

2/12/2025 11:18:17 AM BIM 360://1220834 Cameron Prairie NWR/1220834\_Cameron NWR\_Pole Barn\_ARCH\_V01.rvt

# Cameron Prairie National Wildlife Refuge Pole Barn

LA-27  
Bell City, LA 70630

100% ISSUED FOR CONSTRUCTION

CONTRACT NUMBER: 140FC123F0003

02/12/2025

**POND**

3500 Parkway Lane  
Suite 500  
Peachtree Corners  
Georgia 30092

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CONSULTANT

CLIENT INFORMATION



US Fish & Wildlife Services

PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: R. ELLIOTT  
DRAWN BY: U. MARGULL  
CHECKED BY: K. KOTELLOS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

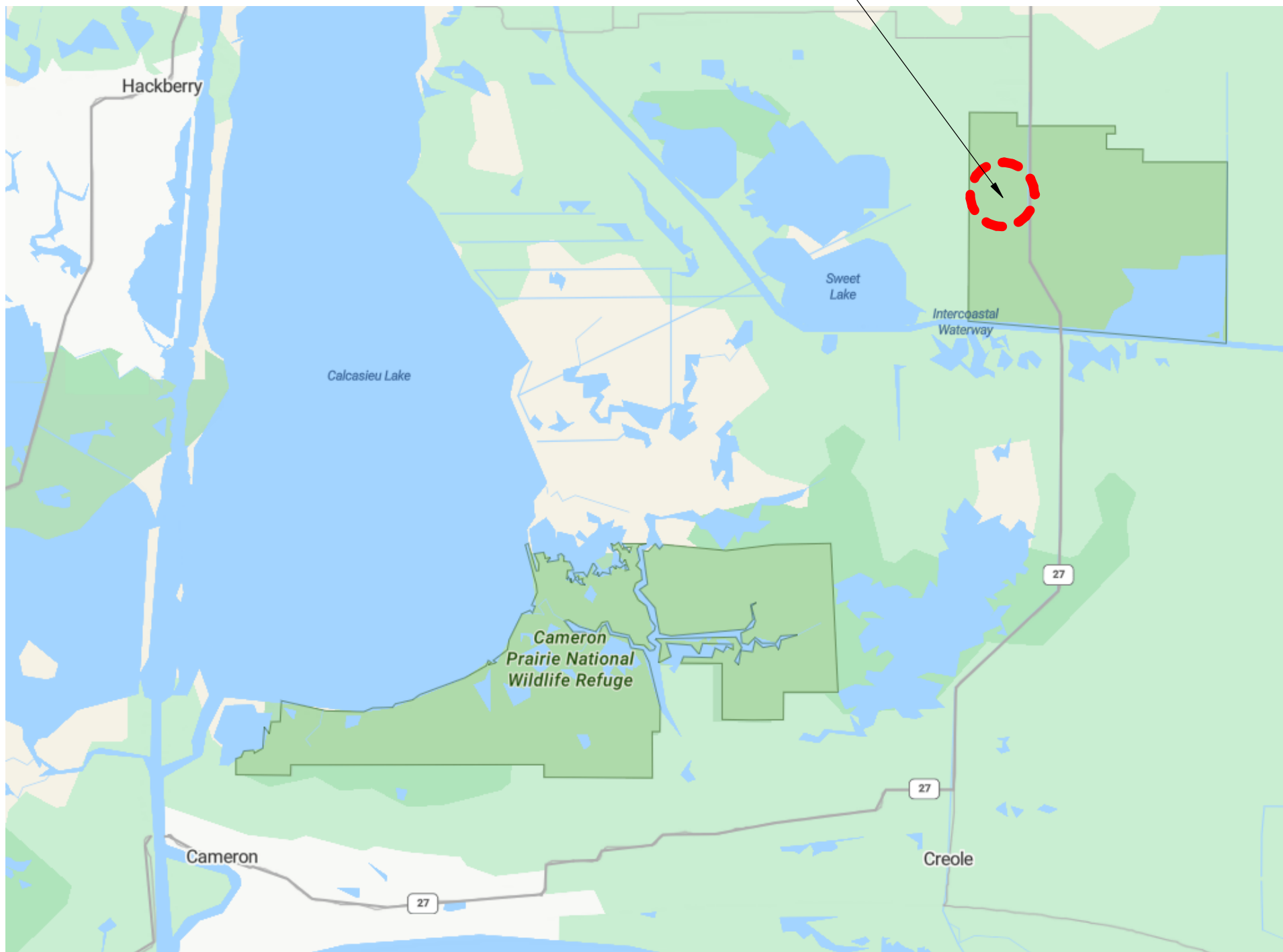
COVER SHEET &  
SHEET INDEX

SHEET NUMBER

G-001

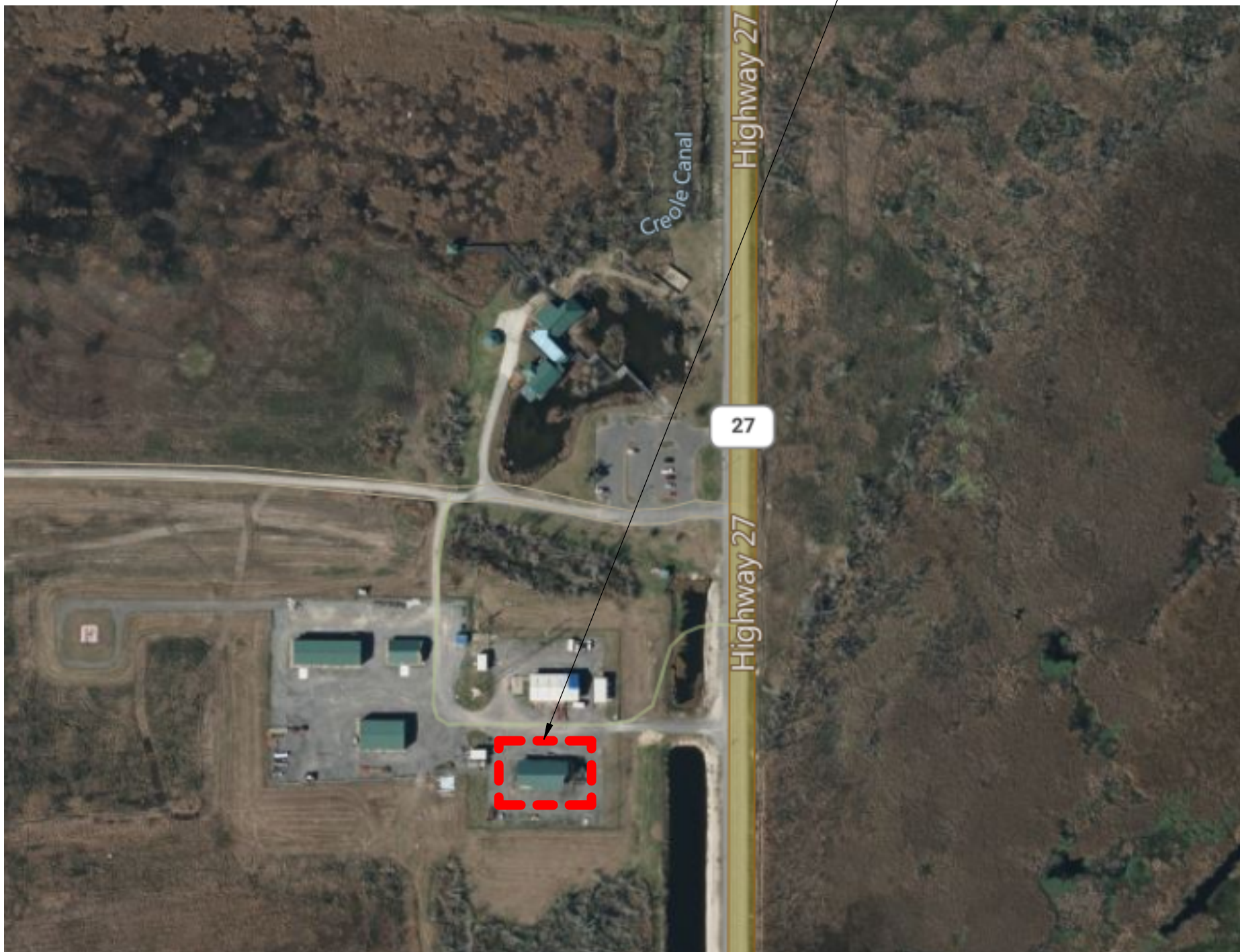
ORIGINAL SHEET SIZE:  
24" X 36"

SCOPE OF WORK AREA

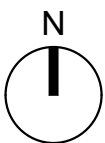


**PROJECT VICINITY MAP**  
SCALE: SCALE: N.T.S.

POLE BARN



**PROJECT LOCATION MAP**  
SCALE: SCALE: N.T.S.



## DESIGN TEAM

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GENERAL STRUCTURAL NOTES:

FOR NEW CONSTRUCTION ONLY

- A. GENERAL
- THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS BEFORE THEY ARE PROVIDED TO THE CONTRACTING OFFICER. THE CONTRACTOR'S REVIEW SHALL BE DOCUMENTED WITHIN THE SUBMITTAL. THE CONTRACTING OFFICER RESERVES THE RIGHT TO REJECT SUBMITTALS THAT HAVE NOT BEEN FIRST REVIEWED BY THE CONTRACTOR. THE ACCURACY AND COMPLETENESS OF THE SUBMITTALS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING ALL ERRORS AND OMISSIONS. IN ADDITION, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL MEANS, METHODS, AND SEQUENCING OF CONSTRUCTION.
  - THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE EXPERIENCED AND QUALIFIED TO PERFORM THE TYPE OF CONSTRUCTION REQUIRED TO COMPLETE THE WORK PRESCRIBED BY THE CONTRACT DOCUMENTS.
  - THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PRE-ENGINEERED METAL BUILDING (PEMB), ARCHITECTURAL, AND ELECTRICAL DRAWINGS, AND THE SPECIFICATIONS.
  - THE CONTRACT DOCUMENTS WERE PREPARED AS A COMPLETE SET OF PROJECT DRAWINGS AND SPECIFICATIONS. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL INFORMATION PROVIDED IN THE ARCHITECTURAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY OF ANY CONFLICTS, OMISSIONS, OR DISCREPANCIES. THIS COORDINATION SHALL BE PERFORMED BEFORE THE PROCUREMENT OF MATERIALS AND/OR FABRICATION OF ANY PROJECT COMPONENTS.
