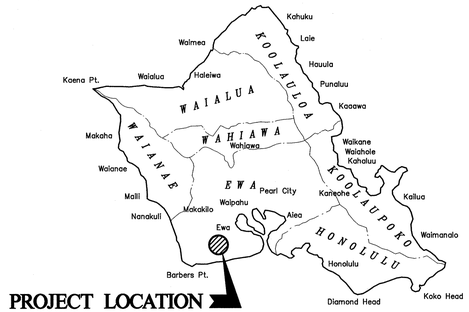
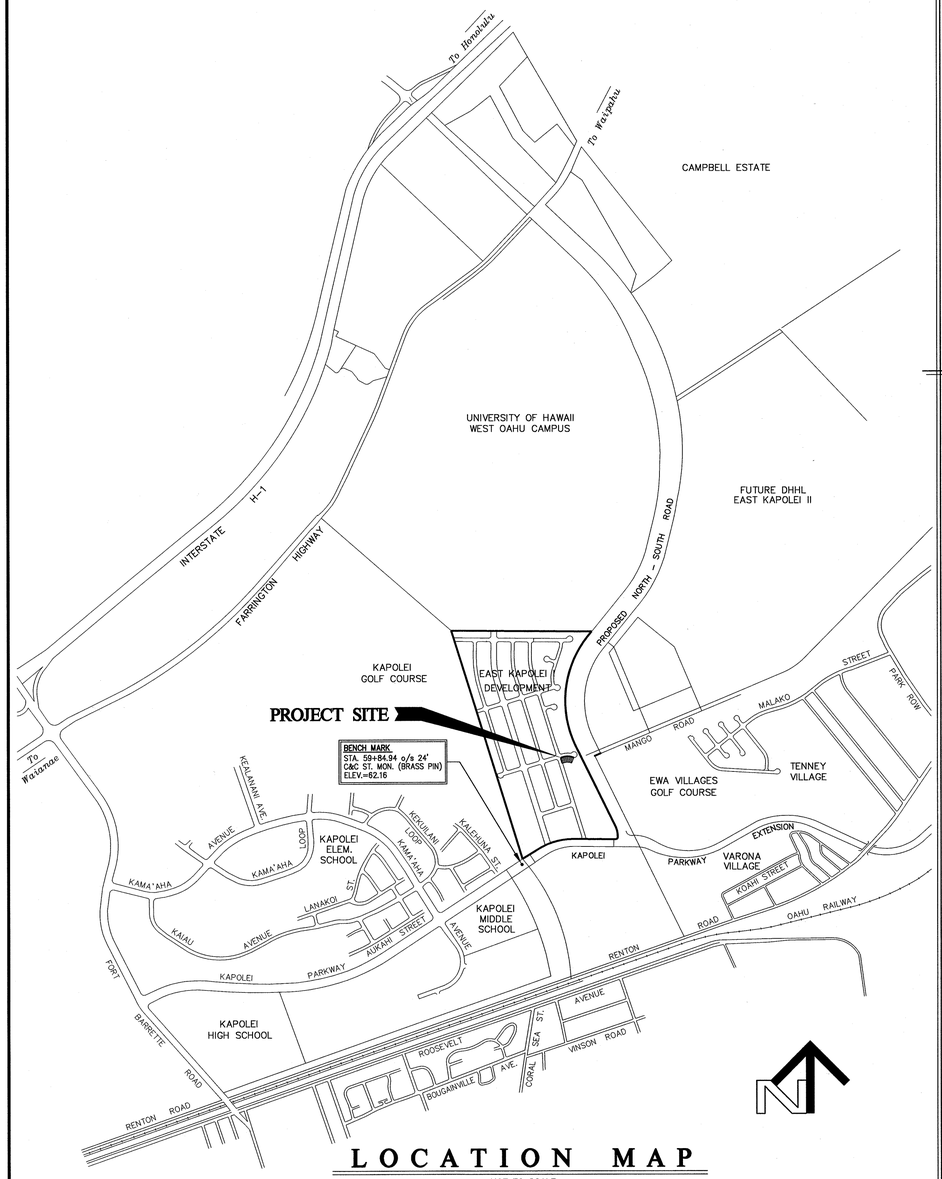


PROJECT LOCATION

VICINITY MAP

4 0 4 8
SCALE IN MILES



LOCATION MAP

NOT TO SCALE

CONSTRUCTION PLANS

FOR

EAST KAPOLEI I DEVELOPMENT MAIL BOX CENTER

HONOULIULI, EWA, OAHU, HAWAII

(DPP SUBD. FILE NO. 2005/SUB-317)

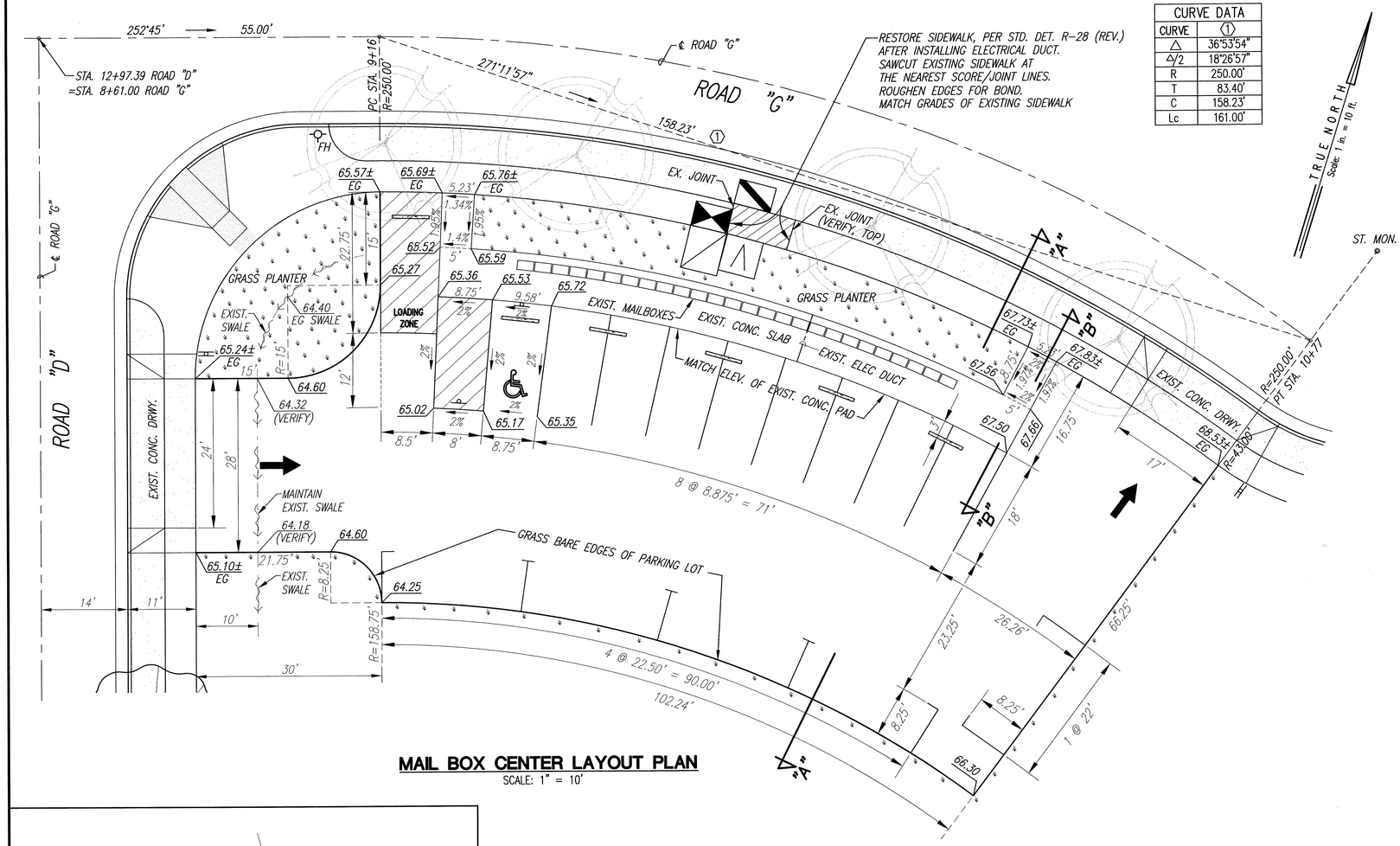
OWNER AND DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS

TAX MAP KEY: 9-1-16: 108

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

INDEX TO DRAWINGS

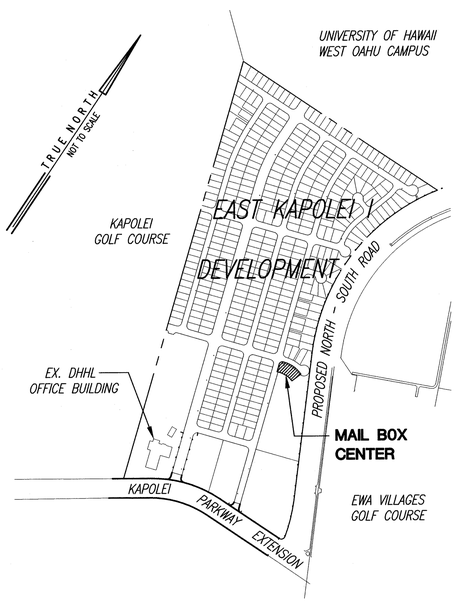
DHHL - EAST KAPOLEI I DEVELOPMENT (DPP SUBD. FILE NO. 2005 / SUB-317)



MAIL BOX CENTER LAYOUT PLAN

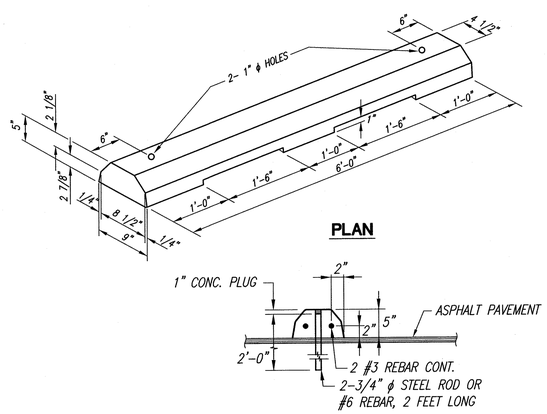
SCALE: 1" = 10'

CURVE DATA	
CURVE	①
△	36°53'54"
△/2	18°26'57"
R	250.00'
T	83.40'
C	158.23'
Lc	161.00'



VICINITY MAP

NOT TO SCALE

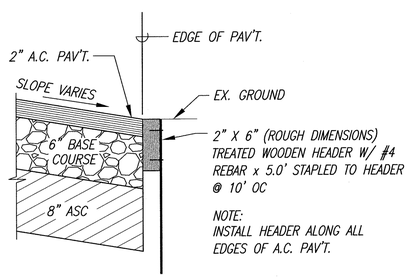


PLAN

TYPICAL SECTION

DETAIL-PRECAST WHEEL STOP

NOT TO SCALE



TYPICAL SECTION

DETAIL-WOODEN HEADER

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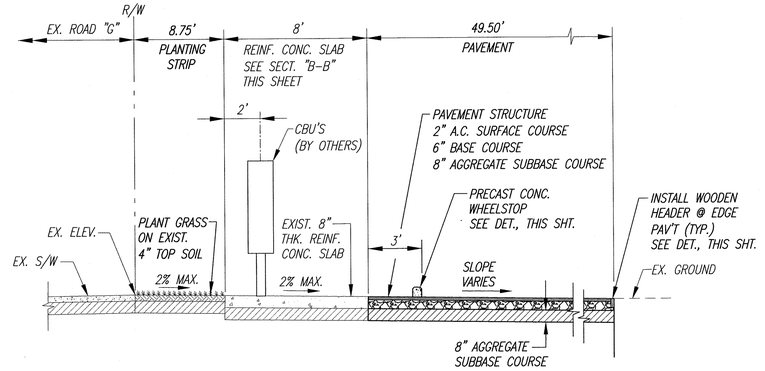
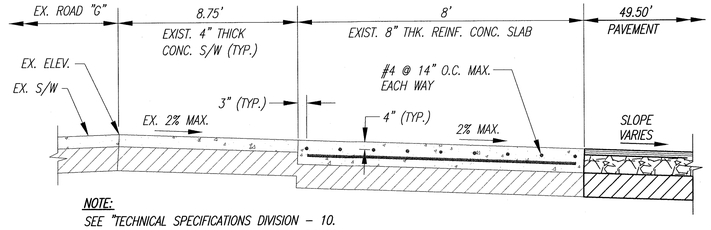


SECTION "A"-"A"

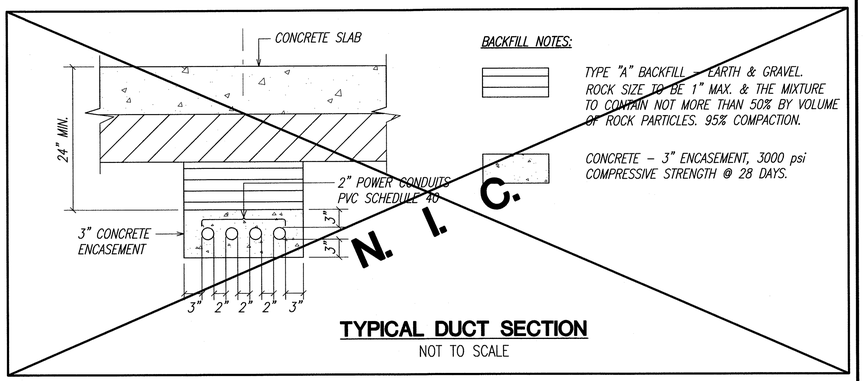
NOT TO SCALE



NOTE:
SEE "TECHNICAL SPECIFICATIONS DIVISION - 10. SECTION 10552 - CONC. PAD FOR MAIL BOXES" FOR ADDT'L. DET.

