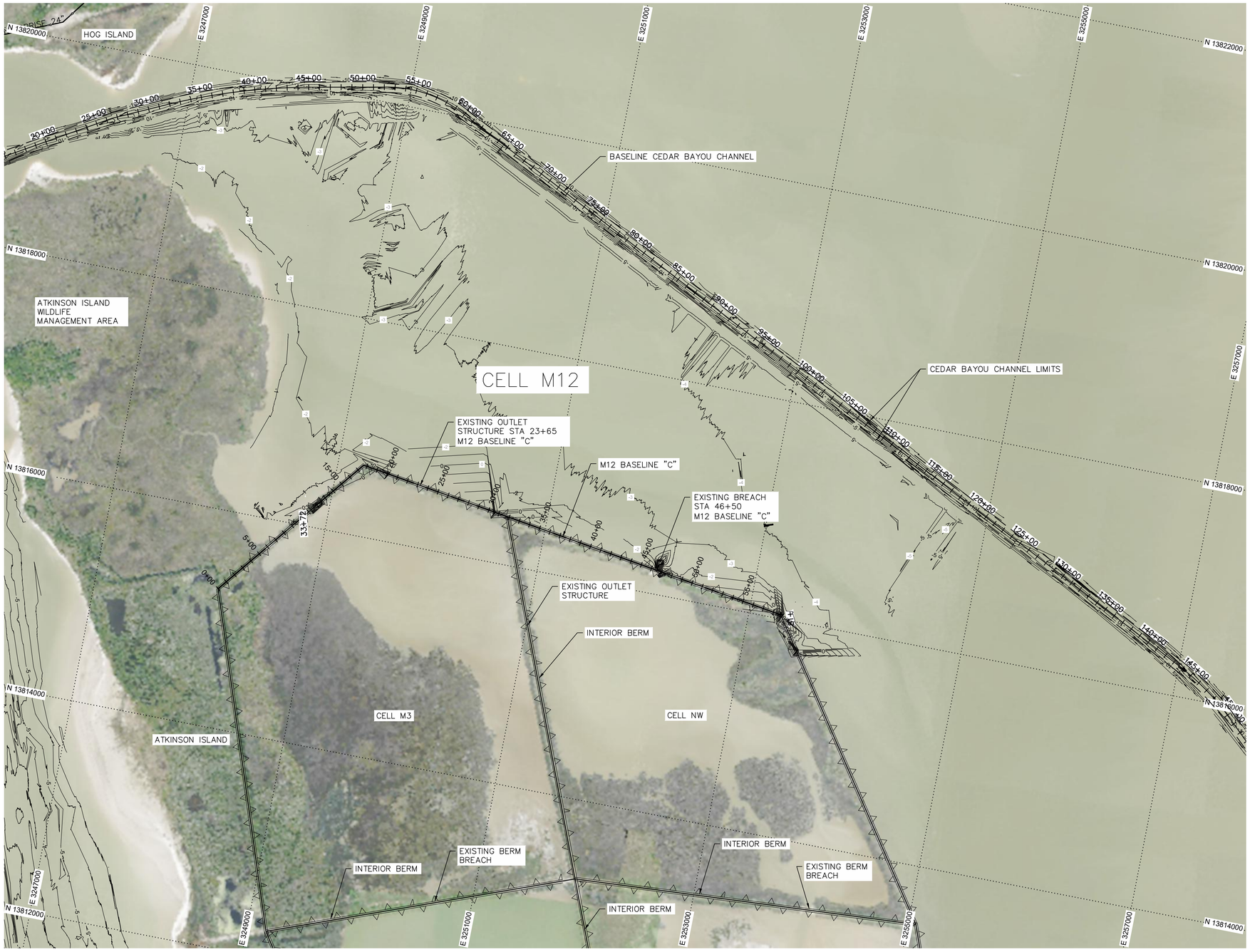

A M12 BENEFICIAL USE SITE - EXISTING CONDITIONS PLAN

SCALE: 1"=500'

500 250 0 500 1000

GENERAL NOTES

1. CONTRACTOR SHALL NOT PERFORM WORK AT M12 WITHIN 500 FT. OF ATKINSON ISLAND WILDLIFE MANAGEMENT AREA BETWEEN FEBRUARY 15TH AND AUGUST 31ST WITHOUT APPROVAL FROM OWNER AND TEXAS PARKS AND WILDLIFE DEPARTMENT.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

SEAL:

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95% REVIEW

APPROVED: DATE

PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

EXISTING CONDITIONS SITE PLAN

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1" = 500'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-201 REV. NO. A

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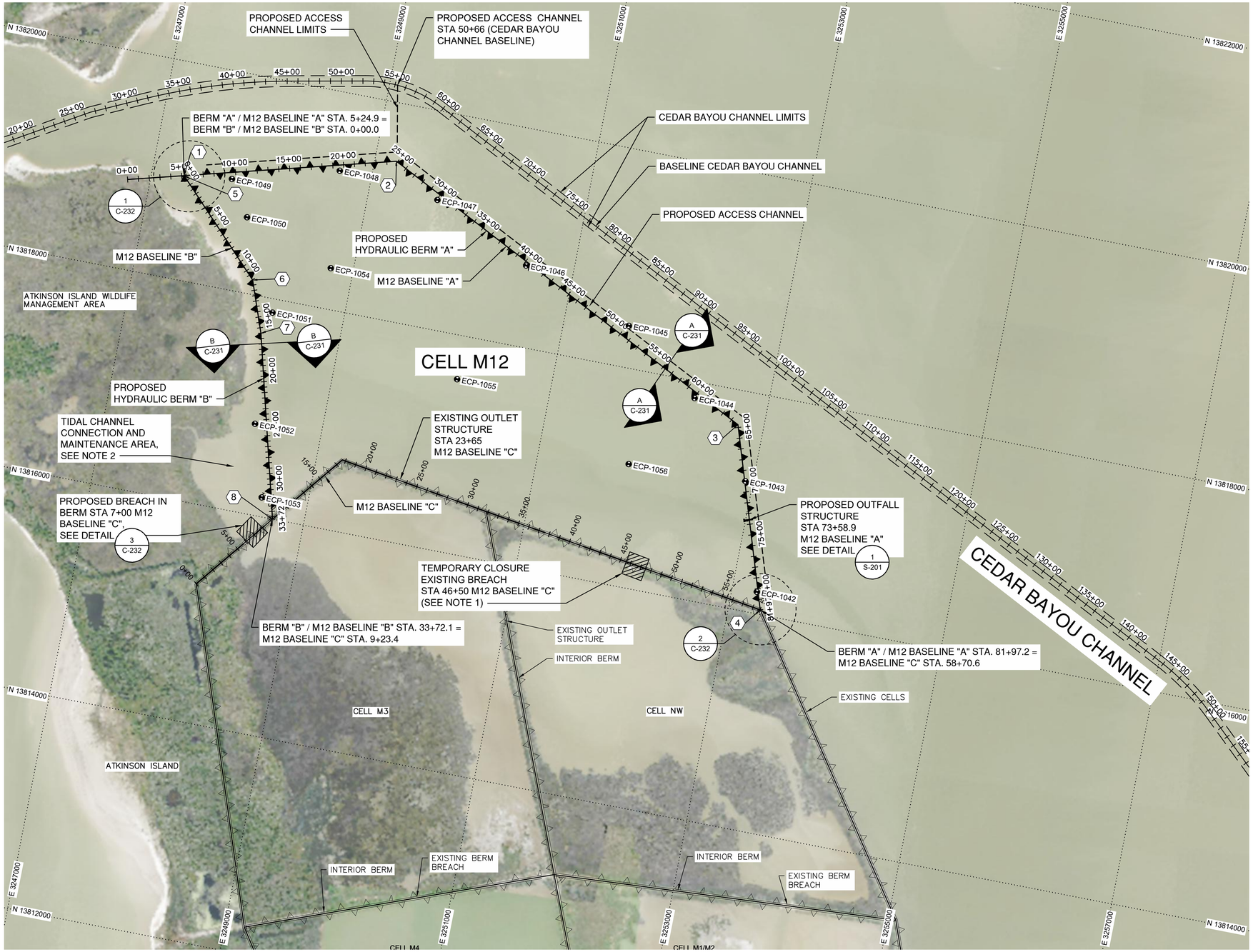
TIME: 12-08-20 – 11:10am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-201.dwg



A M12 BENEFICIAL USE SITE - PROPOSED SITE PLAN

SCALE: 1"=500'

500 250 0 500 1000

GENERAL NOTES

1. CONTRACTOR SHALL TEMPORARILY CLOSE EXISTING BREACH. CONTRACTOR SHALL PROVIDE DETAILS OF METHODOLOGY AND MATERIAL TO ENGINEER FOR APPROVAL PRIOR TO BREACH CLOSURE.
2. UPON COMPLETION OF BERM "B" FINAL SHAPING, CONTRACTOR SHALL CLEAR MOUTH IF TIDAL CHANNEL AND EXCAVATE ACCESS CHANNEL TO GALVESTON BAY AND CELL M3. BREACH AS NEEDED IN AREA AREAS WHERE MUDWAVE FROM BERM CONSTRUCTION HAS RESTRICTED WATER DEPTHS AND TIDAL EXCHANGE. CONTRACTOR SHALL COORDINATE WORK WITH ENGINEER PRIOR TO EXCAVATION.

