



PUBLIC NOTICE

Honolulu District, US Army Corps of Engineers

Regulatory Branch (CEPOH-RB)
Building 230
Fort Shafter, Hawaii 96858-5440

Public Notice Date: **August 25, 2016**
Expiration Date: **September 24, 2016**
Permit File Number: **POH-2015-00062**

FEDERAL PUBLIC NOTICE

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States as described below and shown on the attached drawings.

APPLICANT: Mr. Ross S. Sasamura, City & County of Honolulu, Department of Facility Maintenance, Storm Water Quality Branch, 1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707

WATERWAY AND LOCATION OF THE PROPOSED WORK: The proposed project is located in Hele Channel between Akumu Street and Keolu Drive, Kailua, Island of Oahu, Hawaii.

PROPOSED PROJECT AND PURPOSE: Stabilization of a combined total of 1,177 linear feet of left and right bank segments of a 700-foot long portion of the Hele Channel between Akumu Street and Keolu Drive to address localized sedimentation and channel erosion. Bank stabilization involves installation of rock riprap at and below high tide line with installation of vegetated compostable socks at high tide line to top of bank. Bank stabilization will result in the permanent discharge of 356 cubic yards of rock riprap over 4,797 square feet of navigable waters of the U.S. Rock riprap will be temporarily placed within the toe footprint for access into the channel. All in-water work will be accomplished by either a small excavator or small crane staged atop the temporary access or the top of the channel banks. The toe of the slope protection will be excavated two-feet wide by 3-feet deep using an excavator bucket and replaced with geotextile fabric overlaid by rock riprap from the temporary access road until construction of the bank stabilization structure is complete. Approximately 267 cubic yards of excavated material will either be immediately transported for upland disposal or dewatered adjacent to the channel with no return flow for later upland disposal. A turbidity curtain will be installed along the entire length of the in-water construction area. Drawings enclosed for reference.

AUTHORITY: A Department of the Army permit is required pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) – To install a structure in navigable waters of the U.S.

- Section 404 of the Clean Water Act (33 U.S.C. 1344) – To discharge fill material into waters of the United States. The Corps' public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413) - Transport dredged material for the purpose of dumping it into ocean waters. The Corps' public interest review will consider the criteria established under authority of Section 102(a) of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (40 CFR Parts 220 to 229), as appropriate.

WATER QUALITY CERTIFICATION: The proposed action will result in a discharge of a pollutant into a water of the U.S. and will require authorization from the U.S. Army Corps of Engineers (Corps) in accordance with Section 404 of the Clean Water Act of 1972 (CWA). Under Section 401 of the CWA (Public Law 95-217), the Corps may not issue a permit for the described work until the applicant obtains a certification, or waiver of certification, from the State of Hawaii, Department of Health – Clean Water Branch.

COASTAL ZONE MANAGEMENT ACT CERTIFICATION: The proposed activity will affect land or water uses in the Coastal Zone. Under Section 307(c)(3) of the Coastal Zone Management Act of 1972, as amended by 16 U.S.C. 1456(c)(3), the Corps may not issue a permit for the described work until the applicant obtains a Federal Consistency Concurrence from the State of Hawaii, Department of Business, Economic Development, and Tourism – Office of Planning.

CULTURAL RESOURCES: Pursuant to Section 106 of the National Historic Preservation Act (NHPA), our assessment of the project leads us to a preliminary determination no historic properties will be affected by the proposed action within the permit area. Therefore, consultation with the State of Hawaii, Department of Land & Natural Resources, Historic Preservation Division, Office of Hawaiian Affairs, and the applicable Native Hawaiian Organizations will be conducted independent of this public notice.

ENDANGERED SPECIES: Pursuant to Section 7 of the Endangered Species Act (ESA), federal agencies must consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) on any action that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat. Based on the project location, the following protected species have the potential to occur near the project location:

Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), Endangered
Hawaiian Coot (*Fulica americana alai*), Endangered
Hawaiian Stilt (*Himantopus mexicanus knudseni*), Endangered
Hawaiian Duck (*Anas wyvilliana*), Endangered
Hawaiian Moorhen (*Gallinula chloropus sandvicensis*), Endangered

Preliminary determinations indicate that the described activity may affect the above species. Consultation under Section 7 of the Endangered Species Act of 1973 (87 Stat.

844) will be initiated independent of this notice. A permit for the proposed activity will not be issued until the consultation process is completed.

ESSENTIAL FISH HABITAT: The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), which requires all federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat. The Honolulu District includes areas of EFH as Fishery Management Plans. We have reviewed the January 20, 1999, Western Pacific Fishery Management Council's Environmental Assessment to locate EFH area as identified by NMFS. Preliminary determinations indicate that the described activity will not have an adverse effect on EFH. Consultation under MSA is not required for the described activity.

FEDERAL EVALUATION OF APPLICATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to evaluate the direct, indirect, and cumulative impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above.

PUBLIC HEARING: Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state clearly and concisely, the reasons and rationale for holding a public hearing. The District Commander will then decide if a hearing should be held.

COMMENT AND REVIEW PERIOD: Comments on this public notice should be made in writing via conventional mail or e-mail. Comments will be accepted and made part of

the record and will be considered in determining whether it would be in the public interest to authorize this proposal. Conventional mail comments should be sent to

U.S. Army Corps of Engineers, Honolulu District
Regulatory Office, Attn: J. Paahana
Building 230
Fort Shafter, Hawaii 96858-5440.

Alternatively, comments may be emailed to jessie.k.paahana@usace.army.mil. In order to be accepted, e-mail comments must originate from the author's e-mail account.

Both conventional mail and e-mail comments must include the DA permit number **POH-2015-00062**, and the commentor's name, address, and phone number. All comments, whether conventional mail or e-mail, should be received by the close of business on **September 24, 2016**.

PRIVACY & CONFIDENTIALITY: It should be noted that materials submitted as part of the permit application become part of the public record and are thus available to the general public under the procedures of the Freedom of Information Act. Submissions should not include any information that the submitter seeks to preserve as confidential.

If you have any questions about this project or the permit process, please contact Ms. Jessie Paahana of my staff via telephone at (808) 835-4107 or via email at jessie.k.paahana@usace.army.mil.

Tunis W. McElwain
Acting Chief, Regulatory Branch

JOB NO. ____-____

STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND-HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

KAILUA, OAHU, HAWAII

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

Prepared By:

AECOM
1001 BISHOP STREET, SUITE 1600
HONOLULU, HAWAII 96813

REVISED 6/16/16

VICINITY MAP		LOCATION MAP		INDEX OF DRAWINGS		APPROVED																																																																												
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GENERAL CONSTRUCTION NOTES

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986," AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984," AS AMENDED, BY THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII.
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS/HER SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING CITY DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS", AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING, AT 768-8084 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT TWO (2) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
- THE CONTRACTOR MAY SUBMIT A SUBSTITUTION REQUEST TO PRECAST ANY CITY OWNED AND/OR MAINTAINED DRAINAGE STRUCTURE (EX., CATCH BASINS, DRAIN MANHOLES, DRAIN INLETS, CULVERTS, ETC). HOWEVER, PRIOR TO CONSTRUCTION AND INSTALLATION OF ANY PRECAST STRUCTURE, THE CONTRACTOR SHALL A) SUBMIT SIX (6) SETS OF SHOP DRAWINGS TO THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING AND OBTAIN WRITTEN APPROVAL AND B) NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING AT 768-8084 TO ARRANGE FOR INSPECTIONAL SERVICES. NON-COMPLIANCE WITH ANY OF THESE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL PRECAST CONSTRUCTION WORK AND REJECTION OF ALL PRECAST STRUCTURES ALREADY CONSTRUCTED.
- CONFINED SPACE
FOR ENTRY BY CITY PERSONNEL, INCLUDING INSPECTORS, INTO A PERMIT REQUIRED CONFINED SPACE AS DEFINED IN 29 CFR PART 1910.146(B), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING:
 - ALL SAFETY EQUIPMENT REQUIRED BY THE CONFINED SPACE REGULATIONS APPLICABLE TO ALL PARTIES OTHER THAN THE CONSTRUCTION INDUSTRY, TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
 - FULL BODY HARNESES FOR UP TO TWO PERSONNEL.
 - LIFELINE AND ASSOCIATED CLIPS.
 - INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
 - TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
 - EMERGENCY (ESCAPE) RESPIRATOR (10 MINUTE DURATION).
 - CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
 - CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE OF AT LEAST 20- FEET AWAY).
 - PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.
 - CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
 - ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).
- PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT, THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES - HISTORIC PRESERVATION DIVISION (692-8015). IN ADDITION, FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL INFORM THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING (768-8084); AND FOR CITY PROJECTS, NOTIFY THE RESPONSIBLE CITY AGENCY.
- FOR BENCHMARK, SEE SHEET C-2.

NOTES FOR CONSTRUCTION WITHIN CITY RIGHT-OF-WAY

- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE CITY AND COUNTY OF HONOLULU SHALL REQUIRE SUPPLEMENTARY MEASURES AS NECESSARY.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES

- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND ITS SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO TITLE 11, HAWAII ADMINISTRATIVE RULES, CHAPTER 43, "COMMUNITY NOISE CONTROL FOR OAHU" IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION ACTIVITIES FOR THIS PROJECT WILL EXCEED THE ALLOWABLE NOISE LEVELS, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 43 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR CONSTRUCTION ACTIVITIES.
- ALL EXISTING UTILITIES SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION, AND ANY DAMAGE TO THEM SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.

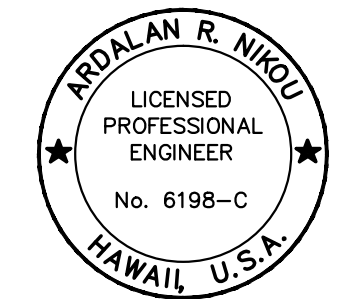
TRAFFIC NOTES FOR WORK ON CITY AND COUNTY STREETS

- A PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION SERVICES (DTS) BEFORE WORK ON ANY PORTION OF A PUBLIC STREET OR HIGHWAY MAY BEGIN. CONSTRUCTION TRAFFIC CONTROL PLANS APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES AND/OR THE DEPARTMENT OF PLANNING AND PERMITTING (DPP) MUST BE PROVIDED WHEN APPLYING FOR THE PERMIT.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS AND OTHER PROTECTIVE FACILITIES, WHICH SHALL CONFORM WITH THE "HAWAII ADMINISTRATION RULES GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAYS ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, PART VI - TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS".
- WORK ON ANY CITY STREET AREA MAY BE PERFORMED ONLY BETWEEN THE HOURS OF 8:30 A.M. TO 3:30 P.M., MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
- DURING WORKING HOURS, THE CONTRACTOR SHALL PROVIDE FOR THROUGH TRAFFIC. DURING NON-WORKING HOURS, ALL TRENCHES SHALL BE COVERED WITH A SAFE, NON-SKID BRIDGING MATERIAL AND ALL LANES SHALL BE OPEN TO TRAFFIC.
- AS REQUIRED BY THE DEPARTMENT OF TRANSPORTATION SERVICES, THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
- WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED.
- DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHTS-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
- THE CONTRACTOR SHALL REFERENCE TO THE APPROVAL OF THE DEPARTMENT OF TRANSPORTATION SERVICES AND THE DEPARTMENT OF PLANNING AND PERMITTING, ALL EXISTING TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS DISTURBED BY HIS/HER ACTIVITIES.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PLANNING AND PERMITTING AT 768-8084 ONE (1) WEEK PRIOR TO ANY WORK TO BE DONE ON SIGNS, POSTS AND PAVEMENT MARKINGS.
- NO EQUIPMENT SHALL BE STORED WITHIN STREET RIGHTS-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
- AECOM SHALL ENSURE THAT THE CONTRACTOR INSTALLS THE CONSTRUCTION TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MUTCD AND THE HAWAII ADMINISTRATION RULES AS SPECIFIED IN NOTE #2.

ABBREVIATIONS

AC	ASPHALT CONCRETE
BC	BOTTOM CURB
B	BASELINE
BW	BOTTOM OF WALL
C&C	CITY AND COUNTY
CL	CENTER LINE
CAU	CONCRETE ARMOR UNIT
CB	CATCH BASIN
CLF	CHAIN LINK FENCE
CMU	CONCRETE MASONRY UNIT
CS	CURB INLET SCREEN
CY	CUBIC YARD
D	DIAMETER OR DRAIN
DET	DETAIL
D.I.	DRAIN INLET
DIA	DIAMETER
DWY.	DRIVEWAY
E/ELEC.	ELECTRIC
ELEV./EL.	ELEVATION
EM	EROSION MAT
EX, EXIST	EXISTING
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FOOT/FEET
G	GAS
GA	GALVANIZED
GMH	GAS MANHOLE
G.P.	GUARD POST/GUY POLE/ GATE POST
GRP	GROUTED RUBBLE PAVING
GV	GAS VALVE
G.W.	GUY WIRE
H	HEIGHT
H.B.	HOSE BIB
HTL	HIGH TIDE LINE
INT.	INTERSECTION
INV.	INVERT
LB	POUND
MH	MANHOLE
MHWM	MEAN HIGH WATER MARK
MON.	MONUMENT
M.S.L.	MEAN SEA LEVEL
N.D.	NOMINAL DIAMETER
NIC	NOT IN CONTRACT
NO.	NUMBER
O/H	OVERHEAD
PAVMT.	PAVEMENT
PC	POINT OF CURVATURE
P	PROPERTY LINE
PT	POINT OF TANGENCY
R/W	RIGHT-OF-WAY
RCP	REINFORCED CONCRETE PIPE
S	SEWER OR SPREAD
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SMH	SEWER MANHOLE
ST.	STREET
STA.	STATION
STD	STANDARD
TC	TOP CURB
TDC	TOP DROP CURB
T/TEL.	TELEPHONE
TMK	TAX MAP KEY
TP	TOP PIPE
TS	TOP STEM
TV	TOP VALVE
TW	TOP WALL
TYP	TYPICAL
U.P.	UTILITY POLE
W	WATER
WM	WATER METER
WMH	WATER MANHOLE
WV	WATER VALVE BOX
W/	WITH


REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED



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LICENSED PROFESSIONAL ENGINEER
No. 6198-C
HAWAII, U.S.A.

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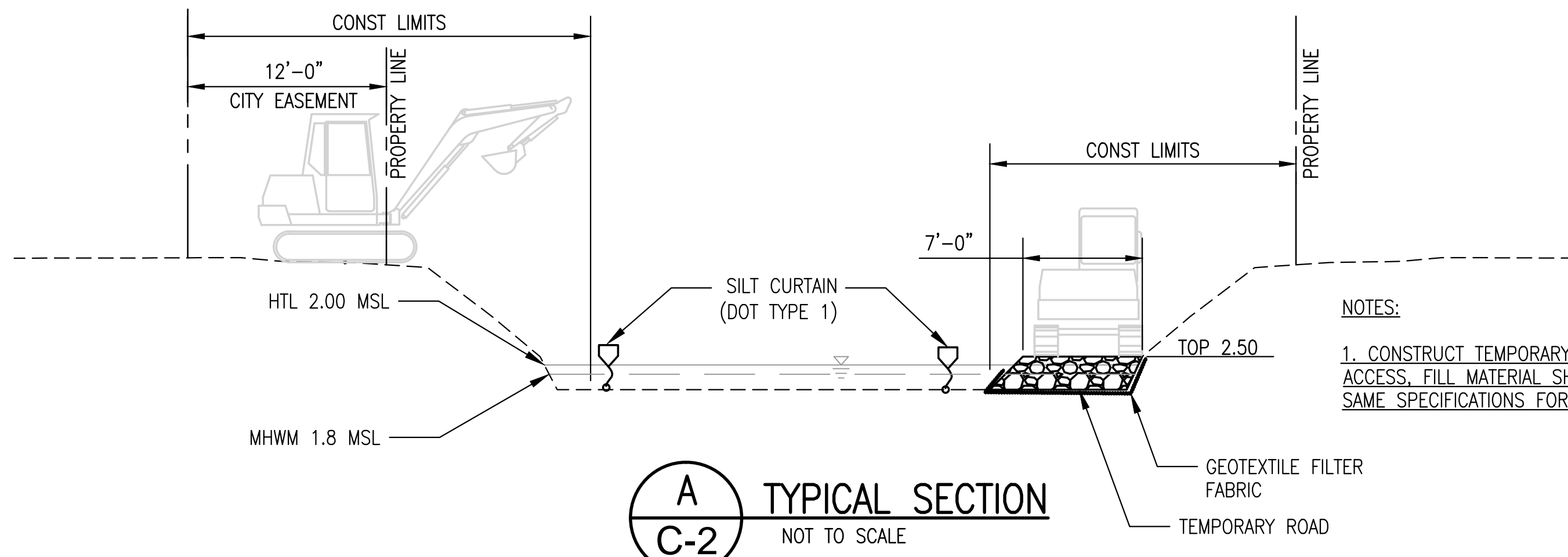
DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

STORM DRAINAGE BMPS IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

CONSTRUCTION NOTES

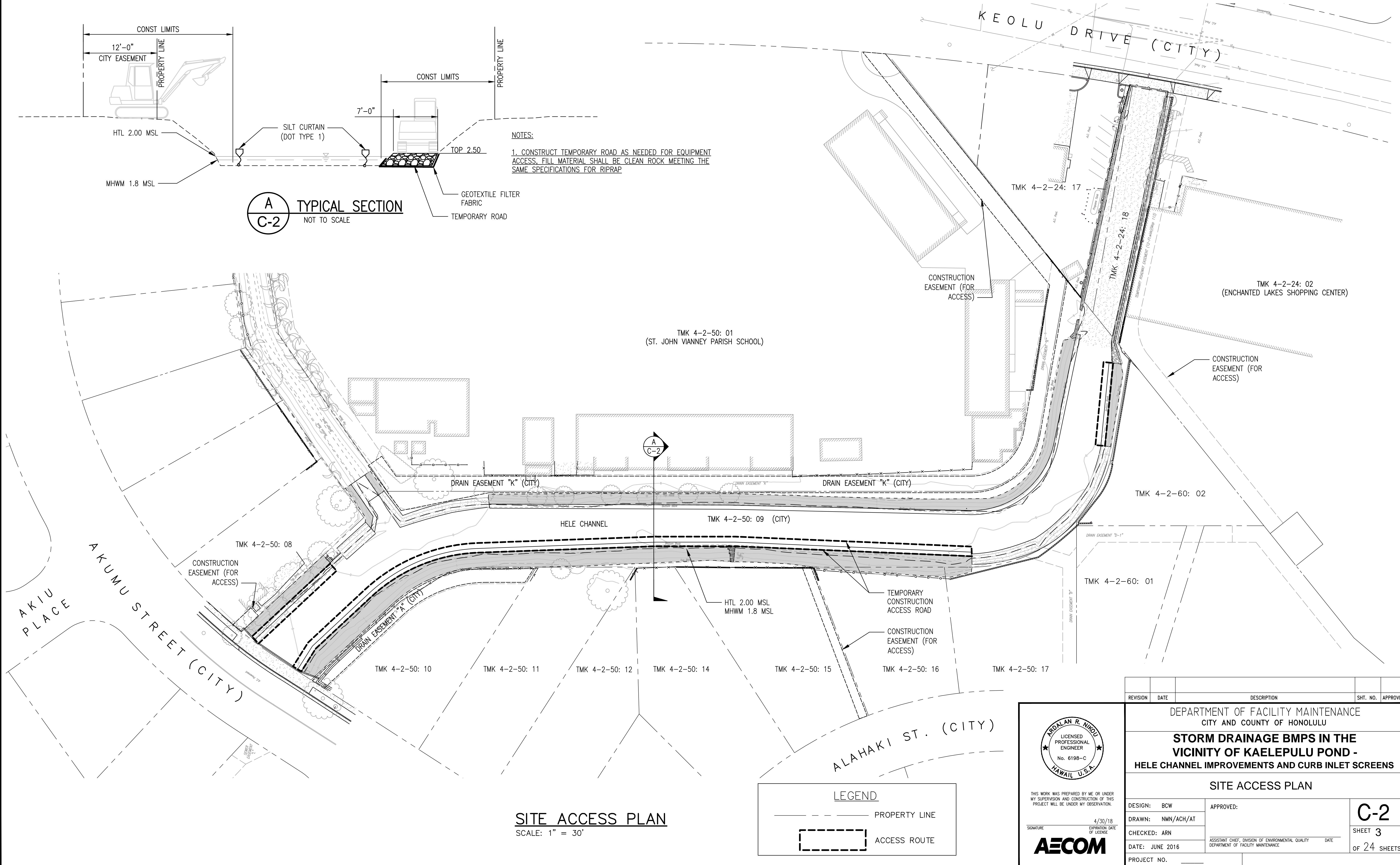
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DRAWN: NMN/ACH/AT		
CHECKED: ARN	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY	SHEET 2
DATE: JUNE 2016	DEPARTMENT OF FACILITY MAINTENANCE	OF 24 SHEETS
PROJECT NO. _____		

