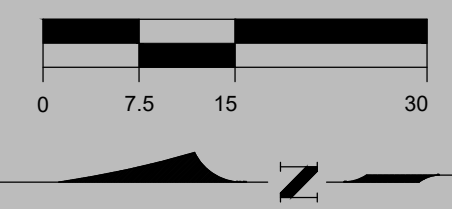




*NOTE: TREE SYMBOLS REPRESENT LOCATION OF TRUNK.



LEGEND

- = GUY POLE
- = POWER POLE
- = SIGN
- = LIGHT POLE ON CONC. PAD
- = PALM TREE (TRUNK)
- = PINE TREE (TRUNK)
- = OAK TREE (TRUNK)
- = CITRUS TREE (TRUNK)
- = FENCE
- = TOP OF SWALE
- = APPROXIMATE LIMITS OF CRUSHED SHELL AREAS
- = FOUND CONCRETE MONUMENT W/ ALUMINUM DISC STAMPED "DENI & ASSOCIATES LB 2848"
- = FOUND BROKEN CONCRETE MONUMENT
- = SET PK NAIL & DISC STAMPED "CEC LB 2464"
- = FOUND 5/8" IRON ROD AND CAP STAMPED "DENI & ASSOCIATES LB 2848"
- RCP = REINFORCED CONCRETE PIPE
- CPP = CORRUGATED PLASTIC PIPE
- +11.0 = EXISTING ELEVATIONS (FT-NAVD)

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CLIENT: LEE COUNTY BOARD OF COMMISSIONERS
TITLE: ALVA BOAT RAMP RENOVATION AND DEMOLITION PLAN

DATE: 6/4/2019
SCALE: AS NOTED
DRAWN: SDB F.B.
CHECKED: MAK J.G.
SEC.: TWP.
ACAD NO.: 13029-C.dwg
REF. NO.: 13.029

DATE: 7/18/19
BY: MAK
REVISION DESCRIPTION: REVISED FRAMING

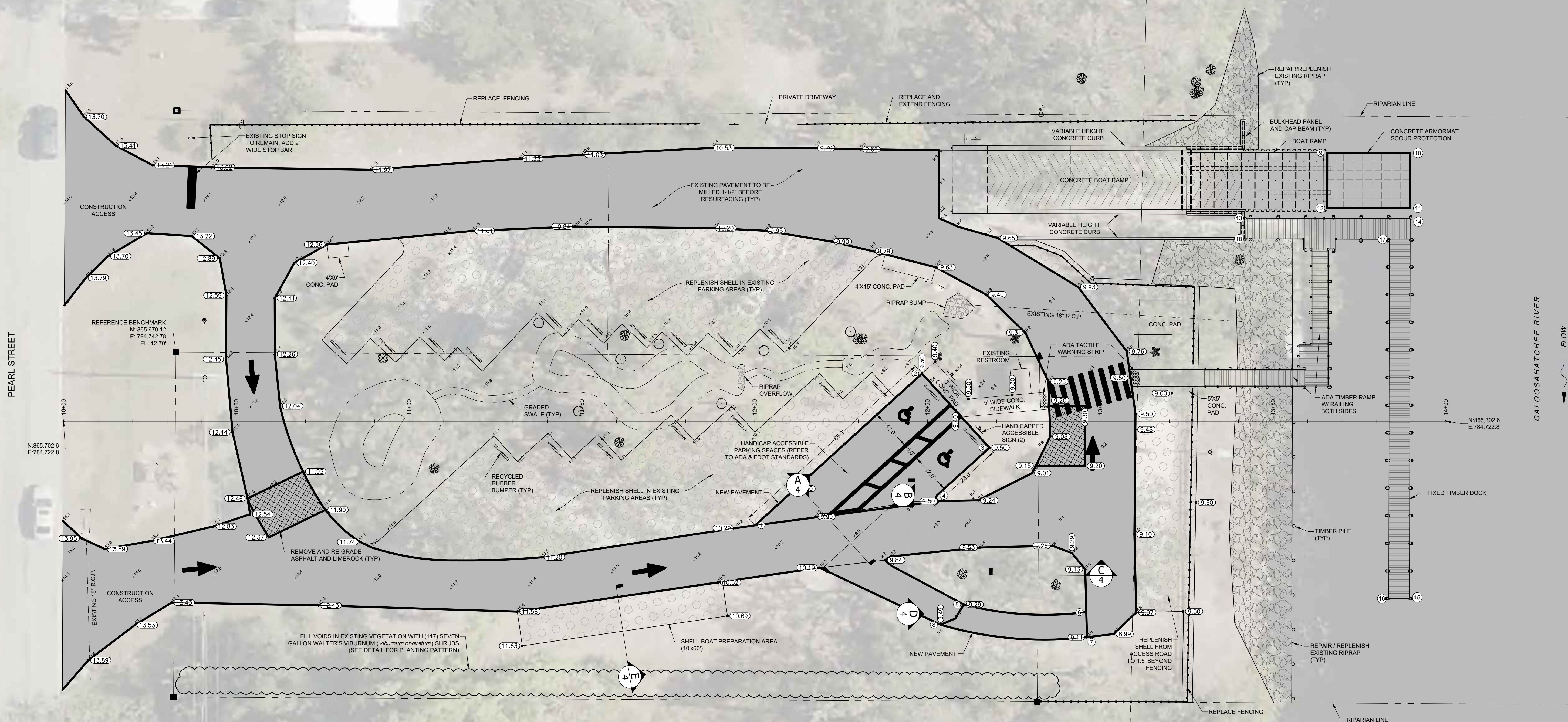
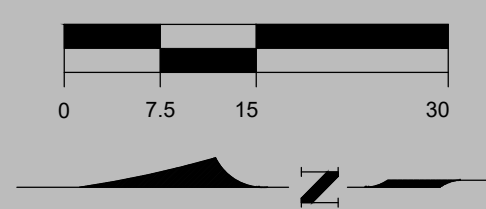
DATE: 7/12/19
BY: J.BH
REVISION DESCRIPTION: RAMP BASE AND SUBGRADE

PHONE: (239)643-2324
FAX: (239)643-1143
WWW: www.coastal-engineering.com
E-MAIL: info@cecinc.com

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 NAPLES, FLORIDA 34104

STATE OF FLORIDA PROFESSIONAL ENGINEER
 No 58654

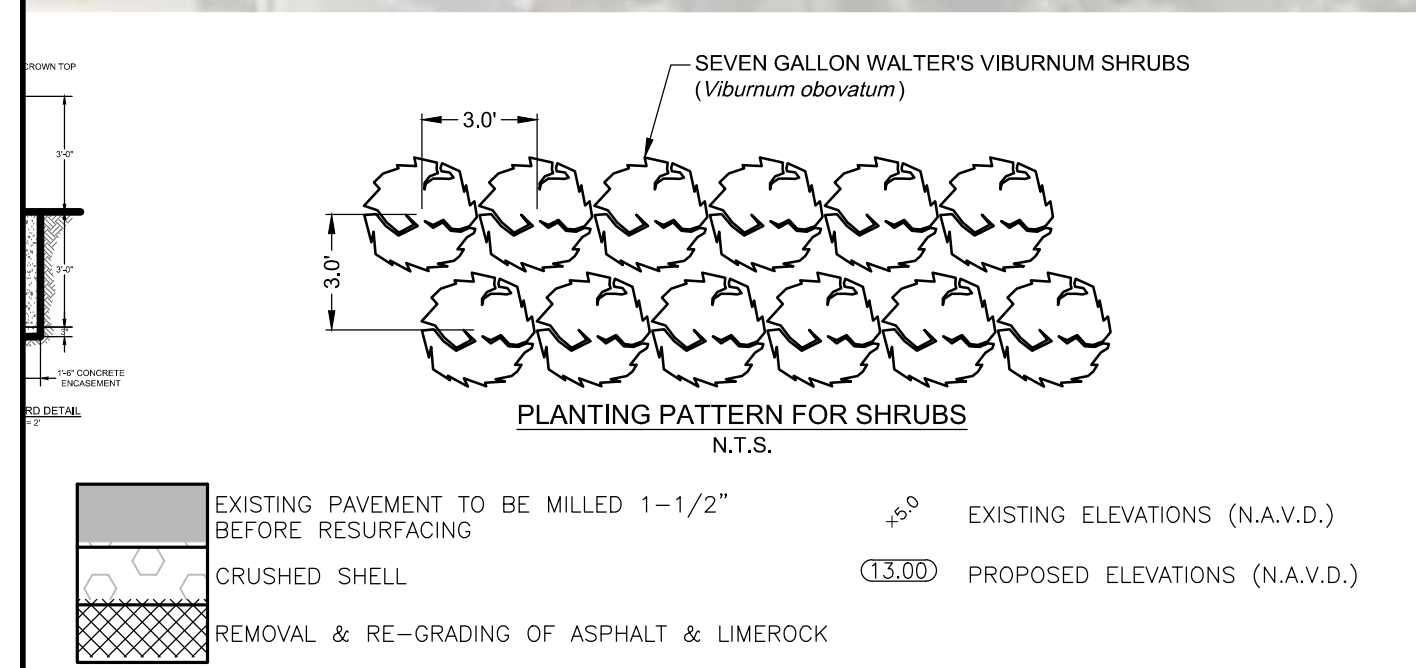
SHEET 2
 FILE NO.: 13029-C-2



PEARL STREET

CALOOSAHATCHEE RIVER

- NOTES:**
1. ALL CLEARED AREAS MAY BE USED FOR STAGING.
 2. FINISHED ASPHALT PAVEMENT SHALL HAVE SMOOTH TRANSITION TO NEW CONCRETE BOAT RAMP, NEW SIDEWALK, NEW ADA ACCESSES, EXISTING RESIDENTIAL DRIVEWAYS, AND EXISTING COUNTY STREET.
 3. CONTRACTOR SHALL MAINTAIN RESIDENTIAL ACCESS TO PRIVATE DRIVEWAY THROUGHOUT CONSTRUCTION.



CLIENT: LEE COUNTY BOARD OF COMMISSIONERS

TITLE: ALVA BOAT RAMP RENOVATION MASTER SITE PLAN

DATE: 6/4/2019

SCALE: AS NOTED

DRAWN: SDB F.B.

CHECKED: MAK J.G.

SEC. TWP. RING.

ACAD NO. 13029-C.dwg

REF. NO. 13,029

NO. DATE BY REVISION DESCRIPTION

2 7/18/19 MAK REVISED FRAMING

1 7/12/19 J.BH RAMP BASE AND SUBGRADE

PHONE: (239)643-2324

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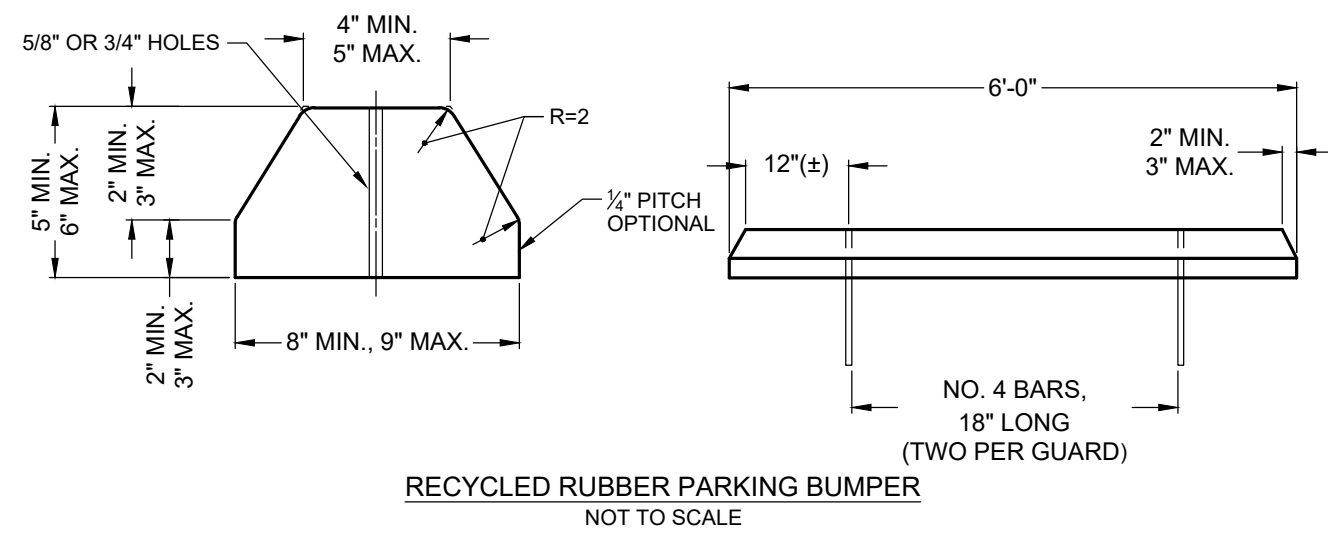
3106 SOUTH HORSESHOE DRIVE

