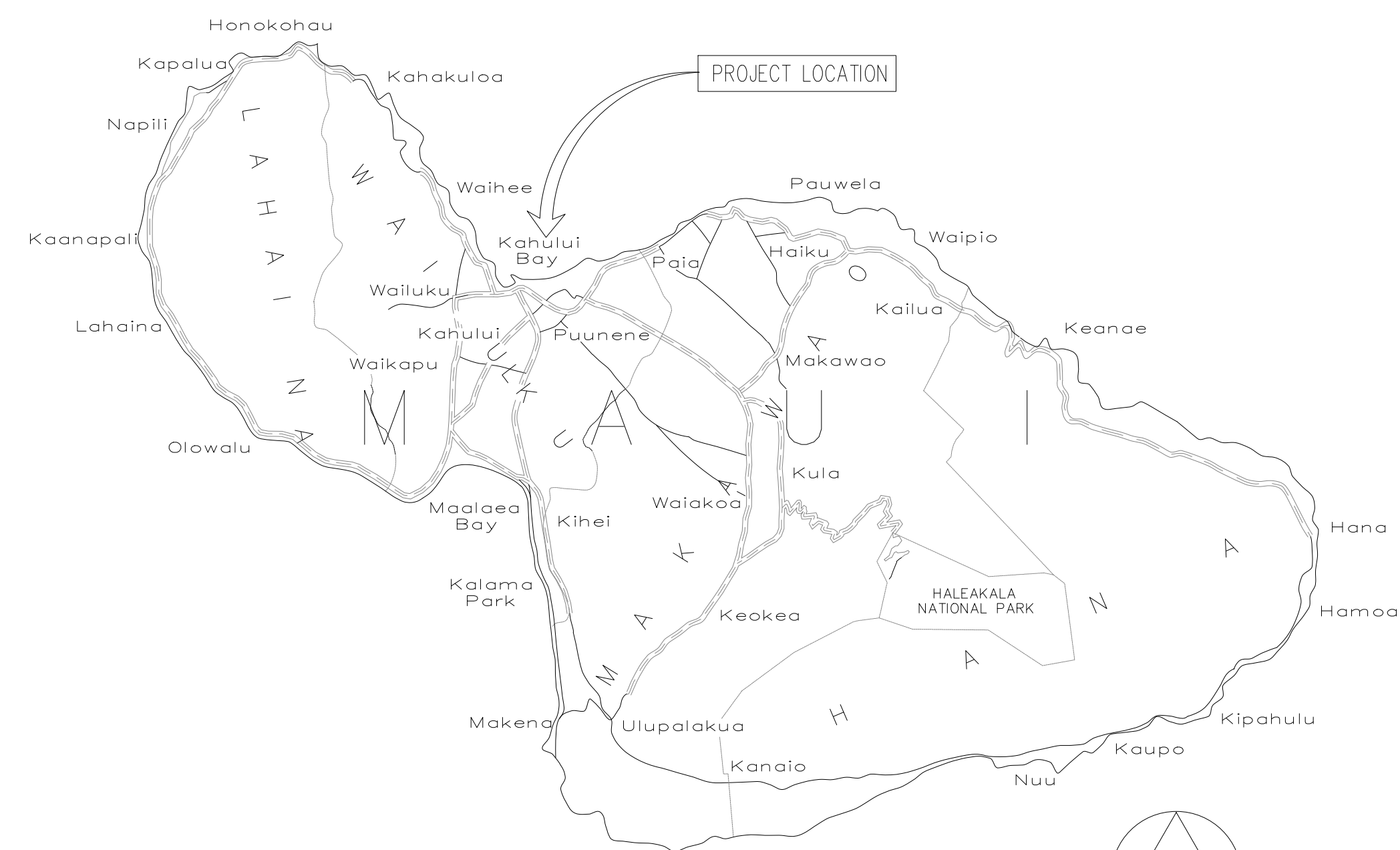


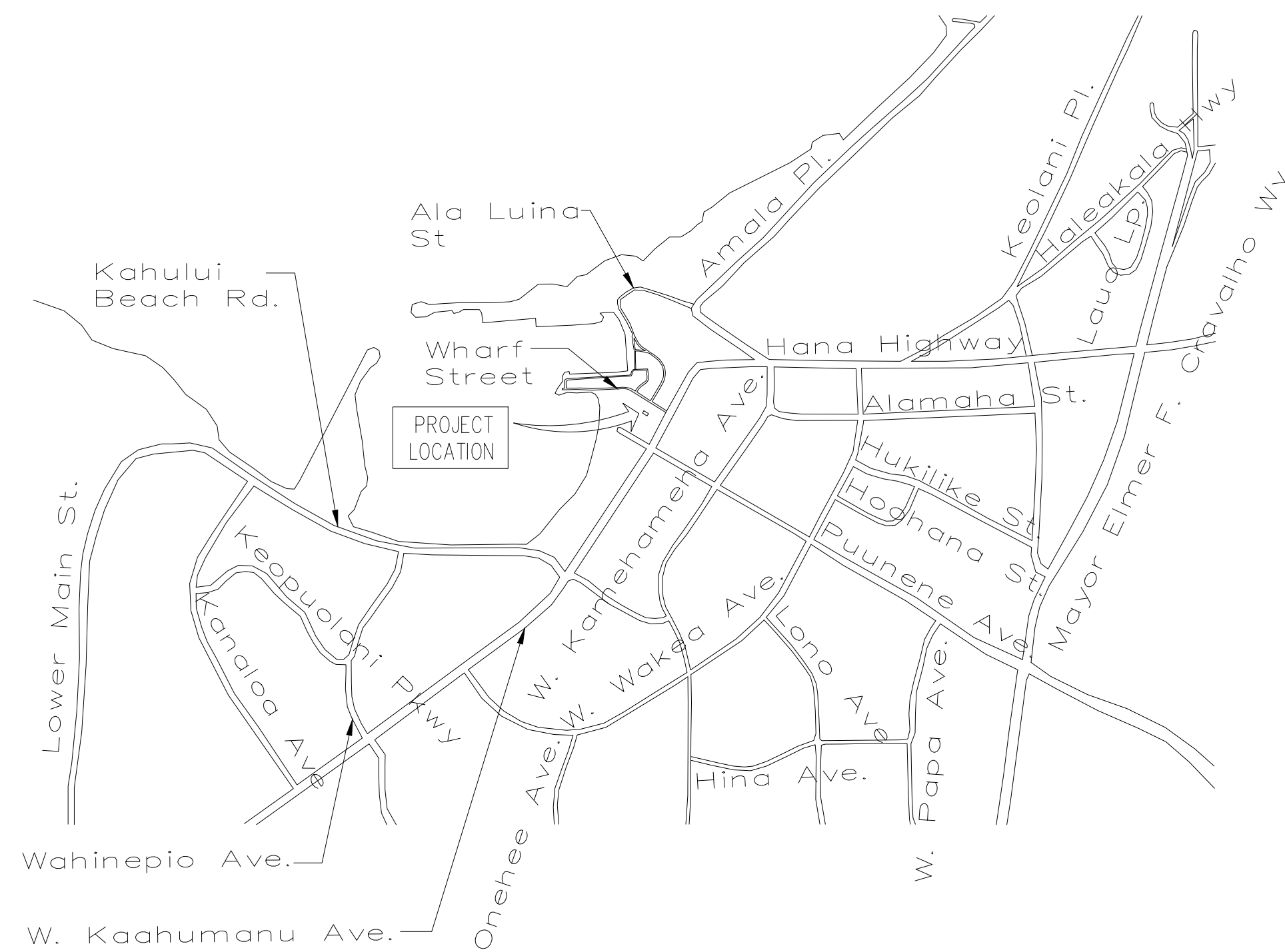
INSTALLATION OF PORTABLE COMFORT STATION AND SEWERLINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS
P30251

KAI HAWAII INC.




VICINITY MAP
NOT TO SCALE

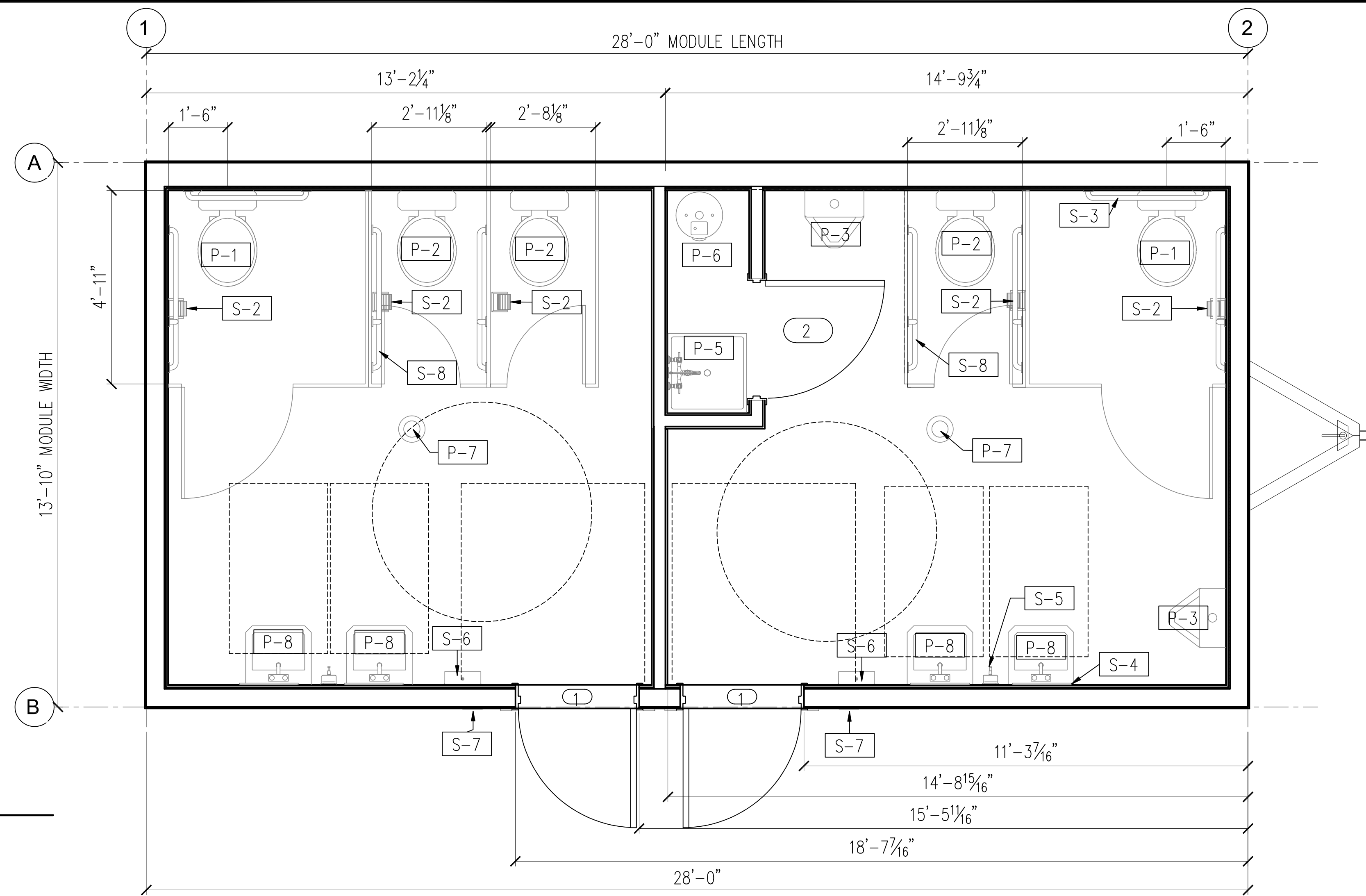


LOCATION MAP
NOT TO SCALE

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DEPARTMENT OF TRANSPORTATION STATE OF HAWAII		SHEET
APPROVED BY:		T-1
	05/07/2026	1 OF 13 SHEETS
for DIRECTOR OF TRANSPORTATION	DATE	



FRONT

FLOOR PLAN
SCALE: 1/2" = 1'-0"

NOTES:

- THE FLOOR PLAN SHOWN IS FOR ILLUSTRATIVE PURPOSES. IT REPRESENTS THE MINIMUM REQUIREMENTS THAT THE CONTRACTOR MUST PROVIDE. THE PORTABLE COMFORT STATION SHALL INCLUDE:
 - BOTH A MEN'S AND WOMEN'S ROOM.
 - SHALL BE COMMERCIAL GRADE INTERIOR
 - NO AIR CONDITIONING, BUT SHALL HAVE ADEQUATE VENTILATION.
 - MINIMUM OF TWO URINALS, ONE WATER CLOSET, AND ONE ADA COMPLIANT WATER CLOSET IN MEN'S ROOM.
 - MINIMUM OF ONE WATER CLOSET AND ONE ADA COMPLIANT WATER CLOSET IN WOMEN'S ROOM.
 - MINIMUM OF TWO SINKS WITH MIRRORS IN EACH ROOM.
 - HOT WATER HEATER AND MOP SINK.
 - THE SOAP DISPENSERS, HAND TOWEL DISPENSERS, AND WATER CLOSETS SHALL INCLUDE HANDS-FREE ACTUATORS THAT ARE HARD WIRED FOR POWER IN LIEU OF BATTERY POWERED.
- ALL URINALS SHALL BE WATERLESS AND SHALL HAVE MEANS OF REDUCING ODORS AND MAINTENANCE. THE CONTRACTOR SHALL PROVIDE TO HARBORS CONSTRUCTION ENGINEER, REPLACEMENT CARTRIDGES THAT WILL COVER A TWO (2) YEAR MAINTENANCE TIMEFRAME.
- LED LIGHTING.
- THE PORTABLE COMFORT STATION SHALL BE POWERED BY A STAND-ALONE PV SOLAR POWER SYSTEM, WITH BATTERY STORAGE. THE SOLAR PANELS SHALL BE MOUNTED TO THE ROOF OF THE COMFORT STATION AND SHALL BE ABLE TO WITHSTAND HURRICANE FORCES IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE (IBC).
- AN ELECTRICAL BACKUP GENERATOR SHALL BE PROVIDED AND MOUNTED TO THE FRAME OF THE TRAILER THAT IS CAPABLE OF PROVIDING ENOUGH POWER TO OPERATE BOTH ROOMS WITH NO LOSS OF OPERATION.
- THE PORTABLE COMFORT STATION SHALL BE SECURELY ANCHORED TO THE GROUND. THE ANCHOR SYSTEM SHALL BE ABLE TO WITHSTAND 130 MPH WINDS IN ACCORDANCE WITH 2018 IBC.
- THE COMFORT STATION WILL UTILIZE COUNTY WATER AND SEWER SERVICES. NO WATER OR SEPTIC TANKS ARE REQUIRED.
- THE COMFORT STATION SHALL BE INSTALLED WITH HEAVY DUTY SUPPORTS SO THAT NO LOADS ARE TRANSFERRED INTO THE TRAILER TIRES.
- REFER TO ARTICLE XXVI - PORTABLE COMFORT STATION, FOR ADDITIONAL REQUIREMENTS.

