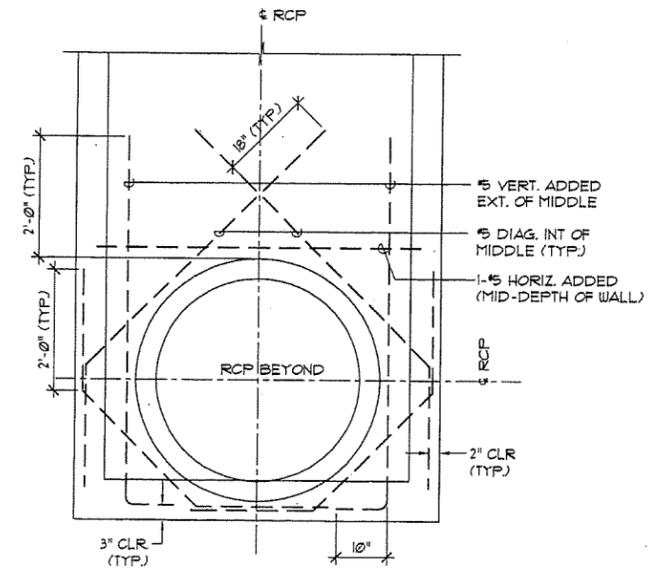


PLAN

TYP. CORNER REINFORCEMENT LAPPING

N.T.S.

B



SECTION

TYP. ADDED REINF. AT PIPES

N.T.S.

C



THOMAS Y. TAMURA
LICENSED PROFESSIONAL ENGINEER
No. 4926-S
HAWAII, U.S.A.

04/30/08
Expiration Date of the License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

cp&e Community Planning and Engineering, Inc.
 Engineering Design | Construction Management | Infrastructure Planning
 1100 Aiea Street, Sixth Floor Honolulu, Hawaii

KEOKEA-WAIOHULI DEVELOPMENT PHASE I
 KEOKEA & WAIOHULI, MAKAWAO, MAUI
 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
 TAX MAP KEY: (2) 2-2-02: 14, 55, & 71

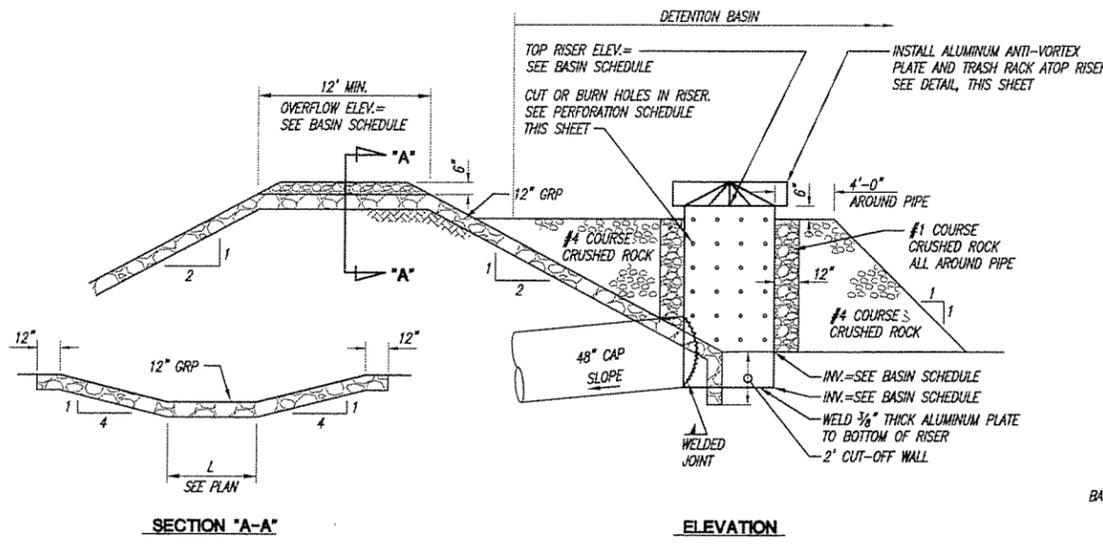
SPECIAL DMH A2, TYPICAL DETAILS

DRAWN BY: -	ENGINEER: -	CHECKED BY: -
APPROVED:		

