

CONSTRUCTION NOTES

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986 AND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII, AND HRS 103.50.
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN 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.
- THE EXISTING UTILITIES HAVE BEEN SHOWN ON THESE PLANS INSOFAR AS IT IS POSSIBLE TO DO SO. THEIR LOCATIONS AS SHOWN ARE APPROXIMATE ONLY AND THE CONTRACTOR SHALL MAKE INDEPENDENT CHECK ON THE GROUND BY PROBING AND GOVERNMENTAL AGENCIES TO ASCERTAIN THEIR EXACT LOCATIONS. IF UTILITIES NOT SHOWN ARE SUSPECTED, REQUIRE TONING OF THESE AREAS PRIOR TO EXCAVATION TO LOCATE THEM.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. BEFORE DISRUPTING SERVICE OF ANY UTILITY, THE CONTRACTOR SHALL CONTACT THE OFFICER IN CHARGE. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT.
- THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR UTILITIES SUCH AS ELECTRICITY, ETC. REQUIRED FOR HIS OPERATIONS, AND ALL COSTS FOR THESE UTILITIES SHALL BE BORNE BY THE CONTRACTOR.
- ALL EXISTING UTILITIES TO REMAIN IN USE, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION UNLESS SPECIFIED ON THE PLANS TO BE ABANDONED. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
- UNLESS RELOCATION IS CALLED FOR ON THE PLANS, EXISTING UTILITIES SHALL REMAIN IN-SERVICE AND IN PLACE. IF RELOCATION OF EXISTING UTILITIES IS REQUIRED FOR THE CONTRACTOR'S CONVENIENCE, INTERRUPTION OF SERVICE SHALL BE KEPT TO A MINIMUM AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE OFFICER IN CHARGE.
- THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE.
- THE EXISTING IMPROVEMENTS ON THE PREMISES AND IN ADJACENT AREA THAT ARE NOT TO BE REMOVED, SHALL BE PRESERVED AND PROTECTED. ANY AND ALL DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION OPERATION SHALL BE REPLACED AND REPAIRED TO ORIGINAL CONDITION, AT NO ADDITIONAL COST TO THE GOVERNMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORATION TO ORIGINAL OR BETTER CONDITION, NEARBY IMPROVEMENTS AFFECTED BY DUST AND/OR OTHER REASONS RESULTING FROM THE CONSTRUCTION ACTIVITY.
- NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS", AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
- BASE PLANS PROVIDED BY THE STATE OF HAWAII, DEPARTMENT OF DEFENSE REFERENCE PROJECT: 298TH REGIONAL TRAINING INSTITUTE, PHASE II, DATED MARCH 28, 2000.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH EXISTING SITE CONDITIONS PRIOR TO BID.
- GOVERNMENT DISPOSAL AREAS WILL NOT BE AVAILABLE FOR THE DISPOSAL OF WASTE MATERIALS. THE CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EXCESS AND WASTE MATERIALS GENERATED DURING CONSTRUCTION.
- ALL UTILITY SERVICES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DISRUPTION SHALL BE MINIMIZED AND COORDINATED WITH THE CONTRACTING OFFICER OR THEIR DESIGNATED REPRESENTATIVE AND THE BASE CIVIL ENGINEER.
- WHERE WARRANTIES ARE SPECIFIED, CONTRACTOR'S BID SHALL INCLUDE FULL COMPLIANCE OF ALL CONDITIONS REQUIRED FOR THE WARRANTIES. WHERE THE MANUFACTURER'S WARRANTY REQUIREMENTS AND/OR RECOMMENDATIONS DIFFER FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR IS EXPECTED TO COMPLY WITH THE STRICTER OF THE TWO UNLESS NOTIFIED OTHERWISE. CONTRACTOR SHALL INFORM THE CONTRACTING OFFICER IN WRITING, PROVIDE SHOP DRAWINGS, AND AS-BUILT DRAWINGS WHERE CONSTRUCTION WILL DIFFER FROM THE CONSTRUCTION DOCUMENTS, AS A RESULT OF WARRANTY REQUIREMENTS.
- ALL MATERIALS, ITEMS IN THE DRAWING ARE "NEW", UNLESS NOTED AS "EXISTING".

CONSTRUCTION NOTES (CONTINUED)

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER FOR ANY AND ALL DISCREPANCIES FOUND ON THE DRAWINGS OR SPECIFICATIONS PRIOR TO THE BID OPENING. ANY DISCREPANCIES OR QUESTIONS RAISED AFTER THE BID OPENING THAT MAY RESULT IN EXTRA COST SHALL BE BORNE BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT SHOP DRAWINGS ON HOW THEY WILL RESOLVE SUCH DISCREPANCIES. GENERAL PRACTICE OF TRADE SHALL BE USED TO RESOLVE SUCH DISCREPANCIES WHICH MUST BE APPROVED BY THE ENGINEER/ARCHITECT.
- THE BID PRICE FOR ALL DESIGN ITEMS SHALL BE INCLUSIVE OF ALL CONSTRUCTION MATERIALS, LABOR, EQUIPMENT, MANUFACTURER'S RECOMMENDATIONS, ETC. REQUIRED FOR THOSE ITEMS TO BE IN PLACE AND COMPLETE TO A STANDARD ACCEPTABLE TO THE ENGINEER/ARCHITECT AND OWNER'S REPRESENTATIVE. THE NEW WORK SHALL TIE SMOOTHLY INTO THE EXISTING FACILITIES. MINOR REVISIONS TO THE DESIGN OF THE GRADING, UTILITIES, EROSION CONTROL, TRAFFIC CONTROL, ROADWAY, SIDEWALKS, ETC. MAY OCCUR AFTER THE BID OPENING AS PART OF THE PLAN REVIEW OR COORDINATION PROCESS. THESE MINOR REVISIONS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS RELATED BID ITEMS.

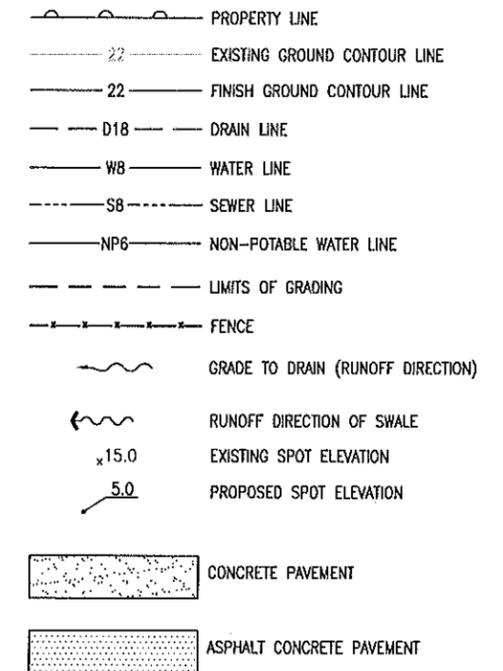
GRADING NOTES

- ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16, AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED.
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW 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.
- NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".
- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.
- ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS", AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL".
- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING PHASE OF THE GRADING IS INITIATED.
- IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- ALL GRADING AND CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE WILL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.
- FOR ALL PROJECTS, WHICH WILL DISTURB ONE (1) ACRE OR MORE OF LAND, THE CONTRACTOR SHALL NOT START CONSTRUCTION UNTIL A NOTICE OF GENERAL PERMIT COVERAGE (NGPC) IS RECEIVED FROM THE DEPARTMENT OF HEALTH, STATE OF HAWAII, AND HAS SATISFIED ANY OTHER APPLICABLE REQUIREMENTS OF THE NPDES PERMIT PROGRAM. ALSO, FOR NON-CITY AND OTHER NON-GOVERNMENT AGENCY PROJECTS, THE CONTRACTOR SHALL PROVIDE A WRITTEN COPY OF THE NGPC TO THE PERMITTING AND INSPECTION SECTION, CIVIL ENGINEERING BRANCH, D.P.P., AT LEAST SEVEN (7) CALENDAR DAYS BEFORE THE START OF THE CONSTRUCTION. FOR CITY OR OTHER GOVERNMENT PROJECTS, THE CONTRACTOR SHOULD PROVIDE A WRITTEN COPY OF THE NGPC TO THE APPROPRIATE CITY DEPARTMENT OR GOVERNMENT AGENCY PER THEIR REQUIREMENTS.

ABBREVIATIONS:

AC	ASPHALTIC CONCRETE	R	RADIUS
ADA	AMERICANS WITH DISABILITIES ACT	REQ'D	REQUIRED
ADAAG	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	REINF	REINFORCEMENT
&	AND	REV	REVISION/REVISED
APPROX	APPROXIMATE, APPROXIMATELY	ROW	RIGHT OF WAY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	RP	RADIAL POINT
⊙	AT	RPM	RAISED PAVEMENT MARKER
B, BOT	BOTTOM	S	SOUTH, SLOPE, SEWER
BLDG	BUILDING	SCH	SCHEDULE
BW	BOTTOM OF WALL	SF	SQUARE FOOT
BWS	BOARD OF WATER SUPPLY	SHT	SHEET
BC	BOTTOM OF CURB	SIGMH	SIGNAL MANHOLE
CB	CATCH BASIN	SL	SEWER LINE
CFS	CUBIC FT PER SECOND	S/N	SERIAL NUMBER
CO	CLEAN OUT	SMH	SEWER MANHOLE
CONN	CONNECT, CONNECTION	SPEC	SPECIFICATION
Ⓞ	CENTERLINE	SQ	SQUARE
CONC	CONCRETE	SST	STAINLESS STEEL
CONT	CONTINUE, CONTINUOUS	ST	STREET
COMP	COMPACTION	STA	STATION
COTG	CLEAN OUT TO GRADE	STD	STANDARD
CY	CUBIC YARD	SY	SQUARE YARD
DET	DETAIL	T	TOP
DIA	DIAMETER	TB	TOP OF BANK
DI	DRAIN INLET	THK	THICK
DMH	DRAIN MANHOLE	TOF	TOP OF FOOTING
DPW	DEPARTMENT OF PUBLIC WORKS	TW	TOP OF WALL
DS	DOWN SPOUT	TC	TOP OF CURB
DWG	DRAWING	TP	TOP OF PAVEMENT
E	EAST	TS	TOP OF SLAB
EA	EACH	TYP	TYPICAL
ELEC	ELECTRIC, ELECTRICAL	VB	VALVE BOX
EP	EDGE OF PAVEMENT	VCP	VITRIFIED CLAY PIPE
EA	EACH	VERT	VERTICAL
ELEV, EL	ELEVATION	W	WATER
EQ	EQUAL	W/	WITH
EW	EACH WAY	WL	WATERLINE
EXIST	EXISTING	WMH	WATER MANHOLE
FT	FOOT, FEET	WM	WATER METER
FH	FIRE HYDRANT	WV	WATER VALVE
FFE	FINISH FLOOR ELEVATION	WWF	WELDED WIRE FABRIC
FG	FINISH GRADE	W	WEST
GALV	GALVANIZED		
GV	GATE VALVE		
HORIZ	HORIZONTAL		
ID	INSIDE DIAMETER		
INV	INVERT		
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY		
LAT	LATERAL		
LC	LENGTH OF CURVE		
LF	LINEAR FOOT		
LIN	LINEAR		
LB(S)	POUND(S)		
MAX	MAXIMUM		
MECH	MECHANICAL		
MH	MANHOLE		
MISC	MISCELLANEOUS		
MIN	MINIMUM		
MON	MONUMENT		
N	NORTH		
NTS	NOT TO SCALE		
NO	NUMBER		
OC	ON CENTER		
OD	OUTSIDE DIAMETER		
O/S	OFFSET		
PCC	PORTLAND CEMENT CONCRETE		
PAV'T	PAVEMENT		
PSF	POUNDS PER SQUARE FOOT		
PI	POINT OF INTERSECTION		
PL	PROPERTY LINE, PLACE		
PVC	POLYVINYL CHLORIDE		
PP	POWER POLE		
PSI	POUNDS PER SQUARE INCH		
POC	POINT ON CURVE		
PORT	PORTABLE BUILDING		

LEGEND:



PUBLIC HEALTH SAFETY & CONVENIENCE NOTES

- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO TITLE 11, DEPARTMENT OF HEALTH, CHAPTER 46, COMMUNITY NOISE CONTROL, IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF HEALTH, THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 46 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR CONSTRUCTION ACTIVITIES. APPLICATION AND INFORMATION ON VARIANCES FROM THE ENVIRONMENTAL HEALTH SERVICES DIVISION, 591 ALA MOANA BLVD., RM. 125, HONOLULU, HAWAII OR BY TELEPHONE 586-4576.
- WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. TEMPORARY PASSAGE WAYS SHALL BE ACCESSIBLE PER ADAAG 4.3.1.

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT--SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

DESIGNED: XX	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831		
DRAWN: XX	CONSTRUCTION NOTES-1		
SAFETY:			
ENGINEER: XX			
APPROVED:	APPROVED:	DATE: 5-25-10	
HAWAII, FAC MGMT OFFICER	HOB, USPD FOR HAWAII		
APPROVED:	SCALE: AS NOTED		
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION		DWG # C-1.1	
HAWAII CONTRACTING & ENGINEERING OFFICER		SHEET 2 of 33	

WATER NOTES

- UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND CONSTRUCTION OF WATER SYSTEM FACILITIES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CITY AND COUNTY OF HONOLULU BOARD OF WATER SUPPLY'S "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, AND ALL SUBSEQUENT AMENDMENTS AND ADDITIONS.
- NUTS AND BOLTS FOR FLANGE CONNECTIONS WITHIN METER BOXES SHALL BE BRONZE OR STAINLESS STEEL EXCEPT COUPLING ADAPTERS WHERE "COR-TEN" (U.S. STEEL) OR "MAYARI" (BETHLEHEM STEEL) MAY BE USED. FLANGE CONNECTIONS OUTSIDE OF THE METER BOX MAY USE "COR-TEN" OR "MAYARI" TYPE NUTS AND BOLTS.
- TEST PRESSURE SHALL BE ONE OF THE FOLLOWING:
 - PREVAILING LINE PRESSURE, JOINTS LEFT EXPOSED FOR 24 HOURS TO CHECK FOR LEAKS PRIOR TO BACKFILL.
 - 150 PSI. DURING THE 30 MINUTE PRESSURE TEST, THE PRESSURE SHALL NOT DROP MORE THAN 10 PSI.
- THE CONTRACTOR SHALL CHLORINATE THE ENTIRE INSIDE SURFACE OF EACH PIPE AND FITTING WITH DISINFECTION SOLUTION OF 5 OUNCES OF SODIUM HYPOCHLORITE MIXED WITH 10 GALLONS OF WATER. (FOR CONNECTION ONLY)
- THE STATE SHALL PAY THE APPLICABLE WATER SYSTEM FACILITIES AND/OR ONE-TIME SERVICE CHARGE AND FOR THE METER WHICH WILL BE FURNISHED BY BWS AND INSTALLED BY THE CONTRACTOR WHEN THE LATERAL IS INSTALLED.
- THE CONTRACTOR SHALL NOTIFY BWS CAPITAL PROJECTS DIVISION, CONSTRUCTION SECTION IN WRITING AND SUBMIT SIX (6) SETS OF APPROVED CONSTRUCTION PLANS ONE WEEK PRIOR TO COMMENCING WORK ON THE WATER SYSTEM.
- CONTRACTOR SHALL CUT AND PLUG ALL EXISTING UNUSED LATERALS AT THE MAIN WHETHER OR NOT SHOWN ON THE PLANS. METER AND VALVE BOXES TO BE OR ALREADY ABANDONED SHALL BE DEMOLISHED OR REMOVED AND PROPERLY DISPOSED OF. THE DAMAGED AREA SHALL BE REPAIRED TO AN EQUAL OR BETTER CONDITION THAN THE IMMEDIATE AREA. ALL WORK SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS ARE FROM THE LATEST AVAILABLE DATA BUT IS NOT GUARANTEED AS TO THE ACCURACY OR THE ENCOUNTERING OF OTHER OBSTACLES DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL DAMAGES TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOT ASSUME THAT WHERE NO UTILITIES ARE SHOWN, THAT NONE EXIST.
- ALL PLANS APPROVED BY THE BOARD OF WATER SUPPLY ARE BASED SOLELY ON THE ADEQUACY OF THE WATER SUPPLY.
- FOR METERS 3 INCHES AND LARGER (COMPOUND, F.M. AND DETECTOR CHECK), CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER TO NOTIFY CUSTOMER CARE DIVISION - SERVICE ENGINEERING SECTION IN WRITING AFTER THE PLAN IS APPROVED, NO LATER THAN 120 DAYS, PRIOR TO WITHDRAWING METER FROM BWS STOREYARD. SUCH NOTICE SHALL INDICATE NUMBER, SIZE, AND TYPE OF METER (COMPOUND, F.M. OR DETECTOR CHECK) AND APPROXIMATE MONTH AND YEAR METER IS ANTICIPATED TO BE DRAWN OUT. IF THE APPROVED PLAN IS ALLOWED TO LAPSE, THE 120-DAY NOTICE WILL BE VOIDED.
- BOARD OF WATER SUPPLY APPROVAL OF THESE PLANS DOES NOT CONSTITUTE A WATER COMMITMENT. AVAILABILITY OF WATER WILL BE DETERMINED WHEN BUILDING PERMIT IS PRESENTED TO THE DEPARTMENT. WATER COMMITMENT WILL DEPEND UPON THE STATUS OF THE WATER SYSTEM AT THAT TIME. SHOULD WATER SERVICE BE MADE AVAILABLE, THE WATER COMMITMENT WILL BE EFFECTIVE WHEN THE PROJECT RECEIVES AN APPROVED BUILDING PERMIT FROM THE BUILDING DEPARTMENT. ALL WATER COMMITMENTS WILL BE CANCELED IN THE EVENT THE BUILDING PERMIT IS CANCELED.
- THE PROJECT SHALL BE SUBJECT TO THE BOARD OF WATER SUPPLY'S CROSS-CONNECTION CONTROL REQUIREMENTS PRIOR TO ISSUANCE OF THE BUILDING PERMIT.
- THE CONTRACTOR IN THE PRESENCE OF THE CONTRACTING OFFICER, WILL FLOW TEST THE MOST CRITICAL HYDRANTS (HYDRANTS WITH THE LEAST FLOW EXPECTED). THE CONTRACTING OFFICER WILL FURNISH TO THE HONOLULU FIRE DEPARTMENT (WITH A COPY TO THE BOARD OF WATER SUPPLY, CAPITAL PROJECTS DIVISION, CONSTRUCTION SECTION) THE FOLLOWING FLOW DATA: STATIC AND RESIDUAL PRESSURES IN PSI, PITOT AND FLOW IN GPM, GENERAL LAYOUT DRAWING SHOWING LOCATION OF HYDRANTS; AND MANUFACTURER OF HYDRANTS.
- THE INSTALLATION, CHLORINATION AND TESTING OF THE WATER MAIN AND FACILITIES AFTER THE METER SHALL NOT BE THE RESPONSIBILITY OF THE BOARD OF WATER SUPPLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL WATER LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE ESPECIALLY CAREFUL WHEN EXCAVATING BEHIND WATER LINES, TEES, AND BENDS WHEREVER THERE IS A POSSIBILITY OF WATER LINE MOVEMENT DUE TO THE REMOVAL OF THE SUPPORTING EARTH BEYOND THE EXISTING REACTION BLOCKS. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES NECESSARY TO PROTECT THE WATER LINES, SUCH AS CONSTRUCTING SPECIAL REACTION BLOCKS (WITH BWS APPROVAL) AND/OR MODIFYING HIS CONSTRUCTION METHOD.

WATER NOTES (CON'T)

- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS ARE FROM THE LATEST AVAILABLE DATA BUT IS NOT GUARANTEED AS TO THE ACCURACY OR THE ENCOUNTERING OF OTHER OBSTACLES DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL DAMAGES TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOT ASSUME THAT WHERE NO UTILITIES ARE SHOWN, THAT NONE EXIST.
- PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY BOARD OF WATER SUPPLY, THE MANUFACTURER'S CERTIFICATION THAT ALL CAST IRON (GRAY OR DUCTILE) FITTINGS FOR THE PROJECT CONFORM IN ALL RESPECTS TO THE WATER SYSTEM STANDARDS, DATED 2002.
- POLYGON SHAPE FOR MECHANICAL JOINT GLANDS AS DESCRIBED IN AWWA STANDARD C111 SHALL BE "STRAIGHT-SIDED" OR AN APPROVED EQUAL ON A JOB-TO-JOB BASIS.
- RE-APPROVAL SHALL BE REQUIRED IF THIS PROJECT IS NOT UNDER CONSTRUCTION WITHIN A PERIOD OF TWO YEARS.
- THE BACKFLOW PREVENTER DEVICE MUST BE INSTALLED BEFORE METER IS ISSUED.
- THE CONTRACTOR/DEVELOPER SHALL OBTAIN A NPDES PERMIT PRIOR TO CHLORINATION AND/OR DEWATERING. A COPY OF THE PERMIT SHALL BE SUBMITTED TO THE BOARD OF WATER SUPPLY CAPITAL PROJECTS DIVISION CONSTRUCTION SECTION.
- PIPE CUSHION SHALL BE OF HIGH RESISTIVITY MATERIAL. THE CONTRACTOR SHALL SUBMIT A SOIL CERTIFICATION THAT HIGH RESISTANT CUSHION MATERIAL HAS A RESISTIVITY GREATER THAN 5,000 OHM-CM. REMAINDER OF THE BACKFILL MATERIAL SHALL BE AS SPECIFIED IN THE WATER SYSTEM STANDARDS. PIPE CUSHION AND BACKFILL MATERIAL SHALL CONTAIN NO HAZARDOUS SUBSTANCES ABOVE REGULATORY ACTION LEVELS INCLUDING BUT NOT LIMITED TO LEAD, ASBESTOS, MERCURY, CHROMIUM, CADMIUM, ZINC, STRONTIUM, AND POLYCHLORINATED BIPHENYLS (PCB).
- INSTALL 4 MIL THICK, NON-METALLIC, BLUE COLORED, 6 INCHES WIDE WARNING TAPE OVER CENTERLINE OF THE PIPE AND BELOW THE BASE COURSE ALONG THE ENTIRE LENGTH OF TRENCH. TAPE SHOULD BE MARKED WITH "CAUTION WATER LINE BURIED BELOW".
- THE CONTRACTOR SHALL FURNISH AND INSTALL POLYETHYLENE WRAP, 3 FEET MINIMUM AT ALL TAPS (FOR DI PIPE AND COPPER LATERAL COMBINATION ONLY) AND PLASTIC PIPE (PE TUBING) 3 FEET LONG AFTER METERS FOR ALL SERVICE LATERAL CONNECTIONS.
- POLYVINYL CHLORIDE (PVC) PIPES SHALL BE CLASS 150. ALL DUCTILE IRON VALVES AND METALLIC FITTINGS SHALL BE WRAPPED WITH TWO LAYERS OF 8 MIL POLYETHYLENE WRAP. NO BENDING OF POLYVINYL CHLORIDE PIPES SHALL BE PERMITTED. THE INSTALLATION OF PVC PIPE, ACCORDING TO THE PLANS AND SPECIFICATIONS AS BID ON BY THE CONTRACTOR, THAT MAY REQUIRE ADDITIONAL DESIGN WORK, ADDITIONAL FITTINGS AND SPECIAL COUPLINGS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID IN THE PROPOSAL FOR PVC PIPE. ANY ADDITIONAL DESIGN WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL INSTALL ELECTRONIC MARKERS TO ALL MAINS AND TEST THE ELECTRONIC MARKERS PRIOR TO INSTALLATIONS TO VERIFY PROPER OPERATION. BWS PERSONNEL SHALL VERIFY THE NUMBER AND LOCATIONS OF PLACED ELECTRONIC MARKERS BEFORE FINAL PAVING OF THE PROJECT.
- ALL POLYVINYL CHLORIDE (PVC) PIPE DEFLECTIONS SHALL BE ACCOMPLISHED ONLY BY THE USE OF SPECIAL PVC DEFLECTION COUPLINGS. DEFLECTION AROUND CURVES SHALL BE ACCOMPLISHED ONLY BY USE OF PVC DEFLECTION COUPLINGS.
- ALL SECTIONS OF THE WATER MAIN REQUIRING REINFORCED CONCRETE JACKETING SHALL BE DUCTILE IRON PIPE CLASS 52 WITH DUCTILE IRON FITTINGS OR CONCRETE CYLINDER PIPE AND FITTINGS.
- BOSSSED TEES REQUIRED FOR ALL LATERALS AND ARV CONNECTIONS TO PVC MAINS.
- THE CONTRACTOR WILL BE REQUIRED TO CONDUCT A CROSS CONNECTION TEST BY CLOSING OFF MAIN CONTROL VALVE NEAR THE METER OF THE R-1 LINE WHILE FULLY ACTIVATING THE IRRIGATION SYSTEM AFTER ACTIVATING THE POTABLE WATER SYSTEM TO CHECK IF THE POTABLE SYSTEM IS SUPPLYING THE IRRIGATION SYSTEM.
- ALL NON-POTABLE WATER LINES (RW-1 OR RECLAIMED WATER) WILL BE CONSTRUCTED OF PURPLE PVC PIPE STAMPED WITH: "CAUTION: RECYCLED WATER - DO NOT DRINK." ALL NON-POTABLE WATER VALVE COVERS WILL BE LABELED "IRRIGATION".

SEWER NOTES

- ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS, SEPTEMBER 1986, THE DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS, SEPTEMBER, 1984, CURRENT CITY PRACTICES AND REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED, AND THE DESIGN STANDARDS OF THE DEPARTMENT OF WASTEWATER MANAGEMENT VOL. 1, JULY 1993.
- THE CONTRACTOR SHALL NOTIFY THE INSPECTION SECTION, WASTEWATER BRANCH, DDC, AT 768-8788 OR 768-8770 TO ARRANGE FOR INSPECTION SERVICES AND SUBMIT FOUR (4) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF SEWER WORK. THE CONTRACTOR SHALL PAY FOR ALL INSPECTION COSTS.
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE CONTRACTING OFFICER FROM HIS RESEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE FACILITIES, INCLUDING AND AFFECTING SEWER LINES, IN THE PRESENCE OF THE WASTEWATER INSPECTOR AND EXERCISE PROPER CARE IN EXCAVATING THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL DAMAGED UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SEWER SERVICE TO ALL AFFECTED AREAS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SEWAGE SPILLS CAUSED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE STATE DEPARTMENT OF HEALTH AND UTILIZE APPROPRIATE SAMPLING AND ANALYZING PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC NOTIFICATIONS AND PRESS RELEASES.
- SEE "ADJUSTMENT TO EXISTING UTILITIES NOTE," THIS SHEET.
- FOR SEWER MANHOLE ADJUSTMENTS UPWARD LESS THAN 3", SEE STD. DETAIL S-25. FOR SMH ADJUSTMENTS UPWARD GREATER THAN 3" OR FOR ANY ADJUSTMENTS DOWNWARD, RECONSTRUCT SMH TOP FROM BELOW THE CONE SECTION.
- CONFINED SPACE

FOR ENTRY BY CITY PERSONNEL, INCLUDING INSPECTORS, INTO A PERMIT REQUIRED CONFINED SPACE AS DEFINED IN 29 CFR PART 1910.146(b), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING:

- ALL SAFETY EQUIPMENT REQUIRED BY THE CONFINED SPACE REGULATIONS APPLICABLE TO ALL PARTIES OTHER THAN THE CONSTRUCTION INDUSTRY, TO INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:
 - FULL BODY HARNESSES FOR UP TO TWO PERSONNEL.
 - LIFELINE AND ASSOCIATED CLIPS.
 - INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
 - TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
 - EMERGENCY (ESCAPE) RESPIRATOR (10 MINUTE DURATION).
 - CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
 - CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20- FEET AWAY).
 - PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.
- CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
- ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).

