PORT OF PORT ARTHUR NAVIGATION DISTRICT TRANSIT SHED 1 REPLACEMENT



MARAD FY 2020 PIDP GRANT NO. 693JF72140014

PORT FILE: 8.335

AUGUST 2025

PREPARED BY:



ISSUED FOR BID

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AUGUST, 2025

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RANDY T. MARTIN, PRESIDENT LINDA TURNER-SPEARS, VICE PRESIDENT

JOHN A. COMEAUX, COMMISSIONER FRED OWENS, COMMISSIONER

OFFICERS

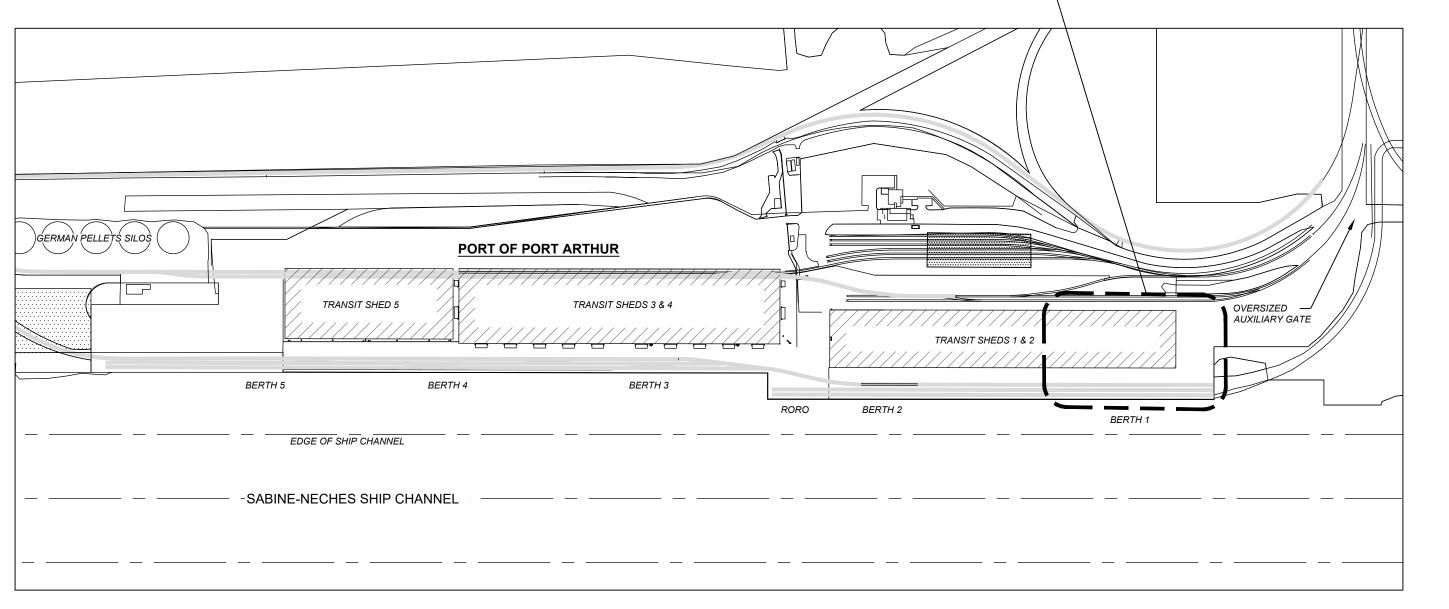
LARRY A. KELLEY, JR., EXECUTIVE PORT DIRECTOR/CEO ED LONG, P.E., DIRECTOR OF ENGINEERING

MICHAEL GREEN, CONSTRUCTION COORDINATOR

VICINITY MAP

NOT TO SCALE





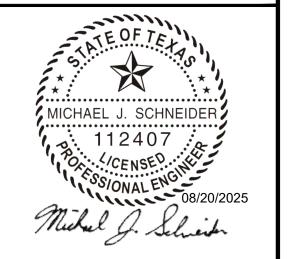




PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS ENGINEERS

235 PROCTER ST.
PORT ARTHUR, TX 77640
409-895-2550
WWW.COLLINSENGR.COM
TX-FIRM F-9791



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COLLINS ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM

REVISIONS

\wedge	ISSUED FOR BID	08/20/25

Designed by:	DTC/ABC
Drawn by:	DTC/ABC/SBT/KNS
Checked by:	JMF/TEH
Reviewed by:	MJS
Revisions by:	JMF

PROJECT NO.: 38-14333.00 DATE:

PORT OF PORT ARTHUR
TRANSIT SHED 1
REPLACEMENT

PORT ARTHUR

COVER

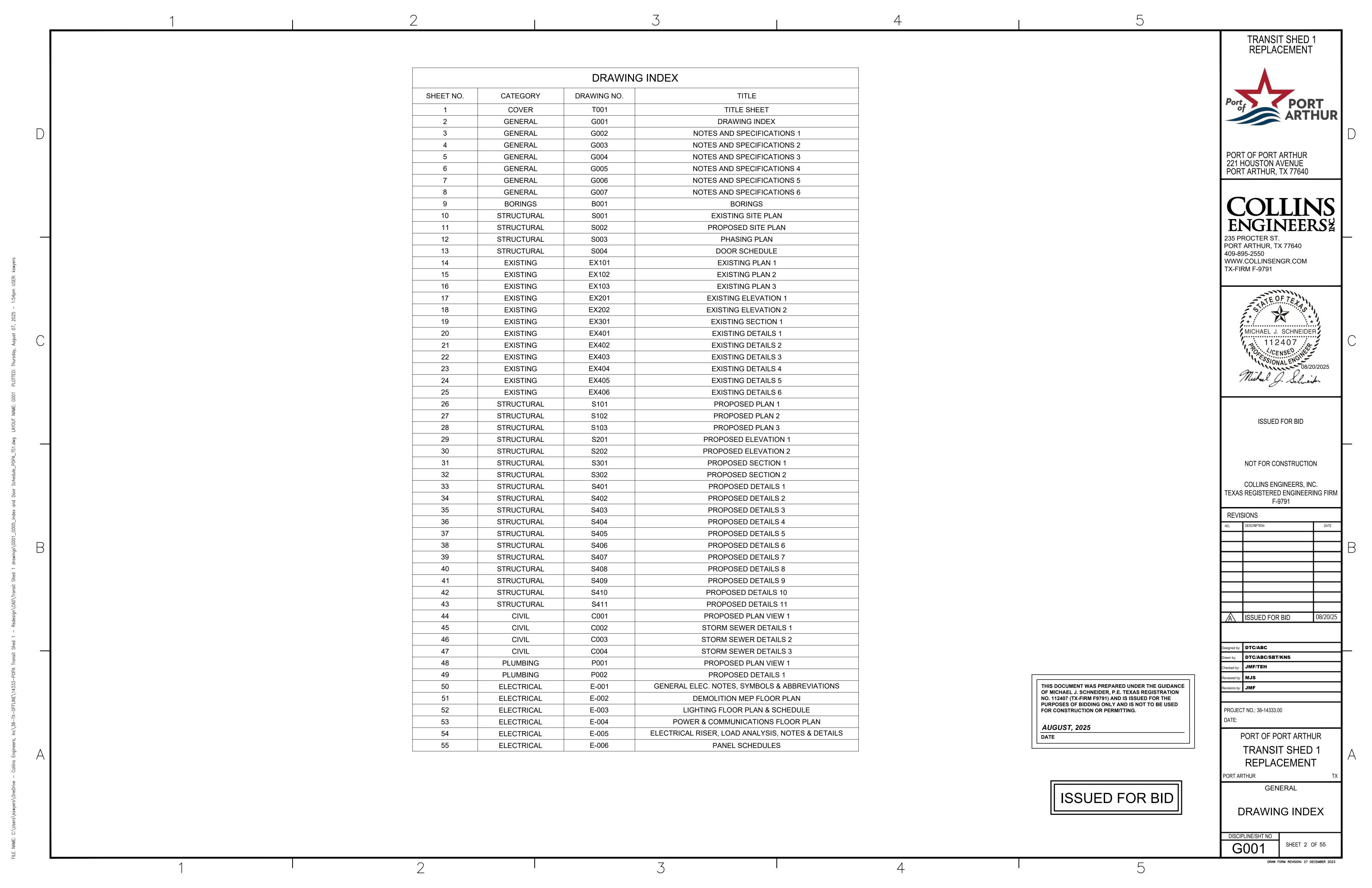
TITLE SHEET

DISCIPLINE/SHT

OO1 SHEET 1 OF 55

1

·) DRAW FORM REVISION: 27 DECEMBER 2023



THE CLASSIFICATION OF THE WORK IS "ALTERATIONS - LEVEL 3" PER THE 2021 TEXAS EXISTING BUILDING CODE (2021 TXEBC). THE CHOSEN 2015 TXEBC CODE PATH IS THE WORK AREA COMPLIANCE METHOD, CHAPTER 9 "ALTERATIONS-LEVEL 3".

THE ORIGINAL FOUNDATION WAS CONSTRUCTED IN THE 1960'S AND THE ORIGINAL BUILDING WAS CONSTRUCTED IN THE 1980'S. IT IS NOT CLEAR WHICH BUILDING CODE THESE DRAWINGS WERE PERMITTED UNDER. SEISMIC AND WIND LOADING PARAMETERS FOR THE CURRENT TXEBC ANALYSIS METHODS WERE BASED ON ASCE 7-16.

THE ALTERATION INVOLVES THE REMOVAL AND REPLACEMENT OF THE EXISTING BUILDING. THE EXISTING FOUNDATION WILL REMAIN AND WILL BE MODIFIED TO ACCOMMODATE THE LOAD PATH OF THE NEW STRUCTURE.

UPDATED WIND PRESSURES HAVE BEEN CALCULATED IN ACCORDANCE WITH ASCE 7-16, AND THE ASSOCIATED PRESSURES FOR AN PARTIALLY OPEN CLASSIFICATION ARE SPECIFIED HEREIN. THE FRAMING SHALL BE DESIGNED SUCH THAT THE DOOR FRAMES MEET REQUIRED PERFORMANCE SPECIFICATIONS (I.E. DESIGN PRESSURE (DP) RATINGS)

CODE ANALYSIS PATH:

APPLICABLE BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE WITH TEXAS MODIFICATIONS (2021 IBC). 2021 INTERNATIONAL FIRE CODE (IFC), AND NATIONAL FIRE PROTECTION AGENCY (NFPA) FOR FIRE PROTECTION SPECIFICATIONS.

USE AND OCCUPANCY: IBC CHAPTER 3 - GROUP U: UTILITY AND MISCELLANEOUS (NO CHANGE OF OCCUPANCY FROM EXISTING) TYPE OF CONSTRUCTION: IBC CHAPTER 6 - TYPE II-B UNPROTECTED, NON-SPRINKLER, NON-COMBUSTIBLE, TABLE 601 -REQUIRED FIRE RATING: 0 HRS.

FIRE AND SMOKE PROTECTION FEATURES:

PROPOSED DOOR SIZE IS APPROXIMATELY 24-FT HIGH X 36-FT WIDE EXTERIOR WALL OPENINGS IS 10% OF BUILDING WALL AREA. PER IBC CHAPTER 7, TABLE 705,8 STRUCTURE MINIMUM FIRE SEPARATION DISTANCE FROM ADJACENT STRUCTURE IS 6-FT. 15-FT IS SHOWN ON THESE PLANS.

APPLICABLE IBC CHAPTERS:

100 YEAR FLOOD RECURRENCE FLOOD WAVE ZONE

HIGHEST OBSERVED WATER LEVEL (09/03/2017)*

HIGHEST ASTRONOMICAL TIDE (05/16/1987)

NORTH AMERICAN VERTICAL DATUM (NAV88)

LOWEST ASTRONOMICAL TIDE (01/10/2005)

MEAN HIGHER HIGH WATER (MHHW)

MEAN LOWER LOW WATER (MLLW)

CHAPTER 9 - ALTERATIONS LEVEL 3. CHAPTER 8 - ALTERATIONS LEVEL 2. **CHAPTER 7 - ALTERATIONS LEVEL 1**

SECTION 603 FIRE PROTECTION: THE WORK HEREIN DOES AFFECT THE EXISTING LEVEL OF FIRE PROTECTION.

SECTION 604 MEANS OF EGRESS: THE WORK HEREIN DOES AFFECT THE EXISTING MEANS OF EGRESS WITH THE NEW DOORS AT NEW LOCATIONS AND THE INCREASE IN FOOTPRINT TO MEET THE LOADING RAMP AT THE BUILDING END.

SECTION 606 STRUCTURAL: NEW DOOR FRAMES WILL BE DESIGNED/CONSTRUCTED TO MEET THE DP RATINGS FOR NEW ASSEMBLIES TO BE INSTALLED.

TRANSIENT LOAD CONFIGURATION DIAGRAMS

HYSTER H1050HD-CH AXLE LOADING (NTS)

(LOADS SHOWN DO NOT INCLUDE IMPACT)

YALE 155VX FORKLIFT AXLE LOADING (NTS) HYSTER 155 FORKLIFT AXLE LOADING (NTS

(LOADS SHOWN DO NOT INCLUDE IMPACT) (LOADS SHOWN DO NOT INCLUDE IMPACT)

AASHTO HS20-44 AXLE LOADING (NTS)

(LOADS SHOWN DO NOT INCLUDE IMPACT)

14'-0" MIN

30'-0" MAX

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AUGUST, 2025

DATE

19'-4"

- 7'-4" ---| 6'-1" |---

3.4K 34.1K

9'-11"

2.3K 33.2K

PORT ARTHUR

TRANSIT SHED 1

REPLACEMENT

PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS **ENGINEERS**

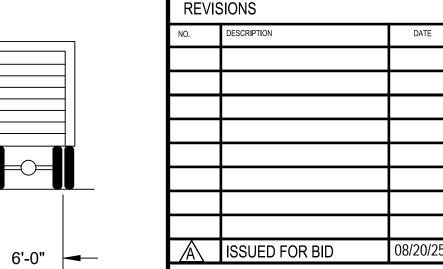
PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



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COLLINS ENGINEERS, INC. TEXAS REGISTERED ENGINEERING FIRM



d by: DTC/ABC DTC/ABC/SBT/KNS JMF/TEH MJS JMF

PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR TRANSIT SHED ' REPLACEMENT

PORT ARTHUR GENERAL

> **NOTES AND SPECIFICATIONS 1**

DISCIPLINE/SHT NO G002

2.0 DESIGN CRITERIA

1. INTERNATIONAL CODE COUNCIL (ICC) - INTERNATIONAL BUILDING

2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)/STRUCTURAL ENGINEERING INSTITUTE (SEI) - 7-16 - MINIMUM DESIGN LOADS FOR **BUILDINGS AND OTHER STRUCTURES**

3. AMERICAN CONCRETE INSTITUTE (ACI) - 318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) - 360-15 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (STEEL **CONSTRUCTION MANUAL) - 15TH EDITION**

5. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

B. DESIGN CRITERIA - ASCE/SEI 7-16/ASCE 7 HAZARD REPORT

1. GENERAL

1.1. RISK CATEGORY: II

DESIGN CODES AND STANDARDS:

2. DEAD LOADS:

2.1. BASED ON ACTUAL WEIGHT OF MATERIALS AND IN ACCORDANCE WITH ASCE 7-16 TABLE C3-1 MINIMUM DESIGN DEAD LOADS.

3. LIVE LOADS:

3.1. AXIAL LOADS

3.1.1. FORKLIFT

3.1.2. AASHTO TRUCK

4. SEISMIC

4.1. SOIL SITE CLASS E - SOFT CLAY SOILS

4.2. SITE RESPONSE COEFFICIENTS:

 $S_{D1} = 0.073 g$

 $S_S = 0.092 g$ $S_1 = 0.05 g$ $S_{M1} = 0.11 g$ $S_{MS} = 0.12 g$

SEISMIC DESIGN CATEGORY: B

5. SOIL LOADS:

5.1. ALLOWABLE BEARING PRESSURE, σ: 1500 PSF (ASSUMED)

 $S_{DS} = 0.081 \, g$

5.2. UNDRAINED SHEAR STRENGTH, su: 250 PSF (ASSUMED)

5.3. REFER TO TERRACON REPORT FOR ADDITIONAL SOIL/EARTH SPECIFICATIONS FOR EARTHWORK CONSTRUCTION.

6. GROUND SNOW LOAD:

6.1. $p_a = 8 PSF$

7. ICE LOAD PARAMETERS:

7.1. ICE THICKNESS: 0.66 INCHES

7.2. CONCURRENT TEMPERATURE: 15° F

7.3. 3-S GUST SPEED:

31 MPH

8. RAIN LOAD:

DATA FROM NOAA NATIONAL WEATHER SERVICE. PRECIPITATION FREQUENCY DATA SERVER, ATLAS 14

8.2. 15-MINUTE PRECIPITATION INTENSITY: 10.3 IN/HR

60-MINUTE PRPITATION INTENSITY: 5.01 IN/HR

9. FLOOD LOADS:

9.1. BASED ON FEMA NATIONAL FLOOD INSURANCE RATE (NFIP) FIRM 4854990050E, DATED APRIL 17, 1984, THE SUBJECT PROJECT IS LOCATED IN AN FLOOD ZONE B. FLOOD ZONE B IS AN AREA BETWEEN LIMITS OF THE 100-YEAR FLOOD AND 500-YEAR FLOOD; OR CERTAIN AREAS SUBJECT TO 100-YEAR FLOODING WITH DEPTHS LESS THAN (1) FOOT OR WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN ONE SQUARE MILE: OR AREAS PROTECTED BY LEVEES FROM THE BASE FLOOD. SPECIFICALLY, THE PROPOSED PROJECT LOCATION IS PROTECTED BY A LEVEE. AS A RESULT, FLOOD LOADS WERE NOT CONSIDERED FOR THIS DESIGN.

10. WIND DESIGN:

10.1. ULTIMATE DESIGN WIND SPEED, $V_{ULT} = 141 \text{ MPH}$

10.2. NOMINAL DESIGN WIND SPEED, V_{ASD}= 110 MPH

- ROOF ZONES

4

2 & 3

10.3. EXPOSURE CATEGORY D

10.4. ENCLOSURE: PARTIALLY OPEN 10.5. HURRICANE PRONE REGION

10.6. WIND DESIGN PARAMETERS:

10.6.1. Kd = 0.85 (C&C)

10.6.2. Kzt = 1.00

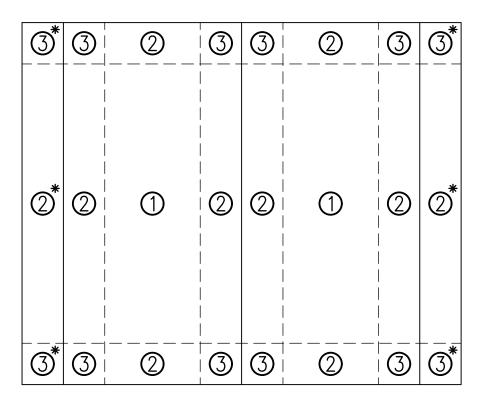
10.6.3. Kh = 1.26

10.7. VELOCITY PRESSURE: 10.7.1. $q_z = 55.3 PSF$

4

10.7.2. a = 18'

COMPONENTS & CLADDING WIND PRESSURES P (PSF) OH (PSF) ZONE P (PSF) OH (PSF) ZONE ULTIMATE ASD ROOF +35/-55 +25/-35 +35/-90 -180 +25/-55 -110 2 +35/-135 -260 3 3 +25/-85 -160 WALLS +60/-65 +40/-40 4 4 +60/-75 +40/-45



0.62 0.00 -0.23 -0.37 -1.49 20K

4.39

1.20

0.67

ALL ELEVATIONS IN FEET

MEAN HIGH WATER (MHW)

MEAN LOW WATER (MLW)

REFERENCES:

1. NOAA/NOS STATION 8770475, PORT ARTHUR, TX, 1983-2001

EPOCH.(DATUM: NAVD88) 2. FEMA FLOOD INSURANCE RATE MAP (FIRM) #4854990045E (1984) AND FIS

TIDAL DATA

48245CV000A (2012). 3. NGVD CORRELATION BASED ON NGS VERTCON PROGRAM FOR

"LUB0475C" USING NAD83 GEOGRAPHIC COORDINATES OF N 29°52'03.12" W 93°55'48.53". *HIGHEST OBSERVED WATER LEVEL DATA NOT AVAILABLE. VALUE SHOWN

BASED ON HIGHEST PUBLISHED VERIFIED WATER LEVEL AT STATION

8770475 DURING HURRICANE HARVEY (AUGUST 2017).

<u>PLAN</u>

DRAW FORM REVISION: 27 DECEMBER 2023

ORTHOMETRIC

ZONES 2 & 3

CODE (IBC) 2021

SHEET 3 OF 55

- 1. DESCRIPTION: THE PROJECT INCLUDES THE DEMOLITION OF THE EXISTING TRANSIT SHED BUILDING, UPGRADES TO THE EXISTING FOUNDATION, UPGRADES TO THE EXISTING ACCESS RAMPS, UPGRADES TO EXISTING UTILITIES. AND THE FABRICATION AND ERECTION OF A NEW. LARGER, PRE-FABRICATED TRANSIT SHED BUILDING.
- 2. SCOPE: THE TRANSIT SHED 1 REPLACEMENT PROJECT INVOLVES THE DECONSTRUCTION AND REMOVAL OF AN APPROXIMATELY 80,000-SF METAL CLAD CONCRETE STRUCTURE, PARTIAL REPLACEMENT OF A CONCRETE SLAB, AND ERECTION OF AN APPROXIMATELY 132,000 SF FRAMED. TENSIONED FABRIC STRUCTURE WITH AN APPROXIMATELY 31-FOOT CLEAR HEIGHT.

3. CONSTRUCTION:

- 3.1. DEMOLITION:
- 3.1.1. DEMOLITION OF EXISTING 80.000-SF METAL CLAD STRUCTURE
- 3.1.2. PARTIAL DEMOLITION OF REINFORCED CONCRETE SLAB.
- 3.1.3. PARTIAL DEMOLITION OF EXISTING ACCESS RAMPS.
- 3.2. FOUNDATION:
- 3.2.1. RECONSTRUCTION OF CONCRETE SLAB
- 3.2.2. STRUCTURAL UPGRADE OF DECK FOR TRUSS LEG FOUNDATION (WATERSIDE)
- 3.2.3. CONSTRUCTION OF CONCRETE UNDERREAMS UNDER BUILDING FRAME AND COLUMNS.
- 3.3. UTILITIES:
- 3.3.1. REMOVE EXISTING LIGHTING, ELECTRICAL AND FIRE MONITORING
- 3.3.2. INSTALL/MODIFY UNDERGROUND STORM SEWER
- 3.3.3. INSTALL ADDITIONAL WATERLINE AND FIRE HYDRANT
- 3.3.4. INSTALL LIGHTING, AND ELECTRICAL, UPON COMPLETION OF TRANSIT SHED
- 3.4. NEW TRANSIT SHED CONSTRUCTION:
- 3.4.1. DESIGN AND FABRICATION OF INDEPENDENT FRAME TENSIONED FABRIC BUILDING SYSTEM - APPROXIMATELY 132.000 SF TOTAL (ROUGHLY 105.300 SF OF USEABLE STORAGE WITH ROUGHLTY 26,700 SF COVERED AREA FOR ALL-WEATHER TRUCK AND RAIL LOADING).
- 3.4.2. INSTALLATION OF TENSIONED FABRIC BUILDING SYSTEM.
- 3.5. UPGRADES TO ACCESS RAMPS
- 3.5.1. CONSTRUCTION OF NEW RETAINING WALLS AND CONCRETE SLAB RAMPS.
- 3.5.2. CONSTRUCTION OF CONCRETE APPROACH SLABS AT BASE OF
- 4. PHASES OF WORK:
- 4.1. FABRICATION
- 4.2. MOBILIZATION
- 4.3. DEMOLITION
- 4.4. INSTALLATION OF UNDERGROUND UTILITIES
- 4.5. FOUNDATION UPGRADES
- 4.6. UPGRADES TO EXISTING RAMPS
- 4.7. ERECTION OF PREFABRICATED STRUCTURE
- 4.8. MECHANICAL, ELECTRICAL, PLUMBING
- 4.9. DEMOBILIZATION
- B. REFERENCE DOCUMENTS
- 1. PLANS FOR CONSTRUCTION OF NEW DRY CARGO WARVES 1&2 PREPARED BY LOCKWOOD, ANDREWS, & NEWMAN INC. - TURNER, COLLIE, & BRADEN, INC. CONSULTING ENGINEERS, DATED JANUARY 1966
- 2. PORT OF PORT ARTHUR ADDITIONAL TRANSIT SHED FACILITIES PREPARED BY MOORE, STANSBURY & VAUGHT ARCHITECTS, INC. AND BOB SHAW CONSULTING ENGINEERS, DATED AUGUST 1984
- 3. PORT OF PORT ARTHUR TRANSIT SHED ADDITION NO. 2, PREPARED BY MOORE, STANSBURY & VAUGHT ARCHITECTS, INC. AND FITTZ & SHIPMAN STRUCTURAL ENGINEER, INC. DATED 20 1987.
- 4. TERRACON GEOTECHNICAL REPORT NO. 92235038 DATED: 11/21/2023

C. GENERAL NOTES

- 1. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL BE FAMILIAR WITH THE STRUCTURAL CONDITION OF THE EXISTING FACILITIES. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO BEGINNING ANY FABRICATION OR CONSTRUCTION. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE EXISTING FACILITIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR OWNER'S REPRESENTATIVE. IF REQUIRED. THE ENGINEER WILL FURNISH ADDITIONAL DETAILS.
- 2. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE CONTRACTOR SHALL ENSURE THAT ALL PHASES OF WORK ARE PERFORMED IN A MANNER TO ASSURE THE SAFETY OF ALL PERSONNEL ON THE SITE AND IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- 3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS. REGULATIONS, AND PERMITTING REQUIREMENTS TO MINIMIZE ENVIRONMENTAL POLLUTION AND DAMAGE THAT MAY OCCUR AS A RESULT OF CONSTRUCTION OPERATIONS. ANY DELAYS RESULTING FROM FAILURE TO COMPLY WITH ENVIRONMENTAL LAWS AND REGULATIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RECORDS OF PERMITS. LICENSES, CERTIFICATES, AND OTHER ENVIRONMENTAL REGULATORY REQUIREMENT CORRESPONDENCES
- 4. THE CONTRACTOR SHALL WORK WITH OWNER AND OPERATOR TO ENSURE AND BE RESPONSIBLE FOR DIMENSIONS, ELEVATIONS, ETC. NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE FACILITY TO THE EXISTING FACILITIES. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR PROPER FABRICATION AND INSTALLATION OF STRUCTURAL COMPONENTS.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND SCHEDULING WORK IN ACCORDANCE WITH OWNER AND OPERATOR OPERATIONS. SCHEDULES SHALL IDENTIFY EACH FACTOR WHICH CONSTITUTES A POTENTIAL INTERRUPTION TO OWNER AND OPERATOR OPERATIONS.
- 6. PRIOR TO MOVING ANY EQUIPMENT ON TO THE FACILITY, THE CONTRACTOR SHALL VERIFY THE CAPACITY OF THE FACILITY TO SUPPORT THE NECESSARY EQUIPMENT LOADS
- D. EXISTING CONDITIONS
- 1. CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING CONDITIONS BY ON-SITE VISITS. REVIEW OF THE COLLINS DRAWINGS. AND REVIEW OF THE ORIGINAL DRAWINGS. CONTRACTOR IS HEREBY NOTIFIED THAT ORIGINAL DRAWINGS ARE GENERALLY REPRESENTATIVE, BUT IT IS KNOWN THAT CERTAIN CONDITIONS IN THE FIELD WERE CONSTRUCTED DIFFERENTLY THAN ARE SHOWN IN THE ORIGINAL DRAWINGS.
- 2. THE FRAMING ORIENTATIONS SHOWN ON THE COLLINS DRAWINGS WERE CREATED USING A COMBINATION OF OBSERVED FIELD CONDITIONS AND REVIEW OF THE ORIGINAL DRAWINGS. CONTRACTOR SHALL NOTIFY ENGINEER OF CONDITIONS AND ORIENTATIONS WHICH ARE DIFFERENT IN THE FIELD THAN ARE SHOWN ON THE COLLINS DRAWINGS, OR PREVENT REPAIRS AS DEPICTED IN THESE DRAWINGS.
- SHORING, BRACING, AND SCAFFOLDING
- 1. STRUCTURAL SHORING SYSTEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW/APPROVAL. SUBMITTALS SHALL INDICATE GENERAL CONFIGURATION, CAPACITIES, LOADING POINTS, AND PRODUCT DATA FOR SHORING SYSTEM. SHORING PLANS SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS.
- 2. SHORING FOR THIS PROJECT CONSISTS OF SUPPORTING WALL AND ROOF FRAMING DURING DEMOLITION AND CONSTRUCTION.
- 3. CONTRACTOR IS RESPONSIBLE FOR SHORING, SCAFFOLDING AND BRACING. CONTRACTOR SHALL COORDINATE SCAFFOLDING SEQUENCING WITH OWNER FOR ON-SITE ACCESS.
- 4. SHORING: CONTRACTOR SHALL NOTIFY ENGINEER IF CONDITIONS ARE **ENCOUNTERED WHICH MAY REQUIRE ADDITIONAL TEMPORARY SHORING** IN ORDER TO CONDUCT WORK. TEMPORARY WALL/ROOF SHORING WILL BE EVALUATED IN THE FIELD ON A CASE-BY-CASE BASIS.

THIS PROJECT IS PARTIALLY FUNDED THROUGH THE U.S. DEPARTMENT OF TRANSPORTATION (USDOT) MARITIME ADMINISTRATION (MARAD) PORT INFASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT 2020. THIS PROJECT MUST CONFORM TO THE BUY AMERICAN REQUIREMENTS OF 41 U.S.C. 8301-8305. THERE WILL BE NO WAIVERS TO THIS REQUIREMENT. ALL SUBMITTALS OF MATERIALS SHALL BE ACCOMPANIED BY A BUY AMERICAN CERTIFICATION FORM. BUY AMERICAN CERTIFICATION FORM IS PROVIDED IN THE PROJECT SPECIFICATIONS, APPENDIX C.

ABBREVIATIONS

ANGLE

L	ANGLE	HOR	HORIZONTAL
@	AT		
ADJ	ADJACENT	I.D.	INSIDE DIAMETER
₽ _	BASELINE	IN	INCHES
_	DI III DINIC	INV	INVERT
BLDG	BUILDING	LB	POUNDS
BTW	BETWEEN	LF	LINEAR FEET
BOT	BOTTOM	LP	LIGHT POLE
Ę	CENTERLINE	LW	LIGHTWEIGHT
C.C.	CLEAR COVER	MAX	MAXIMUM
CJ	CONSTRUCTION JOINT	MFR	MANUFACTURER
CIP	CAST-IN-PLACE	MIN	MINIMUM
COL.	COLUMN	N.I.C.	NOT IN CONTRACT
COLS.	COLUMNS	NO.	NUMBER
CONC.	CONCRETE	O.C.	ON CENTER
Ø	DIAMETER	O.D.	OUTSIDE DIAMETER
DP	DESIGN PRESSURE	PT	POINT
DS	DOWN SPOUT	QTY	QUANTITY
DWG	DRAWING	RAD	RADIUS
EA	EACH	SCH	SCHEDULE
EF	EACH FACE	SF	SQUARE FEET
ELEC	ELECTRIC	SQ	SQUARE
EOS	END OF SLAB	SS	STAINLESS STEEL
EW	EACH WAY	STA	STATION
EXIST.	EXISTING	SY	SQUARE YARD
EXP	EXPANSION	T&B	TOP AND BOTTOM
FNDN	FOUNDATION	TYP	TYPICAL
FOW	FACE OF WALL	UG	UNDERGROUND
FT	FEET/FOOT	VERT	VERTICAL
		V.I.F.	VERIFY IN FIELD
GA	GAUGE		

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TRANSIT SHED 1 REPLACEMENT



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COLLINS **ENGINEERS**

PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



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REVISIONS

\	ISSUED FOR BID	08/20/25

ed by: DTC/ABC DTC/ABC/SBT/KNS JMF/TEH MJS JMF PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR

TRANSIT SHED 1 REPLACEMENT

GENERAL

PORT ARTHUR

NOTES AND SPECIFICATIONS 2

DISCIPLINE/SHT NO G003

SHEET 4 OF 55

DRAW FORM REVISION: 27 DECEMBER 2023

- ALL REINFORCING SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH CRSI MANUAL OF STANDARD PRACTICE.
- ALL REINFORCING BARS SHALL BE GRADE 60 KSI DEFORMED REBAR IN ACCORDANCE WITH ASTM A615. WELDED REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A706. ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A184.
- ALL REINFORCING SHALL BE FULLY SUPPORTED ON APPROVED PLASTIC CHAIRS AND/OR COATED STEEL. WHERE REINFORCING STEEL IS IN CONTACT WITH FORMS, SUPPORTS SHALL BE PLASTIC OR STAINLESS STEEL.
- SPLICING OF REINFORCING STEEL OVER 20 FT IS PERMITTED. STAGGER SPLICES ONE SPLICE LENGTH MINIMUM. UNLESS OTHERWISE NOTED, NO MORE THAN 50 PERCENT OF THE REINFORCING STEEL SHALL BE SPLICED AT ANY LOCATION. PROVIDE SPLICE LENGTHS OF

BAR SIZE	MIN. SPLICE LENGTH
4	38 IN
5	47 IN
6	57 IN
7	82 IN
8	94 IN
9	106 IN
10	119 IN
11	133 IN

- 5. ALL HOOKS SHALL BE STANDARD ACI APPROVED HOOKS, UNLESS DIMENSIONED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR SHALL SUBMIT DETAILED REINFORCING DRAWINGS INCLUDING BAR AND BENDING SCHEDULES TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY OF ANY REINFORCING STEEL
- WHERE "DRILL AND GROUT" IS CALLED FOR IN THE DRAWING SET, GROUT SHALL CONFORM TO THOSE LISTED ON THE TEXAS DEPARTMENT OF TRANSPORTATION'S MATERIALS PRODUCTS LIST FOR "EPOXIES AND ADHESIVES" LIST FOR FAST SETTING GROUT FOR ANCHOR BOLTS OR APPROVED EQUIVALENT. CONTRACTOR MAY SUBMIT FOR APPROVAL MECHANICAL ANCHORS IN LIEU OF EPOXY ANCHOR, PROVIDED THAT THE MECHANICAL ANCHOR SYSTEM HAS EQUIVALENT PERFORMANCE AND CAPACITY OF THE EPOXY ANCHOR SYSTEM.