NAPLES, FLORIDA 34104

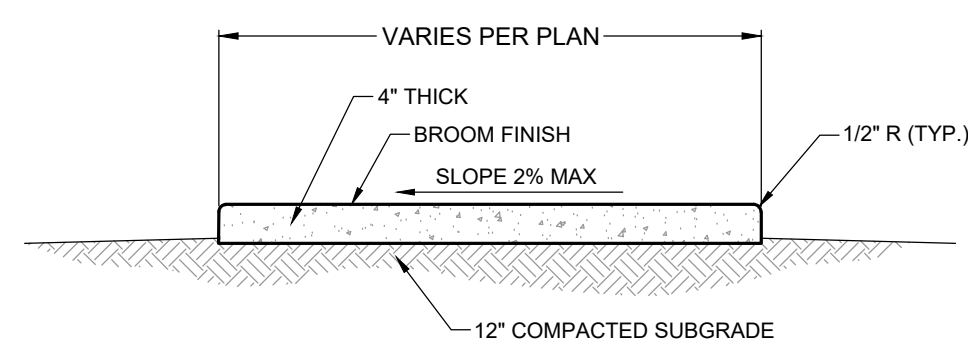
STATE OF FLORIDA PROFESSIONAL ENGINEERS LICENSE No 58654

SHEET 3

FILE NO.: 13029-C-3

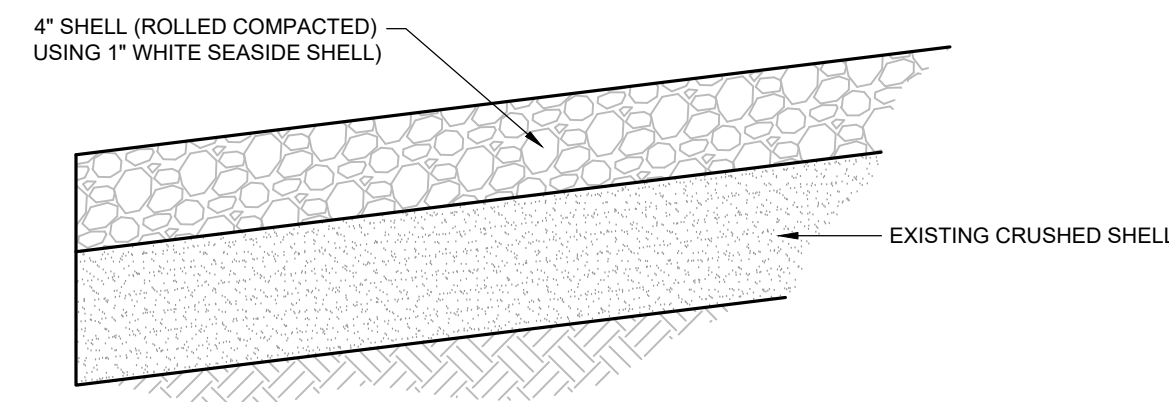


RECYCLED RUBBER PARKING BUMPER
NOT TO SCALE

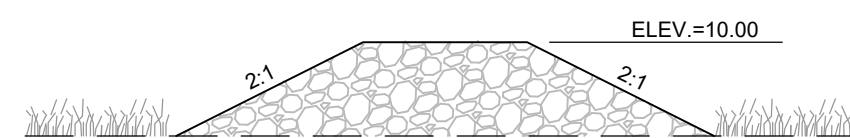


1. THE PROPOSED FILL SHALL BE COMPACTED IN 12" LIFTS TO 95% MAXIMUM DENSITY IN ACCORDANCE WITH AASHTO T-180 AND THE ENGINEER'S SPECIFICATIONS.
2. SUBGRADE SHALL BE SAND, COMPACTED TO A FIRM EVEN SURFACE, TRUE TO GRADE AND CROSS-SECTION, AND BE MOIST WHEN CONCRETE IS PLACED.
3. SIDEWALK SHALL HAVE CONTRACTION JOINTS AT 5' INTERVALS AND AN EXPANSION JOINT EVERY 20' MAXIMUM.

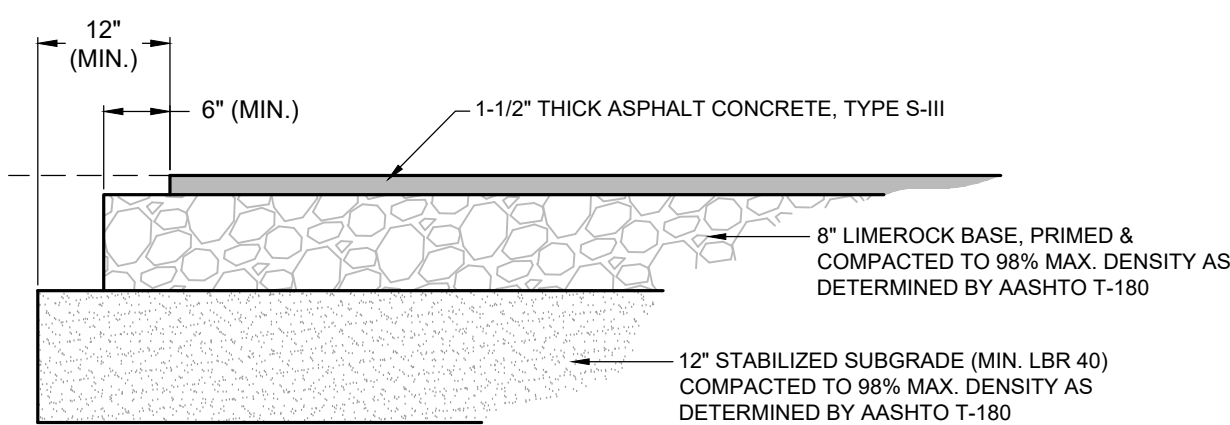
TYPICAL SIDEWALK SECTION
NOT TO SCALE



TYPICAL CRUSHED SHELL SECTION
NOT TO SCALE

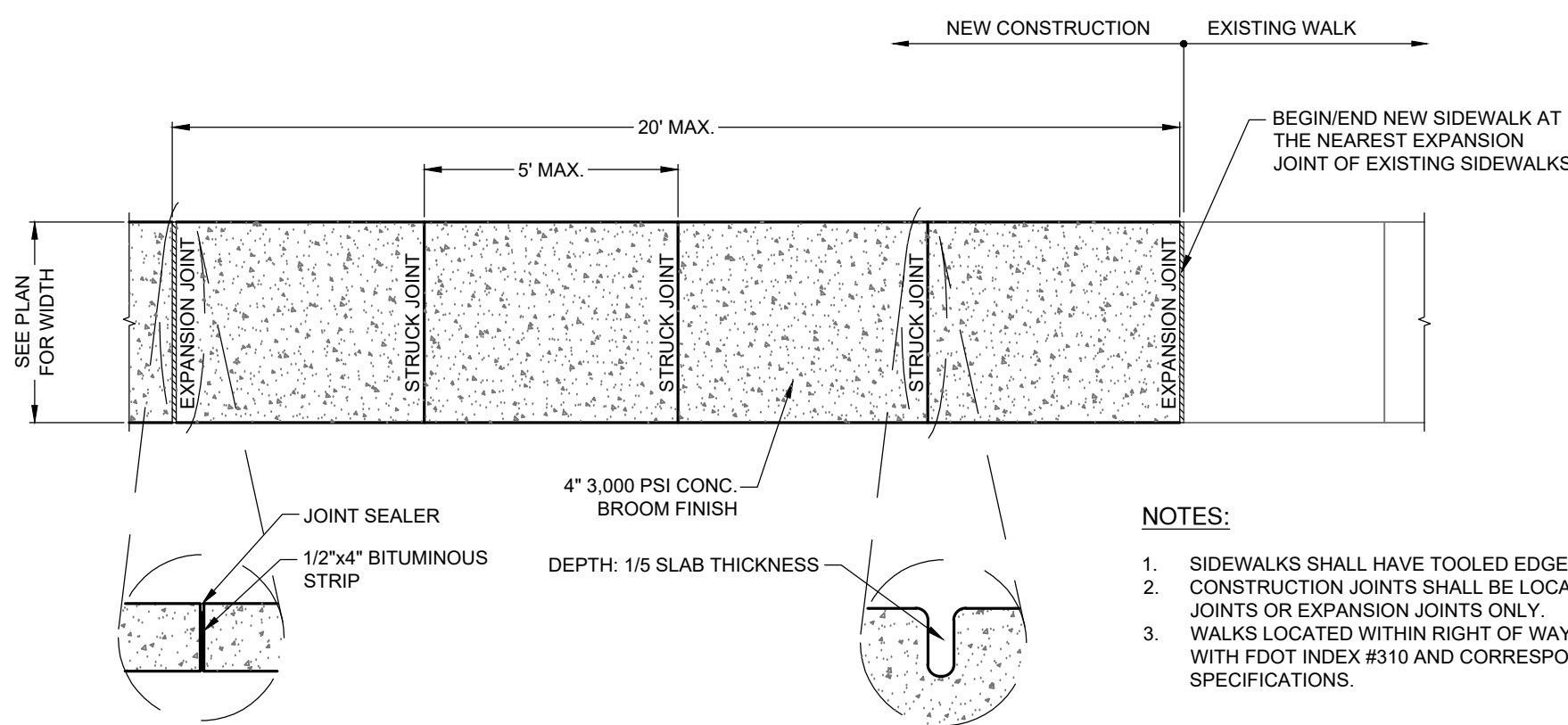


RIPRAP OVERFLOW DETAIL
NOT TO SCALE



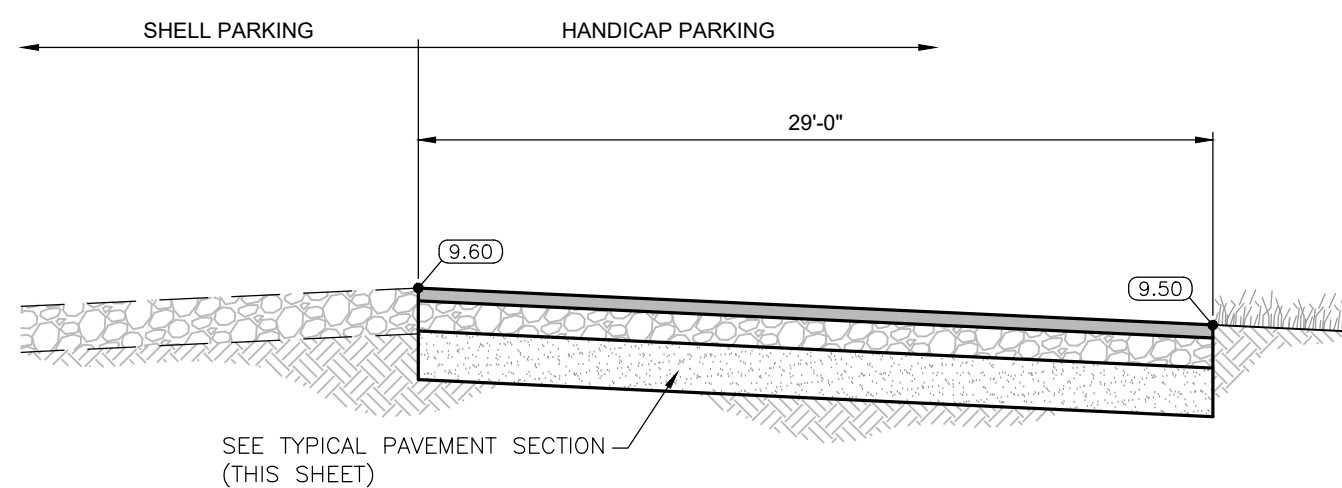
- NOTES:
1. ASPHALTIC CONCRETE PAVEMENT (TYPE S-III) SHALL BE CONSTRUCTED IN TWO 3/4" LIFTS. THE SECOND LIFT SHALL BE CONSTRUCTED AFTER SUBSTANTIAL COMPLETION OF BUILDING CONSTRUCTION.

TYPICAL PAVEMENT SECTION
NOT TO SCALE

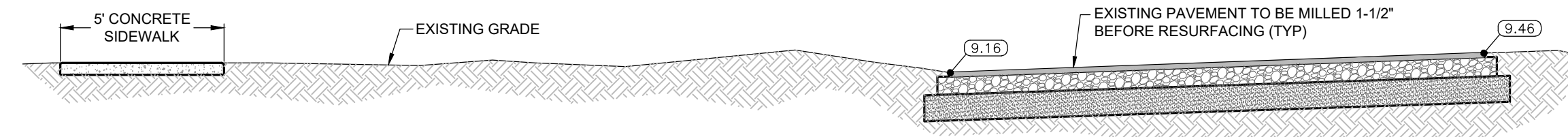


- NOTES:
1. SIDEWALKS SHALL HAVE TOOLED EDGES.
 2. CONSTRUCTION JOINTS SHALL BE LOCATED AT STRUCK JOINTS OR EXPANSION JOINTS ONLY.
 3. WALKS LOCATED WITHIN RIGHT OF WAY SHALL COMPLY WITH FDOT INDEX #510 AND CORRESPONDING SPECIFICATIONS.

