

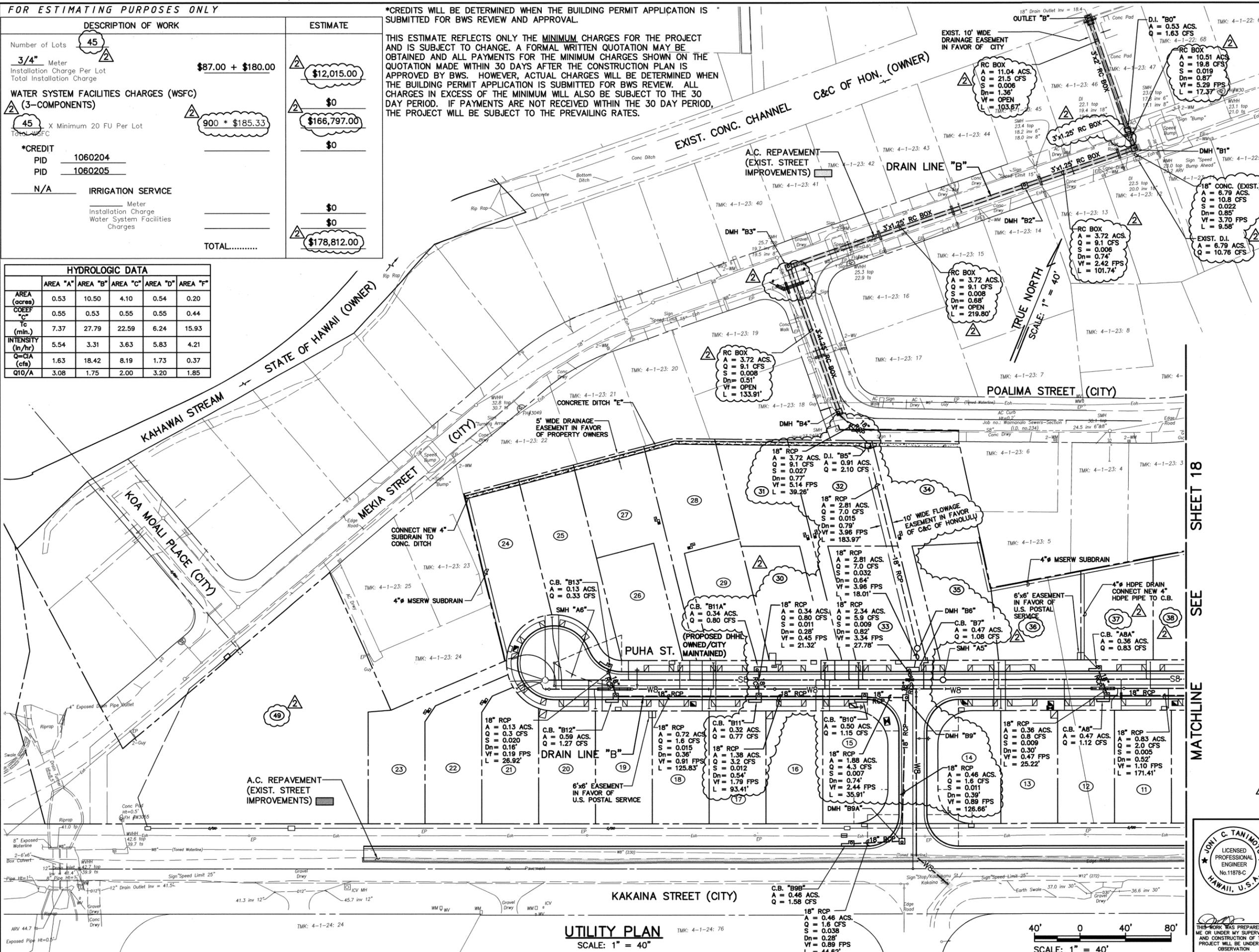
FOR ESTIMATING PURPOSES ONLY

DESCRIPTION OF WORK	ESTIMATE
Number of Lots 45	
$\frac{3}{4}$ " Meter Installation Charge Per Lot Total Installation Charge	\$87.00 + \$180.00
\$12,015.00	
WATER SYSTEM FACILITIES CHARGES (WSFC) (3-COMPONENTS)	\$0
45 X Minimum 20 FU Per Lot Total WSFC	\$166,797.00
*CREDIT	\$0
PID 1060204	
PID 1060205	
N/A IRRIGATION SERVICE	\$0
Meter Installation Charge Water System Facilities Charges	\$0
TOTAL.....	\$178,812.00