B. CONCRETE

ALL CAST-IN-PLACE CONCRETE SHALL ADHERE TO THE FOLLOWING STRENGTH REQUIREMENTS:

<u>ELEMENT</u>	<u>CLASS</u>	COMPRESSIVE STRENGTH (PSI
		(W/C RATIO =.40 UON)
RETAINING WALL &		
LIGHT POLES	С	4500 (.45)
UNDERREAMED FOOTINGS	S	5000
MISCELLANEOUS		
CONSTRUCTION	С	4500 (.45)
UTILITY: PIPE BLOCKS &		
THRUST BLOCKS	Α	2000 (.60)
UTILITY: OTHER	Α	2000 (.60)
STRIP FOOTING	S	5000
HOSE STATIONS	S	5000

- 2. ALL CONCRETE CONSTRUCTION AND DETAILING SHALL CONFORM TO THE APPLICABLE SPECIFICATION SECTION AND THE LATEST EDITION OF ACI 318.
- MAINTAIN 3" CLEAR COVER TO ALL REINFORCING STEEL AND EMBEDDED ITEMS. UNLESS OTHERWISE NOTED.
- 4. CONCRETE SURFACES SHALL BE COVERED AND MOIST CURED FOR A PERIOD OF NOT LESS THAN SEVEN (7) FULL DAYS AFTER CONCRETE PLACEMENTS.

- 5. ALL FORMWORK AND RELEVANT SUPPORT STRUCTURE SHALL REMAIN IN PLACE FOR A MINIMUM OF 24 HOURS FOLLOWING CONCRETE PLACEMENTS.
- 6. CONCRETE SHALL BE ALLOWED TO CURE 28-DAYS PRIOR TO LOADING UNLESS SPECIFIC DATA IS SUBMITTED AND APPROVED SHOWING CONCRETE CAN CARRY ANTICIPATED LOADS AT AN EARLIER DATE. EVALUATION OF EARLY CONCRETE STRENGTH AND MATURITY SHALL BE APPROVED ON A CASE-BY-CASE BASIS.
- REVIEW DRAWINGS FROM OTHER DISCIPLINES AND COORDINATE ALL OPENINGS AND EMBEDDED ITEMS SUCH AS SLEEVES, ANCHORS, CONDUITS, RAIL CONNECTIONS, ETC. THAT WILL BE INCORPORATED IN THE CONCRETE WORK.
- CONTRACTOR SHALL UTILIZE NON-DESTRUCTIVE EQUIPMENT TO LOCATE STEEL REINFORCEMENT PRIOR TO FIELD DRILLING.
- CONCRETE JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS UNLESS NOTED OTHERWISE. EXPOSED EDGES SHALL BE TOOLED. UNLESS OTHERWISE NOTED. CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS MAY BE PROVIDED WITH WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE.
- 10. CONCRETE TOPPING SHALL BE FINISHED USING CARPET DRAG TECHNIQUES IN ACCORDANCE WITH TEXAS DOT STANDARD SPECIFICATIONS ITEM 422.
- 11. CONTRACTOR MAY ALTERNATIVELY PROPOSE ADDITIONAL CONSTRUCTION JOINTS, WHICH WILL BE SUBJECT TO APPROVAL BY THE OWNER. CONSTRUCTION JOINTS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS, TO ENSURE SUFFICIENT LOAD TRANSFER THROUGH THE JOINT AND PROVIDE SUPPLEMENTARY STEEL AS NECESSARY. SUPPLEMENTARY STEEL RESULTING FROM IMPLEMENTATION OF CONSTRUCTION JOINTS WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PORT. CONSTRUCTION JOINTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING MATERIALS AND PERFORMING ASSOCIATED ELEMENTS OF WORK.
- 12. USE MINIMUM 1" INORGANIC COMPRESSIBLE FILLER BETWEEN CONCRETE AND ADJACENT STRUCTURES (ISOLATION JOINT) UNLESS NOTED OTHERWISE.

C. STEEL

- ALL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL
- 2. STRUCTURAL STEEL ELEMENTS SHALL COMPLY WITH THE FOLLOWING STANDARD REQUIREMENTS:

ELEMENT	STANDARD/GRADE	F _y (KSI)	F _U (KSI)
BOLTS NUTS	ASTM F3125 GR. A325 TYPE 3 ASTM A563	-	120
WASHERS	ASTM F436		
THREADED ROD	ASTM A36	36	MIN. 58
ANCHOR RODS	ASTM F1554 GR. 55	55	65
PLATES	ASTM A572 GR. 50	50	65
WIDE FLANGE	ASTM A992	50	65
C-CHANNELS	ASTM A992	50	65
L (ANGLES)	ASTM A572 GR. 50	50	65
HSS ROUND	ASTM A500 GR. C	50	62

- 4. ALL STEEL-TO-STEEL BOLTED CONNECTIONS SHALL BE MADE WITH ASTM F3125 GR. A325 TYPE 3 HIGH STRENGTH BOLTS. NUTS SHALL BE ASTM A563, GRADE A, HEAVY STYLE AND THE WASHERS SHALL BE ASTM F436.
- ALL STEEL ANCHOR RODS EMBEDDED IN CONCRETE SHALL BE EITHER ASTM F1554 GR. 55 BOLTS, OR ASTM A36 THREADED ROD, AS APPLICABLE.
- ALL BOLTS, THREADED RODS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED. IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

TIE-RODS SHALL BE GRADE 75/80 KSI ALL-THREAD BAR IN ACCORDANCE WITH ASTM A615. ALL COUPLERS, TURNBUCKLES, CONNECTIONS, AND OTHER TIE-ROD SYSTEM COMPONENTS SHALL BE AS SPECIFIED BY THE MANUFACTURER AND SHALL DEVELOP 100% OF THE BARS ULTIMATE TENSILE STRENGTH AND DUCTILITY. BARS AND CONNECTION COMPONENTS SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775. OTHER TIE-ROD SYSTEM ELEMENTS SHALL BE EITHER EPOXY COATED IN ACCORDANCE WITH ASTM A775 OR COATED WITH COAL-TAR EPOXY, AS **APPLICABLE**

8. WELDING:

- 8.1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STRUCTURAL WELDING CODE D1.1 OF THE AMERICAN WELDING SOCIETY (AWS), LATEST EDITION ELECTRODES SHALL BE E70XX LOW HYDROGEN IN ACCORDANCE WITH AWS SPECIFICATIONS. ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS, ANSI/AWS D1.1, PART 5.
- 8.2. WELDING SHALL CONFORM TO ANSI/AWS D1.1, LATEST EDITION
- 8.3. ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY. ANSI/AWS D1.1. PART 5.
- 9. NO STEEL COMPONENTS SHALL BE MODIFIED AND/OR WELDED WITHIN THE FIELD WITHOUT PRIOR APPROVAL FROM OWNER.
- 10. BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325 TYPE 3, WITH A THREAD CONDITION OF N.
- 11. BOLT HOLES SHALL BE PUNCHED. DRILLED OR SUB-PUNCHED AND REAMED. TORCH CUTTING IS NOT PERMITTED.

12. COATING:

12.1. PROVIDE COATINGS AS FOLLOWS:

PLATES AND ANGLES HOT-DIP GALVANIZED UNLESS OTHER COATING SYSTEM IS SPECIFIED

TRUSS MEMBERS **HOT-DIP GALVANIZED UNLESS**

OTHER COATING SYSTEM IS SPECIFIED

FRAME MEMBERS ASTM A775

BOLTS, NUTS, WASHERS HOT-DIP GALVANIZED

- 12.2. APPLY COATINGS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. RE-COAT DAMAGED COATINGS AT NO ADDITIONAL COST TO THE OWNER.
- 12.3. PROVIDE GALVANIZING IN ACCORDANCE WITH ASTM A123, ASTM A153, AND F2329 AS APPLICABLE.
- 12.4. APPLY COATINGS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. RE-COAT DAMAGED COATINGS AT NO ADDITIONAL COST TO THE OWNER.
- 12.5. ALL EXPOSED STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED.
- 12.6. CAST IRON. MALLEABLE IRON. AND CAST STEEL PARTS. ALL ROLLED, PRESSED OR FORGED ARTICLES, AND ALL RODS, NUTS. BOLTS, WASHERS, RIVETS AND SIMILAR ITEMS REQUIRED TO BE GALVANIZED, SHALL BE COATED IN ACCORDANCE WITH STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE (ASTM A153).
- 12.7. HOLES IN COATED MEMBERS SHALL BE 1/8" LARGER THAN THE BOLT DIAMETER. NON COATED HOLES SHALL BE $\frac{1}{16}$ " LARGER THAN THE **BOLT DIAMETER.**
- 12.8. ALL GALVANIZED SURFACES THAT HAVE BECOME DAMAGED DURING SHIPPING, HANDLING, ERECTION, OR INSTALLATION, OR DAMAGED IN AN OTHER WAY, SHALL BE REPAIRED WITH A COLD-APPLIED GALVANIZING COMPOUND CONFORMING TO THESE TECHNICAL SPECIFICATIONS APPLIED IN COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- 12.9. GALVANIZING COMPOUND FOR REPAIRS TO DAMAGED ZINC COATING SHALL BE A COLD-APPLIED COMPOUND, ZRC COLD GALVANIZING COMPOUND AS MANUFACTURED BY ZRC WORLDWIDE, MARSHFIELD, MA, 1-800-831-3275, OR APPROVED EQUAL.

D. OPENINGS (DOORS)

- DOORS SHALL MEET OR EXCEED THE FOLLOWING PERFORMANCE SPECIFICATIONS:
 - 1.1. DP-RATING: DP-40
 - 1.2. NEW DOORS SHALL BE CAPABLE OF WITHSTANDING MINIMUM WIND DESIGN PRESSURES OF:
 - ZONE 4: P = 40.0 / -40.0 PSF (ASD)
 - ZONE 5: P = 45.0 / -45.0 PSF (ASD)
- IMPACT RATED: MISSILE LEVEL D (WIND ZONE 2 ASTM 1996)
- ZONE 5 (WALL EDGE ZONE) IS DEFINED AS EXTENDING "a" FT FROM BUILDING CORNERS. ANY DOOR TOUCHING THIS ZONE MUST MEET ZONE 5 DESIGN PRESSURES.
- THE EXISTING DOORS ARE NON-IMPACT RATED UNITS (NOT TESTED AND CERTIFIED TO THE REQUIREMENTS OF LARGE MISSILE TEST OF ASTM E 1886 / 1996). EXISTING DOORS MUST BE REMOVED FROM THE FRAMED OPENING IN ORDER TO ENACT THE CLADDING REPAIRS. NEW OR REPLACEMENT DOORS MUST BE IMPACT RATED. SEE BELOW.
- 5. ALL NEW DOORS SHALL BE DIRECTLY ATTACHED AND ANCHORED TO THE STRUCTURAL MULLIONS AND FRAMED-OPENINGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONTRACTOR AND DOOR MANUFACTURER SHALL REVIEW THE VARIOUS FRAMED OPENING SUBSTRATES IN THIS DRAWING
- CONTRACTOR SHALL PROVIDE A DOOR SUBMITTAL PACKAGE INCLUDING SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING NEW DOORS. SUBMIT THE FOLLOWING DATA:
 - 6.1. MANUFACTURER NAME AND TYPE/MODEL OF DOOR
 - 6.2. SIZE OF DOOR (INCLUDING FRAME OF PEDESTRIAN DOORS)
 - 6.3. MATERIALS OF DOOR (INCLUDING FRAME OF PEDESTRIAN DOORS)
 - 6.4. PERFORMANCE UPGRADE (PG)/DESIGN PRESSURE (DP) RATING OF THE DOOR UNITS
- SHOP DRAWINGS SHALL DETAIL THE METHOD OF STRUCTURAL ATTACHMENT FOR EACH TYPE OR DOOR UNIT TO THE STRUCTURE. FASTENER TYPE, SPACING SIZE, LOCATION AND EMBEDMENT, FOR EACH TYPE OF DOOR IS REQUIRED. IF FASTENING CLIPS ARE TO BE USED IN LIEU OF OTHER METHODS, PROVIDE CLIP TYPE, SIZE, POSITION, AND SPACING FOR EACH TYPE OF DOOR UNIT.

ISSUED FOR BID

THIS DOCUMENT WAS PREPARED UNDER THE GUIDANCE OF MICHAEL J. SCHNEIDER, P.E. TEXAS REGISTRATION

NO. 112407 (TX-FIRM F9791) AND IS ISSUED FOR THE

FOR CONSTRUCTION OR PERMITTING.

AUGUST, 2025

DATE

PURPOSES OF BIDDING ONLY AND IS NOT TO BE USED

REPLACEMENT

TRANSIT SHED 1

PORT ARTHUR

> PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS **ENGINEERS**

235 PROCTER ST. PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



ISSUED FOR BID

NOT FOR CONSTRUCTION

COLLINS ENGINEERS, INC. EXAS REGISTERED ENGINEERING FIRM

REVISIONS

DESCRIPTION

$\mathbb{A}\setminus$	ISSUED FOR BID	08/20/2

by: DTC/ABC DTC/ABC/SBT/KNS JMF/TEH MJS JMF PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR TRANSIT SHED REPLACEMENT

PORT ARTHUR

GENERAL

NOTES AND **SPECIFICATIONS 3**

DISCIPLINE/SHT NO G004

DRAW FORM REVISION: 27 DECEMBER 2023

SHEET 5 OF 55

5.0 SUBMITTALS & ESTIMATES

A. SPECIFICATIONS & SUBMITTALS:

- 1. PRIOR TO THE BEGINNING OF WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER/OWNERS REPRESENTATIVE FOR REVIEW AND APPROVAL THE FOLLOWING THE SUBMITTALS:
 - 1.1. SUMMARY OF WORK
 - 1.2. SUBMITTAL PROCEDURES
 - 1.3. PHASING PLANS
 - 1.4. SHOP AND ERECTION DRAWINGS
 - 1.5. DEMOLITION PLAN
 - 1.6. CONCRETE MATERIAL/MIX DESIGNS
 - 1.7. ANCHORS
 - 1.8. EPOXIES
 - 1.9. STEEL COATINGS
 - 1.10. DOOR SPECIFICATIONS
 - 1.11. DOOR SHOP DRAWINGS
 - 1.12. GALVANIZING CERTIFICATION OF COATING
- 1.13. STEEL FABRICATOR CERTIFICATION
- 1.14. STRUCTURAL STEEL SHOP DRAWINGS
- 1.15. STRUCTURAL WELDING CERTIFICATION
- 1.16. STRUCTURAL HARDWARE
- 1.17. STRUCTURE ERECTION PLAN
- 1.18. ALTERNATES
- 1.19. STATEMENT OF SPECIAL INSTRUCTIONS
- 1.20. INSTALLATION METHODS AND DOCUMENTATION
- 1.21. CALCULATION PACKAGES FOR COMPONENTS AND SYSTEMS DESIGNED BY OTHERS
- 1.22. INSPECTION PROCEDURES FOR REPAIR OF DEFECTS
- 1.23. CRITERIA FOR ACCEPTANCE FOR REPAIR OF DEFECTS
- 1.24. TESTING PROCEDURES, DOCUMENTS, RECORDS FOR REPAIR OF DEFECTS
- 2. ADDITIONAL SUBMITTALS MAY BE REQUIRED DURING THE CONSTRUCTION FOR ANY MATERIAL, PROCEDURE, TESTING, ETC. THAT REQUIRES ENGINEERING REVIEW AND APPROVAL.

ESTIMATED DEMOLITION QUANTITY OF MATERIALS				
COMPONENT	MATERIAL	UNITS	ESTIMATED QUANTITY	DETAIL SHEET
UNDERREAMED FOOTING - A	CONCRETE	EA	-	S403
UNDERREAMED FOOTING - B	CONCRETE	EA	-	S403
UNDERREAMED FOOTING - C	CONCRETE	EA	1	S403
UNDERREAMED FOOTING - D	CONCRETE	EA	•	S403
SPREAD FOOTING - E	CONCRETE	LF	-	-
INTERMEDIATE SIDEWALL COLUMN	STEEL	EA	24	EX403
SIDEWALL COLUMN	STEEL	EA	24	EX403
ENDWALL COLUMN	STEEL	EA	8	EX403
CORNER COLUMN	STEEL	EA	2	EX402
INTERIOR COLUMN 8.5" DIAM.	STEEL	EA	26	EX402
INTERMEDIATE SIDEWALL PEDESTAL	CONCRETE	EA	24	EX403
SIDEWALL PEDESTAL	CONCRETE	EA	24	EX403
ENDWALL PEDESTAL	CONCRETE	EA	8	EX403
CORNER PEDESTAL	CONCRETE	EA	2	EX403
INTERIOR PEDESTAL	CONCRETE	EA	26	EX403
TAPERED ROOF BEAM 90LF	STEEL	EA	28	EX402
ROOF	SHEET METAL	SQUARE	87	EX103
CANOPY SUPERSTRUCTURE 480' X 20'	STEEL	EA	1	EX402
WALL 5'	CONCRETE	LF	884	EX202
WALL 35'	SHEET METAL	LF	884	EX201
DOOR FRAME 20' X 18'	STEEL	EA	14	EX404
ROLL-UP DOORS 20' X 18'	STEEL	EA	12	EX404
ELECTRICAL ROOM 13.5' X 8'	CMU	EA	2	-
OVERHEAD LIGHT	MISC.	EA	108	-
EXTERIOR LIGHT POLE	MISC.	EA	6	EX402
LIGHT POLE PEDESTAL	CONCRETE	EA	6	EX403

*QUANTITIES ARE APPROXIMATE. CONTRACTOR TO VERIFY QUANTITIES PF	RIOR TO STARTING WORK.

ESTIMATED QUANTITY OF NEW MATERIALS					
COMPONENT	MATERIAL	UNITS	ESTIMATED QUANTITY	DETAIL SHEET	
UNDERREAMED FOOTING - A	CONCRETE	EA	6	S403	
SIDEWALL TRUSS COLUMN	STEEL	EA	24	S302	
ENDWALL TRUSS COLUMN	STEEL	EA	8	S302	
CORNER TRUSS COLUMN	STEEL	EA	2	S302	
PVC FABRIC WALL	PVC	SQ.FT.	17550	-	
PVC FABRIC ROOF	PVC	SQ.FT.	108576	-	
TRUSS ROOF BEAM 90LF	STEEL	EA	30	S302	
20' X 16' DOOR RIGID FRAME	STEEL	EA	6	S004	
20' X 18' DOOR RIGID FRAME	STEEL	EA	6	S004	
24' X 18' DOOR RIGID FRAME	STEEL	EA	2	S004	
36' X 24' DOOR RIGID FRAME	STEEL	EA	2	S004	
20' X 16' ROLL-UP DOOR	STEEL	EA	6	S004	
20' X 18' ROLL-UP DOOR	STEEL	EA	6	S004	
24' X 18' ROLL-UP DOOR	STEEL	EA	2	S004	
36' X 24' ROLL-UP DOOR	STEEL	EA	2	S004	
IT ROOM 16' X 8'	CMU	EA	1	S404	
ELECTRICAL ROOM 10' X 8'	CMU	EA	1	S404	
OVERHEAD LIGHT	MISC.	EA	112	-	
EXTERIOR LIGHT POLE	MISC.	EA	6	EX402	
LIGHT POLE PEDESTAL	CONCRETE	EA	6	EX403	
3' PEDESTRIAN DOOR	STEEL	EA	9	S004	

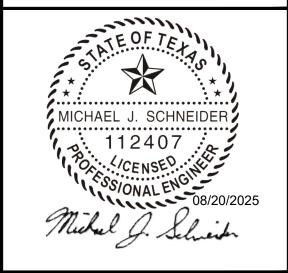
ESTIMATED QUANTITY OF NEW MATERIALS						
COMPONENT	MATERIAL	UNITS	ESTIMATED QUANTITY	DETAIL SHEET		
JNDERREAMED FOOTING - A	CONCRETE	EA	6	S403		
SIDEWALL TRUSS COLUMN	STEEL	EA	24	S302		
ENDWALL TRUSS COLUMN	STEEL	EA	8	S302		
CORNER TRUSS COLUMN	STEEL	EA	2	S302		
PVC FABRIC WALL	PVC	SQ.FT.	17550	-		
PVC FABRIC ROOF	PVC	SQ.FT.	108576	-		
TRUSS ROOF BEAM 90LF	STEEL	EA	30	S302		
20' X 16' DOOR RIGID FRAME	STEEL	EA	6	S004		
20' X 18' DOOR RIGID FRAME	STEEL	EA	6	S004		
24' X 18' DOOR RIGID FRAME	STEEL	EA	2	S004		
36' X 24' DOOR RIGID FRAME	STEEL	EA	2	S004		
20' X 16' ROLL-UP DOOR	STEEL	EA	6	S004		
20' X 18' ROLL-UP DOOR	STEEL	EA	6	S004		
24' X 18' ROLL-UP DOOR	STEEL	EA	2	S004		
36' X 24' ROLL-UP DOOR	STEEL	EA	2	S004		
IT ROOM 16' X 8'	CMU	EA	1	S404		
ELECTRICAL ROOM 10' X 8'	CMU	EA	1	S404		
OVERHEAD LIGHT	MISC.	EA	112	-		
EXTERIOR LIGHT POLE	MISC.	EA	6	EX402		
LIGHT POLE PEDESTAL	CONCRETE	EA	6	EX403		

TRANSIT SHED 1 REPLACEMENT

PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS **ENGINEERS**

PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



ISSUED FOR BID

NOT FOR CONSTRUCTION

COLLINS ENGINEERS, INC. TEXAS REGISTERED ENGINEERING FIRM

ISSUED FOR BID	08/20/25

Designed by:	DTC/ABC
Drawn by:	DTC/ABC/SBT/KNS
Checked by:	JMF/TEH
Reviewed by:	мЈѕ
Revisions by:	JMF
DDO IEO	T NO - 20 44222 00

PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR TRANSIT SHED 1 REPLACEMENT

PORT ARTHUR **GENERAL**

> **NOTES AND SPECIFICATIONS 4**

REVISIONS

SHEET 6 OF 55 G005

6.0 INSPECTIONS DURING CONSTRUCTION

A. <u>INSPECTIONS:</u>

- 1. SPECIAL INSPECTION TYPE WILL BE DENOTED WITH THE LETTER "X" WHERE REQUIRED.
- 2. A STATEMENT OF SPECIAL INSPECTIONS SHALL BE SUBMITTED TO THE ENGINEER AND PORT FOR REVIEW AND APPROVAL PRIOR TO THE COMPLETION OF CONSTRUCTION.
- 3. CONTINUOUS SPECIAL INSPECTIONS SPECIAL INSPECTOR IS PRESENT WHEN AND WHERE WORK TO BE INSPECTED IS BEING PERFORMED.
- 4. PERIODIC SPECIAL INSPECTIONS SPECIAL INSPECTOR INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCED
INSPECTIONS SHALL BE IN ACCORDANCE WITH SECTIONS 104, 110, AND CHAPTER 17 OF THE IBC.				104, 110 CH. 17
THE BUILDING OFFICIAL SHALL CONDUCT INSPECTION DURING CONSTRUCTION.				104.4
GENERAL INSPECTION REQUIREMENTS				110.1
PRELIMINARY INSPECTIONS				110.2
FOOTING AND FOUNDATION INSPECTION		Х		110.3.1
CONCRETE SLAB INSPECTION		×		110.3.2
FRAME INSPECTION - IBC SECTION	X			110.3.4
FIRE AND SMOKE RESISTANT PENETRATION INSPECTION		Х		110.3.6
FINAL INSPECTION	Х			110.3.10
INSPECTION AGENCIES REQUIREMENTS.				110.4
INSPECTION REQUEST REQUIREMENTS.				110.5
APPROVAL REQUIREMENTS				110.6

INSPECTIONS

DRAW FORM REVISION: 27 DECEMBER 2023

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FOR CONSTRUCTION OR PERMITTING.

AUGUST, 2025

DATE

6.0 INSPECTIONS DURING CONSTRUCTION (CONTINUED)

		,						
SPECIAL INSPECTIONS								
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCED				
SPECIAL CASES				TABLE 1705.1.1				
STEEL CONSTRUCTION				1705.2				
CONCRETE CONSTRUCTION	Х	Х		TABLE 1705.3, 1705.3				
SOILS	X	X		TABLE 1705.6				
DEEP FOUNDATION ELEMENTS	X			TABLE 1705.7				
CAST-IN-PLACE DEEP FOUNDATION ELEMENTS	Х			TABLE 1705.8				
FABRICATED COMPONENTS	Х			TABLE 1705.10				
OPEN WEB STEEL MEMBERS		Х		TABLE 1705.2.3				
WIND RESISTANCE		Х		TABLE 1705.11				

REQUIRED SPECIAL INSPEC	REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS							
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION						
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		X						
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		х						
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		X						
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	Х							
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		X						

REQUIRED SPECIAL INSTRUCTIONS OF OPEN-WEB STEEL MEMBERS							
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCED			
1. INSTALLATION OF OPEN-WEB STEEL MEMBERS.							
A. END CONNECTIONS - WELDING OR BOLTED.		x	SJI; CJ, K, LH/DLH, JG	IBC 2207.1			
B. BRIDGING - HORIZONTAL OR DIAGONAL.			SJI; CJ, K, LH/DLH, JG	IBC 2207.1			
1. STANDARD BRIDGING		×	SJI; CJ, K, LH/DLH, JG	IBC 2207.1			
2. BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1.		Х	SJI; CJ, K, LH/DLH, JG	IBC 2207.1			

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AUGUST, 2025 DATE

REQUIRED SPECIAL	INSPECTIONS AND	TESTS OF CONCRE	TE CONSTRUCTION	
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCED
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.		X		
INSPECT ANCHORS CAST IN CONCRETE		Х	ACI 318: 17.8.2	
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.				
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY	Х		ACI 318: 17.8.2.4	
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		X	ACI 318:17.8.2	
VERIFY USE OF REQUIRED DESIGN MIX		Х	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		ASTM C 172 ASTM C 31 ACI 318:26.4.5, 26.12	1908.10
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		Х	ACI 318: 26.4.7-26.4.9	1908.09
INSPECT PRESTRESSED CONCRETE FOR APPLICATION OF PRESTRESSING FORCES AND GROUTING OF BONDED PRESTRESSING TENDONS.	X		ACI 318: 26.9.2.1 ACI 318: 26.9.2.3	
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		X	ACI 318: CH. 26.8	
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		Х	ACI 318: 26.10.2	
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X	ACI 318: 26.10.1(B)	

TRANSIT SHED 1 REPLACEMENT

PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS ENGINEERS

235 PROCTER ST. PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



ISSUED FOR BID

NOT FOR CONSTRUCTION

COLLINS ENGINEERS, INC. TEXAS REGISTERED ENGINEERING FIRM

REVISIONS

\mathbb{A}	ISSUED FOR BID	08/20/25

Designed by:	DTC/ABC
Drawn by:	DTC/ABC/SBT/KNS
Checked by:	JMF/TEH
Reviewed by:	MJS
Revisions by:	JMF

PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR TRANSIT SHED 1 REPLACEMENT

PORT ARTHUR

GENERAL **NOTES AND**

SPECIFICATIONS 5 SHEET 7 OF 55

DRAW FORM REVISION: 27 DECEMBER 2023

				DOOR / HARD	WARE SCHEDULE	_			
ROOM	DOOR SIZE		HARDWARE GROUP	MATERIAL (14 GA.) MIN.					QUANITY
KOOW	WIDTH	HEIGHT	HANDWAKE GROOF	FRAME	DOOR	FIRE RATING	HURRICANE	DOOR SWING	QUANTT
ELECTRICAL	3'	7'	1	НМ	НМ	90 MIN	YES	RHR	1
IT ROOM	3'	7'	2	НМ	НМ	90 MIN	YES	LHR	1
PEDESTRIAN	3'	7'	3	НМ	НМ	90 MIN	YES	LHR	7
GROUP 1			GROUP 2			GROUP 3			
PANIC BAR / DOOR TRIM	VERSION), DOOR T INTERCHANGEABLE C AND/OR G1 FOR ES INTERCHANGEABLE FURNISHED BY OV	JSA M9900 US32D (MIA TRIM: MESC600F STOR CORE PREP CODE R FO CUTCHEON LEVER. OF CORE TO BE USED IS VNER, CONTRACTOR T CONSTRUCTION CORE	EROOM FUNCTION, OR ENTRY LEVER TRIM OR APPROVED EQUAL BEST, FINAL CORES O PROVIDE KEYED	VERSION), DOOF INTERCHANGEABLE AND/OR G1 FOR E INTERCHANGEABI	R TRIM: MESC600F ST E CORE PREP CODE F ESCUTCHEON LEVER LE CORE TO BE USEI	MIAMI-DADE HURRICANE OREROOM FUNCTION, R FOR ENTRY LEVER TRIM OR APPROVED EQUAL. D IS BEST, FINAL CORES OR TO PROVIDE KEYED ORE.	M PANIC BAR: MARKS USA M9900 US32D (MIAMI-DADE VERSION), DOOR TRIM: MESC600DT, OR APPROV		
HINGES	IVES BAA 5BB1HW 4.5X 4.5 NRP, FINISH: 630 OR APPROVED EQUAL		IVES 5BB1HW 4.5X 4.5 NRP, FINISH: 630 OR APPROVED EQUAL		IVES 5BB1HW 4.5X 4.5 NRP, FINISH: 630 OR APPROVED EQUAL				
DOOR CLOSER	MARKS USA 225 SERIE	ES , LCN 4040XP SERIES OR APPROVED EQUAL		MARKS USA 225 SERIES , LCN 4040XP SERIES OR APPROVED EQUAL		MARKS USA 225 SERIES , LCN 4040XP SERIES OR APPROVED EQUAL			
THRESHOLD		IAL 8655, FINISH : A, OF CHORS TO MOUNT INT	•	ZERO 8655 FINISH : A, OR APPROVED EQUAL, PROVIDE ANCHORS TO MOUNT INTO CONCRETE.		ZERO 8655 FINISH: A, OR APPROVED EQUAL, PROVIDE ANCHORS MOUNT INTO CONCRETE AND SET INTO A BED OF SEALANT. TRII THRESHOLD AROUND FRAME.			
PERIMETER SEALS	ZERO INTERNATIO	NAL 328, FINISH AA OR	APPROVED EQUAL	ZERO INTERNATI	ONAL 328, FINISH AA	OR APPROVED EQUAL	ZERO INTERNATIO	DNAL 328, FINISH AA OR A	APPROVED EQUAL
DOOR / FRAME		SERIES 14 GA OR APP PALADIN SERIES 3 OR	ROVED EQUAL FRAME:			APPROVED EQUAL FRAME: OR APPROVED EQUAL.		H SERIES 14 GA OR APPR PALADIN SERIES 3 OR A	·

ISSUED FOR BID

THIS DOCUMENT WAS PREPARED UNDER THE GUIDANCE OF MICHAEL J. SCHNEIDER, P.E. TEXAS REGISTRATION NO. 112407 (TX-FIRM F9791) AND IS ISSUED FOR THE PURPOSES OF BIDDING ONLY AND IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING.

AUGUST, 2025

REPLACEMENT PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640 **ENGINEERS** 235 PROCTER ST. PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791 ISSUED FOR BID NOT FOR CONSTRUCTION COLLINS ENGINEERS, INC. TEXAS REGISTERED ENGINEERING FIRM F-9791 REVISIONS | ISSUED FOR BID 08/20/25 igned by: DTC/ABC DTC/ABC/SBT/KNS PROJECT NO.: 38-14333.00 PORT OF PORT ARTHUR TRANSIT SHED 1 REPLACEMENT PORT ARTHUR **GENERAL** NOTES AND

TRANSIT SHED 1

3. CONTRACTOR TO VERIFY DOOR/FRAME ARE RATED FOR A MINIMUM DP-40 (DESIGN PRESSURE 40PSF).

MOUNTING DOOR FRAMES, CONTRACTOR MUST FURNISH / INSTALL AS A SUBSIDIARY PART OF THEIR BID.

SHEET 7 OF 55

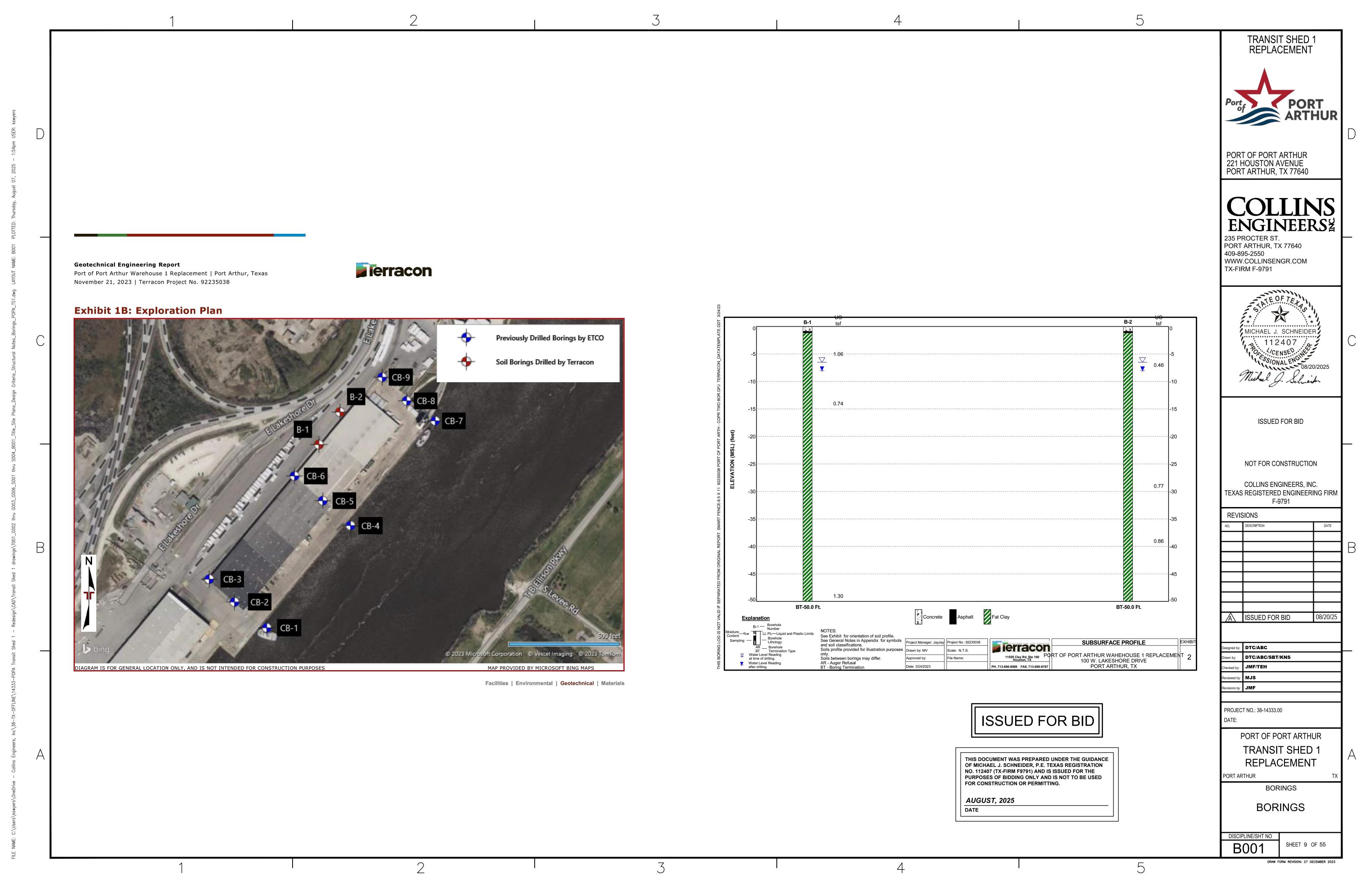
1. SUBMITTALS AND SHOP DRAWINGS (AS APPLICABLE) AND BUY AMERICAN COMPLIANCE DOCUMENTATION REQUIRED FOR ALL DOOR / FRAMES AND HARDWARE.

