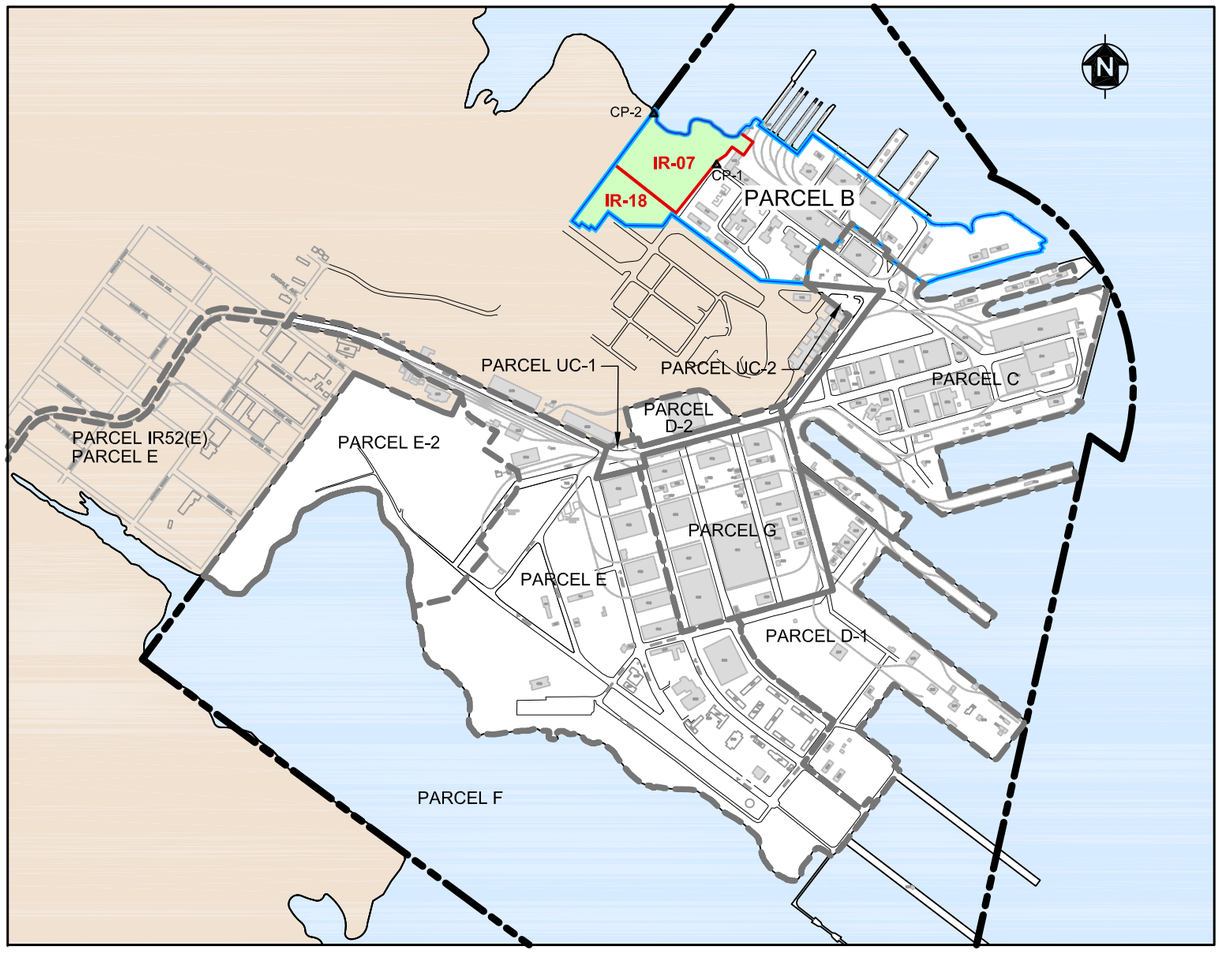
ATTACHMENT 1
DESIGN CONSTRUCTION DRAWINGS

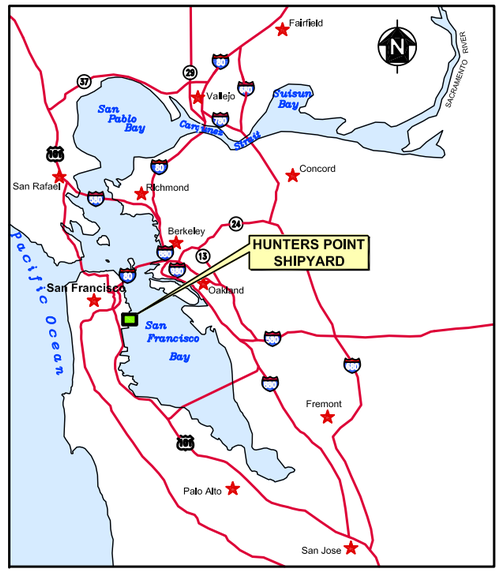
HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA
INSTALLATION RESTORATION SITES 7 AND 18
SOIL COVER AND SHORELINE REVETMENT
DRAFT DESIGN DRAWINGS



LOCATION MAP

600' 0 600' 1200'

SCALE: 1" = 600'



VICINITY MAP

NOT TO SCALE

INDEX OF DRAWINGS

DWG	DESCRIPTION
G1	VICINITY MAP, LOCATION MAP, AND SHEET INDEX
C1	SITE PLAN - CLEARING, GRUBBING, SURFACE DEBRIS REMOVAL AND WELL AND PROBE EXTENSIONS
C2	SOIL COVER AND REVETMENT SUBGRADE PLAN
C3	SOIL COVER AND SHORELINE REVETMENT FINAL GRADING PLAN
C4	CONTROL POINTS
C5	SHORELINE AND REVETMENT CROSS-SECTIONS A, B, AND C
C6	SHORELINE AND REVETMENT CROSS-SECTIONS D, E, AND F
C7	SHORELINE AND REVETMENT CROSS-SECTIONS G, H, I, AND J
C8	SOIL COVER BOUNDARY CROSS-SECTIONS DETAILS A, B, C, AND D
C9	SOIL COVER CROSS-SECTIONS DETAILS A-A' AND B-B'
C10	MONITORING WELL AND METHANE PROBE EXTENSION DETAILS
C11	DETAILS I
C12	DETAILS II

SURVEY CONTROL POINTS			
Control Point	Easting	Northing	Elevation
CP-1	1460168.99	453718.89	11.76
CP-2	1459671.50	454121.67	5.81

NOTE: OFF-SITE TOPOGRAPHY HAS BEEN SHOWN AS REFERENCED BUT HAS NOT BEEN TIED TO THE SITE TOPOGRAPHY. EXISTING TOPOGRAPHY ESTIMATED PRECISION ± 1' DUE TO MINOR REGRADING OF THE SITE FOLLOWING AS SHOWN BASELINE SURVEY.

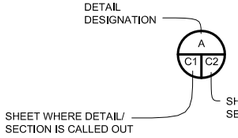
BASIS OF BEARINGS AND ELEVATION

HORIZONTAL: NAD 1927 ZONE-III (HUNTERS POINT WEST 1 PID HT0613) USFT.

VERTICAL :
NGVD 29 LESS CORRECTION 7.76 FEET MSL

LIMITS OF RESPONSIBILITY

THE DESIGNER AND ITS SUBCONTRACTORS SHALL NOT BE RESPONSIBLE FOR VARIANCES FROM THE CONSTRUCTION SPECIFICATIONS, DESIGN DRAWINGS, AND OTHER REQUIREMENTS AND RECOMMENDATIONS UNAPPROVED BY THE DESIGNER.



NOTE: SECTION DETAILS ARE DESIGNATED BY A LETTER AND PLAN DETAILS ARE DESIGNATED BY A NUMBER.

DRAFT
NOT FOR CONSTRUCTION

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV

DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
VICINITY MAP, LOCATION MAP, AND SHEET INDEX

Hunters Point Shipyard
San Francisco, California

DWG. NO.
G1
SHEET 1 OF 13

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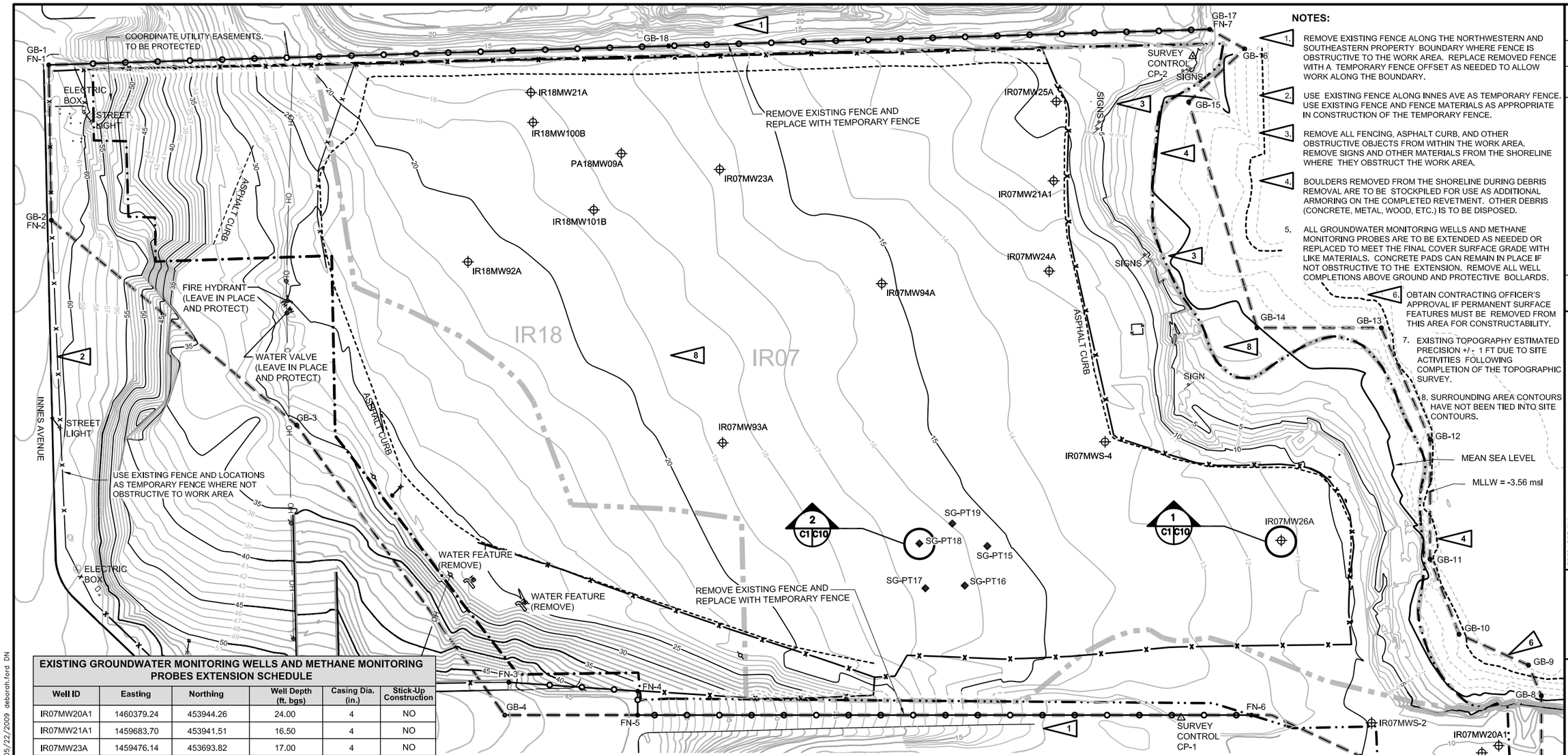

NOTES:

