STATE OF HAWAI'I

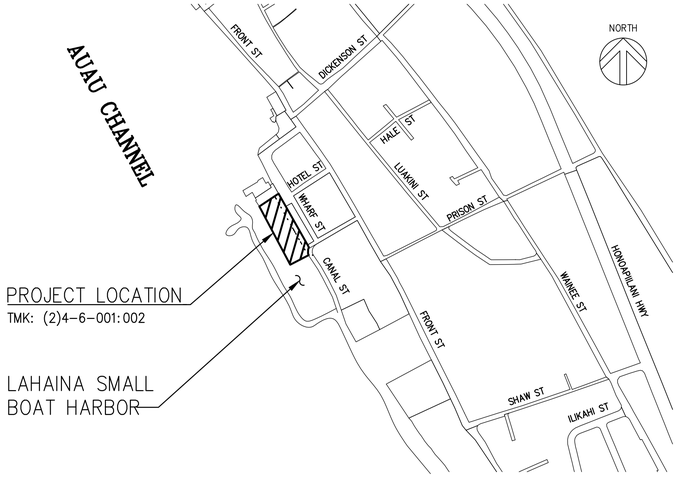
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

JOB NO. B46CM71B

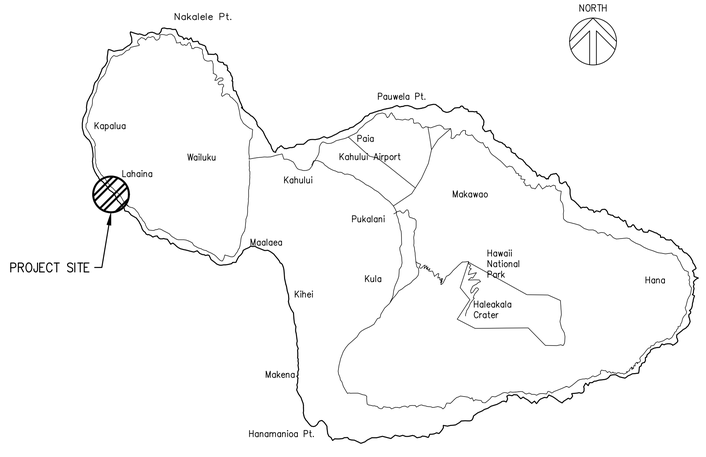
LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

LAHAINA, ISLAND OF MAUI, HAWAI'I

T.M.K.: (2) 4-6-001: 002



LOCATION MAP
NOT TO SCALE



ISLAND OF MAUI
NOT TO SCALE

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APPROVED:

MEGHAN L. STATTS
ADMINISTRATOR
DIVISION OF BOATING AND OCEAN RECREATION
DEPARTMENT OF LAND AND NATURAL RESOURCES

DATE

DRAWING NO.
C-00

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

GENERAL NOTES:

SCOPE OF WORK

1. GENERAL NOTES ARE NOT INTENDED TO REPLACE THE CONTRACT DOCUMENTS. SEE CONTRACT DOCUMENTS FOR REQUIREMENTS IN ADDITION TO THESE GENERAL NOTES. THE CONTRACT DOCUMENTS SHALL CONSIST OF THE COMPLETE PROJECT GENERAL SPECIFICATIONS AND WORKING DRAWINGS INCLUDING BUT NOT LIMITED TO GENERAL PROVISIONS, SPECIAL PROVISIONS, DIVISION 1 REQUIREMENTS, PROPOSAL, DLNR INTERIM GENERAL CONDITIONS, AND ANY RELEVANT ADDENDA ITEMS. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

2. THE WORKING DRAWINGS ARE NOT NECESSARILY COMPLETE IN EVERY DETAIL. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL, SERVICES, LABOR, ETC. FOR A COMPLETE INSTALLATION INCLUDING WORK REASONABLY INFERRED FROM THE CONTRACT DOCUMENTS AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS, WHETHER SHOWN OR NOT ON THE DRAWINGS.

3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE STARTING WORK. DO NOT SCALE PROJECT DRAWINGS. REPORT ANY DISCREPANCIES IN THE DRAWINGS AND/OR SPECIFICATIONS TO THE ENGINEER FOR CLARIFICATIONS OR ADJUSTMENTS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL NOT BEGIN DEMOLITION/CONSTRUCTION IN ANY AREA UNTIL THE DISCREPANCY HAS BEEN RESOLVED.

4. SHOULD THERE BE A CONFLICT BETWEEN THESE GENERAL NOTES, WORKING DRAWINGS, AND/OR SPECIFICATIONS, THE MOST RESTRICTIVE INTERPRETATION SHALL PREVAIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING FROM THE ENGINEER ANY CLARIFICATION OR INTERPRETATION OF THE GENERAL NOTES, WORKING DRAWINGS, AND/OR SPECIFICATIONS IN WRITING AND IN ADVANCE OF THE BEGINNING OF DEMOLITION/CONSTRUCTION. NUMERICAL DIMENSIONS AND ELEVATIONS SHOWN SHALL SUPERSEDE ANY DISCREPANCY IN THE SCALING ON THE DRAWINGS.

5. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS. THIS INCLUDES ALL ENVIRONMENTAL, SAFETY, OSHA AND PERMIT REQUIREMENTS.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DEMOLITION, GRADING AND/OR BUILDING PERMITS.

7. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE STARTING WORK.

8. THE CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ANY CHANGES MADE TO THE DRAWINGS ON A SEPARATE SET OF PLANS PROVIDED BY THE ENGINEER. THESE ANNOTATED DRAWINGS SHALL BE RETURNED TO THE ENGINEER PRIOR TO APPROVAL OF THE FINAL PAYMENT APPLICATION.

9. CONTRACTOR TO PROVIDE QUALITY CONTROL PROGRAM TO ENSURE PROPER CONSTRUCTION OF THE WORK. CONTRACTOR SHALL PROVIDE A COPY OF THE QUALITY CONTROL REPORTS, TEST AND OBSERVATIONS TO THE OWNER AS IDENTIFIED IN THE CONTRACT DOCUMENTS AND UPON REQUEST OF THE ENGINEER, THE CONTRACTOR WILL PROVIDE A COPY OF ALL REPORTS, TESTS AND OBSERVATIONS PERFORMED BY THE CONTRACTOR.

10. CONTRACTOR SHALL PHOTOGRAPHICALLY DOCUMENT THE EXISTING SITE CONDITIONS AT THE WORK SITE, STORAGE AREAS, TRAVEL CORRIDORS AND ANY AREA IMMEDIATELY ADJACENT TO THESE AREAS PRIOR TO THE START OF CONSTRUCTION AND DURING THE COURSE OF THE CONSTRUCTION.

CONSTRUCTION EXECUTION

1. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL, ON A DAILY BASIS, REMOVE FROM THE SITE ANY DEBRIS RESULTING FROM DEMOLITION/CONSTRUCTION. DISPOSAL OF MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL MATERIALS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED. ALL DEBRIS SHALL BE PROPERLY DISPOSED OF IN A PERMITTED LANDFILL. THE CONTRACTOR SHALL KEEP RECORDS OF ALL MATERIALS REMOVED FROM THE SITE, INCLUDING DESCRIPTION, QUANTITIES, AND DISPOSAL LOCATION.

2. ANY DEBRIS THAT FALLS INTO THE HARBOR WATER SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

3. EXISTING CONSTRUCTION, INCLUDING UTILITIES AND OTHER MISCELLANEOUS ITEMS WHICH ARE TO REMAIN, SHALL REMAIN UNDISTURBED AND BE PROTECTED.

4. CONTRACTOR SHALL PROTECT THE PUBLIC, PUBLIC AND PRIVATE PROPERTY (INCLUDING UTILITIES), VEHICLES, MARINE TRAFFIC AND THE ENVIRONMENT DURING THE CONSTRUCTION OF THE WORK ON THE WORK SITES, STAGING AREAS, STORAGE AREAS, ADJACENT AREAS AND ALL TRAVEL CORRIDORS BETWEEN THESE LOCATIONS.

5. THE CONTRACTOR SHALL REPAIR TO THE SATISFACTION OF THE OWNER ANY DAMAGE CAUSED BY THE CONTRACTOR, SUBCONTRACTOR, SUPPLIER OR OTHER ENTITY WORKING AT THE DIRECTION OF THE CONTRACTOR DURING THE COURSE OF THE WORK. THESE REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE.

6. THE CONTRACTOR SHALL PLACE CONSTRUCTION DEBRIS CONTROL DEVICES, TURBIDITY CURTAINS, BOOMS, TARPAULINS, FLOATS, STAGING, AND OTHER DEVICES AS NECESSARY TO PREVENT CONSTRUCTION DEBRIS FROM ENTERING THE WATER AND AIRBORNE MATERIALS FROM LEAVING THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ANY MATERIALS DEPOSITED OUTSIDE THE WORK AREA.

7. BUILDINGS, SURFACE, AND SUBSURFACE IMPROVEMENTS ON AND ADJACENT TO THE PROJECT SITE ARE NOT NECESSARILY SHOWN HEREON.

8. THE OWNER SHALL HAVE THE SOLE AUTHORITY TO DESIGNATE AND/OR LIMIT AREAS OF CONSTRUCTION, STAGING, ACCESS, AND STORAGE.

9. THE LOCATIONS OF KNOWN EXISTING UNDERGROUND UTILITIES SHOWN IN THE DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF DAMAGES THAT OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PROTECT ALL UTILITIES INTENDED TO REMAIN.

10. THE CONTRACTOR SHALL STAKEOUT ALL BASELINES OF CONSTRUCTION, THE LOCATION OF ALL NEW CONSTRUCTION, AND VERIFY ALL SETBACKS, OFFSETS, AND CLEARANCES PRIOR TO THE START OF WORK.

11. PRIOR TO BEGINNING UTILITY CONSTRUCTION, THE CONTRACTOR SHALL CONFIRM LOCATIONS.

CONSTRUCTION EXECUTION (CONTINUED)

12. UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR THE LOCATION, PROFILE AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY LINES WITH FOUNDATIONS AND STRUCTURAL ELEMENTS AS SHOWN ON STRUCTURAL DRAWINGS. ANY INTERFERENCE BETWEEN STRUCTURAL ELEMENTS AND UTILITY LINES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.

13. ALL ELEVATIONS ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW) AS ELEVATION +0.00.

14. TOPOGRAPHIC SURVEY – SEE EXISTING SITE PLAN ON SHEET C–03.

15. THE CONTRACTOR SHALL NOT OVERLOAD EXISTING STRUCTURES DURING DEMOLITION/ CONSTRUCTION. OPERATION OF ANY EQUIPMENT OR STORAGE OF MATERIALS WHICH WOULD RESULT IN OVERLOAD WILL NOT BE PERMITTED. SAFETY OF PERSONNEL, REQUIRED EQUIPMENT, CONDITION, AND SUITABILITY OF THE EXISTING STRUCTURE TO SUPPORT MATERIAL AND EQUIPMENT LOADS IS THE CONTRACTOR'S RESPONSIBILITY.

16. THE FOLLOWING DATA IS PROVIDED REGARDING TIDAL INFORMATION. TIDAL INFORMATION WAS OBTAINED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL OCEAN SERVICE

WATER LEVELS AT LAHAINA SMALL BOAT HARBOR
BASED ON NOAA STATION NO. 1615680 (1983–2001 EPOCH)

WATER LEVELS	ELEVATION (FT–MLLW)
MAXIMUM (DESIGN HIGH WATER)	+3.59
HIGHEST ASTRONOMICAL TIDE (HAT)	+3.10
MEAN HIGHER HIGH WATER (MHHW)	+2.25
MEAN HIGH WATER (MHW)	+1.90
MEAN SEA LEVEL (MSL)	+1.12
MEAN LOW WATER (MLW)	+0.33
MEAN LOWER LOW WATER (MLLW)	0.00
LOWEST ASTRONOMICAL TIDE (LAT)	–0.79
MINIMUM (DESIGN LOW WATER)	–1.61

17. TIDAL DATA IS NOT GUARANTEED TO REPRESENT CONDITIONS WHICH MAY OCCUR DURING CONSTRUCTION. ACTUAL WATER LEVELS WILL VARY FROM LEVELS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN ESTIMATES OF WATER LEVELS WHICH MAY OCCUR DURING CONSTRUCTION. VARIATION OF TIDAL LEVELS FROM THOSE INDICATED OR CONTRACTOR'S ESTIMATION OF TIDAL LEVELS SHALL NOT BE CONSIDERED AS A CLAIM FOR ADDITIONAL COMPENSATION OR DELAY OF WORK.

18. THE CONTRACTOR SHALL PROVIDE REASONABLE ACCESS IN THE IMMEDIATE VICINITY OF THE PROJECT SITE AT ALL TIMES TO PEDESTRIAN TRAFFIC.

19. THE OVERALL BOATING FACILITY SHALL REMAIN OPEN DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL INSTALL ADEQUATE TEMPORARY BARRICADES AND WARNING SIGNS TO PROTECT THE PUBLIC DURING THE CONSTRUCTION PERIOD. PROVIDE AND MAINTAIN A SAFE PEDESTRIAN ACCESS FROM THE PARKING AREA AND TO THE BOATING FACILITY THROUGHOUT THE CONSTRUCTION PERIOD.

20. THE CONTRACTOR SHALL NOT BLOCK THE HARBOR ENTRANCE.

21. THE CONTRACTOR SHALL DETAIL, FURNISH, AND INSTALL ALL MEMBERS, CONNECTIONS, AND ACCESSORIES NOT SHOWN BUT WHICH ARE REQUIRED TO COMPLETE THE WORK AND SHALL SUBMIT THEM TO THE ENGINEER FOR APPROVAL. COST OF THESE MEMBERS, CONNECTIONS, AND ACCESSORIES SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE CONTRACTOR SHALL PERFORM THIS WORK IN ACCORDANCE WITH THE APPLICABLE SECTIONS IN THE INTERNATIONAL BUILDING CODE, IBC 2012.

22. ITEMS IDENTIFIED AS "EXIST" OR "NIC" ARE BY OTHERS AND ARE SHOWN FOR REFERENCE ONLY.

23. 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 (HAR), TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".

24. DEBRIS GENERATED SHALL BE DISPOSED OF OFF–SITE BY THE CONTRACTOR AT HIS EXPENSE.

25. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND ENVIRONMENT QUALITY.

26. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION.

27. ALL CONNECTIONS AND CONSTRUCTION CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE DETAILED BY THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. DETAILS SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, CONFORM TO THE CURRENT CONSTRUCTION PRACTICES, AND MEET ALL REQUIREMENTS OF THE LATEST APPLICABLE BUILDING CODES.

28. SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTING TO THE OWNER AND ENGINEER.

29. 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", BEST MANAGEMENT PRACTICES (BMP) SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION. REFER TO CONTRACT DOCUMENT FOR BMP REQUIREMENTS.

CONSTRUCTION EXECUTION (CONTINUED)

30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORTS NECESSARY FOR THE SAFE DEMOLITION, SHORING OF EXISTING STRUCTURES AND SHORING OF PARTIALLY COMPLETED WORK. TEMPORARY STRUCTURES BY THE CONTRACTOR SHALL BE APPROVED BY A PROFESSIONAL ENGINEER.

31. ALL ELEMENTS REQUIRED TO BE REMOVED TO ALLOW FOR INSTALLATION OF THE WORK SHALL BE REINSTALLED AS ORIGINAL, UNLESS NOTED OTHERWISE OR AS APPROVED BY THE ENGINEER.

32. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY STRUCTURES ERECTED TO ASSIST WITH THE WORK.

MATERIALS

1. ALL MATERIALS SHALL CONFORM TO THE CONTRACT DOCUMENTS. EQUAL MATERIALS CANNOT BE USED UNLESS ACCEPTED IN WRITING BY THE ENGINEER AS AN EQUAL MATERIAL. ALL MATERIALS AND MATERIAL TESTING SHALL CONFORM TO THE RELEVANT STANDARDS IN THE LATEST EDITION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).

2. ALL MATERIALS SHALL BE NEW, HIGH QUALITY, CLEAN, FREE OF DIRT AND IN GOOD CONDITION. HANDLE AND STORE ALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH GOOD WORKMANSHIP AND INDUSTRY STANDARDS.

3. ALL MATERIALS SHALL BE HANDLED, STORED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS AND IN ACCORDANCE WITH GOOD INDUSTRY PRACTICES.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

WILLIAM H. O. BOW
LICENSED PROFESSIONAL ENGINEER
NO. 4904–C
HAWAII USA

SIGNATURE 4/30/28 Exp. Date of License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

GENERAL NOTES

DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED

APPROVED: _____ _____
CHIEF ENGINEER DATE

DRAWING NO. C-01

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 9:53am By: MMCHANG
File Name: H:\Y2024\24010.00 Lahaina SBH, Front Row\06 CADD\C–01 Lahaina SBH Front Row – General Notes.dwg

GOOD HOUSEKEEPING BMPs:

1. STREET SWEEPING AND VACUUMING. ALL POLLUTANTS DISCHARGED FROM CONSTRUCTION SITE TO OFF-SITE AREAS MUST BE SWEPT OR VACUUMED EACH DAY BEFORE LEAVING THE JOB SITE.

2. MATERIALS DELIVERY, STORAGE AND USE MANAGEMENT. PREVENT, REDUCE, OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM MATERIAL DELIVERY, STORAGE, AND USE TO THE STORM WATER SYSTEM OR WATERCOURSES BY MINIMIZING THE STORAGE OF HAZARDOUS MATERIALS ONSITE, STORING MATERIALS IN A DESIGNATED AREA, INSTALLING SECONDARY CONTAINMENT. CONSTRUCTION MATERIALS, WASTE, TOXIC AND HAZARDOUS SUBSTANCES, STOCKPILES AND OTHER SOURCES OF POLLUTION SHALL NOT BE STORED IN BUFFER AREAS, NEAR AREAS OF CONCENTRATED FLOW, OR AREAS ABUTTING THE MS4, RECEIVING WATERS, OR DRAINAGE IMPROVEMENTS THAT DISCHARGE OFF-SITE. PRIMARY AND SECONDARY CONTAINMENT CONTROLS AND COVERS SHALL BE IMPLEMENTED TO THE MEP.

3. SPILL PREVENTION AND CONTROL: CREATE AND IMPLEMENT SPILL PREVENTION AND RESPONSE PLANS TO ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO THE MS4 AND RECEIVING WATERS FROM LEAKS AND SPILLS BY REDUCING THE CHANCE FOR SPILLS, ABSORBING, CONTAINING, AND CLEANING UP SPILLS AND PROPERLY DISPOSING OF SPILL MATERIALS. AT A MINIMUM, ALL PROJECTS SHALL CLEANUP ALL LEAKS AND SPILLS IMMEDIATELY.

4. HAZARDOUS MATERIALS: PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM HAZARDOUS WASTE THROUGH PROPER MATERIAL USE AND WASTE DISPOSAL. IN THE EVENT THAT HAZARDOUS MATERIALS ARE DISCHARGE TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF FACILITIES MAINTENANCE, HONOLULU FIRE DEPARTMENT, AND HONOLULU POLICE DEPARTMENT OF THE DISCHARGE BY TELEPHONE. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGE, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKE TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

5. NONHAZARDOUS MATERIALS: IN THE EVENT THAT NONHAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL NOTIFY THE DEPARTMENT OF FACILITIES MAINTENANCE BY TELEPHONE NO LATER THAN THE NEXT BUSINESS DAY. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGE, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKE TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

6. VEHICLE AND EQUIPMENT CLEANING: ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT CLEANING OPERATION BY USING OFF-SITE FACILITIES WHEN FEASIBLE, WASHING IN DESIGNATED, CONTAINED AREAS ONLY, AND ELIMINATING DISCHARGES TO THE STORM DRAIN SYSTEM BY EVAPORATING AND/OR TREATING WASH WATER, ASS APPROPRIATE OR INFILTRATING WASH WATER FOR EXTERIOR CLEANING ACTIVITIES THAT USE WATER ONLY.

7. VEHICLE AND EQUIPMENT FUELING: PREVENT FUEL SPILLS AND LEAKS BY USING OFF-SITE FACILITIES, FUELING ONLY IN DESIGNATED AREAS, ENCLOSING OR COVERING STORED FUEL, AND IMPLEMENTING SPILL CONTROLS SUCH AS SECONDARY CONTAINMENT AND ACTIVE MEASURE USING SPILL RESPONSE KITS.

8. VEHICLE AND EQUIPMENT MAINTENANCE: ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT MAINTENANCE OPERATIONS BY USING OFF-SITE FACILITIES, WHEN FEASIBLE, PERFORMING WORK IN DESIGNATED AREAS ONLY, USING SPILL PADS UNDER VEHICLES AND EQUIPMENT, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING UP SPILLS IMMEDIATELY.

9. SOLID WASTE MANAGEMENT: PREVENT OR REDUCE DISCHARGE OF POLLUTANTS TO THE LAND, GROUNDWATER, AND IN STORM WATER FROM SOLID WASTE OR CONSTRUCTION AND DEMOLITION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS, COLLECT SITE TRASH DAILY, AND ENSURING THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS.

10. SANITARY/SEPTIC WASTE MANAGEMENT: TEMPORARY AND PORTABLE SANITARY AND SEPTIC WASTE SYSTEMS SHALL BE MOUNTED OR STAKED IN, WELL-MAINTAINED, AND SCHEDULED FOR REGULAR WASTE DISPOSAL AND SERVICING. SOURCES OF SANITARY AND/OR SEPTIC WASTE SHALL NOT BE STORED NEAR THE MS4 OR RECEIVING WATERS.

11. STOCKPILE MANAGEMENT: STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS, WITHIN 50 FEET FROM AREAS OF CONCENTRATED FLOWS, AND ARE NOT ALLOWED IN THE CITY RIGHT-OF-WAY. SEDIMENT BARRIERS OR SILT FENCES SHALL BE USED AROUND THE BASE OF ALL STOCKPILES. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT. STOCKPILES GREATER THAN 15 FEET IN HEIGHT SHALL REQUIRE 8 FOOT WIDE BENCHING IN ACCORDANCE WITH ROH CHAPTER 14, ARTICLE 15. STOCK PILES MUST BE COVERED WITH PLASTIC SHEETING OR A COMPARABLE MATERIAL IF THEY WILL NOT BE ACTIVELY USED WITHIN 7 DAYS.

12. LIQUID WASTE MANAGEMENT: LIQUID WASTE SHALL BE CONTAINED IN A CONTROLLED AREA SUCH AS A HOLDING PIT, SEDIMENT BASIN, ROLL-OFF BIN, OR PORTABLE TANK OF SUFFICIENT VOLUME AND TO CONTAIN THE LIQUID WASTES GENERATED. CONTAINMENT AREAS OR DEVICES MUST BE IMPERMEABLE AND LEAK FREE AND SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS.

13. CONCRETE WASTE MANAGEMENT: PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE OR PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE MINIMUM OF 10 MILLIMETER POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. CONTAINMENT AREAS OR DEVICES SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75 PERCENT FULL. ONCE CONCRETE WASTES ARE WASHING INTO THE DESIGNATED AREAS AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF AS SOLID WASTES.

14. CONTAMINATED SOIL MANAGEMENT: AT MINIMUM CONTAIN CONTAMINATED MATERIAL SOIL BY SURROUNDING WITH IMPERMEABLE LINED BERMS OR COVER EXPOSED CONTAMINATED MATERIAL WITH PLASTIC SHEETING. CONTAMINATED SOIL SHOULD BE DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

EROSION PREVENTION / SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE CITY AND COUNTY OF HONOLULU'S "RULES RELATING TO WATER QUALITY."

2. MEASURE TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTHWORK IS INITIATED.

3. SLOPE PROTECTION: SLOPE PROTECTION IS REQUIRED ON AREAS WITH SLOPES GREATER THEN 15% AND ON AREAS OF MODERATE SLOPE THAT ARE PRONE TO EROSION UNLESS THEY ARE BEING ACTIVELY WORKED. USE DIVERSION UPSTREAM OF SLOPE (DIKES, SWALES, SLOPE DRAINS) TO DIVERT WATER AROUND THE SLOPE. PROVIDE A 10-FT BUFFER ZONE AT THE TOE OF SLOPE. ONLY 5 ACRES MAY BE DISTURBED AT ANY TIME ON SLOPES GREATER THAN 15%.

4. TEMPORARY STABILIZATION: TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 14 CONSECUTIVE DAYS OR MORE.

5. PERMANENT STABILIZATION: ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED USING VEGETATIVE COVERING, PAVEMENT, OR EQUIVALENT, PRIOR TO REMOVING EROSION AND SEDIMENT MEASURES, TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WHICH RESULT FROM THE REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY AND PERMANENTLY STABILIZED.

6. PRESERVE EXISTING VEGETATION: CLEARLY MARK THE AREAS TO BE PRESERVED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

7. MINIMIZE SOIL COMPACTION: AREAS WHERE FINAL STABILIZATION OR INFILTRATION PRACTICES WILL BE INSTALLED SHALL BE PROTECTED FROM EXCESSIVE COMPACTION DURING CONSTRUCTION. VEHICLE AND EQUIPMENT USE SHALL BE RESTRICTED OR TECHNIQUES TO CONDITION THE SOILS TO SUPPORT VEGETATION SHALL BE IMPLEMENTED IN THE AREAS THAT HAVE BEEN COMPACTED AND ARE DESIGNATED TO REMAIN VEGETATIVE OR POST-CONSTRUCTION INFILTRATION AREAS. CLEARLY MARK THE AREAS TO BE AVOIDED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPOSED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

8. PERIMETER CONTROLS: PERIMETER CONTROLS ARE ARE REQUIRED DOWNSLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATIVE BUFFER AREA.

9. SEDIMENT BARRIERS AND FENCES: SEDIMENT FENCES OR BARRIERS SHALL BE USED DOWN SLOPE OF ALL DISTURBED AREAS. UNTIL SLOPE ARE STABILIZED A SEDIMENT FENCE OR BARRIER SHALL BE INSTALLED AT THE TOE OF THE SLOPE AND ON CONTOURS AT THE FOLLOWING SPACING.

   SLOPE >= 2:1 10 FEET SPACING
   SLOPE >= 4:1 AND < 2:1 15 FEET SPACING
   SLOPE < 4:1 20 FEET SPACING

10. INLET PROTECTION:

    - ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO A SEDIMENT BASIN.
    - SEDIMENT LEVELS MAY NOT EXCEED ONE THIRD OF THE HEIGHT OF A SEDIMENT BARRIER OR INLET PROTECTION DEVISE AT ANY POINT ALONG THE LENGTH OF THE SEDIMENT BARRIER OR THE INLET PROTECTION DEVICE.
    - SEDIMENT BARRIERS AND INLET PROTECTION DEVICES MUST BE UNCLOGGED AND CLEANED WHEN PERFORMANCE IS COMPROMISED.
    - TORN, WEATHERED, OR SAGGING SEDIMENT BARRIERS OR INLET PROTECTION DEVICES MUST BE REPAIRED OR REPLACED IMMEDIATELY.

11. SEDIMENT BASINS: SEDIMENT BASINS MUST BE KEPT IN EFFECTIVE OPERATING CONDITION AND SEDIMENT SHALL BE REMOVED TO MAINTAIN AT LEAST ONE HALF OF THE DESIGN CAPACITY AT ALL TIMES.

12. TRACKING CONTROL:

    - MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREETS, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXISTING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXISTING THE SITE.
    - VEHICULAR PARKING AND MOVEMENT ON PROJECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING.
    - ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, OTHER PAVED AREAS, SIDEWALKS OR THE MS4 MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING.
    - WASHING POLLUTANTS AND MATERIALS THAT ARE DISCHARGED FROM THE PROJECT SITE TO THE MS4 INTO DRAIN INLETS OR CATCH BASINS IS PROHIBITED UNLESS THE MATERIAL IS SEDIMENT AND INLETS ARE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP.

