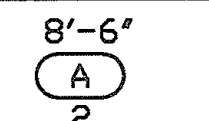

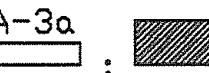

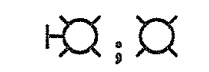

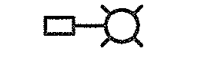





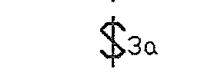

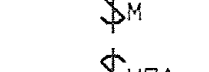

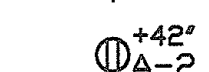



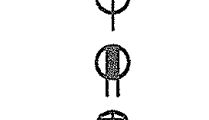



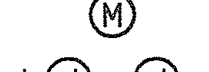





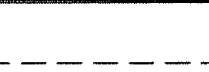

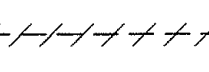

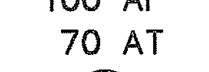



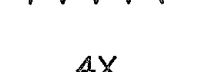





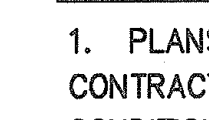

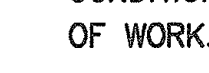



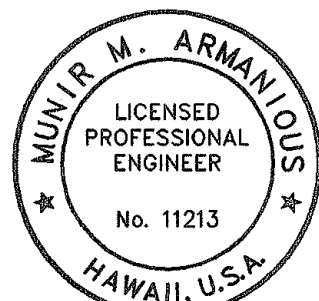
LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHTING FIXTURE IDENTIFIER. "A" INDICATES FIXTURE TYPE, 8'-6" INDICATES MOUNTING HEIGHT, 2 INDICATES NUMBER OF FIXTURES.		PANELBOARD
	FLUORESCENT LIGHTING FIXTURE, CEILING MOUNTED. DESIGNATION INDICATES PANEL AND CIRCUIT FEEDING THE FIXTURE (PNL A, CKT 3). LOWER CASE LETTER INDICATES CONTROLLING SWITCH, SOLID INDICATES BATTERY.		TELEPHONE OR EQUIPMENT CABINET, SIZE AS NOTED.
	COMPACT FLUORESCENT OR H.I.D. LIGHTING FIXTURE. WALL MOUNTED; CEILING MOUNTED.		MOTOR STARTER
	POLE MOUNTED HID STREET/ROADWAY/PARKING LOT LIGHTING FIXTURES		COMBINATION MOTOR STARTER
	EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS WHERE INDICATED SHADED AREA INDICATES EXIT FACE - CEILING MOUNTED; WALL MOUNTED		DISCONNECT SWITCH - 30/NF/2PSN/240/3R UNLESS OTHERWISE NOTED. FRAME SIZE/FUSE SIZE/POLES/VOLTS/NEMA ENCLOSURE
	EMERGENCY LIGHTING FIXTURE		TRANSFORMER
	SINGLE POLE SW. LETTER WHERE SHOWN CORRESPONDS WITH ITEM(S) CONTROLLED.		LIGHTING CONTACTOR
	THREE WAY SW. LETTER WHERE SHOWN CORRESPONDS WITH ITEM(S) CONTROLLED.		ENCLOSED CIRCUIT BREAKER
	MANUAL MOTOR STARTER		PHOTOCELL, MOUNTED +12" ABOVE FINISHED ROOFLINE.
	HAND-OFF-AUTO SW		PUSH-BUTTON OR SELECTOR SWITCH
	DUPLEX RECEPTACLE, 20A, GROUNDING TYPE. DESIGNATION INDICATES PANEL AND CIRCUIT FEEDING RECEPTACLE (PNL A, CKT 2). +42" INDICATES MOUNTING HEIGHT (SHOWN ONLY IF OTHER THAN STANDARD HEIGHT OF 15" AFF).		FLEXIBLE CONDUIT CONNECTION
	SIMPLEX RECEPTACLE. SIZE AND TYPE AS NOTED.		CONDUIT BENT DOWN OR AWAY
	GROUND FAULT CIRCUIT INTERRUPTING (GFI) RECEPTACLE		CONDUIT BENT UP OR TOWARD
	SPECIAL PURPOSE RECEPTACLE. SINGLE, 240 VOLT, 3 PHASE, 30 AMPERE.		GROUND WIRE WITH CADWELD CONNECTION PIGTAILED 18" ABOVE FINISHED FLOOR #4/0 BARE COPPER
	TELEPHONE OUTLET		GROUND WIRE WITH BOLTED CONNECTION #4/0 BARE COPPER
	MOTOR		GROUND ROD AND WELL
	JUNCTION BOX. WALL MOUNTED; CEILING MOUNTED		UNDERGROUND CONDUIT OR DUCTBANK CONCRETE ENCASED
	FAN		HOMERUN TO PNLBD CONCEALED IN CEILING, WALL OR FLOOR, PANEL "A"-CKT 6. HATCH MARKS INDICATE NUMBER OF CONDUCTORS. NO HATCH MARKS INDICATES 2 CONDUCTORS. IN ADDITION TO CONDUCTORS INDICATED, PROVIDE GROUND IN ALL CONDUITS PER NEC. MINIMUM CONDUIT SIZE SHALL BE 3/4".
	INSTRUMENTATION OR CONTROL DEVICE		HOMERUN TO PANELBOARD IN EXPOSED CONDUIT.
	NEW EQUIPMENT		NEW HANDHOLE OR MANHOLE
	EXISTING EQUIPMENT		EXISTING MANHOLE OR HANDHOLE
	EXISTING EQUIPMENT TO BE REMOVED		KILOWATTHOUR METER
	CIRCUIT BREAKER: AF INDICATES FRAME SIZE; AT INDICATES TRIP SETTING.		ENGINE GENERATOR
	POTENTIAL TRANSFORMER		
	NEMA ENCLOSURE TYPE - STAINLESS STEEL, TYPE 316/SS316		