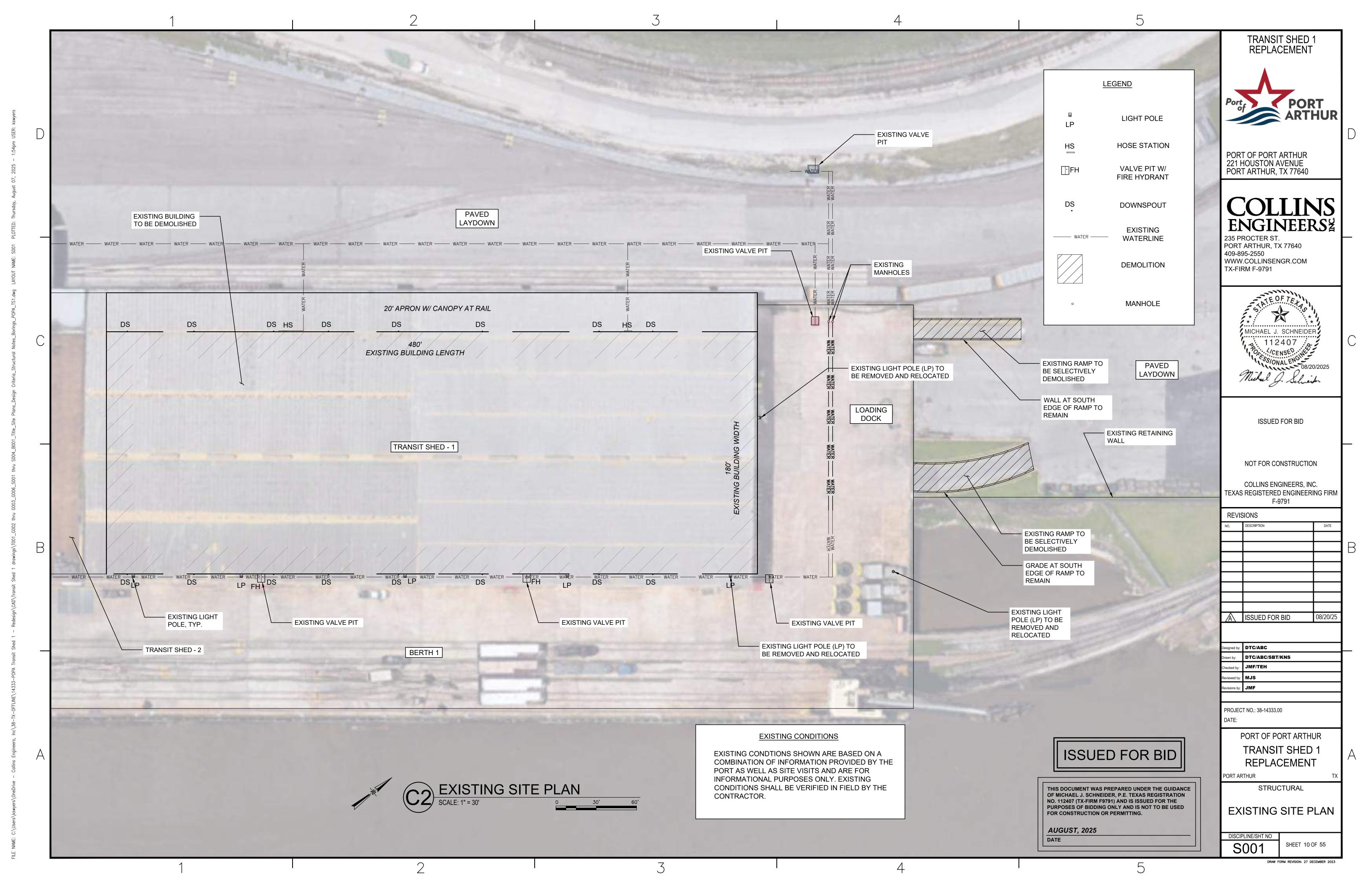
2. CONTRACTOR TO VERIFY ALL DOORS / FRAMES ARE PREPPED FOR SPECIFIED HARDWARE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND SUBMITTALS FOR ALL ITEMS IN DOOR / HARDWARE SCHEDULE.

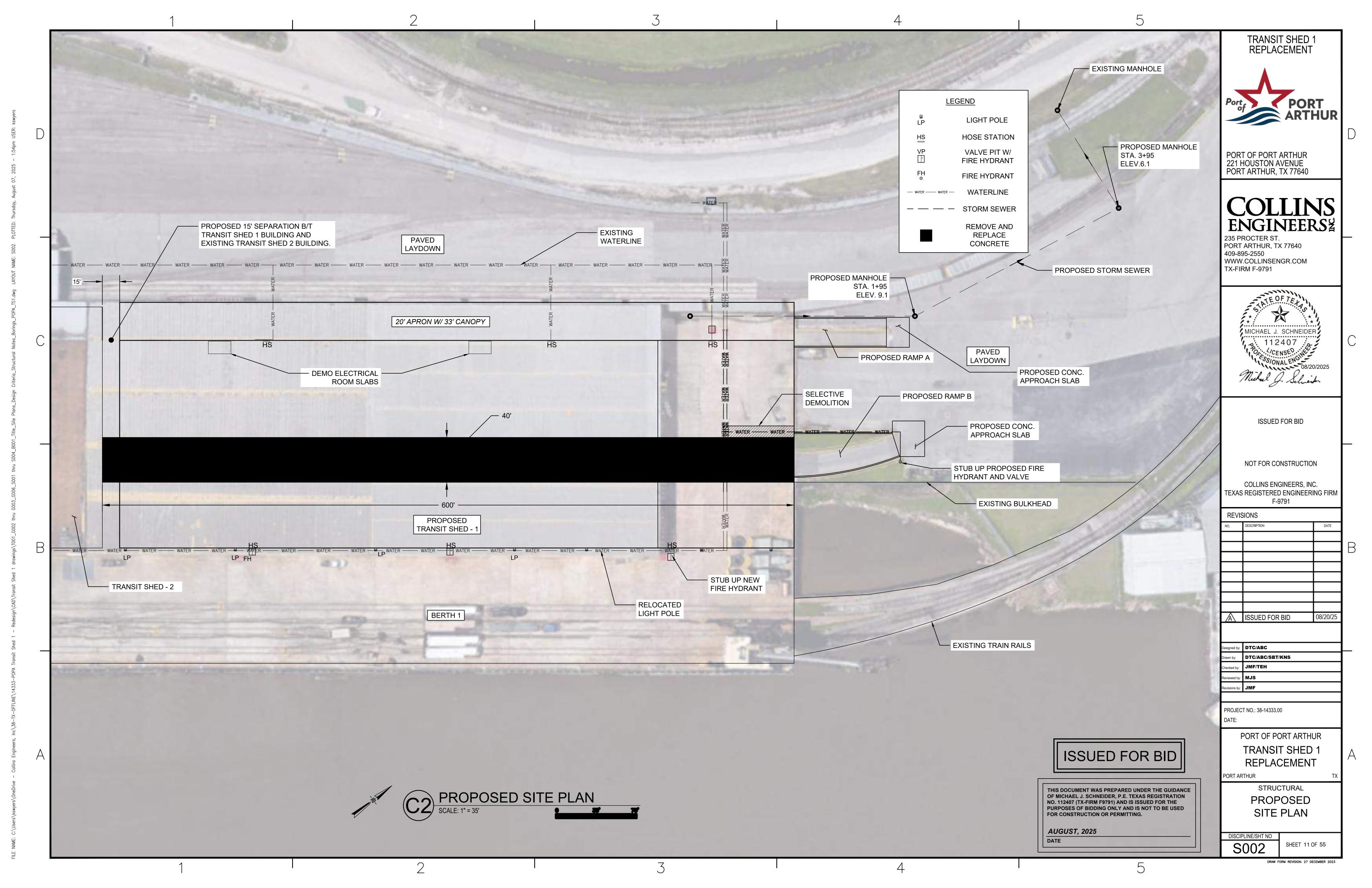
4. DOOR FRAME IS TO BE MOUNTED ON STEEL (PROVIDED BY BUILDING MFR.) COORDINATE FRAME ANCHORS WITH BUILDING MANUFACTURER. IF BUILDING MANUFACTURER DOES NOT FURNISH / INSTALL STEEL REQUIRED FOR

