

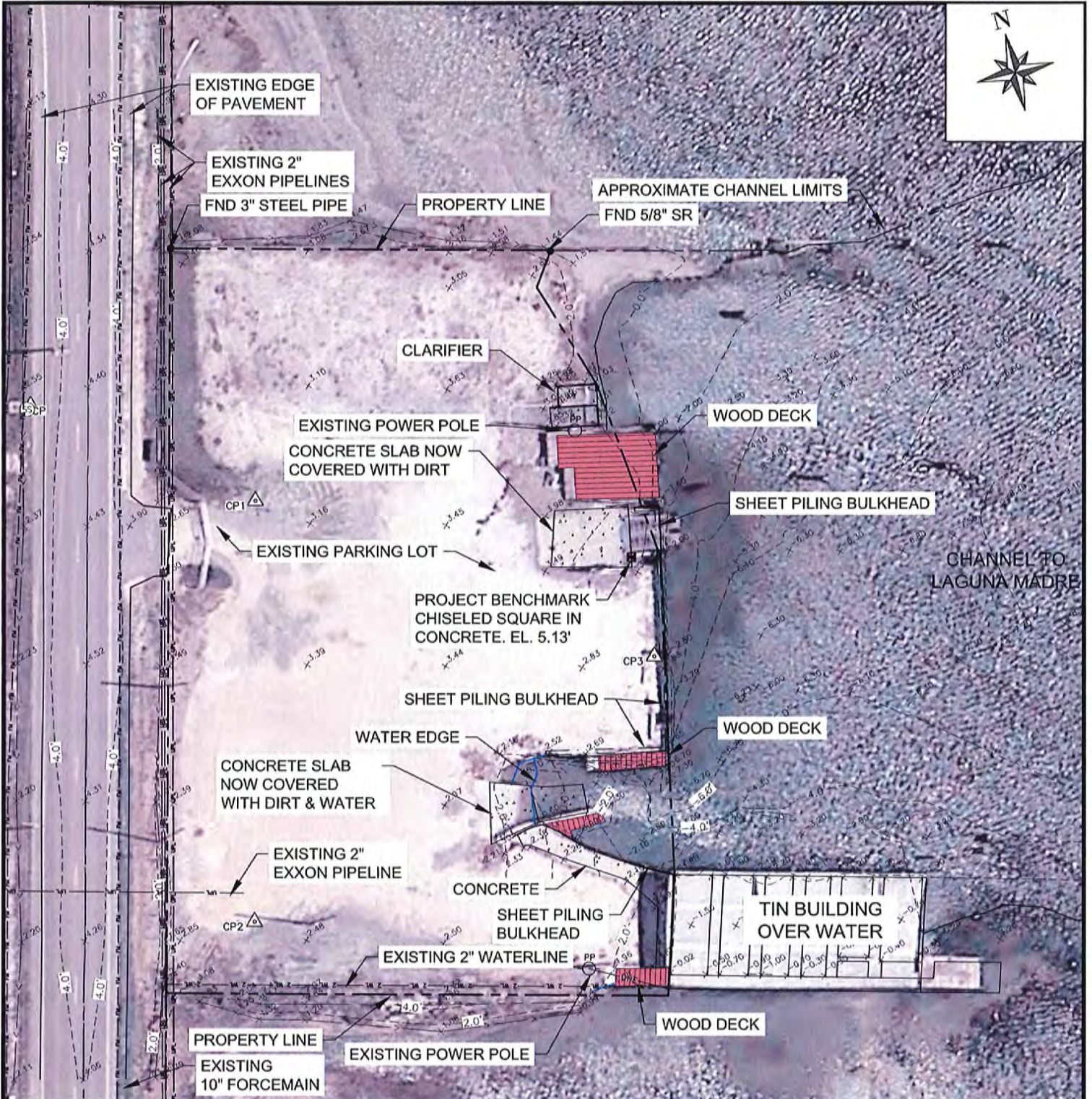
REVISION No.	DATE	BY	DESCRIPTION

<p>LJA ENVIRONMENTAL SERVICES</p>	<p>LAGUNA SHORES BOAT LAUNCH PERMIT</p>	
	<p>Vicinity Site Location Map</p> <p>Page 1 of 10</p>	

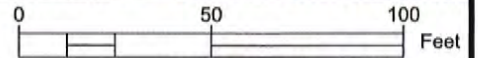
LJA ENGINEERING

5353 South Staples, Suite 425 T&E Firm Reg. No. F-1386
Corpus Christi, Texas 78411 T&E Firm Reg. No. 10016600
Phone (361) 991-4550

LJA PROJECT No.:
C973-21109





THE EXISTING CONDITIONS WERE SURVEYED BY BRISTER SURVEYING ON NAD 83 (93) 4205 DATUM.
ALL WORK ON THIS PROJECT SHALL BE ON DATUM NAVD 88, FEET.

