

ATTACHMENT D

See attached.

CONSTRUCTION PLANS

HO'OPILI OFF-SITE POTABLE WATER SYSTEM

TAX MAP KEYS: (1) 9-2-1:6, 12 & (1) 9-2-2
HONOULIULI, EWA, OAHU, HAWAII

DPP FILE NOS. 2016/SUB-31 & 2016/SUB-221 (2016/CP-33)

OWNER & DEVELOPER: D.R. HORTON - SCHULER DIVISION

CONSULTANTS:

BILLS ENGINEERING INC.
(CIVIL-WATERLINE)
1124 FORT STREET MALL, SUITE 200
HONOLULU, HAWAII 96813
PH: (808) 792-2022 / FAX: (808) 792-2033

TOM NANCE WATER RESOURCES
(CIVIL-UPPER TANK AND BOOSTER PUMP STATION)
550 NORTH NIMITZ HIGHWAY, SUITE 213
HONOLULU, HAWAII 96817
PH: (808) 537-1411 / FAX: (808) 538-7757

RONALD N. S. HO & ASSOCIATES, INC.
(ELECTRICAL-UPPER TANK AND BOOSTER PUMP STATION)
253 NORTH KING STREET, SUITE 201
HONOLULU, HAWAII 96819
PH: (808) 941-0577 / FAX: (808) 945-2646

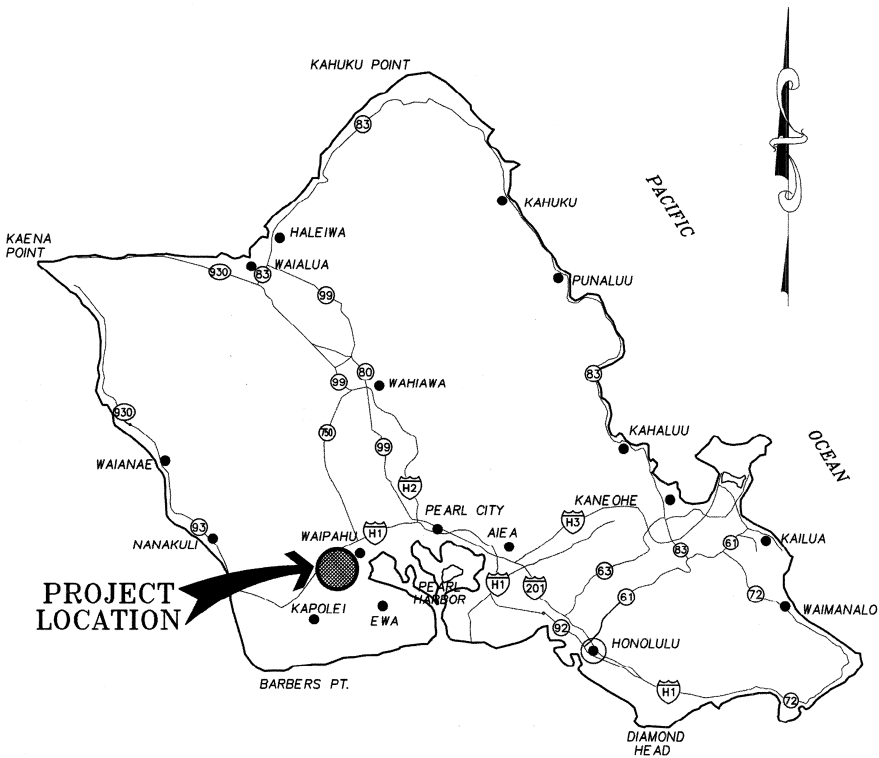
SHIMOKAWA & NAKAMURA
(ARCHITECTURAL-UPPER TANK AND BOOSTER PUMP STATION)
1380 MAKALOA STREET, SUITE 1050
HONOLULU, HAWAII 96814
PH: (808) 955-3373 / FAX: (808) 955-3374

STRUCTURAL ANALYSIS GROUP, INC.
(STRUCTURAL-UPPER TANK AND BOOSTER PUMP STATION)
1221 KAPIOLANI BOULEVARD, SUITE 645
HONOLULU, HAWAII 96814
PH: (808) 593-0951 / FAX: (808) 593-0953 / CELL: (808) 429-7541

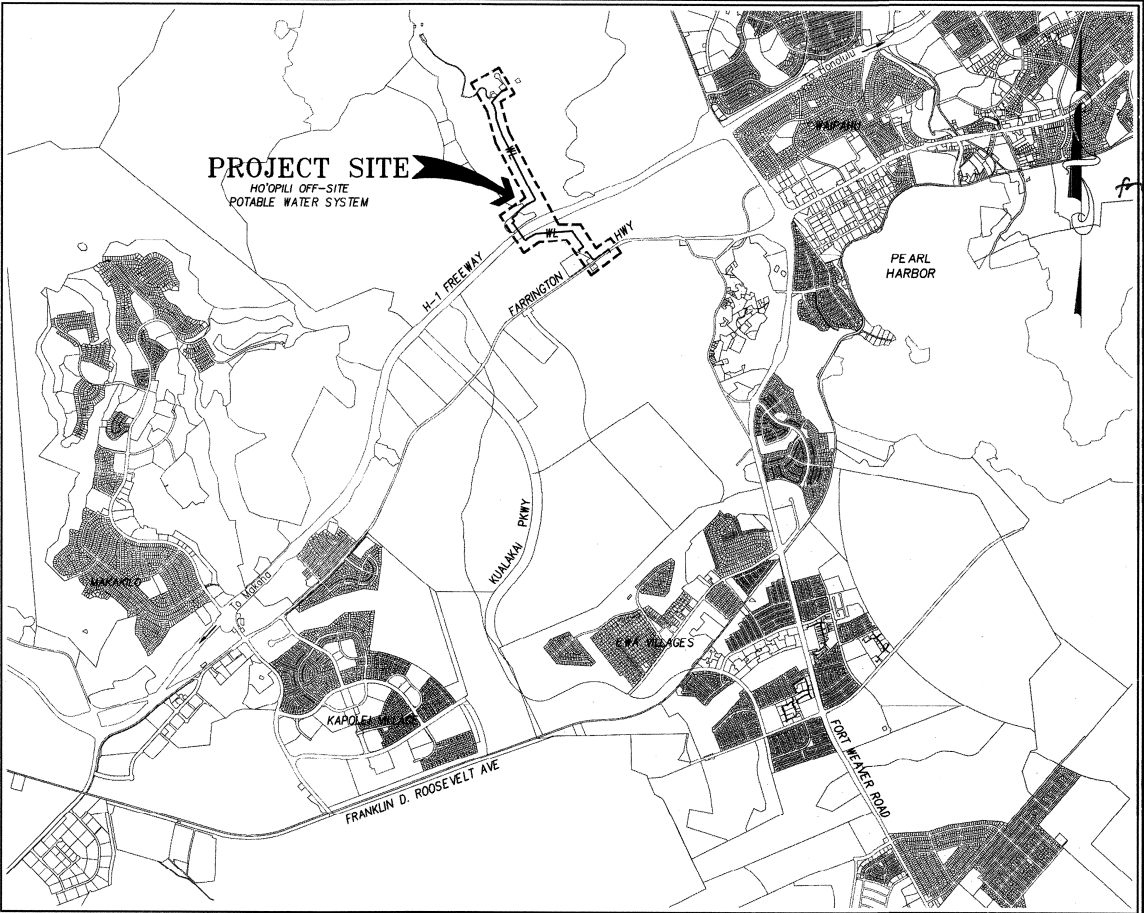
GBOLABS INC.
(GEOTECHNICAL ENGINEERING - WATERLINES, UPPER TANK AND BOOSTER PUMP STATION)
2006 KALIHU STREET
HONOLULU, HAWAII 96819
PH: (808) 841-5064

V&A CONSULTING ENGINEERS
(CATHODIC PROTECTION - WATERLINES)
155 GRAND AVENUE, SUITE 700
OAKLAND, CA 94612
PH: (510) 903-6600

BILLS ENGINEERING INC.
CIVIL/ENVIRONMENTAL ENGINEERING
1124 FORT STREET MALL, SUITE 200
HONOLULU, HAWAII 96813
PH: (808) 792-2022 FAX: (808) 792-2033



VICINITY MAP
Not to Scale



LOCATION MAP
Not to Scale

APPROVED:

M. Feg 10/25/2017

DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
(FOR GRADING, GRUBBING & CONSTRUCTION IN CITY ROW ONLY)
DATE

Bills 4-28-2017

MANAGER AND CHIEF ENGINEER, BWS PD
(FOR WORK AFFECTING BWS FACILITIES IN CITY R/W AND BWS EASEMENTS ONLY)
DATE

Scott J. M. 3/31/17

ADMINISTRATOR, HIGHWAYS DIVISION
STATE DEPARTMENT OF TRANSPORTATION (APPROVAL GRANTED FOR WORK
WITHIN STATE RIGHT-OF-WAY ONLY. I.D. NO. 0-16-08
LETTER OF APPROVAL NO. HWY-CM 2-4480 DATED 4/3/17)
DATE

FILE	POCKET	FOLDER	NO.

HO'OPILI DEVELOPMENT

PHASE 1

BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 004 (POR.) & 072

[SUBDIVISION FILE NO. 2015/SUB-108]

[CONSTRUCTION PLAN FILE NO. 2015/CP-283]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Prepared by:

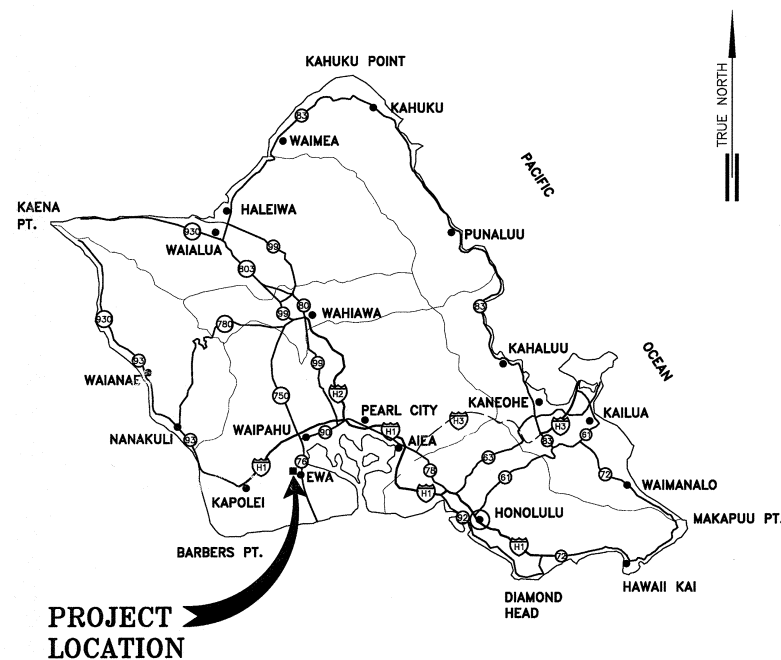


R. M. TOWILL CORPORATION

SINCE 1930

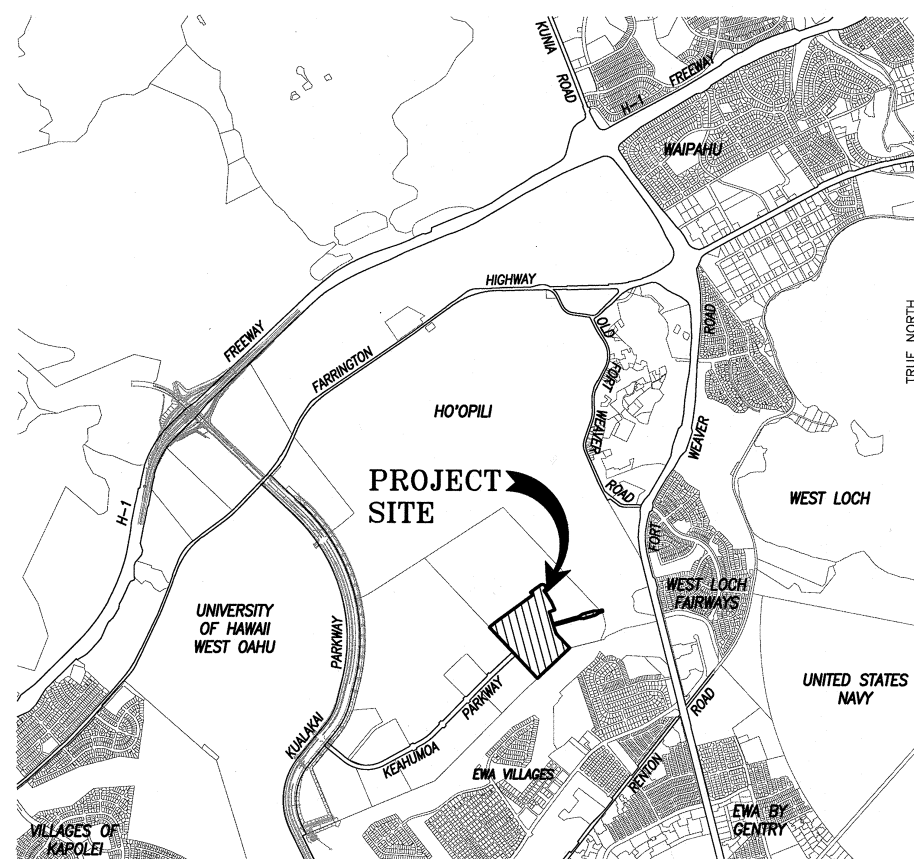
Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management

2015/CP-283
DECEMBER 28, 2015
HO'OPILI DEVELOPMENT PHASE 1 BACKBONE ROADWAY IMPROVEMENTS



VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

M. J. [Signature]
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

9/7/2016
DATE

[Signature]
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

8-26-2016
DATE

CONSTRUCTION DRAWINGS FOR

HOOPILI PHASE 1

LOT 4

(DPP SUBDIVISION FILE NO. 2016/SUB-2)
(DPP FILE NO. 2016/CP-60)

TAX MAP KEY : 9 - 1 - 17 POR OF 72

HONOLULU, EWA, OAHU, HAWAII

OWNER: D.R. Horton, Schuler Division
DEVELOPER: D.R. Horton, Schuler Division

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS

INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN
6	C006	EROSION CONTROL PLAN & DETAILS
7	C007	POST-CONSTRUCTION BMP PLAN
8	C008	TYPICAL ROAD SECTIONS
9	C009	PLAN & PROFILE - ROAD "A"
10	C010	PLAN & PROFILE - ROAD "B"
11	C011	PLAN & PROFILE - ROADS "K1" & "C"
12	C012	CURB RAMPS - 1
13	C013	CURB RAMPS - 2
14	C014	MISCELLANEOUS DETAILS - 1
15	C015	MISCELLANEOUS DETAILS - 2
16	C016	STRIPING & SIGNAGE PLAN
17	C017	STRIPING & SIGNAGE DETAILS AND NOTES
STRUCTURAL		
18	CS001	NOTES & TYPICAL DETAILS
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24	CS007	CB TYPE "B" PRECAST DETAILS
25	CS008	CB TYPE "D" C.I.P. DETAILS
26	CS009	CB TYPE "D" PRECAST DETAILS
27	CS010	RETAINING WALL NOTES & DETS.
28	CS011	RETAINING WALL SECTION & SCHED.
ELECTRICAL		
29	CE001	ISLAND AND LOCATION MAPS, SYMBOL LIST, AND CONDUIT AND EQUIPMENT SCHEDULES
30	CE002	SITE PLAN
31	CE003	HECO NOTES
32	CE004	HTCO AND CATV NOTES
33	CE005	DISTRIBUTION PLAN I
34	CE006	DISTRIBUTION PLAN II
35	CE007	STREET LIGHT PLAN I
36	CE008	STREET LIGHT PLAN II
37	CE009	DUCT SECTIONS I
38	CE010	DUCT SECTIONS II
39	CE011	HECO DETAILS
40	CE012	STREET LIGHT DETAILS
41	CE013	STREET LIGHT NOTES
42	CE014	ELECTRICAL DUCT PROFILES
LANDSCAPE		
43	CL001	STREET TREE PLAN - 1
44	CL002	STREET TREE PLAN - 2
45	CL003	PLANT LIST AND DETAILS

Gray•Hong•Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

Exp: 4/30/18



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OVERSIGHT. OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 8/29/94.

Exp: 4/30/18



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OVERSIGHT. OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 8/29/94.

ENGINEER: WT
DRAWN BY: JG
CHECKED BY: MN
PROJECT #: 3100-01

"PROPOSED PRIVATE DRIVEWAY"

HOOPILI PHASE 1
LOT 4
(DPP SUBDIVISION FILE NO 2016/SUB-2)
(DPP CONSTRUCTION PLANS FILE NO 2016/CP-60)
TMK: 9-1-17: POR OF 72
HONOLULU, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 45 SHEETS
FILE POCKET FOLDER NO.

APPROVED:

Charles O. Chubb
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

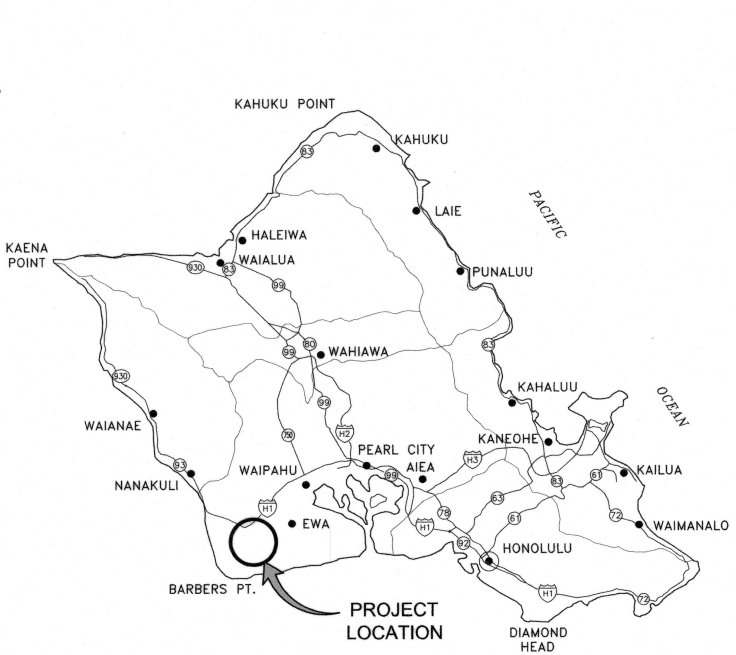
10/7/15
DATE

James J. Jones
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

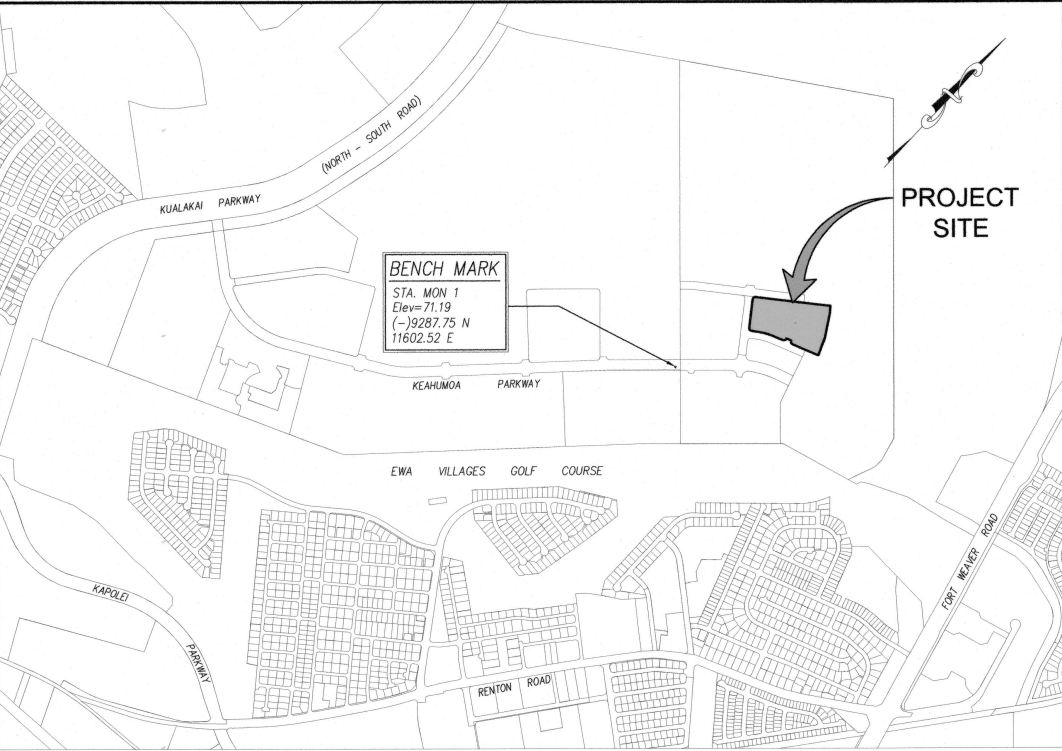
9-01-2016
DATE

Paul D. Smith
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W. AND BWS EASEMENTS)

9-22-2016
DATE



ISLAND OF OAHU
Not to Scale



LOCATION MAP
Not to Scale

HO'OPILI DEVELOPMENT

PHASE 2

BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 004, 072, & 110

[SUBDIVISION FILE NO. 2015/SUB-201, 2018/SUB-82]

[CONSTRUCTION PLAN FILE NO. 2016/CP-234]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Prepared by:

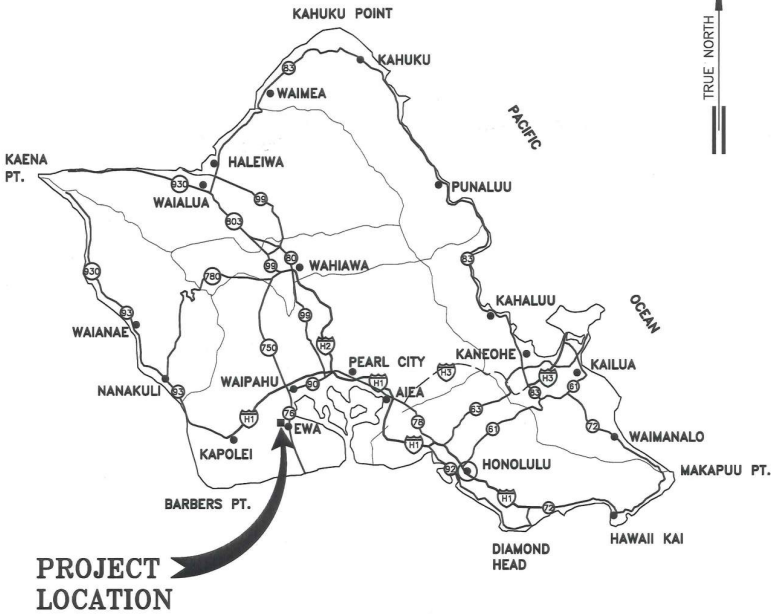


R. M. TOWILL CORPORATION

SINCE 1930

Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management

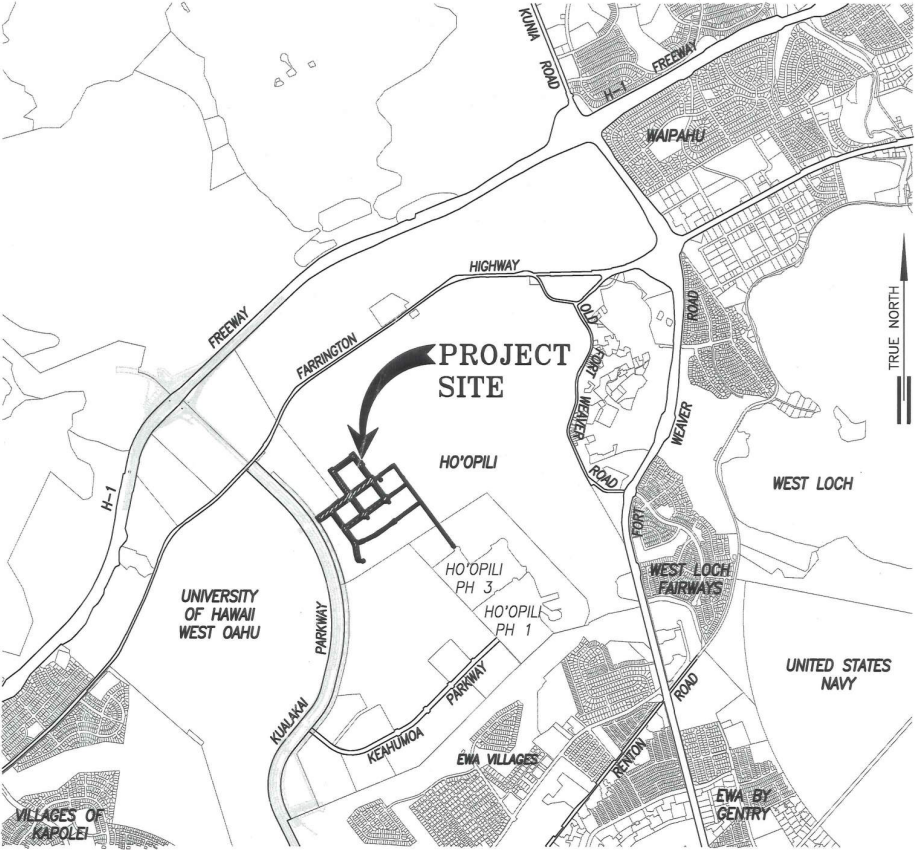
2016/CP-234
OCTOBER 26, 2016
HO'OPILI DEVELOPMENT PHASE 2 - BACKBONE ROADWAY IMPROVEMENTS



