

Construction Plans for ...

PU'UNANI HOMESTEAD

TAX MAP KEY: (2) 3-5-002 : 002, 023, 027, 028 & 031 and (2) 3-5-001 : 064 & 120

Wailuku, Maui, Hawaii

Prepared for

**DEPARTMENT OF
HAWAIIAN HOME LANDS
STATE OF HAWAII**
Honolulu, Hawaii

APPROVED BY:

DIRECTOR, DEPARTMENT OF PUBLIC WORKS _____ DATE _____
COUNTY OF MAUI

DIRECTOR, DEPARTMENT OF WATER SUPPLY _____ DATE _____
COUNTY OF MAUI

Improvements which will be dedicated to the
Department of Water Supply

Chris S. ...
6/10/2021
DATE

for
DEPT. OF TRANSPORTATION, STATE OF HAWAII
(Approval Granted for Work Within State Right-of-Way Only)

RE-APPROVED BY:

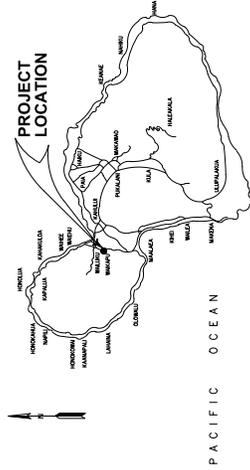
Chris S. ...
6/09/2022
DATE

For:
CHIEF, HIGHWAYS DIVISION, STATE OF HAWAII
DEPT. OF TRANSPORTATION
(Approval Granted for Work Within State Right-of-Way Only)

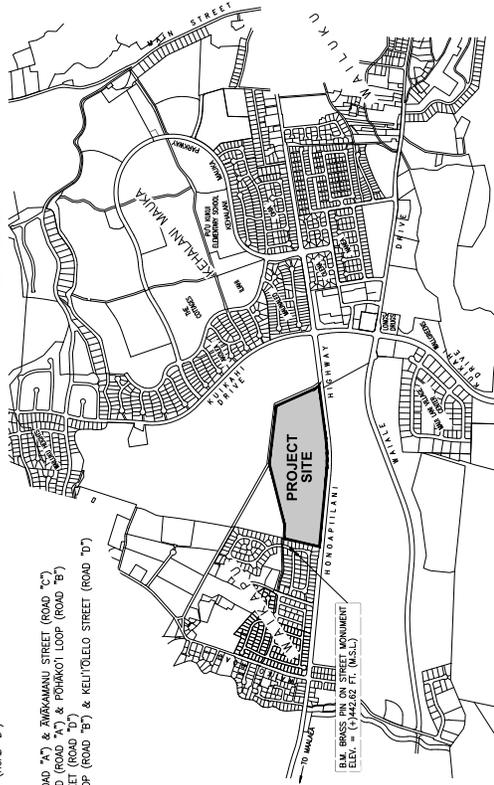
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Prepared by
WARREN S. UNEMORI ENGINEERING, INC.
Civil & Structural Engineers - Land Surveyor
Wells Street Professional Center - Suite 403
2145 Wells Street - Wailuku, Maui, Hawaii 96793



ISLAND OF MAUI
NOT TO SCALE



PROJECT VICINITY MAP
0 1000 2000 3000 4000
SCALE: 1 IN. = 1000 FT.

TRUE NORTH
SCALE: 1 IN. = 40 FT.

SEE SHEET 7 FOR CONTINUATION



T.M.C. (2) 3-5-32 : 24
E.A.'s 10' High Wire Fence
(Owner)

T.M.C. (2) 3-5-32 : 23
E.A.'s 10' High Wire Fence
(Owner)

T.M.C. (2) 3-5-32 : 22
E.A.'s 10' High Wire Fence
(Owner)

T.M.C. (2) 3-5-32 : 21
E.A.'s 10' High Wire Fence
(Owner)

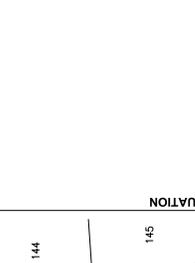
T.M.C. (2) 3-5-32 : 20
E.A.'s 10' High Wire Fence
(Owner)

T.M.C. (2) 3-5-32 : 19
E.A.'s 10' High Wire Fence
(Owner)

T.M.C. (2) 3-5-32 : 18
E.A.'s 10' High Wire Fence
(Owner)

SEE SHEET 4 FOR CONTINUATION

LOCATION MAP
SCALE: 1 IN. = 600 FT.



- NOTES:
- INTERNAL SUBDIVISION ROWWAYS ARE TO BE OWNED BY THE STATE OF HAWAII.
 - THE ROAD WIDENING LOT ALONG HONOLULU HIGHWAY IS TO BE OWNED BY THE COUNTY OF MAUI.
 - LANDS AND MAINTAINED BY THE STATE DEPARTMENT OF TRANSPORTATION.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE STATE DEPARTMENT OF TRANSPORTATION.
- DEMOLITION NOTES:
- CONTRACTOR SHALL REMOVE TO APPLICABLE STATE AND COUNTY REGULATIONS ALL EXISTING UTILITIES, FENCES, STORAGE, AND REMAINING PAVED SURFACES, AND UTILITIES WITHIN THE PROJECT'S GRADING LIMITS.
 - CONTRACTOR SHALL REMOVE EXISTING MONUMENTS, TREES, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE STATE DEPARTMENT OF TRANSPORTATION.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE STATE DEPARTMENT OF TRANSPORTATION.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE STATE DEPARTMENT OF TRANSPORTATION.

- LEGEND:
- SEWER MANHOLE
 - DRAIN MANHOLE
 - AIR RELIEF VALVE MANHOLE
 - FIRE HYDRANT
 - CLEAN-OUT TO GRADE
 - WATERLINE W/ SIZE
 - DRINKLINE W/ SIZE
 - SERVICELINE W/ SIZE
 - UNDERGROUND UTILITY (UNLESS OTHERWISE SPECIFIED)
 - UNDERGROUND UTILITY (UNLESS OTHERWISE SPECIFIED)
 - 6" S.W. LATERAL WITH COIS (SEE DETAIL ON SHEET 32)
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINLINE W/ SIZE
 - EXISTING SERVICELINE W/ SIZE

MAUI COUNTY
ENGINEER
NO. 1815-C

PUNANI HOMESTEAD
WAIKAPU, MAUI, HAWAII

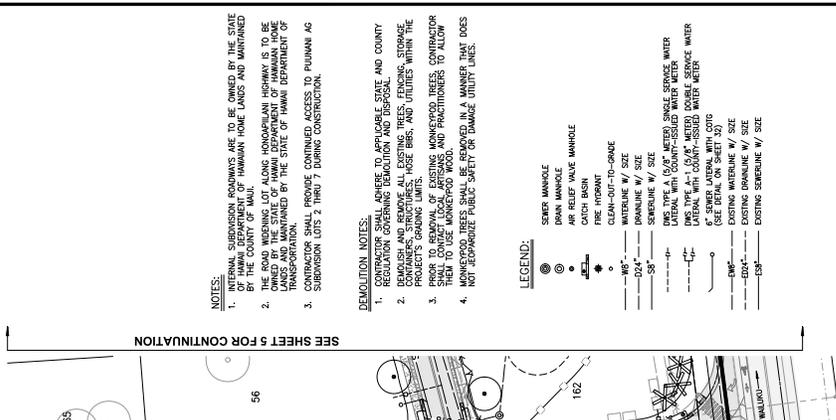
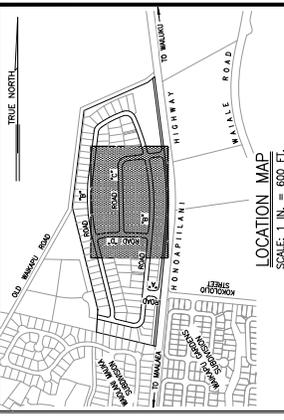
TITLE: PLOT PLAN
D.T.U.
NO. 19028
JOB NUMBER
APPROVED BY
DATE
APR 9, 2020
SHEET 3 OF 3

WARREN'S ENGINEERING, INC.
ONE A ST. LOUIS, MISSOURI 63103
WARREN'S ENGINEERING, INC.
200 S. W. 10TH AVE., SUITE 400
MIAMI, FLORIDA 33136
WARREN'S ENGINEERING, INC.
1111 N. W. 10TH AVE., SUITE 400
MIAMI, FLORIDA 33136

SEWER DEDICATION NOTICE:
THE PROPOSED SEWER SYSTEM IMPROVEMENTS TO BE DEDICATED TO THE COUNTY OF MAUI FOR MAINTENANCE AND REPAIR TO ACT 327.
THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND OPERATED BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN RECORDS OF THE PROPOSED SEWER SYSTEM IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE PROPOSED SEWER SYSTEM IMPROVEMENTS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE COUNTY OF MAUI AND THE STATE DEPARTMENT OF TRANSPORTATION.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE COUNTY OF MAUI AND THE STATE DEPARTMENT OF TRANSPORTATION.



WAIKAPU SUBDIVISION



WARREN'S ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING AND ARCHITECTURE
1115 SOUTH WILSON AVENUE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.WARENS.COM

PUNUANI HOMESTEAD
WAIKAPU, WAIKUKI, MAUI, HAWAII

TITLE: FLOT PLAN

D.T.U.	19028	DATE	4
DESIGNED BY		JOB NUMBER	
CHECKED BY		APPROVED BY	
DRAWN BY		SCALE	1 in. = 40 FT.

LETTERS: (2) 1-5-02: 11
Emmanuel Luma, Chairman of Maui Sewer District

SEWER DEDICATION NOTE:
THE PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE "C" AND "D" LOTS OF THE MAUI COUNTY SEWER DISTRICT ARE HEREBY DEDICATED TO THE COUNTY OF MAUI. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND OPERATED BY THE MAUI COUNTY SEWER DISTRICT. THE COUNTY OF MAUI HAS GRANTED THE MAUI COUNTY SEWER DISTRICT A LICENSE TO USE THE SEWER SYSTEM IMPROVEMENTS OVER THE BURDEN OF THE MAUI COUNTY SEWER DISTRICT. THE COUNTY OF MAUI HAS GRANTED THE MAUI COUNTY SEWER DISTRICT A LICENSE TO USE THE SEWER SYSTEM IMPROVEMENTS OVER THE BURDEN OF THE MAUI COUNTY SEWER DISTRICT. THE COUNTY OF MAUI HAS GRANTED THE MAUI COUNTY SEWER DISTRICT A LICENSE TO USE THE SEWER SYSTEM IMPROVEMENTS OVER THE BURDEN OF THE MAUI COUNTY SEWER DISTRICT.

PLAN
SCALE: 1 IN. = 40 FT.

TRUE NORTH
SCALE: 1 IN. = 40 FT.

SEE SHEET 6 FOR CONTINUATION

SEE SHEET 7 FOR CONTINUATION

SEE SHEET 3 FOR CONTINUATION

SEE SHEET 5 FOR CONTINUATION

SEE SHEET 6 FOR CONTINUATION

SEE SHEET 7 FOR CONTINUATION

SEE SHEET 8 FOR CONTINUATION

SEE SHEET 9 FOR CONTINUATION

SEE SHEET 10 FOR CONTINUATION

SEWER DEDICATION NOTE:

1. THE PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE SUBDIVISION ARE TO BE OWNED BY THE HAWAIIAN HOME LANDS TRUST (HHLT) AND THE HAWAIIAN HOME LANDS TRUST ASSOCIATION (HHLTA). THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND WILL NOT BE DEDICATED TO THE PUBLIC. THE HHLT AND HHLTA HAVE AGREED TO RECORD THIS DEED AND TO ACCEPT LIABILITY FOR THE PROPOSED SEWER SYSTEM IMPROVEMENTS. THE HHLT AND HHLTA HAVE AGREED TO ACCEPT LIABILITY FOR THE PROPOSED SEWER SYSTEM IMPROVEMENTS. THE HHLT AND HHLTA HAVE AGREED TO ACCEPT LIABILITY FOR THE PROPOSED SEWER SYSTEM IMPROVEMENTS.

TRUE NORTH
SCALE: 1 IN. = 40 FT.

LOCATION MAP
SCALE: 1 IN. = 600 FT.

T.M.K. (2) 3-5-02 : 25
Endurance Investments, LLC and
Association (Owner)

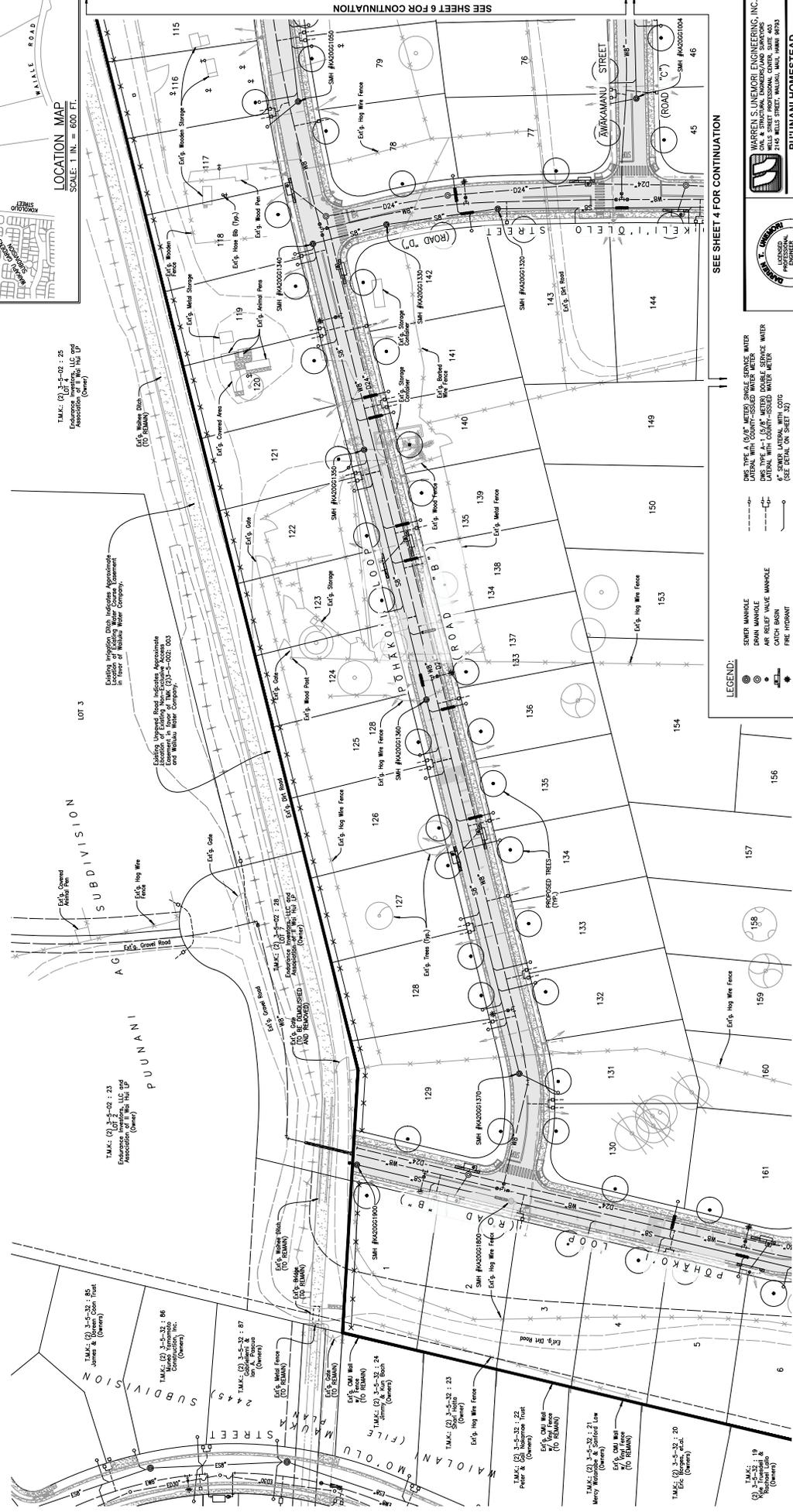
T.M.K. (2) 3-5-02 : 23
Endurance Investments, LLC and
Association (Owner)

T.M.K. (2) 3-5-02 : 27
Merry Rose Properties, LLC and
Association (Owner)

T.M.K. (2) 3-5-02 : 24
Merry Rose Properties, LLC and
Association (Owner)

T.M.K. (2) 3-5-02 : 22
Peer & Co. (Owner)

T.M.K. (2) 3-5-02 : 20
Eric (Owner)



LEGEND:

- SEWER MANHOLE
- DRAIN MANHOLE
- WATER MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CLEAN-OUT-TO-GRADE
- UNDERLINE W/ SIZE
- DRINKLINE W/ SIZE
- EXISTING UNDERLINE W/ SIZE
- EXISTING SEWERLINE W/ SIZE

DWGS A-D (1/2" METERS) SINGLE SERVICE WATER
DWS TYPE A-1 (6" METERS) DOUBLE SERVICE WATER
LATERAL WITH COUNTRY-ISSUED WATER METER
EXISTING UTILITY (SEE REF. OR SHEET 3)

SEE SHEET 3 FOR CONTINUATION

DEMOLITION NOTES:

- DEMOLISH AND REMOVE ALL EXISTING TREES, FENCES, STORAGE TANKS AND UTILITIES WITHIN THE PROJECT'S GRADING UNITS.
- DEMOLISH AND REMOVE ALL EXISTING TREES, FENCES, STORAGE TANKS AND UTILITIES WITHIN THE PROJECT'S GRADING UNITS.

PLAN
SCALE: 1 IN. = 40 FT.



NOTES:

- THE SUBDIVISION GRADINGS ARE TO BE MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES.
- THE SUBDIVISION GRADINGS ARE TO BE MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES.
- CONTRACTOR SHALL PROVIDE CONTINUED ACCESS TO PUNANI AG SUBDIVISION LOTS 2 THRU 7 DURING CONSTRUCTION.

SEE SHEET 4 FOR CONTINUATION

SEE SHEET 6 FOR CONTINUATION

WARREN'S IN-SOIL ENGINEERING, INC.
ONE A STRUCTURAL PROFESSIONAL CHASE, SUITE 400
1000 KALANANAKU AVENUE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.WARENSIN-SOIL.COM

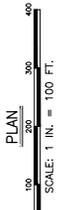
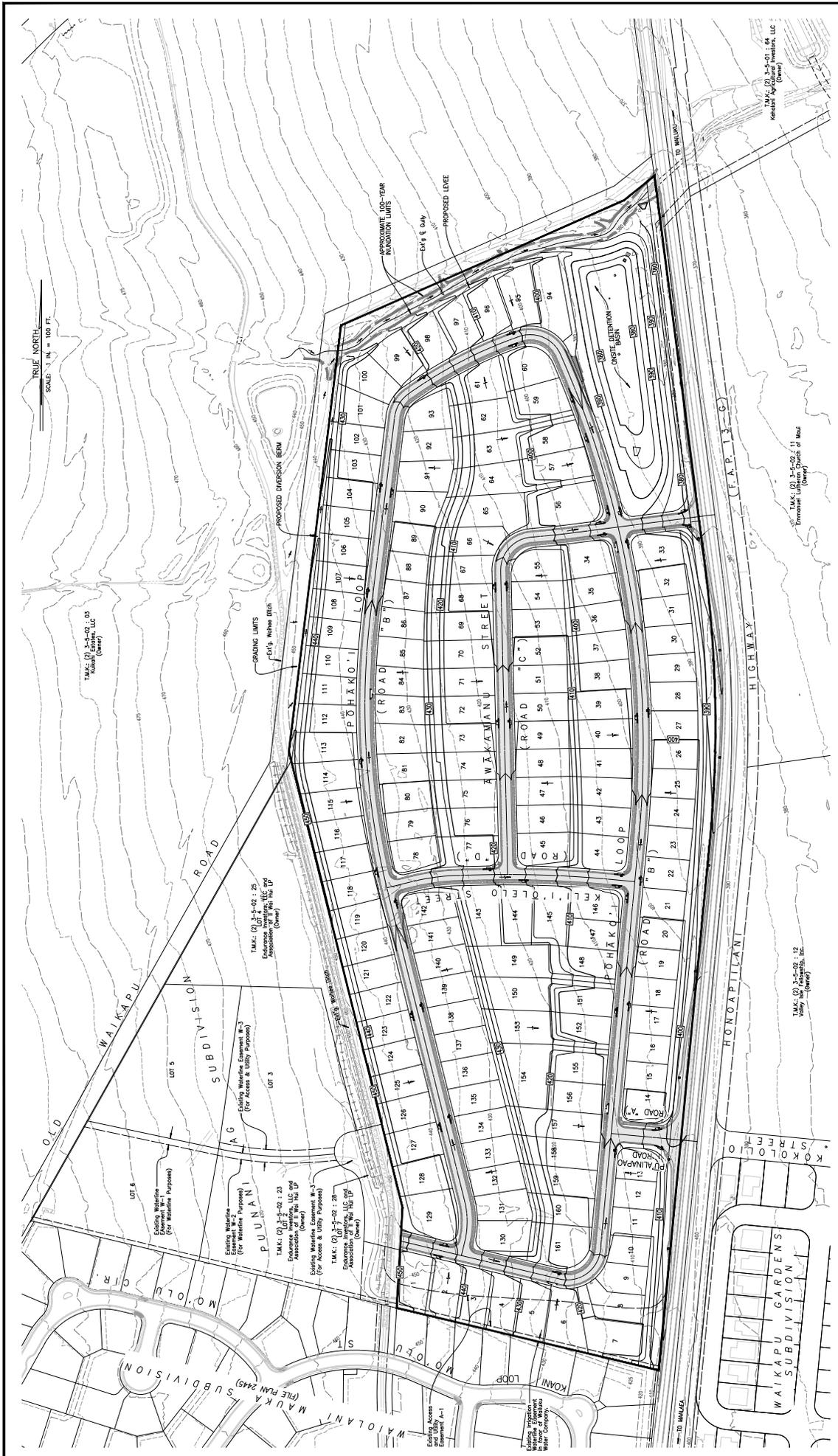
PUNANI HOMESTEAD
WAIKAPU, WAIKAPU MAUI, HAWAII

TITLE	FLOOR PLAN
D.T.U.	19028
DESIGNED BY	WARREN'S
CHECKED BY	WARREN'S
DATE	APRIL 9, 2020
JOB NUMBER	7
APPROVED BY	
DATE	
SCALE	1 IN. = 40 FT.
SHEET	7
OF SHEETS	



Warren's In-Soil Engineering, Inc.
1000 KALANANAKU AVENUE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.WARENSIN-SOIL.COM

TRUE NORTH
SCALE: 1 IN. = 100 FT.



WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1000 KALANANĀHUI DRIVE, SUITE 400
 HONOLULU, HAWAII 96813
 (808) 943-1111

PŪNANI HOMESTEAD
 1000 KALANANĀHUI DRIVE, SUITE 400
 HONOLULU, HAWAII 96813

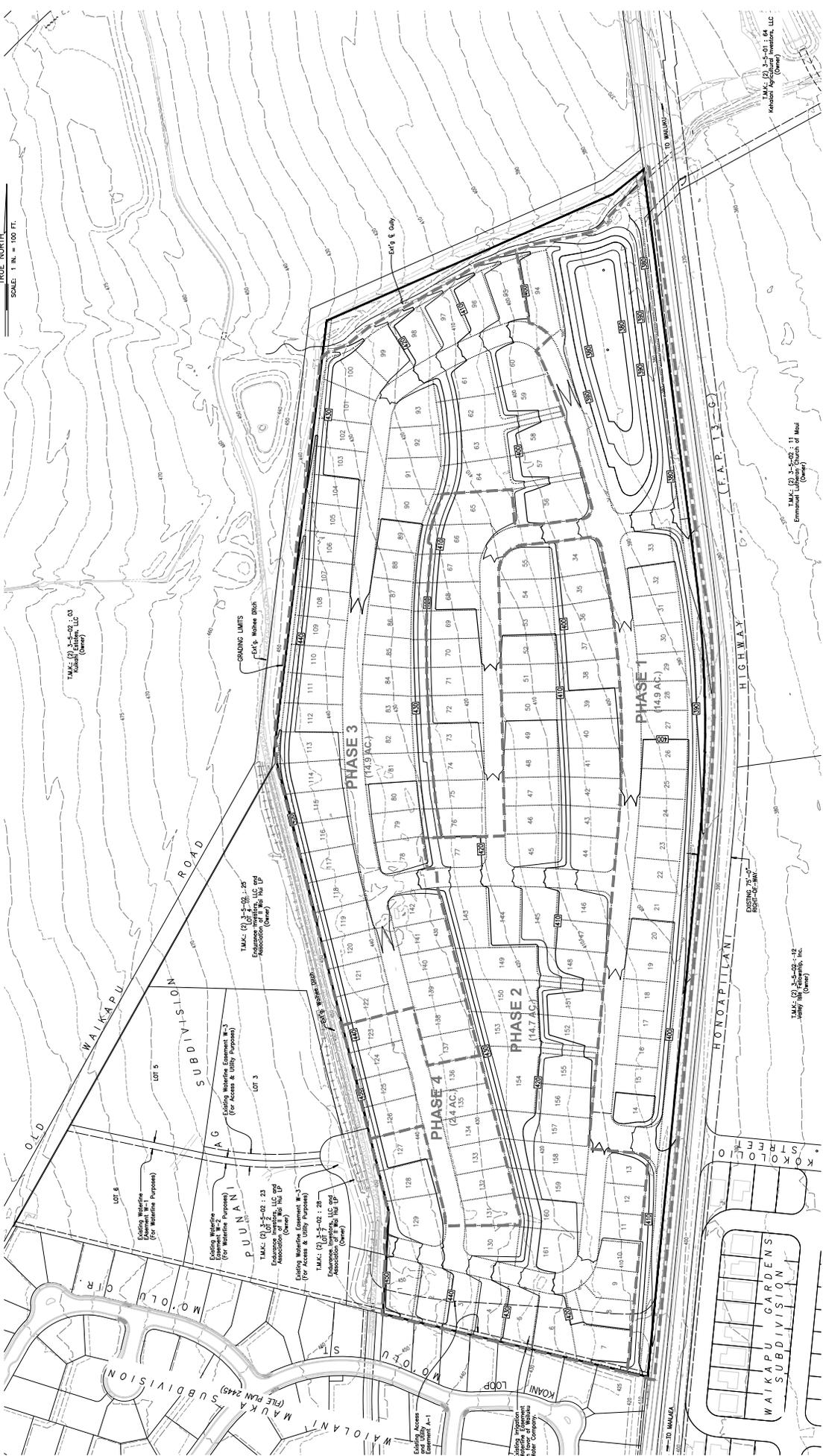
WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1000 KALANANĀHUI DRIVE, SUITE 400
 HONOLULU, HAWAII 96813
 (808) 943-1111

TITLE: GENERAL GRADING PLAN

D.T.U.	10028
DESIGNED BY	WARREN'S ENGINEERING, INC.
APPROVED BY	APRIL 9, 2020
JOB NUMBER	8
DATE	APRIL 9, 2020
SCALE	1 IN. = 100 FT.

LETTER OCCUPATION DATE

TRUE NORTH
SCALE: 1 IN. = 100 FT.



WARREN'S INSULAR ENGINEERS, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 SOUTH KULUWAHUA DRIVE, SUITE 400
 HONOLULU, HAWAII 96813

PUNANI HOMESTEAD
 WAIKAPU, WAIKAPU MAUI, HAWAII

TITLE PHASING PLAN

D.T.U. 19028
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]
 DATE: April 9, 2020
 SHEET NUMBER: 9 OF 9
 SCALE: 1 in. = 100 ft.

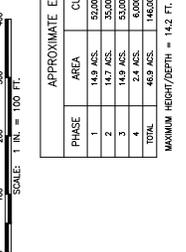
APPROXIMATE EARTHWORK QUANTITIES

PHASE	AREA	CUT	FILL	NET
1	14.9 ACS	53,000 C.Y.	43,000 C.Y.	0 C.Y.
2	14.7 ACS	35,000 C.Y.	35,000 C.Y.	0 C.Y.
3	14.9 ACS	53,000 C.Y.	43,000 C.Y.	10,000 C.Y. (OUT)
4	2.4 ACS	6,000 C.Y.	14,000 C.Y.	8,000 C.Y. (OUT)
TOTAL	46.9 ACS	146,000 C.Y.	144,000 C.Y.	2,000 C.Y. (OUT)

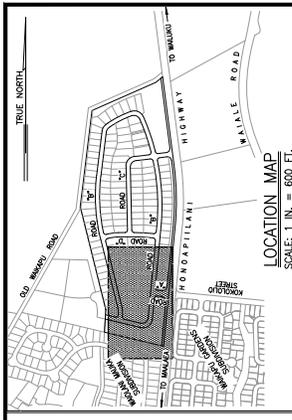
MAXIMUM HEIGHT/DEPTH = 14.2 FT.

NOTES:

- THE RETENTION BASINS WILL BE INSTALLED PRIOR TO GRADING ACTIVITY, PHASE 1 AREA.
- CONTRACTOR SHALL NOT OPEN UP NEXT PHASE UNTIL THE PREVIOUS PHASE HAS BEEN STABILIZED TO THE SATISFACTION OF THE COUNTY DISA INSPECTOR.
- PRIOR TO GRADING, THE CONTRACTOR SHALL CLEARLY MARK THE GRADING LIMITS OF EACH PHASE TO THE SATISFACTION OF THE COUNTY DISA INSPECTOR.



TO MALAKA
 HONOPULIANI HIGHWAY (F.A.P. 13-C)
 KOKOLELO STREET
 WAIKAPU GARDENS SUBDIVISION
 KOANUI LOOP
 MOLOU CLIFF ROAD
 PUNANI AG SUBDIVISION
 LOT 5
 LOT 4
 LOT 3
 LOT 2
 LOT 1
 LOT 12
 LOT 13
 LOT 14
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 LOT 199
 LOT 200



DEMOLITION NOTES:
 1. REMOVE ALL EXISTING DRIVE AND COUNTY REGULATION GOVERNING DEMOLITION AND DISPOSAL.
 2. DEMOLISH AND REMOVE ALL EXISTING TREES, FENCINGS, STORAGE, UTILITIES, AND UTILITIES WITHIN THE PROJECT'S GRADING LIMITS.

- LEGEND:
- DITCH BASIN
 - GRATED INLET CATCH BASIN
 - EXISTING GRADE CONTOUR W/ ELEVATION
 - FINISH GRADE CONTOUR W/ ELEVATION
 - TOP OF BANK
 - GRADING LIMITS
 - FINISH PAD ELEVATION

WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1000 KALANANĀ'ĀHOA DRIVE, SUITE 400
 HONOLULU, HAWAII 96813
 (808) 943-1100

PUNANI HOMESTEAD
 WAIKAPU, MAUI, HAWAII

TITLE: GRADING PLAN
 D.T.U. 19028
 C.E.C. 19028
 W.A.S. 19028
 APPROVED BY: APRIL 9, 2020
 SHEET NO. 10
 DATE

Scale: 1 in. = 40 ft.



SEE SHEET 14 FOR CONTINUATION

SEE SHEET 11 FOR CONTINUATION



PLAN
 SCALE: 1 IN. = 40 FT.

LETTER OCCURRENCE

DATE

DATE

DATE

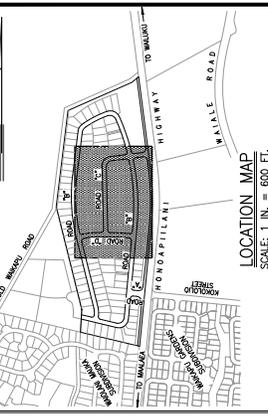
DATE

DATE

DATE

DATE

DATE

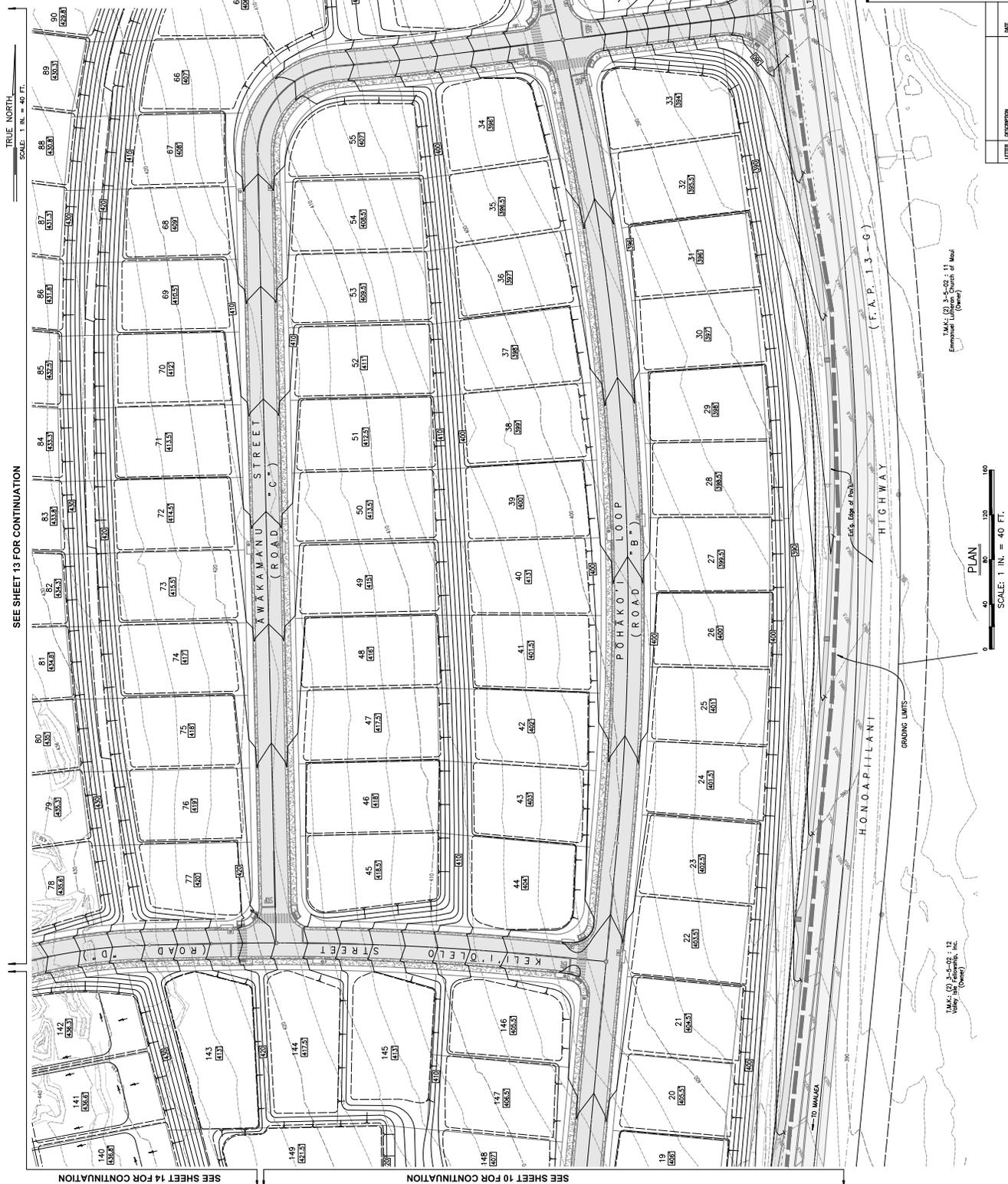


DEVELOPMENT NOTES:

1. ELEVATION GOVERNING TERRAIN, FINISH GRADE, AND COUNTY ELEVATION GOVERNING TERRAIN AND FINISH GRADE.
2. REMOVAL AND REMOVE ALL EXISTING TREES, FENCING, STORAGE, AND UTILITIES WITHIN THE PROJECT'S GRADING LIMITS.

LEGEND:

- CATCH BASIN
- GRADED INLET CATCH BASIN
- EXISTING GRADE CONTOUR W/ ELEVATION
- FINISH GRADE CONTOUR W/ ELEVATION
- TOP OF BANK
- TIDE OF BANK
- GRADING LIMITS
- FINISH PAID ELEVATION



SEE SHEET 10 FOR CONTINUATION

SEE SHEET 13 FOR CONTINUATION

SEE SHEET 14 FOR CONTINUATION

SEE SHEET 12 FOR CONTINUATION

SCALE: 1 IN. = 40 FT.

PLAN

SCALE: 1 IN. = 40 FT.

DATE: 03/20/2020

DATE: 03/20/2020

WARREN S. LINSCHLAG ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND SURVEYING
 1115 KALANANAKU DRIVE, SUITE 400
 HONOLULU, HAWAII 96813

PUNANI HOMESTEAD
 WAIKAPU, WAIKAPU MAUI, HAWAII

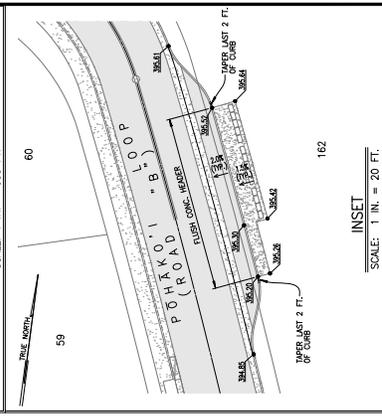
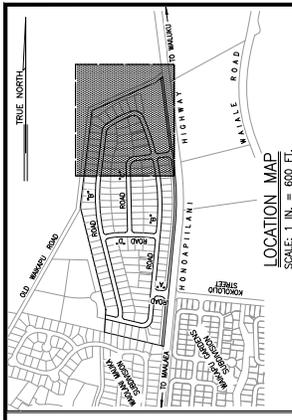
TITLE GRADING PLAN

D.T.U.	19028
DESIGNED BY	WARREN S. LINSCHLAG
APPROVED BY	WARREN S. LINSCHLAG
DATE	APRIL 9, 2020
SHEET	11

SCALE: 1 IN. = 40 FT.

EMMANUEL LUTHELIAN, F.P.S. 11-022, 11
 EMMANUEL LUTHELIAN (Owner)

T.M.C. (3) 3-5-02: 12
 Valley Life Technology, Inc.
 (Owner)



DEMOLITION NOTES:

1. DEMOLISH AND REMOVE TO DISPOSABLE GRADE AND COUNTY REGULATIONS CONCERNING REMOVAL AND DISPOSAL.
2. DEMOLISH AND REMOVE ALL EXISTING TREES, FENCING, STORAGE, AND UTILITIES WITHIN THE PROJECT'S GRADING LIMITS.

- LEGEND:**
- ▭ CATCH BASIN
 - ▭ GRATED INLET CATCH BASIN
 - EXISTING GRADE CONTOUR W/ ELEVATION
 - FINISH GRADE CONTOUR W/ ELEVATION
 - TOP OF BANK
 - TOE OF BANK
 - GRADING LIMITS
 - FINISH PAD ELEVATION

WARRENFELS INSULAR ENGINEERING, INC.
 ONE & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1115 KULUWAHINE DRIVE, SUITE 400
 HONOLULU, HAWAII 96813
 LICENSE NO. 1915-C

PUNUANI HOMESTEAD
 WAIKAPU, MAUI, HAWAII

TITLE GRADING PLAN

D.T.U. 19028
 EXCEEDS D.T.U. 19028
 W.A.S.
 APPROVED BY: [Signature]
 DATE: April 9, 2020

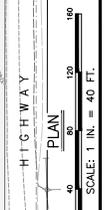
12 SHEET OF 12

1 in. = 40 FT.

SEE SHEET 13 FOR CONTINUATION

SEE SHEET 13 FOR CONTINUATION

SEE SHEET 11 FOR CONTINUATION



T.M.C. (I) 2-6-09-31
 Environmental Engineering Services, LLC
 (Owner)

HONOAIPILANI HIGHWAY (F.A.P. 13-G)

TO MAUILE ROAD TO WAIKAPU

LETTER: OCCUPATION DATE

TRUE NORTH
SCALE: 1 IN. = 40 FT.

T.M.C. (2) 3-5-02 : 03
Kulachi Engineers, LLC
(Owner)

T.M.C. (2) 3-5-02 : 29
Energize Ventures, LLC and
Associates (Owner)

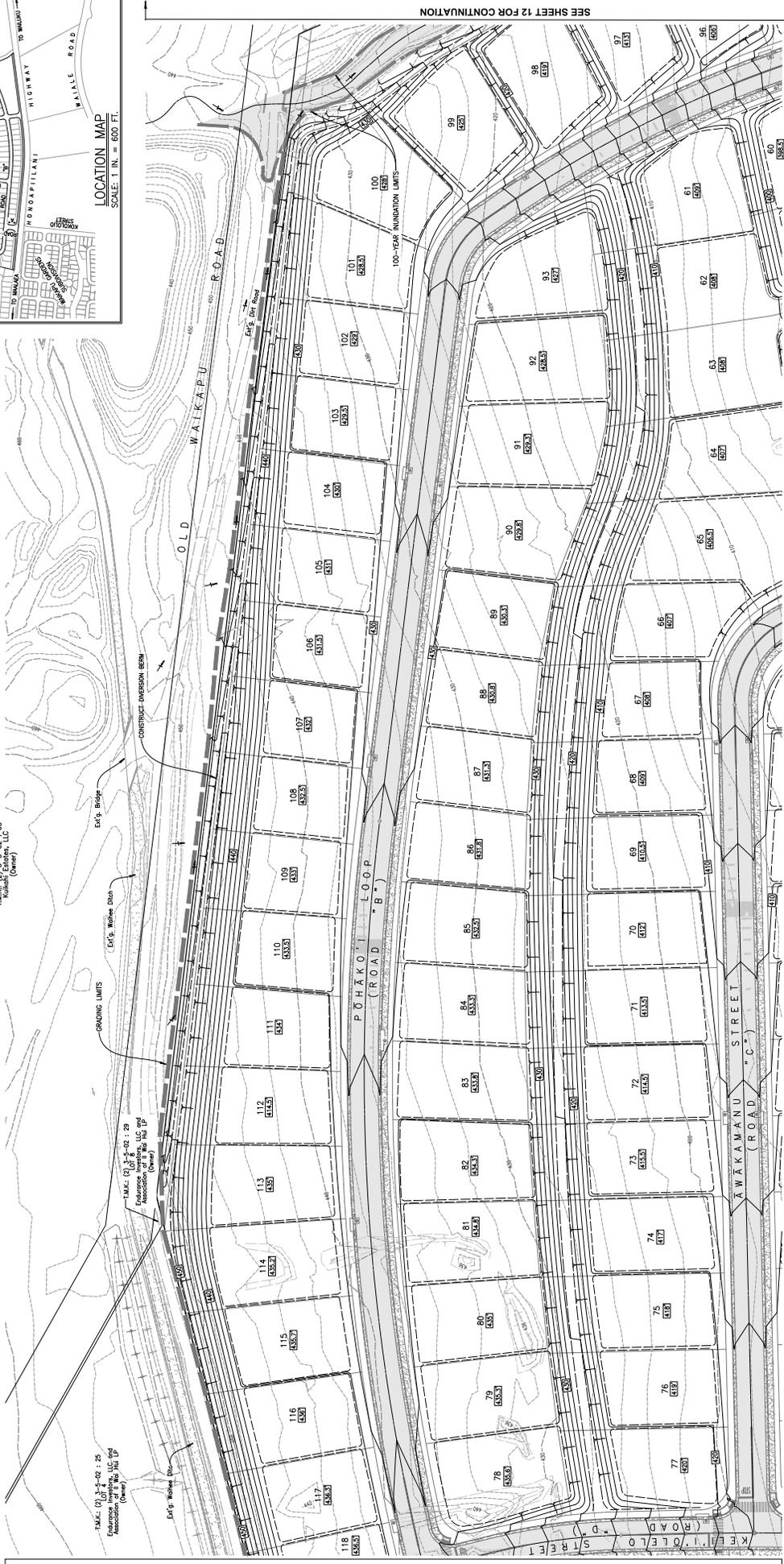
T.M.C. (2) 3-5-02 : 25
Energize Ventures, LLC and
Associates (Owner)

Ex'g. Wetland ditch
GRADING LIMITS

Ex'g. Bridge

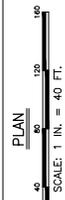
CONSTRUCTIVE OVERFLOW BERM

100-YEAR FLOODING LIMITS



SEE SHEET 14 FOR CONTINUATION

SEE SHEET 11 FOR CONTINUATION



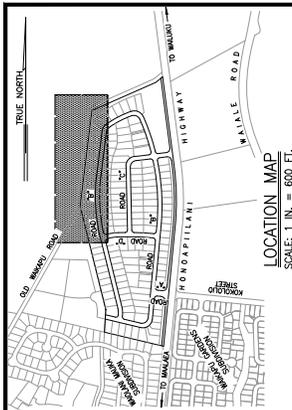
PLAN

SEE SHEET 12 FOR CONTINUATION

LEGEND:

	CATCH BASIN
	GRADED INLET CATCH BASIN
	EXISTING GRADE CONTOUR W/ ELEVATION
	FINISH GRADE CONTOUR W/ ELEVATION
	TOP OF BANK
	TOE OF BANK
	GRADING LIMITS
	FINISH PAD ELEVATION

DEMOLITION NOTES:
1. CONTRACTOR SHALL WHERE TO APPLYABLE STATE AND COUNTY REGULATION GOVERNING DEMOLITION AND DISPOSAL OF MATERIALS REMOVE ALL EXISTING TREES, LIMBS, STORAGE AND REMAINING FOUNDATION, FENCE, AND UTILITIES WITHIN THE PROJECT'S GRADING LIMITS.



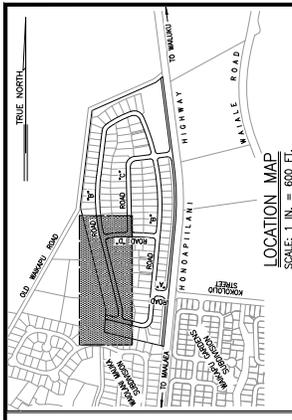
LOCATION MAP
SCALE: 1 IN. = 600 FT.



WARREN'S INSULAR ENGINEERS, INC.
ONE & STRUCTURAL ENGINEERING ARCHITECTS
1115 KULACHI DRIVE, SUITE 400
WAIKAPU, HAWAII 96791
PUNANI HOMESTEAD
WAIKAPU, WAIKAPU MAUI, HAWAII

TITLE	GRADING PLAN	D.T.U.	190228
DESIGNED BY	W.A.S.	CHECKED BY	DATE
DRAWN BY	DATE	APPROVED BY	DATE
JOB NUMBER	13	SHEET	13
DATE	APRIL 9, 2020	OF	13

LETTER	DESCRIPTION	DATE



LOCATION MAP
SCALE: 1 IN. = 600 FT.

TRUE NORTH
SCALE: 1 IN. = 40 FT.



- LEGEND:
- CATCH BASIN
 - GRATED INLET CATCH BASIN
 - EXISTING GRADE CONTOUR W/ ELEVATION
 - FINISH GRADE CONTOUR W/ ELEVATION
 - TOP OF BANK
 - FINE GRADE CONTOUR W/ ELEVATION
 - GRADING LIMITS
 - FINISH PAD ELEVATION
 - SPOT ELEVATION
 - FLOW ARROW
 - SWALE

PLAN
SCALE: 1 IN. = 40 FT.

SEE SHEET 10 FOR CONTINUATION

DEMOLITION NOTES:

- CONTRACTOR SHALL REMOVE TO APPLICABLE STATE AND COUNTY REGULATIONS ALL EXISTING TREES, FENCING, STORAGE, CONDUITS, UTILITIES, HOSE BIBS, AND UTILITIES WITHIN THE PROJECT'S GRADING LIMITS.

SEE SHEET 13 FOR CONTINUATION

SEE SHEET 11 FOR CONTINUATION

PUNANI HOMESTEAD
WAIKAPU, WAIKAPU MAU, HAWAII

WARREN'S ENGINEERING, INC.
ONE & STRUCTURAL PROFESSIONAL ENGINEERS
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-1111
FAX: (808) 943-1112
WWW.WARENSENGINEERING.COM

TITLE: GRADING PLAN
D.T.U. NO. 19028
DESIGNED BY: [Name]
CHECKED BY: [Name]
DATE: APRIL 9, 2020
APPROVED BY: [Name]
SCALE: 1 IN. = 40 FT.

T.M.C. (2) 3-5-02: 25
Entrance Irrigation, LLC and
Association (Owner)

T.M.C. (2) 3-5-02: 28
Entrance Irrigation, LLC and
Association (Owner)

T.M.C. (2) 3-5-02: 27
Peer & [Name] (Owner)

T.M.C. (2) 3-5-02: 24
Peer & [Name] (Owner)

T.M.C. (2) 3-5-02: 23
Punani Home, LLC and
Association (Owner)

T.M.C. (2) 3-5-02: 85
James & [Name] (Owner)

T.M.C. (2) 3-5-02: 86
Mauka [Name] (Owner)

T.M.C. (2) 3-5-02: 22
Peer & [Name] (Owner)

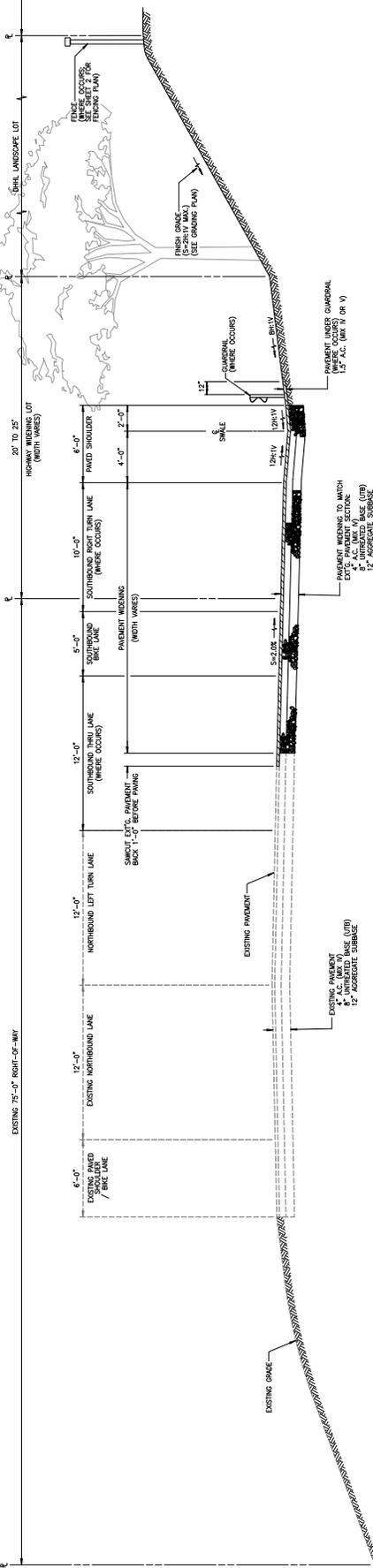
T.M.C. (2) 3-5-02: 20
Peer & [Name] (Owner)

T.M.C. (2) 3-5-02: 21
Peer & [Name] (Owner)

EXISTING 75'-0" RIGHT-OF-WAY

20' TO 25' HIGHWAY WIDENING LOT (WITH WARES)

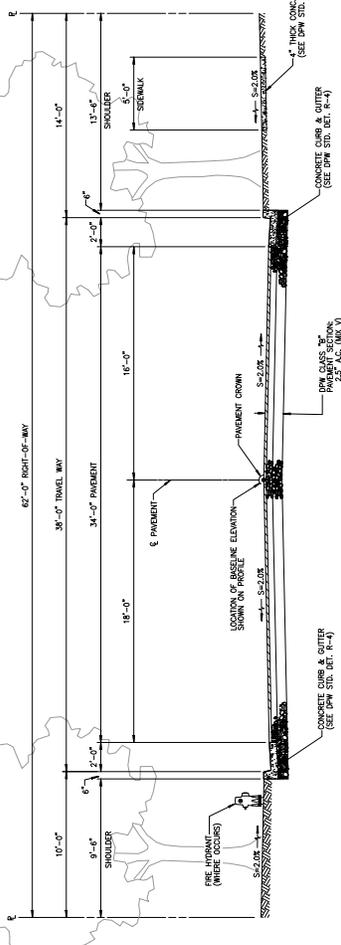
HOUSELOT



TYPICAL SECTION - HONOAPILANI HIGHWAY WIDENING AT SUBDIVISION ENTRANCES

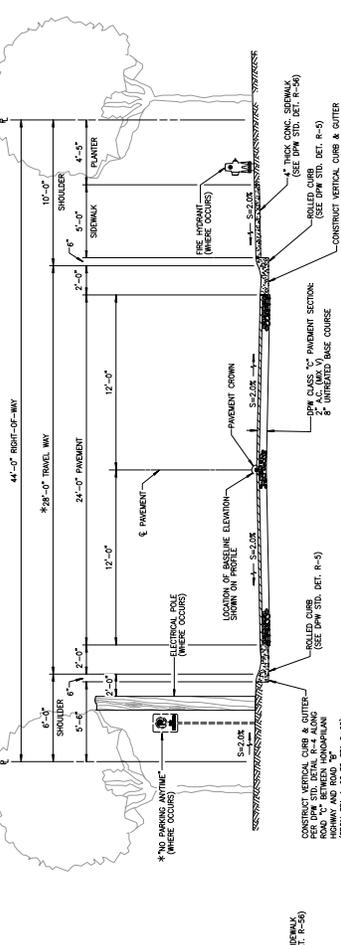
SCALE: 1/4" = 1'-0"

62'-0" RIGHT-OF-WAY



TYPICAL SECTION - PŪALINAPAO ROAD (ROAD "A") (MAIN SUBDIVISION ENTRANCE)

SCALE: 1/4" = 1'-0"



TYPICAL SECTION - PŌHAKŌ'I LOOP (ROAD "B"), ĀWĀKAMĀNU STREET (STREET "C"), AND KĒLI'OLELO STREET (STREET "D") (INTERNAL MINOR STREETS)

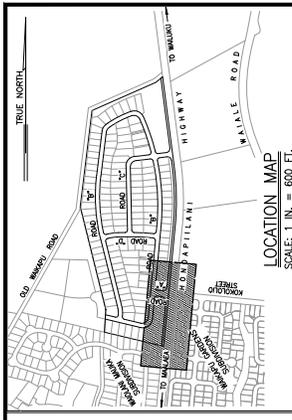
SCALE: 1/4" = 1'-0"

* NOTE: TRAVEL ON MAIN HWY WITHIN COMPLEX WITH ACC. 18.3.2.6.1. CURB-SIDE PARKING WILL BE PROMOTED ON ONE SIDE OF THE STREET.

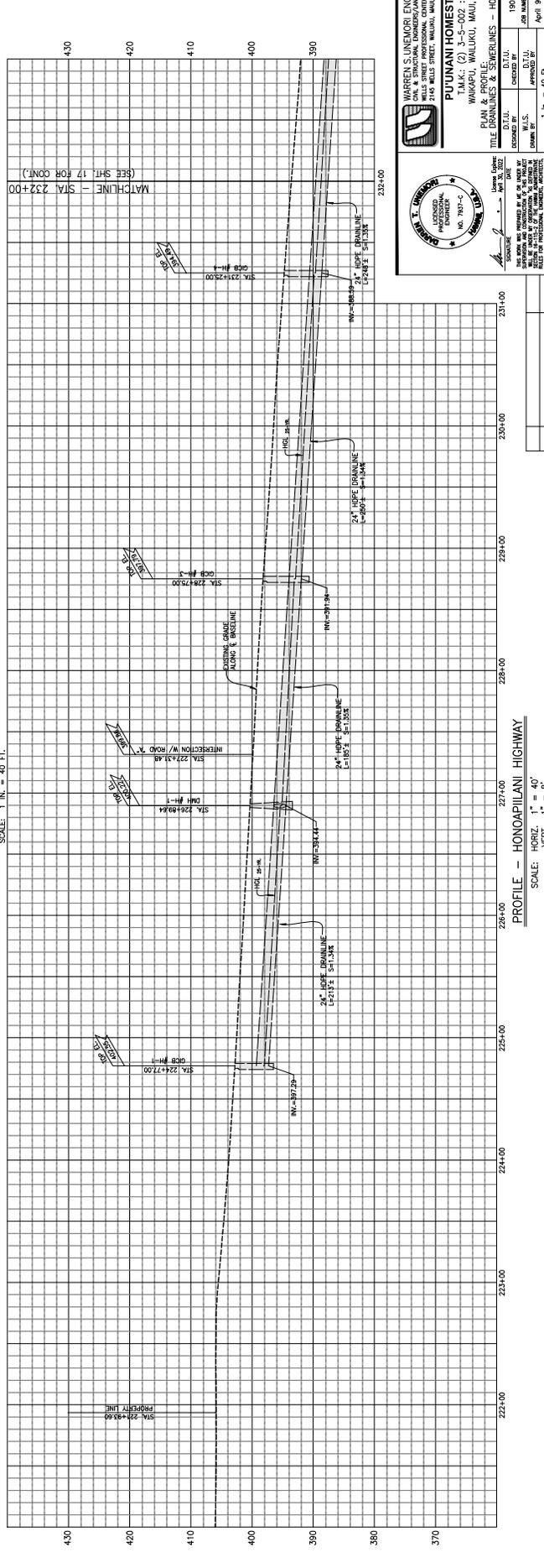
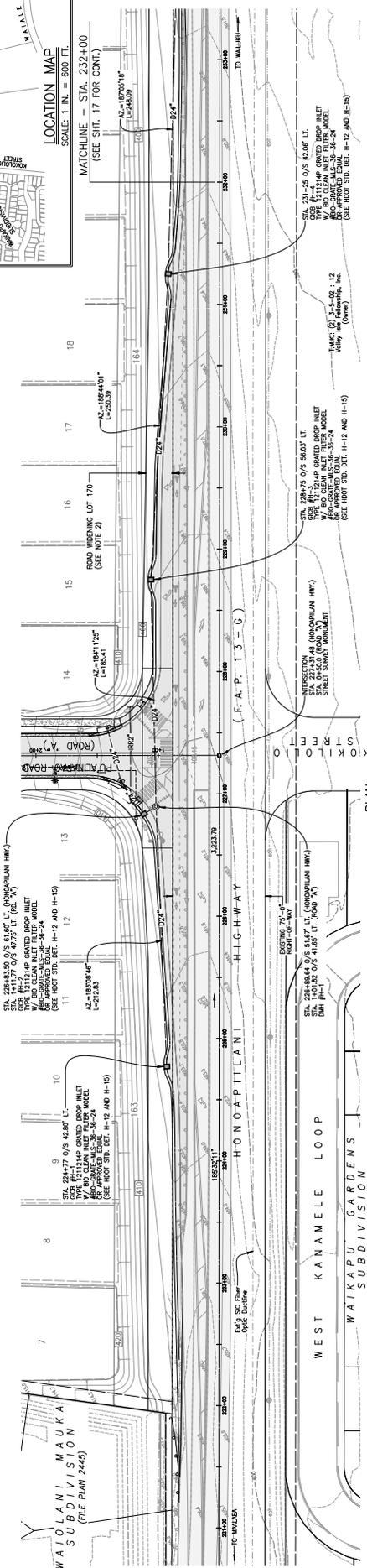


WARREN S. UMETANI
 LICENSE NO. 1832-C
 STATE OF HAWAII
 PROFESSIONAL ENGINEER
 CIVIL & STRUCTURAL ENGINEERING AND SURVEYING
 1111 KALANANĀHUI DRIVE, SUITE 400
 HONOLULU, HAWAII 96813

PŪ'UNANI HOMESTEAD		DATE	
1111 KALANANĀHUI DRIVE, SUITE 400 HONOLULU, HAWAII 96813		APRIL 9, 2020	
TITLE: TYPICAL ROADWAY SECTIONS		SCALE:	
D.T.U.	18028	D.T.U.	15
DESIGNED BY	WARREN S. UMETANI	CHECKED BY	WARREN S. UMETANI
DRAWN BY	WARREN S. UMETANI	APPROVED BY	WARREN S. UMETANI
JOB NUMBER	1111 KALANANĀHUI DRIVE, SUITE 400 HONOLULU, HAWAII 96813	SHEET	15



- NOTES:**
- INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII.
 - THE ROAD WORKING LOT ALONG HONOAPILANI HIGHWAY IS TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.



WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

PUNANI HOMESTEAD
PLAN & PROFILE
TILE DRAINAGES & SEWERLINES - HONOAPILANI HWY.
WAIKAPU, WAIKAPU MAUI, HAWAII

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

1 IN. = 40 FT.
SCALE

WARRELS ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1115 KALANANAKU DRIVE, SUITE 400
HONOLULU, HAWAII 96813

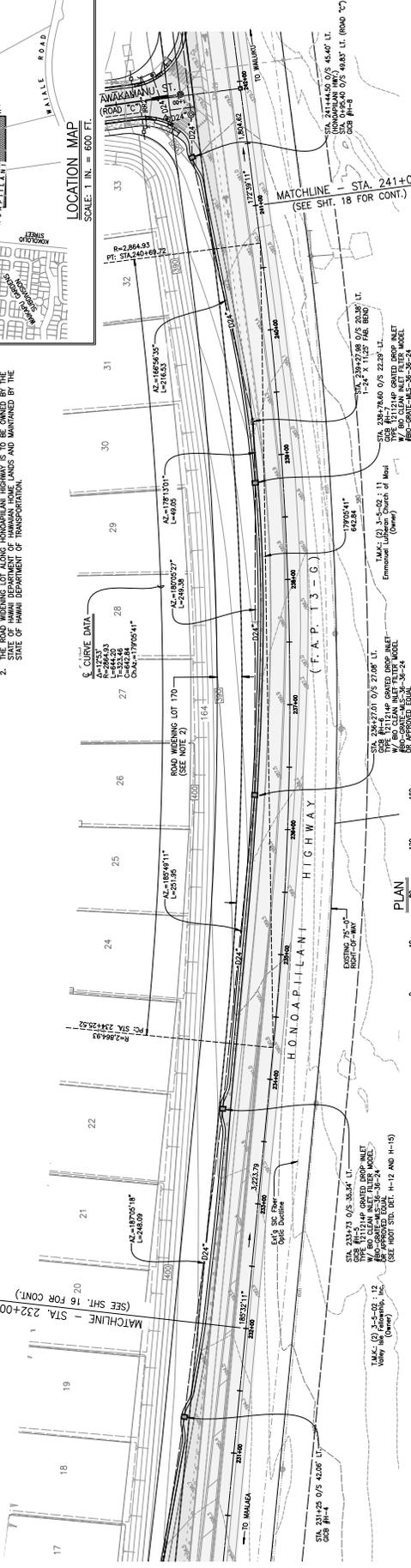
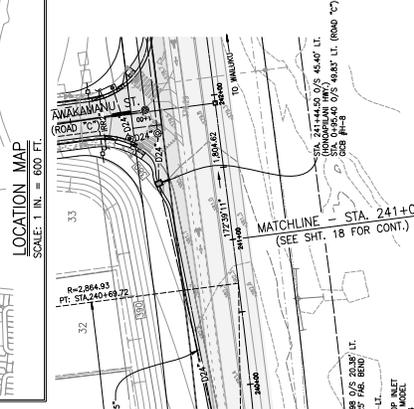
D.T.U. 190928
DESIGNED BY
APPROVED BY
DATE
JOB NUMBER
DATE
SHEET

16
APR 9, 2020
DATE

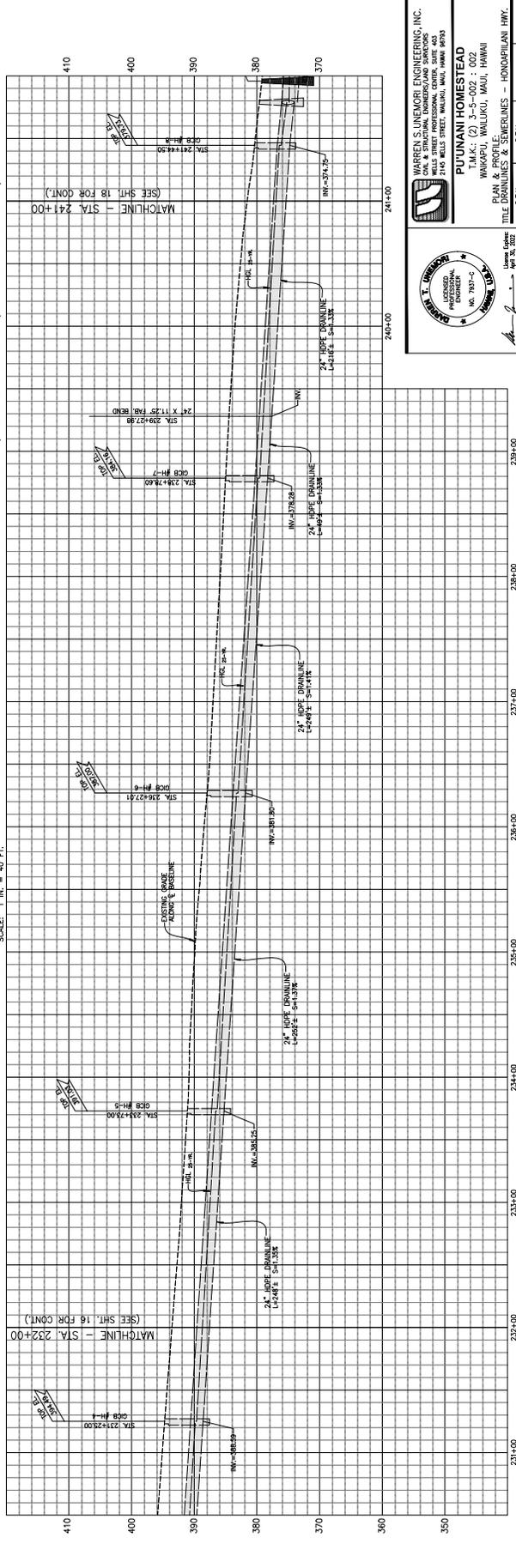
1 IN. = 40 FT.
SCALE

TRUE NORTH
SCALE: 1 IN. = 40 FT.

- NOTES:
- INTERNAL SUBDIVISION BOUNDARIES ARE TO BE OWNED BY THE STATE OF HAWAII. DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
 - THE ROAD WIDENING LOT ALONG HONOPILANI HIGHWAY IS TO BE OWNED BY THE STATE OF HAWAII. DEPARTMENT OF TRANSPORTATION.



PLAN
SCALE: 1 IN. = 40 FT.



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

WARREN'S ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 1957-C

PUNANI HOMESTEAD
WAIKAPU, MAUI, HAWAII

PLAN & PROFILE:
TITLE DRAINAGES & SEWERLINES - HONOPILANI HWY.