13. BEST MANAGEMENT PRACTICES (BMPS) SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS COMPLETE FOR THAT PHASE.

14. REFER TO CITY AND COUNTY OF HONOLULU BEST MANAGEMENT PRACTICES MANUAL – CONSTRUCTION, FOR MORE INFORMATION ON BMPS.

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

WILLIAM H. Q. HOW
LICENSED PROFESSIONAL ENGINEER
NO. 4904-C
HAWAII USA

SIGNATURE 4/30/28 Exp. Date of License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

EROSION AND SEDIMENT CONTROL NOTES

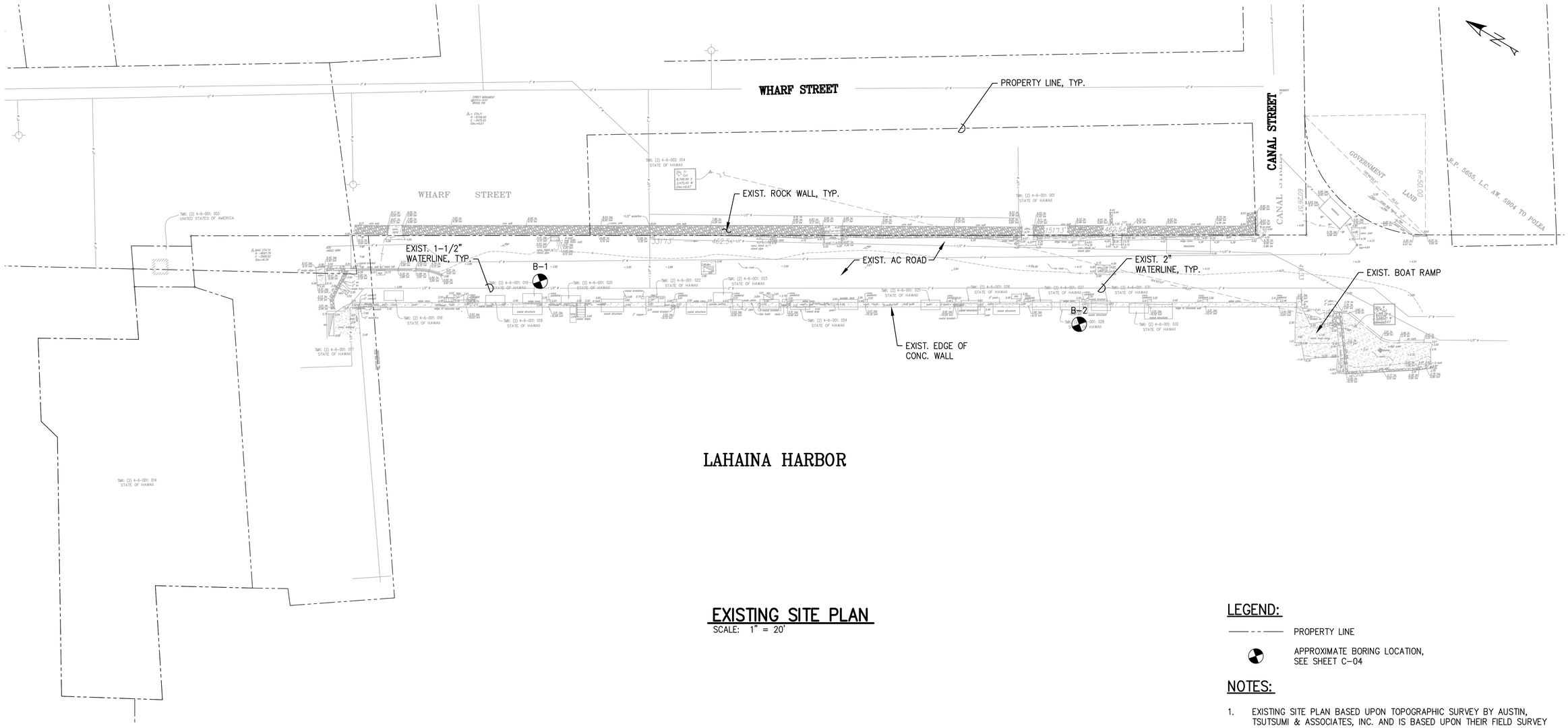
DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED

APPROVED: _____ DATE _____
CHIEF ENGINEER

DRAWING NO. C-02

JOB NO B46CM71B SHEET NO. 3 OF 41 SHEETS

Plotted: Wed, 06 May 2026 – 9:53am By: MMCHANG
File Name: H:\F2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-02 Lahaina SBH Front Row – Erosion and Sediment Control Notes.dwg



LAHAINA HARBOR

EXISTING SITE PLAN
SCALE: 1" = 20'

GRAPHIC SCALE:
20 10 0 20 40
1" = 20'

LEGEND:
PROPERTY LINE

APPROXIMATE BORING LOCATION, SEE SHEET C-04

NOTES:
1. EXISTING SITE PLAN BASED UPON TOPOGRAPHIC SURVEY BY AUSTIN, TSUTSUMI & ASSOCIATES, INC. AND IS BASED UPON THEIR FIELD SURVEY COMPLETED ON JUNE 5, 2024.
2. AZIMUTHS AND COORDINATES ARE REFERRED TO GOVERNMENT SURVEY TRIANGULATION STATION "LAINA△ .
3. ADJOINING LOT INFORMATION HAS BEEN TAKEN FROM RECORDS FILED AT THE REAL PROPERTY MAPPING BRANCH.
4. ELEVATIONS SHOWN ARE BASED ON N.G.S. BENCHMARK SOH 51, HAVING AN ELEVATION OF 15.03 FEET (L.M.S.L.).
5. TMK'S: (2) 4-6-001:016, 017, 018, 020, 022, 023, 024, 025, 026, 027 AND 031 ARE SHOWN HEREON PER TAX MAP LOCATIONS AND SHOULD BE CONSIDERED APPROXIMATE.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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LICENSED PROFESSIONAL ENGINEER
NO. 4904-C
HAWAII USA

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STATE OF HAWAII
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DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

EXISTING SITE PLAN

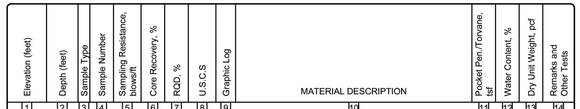
DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED
APPROVED:	DRAWING NO. C-03
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 - 9:53am By: MMCHANG
File Name: H:\FY2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-03 Lahaina SBH Front Row - Existing Site Plan.dwg

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Key to Logs of Borings Sheet 1 of 1

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	



COLUMN DESCRIPTIONS

1 Elevation (feet): Elevation (MSL, feet).
2 Depth (feet): Depth in feet below the ground surface.
3 Sample Type: Type of soil sample collected at the depth interval shown.
4 Sample Number: Sample identification number.
5 Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
6 Core Recovery, %: , expressed as the amount of recovered material divided by the total length of the core run (presented as a percentage).
7 RQD, %: , expressed as a modified core recovery in which the lengths of all sound rock core piece over 4 inches in length are summed and divided by the length of the core run.
8 U.S.C.S: Type of material encountered.
9 Graphic Log: Graphic depiction of the subsurface material encountered.
10 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
11 Pocket Pen./Torvane, tsf: the reading from Poecket Penetrometer or Torvane.
12 Water Content, %: Water content of the soil sample, expressed as percentage of dry weight of sample.
13 Dry Unit Weight, pcf: Dry weight per unit volume of soil sample measured in laboratory, in pounds per cubic foot.
14 Remarks and Other Tests: Other Tests

FIELD AND LABORATORY TEST ABBREVIATIONS

CORR: Corrosivisty tests to assess soil corrosivity
WOR: Weight of Rods
WOH: Weight of Hammer
CONS: One-dimensional consolidation test
LL: Liquid Limit, percent
PI: Plasticity Index, percent
SPT: Standard Penetration Test
UC: Unconfined Compression
MCS: Modified California Sampler

MATERIAL GRAPHIC SYMBOLS

- Asphaltic Concrete (AC)
- Basalt Rock Formation
- Lean CLAY, CLAY w/SAND, SANDY CLAY (CL)
- Clayey GRAVEL (GC)
- Silty GRAVEL (GM)
- SILT, SILT w/SAND, SANDY SILT (ML)
- Clayey SAND (SC)
- Silty SAND (SM)
- Water

TYPICAL SAMPLER GRAPHIC SYMBOLS

- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Grab Sample
- HQ Coring
- 3-inch OD Modified California w/ brass liners
- Pitcher Sample
- PQ Coring
- Probing w/Pointed Tip
- 2-inch-OD unlined split spoon (SPT)
- Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS

- Water level (at time of drilling, ATD)
- Water level (after waiting)
- Minor change in material properties within a stratum
- Inferred/gradational contact between strata
- Queried contact between strata

GENERAL NOTES

1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

PLATE A-0.1

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 1 Sheet 1 of 3

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	

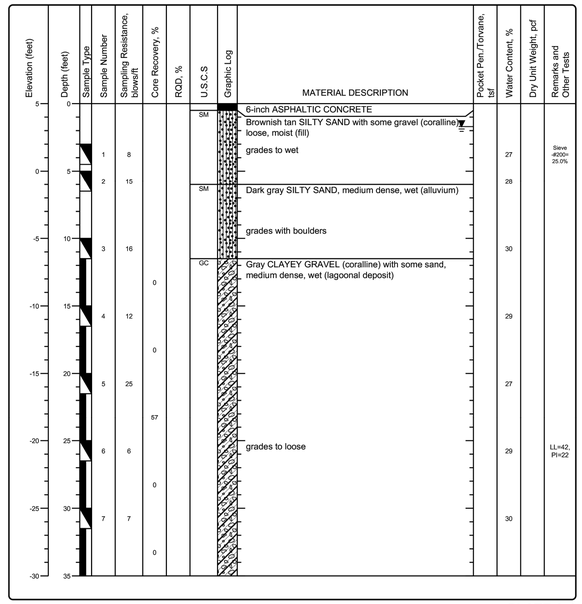


PLATE A-1

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 1 Sheet 2 of 3

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	

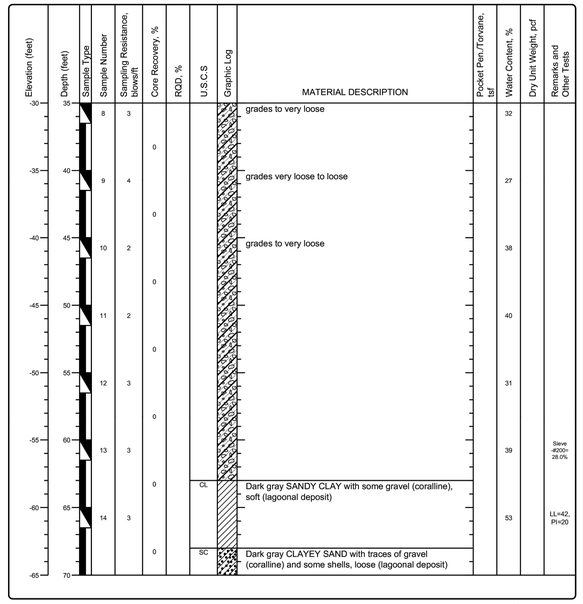


PLATE A-1

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 1 Sheet 3 of 3

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	

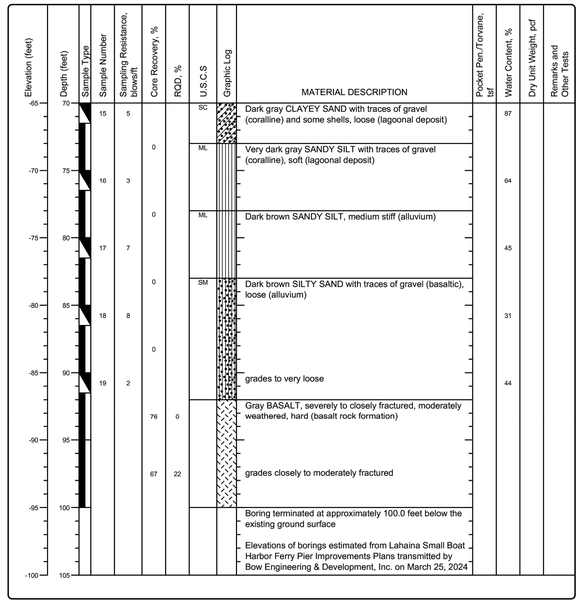


PLATE A-1

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 2 Sheet 1 of 3

Date(s) Drilled **8/5/24 -8/7/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **PQ Coring**	Drill Bit Size/Type **PQ-Size Coring**	Total Depth of Borehole **100.5 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **Mudline -10.0 feet MSL***
Groundwater Level and Date Measured **N/A**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel**	Location **See Site Plan (Plate 2)**	

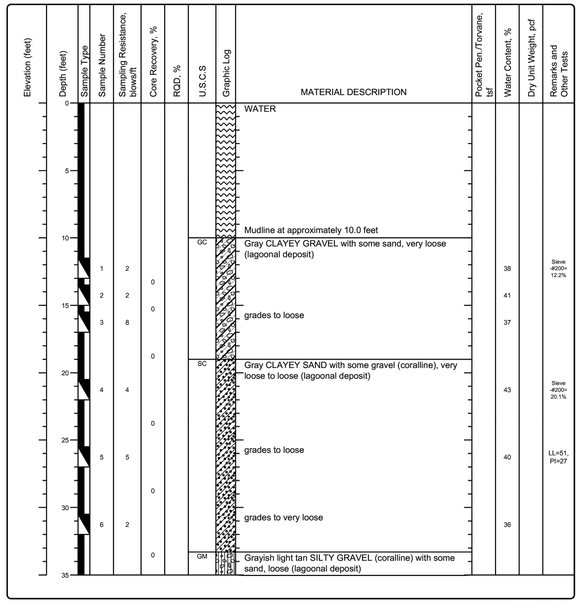


PLATE A-2

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 2 Sheet 2 of 3

Date(s) Drilled **8/5/24 -8/7/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **PQ Coring**	Drill Bit Size/Type **PQ-Size Coring**	Total Depth of Borehole **100.5 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **Mudline -10.0 feet MSL***
Groundwater Level and Date Measured **N/A**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel**	Location **See Site Plan (Plate 2)**	

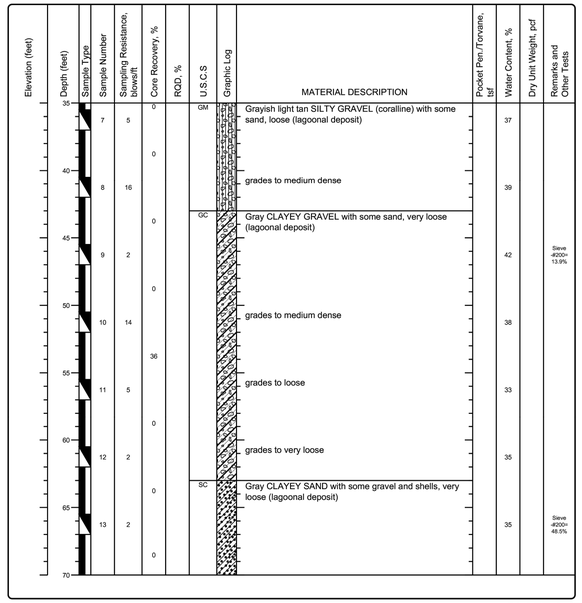


PLATE A-2

Project: **Lahaina Small Boat Harbor Replacement of Front Row Piers** Project Location: **Lahaina, Maui, Hawaii** Project Number: **022624-00**	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 2 Sheet 3 of 3

Date(s) Drilled **8/5/24 -8/7/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **PQ Coring**	Drill Bit Size/Type **PQ-Size Coring**	Total Depth of Borehole **100.5 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **Mudline -10.0 feet MSL***
Groundwater Level and Date Measured **N/A**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel**	Location **See Site Plan (Plate 2)**	

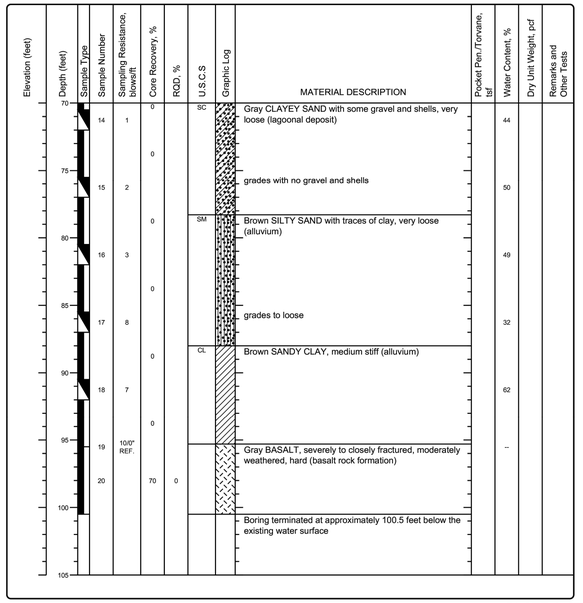


PLATE A-2

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

WILLIAM H. O. BOW
LICENSED PROFESSIONAL ENGINEER
NO. 4904-C
HAWAII USA

SIGNATURE 4/30/28 Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

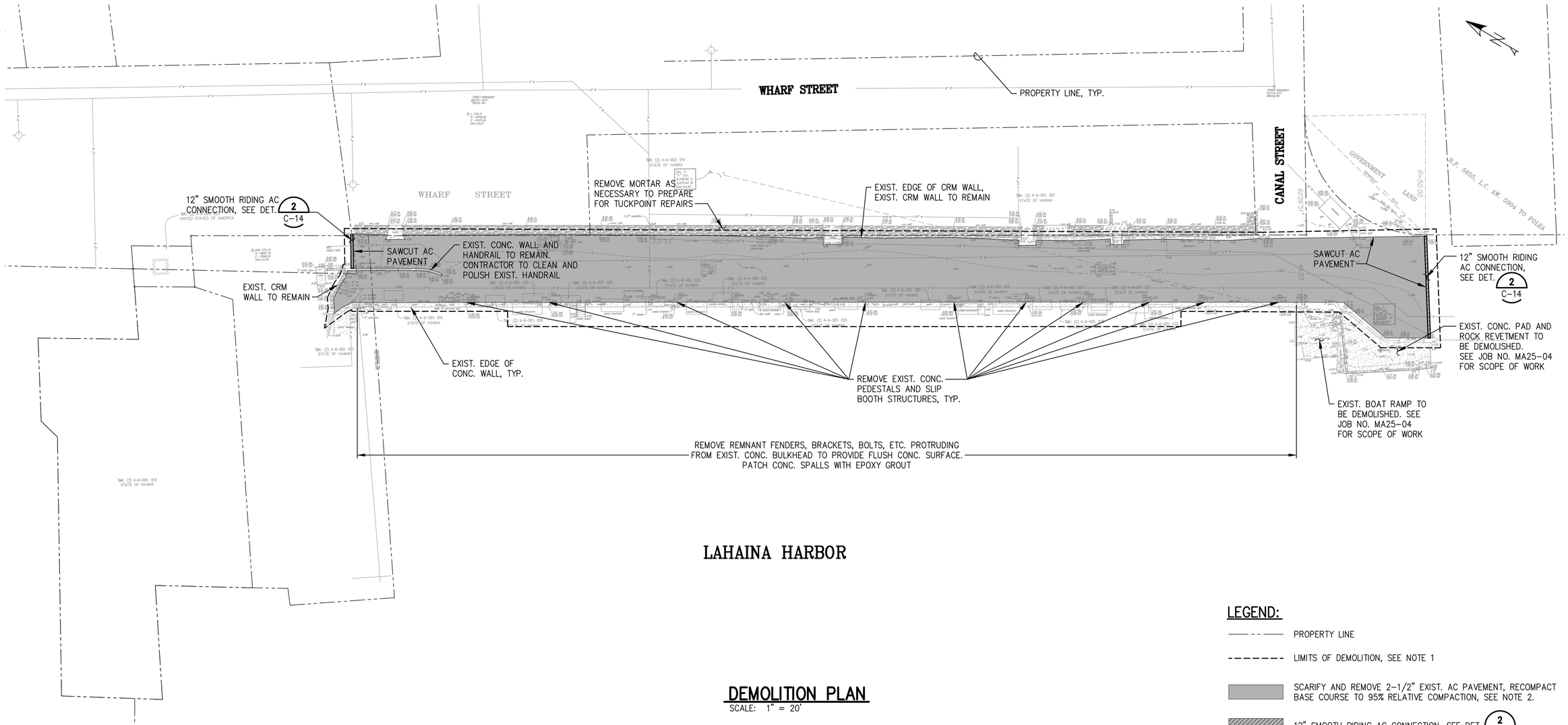
BORING LOGS

DESIGNED: EY	SUBMITTED: –		
DRAWN: GJ	DATE: MAY 2026		
CHECKED: WB	SCALE: AS NOTED		
APPROVED:		DRAWING NO.	C-04
CHIEF ENGINEER	DATE		

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

JOB NO B46CM71B SHEET NO. 5 OF 41 SHEETS

Plotted: Wed, 06 May 2026 – 9:53am By: MMCHANG
File Name: H:\Y2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-04 Lahaina SBH Front Row – Boring Logs.dwg



LAHAINA HARBOR

DEMOLITION PLAN

SCALE: 1" = 20'

GRAPHIC SCALE:

20 10 0 20 40

1" = 20'

LEGEND:

- PROPERTY LINE
- LIMITS OF DEMOLITION, SEE NOTE 1
- SCARIFY AND REMOVE 2-1/2" EXIST. AC PAVEMENT, RECOMPACT BASE COURSE TO 95% RELATIVE COMPACTION, SEE NOTE 2.
- 12" SMOOTH RIDING AC CONNECTION, SEE DET. 2 C-14

NOTES:

1. EXISTING STRUCTURES ABOVE GROUND WITHIN THE LIMITS OF DEMOLITION ARE TO BE DEMOLISHED AND REMOVED. DEMOLITION AND REMOVAL GENERALLY INCLUDE BUT ARE NOT LIMITED TO – CONCRETE PEDESTALS, SHORELINE DEBRIS, CLEATS, METAL AND WOODEN POSTS, SIGN POSTS, BOLTS, METAL AND WOODEN STRUCTURES, RAMPS, AND STAIRS.
2. CONTRACTOR TO PROTECT THE CONCRETE BULKHEAD, ALL UTILITY BOXES, CONCRETE BOXES WITH STAND PIPES, CONCRETE RAMPS AND STAIRS, AND DRAIN INLETS IN PLACE.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

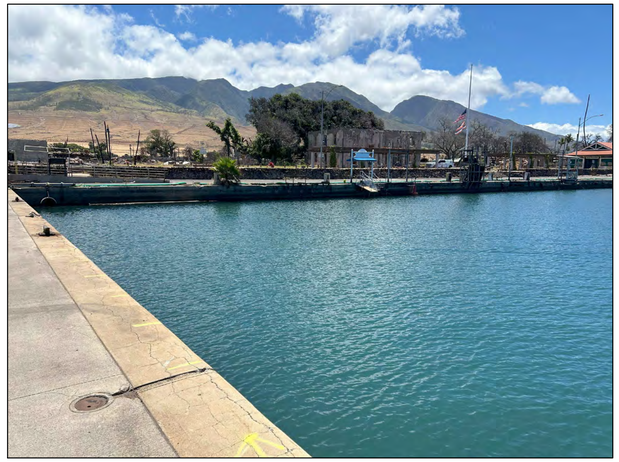
DEMOLITION PLAN

DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED
APPROVED:	DRAWING NO. C-05
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

JOB NO B46CM71B SHEET NO. 6 OF 41 SHEETS

Plotted: Wed, 06 May 2026 – 8:37pm By: MMCHANG
File Name: H:\FY2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-05 Lahaina SBH Front Row – Demolition Plan.dwg



1 PROJECT LOCATION (FACING NORTHERN END)
TAKEN 06/25/2024

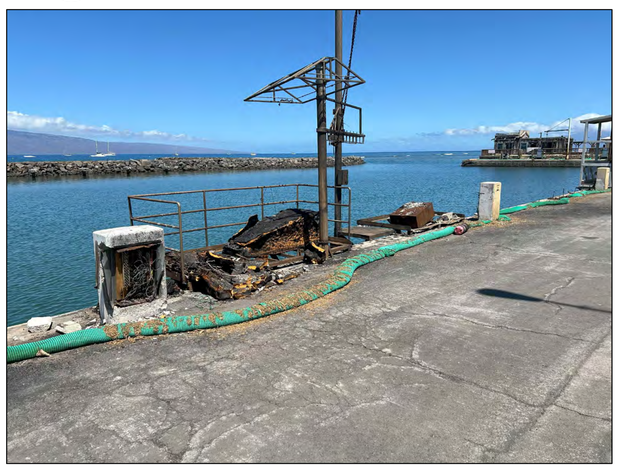
2 PROJECT LOCATION (FACING SOUTHERN END)
TAKEN 06/25/2024

3 EXIST. CONDITIONS ON SOUTHERN SIDE OF LAHAINA SBH, FRONT ROW
TAKEN 06/25/2024

4 EXIST. CONDITIONS ON NORTHERN SIDE OF LAHAINA SBH, FRONT ROW
TAKEN 06/25/2024

5 TYPICAL CONCRETE PEDESTAL TO REMAIN
TAKEN 06/25/2024

6 CONC. BOAT RAMP (SOUTHERN END OF FRONT ROW)
TAKEN 06/25/2024



7 EXIST. METAL STRUCTURE AND DEBRIS TO BE REMOVED
TAKEN 06/25/2024

NOTES:

1. PHOTOS REPRESENT CONDITIONS AT THE TIME PHOTOS WERE TAKEN. CONDITIONS ARE SUBJECT TO CHANGE AND PHOTOS SHOULD BE USED FOR GENERAL REFERENCE ONLY.
2. THE PHOTOS ON THIS SHEET WERE TAKEN FROM THE SAME APPROXIMATE LOCATIONS AS THE PHOTOS ON SHEETS C-07 AND C-08.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

DEMOLITION PHOTOGRAPHS - 1

DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED

APPROVED: _____ CHIEF ENGINEER _____ DATE

DRAWING NO. C-06

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

JOB NO B46CM71B SHEET NO. 7 OF 41 SHEETS

Plotted: Wed, 06 May 2026 - 9:53am By: MMCHANG
File Name: H:\FY2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-06 to C-08 Lahaina SBH Front Row - Demolition Photographs.dwg

1 EXIST. WOODEN STRUCTURE TO BE REMOVED
TAKEN 06/25/2024

2 EXIST. METAL STRUCTURE & DEBRIS TO BE REMOVED
TAKEN 06/25/2024

3 EXIST. METAL STRUCTURE TO BE REMOVED
TAKEN 06/25/2024

4 EXIST. METAL STAIRS & RAMP TO BE REMOVED
TAKEN 06/25/2024

5 EXIST. METAL STRUCTURE TO BE REMOVED
TAKEN 06/25/2024

6 EXIST. CONDITIONS ON NORTHERN SIDE OF LAHAINA SBH. FRONT ROW
TAKEN 06/25/2024

7 EXIST. CONDITIONS ON SOUTHERN SIDE OF LAHAINA SBH. FRONT ROW
TAKEN 06/25/2024

8 EXIST. CONDITIONS OF LAHAINA LOADING DOCK
TAKEN 06/25/2024

NOTES:

1. PHOTOS REPRESENT CONDITIONS AT THE TIME PHOTOS WERE TAKEN. CONDITIONS ARE SUBJECT TO CHANGE AND PHOTOS SHOULD BE USED FOR GENERAL REFERENCE ONLY.

2. THE PHOTOS ON THIS SHEET WERE TAKEN FROM THE SAME APPROXIMATE LOCATIONS AS THE PHOTOS ON SHEETS C-06 AND C-08.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

WILLIAM H. O. HOW
LICENSED PROFESSIONAL ENGINEER
NO. 4904-C
HAWAII USA

SIGNATURE 4/30/28 Exp. Date of License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

DEMOLITION PHOTOGRAPHS - 2

DESIGNED:	EY	SUBMITTED:	–
DRAWN:	GJ	DATE:	MAY 2026
CHECKED:	WB	SCALE:	AS NOTED

APPROVED: _____ CHIEF ENGINEER _____ DATE

DRAWING NO. C-07

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

1 EXIST. CONCRETE WALL AND HANDRAIL TO REMAIN ON NORTHERN SIDE OF LAHAINA SBH, FRONT ROW
TAKEN 01/21/2025

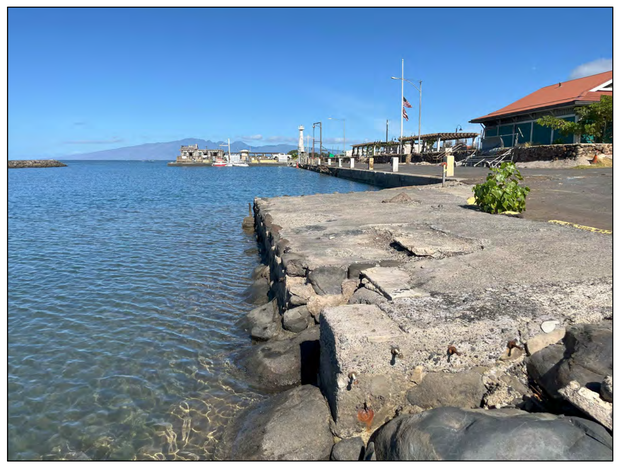
2 EXIST. RAMP (NORTHERN END OF LAHAINA SBH)
TAKEN 01/21/2025

3 EXIST. CRM WALL (FACING SOUTHERN END OF FRONT ROW)
TAKEN 01/21/2025

4 EXIST. CRM WALL (FACING SOUTHERN END OF FRONT ROW)
TAKEN 01/21/2025

5 EXIST. BOAT RAMP (SOUTHERN END OF FRONT ROW)
TAKEN 01/21/2025

6 AREA ADJACENT TO EXIST. BOAT RAMP
TAKEN 01/21/2025



7 VIEW OF LAHAINA SBH, FRONT ROW FROM THE NORTHERN END OF INNER MARGINAL WHARF
TAKEN 01/21/2025

8 EXIST. CONDITIONS OF SOUTHERN END OF LAHAINA SBH, FRONT ROW
TAKEN 01/21/2025

NOTES:

1. PHOTOS REPRESENT CONDITIONS AT THE TIME PHOTOS WERE TAKEN. CONDITIONS ARE SUBJECT TO CHANGE AND PHOTOS SHOULD BE USED FOR GENERAL REFERENCE ONLY.
2. THE PHOTOS ON THIS SHEET WERE TAKEN FROM THE SAME APPROXIMATE LOCATIONS AS THE PHOTOS ON SHEETS C-06 AND C-07.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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HAWAII USA

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STATE OF HAWAII
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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

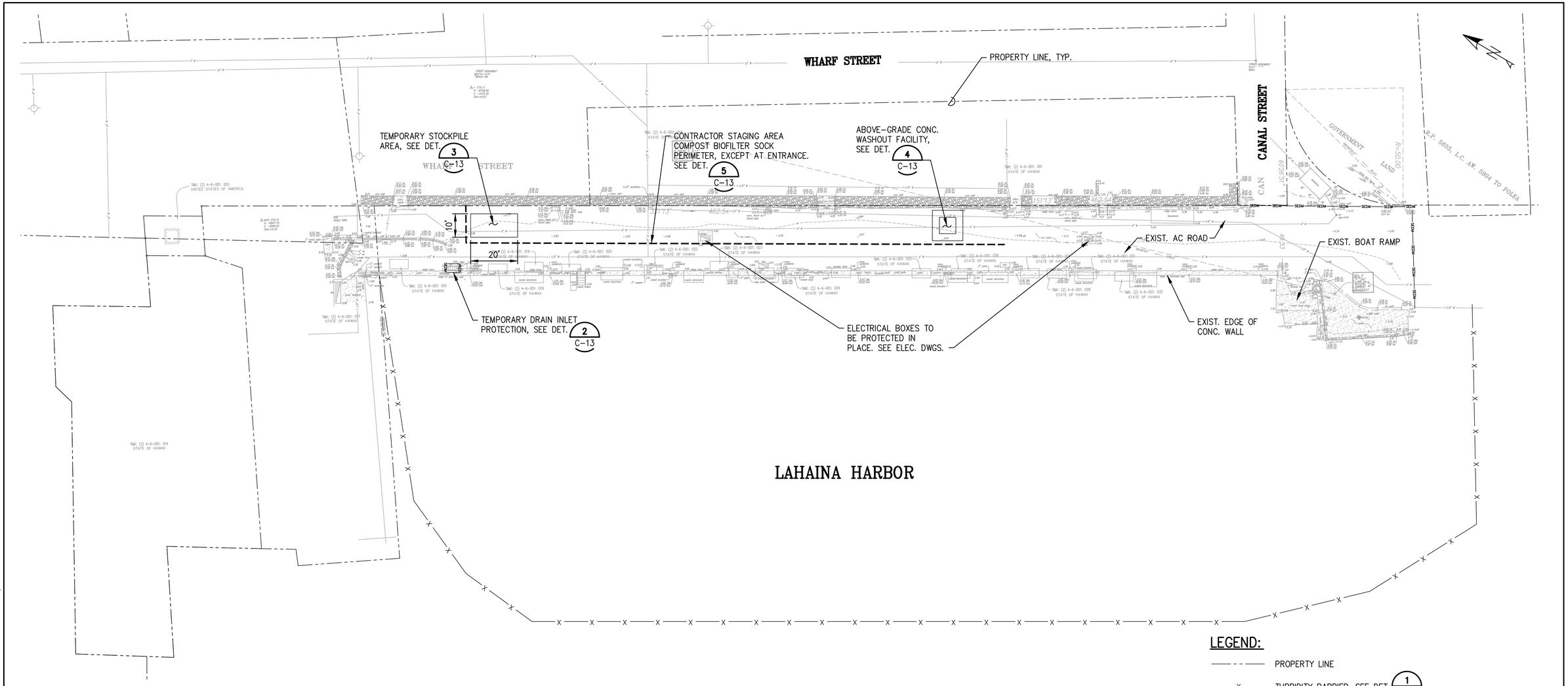
DEMOLITION PHOTOGRAPHS - 3

DESIGNED:	EY	SUBMITTED:	–
DRAWN:	GJ	DATE:	MAY 2026
CHECKED:	WB	SCALE:	AS NOTED

APPROVED: _____ CHIEF ENGINEER _____ DATE

DRAWING NO. C-08

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS



OVERALL SITE BMP PLAN

SCALE: 1" = 20'

LEGEND:

- PROPERTY LINE
- TURBIDITY BARRIER, SEE DET. 1 C-13
- COMPOST FILTER SOCK, SEE DET. 5 C-13

NOTES:

1. CONTRACTOR SHALL RETURN PROJECT SITE TO SIMILAR OR BETTER CONDITIONS AT PROJECT COMPLETION.
2. CONTRACTOR SHALL KEEP ALL CONSTRUCTION ACTIVITIES AND STORAGE OF ALL EQUIPMENT WITHIN THE PROJECT LIMITS AND SPECIFIED STAGING AREA.
3. CONTRACTOR SHALL PROVIDE A TURBIDITY CURTAIN AROUND THE PERIMETER OF IN-WATER ACTIVE DEMOLITION AND CONSTRUCTION OPERATIONS.
4. ADDITIONAL STAGING AREA FOR PILES, PREFABRICATED PIER SECTIONS, ETC. MAY BE PROVIDED IN PARKING AREA BEHIND INNER MARGINAL WHARF. COORDINATE WITH ENGINEER AND MAUI DISTRICT MANAGER.

