

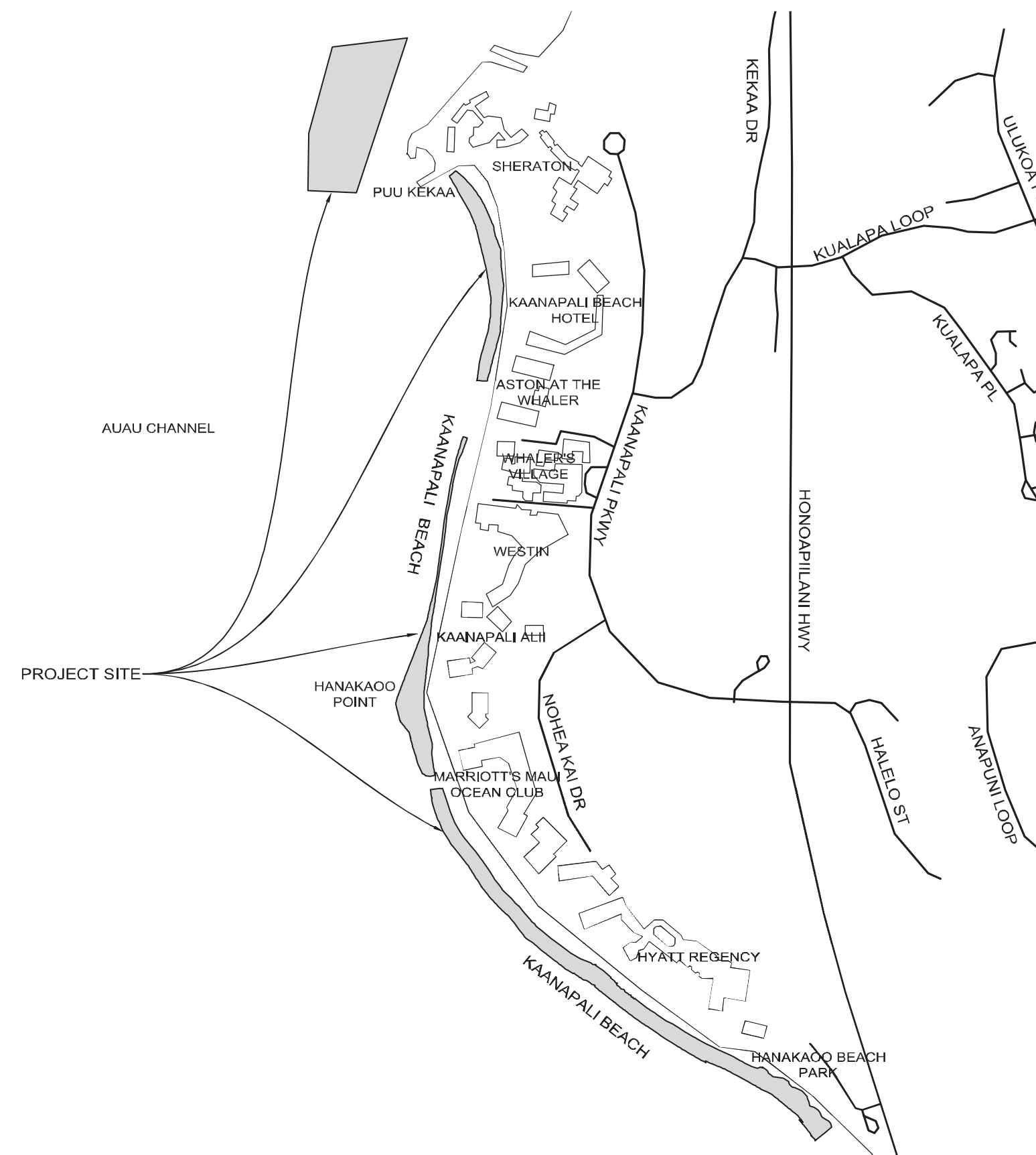
STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION

FOR
 OFFICE OF CONSERVATION AND COASTAL LANDS
 JOB NO. E00XM30A

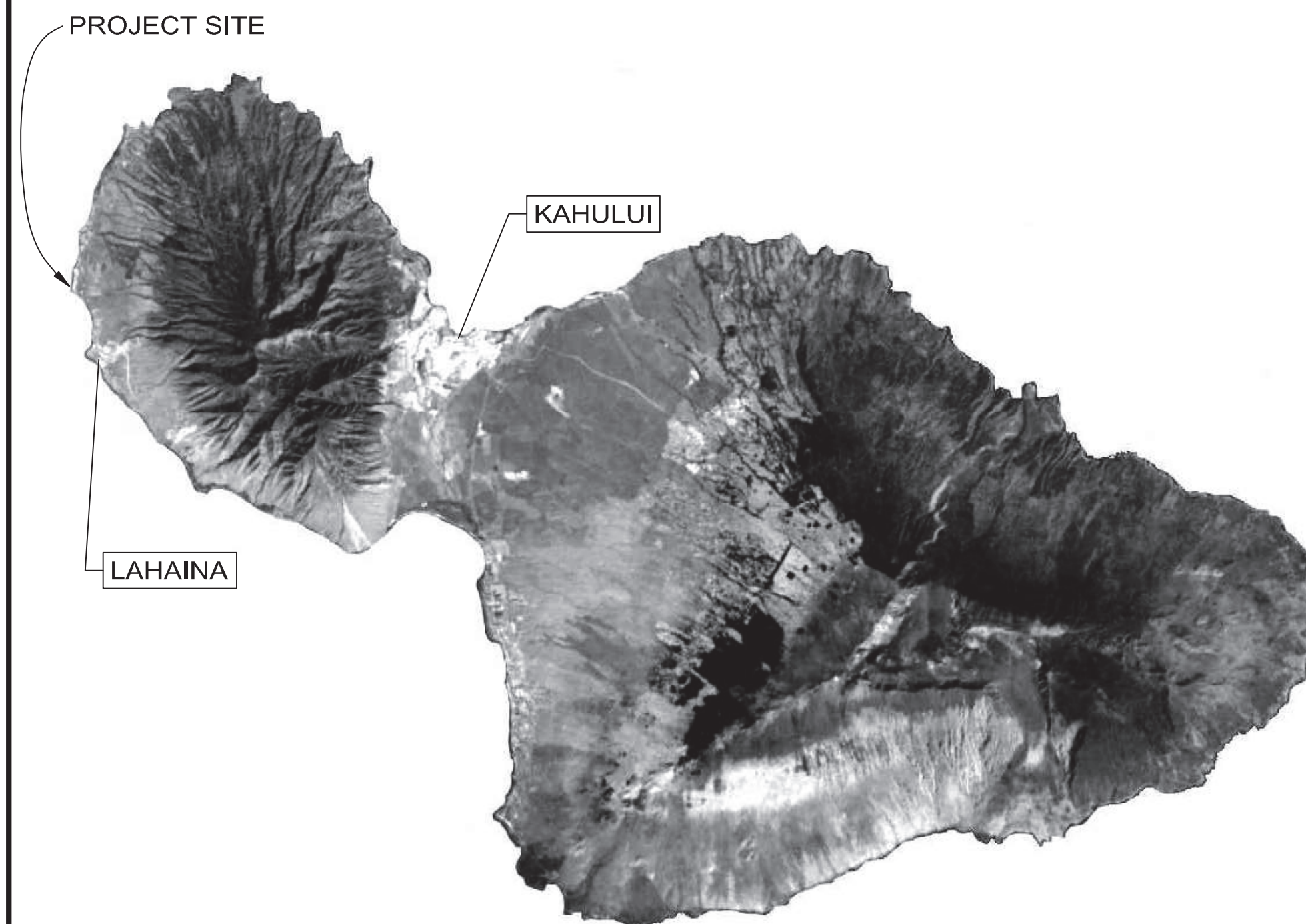
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT

LAHAINA, MAUI, HAWAII
 TAX MAP KEYS (TMKs):

(2)4-4-008:001, (2)4-4-008:002, (2)4-4-008:003, (2)4-4-008:005, (2)4-4-008:019, (2)4-4-008:022
 (2)4-4-013:001, (2)4-4-013:002, (2)4-4-013:006, (2)4-4-013:007, (2)4-4-013:008, (2)4-4-013:013



LOCATION MAP



ISLAND OF MAUI

INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	DESCRIPTION
1	T-1	TITLE SHEET
2	G-1	GENERAL NOTES
3	C-1	OVERALL PROJECT PLAN FEATURES
4	C-2	BASELINE SURVEY CONTROLS
5	C-3	EXISTING CONDITIONS - NORTH BERM ENHANCEMENT
6	C-4	EXISTING CONDITIONS - HANAKAOO LITTORAL CELL BEACH RESTORATION
7	C-5	EXISTING CONDITIONS - SOUTH BERM ENHANCEMENT
8	C-6	SAND RECOVERY AREA
9	C-7	SAND OFFLOADING AREAS
10	C-8	SAND PLACEMENT PLAN - NORTH BERM ENHANCEMENT
11	C-9	SAND PLACEMENT PLAN - HANAKAOO LITTORAL CELL BEACH RESTORATION NORTH
12	C-10	SAND PLACEMENT PLAN - HANAKAOO LITTORAL CELL BEACH RESTORATION SOUTH
13	C-11	SAND PLACEMENT PLAN - SOUTH BERM ENHANCEMENT
14	C-12	SAND PLACEMENT CROSS SECTIONS (NB 0+00 TO NB 7+00)
15	C-13	SAND PLACEMENT CROSS SECTIONS (NB 8+00 TO NB 13+91)
16	C-14	SAND PLACEMENT CROSS SECTIONS (HLC 0+00 TO HLC 7+00)
17	C-15	SAND PLACEMENT CROSS SECTIONS (HLC 8+00 TO HLC 15+00)
18	C-16	SAND PLACEMENT CROSS SECTIONS (HLC 16+00 TO HLC 23+00)
19	C-17	SAND PLACEMENT CROSS SECTIONS (HLC 24+00 TO HLC 31+00)
20	C-18	SAND PLACEMENT CROSS SECTIONS (HLC 32+00 TO HLC 33+83)
21	C-19	SAND PLACEMENT CROSS SECTIONS (SB 0+00 TO SB 7+00)
22	C-20	SAND PLACEMENT CROSS SECTIONS (SB 8+00 TO SB 15+00)
23	C-21	SAND PLACEMENT CROSS SECTIONS (SB 16+00 TO SB 21+90)
24	C-22	WATER QUALITY PROTECTION DETAILS

APPROVED: _____ DATE: 04/22/22

Michael Cain
 MICHAEL CAIN
 ACTING ADMINISTRATOR
 OFFICE OF CONSERVATION AND COASTAL LANDS
 DEPARTMENT OF LAND AND NATURAL RESOURCES

APPROVED: _____ DATE: 04/22/22

Carty S. Chang
 CARTY S. CHANG, P.E.
 CHIEF ENGINEER
 ENGINEERING DIVISION
 DEPARTMENT OF LAND AND NATURAL RESOURCES

DRAWING NO.
T-1

JOB NO. E00XM30A, KAAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT

GENERAL NOTES

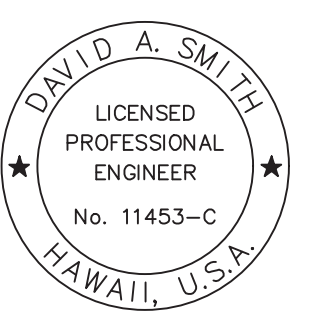
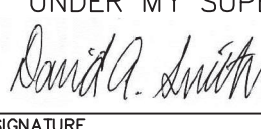
1. THE PROJECT OBJECTIVE IS TO RECOVER, TRANSPORT, CONVEY, AND PLACE ON THE BEACH APPROXIMATELY 75,000 CY OF SAND. BEACH RESTORATION IN THE HANAKA00 LITTORAL CELL (HLC) WOULD USE APPROXIMATELY 50,000 CUBIC YARDS OF SAND AND BERM ENHANCEMENT IN THE KAAPALI LITTORAL CELL WOULD USE APPROXIMATELY 25,000 CUBIC YARDS OF SAND.
2. THE PROJECT OWNER IS THE STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES (ENGINEER). THE ENGINEERING CONSULTANT IS SEA ENGINEERING, INC (CONSULTANT).
3. THE TOPOGRAPHIC BEACH SURVEY WAS CONDUCTED BY AILANA SURVEYING AND GEOMATICS ON 1/6/2020 AND 8/29/2020. RECTANGULAR COORDINATES ARE BASED ON NAD83, HAWAII STATE PLANE, ZONE 2 (US SURVEY FEET).
4. THE PROJECT SHORELINE IS VERY DYNAMIC, WITH RAPID CHANGES IN SAND VOLUME AND BEACH WIDTH POSSIBLE.
5. ELEVATIONS ARE REFERRED TO MEAN LOWER LOW WATER (MLLW). AZIMUTHS ARE MEASURED CLOCKWISE AND REFERRED TO TRUE SOUTH.
6. THE CONTRACTOR SHALL USE THE VERTICAL AND HORIZONTAL CONTROLS SPECIFIED AT MONUMENTS SHOWN ON DRAWING C-2.
7. ALL DISTANCES, DIMENSIONS, ELEVATIONS, AND COORDINATES ARE IN FEET, UNLESS NOTED OTHERWISE.
8. THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR DIRECTION.
9. WORK INCIDENTAL TO THE CONTRACT AND NECESSARY TO COMPLETE THE PROJECT, ALTHOUGH NOT SPECIFICALLY REFERRED TO ON THE CONTRACT DOCUMENTS, SHALL BE FURNISHED AND PERFORMED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR UTILITIES SUCH AS ELECTRICITY, WATER, ETC. REQUIRED FOR HIS OPERATIONS AND ALL COSTS SHALL BE BORNE BY THE CONTRACTOR.
11. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL, OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS, OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE COSTS INCURRED FOR ANY REMEDIAL ACTION SHALL BE PAYABLE BY THE CONTRACTOR.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING AND REMOVAL OF ALL SAND AND DEBRIS GENERATED BY HIS CONSTRUCTION WORK AND DEPOSITED AND ACCUMULATED ON ROADWAYS AND OTHER AREAS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PROJECT AREA IN A CLEAN AND ORDERLY MANNER, AND FOR CLEARING AND REMOVAL OF ALL DEBRIS GENERATED BY HIS CONSTRUCTION WORK.
14. ALL EXISTING UTILITIES, ROADWAYS, WALKWAYS, WALLS, AND BUILDINGS, WHETHER OR NOT SHOWN ON THE DRAWINGS, SHALL BE PROTECTED FROM DAMAGE AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO THEM SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
15. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE ONE CALL CENTER AT (866) 423-7287 OR 811 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF EXCAVATION. PERSONAL INJURY RESULTING FROM CONTACT WITH EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
16. ALL PROJECT WORK, INCLUDING DEMOLITION, STOCKPILING, AND GRADING, SHALL BE PERFORMED IN CONFORMANCE WITH APPLICABLE FEDERAL AND LOCAL LAWS AND REGULATIONS REGARDING WATER QUALITY AND WATER POLLUTION CONTROL. THE CONTRACTOR/OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 54, WATER QUALITY STANDARDS, AND CHAPTER 55, WATER POLLUTION CONTROL, OF TITLE 11, HAWAII ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT

ALL TIMES DURING CONSTRUCTION.

17. 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.
18. 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 CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
19. ALL CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANT FROM THE CONSTRUCTION SITE WILL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.
20. NO BLASTING SHALL BE ALLOWED ON THIS PROJECT.
21. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM RUBBISH, DUST, NOISE, EROSION, ETC. THE WORK SHALL BE DONE IN CONFORMANCE WITH THE AIR AND WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
22. THE JOB SITE MUST BE LEFT IN A SAFE, SECURE CONDITION AT THE END OF EACH CONSTRUCTION WORK DAY. CLEAN UP AND REMOVE FROM THE JOB SITE ALL RUBBISH AND MAINTAIN THE PREMISES IN A CLEAN ORDERLY CONDITION AT ALL TIMES.
23. ALL EXISTING TREES, SHRUBS, AND SURROUNDING VEGETATION SHALL BE PRESERVED AND PROTECTED AS FAR AS PRACTICAL. REMOVAL OF ANY TREES SHALL REQUIRE APPROVAL BY THE ENGINEER. ANY DAMAGED VEGETATION SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
24. DLNR WILL DELEGATE THE CONTRACTOR AS THE AUTHORIZED REPRESENTATIVE TO SUBMIT ALL NECESSARY DOCUMENTS AND REPORTS AS REQUIRED BY DOH AND US ARMY CORPS OF ENGINEERS DIRECTLY TO THEIR OFFICES AT NO COSTS TO THE STATE.
25. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS, AND OTHER PUBLIC RIGHTS OF WAY IN A CLEAN, SAFE, AND USABLE CONDITION. ALL SPILLS OF SAND, ROCK, OR CONSTRUCTION DEBRIS SHALL BE REMOVED IMMEDIATELY. ALL AREAS ADJACENT TO DESIGNATED WORK AREAS SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION.
26. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING FOR PUBLIC SAFETY IN THE VICINITY OF WORK AREAS. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORK HOURS. ALL WORK AREAS SHALL HAVE SUITABLE SAFETY FENCING AND WARNING SIGNAGE TO INSURE PUBLIC SAFETY. CONTRACTOR SHALL ALSO PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE, AND SAFETY OF THE PUBLIC.
27. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. TEMPORARY PASSAGEWAYS SHALL BE ACCESSIBLE PER 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN CHAPTER 2, SECTIONS 201.3 AND 206.1.
28. THE PUBLIC BEACH AREA SHALL REMAIN OPEN TO THE MAXIMUM EXTENT POSSIBLE DURING THE CONSTRUCTION PERIOD. PROVIDE AND MAINTAIN SAFE PEDESTRIAN ACCESS TO THE BEACH AREA THROUGHOUT THE CONSTRUCTION PERIOD.
29. UPON COMPLETION OF CONSTRUCTION THE ENTIRE JOB SITE SHALL BE CLEANED OF ALL RUBBISH AND DEBRIS.
30. SHOULD HISTORIC REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATIONS OF SHELL OR CHARCOAL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IMMEDIATELY IN THE IMMEDIATE VICINITY OF THE FIND. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (808-692-8015), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND APPROPRIATE MITIGATION MEASURES, IF NECESSARY.

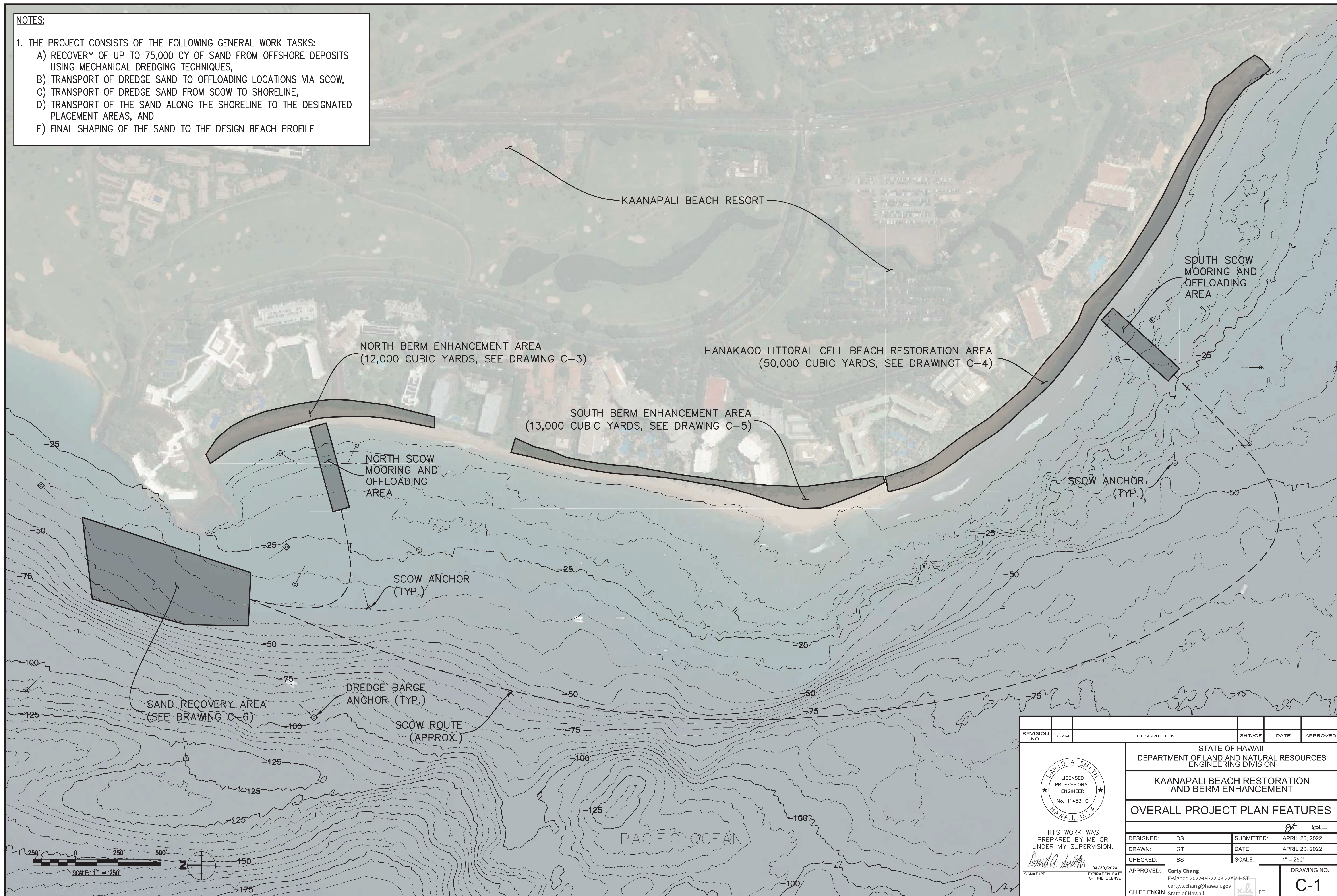
ABBREVIATIONS:

'	FEET
APPROX.	APPROXIMATELY
BL	BASELINE
CY	CUBIC YARDS
DET	DETAIL
(E), EXIST	EXISTING
EG	EXISTING GROUND
ELEV	ELEVATION
HLC	HANAKA00 LITTORAL CELL
KLC	KAAPALI LITTORAL CELL
MLLW	MEAN LOWER LOW WATER
MIN	MINIMUM
(N)	NEW
NB	NORTH BERM
NTS	NOT TO SCALE
SB	SOUTH BERM
SHT(S)	SHEET(S)
SQ FT	SQUARE FEET
TYP	TYPICAL

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
GENERAL NOTES					
		DESIGNED: DS SUBMITTED: APRIL 20, 2022 DRAWN: GT DATE: APRIL 20, 2022 CHECKED: SS SCALE: NTS			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  SIGNATURE		APPROVED: Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. G-1	
EXPIRATION DATE OF THE LICENSE: 04/30/2024					

NOTES:

1. THE PROJECT CONSISTS OF THE FOLLOWING GENERAL WORK TASKS:
 - A) RECOVERY OF UP TO 75,000 CY OF SAND FROM OFFSHORE DEPOSITS USING MECHANICAL DREDGING TECHNIQUES,
 - B) TRANSPORT OF DREDGE SAND TO OFFLOADING LOCATIONS VIA SCOW,
 - C) TRANSPORT OF DREDGE SAND FROM SCOW TO SHORELINE,
 - D) TRANSPORT OF THE SAND ALONG THE SHORELINE TO THE DESIGNATED PLACEMENT AREAS, AND
 - E) FINAL SHAPING OF THE SAND TO THE DESIGN BEACH PROFILE



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION	
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT			
OVERALL PROJECT PLAN FEATURES			
DESIGNED: DS	SUBMITTED: APRIL 20, 2022		
DRAWN: GT	DATE: APRIL 20, 2022	APPROVED: Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer	
CHECKED: SS	SCALE: 1" = 250'	DRAWING NO.	C-1
SIGNATURE: EXPIRATION DATE OF THE LICENSE: 04/30/2024		JOB NO. E00XM30A SHEET NO. 3 OF 24 SHEETS	

NORTH BERM ENHANCEMENT

SEGMENT	START	END	AZIMUTH	DISTANCE (FT)
NB-1	VSBP	NB 0+00	98°2'50"	149.10
NB-2	NB 0+00	NB 3+63	324°6'50"	363.14
NB-3	NB 3+63	NB 9+24	352°35'17"	561.20
NB-4	NB 9+24	NB 13+91	11°57'18"	466.53
NB-5	NB 13+91	VKWR	356°59'28"	217.41
NB-6	VKWR	VKNP	191°46'2"	769.97
NB-7	VKNP	VSBP	164°23'23"	778.29

SOUTH BERM ENHANCEMENT

SEGMENT	START	END	AZIMUTH	DISTANCE (FT)
SB-1	VKWR	SB 0+00	24°0'45"	307.13
SB-2	SB 0+00	SB 1+96	18°0'51"	196.33
SB-3	SB 1+96	SB 5+14	11°1'8"	317.69
SB-4	SB 5+14	SB 9+32	7°40'50"	417.88
SB-5	SB 9+32	SB 14+38	12°1'6"	506.14
SB-6	SB 14+38	SB 17+53	4°30'16"	315.27
SB-7	SB 17+53	SB 21+90	347°36'45"	436.42
SB-8	SB 21+90	SEI-MAR1	318°0'50"	102.16
SB-9	SEI-MAR1	VKMM	171°41'32"	540.74
SB-10	VKMM	SEI-ALII	187°41'21"	597.30
SB-11	SEI-ALII	VKWM	186°5'54"	428.53
SB-12	VKWM	VKWR	193°42'27"	981.05

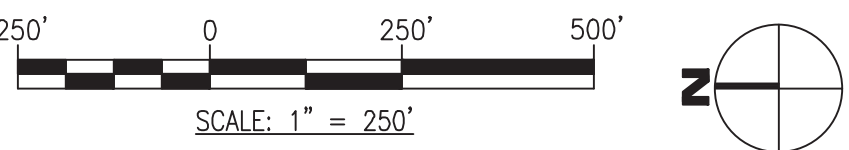
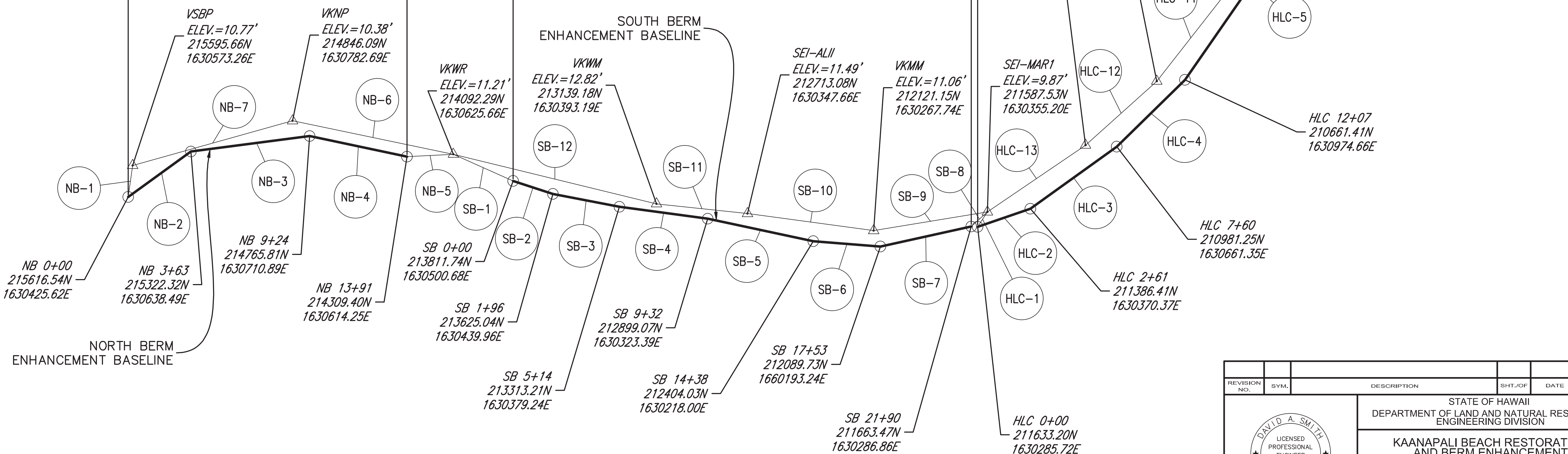
HANAKAOO LITTORAL CELL BEACH RESTORATION

SEGMENT	START	END	AZIMUTH	DISTANCE (FT)
HLC-1	SEI-MAR1	HLC 0+00	123°18'54"	83.15
HLC-2	HLC 0+00	HLC 2+61	341°4'3"	260.90
HLC-3	HLC 2+61	HLC 7+60	324°18'54"	498.83
HLC-4	HLC 7+60	HLC 12+07	315°35'26"	447.73
HLC-5	HLC 12+07	HLC 23+07	304°45'49"	1099.59
HLC-6	HLC 23+07	HLC 29+77	296°57'47"	669.71
HLC-7	HLC 29+77	HLC 33+83	312°15'10"	406.24
HLC-8	HLC 33+83	VHNO	154°25'46"	421.97
HLC-9	VHNO	SEI-HY2	112°50'37"	874.21
HLC-10	SEI-HY2	SEI-HY1	125°45'1"	508.32
HLC-11	SEI-HY1	VKHY	128°1'50"	517.02
HLC-12	VKHY	SEI-MAR2	138°6'1"	449.22
HLC-13	SEI-MAR2	SEI-MAR1	145°46'57"	556.30

HANAKAOO LITTORAL CELL BEACH RESTORATION AREA
SEE DRAWINGS C-9, C-10, C-14 THROUGH C-18

NORTH BERM ENHANCEMENT AREA
SEE DRAWINGS C-8, C-12, C-13

SOUTH BERM ENHANCEMENT AREA
SEE DRAWINGS C-11, C-19, C-20, C-21



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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
David A. Smith
04/30/2024
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

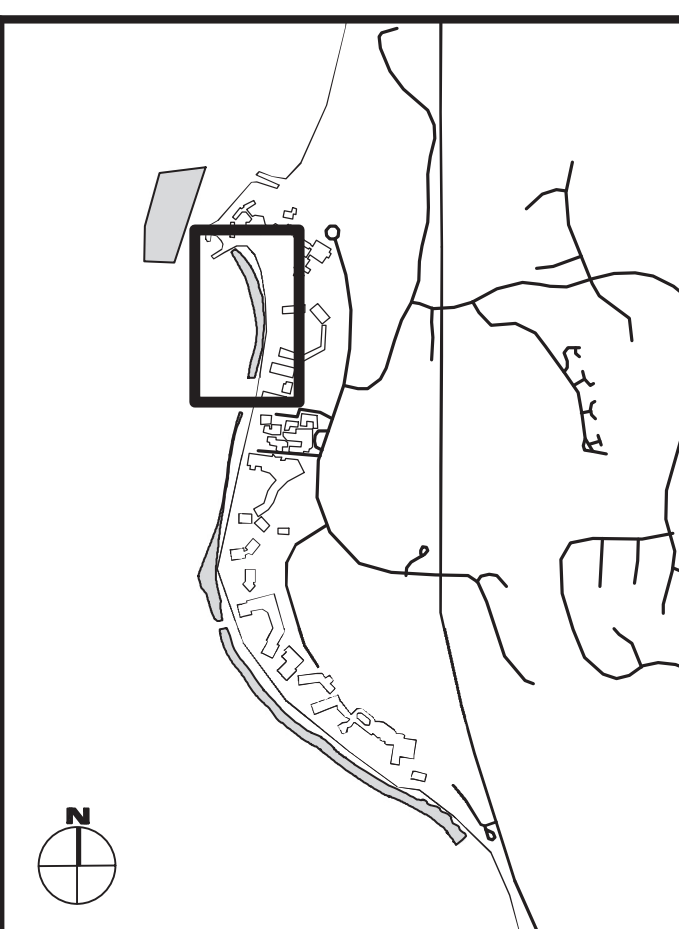
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT

BASELINE SURVEY CONTROLS

DESIGNED: DS	SUBMITTED: APRIL 20, 2022
DRAWN: GT	DATE: APRIL 20, 2022
CHECKED: SS	SCALE: 1" = 250'

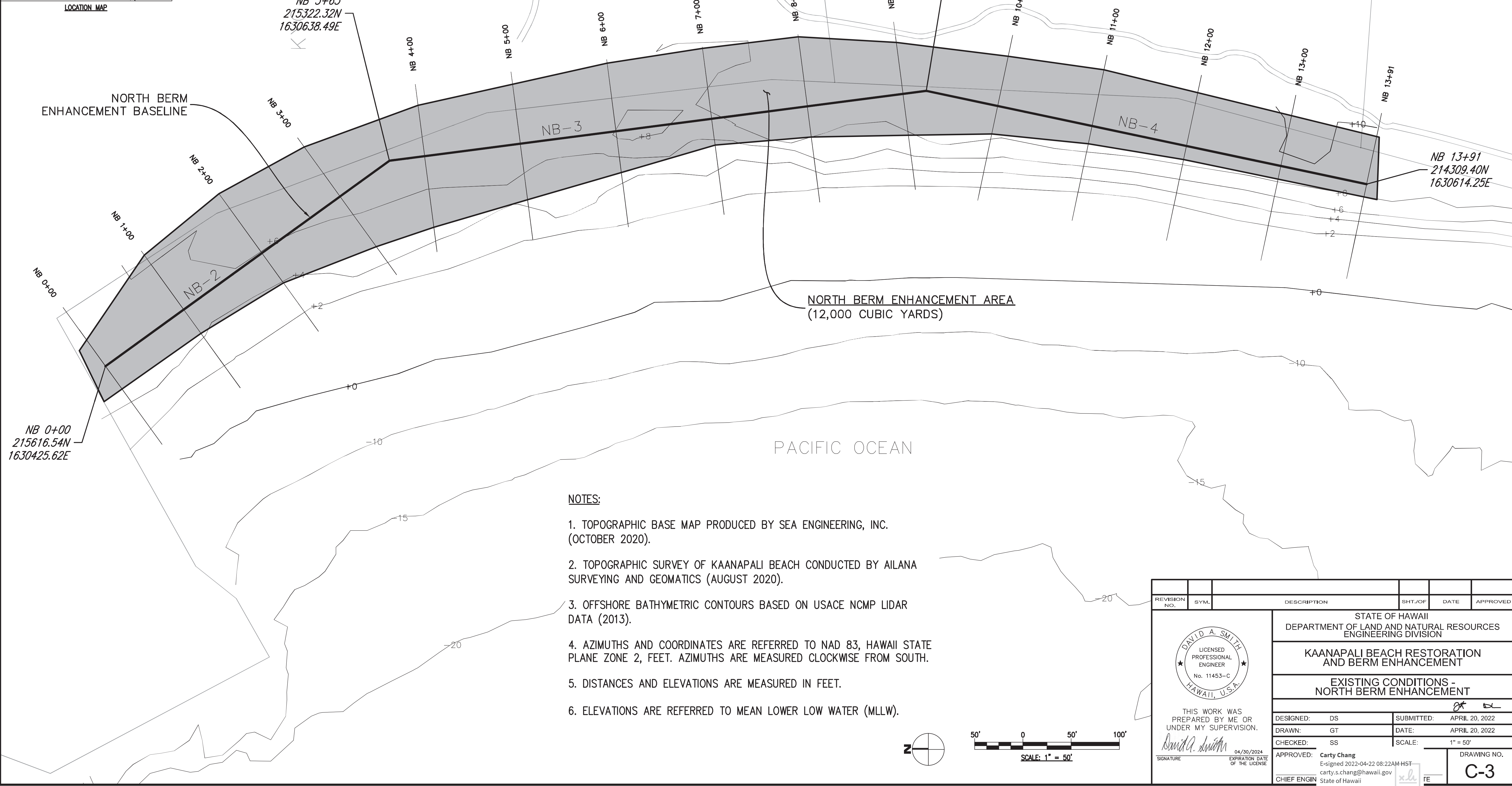
APPROVED: *Cary Chang*
E-signed 2022-04-22 08:22AM HST
carty.s.chang@hawaii.gov
State of Hawaii
Chief Engineer

DRAWING NO.
C-2

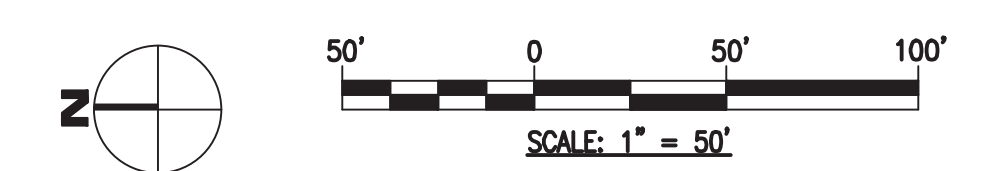


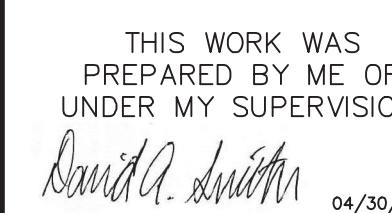
(2) 4-4-008:005
 KAYA HOTELS & RESO

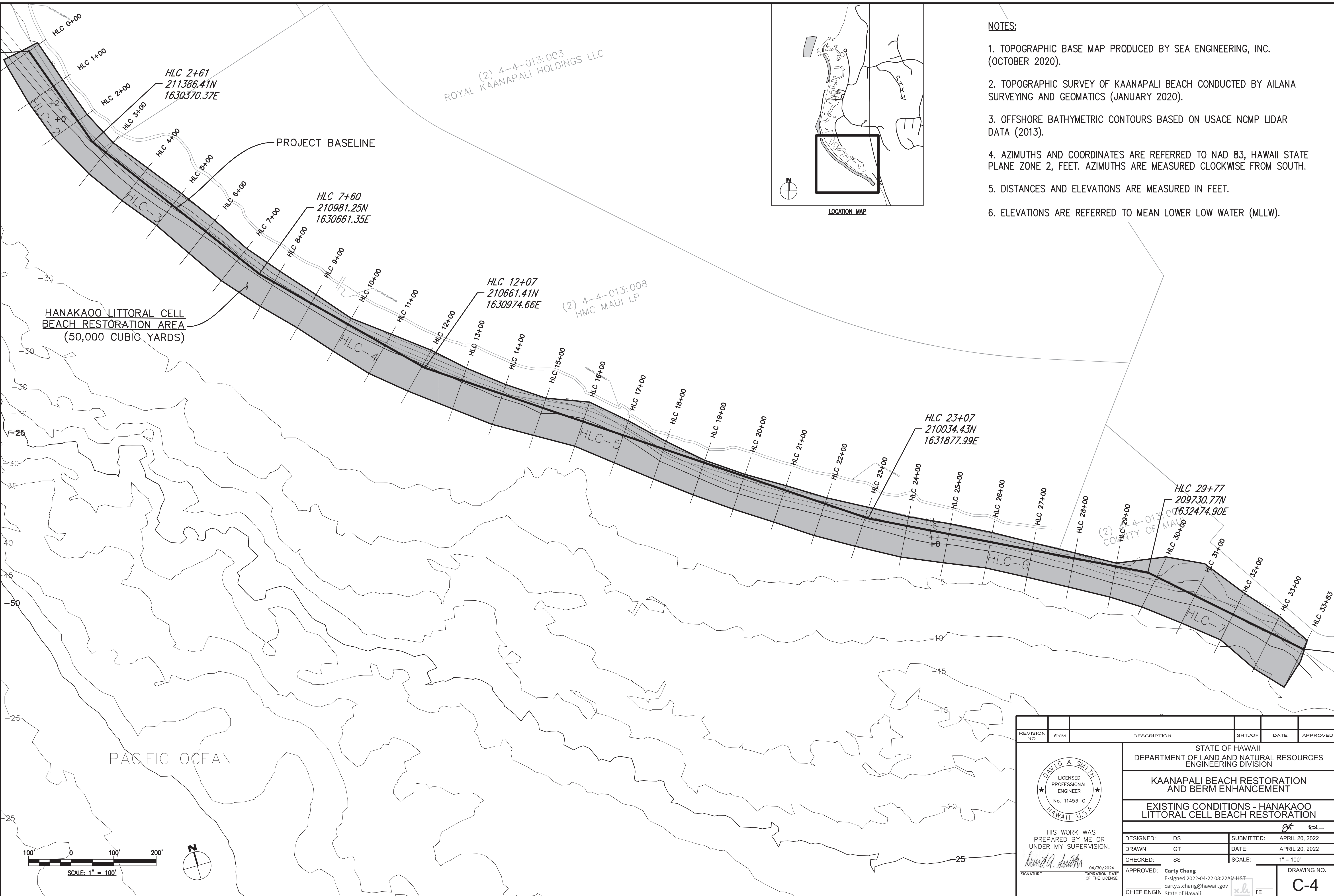
(2) 4-4-008:0
 KBHL LLC



- NOTES:**
1. TOPOGRAPHIC BASE MAP PRODUCED BY SEA ENGINEERING, INC. (OCTOBER 2020).
 2. TOPOGRAPHIC SURVEY OF KAAPALI BEACH CONDUCTED BY AILANA SURVEYING AND GEOMATICS (AUGUST 2020).
 3. OFFSHORE BATHYMETRIC CONTOURS BASED ON USACE NCMP LIDAR DATA (2013).
 4. AZIMUTHS AND COORDINATES ARE REFERRED TO NAD 83, HAWAII STATE PLANE ZONE 2, FEET. AZIMUTHS ARE MEASURED CLOCKWISE FROM SOUTH.
 5. DISTANCES AND ELEVATIONS ARE MEASURED IN FEET.
 6. ELEVATIONS ARE REFERRED TO MEAN LOWER LOW WATER (MLLW).