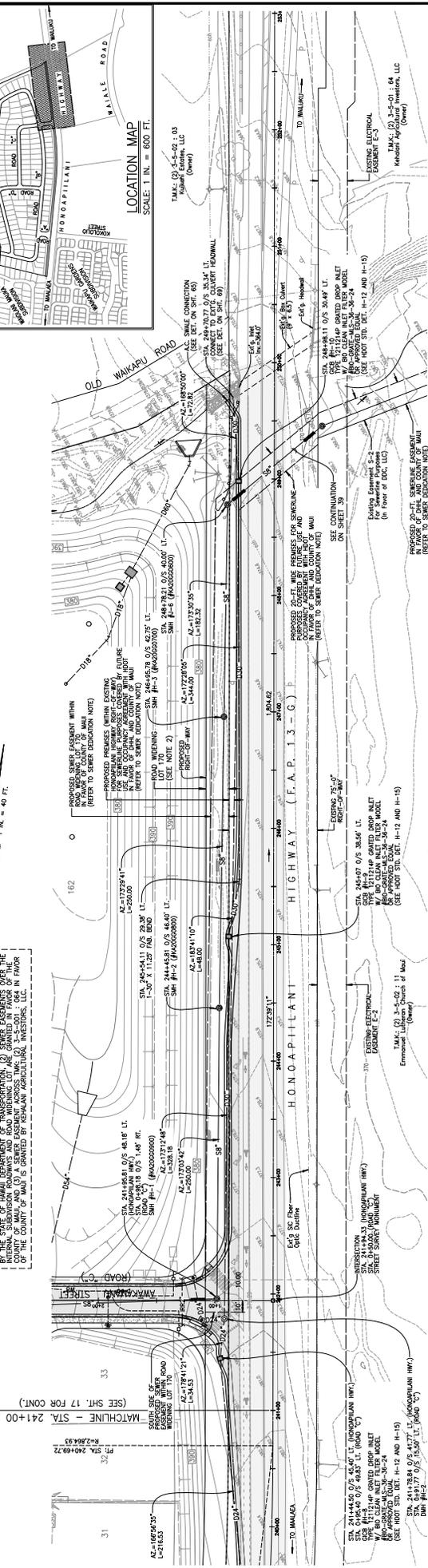
DATE: 10/20/08
DESIGNED BY: [Name]
CHECKED BY: [Name]
APPROVED BY: [Name]

DATE: April 9, 2010
JOB NUMBER: 17
SHEET: 17 OF 17

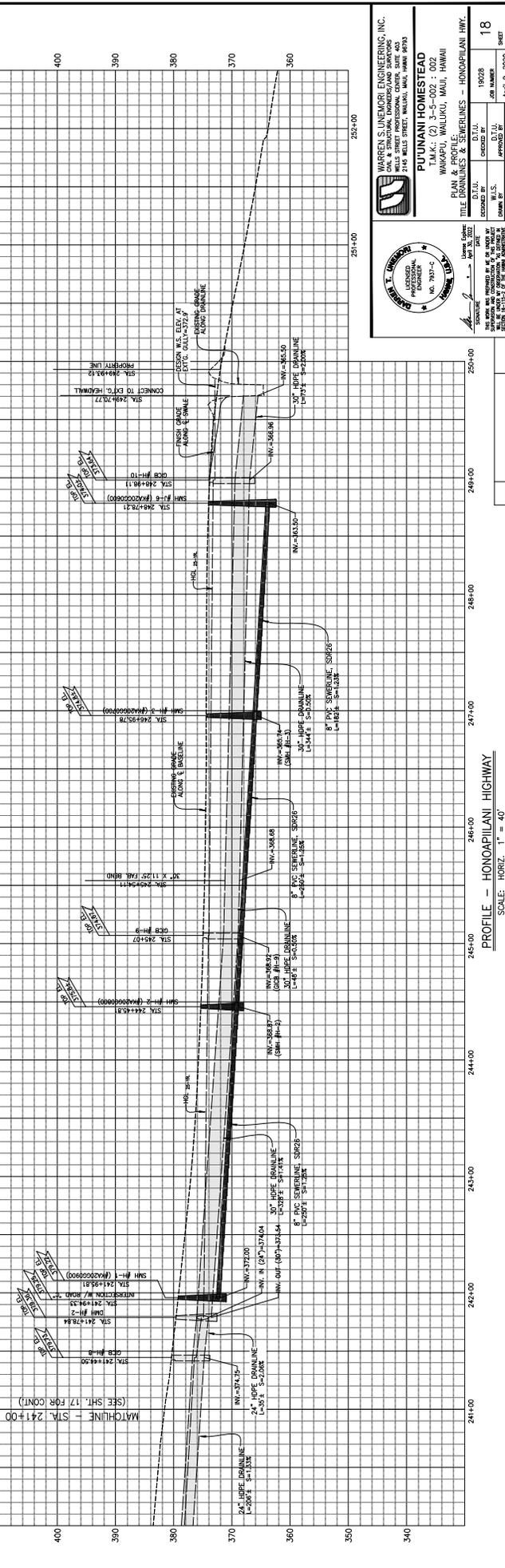
NOTES:
 1. INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII. DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
 2. ROAD WIDENING ALONG HONOPILANI HIGHWAY IS TO BE OWNED BY THE STATE OF HAWAII. DEPARTMENT OF TRANSPORTATION.
 3. ALL UTILITIES ARE TO BE MAINTAINED BY THE COUNTY OF MAUI AND THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.

SEWER DEDICATION NOTE:
 1. THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEED AT 227.
 2. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS.
 3. BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION. (2) SEWER EXHASTERS OVER THE COUNTY OF MAUI AND (3) A SEWER EXHASTION ACROSS THE (2) 1'-5'-0" (2) 1'-0" IN FAVOR OF THE COUNTY OF MAUI IS GRANTED BY REMAINT AGRICULTURAL INVESTORS, LLC (Owner).

PROPOSED 20'-FT. SEWERLINE EXHASTION MAINTENANCE (REFER TO SEWER DEDICATION NOTE)
 PROPOSED 20'-FT. SEWERLINE EXHASTION MAINTENANCE (REFER TO SEWER DEDICATION NOTE)
 PROPOSED 20'-FT. SEWERLINE EXHASTION MAINTENANCE (REFER TO SEWER DEDICATION NOTE)



PLAN
 SCALE: 1 IN. = 40 FT.

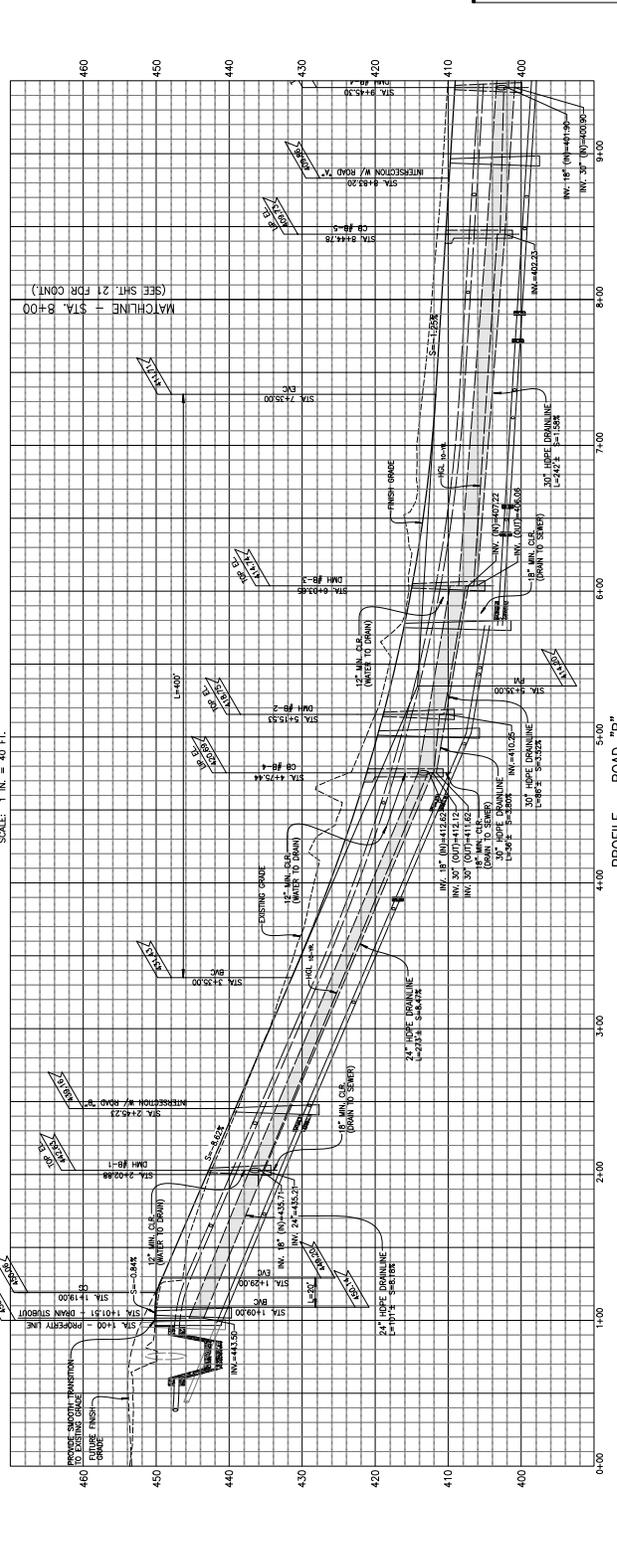
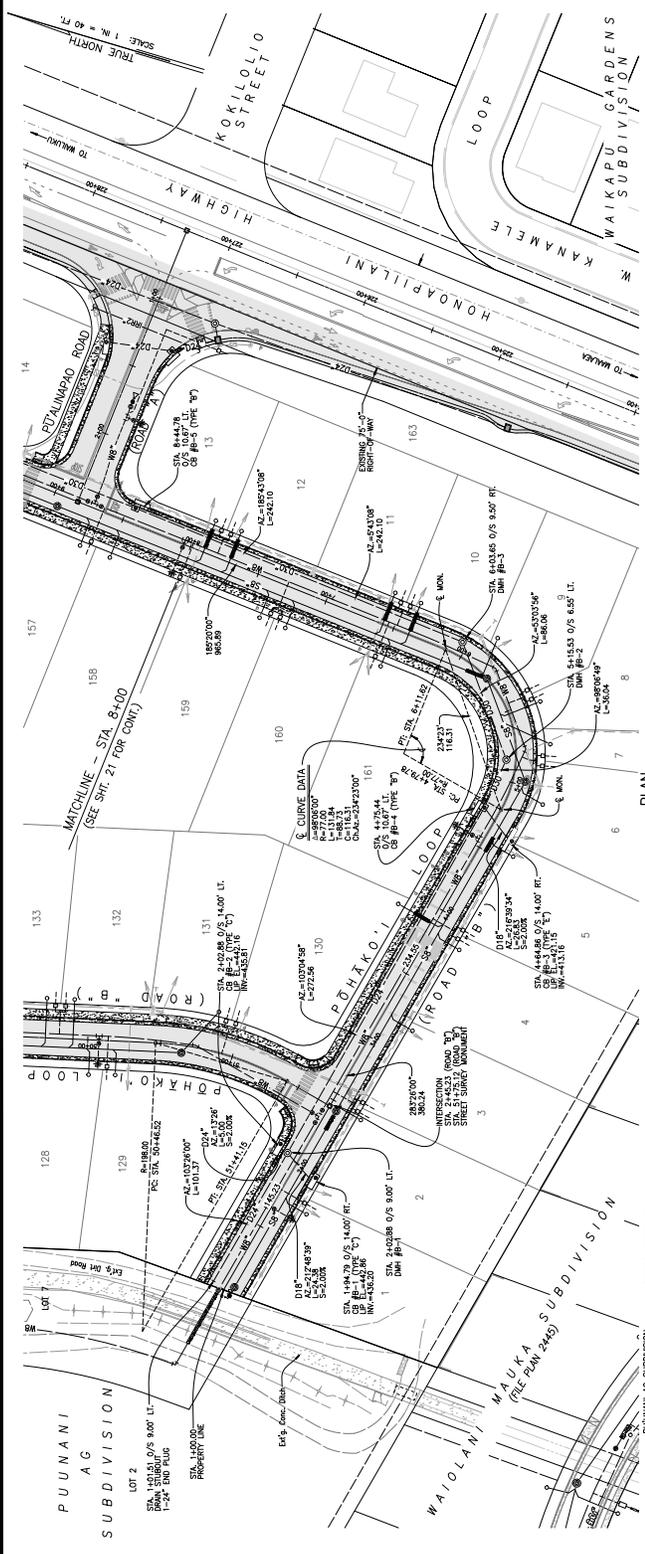
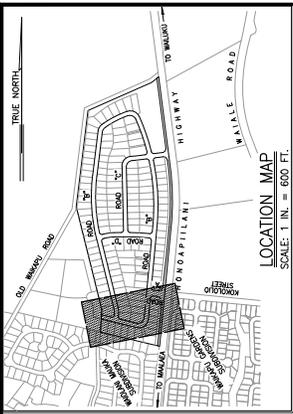


PROFILE - HONOPILANI HIGHWAY
 SCALE: HORIZ. 1" = 40'
 VERT. 1" = 8'

WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1115 SOUTH PINE AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 (808) 943-8888
 FAX (808) 943-8889

PUNANI HOMESTEAD
 TITLE DRAINAGES & SEWERLINES - HONOPILANI HWY.
 PLAN & PROFILE
 WAIKAPU, MAUI, HAWAII

DATE: 11/11/20
 D.T.U.:
 CHECKED BY:
 W.A.S.:
 APPROVED BY:
 DATE: APRIL 9, 2020
 SHEET NUMBER: 18
 OF SHEETS: 18
 SCALE: 1 in. = 40 ft.



NOTE:
 1. INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.

- LEGEND:
- SINKER MANHOLE
 - ⊙ DRAIN MANHOLE
 - ⊕ AIR RELIEF VALVE MANHOLE
 - ⊖ CATCH BASIN
 - CLEAN-OUT-TO-GRADE
 - 18" WATERLINE W/ SIZE
 - 24" WATERLINE W/ SIZE
 - 30" WATERLINE W/ SIZE
 - 18" SINKER MANHOLE
 - 24" SINKER MANHOLE
 - 30" SINKER MANHOLE
 - 18" EXISTING WATERLINE W/ SIZE
 - 24" EXISTING WATERLINE W/ SIZE
 - 30" EXISTING WATERLINE W/ SIZE

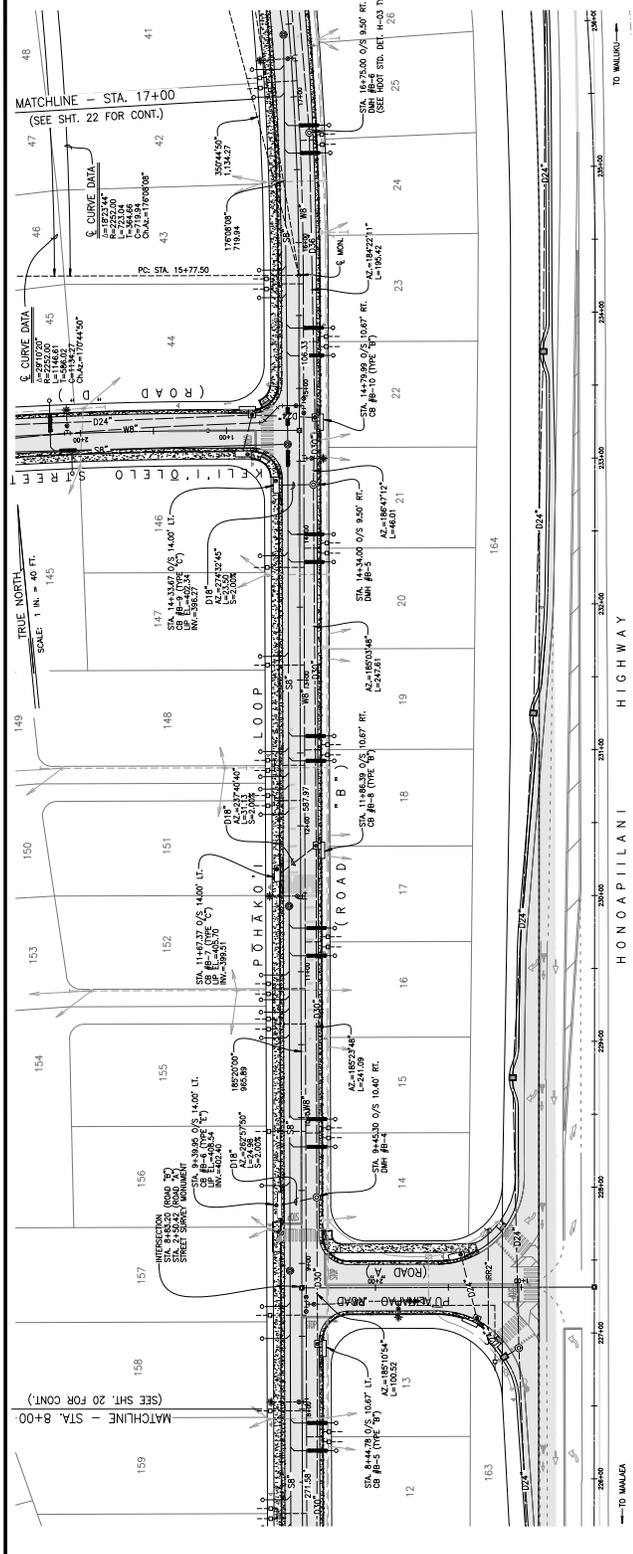
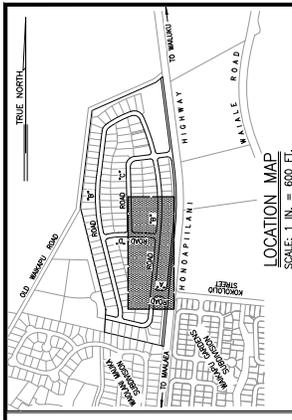
WARREN S. LINSAGOR ENGINEERS, INC.
 ONE & STRUCTURAL ENGINEERING & ARCHITECTURE
 1115 SOUTH WAIKAPU ROAD, SUITE 400
 WAIKAPU, MAUI, HAWAII 96793

PUNUANI HOMESTEAD
 PLAN & PROFILE, ROADWAY & DRAINAGES -
 LOT 2, PUNUANI SUBDIVISION (FILE PLAN 2449)

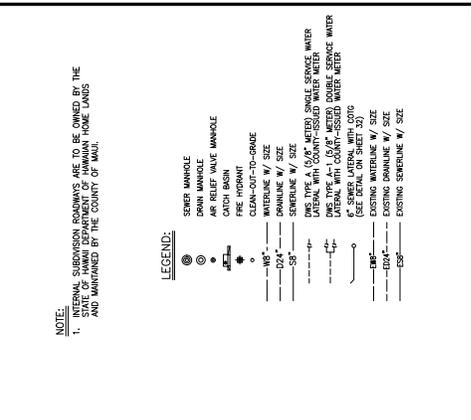
DATE: 19/02/20
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

D.T.U. 19/02/20
 C.E.S. 19/02/20
 W.A.S. 19/02/20
 JOB NUMBER: 20
 SHEET: 20
 DATE: April 9, 2020
 SCALE: 1 in. = 40 ft.

LETTER	OCCUPATION	DATE



HONOAPIILANI HIGHWAY
 SCALE: 1" = 40 FT.
 MATCHLINE - STA. 174+00 (SEE SHT. 22 FOR CONT.)



PROFILE - ROAD "B"
 SCALE: HORIZ. 1" = 40', VERT. 1" = 8'
 MATCHLINE - STA. 8+00 (SEE SHT. 20 FOR CONT.)

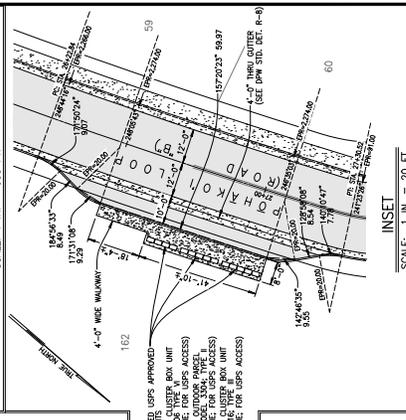
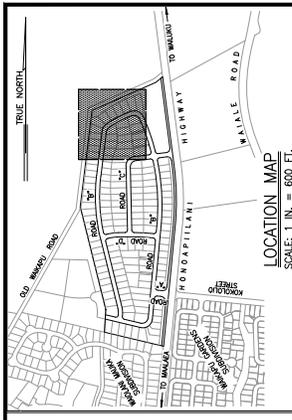
- NOTE:
 1. UTILITIES SUBMITTED FOR REVIEW ARE TO BE OWNED BY THE COUNTY OF MAUI AND MAINTAINED BY THE COUNTY OF MAUI.
- LEGEND:
- SEWER MANHOLE
 - WATER MANHOLE
 - 18" SLOPE VALVE MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLEAN-OUT-TO-GRADE
 - WATERLINE W/ SIZE
 - SEWER W/ SIZE
 - SOMERLAIN W/ SIZE
 - ONE TYPE A (10" METER) SINGLE SERVICE WATER LATERAL WITH QUANTY-ISSUED WATER METER
 - ONE TYPE B (10" METER) SINGLE SERVICE WATER LATERAL WITH QUANTY-ISSUED WATER METER
 - 6" SEWER LATERAL WITH COTG
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINAGE W/ SIZE
 - EXISTING SERVICELINE W/ SIZE

MAUI COUNTY
 PROFESSIONAL ENGINEER
 NO. 1917-C

WARREN'S ENGINEERING, INC.
 1000 S. WILSON AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 LICENSE NO. 1917-C

PUNANI HOMESTEAD
 PLAN & PROFILE, ROADWAY & DRAINAGES -
 WAIKAPU, WAIKUKI MAUI, HAWAII
 TITLE: POKOPOKO LOOP (ROAD "B")

DATE: 10/02/20
 D.T.U. NO. 19028
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]
 DRAWN BY: [Signature]
 SCALE: 1" = 40 FT.
 SHEET NO. 21 OF 21



- PROPOSED MONITOR LOOPS APPROVED:
- 1 - SANITARY CLUSTER BOX UNIT (CONCRETE FOR USPS ACCESS)
 - 3 - CLUSTER SANITARY PIPES (CONCRETE FOR USPS ACCESS)
 - 10 - SANITARY CLUSTER BOX UNIT (CONCRETE FOR USPS ACCESS)

NOTE:
1. INTERNAL SUBURBAN ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION AND MAINTAINED BY THE COUNTY OF MAUI.

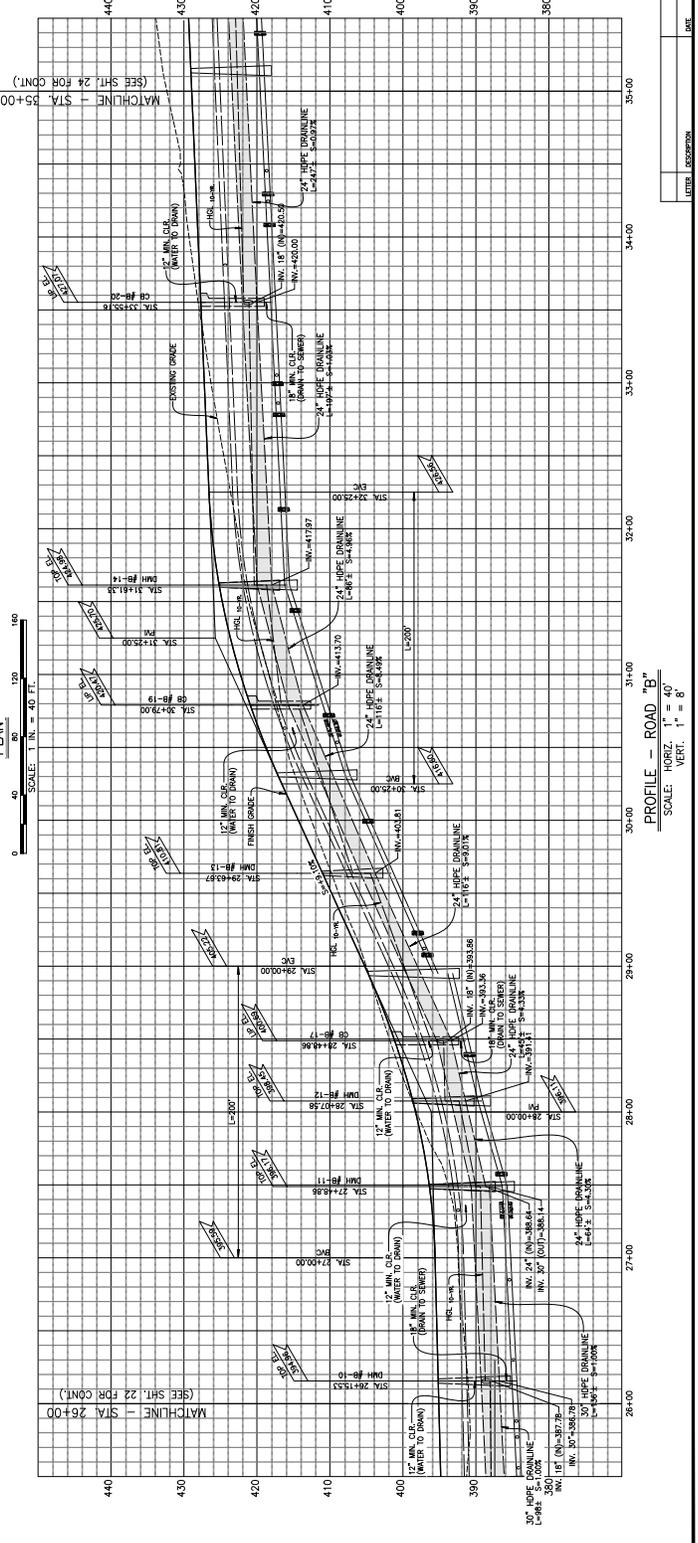
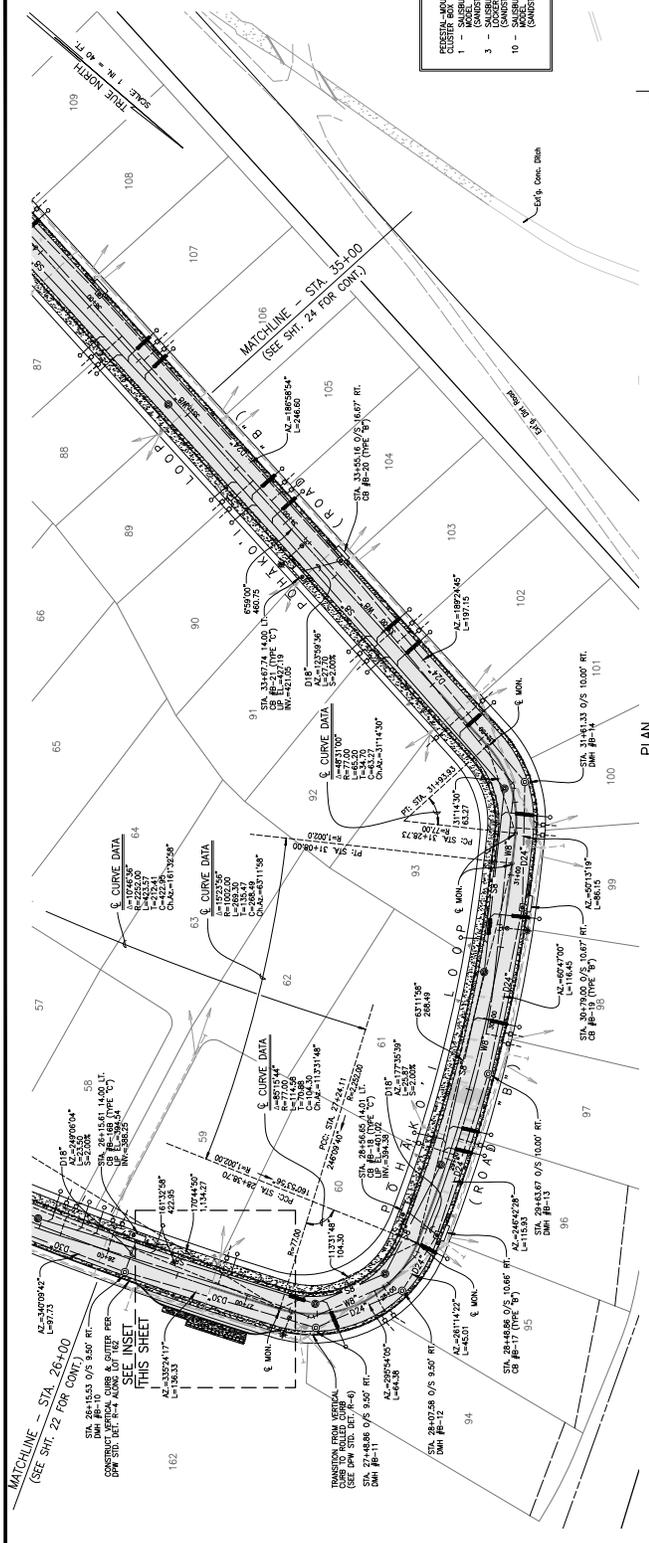
- LEGEND:
- SEWER MANHOLE
 - RAIN MANHOLE
 - AS RELEV. WATER MANHOLE
 - RISE HYDRANT
 - CLEAN-OUT-TO-GRADE
 - WATERLINE W/ SIZE
 - DRAINLINE W/ SIZE
 - SEWER W/ SIZE
 - WATER W/ SIZE
 - 12" MIN. C.I.S. (WATER TO DRAIN)
 - 18" MIN. C.I.S. (DRAIN TO SEWER)
 - 24" HOPE DRAINLINE (DRAIN TO SEWER)
 - 30" HOPE DRAINLINE (DRAIN TO SEWER)
 - EXISTING WATERLINE W/ SIZE
 - EXISTING SEWERLINE W/ SIZE

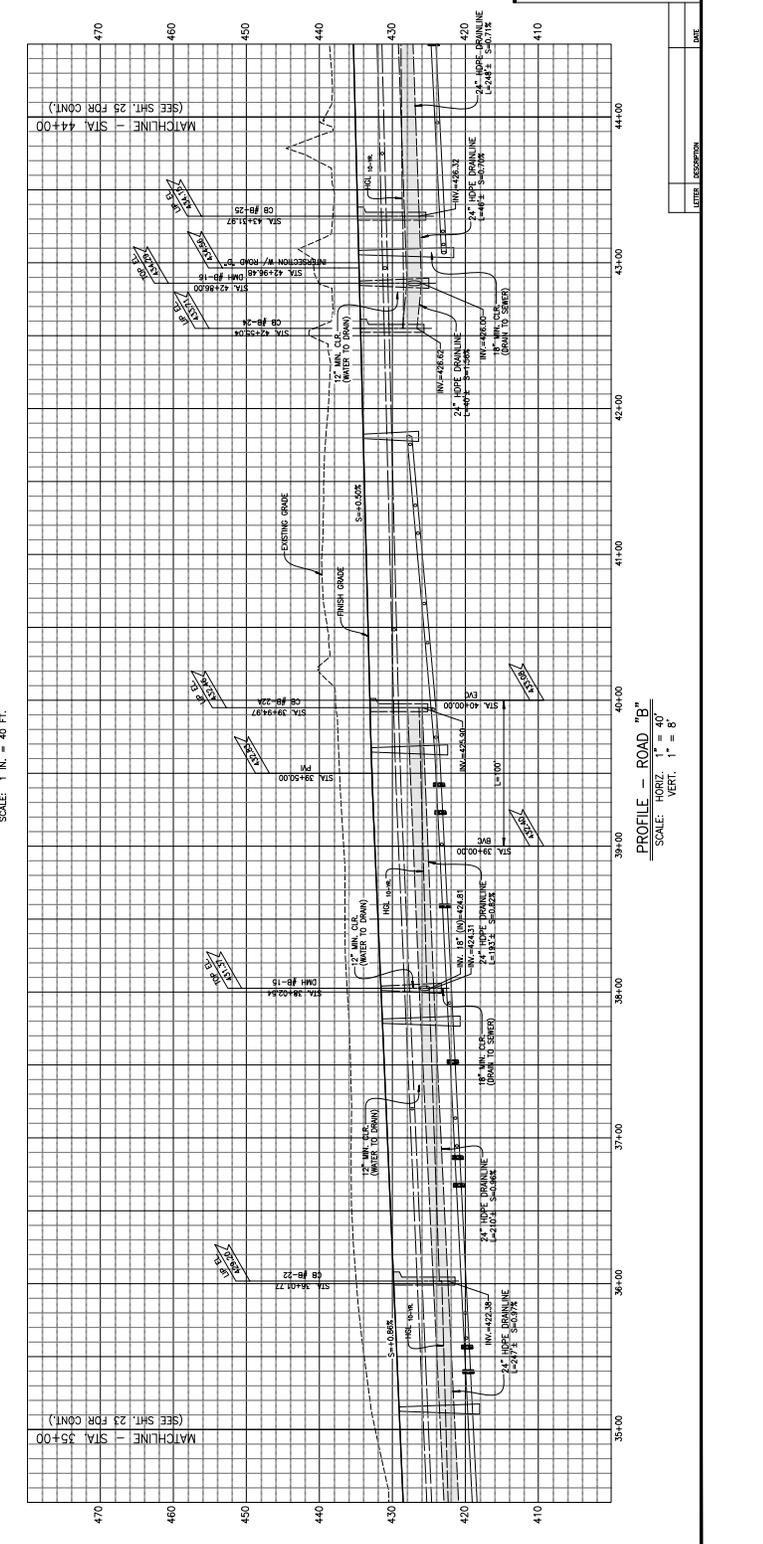
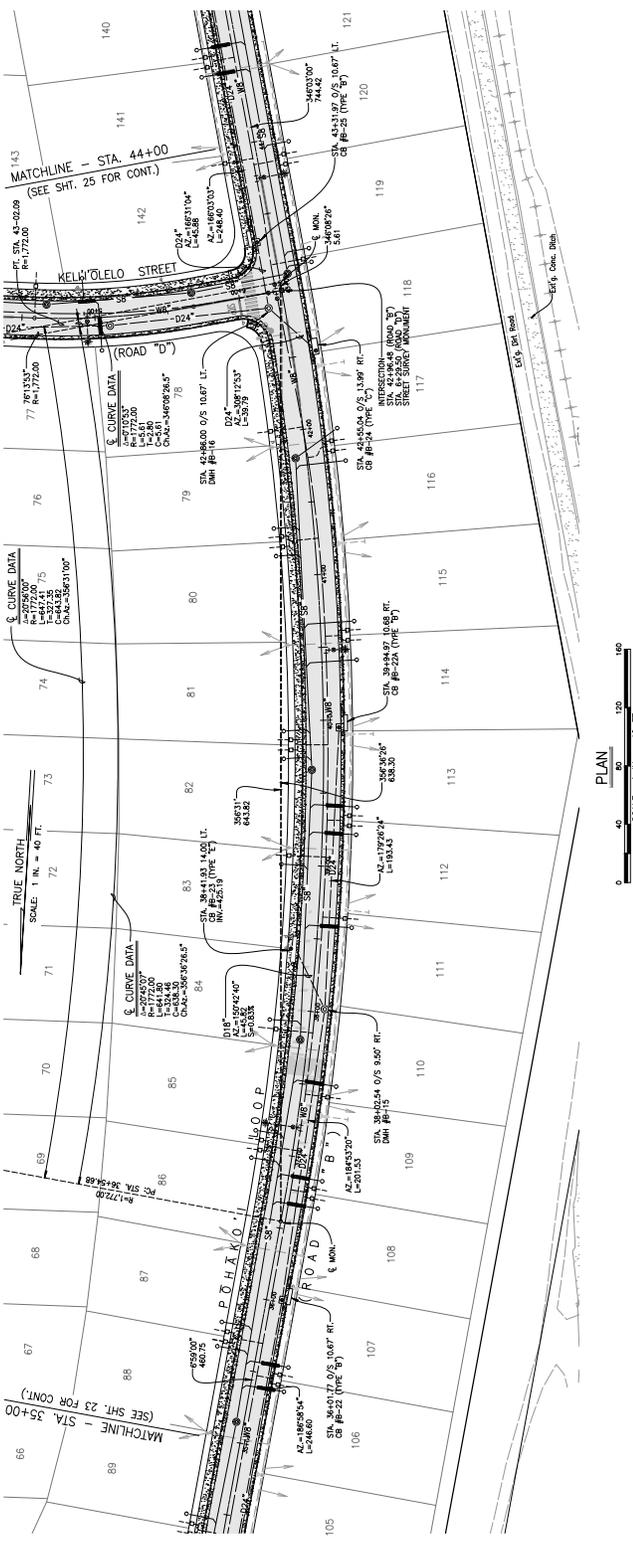
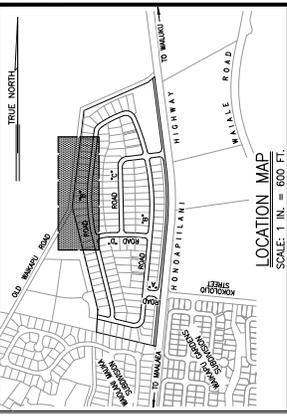
PUNANI HOMESTEAD
 PLAN & PROFILE ROADWAY & DRAINAGES -
 WAIKUKU, MAUI, HAWAII

1 IN. = 40 FT.

DATE: 10/28/20
 JOB NUMBER: 23
 APPROVED BY: [Signature]
 D.T.U. 10/28/20

MAI ENGINEERING, INC.
 1000 S. WAIKUKU AVENUE, SUITE 400
 WAIKUKU, MAUI, HAWAII 96793
 PHONE: (808) 255-1111
 FAX: (808) 255-1112
 LICENSE NO. 1915-C

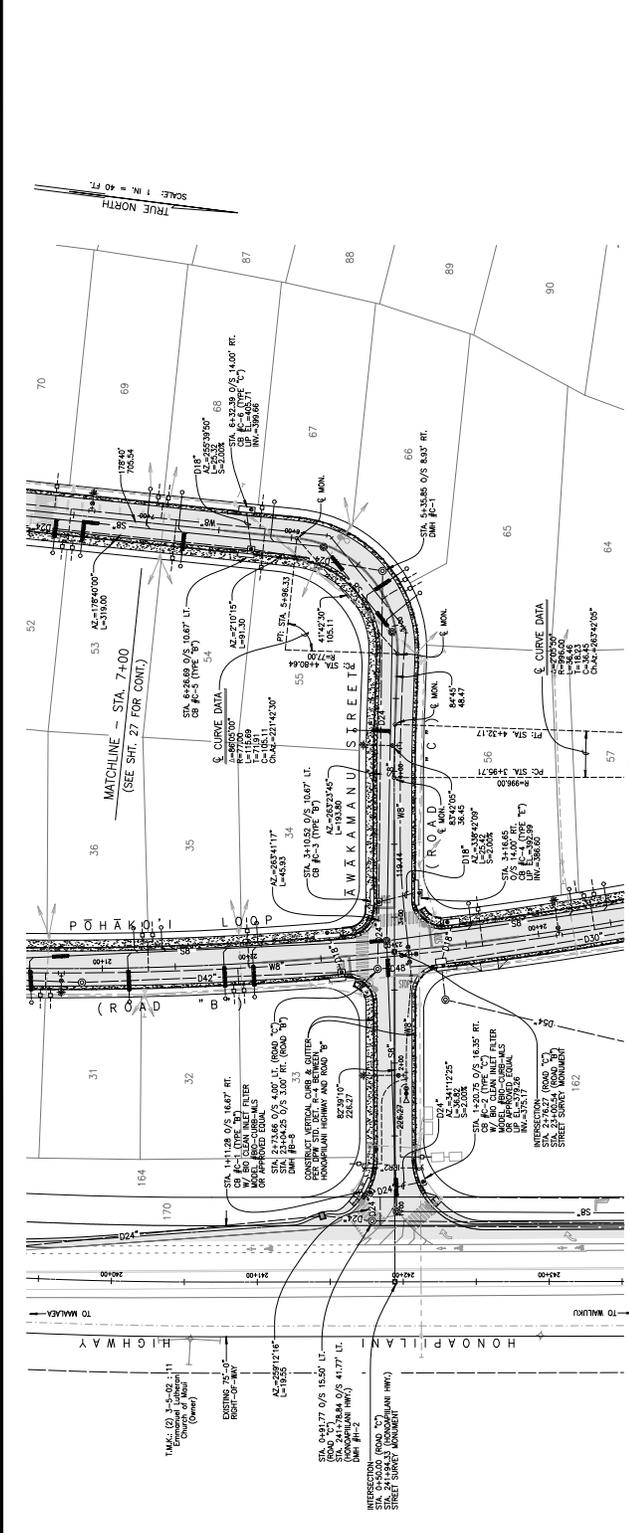
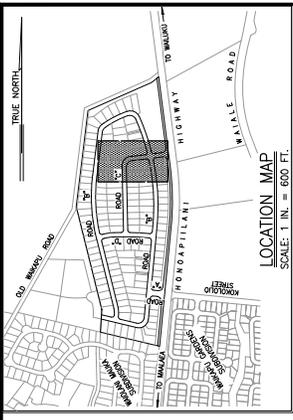




- INTERNAL SUBVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII AND MAINTAINED BY THE COUNTY OF MAUI.
- SEWER MANHOLE
 - RAIN MANHOLE
 - AS RECESSED WALK MANHOLE
 - FIRE HYDRANT
 - CLEAN-OUT-TO-GRADE
 - WATERLINE W/ SIZE
 - DRAINLINE W/ SIZE
 - SEWERLINE W/ SIZE
 - PIPE TYPE, W/ SIZE, MATERIAL, DOUBLE SERVICE WATER EXTERNAL WITH COUNTER-SOLID WATER METER
 - 6\"/>

PUNANI HOMESTEAD
 PLAN & PROFILE: ROADWAY & DRAINAGES -
 WAIKAPU, MAUI, HAWAII
 TITLE: POKIHOI LOOP (ROAD "B")

D.T.U. 19028
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]
 DATE: APR 9, 2020
 SHEET 24 OF 25
 SCALE: 1 in. = 40 FT.



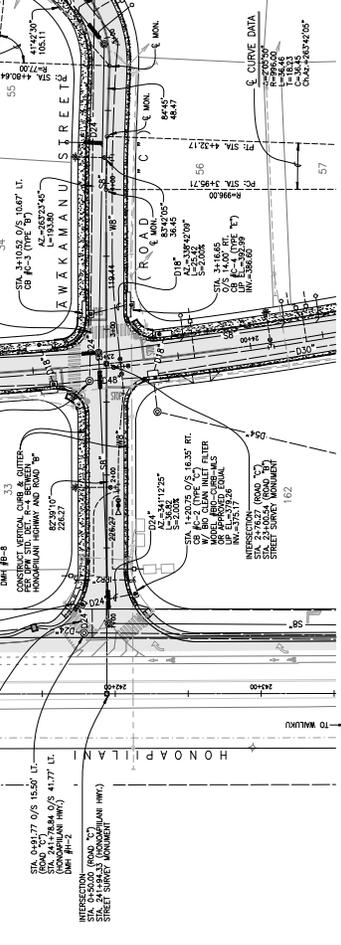
NOTES:
 1. INTERNAL SUBURBAN ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
 2. THE ROAD AND UTILITY LOCATIONS SHOWN ON THIS PLAN ARE OWNED BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.

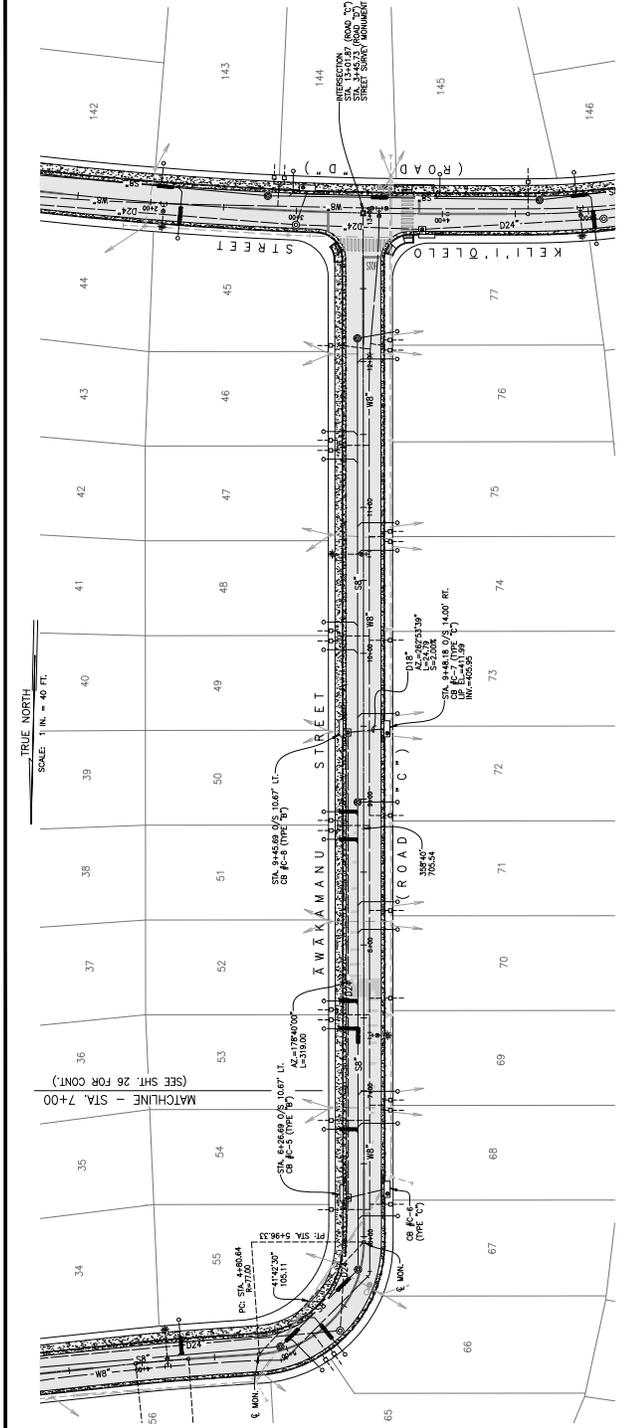
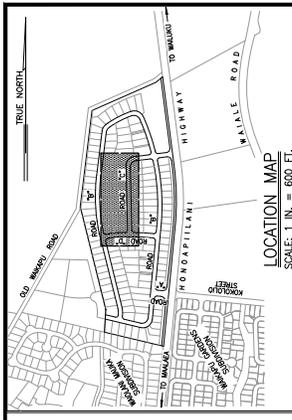
- LEGEND:
- SEWER MANHOLE
 - RAIN MANHOLE
 - AIR RELIEF VALVE MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLEAN-OUT TO DRAIN
 - DRAINAGE W/ SIZE
 - SWERLINE W/ SIZE
 - FIRE TYPE A 5/8" METER SINGLE SERVICE WATER
 - FIRE TYPE B 1/2" METER DOUBLE SERVICE WATER
 - LATERAL WITH COUNTY-ISSUED DOUBLE WATER METER
 - 1/2" MIN. C.I.P. WITH 1/2" MIN. C.I.P. TO 1/2" MIN. C.I.P.
 - 1/2" MIN. C.I.P. WITH 1/2" MIN. C.I.P. TO 1/2" MIN. C.I.P.
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINAGE W/ SIZE
 - EXISTING SWERLINE W/ SIZE

WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 SOUTH WILSON AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 LICENSE NO. 10028
 REGISTERED PROFESSIONAL ENGINEER
 LICENSE NO. 10028
 REGISTERED PROFESSIONAL ARCHITECT
 LICENSE NO. 10028

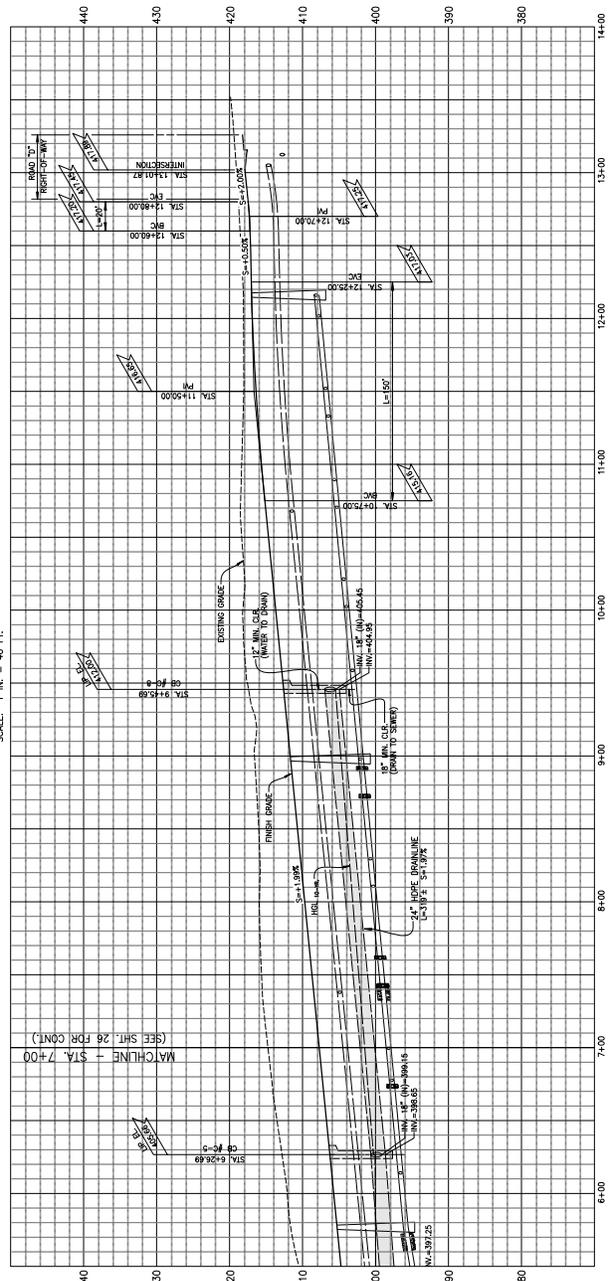
PUNANI HOMESTEAD
 PLAN & PROFILE, ROADWAY & DRAINAGES -
 WAIKAPU, MAUI, HAWAII
 TITLE: WAIKAPU STREET (ROAD "C")

D.T.U. 10028
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]
 DATE: April 9, 2020
 SHEET NO. 26
 SCALE: 1 in. = 40 ft.





PLAN
SCALE: 1 IN. = 40 FT.



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

NOTE:
1. ALL DIMENSIONS AND ELEVATIONS ARE TO BE CHECKED BY THE SITE VISITOR, SUPERVISOR OF MAINTENANCE AND/OR ENGINEER AND MAINTAINED BY THE COUNTY OF MAUI.

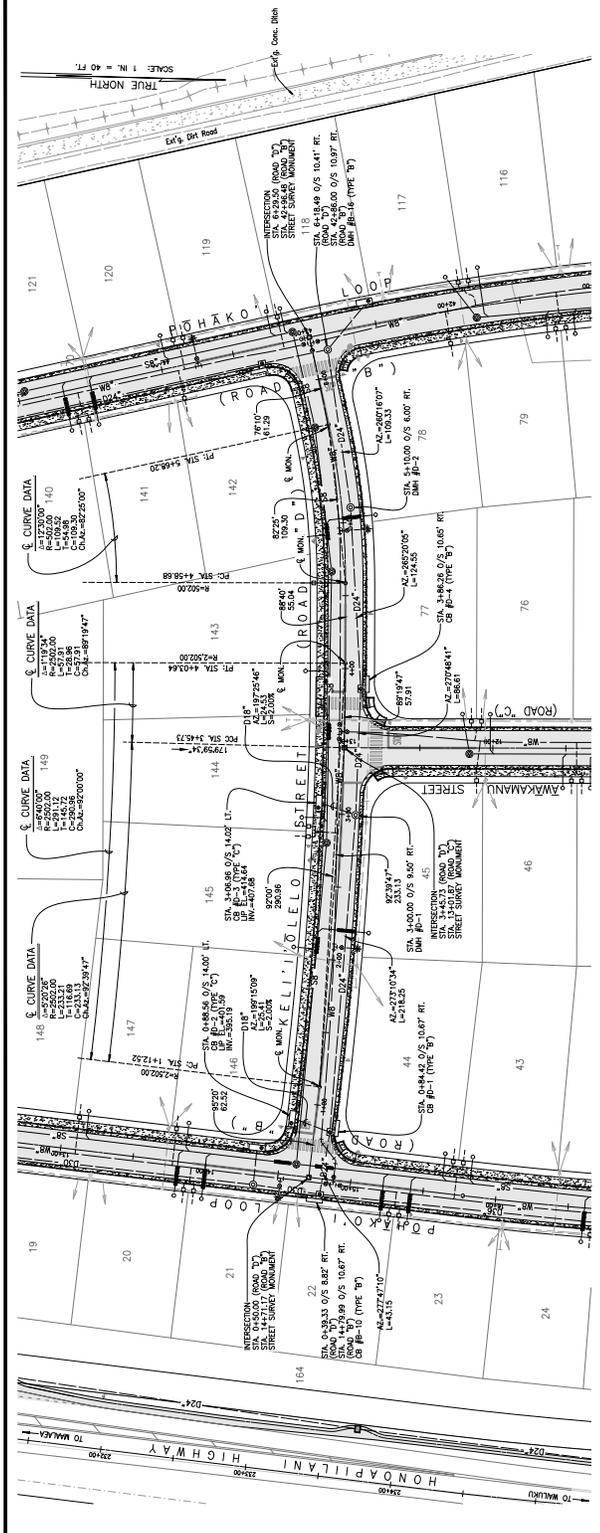
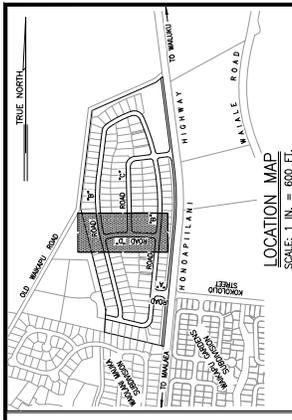
- LEGEND:
- SEWER MANHOLE
 - RAIN MANHOLE
 - AIR RELIEF VALVE MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLEAN-OUT/STUB-OUT
 - 18" DRAINAGE W/ SIZE
 - 24" DRAINAGE W/ SIZE
 - 36" DRAINAGE W/ SIZE
 - 48" DRAINAGE W/ SIZE
 - 60" DRAINAGE W/ SIZE
 - 72" DRAINAGE W/ SIZE
 - 84" DRAINAGE W/ SIZE
 - 96" DRAINAGE W/ SIZE
 - 108" DRAINAGE W/ SIZE
 - 120" DRAINAGE W/ SIZE
 - 144" DRAINAGE W/ SIZE
 - 180" DRAINAGE W/ SIZE
 - 216" DRAINAGE W/ SIZE
 - 288" DRAINAGE W/ SIZE
 - 360" DRAINAGE W/ SIZE
 - 432" DRAINAGE W/ SIZE
 - 504" DRAINAGE W/ SIZE
 - 576" DRAINAGE W/ SIZE
 - 648" DRAINAGE W/ SIZE
 - 720" DRAINAGE W/ SIZE
 - 792" DRAINAGE W/ SIZE
 - 864" DRAINAGE W/ SIZE
 - 936" DRAINAGE W/ SIZE
 - 1008" DRAINAGE W/ SIZE
 - 1080" DRAINAGE W/ SIZE
 - 1152" DRAINAGE W/ SIZE
 - 1224" DRAINAGE W/ SIZE
 - 1296" DRAINAGE W/ SIZE
 - 1368" DRAINAGE W/ SIZE
 - 1440" DRAINAGE W/ SIZE

WARREN S. INAGAKI ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 910 SOUTH WAIKUKI AVENUE, SUITE 400
 WAIKUKI, HAWAII 96793
 (808) 261-1111

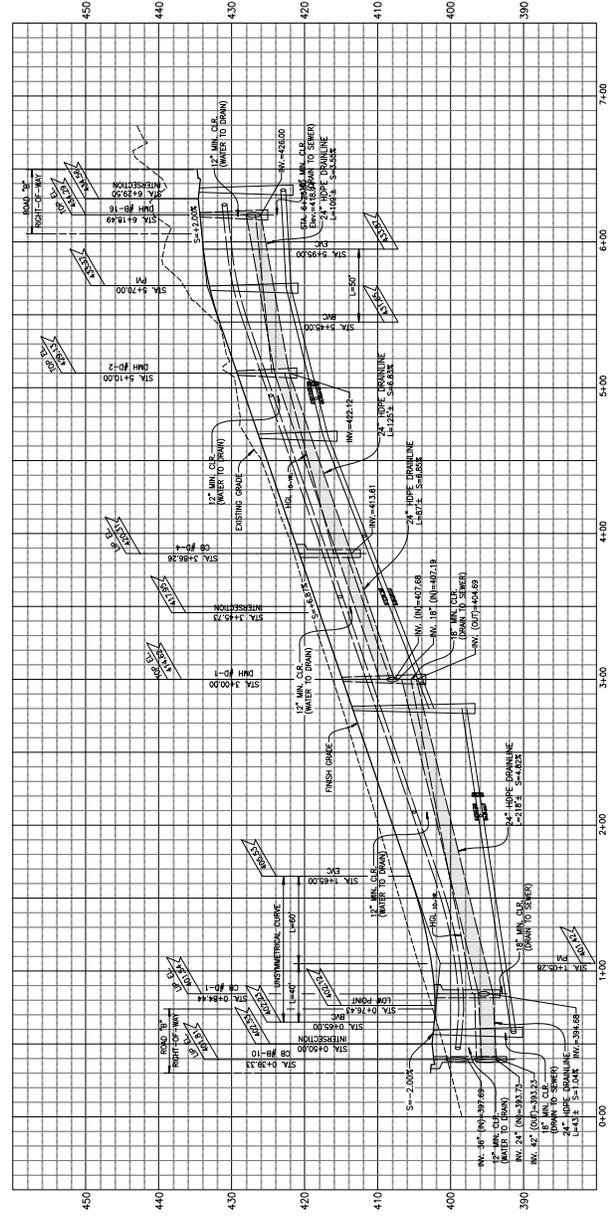
PU'UANANI HOMESTEAD
 MAINTENANCE OF SEWER AND DRAINAGE SYSTEMS
 WAIKUKI, MAUI, HAWAII
 PLAN & PROFILE, ROADWAY & DRAINAGES -
 TITLE: AWKAMANO STREET (ROAD "C")

DATE: 10/20/20
 DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 DRAWN BY: [Signature]
 SCALE: 1 in. = 40 ft.

D.T.U. 19028
 LICENSED T.U.
 APRIL 9, 2020 SHEET
 27
 OF 27



PLAN
SCALE: 1 IN. = 40 FT.



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

NOTE:
1. ALL SEWER SUBMISSION DRAWINGS MUST BE OWNED BY THE CITY AND MAINTAINED BY THE COUNTY OF MAUI.

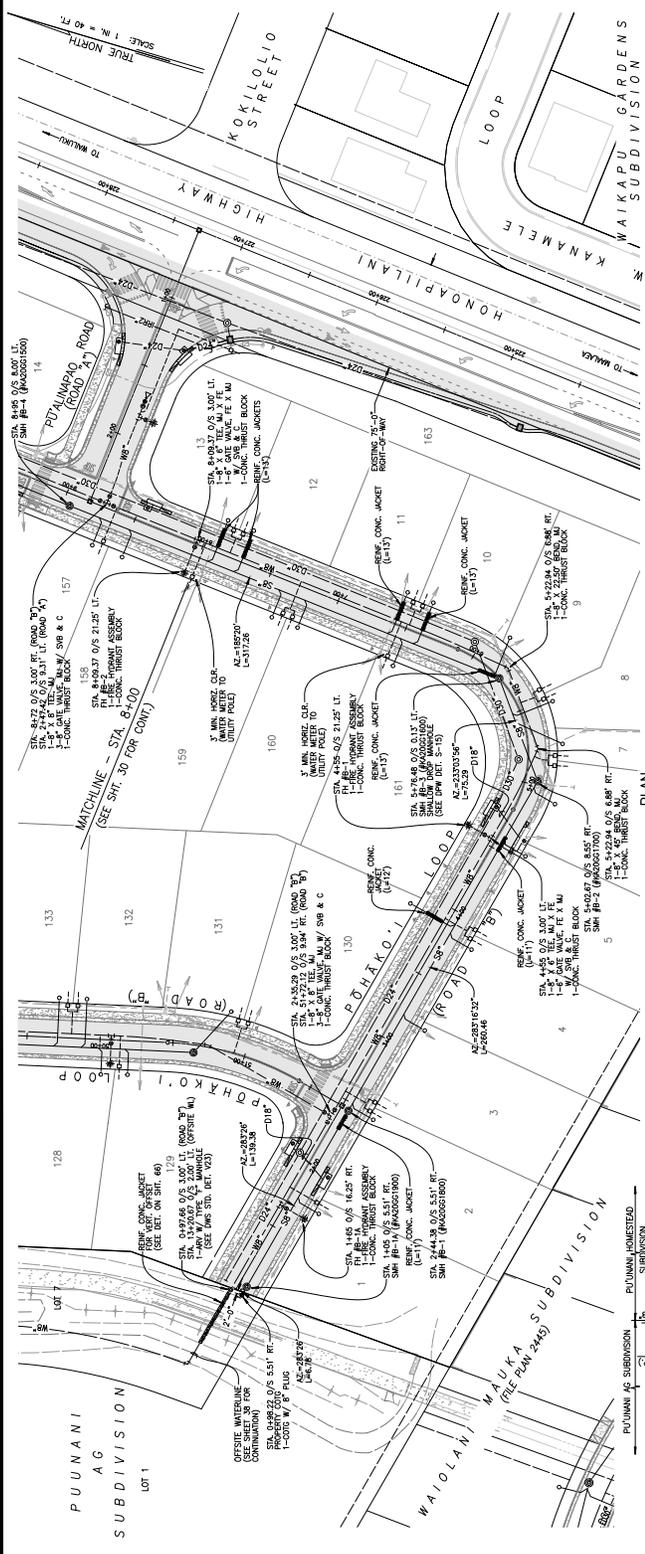
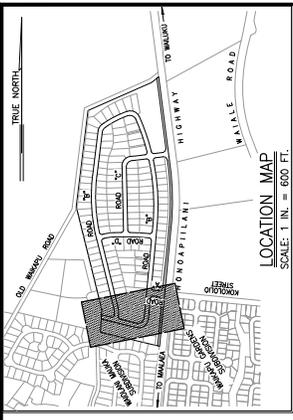
- LEGEND:
- SEWER MANHOLE
 - AIR RELIEF VALVE MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLEAN-OUT/STUB-OUT
 - SEWERLINE W/ SIZE
 - SUMP
 - FIRE TYPE A 5/8" METER SINGLE SERVICE WATER
 - FIRE TYPE B 5/8" METER DOUBLE SERVICE WATER
 - LATERAL WITH COUNTY-ISSUED WATER METER
 - EXISTING WATERLINE W/ SIZE
 - EXISTING WATERLINE W/ SIZE
 - EXISTING SUMP/WATER W/ SIZE

WARREN'S INAGORI ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1100 SOUTH WILSON AVENUE, SUITE 400
HONOLULU, HAWAII 96813

PUNANI HOMESTEAD
PLAN & PROFILE, ROADWAY & DRAINAGES -
WAKAPU, MAUI, HAWAII

TITLE: Keli'iolelo Street (Road 'D')

D.T.U. 19028
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: April 9, 2020
JOB NUMBER: 28
APPROVED BY: [Signature]
DATE: [Blank]
SCALE: 1 in. = 40 ft.

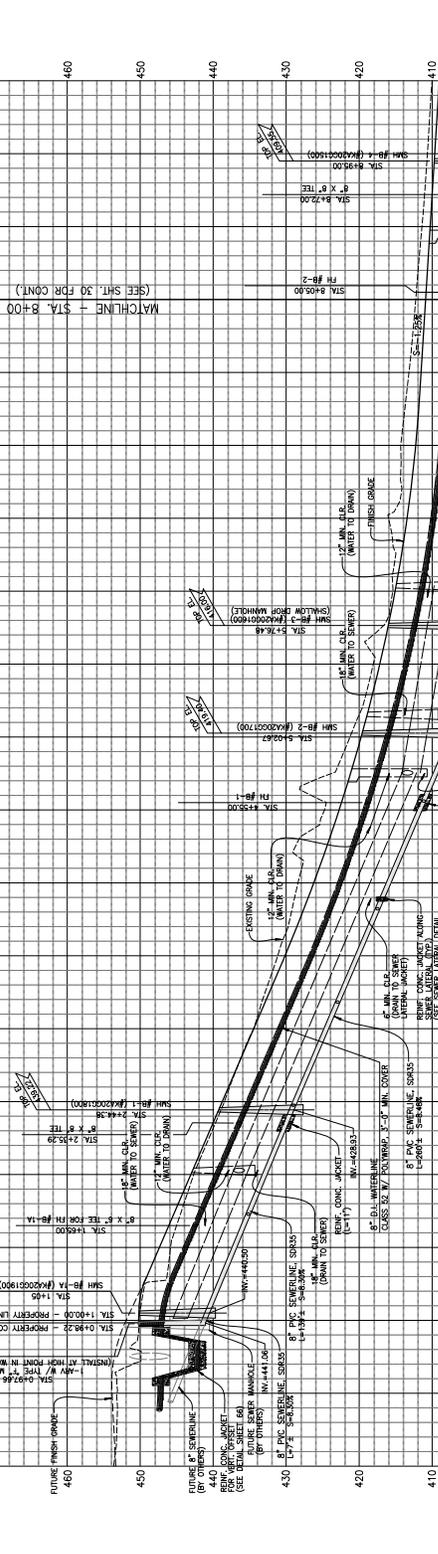


NOTE:

- INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.

SEWER DEDICATION NOTE:

THE SIZE OF MAUI DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI PURSUANT TO ACT 227. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE HOME LANDS. OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS OBTAINED. INTERNAL SUBDIVISION ROADWAYS AND ROAD IMPROVING LOT ARE GRANTED IN FAVOR OF THE COUNTY OF MAUI. THE COUNTY OF MAUI IS GRANTED BY KEHAWAAN RESOLUTION, RESOLUTION NO. 2019-01.



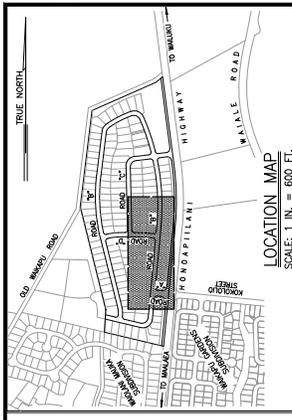
LEGEND:

- SEWER MANHOLE
- RAIN MANHOLE
- AP RELIEF VALVE MANHOLE
- CATCH BASIN
- CLEAR-OUT TO GRADE
- WATERLINE W/ SIZE
- SEWERLINE W/ SIZE
- PIPE TYPE (e.g., PVC S-15)
- EXISTING WATERLINE W/ SIZE
- EXISTING SEWERLINE W/ SIZE

PUNANI HOMESTEAD
 MARRELLS ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 SOUTH WILSON AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 PHONE: (808) 943-8888
 FAX: (808) 943-8889
 LICENSE NO. 1957-C

PUNANI HOMESTEAD
 PLAN & PROFILE: WATERLINES & SEWERLINES
 TITLE: PUNANI LOOP (ROAD 'B')

DESIGNED BY: D.T.L.
CHECKED BY: M.A.S.
DATE: APRIL 9, 2020
JOB NUMBER: 19028
SHEET NUMBER: 29
DATE: APRIL 9, 2020
SCALE: 1 in. = 40 ft.



17+43 0/8 3.00' LT.
SM #1-4 (M3000100)

17+43 0/8 3.00' LT.
SM #1-4 (M3000100)

SEWER DEDICATION NOTE.
THE STATE OF HAWAII DEPARTMENT OF HAWAII HOME LANDS INTENDS TO DEDICATE ALL THE SEWER SYSTEM IMPROVEMENTS HEREIN TO THE COUNTY OF MAUI UNDER ACT 227. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF HAWAII HOME LANDS UNLESS OTHERWISE SPECIFIED. THE STATE OF HAWAII DEPARTMENT OF HAWAII HOME LANDS HAS REVIEWED THE SEWER SYSTEM IMPROVEMENTS AND HAS DETERMINED THAT THE SEWER SYSTEM IMPROVEMENTS ARE IN ACCORDANCE WITH THE REQUIREMENTS OF ACT 227. THE COUNTY OF MAUI AND COUNTY ENGINEERS HAVE REVIEWED THE SEWER SYSTEM IMPROVEMENTS AND HAVE GRANTED A SEWER DEDICATION AGREEMENT TO THE COUNTY OF MAUI AND COUNTY ENGINEERS.