DOOR SCHEDULE

MARK	QTY	DESCRIPTION	DOOR					FRAME		
			WD	HGT	THK.	MATERIAL	FINISH	TYPE	FINISH	WALL THK.
1	2	HINGED SINGLE - FLUSH	3' - 0"	6' - 8"	0' - 1 3/4"	18 GAUGE STEEL INSULATED	PAINT	16 GAUGE HM/KD	PAINT	0' - 7 3/16"
2	1	HINGED SINGLE - FLUSH	3' - 0"	6' - 8"	0' - 1 3/4"	18 GAUGE STEEL INSULATED	PAINT	16 GAUGE HM/KD	PAINT	0' - 7 3/16"

SPECIALTY EQUIPMENT SCHEDULE

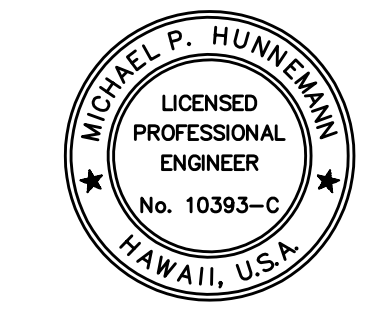
MARK	QTY.	DESCRIPTION
S-1	5	TOILET PARTITIONS & URINAL SCREEN, POWDER COATED METAL, FLOOR MOUNT O/H BRACED
S-2	5	TOILET PAPER DISPENSER
S-3	2	ADA GRAB BARS
S-4	4	MIRROR, 18X30 FRAMED
S-5	2	SOAP DISPENSER
S-6	2	PAPER TOWEL DISPENSER
S-7	2	ADA RESTROOM SIGNAGE
S-8	4	ADA GRAB BARS, (2) PIECE SET

SPECIAL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOVING THE ICE MAKER AND THE WATER IONIZER EQUIPMENT FROM THE ORIGINAL MAINTENANCE BUILDING INTO THE NEW MAINTENANCE BUILDING. SEE SHT. 2A-104, JOB NO. P30176 FOR THE LOCATION OF WHERE THIS EQUIPMENT IS TO BE INSTALLED.
- THIS EQUIPMENT SHALL NOT BE REMOVED FROM ITS CURRENT LOCATIONS UNTIL THE SEWERLINE EXTENSION WORK IS COMPLETED AND IS IN SERVICE.
- PAYMENT FOR THE REMOVAL, RELOCATION, AND INSTALLATION OF THIS EQUIPMENT WILL BE PAID FOR AS PART OF BID ITEM NO. 3 IN THE PROPOSAL SCHEDULE.

PLUMBING FIXTURE SCHEDULE

MARK	QTY	DESCRIPTION
P-1	2	WATER CLOSET, ADA PRESSURE ASSISTED FLUSH TANK
P-2	3	WATER CLOSET, PRESSURE ASSISTED FLUSH TANK
P-3	1	URINAL, WALL MOUNTED, ADA
P-5	1	MOP SINK
P-6	1	WATER HEATER, 6 GALLON COMPACT ELECTRIC
P-7	2	FLOOR DRAIN
P-8	4	20X18 WALL MOUNTED, ADA



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. SUPERVISION OF CONSTRUCTION IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."
Michael P. Hunnefenn
KAI HAWAII, INC.
APRIL 30, 2028
LICENSE EXPIRATION DATE

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE		INSTALLATION OF PORTABLE COMFORT STATION AND SEWERLINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII		
SHEET TITLE		COMFORT STATION NOTES		
DESIGNED BY:	DRAWN BY: CAD	CHECKED BY:	DATE: MAR 2026	JOB NUMBER: P30251
SCALE: AS SHOWN				SHEET: C-1
				2 OF 13 SHTS.

GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005, AS AMENDED AND STANDARD PLANS, DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION SEPTEMBER 1986 AND STANDARD DETAILS FOR PUBLIC WORKS, COUNTY OF MAUI, UNLESS OTHERWISE SPECIFIED.
2. THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE HARBORS CONSTRUCTION ENGINEER FOR CLARIFICATION.
3. RESTORATION OF PAVEMENTS, PAVEMENT MARKERS, PAVEMENT STRIPING, SIGNS, CURBING AND ALL OTHER IMPROVEMENTS, UNAVOIDABLE DAMAGE SHALL BE REPAIRED AND COST BORNE BY THE CONTRACTOR.
4. ALL VISIBLE UTILITY STRUCTURES HAVE BEEN LOCATED IN THE FIELD, HOWEVER, CONNECTION TO UNDERGROUND UTILITY LINES AS SHOWN ARE UNVERIFIED AND COMPILED FROM EXISTING DATA. UNDERGROUND UTILITIES SHOWN HEREON ARE FOR INFORMATION ONLY, HAVING BEEN OBTAINED FROM BEST AVAILABLE SOURCES. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PAY FOR ALL DAMAGED UTILITIES. PERSONAL INJURY RESULTING FROM CONTACT WITH EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF THE NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATION AND DEPTH PRIOR TO EXCAVATION FOR THE NEW FACILITIES.
5. EXISTING TOPOGRAPHIC DATA WAS TAKEN FROM TOPOGRAPHIC MAP PREPARED BY AUSTIN TSUTSUMI & ASSOCIATES, INC., DATED NOVEMBER 19, 2020 AND UPDATED IN JANUARY 13, 2026.
6. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE, SAFE, NON-SKID BRIDGING MATERIAL OVER THE TRENCH, INCLUDING SHORING, WHEN TRENCHING IN PAVEMENT AREAS TO HANDLE A FULLY LOADED 20-TON FORKLIFT.
7. CONTRACTOR SHALL PROVIDE ACCESS TO AND FROM DRIVEWAYS AND ROADS AT ALL TIMES.
8. NO BLASTING SHALL BE ALLOWED ON THIS PROJECT.
9. SHOULD THERE BE ANY DISCOVERIES OF ARCHAEOLOGICAL RESOURCES DURING PROJECT CONSTRUCTION, WORK THAT WOULD AFFECT THE ARCHAEOLOGICAL RESOURCES SHALL STOP IMMEDIATELY AND THE CONTRACTOR SHALL NOTIFY THE HARBORS CONSTRUCTION ENGINEER AND THE DEPARTMENT OF LAND AND NATURAL RESOURCES, STATE HISTORIC PRESERVATION DIVISION (808) 981-2979.
10. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND ENVIRONMENTAL QUALITY.
11. WHEN EXCAVATION IS ADJACENT TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS, AND SETTLEMENTS, AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY PROTECT IT FROM DAMAGE.
12. BACKFILL UNDER EXISTING STRUCTURES OR FACILITIES SHALL BE SANDY OR GRANULAR MATERIAL COMPLETELY PLACED AS SOON AS THE PIPE IS LAID AND TESTED. THE BACKFILL MATERIAL SHALL BE RAMMED WITH PROPER TOOLS UNTIL COMPACTED TO 90 TO 95 PERCENT OF ITS MAXIMUM DENSITY ACCORDING TO ASTM D-1557.
13. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATIONS OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING. THE CONTRACTOR SHALL COORDINATE ALL WORK.
14. ELEVATIONS SHOWN ON THE PLANS ARE BASED ON MEAN LOWER LOW WATER (MLLW) DATUM.
15. FOR BENCH MARK, SEE SHEET C-7.
16. PAVEMENT STRIPING SHALL CONFORM TO THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005, SECTION 629 - PAVEMENT MARKINGS. PARAGRAPHS REFERRING TO MEASUREMENT AND PAVEMENT SHALL BE EXCLUDED.
17. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED PER ADAAG 4.1.1(4).
18. THE CONTRACTOR SHALL ENSURE THAT ACCESS SHALL BE PROVIDED TO WORK AREAS DURING CONSTRUCTION AS PER ADAAG 4.1.1(3). THE AREAS THAT ARE USED ONLY AS WORK AREAS SHALL BE DESIGNED AND CONSTRUCTED SO THAT INDIVIDUALS WITH DISABILITIES CAN APPROACH, ENTER AND EXIT THE AREAS.
19. EXISTING DRAINAGE SYSTEM WILL BE FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS TO FURNISH MATERIALS, EQUIPMENT, LABOR, TOOLS AND INCIDENTALS NECESSARY TO MAINTAIN FLOW. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO VARIOUS CONTRACT ITEMS.
20. ALL SAW CUTTING WORK SHALL BE CONSIDERED INCIDENTAL.
21. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DISPOSE OF ANY EXCESS DEBRIS DUE TO HIS CONSTRUCTION WORK FROM THE JOB SITE.
22. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE DRAWINGS, READ THE SPECIFICATIONS AND ALL OTHER PROPOSED CONTRACT DOCUMENTS AND SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF HIS BID. THE CONTRACTOR SHALL FULLY INFORM HIMSELF PRIOR TO THE SUBMISSION AS TO ALL EXISTING CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK IS TO BE PERFORMED. HE SHALL INCLUDE IN HIS PROPOSAL, A SUM TO COVER ALL COSTS OF ALL ITEMS NECESSARY TO PERFORM HIS WORK AS SET FORTH IN THE PROPOSED CONTRACT DOCUMENTS. NO ALLOWANCE SHALL BE MADE TO THE CONTRACTOR BECAUSE OF LACK OF SUCH EXAMINATION OR KNOWLEDGE. THE SUBMISSION OF A BID SHALL BE CONSTRUED AS CONCLUSIVE EVIDENCE THAT THE BIDDER HAS MADE SUCH EXAMINATION.
23. ALL MATERIALS FOR THIS PROJECT SHALL BE NEW AND FREE FROM ANY AND ALL DEFECTS UNLESS SPECIFIED OTHERWISE.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK AMONG THE VARIOUS TRADES AS NECESSARY TO AVOID CONFLICTS AND TO ENSURE THAT ALL WORK IS IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
25. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFETY BARRICADE AROUND THE PROJECT SITE AND SHALL ASSURE THE SAFETY OF THE PUBLIC AT ALL TIMES.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL BLOCKING, BACKING, BRACKETS, ETC. AS REQUIRED FOR THE PROPER AND SECURED INSTALLATION OF ALL MATERIALS AND PRODUCTS.
27. THE CONTRACTOR SHALL REPORT ANY UNSATISFACTORY CONDITIONS AND/OR DISCREPANCIES TO THE HARBORS CONSTRUCTION ENGINEER. FAILURE TO COMPLY WITH THIS CONDITION MAY RESULT IN PLACING ANY AND ALL RESPONSIBILITY, LIABILITY AND EXPENSE TO THE CONTRACTOR.
28. THE CONTRACTOR SHALL REVIEW THE PROJECT FOR ANY LONG LEAD ITEMS AND PROVIDE SPECIAL CONSIDERATIONS TO AVOID UNNECESSARY DELAYS TO THE COMPLETION OF THE PROJECT.
29. THE CONTRACTOR SHALL NOTIFY THE HARBOR CONSTRUCTION ENGINEER IMMEDIATELY UPON ENCOUNTERING ANY HAZARDOUS MATERIALS, ETC. DURING THE COURSE OF THIS PROJECT. THE CONTRACTOR IS NOT AUTHORIZED TO HANDLE, TEST OR REMOVE SUCH MATERIALS WITHOUT SPECIFIC AUTHORIZATION FROM THE ENGINEER.
30. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO THE FABRICATION AND/OR ORDERING OF HIS MATERIALS.
31. PRODUCTS SPECIFIED AND/OR INDICATED BY NAME IN THESE DRAWINGS AND/OR SPECIFICATIONS ESTABLISH A DESIGN OR MATERIAL QUALITY DESIRED FOR THIS PROJECT. THE PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THAT THEY MEET OR EXCEED THE MATERIAL CONSTRUCTION REQUIREMENTS SPECIFIED AND/OR HEREIN ACCEPTED BY WRITTEN ADDENDUM PER THE GENERAL CONDITIONS FOR REQUEST FOR SUBSTITUTION.
32. THE HAWAII ONE CALL CENTER MUST BE CONTACTED PRIOR TO EXCAVATION. THEY MAY BE REACHED AT 1-866-423-7282 OR HTTP://CALLBEFOREYOU.DIG.ORG. REGARDLESS OF WHAT IS SHOWN OR NOT SHOWN ON THE AS-BUILT PLANS AND/OR UTILITY COMPANY RECORDS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING HIS OWN INVESTIGATION INCLUDING, BUT NOT LIMITED TO, TONING FOR UNDERGROUND UTILITIES AS NECESSARY, PROBING AND POTHOLING FOR ALL UTILITY LOCATIONS PRIOR TO EXCAVATION TO ENSURE UNDERGROUND UTILITY LINES ARE NOT DAMAGED. THE CONTRACTOR SHALL ALSO COORDINATE WITH HARBORS MAUI DISTRICT OFFICE TO REVIEW THE AVAILABLE GIS UTILITY PLANS.
33. THE CONTRACTOR SHALL COORDINATE THE PHASING OF THE WORK WITH THE KAHULUI HARBOR, MAUI DISTRICT OFFICE (DOT) AND THE HARBORS CONSTRUCTION ENGINEER. A CONSTRUCTION SCHEDULE SHALL BE SUBMITTED TO THE HARBORS CONSTRUCTION ENGINEER A MINIMUM FOUR (4) WEEKS PRIOR TO THE START OF CONSTRUCTION. THE NAME AND CONTACT INFORMATION FOR THE CONSTRUCTION ENGINEER WILL BE PROVIDED AT THE TIME OF CONTRACT TRANSMITTAL.
34. ANY SHUTDOWN OF AN EXISTING UTILITY SYSTEM SHALL BE COORDINATED WITH THE HARBORS MAUI DISTRICT MANAGER AND AFFECTED UTILITY. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION WORK WITHIN THE EXISTING HARDENED PAVEMENT AREA WITH DOT TO ENSURE MINIMAL INTERFERENCE OF HARBOR OPERATIONS.
35. DURING THE COURSE OF GRADING WORK IN THE EVENT OF SPILL, LEAK, OTHER RELEASE CONTAINING A HAZARDOUS SUBSTANCE OR OIL, OR DISCOVERY OF CONTAMINATED SOIL, THE CONTRACTOR SHALL IMMEDIATELY (ASAP, WITHIN 24 HOURS) NOTIFY THE APPROPRIATE FACILITY PERSONNEL, EMERGENCY RESPONSE AGENCIES, REGULATORY AGENCIES, HARBORS CONSTRUCTION ENGINEER, HARBORS MAUI DISTRICT MANAGER AND THE ENVIRONMENTAL HOTLINE (808-587-1962) FOLLOWING NOTIFICATION PROCEDURES. SUCH CONTACT INFORMATION MUST BE POSTED AT LOCATIONS THAT ARE READILY ACCESSIBLE AND AVAILABLE.
36. AT LEAST ONE LANE OF TRAFFIC MUST BE OPEN AT ALL TIMES ON WHARF STREET.
37. THE CONTRACTOR SHALL PROVIDE ACCESS FOR VEHICLES AT ALL DRIVEWAYS ENTERING OR LEAVING HARBORS PROPERTY ALONG WHARF STREET AT ALL TIMES DURING CONSTRUCTION.
38. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS ALONG WHARF STREET AT ALL TIMES DURING CONSTRUCTION.
39. ANY WORK REQUIRING LANE CLOSURE ON WHARF STREET SHALL BE PERFORMED AT NIGHT BETWEEN THE HOURS OF 6:00 P.M. TO 5:00 A.M. TO MITIGATE GATE CONGESTION AND IMPACT TO HARBOR OPERATIONS. ALL OPEN TRENCHES SHALL BE COVERED WITH HIGHWAY RATED STEEL PLATES. A COMMUNITY NOISE VARIANCE PERMIT IS REQUIRED FOR NIGHT WORK. THE CONTRACTOR SHALL APPLY FOR AND OBTAIN A COMMUNITY NOISE VARIANCE PERMIT FROM THE STATE OF HAWAII, DEPARTMENT OF HEALTH, INDOOR AND RADIOLOGICAL HEALTH BRANCH, NOISE SECTION PRIOR TO THE START OF CONSTRUCTION.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE: NOTES				
DESIGNED BY: STAFF				SHEET C-2 3 of 13 SHEETS
DRAWN BY: STAFF				
CHECKED BY: PTM				
DATE: MAR 2026				
SCALE: AS SHOWN				JOB NUMBER: P30251

PAUL T. MATSUDA
LICENSED PROFESSIONAL ENGINEER
No. 10901-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. PRESERVATION OF CONSTRUCTION IS DEFINED IN CHAPTER 114-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

APRIL 30, 2026
LICENSE EXPIRATION DATE

GRADING NOTES (COUNTY OF MAUI)

1. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 20.08, AS RELATED TO SOIL EROSION AND SEDIMENTATION CONTROL, OF THE MAUI COUNTY CODE 2020, AS AMENDED.
2. FINISH SPOT ELEVATIONS AND FINISH CONTOURS, AS SHOWN ON PLAN REPRESENTS FINISH GRADING. THE SITE WORK CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE CONTRACTOR FOR THE LOCATION AND DEPTH OF TOPSOIL. THE FINISH SUB-GRADE SHALL REFLECT THE FINISH GRADE LESS THE SPECIFIED TOPSOIL DEPTH.
3. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE MEASURES OF THE BEST MANAGEMENT PRACTICE (BMP) PLAN. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN THE PUBLIC HEALTH REGULATIONS, STATE DEPARTMENT OF HEALTH, ON WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS.
4. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS, AND OTHER AREAS. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE STATE DEPARTMENT OF HEALTH OR COUNTY OF MAUI DPW, SHALL BE PAYABLE BY THE CONTRACTOR.
5. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREAS FREE FROM DUST NUISANCES. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL RULES OF THE STATE DEPARTMENT OF HEALTH, HAR 11-60.1, FUGITIVE DUST.
6. CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT AN APPROPRIATE SITE. THE CONTRACTOR SHALL INFORM THE CONSTRUCTION ENGINEER OF THE LOCATION OF DISPOSAL SITES. THE DISPOSAL SITE MUST ALSO FULFILL REQUIREMENTS OF THE GRADING ORDINANCES.
7. THE CONTRACTOR SHALL NOT DEMOLISH OR CLEAR ANY STRUCTURE, SITE OR VACANT LOT WITHOUT FIRST ASCERTAINING THE PRESENCE OR ABSENCE OF RODENTS WHICH MAY ENDANGER THE PUBLIC HEALTH BY DISPERSAL FROM SUCH PREMISES. SHOULD SUCH INSPECTION REVEAL THE PRESENCE OF SUCH RODENTS, THE CONTRACTOR SHALL ERADICATE SUCH RODENTS BEFORE DEMOLISHING OR CLEARING SAID STRUCTURE, SITE OR VACANT LOT.
8. THE FOLLOWING MEASURES SHALL BE TAKEN TO CONTROL DUST AND EROSION DURING THE SITE DEVELOPMENT PERIOD:
 - A. MINIMIZE TIME OF CONSTRUCTION.
 - B. RETAIN EXISTING GROUND COVER UNTIL THE LATEST DATE TO COMPLETE CONSTRUCTION.
 - C. CONSTRUCT REMAINING PERMANENT EROSION AND DRAINAGE CONTROL FEATURES AS EARLY AS POSSIBLE.
 - D. USE TEMPORARY AREA SPRINKLERS IN NON-ACTIVE CONSTRUCTION AREAS WHEN GROUND COVER IS REMOVED.
 - E. STATION WATER TRUCK ON-SITE DURING CONSTRUCTION PERIOD TO PROVIDE FOR IMMEDIATE SPRINKLING, AS NEEDED, IN ACTIVE CONSTRUCTION AREAS (WEEKENDS AND HOLIDAYS INCLUDED).
 - F. USE TEMPORARY BERMS AND CUT-OFF DITCHES, WHERE NEEDED, FOR CONTROL OF EROSION. IMPLEMENT AND MAINTAIN THE MEASURES OF THE BMP PLAN.
 - G. GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY AND ON WEEKENDS.
 - H. ALL CUT AND FILL SLOPES SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.
9. ALL RETAINING WALLS REQUIRE A SEPARATE BUILDING PERMIT. THE STATE MAY EXEMPT ITSELF FROM COUNTY PERMITS.
10. 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 LOCATION AND DEPTH 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 DEPTH PRIOR TO EXCAVATION FOR THE NEW LINES. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGED UTILITIES.
11. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 55, WATER POLLUTION CONTROL AND CHAPTER 54, WATER QUALITY STANDARDS, AND TO THE EROSION AND SEDIMENTATION CONTROL STANDARDS AND GUIDELINES OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI.
12. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT BEST MANAGEMENT PRACTICES ARE IN PLACE AND ESTABLISHED.
13. IF CONTAMINATED SOIL IS DISCOVERED DURING THE COURSE OF GRADING WORK THE CONTRACTOR SHALL IMMEDIATELY (ASAP, WITHIN 24 HOURS) NOTIFY THE HARBORS PROJECT ENGINEER AND CONTACT THE DEPARTMENT OF HEALTH, HAZARD EVALUATION AND EMERGENCY RESPONSE OFFICE (HEER) AT (808) 586-4249, MONDAY-FRIDAY, 7:45 A.M. - 4:30 P.M., EXCLUDING HOLIDAYS, AND AT (808) 236-8200 DURING NON-BUSINESS HOURS.
14. THE CONTRACTOR SHALL REMOVE ALL VEGETATION BEFORE PLACING FILLS ON NATURAL GROUND SURFACE.
15. ADEQUATE MEASURES SHALL BE PROVIDED TO PREVENT FLOODING AND EROSION PROBLEMS TO ADJACENT PROPERTIES.
16. ALL OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, COMMUNITY NOISE CONTROL.
17. SHOULD ANY UNANTICIPATED ARCHAEOLOGICAL SITE(S) BE UNCOVERED, ALL WORK SHALL CEASE IN THE IMMEDIATE AREA AND THE DLNR, HISTORIC PRESERVATION DIVISION (808) 327-4343 SHALL BE NOTIFIED. NO WORK SHALL RESUME UNTIL CLEARANCE HAS BEEN OBTAINED FROM THE HISTORIC PRESERVATION DIVISION.

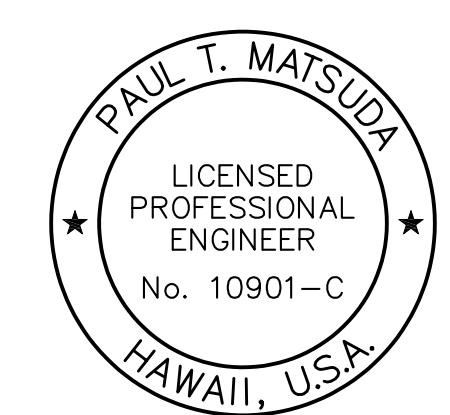
18. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER HANDLING, STORAGE AND/OR DISPOSAL OF ALL WASTE GENERATED BY THIS WORK. THE CONTRACTOR SHALL NOT DISPOSE OF ANY WASTE INTO DOT WASTE BINS.
19. NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN THE IMMEDIATE SUSPENSION OF ALL WORK AND REMEDIAL WORK SHOULD COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE PERMITEE. FURTHERMORE VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.

21. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE GPS COORDINATES OF ALL BURIED AND CONCEALED WORK TO BE DEDICATED TO THE COUNTY, AND PROVIDE THE GPS DATA TO THE COUNTY PRIOR TO THE PROJECT'S FINAL ACCEPTANCE. AN ACCURATE GPS POINT EVERY (50) FEET ALONG THE MAIN LINE, AT UTILITY CROSSINGS, AND AT ANY INSTALLED APPURTENANCE (INCLUDING BUT NOT LIMITED TO MANHOLES, BENDS, CONCRETE JACKET, CLEANOUT, PIPE DEVIATIONS, CHANGE IN PIPE SIZE, CRITICAL JOINTS, ARV, ETC.). GPS DATA SHALL BE IN HAWAII STATE PLANE, ZONE 2, NAD83 (PA11), US FEET PROJECTION AND SHALL BE ACCURATE TO WITHIN ONE (1) FOOT. ACQUIRED GPS SURVEY DATA SHALL BE QUALITY CHECKED BY THE CONTRACTOR PRIOR TO SUBMISSION IN SHAPEFILE (.SHP) FORMAT, FOR COMPATIBILITY WITH MAINSTREAM GIS SOFTWARE SUCH AS ESRI ARCMAP/ARCGIS PRO.

WASTEWATER CONSTRUCTION NOTES (COUNTY OF MAUI)

FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY ONLY

1. ALL WASTEWATER LINES AND APPURTENANCES SHALL CONFORM TO THE STANDARD DETILS FOR PUBLIC WORKS CONSTRUCTION DATED SEPTEMBER 1984 OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI.
2. ALL SEWERLINE AND APPURTENANCES SHALL FOLLOW THE DESIGN STANDARDS OF THE WASTEWATER RECLAMATION DIVISION, CITY AND COUNTY OF HONOLULU, VOLUMES 1 AND 2 DATED JULY 1993 AND JULY 1984 RESPECTIVELY, UNLESS OTHERWISE NOTED.
3. ALL WASTEWATER LINES AND APPURTENANCES INSTALLATIONS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION DATED SEPTEMBER 1986. IF ANY CONFLICTS ARISE BETWEEN THE STANDARD DETAILS, DESIGN STANDARDS AND THE STANDARD SPECIFICATIONS, THE STRICTEST STANDARD SHALL APPLY, UNLESS APPROVED OTHERWISE.
4. BEFORE CONSTRUCTION COMMENCES, THE CONTRACTOR SHALL SCHEDULE AND DOCUMENT A PRE-CONSTRUCTION MEETING WITH ALL AGENCIES HAVING UTILITIES AFFECTED BY THE WORK.
5. CONTRACTOR MUST HAVE A SITE SPECIFIC SPILL PREVENTION PLAN (SSPPP) APPROVED BY WWRD PRIOR TO SEWER LINE CONSTRUCTION AND/OR SEWER LATERAL CONNECTION TO EXISTING FACILITIES, OR ANY WORK WITHIN FIVE (5) FEET OF WASTEWATER SYSTEM IMPROVEMENTS.
6. THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, WASTEWATER RECLAMATION DIVISION, HAS THE RIGHT TO STOP CONSTRUCTION, SHOULD ANY WORK BE FOUND CONTRARY TO THE APPROVED PLANS AND SPECIFICATIONS, OR DETRIMENTAL TO THE PUBLIC INTEREST.
7. ALL EXISTING WASTEWATER LINES, WHETHER OR NOT SHOWN ON THE PLANS, IF DAMAGED DURING CONSTRUCTION, SHALL BE REPAIRED BY THE CONTRACTOR AND THE CONTRACTOR SHALL PAY ALL EXPENSES.
8. THE CONTRACTOR SHALL NOTIFY THE WASTEWATER RECLAMATION DIVISION FIVE (5) WORKING DAYS PRIOR TO CONNECTION TO ANY EXISTING WASTEWATER LINES WITHIN THE COUNTY OF MAUI.
9. SHOULD THE CONTRACTOR EXCAVATE BEYOND THE TRENCH PAY-WIDTH, AS SPECIFIED IN THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, DATED SEPTEMBER 1984, AND SUCH ACTION RESULTS IN A GREATER LOAD TO THE PIPE, THE CONTRACTOR SHALL PROVIDE, AT THE CONTRACTOR'S EXPENSE, A HIGHER CLASS OF BEDDING MATERIAL THAT WILL WITHSTAND THE ADDED LOAD.
10. WASTEWATER LATERALS SHALL BE SIX (6) INCHES IN DIAMETER AT A 2% SLOPE, UNLESS APPROVED OTHERWISE.
11. AN ADVANCE RISER CONNECTION SHALL BE INSTALLED AT EACH NEW WASTEWATER LATERAL.
12. WHERE THE CLEARANCE BETWEEN A WASTEWATER LINE AND A NEW OR EXISTING UTILITY LINE IS LESS THAN EIGHTEEN (18) INCHES, THE WASTEWATER LINE SHALL BE PROTECTED WITH A REINFORCED CONCRETE JACKET IN ACCORDANCE WITH THE STANDARD DETAILS OF PUBLIC WORKS CONSTRUCTION, DATED SEPTEMBER 1984.
13. WHEN THE WASTEWATER MAINS ARE OF A DIFFERENT MATERIAL THAN THE LATERALS, THE CONTRACTOR SHALL INSTALL APPROVED ADAPTERS.
14. ALL BACKFILL FOR WASTEWATER TRENCHES SHALL BE COMPACTED IN ONE (1) FOOT LIFTS TO A MINIMUM OF 95% OF ITS MAXIMUM DENSITY.
15. WHERE CONSTRUCTION IS TO BE DONE IN PHASES OR INCREMENTS, EACH PHASE OR INCREMENT SHALL BE APPROVED BY WASTEWATER RECLAMATION DIVISION BEFORE THE NEXT PHASE OR INCREMENT IS STARTED.
16. ALL WASTEWATER MAINS SHALL PASS A MANDREL TEST AS A CONDITION OF ACCEPTANCE 30 DAYS AFTER COMPLETION AND BACKFILL. THE MANDREL DIAMETER SHALL BE 95% OR MORE OF THE INSIDE DIAMETER OF THE PIPE BEING TESTED.
17. "AS-BUILT" DRAWINGS SHALL BE SUBMITTED AS A CONDITION FOR THE FINAL ACCEPTANCE OF THE PROJECT.
18. PRIOR TO INSPECTION BY CLOSED CIRCUIT TELEVISION (CCTV), ALL WASTEWATER LINES INSTALLED, INCLUDING LATERALS, SHALL BE FLUSHED WITH WATER AND ANY ACCUMULATED CONSTRUCTION DEBRIS AND OTHER FOREIGN MATERIALS SHALL BE REMOVED.
19. ALL MAIN WASTEWATER LINES WHICH WILL BE DEDICATED TO THE COUNTY OF MAUI SHALL BE INSPECTED BY CCTV IN STRICT ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS CCTV POLICY, EFFECTIVE DATE JULY 15, 2001. FINAL ACCEPTANCE OF THE SYSTEM SHALL BE CONTINGENT UPON THE PASSING OF ALL REQUIREMENTS OF THIS POLICY. CCTV RESULTS SHOULD BE SUBMITTED ON DVD PER MEMO DATED OCTOBER 22, 2015. SHOULD ANY OF THE SEWER LATERALS FAIL TO PASS A VISUAL INSPECTION, THEN A CCTV OF ALL LATERALS WILL ALSO BE REQUIRED.
20. ANY CONNECTION MADE UNDER THE WATER TABLE WILL REQUIRE CCTV AT HIGH TIDE TO DETERMINE WATER TIGHTNESS IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS CCTV POLICY, EFFECTIVE DATE JULY 15, 2001. FINAL ACCEPTANCE OF THE SYSTEM SHALL BE CONTINGENT UPON THE PASSING OF ALL REQUIREMENTS OF THIS POLICY.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE: NOTES				
DESIGNED BY: STAFF DRAWN BY: STAFF CHECKED BY: PTM DATE: MAR 2026 SCALE: AS SHOWN			SHEET C-3 4 OF 13 SHEETS	
THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THE PROJECT WILL BE UNDER MY OBSERVATION. SUPERVISION OF CONSTRUCTION IS DEFINED IN CHAPTER 11-15, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SUPERVISORS AND LANDSCAPE ARCHITECTS."  GROUP 70 INTERNATIONAL, INC., dba 670 APRIL 30, 2028 LICENSE EXPIRATION DATE			JOB NUMBER P30251	

PUBLIC HEALTH SAFETY AND CONVENIENCE NOTES

1. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND ENVIRONMENTAL QUALITY.
2. 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 COUNTY OR STATE MAY REQUIRE SUPPLEMENTARY MEASURES AS NECESSARY.
3. 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. INCLUDING HRS 103.50 AND ADAAG 4.1.1(4) & 4.3.
4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO TITLE 11, DEPARTMENT OF HEALTH, CHAPTER 46, COMMUNITY NOISE CONTROL, IN WHICH MAXIMUM ALLOWABLE NOISE 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 INDOOR AND RADIOLOGICAL HEALTH BRANCH, 591 ALA MOANA BLVD., RM. 133, HONOLULU, HAWAII OR BY TELEPHONE (808) 586-4700.

SURVEY NOTES

1. THE UNDERGROUND PUBLIC UTILITIES SHOWN HEREON ARE FOR INFORMATION ONLY, HAVING BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES BUT FROM OTHERS NOT CONNECTED WITH THIS PROJECT. THEREFORE, NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.
2. ALL EXISTING FUEL LINES ARE NOT SHOWN ON THE TOPOGRAPHIC SURVEY. MANY EXISTING FACILITIES HAVE BEEN REMOVED OR ABANDONED. ANY INFORMATION FROM THIS SURVEY REGARDING FUEL FACILITIES SHALL BE VERIFIED WITH THE HARBORS DIVISION.
3. THE HAWAII ONE CALL CENTER MUST BE CONTACTED PRIOR TO EXCAVATION. THEY MAY BE REACHED AT 1-866-423-7282 OR [HTTP://CALLBEFOREYOU DIG.ORG](http://CALLBEFOREYOU DIG.ORG). REGARDLESS OF WHAT IS SHOWN OR NOT SHOWN ON THE AS-BUILT PLANS AND/OR UTILITY COMPANY RECORDS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING HIS OWN INVESTIGATION INCLUDING, BUT NOT LIMITED TO, TONING FOR UNDERGROUND UTILITIES AS NECESSARY, PROBING AND POT-HOLING FOR ALL UTILITY LOCATIONS PRIOR TO EXCAVATION TO ENSURE UNDERGROUND UTILITY LINES ARE NOT DAMAGED. THE CONTRACTOR SHALL ALSO COORDINATE WITH HARBORS MAUI DISTRICT OFFICE TO REVIEW THE AVAILABLE GIS UTILITY PLANS.