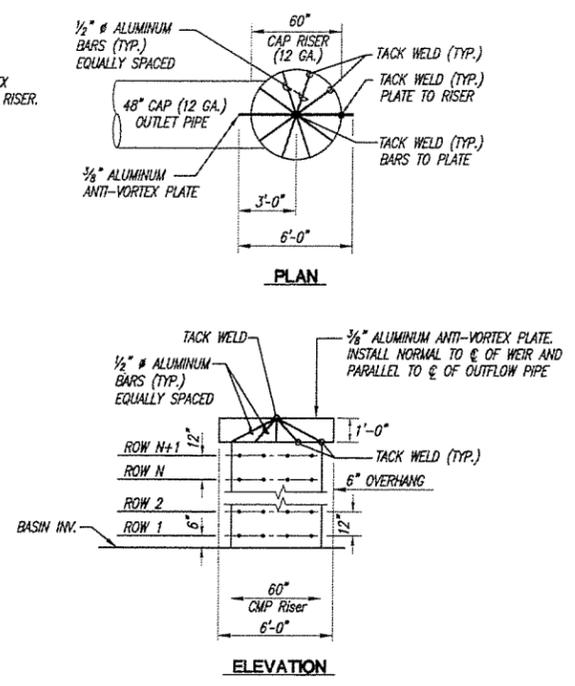
RECORD DRAWINGS

SHEET 68A OF 137 SHEETS

FILE	POCKET	FOLDER	NO.



DETAIL - PERMANENT OUTLET FOR DETENTION BASIN
NOT TO SCALE



DETAIL - ANTI-VORTEX PLATE AND TRASH RACK
NOT TO SCALE

DETENTION BASIN SCHEDULE																
DETENTION BASIN	WAIHOLI DETENTION BASIN #1			WAIHOLI DETENTION BASIN #2			KEOKEA DETENTION BASIN									
TOP OF BERM ELEV. (FT.)	2266.0			2236.0			2223.0									
OVERFLOW WEIR ELEV. (FT.)	2265.0			2236.0			2222.5									
INVERT ELEV. (FT.)	2256.0			2230.0			2214.0									
OUTLET STRUCTURE																
TYPE	CAP			CAP			CAP									
DLA OF RISER (IN.)	60.0			60.0			60.0									
TOP RISER ELEV. (FT.)	2264.5			2235.0			2222.0									
DIA. OF OUTLET PIPE (IN.)	48.0			48.0			48.0									
INVERT OF OUTLET PIPE	2254.0			2234.0			2212.0									
SLOPE OF OUTLET PIPE (%)	0.5			1.0			3.28									
PERFORATION SCHEDULE																
ROW NUMBER		1	2	3	4	5	6	7		1	2	3	4	5	6	7
HOLE DIAMETER (IN.)		3	3	3	3	3	3	3		3	3	3	3	3	3	3
NUMBER OF HOLES		8	8	16	16	16	16	16		14	10	20	20	20	20	20

- NOTES:**
- VERTICAL SPACING BETWEEN HOLES = 12 INCHES OFFSET TO OFFSET.
 - HOLES SHALL BE SPACED EVENLY AROUND THE CIRCUMFERENCE OF THE RISER.
 - ROWS ARE NUMBERED FROM BOTTOM TO TOP.
 - CENTER OF BOTTOM ROW IS 6 INCHES ABOVE INVERT OF BASIN.
 - ALUMINUM PLATE SHALL MEET THE SPECIFICATIONS OF ASTM B-209.
 - ALUMINUM RODS SHALL MEET THE SPECIFICATIONS OF ASTM B-211.

FOUNDATION

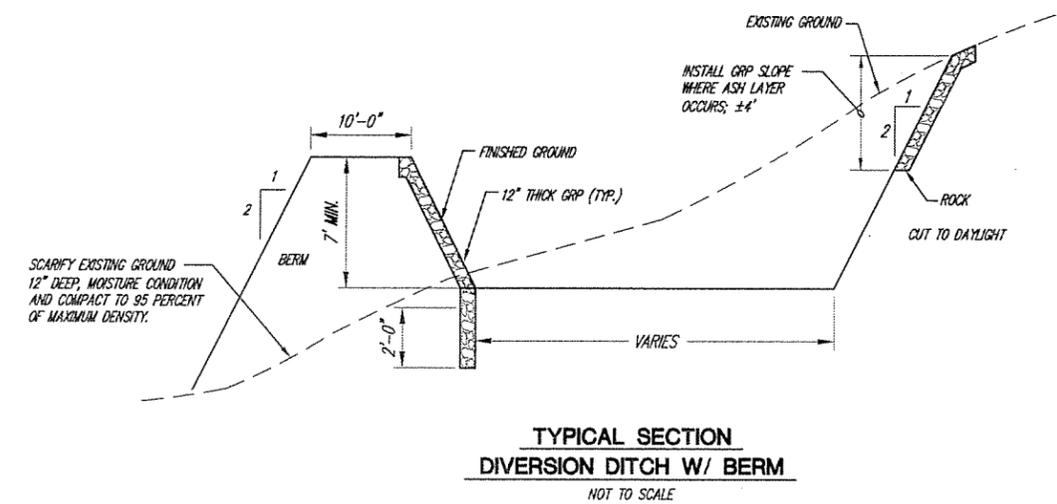
- THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE FOUNDATION INVESTIGATION REPORT BY PSC ASSOCIATES, INC. UNLESS OTHERWISE INDICATED, FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS REPORT. THE REPORT IS PART OF THIS PLAN AND SHOULD BE KEPT ON THE JOB SITE AT ALL TIMES.
- ALL FOOTINGS SHALL BEAR ON WEATHERED BASALT OR STRUCTURALLY PREPARED FILL. BOTTOM OF ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY A QUALIFIED FOUNDATION ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL OR CONCRETE.
- ALL WATER, MUD AND DEBRIS SHALL BE REMOVED FROM THE BOTTOM OF FOOTING EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE.