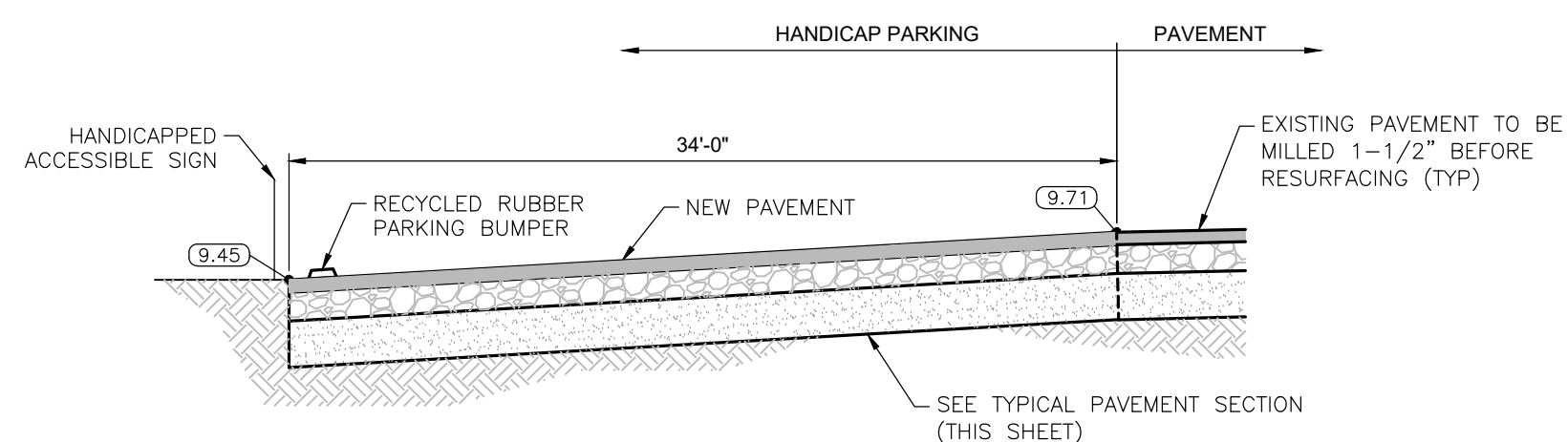
SIDEWALK DETAIL
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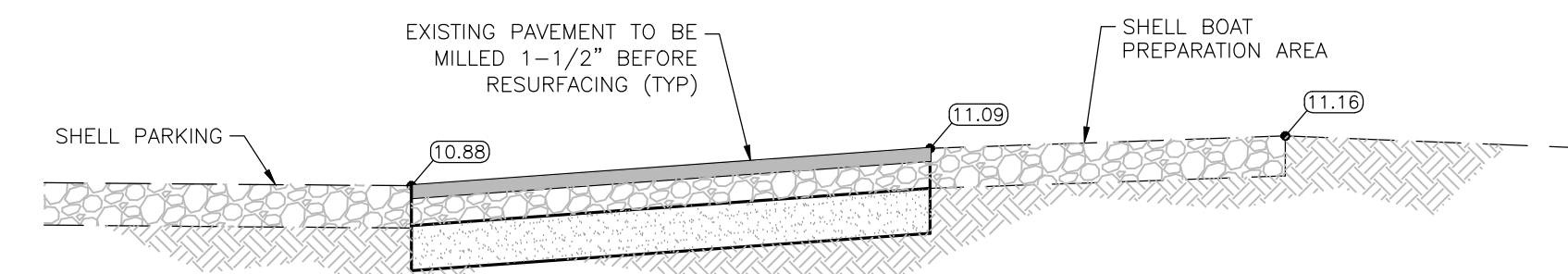
SECTION A
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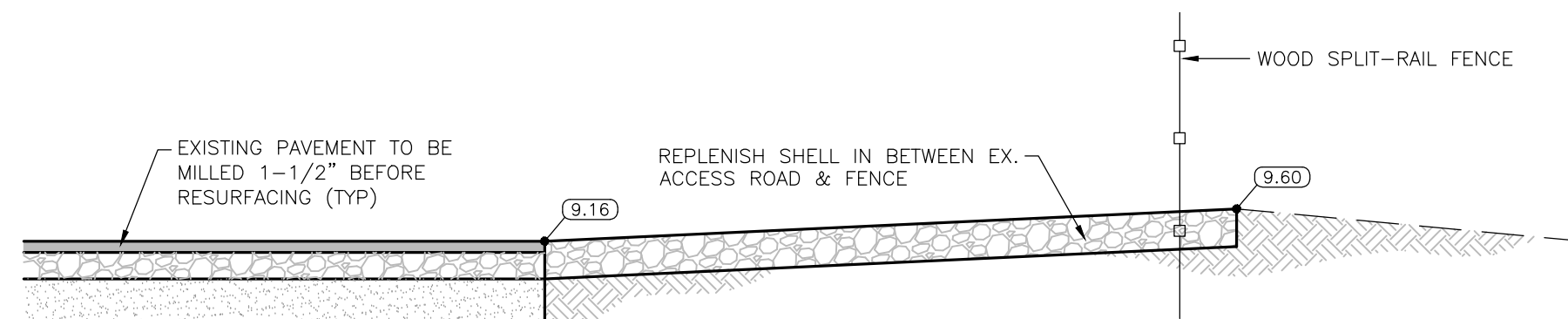
SECTION D
NOT TO SCALE



SECTION B
NOT TO SCALE

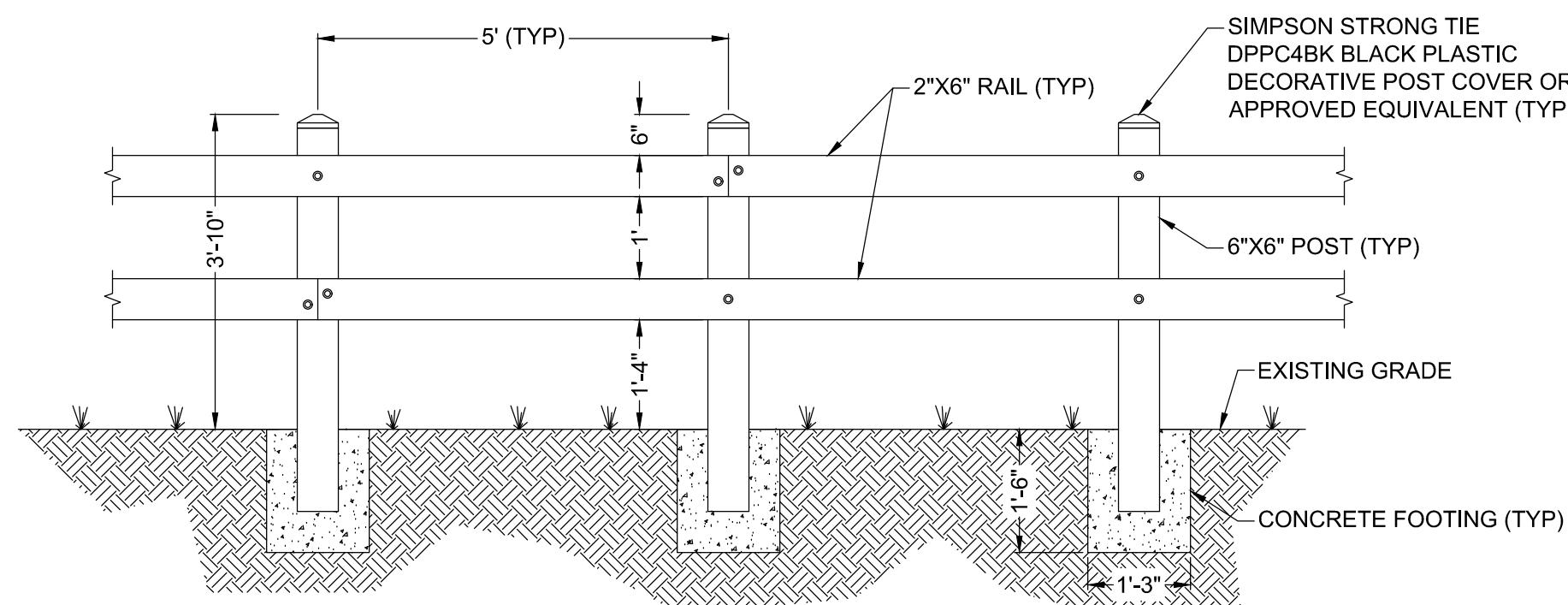


SECTION E
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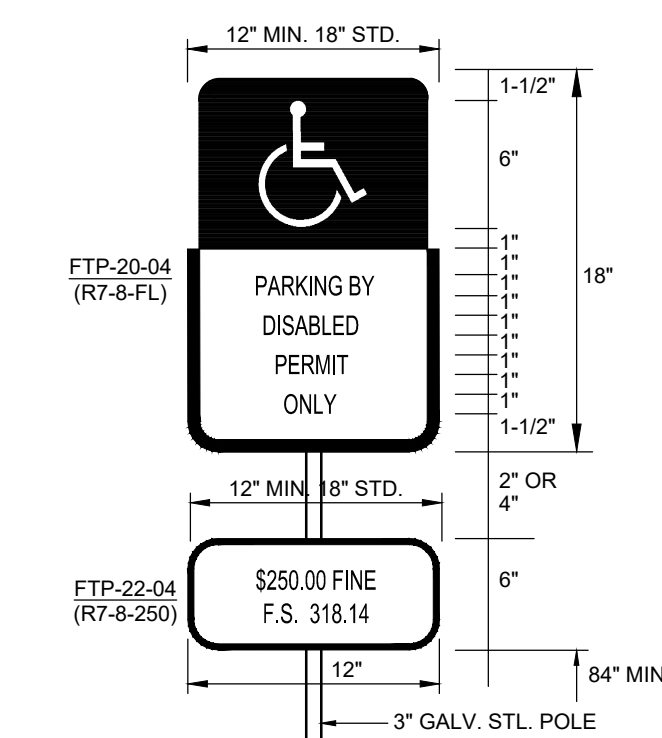


SECTION C
NOT TO SCALE

- NOTES:
1. ALL WOOD FOR FENCE TO BE PRESSURE TREATED OR APPROVED COMPOSITE MATERIAL.
 2. END POST SHALL BE TERMINAL POST.
 3. RAIL SPLICES SHALL BE STAGGERED.