  - WHERE SECTION IS SHOWN AND DETAILED, OTHER SECTIONS OF SIMILAR CONDITION SHALL BE DETAILED THE SAME OR OPPOSITE HAND, WHETHER SPECIFICALLY NOTED OR NOT.
  - CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE BEGINNING CONSTRUCTION. NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES.
  - COORDINATE SIZES AND LOCATIONS OF ALL FLOOR AND ROOF PENETRATIONS WITH PEMB AND ARCHITECTURAL REQUIREMENTS.
  - CONTRACTING OFFICER'S APPROVAL MUST BE SECURED FOR ALL SUBSTITUTIONS. SUCH APPROVAL MAY ALSO BE WITHHELD AT THE SOLE DISCRETION OF THE CONTRACTING OFFICER.
  - THE STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE FOLLOWING:
    - LOUISIANA STATE UNIFORM CONSTRUCTION CODE, ADOPTED JAN 1 2023.
    - INTERNATIONAL BUILDING CODE, 2021 EDITION (IBC 2021).
    - AMERICAN SOCIETY OF CIVIL ENGINEERS, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES," 2016 EDITION (ASCE 7-16).
  - THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.
  - DO NOT SCALE DRAWINGS, USE DIMENSIONS.
  - DESIGN LOADS USED IN THE DESIGN OF THE STRUCTURAL SYSTEMS IN THIS PROJECT ARE AS FOLLOWS:
    - RISK CATEGORY II
    - DEAD LOAD:  
ROOF (NOT INCLUDING FRAMING SELF WT.) 5 psf  
COLLATERAL 5 psf
    - LIVE LOAD:  
ROOF 20 psf (REDUCIBLE)  
SLAB-ON-GRADE 250 psf (EXISTING, ASSUMED)
    - ROOF SNOW LOAD:  
GROUND SNOW LOAD,  $p_g$  5 psf
    - WIND DESIGN CRITERIA:  
EXPOSURE CATEGORY D  
BASIC WIND SPEED,  $V$  137 mph (FACTORED, ULTIMATE LOAD)  
106.1 mph (UNFACTORED, SERVICE LOAD)  
INTERNAL PRESSURE COEFFICIENT,  $GC_p$   $\pm 0.55$ , PARTIALLY ENCLOSED IN LONGITUDINAL DIRECTION  
 $\pm 0.00$ , OPEN IN TRANSVERSE DIRECTION
    - SEISMIC DESIGN CRITERIA:  
SPECTRAL RESPONSE ACCELERATION:  
 $S_s$  (SHORT PERIOD (0.2 SECOND)) 0.100 g  
 $S_1$  (LONG PERIOD (1.0 SECOND)) 0.055 g  
 $S_{DS}$  (SHORT PERIOD (0.2 SECOND)) 0.088 g  
 $S_{D1}$  (LONG PERIOD (1.0 SECOND)) 0.081 g  
SITE CLASS CLASS D  
SEISMIC DESIGN CATEGORY B  
LATERAL FORCE RESISTING SYSTEM MOMENT RESISTING FRAME SYSTEMS: STEEL ORDINARY  
MOMENT FRAMES  
IMPORTANCE FACTOR,  $I_e$  1.0  
RESPONSE MODIFICATION COEFFICIENT,  $R$  3.5  
SEISMIC RESPONSE COEFFICIENT,  $C_s$  0.025  
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE  
SEISMIC BASE SHEAR,  $V$  1.0 K
  - ALL VERTICAL ELEVATIONS ARE BASED ON THE CONTROL ELEVATION FROM SURVEY BY OTHERS.