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 PLOT DATE: June 22, 2016 @ 09:19:20 am
 PLOT BY: [unclear]

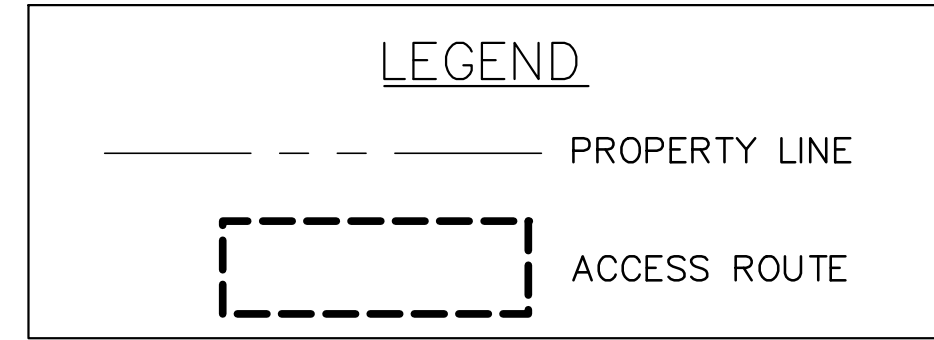


NOTES:
 1. CONSTRUCT TEMPORARY ROAD AS NEEDED FOR EQUIPMENT ACCESS. FILL MATERIAL SHALL BE CLEAN ROCK MEETING THE SAME SPECIFICATIONS FOR RIPRAP

A
C-2 TYPICAL SECTION
 NOT TO SCALE



SITE ACCESS PLAN
 SCALE: 1" = 30'



AROLDAN R. NIQU
 LICENSED PROFESSIONAL ENGINEER
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 HAWAII, U.S.A.

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4/30/18
 EXPIRATION DATE OF LICENSE

AECOM

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED	
DEPARTMENT OF FACILITY MAINTENANCE CITY AND COUNTY OF HONOLULU STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS SITE ACCESS PLAN					
DESIGN:	BCW	APPROVED:	C-2 SHEET 3 OF 24 SHEETS		
DRAWN:	NMN/ACH/AT	DATE:			JUNE 2016
CHECKED:	ARN	DATE:			
PROJECT NO.:		DATE:			

P:\PROJECTS\2016\4-2-50\4-2-50-09\4-2-50-09-01.dwg
 4/30/18 10:00 AM
 AECOM

TMK 4-2-50: 07

TMK 4-2-50: 08

TMK 4-2-50: 01

TMK 4-2-50: 09

TMK 4-2-50: 14

TMK 4-2-50: 10

TMK 4-2-50: 05

TMK 4-2-50: 06

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TMK 4-2-50: 08

TMK 4-2-50: 09

SITE PLAN 1

SCALE: 1" = 10'

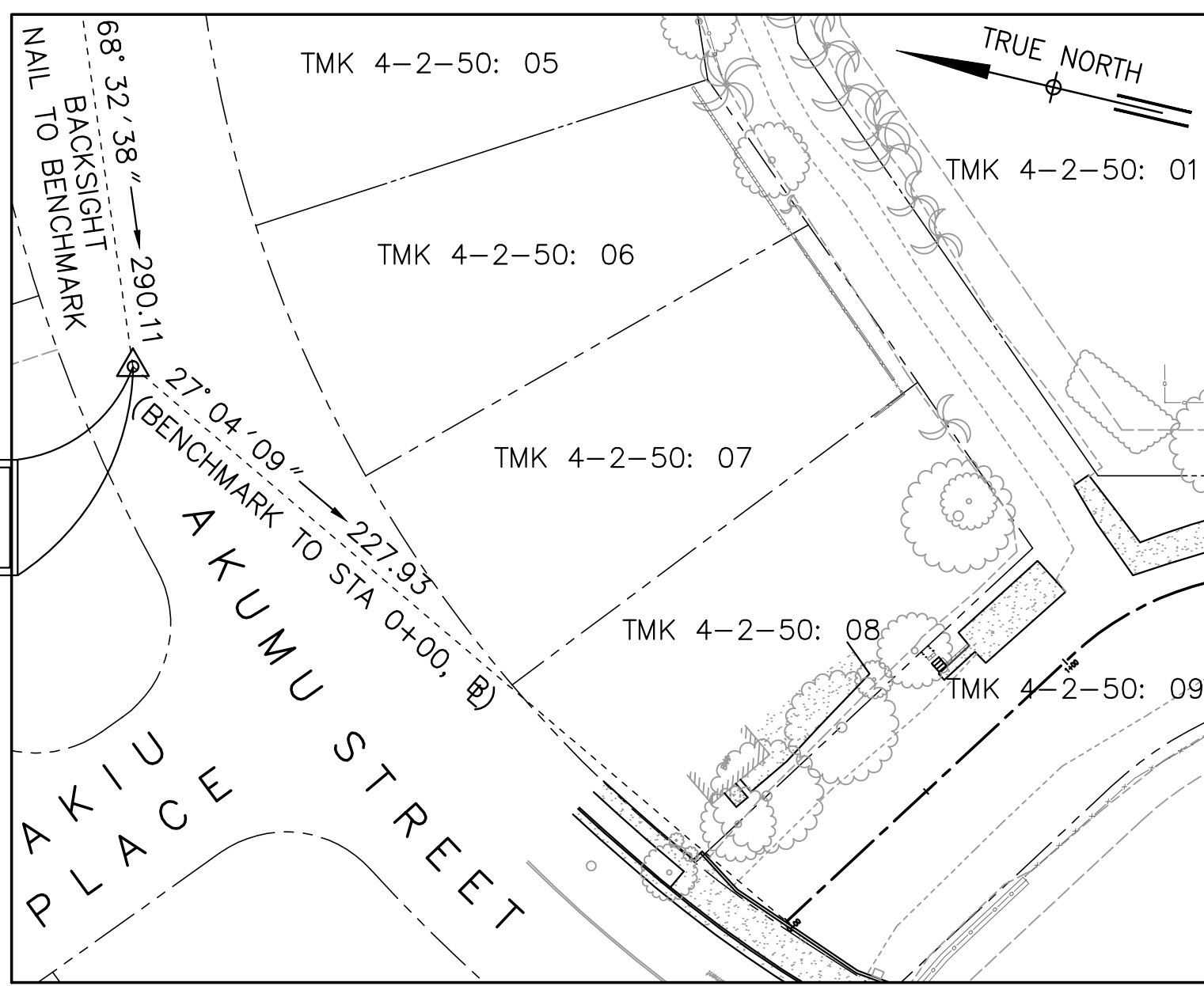
GRAPHIC SCALE



SCALE: 1" = 10'

NAIL (NOT SHOWN)
ELEV.=7.40 M.S.L.

BENCHMARK:
NAIL
ELEV.=6.60 M.S.L.



BENCHMARK LOCATION

SCALE: 1" = 40'

LEGEND

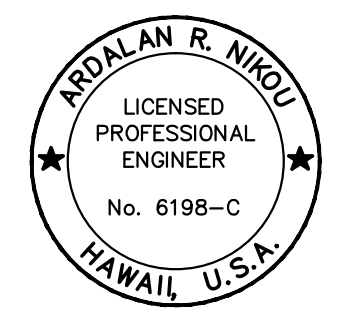
- PROPERTY LINE
- LIMITS OF RIPRAP
- LIMITS OF COMPOST SOCKS
- HTL & MHW
- LIMITS OF RIPRAP

- NOTES:**
- CONTRACTOR TO CLEAR AND GRUB ALL TREES/PLANTS WITHIN THE LIMITS OF THE COMPOST SOCKS UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPING PLANS.



SHEET LAYOUT

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED



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DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

STORM DRAINAGE BMPS IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

SITE PLAN 1

DESIGN: BCW

APPROVED: _____

DRAWN: NMN/ACH/AT

CHECKED: ARN

DATE: JUNE 2016

PROJECT NO. _____

ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY
DEPARTMENT OF FACILITY MAINTENANCE

C-3

SHEET 4

OF 24 SHEETS

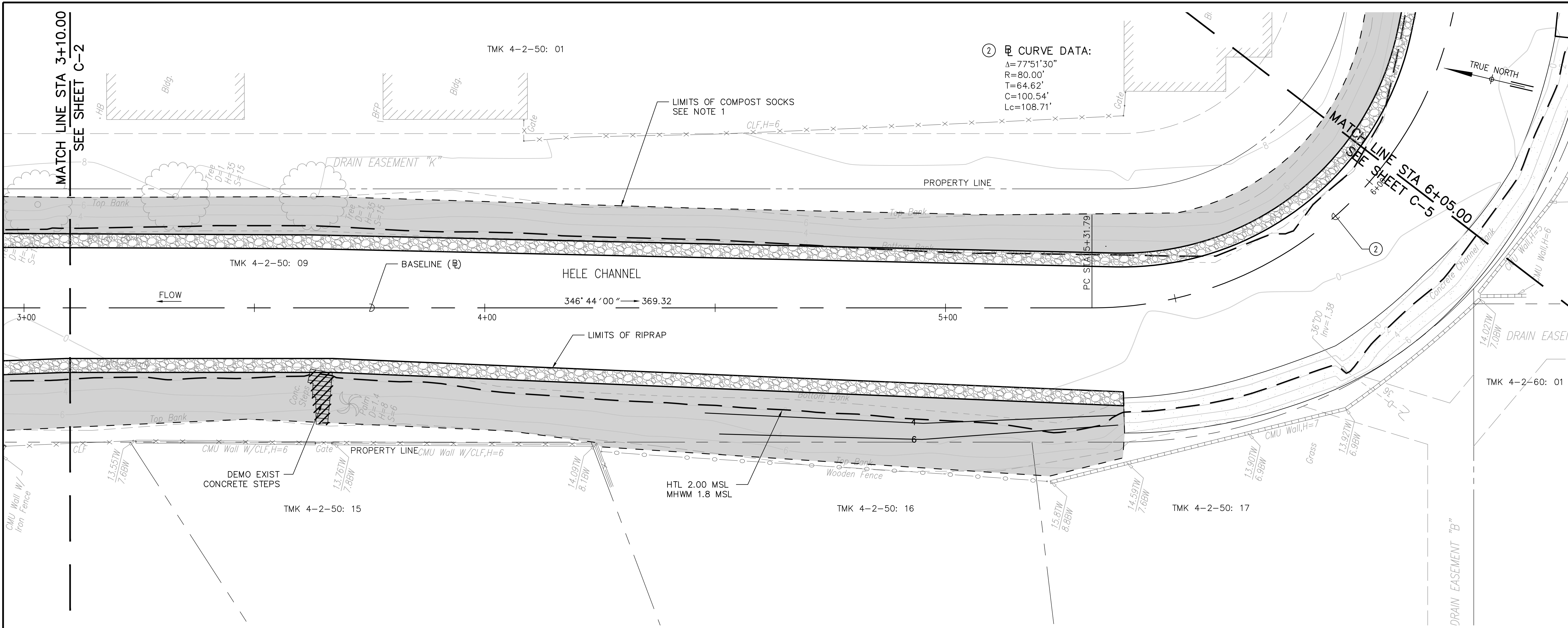
FILE	POCKET	FOLDER	POH-2016-08062

MATCH LINE STA 3+10.00
SEE SHEET C-2

TMK 4-2-50: 01

② CURVE DATA:
 $\Delta = 77^{\circ}51'30''$
 $R = 80.00'$
 $T = 64.62'$
 $C = 100.54'$
 $Lc = 108.71'$

TRUE NORTH



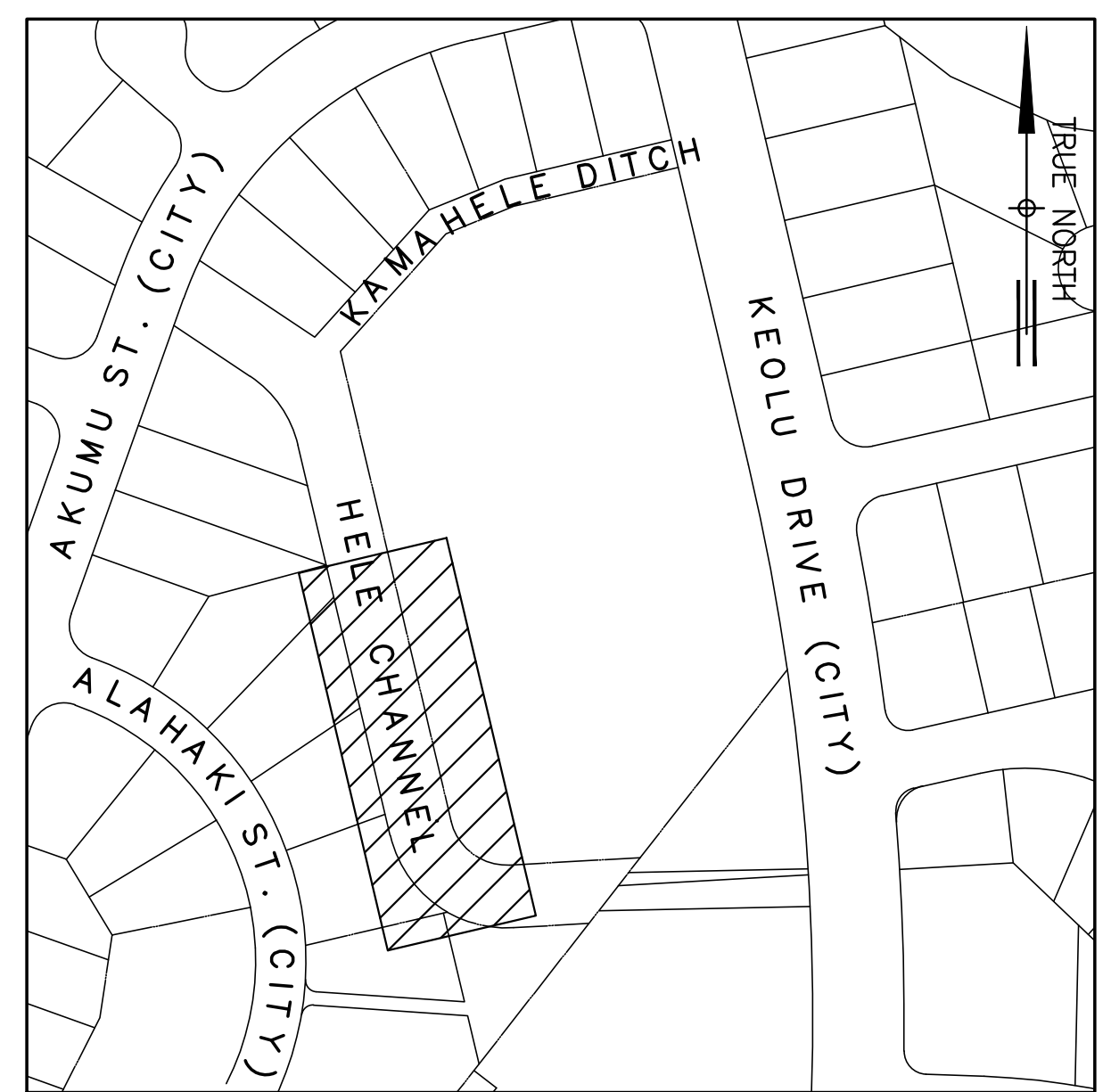
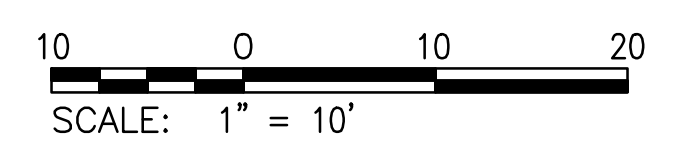
NOTES:

- CONTRACTOR TO CLEAR AND GRUB ALL TREES/PLANTS WITHIN THE LIMITS OF THE COMPOST SOCKS UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPING PLANS.