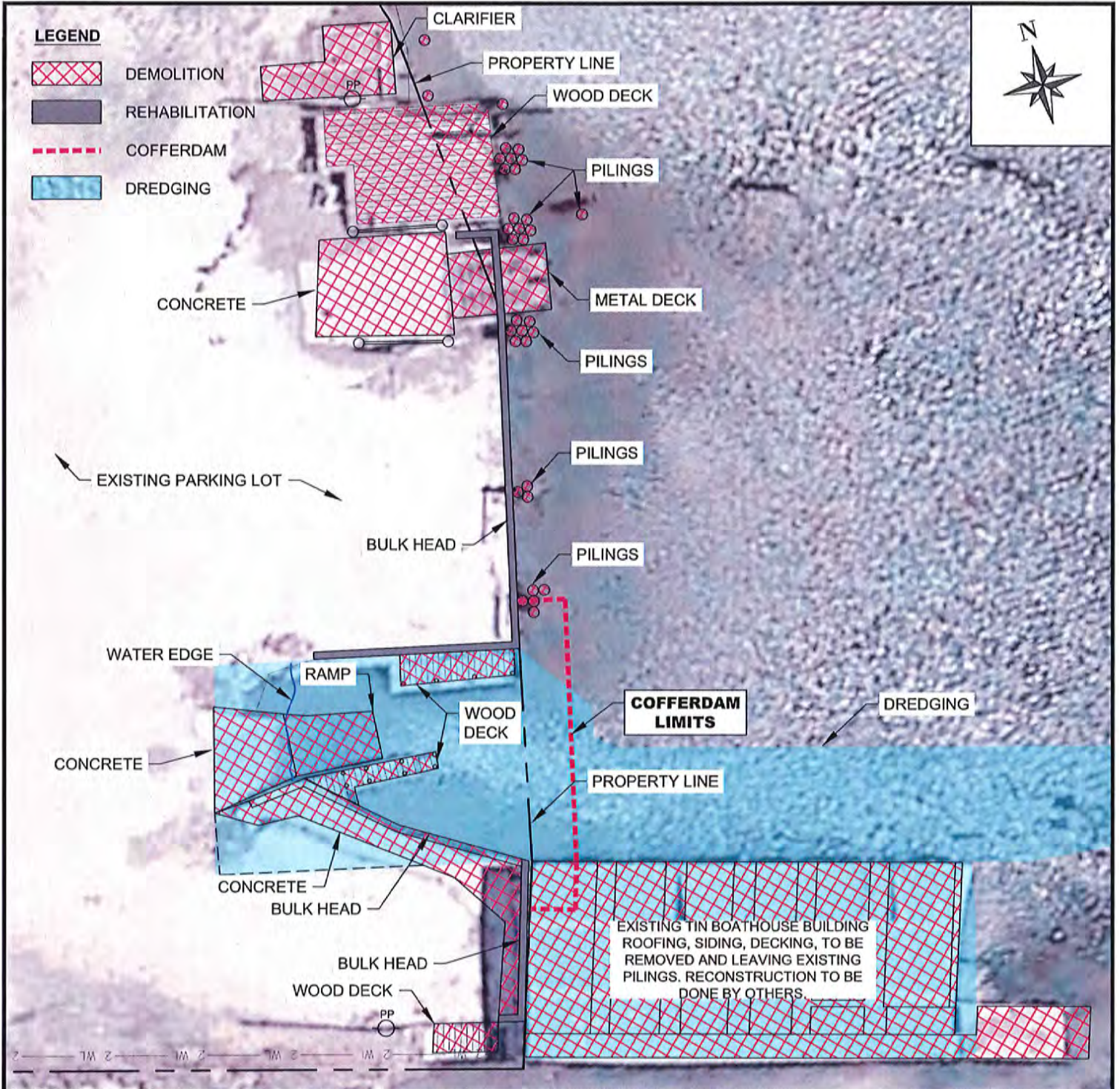


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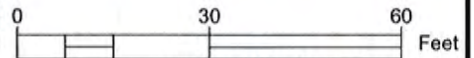
REVISION No.	DATE	BY	DESCRIPTION

SHEET 2	DRN: MF	DATE: 12/18/2019	 <p>LAGUNA SHORES BOAT LAUNCH PERMIT</p> <p>Existing Site Conditions</p>
	SCALE: AS NOTED		

 <p>LJA ENGINEERING</p> <p>5350 South Gables, Suite 425 Coppell, Texas 75041 Phone (972) 991-5550</p>	<p>TBPE Firm Reg. No. F-1328 TBPLS Firm Reg. No. 1071600</p>





EXCAVATION OF THE BOAT RAMP'S SUBGRADE MATERIAL SHALL BE PERFORMED TO THE REQUIRED DEPTH, AS SHOWN ON THE CONTRACT DRAWINGS. SLOPES SHALL BE MAINTAINED AS NECESSARY OR AS OTHERWISE DIRECTED OR APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE EXCAVATED SLOPES TO THE REQUIRED LIMITS UNTIL PLACEMENT OF THE #57 STONE BASE MATERIAL IS COMPLETED. PRIOR TO INITIATION OF EXCAVATION, THE CONTRACTOR SHALL SUBMIT TO THE OWNER OR OWNER'S REPRESENTATIVE FOR APPROVAL HIS PROPOSED METHOD OF EXCAVATION.



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REVISION No.	DATE	BY	DESCRIPTION

SHEET 3	APP. JS	DATE 12/18/2019	 <p>LAGUNA SHORES BOAT LAUNCH PERMIT</p> <p>Demolition Plan</p> <p>Page 3 of 10</p>
	DRN. MF	SCALE: AS NOTED	