M12 BENEFICIAL USE SITE GEOMETRY

POINT	NORTHING	EASTING	STATION	DESC.
1	13818959.1	3247298.8	5+24.9	BERM "A"
2	13819466.5	3249197.8	11+53.5	BERM "A"
3	13817683.5	3252761.6	67+40.0	BERM "A"
4	13816044.1	3253292.1	81+97.2	BERM "A"
5	13818959.1	3247298.8	0+00.0	BERM "B"
6	13818134.3	3248105.1	11+53.5	BERM "B"
7	13817667.6	3248274.1	16+49.8	BERM "B"
8	13817062.9	3248587.6	33+72.1	BERM "B"

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

PROPOSED SITE PLAN

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1" = 500'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-202 REV. NO. A

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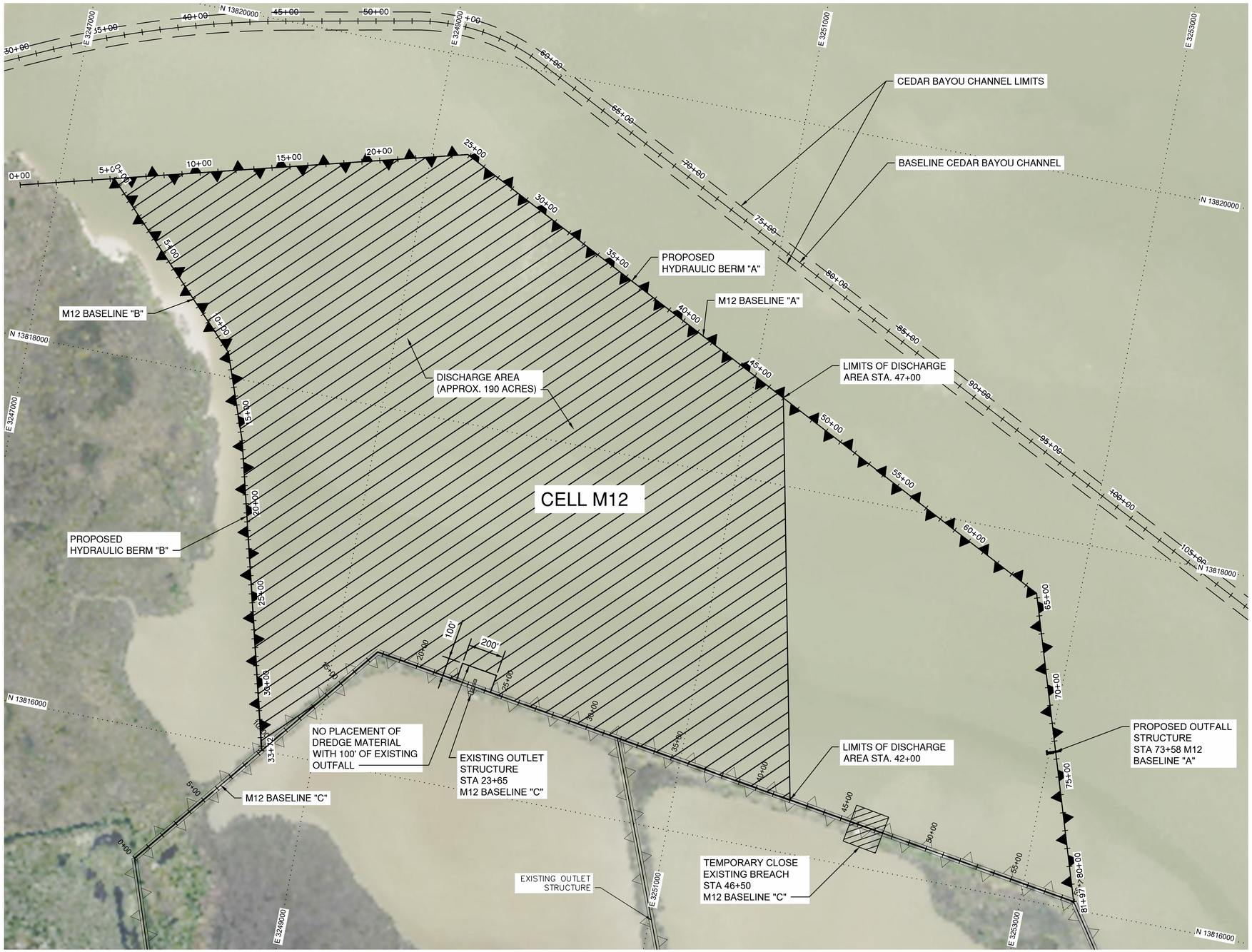
TIME: 12-08-20 – 11:10am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-202.dwg



A M12 BENEFICIAL USE SITE - DREDGE MATERIAL PLACEMENT AREA PLAN

SCALE: 1"=300'

300 150 0 300 600

GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE PIPELINE ROUTING MAP PRIOR TO CONSTRUCTION.
2. PIPELINE DISCHARGE LOCATION SHALL BE LIMITED TO THE AREA SHOWN.
3. CONTRACTOR SHALL MOVE DISCHARGE LOCATION TO LIMIT PLACEMENT HEIGHT. MULTIPLE PIPELINE DISCHARGE POINTS AND Y-VALVES MAY BE USED BY CONTRACTOR.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

DREDGE MATERIAL PLACEMENT AREA PLAN

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

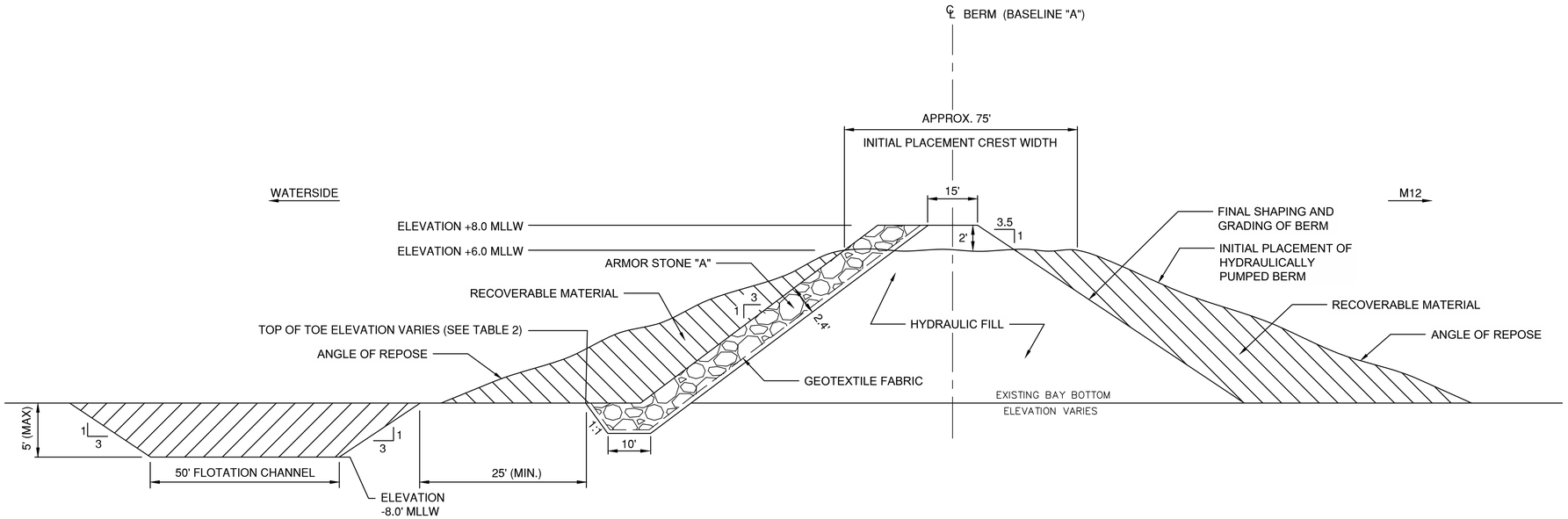
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1"=300

DRAWING NO. C90-D13-P11-007

SHEET NO. C-203 REV. NO. A

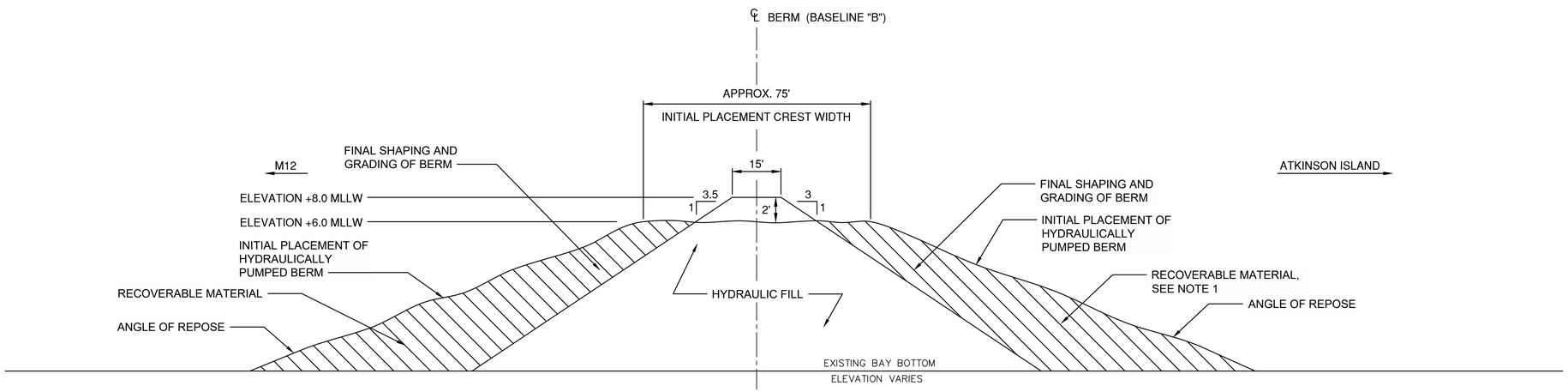
95% REVIEW

TIME: 12-08-20 – 11:11am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-203.dwg



A TYPICAL SECTION - M12 BASELINE "A" - BENEFICIAL USE

SCALE: NTS



B TYPICAL SECTION - M12 BASELINE "B" - BENEFICIAL USE

SCALE: NTS

GENERAL NOTES

1. CONTRACTOR SHALL RECLAIM MATERIAL ON WEST SIDE OF BERM "B" PRIOR TO EXCAVATION OF THE EAST SIDE OF BERM DURING FINAL SHAPING AND GRADING.

