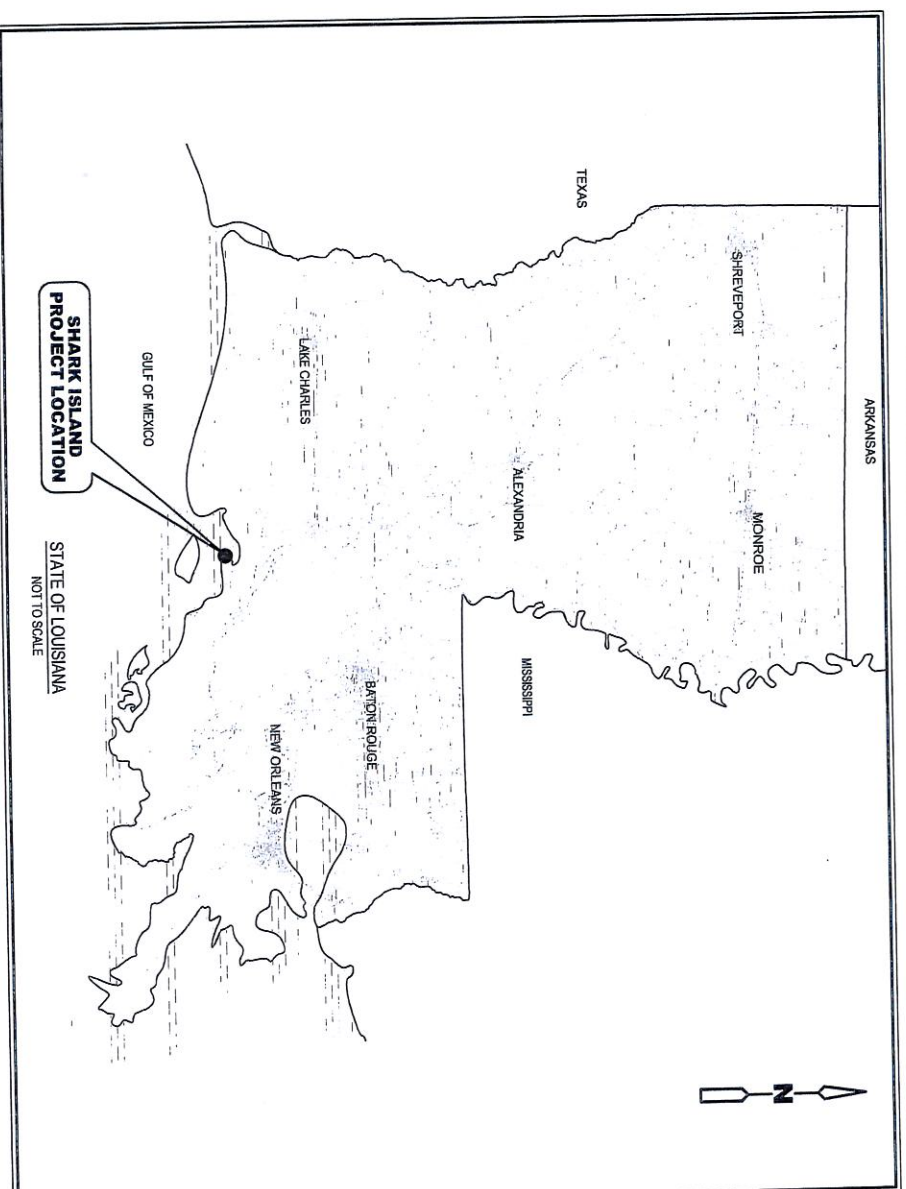


NATURAL RESOURCES CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

LA-16 NON-ROCK ALTERNATIVES TO SHORELINE PROTECTION DEMONSTRATION PROJECT

PROJECT NO. 129859-95110



LOCATION PLAN
N15
NOT TO SCALE

RECORD DRAWING
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY NRCS AND BY CDM SMITH. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE. THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
By *Peter Bauer* Date MAY 2014
CDM Smith

**FOR DEMONSTRATION
PROJECT PURPOSES ONLY**

LIST OF DRAWINGS

SHEET	TITLE
COVER SHEET	
C-1	WAD STRUCTURES
C-2	SHARK ISLAND SITE PLAN
CZ-1	WAD ALIGNMENT
CZ-2	SECTIONS
CZ-3	STANDARD DETAILS
CZ-4-AB	WAD DATA