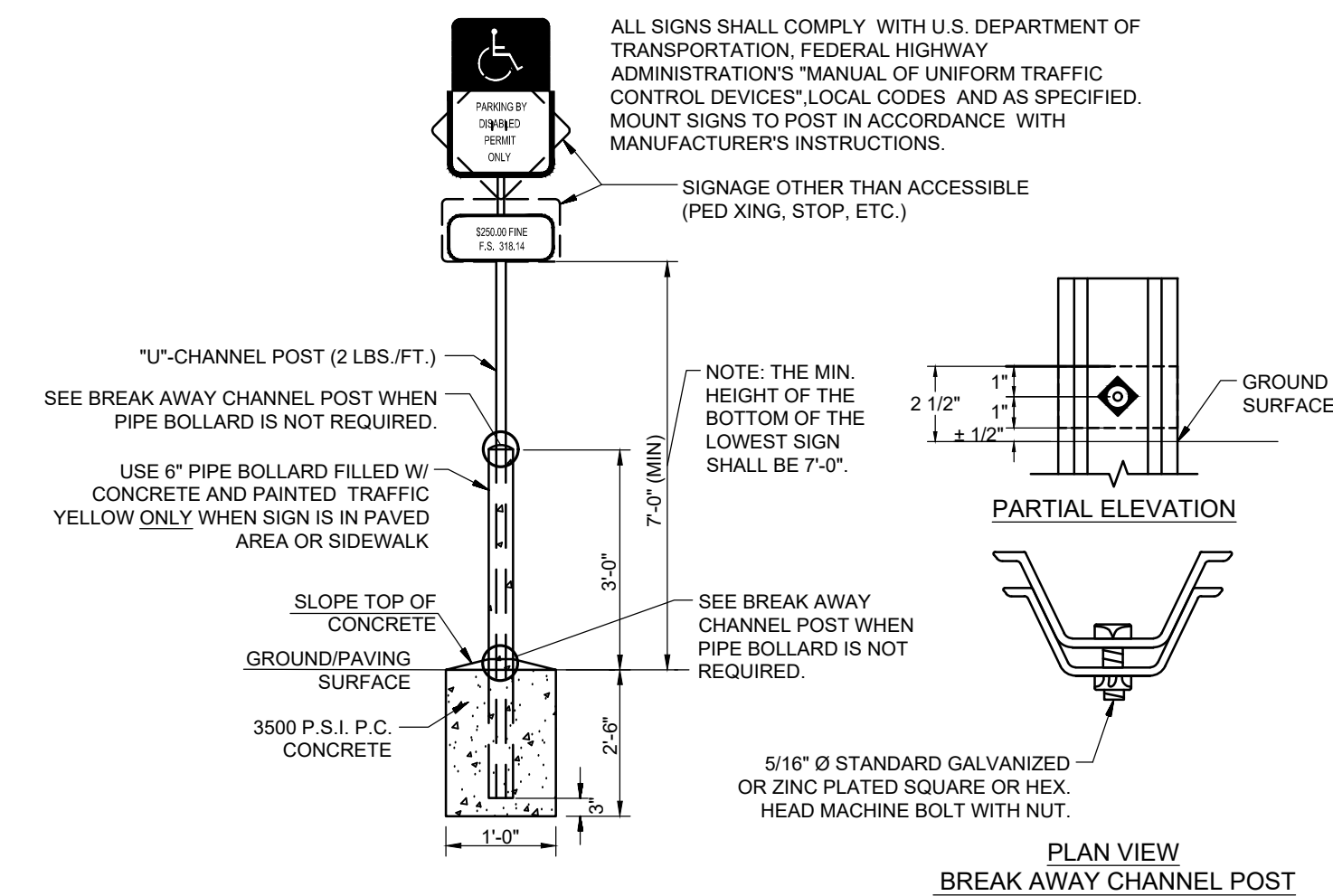


STANDARD FENCE DETAIL
NOT TO SCALE



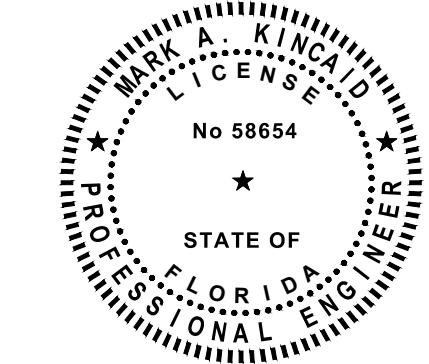
- NOTES:
- SIGNS FTP-20-04 & FTP-22-04 SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 17355 AND SHALL MEET THE REQUIREMENTS OF FLORIDA STATUTES 316.1955 AND 316.1956.
- *SUPPLEMENTAL PANEL TO BE USED AS PER LOCAL REQUIREMENTS WHEN NEEDED.

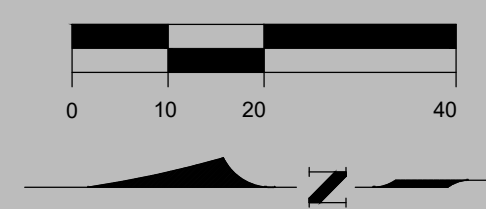
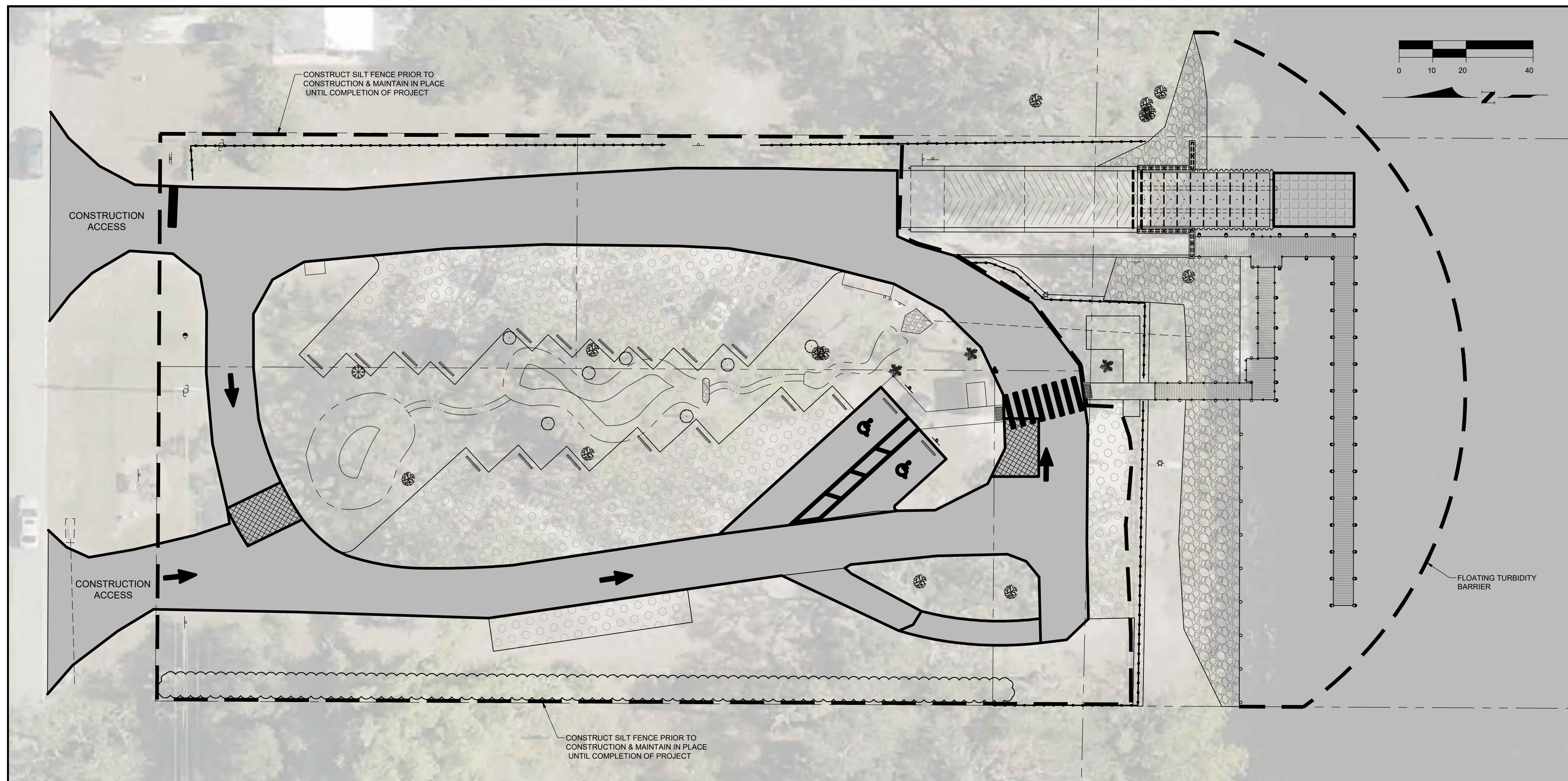
ACCESSIBLE SIGN DETAILS
R7-8-FL & R7-8-250
NOT TO SCALE



SITE SIGN BASE DETAILS
NOT TO SCALE

DATE:	6/4/2019	SCALE:	AS NOTED
DRAWN:	SDB	F.B.	
CHECKED:	MAK	P.G.	
SEC.	TWP.	RNG.	
ACAD NO.	13029-C.dwg	DATE	7/12/19
REF. NO.	13.029	NO.	1
CLIENT:	LEE COUNTY BOARD OF COMMISSIONERS		
TITLE:	ALVA BOAT RAMP RENOVATION GRADING, PAVING AND DRAINAGE DETAILS		
CIVIL ENGINEERING SURVEY & MAPPING	COASTAL ENGINEERING ENVIRONMENTAL PLANNING SERVICES	PHONE: (239)643-2324	FAX: (239)643-1143
www.coastal-engineering.com		E-Mail: info@cecivil.com	
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NOTES:

- CONTRACTOR TO DEMOLISH AND REMOVE ALL IMPROVEMENTS WITHIN LIMITS OF DEMOLITION/CLEARING SHOWN UNLESS OTHERWISE NOTED.
- VEGETATION REMOVAL PERMIT TO BE APPLIED FOR PRIOR TO SILT FENCE INSTALLATION. ONCE PERMIT IS ISSUED, SILT FENCE TO BE INSTALLED, THEN CLEARING MAY COMMENCE.
- SITE (WITHIN CLEARING LIMITS) SHALL BE COMPLETELY CLEARED OF VEGETATION.
- SILT FENCE SHALL BE INSTALLED ALONG THE BOUNDARY PRIOR TO INITIATING CLEARING AND DEMOLITION. SILT FENCE SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF CONSTRUCTION OF APPLICABLE SITE INFRASTRUCTURE.
- ALL EXOTIC VEGETATION SHALL BE REMOVED FROM THE SITE AND THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE SUBSEQUENT ANNUAL EXOTIC REMOVAL.
- CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES/CLEARING LIMITS PRIOR TO CLEARING.
- THE CONTRACTOR SHALL UTILIZE SUITABLE EROSION CONTROL DURING CLEARING. PROTECTIVE BARRIERS WILL REMAIN IN PLACE FOR DURATION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE LEGAL DISPOSAL OF ALL CLEARING DEBRIS OFF OWNER'S PROPERTY.
- THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ANY EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CLEARING AND/OR DEMOLITION (AS APPLICABLE) AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT AND NOT IDENTIFIED TO BE REMOVED.
- IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, STONE TOOLS OR METAL IMPLEMENTS, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES, OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT SITE AREA, THE PERMITTED PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE PERMITTEE, OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, REVIEW AND COMPLIANCE SECTION AT (850) 245-6333 OR (800) 947-7278, AS WELL AS THE APPROPRIATE PERMITTING AGENCY OFFICE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION FROM THE DIVISION OF HISTORICAL RESOURCES. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LEGAL DISPOSAL OF ALL DEMOLITION/CLEARING DEBRIS OFF OWNERS PROPERTY.
- REMOVAL OF ASBESTOS CONTAINING MATERIALS (IF ANY) SHALL BE IN ACCORDANCE WITH THE REGULATORY STANDARDS.

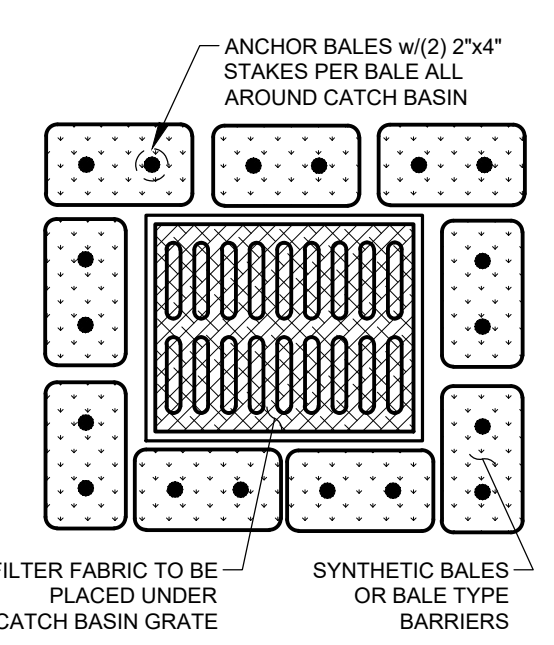
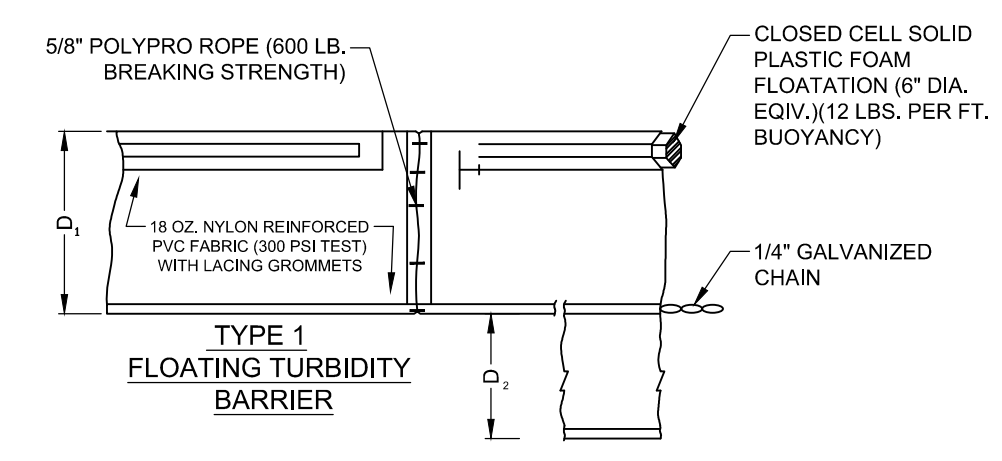
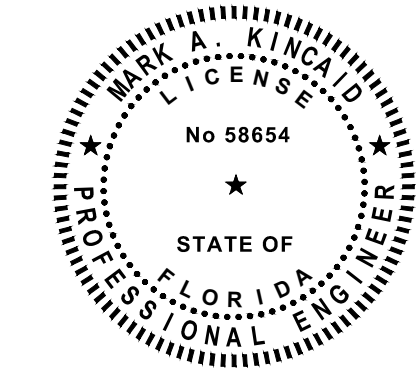
DATE:	SCALE:	AS NOTED
DRAWN:	SDB	F.B.
CHECKED:	MAK	PG.
SEC.	TWP.	RNG.
ACAD NO.	13029-C.dwg	
REF. NO.	NO.	DATE
	13,029	BY
		REVISION DESCRIPTION
		2 7/18/19 MAK REVISED FRAMING
		1 7/12/19 JBH RAMP BASE AND SUBGRADE