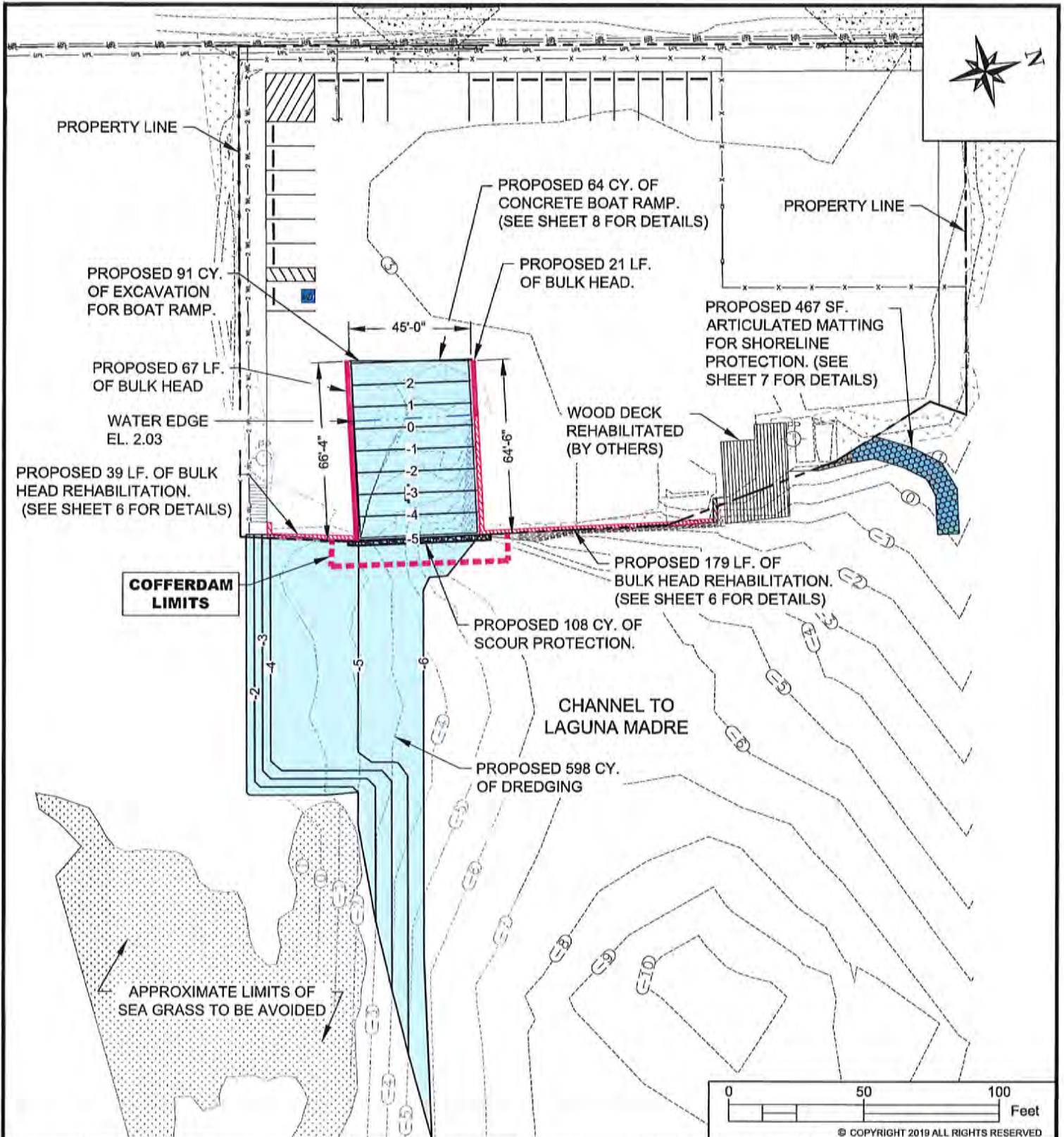


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5350 South Shilps, Suite 425
Corpus Christi, Texas 78411
Phone (361) 991-6556

TDPE Firm Reg. No. F-1386
TDPLS Firm Reg. No. 10016800

LJA PROJECT No.:
0973-21106

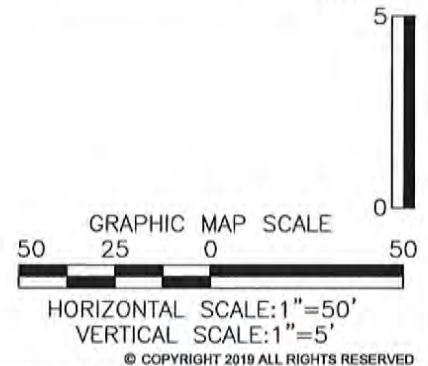
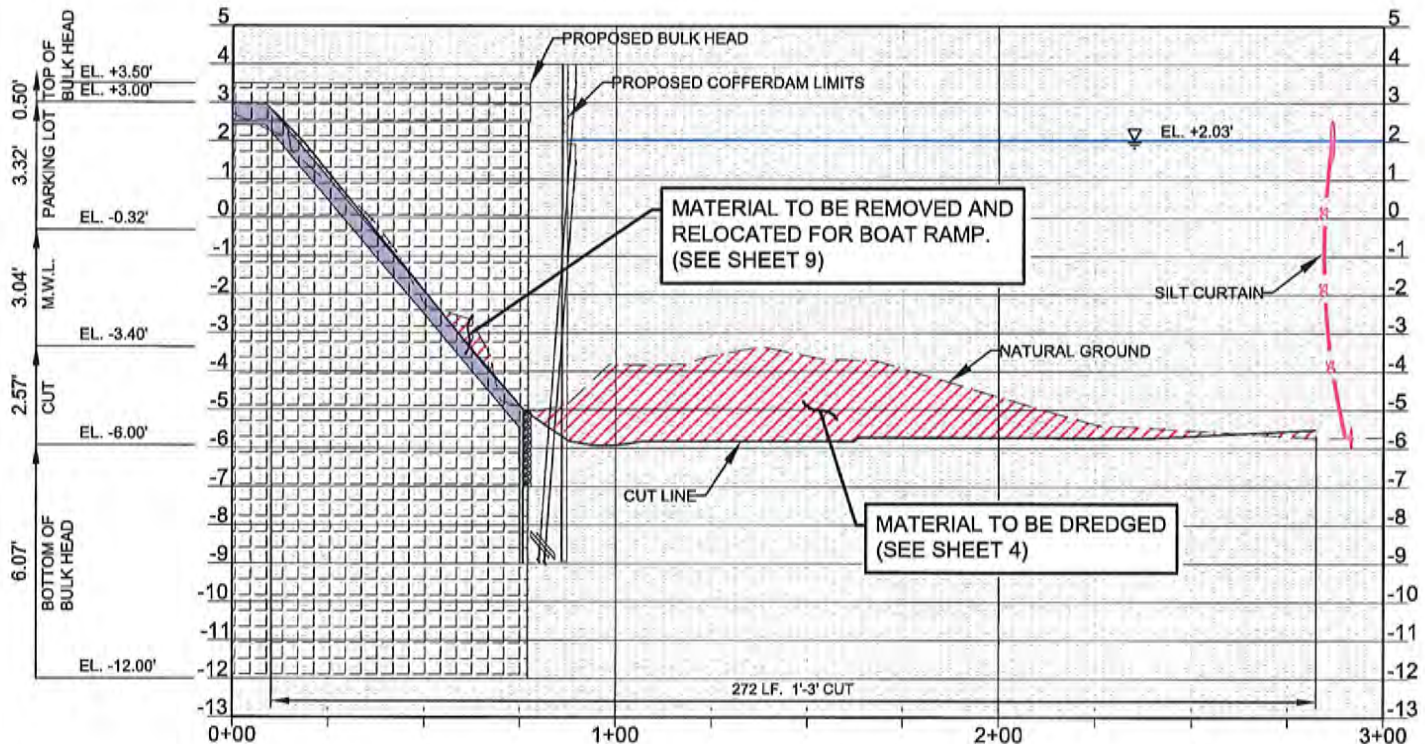