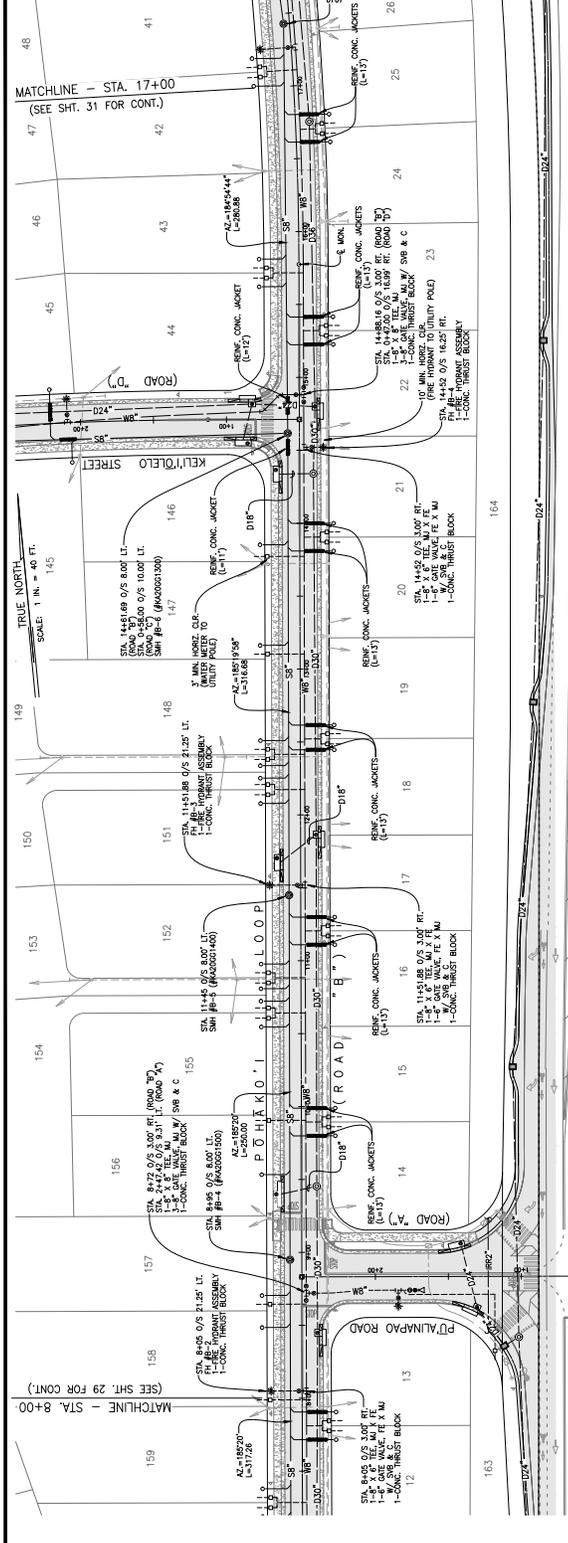
- NOTE:**
1. INTERNAL SUBSTATION ROWWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAII HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
- LEGEND:**
- ⊙ SEWER MANHOLE
 - ⊙ AIR RELEASE VALVE MANHOLE
 - ⊙ CATCH BASIN
 - ⊙ FIRE HYDRANT
 - ⊙ CLEAN-OUT-TO-GRADE
 - ⊙ WATERLINE W/ SIZE
 - ⊙ SLOPELINE W/ SIZE
 - ⊙ ONE TYPE A (50" METER) SINGLE SERVICE WATER LATERAL WITH COUNTY-ISSUED WATER METER
 - ⊙ 6" SEWER LATERAL WITH COG
 - ⊙ 6" SEWER LATERAL WITH COUNTY-ISSUED WATER METER
 - ⊙ EXISTING WATERLINE W/ SIZE
 - ⊙ EXISTING SLOPELINE W/ SIZE

PUNUANI HOMESTEAD
MARRELLS ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING OFFICE
1115 SOUTH KAUAI AVENUE, SUITE 400
LAWAIE, HAWAII 96741
PHONE: (808) 255-1111
FAX: (808) 255-1112
WWW.MARRELLS-ENGINEERING.COM

PROJECT:
PUNUANI HOMESTEAD
PLAN & PROFILE: WATERLINES & SEWERLINES
TITLE: POKAHOI LOOP (ROAD 'B')

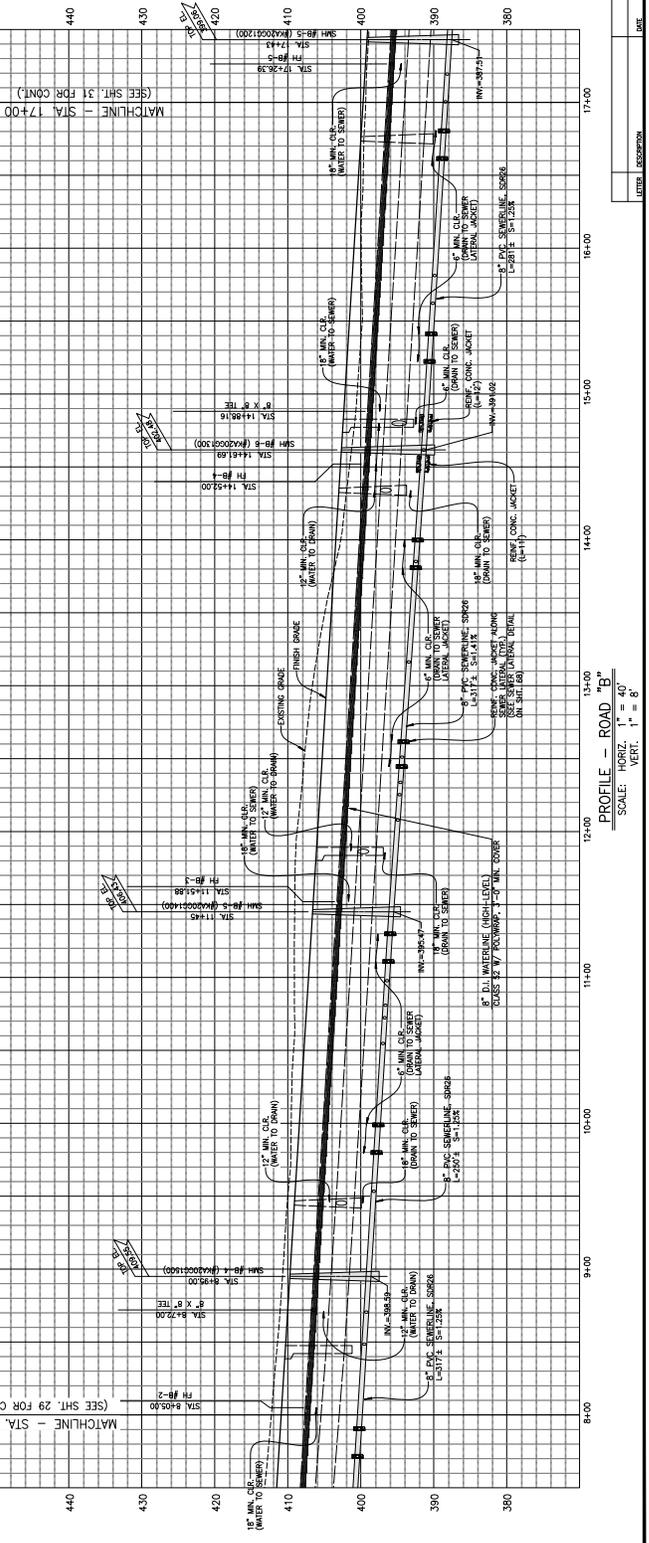
DATE: 10/28/20
SCALE: 1" = 40' PL. 1" = 8' PR.

DESIGNED BY: J. L. LEE
CHECKED BY: J. L. LEE
DATE: APRIL 9, 2020
JOB NUMBER: 19028
SHEET: 30

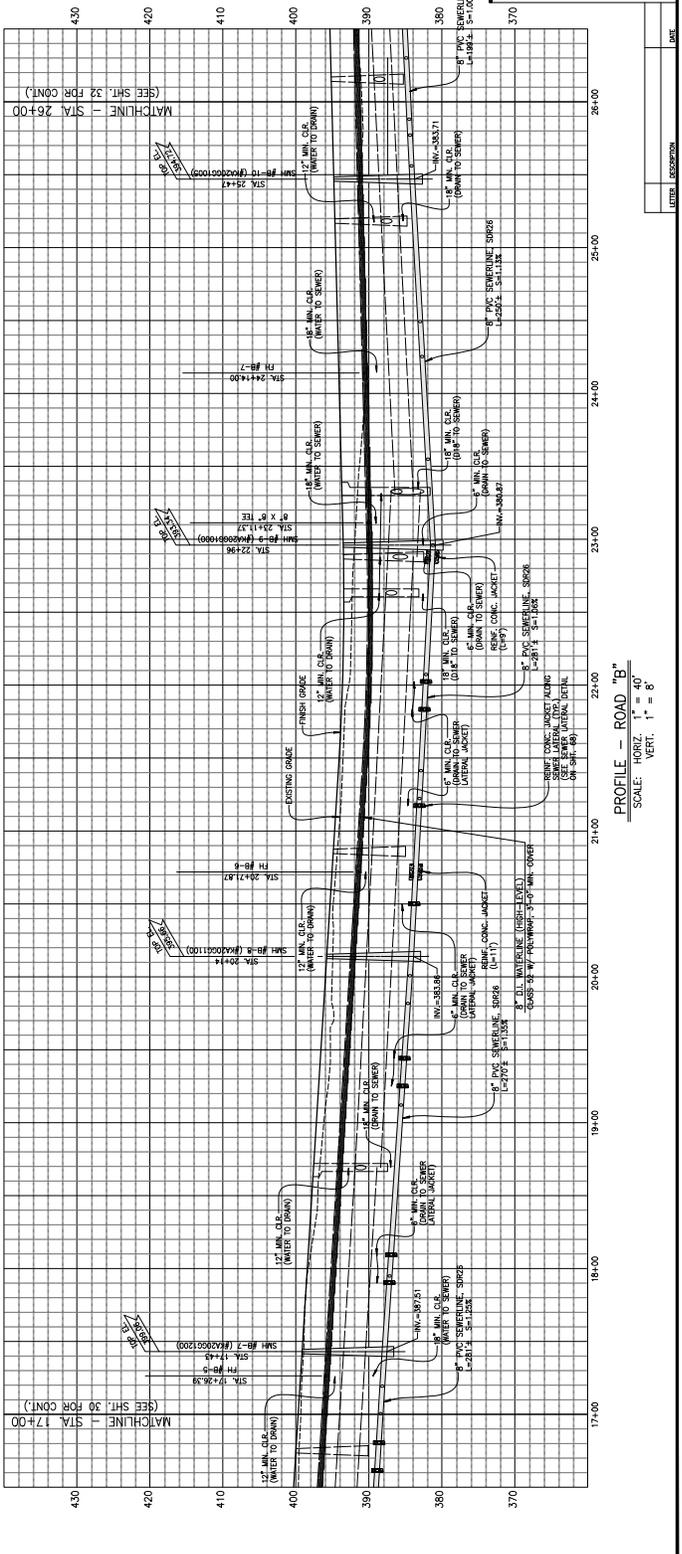
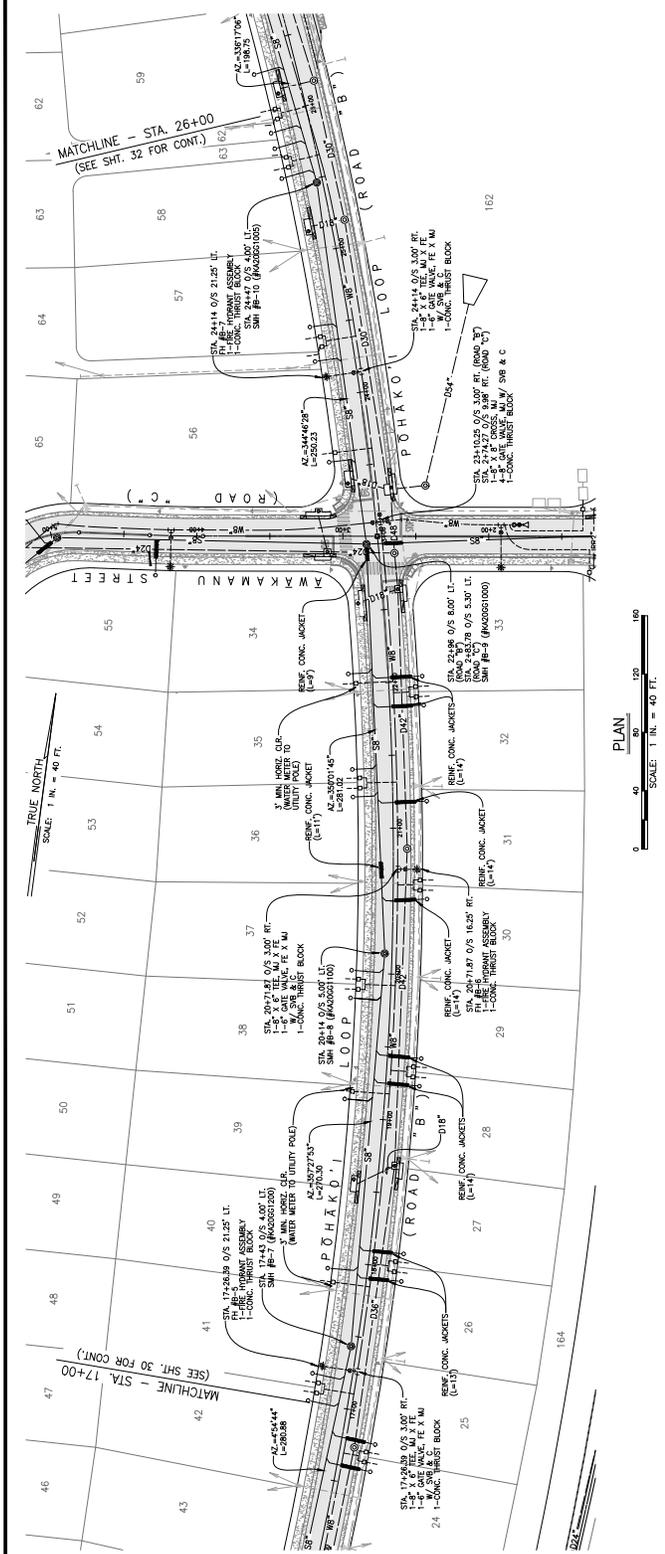
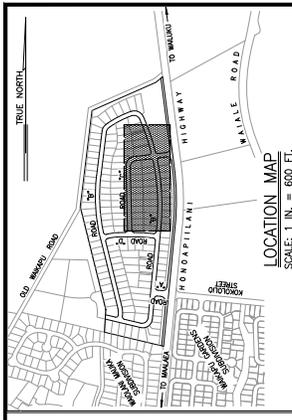


HONOAPIILANI HIGHWAY

PLAN
SCALE: 1" = 40 FT.



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



SEWER DEDICATION NOTE:
 THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI PURSUANT TO ACT 227.
 THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI PURSUANT TO ACT 227.
 MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS UNTIL SUCH TIME AS THE COUNTY OF MAUI DEPARTMENT OF PUBLIC WORKS ACCEPTS THE PROJECT.
 BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION, THE SEWER GASOLINES OVER THE INTERNAL SUBDIVISION ROADS AND ROAD IMPROVING LOT ARE GRANTED IN FAVOR OF THE COUNTY OF MAUI TO THE COUNTY OF MAUI DEPARTMENT OF PUBLIC WORKS. INVESTORS, LLC. OF THE COUNTY OF MAUI IS GRANTED BY KEPAHUA AGRICULTURAL INVESTORS, LLC.

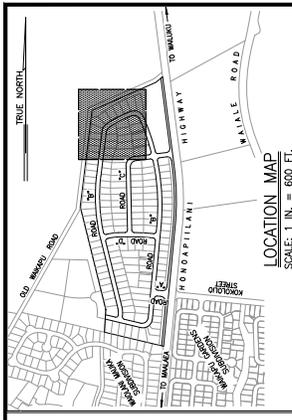
- NOTE:**
 1. INTERNAL SUBDIVISION ROADWAYS ARE TO BE MAINTAINED BY THE COUNTY OF MAUI AND MAINTAINED BY THE COUNTY OF MAUI.
- LEGEND:**
- SEWER MANHOLE
 - ⊙ AIR RELIEF VALVE MANHOLE
 - ⊙ CLEAN-OUT
 - ⊙ CLEAN-OUT TO GRADE
 - WATERLINE W/ SIZE
 - DRAINAGE W/ SIZE
 - SEWERLINE W/ SIZE
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINAGE W/ SIZE
 - EXISTING SEWERLINE W/ SIZE
- PIPE TYPE: 12" (6" MIN. C.I.P. DOUBLE SERVICE WATER LATERAL WITH COUNTY INSULATED WATER METER)
 18" (12" MIN. C.I.P. DOUBLE SERVICE WATER LATERAL WITH COUNTY INSULATED WATER METER)
 30" (24" MIN. C.I.P. DOUBLE SERVICE WATER LATERAL WITH COUNTY INSULATED WATER METER)
 42" (36" MIN. C.I.P. DOUBLE SERVICE WATER LATERAL WITH COUNTY INSULATED WATER METER)
 60" (48" MIN. C.I.P. DOUBLE SERVICE WATER LATERAL WITH COUNTY INSULATED WATER METER)
 84" (72" MIN. C.I.P. DOUBLE SERVICE WATER LATERAL WITH COUNTY INSULATED WATER METER)

PUNUANI HOMESTEAD
 PLAN & PROFILE: WATERLINES & SEWERLINES - TITLE POHAKO LOOP (ROAD 'B')

WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1100 S. WAIKOLEA AVENUE, SUITE 400
 WAIKOLEA, HAWAII 96768
 LICENSE NO. 1957-C

WARREN'S ENGINEERING, INC.
 LICENSE NO. 1957-C
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 HAWAII

D.T.L. 19028
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]
 DATE: April 9, 2020
 SHEET NO. 31
 SCALE: 1" = 40' PL., 1" = 8' SECTIONS



LOCATION MAP
SCALE: 1 IN. = 600 FT.

SEWER DEDICATION NOTE:
THE 2025 SEWER IMPROVEMENTS PROJECTS TO BE CONSTRUCTED WITHIN THE DISTRICT OF PŪHĀI, HAWAII, ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE COUNTY OF MAUI. THE COUNTY OF MAUI HAS AGREED TO MAINTAIN THE SEWER SYSTEM IMPROVEMENTS UNDER THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS. THE COUNTY OF MAUI HAS AGREED TO MAINTAIN THE SEWER SYSTEM IMPROVEMENTS UNDER THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS. THE COUNTY OF MAUI HAS AGREED TO MAINTAIN THE SEWER SYSTEM IMPROVEMENTS UNDER THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS.

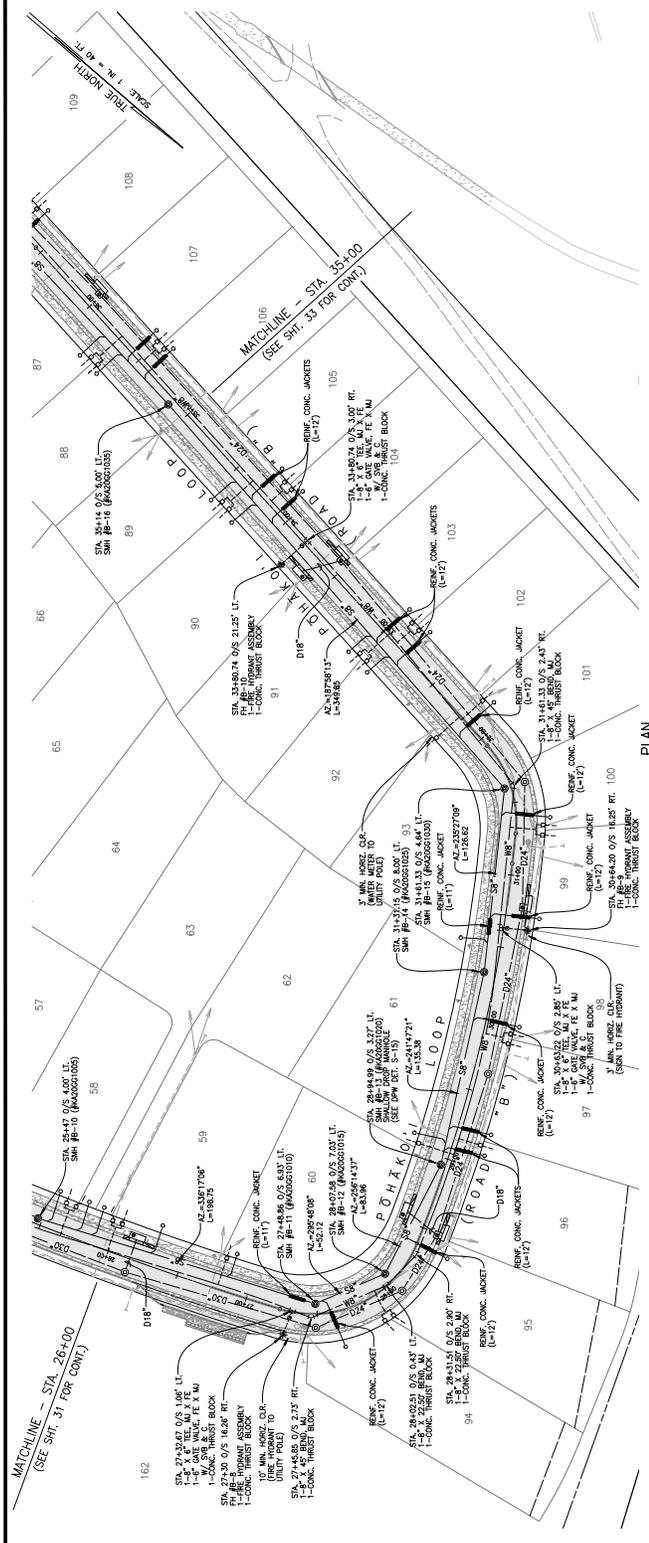
NOTES:
1. INTERNAL SUBURBAN ROADSWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.

LEGEND:

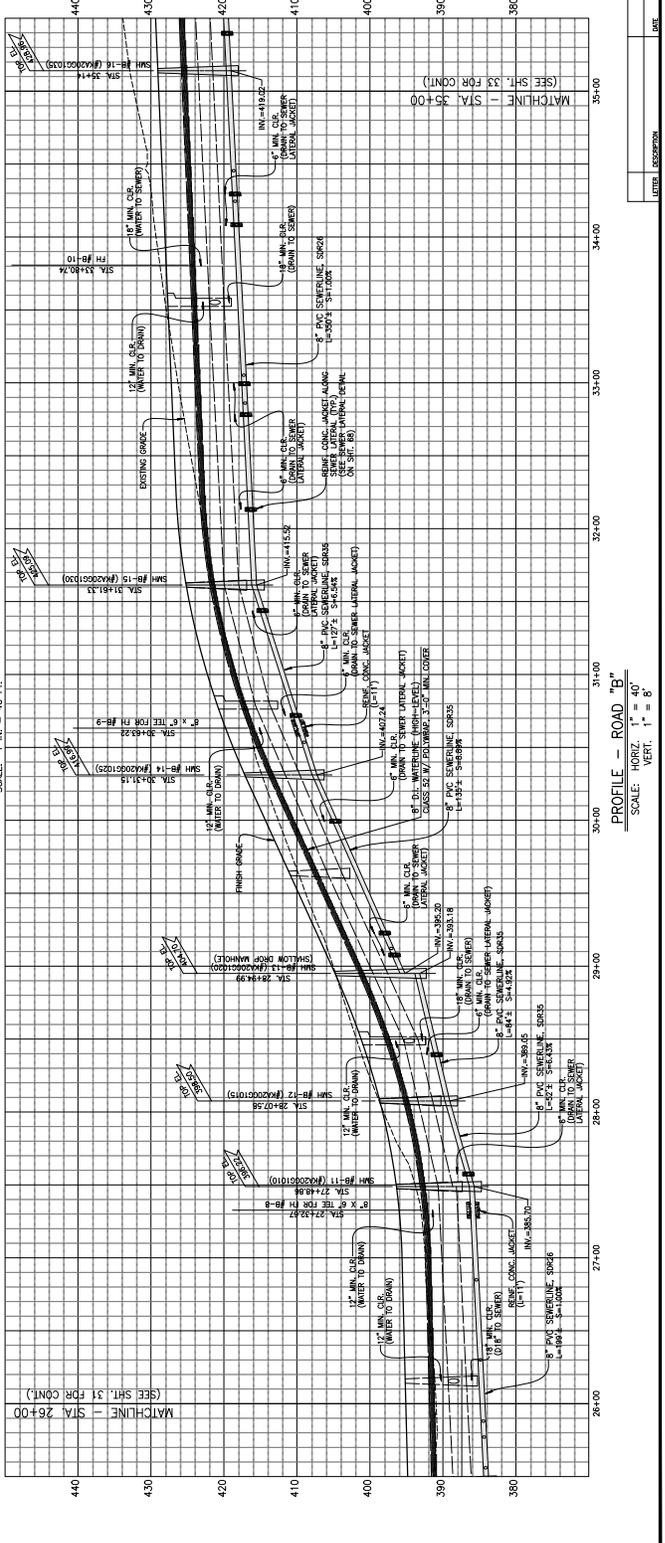
- SEWER MANHOLE
- SEWER MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CLEAN-OUT-TO-GRADE
- WATERLINE W/ SIZE
- WATERLINE W/ SIZE
- 8" PVC SEWERLINE SIZES
- LATERAL WITH COUNTY-ISSUED WATER METER
- LATERAL WITH COUNTY-ISSUED WATER METER
- 8" SEWER LATERAL WITH COTG
- 8" SEWER LATERAL WITH COTG
- EXISTING IRONMANE W/ SIZE
- EXISTING SCHEDULE W/ SIZE

PŪ'UANĪ HOMESTEAD
WARREN'S ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 1937-C
HAWAII
WAIKAPU, MAUI, HAWAII
PLAN & PROFILE: WATERLINES & SEWERLINES - TITLE POHAKOI LOOP (ROAD "B")

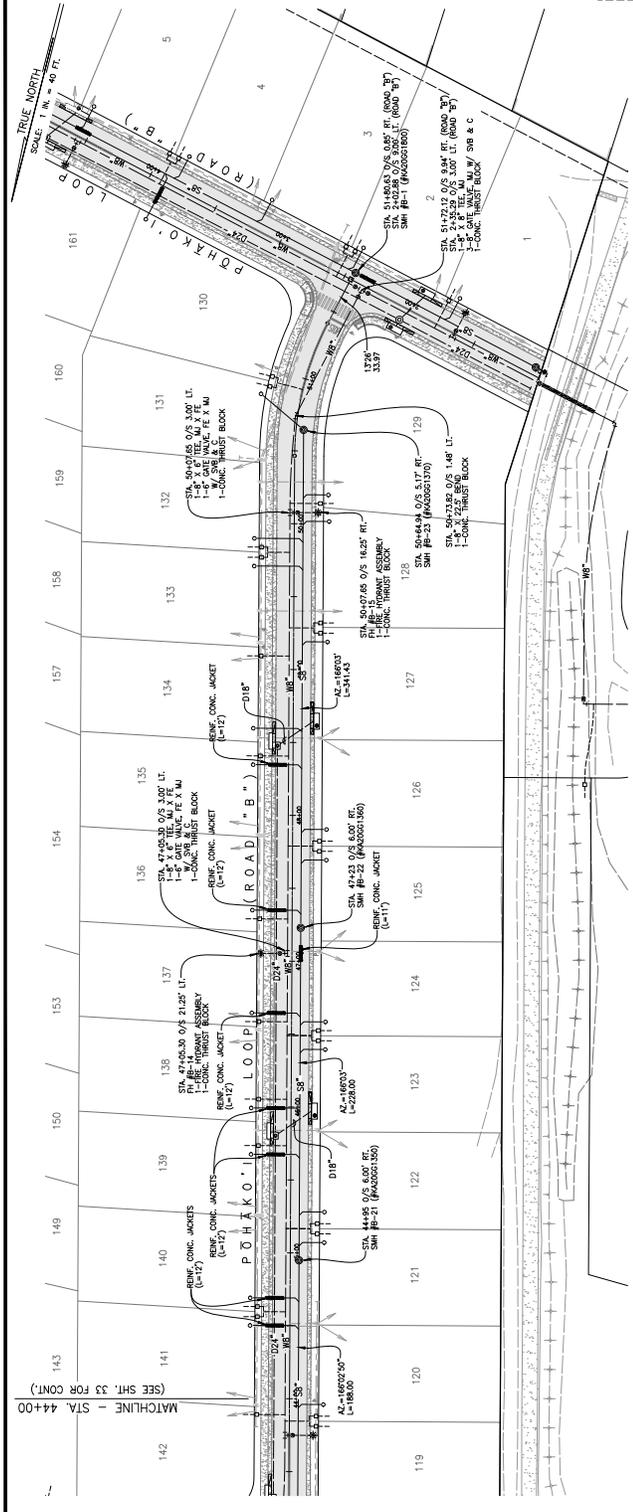
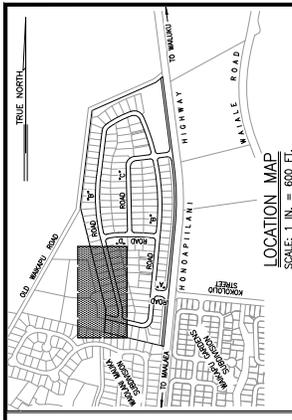
D.T.U. 19028
DESIGNED BY: [Signature]
APPROVED BY: [Signature]
DATE: APRIL 9, 2020
JOB NUMBER: 32
SHEET: 32 OF 32
SCALE: 1 IN. = 40 FT.



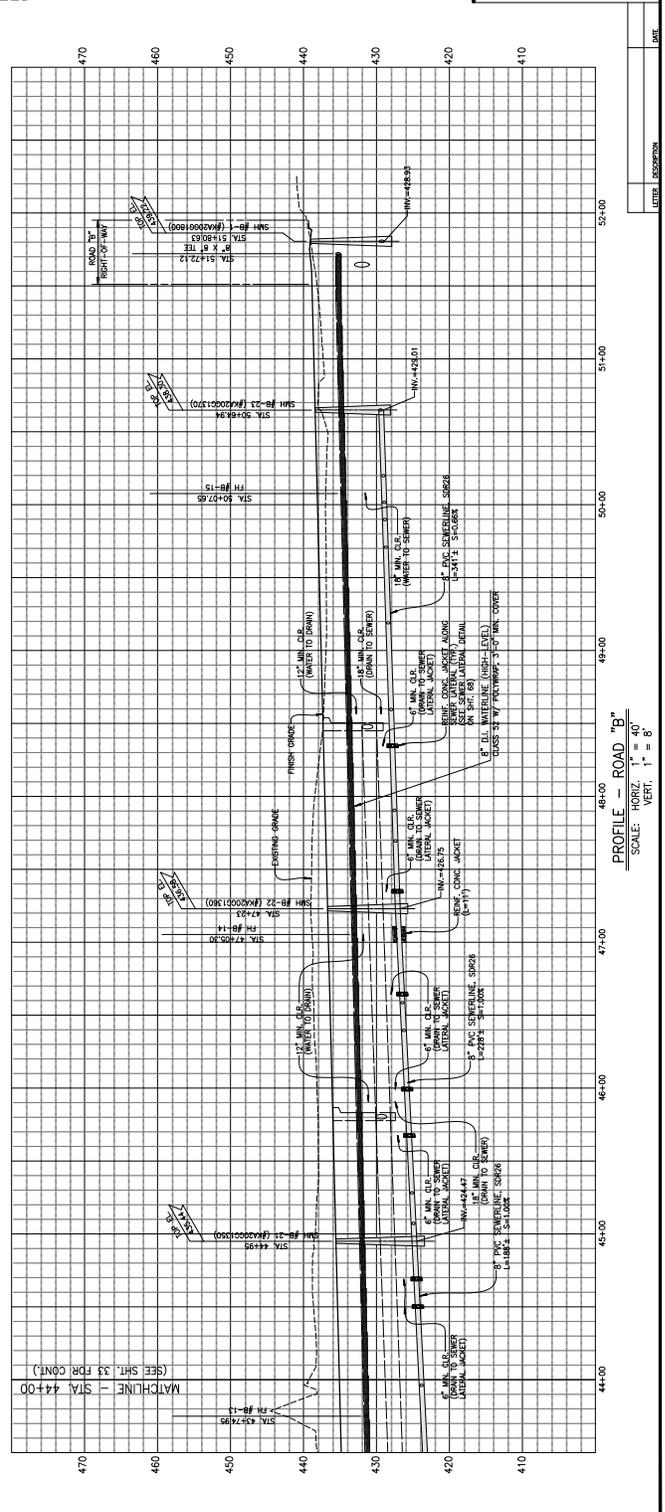
PLAN
SCALE: 1 IN. = 40 FT.



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



PLAN
SCALE: 1 IN. = 40 FT.



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

SEWER DEDICATION NOTE:
THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI PURSUANT TO ACT 227, HAWAIIAN HOME LANDS ACT. THE COUNTY OF MAUI DEPARTMENT OF HAWAIIAN HOME LANDS HAS WORKING FOR THE DEDICATION OF THE PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI. THE COUNTY OF MAUI DEPARTMENT OF HAWAIIAN HOME LANDS HAS RECORDED USE AND OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI'S DEPARTMENT OF HAWAIIAN HOME LANDS. THE COUNTY OF MAUI DEPARTMENT OF HAWAIIAN HOME LANDS HAS GRANTED THE INTERNAL SUBDIVISION ROADWAYS AND ROAD WEIGHING LOT ARE GRANTED IN FAVOR OF THE COUNTY OF MAUI'S DEPARTMENT OF HAWAIIAN HOME LANDS. THE COUNTY OF MAUI'S DEPARTMENT OF HAWAIIAN HOME LANDS HAS GRANTED BY KEHAWAII AGRICULTURAL INVESTORS, LLC.

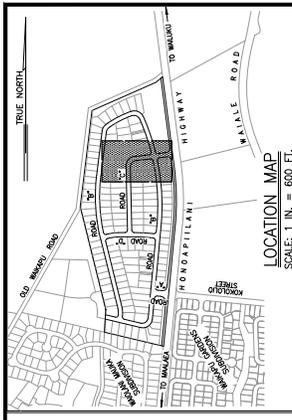
NOTE:
1. INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.

- LEGEND:
- SEWER MANHOLE
 - RAIN MANHOLE
 - AS-RELEF VALVE MANHOLE
 - HYDRANT
 - CLEAN-OUT-TO-GRADE
 - WATERLINE W/ SIZE
 - SEWERLINE W/ SIZE
 - SHOULDER W/ SIZE
 - 12" MIN. C.D. (UNLESS NOTED OTHERWISE)
 - 6" MIN. C.D. (UNLESS NOTED OTHERWISE)
 - 12" MIN. C.D. (UNLESS NOTED OTHERWISE)
 - 6" MIN. C.D. (UNLESS NOTED OTHERWISE)
 - 4" MIN. C.D. (UNLESS NOTED OTHERWISE)
 - EXISTING WATERLINE W/ SIZE
 - EXISTING SEWERLINE W/ SIZE

WARREN'S ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 1937-C

PUNANI HOMESTEAD
WAIKAPU, MAUI, HAWAII
TITLE POKAPOKA LOOP (ROAD "B")

D.T.U. 19028
APPROVED BY: APRIL 9, 2020
JOB NUMBER: 34
DATE: 1 IN. = 40 FT.



BACKFLOW PREVENTER DATA (REGARDLESS)
 TAX MAP KEY: (2) 3-3-002 - 002 (LOT 164)
 SERVICE ADDRESS: HAWAIIAN HIGHWAY
 PROJECT NAME: HAWAIIAN HIGHWAY BACKFLOW PREVENTER
 SIZE/NAME/MODEL: 1" WATTS MODEL L500

BACKFLOW PREVENTER DATA (REGARDLESS)
 PROJECT NAME: PUNUANI HOMESTEAD (LOT 162)
 SERVICE ADDRESS: HAWAIIAN HIGHWAY
 PROJECT NAME: HAWAIIAN HIGHWAY BACKFLOW PREVENTER
 SIZE/NAME/MODEL: 3/4" WATTS MODEL L500

SEWER DEDICATION NOTE:
 THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI PURSUANT TO ACT 227. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE PROPERTY OWNER. THE COUNTY OF MAUI IS GRANTED THE RIGHT TO RECORD, USE, AND OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE INTERNAL SUBDIVISION ROWWAYS AND ROAD WIDENING LOT. THE GRANTED IN FAVOR OF THE COUNTY OF MAUI IS GRANTED BY RESHAWAN AGRICULTURAL INVESTORS, LLC IN FAVOR OF THE COUNTY OF MAUI.

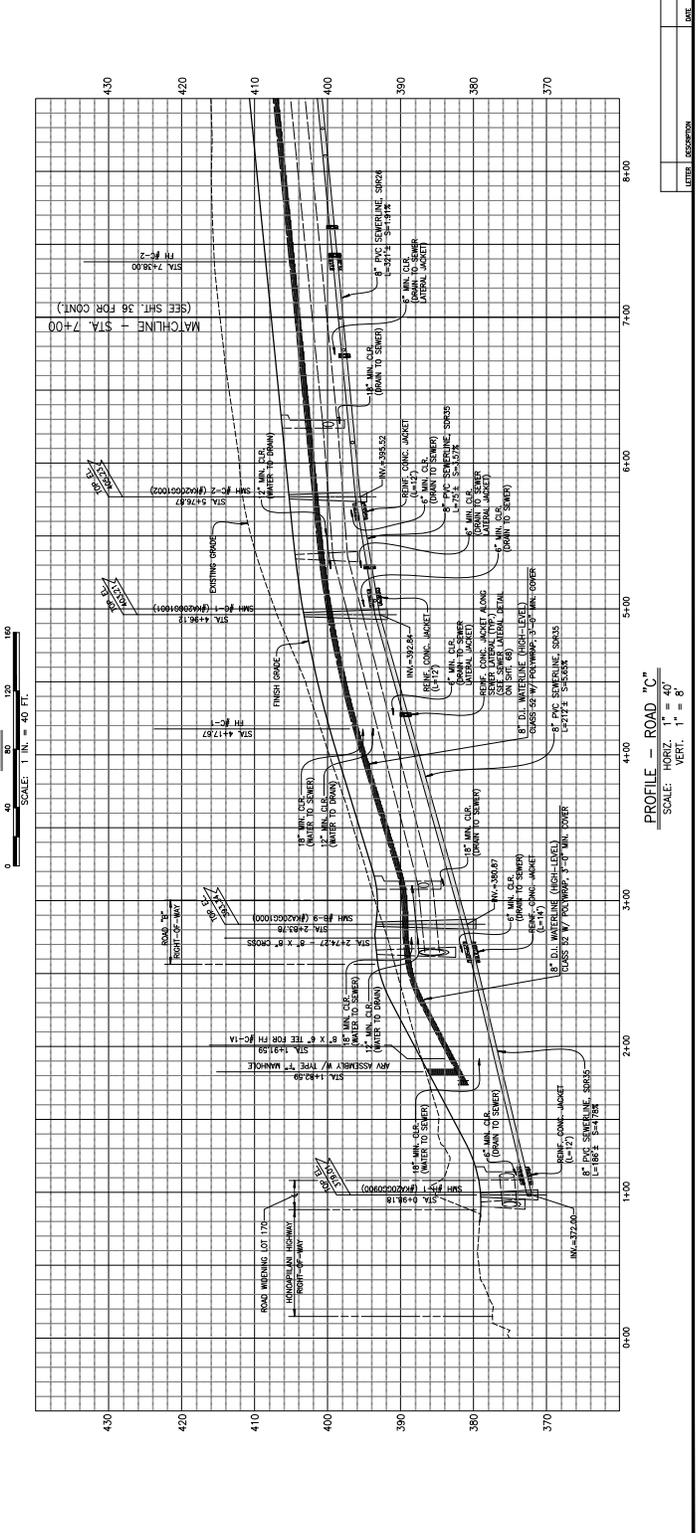
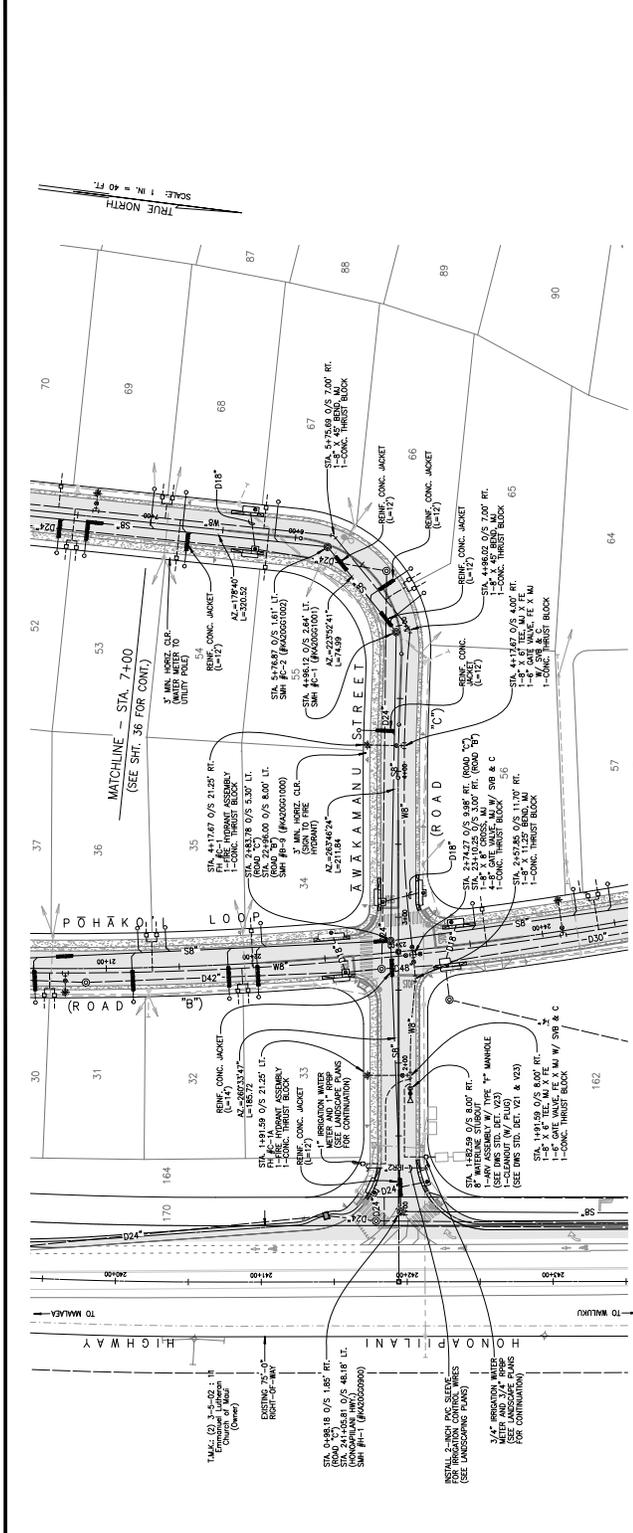
NOTES:
 1. INTERNAL SUBDIVISION ROWWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
 2. THE ROAD WIDENING LOT ALONG HONOLULUAN HIGHWAY IS TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.

- LEGEND:**
- SEWER MANHOLE
 - SOAK MANHOLE
 - AIR RELIEF VALVE MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLEAN-OUT TO CURB
 - CLEAN-OUT TO DRIVE
 - CLEAN-OUT TO SIDEWALK
 - SEWERLINE W/ SIZE
 - SH-1 TYPE A 1/2" METER SINGLE SERVICE WATER LATERAL WITH CLEAN-OUT TO SOAK MANHOLE
 - SH-1 TYPE A 1/2" METER SINGLE SERVICE WATER LATERAL WITH COUNTY-ISSUED WATER METER
 - SH-1 TYPE A 1/2" METER SINGLE SERVICE WATER LATERAL WITH COUNTY-ISSUED WATER METER
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINAGE W/ SIZE

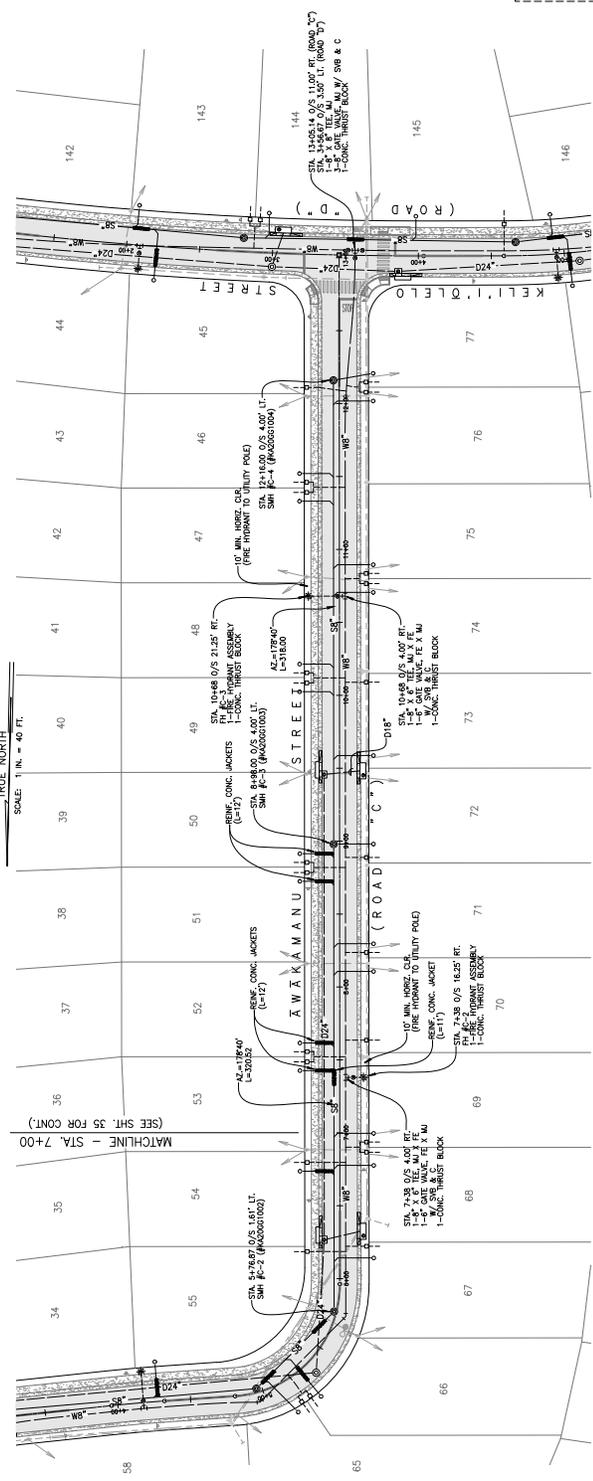
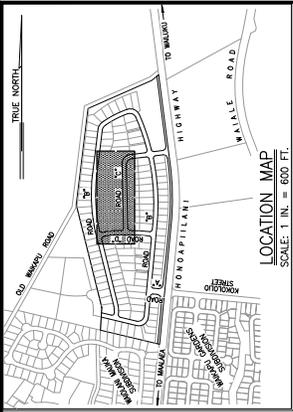
WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 SOUTH WILSON AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 LICENSE NO. 10028
 APRIL 9, 2020 SHEET 35

PUNUANI HOMESTEAD
 PLAN & PROFILE: WATERLINES & SEWERLINES -
 WAKAPU, WAIKUKU MAUI, HAWAII
 TITLE: WAIKUKU STREET (ROAD "C")

WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 SOUTH WILSON AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 LICENSE NO. 10028
 APRIL 9, 2020 SHEET 35



DATE: 11/11/2019
 TIME: 10:00 AM
 USER: J. W. WARR
 PROJECT: PUNUANI HOMESTEAD
 SHEET: 35 OF 35



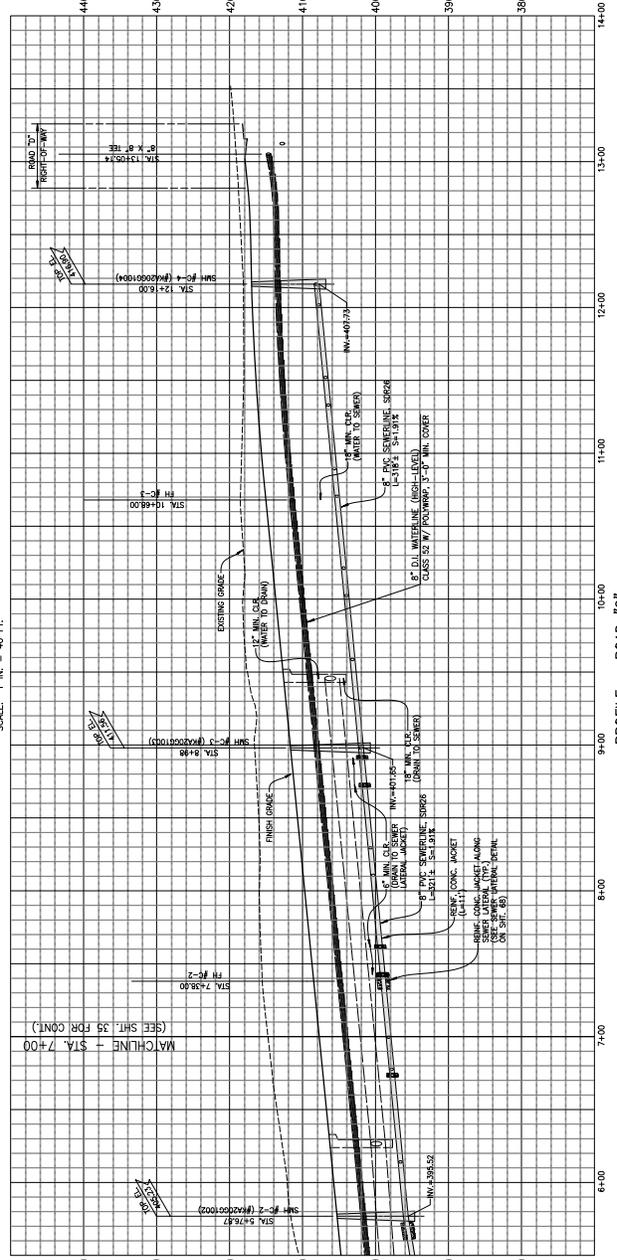
SEWER DEDICATION NOTE:
1. INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HUMAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
2. INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HUMAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
3. THE PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI WILL BE SUBJECT TO ACT 227.
4. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND OPERATED BY THE SUBDIVISION DEVELOPER.
5. THE COUNTY OF MAUI IS GRANTED THE OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE SUBDIVISION DEVELOPER AND SHALL BE SUBJECT TO ACT 227.
6. THE COUNTY OF MAUI IS GRANTED THE OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE SUBDIVISION DEVELOPER AND SHALL BE SUBJECT TO ACT 227.
7. THE COUNTY OF MAUI IS GRANTED THE OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE SUBDIVISION DEVELOPER AND SHALL BE SUBJECT TO ACT 227.
8. THE COUNTY OF MAUI IS GRANTED THE OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE SUBDIVISION DEVELOPER AND SHALL BE SUBJECT TO ACT 227.
9. THE COUNTY OF MAUI IS GRANTED THE OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE SUBDIVISION DEVELOPER AND SHALL BE SUBJECT TO ACT 227.
10. THE COUNTY OF MAUI IS GRANTED THE OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS GRANTED TO THE SUBDIVISION DEVELOPER AND SHALL BE SUBJECT TO ACT 227.

- NOTE:**
1. INTERNAL SUBDIVISION ROADWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HUMAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.
- LEGEND:**
- SEWER MANHOLE
 - SEWER MANHOLE
 - AR RELIEF VALVE MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLAM-DIB-DIB-GRADE
 - DRAINAGE W/ SIZE
 - SEWERLINE W/ SIZE
 - PIPE TYPE, A (5/8" METERS SINGLE SERVICE WATER)
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINAGE W/ SIZE
 - EXISTING SEWERLINE W/ SIZE

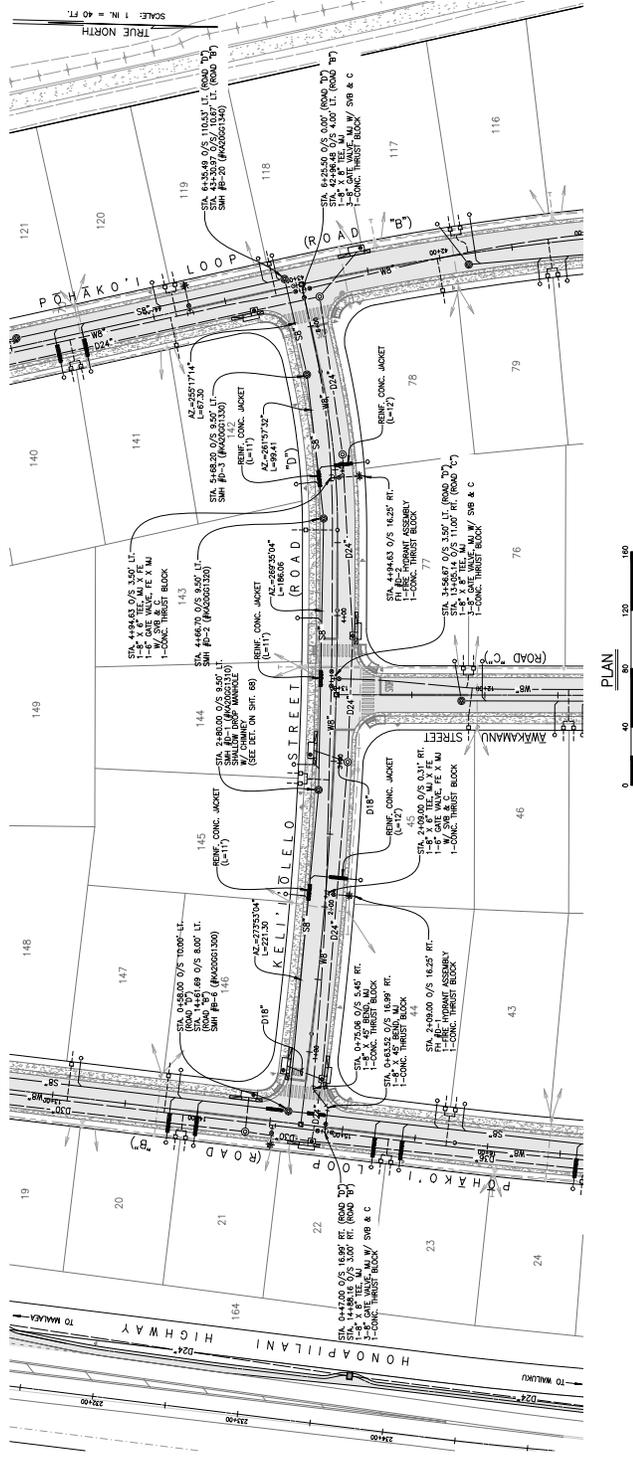
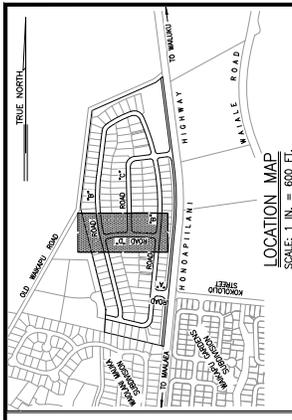
WARREN'S ENGINEERING, INC.
1111 S. KALANANU'U BLVD., SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-1111
FAX: (808) 943-1112

PUNANI HOMESTEAD
PUNANI HOMESTEAD SUBDIVISION
PLAN & PROFILE: WATERLINES & SEWERLINES
TITLE: AWA'AMANUI STREET (ROAD "C")

D.T.U.: 19028
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: April 9, 2020
JOB NUMBER: 36
APPROVED BY: [Signature]
DATE: [Blank]
SCALE: 1 in. = 40 ft.
SHEET NO. OF SHEETS



LETTER	DESCRIPTION	DATE



SEWER DEDICATION NOTICE:

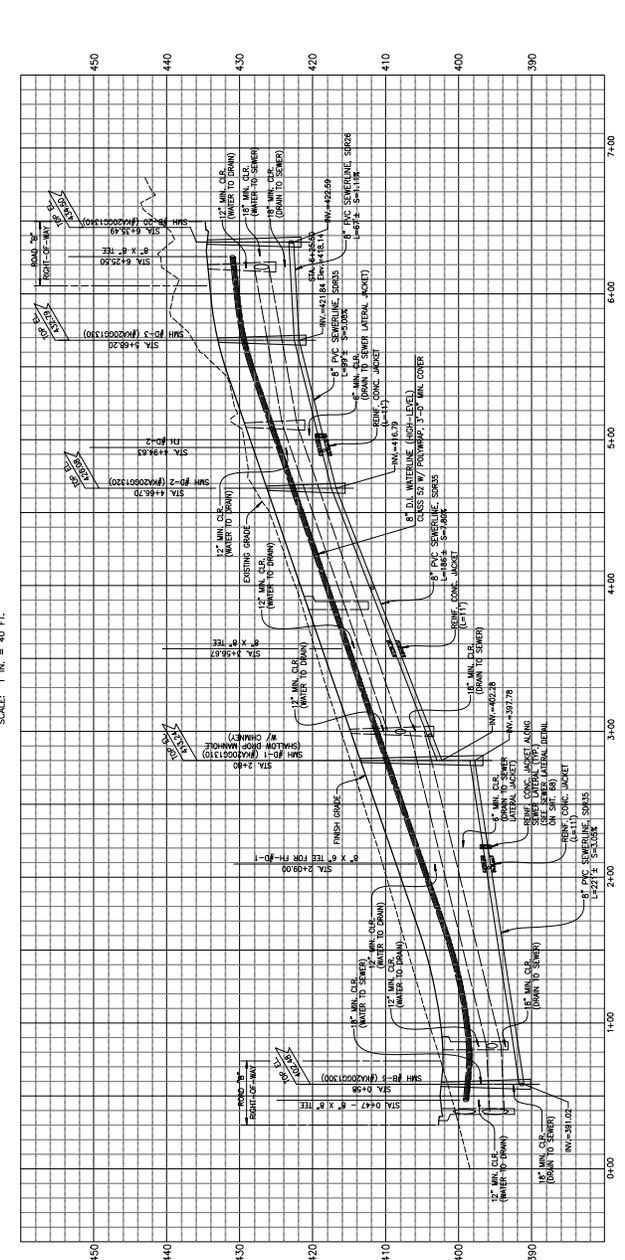
THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL SEWER LINES AND MANHOLES SHOWN ON THIS PLAN TO THE PUBLIC TRUST. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS UNTIL (1) AND BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION, (2) SEWER ASSESSMENTS OVER THE COURSE OF THE PROJECT, AND (3) SEWER ASSESSMENTS OVER THE COURSE OF THE PROJECT. THE COUNTY OF MAUI AND COUNTY SEWER ASSESSMENT DISTRICT NO. 1064 IN FAVOR OF THE COUNTY OF MAUI IS GRANTED BY REDUBAIN AGRICULTURAL INVESTORS, LLC.

NOTE:

- INTERNAL SUBDIVISION ROWWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.

LEGEND:

- SEWER MANHOLE
- RAIN MANHOLE
- AIR RELIEF VALVE MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CLEAN-OUT/STUB-OUT
- SEWERLINE W/ SIZE
- SEWERLINE W/ SIZE
- SEWERLINE W/ SIZE
- PIPE TYPE, A (5/8" METRIC SINGLE SERVICE WATER), B (1/2" METRIC SINGLE SERVICE WATER), C (1/2" METRIC DOUBLE SERVICE WATER), D (1/2" METRIC DOUBLE SERVICE WATER), E (1/2" METRIC DOUBLE SERVICE WATER)
- EXISTING WATERLINE W/ SIZE
- EXISTING DRAINAGE W/ SIZE
- EXISTING SEWERLINE W/ SIZE



WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 SOUTH KAUAI AVENUE, SUITE 400
 KAPAA, HAWAII 96741

PUNANI HOMESTEAD
 PLAN & PROFILE: WATERLINES & SEWERLINES
 WAIKAPU, MAUI, HAWAII

PROJECT INFORMATION:
 TITLE: KELI'OLELO STREET (ROAD 'D')
 D.T.U. NO. 19028
 PROJECT NO. 19028
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]
 DATE: APRIL 9, 2020
 SHEET NO. 37 OF 37

SCALE: 1 in. = 40 ft.

SEWER DEDICATION NOTICE:

THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL SEWER LINES AND MANHOLES SHOWN ON THIS PLAN TO THE PUBLIC TRUST. THE PROPOSED SEWER SYSTEM IMPROVEMENTS WILL REMAIN PRIVATELY OWNED AND MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS UNTIL (1) AND BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION, (2) SEWER ASSESSMENTS OVER THE COURSE OF THE PROJECT, AND (3) SEWER ASSESSMENTS OVER THE COURSE OF THE PROJECT. THE COUNTY OF MAUI AND COUNTY SEWER ASSESSMENT DISTRICT NO. 1064 IN FAVOR OF THE COUNTY OF MAUI IS GRANTED BY REDUBAIN AGRICULTURAL INVESTORS, LLC.

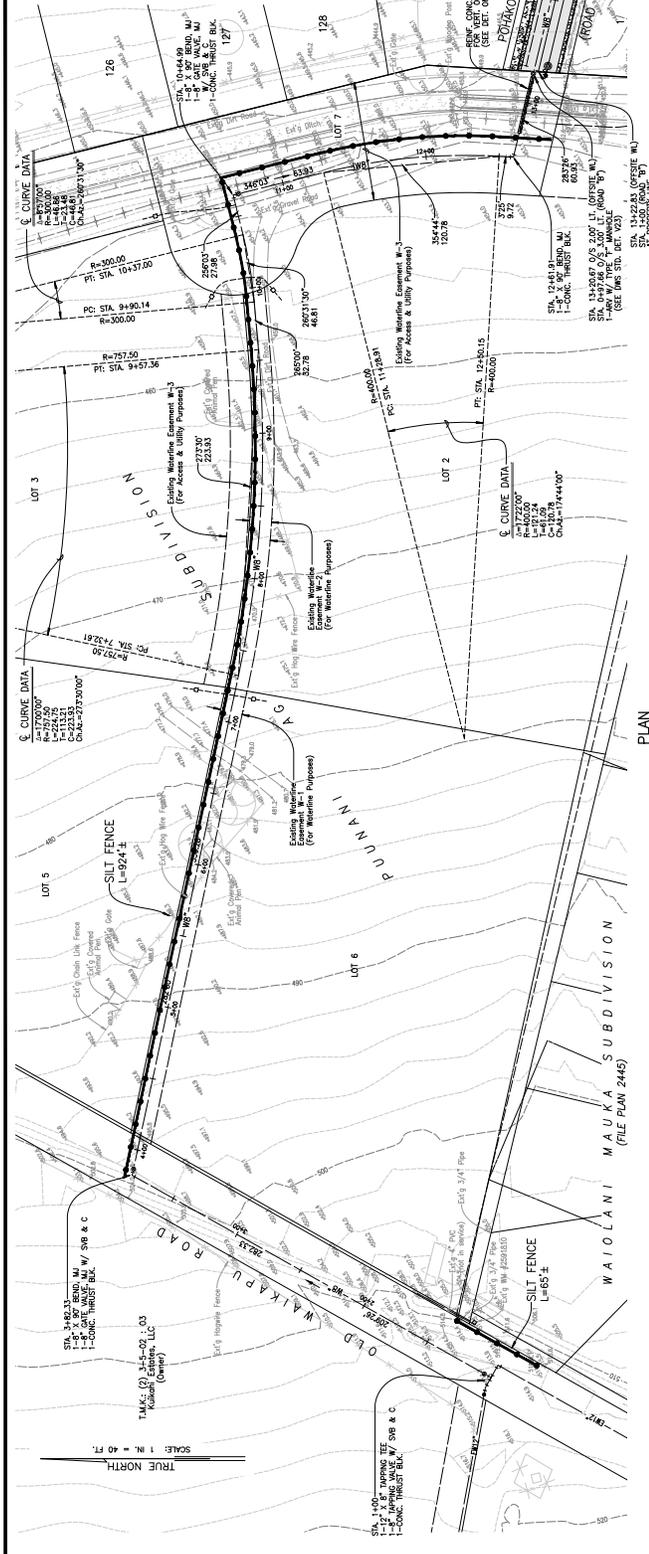
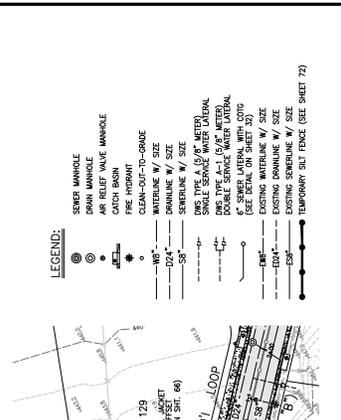
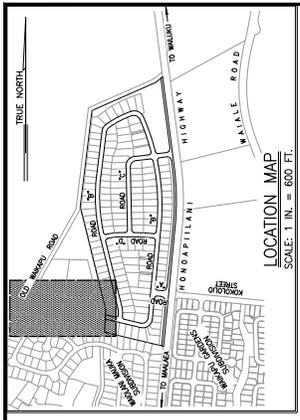
NOTE:

- INTERNAL SUBDIVISION ROWWAYS ARE TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE COUNTY OF MAUI.

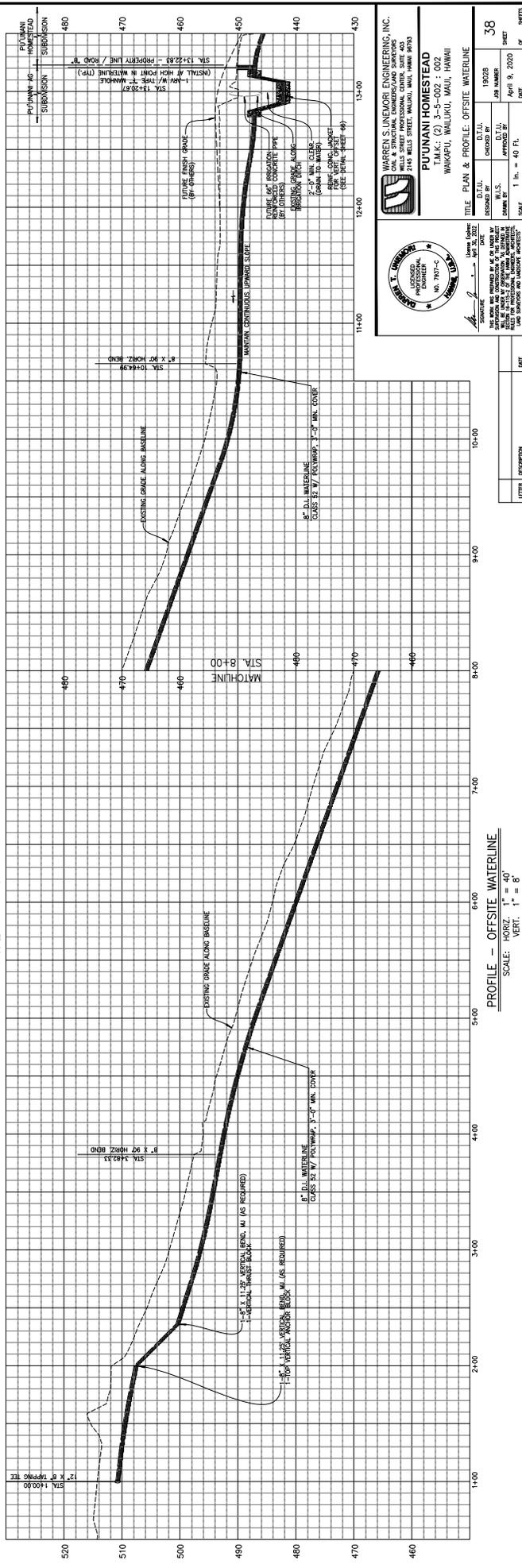
LEGEND:

- SEWER MANHOLE
- RAIN MANHOLE
- AIR RELIEF VALVE MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CLEAN-OUT/STUB-OUT
- SEWERLINE W/ SIZE
- SEWERLINE W/ SIZE
- SEWERLINE W/ SIZE
- PIPE TYPE, A (5/8" METRIC SINGLE SERVICE WATER), B (1/2" METRIC SINGLE SERVICE WATER), C (1/2" METRIC DOUBLE SERVICE WATER), D (1/2" METRIC DOUBLE SERVICE WATER), E (1/2" METRIC DOUBLE SERVICE WATER)
- EXISTING WATERLINE W/ SIZE
- EXISTING DRAINAGE W/ SIZE
- EXISTING SEWERLINE W/ SIZE

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



PLAN SCALE: 1 IN. = 40 FT.



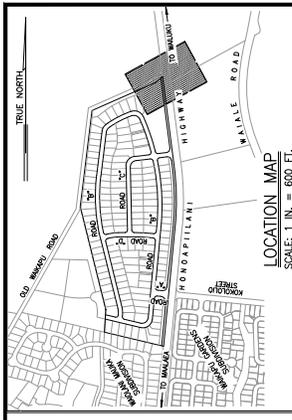
PROFILE - OFFSITE WATERLINE SCALE: HORIZ. 1" = 40' VERT. 1" = 8'

WARREN'S ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 945 KANAIWA DRIVE, SUITE 400
 HONOLULU, HAWAII 96813
 PHONE: (808) 944-0000
 FAX: (808) 944-0001
 WWW: WWW.WARENSENGINEERING.COM

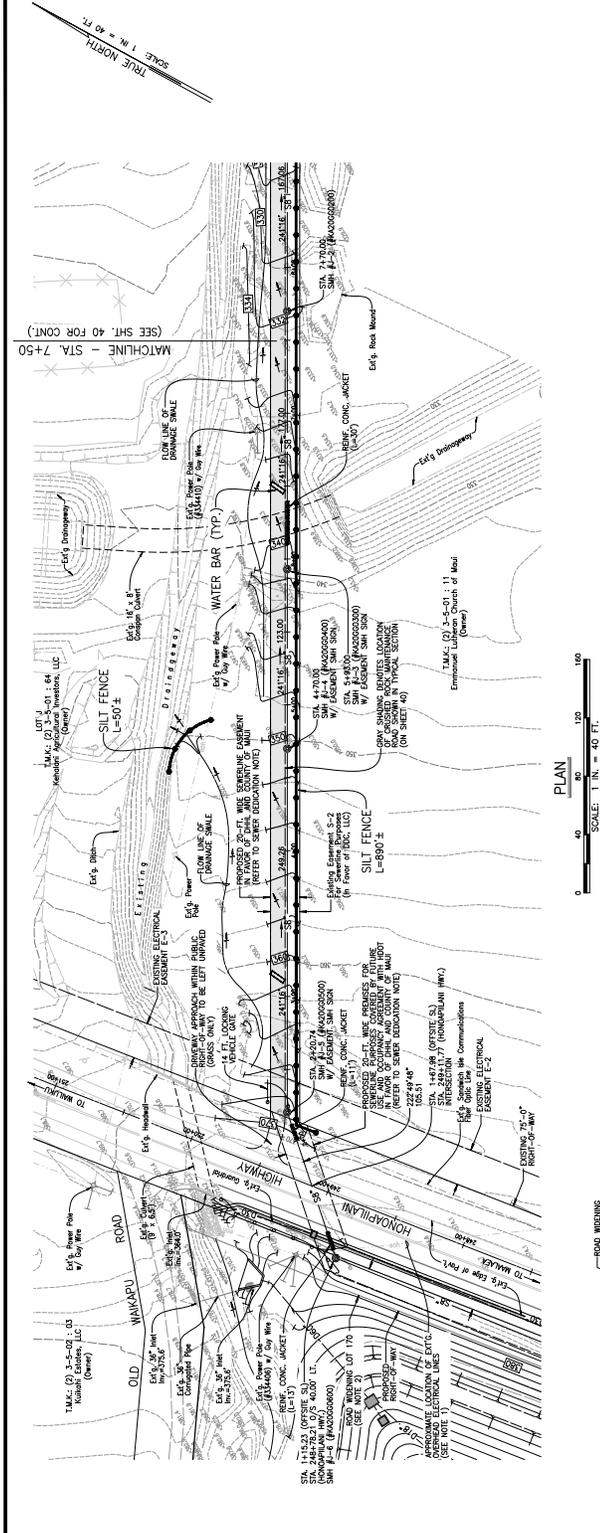
PUNANI HOMESTEAD
 WAIALEALE SUBDIVISION
 WAIALEALE, HAWAII

D.T.U. 19028
 EXISTING M.A.S. 19028
 APPROVED BY: [Signature]
 DATE: APRIL 9, 2020
 SHEET 38 OF 38
 TITLE PLAN & PROFILE OFFSITE WATERLINE
 SCALE 1 IN. = 40 FT.