TABLE 1

ARMOR STONE - GRADED STONE "A" THICKNESS = 2.4'	
% LESS (BY WEIGHT)	WEIGHT (POUNDS)
5 15 50 100	40 40 - 130 130 - 260 260 - 650

TABLE 2

APPROXIMATE EXISTING TOP OF TOE ELEVATION (FT/MLLW)	STATION
-3.0 -3.5' -4.0	5+25 TO 24+70 27+70 TO 49+70 49+70 TO 81+38

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

TYPICAL SECTIONS

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

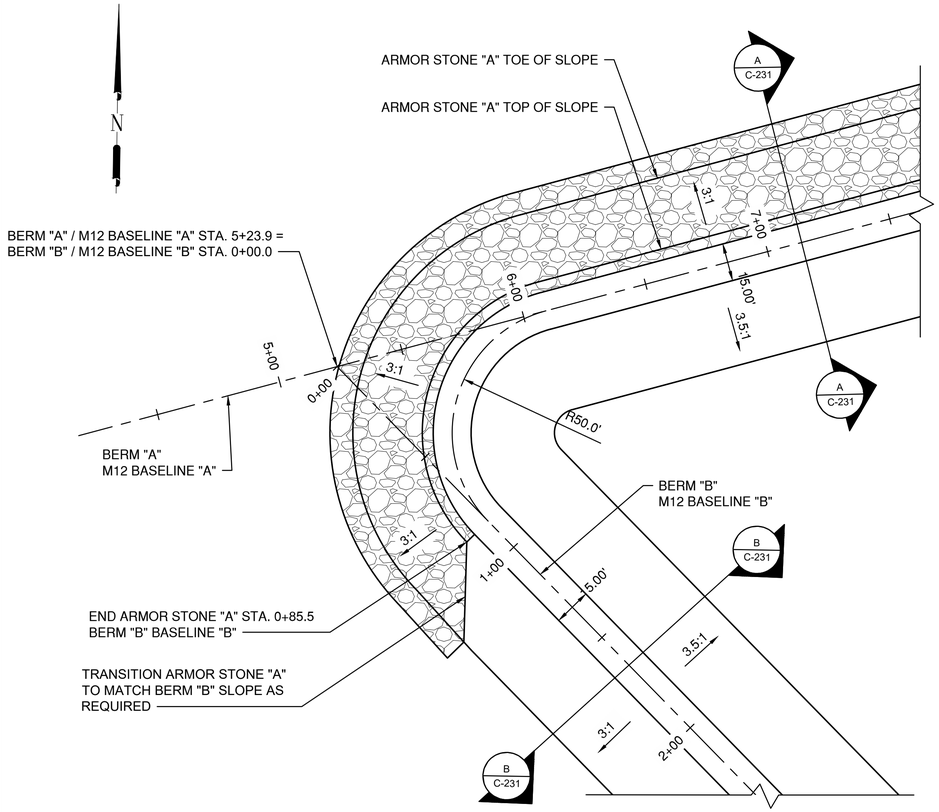
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	AS NOTED

DRAWING NO. C90-D13-P11-007

SHEET NO. C-231 REV. NO. A

95% REVIEW

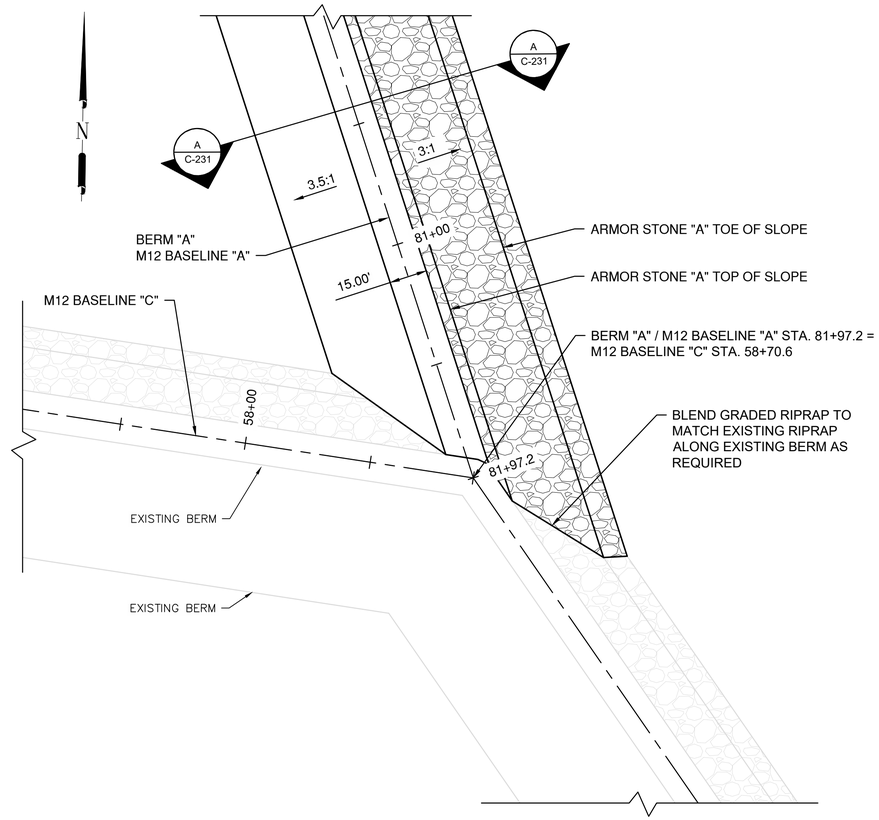
TIME: 12-08-20 – 11:11am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-231.dwg



1 PLAN DETAIL - M12 SHORELINE PROTECTION TRANSITION BETWEEN M12 BASELINE "A" AND M12 BASELINE "B"

SCALE: 1"=30'

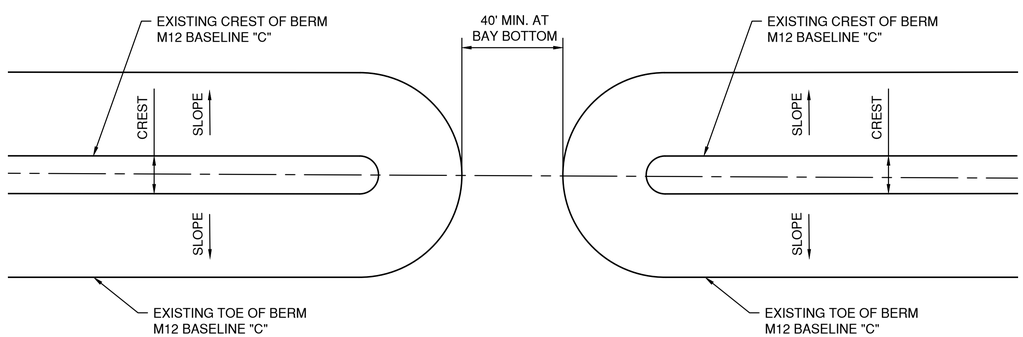
0 30' 60'



2 PLAN DETAIL - M12 SHORELINE PROTECTION TRANSITION BETWEEN M12 BASELINE "A" AND M12 BASELINE "C"

SCALE: 1"=30'

0 30' 60'



3 PLAN DETAIL - EXISTING M12 BASELINE "C" BERM PROPOSED BREACH

SCALE: 1"=30'

0 30' 60'

GENERAL NOTES

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

TYPICAL SECTIONS AND DETAILS

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

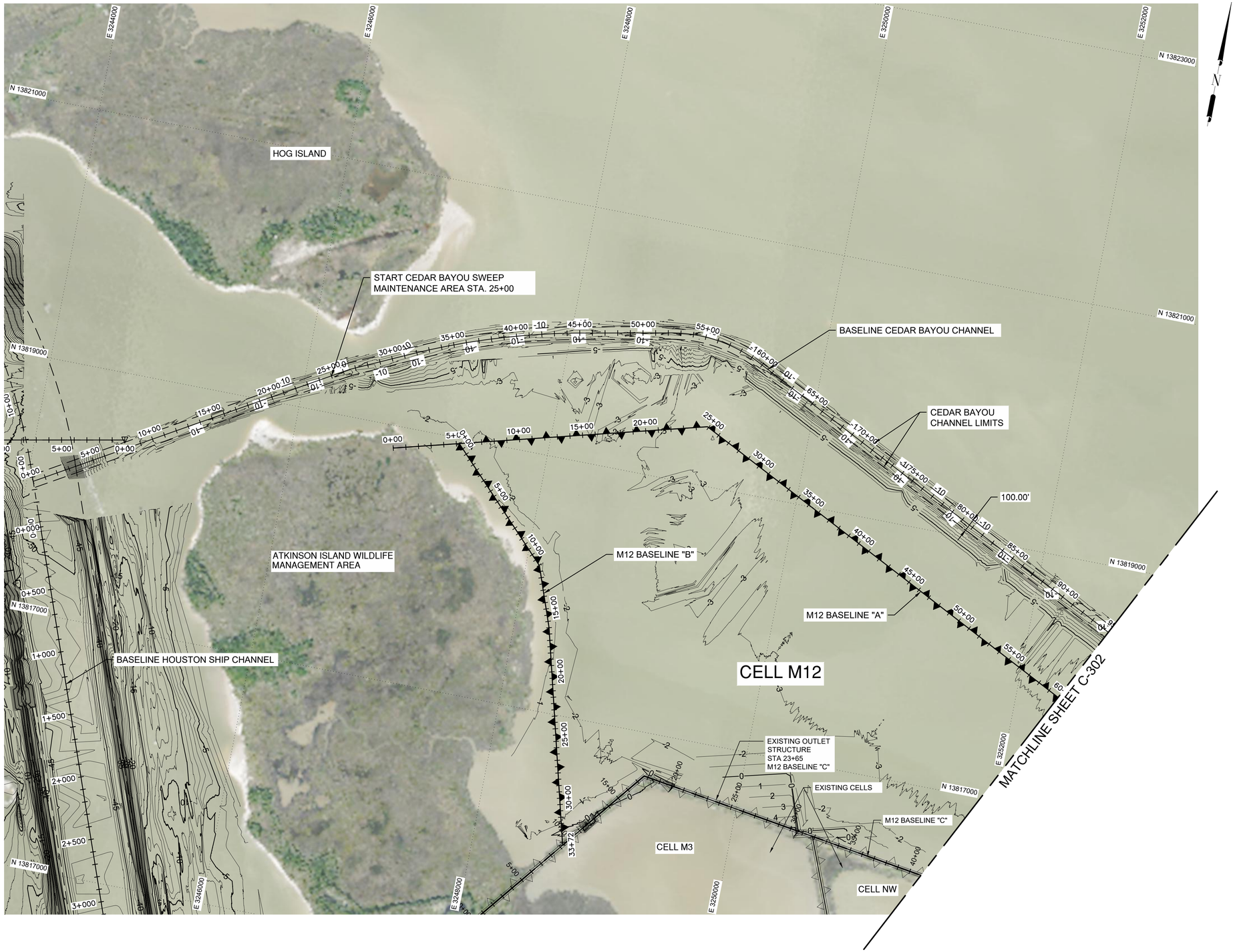
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	AS NOTED