PROJECT
LOCATION

VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

Walter G. W. W.
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

7/11/18
DATE

M. M.
FOR MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

MAY 22 2018
DATE

RMTC JOB NO. 1-22622-0E

HO'OPILI DEVELOPMENT

PHASE 2

ROAD "E" AND KUALAKAI PARKWAY IMPROVEMENTS

HONOLULU , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-016: 220; 9-1-017: 004, 096, & 098
[CONSTRUCTION PLAN FILE NO. 2016/CP-233]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

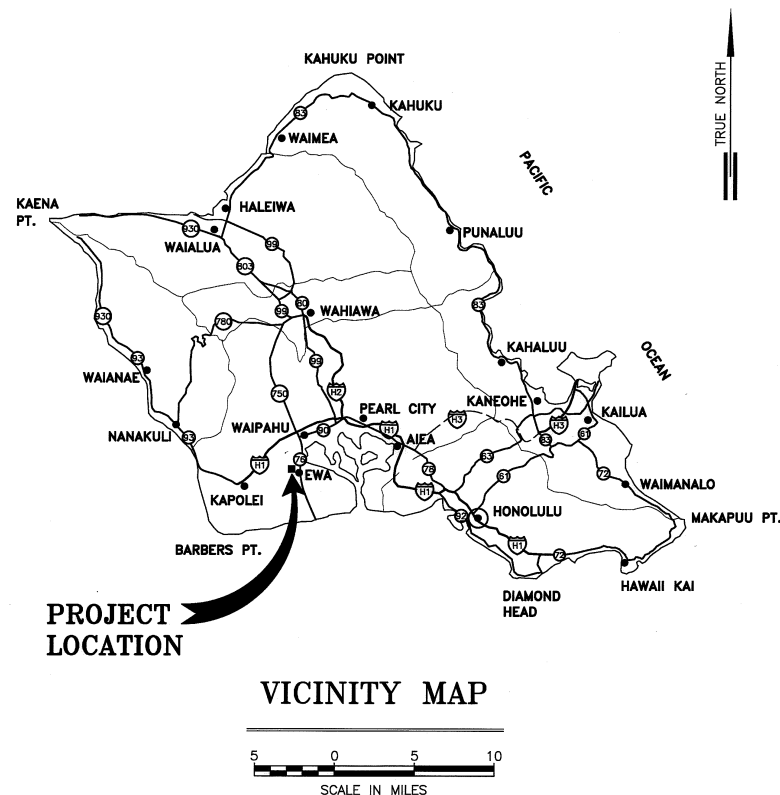
Prepared by:



R. M. TOWILL CORPORATION

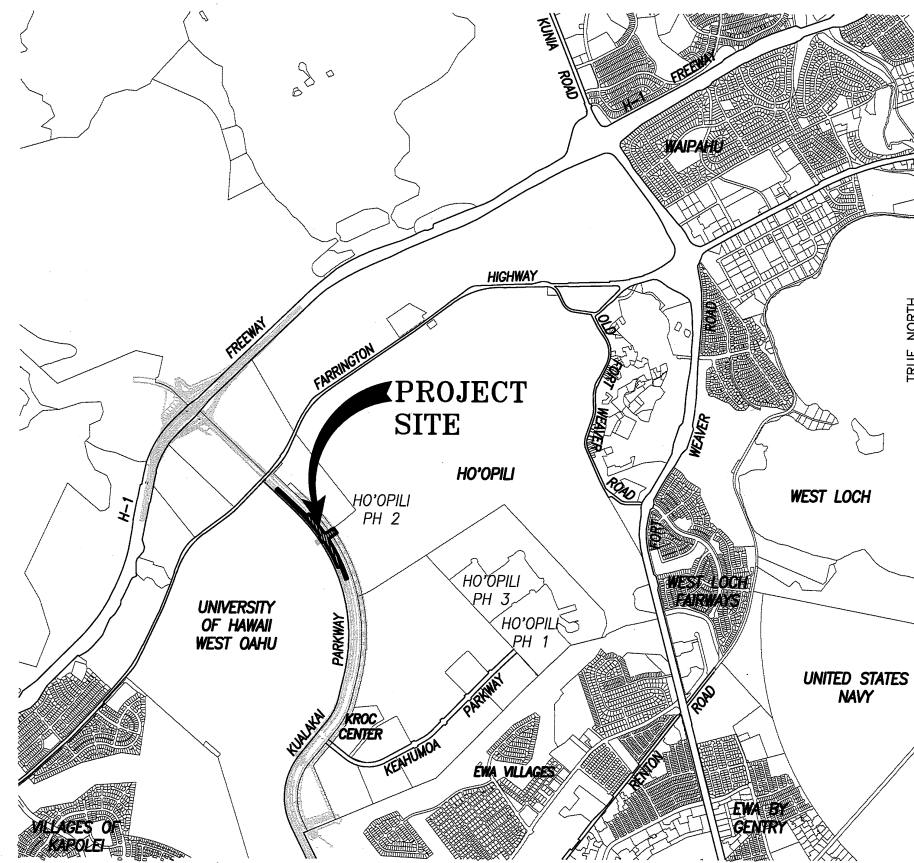
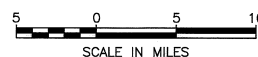
SINCE 1930

Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management



PROJECT
LOCATION

VICINITY MAP



LOCATION MAP

NOT TO SCALE

APPROVED :

ADMINISTRATOR, HIGHWAYS DIVISION, STATE DEPARTMENT OF TRANSPORTATION
(APPROVAL GRANTED FOR WORK WITHIN THE STATE RIGHT-OF-WAY ONLY
I.D. NO. 0-16-31 APPROVAL LETTER NO. HWY-CM 2-7282 DATED 4/16/18.)

4/17/18
DATE

FOR DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU
(FOR SITE GRADING AND WORK WITHIN CITY RIGHT-OF-WAY ONLY)

8/10/18
DATE

FOR MANAGER AND CHIEF, BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

6/15/18
DATE

HO'OPI LI DEVELOPMENT

PHASE 3

BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 072

[SUBDIVISION FILE NO. 2016/SUB-19]

[CONSTRUCTION PLAN FILE NO. 2016/CP-127]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Prepared by:

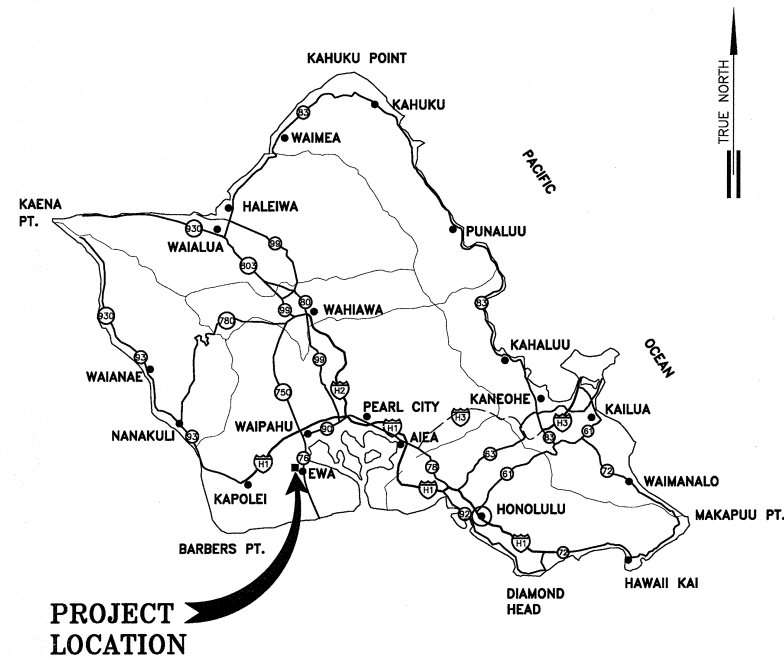


R. M. TOWILL CORPORATION

SINCE 1930

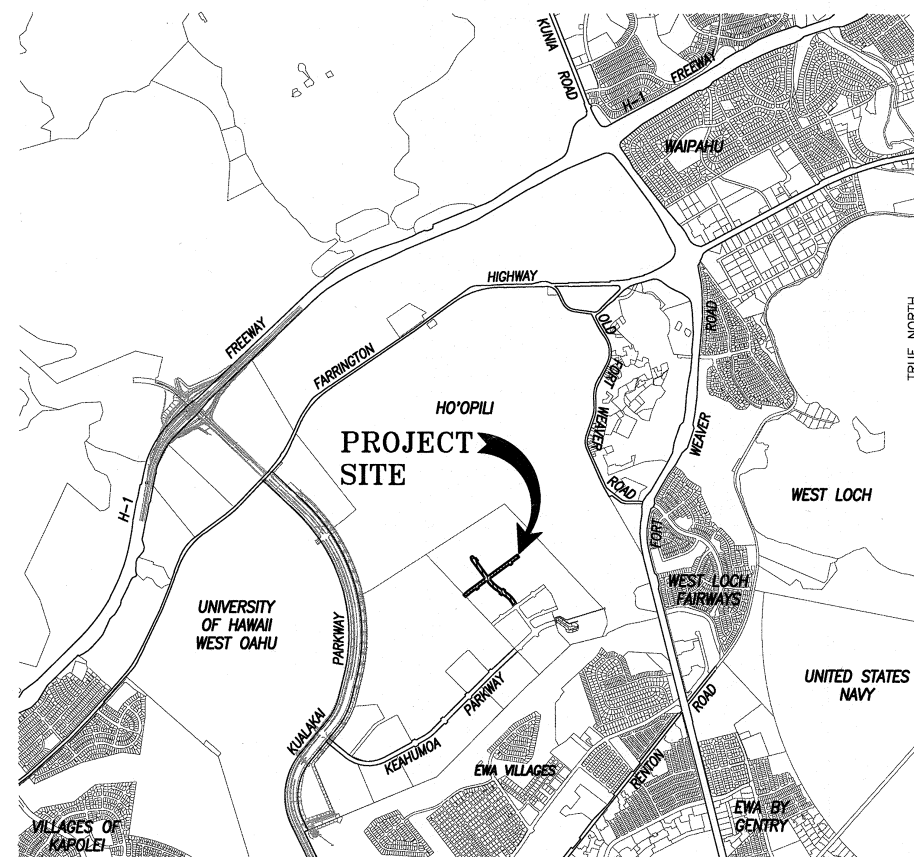
Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management

2016/CP-127
HO'OPI LI DEVELOPMENT PHASE 3 BACKBONE ROADWAY IMPROVEMENTS
NOVEMBER 29, 2016



VICINITY MAP

SCALE IN MILES
0 5 10



LOCATION MAP

NOT TO SCALE

APPROVED :

for M. J. J.
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

12/22/2016
DATE

for M. J. J.
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

12-9-2016
DATE

CONSTRUCTION DRAWINGS FOR

HO'OPIILI PHASE 3

PARCEL 5

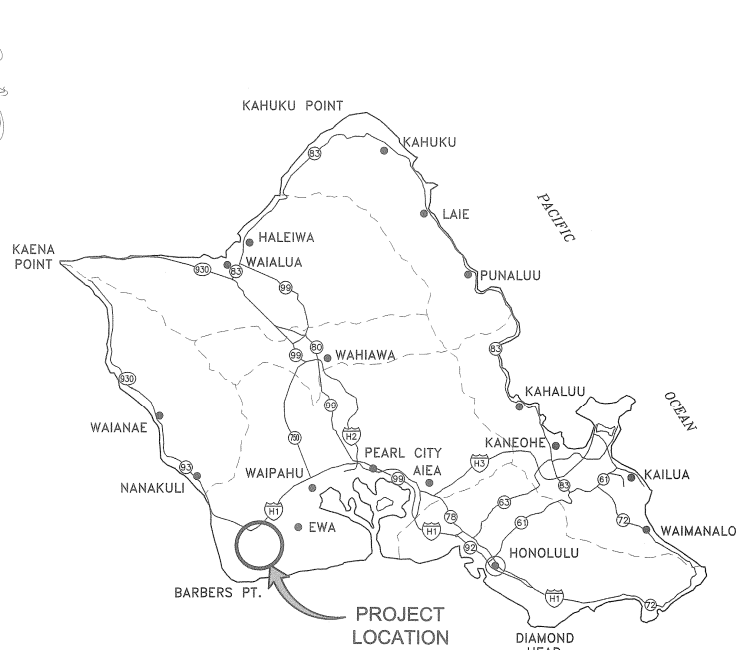
(DPP SUBDIVISION FILE NO. 2016/SUB-80)
(DPP CONSTRUCTION FILE NO. 2016/CP-200)

TAX MAP KEY : 9 - 1 - 17 POR OF 72

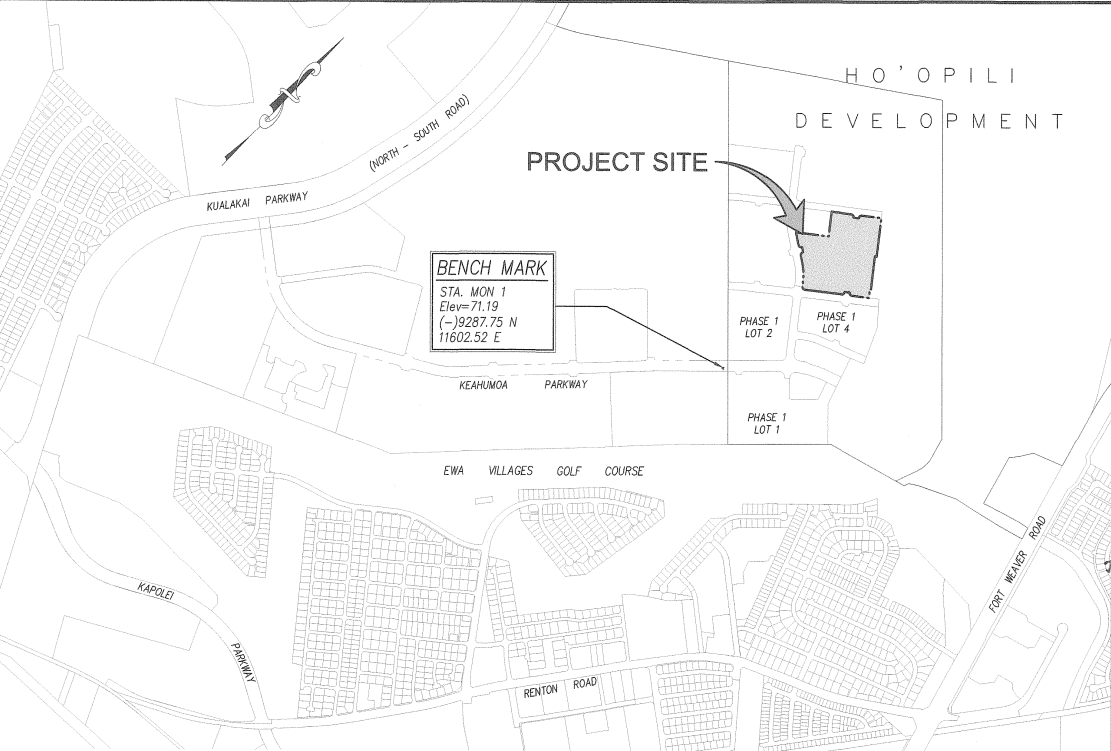
HONOLULULI, EWA, OAHU, HAWAII

OWNER: D.R. Horton, Schuler Division
DEVELOPER: D.R. Horton, Schuler Division

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



ISLAND OF OAHU
Not to Scale



LOCATION MAP
Not to Scale

INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN
6	C006	EROSION CONTROL PLAN & DETAILS
7	C007	POST-CONSTRUCTION BMP PLAN
8	C008	TYPICAL ROADWAY & GRADING SECTIONS AND WALL PROFILES
9	C009	PLAN & PROFILE - ROAD "4A" (STA 0+69± TO 5+60)
10	C010	PLAN & PROFILE - ROAD "4A" (STA 5+60 TO END)
11	C011	PLAN & PROFILE - ROAD "B"
12	C012	PLAN & PROFILE - ROAD "C"
13	C013	PLAN & PROFILE - ROAD "D"
14	C014	PLAN & PROFILE - ROAD "E"
15	C015	PLAN & PROFILE - ROAD "F" (STA 0+00 TO 3+50)
16	C016	PLAN & PROFILE - ROAD "F" (STA 3+50 TO END)
17	C017	PLAN & PROFILE - ROAD "G"
18	C018	PLAN & PROFILE - ROAD "L"
19	C019	PLAN & PROFILE - ROAD "H" & "K"
20	C020	FIRE HYDRANT PROFILES
21	C021	CURB RETURN & RAMP PLAN - 1
22	C022	CURB RETURN & RAMP PLAN - 2
23	C023	CURB RETURN & RAMP PLAN - 3
24	C024	CURB RETURN & RAMP PLAN - 4
25	C025	MISCELLANEOUS DETAILS - 1
26	C026	MISCELLANEOUS DETAILS - 2
27	C027	STRIPING & SIGNAGE PLAN
28	C028	STRIPING & SIGNAGE DETAILS AND NOTES
STRUCTURAL		
29	CS001	NOTES & TYPICAL DETAILS
30	CS002	DMH C.I.P. DETAILS
31	CS003	DMH PRECAST DETAILS
32	CS004	CB TYPE "A" C.I.P. DETAILS
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36	CS008	CB TYPE "D" C.I.P. DETAILS
37	CS009	CB TYPE "D" PRECAST DETAILS
38	CS010	RETAINING WALL NOTES & DETAILS
ELECTRICAL		
39	CE001	ISLAND & LOCATION MAP, NOTES, & ELECTRICAL, CONDUIT & EQUIPMENT SCHEDULES
40	CE002	SITE PLAN
41	CE003	HECO NOTES
42	CE004	HTCO AND CATV NOTES
43	CE005	DISTRIBUTION PLAN I
44	CE006	DISTRIBUTION PLAN II
45	CE007	DISTRIBUTION PLAN III
46	CE008	DISTRIBUTION PLAN IV
47	CE009	STREET LIGHTING PLAN I
48	CE010	STREET LIGHTING PLAN II
49	CE011	STREET LIGHTING PLAN III
50	CE012	STREET LIGHTING PLAN IV
51	CE013	DUCT SECTIONS I
52	CE014	DUCT SECTIONS II
53	CE015	HECO & SERVICE DETAILS
54	CE016	STREET LIGHT DETAILS
55	CE017	STREET LIGHT NOTES
56	CE018	CATV PS DETAIL
57	CE019	ELECTRICAL DUCT PROFILES I
58	CE020	ELECTRICAL DUCT PROFILES II
LANDSCAPE		
59	CL001	STREET TREE PLAN - 1
60	CL002	STREET TREE PLAN - 2
61	CL003	STREET TREE PLAN - 3 & 4
62	CL004	PLANT LIST AND DETAILS

APPROVED:

M. Ferguson
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

6/5/2017
DATE

John A. Smith
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

8/5/17
DATE

Michael H. Nojima
FOR MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W. AND BWS EASEMENTS ONLY)

7/2/17
DATE

Gray•Hong•Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

CONSULTING
ENGINEERS

Exp: 4/30/18



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-113-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 8/29/94.

Exp: 4/30/18



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ENGINEER: GF
DRAWN BY: JG
CHECKED BY: MN
PROJECT #: 3100-04

"PROPOSED PUBLIC ROAD"

HO'OPIILI PHASE 3
PARCEL 5
(DPP SUBDIVISION FILE NO 2016/SUB-80)
(DPP CONSTRUCTION PLANS FILE NO 2016/CP-200)
TMK: 9-1-17: POR OF 72
HONOLULULI, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 62 SHEETS

FILE POCKET FOLDER NO.

CONSTRUCTION DRAWINGS FOR

HOOPILI PHASE 3 PARCEL 6

(DPP SUBDIVISION FILE NO. 2016/SUB-78)
(DPP CONSTRUCTION FILE NO. 2016/CP-194)

TAX MAP KEY : 9 - 1 - 17 POR OF 72

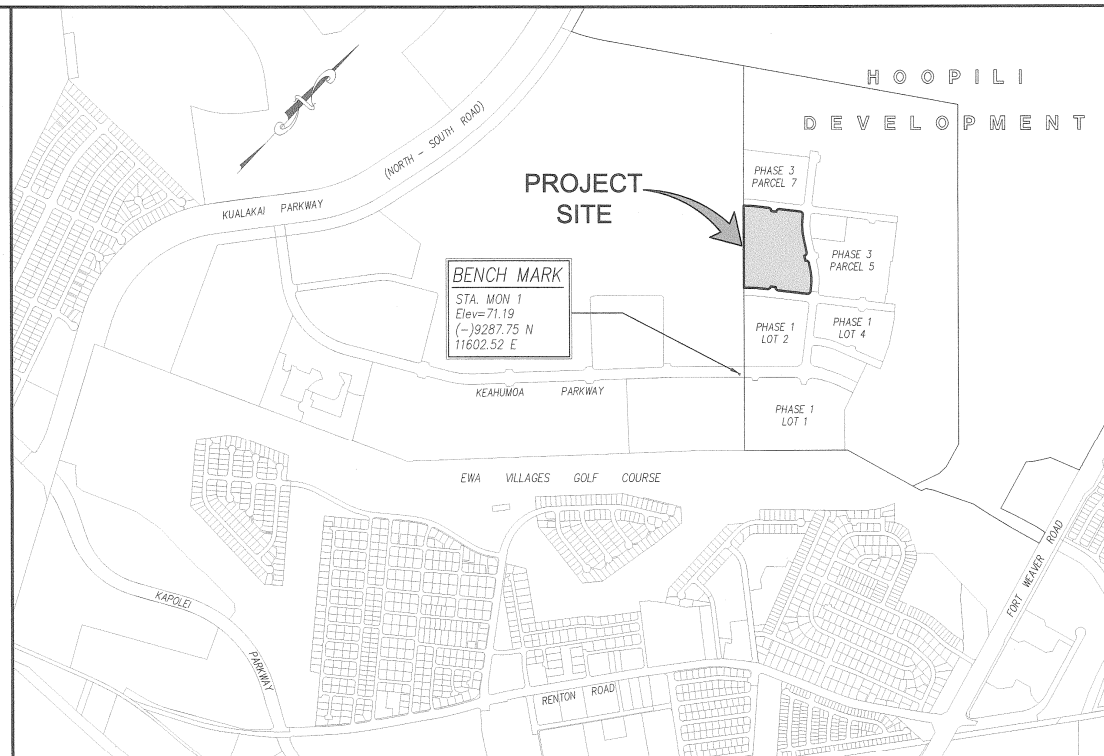
HONOLULULI, EWA, OAHU, HAWAII

OWNER: D.R. Horton, Schuler Division
DEVELOPER: D.R. Horton, Schuler Division

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



ISLAND OF OAHU
Not to Scale



LOCATION MAP
Not to Scale

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1	C001	TITLE SHEET
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3	C003	GENERAL NOTES - 1
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10	C010	PLAN & PROFILE - ROAD "B" (STA (-)2+17.06 TO 1+60)
11	C011	PLAN & PROFILE - ROAD "B" (STA 1+60 TO 3+84.81)
12	C012	PLAN & PROFILE - ROAD "C"
13	C013	PLAN & PROFILE - ROAD "D" (STA (-)1+93.40 TO 1+20)
14	C014	PLAN & PROFILE - ROAD "D" (STA 1+20 TO 3+88.81)
15	C015	PLAN & PROFILE - ROAD "E"
16	C016	PLAN & PROFILE - ROAD "4A" (STA (-)4+99.93 TO (-)1+80)
17	C017	PLAN & PROFILE - ROAD "4A" (STA (-)1+80 TO 0+69)
18	C018	PLAN & PROFILE - ROADS "A3" AND "J-1"
19	C019	FIRE HYDRANT PROFILES
20	C020	CURB RETURN & RAMP PLAN - 1
21	C021	CURB RETURN & RAMP PLAN - 2
22	C022	CURB RETURN & RAMP PLAN - 3
23	C023	BULB-OUT CURB RETURNS
24	C024	MISCELLANEOUS DETAILS - 1
25	C025	MISCELLANEOUS DETAILS - 2
26	C026	STRIPING & SIGNAGE PLAN
27	C027	STRIPING & SIGNAGE DETAILS AND NOTES
STRUCTURAL		
28	CS001	NOTES & TYPICAL DETAILS
29	CS002	DMH C.I.P. DETAILS
30	CS003	DMH PRECAST DETAILS
31	CS004	CB TYPE "A" C.I.P. DETAILS
32	CS005	CB TYPE "A" PRECAST DETAILS
33	CS006	CB TYPE "B" C.I.P. DETAILS
34	CS007	CB TYPE "B" PRECAST DETAILS
35	CS008	CB TYPE "D" C.I.P. DETAILS
36	CS009	CB TYPE "D" PRECAST DETAILS
37	CS010	RETAINING WALL NOTES & DETAILS
ELECTRICAL		
38	CE001	ISLAND & LOCATION MAPS, NOTES, & ELECTRICAL, CONDUIT & EQUIPMENT SCHEDULES
39	CE002	SITE PLAN
40	CE003	HECO NOTES
41	CE004	HTCO AND CATV NOTES
42	CE005	DISTRIBUTION PLAN I
43	CE006	DISTRIBUTION PLAN II
44	CE007	DISTRIBUTION PLAN III
45	CE008	DISTRIBUTION PLAN IV
46	CE009	STREET LIGHT PLAN I
47	CE010	STREET LIGHT PLAN II
48	CE011	STREET LIGHT PLAN III
49	CE012	STREET LIGHT PLAN IV
50	CE013	DUCT SECTIONS I
51	CE014	DUCT SECTIONS II
52	CE015	HECO & SERVICE DETAILS
53	CE016	STREET LIGHT DETAILS
54	CE017	STREET LIGHT NOTES
55	CE018	CATV PS DETAIL
56	CE019	ELECTRICAL DUCT PROFILE I
57	CE020	ELECTRICAL DUCT PROFILE II
LANDSCAPE		
58	CL001	STREET TREE PLAN - 1
59	CL002	STREET TREE PLAN - 2
60	CL003	STREET TREE PLAN - 3
61	CL004	PLANT LIST AND DETAILS

APPROVED:

M. 78
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

6/5/2017
DATE

Sha SL
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

3/15/17
DATE

John D
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W. AND BWS EASEMENTS ONLY)

MAR 08 2017
DATE

Gray • Hong • Nojima & Associates, Inc.
201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018
CONSULTING ENGINEERS

Exp: 4/30/18
MICHAEL H. NOJIMA
LICENSED PROFESSIONAL ENGINEER
No. 5632-C
HAWAII, USA
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 8/29/94)

ENGINEER: GF
DRAWN BY: JG
CHECKED BY: MN
PROJECT #: 3100-05

"PROPOSED PUBLIC ROAD"

HOOPILI PHASE 3
PARCEL 6
(DPP SUBDIVISION FILE NO 2016/SUB-78)
(DPP CONSTRUCTION PLANS FILE NO 2016/CP-194)
TMK: 9-1-17: POR OF 72
HONOLULULI, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 61 SHEETS
FILE POCKET FOLDER NO.