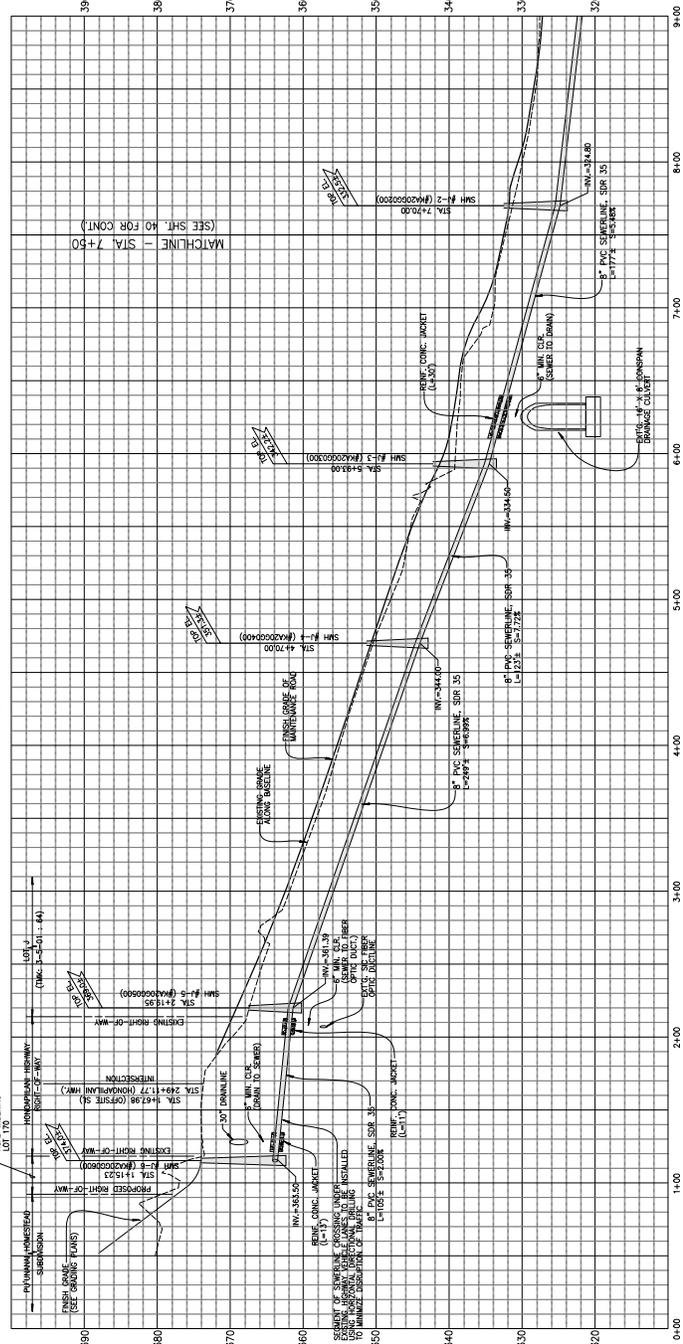
LETTER DESCRIPTION DATE



LOCATION MAP
SCALE: 1 IN. = 600 FT.



PLAN
SCALE: 1 IN. = 40 FT.



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

SEWER DEDICATION NOTE:
THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS INTENDS TO DEDICATE ALL PROPOSED SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI PURSUANT TO ACT 227. THE DEDICATION OF THE SEWER SYSTEM IMPROVEMENTS TO THE COUNTY OF MAUI IS CONTINGENT UPON THE SEWER SYSTEM BEING MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS UNTIL (1) A RECORD OF USE AND OCCUPANCY AGREEMENT IN FAVOR OF THE COUNTY OF MAUI IS SIGNED AND (2) THE COUNTY OF MAUI DEPARTMENT OF HAWAIIAN HOME LANDS HAS GRANTED THE INTERNAL SUBDIVISION ROADS AND ROAD WIDENING LOT AND GRANTED IN FAVOR OF THE COUNTY OF MAUI THE NECESSARY RIGHTS OF WAY TO THE SEWER SYSTEM. THE COUNTY OF MAUI IS GRANTED BY KEHUAJAN AGRICULTURAL INVESTORS, LLC IN FAVOR OF THE COUNTY OF MAUI.

NOTES:

1. CONTRACTOR SHALL INSURE ONE (ONE) YEAR EXISTING OVERHEAD ELECTRICAL LINES.
2. THE ROAD WIDENING LOT ALONG HONOLULU HIGHWAY IS TO BE OWNED BY THE STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS AND MAINTAINED BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.

LEGEND:

- SEWER MANHOLE
- DRAIN MANHOLE
- AIR RELIEF VALVE MANHOLE
- CATCH BASIN
- CLEAN-OUT TO GRADE
- WATERLINE W/ SIZE
- DRAINAGE W/ SIZE
- SERIALLINE W/ SIZE
- 6" PVC SEWERLINE (12" MIN. COVER) WATER
- 8" PVC SEWERLINE (18" MIN. COVER) WATER
- 12" PVC SEWERLINE (24" MIN. COVER) WATER
- 18" PVC SEWERLINE (36" MIN. COVER) WATER
- 24" PVC SEWERLINE (48" MIN. COVER) WATER
- 30" PVC SEWERLINE (60" MIN. COVER) WATER
- 36" PVC SEWERLINE (72" MIN. COVER) WATER
- 42" PVC SEWERLINE (84" MIN. COVER) WATER
- 48" PVC SEWERLINE (96" MIN. COVER) WATER
- 54" PVC SEWERLINE (108" MIN. COVER) WATER
- 60" PVC SEWERLINE (120" MIN. COVER) WATER
- EXISTING DRAINAGE W/ SIZE
- EXISTING SERVICING W/ SIZE
- EXISTING WATERLINE W/ SIZE
- TEMPORARY WATER BARS (SEE SHEET 72)

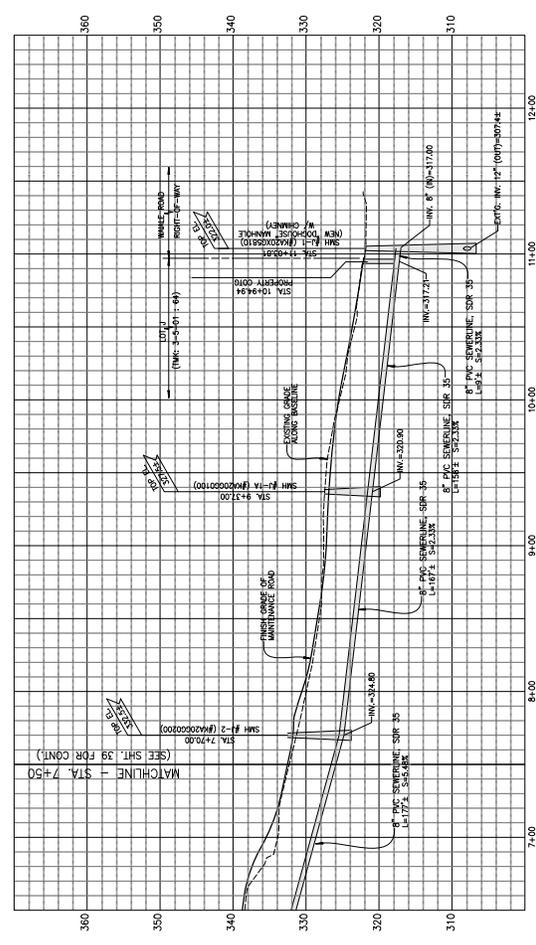
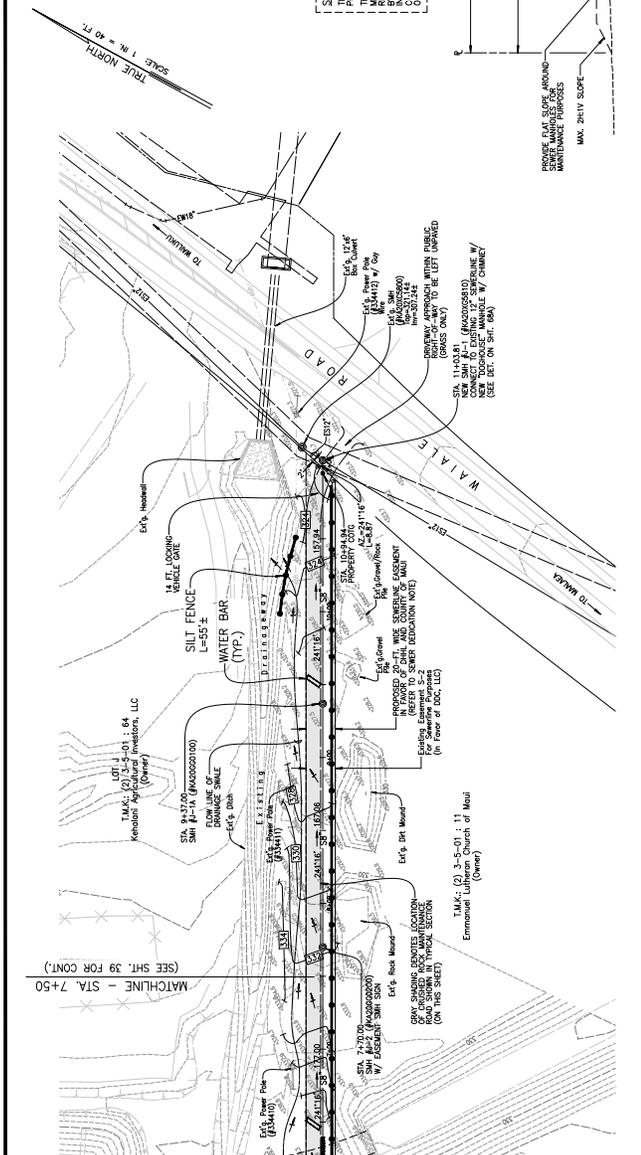
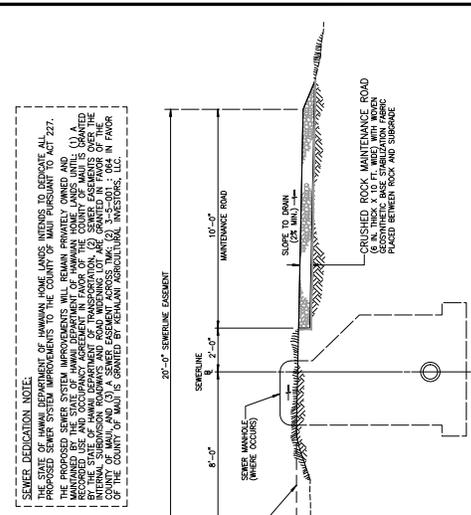
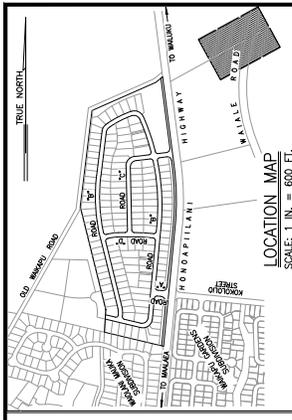


WARREN'S INSULAR ENGINEERS, INC.
ONE A STRUCTURAL ENGINEERING AND ARCHITECTURE
1115 SOUTH WILSON AVENUE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-1111
FAX: (808) 943-1112
WWW.WARENSINSULAR.COM

PUNUANI HOMESTEAD
WAIKAPU, WAIKUKU, MAUI, HAWAII

TITLE	PLAN & PROFILE: OFFSITE SEWERLINE
D.T.U.	190228
DESIGNED BY	W.A.S.
CHECKED BY	W.A.S.
DATE	APRIL 9, 2020
APPROVED BY	
DATE	
SCALE	1 in. = 40 FT.
SHEET	39
JOB NUMBER	

LETTER	DESCRIPTION



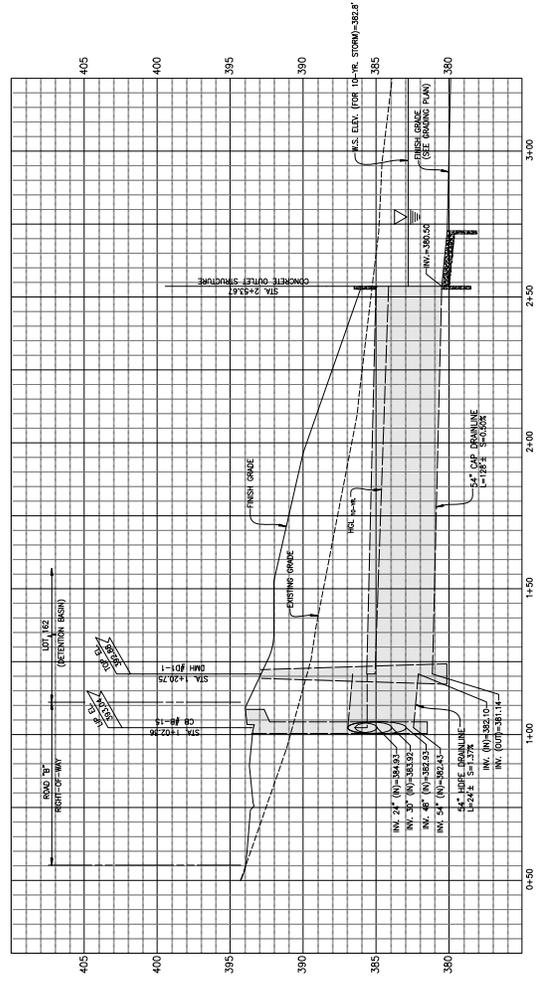
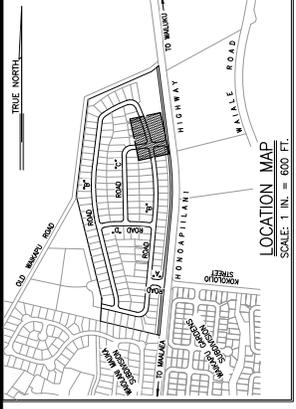
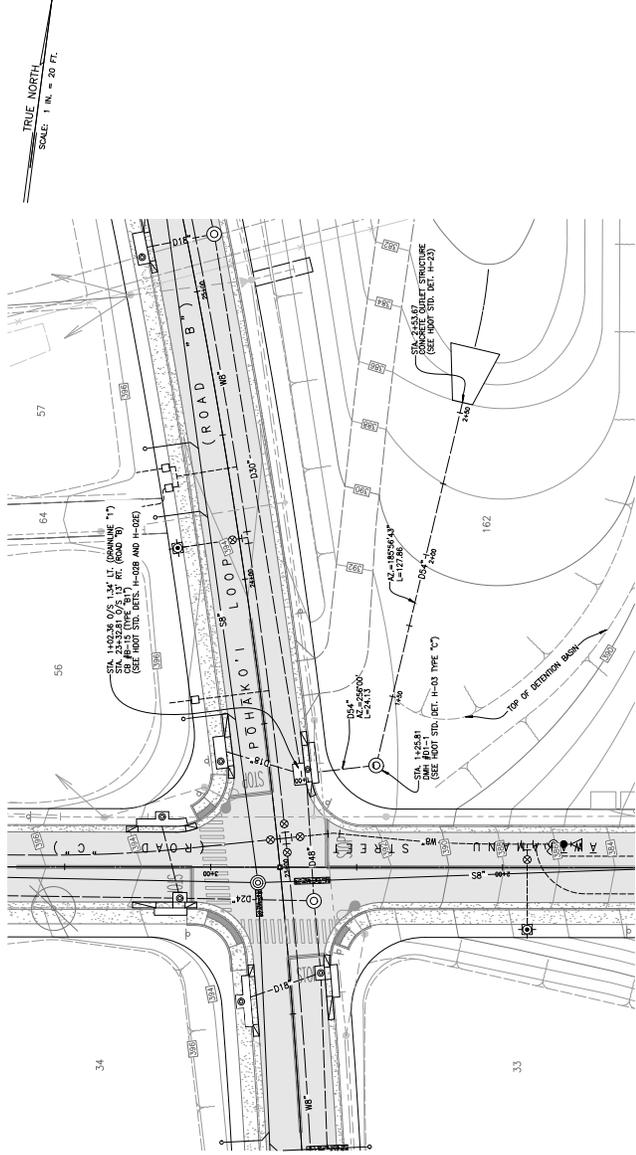
- LEGEND:**
- SEWER MANHOLE
 - AS-BUILT SEWER MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CLEAN-OUT TO-ROUSE
 - WATERLINE W/ SIZE
 - SEWERLINE W/ SIZE
 - ONE TYPE A (5/8" METED) SINGLE SOURCE WATER LATERAL WITH COUNTY-ISSUED WATER METER
 - EXISTING WATERLINE W/ SIZE
 - EXISTING DRAINAGE W/ SIZE
 - EXISTING SEWERLINE W/ SIZE
 - TEMPORARY SUT FENCE (SEE SHEET 72)
 - TEMPORARY WATER BARS (SEE SHEET 72)

PUNUANI HOMESTEAD
WAIKAPU, MAUI, HAWAII

WARREN'S ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING AND ARCHITECTURE
1115 SOUTH WILSON AVENUE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.WARENSENGINEERING.COM

WARREN'S ENGINEERING, INC.
D.T.U. 19028
REGISTERED PROFESSIONAL ENGINEER
W.A.S.
APPROVED BY: [Signature]
DATE: APRIL 9, 2020
JOB NUMBER: 40
SHEET NUMBER: 40
DATE: APRIL 9, 2020

LETTER: OCCUPATION: DATE: SCALE: 1 in. = 40 ft.



WARREN L. INAGAKI ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND SURVEYING
 1155 SOUTH KALANIAN'OLE AVENUE, SUITE 400
 HONOLULU, HAWAII 96813
 (808) 551-3833

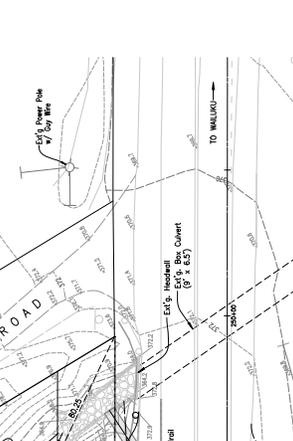
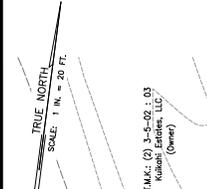
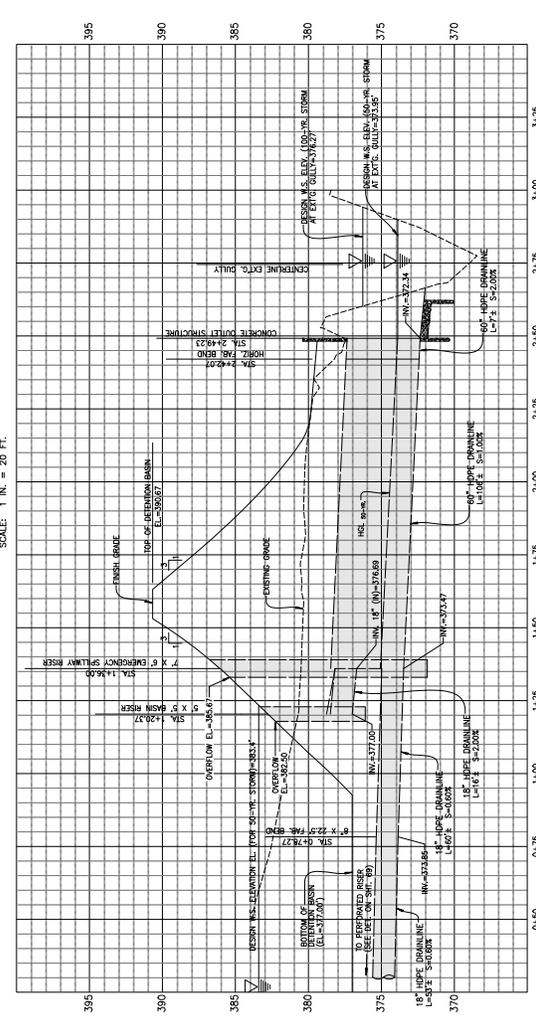
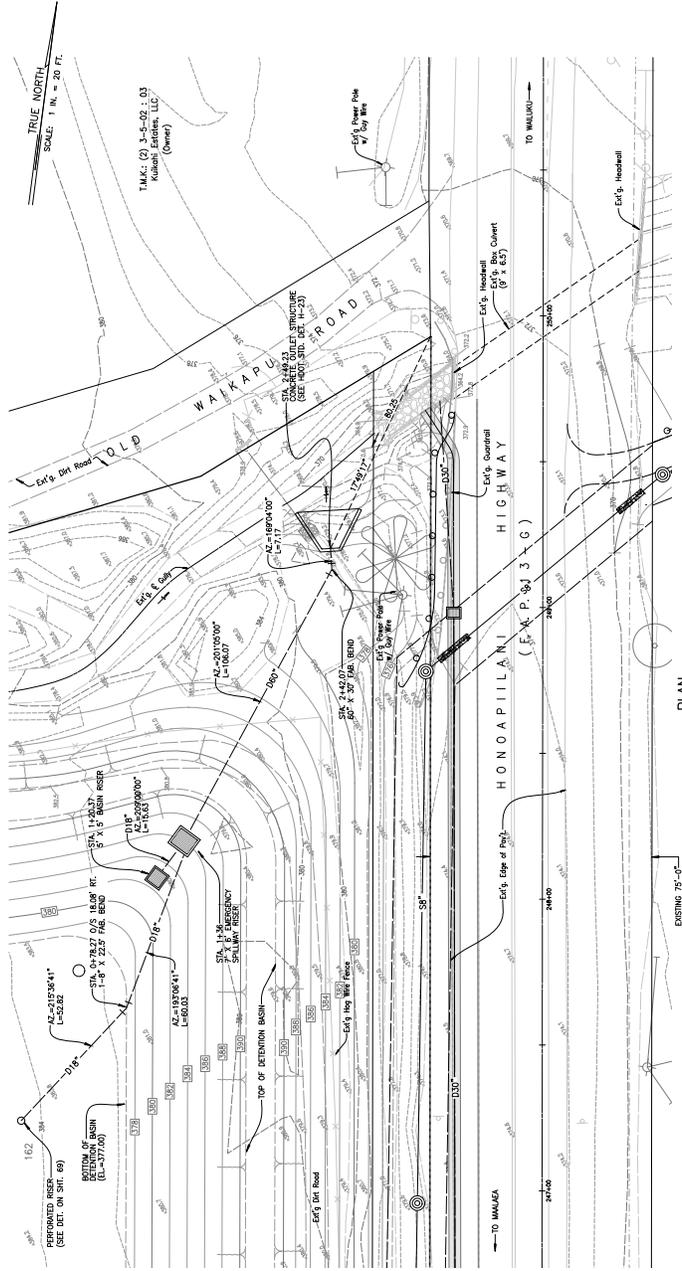
WARREN L. INAGAKI
 PROFESSIONAL ENGINEER
 NO. 1957-C
 STATE OF HAWAII

PUNUANI HOMESTEAD
 1155 SOUTH KALANIAN'OLE AVENUE, SUITE 400
 HONOLULU, HAWAII 96813

PLAN & PROFILE:
 DRAINAGE BASIN INLET - DRAINLINE 1

DRAWN BY	D.L.U.	DATE	1992B
CHECKED BY	M.S.S.	DATE	APRIL 9, 2000
APPROVED BY		JOB NUMBER	41
		DATE	

SCALE: 1 in. = 20 ft.



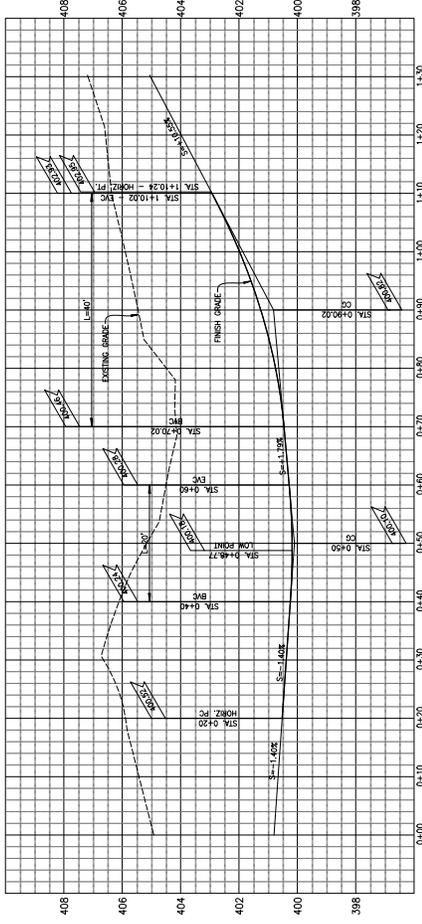
PUNANI HOMESTEAD
1075 PUNANI DRIVE
WAKAPU, MAUI, HAWAII

WARREN L. UNDERHILL ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING SPECIALISTS
200 S. WILSON AVE., SUITE 400
HONOLULU, HAWAII 96813
(808) 551-1234

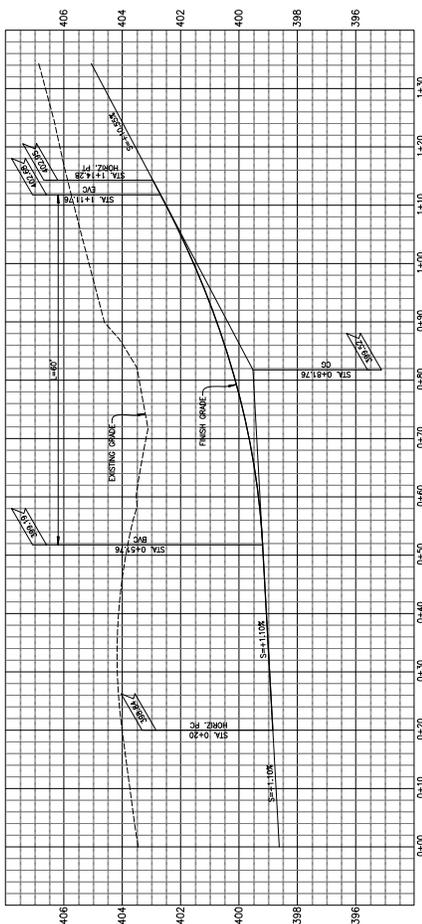
WARREN L. UNDERHILL
REGISTERED PROFESSIONAL ENGINEER
NO. 1917-C
STATE OF HAWAII

PROJECT: DRAINAGE BASIN OUTLET - DRAINLINE 2
DATE: 1992B
DESIGNED BY: W.L.U.
CHECKED BY: W.L.U.
APPROVED BY: APRIL 9, 2020
JOB NUMBER: 42
SHEET: 42
DATE: APRIL 9, 2020
SCALE: 1 in. = 20 ft.

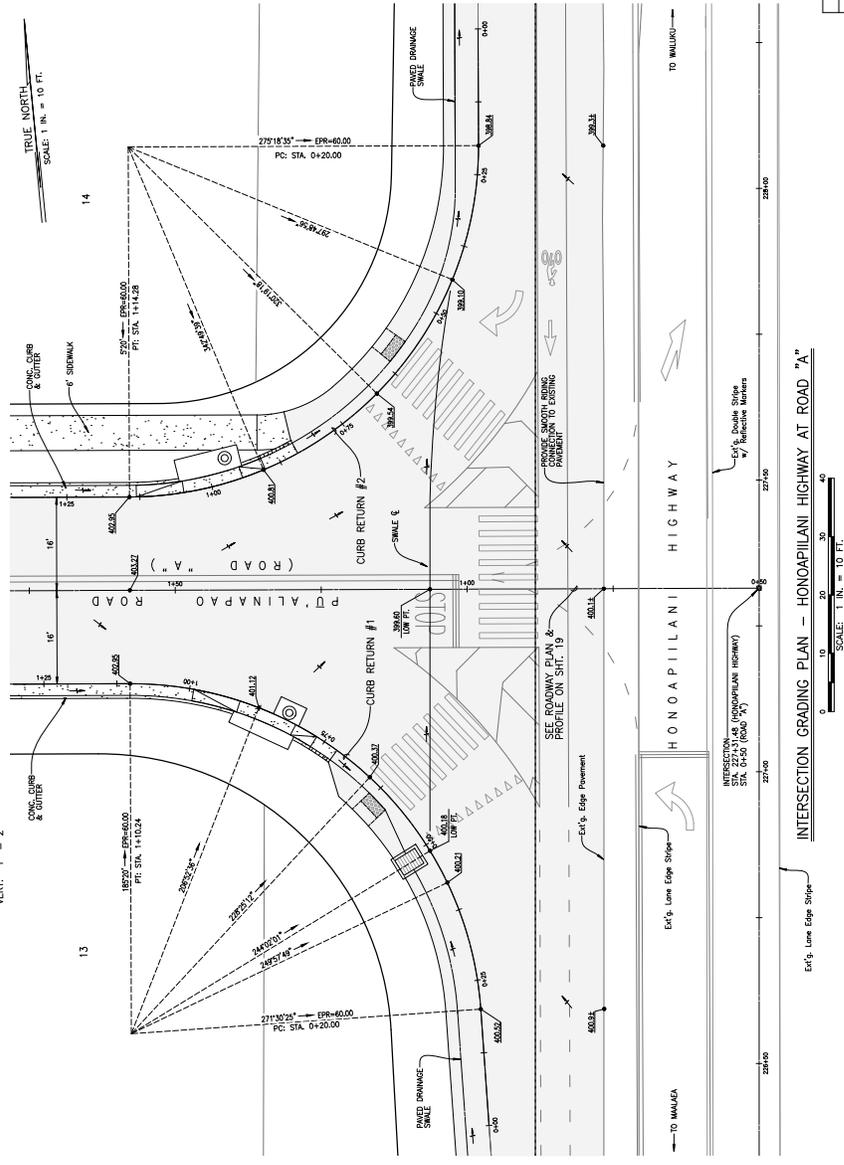
LETTER	DESCRIPTION	DATE



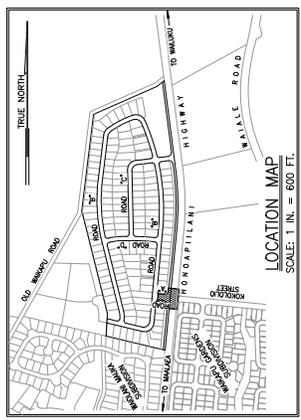
PROFILE — CURB RETURN #1
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



PROFILE — CURB RETURN #2
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



INTERSECTION GRADING PLAN — HONOAPIILANI HIGHWAY AT ROAD 7A
SCALE: 1" = 10 FT.

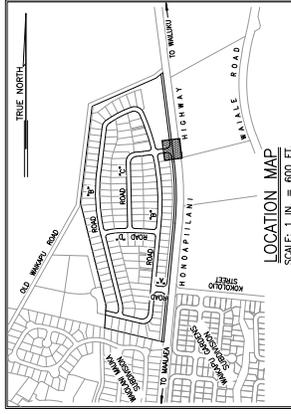
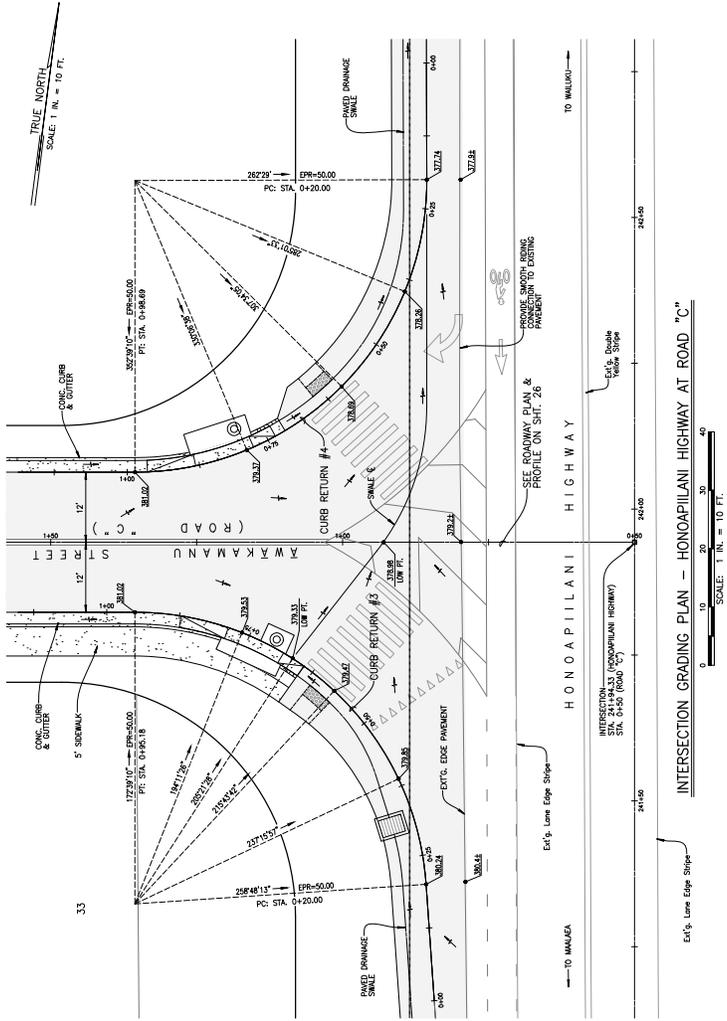
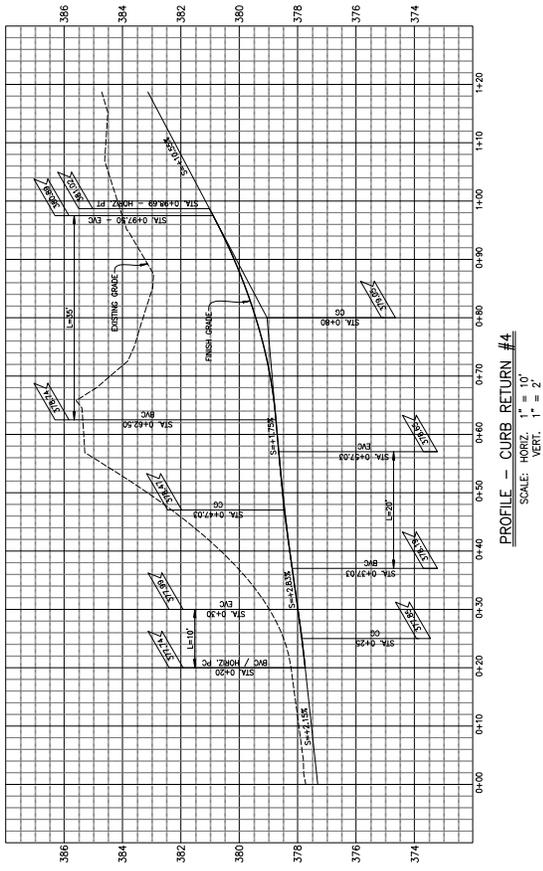
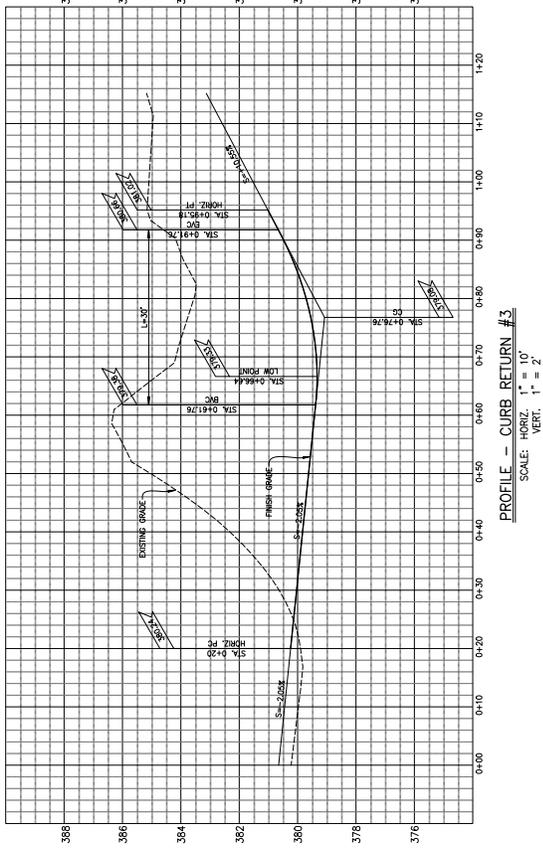


NOTES:

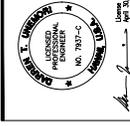
1. GRADE AND ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF PAVEMENT SHALL BE USED FOR THE PURPOSE OF DETERMINING FINAL EDGE OF PAVEMENT CONSTRUCTION. THE FINAL PROFILE SHALL BE THE RESULT OF THE FOLLOWING CONDITIONS:
 - A. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
 - B. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED.
2. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED. CONTRACTOR SHALL CONTACT ENGINEER FOR APPROVAL OF ANY PROPOSED PROFILE ADJUSTMENTS TO ACCOMMODATE BRIDGES AND PEDESTRIANS AND REQUIRED BY THE ENGINEER WILL BE DONE AT CONTRACTOR'S EXPENSE.
3. EXISTING LONGITUDINAL DRAINAGE PATTERN SHOWN ON INTERSECTION DETAILS SHALL BE MAINTAINED AT ALL TIMES.
4. CONTRACTOR SHALL PROVIDE NECESSARY ADJUSTMENTS TO ACCOMMODATE BRIDGES AND PEDESTRIANS AND SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.



WARREN'S LINCOLN ENGINEERING, INC. REGISTERED PROFESSIONAL ENGINEER NO. 1917-C	
PUNANI HOMESTEAD INTERSECTION GRADING PLAN: HONOAPIILANI HIGHWAY AT WAIYAPU ROAD (ROAD 7A)	
D.T.U. DESIGNED BY	19028
CHECKED BY	DATE
APPROVED BY	DATE
JOB NUMBER	43
SCALE	1 in. = 10 ft.
SHEET	OF



- NOTES:**
- FINISH GRADE SPOT ELEVATIONS INDICATED ON CONSTRUCTION PLANS, FOR EDGE OF PAVEMENT, SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PAVEMENT. DURING CONSTRUCTION, SO THE FINAL PROFILE SATISFIES THE FOLLOWING CONDITIONS:
 - DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED. BEING IN FULL COMPLIANCE WITH THE HAWAIIAN WATER RESOURCES ACT AND THE HAWAIIAN WATER RESOURCES DEPARTMENT'S REGULATIONS.
 - PROTECTING ANY ANY FURTHER WORK CHANGES THAT CORRECTIVE WORK REQUIRED BY THE ENGINEER WILL BE DONE AT CONTRACTOR'S EXPENSE.
 - MAINTAINED AT ALL TIMES. DRAINAGE PATTERN SHOWN ON INTERSECTION DETAILS SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PAVEMENT.
 - DURING EXISTING SIDEWALK AND SHOULDER IMPROVEMENTS, THE CONTRACTOR SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.



WARREN S. LINSOTT ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1115 KULUWAHINE DRIVE, SUITE 400
 WAIKUKU, HAWAII 96793

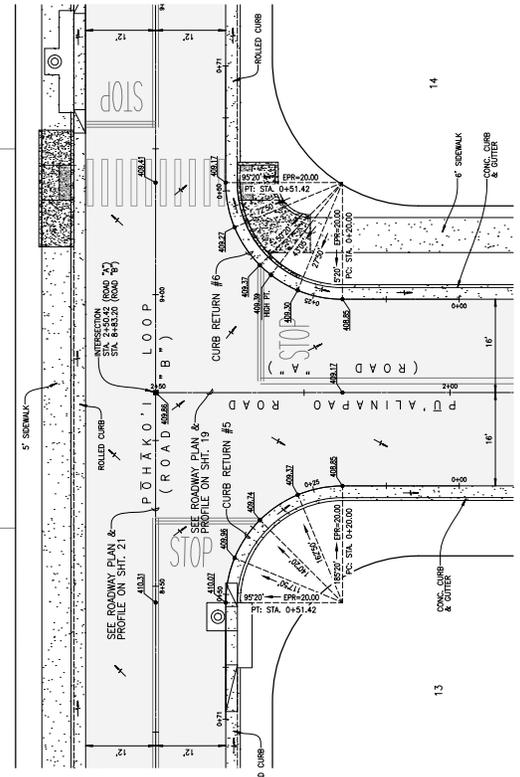
PUNANI HOMESTEAD
 INTERSECTION GRADING PLAN: HONOPIILANI
 HIGHWAY AT MAKAHA STREET (ROAD "C")

DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: APRIL 9, 2020
 SHEET NO. 44 OF 44

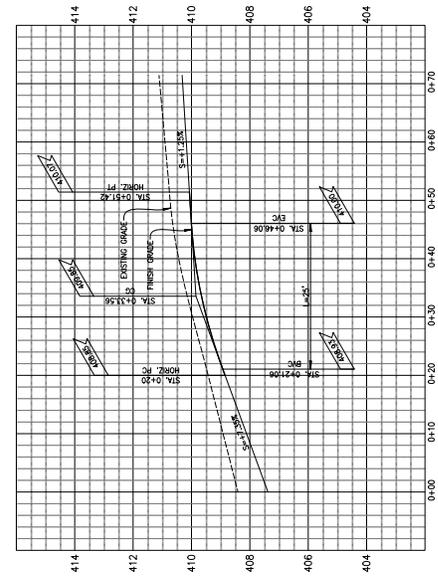
LETTER	DESCRIPTION	DATE

TRUE NORTH
SCALE: 1 IN. = 10 FT.

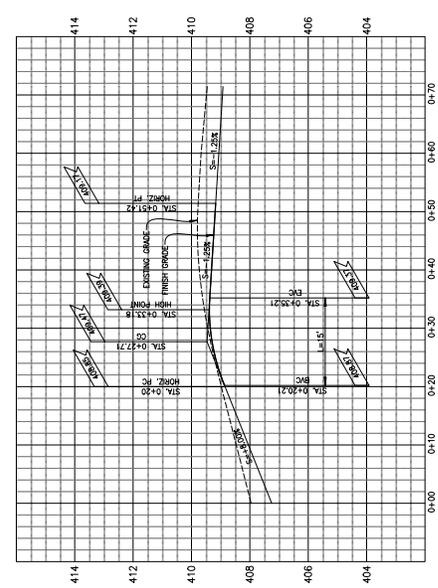
158
157
156



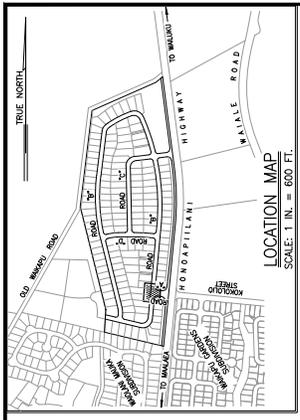
INTERSECTION GRADING PLAN - ROAD "A" AT ROAD "B"
SCALE: 1 IN. = 10 FT.



PROFILE - CURB RETURN #5
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



PROFILE - CURB RETURN #6
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



LOCATION MAP
SCALE: 1 IN. = 600 FT.

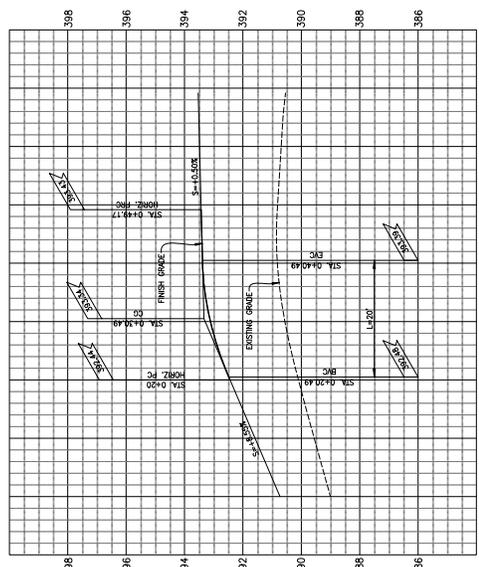
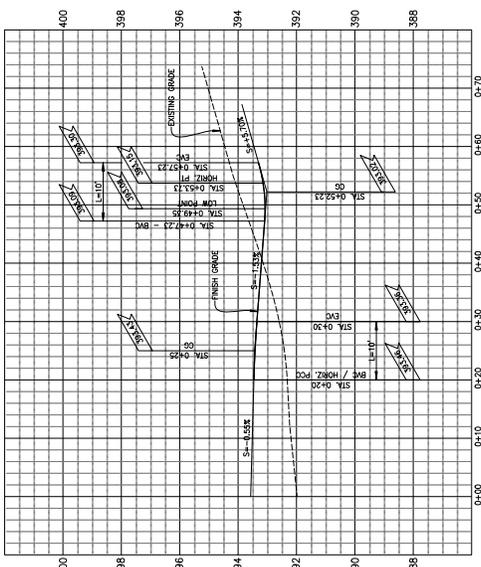
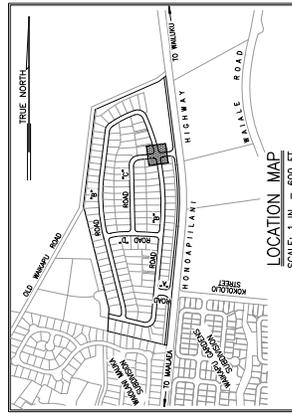
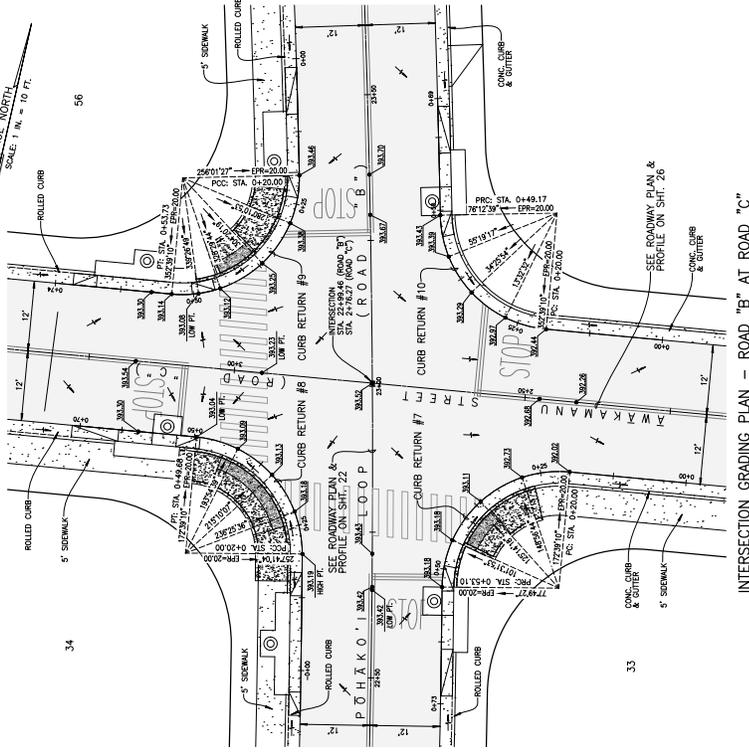
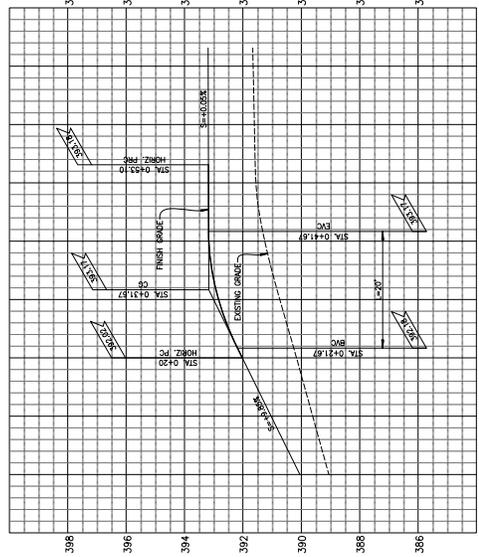
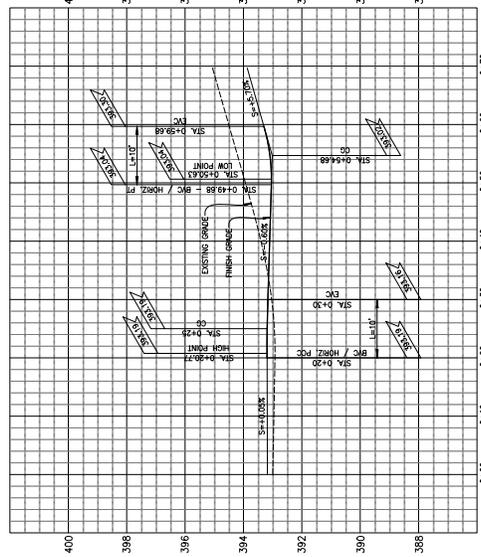
NOTES:
1. FINISH GRADE SPOT ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF PAVEMENT SHALL BE MAINTAINED. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS REQUIRED DURING CONSTRUCTION, SO THE FINAL PROFILE SATISFIES THE FOLLOWING CONDITIONS:
A. DRAINAGE PATTERNS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
B. SURFACE SHALL BE SMOOTH AND COMPLETELY FREE OF ALL OBSTACLES TO PROCEEDING WITH ANY FURTHER WORK, OTHERWISE ANY CORRECTIVE WORK REQUIRED BY THE ENGINEER WILL BE DONE AT CONTRACTOR'S EXPENSE.

WARREN'S ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERS/PLANNING ARCHITECTS
1155 KALANANAKUWAHINE DRIVE, SUITE 400
HONOLULU, HAWAII 96813-1723
PHONE: (808) 943-4500
FAX: (808) 943-4501
WWW.WARENSINC.COM

PUNUANI HOMESTEAD
1020 PUNUANI DRIVE
WAIKAPU, MAUI, HAWAII
INTERSECTION GRADING PLAN: PUNUANI ROAD
TITLE (ROAD "A") AT POKOAPILANI HIGHWAY (ROAD "B")

D.T.U. 19028
D. T. UHAMA
REGISTERED PROFESSIONAL ENGINEER
NO. 1917-C
EXPIRES 12/31/2010
DATE: APRIL 9, 2010
JOB NUMBER: 45
SHEET: 45
DATE: APRIL 9, 2010
SCALE: 1 IN. = 10 FT.

LETTER: OCCUPATION



NOTES:

1. PROFILE GRADE SPOT ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF PAVEMENT SHALL BE USED FOR THE PURPOSE OF DETERMINING INITIAL EDGE OF PAVEMENT CONSTRUCTION. THE FINAL PROFILE SATISFIES THE FOLLOWING CONDITIONS:
 - A. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
 - B. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED. CONTRACTOR SHALL CONSULT ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE ENGINEER. ALL WORK SHALL BE DONE AT CONTRACTOR'S EXPENSE.



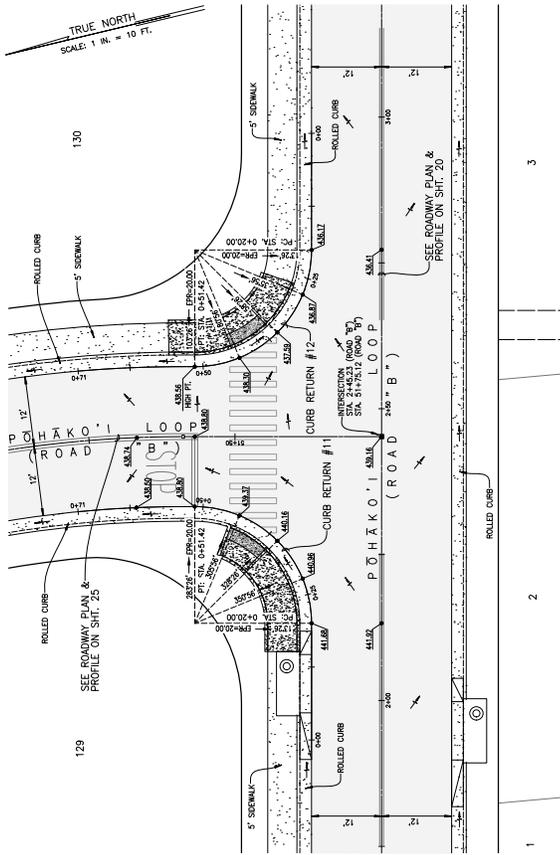
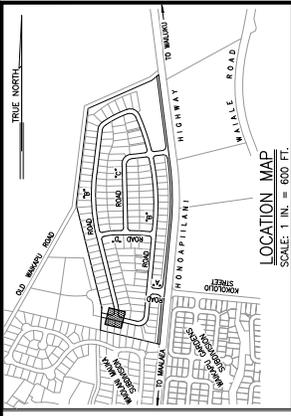
WARREN'S INSULAR ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
1111 KALANANĀ'ŪLA DRIVE, SUITE 400
HONOLULU, HAWAII 96813

PUNANI HOMESTEAD
WAIKĀPĀI, WAIKĀPĀI MAUI, HAWAII
INTERSECTION GRADING PLAN: PŌHAKU LOOP
(ROAD "B") AT WAIKĀPĀI STREET (ROAD "C")

DRAWN BY: [Name]
CHECKED BY: [Name]
DATE: [Date]

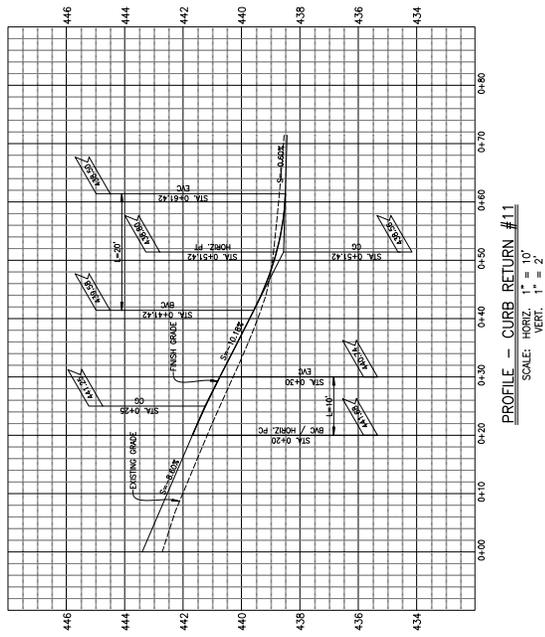
D.T.U. 19028
JOB NUMBER 46
APPROVED BY: [Name]
DATE: April 9, 2020
SHEET 46 OF 52

LETTER	DESCRIPTION	DATE



INTERSECTION GRADING PLAN - ROAD "B" AT ROAD "B"

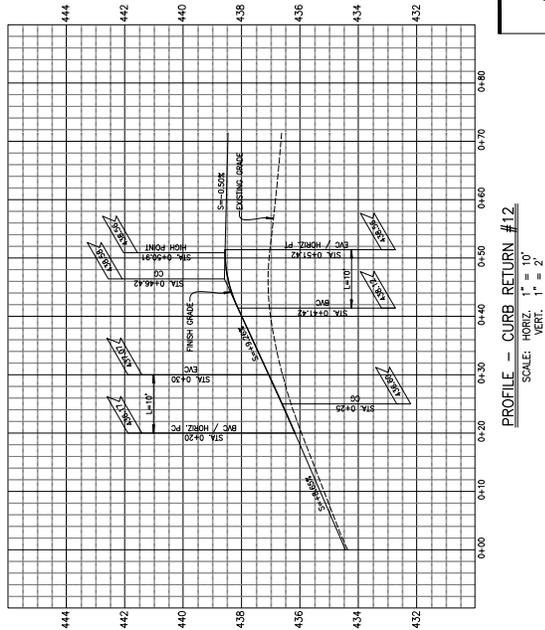
SCALE: 1 IN. = 10 FT.



PROFILE - CURB RETURN #11

SCALE: HORIZ. 1" = 10'

VERT. 1" = 2'



PROFILE - CURB RETURN #12

SCALE: HORIZ. 1" = 10'

VERT. 1" = 2'

NOTES:

1. FINISH GRADES SHALL BE USED FOR THE PURPOSES OF DETERMINING PAVES, FOR EASE OF CONSTRUCTION AND TO BE USED FOR THE PURPOSES OF DETERMINING PAVES, FOR EASE OF CONSTRUCTION AND TO BE USED FOR THE PURPOSES OF DETERMINING PAVES, FOR EASE OF CONSTRUCTION.
2. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
3. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HAWAIIAN ENGINEERING BOARD OF PROFESSIONAL ENGINEERS AND ARCHITECTS, INC. (HEA) PRACTICE MANUAL.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HAWAIIAN ENGINEERING BOARD OF PROFESSIONAL ENGINEERS AND ARCHITECTS, INC. (HEA) PRACTICE MANUAL.

Warren S. Uehara
Professional Engineer
No. 1815-C
State of Hawaii

WARREN S. UEHARA ENGINEERING, INC.
ONE KILAHEA DRIVE, SUITE 400
WAIKAPU, HAWAII 96761
PHONE: (808) 263-1111
FAX: (808) 263-1112

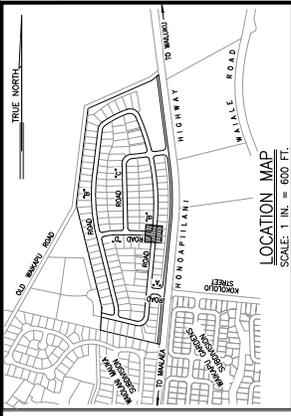
PUNANI HOMESTEAD
KAPUNANI, HAWAII
INTERSECTION GRADING PLAN: PŪHĀKŌI LOOP
INTERSECTION GRADING PLAN: PŪHĀKŌI LOOP
(ROAD "B" AT PŪHĀKŌI LOOP (ROAD "B"))

D.T.U.
DESIGNED BY: W.S.U.
CHECKED BY: W.S.U.
APPROVED BY: W.S.U.

190298
JOB NUMBER
APRIL 9, 2020
SHEET
DATE

SCALE: 1 in. = 10 ft.

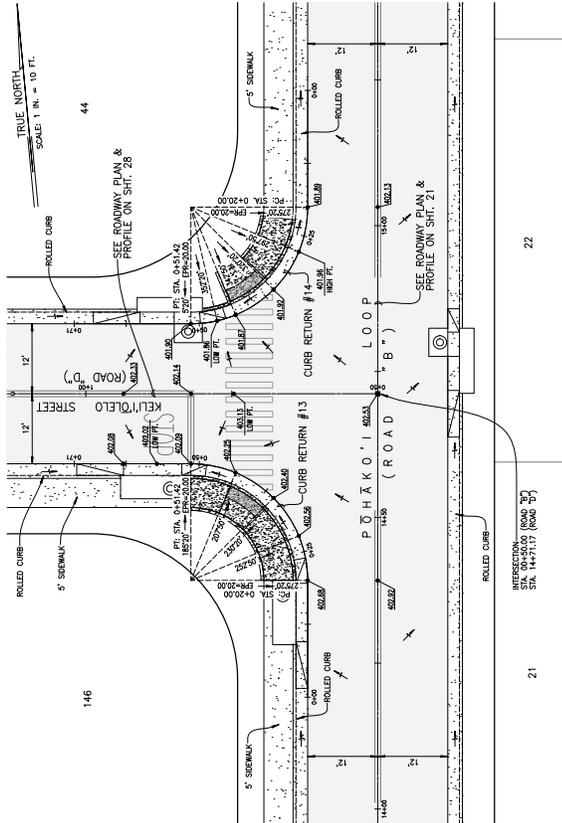
LETTER: OCCUPATION: DATE: OF SHEETS: 47



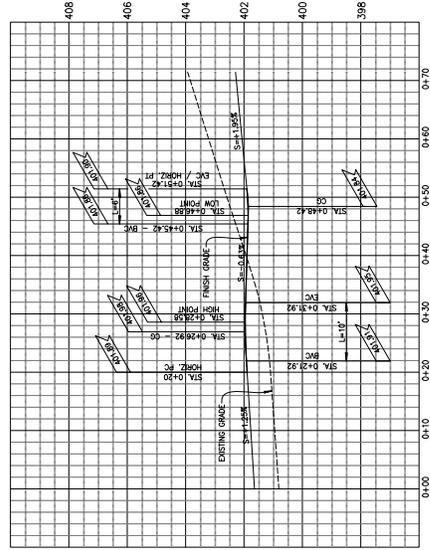
LOCATION MAP
SCALE: 1 IN. = 600 FT.

NOTES:

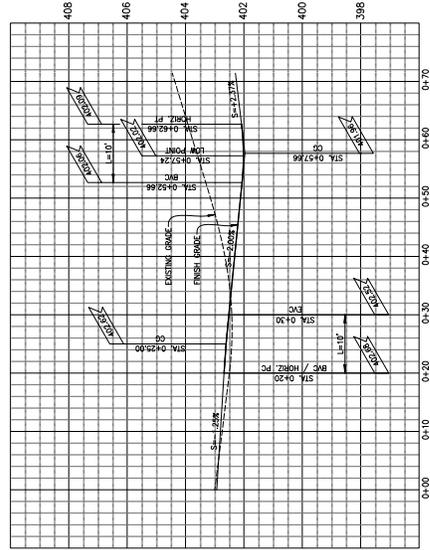
1. GRADE SHEET CALCULATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF PAVEMENT SHALL BE USED FOR THE PURPOSE OF DETERMINING INITIAL ELEVATION OF PAVEMENT CONSTRUCTION. THE FINAL PROFILE SHALL BE DETERMINED BY THE CONTRACTOR.
2. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
3. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED. CONTRACTOR SHALL CONSULT ENGINEER FOR APPROVAL. PRIOR TO CONSTRUCTION.
4. ALL WORK SHALL BE DONE AT CONTRACTOR'S EXPENSE.



INTERSECTION GRADING PLAN - ROAD "B" AT ROAD "D" (EAST)
SCALE: 1 IN. = 10 FT.

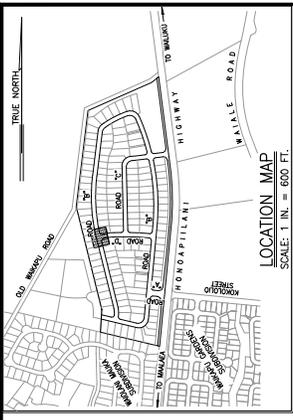


PROFILE - CURB RETURN #14
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



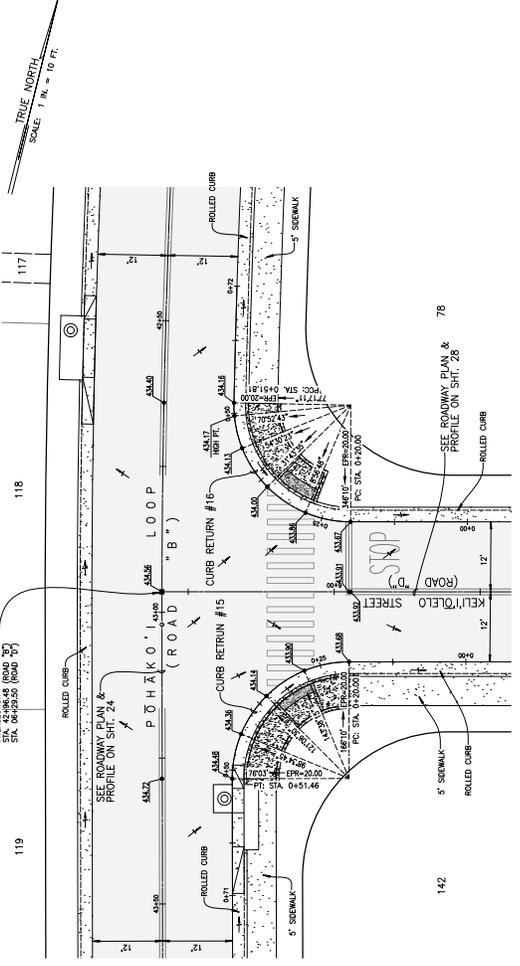
PROFILE - CURB RETURN #13
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'

	WARREN S. L. L. PROFESSIONAL ENGINEER CIVIL & STRUCTURAL ENGINEERING 1000 KALI STREET, SUITE 400 HONOLULU, HAWAII 96813	PUNANI HOMESTEAD INTERSECTION GRADING PLAN: PŌHAKŪ'I LOOP (ROAD "B") AT KELI'ŌLELO STREET (ROAD "D") (EAST)
	D.T.L. 19028 DATE APRIL 9, 2020	D.T.L. 19028 DATE APRIL 9, 2020

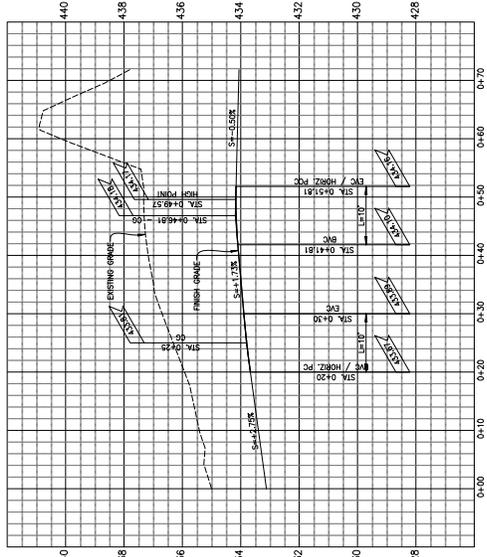


NOTES:

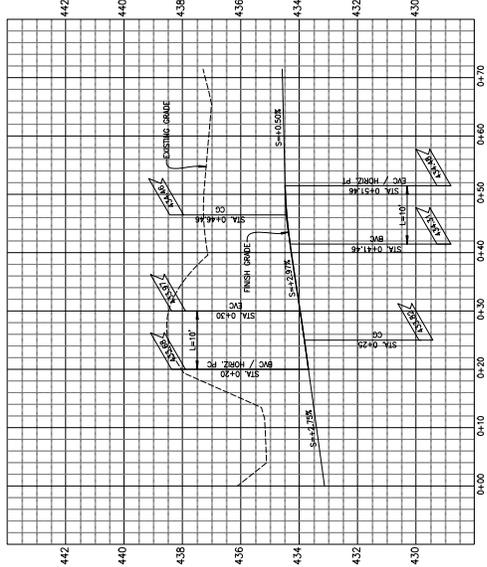
1. FINISH GRADE SPOT ELEVATIONS INDICATED ON CONSTRUCTION PLANS, FOR EDGE OF PAVEMENT SHALL BE USED FOR THE PURPOSES OF DETERMINING THE ELEVATION OF PAVEMENT CONSTRUCTION. SO THE FINAL PROFILE SHOWS THE FOLLOWING CONDITIONS:
 - A. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
 - B. FINISH GRADE AND SLOPE SHALL BE MAINTAINED AS SHOWN ON THE PLANS, UNLESS OTHERWISE NOTED BY THE ENGINEER. ANY CORRECTIONS TO THE FINISH GRADE OR SLOPE SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.