DRAWING NO. C90-D13-P11-007

SHEET NO. C-232 REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:11am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-232.dwg



A CEDAR BAYOU-EXISTING CONDITIONS SITE PLAN

SCALE: 1"=400'

400 200 0 400 800

GENERAL NOTES

1. CEDAR BAYOU SWEEP MAINTENANCE AREA SHALL BE SURVEYED PRIOR TO CONSTRUCTION OF M12 BASELINE A BERM TO DOCUMENT EXISTING CONDITIONS. THE SURVEY AREA EXTENSION FROM STA. 25+00 TO STA. 165+00 ON 100 FT. INTERVALS.
2. MONTHLY SURVEYS OF CEDAR BAYOU SWEEP MAINTENANCE AREA SHOULD BE PERFORMED DURING DURATION OF M12 BASELINE A CONSTRUCTION. ENGINEER AND PORT AUTHORITY WILL REVIEW AND DOCUMENT AREAS REQUIRING MAINTENANCE DREDGING.
3. MAINTENANCE DREDGING OF SHOALING ABOVE PRE-CONSTRUCTION ELEVATIONS SHALL BE BY MECHANICAL MEANS AND PLACED IN ODMDS. REFER TO SECTION 35 20 23, "DREDGING".

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

EXISTING CONDITIONS SITE PLAN (1 OF 2)

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

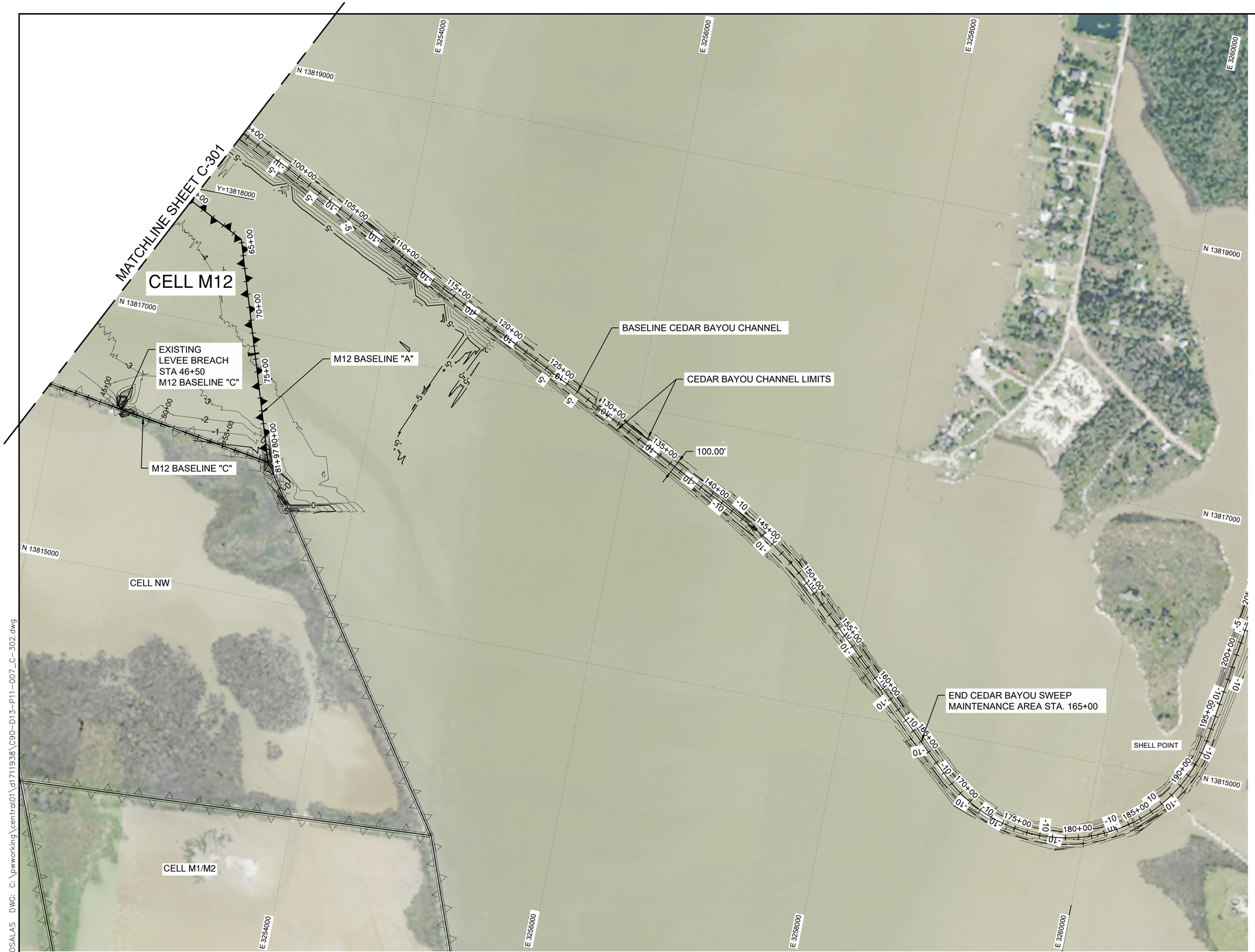
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1"=400'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-301 REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:11am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-301.dwg



GENERAL NOTES

1. SEE GENERAL NOTES ON SHEET C-301.

A CEDAR BAYOU-EXISTING CONDITIONS SITE PLAN

SCALE: 1"=400'

400 200 0 400 800

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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TBPELS Firm
Registration No. F-754

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MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

EXISTING CONDITIONS SITE PLAN (2 OF 2)

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1" = 400'

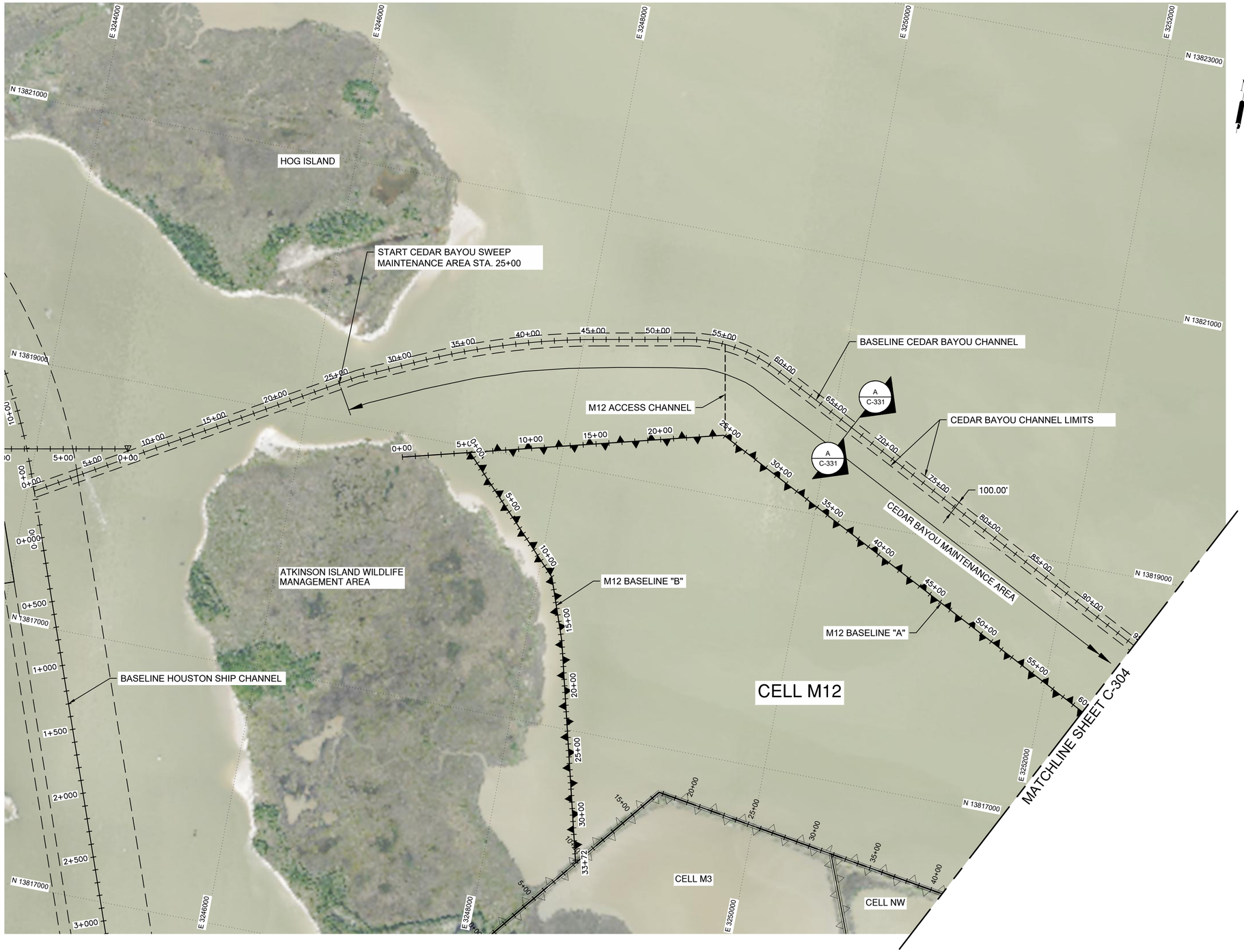
DRAWING NO. C90-D13-P11-007

SHEET NO. C-302

REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:12am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-302.dwg