SECTION "B"-"B"

NOT TO SCALE



TYPICAL DUCT SECTION

NOT TO SCALE

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EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

MAIL BOX CENTER LAYOUT PLAN

DRAWN BY: MN	ENGINEER: SS	CHECKED BY: DSK

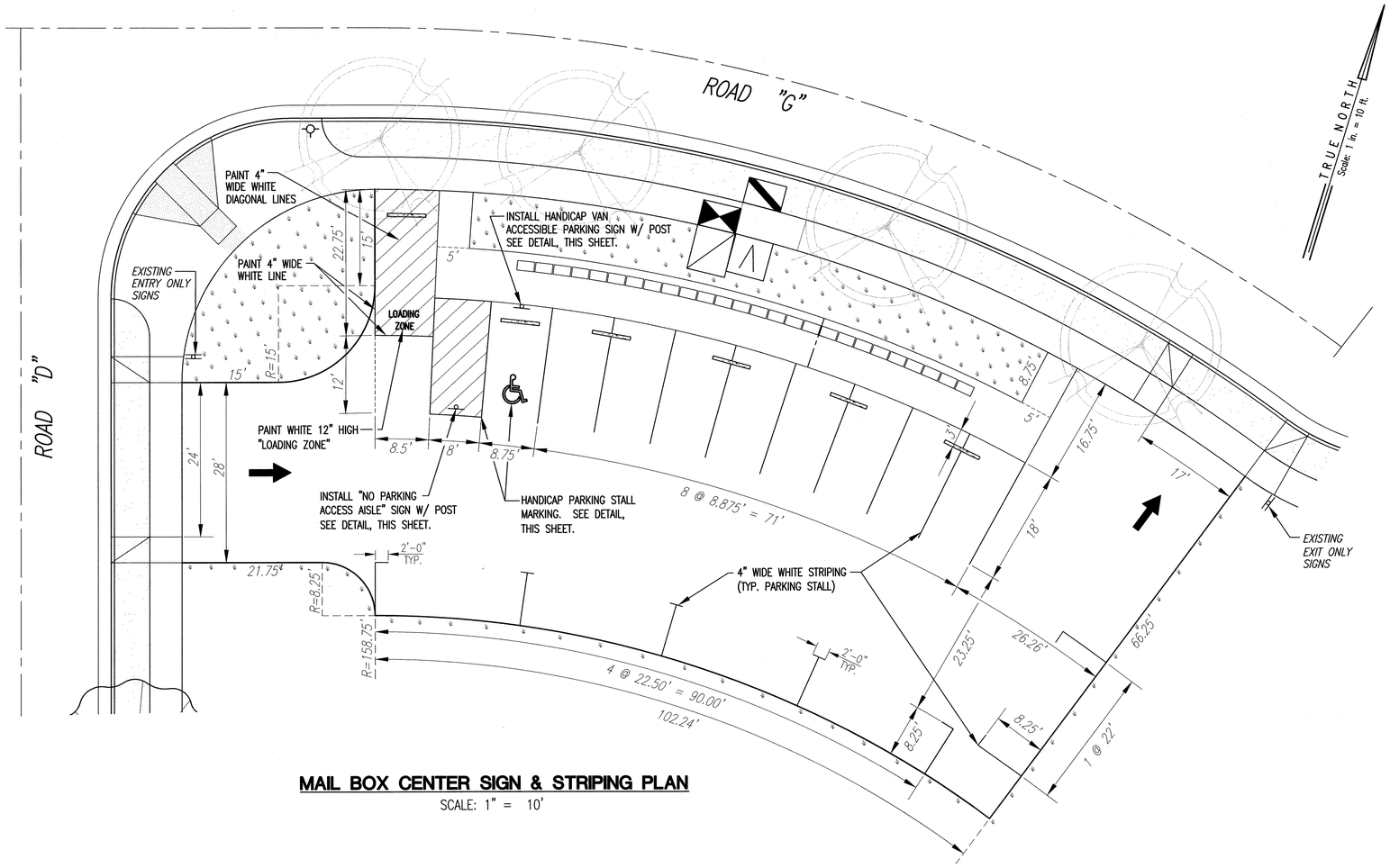
APPROVED:

DOUGLAS S. KAMIYA
LICENSED PROFESSIONAL ENGINEER
No. 3706-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

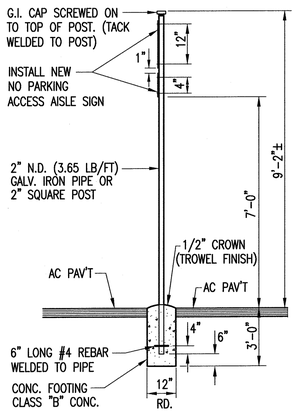
DWG. NO. **C-1** SHEET 2 OF 11 SHEETS

FILE	POCKET	FOLDER	NO.



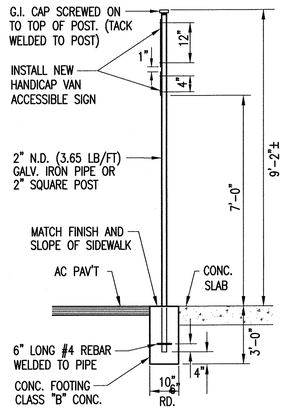
MAIL BOX CENTER SIGN & STRIPING PLAN

SCALE: 1" = 10'



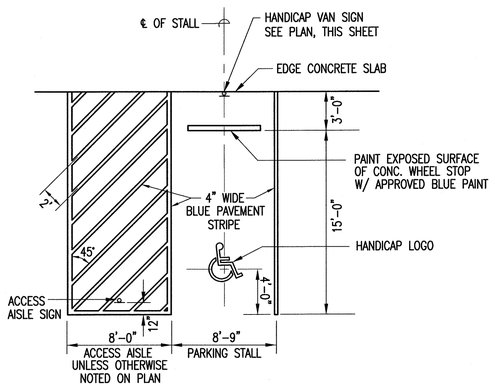
TYPICAL HANDICAP SIGN POST DETAIL

NOT TO SCALE



TYPICAL HANDICAP SIGN POST AT CONC SLAB DETAIL

NOT TO SCALE



HANDICAP PARKING STALL MARKINGS DETAIL

NOT TO SCALE

HANDICAP VAN SIGN

NOT TO SCALE

ACCESS AISLE SIGN

NOT TO SCALE

DOUGLAS S. KAMIYA
LICENSED PROFESSIONAL ENGINEER
No. 3706-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

cp&e Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, 26th Floor Honolulu, Hawaii

EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

MAIL BOX CENTER SIGN AND STRIPING PLAN

DRAWN BY: MN	ENGINEER: SS	CHECKED BY: DSK

APPROVED:

FILE	POCKET	FOLDER	NO.

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE BUILDING CODE OF THE CITY AND COUNTY OF HONOLULU (LATEST).

2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND THE SPECIFICATIONS.

3. THE GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN.

4. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.

5. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW BY THE ARCHITECT.

6. SEE CIVIL DRAWINGS FOR LOCATION OF LIGHT POLES

7. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.

8. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING AND THE PROTECTION OF ADJACENT PROPERTIES, STRUCTURES, STREETS AND UTILITIES FROM DAMAGE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.

9. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.

10. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROPERLY ALIGN THE STRUCTURE.

11. SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

12. ALL REQUESTS BY THE CONTRACTOR TO CHANGE WHAT IS SHOWN IN THE CONTRACT DOCUMENTS MUST BE SUBMITTED IN WRITING TO THE ENGINEER.

13. THE CONTRACTOR SHALL NOTIFY TANIMURA & ASSOCIATES (PH. 536-7692) THREE (3) WORKING DAYS PRIOR TO POURING CONCRETE.

FOUNDATION

1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE FOUNDATION INVESTIGATION REPORT BY PSC CONSULTANTS PROJECT NO. 24307.10, DATED OCTOBER 2005. UNLESS OTHERWISE INDICATED FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS REPORT. THE REPORT IS PART OF THIS PLAN AND SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.

2. THE SIDES OF THE POLE FOUNDATION SHALL BE UNDISTURBED SOIL.

3. ALL WATER, MUD AND DEBRIS SHALL BE REMOVED FROM THE BOTTOM OF FOOTING EXCAVATIONS PRIOR TO THE PLACEMENT OF CONCRETE.

4. CONTRACTOR SHALL NOTIFY PSC CONSULTANTS, 3 WORKING DAYS PRIOR TO BEGINNING ANY FOUNDATION WORK (BOTTOM OF FOOTING, STRUCTURAL FILL, ETC.).

REINFORCED CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-02.

2. ALL CONCRETE SHALL BE NORMAL WEIGHT (150 PCF) WITH AGGREGATES CONFORMING TO ASTM C-33. UNLESS OTHERWISE NOTED, THE COMPRESSIVE STRENGTHS OF CONCRETE AT 28 DAYS AND MAXIMUM AGGREGATE SIZES SHALL BE AS FOLLOWS:

	STRENGTH	AGGREGATE SIZE
DRILLED PIERS	3000 PSI	1-1/2"

3. MAXIMUM WATER-CEMENT RATIO SHALL NOT EXCEED 0.55.

4. ALL REINFORCING STEEL EXCEPT TIES AND STIRRUPS SHALL CONFORM TO ASTM A615 GRADE 60. TIES, STIRRUPS AND REBARS TO BE WELDED SHALL BE ASTM A615 GRADE 40.

5. UNLESS OTHERWISE NOTED, SPLICES, LAPS, DOWEL EXTENSIONS AND EMBEDMENTS SHALL BE 45 BAR DIAMETERS MINIMUM BUT NOT LESS THAN 2'-0".

6. ALL REINFORCING BARS MARKED CONTINUOUS (CONT.) ON THE PLANS SHALL BE LAPPED 45 BAR DIAMETERS MINIMUM BUT NOT LESS THAN 2'-0".

7. STAGGER ALL SPLICES WHERE POSSIBLE.

8. ALL WELDING OF REINFORCING SHALL CONFORM TO "STRUCTURAL WELDING CODE - REINFORCING STEEL" (AWS D1.4).

9. REBARS SHALL BE SUPPORTED, BENT AND PLACED AS PER "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" ACI 315 (LATEST).

10. MINIMUM COVER IN INCHES FOR REBARS FOR CAST-IN-PLACE CONCRETE:

CONCRETE CAST AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:	
#5 AND SMALLER	1-1/2"
#6 AND LARGER	2"

11. AT TIME CONCRETE IS PLACED, REINFORCING SHALL BE FREE FROM MUD, OIL, LAITANCE OR OTHER COATINGS ADVERSELY AFFECTING BOND CAPACITY.