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CLIENT: LEE COUNTY BOARD OF COMMISSIONERS
 TITLE: ALVA BOAT RAMP RENOVATION EROSION CONTROL PLAN AND DETAILS

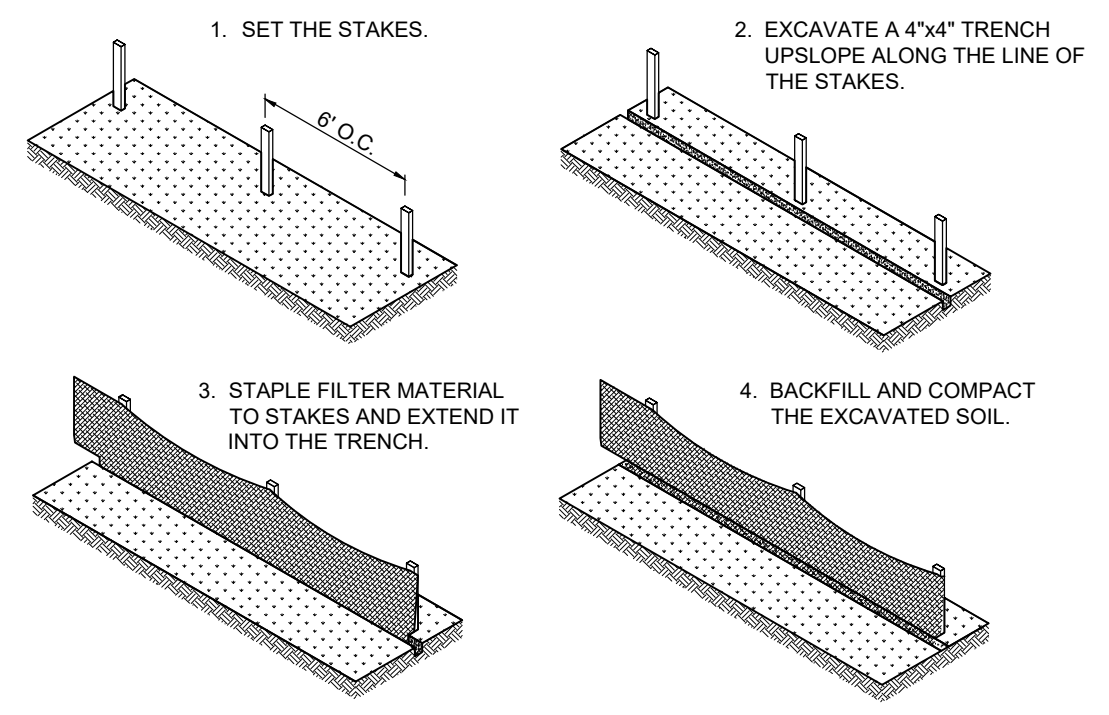
CIVIL ENGINEERING SURVEY & MAPPING COASTAL ENGINEERING ENVIRONMENTAL PLANNING SERVICES
 PHONE: (239) 643-2324
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COASTAL ENGINEERING CONSULTANTS, INC.
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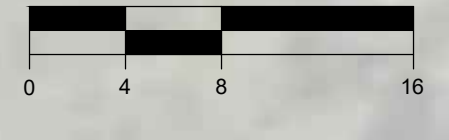


- NOTES:**
- BALES SHOULD BE ANCHORED w/2-1"x2" (OR 1" DIA. 1/4" WOOD STAKES. STAKES OF OTHER MATERIAL OR SHAPE PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY ENGINEER. STAKES OTHER THAN WOOD SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
 - RAILS AND POSTS SHALL BE 2"x4" WOOD. OTHER MATERIALS PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY ENGINEER.
 - ADJACENT BALES SHALL BE BUTTED FIRMLY TOGETHER.
 - WHERE USED IN CONJUNCTION w/SILT FENCE, BALES SHALL BE PLACED ON THE UPSTREAM SIDE OF THE FENCE.

CATCH BASIN PROTECTION DETAIL
 N.T.S.



TYPICAL SILT FENCE DETAIL
 N.T.S.



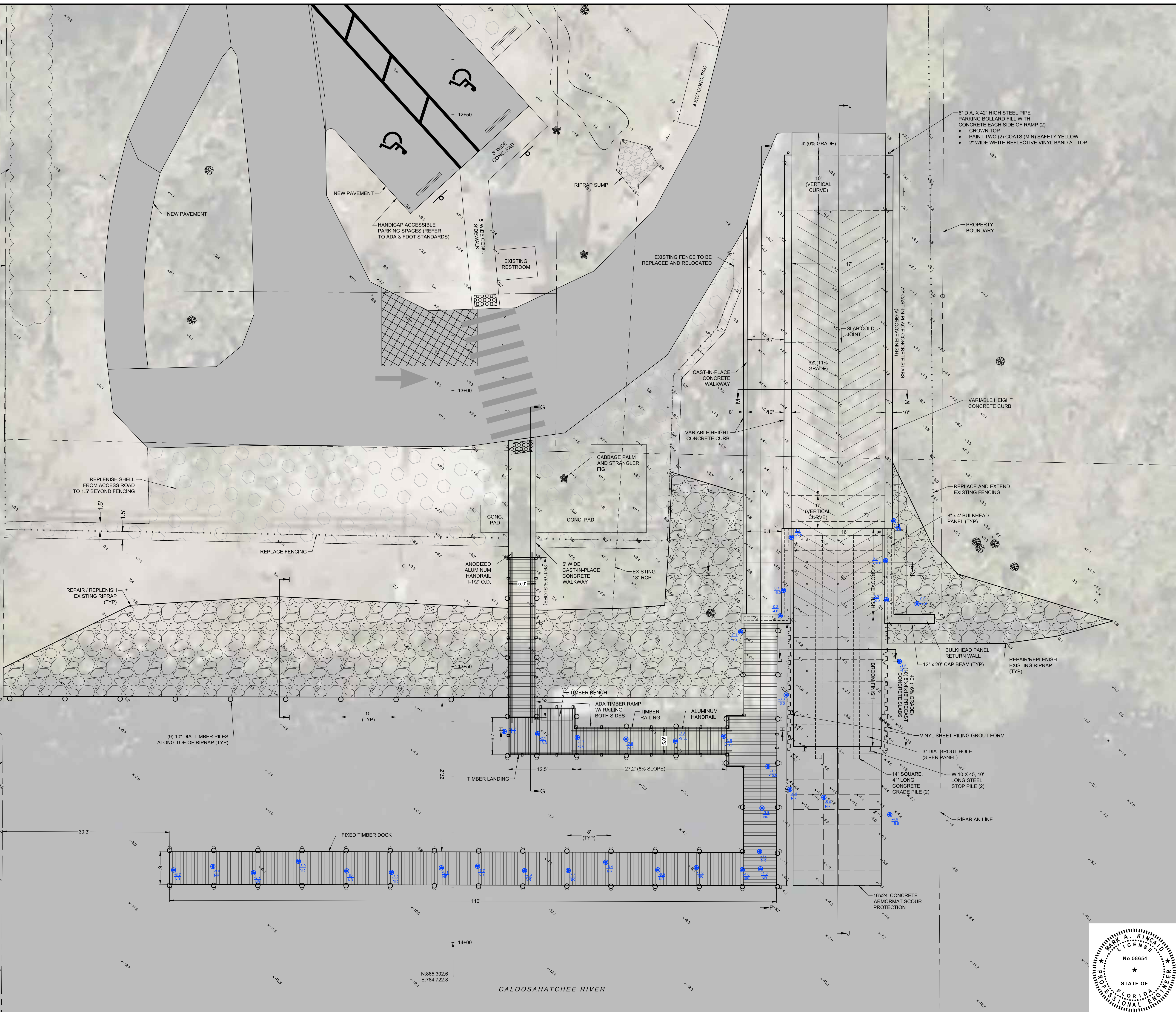
- ROCK PROBE NOTE:**
- TIMBER STRUCTURE AND RAMP ALIGNMENT WERE PROBED WITH 12 FT METAL WATER JET PROBE.
 - MUDLINE AND REFUSAL ELEVATIONS WERE RECORDED.
 - DIVER INSPECTED EXPOSED ROCK. MATERIAL IS POORLY CEMENTED LIMESTONE SHELL HASH. SURFACE WAS EASILY MARRED AND DIVER WAS ABLE TO REMOVE 6" DIA. COBBLE FROM SURFACE WITH AN INSPECTION HAMMER.

FILL VOIDS IN EXISTING VEGETATION WITH (117) SEVEN GALLON WALTER'S VIBURNUM (*Viburnum obtovatum*) SHRUBS

PROPERTY BOUNDARY

OKEECHOBEE WATERWAY RIGHT-OF-WAY LINE

RIPARIAN LINE



- 6" DIA. X 42" HIGH STEEL PIPE PARKING BOLLARD FILL WITH CONCRETE EACH SIDE OF RAMP (2)
- CROWN TOP
- PAINT TWO (2) COATS (MIN) SAFETY YELLOW
- 2" WIDE WHITE REFLECTIVE VINYL BAND AT TOP

CLIENT: LEE COUNTY BOARD OF COMMISSIONERS

TITLE: ALVA BOAT RAMP IMPROVEMENTS
WATER DEPENDENT IMPROVEMENTS

CIVIL ENGINEERING SURVEY & MAPPING: COASTAL ENGINEERING ENVIRONMENTAL PLANNING SERVICES

PHONE: (239) 643-2324
FAX: (239) 643-1143
WWW: coastal-engineering.com
E-MAIL: info@cecinc.com

COASTAL ENGINEERING CONSULTANTS INC.
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3106 SOUTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104

DATE: 6/4/2019
SCALE: AS NOTED

DRAWN: SDB F.B.
CHECKED: MAK P.G.