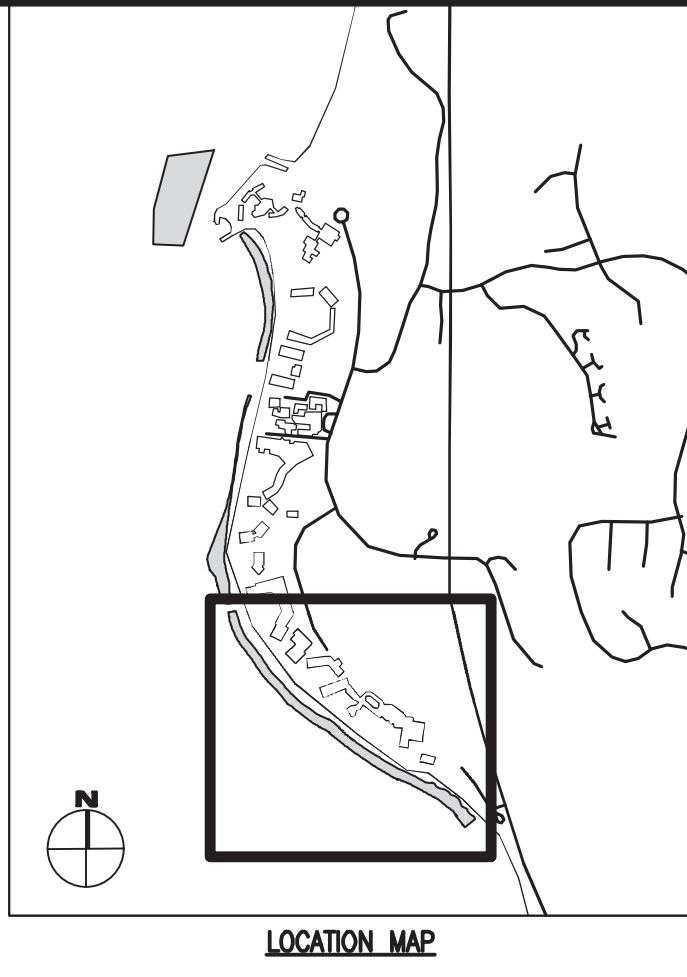


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STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
EXISTING CONDITIONS - NORTH BERM ENHANCEMENT					
DESIGNED:	DS	SUBMITTED:	APRIL 20, 2022		
DRAWN:	GT	DATE:	APRIL 20, 2022		
CHECKED:	SS	SCALE:	1" = 50'		
APPROVED:	Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO.		C-3
SIGNATURE	 <small>04/30/2024 EXPIRATION DATE OF THE LICENSE</small>				



NOTES:

1. TOPOGRAPHIC BASE MAP PRODUCED BY SEA ENGINEERING, INC. (OCTOBER 2020).
2. TOPOGRAPHIC SURVEY OF KAAPALI BEACH CONDUCTED BY AILANA SURVEYING AND GEOMATICS (JANUARY 2020).
3. OFFSHORE BATHYMETRIC CONTOURS BASED ON USACE NCMP LIDAR DATA (2013).
4. AZIMUTHS AND COORDINATES ARE REFERRED TO NAD 83, HAWAII STATE PLANE ZONE 2, FEET. AZIMUTHS ARE MEASURED CLOCKWISE FROM SOUTH.
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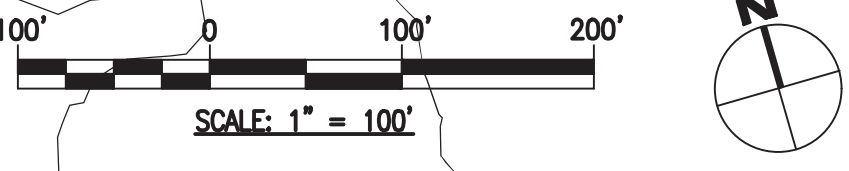


**HANAKAAO LITTORAL CELL
BEACH RESTORATION AREA
(50,000 CUBIC YARDS)**

(2) 4-4-013:003
ROYAL KAAPALI HOLDINGS LLC

(2) 4-4-013:008
HMC MAUI LP

(2) 4-013:003
COUNTY OF MAUI



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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
David A. Smith
SIGNATURE

04/30/2024
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

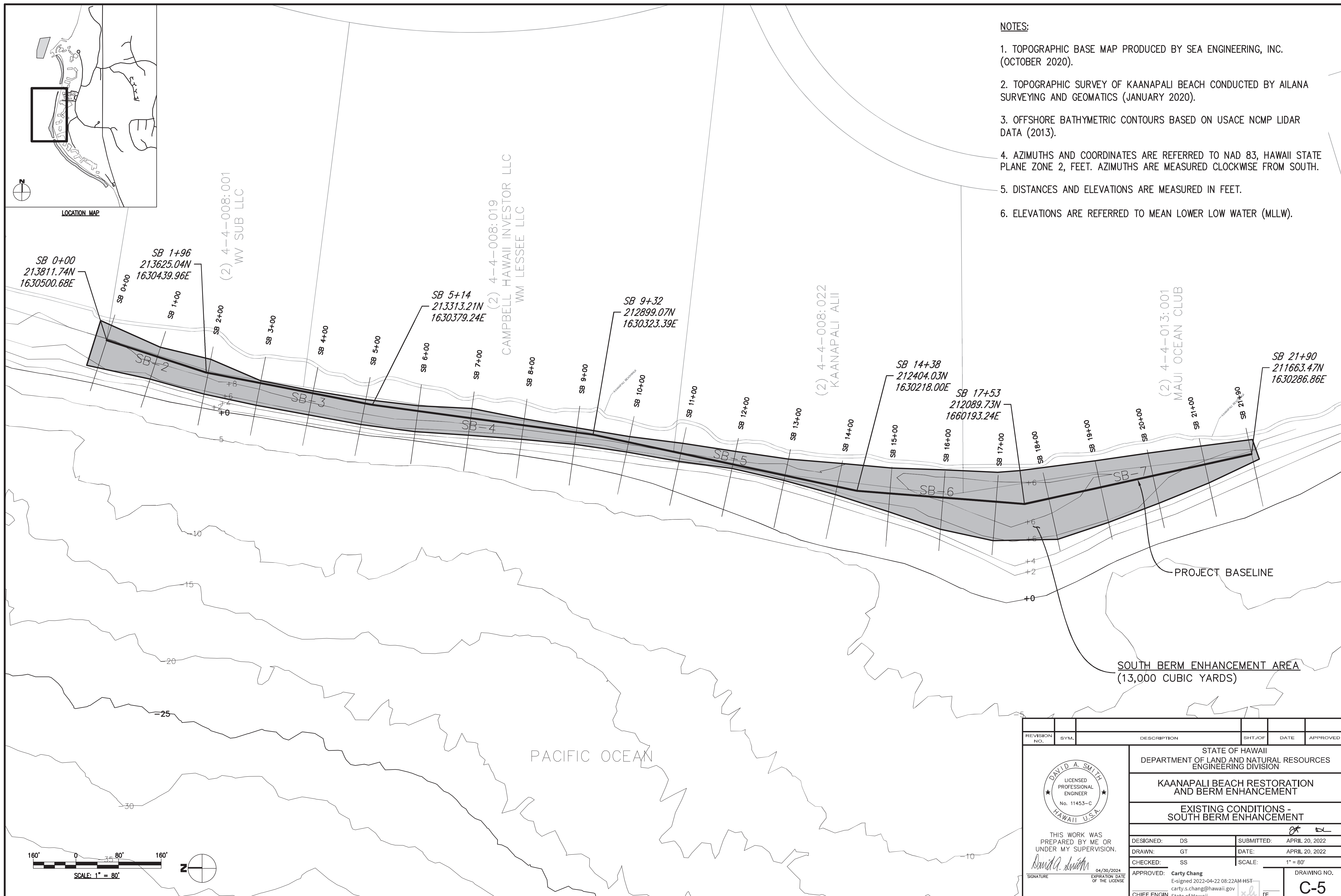
**KAANAPALI BEACH RESTORATION
AND BERM ENHANCEMENT**

**EXISTING CONDITIONS - HANAKAAO
LITTORAL CELL BEACH RESTORATION**

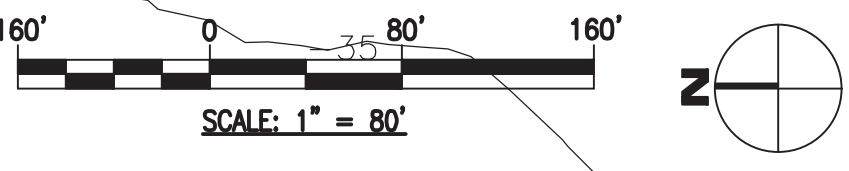
DESIGNED: DS	SUBMITTED: APRIL 20, 2022
DRAWN: GT	DATE: APRIL 20, 2022
CHECKED: SS	SCALE: 1" = 100'
APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer	DRAWING NO. C-4

NOTES:

1. TOPOGRAPHIC BASE MAP PRODUCED BY SEA ENGINEERING, INC. (OCTOBER 2020).
2. TOPOGRAPHIC SURVEY OF KAAPALAPI BEACH CONDUCTED BY AILANA SURVEYING AND GEOMATICS (JANUARY 2020).
3. OFFSHORE BATHYMETRIC CONTOURS BASED ON USACE NCMF LIDAR DATA (2013).
4. AZIMUTHS AND COORDINATES ARE REFERRED TO NAD 83, HAWAII STATE PLANE ZONE 2, FEET. AZIMUTHS ARE MEASURED CLOCKWISE FROM SOUTH.
5. DISTANCES AND ELEVATIONS ARE MEASURED IN FEET.
6. ELEVATIONS ARE REFERRED TO MEAN LOWER LOW WATER (MLLW).



LOCATION MAP



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION	
KAAPALAPI BEACH RESTORATION AND BERM ENHANCEMENT			
EXISTING CONDITIONS - SOUTH BERM ENHANCEMENT			
DESIGNED: DS	SUBMITTED: APRIL 20, 2022		
DRAWN: GT	DATE: APRIL 20, 2022		
CHECKED: SS	SCALE: 1" = 80'		
APPROVED: <i>Carty Chang</i> Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer	04/30/2024 EXPIRATION DATE OF THE LICENSE	DRAWING NO. C-5	

NOTES:

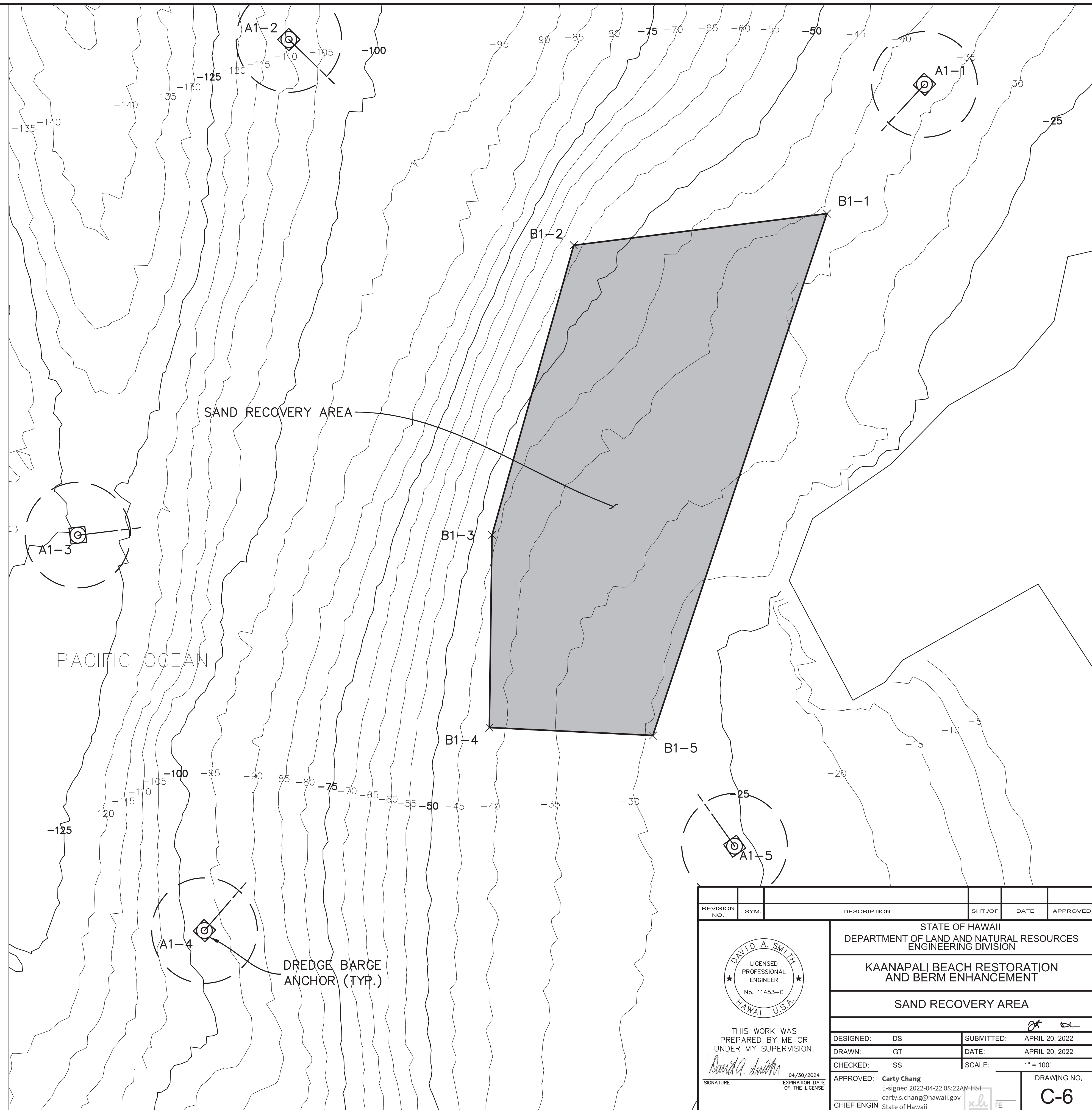
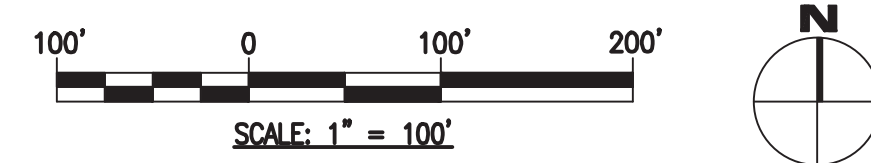
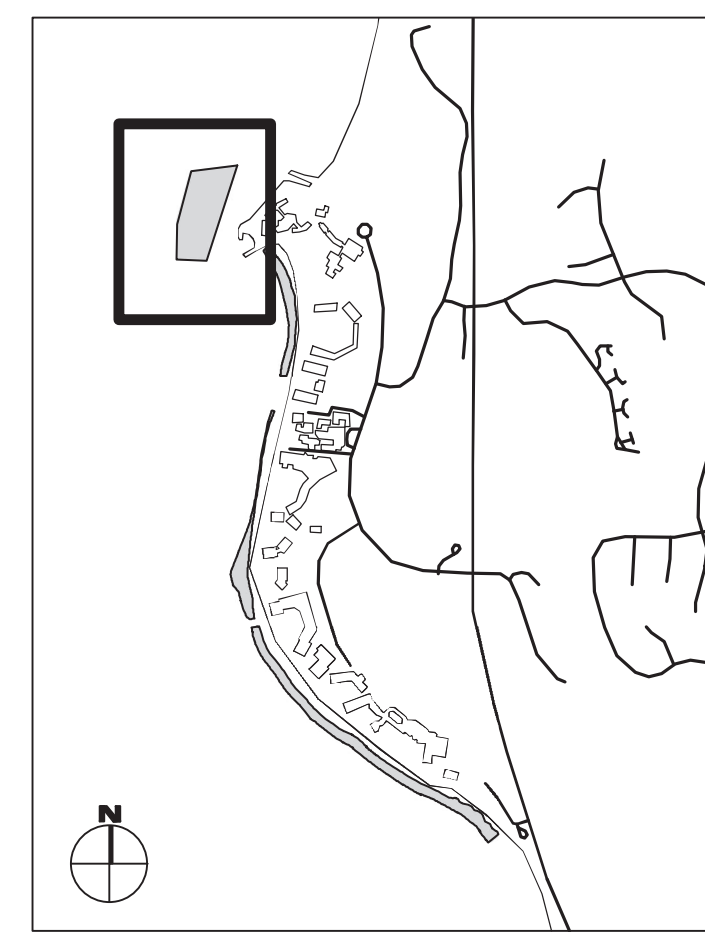
1. THE SAND RECOVERY AREA IS DELINEATED BY STRAIGHT LINES BETWEEN SUCCESSIVE POINTS B1-1 THROUGH B1-5.
2. THE 11-ACRE SAND DEPOSIT IS 7 TO 26 FEET THICK AND CONTAINS AN ESTIMATED 350,000 CUBIC YARDS OF SAND.
3. ELEVATION CONTOURS ARE IN FEET MEAN LOWER LOW WATER (MLLW).
4. ALL SAND RECOVERY WORK SHALL BE CONTAINED WITHIN THE DESIGNATED RECOVERY AREA BOUNDARIES. NO DREDGING SHALL BE CONDUCTED OUTSIDE OF THE DESIGNATED AREA.
5. COORDINATES FOR POINTS B1-1 THROUGH B1-5 ARE LISTED IN THE BELOW TABLE. COORDINATE SYSTEM IS NAD83 HAWAII STATE PLANE, ZONE 2, FEET.

POINT	EASTING COORDINATE	NORTHING COORDINATE
B1-1	1630075	216370
B1-2	1629595	216310
B1-3	1629440	215760
B1-4	1629435	215395
B1-5	1629745	215380

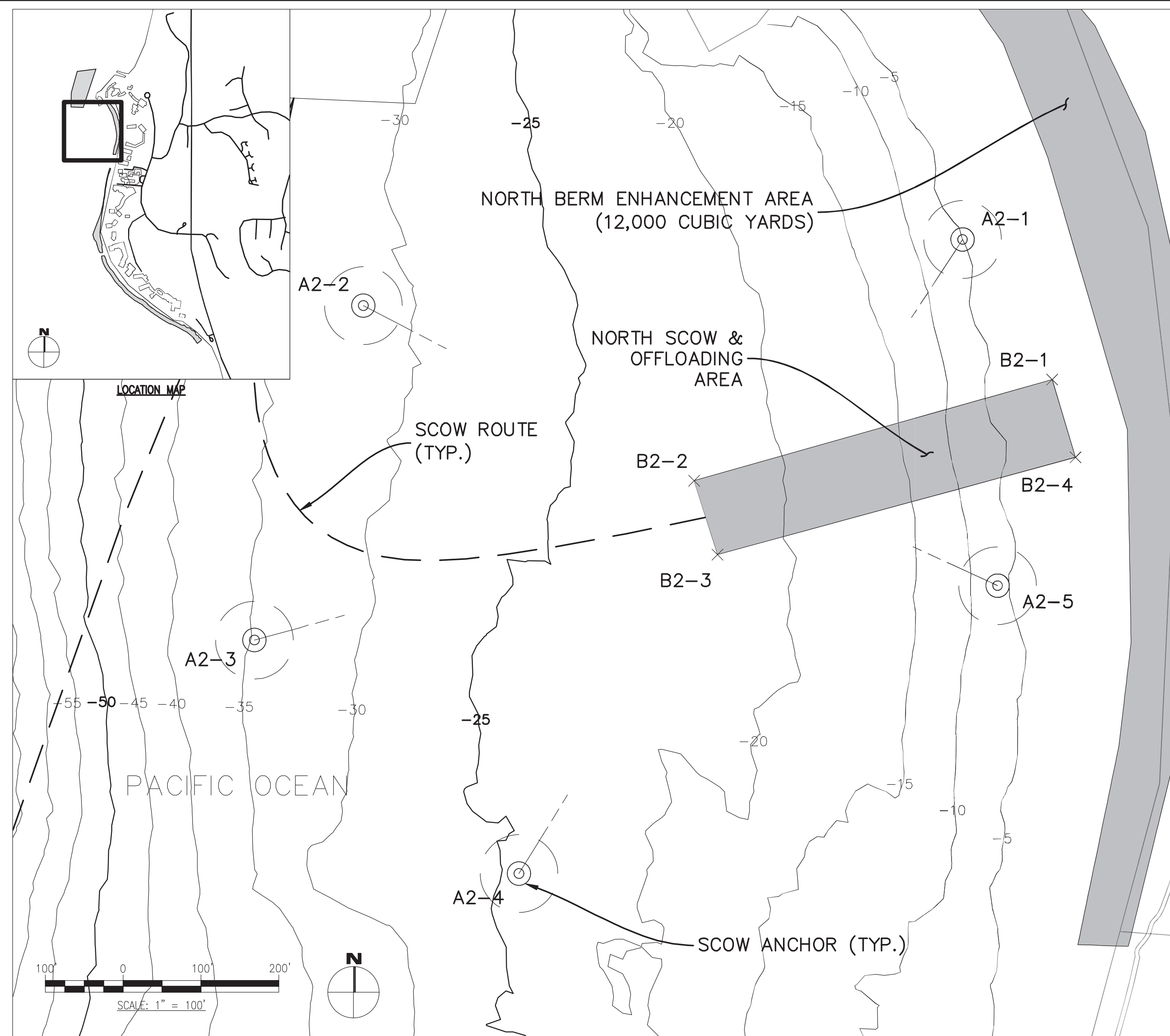
6. SAND IS TO BE RECOVERED FROM SAND DEPOSIT USING BARGE WITH ENVIRONMENTAL CLAMSHELL BUCKET. SAND WILL BE PLACED IN A SCOW FOR TRANSPORT TO ONE OF TWO OFFLOADING AREAS. OFFLOADING AREAS ARE SHOWN ON DRAWING C-7.
7. THE DREDGE BARGE SHALL BE SECURELY ANCHORED TO THE BOTTOM TO PREVENT ITS MOVEMENT UNDER ALL REASONABLY EXPECTED WAVE CONDITIONS. ANCHORS MAY CONSIST OF MASS GRAVITY WEIGHTS OR ANCHORS INSERTED OR DRILLED INTO THE BOTTOM.
8. ANCHORS FOR SAND RECOVERY BARGE SHALL BE PLACED ONLY WITHIN DESIGNATED CIRCLES WITH 100 FT RADII AS SHOWN.
9. ANCHOR CIRCLE CENTER COORDINATES ARE GIVEN IN THE FOLLOWING TABLE:

POINT	EASTING COORDINATE	NORTHING COORDINATE
A1-1	1630260	216615
A1-2	1629055	216700
A1-3	1628655	215760
A1-4	1628895	215010
A1-5	1629900	215170

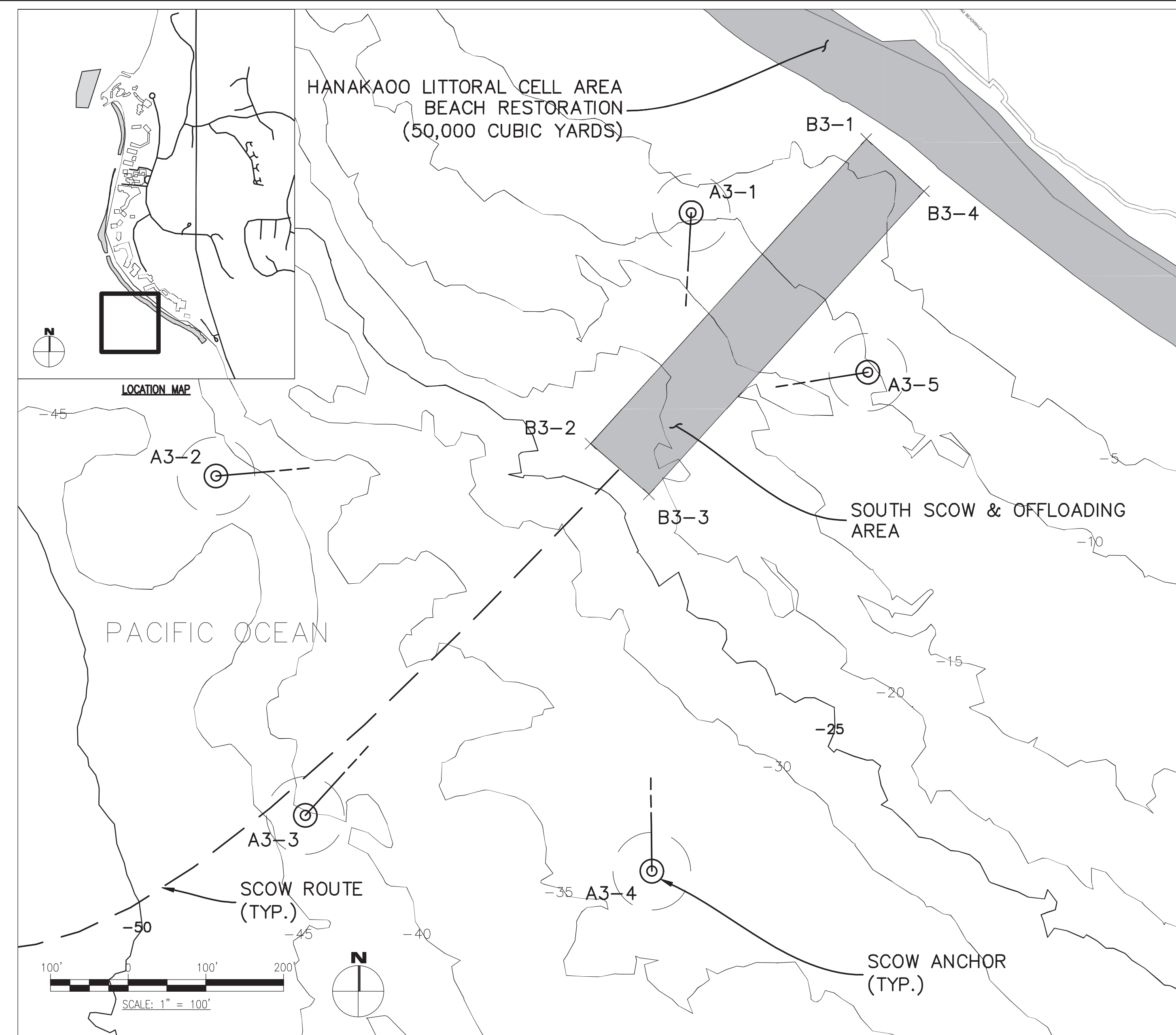
10. ALL ANCHORS SHALL BE COMPLETELY REMOVED AT THE COMPLETION OF THE WORK.



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT SAND RECOVERY AREA					
		THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. <i>David A. Smith</i> SIGNATURE 04/30/2024 EXPIRATION DATE OF THE LICENSE			
DESIGNED:	DS	SUBMITTED:	APRIL 20, 2022		
DRAWN:	GT	DATE:	APRIL 20, 2022		
CHECKED:	SS	SCALE:	1" = 100'		
APPROVED:	Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO.	C-6	



NORTH OFFLOADING AREA
SCALE: 1" = 100'



SOUTH OFFLOADING AREA
SCALE: 1" = 100'

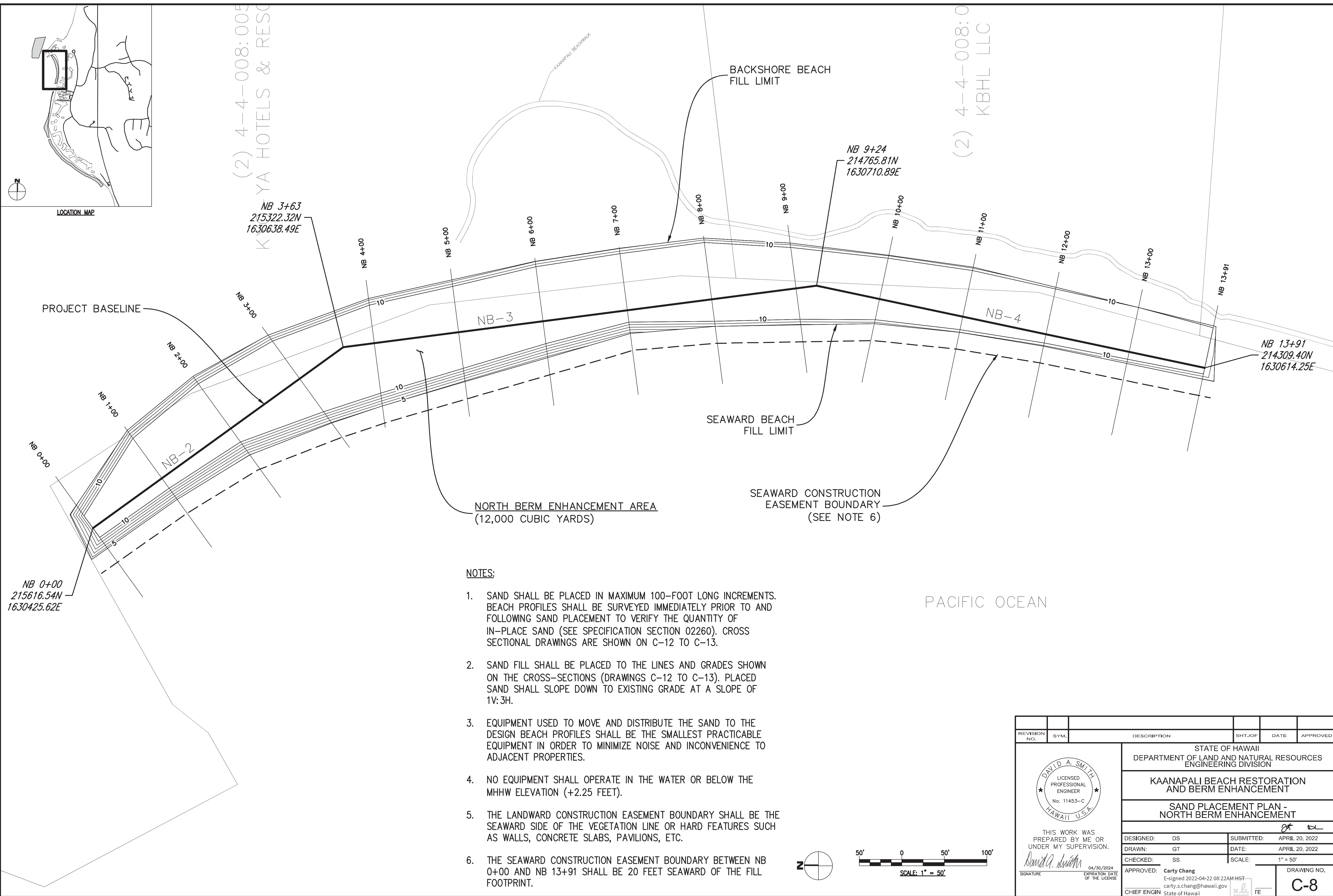
NOTES:

- ELEVATION CONTOURS ARE IN FEET MEAN LOWER LOW WATER (MLLW).
- ALL OFFLOADING EQUIPMENT MUST BE CONTAINED WITHIN THE DESIGNATED 100-FOOT-WIDE OFFLOADING AREA. NO OFFLOADING EQUIPMENT SHALL COME IN CONTACT WITH THE SEAFLOOR OUTSIDE OF THE DESIGNATED AREAS.
- OFFLOADING CORRIDOR BOUNDARIES ARE DELINEATED BY STRAIGHT LINES BETWEEN SUCCESSIVE POINTS B2-1 THROUGH B2-4 FOR THE NORTH OFFLOADING AREA AND POINTS B3-1 THROUGH B3-4 FOR THE SOUTH OFFLOADING AREA. POINTS B2-1 THROUGH B2-4 AND B3-1 THROUGH B3-4 ARE LISTED IN THE BELOW TABLE. COORDINATE SYSTEM IS NAD83 HAWAII STATE PLANE, ZONE 2, FEET.
- THE SCOW SHALL BE SECURELY ANCHORED TO THE BOTTOM TO PREVENT ITS MOVEMENT DURING OFFLOADING OPERATIONS. ANCHORS MAY CONSIST OF MASS GRAVITY WEIGHTS OR ANCHORS INSERTED OR DRILLED INTO THE BOTTOM. CONTRACTOR SHALL ENSURE THAT RODE IS SUSPENDED AND DOES NOT CONTACT BOTTOM.
- ANCHORS FOR SCOW/OFFLOADING AREAS SHALL BE PLACED ONLY WITHIN DESIGNATED CIRCLES HAVING 50 FT RADII AS SHOWN. CONTRACTOR SHALL VERIFY PRIOR TO ANCHOR PLACEMENT THAT SUBSTRATE IN ANCHOR CIRCLES IS FREE OF CORAL, SEA GRASS, AND ANY OTHER PROTECTED SPECIES.
- ANCHOR CIRCLE CENTER COORDINATES ARE GIVEN IN THE FOLLOWING TABLE.
- ALL ANCHORS SHALL BE COMPLETELY REMOVED AT THE COMPLETION OF THE WORK. ANCHORS CEMENTED INTO THE BOTTOM MAY BE CUT OFF FLUSH WITH THE BOTTOM SURFACE.

POINT	EASTING COORDINATE	NORTHING COORDINATE
B2-1	1630565	215025
B2-2	1630105	214895
B2-3	1630135	214800
B2-4	1630595	214925
B3-1	1631230	210375
B3-2	1630875	209985
B3-3	1630950	209920
B3-4	1631305	210310

POINT	EASTING COORDINATE	NORTHING COORDINATE
A2-1	1630450	215205
A2-2	1629680	215120
A2-3	1629540	214690
A2-4	1629880	214390
A2-5	1630495	214760
A3-1	1631005	210280
A3-2	1630395	209945
A3-3	1630510	209505
A3-4	1630955	209435
A3-5	1631230	210075

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND OFFLOADING AREAS					
DESIGNED: DS		SUBMITTED: APRIL 20, 2022			
DRAWN: GT		DATE: APRIL 20, 2022			
CHECKED: SS		SCALE: 1" = 100'			
APPROVED: <i>Carty Chang</i> Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. C-7			



LOCATION MAP

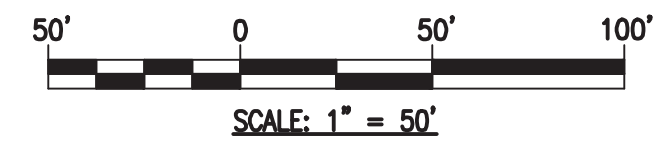
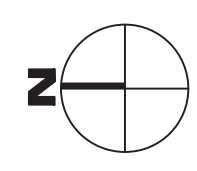
(2) 4-4-008:005
 KAYA HOTELS & RESO

(2) 4-4-008:0
 KBHL LLC

NOTES:

1. SAND SHALL BE PLACED IN MAXIMUM 100-FOOT LONG INCREMENTS. BEACH PROFILES SHALL BE SURVEYED IMMEDIATELY PRIOR TO AND FOLLOWING SAND PLACEMENT TO VERIFY THE QUANTITY OF IN-PLACE SAND (SEE SPECIFICATION SECTION 02260). CROSS SECTIONAL DRAWINGS ARE SHOWN ON C-12 TO C-13.
2. SAND FILL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CROSS-SECTIONS (DRAWINGS C-12 TO C-13). PLACED SAND SHALL SLOPE DOWN TO EXISTING GRADE AT A SLOPE OF 1V:3H.
3. EQUIPMENT USED TO MOVE AND DISTRIBUTE THE SAND TO THE DESIGN BEACH PROFILES SHALL BE THE SMALLEST PRACTICABLE EQUIPMENT IN ORDER TO MINIMIZE NOISE AND INCONVENIENCE TO ADJACENT PROPERTIES.
4. NO EQUIPMENT SHALL OPERATE IN THE WATER OR BELOW THE MHHW ELEVATION (+2.25 FEET).
5. THE LANDWARD CONSTRUCTION EASEMENT BOUNDARY SHALL BE THE SEAWARD SIDE OF THE VEGETATION LINE OR HARD FEATURES SUCH AS WALLS, CONCRETE SLABS, PAVILIONS, ETC.
6. THE SEAWARD CONSTRUCTION EASEMENT BOUNDARY BETWEEN NB 0+00 AND NB 13+91 SHALL BE 20 FEET SEAWARD OF THE FILL FOOTPRINT.

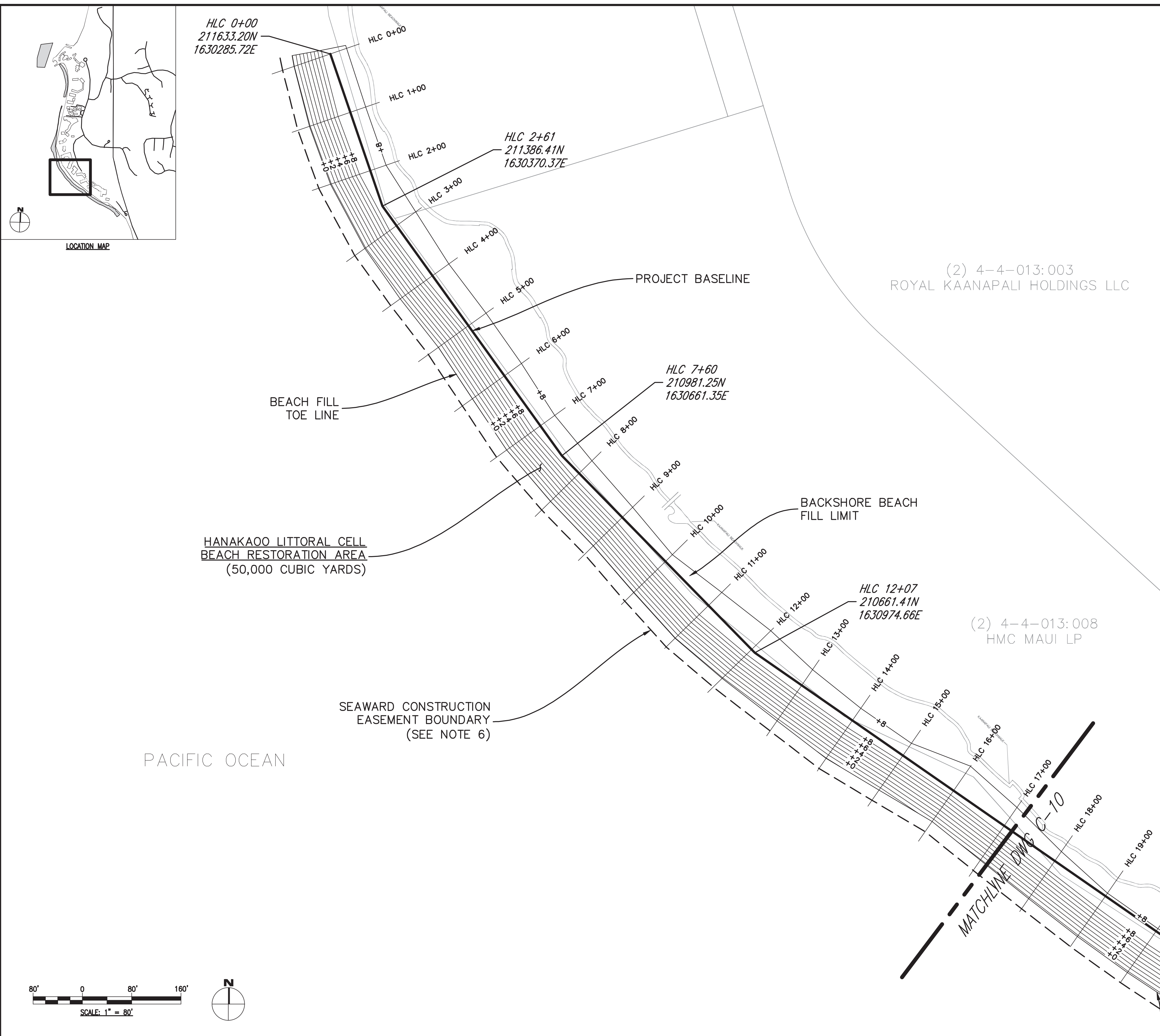
PACIFIC OCEAN



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT PLAN - NORTH BERM ENHANCEMENT					
DESIGNED: DS		SUBMITTED: APRIL 20, 2022		 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. <i>David A. Smith</i> 04/30/2024 EXPIRATION DATE OF THE LICENSE	
DRAWN: GT		DATE: APRIL 20, 2022			
CHECKED: SS		SCALE: 1" = 50'			
APPROVED: Carty Chang		DRAWING NO. C-8			
CHIEF ENGIN		E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		SHEET NO. 10 OF 24 SHEETS	

NOTES:

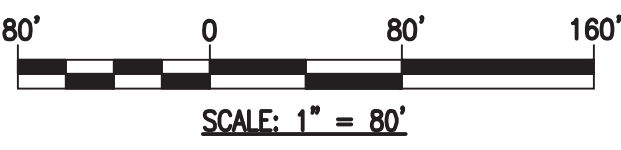
1. SAND SHALL BE PLACED IN MAXIMUM 100-FOOT LONG INCREMENTS. BEACH PROFILES SHALL BE SURVEYED IMMEDIATELY PRIOR TO AND FOLLOWING SAND PLACEMENT TO VERIFY THE QUANTITY OF IN-PLACE SAND (SEE SPECIFICATION SECTION 02260). CROSS SECTIONAL DRAWINGS ARE SHOWN ON C-14 TO C-18.
2. SAND FILL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CROSS-SECTIONS (DRAWINGS C-14 TO C-18). PLACED SAND SHALL SLOPE DOWN TO EXISTING GRADE AT A SLOPE OF 1V:6H ON THE SEAWARD SIDE AND 1V:3H ON THE LANDWARD SIDE.
3. EQUIPMENT USED TO MOVE AND DISTRIBUTE THE SAND TO THE DESIGN BEACH PROFILES SHALL BE THE SMALLEST PRACTICABLE EQUIPMENT IN ORDER TO MINIMIZE NOISE AND INCONVENIENCE TO ADJACENT PROPERTIES.
4. NO EQUIPMENT SHALL OPERATE IN THE WATER OR BELOW THE MHHW ELEVATION (+2.25 FEET).
5. THE LANDWARD CONSTRUCTION EASEMENT BOUNDARY SHALL BE THE SEAWARD SIDE OF THE VEGETATION LINE OR HARD FEATURES SUCH AS WALLS, CONCRETE SLABS, PAVILIONS, ETC.
6. THE SEAWARD CONSTRUCTION EASEMENT BOUNDARY BETWEEN HLC 0+00 AND HLC 17+00 SHALL BE 20 FEET SEAWARD OF THE DESIGN BEACH TOE FILL LINE.