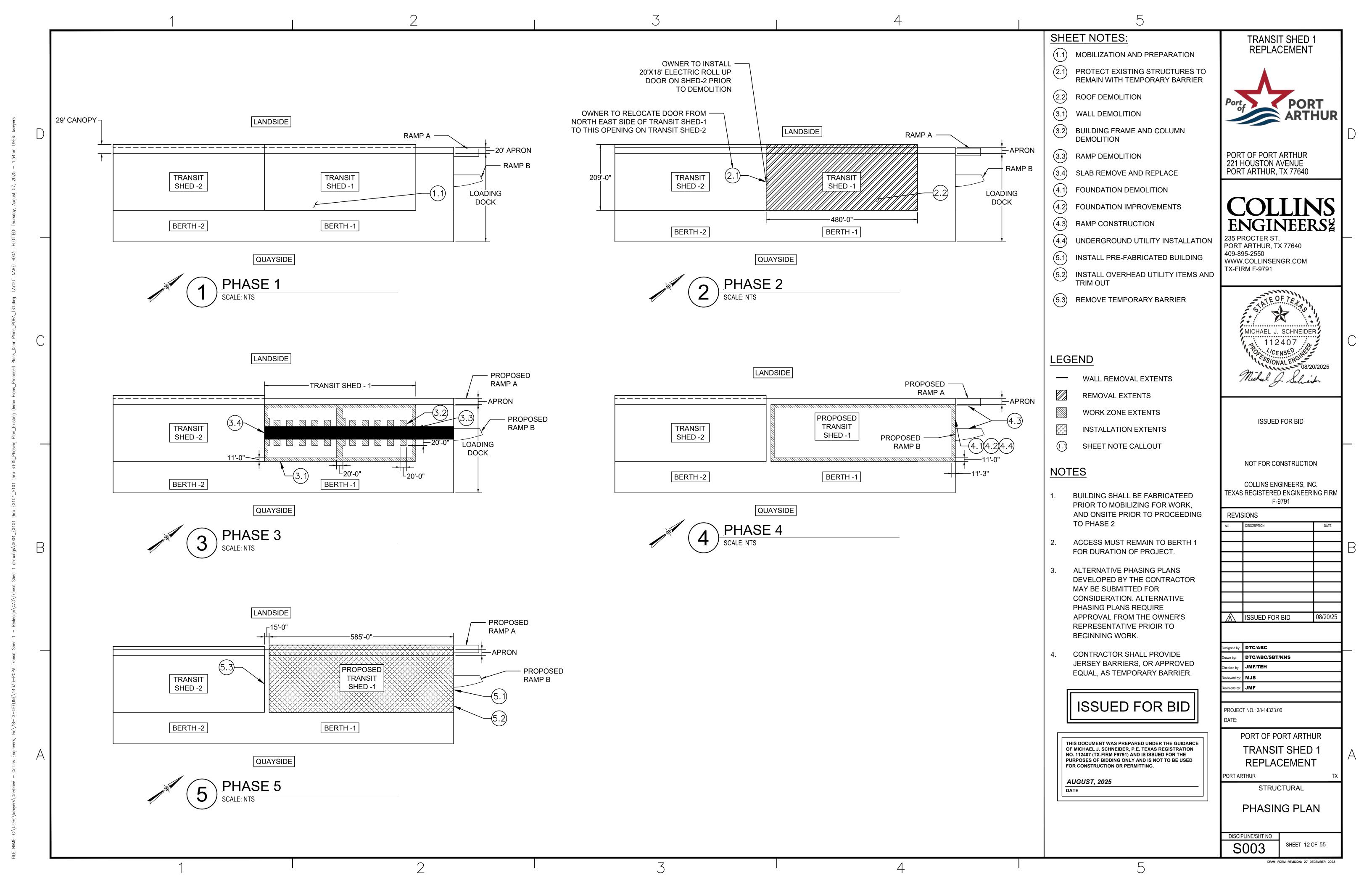
DRAW FORM REVISION: 27 DECEMBER 2023

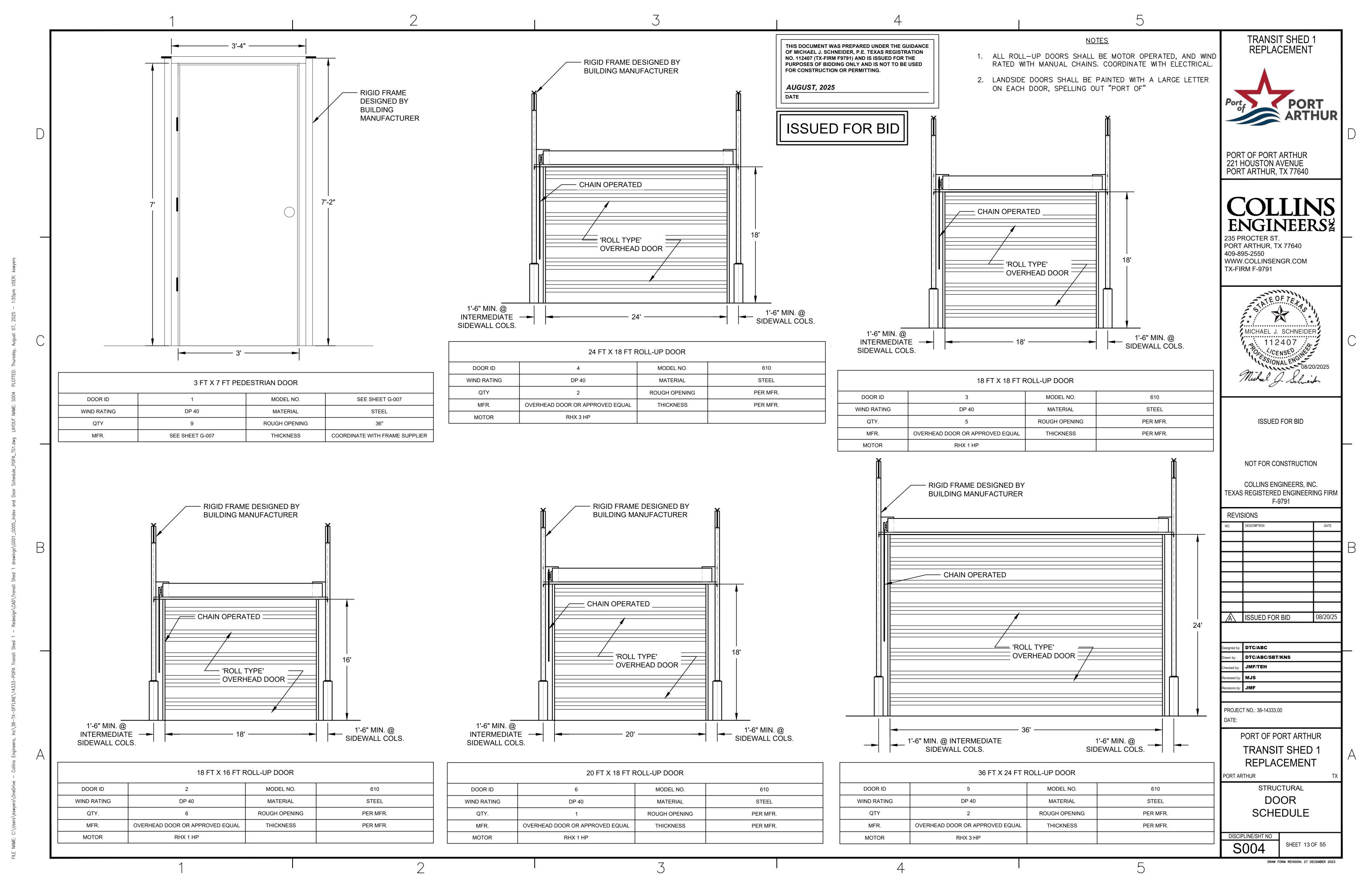
SPECIFICATIONS 6

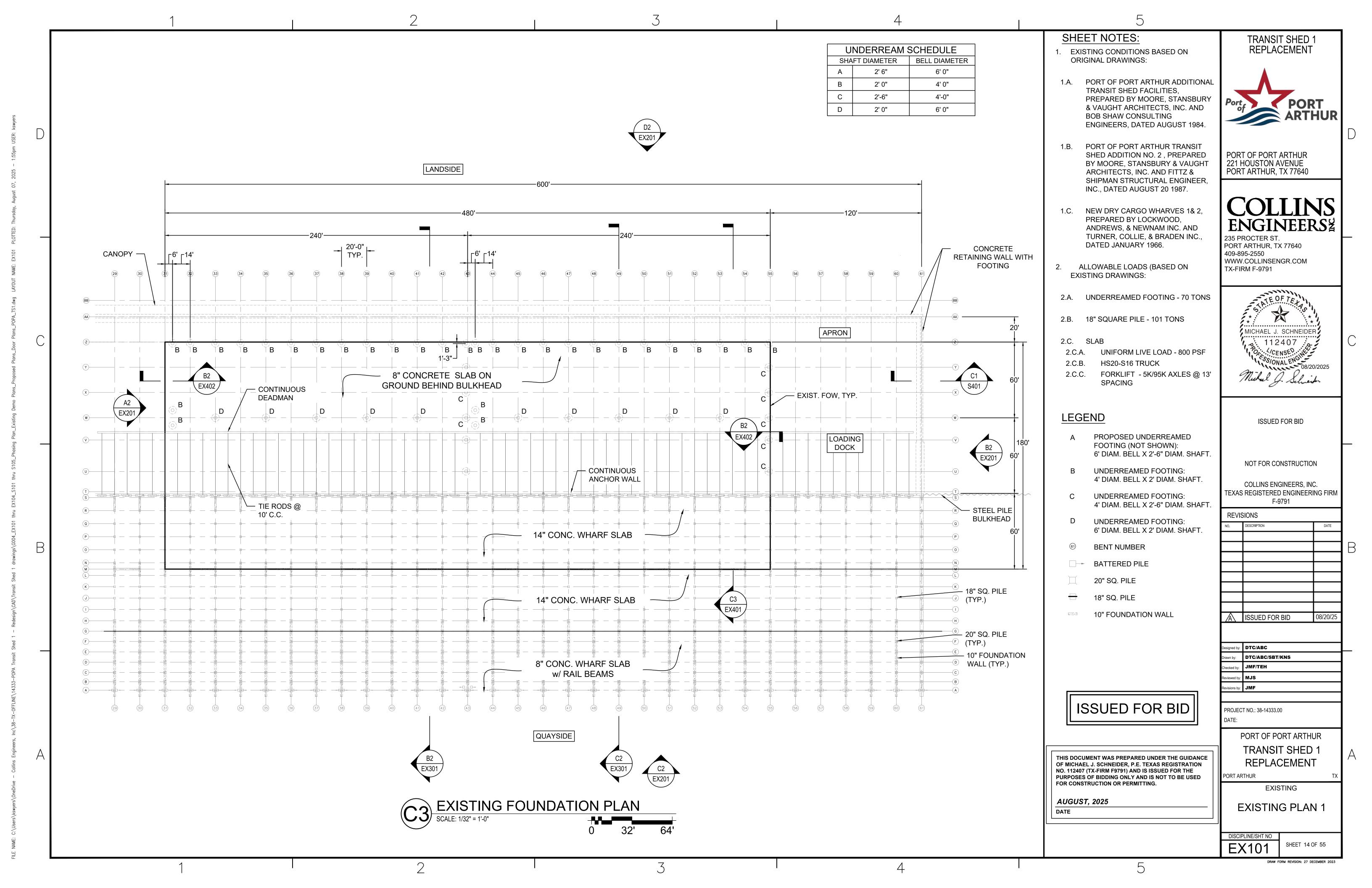


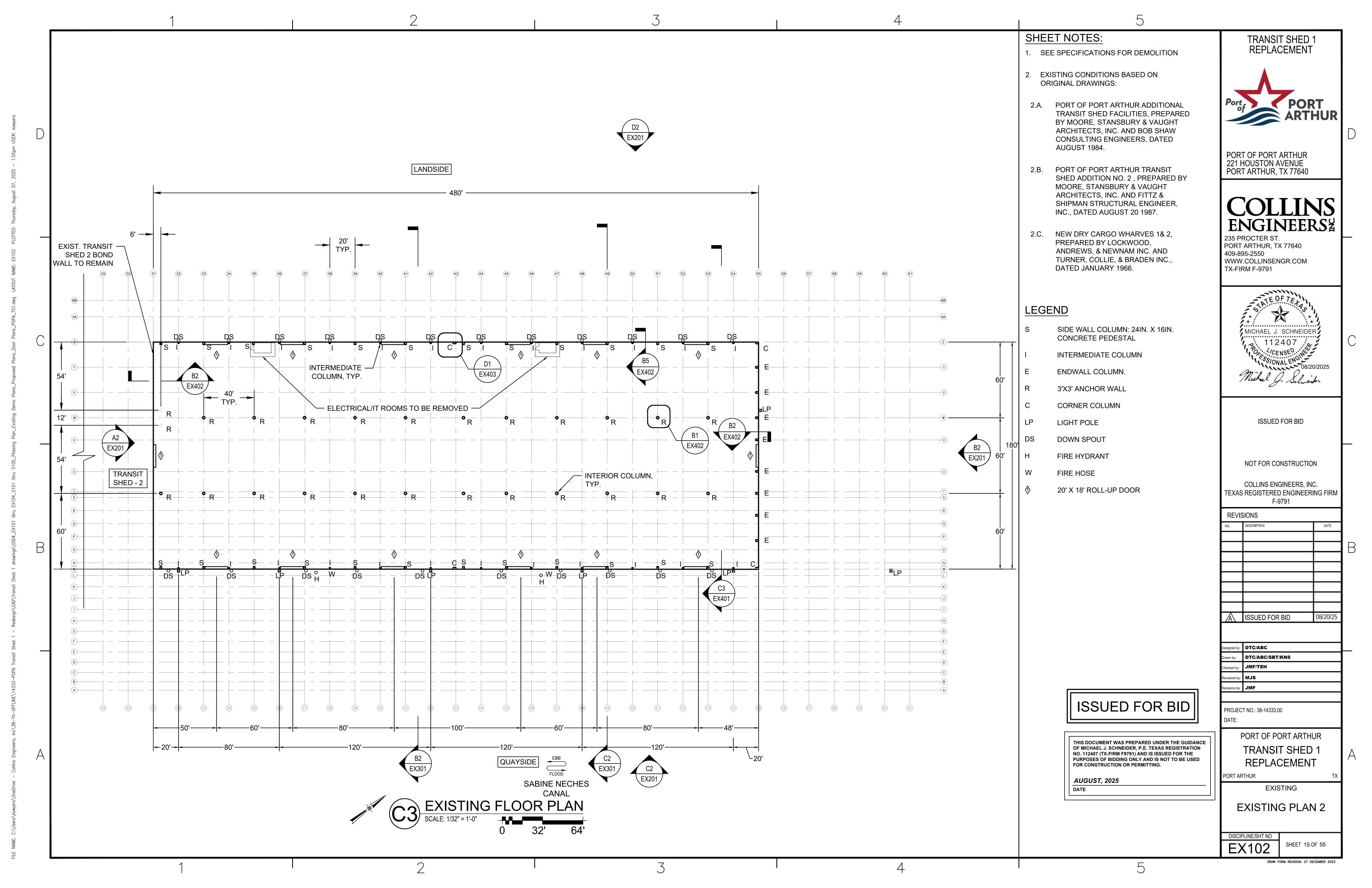


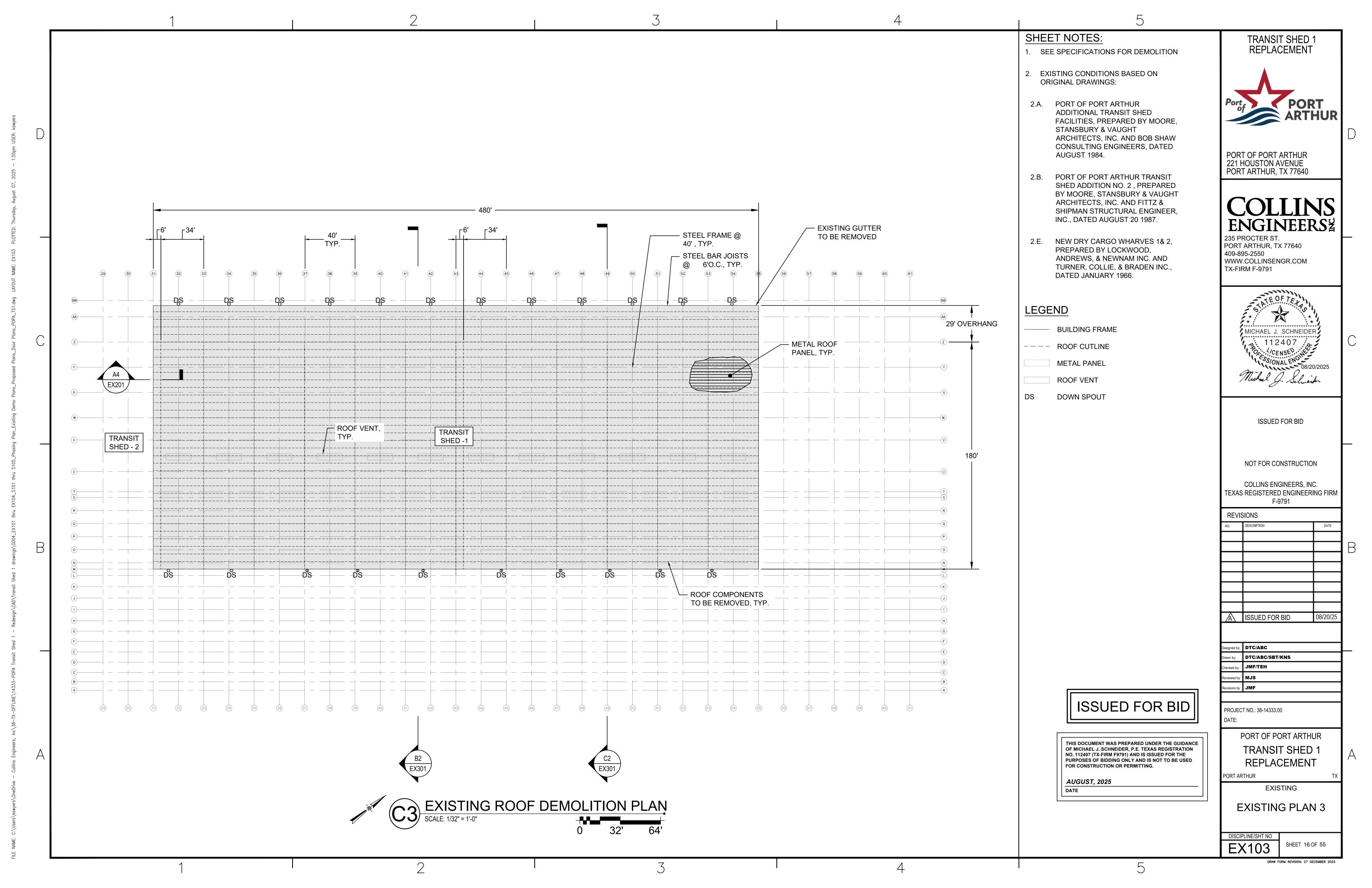


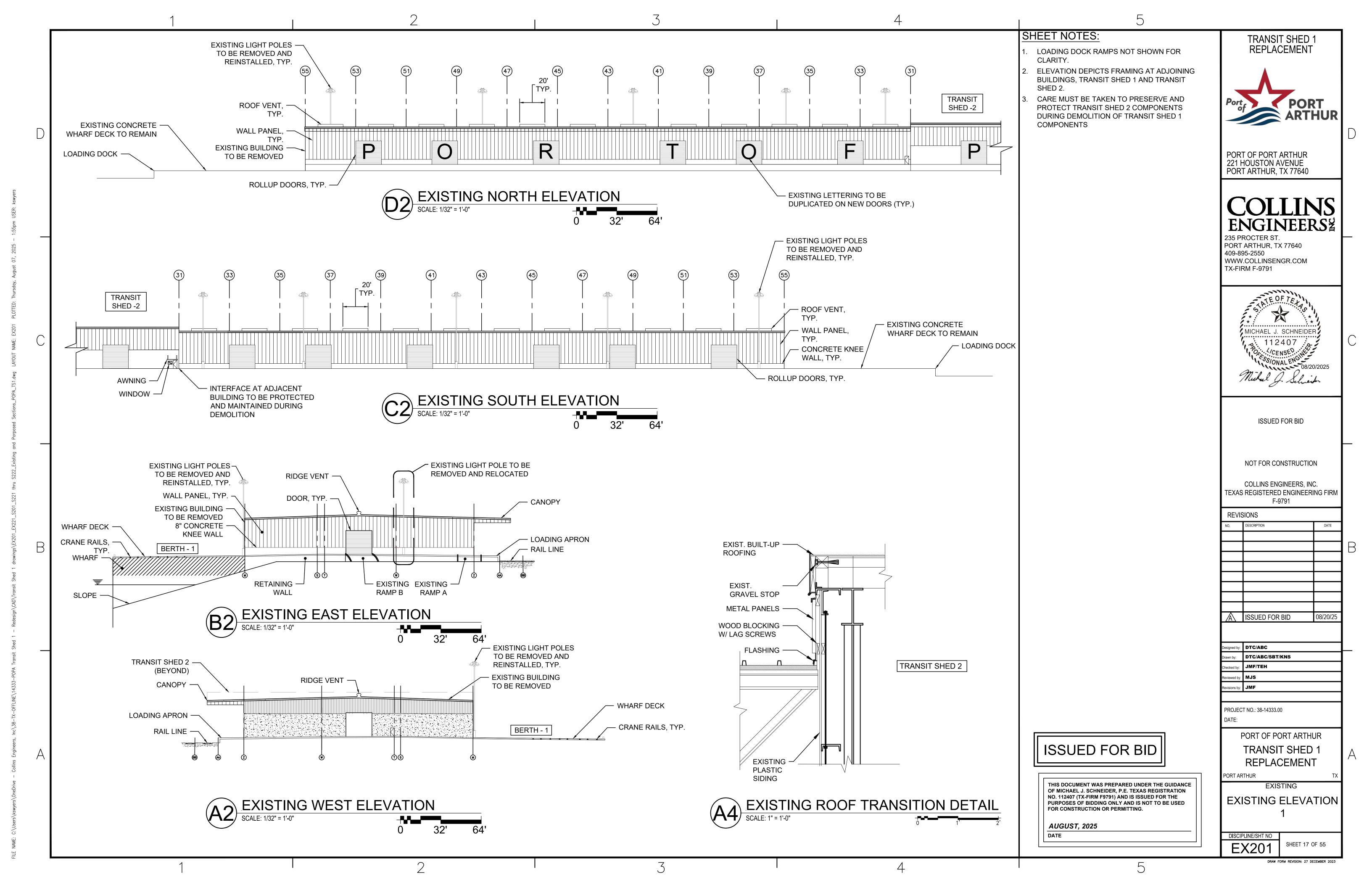


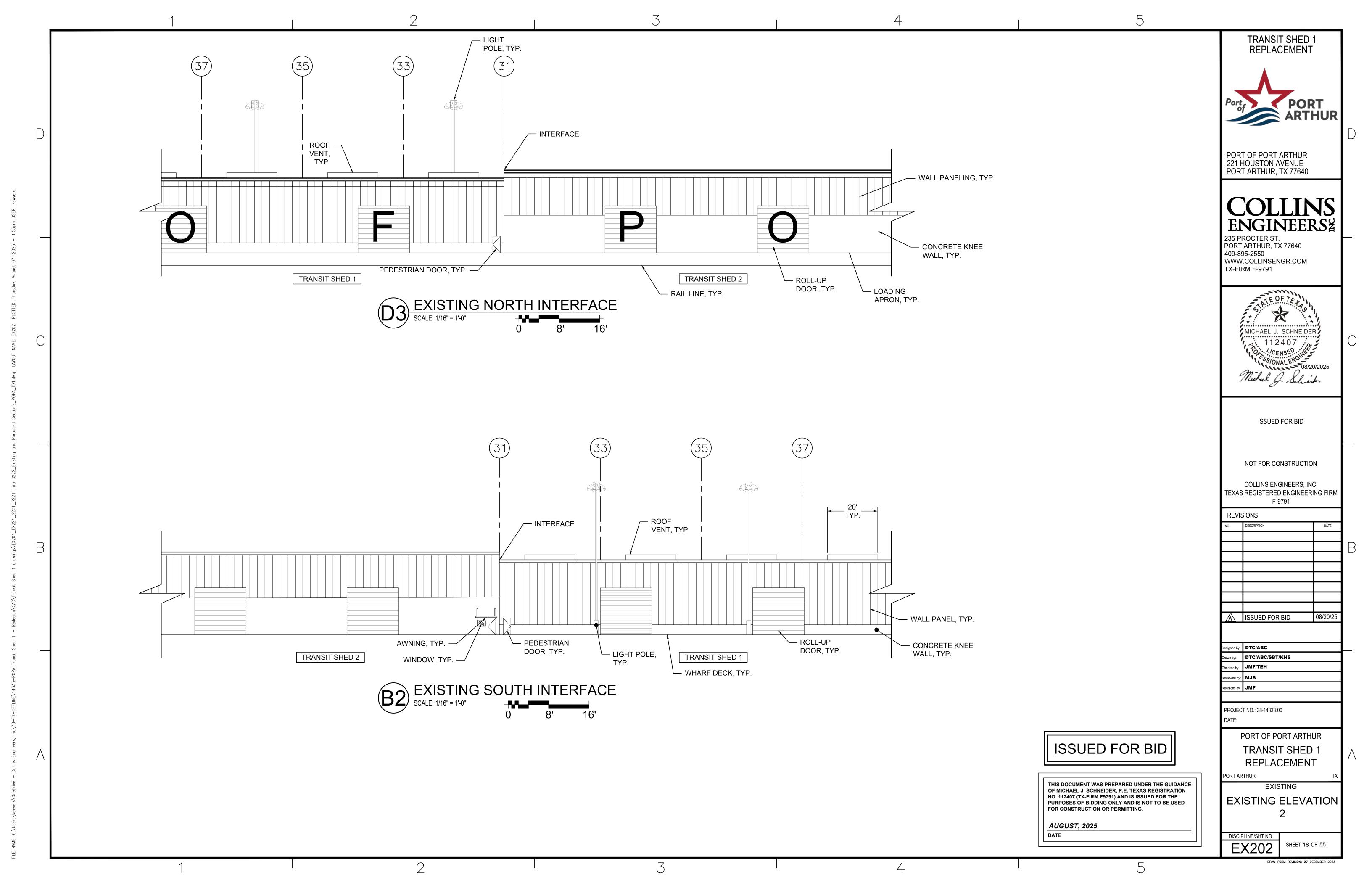


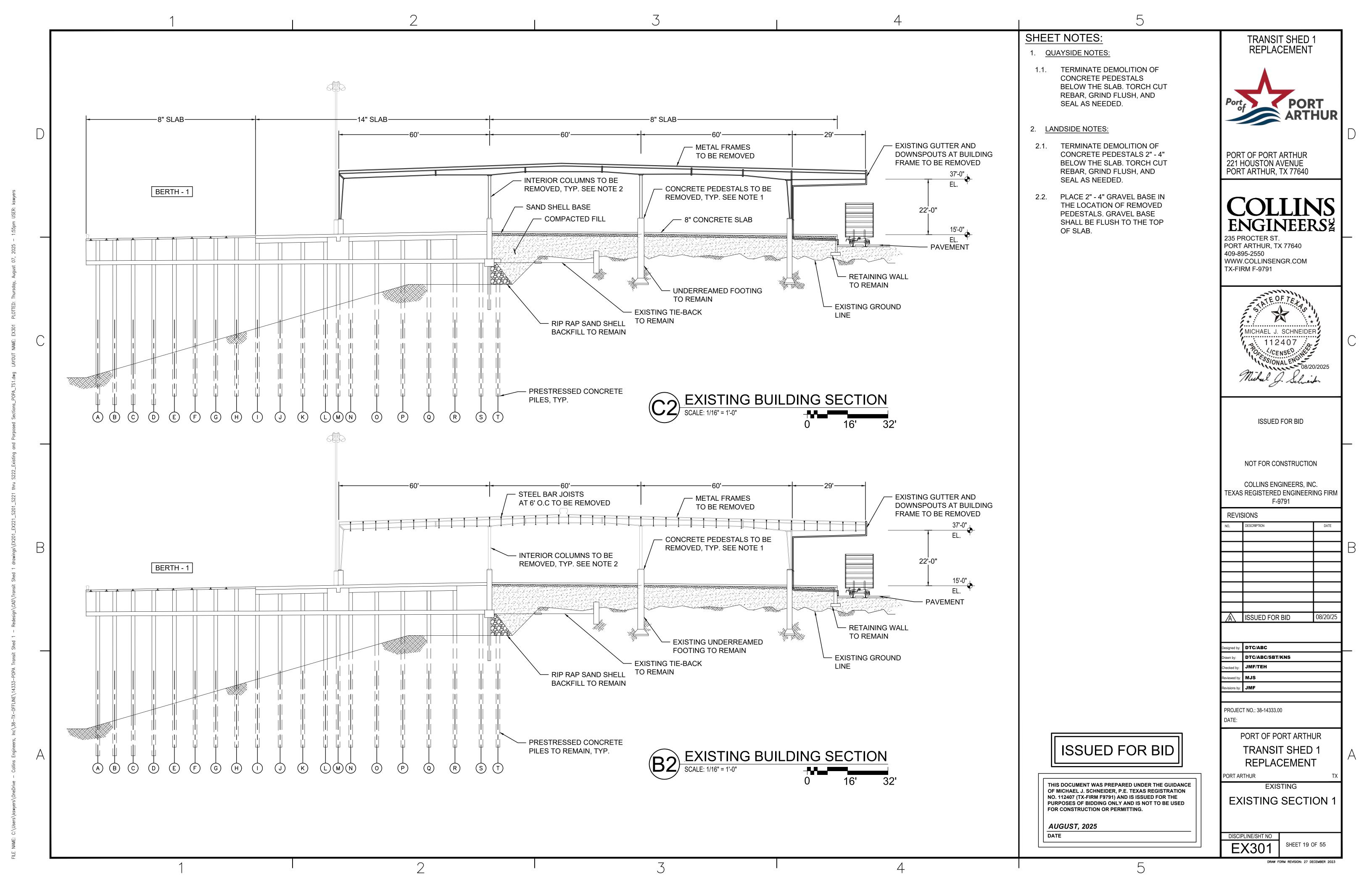


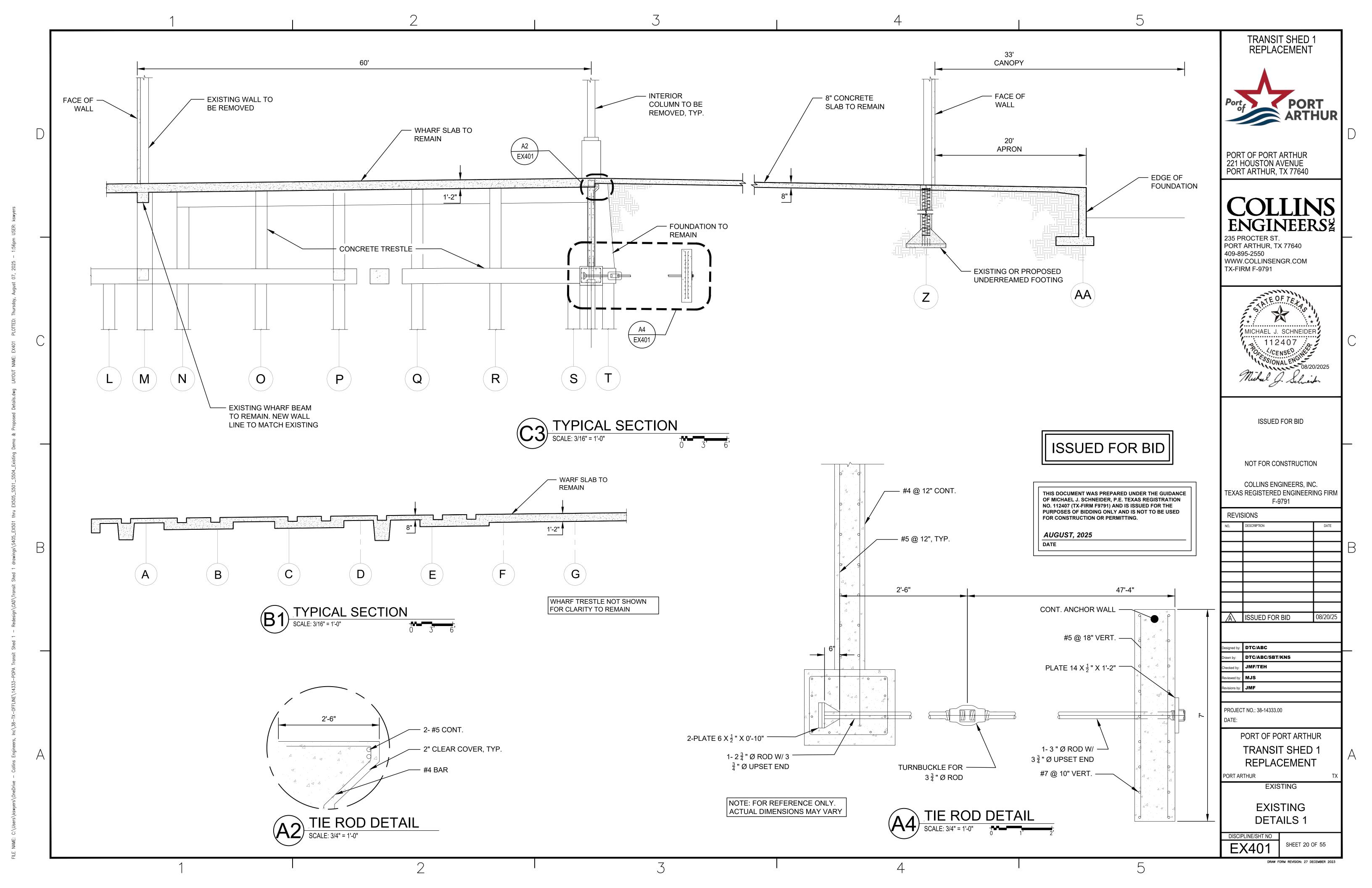


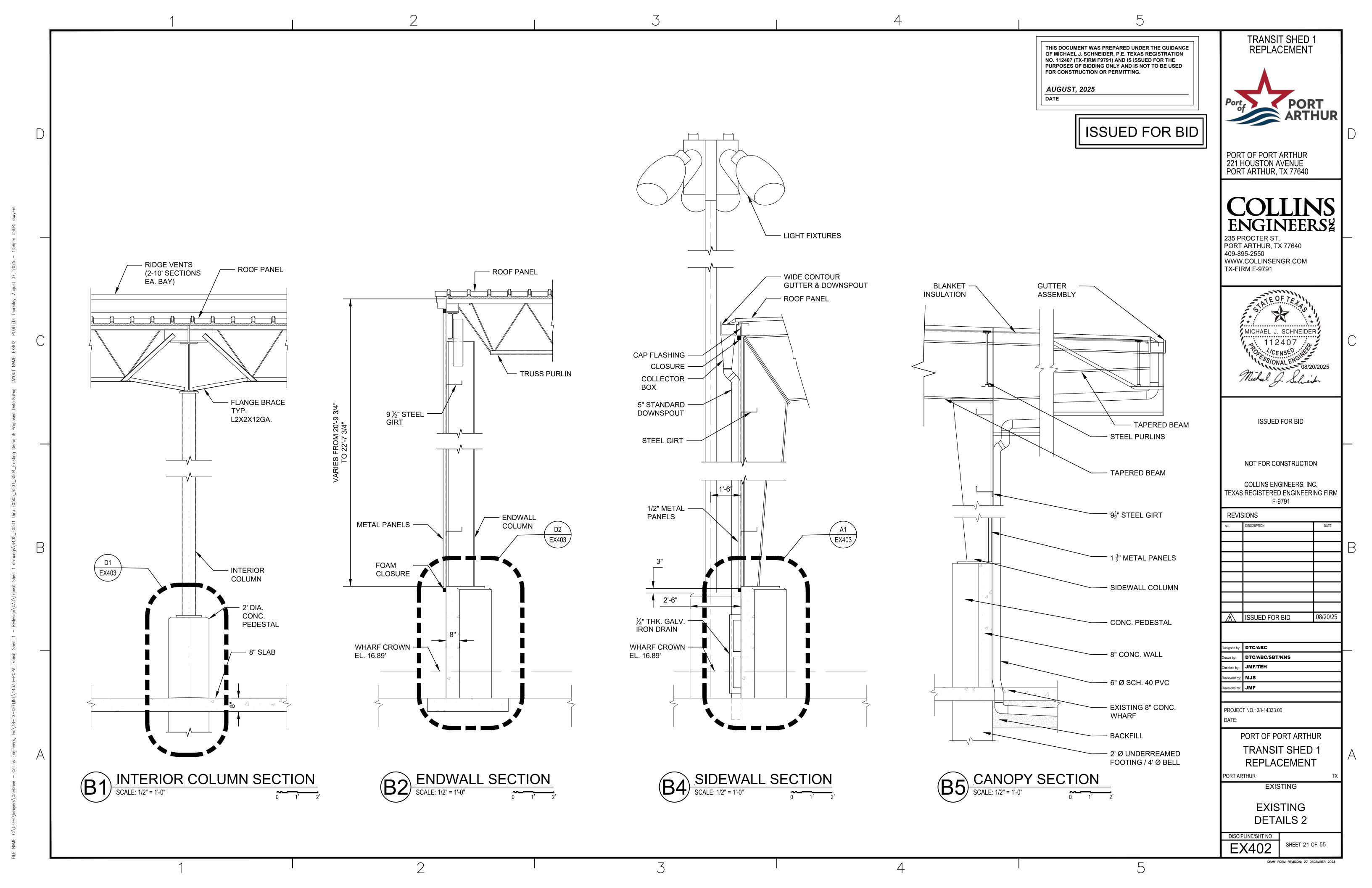


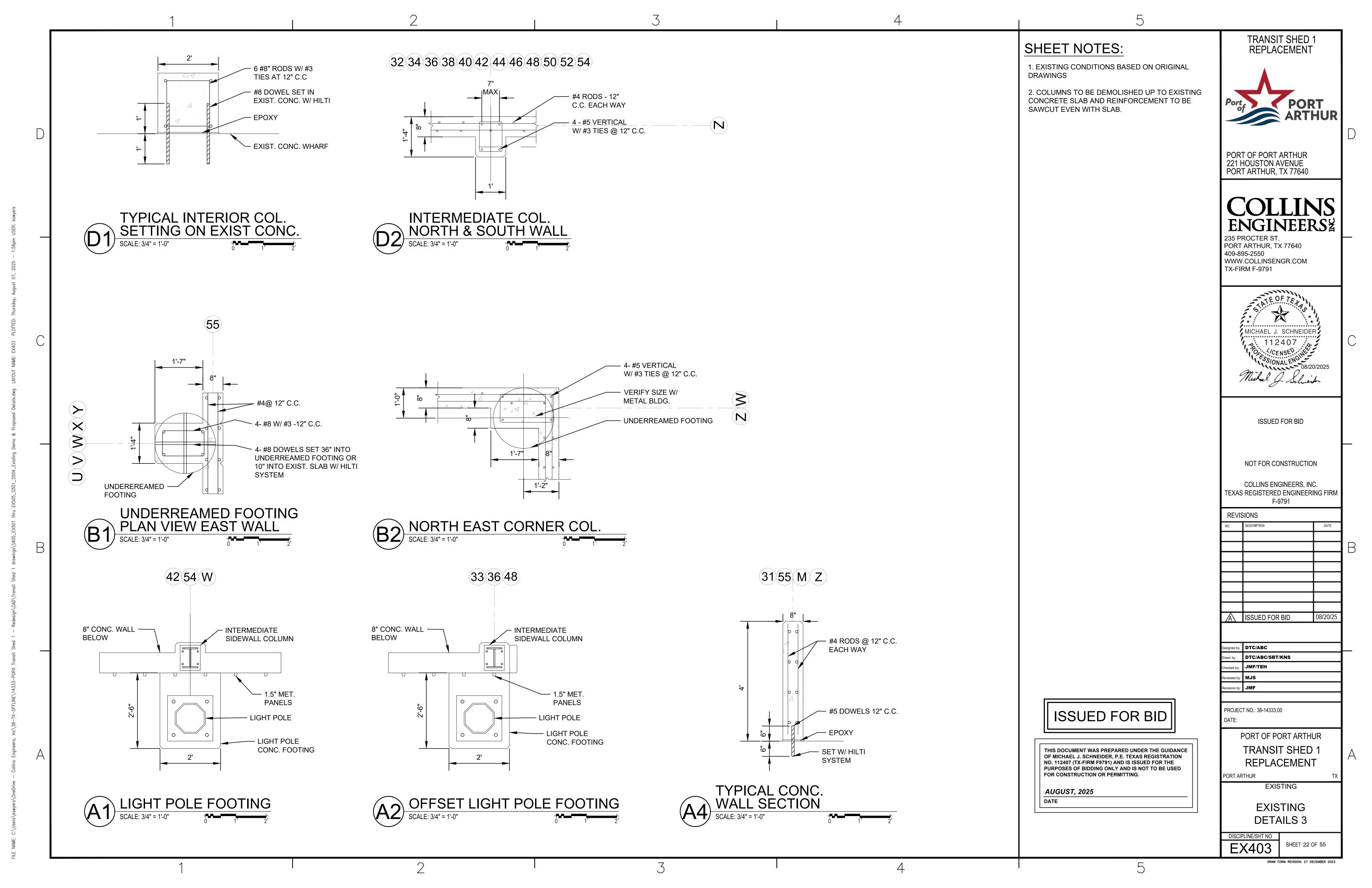


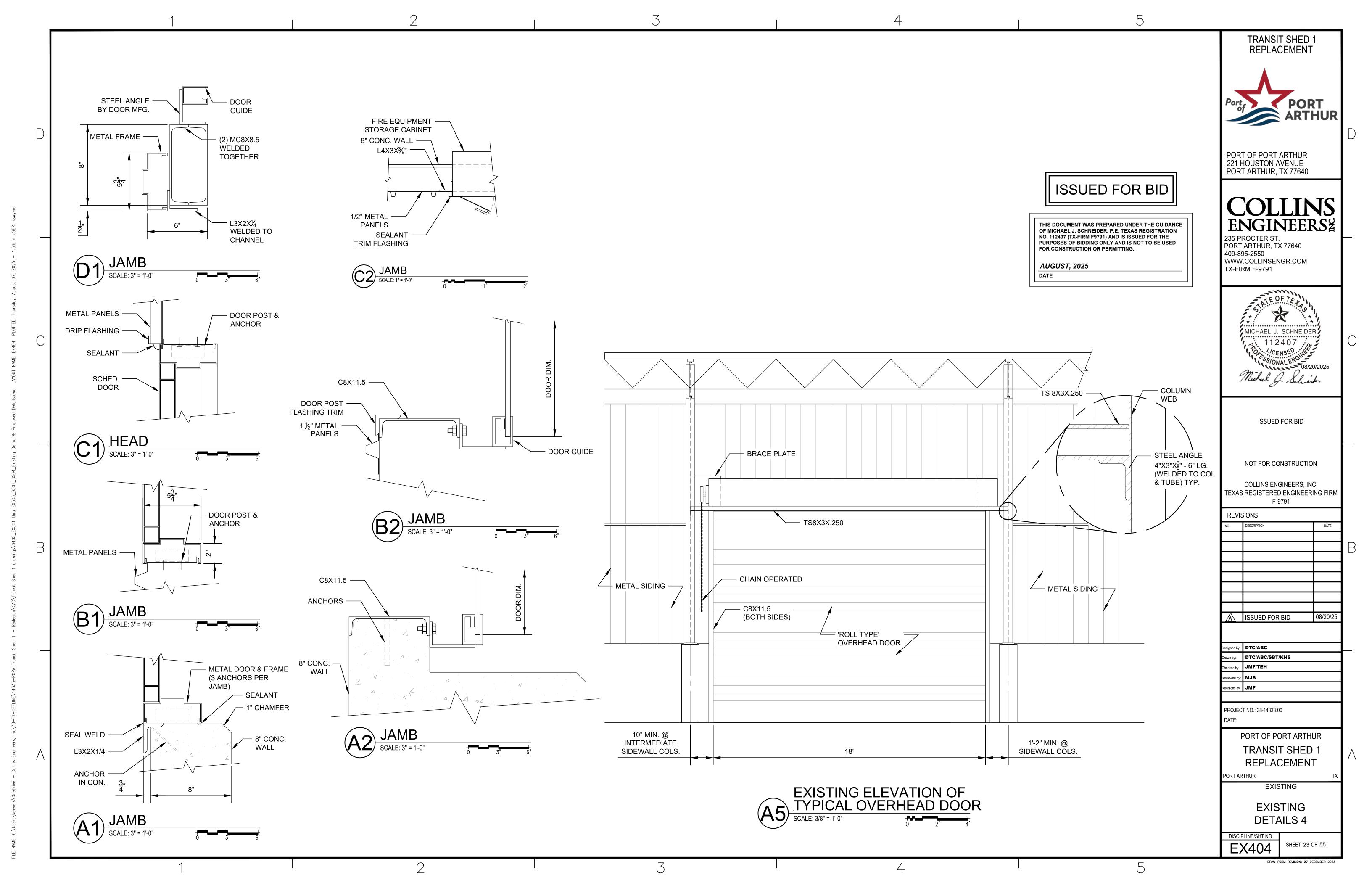


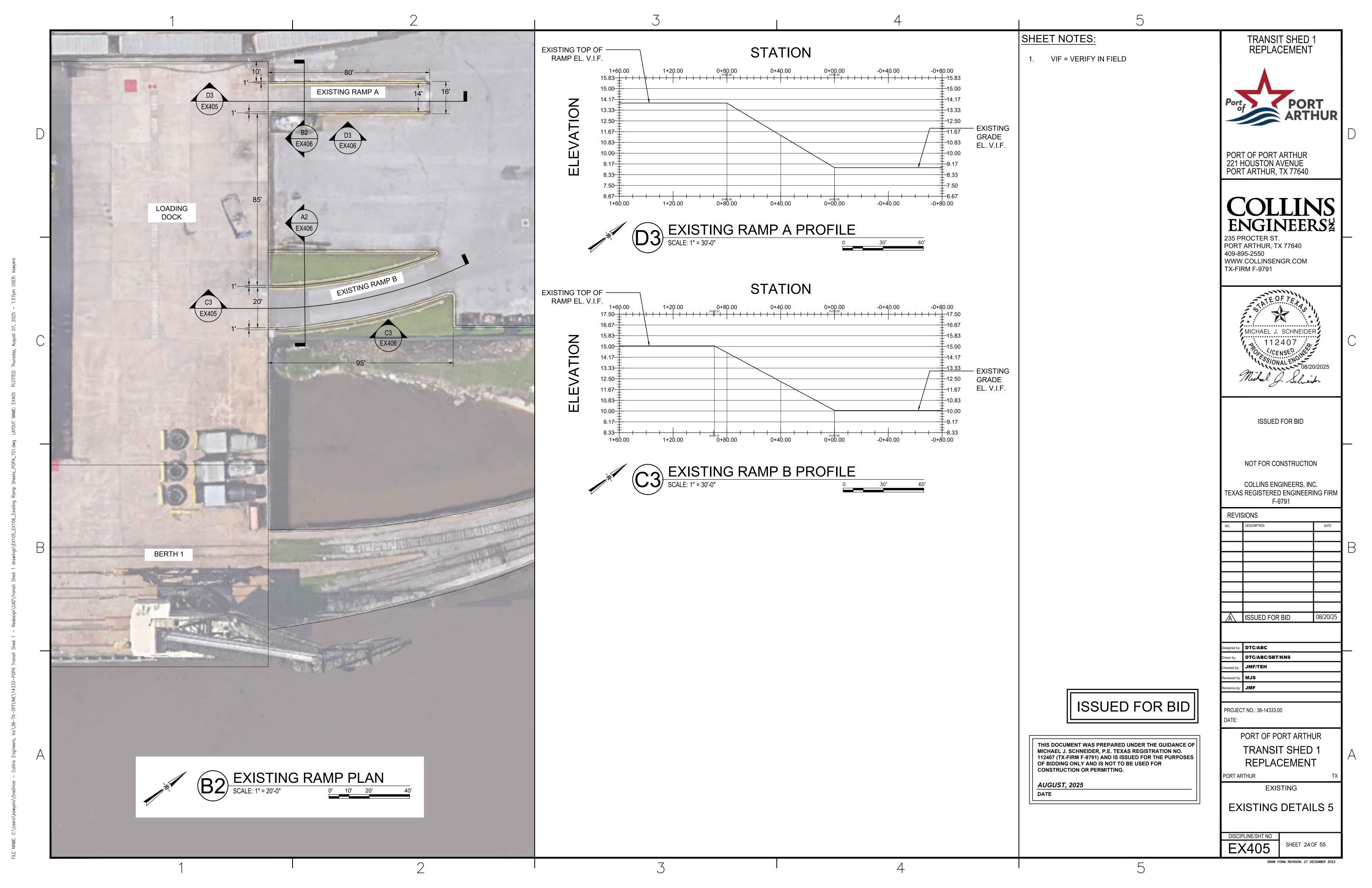


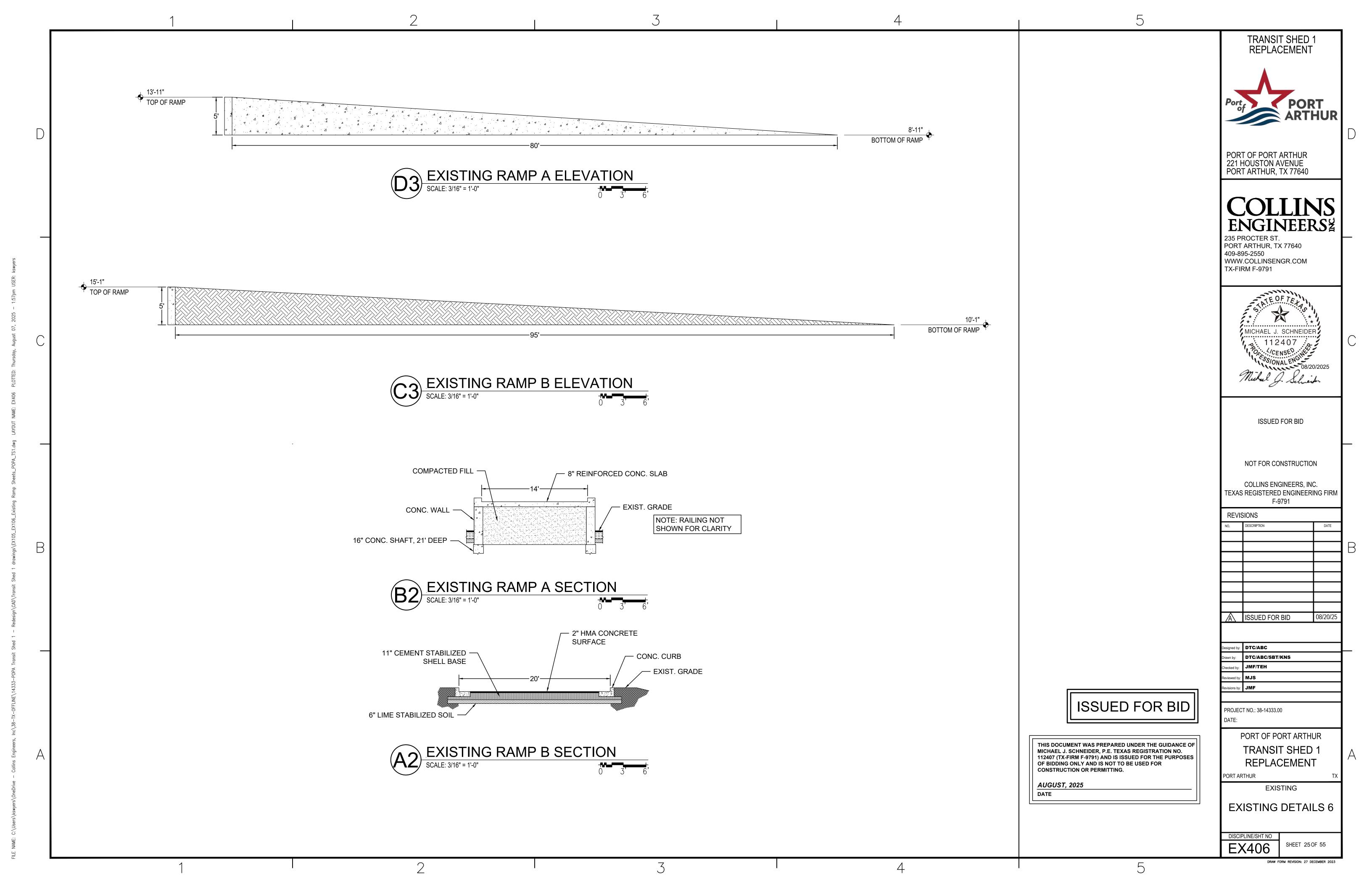


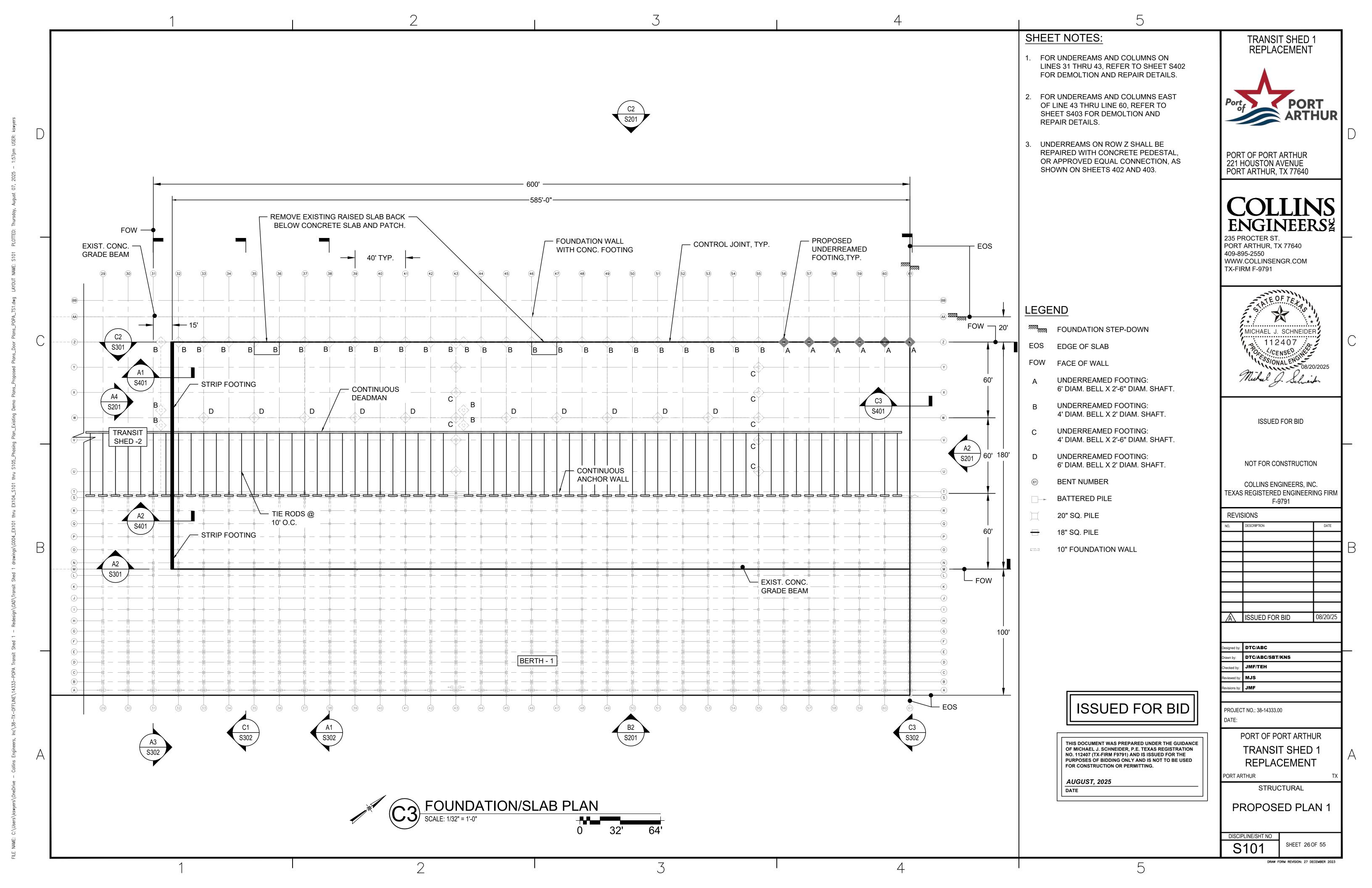


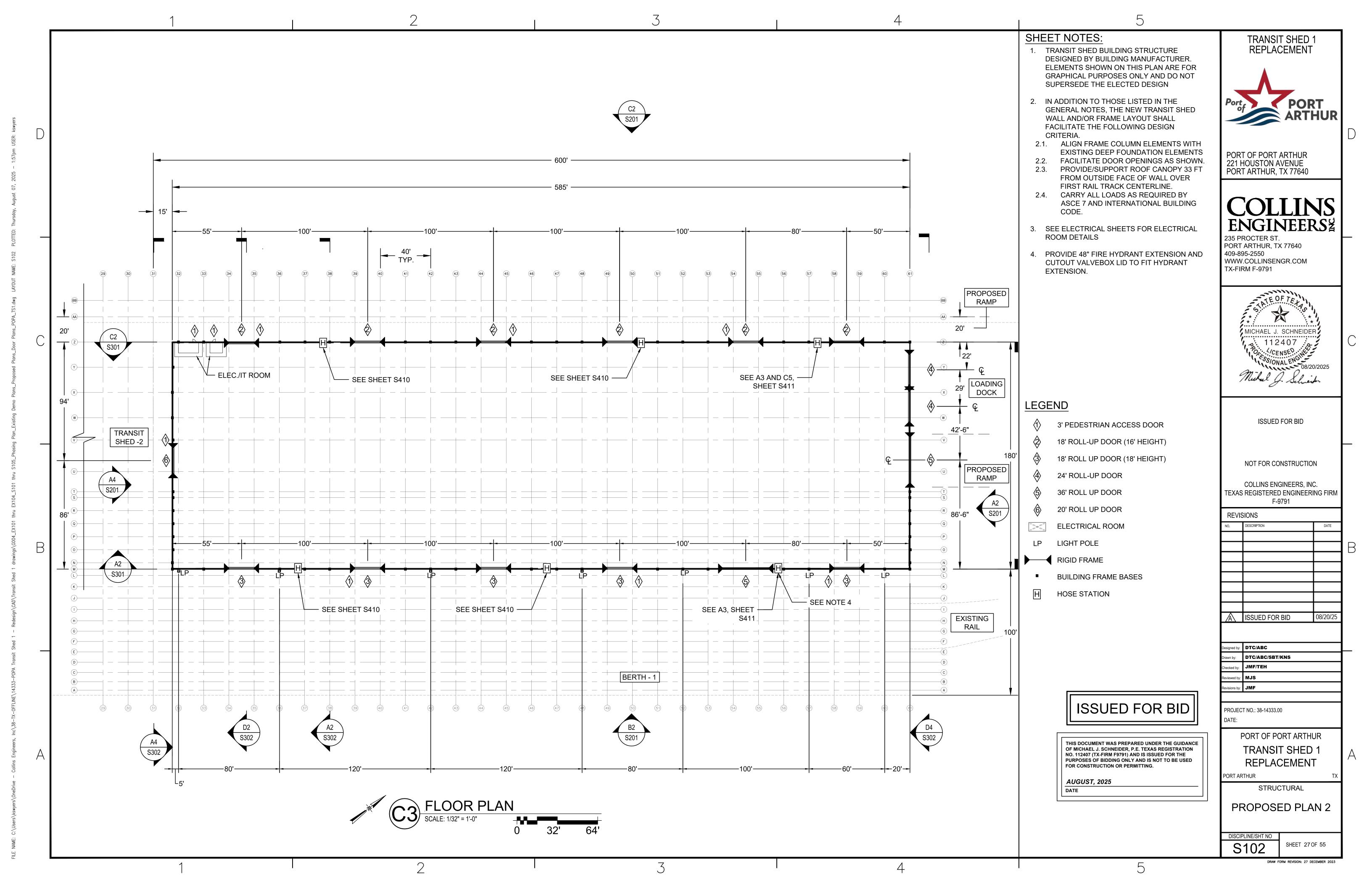


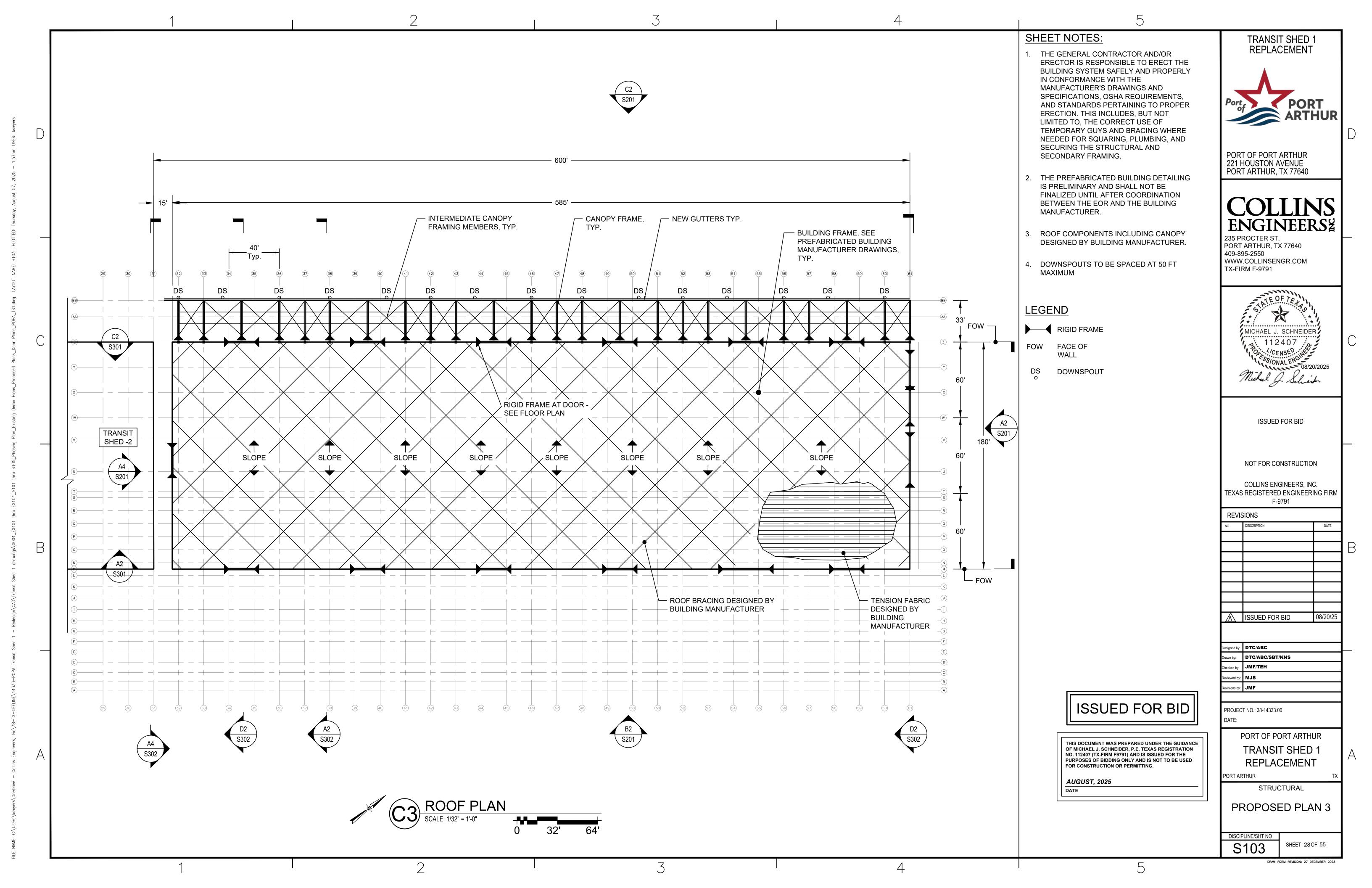


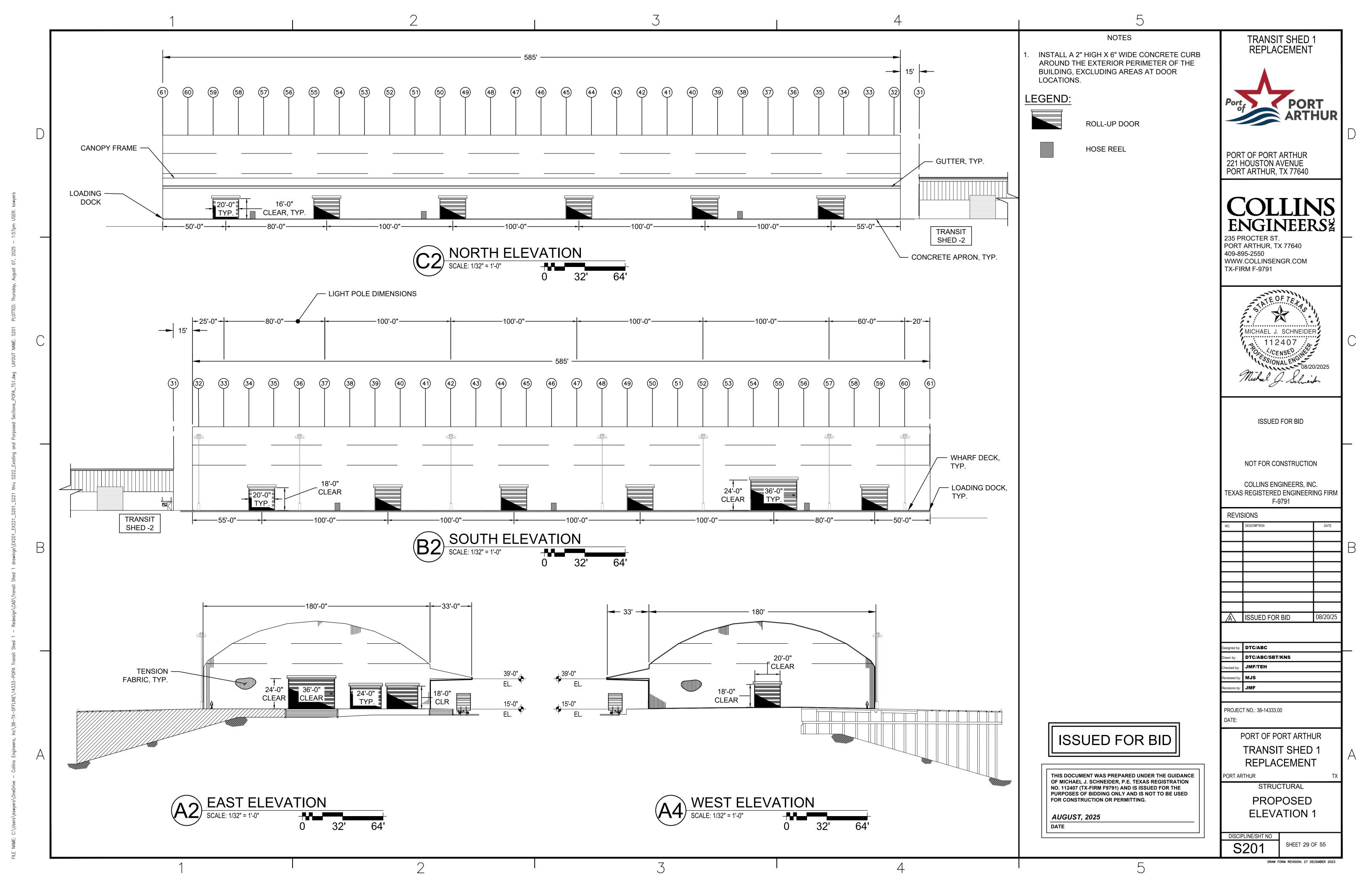


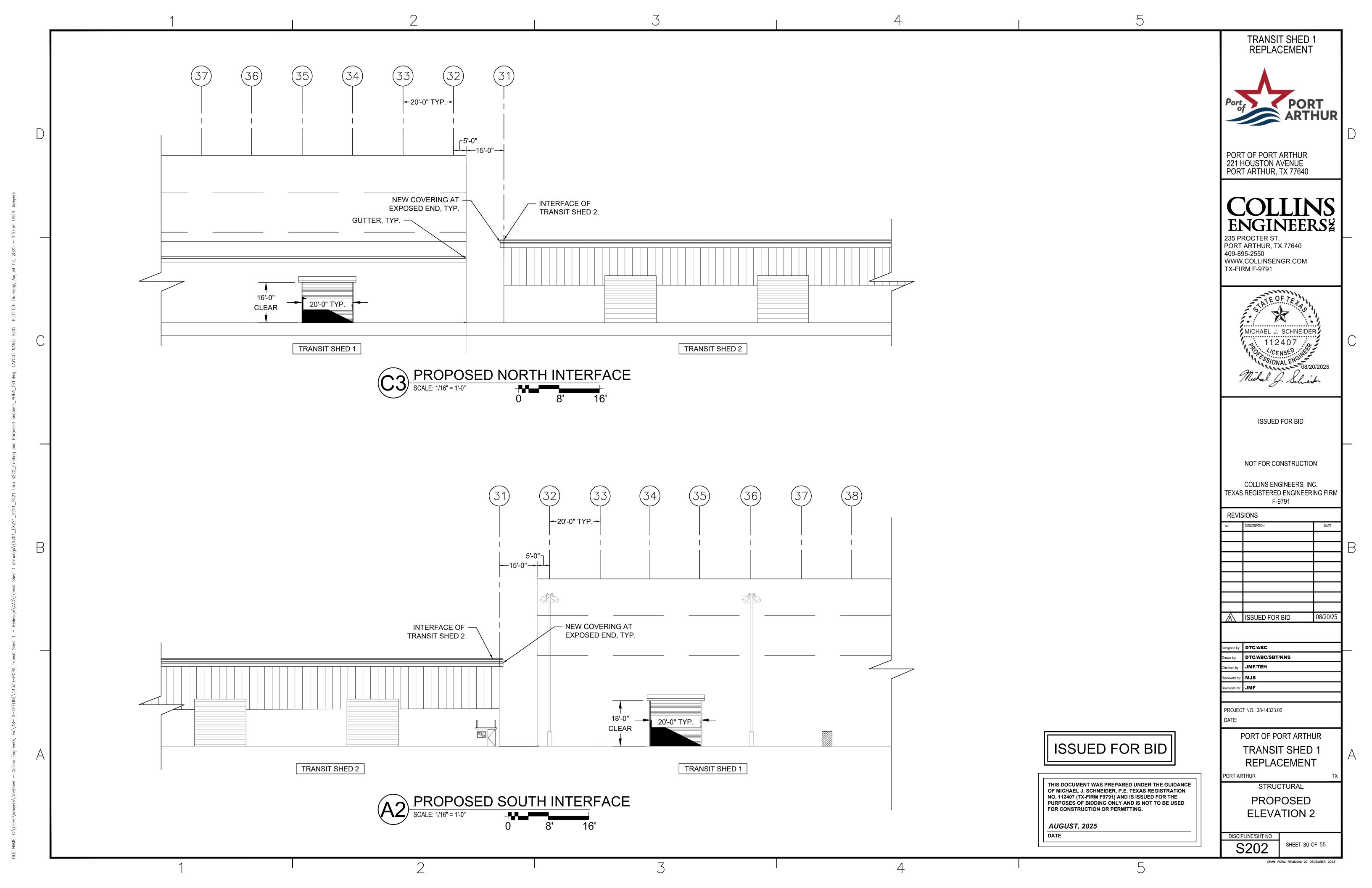


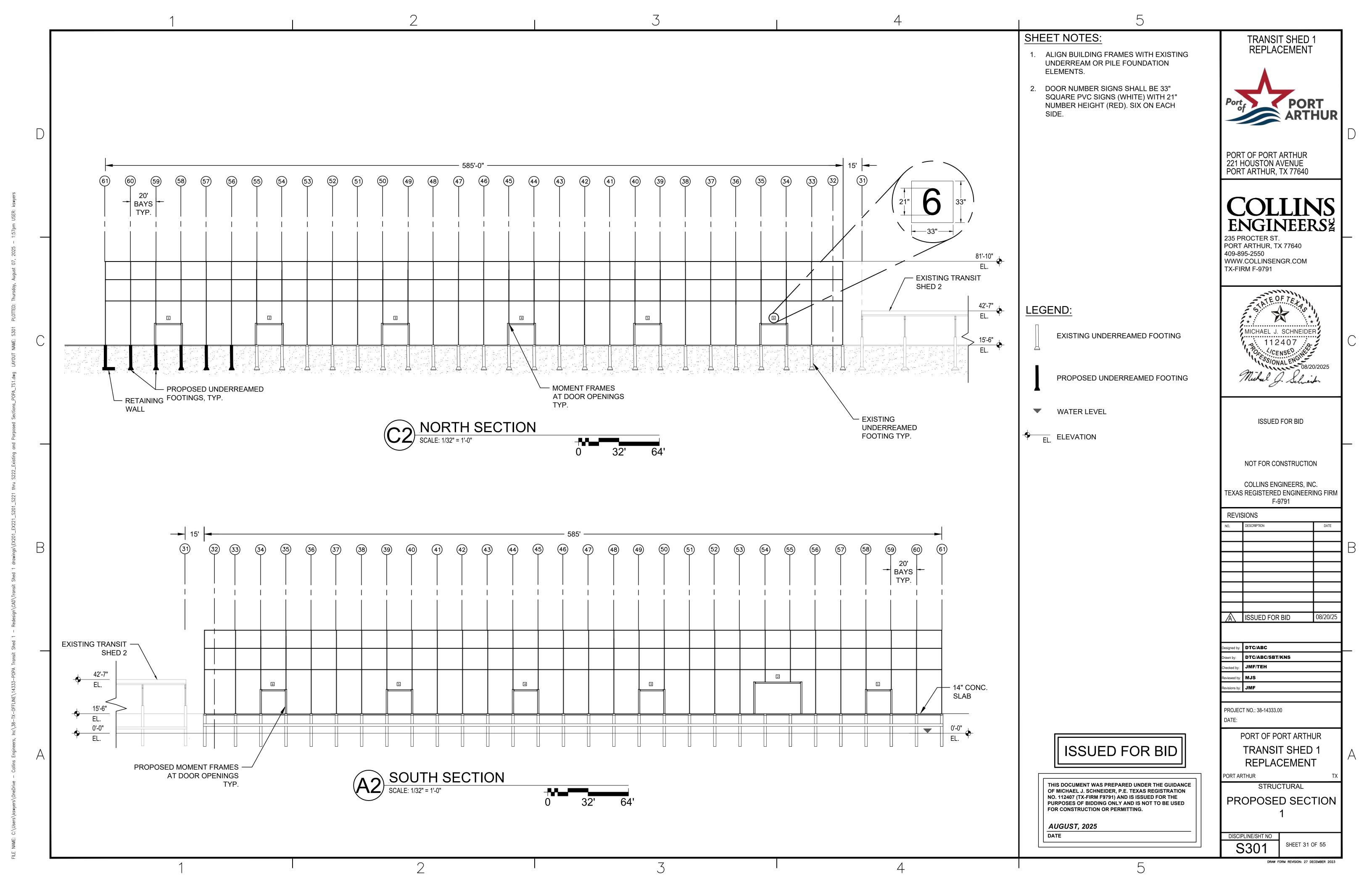


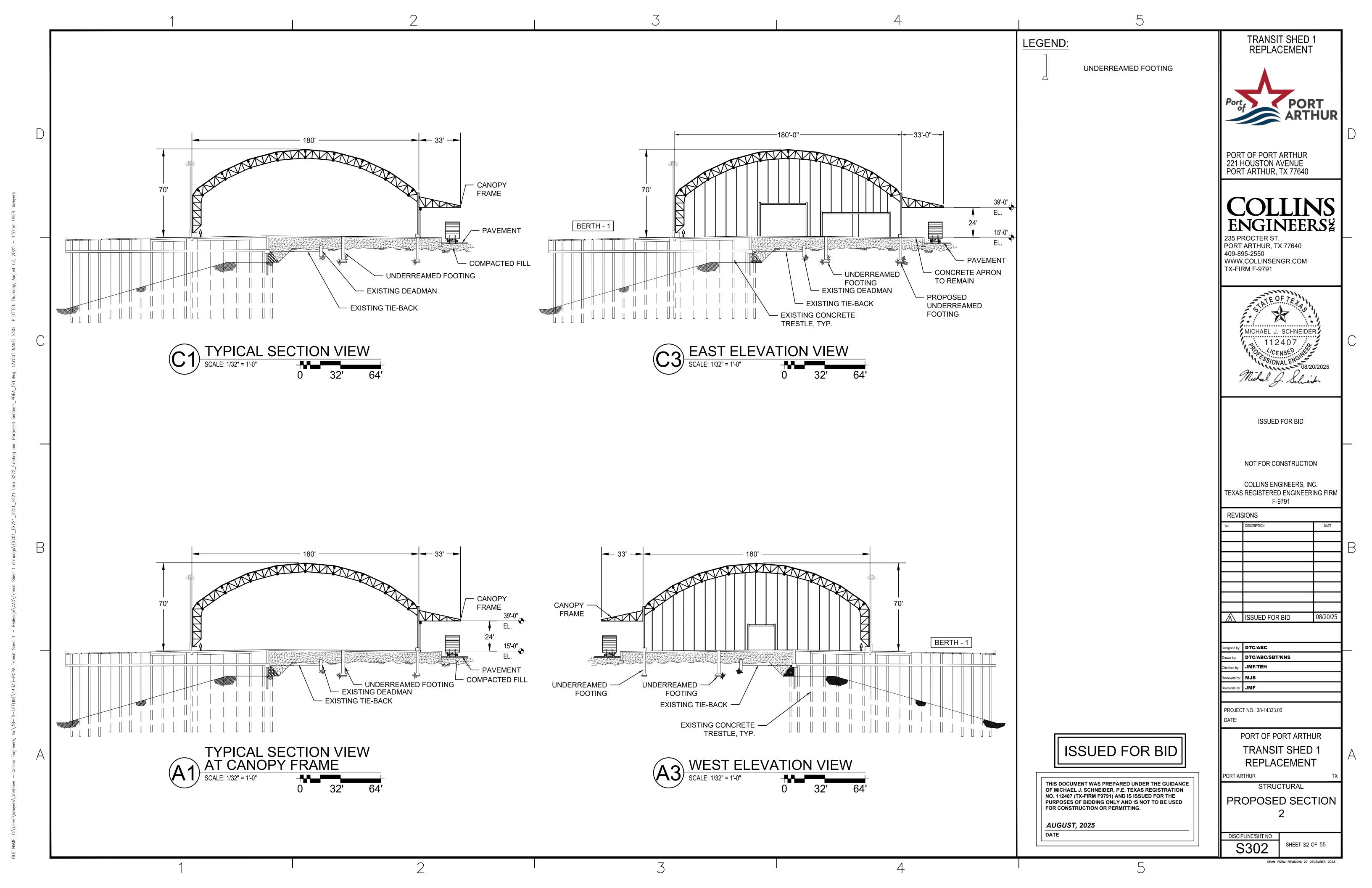


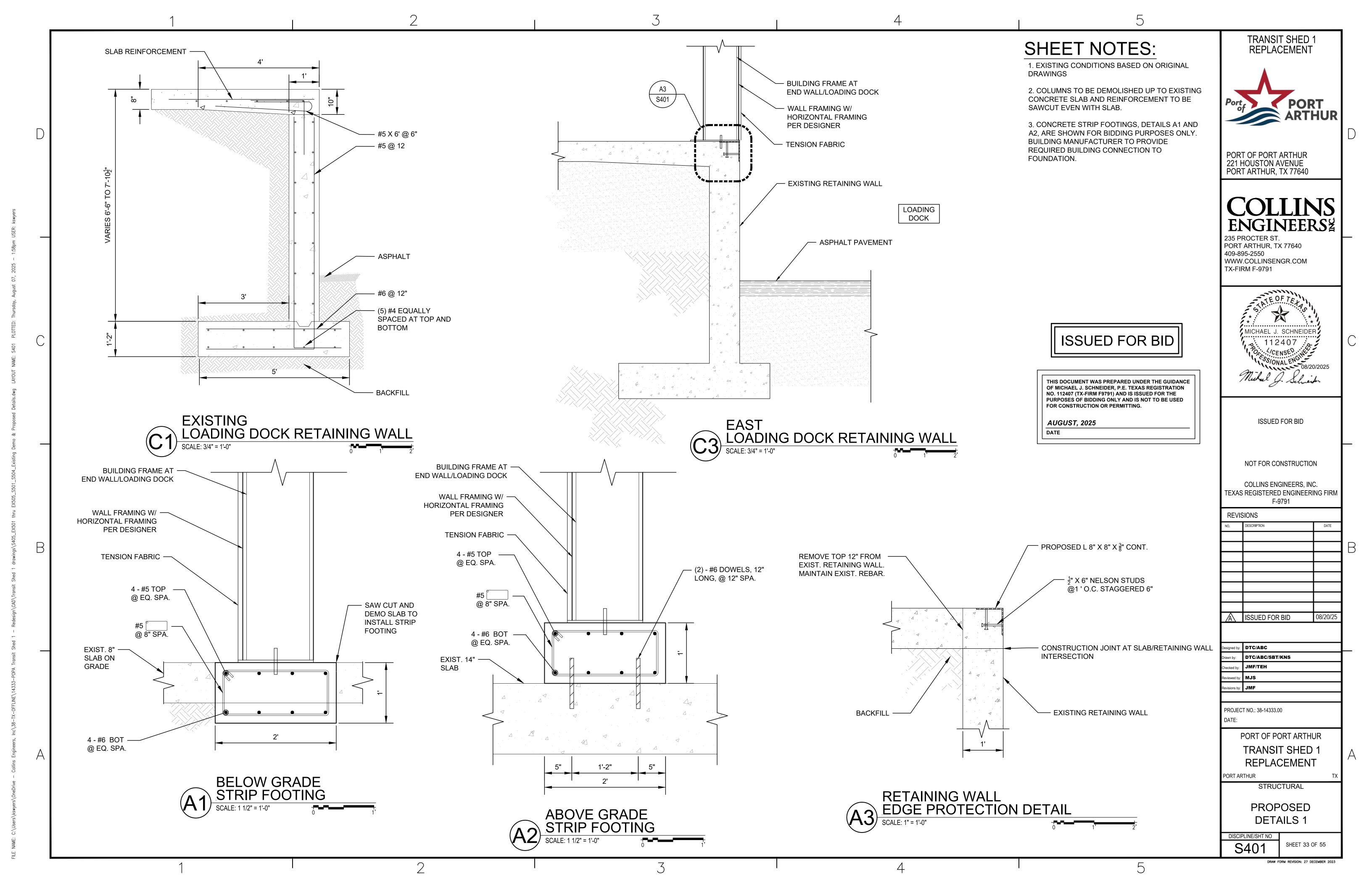


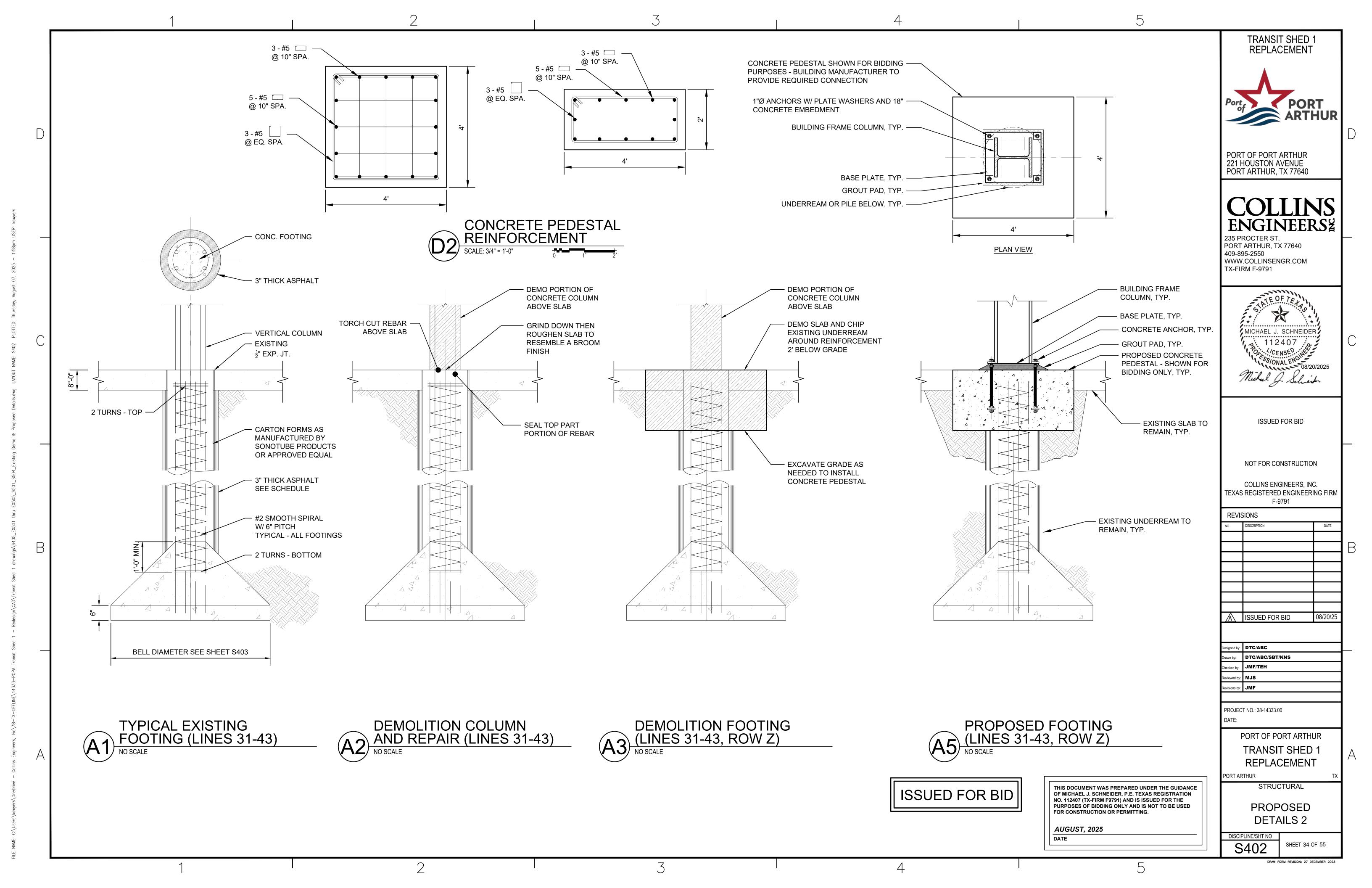


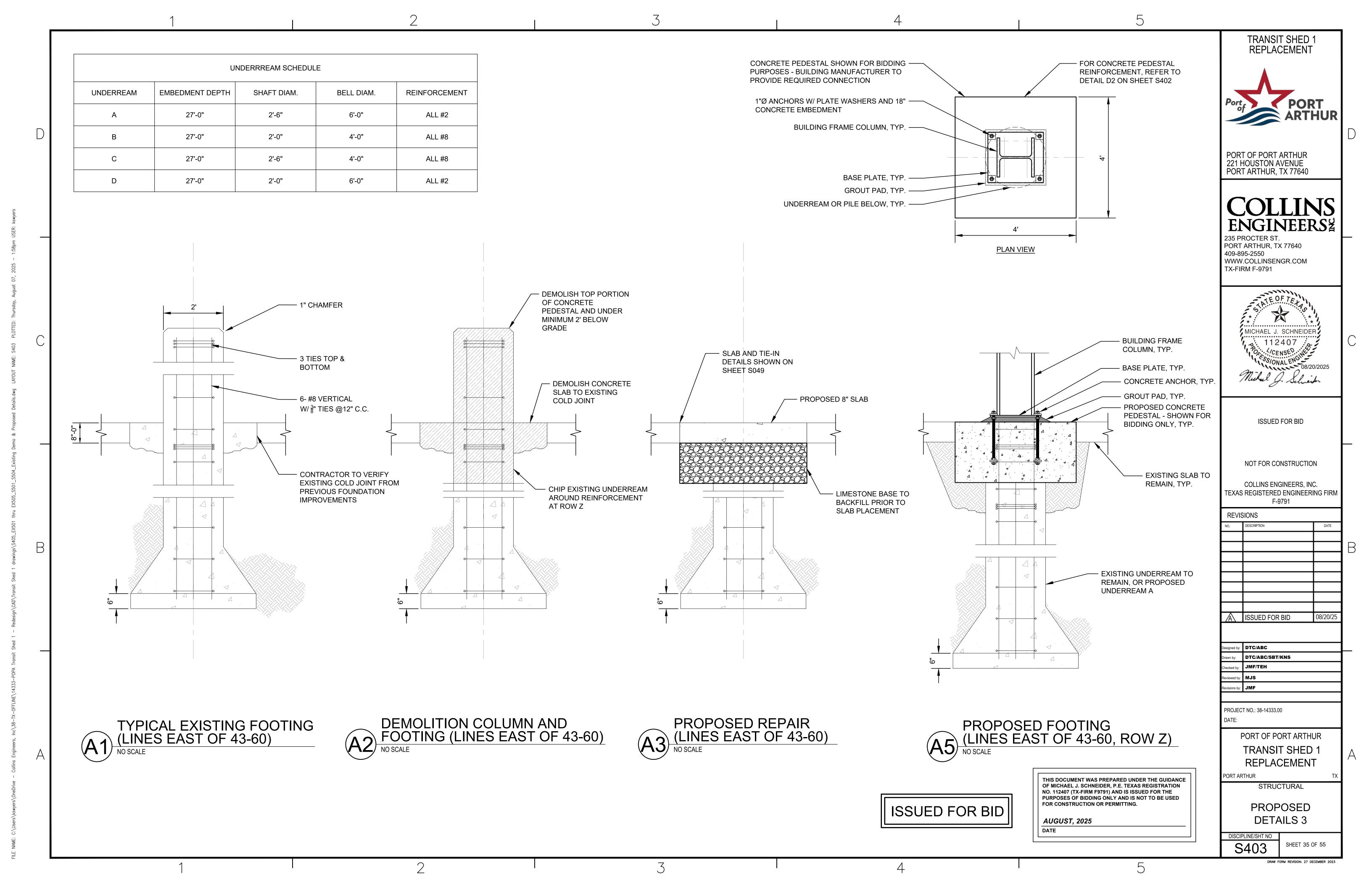


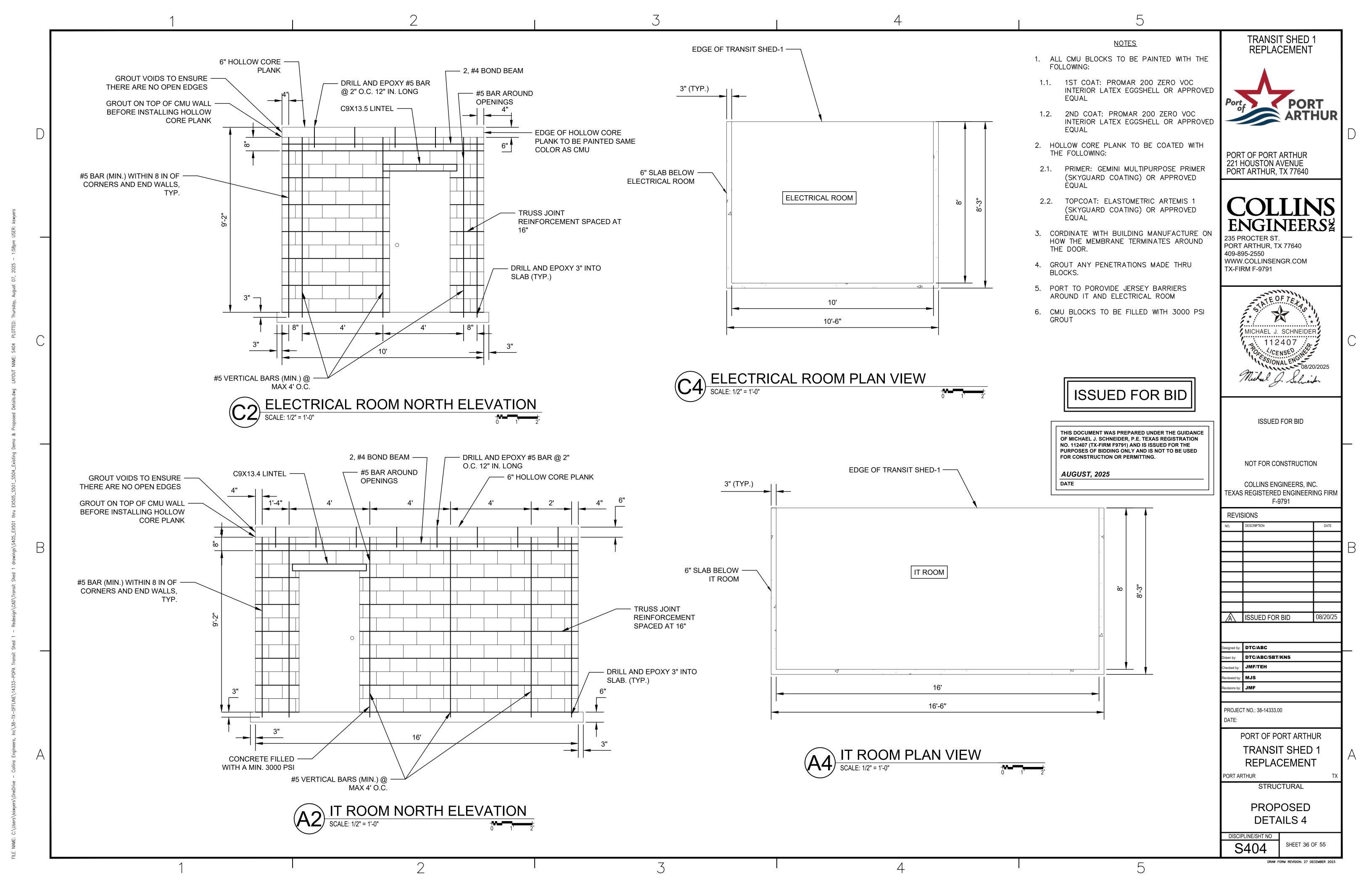


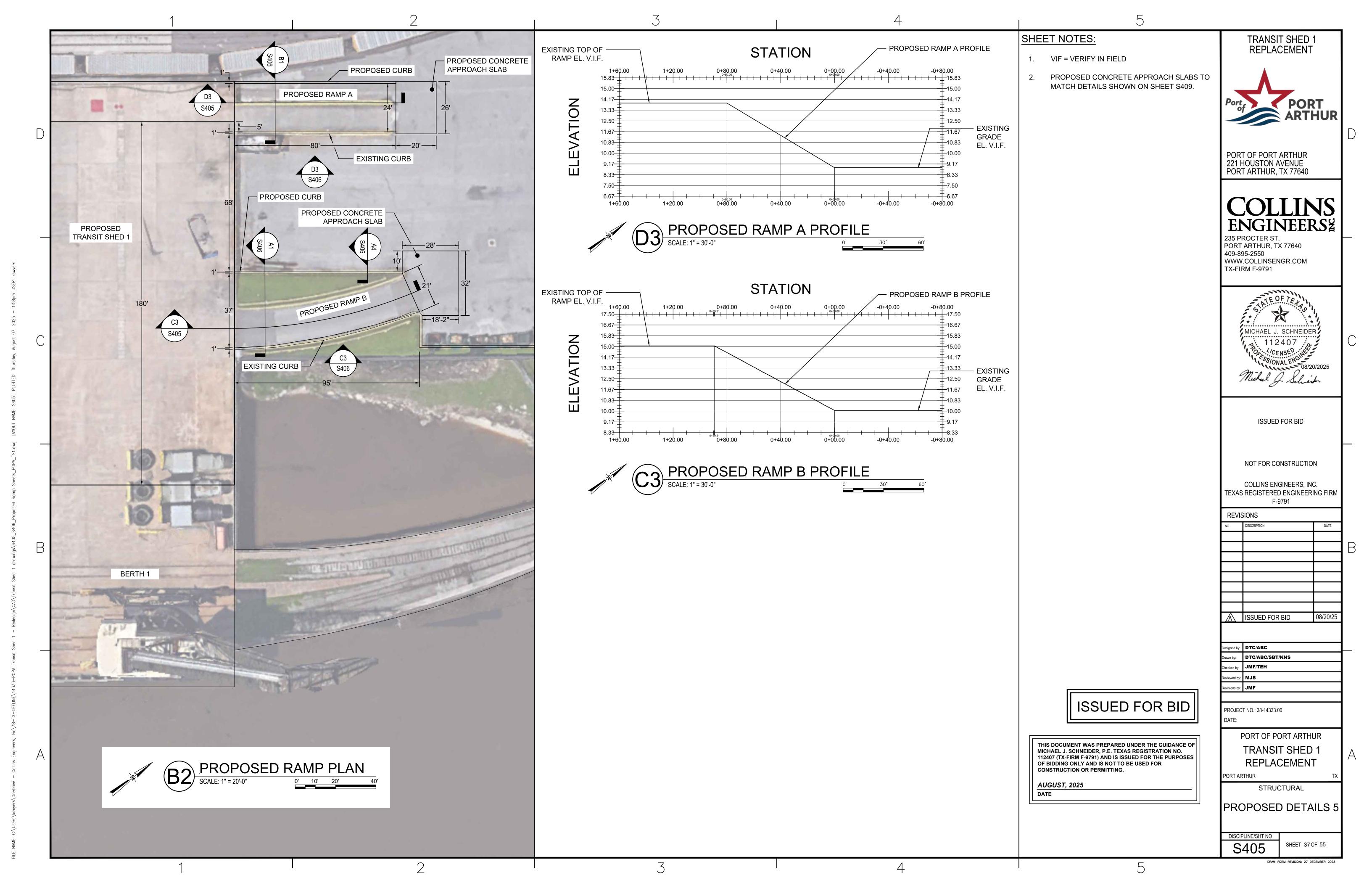


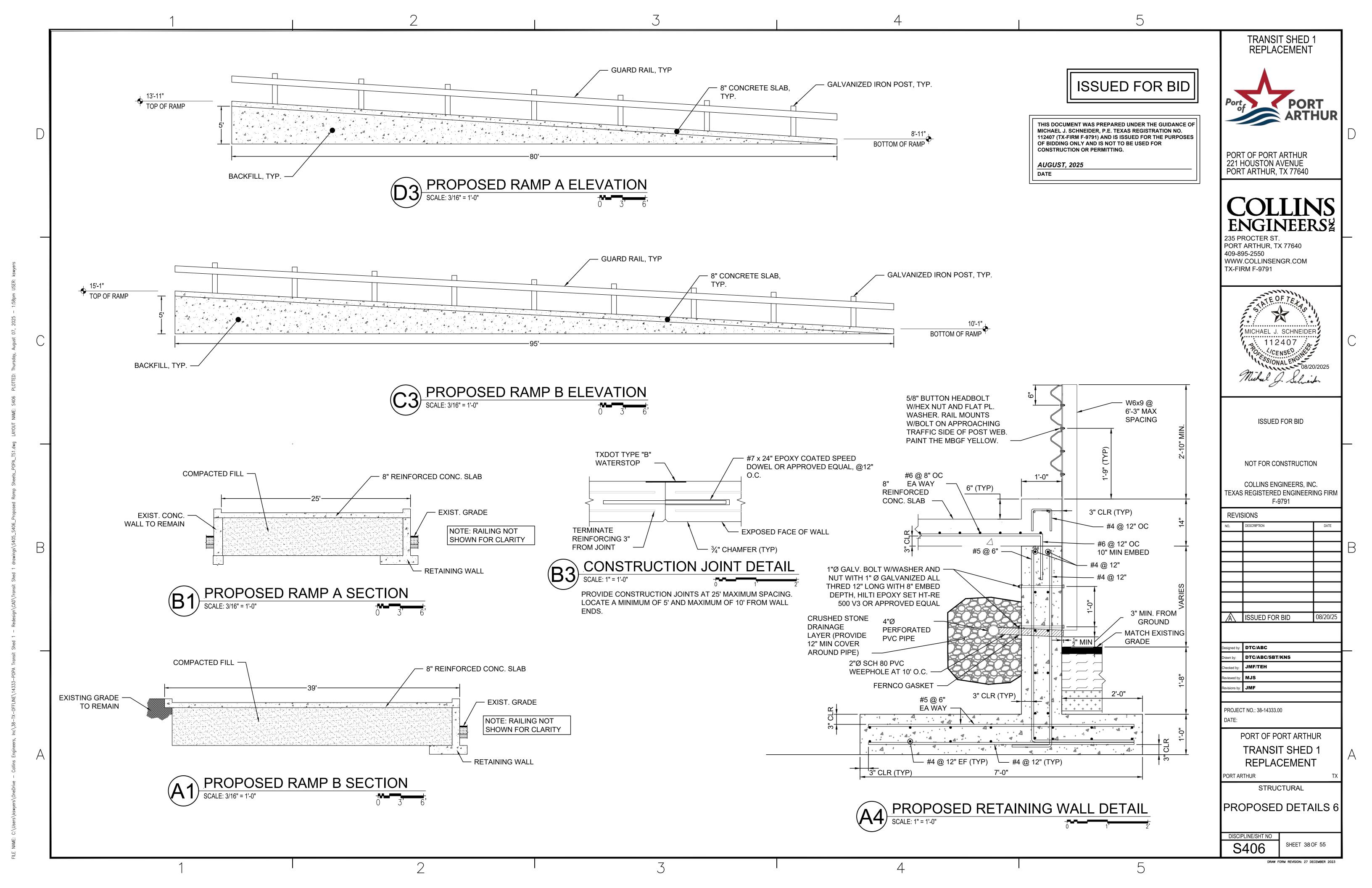


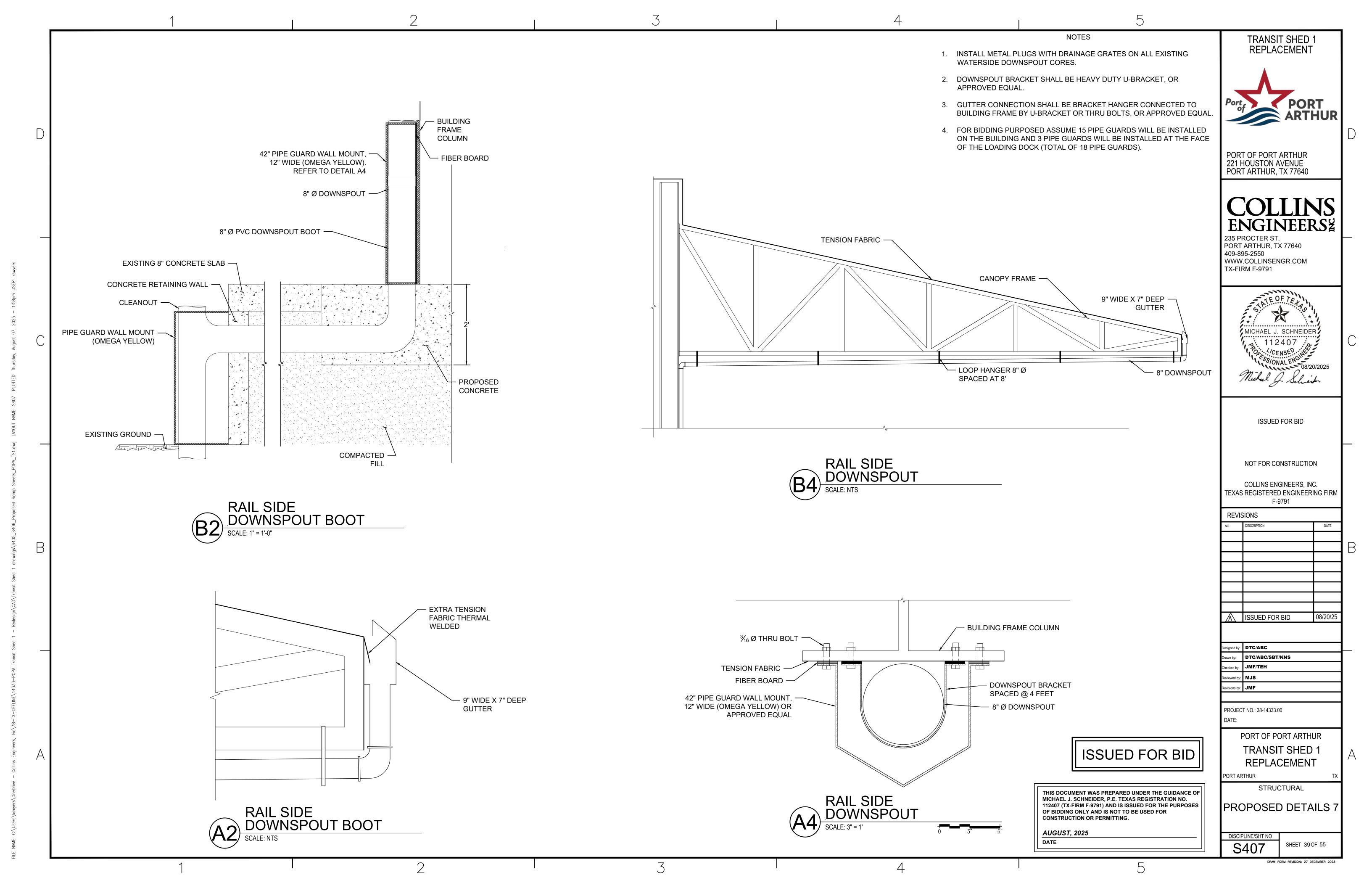


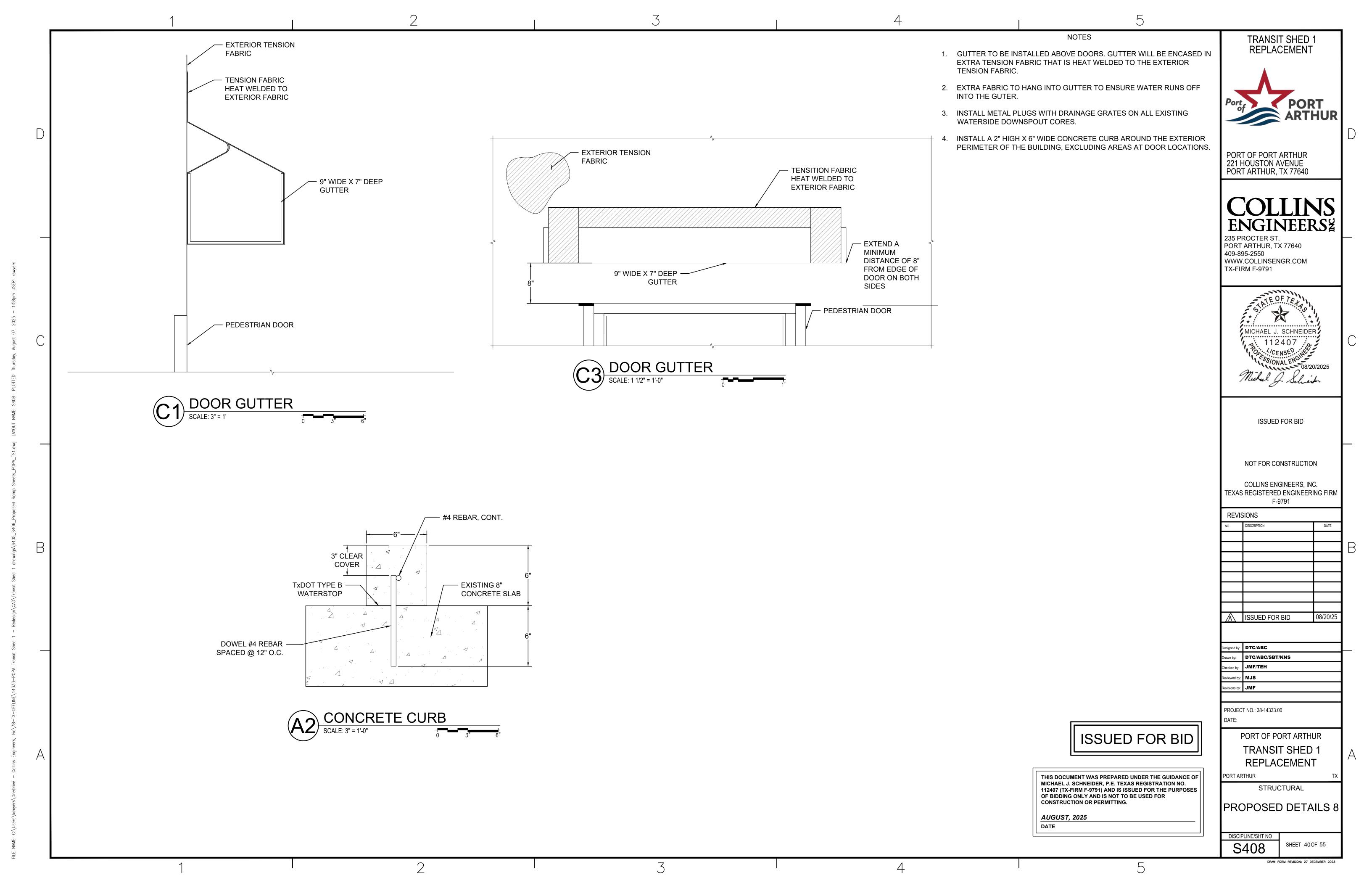


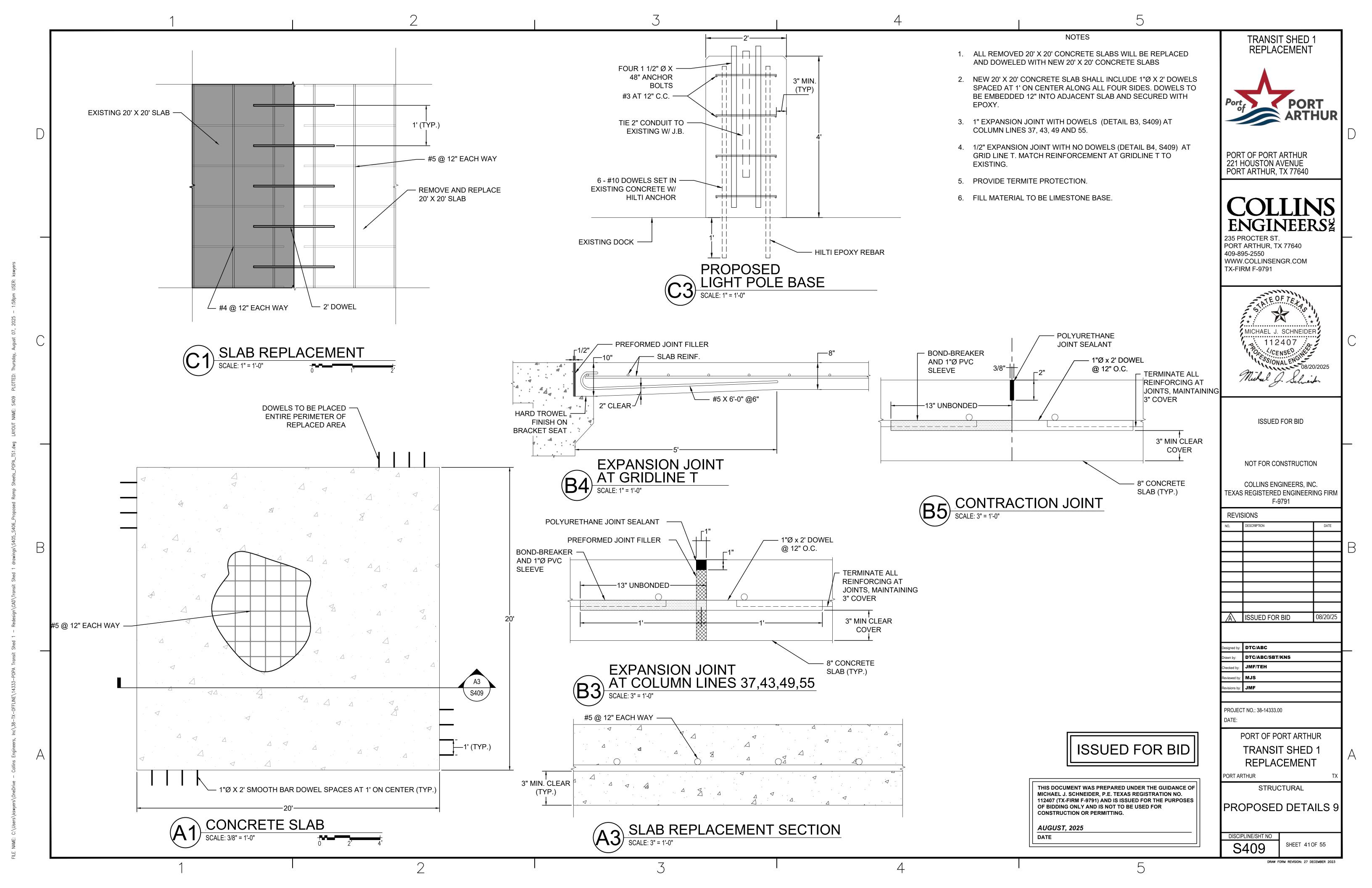


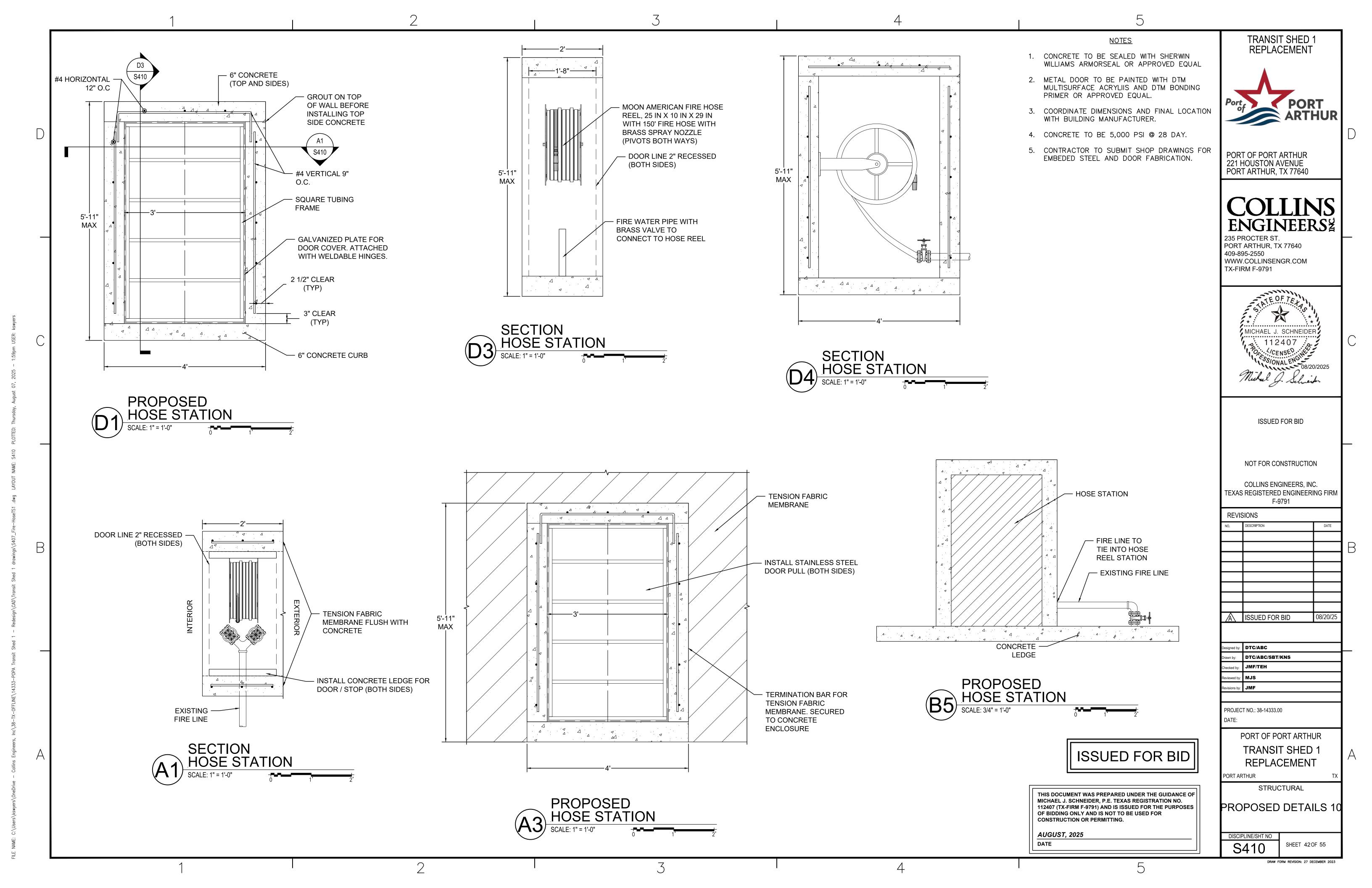


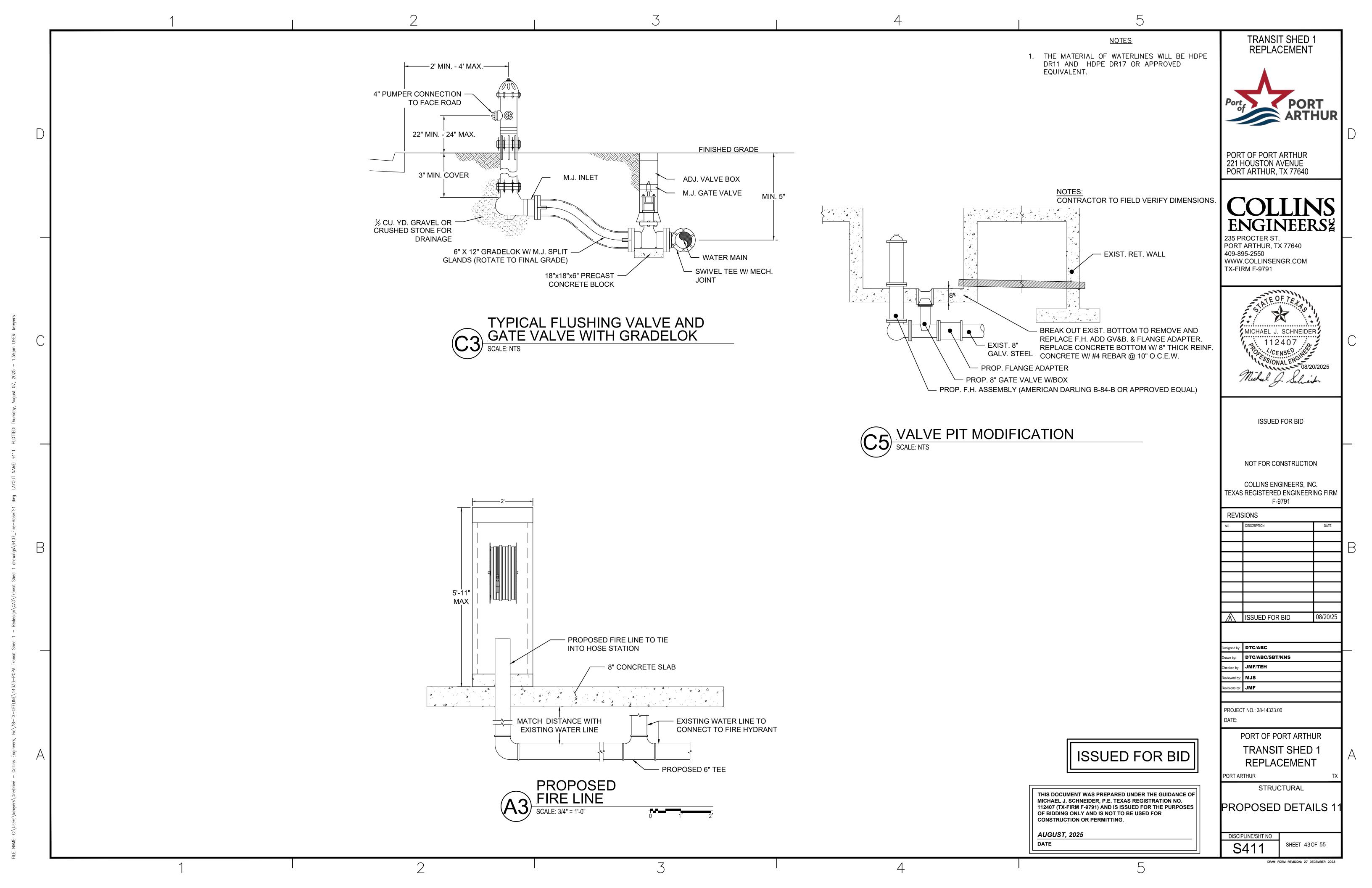


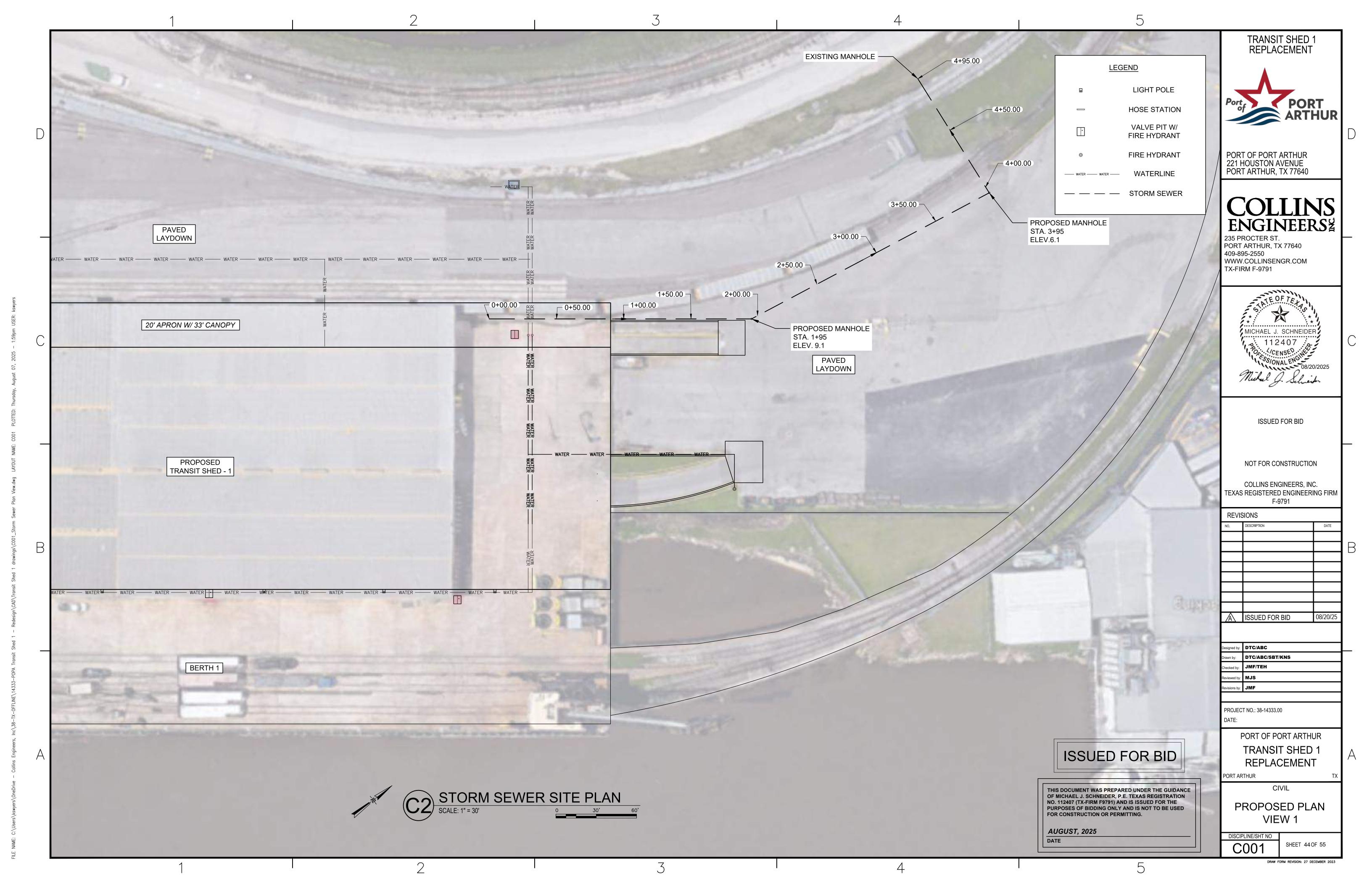


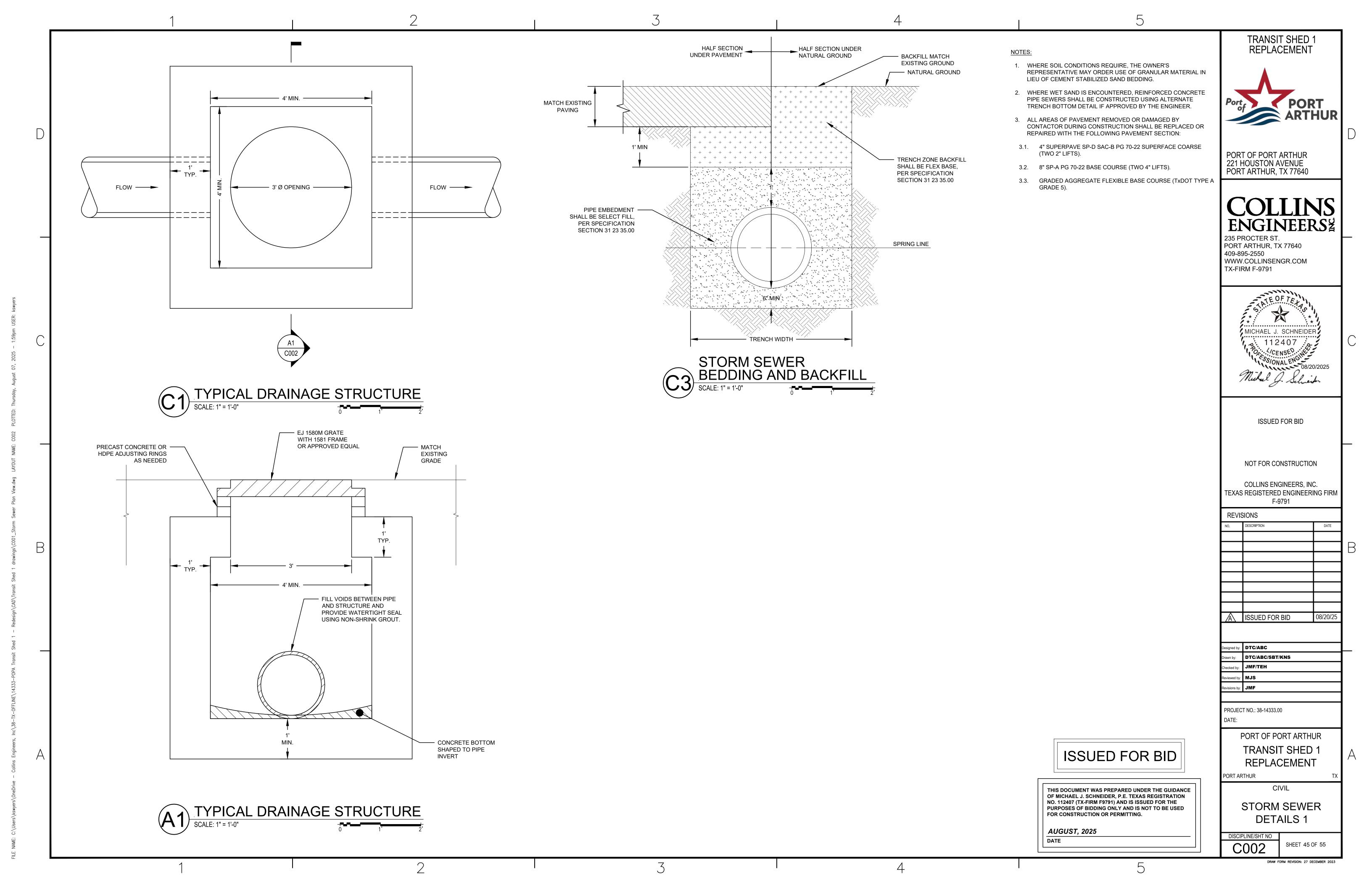


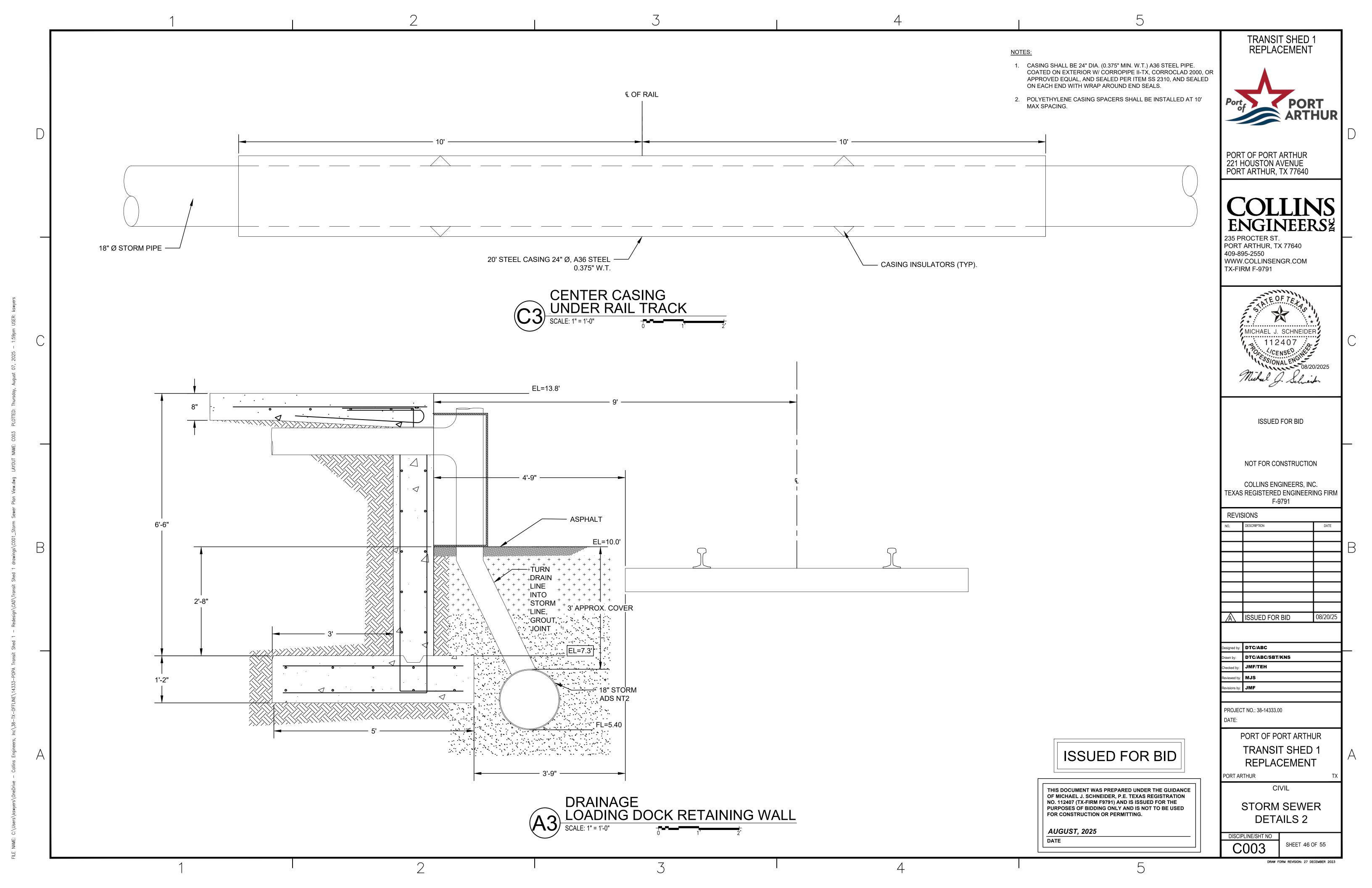




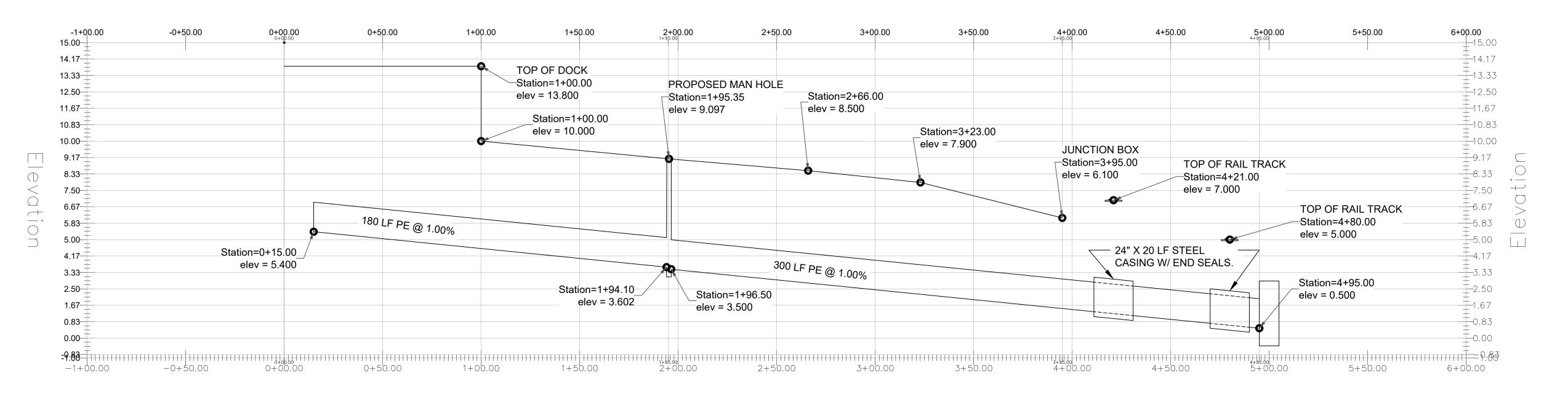








Station



Station



ISSUED FOR BID

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AUGUST, 2025
DATE

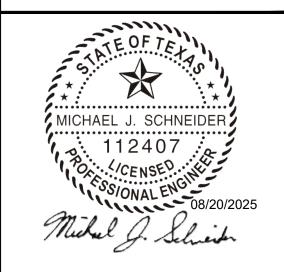
TRANSIT SHED 1 REPLACEMENT



PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS ENGINEERS

235 PROCTER ST.
PORT ARTHUR, TX 77640
409-895-2550
WWW.COLLINSENGR.COM
TX-FIRM F-9791



ISSUED FOR BID

NOT FOR CONSTRUCTION

COLLINS ENGINEERS, INC. TEXAS REGISTERED ENGINEERING FIRM F-9791

REVISIONS								
Э.	DESCRIPTION	DATE						
A	ISSUED FOR BID	08/20/2						
		·						

Designed by:	DTC/ABC
Drawn by:	DTC/ABC/SBT/KNS
Checked by:	JMF/TEH
Reviewed by:	MJS
Revisions by:	JMF

PROJECT NO.: 38-14333.00 DATE:

PORT OF PORT ARTHUR
TRANSIT SHED 1
REPLACEMENT

PORT ARTHUR

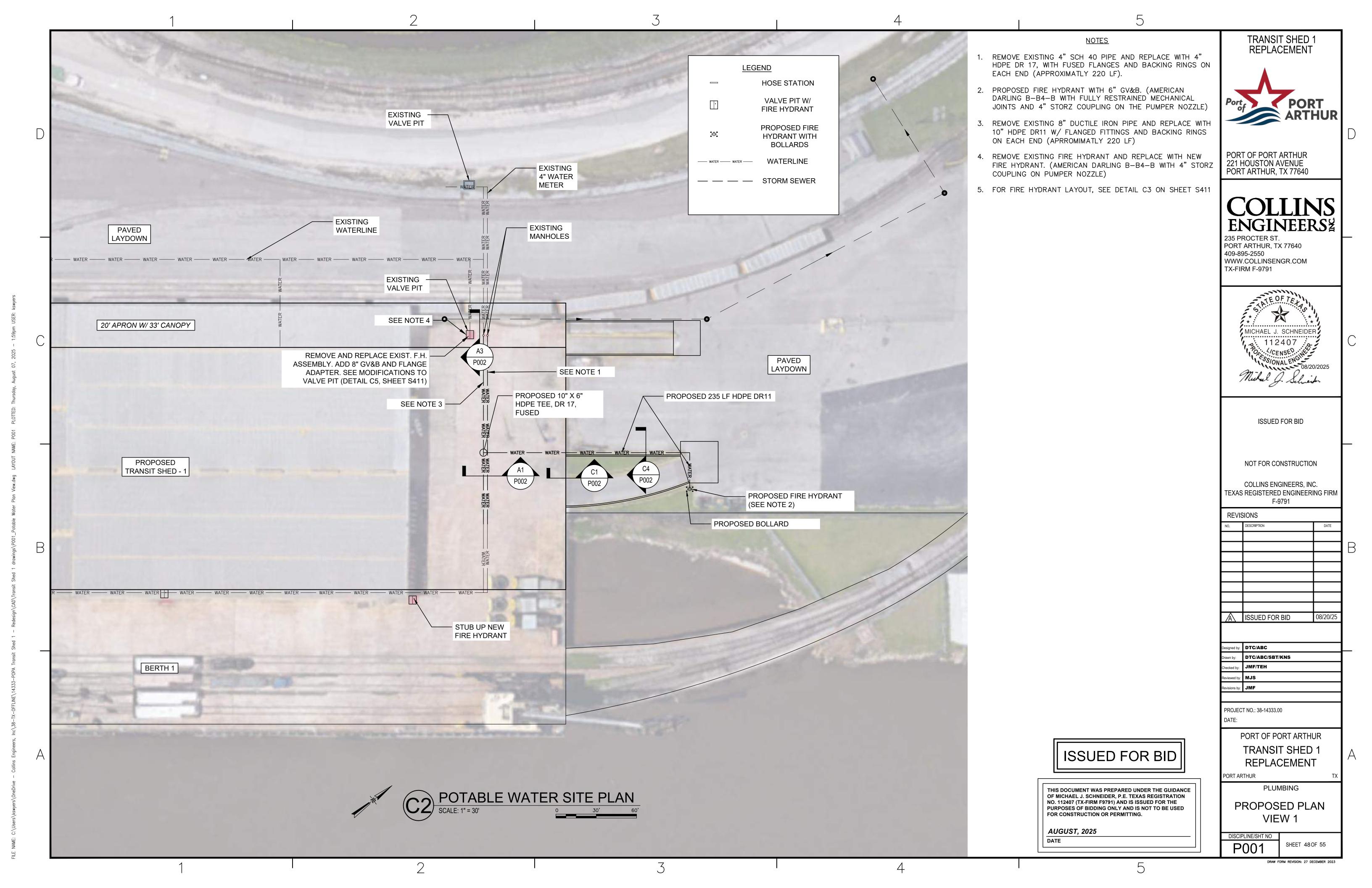
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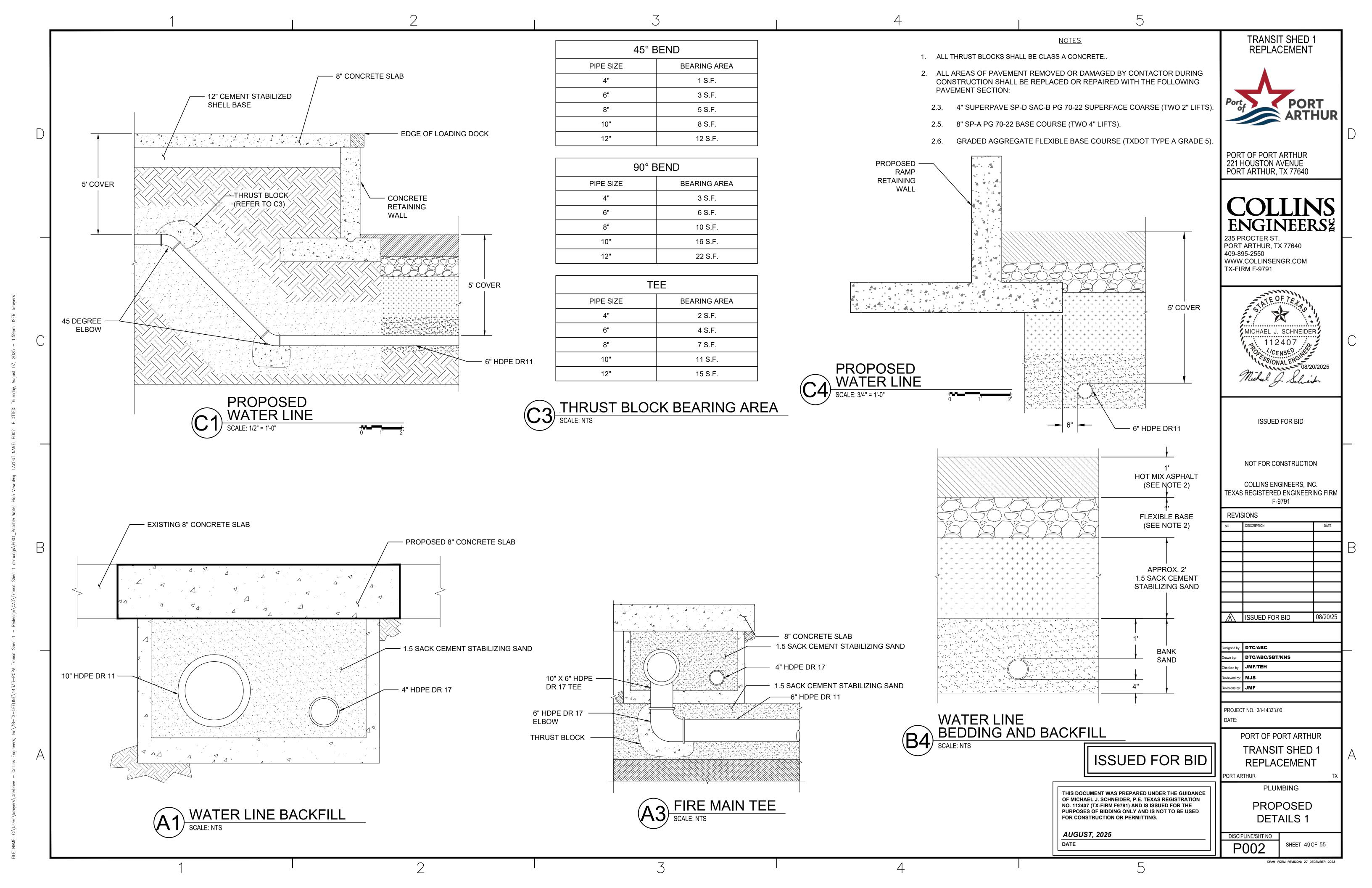
STORM SEWER DETAILS 3

DISCIPLINE/SHT NO

DRAW FORM REVISION: 27 DECEMBER 2023

SHEET 47 OF 55





	ABBREVIA	TIONS	
A	AMPERES	KWH	KILOWATT HOUR
ABV	ABOVE	LRA	LOCKED ROTOR AMPERES
AC	ALTERNATING CURRENT	LSIG	LONG SHORT INSTANTANEOUS GROUND FAULT
AF	AMPERE FUSE, FRAME RATING IN AMPERES	LTG	LIGHTING
AFF	ABOVE FINISHED FLOOR	MC	METAL CLAD
AFG	ABOVE FINISH GRADE	MCA	MINIMUM CIRCUIT AMPACITY
AIC	AMPERE INTERRUPTING CURRENT	MCB	MAIN CIRCUIT BREAKER
AL	ALUMINUM	MCC	MOTOR CONTROL CENTER
AT	TRIP RATING IN AMPERES	MDP	MAIN DISTRIBUTION PANEL
ATS	AUTOMATIC TRANSFER SWITCH	MD	MOTORIZED DAMPER
AUX	AUXILIARY	MEP	MECHANICAL, ELECTRICAL AND PLUMBING
AV	AUDIO VISUAL	MFGR	MANUFACTURER
AWG	AMERICAN WIRE GAUGE	MH	METAL HALIDE
BKR	BREAKER	MLO	MAIN LUGS ONLY
C	CONDUIT	MSB	MAIN SWITCHBOARD
CATV	CABLE TELEVISION SYSTEM	MTD	MOUNTED
CCTV	CLOSED CIRCUIT TELEVISION	MTS	MANUAL TRANSFER SWITCH
CMP	COMM. PULL BOX	N.C.	NORMALLY CLOSED
CL	CENTERLINE	N.C. NEC	NATIONAL ELECTRICAL CODE
CP	CATHODIC PROTECTION	NEMA	NATIONAL ELECTRICAL CODE NATIONAL ELECTRIC MANUFACTURER ASSOCIATION
CTP	CCTV POWER PULL BOX	NEUT	NEUTRAL