HO'OPILI DEVELOPMENT PHASE 4

BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 004, 072

[CONSTRUCTION PLAN FILE NO. 2017/CP-80]

[SUBDIVISION FILE NO. 2016/SUB-228]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

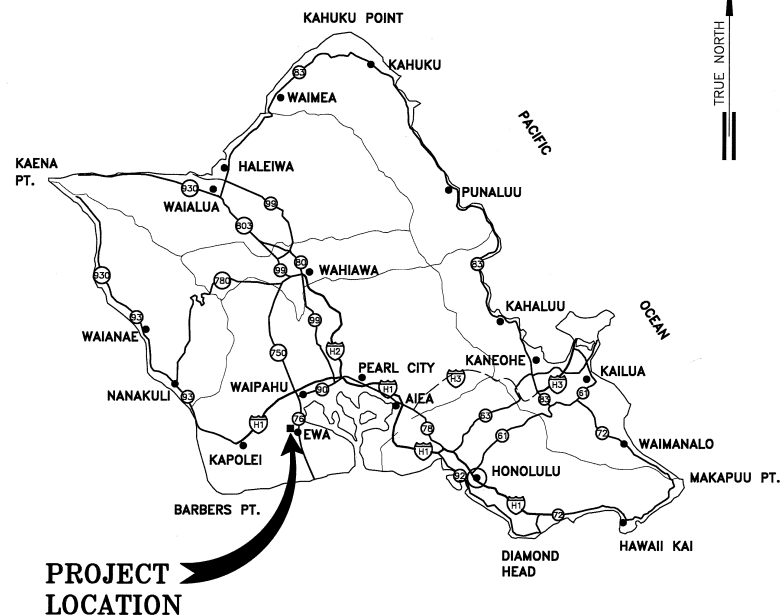
Prepared by:



R. M. TOWILL CORPORATION

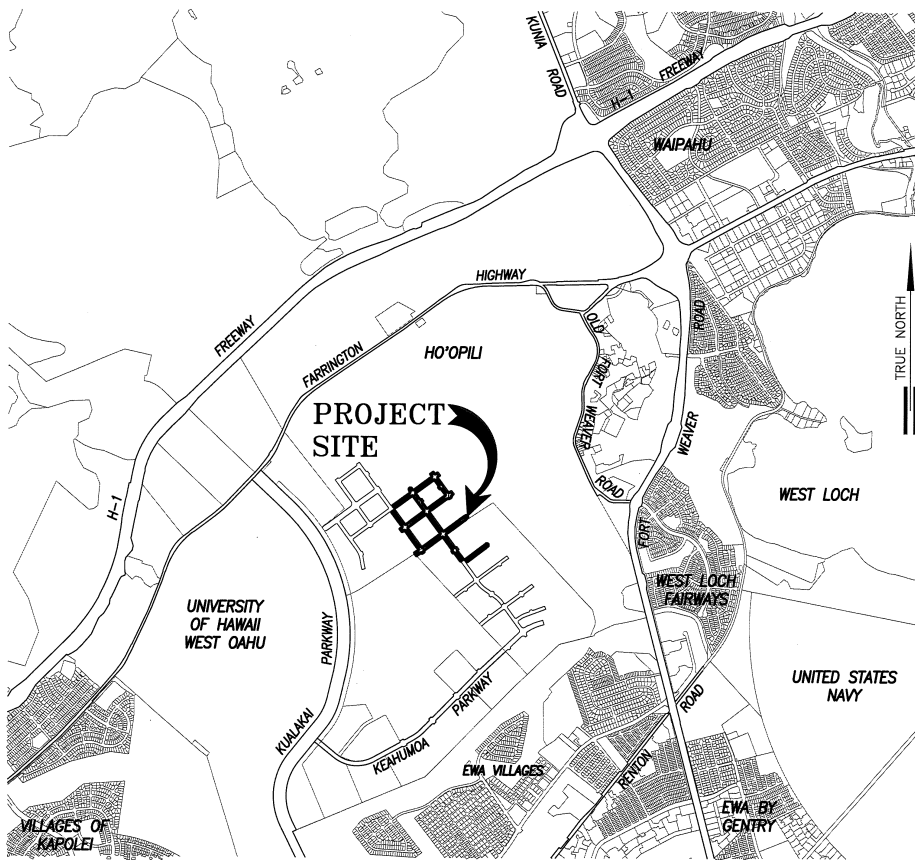
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Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management



VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

9/28/18
DATE

MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

SEP 11 2018
DATE

3100-10 H010211 PHASE 4 PARCEL 6 (2018C2-56)

HO'OPILI PHASE 4 PARCEL 9

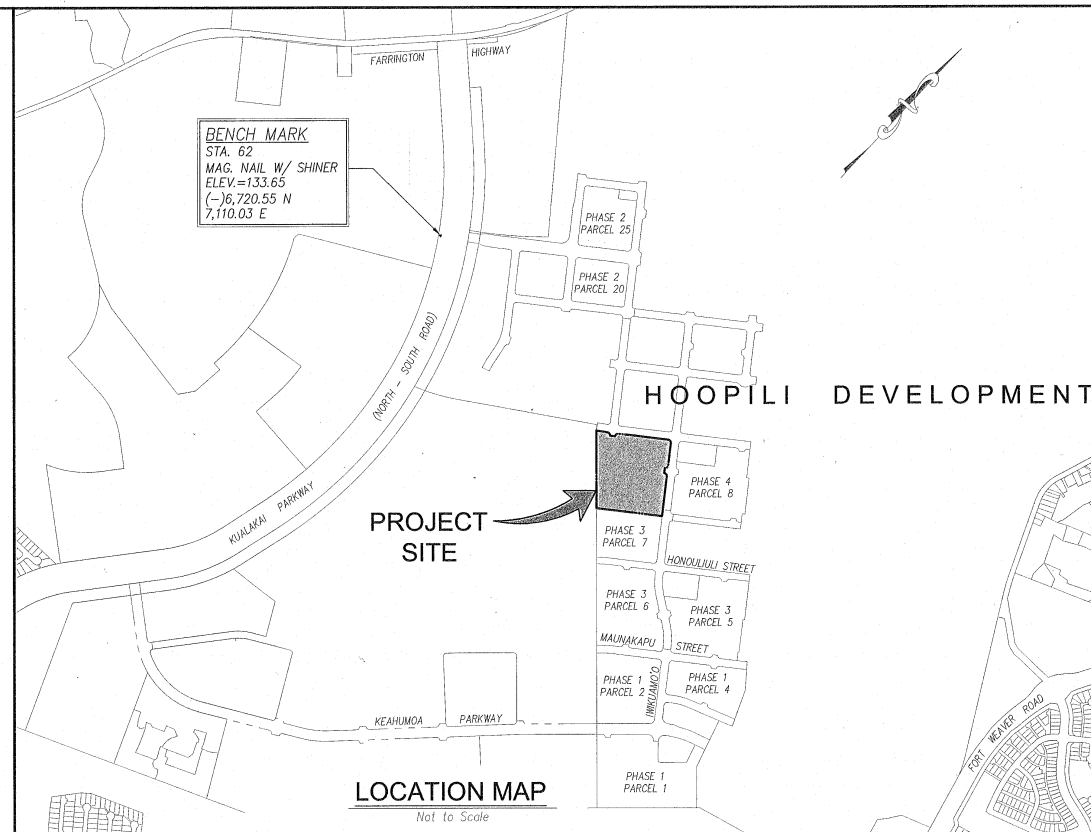
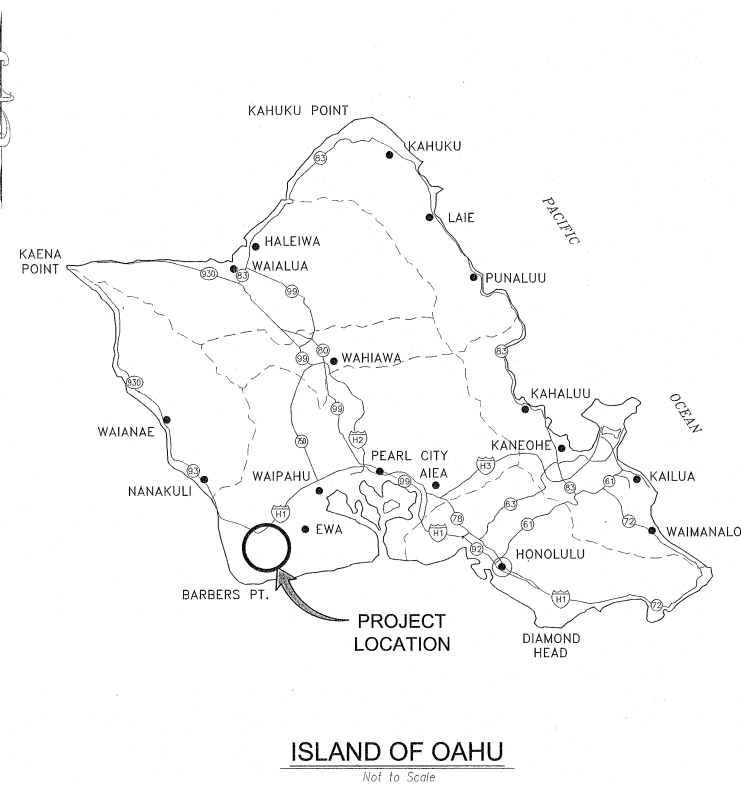
(DPP SUBDIVISION FILE NO. 2017/SUB-202)
(DPP CONSTRUCTION FILE NO. 2018/CP-62)

TAX MAP KEY : 9 - 1 - 17 : POR OF 137

HONOLULU, EWA, OAHU, HAWAII

OWNER: D.R. Horton
DEVELOPER: D.R. Horton

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
		<u>CIVIL</u>
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN
6	C006	WALL PROFILES AND GRADING SECTIONS
7	C007	EROSION & SEDIMENT CONTROL PLAN
8	C008	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
9	C009	POST-CONSTRUCTION BMP PLAN
10	C010	TYPICAL PUBLIC ROADWAY SECTIONS
11	C011	PLAN & PROFILE - ROAD "A" STA 0+00 TO STA 3+70
12	C012	PLAN & PROFILE - ROAD "A" STA 3+70 TO END
13	C013	PLAN & PROFILE - ROAD "B"
14	C014	PLAN & PROFILE - ROAD "C"
15	C015	PLAN & PROFILE - ROAD "D"
16	C016	PLAN & PROFILE - ROAD "E" STA 0+00 TO 4+00
17	C017	PLAN & PROFILE - ROAD "E" STA 4+00 TO END
18	C018	PLAN & PROFILE - ROAD "F"
19	C019	FIRE HYDRANT PROFILES
20	C020	CURB RETURN & RAMP PLAN - 1
21	C021	CURB RETURN & RAMP PLAN - 2
22	C022	BULB-OUT CURB RETURNS
23	C023	MISCELLANEOUS DETAILS - 1
24	C024	MISCELLANEOUS DETAILS - 2
25	C025	STRIPING & SIGNAGE PLAN
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33	CS007	CB TYPE "B" PRECAST DETAILS
34	CS008	RETAINING WALL NOTES & DETAILS
35	CS009	RETAINING WALL SCHEDULES/DETAILS
		<u>ELECTRICAL</u>
36	CE001	ISLAND AND LOCATION MAP, ELECTRICAL SYMBOLS, CONDUIT AND EQUIPMENT SCHEDULES, AND NOTES
37	CE002	SITE PLAN
38	CE003	HECO NOTES
39	CE004	CATV & HTCO NOTES
40	CE005	DISTRIBUTION PLAN 1
41	CE006	DISTRIBUTION PLAN 2
42	CE007	DISTRIBUTION PLAN 3
43	CE008	DISTRIBUTION PLAN 4
44	CE009	STREET LIGHT PLAN 1
45	CE010	STREET LIGHT PLAN 2
46	CE011	STREET LIGHT PLAN 3
47	CE012	STREET LIGHT PLAN 4
48	CE013	TYPICAL DUCT SECTION TRENCH DETAIL
49	CE014	TYPICAL DUCT SECTIONS
50	CE015	HECO AND SERVICE DETAILS
51	CE016	STREET LIGHT DETAILS AND NOTES
52	CE017	CATV POWER SUPPLY PEDESTAL DETAILS
53	CE018	DUCTLINE PROFILES
		<u>LANDSCAPE</u>
54	CL001	LANDSCAPE PLAN - 1
55	CL002	LANDSCAPE PLAN - 2 & 3
56	CL003	LANDSCAPE PLAN - 4
57	CL004	PLANT LIST AND DETAILS

APPROVED:

Walter J. Water
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

Joanna O. Sato
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

FOR MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY W

4/2/19
DATE

9.24.2018
DATE

MAR 13 2019

DATE

Gray•Hong•Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

Exp: 4/30/20



Michael H. Lyg

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8/22/94.

Exp: 4/30/20



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[illegible]

ENGINEER: WT	CHECKED BY: MN
DRAWN BY: JG	PROJECT #: 3100-11

"PROPOSED PUBLIC ROAD"

HO'OPILI PHASE 4
PARCEL 9
(DPP SUBDIVISION FILE NO 2017/SUB-202)
(DPP CONSTRUCTION PLANS FILE NO 2018/CP-62)
TMK: 9-1-17: POR OF 137
HONOLULULI, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 57 SHEETS

PROJECT NAME: HO'OPILI PHASE 4 PARCEL 9
CAD DWG NO.: 3100-11_TitleSet.dwg
DATE: APRIL 2018

100-11 HOPELI PHASE 4 PARCEL 9 (2018CP-42)

HO'OPILI DEVELOPMENT

PHASE 6

BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 110, 138

[SUBDIVISION FILE NO. 2017/SUB-118, 2018/SUB-85]

[CONSTRUCTION PLAN FILE NO. 2018/CP-105]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

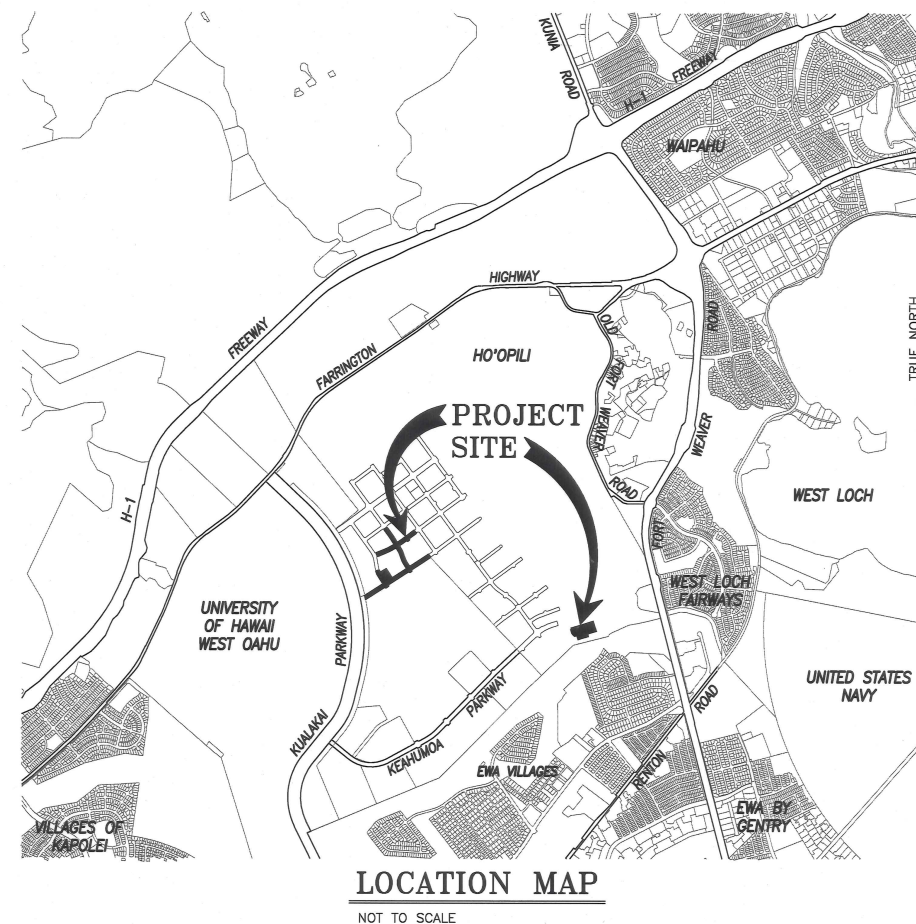
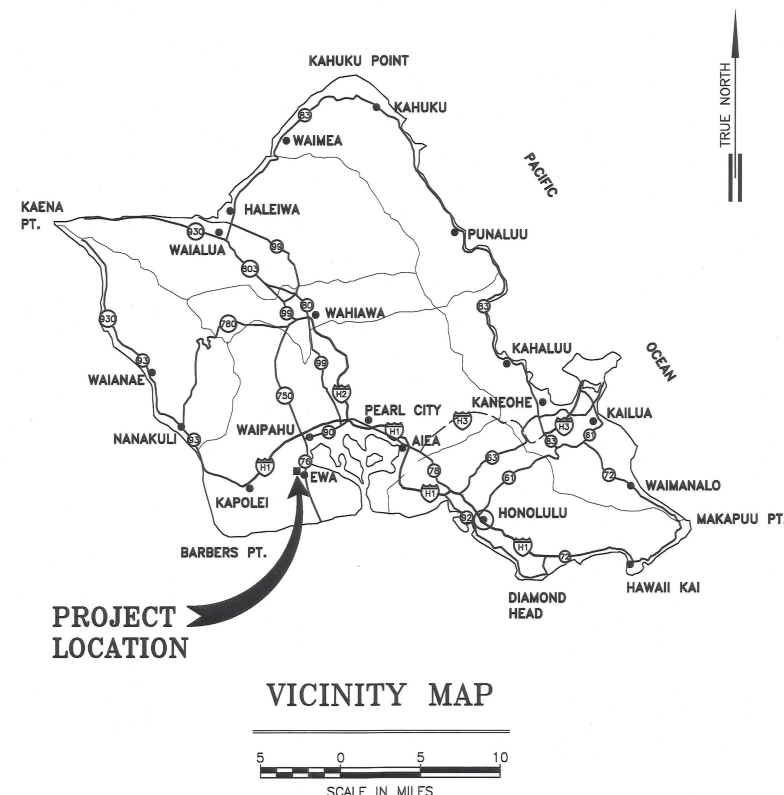
Prepared by:



R. M. TOWILL CORPORATION

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APPROVED :

Winston Y. Watanabe
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

11/20/19
DATE

Paul J. ...
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

10-16-2019
DATE

LOCATION MAP

NOT TO SCALE

CONSTRUCTION DRAWINGS FOR

TAX MAP KEY : 9 - 1 - 17 : POR OF 138

OWNER: D.R. Horton
DEVELOPER: D.R. Horton

BENCH MARK
STA. 62
MAG. NAIL W/ SHINER
ELEV.=133.65
(-)6,720.55 N
7,110.03 E

H'OPILI DEVELOPMENT

PROJECT SITE

LOCATION MAP
Not to Scale

SHT NO	DWG NO	DESCRIPTION
--------	--------	-------------

CATHODIC PROTECTION

STRUCTURAL

ELECTRICAL

LANDSCAPE

APPROVED:

12/3/19
DATE

5/17/19
DATE

6-20-2019
DATE

CONSULTING
ENGINEERS

Exp: 4/30/20



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MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE
UNDER MY OBSERVATION. (OBSERVATION OF
CONSTRUCTION AS DEFINED IN SECTION
16-115-2 OF THE STATE OF HAWAII,
DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR
PROFESSIONAL ENGINEERS, ARCHITECTS,
SURVEYORS, AND LANDSCAPE ARCHITECTS
8/28/94).

Exp: 4/30/20



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"PROPOSED PUBLIC ROAD"

TITLE SHEET

APPROVED BY:

C001

SHEET		1	OF	49	SHEETS
FILE	POCKET	FOLDER	NO.		

