

**POPA BERTH 6
SITE VICINITY MAP**

Project #: 10507N-IP
 For: Collins Engineers, Inc.
 Location: Port of Port Arthur - Berth 6 Project
 Jefferson County, Texas

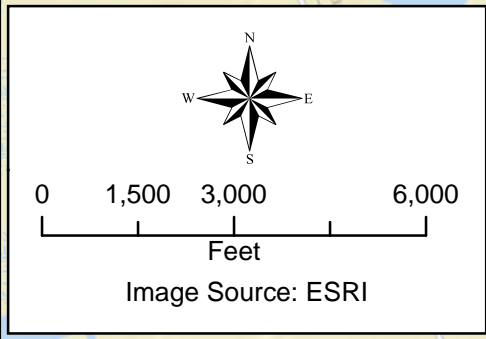
REVISIONS

BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





Site Location



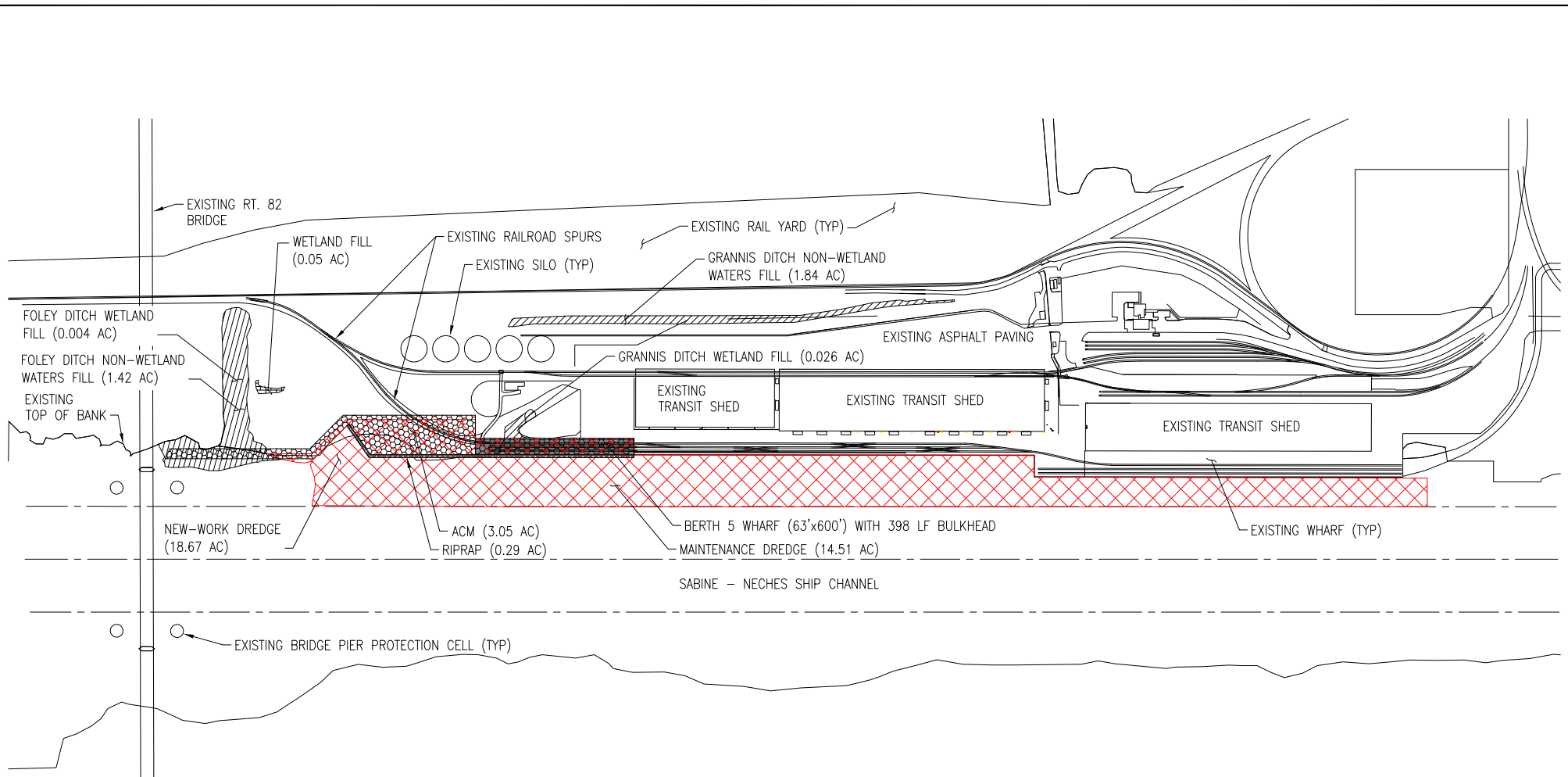
POPA BERTH 6 SITE LOCATION MAP

Project #: 10507N-IP
 For: Collins Engineers, Inc.
 Location: Port of Port Arthur - Berth 6 Project
 Jefferson County, Texas