- B. FOUNDATION
- FOUNDATIONS FOR THIS STRUCTURE HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL ENGINEERING REPORT, PREPARED BY ARDAMAN & ASSOCIATES DATED APRIL 19, 2023, AND ENTITLED "REPORT ADDENDUM #1, PROPOSED BUNKHOUSE, EDUCATION BUILDING, AND POLE BARN AT CAMERON PRAIRIE NWR" (COMPANY # 23-84-2806).
  - FOUNDATIONS HAVE BEEN DESIGNED FOR A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2000 psf.
  - REFER TO THE GEOTECHNICAL REPORT AND SPECIFICATION SECTION 31 20 00 FOR REQUIREMENTS FOR REMOVAL OF UNSATISFACTORY MATERIAL UNDER FOOTINGS, SLABS, AND FOUNDATIONS AND FOR THE BACKFILLING, COMPACTION, AND TESTING OF SATISFACTORY MATERIAL TO REPLACE IT. REFER TO GEOTECHNICAL REPORT FOR ALL ADDITIONAL PREPARATION REQUIREMENTS. WHERE THERE IS A CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL APPLY BETWEEN THE SPECIFICATION AND THE GEOTECHNICAL REPORT.
  - PRIOR TO PLACING FOUNDATION CONCRETE, AND AFTER COMPACTION OF SUBGRADE, ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND TESTED BY A QUALIFIED GEOTECHNICAL TECHNICIAN. TESTING SHALL INCLUDE IN PLACE DENSITY TESTING, WHICH WILL REQUIRE ESTABLISHING THE OPTIMUM MOISTURE CONTENT OF THE SUBGRADE. IF THE SUBGRADE HAS LESS THAN THE STATED ALLOWABLE BEARING CAPACITY (SEE NOTE 2 ABOVE) THE WEAK SUBGRADE SHALL BE REMOVED, RECOMPACTED, AND RETESTED UNTIL IT IS SATISFACTORY AT NO ADDITIONAL COST TO THE OWNER. CONCRETE PLACEMENT SHALL NOT PROCEED UNTIL THE SUBGRADE MEETS THE MINIMUM DENSITY REQUIREMENTS OF SPECIFICATION SECTION 31 20 00 AND THE GEOTECHNICAL REPORT, WHICHEVER IS MORE STRINGENT.
  - NO UNBALANCED BACKFILLING SHALL BE DONE AGAINST CONCRETE UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY CONSTRUCTION BRACING OR BY PERMANENT CONSTRUCTION.
  - WATER SHALL NOT BE ALLOWED TO ACCUMULATE IN EXCAVATIONS.

- C. CAST-IN-PLACE CONCRETE
- CAST-IN-PLACE CONCRETE FOR THIS PROJECT SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY" ACI 318-19 AND ACI 318R-19.
  - REFERENCE PROJECT SPECIFICATION SECTION 03 30 00 "CAST-IN-PLACE CONCRETE."
  - CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

AREA	$f'_c$ (28 DAYS)	AIR CONTENT	MAX. W/C RATIO	MAX. SLUMP
FOUNDATIONS & PEDESTALS	4,000 psi	< 6%	0.45	4" $\pm$ 1"
REMAINING AREAS	4,000 psi	< 3%	0.45	4" $\pm$ 1"

- ALL EXPOSED CONCRETE EDGES SHALL HAVE 3/4" CHAMFER, WHETHER SPECIFICALLY NOTED OR NOT.
- TYPICAL SLAB FINISH SHALL BE BROOM FINISH FOR EXTERIOR SLABS.
- ALL ANCHOR RODS SHALL BE BLACK STEEL.
- CONCRETE FORMWORK SHALL COMPLY WITH ACI 347, LATEST EDITION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMWORK.
- DURING AND IMMEDIATELY AFTER PLACING, CONCRETE SHALL BE THOROUGHLY COMPACTED BY SPADING OR MECHANICAL VIBRATING TO PROVIDE DENSE CONCRETE FREE OF HONEYCOMBING.
- DIRECTLY AFTER FORMS HAVE BEEN REMOVED, ALL EXPOSED TIE WIRES AND STAPLED ENDS SHALL BE REMOVED FROM CONCRETE SURFACES TO BE EXPOSED. CUT TIES FLUSH WITH FINISHED SURFACES FOR ALL OTHER CONCRETE. RUB SMOOTH OR CUT OFF FINS AND ROUGH PLACES. REMOVE ALL LOOSE CONCRETE AND OTHER IRREGULARITIES. PATCH AND FILL VOIDS WITH BONDING AGENT AS REQUIRED.
- ROUGHEN ALL CONSTRUCTION JOINTS TO A MINIMUM OF 1/4" AMPLITUDE UNLESS NOTED OTHERWISE.
- LIMIT FLYASH CONTENT TO 20% MAX (BY MASS)
- USE MAXIMUM COARSE AGGREGATE SIZE OF 3/4 INCH.