MAY 2013

**CDM
Smith**

Living Shoreline Solutions Inc.
www.livingshoresolutions.com

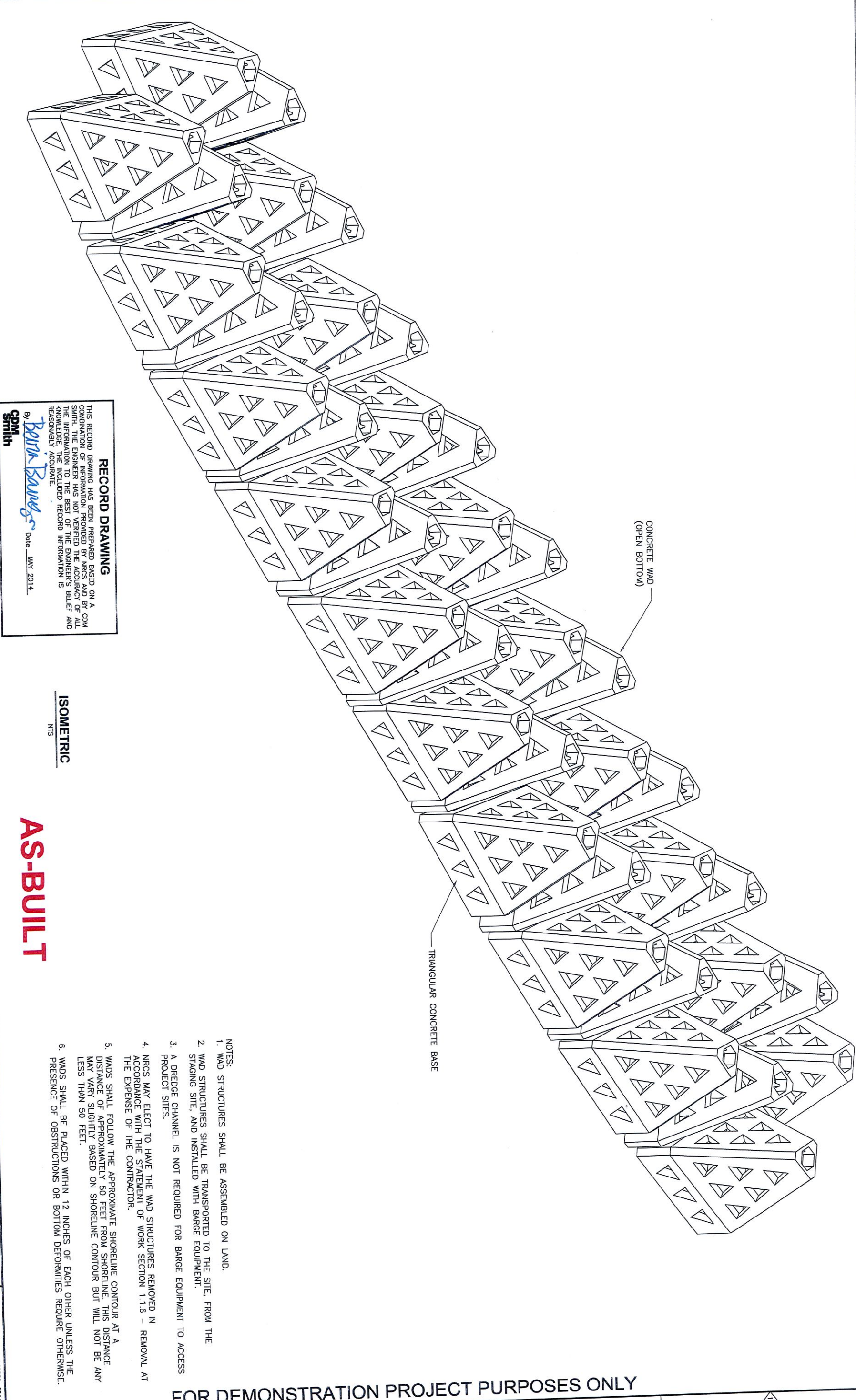
AS-BUILT

DESIGNED BY: LSS
 G. RODRIGUEZ
 DRAWN BY: B. BARBERGER
 SHEET CHECKED BY: N. MURPHY
 GROSS CHECKED BY: MARCH 20, 2014
 DATE:



NATURAL RESOURCES CONSERVATION SERVICE
 UNITED STATES DEPARTMENT OF AGRICULTURE
 LA-16 NON-ROCK ALTERNATIVES TO SHORELINE
 PROTECTION DEMONSTRATION PROJECT

PROJECT NO. 129859-95110
 FILE NAME: CO01PLISO.DWG
 SHEET NO. C-1
 WAD STRUCTURES



RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY NRCGS AND BY CDM SMITH. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
 By: *Brian Barberger* Date: MAY 2014
 CDM Smith

ISOMETRIC
 NTS

AS-BUILT

- NOTES:
1. WAD STRUCTURES SHALL BE ASSEMBLED ON LAND.
 2. WAD STRUCTURES SHALL BE TRANSPORTED TO THE SITE, FROM THE STAGING SITE, AND INSTALLED WITH BARGE EQUIPMENT.
 3. A DREDGE CHANNEL IS NOT REQUIRED FOR BARGE EQUIPMENT TO ACCESS PROJECT SITES.
 4. NRCGS MAY ELECT TO HAVE THE WAD STRUCTURES REMOVED IN ACCORDANCE WITH THE STATEMENT OF WORK SECTION 1.1.6 - REMOVAL AT THE EXPENSE OF THE CONTRACTOR.
 5. WADS SHALL FOLLOW THE APPROXIMATE SHORELINE CONTOUR AT A DISTANCE OF APPROXIMATELY 50 FEET FROM SHORELINE. THIS DISTANCE MAY VARY SLIGHTLY BASED ON SHORELINE CONTOUR BUT WILL NOT BE ANY LESS THAN 50 FEET.
 6. WADS SHALL BE PLACED WITHIN 12 INCHES OF EACH OTHER UNLESS THE PRESENCE OF OBSTRUCTIONS OR BOTTOM DEFORMITIES REQUIRE OTHERWISE.