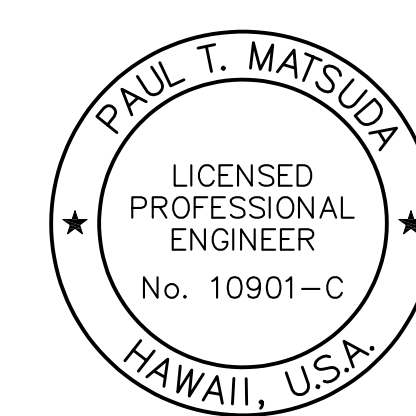
SEWER NOTES (STATE DOT SYSTEM)

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INVESTIGATION AND VERIFICATION OF ALL EXISTING UTILITIES SUPPLEMENTED BY ACTUAL DIGGING IN THE FIELD IF NECESSARY, TO DETERMINE THE ACTUAL LOCATION OF SUCH UTILITIES WITH THEIR BRANCH AND SERVICE LINES, WHETHER INDICATED ON THE PLANS OR NOT.
2. THE CONTRACTOR SHALL BE REQUIRED TO TAKE OUT AND PAY FOR ALL NECESSARY PERMITS AND LICENSES WHICH ARE REQUIRED BY LOCAL ORDINANCES FOR THE PROSECUTION OF THIS WORK.
3. WORKMANSHIP SHALL BE FIRST CLASS. ALL WORK SHALL BE PERFORMED BY THE RESPECTIVE TRADE PERSON IN ACCORDANCE WITH APPLICABLE COUNTY ORDINANCE AND STATE REGULATION.
4. ALL CONSTRUCTION DETAILS AND SPECIFICATIONS NOT SHOWN ON THE PLANS SHALL CONFORM TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984 AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, AS AMENDED.
5. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, ADAPTERS, PLUGS, CAPS, CONNECTIONS AND NECESSARY APPURTENANCES.
6. BYPASSING OR SPILLING OF SEWAGE TO THE GROUND, DRAINAGE SYSTEM OR STATE WATERS IS PROHIBITED. PENALTIES, INCLUDING LEGAL FEES AND OTHER COSTS AS A RESULT OF THE BYPASS OR SPILL SHALL BE PAID BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL REPAIR, AT THEIR OWN EXPENSE, ALL DAMAGES SUSTAINED DURING THE COURSE OF HIS WORK AND LEAVE COMPLETED WORK IN ITS ORIGINAL OR BETTER CONDITION. THE CONTRACTOR SHALL IMMEDIATELY INFORM DOT HARBORS CONSTRUCTION ENGINEER OF ANY INCURRED DAMAGES.
8. ALL DEBRIS RESULTING FROM THE SEWER CONSTRUCTION WORK SHALL NOT BE ALLOWED TO ENTER THE EXISTING SEWER SYSTEM. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BARRIERS AND COLLECTION DEVICES TO PREVENT DEBRIS FROM ENTERING THE SEWER. THE CONTRACTOR SHALL FLUSH ALL NEWLY CONSTRUCTED SEWER WATER PIPE BEFORE CONNECTION TO THE EXISTING SEWER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL DEBRIS THAT ENTER THE EXISTING SEWER SYSTEM AS A RESULT OF THE CONSTRUCTION WORK.
9. CRUSHED ROCK CRADLE IS PERMITTED WHERE SOIL IS STABLE, THE MAKER OF THE PLANS AND THE CONSTRUCTION ENGINEER WILL DETERMINE THE PIPE SUPPORT REQUIRED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SEWER SERVICE TO ALL AFFECTED AREAS DURING CONSTRUCTION.
11. THE UNDERGROUND PIPES, CABLES AND DUCTINES KNOWN TO EXIST BY THE ENGINEER FROM HIS RESEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTH OF THE FACILITIES INCLUDING THE AFFECTED SEWER LINES, IN THE PRESENCE OF THE WASTEWATER INSPECTOR AND EXERCISE PROPER CARE IN EXCAVATING THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGED UTILITIES.
12. 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.

SIGNING AND STRIPING NOTES

1. THE EXISTING PAVEMENT MARKINGS NOT INCORPORATED IN THE FINAL TRAFFIC PATTERN SHALL BE REMOVED AS DIRECTED BY THE HARBORS CONSTRUCTION ENGINEER. COSTS SHALL BE INCIDENTAL TO THE VARIOUS PAVEMENT MARKING ITEMS.
2. EXISTING SIGNS NOT SHOWN ON THESE PLANS SHALL REMAIN AS POSTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. REMOVAL AND DISPOSAL OF EXISTING SIGNS AND/OR POSTS AS DESIGNATED ON THESE PLANS SHALL BE INCIDENTAL TO THE VARIOUS SIGNING ITEMS.
3. ALL PREFORMED PAVEMENT MARKING TAPES OVER EXISTING PAVEMENT SHALL BE APPLIED WITH AN APPROVED PRIMER AS RECOMMENDED BY THE TAPER MANUFACTURER AND AS APPROVED BY THE HARBORS CONSTRUCTION ENGINEER. THE PRIMER SHALL BE ALLOWED TO DRY TO THE TACKY STAGE PRIOR TO THE TAPE APPLICATION.

REVISION	DATE	DESCRIPTION	BY	APPROVED



THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION IS DEFINED IN CHAPTER 11-15, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

GROUP 70 INTERNATIONAL, INC., dba 670
APRIL 30, 2028
LICENSE EXPIRATION DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS

JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION
KAHULUI HARBOR, MAUI, HAWAII

SHEET TITLE: NOTES

DESIGNED BY: STAFF	JOB NUMBER: P30251	SHEET: C-4 5 of 13 SHTS.
DRAWN BY: STAFF		
CHECKED BY: PTM		
DATE: MAR 2026		
SCALE: AS SHOWN		

WATER NOTES

1. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER SUPPLY (DWS), IN WRITING, ONE (1) WEEK PRIOR TO COMMENCEMENT OF WORK.
2. ALL MATERIALS USED AND METHOD OF CONSTRUCTION OF WATER SYSTEM FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF DWS STANDARDS. CONTRACTOR SHALL OBTAIN THE LATEST REVISIONS OF THE DWS STANDARD DETAILS BEFORE COMMENCING CONSTRUCTION.
3. ALL WATER SYSTEM WORK SHALL BE PERFORMED BY CONTRACTORS POSSESSING VALID STATE OF HAWAII CONTRACTOR'S LICENSES, REGARDLESS OF THE VALUE OF THE WORK.
4. THE EXACT DEPTH AND LOCATION OF EXISTING WATERLINES, SERVICE LATERALS AND OTHER UTILITIES ARE NOT KNOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE SAME PRIOR TO TRENCHING FOR THE NEW WATERLINE. THE COST OF LOWERING, RELOCATING OR ADJUSTING EXISTING WATERLINES, SERVICE LATERALS AND OTHER UTILITIES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE NEW WATERLINE, UNLESS NOTED OTHERWISE, AND WILL NOT BE PAID FOR SEPARATELY.
5. CONCRETE FOR REACTION BLOCKS AND ANCHOR BLOCKS SHALL BE DWS CLASS 2500.
6. THE MAXIMUM DISTANCE BETWEEN VALVE NUT AND TOP OF VALVE MANHOLE COVER SHALL BE THREE (3) FEET.
7. THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO DWS FOR APPROVAL PRIOR TO CONSTRUCTION.
8. CONNECTION TO DWS SYSTEM:
 - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY FITTINGS AND OTHER MATERIALS AND EQUIPMENT REQUIRED FOR THE HOOK-UP. HE SHALL VERIFY THE EXACT LOCATION, DEPTH, TYPE, AND CONDITION OF THE EXISTING LINE BEFORE ORDERING MATERIALS FOR THE HOOK-UP. HE SHALL, HOWEVER, CHECK WITH DWS BEFORE EXCAVATING FOR VERIFICATION PURPOSES.
 - B. WHENEVER FEASIBLE, MECHANICAL JOINT FITTINGS SHALL BE USED FOR BURIED APPLICATIONS, AND FLANGED JOINT FITTINGS SHALL BE USED FOR EXPOSED APPLICATIONS.
 - C. AUTHORIZED DWS PERSONNEL MAY BE REQUIRED TO MAKE THE FINAL CONNECTION TO THE EXISTING LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY DWS FOR SAID WORK, INCLUDING THE COST OF PRESSURE TESTING AND DISINFECTION.
 - D. IF THE DWS PROVIDES ONLY INSPECTION AND SUPERVISING OPERATORS, AND DOES NOT PROVIDE PERSONNEL FOR THE ACTUAL CONNECTION, THE CONTRACTOR SHALL PROVIDE ALL PIPEFITTERS AND LABORS TO MAKE THE CONNECTION.
 - E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR FOR TRENCH EXCAVATION, BACKFILLING, CLEANING AND CHLORINATION, PAVING, AND OTHER WORK NECESSARY TO COMPLETE THE HOOK-UP, AS DIRECTED BY AND TO THE SATISFACTION OF DWS.
9. MINIMUM COVER OVER WATER MAIN, 6" DIAMETER OR LARGER, SHALL BE 3'-0". MINIMUM COVER FOR 4" DIAMETER SHALL BE 2'-6". MINIMUM COVER FOR DIAMETERS LESS THAN 4" SHALL BE 1'-6".
10. BOLTS FOR EXPOSED FLANGED DUCTILE IRON PIPE JOINTS SHALL BE EITHER SILICON BRONZE BOLTS AND NUTS OR 316 STAINLESS STEEL BOLTING WITH THE HEAVY DUTY STAINLESS STEEL NUTS (ONLY) FURNISHED WITH TRIPAC 2000 BLUE COATING SYSTEM. ANTI-SEIZE SHALL NOT BE USED. T-BOLTS FOR DUCTILE IRON MECHANICAL JOINT (MJ) PIPE AND FITTING CONNECTIONS IN UNDERGROUND SITUATIONS SHALL BE ONE OF THE FOLLOWING SYSTEMS:
 - A. 316 STAINLESS STEEL T-BOLTS WITH THE HEAVY DUTY STAINLESS STEEL NUTS (ONLY) FURNISHED WITH TRIPAC 2000 BLUE COATING SYSTEM. ANTI-SEIZE SHALL NOT BE USED.
 - B. COR-TEN T-BOLTS AND NUTS WITH HIGH GRADE ZINC SACRIFICIAL ANODES, EQUIVALENT TO "DURATRON" SACRIFICIAL "SAC-NUT" MODULES, INSTALLED ON THE NUTS FOR ALL STANDARD COR-TEN T-BOLTS.
 - C. COR-TEN T-BOLTS AND NUTS BOTH FACTORY COATED WITH TRIPAC 2000 BLUE COATING SYSTEM BY "TRIPAC FASTENERS".
11. ALL BURIED METALS SHALL BE WRAPPED WITH POLY-WRAP. FOR ALL BURIED INSTALLATIONS OF DUCTILE IRON PIPE AND FITTINGS, POLY-WRAP IS REQUIRED EXCEPT WITHIN CONCRETE JACKETS.

12. LUBRICATE HYDRANT NOZZLE THREADS WITH NON-TOXIC GREASE.
13. THE CONTRACTOR SHALL PAINT AND NUMBER THE FIRE HYDRANT. NUMBERING TO BE FURNISHED BY DWS.
14. WATER MAINS AND APPURTENANCES SHALL BE SUBJECT TO HYDROSTATIC TESTING IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C600, UNDER THE "HYDROSTATIC TESTING" SECTION, TO A PRESSURE OF AT LEAST 1.5 TIMES THE WORKING PRESSURE. UNLESS OTHERWISE STATED IN THE CONSTRUCTION DOCUMENTS OR LIMITED BY THE PRESSURE RATING OF EQUIPMENT, THE PRESSURE TEST AND LEAKAGE TEST SHALL BE PERFORMED AT 225 POUNDS PER SQUARE INCH PRESSURE.
15. THE OWNER SHALL SUBMIT A COST LIST ALONG WITH AN AFFIDAVIT FOR THE WATER SYSTEM PRIOR TO ACCEPTANCE.
16. THE CONTRACTOR SHALL SUBMIT TWO SETS OF RECORD DRAWINGS VIA A CONSULTANT PRIOR TO ACCEPTANCE OF THE WATER SYSTEM. AN ELECTRONIC IMAGE FILE IN TIFF FORMAT SHALL BE PROVIDED TO THE DWS FOR ALL PROJECTS.
17. WATER SERVICE LATERAL CONNECTIONS:


THE CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, AND LABOR FOR RE-CONNECTION TO CONSUMER'S PIPE TO NEW SERVICE LATERAL WITH COPPER PIPING AT THE CONTRACTOR'S EXPENSE. THE SIZE OF COPPER PIPE AND FITTINGS SHALL BE DETERMINED BY DWS OR AS SPECIFIED ON PLANS. THE USE OF PLASTIC MATERIALS IS PROHIBITED.

 - A. ALL WATER METER INSTALLATIONS/RELOCATIONS SHALL BE COORDINATED WITH DWS PERSONNEL. ONLY DWS PERSONNEL IS AUTHORIZED TO REMOVE AND RELOCATE WATER METER.
 - B. IF CONSUMER'S PIPE IS COPPER OR PVC, USE BRONZE PACK JOINT COUPLING, IF CONSUMER'S PIPE IS ANY OTHER MATERIAL, USE APPROPRIATE DI-ELECTRIC COUPLING.
 - C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER SERVICE TO CONSUMERS AT ALL TIMES. IF WATER SERVICE DISRUPTION IS NECESSARY, THE CONTRACTOR SHALL COORDINATE ALL DISRUPTIONS OF SERVICE WITH CONSUMERS.
18. THE CONTRACTOR SHALL FURNISH AND INSTALL DUCTILE IRON NIPPLES WHETHER OR NOT SPECIFIED ON THE CONSTRUCTION PLANS FOR COMPLETE INSTALLATION OF THE WATERLINE AT THE CONTRACTOR'S EXPENSE.
19. THE CONTRACTOR SHALL FURNISH TEMPORARY CLEANOUTS WHEN NECESSARY TO TEST, FLUSH, AND CHLORINATE THE WATERLINE AT THE CONTRACTOR'S EXPENSE.
20. THE CONTRACTOR SHALL CONCRETE PLUG ALL OPEN ENDS OF ABANDONED WATERLINES AT THE CONTRACTOR'S EXPENSE, WHETHER OR NOT SHOWN ON THE CONSTRUCTION PLANS.
21. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL PORTIONS OF ABANDONED WATERLINES AT THE CONTRACTOR'S EXPENSE.
22. THE CONTRACTOR SHALL ADJUST TO FINISHED PAVEMENT GRADES, ALL EXISTING VALVE BOXES AND MANHOLES, INCLUDING FRAME AND COVERS FOR ALL UTILITIES (I.E., WATER, SEWER, DRAIN, ETC.) AFFECTED BY PAVEMENT RESTORATION AT THE CONTRACTOR'S EXPENSE, WHETHER SHOWN OR NOT SHOWN ON THE CONSTRUCTION PLANS.
23. THE CONTRACTOR SHALL RESTORE ALL ROAD IMPROVEMENTS, DISTURBED OR DAMAGED DURING CONSTRUCTION IN ACCORDANCE WITH THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005, AS AMENDED, DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT. ROAD IMPROVEMENTS INCLUDE, BUT ARE NOT LIMITED TO, PAVEMENT, PAVEMENT MARKERS, STRIPING, SPEED HUMPS.
24. THE CONTRACTOR SHALL MAINTAIN FOUR FEET OF CLEARANCE WHEN TRENCHING OR EXCAVATING NEAR ANY UTILITY POLES. CONSTRUCTION EQUIPMENT SHALL MAINTAIN A TEN FOOT RADIAL CLEARANCE AROUND ANY OVERHEAD CONDUCTOR.
25. THE CONTRACTOR SHALL ADEQUATELY BRACE UTILITY POLES DURING TRENCHING AND BACKFILLING OPERATIONS. AFFECTED UTILITY COMPANIES SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF WORK NEAR UTILITY POLES.