CU	COPPER	NF	NON-FUSED
DC	DIRECT CURRENT	NFPA	NATIONAL FIRE PROTECTIONS ASSOCIATION
DIA	DIAMETER		
DISC	DISCONNECT	NL N. C	NIGHT LIGHT
DP	DISTRIBUTION PANEL	N.O.	NORMALLY OPEN
DPDT	DOUBLE POLE DOUBLE THROW	PC	PHOTO CONTROL/PHOTOCELL
DPST	DOUBLE POLE SINGLE THROW	PF PH	POWER FACTOR PHASE
DEST	DAYLIGHT SENSOR		
EC	ELECTRICAL CONTRACTOR	PNL	PANEL POY
EL	EMERGENCY LIGHT	PPB	POWER PULL BOX
ELEC	ELECTRICAL	PVC	POLYVINYL CHLORIDE
ELEC	EMERGENCY	QTY	QUANTITY DEFI-ENTED OF UNIO DI ANI
EMT	ELECTRICAL METALLIC TUBING	RCP	REFLECTED CEILING PLAN
	ENCLOSURE	RGS	RIGID GALVANIZED STEEL
ENCL		RLA	RUNNING LOAD AMPERES
ETWH	ELECTRIC TANKLESS WATER HEATER	SWB	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SEC	SECOND
FLA	FULL LOAD AMPERES	SF	SQUARE FEET
FLEX	FLEXIBLE	SPEC	SPECIFICATIONS
GND	GROUND	SQ	SQUARE
GA	GAUGE	THRU	THROUGH
GALV	GALVANIZED	TS	TIME SWITCH
GC	GENERAL CONTRACTOR	TB	TELEPHONE TERMINAL BOARD
GFCI	GROUND FAULT CURRENT INTERRUPTER	TYP	TYPICAL
GFR	GROUND FAULT RELAY	UF	UNDERFLOOR
HD	HEAVY DUTY	UG	UNDERGROUND
HID	HIGH INTENSITY DISCHARGE	UL	UNDERWRITERS LABORATORIES, INC.
HOA	HAND OFF AUTO	UPS	UNINTERRUPTIBLE POWER SUPPLY
HP	HORSEPOWER	V	VOLT
HTR	HEATER	VA	VOLT AMPERE
Hz	HERTZ	VAC	VACUUM
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS	VERT	VERTICAL
IES	ILLUMINATING ENGINEERING SOCIETY	VFD	VARIABLE FREQUENCY DRIVE
IG	ISOLATED GROUND	W	WATT
KCMIL	1000 CIRCULAR MILS	WH	WATER HEATER
KV	KILOVOLT	WP	WEATHER PROOF
KVA	KILOVOLT AMPERES	WR	WEATHER RESISTANT
KW	KILOWATT	XFMR	TRANSFORMER

	ELECTRICAL SYMBOLS
1 E-001	REFERENCE TO DETAIL AND SHEET NUMBER
A E-001	SECTION NUMBER SHEET NUMBER
	POINT OF CONNECTION NEW TO EXISTING
	NEW SURFACE MOUNTED PANEL
	NEW FLUSH MOUNTED PANEL
	EXISTING SURFACE MOUNTED PANEL EXISTING FLUSH MOUNTED PANEL
	FLUORESCENT LIGHT FIXTURE
	EMERGENCY FLUORESCENT LIGHT FIXTURE
0	HIGH BAY LED LIGHT FIXTURE
Н	WALL MOUNTED EXTERIOR LIGHT FIXTURE
$ \hspace{.05cm} \otimes \hspace{.05cm} $	CEILING MOUNTED EXIT LIGHT FIXTURE
₩	WALL MOUNTED EXIT LIGHT FIXTURE
	NEUTRAL CONDUCTOR
	PHASE CONDUCTOR
	GROUND CONDUCTOR
	GROUND, IG CONDUCTORS
	SWITCH LEG AND/OR BRANCH CIRCUIT
	BRANCH CIRCUIT
	HOME RUN TO PANELBOARD
—COM—	EXISTING UNDERGROUND COMMUNICATIONS LINE
UGE —	EXISTING UNDERGROUND ELECTRICAL LINE
\$ \$3	SWITCH, 48" AFF THREE—WAY SWITCH, 48" AFF
рз \$м	MOTOR RATED SWITCH
\$P	SWITCH WITH PILOT LIGHT, 48" AFF
\$os	OCCUPANCY SENSOR SWITCH, 48" AFF
	MOTOR
	DISCONNECT SAFETY SWITCH
	COMBINATION MOTOR STARTER AND DISCONNECT SAFETY SWITCH
	HARDWIRED CONNECTION
\ominus	DUPLEX RECEPTACLE, 18" AFF
	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE
€00"	DUPLEX RECEPTACLE WITH MOUNTING HEIGHT
⊕ıc	ISOLATED GROUND DUPLEX RECEPTACLE
⊕ wp	WEATHER PROOF DUPLEX RECEPTACLE
⊕ GFCI	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE
⊕	DOUBLE DUPLEX RECEPTACLE, 18" AFF
⊕ ∞"	DOUBLE DUPLEX RECEPTACLE WITH MOUNTING HEIGHT
∯ıc	ISOLATED GROUND DOUBLE DUPLEX RECEPTACLE
٠	JUNCTION BOX
-🗷	DATA AND/OR VOICE OUTLETS, 18" AFF
- □ 00"	DATA AND/OR VOICE OUTLETS WITH MOUNTING HEIGHT
C✓	SECURITY CAMERA
PC	PHOTO ELECTRIC CONTROL
C1	LIGHTING CONTACTOR
P	POWER PULL BOX
	, .

COMMUNICATION (COMM.) PULL BOX

GENERAL ELECTRICAL NOTES

- 1.) REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR ELECTRICAL SYSTEMS CONSTRUCTION.
- 2.) PERFORM WORK IN ACCORDANCE WITH THE LATEST EDITIONS, REVISIONS, AMENDMENTS OR SUPPLEMENTS OF APPLICABLE STATUTES, ORDINANCES, CODES OR REGULATIONS OF FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION IN EFFECT ON THE DATE BIDS ARE RECEIVED. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES.