12. REINFORCEMENT, ANCHOR BOLTS, DOWELS AND ALL OTHER EMBEDDED ITEMS SHALL BE POSITIVELY SECURED BEFORE POURING.

DESIGN CRITERIA

1. CODES: 2003 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS

2. FOUNDATION DESIGN CRITERIA
   - ALLOWABLE BEARING 2500 PSF
   - PASSIVE PRESSURE 250 PCF

3. LATERAL FORCES

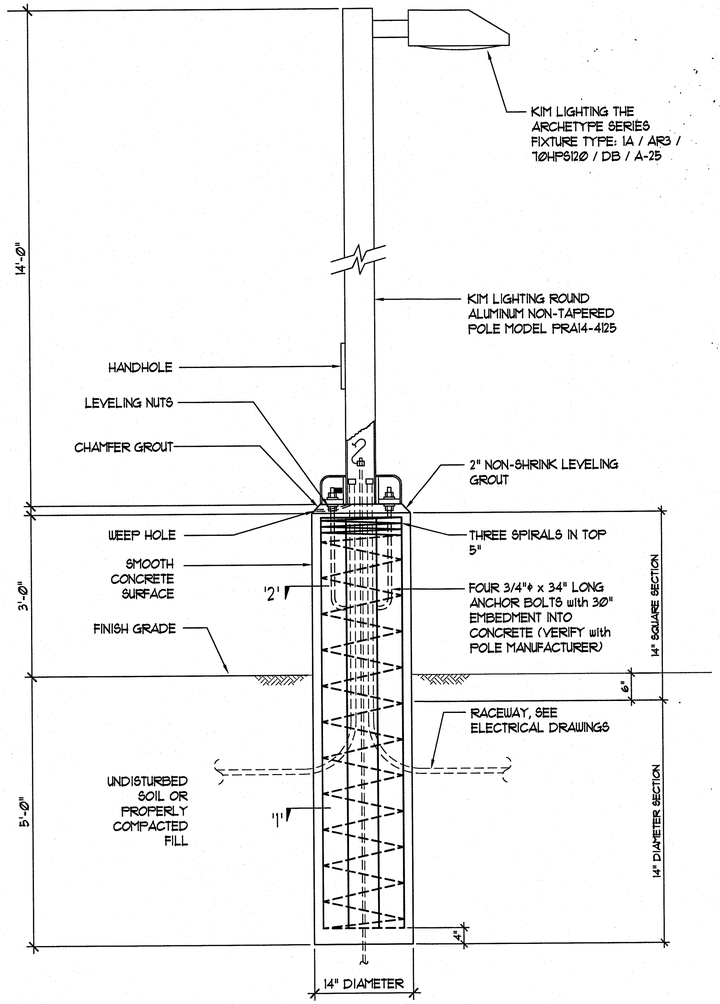
WIND
BASIC WIND SPEED (3 SECOND GUST) 105 MPH
WIND IMPORTANCE FACTOR Ir 1.0

SPECIAL INSPECTION

1. ITEMS REQUIRING SPECIAL INSPECTION:
   2. BOLTS IN CONCRETE
   4. REINFORCING STEEL

2. NOTIFY SPECIAL INSPECTOR 3 WORKING DAYS PRIOR TO NEED OF INSPECTION SERVICES.

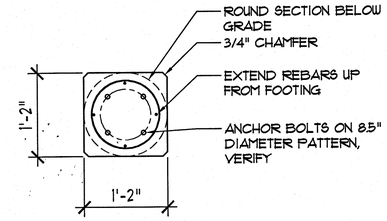
   CONTRACTOR SHALL NOTIFY TANIMURA & ASSOCIATES (PHONE 536-7692) 3 WORKING DAYS PRIOR TO NEED OF INSPECTION SERVICES. WORK SHALL NOT PROCEED UNTIL INSPECTION HAS BEEN COMPLETED.



LIGHT POLE SECTION

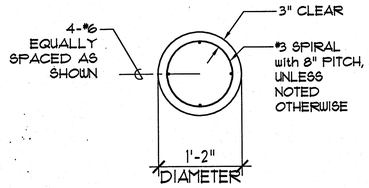
SC: 3/4"=1'-0"

A
S-1



"2" SECTION - SQUARE BASE

SC: 1"=1'-0"



"1" SECTION - ROUND FOOTING

SC: 1"=1'-0"

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

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EAST KAPOLEI I DEVELOPMENT
(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

MAIL BOX CENTER
LIGHT POLE SECTION

DRAWN BY: ACML	ENGINEER: ACML	CHECKED BY: TT

APPROVED:

ADRIAN C.M. LEE
LICENSED PROFESSIONAL ENGINEER
No. 9164-S
HAWAII, U.S.A.

Adrian Lee
EXPIRATION DATE OF THE LICENSE APRIL 30 2012

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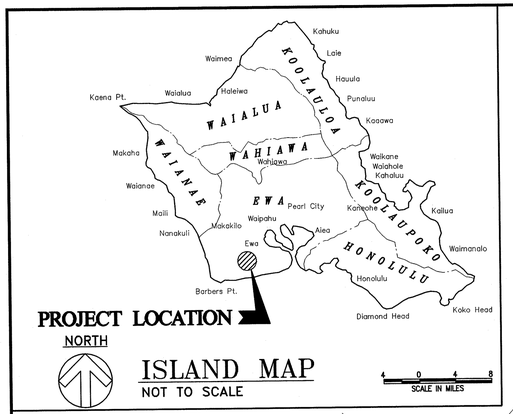
DWG. NO. S-1 SHEET 4 OF 11 SHEETS

FILE	POCKET	FOLDER	NO.



GENERAL NOTES

1. PROVIDE 5' MINIMUM CLEAR BETWEEN STREET LIGHT POLES & SEWER LATERALS.
2. PROVIDE 3' MINIMUM CLEAR BETWEEN PULLBOXES & SEWER LATERALS.
3. PROVIDE 6' MINIMUM CLEAR BETWEEN TRANSFORMER PADS & SEWER LATERALS (DO NOT STRADDLE).
4. PROVIDE 3' MINIMUM CLEAR BETWEEN DUCTLINES & SEWER LINES.
5. CONTRACTOR SHALL VERIFY SEWER LATERAL LOCATIONS WITH CIVIL SHEETS.
6. PROVIDE 3' MINIMUM HORIZONTAL CLEAR & 6" VERTICAL CLEAR BETWEEN WATER LINES & ALL ELECTRICAL SYSTEMS.
7. CONTRACTOR SHALL BE RESPONSIBLE TO ARRANGE WITH THE GENERAL CONTRACTOR TO IDENTIFY THE LOCATIONS OF CIVIL SITE UTILITIES, DRIVEWAYS, ETC. PRIOR TO ELECTRICAL CONTRACTORS LAYOUT OF ELECTRIC, TELEPHONE, STREET LIGHT, TRAFFIC SIGNAL, AND CATV SYSTEMS.

NOTES FOR CONSTRUCTION

a. THE LOCATION OF OVERHEAD AND UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE FROM EXISTING RECORDS WITH VARYING DEGREES OF ACCURACY AND ARE NOT GUARANTEED AS SHOWN. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN PROXIMITY OF UNDERGROUND LINES AND SHALL MAINTAIN ADEQUATE CLEARANCE WHEN OPERATING EQUIPMENT UNDER ANY OVERHEAD LINES.

b. THE CONTRACTOR IS TO COMPLY WITH THE DIRECTIONS OF THE STATE OF HAWAII OCCUPATIONAL SAFETY AND HEALTH LAW (DOSH).

c. WHEN TRENCH EXCAVATION IS ADJACENT TO EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT, AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY PROTECT IT FROM DAMAGE.

d. AS REQUIRED BY THE CITY AND COUNTY OF HONOLULU, THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.

e. WHERE PEDESTRIAN WALKWAYS EXIST, SUCH WALKWAYS SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED.

f. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHT-OF-WAYS ARE OTHERWISE PROVIDED FOR SATISFACTORILY.

g. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN BY THE ENGINEER TO EXIST FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHT POLE, 70W HIGH PRESSURE SODIUM LUMINAIRE, GALVANIZED STEEL POLE & BRACKET ARM, SEE DETAIL D/E-7		24" X 36" NON-CONCRETE LIGHT PULLBOX SEE SHEET A/E-7 FOR DETAILS
	EXST. STREET LIGHT, 100W HIGH PRESSURE SODIUM LUMINAIRE	M	HECO METERING CABINET, EQUIPMENT, AND EASEMENT
	EXST. STREET LIGHT, 70W HIGH PRESSURE SODIUM LUMINAIRE		EXST. HECO 3' X 5' HANDHOLE
	BREAKLINE TO BEGIN & END DUCT SECTION TYPE		EXST. SIC 3' X 5' HANDHOLE
	ELECTRIC/SIGNAL DUCTLINE WITH DESIGNATORS;		
A 2-2L	INDICATES TYPE "A" DUCT SECTION WITH "2-2L" DUCTS. SEE SHEET C/E-7 FOR DUCT SECTIONS AND CONDUIT DETAIL		EXST. HECO XFMR EASEMENT PAD LOT
			EXST. HECO SWITCHING EASEMENT PAD LOT
	EXST. STUB OUT		EXST. TRAFFIC SIGNAL TYPE "B" PULLBOX
e	EXST. UNDERGROUND ELECTRICAL DUCTLINE & WIRING		EXST. TRAFFIC SIGNAL TYPE "C" PULLBOX,
st	EXST. UNDERGROUND STREET LIGHT CABLES & CONDUITS	V	EXST. CATV POWER SUPPLY EQUIP., 6' X 6' EASEMENT,
		1	NOTE SYMBOL, SEE PLAN FOR NOTES

SCOTT S. LEE
LICENSED PROFESSIONAL ENGINEER
No. 10038-E
HAWAII, U.S.A.
10-22-10

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REVISION DATE	DESCRIPTION	MADE BY	APPROVED

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

EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

ELECTRICAL SYMBOLS, MAPS, NOTES

DRAWN BY:	ENGINEER: SL	CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE

DATE

DATE

DATE

FILE	POCKET	FOLDER	NO.

DWG. NO. E-1

SHEET 5 OF 11 SHEETS

LAST SAVE: 10/22/10 @ 14:43:17 BY: RT PLOT SC 12.000000=12.000000
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HAWAIIAN ELECTRIC COMPANY (HECO) NOTES

1. LOCATION OF HECO FACILITIES

THE LOCATION OF HECO'S OVERHEAD AND UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE FROM EXISTING RECORDS WITH VARYING DEGREES OF ACCURACY AND ARE NOT GUARANTEED AS SHOWN. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATIONS OF THE FACILITIES AND SHALL EXERCISE PROPER CARE IN EXCAVATING AND WORKING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES AND UTILITY CROSSINGS ARE SHOWN, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS AND CROSSINGS TO VERIFY THE DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO HECO'S FACILITIES WHETHER SHOWN OR NOT SHOWN ON THE PLANS.

2. COMPLIANCE WITH HAWAII OCCUPATIONAL SAFETY AND HEALTH LAWS

THE CONTRACTOR SHALL COMPLY WITH THE STATE OF HAWAII'S OCCUPATIONAL SAFETY AND HEALTH LAWS AND REGULATIONS, INCLUDING WITHOUT LIMITATION, THOSE RELATED TO WORKING ON OR NEAR EXPOSED OR ENERGIZED ELECTRICAL LINES AND EQUIPMENT.

3. EXCAVATION PERMIT

THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM HECO'S TECHNICAL DIVISION (543-5654) LOCATED AT 820 WARD AVENUE, 4TH FLOOR, TWO WEEKS PRIOR TO STARTING CONSTRUCTION. PLEASE REFER TO OUR REQUEST NUMBER AT THAT TIME.

4. CAUTION!!! ELECTRICAL HAZARD!!!

EXISTING HECO OVERHEAD AND UNDERGROUND LINES ARE ENERGIZED AND WILL REMAIN ENERGIZED DURING CONSTRUCTION UNLESS PRIOR SPECIAL ARRANGEMENTS HAVE BEEN MADE WITH HECO. ONLY HECO PERSONNEL ARE TO HANDLE THESE ENERGIZED LINES AND ERECT TEMPORARY GUARDS TO PROTECT THESE LINES FROM DAMAGE. THE CONTRACTOR SHALL WORK CAUTIOUSLY AT ALL TIMES TO AVOID ACCIDENTS AND DAMAGE TO EXISTING HECO FACILITIES, WHICH CAN RESULT IN ELECTROCUTION.

5. OVERHEAD LINES

STATE LAW (OSHA 1910.269 (k) (28)) REQUIRES THAT A WORKER AND THE LONGEST OBJECT HE OR SHE MAY CONTACT CANNOT COME CLOSER THAN A MINIMUM RADIAL CLEARANCE OF 10 FEET WHEN WORKING CLOSE TO OR UNDER ANY OVERHEAD LINES RATED 50KV AND BELOW. FOR EACH ADDITIONAL 1KV ABOVE 50KV, AN ADDITIONAL 0.4 INCH SHALL BE ADDED TO THE 10- FOOT CLEARANCE REQUIREMENT. THE PRECEDING INFORMATION ON LINE CLEARANCE REQUIREMENTS IS PROVIDED AS A CONVENIENCE AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE INFORMED OF AND COMPLY WITH ANY REVISIONS OR AMENDMENTS TO THE LAW.