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Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: D. SKULLY  
DRAWN BY: D. SKULLY  
CHECKED BY: W. HAYNES  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

GENERAL  
STRUCTURAL  
NOTES

SHEET NUMBER

S-001

SHEET 1 OF

ORIGINAL SHEET SIZE:  
24" X 36"

100% ISSUED FOR CONSTRUCTION

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GENERAL STRUCTURAL NOTES (CONT.):

D. CONCRETE REINFORCEMENT:

- REINFORCING STEEL SHALL CONFORM TO ASTM A615 SUPPLEMENT SI, GRADE 60, OF DOMESTIC MANUFACTURER.
- REINFORCEMENT SHALL BE FABRICATED TO SHAPES AND DIMENSIONS SHOWN AND SHALL CONFORM TO THE REQUIREMENTS OF CRSI AND ACI 318. REINFORCEMENT SHALL BE COLD BENT UNLESS OTHERWISE AUTHORIZED. BENDING MAY BE ACCOMPLISHED IN THE FIELD OR AT THE MILL. BARS SHALL NOT BE FIELD BENT WITHOUT THE APPROVAL OF THE CONTRACTING OFFICER.
- REINFORCEMENT SHALL BE FREE FROM LOOSE RUST AND SCALE, DIRT, OIL, OR OTHER DELETERIOUS COATING THAT COULD REDUCE BOND WITH THE CONCRETE.
- NO SPLICES OF REINFORCEMENT SHALL BE PERMITTED EXCEPT AS DETAILED OR AUTHORIZED. MAKE BARS CONTINUOUS AROUND CORNERS WITH CORNER BARS. WHERE PERMITTED, SPLICES MADE BY CONTACT LAPS SHALL BE CLASS "B" TENSION LAPS.
- TENSION AND COMPRESSION REINFORCEMENT SPLICE LENGTHS IN CONCRETE SHALL BE DETERMINED AS FOLLOWS:

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP BAR SPLICE SIZE	28"	37"	47"	56"	81"	93"	105"	118"	131"
BOTTOM BAR SPLICE SIZE	22"	29"	36"	43"	63"	72"	81"	91"	101"

  - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
  - THE TABLE ABOVE IS BASED ON A CONCRETE COVER AT LEAST EQUAL TO THE BAR DIAMETER AND A CENTER TO CENTER BAR SPACING AT LEAST EQUAL TO 3 TIMES THE BAR DIAMETER. MULTIPLY THE ABOVE LENGTHS BY 1.5 WHERE THESE CONDITIONS DO NOT EXIST.
- WHERE HOOKS ARE SHOWN, PROVIDE STANDARD 90 DEGREE HOOKS IN ACCORDANCE WITH CRSI AND ACI 318, UNLESS NOTED OTHERWISE.
- WHERE REQUIRED, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING FROM FOUNDATION. DOWELS SHALL HAVE STANDARD 90 DEGREE HOOKS.
- MINIMUM CONCRETE REINFORCING COVER REQUIREMENTS:

EXPOSURE	CONST. TYPE	BAR SIZE	MINIMUM COVER
CONCRETE CAST AGAINST EARTH:	ALL	ALL	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:	WALLS, SLABS	#6 BAR AND LARGER	2"
		#5 BAR AND SMALLER	1 1/2"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	WALLS, SLABS	#11 BAR AND SMALLER	3/4"

- ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR RODS AND WELD PLATES SHALL BE PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
- DETAIL BARS IN ACCORDANCE WITH "ACI DETAILING MANUAL-2004," PUBLICATION SP-66, ACI 318, AND ACI 315, OR LATEST EDITIONS.
- PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AT POSITIONS SHOWN ON PLANS.
- WELDING OF REINFORCEMENT IS NOT PERMITTED.

E. PRE-ENGINEERED METAL BUILDING SYSTEMS:

- PRE-ENGINEERED METAL BUILDING (PEMB) SYSTEMS FOR THIS PROJECT SHALL BE DESIGNED IN ACCORDANCE WITH THE METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA) "DESIGN PRACTICES MANUAL" (2018 EDITION), BUILDING CODES REFERENCED IN NOTE A.7 ON S-001, AND THE LOADS SHOWN IN NOTE A.10 ON S-001. WHERE THERE IS A DISCREPANCY IN DESIGN LOAD REQUIREMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- PRE-ENGINEERED METAL BUILDING (PEMB) SYSTEMS SHALL BE FULLY ENGINEERED AND FABRICATED BY THE MANUFACTURER AND SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF LOUISIANA. DESIGN AND ERECTION DRAWINGS SHALL BE SUBMITTED AND SHALL INCLUDE COLUMN LAYOUT/LOCATIONS, MEMBER SPACING, SIZE OF MEMBERS, CONNECTIONS AND BRACING. DESIGN SHALL CONSIDER UNFACTORED LL, DL (INCLUDING TRUE COLLATERAL DEAD LOAD FROM SUSPENDED PIPING, HVAC, AND OTHER EQUIPMENT LOADS SUPPORTED BY THE SUPER-STRUCTURE AND COORDINATED/CALCULATED BY THE PEMB DESIGNER), WIND LOADS (POSITIVE AND NEGATIVE PRESSURES, SEISMIC LOADS, SNOW LOAD AND SNOW DRIFT WHERE APPLICABLE). CALCULATIONS SHALL ALSO BE SUBMITTED AND BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF LOUISIANA. LOCATION OF INTENDED PORTAL FRAMES AND THEIR ASSOCIATED LOADS SHALL BE GIVEN. BUILDING DESIGNER SHALL REFERENCE THE PROJECT NOTES INCLUDED IN THIS SET OF DRAWINGS FOR BUILDING LOADS AND PROVIDE AN INDEPENDENT CODE ANALYSIS FOR CODE-PRESCRIBED LOADS FOR THE PEMB. REPORT DISCREPANCIES TO CONTRACTING OFFICER FOR REVIEW AND RESOLUTION BEFORE FINALIZING PEMB DESIGN. EXISTING PEMB SHALL BE DEMOLISHED BY FWS AND THE EXISTING SLAB-ON-GRADE SHALL REMAIN.
- FOUNDATIONS HAVE BEEN DESIGNED FOR THE PRELIMINARY COLUMN REACTIONS SHOWN ON S-004. IF THE FINAL BUILDING SYSTEM PROVIDED HAS HIGHER COLUMN REACTIONS, THE CONTRACTOR SHALL REDESIGN AND INSTALL MODIFIED FOUNDATIONS AT NO ADDITIONAL CHARGE TO THE GOVERNMENT. THE REDESIGN SHALL BE PERFORMED AND STAMPED BY A PROFESSIONAL ENGINEER WHO IS REGISTERED IN THE STATE OF LOUISIANA.
- CONCRETE FOOTINGS ARE TO BE CENTERED ON PEMB COLUMNS (U.N.O.)
- CONTRACTOR SHALL COORDINATE ALL DIMENSIONS SHOWN WITH FINAL PEMB DRAWINGS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY CONFLICTS FOR DRAWING REVISIONS PRIOR TO CONSTRUCTION.
- STEEL FRAMING SHALL BE FABRICATED AND ERECTED TO BE ELECTRICALLY CONTINUOUS FOR LIGHTNING PROTECTION.
- MINIMUM HEAD CLEARANCE FOR THE PEMB SHALL BE 14 FEET ABOVE EXISTING SLAB-ON-GRADE.