1. REMOVE EXISTING FENCE ALONG THE NORTHWESTERN AND SOUTHEASTERN PROPERTY BOUNDARY WHERE FENCE IS OBSTRUCTIVE TO THE WORK AREA. REPLACE REMOVED FENCE WITH A TEMPORARY FENCE OFFSET AS NEEDED TO ALLOW WORK ALONG THE BOUNDARY.
2. USE EXISTING FENCE ALONG INNES AVE AS TEMPORARY FENCE. USE EXISTING FENCE AND FENCE MATERIALS AS APPROPRIATE IN CONSTRUCTION OF THE TEMPORARY FENCE.
3. REMOVE ALL FENCING, ASPHALT CURB, AND OTHER OBSTRUCTIVE OBJECTS FROM WITHIN THE WORK AREA. REMOVE SIGNS AND OTHER MATERIALS FROM THE SHORELINE WHERE THEY OBSTRUCT THE WORK AREA.
4. BOULDERS REMOVED FROM THE SHORELINE DURING DEBRIS REMOVAL ARE TO BE STOCKPILED FOR USE AS ADDITIONAL ARMORING ON THE COMPLETED REVETMENT. OTHER DEBRIS (CONCRETE, METAL, WOOD, ETC.) IS TO BE DISPOSED.
5. ALL GROUNDWATER MONITORING WELLS AND METHANE MONITORING PROBES ARE TO BE EXTENDED AS NEEDED OR REPLACED TO MEET THE FINAL COVER SURFACE GRADE WITH LIKE MATERIALS. CONCRETE PADS CAN REMAIN IN PLACE IF NOT OBSTRUCTIVE TO THE EXTENSION. REMOVE ALL WELL COMPLETIONS ABOVE GROUND AND PROTECTIVE BOLLARDS.
6. OBTAIN CONTRACTING OFFICER'S APPROVAL IF PERMANENT SURFACE FEATURES MUST BE REMOVED FROM THIS AREA FOR CONSTRUCTABILITY.
7. EXISTING TOPOGRAPHY ESTIMATED PRECISION +/- 1 FT DUE TO SITE ACTIVITIES FOLLOWING COMPLETION OF THE TOPOGRAPHIC SURVEY.
8. SURROUNDING AREA CONTOURS HAVE NOT BEEN TIED INTO SITE CONTOURS.

EXISTING GROUNDWATER MONITORING WELLS AND METHANE MONITORING PROBES EXTENSION SCHEDULE

Well ID	Easting	Northing	Well Depth (ft. bgs)	Casing Dia. (in.)	Stick-Up Construction
IR07MW20A1	1460379.24	453944.26	24.00	4	NO
IR07MW21A1	1459683.70	453941.51	16.50	4	NO
IR07MW23A	1459476.14	453693.82	17.00	4	NO
IR07MW24A	1459749.67	453884.37	15.00	4	YES
IR07MW25A	1459624.70	453990.88	18.00	4	YES
IR07MW26A	1460093.30	453900.68	15.00	4	YES
IR07MW93A	1459686.30	453533.20	29.00	2	NO
IR07MW94A	1459659.70	453749.30	25.00	2	NO
IR07MWS-2	1460286.15	453860.98	15.50	4	YES
IR07MWS-4	1459913.20	453825.23	16.00	4	YES
IR07P20A	1460374.65	453927.21	25.00	2	NO
IR18MW100B	1459329.10	453579.54	47.00	4	NO
IR18MW101B	1459432.00	453573.70	45.00	4	NO
IR18MW21A	1459304.90	453595.74	20.00	4	NO
IR18MW92A	1459396.70	453446.90	27.00	2	NO
PA18MW09A	1459405.47	453628.25	25.00	4	NO
SG-PT15	1459922.63	453673.40	3.00	TUBE	NO
SG-PT16	1459939.27	453632.67	3.00	TUBE	NO
SG-PT17	1459917.88	453601.10	3.00	TUBE	NO
SG-PT18	1459880.20	453623.16	3.00	TUBE	NO
SG-PT19	1459884.61	453660.16	3.00	TUBE	NO

CLEARING AND GRUBBING CONTROL POINTS

Point ID	Easting	Northing
GB-1	1458996.94	453244.69
GB-2	1459116.91	453154.18
GB-3	1459419.24	453219.12
GB-4	1459764.15	453204.97
GB-5	1460273.78	453857.25
GB-6	1460376.47	453777.02
GB-7	1460484.04	453914.71
GB-8	1460366.54	454006.50
GB-9	1460335.57	454014.91
GB-10	1460270.80	453980.39
GB-11	1460196.05	454003.03
GB-12	1460105.13	454074.42
GB-13	1459990.79	454103.70
GB-14	1459916.77	454008.96
GB-15	1459703.93	454091.38
GB-16	1459696.86	454165.65
GB-17	1459661.06	454150.64
GB-18	1459351.58	453728.48

TEMPORARY FENCE CONTROL POINTS

Point ID	Easting	Northing
FN-1	1458996.94	453244.69
FN-2	1459116.91	453154.18
FN-3	1459741.53	453227.66
FN-4	1459825.05	453320.55
FN-5	1459843.31	453306.28
FN-6	1460208.68	453773.94
FN-7	1459661.06	454150.64

LEGEND

- IR SITE 7 BOUNDARY
- IR SITE 18 BOUNDARY
- EXTENT OF RESTRICTIONS RELATED TO RADIONUCLIDES
- EXISTING MAJOR CONTOUR (5 FT.)
- EXISTING MINOR CONTOUR (1 FT.)
- ASPHALT CURB (REMOVE)
- OH — OVERHEAD POWER LINE (PROTECT DURING CONSTRUCTION)
- EXISTING FENCE
- EXISTING FENCE (REMOVE)
- TEMPORARY FENCE (TO BE INSTALLED DURING CONSTRUCTION)
- APPROXIMATE LIMITS OF CLEARING AND GRUBBING AND DEBRIS REMOVAL
- SURVEY CONTROL POINT
- UTILITY FEATURE
- UTILITY POLE (REMOVE)
- UTILITY POLE (LEAVE IN PLACE)
- WATER FEATURE
- MONITORING WELL (PROTECT AND EXTEND)
- METHANE MONITORING PROBE (PROTECT AND EXTEND)
- GB-5 GRUBBING BOUNDARY CONTROL POINT
- FN-6 TEMPORARY FENCE CONTROL POINT

SURVEY CONTROL DATUM

HORIZONTAL (BASIS OF BEARINGS): NAD27 ZONE-III (HUNTERS POINT WEST 1 PID HT0613) USFT.

VERTICAL (BENCH MARK): NGVD 29 LESS CORRECTION 7.76 FEET MSL

50' 0 50' 100'

SCALE: 1" = 50'

DRAFT NOT FOR CONSTRUCTION

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV

DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: -
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA
BRAC PMO WEST

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SITE PLAN - CLEARING, GRUBBING, SURFACE DEBRIS REMOVAL AND WELL AND PROBE EXTENSIONS

Hunters Point Shipyard
San Francisco, California

DWG. NO.
C1
SHEET 2 OF 13

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NOTES:

1. WITHIN RADIOLOGICALLY RESTRICTED AREA EXCAVATE ALONG NORTHWEST AND SOUTHEAST BOUNDARY TO 3 FT BGS AND SLOPE BACK ONTO SITE AT SLOPE 3H:1V.
2. WITHIN THE NON-RADIOLOGICALLY RESTRICTED AREA EXCAVATE ALONG NORTHWEST AND SOUTHEAST BOUNDARY TO 2 FT BGS AND SLOPE BACK ONTO SITE AT 3H:1V.
3. EXCAVATED SOIL AND SEDIMENT PLACEMENT ZONE. GRADING BASED ON ESTIMATED VOLUME OF MATERIAL REMOVED FROM ALONG THE SITE BOUNDARY AND SHORELINE. VOLUME VARIABLE AS CONTAMINATED MATERIAL WILL BE REMOVED AND DISPOSED OF OFF SITE. COMPACTION 90% OR GREATER OF MAXIMUM DENSITY BASED ON MODIFIED PROCTOR TESTING.
4. GRADE COVER PORTION OF SITE TO INCORPORATE AVAILABLE EXCAVATION SPOILS TO THE EXTENT POSSIBLE WITH CONSIDERATION TO THE FINAL COVER GRADE . FINISHED SURFACE GRADE AS SHOWN CONSTITUTES BOTTOM OF COVER .
5. EXCAVATED SOIL AND SEDIMENT REQUIRES SCREENING FOR RADIONUCLIDES PRIOR TO PLACEMENT ON SITE. MINIMIZE EXCAVATION VOLUMES TO THE EXTENT POSSIBLE.
6. GRADE UPPER SHORELINE TO 4H:1V. BREAK IN SLOPE AT POINTS B3, E4, F3, G3, AND H3 AND THEN FOLLOW EXISTING GRADE.
7. SHORELINE EXCAVATION AND GRADING MUST EXTEND TO AT LEAST THE SITE BOUNDARY.
8. USE FILL MATERIAL ALONG THE SHORELINE WHERE NECESSARY TO MEET THE GRADING PLAN. USE FILL SIMILAR TO EXISTING SHORELINE MATERIAL OR FILTER LAYER CRUSHED ROCK.
9. SHORELINE EXCAVATIONS ARE NOT TO BE EXPOSED TO INCOMING TIDAL WATER WITHOUT STABILIZATION.

SUBGRADE LAYER CONTROL POINT COORDINATES			
CONTROL POINT	EASTING	NORTHING	ELEV. (FT.)
SGL-52	1459624.74	454059.46	7.00
SGL-53	1459037.27	453275.10	58.00
SGL-54	1459821.66	453319.71	36.00
SGL-55	1460046.84	453602.85	13.00

SITE BOUNDARY CONTROL POINT COORDINATES		
CONTROL POINT	EASTING	NORTHING
BCP-1	1459026.47	453275.75
BCP-2	1459081.35	453234.11
BCP-3	1459101.36	453258.32
BCP-4	1459160.10	453215.07
BCP-5	1459176.57	453234.76
BCP-6	1459210.46	453208.94
BCP-7	1459310.84	453346.76
BCP-8	1459450.21	453242.17
BCP-9	1459741.14	453239.37
BCP-10	1459811.27	453331.97
BCP-11	1459833.74	453317.59
BCP-12	1459896.48	453401.49
BCP-13	1460063.06	453608.80
BCP-14	1460176.75	453751.84
BCP-15	1460243.50	453798.03
BCP-16	1460291.50	453862.25
BCP-17	1460383.75	453795.81
BCP-18	1460457.50	453900.59
BCP-19	1460352.74	453975.89
BCP-20	1460306.13	453942.47
BCP-21	1460232.38	453960.75
BCP-22	1460194.37	453997.75
BCP-23	1460148.13	454028.06
BCP-24	1460124.63	454053.06
BCP-25	1460041.38	454077.34
BCP-26	1459991.75	454078.34

SITE BOUNDARY CONTROL POINT COORDINATES		
CONTROL POINT	EASTING	NORTHING
BCP-27	1459970.62	454064.34
BCP-28	1459953.38	453979.91
BCP-29	1459947.75	453969.75
BCP-30	1459923.88	453958.75
BCP-31	1459875.75	453969.34
BCP-32	1459783.63	453987.34
BCP-33	1459695.62	454062.34
BCP-34	1459698.63	454106.06
BCP-35	1459694.00	454137.00
BCP-36	1459681.00	454153.72
BCP-37	1459359.41	453722.67
BCP-38	1459154.98	453448.28
SLF-39	1459348.36	453345.68
BCP-40	1459450.19	453397.33
BCP-41	1459492.98	453410.62
BCP-42	1459541.68	453413.57
BCP-43	1459643.51	453381.10
BCP-44	1459704.01	453451.94
BCP-45	1459755.66	453502.11
BCP-46	1460061.58	453683.68
BCP-47	1460082.98	453747.32
BCP-48	1460108.60	453761.74
BCP-49	1460124.07	453787.53
BCP-50	1460226.16	453850.62
BCP-51	1460327.73	453936.20