REVISION No.	DATE	BY	DESCRIPTION


SHEET	APP. JG	DATE: 12/18/2019	 <p>LJA ENVIRONMENTAL SERVICES</p>
	DRN. MF	SCALE: AS NOTED	
4	<p align="center">LAGUNA SHORES BOAT LAUNCH PERMIT</p> <p align="center">Proposed Site Plan</p> <p align="center">Page 4 of 10</p>		 <p>LJA ENGINEERING</p> <p><small>5350 South Staples, Suite 475 Corpus Christi, Texas 78411 Phone (361) 981-6550</small></p> <p><small>TBPE Firm Reg. No. F-1388 TBPLS Firm Reg. No. 10316602</small></p>

LJA PROJECT No.:
C973-21108

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REVISION No.	DATE	BY	DESCRIPTION
5	12/18/2019	JG	AS NOTED



LJA ENVIRONMENTAL SERVICES

LAGUNA SHORES BOAT LAUNCH PERMIT

Profile View
Page 5 of 10

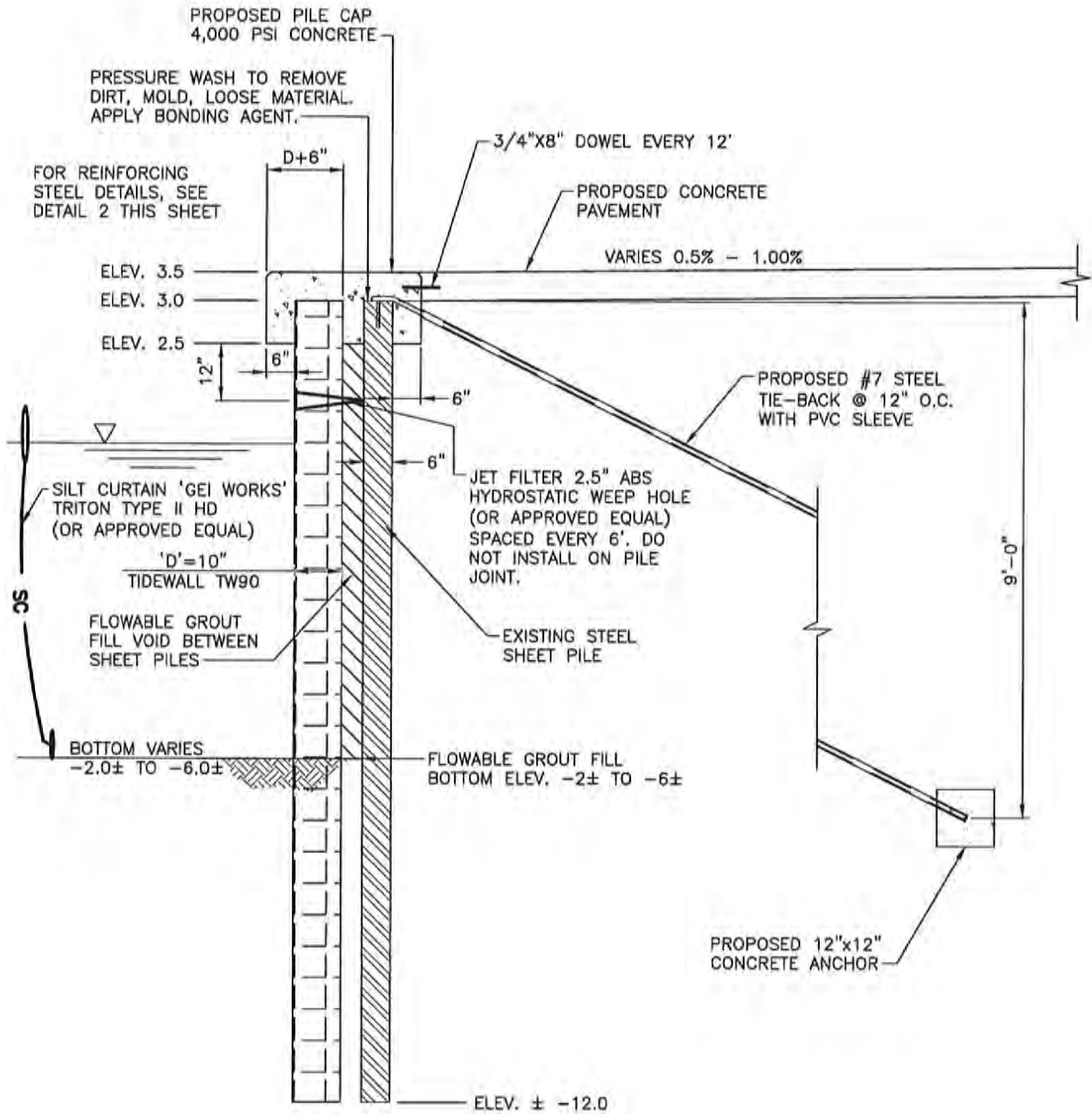


LJA ENGINEERING

5350 South Staples, Suite 425 Corpus Christi, Texas 78411 Phone (361) 961-5500

TXPE Firm Reg. No. F-1386 TAPLS Firm Reg. No. 10016003


LJA PROJECT No.:
 C973-21106



1 BULKHEAD REHABILITATION DETAIL
 3 6 SCALE: 1"=2'

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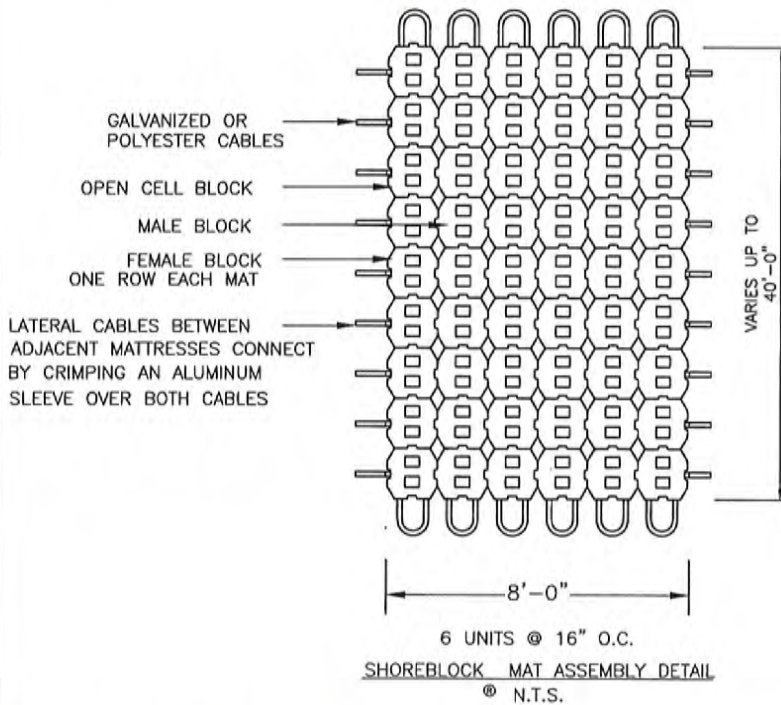
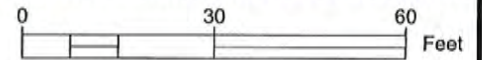
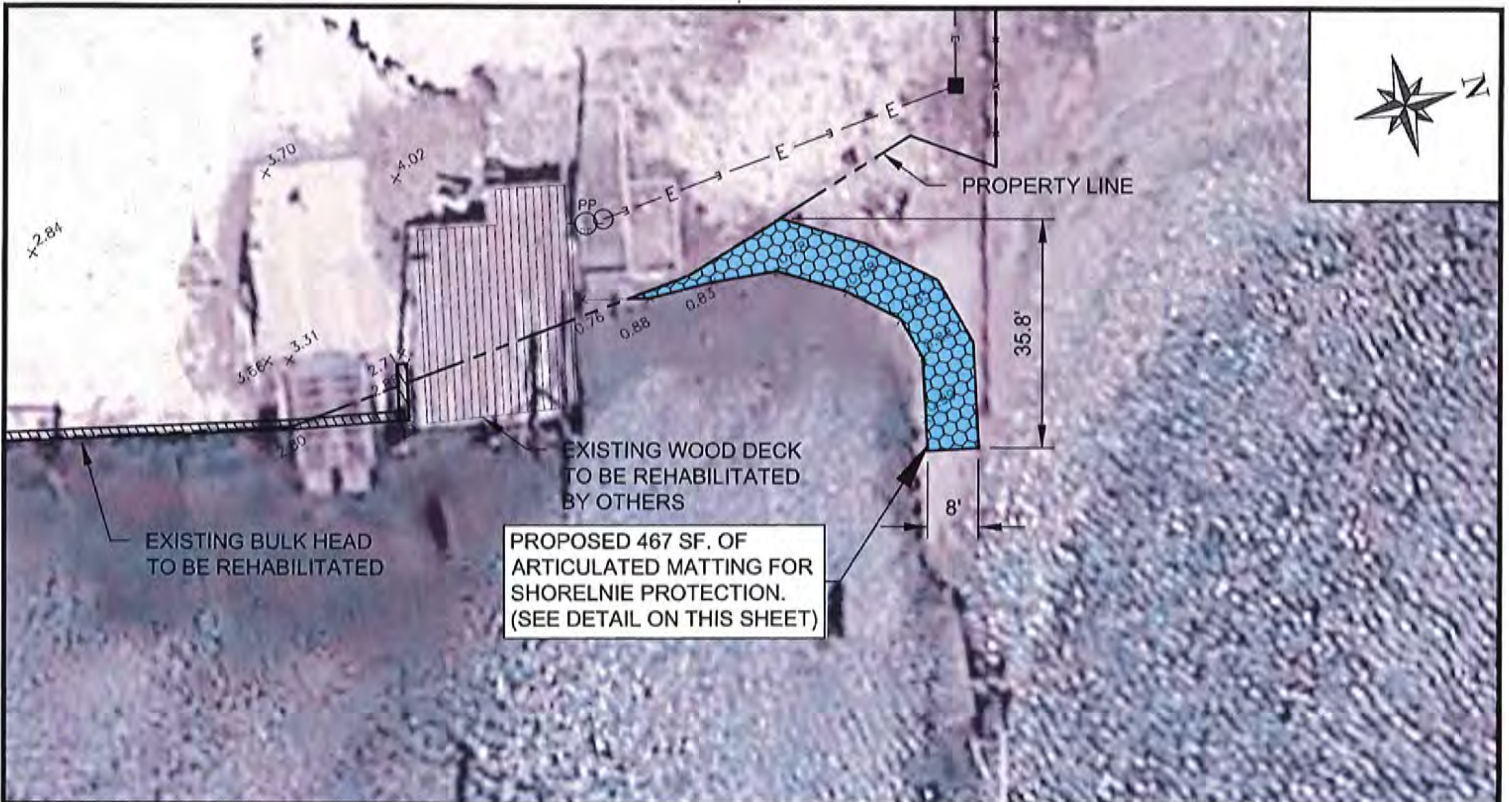
REVISION No.	DATE	BY	DESCRIPTION

SHEET 6	APP. JG	DATE 12/18/2019	 <p>LJA ENVIRONMENTAL SERVICES</p>	<p align="center">LAGUNA SHORES BOAT LAUNCH PERMIT</p> <p align="center">Bulkhead Rehabilitation Detail</p>
	DRN. MF	SCALE: AS NOTED		