GRAPHIC SCALE:

20 10 0 20 40

1" = 20'

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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LICENSED PROFESSIONAL ENGINEER
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HAWAII USA

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

EROSION AND SEDIMENT CONTROL PLAN

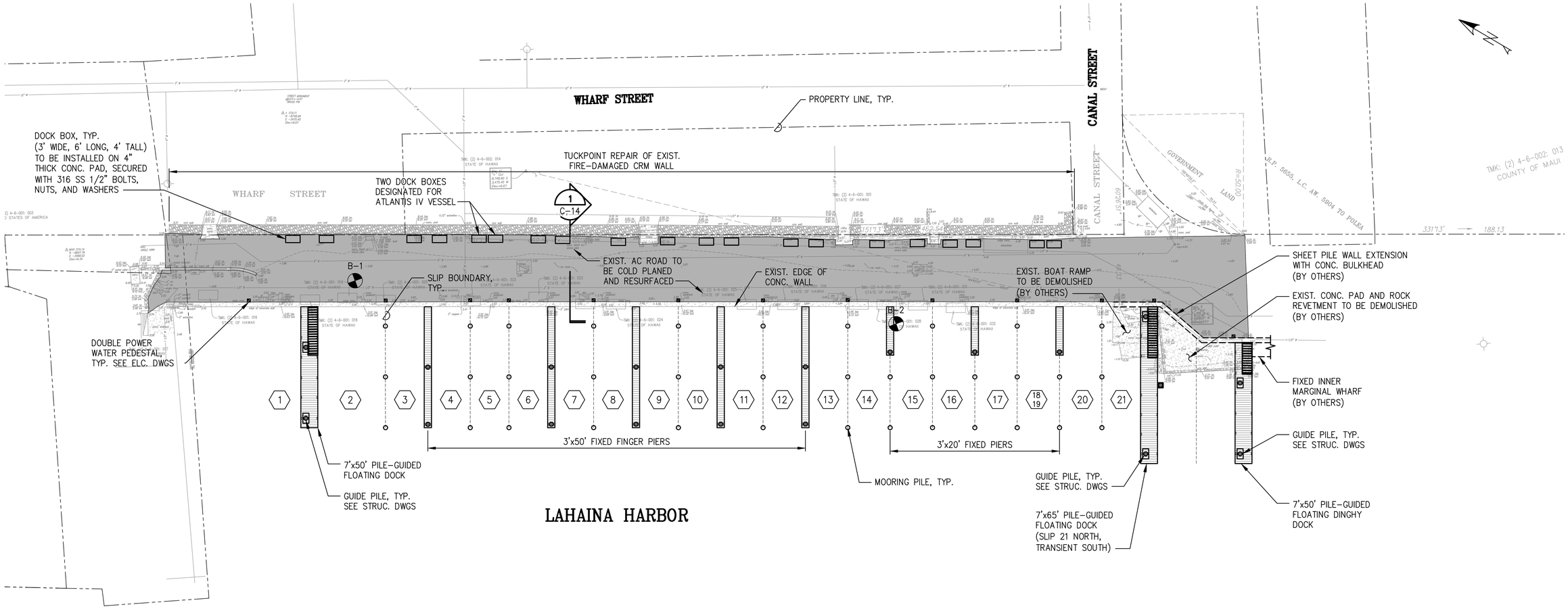
DESIGNED:	EY	SUBMITTED:	–
DRAWN:	GJ	DATE:	MAY 2026
CHECKED:	WB	SCALE:	AS NOTED

APPROVED: _____ DATE _____
CHIEF ENGINEER

DRAWING NO. C-09

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 9:54am By: MMCHANG
File Name: H:\F\2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-09 Lahaina SBH Front Row – Erosion and Sediment Control Plan.dwg



GENERAL SITE PLAN

SCALE: 1" = 20'

SLIP NO.	VESSEL NAME	LOA (FT.)	BEAM (FT.)	DRAFT (FT.)
1	TRILOGY	55	30	4
2	OCEAN LEGACY	65	25	9
3	SCOTCH MIST II	49	12	5.2
4	AURORA	45	14	7.3
5	ATLANTIS IV	65	13	12
6	REEFDANCER	57	13	8
7	FINEST KIND	35	12	6
8	GREAT WHITE	27	12	4
9	NA PALI EXPLORER III	46	11	4
10	ROXIE	32	12.5	5
11	MAUI NUI EXPLORER	43	11	4
12	START ME UP	38	13.2	6
13	START ME UP CUZ	42	13.2	6
14	SEA MONKEY	32	11	2
15	CHUTE HAPPENS	31	11	6
16	KAINALU	37	12	10
17	WAHINE KAI	38	9	4
18/19	HOLOKAI	54	14	6
20	KAIMANA	33	11	3
21	MANA	45	16	4

LEGEND:

- PROPERTY LINE
- SLIP BOUNDARIES
- (X) SLIP NUMBER
- APPROXIMATE BORING LOCATION, SEE SHEET C-04
- POWER PEDESTAL, SEE ELEC. DWGS
- A.C. PAVEMENT, SEE DET. 1 / C-14

GRAPHIC SCALE:

20 10 0 20 40

1" = 20'

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WILLIAM H. O. HOW
LICENSED PROFESSIONAL ENGINEER
NO. 4904-C
HAWAII USA

4/30/28
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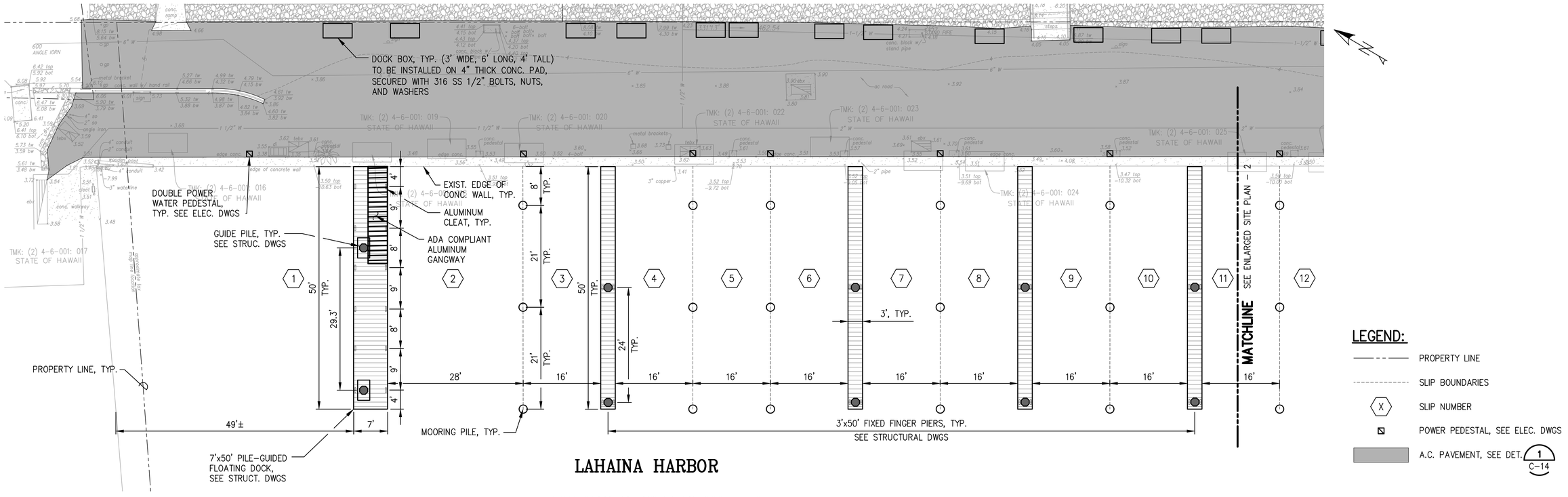
LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

GENERAL SITE PLAN

DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED
APPROVED:	DRAWING NO. C-10
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

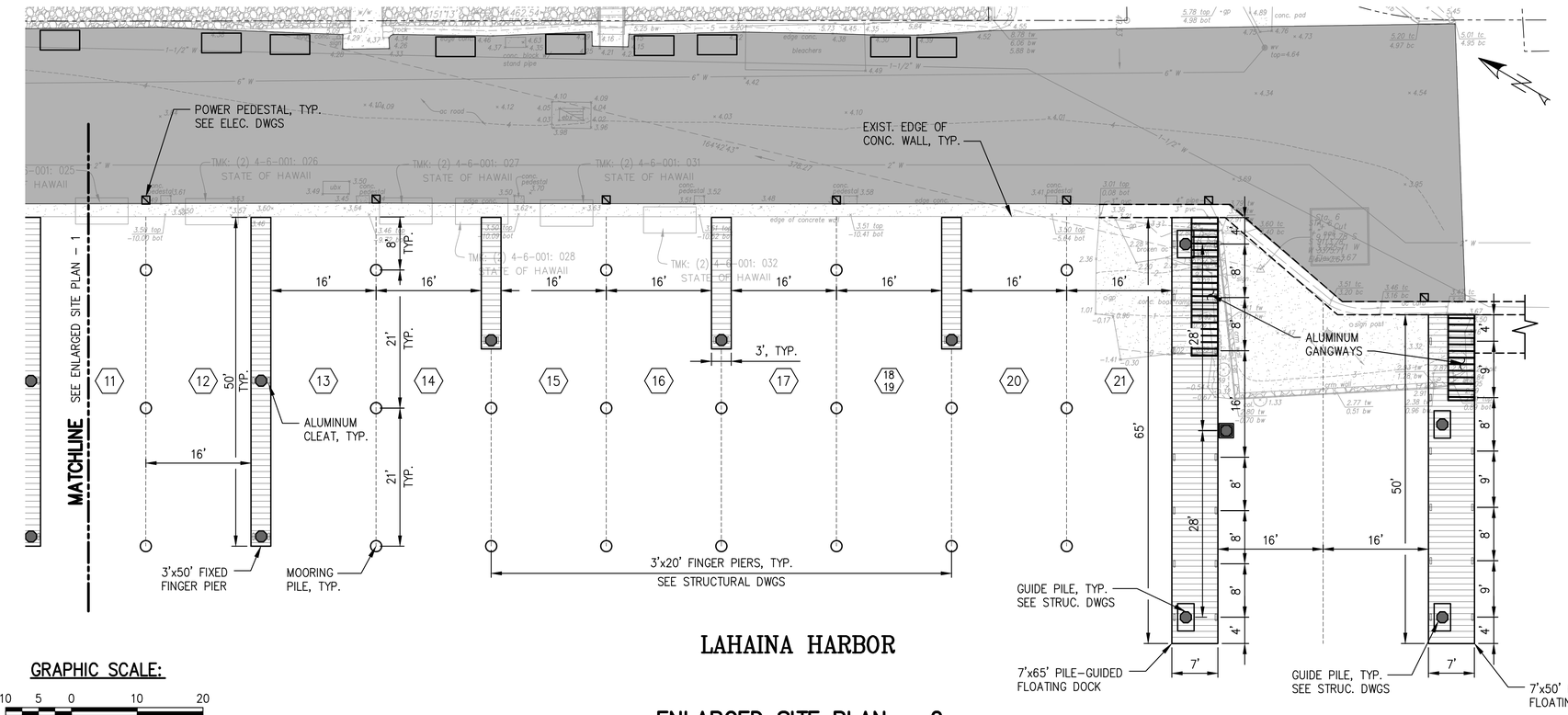
Plotted: Wed, 06 May 2026 – 8:59pm By: MMCHANG
File Name: H:\FY2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-10 Lahaina SBH Front Row – General Site Plan.dwg



LAHAINA HARBOR

ENLARGED SITE PLAN – 1

SCALE: 1" = 10'



LAHAINA HARBOR

ENLARGED SITE PLAN – 2

SCALE: 1" = 10'

GRAPHIC SCALE:

10 5 0 10 20

1" = 10'

SLIP NO.	VESSEL NAME	BEAM (FT.)	SLIP WIDTH (FT.)
1	TRILOGY	30	49
2	OCEAN LEGACY	25	28
3	SCOTCH MIST II	12	16
4	AURORA	14	16
5	ATLANTIS IV	13	16
6	REEFDANCER	13	16
7	FINEST KIND	12	16
8	GREAT WHITE	12	16
9	NA PALI EXPLORER III	11	16
10	ROXIE	12.5	16
11	MAUI NUI EXPLORER	11	16
12	START ME UP	13.2	16
13	START ME UP CUZ	13.2	16
14	SEA MONKEY	11	16
15	CHUTE HAPPENS	11	16
16	KAINALU	12	16
17	WAHINE KAI	9	16
18/19	HOLOKAI	14	16
20	KAIMANA	11	16
21	MANA	16	16

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

WILLIAM H. Q. HOW LICENSED PROFESSIONAL ENGINEER NO. 4904-C HAWAII USA

4/30/28
SIGNATURE Exp. Date of License

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

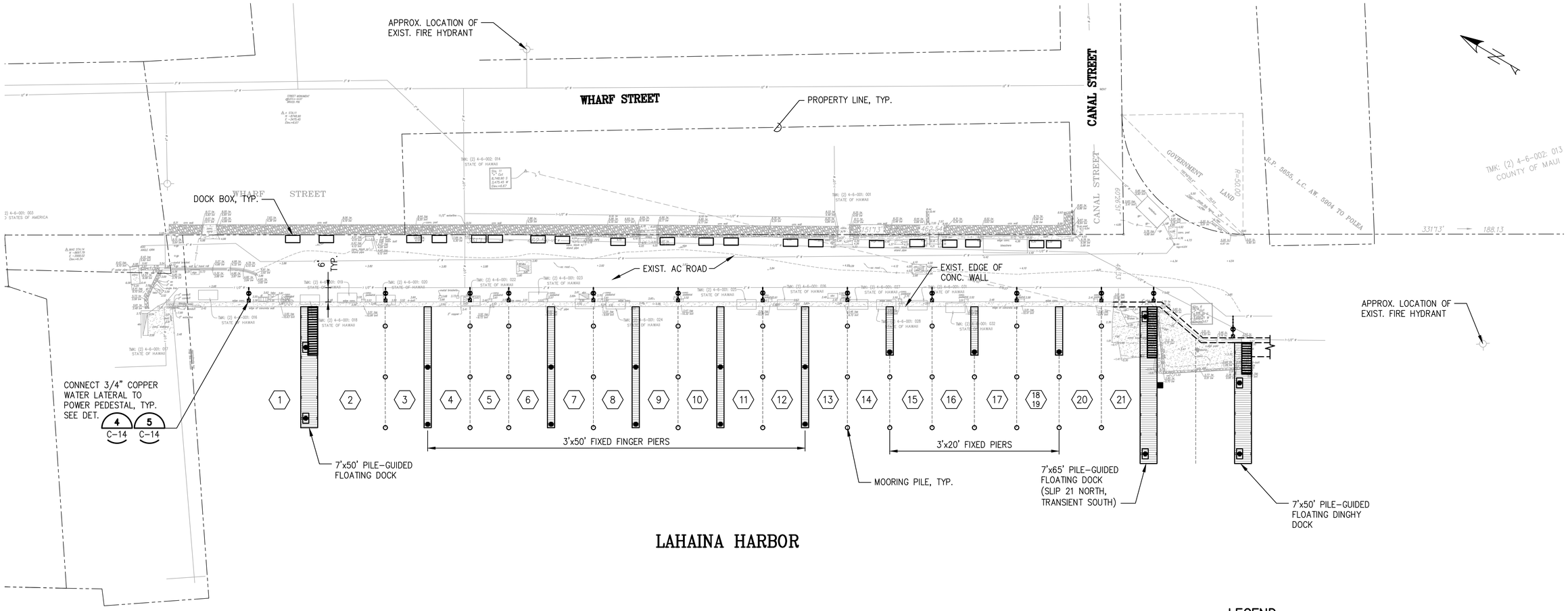
LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

ENLARGED SITE PLAN

DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED
APPROVED:	DRAWING NO. C-11
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 8:32pm By: MMCHANG
File Name: H:\P2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-11 Lahaina SBH Front Row – Enlarged Site Plan.dwg



LAHAINA HARBOR

WATER SYSTEM SITE PLAN

SCALE: 1" = 20'

GRAPHIC SCALE:

20 10 0 20 40

1" = 20'

LEGEND:

- PROPERTY LINE
- SLIP BOUNDARIES
- 3/4" COPPER WATERLINE
- (X) SLIP NUMBER
- POWER PEDESTAL, SEE ELEC. DWGS
- 3/4" BALL VALVE AND VALVE BOX, SEE DET. 7 C-14

NOTES:

1. WATER SYSTEM SHALL BE COMPLETED AND TESTED PRIOR TO ASPHALT RESURFACING.
2. ADJUST VALVE BOXES AS NECESSARY TO BE FLUSH WITH NEW A.C. SURFACE.
3. NO GALVANIZED PIPE/FITTINGS PERMITTED.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

WILLIAM H. G. HOW LICENSED PROFESSIONAL ENGINEER NO. 4904-C HAWAII USA

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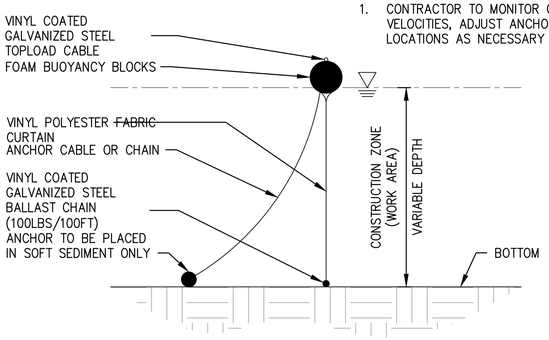
LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

WATER SYSTEM SITE PLAN

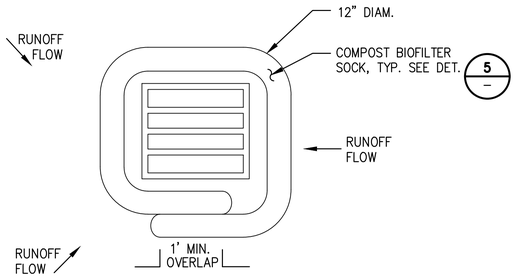
DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED
APPROVED:	DRAWING NO. C-12
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 9:02pm By: MMCHANG
File Name: H:\FY2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-12 Lahaina SBH Front Row – Water System Site Plan.dwg

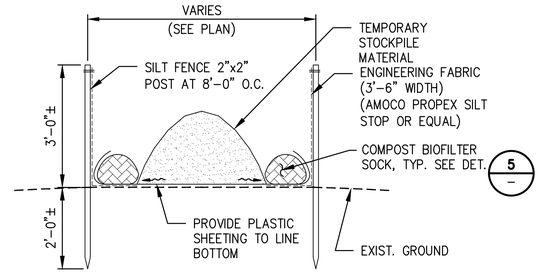


1 TURBIDITY BARRIER DETAIL
NOT TO SCALE

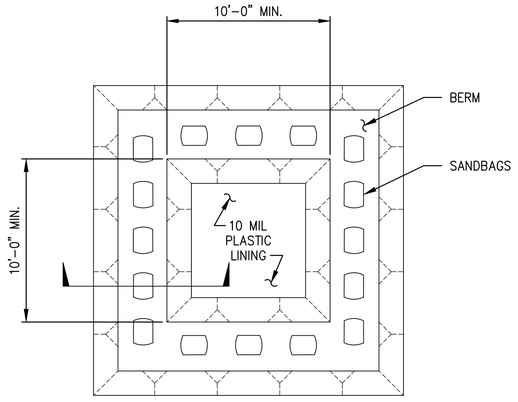


PLAN

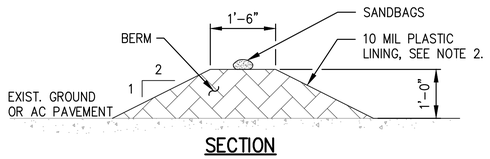
2 TEMPORARY INLET PROTECTION DETAIL
NOT TO SCALE



3 TEMPORARY STOCKPILE AREA DETAIL
NOT TO SCALE



PLAN

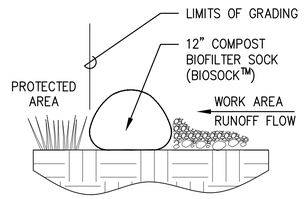


SECTION

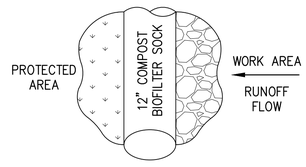
NOTES:

1. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH A MINIMUM LENGTH AND WIDTH OF 10 FT, BUT WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
2. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
3. PROVIDE 18" X 24" CONCRETE WASHOUT AREA SIGN.

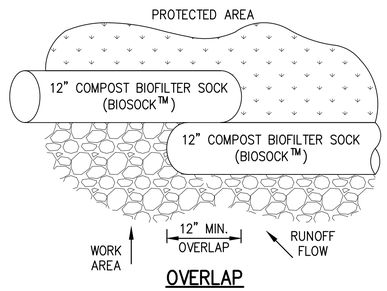
4 ABOVE GRADE CONCRETE WASHOUT FACILITY
NOT TO SCALE



SECTION



PLAN



OVERLAP

NOTES:

1. COMPOST SHALL NOT CONTAIN BIOSOLIDS AND SHOULD BE CONSISTENT WITH EPA GUIDELINES.
2. STAKING OF COMPOST FILTER SOCK IS NOT REQUIRED.

5 COMPOST FILTER SOCK DETAIL
NOT TO SCALE

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DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

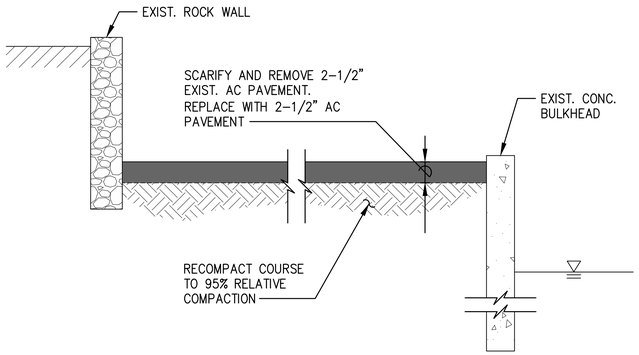
EROSION AND SEDIMENT CONTROL DETAILS

DESIGNED:	EY	SUBMITTED:	–
DRAWN:	GJ	DATE:	MAY 2026
CHECKED:	WB	SCALE:	AS NOTED

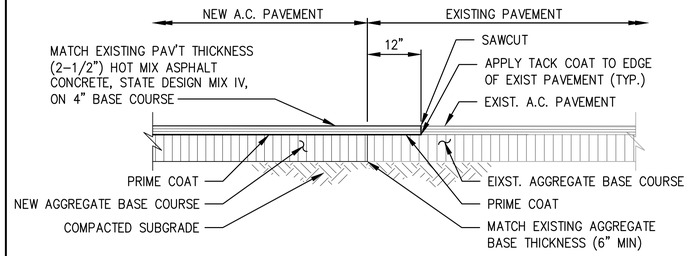
APPROVED: _____ CHIEF ENGINEER _____ DATE

DRAWING NO. C-13

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

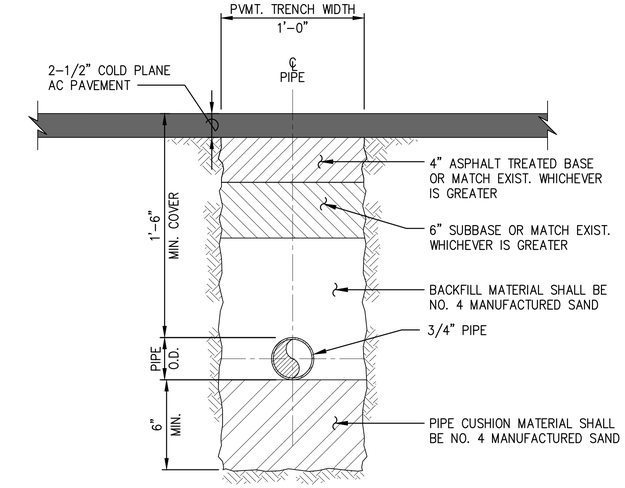


1 TYPICAL AC PAVEMENT SECTION
NOT TO SCALE

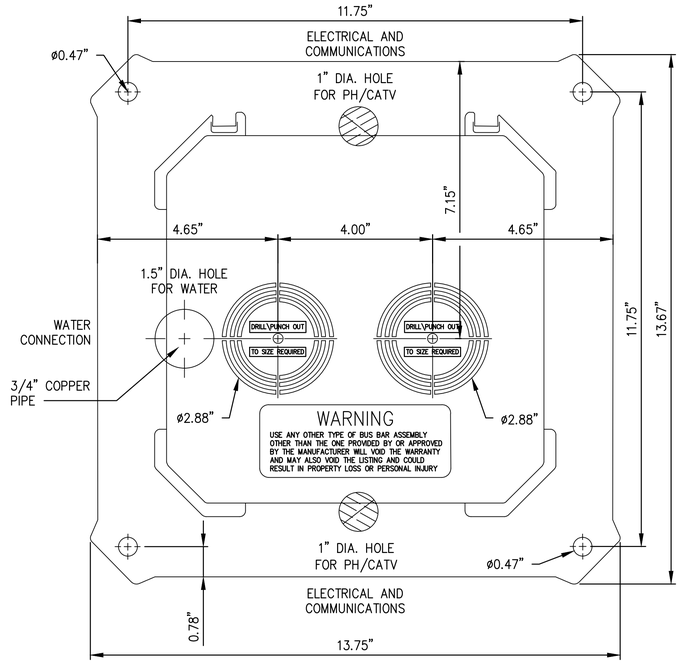


NOTE:
PAVEMENT STRUCTURE SHALL BE RESTORED TO EQUAL OR BETTER THAN EXIST. IN THICKNESS AND QUALITY.

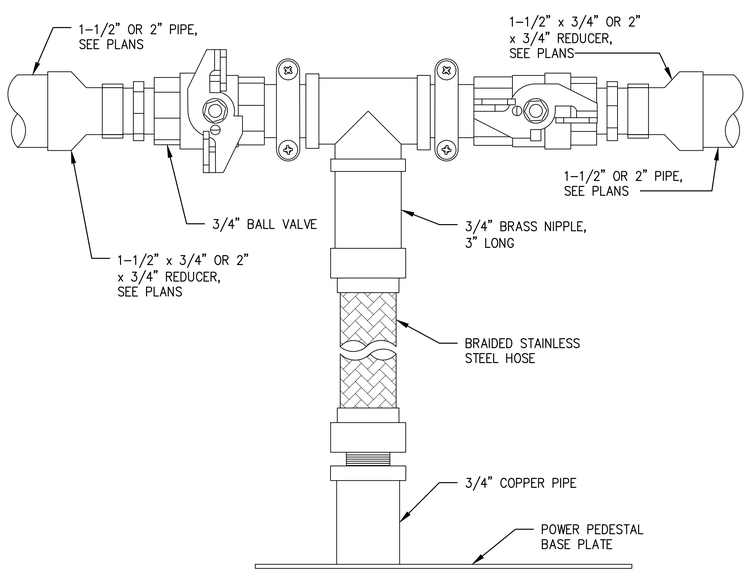
2 SMOOTH RIDING CONNECTION DETAIL
NOT TO SCALE



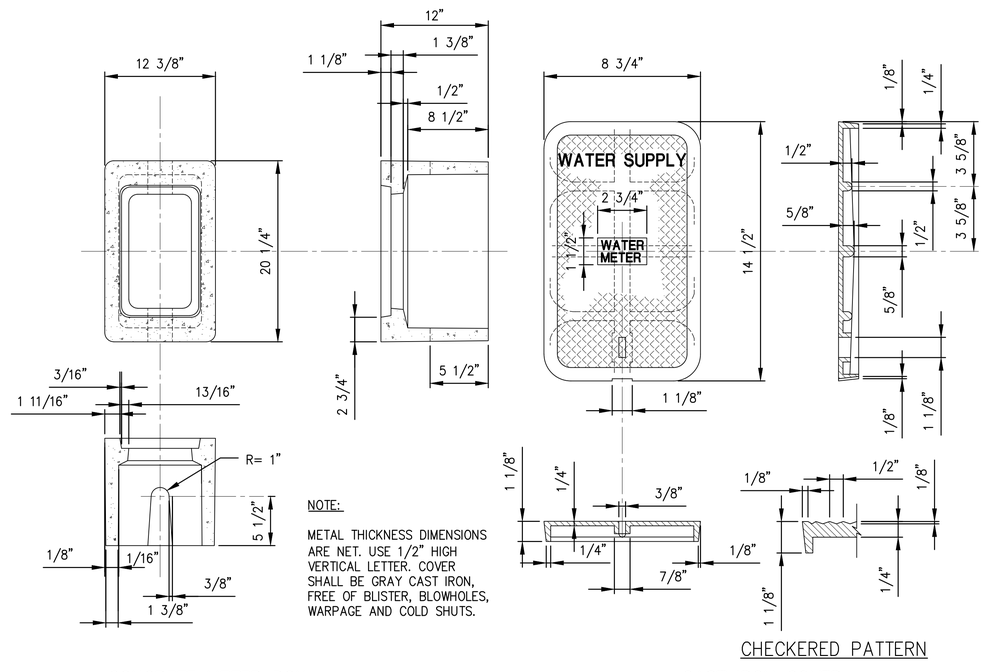
3 TYPICAL WATERLINE LATERAL TRENCH DETAIL
NOT TO SCALE



4 POWER PEDESTAL BASE DETAIL
NOT TO SCALE



5 WATER CONNECTION TO POWER PEDESTAL
NOT TO SCALE



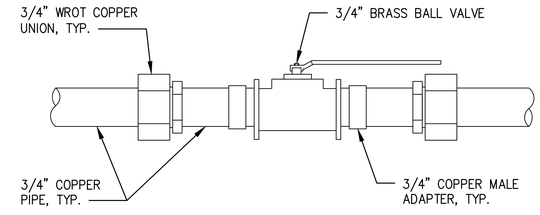
NOTE:
METAL THICKNESS DIMENSIONS ARE NET. USE 1/2" HIGH VERTICAL LETTER. COVER SHALL BE GRAY CAST IRON, FREE OF BLISTER, BLOWHOLES, WARPAGE AND COLD SHUTS.