SHOULD THE CONTRACTOR ANTICIPATE THAT HIS WORK WILL RESULT IN THE NEED TO ENCROACH WITHIN THE MINIMUM REQUIRED CLEARANCE AT ANY TIME, THE CONTRACTOR SHALL NOTIFY HECO AT LEAST FOUR (4) WEEKS PRIOR TO THE PLANNED ENCROACHMENT SO THAT, IF FEASIBLE, THE NECESSARY PROTECTIONS (E.G. RELOCATE, DE- ENERGIZE, OR BLANKET HECO LINES) CAN BE PUT IN PLACE. HECO'S COST OF SAFEGUARDING ITS LINES WILL BE CHARGED TO THE CONTRACTOR.

CONTACT HECO'S CUSTOMER INSTALLATIONS DEPARTMENT AT 543-7846 FOR ASSISTANCE IN IDENTIFYING AND SAFEGUARDING OVERHEAD POWER LINES.

REFER TO SECTION X OF HECO'S ELECTRIC SERVICE INSTALLATION MANUAL FOR ADDITIONAL GUIDELINES WHEN WORKING AROUND HECO'S FACILITIES. A COPY MAY BE OBTAINED FROM HECO'S CUSTOMER INSTALLATIONS DEPARTMENT.

6. POLE BRACING

A MINIMUM CLEARANCE OF 10 FEET MUST BE MAINTAINED WHEN EXCAVATING AROUND UTILITY POLES AND/OR THEIR ANCHOR SYSTEM TO PREVENT WEAKENING OR POLE SUPPORT FAILURE. SHOULD WORK REQUIRE EXCAVATING WITHIN 10 FEET OF A POLE AND/OR ITS ANCHOR SYSTEM, THE CONTRACTOR SHALL PROTECT, SUPPORT, SECURE, AND TAKE ALL OTHER PRECAUTIONS TO PREVENT DAMAGE TO OR LEANING OF THESE POLES. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASSOCIATED COSTS TO BRACE, REPAIR, OR STRAIGHTEN POLES. ALL MEANS OF STRUCTURAL SUPPORT FOR THE POLE PROPOSED BY THE CONTRACTOR SHALL FIRST BE REVIEWED BY HECO BEFORE IMPLEMENTATION. FOR POLE BRACING INSTRUCTIONS, THE CONTRACTOR SHALL CALL THE HECO CONSTRUCTION AND MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT AT 543-4223 A MINIMUM OF TWO (2) WEEKS IN ADVANCE.

7. UNDERGROUND LINES

THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF UNDERGROUND LINES. HECO'S EXISTING ELECTRICAL CABLES ARE ENERGIZED AND WILL REMAIN ENERGIZED DURING CONSTRUCTION. ONLY HECO PERSONNEL ARE TO BREAK INTO EXISTING HECO FACILITIES, HANDLE THESE CABLES, AND ERECT TEMPORARY GUARDS TO PROTECT THESE CABLES FROM DAMAGE. THE COST OF HECO'S ASSISTANCE IN PROVIDING PROPER SUPPORT AND PROTECTION OF ITS UNDERGROUND LINES WILL BE CHARGED TO THE CONTRACTOR. SPECIAL PRECAUTIONS ARE REQUIRED WHEN EXCAVATING NEAR HECO'S 138KV UNDERGROUND LINES (SEE HECO INSTRUCTIONS TO CONSULTANTS/CONTRACTORS ON "EXCAVATION NEAR HECO'S UNDERGROUND 138KV LINES" FOR DETAILED REQUIREMENTS).

FOR VERIFICATION OF UNDERGROUND LINES, THE CONTRACTOR SHALL CALL HECO'S UNDERGROUND DIVISION AT 543-7049 A MINIMUM OF 72 HOURS IN ADVANCE.

FOR ASSISTANCE IN PROVIDING PROPER SUPPORT AND PROTECTION OF THESE LINES, THE CONTRACTOR SHALL CALL HECO'S CONSTRUCTION & MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT, AT 543-4223, A MINIMUM OF TWO (2) WEEKS IN ADVANCE.

8. UNDERGROUND FUEL PIPELINES

THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF HECO'S UNDERGROUND FUEL OIL PIPELINES. SPECIAL PRECAUTIONS ARE REQUIRED WHEN EXCAVATING NEAR HECO'S UNDERGROUND FUEL OIL PIPELINES (SEE HECO INSTRUCTIONS TO CONSULTANTS/CONTRACTORS ON "EXCAVATION NEAR HECO'S UNDERGROUND FUEL PIPELINES" FOR DETAILED REQUIREMENTS).

9. EXCAVATIONS

WHEN TRENCH EXCAVATION IS ADJACENT TO OR BENEATH HECO'S EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR:

a) SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE AND TO PREVENT POSSIBLE SLIDES, CAVE-INS, AND SETTLEMENTS.
b) PROPERLY SUPPORTING EXISTING STRUCTURES OR FACILITIES WITH BEAMS, STRUTS, OR UNDER-PINNINGS TO FULLY PROTECT IT FROM DAMAGE.
c) BACKFILLING WITH PROPER BACKFILL MATERIAL INCLUDING SPECIAL THERMAL BACKFILL WHERE EXISTING (REFER TO ENGINEERING DEPARTMENT FOR THERMAL BACKFILL SPECIFICATIONS).

10. RELOCATION OF HECO FACILITIES

ANY WORK REQUIRED TO RELOCATE OR MODIFY HECO FACILITIES SHALL BE DONE BY HECO, OR BY THE CONTRACTOR UNDER HECO'S SUPERVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, AND SHALL PROVIDE NECESSARY SUPPORT FOR HECO'S WORK, WHICH MAY INCLUDE, BUT NOT BE LIMITED TO, EXCAVATION AND BACKFILL, PERMITS AND TRAFFIC CONTROL, BARRICADING, AND RESTORATION OF PAVEMENT, SIDEWALKS, AND OTHER FACILITIES.

ALL COSTS ASSOCIATED WITH ANY RELOCATION OR MODIFICATION (EITHER TEMPORARY OR PERMANENT) FOR THE CONVENIENCE OF THE CONTRACTOR, OR TO ENABLE THE CONTRACTOR TO PERFORM HIS WORK IN A SAFE AND EXPEDITIOUS MANNER IN FULFILLING HIS CONTRACT OBLIGATIONS SHALL BE BORNE BY THE CONTRACTOR.

11. CONFLICTS

ANY REDESIGN OR RELOCATION OF HECO'S FACILITIES NOT SHOWN ON THE PLANS MAY BE CAUSE FOR LENGTHY DELAYS. THE CONTRACTOR ACKNOWLEDGES THAT HECO IS NOT RESPONSIBLE FOR ANY DELAY OR DAMAGE THAT MAY ARISE AS A RESULT OF ANY CONFLICTS DISCOVERED OR IDENTIFIED WITH RESPECT TO THE LOCATION OR CONSTRUCTION OF HECO'S ELECTRICAL FACILITIES IN THE FIELD, REGARDLESS OF WHETHER THE CONTRACTOR HAS MET THE REQUESTED MINIMUM ADVANCE NOTICES. IN ORDER TO MINIMIZE ANY DELAY OR IMPACT ARISING FROM SUCH CONFLICTS, HECO SHOULD BE NOTIFIED IMMEDIATELY UPON DISCOVERY OR IDENTIFICATION OF SUCH CONFLICT.

12. DAMAGE TO HECO FACILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL HECO SURFACE AND SUBSURFACE UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGES TO HECO'S FACILITIES AS A RESULT OF HIS OPERATIONS. THE CONTRACTOR SHALL IMMEDIATELY REPORT SUCH DAMAGES TO HECO'S TROUBLE DISPATCHER AT 548-7961. REPAIR WORK SHALL BE DONE BY HECO OR BY THE CONTRACTOR UNDER HECO'S SUPERVISION COSTS FOR DAMAGES TO HECO'S FACILITIES SHALL BE BORNE BY THE CONTRACTOR.

IN CASE OF DAMAGE OR SUSPECTED DAMAGE TO HECO'S FUEL PIPELINE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY HECO'S HONOLULU POWER PLANT SHIFT SUPERVISOR AT 533-2102 (A 24-HOUR NUMBER) SO HECO PERSONNEL CAN SECURE THE DAMAGED SECTION AND REPORT ANY OIL SPILLS TO THE PROPER AUTHORITIES. ALL COSTS ASSOCIATED WITH THE DAMAGE, REPAIR, AND OIL SPILL CLEANUP SHALL BE BORNE BY THE CONTRACTOR.

13. HECO STAND-BY PERSONNEL

THE CONTRACTOR MAY REQUEST HECO TO PROVIDE AN INSPECTOR TO STAND-BY DURING CONSTRUCTION NEAR HECO'S FACILITIES. THE COST OF SUCH INSPECTION WILL BE CHARGED TO THE CONTRACTOR.

THE CONTRACTOR SHALL CALL THE HECO CONSTRUCTION AND MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT AT 543-4223 A MINIMUM OF 5 WORKING DAYS IN ADVANCE TO ARRANGE FOR HECO STAND-BY PERSONNEL.

14. CLEARANCES

THE FOLLOWING CLEARANCES SHALL BE MAINTAINED BETWEEN HECO'S DUCTLINE AND ALL ADJACENT STRUCTURES (CHARTED AND UNCHARTED) IN THE TRENCH:

STRUCTURE TYPE	MINIMUM CLEARANCE(INCHES)
WATER LINES, PARALLEL	36 (A)
WATER LINES, CROSSING	12 (B)
SEWER LINES, PARALLEL	36 (C)
SEWER LINES, CROSSING	24 (D)
DRAIN LINES, PARALLEL	12
DRAIN LINES, CROSSING	6 (E)
ELECTRICAL AND GAS LINES, PARALLEL	12
ELECTRICAL AND GAS LINES, CROSSING	12
TELEPHONE LINES, PARALLEL	6 (E)
TELEPHONE LINES, CROSSING	6 (E)
CHEVRON OIL LINES, PARALLEL	36
CHEVRON OIL LINES, CROSSING	48 BELOW OIL LINE (F)

A. THE MINIMUM HORIZONTAL CLEARANCES TO WATER LINES PARALLEL TO ELECTRICAL DUCTLINES MUST BE INCREASED TO 60 INCHES IF THE WATER LINE IS GREATER THAN 16 INCHES IN DIAMETER
B. THE MINIMUM VERTICAL CLEARANCES TO WATER LINES CROSSING ELECTRICAL DUCTLINES CAN BE REDUCED TO 6 INCHES IF THE ELECTRICAL DUCTLINE STRUCTURE IS CONCRETE ENCASED AND IS BELOW THE WATER LINE AND THE WATER LINE IS LESS THAN 16 INCHES IN DIAMETER.
C. A MINIMUM HORIZONTAL CLERANCE OF 36 INCHES IS REQUIRED BETWEEN NEW HANDHOLES AND EXISTING SEWER LATERALS.
D. THE MINIMUM VERTICAL CLEARANCES TO SEWER PIPES CROSSING ELECTRICAL DUCTLINES CAN BE REDUCED TO 12 INCHES IF THE SEWER PIPE IS JACKETED IN CONCRETE.
E. THE MINIMUM CLEARANCES SHALL BE INCREASED TO 12 INCHES IF THE ELECTRICAL DUCTLINE IS DIRECT BURIED.
F. THE MINIMUM VERTICAL CLEARANCES TO OIL LINES CROSSING ELECTRICAL DUCTLINES CAN BE REDUCED TO 24 INCHES BELOW OIL LINES IF THE CROSSINGS ARE ENCASED IN 6 INCHES OF CONCRETE.
G. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER & HECO OF ANY HEAT SOURCES (POWER CABLE DUCT BANK, STEAMLINE, ETC.) ENCOUNTERED THAT ARE NOT PROPERLY IDENTIFIED ON THE DRAWING.

THE FOLLOWING CLEARANCE SHALL BE MAINTAINED BETWEEN HECO'S FUEL OIL PIPELINES AND ALL ADJACENT STRUCTURES: 24-INCHES, PARALLEL OR CROSSING. THE MINIMUM CLEARANCE CAN BE REDUCED TO 12 INCHEL (PARALLEL AND BELOW ONLY) IF THE STRUCTURE IS JACKETED IN CONCRETE.

15. INDEMNITY

THE CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS HECO FROM AND AGAINST ALL LOSSES, DAMAGES, CLAIMS, AND ACTIONS, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEY'S FEES AND COSTS BASED UPON OR ARISING OUT OF DAMAGE TO PROPERTY OR INJURIES TO PERSONS, OR OTHER TORTIOUS ACTS CAUSED OR CONTRIBUTED TO BY CONTRACTOR OR ANYONE ACTING UNDER ITS DIRECTION OR CONTROL OR ON ITS BEHALF; PROVIDED CONTRACTOR'S INDEMNITY SHALL NOT BE APPLICABLE TO ANY LIABILITY BASED UPON THE SOLE NEGLIGENCE OF HECO.