ABBREVIATIONS			
ABBR	WORD	ABBR	WORD
A, AMP	AMPERE	JB	JUNCTION BOX
AB	ANCHOR BOLT	KV	KILOVOLT
ACU	AIR CONDITIONING UNIT	KVA	KILOVOLT AMPERE
AFF	ABOVE FINISHED FLOOR	KW	KILOWATT
ANT	ANTENNA	KWH	KILOWATTHOUR
ATS	AUTOMATIC TRANSFER SWITCH		
AWG	AMERICAN WIRE GAUGE	LED	LIGHT EMMITING DIODES
Ⓢ	AT	LT	LIGHT
		LTG	LIGHTING
BC	BARE COPPER		
BLDG	BUILDING	MAX	MAXIMUM
BTRY	BATTERY	MCM	THOUSAND CIRCULAR MILS
BOT	BOTTOM	MH	MAN HOLE
CL	CENTER LINE	MIN	MINIMUM
CB	CIRCUIT BREAKER	MTD	MOUNTED
CKT	CIRCUIT	MECO	MAUI ELECTRICAL COMPANY
CNDCT	CONDUCTOR	N	NORTH
CND,C	CONDUIT	NEC	NATIONAL ELECTRICAL CODE
COMB	COMBINATION	NFSD	NON-FUSED
CONT	CONTROL	NL	NIGHT LIGHT
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECTION	NO., #	NUMBER
CONTD	CONTINUED		
CNVC	CONVENIENCE	OBSTN	OBSTRUCTION
CU	COPPER	OC	ON CENTER
DB	DIRECT BURIAL	P	POLE
DBL	DOUBLE	PB	PUSH BUTTON
DIA	DIAMETER	PC	PHOTOCELL
DISC	DISCONNECT	PFB	PROVISION FOR FUTURE BREAKER
DISTR	DISTRIBUTION	PH	PHASE
DR	DRAIN	PNL	PANEL
DWG	DRAWING	PSI	POUNDS PER SQUARE INCH
		PVC	POLYVINYL CHLORIDE
E	EAST		
EW	EACH WAY	RCPT	RECEPTACLE
EF	EACH FACE	RELOC	RELOCATED
E/G	ENGINE GENERATOR	REQD	REQUIRED
EL	ELEVATION	RSC	RIGID STEEL CONDUIT
EMER	EMERGENCY		
ENCL	ENCLOSURE	SA	SURGE ARRESTER
EQ	EQUAL	SPEC	SPECIFICATION
EQUIP	EQUIPMENT	SQ	SQUARE
EXH	EXHAUST	SS	STAINLESS STEEL
EXP	EXPANSION	SW	SWITCH
EXST	EXISTING	SYS	SYSTEM
EXT	EXTERIOR		
FDR	FEEDER	T	TOP
FF	FINISH FLOOR	TEMP	TEMPERATURE
FIN GR	FINISHED GRADE	TYP	TYPICAL
FLR	FLOOR		
FXTR	FIXTURE	UNO	UNLESS NOTED OTHERWISE
		UPS	UNINTERRUPTABLE POWER SUPPLY
GALV	GALVANIZED	V	VOLT
GEN	GENERATOR	VERT	VERTICAL
GFI	GROUND FAULT INTERRUPTER		
GND,GRD	GROUND	W/	WITH
GRS	GALVANIZED RIGID STEEL CONDUIT	W	WIRE
HTR	HEATER	WP	WEATHER PROOF
HZ	HERTZ		
HH	HAND HOLE	XFMR	TRANSFORMER
HID	HIGH INTENSITY DISCHARGE	XFR	TRANSFER
HOA	HAND-OFF-AUTO		
HORIZ	HORIZONTAL		
IES	ILLUMINATING ENGINEERING SOCIETY		
INT	INTERIOR		
INTLK	INTERLOCK		