REVETMENT CONTROL POINT COORDINATES			
POINT	EASTING	NORTHING	ELEVATION (FT.)
A-2	1459672.54	454113.72	5.04
A-3	1459706.42	454126.26	-3.88
B-2	1459674.56	453974.29	9.36
B-3	1459706.81	454015.55	-3.50
B-4	1459722.49	454035.63	-4.42
C-2	1459770.28	453946.01	10.00
C-3	1459784.90	454001.11	-3.90
D-2	1459824.09	453936.29	10.40
D-3	1459832.53	453995.31	-4.21
E-2	1459956.37	453879.30	11.06
E-4	1459944.99	453923.84	-1.26
E-5	1459935.47	453961.05	-3.50
F-2	1460021.68	453975.56	8.00
F-3	1460006.79	454014.55	2.02
F-4	1459983.97	454074.31	-5.77
G-2	1460084.02	453985.89	8.00
G-3	1460087.85	454040.56	-0.46
G-4	1460087.85	454065.03	-5.93
H-2	1460165.87	453968.07	3.47
H-3	1460171.19	453997.18	-3.50
H-4	1460173.69	454010.87	-4.69

REVETMENT CONTROL POINT COORDINATES			
POINT	EASTING	NORTHING	ELEVATION (FT.)
I-2	1460262.82	453889.47	9.00
I-3	1460268.13	453946.18	-5.15
J-2	1460356.91	453946.56	8.15
J-3	1460299.59	453991.73	-8.54

SURVEY CONTROL DATUM

HORIZONTAL (BASIS OF BEARINGS): NAD27 ZONE-III (HUNTERS POINT WEST 1 PID HT0613) USFT.

VERTICAL (BENCH MARK): NGVD 29 LESS CORRECTION 7.76 FEET MSL

LEGEND

- EXTENT OF COVER BOUNDARY
- EXTENT OF RESTRICTIONS RELATED TO RADIONUCLIDES
- EXISTING CONTOUR
- EXISTING FENCE
- PROPOSED SUBGRADE CONTOUR
- PROPOSED SUBGRADE CONTOUR INDICATING AREA TO PLACE EXCAVATED SOIL AND ANTICAPTED FILL AREA
- PROPOSED REVETMENT CONTOUR (SEE SHEET C-3 FOR CONTROL COORDINATES)
- TEMPORARY FENCE (DURING CONSTRUCTION)
- BCP-15 SITE CONTROL POINT
- SGL-53 SUBGRADE EXCAVATION CONTROL POINT

50' 0 50' 100'
SCALE: 1" = 50'

DRAFT NOT FOR CONSTRUCTION

REVISIONS

SYMBOL	DESCRIPTION	PREP.BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV Consulting, Engineers and Scientists

DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
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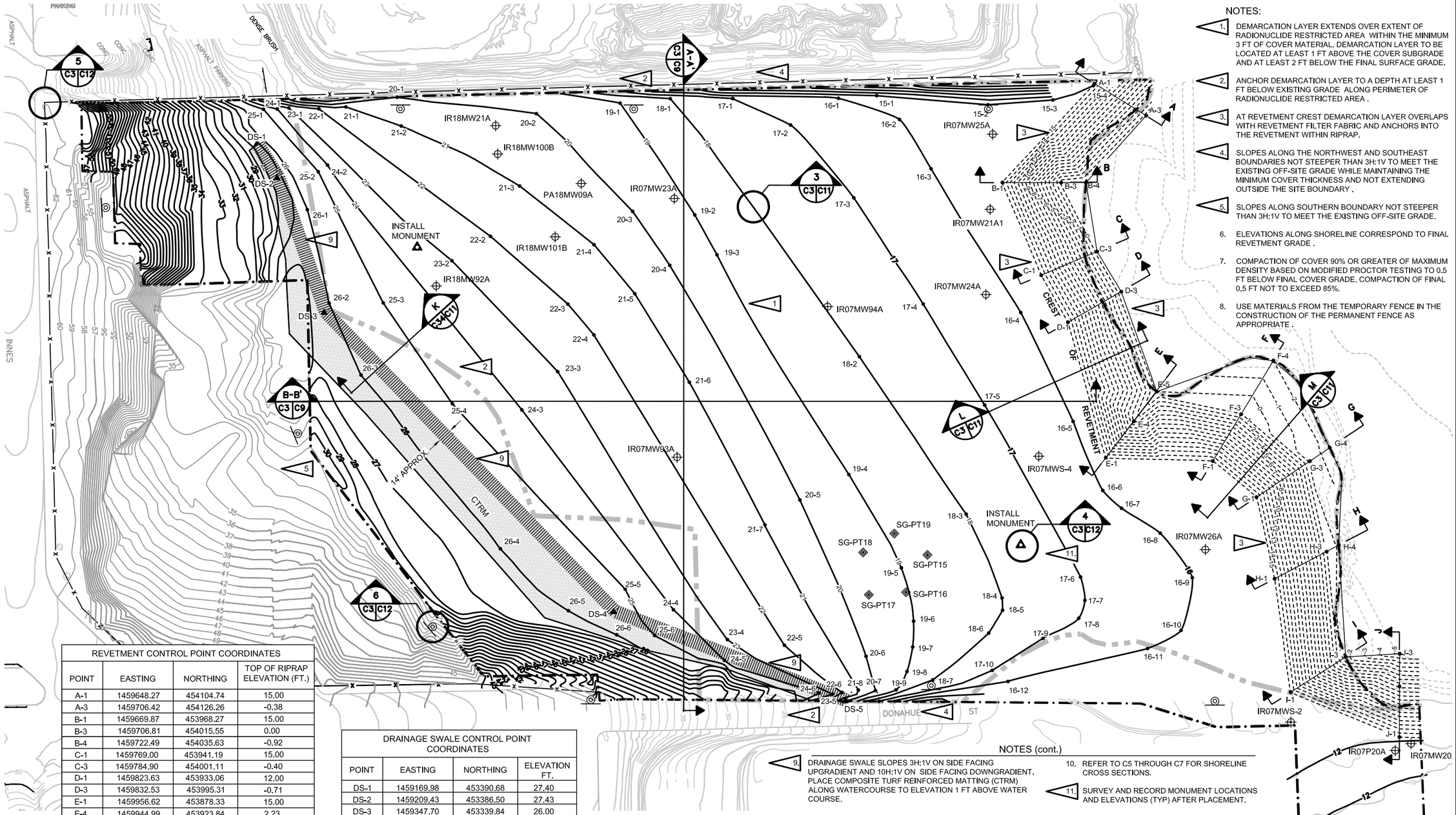
SAN DIEGO, CALIFORNIA
BRAC PMO WEST

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SOIL COVER AND REVETMENT SUBGRADE PLAN

Hunters Point Shipyard
San Francisco, California

DWG. NO.
C2
SHEET 3 OF 13

R:\Navy Hunters-Pt\Parcel B\r07_r08\Preliminary Design\ C2- Base Grading Plan.dwg 05/22/2009 deborah.ford DN



NOTES:

1. DEMARCATION LAYER EXTENDS OVER EXTENT OF RADIONUCLIDE RESTRICTED AREA WITHIN THE MINIMUM 3 FT OF COVER MATERIAL. DEMARCATION LAYER TO BE LOCATED AT LEAST 1 FT ABOVE THE COVER SUBGRADE AND AT LEAST 2 FT BELOW THE FINAL SURFACE GRADE.
2. ANCHOR DEMARCATION LAYER TO A DEPTH AT LEAST 1 FT BELOW EXISTING GRADE ALONG PERIMETER OF RADIONUCLIDE RESTRICTED AREA .
3. AT REVETMENT CREST DEMARCATION LAYER OVERLAPS WITH REVETMENT FILTER FABRIC AND ANCHORS INTO THE REVETMENT WITHIN RIPRAP.
4. SLOPES ALONG THE NORTHWEST AND SOUTHEAST BOUNDARIES NOT STEEPER THAN 3H:1V TO MEET THE EXISTING OFF-SITE GRADE WHILE MAINTAINING THE MINIMUM COVER THICKNESS AND NOT EXTENDING OUTSIDE THE SITE BOUNDARY .
5. SLOPES ALONG SOUTHERN BOUNDARY NOT STEEPER THAN 3H:1V TO MEET THE EXISTING OFF-SITE GRADE.
6. ELEVATIONS ALONG SHORELINE CORRESPOND TO FINAL REVETMENT GRADE .
7. COMPACTION OF COVER 90% OR GREATER OF MAXIMUM DENSITY BASED ON MODIFIED PROCTOR TESTING TO 0.5 FT BELOW FINAL COVER GRADE. COMPACTION OF FINAL 0.5 FT NOT TO EXCEED 85%.
8. USE MATERIALS FROM THE TEMPORARY FENCE IN THE CONSTRUCTION OF THE PERMANENT FENCE AS APPROPRIATE .

NOTES (cont.)

9. DRAINAGE SWALE SLOPES 3H:1V ON SIDE FACING UPGRADIENT AND 10H:1V ON SIDE FACING DOWNGRADIENT. PLACE COMPOSITE TURF REINFORCED MATTING (CTRM) ALONG WATERCOURSE TO ELEVATION 1 FT ABOVE WATER COURSE.
10. REFER TO C5 THROUGH C7 FOR SHORELINE CROSS SECTIONS.
11. SURVEY AND RECORD MONUMENT LOCATIONS AND ELEVATIONS (TYP) AFTER PLACEMENT.

REVETMENT CONTROL POINT COORDINATES

POINT	EASTING	NORTHING	TOP OF RIPRAP ELEVATION (FT.)
A-1	1459648.27	454104.74	15.00
A-3	1459706.42	454126.26	-0.38
B-1	1459669.87	453968.27	15.00
B-3	1459706.81	454015.55	0.00
B-4	1459722.49	454035.63	-0.92
C-1	1459769.00	453941.19	15.00
C-3	1459784.90	454001.11	-0.40
D-1	1459823.63	453933.06	12.00
D-3	1459832.53	453995.31	-0.71
E-1	1459956.62	453878.33	15.00
E-4	1459944.99	453923.84	2.23
E-5	1459935.47	453961.05	0.00
F-1	1460026.69	453962.45	15.00
F-3	1460006.79	454014.55	1.02
F-4	1459983.97	454074.31	-2.27
G-1	1460083.25	453974.91	15.00
G-3	1460087.85	454040.56	-1.46
G-4	1460087.85	454065.03	-2.43
H-1	1460160.41	453938.16	15.00
H-3	1460171.19	453997.18	0.00
H-4	1460173.69	454010.87	-1.19
I-1	1460261.91	453879.72	15.00
I-3	1460268.13	453946.18	-1.65
J-1	1460366.54	453939.02	15.00
J-3	1460299.59	453991.73	-5.04

DRAINAGE SWALE CONTROL POINT COORDINATES

POINT	EASTING	NORTHING	ELEVATION FT.
DS-1	1459169.98	453390.68	27.40
DS-2	1459209.43	453386.50	27.43
DS-3	1459347.70	453339.84	26.00
DS-4	1459771.01	453384.65	25.51
DS-5	1459988.70	453515.24	20.00

REVETMENT CROSS SECTION LOCATION

CROSS SECTION	SHEET	CROSS SECTION	SHEET
A	C-5	F	C-6
B	C-5	G	C-7
C	C-5	H	C-7
D	C-6	I	C-7
E	C-6	J	C-7

LEGEND

- EXTENT OF COVER BOUNDARY
- EXTENT OF RESTRICTIONS RELATED TO RADIONUCLIDES
- EXISTING CONTOUR
- PROPOSED FINAL COVER CONTOUR
- PROPOSED REVETMENT CONTOUR
- PERMANENT FENCE
- COMPOSITE TURF REINFORCED MATTING (CTRM)
- A-1 REVETMENT CONTROL POINT
- 22-5 FINAL COVER CONTROL POINT (SEE SHEET C4 FOR COORDINATES)
- MONITORING WELL
- METHANE MONITORING PROBE
- DRAINAGE SWALE
- SIGN
- SURVEY MONUMENT
- DS-1 DRAINAGE CONTROL POINT

SURVEY CONTROL DATUM

HORIZONTAL (BASIS OF BEARINGS): NAD27 ZONE-III (HUNTERS POINT WEST 1 PID HT0613) USFT.