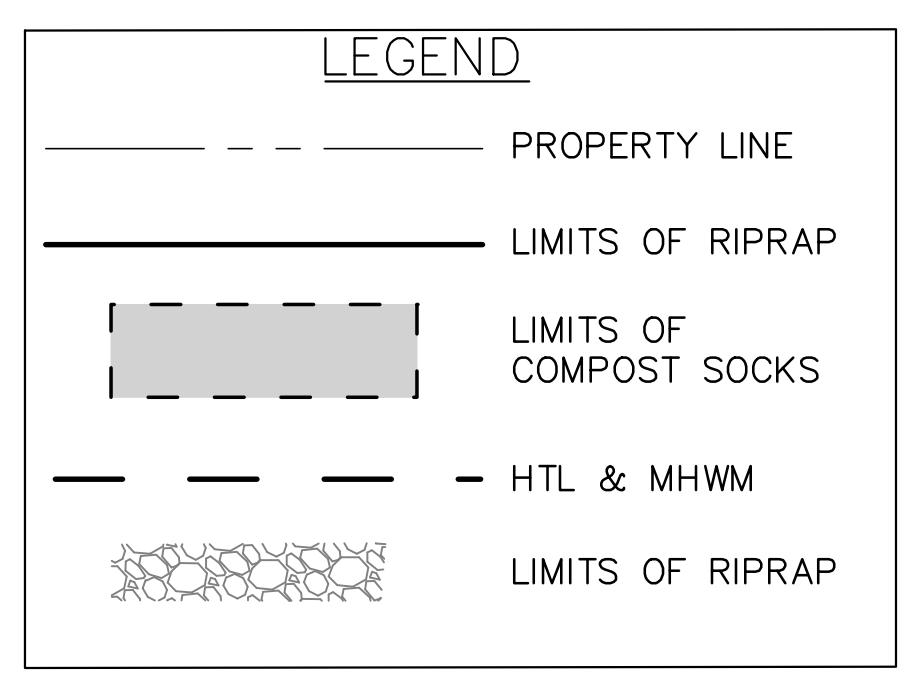
SITE PLAN 2

SCALE: 1" = 10'

GRAPHIC SCALE



SHEET LAYOUT



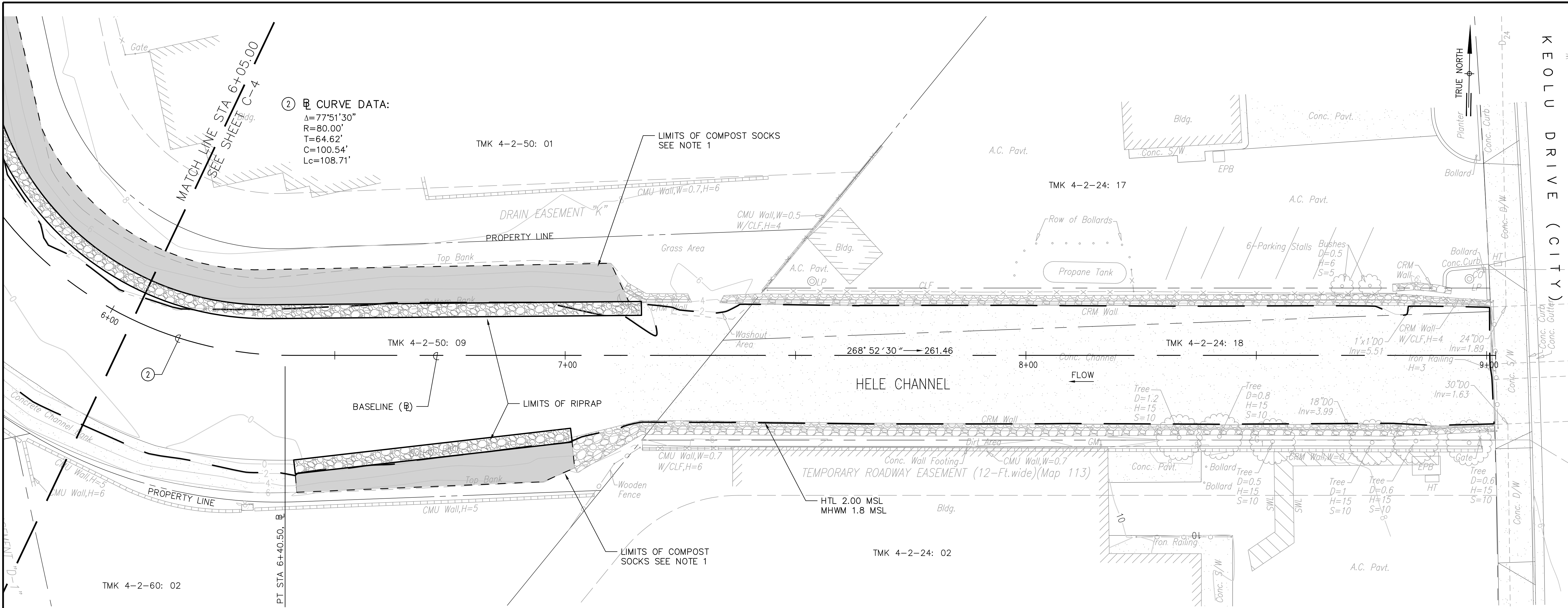
ARDALAN R. NIROU
 LICENSED PROFESSIONAL ENGINEER
 No. 6198-C
 HAWAII, U.S.A.

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4/30/18
 EXPIRATION DATE OF LICENSE

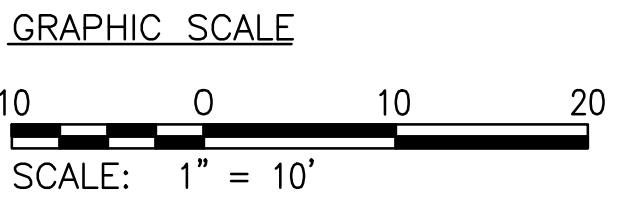
AECOM

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED
DEPARTMENT OF FACILITY MAINTENANCE CITY AND COUNTY OF HONOLULU				
STORM DRAINAGE BMPS IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS				
SITE PLAN 2				
DESIGN: BCW	APPROVED:		C-4 SHEET 5 OF 24 SHEETS	
DRAWN: NMN/ACH/AT	DATE: JUNE 2016			
CHECKED: ARN	PROJECT NO. _____			
ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF FACILITY MAINTENANCE				

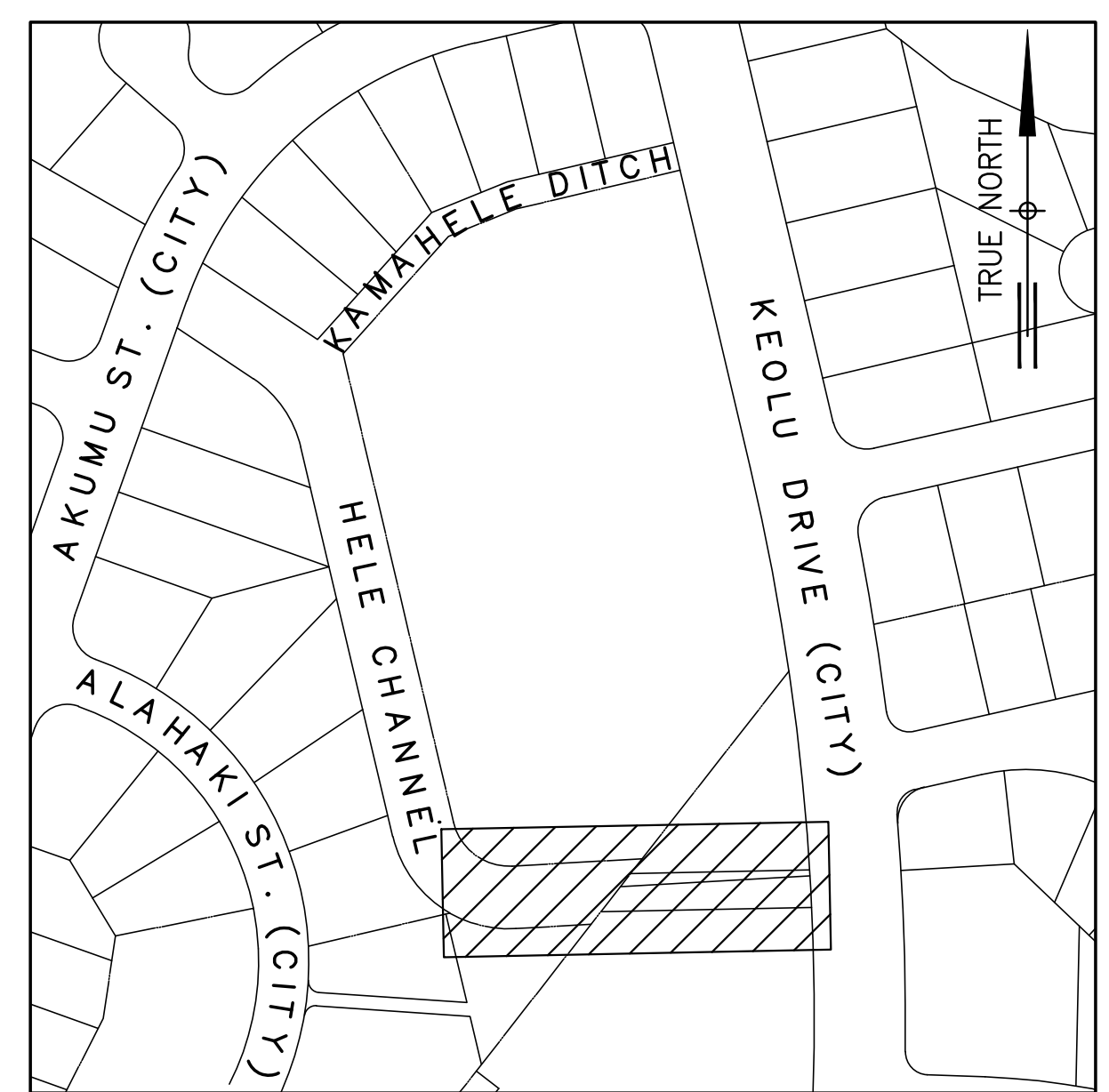


② CURVE DATA:
Δ=77°51'30"
R=80.00'
T=64.62'
C=100.54'
Lc=108.71'

SITE PLAN 3
SCALE: 1" = 10'