REVISION NO	DESCRIPTION	DATE	BY	CHK'D



DEPARTMENTS OF THE ARMY AND AIR
NATIONAL GUARD OF HAWAII
OFFICE OF THE ENGINEER, FT. RUGER, HAWAII

DESIGNED: KS
DRAWN: KS
SAFETY: KS
ENGINEER: KS

BUILDING 175 RENOVATION
KALAELOA
JOB NO. PN15080016 / CA-2831

CONSTRUCTION NOTES-2

APPROVED: _____

HAWAII, FAC. UNIT OFFICER

APPROVED: _____

HWR, USFPO FOR HAWAII

DATE: 5-25-10

SCALE: AS NOTED

DRG # **C-1.2**

SHEET 3 of 33

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

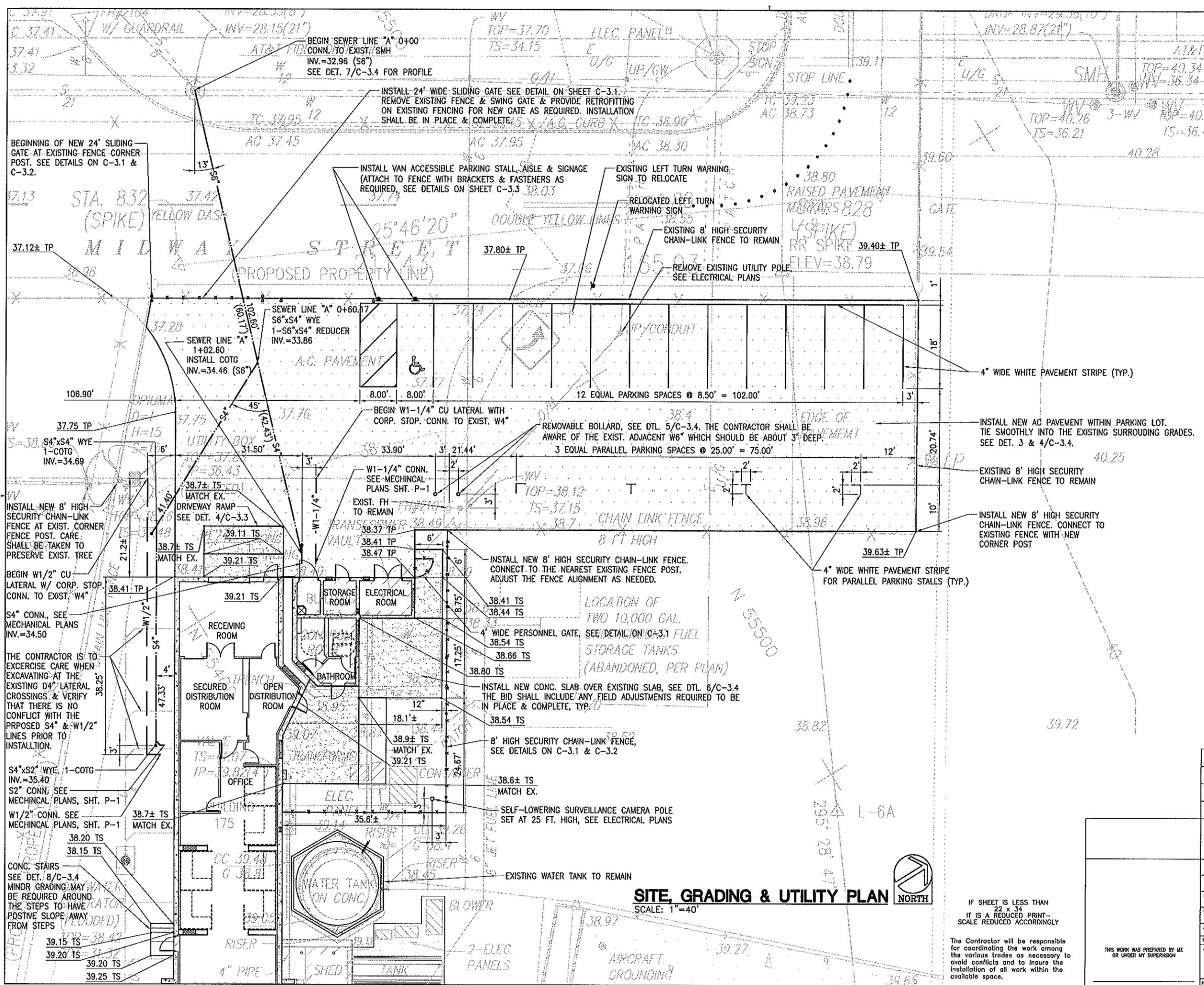
The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.



CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Chad M. McDonald

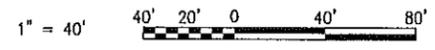


SITE, GRADING & UTILITY PLAN
 SCALE: 1"=40'

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT--SCALE REDUCED ACCORDINGLY

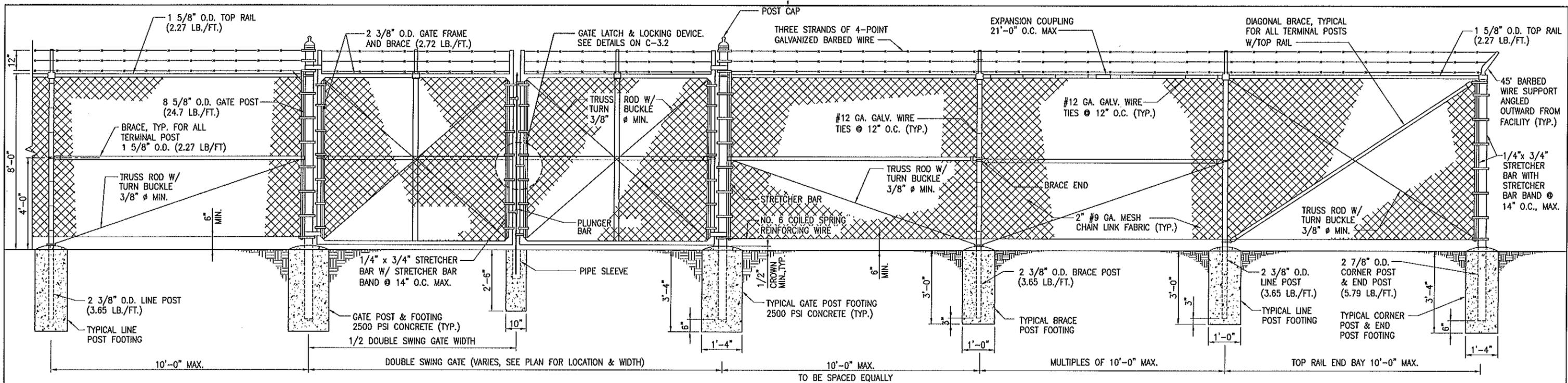
The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

GRAPHIC SCALES

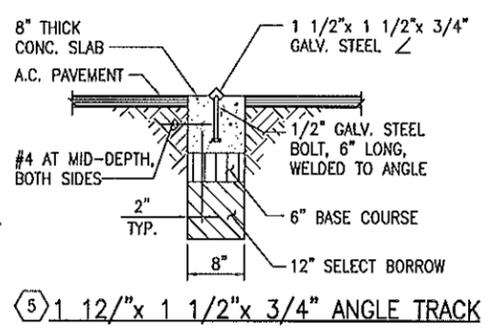
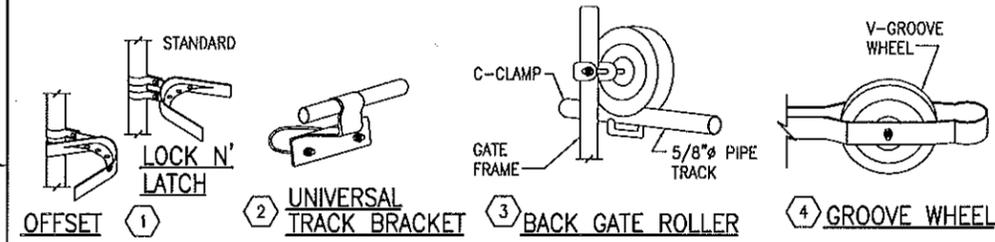


REVISION NO	DESCRIPTION	DATE	BY	CHK'D

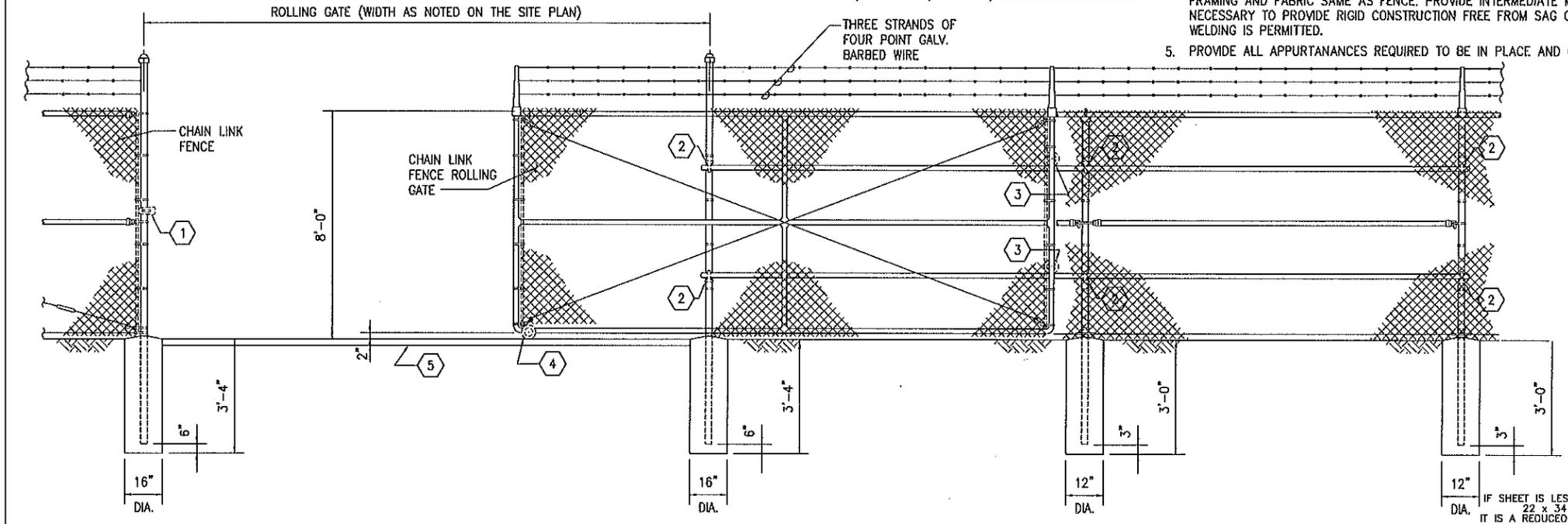
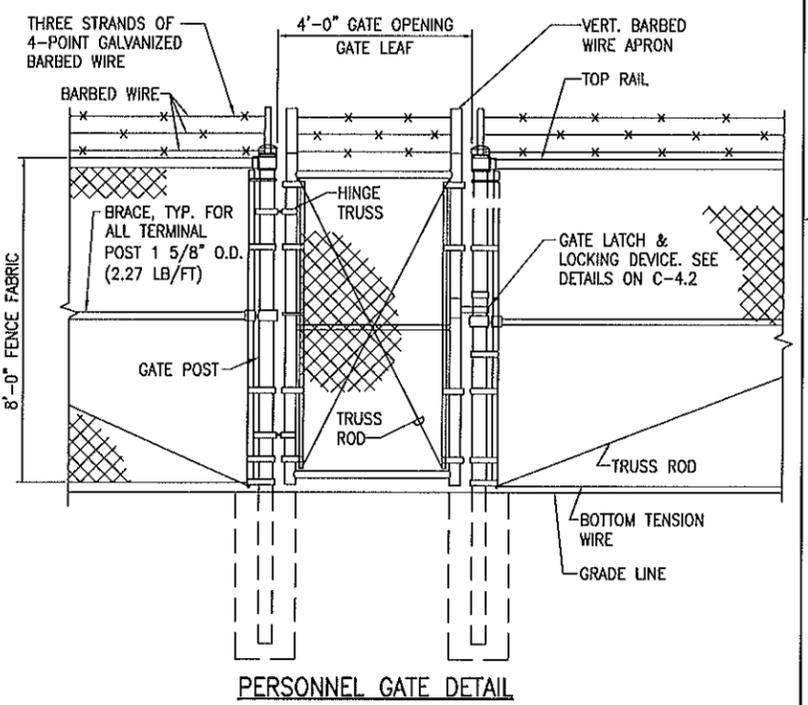
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII					
DESIGNED:	XX	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831 SITE, UTILITY & GRADING PLAN			
DRAWN:	XX				
SAFETY:					
ENGINEER:	XX				
APPROVED:		APPROVED:		DATE	5-25-10
HAWAII, FAC LIGHT OFFICER		HAWAII, USFPO FOR HAWAII		SCALE:	AS NOTED
APPROVED:					
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION					
HAWAII, CONTRACTING & ENGINEERING OFFICER					
C-2.1 SHEET 4 OF 33					



CHAIN LINK SECURITY FENCE WITH THREE STRANDS OF BARBED WIRE



- ROLLING GATE NOTES:**
1. INSTALL DOUBLE WHEEL ON GATE AND BACK GATE ROLLERS WITH C-CLAMPS.
 2. INSTALL UNIVERSAL TRACK BRACKETS (SET TOP END BRACKET UPSIDE DOWN) ON POSTS AND MEASURE LENGTHS TO CUT THE 5/8" PIPE TRACK, CUT PIPE TRACK AND INSTALL WITH UNIVERSAL TRACK BRACKETS. SET TWO PIPE TRACKS PARALLEL ABOUT ONE FOOT FROM THE TOP AND BOTTOM OF THE POSTS.
 3. PADLOCK SHALL BE 5 PIN TUMBLER CYLINDER TYPE WITH BRASS CASE AND A 5/16" DIA. HARDENED STEEL SHACKLE. PADLOCKS SHALL BE KEYED DIFFERENTLY BUT MASTER-KEYED TO THE FENCE SYSTEM. TWO MASTER KEYS SHALL BE PROVIDED. PADLOCK SHALL BE ARRANGED TO BE ACCESSIBLE FROM BOTH SIDES OF THE GATE, REGARDLESS OF LATCHING ARRANGEMENT. PADLOCKS SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTING OFFICER PRIOR TO PURCHASE.
 4. SLIDING WHEEL GATE SHALL BE SINGLE OVERHEAD, ZINC COATED STEEL WITH ALL FRAMING AND FABRIC SAME AS FENCE. PROVIDE INTERMEDIATE MEMBERS AS NECESSARY TO PROVIDE RIGID CONSTRUCTION FREE FROM SAG OR TWIST. NO FIELD WELDING IS PERMITTED.
 5. PROVIDE ALL APPURTANANCES REQUIRED TO BE IN PLACE AND COMPLETE.



TYPICAL ROLLING GATE DETAIL

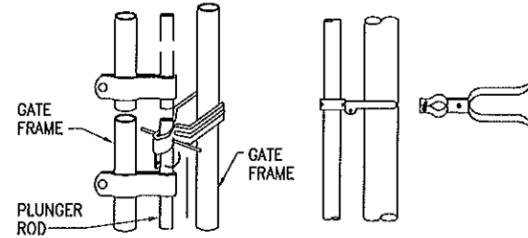
1 CHAIN LINK SECURITY FENCE TYPICAL DETAILS-1
NOT TO SCALE

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

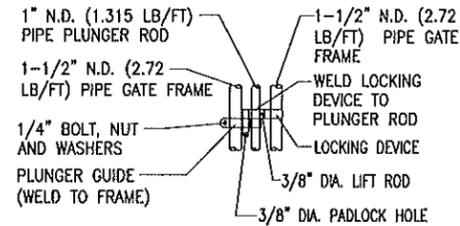
REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	XX	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831		
DRAWN:	XX			
SAFETY:				
ENGINEER:	XX			
APPROVED:		APPROVED:	DATE	
MARKING FAC. MGMT OFFICER		HSG. USPGD FOR HAWAII		5-25-10
APPROVED:		SCALE		AS NOTED
HAW. CONTRACTING & ENGINEERING OFFICER		DWG #		C-3.1
		SHEET		5 of 33

FENCING NOTES:

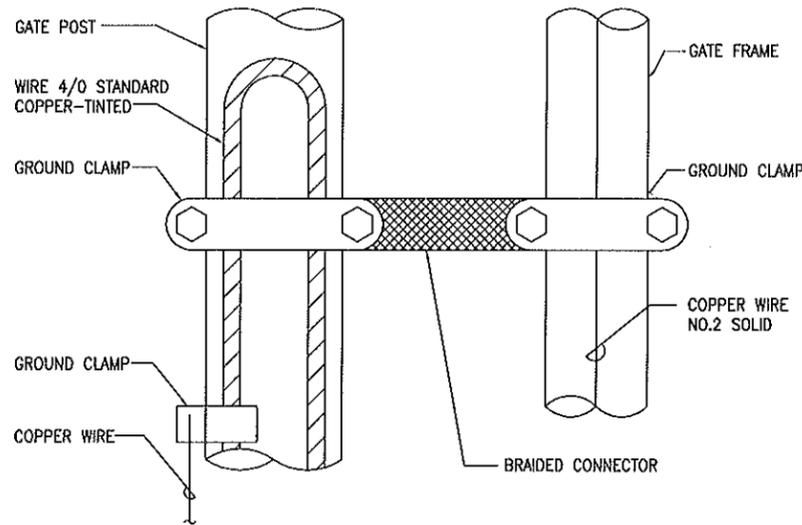
1. ALL PIPE AND POST SIZES ARE NOMINAL DIAMETER (N.D.). GATE FRAMES, AND BRACES SHALL BE SCHEDULE 40 (STANDARD WEIGHT) PIPE.
2. CHAIN LINK FABRIC, PIPES, FITTING, FASTENERS, TRUSS ROD, POSTS, HOG RINGS AND TENSION WIRE SHALL BE HOT-DIP GALVANIZED.
3. CHAIN LINK FABRIC SHALL BE CONTINUOUS AND FASTENED TO END, SIDE FRAME PIPES, INTERMEDIATE, GATE AND CORNER POSTS BY TENSION BARS WITH TENSION BANDS EVENLY SPACED AT 15" O.C. (MAX.).
4. WIRE FASTENINGS SHALL BE NO. 12 GAUGE GALVANIZED TIE WIRE.
5. CHAIN LINK FABRIC SHALL BE FASTENED TO LINE POSTS TOP AND BOTTOM FRAME PIPES WITH WIRE FASTENINGS EVENLY SPACED AT 12" O.C. (MAX.).
6. CHAIN LINK FABRIC SHALL BE FASTENED TO HORIZONTAL RAILS WITH WIRE FASTENINGS EVENLY SPACED AT 12" O.C. (MAX.).
7. ALL WIRE FASTENING ENDS SHALL BE WRAPPED AROUND CHAIN LINK A MINIMUM OF ONE COMPLETE TURN. (HOOKING OF WIRE ENDS SHALL NOT BE PERMITTED).
8. CHAIN LINK FABRIC SHALL BE FASTENED TO TRUSS ROD WITH NO. 9 GAUGE HOG RINGS AT 12" O.C.
9. NO SPLICING SHALL BE ALLOWED ON ALL STRAIGHT-RUN PIPES.
10. TOP AND BOTTOM SELVAGES OF CHAIN LINK FABRIC SHALL BE KNUCKLED.
11. INSTALL INTERMEDIATE POSTS AT 200' MAX. INTERVALS.
12. ALL GATES SHALL HAVE ACCESSIBLE HARDWARE FOR THE LOCK AND CATCH ASSEMBLIES.
13. ALL FENCE POSTS SHALL BE INSTALLED EVENLY SPACED.
14. ONE FENCE POSTS SHALL BE GROUNDED AS SHOWN ON THE GROUNDING DETAIL ON SHIT. THIS SHEET.
15. AFTER INSTALLATION, ALL BOLT ENDS SHALL BE CUT FLUSH WITH THE NUTS AND GROUND SMOOTH.
16. GATE FRAME SHALL BE OF WELDED PIPE CONSTRUCTION. ALL WELDING SHALL CONFORM TO THE SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE".
17. FOR ALL WELDED CONNECTIONS: CORNERS SHALL BE MITERED AND ALL PIPE BRACES PROPERLY COPEd.
18. ALL WELDED CONNECTIONS SHALL BE PAINTED WITH TWO COATS OF Z.R.C. COLD GALVANIZING COMPOUND.
19. GATE HINGES SHALL BE TACK WELDED TO GATE POSTS AND FRAMES.
20. THE FENCE FABRIC SHALL BE SECURED TO THE VERTICAL POST AT MAXIMUM 3-FOOT INTERVALS ALONG THE HEIGHT WITH POWDER ACTUATED STUDS IN ADDITION TO THE TYPICAL FASTENERS AS NOTED IN THE SPECIFICATIONS.
21. PAD LOCKS FOR ALL GATES SHALL BE FURNISHED BY THE CONTRACTOR. PADLOCKS ARE TO BE OF GOOD QUALITY, HEAVY DUTY AND WEATHER RESISTANT AND PROVIDED FOR ALL GATES. ALL PADLOCKS SHALL BE KEYED ALIKE AND A MINIMUM OF TWO (2) KEYS PER LOCK SHALL BE PROVIDED. PADLOCKS SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTING OFFICER PRIOR TO PURCHASE.
22. SWING GATES SHALL BE CONSTRUCTED TO OPEN 180°±.
23. POST IN CONCRETE FOOTING TO HAVE HEAVY COAT OF BITUMINOUS MASTIC.
24. DOUBLE SWING GATE SHALL BE PROVIDED WITH TUBULAR PLUNGER BAR, 1 LOCK KEEPER AND GUIDE, 2 LATCH FORKS, 2 FORK CATHES, 1 CATCH FOR PLUNGER BAR AND 2 GATE STOPS.
25. FENCE INSTALLATION SHALL BE IN PLACE AND COMPLETE. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION.



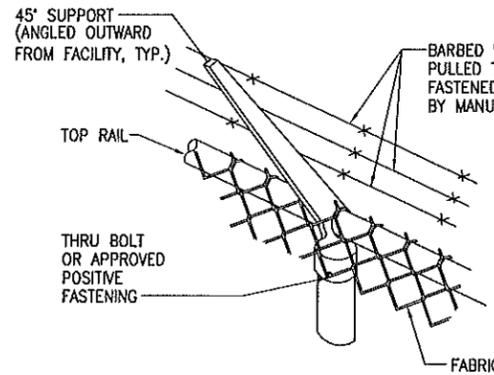
GATE LATCH DETAIL



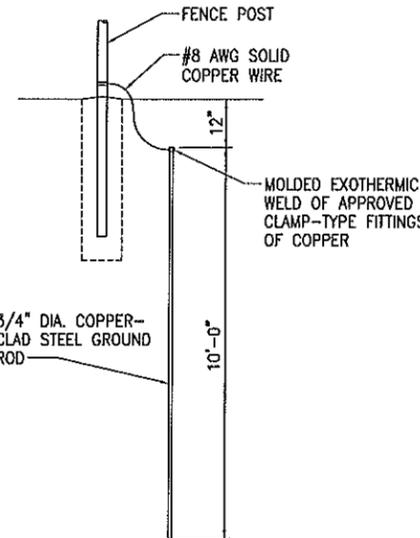
LOCKING DEVICE DETAIL



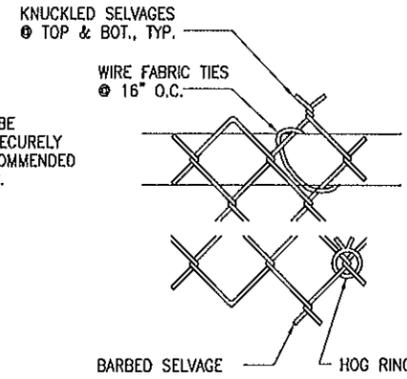
POST GROUNDING DETAIL



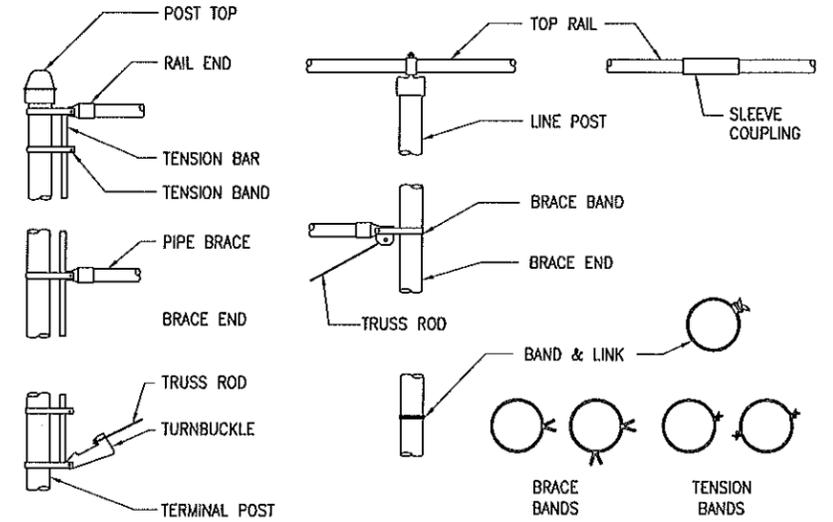
DETAIL OF 45' SUPPORT



GROUNDING DETAIL

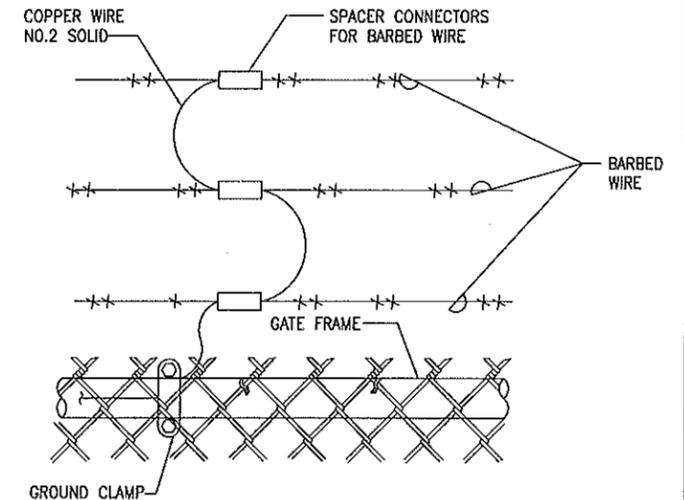


FABRIC DETAIL



POST DETAIL

FASTENERS



FENCE GROUNDING DETAIL

1 CHAIN LINK SECURITY FENCE TYPICAL DETAILS-2
 C-3.2 NOT TO SCALE

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D

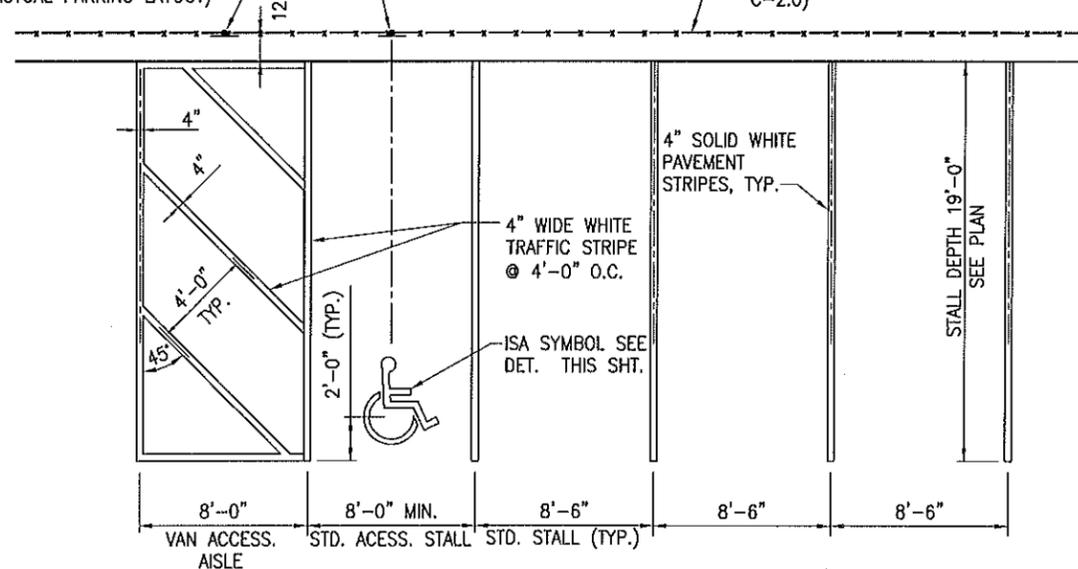
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED: XX	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831			
DRAWN: XX	SECURITY FENCE DETAILS-2			
SAFETY:				
ENGINEER: XX				
APPROVED:	APPROVED:	DATE		
HAWAII, FAC MGMT OFFICER	HQB, USFPO FOR HAWAII	5-25-10		
APPROVED:	SCALE: AS NOTED		DWG #	
HAWAII, CONTRACTING & ENGINEERING OFFICER	C-3.2		SHEET 6 of 33	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

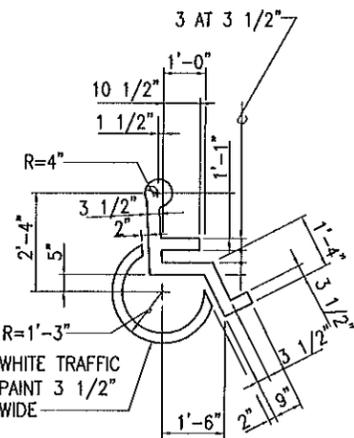
NOTE:
ALL SLOPES WITHIN THE ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2% IN ALL DIRECTIONS (SEE SITE PLAN FOR ACTUAL PARKING LAYOUT)

ACCESS AISLE SIGN. SEE DET. THIS SHEET. ATTACH TO FENCE.
VAN ACCESSIBLE STALL SIGN. SEE DET. THIS SHEET. ATTACH TO FENCE.