REVISIONS

BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





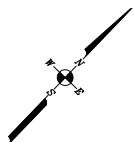
IMPACT SUMMARY

TOTAL PROJECT	AREA (AC)	FILL BELOW MHHW (CY)	CUT BELOW MHHW (CY)
FILL WITHIN EXISTING WATERS (CONVERTED TO UPLAND)	3.26	19,700	-
NEW WORK DREDGING	18.67	-	416,200
WETLANDS TO BE FILLED (CONVERTED TO UPLAND)	0.08	-	-
ARTICULATED CONCRETE MAT (ACM)	3.05	5,000	-
RIP RAP	0.29	1,000	-

	AREA (AC)	ESTIMATED ANNUAL MAINTENANCE DREDGING VOLUME (CY/YR)
MAINTENANCE DREDGING	14.51	211,000

LEGEND

- LIMITS OF WHARF
- LIMITS OF DREDGING
- LIMITS OF FILL IN WETLANDS AND NON-WETLAND WATERS
- LIMITS OF ACM SLOPE PROTECTION
- LIMITS OF RIP RAP FILL



AUTHORIZED WORK PLAN* (SWG-2011-00303)

- *AUTHORIZED WORK THAT IS NOT SHOWN INCLUDES:
- REMOVAL OF EXISTING REMNANT BULKHEADS AND DOLPHINS, PILE CLUSTERS, PILE-SUPPORTED RAIL SPUR, AND INCIDENTAL STRUCTURES WITHIN BERTH 5 LIMITS
 - 570 LF CULVERT EXTENSION AND OUTFALL AT FOLEY DITCH
 - (2) 124 LF BOX CULVERT AND OUTFALL FOR GRANNIS OUTFALL
 - RAIL BRIDGE BETWEEN BERTH 5 WHARF AND EXISTING LANDSIDE RAIL SPUR
 - (1) BREASTING DOLPHIN AND (1) MOORING DOLPHIN
 - PLACEMENT OF DREDGED MATERIAL AT PLACEMENT AREAS 9, 9A, 9B AND 11.