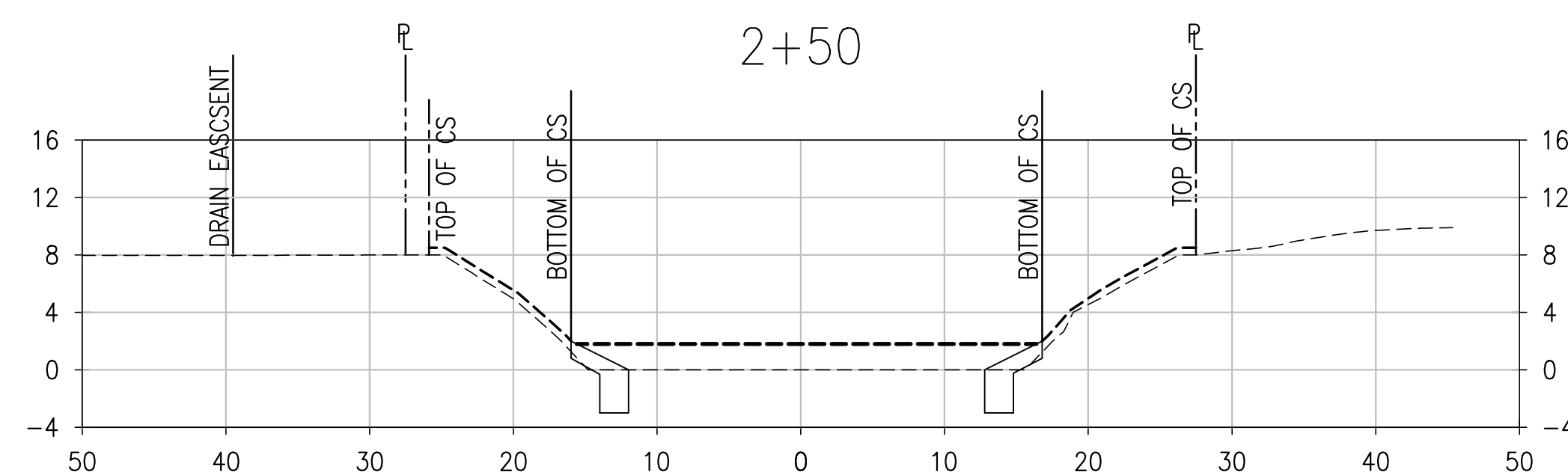
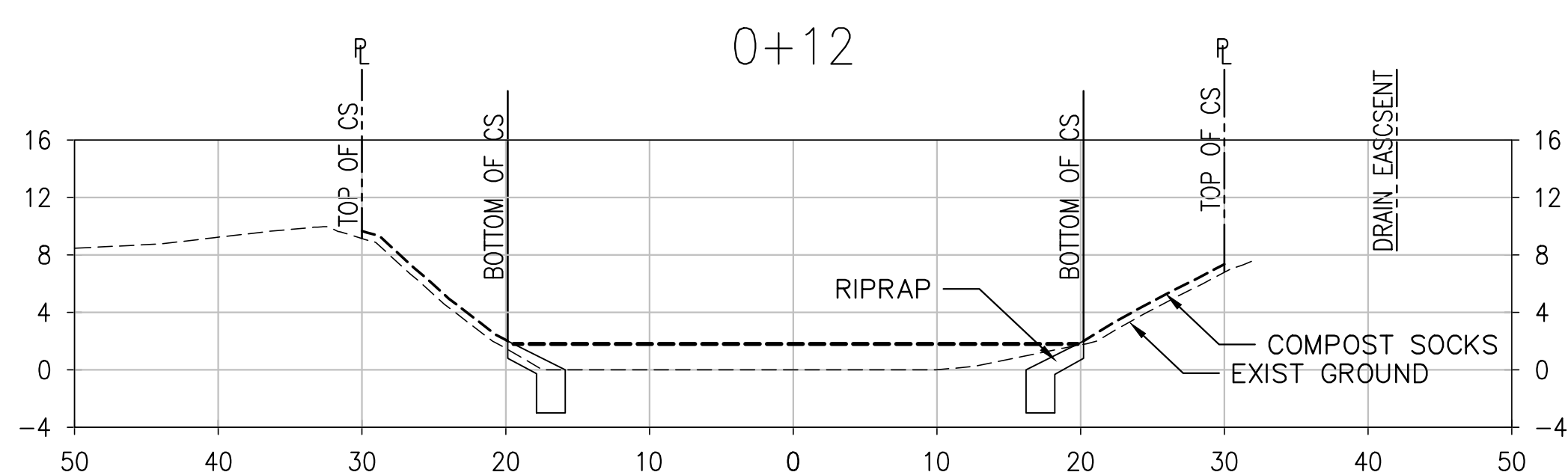
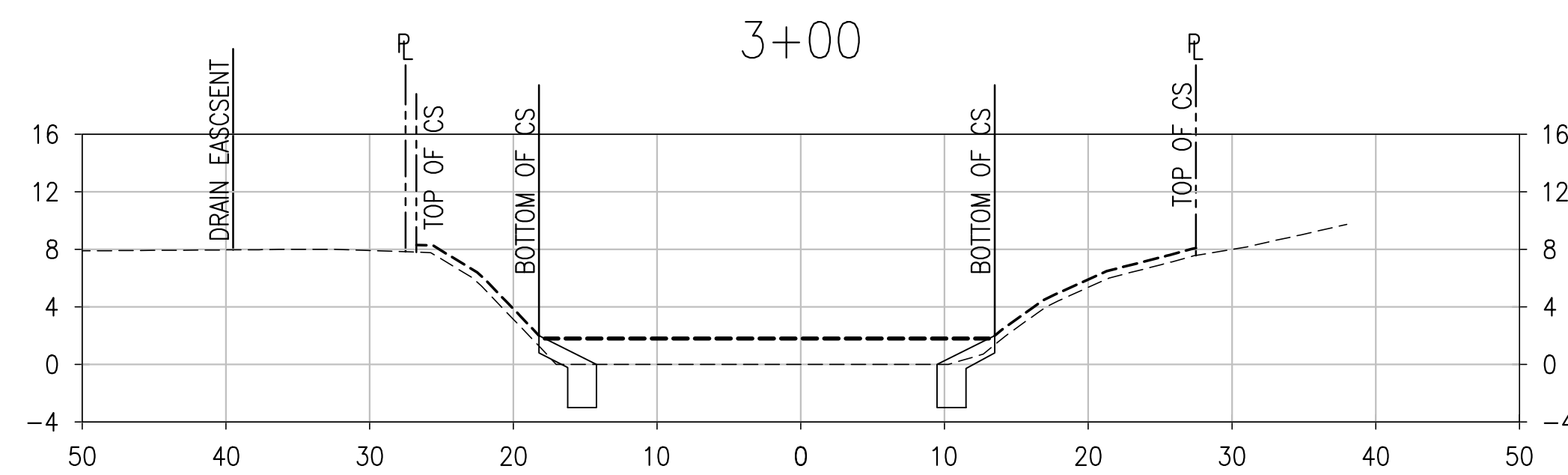
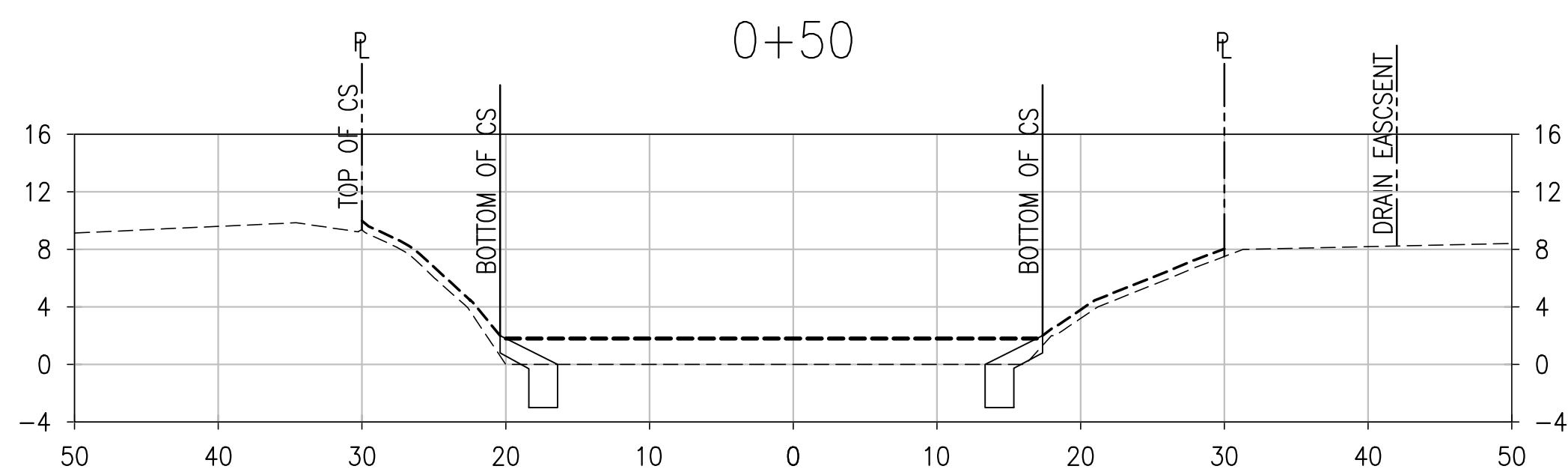
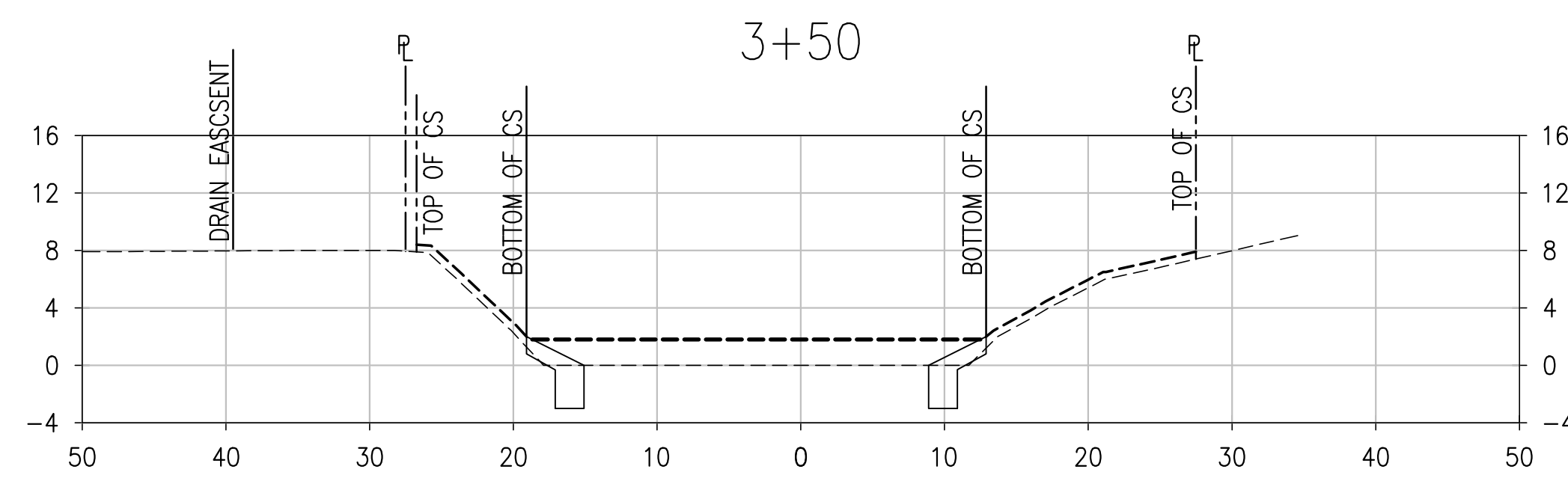
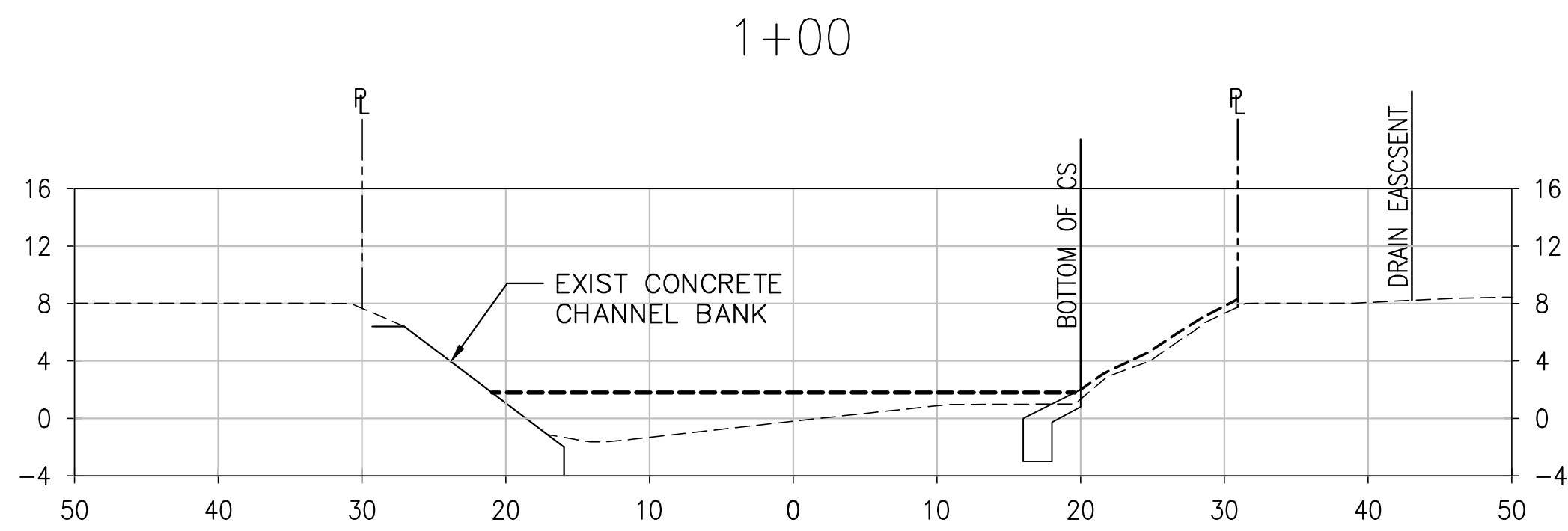
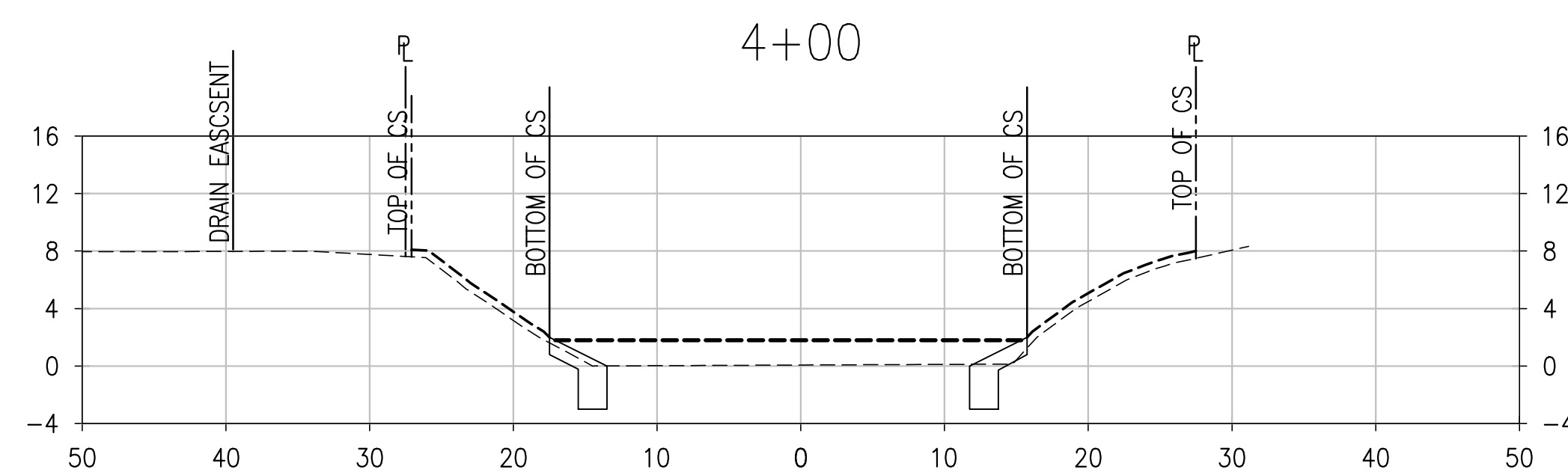
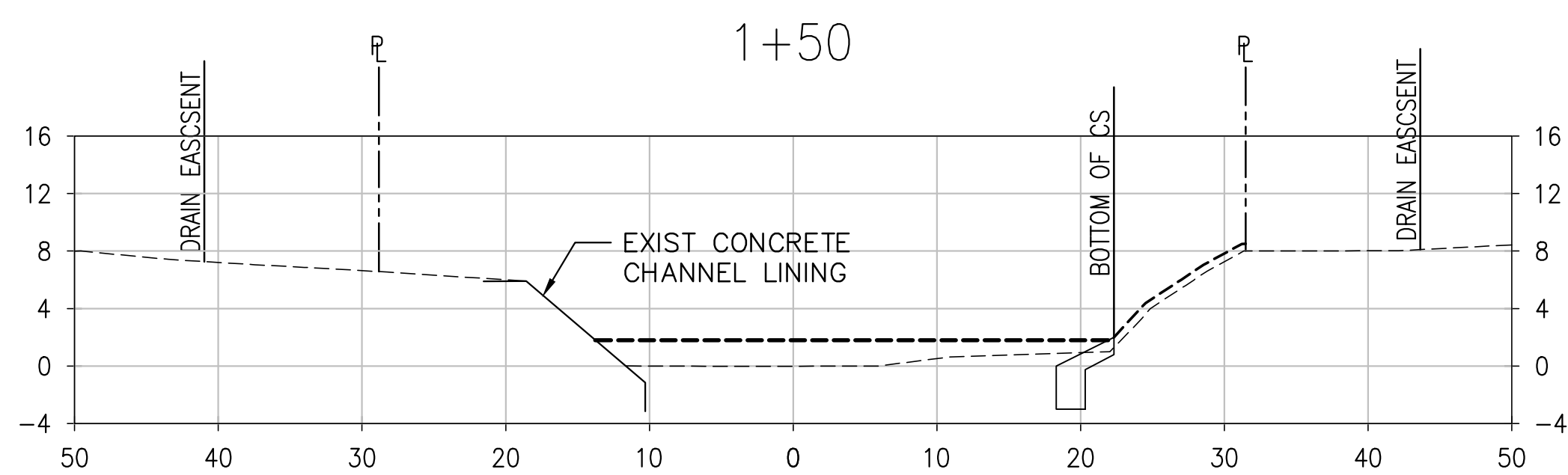
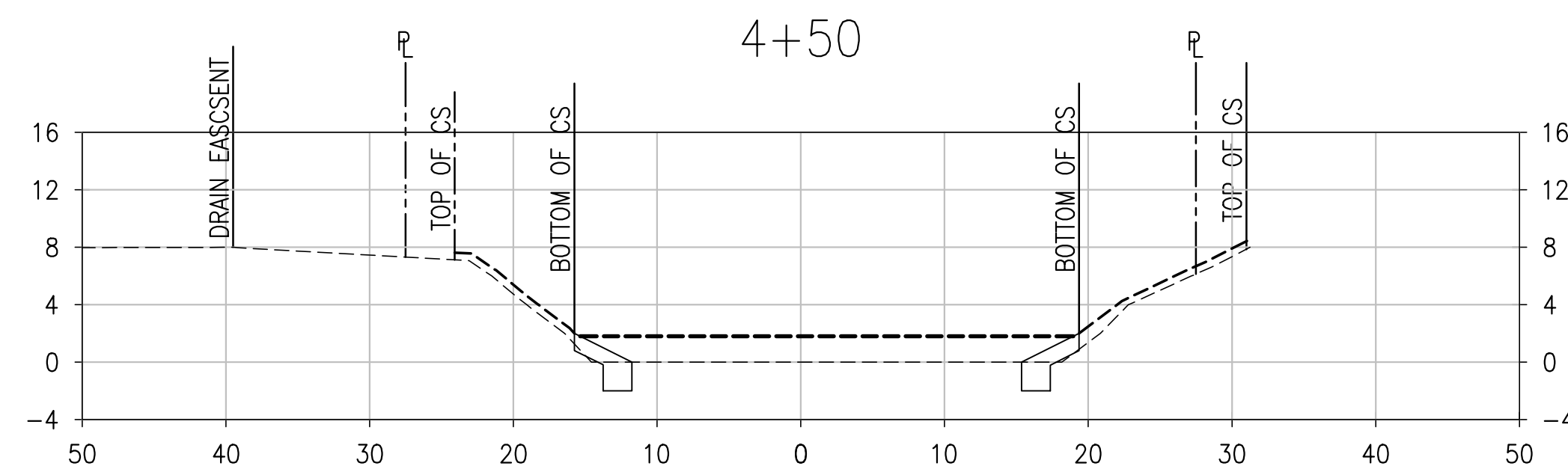
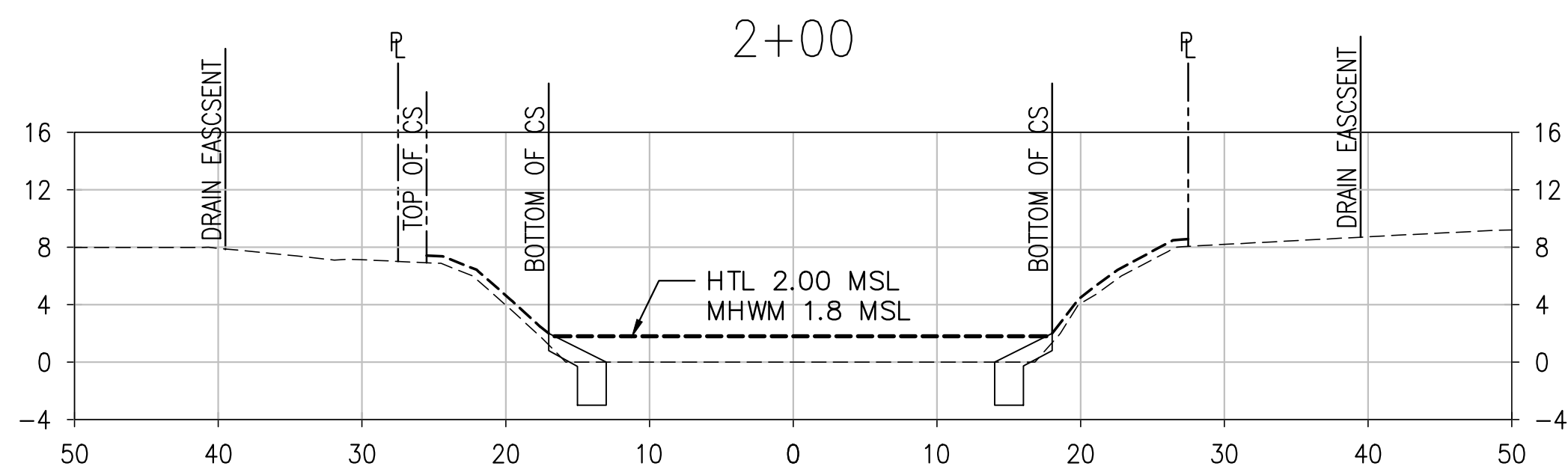
- NOTES:
1. CONTRACTOR TO CLEAR AND GRUB ALL TREES/PLANTS WITHIN THE LIMITS OF THE COMPOST SOCKS UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPING PLANS.



LEGEND table with symbols for PROPERTY LINE, LIMITS OF RIPRAP, LIMITS OF COMPOST SOCKS, HTL & MHWM, and LIMITS OF RIPRAP.

Professional Engineer Seal for Ardalan R. Nireol, License No. 6198-C, Hawaii, U.S.A., with AECOM logo and project date information.

Approval and revision table with columns for REVISION, DATE, DESCRIPTION, SHT. NO., and APPROVED. Includes project title and sheet information.



CROSS SECTIONS 1

SCALE: 1" = 10'

GRAPHIC SCALE



SCALE: 1" = 10'

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU
STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

CROSS SECTIONS 1

DESIGN: BCW
DRAWN: NMN/ACH/AT
CHECKED: ARN
DATE: JUNE 2016

APPROVED: _____
ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY
DEPARTMENT OF FACILITY MAINTENANCE

C-6
SHEET 7
OF 24 SHEETS

PROJECT NO. _____

ARJAN R. NIQUO
LICENSED PROFESSIONAL ENGINEER
No. 6198-C
HAWAII, U.S.A.