FOR DEMONSTRATION PROJECT PURPOSES ONLY

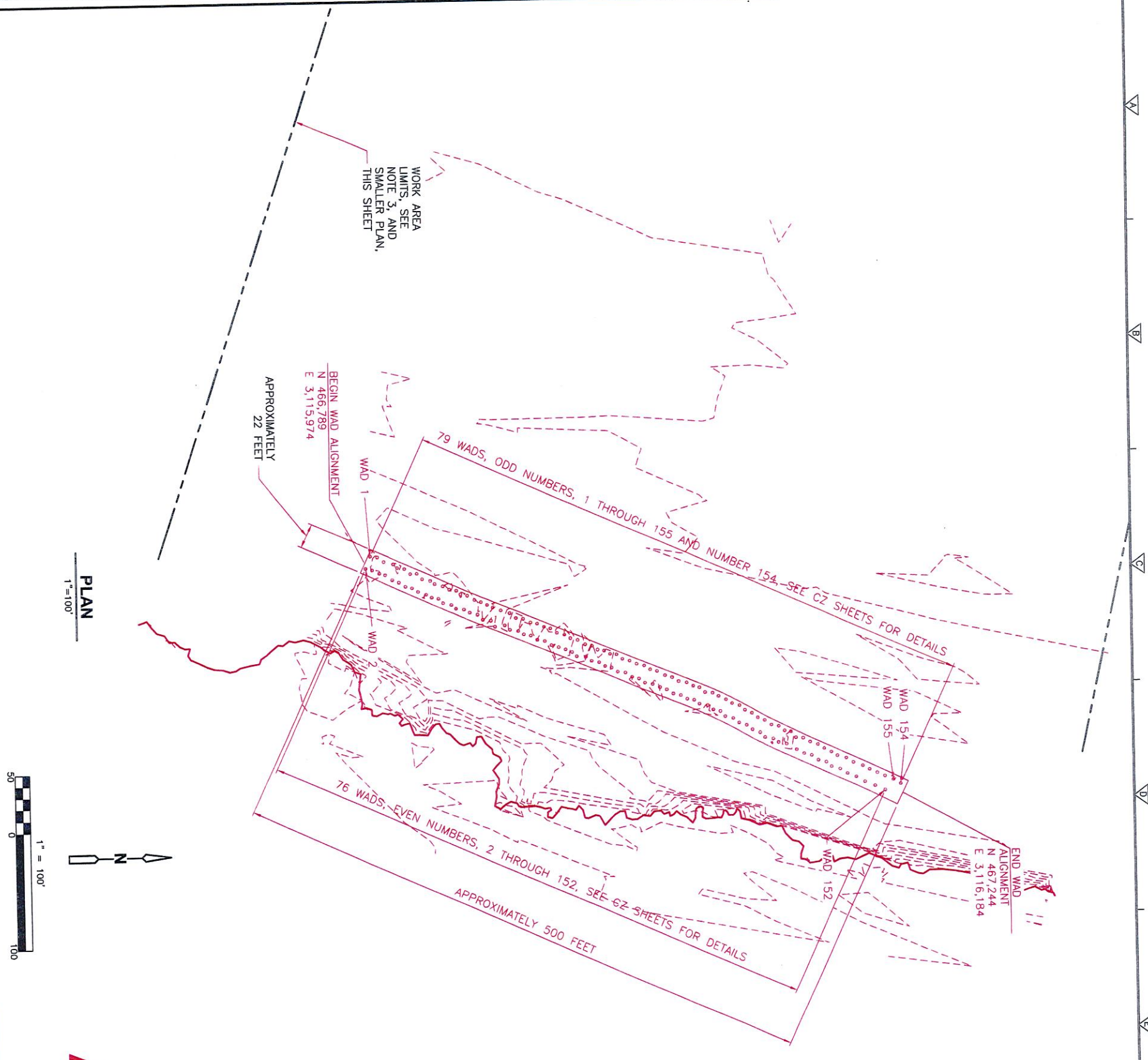
DESIGNED BY: LSS
DRAWN BY: G. RODRIGUEZ
SHEET CHECKED BY: B. BARRINGER
CROSS CHECKED BY: N. MIRSCHALL
DATE: MARCH 20, 2014



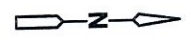
NATURAL RESOURCES CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
LA-16 NON-ROCK ALTERNATIVES TO SHORELINE
PROTECTION DEMONSTRATION PROJECT