5350 South Staples, Suite 425 THE Firm Reg. No. F-1389
 Corpus Christi, Texas 78411 TDRS Firm Reg. No. (D19400)
 Phone (361) 991-8500

LJA PROJECT No.:
 C973-21106



TECHINCAL SPECIFICATIONS

- 1) SHOREBLOCK® UNITS ARE MANUFACTURED IN ACCORDANCE WITH ASTM C90 AND C140 AND THE FOLLOWING CRITERIA:
 - A) CONCRETE UNIT WEIGHT 130 -150 LBS/CF
 - B) MINIMUM COMPRESSIVE STRENGTH - 4,000 PSI.
 - C) MAXIMUM ABSORPTION - 5 %
 - D) DIMENSIONAL TOLERANCE ± 1/8"
- 2) GALVANIZED OR POLYESTER CABLING

NOTE:
FEMALE BLOCK ARE USED ON THE OUTSIDE OF THE MATS TO ALLOW CRIMPING.

UNIT	WEIGHT LBS.	COVERAGE (lbs/sq.ft)	OPEN AREA
BD-600 OC	87 - 93	50 - 54	20%

ASSEMBLY SPECIFICATIONS

- 1) SHOREBLOCK® UNITS ARE SHOP ASSEMBLED IN A CABLED MATTERESS AS SHOWN ABOVE.
- 2) SHOREBLOCK® MATS ARE PLACED BY THE CONTRACTOR IN THE FIELD ON PREPARED SLOPES PER THE CONTRACT DRAWINGS.

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REVISION No.	DATE	BY	DESCRIPTION

LJA ENVIRONMENTAL SERVICES

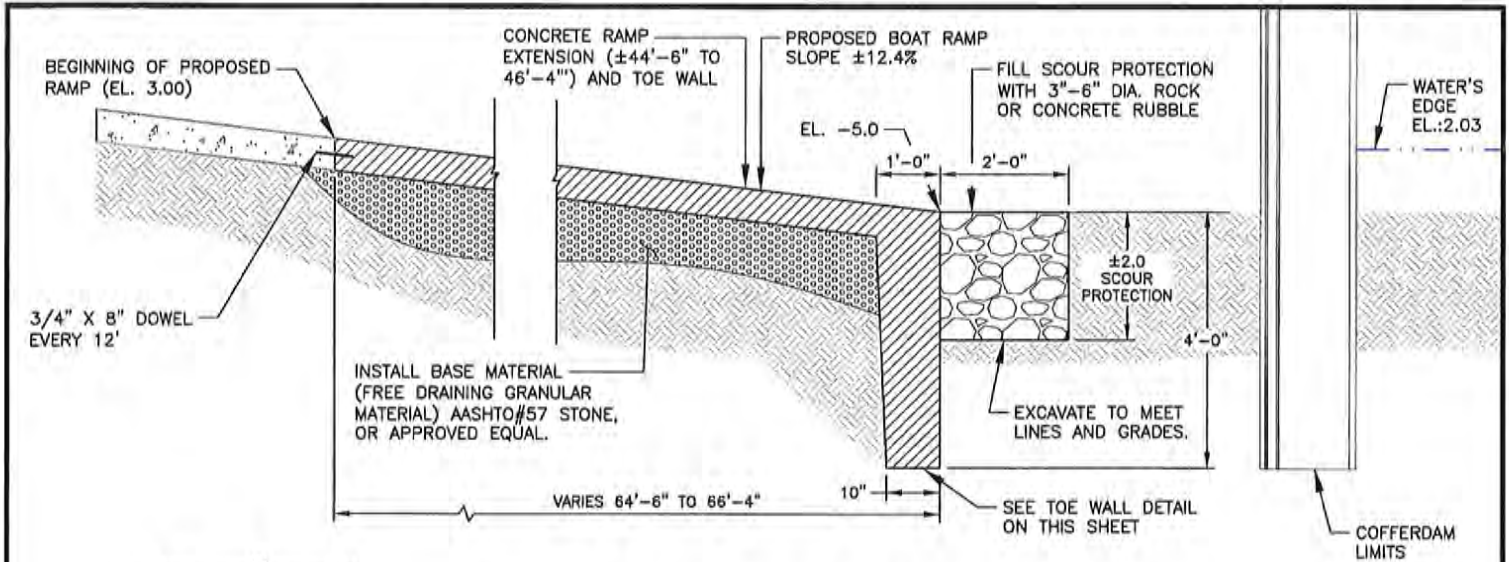
LAGUNA SHORES BOAT LAUNCH PERMIT

Proposed Articulated Matting

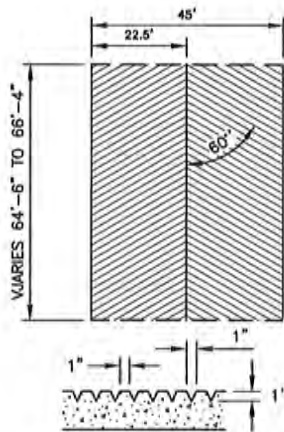
LJA ENGINEERING

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 Corpus Christi, Texas 78411 T&PE Firm Reg. No. 10016603
 Phone (361) 991-8559