HYDROLOGIC DATA					
	AREA "A"	AREA "B"	AREA "C"	AREA "D"	AREA "E"
AREA (acres)	0.53	10.50	4.10	0.54	0.20
COEFF "C"	0.55	0.53	0.55	0.55	0.44
Tc (min.)	7.37	27.79	22.59	6.24	15.93
INTENSITY (in/hr)	5.54	3.31	3.63	5.83	4.21
Q=CIA (cfs)	1.63	18.42	8.19	1.73	0.37
Q10/A	3.08	1.75	2.00	3.20	1.85

*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.

THIS ESTIMATE REFLECTS ONLY THE MINIMUM CHARGES FOR THE PROJECT AND IS SUBJECT TO CHANGE. A FORMAL WRITTEN QUOTATION MAY BE OBTAINED AND ALL PAYMENTS FOR THE MINIMUM CHARGES SHOWN ON THE QUOTATION MADE WITHIN 30 DAYS AFTER THE CONSTRUCTION PLAN IS APPROVED BY BWS. HOWEVER, ACTUAL CHARGES WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW. ALL CHARGES IN EXCESS OF THE MINIMUM WILL ALSO BE SUBJECT TO THE 30 DAY PERIOD. IF PAYMENTS ARE NOT RECEIVED WITHIN THE 30 DAY PERIOD, THE PROJECT WILL BE SUBJECT TO THE PREVAILING RATES.



LEGEND

- W8 — EXIST. WATER LINE
- W8 — NEW WATER LINE
- D24 — EXIST. DRAIN LINE
- D24 — NEW DRAIN LINE
- EoH — EXIST. UTILITY/ELECT. LINE
- S8 — EXIST. SEWER LINE
- S8 — NEW SEWER LINE
- | — SINGLE SERVICE SEWER LATERAL
- | — FIRE HYDRANT
- | — DOUBLE SERVICE WATER LATERAL "C-1"
- | — SINGLE SERVICE WATER LATERAL "A"
- □ — TRANSFORMER PADS
- ⑤ — LOT NUMBER
- 18" RCP — PIPE DIAMETER & TYPE
- A = 11.99 AC. — DRAINAGE AREA, ACRES
- Q10 = 55.64 CFS — FLOW IN CFS, CUBIC FEET PER SECOND
- S = 0.260 — SLOPE, FEET PER FOOT
- Dn = 0.79' — NORMAL DEPTH, FEET
- Vf = 6.78 FPS — VELOCITY, FEET PER SECOND AT FULL FLOW
- ▨ — A.C. REPAVEMENT

APPROVED:

Donn Chen 12/13/13
CHIEF, WASTEWATER BRANCH, DPP
(FOR CONFORMANCE WITH CITY STANDARDS AND WORK IN CITY R/W ONLY)

Waterman 12/17/13
CHIEF, TRAFFIC REVIEW BRANCH, DPP

MMA 12-14-10
MANAGER AND CHIEF ENGINEER, BWS
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R/W AND EWS EASEMENTS ONLY) CITY & COUNTY OF HONOLULU

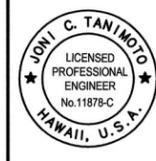
REVISION DATE	DESCRIPTION	MADE BY	APPR
5/6/2013	ADDED SHT. DELETE PORTION OF KAKAIKAWA ST.	A&A	

DEPARTMENT OF HAWAIIAN HOME LANDS
KAKAINA SUBDIVISION
TAX MAP KEY: 4-1-08: 10, 81, 91 & 92
WAIMANALO, KOOLAUPOKO, OAHU, HAWAII

UTILITY PLAN

APPROVED: *M. J. ...* 12/17/2013
CHIEF, CIVIL ENGINEERING BRANCH, DPP

AKINAKA & ASSOCIATES, LTD.
CONSULTING ENGINEERS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION LICENSE EXPIRES 4/30/14

UTILITY PLAN
SCALE: 1" = 40'

SCALE: 1" = 40'

THIS SHEET SUPERSEDES SHEET 17 SHEET 17A OF 88 SHEETS

FILE	POCKET	FOLDER	NO.