SHARK ISLAND
SITE PLAN

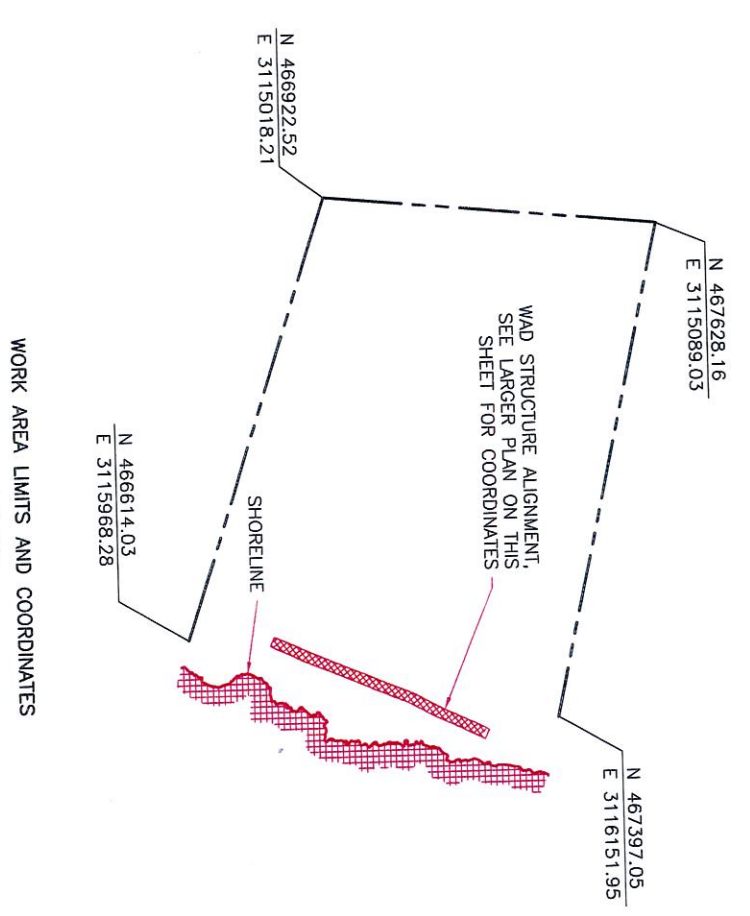
PROJECT NO. 129899-89110
FILE NAME: CO02STPL-SHARK-LDMC
SHEET NO. C-2



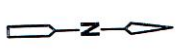
PLAN
1" = 100'



AS-BUILT



PLAN
1" = 200'



LOCATION, SURVEY DATA, AND AERIAL IMAGERY
WAS PROVIDED BY NRCS.

- NOTES:
1. TOPOGRAPHIC INFORMATION SHOWN WAS PROVIDED BY NRCS. ALL ELEVATIONS ARE IN FEET AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. ALL HORIZONTAL COORDINATES ARE IN FEET AND REFERENCED TO STATE PLANE, LOUISIANA SOUTH, NORTH AMERICAN DATUM 1983.
 2. MEAN WATER LEVELS ARE ANTICIPATED TO RANGE BETWEEN EL. +1.46' AND -0.24' WITHIN THE AREA OF THE ARRAY.
 3. NRCS WILL PROVIDE STAKE OUT OF THE WORK LIMITS (150' ON EITHER SIDE OF BEGINNING & ENDING STATIONS). THE WORK LIMITS PARALLEL TO THE SHORELINE WILL CONSIST OF THE 500' EXTENT OF THE SHORELINE PROTECTION FEATURE PLUS 150' ON EITHER SIDE OF THOSE EXTENTS. THE WORK LIMITS PERPENDICULAR TO THE SHORELINE WILL EXTEND 1,000' INTO VERMILLION BAY.
 4. BENCHMARK INFORMATION:

BENCHMARK NAME	LA16-SH#4
COORDINATES	N=451,605.000 E=3,115,444.877
ELEVATION	2.84
GEOID	3

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY NRCS AND BY CDM SMITH. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND THE KNOWLEDGE THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.

By: *Brian Bausig*
CDM Smith
Date: MAY 2014

FOR DEMONSTRATION PROJECT PURPOSES ONLY

DESIGNED BY: LSS
 DRAWN BY: G. RODRIGUEZ
 SHEET CHECKED BY: B. BARRINGER
 CROSS CHECKED BY: N. MCKEAL
 DATE: MARCH 20, 2014



NATURAL RESOURCES CONSERVATION SERVICE
 UNITED STATES DEPARTMENT OF AGRICULTURE
 LA-16 NON-ROCK ALTERNATIVES TO SHORELINE
 PROTECTION DEMONSTRATION PROJECT

PROJECT NO. 129899-99110
 FILE NAME: CZ1PLAL
 SHEET NO. CZ-1

- NOTES:
1. WADS SHALL FOLLOW THE APPROXIMATE SHORELINE CONTOUR AT A DISTANCE OF APPROXIMATELY 50 FEET FROM SHORELINE. THIS DISTANCE MAY VARY SLIGHTLY BASED ON SHORELINE CONTOUR BUT WILL NOT BE ANY LESS THAN 50 FEET.
 2. WAD LAYOUT SHALL BE ADJUSTED AS NECESSARY TO FOLLOW SHORELINE CONTOUR. SPACING BETWEEN ADJACENT WAD STRUCTURES SHALL NOT EXCEED 12 INCHES UNLESS THE PRESENCE OF OBSTRUCTIONS OR BOTTOM DEFORMITIES REQUIRE OTHERWISE.