CONCRETE METER BOX

CHECKERED PATTERN

CAST IRON COVER

6 TYPE "B" METER BOX AND COVER (VALVE BOX FOR WATER LATERAL)
NOT TO SCALE



7 3/4" BALL VALVE DETAIL
NOT TO SCALE

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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

MISCELLANEOUS DETAILS

DESIGNED: EY	SUBMITTED: –
DRAWN: GJ	DATE: MAY 2026
CHECKED: WB	SCALE: AS NOTED
APPROVED:	DRAWING NO. C-14
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 - 9:54am By: MMCHANG
File Name: H:\F\2024\24010.00 Lahaina SBH, Front Row\06 CADD\C-13 to C-14 Lahaina SBH Front Row - Miscellaneous Details.dwg

GENERAL:

A. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION, 9TH EDITION (INCLUDING MOST RECENT INTERIMS), AND THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2005 EDITION), AND ALL APPLICABLE SPECIAL PROVISIONS BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.
B. THE CONTRACTOR SHALL COMPARE ALL THE CONTRACT DOCUMENTS WITH EACH OTHER AND REPORT IN WRITING TO THE ENGINEER ALL INCONSISTENCIES AND OMISSIONS PRIOR TO CONSTRUCTION.
C. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY.
F. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED FOR STABILITY OF STRUCTURAL MEMBERS AND SYSTEMS.
G. CONSTRUCTION LOADING SHALL NOT EXCEED DESIGN LIVE LOAD UNLESS SPECIAL SHORING IS PROVIDED. PERMITTED CONSTRUCTION LOADS SHALL BE PROPERLY REDUCED IN AREAS WHERE THE STRUCTURE HAS NOT ATTAINED FULL DESIGN STRENGTH.
H. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE ADJACENT PROPERTIES, STRUCTURES, STREETS AND UTILITIES DURING THE CONSTRUCTION PERIOD. ANY DAMAGED OR DETERIORATED PROPERTY SHALL BE RESTORED TO THE CONDITION PRIOR TO THE BEGINNING OF WORK OR BETTER AT NO COST TO THE STATE.
I. DETAILS NOTED AS TYPICAL ON THE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.

DESIGN CRITERIA

A. LIVE LOADS
   1. ALL FINGER PIERS AND DOCKS: 100 PSF PEDESTRIAN LOAD
B. LATERAL LOADS
   1. WIND
      a. BASIC WIND SPEED (3 SECOND GUST): 130 MPH
   2. SEISMIC
      a. IMPORTANCE FACTOR: 1.5
      b. MAPPED SPECTRAL RESPONSE ACCELERATION COEFFICIENTS
         i. SHORT PERIOD: 0.70G
         ii. 1-SEC PERIOD: 0.21G
      c. SITE CLASS: E
      d. RESPONSE SPECTRAL ACCELERATION COEFFICIENTS
         i. SHORT PERIOD: 0.61G
         ii. 1-SEC PERIOD: 0.55G
      e. DESIGN CATEGORY: E
      f. BASIC SEISMIC-FORCE-RESISTING SYSTEM: CANTILEVER COLUMNS
      g. PEAK HORIZONTAL GROUND ACCELERATION COEFFICIENT: 0.38G
   3. BERTHING
      a. SHIP DISPLACEMENT: 414 LT
      b. TYPE OF BERTHING: SIDE BERTHING (1/4 POINT CONTACT)
      c. MAXIMUM APPROACH ANGLE: 10 DEGREES
      d. BERTHING VELOCITY: 7.33 FT/SEC
   4. MOORING
      a. HORIZONTAL LOAD: 16 TONS X 2.24 X 0.707 = 26 KIPS
      b. YAW MOMENT: 26 FOOT-KIPS
C. SOILS
   1. SERVICE LIMIT STATE BEARING CAPACITY: 35 KIPS
   2. EXTREME EVENT LIMIT STATE BEARING CAPACITY: 46 KIPS

FOUNDATION:

A. FOUNDATION DESIGN IS BASED ON THE PRELIMINARY DRIVEN PILE RECOMMENDATIONS BY KOKUA GEOTECH, LLC., DATED APRIL 21, 2025 AND THE GEOTECHNICAL DATA REPORT BY KOKUA GEOTECH, LLC., DATED OCTOBER 29, 2024.
B. CONTRACTOR SHALL PROVIDE DE-WATERING OF EXCAVATED AREAS, AS REQUIRED.
C. CONTRACTOR SHALL PROVIDE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING, AND SHORING NECESSARY TO PRESERVE EXCAVATIONS AND EARTH BANKS. SHORING SHALL CONFORM TO OSHA REGULATIONS.
D. CONTROLLED LOW-STRENGTH MATERIAL (CLSM) SHALL BE IN ACCORDANCE WITH ENTIRE SECTION 314 OF THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005 EDITION. THE CLSM SHALL BE PLACED AS SHOWN IN THE DRAWINGS OR AS APPROVED BY THE ENGINEER IN WRITING.

CONCRETE:

A. CONCRETE CONSTRUCTION SHALL CONFORM TO AASHTO LRFD.
B. CONCRETE SHALL BE NORMAL WEIGHT HARD ROCK CONCRETE AND SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:
   1. ABUTMENTS AND PILE CAPS 5000 PSI
   2. PRESTRESSED PILES 7000 PSI
   3. PILE BUILD-UP CONCRETE 7000 PSI
   4. ALL OTHER CONCRETE 4000 PSI
C. CONCRETE DELIVERY TICKETS SHALL RECORD ALL FREE WATER IN THE MIX AT BATCHING PLANT, ADDED FOR CONSISTENCY BY DRIVER, AND ANY ADDITIONAL REQUEST BY CONTRACTOR UP TO THE MAXIMUM AMOUNT ALLOWED BY THE MIX DESIGN.
D. ALL INSERTS, ANCHOR BOLTS, PLATES, AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE HOT-DIPPED GALVANIZED ACCORDING TO ASTM A153 UNLESS OTHERWISE NOTED.
E. REINFORCING BARS, ANCHOR BOLTS, INSERTS, AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE SECURED IN POSITION PRIOR TO PLACEMENT OF CONCRETE.
F. CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A SLAB OR FOOTING THAT DO NOT CONFORM TO TYPICAL DETAILS SHALL BE LOCATED AND THE PROPOSED CONSTRUCTION DETAIL SUBMITTED TO THE ENGINEER FOR APPROVAL.
G. CONDUITS, PIPES, AND SLEEVES EMBEDDED WITHIN A SLAB OR WALL (OTHER THAN THOSE MERELY PASSING THROUGH) SHALL BE:
   1. NO LARGER IN OUTSIDE DIMENSIONS THAN ONE THIRD THE OVERALL SLAB OR WALL THICKNESS IN WHICH THEY ARE EMBEDDED.
   2. PLACED IN THE MIDDLE ONE THIRD OF SLAB OR WALL THICKNESS
   3. SPACED NO CLOSER THAN THREE DIAMETERS OR WIDTHS ON CENTER.
H. CONDUITS, PIPES, AND SLEEVES SHALL NOT BE PLACED THROUGH OR EMBEDDED IN A BEAM UNLESS SPECIFICALLY DETAILED.
I. THE CONTRACTOR SHALL LOCATE CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS, SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE STRESSES. SUBMIT PROPOSED LOCATIONS OF CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL. A SHRINKAGE REDUCING ADMIXTURE SHALL BE INCLUDED IN THE CONCRETE MIX FOR THE DECK TOPPING.
J. A CORROSION INHIBITING ADMIXTURE SHALL BE INCLUDED IN THE CONCRETE MIX FOR ALL CONCRETE. THE ADMIXTURE SHALL BE RHEOCRETE CNI CORROSION INHIBITOR FROM BASF, DCI S CORROSION INHIBITOR FROM GRACE CONSTRUCTION PRODUCTS OR AN APPROVED EQUAL. ADDITION OF CORROSION INHIBITING ADMIXTURE SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

REINFORCING STEEL:

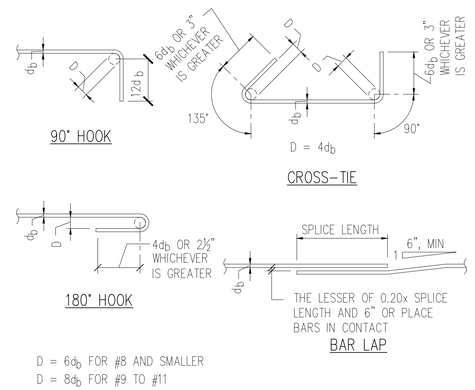
A. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO AASHTO M 334M/ M 334, CHROMX 4100 OR APPROVED EQUAL.
B. CLEAR CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
   1. FOOTINGS, GRADE BEAMS, ETC. CAST AGAINST EARTH: 3"
   2. FOOTINGS, WALLS, GRADE BEAMS, ETC. FORMED AND EXPOSED TO EARTH OR WEATHER: 2"
   3. EXTERIOR CONCRETE IN COASTAL REGION: 3"
C. CLEAR DISTANCE BETWEEN THE SURFACE OF A BAR AND ANY SURFACE OF A MASONRY UNIT SHALL BE NOT LESS THAN 3/4 INCH, UNLESS OTHERWISE NOTED.
D. REINFORCING STEEL SHALL BE SPLICED WHERE INDICATED ON PLANS. PROVIDE LAP SPLICE LENGTH PER TYPICAL DETAILS AND SCHEDULE, UNLESS OTHERWISE NOTED.
E. MECHANICAL SPLICE CONNECTORS SHALL DEVELOP IN TENSION 125 PERCENT OF THE SPECIFIED MINIMUM YIELD STRENGTH OF REINFORCING BARS.
F. BAR BENDS AND HOOKS SHALL BE "STANDARD HOOKS" IN ACCORDANCE WITH ACI 318.
G. MINIMUM REINFORCEMENT BEND DIAMETERS SHALL COMPLY WITH AASHTO 5.10.2.3.
H. REINFORCING STEEL SHALL BE PLACED AND SECURED IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE WITH PLACEMENT TOLERANCES PER ACI STANDARD 117.

ALUMINUM:

A. FABRICATION AND ERECTON OF ALUMINUM STRUCTURES SHALL BE IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL (ADM1-05) AND ALUMINUM SHEET METAL WORK IN BUILDING CONSTRUCTION, 4TH EDITION (ASM35-00).
B. ALUMINUM SHALL CONFORM TO 6061-T6 UNLESS OTHERWISE NOTED.
C. WELDS AND WELDNG PROCEDURES SHALL CONFORM TO THE STRUCTURAL WELDING CODE-ALUMINUM AWS D1.2 OF THE AMERICAN WELDING SOCIETY.
D. WELD FILLER METAL SHALL BE 5356.
E. ALL ALUMINUM SHALL BE COATED AFTER FABRCATION WITH ONE (1) COAT OF MICROGUARD TS AD95 AS MANUFACTURER BY ADSIL CORPORATION, OR APPROVED EQUAL. PREPARE SURFACES AND APPLY ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
F. IN ADDITION TO THE MICROGUARD TS AD95 COATING, ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE COATED WITH COAL TAR EPOXY. USE ONE OF THE COATING SYSTEMS LISTED IN SPECIFICATION SECTION 05530, PARA.2.2. SURFACE PREPARATION SHALL CONFORM TO SSPC-SP15.

MINIMUM SPLICE & EMBEDMENT LENGTHS					
	CONCRETE STRENGTH = 5,000 PSI				
	LAP SPLICE		EMBEDMENT		
			STRAIGHT		
BAR SIZE	OTHER BARS	TOP BAR	OTHER BARS	TOP BAR	WITH STANDARD 90° HOOK
#4	28"	37"	22"	28"	12"
#5	35"	46"	27"	35"	16"
#6	42"	55"	33"	42"	18"
#7	49"	64"	38"	49"	20"
#8	56"	73"	43"	56"	24"
#9	70"	91"	54"	70"	26"
#10	86"	112"	66"	86"	30"
#11	103"	134"	79"	103"	32"

NOTES:
1. "TOP BARS" ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST BELOW.
2. EMBEDMENT LENGTHS FOR BARS WITH 90° HOOK ARE BARS WITH SIDE COVER,NORMAL TO PLANE OF HOOK, OF NOT LESS THAN 2½" AND COVER ON BAR EXTENSION BEYOND HOOK NOT LESS THAN 2". INCREASE EMBEDMENT LENGTH BY 25% FOR BARS NOT MEETING THESE REQUIREMENTS.



D = 6d_b FOR #8 AND SMALLER
D = 8d_b FOR #9 TO #11

1 SO.1 TYPICAL REBAR SPLICE AND EMBEDMENT LENGTH SCHEDULE
NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BRANDON L. CHING LICENSED PROFESSIONAL ENGINEER No. 17851-S HAWAII, U.S.A.

Brandon Ching 4/30/28
SIGNATURE Exp. Date of License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

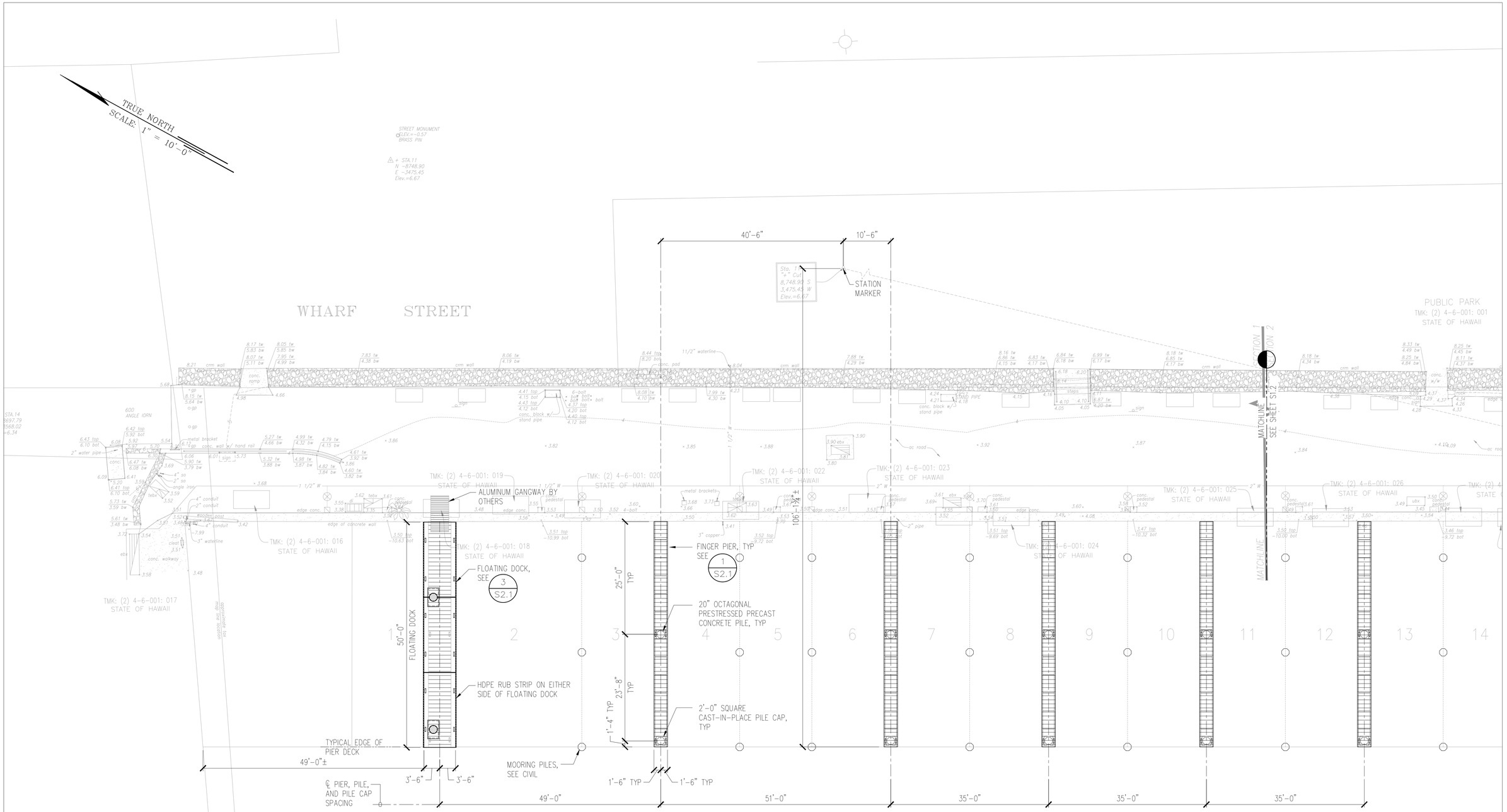
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

GENERAL NOTES AND TYPICAL DETAILS

DESIGNED: ER	SUBMITTED: -
DRAWN: ER	DATE: MAY 2026
CHECKED: BC	SCALE: AS NOTED
APPROVED:	DRAWING NO. S0.1
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS



1 / S1.1 LAYOUT PLAN
SCALE: 1" = 10'-0"

0' 10' 20' 30'
1" = 10'

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LAYOUT PLAN – 1

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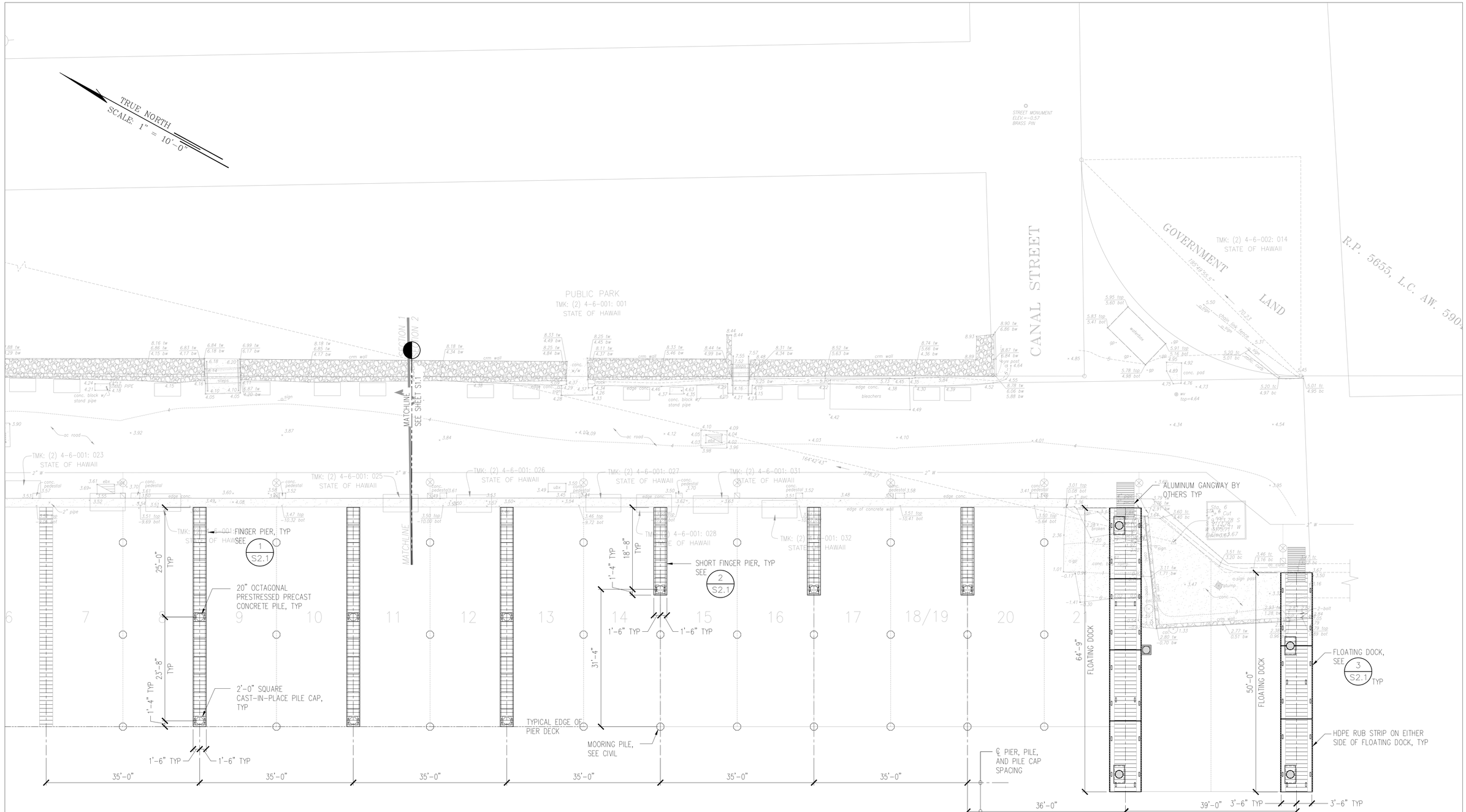

1 / S1.2 **LAYOUT PLAN**
SCALE: 1" = 10'-0"

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LAHAINA SMALL BOAT HARBOR
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LAYOUT PLAN – 2

DESIGNED:	ER	SUBMITTED:	–
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CHECKED:	BC	SCALE:	AS NOTED
APPROVED:			DRAWING NO. S1.2
CHIEF ENGINEER		DATE	

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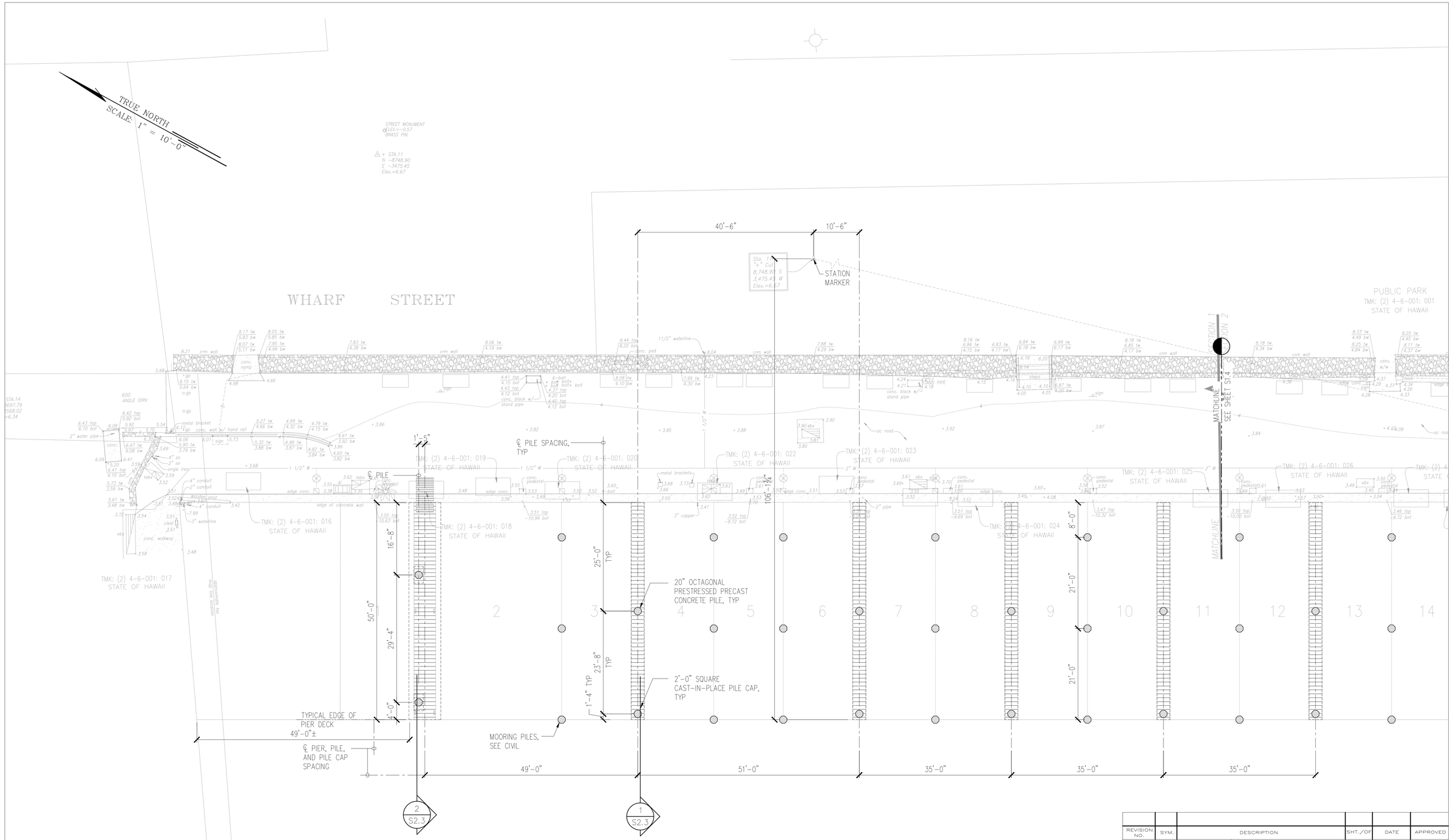

1 / S1.3 **FOUNDATION PLAN**
SCALE: 1" = 10'-0"

0' 10' 20' 30'
1" = 10'

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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

FOUNDATION PLAN – 1

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CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

TRUE NORTH
SCALE: 1" = 10'-0"

PUBLIC PARK
TMK: (2) 4-6-001: 001
STATE OF HAWAII

CANAL STREET

STREET MONUMENT
ELEV.=-0.57
BRASS PIN

TMK: (2) 4-6-002: 014
STATE OF HAWAII

GOVERNMENT LAND

R.P. 5655, L.C. AW. 590

MATCHLINE SECTION 1
SEE SHEET S1.3

MATCHLINE SECTION 2

℄ PILE SPACING, TYP

TMK: (2) 4-6-001: 023
STATE OF HAWAII

TMK: (2) 4-6-001: 025
STATE OF HAWAII

TMK: (2) 4-6-001: 026
STATE OF HAWAII

TMK: (2) 4-6-001: 027
STATE OF HAWAII

TMK: (2) 4-6-001: 031
STATE OF HAWAII

TMK: (2) 4-6-001: 024
STATE OF HAWAII

TMK: (2) 4-6-001: 028
STATE OF HAWAII

TMK: (2) 4-6-001: 032
STATE OF HAWAII

DECK OUTLINE ABOVE

2'-0" SQUARE CAST-IN-PLACE PILE CAP, TYP

20" OCTAGONAL PRESTRESSED PRECAST CONCRETE PILE, TYP

TYPICAL EDGE OF PIER DECK

MOORING PILE, SEE CIVIL

℄ PIER, PILE, AND PILE CAP SPACING

OUTLINE OF FLOATING DOCK ABOVE

FLOATING DOCK CONNECTION AT BOTTOM OF RAMP

OUTLINE OF FLOATING DOCK ABOVE

6 7 8 9 10 11 12 13 14 15 16 17 18/19 20 21

35'-0" 35'-0" 35'-0" 35'-0" 35'-0" 35'-0" 35'-0"

36'-0" 39'-0"

25'-0" TYP
23'-8" TYP
1'-4" TYP
21'-0"
18'-8" TYP
8'-0"
28'-4½"
29'-4"
4'-0"

1'-5"

0' 10' 20' 30'
1" = 10'

1 S1.3 **FOUNDATION PLAN**
SCALE: 1" = 10'-0"

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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

FOUNDATION PLAN – 2

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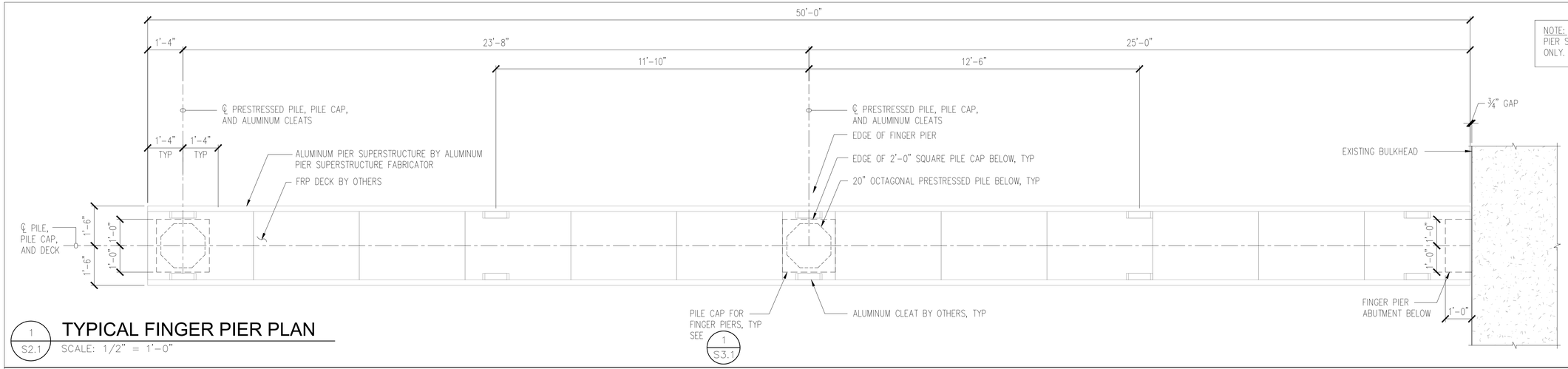
CHECKED:	BC	SCALE:	AS NOTED
APPROVED:			DRAWING NO. S1.4
CHIEF ENGINEER		DATE	

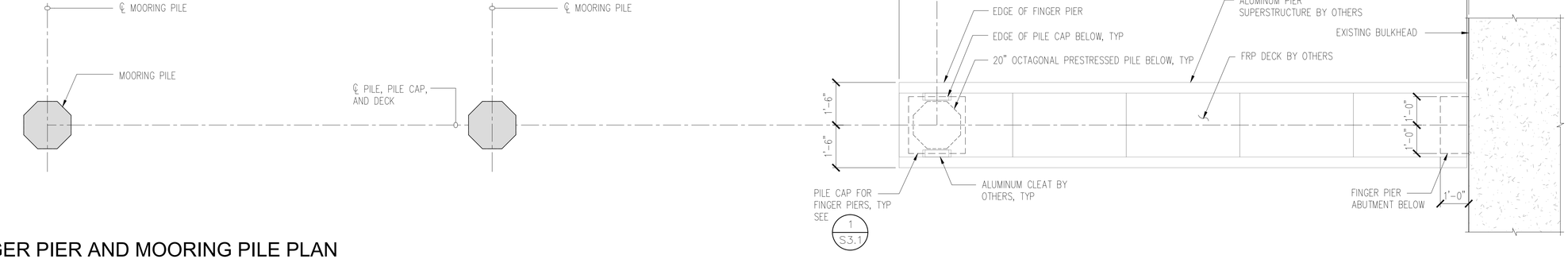
JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS



1/S2.1 **TYPICAL FINGER PIER PLAN**

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

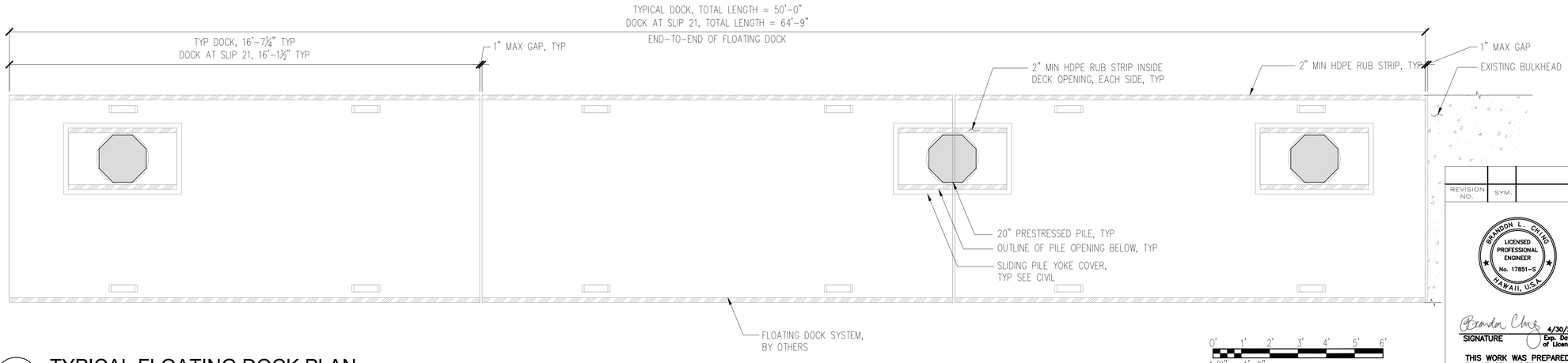
NOTE:
PIER SUPERSTRUCTURE LAYOUT IS SCHEMATIC ONLY.