HO'OPILI DEVELOPMENT

PHASE 6

ROAD "H" AND KUALAKAI PARKWAY IMPROVEMENTS

HONOLULU , EWA , OAHU , HAWAII
TAX MAP KEY : 9-1-017: 096, 098, 138, & 161
[CONSTRUCTION PLAN FILE NO. 2018/CP-246]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

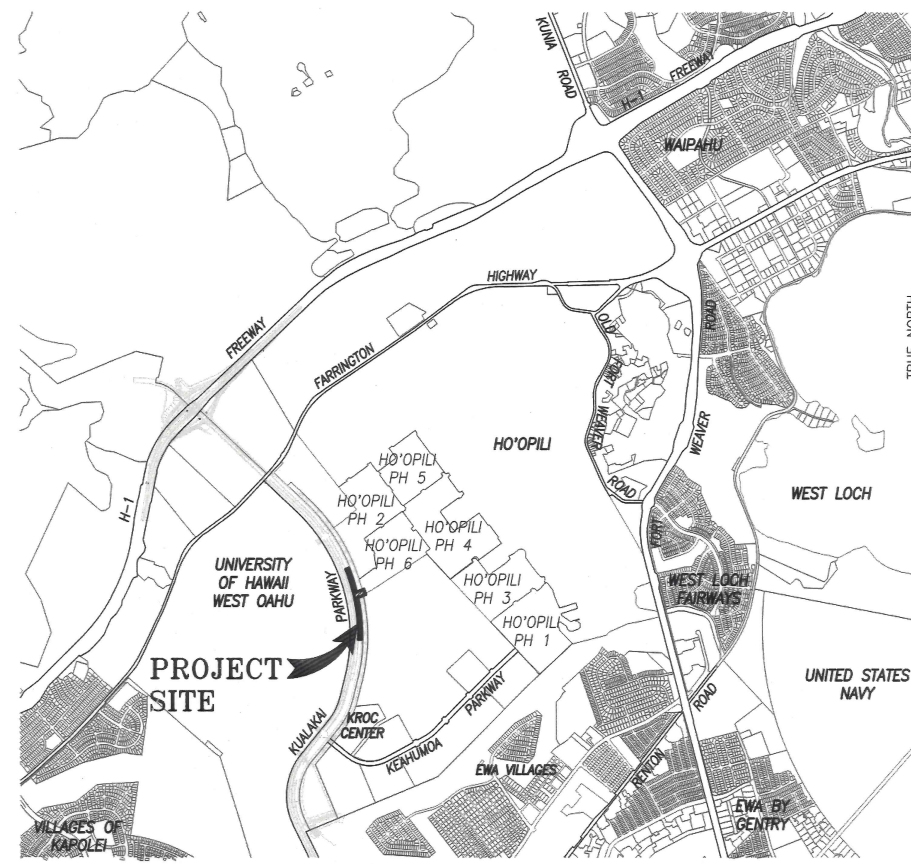
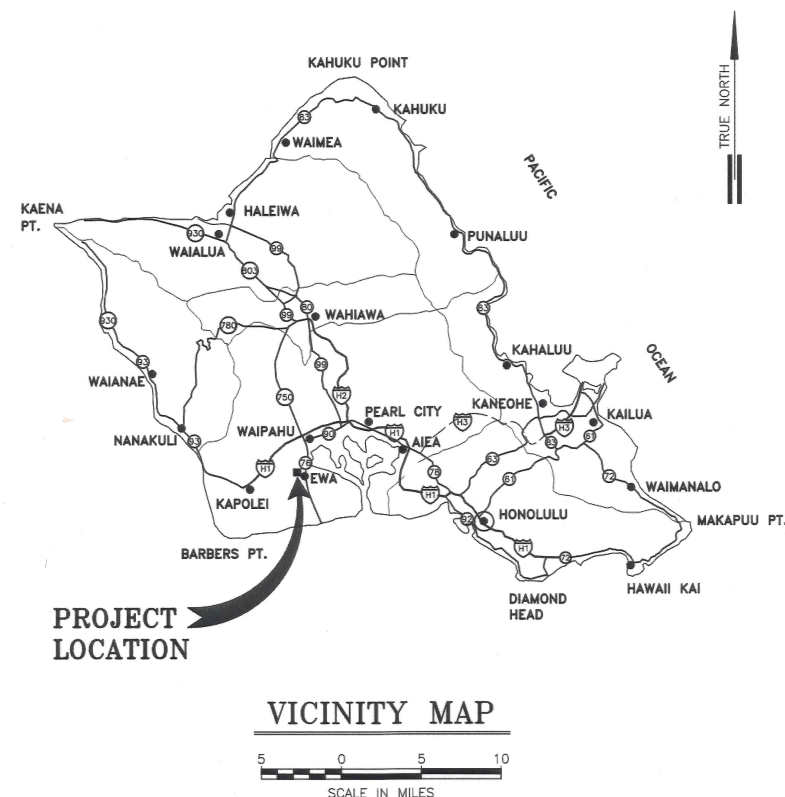
Prepared by:



R. M. TOWILL CORPORATION

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APPROVED :

[Signature]
ADMINISTRATOR, HIGHWAYS DIVISION, STATE DEPARTMENT OF TRANSPORTATION
(APPROVAL GRANTED FOR WORK WITHIN THE STATE RIGHT-OF-WAY ONLY)
I.D. NO. 0-18-22 APPROVAL LETTER NO. HWY-CM 2.5236 DATED 2/12/2021

2/12/2021
DATE

[Signature]
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU
(FOR SITE GRADING ONLY)

3/24/2021
DATE

[Signature]
MANAGER AND CHIEF, BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

MAR 01 2021
DATE

HO'OPI LI DEVELOPMENT
PHASE 7A
BACKBONE ROADWAY IMPROVEMENTS

HONOLULU , EWA , OAHU , HAWAII
TAX MAP KEY : 9-1-017: 193, 194, 195
[SUBDIVISION FILE NO. 2022/SUB-214]
[CONSTRUCTION PLAN FILE NO. 2023/CP-2]

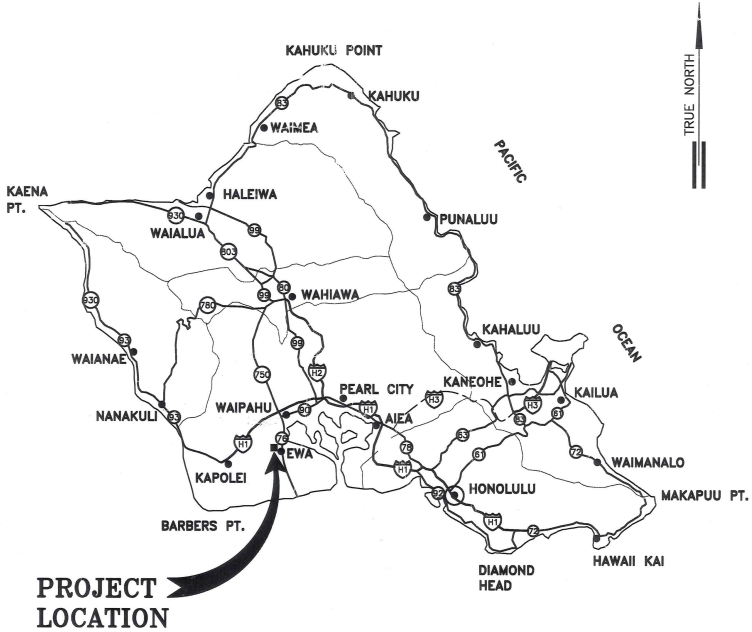
PREPARED FOR:
D.R. HORTON HAWAII LLC
130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Prepared by:



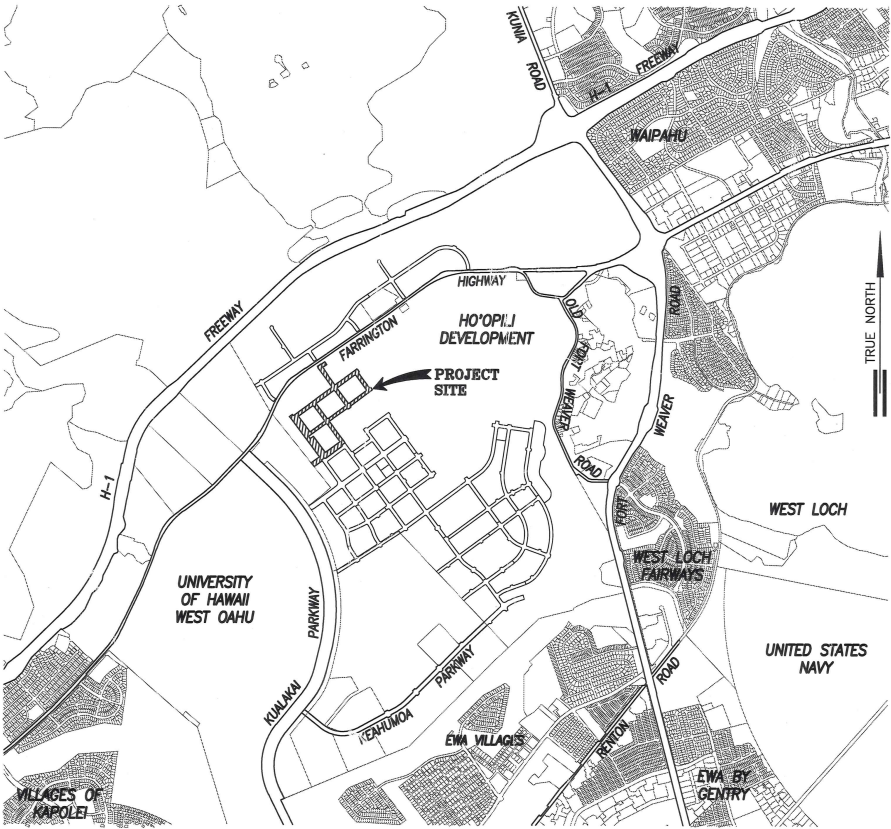
R. M. TOWILL CORPORATION
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VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

Walter J. Wai
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

1/28/2025
DATE

John Chen
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY *
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

9/6/2024
DATE

John Chen
HIGHWAYS ADMINISTRATOR
STATE DEPARTMENT OF TRANSPORTATION
(APPROVAL GRANTED FOR WORK WITHIN THE STATE RIGHT-OF-WAY ONLY, I.D. NO. O-23-16
LETTER OF APPROVAL NO. HWY-CM 24-2.15188
DATED 5/23/2024.)

5/23/2024
DATE

HO'OPILI DEVELOPMENT

INDUSTRIAL MIXED USE INTERSECTION IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 004; 9-1-018: 010
[SUBDIVISION FILE NO. 2018/SUB-187, 2018/SUB-201]
[CONSTRUCTION PLAN FILE NO. 2017/CP-307]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Prepared by:

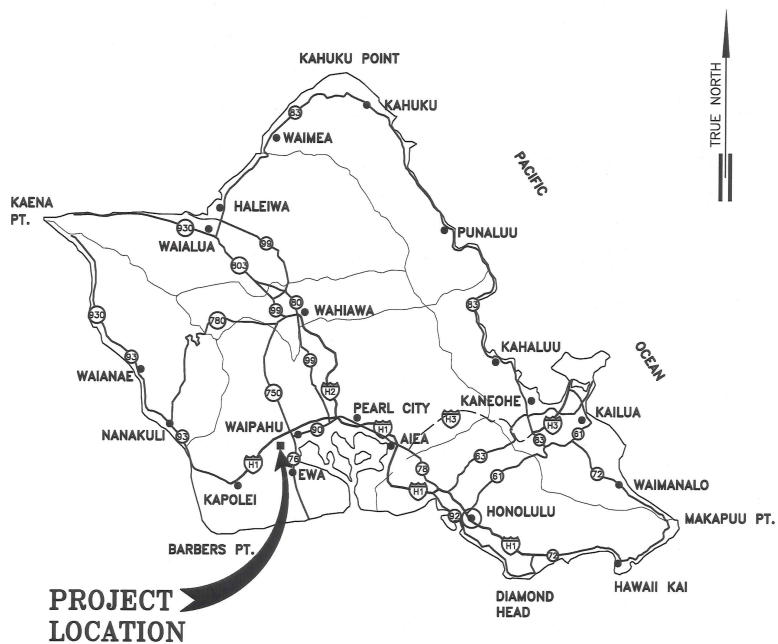


R. M. TOWILL CORPORATION

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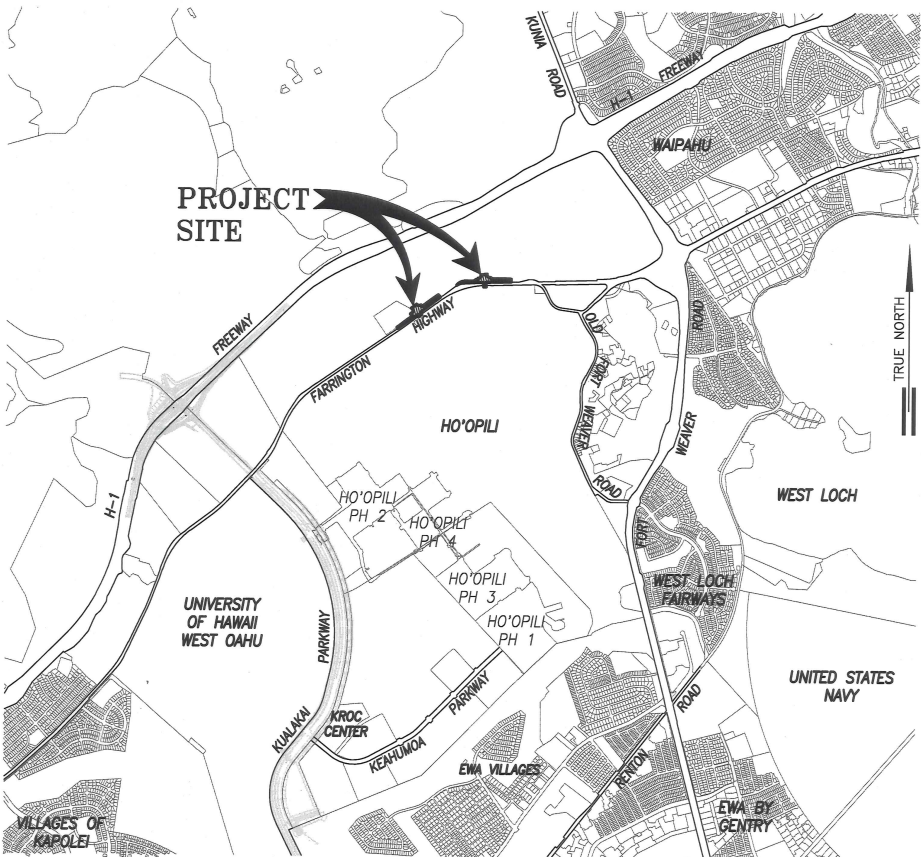
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2017/CP-307
DECEMBER 18, 2017
HO'OPILI DEVELOPMENT INDUSTRIAL MIXED USE INTERSECTION IMPROVEMENTS



VICINITY MAP

5 0 5 10
SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

8/30/19
DATE

MANAGER AND CHIEF, BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

1-31-2019
DATE

RWTC JOB NO.: 1-23023-OE

HO'OPILI DEVELOPMENT

PHASE 10A

BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-017: 004 & 151
[SUBDIVISION FILE NO. 2019/SUB-122]
[CONSTRUCTION PLAN FILE NO. 2019/CP-117]

PREPARED FOR:

D.R. HORTON - SCHULER DIVISION

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

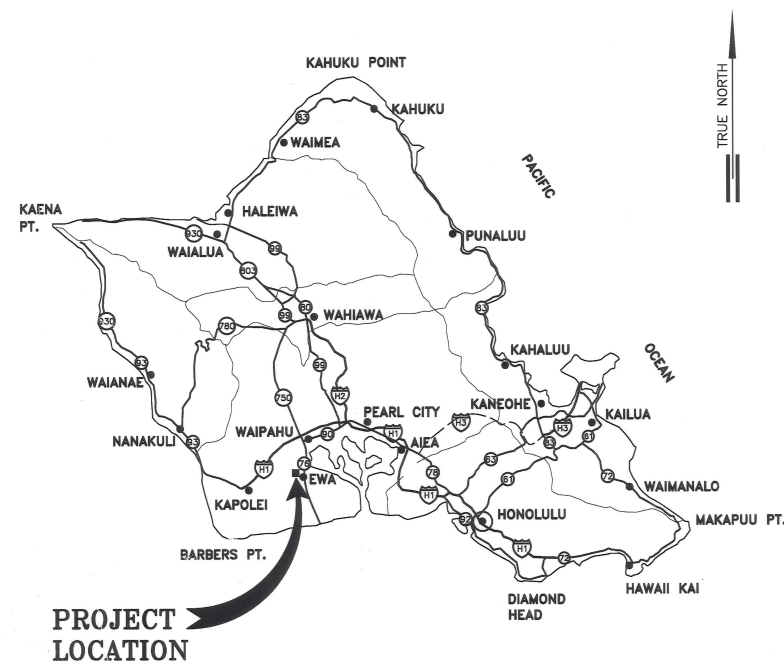
Prepared by:



R. M. TOWILL CORPORATION

SINCE 1930

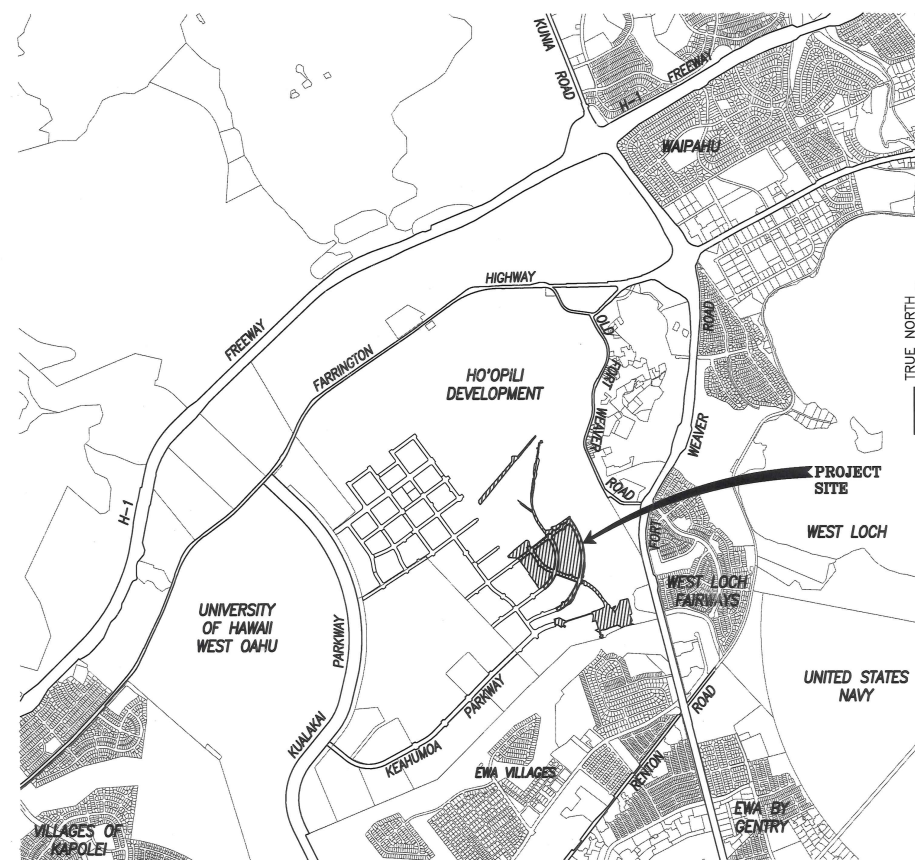
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PROJECT
LOCATION

VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

Walter J. Wata
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

11/10/2020
DATE

Amid
FOR MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

OCT 09 2020
DATE

CONSTRUCTION DRAWINGS FOR

HO'OPILI PHASE 10A

PARCEL 103

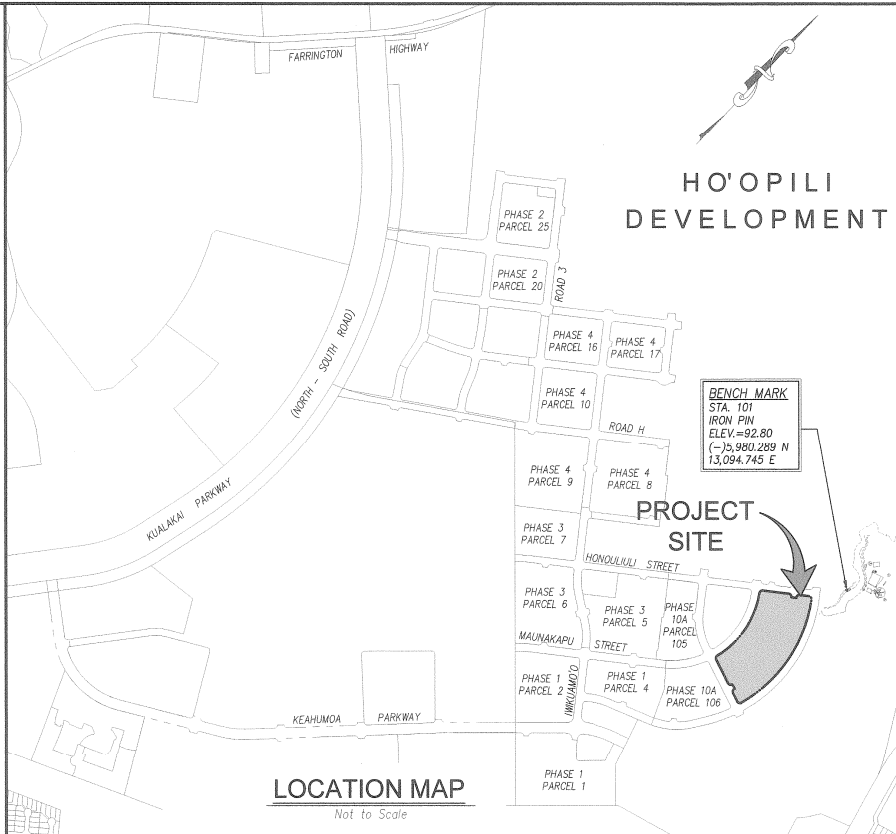
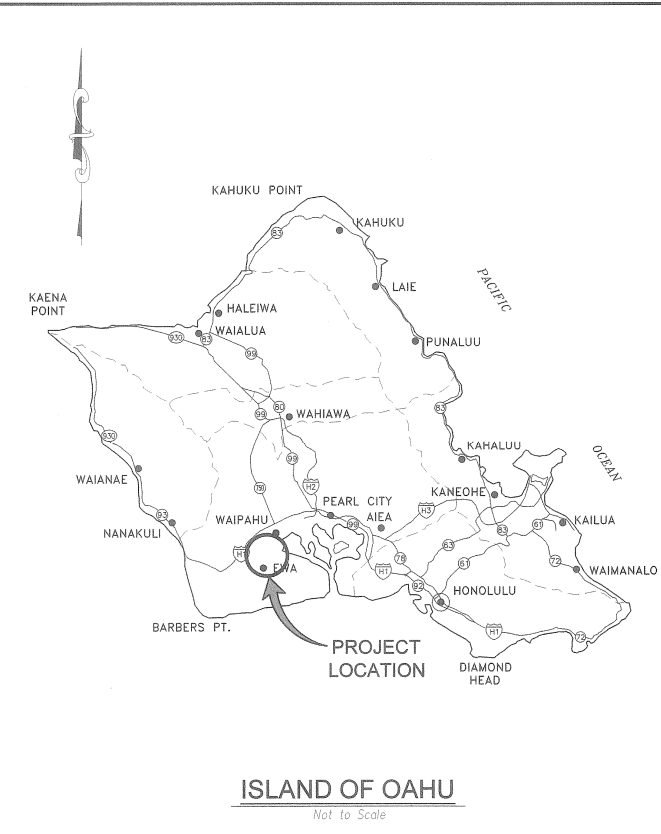
(DPP SUBDIVISION FILE NO. 2020/SUB-67)
(DPP CONSTRUCTION FILE NO. 2020/CP-124)

TAX MAP KEY : 9 - 1 - 17 : POR OF 004

HONOLULU, EWA, OAHU, HAWAII

OWNER: D.R. Horton
DEVELOPER: D.R. Horton

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



INDEX TO DRAWINGS

SHT NO DWG NO DESCRIPTION

CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN - 1
6	C006	GRADING PLAN - 2
7	C007	WALL PROFILES AND GRADING SECTIONS
8	C008	EROSION & SEDIMENT CONTROL PLAN
9	C009	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
10	C010	POST-CONSTRUCTION BMP PLAN
11	C011	PLAN & PROFILE - ROAD 6A STA 0+72.26 TO 4+00
12	C012	PLAN & PROFILE - ROAD "6A" STA 4+00 TO 9+00
13	C013	PLAN & PROFILE - ROAD "6A" STA 9+00 TO END
14	C014	PLAN & PROFILE - ROAD "B"
15	C015	PLAN & PROFILE - ROAD "C" STA 0+00 TO 4+00
16	C016	PLAN & PROFILE - ROAD "C" STA 4+00 TO END
17	C017	PLAN & PROFILE - ROAD "D"
18	C018	TYPICAL PUBLIC ROADWAY SECTIONS AND FIRE HYDRANT PROFILES
19	C019	CURB RETURN & RAMP PLAN
20	C020	CURB RETURN
21	C021	MISCELLANEOUS DETAILS - 1
22	C022	MISCELLANEOUS DETAILS - 2
23	C023	STRIPING & SIGNAGE PLAN
24	C024	STRIPING & SIGNAGE DETAILS AND NOTES
25	CP001	CATHODIC PROTECTION DETAILS
26	CP002	CATHODIC PROTECTION DETAILS
27	CP003	CATHODIC PROTECTION DETAILS

STRUCTURAL		
28	CS001	NOTES & TYPICAL DETAILS
29	CS002	SDMH C.I.P. DETAILS
30	CS003	SDMH PRECAST DETAILS
31	CS004	CB TYPE "A" CIP DETAILS
32	CS005	CB TYPE "A" PRECAST DETAILS
33	CS006	CB TYPE "B" CIP DETAILS
34	CS007	CB TYPE "B" PRECAST DETAILS
35	CS008	RETAINING WALL NOTES & DETAILS
36	CS009	RETAINING WALL SCHEDULES/NEW OPENING IN EXISTING SEWER MANHOLE

ELECTRICAL		
37	CE001	ISLAND AND LOCATION MAPS, ELECTRICAL SYMBOLS AND EQUIPMENT SCHEDULE, AND NOTES
38	CE002	SITE PLAN
39	CE003	HTCO NOTES
40	CE004	HTCO AND CATV NOTES
41	CE005	ELECTRICAL DISTRIBUTION PLAN I
42	CE006	ELECTRICAL DISTRIBUTION PLAN II
43	CE007	ELECTRICAL DISTRIBUTION PLAN III
44	CE008	STREET LIGHT PLAN I
45	CE009	STREET LIGHT PLAN II
46	CE010	STREET LIGHT PLAN III
47	CE011	TYPICAL TRENCHING DETAILS
48	CE012	TYPICAL DUCT SECTIONS I
49	CE013	TYPICAL DUCT SECTIONS II
50	CE014	HANDHOLE DETAILS
51	CE015	STREET LIGHT DETAILS
52	CE016	DUCTLINE PROFILES I
53	CE017	DUCTLINE PROFILES II

LANDSCAPE		
54	CL001	STREET TREE PLAN - 1
55	CL002	STREET TREE PLAN - 2
56	CL003	STREET TREE PLAN - 3
57	CL004	STREET TREE PLAN - 4
58	CL005	PLANT LIST AND DETAILS

RECORD DRAWING TRACINGS

CONTRACTOR
As-Built Drawings
Certified By: _____ Date: _____
Print Name: _____
Company: _____

LICENSED PROFESSIONAL ENGINEER
Prepared By: _____ Date: _____
Print Name: _____
Company: GRAY, HONG, NOJIMA & ASSOC., INC.