EXISTING 8-FT CHAIN LINK SECURITY FENCE (SEE SITE PLAN, C-2.0)

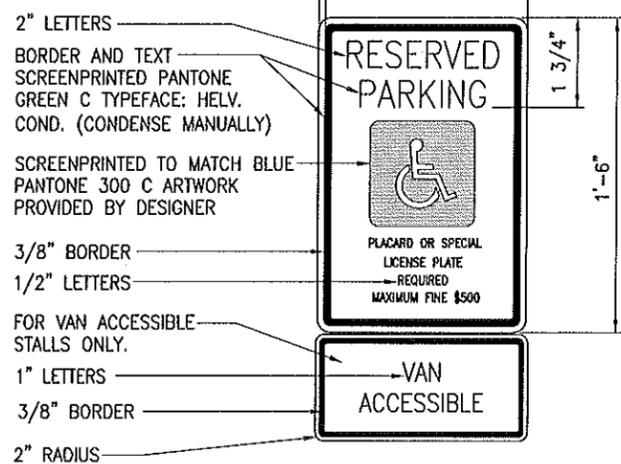


1 TYPICAL PARKING STALL DETAIL
C-3.3 NOT TO SCALE

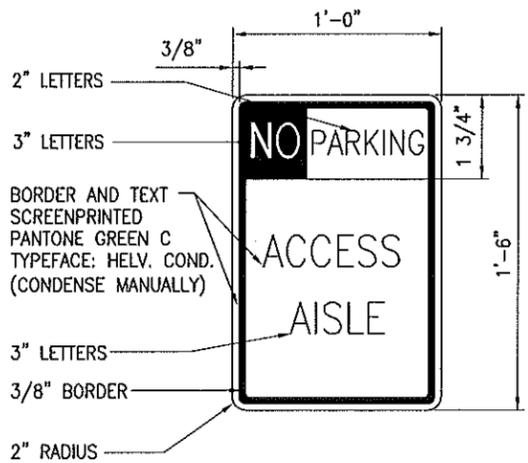


ISA SYMBOL DETAIL
NOT TO SCALE

2 VAN ACCESSIBLE & ACCESSIBLE STALL SIGNS DETAIL
C-3.3 SCALE: 1 1/2"=1'-0"

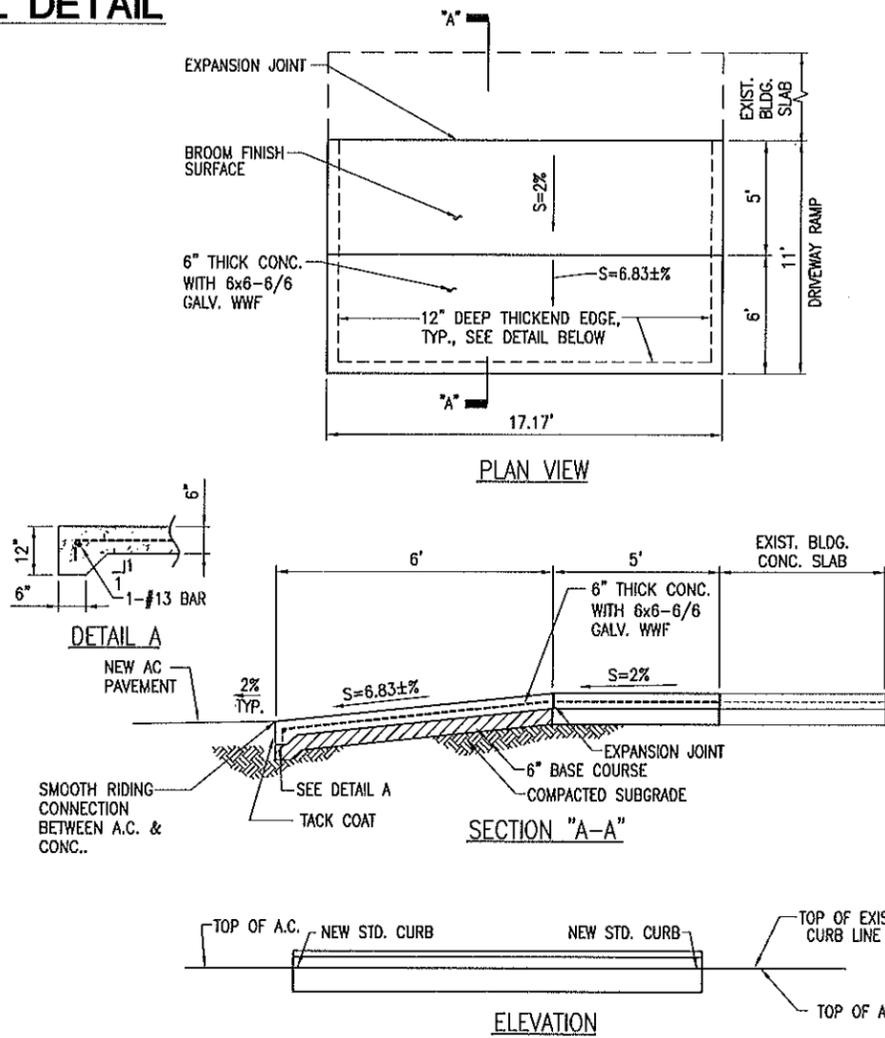


NOTES:
1. SIGNS SHALL BE ALUM T6061 SHEET COVERED WITH ENGINEERING GRADE REFLECTIVE SHEETING.
2. SIGN LETTERING SHALL BE UPPERCASE LETTERS OF THE TYPE APPROVED BY FEDERAL HIGHWAY ADMINISTRATION.
3. SIGNS SHALL BE PROPERLY SECURED TO THE FENCE WITH BRACKETS AND BOLTS AS REQUIRED.



NOTES:
1. SIGNS SHALL BE ALUM T6061 SHEET COVERED WITH ENGINEERING GRADE REFLECTIVE SHEETING.
2. SIGN LETTERING SHALL BE UPPERCASE LETTERS OF THE TYPE APPROVED BY FEDERAL HIGHWAY ADMINISTRATION.
3. SIGNS SHALL BE PROPERLY SECURED TO THE FENCE WITH BRACKETS AND BOLTS AS REQUIRED.

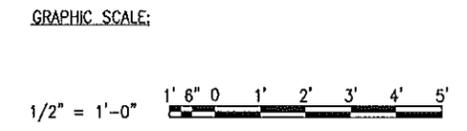
3 ACCESS AISLE SIGN DETAIL
C-3.3 SCALE: 1 1/2"=1'-0"



4 DRIVEWAY RAMP DETAIL
C-3.3 NOT TO SCALE

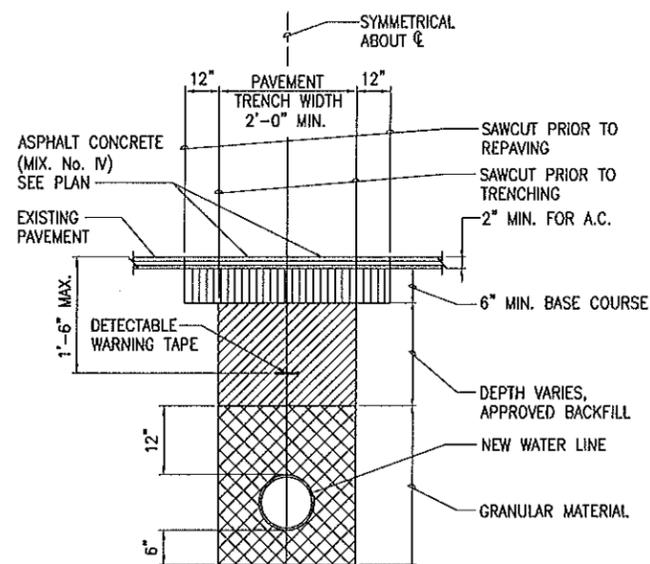
IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT--SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

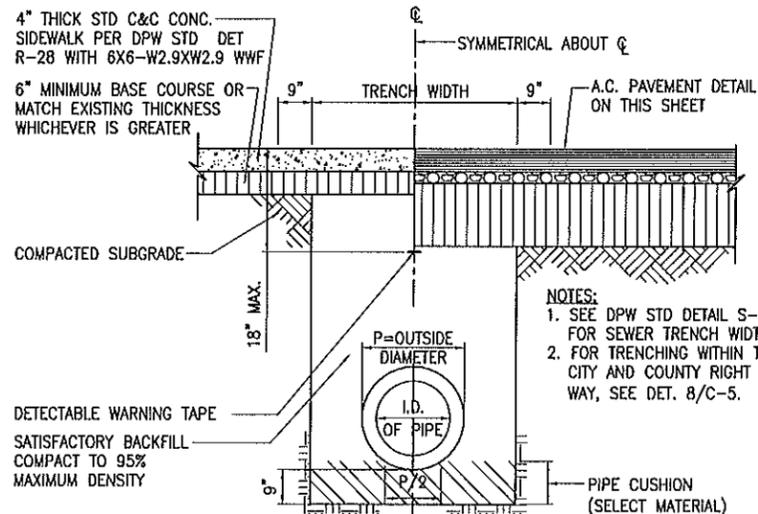


REVISION NO	DESCRIPTION	DATE	BY	CHK'D

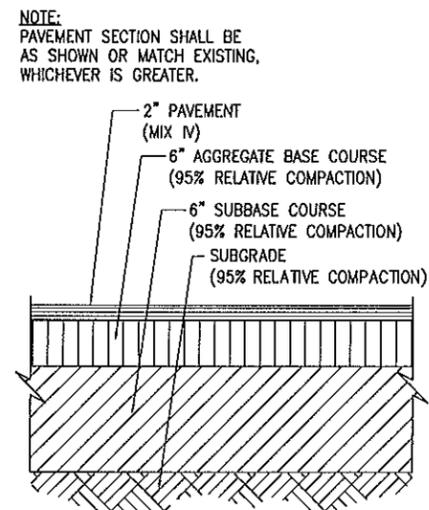
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED: XX	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831			
DRAWN: XX	PARKING DETAILS			
SAFETY:				
ENGINEER: XX				
APPROVED:	APPROVED:	DATE: 5-25-10		
HAWKING, FAC MGMT OFFICER	HOB, USPO FOR HAWAII			
APPROVED:				SCALE: AS NOTED
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION				DWG # C-3.3
HAWKING, CONTRACTING & ENGINEERING OFFICER				SHEET 7 OF 33



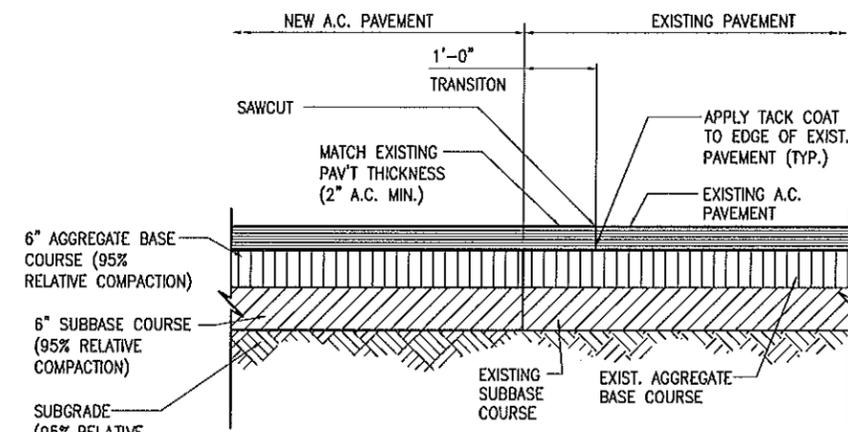
1 WATERLINE TRENCH DETAIL
C-3.4 NOT TO SCALE



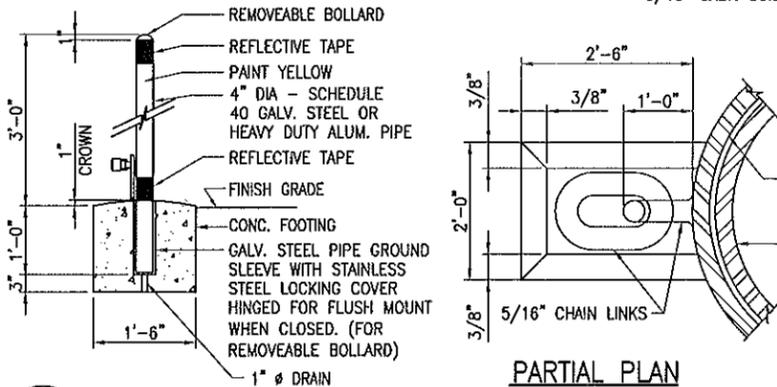
2 SEWER TRENCH DETAIL
C-3.4 NOT TO SCALE



3 A.C. PAVEMENT DETAIL
C-3.4 NOT TO SCALE

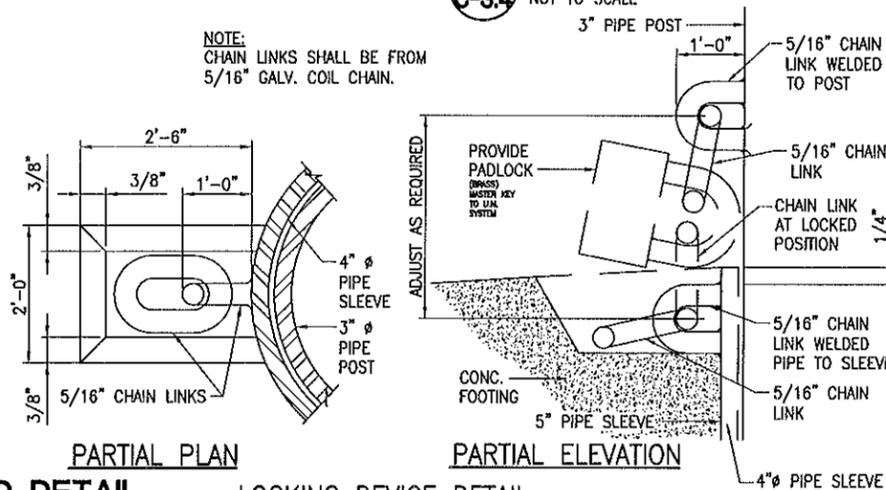


4 SMOOTH RIDING CONNECTION DETAIL
C-3.4 NOT TO SCALE

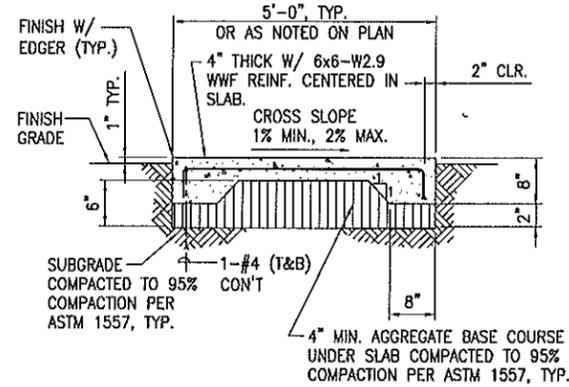


5 REMOVABLE BOLLARD DETAIL
C-3.4 SCALE: 3/4" = 1'-0"

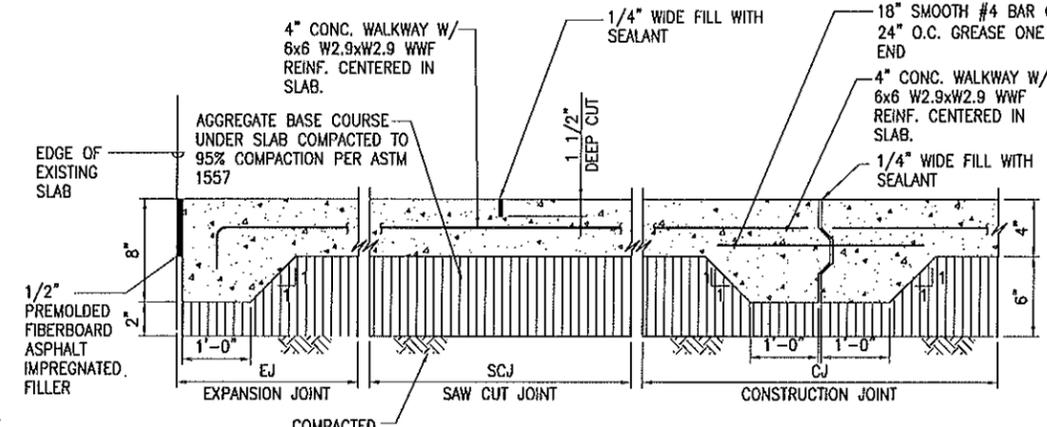
NOTE: CHAIN LINKS SHALL BE FROM 5/16" GALV. COIL CHAIN.



LOCKING DEVICE DETAIL
NOT TO SCALE



X-SECTION

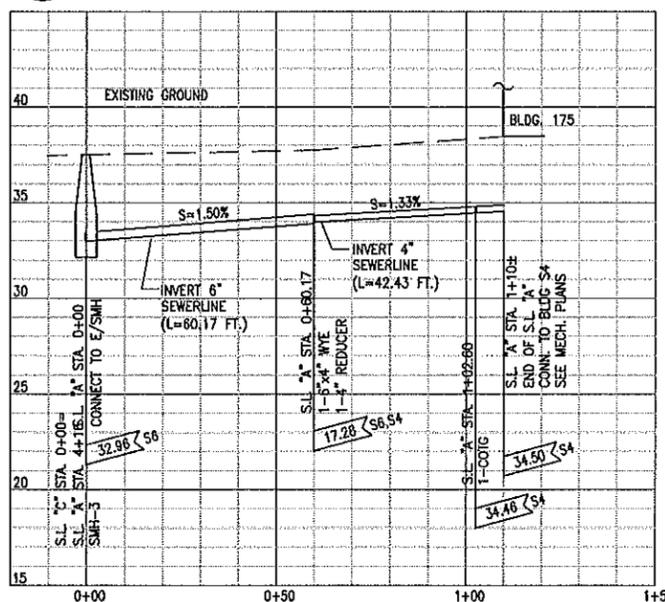


JOINT DETAIL

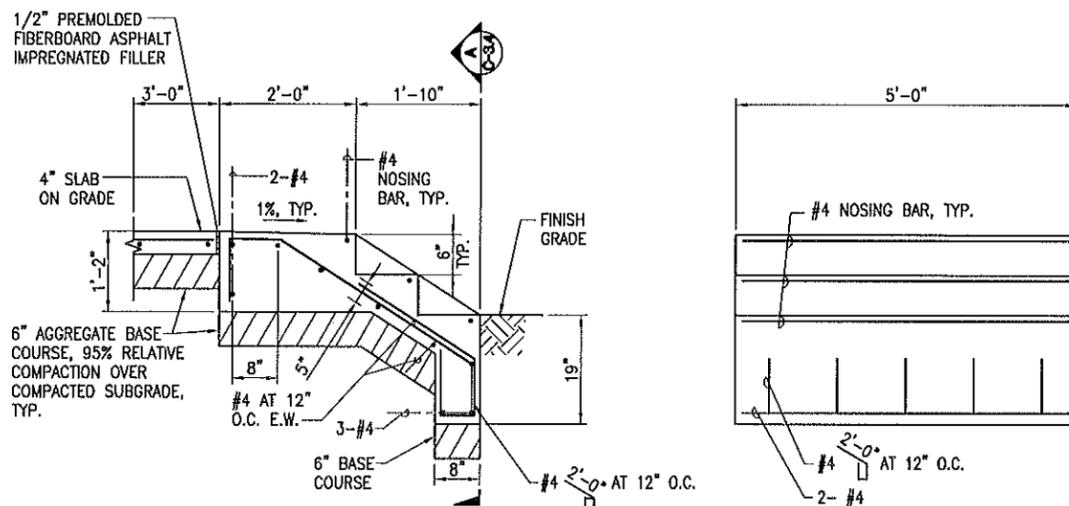
6 CONCRETE SLAB/WALKWAY DETAIL (PRIVATE)
C-3.4 NOT TO SCALE

CONCRETE SLAB/WALKWAY NOTES:

1. MAXIMUM SPACING BETWEEN ANY TWO CONSECUTIVE CONTROL JOINTS OR CONSTRUCTION JOINTS SHALL BE 8 FEET.
2. ALL CONTROL JOINTS SHALL BE SAW CUT WITHIN 24 HOURS OF PLACEMENT OF SEALANT.
3. ALL SAW CUT JOINTS SHALL BE CLEAN AND FREE OF DIRT, DUST AND WATER PRIOR TO PLACEMENTS OF SEALANTS.
4. ALL CONTROL JOINTS SHALL BE STRAIGHT AND PERPENDICULAR TO CENTERLINE OF WALKWAY.
5. ALL PROPOSED WALKWAYS SHALL BE BROOM FINISHED. THE FINISHED SURFACE SHALL BE SCORED INTO SQUARES WITH SIDES EQUAL TO SIDEWALK WIDTH, IN 5 FOOT SQUARES OR AS OTHERWISE SHOWN ON THE PLANS.
6. EXPANSION JOINTS TO BE SPACED AT A MAXIMUM OF 50 FOOT INTERVALS AND WHERE WALKWAY CHANGES DIRECTIONS OR BUTTS AGAINST A CURB OR STRUCTURE.



7 PROFILE - SEWERLINE "A"
C-3.4 SCALES: HORIZ. 1" = 20' VERT. 1" = 4'



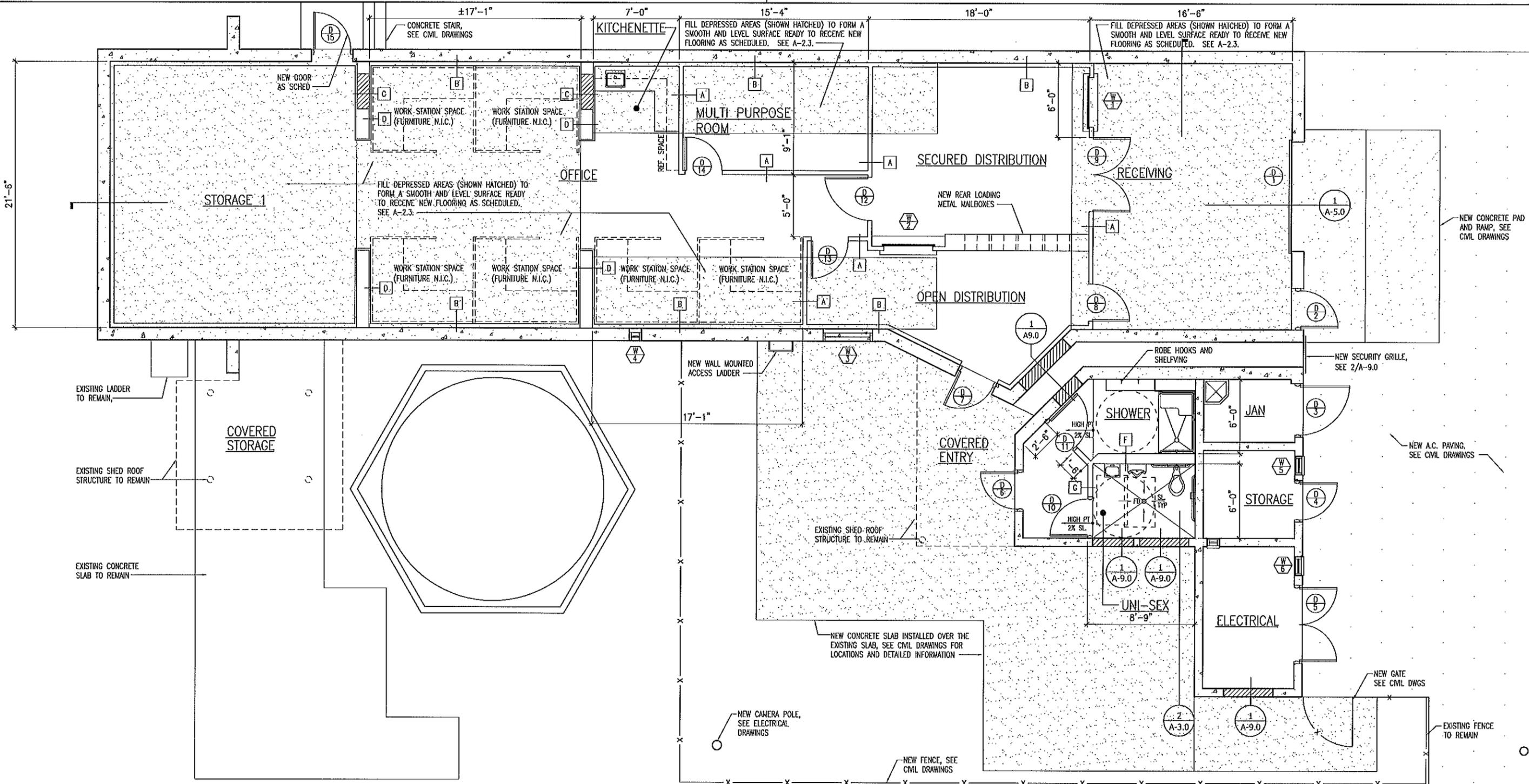
8 CONCRETE STAIR DETAIL
C-3.4 SCALE: 3/4" = 1'-0"

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT - SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D

DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED: XX	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831			
DRAWN: XX	MISCELLANEOUS DETAILS			
SAFETY:				
ENGINEER: XX				
APPROVED:	APPROVED:	DATE: 5-25-10		
HAWAII, FAC MGMT OFFICER	HQB, USPO FOR HAWAII			
APPROVED:				SCALE: AS NOTED
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION				DWG # C-3.4
HONO, CONTRACTING & ENGINEERING OFFICER				SHEET 8 of 33



1 NEW FLOOR PLAN
A-2.0 SCALE: 1/4" = 1'-0"



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 Chapter 10-110, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscapers Architects.

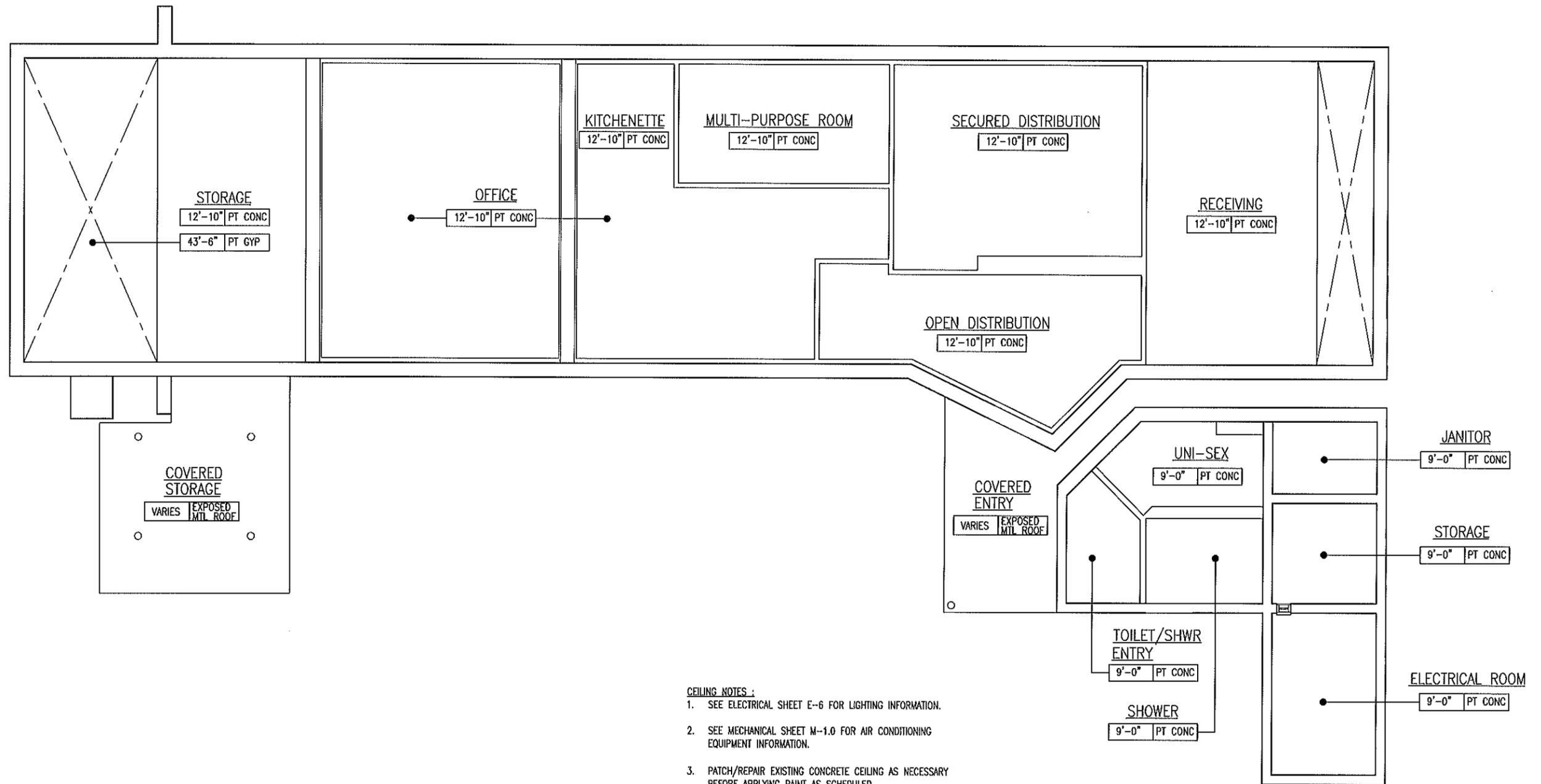
Steven D. Wong
4/30/2012
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831		
DRAWN:	CAD	NEW FLOOR PLAN		
SAFETY:				
CHECKED:	SW			
APPROVED:		APPROVED:	DATE	
HEARING, FAC MGMT OFFICER		WOB, USPTD FOR HAWAII	5-25-10	
APPROVED:		SCALE: AS NOTED		
			DWG # A-2.0	
			SHEET 11 OF 33	

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.