CHLORINATION OF WATER SYSTEM PIPELINES

1. WATER MAINS AND APPURTENANCES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651. ALL PROCEDURES AND MATERIALS (LIQUID CHLORINE OR CALCIUM HYPOCHLORITE) USED FOR THE CHLORINATION OF THE PROJECT SHALL CONFORM TO AWWA REQUIREMENTS.
2. PRIOR TO CHLORINATION, THE PROJECT PIPELINES SHALL BE THOROUGHLY CLEANED. CLEANING OF LINES 8" AND LARGER SHALL BE BY PIGGING USING FOAM PIGS. SMALLER LINES CAN BE FLUSHED IN ACCORDANCE WITH AWWA REQUIREMENTS IF ADEQUATE WATER SUPPLY IS PROVIDED, OTHERWISE BY PIGGING. THE CONTRACTOR SHALL SUBMIT HIS PLAN FOR PIPELINE CLEANING, INCLUDING FITTING REQUIREMENTS FOR PIGGING, FOR APPROVAL PRIOR TO PROCEEDING.
3. THE INTERIOR SURFACES OF THE PROJECT SHALL BE EXPOSED TO THE CHLORINATING SOLUTION FOR A MINIMUM OF 24 HOURS AND THE CHLORINE RESIDUAL SHALL NOT BE LESS THAN 10 PPM AFTER SUCH TIME.
4. SHOULD CALCIUM HYPOCHLORITE BE USED, NO SOLID AND/OR UNDISSOLVED PORTION OF THE COMPOUND SHALL BE INTRODUCED INTO ANY SECTION OF THE PROJECT TO BE CHLORINATED.
5. AT THE END OF THE 24-HOUR DISINFECTION PERIOD, REPRESENTATIVE SAMPLES SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE RESIDUAL OF AT LEAST 10 PPM. MEASUREMENTS FOR CHLORINE RESIDUAL TESTS SHALL BE BY A TRAINED, QUALIFIED TESTER APPROVED BY THE DIRECTOR.
6. SHOULD THE RESULTS INDICATE ADEQUATE CHLORINATION, THE PROJECT SHALL BE THOROUGHLY FLUSHED AND FILLED WITH POTABLE WATER FROM THE EXISTING POTABLE WATER SYSTEM AND AGAIN TESTED FOR CHLORINE RESIDUAL. THE FLUSHING SHALL BE CONSIDERED ADEQUATE IF THE TEST RESULTS INDICATE THAT THE WATER IN THE PROJECT HAS A COMPARABLE CHLORINE RESIDUAL AS THE WATER IN THE EXISTING SYSTEM.
7. FOLLOWING THE ACCEPTABLE FLUSHING OF THE HIGH CONCENTRATION CHLORINE SOLUTION, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES SHALL BE TAKEN AT LEAST 24 HOURS APART FROM REPRESENTATIVE POINTS IN THE PROJECT AND SUBJECTED TO MICROBIOLOGICAL TESTS PERFORMED BY A CERTIFIED LABORATORY APPROVED BY THE DEPARTMENT OF HEALTH. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED AND TESTED FROM EVERY 1,200 FEET OF THE NEW WATER MAIN, PLUS ONE SET FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. POSITIVE RESULTS WILL NOT BE ACCEPTABLE AND THE ENTIRE CHLORINATION PROCESS WILL BE REPEATED.
8. ANALYSIS FOR RESIDUAL CHLORINE SHALL BE MADE IN ACCORDANCE WITH "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER", AMERICAN PUBLIC HEALTH ASSOCIATION, CURRENT EDITION.
9. MICROBIOLOGICAL TESTS SHALL BE MADE IN ACCORDANCE WITH "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER", AMERICAN PUBLIC HEALTH ASSOCIATION, CURRENT EDITION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ALL OF THE FOREGOING.

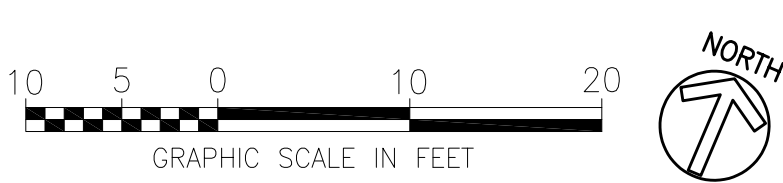
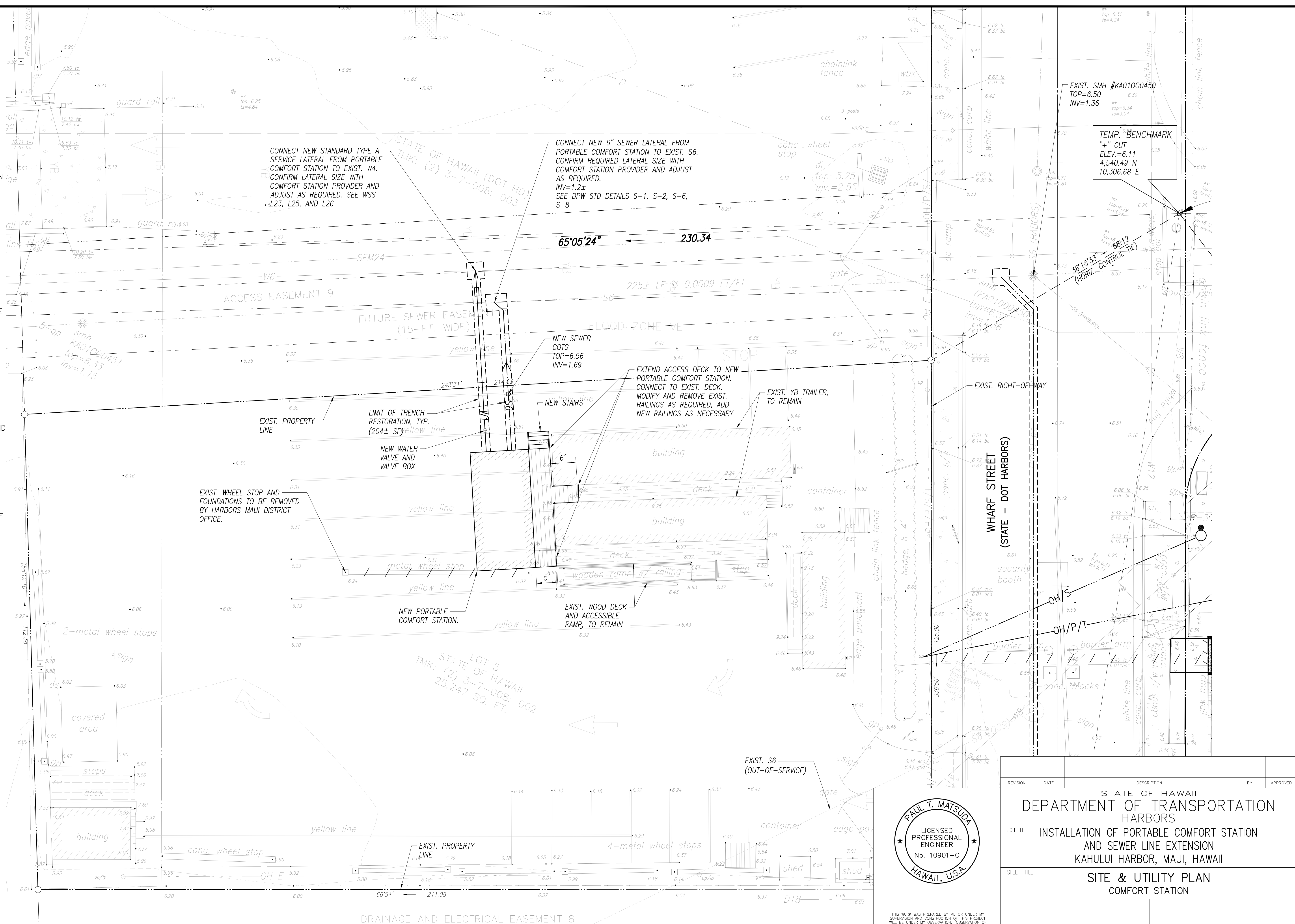
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE: NOTES				
DESIGNED BY: STAFF			SHEET	
DRAWN BY: STAFF			C-5	
CHECKED BY: PTM			JOB NUMBER	
DATE: MAR 2026			P30251	
SCALE: AS SHOWN			6 OF 13 SHEETS	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. PRESERVATION OF CONSTRUCTION IS DEFINED IN CHAPTER 10-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."
GROUP 70 INTERNATIONAL, INC., dba 670
 APRIL 30, 2028
 LICENSE EXPIRATION DATE

- LEGEND**
- RIGHT-OF-WAY / PROPERTY LINE
 - - - EASEMENT
 - - - EXIST. GAS LINE
 - - - EXIST. WATER LINE
 - - - NEW WATER LINE
 - - - EXIST. SEWER LINE
 - - - NEW SEWER LINE
 - - - EXIST. DRAIN LINE
 - DIRECTION OF EXIST. SURFACE RUNOFF
 - [] LIMIT OF UTILITY TRENCH RESTORATION

- NOTES:**
1. DESIGN, FABRICATION AND INSTALLATION OF NEW ACCESS DECK EXTENSION AND STAIRS BY COMFORT STATION SUPPLIER.
 2. RESTORE TO ORIGINAL OR BETTER CONDITION ALL PAVEMENT MARKINGS AND STRIPING DISTURBED OR OBLITERATED DUE TO TRENCHING AND TRENCH RESTORATION ACTIVITIES ONCE PAVEMENT HAS BEEN RESTORED.
 3. CONTRACTOR SHALL EXPOSE AND CONFIRM LOCATION AND INVERT OF ALL UTILITY CONNECTIONS PRIOR TO ALL TRENCHING ACTIVITIES.
 4. NEW WATER AND SEWER FACILITIES (LATERALS, VALVES, CLEAN-OUTS) SIZING SHALL BE CONFIRMED WITH THE COMFORT STATION MANUFACTURER'S SPECIFICATIONS REGARDING WATER AND SEWER DEMAND PRIOR TO ANY ORDERING OF MATERIALS AND TRENCHING ACTIVITIES AND ADJUSTED ACCORDINGLY, IF NECESSARY.
 5. CONTRACTOR SHALL VERIFY WATER PRESSURE IN EXIST. W4 PRIOR TO ANY TRENCHING ACTIVITIES. IF PRESSURE IS DETERMINED TO BE IN EXCESS OF THE OPERATING RANGE OF THE PROPOSED COMFORT STATION FIXTURES, THE CONTRACTOR SHALL ADD A PRESSURE REDUCING VALVE (PRV) PRIOR TO THE CONNECTION TO THE BUILDING TO REDUCE THE PRESSURE WITHIN THE OPERATING RANGE.



SITE & UTILITY PLAN
SCALE: 1" = 10'



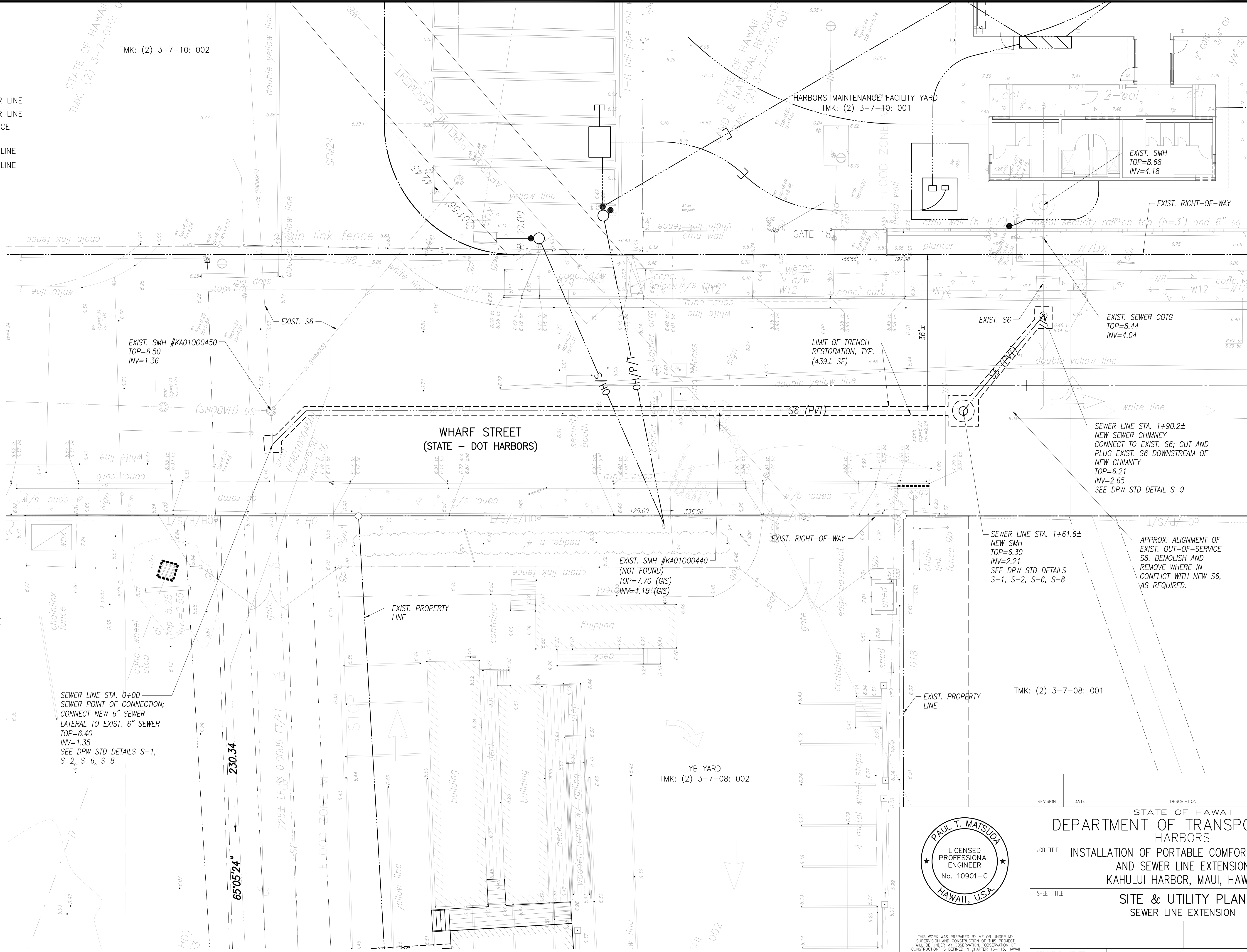
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GROUP 70 INTERNATIONAL, INC., dba G70
APRIL 30, 2028
LICENSE EXPIRATION DATE

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE: SITE & UTILITY PLAN COMFORT STATION				
DESIGNED BY: STAFF			SHEET	
DRAWN BY: STAFF			C-7	
CHECKED BY: PTM				
DATE: MAR 2026				
SCALE: AS SHOWN			JOB NUMBER: P30251	
8 OF 13 SHEETS				

- LEGEND**
- RIGHT-OF-WAY / PROPERTY LINE
 - - - EASEMENT
 - - - G2 EXIST. GAS LINE
 - - - W8 EXIST. WATER LINE
 - - - W6 NEW WATER LINE
 - - - S6 EXIST. COUNTY SEWER LINE
 - - - S6 (PVT) EXIST. PRIVATE SEWER LINE
 - - - S6 (OOS) EXIST. OUT-OF-SERVICE COUNTY SEWER LINE
 - - - S6 NEW COUNTY SEWER LINE
 - - - S6 (PVT) NEW PRIVATE SEWER LINE
 - - - D18 EXIST. DRAIN LINE
 - DIRECTION OF EXIST. SURFACE RUNOFF
 - - - - - LIMIT OF UTILITY TRENCH RESTORATION

- NOTES:**
1. RESTORE TO ORIGINAL OR BETTER CONDITION ALL PAVEMENT MARKINGS AND STRIPING DISTURBED OR OBLITERATED DUE TO TRENCHING AND TRENCH RESTORATION ACTIVITIES ONCE PAVEMENT HAS BEEN RESTORED.
 2. CONTRACTOR SHALL EXPOSE AND CONFIRM LOCATION AND INVERT OF ALL UTILITY CONNECTIONS PRIOR TO ALL TRENCHING ACTIVITIES.
 3. THE EXIST. COUNTY S8 IN THIS SECTION OF WHARF STREET IS OUT-OF-SERVICE PER THE COUNTY GIS RECORDS AND BASED ON DISCUSSIONS WITH WWRD.
 4. DUE TO THE EXIST. S8 BEING OUT-OF-SERVICE, EFFLUENT IN THE S6 FROM THE COMFORT STATION IN TMK 3-7-010: 001 HAS BEEN BACKING-UP INTO THE EXIST. SMH JUST OUTSIDE OF THE COMFORT STATION. THE CONTRACTOR SHALL CLEAR AND DISPOSE OF ALL ACCUMULATED EFFLUENT AND DEBRIS FROM THE EXIST. S6 AND THE SMH TO THE POINT OF CONNECTION OF THE NEW S6 AT SL STA. 1+90.2±.
 5. ALIGNMENT FOR THE NEW S6 IS OVER THE ALIGNMENT FOR THE EXIST. S8. CONTRACTOR SHALL DEMOLISH ALL PORTIONS OF THE S8 THAT ARE IN CONFLICT WITH THE INSTALLATION OF THE NEW S6. PER COUNTY GIS AND PRIOR DISCUSSIONS WITH COUNTY, THE EXIST. S8 IS OUT-OF-SERVICE.