GENERAL NOTES

- PLANS DO NOT INDICATE COMPLETE EXISTING ELECTRICAL CONDITIONS. CONTRACTOR SHALL VISIT JOBSITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND EXTENT OF DEMOLITION AND NEW WORK PRIOR TO THE START OF WORK.
- PRIOR TO THE START OF WORK, CONTRACTOR SHALL VISIT JOBSITE AND REPORT ANY DISCREPANCIES AND/OR DIFFERENCES IN DRAWING, IN RESPECT TO EXISTING CONDITIONS TO ENGINEER AND/OR OWNER.
- CONTRACTOR SHALL RESOLVE ALL DISCREPANCIES AND QUESTIONS PRIOR TO THE START OF WORK. NO EXTRA PAYMENT SHALL BE ALLOWED ON ACCOUNT OF WORK MADE NECESSARY BY CONTRACTOR'S FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES OR QUESTIONS.
- ALL POWER OUTAGES SHALL BE COORDINATED AND APPROVED BY THE OWNER, OUTAGES SHALL BE SCHEDULED AND LIMITED PER THE OWNER REQUIREMENTS.
- BEFORE ANY ELECTRICAL WIRING IS CUT, CONTRACTOR SHALL VERIFY USAGE OF WIRING TO INSURE THAT REQUIRED SERVICES ARE NOT DISCONNECTED.
- RETURN ALL SALVAGEABLE APPARATUS, AS DETERMINED BY THE OWNER OR HIS REPRESENTATIVE, TO A SITE DESIGNATED BY THE OWNER OR HIS REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER. DISPOSE OF ALL UNWANTED MATERIALS.
- CONTRACTOR SHALL "TONE" FOR EXISTING UTILITIES NOT SPECIFICALLY SHOWN ON PLANS PRIOR TO EXCAVATION AND TRENCHING.
- DETAILS ARE INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING WORK. MINOR MODIFICATION MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS TO BE INCLUDED AS PART OF THE WORK.
- EXISTING WIRING AND DUCTS SHOWN ARE TAKEN FROM BEST AVAILABLE AS-BUILT DRAWINGS FROM PREVIOUS CONTRACTS. VERIFY THE ACTUAL NUMBER OF THE WIRES, CONDUITS CONDITION AND ROUTING OF UNDERGROUND DUCTS AND NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES.

- PROVIDE PULLING NYLON ROPE IN ALL SPARE CONDUITS. ALL CONDUIT ENDS AT HANDHOLES SHALL BE SEALED WITH DUCT SEAL. SPARE DUCTS SHALL BE PLUGGED PER SPECIFICATIONS.
- SEPARATIONS BETWEEN SUPPLY AND COMMUNICATIONS CONDUIT SYSTEMS. CONDUIT SYSTEMS TO BE OCCUPIED BY COMMUNICATIONS CONDUCTORS SHALL BE SEPARATED FROM CONDUIT SYSTEMS TO BE USED FOR SUPPLY SYSTEMS BY:
 - 3" (75 MM) OF CONCRETE
 - 4" (100 MM) OF MASONRY
 - 12" (300 MM) OF WELL TAMPED EARTH AS PER NATIONAL SAFETY ELECTRIC CODE. OR AS NOTED IN THE PLANS.
- CONTRACTOR SHALL VERIFY LOCATION OF EXISTING PIPING AND CONDUITS IN THE PATH OF NEW UNDERGROUND DUCTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO PIPING AND CONDUIT RESULTING FROM THE FAILURE TO BECOME FAMILIAR WITH EXISTING CONDITIONS.
- ALL A.C. AND CONCRETE PAVEMENT TO BE TRENCHED FOR DUCTBANKS SHALL BE "SAW-CUT" TO THE REQUIRED WIDTH PRIOR TO REMOVAL. RESTORATION OF PAVEMENT SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR THE STATE OF HAWAII".
- ALL ITEMS SPECIFIED AS NEMA 4X SHALL BE STAINLESS STEEL TYPE 316 (SS316) UNLESS OTHERWISE INDICATED. ALL C-CHANNELS AND FASTENING HARDWARE: SCREWS, NUTS, BOLTS, WASHERS, ETC SHALL BE SS 316. ALL EXPOSED FACTORY PROVIDED HARDWARE NOT SS 316 SHALL BE REPLACED WITH SS 316 HARDWARE.
- HAZARDOUS LOCATIONS: WORK IN HAZARDOUS LOCATIONS, AS DEFINED BY NFPA 70 AND 820 SHALL BE PERFORMED IN STRICT ACCORDANCE WITH NFPA 70 FOR PARTICULAR "CLASS", "DIVISION" AND "GROUP" OF HAZARDOUS LOCATIONS INVOLVED. PROVIDE CONDUIT AND CABLE SEALS WHERE REQUIRED BY NFPA 70. ELVEN THOUGH SEALS ARE NOT INDICATED ON DRAWINGS. CONDUIT SHALL HAVE TAPERED THREADS.



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.

Munir M. Armanious
Signature

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES	
MAUI DISTRICT BASEYARD REPAIR AND MAINTENANCE OF BUILDINGS AND GROUNDS, PHASE 3 PROJECT NO. HWY-M-08-04M	
SCALE: AS SHOWN	DATE: MAY 2005
SHEET No. E-1 OF 10 SHEETS	