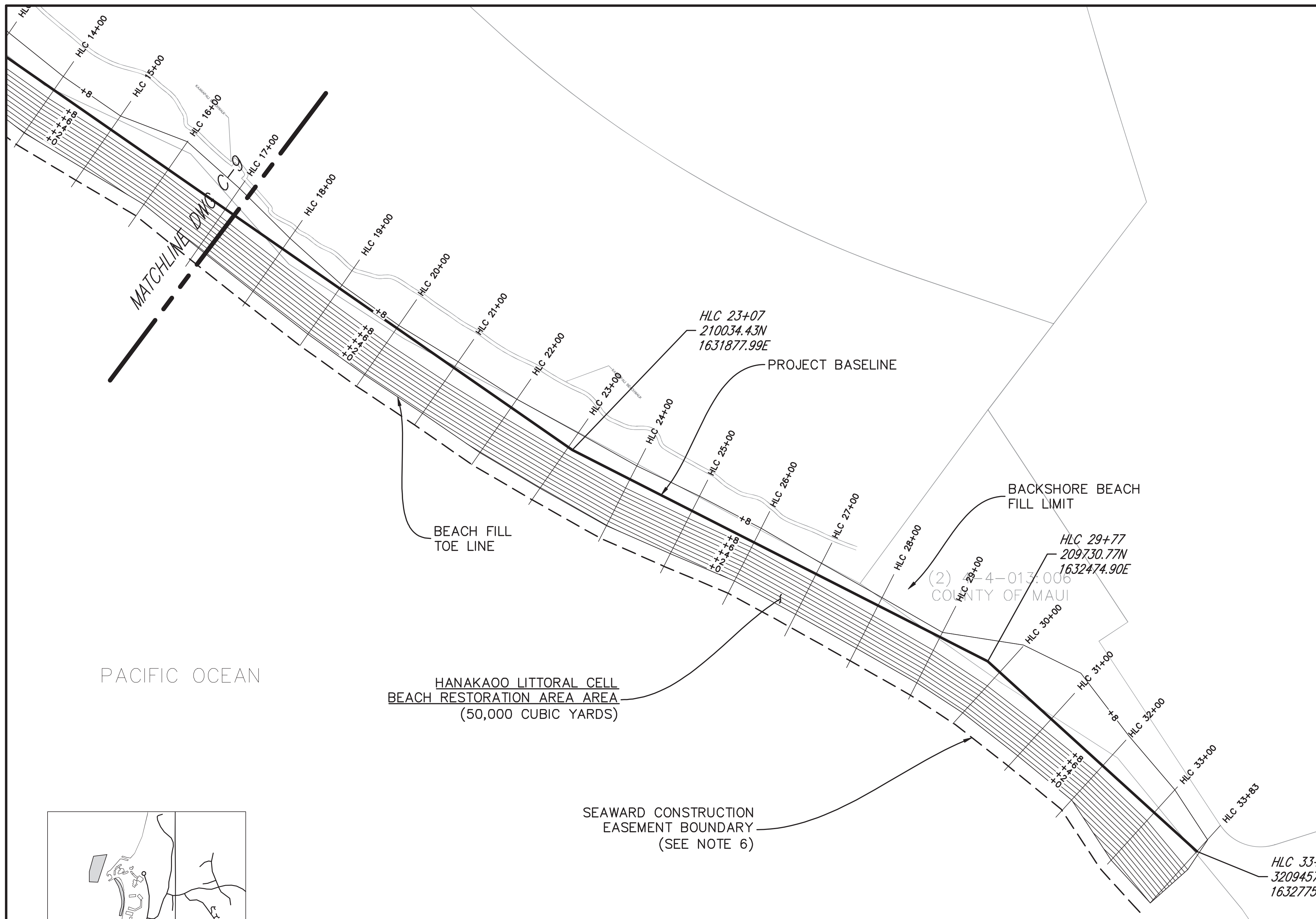
LOCATION MAP

HANAKA OO LITTORAL CELL
BEACH RESTORATION AREA
(50,000 CUBIC YARDS)

PACIFIC OCEAN



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAA NAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT PLAN - HANAKA OO LITTORAL CELL BEACH RESTORATION NORTH					
DESIGNED:	DS	SUBMITTED:	APRIL 20, 2022		
DRAWN:	GT	DATE:	APRIL 20, 2022		
CHECKED:	SS	SCALE:	1" = 80'		
APPROVED:	Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		04/30/2024 EXPIRATION DATE OF THE LICENSE		DRAWING NO. C-9



NOTES:

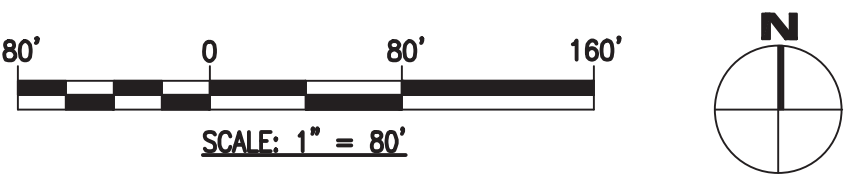
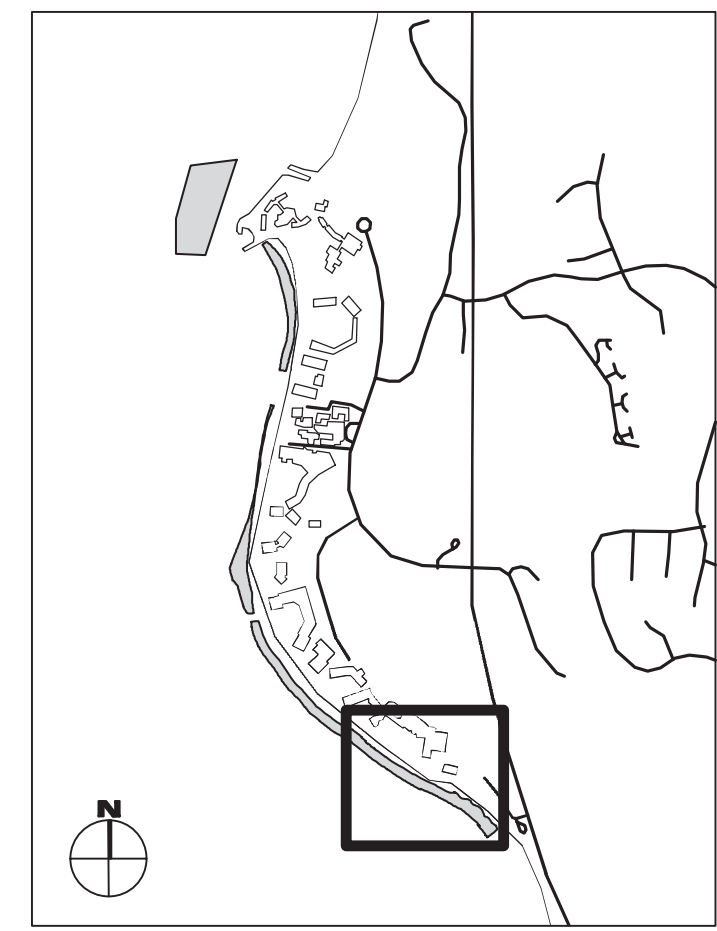
1. SAND SHALL BE PLACED IN MAXIMUM 100-FOOT LONG INCREMENTS. BEACH PROFILES SHALL BE SURVEYED IMMEDIATELY PRIOR TO AND FOLLOWING SAND PLACEMENT TO VERIFY THE QUANTITY OF IN-PLACE SAND (SEE SPECIFICATION SECTION 02260). CROSS SECTIONAL DRAWINGS ARE SHOWN ON C-14 TO C-18.
2. SAND FILL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CROSS-SECTIONS (DRAWINGS C-14 TO C-18). PLACED SAND SHALL SLOPE DOWN TO EXISTING GRADE AT A SLOPE OF 1V:6H ON THE SEAWARD SIDE AND 1V:3H ON THE LANDWARD SIDE.
3. EQUIPMENT USED TO MOVE AND DISTRIBUTE THE SAND TO THE DESIGN BEACH PROFILES SHALL BE THE SMALLEST PRACTICABLE EQUIPMENT IN ORDER TO MINIMIZE NOISE AND INCONVENIENCE TO ADJACENT PROPERTIES.
4. NO EQUIPMENT SHALL OPERATE IN THE WATER OR BELOW THE MHHW ELEVATION (+2.25 FEET).
5. THE LANDWARD CONSTRUCTION EASEMENT BOUNDARY SHALL BE THE SEAWARD SIDE OF THE VEGETATION LINE OR HARD FEATURES SUCH AS WALLS, CONCRETE SLABS, PAVILIONS, ETC.
6. THE SEAWARD CONSTRUCTION EASEMENT BOUNDARY BETWEEN HLC 18+00 AND HLC 33+83 SHALL BE 20 FEET SEAWARD OF THE DESIGN BEACH FILL LINE

PACIFIC OCEAN

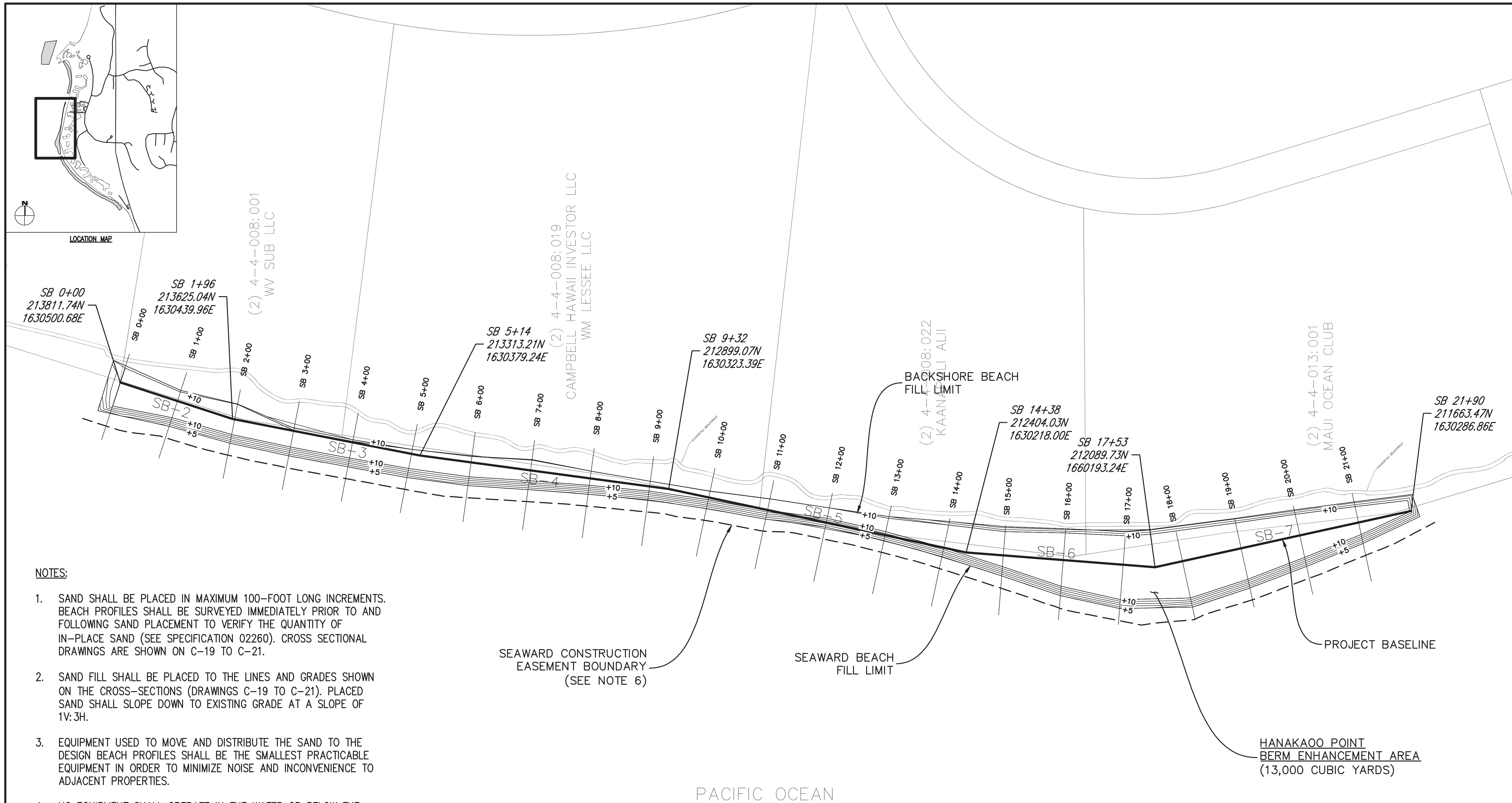
HANAKAOO LITTORAL CELL
BEACH RESTORATION AREA AREA
(50,000 CUBIC YARDS)

SEAWARD CONSTRUCTION
EASEMENT BOUNDARY
(SEE NOTE 6)

BACKSHORE BEACH
FILL LIMIT

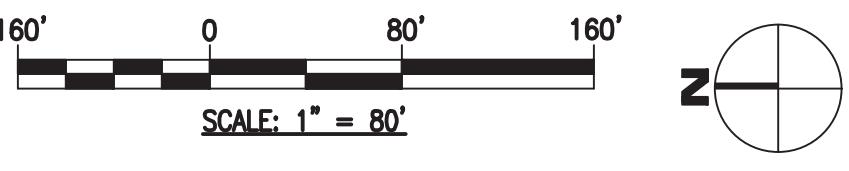


REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT PLAN - HANAKAOO LITTORAL CELL BEACH RESTORATION SOUTH					
DESIGNED: DS		SUBMITTED: APRIL 20, 2022			
DRAWN: GT		DATE: APRIL 20, 2022			
CHECKED: SS		SCALE: 1" = 80'			
APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. C-10			



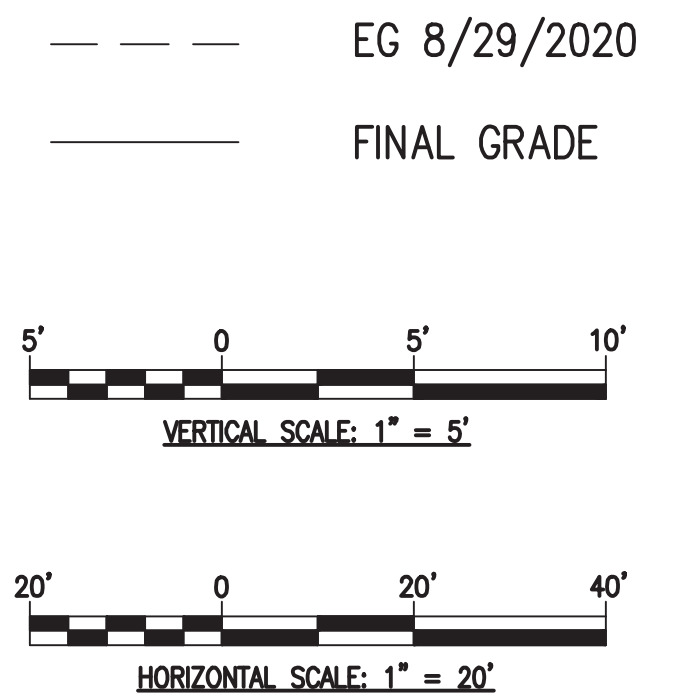
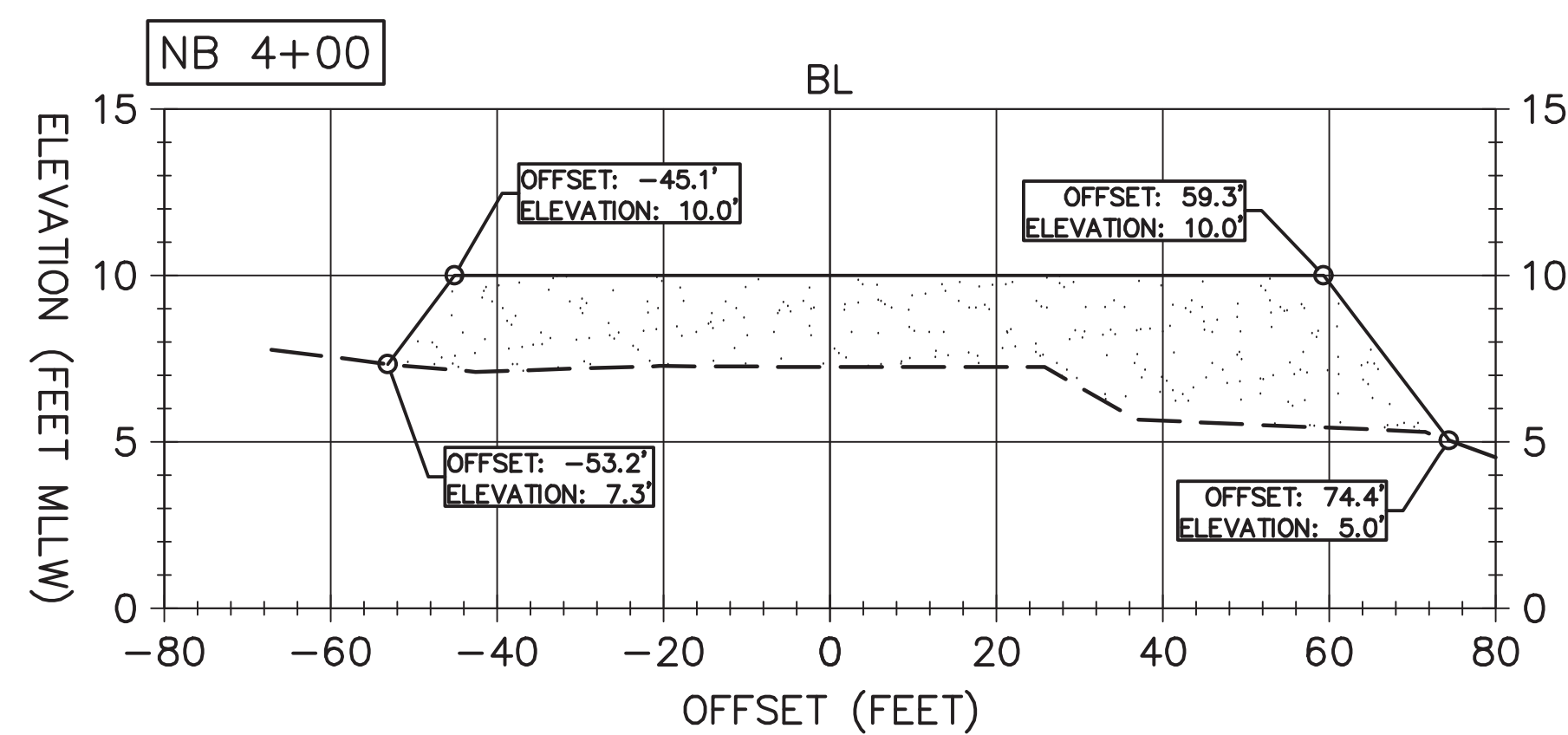
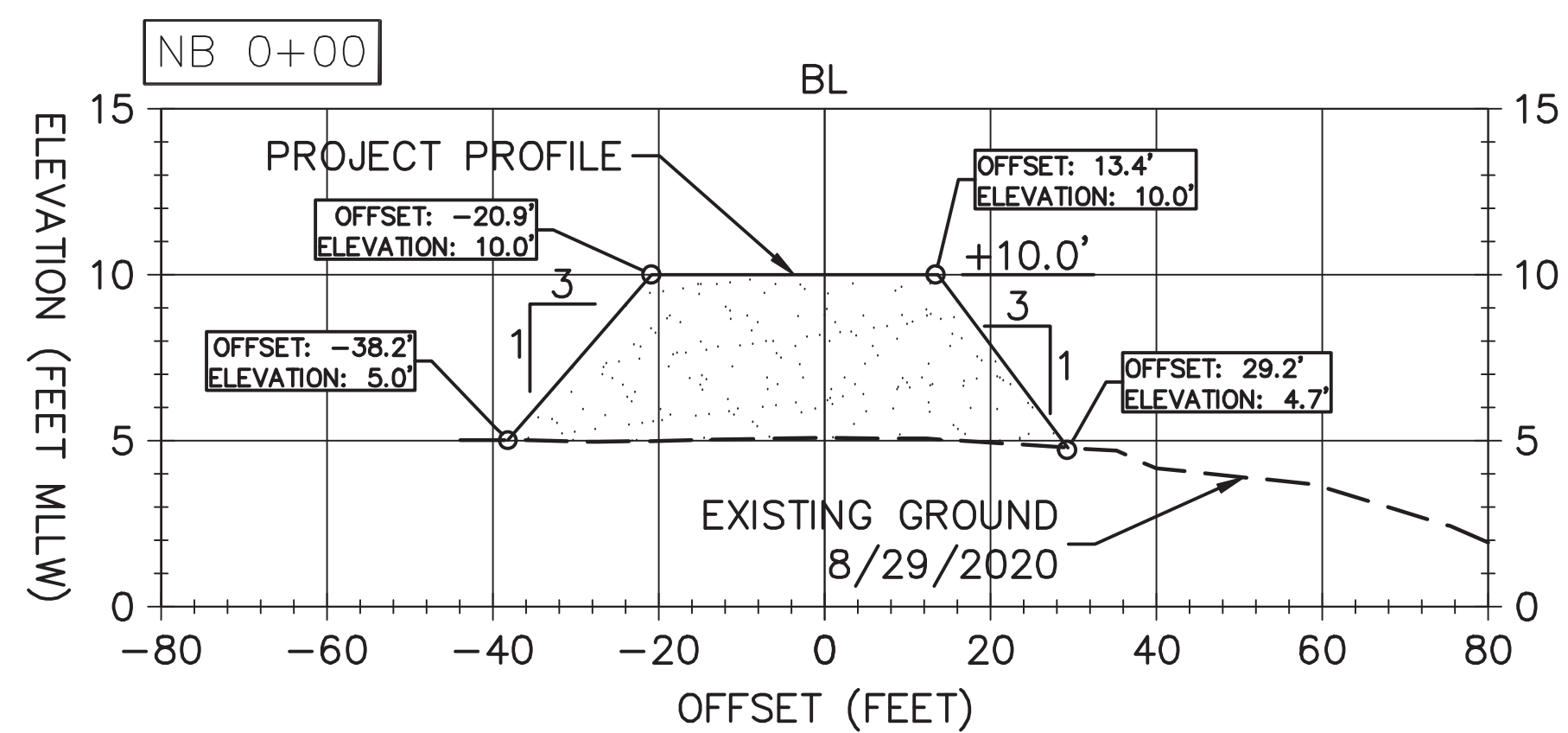
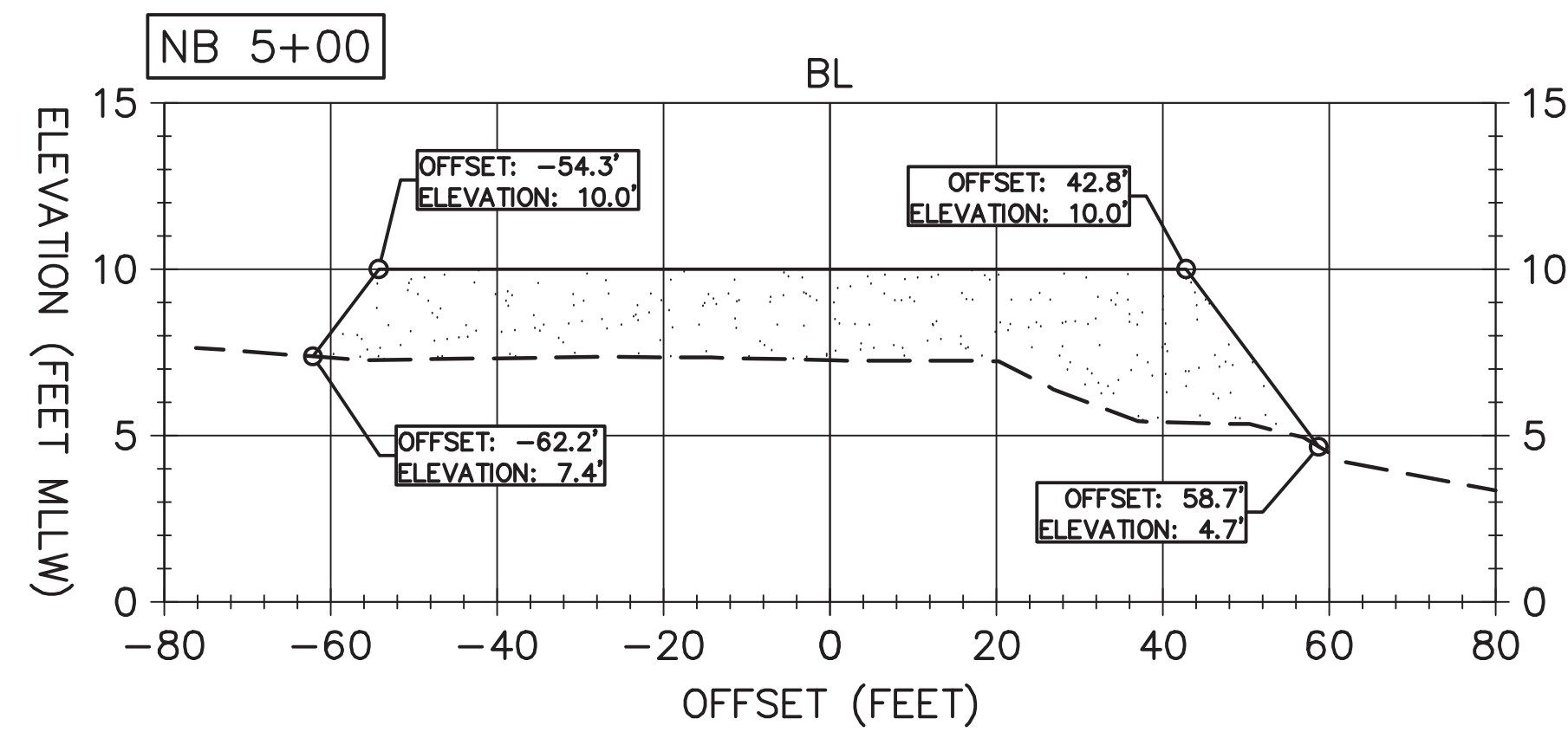
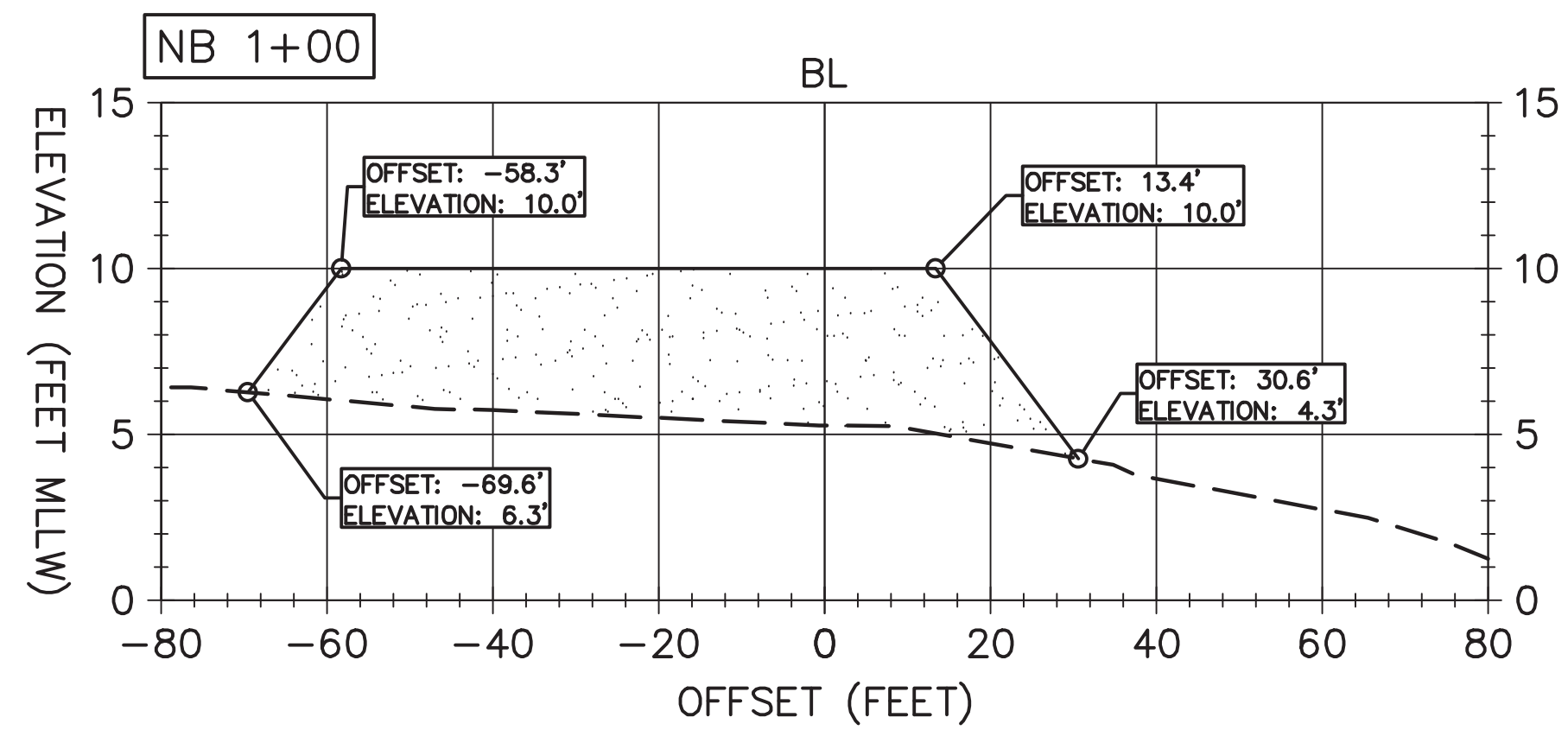
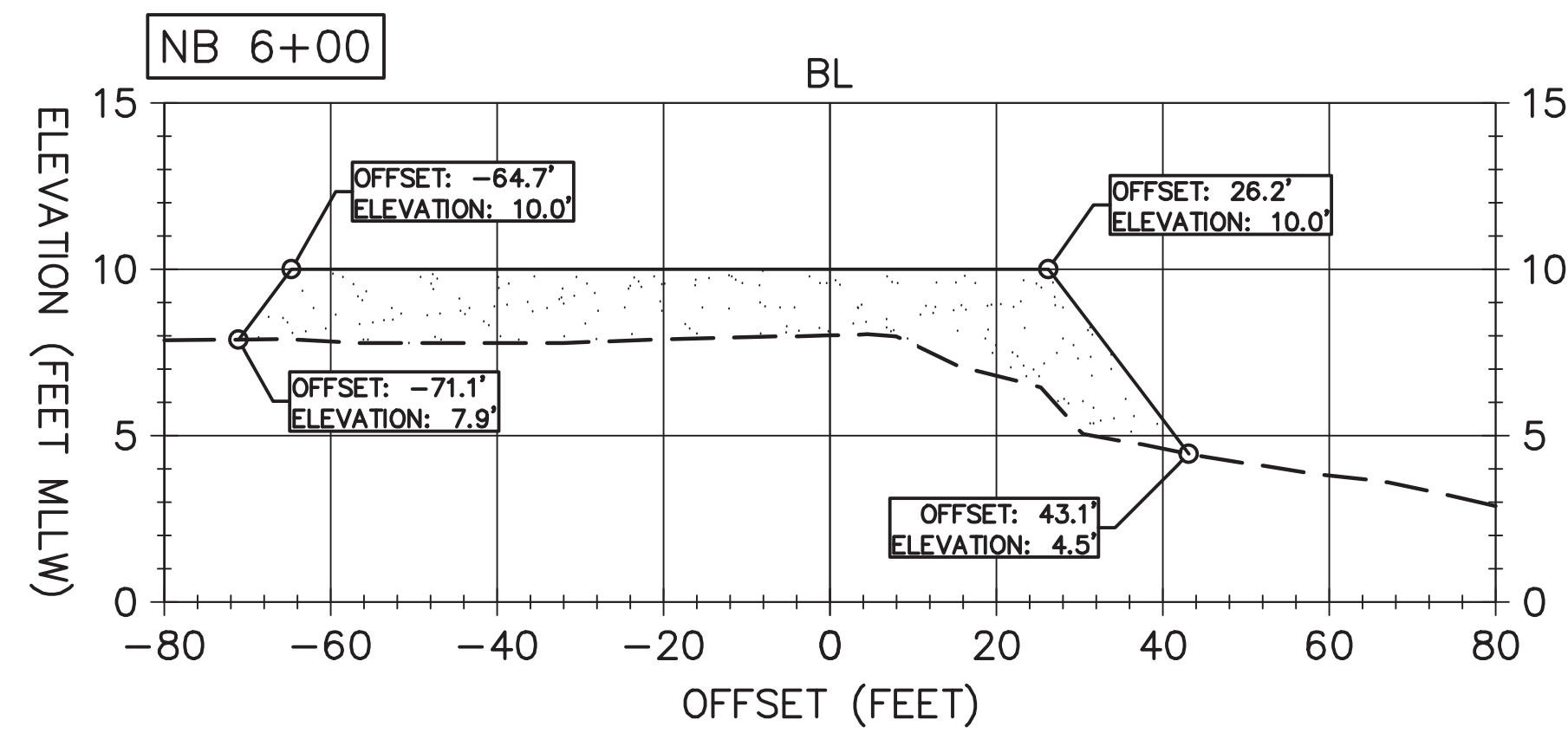
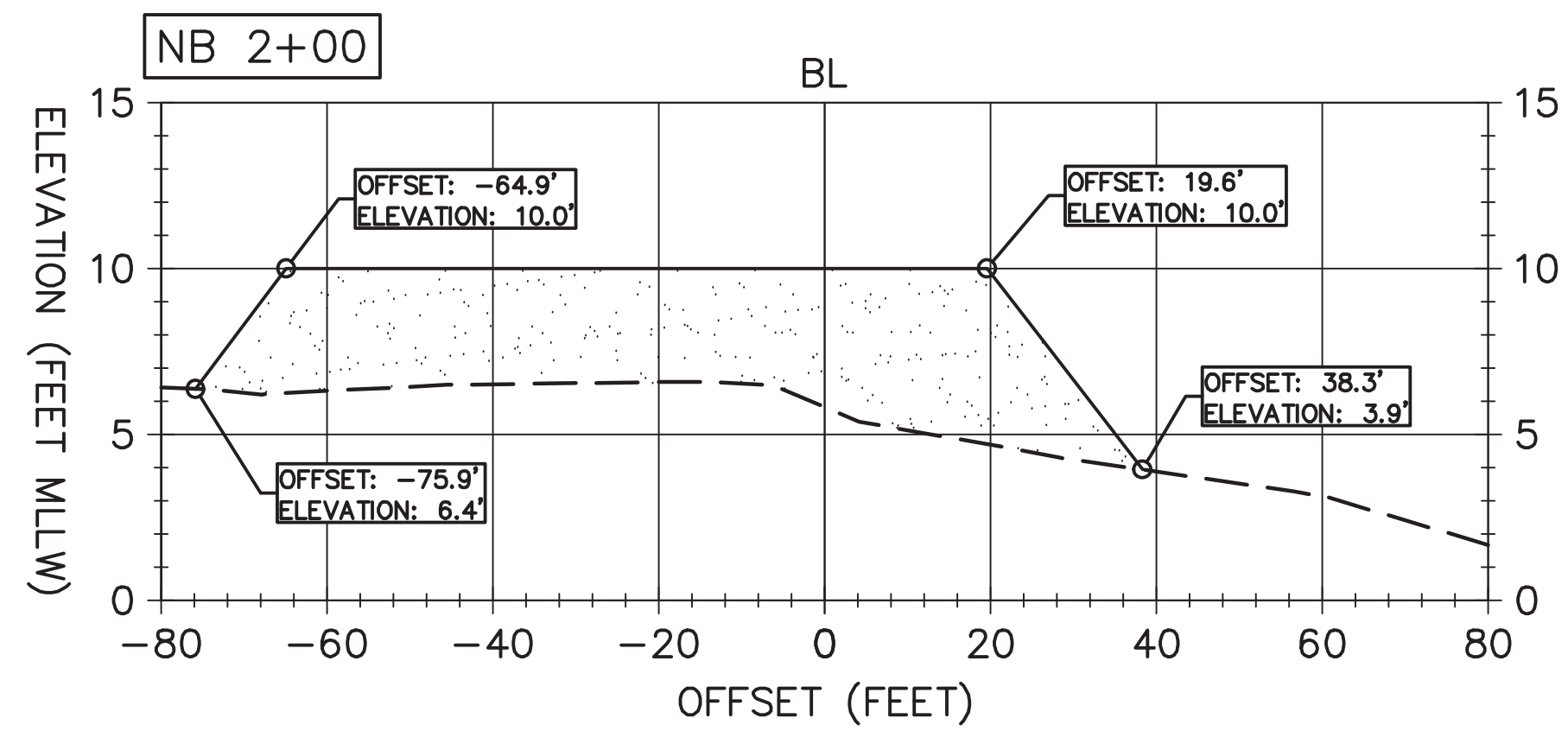
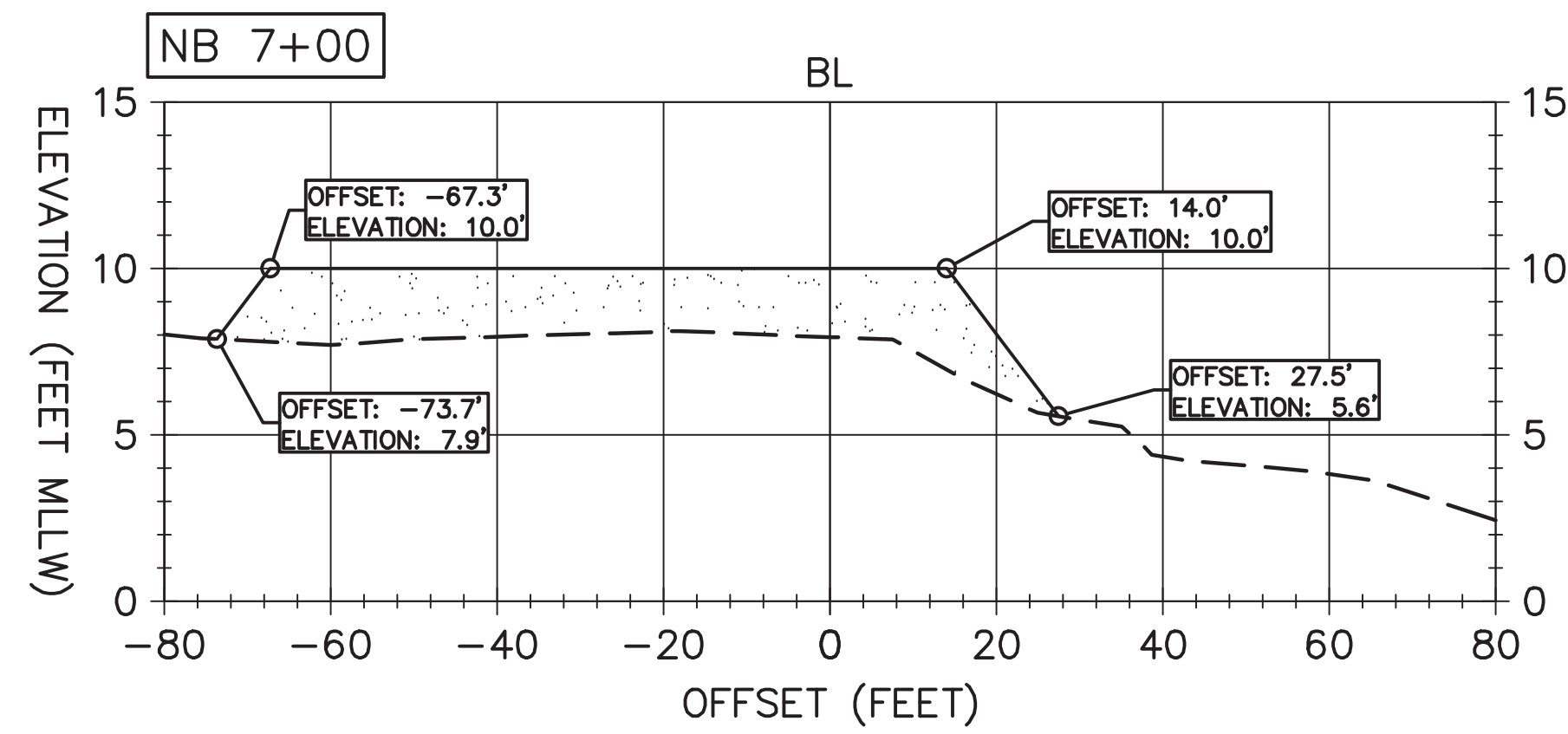
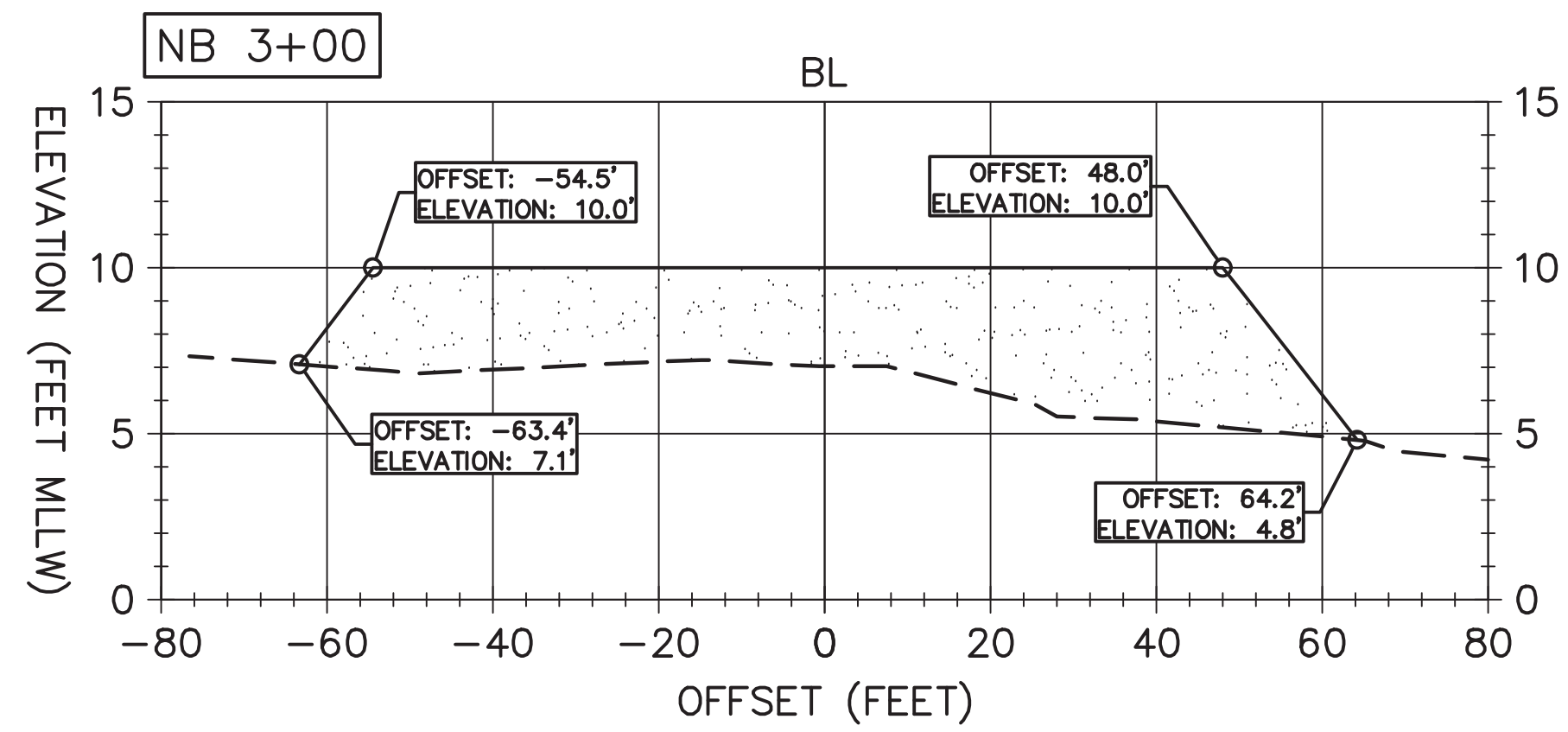
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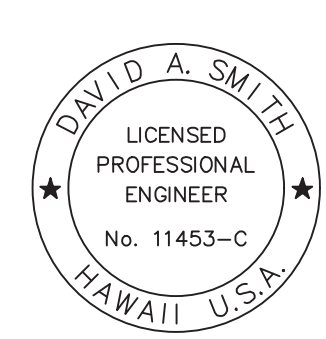
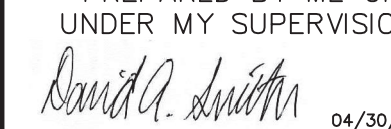
1. SAND SHALL BE PLACED IN MAXIMUM 100-FOOT LONG INCREMENTS. BEACH PROFILES SHALL BE SURVEYED IMMEDIATELY PRIOR TO AND FOLLOWING SAND PLACEMENT TO VERIFY THE QUANTITY OF IN-PLACE SAND (SEE SPECIFICATION 02260). CROSS SECTIONAL DRAWINGS ARE SHOWN ON C-19 TO C-21.
2. SAND FILL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CROSS-SECTIONS (DRAWINGS C-19 TO C-21). PLACED SAND SHALL SLOPE DOWN TO EXISTING GRADE AT A SLOPE OF 1V:3H.
3. EQUIPMENT USED TO MOVE AND DISTRIBUTE THE SAND TO THE DESIGN BEACH PROFILES SHALL BE THE SMALLEST PRACTICABLE EQUIPMENT IN ORDER TO MINIMIZE NOISE AND INCONVENIENCE TO ADJACENT PROPERTIES.
4. NO EQUIPMENT SHALL OPERATE IN THE WATER OR BELOW THE MHW ELEVATION (+2.25 FEET).
5. THE LANDWARD CONSTRUCTION EASEMENT BOUNDARY SHALL BE THE SEAWARD SIDE OF THE VEGETATION LINE OR HARD FEATURES SUCH AS WALLS, CONCRETE SLABS, PAVILIONS, ETC.
6. THE SEAWARD CONSTRUCTION EASEMENT BOUNDARY BETWEEN SB 0+00 AND SB 21+90 SHALL BE 20 FEET SEAWARD OF THE FILL FOOTPRINT.