A CEDAR BAYOU - PROPOSED SITE PLAN

SCALE: 1"=400'

400 200 0 400 800

GENERAL NOTES

1. SEE GENERAL NOTES ON SHEET C-301.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

PROPOSED SITE PLAN (1 OF 2)

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

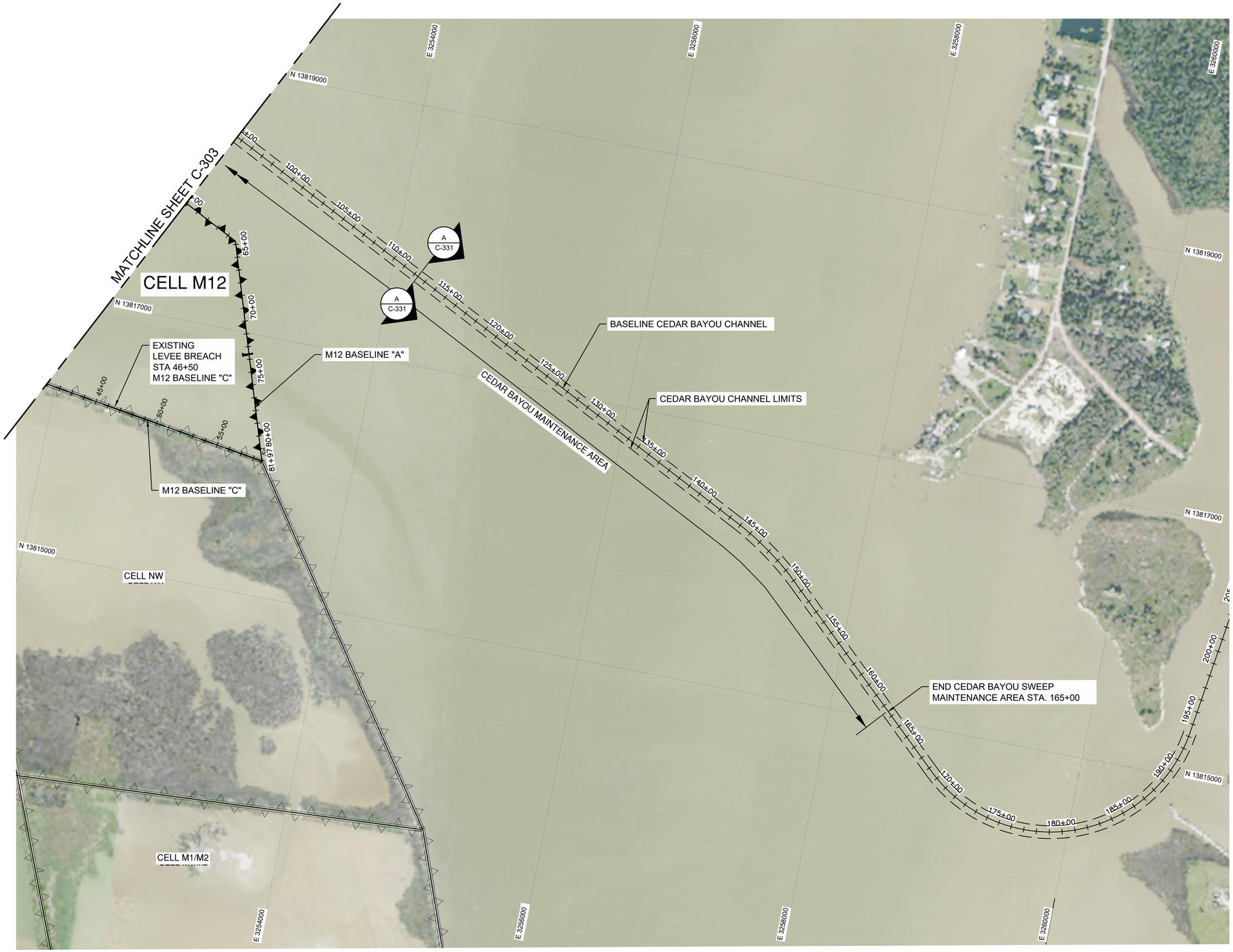
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1"=400'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-303 REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:12am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-303.dwg



A CEDAR BAYOU - PROPOSED SITE PLAN

SCALE: 1"=400'

400 200 0 400 800

GENERAL NOTES

1. SEE GENERAL NOTES ON SHEET C-301.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

PROPOSED SITE PLAN (2 OF 2)

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

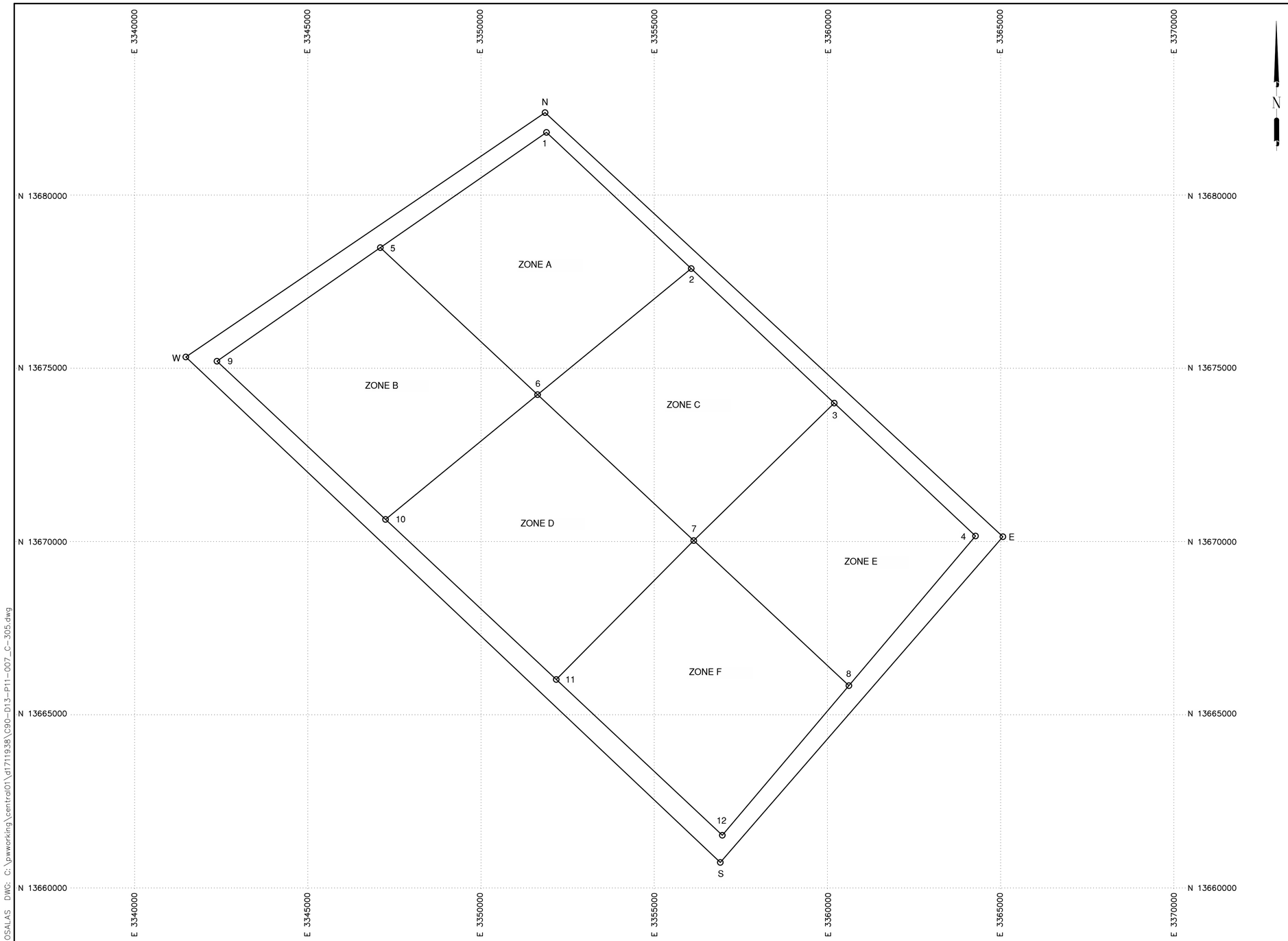
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1" = 400'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-304 REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:12am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-304.dwg