DEVELOPER
Submitted By: _____ Date: _____
Print Name: _____
Company: D.R. HORTON

THIS SET OF "RECORD DRAWINGS" IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AS "AS-BUILT" DRAWINGS AND HAS NOT BEEN FIELD VERIFIED BY THE LICENSED PROFESSIONAL ENGINEER. "RECORD DRAWINGS" ARE DRAWINGS DEFINED AS RECORD DOCUMENTS PREPARED BY THE LICENSED PROFESSIONAL ENGINEER UPON THE COMPLETION OF CONSTRUCTION. THESE DRAWINGS ARE BASED UPON THE DRAWINGS AND OTHER DATA FURNISHED BY THE CONTRACTOR AND OTHERS SHOWING THE FINAL CONSTRUCTED IMPROVEMENTS, REPRESENTING ALL FIELD MARKUPS, DESIGN CHANGES, AND CHANGES IN THE WORK MADE DURING CONSTRUCTION. THE LICENSED PROFESSIONAL ENGINEER IS NOT RESPONSIBLE FOR FIELD VERIFICATION OF THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS ON THESE DRAWINGS RESULTING FROM ERRONEOUS INFORMATION PROVIDED BY OTHERS.

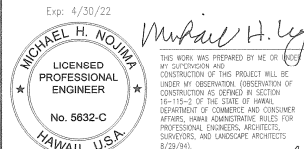
APPROVED:

Winston M. Taniguchi 2/10/2021
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING
DATE

James B. ... 12-4-20
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII
DATE

Michael H. ... DEC 02 2020
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)
DATE

Gray • Hong • Nojima & Associates, Inc.



REVISION	DATE	DESCRIPTION
1	2/10/21	REVISED INDEX TO DRAWINGS

ENGINEER: WT CHECKED BY: MN
DRAWN BY: JG PROJECT # 3100-18

"PROPOSED PUBLIC ROAD"

HO'OPILI PHASE 10A PARCEL 103

(DPP SUBDIVISION FILE NO 2020/SUB-67)
(DPP CONSTRUCTION PLANS FILE NO 2020/CP-124)
TMK: 9-1-17: POR OF 004
HONOLULU, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 58 SHEETS

CONSTRUCTION DRAWINGS FOR

HO'OPI LI PHASE 10A

PARCEL 106

(DPP SUBDIVISION FILE NO. 2019/SUB-58)
(DPP CONSTRUCTION FILE NO. 2019/CP-111)

TAX MAP KEY : 9 - 1 - 17 : POR OF 151

HONOU LIULI, EWA, OAHU, HAWAII

OWNER: D.R. Horton
DEVELOPER: D.R. Horton

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS

INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN - 1
6	C006	GRADING PLAN - 2
7	C007	GRADING SECTIONS AND WALL PROFILE
8	C008	EROSION & SEDIMENT CONTROL PLAN
9	C009	EROSION & SEDIMENT CONTROL DETAILS
10	C010	EROSION & SEDIMENT CONTROL NOTES
11	C011	POST-CONSTRUCTION BMP PLAN
12	C012	PLAN & PROFILE - ROAD "A" STA 3+27.46 TO 6+60
13	C013	PLAN & PROFILE - ROAD "A" STA 6+60 TO END
14	C014	PLAN & PROFILE - ROAD "B"
15	C015	PLAN & PROFILE - ROAD "C"
16	C016	PLAN & PROFILE - ROAD "D"
17	C017	TYPICAL PUBLIC ROADWAY SECTIONS AND FIRE HYDRANT PROFILES
18	C018	CURB RETURN & RAMP PLAN
19	C019	CURB RETURN
20	C020	MISCELLANEOUS DETAILS - 1
21	C021	MISCELLANEOUS DETAILS - 2
22	C022	STRIPING & SIGNAGE PLAN
23	C023	STRIPING & SIGNAGE DETAILS AND NOTES
STRUCTURAL		
24	CS001	NOTES AND TYPICAL DETAILS
25	CS002	SPECIAL DRAIN MANHOLE CAST IN PLACE DETAILS
26	CS003	SPECIAL DRAIN MANHOLE PRECAST DETAILS
27	CS004	CATCH BASIN TYPE A CAST IN PLACE DETAILS
28	CS005	CATCH BASIN TYPE A PRECAST DETAILS
29	CS006	CATCH BASIN TYPE B CAST IN PLACE DETAILS
30	CS007	CATCH BASIN TYPE B PRECAST DETAILS
31	CS008	CATCH BASIN TYPE D CAST IN PLACE DETAILS
32	CS009	CATCH BASIN TYPE D PRECAST DETAILS
33	CS010	RETAINING WALL GENERAL NOTES AND DETAILS
34	CS011	RETAINING WALL SCHEDULES AND DETAILS
ELECTRICAL		
35	CE001	SYMBOL LIST
36	CE002	SITE PLAN
37	CE003	HECO NOTES
38	CE004	HTCO AND CATV NOTES
39	CE005	DISTRIBUTION PLAN 1
40	CE006	DISTRIBUTION PLAN 2
41	CE007	LIGHT PLAN 1
42	CE008	LIGHT PLAN 2
43	CE009	DUCT SECTION AND STUB-OUT MARKER DETAILS AND NOTES
44	CE010	TYPICAL DUCT SECTIONS
45	CE011	HECO AND SERVICE DETAILS
46	CE012	STREET LIGHT DETAILS AND NOTES
47	CE013	DUCT PROFILES
LANDSCAPE		
48	CL001	STREET TREE PLAN - 1
49	CL002	STREET TREE PLAN 2 & 3
50	CL003	PLANT LIST AND DETAILS

Gray•Hong•Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

CONSULTING
ENGINEERS

Exp: 4/30/20



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (CERTIFICATION OF CONSTRUCTION AS DEFINED IN SECTION 18-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 6/28/94)

Exp: 4/30/20



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (CERTIFICATION OF CONSTRUCTION AS DEFINED IN SECTION 18-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 6/28/94)

ENGINEER: WT CHECKED BY: MN
DRAWN BY: JG PROJECT #: 3100-21

"PROPOSED PUBLIC ROAD"

HO'OPI LI PHASE 10A
PARCEL 106

(DPP SUBDIVISION FILE NO 2019/SUB-58)
(DPP CONSTRUCTION PLANS FILE NO 2019/CP-111)
TMK: 9-1-17: POR OF 151
HONOU LIULI, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

4/20/20
DATE

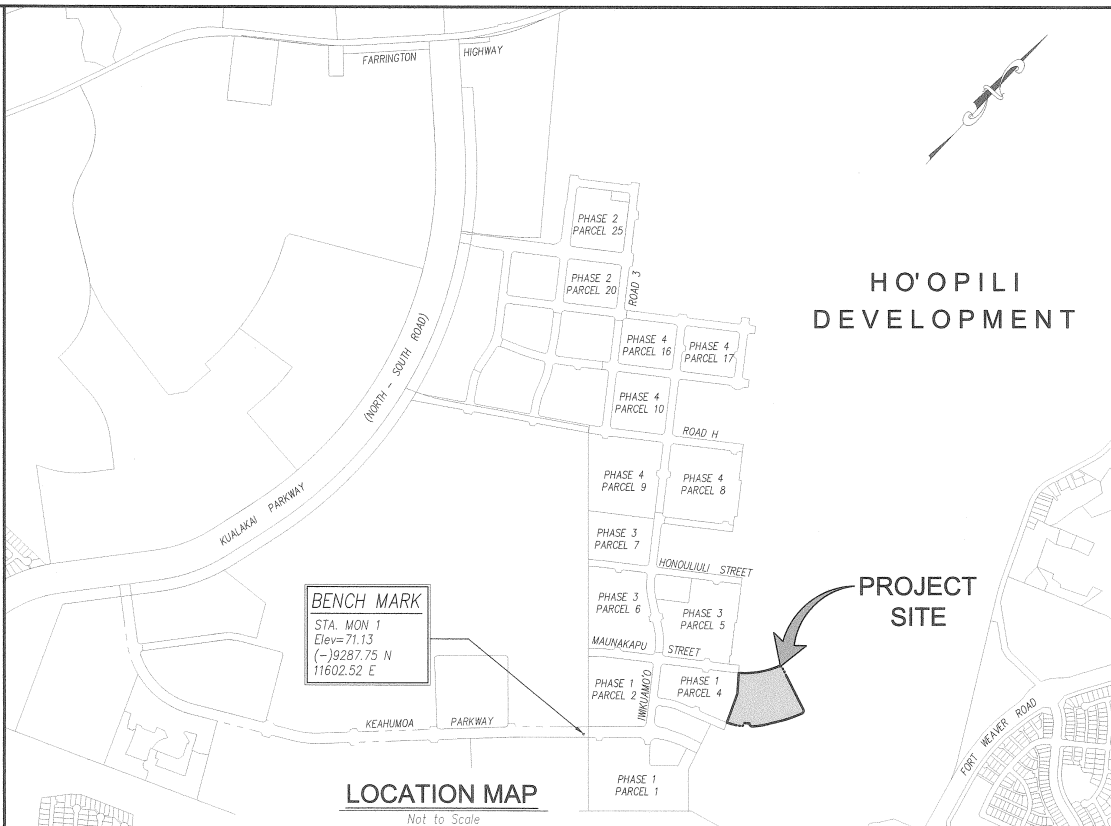
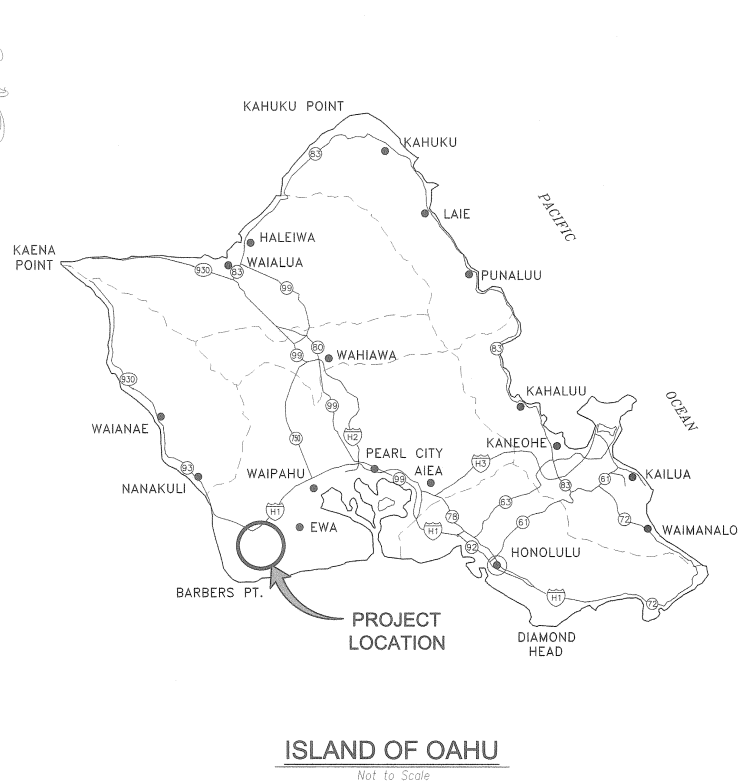
9/24/19
DATE

10-16-2019
DATE

C001

SHEET 1 OF 50 SHEETS

FILE PROJECT FOLDER NO.



APPROVED:

DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)

HO'OPILI DEVELOPMENT

PHASE 11

BACKBONE ROADWAY IMPROVEMENTS

HONOLULU , EWA , OAHU , HAWAII

TAX MAP KEY : 9-1-018: 019, 020

[SUBDIVISION FILE NO. 2022/SUB-73]

[CONSTRUCTION PLAN FILE NO. 2022/CP-20]

PREPARED FOR:

D.R. HORTON HAWAII LLC

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

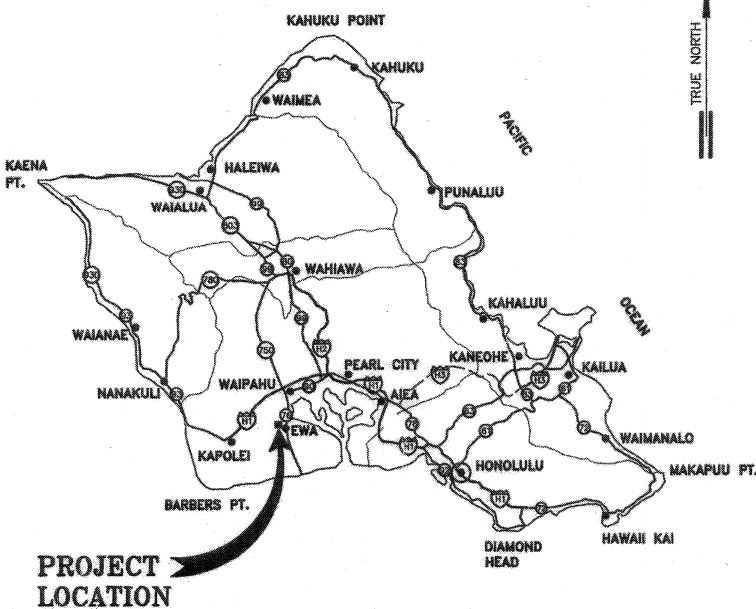
Prepared by:



R. M. TOWILL CORPORATION

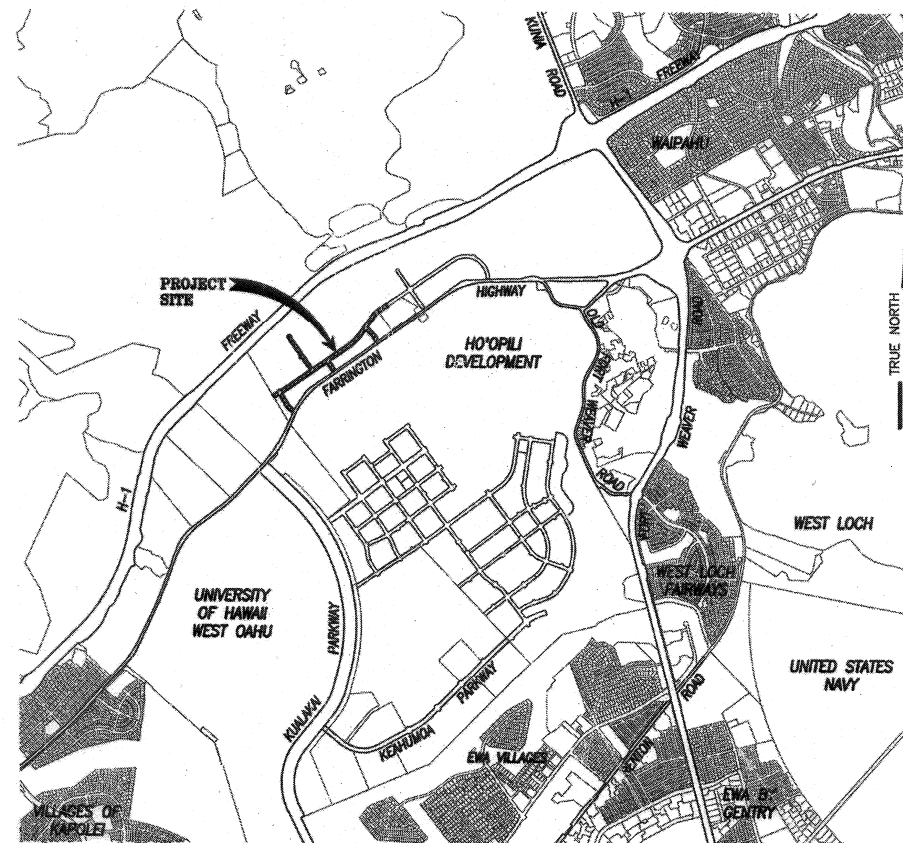
SINCE 1930

Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management



VICINITY MAP

SCALE IN MILES
0 5 10



LOCATION MAP

NOT TO SCALE

APPROVED :

Walter G. Watanabe
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

4/17/2023
DATE

James M. Maki
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

3.1.23
DATE

John
ADMINISTRATOR, HIGHWAYS, STATE DEPARTMENT OF TRANSPORTATION
(APPROVAL GRANTED FOR WORK WITHIN THE STATE RIGHT-OF-WAY ONLY
I.D. NO. 0-22-20 - APPROVAL LETTER NO. HWY-CM 2.1266 DATED 3/24/2023.)

Mar 24, 2023
DATE

CONSTRUCTION DRAWINGS FOR

HO'OPILI PHASE 11

PARCEL 48

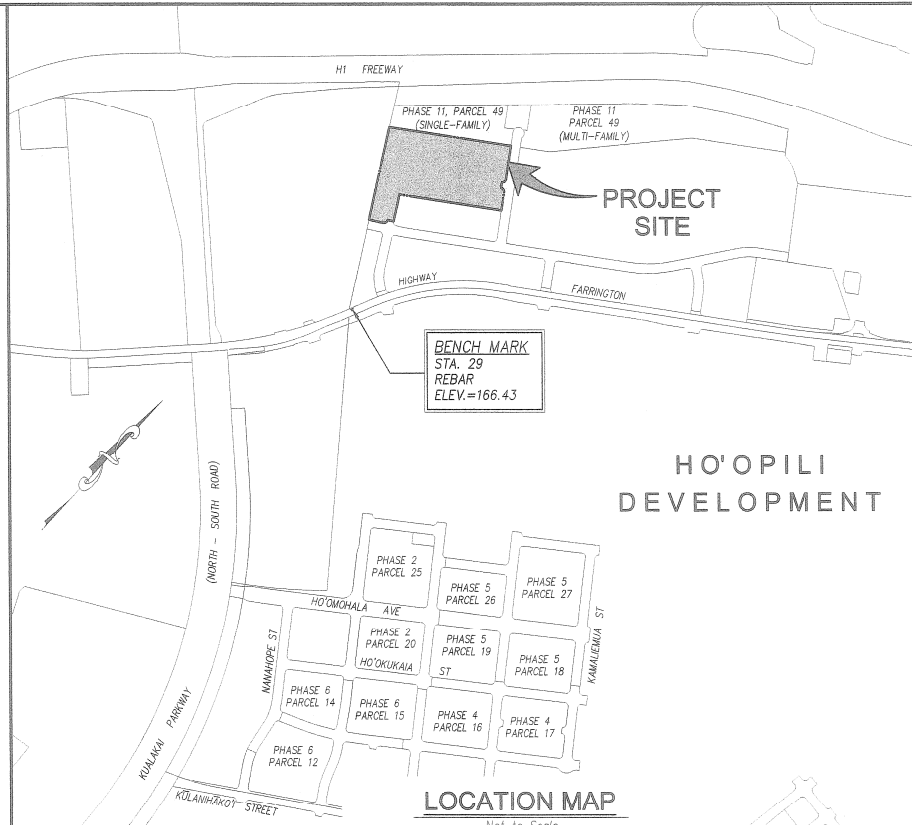
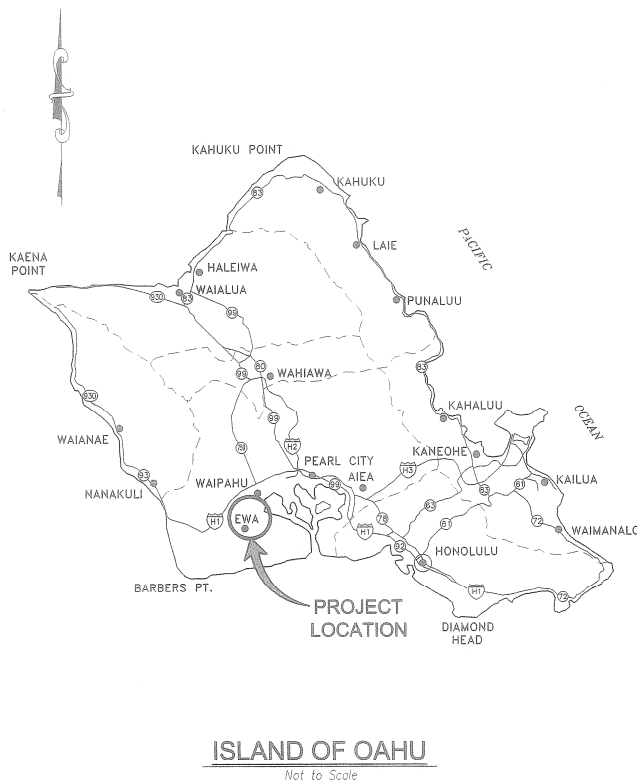
(DPP SUBDIVISION FILE NO. 2022/SUB-94)
(DPP CONSTRUCTION FILE NO. 2022/CP-140)

TAX MAP KEY : 9 - 1 - 18 : POR OF 19

HONOLULU, EWA, OAHU, HAWAII

OWNER: D.R. Horton Hawaii LLC
DEVELOPER: D.R. Horton Hawaii LLC

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN - 1
6	C006	GRADING PLAN - 2
7	C007	SECTIONS
8	C008	EROSION & SEDIMENT CONTROL PLAN
9	C009	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
10	C010	POST-CONSTRUCTION BMP PLAN
11	C011	PLAN & PROFILE - ROAD "2" STA 6+09.13 TO 10+50
12	C012	PLAN & PROFILE - ROAD "2" STA 10+50 TO END
13	C013	PLAN & PROFILE - ROAD "A" STA 0+00 TO 4+00
14	C014	PLAN & PROFILE - ROAD "A" STA 4+00 TO END
15	C015	PLAN & PROFILE - ROAD "B" STA 0+00 TO 5+00
16	C016	PLAN & PROFILE - ROAD "B" STA 5+00 TO 8+87.19
17	C017	PLAN & PROFILE - ROAD "C"
18	C018	FIRE HYDRANT PROFILES
19	C019	CURB RETURN & RAMP PLAN
20	C020	CURB RETURN
21	C021	MISCELLANEOUS DETAILS - 1
22	C022	MISCELLANEOUS DETAILS - 2
23	C023	STRIPING & SIGNAGE PLAN
24	C024	STRIPING & SIGNAGE DETAILS AND NOTES
25	CP1	CATHODIC PROTECTION PLAN VIEW
26	CP2	CATHODIC PROTECTION DETAILS
27	CP3	CATHODIC PROTECTION DETAILS
28	CP4	CATHODIC PROTECTION DETAILS
ELECTRICAL		
29	CE001	SYMBOL LIST, LOCATION MAP
30	CE002	SITE PLAN
31	CE003	HECO NOTES
32	CE004	CATV AND HTCO NOTES
33	CE005	ELECTRICAL DISTRIBUTION PARTIAL PLAN 1
34	CE006	ELECTRICAL DISTRIBUTION PARTIAL PLAN 2
35	CE007	ELECTRICAL DISTRIBUTION PARTIAL PLAN 3
36	CE008	ELECTRICAL DISTRIBUTION PARTIAL PLAN 4
37	CE009	ELECTRICAL DISTRIBUTION PARTIAL PLAN 5
38	CE010	STREET LIGHTING PARTIAL PLAN 1
39	CE011	STREET LIGHTING PARTIAL PLAN 2
40	CE012	STREET LIGHTING PARTIAL PLAN 3
41	CE013	STREET LIGHTING PARTIAL PLAN 4
42	CE014	STREET LIGHTING PARTIAL PLAN 5
43	CE015	TRENCH DETAIL
44	CE016	DUCT SECTION 1
45	CE017	DUCT SECTION 2
46	CE018	EQUIPMENT DETAILS
47	CE019	STREET LIGHT DETAILS
48	CE020	CATV POWER SUPPLY PEDESTAL DETAILS
49	CE021	DUCTLINE PROFILES
LANDSCAPE		
50	CL001	STREET TREE PLAN - 1
51	CL002	STREET TREE PLAN - 2
52	CL003	PLANT LIST AND DETAILS

RECORD DRAWING TRACINGS

CONTRACTOR (Excluding Landscaping)	
As-Built Drawings	
Certified By: _____	Date: _____
Print Name: _____	
Company: _____	
CONTRACTOR (For Landscaping Only)	
As-Built Drawings	
Certified By: _____	Date: _____
Print Name: _____	
Company: _____	
LICENSED PROFESSIONAL ENGINEER	
Prepared By: _____	Date: _____
Print Name: _____	
Company: GRAY, HONG, NOJIMA & ASSOC., INC.	
DEVELOPER	
Submitted By: _____	Date: _____
Print Name: _____	
Company: D.R. HORTON HAWAII, LLC	

THIS SET OF "RECORD DRAWINGS" IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AS "AS-BUILT" DRAWINGS AND HAS NOT BEEN FIELD VERIFIED BY THE LICENSED PROFESSIONAL ENGINEER. "RECORD DRAWINGS" ARE DRAWINGS DEFINED AS RECORD DOCUMENTS PREPARED BY THE LICENSED PROFESSIONAL ENGINEER UPON THE COMPLETION OF CONSTRUCTION. THESE DRAWINGS ARE BASED UPON THE DRAWINGS AND OTHER DATA FURNISHED BY THE CONTRACTOR AND OTHERS SHOWING THE FINAL CONSTRUCTED IMPROVEMENTS, REPRESENTING ALL FIELD MARKUPS, DESIGN CHANGES, AND CHANGES IN THE WORK MADE DURING CONSTRUCTION. THE LICENSED PROFESSIONAL ENGINEER IS NOT RESPONSIBLE FOR FIELD VERIFICATION OF THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS ON THESE DRAWINGS RESULTING FROM ERRONEOUS INFORMATION PROVIDED BY OTHERS.

APPROVED:

Walter J. White
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

5/23/2023
DATE

James A. Kato
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

Feb 1, 2023
DATE

Adam M. Maki
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)

DATE

Gray • Hong • Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0308
Fax: (808) 531-8018

CONSULTING
ENGINEERS

Exp: 4/30/24



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION IS AS DEFINED IN SECTION 15-115-2, IF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS 8/29/94.

Exp: 4/30/24



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION IS AS DEFINED IN SECTION 15-115-2, IF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS 8/29/94.