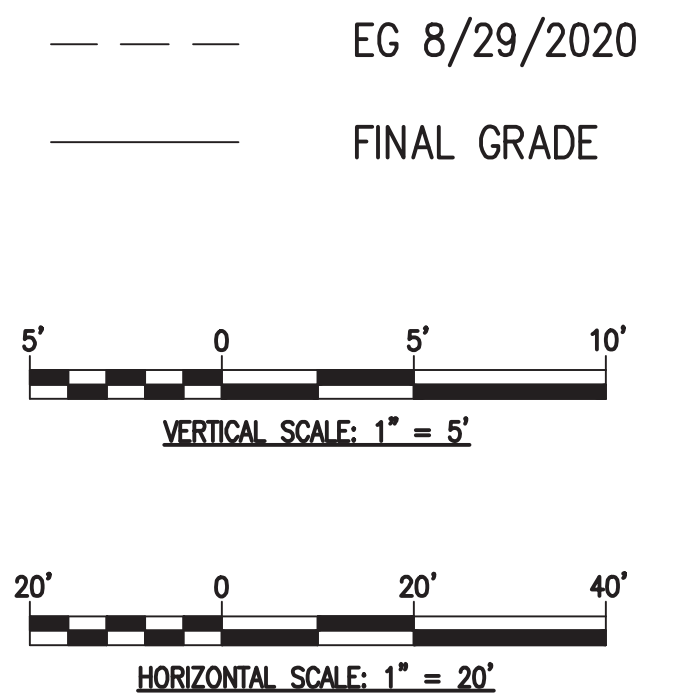
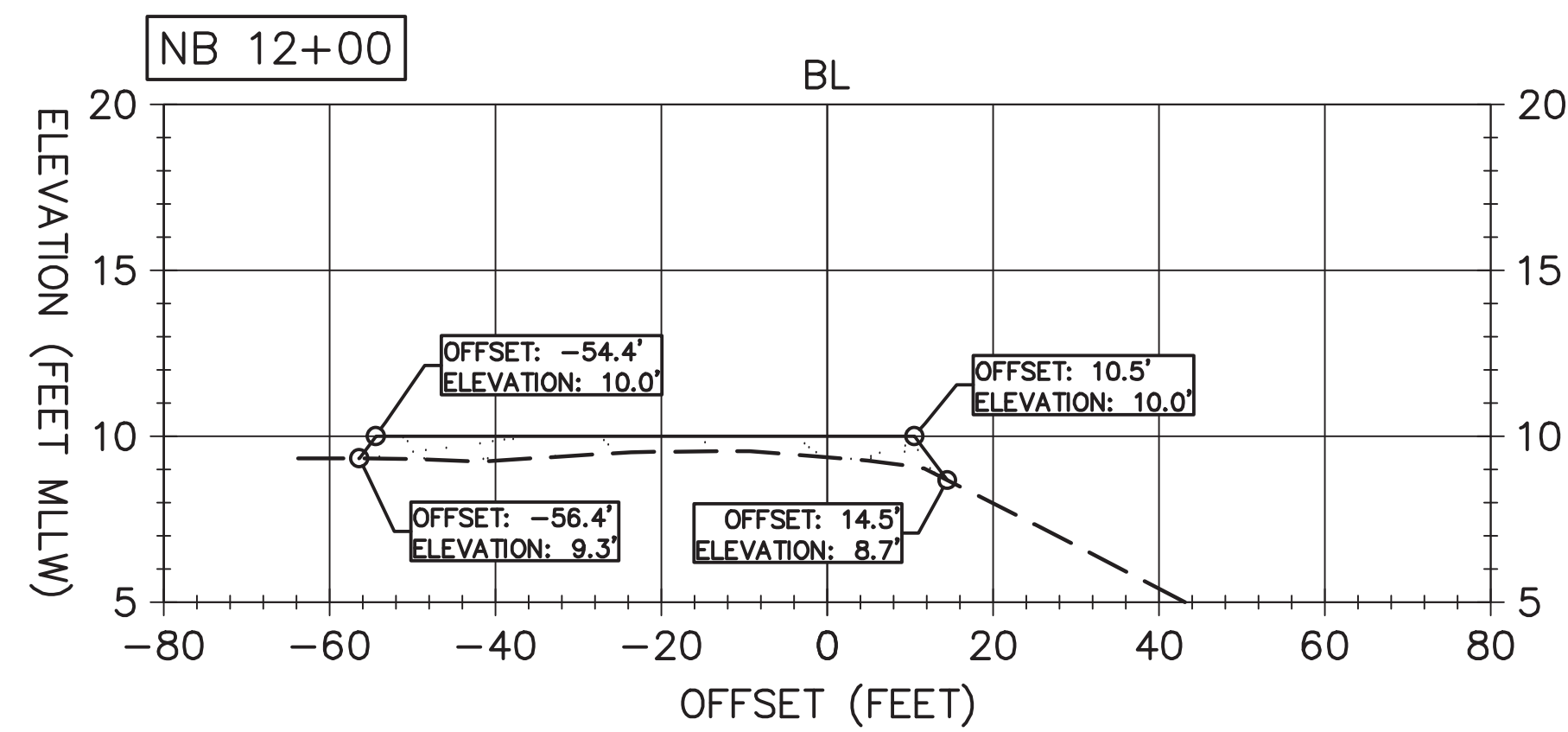
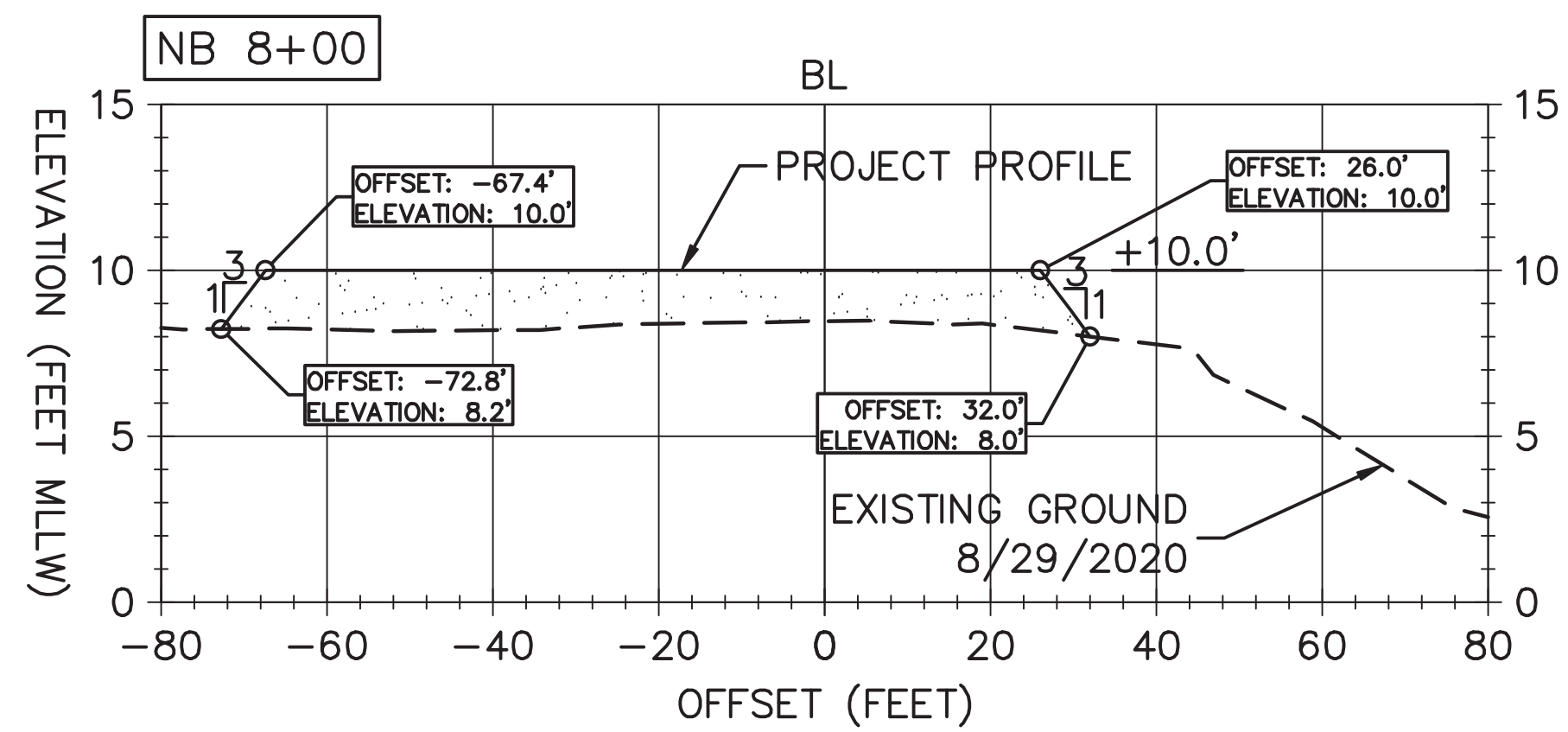
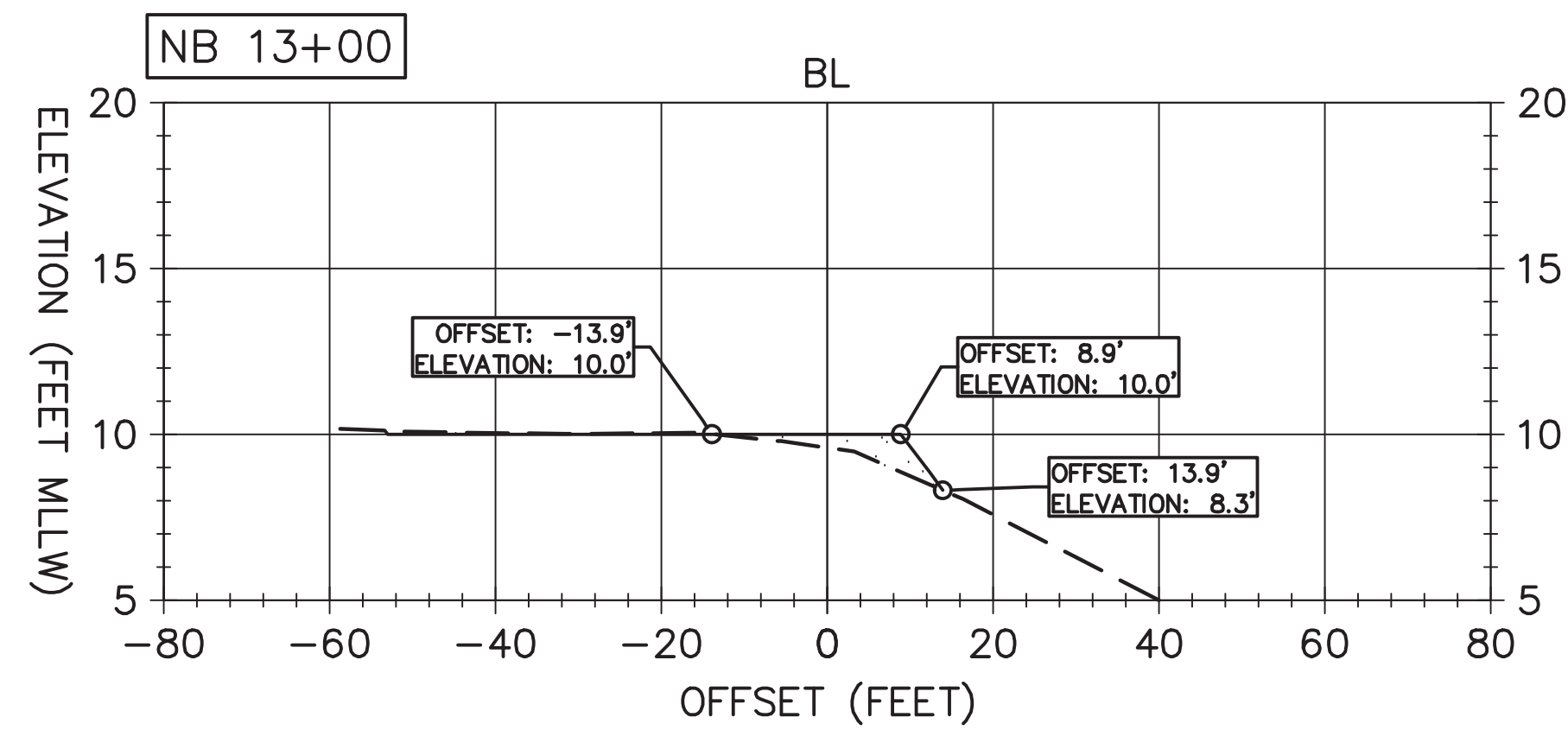
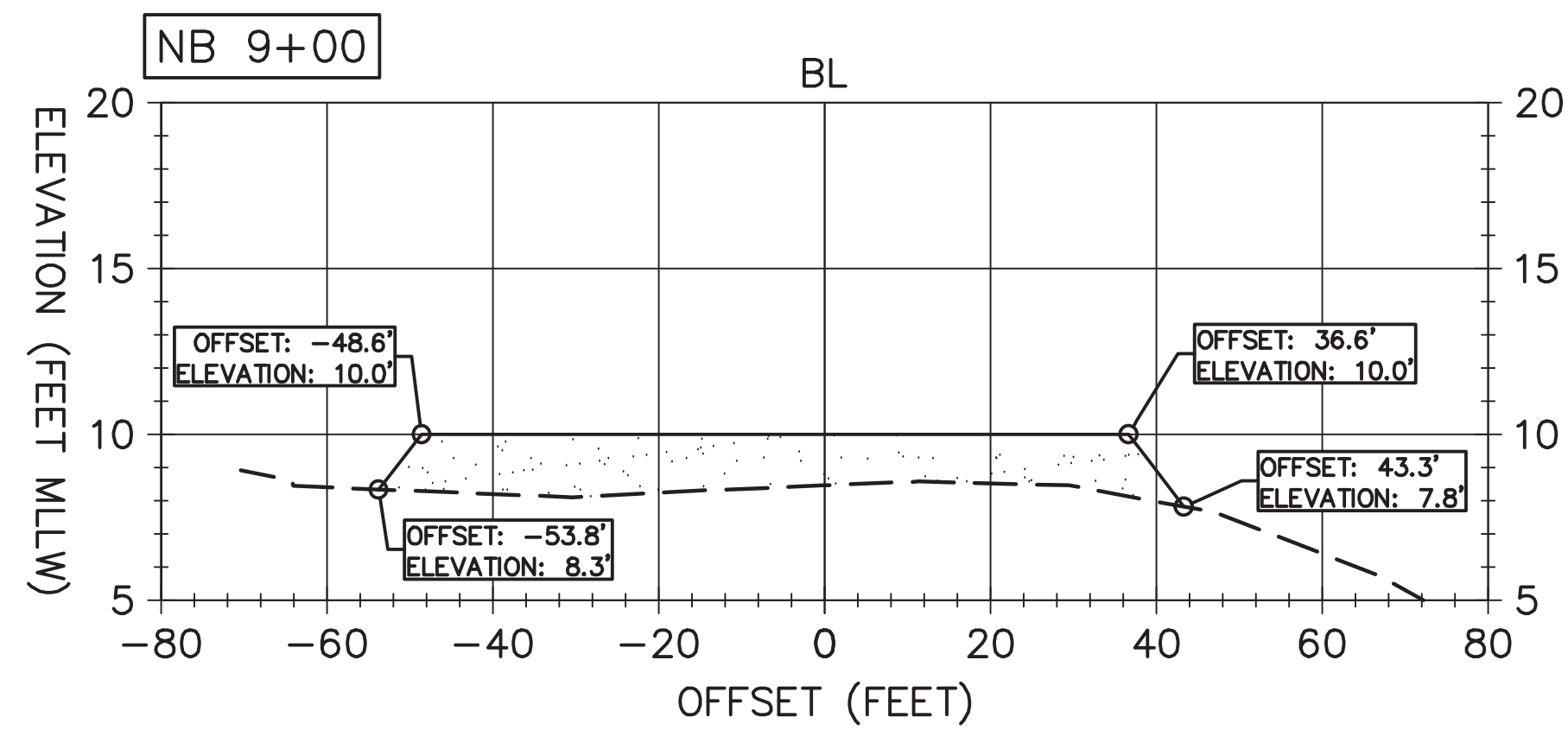
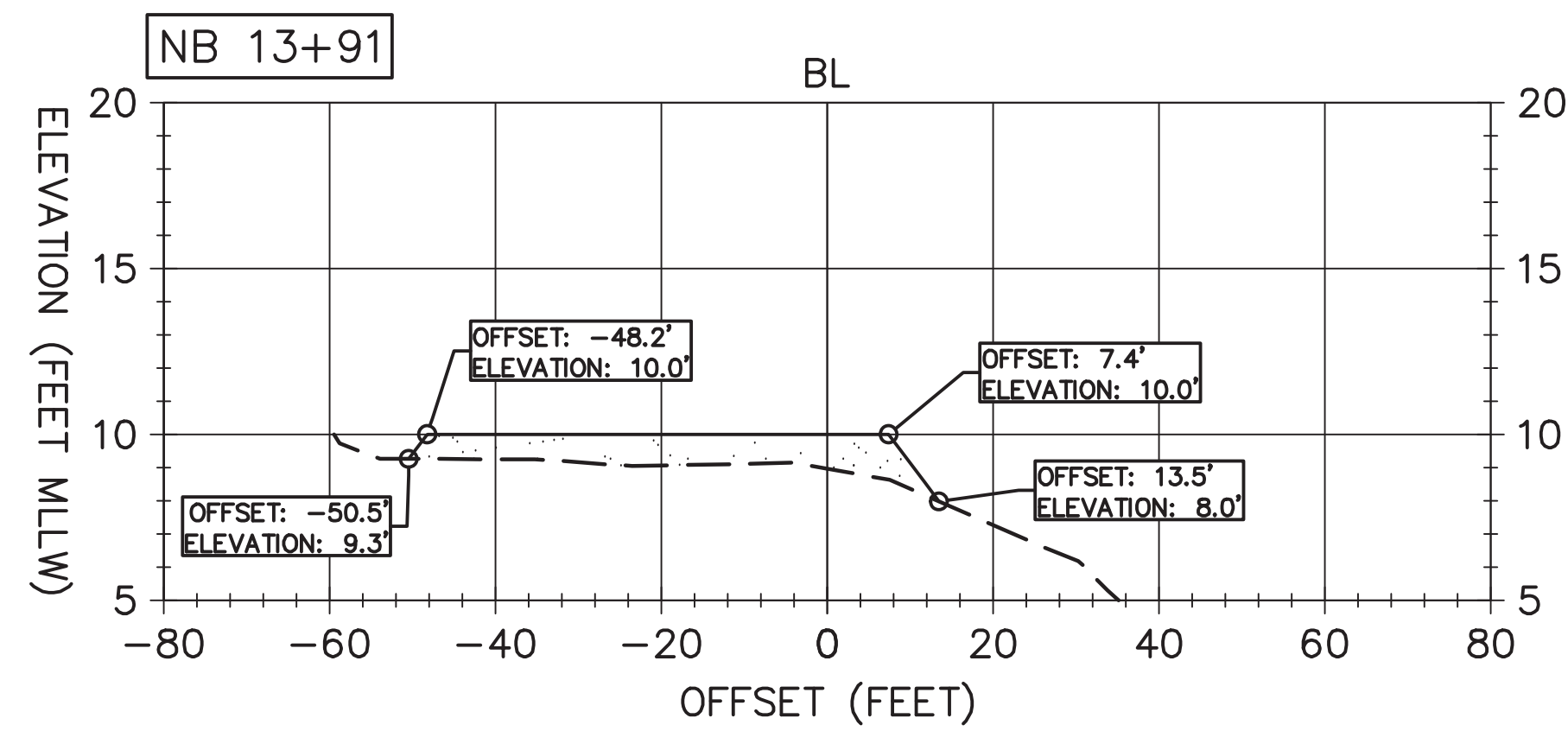
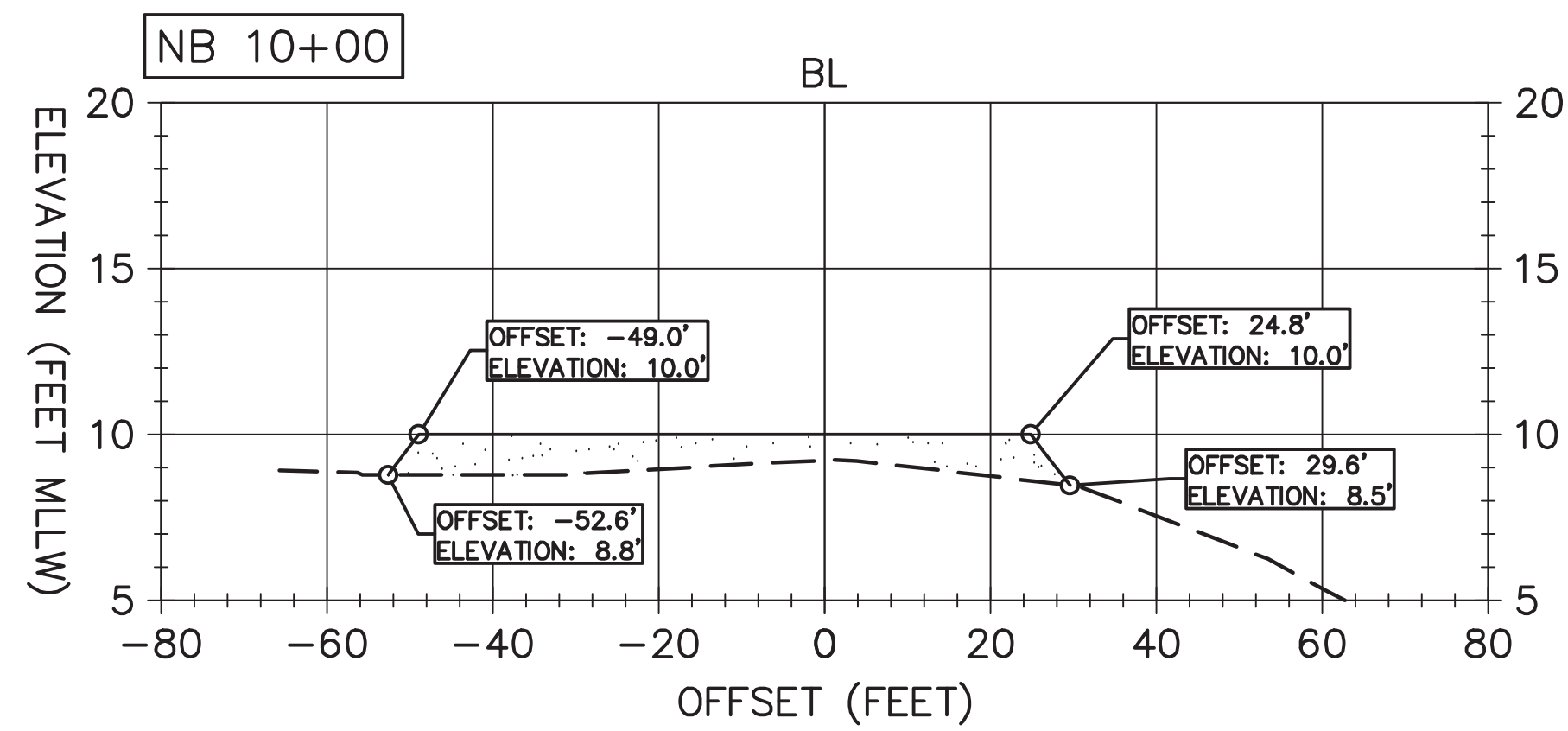
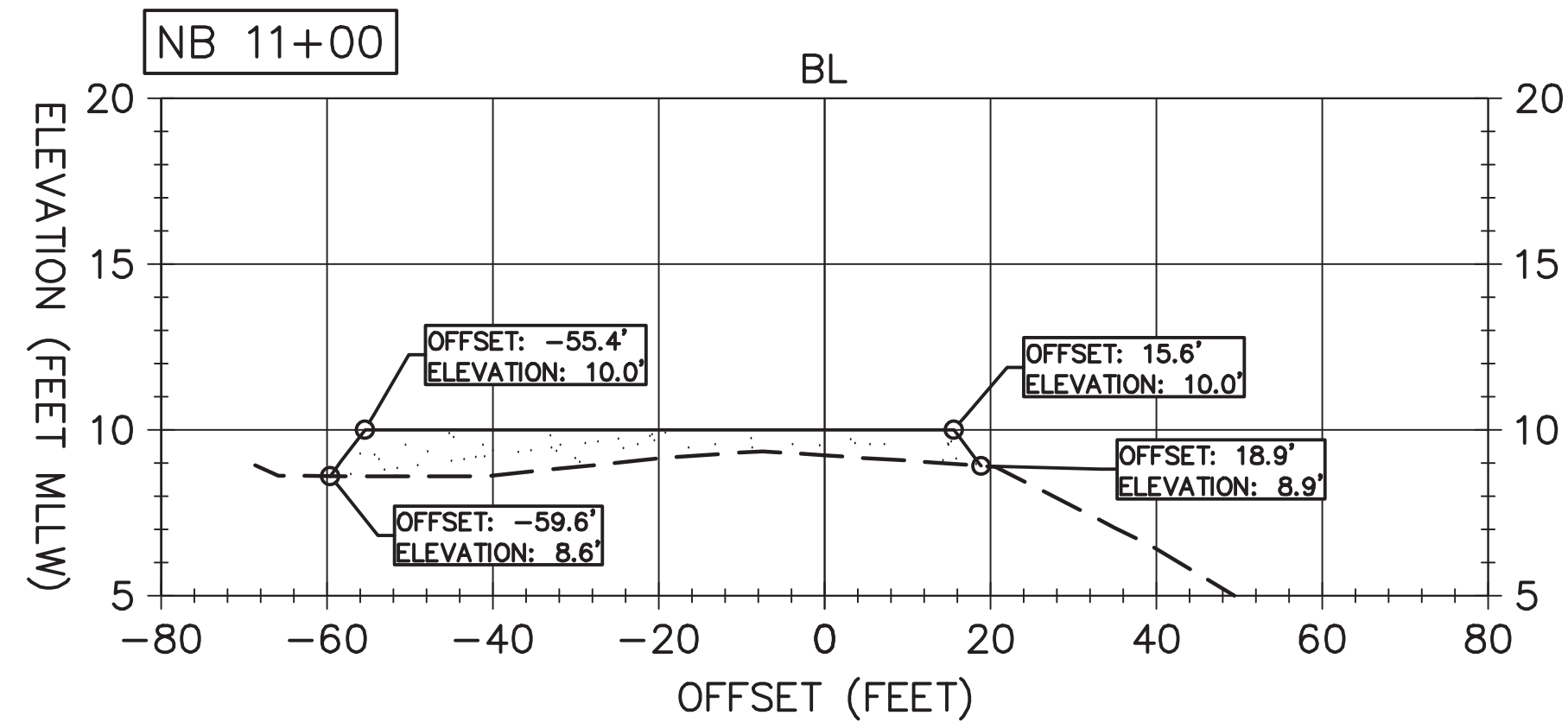
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT PLAN - SOUTH BERM ENHANCEMENT					
DESIGNED: DS		SUBMITTED: APRIL 20, 2022			
DRAWN: GT		DATE: APRIL 20 2022			
CHECKED: SS		SCALE: 1" = 80'			
APPROVED: <i>Cary Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. C-11			

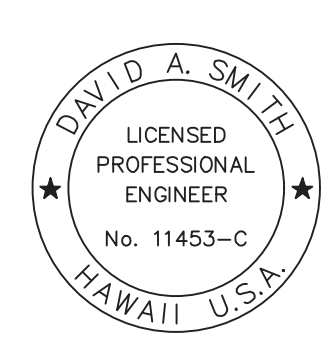
SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



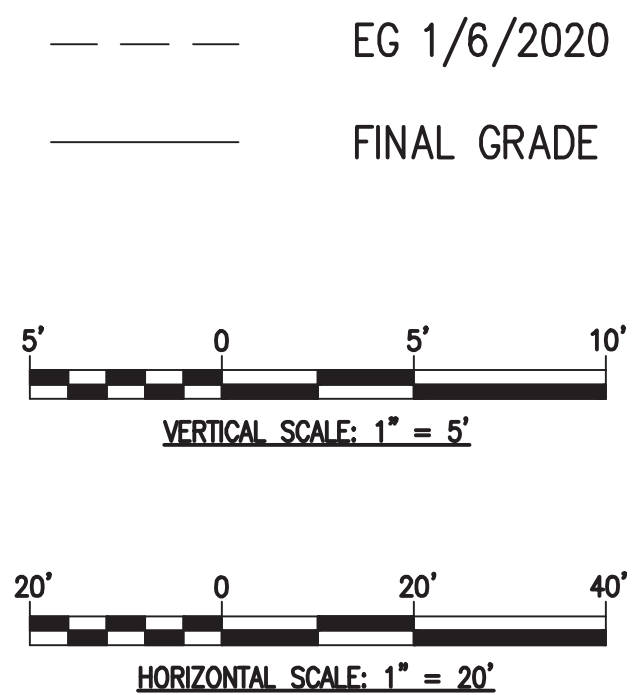
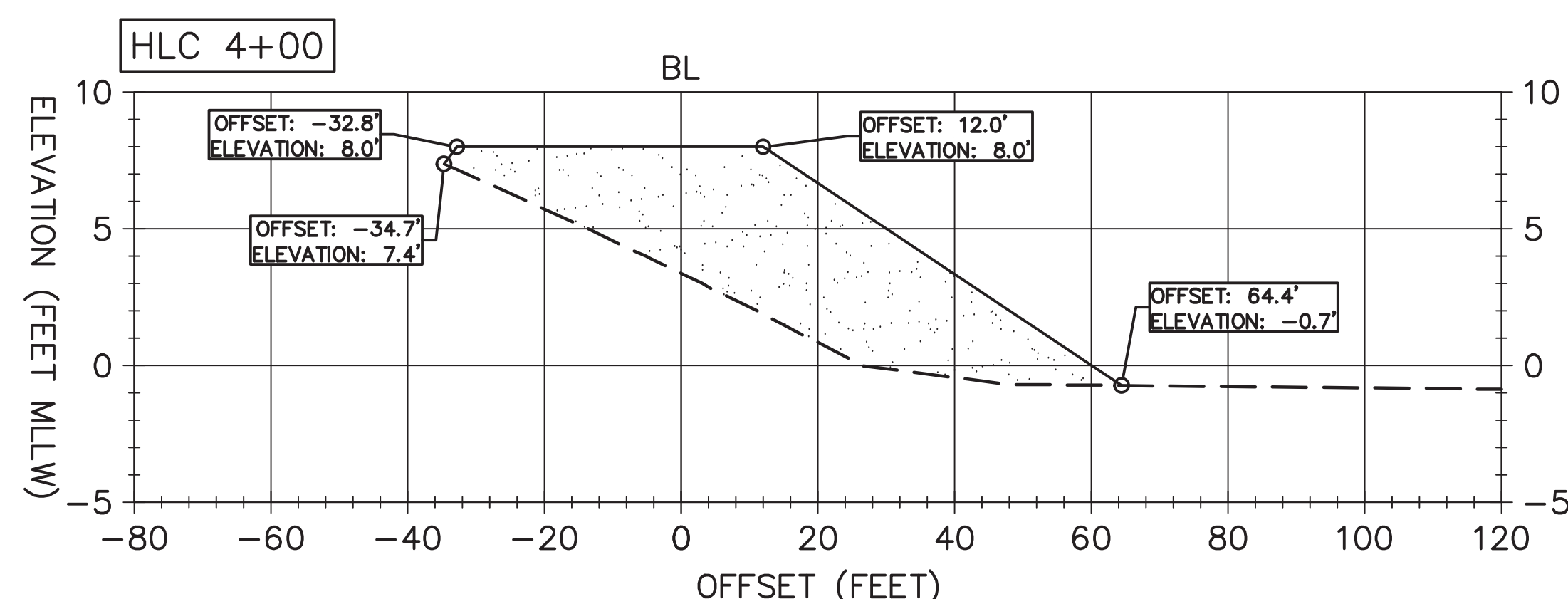
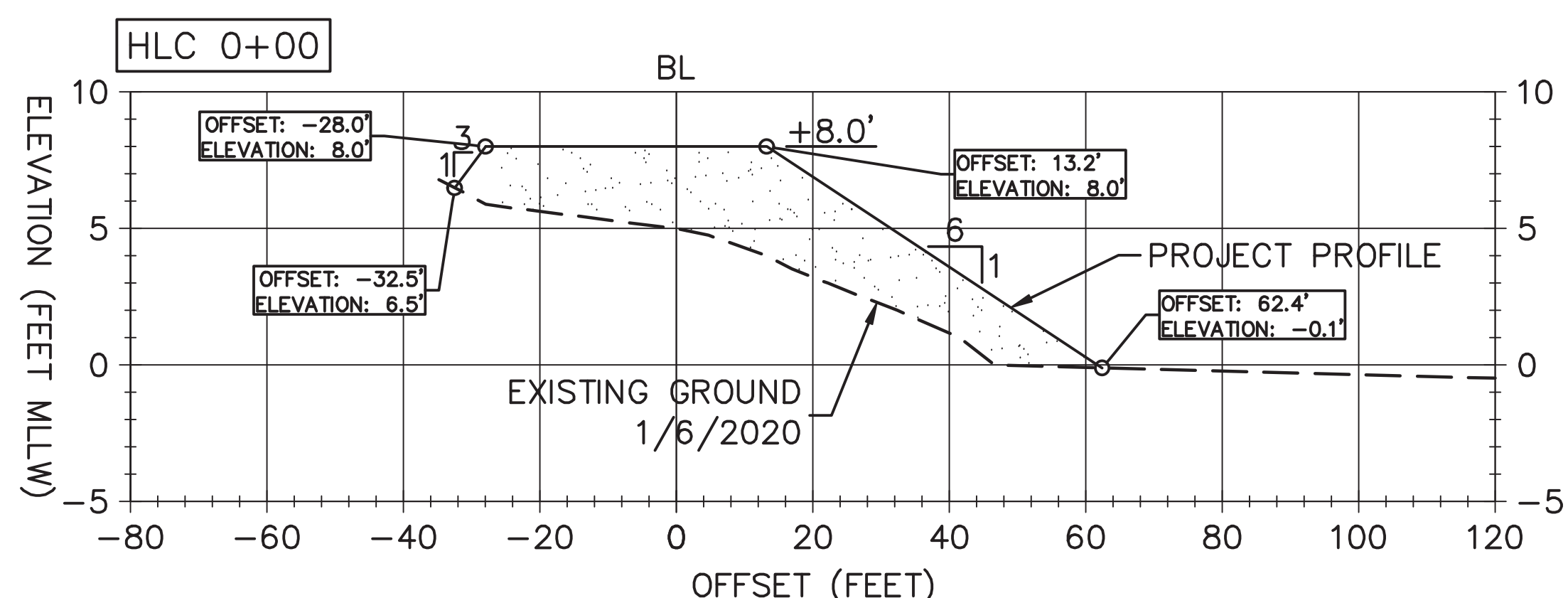
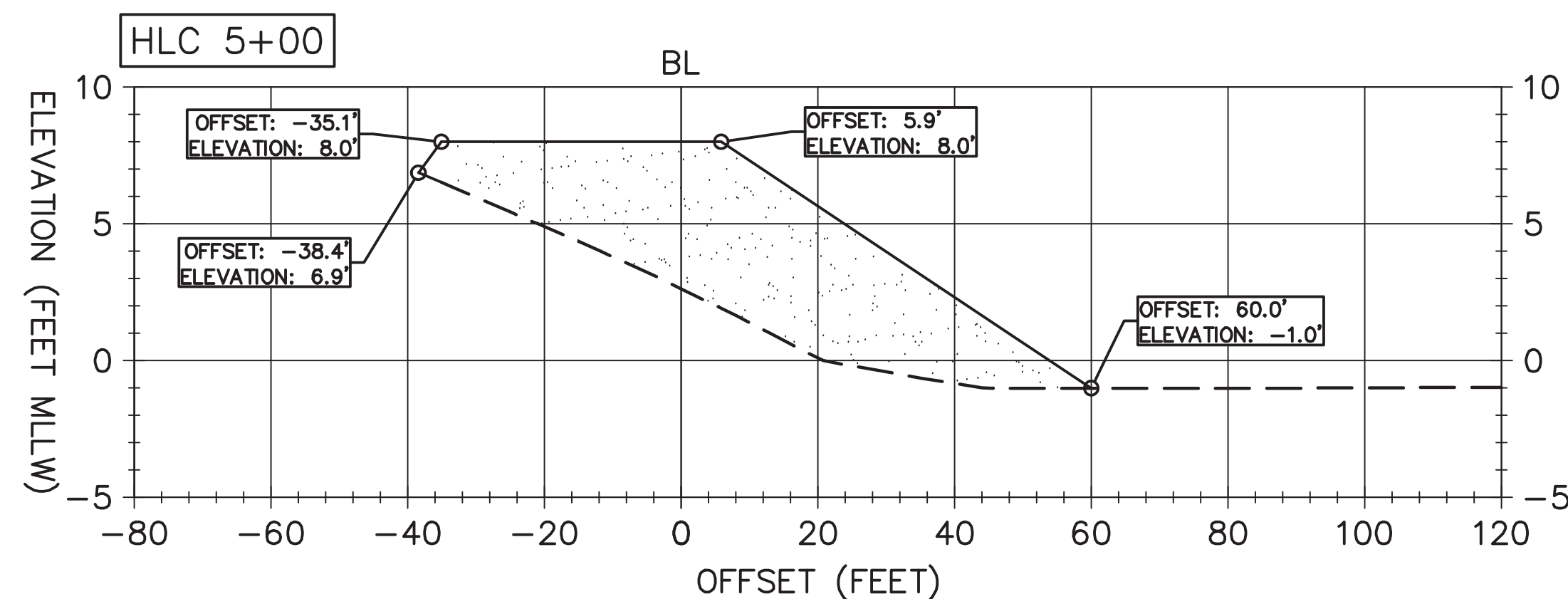
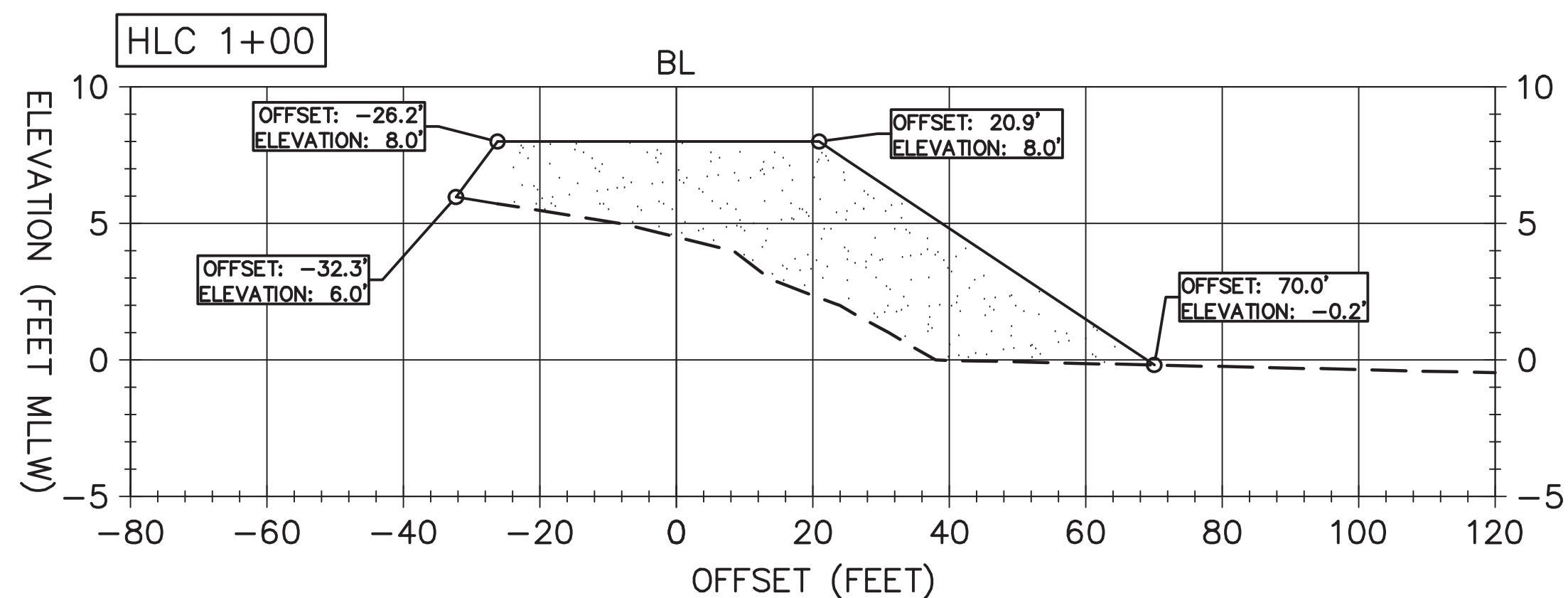
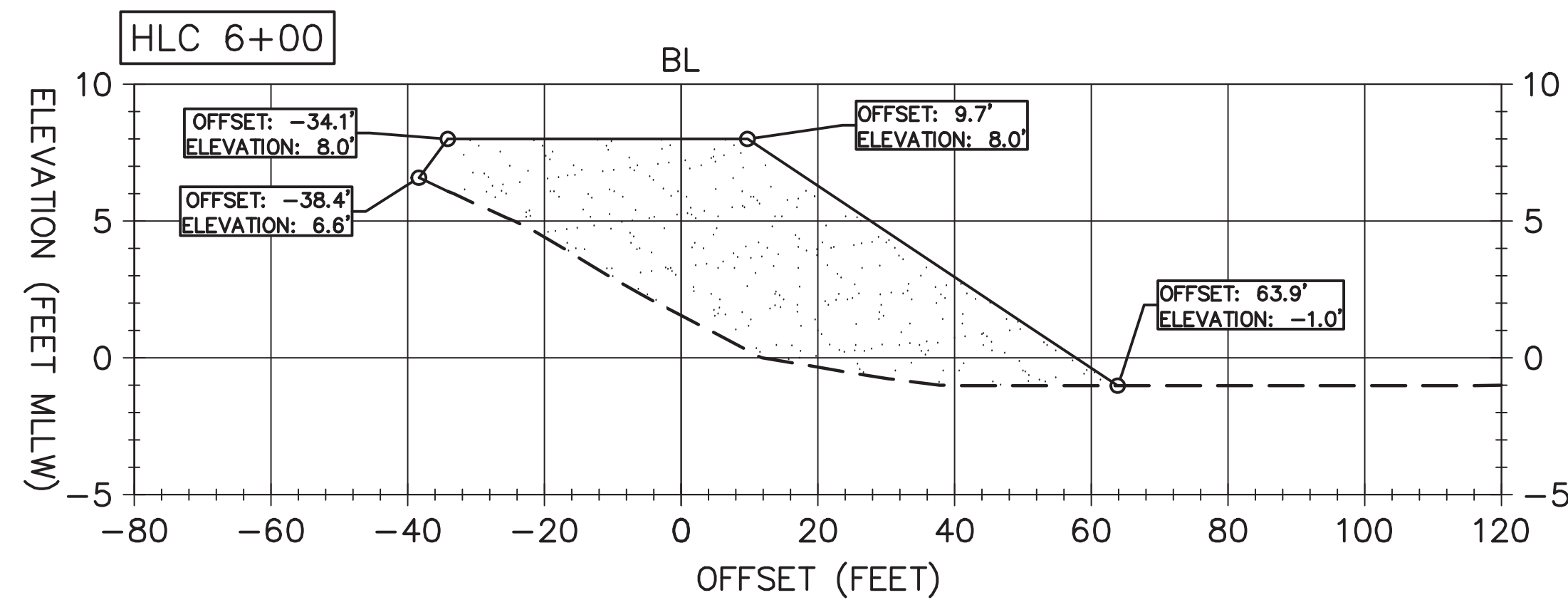
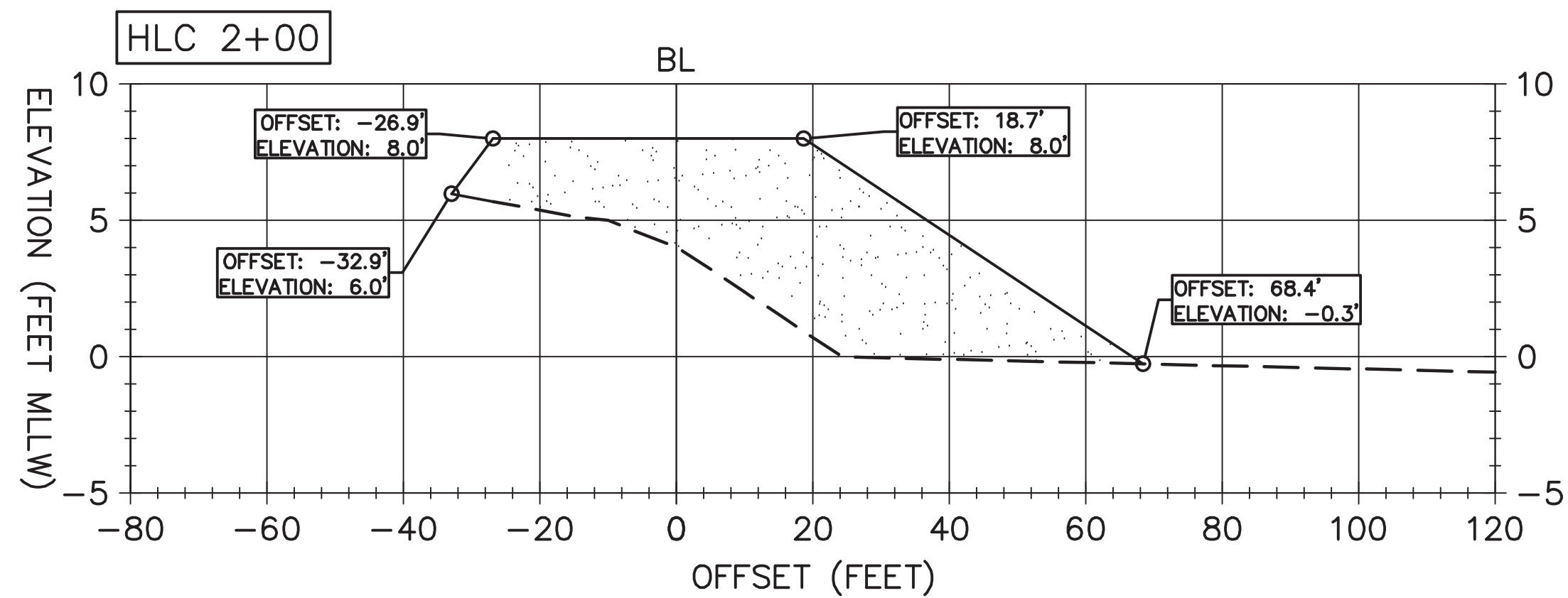
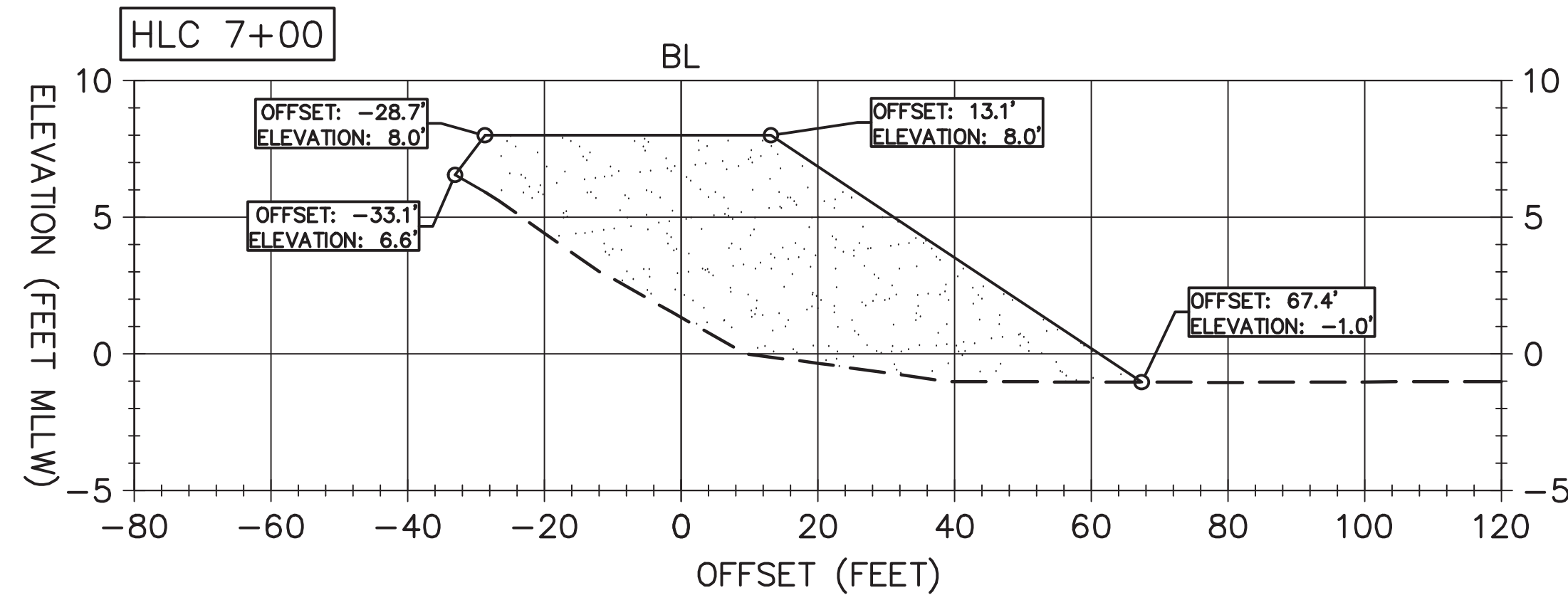
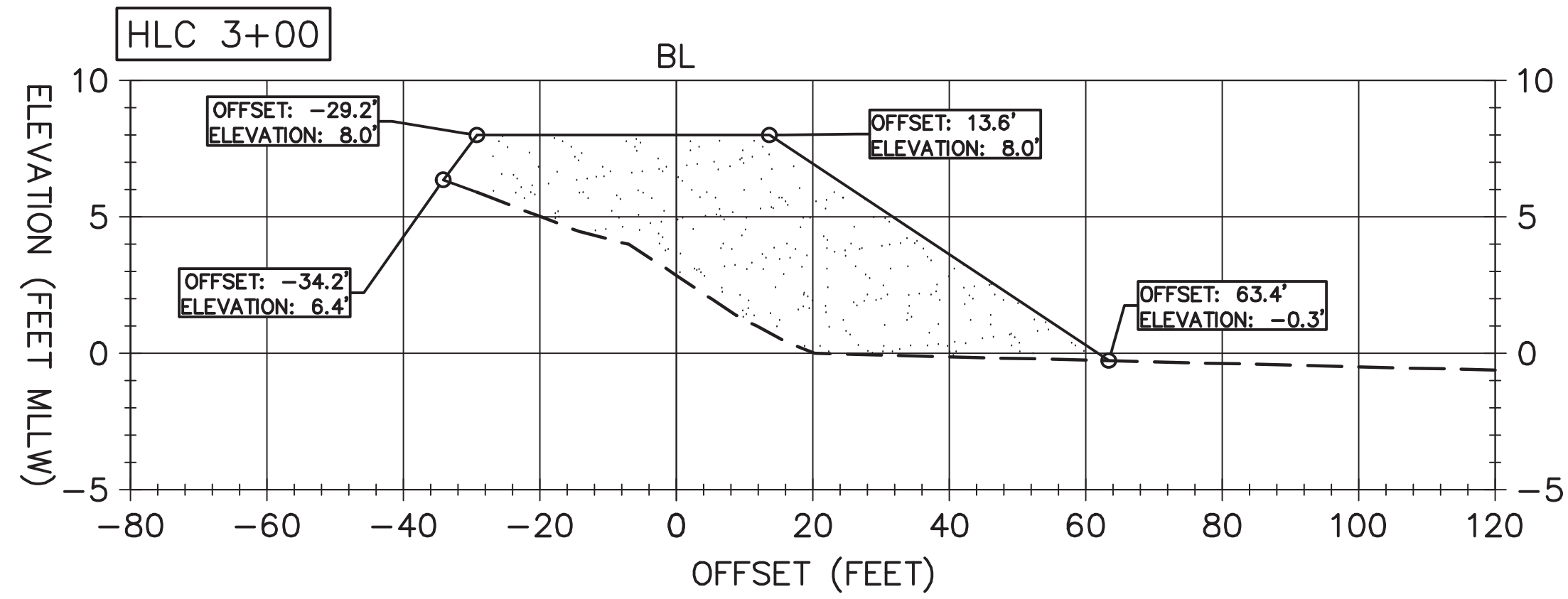
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (NB 0+00 TO NB 7+00)					
					
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.					
					
