STRUCTURAL NOTES

1061 DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. 2023 EDITION. THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:

> WEIR ACCESS BRIDGE LIVE LOAD

WIND

ASCE 7-22 Vult = 147 MPH, Vasd = 114 mph EXPOSURE C RISK CATEGORY I

100psf

1120 SHOP DRAWING REVIEW:

ELECTRONIC VERSIONS OF STRUCTURAL DRAWINGS ARE THE SOLE. COPYRIGHTED PROPERTY OF TRC WORLDWIDE ENGINEERING, INC. ELECTRONIC VERSIONS OF DRAWINGS ARE NOT TO BE USED OR TRANSFERRED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF TRC WORLDWIDE ENGINEERING, INC. USERS WILL SIGN A RELEASE.

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.

SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR'S FIELD ENGINEER PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED.

SHOP DRAWING SUBMITTALS SHALL BE IN ELECTRONIC PDF FILE FORMAT ONLY. THE CONTRACTOR SHALL MAKE PRINTS FROM THE MARKED UP PDF FILES AS REQUIRED FOR DISTRIBUTION.

THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.

CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS SHALL BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTALS SHALL BE CLEARLY NOTED ON THE LETTER OF TRANSMITTAL. ARCHITECT/ENGINEER REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL.

SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL FRAMING SHOWN ON THESE DRAWINGS INCLUDING, BUT NOT LIMITED TO: CONCRETE MIXES, CONCRETE AND MASONRY REINFORCING, STRUCTURAL STEEL AND CONNECTIONS, STEEL DECK, LIGHT GAGE FRAMING, WOOD ROOF TRUSS FRAMING

2354 STEEL SHEET PILING:

STEEL SHEET PILING SHALL CONSIST OF APPROVED CONTINUOUS, INTERLOCKING PANELS WEIGHTING NOT LESS THAN 22 PSF OF WALL. A SINGLE PANEL SHALL HAVE A SECTION MODULUS OF NOT LESS THAN 18.1 IN 3 PER LINEAL FOOT OF WALL. SHEET PILING AND ACCESSORIES SHALL CONFORM TO ASTM A572 GRADE 50. BOLTS AND NUTS SHALL CONFORM TO ASTM A588.

PROTECTIVE COATING: SHOP PRIMED W/ FIELD TOUCH-UP: PAINT SYSTEM PER SFWMD SECTION 09900 (TYPE S-IV)

3104 CONSTRUCTION JOINTS:

ANY DEVIATION OR ADDITION OF CONSTRUCTION JOINT FROM THAT SHOWN ON THE PLANS MUST BE REVIEWED BY THE ENGINEER. ALTERNATE OR ADDED CONSTRUCTION JOINT LOCATIONS ARE ACCEPTABLE ONLY AS A CHANGE ORDER, WHICH WILL INCLUDE ENGINEERING CHARGES BY THE ENGINEER OF RECORD FOR REDESIGN OF THE STRUCTURE, SHORING, ETC.

3201 REINFORCING STEEL:

SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.

3302 CONCRETE:

SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND

4000 PSI FOR CONCRETE CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.

WHERE THE SPECIFIED CONCRETE STRENGTH OF A COLUMN OR SHEARWALL IS GREATER THAN 1.4 TIMES THE SPECIFIED SLAB CONCRETE STRENGTH, THE CONCRETE OF THE STRENGTH SPECIFIED FOR THE COLUMN OR SHEARWALL SHALL BE PLACED IN THE FLOOR AT THE COLUMN OR SHEARWALL LOCATION. THE AREA OF THE COLUMN OR SHEARWALL CONCRETE STRENGTH POURED IN THE SLAB SHALL EXTEND A MINIMUM OF 2 FEET INTO THE SLAB FROM THE FACE OF THE COLUMN OR SHEARWALL.

SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1_1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. APPLY S-4 PROTECTIVE COATING SYSTEM PER SSFWMD STANDARD SPECIFICATION SECTION 09900 PROTECTIVE COATINGS.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS AND/OR CITY OF PORT ST. LUCIE CONSTRUCTION STANDARDS (MOST STRINGENT CRITERIA APPLIES). CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. IF ACCEPTED, PEA ROCK PUMP MIX USE IS LIMITED TO VERTICAL ELEMENT POURS AND BEAM POURS LESS THAN 60 LINEAL FEET PER POUR.

CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED. STATISTICAL BACK_UP DATA AS PER CHAPTER 5 OF ACI 318.