VERTICAL (BENCH MARK): NGVD 29 LESS CORRECTION 7.76 FEET MSL

50' 0 50' 100'

SCALE: 1" = 50'

DRAFT
NOT FOR CONSTRUCTION

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

REVISIONS

PREPARED BY:
DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

ChaduxTt JV
Consulting Engineers and Scientists

SIZE D
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SOIL COVER AND SHORELINE REVETMENT
FINAL GRADING PLAN

Hunters Point Shipyard
San Francisco, California

DWG. NO.
C3
SHEET 4 OF 13

ADDITIONAL REVETMENT BOUNDARY CONTROL POINT COORDINATES			
POINT	EASTING	NORTHING	ELEVATION
15-1	1459520.68	453921.63	15.00
15-2	1459598.04	454005.55	15.00
15-3	1459635.06	454060.88	15.00
15-4	1459649.00	454102.60	15.00
16-1	1459498.70	453889.15	16.00
16-2	1459554.22	453925.04	16.00
16-3	1459613.74	453919.42	16.00
16-4	1459786.16	453901.18	16.00
16-5	1459906.78	453874.85	16.00
16-6	1459981.12	453855.29	16.00
16-7	1460007.31	453859.17	16.00
16-8	1460051.68	453874.67	16.00
16-9	1460107.81	453872.50	16.00
16-10	1460143.12	453830.20	16.00
16-11	1460136.64	453791.86	16.00
16-12	1460075.35	453658.66	16.00
17-1	1459432.35	453803.90	17.00
17-2	1459490.07	453833.78	17.00
17-3	1459588.62	453838.87	17.00
17-4	1459717.87	453827.97	17.00
17-5	1459837.97	453813.87	17.00
17-6	1460036.90	453782.85	17.00
17-7	1460058.39	453771.68	17.00
17-8	1460068.91	453755.49	17.00
17-9	1460062.66	453714.03	17.00
17-10	1460056.49	453652.90	17.00
18-1	1459393.06	453753.40	18.00
18-2	1459720.03	453743.38	18.00
18-3	1459914.16	453730.30	18.00
18-4	1460004.30	453706.46	18.00
18-5	1460014.51	453699.19	18.00
18-6	1460024.20	453673.62	18.00
18-7	1460026.72	453599.13	18.00
19-1	1459365.11	453710.21	19.00
19-2	1459502.15	453699.99	19.00
19-3	1459548.38	453692.75	19.00
19-4	1459808.48	453660.72	19.00
19-5	1459916.67	453644.22	19.00
19-6	1459967.32	453620.60	19.00
19-7	1459987.56	453603.61	19.00
19-8	1460003.67	453583.53	19.00
19-9	1460011.65	453563.23	19.00

ADDITIONAL REVETMENT BOUNDARY CONTROL POINT COORDINATES			
POINT	EASTING	NORTHING	ELEVATION
20-1	1459220.06	453534.21	20.00
20-2	1459320.94	453636.06	20.00
20-3	1459460.27	453652.11	20.00
20-4	1459527.12	453648.09	20.00
20-5	1459798.05	453605.24	20.00
20-6	1459965.66	453560.11	20.00
20-7	1459999.24	453546.18	20.00
21-1	1459195.51	453486.80	21.00
21-2	1459245.79	453519.42	21.00
21-3	1459368.76	453577.09	21.00
21-4	1459462.80	453600.02	21.00
21-5	1459527.97	453602.01	21.00
21-6	1459633.58	453590.31	21.00
21-7	1459796.10	453561.37	21.00
21-8	1459988.09	453532.65	21.00
22-1	1459180.07	453463.88	22.00
22-2	1459390.84	453521.86	22.00
22-3	1459494.17	453541.55	22.00
22-4	1459535.33	453543.17	22.00
22-5	1459905.43	453501.33	22.00
22-6	1459979.74	453518.09	22.00
23-1	1459160.56	453440.29	23.00
23-2	1459386.27	453475.43	23.00
23-3	1459542.26	453490.87	23.00
23-4	1459864.99	453458.90	23.00
23-5	1459975.16	453509.34	23.00
24-1	1459153.99	453430.19	24.00
24-2	1459230.88	453435.41	24.00
24-3	1459550.50	453437.92	24.00
24-4	1459806.98	453434.21	24.00
24-5	1459879.87	453443.41	24.00
24-6	1459965.77	453499.12	24.00
25-1	1459145.58	453418.93	25.00
25-2	1459230.41	453423.80	25.00
25-3	1459377.01	453393.57	25.00
25-4	1459501.67	453385.79	25.00
26-5	1459759.83	453408.33	25.00
25-6	1459815.85	453402.89	25.00
26-1	1459254.10	453391.12	26.00
26-2	1459343.27	453349.78	26.00
26-3	1459421.08	453330.25	26.00
26-4	1459648.81	453333.20	26.00
26-5	1459741.55	453348.98	26.00
26-6	1459791.40	453372.70	26.00

REVISIONS

SYMBOL	DESCRIPTION	PREP.BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV

DESIGNED BY: IBL
DRAWN BY: DMF
CHECKED BY: SWF

RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
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SCALE REDUCED ACCORDINGLY

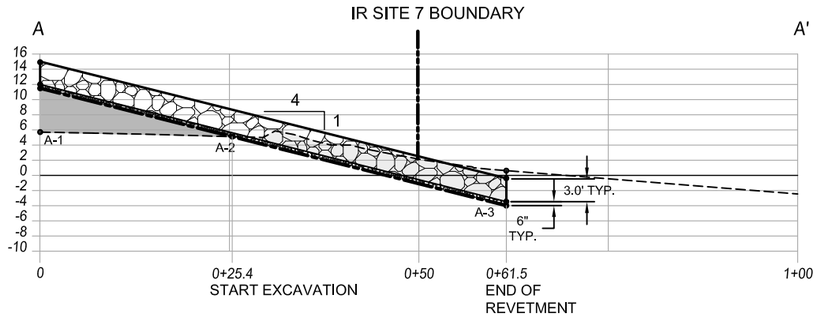
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT CONTROL POINTS

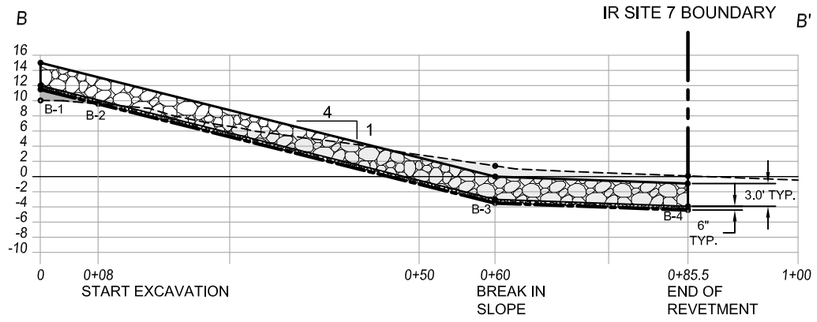
Hunters Point Shipyard
San Francisco, California

DWG. NO.
C4

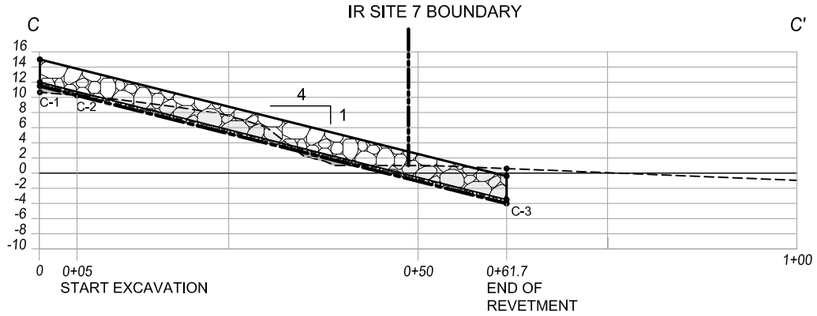
SHEET 5 OF 13



POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
A-1	1459648.27	454104.74	1.71	15.00	12.00	11.50
A-2	1459672.54	454113.72	5.04	–	–	–
A-3	1459706.42	454126.26	0.62	-0.38	-3.38	-3.88



POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
B-1	1459669.87	453968.27	10.04	15.00	12.00	11.50
B-2	1459674.56	453974.29	9.36	--	–	–
B-3	1459706.81	454015.55	1.41	0.00	-3.00	-3.50
B-4	1459722.49	454035.63	0.08	-0.92	-3.92	-4.42



POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
C-1	1459769.00	453941.19	10.67	15.00	12.00	11.50
C-2	1459770.28	453946.01	10.00	--	–	–
C-3	1459784.90	454001.11	0.60	-0.40	-3.40	-3.90

NOTE:
ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

NOTES:

1. POINTS A-2, B-2, AND C-2 CORRESPOND TO SHORELINE EXCAVATION START. GRADE ACCORDINGLY SLOPE 4H:1V.
2. AT ELEVATIONS ABOVE MHHW COVER FILL MATERIAL TO BE USED.
3. COMPACT FILL UNDER REVETMENT TO AT LEAST 90% OF MAX. DRY DENSITY BASED ON PROCTOR ASTM D1557.
4. GRADE UPPER BANK OF SHORELINE TO A SLOPE OF 4H:1V AND EXTEND GRADE OFF SHORE TO A POINT WHERE THE COMPLETED REVETMENT TOE WILL BE AT LEAST 1 FT BELOW THE EXISTING GRADE. WHERE NECESSARY EXTEND THE EXCAVATION TO THE PROPERTY BOUNDARY FOLLOWING THE EXISTING GRADE TO A DEPTH SO THAT THE COMPLETED REVETMENT TOE WILL BE AT LEAST 1 FT BELOW THE EXISTING GRADE AT THE PROPERTY BOUNDARY.
5. AT ELEVATIONS LESS THAN MHHW FILL MATERIAL USED TO MEET THE PRESCRIBED GRADE SHOULD BE OF SIMILAR MATERIAL AS EXISTING OR FILTER ROCK MAY BE USED. IF FILTER ROCK IS USED COMPACTION IS NOT NECESSARY.
6. EXCAVATED SOIL AND SEDIMENT REQUIRES SCREENING FOR RADIONUCLIDES PRIOR TO PLACEMENT ON SITE. MINIMIZE EXCAVATION VOLUMES TO THE EXTENT POSSIBLE.
7. SHORELINE EXCAVATIONS ARE NOT TO BE EXPOSED TO INCOMING TIDAL WATER WITHOUT STABILIZATION.
8. CONSTRUCT REVETMENT OFF SHORE AND ALONG SHORE TO AT LEAST THE PROPERTY BOUNDARY.
9. CREST OF REVETMENT MEETS THE FINAL COVER GRADE AT ELEVATION +15 FT MSL.