16. SCHEDULE

CONTRACTOR SHALL FURNISH HIS CONSTRUCTION SCHEDULE __ WORKING DAYS PRIOR TO STARTING WORK ON HECO FACILITIES. CONTRACTOR SHALL GIVE HECO, IN WRITING __ WORKING DAYS NOTICE TO PROCEED WITH HECO'S PORTION OF WORK.

17. AUTHORITY

ALL CONSTRUCTION, RESTORATION WORK, AND INSPECTION SHALL BE SUBJECT TO WHICHEVER GOVERNMENTAL AGENCY HAS AUTHORITY OVER THE WORK.

18. SPECIFICATIONS

CONSTRUCTION OF HECO'S UNDERGROUND FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISIONS OF HECO SPECIFICATIONS CS7001, CS7003, CS7202, CS9301, AND CS9401 AND APPLICABLE HECO STANDARDS.

19. CONSTRUCTION

CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES TO PROPERLY PERFORM AND FULLY COMPLETE ALL WORK SHOWN ON THE CONTRACT, DRAWINGS, AND SPECIFICATIONS. ALL MATERIALS SHALL BE NEW AND MANUFACTURED IN THE UNITED STATES OF AMERICA. ALL MANHOLE, HANDHOLE, AND DUCTLINE INSTALLATIONS SHALL BE INSPECTED AND APPROVED BY HECO PRIOR TO EXCAVATION AND PRIOR TO PLACING CONCRETE. CONTRACTOR SHALL NOTIFY HECO'S INSPECTION DIVISION AT 543-4356 AT LEAST 48 HOURS PRIOR TO PLACING CONCRETE.

CONTRACTOR TO COORDINATE WORK TO BREAK INTO HECO'S EXISTING ELECTRICAL FACILITIES WITH HECO'S UNDERGROUND DIVISION AT 543-7871 AT LEAST 10 WORKING DAYS IN ADVANCE.

20. STAKEOUT

THE CONTRACTOR SHALL ARRANGE FOR TONEOUTS OF ALL UNDERGROUND FACILITIES AND SHALL STAKEOUT ALL PROPOSED HECO FACILITIES WITHIN THE PROJECT AREA SO AS TO NOT CONFLICT WITH ANY UTILITY (EXISTING OR PROPOSED) AND ANY PROPOSED CONSTRUCTION OR IMPROVEMENT WORK FOR VERIFICATION BY HECO BEFORE PROCEEDING WITH HECO WORK.

21. DUCTLINES

ALL DUCTLINE INSTALLATIONS SHALL BE PVC SCHEDULE 40 ENCASED IN CONCRETE, UNLESS OTHERWISE NOTED. ALL COMPLETED DUCTLINES SHALL BE MANDREL TESTED BY THE CONTRACTOR IN THE PRESENCE OF HECO'S INSPECTOR USING HECO'S STANDARD PRACTICE. THE CONTRACTOR SHALL INSTALL A 1/8" POLYOLEFIN PULL LINE IN ALL COMPLETED DUCTLINES AFTER MANDREL TESTING IS COMPLETE.

22. JOINT POLE REMOVAL

THE LAST JOINT POLE OCCUPANT OFF THE POLES SHALL REMOVE THE POLES.

23. AS-BUILT PLANS

THE CONTRACTOR SHALL PROVIDE HECO WITH TWO SETS OF AS-BUILT REPRODUCIBLE TRACINGS SHOWING THE OFFSETS, STATIONING, AND VERTICAL ELEVATION OF THE DUCT LINE(S) CONSTRUCTED.

SCOTT S. LEE
LICENSED PROFESSIONAL ENGINEER
No. 10038-E
HAWAII, U.S.A.
10-22-10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

cp&e Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, 20th Floor Honolulu, Hawaii

EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

HECO NOTES

DRAWN BY:	ENGINEER: SL	CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE

DATE

DATE

DATE

FILE	POCKET	FOLDER	NO.

DWG. NO. E-2

SHEET 6 OF 11 SHEETS

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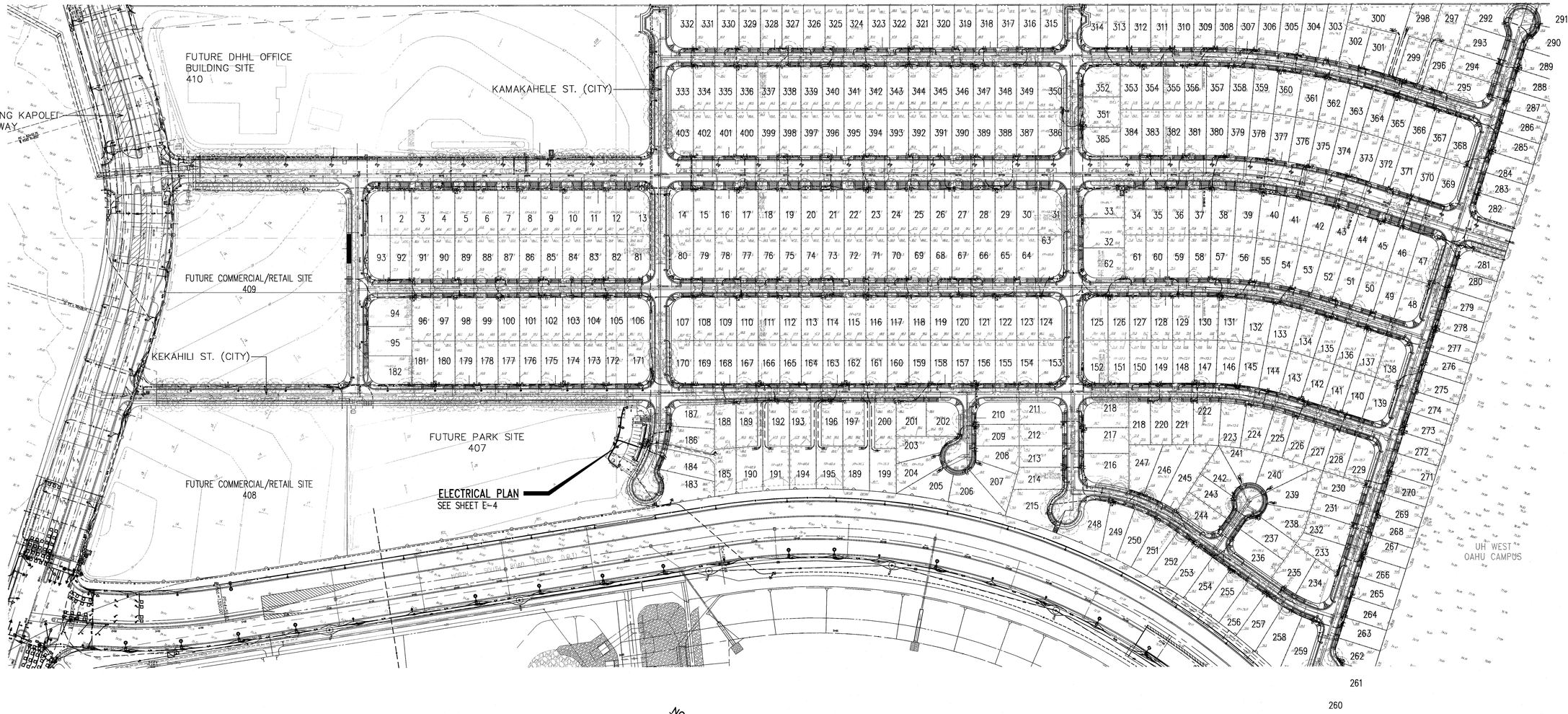

ELECTRICAL SITE PLAN

SCALE: 1"=120'

120' 60' 0 120' 240' 360'

SCALE: 1"=120'

GRAPHIC SCALE

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

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

EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

ELECTRICAL SITE PLAN

DRAWN BY:	ENGINEER: SL	CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE

DATE DATE DATE

SCOTT S. LEE
LICENSED PROFESSIONAL ENGINEER
No. 10038-E
HAWAII, U.S.A.
10-22-12

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FILE	POCKET	FOLDER	NO.

DWG. NO. E-3

SHEET 7 OF 11 SHEETS

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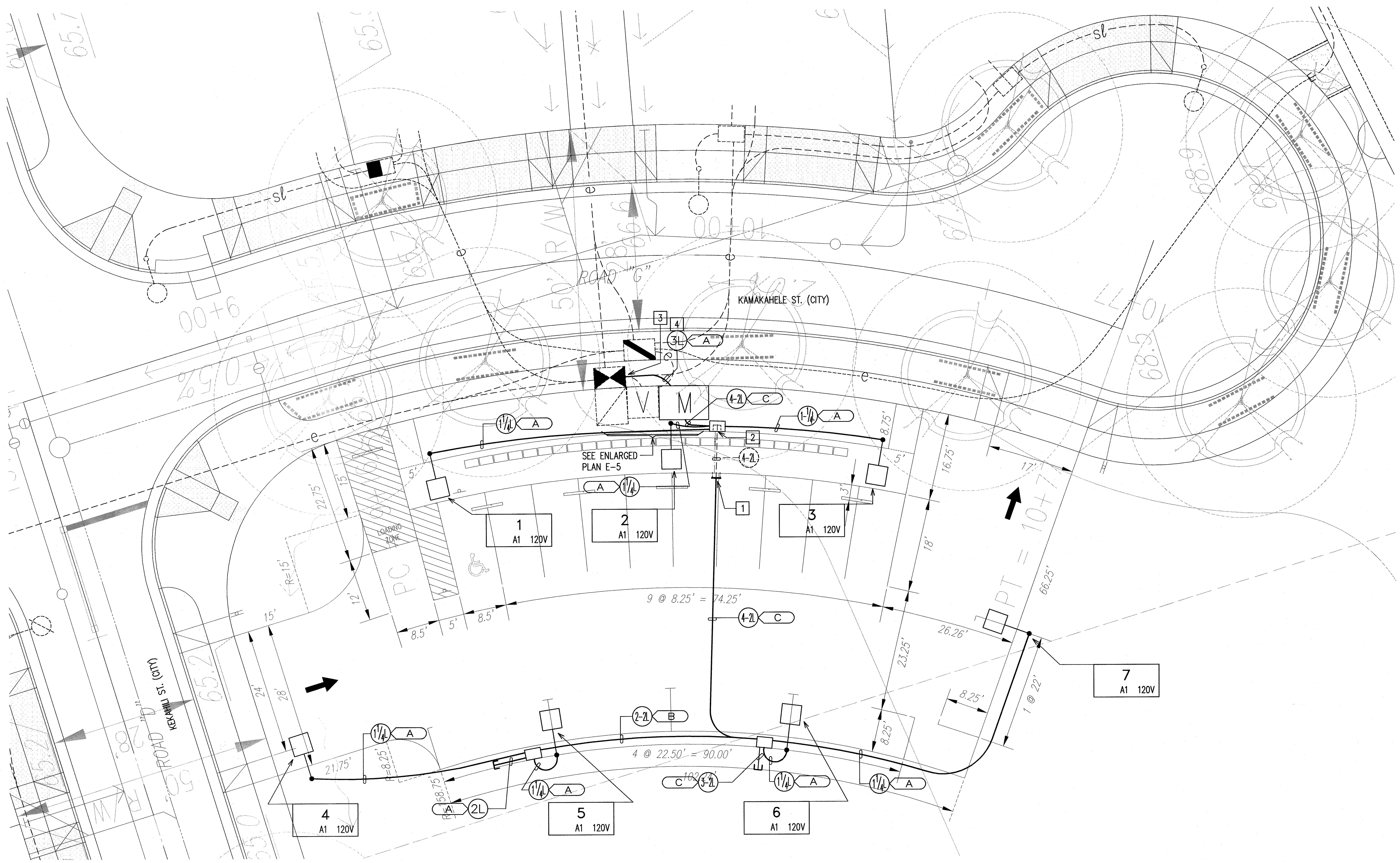

NOTE(S):

1. CAREFULLY EXCAVATE TO EXPOSE EXST DUCTS, PROVIDE COUPLINGS AND EXTEND. CONTRACTOR SHALL VERIFY EXACT LOCATION IN THE FIELD AND ADJUST HIS WORK ACCORDINGLY.
2. INTERCEPT 4-2"C STUB OUT WITH PULLBOX.
3. CAREFULLY EXCAVATE TO EXPOSE SIDE OF PULLBOX. BREAK PULLBOX WALL AND INSTALL CONDUIT. REPAIR PULLBOX TO MATCH EXISTING AND BACKFILL.
4. SAWCUT EXISTING SIDEWALK PRIOR TO TRENCH EXCAVATION. RESTORE SIDEWALK PER CITY REQUIREMENTS, THICKNESS SHALL MATCH EXISTING SIDEWALK DESIGN

NORTH

ELECTRICAL PLAN

SCALE: 1"=10'

10' 5' 0 10' 20' 30'

SCALE: 1"=10'

GRAPHIC SCALE

SCOTT S. [signature] LICENSED PROFESSIONAL ENGINEER No. 10038-E HAWAII, U.S.A.