2/S2.1 **FINGER PIER AND MOORING PILE PLAN**

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

NOTE:
PIER SUPERSTRUCTURE LAYOUT IS SCHEMATIC ONLY.



3/S2.1 **TYPICAL FLOATING DOCK PLAN**

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

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LAHAINA SMALL BOAT HARBOR
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TYPICAL PIER AND DOCK LAYOUT PLANS

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DRAWING NO. S2.1

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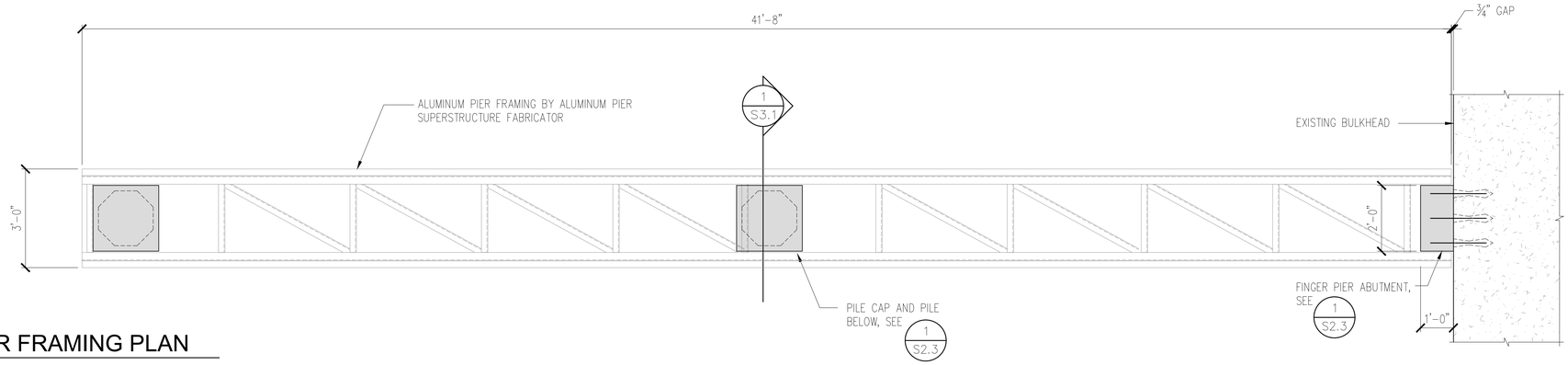
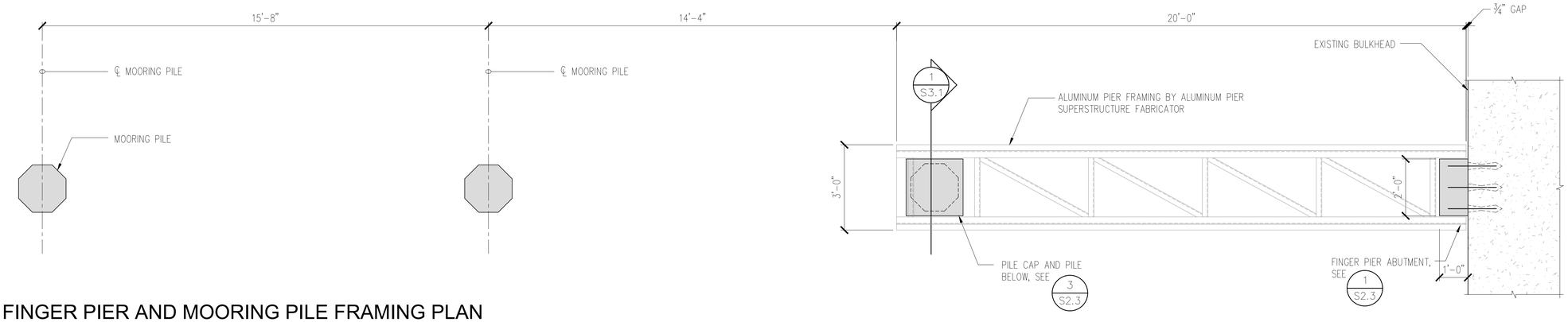


1 S2.2 **TYPICAL FINGER PIER FRAMING PLAN**

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



3 S2.2 **FINGER PIER AND MOORING PILE FRAMING PLAN**

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

0' 1' 2' 3' 4' 5' 6'

1/2" = 1'-0"

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TYPICAL PIER AND DOCK FRAMING PLAN

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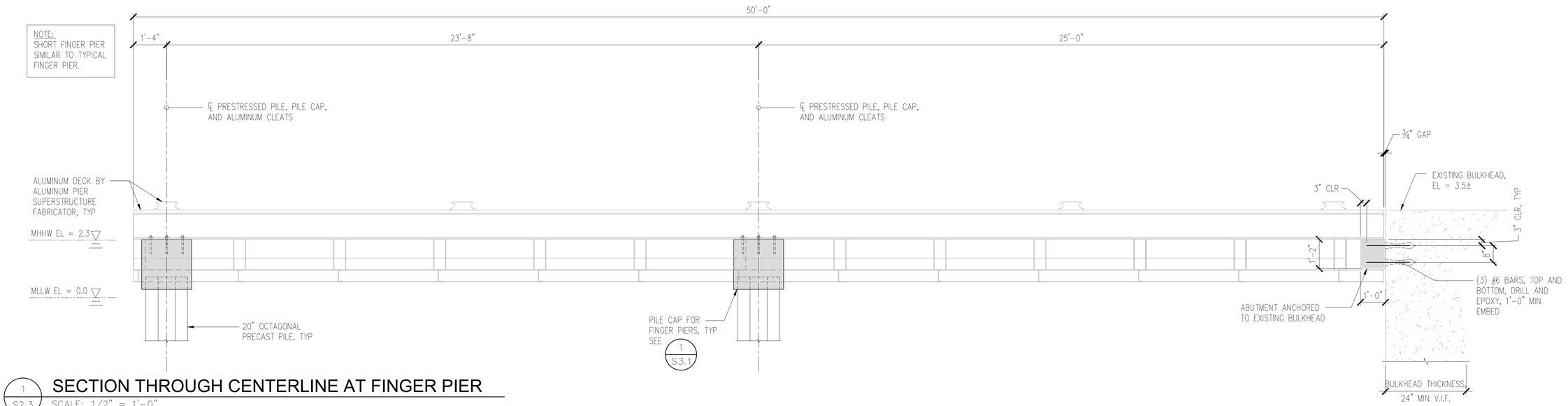
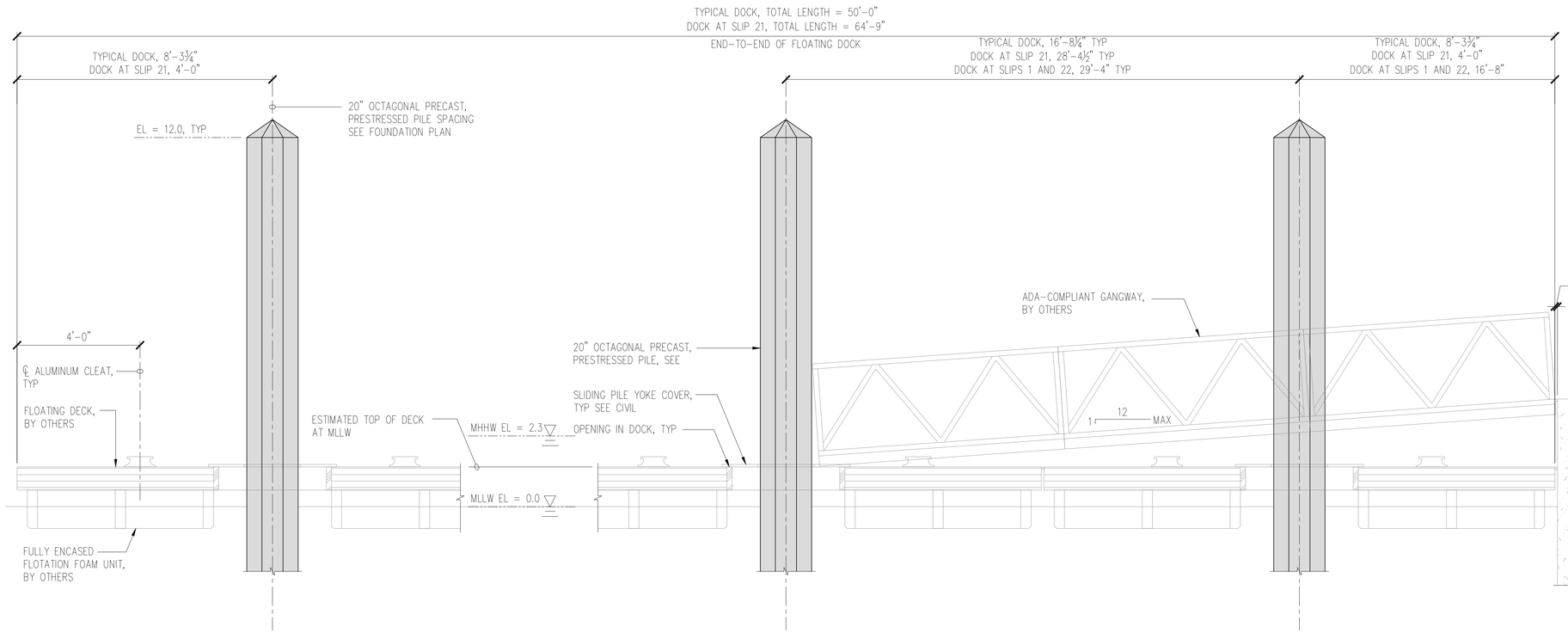


1/S2.3 SECTION THROUGH CENTERLINE AT FINGER PIER

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



2/S2.3 SECTION THROUGH PILE CENTERLINE AT FLOATING DOCK

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

NOTES:
1. HINGE LAYOUT IS SCHEMATIC ONLY.
2. LATERAL CLEARANCE FOR GUIDE PILE RUB STRIP IS ½" MINIMUM AND 1" MAXIMUM AT MLLW AND MHHW ACCORDING TO THE RELATIVE LOCATION OF THE GUIDE PILE AT EACH WATER SURFACE ELEVATION.
3. FOR BALANCE OF INFORMATION ON PILE LOCATIONS, SEE 1/S1.3 AND 1/S1.4

0' 1' 2' 3' 4' 5' 6'
1/2" = 1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BRANDON L. CHING LICENSED PROFESSIONAL ENGINEER No. 17851-S HAWAII, U.S.A.

Brandon Chng 4/30/28
SIGNATURE Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

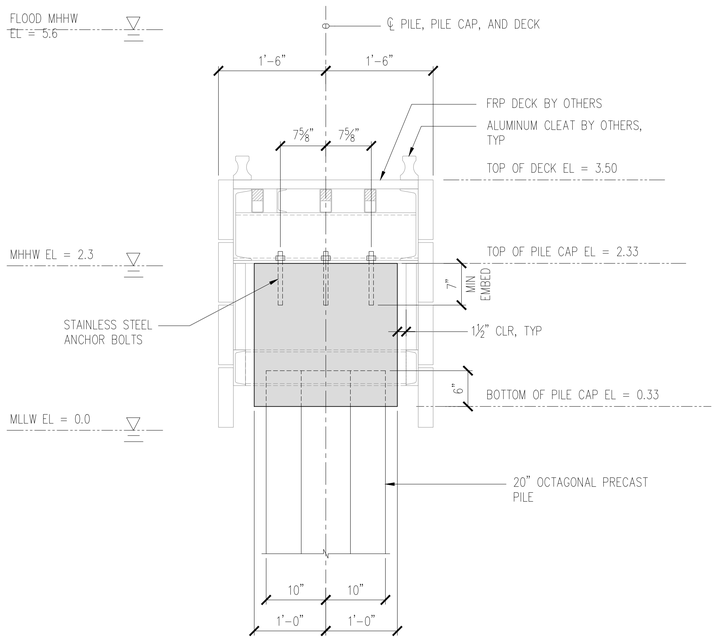
LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

FIXED PIER ELEVATION

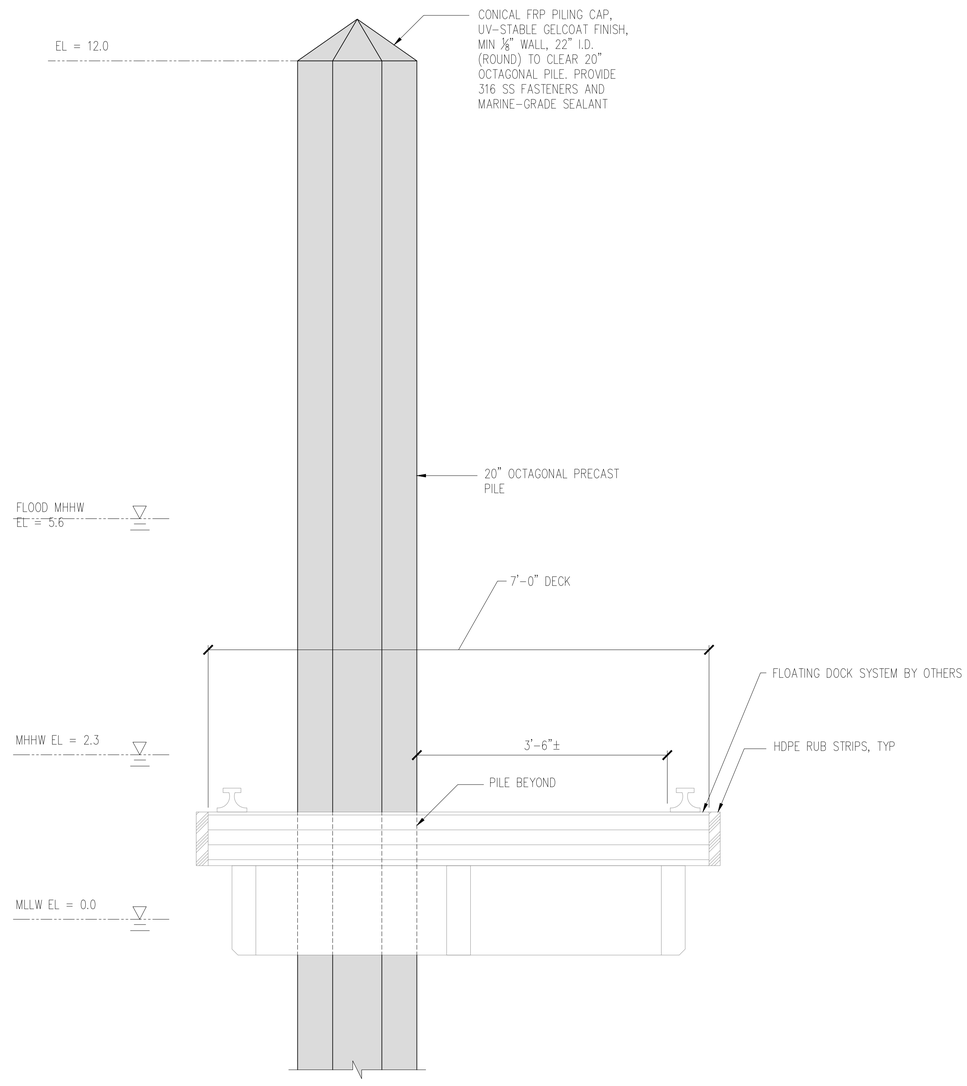
DESIGNED: ER	SUBMITTED: –
DRAWN: ER	DATE: MAY 2026
CHECKED: BC	SCALE: AS NOTED
APPROVED:	DRAWING NO. S2.3
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

NOTES:
1. ALUMINUM DECK BY ALUMINUM PIER SUPERSTRUCTURE FABRICATOR.
2. FLOATING DOCK BY OTHERS.
3. FINGER PIER PILE CAP REINFORCEMENT NOT DRAWN FOR CLARITY. FOR BALANCE OF INFORMATION, SEE 1/S4.2



TYPICAL SECTION AT FINGER PIER



TYPICAL SECTION AT FLOATING DOCK

1/S3.1 TYPICAL DECK SECTIONS

SCALE: 1" = 1'-0"

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Brandon Ching 4/30/28
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

FIXED PIER AND FLOATING DOCK SECTIONS

DESIGNED: ER	SUBMITTED: –
DRAWN: ER	DATE: MAY 2026
CHECKED: BC	SCALE: AS NOTED
APPROVED:	DRAWING NO. S3.1
CHIEF ENGINEER	DATE

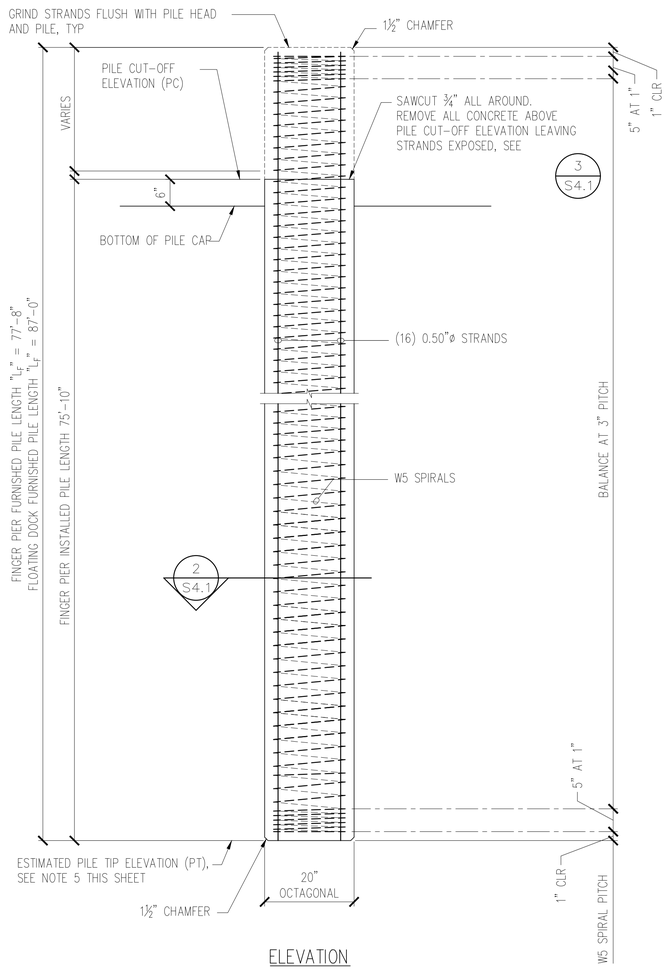
JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

PRECAST PRESTRESSED PILE NOTES:

1. PRESTRESSED CONCRETE 28 DAY COMPRESSIVE STRENGTH, f'c = 7,000 PSI. PRESTRESSED CONCRETE STRENGTH AT TIME OF RELEASE, f'c = 5,600 PSI.
2. PILE BUILD-UP CONCRETE 28 DAY COMPRESSIVE STRENGTH (WITH AND WITHOUT DRIVING), f'c = 7,000 PSI.
3. PRESTRESSING STRANDS SHALL BE 7 WIRE, 0.50"ø LOW RELAXATION STEEL STRANDS (AREA = 0.153 IN^2) WITH AN ULTIMATE TENSILE STRENGTH OF 270 KSI, INITIAL STRAND STRESS (BEFORE ANY LOSSES) = 202.5 KSI.
4. NON-PRESTRESSED REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A1035, CHROMX 4100, OR APPROVED EQUAL. SPIRAL REINFORCEMENT SHALL CONFORM TO ASTM A1064.
5. EACH PILE LOCATION SHALL BE PREDRILLED A MINIMUM OF 65 FEET INTO THE MUDLINE, CORRESPONDING TO ELEVATION -75.0 MSL. THE DIAMETER OF THE PREDRILLED HOLES SHALL BE LIMITED TO THE DIAGONAL DIMENSION OF THE PILE TO PROVIDE THE DRIVEN PILES WITH SUFFICIENT SOIL/ROCK CONTACT FOR LATERAL LOAD RESISTANCE. THE ANNULAR SPACE BETWEEN PILES AND PREDRILLED HOLES SHALL BE GROUTED WITH TREMIE CONCRETE. THE PREDRILLING DEPTHS SHALL BE CONFIRMED AND/OR MODIFIED BY THE GEOTECHNICHAL ENGINEER OF RECORD DURING CONSTRUCTION.
6. PILES SHALL BE DRIVEN WITH A HAMMER CAPABLE OF DELIVERING A MINIMUM RATED ENERGY OF APPROXIMATELY 40,000 FOOT POUNDS OF ENERGY PER BLOW. THE HAMMER SHALL BE EQUIPPED WITH ENERGY CONTROL LEVEL. PRIOR TO CONSTRUCTION, PILE AND DRIVING EQUIPMENT DATA FORMS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.
7. FINAL PILE DRIVING TERMINATION CRITERIA SHALL BE ESTABLISHED BASED ON GEOTECHNICAL REVIEW, WAVE EQUATION ANALYSIS, PDA/CAPWAP RESULTS, AND THE APPROVED HAMMER SYSTEM. PROVIDE A TEST PILE PROGRAM USING PDA TO MONITOR HAMMER PERFORMANCE, PILE DRIVING STRESSES, PILE INTEGRITY, AND PILE CAPACITY. PDA-MONITORED RESTRIKES SHALL BE PERFORMED NO SOONER THAN 72 HOURS AFTER INITIAL DRIVE. CAPWAP ANALYSES SHALL BE PERFORMED AT END OF INITIAL DRIVE AND AT BEGINNING OF RESTRIKE.
8. PILES SHALL BE DRIVEN TO THE DEPTHS REQUIRED WITH ALLOWANCE IN THE LENGTH OF PILES FOR CUT-OFF AT TOP OF FINISH ELEVATION FOR PILES.
9. DRIVING SHALL NOT BE PERMITTED UNTIL THE PILES CONCRETE HAS ATTAINED A MINIMUM STRENGTH OF 7,000 PSI, OR SEVEN DAYS AFTER CASTING, WHICHEVER IS LATER. PILES SHALL BE HANDLED, SUPPORTED, AND STORED IN SUCH A MANNER AS TO AVOID EXCESSIVE BENDING STRESSES THAT CAN CAUSE CRACKING. PICK UP POINTS SHALL BE AS SHOWN IN THE SHOP DRAWINGS.
10. PILE HEADS SHALL BE PROTECTED FROM DIRECT IMPACT OF THE HAMMER BY A PILE CUSHION SO ARRANGE THAT ANY STRANDS OR REINFORCING BARS PROJECTING ABOVE THE PILES WILL NOT BE DISPLACED OR DEFORMED IN DRIVING.
11. PILES SHALL BE SECURED AGAINST LATERAL MOVEMENTS BY FIXED LEADS DURING DRIVING. PILES SHALL BE DRIVEN STRAIGHT AND TRUE. MAXIMUM ALLOWABLE TOTAL DEVIATION FOR PILE LOCATION IS ONE INCH. ANY DRIVEN PILE EXCEEDING THE 1-INCH DEVIATION SHALL BE PULLED OUT AND RE-DRIVEN AT THE CONTRACTOR'S EXPENSE.
12. ALL PILES SHALL BE DRIVEN FULL LENGTH TO THE PILE TIP ELEVATION AS SHOWN ON THE PLANS. EACH PILE SHALL BE DRIVEN CONTINUOUSLY WITHOUT INTERRUPTION. ANY PILE DAMAGED IN DRIVING OR HANDLING TO IMPAIR ITS USEFULNESS SHALL BE REPLACED BY A NEW PILE AT THE CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE ENGINEER.
13. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT DURING ALL PILE DRIVING OPERATIONS TO OBSERVE THE ACTUAL DRIVING BEHAVIOR AND TO FURTHER EVALUATE THE FIELD PERFORMANCE. ALL COSTS ASSOCIATED WITH CONTRACTING A GEOTECHNICAL ENGINEERING FIRM TO CONDUCT SITE OBSERVATIONS DURING PILE DRIVING OPERATIONS SHALL BE PAID FOR BY THE CONTRACTOR. ALL COSTS SHALL BE INCLUDED IN PILE DRIVING AND INSTALLAION PAY ITEMS IN THE PROPOSAL SCHEDULE.
14. THE TOPS OF ALL PILES PROJECTING ABOVE THE CUT-OFF ELEVATION AFTER PILES HAVE BEEN ACCEPTED BY THE ENGINEER SHALL BE CUT-OFF AT THE PROPER ELEVATION AND THE CUT-OFFS SHALL BE REMOVED FROM THE SIT. PILE CUT-OFFS AND OTHER DEBRIS SHALL NOT BE ALLOWED TO FALL INTO THE HARBOR. IF PILE CUT-OFFS OR DEBRIS FALL INTO THE HARBOR, THE CONTRACTOR SHALL REMOVE THEM IMMEDIATELY. ALL PILE STRANDS NOT TO BE EMBEDDED INTO PILE CAP SHALL BE CUT OFF AT LEAST ONE INCH BELOW THE TOP OF PILES AND PATCHED WITH AN EPOXY GROUT MIXTURE. CUTTING OF PILES SHALL BE WITH PNEUMATIC TOOLS OR OTHER ACCEPTABLE METHODS. PILES THAT NEED TO BE CUT-OFF SHALL BE CUT-OFF IN A NEAT WORKMANSHIP MANNER.

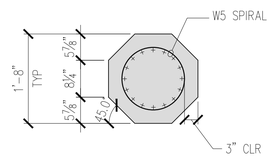
PILE SCHEDULE				
PILE LOCATION	PC ELEVATION	PT ELEVATION	P_{COMP} (KIPS)	P_{UPLIFT} (KIPS)
FINGER PIER, NEARSHORE	0.83	-75.0	35	20
FINGER PIER, OFFSHORE	0.83	-75.0	35	20
TAHITI PIER, TYPICAL	0.83	-75.0	35	20
FIXED DOCK, TYPICAL	0.83	-75.0	35	20
FLOATING DOCK, TYPICAL	12.0	-75.0	35	20

NOTE:
1. P_{COMP} = ALLOWABLE COMPRESSIVE LOAD CAPACITY PER PILE DUE TO DEAD LOAD PLUS LIVE LOAD. THE ALLOWABLE LOAD MAY BE INCREASED BY ONE-THIRD (1/3) FOR LOADINGS THAT INCLUDE WIND OR SEISMIC FORCES.