TIDAL RANGES AND ELEVATION DATUMS

Tidal Datum	Reference Datum		
	MLLW	NGVD 1929	MSL
Extreme	+9.7	+6.58	+6.14
MHHW	+6.73	+3.61	+3.17
MHW	+6.10	+2.98	+2.54
MSL	+3.56	+0.44	0
NGVD	+3.12	0	-0.44
MLW	+1.12	-2.06	-2.44
MLLW	0	-3.12	-3.56

LEGEND

- TOP OF RIPRAP
- EXISTING GRADE
- GEOTEXTILE FILTER FABRIC
- PROPOSED EXCAVATION AREA
- PROPOSED CLEAN FILL AREA
- PROPOSED RIPRAP (3' THICK)
- PROPOSED 6" FILTER LAYER

MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MSL	MEAN SEA LEVEL
NGVD	NATIONAL GEODETIC VERTICAL DATUM
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER

DRAFT
NOT FOR CONSTRUCTION

10' 0 10' 20'
SCALE IN FEET

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV

DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT
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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SHORELINE AND REVETMENT CROSS SECTIONS A, B, AND C

Hunters Point Shipyard
San Francisco, California

DWG. NO.
C5
SHEET 6 OF 12

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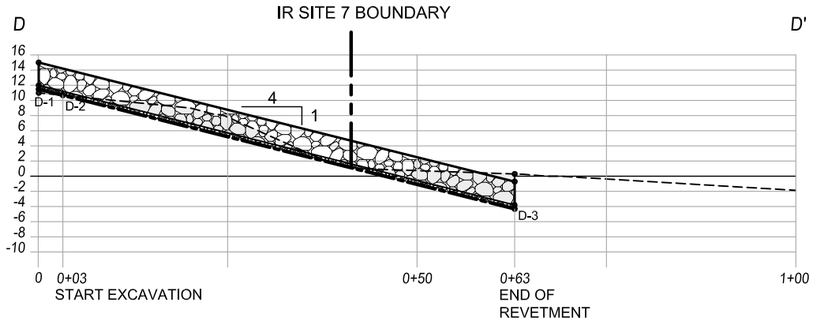

POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
D-1	1459823.63	453933.06	11.00	15.00	12.00	11.50
D-2	1459824.09	453936.29	10.40	–	–	–
D-3	1459832.53	453995.31	0.30	-0.71	-3.71	-4.21

POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
E-1	1459956.62	453878.33	11.28	15.00	12.00	11.50
E-2	1459956.37	453879.30	11.06	–	–	--
E-3	1459949.41	453906.53	4.16	–	–	--
E-4	1459944.99	453923.84	4.59	2.23	-0.76	-1.26
E-5	1459935.47	453961.05	1.00	0.00	-3.00	-3.50

POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
F-1	1460026.69	453962.45	9.46	15.00	12.00	11.50
F-2	1460021.68	453975.56	8.00	–	--	–
F-3	1460006.79	454014.55	2.02	1.02	-1.98	-2.52
F-4	1459983.97	454074.31	-1.27	-2.27	-5.27	-5.77

NOTE:
ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

TIDAL RANGES AND ELEVATION DATUMS

Tidal Datum	Reference Datum		
	MLLW	NGVD 1929	MSL
Extreme	+9.7	+6.58	+6.14
MHHW	+6.73	+3.61	+3.17
MHW	+6.10	+2.98	+2.54
MSL	+3.56	+0.44	0
NGVD	+3.12	0	-0.44
MLW	+1.12	-2.06	-2.44
MLLW	0	-3.12	-3.56

NOTES:

1. POINTS D-2, E-2, AND F-2 CORRESPOND TO SHORELINE EXCAVATION START. GRADE ACCORDINGLY SLOPE 4H:1V.
2. AT ELEVATIONS ABOVE MHHW COVER FILL MATERIAL TO BE USED.
3. COMPACT FILL UNDER REVETMENT TO AT LEAST 90% OF MAX. DRY DENSITY BASED ON PROCTOR ASTM D1557.
4. GRADE UPPER BANK OF SHORELINE TO A SLOPE OF 4H:1V AND EXTEND GRADE OFF SHORE TO A POINT WHERE THE COMPLETED REVETMENT TOE WILL BE AT LEAST 1 FT BELOW THE EXISTING GRADE. WHERE NECESSARY EXTEND THE EXCAVATION TO THE PROPERTY BOUNDARY FOLLOWING THE EXISTING GRADE TO A DEPTH SO THAT THE COMPLETED REVETMENT TOE WILL BE AT LEAST 1 FT BELOW THE EXISTING GRADE AT THE PROPERTY BOUNDARY.
5. AT ELEVATIONS LESS THAN MHHW FILL MATERIAL USED TO MEET THE PRESCRIBED GRADE SHOULD BE OF SIMILAR MATERIAL AS EXISTING OR FILTER ROCK MAY BE USED. IF FILTER ROCK IS USED COMPACTION IS NOT NECESSARY.
6. EXCAVATED SOIL AND SEDIMENT REQUIRES SCREENING FOR RADIONUCLIDES PRIOR TO PLACEMENT ON SITE. MINIMIZE EXCAVATION VOLUMES TO THE EXTENT POSSIBLE.
7. SHORELINE EXCAVATIONS ARE NOT TO BE EXPOSED TO INCOMING TIDAL WATER WITHOUT STABILIZATION.
8. CONSTRUCT REVETMENT OFF SHORE AND ALONG SHORE TO AT LEAST THE PROPERTY BOUNDARY.
9. CREST OF REVETMENT MEETS THE FINAL COVER GRADE AT ELEVATION +15 FT MSL.

LEGEND

- TOP OF RIPRAP
- EXISTING GRADE
- GEOTEXTILE FILTER FABRIC
- PROPOSED EXCAVATION AREA
- PROPOSED CLEAN FILL AREA
- PROPOSED RIPRAP (3' THICK)
- PROPOSED 6" FILTER LAYER

MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MSL	MEAN SEA LEVEL
NGVD	NATIONAL GEODETIC VERTICAL DATUM
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER

DRAFT
NOT FOR CONSTRUCTION

10' 0 10' 20'
SCALE IN FEET

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV Consulting, Engineers and Scientists
DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SHORELINE AND REVETMENT CROSS SECTIONS D, E, AND F

Hunters Point Shipyard
San Francisco, California

DWG. NO.
C6
SHEET 7 OF 12

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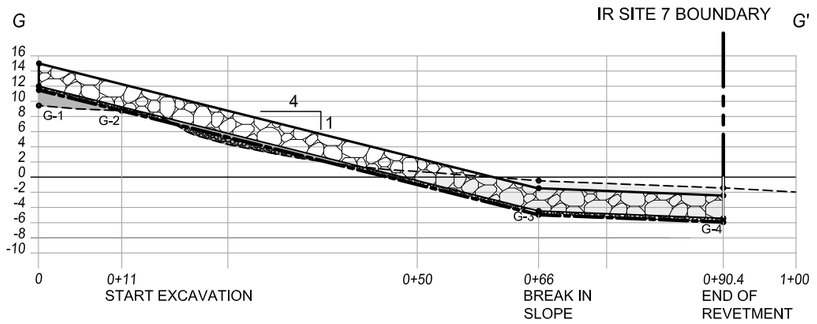
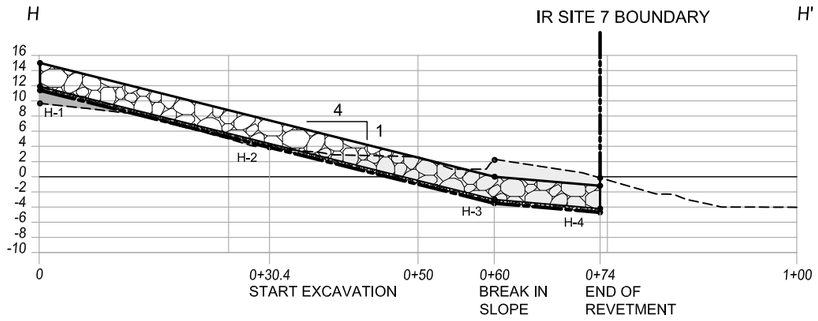
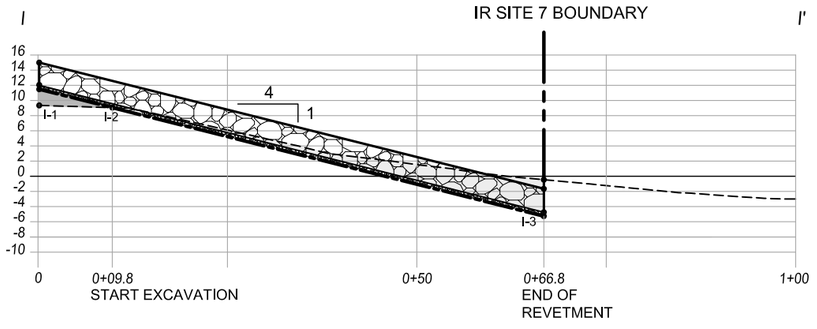


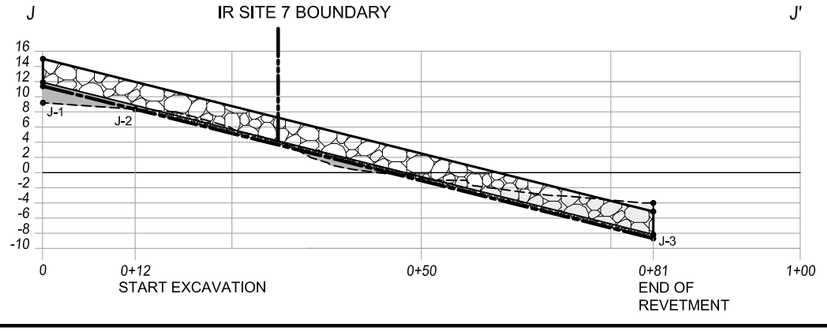
POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
G-1	1460083.25	453974.91	9.45	15.00	12.00	11.50
G-2	1460084.02	453985.89	8.00	--	–	–
G-3	1460087.85	454040.56	-0.46	-1.46	-4.46	-4.96
G-4	1460087.85	454065.03	-1.43	-2.43	-5.43	-5.93



POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
H-1	1460160.41	453938.16	9.67	15.00	12.00	11.50
H-2	1460165.87	453968.07	3.47	--	–	–
H-3	1460171.19	453997.18	2.21	0.00	-3.00	-3.50
H-4	1460173.69	454010.87	-0.19	-1.19	-4.19	-4.69



POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
I-1	1460261.91	453879.72	9.35	15.00	12.00	11.50
I-2	1460262.82	453889.47	9.00	--	–	–
I-3	1460268.13	453946.18	-0.65	-1.65	-4.65	-5.15



POINT	EASTING	NORTHING	ELEVATION			
			EXISTING GRADE	TOP OF RIPRAP	TOP OF FILTER LAYER	BOTTOM OF FILTER LAYER
J-1	1460366.54	453939.02	9.21	15.00	12.00	11.50
J-2	1460356.91	453946.56	8.15	–	--	–
J-3	1460299.59	453991.73	-4.04	-5.04	-8.04	-8.54

NOTE:
ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

NOTES:

1. POINTS G-2, H-2, I-2, AND J-2 CORRESPOND TO SHORELINE EXCAVATION START. GRADE ACCORDINGLY SLOPE 4H:1V.
2. AT ELEVATIONS ABOVE MHHW COVER FILL MATERIAL TO BE USED.
3. COMPACT FILL UNDER REVETMENT TO AT LEAST 90% OF MAX. DRY DENSITY BASED ON PROCTOR ASTM D1557.
4. GRADE UPPER BANK OF SHORELINE TO A SLOPE OF 4H:1V AND EXTEND GRADE OFF SHORE TO A POINT WHERE THE COMPLETED REVETMENT TOE WILL BE AT LEAST 1 FT BELOW THE EXISTING GRADE. WHERE NECESSARY EXTEND THE EXCAVATION TO THE PROPERTY BOUNDARY FOLLOWING THE EXISTING GRADE TO A DEPTH SO THAT THE COMPLETED REVETMENT TOE WILL BE AT LEAST 1 FT BELOW THE EXISTING GRADE AT THE PROPERTY BOUNDARY.
5. AT ELEVATIONS LESS THAN MHHW FILL MATERIAL USED TO MEET THE PRESCRIBED GRADE SHOULD BE OF SIMILAR MATERIAL AS EXISTING OR FILTER ROCK MAY BE USED. IF FILTER ROCK IS USED COMPACTION IS NOT NECESSARY.
6. EXCAVATED SOIL AND SEDIMENT REQUIRES SCREENING FOR RADIONUCLIDES PRIOR TO PLACEMENT ON SITE. MINIMIZE EXCAVATION VOLUMES TO THE EXTENT POSSIBLE.
7. SHORELINE EXCAVATIONS ARE NOT TO BE EXPOSED TO INCOMING TIDAL WATER WITHOUT STABILIZATION.
8. CONSTRUCT REVETMENT OFF SHORE AND ALONG SHORE TO AT LEAST THE PROPERTY BOUNDARY.
9. CREST OF REVETMENT MEETS THE FINAL COVER GRADE AT ELEVATION +15 FT MSL.