WATER/CEMENT RATIO FOR ALL CONCRETE SHALL NOT EXCEED 0.40 BY WEIGHT.

3304 CONCRETE TESTING:
AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:

A)ASTM C143 _ "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE 6" INCHES.

B)ASTM C39 _ "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:

> 1 AT 3 DAYS 1 AT 7 DAYS 2 AT 28 DAYS

ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

3602 POST-INSTALLED ANCHORS:

POST-INSTALLED ANCHORS SHALL ONLY BE USED SPECIFIED ON THE DRAWINGS.

- CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- 3. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS.
- UNLESS SPECIFIED OTHERWISE, ANCHORS SHALL BE EMBEDDED IN THE APPROPRIATE SUBSTRATE WITH A MINIMUM EMBEDMENT OF 8 TIMES THE NOMINAL ANCHOR DIAMETER OR THE EMBEDMENT REQUIRED TO SUPPORT THE INTENDED LOAD. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCE AND/OR SPACING INDICATED IN THE MANUFACTURER'S LITERATURE.
- 5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE.
- ACCEPTABLE PRODUCTS ARE:
- A. EXPANSION ANCHORS FOR NON-CRACKED CONCRETE
 - WEDGE-ALL (WA), BY SIMPSON STRONG-TIE
 - KWIK BOLT 3, BY HILTI
 - B. CRACKED CONCRETE MECHANICAL ANCHORS:
 - STRONG-BOLT (STB), BY SIMPSON STRONG-TIE
 - KWIK BOLT (TZ), BY HILTI
 - SCREW ANCHORS:
 - TITEN HD (THD), BY SIMPSON STRONG-TIE
 - HUS-H, BY HILTI
 - D. ADHESIVE ANCHORS:
 - A) FOR ANCHORING INTO SOLID BASE MATERIAL (CONCRETE AND GROUT-FILLED CMU):
 - ACRYLIC-TIE (AT)
 - SET EPOXY-TIE (SET) WITH RETROFIT BOLTS (RFB), BY SIMPSON STRONG-TIE
 - HIT RE 500, BY HILTI

5101 STRUCTURAL STEEL:

ROLLED SHAPES SHALL CONFORM TO ASTM A-572 OR A-992 GRADE 50 AND "THE SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. SHOP CONNECTIONS TO BE WELDED (UTILIZING E70XX ELECTRODES) AND FIELD CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. STEEL SHALL RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE GALVANIZING IS INDICATED ON THE

STRUCTURAL TUBING SHALL CONFORM TO ASTM A_500, GRADE B, FY = 46 KSI. STRUCTURAL PIPE SHALL CONFORM TO ASTM A_53 GRADE B, TYPE E OR S, FY = 35 KSI. BEAM CONNECTIONS TO TUBE COLUMNS SHALL BE A.I.S.C. THRU-PLATE TYPE UNLESS SHOWN OTHERWISE.

BOLTED CONNECTIONS SHALL CONSIST OF MINIMUM 3 INCH DIAMETER ASTM A-325-SC HIGH STRENGTH BOLTS.

ALL STEEL SHALL BE HOT DIPPED GALVANIZED PROTECTION OR 316 STAINLESS STEEL.