- 3.) FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL ELECTRICAL SYSTEMS.
- 4.) THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF DEVICES, FIXTURES, CONDUIT, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL SECTIONS, DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL/STRUCTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. DISCONNECT, JUNCTION BOXES OR CONDUIT MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT.
- 5.) CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO FABRICATING AND/OR INSTALLING ANY PANELS OR DEVICES. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING, FLOOR AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL/CLOSET SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS, SECTIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. NOTIFY THE ARCHITECT OF ANY CONFLICTS.
- 6.) BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. CONTRACTOR SHALL BE RESPONSIBLE OF FAILURE TO FIELD VERIFY, COORDINATE AND CONFIRM.
- 7.) THE OWNER AND/OR ENGINEER IS NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
- 8.) THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, MOTORS, CONTROLLERS, DISCONNECTS SWITCHGEAR, TRAPS AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT, ENGINEER AND GENERAL CONTRACTOR PRIOR TO MAKE FINAL CHANGES.
- 9.) THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF APPROVED EQUIPMENT WITH THE MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO THE PURCHASE AND TO MAKE FINAL INSTALLATION OF ANY ELECTRICAL PANELS AND/OR CONDUIT SYSTEM.
- 10.) GENERAL CONTROL WIRING, THERMOSTATS, MOTORIZED DAMPERS AND CONDUIT SYSTEM ASSOCIATED WITH HVAC EQUIPMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 11.) COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA). LOCATE DEVICES AND SWITCHES AT HEIGHT AND WITH APPROACH CLEARANCES.
- 12.) THE CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, MATERIALS, CONTROLS, AND FIXTURES TO BE PROVIDED. CONTRACTOR SHALL ENSURE REVIEW ALL PROJECT SUBMITTALS PRIOR TO ISSUING TO THE ENGINEER. ALL SUBMITTALS NOT REVIEWED BY THE CONTRACTOR SHALL BE RETURNED WITHOUT REVIEW BY THE ENGINEER. AFTER REVIEW HAS BEEN PERFORMED, SUBMIT A COPY OF EACH SHOP DRAWING TO THE OWNER WITH THE APPROVAL SEAL OF THE ENGINEER AND THE GENERAL/ELECTRICAL CONTRACTOR.
- 13.) NORMAL BUILDING OPERATIONS CANNOT BE AFFECTED BY ANY CONSTRUCTION ACTIVITIES WITHOUT PRIOR APPROVAL OF THE TENANT AND BUILDING ENGINEER. THE CONTRACTOR SHALL VERIFY ALL WORKING CONDITIONS SUCH AS STARTING TIME, NOISE AND VIBRATION LIMITATIONS, CONFINED SPACE, ETC. THROUGH THE TENANT AND BUILDING ENGINEER AND APPROVAL SHALL BE RECEIVED PRIOR TO START WORK. ANY SHUTDOWN OF ELECTRICAL POWER, MECHANICAL SERVICE, OR PLUMBING UTILITIES SHALL BE COORDINATED WITH THE OWNER AND/OR BUILDING ENGINEER.
- 14.) ARRANGE ALL WORK IN A NEAT, WELL ORGANIZED MANNER WITH SERVICES RUNNING PARALLEL WITH PRIMARY LINES OF THE BUILDING CONSTRUCTION. LOCATE OPERATING AND CONTROL EQUIPMENT PROPERLY TO PROVIDE EASY ACCESS, AND ARRANGE ENTIRE WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND FOR PROPER CODE CLEARANCES.
- 15.) CONTRACTOR SHALL NOT DEVIATE FROM THE DRAWINGS OR INSTRUCTIONS CONTAINED THEREIN IN THESE CONSTRUCTION DOCUMENTS WITHOUT PRIOR WRITTEN APPROVAL. MATERIALS SHALL NOT BE SUBSTITUTED FOR THOSE SPECIFIED, NOR SHALL "OR EQUAL" ITEMS BE FURNISHED WITHOUT THE ENGINEER, ARCHITECT AND/OR OWNER PRIOR FINAL WRITTEN APPROVAL.

TRANSIT SHED 1
REPLACEMENT



PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