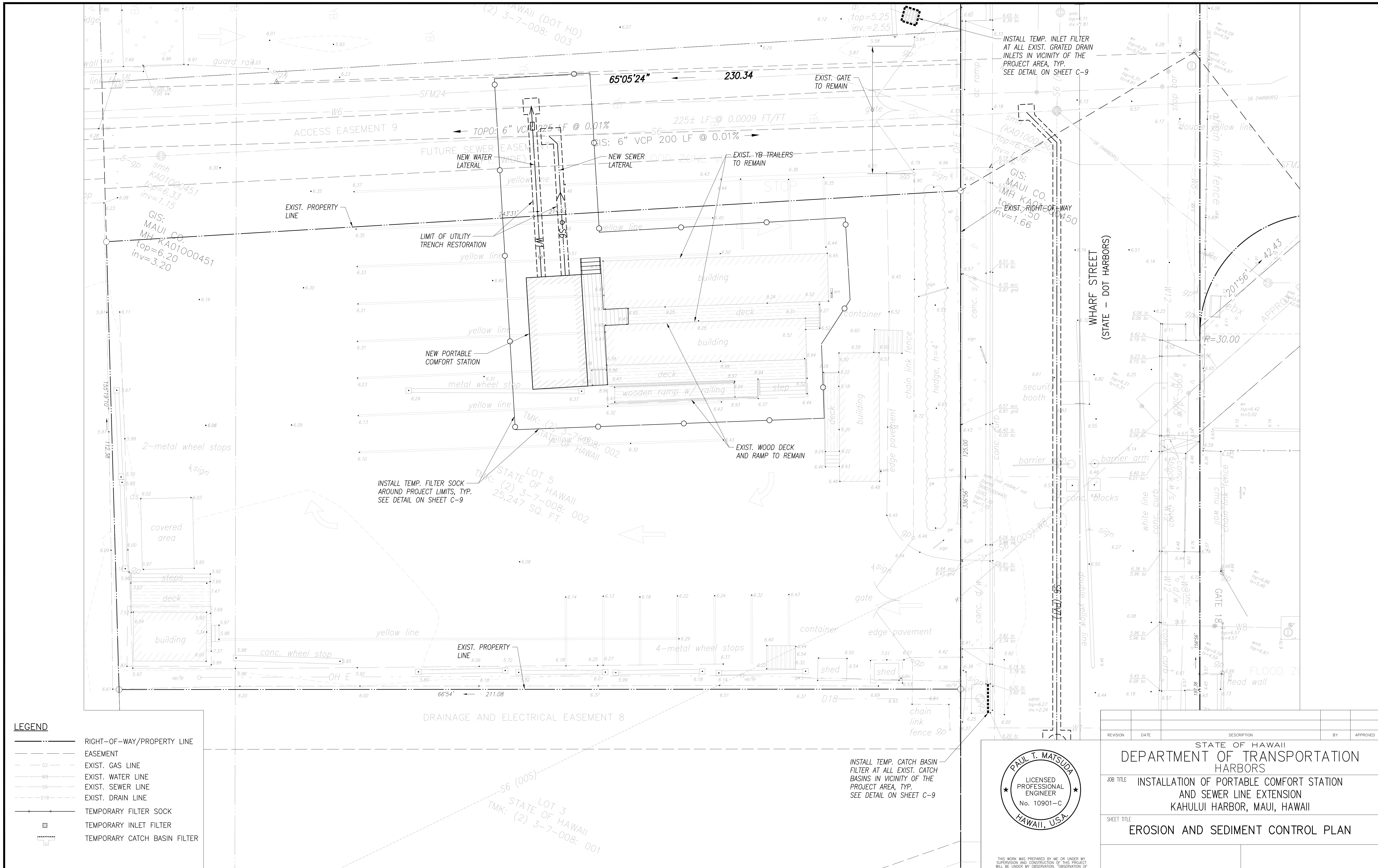


SITE & UTILITY PLAN
SCALE: 1" = 10'



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 GROUP 70 INTERNATIONAL, INC., dba G70
 APRIL 30, 2028
 LICENSE EXPIRATION DATE

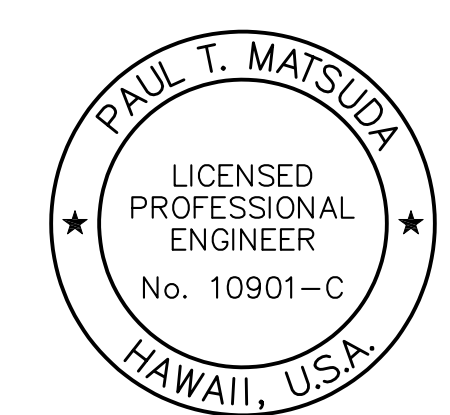
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE: SITE & UTILITY PLAN SEWER LINE EXTENSION				
DESIGNED BY: STAFF			SHEET	
DRAWN BY: STAFF			C-8	
CHECKED BY: PTM				
DATE: MAR 2026				
JOB NUMBER: P30251			SCALE: AS SHOWN	



- LEGEND**
- RIGHT-OF-WAY/PROPERTY LINE
 - - - EASEMENT
 - G2 - EXIST. GAS LINE
 - W6 - EXIST. WATER LINE
 - S6 - EXIST. SEWER LINE
 - D18 - EXIST. DRAIN LINE
 - TEMPORARY FILTER SOCK
 - TEMPORARY INLET FILTER
 - TEMPORARY CATCH BASIN FILTER



EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1" = 10'



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GROUP 70 INTERNATIONAL, INC., dba G70
APRIL 30, 2028
LICENSE EXPIRATION DATE

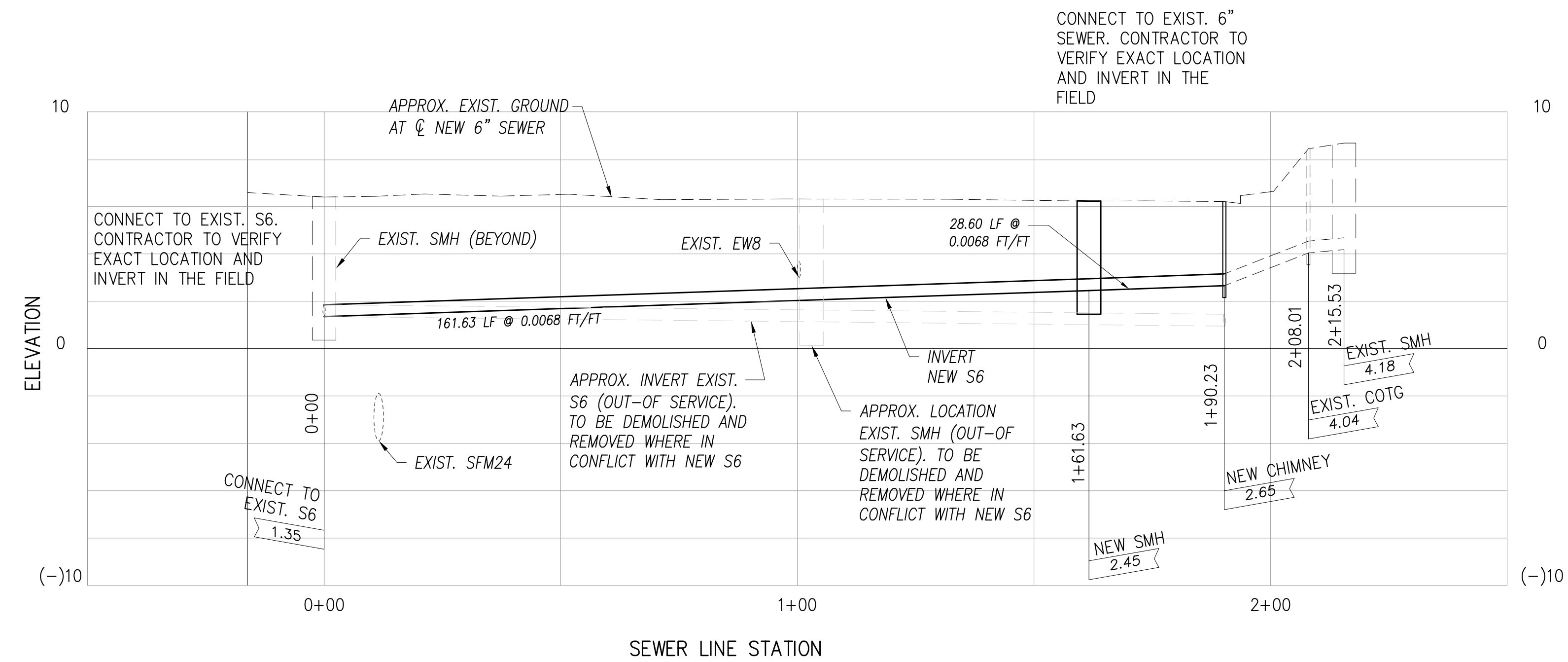
REVISION	DATE	DESCRIPTION	BY	APPROVED

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS

JOB TITLE: **INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII**

SHEET TITLE: **EROSION AND SEDIMENT CONTROL PLAN**

DESIGNED BY: STAFF	JOB NUMBER: P30251	SHEET: C-9
DRAWN BY: STAFF		
CHECKED BY: PTM		
DATE: MAR 2026		
SCALE: AS SHOWN	10 OF 13 SHEETS	

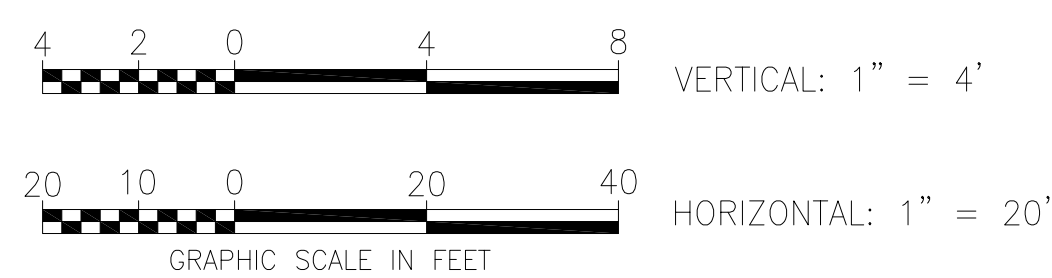


PROFILE - 6" SEWER LINE

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 4'

NOTES:

1. LOCATION AND DEPTH OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL EXPOSE AND VERIFY ALL POINTS OF CONNECTION, UTILITY CROSSING LOCATIONS AND INVERTS PRIOR TO ANY TRENCHING WORK.
2. THE EXIST. W8 SHALL BE FULLY SUPPORTED ACROSS THE NEW SEWER LINE TRENCH DURING THE INSTALLATION OF THE NEW SEWER PIPE.



REVISION	DATE	DESCRIPTION	BY	APPROVED

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS

JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION
KAHULUI HARBOR, MAUI, HAWAII

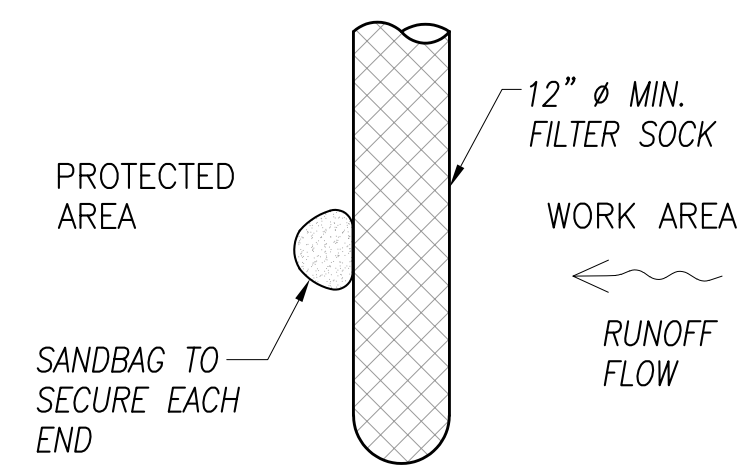
SHEET TITLE: **PROFILES**

DESIGNED BY: STAFF
DRAWN BY: STAFF
CHECKED BY: PTM
DATE: MAR 2026
SCALE: AS SHOWN

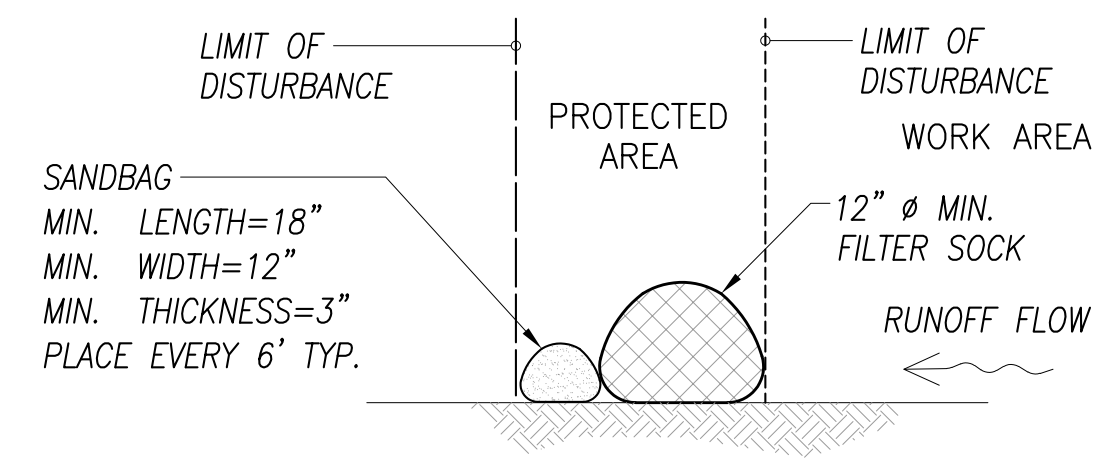
JOB NUMBER: **P30251**

SHEET: **C-10**
11 OF 13 SHTS.