DESIGNED: DS		SUBMITTED: APRIL 20, 2022			
DRAWN: GT		DATE: APRIL 20, 2022			
CHECKED: SS		SCALE: VARIES			
APPROVED: Carty Chang		E-signed 2022-04-22 08:22AM HST		DRAWING NO.	
CHIEF ENGINEER		State of Hawaii		C-12	

SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



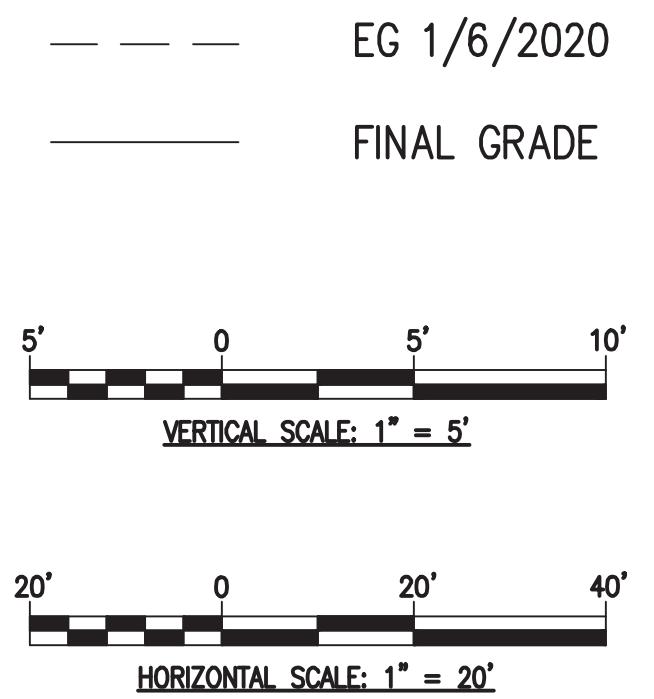
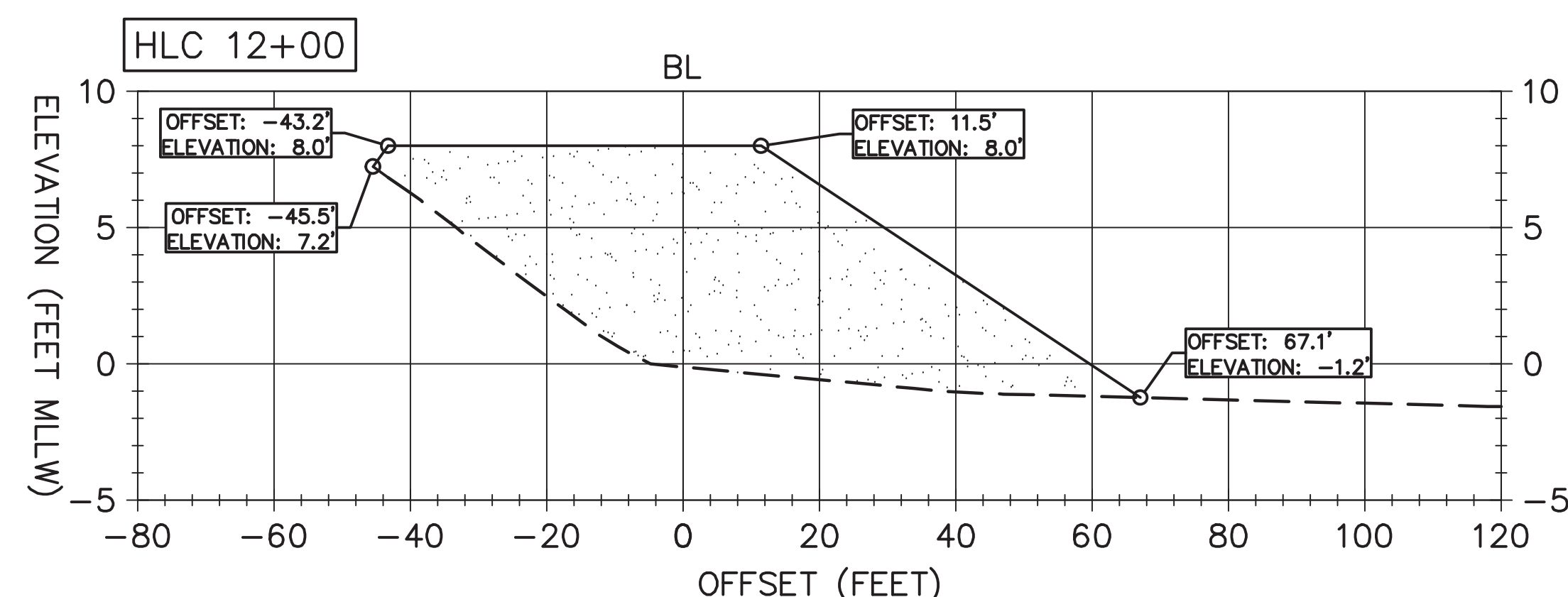
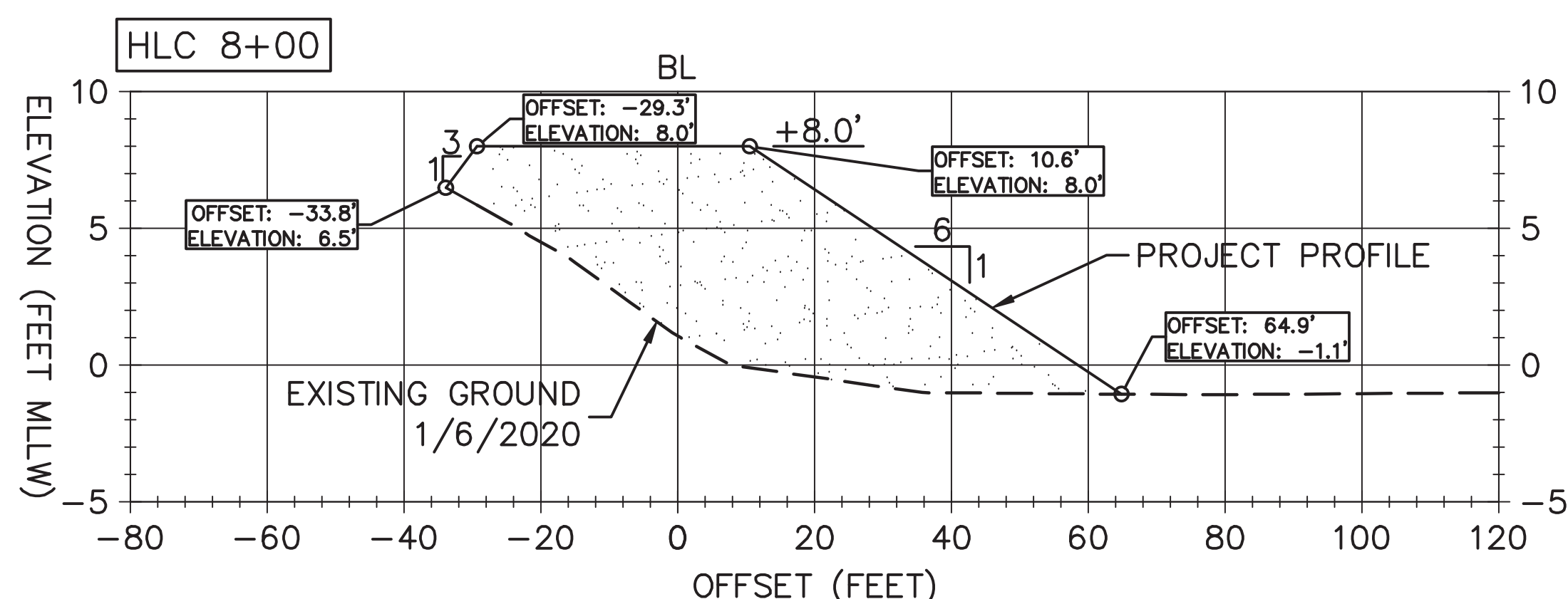
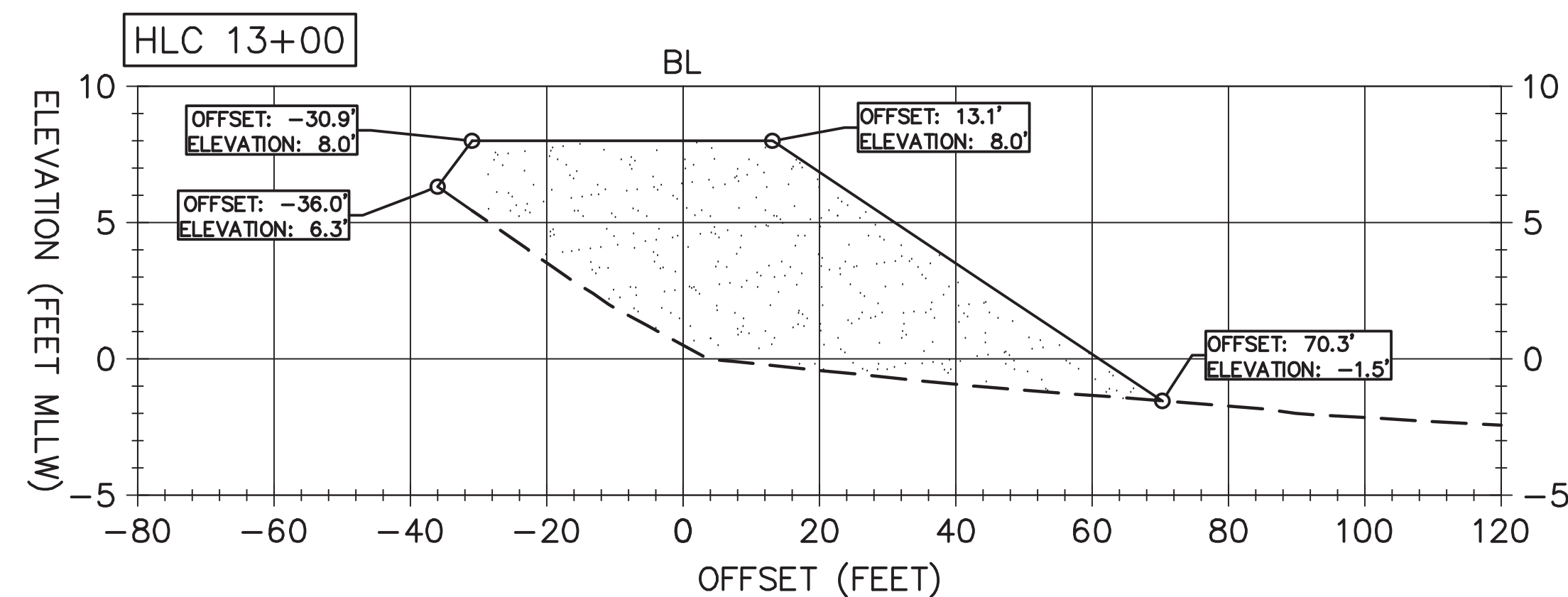
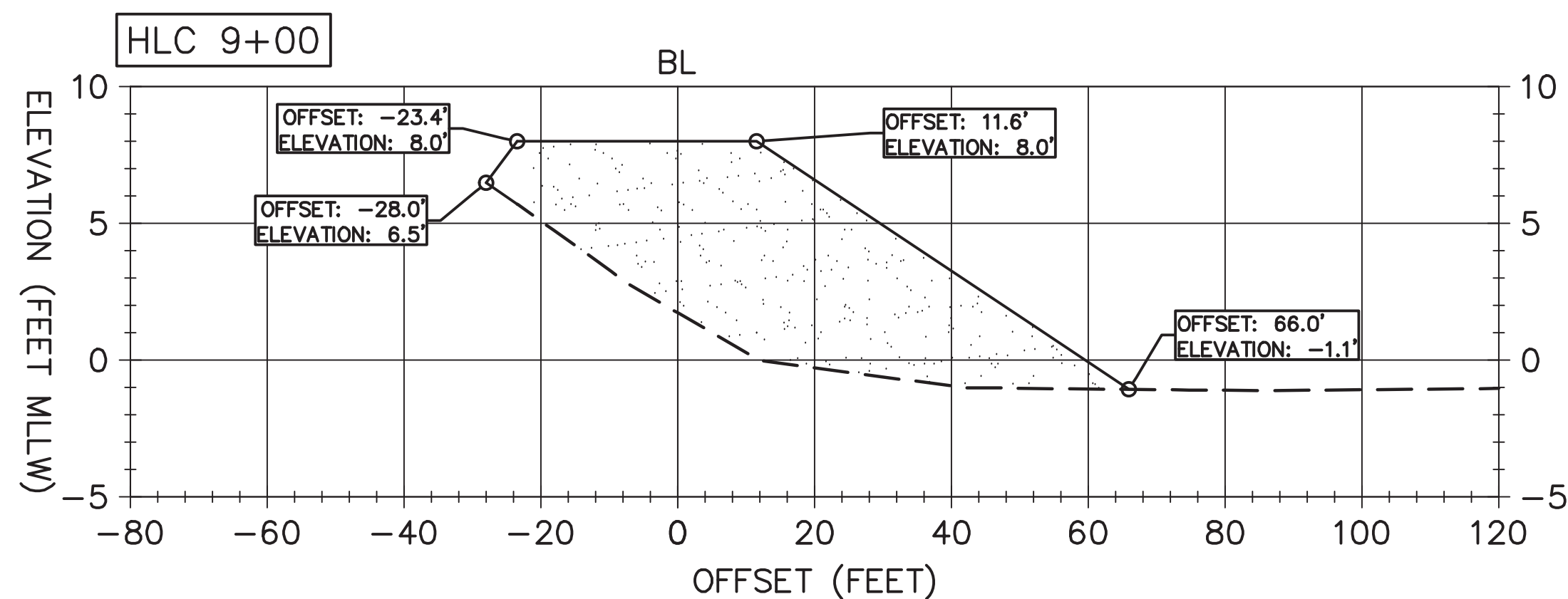
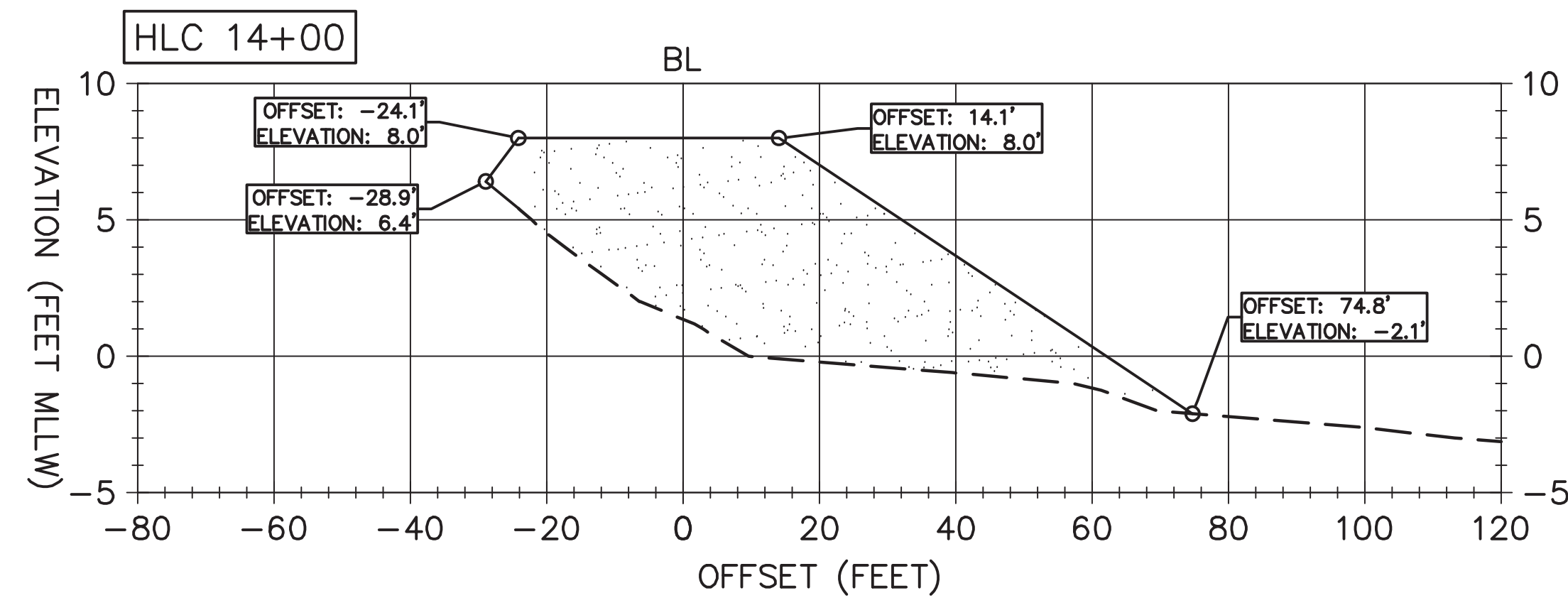
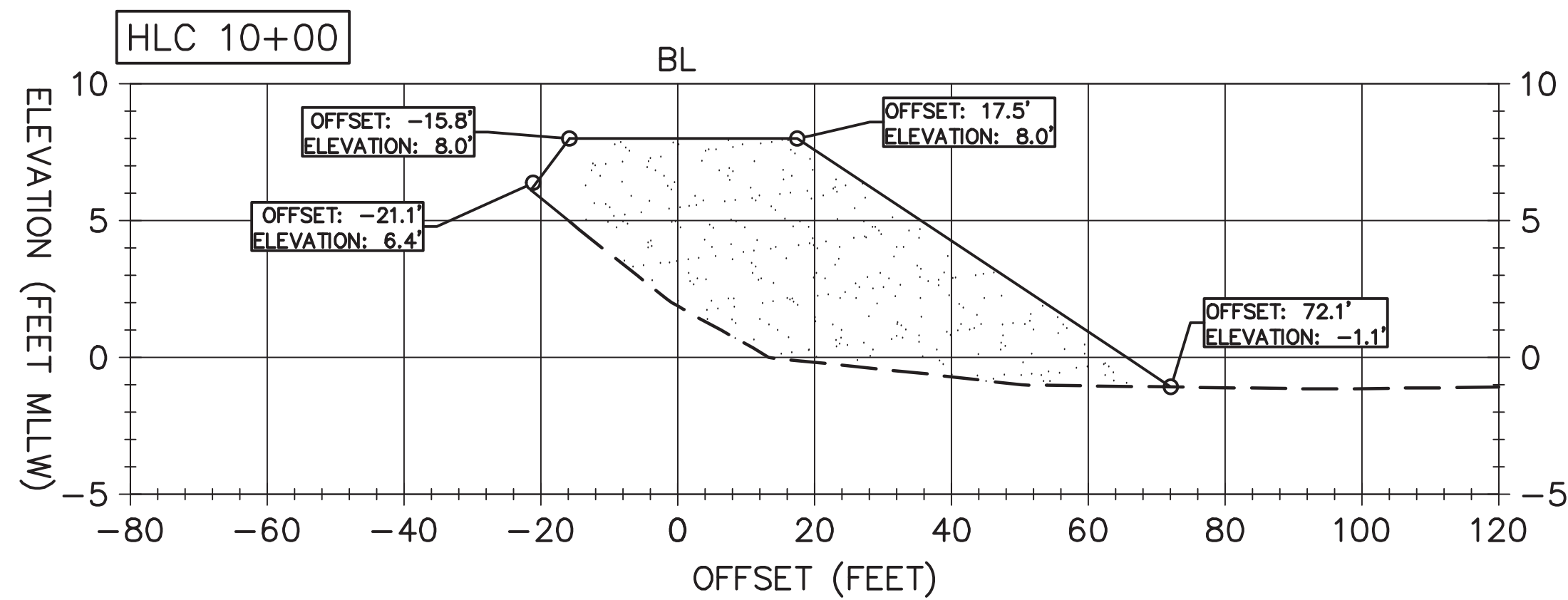
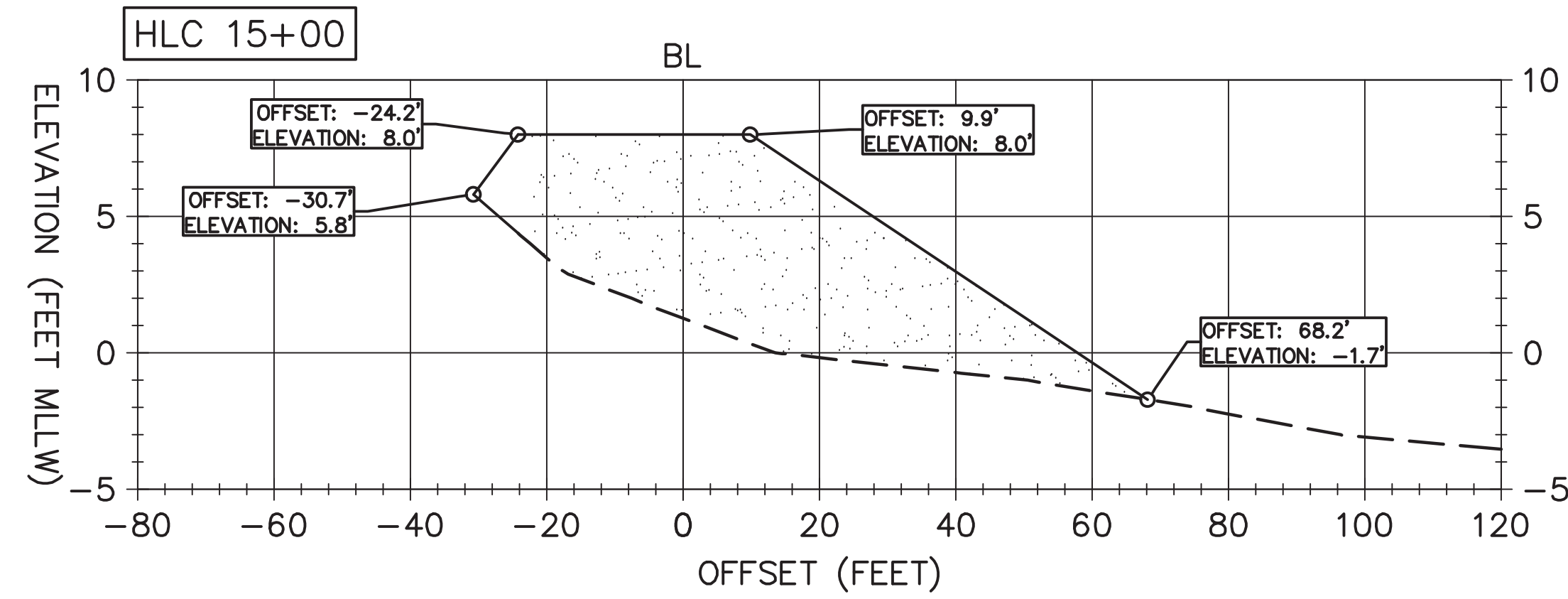
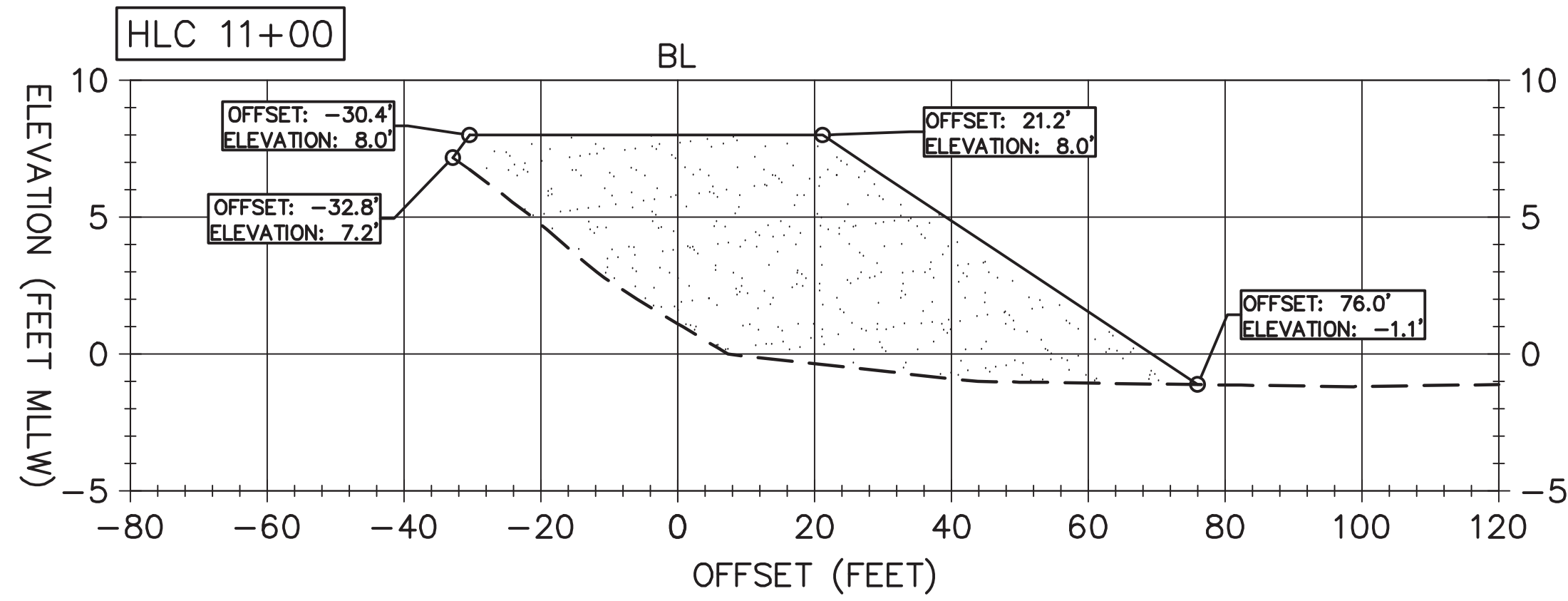
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (NB 8+00 TO NB 13+91)					
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. SIGNATURE: <i>David A. Smith</i> EXPIRATION DATE OF THE LICENSE: 04/30/2024		DESIGNED: DS SUBMITTED: APRIL 20, 2022 DRAWN: GT DATE: APRIL 20, 2022 CHECKED: SS SCALE: VARIES		APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer	
				DRAWING NO.	C-13

SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



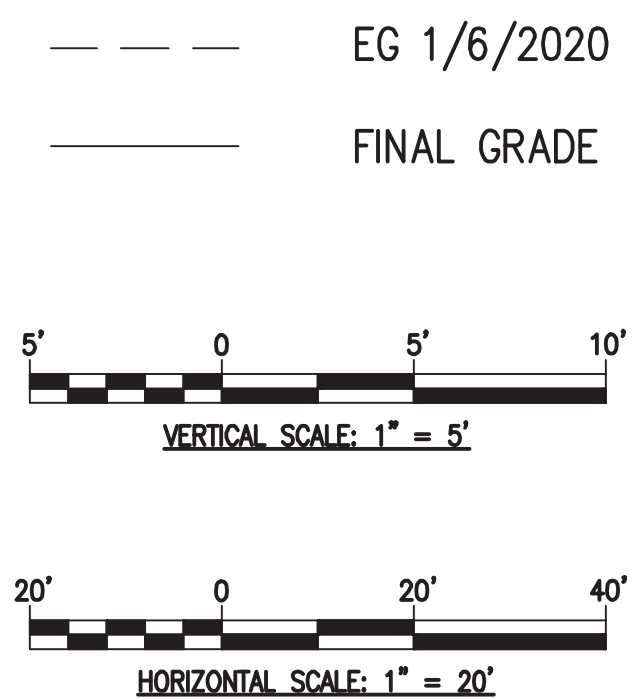
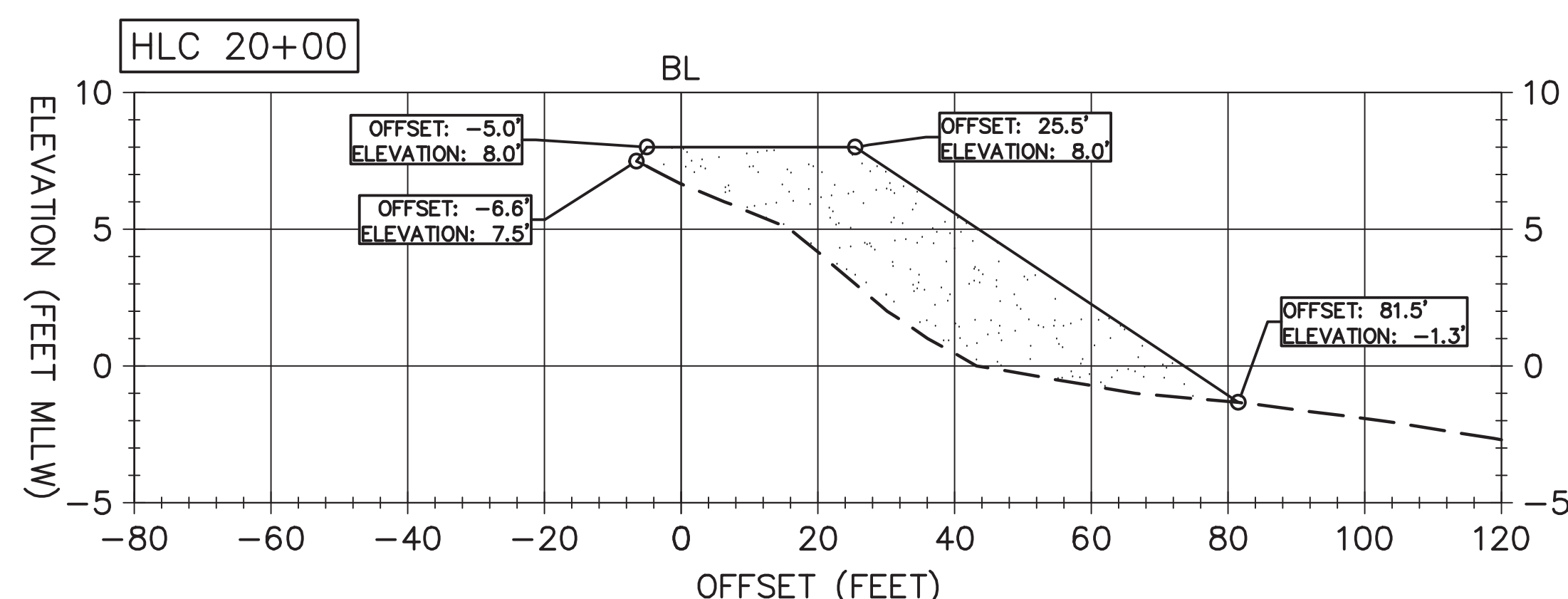
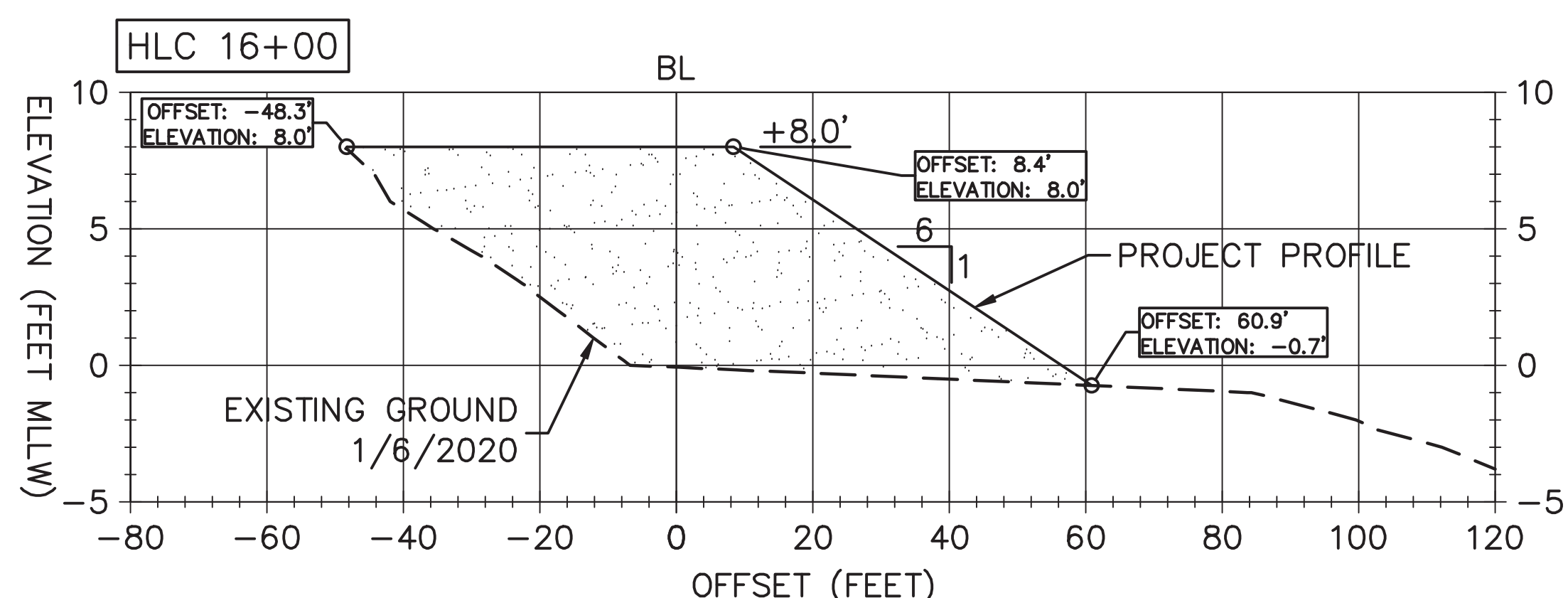
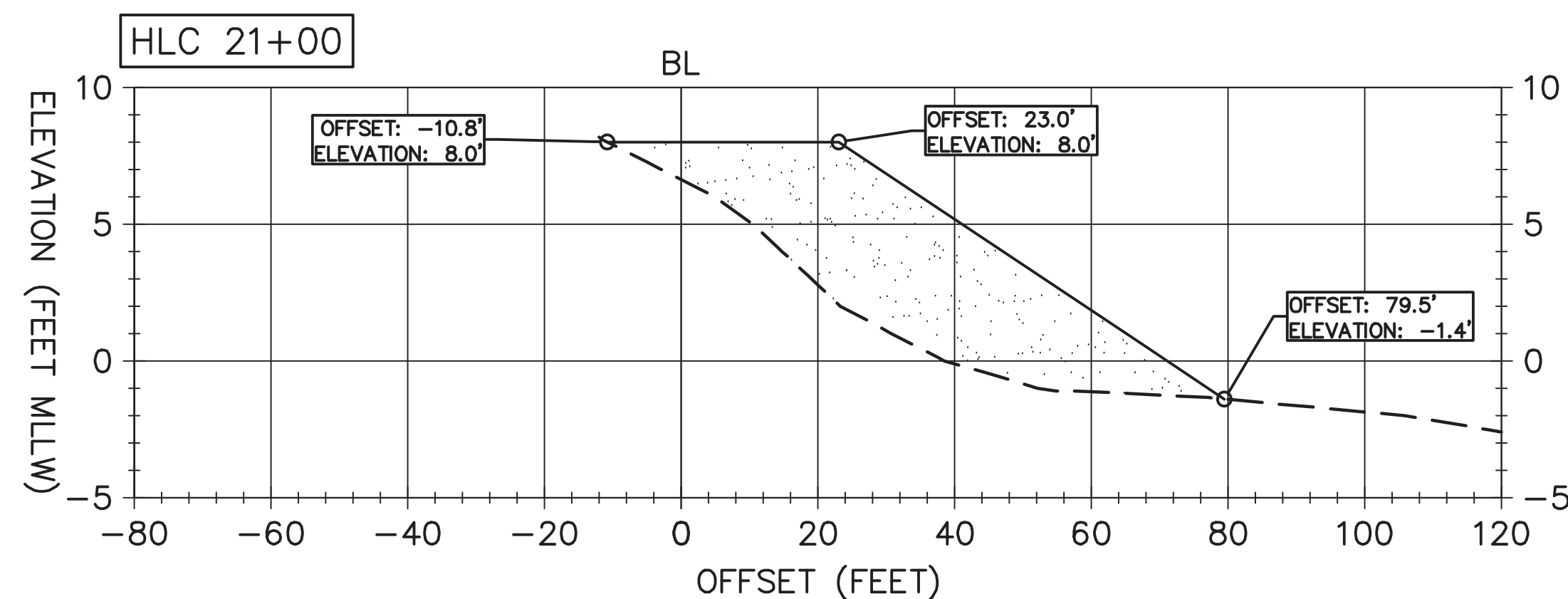
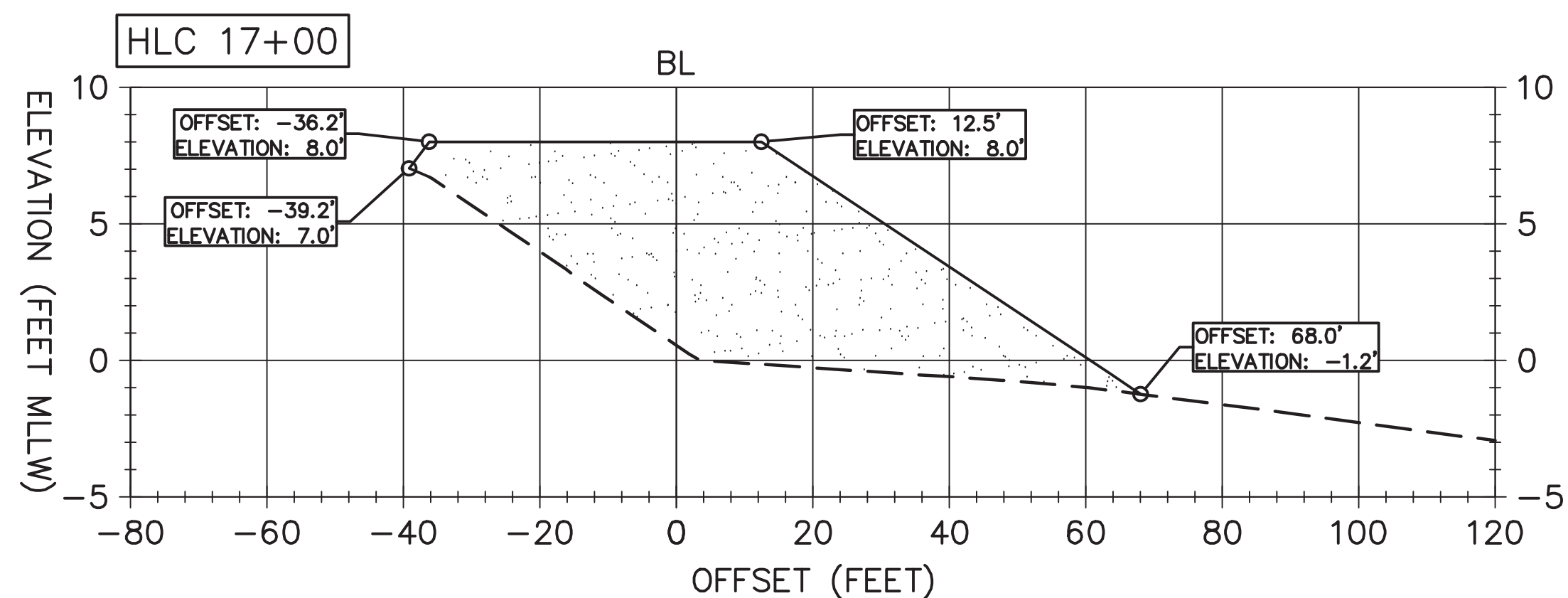
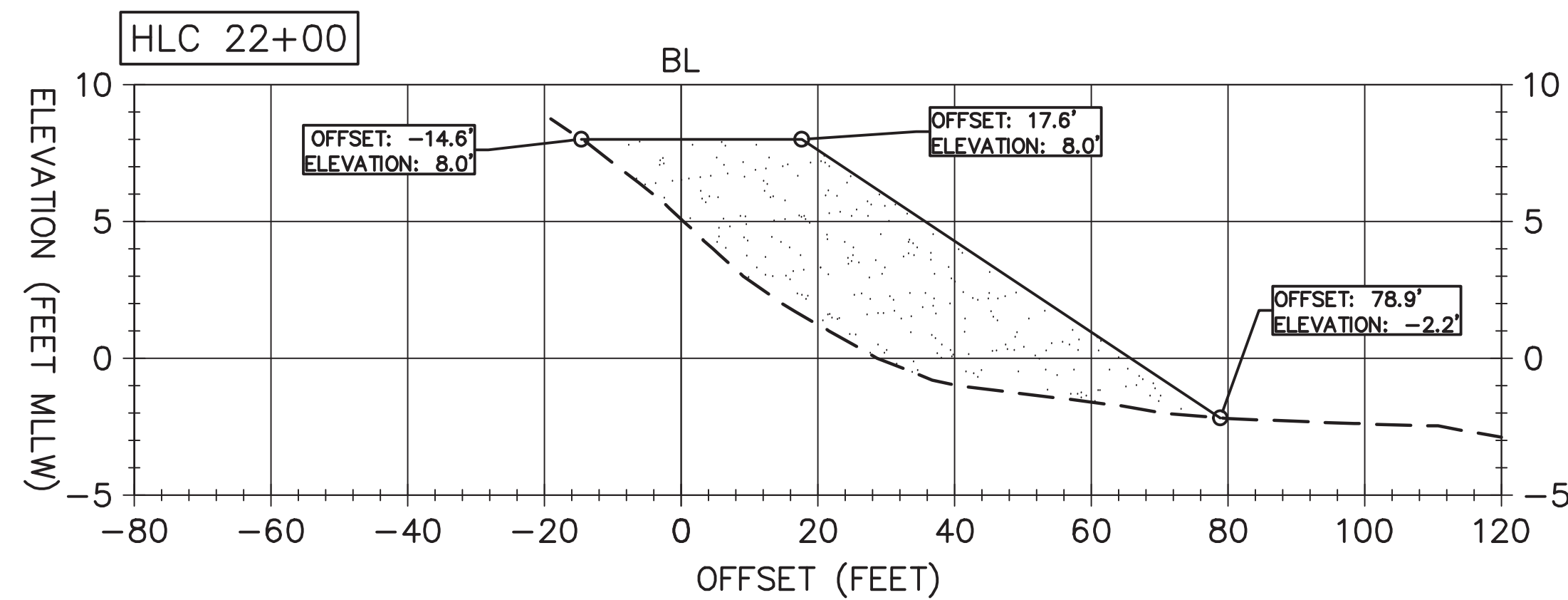
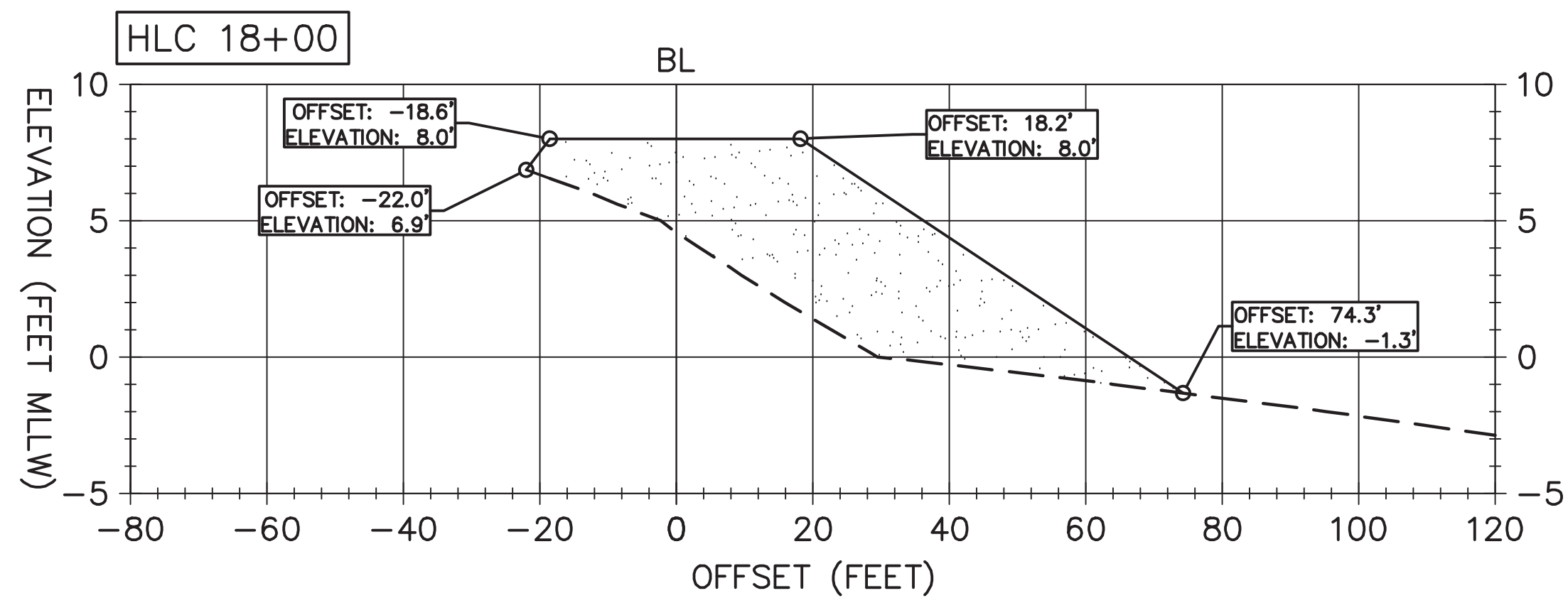
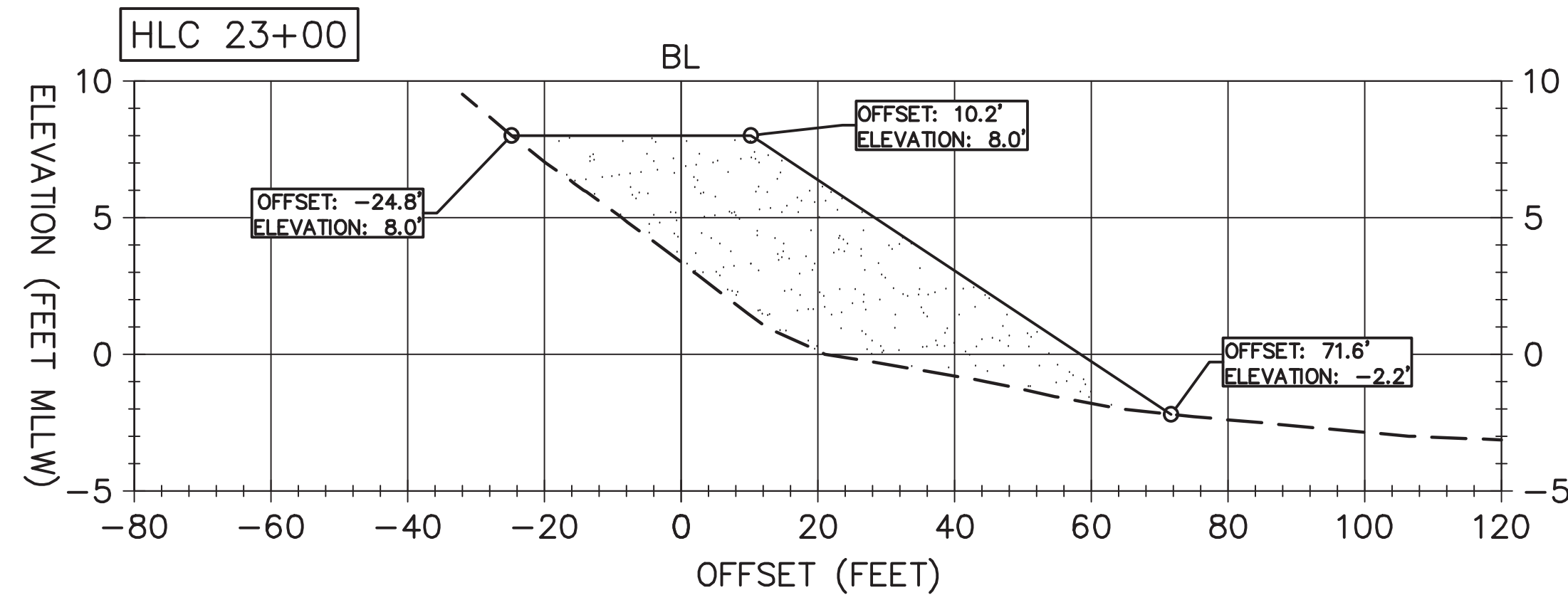
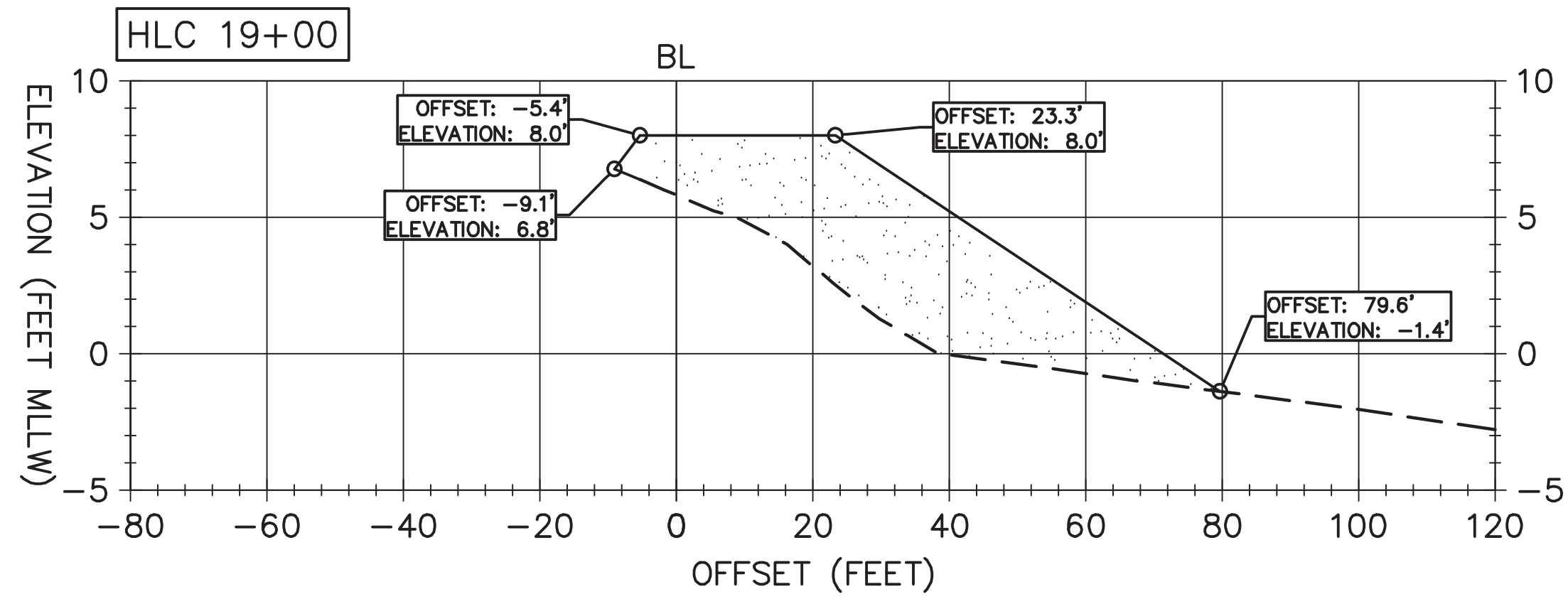
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (HLC 0+00 TO HLC 7+00)					
		DESIGNED: DS SUBMITTED: APRIL 20, 2022 DRAWN: GT DATE: APRIL 20, 2022 CHECKED: SS SCALE: VARIES			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. SIGNATURE EXPIRATION DATE OF THE LICENSE: 04/30/2024		APPROVED: Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii CHIEF ENGINEER			
					C-14

SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



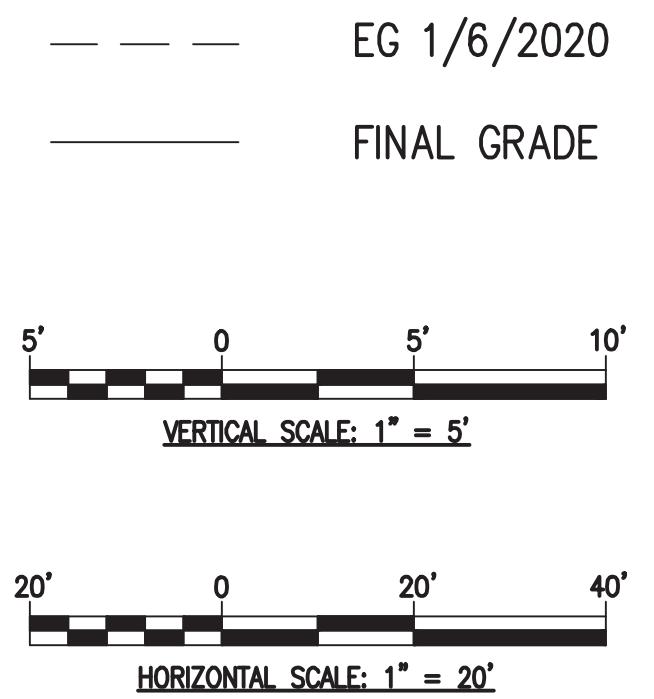
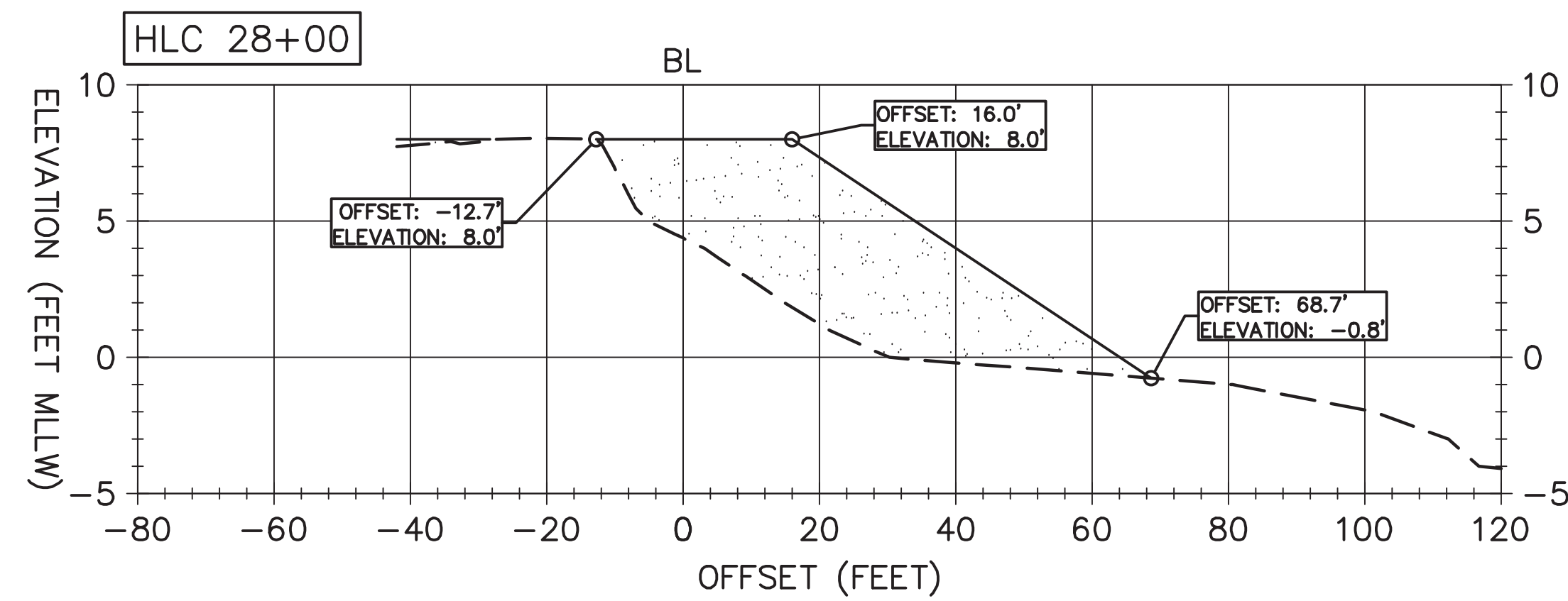
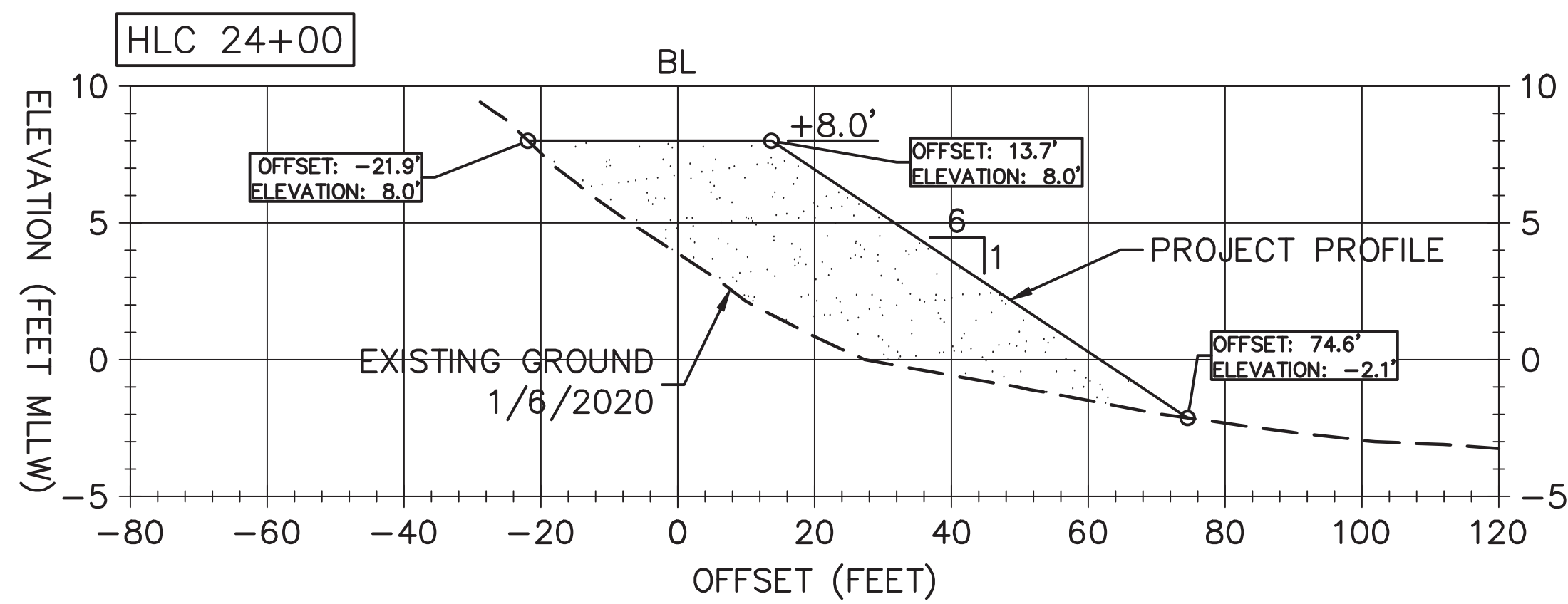
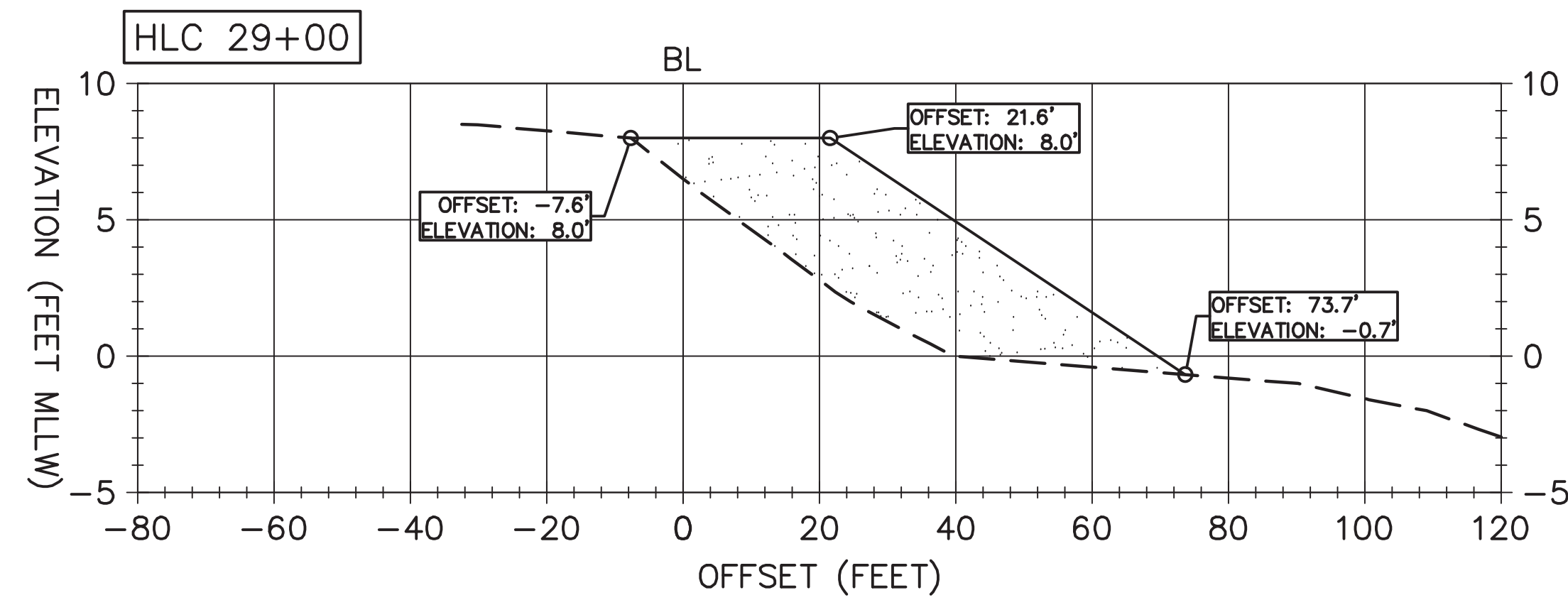
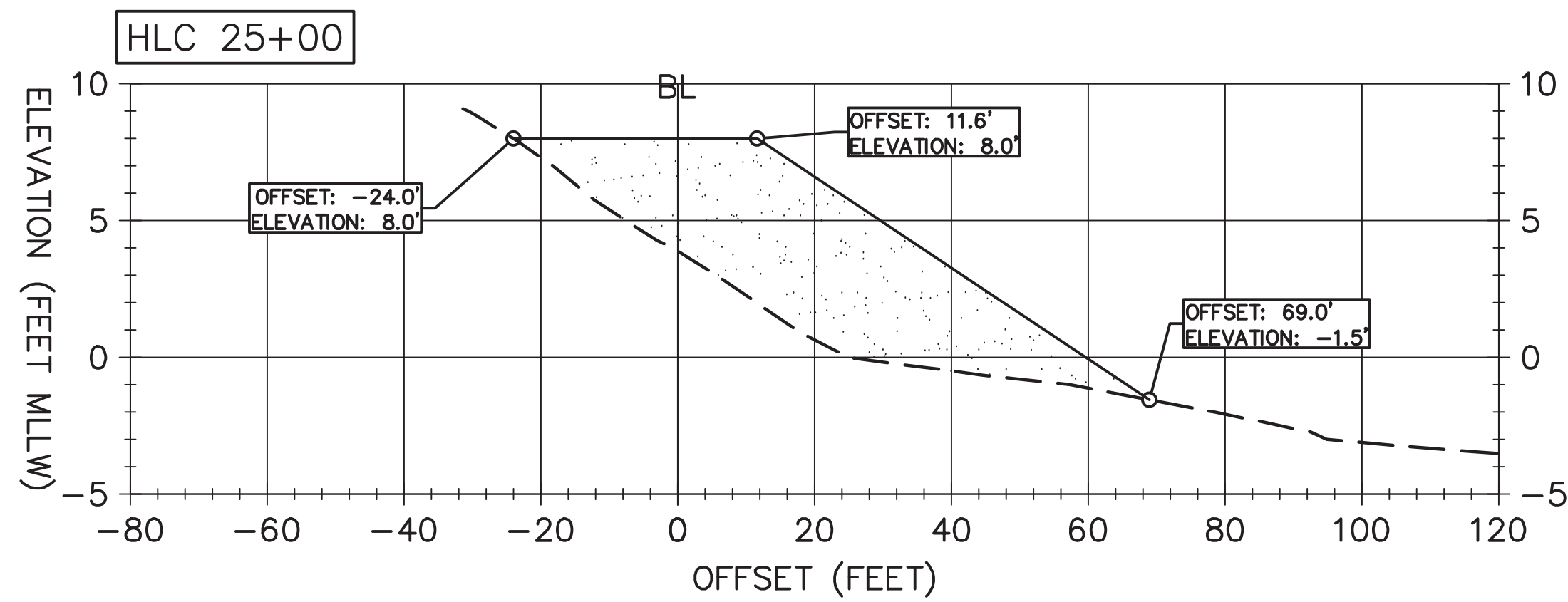
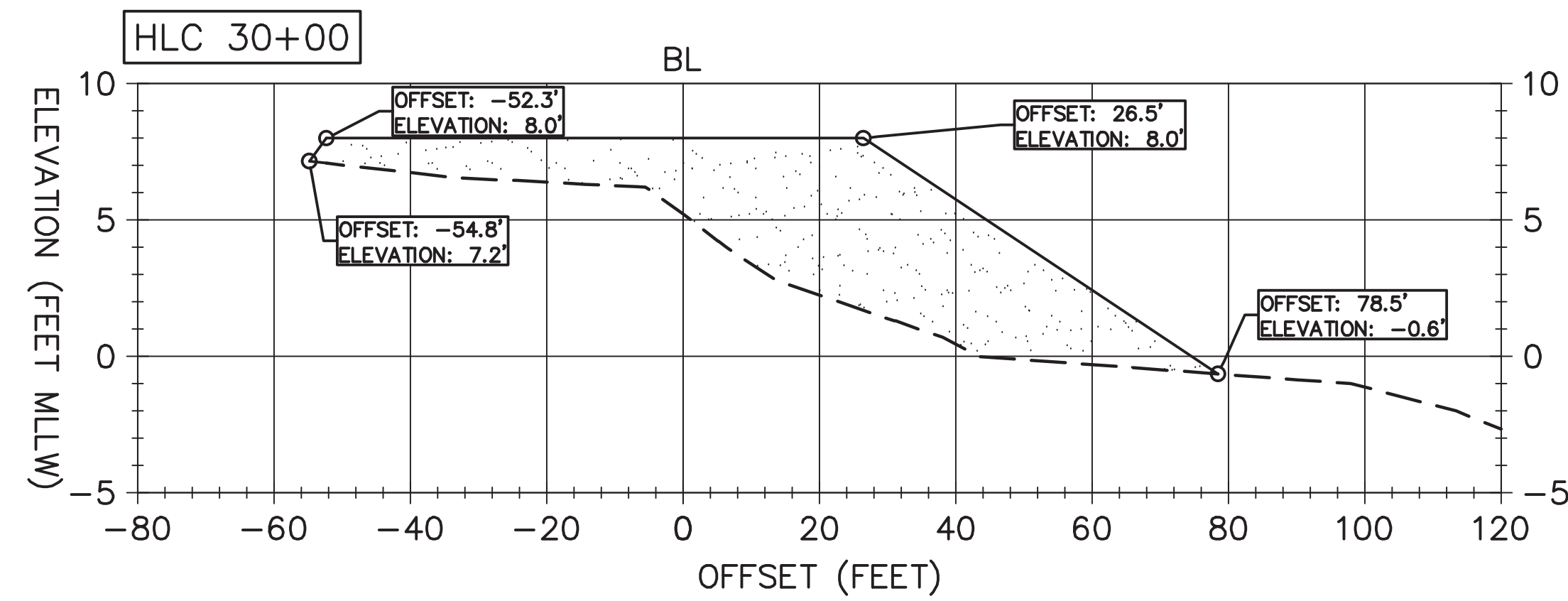
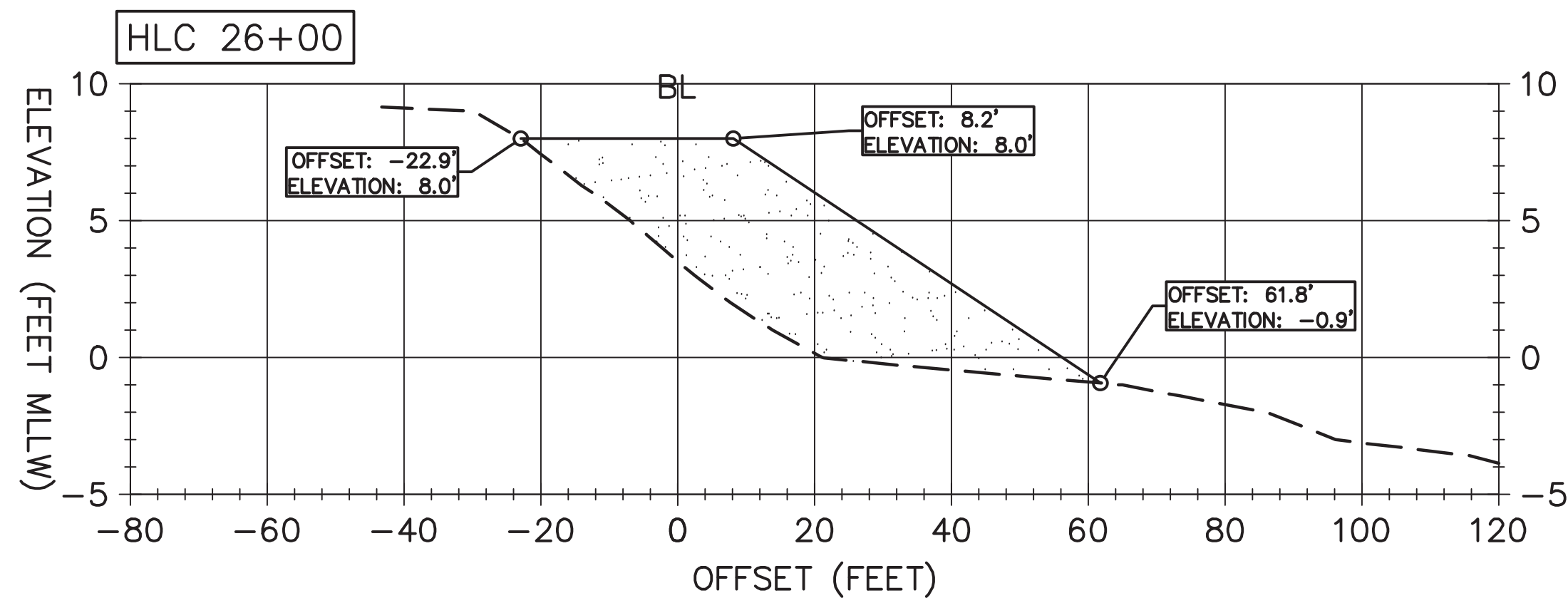
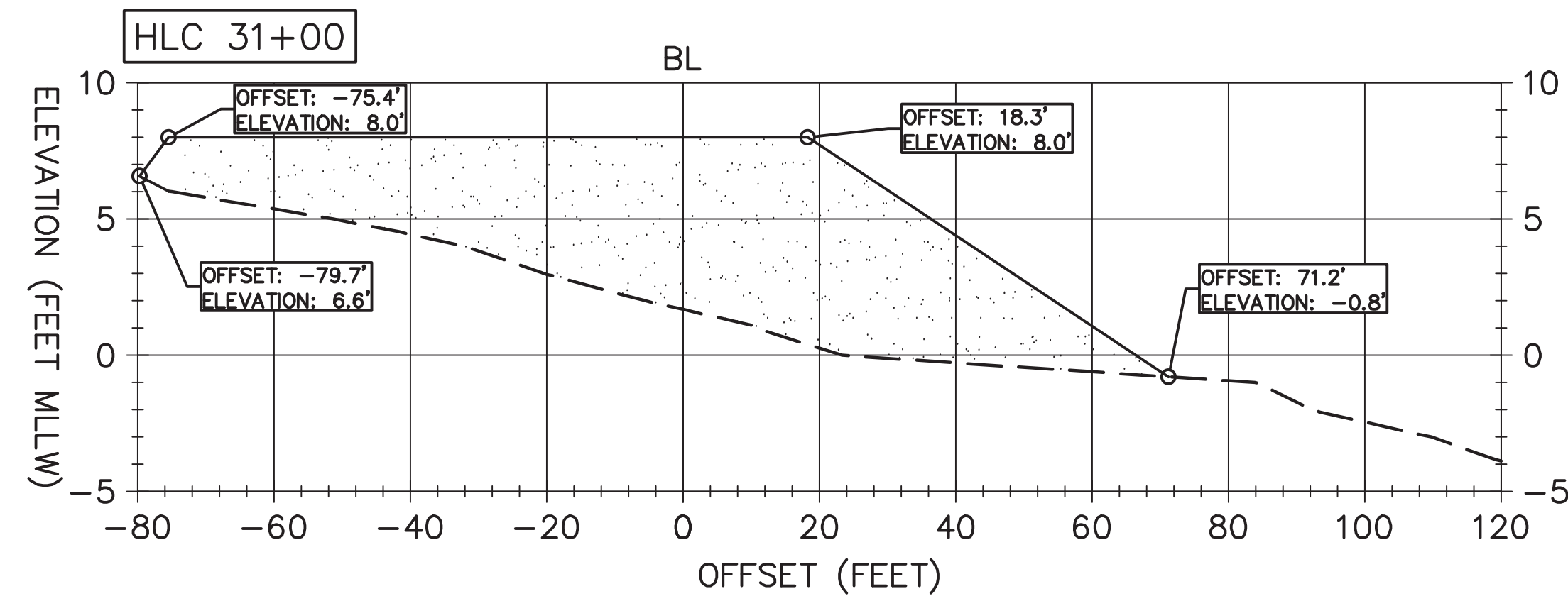
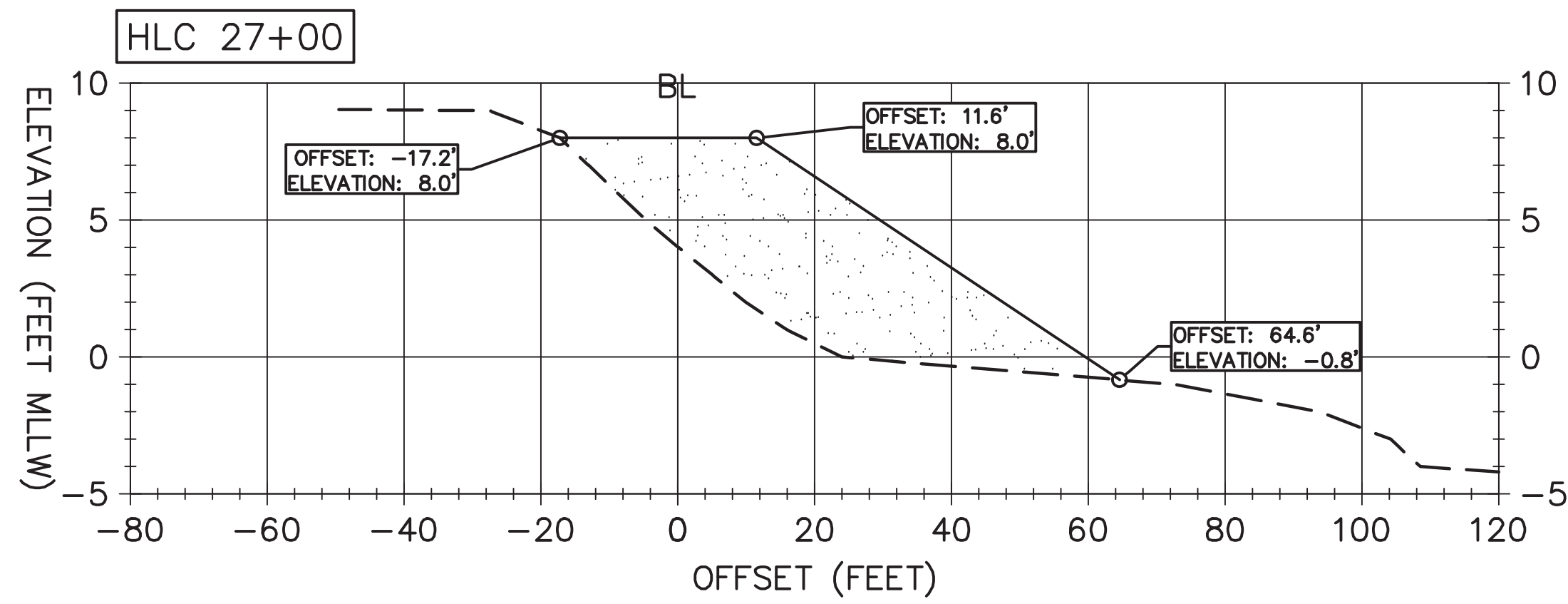
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (HLC 8+00 TO HLC 15+00)					
DESIGNED: DS			SUBMITTED: APRIL 20, 2022		
DRAWN: GT			DATE: APRIL 20, 2022		
CHECKED: SS			SCALE: VARIES		
APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer			DRAWING NO. C-15		

SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



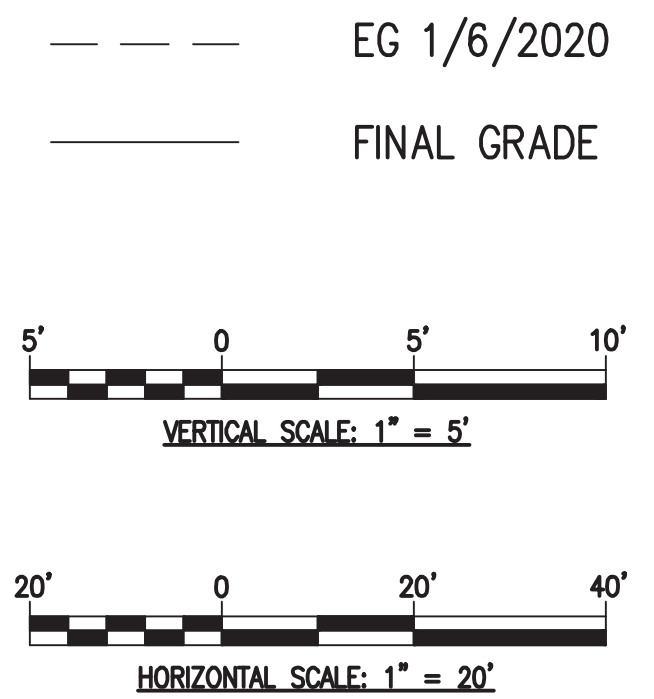
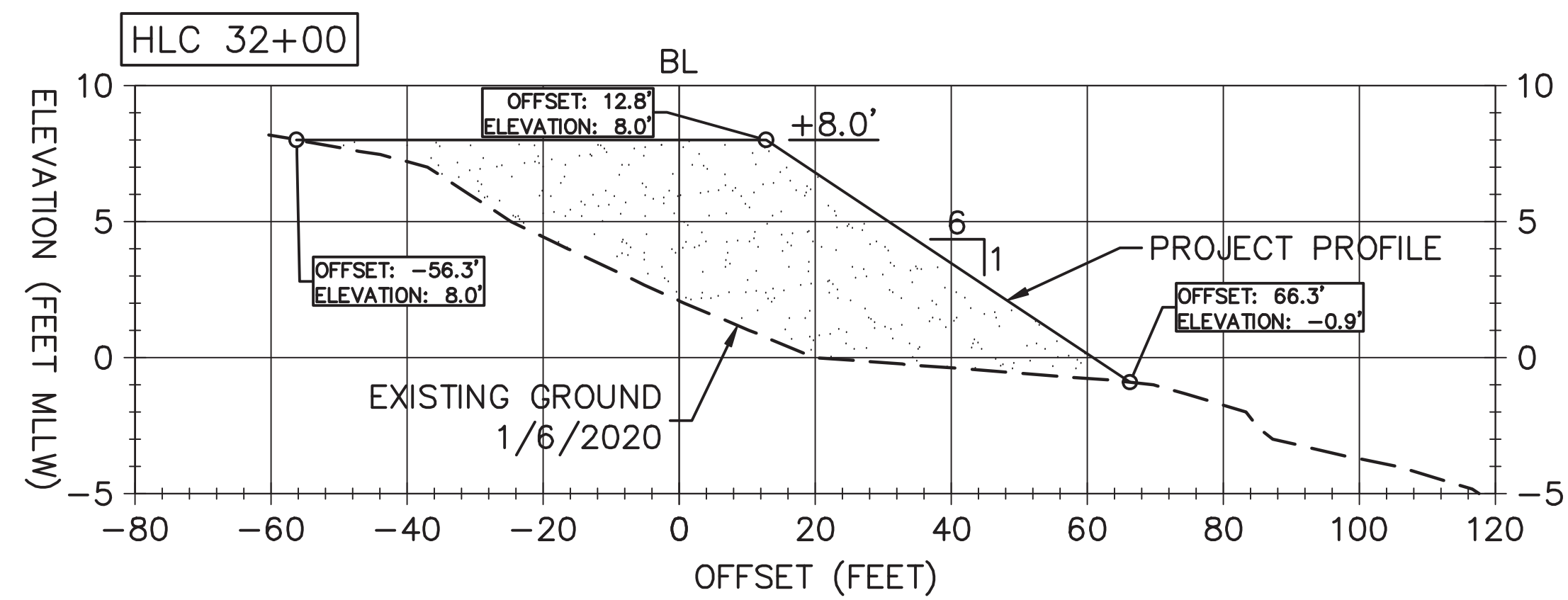
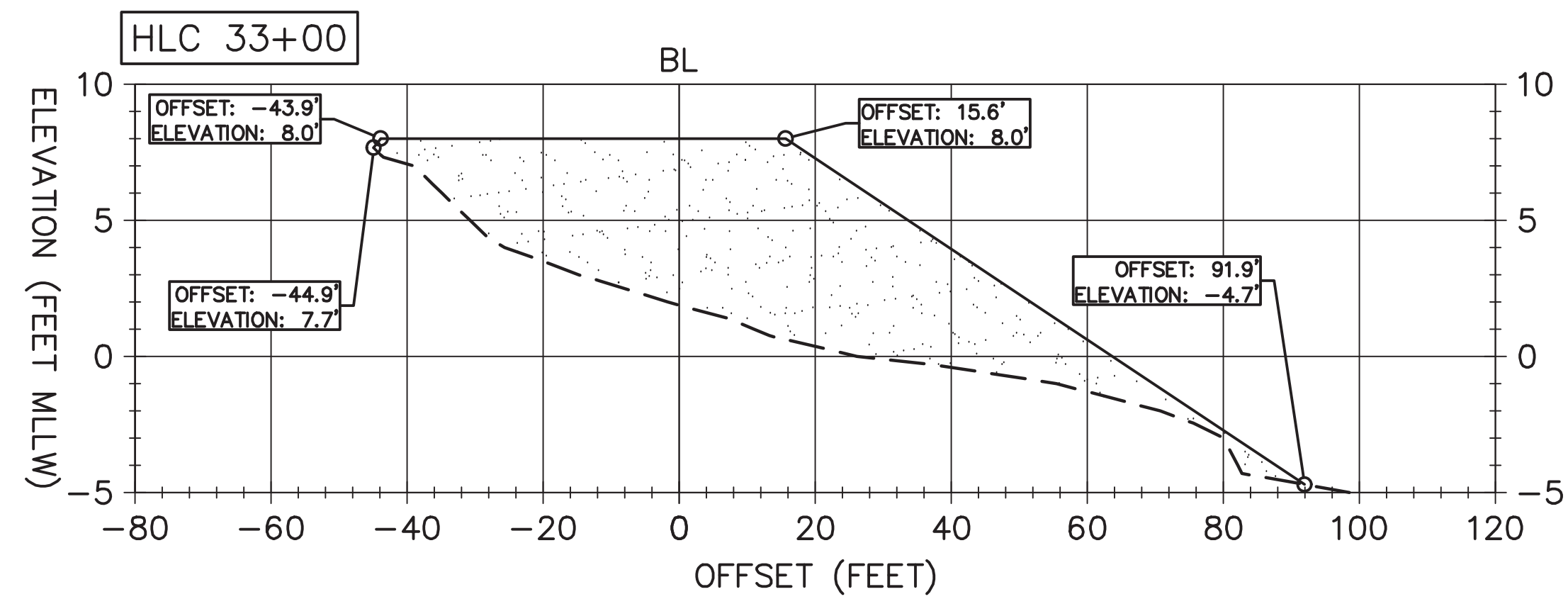
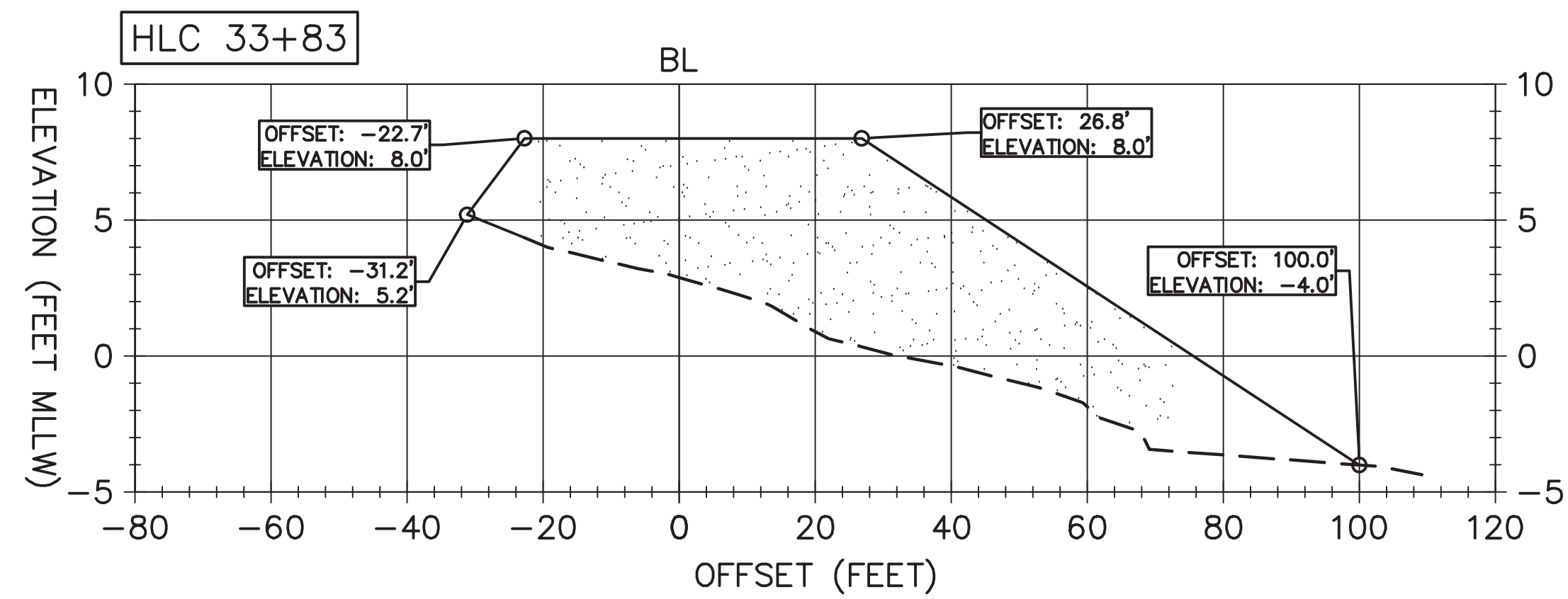
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (HLC 16+00 TO HLC 23+00)					
			DESIGNED: DS SUBMITTED: APRIL 20, 2022		
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. <i>David A. Smith</i> SIGNATURE 04/30/2024 EXPIRATION DATE OF THE LICENSE			DRAWN: GT DATE: APRIL 20, 2022		
CHECKED: SS			SCALE: VARIES		
APPROVED: <i>Cary Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii CHIEF ENGIN			DRAWING NO. C-16		