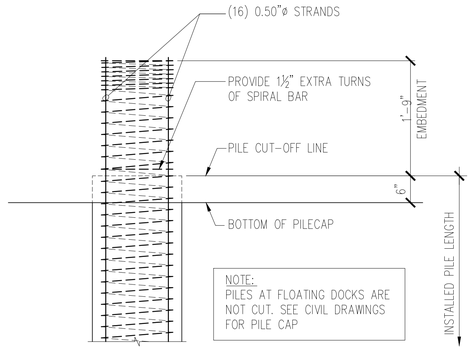
ELEVATION

1 S4.1 20" OCTAGONAL PRECAST/PRESTRESSED PILE
NOT TO SCALE

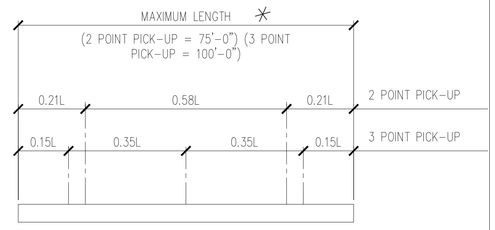


LEGEND:
+ DENOTES (16) 0.50"ø 270 KSI STRANDS

2 S4.1 SECTION
NOT TO SCALE



3 S4.1 PILE EMBEDMENT DETAIL
NOT TO SCALE



* THE LENGTH "L" IS THE DISTANCE END TO END OF PILE

4 S4.1 PILE PICK UP POINTS
NOT TO SCALE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BRANDON L. CHING LICENSED PROFESSIONAL ENGINEER No. 17851-S HAWAII, U.S.A.

Brandon Ching 4/30/28
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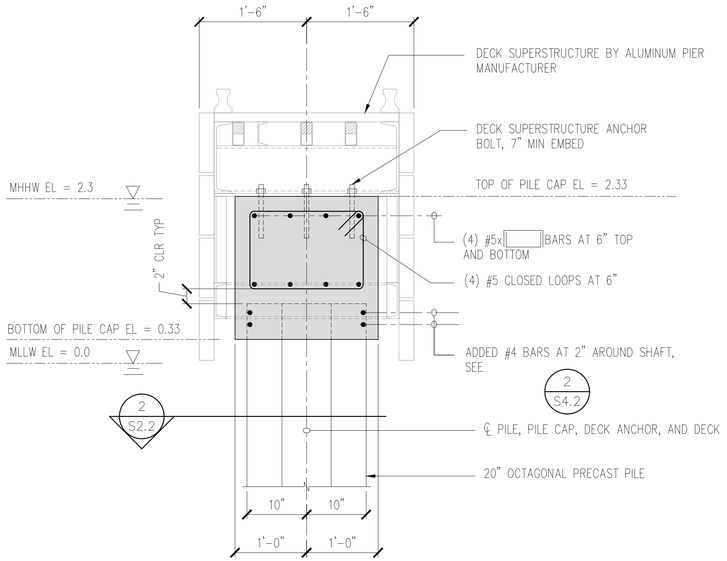
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

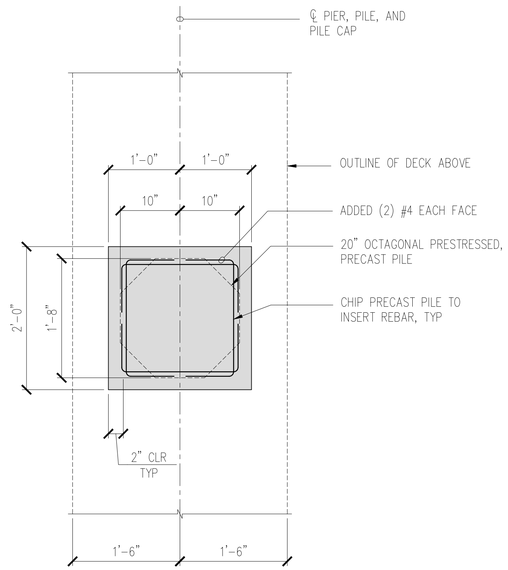
TYPICAL PRESTRESSED CONCRETE PILE DETAILS

DESIGNED: ER	SUBMITTED: -
DRAWN: ER	DATE: MAY 2026
CHECKED: BC	SCALE: AS NOTED
APPROVED:	DRAWING NO. S4.1
CHIEF ENGINEER	DATE



1 S4.2 **SECTION AT TYPICAL PILE CAP**

SCALE: 1" = 1'-0"



2 S4.2 **SECTION**

SCALE: 1" = 1'-0"

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

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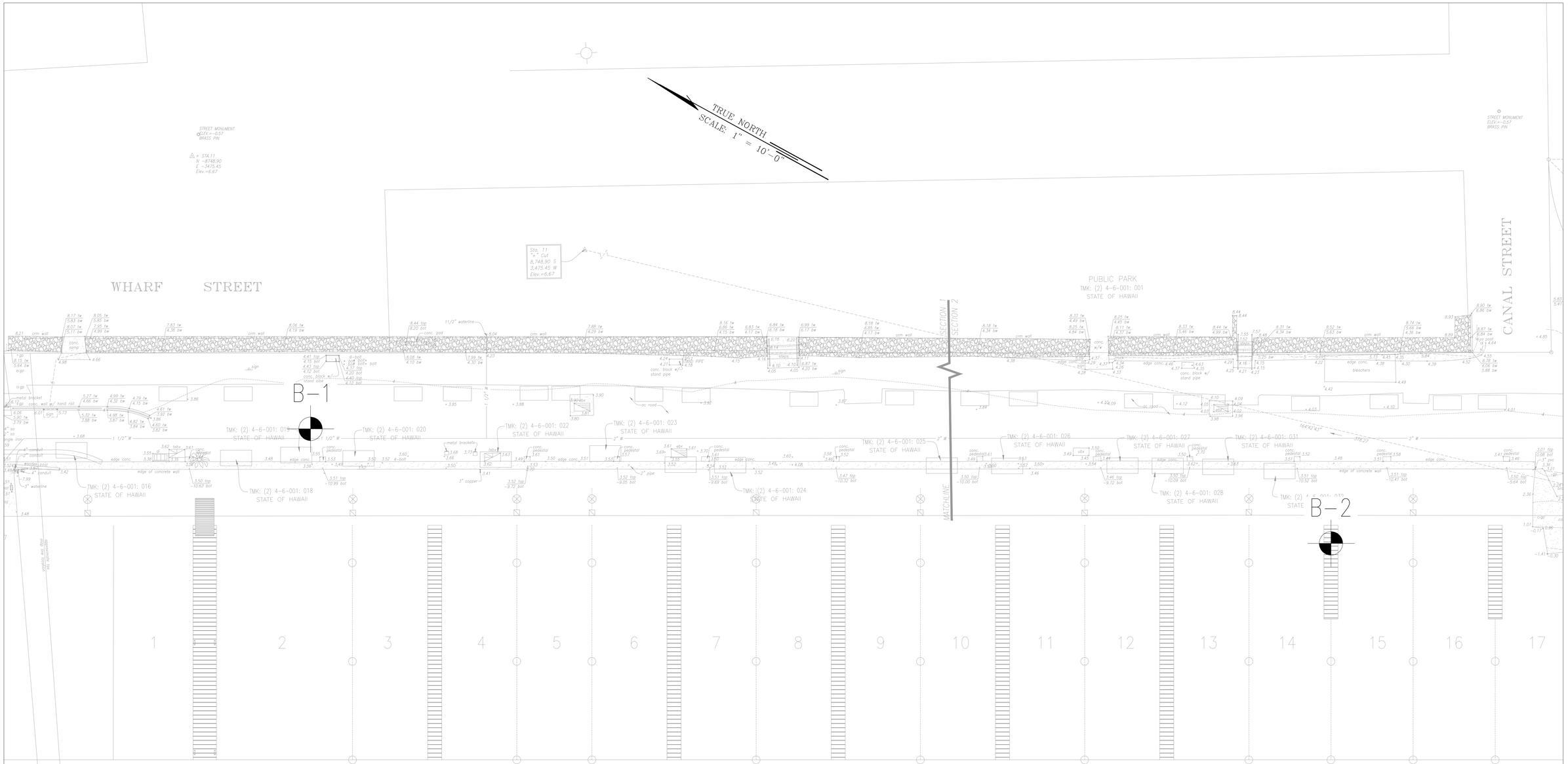
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

PILE CAP SECTIONS AND DETAILS

DESIGNED: ER	SUBMITTED: –
DRAWN: ER	DATE: MAY 2026
CHECKED: BC	SCALE: AS NOTED
APPROVED:	DRAWING NO. S4.2
CHIEF ENGINEER	DATE



LEGEND:

APPROXIMATE BORING LOCATION

0' 10' 20' 30'
1" = 10'

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

XIAOBIN (TIM) LIN
LICENSED PROFESSIONAL ENGINEER
No. 13982-C
HAWAII, U.S.A.

SIGNATURE 4/30/28 Exp. Date of License

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STATE OF HAWAII
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DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

SOIL BORING LOCATION PLAN

DESIGNED: AJF	SUBMITTED: –
DRAWN: CAD	DATE: MAY 2026
CHECKED: TL	SCALE: AS NOTED
APPROVED:	DRAWING NO. GT1.0
CHIEF ENGINEER	DATE

JOB NO. B46CM71B

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Project: Lahaina Small Boat Harbor Replacement of Front Row Piers Project Location: Lahaina, Maui, Hawaii Project Number: 022624-00	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 1 Sheet 1 of 3

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill* **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	

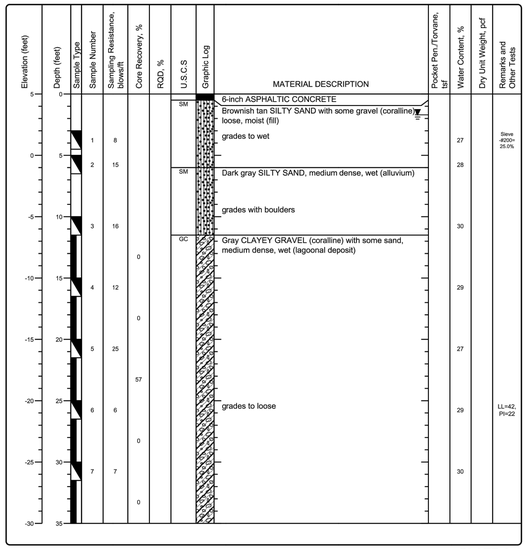

PLATE A-1

Project: Lahaina Small Boat Harbor Replacement of Front Row Piers Project Location: Lahaina, Maui, Hawaii Project Number: 022624-00	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 1 Sheet 2 of 3

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	

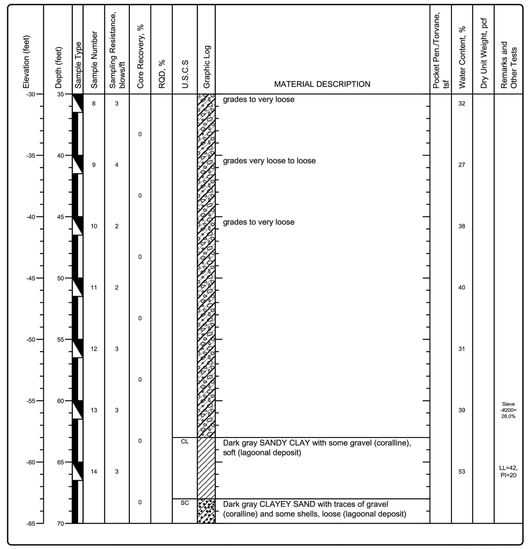

PLATE A-1

Project: Lahaina Small Boat Harbor Replacement of Front Row Piers Project Location: Lahaina, Maui, Hawaii Project Number: 022624-00	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 1 Sheet 3 of 3

Date(s) Drilled **7/30/24 - 8/1/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **CF Auger & PQ Coring**	Drill Bit Size/Type **5-inch Solid Stem Auger & PQ-Size Coring**	Total Depth of Borehole **100.0 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **+5.0 feet MSL***
Groundwater Level and Date Measured **1.7 feet @ 11:44 AM 7/30/24**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel & AC Patch**	Location **See Site Plan (Plate 2)**	

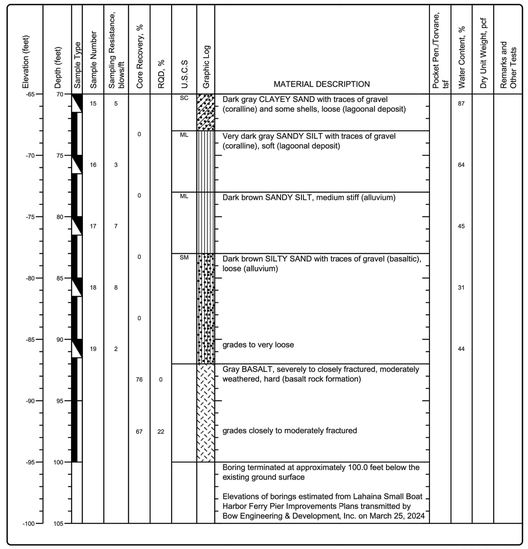

PLATE A-1

Project: Lahaina Small Boat Harbor Replacement of Front Row Piers Project Location: Lahaina, Maui, Hawaii Project Number: 022624-00	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 2 Sheet 1 of 3

Date(s) Drilled **8/5/24 -8/7/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **PQ Coring**	Drill Bit Size/Type **PQ-Size Coring**	Total Depth of Borehole **100.5 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **Mudline -10.0 feet MSL***
Groundwater Level and Date Measured **N/A**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill* **Gravel**	Location **See Site Plan (Plate 2)**	

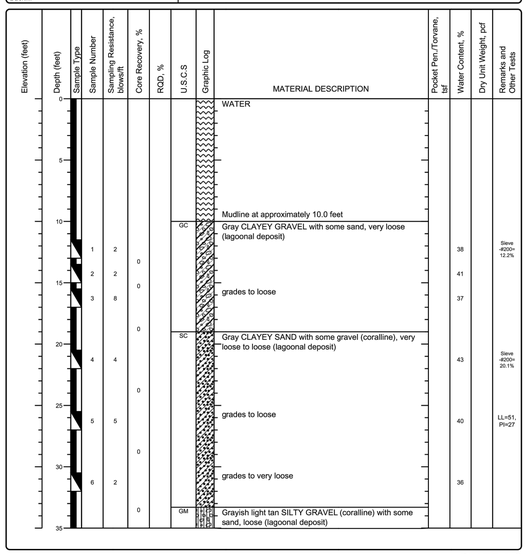

PLATE A-2

Project: Lahaina Small Boat Harbor Replacement of Front Row Piers Project Location: Lahaina, Maui, Hawaii Project Number: 022624-00	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 2 Sheet 2 of 3

Date(s) Drilled **8/5/24 -8/7/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **PQ Coring**	Drill Bit Size/Type **PQ-Size Coring**	Total Depth of Borehole **100.5 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **Mudline -10.0 feet MSL***
Groundwater Level and Date Measured **N/A**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel**	Location **See Site Plan (Plate 2)**	

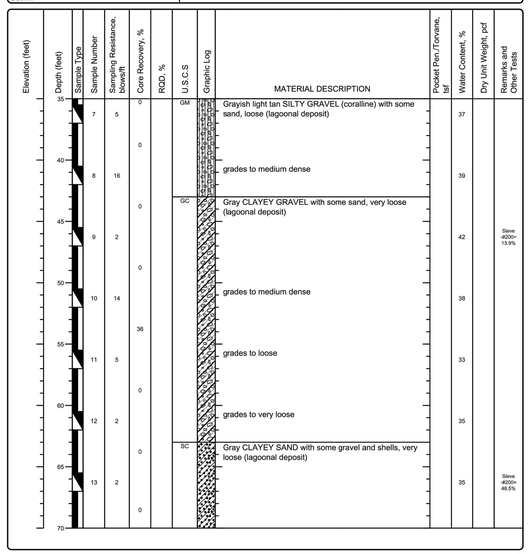

PLATE A-2

Project: Lahaina Small Boat Harbor Replacement of Front Row Piers Project Location: Lahaina, Maui, Hawaii Project Number: 022624-00	**Kokua Geotech LLC** 1017 N King St Honolulu, HI 96817 (808) 214-9339	Log of Boring No. 2 Sheet 3 of 3

Date(s) Drilled **8/5/24 -8/7/24**	Logged By **JL**	Checked By **AJF**
Drilling Method **PQ Coring**	Drill Bit Size/Type **PQ-Size Coring**	Total Depth of Borehole **100.5 feet**
Drill Rig Type **Blue Acker**	Drilling Contractor **Kokua Geotech LLC**	Approximate Surface Elevation **Mudline -10.0 feet MSL***
Groundwater Level and Date Measured **N/A**	Sampling Method(s) **SPT & PQ Coring**	Hammer Data **140 lbs. with 30-inch drop**
Borehole Backfill **Gravel**	Location **See Site Plan (Plate 2)**	

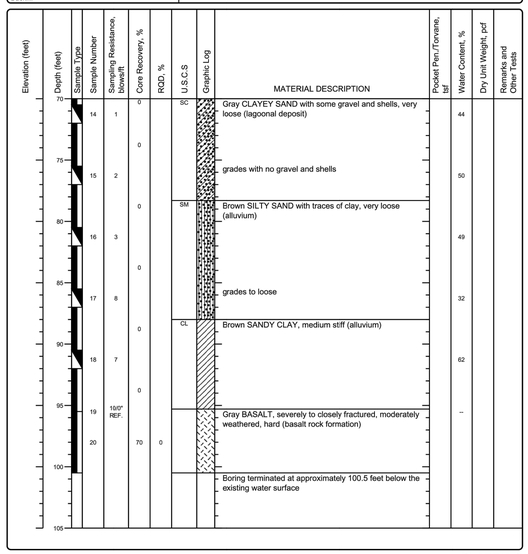

PLATE A-2

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

XIAOBIN (TIM) LIN
LICENSED PROFESSIONAL ENGINEER
No. 13982-C
HAWAII, U.S.A.

4/30/28
SIGNATURE — Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

SOIL BORING LOGS

DESIGNED: AJF	SUBMITTED: --
DRAWN: CAD	DATE: MAY 2026
CHECKED: TL	SCALE: AS NOTED
APPROVED:	DRAWING NO. GT1.1
CHIEF ENGINEER — DATE	

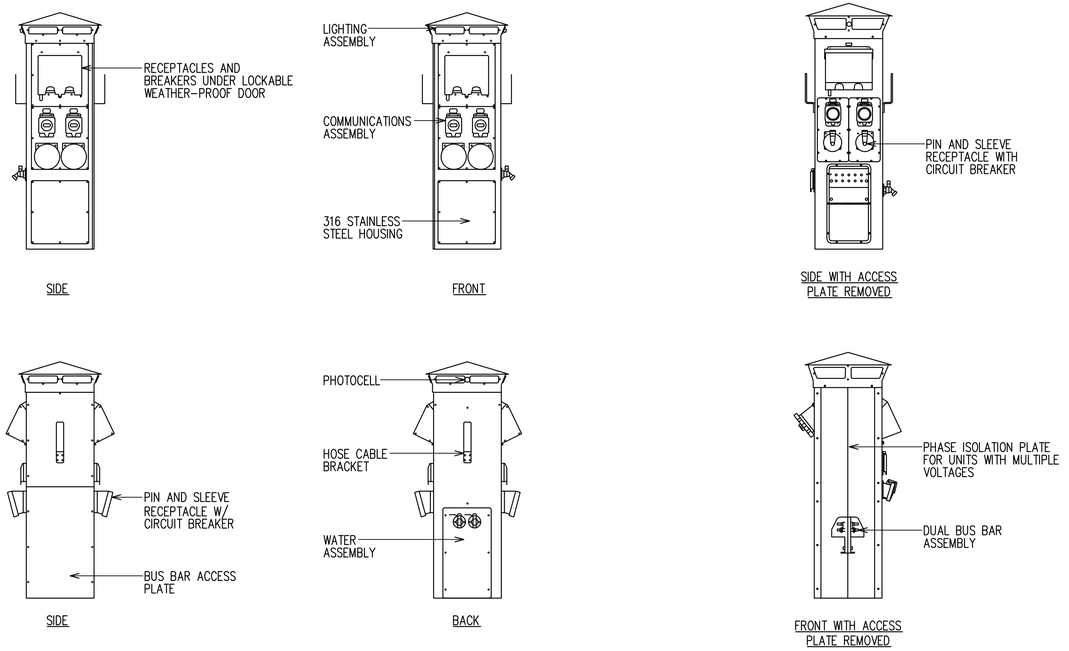
JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

GENERAL NOTES

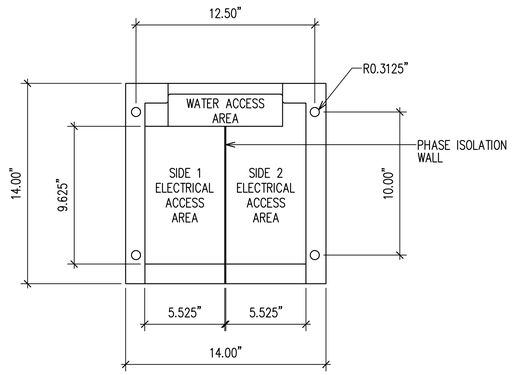
1. PLANS DO NOT INDICATE COMPLETE EXISTING ELECTRICAL CONDITIONS. CONTRACTOR SHALL VISIT JOBSITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND EXTENT OF DEMOLITION AND NEW WORK PRIOR TO THE START OF WORK.
2. PRIOR TO THE START OF WORK, CONTRACTOR SHALL VISIT JOBSITE AND REPORT ANY DISCREPANCIES AND/OR DIFFERENCE IN DRAWINGS, IN RESPECT TO EXISTING CONDITION, TO ENGINEER.
3. CONTRACTOR SHALL RESOLVE ALL DISCREPANCIES AND QUESTIONS PRIOR TO THE START OF WORK. NO EXTRA PAYMENT SHALL BE ALLOWED ON ACCOUNT OF WORK MADE NECESSARY BY CONTRACTOR'S FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES AND QUESTIONS.
4. ALL POWER OUTAGES SHALL BE COORDINATED AND APPROVED BY THE ENGINEER. OUTAGES SHALL BE SCHEDULED AND LIMITED PER THE REQUIREMENTS OF THE STATE.
5. BEFORE ANY ELECTRICAL WIRING IS CUT, CONTRACTOR SHALL VERIFY USAGE OF WIRING TO ENSURE THAT REQUIRED SERVICES ARE NOT DISCONTINUED.
6. REMOVE ALL EXISTING EXPOSED CONDUIT AND WIRES NOT TO REMAIN IN SERVICE; CONCEALED RACEWAYS NO LONGER REQUIRED SHALL BE CAPPED AND ABANDONED IN PLACE WITH ALL WIRES REMOVED UNLESS OTHERWISE NOTED.
7. WHERE RACEWAYS ARE EXPOSED, PAINT RACEWAYS AND BOXES TO MATCH ADJACENT FINISH. PAINT WITH TWO COATS OF MARINE GRADE PAINT.
8. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL UTILITY WORK WITH MECO PRIOR TO START OF WORK. CONTRACTOR SHALL PAY FOR ALL MECO CHARGES.
9. CONTRACTOR SHALL COORDINATE ALL TELEPHONE WIRING REMOVAL WORK WITH HAWAIIAN TELCOM PRIOR TO THE START OF WORK. CONTRACTOR SHALL PAY FOR ALL HAWAIIAN TELCOM CHARGES.
10. RETURN ALL SALVABLE APPARATUS, AS DETERMINED BY THE ENGINEER, TO A SITE DESIGNATED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE STATE. DISPOSE OF ALL UNWANTED MATERIALS.
11. PROVIDE PROTECTION TO ENSURE THAT NO MATERIAL IS ALLOWED TO FALL INTO WATER DURING CONSTRUCTION. COMPLY WITH ALL EPA CODES AND REGULATIONS. SEE STRUCTURAL OR CIVIL NOTES ON BMP'S.

ELECTRICAL SYMBOLS

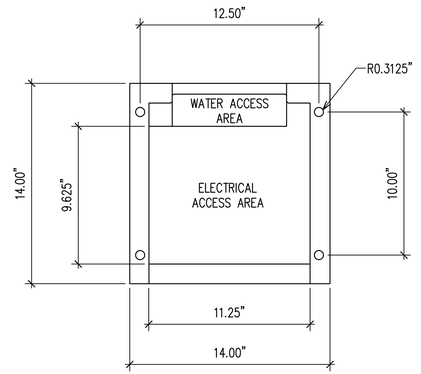
EXISTING SYMBOL	NEW SYMBOL	DESCRIPTION
—e—	———	CONDUIT CONCEALED IN PIER, 2 WIRES INDICATED
—·—e—·—	——·——	CONDUIT CONCEALED BELOW GRADE
☼	●	MECO UTILITY POLE
⊠	⊠	PIER POWER PEDESTAL
⊠		EXISTING 2'X4' ELEC HANDHOLE.
⊠		EXISTING 2'X4' MECO HANDHOLE.
⋈	⋈	4'X6' ELEC HANDHOLE PER HECO STANDARD DRAWING 101025.
		INSCRIBE COVER WITH 'ELEC".
	Ⓐ——┘	DUCT SECTION DESIGNATOR; SECTION "A" INDICATED
		SEE DETAIL 1/E-301 FOR DUCT SECTION DETAIL
	1 →	BOX NOTE INDICATOR; NOTE 1 INDICATED
	PED	DENOTES "PIER POWER PEDESTAL"
	SWBD	DENOTES "SWITCHBOARD"
	MB	DENOTES "METER BANK"
	EXIST	DENOTES "EXISTING"
	XMFR	DENOTES "TRANSFORMER"
	BKR	DENOTES "BREAKER"
	GND	DENOTES "GROUND"
	TYP	DENOTES "TYPICAL"
	CONC	DENOTES "CONCRETE"
	CKT BKR	DENOTES "CIRCUIT BREAKER"
	HWN TEL	DENOTES "HAWAIIAN TELCOM"
	CKT	DENOTES "CIRCUIT"
	MECO	DENOTES "MAUI ELECTRIC COMPANY"
	SW	DENOTES "SWITCH"



1 E-001 **POWER PEDESTAL DETAIL** NOT TO SCALE



2 E-001 **POWER PEDESTAL DOUBLE FEED BASE DETAIL** NOT TO SCALE



3 E-001 **POWER PEDESTAL SINGLE FEED BASE DETAIL** NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BILLY J. ORNELLAS — LICENSED PROFESSIONAL ENGINEER — No. 11658-E — HAWAII, U.S.A.

SIGNATURE 4/30/28 Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

SYMBOLS LIST

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED
APPROVED:	DRAWING NO. E-001
CHIEF ENGINEER	DATE

JOB NO. B46CM71B

SHEET NO. 29 OF 41 SHEETS

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 7:50am By: KCHUN
File Name: Z:\Acad\projects\224086\E-001_Symbols List 1.dwg

MAUI ELECTRIC COMPANY (MECO) NOTES

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

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

3. EXCAVATION PERMIT
THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM MECO TWO WEEKS PRIOR TO STARTING CONSTRUCTION. PLEASE REFER TO OUR REQUEST NUMBER AT THAT TIME.

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

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

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

CONTACT MECO'S CUSTOMER INSTALLATIONS DEPARTMENT AT FOR ASSISTANCE IN IDENTIFYING AND SAFEGUARDING OVERHEAD POWER LINES.

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

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

7. UNDERGROUND LINES
THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF UNDERGROUND LINES. MECO'S EXISTING ELECTRICAL CABLES ARE ENERGIZED AND WILL REMAIN ENERGIZED DURING CONSTRUCTION. ONLY MECO PERSONNEL ARE TO BREAK INTO EXISTING MECO FACILITIES, HANDLE THESE CABLES, AND ERECT TEMPORARY GUARDS TO PROTECT THESE CABLES FROM DAMAGE. THE COST OF MECO'S ASSISTANCE IN PROVIDING PROPER SUPPORT AND PROTECTION OF ITS UNDERGROUND LINES WILL BE CHARGED TO THE CONTRACTOR.

FOR VERIFICATION OF UNDERGROUND LINES, THE CONTRACTOR SHALL CALL MECO'S UNDERGROUND DIVISION A MINIMUM OF 72 HOURS IN ADVANCE.

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

8. EXCAVATIONS
WHEN TRENCH EXCAVATION IS ADJACENT TO OR BENEATH MECO'S EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR:

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

9. RELOCATION OF MECO FACILITIES
ANY WORK REQUIRED TO RELOCATE OR MODIFY MECO FACILITIES SHALL BE DONE BY MECO, OR BY THE CONTRACTOR UNDER MECO'S SUPERVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, AND SHALL PROVIDE NECESSARY SUPPORT FOR MECO'S WORK, WHICH MAY INCLUDE, BUT NOT BE LIMITED TO, EXCAVATION AND BACKFILL, PERMITS AND TRAFFIC CONTROL, BARRICADING, AND RESTORATION OF PAVEMENT, SIDEWALKS, AND OTHER FACILITIES.
ALL COSTS ASSOCIATED WITH ANY RELOCATION OR MODIFICATION (EITHER TEMPORARY OR PERMANENT) FOR THE CONVENIENCE OF THE CONTRACTOR, OR TO ENABLE THE CONTRACTOR TO PERFORM HIS WORK IN A SAFE AND EXPEDITIOUS MANNER IN FULFILLING HIS CONTRACT OBLIGATIONS SHALL BE BORNE BY THE CONTRACTOR.

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

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

12. MECO STAND–BY PERSONNEL THE CONTRACTOR MAY REQUEST MECO TO PROVIDE AN INSPECTOR TO STAND–BY DURING CONSTRUCTION NEAR MECO'S FACILITIES. THE COST OF SUCH INSPECTION WILL BE CHARGED TO THE CONTRACTOR. THE CONTRACTOR SHALL CALL THE MECO CONSTRUCTION AND MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT A MINIMUM OF 5 WORKING DAYS IN ADVANCE TO ARRANGE FOR MECO STAND–BY PERSONNEL.

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

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

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

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

15. SCHEDULE CONTRACTOR SHALL FURNISH HIS CONSTRUCTION SCHEDULE __ WORKING DAYS PRIOR TO STARTING WORK ON MECO FACILITIES. CONTRACTOR SHALL GIVE MECO, IN WRITING __ WORKING DAYS NOTICE TO PROCEED WITH MECO'S PORTION OF WORK.
16. AUTHORITY ALL CONSTRUCTION, RESTORATION WORK, AND INSPECTION SHALL BE SUBJECT TO WHICHEVER GOVERNMENTAL AGENCY HAS AUTHORITY OVER THE WORK.

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

18. CONSTRUCTION CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES TO PROPERLY PERFORM AND FULLY COMPLETE ALL WORK SHOWN ON THE CONTRACT, DRAWINGS, AND SPECIFICATIONS. ALL MATERIALS SHALL BE NEW AND MANUFACTURED IN THE UNITED STATES OF AMERICA. ALL MANHOLE, HANDHOLE, AND DUCTLINE INSTALLATIONS SHALL BE INSPECTED AND APPROVED BY MECO PRIOR TO EXCAVATION AND PRIOR TO PLACING CONCRETE. CONTRACTOR SHALL NOTIFY MECO'S INSPECTION DIVISION AT 543–4356 AT LEAST 48 HOURS PRIOR TO PLACING CONCRETE. CONTRACTOR TO COORDINATE WORK TO BREAK INTO MECO'S EXISTING ELECTRICAL FACILITIES WITH MECO'S UNDERGROUND DIVISION AT 543–7871 AT LEAST 10 WORKING DAYS IN ADVANCE.