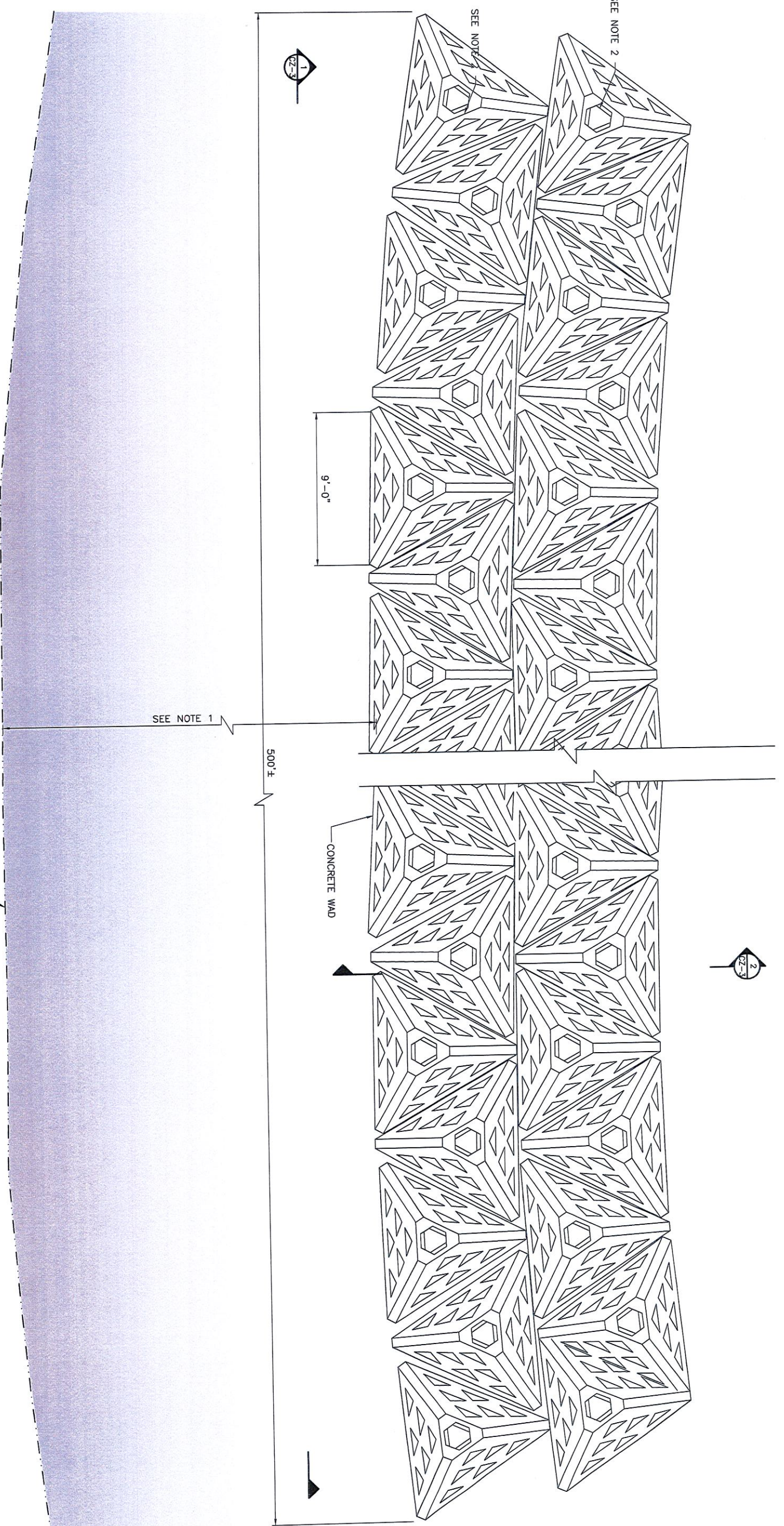
PLAN
 3/16" = 1'-0"

RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY NRCS AND BY CDM SMITH. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND REASONABLY ACCURATE.
 By: *Brian Barringer* Date: MAY 2014
 CDM Smith



AS-BUILT

SHORELINE



FOR DEMONSTRATION PROJECT PURPOSES ONLY

DESIGNED BY: LSS
 DRAWN BY: O. RODRIGUEZ
 SHEET CHECKED BY: E. BARBACID
 PROJECT MANAGER BY: N. MINNELL
 DATE: MARCH 20, 2014



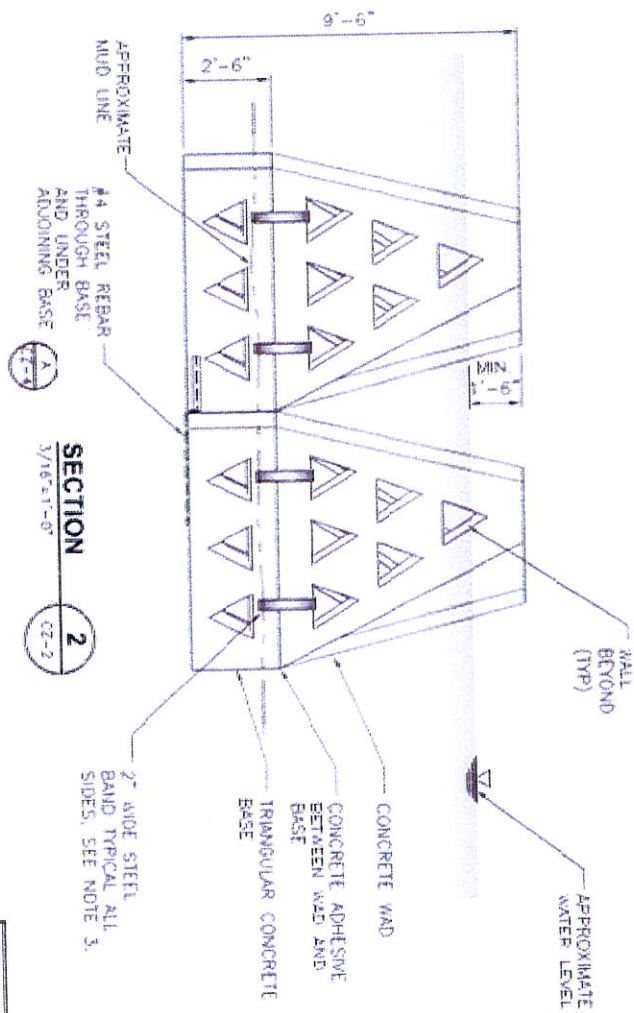
NATURAL RESOURCES CONSERVATION SERVICE
 UNITED STATES DEPARTMENT OF AGRICULTURE
 LA-16 NON-ROCK ALTERNATIVES TO SHORELINE
 PROTECTION DEMONSTRATION PROJECT