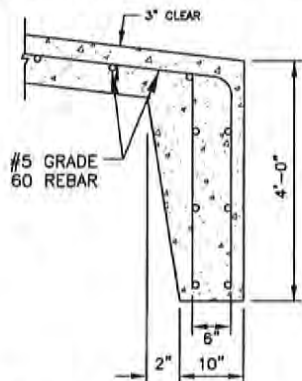
LJA PROJECT No.:
 C973-21106



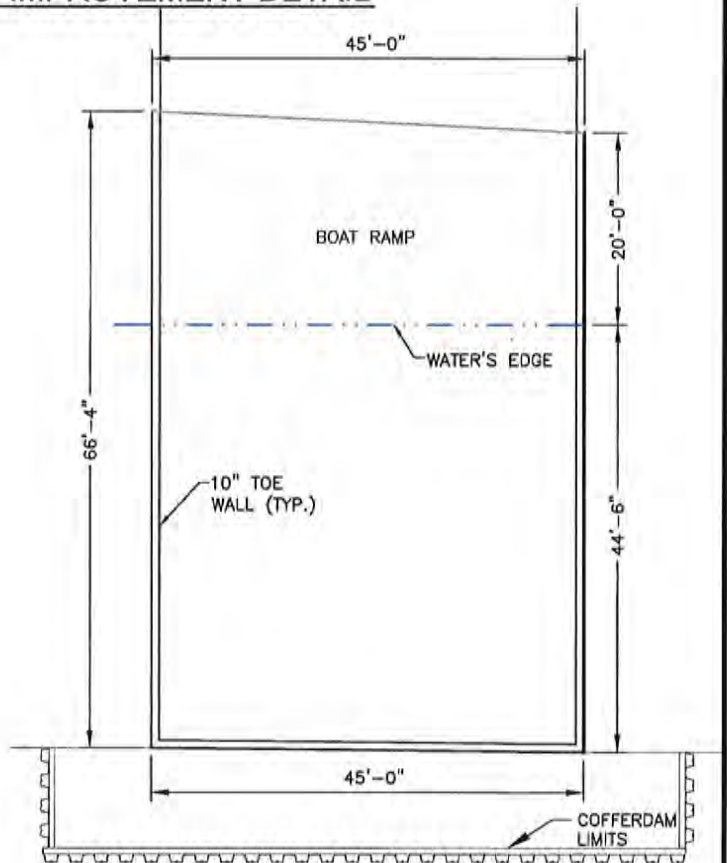
1 BOAT RAMP 1 IMPROVEMENT DETAIL
SCALE: N.T.S.



2 BOAT RAMP 1 V-GROOVE FINISHING DETAIL
SCALE: N.T.S.




3 TOE WALL DETAIL
SCALE: N.T.S.



4 TOE WALL PLAN
SCALE: N.T.S.

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REVISION No.	DATE	BY	DESCRIPTION




LJA ENVIRONMENTAL SERVICES

LAGUNA SHORES BOAT LAUNCH PERMIT

Boat Ramp Details

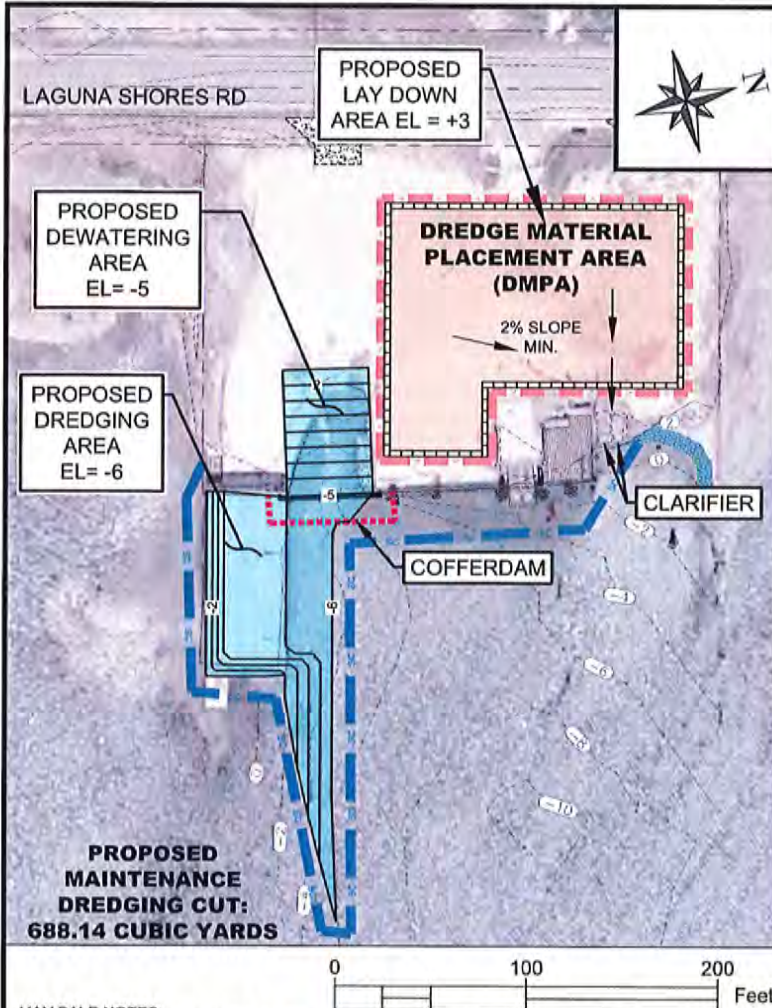
Page 8 of 10



LJA ENGINEERING

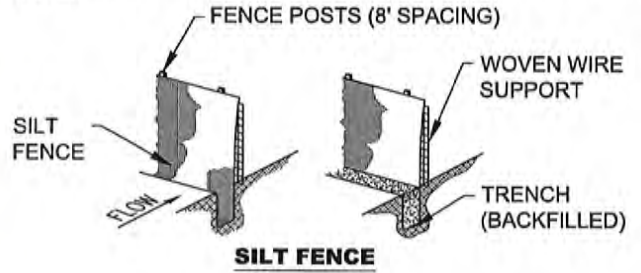
5300 South Staples, Suite 425 | 787PE Firm Reg. No. F-1386
 Corpus Christi, Texas 78411 | 787PE Firm Reg. No. 1001600
 Phone (361) 991-6556

LJA PROJECT No.:
CS973-21106

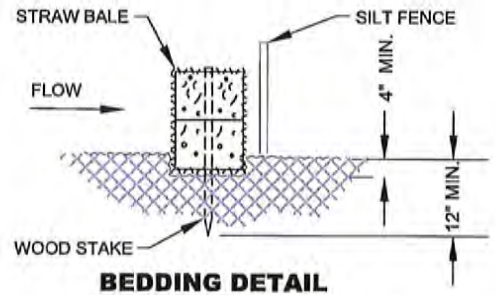


SILT FENCE NOTES:

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 4-8 INCH WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.