COLLINS ENGINEERS

235 PROCTER ST.
PORT ARTHUR, TX 77640
409-895-2550
WWW.COLLINSENGR.COM
TX-FIRM F-9791



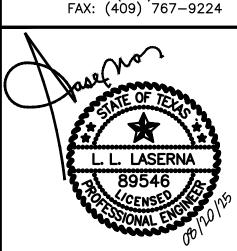
MEPTech Engineering, Inc.

TBPE FIRM # F-10227

5090 ADA AVENUE

BEAUMONT, TEXAS 77708

PHONE: (409) 673-2013



MEPTech Engineering, Inc.

TEXAS REGISTERED ENGINEERING FIRM F-10227

REVISIONS

NO. DESCRIPTION DATE

A ISSUED FOR BID 08/20/25

Designed by: LLL

Drawn by: LLL

Checked by: LLL

Reviewed by: LLL

Revisions by:

PROJECT NO.: 38-14333.00 DATE:

PORT OF PORT ARTHUR
TRANSIT SHED 1
REPLACEMENT

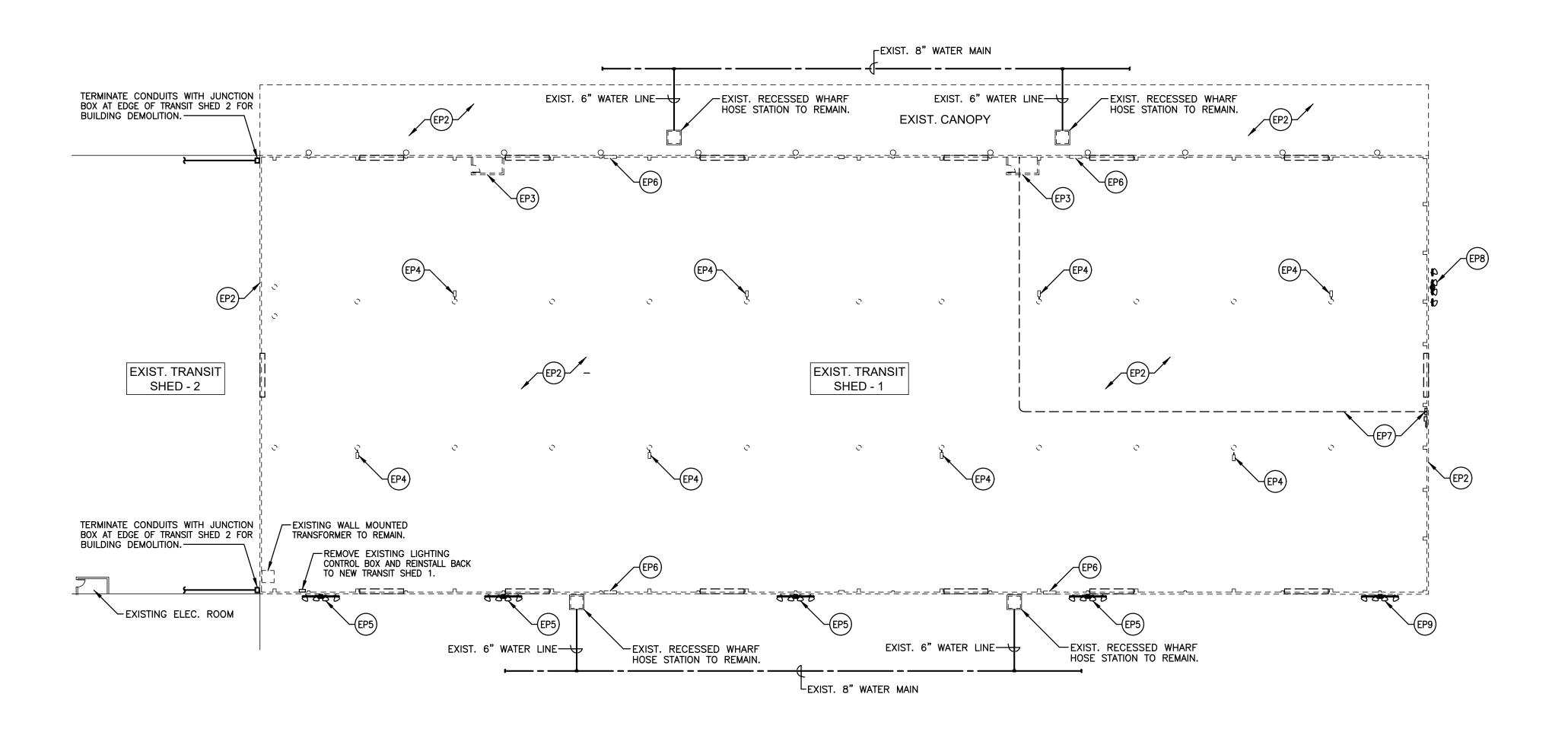
PORT ARTHUR

GENERAL ELEC.
NOTES, SYMBOLS &
ABBREVIATIONS

E-001

SHEET 50 OF 55

DRAW FORM REVISION: 27 DECEMBER 2023



DEMOLITION MEP FLOOR PLAN

DEMOLITION MEP NOTES

- EP1) REFER TO SHEET E-001 FOR ELECTRICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.
- EP2 REMOVE ALL EXISTING LIGHT FIXTURES INSIDE THE TRANSIT SHED 1, AND EXTERIOR WALL/CANOPY MOUNTED LIGHT FIXTURES AND RELATED JUNCTION BOXES, CONDUIT AND CONDUCTORS BACK TO EXISTING PANELS. RETURN TO OWNER THE LIGHT FIXTURES BEING REMOVED. FIELD COORDINATE AND CONFIRM WITH OWNER WHAT LIGHT FIXTURES BEING SALVAGED.
- REMOVE EXISTING PANELS, TRANSFORMERS, CONTACTORS, SECURITY//FIRE ALARM/TECHNOLOGY CONTROL PANELS/DEVICES, RECEPTACLES AND RELATED JUNCTION BOXES, CONDUIT AND CONDUCTORS. EXISTING TECHNOLOGY/ELECTRICAL ROOM TO BE DEMOLISHED. FIELD COORDINATE WITH ALL RELATED TRADES.
- REMOVE ALL EXISTING COLUMN/WALL MOUNTED HOSE STATIONS, AND RELATED GATE/CUT-OFF VALVES AND WATER PIPING BACK TO EXISTING RECESSED WHARF HOSE STATIONS AND CAP AS REQUIRED.
- EP5 EXISTING POLES AND LIGHT FIXTURES TEMPORARILY REMOVE AND SHALL BE INSTALLED BACK AT THE SAME POLE FOUNDATION BY GENERAL CONTRACTOR AFTER INSTALLATION OF NEW TRANSIT SHED 1. ELECTRICAL CONTRACTOR SHALL COORDINATE THE DISCONNECTION AND RECONNECTION OF EXISTING POWER. TERMINATE POWER CIRCUITS/CONDUITS/CONDUCTORS AT THE EDGE OF TRANSIT SHED 2 IF POWER FEEDERS ROUTED ABOVE EXISTING STRUCTURE. RECONNECT POWER FEEDERS TO EXISTING POLE LIGHTS AS REQUIRED AFTER INSTALLATION OF NEW TRANSIT SHED 1.
- EP6 EXISTING WALL MOUNTED HOSE STATIONS, AND RELATED GATE/CUT-OFF VALVES AND WATER PIPING BACK TO EXISTING RECESSED WHARF HOSE STATIONS TO REMAIN. REMOVE AND REINSTALL BACK AT THE SAME LOCATION AS REQUIRED DUE TO DEMOLITION OF EXISTING WALLS. CONFIRM THE EXACT REQUIREMENTS WITH COLLINS ENGINEERS CONSTRUCTION DRAWINGS.
- REMOVE EXISTING PANELS, TRANSFORMERS AND RELATED CIRCUITS, CONTROLS, SUPPORTS, CONDUIT AND CONDUCTORS. REMOVE EXISTING OVERHEAD FEEDER CONDUIT, CONDUCTORS AND RELATED SUPPORTS FROM EXISTING TECHNOLOGY/ELECTRICAL ROOM AS SHOWN.
- EP8 EXISTING POLE, LIGHT FIXTURES AND POLE FOUNDATION SHALL BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR TO REMOVE EXISTING CIRCUIT, CONDUIT AND CONDUCTORS BACK TO EXISTING PANEL. INSTALL IN NEW LOCATION MARKED AS LIGHT FIXTURE TYPE "P" ON SHEET E-003 WITH NEW POLE FOUNDATION BY GENERAL CONTRACTOR AND NEW CIRCUIT AS INDICATED BY ELECTRICAL CONTRACTOR.
- EP9 EXISTING POLE, LIGHT FIXTURES AND POLE FOUNDATION SHALL BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR TO REROUTE EXISTING CIRCUIT, CONDUIT AND CONDUCTORS TO EXISTING POLE RELOCATED TO NEW LOCATION MARKED AS LIGHT FIXTURE TYPE "P1" ON SHEET E-003 WITH NEW POLE FOUNDATION BY GENERAL CONTRACTOR. EXISTING POLE LIGHT FIXTURES CIRCUITED ON EXISTING PANEL "L3" LOCATED IN EXISTING TRANSIT SHED 2 BAY 9 BACK WALL. EXISTING POLE SHALL BE RELOCATED AT 20'-0" TO THE LEFT.