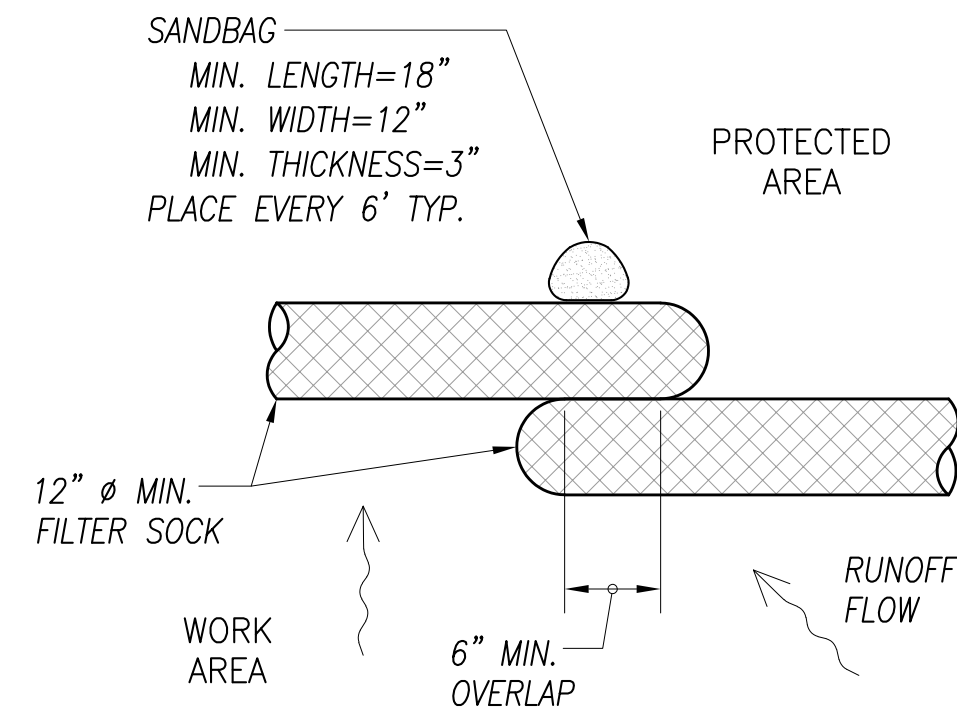
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APRIL 30, 2028
LICENSE EXPIRATION DATE



PLAN



SECTION

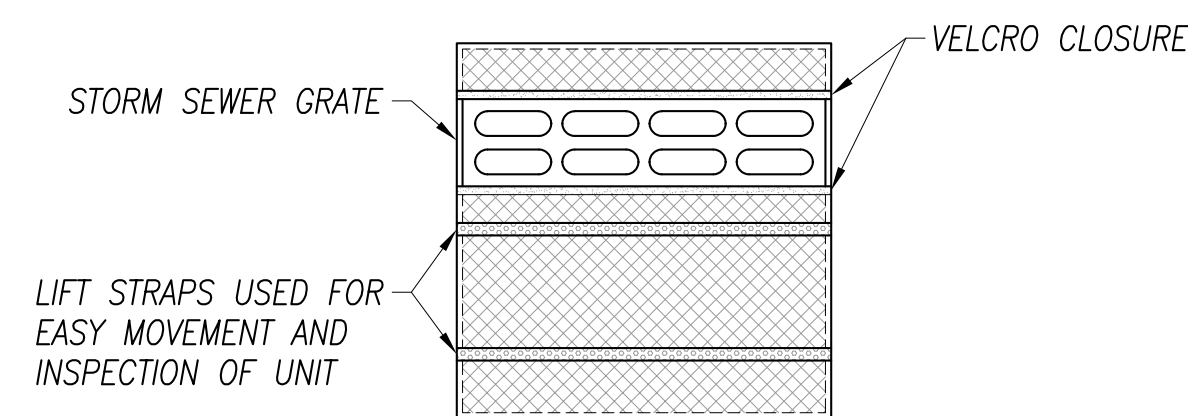


OVERLAP

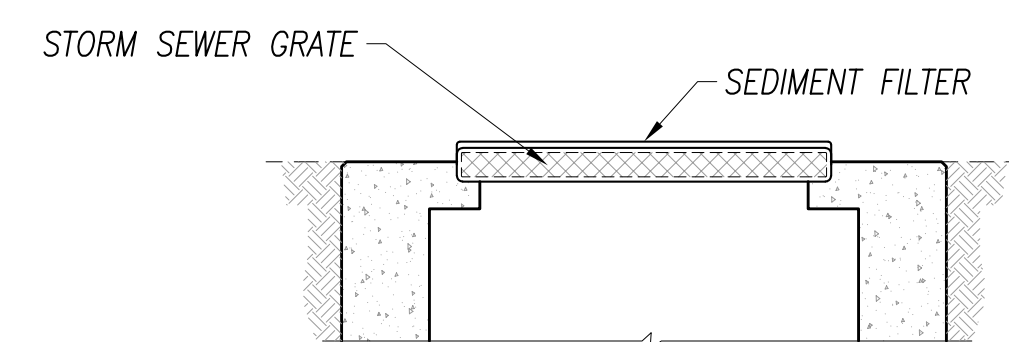
NOTES:

1. PROVIDE AND MAINTAIN FILTER SOCKS AT THE DOWNSLOPE SIDE OF ALL EXCAVATIONS AND ALL STOCKPILES OF EXCAVATED MATERIALS, AT ALL TIMES.
2. WHEN JOINING TWO SECTIONS OF FILTER SOCK, A MINIMUM OF 6-INCHES OF OVERLAP SHOULD BE MADE SO THAT FILTER SOCK SIT SIDE BY SIDE.
3. CONTRACTOR SHALL REMOVE ANY DEBRIS IN PATH OF FILTER SOCK TO ENSURE GOOD GROUND CONTACT.
4. COMPOST SHALL NOT CONTAIN BIO-SOLIDS AND SHOULD BE CONSISTENT WITH EPA GUIDELINES.
5. SHOULD THE FILTER FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE FILTER SOCK STILL BE NECESSARY, THE FILTER SOCK SHALL BE REPLACED PROMPTLY, AT NO ADDITIONAL COST TO DOT HARBORS.
6. CONTRACTOR MAY USE 2"x2"x36 WOODEN STAKES WITH 18" MINIMUM EMBEDMENT AND 6" HEIGHT OVER TOP OF FILTER SOCK @ 10' O.C. IN LIEU OF SAND BAGS TO SECURE SOCKS WHEN INSTALLED ON DIRT OR EARTH.

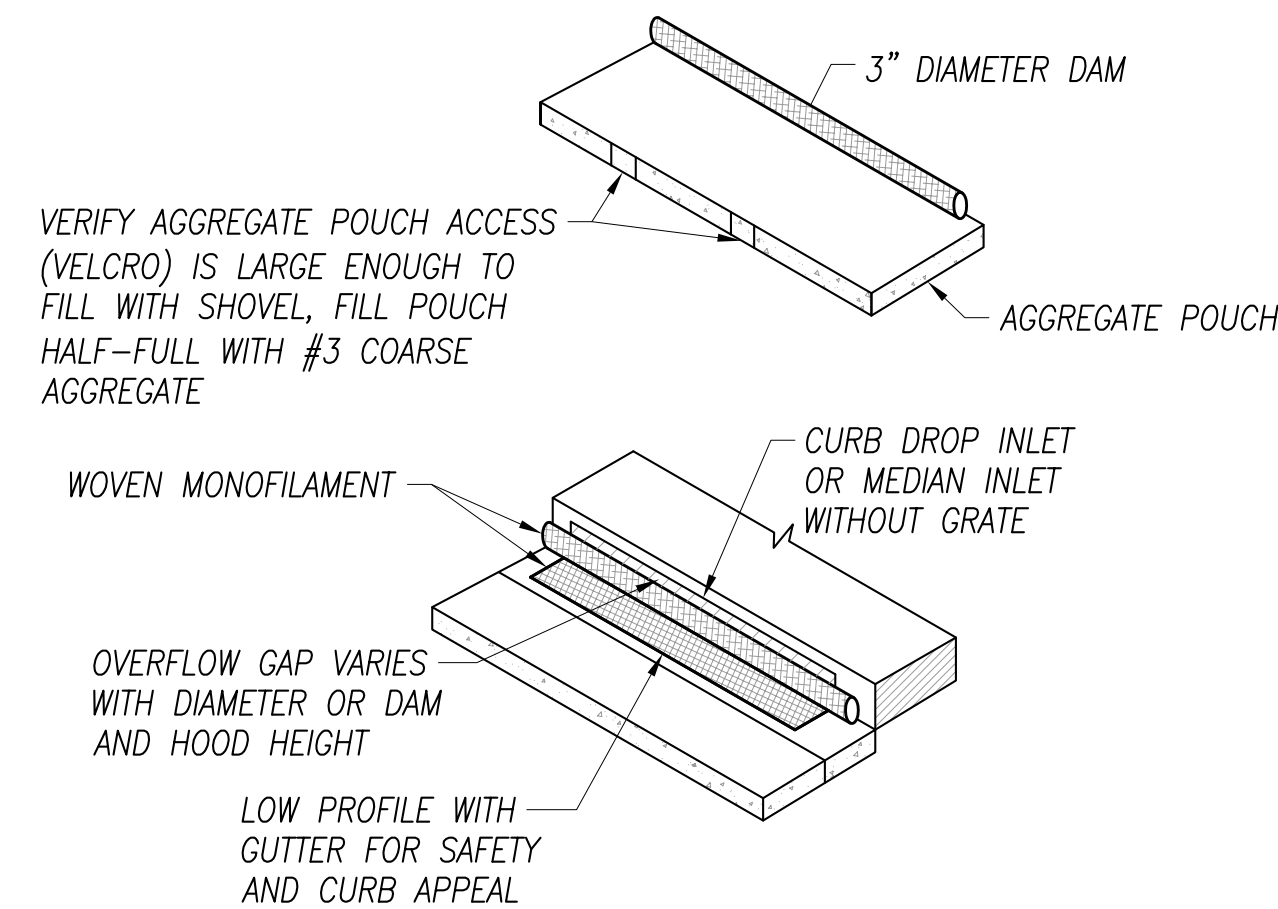
FILTER SOCK
NOT TO SCALE



PLAN



SECTION



SEDIMENT FILTER FOR CATCH BASINS
NOT TO SCALE

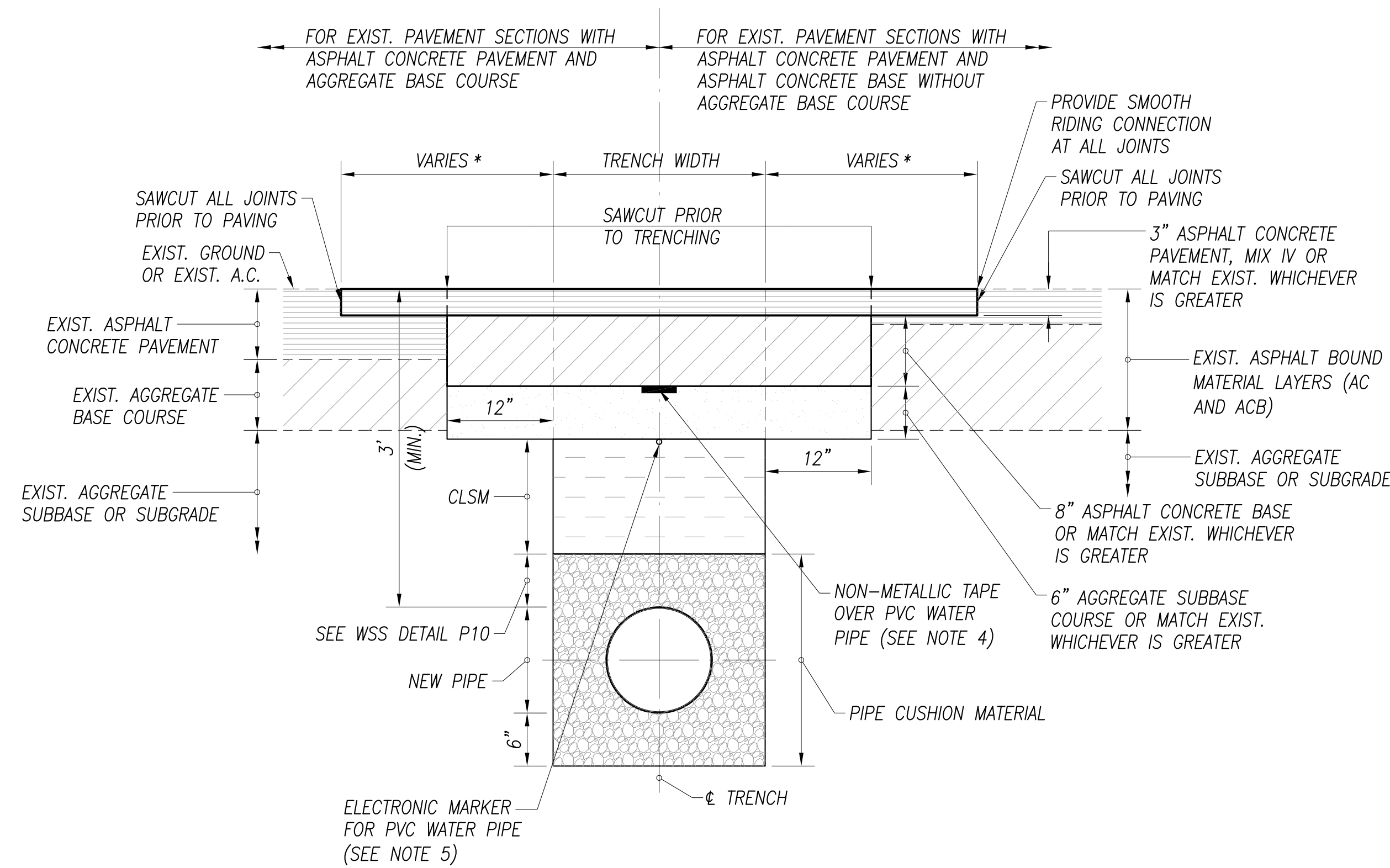
MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) x 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m ² (gal/min.ft) ²	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec ⁻¹	2.1

SEDIMENT FILTER FOR DRAIN INLETS
NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE: INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE: EROSION AND SEDIMENT CONTROL DETAILS				
DESIGNED BY: STAFF DRAWN BY: STAFF CHECKED BY: PTM DATE: MAR 2026			SHEET C-11 12 OF 13 SHTS.	
GROUP 70 INTERNATIONAL, INC., dba 670 APRIL 30, 2028 LICENSE EXPIRATION DATE			JOB NUMBER: P30251 SCALE: AS SHOWN	

CONSTRUCTION REQUIREMENTS

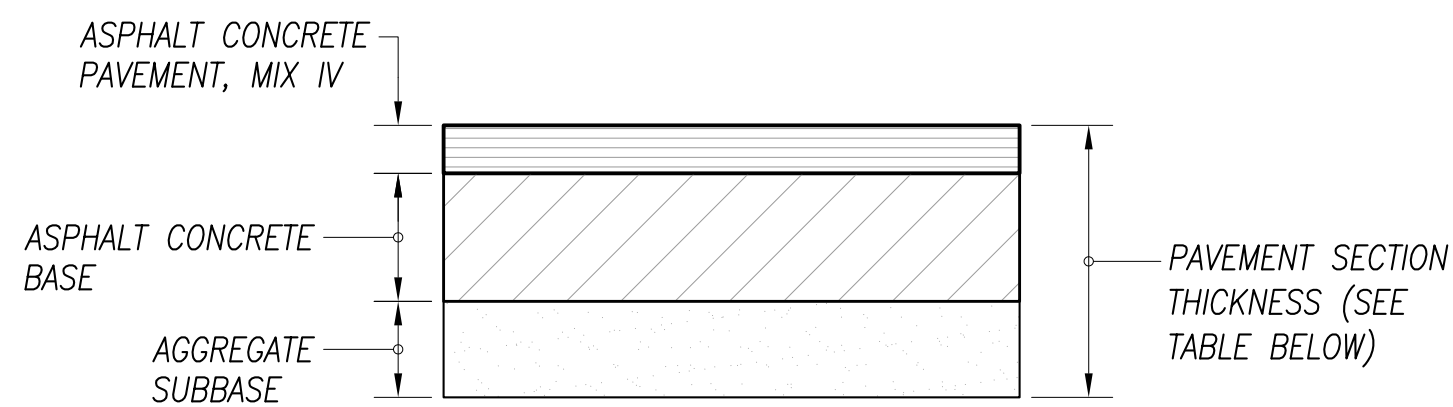
- ALL WORK PERFORMED SHALL BE SUBJECT TO INSPECTION BY THE STATE AND SHALL BE TO THE STATE'S SATISFACTION.
- CONSTRUCT THE TRENCH RESTORATION IN ACCORDANCE WITH THE 2005 HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ITS SPECIAL PROVISIONS, AS AMENDED.
- PAVEMENT SMOOTHNESS
 - THE DISTANCE FROM THE PAVED SURFACE TO THE TESTING EDGE OF A TEN-FOOT LONG STRAIGHT EDGE BETWEEN TWO POINTS OF CONTACT SHALL NOT EXCEED 1/4 INCH.
- PLACE ALL UNBOUND MATERIALS IN THE TRENCH AS FOLLOWS:
 - COMPACTION BY WATER JETTING OR PONDING IS NOT PERMITTED.
 - ALL UNBOUND MATERIALS, EXCEPT THE PERMEABLE BASE AND ASTM C-33 SIZE 67:
 - PLACE MATERIAL IN ACCORDANCE WITH SUBSECTION 206 (E) STRUCTURE AND TRENCH BACKFILL OF THE HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION.
 - TAKE ONE COMPACTION TEST FOR 300 LINEAL FEET OF TRENCH. SUBMIT COMPACTION TEST RESULTS TO THE DISTRICT ENGINEER.
 - ASTM C-33, SIZE 67:
 - MATERIAL PLACE UNDER WATER NEED NOT BE COMPACTED.
 - MATERIAL PLACED ABOVE WATER:
 - PLACE MATERIAL IN UNIFORM HORIZONTAL LAYER NOT EXCEEDING 9 INCHES IN LOOSE THICKNESS.
 - COMPACT EACH LAYER WITH 8 PASSES OF A VIBRATING PLATE COMPACTOR. USE HAND TAMPER IF TRENCH TOO NARROW TO ACCOMMODATE THE VIBRATING PLATE COMPACTOR.