INTERSECTION GRADING PLAN - ROAD "B" AT ROAD "D" (WEST)



PROFILE - CURB RETURN #16
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



PROFILE - CURB RETURN #15
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'

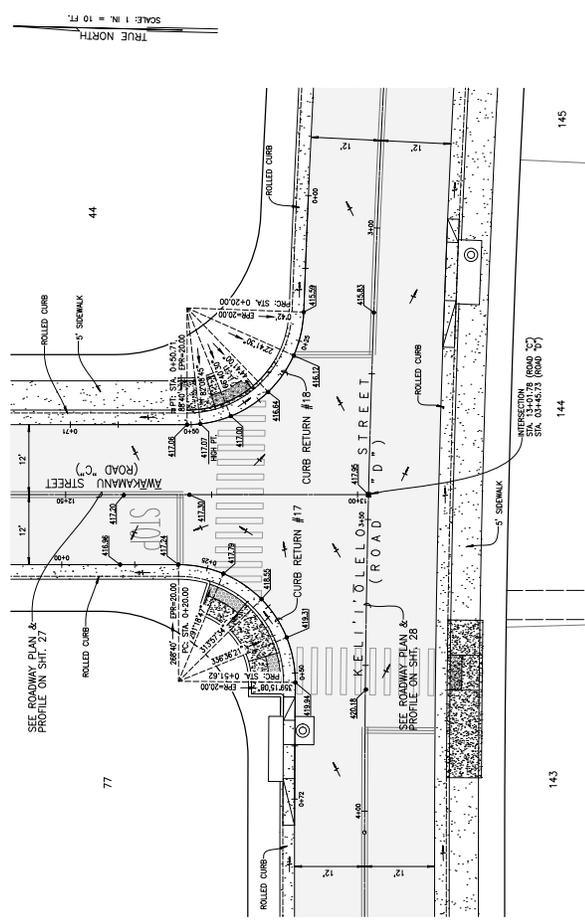
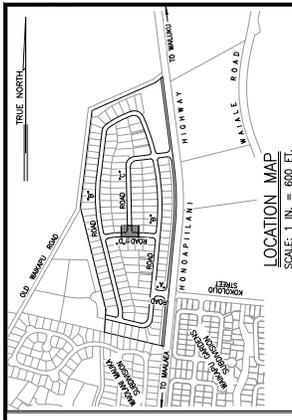
WARREN S. LINSCHLAG ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND SURVEYING
 910 KALI STREET, FIFTH FLOOR, SUITE 400
 HONOLULU, HAWAII 96813

PŪHAKO'I HOMESTEAD
 WAIKAPU, MAIUKU MAUI, HAWAII
 INTERSECTION GRADING PLAN: PŪHAKO'I LOOP (ROAD
 "B") AT KELI'OLELO STREET (ROAD "D") (WEST)

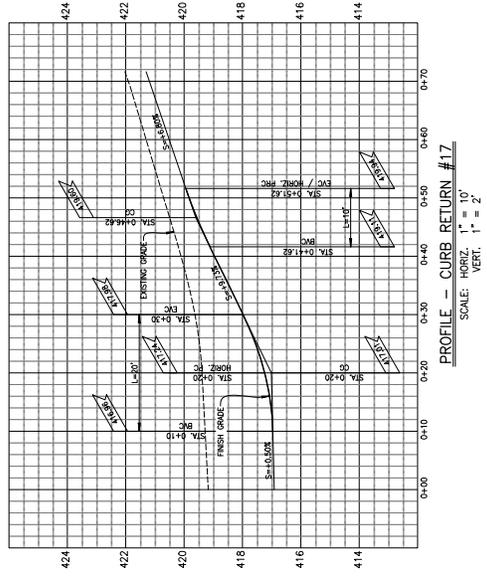
D.T.U. 190228
 CHECKED BY: [Signature]
 DESIGNED BY: [Signature]
 DRAWN BY: [Signature]
 APPROVED BY: [Signature]
 DATE: April 9, 2020

JOB NUMBER: 49
 SHEET: 49
 SCALE: 1 in. = 10 ft.

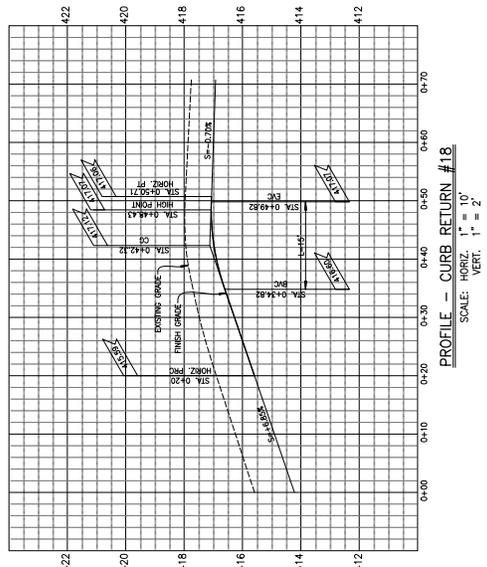
LETTER	DESCRIPTION	DATE



INTERSECTION GRADING PLAN - ROAD "C" AT ROAD "D"
SCALE: 1 IN. = 10 FT.



PROFILE - CURB RETURN #17
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



PROFILE - CURB RETURN #18
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'

- NOTES:
1. FINISH GRADE SPOT ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF PAVEMENT SHALL BE USED FOR THE PURPOSES OF DETERMINING INITIAL EDGE OF PAVEMENT CONSTRUCTION. SO THE FINAL PROFILE SATISFIES THE FOLLOWING CONDITIONS:
 - A. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
 - B. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED.
 - C. CONTRACTOR SHALL CONTACT BUSINESS FOR APPROVAL PRIOR TO ANY WORK REQUIRED BY THE ENGINEER WILL BE DONE AT CONTRACTOR'S EXPENSE.

WARREN S. INAGAKI ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERING AND SURVEYING
1115 KALI STREET, SUITE 400
HONOLULU, HAWAII 96813

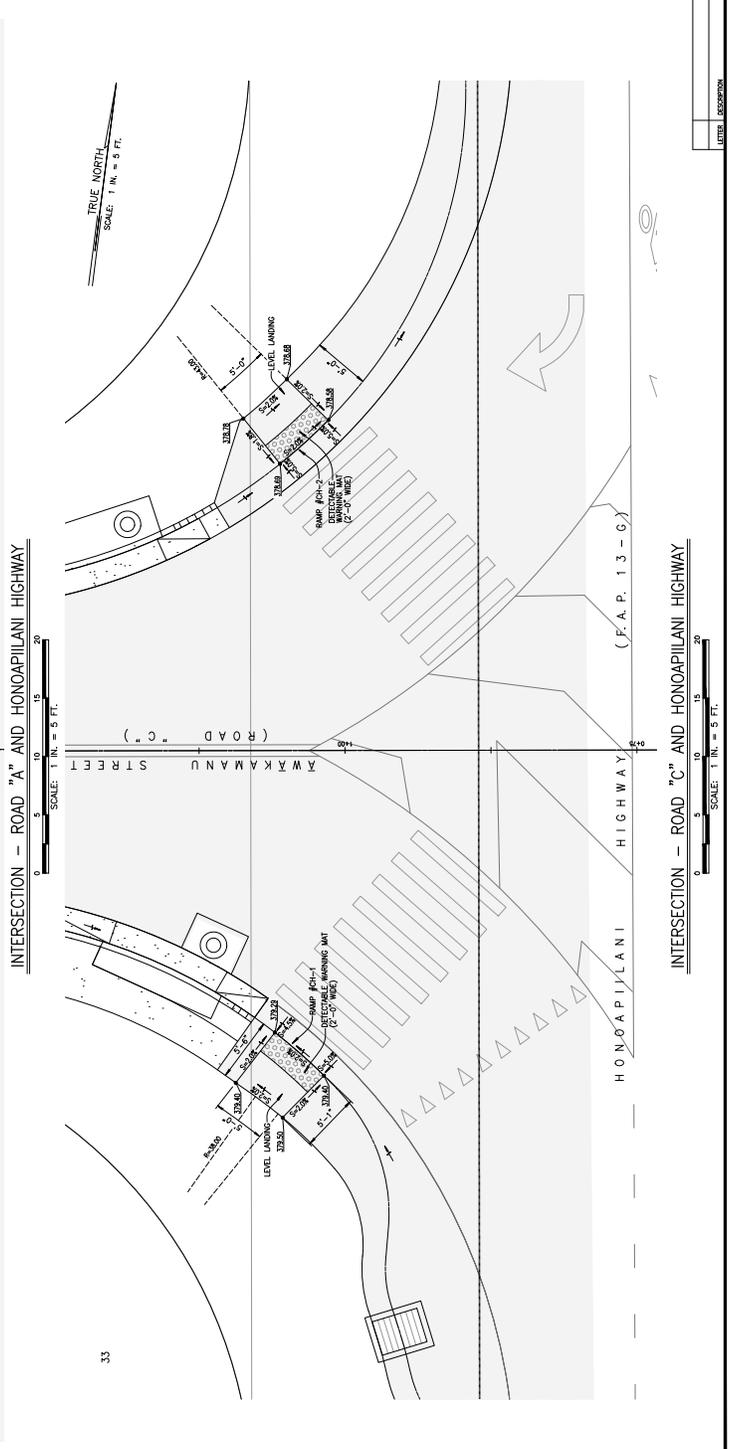
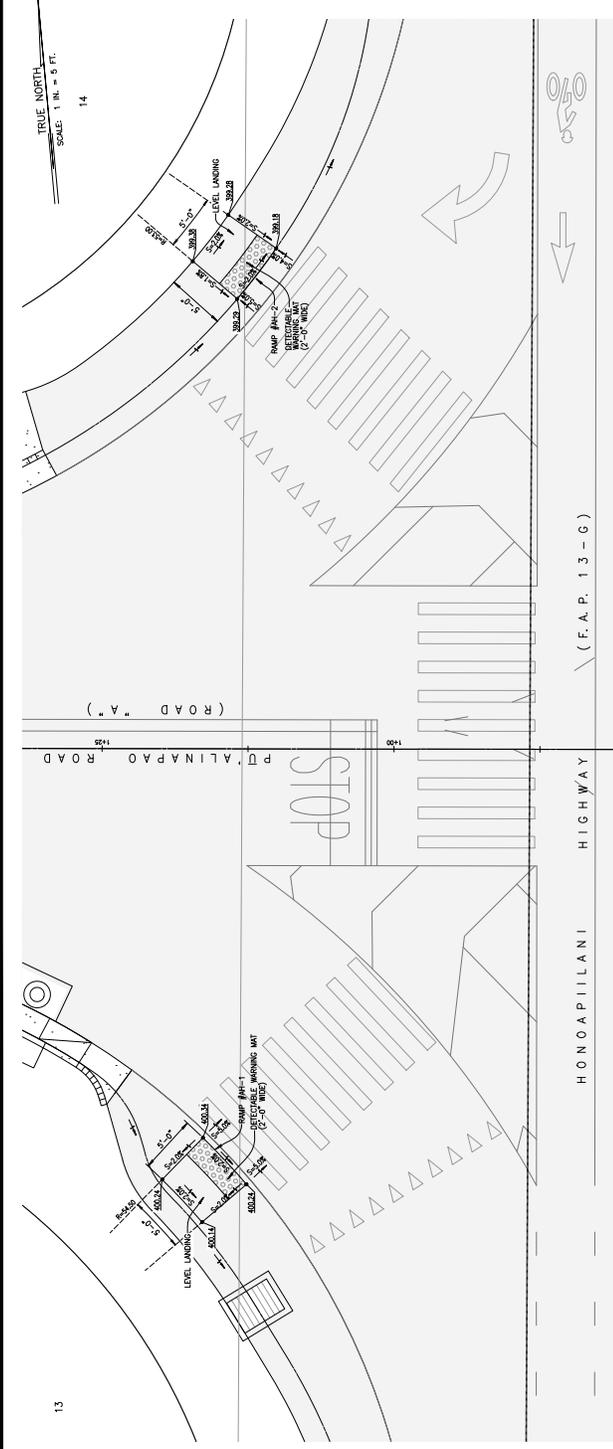
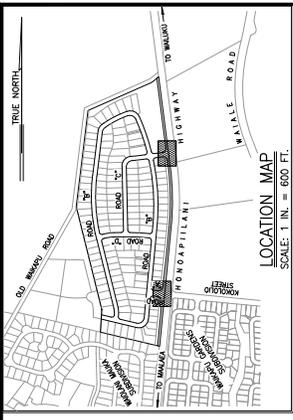
PUNUANI HOMESTEAD
INTERSECTION GRADING PLAN, AMKAMANU STREET
WAKAPAI, MAUI, HAWAII

TITLE (ROAD "C") AT KELI'OLELO STREET (ROAD "D")

D.T.U. 19028
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

JOB NUMBER: 50
DATE: April 9, 2020
SHEET: 50 OF 50

SCALE: 1 in. = 10 ft.



- NOTES:**
1. FINISH GRADE ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF DRIVEWAY SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT. CURBS AND SIDEWALKS SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
 2. FINISH GRADE ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF DRIVEWAY SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT. CURBS AND SIDEWALKS SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
 3. FINISH GRADE ELEVATIONS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF DRIVEWAY SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT. CURBS AND SIDEWALKS SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.

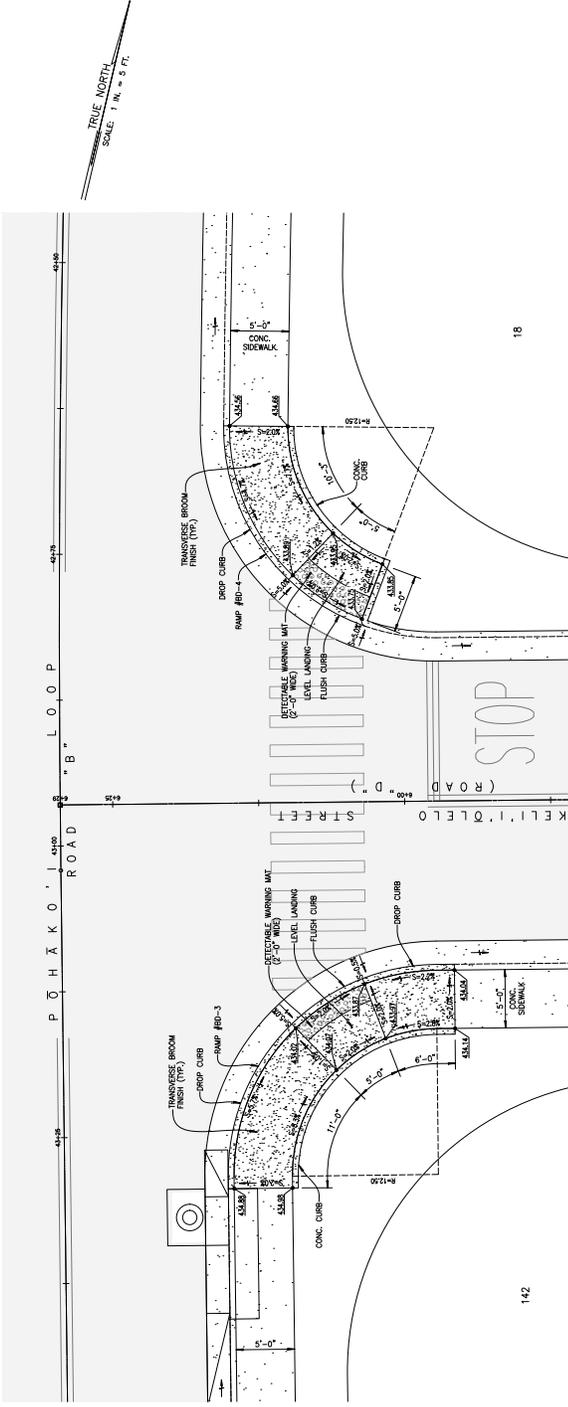
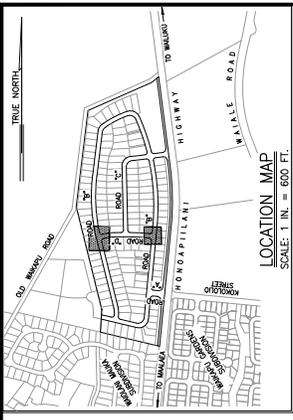
WARREN'S INSEGORI ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING ARCHITECTS
 1111 KALANANĪHUI DRIVE, SUITE 400
 HONOLULU, HAWAII 96813

PUNUANI HOMESTEAD
 INTERSECTION GRADING DETAILS:
 WAIKAPU, WAIKURU MAUI, HAWAII

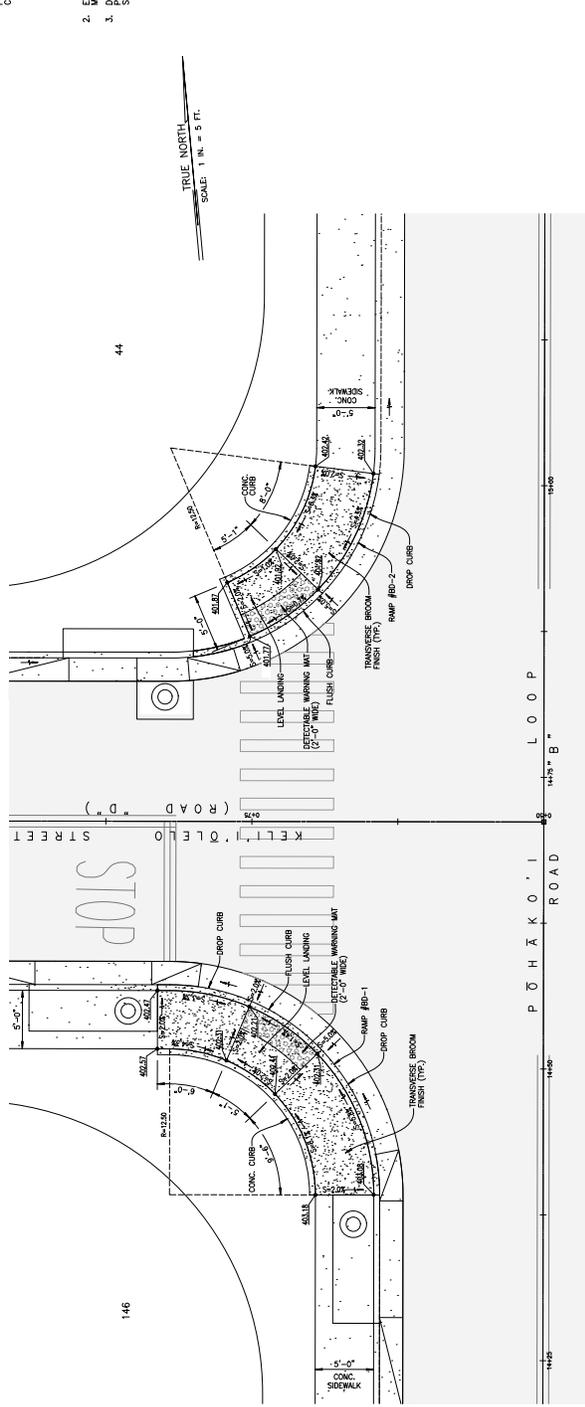
TITLE: WHEELCHAIR RAMPS

DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

D.T.U. NO. 19028
 DATE: April 9, 2020
 SHEET NO. 51



INTERSECTION - ROAD "D" AND ROAD "B" (WEST)



INTERSECTION - ROAD "B" AND ROAD "D" (EAST)

NOTES:

1. FINISH GRADE SPOT ELEVATIONS, INDICATED ON CONSTRUCTION PLANS, FOR EDGE OF PAVEMENT SHALL BE MAINTAINED THROUGHOUT THE PROJECT. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS REQUIRED DURING CONSTRUCTION.
2. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
3. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED THROUGHOUT THE PROJECT. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS REQUIRED DURING CONSTRUCTION.
4. EXISTING LONGITUDINAL DRAINAGE PATTERN SHOWN ON INTERSECTION DETAILS SHALL BE MAINTAINED AT ALL TIMES.
5. PROVIDE EXISTING SPOT ELEVATIONS AND 5% SLOPE INDICATED ON INTERSECTION DETAILS AND SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.

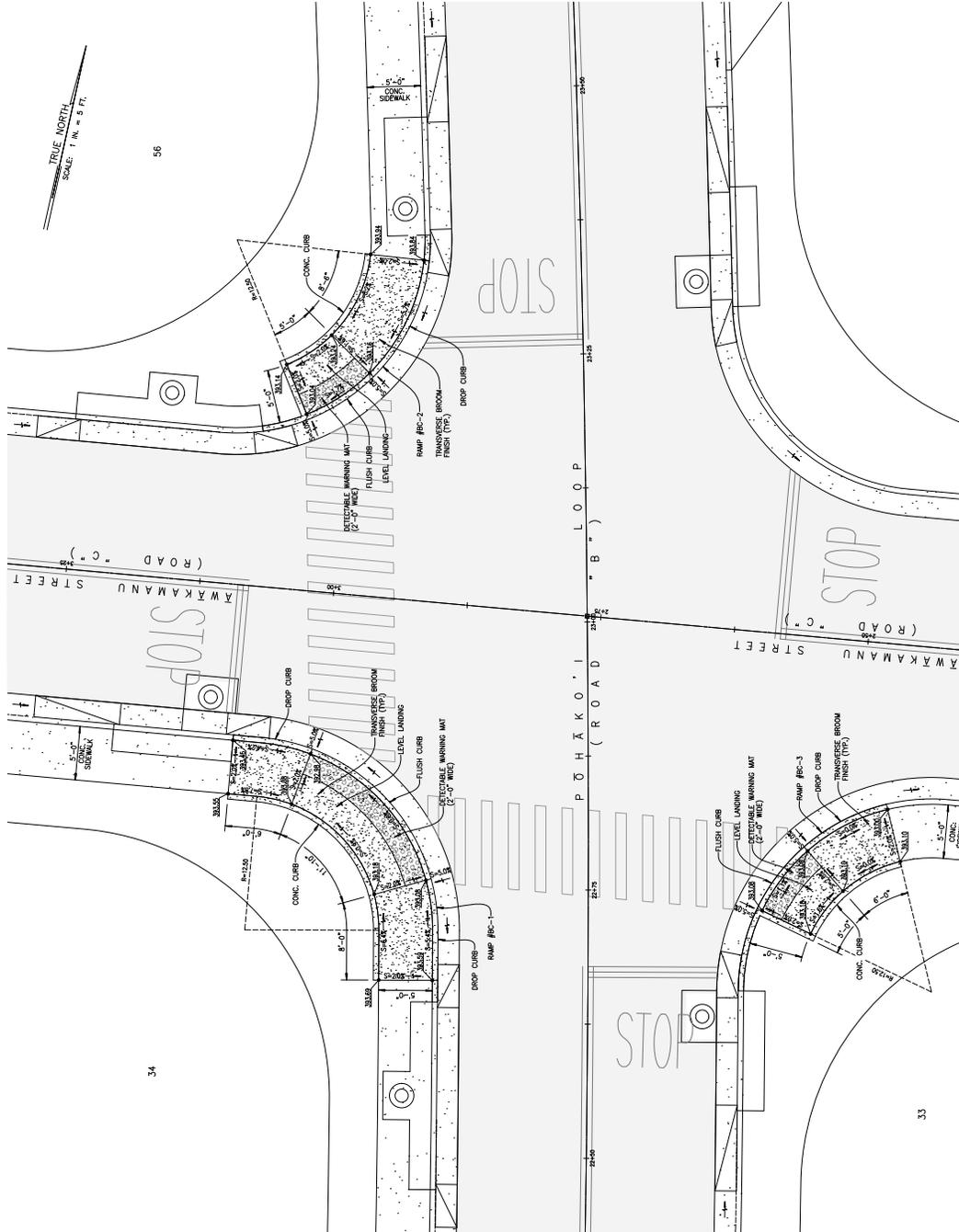
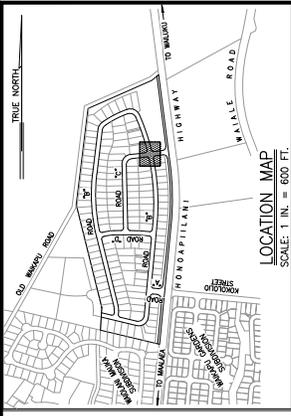
WARREN S. LINSCHÖR ENGINEERING, INC.
 ONE & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1115 KALANANĀ'OHU DRIVE, SUITE 400
 HONOLULU, HAWAII 96813

PUNUANI HOMESTEAD
 WAIKAPU, WAIKUKU, MAUI, HAWAII

INTERSECTION GRADING DETAILS:
 TITLE WHEELCHAIR RAMPS

DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 10/20/20
 D.T.U. NO. 19028
 W.A.S. NO. 19028
 APPROVED BY: [Signature]
 DATE: April 9, 2020
 SHEET NO. 53

SCALE: 1 in. = 5 ft.



INTERSECTION - ROAD "B" AND ROAD "C"
SCALE: 1 IN. = 5 FT.

- NOTES:**
1. THESE SHEET DRAWINGS, INCHES ON CONSTRUCTION PLANS, FOR USE OF PAVEMENT SHALL BE USED FOR THE PURPOSE OF DETERMINING WIDTH, EDGE OF PAVEMENT CONSTRUCTION, SO THE FINAL PROFILE SATISFIES THE FOLLOWING CONDITIONS:
 - A. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
 - B. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED.
 2. EXISTING LONGITUDINAL DRAINAGE PATTERN SHOWN ON INTERSECTION DETAILS SHALL BE MAINTAINED AT ALL TIMES.
 3. PROVIDE NECESSARY ADJUSTMENTS TO ACCOMMODATE BICYCLISTS AND PEDESTRIANS AND SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.

WARREN S. LINSAGOR ENGINEERING, INC.
ONE K STATIONARY ENGINEERING AND ARCHITECTURE
1115 SOUTH KULUWAHINE DRIVE, SUITE 400
HONOLULU, HAWAII 96813

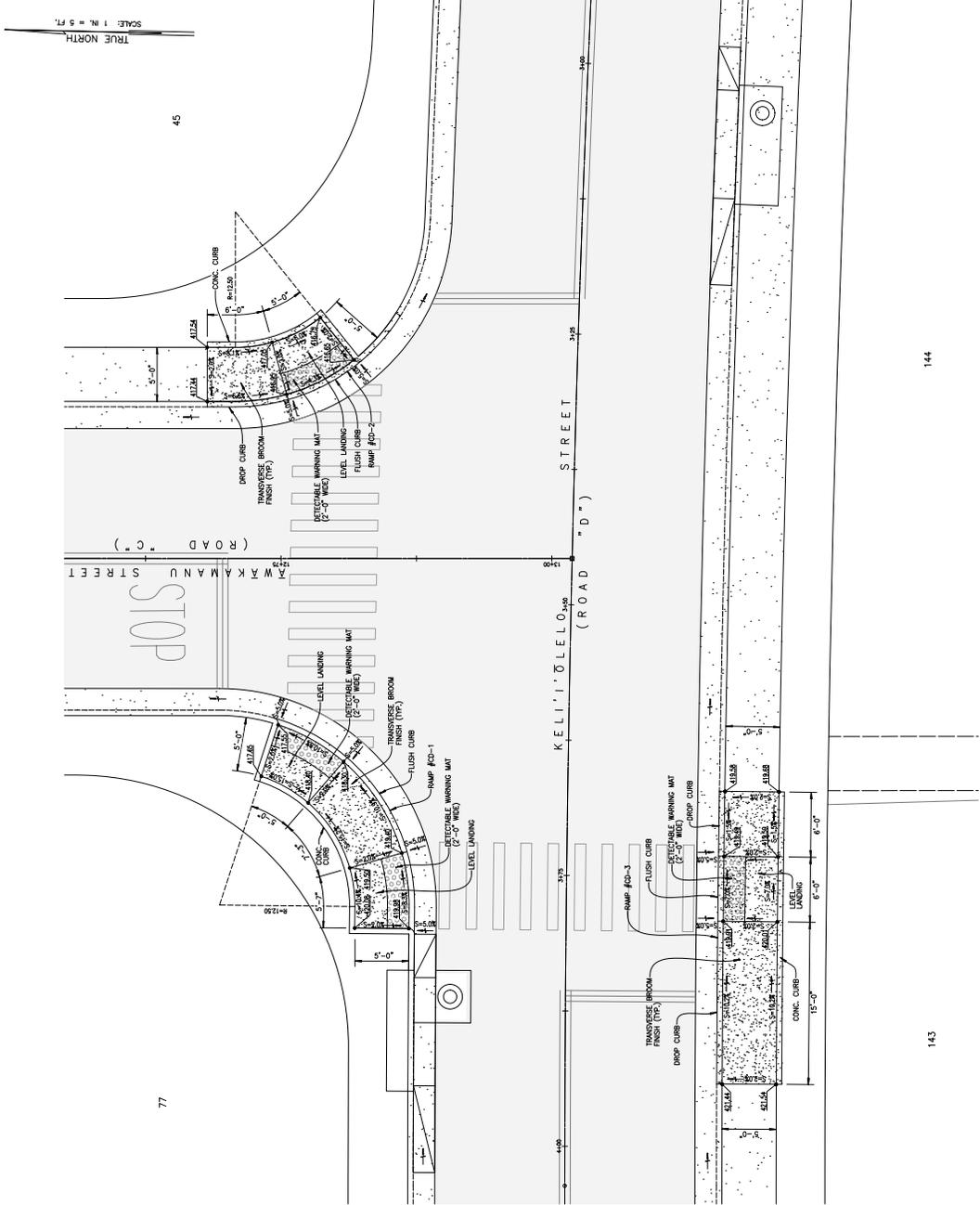
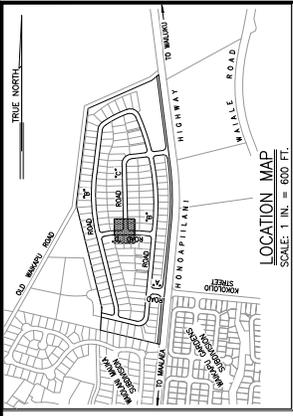
PUNUANI HOMESTEAD
1115 SOUTH KULUWAHINE DRIVE, SUITE 400
HONOLULU, HAWAII 96813

INTERSECTION GRADING DETAILS:
TITLE: WHEELCHAIR RAMPS

DRAWN BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

D.T.U. 19028
JOB NUMBER 54
DATE APRIL 9, 2020
SHEET 54 OF 54

SCALE: 1 in. = 5 ft.



INTERSECTION - ROAD "D" AND ROAD "C"
 SCALE: 1 IN. = 5 FT.

NOTES:
 1. SOME GRAY SHADINGS INDICATED ON CONSTRUCTION PLANS FOR EDGE OF PAVEMENT SHALL BE USED FOR THE PURPOSE OF DETERMINING INITIAL EDGE OF PAVEMENT CONSTRUCTION TO THE FINAL PROFILE SURFACES THE FOLLOWING CONDITIONS:
 A. DRAINAGE PATTERN AS INDICATED ON CONSTRUCTION PLANS SHALL BE MAINTAINED.
 B. PROFILE OF TRANSITION ALONG EDGE OF PAVEMENT FROM STREET TO STREET SHALL BE MAINTAINED. CONTRACTOR SHALL CONTACT ENGINEER FOR APPROVAL PRIOR TO ANY CHANGES TO THE DRAINAGE PATTERN OR PROFILE.
 2. EXISTING LONGITUDINAL DRAINAGE PATTERN SHOWN ON INTERSECTION DETAILS SHALL BE MAINTAINED AT ALL TIMES.
 3. PROVIDE NECESSARY ADJUSTMENTS TO ACCOMMODATE BICYCLISTS AND PEDESTRIANS AND SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.

WARREN S. LINSCHORT, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 4455 KALI ST. #200
 WAIKAPILI, HAWAII 96765

PUNANI HOMESTEAD
 INTERSECTION GRADING DETAILS:
 WAIKAPILI, MAUI, HAWAII

TITLE: WHEELCHAIR RAMPS

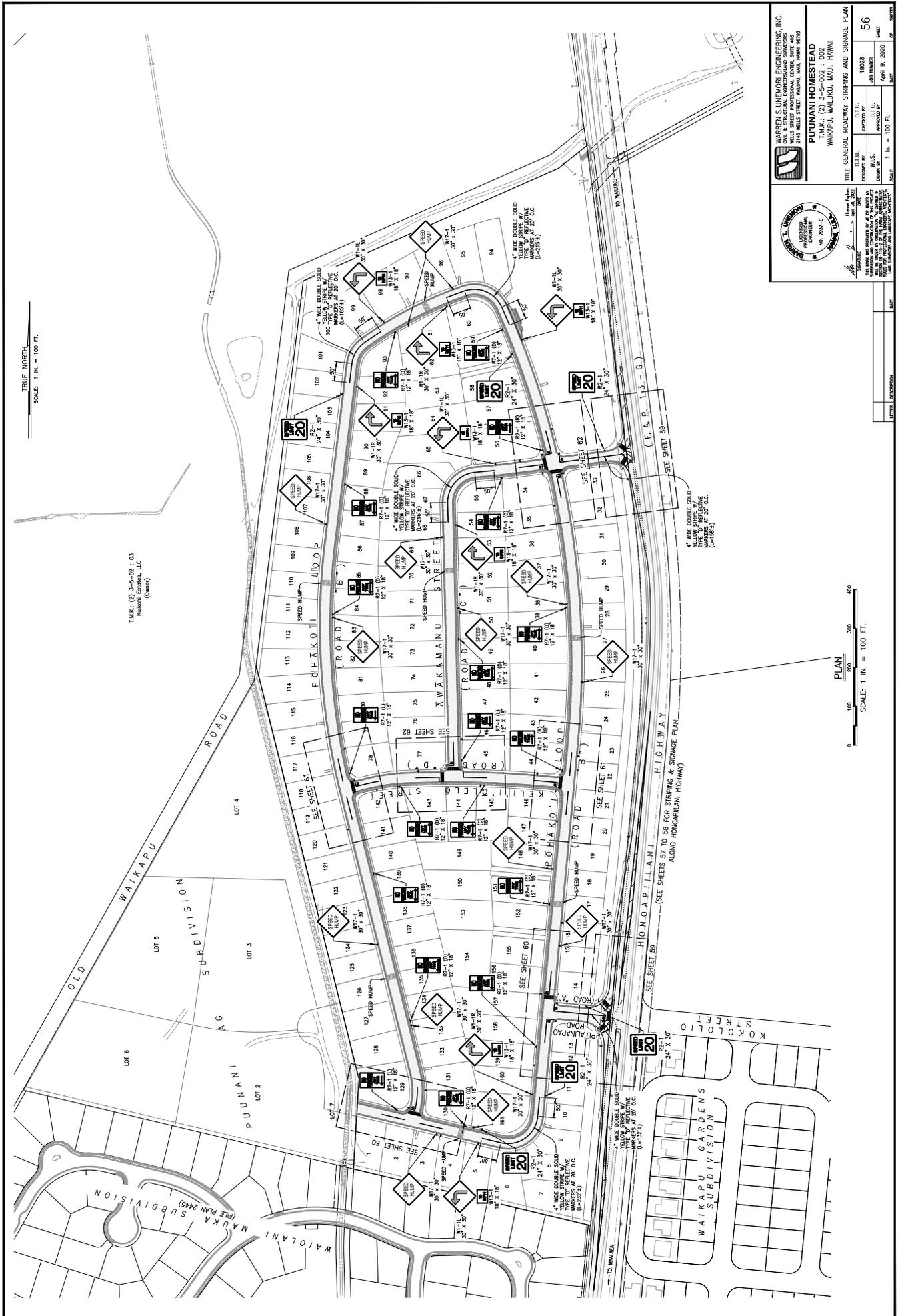
D.T.U. NO. 19028
 CREATED BY: [Name]
 APPROVED BY: [Signature]
 DATE: APRIL 9, 2020

SCALE: 1 IN. = 5 FT.

SHEET NO. 55 OF 55

TRUE NORTH
SCALE: 1 IN. = 100 FT.

TAKA (S) 3-6-09-03
Kulohā Estates, LLC
(Owner)



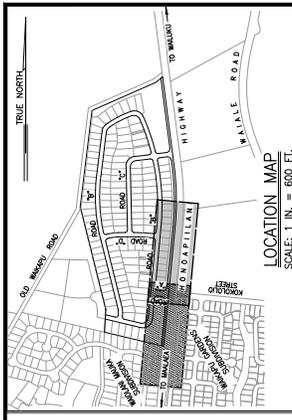
PLAN
SCALE: 1 IN. = 100 FT.

WARREN'S INSHORE ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 1915-C
HAWAII

PUNANI HOMESTEAD
GENERAL ROADWAY STRIPING AND SIGNAGE PLAN

D.T.U.	19028	DATE	1 IN. = 100 FT.
DESIGNED BY	WARREN'S	APPROVED BY	DATE
DRAWN BY	WARREN'S	CHECKED BY	DATE
DATE	APRIL 9, 2020	JOB NUMBER	56
SHEET		OF	

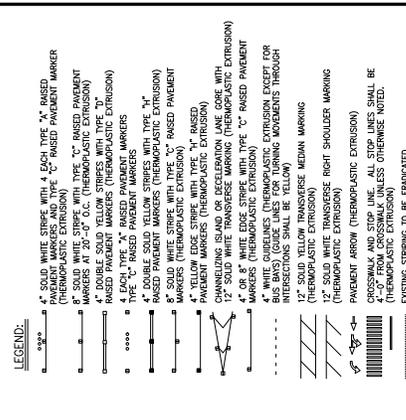
\\p100001\h0001\102019028\p100001\03\striping\signage\striping\Plan-05.dwg



1. EXISTING SIGNS (AND POSTS) TO REMAIN
2. RELOCATE EXISTING SIGNS (AND POSTS)
3. REMOVE EXISTING SIGNS (AND POSTS)
4. INSTALL NEW SIGNS (AND POSTS)
5. REPLACE EXISTING SIGN WITH NEW SIGN

NOTES:

1. TRAFFIC CONTROL MARKINGS AND SIGNAGE WITHIN PUBLIC STREET RIGHTS-OF-WAY SHALL CONFORM TO THE CURRENT EDITION OF THE U.S. DOT FHWA MANUAL ON UNIFORM CONTROL DEVICES (MUTCD) AND THE HAWAIIAN MANUAL ON UNIFORM CONTROL DEVICES (HMUCD) AND THE HAWAIIAN MANUAL ON UNIFORM CONTROL DEVICES (HMUCD) AND THE HAWAIIAN MANUAL ON UNIFORM CONTROL DEVICES (HMUCD).
2. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC EXTRUSION. EXISTING SIGNS AND PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. RED, YELLOW, OR BROWN REFLECTORS AND REFLECTIVE PAINT SHALL BE USED TO MAINTAIN A UNIFORM APPEARANCE AND AVOID CONFUSING MOTORISTS AND PEDESTRIANS.
3. ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER NEEDED SHALL BE COMPLETELY ERADICATED TO AVOID CONFUSING MOTORISTS AND PEDESTRIANS.
4. SIGNAGE SHALL BE INSTALLED BY THE CONTRACTOR TO VERIFY STREET DIMENSIONS AND TO BE USED FOR CONSTRUCTION OF THE CONTRACTOR'S STRIPING AND PAVEMENT MARKINGS. CONTRACTOR SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.
5. TRAFFIC SIGNS SHALL BE WITH ALUMINUM SIGN BLANKS AND WITH HIGH INTENSITY SHEETING.
6. DURING EXISTING SIDEWALK AND SHOULDER IMPROVEMENTS, THE CONTRACTOR SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.
7. PEDESTRIANS AND SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.

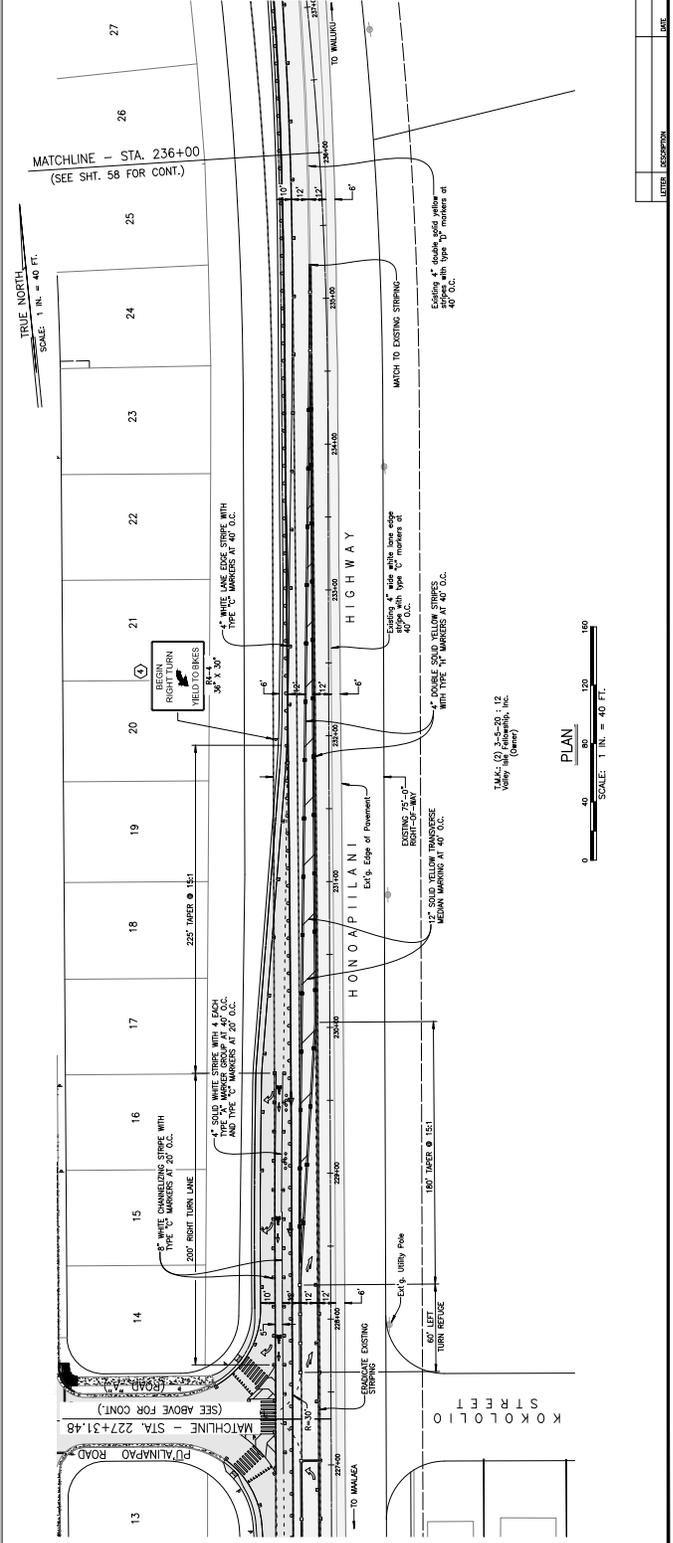
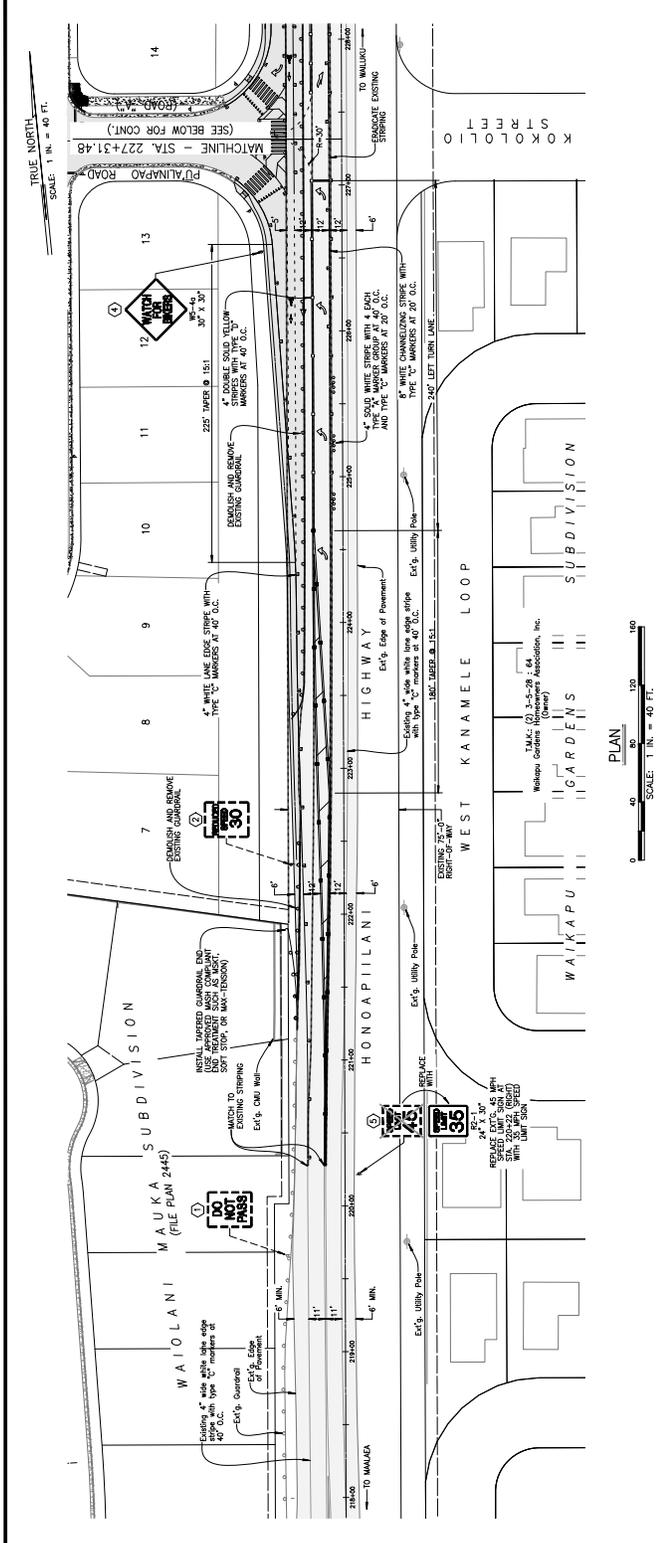


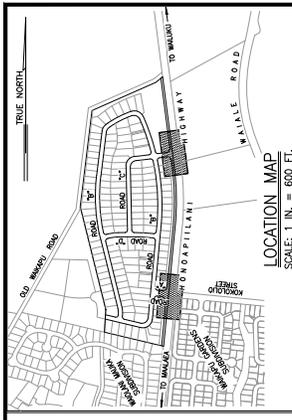
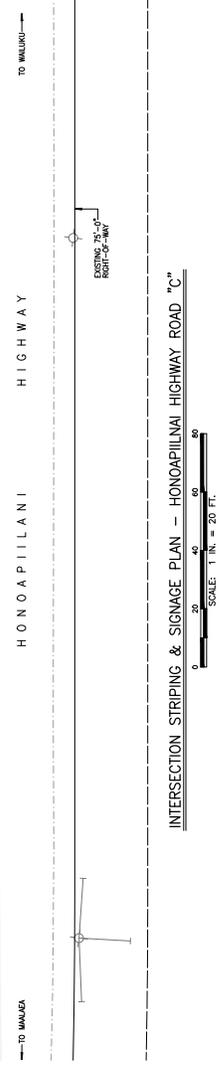
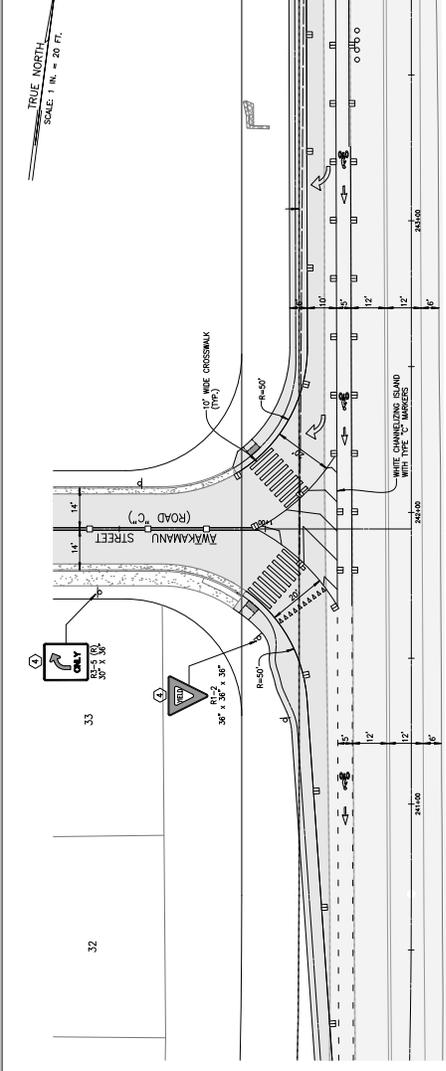
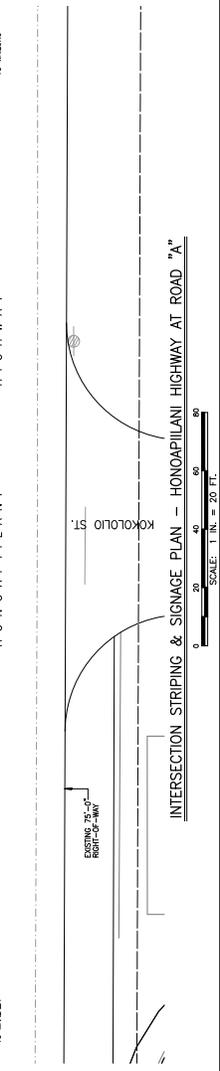
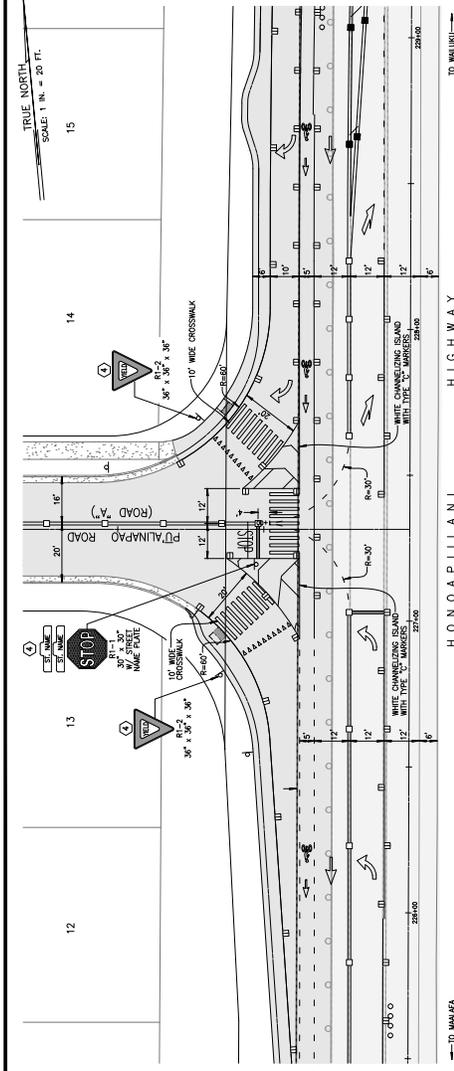
PUNUANI HOMESTEAD
 STRIPING AND SIGNAGE PLAN
 HONOPILANI HIGHWAY

DATE: 10/15/2020
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

D.T.U. 19028
 JOB NUMBER 57
 SHEET [Number]

DATE: 1 IN. = 50 FT.





- ① EXISTING SIGNS (AND POSTS) TO REMAIN
- ② RELOCATE EXISTING SIGNS (AND POSTS)
- ③ REMOVE EXISTING SIGNS (AND POSTS)
- ④ INSTALL NEW SIGNS (AND POSTS)
- ⑤ REPLACE EXISTING SIGN WITH NEW SIGN

NOTES:

1. TRAFFIC CONTROL MARKINGS AND SIGNAGE WITHIN PUBLIC STREET RIGHTS-OF-WAY SHALL CONFORM TO THE CURRENT EDITION OF THE U.S. DOT FHWA MANUAL ON UNIFORM CONTROL DEVICES AND SIGNAGE, AND THE STANDARD SPECIFICATIONS FOR THE MAINTENANCE OF PUBLIC WORKS.
2. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC EXTRUSION.
3. EXISTING SIGNS AND PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION SHALL BE RESTORED AT CONTRACTOR'S EXPENSE.
4. REFLECTORS OR BROWN REFLECTORS AND BROWN PAVED STRIPING, ARROWS, AND OTHER PAVEMENT MARKINGS IN OR NEAR PROJECT AREA AS SHOWN SHALL BE MAINTAINED IN UNIFORM APPEARANCE AND AVOID CONFUSING MOTORISTS AND PEDESTRIANS.
5. ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER NEEDED SHALL BE COMPLETELY EPICATED TO AVOID CONFUSING MOTORISTS AND PEDESTRIANS.
6. SIGNES MUST BE PLACED PRIOR TO CONSTRUCTION.
7. TRAFFIC SIGNS SHALL BE WITH ALUMINUM SIGN BLANKS AND WITH HIGH INTENSITY SHEETING.
8. DURING EXISTING SUPERMARKET AND SHOULDER IMPROVEMENTS, THE CONTRACTORS SHALL MAINTAIN AN ACCESSIBLE ROUTE FOR ALL PEDESTRIANS AND SHALL MAINTAIN AN ACCESSIBLE ROUTE AT ALL TIMES.

- LEGEND:**
- ① SOLID WHITE STRIPES WITH 4" EACH TYPE "A" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ② SOLID WHITE STRIPES WITH TYPE "C" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ③ SOLID WHITE STRIPES WITH TYPE "H" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ④ DOUBLE SOLID YELLOW STRIPES WITH TYPE "C" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑤ SOLID YELLOW STRIPES WITH TYPE "H" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑥ DOUBLE SOLID YELLOW STRIPES WITH TYPE "H" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑦ SOLID YELLOW STRIPES WITH TYPE "C" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑧ YELLOW EDGE STRIPES WITH TYPE "H" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑨ SOLID YELLOW STRIPES WITH TYPE "H" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑩ SOLID YELLOW STRIPES WITH TYPE "C" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑪ SOLID YELLOW STRIPES WITH TYPE "H" BASED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
 - ⑫ SOLID YELLOW TRANSVERSE MEDIAN MARKING (THERMOPLASTIC EXTRUSION)
 - ⑬ WHITE CHANNELIZING ISLAND WITH TYPE "V" MARKERS
 - ⑭ STOP SIGN
 - ⑮ AHEAD SIGN
 - ⑯ RIGHT SHOULDER MARKING (THERMOPLASTIC EXTRUSION)
 - ⑰ PAVEMENT ARROW (THERMOPLASTIC EXTRUSION)
 - ⑱ CROSSWALK AND STOP LINE. ALL STOP LINES SHALL BE 4'-0" FROM CROSSWALK UNLESS OTHERWISE NOTED.

PUNUANI HOMESTEAD
 1075 PUNUANI HOMESTEAD DRIVE
 WAIKAPU, MAUI, HAWAII

INTERSECTION STRIPING & SIGNAGE: HONOAPIILANI HIGHWAY AT ROAD "A"

INTERSECTION STRIPING & SIGNAGE: HONOAPIILANI HIGHWAY AT ROAD "C"

Scale: 1 in. = 20 ft.

DATE: APRIL 9, 2020

SHEET: 59

MARKS ENGINEERING, INC.
 ONE & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1115 SOUTH PUNUANI DRIVE, SUITE 400
 WAIKAPU, MAUI, HAWAII 96793

Professional Engineer
 License No. 1917-C

Professional Engineer
 License No. 1917-C

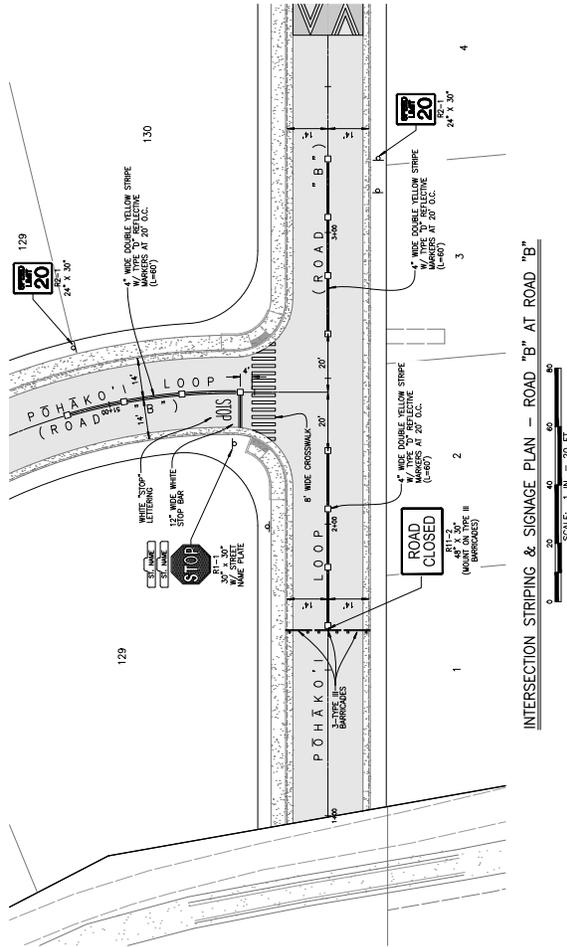
Project No. 1917-C

Scale: 1 in. = 20 ft.

DATE: APRIL 9, 2020

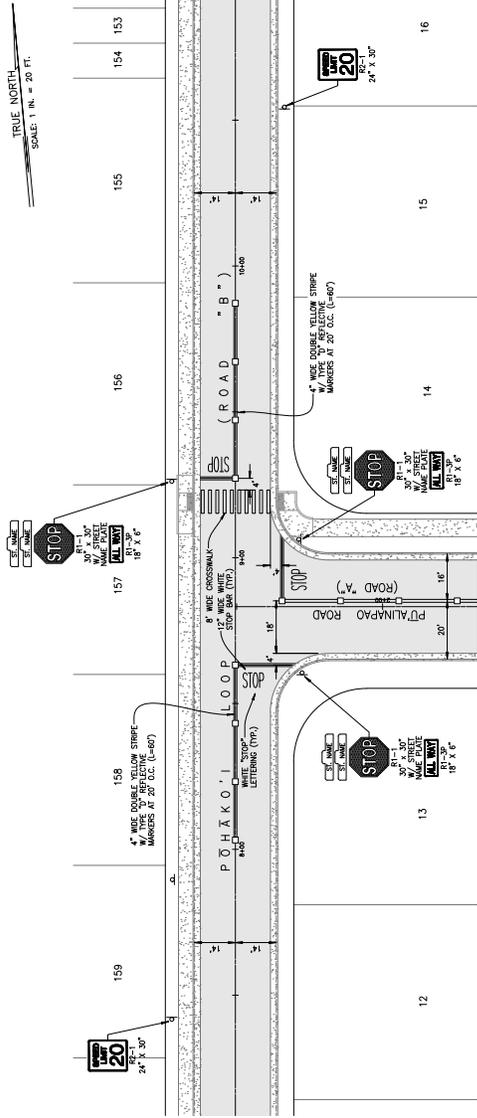
SHEET: 59

TRUE NORTH
SCALE: 1 IN. = 20 FT.



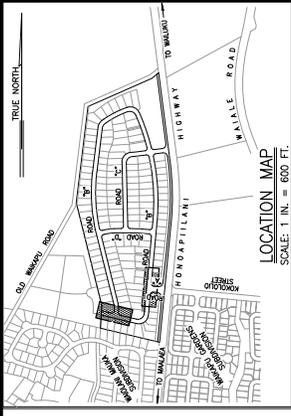
INTERSECTION STRIPING & SIGNAGE PLAN - ROAD "A" AT ROAD "B"

SCALE: 1 IN. = 20 FT.



INTERSECTION STRIPING & SIGNAGE PLAN - ROAD "A" AT ROAD "B"

SCALE: 1 IN. = 20 FT.



LOCATION MAP
SCALE: 1 IN. = 600 FT.

NOTES:

1. ALL CONTROL MARKERS AND SIGNS WITHIN THE STREET RIGHT-OF-WAY SHALL BE PLACED IN THE CORNER EDGES OF THE PAVED SURFACE. UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS ADOPTED BY THE DEPARTMENT OF TRANSPORTATION SHALL BE USED.
2. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC EXTRUSION.
3. EXISTING SIGNS AND PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION SHALL BE RESTORED AT CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL REPLACE MISSING OR BROKEN REFLECTORS AND RESTORE PAVED SURFACES TO ORIGINAL FINISH. REFLECTORS SHALL BE RESTORED TO THE ORIGINAL NEARLY TO MAINTAIN A UNIFORM APPEARANCE AND AVOID CONFUSING MOTORISTS AND PEDESTRIANS.
5. ALL MATERIALS SHALL BE OF THE BEST QUALITY. CONTRACTOR TO VERIFY STREET NAMES WITH ENGINEER PRIOR TO ORDERING MATERIALS.
6. TRAFFIC SIGNS SHALL BE WITH ALUMINUM SIGN BLANKS AND WITH HIGH INTENSITY SHEETING.

LEGEND:

- 1" SOLID WHITE STRIPES WITH 4" RAISED THERMOPLASTIC EXTRUSION
- 6" SOLID WHITE STRIPES WITH 4" RAISED THERMOPLASTIC EXTRUSION
- 12" SOLID WHITE STRIPES WITH 4" RAISED THERMOPLASTIC EXTRUSION
- 4" DOUBLE SOLID YELLOW STRIPES WITH TYPE "C" RAISED THERMOPLASTIC EXTRUSION
- 4" DOUBLE SOLID YELLOW STRIPES WITH TYPE "H" RAISED THERMOPLASTIC EXTRUSION
- 4" YELLOW EDGE STRIPES WITH TYPE "H" RAISED THERMOPLASTIC EXTRUSION
- 4" OR 6" WHITE EDGE STRIPES WITH TYPE "C" RAISED THERMOPLASTIC EXTRUSION
- 12" SOLID YELLOW TRANSPARENCY MEDIA MARKINGS (THERMOPLASTIC EXTRUSION)
- RIGHT SHOULDER MARKING (THERMOPLASTIC EXTRUSION)
- PAVEMENT ARROW (THERMOPLASTIC EXTRUSION)
- CROSSWALK AND STOP LINE. ALL STOP LINES SHALL BE 4" OR 6" FROM CROSSWALK UNLESS OTHERWISE NOTED.
- EXISTING STRIPING TO BE EXCLUDED

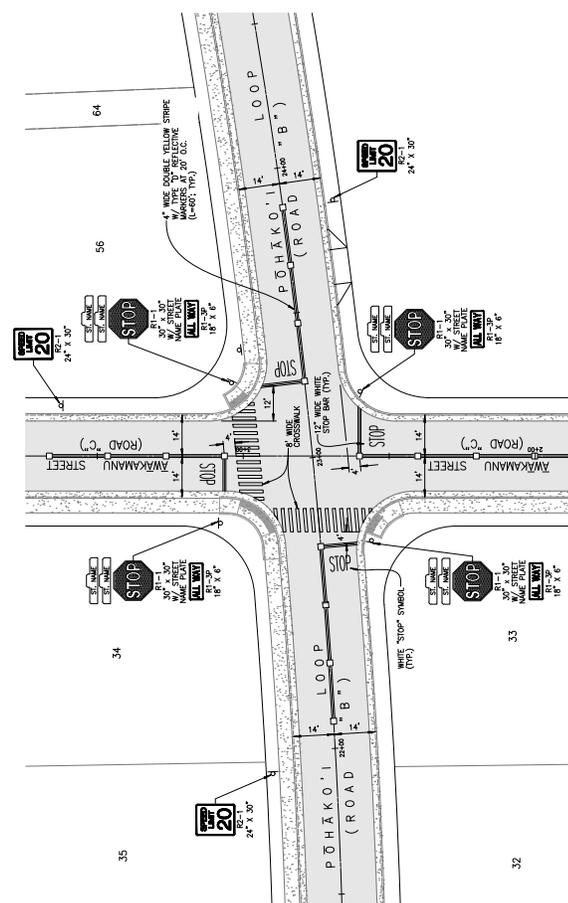


PUNUANI HOMESTEAD
INTERSECTION STRIPING & SIGNAGE: POKAHOI LOOP (ROAD "A") AT POKAHOI LOOP (ROAD "B")

DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
JOB NUMBER	60
SHEET	
SCALE	1 IN. = 20 FT.

WARREN'S INSULAR ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING OFFICE
1150 KALANIANA'OHU DRIVE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 941-1111
FAX: (808) 941-1112
WWW.WARENSINSULARENG.COM

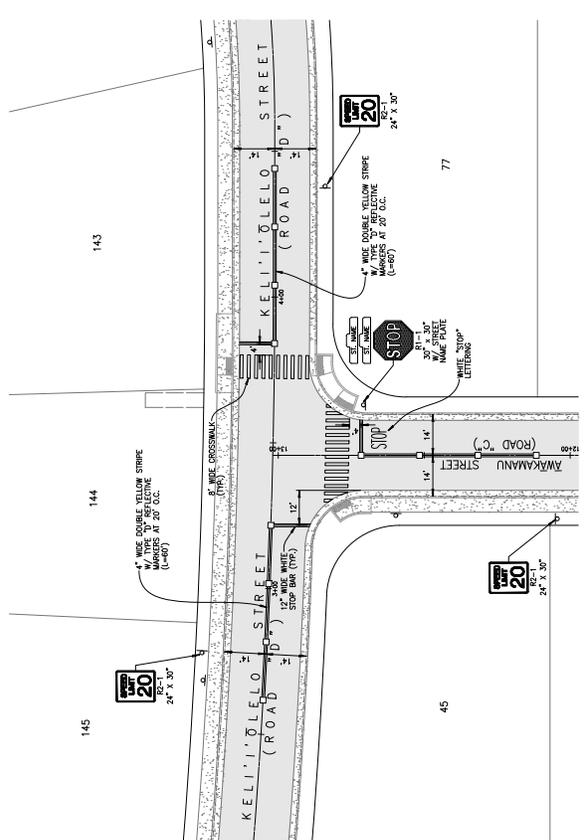
TRUE NORTH
SCALE: 1 IN. = 20 FT.



INTERSECTION STRIPING & SIGNAGE PLAN - ROAD "B" AT ROAD "C"

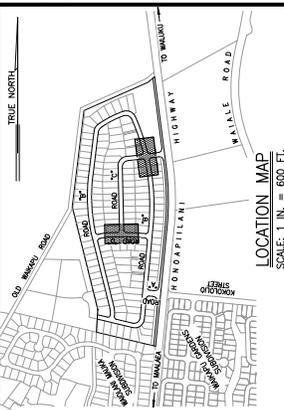
SCALE: 1 IN. = 20 FT.

TRUE NORTH
SCALE: 1 IN. = 20 FT.



INTERSECTION STRIPING & SIGNAGE PLAN - ROAD "C" AT ROAD "D"

SCALE: 1 IN. = 20 FT.



LOCATION MAP
SCALE: 1 IN. = 600 FT.

NOTES:

- SAFETY CONTROL MARKINGS AND SIGNAGE WITH THE STREET MARKINGS SHALL BE CONDUCTED TO THE GRASSY EDGES OF THE CURBSIDE PAVEMENT TO MAINTAIN UNIFORM TRAFFIC CONTROL MARKINGS FOR STREETS AND HIGHWAYS AS REQUIRED BY THE APPLICABLE REGULATIONS.
- ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC EXTRUSION.
- EXISTING SIGNS AND PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION SHALL BE RESTORED AT CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL REPLACE MISSING OR BROKEN REFLECTORS AND RESTORE FADED STRIPING TO MAINTAIN UNIFORM APPEARANCE AND AVOID CONFUSING MOTORISTS AND PEDESTRIANS.
- TRAFFIC SIGNAGE SHALL BE ALUMINUM SIGN BLANKS AND WITH HIGH INTENSITY SHIELDING.

LEGEND:

- 4" SOLID WHITE STRIPES WITH 4" RAISED PAVEMENT MARKER (THERMOPLASTIC EXTRUSION)
- 4" SOLID WHITE STRIPES WITH 4" RAISED PAVEMENT MARKER (THERMOPLASTIC EXTRUSION)
- 4" DOUBLE SOLID YELLOW STRIPES WITH TYPE "D" MARKERS (THERMOPLASTIC EXTRUSION)
- 4" RAISED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
- 4" DOUBLE SOLID YELLOW STRIPES WITH TYPE "H" MARKERS (THERMOPLASTIC EXTRUSION)
- 4" RAISED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
- 4" YELLOW EDGE STRIPES WITH TYPE "H" RAISED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
- 4" SOLID WHITE STRIPES WITH TYPE "D" MARKERS (THERMOPLASTIC EXTRUSION)
- 4" OR 8" WHITE EDGE STRIPES WITH TYPE "C" RAISED PAVEMENT MARKERS (THERMOPLASTIC EXTRUSION)
- 12" SOLID YELLOW TRANVERSE MEDIAN MARKING (THERMOPLASTIC EXTRUSION)
- 4" RIGHT SHOULDER MARKING (THERMOPLASTIC EXTRUSION)
- PAVEMENT ARROW (THERMOPLASTIC EXTRUSION)
- CROSSWALK AND STOP LINE. ALL STOP LINES SHALL BE 4'-0" FROM CROSSWALK UNLESS OTHERWISE NOTED.
- EXISTING STRIPING TO BE ENLIGHTENED

WARREN'S ENGINEERING, INC.
ONE & STRUCTURAL ENGINEERING AND ARCHITECTURE
1115 KĀHĀLELE STREET, SUITE 400
HONOLULU, HAWAII 96813-4000
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.WARRENS-INC.COM

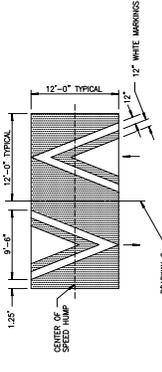
PUNUANI HOMESTEAD
1000 PUNUANI DRIVE
HONOLULU, HAWAII 96813

TITLE: INTERSECTION STRIPING & SIGNAGE, ĀWākāMANU STREET (ROAD "C") AT PŌHĀKO'I LOOP (ROAD "B") & KELI'I'ŌLELO STREET (ROAD "D")

DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: April 9, 2020

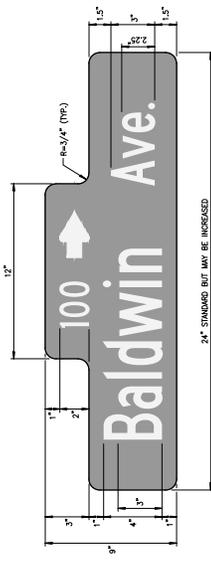
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ISSUED BY	[Signature]
DATE	April 9, 2020
JOB NUMBER	62
APPROVED BY	[Signature]

SCALE: 1 in. = 20 ft.