F. POST INSTALLED ANCHORS:

- ALL POST INSTALLED ANCHORS SHALL BE INSTALLED WITH THE PRODUCT DIAMETER AND EMBEDMENT SHOWN IN THE DETAILS.
- INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR PRODUCT INSTALLATION TRAINING.
- REFER TO THE PROJECT BUILDING CODE AND/OR EVALUATION REPORT FOR SPECIAL INSPECTIONS AND PROOF LOAD REQUIREMENTS.
- THREADED RODS SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 ksi.
- SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED BELOW MAY BE SUBMITTED BY THE CONTRACTOR TO THE CONTRACTING OFFICER FOR REVIEW. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS HAVING A RESEARCH REPORT RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION UNDER THE PRODUCT BUILDING CODE. SUBSTITUTION REQUESTS SHALL INCLUDE CALCULATIONS THAT DEMONSTRATE THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE EQUIVALENT PERFORMANCE VALUES OF THE DESIGN BASIS PRODUCT.
- ADHESIVE ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE DRILL BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-19 SECTION 26.7.1 (I). INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-19 SECTION 26.13.1.5. PRE-APPROVED PRODUCTS INCLUDE:

	MANUFACTURER	PRODUCT	ICC REPORT
BASIS OF DESIGN	HILTI	HIT-RE 500-VE WITH THREADED ROD	ESR-2322
PRE-APPROVED ALTERNATE ANCHORS	HILTI	HIT-HY 200R WITH HIT-Z ANCHORS	ESR-3187
	SIMPSON STRONG-TIE	SET-XP WITH THREADED ROD	ESR-2508
	DeWALT POWERS FASTENERS	PE1000+ WITH THREADED ROD	ESR-2583

G. SPECIAL INSPECTIONS:

- QUALIFIED SPECIAL INSPECTORS SHALL BE RETAINED TO PERFORM INSPECTIONS REQUIRED BY THE BUILDING CODE. SEE SHEET S-003 FOR THE SPECIAL INSPECTIONS SCHEDULES.
- ANY FIELD OBSERVATIONS OR OTHER WORK PROGRESS REVIEW PERFORMED BY THE STRUCTURAL ENGINEER SHALL NOT BE CONSTRUED AS A SPECIAL INSPECTION.



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DRAWN BY: D. SKULLY  
CHECKED BY: W. HAYNES  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
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STRUCTURAL  
NOTES

SHEET NUMBER

S-002

ORIGINAL SHEET SIZE:  
24" X 36"

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1704.2.5 INSPECTION OF FABRICATORS		
MATERIAL / ACTIVITY	SERVICE	EXTENT
VERIFY FABRICATION/QUALITY CONTROL PROCEDURES	IN-PLANT REVIEW	PERIODIC

1705.2 STEEL CONSTRUCTION		
MATERIAL / ACTIVITY	SERVICE	EXTENT
1. FABRICATOR AND ERECTOR DOCUMENTS (VERIFY REPORTS AND CERTIFICATES AS LISTED IN AISC 360, CHAPTER N, PARAGRAPH 3.2 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS)	SUBMITTAL REVIEW	EACH SUBMITTAL
2. MATERIAL VERIFICATION OF STRUCTURAL STEEL	SHOP AND FIELD INSPECTION	PERIODIC
3. EMBEDMENTS (VERIFY DIAMETER, GRADE, TYPE, LENGTH, EMBEDMENT. SEE 1705.3 FOR ANCHORS)	FIELD INSPECTION	PERIODIC
4. VERIFY MEMBER LOCATIONS, BRACES, STIFFENERS, AND APPLICATION OF JOINT DETAILS AT EACH CONNECTION COMPLY WITH CONSTRUCTION DOCUMENTS	FIELD INSPECTION	PERIODIC
5. STRUCTURAL STEEL WELDING:		
a. INSPECTION TASKS PRIOR TO WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-1)	SHOP AND FIELD INSPECTION	OBSERVE OR PERFORM AS NOTED
b. INSPECTION TASKS DURING WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-2)	SHOP AND FIELD INSPECTION	OBSERVE
c. INSPECTION TASKS AFTER WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-3)	SHOP AND FIELD INSPECTION	OBSERVE OR PERFORM AS NOTED
d. NONDESTRUCTIVE TESTING (NDT) OF WELDED JOINTS: SEE COMMENTARY		
1.) COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV	SHOP OR FIELD ULTRASONIC TESTING - 100%	PERIODIC
2.) COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II	SHOP OR FIELD ULTRASONIC TESTING - 10% OF WELDS MINIMUM	PERIODIC
3.) THERMALLY CUT SURFACES OF ACCESS HOLES WHEN MATERIAL t > 2"	SHOP OR FIELD MAGNETIC PARTICLE OR PENETRANT TESTING	PERIODIC
4.) WELDED JOINTS SUBJECT TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3 TABLE A-3.1	SHOP OR FIELD RADIOGRAPHIC OR ULTRASONIC TESTING	PERIODIC
5.) FABRICATOR'S NDT REPORTS WHEN FABRICATOR PERFORMS NDT	VERIFY REPORTS	EACH SUBMITTAL
6. STRUCTURAL STEEL BOLTING:	SHOP AND FIELD INSPECTION	
a. INSPECTION TASKS PRIOR TO BOLTING (OBSERVE, OR PERFORM TASKS FOR EACH BOLTED CONNECTION, IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-1)		OBSERVE OR PERFORM AS NOTED
b. INSPECTION TASKS DURING BOLTING (OBSERVE THE QA TASKS LISTED IN AISC 360, TABLE N5.6-2)		OBSERVE
1.) PRE-TENSIONED AND SLIP-CRITICAL JOINTS		
a.) TURN-OF-NUT WITH MATCHING MARKINGS		PERIODIC
b.) DIRECT TENSION INDICATOR		PERIODIC
c.) TWIST-OFF TYPE TENSION CONTROL BOLT		PERIODIC
d.) TURN-OF-NUT WITHOUT MATCHING MARKINGS		CONTINUOUS
e.) CALIBRATED WRENCH		CONTINUOUS
2.) SNUG-TIGHT JOINTS		PERIODIC
c. INSPECTION TASKS AFTER BOLTING (PERFORM TASKS FOR EACH BOLTED CONNECTION IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-3)		PERFORM
7. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N6.1	SHOP AND FIELD INSPECTION AND TESTING	OBSERVE OR PERFORM AS NOTED