SECTIONS

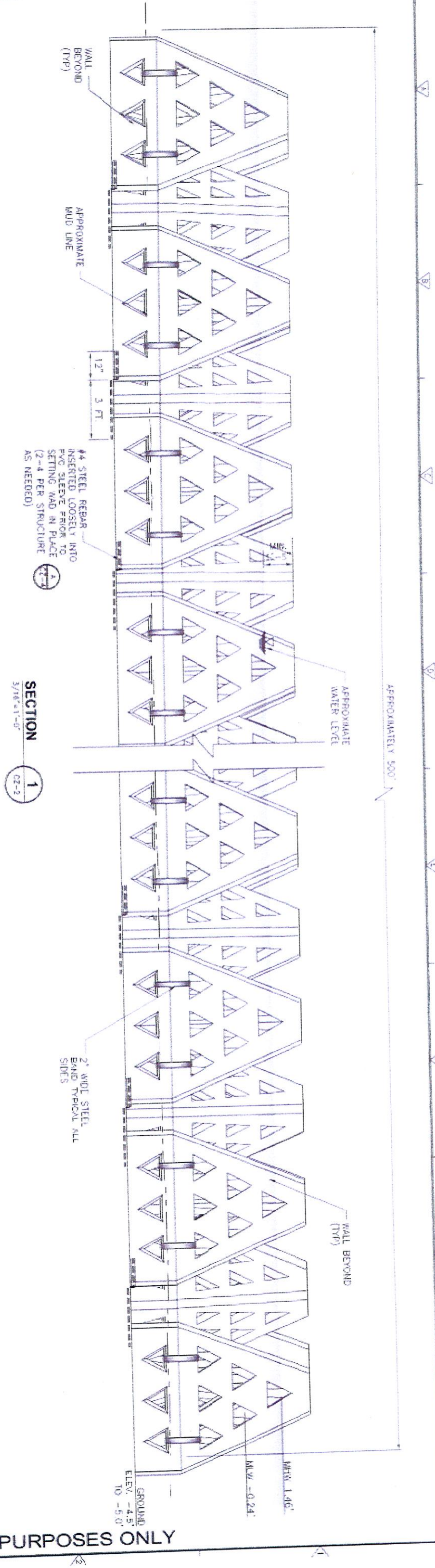
PROJECT NO: 129889-09110
 DATE: MAR 2014
 SHEET NO: C2-2

RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY MRCS AND BY CDM SMITH. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BEST AND KNOWLEDGE. THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
 By: *Burtin Bunkley*
 CDM Smith
 DATE: MAR 2014

AS-BUILT



NOTES:
 1. MEAN HIGH WATER (MHW) & MEAN LOW WATER (MLW) WERE DETERMINED USING GAGE 876521 AND WERE ALSO USED IN THE MODELING.
 2. GROUND ELEVATIONS WERE PROVIDED IN THE MRCS SURVEY DATA AND ALSO VERIFIED @ THE SITE.
 3. STEEL BANDS ARE SACRIFICIAL. PRIMARY PURPOSE IS A SAFETY FACTOR DURING DEPLOYMENT - THEY ARE NOT NEEDED IN THE LONG TERM. DOES NOT AFFECT REMOVAL IF REMOVAL WERE TO OCCUR.
 4. TRUE BOND ADHESIVE IS USED TO SECURE BASE TO MUD. IT IS AN ADHESIVE THAT SHOULD LAST FOR THE 20-YEAR DESIGN LIFE.