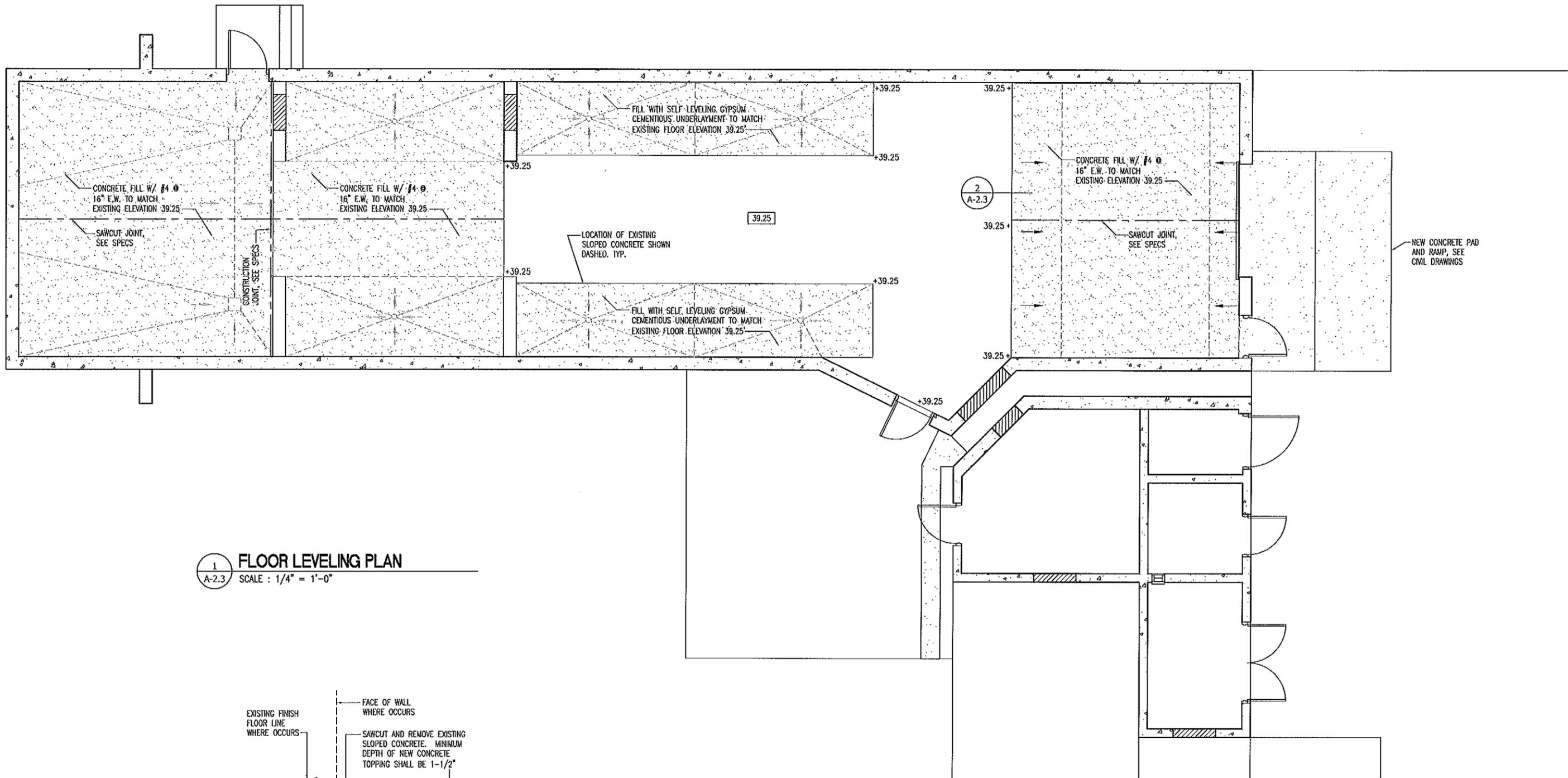
- CEILING NOTES :**
1. SEE ELECTRICAL SHEET E-6 FOR LIGHTING INFORMATION.
 2. SEE MECHANICAL SHEET M-1.0 FOR AIR CONDITIONING EQUIPMENT INFORMATION.
 3. PATCH/REPAIR EXISTING CONCRETE CEILING AS NECESSARY BEFORE APPLYING PAINT AS SCHEDULED.

1 REFLECTED CEILING PLAN
 A-2.1 SCALE : 1/4" = 1'-0"

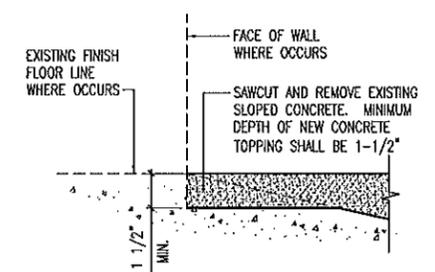
IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT--SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

<small>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 Chapter 10-115, Subchapter 1) Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscapers Architects.</small>					
<small>NOTE: Contractor to check and verify dimensions of job before proceeding with work.</small>					
<small>4/25/2012</small> MITSUNAGA & ASSOCIATES, INC. EXP. DATE					
DESIGNED: AC DRAWN: CAD SAFETY: CHECKED: SW APPROVED:		DESCRIPTION BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831 REFLECTED CEILING PLAN		DATE 5-25-10	
HIRAO, FAD MGMT OFFICER APPROVED:		NIB, USFPO FOR HAWAII APPROVED:		SCALE: AS NOTED DWG # A-2.1 SHEET 12 OF 33	
HIRAO, CONTRACTING & ENGINEERING OFFICER					



1 FLOOR LEVELING PLAN
 A-2.3 SCALE : 1/4" = 1'-0"



2 DETAIL
 A-2.3 SCALE : 3" = 1'-0"

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT—SCALE REDUCED ACCORDINGLY

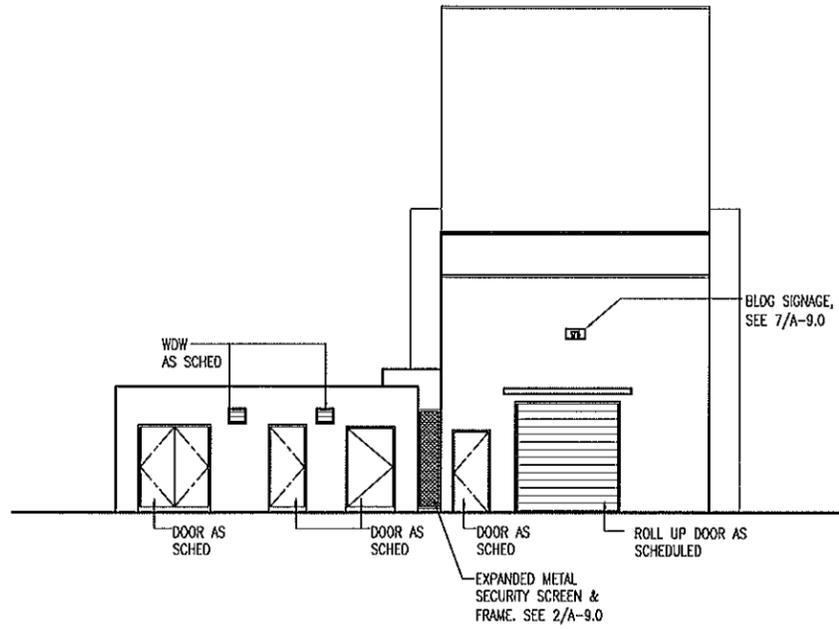
The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.



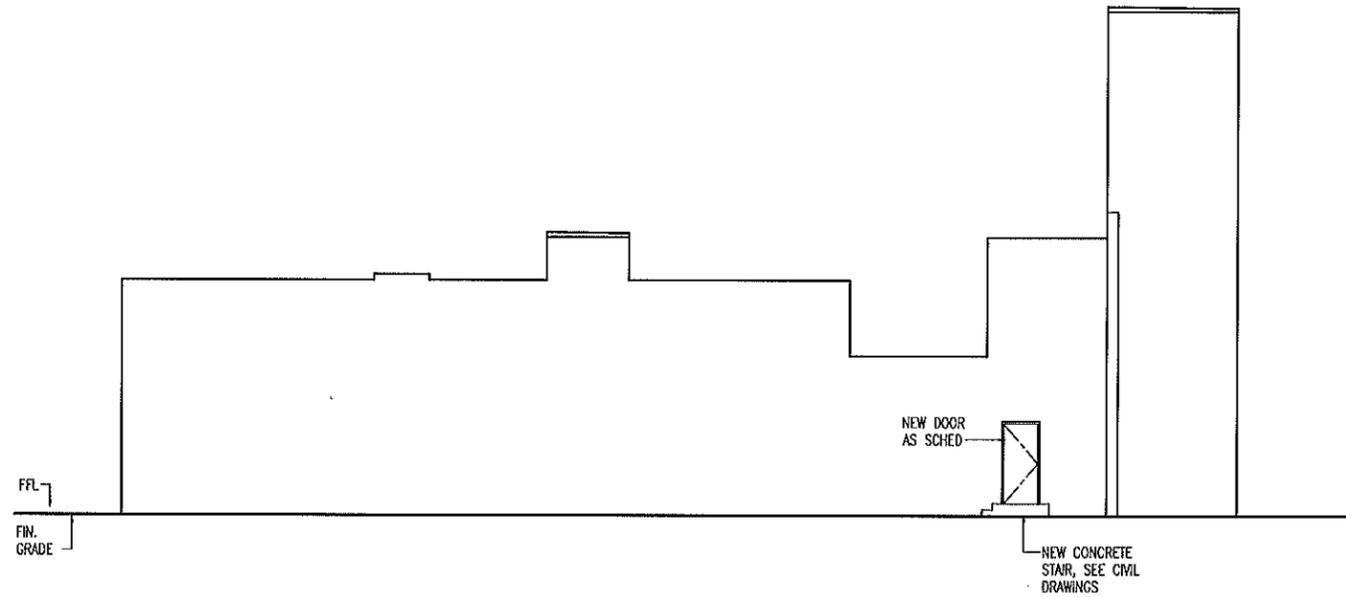
This work was prepared by me or under my supervision and construction of this project will be under my observation. Observation of construction as defined in Chapter 16-116, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscapers Architects, 1/30/2012

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

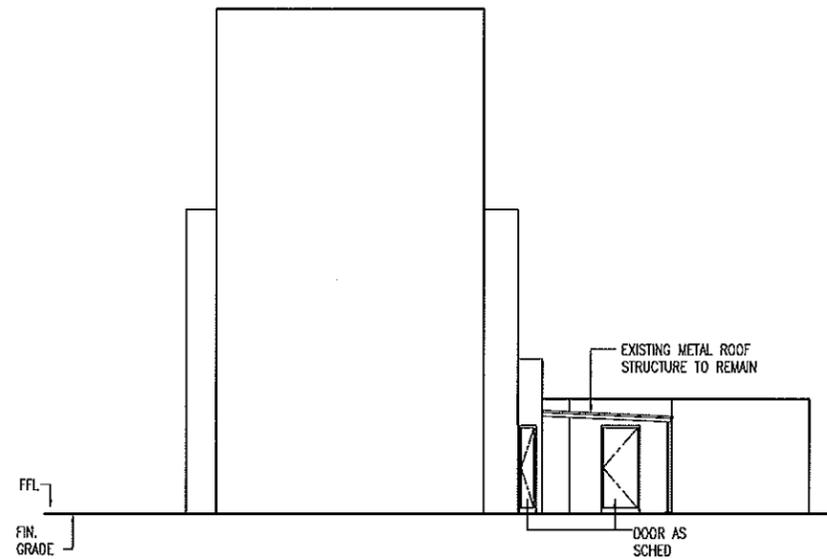
REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DESIGNED:	AC	DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII		
DRAWN:	CAD	BUILDING 175 RENOVATION KALAELOA		
SAFETY:		JOB NO. PN15080016 / CA-2831		
CHECKED:	SW	FLOOR LEVELING PLAN		
APPROVED:		DATE	5-25-10	
HAWAII, FAC MGMT OFFICER		HON. USFPO FOR HAWAII		
APPROVED:		SCALE:	AS NOTED	
		DWG #	A-2.3	
		SHEET	14 OF 33	



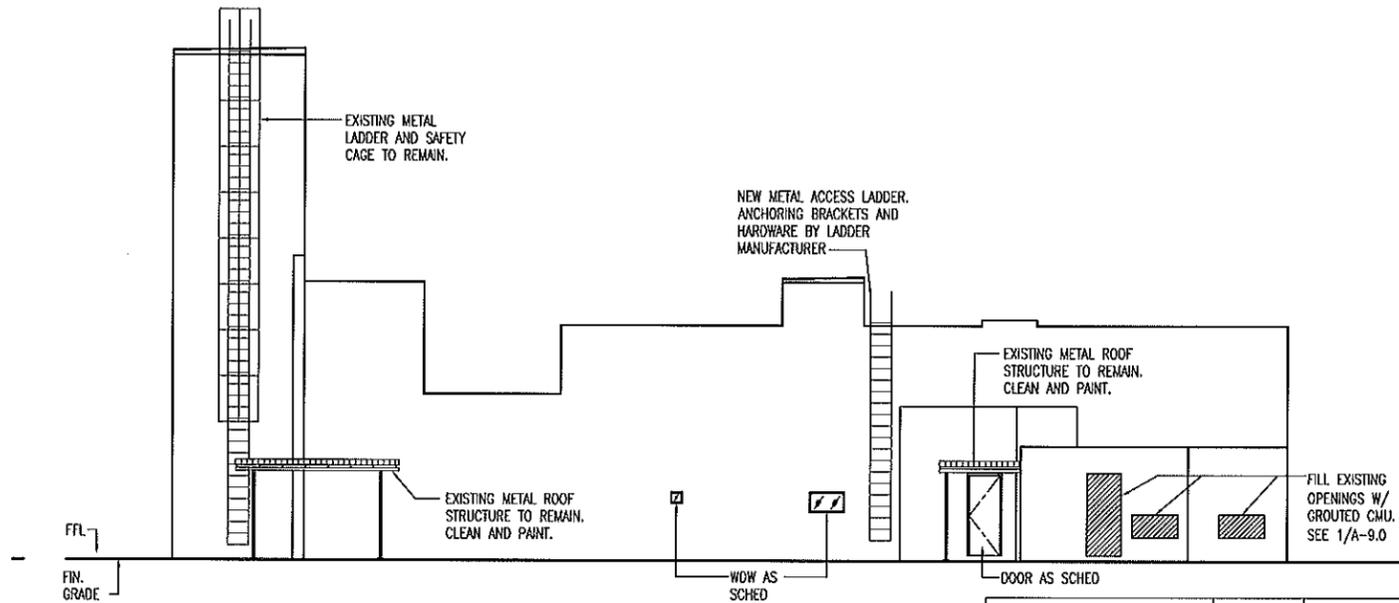
1 WEST ELEVATION
A-3.0 SCALE : 1/8" = 1'-0"



2 SOUTH ELEVATION
A-3.0 SCALE : 1/8" = 1'-0"



3 EAST ELEVATION
A-3.0 SCALE : 1/8" = 1'-0"



4 NORTH ELEVATION
A-3.0 SCALE : 1/8" = 1'-0"

IF SHEET IS LESS THAN
22 x 34
IT IS A REDUCED PRINT—
SCALE REDUCED ACCORDINGLY

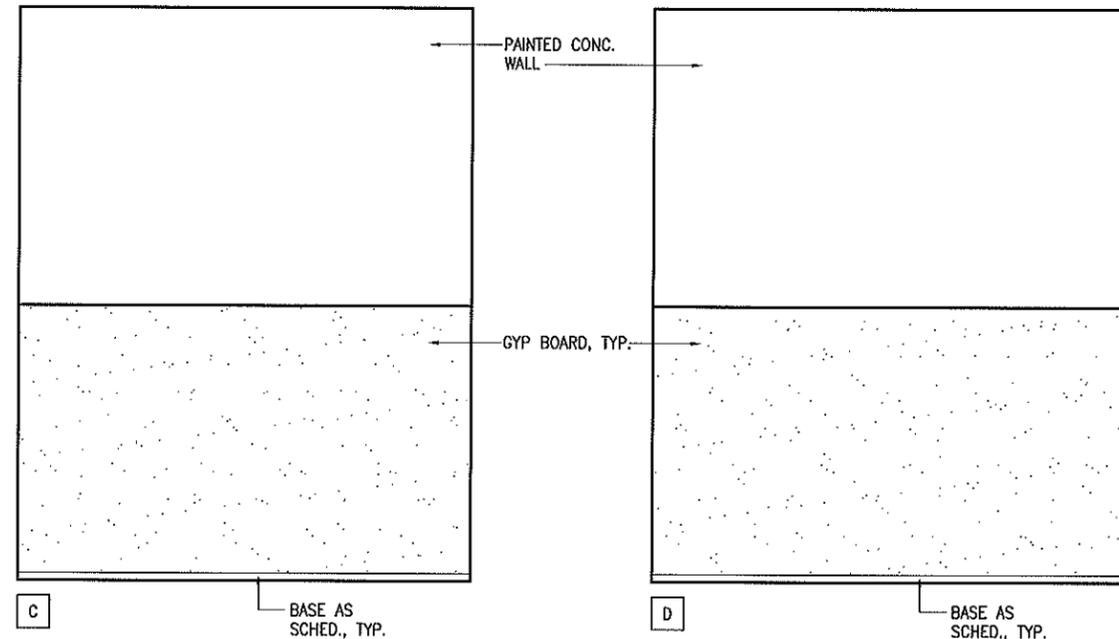
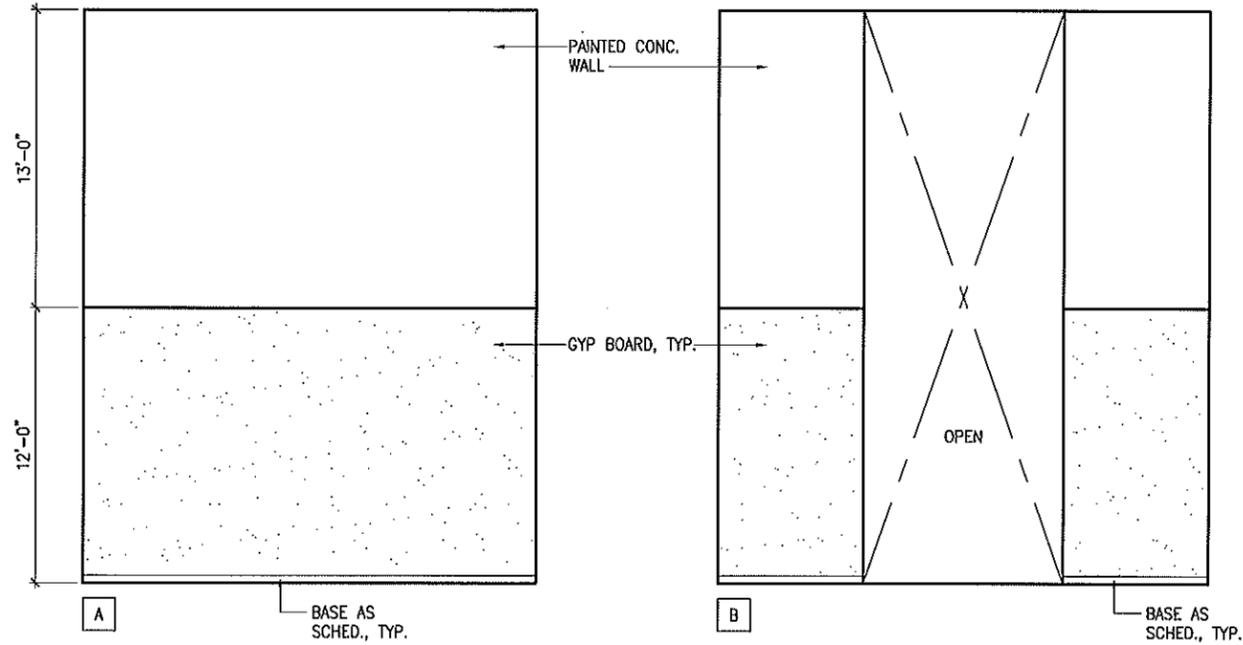
The Contractor will be responsible
for coordinating the work among
the various trades as necessary to
avoid conflicts and to insure the
installation of all work within the
available space.



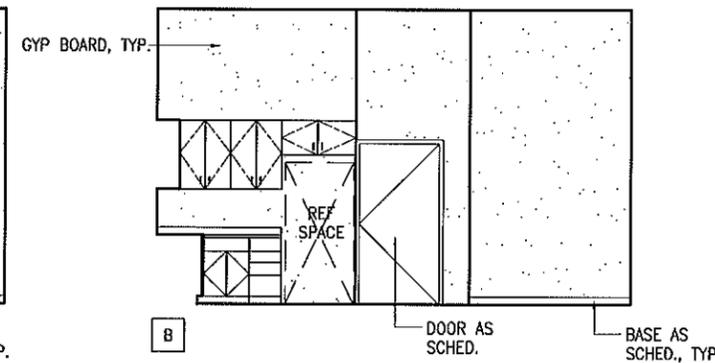
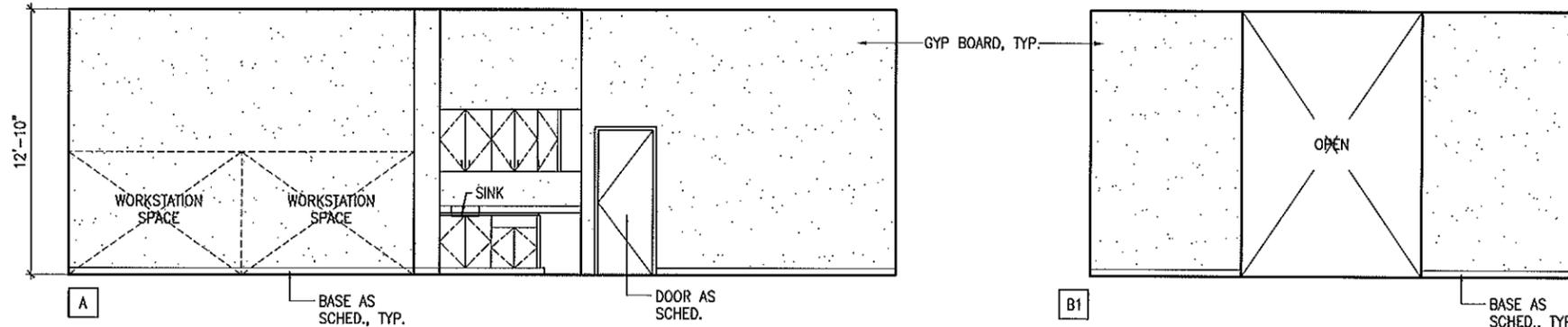
This work was prepared by me or under
my supervision and construction of this
project will be under my observation.
(Observation of construction as defined
in Chapter 16-114, Subchapter 1
Definitions of the Hawaii Administrative
Rules, Professional Engineers, Architects,
Surveyors, and Landscape Architects.)

1/30/2012
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

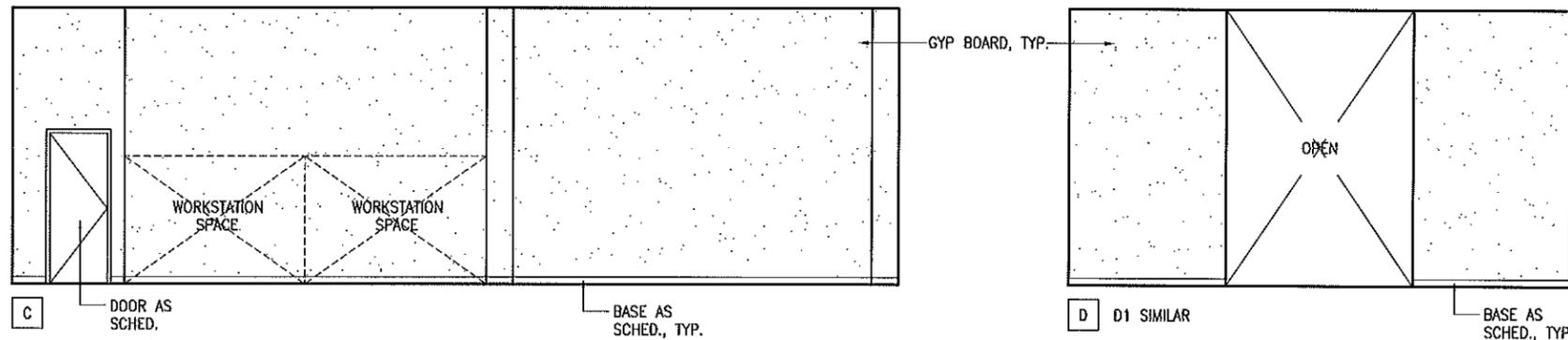
REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA		
DRAWN:	CAD	JOB NO. PN15080016 / CA-2831		
SAFETY:		EXTERIOR ELEVATIONS		
CHECKED:	SW			
APPROVED:				
HAWAII, F&G MGMT OFFICER	NOB, USPED FOR HAWAII	DATE	5-25-10	
APPROVED:		SCALE:	AS NOTED	
		DWG #	A-3.0	
HMO, CONTRACTING & ENGINEERING OFFICER				SHEET 15 OF 33



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



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



C DOOR AS SCHED.

D D1 SIMILAR

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT—SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSUBUNAGA & ASSOCIATES, INC.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D

**DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII
OFFICE OF THE ENGINEER, FT. RUGER, HAWAII**

**BUILDING 175 RENOVATION
KALAELOA
JOB NO. PN15080016 / CA-2831**

INTERIOR ELEVATIONS

DESIGNED: AC	APPROVED:	DATE: 5-25-10
DRAWN: CAD	APPROVED:	SCALE: AS NOTED
SAFETY:	APPROVED:	DWG # A-4.0
CHECKED: SW	APPROVED:	SHEET 16 of 33

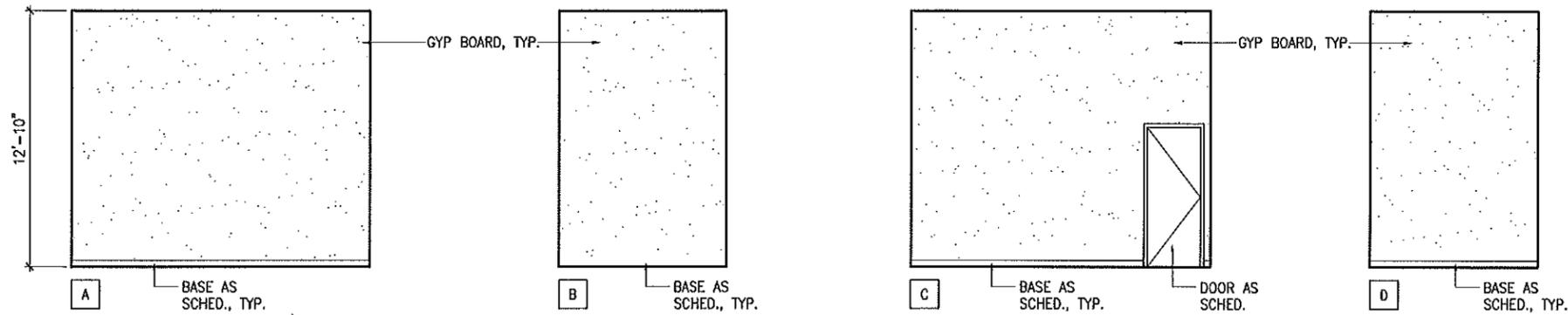
APPROVED: HAWAII, FAC MGMT OFFICER
APPROVED: HOB, USPED FOR HAWAII

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

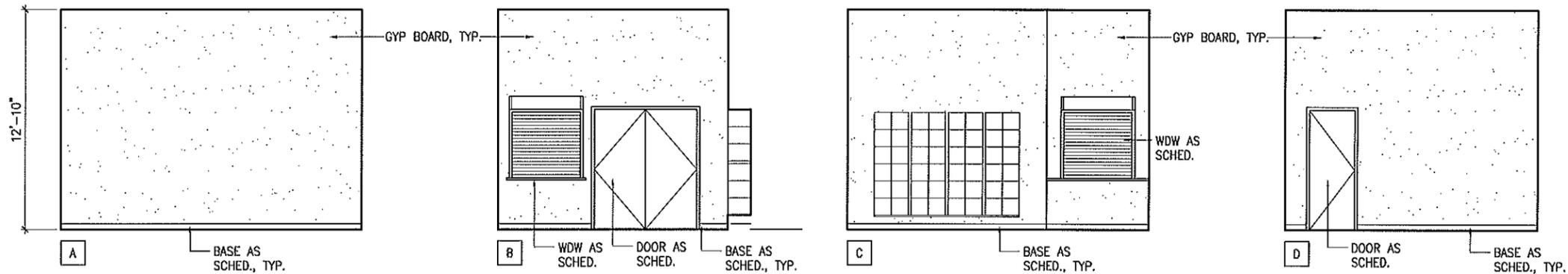
MITSUBUNAGA & ASSOCIATES, INC. EXP. DATE 7/30/2012
HAWAII, CONTRACTING & ENGINEERING OFFICER

STEPHEN D. WONG
LICENSED PROFESSIONAL ARCHITECT
No. 4646
HAWAII U.S.A.

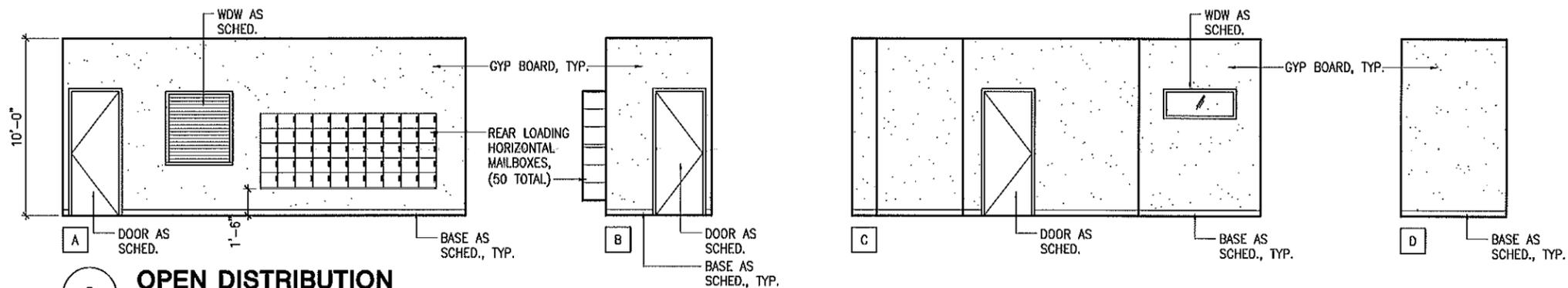
This work was prepared by me or under my supervision and construction of this project will be under my observation. Observation of construction as defined in Chapter 10-116, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscaping Architects, J.