5104 MACHINE AND LAG BOLTS: SHALL BE A_307 HOT DIPPED GALVANIZED WITH GALVANIZED WASHERS. OR 316 STAINLESS STEEL.

ALUMINUM GRATING PANELS

ALUMINUM GRATING PANELS SHALL BE MCNICHOLS PRESS-LOCKED GCM-1-175 BAR GRATING PANELS OR APPROVED EQUAL

LIVE LOAD

SPAN 6'-0" ATTACHED IN ACCORDANCE MANUFACTURERS RECOMMENDATIONS



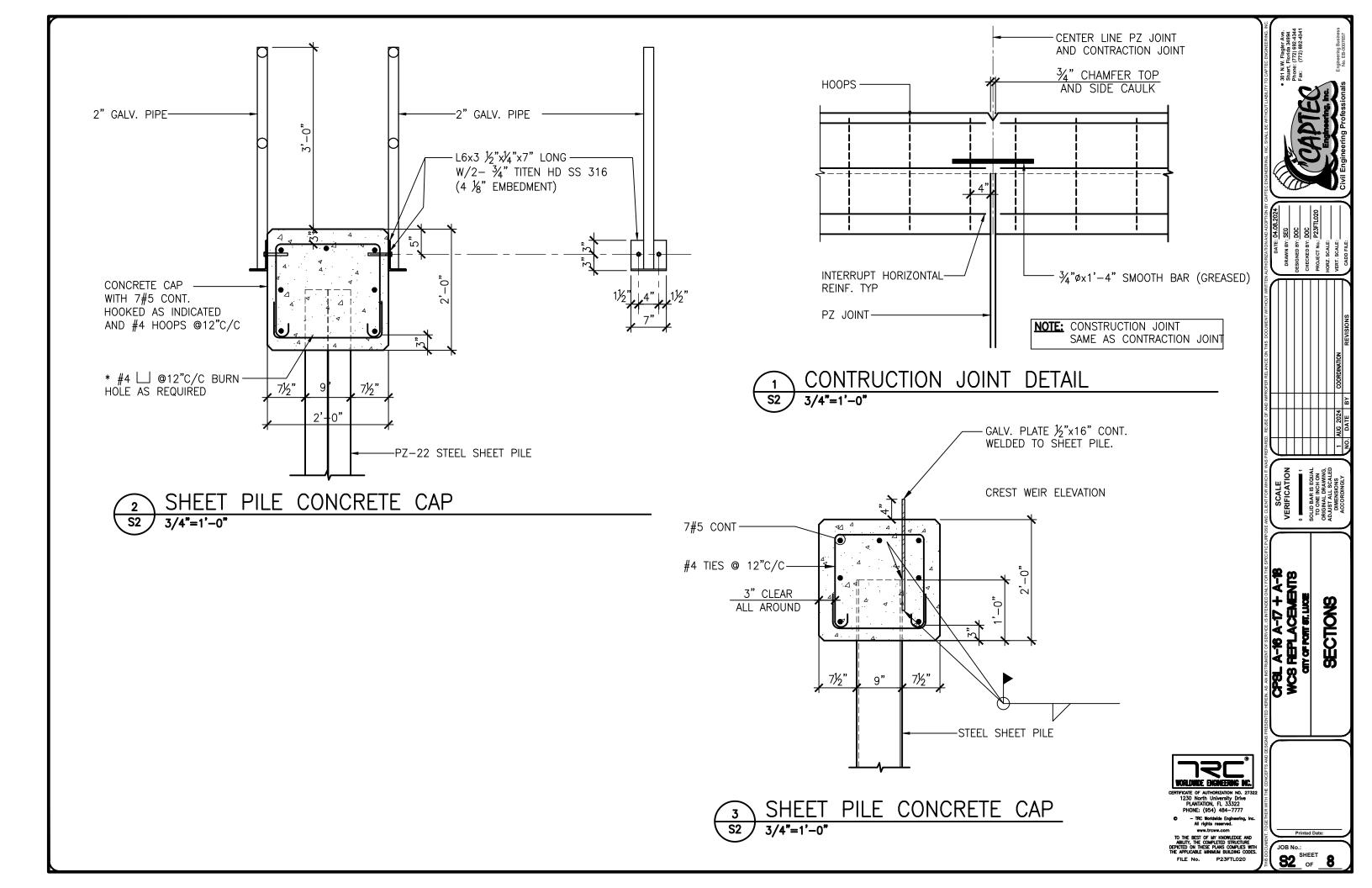
www.trcww.com TO THE BEST OF MY KNOWLEDGE AND ABILITY, THE COMPLETED STRUCTURE DEPICTED ON THESE PLANS COMPLIES WITH THE APPLICABLE MINIMUM BUILDING CODES FILE No. P23FTL020