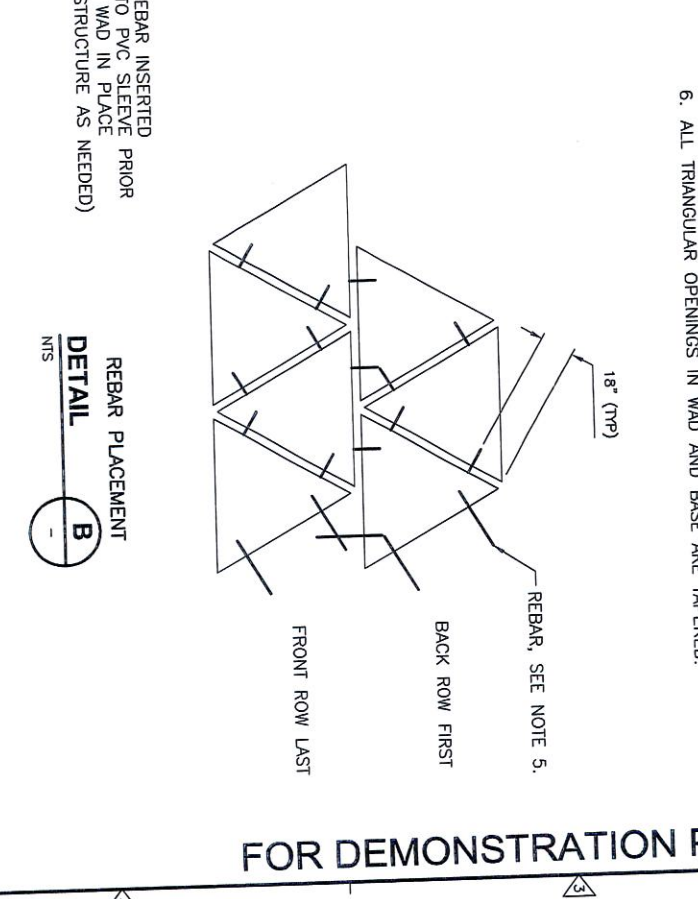
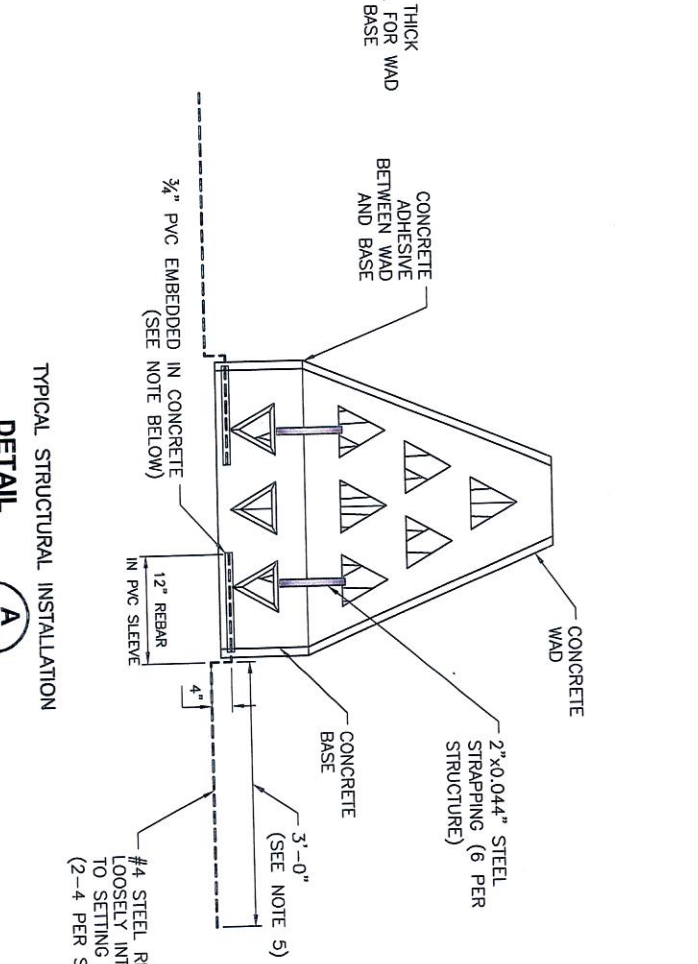
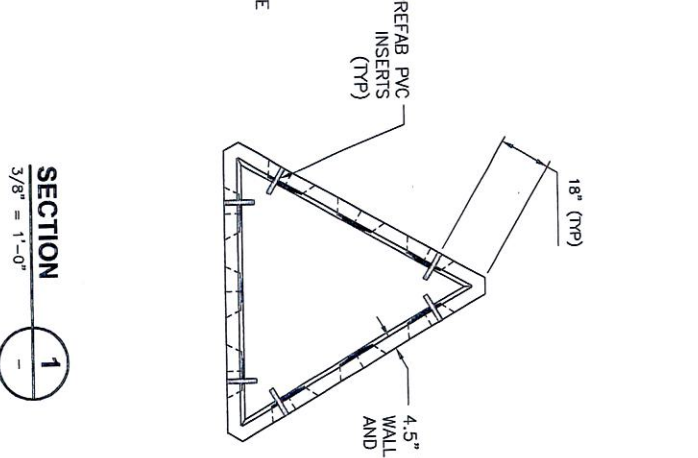
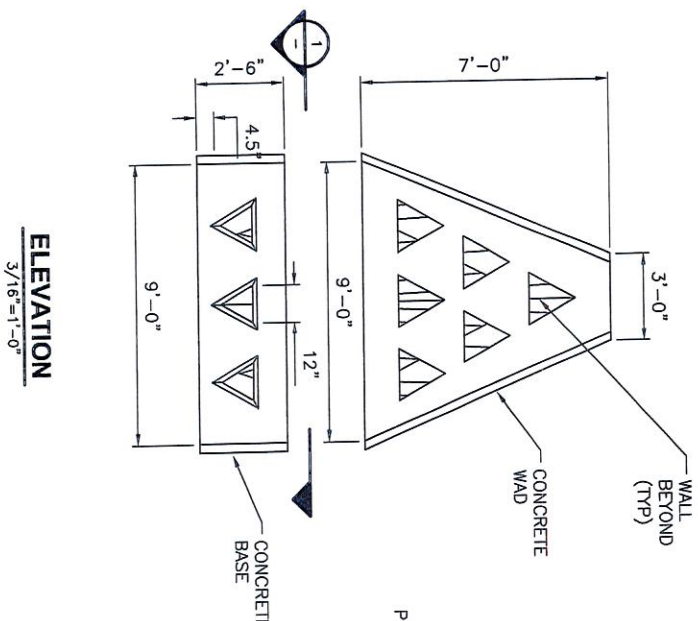
FOR DEMONSTRATION PROJECT PURPOSES ONLY