STRUCTURAL STEEL

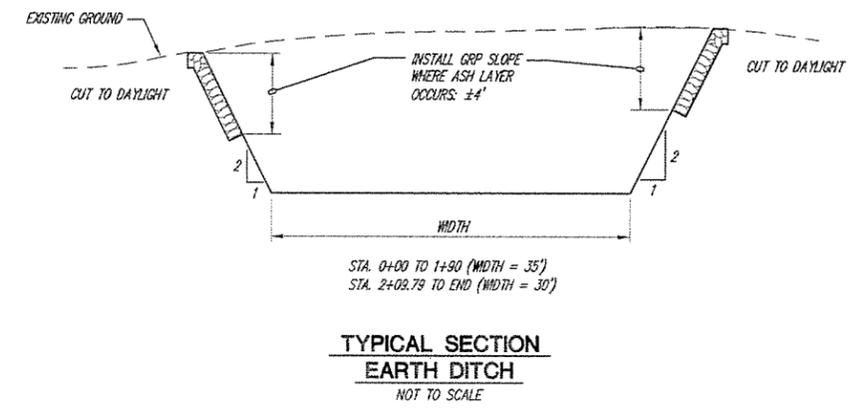
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM SPECIFICATION A-36 AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
- BOLTS SHALL CONFORM TO ASTM A307.
- WELDING: ALL WELDING IS TO COMPLY WITH A.W.S. SPECIFICATIONS AND IS TO BE DONE BY CERTIFIED WELDERS. ALL WELDING IS TO BE DONE BY ELECTRIC ARC PROCESS AND SHALL BE PERFORMED WITH APPROVED ELECTRODES AS REQUIRED PER CHAPTER 27 U.B.C. WELDS ARE DESIGNED AT FULL STRESS AND MUST BE DONE IN THE SHOP OF A LICENSED FABRICATOR.
- ALL WELDS NOT SHOWN SHALL BE FULL PENETRATION WELDS CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE CONNECTING MEMBERS.
- THE CONTRACTOR SHALL DETAIL ALL MEMBERS AND CONNECTIONS NOT SHOWN AND SHALL SUBMIT THEM TO THE ENGINEER FOR REVIEW AND APPROVAL. COST OF THESE MEMBERS AND CONNECTIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.
- GALVANIZE ALL STRUCTURAL STEEL SHAPES, PLATES, BOLTS AND ACCESSORIES EXPOSED TO WEATHER.

DESIGN CRITERIA

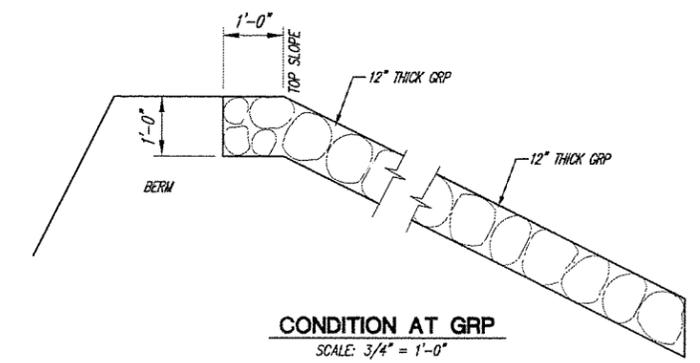
- THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE FOUNDATION INVESTIGATION REPORT BY PSC ASSOCIATES, INC., JOB NO. 24304.10/24304.11. BEARING CAPACITIES, ACTIVE AND PASSIVE PRESSURES AND COEFFICIENT OF FRICTION VARY WITH SITE CONDITIONS.



TYPICAL SECTION DIVERSION DITCH W/ BERM
NOT TO SCALE



TYPICAL SECTION EARTH DITCH
NOT TO SCALE



CONDITION AT GRP
SCALE: 3/4" = 1'-0"

C. MICHAEL STREET
LICENSED PROFESSIONAL ENGINEER
No. 6013-C
HAWAII, U.S.A.

C. Michael Street
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<p>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1700 Alakea Street, Sixth Floor, Honolulu, Hawaii</p>			
<p>KEOKEA-WAIOHULI DEVELOPMENT PHASE I KEOKEA & WAIOHULI, MAKAWAO, MAUI OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (2) 2-2-02: 14, 55, & 71</p>			
<p>DIVERSION DITCH AND DETENTION BASIN DETAILS AND NOTES</p>			
DRAWN BY: ER	ENGINEER: DK	CHECKED BY: MS	