A

CEDAR BAYOU-PLACEMENT AREA PLAN - ODMPA

SCALE: 1"=400'

1500 750 0 1500 3000

GENERAL NOTES

GALVESTON ODMS COORDINATES				
VERTICES	LATITUDE	LONGITUDE	NORTHING	EASTING
N	29 18 00.85	94 39 30.69	13,682,382.92	3,351,849.84
E	29 15 54.86	94 37 06.69	13,670,142.19	3,365,065.96
S	29 14 24.86	94 38 42.69	13,660,741.07	3,356,908.48
W	29 16 54.86	94 41 30.69	13,675,329.68	3,341,478.93

GALVESTON ODMS DISPOSAL ZONES				
VERTICES	LATITUDE	LONGITUDE	NORTHING	EASTING
1	29.298664	94.658464	13,681,812.41	3,351,890.49
2	29.287435	94.645823	13,677,882.13	3,356,068.54
3	29.276339	94.633335	13,673,998.82	3,360,196.91
4	29.265377	94.621002	13,670,162.81	3,364,274.93
5	29.29001	94.67289	13,678,485.83	3,347,093.75
6	29.277887	94.660151	13,674,243.15	3,351,633.46
7	29.265585	94.646513	13,670,031.09	3,356,140.84
8	29.253884	94.632961	13,665,844.35	3,360,620.86
9	29.28148	94.689054	13,675,207.99	3,342,377.96
10	29.268436	94.674327	13,670,641.75	3,347,244.63
11	29.255236	94.65942	13,666,021.60	3,352,171.92
12	29.242389	94.644918	13,661,525.56	3,356,966.58

NOTE:
1. GEOGRAPHIC (NAD83) COORDINATES PROVIDED IN THE USACE JANUARY 26, 2016 SITE MANAGEMENT & MONITORING PLAN FOR THE GALVENSTON, TEXAS OCEAN DREDGE MATERIAL DISPOSAL SITE.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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APPROVED: DATE

PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

PLACEMENT AREA PLAN

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	1"=1500

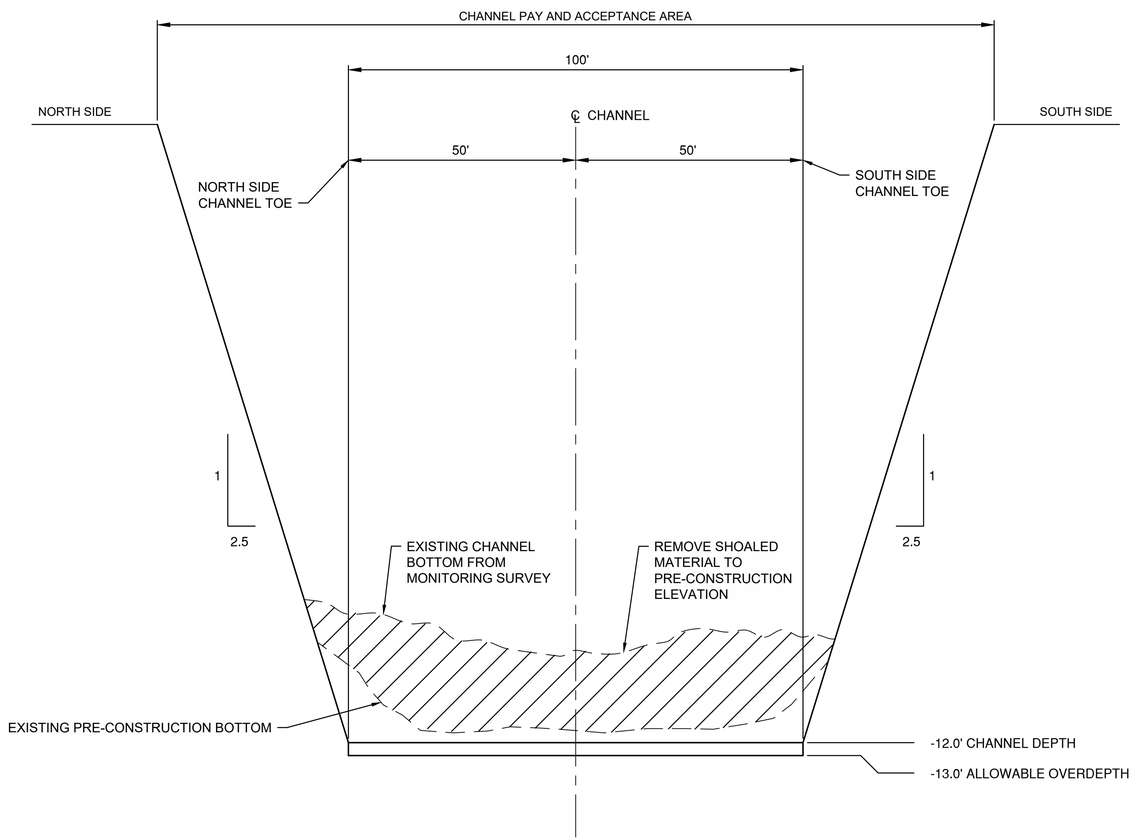
DRAWING NO. C90-D13-P11-007

SHEET NO. C-305

REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:12am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-305.dwg



A TYPICAL SECTION - CEDAR BAYOU

SCALE: NTS

GENERAL NOTES

1. SEE GENERAL NOTES ON SHEET C-301.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

SEAL:

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95% REVIEW

APPROVED:

DATE

PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

TYPICAL SECTION-DREDGE TEMPLATE

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

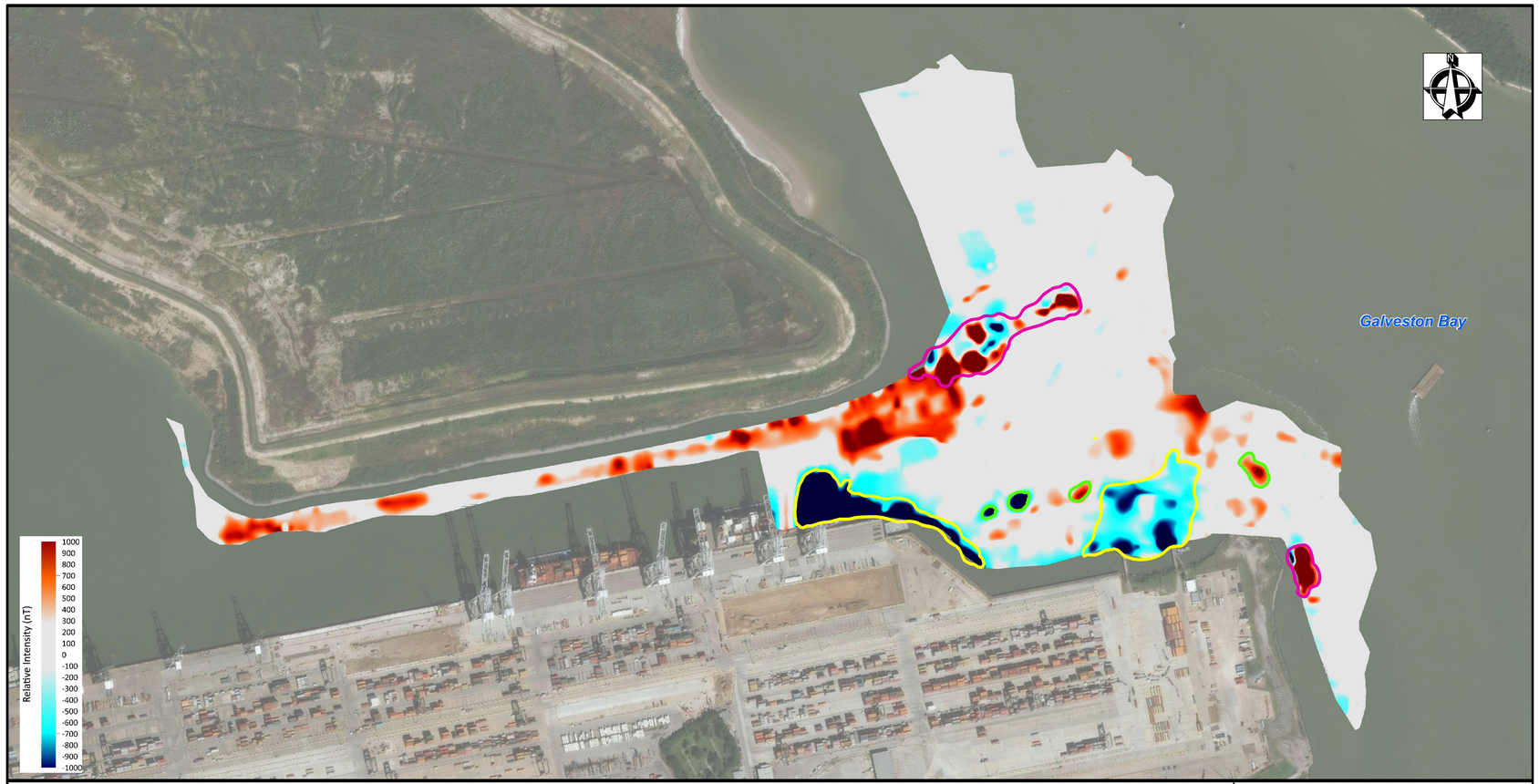
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	AS NOTED

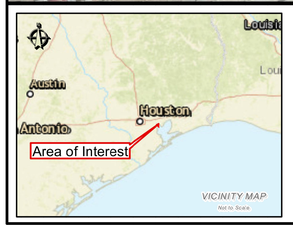
DRAWING NO.
C90-D13-P11-007

SHEET NO. C-331
REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:12am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-331.dwg





Legend

- Dock Anomaly
- Piling Anomaly
- Unidentified Anomaly

HDR ENGINEERING, INC.