DESIGNED BY: _____
 DRAWN BY: G. RODRIGUEZ
 SHEET CHECKED BY: B. BARRINGER
 CROSS CHECKED BY: N. MICHAIL
 DATE: MARCH 20, 2014



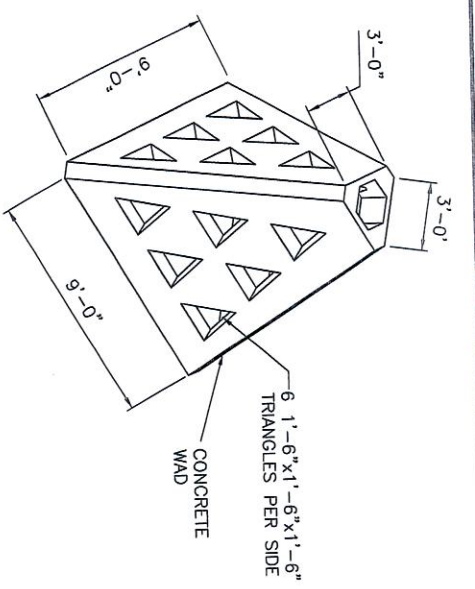
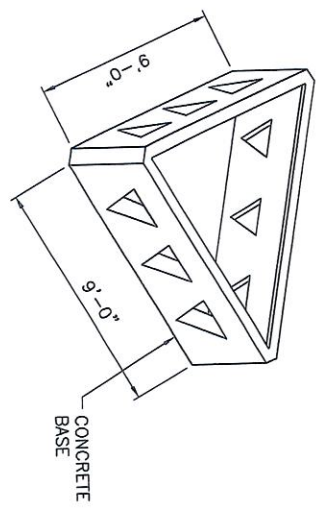
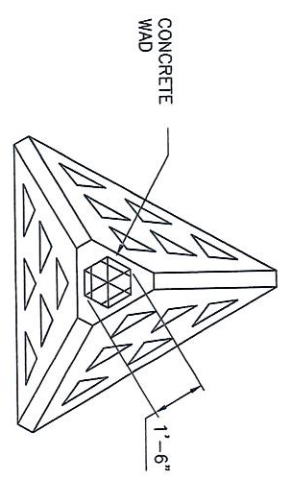
NATURAL RESOURCES CONSERVATION SERVICE
 UNITED STATES DEPARTMENT OF AGRICULTURE
 LA-16 NON-ROCK ALTERNATIVES TO SHORELINE
 PROTECTION DEMONSTRATION PROJECT

PROJECT NO. 128989-89110
 FILE NAME: CZ3SDOT
 SHEET NO. CZ-3



NOTE: IMBEDDED PVC IS 12" LONG X 3/4" DIA, CENTERED IN THE 4" THICK CONCRETE BASE AT 2" FROM THE BOTTOM AND FROM THE TOP

AS-BUILT



PLAN
1/2" = 1'-0"

ISOMETRIC
NTS

ISOMETRIC
NTS

- NOTES:
1. EACH WAD CONTAINS APPROXIMATELY 2.25 CUBIC FEET OF CONCRETE. EACH BASE CONTAINS APPROXIMATELY 1.75 CUBIC FEET OF CONCRETE. THE WAD UNIT IS HOLLOW, THE BASE HAS A SOLID BOTTOM.
 2. CONCRETE COMPRESSIVE STRENGTH SHALL BE 5,000 POUNDS PER SQUARE INCH WITHIN 28 DAYS.
 3. STEEL BANDING SHALL BE 2 INCHES WIDE BY 0.044 INCHES THICK WITH A BREAK STRENGTH OF 12,300 POUNDS BY POLY STEEL AND STRAPPING.
 4. CONCRETE ADHESIVE SHALL BE TRUE BOND ADHESIVE BY R.C. DAVIS INC.
 5. #4 STEEL REBAR SHALL BE PLACED BETWEEN ALL ADJACENT WAD BASES, 2 PER SIDE, SEE DETAIL B, THIS SHEET. SHORT ENDS (12" END) OF REBAR ARE INSERTED LOOSE INTO 3/4" EMBEDDED, PVC SLEEVES, SEE DETAIL A, THIS SHEET FOR REBAR DIMENSIONS.
 6. ALL TRIANGULAR OPENINGS IN WAD AND BASE ARE TAPERED.

RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY ANCS AND CDM SMITH. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
 By: *Paula Bowers*
 CDM Smith
 Date: MAY 2014

FOR DEMONSTRATION PROJECT PURPOSES ONLY