SEC.: TWP.
ACAD NO.: 13029-C.dwg
REF. NO.: 13.029

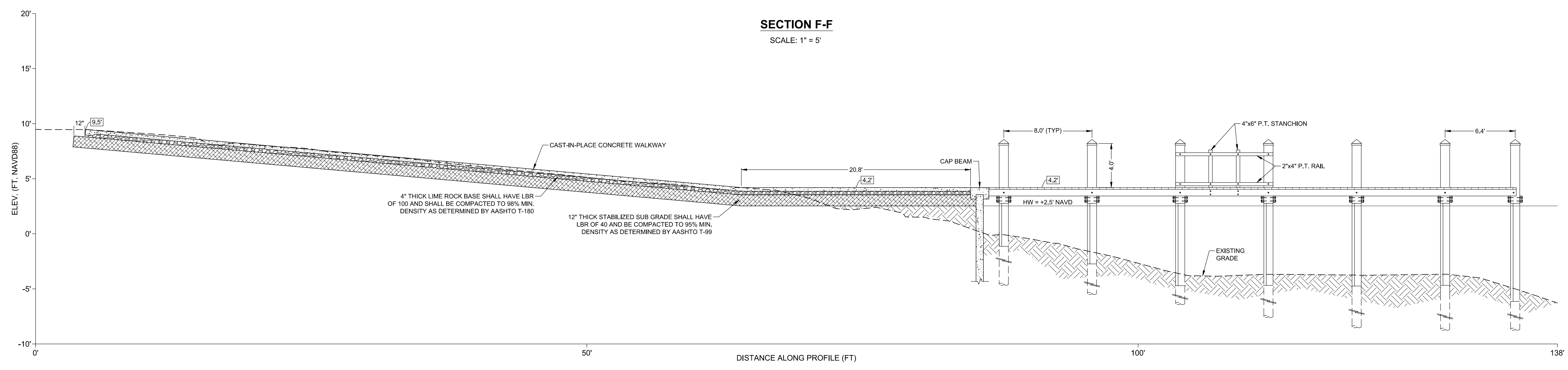
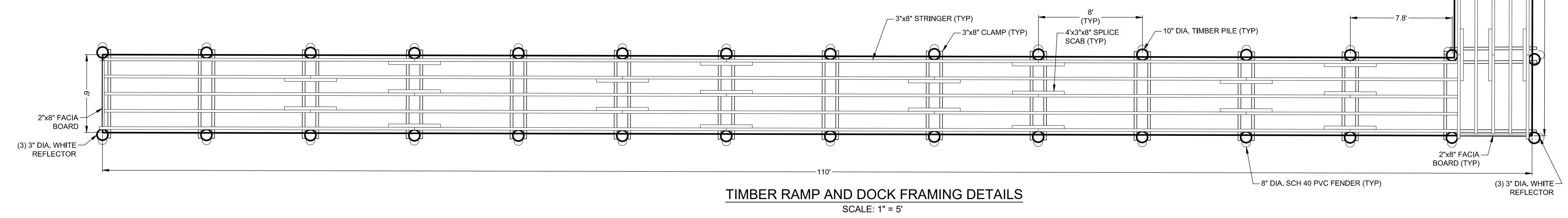
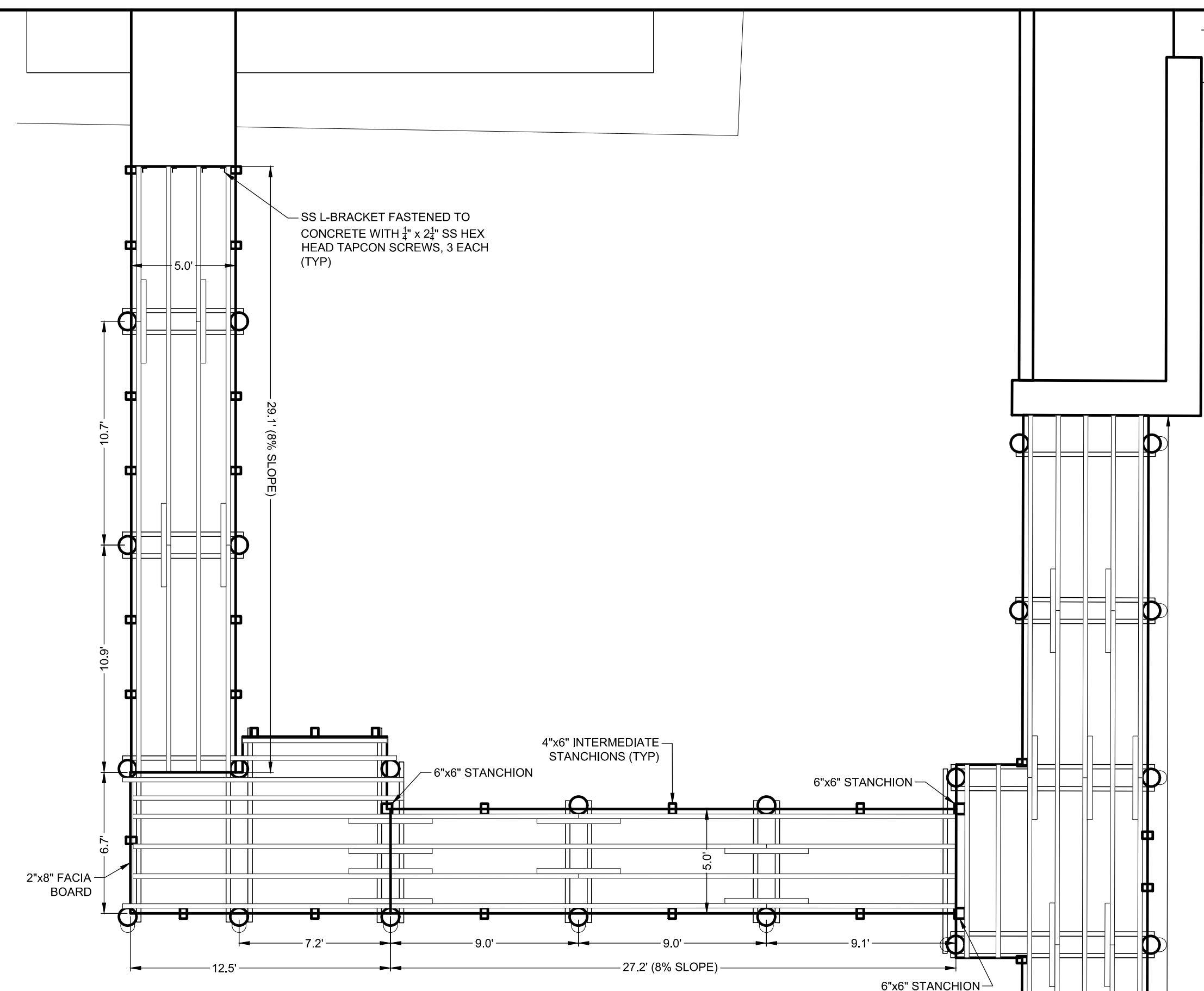
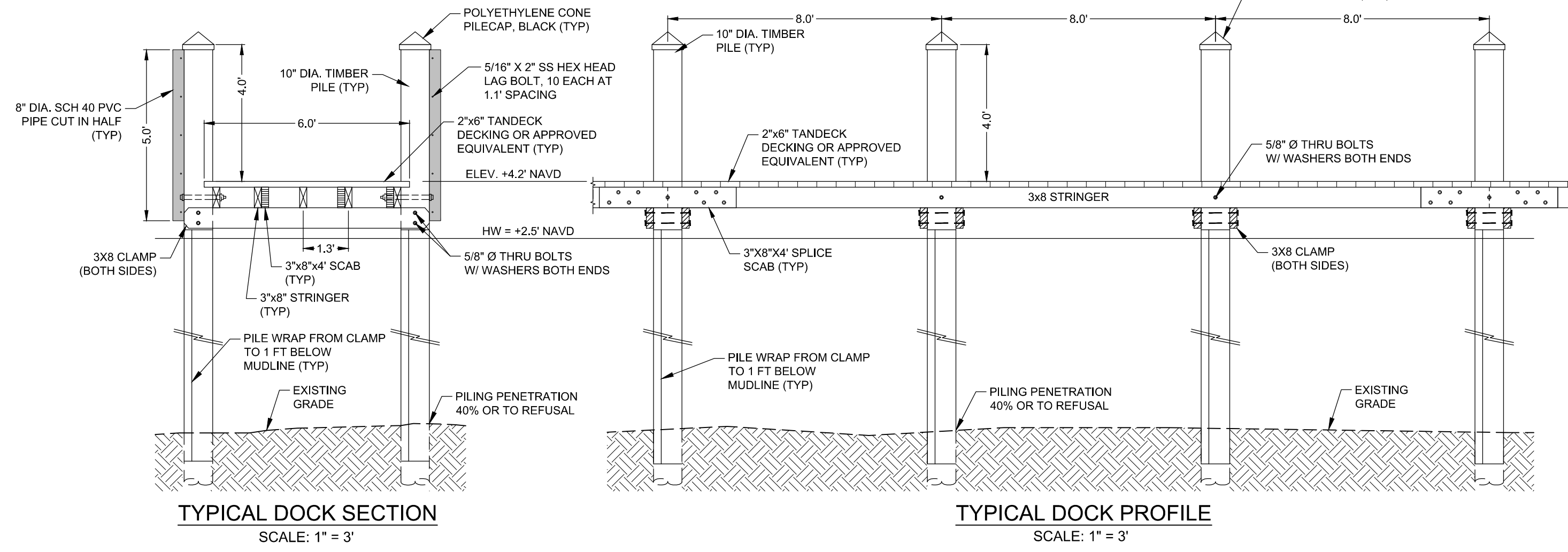
NO.	DATE	BY	REVISION DESCRIPTION
2	7/18/19	MAK	REVISED FRAMING
1	7/12/19	JBH	RAMP BASE AND SUBGRADE

STATE OF FLORIDA PROFESSIONAL ENGINEER
No 58654

SHEET 6
FILE NO.: 13029-C-6

DOCK CONSTRUCTION NOTES:

1. PRIOR TO EXCAVATION CONTRACTOR TO FIELD VERIFY LOCATION OF ALL UTILITIES, IRRIGATION AND DRAINS.
2. THE CONTRACTOR SHALL DEMOLISH, REMOVE, AND DISPOSE OF IN AN APPROVED OFF SITE DISPOSAL AREA THE EXISTING TIMBER PILES, DOCK AND ASSOCIATED DEBRIS WITHIN THE LIMITS OF THE PROJECT.
3. BEVEL TOP EDGE OF PILES AND DECKING TO REMOVE SPLINTERS.
4. RECESS ALL OUTBOARD FACING BOLT HEADS FLUSH WITH PILE.
5. ALL FASTENERS AND HARDWARE SHALL BE 304 STAINLESS STEEL.
6. ALL PILES SHALL ACHIEVE A MINIMUM PENETRATION OF 40 PERCENT OF THE OVERALL LENGTH OR A MINIMUM OF 8 FT, WHICHEVER IS GREATER.
7. ALL PILES SHALL BE WRAPPED WITH A 0.30 MIL SHEETING MANUFACTURED BY PERMA PILE OR APPROVED EQUAL. THE SHEETING IS TO PREVENT PRESERVATIVE TREATMENT FROM LEACHING INTO THE ENVIRONMENT AND TO PROHIBIT MARINE BORER ATTACK. THE SHEETING MUST OVERLAP A MINIMUM OF 6 INCHES AT SEAMS AND LAP JOINTS AND PROVIDE A COMPLETE BARRIER TO THE TIMBER. MINIMUM 1 1/4" LONG 304 STAINLESS STEEL ROOFING NAILS, SPACED NO GREATER THAN 3 INCHES APART, SHALL BE USED FOR ATTACHING THE SHEETING. THE SHEETING SHALL EXTEND FROM BOTTOM OF CLAMPS DOWN TO 1 FOOT BELOW THE EXISTING MUDLINE. VERTICAL SEAMS SHALL BE ORIENTATED TOWARD THE UNDERSIDE OF THE PIER.
8. ALL MOORING PILES AND DOCK PILES EXTENDING ABOVE THE DECK SHALL BE FITTED WITH A BLACK POLYETHYLENE CONE PILE CAP MANUFACTURED BY INTERNATIONAL DOCK PRODUCTS, INC. OR APPROVED EQUIVALENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. EACH PILE SHALL BE MEASURED AND FITTED WITH THE CORRECT SIZE CAP. CAPS SHOULD FIT SNUG, BUT NOT CAUSE DEFORMATION. GAPS BETWEEN THE PILE AND CAP SHALL NOT EXCEED 1/2".
9. DECKING SHALL BE 2"x6" TANDECK (BY TANGENT TECHNOLOGIES, LLC) OR APPROVED EQUIVALENT. COLOR TO BE DETERMINED BY COUNTY. DECKING SHALL BE FLUSH WITH TOP OF CAP BEAM.
10. STRINGER SPLICES SHALL BE STAGGERED.
11. FIRE EXTINGUISHERS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 303.