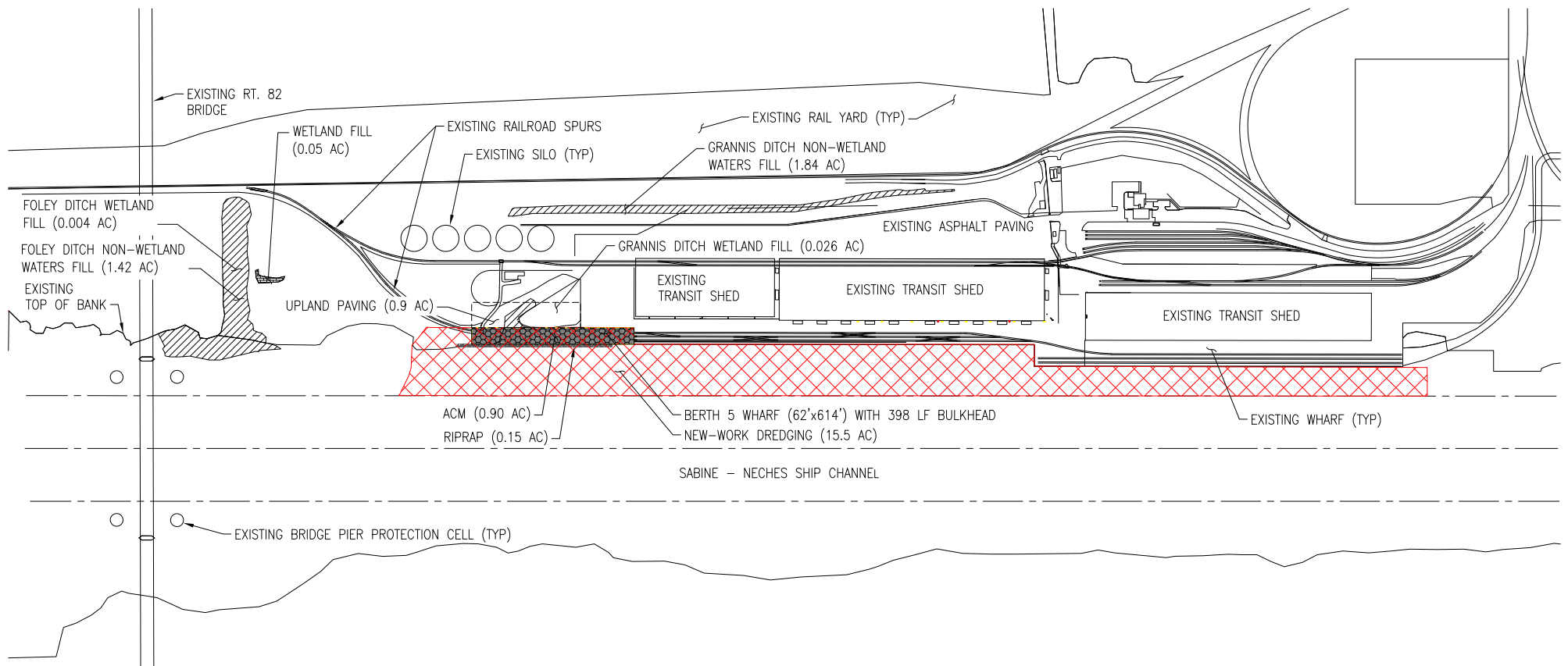
PROJECT #: 10507N-IP

FOR: Collins Engineers, Inc.

LOCATION: Port of Port Arthur - Berth 6 Project
Jefferson County, Texas

COASTAL DATUM	
MEAN HIGHER HIGH WATER (MHHW)	-1.77'
MEAN HIGH WATER (MHW)	-1.21'
MEAN SEA LEVEL (MSL)	0.00'
MEAN LOW WATER (MLW)	0.35'
MEAN LOWER LOW WATER (MLLW)	0.22'
NAVD88	0.00'
MEAN LOW TIDE (MLT)	-0.78'

BERG*OLIVER ASSOCIATES, INC.
ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
PHONE (281) 588-0898 <http://www.bergoliver.com>

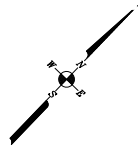
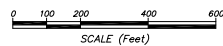


LEGEND

- LIMITS OF WHARF
- LIMITS OF DREDGING
- LIMITS OF FILL IN WETLANDS AND NON-WETLAND WATERS
- LIMITS OF ACM SLOPE PROTECTION
- LIMITS OF RIP RAP FILL

PLANNED BERTH 5 IMPACT SUMMARY

TOTAL PROJECT	AREA (AC)	FILL BELOW MHHW (CY)	CUT BELOW MHHW (CY)
FILL WITHIN EXISTING WATERS (CONVERTED TO UPLAND)	3.26	19,700	-
NEW WORK DREDGING	15.50	-	300,000
WETLANDS TO BE FILLED (CONVERTED TO UPLAND)	0.08	-	-
ARTICULATED CONCRETE MAT (ACM)	0.90	1,500	-
RIP RAP	0.15	550	-



BERTH 5 SITE PLAN (CURRENTLY BEING CONSTRUCTED)

NOTES:

1. FIGURE BASED ON CONSTRUCTION DOCUMENTS ISSUED DATE OCTOBER 18, 2018.
2. ANNUAL MAINTENANCE DREDGE NOT SHOWN
3. BOX CULVERTS AND OUTFALLS FOR GRANNIS DITCH NOT SHOWN.
4. FOLEY DITCH FILL AND CULVERT EXTENSION CURRENTLY UNDER CONSTRUCTION.