ENGINEER: WT	CHECKED BY: MN
DRAWN BY: JG	PROJECT #: 3100-40

"PROPOSED PUBLIC ROAD"

HO'OPILI PHASE 11 PARCEL 48

(DPP SUBDIVISION FILE NO. 2022/SUB-94)
(DPP CONSTRUCTION PLANS FILE NO. 2022/CP-140)
TMK: 9-1-18: POR OF 19
HONOLULU, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 52 SHEETS

HO'OPILI DEVELOPMENT

PHASE 13

BACKBONE ROADWAY IMPROVEMENTS

HONOLULU , EWA , OAHU , HAWAII
TAX MAP KEY : 9-1-017: 197, 198 & 202
[SUBDIVISION FILE NO. 2020/SUB-223]
[CONSTRUCTION PLAN FILE NO. 2021/CP-14]

PREPARED FOR:

D.R. HORTON HAWAII LLC

130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

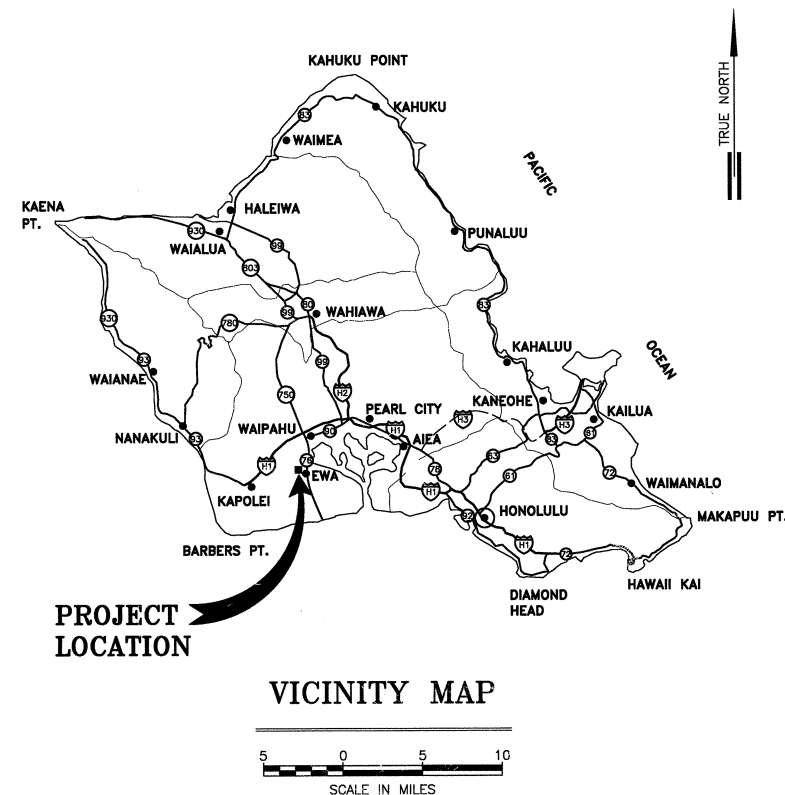
Prepared by:



R. M. TOWILL CORPORATION

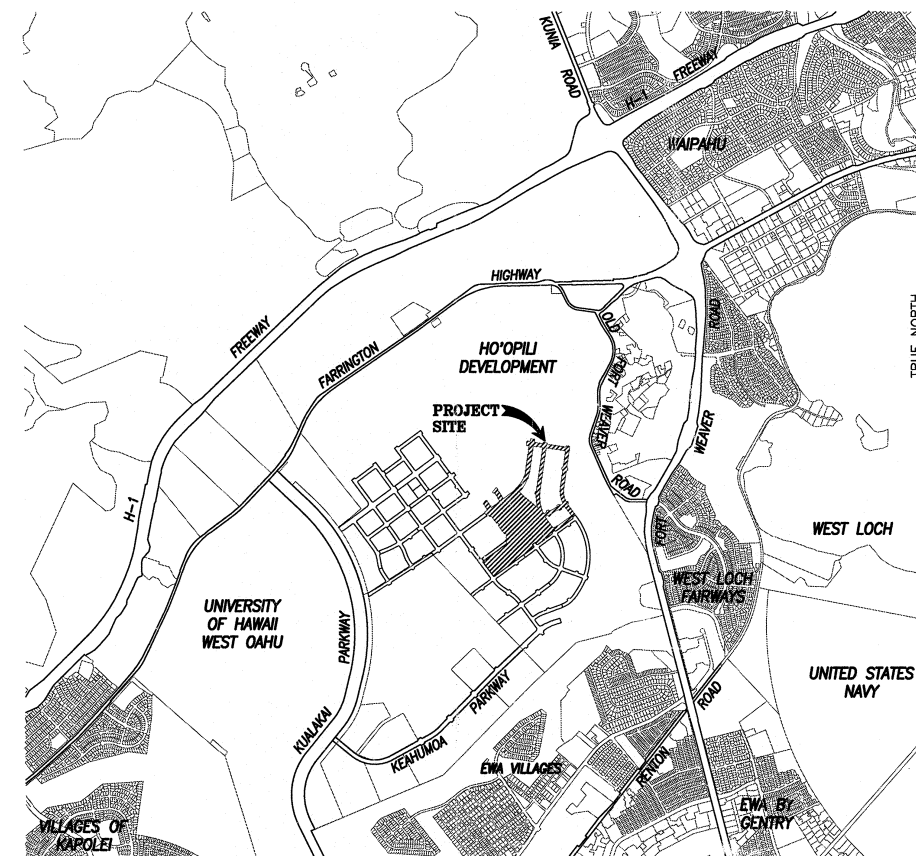
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VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

1/5/2022
DATE

FOR MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

DEC 02 2021
DATE

CONSTRUCTION DRAWINGS FOR

HO'OPI LI PHASE 13

PARCEL 97

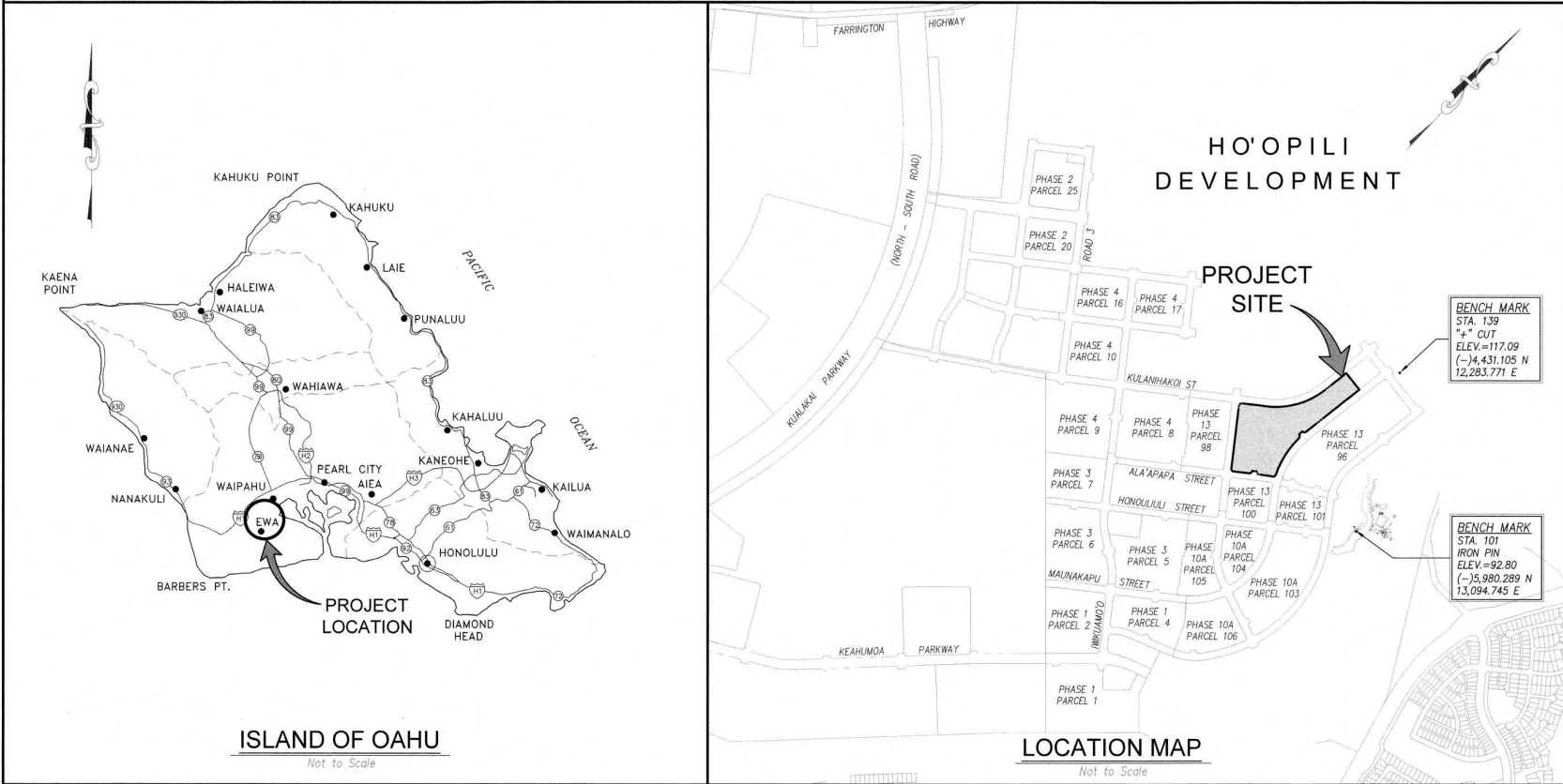
(DPP SUBDIVISION FILE NO. 2021/SUB-180)
(DPP CONSTRUCTION FILE NO. 2022/CP-19)

TAX MAP KEY : 9 - 1 - 17 : POR OF 206

HONOULIULI, EWA, OAHU, HAWAII

OWNER: D.R. Horton Hawaii LLC
DEVELOPER: D.R. Horton Hawaii LLC

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN - 1
6	C006	GRADING PLAN - 2
7	C007	GRADING PLAN - 3
8	C008	WALL PROFILES AND TYPICAL PUBLIC ROADWAY SECTIONS
9	C009	EROSION & SEDIMENT CONTROL PLAN
10	C010	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
11	C011	POST-CONSTRUCTION BMP PLAN
12	C012	PLAN & PROFILE - ROAD "A" STA (-)1+00 TO END
13	C013	PLAN & PROFILE - ROAD "A" STA (-)1+00 TO 3+50
14	C014	PLAN & PROFILE - ROAD "A" STA 3+50 TO END
15	C015	PLAN & PROFILE - ROAD "B"
16	C016	PLAN & PROFILE - ROAD "C"
17	C017	PLAN & PROFILE - ROAD "D"
18	C018	PLAN & PROFILE - ROAD "M1" STA 0+67.64 TO 5+00
19	C019	PLAN & PROFILE - ROAD "M1" STA 5+00 TO END & ROAD "H"
20	C020	FIRE HYDRANT PROFILES
21	C021	CURB RETURN & RAMP PLAN - 1
22	C022	CURB RETURN & RAMP PLAN - 2
23	C023	CURB RETURN - 1
24	C024	CURB RETURN - 2
25	C025	MISCELLANEOUS DETAILS - 1
26	C026	MISCELLANEOUS DETAILS - 2
27	C027	STRIPING & SIGNAGE PLAN
28	C028	STRIPING & SIGNAGE DETAILS AND NOTES
29	CP001	CATHODIC PROTECTION PLAN
30	CP002	CATHODIC PROTECTION DETAILS
31	CP003	CATHODIC PROTECTION DETAILS
32	CP004	CATHODIC PROTECTION DETAILS
STRUCTURAL		
33	CS001	DRAINAGE STRUCTURES TYPICAL DETAILS
34	CS002	GENERAL NOTES & TYPICAL DETAILS
35	CS003	DMH C.I.P. DETAILS
36	CS004	DMH PRECAST DETAILS
37	CS005	CB TYPE "B" C.I.P. DETAILS
38	CS006	CB TYPE "B" PRECAST DETAILS
39	CS101	RETAINING WALL TYPICAL DETAILS & GENERAL NOTES
40	CS102	RETAINING WALL DETAIL & SCHEDULE
ELECTRICAL		
41	CE001	ISLAND AND LOCATION MAPS, ELECTRICAL SYMBOLS AND EQUIPMENT SCHEDULE, AND NOTES
42	CE002	SITE PLAN
43	CE003	HECO NOTES
44	CE004	HTCO AND CATV NOTES
45	CE005	ELECTRICAL DISTRIBUTION PLAN I
46	CE006	ELECTRICAL DISTRIBUTION PLAN II
47	CE007	ELECTRICAL DISTRIBUTION PLAN III
48	CE008	ELECTRICAL DISTRIBUTION PLAN IV
49	CE009	ELECTRICAL DISTRIBUTION PLAN V
50	CE010	STREET LIGHTING PLAN I
51	CE011	STREET LIGHTING PLAN II
52	CE012	STREET LIGHTING PLAN III
53	CE013	STREET LIGHTING PLAN IV
54	CE014	STREET LIGHTING PLAN V
55	CE015	TYPICAL TRENCHING DETAILS
56	CE016	TYPICAL DUCT SECTIONS
57	CE017	MISCELLANEOUS DETAILS
58	CE018	STREET LIGHT DETAILS
59	CE019	DUCTLINE PROFILES I
60	CE020	DUCTLINE PROFILES II
61	CE021	CATV POWER SUPPLY PEDESTAL DETAIL
LANDSCAPE		
62	CL001	STREET TREE PLAN - 1
63	CL002	STREET TREE PLAN - 2
64	CL003	STREET TREE PLAN - 3
65	CL004	PLANT LIST AND DETAILS

RECORD DRAWING TRACINGS

CONTRACTOR (Excluding Landscaping)

As-Built Drawings

Certified By: _____ Date: _____

Print Name: _____

Company: _____

CONTRACTOR (For Landscaping Only)

As-Built Drawings

Certified By: _____ Date: _____

Print Name: _____

Company: _____

LICENSED PROFESSIONAL ENGINEER

Prepared By: _____ Date: _____

Print Name: _____

Company: GRAY, HONG, NOJIMA & ASSOC., INC.

DEVELOPER

Submitted By: _____ Date: _____

Print Name: _____

Company: D.R. HORTON HAWAII LLC

THIS SET OF "RECORD DRAWINGS" IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AS "AS-BUILT" DRAWINGS AND HAS NOT BEEN FIELD VERIFIED BY THE LICENSED PROFESSIONAL ENGINEER. "RECORD DRAWINGS" ARE DRAWINGS DEFINED AS RECORD DOCUMENTS PREPARED BY THE LICENSED PROFESSIONAL ENGINEER UPON THE COMPLETION OF CONSTRUCTION. THESE DRAWINGS ARE BASED UPON THE DRAWINGS AND OTHER DATA FURNISHED BY THE CONTRACTOR AND OTHERS SHOWING THE FINAL CONSTRUCTED IMPROVEMENTS, REPRESENTING ALL FIELD MARKUPS, DESIGN CHANGES, AND CHANGES IN THE WORK MADE DURING CONSTRUCTION. THE LICENSED PROFESSIONAL ENGINEER IS NOT RESPONSIBLE FOR FIELD VERIFICATION OF THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS ON THESE DRAWINGS RESULTING FROM ERRONEOUS INFORMATION PROVIDED BY OTHERS.

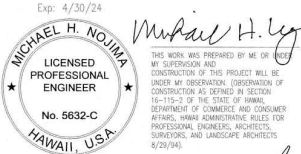
APPROVED:

[Signature] 9/26/2022
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING
DATE

[Signature] Aug 5, 2022
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII
DATE

[Signature] AUG 10 2022
FOR MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)
DATE

Gray • Hong • Nojima & Associates, Inc.



ENGINEER: WT CHECKED BY: MN
DRAWN BY: JG PROJECT # 3100-32

"PROPOSED PUBLIC ROAD"

HO'OPI LI PHASE 13
PARCEL 97
(DPP SUBDIVISION FILE NO 2021/SUB-180)
(DPP CONSTRUCTION PLANS FILE NO 2022/CP-19)
TMK: 9-1-17: POR OF 206
HONOULIULI, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY: _____
DATE: _____

C001

SHEET 1 OF 65 SHEETS
FILE POCKET FOLDER NO.

CONSTRUCTION DRAWINGS FOR

HO'OPI LI PHASE 13

PARCEL 98

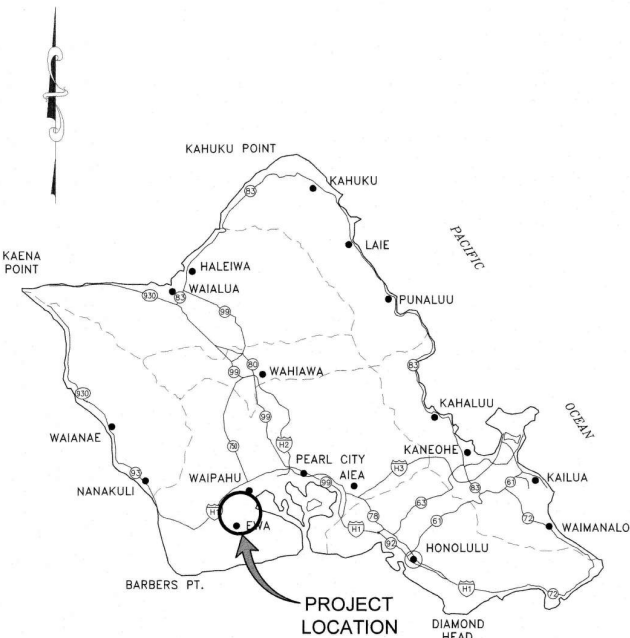
(DPP SUBDIVISION FILE NO. 2021/SUB-67)
(DPP CONSTRUCTION FILE NO. 2021/CP-101)

TAX MAP KEY : 9 - 1 - 17 : POR OF 198

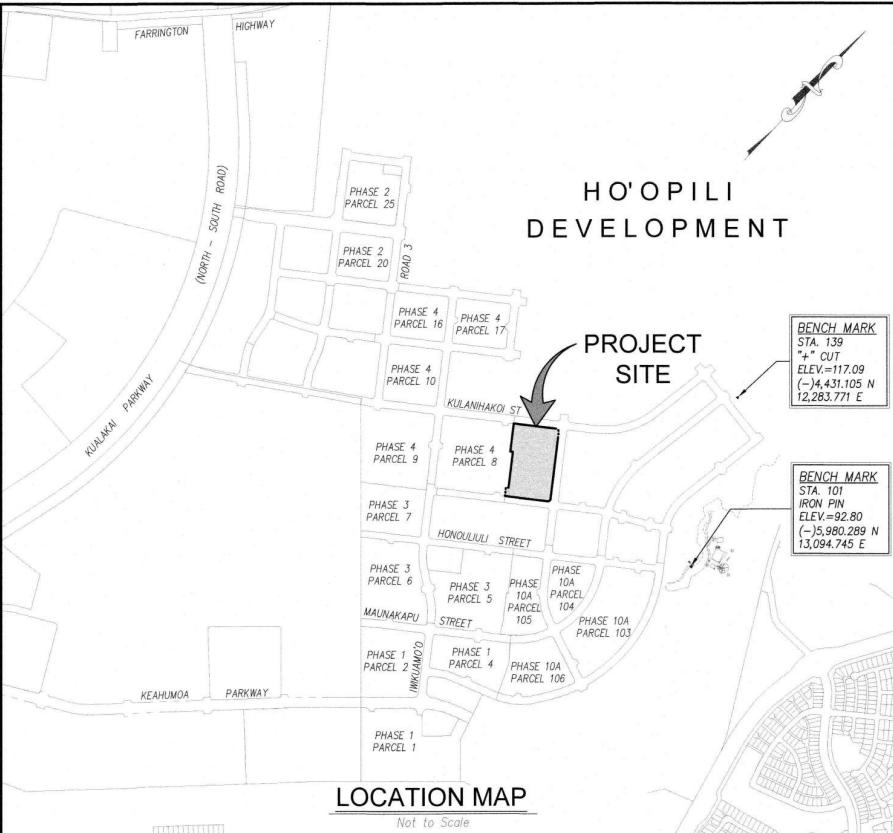
HONOULIULI, EWA, OAHU, HAWAII

OWNER: D.R. Horton Hawaii, LLC
DEVELOPER: D.R. Horton Hawaii, LLC

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



ISLAND OF OAHU
Not to Scale



LOCATION MAP
Not to Scale

INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN
6	C006	WALL PROFILES AND GRADING SECTIONS
7	C007	EROSION & SEDIMENT CONTROL PLAN
8	C008	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
9	C009	POST-CONSTRUCTION BMP PLAN
10	C010	PLAN & PROFILE - KAKIWI ST
11	C011	PLAN & PROFILE - ULUAHEWA ST
12	C012	PLAN & PROFILE - HO'OMAHUA ST
13	C013	PLAN & PROFILE - ROAD "A"
14	C014	PLAN & PROFILE - ROAD "B"
15	C015	TYPICAL PUBLIC ROADWAY SECTIONS AND FIRE HYDRANT PROFILES
16	C016	CURB RETURN & RAMP PLAN
17	C017	CURB RETURN
18	C018	MISCELLANEOUS DETAILS
19	C019	MISCELLANEOUS DETAILS AND PROFILES
20	C020	STRIPING & SIGNAGE PLAN
21	C021	STRIPING & SIGNAGE DETAILS AND NOTES
22	CP001	CATHODIC PROTECTION DETAILS
23	CP002	CATHODIC PROTECTION DETAILS
24	CP003	CATHODIC PROTECTION DETAILS
STRUCTURAL		
25	CS001	DRAINAGE STRUCTURES GENERAL NOTES & TYPICAL DETAILS
26	CS002	NON-TRAFFIC DMH CIP DETAILS
27	CS003	TRAFFIC SDMH CIP DETAILS
28	CS004	SDMH PRECAST TYPICAL DETAILS & GENERAL NOTES
29	CS101	RETAINING WALL TYPICAL DETAILS & GENERAL NOTES
30	CS102	RETAINING WALL DETAIL & SCHEDULE
ELECTRICAL		
31	CE001	ISLAND AND LOCATION MAPS, NOTES, ELECTRICAL SYMBOLS, AND CONDUIT AND EQUIPMENT SCHEDULES
32	CE002	SITE PLAN
33	CE003	HECO NOTES
34	CE004	CATV & HTCO NOTES
35	CE005	ELECTRICAL DISTRIBUTION PLAN I
36	CE006	ELECTRICAL DISTRIBUTION PLAN II
37	CE007	ELECTRICAL DISTRIBUTION PLAN III
38	CE008	STREET LIGHT PARTIAL PLAN I
39	CE009	STREET LIGHT PARTIAL PLAN II
40	CE010	STREET LIGHT PARTIAL PLAN III
41	CE011	TYPICAL TRENCHING DETAILS
42	CE012	TYPICAL DUCT SECTIONS
43	CE013	HECO AND SERVICE DETAILS
44	CE014	STREET LIGHT DETAILS AND NOTES
45	CE015	DUCTLINE PROFILES I
46	CE016	DUCTLINE PROFILES II
LANDSCAPE		
47	CL001	STREET TREE PLAN
48	CL002	PLANT LIST AND DETAILS

RECORD DRAWING TRACINGS

CONTRACTOR (Excluding Landscaping)	
As-Built Drawings	Date: _____
Certified By: _____	
Print Name: _____	
Company: _____	
CONTRACTOR (For Landscaping Only)	
As-Built Drawings	Date: _____
Certified By: _____	
Print Name: _____	
Company: _____	
LICENSED PROFESSIONAL ENGINEER	
Prepared By: _____	Date: _____
Print Name: _____	
Company: GRAY, HONG, NOJIMA & ASSOC., INC.	
DEVELOPER	
Submitted By: _____	Date: _____
Print Name: D.R. HORTON HAWAII, LLC	
Company: _____	

THIS SET OF "RECORD DRAWINGS" IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AS "AS-BUILT" DRAWINGS AND HAS NOT BEEN FIELD VERIFIED BY THE LICENSED PROFESSIONAL ENGINEER. "RECORD DRAWINGS" ARE DRAWINGS DEFINED AS RECORD DOCUMENTS PREPARED BY THE LICENSED PROFESSIONAL ENGINEER UPON THE COMPLETION OF CONSTRUCTION. THESE DRAWINGS ARE BASED UPON THE DRAWINGS AND OTHER DATA FURNISHED BY THE CONTRACTOR AND OTHERS SHOWING THE FINAL CONSTRUCTED IMPROVEMENTS, REPRESENTING ALL FIELD MARKUPS, DESIGN CHANGES, AND CHANGES IN THE WORK MADE DURING CONSTRUCTION. THE LICENSED PROFESSIONAL ENGINEER IS NOT RESPONSIBLE FOR FIELD VERIFICATION OF THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS ON THESE DRAWINGS RESULTING FROM ERRONEOUS INFORMATION PROVIDED BY OTHERS.

APPROVED:

Winston G. Wato 12/10/2021
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING
DATE

James A. Gato Sep 22, 2021
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII
DATE

Adrian M. Maki 11.16.2021
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)
DATE

Gray•Hong•Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

CONSULTING
ENGINEERS

Exp: 4/30/22



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS SET FORTH IN SECTION 16-115.2 OF THE STATE OF HAWAII. AFFIDAVIT, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS. 8/20/94.