DATE: 6/4/2019
SCALE: AS NOTED
DRAWN: SDB
CHECKED: MAK
SEC: TWP.
ACAD NO: 13029-C.dwg
REF. NO: 13.029

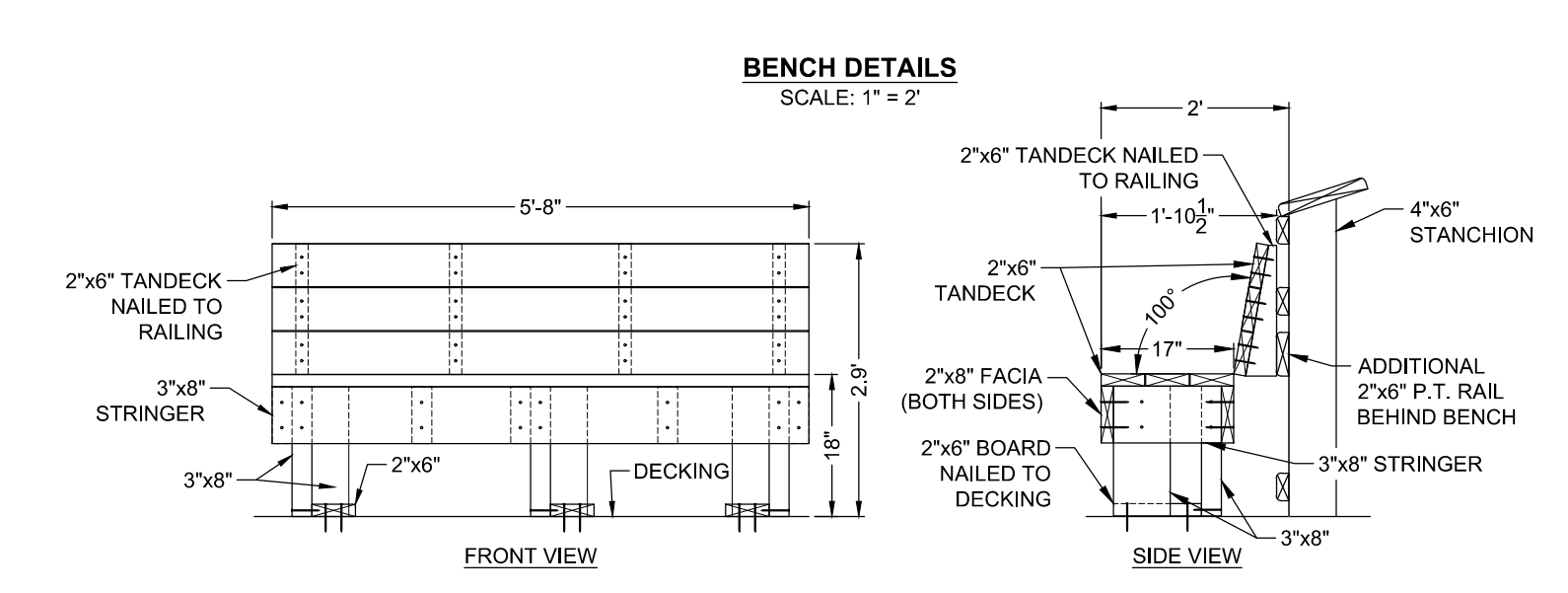
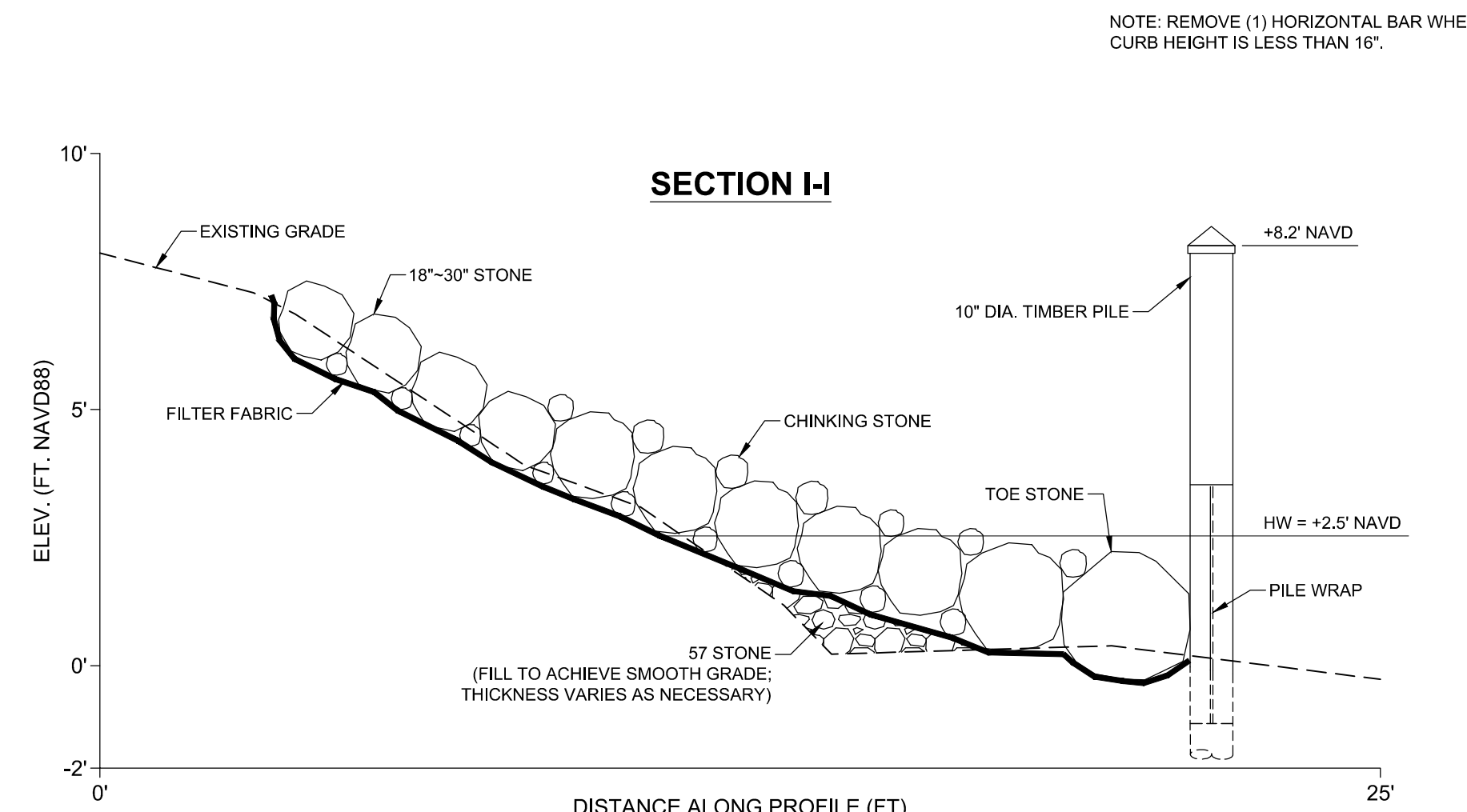
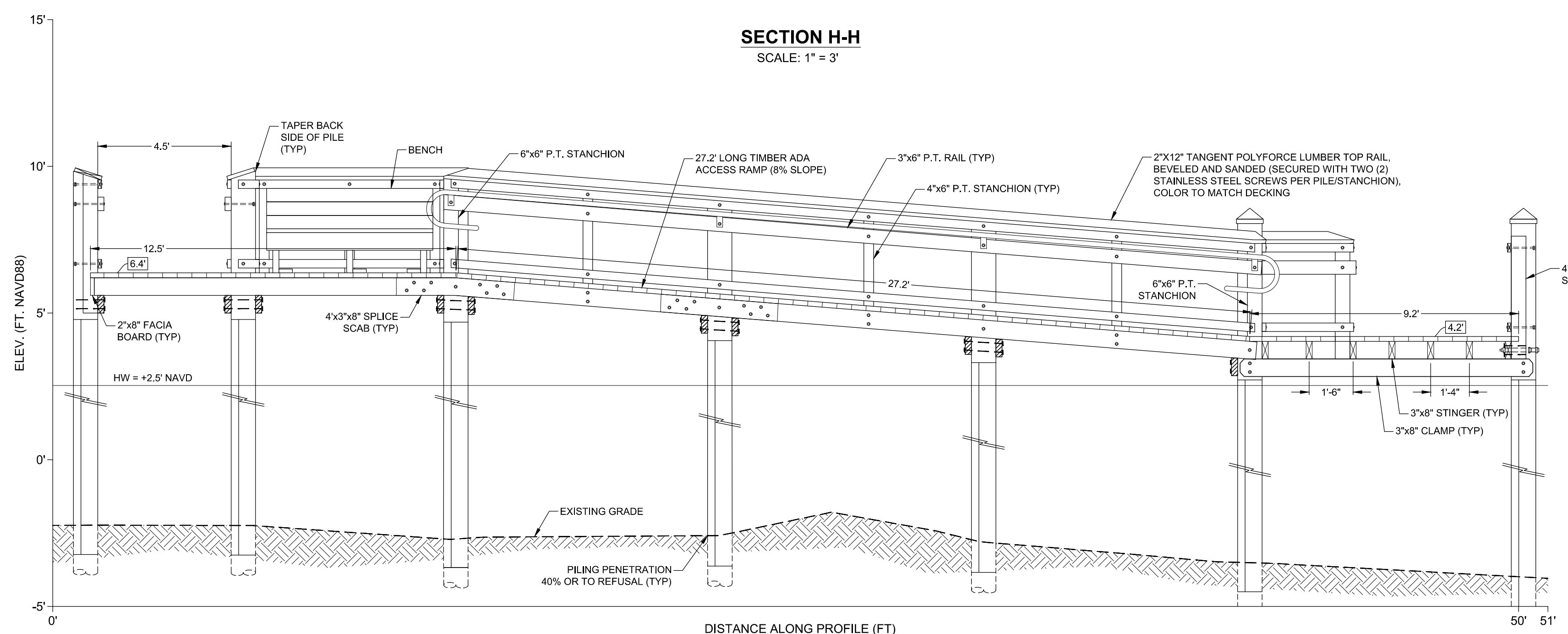
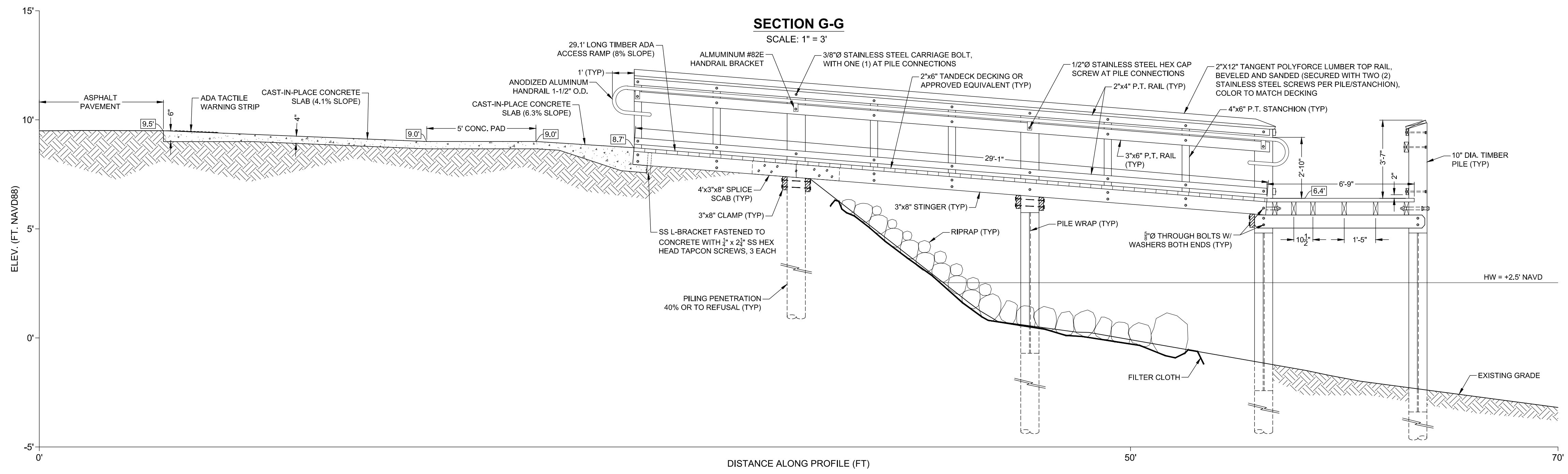
CLIENT: LEE COUNTY BOARD OF COMMISSIONERS
TITLE: ALVA BOAT RAMP RENOVATION DOCK REPLACEMENT DETAILS

CIVIL ENGINEERING SURVEY & MAPPING
COASTAL ENGINEERING ENVIRONMENTAL PLANNING SERVICES
PHONE: (239)643-2324
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COASTAL ENGINEERING CONSULTANTS INC.
A CECI GROUP COMPANY
Serving Florida Since 1977
3105 SOUTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104