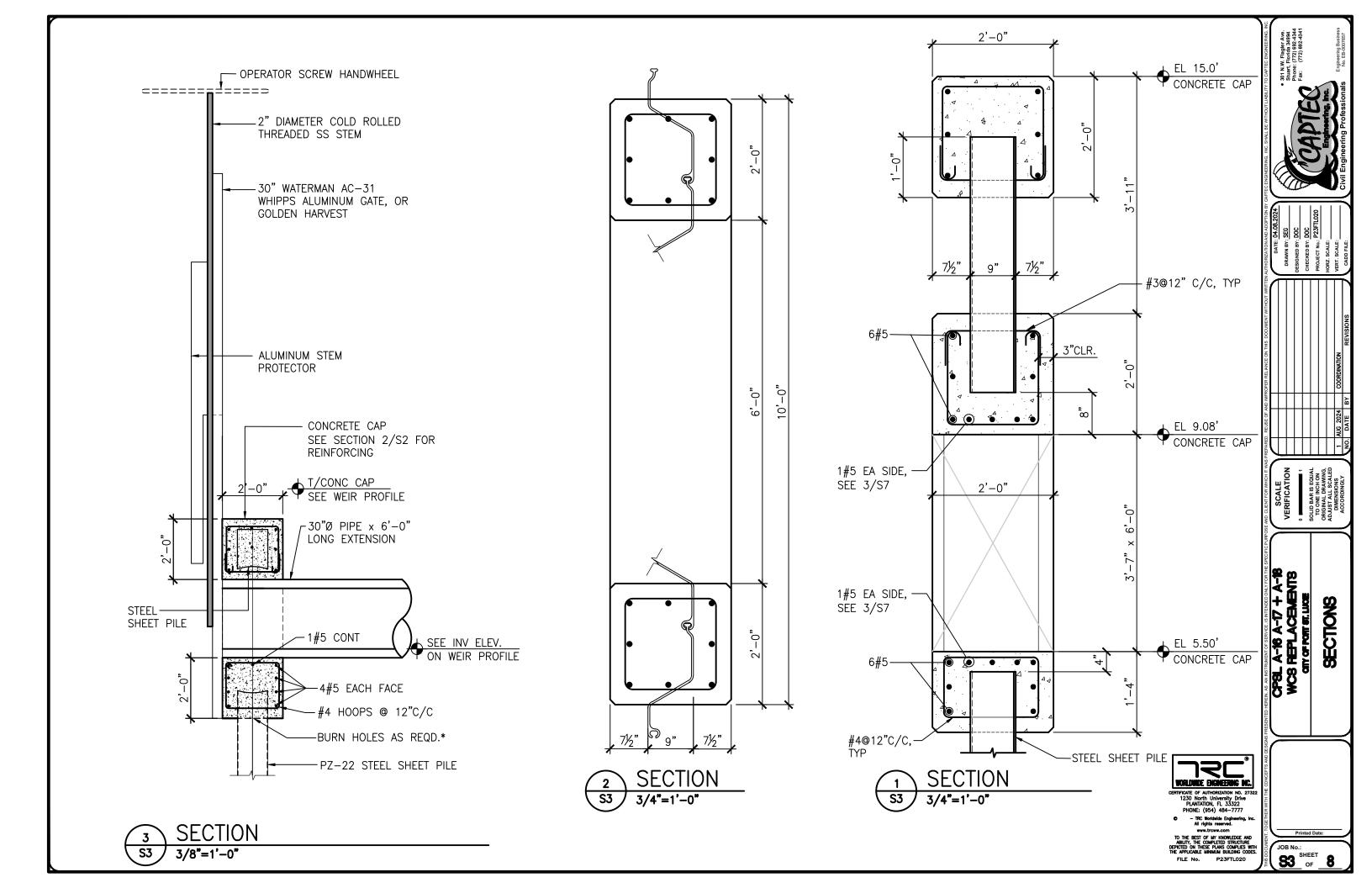


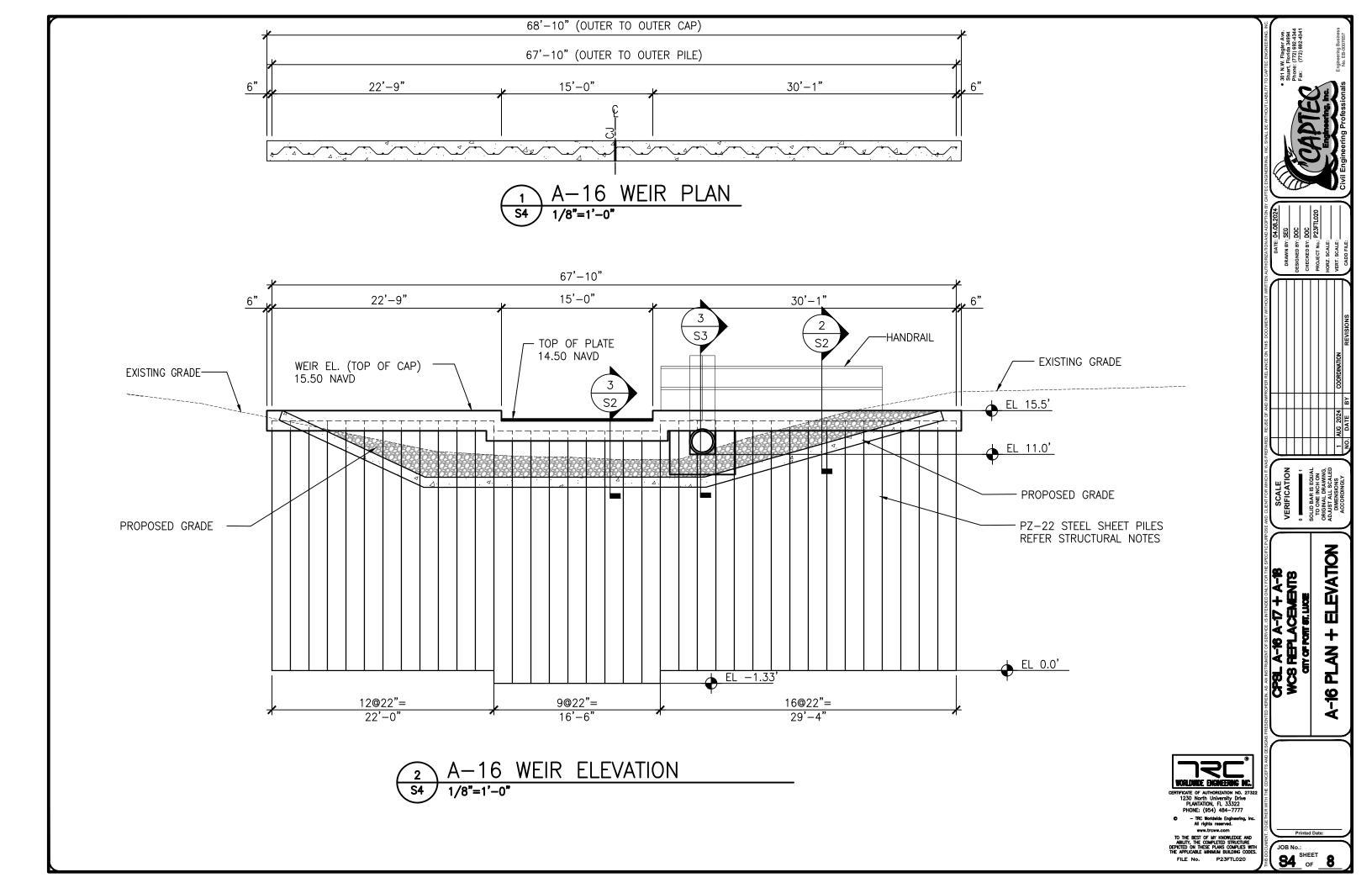