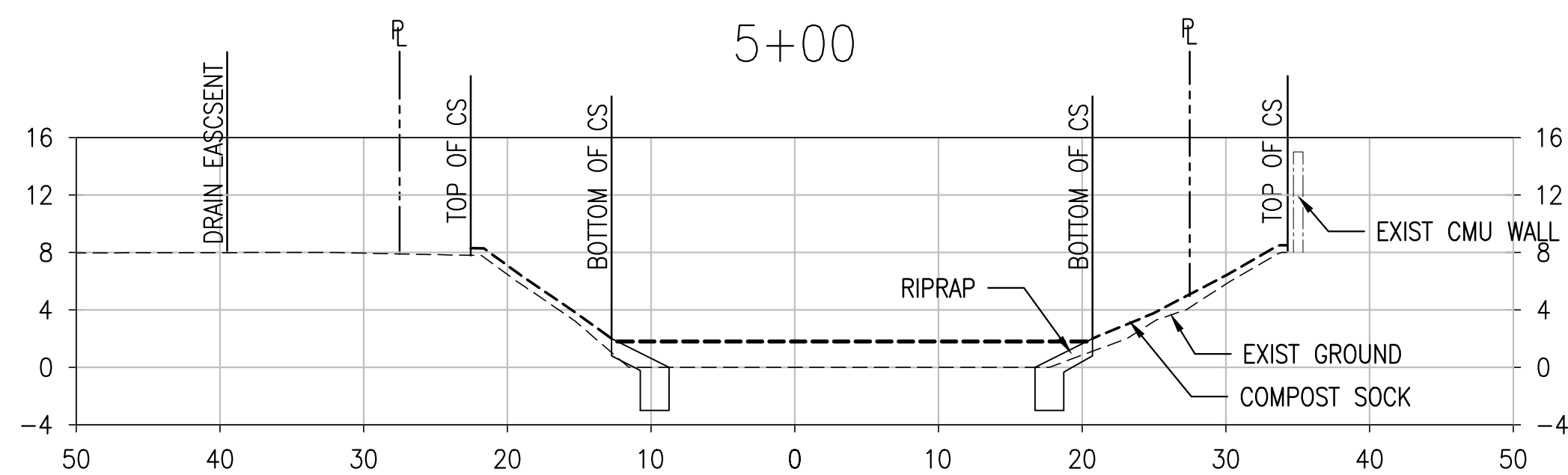
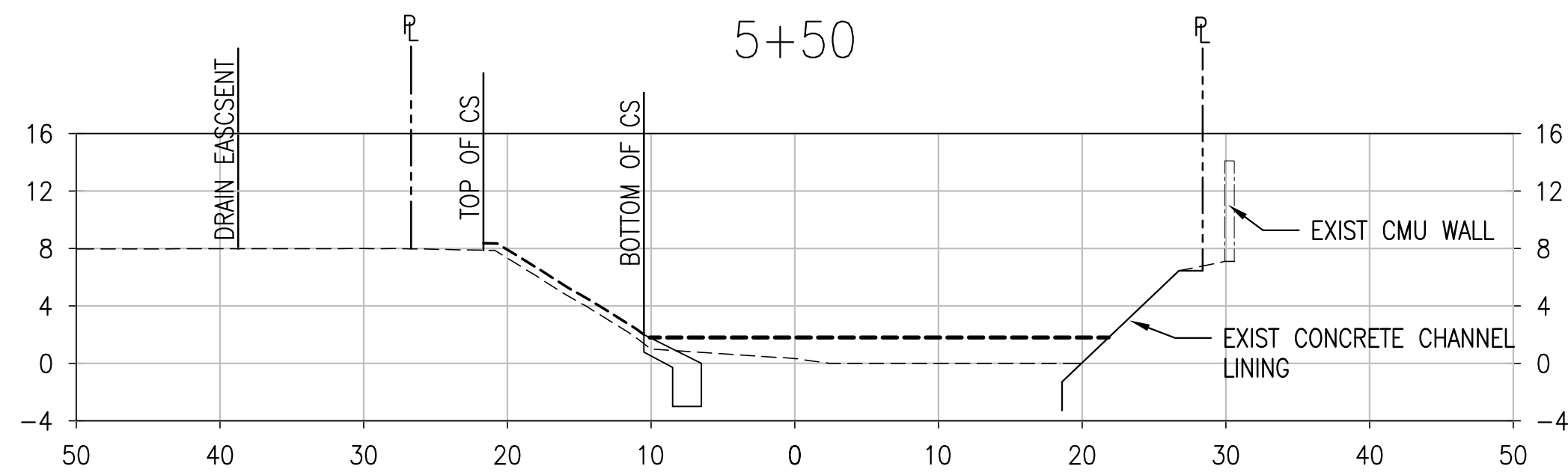
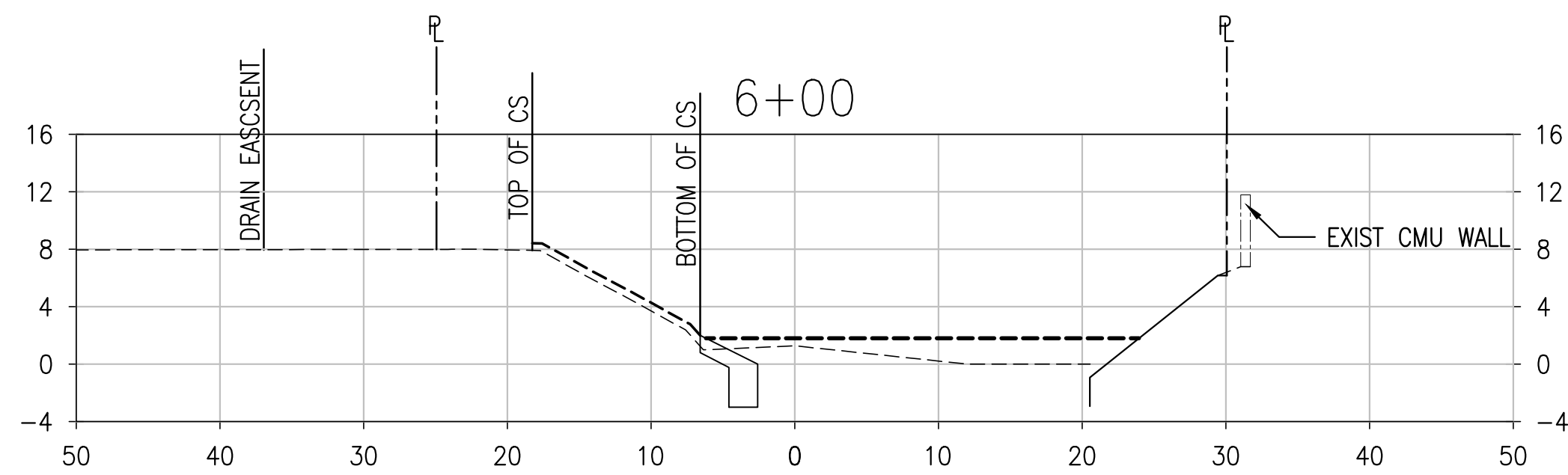
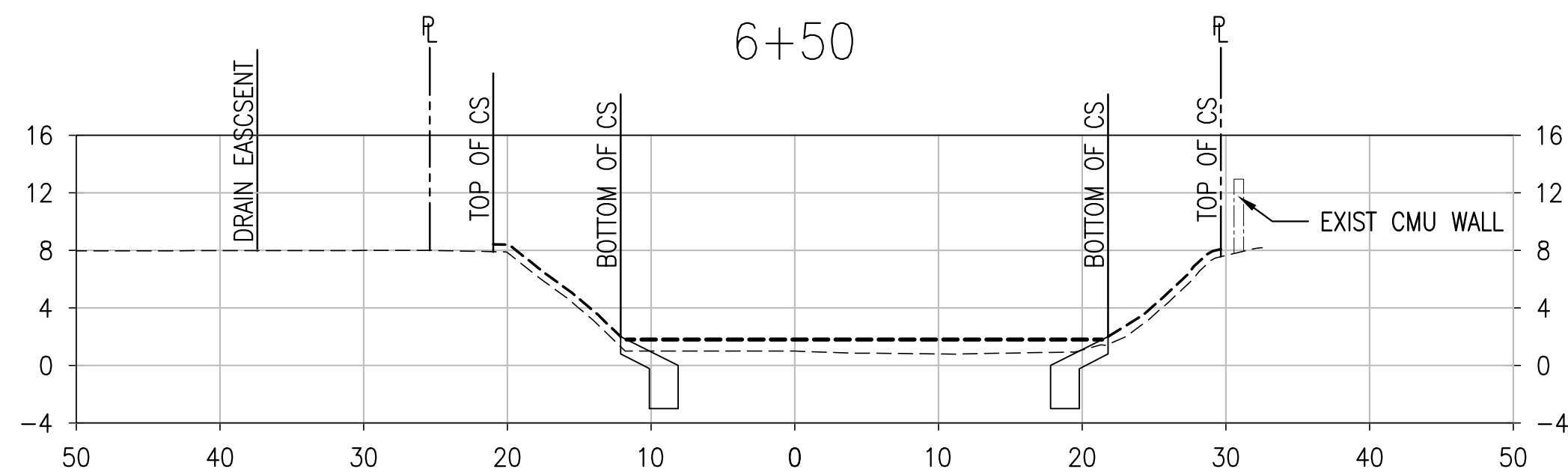
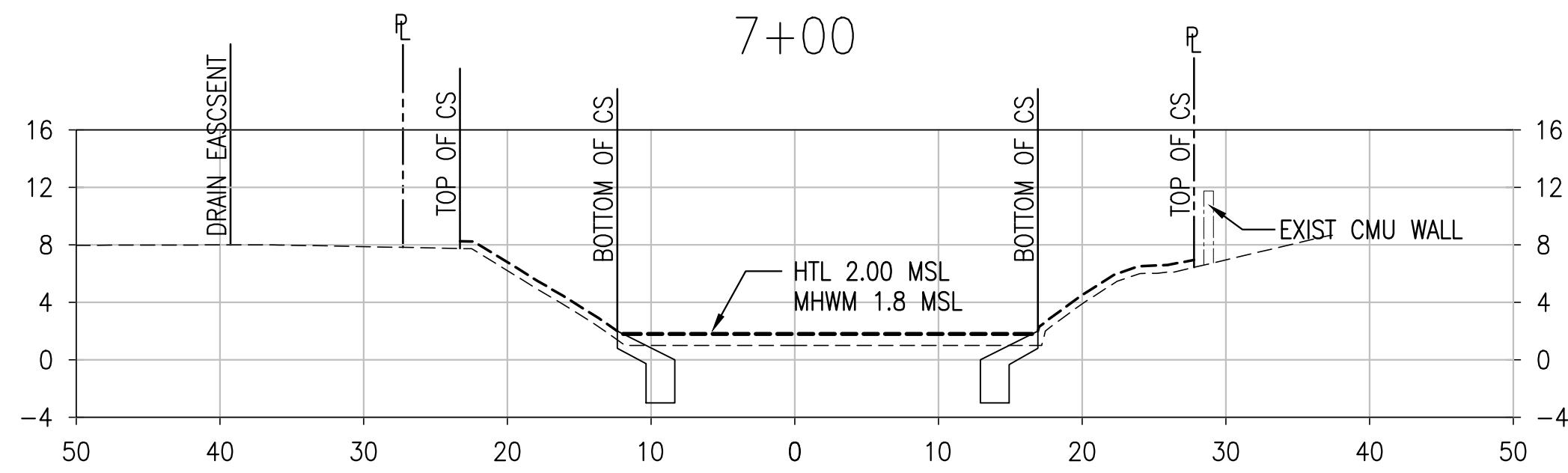
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4/30/18
EXPIRATION DATE OF LICENSE

AECOM

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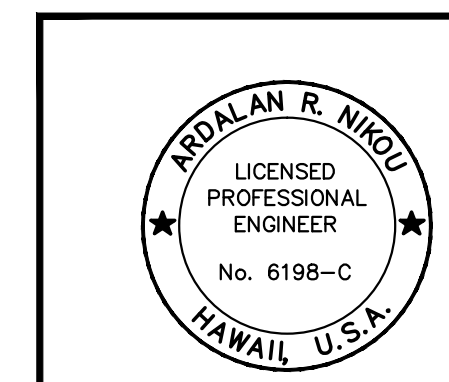
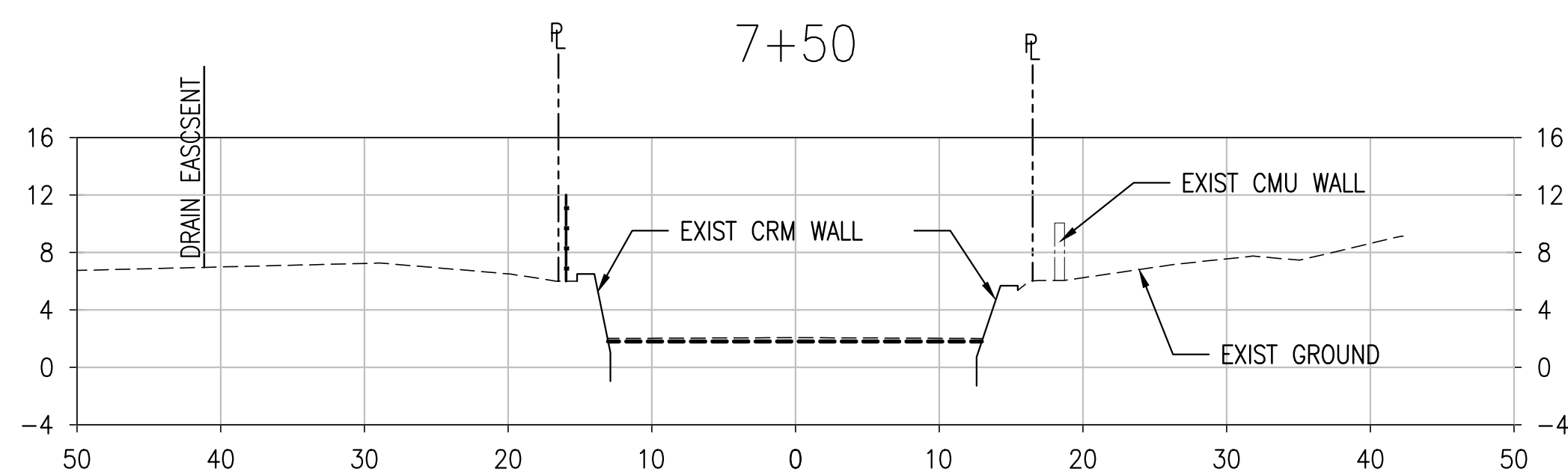
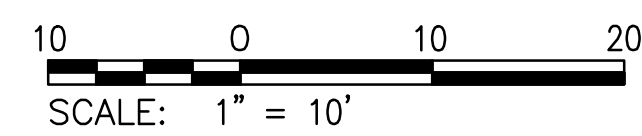
FILE	POCKET	FOLDER NUMBER
		POF-2015-00062



CROSS SECTIONS 2

SCALE: 1" = 10'

GRAPHIC SCALE

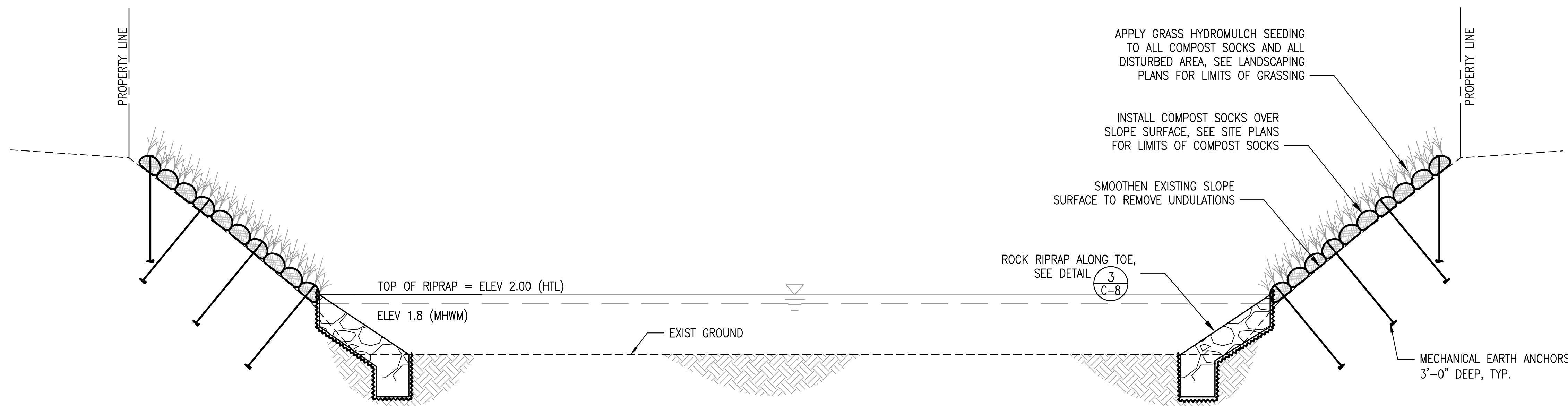


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 EXPIRATION DATE OF LICENSE
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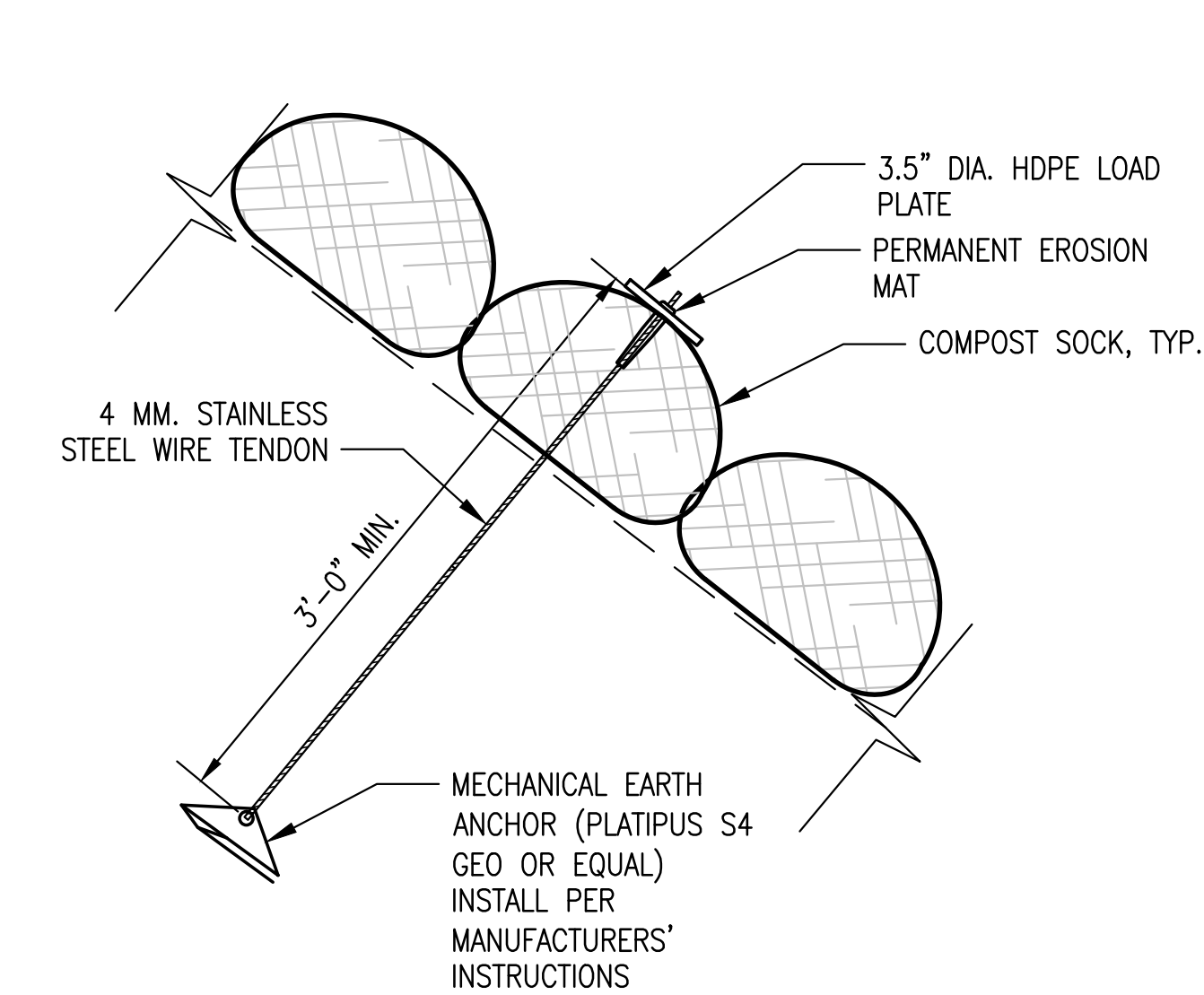
REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED
DEPARTMENT OF FACILITY MAINTENANCE CITY AND COUNTY OF HONOLULU STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS CROSS SECTIONS 2				
DESIGN:	BCW	APPROVED:	C-7 SHEET 8 OF 24 SHEETS	
DRAWN:	NMN/ACH/AT			
CHECKED:	ARN			
DATE:	JUNE 2016	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF FACILITY MAINTENANCE		
PROJECT NO.				

FILE	POCKET	FOLDER NUMBER
		POFF-2015-00062

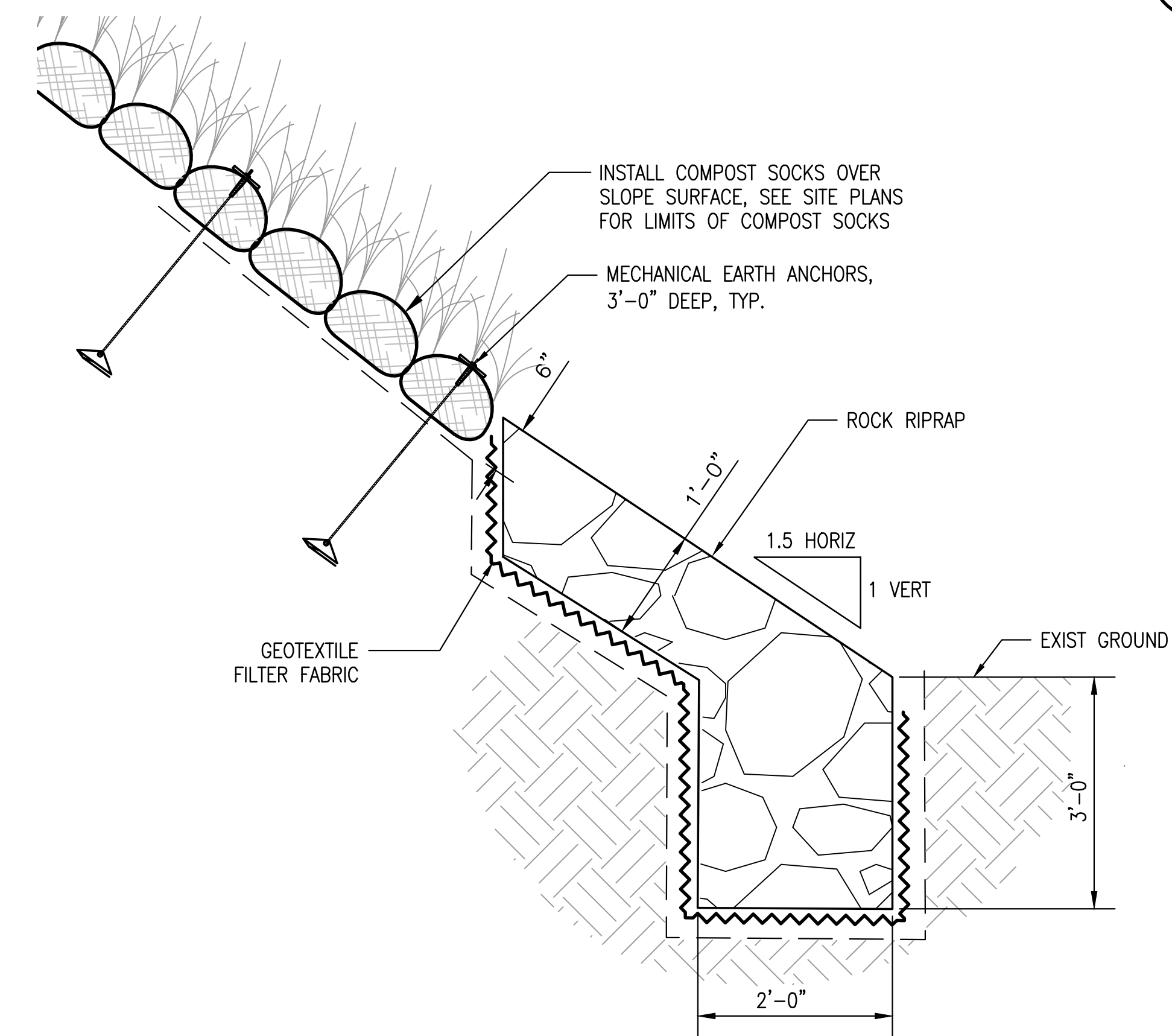
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 PLOT DATE: Jun 22, 2016 @ 09:23:15 am