TIDAL RANGES AND ELEVATION DATUMS

Tidal Datum	Reference Datum		
	MLLW	NGVD 1929	MSL
Extreme	+9.7	+6.58	+6.14
MHHW	+6.73	+3.61	+3.17
MHW	+6.10	+2.98	+2.54
MSL	+3.56	+0.44	0
NGVD	+3.12	0	-0.44
MLW	+1.12	-2.06	-2.44
MLLW	0	-3.12	-3.56

LEGEND

- TOP OF RIPRAP
- EXISTING GRADE
- GEOTEXTILE FILTER FABRIC
- PROPOSED EXCAVATION AREA
- PROPOSED CLEAN FILL AREA
- PROPOSED RIPRAP (3' THICK)
- PROPOSED 6" FILTER LAYER

MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MSL	MEAN SEA LEVEL
NGVD	NATIONAL GEODETIC VERTICAL DATUM
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER

DRAFT
NOT FOR CONSTRUCTION

10' 0 10' 20'
SCALE IN FEET

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV
DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SHORELINE AND REVETMENT CROSS SECTIONS G, H, I, AND J

Hunters Point Shipyard
San Francisco, California

DWG. NO.
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SHEET 8 OF 12

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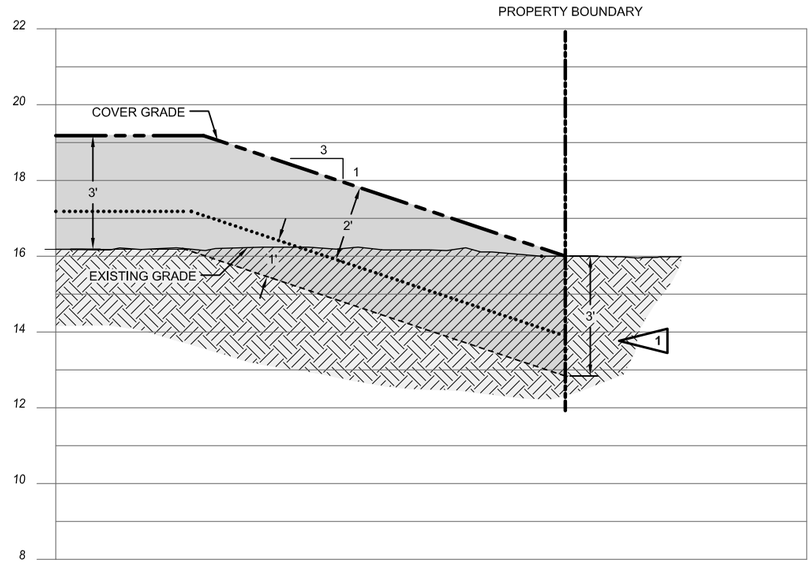
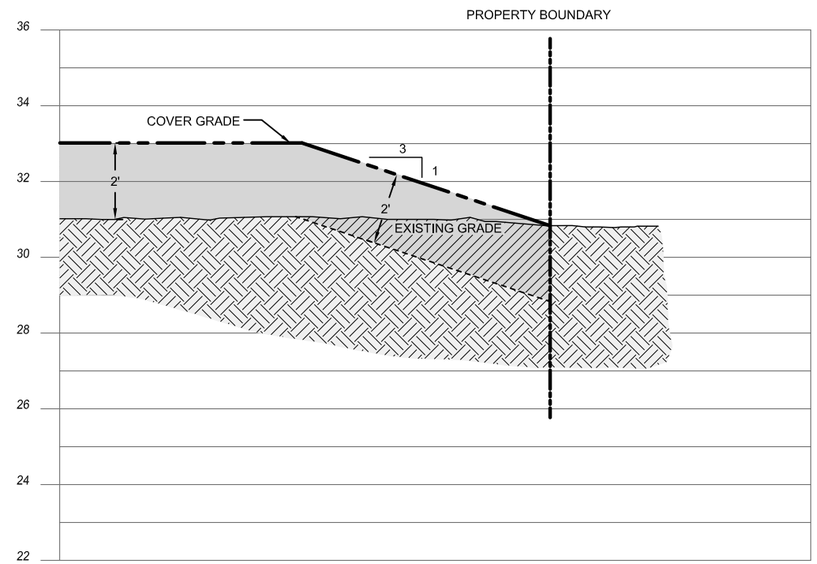


A / C2 C8 WEST BOUNDARY 3 FT. COVER CROSS-SECTION (TYP.)

SCALE: 1" = 2'-0"



B / C2 C8 WEST BOUNDARY 2 FT. COVER CROSS-SECTION (TYP.)

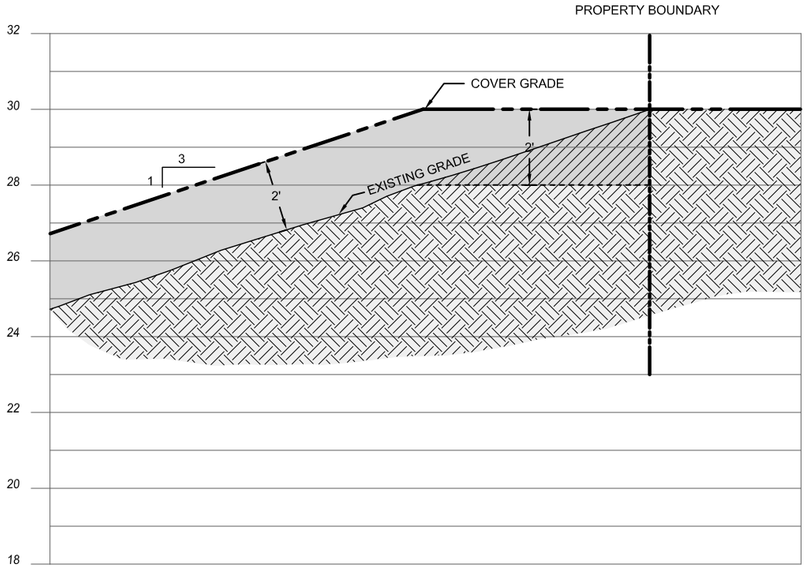
SCALE: 1" = 2'-0"

NOTE:

1. DEMARCATION LAYER TO EXTEND TO SITE BOUNDARY.
2. COVER FILL COMPOSED OF COMPACTED SOIL LAYER AND EROSION RESISTANT LAYER.

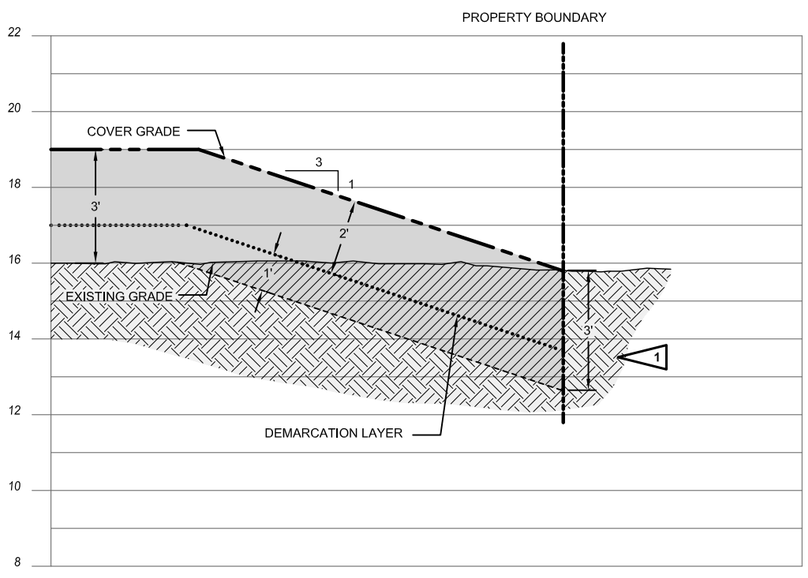
LEGEND

- EXISTING SURFACE
- DEMARCATION LAYER
- FINAL COVER SURFACE
- EXCAVATION SURFACE
- EXISTING
- PROPOSED COVER FILL
- PROPOSED EXCAVATION



C / C2 C8 EAST BOUNDARY 2 FT. COVER CROSS-SECTION (TYP.)

SCALE: 1" = 2'-0"



D / C2 C8 EAST BOUNDARY 3 FT. COVER CROSS-SECTION (TYP.)

SCALE: 1" = 2'-0"

TIDAL RANGES AND ELEVATION DATUMS

Tidal Datum	Reference Datum		
	MLLW	NGVD 1929	MSL
Extreme	+9.7	+6.58	+6.14
MHHW	+6.73	+3.61	+3.17
MHW	+6.10	+2.98	+2.54
MSL	+3.56	+0.44	0
NGVD	+3.12	0	-0.44
MLW	+1.12	-2.06	-2.44
MLLW	0	-3.12	-3.56

ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

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2' 0 2' 4'

SCALE: 1" = 2'-0"

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV Consulting Engineers and Scientists

DESIGNED BY: IBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
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IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SOIL COVER BOUNDARY CROSS SECTION
DETAILS A, B, C, AND D