HAZARD SURVEY - SPILMAN
MAGNETOMETER INTENSITY FIELD MAP
GALVESTON BAY AREA
HARRIS COUNTY, TEXAS

FUGRO USA LAND, INC.
226 DULLES DR. SUITE 110 LAFAYETTE, LA 70506

Coordinate System:
NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic
Units: Foot US

0 500
1 inch = 500 feet

Job Number: 04.10781042 | Date: 10/6/2020 | Drwn: AXG | Page 2 of 3

Prj Mgr: PHL | Path: L:\2019\04.107810424\000 Processing\4300 CAD\ArcMap\HDR-HSC\H0410781042_MAG2_SPILMAN.mxd

GENERAL NOTES

1. REFER TO APPENDIX _____ OF CONTRACT DOCUMENTS AND REPORT FROM FUGRO TITLED "HAZARD SURVEY FOR PORT HOUSTON-EXPANSION CHANNEL IMPROVEMENT PROJECT-AMENDMENT 6 SPILMANS ISLAND/MORGAN'S POINT GEOPHYSICAL SURVEY METHODOLOGY REPORT" DATED SEPTEMBER 15, 2020.
2. REFER TO APPENDIX _____ OF CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION ON POTENTIAL DEBRIS AND OBSTRUCTIONS. NOTE THIS IS BEING PROVIDED FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL MAKE THEIR OWN ASSESSMENT OF POTENTIAL DEBRIS AND OBSTRUCTIONS.

A DEBRIS/OBSTRUCTION-MAGNETOMETER SURVEY
NOT TO SCALE

PORT OF HOUSTON AUTHORITY

CONSULTANT:
DESIGN PREPARED BY:
HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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APPROVED: _____ DATE
_____
PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:
HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)
PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:
DEBRIS OBSTRUCTIONS-MAGNETOMETER SURVEY

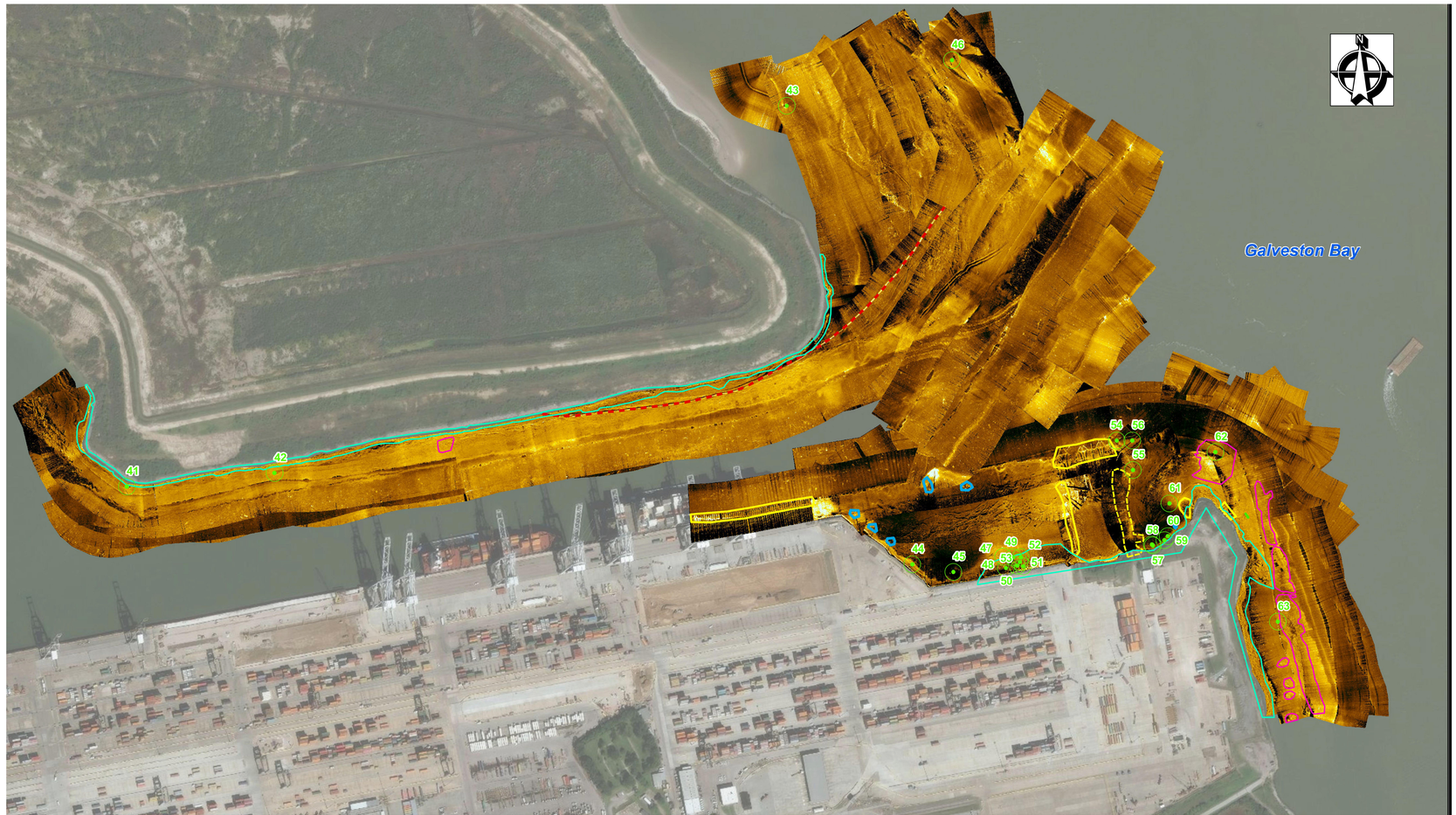
REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

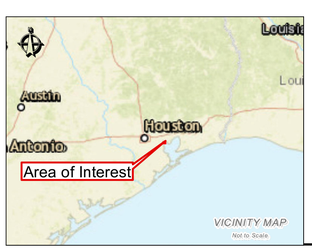
DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	NONE

DRAWING NO. C90-D13-P11-007
SHEET NO. C-401
REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:13am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-401.dwg





LEGEND

- Debris Cluster
- Dock Structure
- New Dock
- Pilings
- Rip Rap
- Unidentified Debris
- Possible Dredge Pipe
- Sonar Contacts

Prj Mgr: PHL

HDR ENGINEERING, INC.

HAZARD SURVEY - SPILMAN
SIDE SCAN SONAR MAP
GALVESTON BAY AREA
HARRIS COUNTY, TEXAS

FUGRO USA LAND, INC.
226 DULLES DR. SUITE 110 LAFAYETTE, LA 70506

Coordinate System:
NAD 1983 StatePlane Texas South FIPS 4205 Feet
Projection: Lambert Conformal Conic
Units: Foot US

0 500
1 inch = 500 feet

Job Number: 04.10781042	Date: 10/6/2020	Drwn: AXG	Page 3 of 3

Path: L:\2019\04.107810424\000 Processing\4300 CAD\ArcMap\HDR-HSC\H04107810 42_SSS_SPILMAN.mxd

(A) DEBRIS/OBSTRUCTION-SIDE SCAN SURVEY

NOT TO SCALE

GENERAL NOTES

1. SEE NOTES ON SHEET C-401.

SONAR CONTACTS

NUMBER	X COORDINATE	Y COORDINATE
41	3238174.170	13817546.430
42	3238915.160	13817619.950
43	3241482.030	13819483.680
44	3242128.070	13817180.800
45	3242334.110	13817144.480
46	3242310.010	13819717.650
47	3242584.770	13817222.930
48	3242598.950	13817165.160
49	3242634.720	13817218.910
50	3242655.800	13817178.020
51	3242669.110	13817196.210
52	3242673.390	13817221.150
53	3242685.160	13817174.760
54	3243152.350	13817809.910
55	3243234.380	13817663.290
56	3243230.730	13817811.480
57	3243331.420	13817288.830
58	3243336.740	13817283.920
59	3243395.170	13817310.350
60	3243411.930	13817331.060
61	3243418.580	13817496.300
62	3243649.130	13817754.760
63	3243968.500	13816904.270

PORT OF HOUSTON AUTHORITY
HOUSTON, TEXAS

PORT OF HOUSTON AUTHORITY

CONSULTANT:
DESIGN PREPARED BY:
HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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APPROVED: DATE
PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:
HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)
PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:
DEBRIS OBSTRUCTIONS - SIDE SCAN SURVEY

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. HELM
CHECKER:	R. McPHERSON
DATE:	12/08/2020
SCALE:	NONE