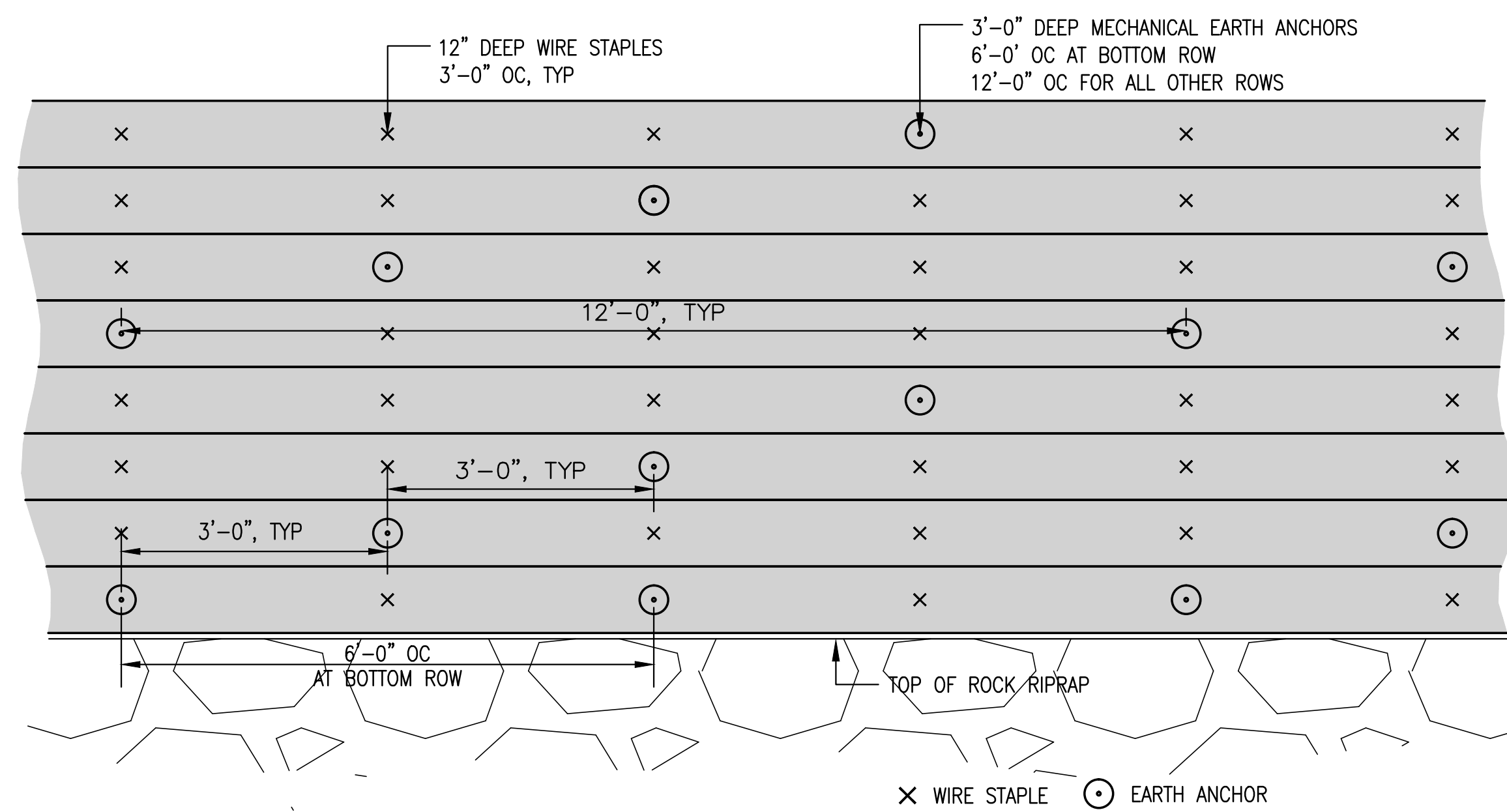
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C-8 TYPICAL SECTION
NOT TO SCALE



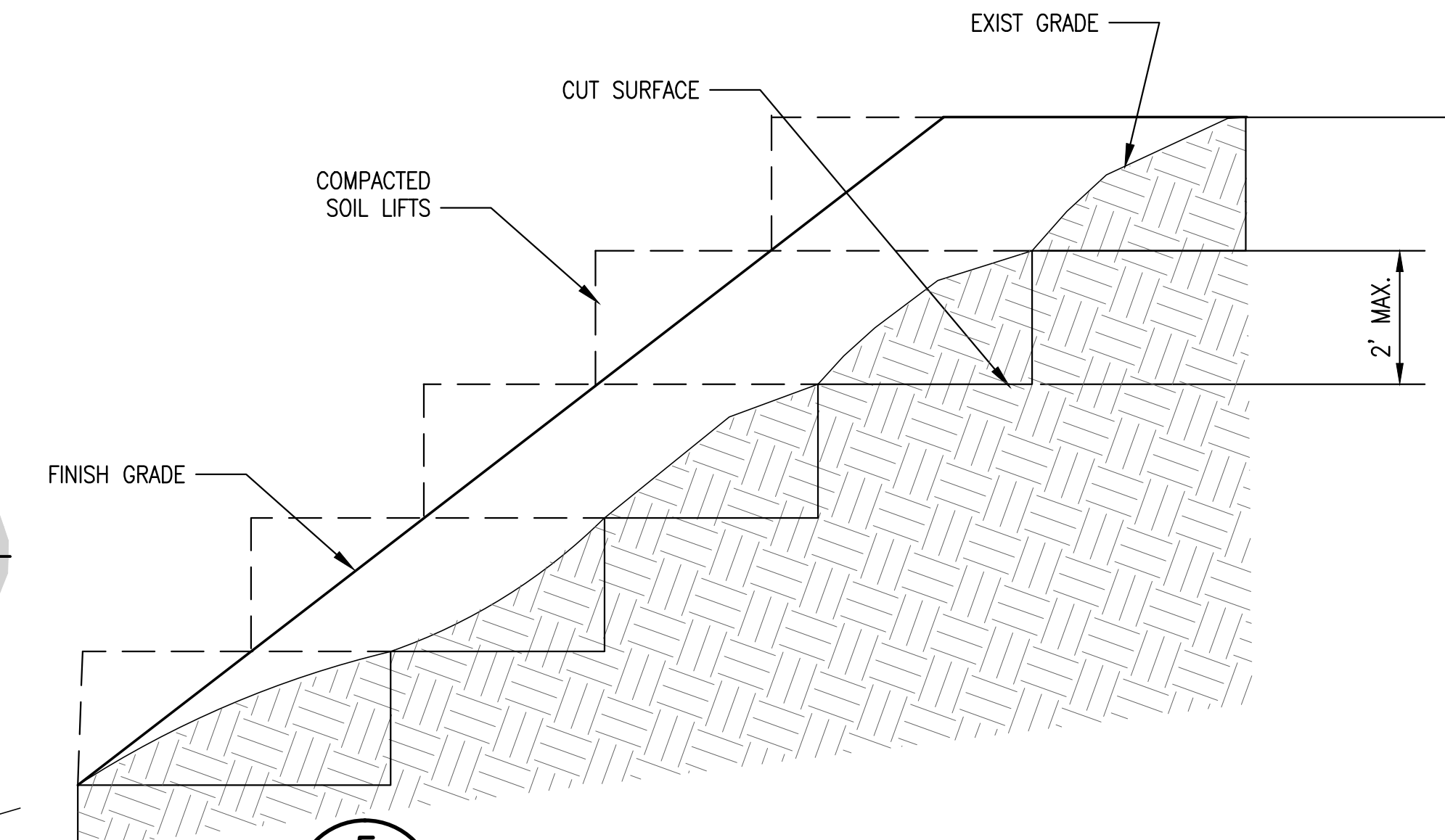
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C-8 TYPICAL ANCHOR DETAIL
NOT TO SCALE



3
C-8 TYPICAL RIPRAP DETAIL
NOT TO SCALE

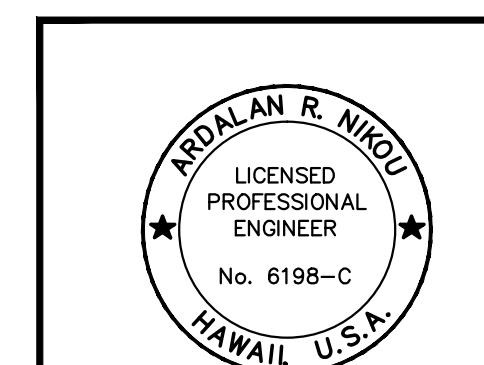


4
C-8 TYPICAL COMPOST SOCK ANCHOR LAYOUT
NOT TO SCALE



5
C-8 FILL ON SLOPE
NOT TO SCALE

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED
----------	------	-------------	----------	----------



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4/30/18
EXPIRATION DATE OF LICENSE

SIGNATURE: **AECOM**

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

TYPICAL SECTION AND DETAILS

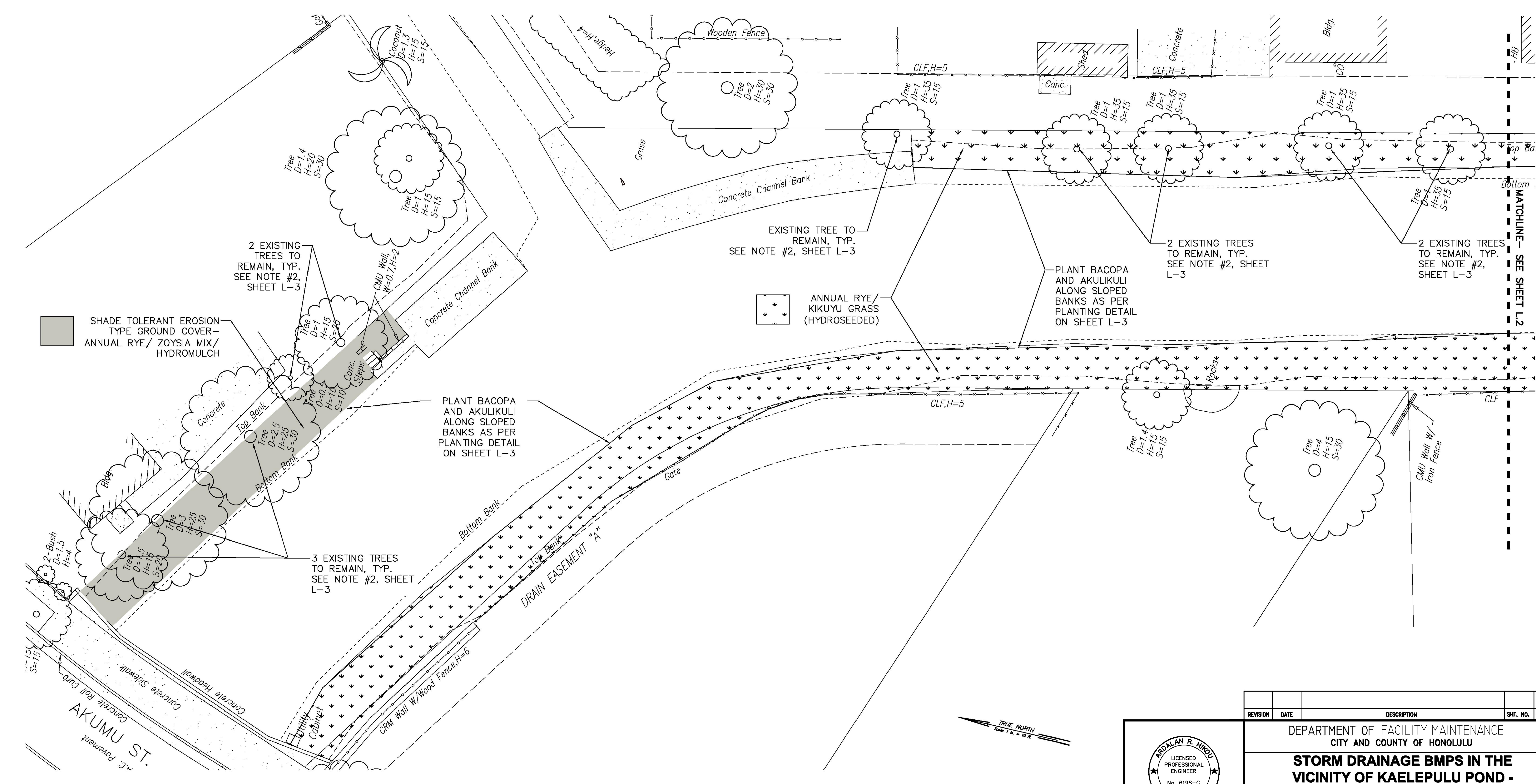
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DRAWN: NMN/ACH/AT
CHECKED: ARN
DATE: JUNE 2016
PROJECT NO. _____

APPROVED: _____
ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY
DEPARTMENT OF FACILITY MAINTENANCE
DATE _____

C-8
SHEET **9**
OF **24** SHEETS

FILE	POCKET	FOLDER	NUMBER
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P:\IT\161616_C-8\161616_C-8_RIPRAP\161616_C-8_RIPRAP.dwg
 PLOT DATE: JUN 22 2016 10:04:46 AM



SHADE TOLERANT EROSION TYPE GROUND COVER - ANNUAL RYE/ ZOYSIA MIX/ HYDROMULCH

2 EXISTING TREES TO REMAIN, TYP. SEE NOTE #2, SHEET L-3

EXISTING TREE TO REMAIN, TYP. SEE NOTE #2, SHEET L-3

ANNUAL RYE/ KIKUYU GRASS (HYDROSEEDED)

PLANT BACOPA AND AKULIKULI ALONG SLOPED BANKS AS PER PLANTING DETAIL ON SHEET L-3

2 EXISTING TREES TO REMAIN, TYP. SEE NOTE #2, SHEET L-3

2 EXISTING TREES TO REMAIN, TYP. SEE NOTE #2, SHEET L-3

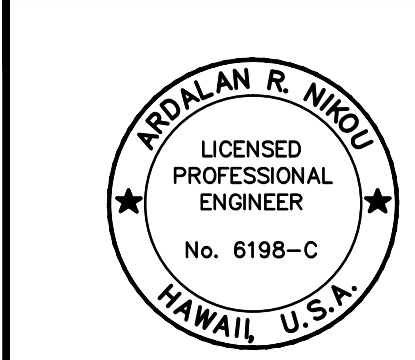
PLANT BACOPA AND AKULIKULI ALONG SLOPED BANKS AS PER PLANTING DETAIL ON SHEET L-3

3 EXISTING TREES TO REMAIN, TYP. SEE NOTE #2, SHEET L-3

LANDSCAPE PLAN 1

SCALE: 1" = 10'-0"

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED



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4/30/18
SIGNATURE DATE OF LICENSE
AECOM

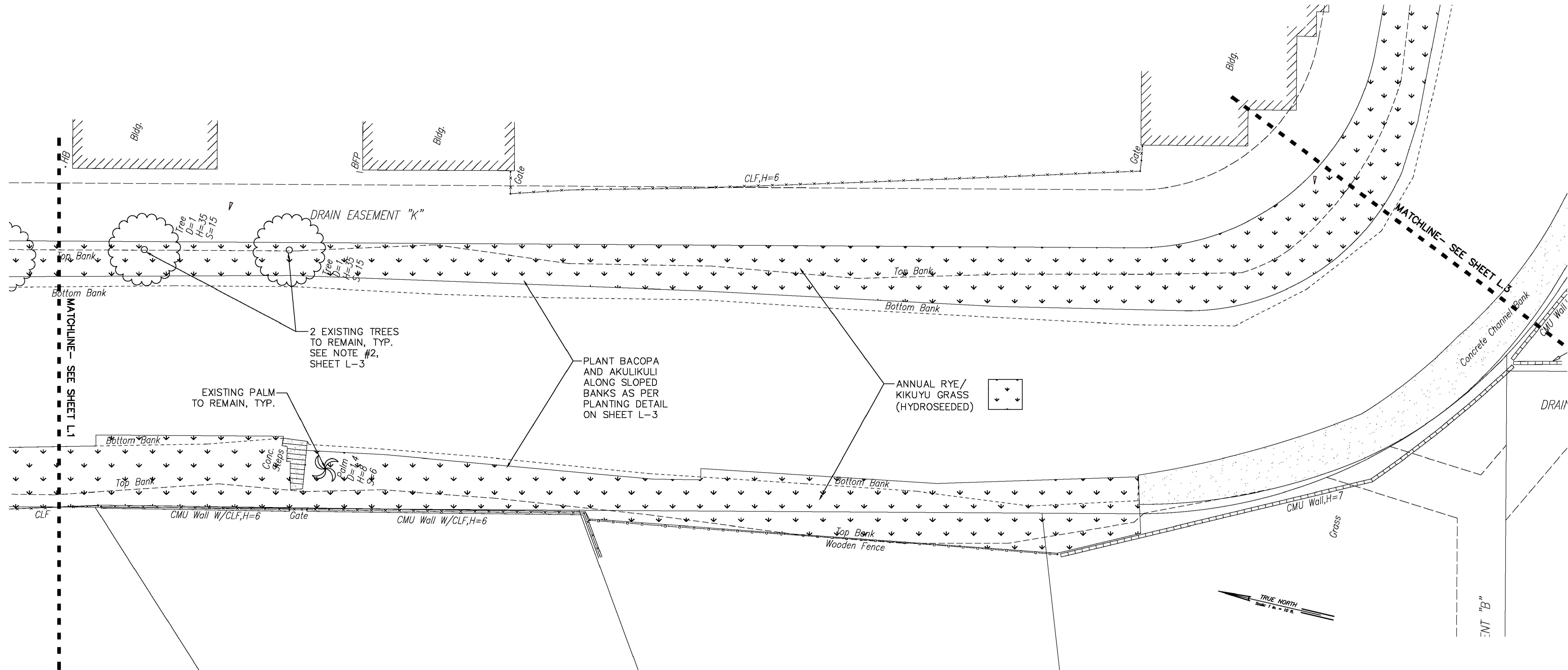
DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

LANDSCAPE PLAN 1

DESIGN: BCW	APPROVED:	L-1
DRAWN: NMN/ACH/AT		
CHECKED: ARN	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY	SHEET 10
DATE: JUNE 2016	DEPARTMENT OF FACILITY MAINTENANCE	OF 24 SHEETS
PROJECT NO. _____		

FILE	PACKET	FOLDER	NUMBER

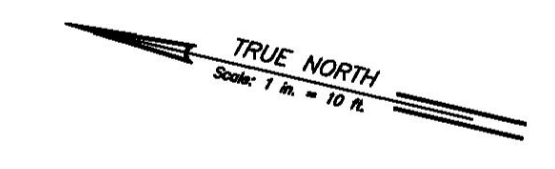


2 EXISTING TREES TO REMAIN, TYP. SEE NOTE #2, SHEET L-3

EXISTING PALM TO REMAIN, TYP.