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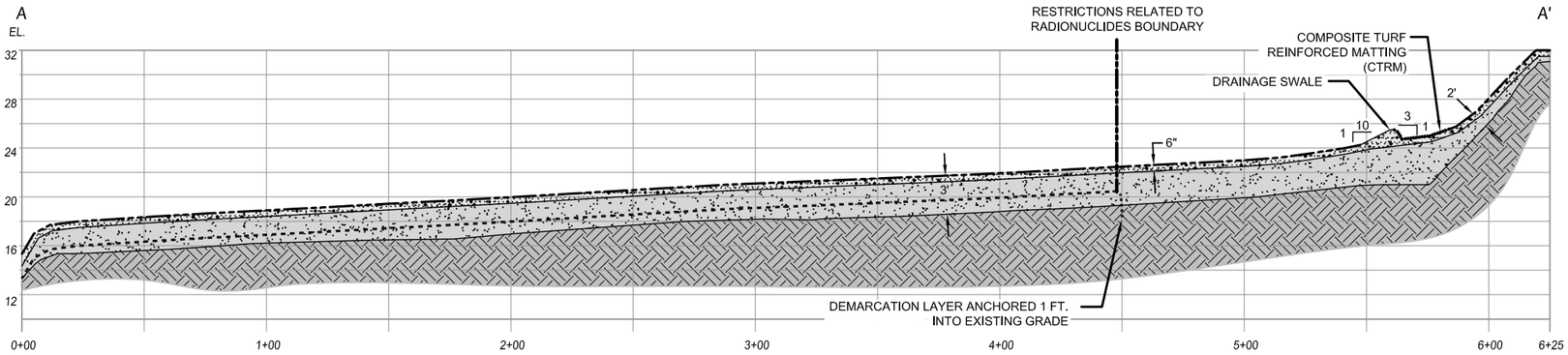
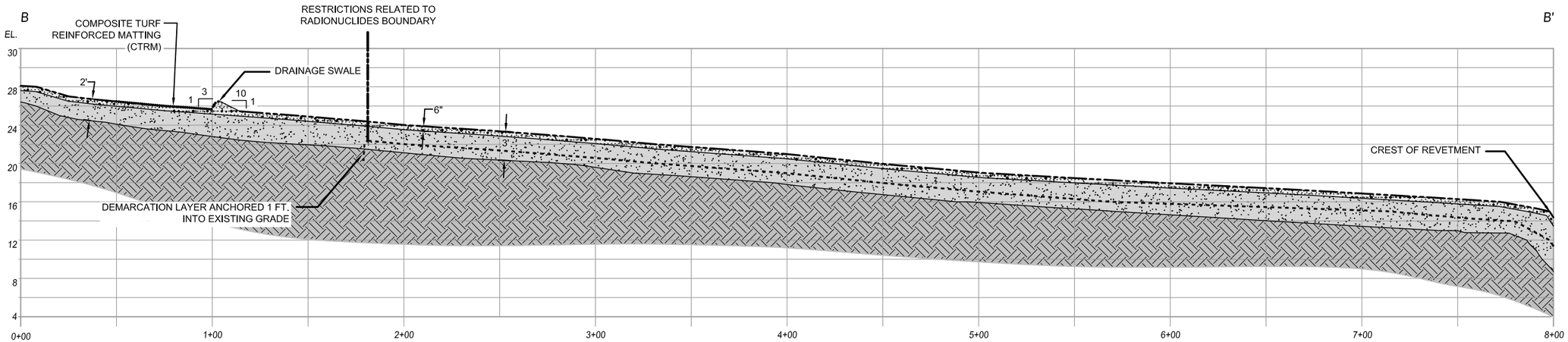


A–A' / C3 | C9 COVER CROSS SECTION A-A' (TYP.)

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6'



B–B' / C3 | C9 COVER CROSS SECTION B-B' (TYP.)

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6'

LEGEND

- PROPOSED EROSION RESISTANT LAYER
- PROPOSED COMPACTED COVER LAYER
- EXISTING SURFACE
- DEMARCATION LAYER
- COMPOSITE TURF REINFORCED MATTING
- EL. ELEVATION

NOTE:

1. ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.
2. COVER FILL COMPOSED OF COMPACTED SOIL LAYER AND EROSION RESISTANT LAYER.

DRAFT
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6' 0 6' 12'
SCALE: 1" = 6'
VERTICAL

30' 0 30' 60'
SCALE: 1" = 30'
HORIZONTAL

REVISIONS

SYMBOL	DESCRIPTION	PREP.BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV Consulting Engineers and Scientists
DESIGNED BY: IBL
DRAWN BY: DMF
CHECKED BY: SWF
RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

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NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
SOIL COVER CROSS SECTIONS DETAILS
A-A' AND B-B'

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San Francisco, California

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C9
SHEET 10 OF 13

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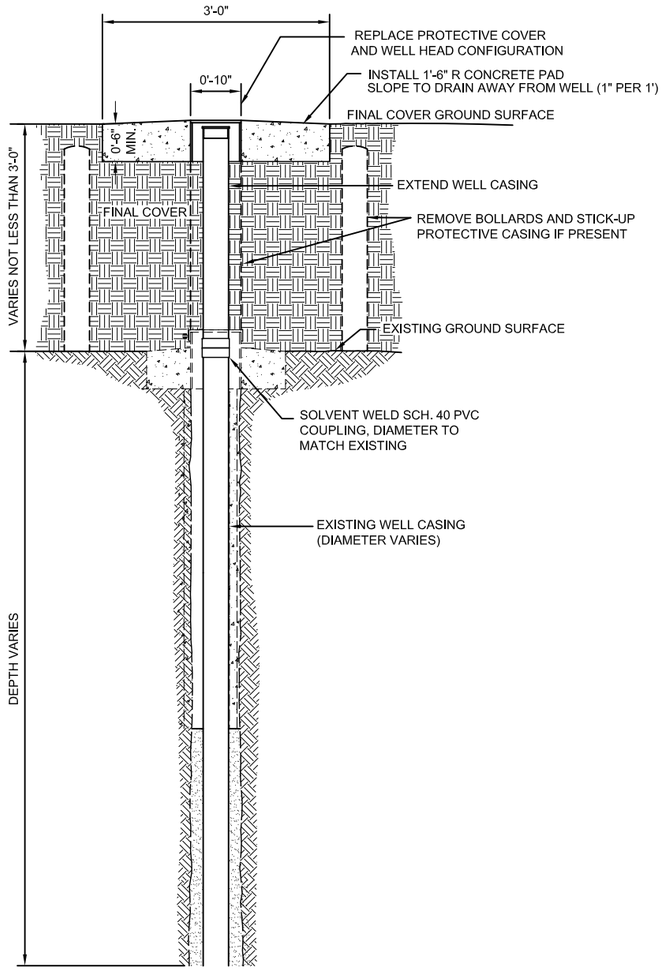
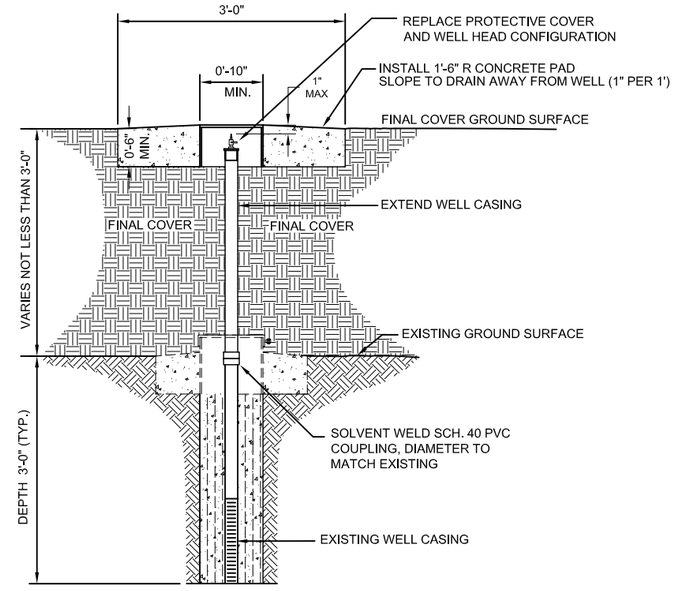


1 C1 C10 FLUSH MOUNTED MONITORING WELL EXTENTION (TYP.)

FOR ALL WELLS IRXXMWXX

SCALE: 1" = 1'-0"



2 C1 C10 FLUSH MOUNTED METHANE PROBE EXTENTION (TYP.)

FOR ALL PROBES SG-XX

SCALE: 1" = 1'-0"

NOTE:

1. PROTECT GROUNDWATER MONITORING WELLS AND METHANE MONITORING PROBES AS NECESSARY DURING CONSTRUCTION OF THE COVER.
2. REMOVE CONCRETE PADS AND/OR FLUSH MOUNTED PROTECTIVE CASING IF OBSTRUCTIVE TO THE EXTENSION COUPLING.

1' 0 1' 2'

SCALE: 1" = 1'-0"

DRAFT
NOT FOR CONSTRUCTION

REVISIONS

SYMBOL	DESCRIPTION	PREP.BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV

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DRAWN BY: DMF
CHECKED BY: SWF

RECHECKED BY:
APPROVED BY:
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BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT
MONITORING WELL AND METHANE MONITORING PROBE EXTENSION DETAILS

Hunters Point Shipyard
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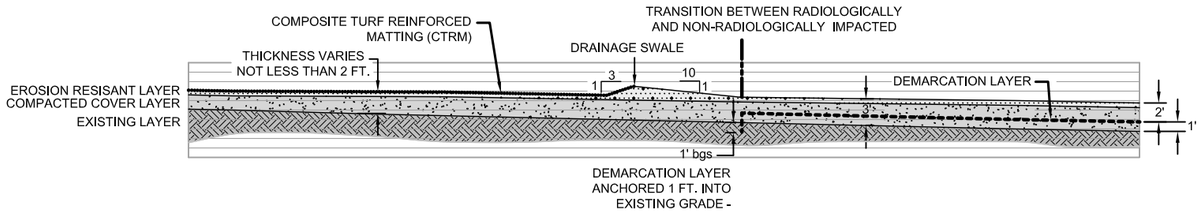
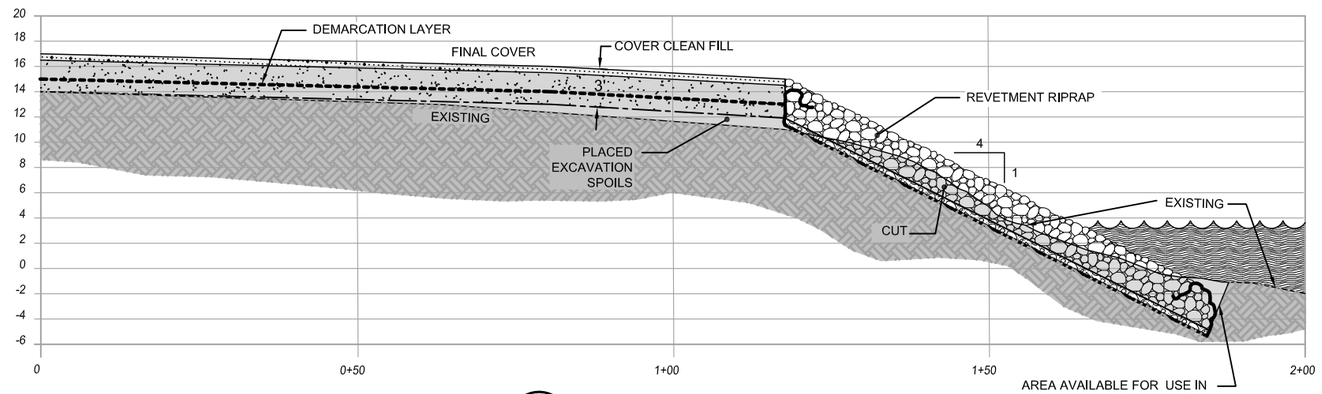
DWG. NO.
C10