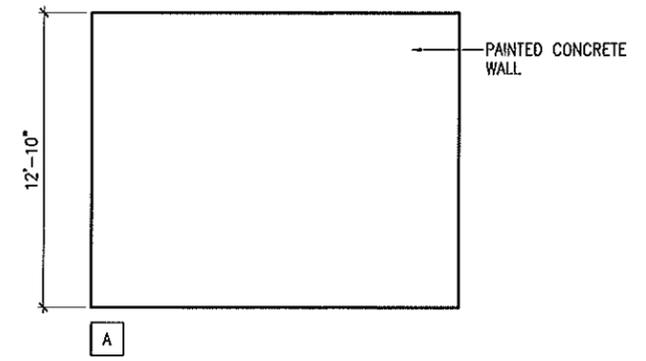
1 MULTI-PURPOSE RM.
SCALE: 1/4" = 1'-0"



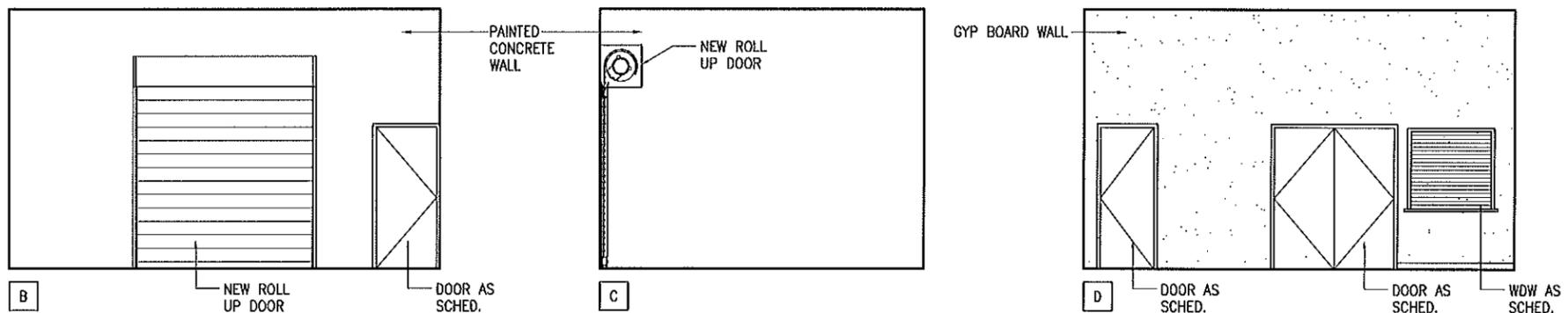
2 SECURED DISTRIBUTION
SCALE: 1/4" = 1'-0"



3 OPEN DISTRIBUTION
SCALE: 1/4" = 1'-0"



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



IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT—SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSUNAGA & ASSOCIATES, INC.

STEVEN D. WONG
LICENSED PROFESSIONAL ARCHITECT
No. 4646
HAWAII U.S.A.

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 Chapter 16-116, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscapers Architects, 1/30/2012

DATE: 5-25-10

SCALE: AS NOTED

DWG # **A-4.1**

SHEET 17 of 33

REVISION NO.	DESCRIPTION	DATE	BY	CHK'D

DESIGNED: AC
DRAWN: CAD
SAFETY: SW
CHECKED: SW

APPROVED: [Signature]
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII
OFFICE OF THE ENGINEER, FT. RUGER, HAWAII

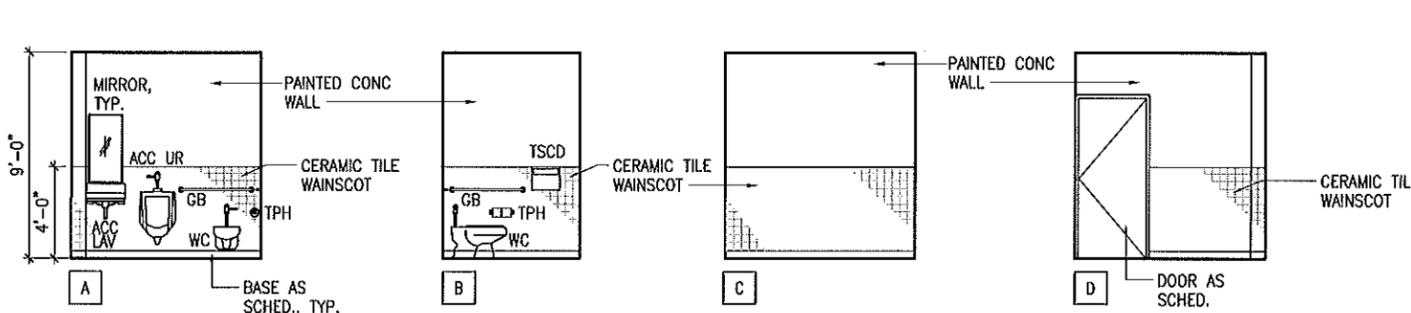
BUILDING 175 RENOVATION
KALAELOA
JOB NO. PN15080016 / CA-2831

INTERIOR ELEVATIONS

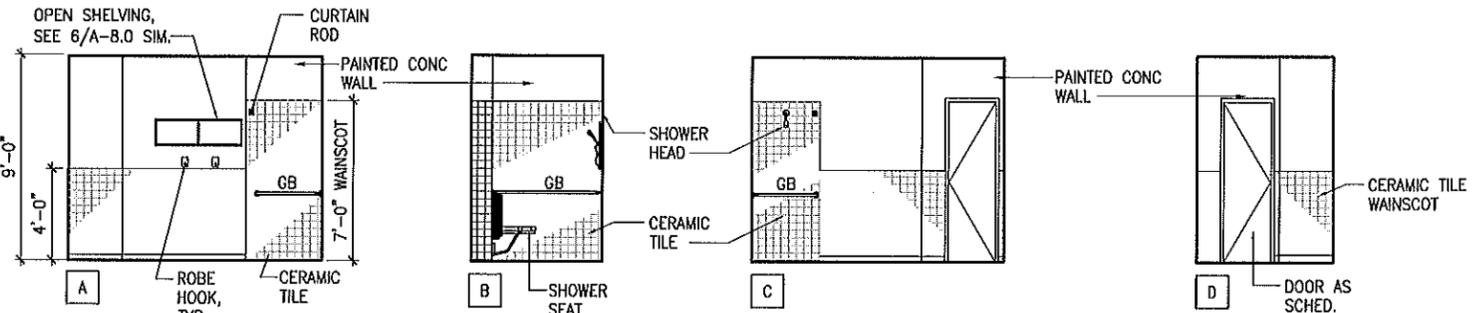
HAWAII, FAC MGMT OFFICER
HQB, USFPO FOR HAWAII

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

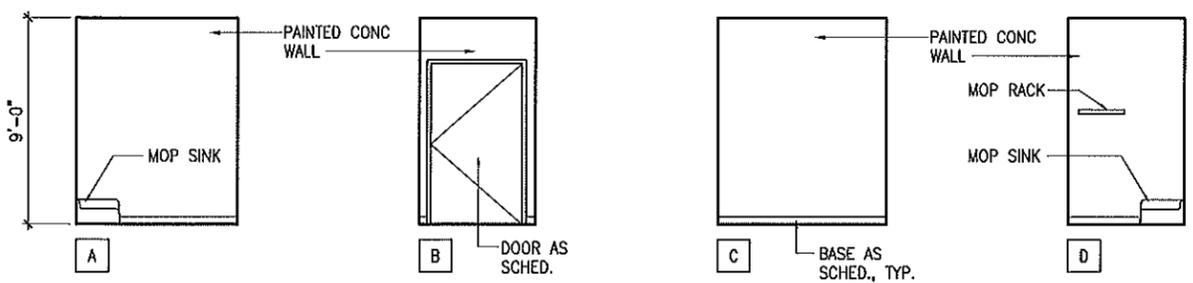
FRMO, CONTRACTING & ENGINEERING OFFICER



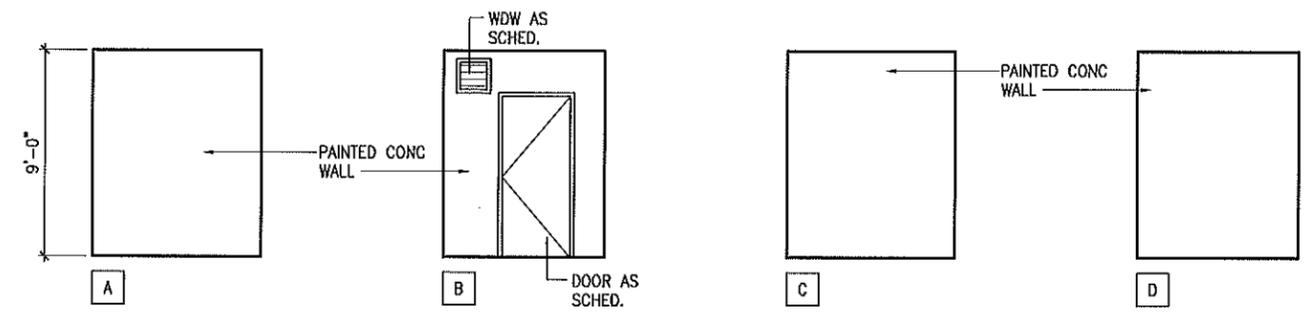
1 UNI-SEX
SCALE: 1/4" = 1'-0"



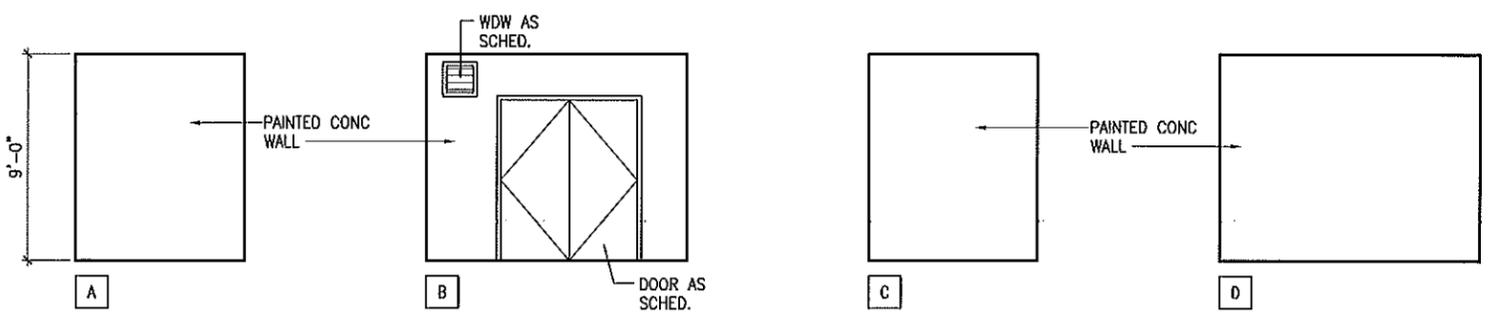
2 SHOWER
SCALE: 1/4" = 1'-0"



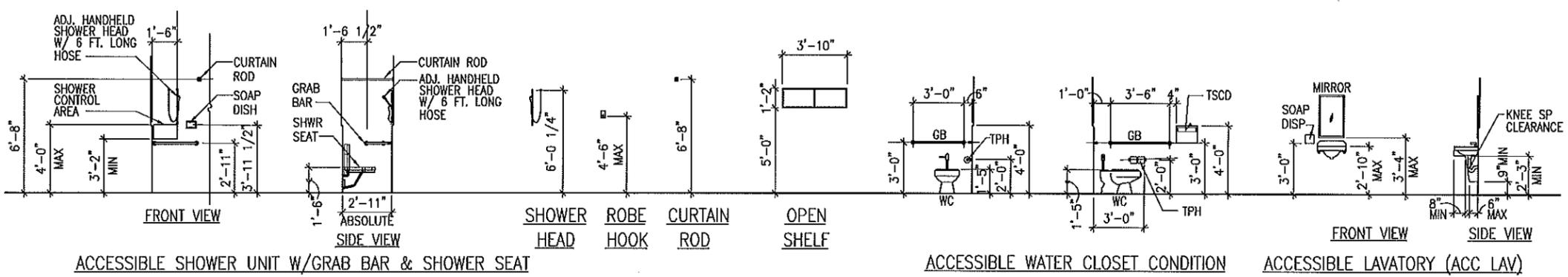
3 JANITOR
SCALE: 1/4" = 1'-0"



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



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

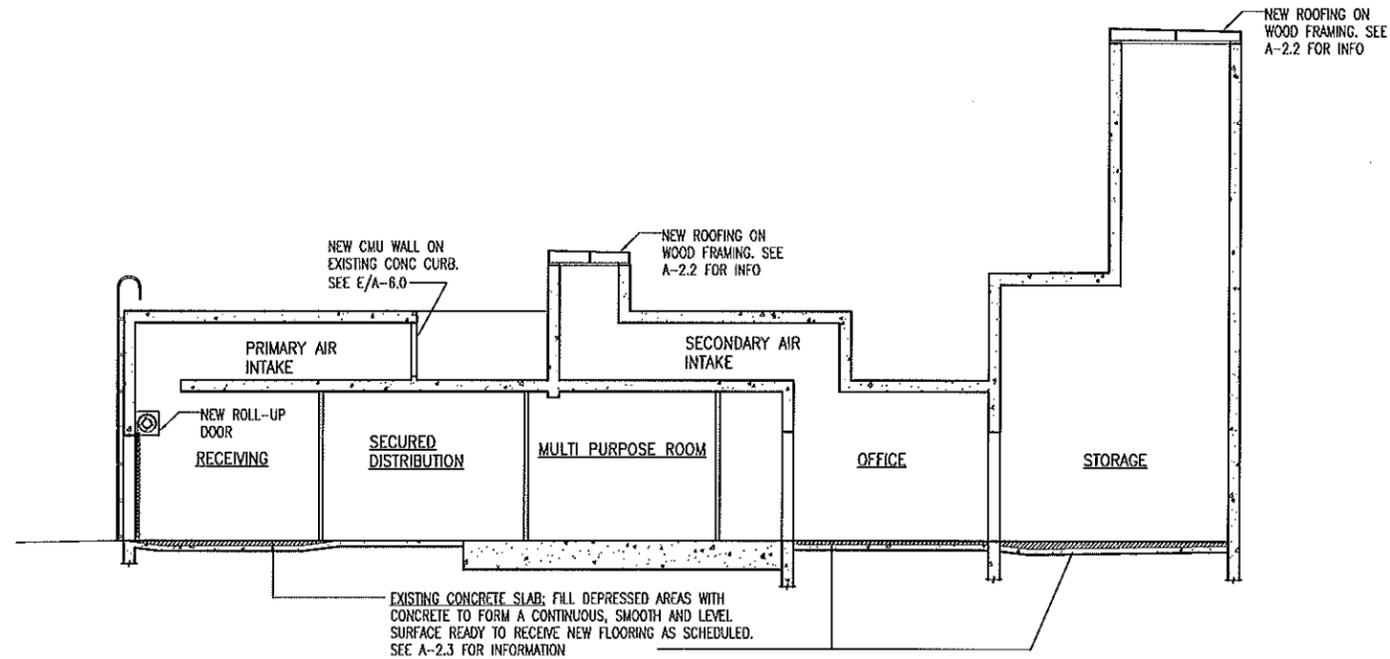


6 TYPICAL MOUNTING HEIGHTS
SCALE: 1/4" = 1'-0"

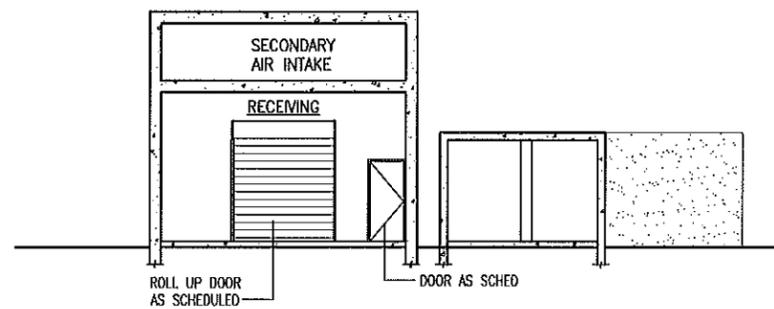
IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

DESIGNED:	AC	DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII			
DRAWN:	CAD	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831			
SAFETY:		INTERIOR ELEVATIONS			
CHECKED:	SW			DATE	5-25-10
APPROVED:		APPROVED:			
HAWAII, FGD MGMT OFFICER		HAWAII, USPTO FOR HAWAII			
APPROVED:				SCALE:	AS NOTED
NOTE: Contractor to check and verify dimensions at job before proceeding with work.				DWG #	A-4.2
HONG, CONTRACTING & ENGINEERING OFFICER				SHEET	18 OF 33



1 BUILDING SECTION
A-5.0 SCALE : 1/8" = 1'-0"



2 BUILDING SECTION
A-5.0 SCALE : 1/8" = 1'-0"

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT—SCALE REDUCED ACCORDINGLY

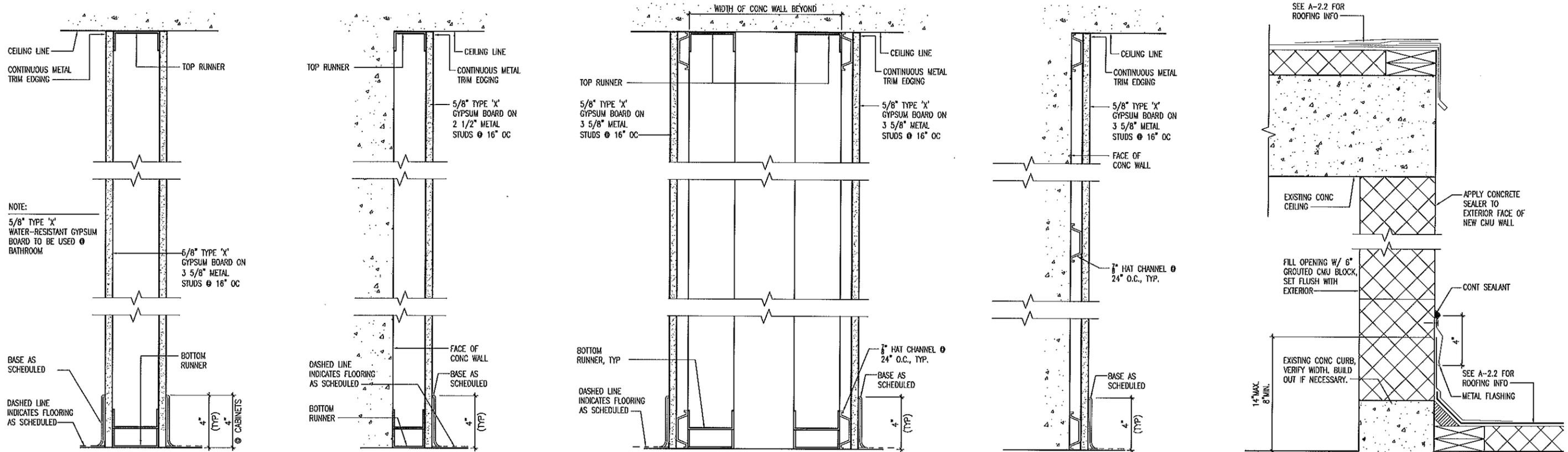
The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.



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 Chapter 16-116, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscape Architects.)

Steven D. Wong
MITSUNAGA & ASSOCIATES, INC. 1/30/2012
EXP. DATE

REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA		
DRAWN:	CAD	JOB NO. PN15080016 / CA-2831		
SAFETY:		BUILDING SECTIONS		
CHECKED:	SW			
APPROVED:		DATE	5-25-10	
HAWAII, PAGO PAGO OFFICER	HON. USFPO FOR HAWAII	SCALE	AS NOTED	
APPROVED:		DWG #	A-5.0	
ENGINE, CONTRACTING & ENGINEERING OFFICER			SHEET	19 OF 33



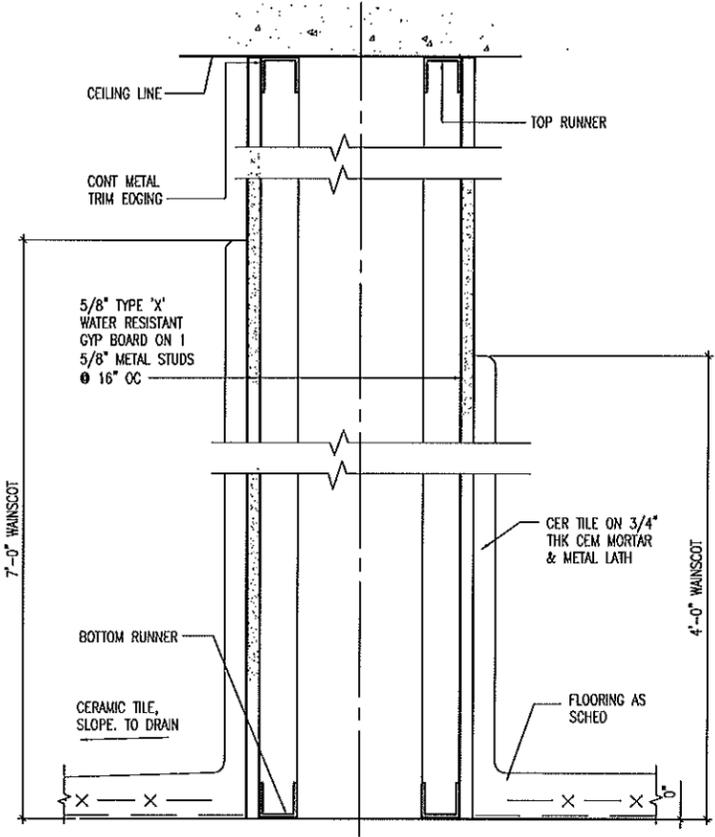
TYPE A

TYPE B

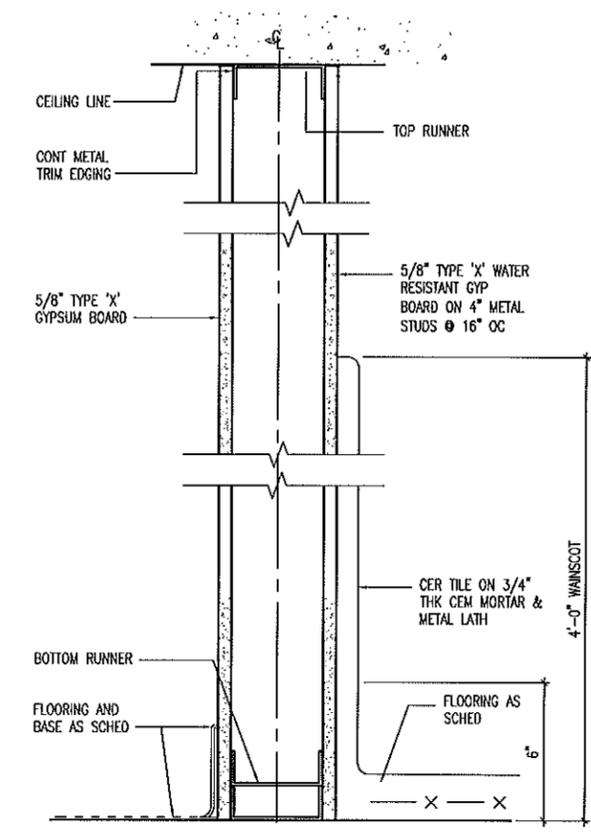
TYPE C

TYPE D

TYPE E



TYPE F



TYPE G

1 PARTITION TYPES
A-6.0 SCALE : 3" = 1'-0"

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSUNAGA & ASSOCIATES, INC.

STEVEN D. WONG
LICENSED PROFESSIONAL ARCHITECT
No. 4646
HAWAII U.S.A.

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 Chapter 16-115, Subchapter 1, Definitions of the Hawaii Administrative Rules, "Professional Engineers, Architects, Surveyors, and Landscape Architects.")

Steven D. Wong
4/30/2012
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

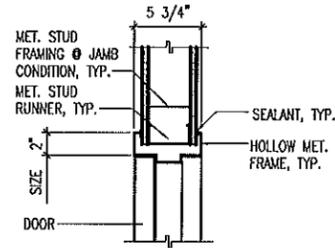
NOTE: Contractor to check and verify dimensions at job before proceeding with work.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA		
DRAWN:	CAD	JOB NO. PN150B0016 / CA-2831		
SAFETY:		PARTITION TYPES		
CHECKED:	SW	APPROVED:		DATE: 5-25-10
APPROVED:		HAWAII, FAC MGMT OFFICER	NOB, USPTO FOR HAWAII	SCALE: AS NOTED
APPROVED:				DWG # A-6.0
HMO, CONTRACTING & ENGINEERING OFFICER				SHEET 20 of 33

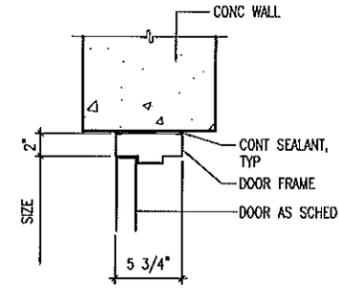
DOOR SCHEDULE

ROOM NAME	DOOR NO.	TYPE	SIZE			DOOR		FRAME		DETAILS (SEE SHEET A-11.2 FOR ALL DOOR DETAILS UNLESS OTHERWISE NOTED)				HARDWARE	REMARKS
			WIDTH	HEIGHT	THICKNESS	CORE	MATERIAL	MATERIAL	HEAD	JAMB	MEETING STILES	THRESH			
RECEIVING	1	A	8'-10"	9'-6"	-	-	MET	MET	1	2		3	1		
RECEIVING	2	B	3'-0"	7'-0"	1 3/4"	HOLLOW	MET	MET	4	5		6	2		
JANITOR	3	B	4'-0"	6'-8"	1 3/4"	HOLLOW	MET	MET	4	5		6	3		
STORAGE	4	B	3'-0"	6'-8"	1 3/4"	HOLLOW	MET	MET	4	5		6	4		
ELECTRICAL	5	C	6'-0"	6'-8"	1 3/4"	HOLLOW	MET	MET	4	5		6	5		
TOILET/SHOWER ENTRY	6	B	3'-0"	6'-8"	1 3/4"	HOLLOW	MET	MET	4	5		6	6		
OPEN DISTRIBUTION	7	D	2'-8"	6'-8"	1 3/4"	HOLLOW	MET	MET	4	5		6	7	FIXED GLASS TRANSOM ABOVE	
RECEIVING	8	B	3'-0"	7'-0"	1 3/4"	HOLLOW	MET	MET	4	5		8	8		
SECURED DISTRIBUTION	9	C	6'-0"	7'-0"	1 3/4"	HOLLOW	MET	MET	7	7		8	9		
UNI-SEX	10	E	3'-0"	7'-0"	1 3/4"	SOLID	WD	MET	7	7		8	10		
SHOWER	11	E	3'-0"	7'-0"	1 3/4"	SOLID	WD	MET	7	7		8	10		
SECURED DISTRIBUTION	12	C	3'-6"	7'-0"	1 3/4"	HOLLOW	MET	MET	7	7		8	8		
OPEN DISTRIBUTION	13	E	3'-0"	7'-0"	1 3/4"	SOLID	WD	MET	7	7		8	8		
MULTI PURPOSE ROOM	14	E	3'-0"	7'-0"	1 3/4"	SOLID	WD	MET	7	7		8	8		
STORAGE	15	B	3'-0"	7'-0"	1 3/4"	HOLLOW	MET	MET	4	5		6	-		

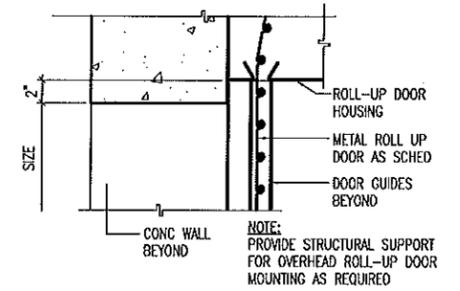
DEDUCTIVE ALTERNATE BID ITEM #8
INCLUDES THE LABOR, EQUIPMENT AND MATERIALS NEEDED TO INSTALL ALL EXTERIOR DOORS AS SCHEDULED.