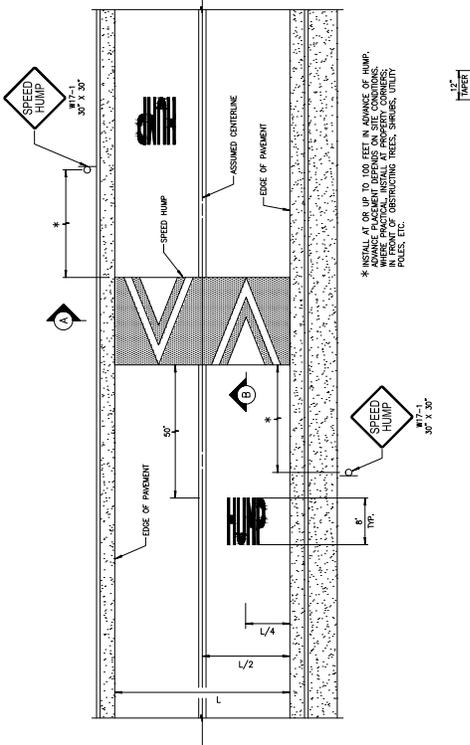
PAVEMENT MARKINGS FOR SPEED HUMP
NOT TO SCALE

- GENERAL NOTES:
1. SPEEDS SHALL CONFORM TO THE LATEST EDITIONS OF THE PUBLICATIONS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," "STANDARD ALPHABETS FOR HIGHWAY LETTERING," AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2008."
 2. ALL SIGNS SHALL BE MADE OF HIGH INTENSITY REFLECTIVE SHEETING MATERIALS.
 3. INSTALL WARNING SIGNS AT EACH APPROACH OF A SPEED BUMP OR SERIES OF SPEED BUMPS WITHIN A STREET BLOCK. WARNING SIGNS SHOULD BE SPACED AT 200 FEET TO ADVANCE FOR EACH BUMP. PROVIDE A SERIES OF BUMPS SPACING ON THE TYPICAL ROAD SPACING BUMPS.
 4. PAVEMENT WORKING SHALL CONFORM TO THE STANDARD PLAN 1E-30.
 5. CONFORM TO THE REQUIREMENTS OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2008."
 6. THE COUNTY INSPECTOR WILL TEST THE SURFACE OF THE HUMP USING A PARABOLIC TEMPLATE AT THE MIDPOINT. THE VARIATION OF THE SURFACE FROM THE TESTING EDGE SHALL NOT EXCEED 1/8" (3.2 MM).
 7. CONTACT DEPARTMENT OF WATER SUPPLY INSPECTOR AT 270-2340 TO ADVANCE FOR LOCATION OF EXISTING WATER LATERALS AND VALVE PRIOR TO CONSTRUCTION.
 8. PRIOR TO INSTALLING SIGNS IN THE SHOULDER AREAS.

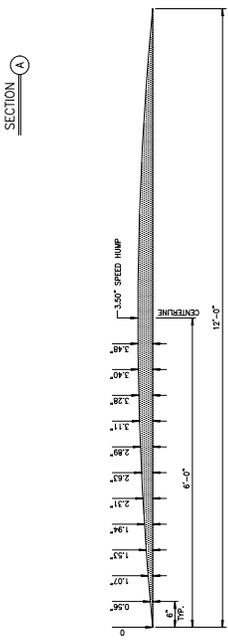


DETAIL - STREET NAME PLATE
NOT TO SCALE

- NOTES:
1. CONTRACTOR TO VERIFY STREET NAMES PRIOR TO ORDERING MATERIALS.
 2. INSTALL PER FPM STANDARD DETAIL T-1.
 3. SIGNS SHALL BE MADE OF TYPE II HIGH INTENSITY REFLECTIVE SHEETING MATERIAL.
 4. INITIAL UPPER CASE LETTERS SHALL BE COMPOSED OF A COMBINATION OF CONTOUR-OUTLINED LETTERS WITH INITIAL UPPER CASE LETTERS.



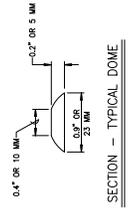
PLAN



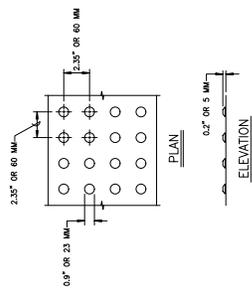
SECTION A-A

DETAIL - SPEED HUMP
NOT TO SCALE

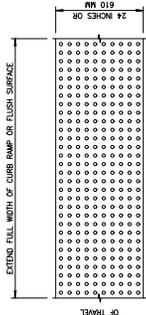
- NOTES:
1. DETECTABLE WARNING SIGNS SHALL BE 24 INCHES (610 MM) IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
 2. LOCATION: THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB POTENTIAL 'HEAD-ON' TRAVEL. TYPICAL HEAD-ON IS 6 TO 8 INCHES (150 TO 200 MM) FROM CURB LINE OR OTHER SURFACE.
 3. DOME SIZE AND SPACING: TRUNCATED DOMES SHALL HAVE A DIAMETER OF A 0.9 INCH (23 MM) AT THE BOTTOM, A DIAMETER OF 2.5 INCH (63.5 MM) AT THE TOP, AND A HEIGHT OF 0.2 INCH (5 MM) AND A CENTER-TO-CENTER SPACING OF 4.25 INCHES (108 MM) THROUGHOUT THE USE OF A SQUARE ARRANGEMENT.
 4. DOME ALIGNMENT: DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL.
 5. VISUAL CONTRAST: THERE SHALL BE A MINIMUM OF 70 PERCENT CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE ON THE DETECTABLE WARNING SHALL BE AT LEAST 20 PERCENT.
 6. MATERIALS: TRUNCATED DOME DETECTABLE WARNING SYSTEM SHALL CONSIST OF DETECTABLE WARNING MATERIALS THAT MEET THE REQUIREMENTS OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2008." SHOP DRAWINGS AND SAMPLE (8" X 8" MIN.) SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.



SECTION - TYPICAL DOME



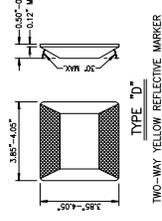
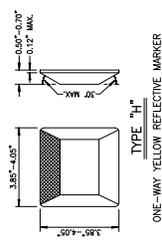
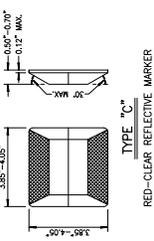
DETAIL - DOME SPACING



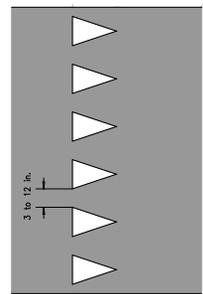
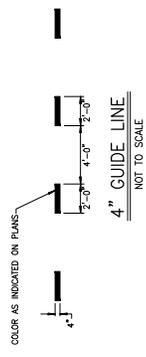
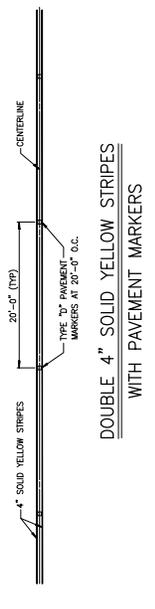
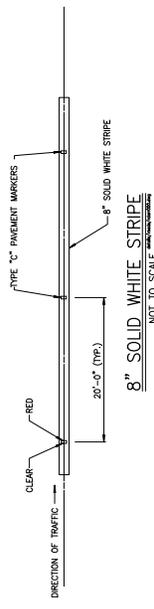
PLAN - DOME ALIGNMENT

DETAIL - DETECTABLE WARNING ON CURB RAMPS
NOT TO SCALE

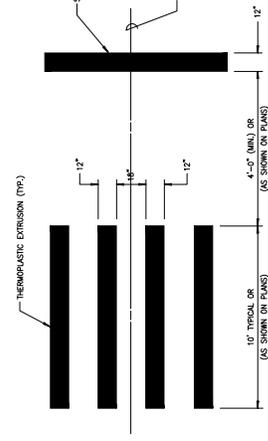
		WARRENFELS ENGINEERING, INC. CIVIL & STRUCTURAL ENGINEERING AND SURVEYING FULLY LICENSED PROFESSIONAL ENGINEERING FIRM LICENSE NO. 15057-C	
		PU'UNANI HOMESTEAD (A) 15057-C WAIKAPU, WAILUKU, MAUI, HAWAII	
		TITLE: GENERAL STRIPING DETAILS D.T.U. NO. 19028 EXPIRES: 12/31/2020 W.A.S. NO. 1917-C NAME BY: [Signature] APPROVED BY: [Signature] DATE: AS SHOWN	
LETTER	OCCUPATION	DATE	DATE
			63
			APR 9, 2020
			SHEET
			OF



RAISED PAVEMENT MARKER DETAILS
NOT TO SCALE



- NOTES:**
1. TRIANGLE HEIGHT IS EQUAL TO 1.5 TIMES THE BASE DIMENSION.
 2. YIELD LINES MAY BE SMALLER THEN SUGGESTED WHEN INSTALLED ON UNPAVED SURFACES OR SITUATIONS SUCH AS SHARED-USE PATHS.

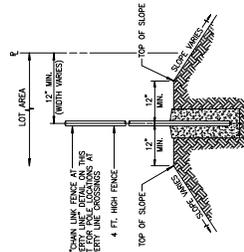


- NOTES:**
1. FOR LOCATION OF SIGNS AND MARKINGS AT INTERSECTION, SEE INTERSECTION DETAILS.
 2. FOR LOCATION OF SIGN AND MARKINGS AT INTERSECTION, SEE INTERSECTION DETAILS.
 3. ALL CONSTRUCTION WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 4. LAYOUT OF PAVEMENT MARKINGS AND STRIPING SHALL BE DONE BY THE CONTRACTOR PRIOR TO COMMENCING WORK AND SHALL BE APPROVED BY THE ENGINEER.
 5. ALL EXISTING STRIPING SHALL BE ENGRAINED OR SANDGRAINED.
 6. ALL EXISTING STRIPING SHALL BE ENGRAINED OR SANDGRAINED.
 7. DETOURMENT OF TRAFFIC SHALL BE CONCEPTUAL ONLY. FINAL DETOURMENT LOCATIONS SHALL BE DETERMINED BY ENGINEER.

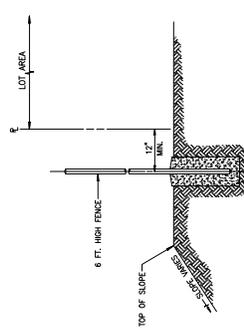
WARREN S. LINSAGOR ENGINEERING, INC.
ONE & STRUCTURAL ENGINEERING AND ARCHITECTURE
1111 KALANANAKUHIWA DRIVE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 531-8888
FAX: (808) 531-8889
WWW.WSLEI.COM

PUNUANI HOMESTEAD
1000 PUNUANI ROAD
WAIKAPU, WAILUKU, MAUI, HAWAII

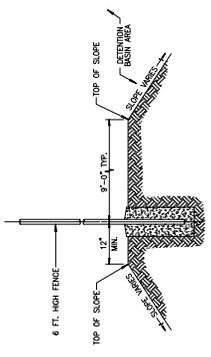
TITLE: GENERAL STRIPING DETAILS
D.T.L. 19028
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: APRIL 9, 2020
JOB NUMBER: 64
APPROVED BY: [Signature]
DATE: [Signature]
SCALE: AS SHOWN
SHEET: 64 OF 64



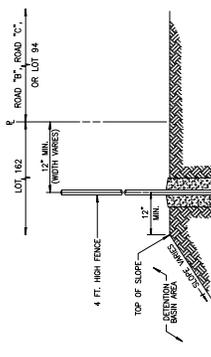
(ALONG LOTS 1 AND 94 TO 129)
FENCE DETAIL "A"
 NOT TO SCALE



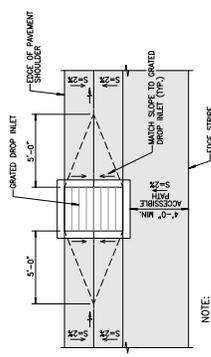
(ALONG LOTS 7 TO 33)
FENCE DETAIL "B"
 NOT TO SCALE



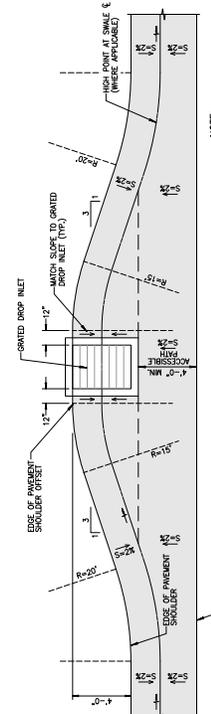
(ALONG LOT 162)
FENCE DETAIL "C"
 NOT TO SCALE



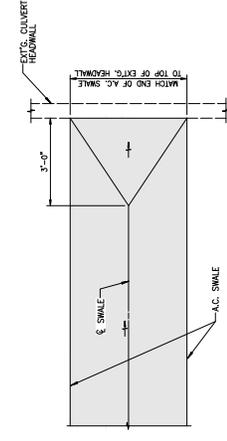
(ALONG LOT 162)
FENCE DETAIL "D"
 NOT TO SCALE



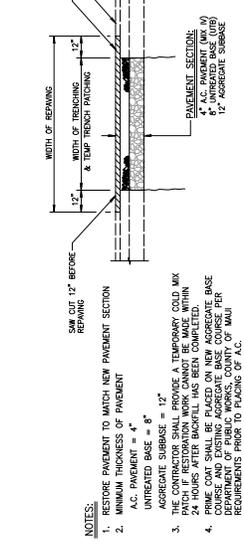
SLOPE TRANSITION AT GRATED DROP INLETS
 SCALE: 1/4" = 1'-0"
 NOTE:
 1. THIS DETAIL IS APPLICABLE TO #1-1, #1-2, #1-3, #1-4, #1-5, #1-6, #1-7, #1-8 AND #1-9.



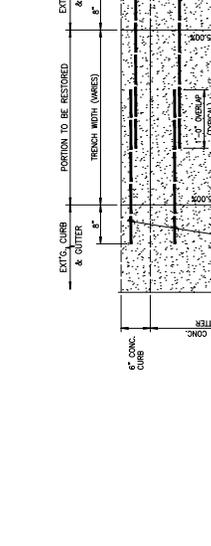
PAVED SHOULDER OFFSET AT GRATED DROP INLETS
 ALONG HONOAPILANI HIGHWAY
 SCALE: 1/4" = 1'-0"



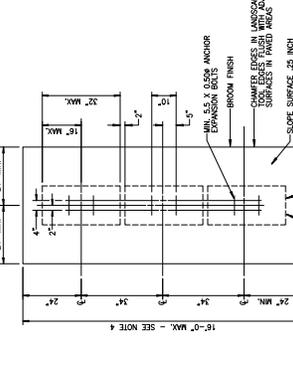
A.C. SWALE CONNECTION TO EXISTING CULVERT HEADWALL
 NOT TO SCALE



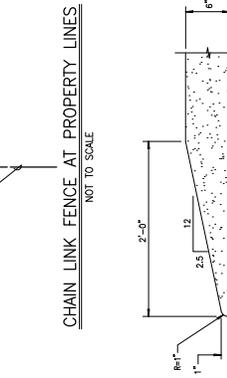
PAVEMENT RESTORATION (HONOAPILANI HIGHWAY)
 NOT TO SCALE



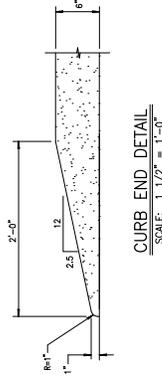
CURB AND GUTTER RESTORATION
 NOT TO SCALE



CLUSTER BOX UNIT (CBU) INSTALLATION - MULTIPLE UNIT
 NOT TO SCALE



CHAIN LINK FENCE AT PROPERTY LINES
 NOT TO SCALE



CURB END DETAIL
 SCALE: 1/2" = 1'-0"



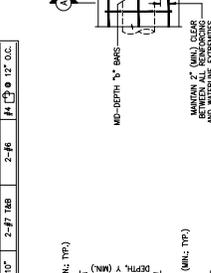
PUNJANI HOMESTEAD 12121/12122 WAIKAPU, MAUI, HAWAII	
TITLE SITE DETAILS	D.T.U. 19028
DATE	APRIL 9, 2020
SCALE	AS SHOWN
SHEET	65

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
DATE	DATE

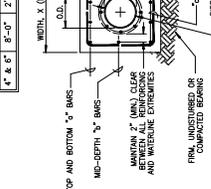
LETTER	DESCRIPTION

REINFORCING BAR & DIMENSION SCHEDULE				
DIAMETER (IN.)	LENGTH (IN.)	REINFORCING BAR & DIMENSION SCHEDULE		
		1/2" BARS	3/4" BARS	1" BARS
16"	4'-0"	3-8"	2-8"	5-8"
16"	5'-0"	3-8"	2-8"	5-8"
16"	6'-0"	3-8"	2-8"	5-8"
16"	7'-0"	4'-0"	3-8"	5-8"
16"	8'-0"	4'-0"	3-8"	5-8"
16"	9'-0"	4'-0"	3-8"	5-8"
16"	10'-0"	4'-0"	3-8"	5-8"
16"	11'-0"	4'-0"	3-8"	5-8"
16"	12'-0"	4'-0"	3-8"	5-8"
16"	13'-0"	4'-0"	3-8"	5-8"
16"	14'-0"	4'-0"	3-8"	5-8"
16"	15'-0"	4'-0"	3-8"	5-8"
16"	16'-0"	4'-0"	3-8"	5-8"
16"	17'-0"	4'-0"	3-8"	5-8"
16"	18'-0"	4'-0"	3-8"	5-8"
16"	19'-0"	4'-0"	3-8"	5-8"
16"	20'-0"	4'-0"	3-8"	5-8"
16"	21'-0"	4'-0"	3-8"	5-8"
16"	22'-0"	4'-0"	3-8"	5-8"
16"	23'-0"	4'-0"	3-8"	5-8"
16"	24'-0"	4'-0"	3-8"	5-8"
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16"	27'-0"	4'-0"	3-8"	5-8"
16"	28'-0"	4'-0"	3-8"	5-8"
16"	29'-0"	4'-0"	3-8"	5-8"
16"	30'-0"	4'-0"	3-8"	5-8"
16"	31'-0"	4'-0"	3-8"	5-8"
16"	32'-0"	4'-0"	3-8"	5-8"
16"	33'-0"	4'-0"	3-8"	5-8"
16"	34'-0"	4'-0"	3-8"	5-8"
16"	35'-0"	4'-0"	3-8"	5-8"
16"	36'-0"	4'-0"	3-8"	5-8"
16"	37'-0"	4'-0"	3-8"	5-8"
16"	38'-0"	4'-0"	3-8"	5-8"
16"	39'-0"	4'-0"	3-8"	5-8"
16"	40'-0"	4'-0"	3-8"	5-8"

- NOTES:
- CONCRETE: $f_c = 4000$ P.S.I. (MIN.)
 - STEEL REINFORCEMENT: $f_y = 60$ K.S.I. (ASTM A615 GRADE 60)
 - HYDRAULIC DESIGN PRESSURE: 250 P.S.I. (150 P.S.I. PLUS 100 P.S.I. SURGE)
 - CONTRACTOR SHALL SUBMIT CERTIFICATION OF COMPLIANCE WITH ABOVE WORKING DRAWINGS TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
 - FOR PRE-CAST APPLICATIONS, CONTRACTOR SHALL SUBMIT STRUCTURALLY-DESIGNED JOINTS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
 - CONCRETE SHALL BE PLACED IN LIFTS NOT EXCEEDING 4 FEET (1200 MM) PER LIFT. LIFTS SHALL BE PLACED AT LEAST TEN (10) MINUTES PRIOR TO FABRICATION OF STRUCTURE.
 - ALL INTERIOR JOINTS AND FITTINGS SHALL NOT BE ALLOWED.



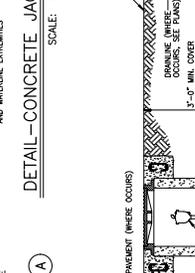
DETAIL - REINFORCEMENT AT BENDS
SCALE: 1/2 IN. = 1 FT.



DETAIL - CONCRETE JACKET AT INTERIOR JOINTS
SCALE: 1/2 IN. = 1 FT.



DETAIL - ADDITIONAL REINFORCEMENT AT BENDS
SCALE: 1/2 IN. = 1 FT.



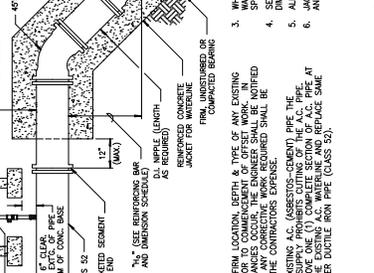
SECTION
SCALE: 1/2 IN. = 1 FT.



DETAIL - CONCRETE JACKET AT INTERIOR JOINTS
SCALE: 1/2 IN. = 1 FT.



DETAIL - ADDITIONAL REINFORCEMENT AT BENDS
SCALE: 1/2 IN. = 1 FT.



ELEVATION
SCALE: 1/2 IN. = 1 FT.



DETAIL - CONCRETE JACKET AT INTERIOR JOINTS
SCALE: 1/2 IN. = 1 FT.



DETAIL - ADDITIONAL REINFORCEMENT AT BENDS
SCALE: 1/2 IN. = 1 FT.

- NOTES:
- CONTRACTOR SHALL CONFIRM LOCATION, DEPTH & TYPE OF ANY EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK. IF ANY UTILITIES ARE ENCOUNTERED IMMEDIATELY, OTHERWISE ANY CORRECTIVE WORK REQUIRED SHALL BE PERFORMED SOLELY AT THE CONTRACTOR'S EXPENSE.
 - CONTRACTOR SHALL REMOVE ONE (1) COMPLETE SECTION OF A.C. PIPE AT DEPARTMENT OF WATER SUPPLY FACILITY CUTTING OF THE A.C. PIPE. CONTRACTOR SHALL REMOVE ONE (1) COMPLETE SECTION OF A.C. PIPE AT DEPARTMENT OF WATER SUPPLY FACILITY CUTTING OF THE A.C. PIPE WITH EQUIVALENT DIAMETER DUCTILE IRON PIPE (CLASS 52).
 - WHEREVER CONSTRUCTION JOINTS ARE REQUIRED 6" RUBBER OR NEOPRENE WATERSTOPS SHALL BE INSTALLED. WATERSTOP SHALL BE OF THE TYPE SPECIFIED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 - SEE REINFORCING BAR & DIMENSION SCHEDULE FOR REINFORCING ANS DIMENSIONS.
 - ALL INTERIOR JOINTS AND FITTINGS SHALL BE "M".
 - JACKETED JOINTS SHALL BE CONSTRUCTED WITH AN APPROPRIATE JOINT DESIGN. AN APPROPRIATE JOINT DESIGN IS A STRUCTURALLY-DESIGNED JOINT WITH EQUIVALENT DIAMETER DUCTILE IRON PIPE (CLASS 52).

DETAIL - REINF. CONC. WATERLINE JACKET FOR VERTICAL OFFSETS
SCALE: 1/2 IN. = 1 FT.



DETAIL - REINF. CONC. WATERLINE JACKET FOR VERTICAL OFFSETS
SCALE: 1/2 IN. = 1 FT.

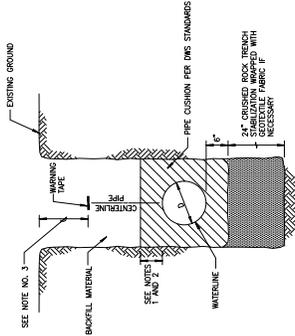


DETAIL - ADDITIONAL REINFORCEMENT AT BENDS
SCALE: 1/2 IN. = 1 FT.

WARREN'S ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 1815-C

PUNUANI HOMESTEAD
WAIKAPU, WAIKUKI, MAUI, HAWAII

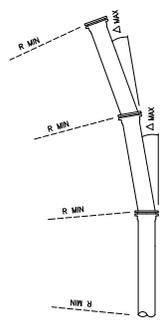
TITLE: WATER DETAILS
D.T.U. 19028
DESIGNED BY: [Name]
CHECKED BY: [Name]
APPROVED BY: [Name]
DATE: APRIL 9, 2020
JOB NUMBER: 66
SHEET: 66 OF 66
SCALE: AS SHOWN



TYPICAL WATERLINE TRENCH SECTION (PER DWS STD. DET. P10)
NOT TO SCALE

NOTES:

1. 12" OF CUSHION MATERIAL SHALL BE PLACED OVER THE TOP OF PIPE FOR PIPES 18" OR SMALLER AT LOCATIONS WHERE INSERT IS ABOVE 4'-0" FOOT ELEVATION.
2. 12" OF CUSHION MATERIAL SHALL BE PLACED OVER THE TOP OF PIPE FOR PIPES 12" OR SMALLER AT LOCATIONS WHERE INSERT IS ABOVE 4'-0" FOOT ELEVATION.
3. WARNING TAPE SHALL BE INSTALLED OVER THE CENTERLINE OF PIPES, BENDS, AND FITTINGS. IT SHALL BE INSTALLED AT LEAST 12" BELOW THE FINISHED GRADE OR DIRECTLY BELOW THE EXISTING STRUCTURE.
4. BACKFILL SHALL BE REMOVED AT SURVEY POINTS IDENTIFIED BY TRENCH.



NOTES:

1. CONTRACTOR SHALL LIMIT FULL LENGTH DEFLECTIONS (Δ MAX) FOR PUSH-IN TYPE JOINT & MECHANICAL JOINT PIPES TO 50% OF THE MAXIMUM ALLOWABLE DEFLECTIONS SPECIFIED IN THE MANUFACTURER'S, OR THE VALUES SPECIFIED AS FOLLOWS, WHICHEVER IS LESS:

SIZE OF PIPE	Δ MAX	Δ MIN
12" & LESS	2" 30'	10"
15" PER 18' LENGTH	0/5" PER 18' LENGTH	

DETAIL - HORIZ. & VERT. PIPE DEFLECTION
NOT TO SCALE

STANDARD WATER DETAILS

THE FOLLOWING DETAILS AS SHOWN ON APPROVED MATERIAL LIST AND STANDARD ARE SPECIFICALLY REFERENCED WITHIN THESE PLANS AND SHALL BE CONSIDERED PART OF THE CONTRACT. CONTRACTOR SHALL VERIFY THE EXISTENCE OF THE CONTRACTOR FROM CONSULTING WITH ALL PERTINENT PARTS OF THE FOREMENTIONED LIST, STANDARD DETAILS AND STANDARDS.

PLATE

- B1.....REINFORCED CONCRETE JACKET - TYPICAL DETAIL
- B2.....CONCRETE THROUST BLOBS
- B6-B8.....TOP VERTICAL THROUST BLOBS
- B16-B18.....CONCRETE THROUST BEAM
- F16-F19.....FIRE HYDRANT CONNECTION
- L25-L26, REV. 2021.....SINGLE SERVICE LATERAL (TYPE "A", 5/8" METER)
- L27-L28, REV. 2003.....DOUBLE SERVICE LATERAL (TYPE "A-1", 5/8" METERS)
- V1.....AIR RELIEF VALVE CONNECTION
- V4.....AIR RELIEF VALVE CONNECTION
- V2.....SLIDING VALVE BOX ASSEMBLY
- V21.....CLEANOUT
- V23, REV. 2018.....AIR INSTALLATION TYPE "B" MANHOLE

CONTENTS

- B1.....REINFORCED CONCRETE JACKET - TYPICAL DETAIL
- B2.....CONCRETE THROUST BLOBS
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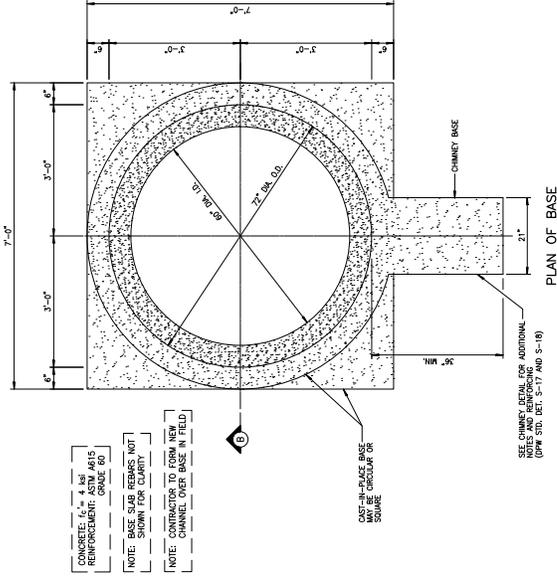
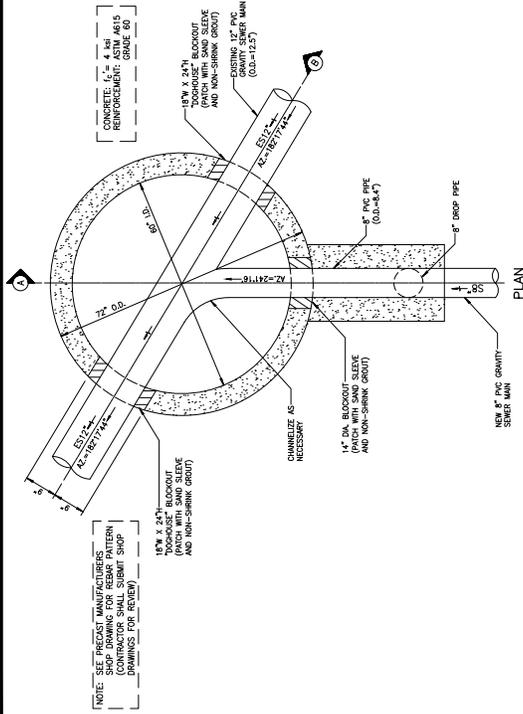


WARREN'S LINSAGOR ENGINEERING, INC.
ONE & STRUCTURAL ENGINEERING/PLUMBING
1111 SOUTH KAUAI AVENUE, SUITE 400
LAWAIE, HAWAII 96741-1400
PHONE: (808) 251-1111
FAX: (808) 251-1112

PUNANI HOMESTEAD
1111 SOUTH KAUAI AVENUE, SUITE 400
LAWAIE, HAWAII 96741-1400
WAIKAPU, WAILUKU, MAUI, HAWAII

TITLE: WATER DETAILS		D.T.U.	19028
DATE	DATE	DATE	DATE
DESIGNED BY	W.A.S.	CHECKED BY	DATE
DRAWN BY	DATE	APPROVED BY	DATE
SCALE	AS SHOWN	JOB NUMBER	67
SHEET		DATE	APRIL 9, 2020

LETTER	DESCRIPTION	DATE

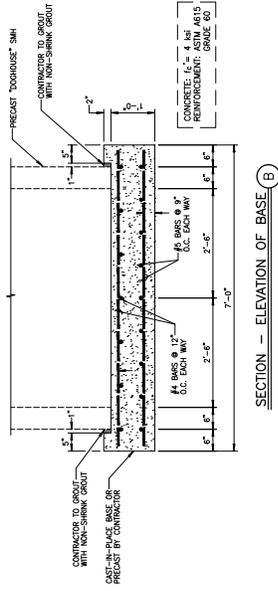


CONCRETE: 4\"/>

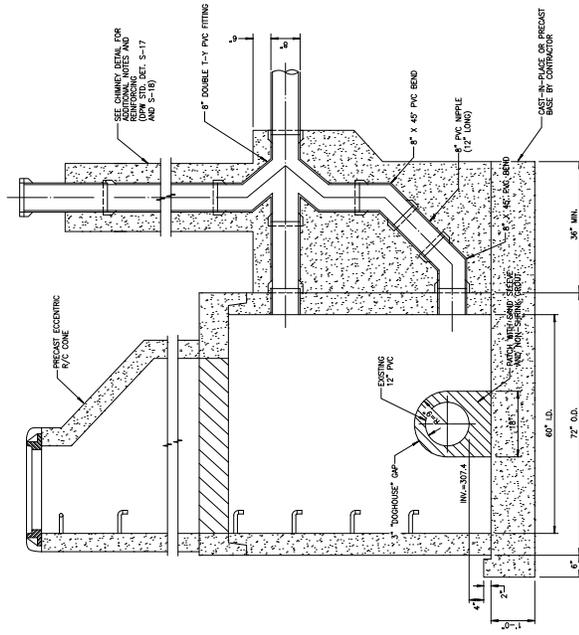
NOTE: BASE SLAB REBARS NOT SHOWN FOR CLARITY.

NOTE: CONTRACTOR TO FORM NEW CHANNEL OVER BASE IN FIELD.

SEE CHIMNEY DETAIL FOR ADDITIONAL NOTES AND REINFORCING (SEE DET. S-17 AND S-18)



SECTION - ELEVATION OF BASE (B)



SECTION (A)

DETAIL - PRECAST "DOGHOUSE" SEWER MANHOLE SMH #J-1 (#KA20XG5810)

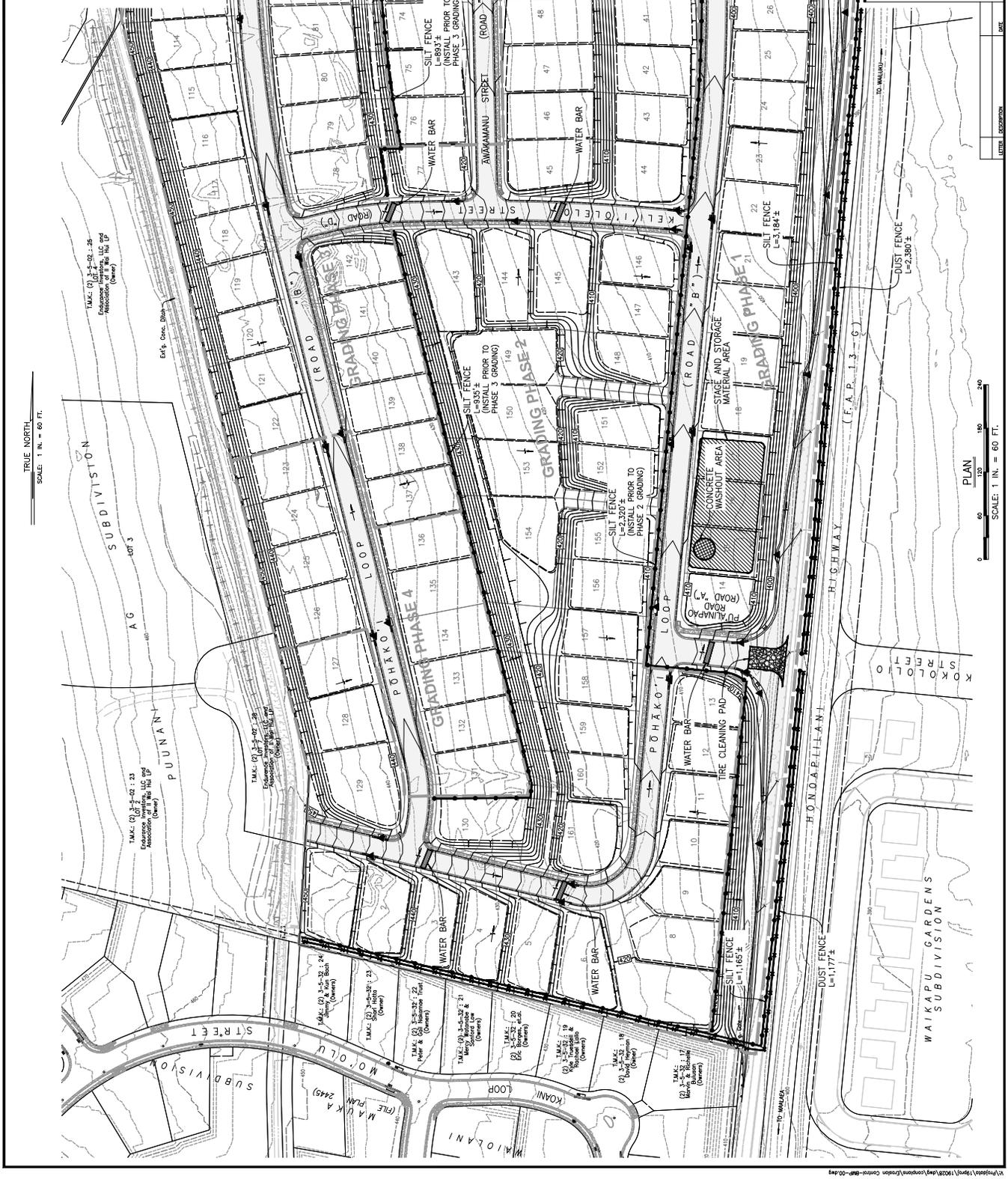
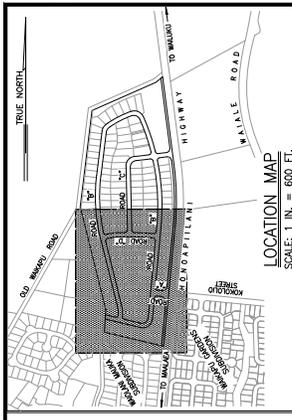
SCALE: 3/4 IN. = 1 FT.



WARREN S. INAGAKI ENGINEERING, INC.
 CIVIL & STRUCTURAL ENGINEERING AND ARCHITECTURE
 1115 KALANANAKUHIWA DRIVE, SUITE 400
 HONOLULU, HAWAII 96813
 PUNANI HOMESTEAD
 1001 W. KALANANAKUHIWA DRIVE
 WAIKAPU, WAILUKU, MAUI, HAWAII

TITLE	SEWER DETAILS
D.T.U.	19028
DESIGNED BY	W.S.I.
CHECKED BY	W.S.I.
DATE	APRIL 9, 2020
JOB NUMBER	68A
APPROVED BY	
SCALE	AS SHOWN
SHEET	68A
OF	68

DATE	
REVISION	
DESCRIPTION	
DATE	



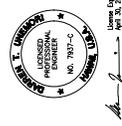
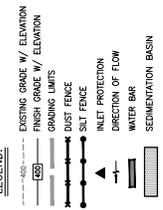
TRUE NORTH
SCALE: 1 IN. = 60 FT.

TRUE NORTH
SCALE: 1 IN. = 60 FT.

SEE SHEET 71 FOR CONTINUATION

- NOTE:
1. THE SEDIMENT BASIN SHALL BE CONSTRUCTED PRIOR TO COMPLETION OF ALL GRADING AND SHALL BE MAINTAINED OPEN AT ALL TIMES.
 2. SLOPES AND LOT PAVES WILL BE STABILIZED WITH VEGETATION ONCE GRADING IS COMPLETED WITHIN THE SPECIFIED TIME FRAME.
 3. THE CONTRACTOR SHALL MAINTAIN THE EXISTING ANTI-SLOPE CONTROLS TO PREVENT EROSION OF THE EXISTING SLOPES AND TO PREVENT RUNOFF FROM ENTERING THE HIGHWAY.
 4. THE CONTRACTOR SHALL MAINTAIN THE EXISTING ANTI-SLOPE CONTROLS TO PREVENT EROSION OF THE EXISTING SLOPES AND TO PREVENT RUNOFF FROM ENTERING THE HIGHWAY.

LEGEND:



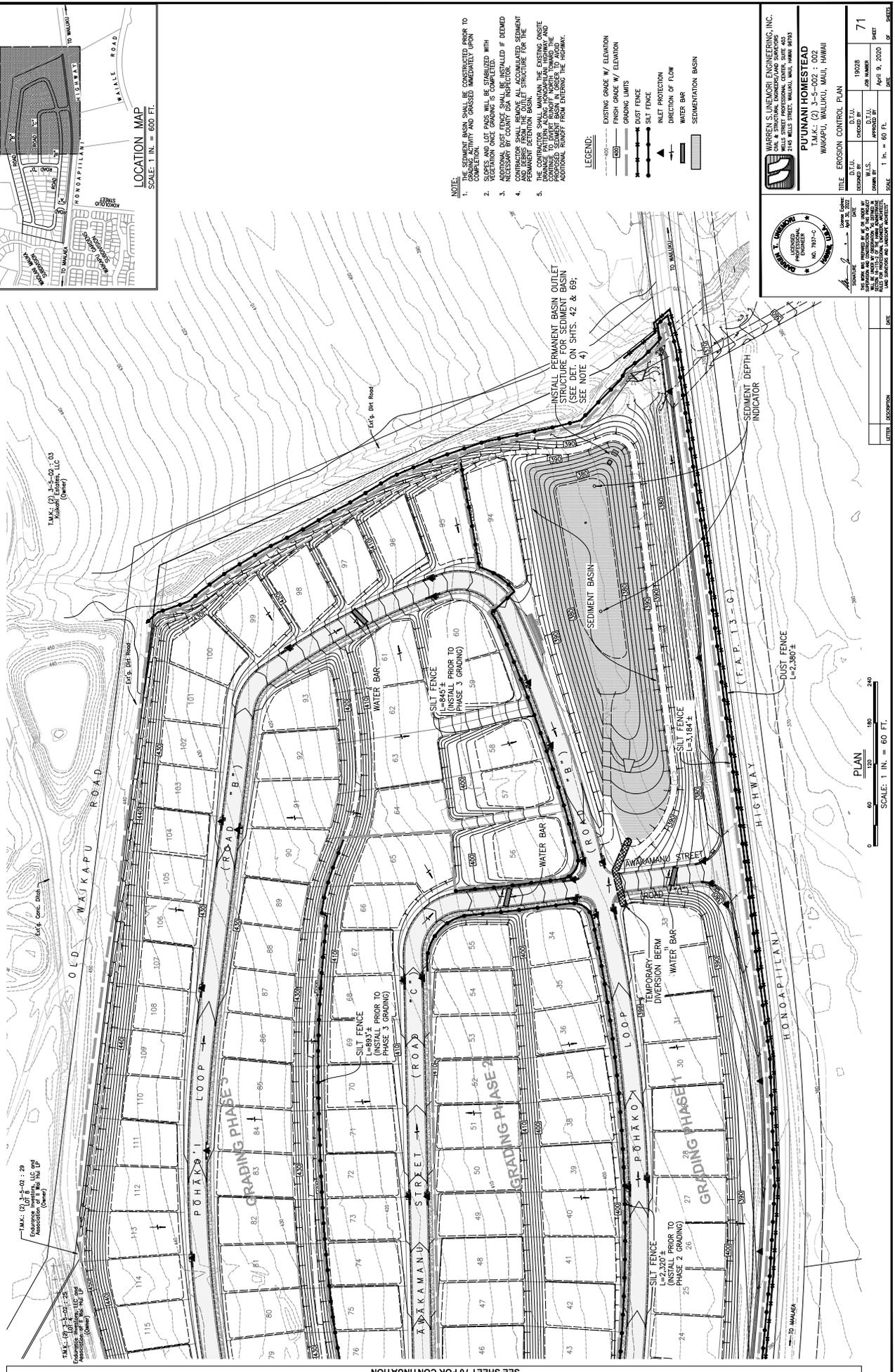
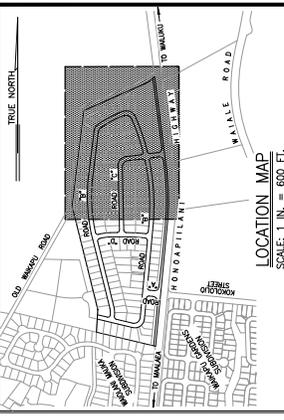
WARREN'S INSULAR ENGINEERS, INC.
ONE & STRUCTURAL ENGINEERING SERVICES
1100 KALANANĀHUI DRIVE, SUITE 400
HONOLULU, HAWAII 96813
PHONE: (808) 943-1111
FAX: (808) 943-1112
WWW.WARENSINSULAR.COM

PUNUANI HOMESTEAD
PUNUANI HOMESTEAD
WAIKAPU, WAIKAPU MAUI, HAWAII

TITLE: EROSION CONTROL PLAN
D.T.U. 19028
DESIGNED BY: W.A.S.
CHECKED BY: W.A.S.
APPROVED BY: [Signature]
DATE: APRIL 9, 2020
JOB NUMBER: 70
SHEET: 70
DATE: APRIL 9, 2020
SCALE: 1 IN. = 60 FT.

PLAN
SCALE: 1 IN. = 60 FT.

TRUE NORTH
SCALE: 1 IN. = 60 FT.



SEE SHEET 70 FOR CONTINUATION

TRUE NORTH
SCALE: 1 IN. = 60 FT.

TRUE NORTH
SCALE: 1 IN. = 60 FT.

- NOTE:
1. THE SEDIMENT BASIN SHALL BE CONSTRUCTED PRIOR TO COMMENCING ANY CONSTRUCTION OF THE SUBDIVISION AND GRADED IMMEDIATELY UPON COMPLETION OF THE GRADING WORK.
 2. SLOPES AND LOT PADS WILL BE STABILIZED WITH VEGETATION ONCE GRADING IS COMPLETED.
 3. NECESSARY EROSION CONTROL MEASURES SHALL BE NECESSARY BY COUNTY ZONING REGULATIONS IF DEEMED NECESSARY BY THE COUNTY ENGINEER.
 4. CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT PERMANENT RETENTION BASIN.
 5. THE CONTRACTOR SHALL MAINTAIN THE EXISTING ON-SITE CONTOUR TO DIRECT RUNOFF NORTH TOWARD THE ROAD AND ADDITIONAL RUNOFF FROM ENTERING THE HIGHWAY.

- LEGEND:
- EXISTING GRADE W/ ELEVATION
 - FINISH GRADE W/ ELEVATION
 - GRADING LIMITS
 - SOIL FENCE
 - DUST FENCE
 - WATER BAR
 - SEDIMENTATION BASIN

WARREN S. UMETANI ENGINEERING, INC.
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 WAIKAPU, HAWAII 96795
 (808) 261-8000

PUNUANI HOMESTEAD
 PUNUANI, HAWAII

TITLE	EROSION CONTROL PLAN
D.T.U.	19028
DESIGNER	DATE
D.T.U.	APRIL 9, 2020
APPROVED BY	JOB NUMBER
DATE	SHEET
SCALE	71
1 IN. = 60 FT.	OF

LETTER OCCUPATION

SCALE: 1 IN. = 60 FT.

SCALE: 1 IN. = 60 FT.

SCALE: 1 IN. = 60 FT.

BEST MANAGEMENT PRACTICES

1. CONSTRUCTION MANAGEMENT
- 1) GRADING OPERATIONS SHALL BE PLANNED SO AS TO MINIMIZE THE TIME OF CONSTRUCTION.
 - 2) THE PROJECT GRADING LIMITS SHALL BE STAKED PRIOR TO THE START OF CONSTRUCTION.
 - 3) GRADING OPERATIONS SHALL NOT EXTEND BEYOND WHAT IS ACTUALLY REQUIRED FOR GRADING.
 - 4) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE DISTURBED AREA.
 - 5) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE TIME OF CONSTRUCTION.
 - 6) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE TIME OF CONSTRUCTION.
 - 7) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE TIME OF CONSTRUCTION.
 - 8) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE TIME OF CONSTRUCTION.
 - 9) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE TIME OF CONSTRUCTION.
 - 10) GRADING OPERATIONS SHALL BE STAGED TO MINIMIZE THE TIME OF CONSTRUCTION.

2. EROSION AND SEDIMENT CONTROL
- 1) EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
 - 2) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 3) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 4) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 5) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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 - 8) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 9) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 10) EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

3. DUST CONTROL
- 1) DUST CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
 - 2) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 3) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 4) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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 - 10) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

4. OTHER BEST MANAGEMENT PRACTICES
- 1) OTHER BEST MANAGEMENT PRACTICES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
 - 2) OTHER BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 3) OTHER BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 4) OTHER BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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 - 9) OTHER BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 10) OTHER BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

5. SCHEDULE FOR IMPLEMENTING CONTROLS
- 1) SCHEDULE FOR IMPLEMENTING CONTROLS SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
 - 2) SCHEDULE FOR IMPLEMENTING CONTROLS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 3) SCHEDULE FOR IMPLEMENTING CONTROLS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 4) SCHEDULE FOR IMPLEMENTING CONTROLS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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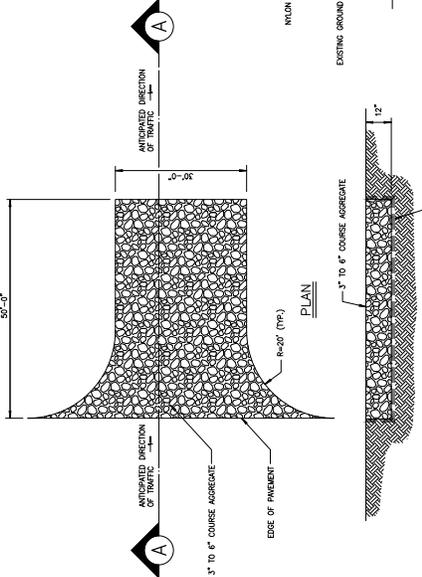
6. DUST CONTROL
- 1) DUST CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
 - 2) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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 - 9) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 10) DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

7. OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S
- 1) OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
 - 2) OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 3) OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 4) OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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 - 9) OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 - 10) OPERATIONAL AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

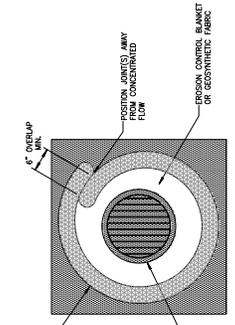
8. OPERATION AND MAINTENANCE PLAN FOR BMP'S
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 - 2) OPERATION AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
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9. OPERATION AND MAINTENANCE PLAN FOR BMP'S
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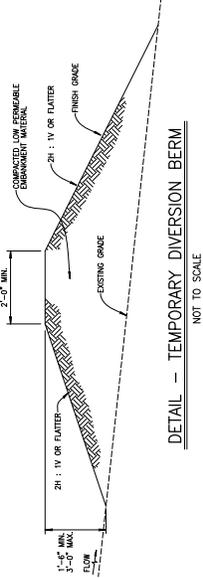
10. OPERATION AND MAINTENANCE PLAN FOR BMP'S
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 - 10) OPERATION AND MAINTENANCE PLAN FOR BMP'S SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.



DETAIL — TIRE CLEANING PAD
NOT TO SCALE

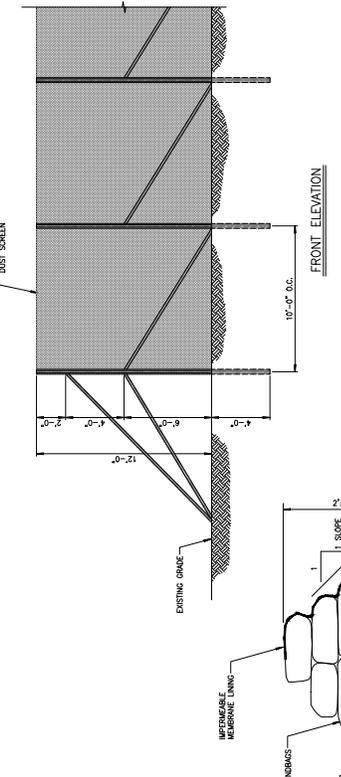


DETAIL — GRADED INLET PROTECTION
NOT TO SCALE

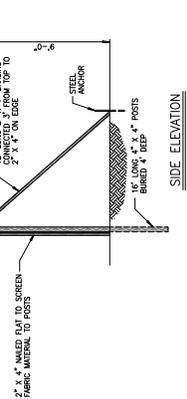


DETAIL — TEMPORARY DIVERSION BERM
NOT TO SCALE

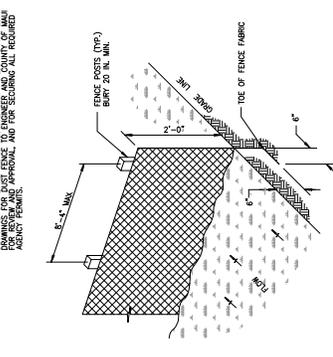
MAINTENANCE ACTIVITY	SCHEDULE
1. RECONSTRUCT OR REPLACE BASIN WHEN IT IS NO LONGER FUNCTIONING PROPERLY.	AS REQUESTED BY THE COUNTY INSPECTOR
2. ASSESS OVERALL OPERATION OF BASIN AND MAKE NECESSARY REPAIRS.	WEEKLY
3. INSPECT, CLEAN, AND REPAIR ALL PRETREATMENT AREAS.	WEEKLY
4. MAINTAIN ESTABLISHMENT OF VEGETATION AND REPLANT BARE AREAS.	WEEKLY
5. REMOVE UNMAINTAINED TREES, BRUSH, AND WEEDS.	WEEKLY
6. REPAIR INLET AND OUTLET STRUCTURES, OVERFLOW, LOW FLOW CHANNELS, AND ANY OTHER DAMAGE.	WEEKLY
7. REMOVE TRASH AND DEBRIS.	WEEKLY
8. REPAIR EROSION AND OTHER DAMAGE.	WEEKLY
9. REMOVE SEDIMENT FROM BASIN.	WEEKLY
10. REMOVE SEDIMENT FROM BASIN.	WHEN SIZE OF ORIGINAL VOLUME HAS BEEN LOST



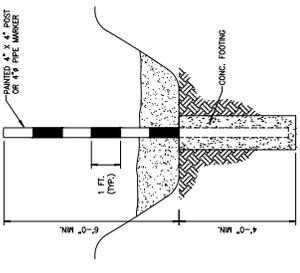
DETAIL — SPILL CONTAINMENT BERM
NOT TO SCALE



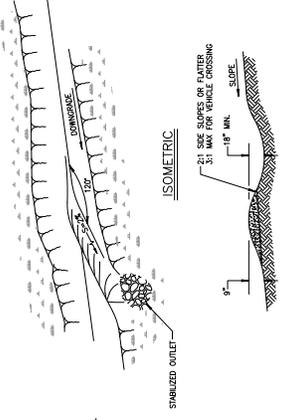
DETAIL — DUST FENCE
SCALE: 1/4" = 1'-0"



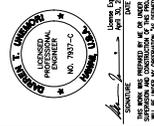
DETAIL — SILT FENCE
NOT TO SCALE



SEDIMENT DEPTH INDICATOR
NOT TO SCALE



DETAIL — WATERBAR
NOT TO SCALE



WARREN'S ENGINEERING, INC.
A PROFESSIONAL ENGINEERING FIRM
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PHONE: (808) 943-1111
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WWW.WARENS.COM

PUNANI HOMESTEAD
WAIKAPU, WAIKUKI, MAUI, HAWAII

WARREN'S ENGINEERING, INC.
D.T.U. NO. 1915-C
ISSUED: 10/2008
DATE: APRIL 9, 2020
JOB NUMBER: 72
SCALE: AS SHOWN

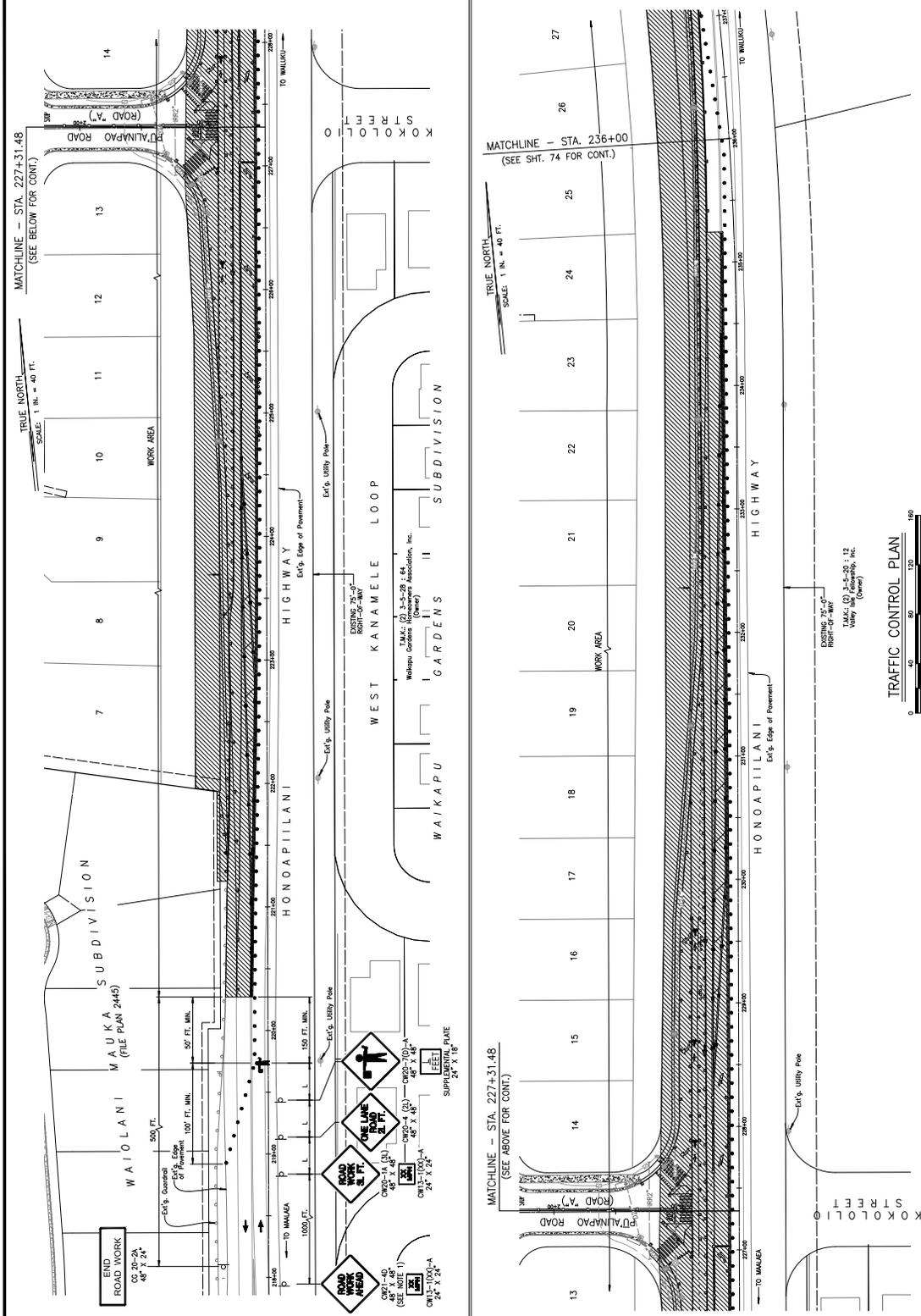
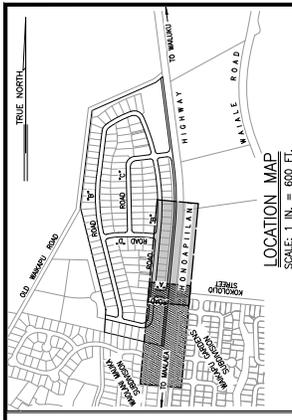


TABLE 1 FOR TRAFFIC CONTROL PLAN

POSTED SPEED LIMIT (M-P-H)	SIGN SPACING (L) (FEET)	TAPER LENGTH (L) (FEET)	LONGITUDINAL BUFFER (L) (FEET)	SIGNING OF CLOSED OR LANE UNDER CONSTRUCTION	
				TAPER TANGENT	WORK AREA
25	250	200	W x 17	55	25
30	350	250	W x 20	65	30
35	450	350	W x 25	75	35
40	550	450	W x 30	85	40
45	650	550	W x 35	95	45
50	800	700	W x 40	110	50
55	1000	900	W x 45	135	55
60	1200	1100	W x 50	165	60
65	1400	1300	W x 55	205	65
70	1600	1500	W x 60	255	70
75	1800	1700	W x 65	315	75
80	2000	1900	W x 70	385	80
85	2200	2100	W x 75	465	85
90	2400	2300	W x 80	555	90
95	2600	2500	W x 85	655	95
100	2800	2700	W x 90	765	100
105	3000	2900	W x 95	885	105
110	3200	3100	W x 100	1015	110
115	3400	3300	W x 105	1155	115
120	3600	3500	W x 110	1305	120

- GENERAL NOTES FOR TRAFFIC CONTROL PLAN**
- THE PERMEE SHALL MAKE MINOR ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, BOXES, STRUCTURES, ETC. TO FIT FIELD CONDITIONS.
 - TRAFFIC CONTROL DEVICES SHALL BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
 - TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR MESSAGE IS VIEWED FROM THE APPROACHING TRAFFIC.
 - REGULATORY AND WARNING SIGNS WITHIN THE CONSTRUCTION ZONE THAT ARE COVERED BY THE CONSTRUCTION SHALL BE RESTORED UPON COMPLETION OF WORK.
 - FLAGGERS AND/OR POLICE OFFICERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
 - FLASHING ARROW SIGNAL AS SHOWN ON THE TRAFFIC CONTROL PLAN. A SUPPLEMENTAL PLATE 24" X 18" SHALL BE USED.
 - SION SPACING (L), TAPER LENGTHS (T) AND SPACINGS OF CONES OR DELIMITORS SHALL BE AS SHOWN IN TABLE 1, UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLAN.
 - ALL TRAFFIC LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
 - ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
 - ALL SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
 - ALL SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
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LEGEND

- SIGN
- CONE OR DELIMITOR
- DIRECTION OF TRAFFIC
- ⇄ FLASHING ARROW SIGNAL
- ⚠ POLICE OFFICER/FLAGGER

NOTES:

- CONE-TO-SIGN REQUIRED FOR POSTED SPEED LIMIT OF 45 MPH OR GREATER.
- SEE TABLE 1 FOR ADDITIONAL DIMENSIONS.
- ONE LANE ROAD (CONE-TO-SIGN) AND FLAGGER AHEAD (CONE-TO-SIGN) SIGNS SHALL BE REMOVED OR COVERED WHEN NO WORK IS BEING PERFORMED AND LANE IS NOT CLOSED.
- THE ADVISORY SPEED (X) SHALL BE DETERMINED BY THE ENGINEER.

WARREN'S ENGINEERING, INC.
 1000 S. WILSON AVENUE, SUITE 400
 WAIKAPU, HAWAII 96795
 PHONE: (808) 261-1111
 FAX: (808) 261-1112

PUNUANI HOMESTEAD
 WAIKAPU, WAILUKU, MAUI, HAWAII

TITLE: TRAFFIC CONTROL PLAN

DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

D.T.U. 19028
 JOB NUMBER 73
 DATE: April 9, 2020
 SHEET 73 OF 73

SCALE: 1 IN. = 50 FT.

CONSTRUCTION NOTES WITHIN STATE RIGHT-OF-WAY:

- 1. ALL CONSTRUCTION SHALL BE WITHIN THE STATE RIGHT-OF-WAY...
2. ALL CONSTRUCTION SHALL BE WITHIN THE STATE RIGHT-OF-WAY...
3. ALL CONSTRUCTION SHALL BE WITHIN THE STATE RIGHT-OF-WAY...
4. ALL CONSTRUCTION SHALL BE WITHIN THE STATE RIGHT-OF-WAY...
5. ALL CONSTRUCTION SHALL BE WITHIN THE STATE RIGHT-OF-WAY...

EROSION CONTROL AND BMP NOTES FOR WORK WITHIN STATE RIGHT-OF-WAY:

- 1. GENERAL:
A. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND MONITOR BEST MANAGEMENT PRACTICES (BMPs) APPROPRIATE FOR THE PROJECT...
B. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD...
C. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD...

WASTE DISPOSAL:

- 1. WASTE DISPOSAL:
A. ALL WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER PERMITTED BY LOCAL, STATE OR FEDERAL REGULATIONS...
B. ALL WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER PERMITTED BY LOCAL, STATE OR FEDERAL REGULATIONS...
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WATER POLLUTION CONTROL:

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BIOLOGICAL NOTES:

- 1. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD...
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- C. SPILL PREVENTION:
1. EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF AND DISCHARGE...
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MARKET'S INSULATOR ENGINEERING, INC.
PUNUANI HOMESTEAD
WAKAPU, WAIKUKU, MAUI, HAWAII
D.U.L. 19028
JOB NUMBER 76
APPROVED BY: [Signature]



NO.	DATE	REVISIONS
1-4-22		REVISED PER HECO/ECM
6-2-22		REVISED PER DMS

408 NO. 2019-52
 DATE: 11/20
 DRAWN BY: RMB
 CHECKED BY: WPK
ELECTRICAL PLAN FOR PUNNAI HOMESTEAD SUBMISSION
 WAIALAUA MAUI HAWAII

SHEET NO. **E-0**
 1 OF 12 SHEETS

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY
 (REVISED 2/20/19)

- THE CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM WORK UPON STATE HIGHWAYS FROM THE MAUI DISTRICT ENGINEER, STATE HIGHWAYS, AT STATE'S HIGHWAY RIGHT-OF-WAY COMMENCEMENT OF WORK WITHIN THE STATE'S HIGHWAY RIGHT-OF-WAY.
- CONSTRUCTION AND RESTORATION OF ALL EXISTING FACILITIES AND TEMPORARY FACILITIES TO REMAIN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE HAWAIIAN ROADWAY DESIGN AND CONSTRUCTION MANUAL AND THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS UTILITIES WITHIN STATE HIGHWAYS OF THE STATE HIGHWAYS DIVISION, MAUI DISTRICT ENGINEER, STATE HIGHWAYS, UNLESS OTHERWISE MONDAY THROUGH FRIDAY, EXCEPT STATE HOLIDAYS, UNLESS WHEN OTHERWISE APPROVED IN WRITING BY THE DISTRICT ENGINEER. SHALL BE CLOSED. AND PLANS SHALL HAVE FOUR THOUGH LANES, UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE PUBLIC AND POSTING ADVANCE NOTICE OF ROAD CLOSURE. ALL WORK SHALL BE ALLOWED DURING THE PERIODS AND AT OTHER TIMES AS DIRECTED BY THE HIGHWAY DIVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE PUBLIC AND POSTING ADVANCE NOTICE OF ROAD CLOSURE. ALL WORK SHALL BE ALLOWED DURING THE PERIODS AND AT OTHER TIMES AS DIRECTED BY THE HIGHWAY DIVISION.
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- ALL REGULATORY, GUIDE, AND CONSTRUCTION SIGNS AND BARRICADES SHALL HAVE A HIGH-INTENSITY TYPE III OR IV RETROREFLECTIVE BACKGROUND (ROADS).
- DRAWINGS SHALL BE KEPT OPEN UNLESS THE OWNER OF THE CONTRACTS USING WHERE PREFERRED, WAIALAUA DISTRICT, THEY SHALL BE MAINTAINED IN A SAFE AND ACCESSIBLE LOCATION AT ALL TIMES. ALL SIGNS SHALL BE MAINTAINED IN A SAFE AND ACCESSIBLE LOCATION AT ALL TIMES.
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TYPICAL DUCTS CROSSING UNDER OTHER WORK
 NOT TO SCALE

STATE-OF-HAWAII COLOR CODING

- EXISTING FACILITIES TO BE REMOVED (REMOVE), ABANDONED, OR RELOCATED
- NEW FACILITIES
- EXISTING FACILITIES TO REMAIN
- TEMPORARY FACILITIES TO BE REMOVED AFTER USE
- EXISTING FACILITIES TO BE ADJUSTED
- RELOCATED FACILITIES



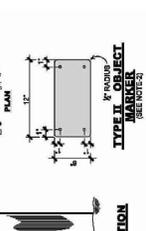
TABLE 1 FOR TRAFFIC CONTROL PLAN

TRAFFIC CONTROL PLAN	WORKING AREA (SQ. FT.)	TRAFFIC CONTROL PLAN	WORKING AREA (SQ. FT.)
20	250	W x 17	20
30	500	W x 20	30
40	1000	W x 30	40
50	1500	W x 35	50
60	2000	W x 40	60
70	2500	W x 45	70
80	3000	W x 50	80
90	3500	W x 55	90
100	4000	W x 60	100
110	4500	W x 65	110
120	5000	W x 70	120
130	5500	W x 75	130
140	6000	W x 80	140
150	6500	W x 85	150
160	7000	W x 90	160

NOTE: (1) W = WIDTH OF SHOULDER OR OFFSET

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

- PERMITS SHALL MAKE WORK ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, BRIDGES, STRUCTURES, ETC., TO FIT FIELD CONDITIONS.
- CONES OR DELIMITERS SHALL BE EXTENDED TO A POINT WHERE THEY ARE NEARLY TO APPROACHING TRAFFIC.
- TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SIGN THAT THE SIGN OR DEVICES PARTIES FROM THE WORK AREA SHALL BE PLACED FIRST. THE OTHERS SHALL BE PLACED SECOND AND THIRD. THE POSITIONING OF THESE DEVICES SHALL BE AS SHOWN IN TABLE 1, UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLAN.
- ALL SIGNS SHALL BE RESTORED UPON COMPLETION OF THE WORK.
- FLASHERS AND/OR FLASHER SIGNALS SHALL BE IN SHORT OF EACH OTHER IN DIRECT COMMUNICATION AT ALL TIMES.
- WHEN REQUIRED BY THE ISSUING OFFICE THE PERMITS SHALL INSTALL A FLASHING ARROW SIGNAL AS SHOWN ON THE TRAFFIC CONTROL PLANS.
- SIGNS SPACING (L) TAPER LENGTHS (T) AND SPACINGS OF CONES OR DELIMITERS SHALL BE AS SHOWN IN TABLE 1, UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLAN.
- ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHEN THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
- CONES OR DELIMITERS SHALL BE PROMPTLY REMOVED OR COVERED TO PRECLUDE THE DISPLAY OF UNPUBLISHED MESSAGE(S) (AS SHOWN ON BOTH FACES).
- AT THE END OF EACH DAY'S WORK OR AS SOON AS THE WORK IS COMPLETED, THE PERMITS SHALL REMOVE ALL TRAFFIC CONTROL DEVICES NO LONGER NEEDED TO PROTECT THE WORK AREA. THE PERMITS SHALL BE RESPONSIBLE FOR THE REVERSE ORDER OR INSTALLATION. TEMPORARY TRAFFIC SIGNALS SHALL BE IN THE REVERSE ORDER OF INSTALLATION.
- REPLACE PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS UPON COMPLETION OF WORK.
- REPAIRMENT OF WATER-SUBJECT MATERIALS SHALL BE PROMPTLY REMOVED OR COVERED PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL CONTACT DMS FOR THE EXACT DEPTH AND LOCATION OF EXISTING UTILITIES, SERVICE LATERALS, AND APPURTENANCES TO BE DETERMINED IN THE FIELD.
- LOW VOLTAGE (120V) TRAFFIC SIGNALS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT HIS/HER EXPENSE.
- KEEP A 3 FEET MINIMUM HORIZONTAL CLEARANCE AND/OR 6 INCH MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING OR NEW UTILITIES, IMPROVEMENTS AND ELECTRICAL UTILITIES.
- WHenever A WATER MAIN CROSSES OVER OR UNDER A BURIED UTILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE PUBLIC AND POSTING ADVANCE NOTICE OF ROAD CLOSURE. ALL WORK SHALL BE ALLOWED DURING THE PERIODS AND AT OTHER TIMES AS DIRECTED BY THE HIGHWAY DIVISION.