PROJECT #: 10507N-IP

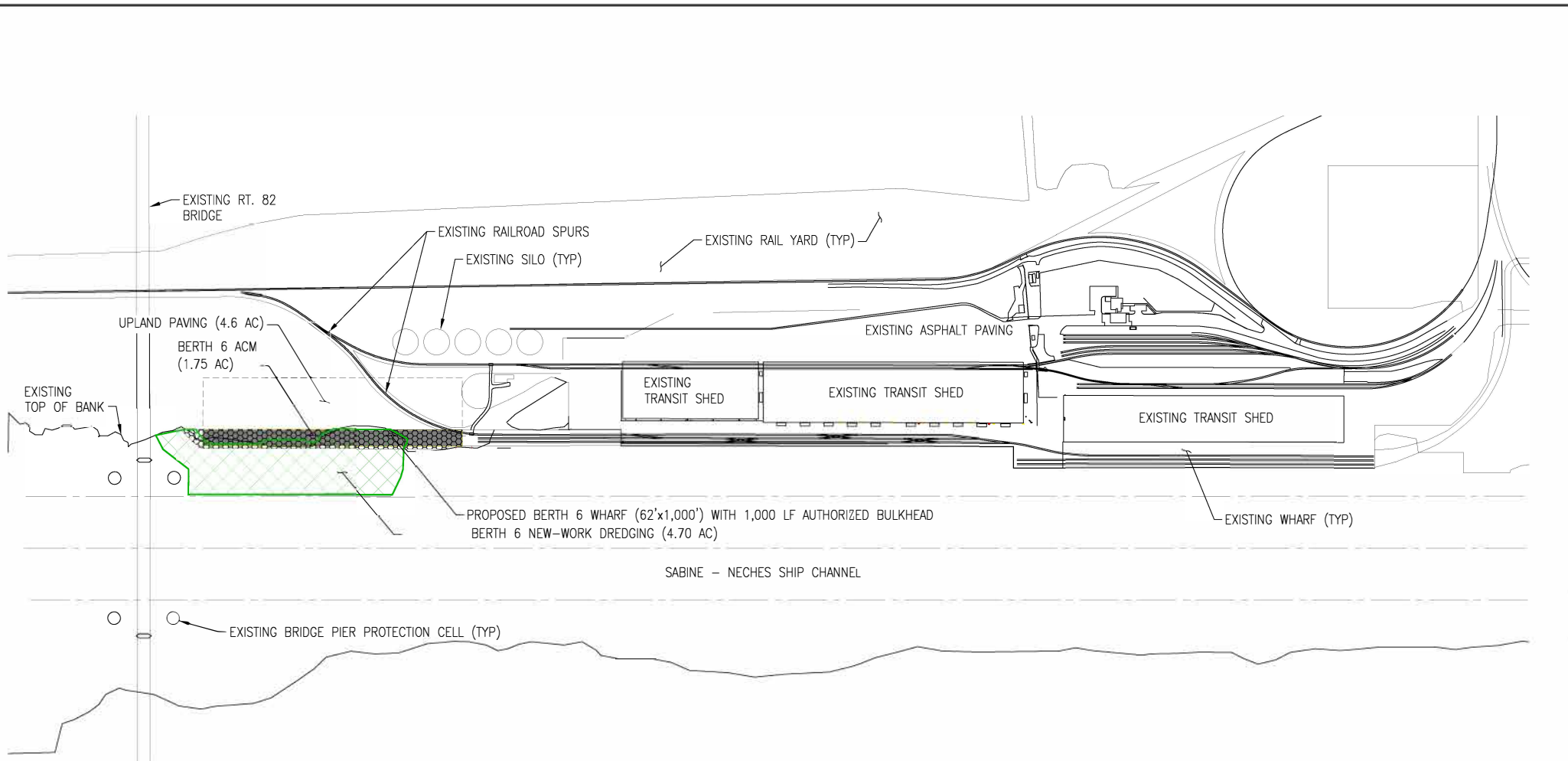
FOR: Collins Engineers, Inc.

LOCATION: Port of Port Arthur - Berth 6 Project
Jefferson County, Texas

BERG*OLIVER ASSOCIATES, INC.

ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
PHONE (281) 588-0898 <http://www.bergoliver.com>

	AREA (AC)	ESTIMATED ANNUAL MAINTENANCE DREDGING VOLUME (CY/YR)
MAINTENANCE DREDGING	14.51	211,000



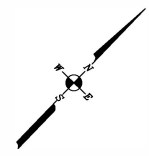
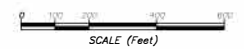
LEGEND:

- LIMITS OF BERTH 6 WHARF
- LIMITS OF BERTH 6 NEW-WORK DREDGING
- LIMITS OF ACM SLOPE PROTECTION

BERTH 6 SITE PLAN

BERTH 6 IMPACT SUMMARY (ESTIMATED)