PLANT BACOPA AND AKULIKULI ALONG SLOPED BANKS AS PER PLANTING DETAIL ON SHEET L-3

ANNUAL RYE / KIKUYU GRASS (HYDROSEEDED)



LANDSCAPE PLAN 2

SCALE: 1" = 10'-0"

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED

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

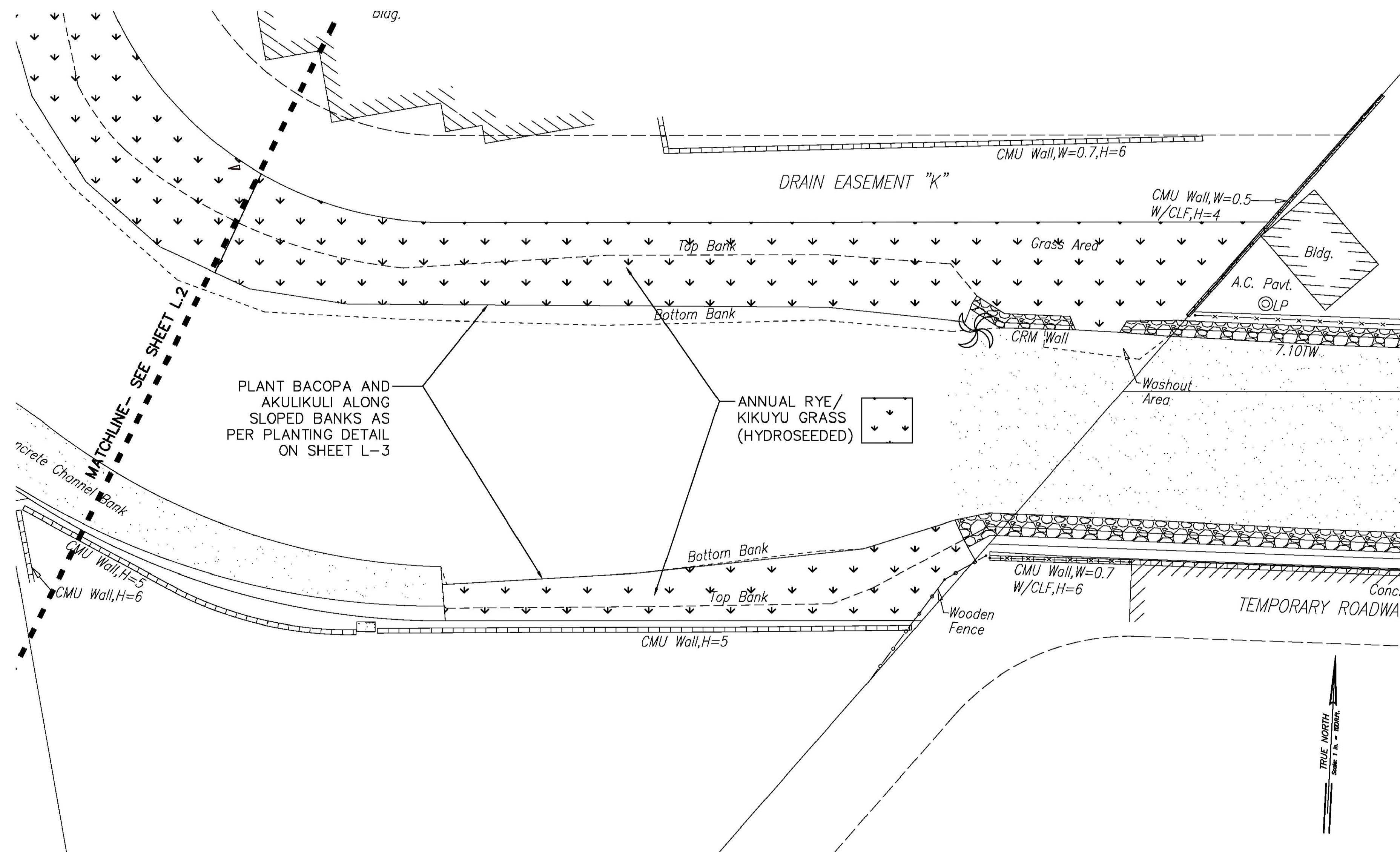
 4/30/18

 SIGNATURE: **AECOM**

DEPARTMENT OF FACILITY MAINTENANCE
 CITY AND COUNTY OF HONOLULU
STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS
LANDSCAPE PLAN 2

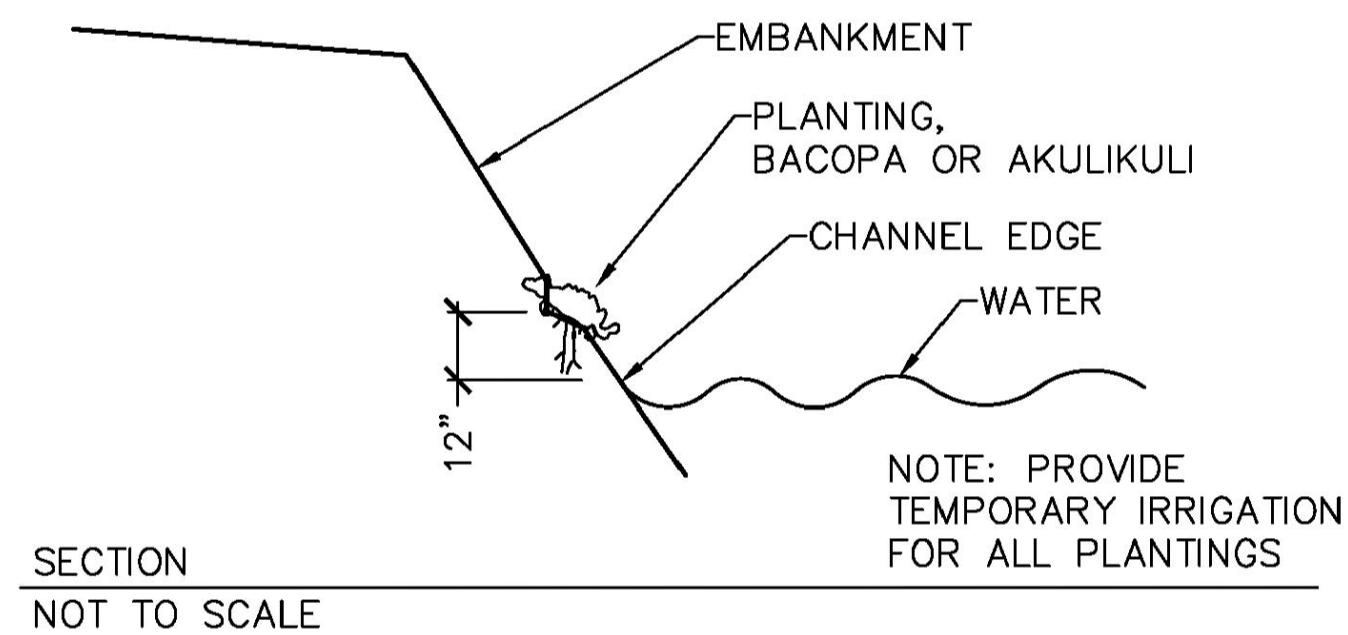
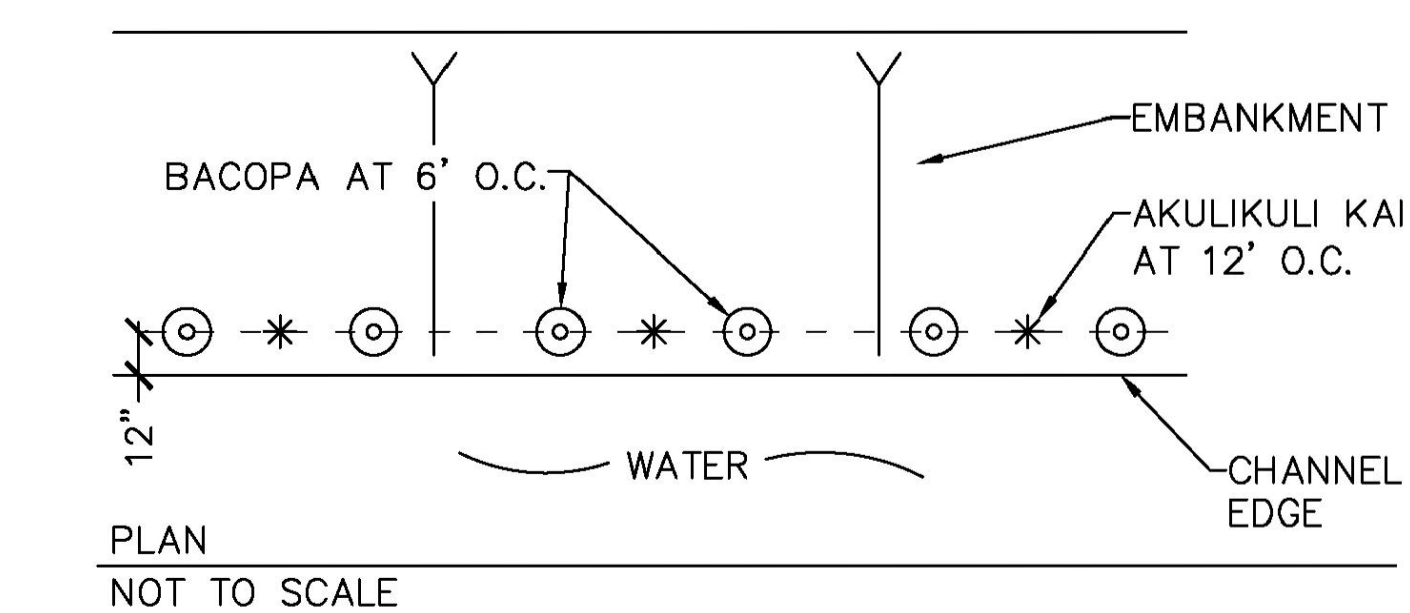
DESIGN: BCW	APPROVED:	L-2 SHEET 11 OF 24 SHEETS
DRAWN: NMN/ACH/AT	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF FACILITY MAINTENANCE	
CHECKED: ARN	DATE	
DATE: JUNE 2016	PROJECT NO.	

FILE	PROJECT	FOLDER	NUMBER



LANDSCAPE PLAN 3

SCALE: 1" = 10'-0"



PLANTING DETAIL

NOT TO SCALE

LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL A TEMPORARY BATTERY-OPERATED CONTROLLED IRRIGATION SYSTEM TO IRRIGATE ALL NEWLY PLANTED AREAS SHOWN ON PLANS. SPRINKLERS SHALL BE LOCATED TO ENSURE PROPER COVERAGE AND TO MAINTAIN PLANTS AND GRASS FOR THE EIGHTEEN (18) MONTH MAINTENANCE PERIOD, STARTING FROM ACCEPTANCE AND WRITTEN APPROVAL BY THE CONTRACTING OFFICER (STATE REPRESENTATIVE).
2. EXISTING TREES SHOWN ON PLAN TO BE TRIMMED SHALL BE PERFORMED UNDER THE DIRECTION AND SUPERVISION OF A CERTIFIED ARBORIST. TRIMMING SHALL BE TO LIGHTEN CROWN BY 20% AND RAISE AND LIFT THE LOWER BRANCHING OF TREE ON THE PROJECT SIDE TO ALLOW FOR MORE SUNLIGHT ONTO SLOPES AND STREAMBED BELOW. PRECAUTIONS SHALL BE TAKEN TO NOT DAMAGE EXISTING FENCING OR NEIGHBORING PROPERTIES. THE CONTRACTOR SHALL REPAIR OR REPLACE DAMAGE(S) AT HIS EXPENSE.

3. GRASS PLANTING FOR PROJECT SHALL BE AS FOLLOWS:

- a. PLANTING AREAS SHOWN ON PLAN AND WITHIN THE PLANTING LIMITS SHALL BE HYDROMULCHED WITH A MIXTURE OF ANNUAL RYE/ KIKUYU GRASS -AZ 1 (TURF TYPE) UNLESS OTHERWISE NOTED. GRASS MIXTURE SHALL BE:

2 LBS/ 1000 SF OF KIKUYU GRASS -AZ 1 (TURF TYPE)
1 LB/ 1000 SF OF ANNUAL RYE

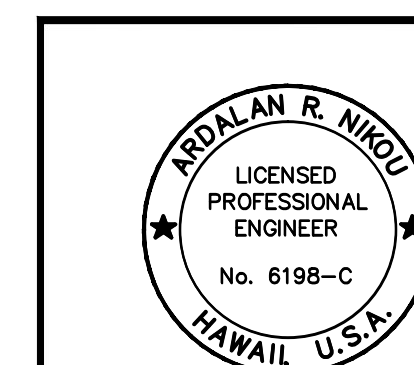
- b. SHADED AREAS SHALL BE HYDROMULCHED WITH A MIXTURE OF ANNUAL RYE/ ZOYSIA JAPONICA 'ZENITH' GRASS. GRASS MIXTURE SHALL BE:

2 LBS/ 1000 SF OF ZOYSIA JAPONICA 'ZENITH'
1 LB/ 1000 SF OF ANNUAL RYE

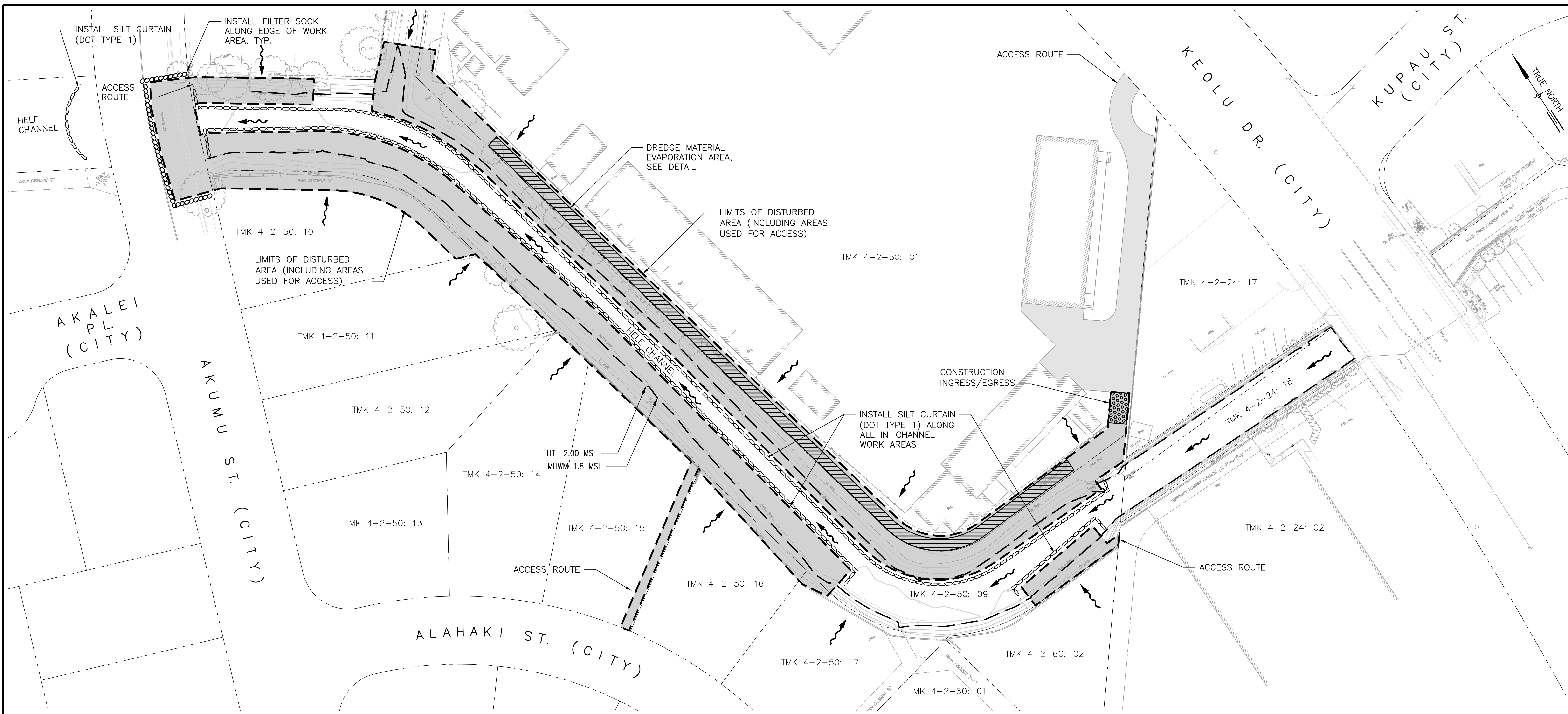
LANDSCAPE LIST

SYMBOL	QUANTITY	COMMON NAME/ BOTANICAL NAME	DESCRIPTION
	198	BACOPA/ BACOPA MONNIERI	4" POTS AT 6' O.C.
	99	AKULIKULI KAI/ BATIS MARITIMA	4" POTS AT 12' O.C.
	826 SF	ANNUAL RYE AND ZOYSIA JAPONICA 'ZENITH'	SEE NOTE #3
	11776 SF	ANNUAL RYE AND KIKUYU -AZ 1 (TURF TYPE) GRASS	SEE NOTE #3

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED	
DEPARTMENT OF FACILITY MAINTENANCE CITY AND COUNTY OF HONOLULU STORM DRAINAGE BMPS IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS LANDSCAPE PLAN 3					
DESIGN:	BCW	APPROVED:	L-3 SHEET 12 OF 24 SHEETS		
DRAWN:	NMN/ACH/AT	CHECKED:			ARN
DATE:	JUNE 2016	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF FACILITY MAINTENANCE			
PROJECT NO.					

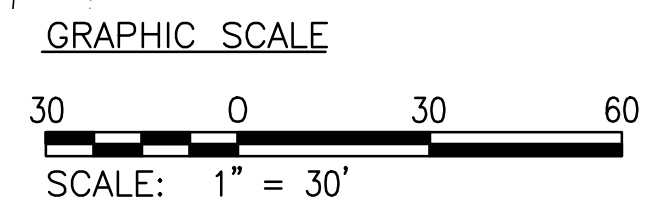


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 4/30/18
 SIGNATURE: **AECOM**
 EXPIRATION DATE OF LICENSE



EROSION CONTROL PLAN

SCALE: 1" = 30'

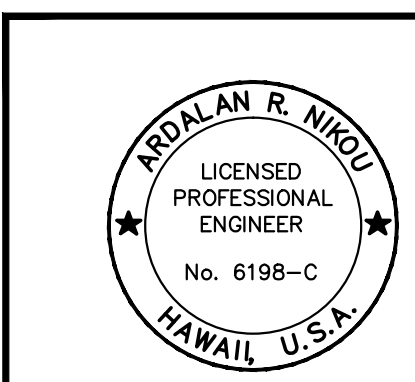


LEGEND

- PROPERTY LINE OR R/W LINE
- FILTER SOCK
- SILT CURTAIN
- LIMITS OF DISTURBED AREA
- DIRECTION OF SURFACE RUNOFF
- DREDGED MATERIAL EVAPORATION AREA
- HTL & MHW

EROSION CONTROL NOTES AND BEST MANAGEMENT PRACTICES (BMPs):

1. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY CONSTRUCTION WORK IS INITIATED. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. ALL CONTROL MEASURES SHALL BE CHECKED DAILY AND REPAIRED AS NECESSARY.
3. CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT FACILITIES TO RETAIN ON-SITE WASTEWATER SUCH AS WASH WATER AFTER CLEANING CONCRETE TRUCKS, GROUTING EQUIPMENT, ETC., AND PREVENT WASH WATER FROM PENETRATING INTO THE SOIL.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN TWENTY (20) CALENDAR DAYS PRIOR TO SITE DISTURBANCE.
5. STORM WATER FLOWING TOWARD THE CONSTRUCTION AREA SHALL BE DIVERTED BY USING APPROPRIATE CONTROL MEASURES AS PRACTICAL.
6. FOLLOW THE GUIDELINES IN THE "BEST MANAGEMENT PRACTICES MANUAL FOR CONSTRUCTION SITES IN HONOLULU", DATED MAY 1999 IN DEVELOPING, INSTALLING, AND MAINTAINING THE BMPs FOR THE PROJECT.
7. THE CONTRACTOR SHALL INSTALL CATCH BASIN AND DRAIN INLET FILTERS FOR SEDIMENT CONTROL AT PROJECT-AFFECTED CATCH BASINS.
8. THE CONTRACTOR SHALL MAINTAIN AND CLEAN TEMPORARY CATCH BASIN AND DRAIN INLET FILTERS AS REQUIRED TO PREVENT CLOGGING AND TO MAINTAIN ADEQUATE AND EFFECTIVE PERFORMANCE OF THE FILTERS. ANY BROKEN/FAILING FILTERS SHALL BE REPAIRED OR REPLACED TO ENSURE PROPER PERFORMANCE.
9. THE CONTRACTOR SHALL PROVIDE GRAVEL CONSTRUCTION ENTRANCE FOR INGRESS/EGRESS AT HIS STAGING AREA AND SHALL REPAIR AND OR REINFORCE AS REQUIRED TO PROVIDE CONTINUOUS BMP.
10. AT THE END OF THE CONSTRUCTION OPERATION, EXISTING CATCH BASINS SURROUNDING THE PROJECT SITE SHALL BE INSPECTED, AND ANY ACCUMULATED SEDIMENT AND DEBRIS FOUND IN THE CATCH BASINS SHALL BE REMOVED. FLUSHING INTO THE CATCH BASINS AND DRAIN INLETS ARE PROHIBITED.