10-22-10

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EAST KAPOLEI I DEVELOPMENT

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HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

ELECTRICAL PLAN

DRAWN BY: | ENGINEER: SL | CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE DATE

DATE DATE

DWG. NO. E-4 SHEET 8 OF 11 SHEETS

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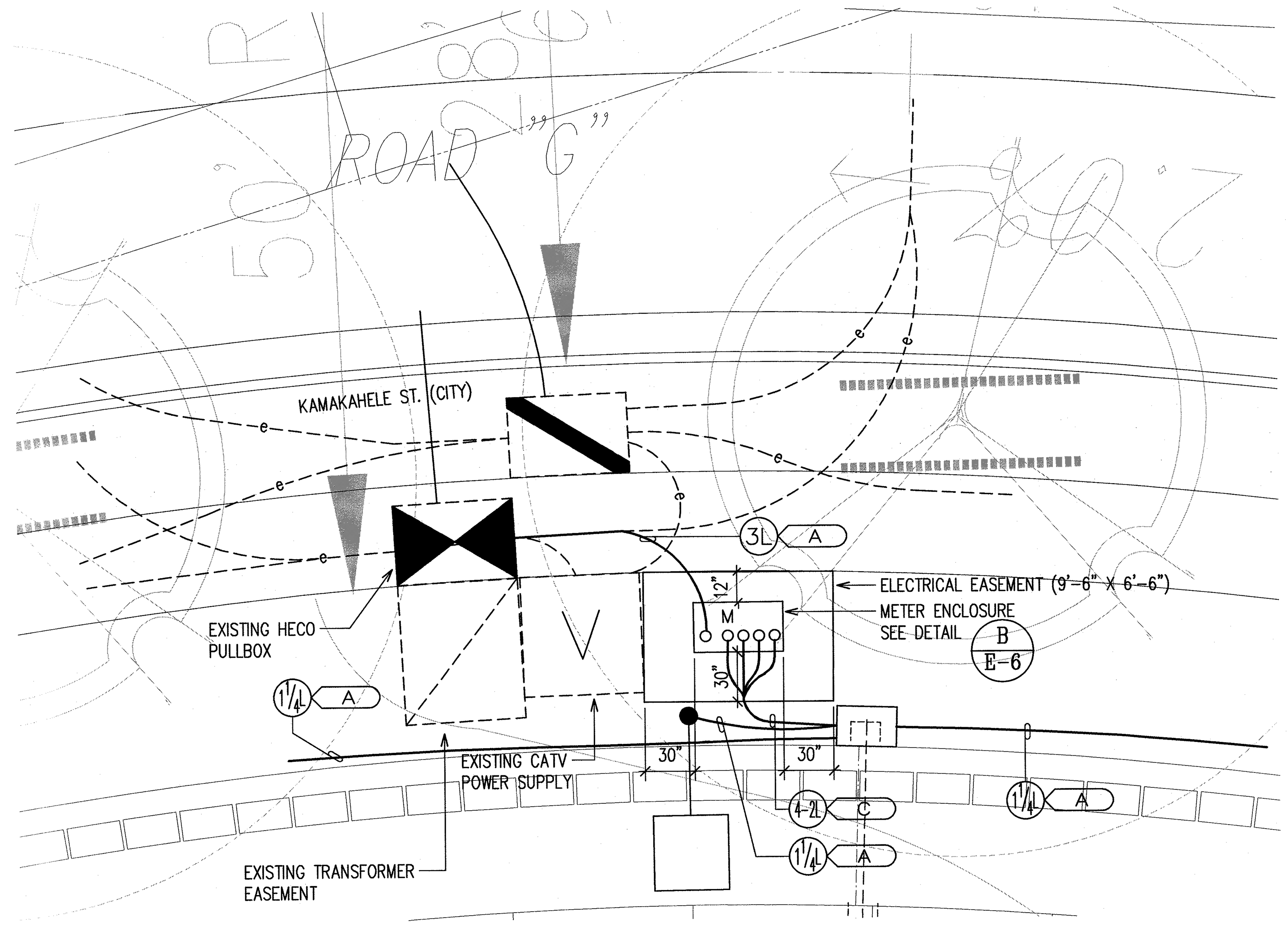

NORTH

ENLARGED ELECTRICAL PLAN

SCALE: 1"=5'

5' 2.5' 0 5' 10' 15'

SCALE: 1"=5'

GRAPHIC SCALE

SCOTT S. [signature] LICENSED PROFESSIONAL ENGINEER No. 10038-E HAWAII, U.S.A.

10-22-10

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LICENSE EXPIRATION DATE: 04/30/12

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1100 Alakea Street, Sixth Floor Honolulu, Hawaii

EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

ENLARGED ELECTRICAL PLAN

DRAWN BY:	ENGINEER: SL	CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE DATE

DATE DATE

DWG. NO. E-5 SHEET 9 OF 11 SHEETS

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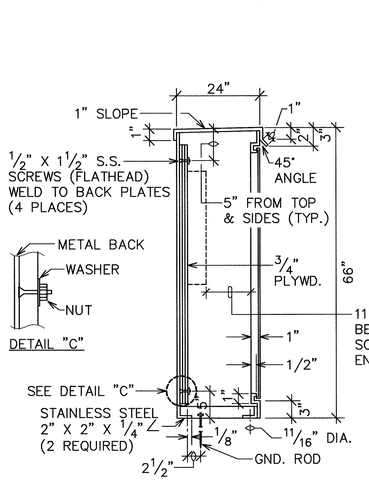
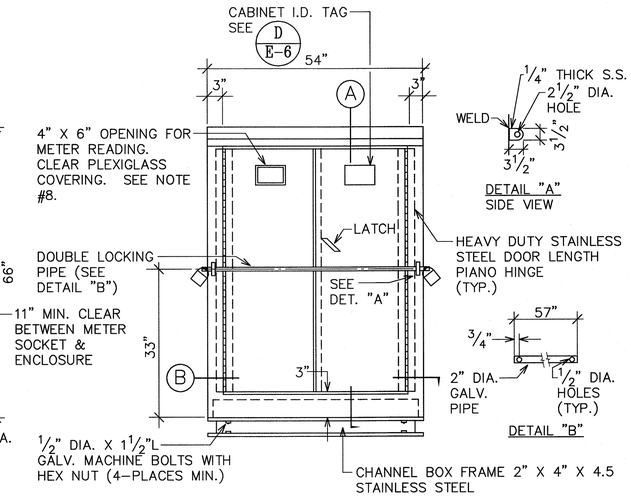


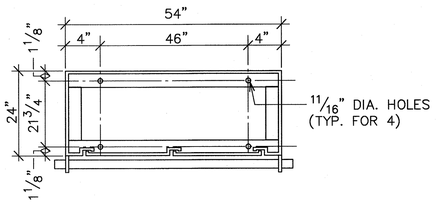
SECTION "A"



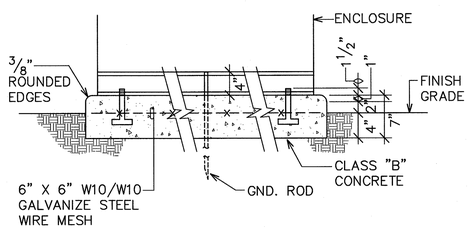
ELEVATION

NOTES:

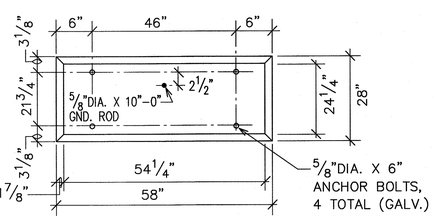
1. CABINET TO BE PRIMED WITH ONE COAT SHOP PRIMER.
2. PLYWOOD TO BE ¾" THICK (MIN.) TERMITE TREATED PLYWOOD. (EXTERIOR GRADE)
3. MADE FROM 10 GAUGE TYPE 316 STAINLESS SHEEL.
4. PROVIDE ACRYLIC ENAMEL FINISH, COLOR TO MATCH TRANS-FORMER. (2 COATS)
5. ENCLOSURE SHALL BE NEMA 3R WITH NEOPRENE GASKETING.
6. PADLOCKS:
   1 - HECO FURNISHED
   1 - CONTRACTOR FURNISHED, BRASS CORBIN SESAMEE COMBINATION
7. SHOP FABRICATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.
8. LOCATION OF OPENING FOR METER READER TO CORRESPOND WITH LOCATION OF METER (CENTER OPENING WITH METER SOCKET).
9. MAINTAIN 4'-0" MIN. CLEARANCE FRONTING CABINET DOOR, UNLESS INDICATED OTHERWISE.



SECTION "B"
(STAINLESS STEEL ANGLE FRAME)



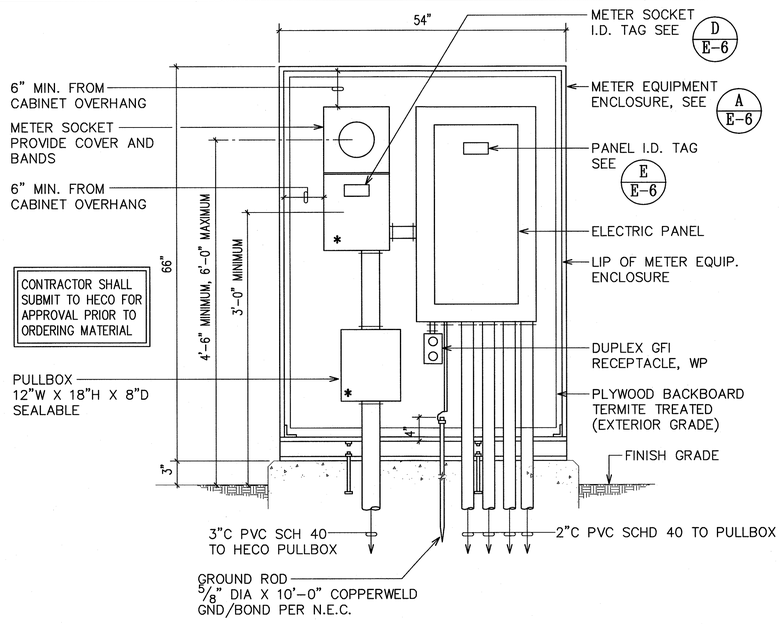
FRONT



PLAN

CONCRETE PAD

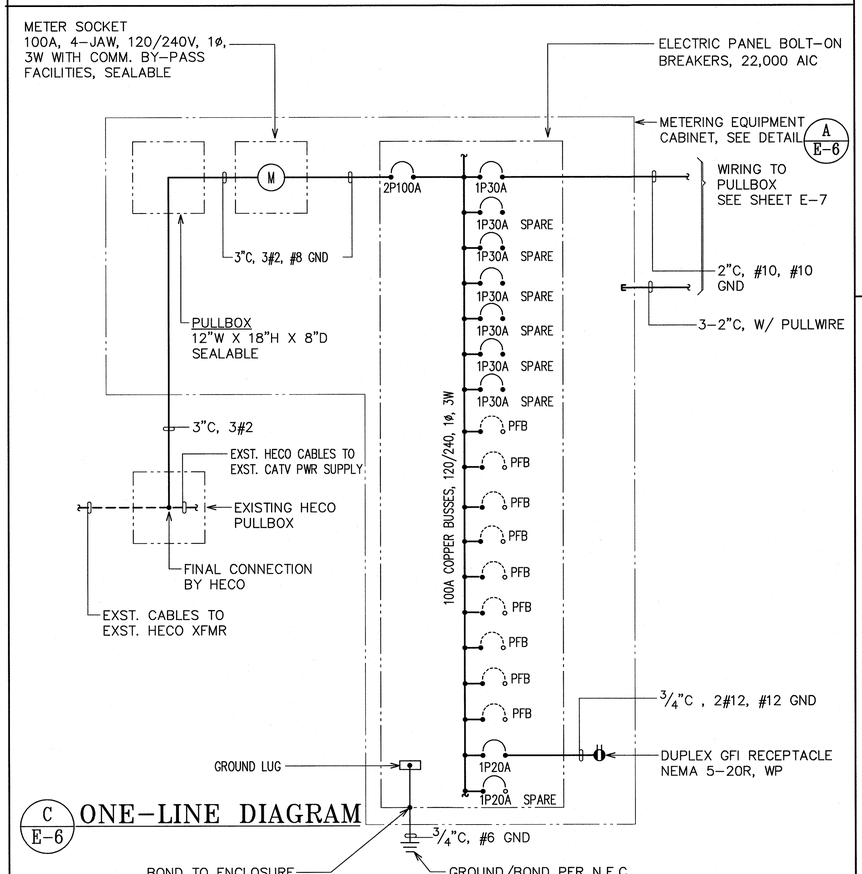
A E-6 METERING EQUIPMENT CABINET
NOT TO SCALE



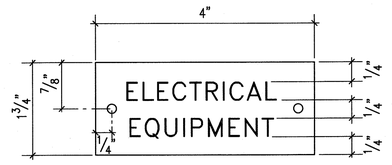
SEE THIS SHEET FOR ONE-LINE DIAGRAM

NOTE: "*" DENOTES PROVISIONS FOR HECO SEALS.