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

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

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

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

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 7:51am By: KCHUN
File Name: Z:\Acad\projects\224086\E-002_MECO Notes.dwg

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BILLY J. ORNELLAS
LICENSED PROFESSIONAL ENGINEER
No. 11658-E
HAWAII, U.S.A.

SIGNATURE 4/30/28 Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

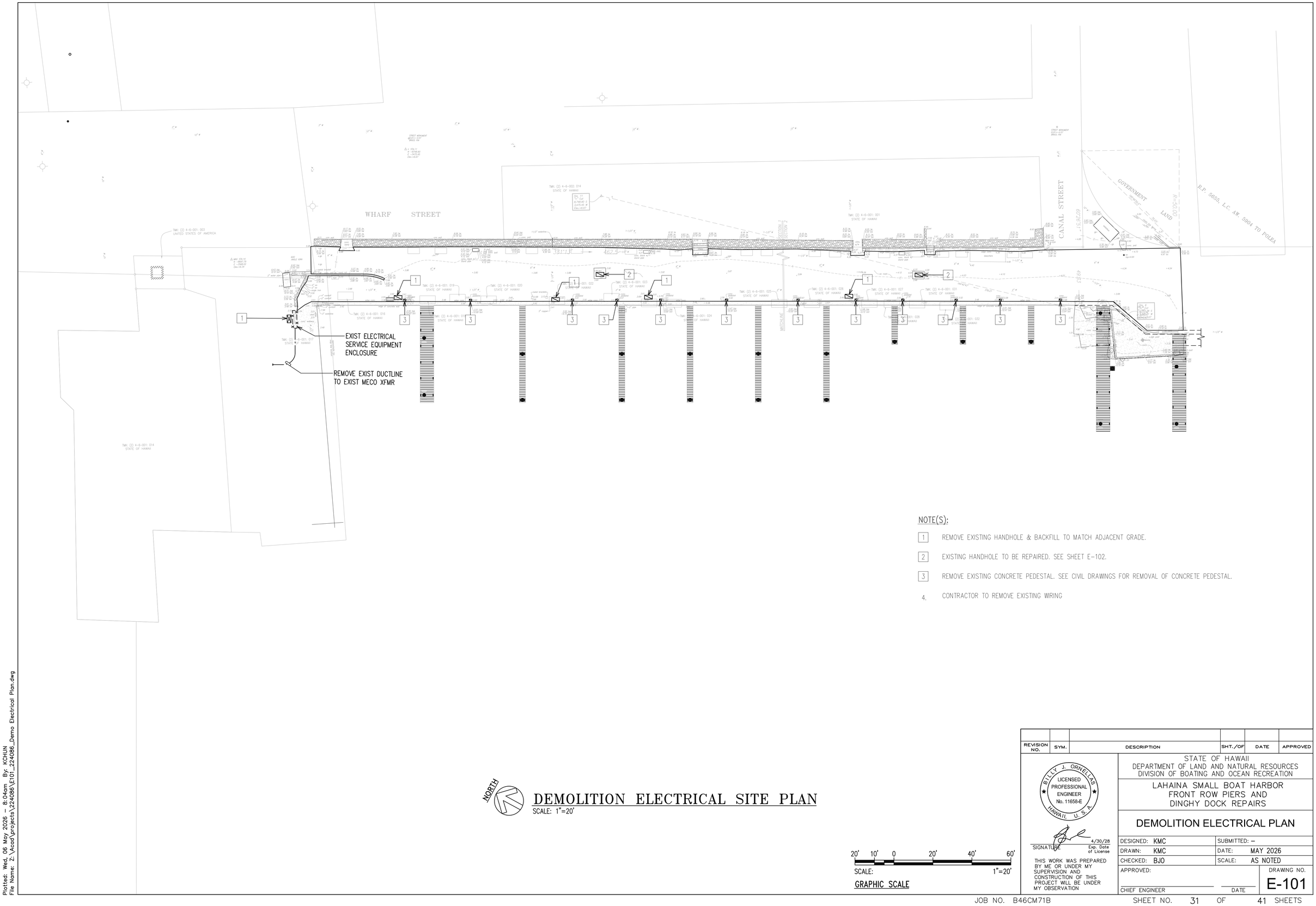
MECO NOTES

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED

APPROVED: _____ DATE _____
CHIEF ENGINEER

DRAWING NO. E-002

JOB NO. B46CM71B SHEET NO. 30 OF 41 SHEETS



NOTE(S):

1. REMOVE EXISTING HANDHOLE & BACKFILL TO MATCH ADJACENT GRADE.
2. EXISTING HANDHOLE TO BE REPAIRED. SEE SHEET E-102.
3. REMOVE EXISTING CONCRETE PEDESTAL. SEE CIVIL DRAWINGS FOR REMOVAL OF CONCRETE PEDESTAL.
4. CONTRACTOR TO REMOVE EXISTING WIRING

NORTH

DEMOLITION ELECTRICAL SITE PLAN

SCALE: 1"=20'

20' 10' 0 20' 40' 60'

SCALE: 1"=20'

GRAPHIC SCALE

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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

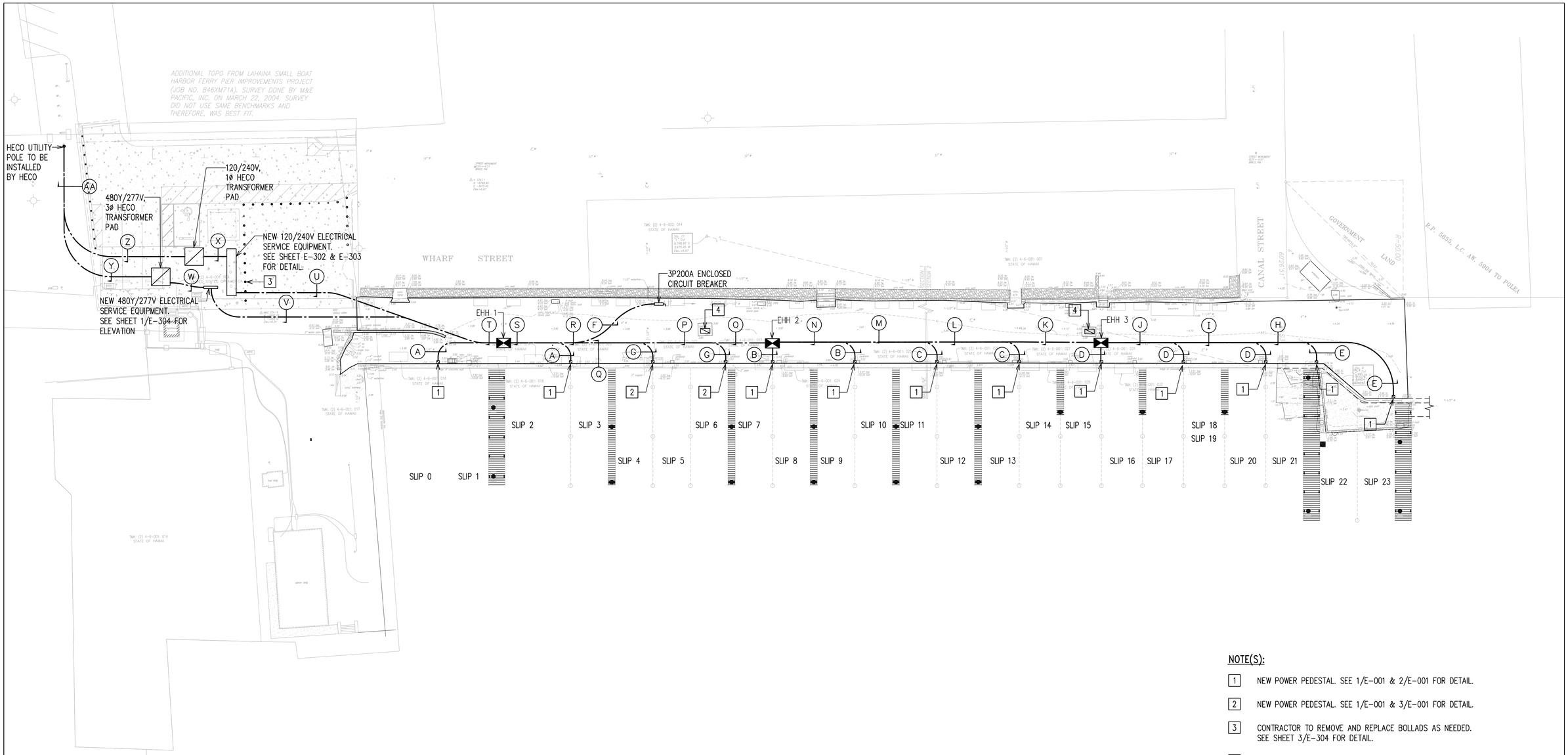
DEMOLITION ELECTRICAL PLAN

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED
APPROVED:	DRAWING NO. E-101
CHIEF ENGINEER	DATE

JOB NO. B46CM71B

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 8:04am By: KCHUN
File Name: Z:\Acad\projects\224086\E101_224086_Demo Electrical Plan.dwg



NOTE(S):

1. NEW POWER PEDESTAL. SEE 1/E-001 & 2/E-001 FOR DETAIL.
2. NEW POWER PEDESTAL. SEE 1/E-001 & 3/E-001 FOR DETAIL.
3. CONTRACTOR TO REMOVE AND REPLACE BOLLADS AS NEEDED. SEE SHEET 3/E-304 FOR DETAIL.
4. REPAIR EXISTING HANDHOLE COLLAR AND PROVIDE NEW COVER.
5. SEE SHEET 3/E-304 FOR DETAIL.

NORTH

NEW ELECTRICAL SITE PLAN

SCALE: 1"=20'

20' 10' 0 20' 40' 60'

SCALE: 1"=20'

GRAPHIC SCALE

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

NEW ELECTRICAL PLAN

DESIGNED:	KMC	SUBMITTED:	–
DRAWN:	KMC	DATE:	MAY 2026
CHECKED:	BJO	SCALE:	AS NOTED

APPROVED: _____ _____
CHIEF ENGINEER DATE

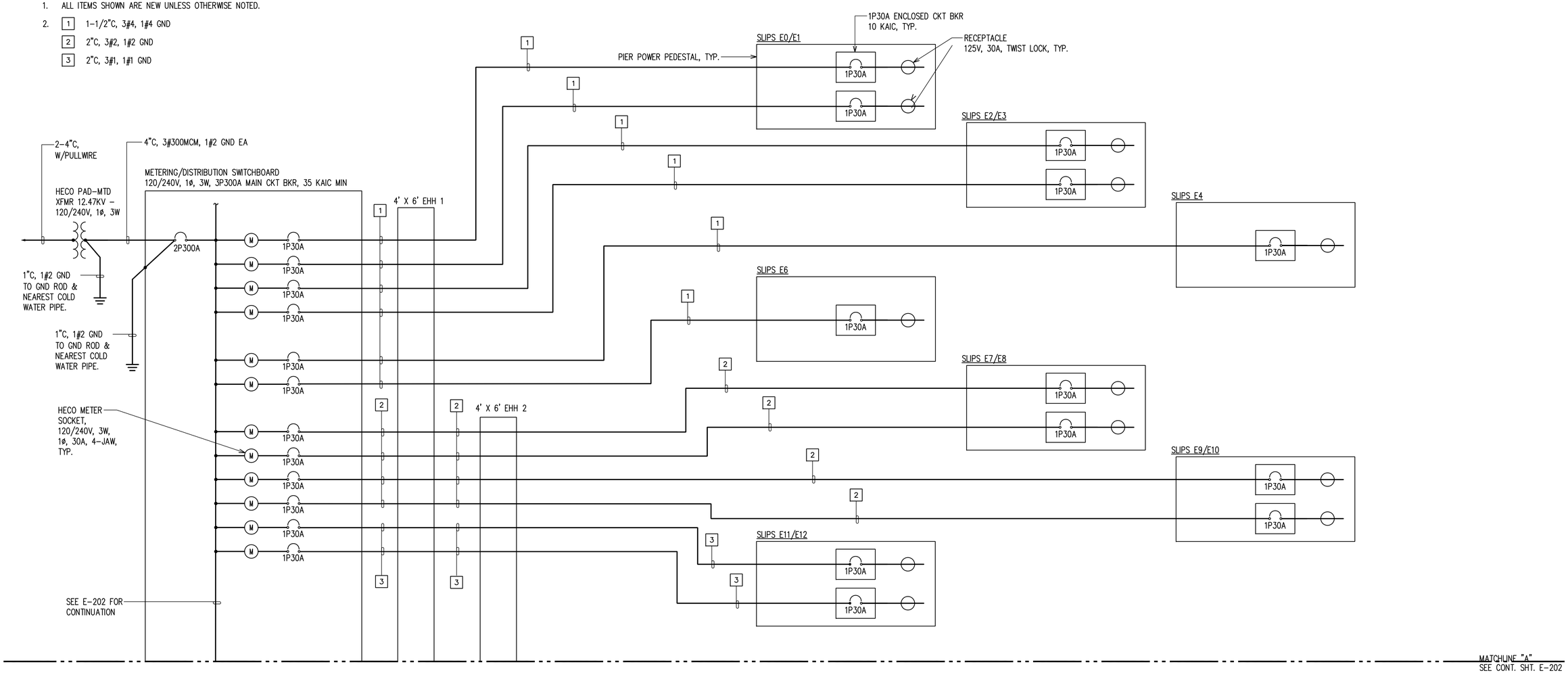
DRAWING NO. E-102

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 8:08am By: KCHUN
File Name: Z:\Acad\projects\224086\E102_224086_Electrical Plan.dwg

NOTES:

1. ALL ITEMS SHOWN ARE NEW UNLESS OTHERWISE NOTED.
2. [1] 1-1/2"C, 3#4, 1#4 GND
   [2] 2"C, 3#2, 1#2 GND
   [3] 2"C, 3#1, 1#1 GND



ELECTRICAL LOAD CALCULATIONS

LOADS	CALCULATION	TOTAL
2P50A SHORE POWER RECEPTACLE	24A X 120V X 24 RECEPTACLES	69.1 KVA
SHORE POWER DEMAND FACTOR (NEC TABLE 555.6)	70%	70%
SHORE POWER DEMAND LOAD	69.1 KVA X 70%	48.4 KVA
EXISTING BOOTH ELECTRICAL LOAD	24A X 120V X 2	5.75 KVA
EXISTING LIGHT AND RECEPTACLE	16A X 120V	1.9 KVA
TOTAL DEMAND LOAD	48.4 KVA + 5.75 KVA + 1.9 KVA	56 KVA
TOTAL DEMAND LOAD	56 KVA / 240V	233.4A

NEW ONE-LINE DIAGRAM 1

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BILLY J. ORNELLAS LICENSED PROFESSIONAL ENGINEER No. 11658-E HAWAII, U.S.A.

SIGNATURE 4/30/28 Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

NEW ONE-LINE DIAGRAM 1

DESIGNED: KMC	SUBMITTED: -
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED
APPROVED:	DRAWING NO. E-201
CHIEF ENGINEER	DATE

JOB NO. B46CM71B

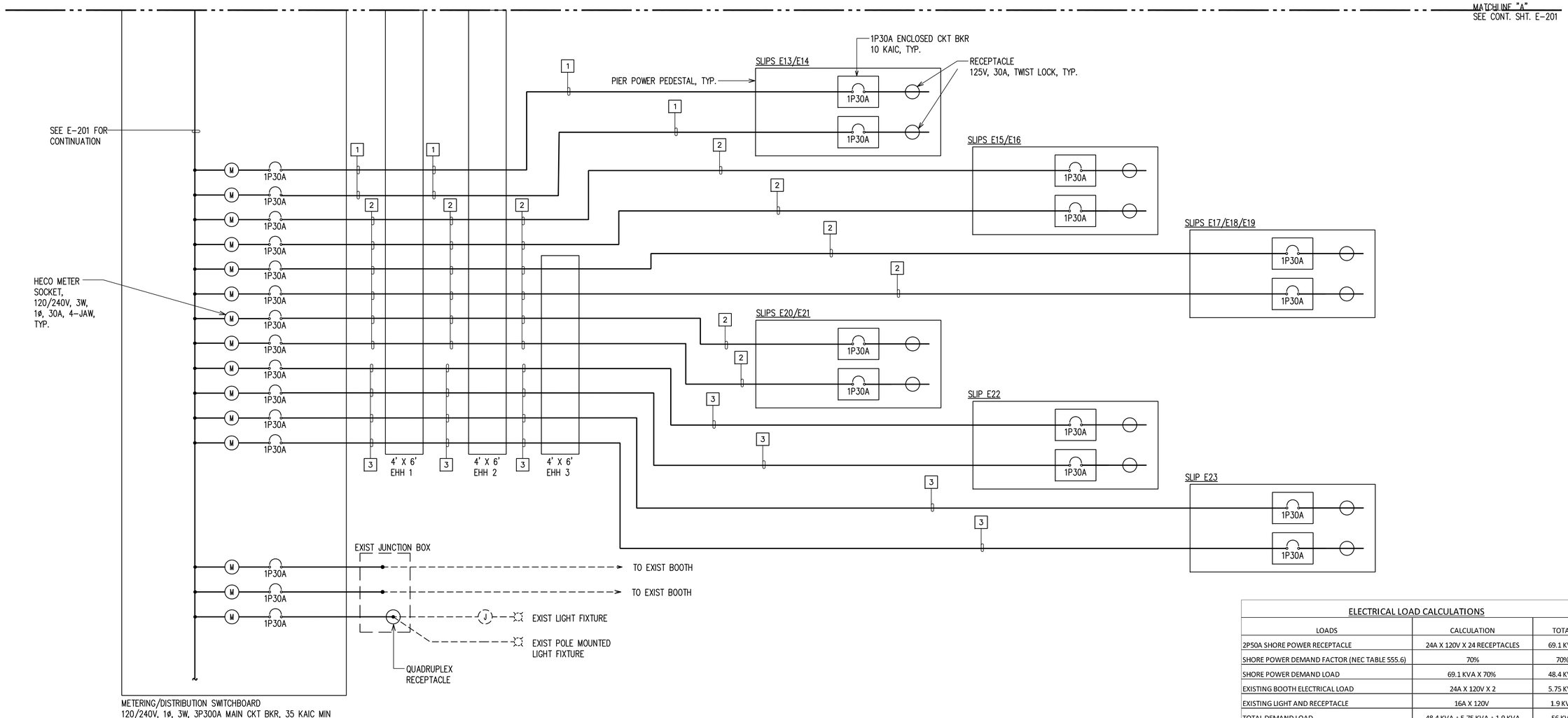
SHEET NO. 33 OF 41 SHEETS

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 - 8:27am By: AHU
File Name: Z:\ACAD\projects\224086\E-201_One Line Diagram.dwg

NOTES:

1. ALL ITEMS SHOWN ARE NEW UNLESS OTHERWISE NOTED.
2. [1] 2"C, 3#1, 1#1 GND
   [2] 3"C, 3#1/0, 1#1/0 GND
   [3] 3"C, 3#2/0, 1#2/0 GND.



ELECTRICAL LOAD CALCULATIONS

LOADS	CALCULATION	TOTAL
2P50A SHORE POWER RECEPTACLE	24A X 120V X 24 RECEPTACLES	69.1 KVA
SHORE POWER DEMAND FACTOR (NEC TABLE 555.6)	70%	70%
SHORE POWER DEMAND LOAD	69.1 KVA X 70%	48.4 KVA
EXISTING BOOTH ELECTRICAL LOAD	24A X 120V X 2	5.75 KVA
EXISTING LIGHT AND RECEPTACLE	16A X 120V	1.9 KVA
TOTAL DEMAND LOAD	48.4 KVA + 5.75 KVA + 1.9 KVA	56 KVA
TOTAL DEMAND LOAD	56 KVA / 240V	233.4A

NEW ONE-LINE DIAGRAM 2

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BILLY J. ORNELLAS
LICENSED PROFESSIONAL ENGINEER
No. 11658-E
HAWAII, U.S.A.

SIGNATURE 4/30/28 Exp. Date of License

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

NEW ONE-LINE DIAGRAM 2

DESIGNED:	KMC	SUBMITTED:	—
DRAWN:	KMC	DATE:	MAY 2026
CHECKED:	BJO	SCALE:	AS NOTED

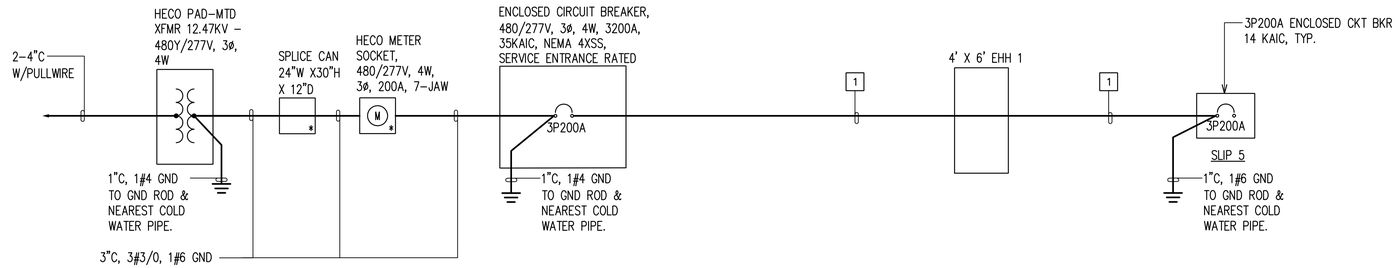
APPROVED: _____ CHIEF ENGINEER _____ DATE

DRAWING NO. E-202

JOB NO. B46CM71B SHEET NO. 34 OF 41 SHEETS

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 - 8:27am By: AHU
File Name: Z:\ACAD\projects\224086\E-202_One Line Diagram 2.dwg



NOTES:

1. ALL ITEMS SHOWN ARE NEW UNLESS OTHERWISE NOTED.
2. [1] 3"C, 3#1/0, 1#6 GND

NEW ONE-LINE DIAGRAM 3

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BILLY J. ORNELLAS LICENSED PROFESSIONAL ENGINEER No. 11658-E HAWAII, U.S.A.

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

NEW ONE-LINE DIAGRAM 3

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED
APPROVED:	DRAWING NO. E-203
CHIEF ENGINEER DATE	

JOB NO. B46CM71B

Plotted: Wed, 06 May 2026 - 8:16am By: KCHUN
File Name: Z:\Acad\projects\224086\E-203_One Line Diagram 480V.dwg

Point to Point Fault Current Calculations

From	To	I_{sc} at Source (A)	V_{LL}	Phase	Length (ft)	# Sets	Conductor Size	Conductor Type	Conduit Type	C	f	m	$I_{sc(available)}$ (A)	Note
Utility XFMR Secondary	120/240V Service Equipment	25,700 amps	240 V	1	10'-0"	1	#300kcmil	Copper	Nonmetallic	20,868	0.1026	0.9069	23,308 amps	
120/240V Service Equipment	Slip 0	23,308 amps	240 V	1	173'-0"	1	#4	Copper	Nonmetallic	3,826	8.7826	0.1022	2,383 amps	
120/240V Service Equipment	Slip 1	23,308 amps	240 V	1	173'-0"	1	#4	Copper	Nonmetallic	3,826	8.7826	0.1022	2,383 amps	
120/240V Service Equipment	Slip 2	23,308 amps	240 V	1	175'-0"	1	#4	Copper	Nonmetallic	3,826	8.8841	0.1012	2,358 amps	
120/240V Service Equipment	Slip 3	23,308 amps	240 V	1	175'-0"	1	#4	Copper	Nonmetallic	3,826	8.8841	0.1012	2,358 amps	
120/240V Service Equipment	Slip 4	23,308 amps	240 V	1	210'-0"	1	#4	Copper	Nonmetallic	3,826	10.6610	0.0858	1,999 amps	
120/240V Service Equipment	Slip 6	23,308 amps	240 V	1	242'-0"	1	#4	Copper	Nonmetallic	3,826	12.2855	0.0753	1,754 amps	
120/240V Service Equipment	Slip 7	23,308 amps	240 V	1	280'-0"	1	#2	Copper	Nonmetallic	6,044	8.9982	0.1000	2,331 amps	
120/240V Service Equipment	Slip 8	23,308 amps	240 V	1	280'-0"	1	#2	Copper	Nonmetallic	6,044	8.9982	0.1000	2,331 amps	
120/240V Service Equipment	Slip 9	23,308 amps	240 V	1	305'-0"	1	#2	Copper	Nonmetallic	6,044	9.8016	0.0926	2,158 amps	
120/240V Service Equipment	Slip 10	23,308 amps	240 V	1	305'-0"	1	#2	Copper	Nonmetallic	6,044	9.8016	0.0926	2,158 amps	
120/240V Service Equipment	Slip 11	23,308 amps	240 V	1	350'-0"	1	#1	Copper	Nonmetallic	7,493	9.0727	0.0993	2,314 amps	
120/240V Service Equipment	Slip 12	23,308 amps	240 V	1	350'-0"	1	#1	Copper	Nonmetallic	7,493	9.0727	0.0993	2,314 amps	
120/240V Service Equipment	Slip 13	23,308 amps	240 V	1	386'-0"	1	#1	Copper	Nonmetallic	7,493	10.0058	0.0909	2,118 amps	
120/240V Service Equipment	Slip 14	23,308 amps	240 V	1	386'-0"	1	#1	Copper	Nonmetallic	7,493	10.0058	0.0909	2,118 amps	
120/240V Service Equipment	Slip 15	23,308 amps	240 V	1	440'-0"	1	#1/0	Copper	Nonmetallic	9,317	9.1727	0.0983	2,291 amps	
120/240V Service Equipment	Slip 16	23,308 amps	240 V	1	440'-0"	1	#1/0	Copper	Nonmetallic	9,317	9.1727	0.0983	2,291 amps	
120/240V Service Equipment	Slip 17	23,308 amps	240 V	1	475'-0"	1	#1/0	Copper	Nonmetallic	9,317	9.9024	0.0917	2,138 amps	
120/240V Service Equipment	Slip 18/19	23,308 amps	240 V	1	475'-0"	1	#1/0	Copper	Nonmetallic	9,317	9.9024	0.0917	2,138 amps	
120/240V Service Equipment	Slip 20	23,308 amps	240 V	1	511'-0"	1	#1/0	Copper	Nonmetallic	9,317	10.6529	0.0858	2,000 amps	
120/240V Service Equipment	Slip 21	23,308 amps	240 V	1	511'-0"	1	#1/0	Copper	Nonmetallic	9,317	10.6529	0.0858	2,000 amps	
120/240V Service Equipment	Slip 22	23,308 amps	240 V	1	532'-0"	1	#2/0	Copper	Nonmetallic	11,424	9.0452	0.0996	2,320 amps	
120/240V Service Equipment	Slip 22	23,308 amps	240 V	1	532'-0"	1	#2/0	Copper	Nonmetallic	11,424	9.0452	0.0996	2,320 amps	
120/240V Service Equipment	Slip 23	23,308 amps	240 V	1	580'-0"	1	#2/0	Copper	Nonmetallic	11,424	9.8613	0.0921	2,146 amps	
120/240V Service Equipment	Slip 23	23,308 amps	240 V	1	580'-0"	1	#2/0	Copper	Nonmetallic	11,424	9.8613	0.0921	2,146 amps	

1 E-204 120/240V FAULT CURRENT CALCULATION

Point to Point Fault Current Calculations

From	To	I_{sc} at Source (A)	V_{LL}	Phase	Length (ft)	# Sets	Conductor Size	Conductor Type	Conduit Type	C	f	m	$I_{sc(available)}$ (A)	Note
Utility XFMR Secondary	480/277V Service Equipment	26,800 amps	480 V	3	10'-0"	1	#3/0	Copper	Nonmetallic	13,923	0.0695	0.9351	25,059 amps	
480/277V Service Equipment	Enclosed Circuit Breaker	25,059 amps	480 V	3	220'-0"	1	#1/0	Copper	Nonmetallic	9,317	2.1352	0.3190	7,993 amps	

2 E-204 277/480V FAULT CURRENT CALCULATION

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

FAULT CURRENT CALCULATIONS

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED

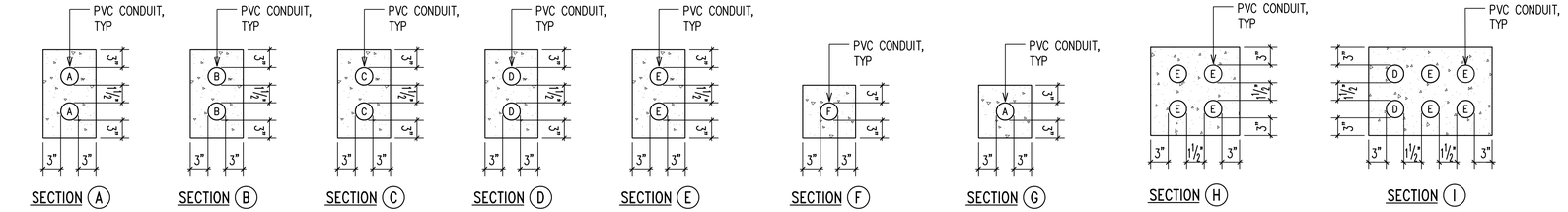
APPROVED: _____ _____
CHIEF ENGINEER DATE

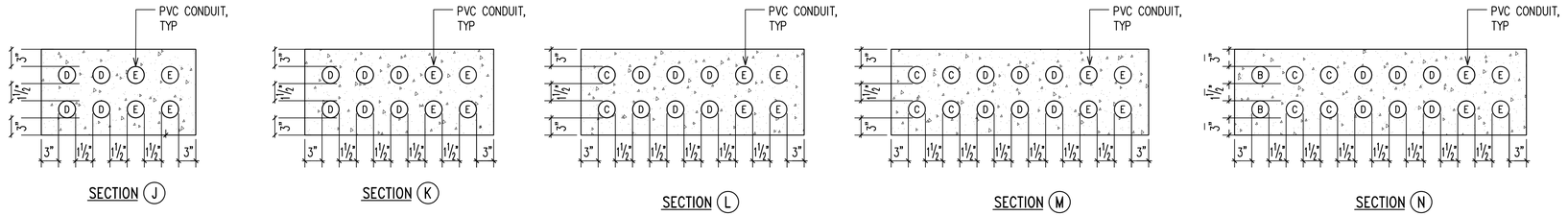
DRAWING NO. E-204

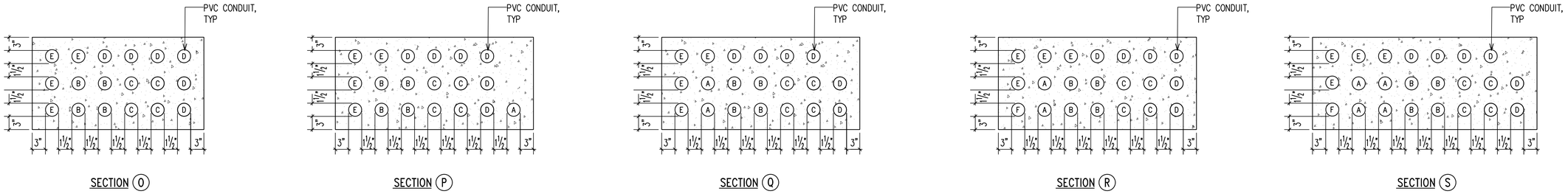
Plotted: Wed, 06 May 2026 – 8:27am By: AHU
File Name: Z:\ACAD\projects\224086\E-204_Calculations.dwg

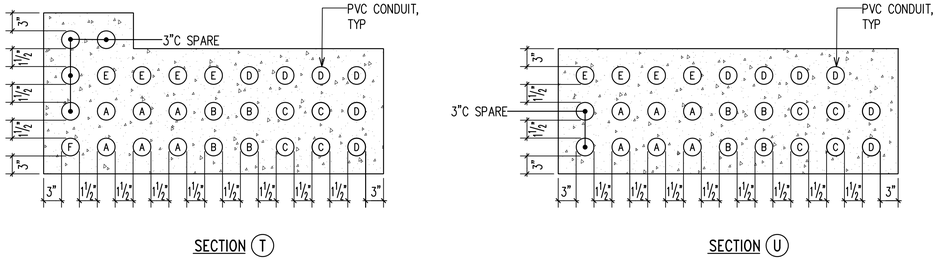
CONDUIT AND WIRE SCHEDULE

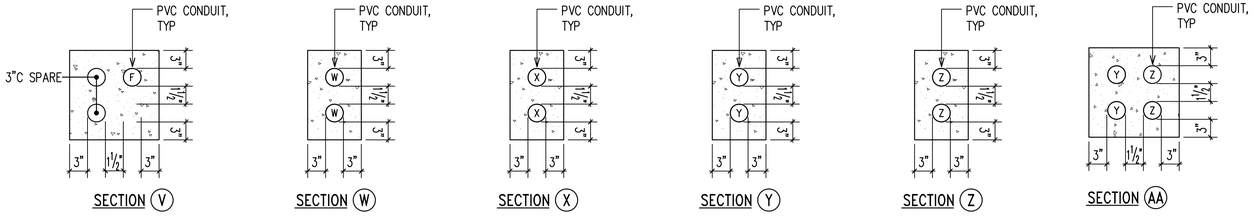
SYMBOL	CONDUIT SIZE	WIRE SIZE	DESCRIPTION
A	1-1/2"	3#4, 1#4 GND	ELECTRIC
B	2"	3#2, 1#2 GND	ELECTRIC
C	2"	3#1, 1#1 GND	ELECTRIC
D	3"	3#1/0, 1#1/0 GND	ELECTRIC
E	3"	3#2/0, 1#2/0 GND	ELECTRIC
F	3"	3#1/0, 1#6 GND	ELECTRIC
W	3"	3#3/0, 1#6 GND	SECONDARY POWER
X	4"	3#300MCM, 1#2 GND	SECONDARY POWER
Y	4"	PROVIDED BY HECO	PRIMARY POWER
Z	4"	PROVIDED BY HECO	PRIMARY POWER

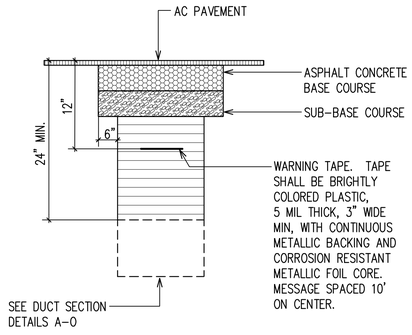












BACKFILL NOTES:

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

CONCRETE – 3" ENCASEMENT, 3000 PSI COMPRESSIVE STRENGTH @ 28 DAYS.