1705.3 CONCRETE CONSTRUCTION		
MATERIAL / ACTIVITY	SERVICE	EXTENT
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRE-STRESSING TENDONS, AND PLACEMENT	SHOP AND FIELD INSPECTION	PERIODIC
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2 ITEM 2b	SHOP AND FIELD INSPECTION	
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	SHOP AND FIELD INSPECTION	PERIODIC
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	SHOP AND FIELD INSPECTION	PERIODIC
5. VERIFY USE OF REQUIRED DESIGN MIX	SHOP AND FIELD INSPECTION	PERIODIC
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	SHOP AND FIELD INSPECTION	CONTINUOUS
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	SHOP AND FIELD INSPECTION	CONTINUOUS
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	SHOP AND FIELD INSPECTION	PERIODIC
9. INSPECTION OF PRE-STRESSED CONCRETE	SHOP AND FIELD INSPECTION	
a. APPLICATION OF PRE-STRESSING FORCE		CONTINUOUS
b. GROUTING OF BONDED PRE-STRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM		CONTINUOUS
10. ERECTION OF PRECAST CONCRETE MEMBERS		PERIODIC
11. VERIFICATION OF 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.	REVIEW FIELD TESTING AND LABORATORY REPORTS	PERIODIC
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS FOR THE CONCRETE MEMBER TO BE FORMED	FIELD INSPECTION	PERIODIC

NOTES:

- a. WHERE APPLICABLE, SEE ALSO SECTION 1705.11 SPECIAL INSTRUCTIONS FOR SEISMIC RESISTANCE.
- b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI 355.2 OR OTHER QUALIFICATIONS PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS		
MATERIAL / ACTIVITY	SERVICE	EXTENT
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	FIELD INSPECTION	PERIODIC
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	FIELD INSPECTION	PERIODIC
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	FIELD INSPECTION	PERIODIC
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	FIELD INSPECTION	CONTINUOUS
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	FIELD INSPECTION	PERIODIC

STRUCTURAL ABBREVIATION KEY

@	AT	lb	POUNDS
A.F.F.	ABOVE FINISHED FLOOR	L.L.	LIVE LOAD
ARCH	ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
B/	BOTTOM OF	LLV	LONG LEG VERTICAL
BLDG	BUILDING	L.W.	LIGHT WEIGHT
BM	BEAM	MAX.	MAXIMUM
BTM.	BOTTOM	MECH.	MECHANICAL
BTW.	BETWEEN	MFR.	MANUFACTURER
C.L.	CENTERLINE	MIN.	MINIMUM
CIP	CAST-IN-PLACE	mph	MILES PER HOUR
CJ	CONTROL JOINT	N/A	NOT APPLICABLE
C.J.P.	COMPLETE JOINT PENETRATING WELD	N.I.C.	NOT IN CONTRACT
CLR.	CLEAR	N.S.	NEAR SIDE
CMU	CONCRETE MASONRY UNIT	N.T.S.	NOT TO SCALE
COL.	COLUMN	N.W.	NORMAL WEIGHT
CONC.	CONCRETE	O/O	OUT TO OUT
CONST.	CONSTRUCTION	O.C.	ON CENTER
CONT.	CONTINUOUS	O.H.	OPPOSITE HAND
DEG.	DEGREE	OP'N'G	OPENING
DIA.	DIAMETER	OPP.	OPPOSITE
D.L.	DEAD LOAD	PEMB	PRE-ENGINEERED METAL BUILDING SYSTEM
DWG.	DRAWING	PL.	PLATE
DWL.	DOWEL	PJF	PRE-MOLDED JOINT FILLER
E.E.	EACH END	P.J.P.	PARTIAL JOINT PENETRATING WELD
E.F.	EACH FACE	PROJ.	PROJECTION
ELEC.	ELECTRICAL	PTB	POST-TENSION BEAM
ELEV.	ELEVATION	psf	POUNDS PER SQUARE FOOT
E.O.R.	ENGINEER OF RECORD	psi	POUNDS PER SQUARE INCH
E.O.S.	EDGE OF SLAB	RCB	REINFORCED CONCRETE BEAM
EQ.	EQUAL	REINF.	REINFORCEMENT
E.S.	EACH SIDE	REQ'D	REQUIRED
E.W.	EACH WAY	SDSTSMS	SELF-DRILLING, SELF-TAPPING SHEET METAL SCREWS
EXIST.	EXISTING	S.F.	SQUARE FOOT
EXP.	EXPANSION	SIM.	SIMILAR
EXT.	EXTERIOR	SQ.	SQUARE
FD	FLOOR DRAIN	STD.	STANDARD
FDN.	FOUNDATION	STL.	STEEL
F.P.	FLOOR PENETRATION	S.W.	SELF-WEIGHT
F.F.	FINISH FLOOR	T&B	TOP AND BOTTOM
F.S.	FAR SIDE	T/	TOP OF
FT.	FEET	THRD'D	THREADED
FTG	FOOTING	TOS	TOP OF STEEL
F.V.	FIELD VERIFY	TYP.	TYPICAL
HK.	HOOK	U.N.O.	UNLESS NOTED OTHERWISE
HOR.	HORIZONTAL	VERT.	VERTICAL
H.S.A.	HEADED STUD ANCHOR	VIF	VERIFY IN FIELD
HSS	HOLLOW STRUCTURAL SECTION	w/	WITH
HT.	HEIGHT	W/C	WATER TO CEMENT
HVY.	HEAVY	WF	WIDE FLANGE
IN.	INCH	W.L.	WIND LOAD
INT.	INTERIOR	W.P.	WORKING POINT
K	KIPS	WT.	WEIGHT
ksi	1,000 POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC
		WWR	WELDED WIRE REINFORCEMENT

NOTE: NOT ALL ABBREVIATIONS WILL BE USED.