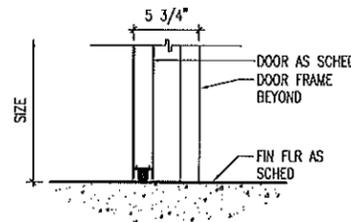
7 HEAD / JAMB DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"



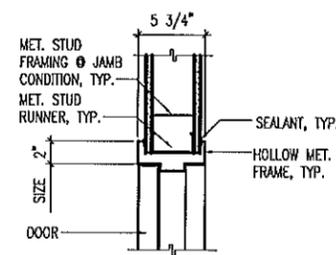
4 HEAD DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"



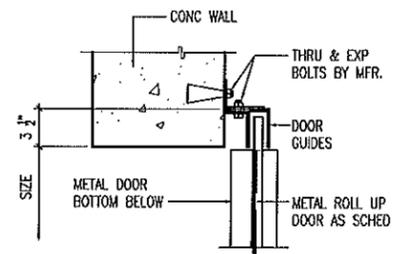
1 HEAD DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"



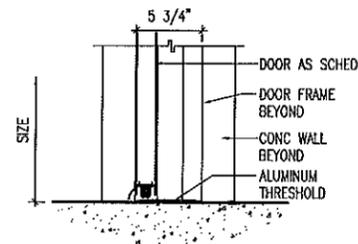
8 THRESHOLD DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"



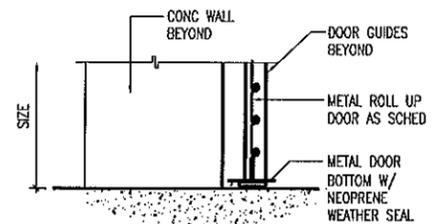
5 JAMB DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"



2 JAMB DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"

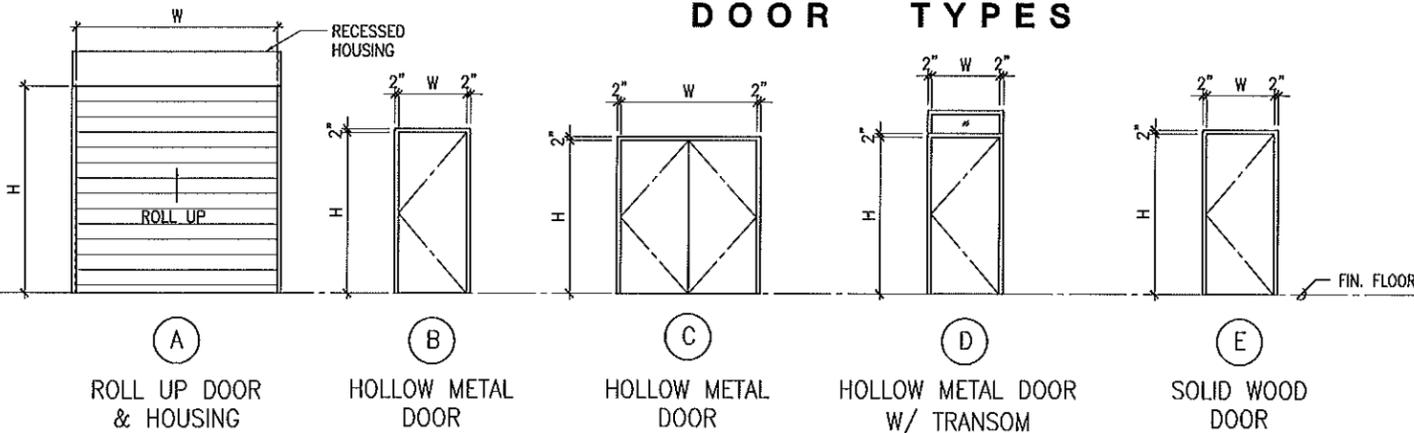


6 THRESHOLD DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"



3 THRESHOLD DETAIL
A-7.0 SCALE : 1-1/2" = 1'-0"

DOOR TYPES



IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT—SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSUNAGA & ASSOCIATES, INC.



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 Chapter 16-116, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscape Architects.)

Steven D. Wong
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

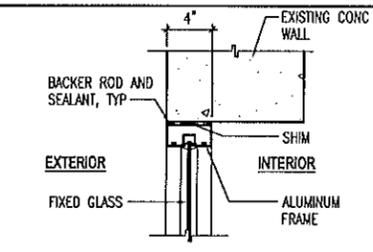
NOTE: Contractor to check and verify dimensions at job before proceeding with work.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA		
DRAWN:	CAD	JOB NO. PN15080016 / CA-2831		
SAFETY:		DOOR SCHEDULE, DOOR TYPES, DOOR DETAILS		
CHECKED:	SW			
APPROVED:		APPROVED:		DATE
				5-25-10
				SCALE: AS NOTED
				DWG # A-7.0
				SHEET 21 OF 33

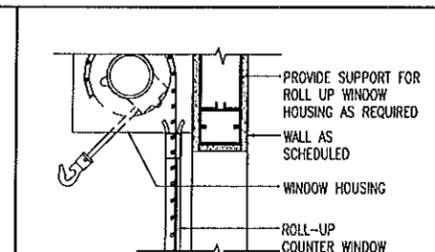
WINDOW SCHEDULE

WINDOW NUMBER	TYPE	SIZE		DETAILS			GLAZING	REMARKS
		WIDTH	HEIGHT	FRAME	HEAD	JAMB		
1	A	4'-0"	4'-0"	MET	4	5	6	-
2	A	4'-0"	4'-0"	MET	4	5	6	-
3	B	4'-2"	1'-8"	ALUM	7	7	7	CLEAR VERIFY EXISTING OPENING
4	B	1'-0"	1'-0"	ALUM	7	7	7	CLEAR VERIFY EXISTING OPENING
5	C	1'-6"	1'-6"	ALUM	1	2	3	- VERIFY EXISTING OPENING
6	C	1'-6"	1'-6"	ALUM	1	2	3	- VERIFY EXISTING OPENING

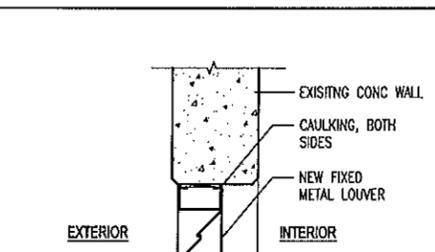
7 HEAD/ JAMB/ SILL
SCALE : 1 1/2" = 1'-0"



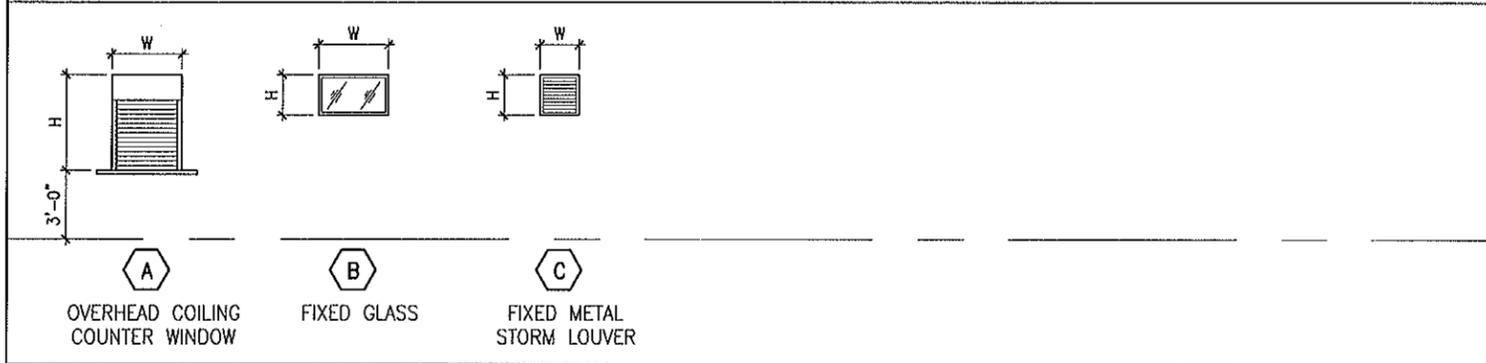
4 HEAD (COUNTER WINDOW)
SCALE : 1 1/2" = 1'-0"



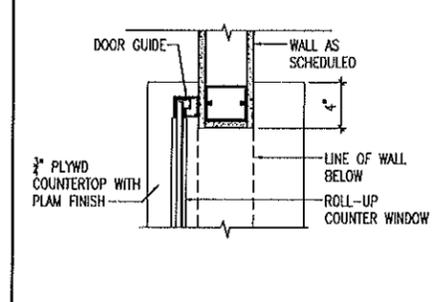
1 HEAD (LOUVER)
SCALE : 1 1/2" = 1'-0"



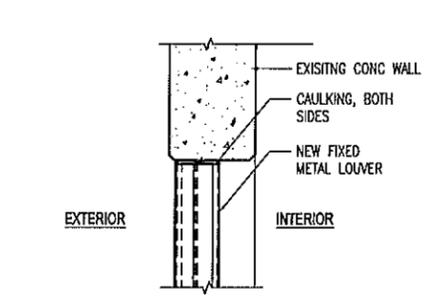
WINDOW TYPES



5 JAMB (COUNTER WINDOW)
SCALE : 1 1/2" = 1'-0"



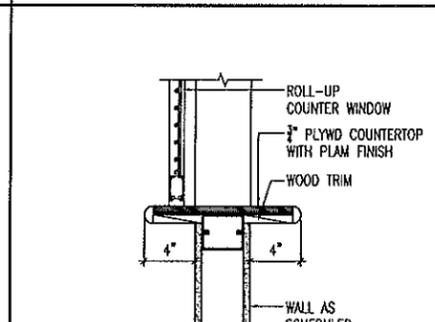
2 JAMB (LOUVER)
SCALE : 1 1/2" = 1'-0"



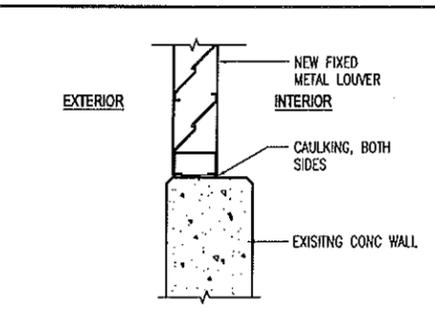
ROOM FINISH SCHEDULE

ROOM NAME	FLOOR		BASE	WALLS	CEILING	DOOR/FRAME		REMARKS
	CERAMIC TILE	SEALED CONCRETE				DOOR	FRAME	
STORAGE 1	-	-	VCT1	RB1	PT1	PT2	PT2	-
OFFICE	-	-	VCT1	RB1	PT1	PT1	PT2	-
MULTI PURPOSE	-	-	VCT1	RB1	PT1	PT1	PT2	-
SECURED DISTRIBUTION	-	-	VCT1	RB1	PT1	PT1	PT2	-
OPEN DISTRIBUTION	-	-	VCT1	PT1	PT1	PT1	PT2	-
RECEIVING	-	SC1	-	-	PT1	PT1	PT2	-
TOILET SHOWER ENTRY	-	SC1	-	PT1	PT1	PT1	PT2	-
SHOWER	CT1	-	-	CT1	PT1	PT1	PT2	SHOWER WAINSCOT SHALL BE CT2 - DALTILE K165 ALMOND
UNI-SEX	CT1	-	-	CT1	PT1	PT1	PT2	-
JANITOR	-	SC1	-	-	PT1	PT1	PT2	-
STORAGE	-	SC1	-	-	PT1	PT1	PT2	-
ELECTRICAL	-	SC1	-	-	PT1	PT1	PT2	-

6 SILL (COUNTER WINDOW)
SCALE : 1 1/2" = 1'-0"



3 SILL (LOUVER)
SCALE : 1 1/2" = 1'-0"



COLOR SCHEDULE

SYMBOL	MATERIAL DESCRIPTION	COLOR
SC-1	SEALED CONCRETE	CONCRETE GREY COLOR
PT-1	PAINT - INTERIOR	ICI 2012 SWISS COFFEE
PT-2	PAINT - DOOR & FRAME	ICI 1037 BIG RIVER
PT-3	PAINT - EXTERIOR	ICI 547 CLASSIC IVORY
CT-1	CERAMIC TILE - FLOOR	DALTILE D452 CYPRESS
VCT1	VINYL COMPOSITION TILE	MANNINGTON BRUSHWORKS 705 VIRIDIAN
RB-1	RUBBER WALL BASE	ROPPE RUBBER BASE 113 PISTACHIO

DEDUCTIVE ALTERNATE BID ITEM #5
INCLUDES THE LABOR AND EQUIPMENT AND MATERIALS FOR TO APPLY EXTERIOR PAINT AS SCHEDULED.

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of oil work within the available space.

MITSUNAGA & ASSOCIATES, INC.

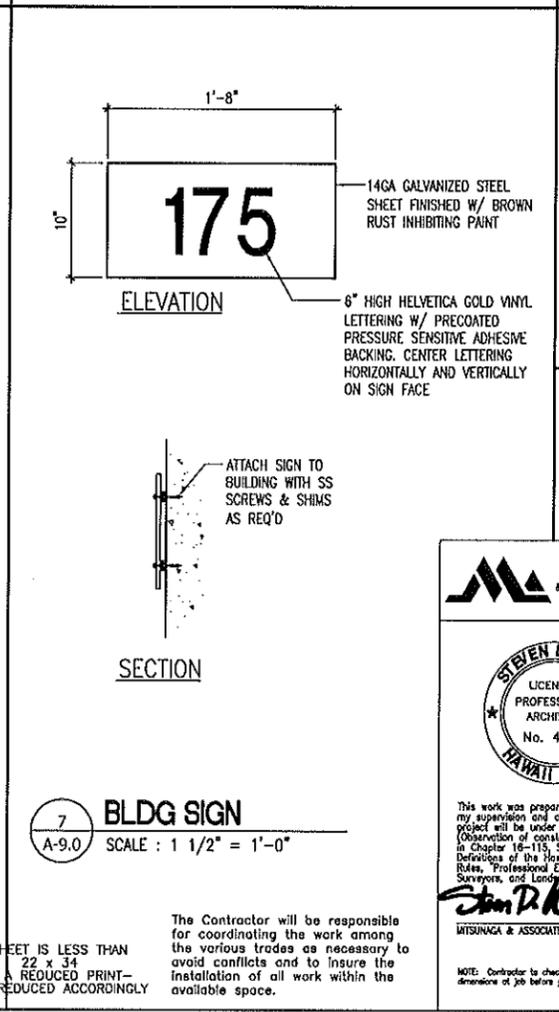
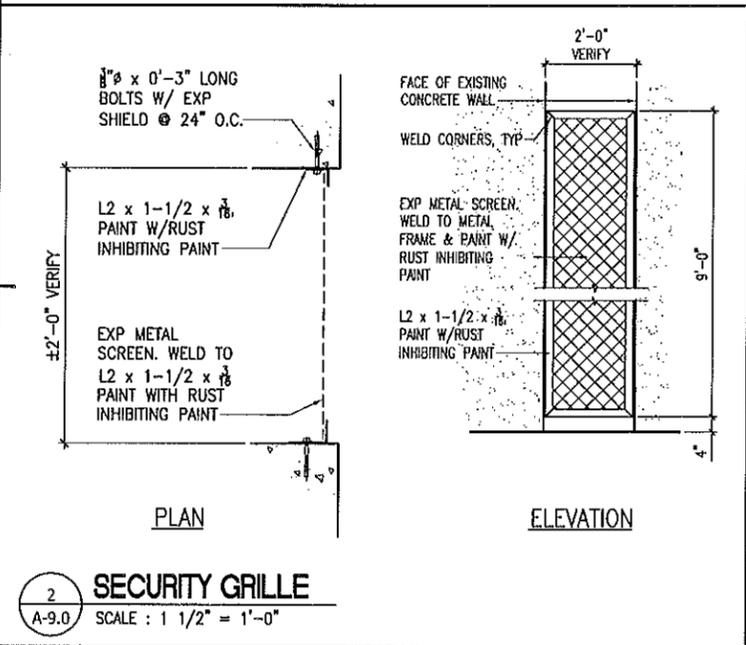
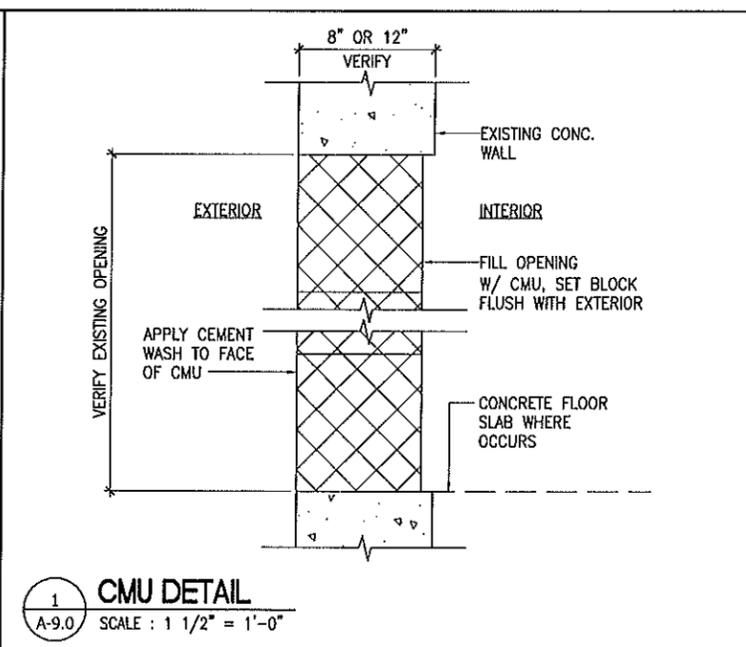
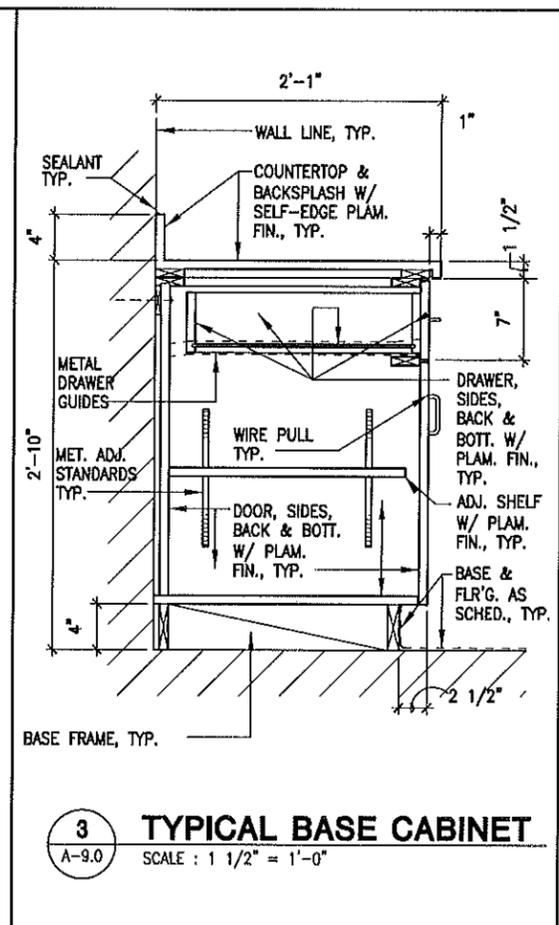
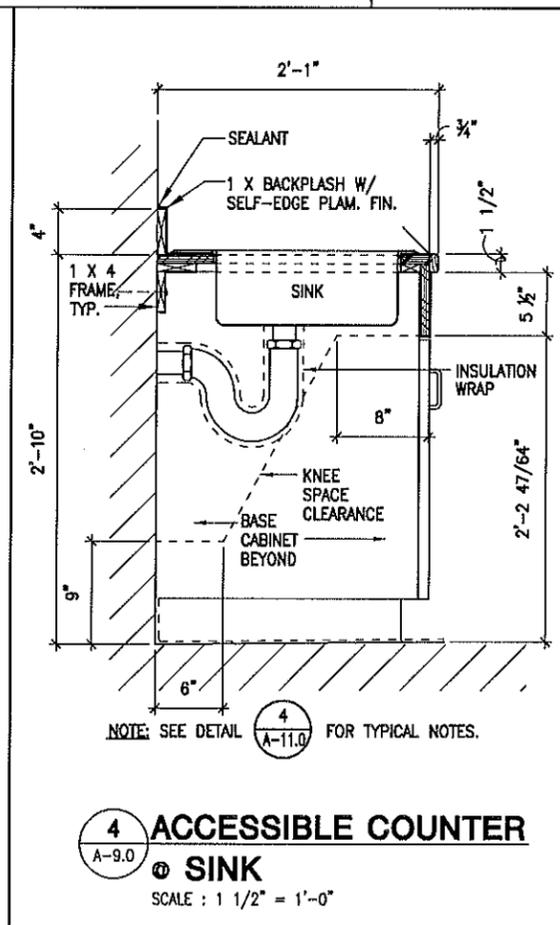
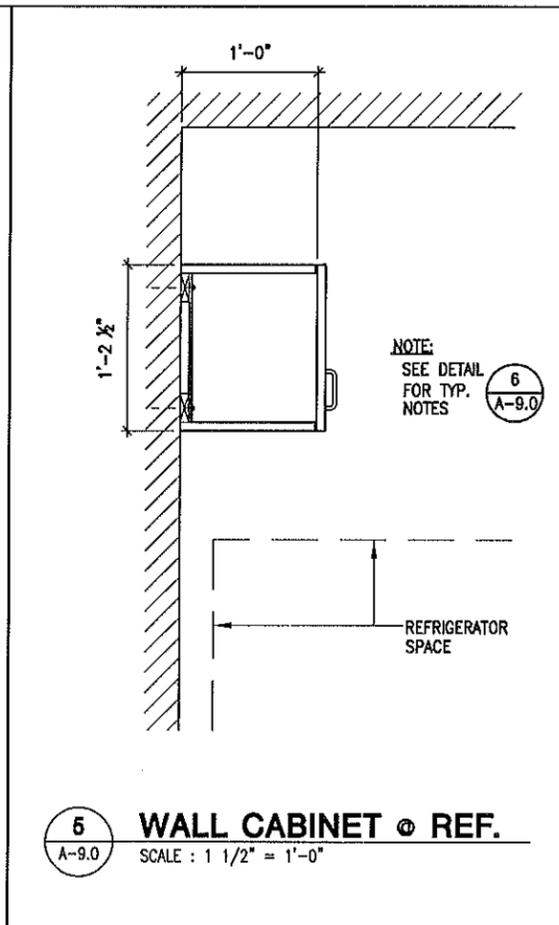
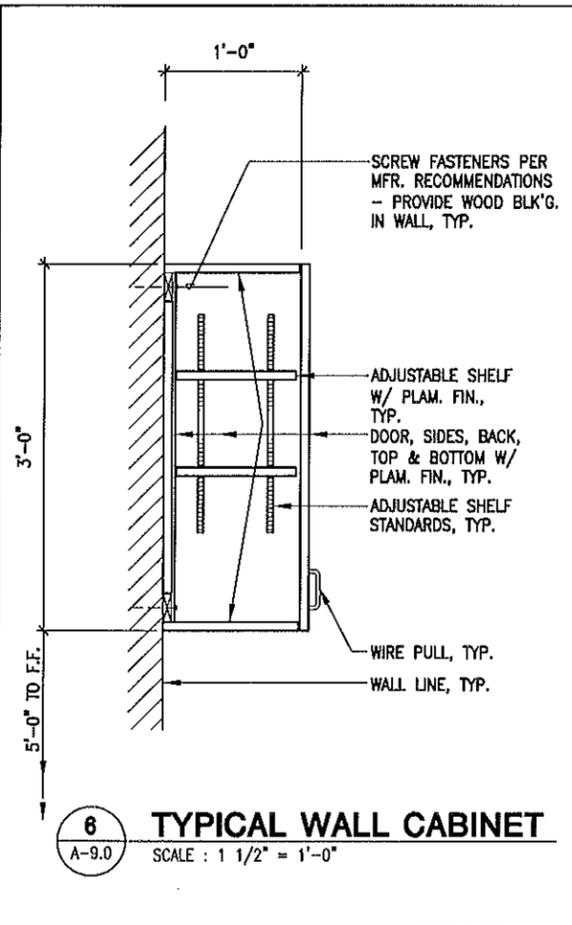
STEVEN D. WONG
LICENSED PROFESSIONAL ARCHITECT
No. 4646
HAWAII U.S.A.

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 Chapter 16-116, Subchapter 1, Definitions of the Hawaii Administrative Rules, "Professional Engineers, Architects, Surveyors, and Landscape Architects."

DATE: 1/30/2012
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

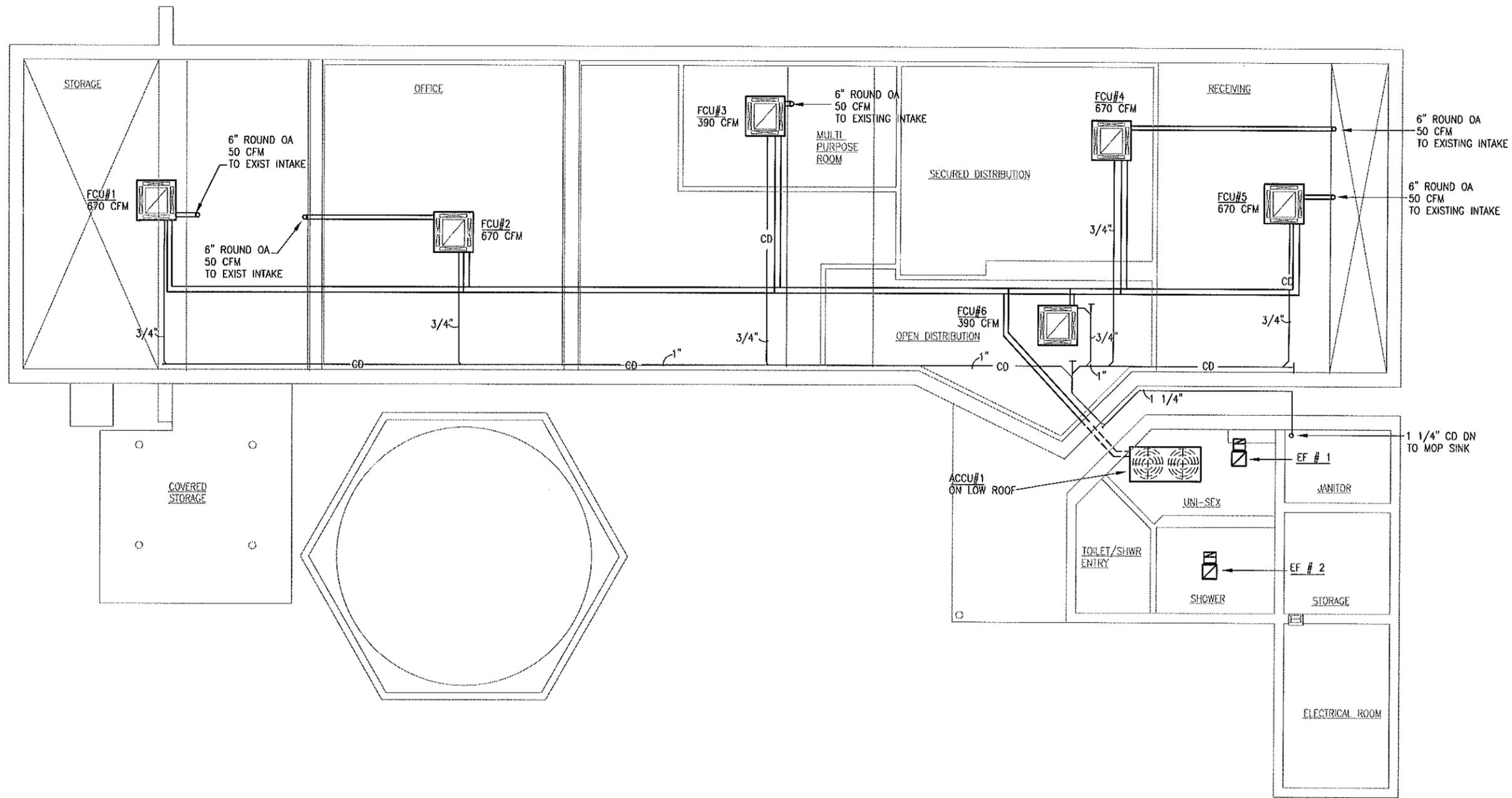
REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831		
DRAWN:	CAD	WINDOW SCHEDULE, WINDOW TYPES, WINDOW DETAILS, ROOM FINISH SCHEDULE		
SAFETY:				
CHECKED:	SW			
APPROVED:		DATE	5-25-10	
TRAINING, TAG MGMT OFFICER		HOB, USPD FOR HAWAII		
APPROVED:		SCALE:	AS NOTED	
		DWG #	A-8.0	
		SHEET	22 of 33	



IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT - SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

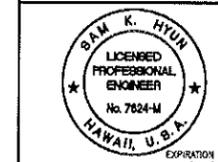
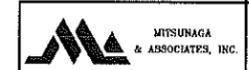
REVISION NO	DESCRIPTION	DATE	BY	CHK'D	
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII					
DESIGNED:	AC	BUILDING 175 RENOVATION KALAELOA			
DRAWN:	CAD	JOB NO. PN15080016 / CA-2831			
SAFETY:		MISC DETAILS			
CHECKED:	SW			DATE	5-25-10
APPROVED:		APPROVED:			
HAWK, FAC MGMT OFFICER		HOB, USPTD FOR HAWAII			
APPROVED:				SCALE:	AS NOTED
MITSUNAGA & ASSOCIATES, INC. 4/30/2012				DWG #	A-9.0
NOTE: Contractor to check and verify dimensions of job before proceeding with work.					
HAWK, CONTRACTING & ENGINEERING OFFICER					
				SHEET	23 of 33



A
M-1 FLOOR PLAN - AIR CONDITIONING
SCALE : 1/4" = 1'-0"

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT--SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.