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4/30/18
EXPIRATION DATE OF LICENSE
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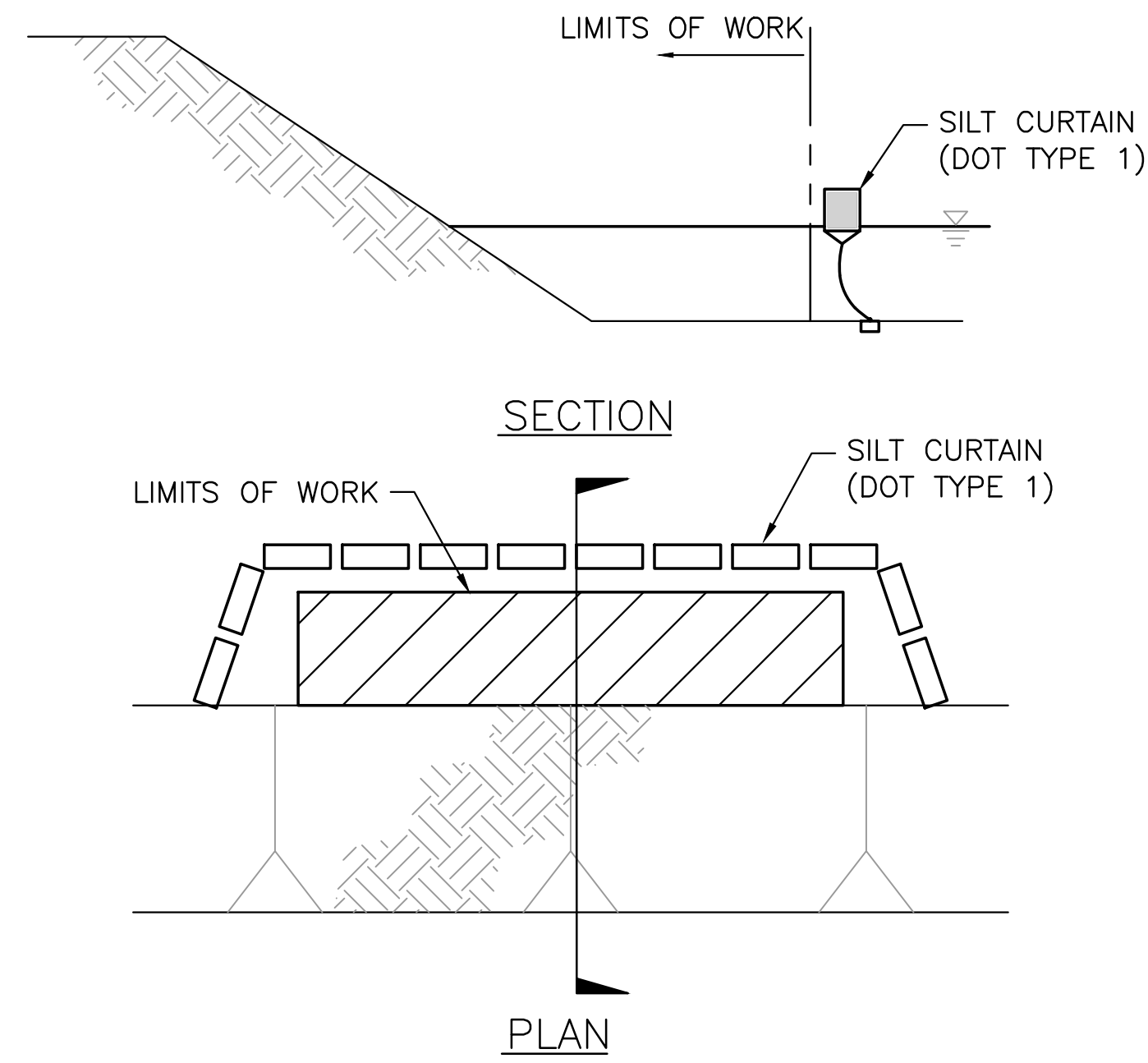
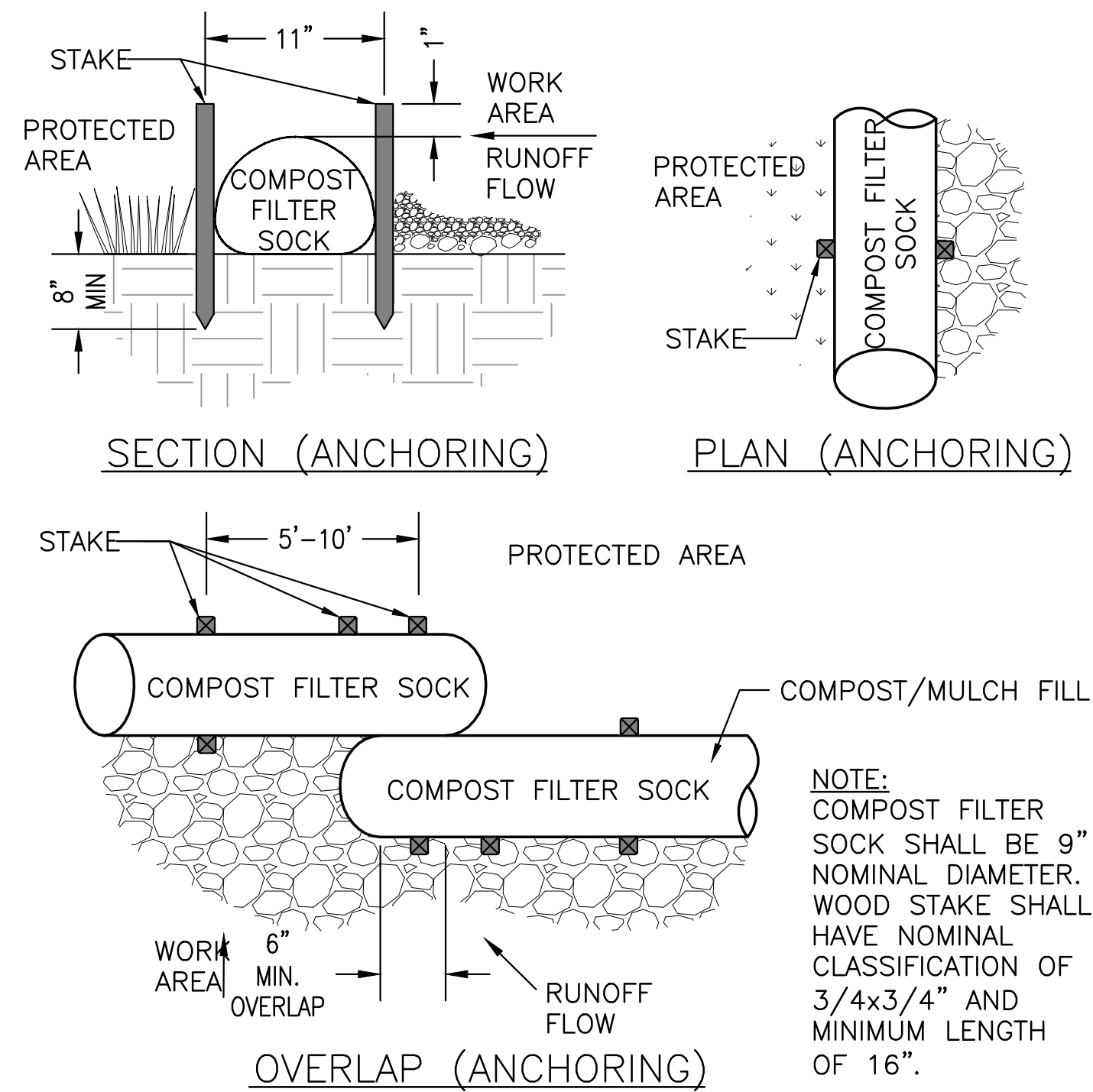
REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED
DEPARTMENT OF FACILITY MAINTENANCE CITY AND COUNTY OF HONOLULU				
STORM DRAINAGE BMPs IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS				
EROSION CONTROL PLAN				
DESIGN: BCW	APPROVED:		EC-1 SHEET 13 of 24 SHEETS	
DRAWN: NMN/ACH/AT	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF FACILITY MAINTENANCE			
CHECKED: ARN	DATE			
DATE: JUNE 2016	PROJECT NO.			

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 PLOT DATE: Jun 22, 2016 @ 09:28:03 am
 PLOT BY: [unreadable]

FILE	POCKET	FOLDER	NUMBER
		POF-2015-00062	

COMPOST FILTER SOCK NOTES:

1. INSTALLATION:
 - a. FOR MULTI-SOCK USE, PLACE SOCKS END-TO-END AND INTERLOCK THE ENDS.
 - b. ANCHOR FILTER SOCKS TO GROUND USING STAKES AS SHOWN. WHERE STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE FILTER SOCK FOR STABILIZATION DURING RAINFALL EVENTS.
2. INSPECTION & MAINTENANCE: PROPERLY MAINTAIN ALL EROSION CONTROL FEATURES. INSPECT, REMOVE DEBRIS COLLECTED, AND MAKE NECESSARY REPAIRS TO ALL EROSION CONTROL MEASURES AT THE FOLLOWING INTERVALS:
 - a. WEEKLY DURING DRY PERIODS,
 - b. WITHIN 24 HOURS OF ANY RAINFALL OF 0.5 INCH OR GREATER WHICH OCCURS IN A 24-HOUR PERIOD,
 - c. DAILY DURING PERIODS OF PROLONGED RAINFALL,
 - d. WHEN EXISTING EROSION CONTROL MEASURES ARE DAMAGED OR NOT OPERATING PROPERLY AS SPECIFIED BY THE OFFICER-IN-CHARGE.
4. REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF FILTER SOCK(S) AFTER EACH STORM EVENT, OR WHENEVER THE SEDIMENT HAS ACCUMULATED MORE THAN 1/3 OF THE SOCK HEIGHT.



1
EC-2 **FILTER SOCK (FOR TEMPORARY EROSION CONTROL)**
NOT TO SCALE

2
EC-2 **SILT CURTAIN DETAIL**
NOT TO SCALE

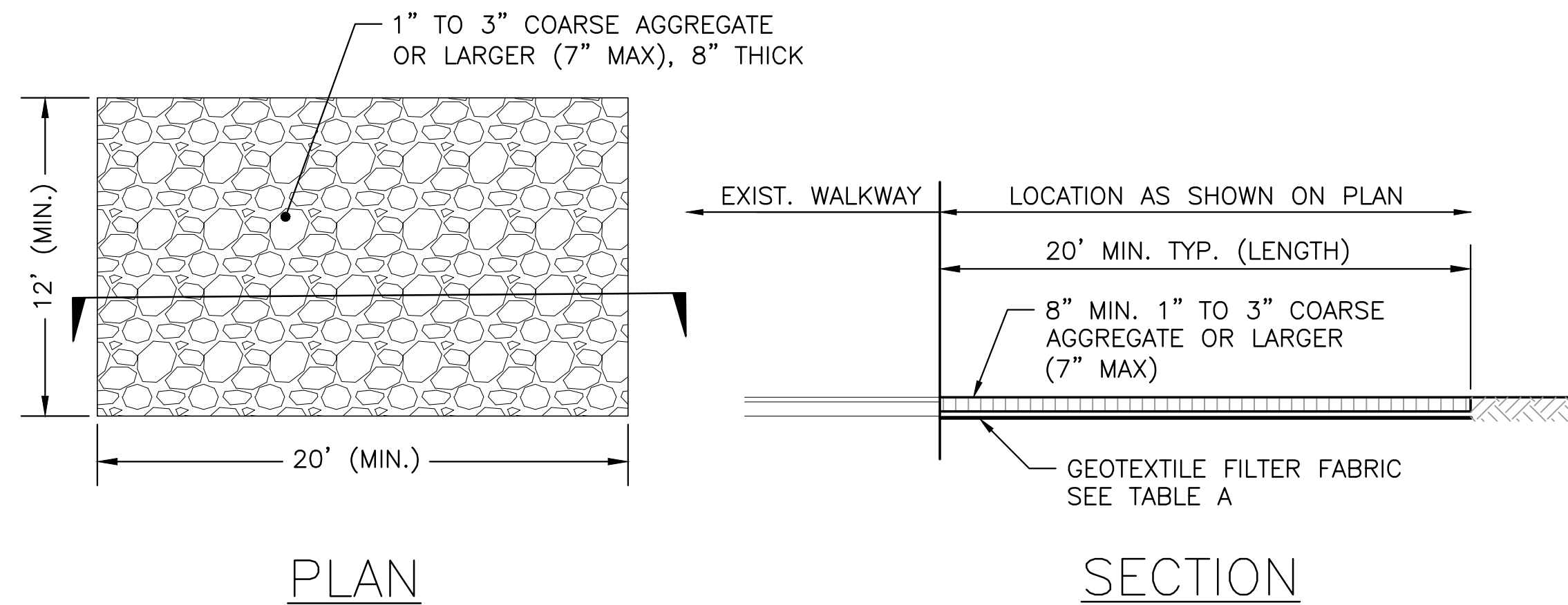
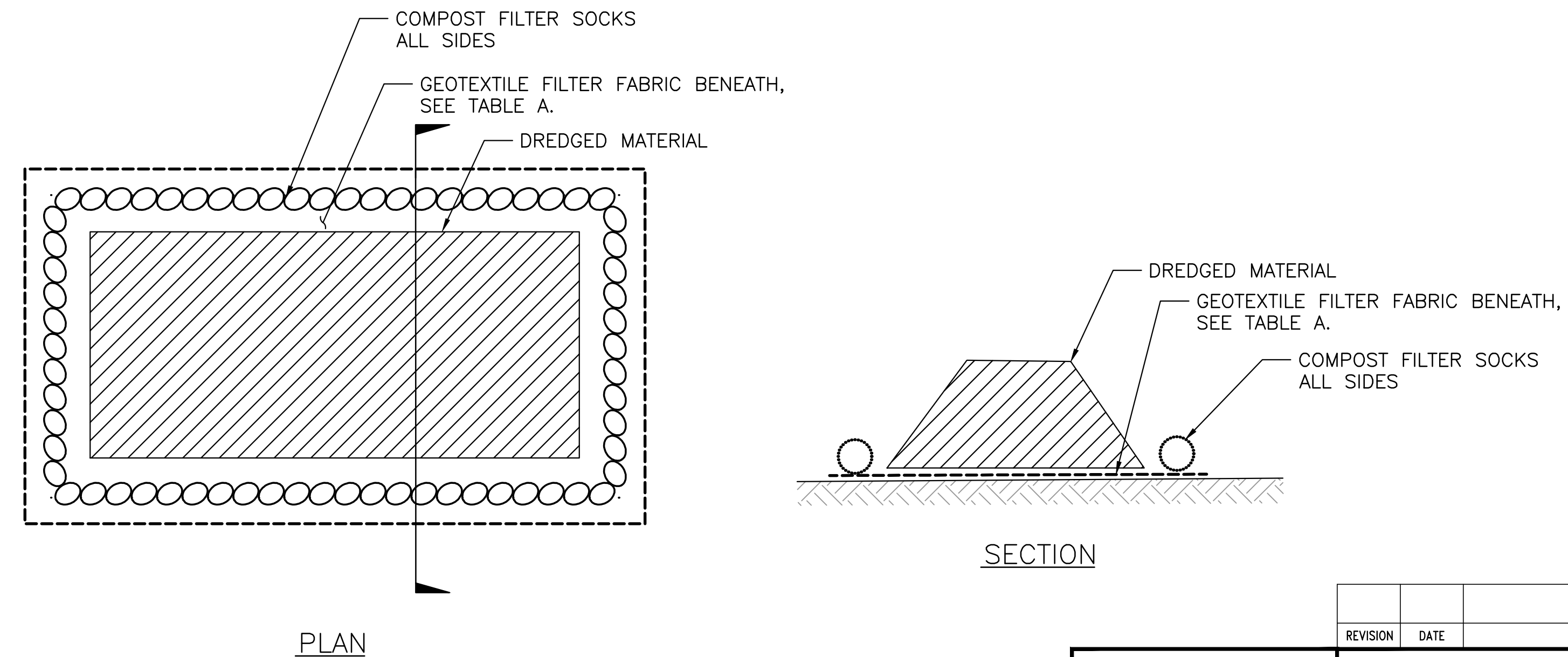


TABLE A GEOTEXTILE REQUIREMENTS	
PHYSICAL PROPERTY	REQUIREMENTS
GRAB TENSILE STRENGTH	220 LB (ASTM D1682)
ELONGATION FAILURE	60% (ASTM D1682)
MULLEN BURST STRENGTH	430 LB (ASTM D3768)
PUNCTURE STRENGTH	125 LB (ASTM D751, MODIFIED)
EQUIVALENT OPENING	SIZE 40-80 (U.S. STD SIEVE, CW-02215)

3
EC-2 **CONSTRUCTION INGRESS/EGRESS DETAIL**
NOT TO SCALE



4
EC-2 **DREDGE MATERIAL EVAPORATION DETAIL**
NOT TO SCALE

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

STORM DRAINAGE BMPS IN THE VICINITY OF KAELEPULU POND - HELE CHANNEL IMPROVEMENTS AND CURB INLET SCREENS

EROSION CONTROL DETAILS

DESIGN: BCW	APPROVED:	EC-2 SHEET 14 OF 24 SHEETS
DRAWN: NMN/ACH/AT		
CHECKED: ARN		
DATE: JUNE 2016		

PROJECT NO. _____

ROYALAN R. NIQUO
LICENSED PROFESSIONAL ENGINEER
No. 6198-C
HAWAII, U.S.A.

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

4/30/18
EXPIRATION DATE OF LICENSE

AECOM

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