1 / E-301 DUCT SECTION DETAIL

NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

DUCT SECTION DETAIL

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED
APPROVED:	DRAWING NO. E-301
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 8:17am By: KCHUN
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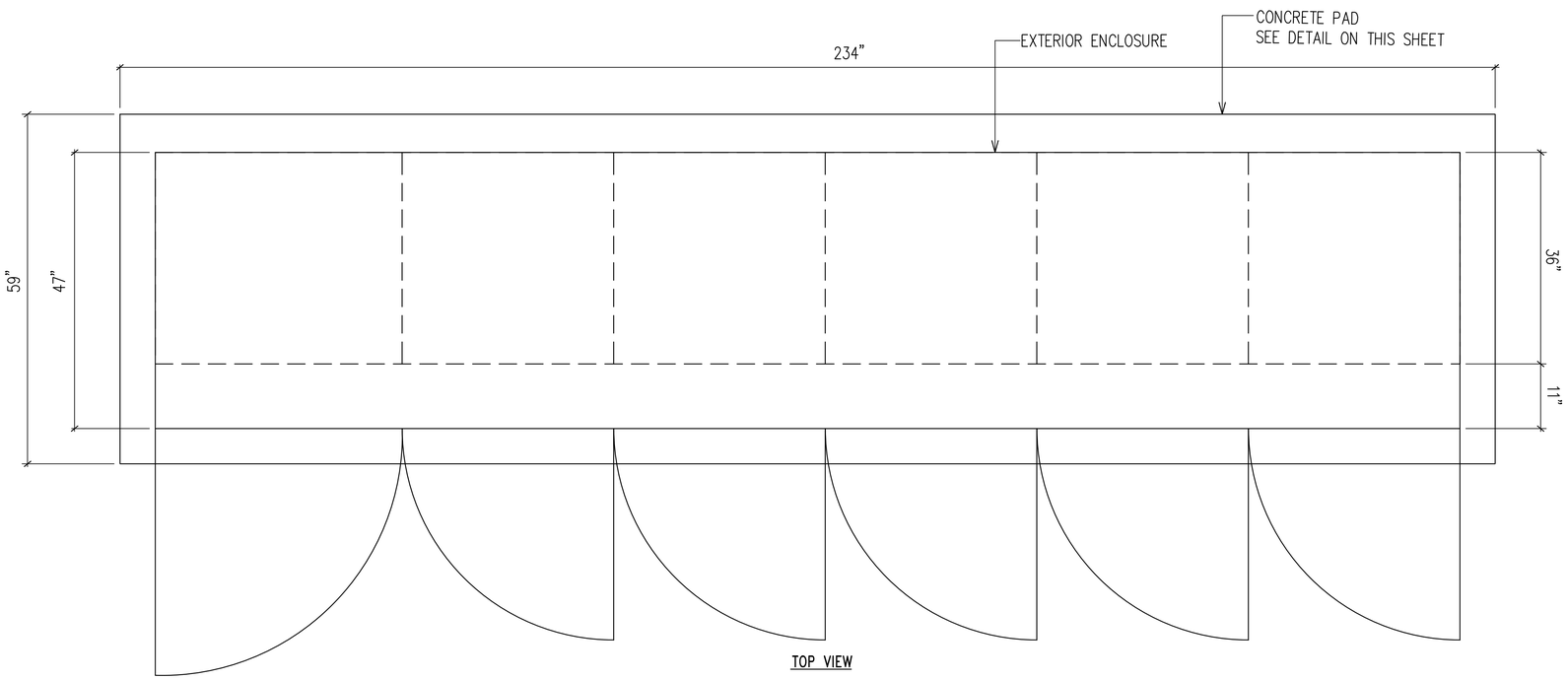
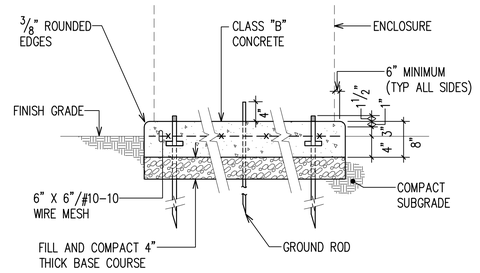


TOP VIEW

METERING/DISTRIBUTION SWITCHBOARD ENCLOSURE PLAN

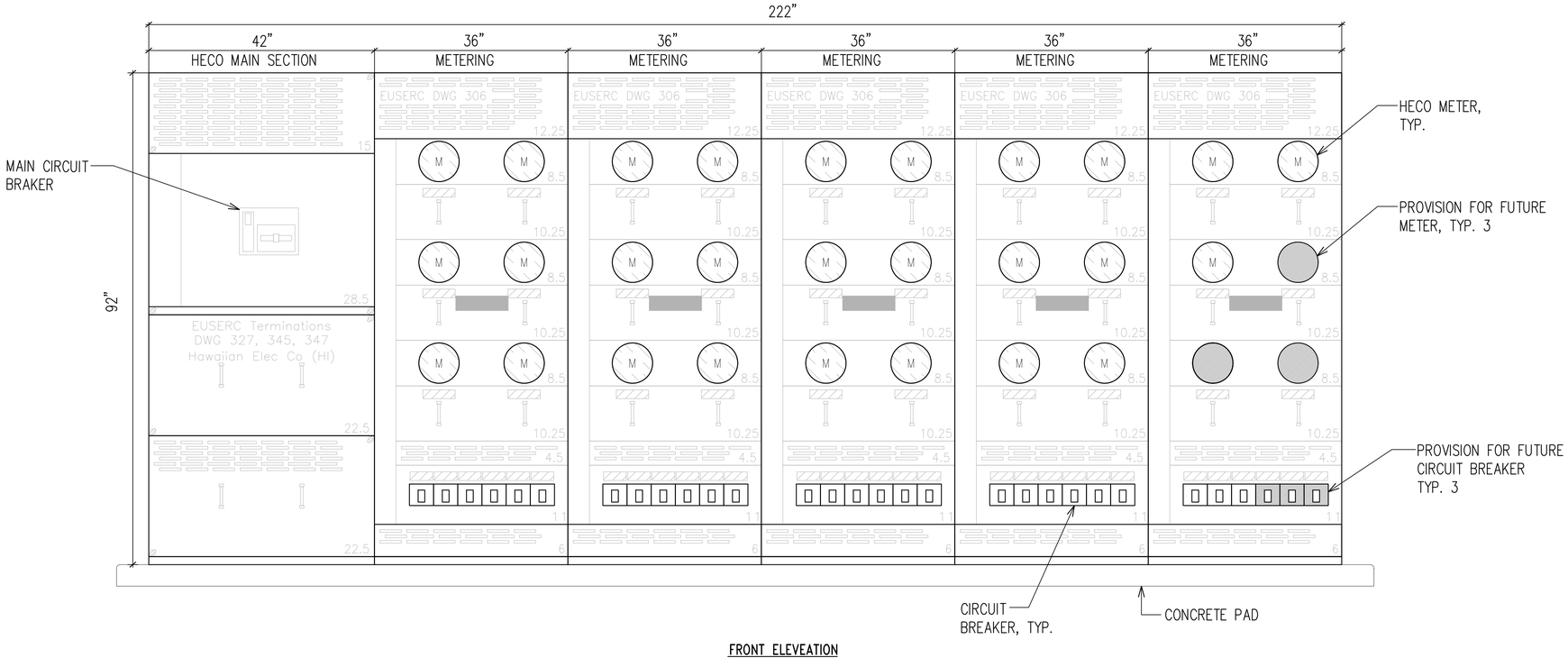
NOT TO SCALE



NOTE: CONCRETE PAD SHALL BE ADJUSTED TO FIT SWITCHBOARD ENCLOSURE AT NO EXTRA CHARGE TO THE OWNER.

CONCRETE PAD DETAIL

NOT TO SCALE



FRONT ELEVEATION

METERING/DISTRIBUTION SWITCHBOARD ELEVATION

NOT TO SCALE

NOTES:

1. SUBMIT MANUFACTURER'S SHOP DRAWINGS OF SWITCHBOARD/SWITCHGEAR FOR REVIEW AND APPROVAL BEFORE FABRICATION. SWITCHBOARD/ SWITCHGEAR SHALL BE DESIGNED IN ACCORDANCE WITH "EUSERC" DRAWINGS AND HECO REQUIREMENTS.
2. PROVIDE PERMANENT IDENTIFICATION LABELS FOR ALL METER SOCKETS TO IDENTIFY THE UNIT OR SPACE SERVED.
3. AT TIME OF INSTALLATION, PROVIDE AND INSTALL METER SOCKET COVERS (PLASTIC) AND BANDS FOR ALL BLANK METER SOCKETS. IDENTIFY COVERS SO COVERS CAN BE RETURNED.
4. HECO'S SERVICE CONDUCTORS SHALL BE SEPERATED BY SUITABLE BARRIERS FROM THE CUSTOMER'S LOAD CONDUCTORS. ALSO, THE CUSTOMER'S LOAD CONDUCTORS SHALL NOT PASS THROUGH HECO'S SEALABLE SECTIONS OR COMPARTMENTS.
5. "*" DENOTES PROVIDE PROVISION FOR HECO SEAL.
6. GROUND AND BOND PER NEC.
7. PROVIDE A MINIMUM OF 4 FEET CLEAR AND LEVEL WORKSPACE CLEARANCE IN FRONT OF METERING AND SERVICE EQUIPMENT.

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DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

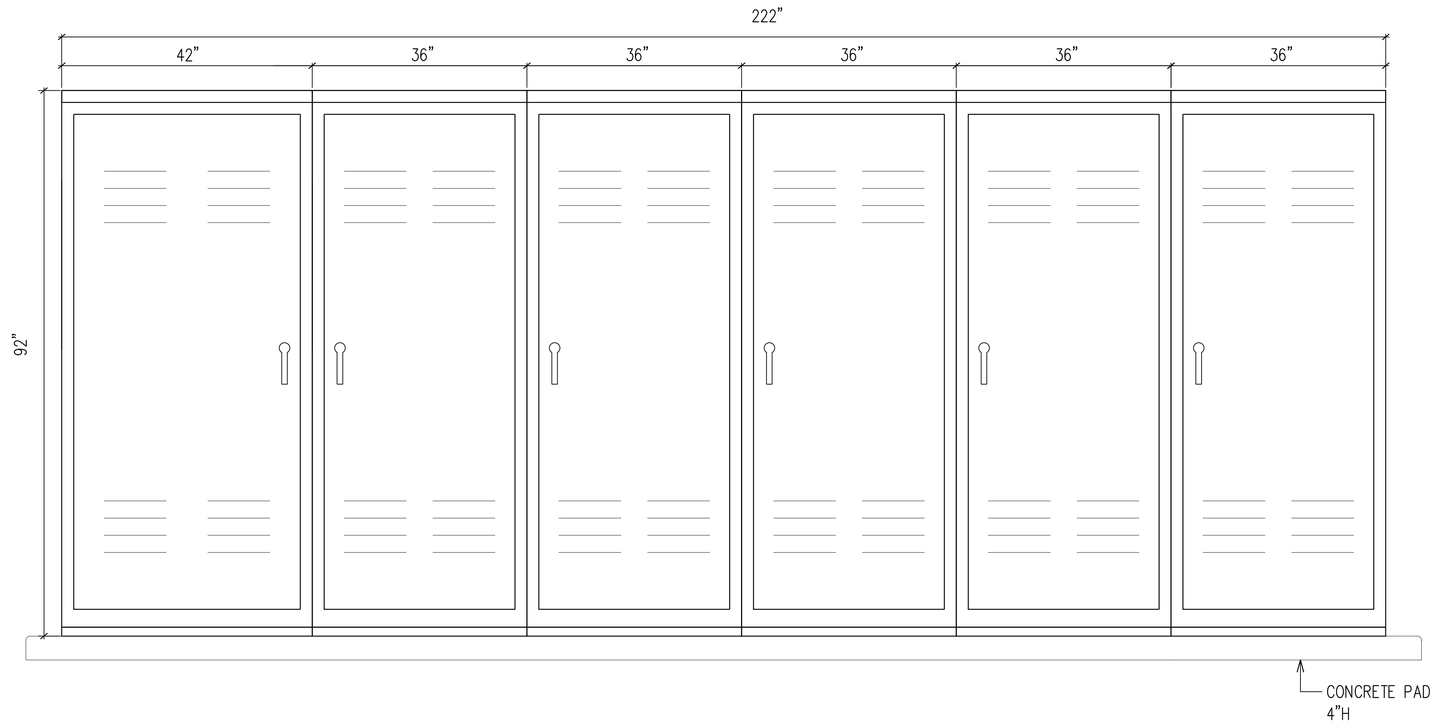
LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

SWITCHBOARD DETAIL 1

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED
APPROVED:	DRAWING NO. E-302
CHIEF ENGINEER	DATE

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 8:19am By: KCHUN
File Name: Z:\Acad\projects\224086\E-302– Switchboard Details.dwg



FRONT ELEVEATION

METERING/DISTRIBUTION SWITCHBOARD ENCLOSURE ELEVATION

NOT TO SCALE

NOTES:

1. MADE FROM TYPE 316 SS.
2. ENCLOSURE SHALL BE NEMA 3R STAINLESS STEEL WITH NEOPRENE GASKETING. PROVIDE GASKETING AT ALL DOORS, REMOVABLE PANELS, AND BETWEEN BOTTOM OF ENCLOSURE AND CONCRETE PAD.
3. PADLOCKS SHALL BE KEYED ALIKE WITH 3 SETS OF KEYS. COORDINATE KEYING OF PADLOCKS WITH THE STATE & HECO. PROVIDE DOUBLE-LOCK HASP FOR INSTALLATION OF HECO & STATE PADLOCKS.
4. PROVIDE 1" THICK CLOSED CELL FOAM INSULATION ON INTERIOR CEILING OF SWITCHBOARD ENCLOSURE TO MINIMIZE CONDENSATION BUILD-UP. PROVIDE AN ACRYLIC-RESIN COATING OVER THE INSULATION MATERIAL. RUBATEX INSULATION AND 374 COATING OR APPROVED EQUAL.
5. SWITCHBOARD ENCLOSURE DIMENSIONS ARE FOR REFERENCE ONLY. DIMENSIONS SHALL BE ADJUSTED TO FIT METERING/DISTRIBUTION SWITCHBOARD. COORDINATE EXACT SIZE WITH SWITCHBOARD DIMENSIONS. DOORS SHALL BE SIZED SUCH THAT ACCESS TO THE METERING SECTIONS OF THE SWITCHBOARD ARE NOT BLOCKED BY THE CENTER DIVIDER.
6. PROVIDE MECHANISM TO HOLD DOORS OPEN IN SERVICE POSITION DURING USE OR MAINTENANCE.

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

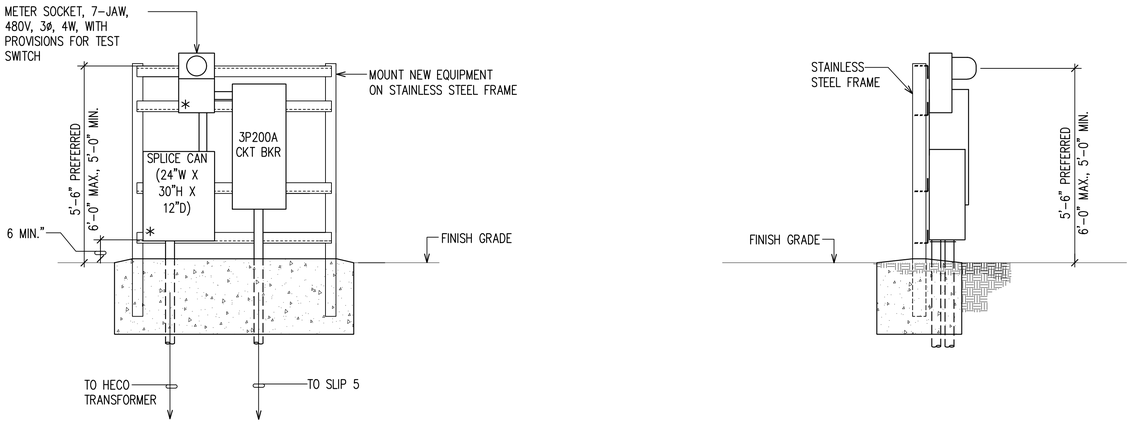
SWITCHBOARD DETAIL 2

DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED

APPROVED: _____ DATE _____
CHIEF ENGINEER

DRAWING NO. E-303

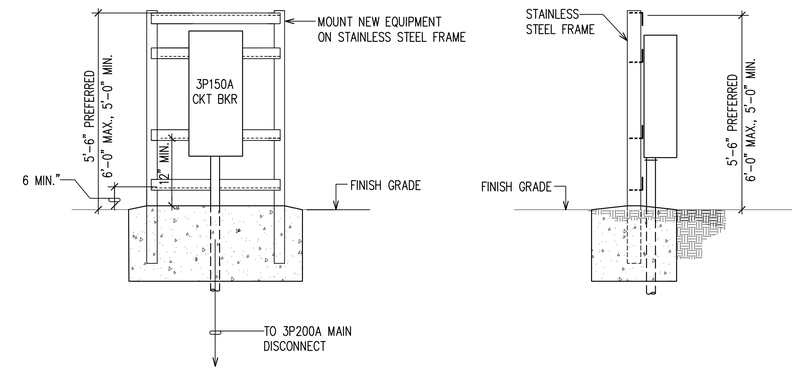
Plotted: Wed, 06 May 2026 – 8:21am By: KCHUN
File Name: Z:\Acad\projects\224086\E-303– Switchboard Details 2.dwg



NOTE: PROVIDE PERMANENT IDENTIFICATION LABELS FOR METER SOCKETS TO IDENTIFY THE UNIT OR SPACE SERVED.

1 E-304 NEW ELECTRICAL SERVICE EQUIPMENT ELEVATION

NOT TO SCALE

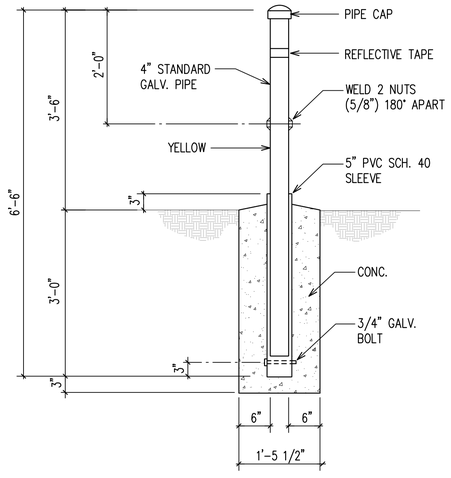


2 E-304 ENCLOSED CIRCUIT BREAKER FOR ATLANTIS ELEVATION

NOT TO SCALE

STANCHION NOTES:

1. STANCHIONS SHALL CONFORM TO ASTM A43.
2. WELDED NUTS ARE FOR INSERTING BOLTS TO ACT AS HANDLES FOR LIFTING REMOVABLE STANCHIONS. TWO BOLTS SHALL BE PROVIDED AND USED TO INSTALL ALL STANCHIONS. BOLTS TO BE REMOVED AFTER INSTALLATION AND TURNED OVER TO OWNER.
3. STANCHIONS SHALL BE PAINTED YELLOW PER ANSI SPEC Z535.1 TO COMPLY WITH OSHA 1910.144 FOR COLOR CODING.
4. A 2" WIDE STRIP OF REFLECTIVE TAPE SHALL BE PLACED 6" BELOW THE TOP OF STANCHION.



3 E-304 TYPICAL REMOVABLE STANCHION DETAILS

NOT TO SCALE

SEE NOTE #7 → MAXIMUM AVAILABLE FAULT CURRENT
XXXX AMPS
DATE: MONTH DAY, YEAR

NOTE:
1. RED BACKGROUND
2. WHITE LETTERING
3. MINIMUM 1/4" LETTER HEIGHT
4. ALL CAPITAL LETTERS
5. SHANNON OR SIMILAR FONT, NON-BOLD
6. REFLECTIVE WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT. (DURABLE ADHESIVE MATERIALS MAY MEET THIS REQUIREMENT
7. FIND AVAILABLE FAULT CURRENT VALUE ON LAST COLUMN OF SHORT CIRCUIT CALCULATIONS SPREADSHEET.
8. PROVIDE LABEL FOR ALL NEW SWITCHBOARDS, CIRCUIT BREAKERS, AND POWER PEDESTALS.
9. LABEL SHALL COMPLY WITH NEC SECTION 110.21(B).

4 E-304 FAULT CURRENT LABEL

NOT TO SCALE

SEE NOTE #8 → FED FROM HECO TRANSFORMER

NOTE:
1. RED OR BLACK BACKGROUND
2. WHITE LETTERING
3. MINIMUM 3/16" LETTER HEIGHT
4. ALL CAPITAL LETTERS
5. SHANNON OR SIMILAR FONT, NON-BOLD
6. REFLECTIVE WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT. (DURABLE ADHESIVE MATERIALS MAY MEET THIS REQUIREMENT
7. PROVIDE LABEL FOR ALL NEW SWITCHBOARDS.
8. LABEL SHOWN AS AN EXAMPLE. INDICATE CORRECT FEEDER PANEL BASED OFF OF ONE-LINE DIAGRAM.

5 E-304 SOURCE OF SUPPLY LABEL

NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

LAHAINA SMALL BOAT HARBOR
FRONT ROW PIERS AND
DINGHY DOCK REPAIRS

ELECTRICAL RACK AND BOLLARD

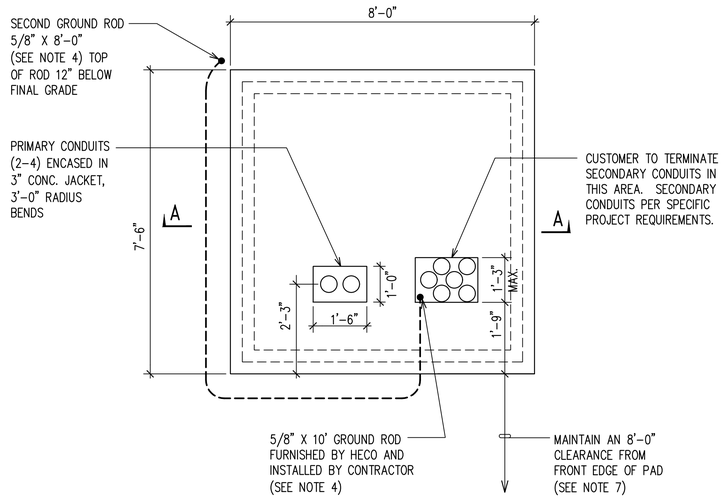
DESIGNED: KMC	SUBMITTED: –
DRAWN: KMC	DATE: MAY 2026
CHECKED: BJO	SCALE: AS NOTED

APPROVED: _____ DATE _____
CHIEF ENGINEER

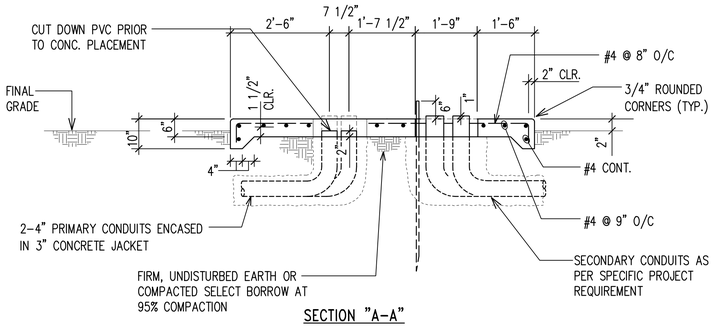
DRAWING NO. E-304

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

Plotted: Wed, 06 May 2026 – 11:40am By: KCHUN
File Name: Z:\Acad Projects\24086\E-304– Electrical Service Elevation.dwg



PLAN



SECTION "A-A"

NOTES:

1. COMPRESSIVE STRENGTH OF CONCRETE : 3000 PSI IN 28 DAYS. MOISTURE CURE CONCRETE PAD A MINIMUM OF 7 DAYS. DO NOT INSTALL TRANSFORMER UNTIL CONCRETE COMPRESSIVE STRENGTH REACHES 1,500 PSI MINIMUM OR AFTER 14 DAYS.
2. REINFORCING: NEW, CLEAN AND FREE FROM LOOSE, FLAKY RUST, ASTM A615, GRADE 40 MINIMUM.
3. CONSTRUCTION TO COMPLY WITH ACI 318 AS AMENDED.
4. IF GROUND RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL 5/8" DIAMETER X 8'-0" GROUND ROD AND CONNECT 4/0 BARE COPPER GROUND WIRE BETWEEN GROUND RODS. A MINIMUM OF 6'-0" SHALL BE MAINTAINED BETWEEN THE DRIVEN GROUND RODS. A SECOND GROUND ROD WILL PROBABLY BE REQUIRED WHEN SOIL RESISTIVITY IS GREATER THAN 67 OHM-METERS.
5. LOCATE, SECURE AND CAP ALL CONDUITS BEFORE POURING PAD. TOP OF CONCRETE TO BE SMOOTH AND TRUE, WOOD-FLOAT FINISH, FREE OF DEFECTS, AS PER CITY AND COUNTY SPECIFICATIONS. ROUND EXPOSED EDGES TO 3/4" CHAMFER.
6. MAINTAIN A RELATIVELY LEVEL, MINIMUM CLEARANCE OF 2'-6" FROM THE SIDES OF THE PAD, 2'-0" FROM THE BACK OF PAD AND 10'-0" IN FRONT OF PAD. EXTEND CONCRETE PAD AN ADDITIONAL 10'-0" IN FRONT IF LOCATED IN PLANTING AREA.
7. REFER TO STD. 30-5000 FOR LOCATIONS AND CLEARANCES.
8. REFER TO STD. 22-2005 FOR 3 PHASE PAD MOUNTED TRANSFORMER REQUIREMENTS.

1 / E-305 75-300KVA TRANSFORMER CONCRETE PAD DETAIL

NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

BILLY J. ORNELLAS LICENSED PROFESSIONAL ENGINEER No. 11658-E HAWAII, U.S.A.

SIGNATURE 4/30/28 Exp. Date of License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

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TRANSFORMER PAD DETAIL

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JOB NO. B46CM71B

JOB NO. B46CM71B LAHAINA SMALL BOAT HARBOR FRONT ROW PIERS AND DINGHY DOCK REPAIRS

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