EXPIRATION DATE: 4/30/12
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Sam K. Hyun
HND, CONTRACTING & ENGINEERING OFFICER

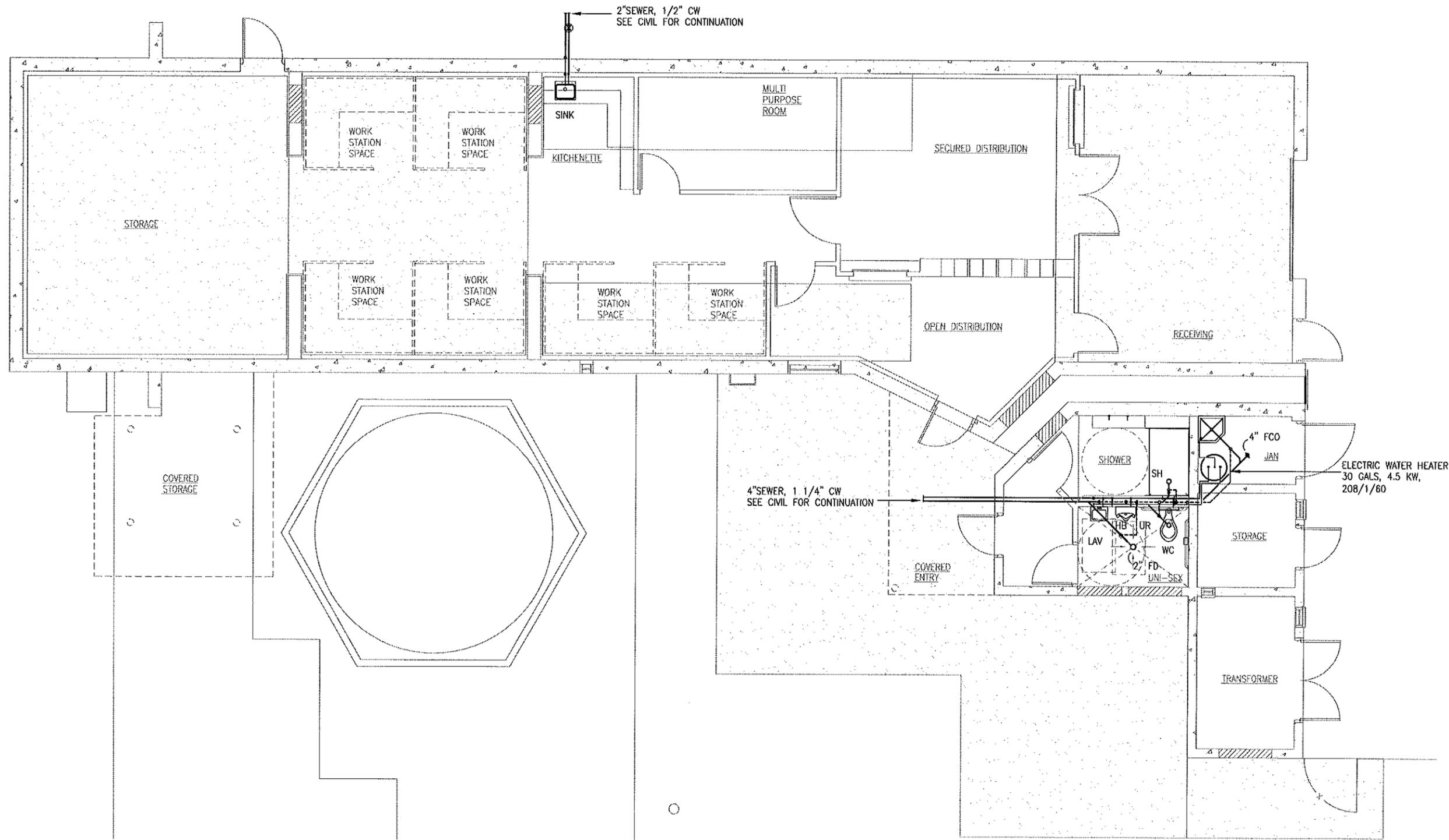
REVISION NO	DESCRIPTION	DATE	BY	CHK'D

DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII
OFFICE OF THE ENGINEER, FT. RUGER, HAWAII

BUILDING 175 RENOVATION
KALAELOA
JOB NO. PN15080016 / CA 2831XXXX

FLOOR PLAN - AIR CONDITIONING

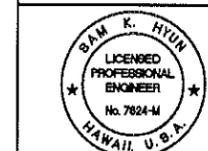
DESIGNED: MCM	APPROVED:	DATE: 5-25-10
DRAWN: MCM	APPROVED:	SCALE: AS NOTED
SAFETY:	APPROVED:	DWG # M-1
CHECKED: SKH	APPROVED:	SHEET 24 of 33



A
M-2 FLOOR PLAN - PLUMBING
SCALE : 1/4" = 1'-0"

IF SHEET IS LESS THAN
22 x 34
IT IS A REDUCED PRINT -
SCALE REDUCED ACCORDINGLY

The Contractor will be responsible
for coordinating the work among
the various trades as necessary to
avoid conflicts and to insure the
installation of all work within the
available space.



EXPIRATION DATE
4/30/12
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Sam K. Hyun
HONO, CONTRACTING & ENGINEERING OFFICER

REVISION NO	DESCRIPTION	DATE	BY	CHK'D

DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII	
DESIGNED: MCM	BUILDING 175 RENOVATION
DRAWN: MCM	KALAELOA
SAFETY:	JOB NO. PN15080016 / CA 2831XXXX
CHECKED: SKH	FLOOR PLAN - PLUMBING
APPROVED:	DATE 5-25-10
HARRIS, FAC MGMT OFFICER	NGO, USFPO FOR HAWAII
APPROVED:	SCALE: AS NOTED
	DWG # M-2
	SHEET 25 of 33

GENERAL NOTES:

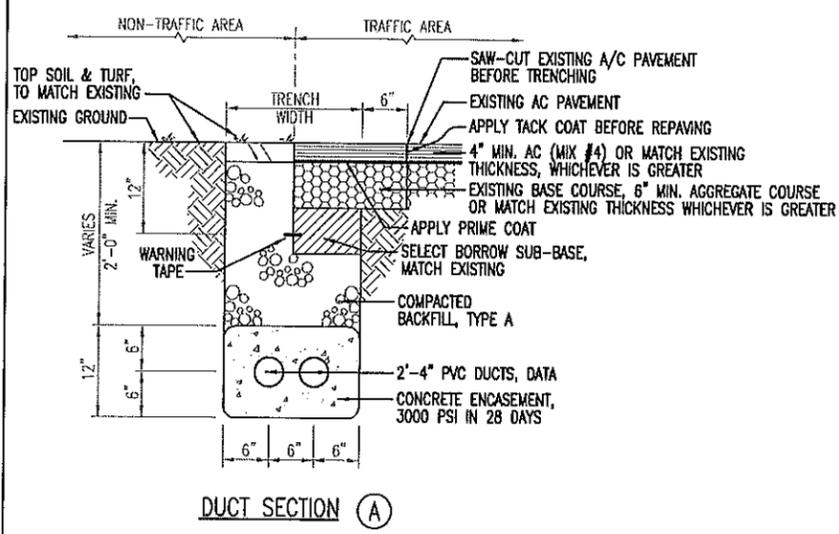
1. ELECTRICAL CONTRACTOR SHALL VISIT SITE AND VERIFY EXISTING ELECTRICAL INSTALLATION AND NEW DESIGN PRIOR TO BID.
2. ELECTRICAL CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE GOVERNMENT, DISCONNECT ALL ABANDONED EXISTING ELECTRICAL EQUIPMENT IN CONFLICT WITH NEW CONSTRUCTION.
3. EXISTING ELECTRICAL PRIMARY SWITCH & PAD MOUNTED TRANSFORMER SHALL BE MAINTAINED. CONNECT NEW SECONDARY SERVICE LATERAL TO EXISTING TRANSFORMER.
4. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER TRADES.
5. ELECTRICAL CONTRACTOR SHALL VERIFY AND CONFIRM LOCATION OF ALL WIRING DEVICES AND LIGHTING FIXTURES W/ARCH. PRIOR TO ROUGH-IN.
6. CIRCUIT NUMBERS INDICATED ARE FOR THE PURPOSE OF CIRCUIT GROUPING AND MAY NOT REFLECT ACTUAL PANEL CIRCUIT NUMBER ASSIGNMENT. ELECTRICAL CONTRACTOR SHALL BALANCE PANEL LOAD AND ASSIGN CIRCUITS ACCORDINGLY. PROVIDE TYPEWRITTEN PANEL DIRECTORY USING ROOM NAMES AND NUMBERS.
7. WIRE COUNT IN RACEWAYS NOT ALWAYS INDICATED. ELECTRICAL CONTRACTOR SHALL PROVIDE NUMBER OF WIRES AS REQUIRED IN NEW RACEWAYS FOR NUMBER OF CIRCUITS INDICATED.
8. PAINT ALL EXPOSED RACEWAYS AND OUTLET BOXES TO MATCH SURROUNDING WALL OR CEILING FINISH.

ELECTRICAL SYMBOL LIST

EXISTING	NEW	DESCRIPTION
		LIGHT, FLUORESCENT, MOUNTED ON STEEL CHANNEL.
		LIGHT, FLUORESCENT, CEILING SURFACE MOUNTED.
		LIGHT, FLUORESCENT, WALL SURFACE MOUNTED.
		NIGHT LIGHT, WALL MOUNTED.
		EXIT SIGN, SINGLE FACE W/ARROW ON SIGN FACE, WALL SURFACE MOUNTED.
		SWITCH, FLUSH TUMBLER, WALL MOUNTED.
		SWITCH, 3-WAY, WALL MOUNTED.
		JUNCTION BOX, CEILING MOUNTED.
		RECEPTACLE, DUPLEX, WALL MOUNTED, 20A, 125V, NEMA 5-20.
		RECEPTACLE, TWO-DUPLEX, WALL MOUNTED, 20A, 125V, NEMA 5-20.
		RECEPTACLE, DUPLEX, G.F.I. TYPE, WALL MTD., 20A, 125V, NEMA 5-20.
		WALL PHONE, WALL MOUNTED.
		TEL/DATA OUTLET, WALL MOUNTED, 1" EMT STUB-UP.
		ELECTRIC PANEL.
		RACEWAY, CONCEALED ABOVE FINISH FLOOR, NUMBER OF HASHMARKS INDICATE NUMBER OF WIRES WITHIN.
		RACEWAY, CONCEALED BELOW FINISH FLOOR, NO HASHMARKS INDICATES TWO WIRES WITHIN.
		EXPOSED RACEWAY.
		FLEXIBLE RACEWAY.
		ARROW, HOMERUN TO PANEL OR CABINET.
		RACEWAY, STUBBED AND CAPPED.
		ELECTRICAL NOTE INDICATOR.
		FIXTURE INDICATOR UPPER HALF: FIXTURE TYPE. LOWER HALF: NO. OF LAMPS & WATTS OR LENGTH.
		DETAIL INDICATOR UPPER HALF: DETAIL NUMBER. LOWER HALF: SHEET NUMBER, DETAIL LOCATION.
		INDICATES WEATHERPROOF.
		UNDERGROUND DATA DUCT.
		FAN CONNECTION.
		CAST METAL VIDEO OUTLET.

NOTES:

1. BACKFILL MATERIAL TYPE "A"
BLACK OR BEACH SAND, EARTH AND GRAVEL MIXTURE. IF EARTH & GRAVEL MIXTURE, ROCK SIZE SHALL BE 1-INCH OR SMALLER AND SHALL NOT CONTAIN MORE THAN 50% ROCK PARTICLES BY VOLUME.
2. ALL DUCTS SHALL BE PVC SCHEDULE 40.
3. PROVIDE DUCT WARNING TAPE 12" BELOW FINISH GRADE OF PAVEMENT DIRECTLY ABOVE DUCTS.



DEDUCTIVE ALTERNATE BID ITEM #3
INCLUDES THE LABOR, EQUIPMENT AND MATERIALS NEEDED TO INSTALL 2 NEW 4" CONCRETE ENCASED DATA DUCTS FROM THE EXISTING PULLBOX #3 TO THE NEW DATA BACKBOARD AS SHOWN ON SHEET E-1

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSUNAGA & ASSOCIATES, INC.

BRIAN T. ITOZAKI
LICENSED PROFESSIONAL ENGINEER
No. 9058-E
HAWAII, U.S.A.

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 Chapter 16-116, Subchapter 1, Rules of the Board of Professional Engineers, Architects, Surveyors, and Landscape Architects.

4/30/2012
H & D - H, INC. EXP. DATE

REVISION NO.	DESCRIPTION	DATE	BY	CHK'D

DESIGNED: SM
DRAWN: SY
SAFETY: BI
ENGINEER: BI

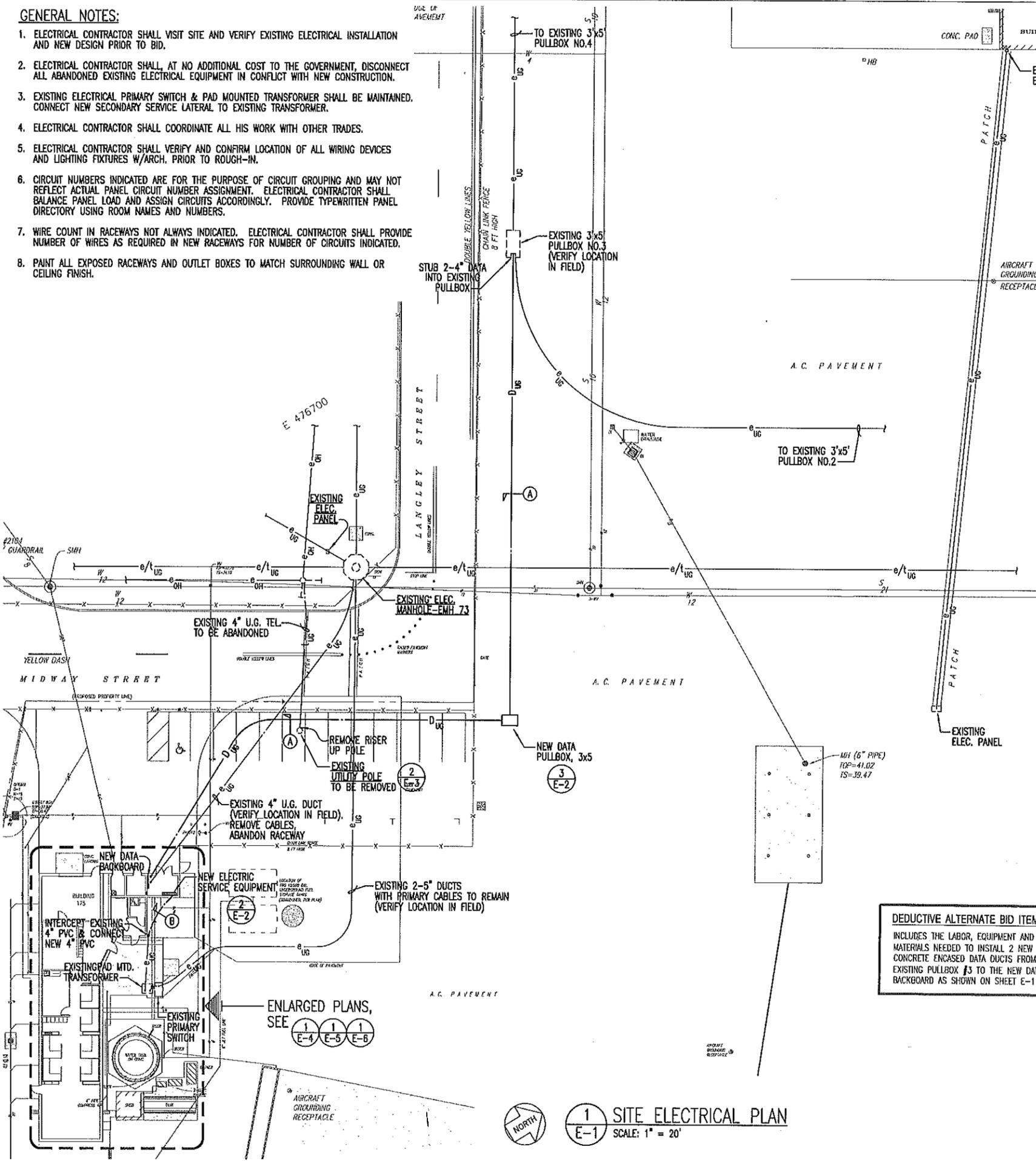
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII
OFFICE OF THE ENGINEER, FT. RUGER, HAWAII

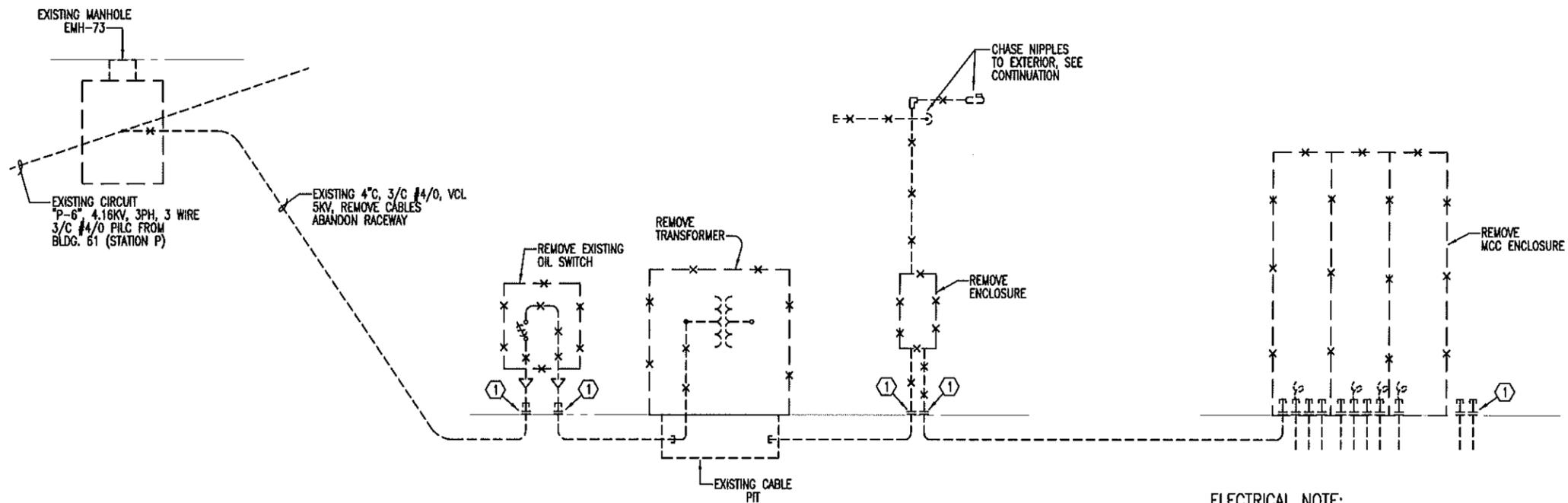
BUILDING 175 RENOVATION
KALAELOA
JOB NO. PN15080016 / CA-2831

SITE ELECTRICAL PLAN, ELECTRICAL SYMBOL LIST, GENERAL ELECTRICAL NOTES

APPROVED: HARRIS, FAC MGMT OFFICER
APPROVED: HOB, USPPF FOR HAWAII
DATE: 5-25-10

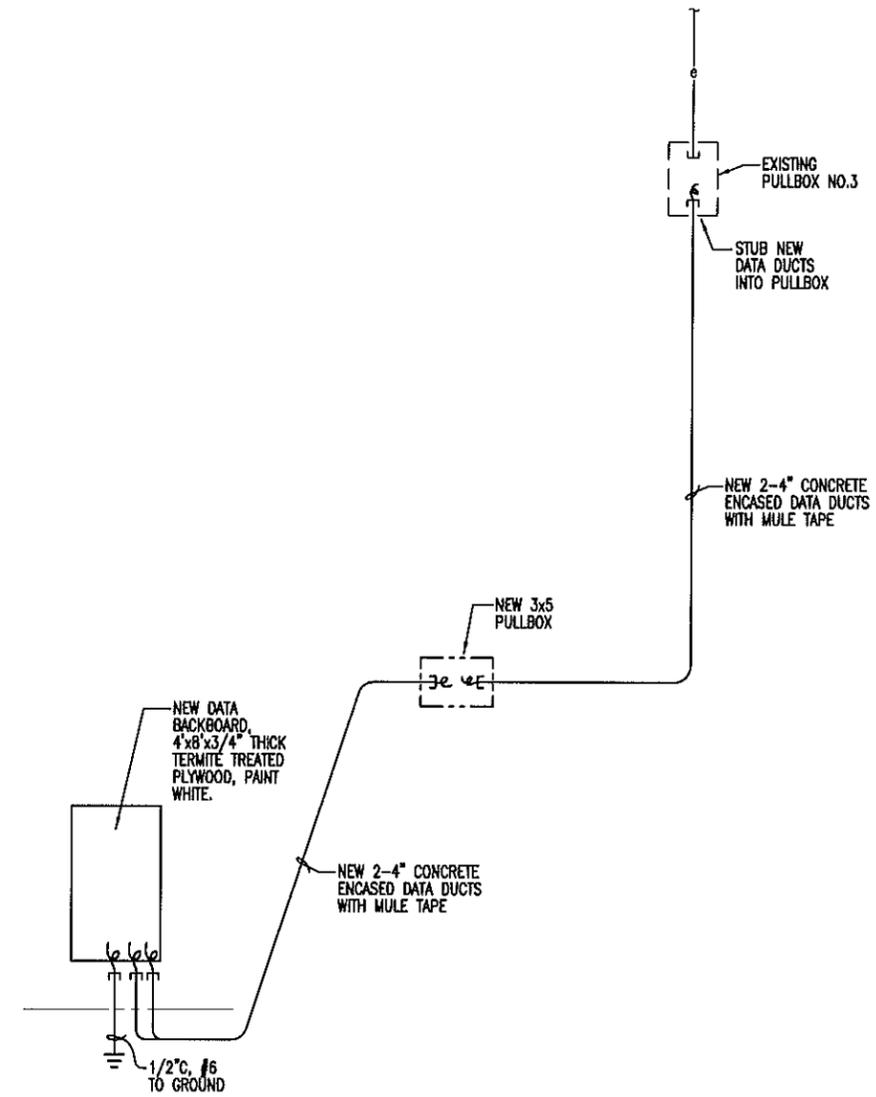
SCALE: DWG # E-1 SHEET 27 OF 33



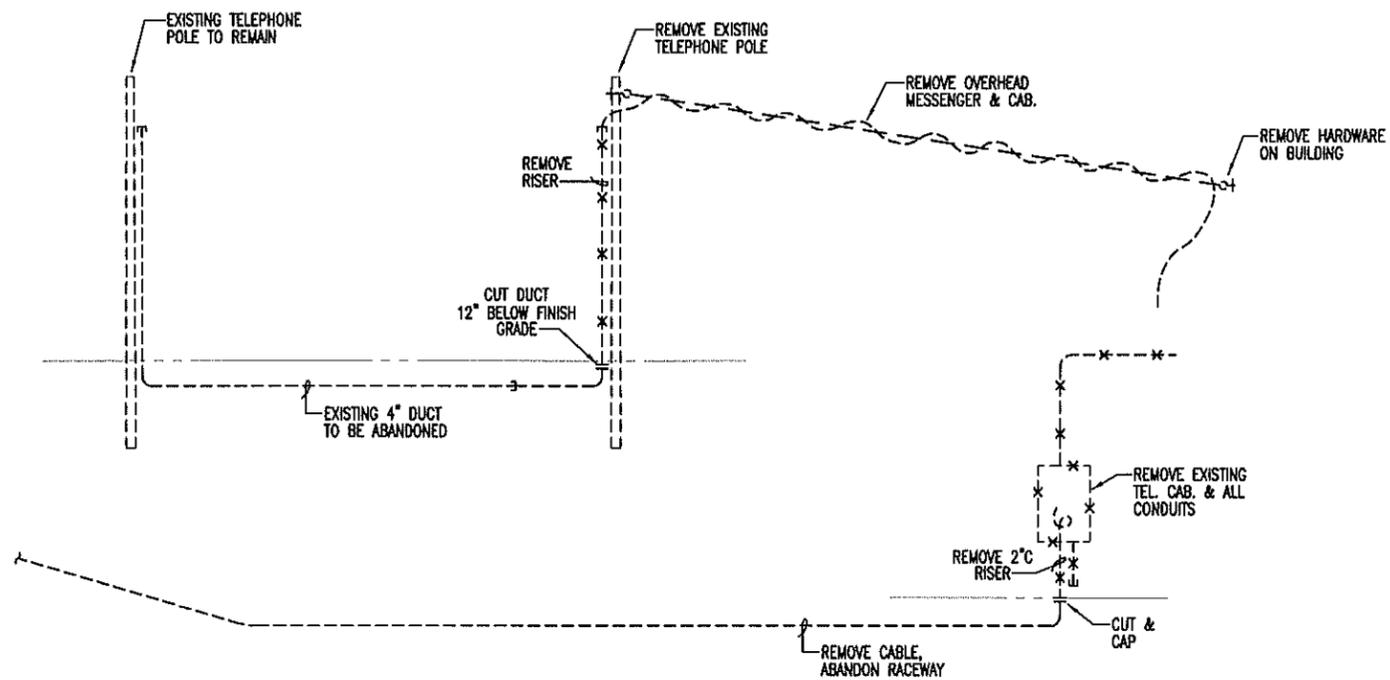


ELECTRICAL NOTE:
 ① CUT STUB UP AT FLOOR LINE, REMOVE WIRES WHERE SHOWN.

① CONNECTION DIAGRAM (EXISTING/REMOVAL WORK)
 E-3 NOT TO SCALE



③ DATA CONNECTION DIAGRAM
 E-3 NOT TO SCALE



② TELEPHONE CONNECTION DIAGRAM (REMOVAL WORK)
 E-3 NOT TO SCALE

- NOTES:**
1. DASHED LINES (---) INDICATE EXISTING CONDITION.
 2. DASHED LINES WITH 'X' (---X---) INDICATE REMOVAL WORK.
 3. SOLID LINES (—) AND DOTTED LINES (---) INDICATE NEW WORK.

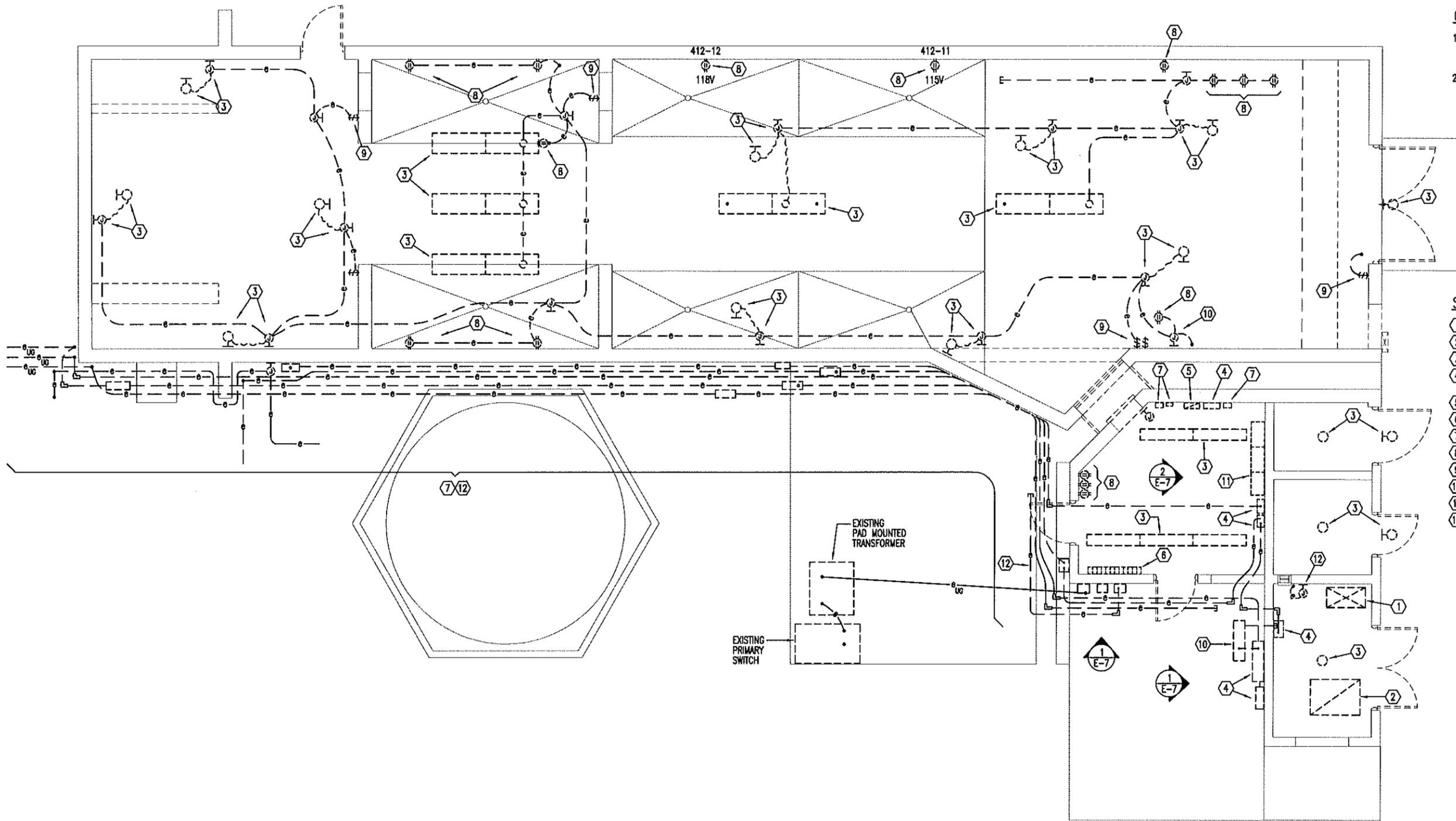
IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

<small>This work was prepared by me or under my supervision and control of this project will be under my observation. (Observation of construction as defined in Chapter 10-119, Subchapter 1 Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscape Architects.)</small>					
<small>IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY</small>					
<small>The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.</small>					
<small>NOTE: Contractor to check and verify dimensions of job before proceeding with work.</small>					
<small>H & O - B, INC. 4/30/2012 EXP. DATE</small>					
<small>PHIG, CONTRACTING & ENGINEERING OFFICER</small>					
DESIGNED:	SM	BUILDING 175 RENOVATION		DATE 5-25-10	
DRAWN:	SY	KALAELOA		SCALE:	
SAFETY:		JOB NO. PN15080016 / CA-2831		DWG # E-3	
ENGINEER:	BI	CONNECTION DIAGRAM (EXISTING/REMOVAL WORK), TELEPHONE CONNECTION DIAGRAM (REMOVAL WORK)		SHEET 29 OF 33	
APPROVED:		APPROVED:			
MARKO, FAC MGMT OFFICER		MOB, USPO FOR HAWAII			

GENERAL ELECTRICAL NOTES (REMOVAL WORK)

1. ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXTERIOR WALL MOUNTED ABANDONED ENCLOSURES, RACEWAYS, JUNCTION BOXES AND CONDUIT BODIES WHETHER SHOWN OR NOT.
2. REUSE EXISTING PRIMARY SWITCH & PAD MOUNTED TRANSFORMER.