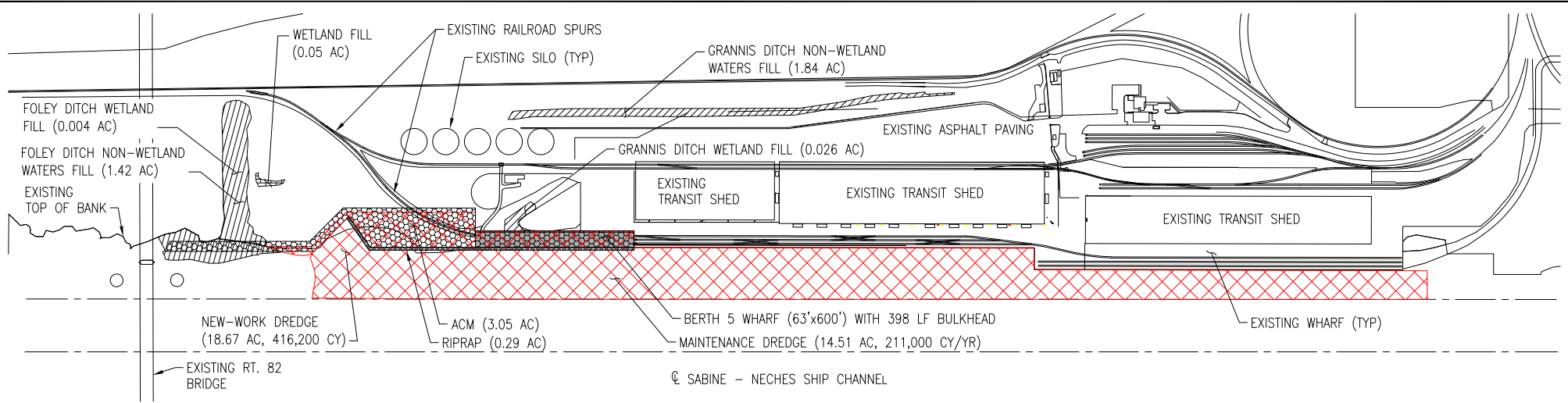
TOTAL PROJECT	AREA (AC)	FILL BELOW MHHW (CY)	CUT BELOW MHHW (CY)
NEW WORK DREDGING	4.70	-	275,000
ARTICULATED CONCRETE MAT (ACM)	1.75	1,144	-



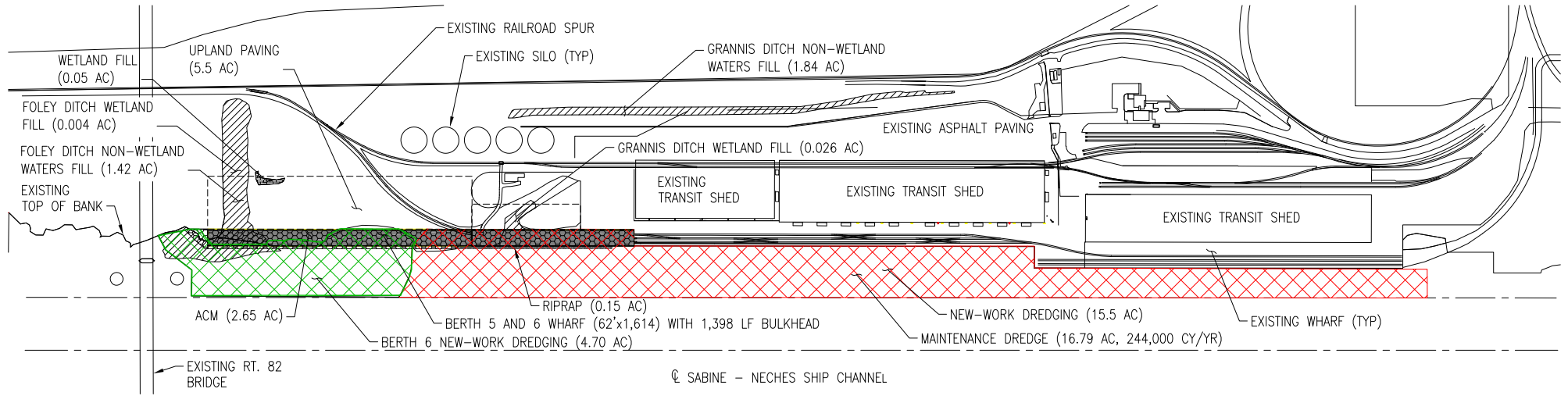
BERG*OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 569-0898 <http://www.bergoliver.com>

PROJECT #: 10507N-IP
 FOR: Collins Engineers, Inc.
 LOCATION: Port of Port Arthur - Berth 6 Project
 Jefferson County, Texas

	AREA (AC)	ESTIMATED ANNUAL MAINTENANCE DREDGING VOLUME (CY/YR)
MAINTENANCE DREDGING	2.28	33,000



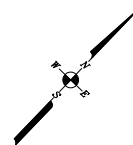
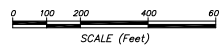
AUTHORIZED WORK PLAN* (SWG-2011-00303)