Exp: 4/30/22



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS SET FORTH IN SECTION 16-115.2 OF THE STATE OF HAWAII. AFFIDAVIT, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS. 8/20/94.

ENGINEER: WT CHECKED BY: MN
DRAWN BY: JG PROJECT # 3100-33

"PROPOSED PUBLIC ROAD"

HO'OPI LI PHASE 13
PARCEL 98

(DPP SUBDIVISION FILE NO 2021/SUB-67)
DPP CONSTRUCTION PLANS FILE NO 2021/CP-101
TMK: 9-1-17: POR OF 198
HONOULIULI, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 48 SHEETS

CONSTRUCTION DRAWINGS FOR

HO'OPI LI PHASE 13

PARCEL 102

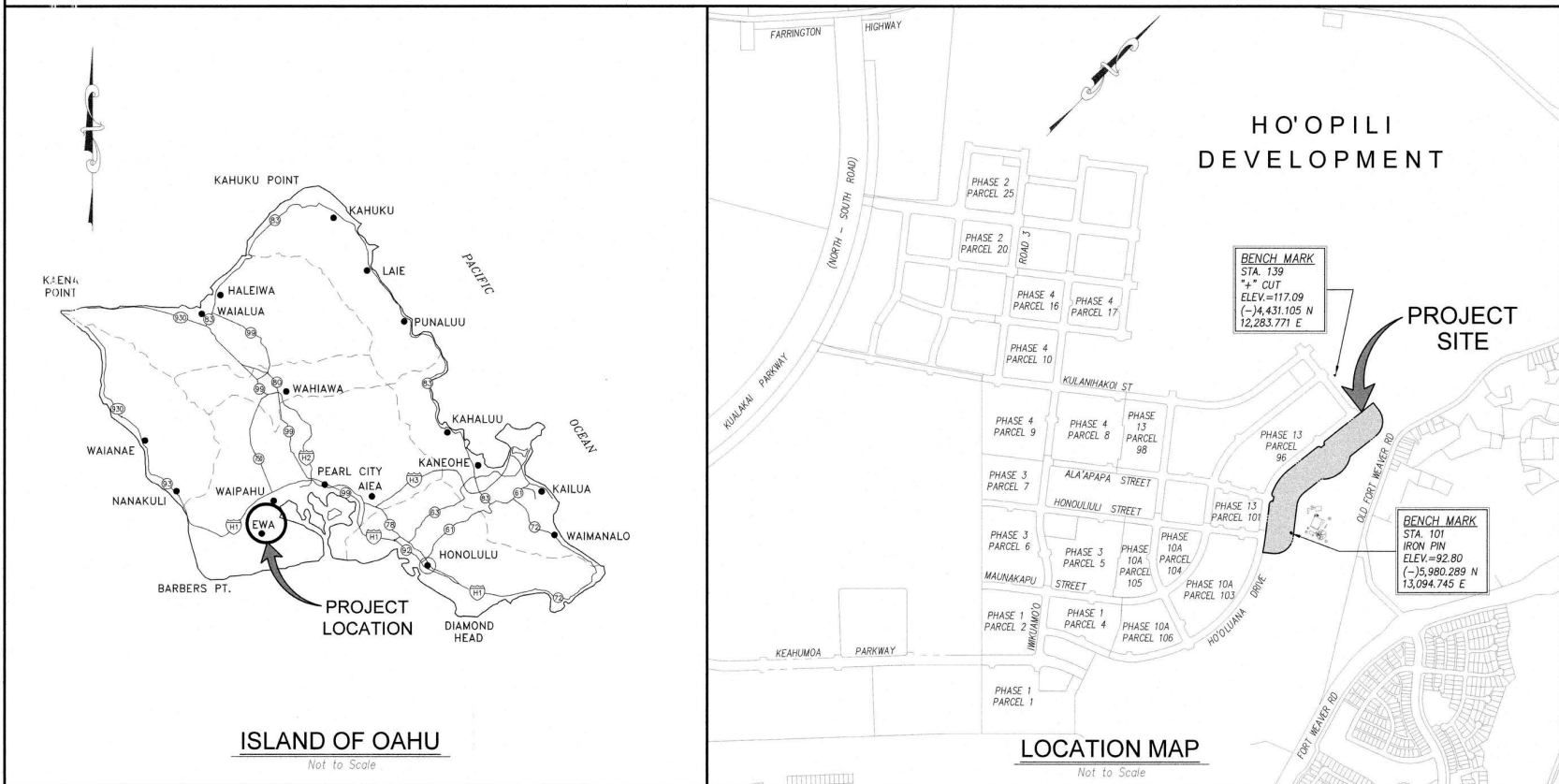
(DPP SUBDIVISION FILE NO. 2021/SUB-174)
(DPP CONSTRUCTION FILE NO. 2021/CP-254)

TAX MAP KEY : 9 - 1 - 17 : POR OF 198

HONOULIULI, EWA, OAHU, HAWAII

OWNER: D.R. Horton Hawaii LLC
DEVELOPER: D.R. Horton Hawaii LLC

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



INDEX TO DRAWINGS

SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN - 1
6	C006	GRADING PLAN - 2
7	C007	GRADING PLAN - 3
8	C008	EROSION & SEDIMENT CONTROL PLAN
9	C009	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
10	C010	POST-CONSTRUCTION BMP PLAN
11	C011	PLAN & PROFILE - ROAD "A" STA (-)0+60 TO END
12	C012	PLAN & PROFILE - ROAD "A" STA (-)0+60 TO 4+50
13	C013	PLAN & PROFILE - ROAD "A" STA 4+50 TO 9+50
14	C014	PLAN & PROFILE - ROAD "A" STA 9+50 TO END
15	C015	PLAN & PROFILE - ALA'APAPA ST & ROAD "K1"
16	C016	PLAN & PROFILE - PORT DL "A" AND FIRE HYDRANT PROFILES
17	C017	CURB RETURN & RAMP PLAN
18	C018	CURB RETURN
19	C019	MISCELLANEOUS DETAILS - 1
20	C020	MISCELLANEOUS DETAILS - 2
21	C021	STRIPING & SIGNAGE PLAN
22	C022	STRIPING & SIGNAGE DETAILS AND NOTES
23	CP001	CATHODIC PROTECTION PLAN VIEW
24	CP002	CATHODIC PROTECTION DETAILS
25	CP003	CATHODIC PROTECTION DETAILS
26	CP004	CATHODIC PROTECTION DETAILS
STRUCTURAL		
27	CS001	DRAINAGE STRUCTURES GENERAL TYPICAL DETAILS
28	CS002	DRAINAGE STRUCTURES GENERAL NOTES
29	CS003	DMH C.I.P. DETAILS
30	CS004	DMH PRECAST DETAILS
31	CS005	CB TYPE "A" C.I.P. DETAILS
32	CS006	CB TYPE "A" PRECAST DETAILS
33	CS007	CB TYPE "B" C.I.P. DETAILS
34	CS008	CB TYPE "B" PRECAST DETAILS
ELECTRICAL		
35	CE001	ISLAND AND LOCATION MAPS, ELECTRICAL SYMBOLS AND EQUIPMENT SCHEDULE, AND NOTES
36	CE002	SITE PLAN
37	CE003	HECO NOTES
38	CE004	HTCO AND CATV NOTES
39	CE005	ELECTRICAL DISTRIBUTION PLAN I
40	CE006	ELECTRICAL DISTRIBUTION PLAN II
41	CE007	ELECTRICAL DISTRIBUTION PLAN III
42	CE008	STREET LIGHTING PLAN I
43	CE009	STREET LIGHTING PLAN II
44	CE010	STREET LIGHTING PLAN III
45	CE011	TYPICAL TRENCHING DETAILS
46	CE012	TYPICAL DUCT SECTIONS
47	CE013	MISCELLANEOUS DETAILS
48	CE014	STREET LIGHT DETAILS
49	CE015	DUCTLINE PROFILES I
50	CE016	DUCTLINE PROFILES II
51	CE017	CATV POWER SUPPLY PEDESTAL DETAIL
LANDSCAPE		
52	CL001	STREET TREE PLAN - 1
53	CL002	STREET TREE PLAN - 2
54	CL003	STREET TREE PLAN - 3
55	CL004	PLANT LIST AND DETAILS

RECORD DRAWING TRACINGS

CONTRACTOR (Excluding Landscaping)

As-Built Drawings

Certified By: _____ Date: _____

Print Name: _____

Company: _____

CONTRACTOR (For Landscaping Only)

As-Built Drawings

Certified By: _____ Date: _____

Print Name: _____

Company: _____

LICENSED PROFESSIONAL ENGINEER

Prepared By: _____ Date: _____

Print Name: _____

Company: GRAY, HONG, NOJIMA & ASSOC., INC.

DEVELOPER

Submitted By: _____ Date: _____

Print Name: _____

Company: D.R. HORTON HAWAII, LLC

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APPROVED:

Walter Watan 8/26/2022
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

Harriet Sato May 20, 2022
for CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

M. J. ... JUL 20 2022
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)

Gray•Hong•Nojima & Associates, Inc.

201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

CONSULTING ENGINEERS

Exp: 4/30/24
MICHAEL H. NOJIMA
LICENSED PROFESSIONAL ENGINEER
No. 5632-C
HAWAII, U.S.A.

Exp: 4/30/24
WINSTON M. TANIUCHI
LICENSED PROFESSIONAL ENGINEER
No. 13730-C
HAWAII, U.S.A.

ENGINEER: WT	CHECKED BY: MN
DRAWN BY: JG	PROJECT #: 3100-36
"PROPOSED PUBLIC ROAD"	
HO'OPI LI PHASE 13 PARCEL 102 (DPP SUBDIVISION FILE NO 2021/SUB-174) DPP CONSTRUCTION PLANS FILE NO 2021/CP-254 TMK: 9-1-17: POR OF 198 HONOLULU, EWA, OAHU, HAWAII	
TITLE SHEET	
APPROVED BY:	
SHEET 1 OF 55 SHEETS	
FILE	POCKET
FOLDER	NO.

CONSTRUCTION DRAWINGS FOR

HO'OPILI PHASE 13

PARCELS 96 & 101

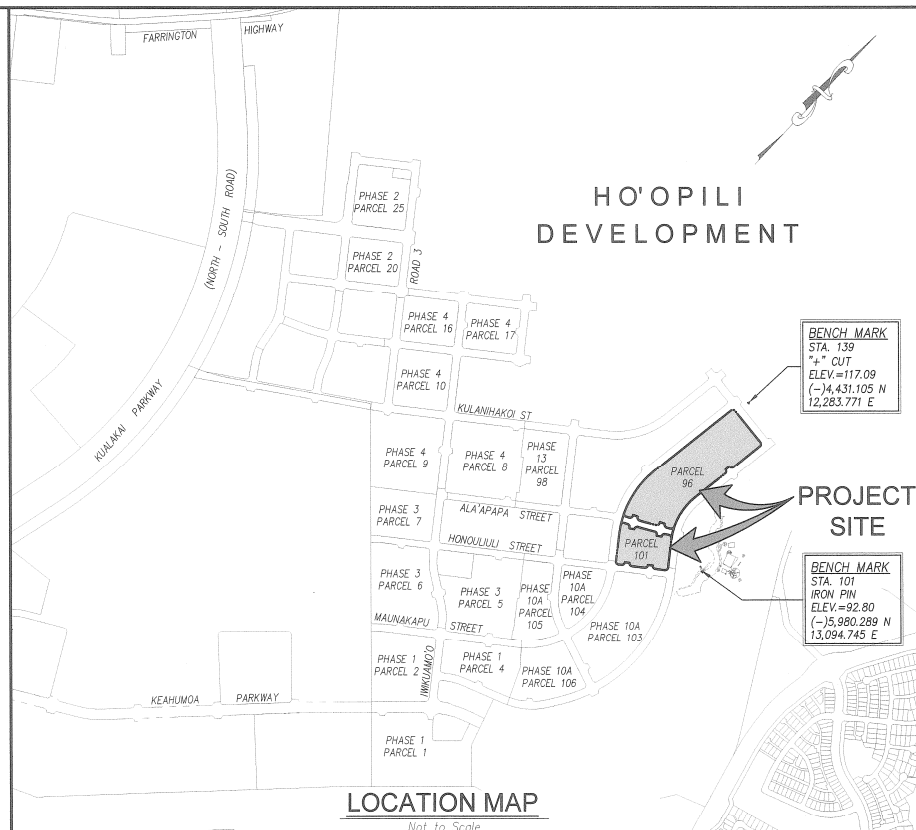
(DPP SUBDIVISION FILE NO. 2021/SUB-143)
(DPP CONSTRUCTION FILE NO. 2021/CP-171)

TAX MAP KEY : 9 - 1 - 17 : POR OF ²⁰⁶~~198~~

HONOLULU, EWA, OAHU, HAWAII

OWNER: D.R. Horton Hawaii, LLC
DEVELOPER: D.R. Horton, Hawaii, LLC

GRAY, HONG, NOJIMA & ASSOCIATES, INC.
CONSULTING ENGINEERS



INDEX TO DRAWINGS		
SHT NO	DWG NO	DESCRIPTION
CIVIL		
1	C001	TITLE SHEET
2	C002	GENERAL PLAN
3	C003	GENERAL NOTES - 1
4	C004	GENERAL NOTES - 2
5	C005	GRADING PLAN - 1
6	C006	GRADING PLAN - 2
7	C007	GRADING PLAN - 3
8	C008	WALL PROFILES AND GRADING SECTIONS
9	C009	EROSION & SEDIMENT CONTROL PLAN
10	C010	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
11	C011	POST-CONSTRUCTION BMP PLAN
12	C012	PLAN & PROFILE - ROAD "I2" STA (-)0+70.13 TO END
13	C013	PLAN & PROFILE - ROAD "I2" STA 0+64.77 TO 5+50
14	C014	PLAN & PROFILE - ROAD "I2" STA 5+50 TO 10+00
15	C015	PLAN & PROFILE - ROAD "I2" STA 10+00 TO END
16	C016	PLAN & PROFILE - ROAD "I3" STA (-)0+70.69 TO END
17	C017	PLAN & PROFILE - ROAD "I3" STA 0+65.28 TO 5+25
18	C018	PLAN & PROFILE - ROAD "I3" STA 5+25 TO 10+50
19	C019	PLAN & PROFILE - ROAD "I3" STA 10+50 TO END AND ROAD "K1"
20	C020	PLAN & PROFILE - ROAD "A"
21	C021	PLAN & PROFILE - ROAD "D"
22	C022	PLAN & PROFILE - UTILITY LOT CONNECTION & TYPICAL PUBLIC ROADWAY SECTION
23	C023	FIRE HYDRANT PROFILES
24	C024	CURB RETURN & RAMP PLAN
25	C025	CURB RETURN
26	C026	MISCELLANEOUS DETAILS - 1
27	C027	MISCELLANEOUS DETAILS - 2
28	C028	STRIPING & SIGNAGE PLAN
29	C029	STRIPING & SIGNAGE DETAILS AND NOTES
30	CP001	CATHODIC PROTECTION PLAN VIEW
31	CP002	CATHODIC PROTECTION DETAILS
32	CP003	CATHODIC PROTECTION DETAILS
33	CP004	CATHODIC PROTECTION DETAILS
STRUCTURAL		
34	CS101	RETAINING WALL TYPICAL DETAILS & GENERAL NOTES
35	CS102	RETAINING WALL DETAIL & SCHEDULE
ELECTRICAL		
36	CE001	ISLAND AND LOCATION MAPS, ELECTRICAL SYMBOLS AND EQUIPMENT SCHEDULE, AND NOTES
37	CE002	SITE PLAN
38	CE003	HECO NOTES
39	CE004	HTCO & CATV NOTES
40	CE005	ELECTRICAL DISTRIBUTION PLAN I
41	CE006	ELECTRICAL DISTRIBUTION PLAN II
42	CE007	ELECTRICAL DISTRIBUTION PLAN III
43	CE008	STREET LIGHTING PLAN I
44	CE009	STREET LIGHTING PLAN II
45	CE010	STREET LIGHTING PLAN III
46	CE011	TYPICAL TRENCHING DETAILS
47	CE012	TYPICAL DUCT SECTIONS I
48	CE013	TYPICAL DUCT SECTIONS II
49	CE014	HANDHOLE DETAILS
50	CE015	STREET LIGHT DETAILS AND NOTES
51	CE016	DUCTLINE PROFILES I
52	CE017	DUCTLINE PROFILES II
53	CE018	DUCTLINE PROFILES III
54	CE019	DUCTLINE PROFILES IV
LANDSCAPE		
55	CL001	PARCEL 96 STREET TREE PLAN - 1
56	CL002	PARCEL 96 STREET TREE PLAN - 2
57	CL003	PARCEL 101 STREET TREE PLAN
58	CL004	PLANT LIST AND DETAILS

RECORD DRAWING TRACINGS

CONTRACTOR (Excluding Landscaping)
As-Built Drawings
Certified By: _____ Date: _____
Print Name: _____
Company: _____

CONTRACTOR (For Landscaping Only)
As-Built Drawings
Certified By: _____ Date: _____
Print Name: _____
Company: _____

LICENSED PROFESSIONAL ENGINEER
Prepared By: _____ Date: _____
Print Name: _____
Company: GRAY, HONG, NOJIMA & ASSOC., INC.

DEVELOPER
Submitted By: _____ Date: _____
Print Name: _____
Company: D.R. HORTON HAWAII, LLC

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APPROVED:

Walter J. Watanabe
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING

6/15/2022
DATE

Heavenly Jones
for CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH, STATE OF HAWAII

May 20, 2022
DATE

Michael H. Nojima
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R.O.W.
AND BWS EASEMENTS ONLY)

JUL 13 2022
DATE

Gray•Hong•Nojima & Associates, Inc.



201 Merchant Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: (808) 521-0306
Fax: (808) 531-8018

CONSULTING ENGINEERS

Exp: 4/30/24



Michael H. Nojima
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES, DIVISION OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS. 8/29/94.

Exp: 4/30/24



Winston M. Taniguchi
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES, DIVISION OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS. 8/29/94.

ENGINEER: WT CHECKED BY: MN
DRAWN BY: JG PROJECT #: 3100-31

"PROPOSED PUBLIC ROAD"

HO'OPILI PHASE 13 PARCEL 96 & 101

(DPP SUBDIVISION FILE NO 2021/SUB-143)
(DPP CONSTRUCTION PLANS FILE NO 2021/CP-171)
TMK: 9-1-17: POR OF 206
HONOLULU, EWA, OAHU, HAWAII

TITLE SHEET

APPROVED BY:

C001

SHEET 1 OF 58 SHEETS

FILE POCKET FOLDER NO.

HO'OPI LI DEVELOPMENT
PHASE 17A
BACKBONE ROADWAY IMPROVEMENTS

HONOULIULI , EWA , OAHU , HAWAII
TAX MAP KEY : 9-1-017: 213
[SUBDIVISION FILE NO. 2023/SUB-70]
[CONSTRUCTION PLAN FILE NO. 2023/CP-66]

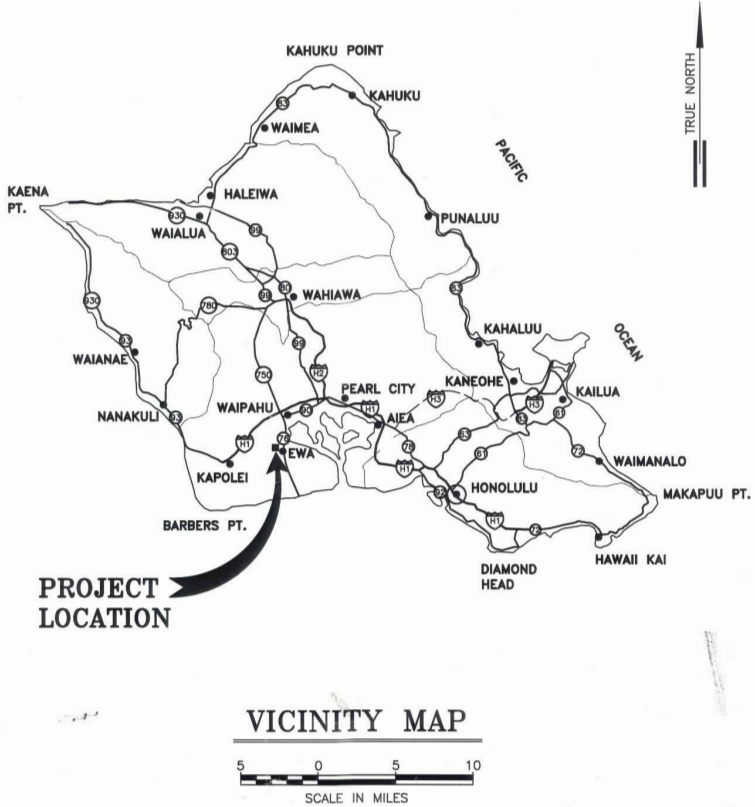
PREPARED FOR:
D.R. HORTON HAWAII LLC
130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Prepared by:



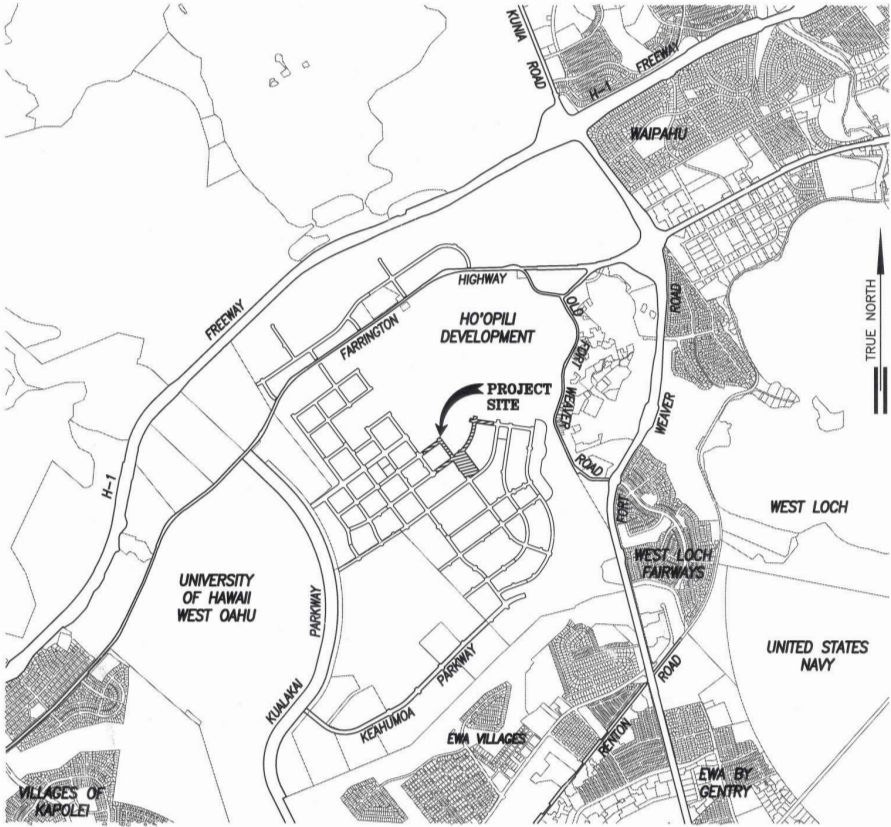
R. M. TOWILL CORPORATION
SINCE 1930

Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management



VICINITY MAP

SCALE IN MILES



LOCATION MAP

NOT TO SCALE

APPROVED :

Victor G. Wata
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

7/17/2024
DATE

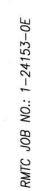
Patricia Chum
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
(FOR WORK AFFECTING BOARD OF WATER SUPPLY FACILITIES IN
CITY/STATE RIGHT-OF-WAY AND BWS EASEMENTS ONLY)

6/24/2024
DATE

	2023/CP-155	SEPTEMBER 2023
HOOPII DEVELOPMENT PHASE 17B – BACKBONE ROADWAY IMPROVEMENTS		

PREPARED FOR:
D.R. HORTON HAWAII LLC
130 MERCHANT STREET, SUITE 112
HONOLULU, HAWAII 96813

Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management



ATTACHMENT E

See attached.