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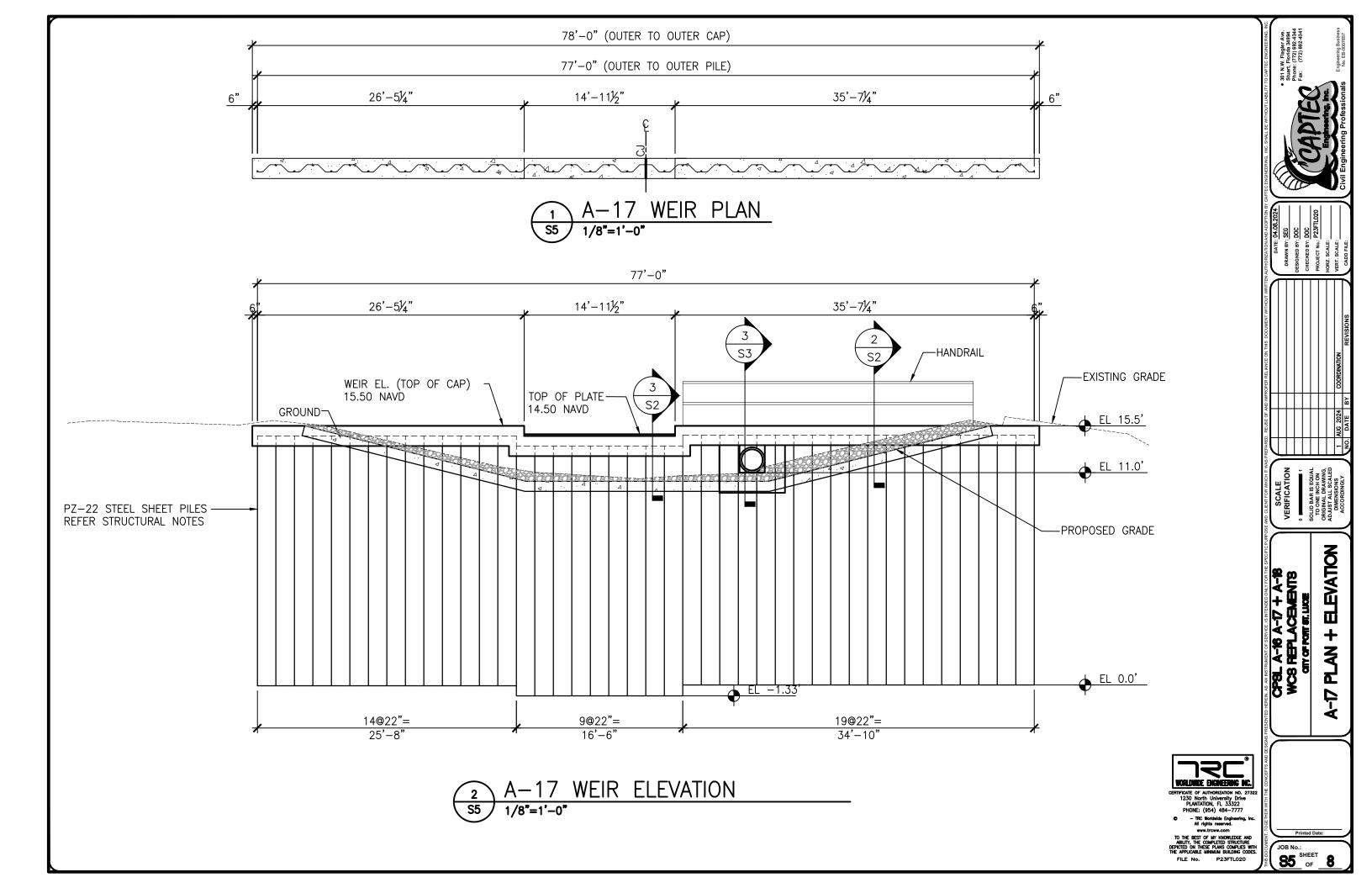