COMBINED SITE PLAN: BERTH 5 AND 6




LEGEND

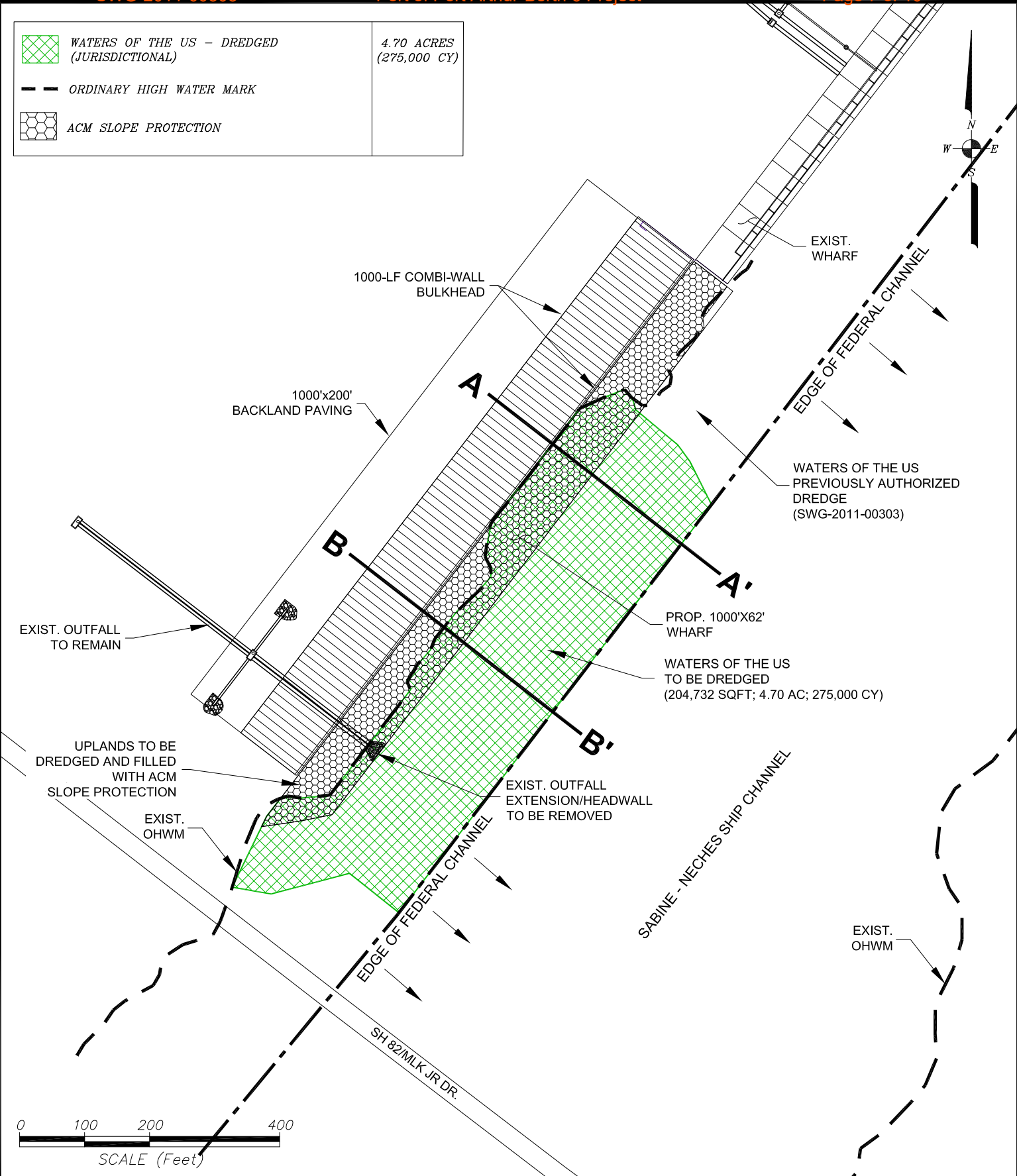
- LIMITS OF WHARF
- LIMITS OF BERTH 5 NEW-WORK DREDGING
- LIMITS OF BERTH 6 NEW-WORK DREDGING
- LIMITS OF FILL IN WETLANDS AND NON-WETLAND WATERS
- LIMITS OF ACM SLOPE PROTECTION
- LIMITS OF RIP RAP FILL