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EOR/AOR SEAL

CONSULTANT



PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: D. SKULLY  
DRAWN BY: D. SKULLY  
CHECKED BY: W. HAYNES  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

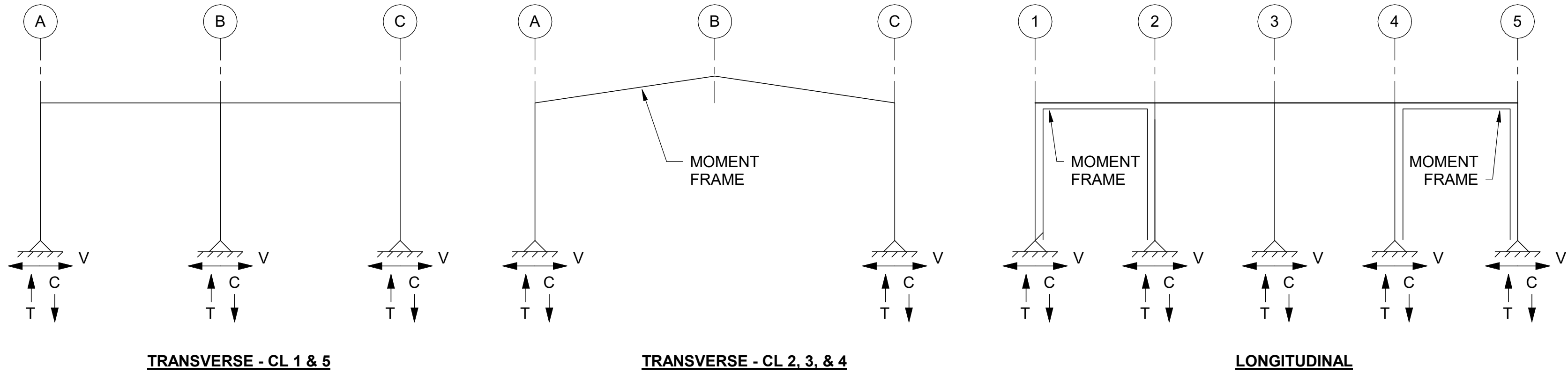
SCHEDULE OF  
SPECIAL  
INSPECTIONS &  
ABBREVIATION  
KEY

SHEET NUMBER

S-003

ORIGINAL SHEET SIZE:  
24" X 36"

100% ISSUED FOR CONSTRUCTION



WIND LOADING NOTES:

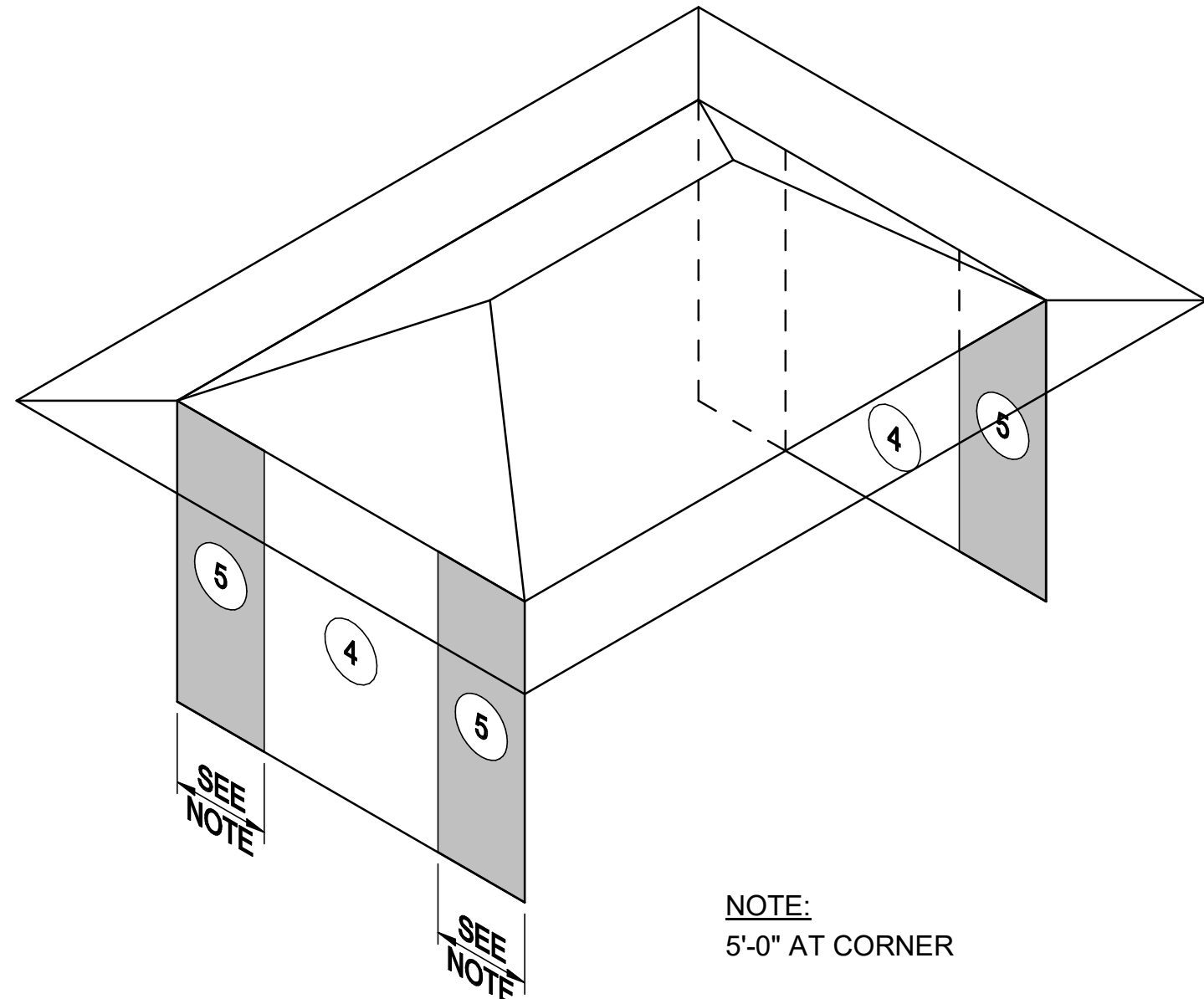
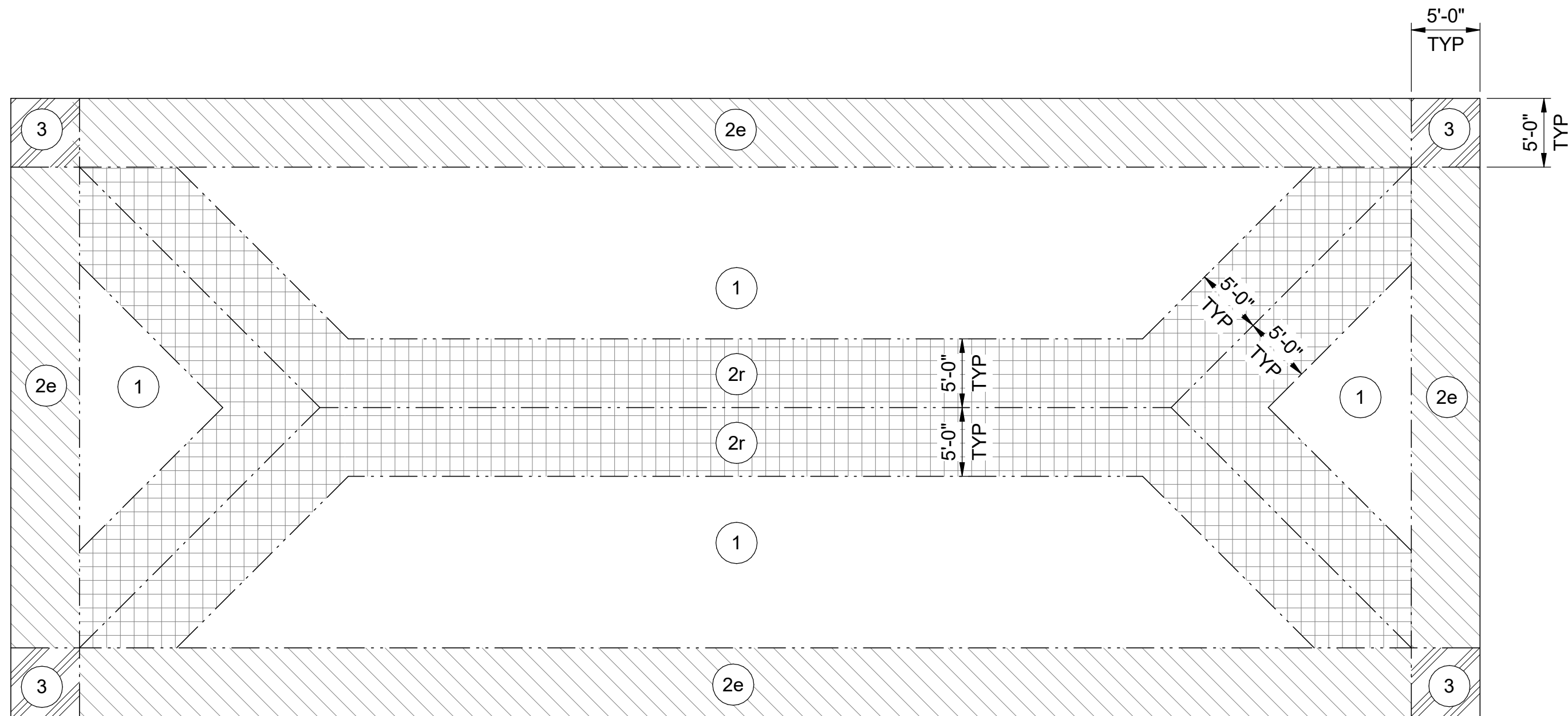
1. POSITIVE VALUES ACT TOWARD THE ROOF SURFACE (COMPRESSION) AND NEGATIVE VALUES ACT AWAY FROM THE ROOF SURFACE (UPLIFT).
2. FOR ROOF JOIST DESIGN, NET UPLIFT = SCHEDULED VALUE + 6 psf.
3. LINEAR INTERPOLATION PERMITTED BETWEEN VALUES.
4. VALUES INDICATED IN TABLES ARE FACTORED LOADS IN ACCORDANCE WITH ASCE 7-16.
5. "OH" DENOTES "OVERHANG" AT ROOF.