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COLLINS ENGINEERS &

235 PROCTER ST.
PORT ARTHUR, TX 77640
409-895-2550
WWW.COLLINSENGR.COM
TX-FIRM F-9791



MEPTech Engineering, Inc.

TBPE FIRM # F-10227
5090 ADA AVENUE
BEAUMONT, TEXAS 77708
PHONE: (409) 673-2013
FAX: (409) 767-9224



MEPTech Engineering, Inc.

TEXAS REGISTERED ENGINEERING FIRM F-10227

REVISIONS

NO. DESCRIPTION DATE

A ISSUED FOR BID 08/20/25

by: LLL

ed by: LLL

ved by: LLL

ons by:

PROJECT NO.: 38-14333.00 DATE:

TRANSIT SHED 1
REPLACEMENT

PORT ARTHUR

MEP FLOOR PLAN & NOTES

DEMOLITION

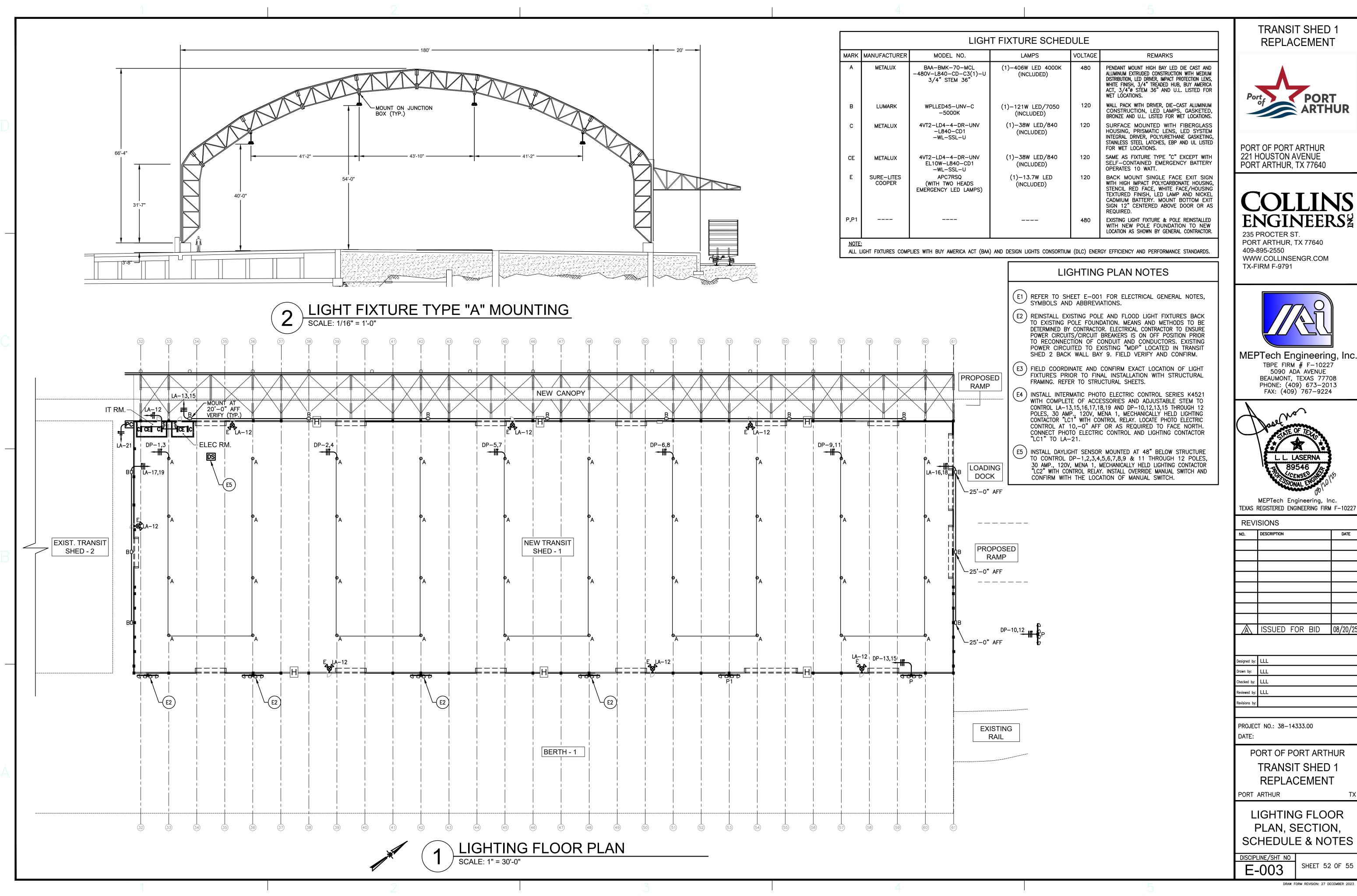
DISCIPLINE/SHT NO E-002

SHEET 51 OF 55

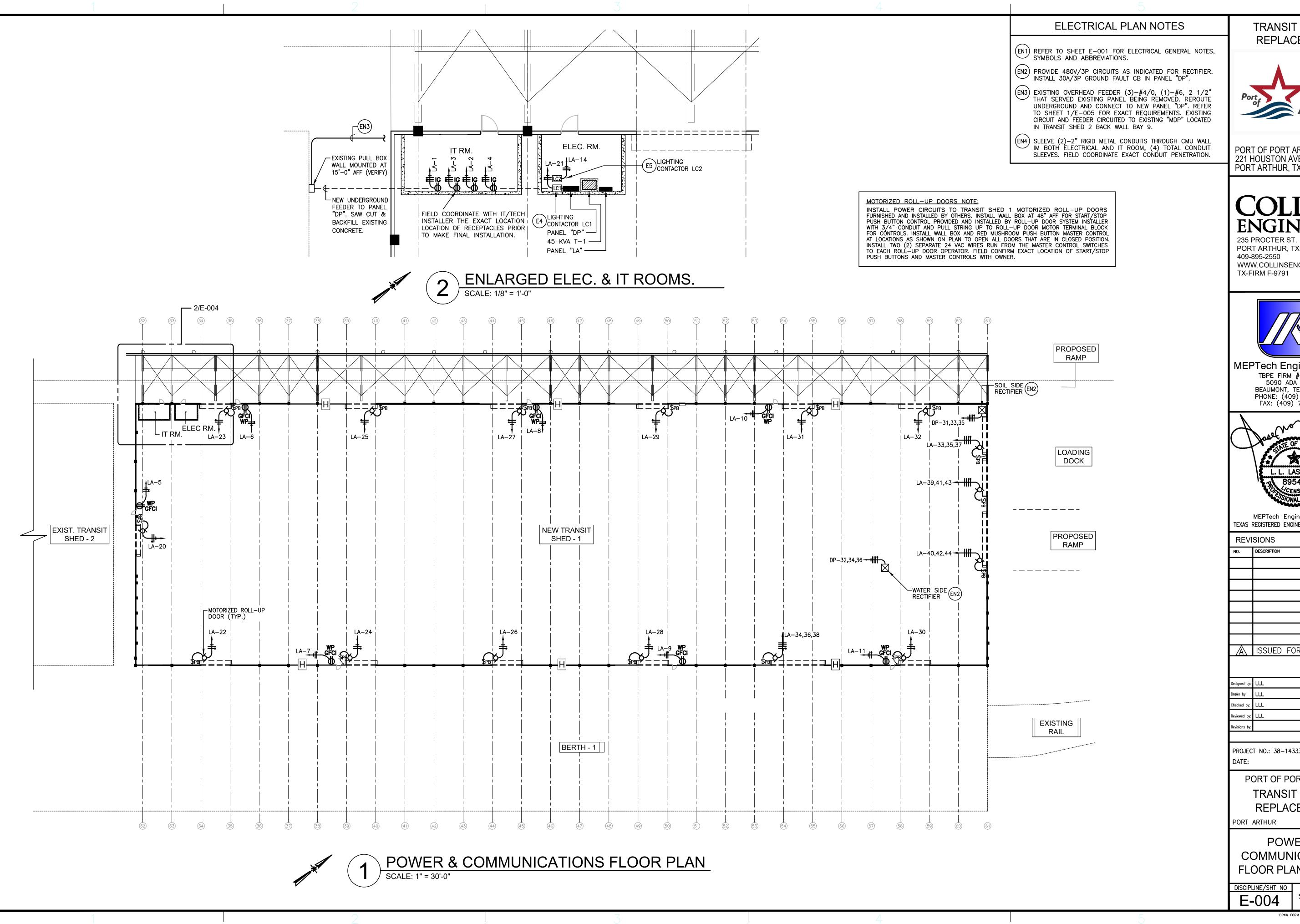
EP8

tb

DRAW FORM REVISION: 27 DECEMBER 2023



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TRANSIT SHED 1 REPLACEMENT



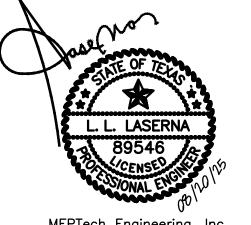
PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

ENGINEERS

PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



MEPTech Engineering, Inc. TBPE FIRM # F-10227 5090 ADA AVENUE
BEAUMONT, TEXAS 77708
PHONE: (409) 673-2013
FAX: (409) 767-9224



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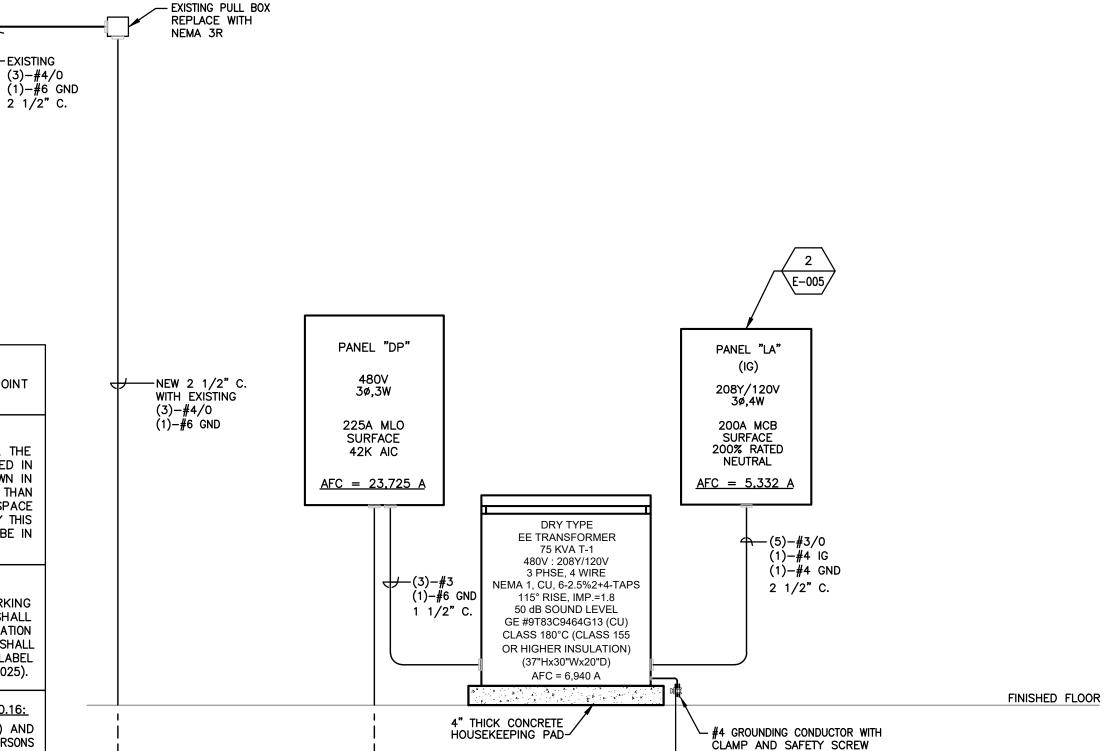
PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR TRANSIT SHED 1 REPLACEMENT

POWER & COMMUNICATIONS FLOOR PLAN & NOTES

DISCIPLINE/SHT NO

SHEET 53 OF 55



-EXISTING

2 1/2" C.

SHORT-CIRCUIT CURRENTS NOTES:

COMPLIANCE, ARTICLE 110.26 NEC.

AVAILABLE FAULT CURRENT LABELING:

WORKING CLEARANCES:

OF THE EQUIPMENT.

CALCULATION OF SHORT-CIRCUIT CURRENTS: POINT-TO-POINT

SYSTEMS OPERATING AT 600 VOLTS OR LESS TO GROUND, THE

WORKING CLEARANCE SHALL NOT BE LESS THAN INDICATED IN

TABLE 110.26 (A)(1) IN ADDITION TO THE DIMENSION SHOWN IN TABLE 110.26(A)(1), THE WORKING SPACE SHALL NOT BE LESS THAN

30 IN. WIDE IN FRONT OF THE ELECTRIC EQUIPMENT, THIS SPACE

SHALL BE CLEAR FROM THE FLOOR TO THE HEIGHT REQUIRED BY THIS

SECTION, CHECK ACCESS, ENTRANCE AND ILLUMINATION TO BE IN

IN LIEU OF THE MAXIMUM AVAILABLE FAULT CURRENT MARKING

AS REQUIRED BY 110.24, A PERMANENT AFFIXED LABEL SHALL

BE APPLIED WITH THE FAULT CURRENT AT THE TIME OF INSTALLATION

AND CALCULATION. THE LABEL SHALL BE 2"x3" IN SIZE AND SHALL

BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL

SHALL ALSO INCLUDED THE DATE OF THE CALCULATION (3/31/2025).

ARC-FLASH HAZARD WARNING PER 2023 NEC ARTICLE 110.16:

THE MARKING SHALL MEET THE REQUIREMENTS IN 110.21(B) AND

SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PÉRSONS

BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE

METHOD PER NEC 2023 ARTICLE 110.9, 110.10 & 240.1.

LOAD ANALYSIS	_
LOADS: VOLT-AMPERES (VA)	VA
LIGHTING LOADS (NEC 2023 ARTICLE 220.12) LIGHTING LOADS: 21,001 x 1.25 = 26,251 VA	26,25
RECEPTACL LOADS (NEC 2023 ARTICLE 220.14 (K)) RECEPTACLE LOADS: 31,430 VA	31,430
MOTOR AND HVAC LOADS (NEC 2023 ARTICLE 430.24.25 & 440) a.) HVAC = 0 b.) 25% OF THE HIGHEST MOTOR (1 HP-480/3ø) = 0 c.) EQUIPMENT & MISCELLANEOUS= 14,001 VA TOTAL HVAC LOAD = 14,001 VA	14,00

<u>REMARKS</u>:

TOTAL CALCULATED DEMAND LOAD IN AMPS (SERVICE VOLTAGE IS 480 VAC 3P/3W) = 71.682/(480 x 1.732) = 86.2 AMPS. THEREFORE, 200 AMPS SERVICE

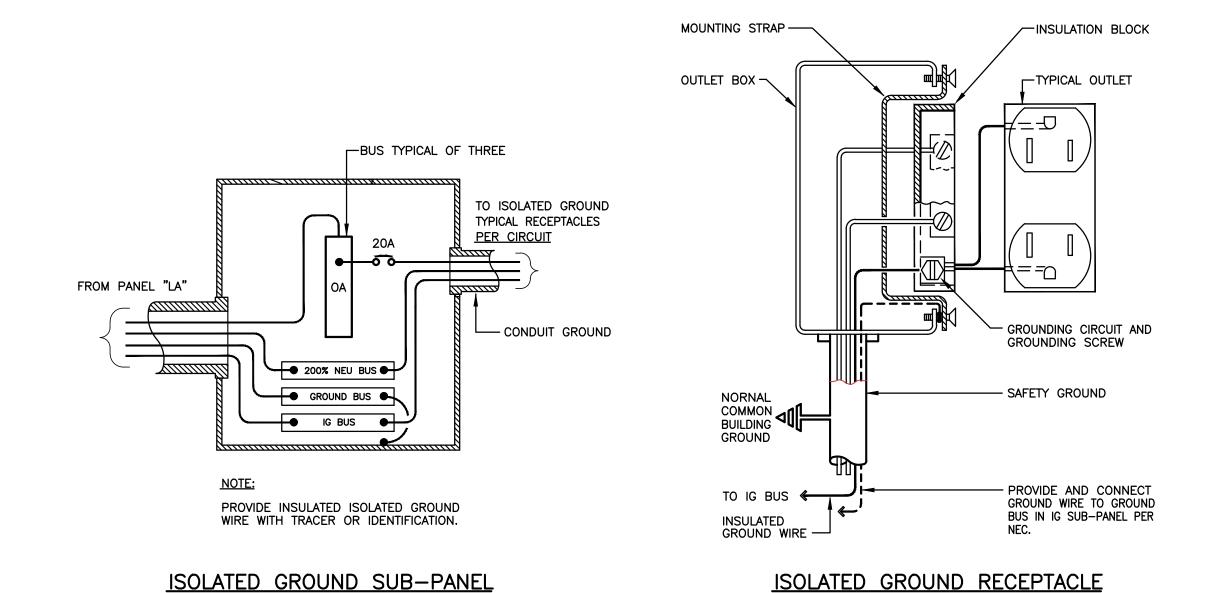
IS SELÉCTED.

A.) DEMAND LOAD - BUILDING

ELECTRICAL RISER ONE-LINE DIAGRAM SCALE: NOT TO SACLE

-3/4"ø x 10'-0" LÓNG COPPERWELD

GROUND ROD



ISOLATED GROUND REQUIREMENTS SCALE: NOT TO SACLE

TRANSIT SHED 1 REPLACEMENT

ELECTRICAL RISER NOTES

ER1) ELECTRICAL CONTRACTOR MUST CONFIRM THE ACTUAL PHYSICAL DIMENSIONS OF NEW PANELS AND TRANSFORMER PRIOR TO DIMENSIONS OF NEW PANELS AND TRANSFORMER PRIOR TO FINAL INSTALLATION AND TO BE INSTALLED PER NEC OR AT

FIELD VERIFY AND COORDINATE EXACT ROUTING OF ALL CONDUITS WITH ALL TRADES PRIOR TO FINALL INSTALLATION.

"WORKING HEIGHT".

71,682



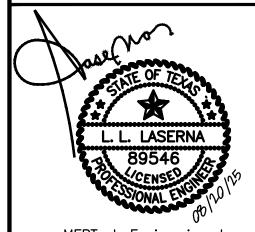
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ENGINEERS

235 PROCTER ST. PORT ARTHUR, TX 77640 409-895-2550 WWW.COLLINSENGR.COM TX-FIRM F-9791



MEPTech Engineering, Inc. TBPE FIRM # F-10227 5090 ADA AVENUE BEAUMONT, TEXAS 77708 PHONE: (409) 673-2013 FAX: (409) 767-9224



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PROJECT NO.: 38-14333.00

PORT OF PORT ARTHUR TRANSIT SHED 1 REPLACEMENT

PORT ARTHUR

ELECTRICAL RISER, LOAD ANALYSIS, **NOTES & DETAILS**

DISCIPLINE/SHT NO

SHEET 54 OF 55 DRAW FORM REVISION: 27 DECEMBER 2023

				P	AN	EL'	'D	P	" S	SC	HED	UL	E								
MOUNTING: SURFACE	OR SQUARE D							FAULT CURRENT: 23,725 A							: MLO	BUS:	225 A	FEED	: TOP		
VOLTS: 480 Vac BOLT-On		ENCLOSUR	CLOSURE: NEMA 1 WITH GROUND BAR FAULT BRACING: 42K AIC SC											FULLY	RATED	MAIN	SIZE	BREAKER	: NONE	BUS:	COPPER
PHASE: 3 WIRE: 3 Hz.: 60		ISOLATED	GROUN	ID: NO	NE				Т	vss/s	SPD: NON	E				LOC	ATION:	ELEC. RO	ОМ		
DESCRIPTION	CONDUIT	WIRE & IG/GROUND	LO	AD (k\	/A)	DDEVKED	ΠŊ	ØΑ	øΒ	øC j	BREAKER	LO	AD (k'	VA)	WIRE & IG/GROUND	CONDUIT		DES	CRIPTION	1	
DESCRIPTION			ØΑ	øΒ	øС	DIVEAREN	S. S.	٩l	٩l	<u> </u>	DIVERNER	ØΑ	øΒ	øС	SIZE		DESCRIPTION				
LIGHTS, WAREHOUSE - TRANSIT SHED 1	3/4"	(2) - #10, (1) -# 10	1.750			20/2	 ' 	+	\pm	+ 2	20/2	1.750			(2)-#10, (1)-#10	3/4"	LIGHTS	, WAREHO	<u> USE – 1</u>	RANSIT SH	HED 1
" LIGHTS, WAREHOUSE - TRANSIT SHED 1	1"	- (2)-#8, (1)-#10		1.750	1.750	20/2	5	王		+ 4 + 6	20/2		1.750		- (2)-#8, (1)-#10	1*	" LICHTS	WARFHO	IISF _ T	RANSIT SH	4FD 1
"	 	-	1.750		1.750	-	17	+	+	1 8	-	1.750		1.750	-	-	"	, WAILLIO	03L - 1	IMION 31	ILD I
LIGHTS, WAREHOUSE - TRANSIT SHED 1	1"	(2)-#8, (1)-#10		1.750		20/2	9	\pm	\downarrow	10	20/2		0.570		(2)-#6, (1)-#8	1-1/2"	POLE I	LIGHTS, LO	DADING D	OCK	
"	-	-			1.750	_	11	\mp		12	_			0.570		-	-	•			
POLE LIGHTS, WHARF DOCK	1-1/4"	(2) - #8, (1) - #10	0.570			20/2	13	•		14							SPACE				
n	-	-		0.570		-	15	+	•	16							SPACE				
SPACE							17	+		+ 18							SPACE				
SPACE							19	+	\pm	+ 20							SPACE				
SPACE							21	\pm	*	+ 22							SPACE				
SPACE							23	\pm		<u>+</u> 24							SPACE				
SPACE							25	+		+ 26							SPACE				
SPACE							27	+	*	 28							SPACE				
SPACE		4.5					29	\pm	+	+ 30					4.0 0.0 0.0		SPACE				
RECTIFIER, SOIL SIDE - TRANSIT SHED 1	1 1/2	(4) - #6, (1) -# 8	2.800			30/3	31	+	\pm	+ 32	30/3	1.867			(4) - # 6, (1)- # 8	1 1/2	RECTIF	ER, WATE	R SIDE -	- TRANSIT	SHED 1
n	-	-		2.800		-	33	+	*	+ 34	-		1.867		-	-	"				
"		-			2.800	-	35	\pm	+	♦ 36	-			1.867	-	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
45 KVA TRANSFORMER "T-1"/PANEL "LA"	1 1/2	(3)-#3, (1)-#6				100/3	37	+		+ 38							SPACE				
-	-			17.477		-	39	+	1	+ 40							SPACE				
-	-				17.477		41			+ 42							SPACE				
NOTES:					= 29					28.5	34 TOTAL	kVA Ø0	= 2	7.964							
ALL PANELS TO BE IDENTIFIED WITH ENGRAVED PHENOLIC RESIN PLACARDS.				L CON	INECTE	D LOAD	-								-						
2 PANEL CIRCUIT SCHEDULES TO BE TYPED, NOT HANDWRITTEN,			 ,	TATA!	DEMAN	ID I OAD				AMP					-						
ON PANEL MANUFACTURERS SUPPLIED TEM	LAIE.			TOTAL DEMAND LOAD = 71.6							ZOZO NEO ANTIOLE ZIO.O										
			86.3 AMPS ARTICLE 220 II &									c III									

				P	MAY	IEL '	"L/	Δ"	S	CH	HED	UL	Ε				
MOUNTING: SURFACE	UARE D							ULT	CURRENT	: 5,33	32 A			MAII	N: MCB BUS: 225 A FEED: BOTTOM		
VOLTS: 208Y/120 Vac BOLT-On		ENCLOSURE	E: NEMA 1 WITH GROUND BAR							JLT E	BRACING:	10K	AIC SC	FULLY	RATED	MAII	N SIZE BREAKER: 200 A BUS: COPPER
PHASE: 3 WIRE: 4 Hz.: 60		ISOLATED G	GROUND: YES, 200% RATED NEUTRAL							SS/S	PD: NONI	 E				LOC	ATION: ELEC. ROOM
	5	WIRE &	LOAD (kVA)				I⊑lø	A ØE	S &C CIRCUIT			LOAD		/A)	WIRE &	5	
DESCRIPTION	CONDUIT	IG/GROUND SIZE	ØΑ	øΒ	øς	BREAKER	CIRCUIT	γ γ	ρ	왕	BREAKER	ØΑ	øΒ	øС	IG/GROUND SIZE	CONDUIT SIZE	DESCRIPTION
NETWORK, IT/SECURITY ROOM		(2)-#10, (1)-#10	2.400			30/1	1 4	+	#	2		2.400			(2)-#10, (1)-#10		NETWORK, IT/SECURITY ROOM
CCTV, IT/SECURITY ROOM		(2)-#12, (1)-#12		1.500		20/1	3 -	•	\dashv	4	30/1		2.000		(2)-#10, (1)-#10		PA SYSTEM, IT/SECURITY ROOM
RECEPTACLE, TRANSIT SHED 1		(2)-#10, (1)-#10			0.180	20/1	5 -		-	6	20/1			0.180	(2)-#10, (1)-#10		RECEPTACLE, TRANSIT SHED 1
RECEPTACLE, TRANSIT SHED 1		(2)-#10, (1)-#10				20/1	7 -	 	\dashv	8		0.180			(2)-#8, (1)-#10		RECEPTACLE, TRANSIT SHED 1
RECEPTACLE, TRANSIT SHED 1		(2)-#8, (1)-#10		0.180		20/1	9 -	 	ightharpoons	10	20/1		0.180		(2)-#8, (1)-#10		RECEPTACLE, TRANSIT SHED 1
RECEPTACLE, TRANSIT SHED 1		(2)-#8, (1)-#10			0.180	•	11 -	\vdash	—	12	20/1				(2)-#6, (1)-#8	1"	LIGHTS, EXIT SIGN/EM. LIGHTS ELEC/IT/TS1
LIGHTS, CANOPY EXTERIOR WALL - TRANSIT SHED 1		(2)-#8, (1)-#10				20/2	13 -		_	14	•	0.100			(2)-#12, (1)-#12		DAYLIGHT SENSOR/LIGHTING CONTACTOR "LC2", ELEC. RM.
27	-	-	-	0.424		-	15 -		_	16	20/2	00	0.182		(2)-#8, (1)-#10		LIGHTS, EXTERIOR WALL - TRANSIT SHED 1
LIGHTS, EXTERIOR WALL - TRANSIT SHED 1	1"	(2)-#10, (1)-#10			0.182	20/2	17 -			18			51.52	0.182		_	n
27	-		0.182		01.02	-	19 -	•	#	20	30/1	1.920		01102	(2)-#8, (1)-#10	1 1/4"	MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
PHOTOCELL, EXTERIOR WALL, LIGHTING CONTACTOR "LC1", ELEC. RM.	1*	(2)-#12, (1)-#12		0.100		20/1	21 -		\Rightarrow	22	30/1		1.920		(2)-#8, (1)-#10		MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1		(2)-#8, (1)-#10		000	1.920	30/1	23 -			24	30/1		1.020	1.920	(2)-#6, (1)-#8		MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1		(2)-#8, (1)-#10	1 920		1.020	30/1	25 -		士	26		1.920		11020	(2)-#6, (1)-#8	_	MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
		(2)-#6, (1)-#8	1.020	1.920			27 -		_	28	30/1	1.020	1.920		(2)-#4, (1)-#8		MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
		(2)-46, (1)-48		1.020	1.920	30/1	29 -		\Rightarrow	30	30/1		1.020	1 920	(2)-#3, (1)-#6		MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
	1 1/2°	 	1 020		1.920	30/1	31 -		ightharpoons	32		1.920		1.920	(2) -4 4, (1) -4 8		MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
·	1 1/2"		1.920	1.320		20/3	33 -			34	20/3	1.920	1.320		(3)- # 6, (1)- # 8	_	MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
" " " " " " " " " " " " " " " " " " "	-	(J)_#0, (1)_#0		1.320	1.320	-	35 -		\dashv	36	20/3		1.320	1.320	(3)_#0, (1)_#0	-	MOTORIZED ROLL-OF DOOR, TRANSIT SHED T
"			1.320		1.320		37 -		<u> </u>	38		1.320		1.320			
			1.320			20/3			- F			1.320	4 700		_	1 1/0"	MOTORIZED DOLL LID DOOD TRANSIT CHED 1
MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1	1 1/2"	(3)-#6, (1)-#8		1.320		•	39 -		\exists	40	20/3		1.320	4 700	(3)-#6, (1)-#8	1 1/2	MOTORIZED ROLL-UP DOOR, TRANSIT SHED 1
,		-	4 700		1.320	-	41 -			42		4 700		1.320	-	-	"
"			1.320			-	43	+ +		44	-	1.320			-	-	n
LIGHTING CONTACTOR "LC2", ELEC. RM.	J/4 [™]	(2)-#12, (1)-#12		0.100		20/1	45	\vdash		46	20/1 20/1						SPARE
SPARE						20/1	47	+	\dashv	48	20/ 1						SPARE
SPACE							49	+	\dashv	50							SPACE
SPACE							51	\vdash	_	52							SPACE
SPACE							53			54							SPACE
NOTES:			TOTAL	. kVA ØA	= 20).746 TO	OTAL kV	/A øB	= 1	17.52	6 TOTAL	kVA ØC	: = 14	1.159			
1 ALL PANELS TO BE IDENTIFIED WITH ENGRAVED PHENOLIC RESIN PLACARDS.			TOTA	AL CON	NECTE	D LOAD	=										
	IOT HA	ANDWRITTEN						145	.5	AMPS	<u> </u>						
(2) PANEL CIRCUIT SCHEDULES TO BE TYPED, NOT HANDWRITTEN, ON PANEL MANUFACTURERS SUPPLIED TEMPLATE.				TOTAL	DEMAN	ID LOAD	=	52.4	31	kVA			RTICLE				
								145	.5	AMPS	AR'	TICLE 2	20 &	: III			

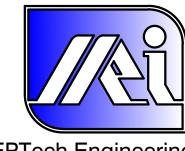
TRANSIT SHED 1
REPLACEMENT



PORT OF PORT ARTHUR 221 HOUSTON AVENUE PORT ARTHUR, TX 77640

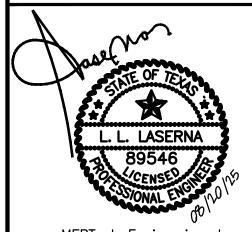
COLLINS ENGINEERS

235 PROCTER ST.
PORT ARTHUR, TX 77640
409-895-2550
WWW.COLLINSENGR.COM
TX-FIRM F-9791



MEPTech Engineering, Inc.

TBPE FIRM # F-10227
5090 ADA AVENUE
BEAUMONT, TEXAS 77708
PHONE: (409) 673-2013
FAX: (409) 767-9224



MEPTech Engineering, Inc.
TEXAS REGISTERED ENGINEERING FIRM F-10227

REVISIONS

NO. DESCRIPTION DATE

A ISSUED FOR BID 08/20/25

Designed by:	LLL
Drawn by:	Ш
Checked by:	LLL
Reviewed by:	LLL
Revisions by:	

PROJECT NO.: 38-14333.00 DATE:

PORT OF PORT ARTHUR
TRANSIT SHED 1
REPLACEMENT

PORT ARTHUR

PANEL SCHEDULES

DISCIPLINE/SHT NO E-006

SHEET 55 OF 55

DRAW FORM REVISION: 27 DECEMBER 2023