B E-6 ELECTRICAL METERING EQUIPMENT ELEVATION
NOT TO SCALE



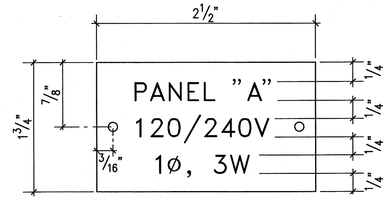
C E-6 ONE-LINE DIAGRAM



NOTES:

1. USE 2 PLY PLASTIC - BLACK, WHITE.
2. LETTER SIZE SHALL BE ½" HIGH AND ENGRAVED 1/16" WIDE, WHITE IN COLOR.
3. ATTACH TO EQUIPMENT ENCLOSURE WITH NO.7 STAINLESS STEEL DRIVE SCREWS.
4. CABINET I.D. TAG: ELECTRICAL EQUIPMENT METER SOCKET: "PKG LOT LIGHTS".

D E-6 ELEC EQUIP I.D. TAG
NOT TO SCALE



NOTES:

1. USE 2 PLY PLASTIC - BLACK, WHITE.
2. LETTER SIZE SHALL BE ½" HIGH AND ENGRAVED 1/16" WIDE, WHITE IN COLOR.
3. ATTACH TO EQUIPMENT ENCLOSURE WITH NO.7 STAINLESS STEEL DRIVE SCREWS.

E E-6 TYP PANEL I.D. TAG DETAIL
NOT TO SCALE

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

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Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, 26th Floor Honolulu, Hawaii

EAST KAPOLEI I DEVELOPMENT

(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

MISCELLANEOUS DETAILS

DRAWN BY:	ENGINEER: SL	CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE

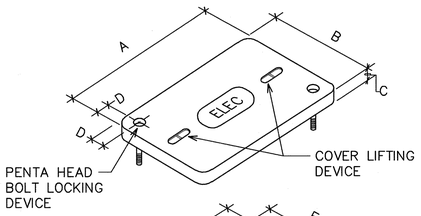
DATE DATE

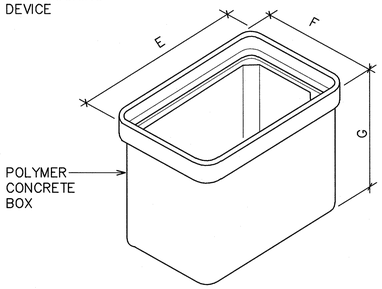
SCOTT S. LEE LICENSED PROFESSIONAL ENGINEER No. 10038-E HAWAII, U.S.A.
10-22-10

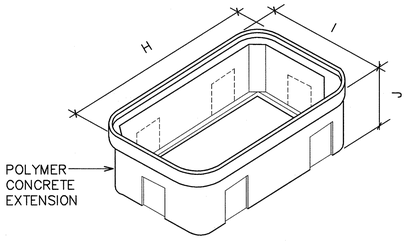
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

FILE	POCKET	FOLDER	NO.

DWG. NO. E-6 SHEET 10 OF 11 SHEETS







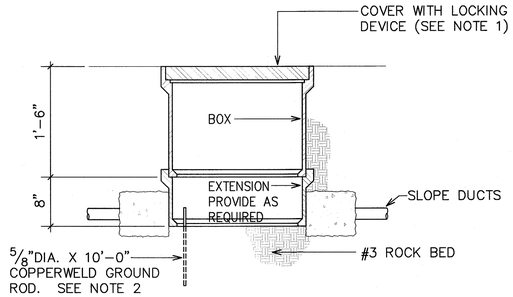
NOTES:

1. TO PROPERLY SECURE THE COVER, BE SURE THAT THE PENTAHEAD BOLTS ARE IN PLACE AND TIGHTENED. THE PENTA BOLTS SHALL BE FASTENED SECURELY TO THE COVERS (BY MEANS OF A COTTER PIN, FOR EXAMPLE), SO THE BOLTS CANNOT BE EASILY REMOVED FROM THE COVERS, EVEN WHEN THE COVERS ARE REMOVED FROM THE BOXES.
2. GROUND ROD SHALL BE INSTALLED IN THE CORNER, 6" FROM EACH WALL AND 6" ABOVE FINAL FLOOR GRADE.
3. NON-CONCRETE BOXES, COVERS, AND EXTENSIONS SHALL BE RATED FOR A VERTICAL LOAD OF 20,000 LBS (20K) MINIMUM.

NON-CONCRETE BOX SCHEDULE			
ITEM	13" X 24" PULLBOX	17" X 30" PULLBOX	24" X 36" PULLBOX
A	$23\frac{1}{4}$	$30\frac{1}{2}$	$35\frac{5}{8}$
B	$13\frac{3}{4}$	$17\frac{1}{2}$	24
C	2	2	3
D	$1\frac{3}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$
E	$24\frac{1}{2}$	$31\frac{3}{4}$	$36\frac{7}{8}$
F	15	$18\frac{3}{4}$	$25\frac{1}{4}$
G	18	18	18
H	$29\frac{1}{4}$	$36\frac{1}{2}$	$41\frac{7}{8}$
I	$19\frac{3}{4}$	$23\frac{1}{2}$	$30\frac{1}{4}$
J	9	9	9

NOTE: ALL DIMENSIONS ARE IN INCHES & ARE NOMINAL.

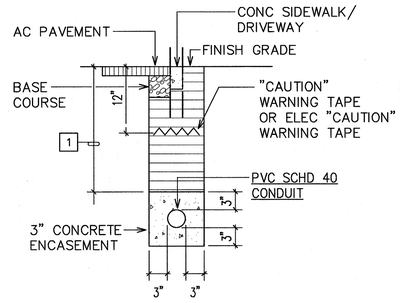
A / E-7 NON-CONCRETE LIGHT PULLBOX DETAIL
NOT TO SCALE



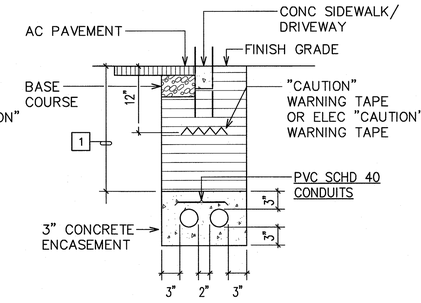
ELEVATION

LIGHT NOTES:

1. WIRE TO BE RHW-USE, 600V WITH OUTER COVERING.
2. CONDUIT-PVC SCHD. 80 DIRECT BURIED @ SIDEWALK.
   PVC SCHD. 40 WITH 3" CONC. JACKET @ ROAD CROSSINGS.
3. CONTRACTOR SHALL IDENTIFY ALL CIRCUIT CABLES WITH LEAD TAG IN EACH PULLBOX AS SHOWN.
   ALL NEUTRAL CONDUCTORS SHALL BE IDENTIFIED WITH WHITE INSULATION. OTHER MEANS OF IDENTIFICATION ARE NOT ACCEPTABLE.
5. INSTALL PULLBOXES ON 6" OF #3 CRUSHED ROCK BASE.
6. SEAL ALL CONDUIT ENDS WITH DUCT SEAL.



SECTION (A)



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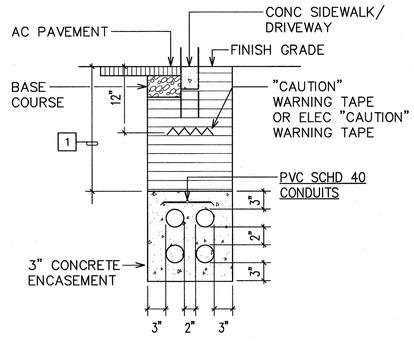


SECTION (C)

NOTES:

1 DEPTH VARIES; 36" MIN. UNDER AC PAVEMENT AND 18" MIN. BEYOND AC PAVEMENT.

BACKFILL NOTES:

TYPE "A" BACKFILL – EARTH & GRAVEL. ROCK SIZE TO BE 1" MAX & THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICLES. THE MATERIAL SHALL BE NONEXPANSIVE. 95% COMPACTION.

TYPE "B" BACKFILL – EARTH & GRAVEL. MIXTURE MUST PASS A $\frac{1}{2}$" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICLES. 95% COMPACTION.

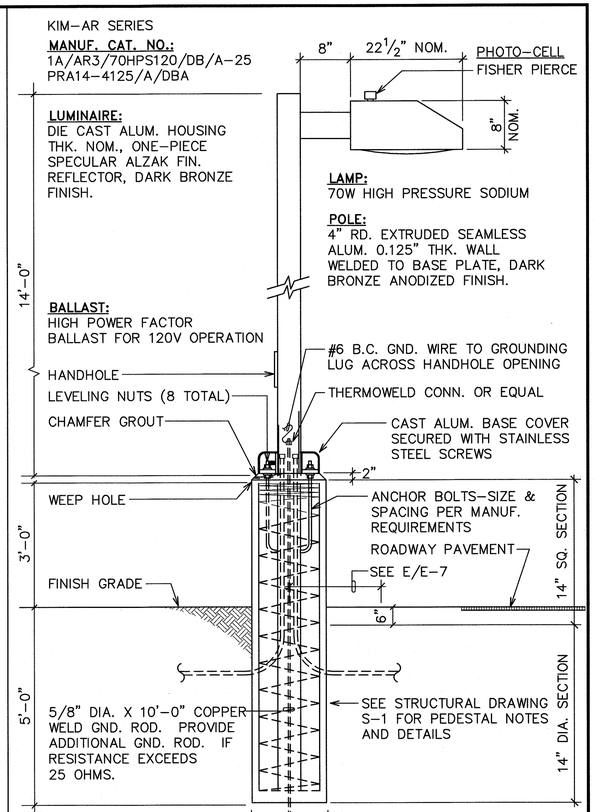
NOTE – IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B", AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL PROVIDED.

CONCRETE – 3" ENCASEMENT, 2500 PSI COMPRESSIVE STRENGTH @ 28 DAYS.

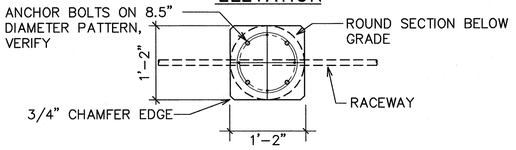
CONDUIT SCHEDULE	
ITEM	DESCRIPTION
1¼	LIGHTING 1¼" CONDUIT WITH WIRING
2L	LIGHTING 2" CONDUIT WITH WIRING
2-2L	LIGHTING 2-2" CONDUIT WITH WIRING
4-2L	LIGHTING 4-2" CONDUIT WITH WIRING
3L	LIGHTING 3" CONDUIT WITH WIRING

NOTE: DASHED SYMBOL INDICATES EXST.