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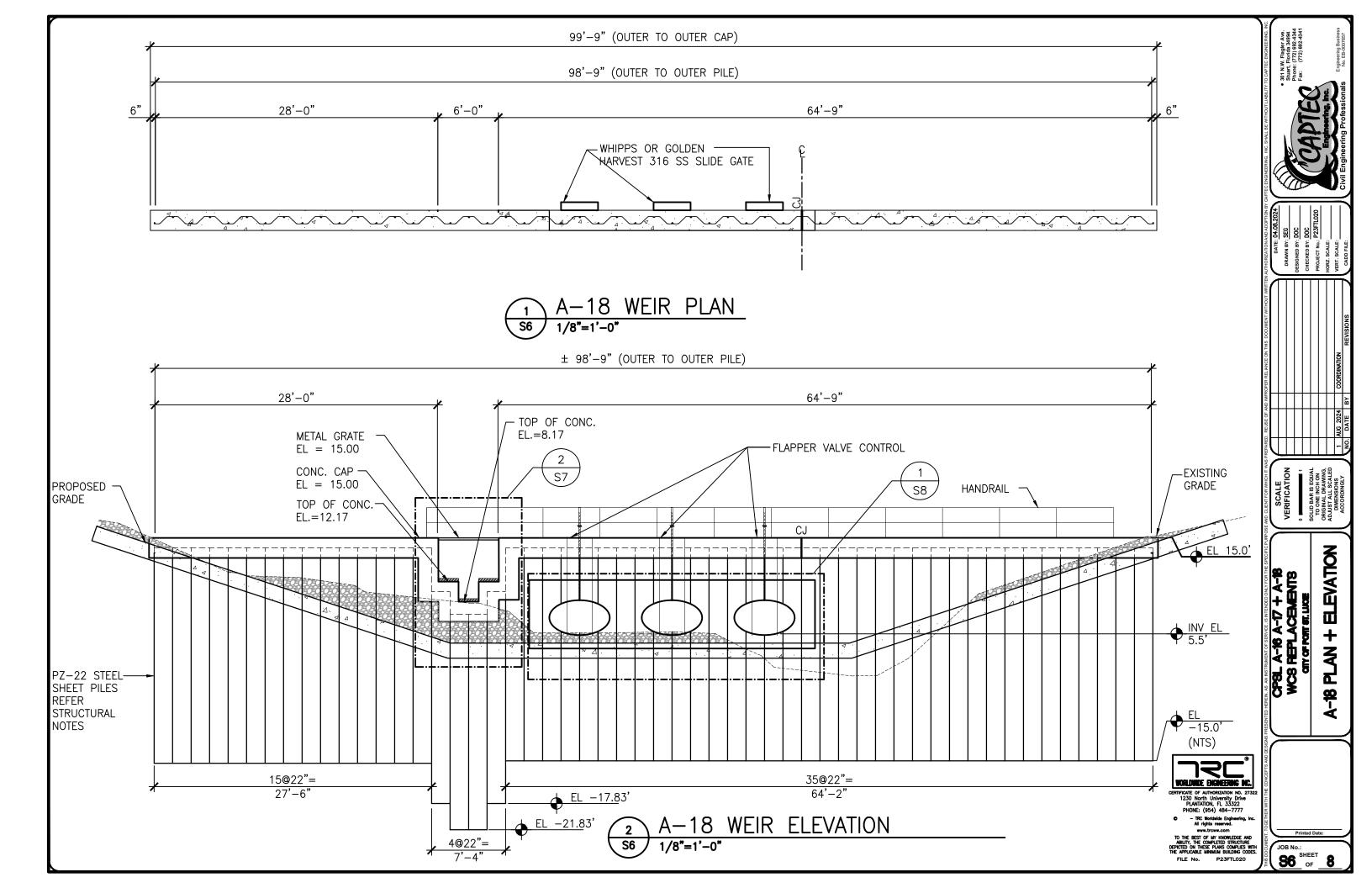