BERG*OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 569-0899 <http://www.bergoliver.com>

PROJECT #: 10507N-IP
 FOR: Collins Engineers, Inc.
 LOCATION: Port of Port Arthur - Berth 6 Project
 Jefferson County, Texas

	WATERS OF THE US - DREDGED (JURISDICTIONAL)	4.70 ACRES (275,000 CY)
	ORDINARY HIGH WATER MARK	
	ACM SLOPE PROTECTION	



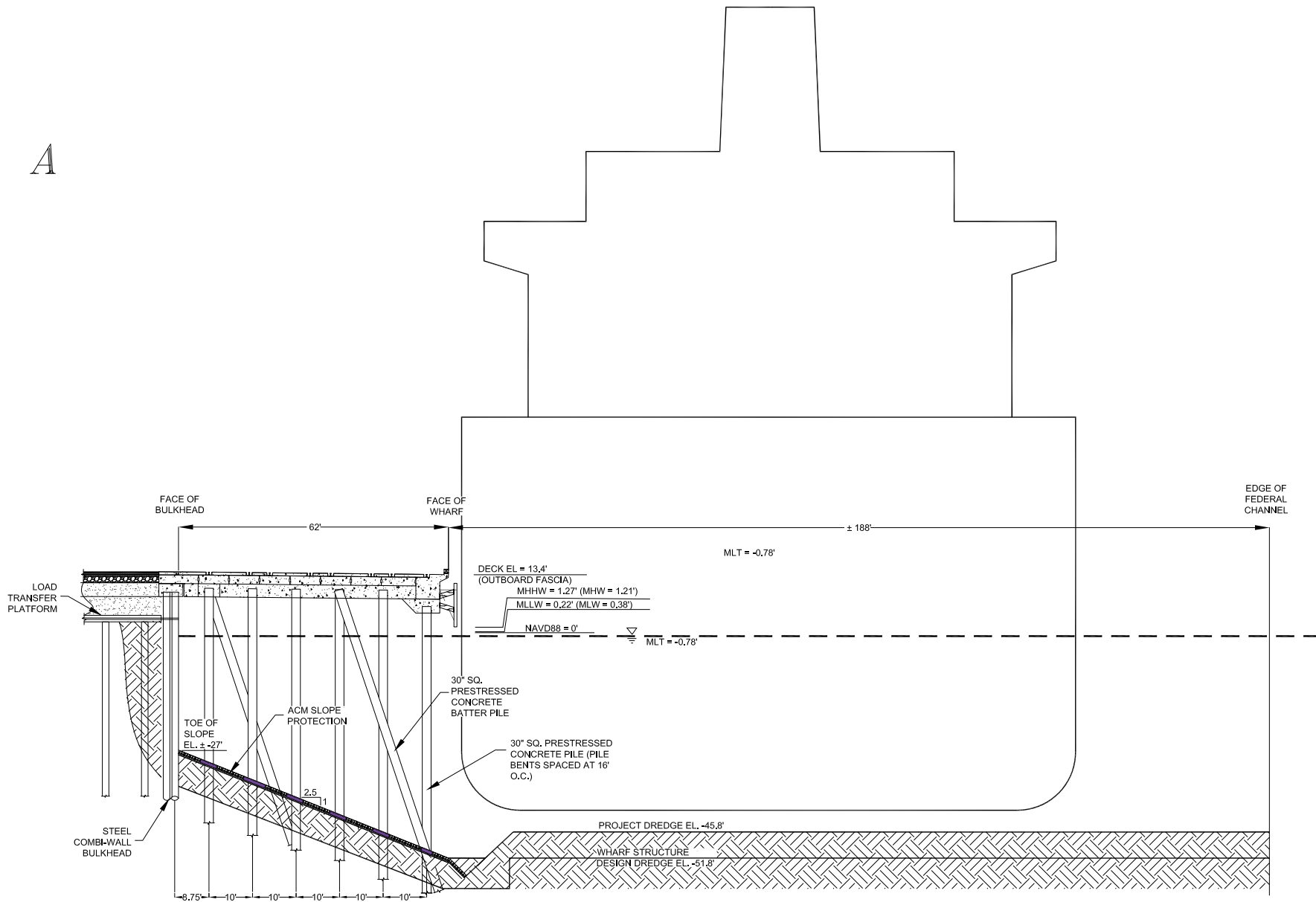
**POPA BERTH 6
DETAIL PLAN VIEW**

PROJECT #: 10507N-IP
 FOR: Collins Engineers, Inc.
 LOCATION: Port of Port Arthur - Berth 6 Project
 Jefferson County, Texas