Wastewater Facilities Tracker for LUC/DPP

as of 9/18/2025

Per DPP letter dated August 22, 2025: "It would be helpful in the [LUC] annual reports to have a status report showing the wastewater facilities that were planned, their stage of completion, date of inspection, and if the facilities or parts of the system have been submitted for acceptance and dedication. This provides a measure as to the fulfillment of this condition." [Condition 8 of the LUC]

Facility Description and Details					Stage of Completion	WWB Inspection Date	Dedication Status
Phase	Parcel	Subdivision	Name	Housing Type			
						For SF: date of CEB final inspection letter	
						For MF: date of first completed DPP plumbing inspection	
1	n/a	2015/SUB-108	Backbone Roads	n/a	Done	9/23/2020	Dedication documents pending with County
1	1	2016/SUB-1	Ha'akea	Single Family	Done	11/26/2019	Dedication documents pending with County
1	2	n/a	Hāloa	Multi-Family	Done	11/9/2017	n/a
1	4	2016/SUB-2	Lehua	Single Family	Done	12/2/2019	Dedication documents pending with County
3	n/a	2016/SUB-19	Backbone Roads	n/a	Done	2/26/2021	Dedication documents pending with County
3	5	2016/SUB-80	'Iliahi	Single Family	Done	12/2/2019	Dedication documents pending with County
3	5	n/a	SoHo Community Ctr	n/a	Done	2/19/2021	n/a
3	6	2016/SUB-78	'Iliahi	Single Family	Done	4/12/2019	Dedication documents pending with County
3	7	n/a	Akoko	Multi-Family	Done	7/11/2018	n/a
4	n/a	2019/SUB-228	Backbone Roads	n/a	Done	3/1/2023	Dedication documents pending with County
4	8	2018/SUB-29	Ho'oulu	Single Family	Done	2/10/2022	Dedication documents pending with County
4	9	2017/SUB-202	Āulu	Single Family	Done	2/16/2022	Dedication documents pending with County
4	10	n/a	Kulia	Multi-Family	Done	8/17/2020	n/a
6	n/a	2017/SUB-118	Backbone Roads	n/a	Done	4/19/2024	Pending Submittal
6	11	2018/SUB-139	Liko	Single Family	Done	3/30/2021	Pending Submittal
6	12	n/a	Hinahina	Multi-Family	Done	8/10/2021	n/a
6	15	n/a	Kōhina III	Multi-Family	Done	2/16/2022	n/a
4	16	n/a	‘Ilima	Multi-Family	Done	3/18/2020	n/a
4	17	2018/SUB-79	Ōlena	Single Family	Done	4/8/2021	Pending Submittal
5	n/a	2017/SUB-85	Backbone Roads	n/a	Done	2/22/2022	Dedication documents pending with County
5	18	n/a	Kaikea I	Multi-Family	Done	3/23/2022	n/a
5	19	n/a	Kaikoi II	Multi-Family	Done	7/18/2022	n/a
2	n/a	2015/SUB-201	Backbone Roads	n/a	Done	2/22/2022	Dedication documents pending with County
2	20	n/a	Kōhina	Multi-Family	Done	12/16/2020	n/a
2	25	n/a	Kōhina	Multi-Family	Done	7/17/2020	n/a
2	n/a	2018/SUB-82	Phase 2 Offsite Sewer (aka IMX Offsite Sewer)	n/a	Done	9/6/2022	Pending Submittal
5	26	n/a	Kaikoi I	Multi-Family	Done	8/31/2021	n/a
5	27	n/a	Nahele	Multi-Family	Done	6/2/2023	n/a
10A	n/a	2019/SUB-122	Backbone Roads	n/a	Done	4/28/2025	Pending Submittal
10A	105	2019/SUB-130	'Iliahi III	Single Family	Done	2/22/2023	Pending Submittal
10A	106	2019/SUB-58	Lehua II	Single Family	Done	6/14/2022	Pending Submittal
10A	104	n/a	Mamaka	SF Condo	Done	3/30/2022	n/a
10A	103	2020/SUB-67	Ikena	Single Family	Done	4/25/2024	Pending Submittal
IMX	n/a	n/a	Intersections	n/a	Done	Inspection complete; pending receipt of Final Inspection Letter	Pending Submittal
13	n/a	2020/SUB-223	Backbone Roads	n/a	Done	Inspection complete; pending receipt of Final Inspection Letter	Pending Submittal
13	98	2021/SUB-67	Ho'oulu Phase 2	Single Family	Done	2/21/2024	Pending Submittal
13	100	n/a	Mamaka II	SF Condo	Done	12/29/2022	Pending Submittal

Facility Description and Details					Stage of Completion	WWB Inspection Date	Dedication Status
Phase	Parcel	Subdivision	Name	Housing Type			
						For SF: date of CEB final inspection letter	
						For MF: date of first completed DPP plumbing inspection	
13	96/101	2021/SUB-143	Ikena C	Single Family	Done	Inspection complete; pending receipt of Final Inspection Letter	Pending Submittal
13	102	2021/SUB-174	Nanaina	Single Family	Done	Inspection complete; pending receipt of Final Inspection Letter	Pending Submittal
13	97	2021/SUB-97	Kanalani	Single Family	Done	Inspection complete; pending receipt of Final Inspection Letter	Pending Submittal
11	n/a	2022/SUB-73	Backbone Roads	n/a	Done	TBD	Pending Submittal
11	49	n/a	Molehu	SF Condo	Done	TBD	Pending Submittal
11	49	n/a	Kapiili	Multi-Family	Done	TBD	Pending Submittal
11	48	2022/SUB-94	Noho Papa	SF	Done	TBD	Pending Submittal
11	45/46	n/a	Alana	Multi-Family	Done	TBD	Pending Submittal
11	42	n/a	Alana	Multi-Family	Done	TBD	Pending Submittal
11	n/a	n/a	Ph 11 Offsite Sewer	n/a	Done	3/13/2025	Pending Submittal
17A	n/a	2023/SUB-70	Backbone Roads	n/a	In Progress	TBD	Pending Submittal
17A	92	n/a	Ahakea	SF Condo	In Progress	TBD	Pending Submittal
7A	n/a	2022/SUB-214	Backbone Roads	n/a	In Progress	TBD	Pending Submittal
Gateway	n/a	2023/SUB-37	Backbone Roads	n/a	In Progress	TBD	Pending Submittal

ATTACHMENT F

See attached.

Table 6.1: Intersection Mitigation Summary

ID	Intersection	Existing 2021	Base Year 2030 with Mitigation	Base Year 2040	Future Year 2030 with Mitigation	Future Year 2040 with Mitigation
Kualakai Parkway @						
1	Westbound H-1 Freeway On/Off-Ramps	#1 Kualakai Pkwy. H-1 Freeway On/Off-ramps B/B	#1 Kualakai Pkwy. H-1 Freeway On/Off-ramps E/D	#1 Kualakai Pkwy. H-1 Freeway On/Off-ramps E/D	#1 Kualakai Pkwy. H-1 Freeway On/Off-ramps E/C	#1 Kualakai Pkwy. H-1 Freeway On/Off-ramps E/D
2	Eastbound H-1 Freeway On/Off-Ramps	#2 Kualakai Pkwy. H-1 Freeway On/Off-ramps A/A	#2 Kualakai Pkwy. H-1 Freeway On/Off-ramps B/A	#2 Kualakai Pkwy. H-1 Freeway On/Off-ramps A/A	#2 Kualakai Pkwy. H-1 Freeway On/Off-ramps A/B	#2 Kualakai Pkwy. H-1 Freeway On/Off-ramps A/A
3	DLNR Driveway/Gateway Access		#3 Kualakai Pkwy. DLNR Dwy A/A	#3 Kualakai Pkwy. DLNR Dwy A/A	#3 Kualakai Pkwy. DLNR Dwy A/B	#3 Kualakai Pkwy. DLNR Dwy A/A
4	Farrington Highway	#4 Kualakai Pkwy. Farrington Hwy D/C	#4 Kualakai Pkwy. Farrington Hwy D/D	#4 Kualakai Pkwy. Farrington Hwy D/D	#4 Kualakai Pkwy. Farrington Hwy D/D	#4 Kualakai Pkwy. Farrington Hwy E/E
5	Hoomohala Avenue	#5 Kualakai Pkwy. Hoomohala Ave B/A	#5 Kualakai Pkwy. Hoomohala Ave C/C	#5 Kualakai Pkwy. Hoomohala Ave D/D	#5 Kualakai Pkwy. Hoomohala Ave D/C	#5 Kualakai Pkwy. Hoomohala Ave D/D
6	Kulanihako Street		#6 Kualakai Pkwy. Kulanihako St A/A	#6 Kualakai Pkwy. Kulanihako St B/A	#6 Kualakai Pkwy. Kulanihako St D/D	#6 Kualakai Pkwy. Kulanihako St D/D
7	Keahumoa Parkway	#7 Kualakai Pkwy. Keahumoa Pkwy B/B	#7 Kualakai Pkwy. Keahumoa Pkwy D/D	#7 Kualakai Pkwy. Keahumoa Pkwy E/D	#7 Kualakai Pkwy. Keahumoa Pkwy C/D	#7 Kualakai Pkwy. Keahumoa Pkwy E/E

Notes:

- Mitigation or improvements from previous year or scenario
- Proposed mitigative measure or intersection improvement
- No change from previous year or scenario

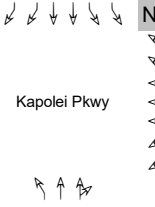
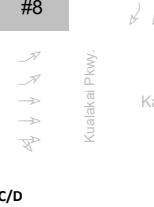
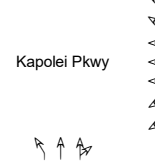
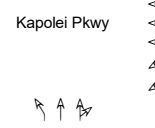
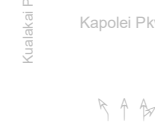
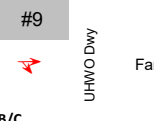
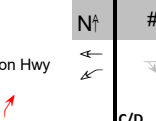
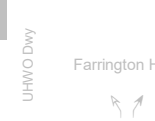
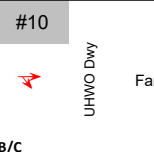
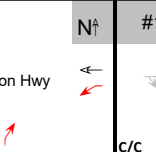
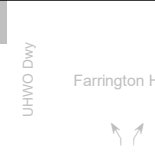
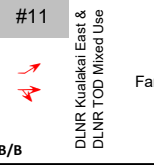
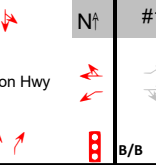
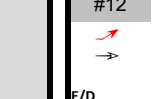
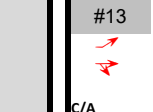
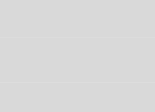
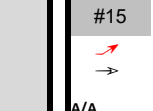
Intersection comparisons are made between:

Base Year 2030 with Mitigation vs. Existing 2021
 Base Year 2040 vs. Base Year 2030 with Mitigation

Intersection comparisons are made between:

Future Year 2030 with Mitigation vs. Base Year 2030 with Mitigation
 Future Year 2040 with Mitigation vs. Future Year 2040 with Mitigation

Table 6.1: Intersection Mitigation Summary continued

ID	Intersection	Existing 2021		Base Year 2030 with Mitigation		Base Year 2040		Future Year 2030 with Mitigation		Future Year 2040 with Mitigation			
8	Kapolei Parkway	#8		N↑	#8		N↑	#8		N↑	#8		N↑
		B/C		N↑	C/D		N↑	D/D		N↑	D/D		N↑
		D/E		N↑	D/E		N↑	D/E		N↑	D/E		N↑
Farrington Highway@													
9	UHWO Driveway	#9		N↑	#9		N↑	#9		N↑	#9		N↑
10	Gateway Access/UHWO Driveway			#10		N↑	#10		N↑	#10		N↑	
11	DLNR Kualakai East/DLNR TOD Mixed Use			#11		N↑	#11		N↑	#11		N↑	
12	Kauluakoko Street							#12		N↑	#12		N↑
13	Iwikuamoo Street							#13		N↑	#13		N↑
14	Kamailehope Street									#14		N↑	
15	Hooluana Drive/Hikukahi Street							#15		N↑	#15		N↑

Notes:

- Mitigation or improvements from previous year or scenario
- Proposed mitigative measure or intersection improvement
- No change from previous year or scenario

Intersection comparisons are made between:

Base Year 2030 with Mitigation vs. Existing 2021
Base Year 2040 vs. Base Year 2030 with Mitigation

Intersection comparisons are made between:

Future Year 2030 with Mitigation vs. Base Year 2030 with Mitigation
Future Year 2040 with Mitigation vs. Future Year 2040 with Mitigation

Table 6.1: Intersection Mitigation Summary continued

ID	Intersection	Existing 2021	Base Year 2030 with Mitigation	Base Year 2040	Future Year 2030 with Mitigation	Future Year 2040 with Mitigation
16	Hoomohala Avenue/Hoonaauao Street				#16 A/A	#16 B/B
17	Old Fort Weaver Road West	#17 D/B	#17 C/C	#17 C/C	#17 F/F	#17 F/C
18	Old Fort Weaver Road East	#18 B/A	#18 C/A	#18 C/B	#18 C/B	#18 D/C
19	Old Fort Weaver Road West/Old Fort Weaver Road East	#19 A/A	#19 A/A	#19 A/A	#19 A/A	#19 A/A
20	Queens Access/Road 13		#20 A/A	#20 A/B	#20 A/B	#20 A/B/B
21	EB Farrington Hwy Off-Ramp to SB Fort Weaver Rd & SB Kunia Road Off-Ramp to WB Farrington Hwy	#21 A/B	#21 A/A	#21 A/A	#21 A/A	#21 A/A
22	WB Farrington Hwy Off-Ramp to SB Fort Weaver Rd	#22 A/A	#22 A/A	#22 A/A	#22 A/A	#22 A/B
24	Eastbound & Westbound Farrington Hwy Off-Ramp to NB Kunia Rd	#24 A/A	#24 A/A	#24 A/A	#24 A/A	#24 B/B

Notes:

- Mitigation or improvements from previous year or scenario
- Proposed mitigative measure or intersection improvement
- No change from previous year or scenario

Intersection comparisons are made between:

- Base Year 2030 with Mitigation vs. Existing 2021
- Base Year 2040 vs. Base Year 2030 with Mitigation

Intersection comparisons are made between:

- Future Year 2030 with Mitigation vs. Base Year 2030 with Mitigation
- Future Year 2040 with Mitigation vs. Future Year 2040 with Mitigation

Table 6.1: Intersection Mitigation Summary continued

ID	Intersection	Existing 2021	Base Year 2030 with Mitigation	Base Year 2040	Future Year 2030 with Mitigation	Future Year 2040 with Mitigation
Keahumoa Pkwy@						
26	Maunakapu Street	#26 Maunakapu St Keahumoa Pkwy A/B	#26 Maunakapu St Keahumoa Pkwy B/B	#26 Maunakapu St Keahumoa Pkwy C/B	#26 Maunakapu St Keahumoa Pkwy B/B	#26 Maunakapu St Keahumoa Pkwy B/B
27	Middle School Driveway	#27 Middle School Driveway Keahumoa Parkway B/B	#27 Middle School Driveway Keahumoa Parkway C/C	#27 Middle School Driveway Keahumoa Parkway F/F	#27 Middle School Driveway Keahumoa Parkway C/D	#27 Middle School Driveway Keahumoa Parkway D/F
28	Maweke Street	#28 Maweke Street Keahumoa Parkway A/A	#28 Maweke Street Keahumoa Parkway C/C	#28 Maweke Street Keahumoa Parkway D/F	#28 Maweke Street Keahumoa Parkway C/D	#28 Maweke Street Keahumoa Parkway C/F
29	Elepuu Street	#29 Elepuu Street Keahumoa Parkway A/A	#29 Elepuu Street Keahumoa Parkway B/C	#29 Elepuu Street Keahumoa Parkway C/E	#29 Elepuu Street Keahumoa Parkway B/C	#29 Elepuu Street Keahumoa Parkway C/E
30	Lakona Street	#30 Lakona Street Keahumoa Parkway A/A	#30 Lakona Street Keahumoa Parkway C/C	#30 Lakona Street Keahumoa Parkway C/D	#30 Lakona Street Keahumoa Parkway C/C	#30 Lakona Street Keahumoa Parkway C/D
31	Keahumoa Place Apartments Driveway	#31 Keahumoa Place Apartments Dwy Keahumoa Parkway B/B	#31 Maweke Street Keahumoa Parkway B/B	#31 Keahumoa Place Apartments Dwy Keahumoa Parkway C/C	#31 Keahumoa Place Apartments Dwy Keahumoa Parkway B/C	#31 Keahumoa Place Apartments Dwy Keahumoa Parkway C/D
32	Iwikuamoo Street	#32 Iwikuamoo Street Keahumoa Parkway B/B	#32 Iwikuamoo Street Keahumoa Parkway B/B	#32 Iwikuamoo Street Keahumoa Parkway B/C	#32 Iwikuamoo Street Keahumoa Parkway B/D	#32 Iwikuamoo Street Keahumoa Parkway B/E
33	Kamailehope Street				#33 Kamailehope St Keahumoa Parkway A/B	#33 Kamailehope St Keahumoa Parkway B/D

Notes:

- Mitigation or improvements from previous year or scenario
- Proposed mitigative measure or intersection improvement
- No change from previous year or scenario

Intersection comparisons are made between:

Base Year 2030 with Mitigation vs. Existing 2021
 Base Year 2040 vs. Base Year 2030 with Mitigation

Intersection comparisons are made between:

Future Year 2030 with Mitigation vs. Base Year 2030 with Mitigation
 Future Year 2040 with Mitigation vs. Future Year 2040 with Mitigation

Table 6.1: Intersection Mitigation Summary continued

ID	Intersection	Existing 2021	Base Year 2030 with Mitigation	Base Year 2040	Future Year 2030 with Mitigation	Future Year 2040 with Mitigation
34	Old Fort Weaver Road					#34   B/D Old Fort Weaver Road   Keahumoa Parkway/Old Fort Weaver Road N†
Paiwa Street @						
43	H-1 Westbound On/Off Ramps	#43     N†     B/B Paiwa Street H-1 WB On/Off Ramps	#43     N†     B/B Paiwa Street H-1 WB On/Off Ramps	#43     N†     B/B Paiwa Street H-1 WB On/Off Ramps	#43     N†     B/B Paiwa Street H-1 WB On/Off Ramps	#43     N†     B/B Paiwa Street H-1 WB On/Off Ramps
44	H-1 Eastbound On/Off Ramps	#44     N†    C/B Paiwa Street H-1 EB On/Off Ramps	#44     N†    C/C Paiwa Street H-1 EB On/Off Ramps	#44     N†    D/C Paiwa Street H-1 EB On/Off Ramps	#44     N†    D/C Paiwa Street H-1 EB On/Off Ramps	#44     N†    E/C Paiwa Street H-1 EB On/Off Ramps
Kunia Road @						
50	Kupuna Loop North	#50     N†     B/C Kunia Road Kupuna Loop North	#50     N†     B/B Kunia Road Kupuna Loop North	#50     N†     A/B Kunia Road Kupuna Loop North	#50     N†     B/B Kunia Road Kupuna Loop North	#50     N†     A/B Kunia Road Kupuna Loop North
51	Kupuna Loop South	#51   N†     B/B Kunia Road Kupuna Loop South	#51   N†     B/B Kunia Road Kupuna Loop South	#51   N†     B/B Kunia Road Kupuna Loop South	#51   N†     B/B Kunia Road Kupuna Loop South	#51   N†     B/B Kunia Road Kupuna Loop South
53	H-1 Westbound On-Ramp	#53   N†     A/B Kunia Road H-1 WB On-Ramp	#53   N†     A/B Kunia Road H-1 WB On-Ramp	#53   N†     A/B Kunia Road H-1 WB On-Ramp	#53   N†     A/B Kunia Road H-1 WB On-Ramp	#53   N†     A/B Kunia Road H-1 WB On-Ramp
55	H-1 Eastbound On/Off Ramps	#55       N†     C/C Kunia Road H-1 EB On/Off Ramps	#55       N†     C/C Kunia Road H-1 EB On/Off Ramps	#55       N†     D/C Kunia Road H-1 EB On/Off Ramps	#55       N†     C/C Kunia Road H-1 EB On/Off Ramps	#55       N†     D/C Kunia Road H-1 EB On/Off Ramps
57	Honowai Street	#57    N†     E/C Kunia Road Honowai Street	#57    N†     E/C Kunia Road Honowai Street	#57    N†     E/C Kunia Road Honowai Street	#57    N†     E/C Kunia Road Honowai Street	#57    N†     F/C Kunia Road Honowai Street

Notes:

- Mitigation or improvements from previous year or scenario
- Proposed mitigative measure or intersection improvement
- No change from previous year or scenario

Intersection comparisons are made between:

Base Year 2030 with Mitigation vs. Existing 2021
 Base Year 2040 vs. Base Year 2030 with Mitigation

Intersection comparisons are made between:

Future Year 2030 with Mitigation vs. Base Year 2030 with Mitigation
 Future Year 2040 with Mitigation vs. Future Year 2040 with Mitigation

Table 6.1: Intersection Mitigation Summary continued

ID	Intersection	Existing 2021	Base Year 2030 with Mitigation	Base Year 2040	Future Year 2030 with Mitigation	Future Year 2040 with Mitigation
Fort Weaver Road @						
61	Laulaunui Street	#61 Fort Weaver Road Laulaunui Street C/D	#61 Fort Weaver Road Laulaunui Street C/D	#61 Fort Weaver Road Laulaunui Street C/E	#61 Fort Weaver Road Laulaunui Street C/D	#61 Fort Weaver Road Laulaunui Street C/E
62	Old Fort Weaver/Aawa Drive	#62 Fort Weaver Road Old Fort Weaver Road/Aawa Drive C/C	#62 Fort Weaver Road Old Fort Weaver Road/Aawa Drive C/C	#62 Fort Weaver Road Old Fort Weaver Road/Aawa Drive C/C	#62 Fort Weaver Road Old Fort Weaver Road/Aawa Drive C/C	#62 Fort Weaver Road Old Fort Weaver Road/Aawa Drive D/D
63	Hale O Ulu School Crosswalk	#63 Fort Weaver Road Hale O Ulu School Crosswalk A/A	#63 Fort Weaver Road Hale O Ulu School Crosswalk A/A	#63 Fort Weaver Road Hale O Ulu School Crosswalk A/A	#63 Fort Weaver Road Hale O Ulu School Crosswalk A/A	#63 Fort Weaver Road Hale O Ulu School Crosswalk A/A
64	Renton Road	#64 Fort Weaver Road Renton Road D/B	#64 Fort Weaver Road Renton Road E/C	#64 Fort Weaver Road Renton Road D/B	#64 Fort Weaver Road Renton Road E/C	#64 Fort Weaver Road Renton Road D/B
65	Kolowaka Drive	#65 Fort Weaver Road Kolowaka Drive F/D	#65 Fort Weaver Road Kolowaka Drive F/D	#65 Fort Weaver Road Kolowaka Drive E/D	#65 Fort Weaver Road Kolowaka Drive F/D	#65 Fort Weaver Road Kolowaka Drive F/D
66	Geiger Road/Iroquois Road	#66 Fort Weaver Road Geiger Road/Iroquois Road E/D	#66 Fort Weaver Road Geiger Road/Iroquois Road D/E	#66 Fort Weaver Road Geiger Road/Iroquois Road D/D	#66 Fort Weaver Road Geiger Road/Iroquois Road E/D	#66 Fort Weaver Road Geiger Road/Iroquois Road D/D

Notes:

- Mitigation or improvements from previous year or scenario
- Proposed mitigative measure or intersection improvement
- No change from previous year or scenario

Intersection comparisons are made between:

Base Year 2030 with Mitigation vs. Existing 2021
Base Year 2040 vs. Base Year 2030 with Mitigation

Intersection comparisons are made between:

Future Year 2030 with Mitigation vs. Base Year 2030 with Mitigation
Future Year 2040 with Mitigation vs. Future Year 2040 with Mitigation

ATTACHMENT G

See attached.

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluluodpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR



GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2015/ELOG-1775 (lf/mf)

September 16, 2015

Mr. Brent Nakaoka
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819-3494

Dear Mr. Nakaoka:

The Ho'opili Drainage Master Plan ("Plan"), dated August 24, 2015, is approved as submitted (TMK: 9-1-017: 004, 059, 072 and 9-1-018: 001 and 004). The Plan supersedes the March 2013 Revised Drainage Master Plan that was prepared by Bills Engineering, Inc.

The Plan is for Ho'opili, a master-planned subdivision development located in Honouliuli, Ewa, Oahu, Hawaii. Its development is expected to last 20 years (2015 - 2035).

The Plan satisfies Condition 3 of D. R. Horton-Schuler Homes, LLC's, Unilateral Agreement (Ordinance 15-13), requiring submittal of a revised Drainage Master Plan to the Department of Planning and Permitting for review and approval.

Ho'opili's project site is bounded by the Interstate H-1 Freeway to the north, Ewa Villages to the south, Fort Weaver Road to the east and Kualakai Parkway to the west. The project site spans across the Kaloi, Honouliuli, and West Loch drainage basins. The Plan used data, as references, from previous studies in the vicinity of Ho'opili.

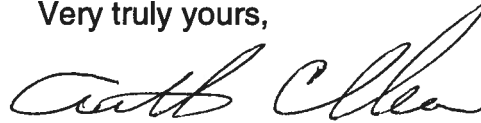
The scope of the Plan includes the main, or backbone, drainage system, layout, and hydraulic data, and the anticipated points of connection throughout the various phases of development of approximately 1,051 acres.

The Plan also includes a proposed storm water quality system to meet current storm water quality treatment requirements of the City and County of Honolulu (City). The Plan acknowledged that in the event that the City's current storm water quality standards are revised, new developments will be designed to comply with the prevailing standards at the time of the development.

Mr. Brent Nakaoka
September 16, 2015
Page 2

Should you have any questions, please call me at 768-8000 or Len Furukawa of our Site Development Division at 768-8105.

Very truly yours,

A handwritten signature in black ink, appearing to read "George I. Atta". The signature is fluid and cursive, with a large, sweeping initial "G".

 George I. Atta, FAICP
Director

cc: Planning Division