STATE OF FLORIDA
PROFESSIONAL ENGINEER
No 58654

SHEET 7
FILE NO.: 13029-C-7

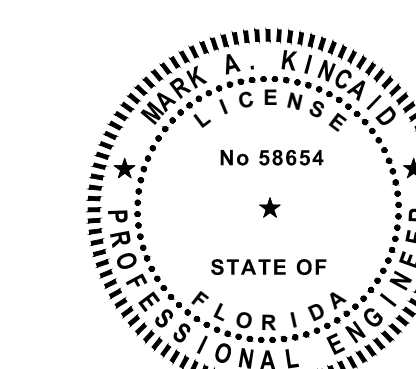


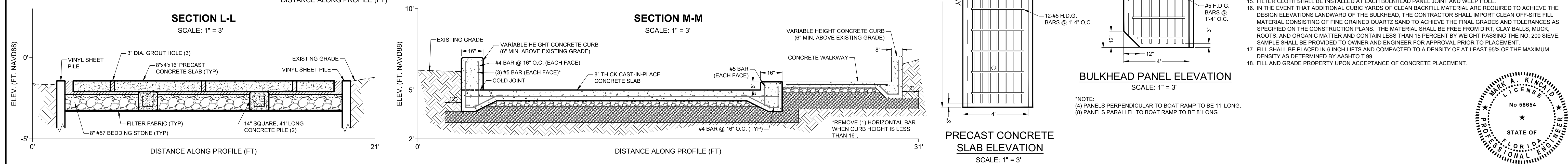
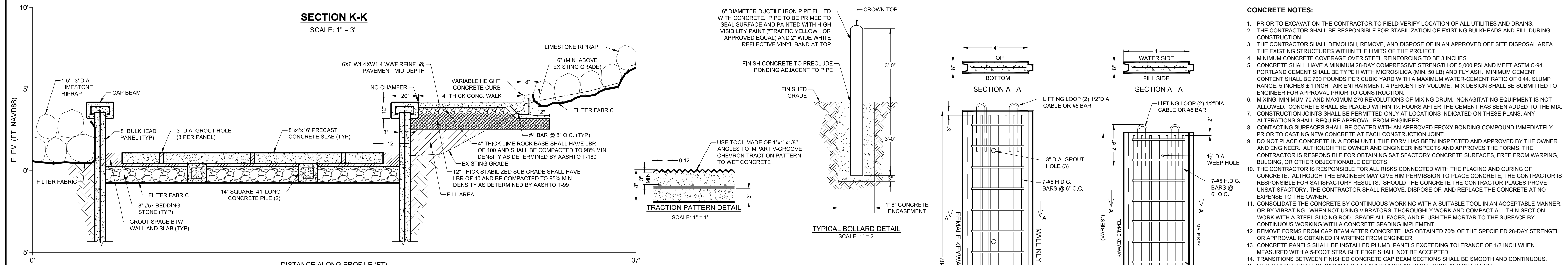
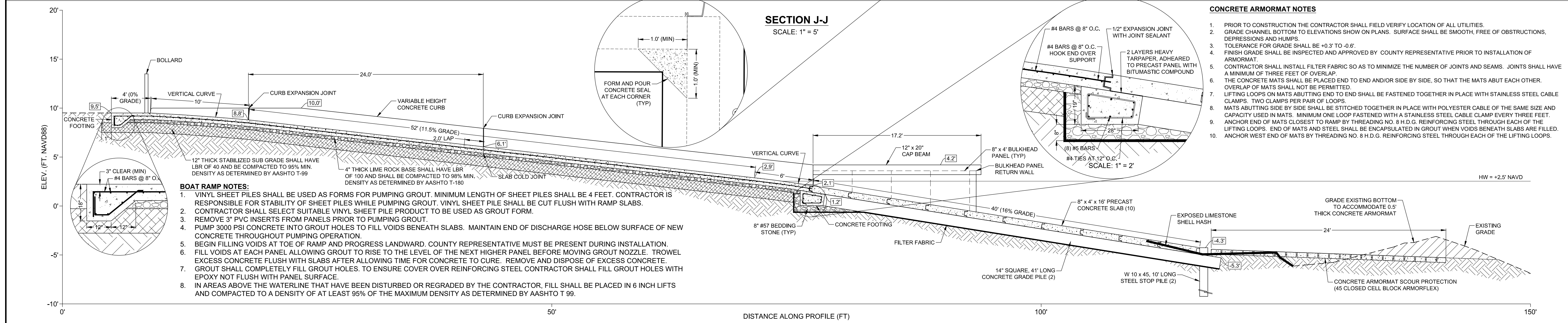
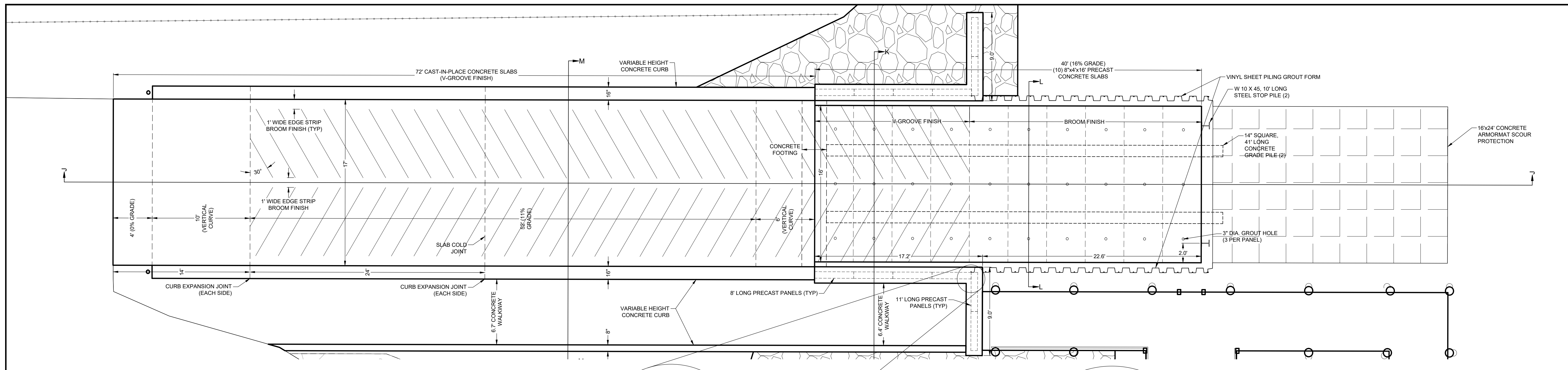
NOTE: REMOVE (1) HORIZONTAL BAR WHEN CURB HEIGHT IS LESS THAN 16".

DATE: 6/4/2019		SCALE: AS NOTED	CLIENT: LEE COUNTY BOARD OF COMMISSIONERS	
DRAWN: SDB	F.B.	TITLE: ALVA BOAT RAMP RENOVATION ADA TIMBER RAMP PROFILES		
CHECKED: MAK	P.G.	NO. 2	DATE 7/18/19	BY MAK
SEC. TWP.	RNG.	ACAD NO. 13029-C.dwg	DATE 7/12/19	BY JBH
REF. NO. 13.029	NO.	REVISION DESCRIPTION		

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- CONCRETE ARMORMAT NOTES**
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UTILITIES, DEPRESSIONS AND HUMPS.
 - GRADE CHANNEL BOTTOM TO ELEVATIONS SHOWN ON PLANS. SURFACE SHALL BE SMOOTH, FREE OF OBSTRUCTIONS, TOLERANCE FOR GRADE SHALL BE +0.3 TO -0.6.
 - FINISH GRADE SHALL BE INSPECTED AND APPROVED BY COUNTY REPRESENTATIVE PRIOR TO INSTALLATION OF ARMORMAT.
 - CONTRACTOR SHALL INSTALL FILTER FABRIC SO AS TO MINIMIZE THE NUMBER OF JOINTS AND SEAMS. JOINTS SHALL HAVE A MINIMUM OF THREE FEET OF OVERLAP.
 - THE CONCRETE MATS SHALL BE PLACED END TO END AND/OR SIDE BY SIDE. SO THAT THE MATS ABUT EACH OTHER. OVERLAP OF MATS SHALL NOT BE PERMITTED.
 - LIFTING LOOPS ON MATS ABUTTING END TO END SHALL BE FASTENED TOGETHER IN PLACE WITH STAINLESS STEEL CABLE CLAMPS. TWO CLAMPS PER PAIR OF LOOPS.
 - MATS ABUTTING SIDE BY SIDE SHALL BE STITCHED TOGETHER IN PLACE WITH POLYESTER CABLE OF THE SAME SIZE AND CAPACITY USED IN MATS. MINIMUM ONE LOOP FASTENED WITH A STAINLESS STEEL CABLE CLAMP EVERY THREE FEET.
 - ANCHOR END OF MATS CLOSEST TO RAMP BY THREADING NO. 8 H.D.G. REINFORCING STEEL THROUGH EACH OF THE LIFTING LOOPS. END OF MATS AND STEEL SHALL BE ENCAPSULATED IN GROUT WHEN VOIDS BENEATH SLABS ARE FILLED.
 - ANCHOR WEST END OF MATS BY THREADING NO. 8 H.D.G. REINFORCING STEEL THROUGH EACH OF THE LIFTING LOOPS.

- CONCRETE NOTES:**
- PRIOR TO EXCAVATION THE CONTRACTOR TO FIELD VERIFY LOCATION OF ALL UTILITIES AND DRAINS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZATION OF EXISTING BULKHEADS AND FILL DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL DEMOLISH, REMOVE, AND DISPOSE OF IN AN APPROVED OFF SITE DISPOSAL AREA THE EXISTING STRUCTURES WITHIN THE LIMITS OF THE PROJECT.
 - MINIMUM CONCRETE COVERAGE OVER STEEL REINFORCING TO BE 3 INCHES.
 - CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI AND MEET ASTM C-94. PORTLAND CEMENT SHALL BE TYPE I WITH MICROSILICA (MIN. 50 LB) AND FLY ASH. MINIMUM CEMENT CONTENT SHALL BE 700 POUNDS PER CUBIC YARD WITH A MAXIMUM WATER-CEMENT RATIO OF 0.44. SLUMP RANGE: 5 INCHES ± 1 INCH. AIR ENTRAINMENT: 4 PERCENT BY VOLUME. MIX DESIGN SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
 - MIXING: MINIMUM 70 AND MAXIMUM 270 REVOLUTIONS OF MIXING DRUM. NONAGGITATING EQUIPMENT IS NOT ALLOWED. CONCRETE SHALL BE PLACED WITHIN 1 1/2 HOURS AFTER THE CEMENT HAS BEEN ADDED TO THE MIX.
 - CONSTRUCTION JOINTS SHALL BE PERMITTED ONLY AT LOCATIONS INDICATED ON THESE PLANS. ANY ALTERATIONS SHALL REQUIRE APPROVAL FROM ENGINEER.
 - CONTACTING SURFACES SHALL BE COATED WITH AN APPROVED EPOXY BONDING COMPOUND IMMEDIATELY PRIOR TO CASTING NEW CONCRETE AT EACH CONSTRUCTION JOINT.
 - DO NOT PLACE CONCRETE IN A FORM UNTIL THE FORM HAS BEEN INSPECTED AND APPROVED BY THE OWNER AND ENGINEER. ALTHOUGH THE OWNER AND ENGINEER INSPECTS AND APPROVES THE FORMS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING SATISFACTORY CONCRETE SURFACES, FREE FROM WARPING, BULGING, OR OTHER OBJECTIONABLE DEFECTS.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL RISKS CONNECTED WITH THE PLACING AND CURING OF CONCRETE. ALTHOUGH THE ENGINEER MAY GIVE HIM PERMISSION TO PLACE CONCRETE, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING SATISFACTORY RESULTS. SHOULD THE CONCRETE BE DEFECTIVE, UNDESIRABLE, UNSATISFACTORY, THE CONTRACTOR SHALL REMOVE, DISPOSE OF, AND REPLACE THE CONCRETE AT NO EXPENSE TO THE OWNER.
 - CONSOLIDATE THE CONCRETE BY CONTINUOUS WORKING WITH A SUITABLE TOOL IN AN ACCEPTABLE MANNER, OR BY VIBRATING. WHEN NOT USING VIBRATORS, THOROUGHLY WORK AND COMPACT ALL THIN-SECTION WORK WITH A STEEL SLICING ROD. SPADE ALL FACES, AND FLUSH THE MORTAR TO THE SURFACE BY CONTINUOUS WORKING WITH A CONCRETE SPADING IMPLEMENT.
 - REMOVE FORMS FROM CAP BEAM AFTER CONCRETE HAS OBTAINED 70% OF THE SPECIFIED 28-DAY STRENGTH OR APPROVAL IS OBTAINED IN WRITING FROM ENGINEER.
 - CONCRETE PANELS SHALL BE INSTALLED PLUMB. PANELS EXCEEDING TOLERANCE OF 1/2 INCH WHEN MEASURED WITH A 5-FOOT STRAIGHT EDGE SHALL NOT BE ACCEPTED.
 - TRANSITIONS BETWEEN FINISHED CONCRETE CAP BEAM SECTIONS SHALL BE SMOOTH AND CONTINUOUS.
 - FILTER CLOTH SHALL BE INSTALLED AT EACH BULKHEAD PANEL JOINT AND WEEP HOLE.
 - IN THE EVENT THAT ADDITIONAL CUBIC YARDS OF CLEAN BACKFILL MATERIAL ARE REQUIRED TO ACHIEVE THE DESIGN ELEVATIONS LANDWARD OF THE BULKHEAD, THE CONTRACTOR SHALL IMPORT CLEAN OFF-SITE FILL MATERIAL CONSISTING OF FINE GRAINED QUARTZ SAND TO ACHIEVE THE FINAL GRADES AND TOLERANCES AS SPECIFIED ON THE CONSTRUCTION PLANS. THE MATERIAL SHALL BE FREE FROM DIRT, CLAY BALLS, MUCK, ROOTS, AND ORGANIC MATTER AND CONTAIN LESS THAN 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE. SAMPLE SHALL BE PROVIDED TO OWNER AND ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.
 - FILL SHALL BE PLACED IN 6 INCH LIFTS AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
 - FILL AND GRADE PROPERTY UPON ACCEPTANCE OF CONCRETE PLACEMENT.

DATE: 6/4/2019 SCALE: AS NOTED
 DRAWN: SDB F.B.
 CHECKED: MAK P.G.
 SEC. TWP: RING.
 ACAD NO. 13029-C.dwg
 REF. NO. 13.029

LEE COUNTY BOARD OF COMMISSIONERS
 ALVA BOAT RAMP RENOVATION
 BOAT RAMP DETAILS

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 FILE NO.: 13029-C-9