REVISIONS:
Jan. 21, 2019 by MDB
April 2, 2019 by MDB
April 23, 2019 by MDB
Aug. 12, 2019 by MDB

BERG & OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 589-0898 <http://www.bergoliver.com>





**PROPOSED WHARF
CROSS SECTION A-A'**

PROJECT #: 10507N-IP
 FOR: Collins Engineers, Inc.
 LOCATION: Port of Port Arthur - Berth 6 Project
Jefferson County, Texas

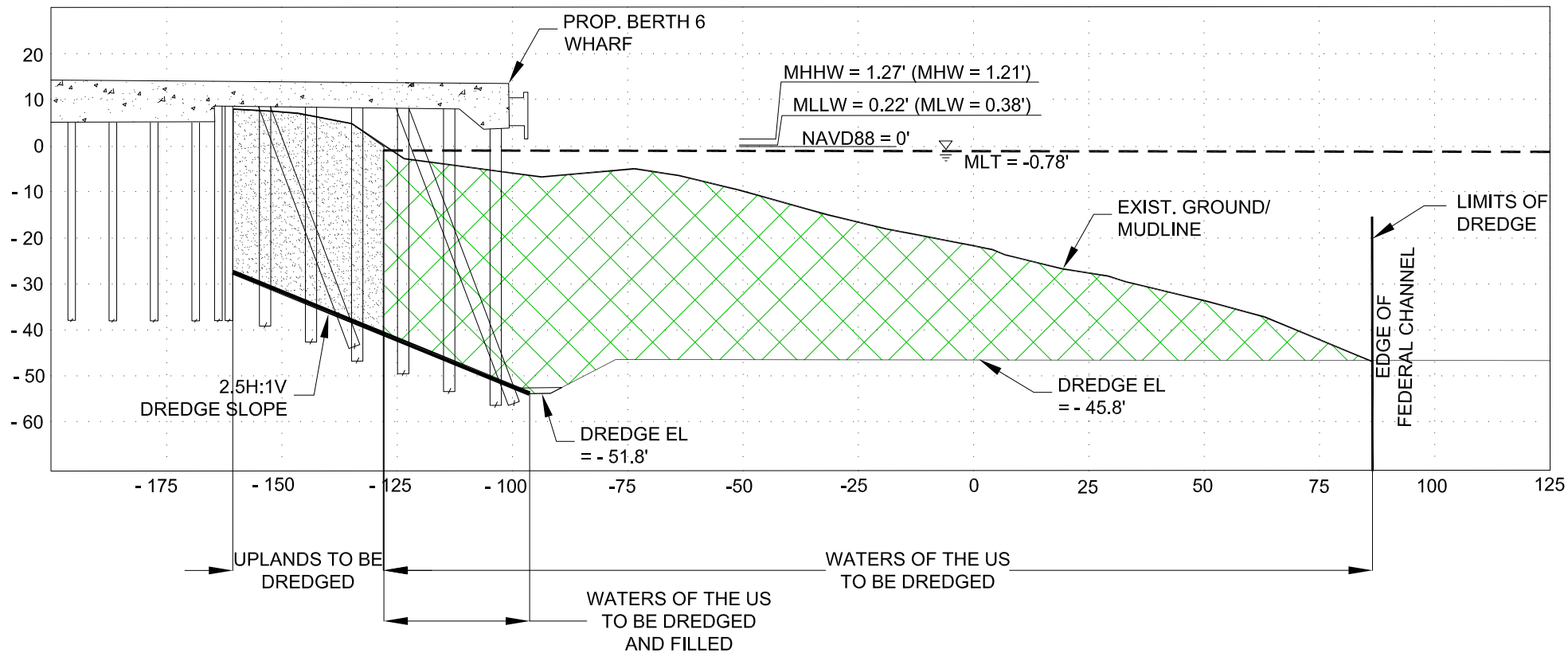
REVISIONS:
Aug. 12, 2019 by MDB

BERG & OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 569-0898 <http://www.bergoliver.com>



B

B'



POPA BERTH 6
CROSS SECTION B-B'

PROJECT #: 10507N-IP
 FOR: Collins Engineers, Inc.
 LOCATION: Port of Port Arthur - Berth 6 Project
 Jefferson County, Texas

REVISIONS:
Jan. 21, 2019 by MOB
April 2, 2019 by MDB
Aug. 13, 2019 by MOB

BERG & OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 589-0898 <http://www.bergoliver.com>