SILT FENCE



BEDDING DETAIL

HAY BALE NOTES:

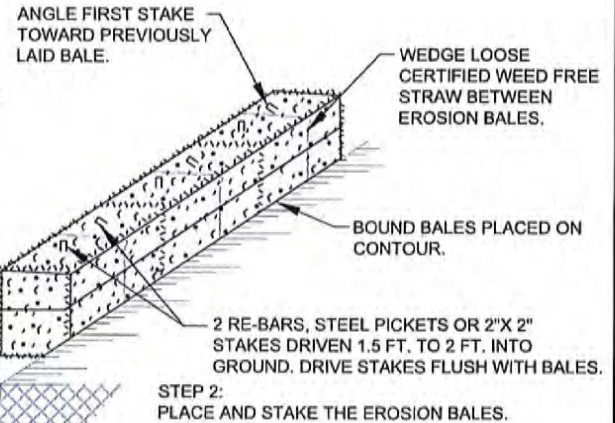
1. BALES SHALL BE PLACED AT THE TOP OF SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4", TIGHTLY ABUTTED WITH NO CAPS, STAKED, BACKFILLED AROUND THE ENTIRE OUTSIDE PERIMETER AND PLACED SO THAT BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE.
4. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
5. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. STAKES SHALL BE WOOD AND SHALL BE 2"X 2" NOMINAL.
8. EROSION BALES SHALL BE 18"X 18"X 36".

SILT CURTAIN NOTES:

1. SILT SCREEN OF PROPER LENGTH SHOULD BE DEPLOYED WITH APPROPRIATE WEIGHTS AND FLOATS, AND SHOULD BE DEPLOYED IN A MANNER AROUND THE WORK AREAS IN ORDER TO PREVENT ANY SUSPENDED SOLIDS TO ENTER THE ADJACENT WATERWAY. THIS INCLUDES ANY RETURN WATER FROM DEWATERING ACTIVITIES.

LEGEND

- HAY BAILES
- SILT FENCE
- SILT CURTAIN
- COFFERDAM



ANCHORING DETAIL

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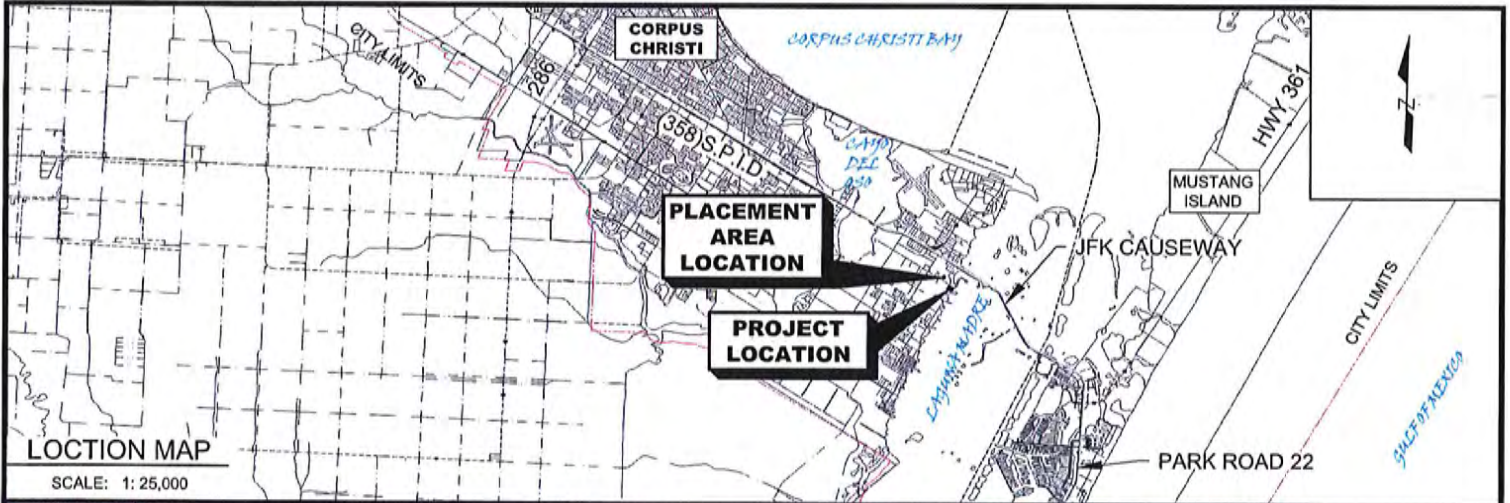
REVISION No.	DATE	BY	DESCRIPTION

SHEET 9	APP. JG	DATE 12/18/2019	<p>LJA ENVIRONMENTAL SERVICES</p>	<p align="center">LAGUNA SHORES BOAT LAUNCH PERMIT</p> <p align="center">Dredge Material Placement Area (DMPA) & SWPPP</p> <p align="center">Page 9 of 10</p>
	DRN. MF	SCALE AS NOTED		

LJA ENGINEERING


5350 South Staples, Suite 425 TWP Firm Reg. No. F-1388
 Corpus Christi, Texas 78411 TWP Firm Reg. No. 10016800
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LJA PROJECT No.:
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REVISION No.	DATE	BY	DESCRIPTION

 LJA ENVIRONMENTAL SERVICES	App: JG Date: 12/18/2019
	Scale: AS NOTED

<h2>LAGUNA SHORES BOAT LAUNCH PERMIT</h2>
<h3>Placement Area Location Map</h3>

 LJA ENGINEERING	LJA PROJECT No.: C973-21106
<small>5350 South Staples, Suite 425 Corpus Christi, Texas 78411 Phone (361) 991-6550</small>	<small>TBPE Firm Reg. No. F-1205 TBPLS Firm Reg. No. 10016000</small>