TYPE II OBJECT MARKER

NOTES:

- THE TYPE II OBJECT MARKER (OM) SHALL BE AS SHOWN IN SHEETING AND BE MADE OF HIGH INTENSITY AMBER REFLECTIVE SHEETING MATERIAL OPERATED ON OTHER ALUMINUM SHEETING.
- INSTALL TWO OBJECT MARKERS ONE ON EACH SIDE OF THE TRAFFIC CROSSING TO BE SHOWN ON THIS PLAN VIEW.

STATE/COUNTY REQUIRED TYPE II MARKER

REPLACE PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS UPON COMPLETION OF WORK.

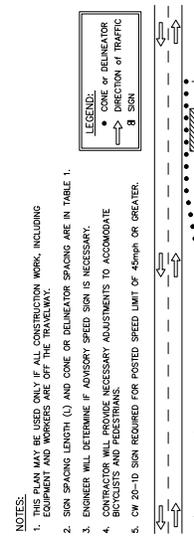


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STATE/COUNTY REQUIRED TYPE II MARKER

REPLACE PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS UPON COMPLETION OF WORK.



MAUI COUNTY
REGISTERED PROFESSIONAL ENGINEER
No. 8991-E
MARK P. ROKARD



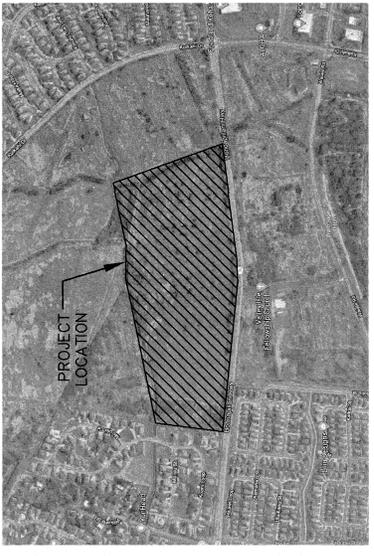
DATE: 11/20
DRAWN BY: MHR
CHECKED BY: MHR
PROJECT NO.: 2019-02

NO.	DATE	DESCRIPTION
1	11-20	REVISIONS

408 NO. 2019-02
DATE: 11/20
DRAWN BY: MHR
CHECKED BY: MHR
PROJECT NO.: 2019-02

ELECTRICAL PLANS FOR
PUNANNI HOMESTEAD
SUBDIVISION
WAILUKU, MAUI, HAWAII
TMK: (2) 3-5-002002

SHEET NO. **E-1**
2 OF 12 SHEETS



LOCATION MAP
NOT TO SCALE

COUNTY OF MAUI MAUI COUNTY CODE, CHAPTER 16.168 ENERGY CODE (2015 IECG COMMERCIAL PROVISIONS)	
<input type="checkbox"/>	C401.2(1) ANSI/ASHRAE/IESNA 90.1
<input checked="" type="checkbox"/>	C401.2(2) Section C405
<input type="checkbox"/>	C401.2(3) Sections C405.2, C405.3, C405.4, C405.6 & C407
<input type="checkbox"/>	C102.1 Alternative

COMPLIANCE METHOD
Check applicable method

To the best of my knowledge, this project's design substantially conforms to the Energy Code.

Signature: Mark P. Rokard Date: 12-23-20
Name: MARK P. ROKARD
Title: PROJECT ENGINEER
License No.: 8991-E

APPROVALS:

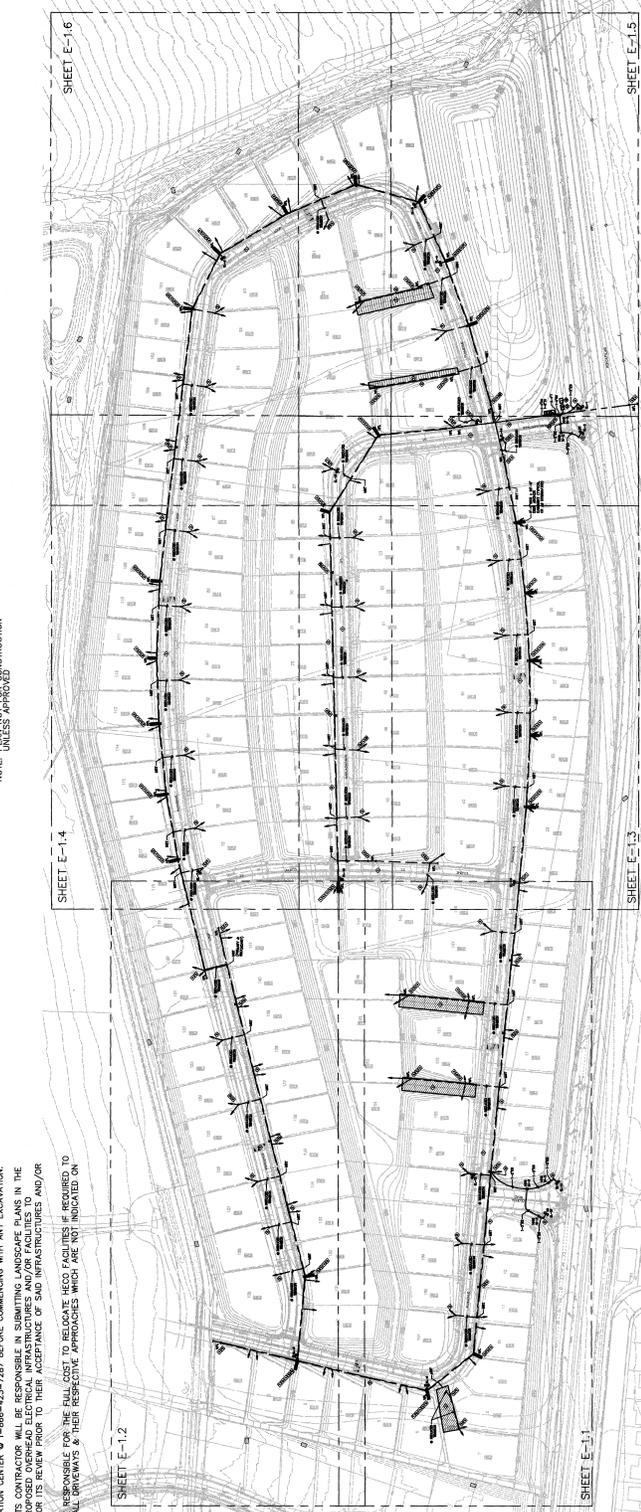
David Kim
HAWAIIAN ELECTRIC - MAUI COUNTY
DATE: 12/22

Logis Kujorio
SPECTRUM
DATE: 6/22/22

NOTE: PLAN NOT FOR CONSTRUCTION
UNLESS APPROVED

- SYMBOL LEGEND**
- NEW 250W HPS HECO ST. LIGHT, 30' ALUMINUM POLE, FULLY OUT-OFF
 - NEW 100W HPS HECO ST. LIGHT ON WOODEN POLE, FULLY OUT-OFF (SEE DETAIL SHIT E-2)
 - NEW UTILITY POLE
 - NEW HECO POLE-MOUNTED TRANSFORMER
 - EXISTING ANCHOR
 - EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
 - NEW HECO POLE-MOUNTED STREET LIGHT
 - NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT
 - NEW HECO 100W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT
 - NEW HECO ANCHOR & CITY WIRE
 - NEW HECO POLE-MOUNTED TRANSFORMER
 - NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT
 - NEW HECO 100W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT
 - NEW HECO FIBER PAD
 - NEW HECO POWER SUPPLY PAD
 - NEW CITY DUCT-LINES T RISER POLE
 - NEW ZC HECO RISER FROM NEW POLE
 - IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS)
 - NEW ELECTRIC METER ENCLOSURE
 - PROVIDE 3' HORIZONTAL CLEARANCE FROM SEMI LATERAL
 - PROVIDE 2' HORIZONTAL CLEARANCE FROM FIRE HYDRANT
 - PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APRON

- GENERAL NOTES:**
- EDM PLANS ARE DIAGNOSTICAL.
 - PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
 - ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DEVELOPER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER ASSIGNED TO THE PROJECT.
 - THE CONTRACTOR/UTILITY COMPANIES SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COORDINATION WITH THE DEPARTMENT OF WATER SUPPLY PERSONNEL OUT IN THE FIELD TO HELP LOCATE THE EXISTING WATER LINES IN THE PROJECT AREA IF NECESSARY.
 - WALLS INSTALLED UTILIZE THREE (3) FEET CLEAR HORIZONTAL SEPARATION BETWEEN EXISTING WATER LINES.
 - CALL UTILITY NOTIFICATION CENTER @ 1-888-432-7897 BEFORE COMMENCING WITH ANY EXCAVATION.
 - THE DESIGNER OR HIS CONSULTANT WILL BE RESPONSIBLE IN SUBMITTING LANDSCAPE PLANS IN THE PROXIMITY OF THE PROPOSED OVERHEAD ELECTRICAL INFRASTRUCTURES AND/OR FACILITIES TO HECO-ENGINEERING FOR ITS REVIEW PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR FACILITIES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING TO RESOLVE HECO FACILITIES IF REQUIRED TO:
 - 1. RELOCATE HECO FACILITIES TO CLEAR DRIVEWAYS & THEIR RESPECTIVE APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.



OVERALL ELECTRICAL SITE PLAN
NOT TO SCALE

THIS DRAWING IS AN INSTRUMENT OF SERVICE. BY SIGNING THIS DRAWING, THE ENGINEER ASSUMES RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ENGINEER DOES NOT WARRANT THAT THE PROJECT WILL BE COMPLETED ON TIME OR WITHIN BUDGET. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT.



ECMG
ELECTRICAL CONSULTING GROUP, INC.
1000 KALANOAHI BLVD, SUITE 200
HONOLULU, HI 96813
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.ECMG.COM



DESIGNED BY: V. RICHARD
CHECKED BY: MPR
DATE: 11-20-2019
REVISIONS: 1-4-22 REWISED PER HECO DWS/ECM

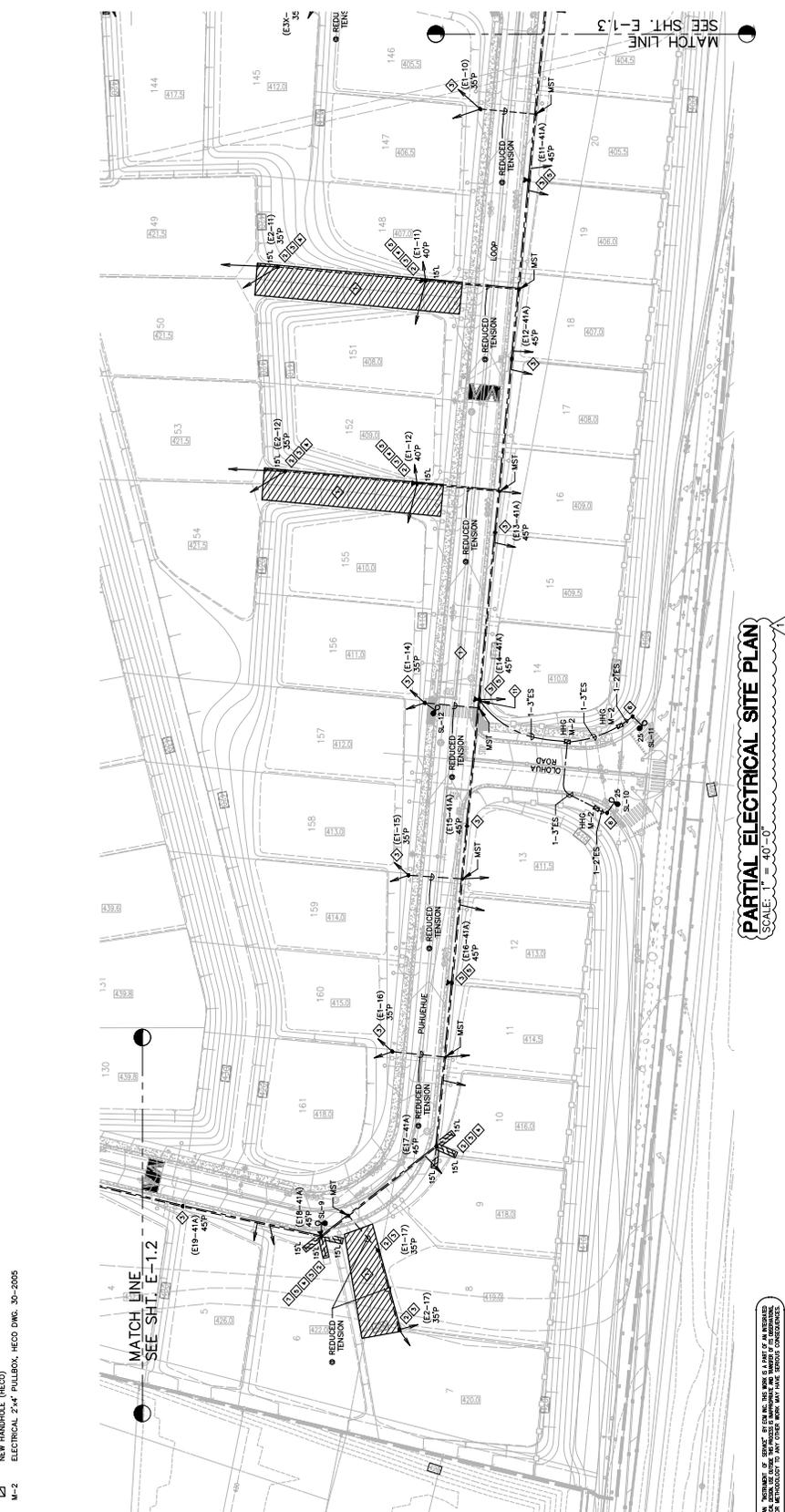
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JOB NO. 2019-52
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CHECKED BY: MPR
DATE: 11/20

ELECTRICAL PLAN FOR
PUNNANI HOMESTEAD SUBDIVISION
WAILUKU, MAUI, HAWAII
TRAC (2) 9-6-002-002

SHEET NO.
E-11
3 OF 12 SHEETS

- SYMBOL LEGEND**
- 20' - NEW 250W HPS HECO ST. LIGHT, 30' ALUMINUM POLE, FULLY OUT-OFF (SEE DETAIL SHT. E-2)
 - - EXISTING UTILITY POLE
 - - NEW UTILITY POLE
 - - NEW HECO POLE-MOUNTED TRANSFORMER
 - - EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCO, SPECTRUM)
 - - NEW OVERHEAD LINES (HECO, HAWAIIAN TELCO, SPECTRUM)
 - - NEW SECONDARY DUCTLINE
 - - FUTURE OVERHEAD SERVICE DROP
 - - MID-SPAN TAP (PRIMARY/SECONDARY)
 - - NEW POWER SUPPLY PAD (CATV)
 - - NEW FIBER PAD (HICO)
 - - ELECTRICAL EQUIPMENT ENCLOSURE (SEE DETAIL SHT. E-2)
 - - IRRIGATION CONTROLLER
 - - NEW HANDHOLE (HECO)
 - M-2 - ELECTRICAL, 2"x4" PULLBOX, HECO DWS, 30"-2005
- GENERAL NOTES:**
- EDM PLANS ARE DIAGRAMMATICAL.
 - PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
 - ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DEVELOPER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER.
 - THE CONTRACTOR'S UTILITY COMPANY SHALL BE RESPONSIBLE TO VERIFY THE EXACT DEPTH AND LOCATION OF EXISTING WATERLINES IN THE PROJECT AREA. THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF WATER SUPPLY PERSONNEL OUT IN THE FIELD TO HELP LOCATE THE EXISTING WATERLINES IN THE PROJECT AREA IF NECESSARY.
 - MINIMUM 18" SEPARATION BETWEEN EXISTING WATERLINES AND INSTALLED UTILITIES COMMENCING WITH ANY EXCAVATION.
 - CALL UTILITY NOTIFICATION CENTER @ 1-866-423-7287 BEFORE COMMENCING WITH ANY EXCAVATION.
 - THE DEVELOPER OR ITS CONTRACTOR WILL BE RESPONSIBLE IN SUBMITTING ALL NECESSARY PERMITS TO THE APPLICABLE AGENCIES AND/OR ELECTRICAL INFRASTRUCTURES AND/OR FACILITIES TO HECO-ENGINEERING FOR ITS REVIEW PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES.
 - DEVELOPER SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE HECO FACILITIES IF REQUIRED TO ADEQUATELY CLEAR ALL DRIVEWAYS & HECO RESPECTIVE APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.
- PLAN NOTES:**
- ◇ EASEMENTS COVERING ACCESS ROADWAYS AND DRIVEWAYS REQUIRED.
 - ◇ EASEMENTS COVERING UTILITY FACILITIES IN PRIVATE PROPERTY REQUIRED (REFER TO HECO DWS).
 - ◇ NEW HECO POLE.
 - ◇ NEW HECO ANCHOR & GUY WIRE.
 - ◇ NEW HECO POLE-MOUNTED TRANSFORMER.
 - ◇ NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT.
 - ◇ NEW HECO 100W HPS POLE-MOUNTED STREET LIGHT.
 - ◇ NEW HECO FIBER PAD.
 - ◇ NEW CATV POWER SUPPLY PAD.
 - ◇ NEW CATV DUCT-LINES 1" RISER POLE.
 - ◇ NEW 2" HECO RISER FROM NEW POLE.
 - ◇ IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS).
 - ◇ NEW ELECTRICAL METER ENCLOSURE.
 - ◇ PROVIDE 3' HORIZONTAL CLEARANCE FROM SEWER LATERAL.
 - ◇ PROVIDE 3' HORIZONTAL CLEARANCE FROM THE HYDRANT.
 - ◇ PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APRON.

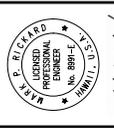


PARTIAL ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"

THIS DRAWING IS A PRELIMINARY DESIGN. THE CONTRACTOR SHALL VERIFY ALL UTILITIES AND CONDITIONS ON THE GROUND BEFORE COMMENCING WORK. ANY CHANGES TO THE DESIGN SHALL BE APPROVED BY THE ENGINEER.



ECOM
ELECTRICAL CONSULTANTS
1000 KALANOAHI DRIVE
SUITE 200
HONOLULU, HAWAII 96815
PHONE: (808) 943-8888
FAX: (808) 943-8889
WWW.ECOMHAWAII.COM



PROJECT NO. 2019-52
DATE: 11/20
DRAWN BY: MBR
CHECKED BY: MBR
REVISIONS

NO.	DATE	DESCRIPTION
1	11-20-2019	ISSUED FOR PERMITS
2	11-20-2019	REVISIONS PER HECO DWS/ECM

ELECTRICAL PLAN FOR
PUNNANI HOMESTEAD SUBDIVISION
WAILUKU, MAUI, HAWAII
TRAC (2) 9-6-002002

SHEET NO.
E-1.2
4 OF 12 SHEETS

- GENERAL NOTES:**
- EDM PLANS ARE DIAGRAMMATIC.
 - PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
 - ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DESIGNER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER.
 - THE CONTRACTOR'S UTILITY COMPANY SHALL BE RESPONSIBLE TO VERIFY THE EXACT DEPTH AND LOCATION OF EXISTING WATERLINES IN THE FIELD WITH THE DEPARTMENT OF WATER SUPPLY PERSONNEL. IT IS THE FIELD RESPONSIBILITY TO VERIFY THE EXISTING WATERLINES IN THE PROJECT AREA IF NECESSARY.
 - INDICATE THE ANCHOR OF THE (3) FEET CLEAR HORIZONTAL SEPARATION BETWEEN EXISTING WATERLINES AND INSTALLED UTILITIES COMMENCING WITH ANY EXCAVATION.
 - CALL UTILITY NOTIFICATION CENTER @ 1-888-423-7287 BEFORE COMMENCING WITH ANY EXCAVATION.
 - THE DEVELOPER OR ITS CONTRACTOR WILL BE RESPONSIBLE IN SUBMITTING TO THE DEPARTMENT OF WATER SUPPLY PERSONNEL FOR REVIEW PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR UTILITIES TO HECO-ENGINEERING FOR ITS REVIEW PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR UTILITIES TO HECO-ENGINEERING.
 - DESIGNER SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE HECO FACILITIES IF REQUIRED TO ADEQUATELY CLEAR ALL DRIVEWAYS & HECO FACILITIES. RESPECTIVE APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.
- ELAN NOTES:**
- EASEMENTS COVERING ACCESS ROADWAYS AND DRIVEWAYS REQUIRED.
 - EASEMENT COVERING UTILITY FACILITIES IN PRIVATE PROPERTY REQUIRED (REFER TO HECO DWS).
 - NEW HECO POLE.
 - NEW HECO ANCHOR & GUY WIRE.
 - NEW HECO POLE-MOUNTED TRANSFORMER.
 - NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT.
 - NEW HECO 100W HPS POLE-MOUNTED STREET LIGHT.
 - NEW HECO FIBER PAD.
 - NEW HECO POWER SUPPLY PAD.
 - NEW GUY DUCT-LINES 1 RISER POLE.
 - NEW 2" HECO RISER FROM NEW POLE.
 - IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS).
 - NEW ELECTRIC METER ENCLOSURE.
 - PROVIDE 3' HORIZONTAL CLEARANCE FROM SEWER LATERAL.
 - PROVIDE 3' HORIZONTAL CLEARANCE FROM THE HYDRANT.
 - PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APRON.

- SYMBOL LEGEND**
- 25' NEW 250W HPS HECO ST. LIGHT, 30' ALUMINUM POLE, FULLY OUT-OFF
 - NEW 100W HPS HECO ST. LIGHT ON WOODEN POLE, FULLY OUT-OFF (SEE DETAIL SHT. E-2)
 - EXISTING UTILITY POLE
 - NEW UTILITY POLE
 - NEW HECO POLE-MOUNTED TRANSFORMER
 - EXISTING ANCHOR
 - EXISTING WORK
 - EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCO, SPECTRUM)
 - NEW SECONDARY OVERHEAD LINES
 - FUTURE OVERHEAD SERVICE DROP
 - MID-SPAN TAP (PRIMARY/SECONDARY)
 - NEW POWER SUPPLY PAD (CATV)
 - NEW FIBER PAD (HICO)
 - ELECTRICAL EQUIPMENT ENCLOSURE (SEE DETAIL SHT. E-2)
 - IRRIGATION CONTROLLER
 - NEW HANDHOLE (HECO)
 - ELECTRICAL 2"x4" PULLBOX, HECO DWS, 30-2005



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"

THIS DRAWING IS A PRELIMINARY DESIGN. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND BE RESPONSIBLE FOR ANY CHANGES TO THE DESIGN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND EASEMENTS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL COST OF ANY REVISIONS TO THIS DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL COST OF ANY REVISIONS TO THIS DRAWING.

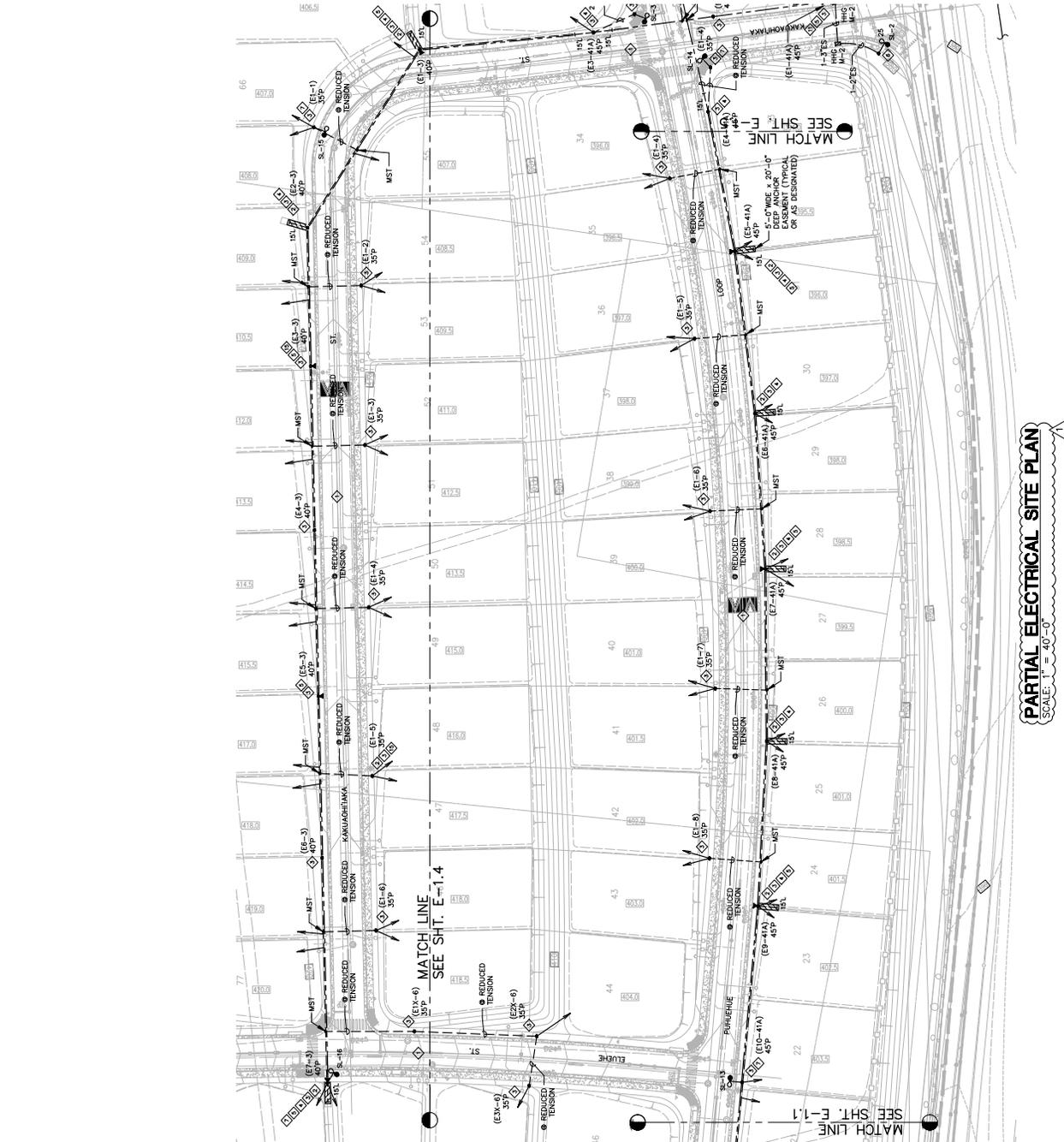


DATE: 11/20
 DRAWN BY: MBR
 CHECKED BY: MBR
 408 NO. 2019-52

NO.	DATE	DESCRIPTION
1-4-22		REVISION PER HECO DWS/ECM
1-1		

WAILUKU MAUI, HAWAII
PUNNAI HOMESTEAD
 SUBDIVISION
 ELECTRICAL PLAN FOR

SHEET NO.
E-1.3
 5 OF 12 SHEETS



- SYMBOL LEGEND**
- NEW 250W HPS HECO ST. LIGHT, 30' ALUMINUM POLE FULLY CUT-OFF (SEE DETAIL SHT. E-2)
 - EXISTING UTILITY POLE
 - NEW PEG-MOUNTED TRANSFORMER
 - ▲ NEW HECO ANCHOR
 - EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
 - NEW OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
 - NEW SECONDARY OVERHEAD LINES
 - FUTURE OVERHEAD SERVICE DROP
 - MID-SPAN TAP (PRIMARY/SECONDARY)
 - NEW POWER SUPPLY PAD (CATV)
 - NEW FIBER PAD (HTCO)
 - NEW HECO ANCHOR ENCLOSURE (SEE DETAIL SHEET E-3)
 - IRRIGATION CONTROLLER
 - NEW HANGPILE (HECO)
 - ELECTRICAL 2"x4" PULLBOX, HECO DWS, 30"-2005

- GENERAL NOTES:**
1. EGM PLANS ARE DIAGRAMMATICAL.
 2. PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
 3. ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DEVELOPER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER ASSIGNED TO THE PROJECT.
 4. THE CONTRACTOR/UTILITY COMPANY SHALL BE RESPONSIBLE TO VERIFY ALL EXISTING UTILITIES AND ANCHOR LOCATIONS PRIOR TO COMMENCEMENT OF WORK AND SHALL MEET WITH HECO AND THE UTILITY COMPANIES TO VERIFY THE LOCATION OF ALL UTILITIES AND ANCHORS TO BE LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE TO RELOCATE THE EXISTING UTILITIES IN THE PROJECT AREA IF NECESSARY.
 5. MAINTAIN A MINIMUM OF THREE (3) FEET CLEAR HORIZONTAL SEPARATION BETWEEN EXISTING UTILITIES AND INSTALLED UTILITIES.
 6. CONSULT WITH ANY EXISTING 1-866-423-7287 BEFORE COMMENCING WITH ANY EXCAVATION.
 7. THE DEVELOPER OR ITS CONTRACTOR WILL BE RESPONSIBLE IN SUBMITTING LANDSCAPE PLANS IN THE PROXIMITY OF THE PROPOSED OVERHEAD LINES TO THE UTILITY COMPANIES FOR THEIR REVIEW PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR FACILITIES.
 8. DEVELOPER SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE, AND/OR REPAIR EXISTING UTILITIES AND ANCHORS TO BE LOCATED. THEIR RESPECTIVE APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.

- PLAN NOTES:**
- ◇ EASEMENTS COVERING ACCESS ROADS AND DRIVEWAYS REQUIRED.
 - ◇ EASEMENTS COVERING UTILITY FACILITIES IN PRIVATE PROPERTY REQUIRED (REFER TO HECO DWS).
 - ◇ NEW HECO ANCHOR & GUY WIRE.
 - ◇ NEW HECO POLE-MOUNTED TRANSFORMER.
 - ◇ NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT.
 - ◇ NEW HECO 100W HPS POLE-MOUNTED STREET LIGHT.
 - ◇ NEW HTCO FIBER PAD.
 - ◇ NEW CATV POWER SUPPLY PAD.
 - ◇ NEW CATV DUCT-LINES 1' RISER POLE.
 - ◇ NEW 2" HECO RISER FROM NEW POLE.
 - ◇ IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS).
 - ◇ NEW ELECTRIC METER ENCLOSURE.
 - ◇ PROVIDE 3' HORIZONTAL CLEARANCE FROM SEWER LATERAL.
 - ◇ PROVIDE 3' HORIZONTAL CLEARANCE FROM FIRE HYDRANT.
 - ◇ PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APRON.

PARTIAL ELECTRICAL SITE PLAN
 SCALE: 1" = 40'-0"

THIS DRAWING IS A PART OF A PROJECT AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE ANY OTHER SERVICES OR CONSEQUENCES.



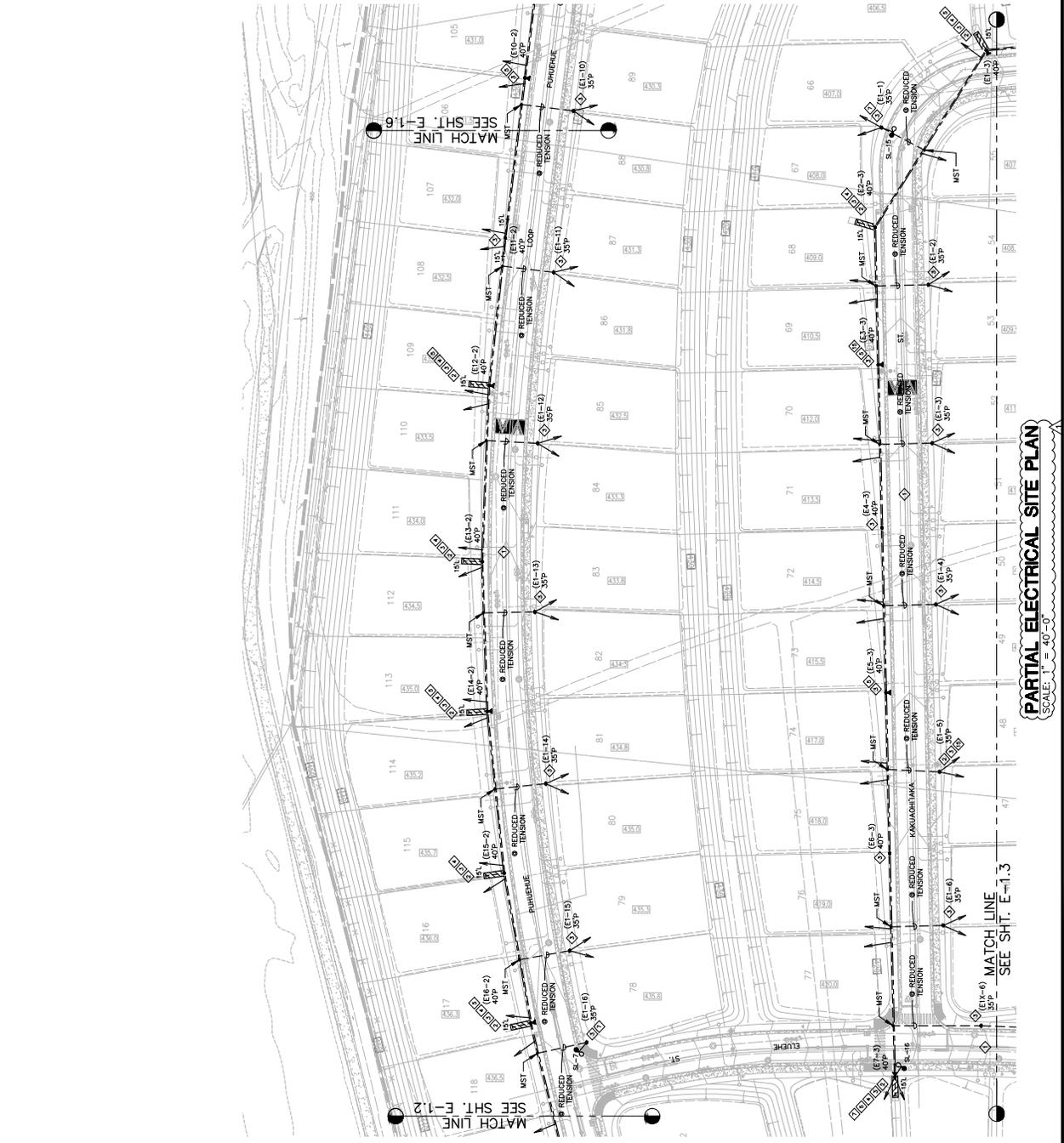
V. RICHARD
 LICENSED PROFESSIONAL ENGINEER
 No. 8991-E
 STATE OF HAWAII
 1000 KALANANĀʻOHE BLVD., SUITE 200
 HONOLULU, HAWAII 96813
 808-531-1111
 808-531-1112

NO.	DATE	DESCRIPTION	REVISIONS
1-4-22		REVISION PER HECD DWS/ECM	

JOB NO. 2019-52
 DATE: 11/20
 DRAWN BY: MWR
 CHECKED BY: MWR

ELECTRICAL PLAN FOR PUNNAI HOMESTEAD SUBDIVISION
 WAILUKU, MAUI, HAWAII
 TRAC (2) 9-6-002-002

SHEET NO. **E-1.4**
 6 OF 12 SHEETS



- SYMBOL LEGEND**
- NEW 250V HPS HECD ST. LIGHT, 30' ALUMINUM POLE FULLY CUT-OFF (SEE DETAIL SHT. E-2)
 - EXISTING UTILITY POLE
 - NEW POLE-MOUNTED TRANSFORMER
 - ▲ NEW HECO ANCHOR
 - EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
 - NEW OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
 - NEW SECONDARY DUCTLINE
 - NEW SECONDARY OVERHEAD LINES
 - FUTURE OVERHEAD SERVICE DROP
 - MD-SPAN TAP (PRIMARY/SECONDARY)
 - NEW POWER SUPPLY PAD (CATV)
 - NEW FIBER PAD (HTCO)
 - NEW HECO ENCLOSURE (SEE DETAIL SHEET E-3)
 - IRRIGATION CONTROLLER
 - NEW HANGHOLE (HECO)
 - ELECTRICAL 2"x4" PULLBOX, HECD DWS, 30-2005

- GENERAL NOTES:**
- ECM PLANS ARE DIAGRAMMATICAL.
 - PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
 - ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DEVELOPER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER ASSIGNED TO THE PROJECT.
 - THE CONTRACTOR UTILITY COMPANY SHALL BE RESPONSIBLE TO VERIFY ALL UTILITY LOCATIONS PRIOR TO COMMENCEMENT OF WORK AND SHALL MEET PROJECT AREA PRIOR TO COMMENCEMENT OF WORK AND SHALL BE HELD RESPONSIBLE TO MAINTAIN ALL UTILITIES AND WATER LINES IN THE PROJECT AREA IF NECESSARY.
 - MAINTAIN A MINIMUM OF THREE (3) FEET CLEAR HORIZONTAL SEPARATION BETWEEN EXISTING WATER LINES AND INSTALLED UTILITIES.
 - COORDINATE WITH ANY EXISTING 1-888-423-7287 BEFORE COMMENCING WORK.
 - THE DEVELOPER OR ITS CONTRACTOR WILL BE RESPONSIBLE IN SUBMITTING LANDSCAPE PLANS IN THE PROXIMITY OF THE PROPOSED OVERHEAD LINES TO THE HECO PLANNER FOR ITS REVIEW PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR FACILITIES.
 - DEVELOPER SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE, REPAIR, OR REMOVE EXISTING UTILITIES AND/OR FACILITIES WHICH ARE NOT INDICATED ON THIS PLAN.

- PLAN NOTES:**
- ◇ EASEMENTS COVERING ACCESS ROADS AND DRIVEWAYS REQUIRED. (REFER TO HECD DWG.)
 - ◇ EASEMENT COVERING UTILITY FACILITIES IN PRIVATE PROPERTY REQUIRED (REFER TO HECD DWG.)
 - ◇ NEW HECO POLE
 - ◇ NEW HECO ANCHOR & GUY WIRE
 - ◇ NEW HECO POLE-MOUNTED TRANSFORMER
 - ◇ NEW HECO 250V HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT
 - ◇ NEW HECO 100V HPS POLE-MOUNTED STREET LIGHT
 - ◇ NEW HTCO FIBER PAD
 - ◇ NEW CATV POWER SUPPLY PAD
 - ◇ NEW CATV DUCT-LINES 1' RISER POLE
 - ◇ NEW 2" HECO RISER FROM NEW POLE
 - ◇ NEW IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS)
 - ◇ NEW ELECTRIC METER ENCLOSURE
 - ◇ PROVIDE 3' HORIZONTAL CLEARANCE FROM SEWER LATERAL
 - ◇ PROVIDE 3' HORIZONTAL CLEARANCE FROM FIRE HYDRANT
 - ◇ PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APRON

PARTIAL ELECTRICAL SITE PLAN
 SCALE: 1" = 40'-0"

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V. RICHARD
 LICENSED PROFESSIONAL ENGINEER
 NO. 8991-E
 STATE OF HAWAII
 10/10/2019

NO.	DATE	DESCRIPTION
1-4-22		REVISION PER HECD DWS/ECM
1-4-22		REVISION PER HECD DWS/ECM
1-4-22		REVISION PER HECD DWS/ECM

JOB NO. 2019-52
 DATE: 11/20
 DRAWN BY: MWR
 CHECKED BY: MWR

ELECTRICAL PLAN FOR
PUNNANI HOMESTEAD
SUBDIVISION
 WAIALAIA MAUI, HAWAII
 TRAC (2) 9-6-002-002

SHEET NO.
E-1.5
 7 OF 12 SHEETS

SYMBOL LEGEND

- 25 NEW 250W HPS HECO ST. LIGHT, 30' ALUMINUM POLE FULLY CUT-OFF
- NEW 100W HPS HECO ST. LIGHT ON WOODEN POLE FULLY CUT-OFF (SEE DETAIL SHT. E-2)
- EXISTING UTILITY POLE
- NEW UTILITY POLE
- NEW HECO POLE-MOUNTED TRANSFORMER
- NEW HECO ANCHOR
- NEW ANCHOR
- EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
- NEW OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
- NEW SECONDARY DUCTLINE
- NEW SECONDARY OVERHEAD LINES
- FUTURE OVERHEAD SERVICE DROP
- MD-SPAN TAP (PRIMARY/SECONDARY)
- NEW POWER SUPPLY PAD (CATV)
- NEW FIBER PAD (HTOD)
- NEW FIBER PAD (HTOD) ENCLOSURE (SEE DETAIL SHEET E-3)
- IRRIGATION CONTROLLER
- NEW HANGULOLE (HECO)
- ELECTRICAL 2"x4" PULLBOX, HECO DMC, 30-2005

GENERAL NOTES:

1. E/M PLANS ARE DIAGRAMMATICAL.
2. PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
3. ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DEVELOPER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER ASSIGNED TO THE PROJECT.
4. THE CONTRACTOR/UTILITY COMPANY SHALL BE RESPONSIBLE TO VERIFY THE EXISTING UTILITIES AND TO OBTAIN THE NECESSARY PERMITS FOR THE PROJECT AREA PRIOR TO COMMENCEMENT OF WORK AND SHALL MEET WITH THE DEVELOPER AND THE SURVEYOR TO DISCUSS THE RESULTS AND TO HELP LOCATE THE EXISTING UTILITIES IN THE PROJECT AREA IF NECESSARY.
5. MAINTAIN A MINIMUM OF THREE (3) FEET CLEAR HORIZONTAL SEPARATION BETWEEN EXISTING WATERLINES AND INSTALLED UTILITIES.
6. COORDINATE WITH ANY EXISTING 1-888-423-7287 BEFORE COMMENCING WORK.
7. LANDSCAPE PLANS IN THE PROXIMITY OF THE PROPOSED OVERHEAD LINES SHALL BE REVIEWED AND APPROVED BY THE DEVELOPER PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR FACILITIES.
8. DEVELOPER SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE, REPAIR, OR REMOVE EXISTING UTILITIES AND TO PROVIDE THE NECESSARY EASEMENTS AND APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.

PLAN NOTES:

- 1. EASEMENTS COVERING ACCESS ROADS AND DRIVEWAYS REQUIRED. (REFER TO HECD DWS).
- 2. EASEMENT COVERING UTILITY FACILITIES IN PRIVATE PROPERTY REQUIRED (REFER TO HECD DWS).
- 3. NEW HECO POLE.
- 4. NEW HECO ANCHOR & GUY WIRE.
- 5. NEW HECO POLE-MOUNTED TRANSFORMER.
- 6. NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT.
- 7. NEW HECO 100W HPS POLE-MOUNTED STREET LIGHT.
- 8. NEW HTOD FIBER PAD.
- 9. NEW CATV POWER SUPPLY PAD.
- 10. NEW CATV DUCT-LINES 1" FIBER POLE.
- 11. NEW 2" HECO RISER FROM NEW POLE.
- 12. IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS).
- 13. NEW ELECTRIC METER ENCLOSURE.
- 14. PROVIDE 3' HORIZONTAL CLEARANCE FROM SEWER LATERAL.
- 15. PROVIDE 3' HORIZONTAL CLEARANCE FROM FIRE HYDRANT.
- 16. PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APRON.



PARTIAL ELECTRICAL SITE PLAN
 SCALE: 1" = 40'-0"

THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING UTILITIES AND FOR PROVIDING THE NECESSARY EASEMENTS AND APPROACHES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE, REPAIR, OR REMOVE EXISTING UTILITIES AND TO PROVIDE THE NECESSARY EASEMENTS AND APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.



V. RICHARD
 LICENSED PROFESSIONAL ENGINEER
 No. 8991-E
 STATE OF HAWAII
 EXPIRES 12/31/2024
 1000 KALANOAUE AVENUE, SUITE 200
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 808-943-8888
 808-943-8889

NO.	DATE	DESCRIPTION
1-4-22		REVISED PER HECD DWS/ECM
1-1		ISSUE FOR PERMIT

JOB NO. 2019-52
 DATE: 11/20
 DRAWN BY: MWR
 CHECKED BY: MWR

ELECTRICAL PLAN FOR
PUNNANI HOMESTEAD
SUBDIVISION
 WAILUKU, MAUI, HAWAII
 TRAC (2) 9-6-002002

SHEET NO.
E-1.6
 8 OF 12 SHEETS

SYMBOL LEGEND

- 2" NEW 250W HPS HECO ST. LIGHT, 30' ALUMINUM POLE FULLY CUT-OFF
- 1" NEW 100W HPS HECO ST. LIGHT ON WOODEN POLE FULLY CUT-OFF (SEE DETAIL SHT. E-2)
- EXISTING UTILITY POLE
- NEW UTILITY POLE
- ▲ NEW POLE-MOUNTED TRANSFORMER
- ◆ EXISTING ANCHOR
- ◆ NEW ANCHOR
- EXISTING OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
- - - NEW OVERHEAD LINES (HECO, HAWAIIAN TELCOM, SPECTRUM)
- NEW SECONDARY OVERHEAD LINES
- FUTURE OVERHEAD SERVICE DROP
- MID-SPAN TAP (PRIMARY/SECONDARY)
- NEW FIBER PAD (HTCO)
- NEW POWER SUPPLY PAD (CATV)
- NEW FIBER PAD (HTCO) ENCLOSURE (SEE DETAIL SHEET E-3)
- IRRIGATION CONTROLLER
- NEW HANGHOLE (HECO)
- M-2 ELECTRICAL 2"x4" PULLBOX, HECO DWS, 30"-2005

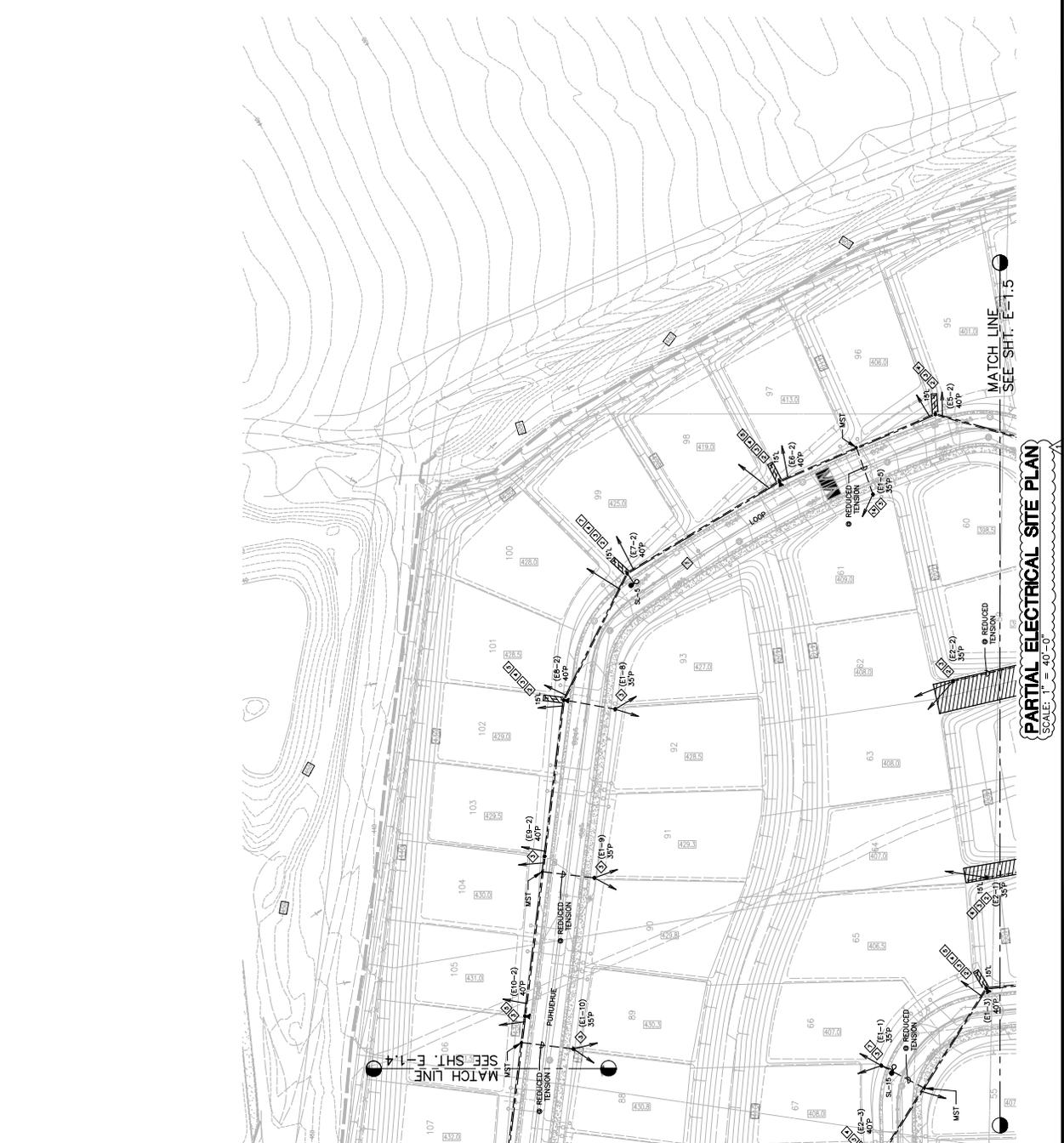
GENERAL NOTES:

1. EOM PLANS ARE DIAGRAMMATICAL.
2. PLANS SUBJECT TO REVIEW AND APPROVAL OF UTILITY COMPANIES.
3. ALL NEW POLE & ANCHOR LOCATIONS ARE TO BE STAKED OUT BY THE DEVELOPER'S SURVEYOR. COORDINATION REQUIRED WITH HECO'S PLANNER ASSIGNED TO THE PROJECT.
4. THE CONTRACTOR/UTILITY COMPANY SHALL BE RESPONSIBLE TO VERIFY EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK AND SHALL MEET WITH THE DEVELOPER AND HECO PLANNER TO REVIEW THE FIELD TO HELP LOCATE THE EXISTING UTILITIES IN THE PROJECT AREA IF NECESSARY.
5. MAINTAIN A MINIMUM OF THREE (3) FEET CLEAR HORIZONTAL SEPARATION BETWEEN EXISTING WATERLINES AND INSTALLED UTILITIES.
6. CONSULT WITH ANY EXISTING 1-888-423-7287 BEFORE COMMENCING WORK.
7. LANDSCAPE PLANS IN THE PROXIMITY OF THE PROPOSED OVERHEAD LINES SHALL BE REVIEWED PRIOR TO THEIR ACCEPTANCE OF SAID INFRASTRUCTURES AND/OR FACILITIES.
8. DEVELOPER SHALL BE RESPONSIBLE FOR THE FULL COST TO RELOCATE, REPAIR, AND/OR REPLACE EXISTING UTILITIES AND/OR FACILITIES AND THEIR RESPECTIVE APPROACHES WHICH ARE NOT INDICATED ON THIS PLAN.

PLAN NOTES:

- ◆ EASEMENTS COVERING ACCESS ROADWAYS AND DRIVEWAYS REQUIRED. (REFER TO HECO DWS.)
- ◆ EASEMENT COVERING UTILITY FACILITIES IN PRIVATE PROPERTY REQUIRED (REFER TO HECO DWS.)
- ◆ NEW HECO POLE.
- ◆ NEW HECO ANCHOR & GUY WIRE.
- ◆ NEW HECO POLE-MOUNTED TRANSFORMER.
- ◆ NEW HECO 250W HPS, 30' ALUMINUM POLE-MOUNTED STREET LIGHT.
- ◆ NEW HECO 100W HPS POLE-MOUNTED STREET LIGHT.
- ◆ NEW HTCO FIBER PAD.
- ◆ NEW CATV POWER SUPPLY PAD.
- ◆ NEW CATV DUCT-LINES 1" RIBER POLE.
- ◆ NEW 2" HECO RISER FROM NEW POLE.
- ◆ IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS).
- ◆ NEW ELECTRIC METER ENCLOSURE.
- ◆ PROVIDE 3' HORIZONTAL CLEARANCE FROM SEWER LATERAL.
- ◆ PROVIDE 2' HORIZONTAL CLEARANCE FROM FIRE HYDRANT.
- ◆ PROVIDE 2' HORIZONTAL CLEARANCE FROM DRIVEWAY APPROX.

MATCH LINE SEE SHT. E-1.4
 MATCH LINE SEE SHT. E-1.5



PARTIAL ELECTRICAL SITE PLAN
 SCALE: 1" = 40'

THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL FIELD DATA AND UTILITIES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CLEARANCE FROM ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL EXISTING UTILITIES AND STRUCTURES TO ORIGINAL OR BETTER CONDITION AFTER COMPLETION OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CLEARANCE FROM ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL EXISTING UTILITIES AND STRUCTURES TO ORIGINAL OR BETTER CONDITION AFTER COMPLETION OF WORK.



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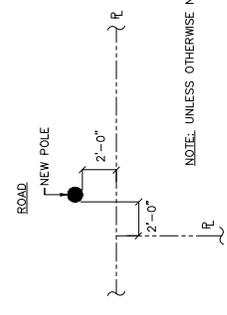
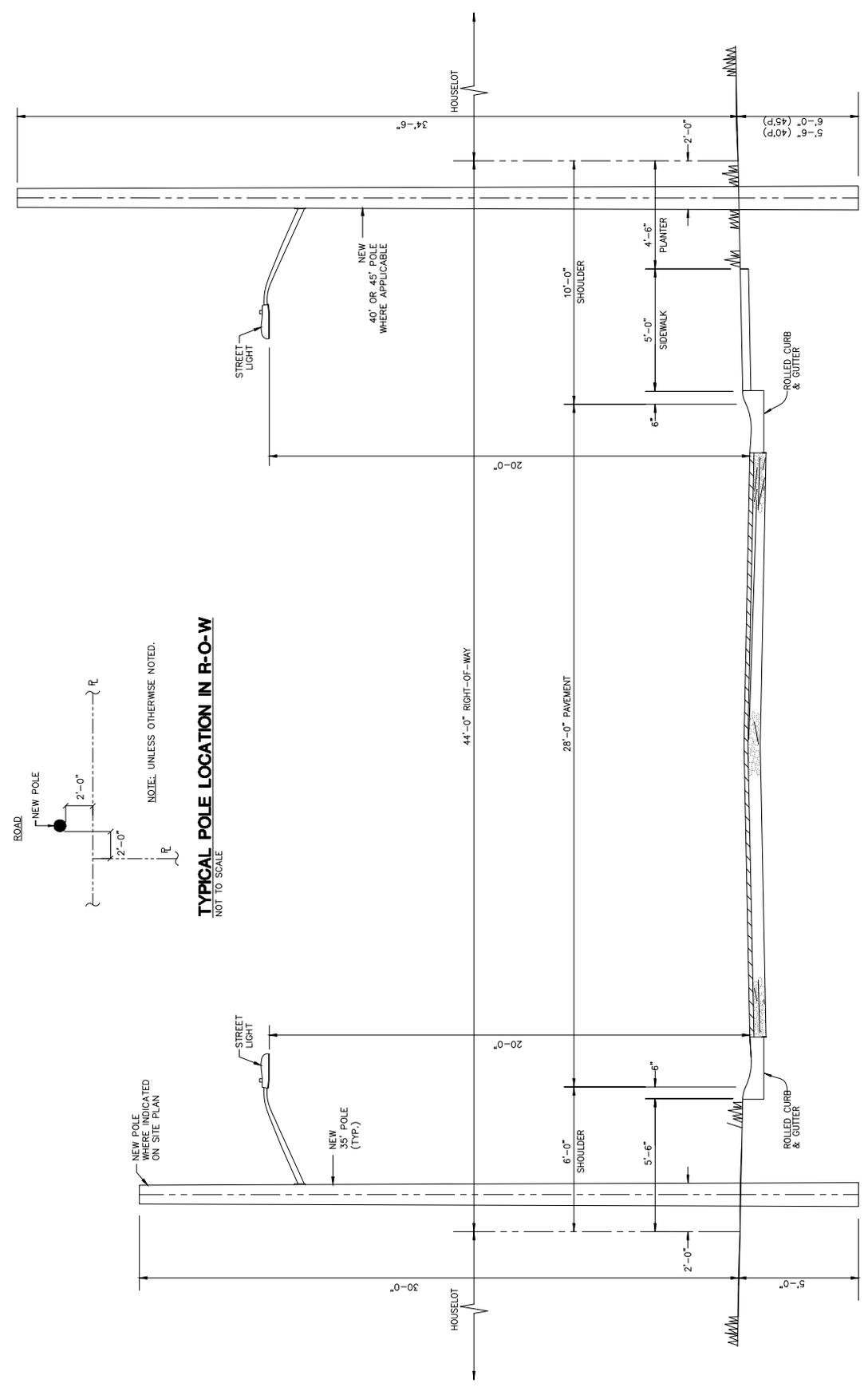
V. RICHARD
 LICENSED PROFESSIONAL ENGINEER
 No. 8991-E
 HAWAII, U.S.A.
 EXPIRES 12/31/2012

NO.	DATE	REVISIONS

JOB NO. 2019-52
 DATE: 11/20
 DRAWING NO. 2019-52
 CHECKED BY: MPR

WAILUKU, MAUI, HAWAII
PUNNANI HOMESTEAD
SUBDIVISION
 TRAC (2) 9-6-002002

SHEET NO.
E-2
 9 OF 12 SHEETS



POLE DETAIL @ TYPICAL SECTION - 44 FT. RIGHT-OF-WAY
 NOT TO SCALE

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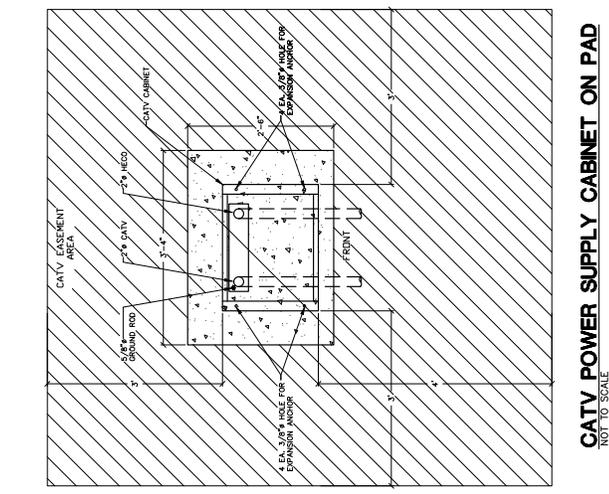
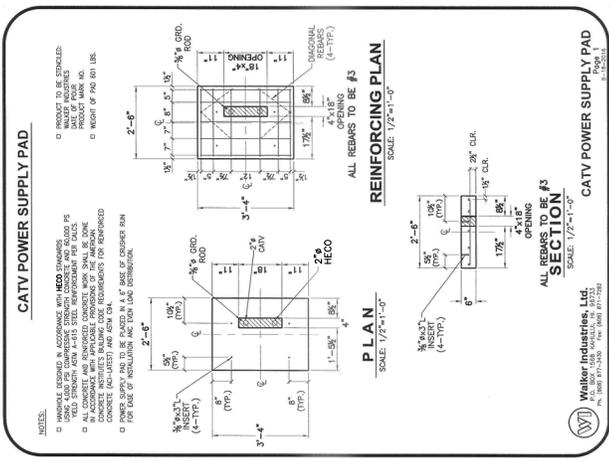
REVISIONS

NO.	DATE	DESCRIPTION

JOB NO. 2019-52
 DATE: 11/20
 DRAWN BY: RMB
 CHECKED BY: MPR

**ELECTRICAL PLAN FOR
 PUNNANI HOMESTEAD
 SUBDIVISION**
 WAIALAIA MAUI, HAWAII
 TRAC (2) 9-6-002-002

SHEET NO.
E-4
 11 OF 12 SHEETS



- SECTION — GENERAL NOTES**
- THE CONTRACTOR WILL PROVIDE A 5/8" x 8' GALVANIZED GROUND ROD AND A 2' x 4' x 8' GALVANIZED GROUND CABINET. MINIMUM CATY CABINET SIZE IS 18" x 24" x 8".
 - ALL CONDUITS WILL ENTER AND LEAVE THE HANDHOLE/PULLBOX AT 90 DEGREES TO THE FACE OF THE BOX.
 - THE MAXIMUM SIZE CONDUIT THAT MAY ENTER THE SIDE WALL OF A 2' x 4" PULL BOX IS 2".
 - ALL CONDUITS WILL BE TERMINATED WITH A BELL END, GROUNDED AROUND THE CONDUIT. THE BELL END SHALL BE FLUSH WITH THE INSIDE FACE OF THE CONDUIT. THE INSIDE SURFACE SHALL BE FINISHED SMOOTH AND FLUSH WITH THE EXISTING SURFACE.
 - ALL CONDUITS SHALL HAVE A W/8000 POLYESTER MULETAPE OR EQUIVALENT FOREIGN MATERIALS DURING CONSTRUCTION. THE TEMPORARY CAPS SHALL BE REMOVED. THE INSIDE SURFACE SHALL BE FINISHED SMOOTH AND FLUSH WITH THE EXISTING SURFACE.
 - ALL CONDUIT AND PULLBOXES/HANDLES, INSTALLED BY THE CONTRACTOR FOR USE BY CATY WILL BE SUBJECT TO INSPECTION. THE INSPECTION SHALL TAKE PLACE PRIOR TO BACK FILL OR CONCRETE POUR. INSPECTIONS MUST BE SCHEDULED 3 WORKING DAYS IN ADVANCE.
 - ALL HANDHOLE/PULLBOXES INSTALLED IN NON-SIDEWALK AREAS WILL REQUIRE A 10" x 5" THICK CONCRETE COLLAR AROUND THE ENTIRE FRAME, REINFORCED WITH #4 BARS. THE COLLAR SHALL BE PLACED ON A COMPACTED 6" BASE OF SAND OR CATY TYPE "B" BACKFILL.
 - AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL NOT LESS THAN 12" IN DIAMETER SHALL BE PULLED THROUGH EACH DUCT.
 - CONDUIT AND PULLBOXES/HANDLES SHALL BE INSTALLED IN ANY STRUCTURES THAT CONTAIN CATY FACILITIES. THE CONTRACTOR SHALL ADVISE THE INSPECTOR OR STANLEY MAN, THE WORKING DAYS IN ADVANCE. NOTICE IS REQUIRED FOR UNDERGROUND CABLE LOCATING AND MARKING.
 - ALL CONDUITS WILL ENTER CATY CABINETS FROM THE EXTREME LEFT KIDGOCUT.
 - THE DEVELOPER WILL BE RESPONSIBLE FOR ALL REVISIONS REQUIRED ON CATY DESIGN DUE TO FIELD CONDITIONS.
 - ONE PIECE 2' x 4", PULL BOXES ARE NON CATY STANDARD AND WILL NOT BE ACCEPTED.
 - THE APPROVAL OF THE SUBJECT DRAWING(S) IS GOOD FOR A PERIOD OF 180 DAYS. IF CONSTRUCTION ACTIVITIES HAVE NOT COMMENCED WITHIN 180 DAYS OF THE DATE OF APPROVAL, THE CONTRACTOR SHALL BE VOID. SHOULD THIS OCCUR THE CONTRACTOR WILL BE NOTIFIED UPON RECEIPT FOR INSPECTION OF UNDERGROUND.

THIS DRAWING IS A CONTRACT DOCUMENT. IT IS THE PROPERTY OF WALKER INDUSTRIES, LTD. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF WALKER INDUSTRIES, LTD.