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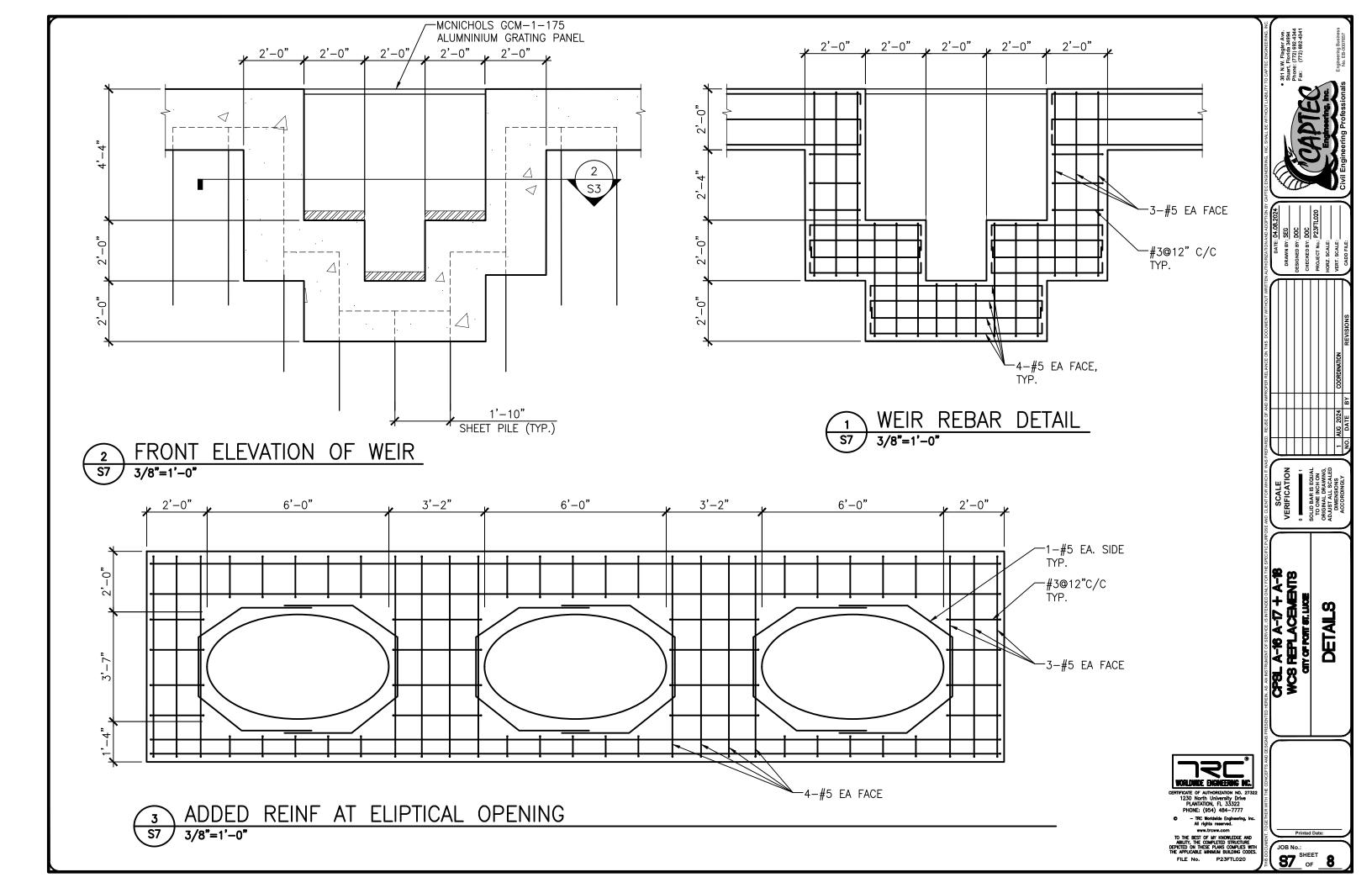