TYPICAL TRENCH RESTORATION DETAIL
NOT TO SCALE

NOTES:

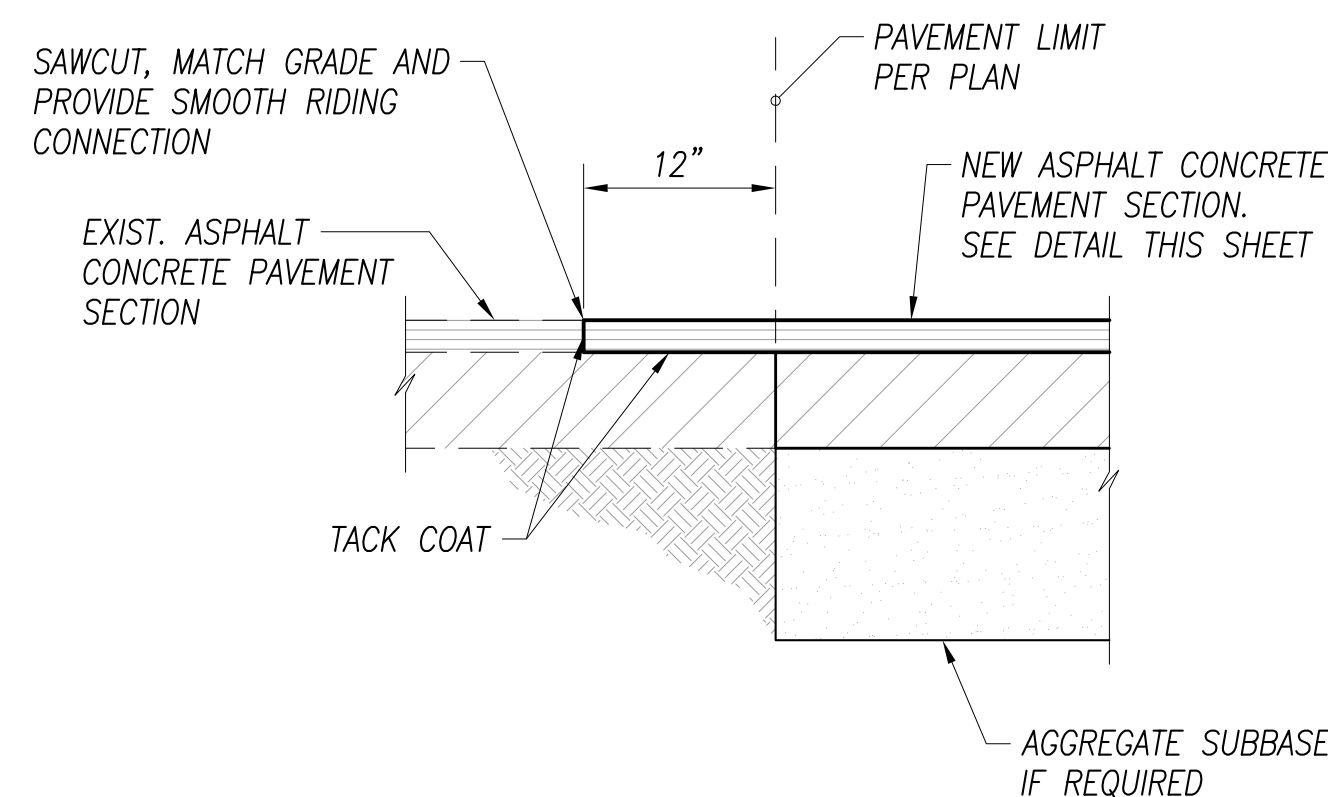
- THIS TRENCH RESTORATION DETAIL IS TO BE USED WHEREVER THE PAVEMENT IS AN ASPHALT SURFACE. FOR TRENCHES LOCATED IN UNPAVED AREAS, THE BACKFILL NEED NOT BE CLSM AND CAN BE BACKFILLED AS SPECIFIED IN THE STANDARD SPECIFICATIONS.
 - TACK COAT FACES OF EXISTING ASPHALT BOUND MATERIALS PRIOR TO FILLING EXCAVATION WITH NEW ASPHALT BOUND MATERIALS.
 - WHEN GROUND WATER IS ENCOUNTERED IN TRENCHES, BACKFILL WITH GRAVEL CONFORMING TO ASTM C-33, SIZE 67, ENCAPSULATED WITH A PERMEABLE SEPARATOR.
 - INSTALL 4 MIL THICK, NON-METALLIC, BLUE COLORED, 6" WIDE WARNING TAPE OVER CENTERLINE OF THE PIPE AND BELOW THE BASE COURSE ALONG THE THE ENTIRE LENGTH OF TRENCH. TAPE SHOULD BE MARKED WITH "CAUTION WATER LINE BURIED BELOW". PAYMENT FOR THE FURNISHING AND INSTALLATION OF THE WARNING TAPE SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE PIPE.
 - INSTALL NO. 8 GA COPPER TONING WIRE OVER CENTERLINE OF PVC PIPES AT 2'-6" MAXIMUM FROM FROM FINISH GRADE.
 - FOR WATER PIPE, SEE WATER SYSTEM STD. DETAIL P10.
- * IF TRENCH IS ALIGNED TRANSVERSE TO DIRECTION OF TRAVEL, 6 FEET ON EACH SIDE OF TRENCH.
- IF TRENCH IS ALIGNED ALONG DIRECTION OF TRAVEL, TO EDGE OF LANE IN WHICH EDGE OF TRENCH IS LOCATED, EXIST. LANE STRIPING SHALL BE REMOVED PRIOR TO SAW-CUTTING. NEW LANE STRIPING SHALL COVER PAVEMENT JOINT.
- SMOOTHNESS OF PAVED SURFACES: THE DISTANCE FROM THE PAVED SURFACE TO THE TESTING EDGE OF A TEN-FOOT STRAIGHT EDGE BETWEEN TWO POINTS OF CONTACT SHALL NOT EXCEED 1/4 INCH.



FOR WORK WITHIN STATE HARBORS		FOR WORK WITHIN STATE HIGHWAYS	
MATERIAL	THICKNESS*	MATERIAL	THICKNESS*
A.C. PAVEMENT, MIX IV	3"	A.C. PAVEMENT, MIX IV	4"
ASPHALT CONCRETE BASE	8"	ASPHALT CONCRETE BASE	8"
AGGREGATE SUBBASE	6"	AGGREGATE SUBBASE	6"

*OR MATCH EXIST. WHICHEVER IS GREATER

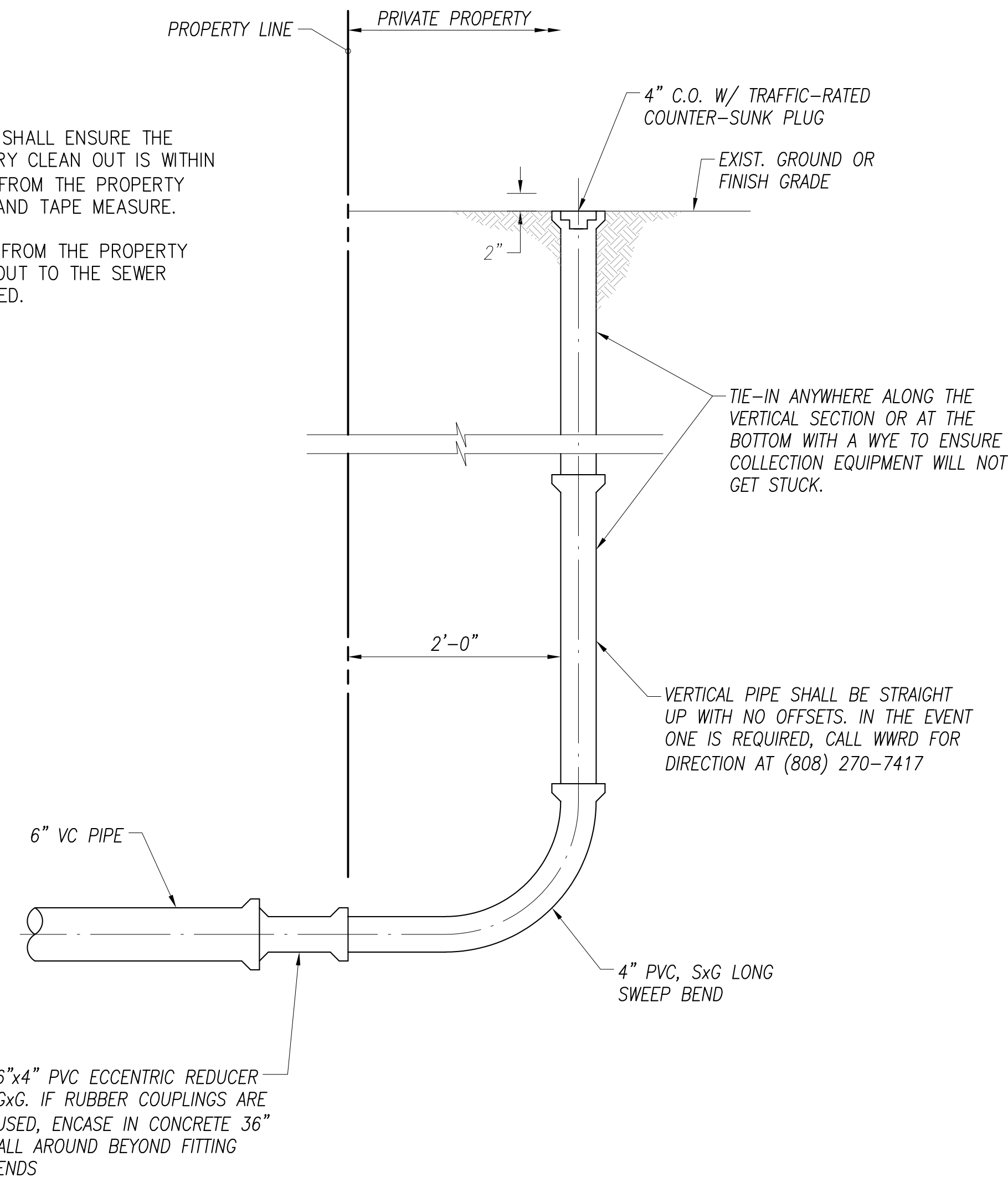
TYPICAL ASPHALT CONCRETE PAVEMENT SECTION
NOT TO SCALE



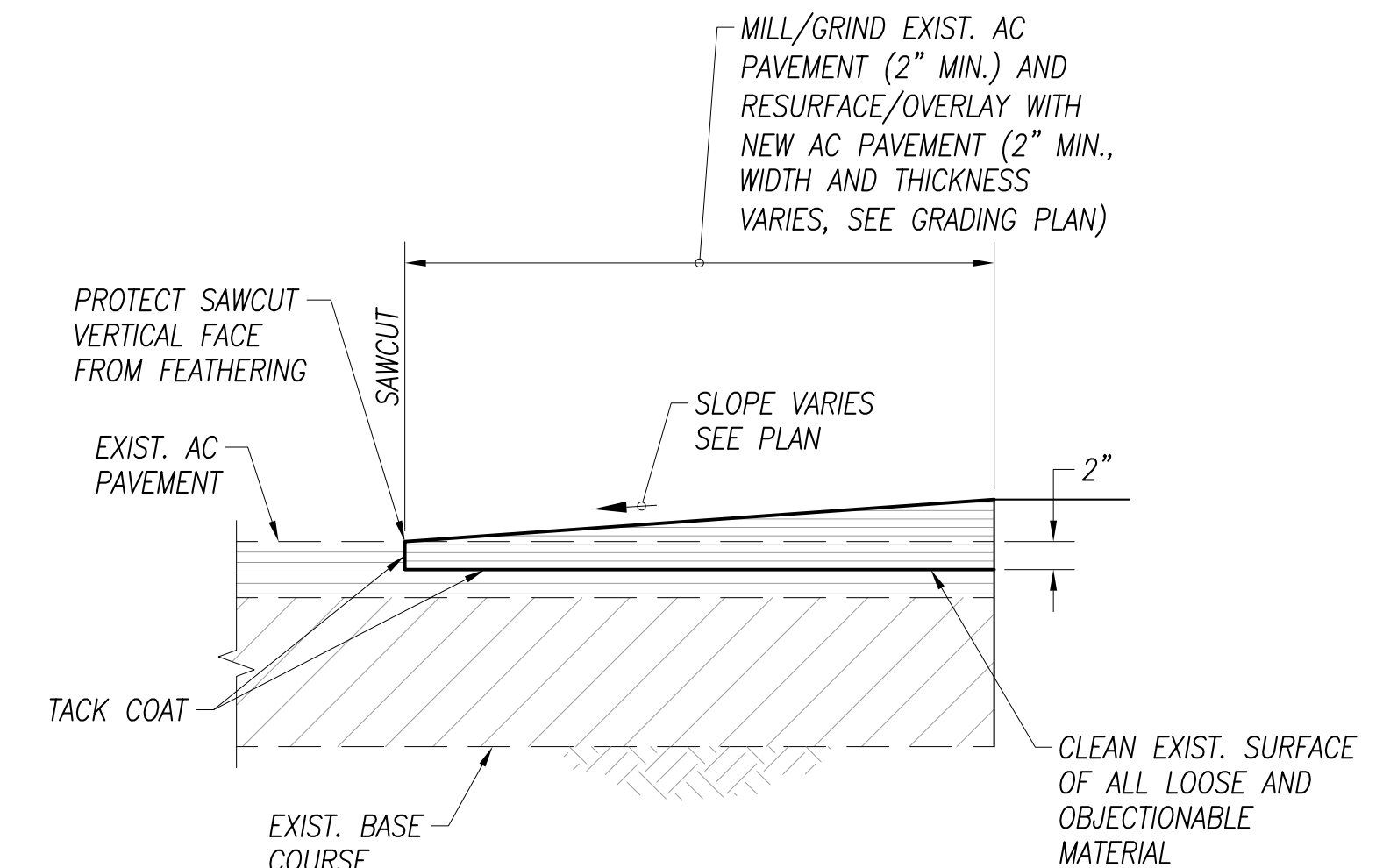
NEW ASPHALT CONCRETE PAVEMENT CONNECTION TO EXIST. PAVEMENT
NOT TO SCALE

NOTES:

- 4 LEAF INSPECTOR SHALL ENSURE THE PROPERTY BOUNDARY CLEAN OUT IS WITHIN THE PROPERTY, 2' FROM THE PROPERTY LINE, WITH PHOTO AND TAPE MEASURE.
- INTERCONNECTIONS FROM THE PROPERTY BOUNDARY CLEAN OUT TO THE SEWER MAIN ARE PROHIBITED.



ADVANCE RISER CONDITION
NOT TO SCALE



ASPHALT CONCRETE PAVEMENT RESURFACING/OVERLAY
NOT TO SCALE

		STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS	
JOB TITLE INSTALLATION OF PORTABLE COMFORT STATION AND SEWER LINE EXTENSION KAHULUI HARBOR, MAUI, HAWAII		SHEET TITLE MISCELLANEOUS DETAILS	
DESIGNED BY: STAFF DRAWN BY: STAFF CHECKED BY: PTM DATE: MAR 2026		SHEET C-12 13 OF 13 SHETS	
GROUP 70 INTERNATIONAL, INC., dba G70 APRIL 30, 2026 LICENSE EXPIRATION DATE		JOB NUMBER P30251	