NO.	DATE	REVISIONS

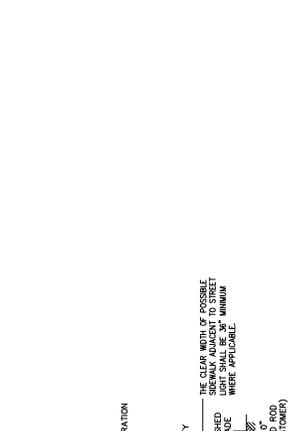
408 NO. 2019-52
 DATE: 11/20
 DRAWN BY: MPR
 CHECKED BY: MPR

ELECTRICAL PLAN FOR PUNNAI HOMESTEAD SUBMISION
 WALKER MAIL, HAWAII
 TMC (2) 9-6-002-002

SHEET NO. **E-5**
 12 OF 12 SHEETS

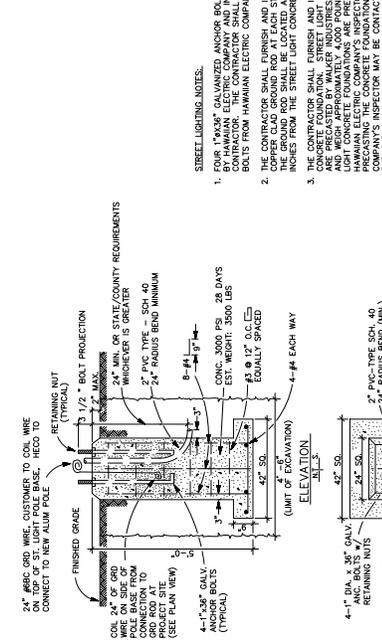
PHASE 1 - A

MOUNTING SURFACE	PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 6	
	1	2	3	4	5	6	7	8	9	10	11	12
1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
11	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
12	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
TOTAL	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0



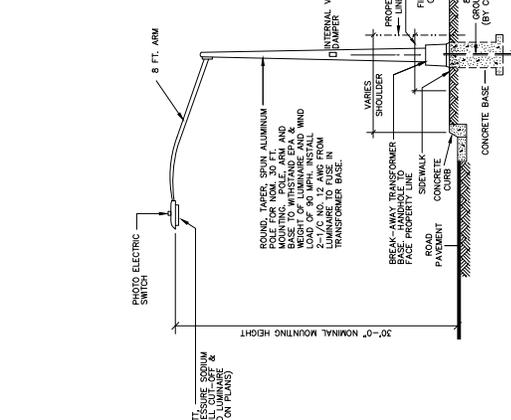
SINGLE-LINE DIAGRAM
 NOT TO SCALE

STREET LIGHT STANDARD DETAIL W/IN COUNTY R.O.W.
 NOT TO SCALE



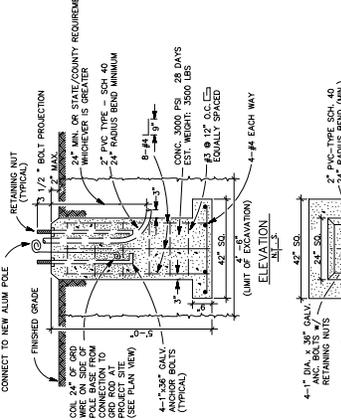
STREET LIGHTING NOTES:

1. FOR "FAN" CALUMNETED ANCHOR BOLTS SHALL BE FURNISHED BY HAWAIIAN ELECTRIC COMPANY AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS FROM HAWAIIAN ELECTRIC COMPANY'S MAHULU WAREHOUSE.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL 4-# 3/8\"/>



PLAN SECTION - B
 NOT TO SCALE

METER ENCLOSURE DETAIL
 NOT TO SCALE



PLAN SECTION - A
 NOT TO SCALE

1. CABINET TO BE PRIMED WITH ONE COAT SHOP PRIMER.
2. PLYWOOD BACKBOARD SHALL BE 3/4\"/>

METER ENCLOSURE DETAIL
 NOT TO SCALE

1. CONTRACTOR SHALL PROVIDE NUMBER OF CONDUITS REQUIRED.
2. MOUNT METERING EQUIPMENT SECURELY TO PLYWOOD BACKBOARD.
3. PROVIDE 7\"/>

12 OF 12 SHEETS

PLANTING NOTES

1. INTENT IS TO STOCKPILE AND RE-USE THE EXISTING TOPSOIL TO THE EXTENT THAT CLEARING AND GRUBBING CONDITIONS ALLOW. REMOVE AND STOCKPILE EXISTING TOPSOIL FOR RE-USE.
2. EXCAVATE PREPARE SUBGRADE AND PROVIDE A MINIMUM DEPTH OF 4 INCHES WHERE DISTURBANCE OCCURS DUE TO WORK UNDER THIS CONTRACT. AREAS WHERE NO STRUCTURES OR PAVEMENTS ARE TO BE CONSTRUCTED, AND WHERE QUANTITY OF EXISTING TOPSOIL IS INSUFFICIENT, PROVIDE IMPORTED TOPSOIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
3. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF TOPSOIL TO BE STOCKPILED AND RE-USED. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF TOPSOIL TO BE STOCKPILED AND RE-USED.
4. TEST PLANT PITS FOR DRAINAGE BY FILLING WITH WATER, BRING CONDITIONS PERMITTING THE RETENTION OF WATER TO THE ATTENTION OF THE ARCHITECT. DO NOT PROCEED WITH PLANTING WITHOUT APPROVAL. PAY SPECIAL ATTENTION TO AREAS WHERE DRAINAGE HAS BEEN PROVIDED TO ACCUMULATE THE PLANTS TO RECEIVING INITIAL WATER BY GRADUALLY REDUCING THE AMOUNT OF WATER APPLIED DURING THE LAST MONTH OF THE MAINTENANCE PERIOD. KEEP UP TO DATE RECORDS OF WATER APPLICATION.
5. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF PLANT MATERIALS, EQUIPMENT AND VEHICLES ARE FREE OF INVASIVE PREYS IDENTIFIED BY THE HAWAII INVASIVE SPECIES COUNCIL AND THE HAWAII DEPT. OF AGRICULTURE.
 - PLANTING SPECIES: FELDERBERGACTIS, COOBI AND/OR ELEI, HIERODACTYLUS PLANTING SPECIES AND/OR THEIR EGGS
 - LITTLE FIRE ANT (WASHANNIA AURORIFRONTAL)
 - COCONUT RHINOBEETLE (ORICTES RHINOCEBUS).
6. IF ANY OF THE ABOVE PREYS ARE SUSPECTED, REPORT PRESENCE TO THE HAWAII DEPT. OF AGRICULTURE HAWAII PEST HOTLINE AT (808) 643-PEST (7379)

LANDSCAPE DEMOLITION NOTES

1. PRIOR TO START OF WORK, VERIFY THE EXTENT OF LANDSCAPE DEMOLITION TO ACCOMMODATE WORK UNDER THIS CONTRACT. ADDITIONAL REMOVAL PATCHING AND RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. IF REQUIRED, THE ARCHITECT MAY APPROVE TEMPORARY REMOVAL OF ITEMS CAREFULLY REMOVED TO AVOID DAMAGE AND BE PROPERLY REINSTALLED.
2. IN AREAS OF SELECTIVE LANDSCAPE DEMOLITION, INVENTORY EXISTING CONDITIONS OF TREES OR OTHER PLANTING TO REMAIN WHICH COULD BE MISCONSTRUED AS DAMAGE RESULTING FROM SELECTIVE DEMOLITION. PHOTOGRAPH OR OTHERWISE DOCUMENT PRIOR TO STARTING WORK.
3. REMOVE AND STOCKPILE EXISTING TOPSOIL FOR RE-USE.
4. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF TOPSOIL TO BE STOCKPILED AND RE-USED. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF TOPSOIL TO BE STOCKPILED AND RE-USED.
5. CAREFULLY SURVEY TO ENSURE THAT NO WHITE TERM CHICKS OR EGGS ARE PRESENT. CHICKS OR EGGS ARE PRESENT, CONTACT THE US FISH AND WILDLIFE SERVICE. WORK MAY BE DELAYED UNTIL THE CHICKS FLEGE.
6. DEMOLITION OF TREES AND PALMS INCLUDES REMOVAL OF ROOTBALL, BUTTRESSES AND OTHER ROOTS AND BRANCHES TO A MINIMUM DEPTH OF 12 INCHES BELOW GRADE. UNLESS OTHERWISE SPECIFIED, SURROUNDING ROOTS SHALL BE REMOVED TO A MINIMUM DEPTH OF 12 INCHES BELOW ADJACENT GROUND LEVEL.
7. THE CONTRACTOR SHALL NOT TAKE REQUESTS FOR ADDITIONAL CONSTRUCTION MATERIAL OR EXCAVATION FOR NEW PLANTING.
8. REMOVE ROOTS ONLY WHERE REMOVAL DOES NOT DAMAGE EXISTING STRUCTURES, PAVEMENTS OR UTILITIES TO REMAIN. IF INVESTIGATION INDICATES THAT ROOTS TO BE REMOVED MAY AFFECT OR SURROUND SUCH FEATURES, TO REMAIN, EXPOSE THE ROOTS TO BE REMOVED TO A MINIMUM DEPTH OF 12 INCHES BELOW GRADE. DO NOT TRIP OUT ROOTS WITH A BACKLOG OR SIMILAR EQUIPMENT. THE ROOTS SHALL THEN BE CUT AND REMOVED, BEING CAREFUL NOT TO DAMAGE THE FEATURES TO REMAIN.
9. BACKFILL PITS WITH APPROVED MATERIAL AND COMPACT AS REQUIRED TO ACCOMMODATE WORK UNDER THIS CONTRACT. OVER EXCAVATION OF PITS TO RECEIVE NEW TREES WITH ON-SITE EXCAVATED SOIL. AREAS TO BE PLANTED SHALL RECEIVE A FINISH SURFACE OF TOPSOIL. OVERFILL, MONITOR, AND TAMP TO ALLOW FOR SETTILING TO MATCH FINISH GRADE.
10. PROPERLY REMOVE AND DISPOSE DEBRIS. DO NOT USE WOOD CHIPS OR DEBRIS AS BACKFILL.

GENERAL NOTES

1. REQUIRE WORKING PERSONNEL THOROUGHLY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND WITH COMPLETE TRAINING AND EXPERIENCE TO ENSURE INSTALLATION OF THE IRRIGATION SYSTEMS AND LANDSCAPING IN STRICT ACCORDANCE WITH THE APPROVED DESIGN. APPROVED RECOMMENDATIONS OF THE ARCHITECT SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
2. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF TOPSOIL TO BE STOCKPILED AND RE-USED. THE CONTRACTOR SHALL VERIFY QUANTITIES AND PROVIDE THE QUANTITY OF TOPSOIL TO BE STOCKPILED AND RE-USED.
3. COMPARE DRAWINGS FROM THE VARIOUS DISCIPLINES WITH THE LANDSCAPE DRAWINGS AND REPORT INCONSISTENCIES OR OMISSIONS TO THE ARCHITECT.
4. UNLESS PROVIDED FOR IN THE CONTRACT, THE CONTRACTOR SHALL ACCEPT THE SITE AS SHOWN ON THE DRAWINGS AND ACCEPTS THE SITE AS IT IS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
5. EXISTING FACILITIES SHOWN OR NOTED ON THE DRAWINGS ARE BASED ON PLANS PREPARED BY OTHERS AND BY FIELD OBSERVATIONS. ACCURACY OR COMPLETENESS OF THE INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE INFORMATION AND REPORT ANY DISCREPANCIES TO THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
6. PRIOR TO EXCAVATION FIELD LAYOUT, THE PROPOSED IMPROVEMENTS FOR THE PROJECT SHALL BE APPROVED BY THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
7. PROTECT EXISTING IMPROVEMENTS ON THE PREMISES AND IN ADJACENT AREAS. REPAIR DAMAGES CAUSED BY WORK UNDER THIS CONTRACT TO MATCH SURROUNDING SURFACES, INCLUDING BUT NOT LIMITED TO PATCHING, PAINTING, AND RE-FLANNING. REPAIRS SHALL BE AT NO COST TO THE OWNER. PRIOR TO PROTECTING EXISTING IMPROVEMENTS, THE CONTRACTOR SHALL PHOTOGRAPH OR OTHERWISE DOCUMENT THE CONDITION OF EXISTING FEATURES TO BE PROTECTED.
8. PRIOR TO EXCAVATION FIELD LAYOUT, THE PROPOSED IMPROVEMENTS FOR THE PROJECT SHALL BE APPROVED BY THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
9. PLAN AND PROVIDE BEST MANAGEMENT PRACTICES (BMP) TO COMPLY WITH LOCAL STANDARDS, RULES AND REGULATIONS OF THE CITY AND COUNTY OF HONOLULU. SLOPED ALONG PAVEMENTS AND WERE DIRECTED. UPON ACCEPTANCE OF THE PROJECT, REMOVE SILT FENCE OR FILTER SOCK AND RESTORE THE PROJECT SITE TO ITS ORIGINAL CONDITIONS.
10. PROVIDE AND MAINTAIN SIGNS, LIGHTS, BARRICADES, AND PROTECTIVE ELEMENTS FOR THE PROTECTION AND SAFETY OF THE PUBLIC.

TEMPORARY IRRIGATION NOTES

1. PROVIDE TEMPORARY IRRIGATION FOR THE ESTABLISHMENT OF PLANT MATERIALS FOR THE DURATION OF THE CONTRACT. TEMPORARY IRRIGATION SHALL REMAIN IN PLACE UNTIL THE CONTRACTOR HAS COMPLETED ALL WORK UNDER THIS CONTRACT. IRRIGATION SHALL BE AT THE OPTION OF THE CONTRACTOR.
2. OBTAIN AND PAY FOR PERMITS FOR WATER SERVICE.
3. BE AWARE THAT TEMPORARY IRRIGATION WILL BE EXPOSED TO THE PUBLIC AND WILL NOT BE SECURE. TAKE REASONABLE PRECAUTIONS TO MINIMIZE EXPOSURE TO THE PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
4. IF TEMPORARY CONNECTIONS TO A POTABLE WATER SOURCE IS APPROVED, PROVIDE AN APPROVED BACKFLOW PREVENTION DEVICE IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
5. IF SPRINKLER HEADS ARE USED, LOCATE A MINIMUM OF 6 INCHES FROM CURBS AND PAVEMENTS AND MINIMUM 18 INCHES FROM BUILDINGS AND WALLS.
6. PROVIDE BATTERY OPERATED CONTROLLERS TO ENABLE IRRIGATION DURING MAINTENANCE PERIODS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
7. ACCLIMATE PLANTING PRIOR TO REMOVAL OF TEMPORARY IRRIGATION SYSTEMS BY GRADUALLY REDUCING WATER APPLICATION DURING THE LAST MONTH OF THE MAINTENANCE PERIOD. KEEP UP TO DATE RECORDS OF WATER APPLICATION.

IRRIGATION NOTES

1. WORK SHOWN IS DIAGNOSTIC AND SUBJECT TO ADJUSTMENTS DUE TO ACTUAL CONDITIONS ENCOUNTERED IN THE FIELD. PROVIDE WORK NECESSARY TO MEET THE DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
2. SCALE HEAD LOCATIONS FROM THE DRAWINGS AND LAY OUT PER CURRENT INDUSTRY STANDARDS TO MEET THE DESIGN INTENT. MAJOR DEVIATIONS DUE TO OBSTRUCTIONS OR OTHER SITE CONDITIONS SHALL BE APPROVED IN THE FIELD. DO NOT LOCATE HEADS ON PARTIAL PAVEMENTS OR UNFINISHED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
3. COORDINATE THE INSTALLATION AND CLEARANCES FOR CONNECTION OF PRESSURE LINES AND APPURTENANCES WITH OTHER CONTRACTORS ON THE JOB. ENSURE THAT THESE ITEMS ARE INSTALLED PRIOR TO PLACEMENT OF PAVEMENT OR STRUCTURES. DO NOT INSTALL TEES OR ELBS UNDER PAVEMENT, EXTEND ELVES TO THE POINT OF CONNECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARIES OF SOIL CHANGE OR AGREEMENT TO FILL IN GRUBBED AREAS INCLUDING ALLOWANCE FOR SETTLEMENT. FINE GRADE AS DESIGNED OR TO MAINTAIN EXISTING DRAINAGE PATTERNS.
4. A MAXIMUM PRESSURE OF 120 PSI AT THE POINT OF CONNECTION. PRIOR TO COMMENCING WITH THE WORK, TEST THE PRESSURE AND REPORT THE RESULTS.
5. VALVE STATION NUMBERING IS FOR IDENTIFICATION PURPOSES AND NOT AN INDICATION OF VALVE OPERATION SEQUENCE. COORDINATE PROGRAMMING OF THE FACILITY, OPERATE DRAIN SYSTEMS LAST.
6. EXCEPT WHEN REQUIRED FOR INITIAL PLANT ESTABLISHMENT, OPERATE IRRIGATION SYSTEMS DURING "OFF PEAK" EVENING HOURS. THE OWNER SHALL APPROVE OPERATION DURING OTHER PEAK HOURS.
7. MAINTAIN A CURRENT SET OF DRAWINGS ON SITE. NOTE FIELD CHANGES AND RECORD AS THEY OCCUR. SUBMIT RECORD DRAWINGS AT THE END OF THE CONTRACT.
8. AN INSPECTION OF THE IRRIGATION SYSTEM SHALL BE CONDUCTED TOGETHER WITH THE LANDSCAPE FINAL INSPECTION.



MARRELLS, UNIKORI ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING AND SURVEYING
1111 SOUTH KULUWAHUA DRIVE, SUITE 403
HONOLULU, HAWAII 96813

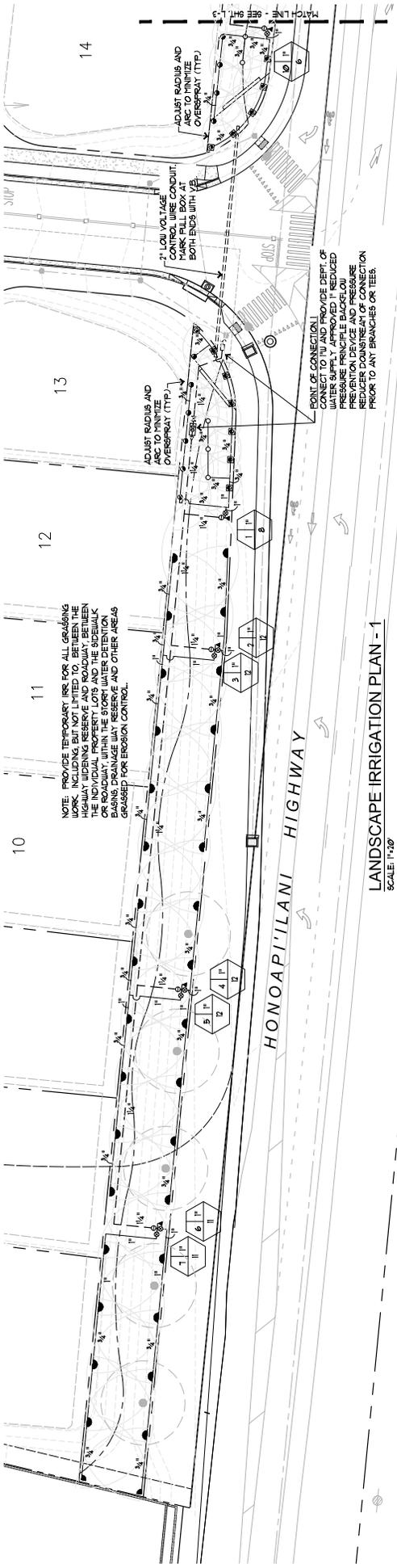
PU UNANI HOMESTEAD
1111 SOUTH KULUWAHUA DRIVE, SUITE 403
HONOLULU, HAWAII 96813

TITLE: LANDSCAPE NOTES
DATE: 12/21/2020
SCALE: NOT TO SCALE

DESIGNED BY: MM
CHECKED BY: MM
DATE: 12/21/2020

APPROVED BY: MM
DATE: 12/21/2020

PROJECT NO.: 19028
JOB NUMBER: L-1
SHEET: 1 OF 1



LANDSCAPE IRRIGATION PLAN - 1
SCALE 1"=30'

IRRIGATION LIST AND LEGEND

SYMBOL	DESCRIPTION
000	MAIN DEPTH OF WATER SUPPLY APPROVED, AMERICAN MADE LEAD FREE BRASS PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE (1" AND 1/2" SIZES) - HANTRIC VALVE SERIES, APOLLO RET-144 SERIES, OR JURN WILKINS ST5X13U SERIES.
X	BACKFLOW PREVENTION DEVICE ENCLOSURE ON CONC PAD FOR UP TO 1-1/4" SIZE DEVICES, 100% STAINLESS STEEL CONSTRUCTION, HINGED AND LOCKABLE WITH STAINLESS STEEL SETTING BASE, STRAINBBOX, SBCC-4888 (465"x283"x115").
	GATE VALVES (SAME SIZE AS THE LARGEST DOWNSTREAM PIPING), NON-BRASS STEEL CROSS HANDLE AND HANDLE TUBES, REGULATED ENCL, APOLLO 601-K SERIES, OR NISCO T-13-K SERIES.
	PRESSURE REDUCING VALVE WITH INTEGRAL BY-PASS CHECK VALVE AND STRAINER, JURN WILKINS MODEL 6000AL-G-1" AND 1-1/4" SIZES, DESIGN INCOMING STATIC PRESSURE OF 120 PSI (STATIC), DESIGN OUTLET PRESSURE OF 10 PSI. VERIFY PRESSURE ON SITE PRIOR TO PROCEEDING WITH THE WORK.
	MAIN (PRESSURE) LINE (SIZES AS NOTED).
	HARD DRAIN COPPER TUBE K THROUGH THE BACKFLOW PREVENTION DEVICE PROVIDE COPPER TO PVC ADAPTERS.
	PVC SCH 40 WITH PVC SCH 80 FITTINGS.
	NON-PRESSURE LATERAL GREEN THARRING TAPE, CAUTION IRRIGATION LINE BURIED BELOW.
	NON-PRESSURE LATERAL LINE (SIZES AS NOTED), PVC CLASS 200 WITH SCH 40 PVC FITTINGS.
	SLEEVES FOR PIPES OR CONDUIT FOR WIRES UNDER PAVEMENT OR THROUGH WALLS - PVC SCH 40, 1/4" IRIS PIPES.
	4" SIZE FOR 1-1/2" THROUGH 2-1/2" IRIS PIPES.
	2" SIZE FOR LOW VOLTAGE CONTROL WIRES.
0	BRASS ANGLE VALVE FEMALE THREADED CONNECTIONS (SAME SIZE AS THE LARGEST DOWNSTREAM PIPING UP TO 2" SIZE), CHAMPION 200RS SERIES.

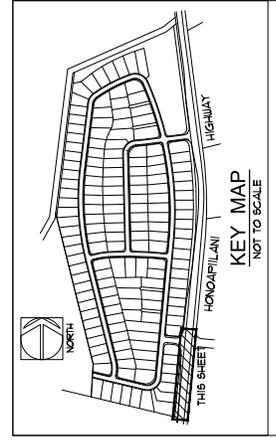
SYMBOL	DESCRIPTION
⊗	REPOTE CONTROL VALVE CONTAMINATION RESISTANT, COPPER/BRASS GRADE GLASS FILLED NITON (SIZES AS NOTED), RAINBIRD X200-P885 SERIES, OR HANTRIC 10-X200-P8 SERIES.
▲	QUICK COUPLING VALVE, 2" PIECE WITH LOCKING W/NTL OR RUBBER COUPLING, HANTRIC OR HANTRIC 10-X200-P8 SERIES.
⊙	HANTRIC 10-X200-P8 SERIES, 2" SIZE.
⊚	HANTRIC 10-X200-P8 SERIES, 1-1/2" SIZE.
⊛	LOCK TOP KEY FOR QUICK COUPLING VALVE (2" TOTAL).
⊜	VALVE BOXES, COPPER/BRASS GRADE POLYETHYLENE CONSTRUCTION WITH W/NTL MONITOR, WIDE FLANGE BASE, CORRUGATED SIDES, AND PIPE VALVE TYPED INTO THE LID. PROVIDE JMW20 SIZE AND EXTENSIONS AS REQUIRED. RAINBIRD VS SERIES, CARBON TRUSS 1 SERIES, OR NDS PRO-SPEC SERIES.
⊝	IRRIGATION CONTROL SYSTEM.
⊞	IRRIGATION CONTROLLER, 31 STATIONS, RAINBIRD ESP-LXVE-8 STATION BASE CONTROLLER WITH 2 EA ESP-LXV810 2-STATION CONTROLLER, 1 EA ESP-LXV810 2-STATION CONTROLLER TO ALLOW A MINIMUM OF 3 STATIONS TO OPERATE AT THE SAME TIME TO PREVENT OVERWATERING.
⊟	CONTROLLER ENCLOSURE, 100% STAINLESS STEEL, WITH CONTROLLER TERMINAL STRIP WITH DUPLEX OUTLET BOARD, FLEXIBLE POWER CORD, AND 2" DIA. LOCKING HANDLE WITH 1/2" DIA. LOCKING SWITCH SUB-ASSEMBLY, FED-1888 AND REAR/RAIN SWITCH ENCLOSURE.
⊠	UL APPROVED DIRECT BURIAL SPlice CONNECTOR WITH SILICONE GREASE SEALANT AND CAPS 3"1 DB07-14.
⊡	RAIN SHUT-OFF SENSOR, HANTRIC W/NTL WIRE - HANTRIC W/NTL-CLK CONTROLLER / VALVE NO. 1 (0" INDICATES DRIP CIRCUIT).
⊢	VALVE SIZE ("DRIP" INDICATES DRIP VALVE)
⊣	GRI THROUGH VALVE

SYMBOL	DESCRIPTION	IRRI-GATION HEADS	GRI-PSI	RADIUS ARC
1	1" RUBER MID, LOW ANGLE STREAM ROTATOR WITH ADJ. ARC, AND ADJ. RADIUS 1, 30-60-90-PSI 201.A (GRAT)	1.0-5.0	28'	ADJ.
2	1" RUBER MID, LOW ANGLE STREAM ROTATOR	2.0-5.0	28'	ADJ.
3	1" POP-UP MULTI-STREAM ROTATOR NOZZLE WITH ADJ. 8" TO 16" RADIUS	ADJ. 8" TO 360"	ARC CHECK VALVE MATCHED PRECIPITATION 40 PSI	ADJ.
4	1" PRESSURE REGULATOR - HANTRIC PROS-12, PRS-160-CV-PP-0002	0.71-4.0	4"	30"
5	1" POP-UP MULTI-STREAM ROTATOR	0.71-4.0	4"	30"
6	1" RUBER MID, MULTI-STREAM ROTATOR NOZZLE WITH ADJ. 8" TO 16" RADIUS	PRESSURE REGULATOR MATCHED PRECIPITATION 40 PSI	0.71-4.0	4"
7	1" RUBER MID, MULTI-STREAM ROTATOR	0.71-4.0	4"	30"
8	1" RUBER MID, MULTI-STREAM ROTATOR	0.71-4.0	4"	30"
9	1" RUBER MID, MULTI-STREAM ROTATOR	0.71-4.0	4"	30"
10	1" RUBER MID, MULTI-STREAM ROTATOR	0.71-4.0	4"	30"
11	1" RUBER MID, MULTI-STREAM ROTATOR	0.71-4.0	4"	30"
12	1" RUBER MID, MULTI-STREAM ROTATOR	0.71-4.0	4"	30"

IRRIGATION FLOW REQUIREMENTS
PROVIDED FOR DRIP IRRIGATION WATER USE ONLY.

P.O.C. NO. (3/4" DIETER)	EM GPM	TOTAL GPD
PROPOSED IRRIGATION	6	600
P.O.C. NO. 2 (1" DIETER)	EM GPM	TOTAL GPD
PROPOSED IRRIGATION	24	2400
P.O.C. NO. 3 (1.5" DIETER)	EM GPM	TOTAL GPD
PROPOSED IRRIGATION	71	8500

NOTE: IRRIGATION WILL BE DONE DURING OFF PEAK HOURS WITH ONLY ONE REPOTE CONTROL VALVE PER CONNECTION OPERATING AT ANY GIVEN TIME.



WARREN S. UNIKORI ENGINEERING, INC.
ONE A STRUCTURAL ENGINEERING BUILDING
1115 SOUTH KULANANI AVENUE, SUITE 403
HONOLULU, HAWAII 96813
PHONE: 808-943-8888
FAX: 808-943-8889
WWW.WSUNIKORI.COM

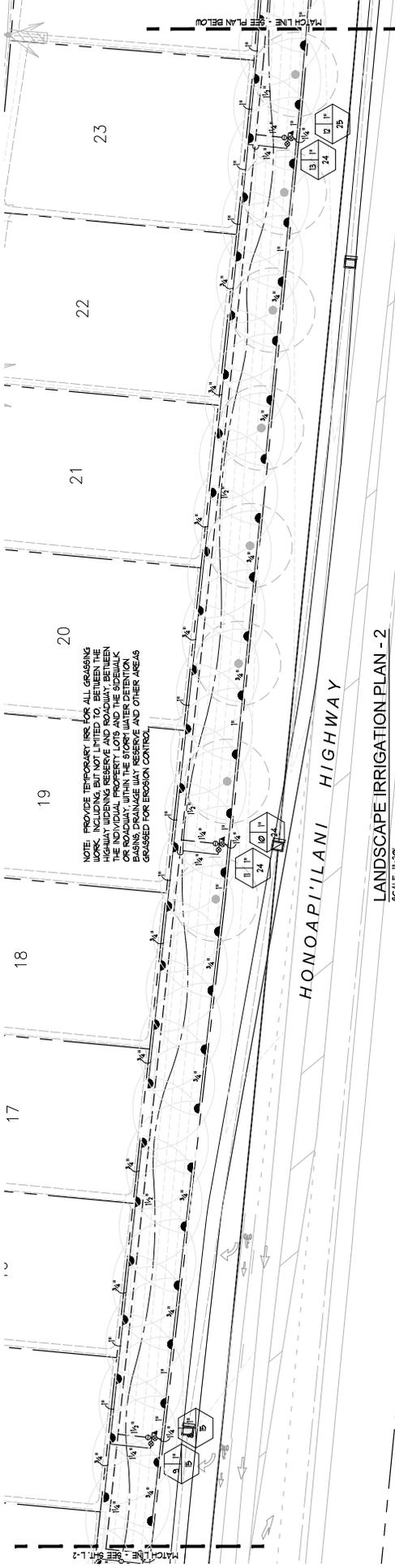
PU UNANI HOMESTEAD
TRACT (2) 100-2-10-002 (P&C)
1115 SOUTH KULANANI AVENUE, SUITE 403
HONOLULU, HAWAII 96813

TITLE: LANDSCAPE IRRIGATION PLAN 1
DATE: 11/27/2020
DRAWN BY: MM
CHECKED BY: GJ
APPROVED BY: MM
JOB NUMBER: L-2
SHEET NUMBER: 1
DATE: 11/27/2020

SCALE: 1" = 30'

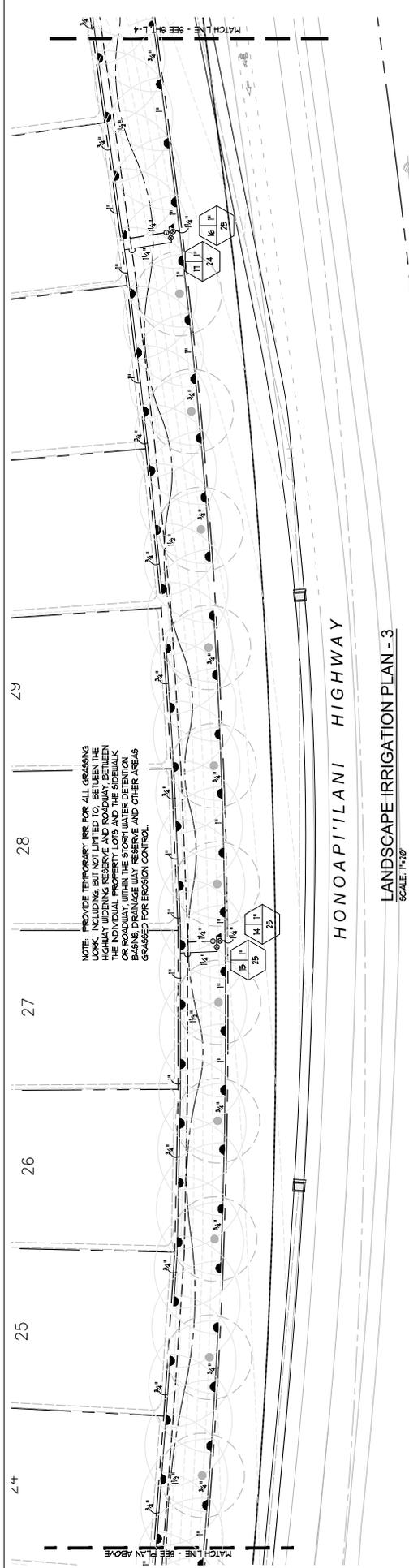
DATE: _____

DESCRIPTION: _____



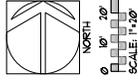
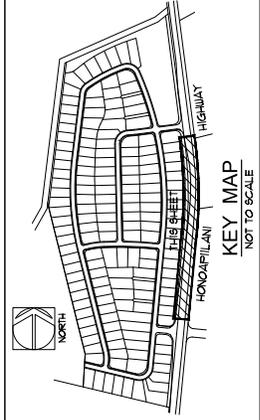
NOTE: PROVIDE TEMPORARY IRRIGATION FOR ALL GRASSING WORKS INCLUDING RESERVE AND ROADWAY BETWEEN THE INDIVIDUAL PROPERTY LOTS AND THE SIDEWALK OR ROADWAY WITHIN THE STORM WATER DETENTION BASINS DRAINAGE WAY RESERVE AND OTHER AREAS GRASSING FOR EROSION CONTROL.

HONOAPI'ILANI HIGHWAY
LANDSCAPE IRRIGATION PLAN - 2
SCALE: 1"=20'



NOTE: PROVIDE TEMPORARY IRRIGATION FOR ALL GRASSING WORKS INCLUDING BUT NOT LIMITED TO, BETWEEN THE HIGHWAY WIDENING RESERVE AND ROADWAY BETWEEN THE INDIVIDUAL PROPERTY LOTS AND THE SIDEWALK OR ROADWAY WITHIN THE STORM WATER DETENTION BASINS DRAINAGE WAY RESERVE AND OTHER AREAS GRASSING FOR EROSION CONTROL.

HONOAPI'ILANI HIGHWAY
LANDSCAPE IRRIGATION PLAN - 3
SCALE: 1"=20'



WARREN S. UNGORI ENGINEERING, INC.
1115 KALANANAKU DRIVE, SUITE 403
HONOLULU, HAWAII 96813
PHONE: 808-943-8888
FAX: 808-943-8889
WWW.WSUNGORI.COM

PU UNANI HOMESTEAD
1115 KALANANAKU DRIVE, SUITE 403 (P.O. BOX)
HONOLULU, HAWAII 96813

TITLE: LANDSCAPE IRRIGATION PLANS 2 AND 3
DATE: 11/27/2020
DRAWN BY: MM
CHECKED BY: MM
APPROVED BY: MM
JOB NUMBER: 19028
SHEET: L-3
DATE: 11/27/2020

NO.	REVISION	DATE

NOTE: PROVIDE TEMPORARY IRR FOR ALL GRASSING WORK, INCLUDING BUT NOT LIMITED TO, BETWEEN THE HIGHWAY SIDING RESERVE AND ROADWAY BETWEEN THE SIDEWALK AND ROADWAY, WITHIN THE STORM WATER DETENTION BASINS, DRAINAGE WAY RESERVE AND OTHER AREAS GRASSING FOR EROSION CONTROL.

POINT OF CONNECTION 3
CONNECT TO 1/4" AND PROVIDE DEPT. OF WATER SUPPLY APPROVED 1" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE WITH ENCLASURE AND VERMANS REGULATOR FOR FRESH WATER OF CONNECTION.

ADJUST RADIUS AND
2" LOW VOLTAGE
PULL BOX AT BOTH
CONDUIT MARK
ENDS WITH V&B

ADJUST RADIUS AND
2" LOW VOLTAGE
PULL BOX AT BOTH
CONDUIT MARK
ENDS WITH V&B

IRRIGATION CONTROLLER IN STAINLESS
STEEL CONTROLLER ENCLOSURE. SEE
SCHEDULE FOR SPECIFICATIONS. NOTE:
PROGRAM TO ALLOW ONE VALVE AT EA.
OF THE 3 POINTS OF CONNECTION TO RUN
CONCURRENTLY.

POINT OF CONNECTION 2
PROVIDE DEPT. OF WATER SUPPLY APPROVED 1/4" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE AND PRESSURE REDUCER ON EACH BRANCH OF CONNECTION PRIOR TO ANY BRANCHES ON TREE.

LANDSCAPE IRRIGATION PLAN - 4

SCALE: 1"=20'

HONOAPI'ILANI HIGHWAY

26' TO 29' WIDE HIGHWAY SIDING RESERVE

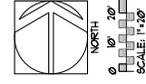
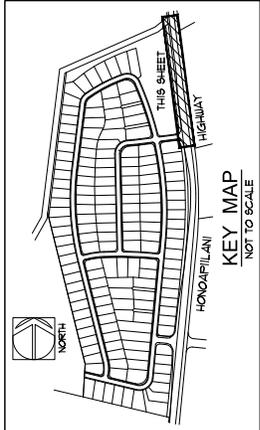
NOTE: PROVIDE TEMPORARY IRR FOR ALL GRASSING WORK, INCLUDING BUT NOT LIMITED TO, BETWEEN THE HIGHWAY SIDING RESERVE AND ROADWAY BETWEEN THE INDIVIDUAL PROPERTY LOTS AND THE SIDEWALK OR ROADWAY, WITHIN THE STORM WATER DETENTION BASINS, DRAINAGE WAY RESERVE AND OTHER AREAS GRASSING FOR EROSION CONTROL.

ADJUST RADIUS AND
2" LOW VOLTAGE
PULL BOX AT BOTH
CONDUIT MARK
ENDS WITH V&B

HONOAPI'ILANI HIGHWAY

LANDSCAPE IRRIGATION PLAN - 5

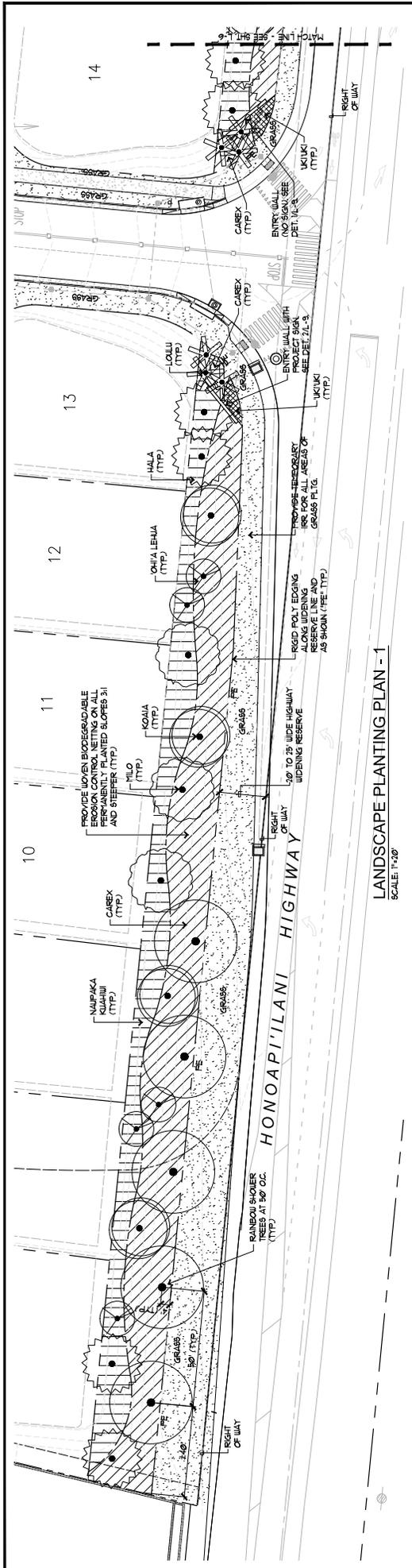
SCALE: 1"=20'



WARREN'S ENGINEERING, INC.
1115 SOUTH KAUAI AVENUE, SUITE 403
KAILUA, HAWAII 96731
PHONE: (808) 261-1111
FAX: (808) 261-1112
WWW.WARENS.COM

PU UNANI HOMESTEAD
TRAKS (2) PHASE 2, 10.002 (P&C)
WARRAP, HAILUKU, MAUI, HAWAII

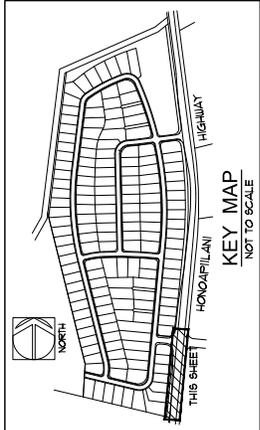
TITLE	LANDSCAPE IRRIGATION PLANS 4 AND 5
DATE	10/20/2020
DESIGNED BY	MM
CHECKED BY	MM
APPROVED BY	MM
DATE	12/21/2020
SHEET	L-4
OF	20



LANDSCAPE PLANTING PLAN - 1
SCALE 1"=30'

HONOAPI'ILANI FRONTAGE PLANT LIST

QUANTITY	BOTANICAL NAME	COMMON NAME	ROOTBALL	HEIGHT	SPREAD	CALIPER
	TREES AND PALMS					
24 EA.	ACACIA KOAIA	KOAIA	25 GAL.	8'	4'	2"
34 EA.	CASIA NEALAE VAR. WHITE	WHITE SHOULDER TREE	25 GAL.	8'	4'	2"
23 EA.	METROSIDEROS POLYORPHA	OHI'A LEHUA	25 GAL.	8'	4'	2"
10 EA.	PANDANUS TECTORUS	HALO	65 GAL.	12'	8'	4"
2 EA.	FRITCHARDIA SP.	NATIVE LOLLI PALM	65 GAL.	6" IN. BROAD TRUNK		
2 EA.	THEPESIA POPULNEA	MIL	25 GAL.	8'	4'	2"
	GROUND COVERS AND GRASSES					SPRING O.C.
25,470 SF.	NAUPAKA GAUDICHAUDIANA	NAUPAKA KUA'IIHII	6" POT	12"	12"	8"
36,300 SF.	CAREX WAIHENSIS	CAREX	4" POT	12"	12"	8"
200 SF.	DIANELLA SANDWICENSIS	UKUIKI	4" POT	12"	8"	8"
55,440 SF.	CYNODON DACTYLON	COTTON BERTIDA GRASS	SEED			
2600 LF.	POLYETHYLENE LANDSCAPE EDGING (TYP) 1 1/2" WITH STAKES	EPIC PLASTICS BEGDA BOARD, OR AN APPROVED SUBSTITUTE				
67,600 SF.	WOVEN BIODEGRADABLE EROSION CONTROL NETTING, BIODEGRADABLE JUTE TOP AND BOTTOM NET, 10% SANDING CRUSHED RUBBER MATRIX, 9 MONTHS LONGEVITY, NORTH AMERICAN GREEN SCREEN OR AN APPROVED SUBSTITUTE					



KEY MAP
NOT TO SCALE

MICHAEL J. MYKURA
PROFESSIONAL ENGINEER
LICENSE NO. 12345
STATE OF HAWAII

WARREN'S LANDSCAPING ENGINEERS, INC.
ONE A STRUCTURAL ENGINEERING BUILDING
1115 SOUTH KULUWAHINE AVENUE, SUITE 403
HONOLULU, HAWAII 96813
PHONE: (808) 943-1111
FAX: (808) 943-1112
WWW.WARENSLANDSCAPING.COM

PUNANI HOMESTEAD
TRAKS (2) 100' x 100' (100' x 100')
HAWAII, HAWAII, HAWAII

TITLE: LANDSCAPE PLANTING PLAN 1

DATE: 12/21/2020

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

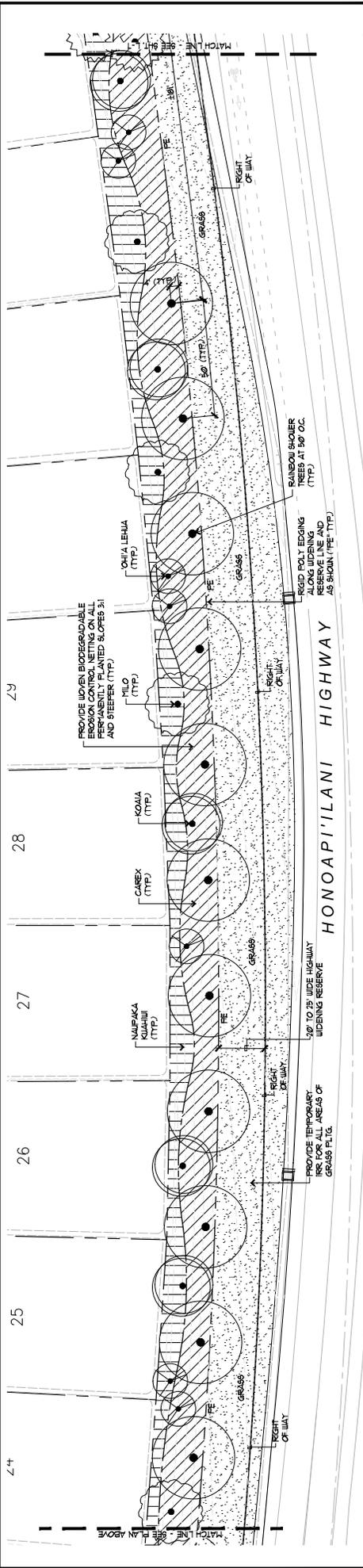
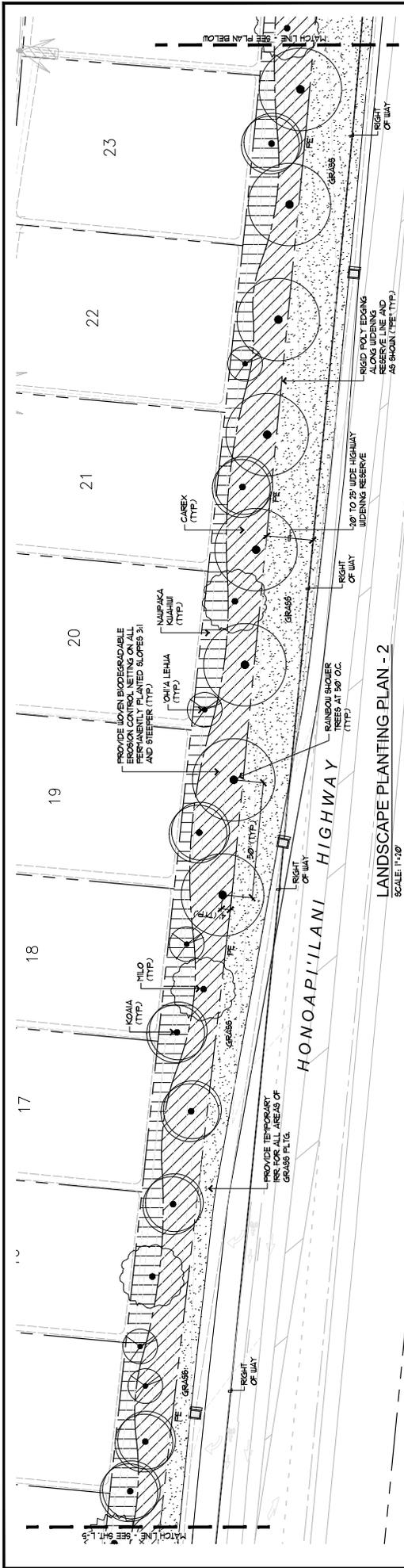
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SCALE: 1" = 20'

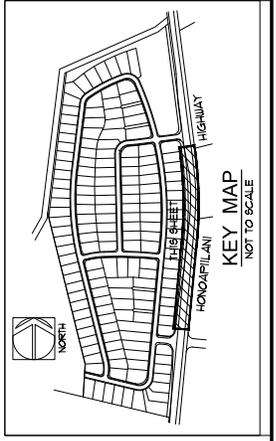
DATE: 12/21/2020

SHEET: L-5

OF: 5



LANDSCAPE PLANTING PLAN - 3
SCALE: 1"=30'



WARREN'S ENGINEERS, INC.
ONE A STRUCTURAL ENGINEERING DIVISION
2105 W. KALI STREET, SUITE 403
HONOLULU, HAWAII 96819

PU UNANI HOMESTEAD
TRAKIA (2) AND 2 (2) (P&C)
WAKAPU, HAILUKU, MAUI, HAWAII

TITLE: LANDSCAPE PLANTING PLANS 2 AND 3

DATE: 12/01/2020

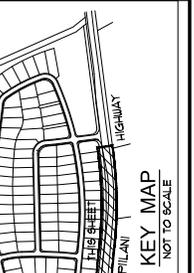
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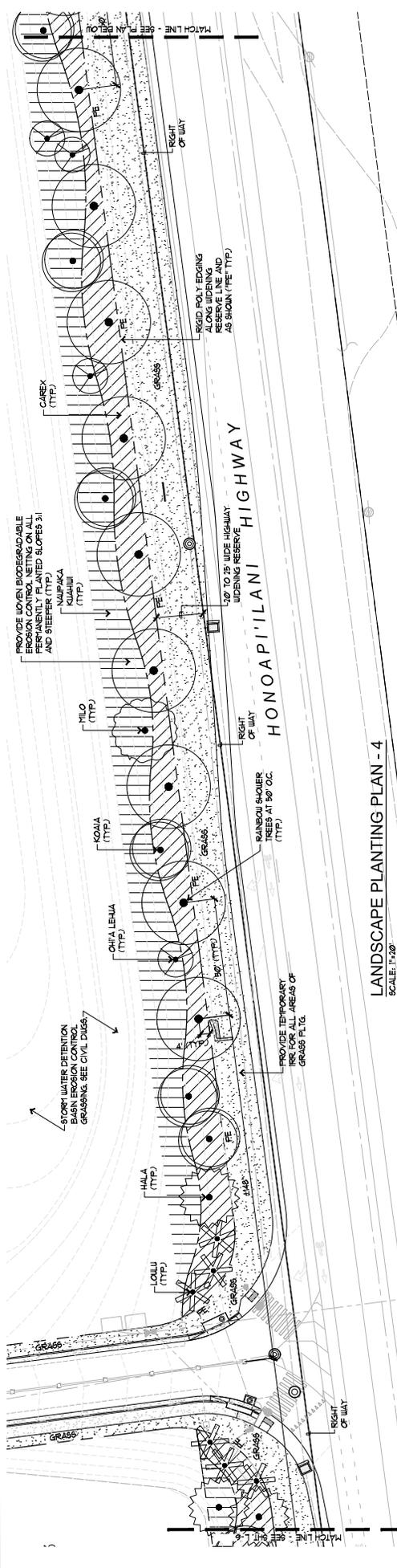
DATE: 12/01/2020

SHEET: L-6

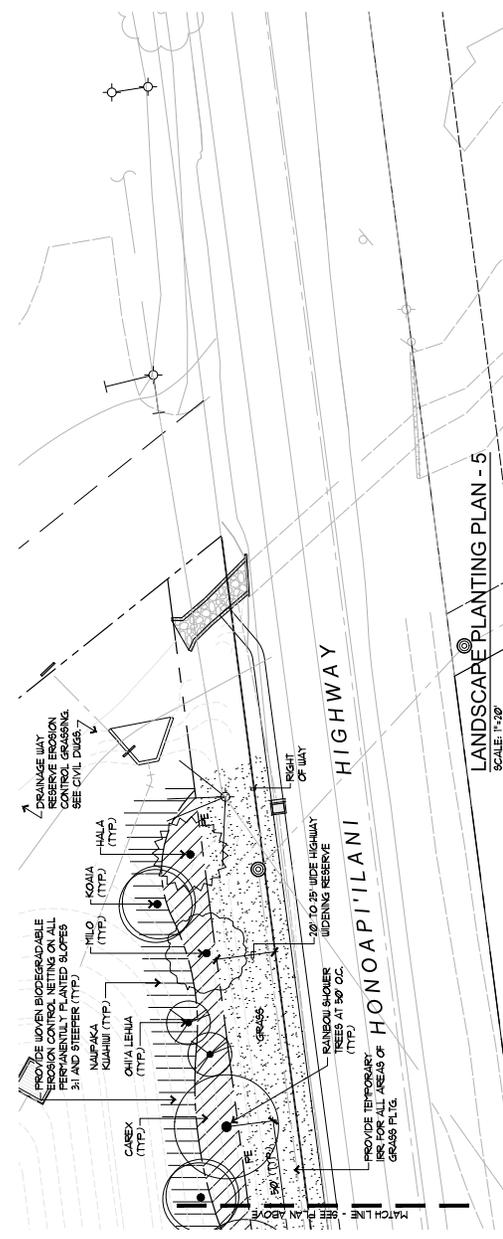
DATE: 12/01/2020

NO.	DATE	DESCRIPTION
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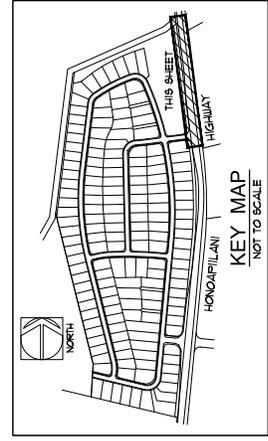




LANDSCAPE PLANTING PLAN - 4
SCALE: 1"=20'



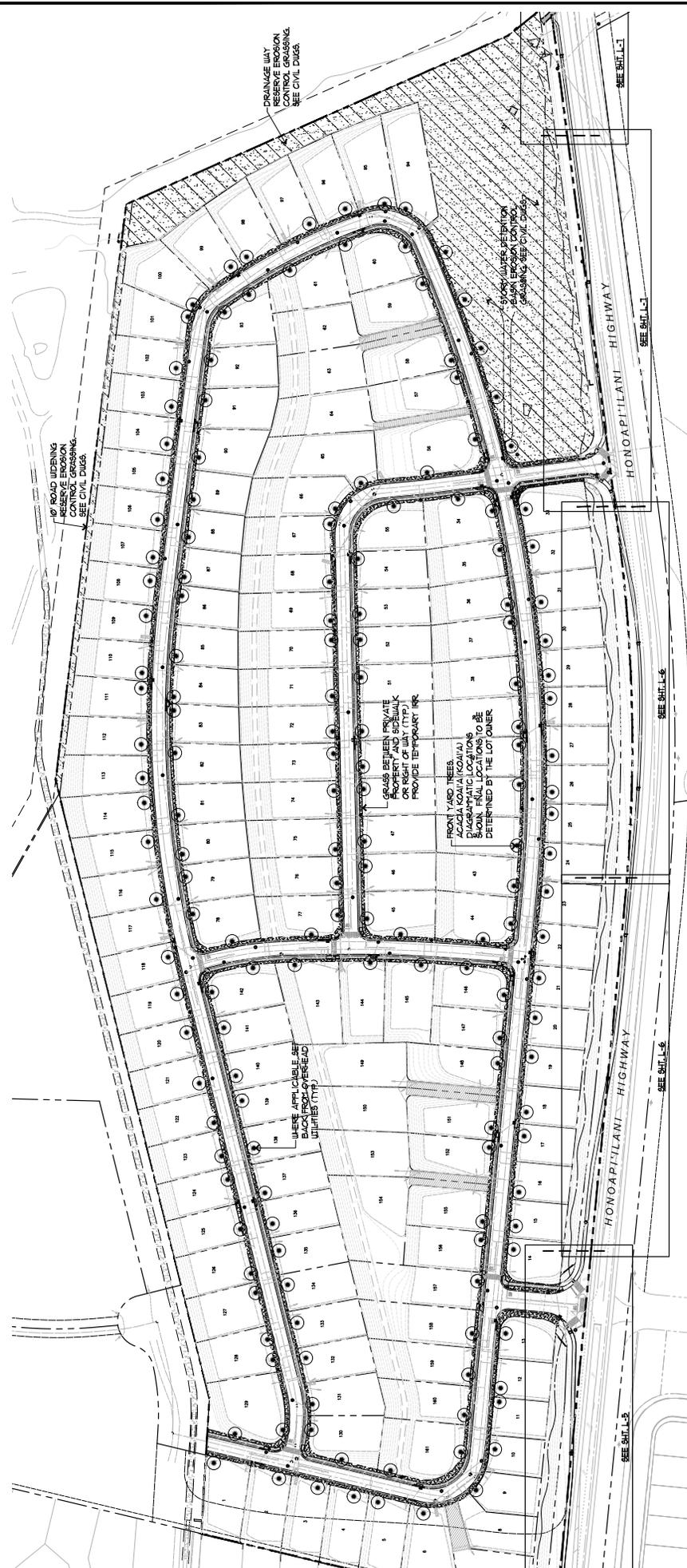
LANDSCAPE PLANTING PLAN - 5
SCALE: 1"=20'



WARREN'S ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERING
1115 KALANANAKUHIWA DRIVE, SUITE 403
HONOLULU, HAWAII 96813
PU UNANI HOMESTEAD
TRAKI (2) AND 2 IN 002 (P&C)
WAKAHI, HAILUKI, MAUKA, PUNANI

TITLE	LANDSCAPE PLANTING PLANS 4 AND 5	DATE	12/21/2020
DESIGNED BY	MM	CHECKED BY	MM
DRAWN BY	MM	APPROVED BY	MM
SCALE	1" = 20'	SHEET	L-7
		OF	10

THIS WORK WAS PROVIDED TO ME BY THE CLIENT FOR THE PURPOSE OF OBTAINING PROFESSIONAL ENGINEERING SERVICES. I HAVE REVIEWED THE WORK AND I AM NOT PROVIDING ANY WARRANTY OR ASSURANCE OF ACCURACY OR COMPLETENESS.



LANDSCAPE PLANTING PLAN - 8
SCALE: 1"=80'

QUANTITY	BOTANICAL NAME	COTTON NAME	ROOTBALL	HEIGHT	SPREAD	CALIPER
110 EA.	ACACIA KOAIA	KOAI'A	25 GAL	6'	4"	2"
63550 SF.	CYNODON DACTYLON	COTTON BERMUDA GRASS	SEED			

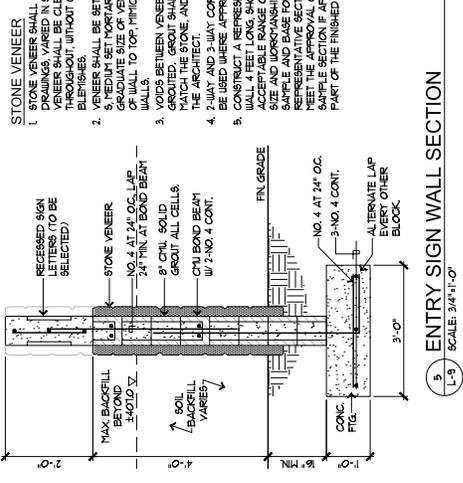
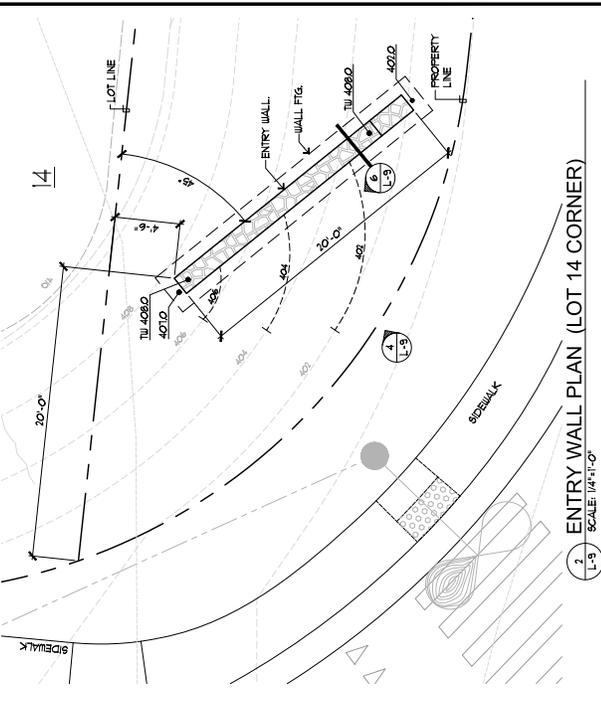
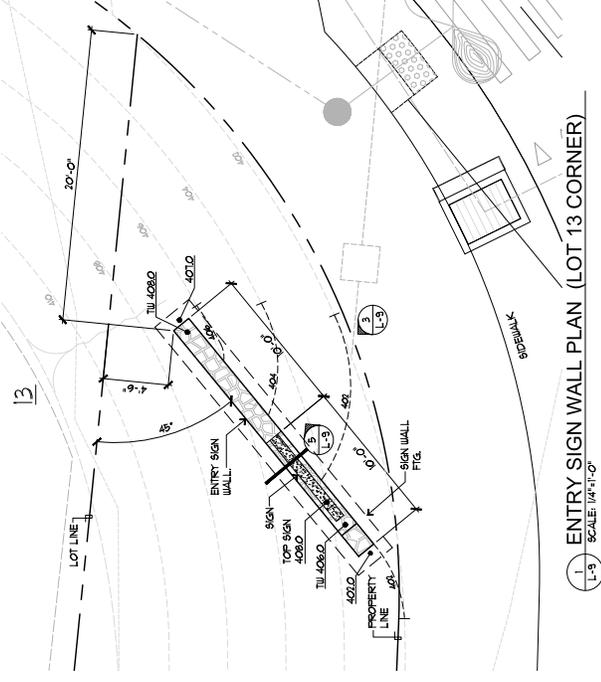
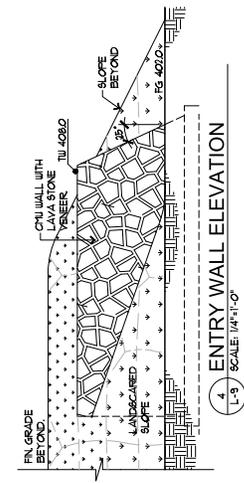
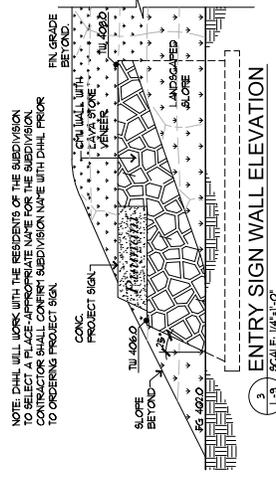


WARREN'S LANDSCAPE ENGINEERING, INC.
 1115 SOUTH KULUWAHINE DRIVE, SUITE 403
 HONOLULU, HAWAII 96813
 (808) 943-8888

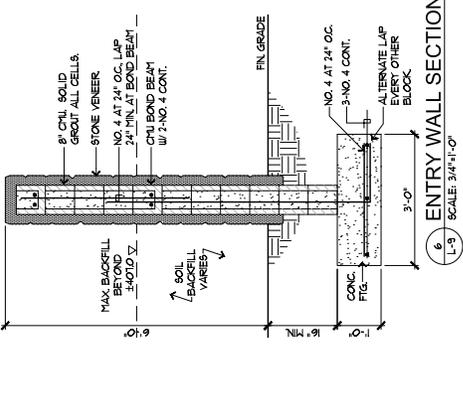
PU UNANI HOMESTEAD
 1115 SOUTH KULUWAHINE DRIVE, SUITE 403
 HONOLULU, HAWAII 96813

TITLE: LANDSCAPE PLANTING PLAN 8
 DATE: 12/21/2020
 DRAWN BY: MM
 CHECKED BY: MM
 APPROVED BY: MM
 SCALE: 1" = 80'

DATE	12/21/2020
SHEET	L-8
OF SHEETS	8



- STONE VENEER**
1. COLOR AND GRAIN SHALL BE AS NOTED ON THE DRAWING. FINISHES SHALL BE CLEAN AND SOLID THROUGHOUT WITHOUT CRACKS AND BLEMISHES.
 2. VENEER SHALL BE SET IN PLACE WITH TYPE 8 MEDIUM SET MORTAR. FOR TALL WALLS GRADUATE SIZE OF VENEER FROM BOTTOM OF WALL TO TOP IMITATING NATURAL STONE WALLS.
 3. GROUDED GROUT SHALL BE COLORED TO MATCH THE STONE AND BE APPROVED BY THE ARCHITECT.
 4. 2-WAY AND 3-WAY CORNER VENEERS SHALL MATCH THE STONE.
 5. CONTRACT A REPRESENTATIVE SECTION OF WALL 4 FEET LONG SHOWING THE ACCEPTABLE RANGE OF COLOR, TEXTURE, SIZE AND WORKMANSHIP TO SERVE AS A REPRESENTATIVE SECTION OF WALL SHALL MEET THE APPROVAL OF THE ARCHITECT. A SAMPLE SECTION IF APPROVED MAY BE PART OF THE FINISHED WALL.



- STONE VENEER**
1. COLOR AND GRAIN SHALL BE AS NOTED ON THE DRAWING. FINISHES SHALL BE CLEAN AND SOLID THROUGHOUT WITHOUT CRACKS AND BLEMISHES.
 2. VENEER SHALL BE SET IN PLACE WITH TYPE 8 MEDIUM SET MORTAR. FOR TALL WALLS GRADUATE SIZE OF VENEER FROM BOTTOM OF WALL TO TOP IMITATING NATURAL STONE WALLS.
 3. GROUDED GROUT SHALL BE COLORED TO MATCH THE STONE AND BE APPROVED BY THE ARCHITECT.
 4. 2-WAY AND 3-WAY CORNER VENEERS SHALL MATCH THE STONE.
 5. CONTRACT A REPRESENTATIVE SECTION OF WALL 4 FEET LONG SHOWING THE ACCEPTABLE RANGE OF COLOR, TEXTURE, SIZE AND WORKMANSHIP TO SERVE AS A REPRESENTATIVE SECTION OF WALL SHALL MEET THE APPROVAL OF THE ARCHITECT. A SAMPLE SECTION IF APPROVED MAY BE PART OF THE FINISHED WALL.

WARREN'S LANDSCAPE ENGINEERING, INC.
 1000 W. 10TH STREET, SUITE 403
 DENVER, COLORADO 80202
 (303) 733-1111

PUNJANI HOMESTEAD
 1407 S. 10TH AVE. (P&U)
 WINKLE, WALKER, HUNT, FORBRI

TITLE: LANDSCAPE DETAILS

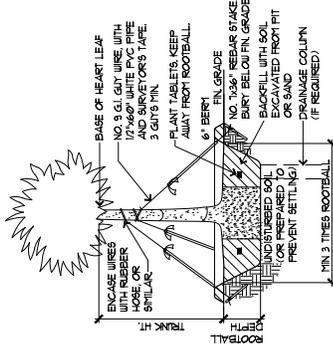
DATE: 10/20/2020
 DRAWN BY: MM
 CHECKED BY: MM
 APPROVED BY: MM

JOB NUMBER: L-9
 SHEET: L-9
 DATE: 12/21/2020

NOT TO SCALE

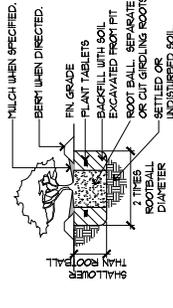
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DATE	DESCRIPTION

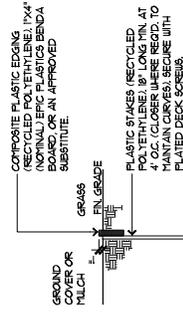


3 PALM PLANTING
 L-1 NOT TO SCALE

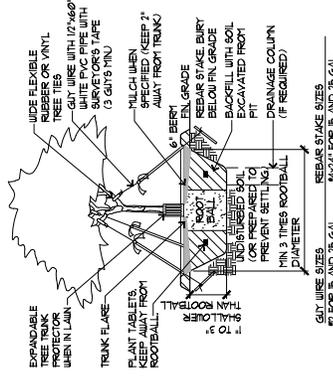
NOTES:
 1. PERFORM WORK IN ACCORDANCE WITH THE LATEST IBA STANDARDS FOR TREE PLANTING.
 2. FOR TREE PLANTING, COURSE SANDSTON, HARDPAN OR ROCK IS ENCOUNTERED, FILL FIT AND TEST FOR DRAINAGE. IF FIT RETAINS WATER, NOTIFY THE ARCHITECT. IF DIRECTED, PROVIDE GRAVEL FILL.
 3. CUT GRADING AND GROUNDING ROOTS.
 4. PRUNE ONLY TO REMOVE DAMAGED, DISEASED OR DEAD BRANCHES OR FOR TRANSPORTATION PURPOSES.
 5. FERTILIZERS SHOULD NOT EXIST ON THE ROOTBALL SIZE AND BACKFILL CONDITIONS CREATE A FIRM BASE FOR THE TREE.



4 SHRUB PLANTING
 L-1 NOT TO SCALE

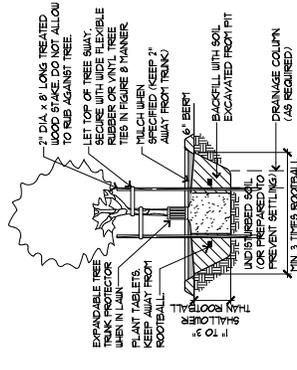


5 PLASTIC EDGING
 L-1 NOT TO SCALE



1 TREE PLANTING - GUYING
 L-1 NOT TO SCALE

NOTES:
 1. PERFORM WORK IN ACCORDANCE WITH THE LATEST IBA STANDARDS FOR TREE PLANTING.
 2. FOR TREE PLANTING, COURSE SANDSTON, HARDPAN OR ROCK IS ENCOUNTERED, FILL FIT AND TEST FOR DRAINAGE. IF FIT RETAINS WATER, NOTIFY THE ARCHITECT. IF DIRECTED, PROVIDE GRAVEL FILL.
 3. CUT GRADING AND GROUNDING ROOTS.
 4. PRUNE ONLY TO REMOVE DAMAGED, DISEASED OR DEAD BRANCHES OR FOR TRANSPORTATION PURPOSES.
 5. FERTILIZERS SHOULD NOT EXIST ON THE ROOTBALL SIZE AND BACKFILL CONDITIONS CREATE A FIRM BASE FOR THE TREE.



2 TREE PLANTING - STAKING
 L-1 NOT TO SCALE

NOTES:
 1. EXCAVATED FILL FOR COURSE SANDSTON, HARDPAN OR ROCK IS ENCOUNTERED, FILL FIT AND TEST FOR DRAINAGE. IF FIT RETAINS WATER, NOTIFY THE ARCHITECT. IF DIRECTED, PROVIDE GRAVEL FILL.
 2. CUT GRADING AND GROUNDING ROOTS.
 3. MINIMIZE REMOVAL OF CANOPY FOLIAGE. PRUNE ONLY TO REMOVE BROKEN, DAMAGED, DISEASED OR DEAD BRANCHES, OR FOR TRANSPORTATION PURPOSES.
 4. APPROVED STAKES MAY BE OMITTED WHERE STRONG WIND CONDITIONS DO NOT EXIST OR WHEN ROOTBALL SIZE AND BACKFILL CONDITIONS CREATE A FIRM BASE FOR THE TREE.



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 WARREN, MICHIGAN 48091-1300

WARREN'S UNGERI ENGINEERING, INC.
 TITLE: LANDSCAPE DETAILS

WARREN'S UNGERI ENGINEERING, INC.
 11000 WOODLAND AVENUE
 WARREN, MICHIGAN 48091-1300

PROJECT NO.	19028	DATE	12/21/2020
DESIGNED BY	MM	CHECKED BY	MM
DRAWN BY	MM	APPROVED BY	MM
SCALE	NOT TO SCALE		
SHEET NO.	L-11		
TOTAL SHEETS	11		

DATE: _____
 DESCRIPTION: _____