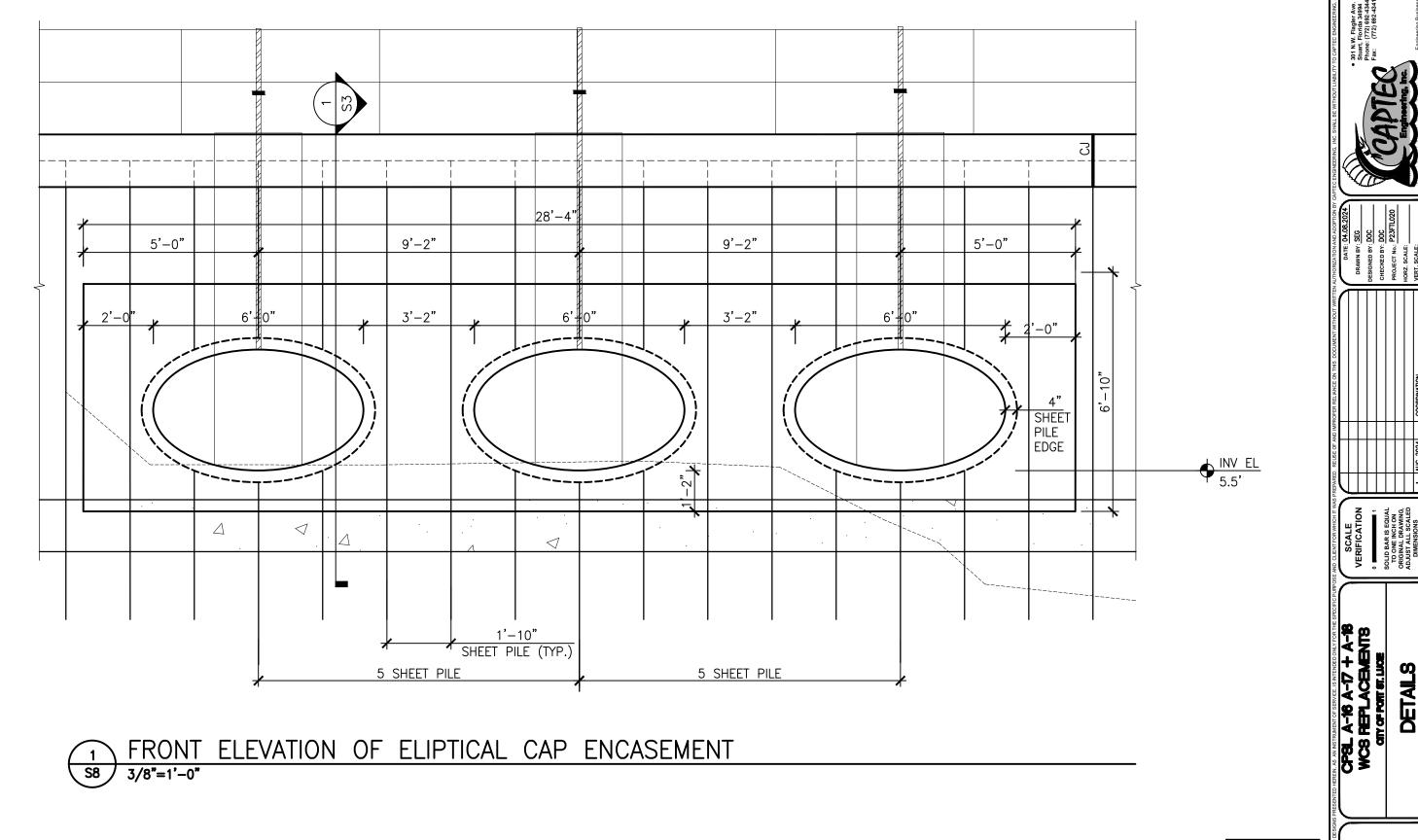












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ABILITY, THE COMPLETED STRUCTURE
DEPICTED ON THESE PLANS COMPLES WITH
THE APPLICABLE MINIMUM BULDION COOKS.

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