DRAWING NO. C90-D13-P11-007
SHEET NO. C-402
REV. NO. A

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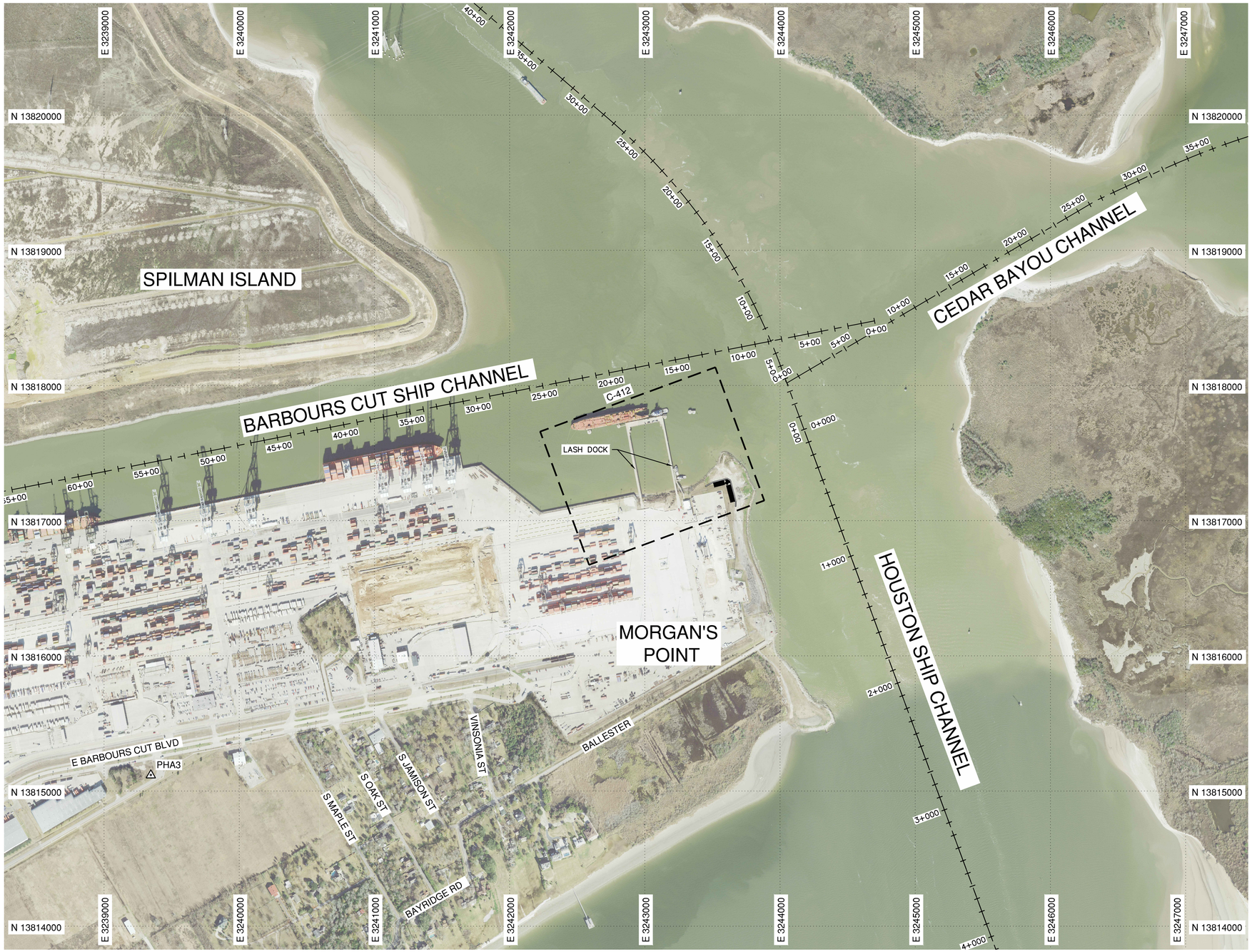
TIME: 12-08-20 – 11:13am User: OSALAS DWG: C:\pwworking\central01\d1711938\C90-D13-P11-007_C-402.dwg



A SITE KEY PLAN-LASH DOCK DEMOLITION

SCALE: 1"=400'

400 200 0 400 800

GENERAL NOTES

1. REFER TO GENERAL NOTES ON SHEET G-003.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

SITE KEY PLAN-LASH DOCK DEMOLITION

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. THORPE
CHECKER:	S. McCOY
DATE:	12/08/2020
SCALE:	1"=400'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-411 REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:14am User: OSALAS DWG: C:\pwworking\central01\d1950144\C90-D13-P11-007-C-411.dwg

A ENLARGED SITE PLAN-LASH DOCK DEMOLITION

SCALE: 1" = 60'

60 30 0 60 120

GENERAL NOTES

1. REFER TO GENERAL NOTES ON SHEET G-003.

LEGEND

DEMO WORK DONE BY OTHERS

PROPOSED TO BE REMOVED

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

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TBPELS Firm
Registration No. F-754

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PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

ENLARGED SITE PLAN-LASH DOCK DEMOLITION

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. THORPE
CHECKER:	S. McCOY
DATE:	12/08/2020
SCALE:	1" = 60'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-412 REV. NO. A

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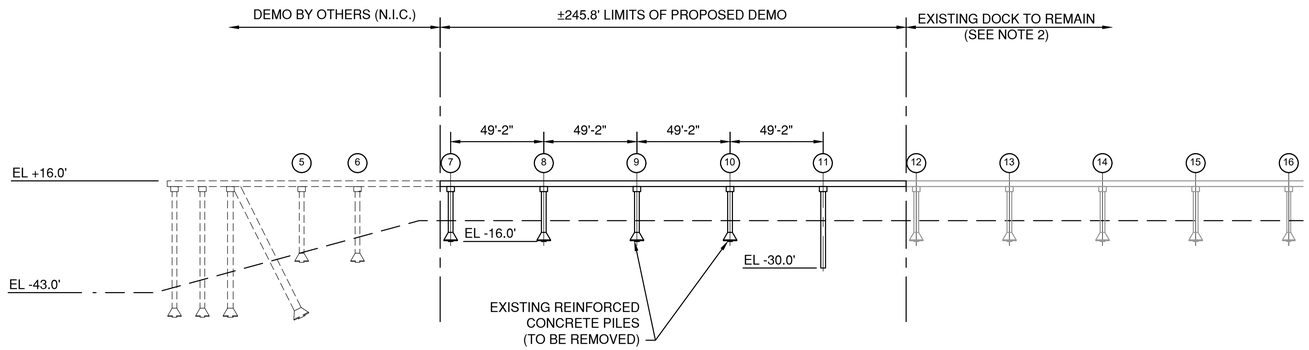
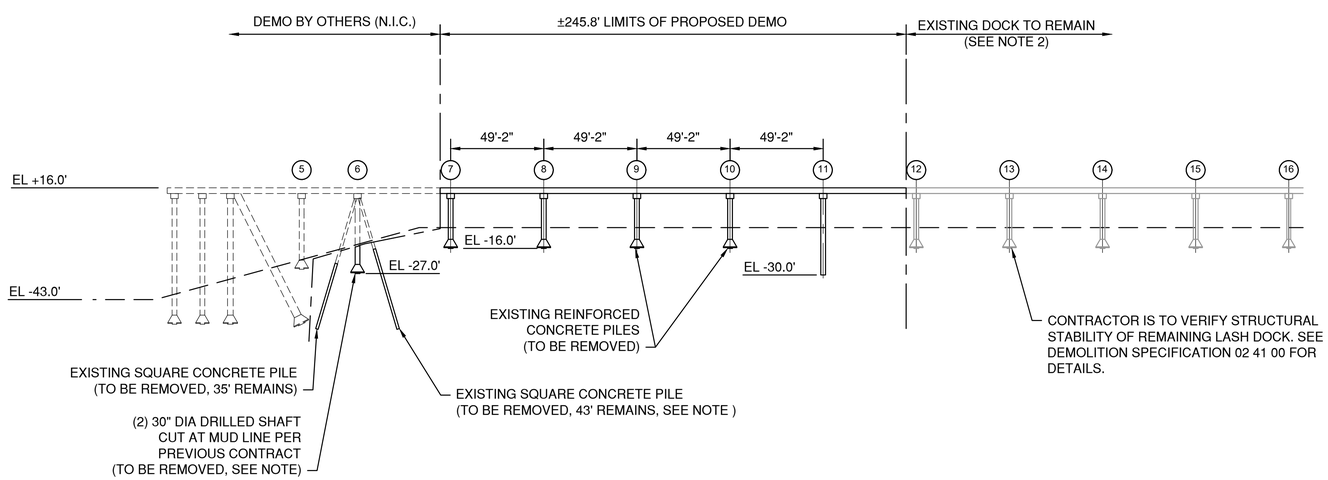
TIME: 12-08-20 – 11:15am User: OSALAS DWG: C:\pwworking\central01\d1950144\C90-D13-P11-007-C-412.dwg



A ELEVATION-LASH DOCK WEST

SCALE: 1" = 40'

40 20 0 40 80



B ELEVATION-LASH DOCK EAST

SCALE: 1" = 40'

40 20 0 40 80

GENERAL NOTES

1. REFER TO GENERAL NOTES ON SHEET G-003.
2. CONTRACTOR IS TO VERIFY STRUCTURAL STABILITY OF REMAINING LASH DOCK. SEE DEMOLITION SPECIFICATION 02 41 00 FOR DETAILS.
3. REMOVE AND CAP ALL UTILITIES, BOTH MECHANICAL AND ELECTRICAL, INSIDE THE AREA TO BE REMOVED.
4. SQUARE PILES BROKE DURING PREVIOUS EXTRACTION ATTEMPT REMAINING PILE LENGTH IS NOTED ON DRAWINGS.

PORT OF HOUSTON AUTHORITY

CONSULTANT:

DESIGN PREPARED BY:

HDR Engineering, INC
TBPELS Firm
Registration No. F-754

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APPROVED: DATE

PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR – ENGINEERING DESIGN & SUPPORT

PROJECT TITLE:

HOUSTON SHIP CHANNEL (HSC) EXPANSION CHANNEL IMPROVEMENT PROJECT (ECIP)

PROJECT 11 PACKAGE #7 SEGMENT 3

SHEET TITLE:

DEMOLITION ELEVATIONS - LASH DOCK (1 OF 2)

REV	DATE	DESCRIPTION
A	08/14/20	65% SUBMITTAL
B	12/08/20	95% SUBMITTAL

DESIGNER:	C. PERRY
CADD:	J. THORPE
CHECKER:	S. McCOY
DATE:	12/08/2020
SCALE:	1" = 40'

DRAWING NO. C90-D13-P11-007

SHEET NO. C-413 REV. NO. A

95% REVIEW

TIME: 12-08-20 – 11:15am User: OSALAS DWG: C:\pwworking\central01\d1950144\C90-D13-P11-007-C-413.dwg