C / E-7 TYPICAL DUCT SECTION AND CONDUIT DETAIL
NOT TO SCALE

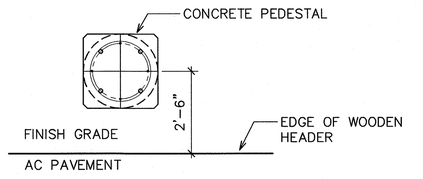


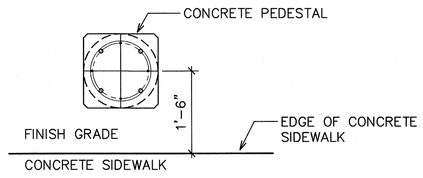
ELEVATION



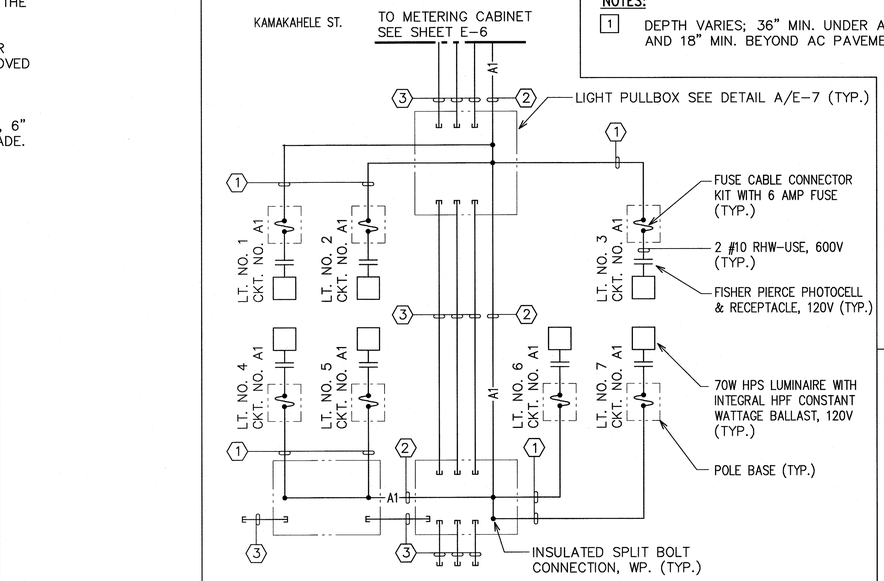
PLAN

D / E-7 PARKING LOT LIGHT DETAIL
N.T.S.





E / E-7 LIGHT LOCATION DETAIL
N.T.S.



CONDUIT & WIRE SCHEDULE	
ITEM	DESCRIPTION
1	1¼"C, 2 #10 RHW-USE, #10 GND
2	2"C, 3 #10 RHW-USE, #10 GND
3	2"C (SPARE), PULLWIRE

A / E-7 CONNECTION DIAGRAM
NOT TO SCALE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

cp&e Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, 26th Floor Honolulu, Hawaii

EAST KAPOLEI I DEVELOPMENT
(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

MISCELLANEOUS DETAILS & CONNECTION DIAGRAM

DRAWN BY:	ENGINEER: SL	CHECKED BY: GF

APPROVED:

HAWAIIAN ELECTRIC CO. DATE DATE DATE DATE

FILE	POCKET	FOLDER	NO.

DWG. NO. E-7
SHEET 11 OF 11 SHEETS

LAST SAVE: 10/22/10 @ 15:25:13 BY: RT PLOT: SC: 12.000000=12.000000
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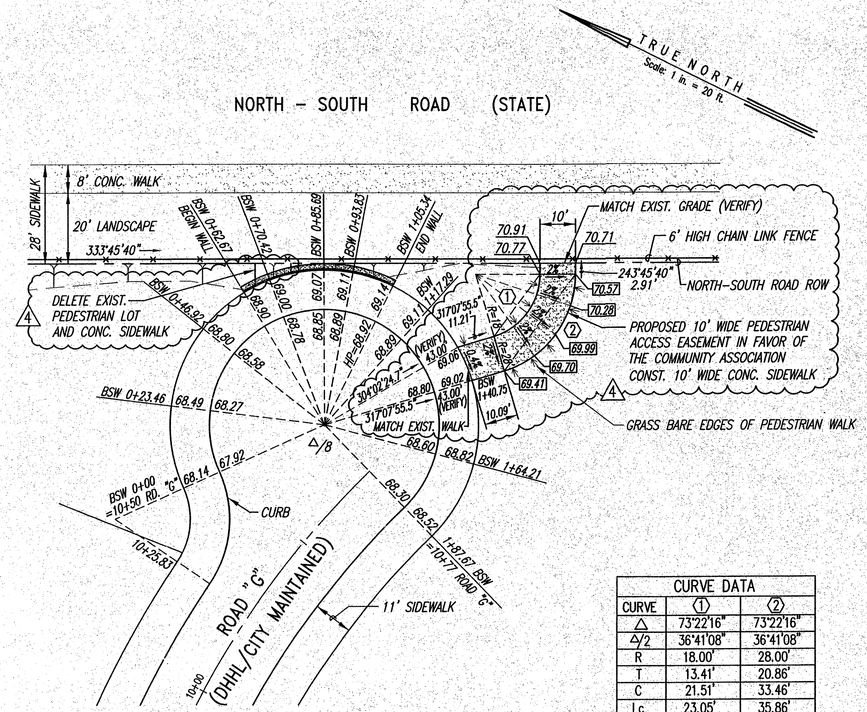
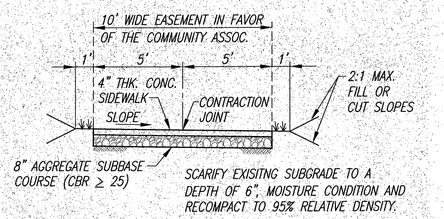
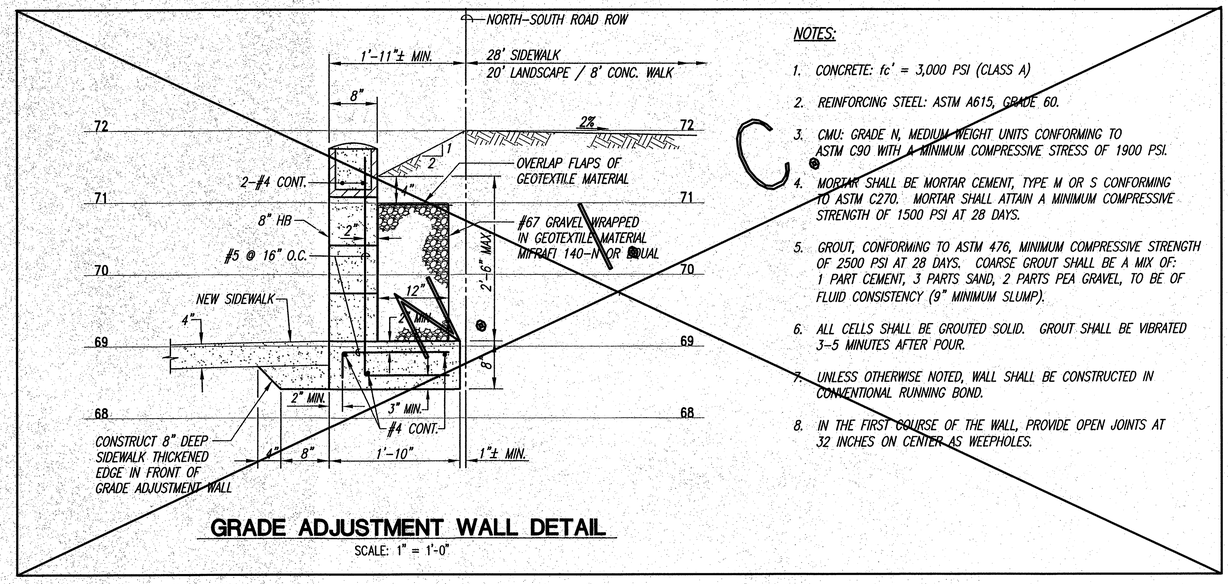


CURVE DATA		
CURVE	①	②
△	73°22'16"	73°22'16"
△/2	36°41'08"	36°41'08"
R	18.00'	28.00'
T	13.41'	20.86'
C	21.51'	33.46'
Lc	23.05'	35.86'

PLAN - ROAD "G" CUL-DE-SAC
SCALE: 1" = 20'-0"



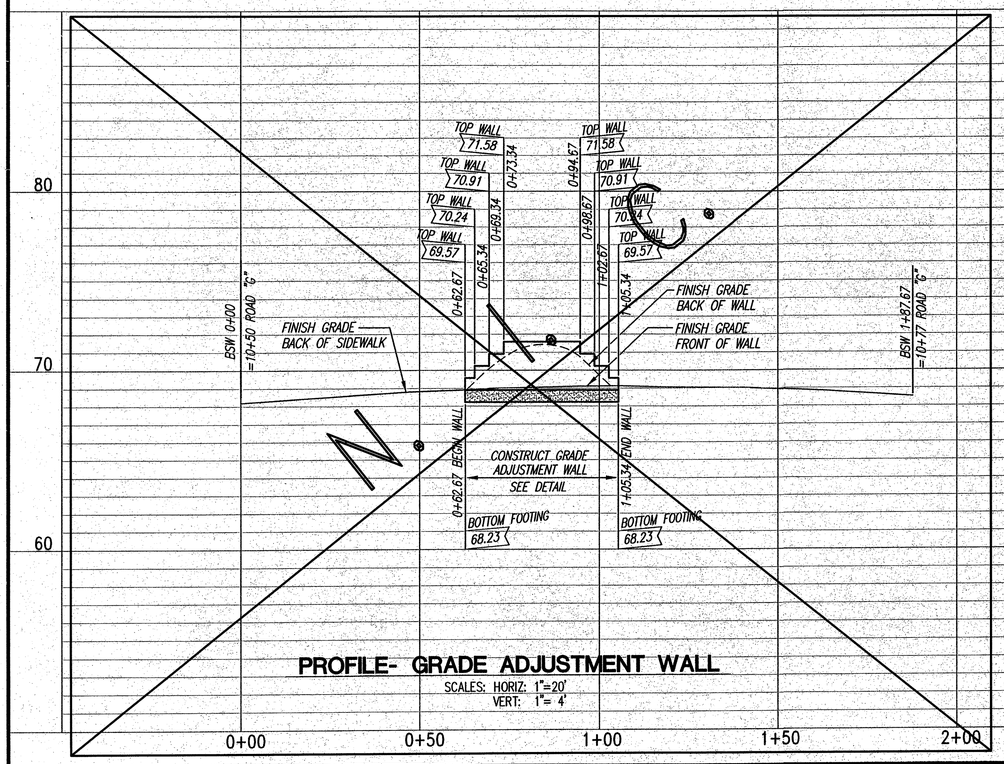
TYPICAL WALK SECTION
SCALE: 1/4" = 1'-0"



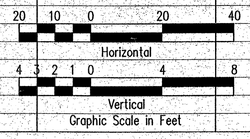
GRADE ADJUSTMENT WALL DETAIL
SCALE: 1" = 1'-0"

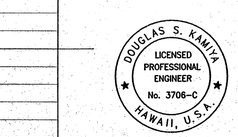
NOTES:

1. CONCRETE: fc' = 3,000 PSI (CLASS A)
2. REINFORCING STEEL: ASTM A615, GRADE 60.
3. CMU: GRADE N, MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90 WITH A MINIMUM COMPRESSIVE STRESS OF 1900 PSI.
4. MORTAR SHALL BE MORTAR CEMENT, TYPE M OR S CONFORMING TO ASTM C270. MORTAR SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI AT 28 DAYS.
5. GROUT, CONFORMING TO ASTM 476, MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. COARSE GROUT SHALL BE A MIX OF: 1 PART CEMENT, 3 PARTS SAND, 2 PARTS PEA GRAVEL, TO BE OF FLUID CONSISTENCY (9" MINIMUM SLUMP).
6. ALL CELLS SHALL BE GROUTED SOLID. GROUT SHALL BE VIBRATED 3–5 MINUTES AFTER POUR.
7. UNLESS OTHERWISE NOTED, WALL SHALL BE CONSTRUCTED IN CONVENTIONAL RUNNING BOND.
8. IN THE FIRST COURSE OF THE WALL, PROVIDE OPEN JOINTS AT 32 INCHES ON CENTER AS WEEPHOLES.



PROFILE- GRADE ADJUSTMENT WALL
SCALES: HORIZ: 1"=20'
VERT: 1"= 4'





THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/10

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
1/29/10	RELOCATE PEDESTRIAN ACCESS, ADDED SHEET	CPE	

cp&e Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, 26th Floor Honolulu, Hawaii

EAST KAPOLEI I DEVELOPMENT (MASS GRADING)
(DPP SUBD. FILE NO. 2005/SUB-317)
HONOULIULI, EWA, OAHU, HAWAII
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: 9-1-16: 108

ROAD "G" GRADE ADJUSTMENT WALL

DRAWN BY: LT	ENGINEER: DSK	CHECKED BY: DSK

APPROVED:
(FOR PEDESTRIAN ACCESS RELOCATION ONLY)

3/30/10
CHIEF, CIVIL ENGINEERING BRANCH, D.P.P. DATE

FILE	POCKET	FOLDER	NO.

SHEET 7a OF 23 SHEETS

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