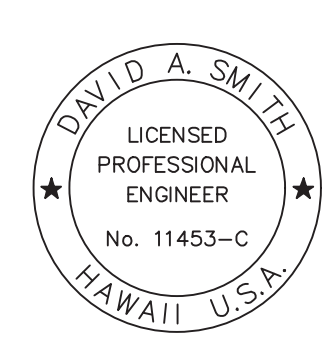
SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



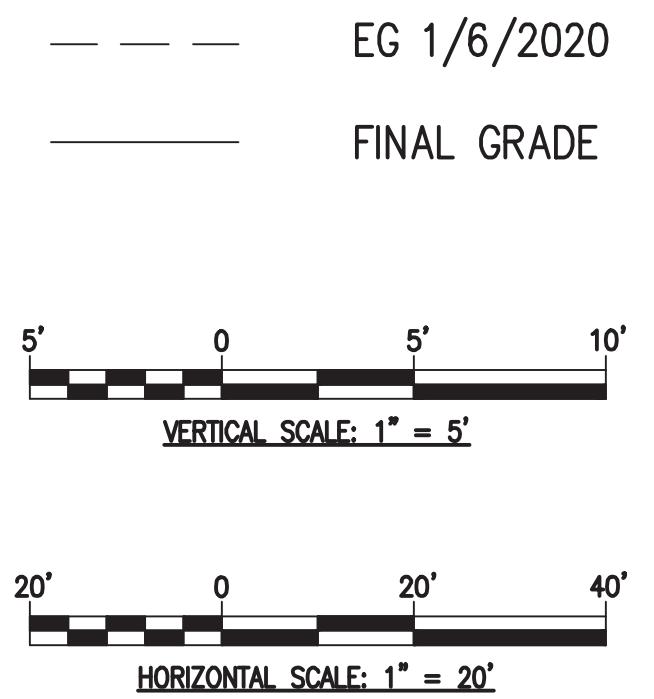
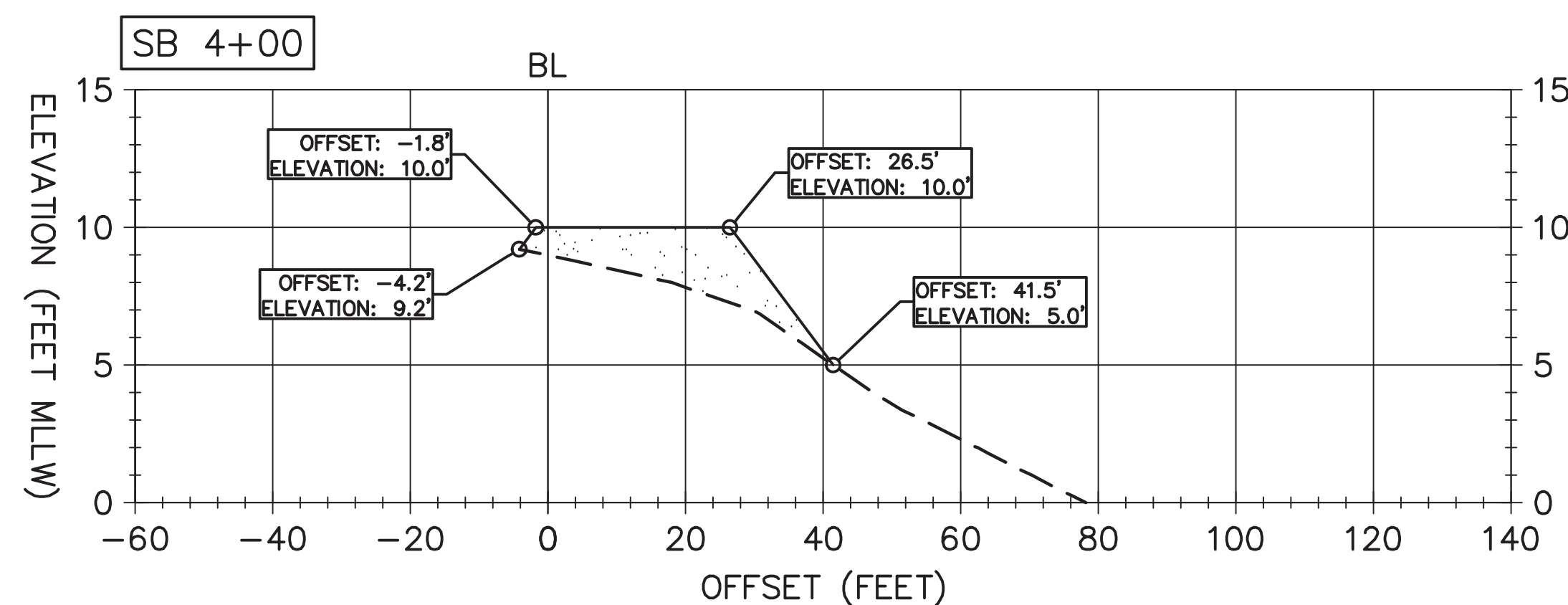
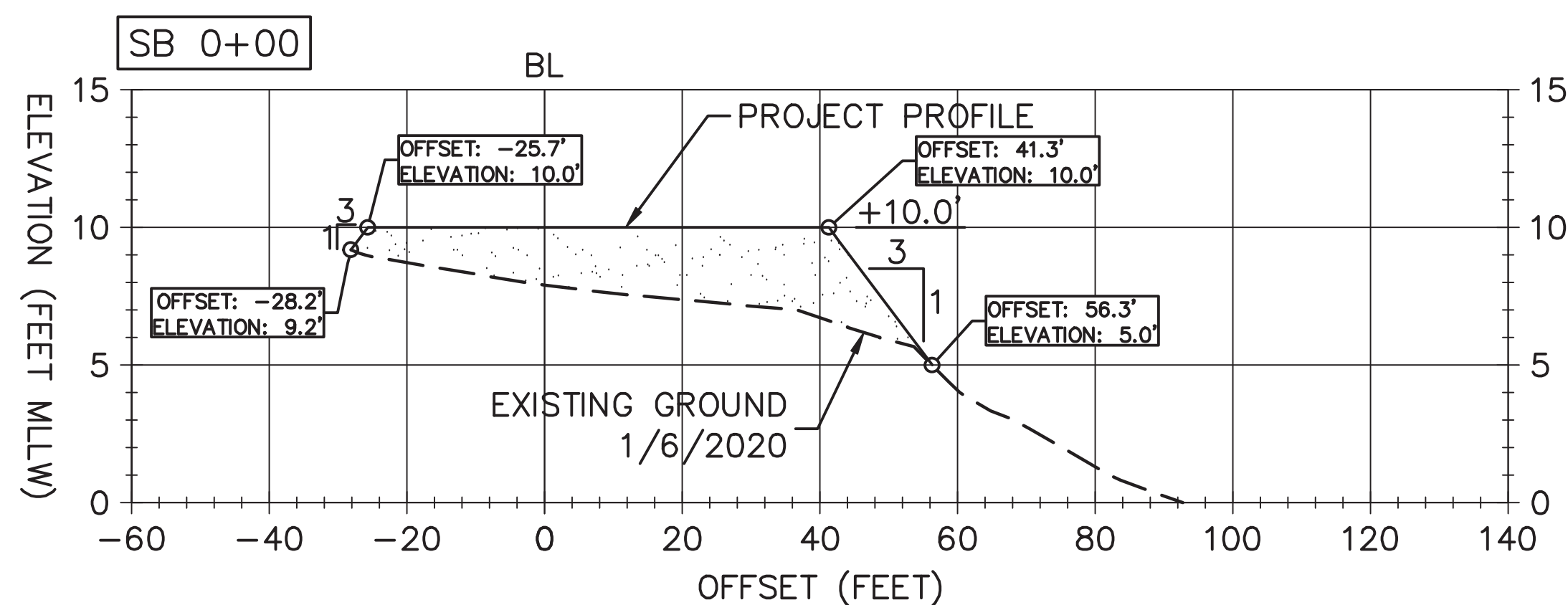
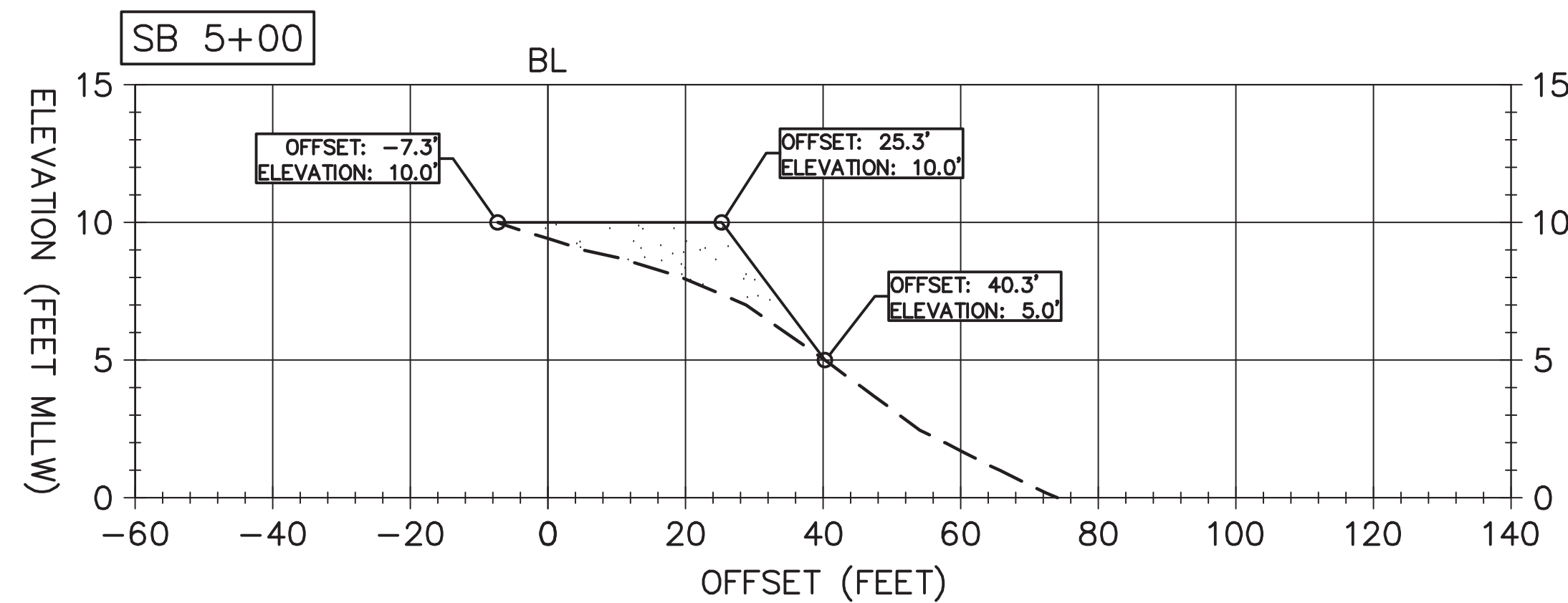
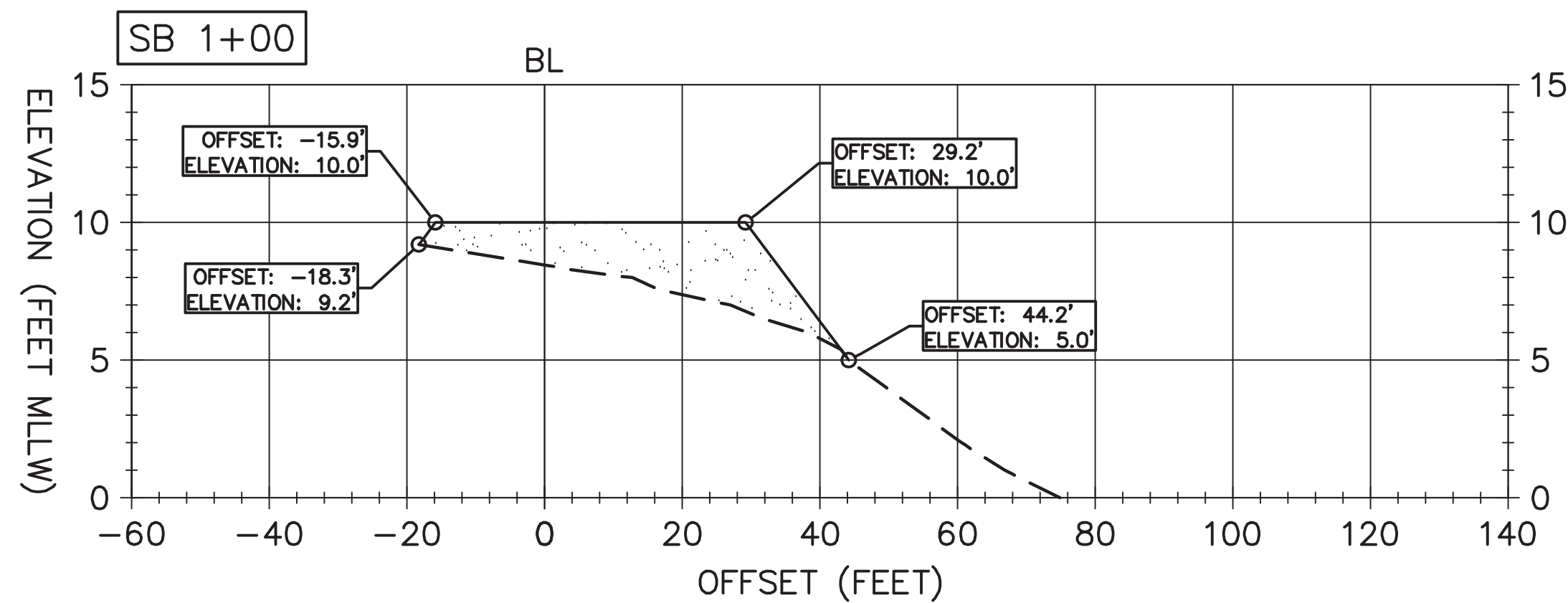
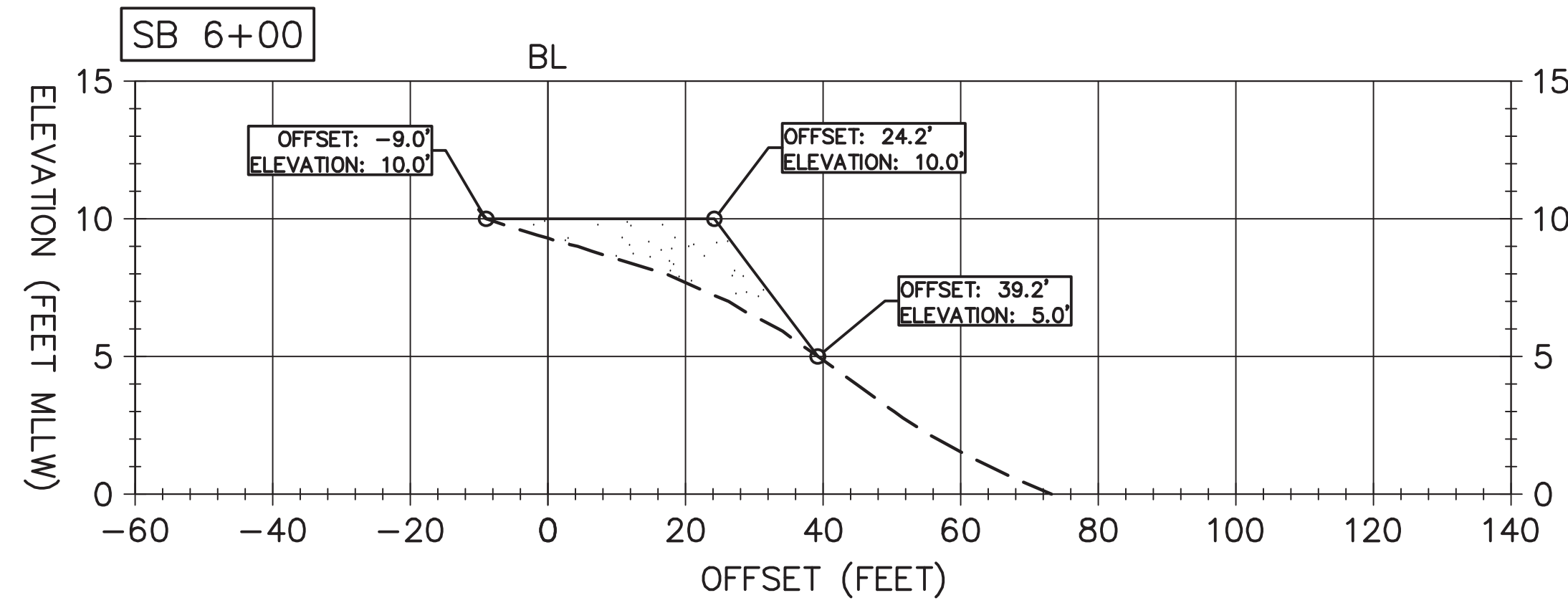
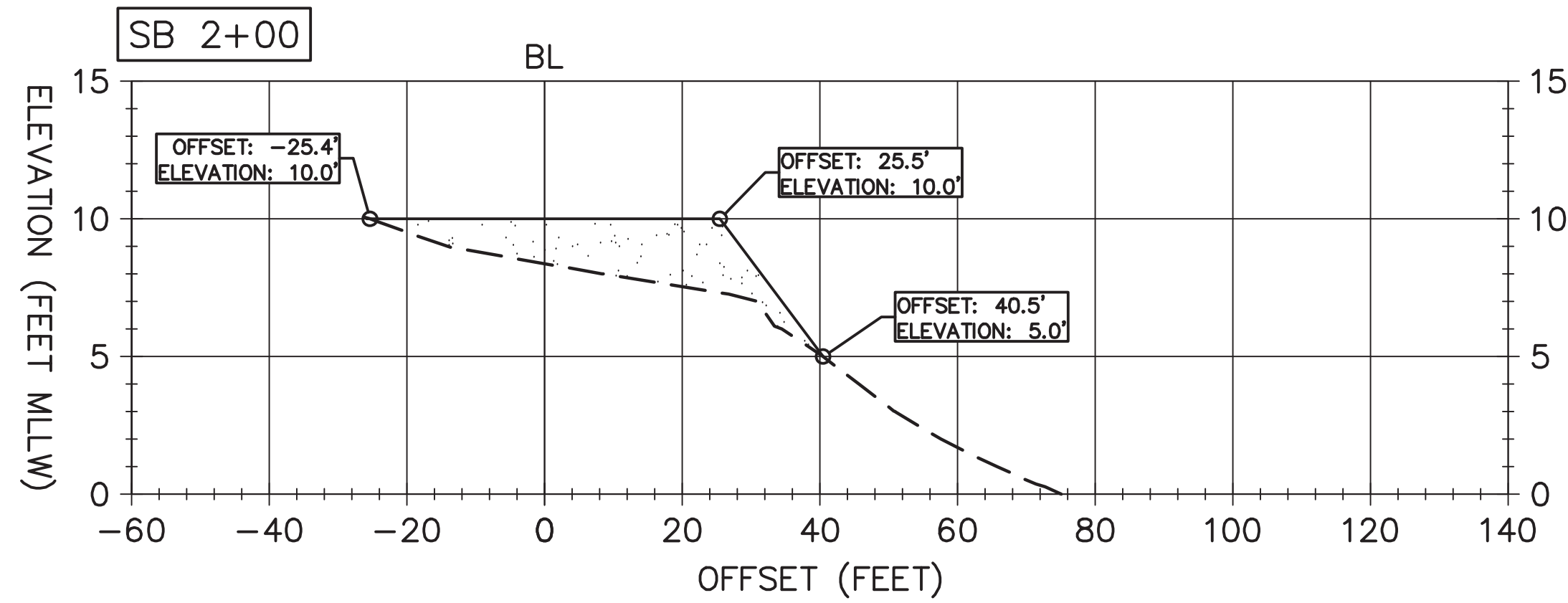
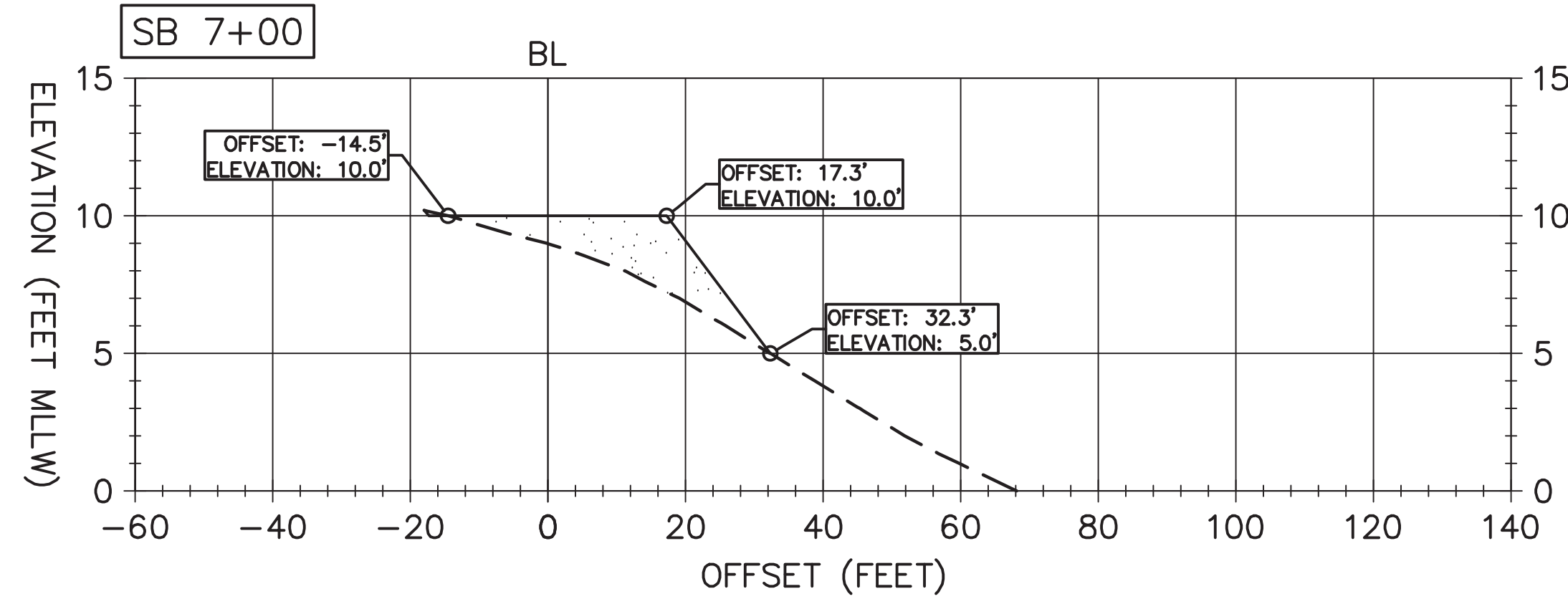
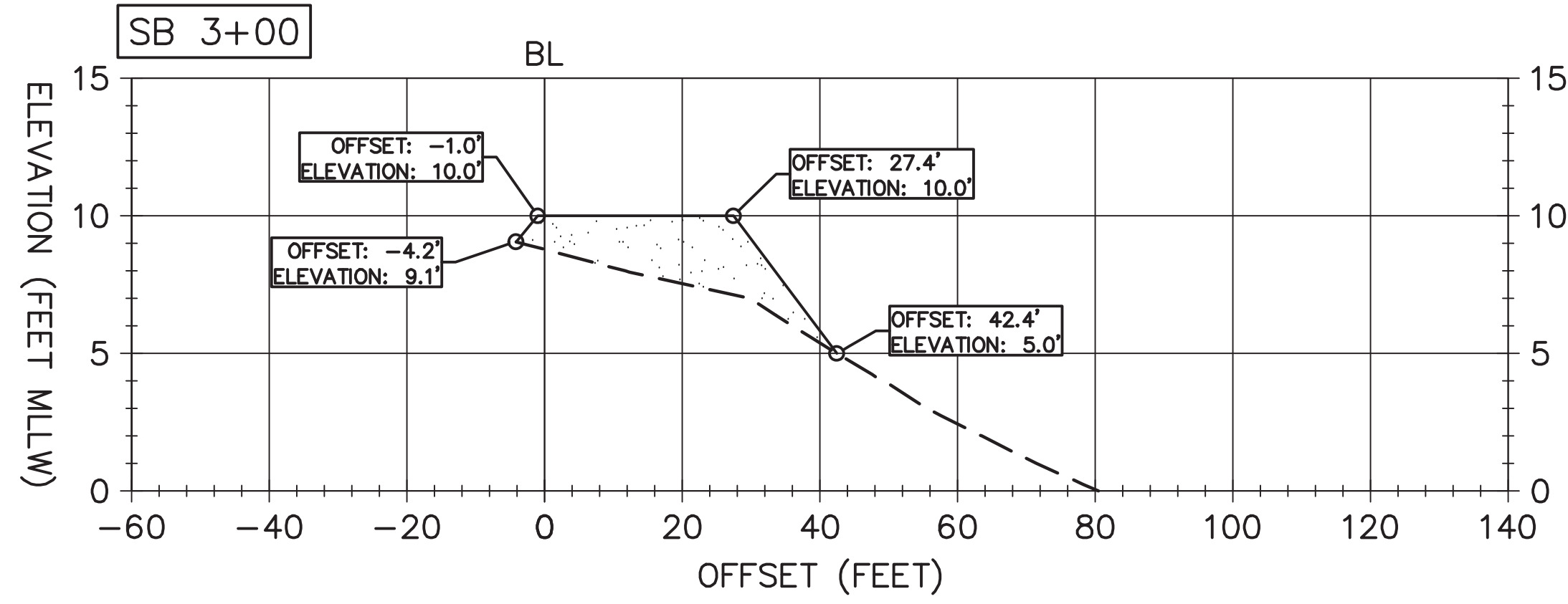
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (HLC 24+00 TO HLC 31+00)					
DESIGNED:	DS	SUBMITTED:	APRIL 20, 2022		
DRAWN:	GT	DATE:	APRIL 20, 2022		
CHECKED:	SS	SCALE:	VARIES		
APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. C-17			

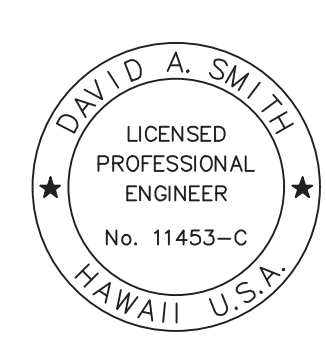
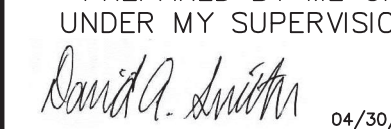
SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



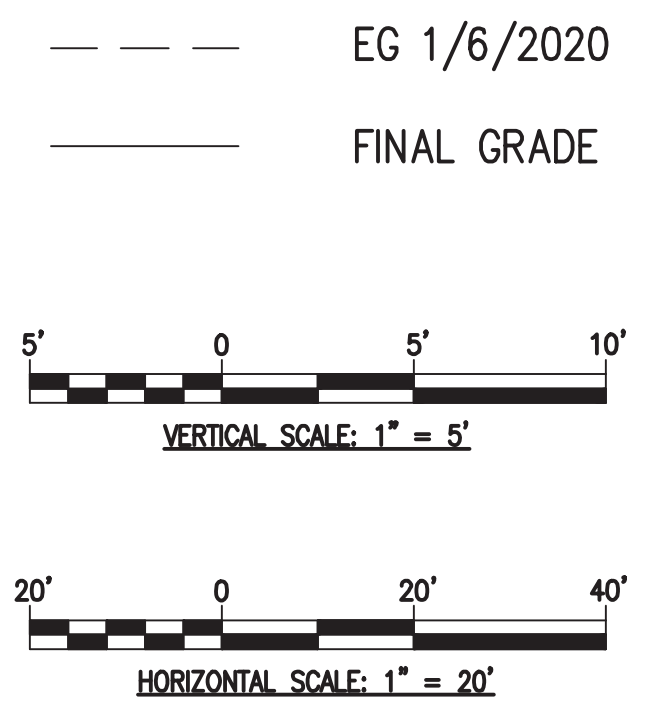
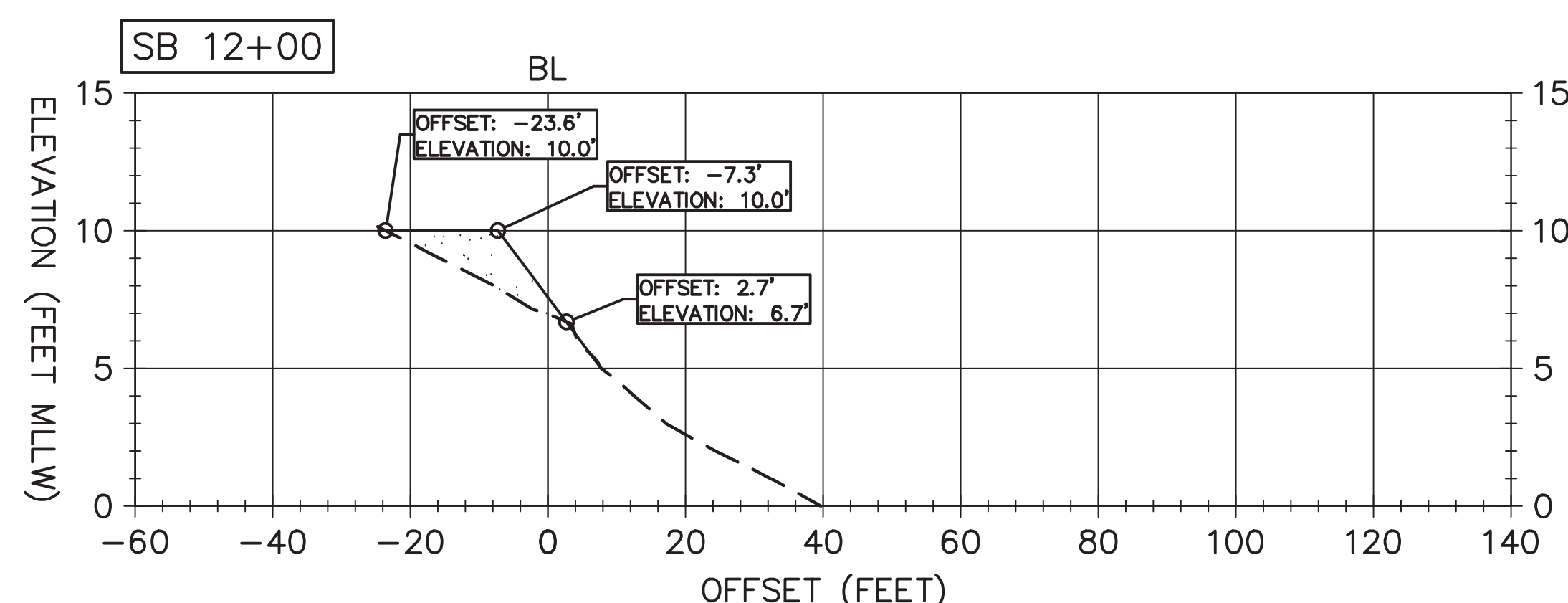
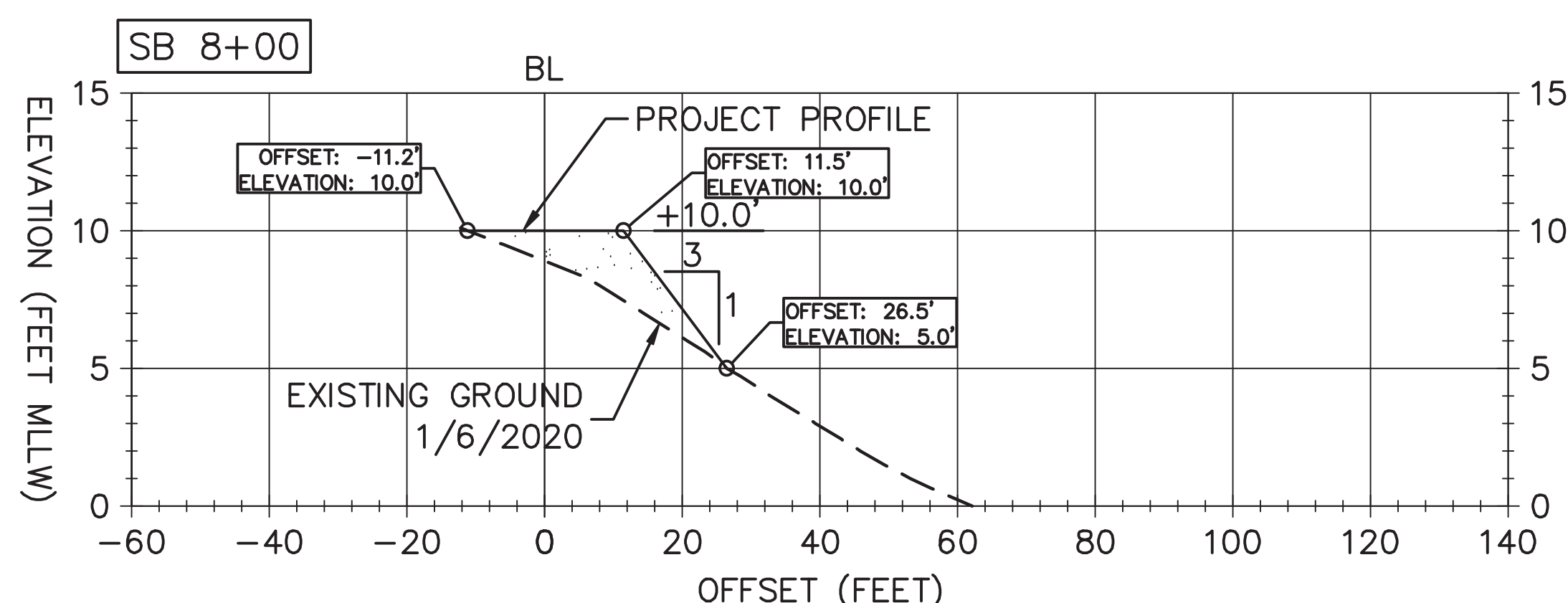
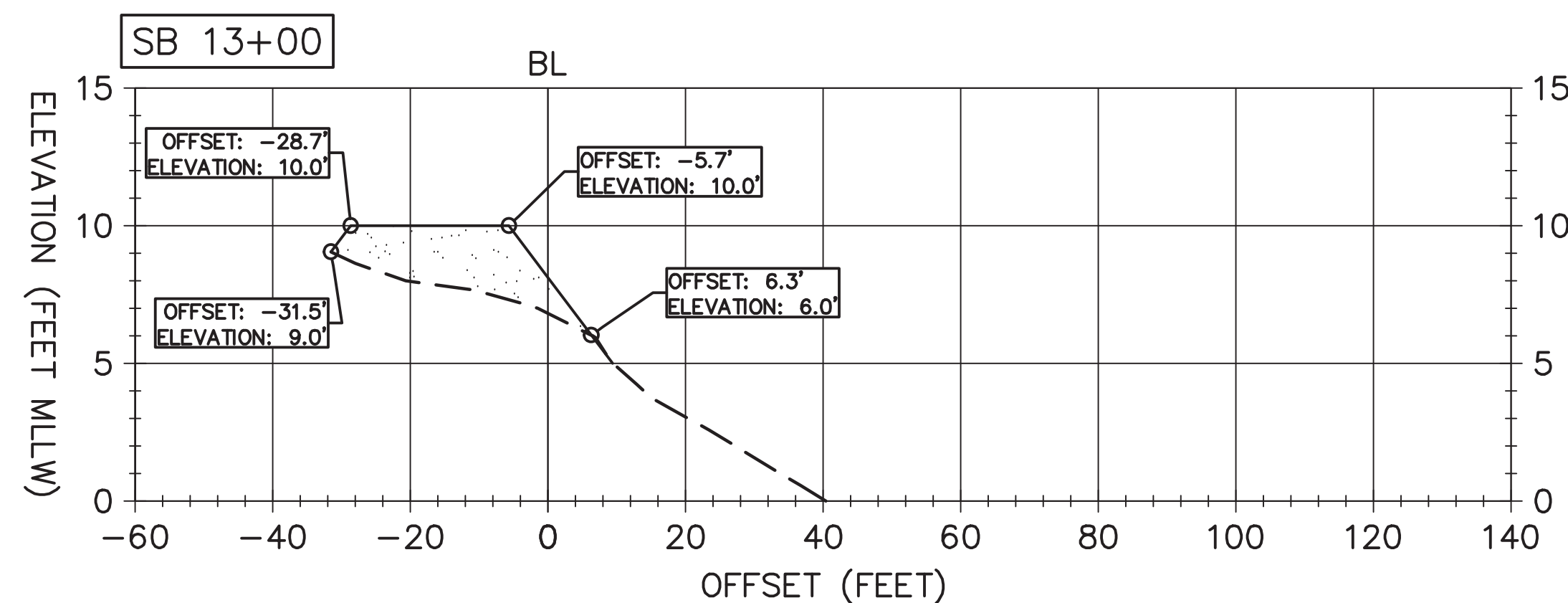
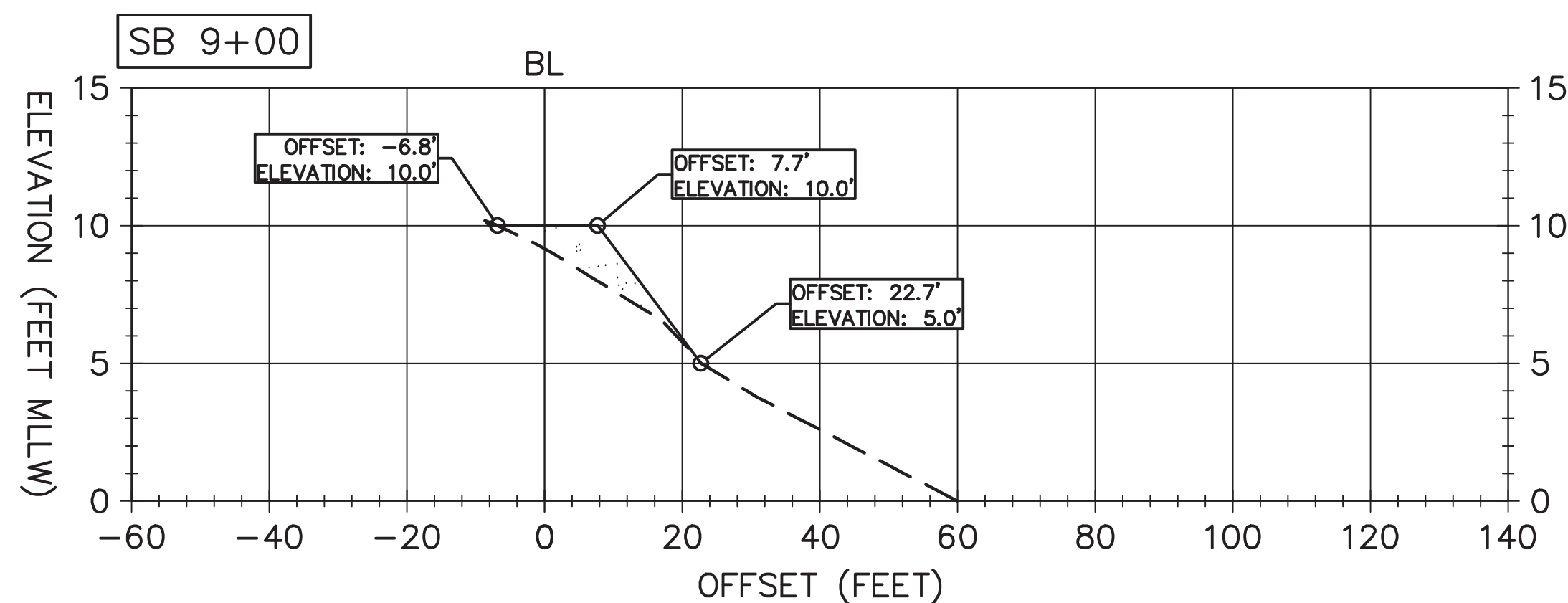
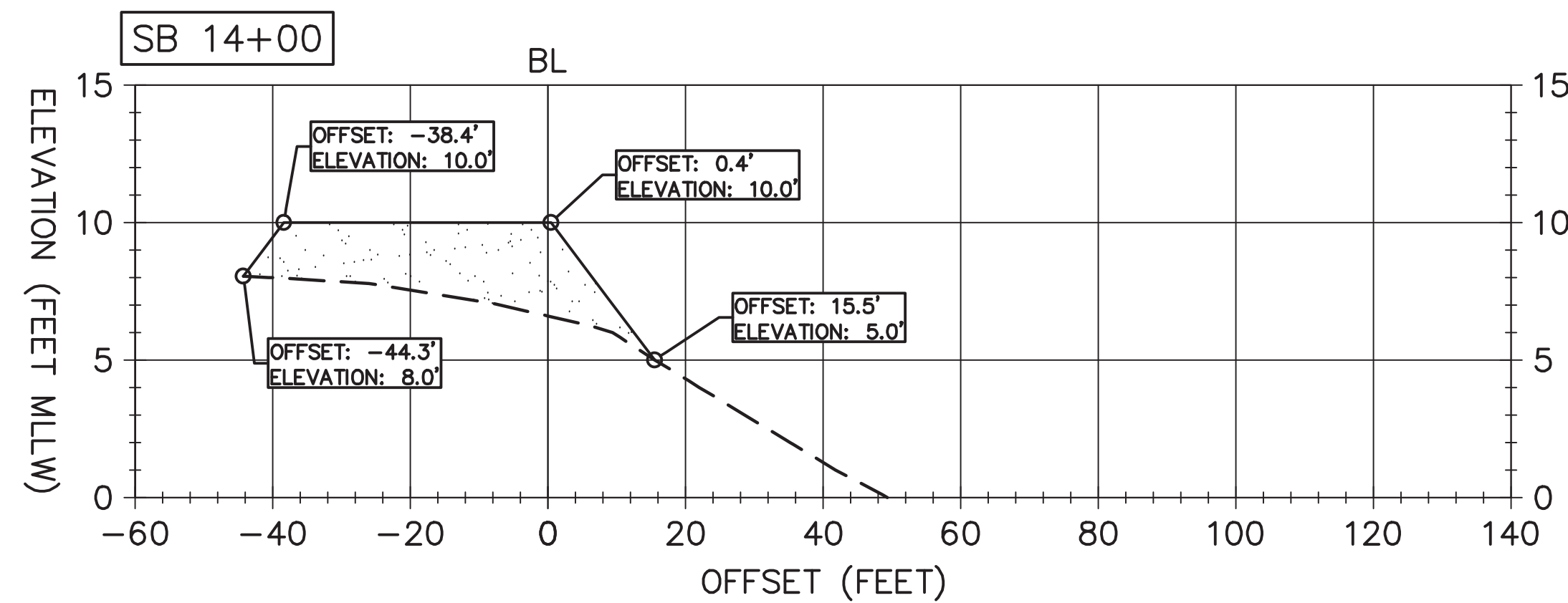
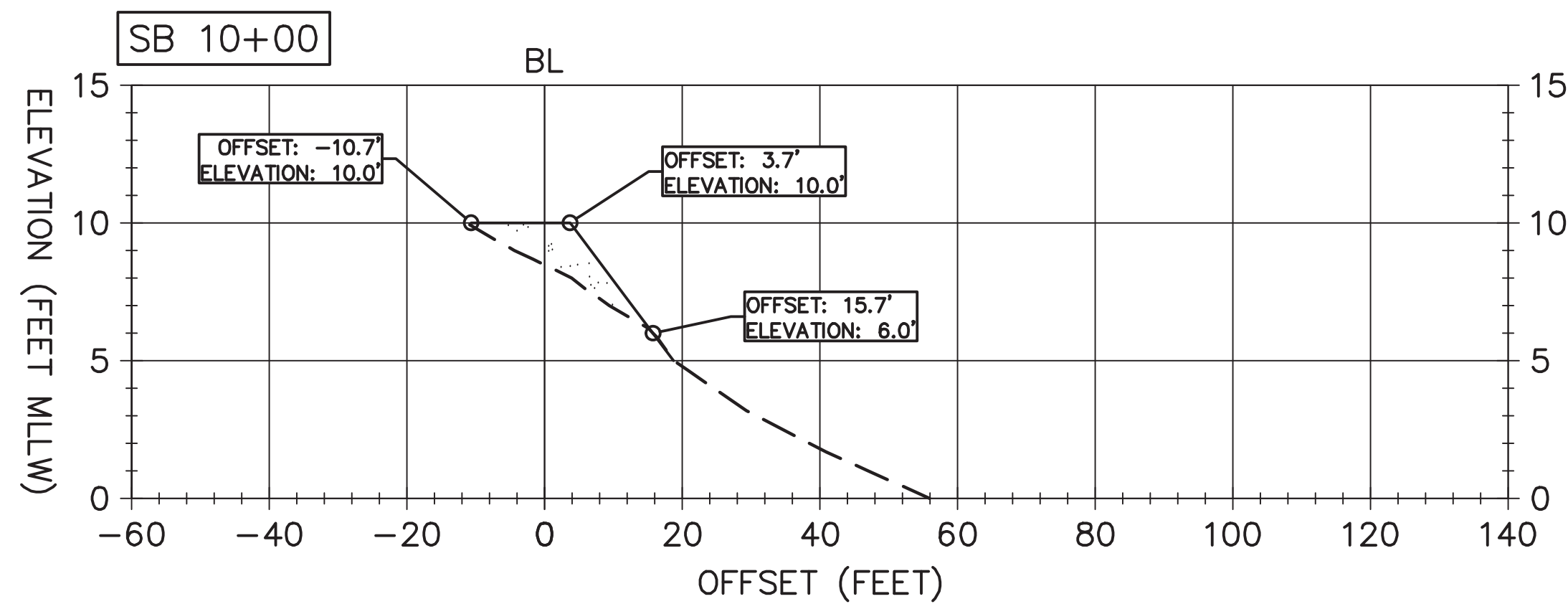
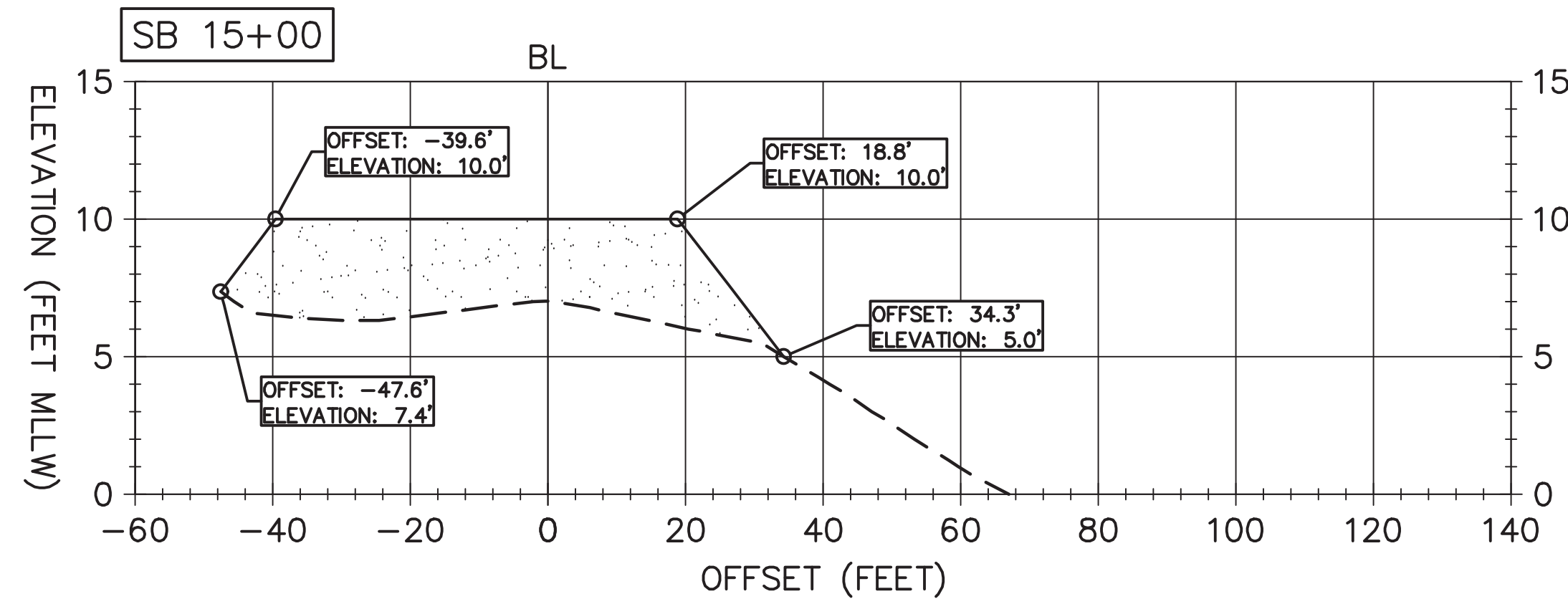
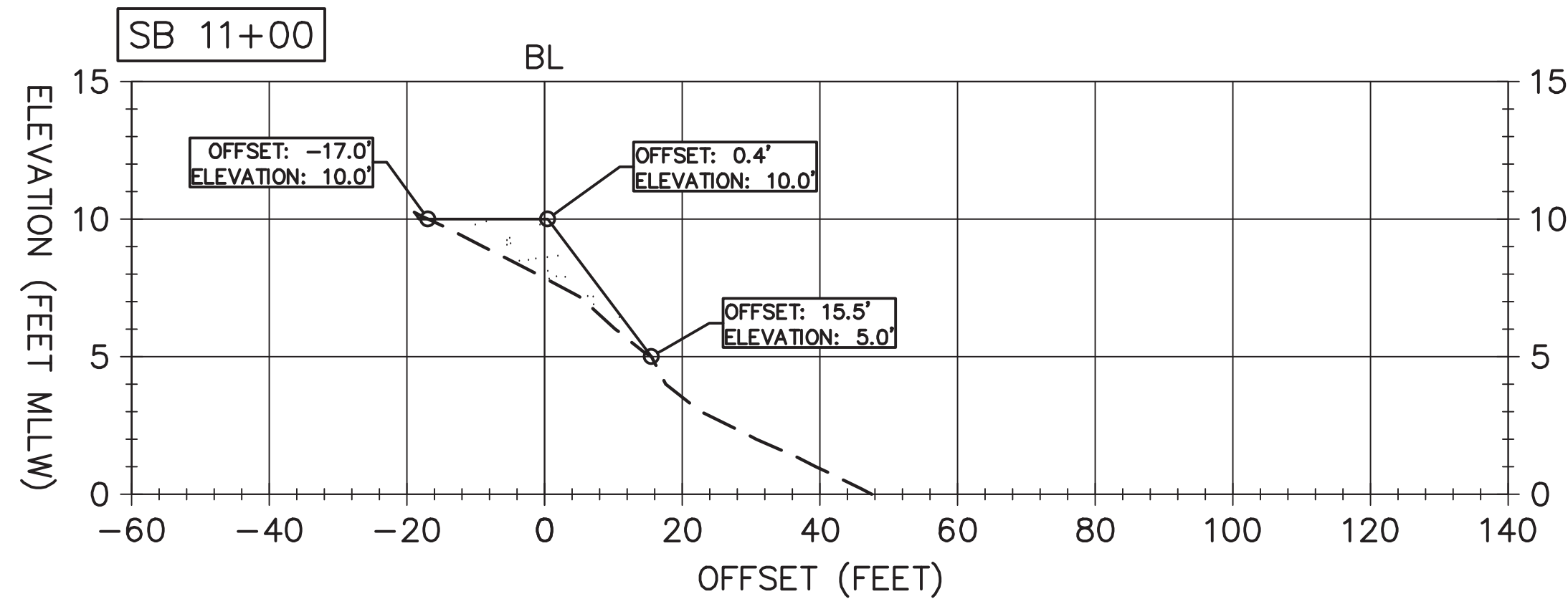
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (HLC 32+00 TO HLC 33+83)					
		DESIGNED: DS SUBMITTED: APRIL 20, 2022 DRAWN: GT DATE: APRIL 20, 2022 CHECKED: SS SCALE: VARIES			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. <i>David A. Smith</i> SIGNATURE 04/30/2024 EXPIRATION DATE OF THE LICENSE		APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. C-18	

SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



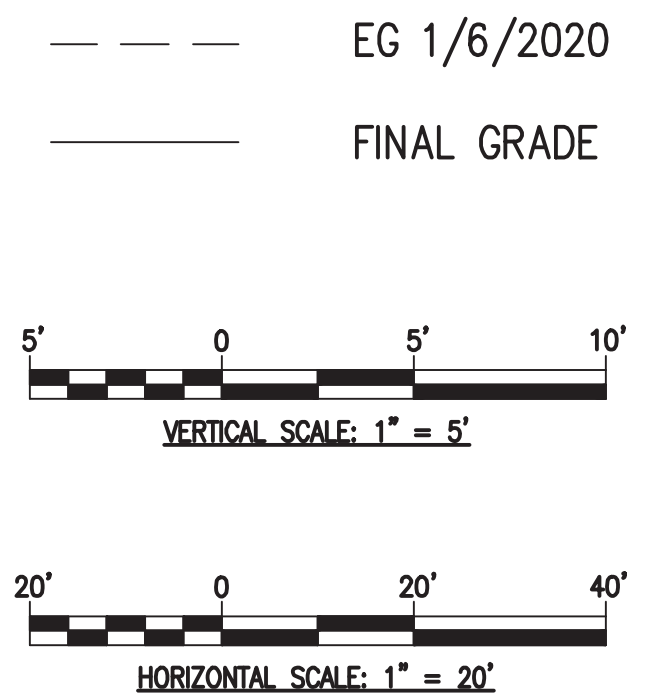
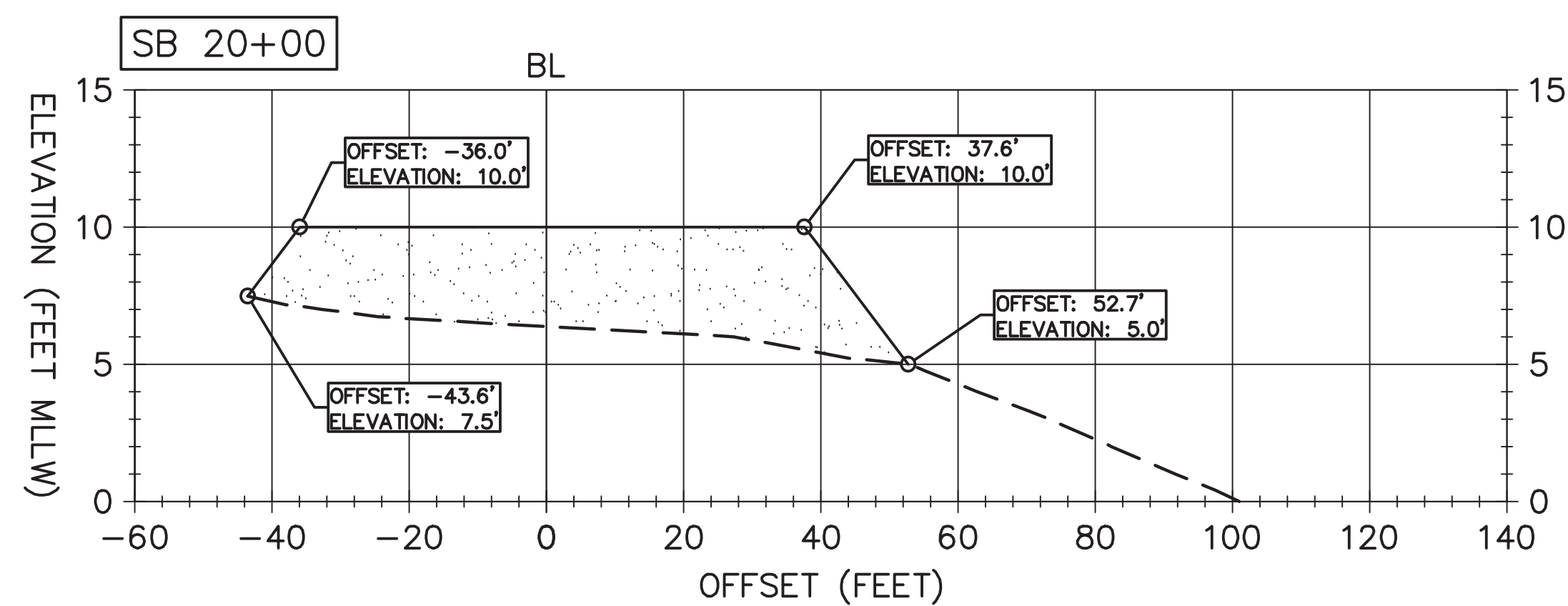
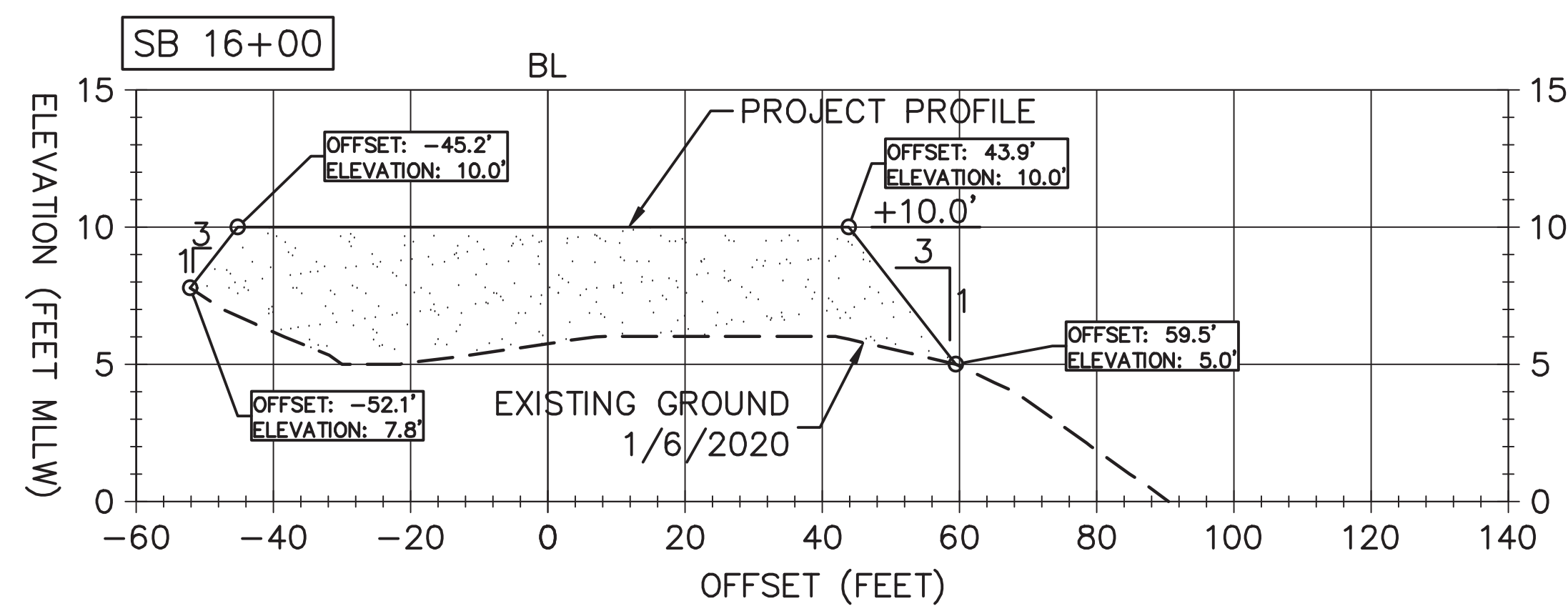
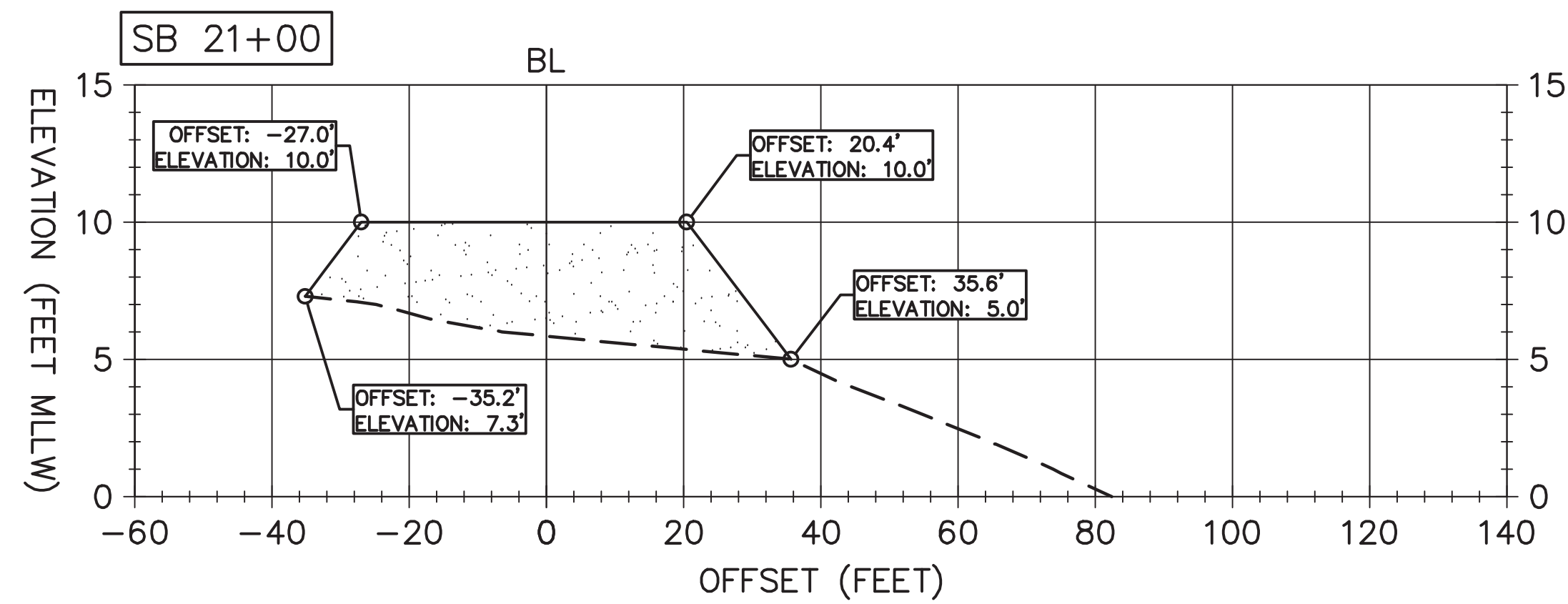
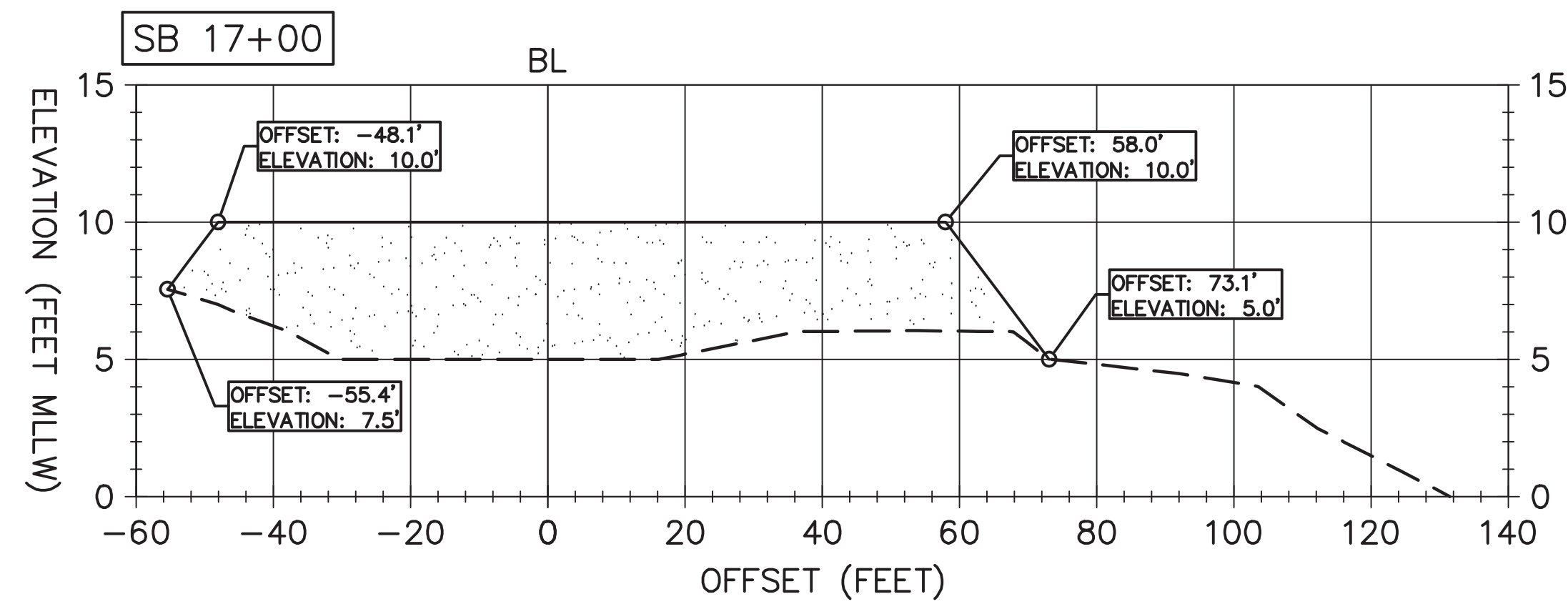
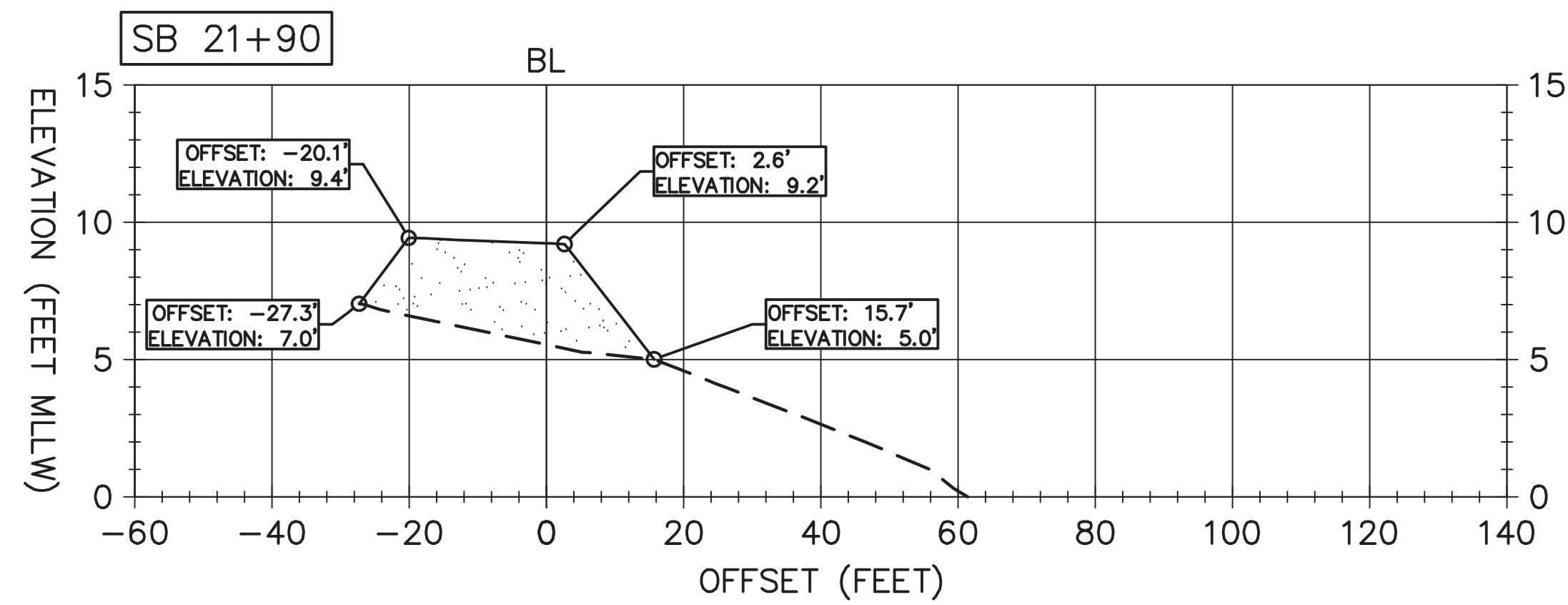
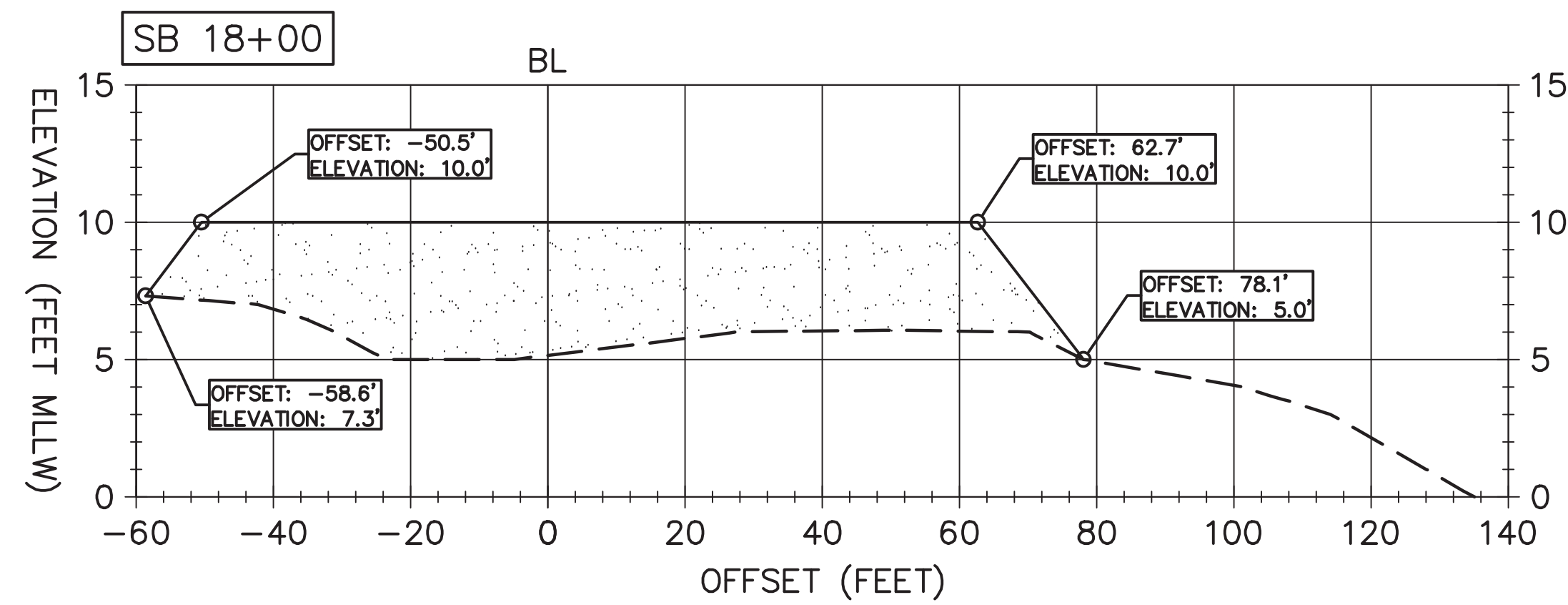
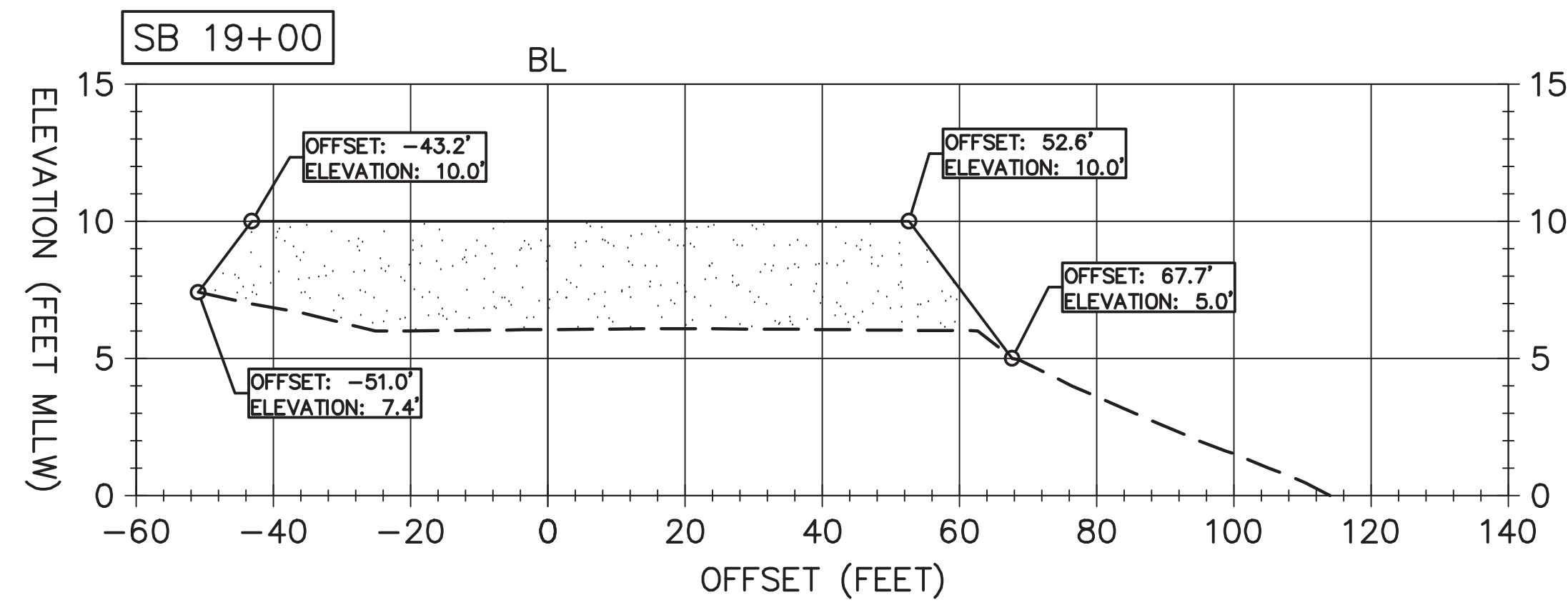
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (SB 0+00 TO SB 7+00)					
					
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.					
 <small>SIGNATURE</small>		<small>APPROVED:</small> Carty Chang E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		<small>DESIGNED:</small> DS <small>DRAWN:</small> GT <small>CHECKED:</small> SS <small>DATE:</small> APRIL 20, 2022 <small>SCALE:</small> VARIES <small>SUBMITTED:</small> APRIL 20, 2022 <small>DATE:</small> APRIL 20, 2022 <small>SCALE:</small> VARIES <small>DRAWING NO.:</small> C-19	
<small>EXPIRATION DATE OF THE LICENSE</small> 04/30/2024					

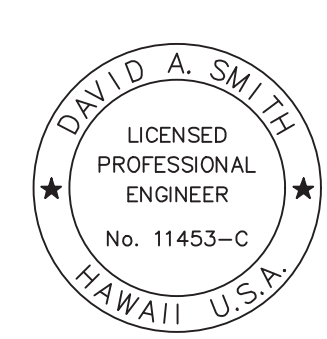
SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY

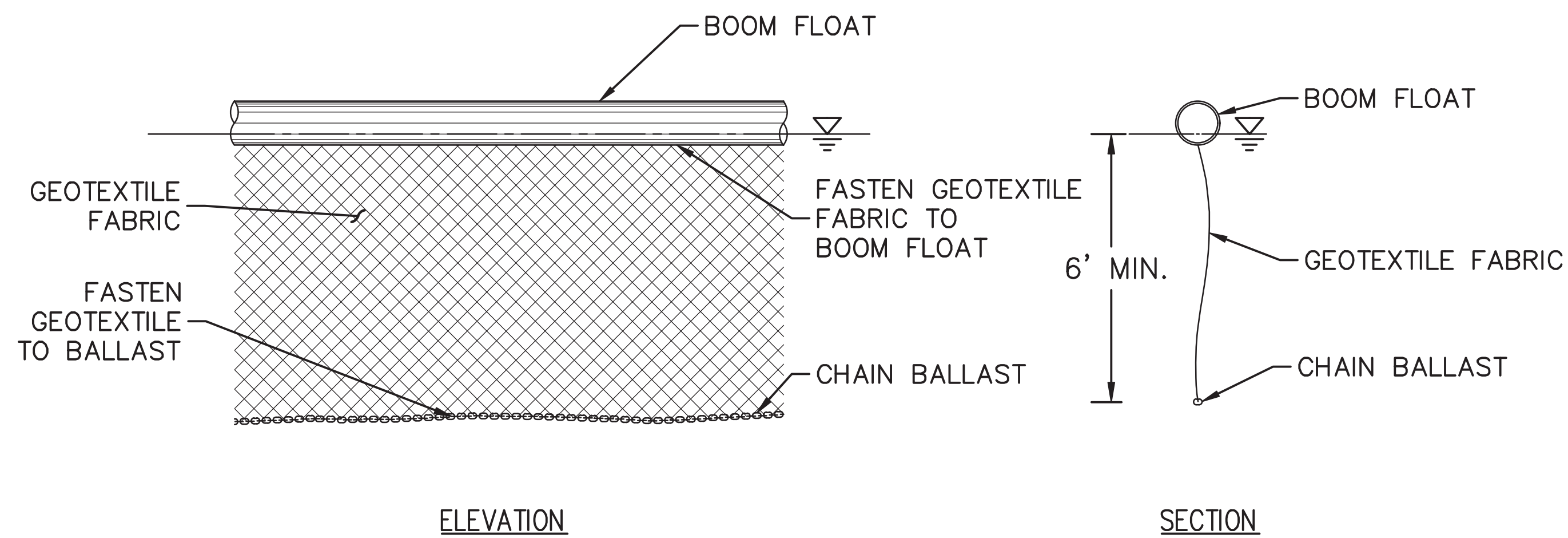


REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (SB 8+00 TO SB 15+00)					
DESIGNED: DS			SUBMITTED: APRIL 20, 2022		
DRAWN: GT			DATE: APRIL 20, 2022		
CHECKED: SS			SCALE: VARIES		
APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer			DRAWING NO. C-20		

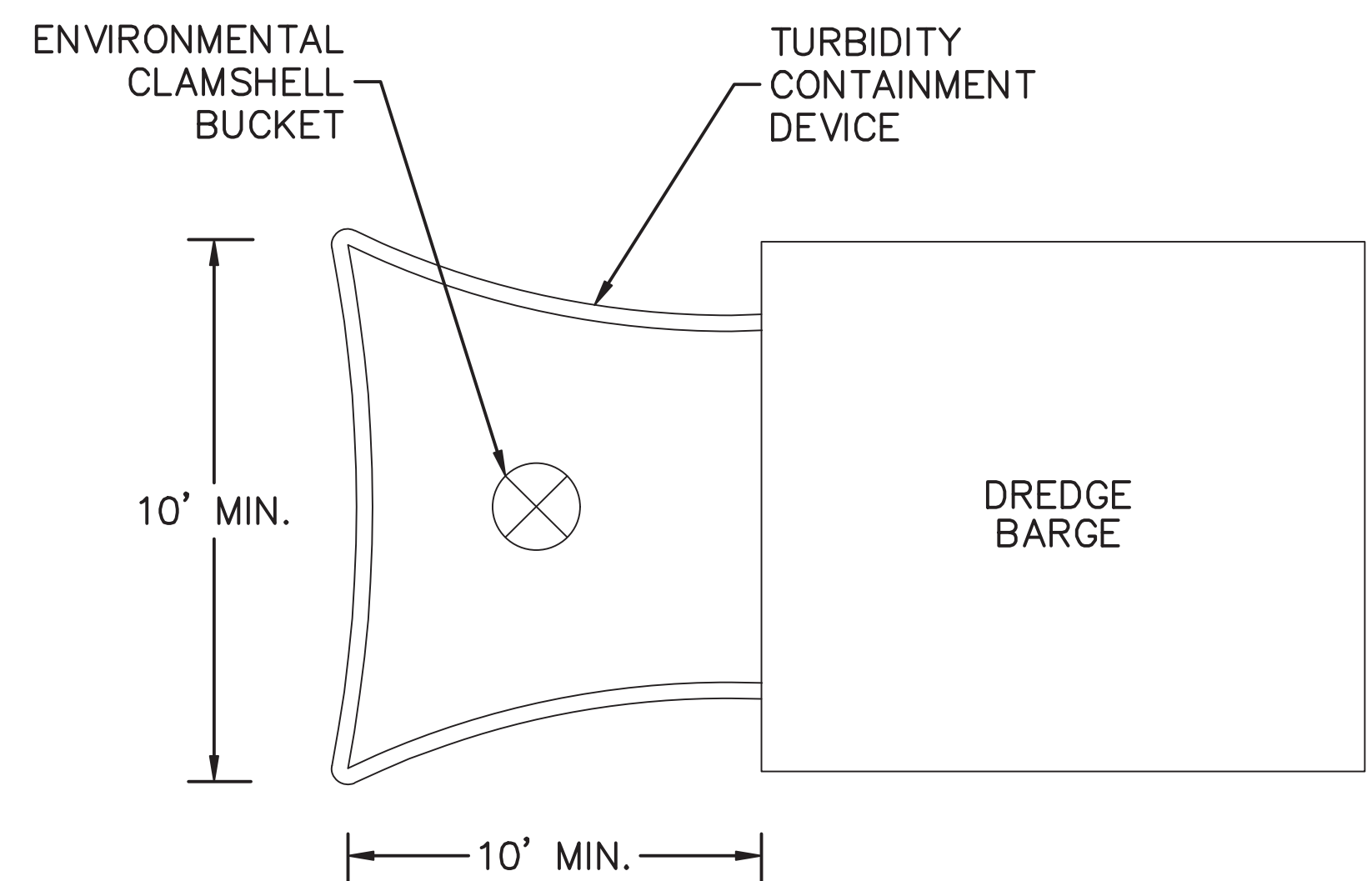
SAND PLACEMENT TEMPLATE SUBJECT TO CHANGE PER MOST RECENT TOPOGRAPHIC SURVEY



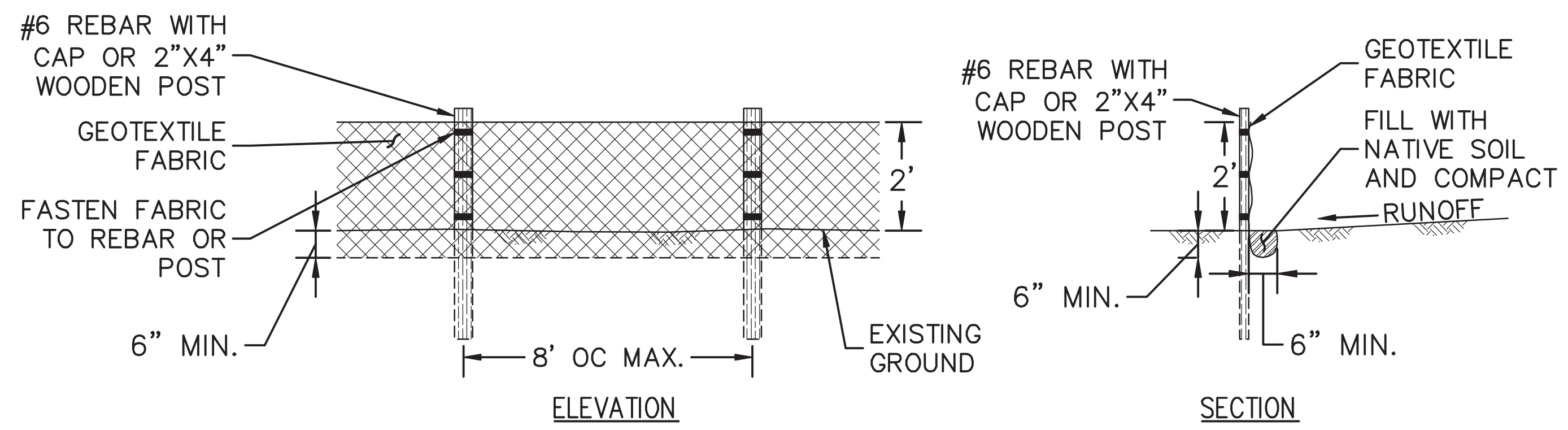
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
SAND PLACEMENT CROSS SECTIONS (SB 16+00 TO SB 21+90)					
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. <i>David A. Smith</i> SIGNATURE		04/30/2022 EXPIRATION DATE OF THE LICENSE		APPROVED: <i>Carty Chang</i> Chief Engineer	
DESIGNED: DS		SUBMITTED: APRIL 20, 2022		DRAWING NO. <h2 style="margin: 0;">C-21</h2>	
DRAWN: GT		DATE: APRIL 20, 2022			
CHECKED: SS		SCALE: VARIES			



1 TURBIDITY CONTAINMENT DEVICE DETAIL
 C-22 SCALE: NTS



2 SAND RECOVERY AREA TURBIDITY CONTAINMENT DEVICE (TYP.)
 C-22 SCALE: NTS



3 SILT FENCE DETAIL
 C-22 SCALE: NTS

- NOTES:**
1. TURBIDITY CONTAINMENT DEVICES AND ON-LAND SILT FENCES AS SHOWN ON SHEET C-22 SHALL BE OF SUFFICIENT DESIGN, STRENGTH, AND SUITABILITY FOR THEIR INTENDED APPLICATION IN THE OCEAN ENVIRONMENT.
 2. TURBIDITY CONTAINMENT DEVICES AND SILT FENCES SHALL BE INSPECTED DAILY, AND IMMEDIATELY REPAIRED OR REPLACED AS NECESSARY TO ENSURE THEIR EFFECTIVENESS.
 3. A TURBIDITY CONTAINMENT DEVICE SHALL BE DEPLOYED COMPLETELY AROUND THE DREDGE CLAMSHELL BUCKET AND AREA OF ACTIVE SAND RECOVERY. THE TURBIDITY CONTAINMENT DEVICE SHALL EXTEND A MINIMUM OF 6 FEET BELOW THE WATER SURFACE. THE TURBIDITY CONTAINMENT DEVICE MAY ATTACH TO THE DREDGE BARGE.
 4. TURBIDITY CONTAINMENT DEVICES SHALL GENERALLY BE COMPOSED OF A WATER SURFACE FLOTATION BOOM WITH A MINIMUM FREEBOARD OF 4 INCHES, A CURTAIN HANGING VERTICALLY TO THE REQUIRED DEPTH, BALLAST WEIGHT AT THE CURTAIN BOTTOM, AND SUFFICIENT ANCHORS TO MAINTAIN THE CURTAIN IN PLACE.
 5. THE TURBIDITY CONTAINMENT DEVICE CURTAIN MATERIAL SHALL BE MONOFILAMENT WOVEN POLYPROPYLENE WITH THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:

PROPERTY	VALUE	TEST METHOD
GRAB STRENGTH	200 LBS	ASTM D 4632
PUNCTURE	90 LBS	ASTM D 4833
TRAPEZOID TEAR	90 LBS	ASTM D 4533

PERVIOUS GEOTEXTILE CURTAIN MATERIAL SHALL HAVE A MAXIMUM APPARENT OPENING SIZE (AOS) AND PERCENT OPEN AREA (POA) CAPABLE OF RETAINING FINE SUSPENDED SEDIMENTS 0.004 MM OR LARGER IN DIAMETER.

6. A DESCRIPTION OF THE TURBIDITY CONTAINMENT DEVICE(S), THEIR MATERIALS AND DESIGN, AND THE PROPOSED DEPLOYMENT METHODOLOGY SHALL BE INCLUDED IN THE ENVIRONMENTAL PROTECTION PLAN AND APPROVED BY THE ENGINEER PRIOR TO THEIR USE.
7. A SILT FENCE SHALL BE INSTALLED AND MAINTAINED AROUND THE WORKSITE AND EQUIPMENT/MATERIALS STAGING AREAS.
8. THE SILT FENCE SHALL BE LOCATED A MINIMUM OF 20 FEET LANDWARD OF THE MEAN HIGHER HIGH WATER (MHHW) LINE.
9. SILT FENCE FILTER FABRIC SHALL BE MIRAFI SILT FENCE, AMOCO SILT STOP, OR APPROVED EQUAL.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
KAANAPALI BEACH RESTORATION AND BERM ENHANCEMENT					
WATER QUALITY PROTECTION DETAILS					
DESIGNED: DS		SUBMITTED: APRIL 20, 2022			
DRAWN: GT		DATE: APRIL 20, 2022			
CHECKED: SS		SCALE: NTS			
APPROVED: <i>Carty Chang</i> E-signed 2022-04-22 08:22AM HST carty.s.chang@hawaii.gov State of Hawaii Chief Engineer		DRAWING NO. C-22			
JOB NO. E00XM30A SHEET NO. 24 OF 24 SHEETS					