SPECIFIC ELECTRICAL NOTES:

- 1 DISCONNECT AND REMOVE OIL SWITCH.
- 2 DISCONNECT AND REMOVE TRANSFORMER.
- 3 DISCONNECT AND REMOVE LIGHT FIXTURE & WIRING.
- 4 DISCONNECT AND REMOVE ELECTRIC PANEL ENCLOSURE AND RACEWAYS.
- 5 REMOVE TELEPHONE CABINET & RACEWAYS.
- 6 REMOVE WIREWAY, SWITCHES AND RACEWAYS.
- 7 REMOVE ELECTRICAL EQUIPMENT AND RACEWAYS.
- 8 REMOVE OUTLET, RECEPTACLE & WIRING.
- 9 REMOVE OUTLET, LIGHT SWITCH & WIRING.
- 10 REMOVE JUNCTION BOX, RACEWAY & WIRING.
- 11 REMOVE MCC.
- 12 REMOVE JUNCTION BOX AND RACEWAYS.



1 ELECTRICAL PLAN (EXISTING/REMOVAL WORK)
E-4 SCALE: 1/4" = 1' - 0"

IF SHEET IS LESS THAN
 22 x 34
 IT IS A REDUCED PRINT-
 SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

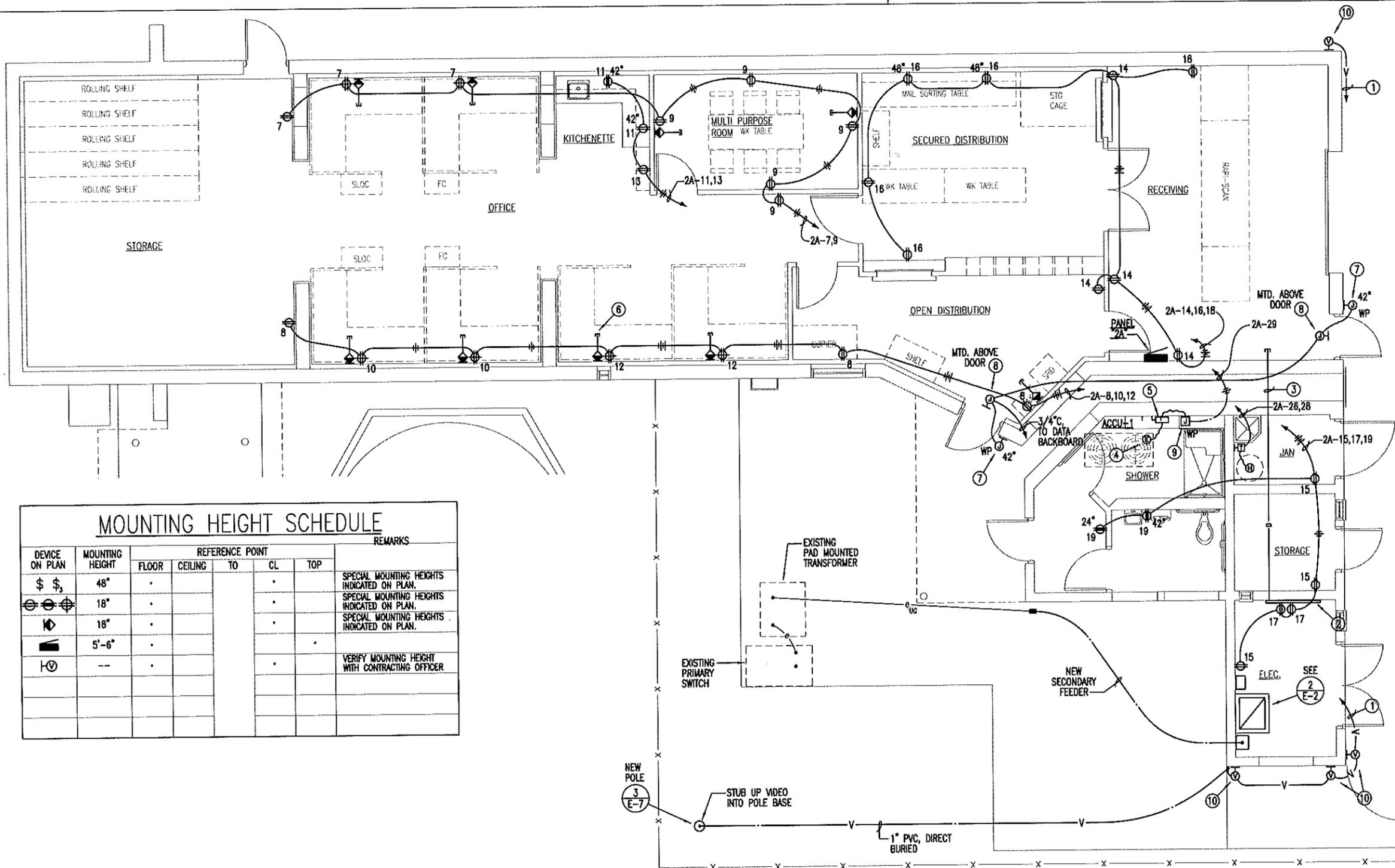


This work was prepared by me or under my supervision and contribution of this project will be under my observation. (Observation of construction as defined in Chapter 10-115, Subchapter 1, Definitions of the Revised Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscape Architects.)

4/30/2013
 H & O - H, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	SM	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831 ELECTRICAL PLAN (EXISTING/REMOVAL WORK)		
DRAWN:	SY			
SAFETY:				
ENGINEER:	BI			
APPROVED:		APPROVED:		DATE
				5-25-10
				SCALE:
				DWG #
				E-4
				SHEET
				30 OF 33



PANEL "2A" SCHEDULE

208Y/120 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

CKT. NO.	USE	CIRCUIT BREAKER			CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMP	A	B	C		
1	NIGHT LIGHTS	1	20	1.1				12
2	LIGHTS	1	20	0.7				12
3	LIGHTS	1	20		1.0			12
4	LIGHTS	1	20		1.2			12
5	LIGHTS	1	20			0.7		12
6	RECEPTACLES	1	20	1.2			1.2	12
7	RECEPTACLES	1	20	1.2				12
8	RECEPTACLES	1	20	1.2				12
9	RECEPTACLES	1	20		1.2			12
10	RECEPTACLES	1	20		1.2			12
11	RECEPTACLES	1	20			1.2		12
12	RECEPTACLES	1	20			1.2		12
13	RECEPTACLES - REFRIG.	1	20	1.2				12
14	RECEPTACLES	1	20	1.2				12
15	RECEPTACLES	1	20		1.2			12
16	RECEPTACLES	1	20		1.2			12
17	RECEPTACLES	1	20			1.2		12
18	RECEP. - RAPI SCAN	1	20			1.0		12
19	RECEPTACLES	1	20	1.2				12
20	SPARE	1	20	1.0				---
21	SPARE	1	20		1.0			---
22	SPARE	1	20		1.0			---
23	SPARE	1	20			1.0		---
24	SPARE	1	20			1.0		---
25	FCU	2	20	0.7				12
26	ELEC. WATER HEATER	2	30	2.3				10
27	FCU	---	---	---	0.7			12
28	ELEC. WATER HEATER	---	---	---	2.3			10
29	PFB	1	50			1.0		---
30	PFB	1	50			1.0		---
31	ACCU	3	80	5.3				6
32	PFB	3	50	1.0				---
33	ACCU	---	---	---	5.3			6
34	PFB	---	---	---	1.0			---
35	ACCU	---	---	---	5.3			6
36	PFB	---	---	---	1.0			---
37	PFB	1	50	---				---
38	PFB	1	50	---				---
39	PFB	1	50	---				---
40	PFB	1	50	---				---
41	PFB	1	50	---				---
42	PFB	1	50	---				---
PFB - PROMSION FOR FUTURE BREAKER		TOTAL LOAD/ PHASE		18.1	18.3	16.8		
		TOTAL LOAD		53.2 KVA				
		DEMAND FACTOR		0.7				
		DEMAND LOAD		37.2 KVA				

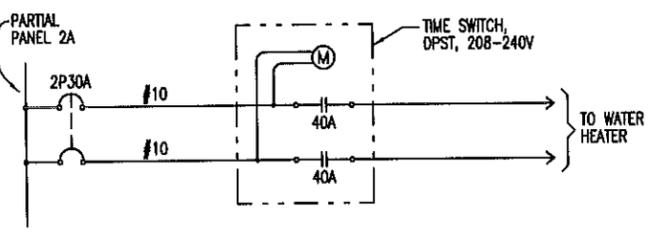
MOUNTING HEIGHT SCHEDULE

DEVICE ON PLAN	MOUNTING HEIGHT	REFERENCE POINT			REMARKS
		FLOOR	CEILING	TO	
\$ \$	48"	.		CL	SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
⊕ ⊕	18"	.		CL	SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
◀	18"	.		CL	SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
■	5'-6"	.			
⊖	--	.			VERIFY MOUNTING HEIGHT WITH CONTRACTING OFFICER

- ### ELECTRICAL NOTES:
- 1" C, VIDEO TO DATA BACKBOARD.
 - DATA BACKBOARD.
 - 3-2" DATA RACEWAYS STUB AT BACKBOARD.
 - ACCU ON ROOF.
 - 3P100A NON-FUSE SWITCH, NEMA 3R.
 - TYPICAL 1" EMT STUB UP AT 8'-0".
 - 2 GANG CAST METAL OUTLET BOX.
 - 1 GANG CAST METAL OUTLET BOX.
 - CAST METAL ON CONDUIT RISER ON ROOF.
 - VERIFY OUTLET LOCATION WITH CONTRACTING OFFICER.

1 ELECTRICAL PLAN (NEW WORK)

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



IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSUBISHI & ASSOCIATES, INC.

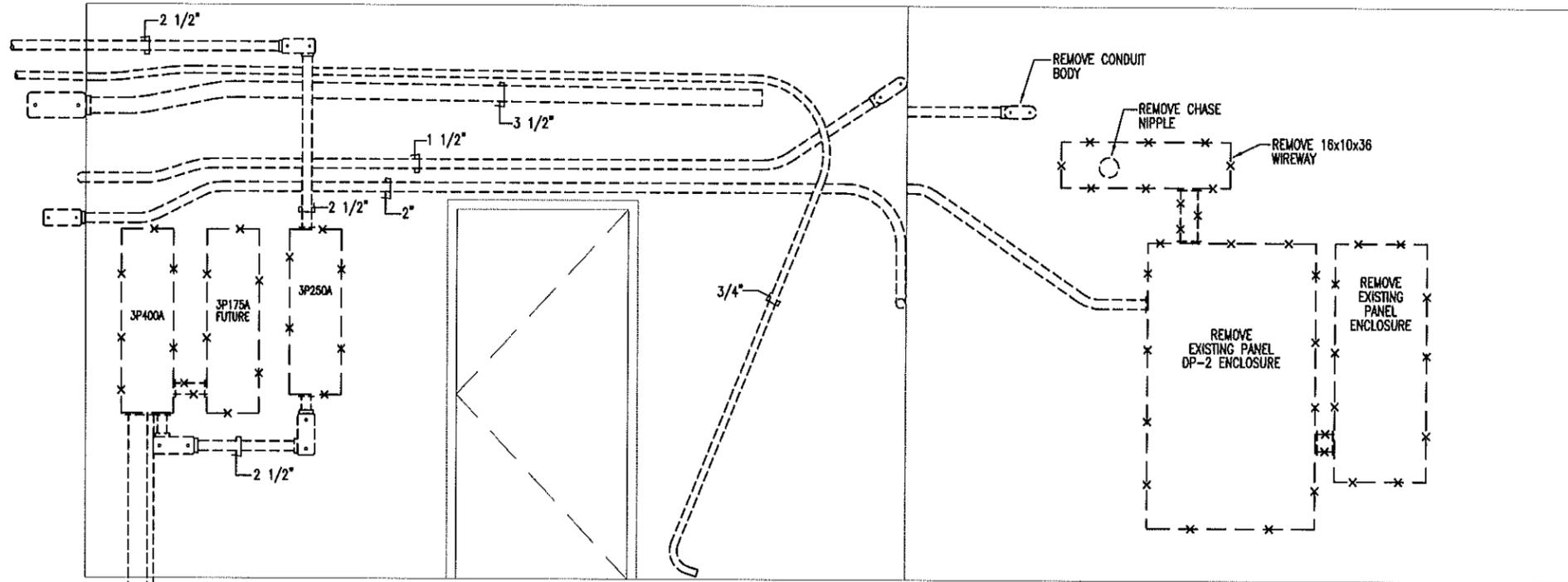
BRIAN T. ITOZAKI
LICENSED PROFESSIONAL ENGINEER
No. 9058-E
HAWAII, U.S.A.

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 Chapter 16-115, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscaping Architects.)

4/30/2012
H & O - B, INC. EXP. DATE

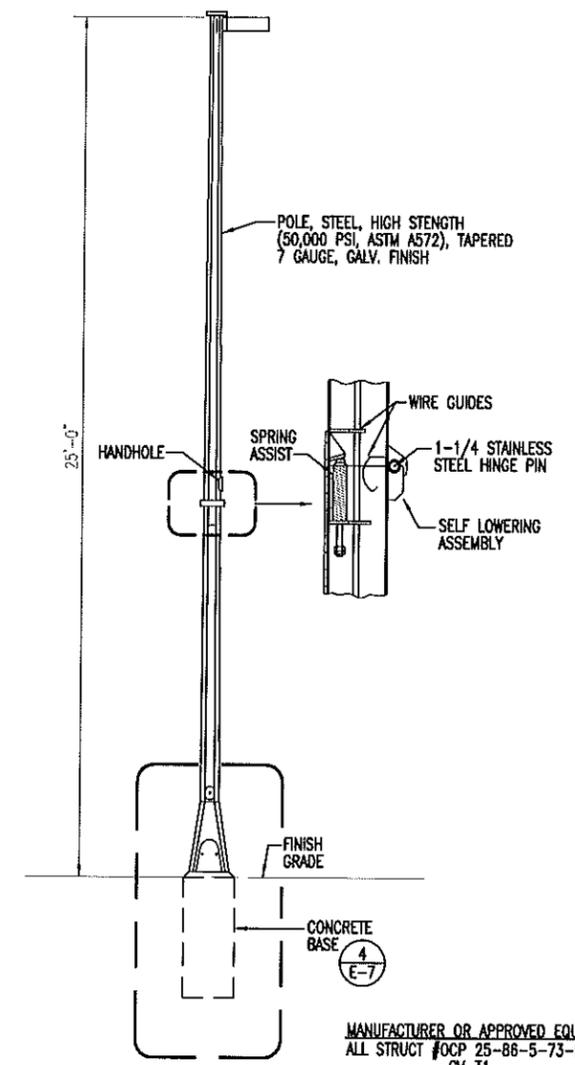
NOTE: Contractor to check and verify dimensions of job before proceeding with work.

REVISION NO.	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	SM	BUILDING 175 RENOVATION		
DRAWN:	SY	KALAELOA		
SAFETY:		JOB NO. PN150B0016 / CA-2831		
ENGINEER:	BI	ELECTRICAL PLAN (NEW WORK)		
APPROVED:		APPROVED:		DATE
HAWAII, FAC MGMT OFFICER		HQB, USFPO FOR HAWAII		5-25-10
APPROVED:				SCALE:
				E-5
HQB, CONTRACTING & ENGINEERING OFFICER				SHEET
				31 of 33



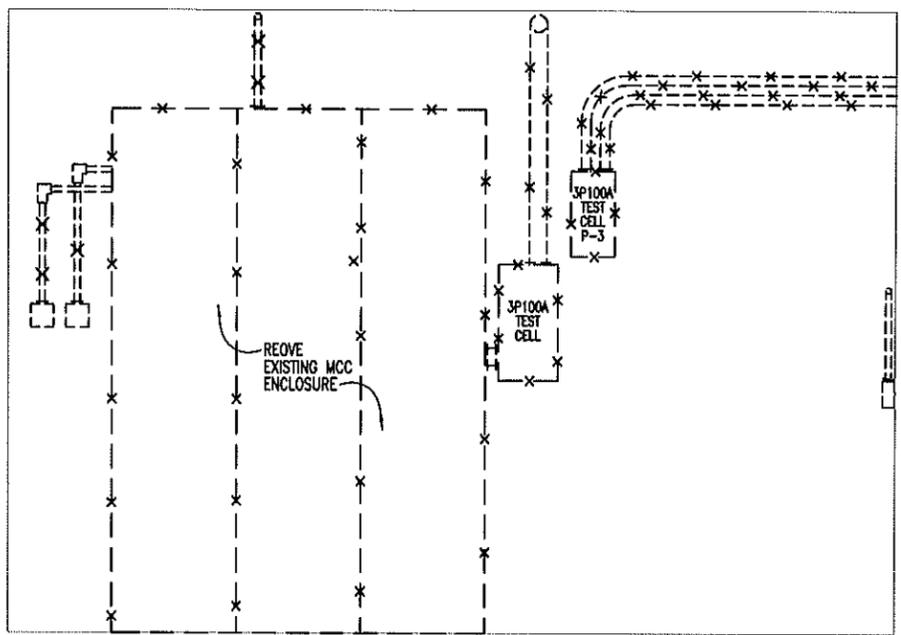
1 ELEVATION - EXTERIOR SERVICE EQUIP. (EXISTING/REMOVAL WORK)
E-7 NOT TO SCALE

NOTE:
REMOVE ALL EQUIPMENT
AND RACEWAYS SHOWN.



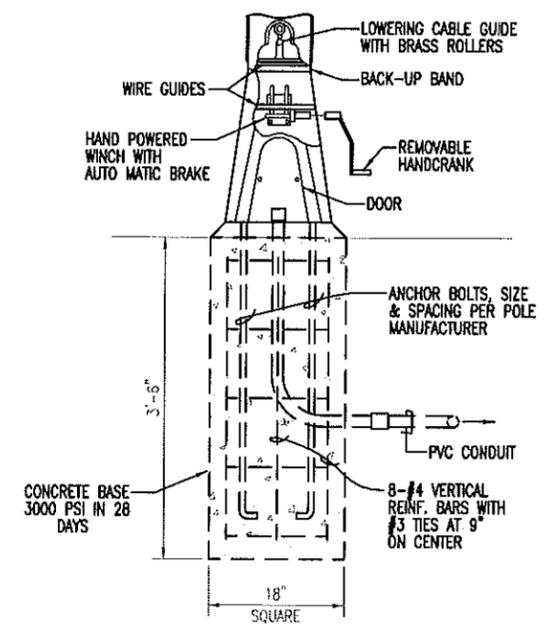
3 ELEVATION - CAMERA POLE
E-7 NOT TO SCALE

MANUFACTURER OR APPROVED EQUAL:
ALL STRUCT #OCP 25-88-5-73-HB
GV-T1.



2 ELEVATION - INTERIOR SERVICE EQUIP. (EXISTING/REMOVAL WORK)
E-7 NOT TO SCALE

NOTE:
REMOVE ALL EQUIPMENT
AND RACEWAYS SHOWN.



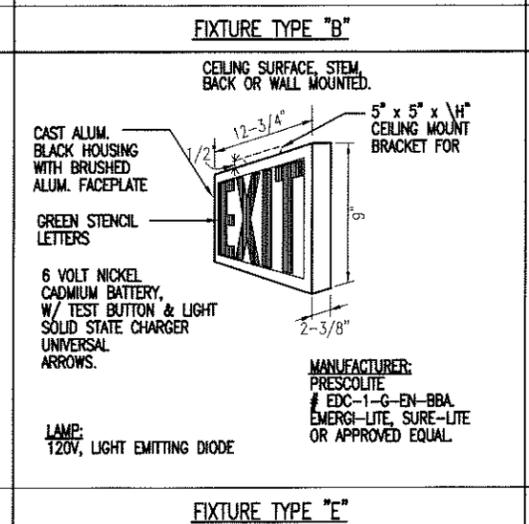
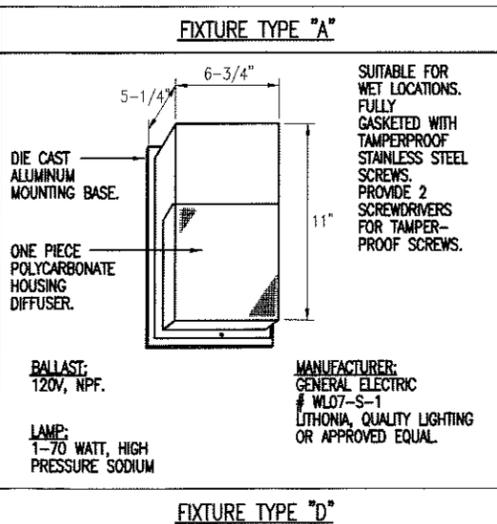
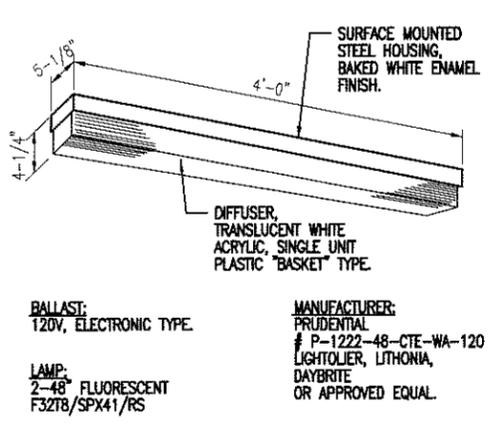
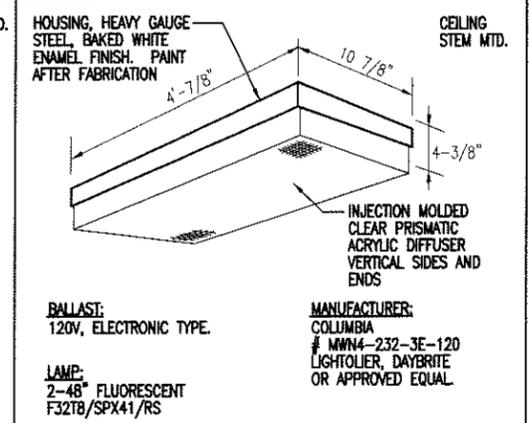
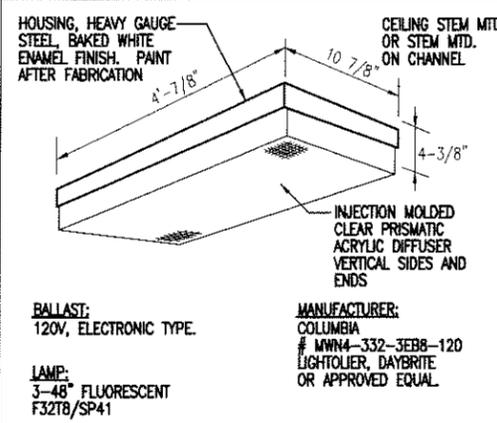
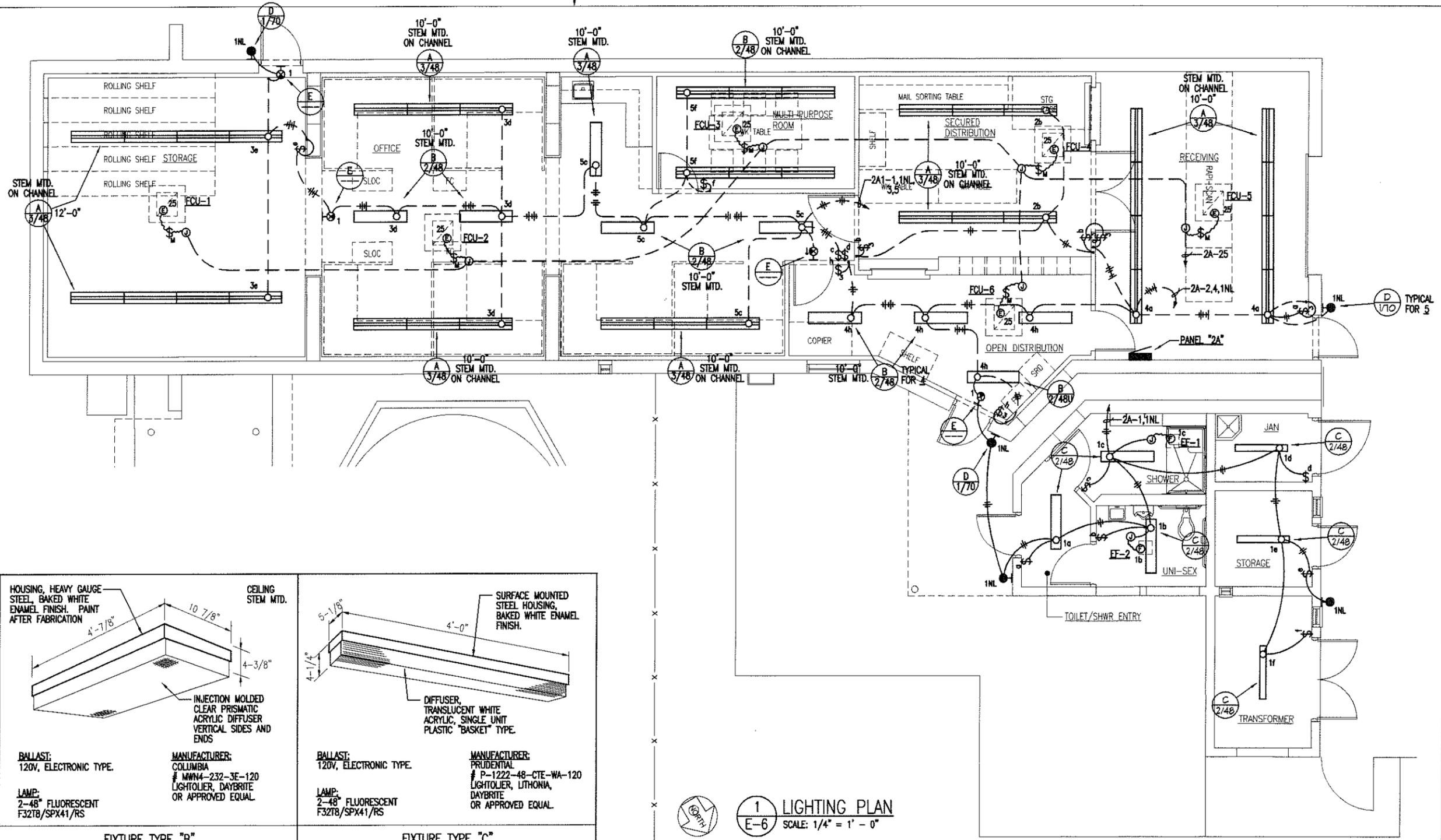
4 DETAIL - CONCRETE BASE
E-7 NOT TO SCALE

IF SHEET IS LESS THAN
22 x 34
IT IS A REDUCED PRINT-
SCALE REDUCED ACCORDINGLY

The Contractor will be responsible
for coordinating the work among
the various trades as necessary to
avoid conflicts and to insure the
installation of all work within the
available space.

LICENSED PROFESSIONAL ENGINEER No. 9058-E HAWAII, U.S.A.					
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 Chapter 18-115, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscape Architects.)					
H & O - #, INC. 4/30/2012 EXP. DATE		APPROVED: HNO, USPFO FOR HAWAII		DATE 5-25-10	
NOTE: Contractor to check and verify dimensions at job before proceeding with work.					
HNO, CONTRACTING & ENGINEERING OFFICER				SCALE: E-7 SHEET 33 of 33	

REVISION NO	DESCRIPTION	DATE	BY	CHK'D	
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII					
DESIGNED: SM		BUILDING 175 RENOVATION KALAELOA			
DRAWN: SY		JOB NO. PN15080016 / CA-2831			
SAFETY:		ELEVATION - EXTERIOR SERVICE EQUIPMENT (EXISTING/REMOVAL WORK), ELEVATION - INTERIOR SERVICE EQUIPMENT (EXISTING/REMOVAL WORK)			
ENGINEER: BI					



1 LIGHTING PLAN
E-6 SCALE: 1/4" = 1' - 0"

IF SHEET IS LESS THAN 22 x 34 IT IS A REDUCED PRINT—SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades as necessary to avoid conflicts and to insure the installation of all work within the available space.

MITSURAGA & ASSOCIATES, INC.

BRIAN T. ITOZAKI
LICENSED PROFESSIONAL ENGINEER
No. 9058-E
HAWAII, U.S.A.

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 Chapter 10-115, Subchapter 1, Definitions of the Hawaii Administrative Rules, Professional Engineers, Architects, Surveyors, and Landscape Architects.)

4/30/2012
H & O - II, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

REVISION NO	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FT. RUGER, HAWAII				
DESIGNED:	SM	BUILDING 175 RENOVATION KALAELOA JOB NO. PN15080016 / CA-2831		
DRAWN:	SY			
SAFETY:		LIGHTING PLAN, LIGHTING FIXTURE SCHEDULE		
ENGINEER:	BI			
APPROVED:		DATE	5-25-10	
HAWAII, FAC MGMT OFFICER	NGB, USFPO FOR HAWAII	SCALE:	E-6	
HING, CONTRACTING & ENGINEERING OFFICER		DWG #	32 of 33	