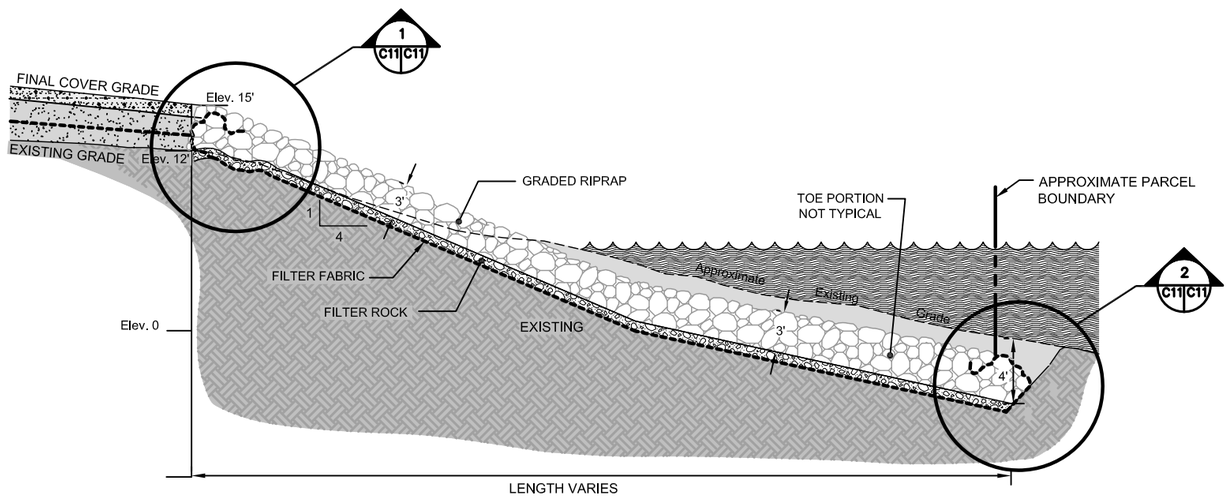
K C3 C11 DRAINAGE SWALE / CHANNEL

SCALE: 1" = 8'



L C3 C11 NEAR SHORE CROSS SECTION

NOT TO SCALE
2X VERTICAL EXAGGERATION

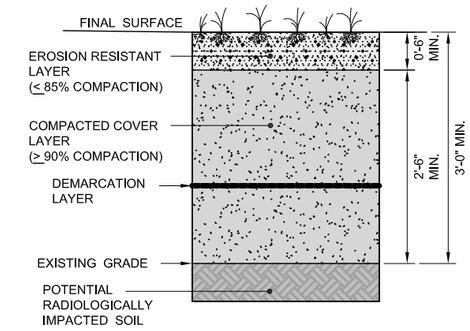


M C3 C11 GENERALIZED REVETMENT CROSS SECTION

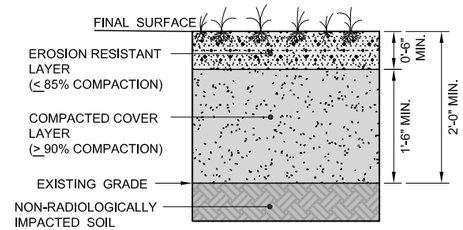
NOT TO SCALE

NOTE:

ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.



COVER OVER POTENTIAL RADIOLOGICALLY IMPACTED AREA



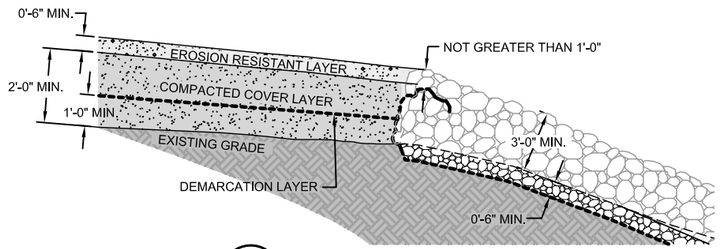
COVER OVER NON RADIOLOGICALLY IMPACTED AREA

3 C3 C11 COVER COMPONENTS

SCALE: 1" = 1'-0"

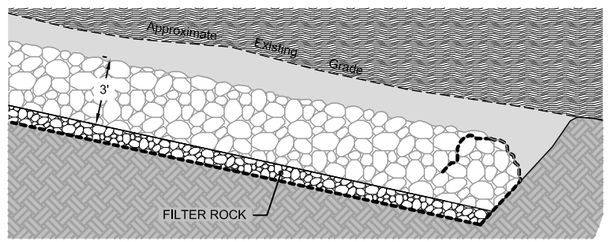
NOTE:

EXCAVATED NON RADIOLOGICALLY IMPACTED SOIL TO BE PLACED UNDER COMPACTED COVER LAYER.



1 C11 C11 TIE IN OF FILTER FABRIC AT CREST

SCALE: 1" = 3'-0"



2 C11 C11 TIE IN OF FILTER FABRIC AT TOE

SCALE: 1" = 3'-0"

DRAFT
NOT FOR CONSTRUCTION

8' 0 8' 16'

SCALE: 1" = 8'

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV

DESIGNED BY: JBL
DRAWN BY: DMF
CHECKED BY: SWF

RECHECKED BY:
APPROVED BY:
DATE: 05/22/2009

SIZE D
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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT DETAILS I

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C11
SHEET 12 OF 13

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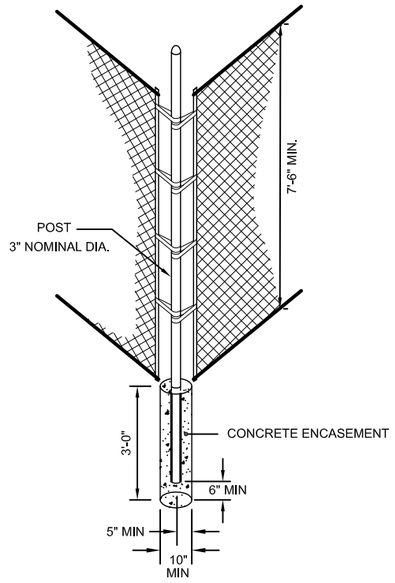
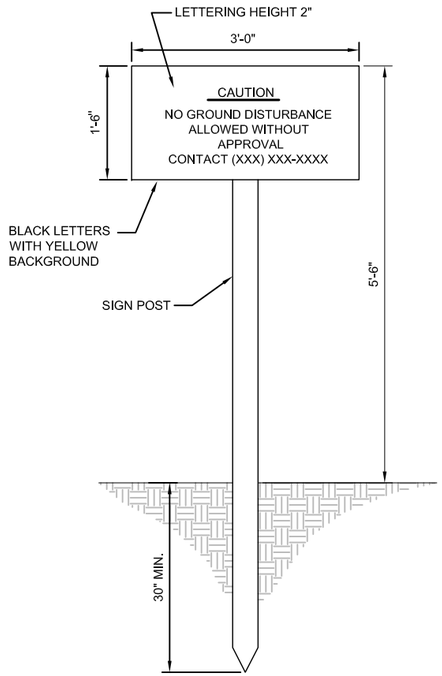
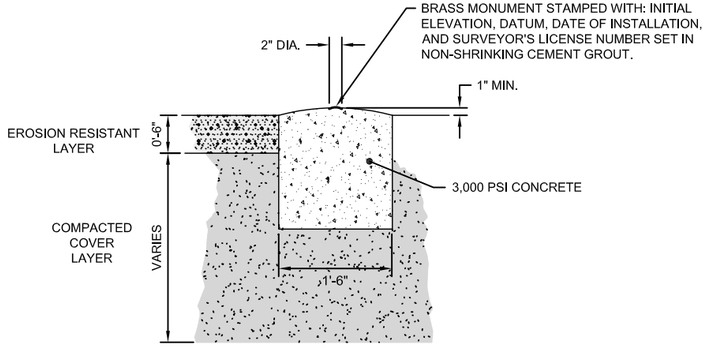


5 C3 C12 FENCE POST DETAIL
SCALE: ½" = 1'-0"

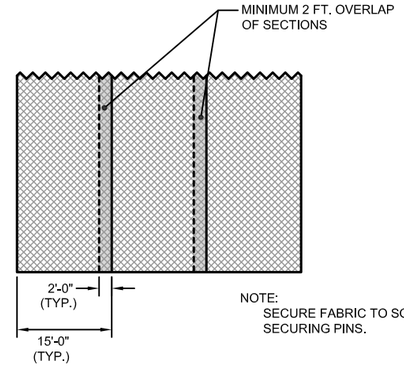
NOTE:
CONCRETE ENCASEMENT OF FENCE POST NOT NECESSARY FOR TEMPORARY FENCE. REMOVE ANY CONCRETE USED OFF NAVY PROPERTY.



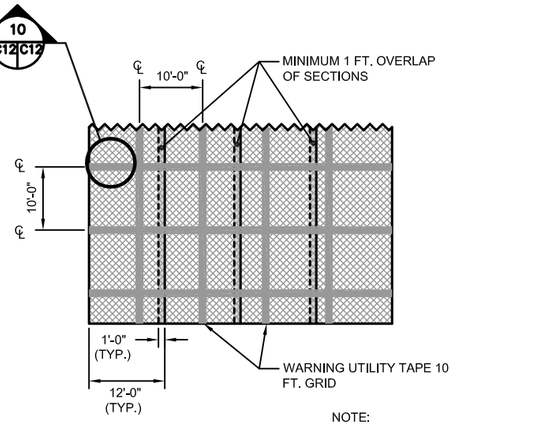
6 C3 C12 WARNING SIGN
SCALE: 1" = 1'-0"



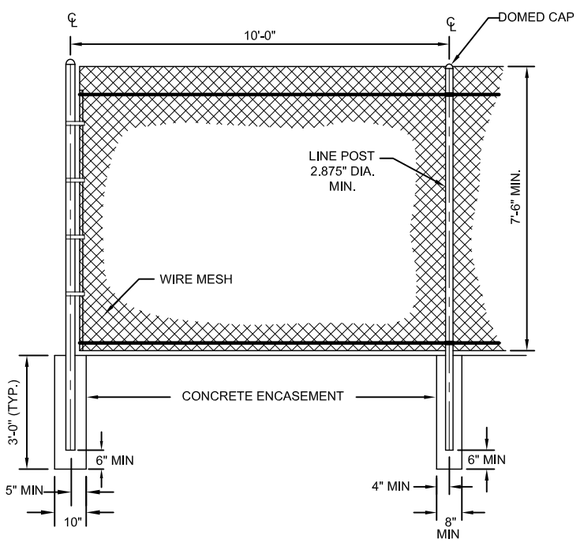
4 C3 C12 MONUMENT (TYP.)
SCALE: 1" = 1'-0"



8 C3 C12 FILTER FABRIC DETAIL - REVETMENT
SCALE = 1'-0"

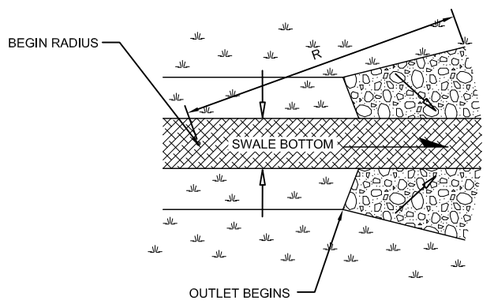


9 C3 C12 FILTER FABRIC DETAIL - REVETMENT
SCALE = 1'-0"



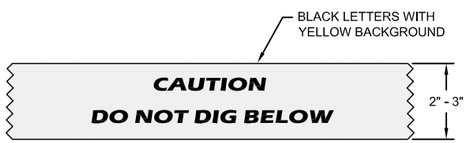
7 C3 C12 TEMPORARY FENCE DETAIL
SCALE: ½" = 1'-0"

NOTE:
CONCRETE ENCASEMENT OF FENCE POST NOT NECESSARY FOR TEMPORARY FENCE. REMOVE ANY CONCRETE USED OFF NAVY PROPERTY.



11 C3 C12 SWALE OUTLET
SCALE: 1" = 8'-0"

LEGEND
BEDDING MATERIAL
COVER VEGETATION



10 C11 C12 WARNING UTILTIY TAPE
SCALE: ½" = 1'-0"

DRAFT
NOT FOR CONSTRUCTION

8' 0 8' 16'
SCALE: 1" = 8'

REVISIONS

SYMBOL	DESCRIPTION	PREP BY	DATE	APPROVED

PREPARED BY: ChaduxTt JV Consulting Engineers and Scientists
DESIGNED BY: JBL
DRAWN BY: DMF
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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA
BRAC PMO WEST

IR SITES 7 & 18 SOIL COVER AND SHORELINE REVETMENT DETAILS II

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