ROOF COMPONENTS AND CLADDING WIND PRESSURE SCHEDULE

ZONE	EFFECTIVE WIND AREA			
	AREA ≤ 10 S.F.	AREA = 25 S.F.	AREA = 50 S.F.	100 S.F. ≤ AREA
OH ①	+53.2/-78.7 PSF	+46.4/-76.9 PSF	+41.3/-71.5 PSF	+36.2/-66.0 PSF
OH ②e	+53.2/-97.9 PSF	+46.4/-95.3 PSF	+41.3/-93.3 PSF	+36.2/-91.3 PSF
OH ②r	+53.2/-125.5 PSF	+46.4/-111.2 PSF	+41.3/-100.4 PSF	+36.2/-89.5 PSF
OH ③	+53.2/-123.4 PSF	+46.4/-106.5 PSF	+41.3/-93.7 PSF	+36.2/-80.9 PSF

WALL COMPONENTS AND CLADDING WIND PRESSURE SCHEDULE

ZONE	EFFECTIVE WIND AREA			
	AREA ≤ 10 S.F.	AREA = 50 S.F.	AREA = 200 S.F.	500 S.F. ≤ AREA
④	+66.0/-70.2 PSF	+60.7/-65.0 PSF	+56.2/-60.4 PSF	+53.2/-57.4 PSF
⑤	+66.0/-83.0 PSF	+60.7/-72.5 PSF	+56.2/-63.4 PSF	+53.2/-57.4 PSF



WALL COMPONENTS AND CLADDING WIND PRESSURE DIAGRAM - HIP ROOF

ROOF COMPONENTS AND CLADDING WIND PRESSURE DIAGRAM



Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

DESIGNED BY: D. SKULLY  
DRAWN BY: D. SKULLY  
CHECKED BY: W. HAYNES  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

WIND LOADING  
DIAGRAMS &  
METAL BUILDING  
DESIGN CRITERIA

S-004

1

2

3

4

5

## SHEET NOTES

- SEE SHEETS S-001 - S-003 FOR GENERAL STRUCTURAL NOTES AND ABBREVIATION KEY.
- SEE SHEET S-301 FOR TYPICAL FOUNDATION DETAILS.
- REFERENCE FLOOR ELEVATION OF 0'-0" CORRESPONDS TO USGS ELEVATION OF 8.0 FEET.
- TOP OF FOOTING ELEVATIONS = -2'-0", UNLESS NOTED OTHERWISE.
- ALL EXPOSED STEEL TO BE GALVANIZED. HIGH PERFORMANCE EXTERIOR COATING IS AN ACCEPTABLE ALTERNATIVE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATION.
- PROVIDE MINIMUM 14'-0" CLEARANCE BELOW PEMB AND TOP OF SLAB ON GRADE.

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Georgia 30092

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EOR/AOR SEAL

CONSULTANT

## CLIENT INFORMATION



US Fish &amp; Wildlife Services

## PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole BarnLA-27  
Bell City, LA 70630

## DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: D. SKULLY  
DRAWN BY: D. SKULLY  
CHECKED BY: W. HAYNES  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

## SHEET TITLE

FOUNDATION AND  
FRAMING PLANS

## SHEET NUMBER

S-101

ORIGINAL SHEET SIZE:  
24" X 36"

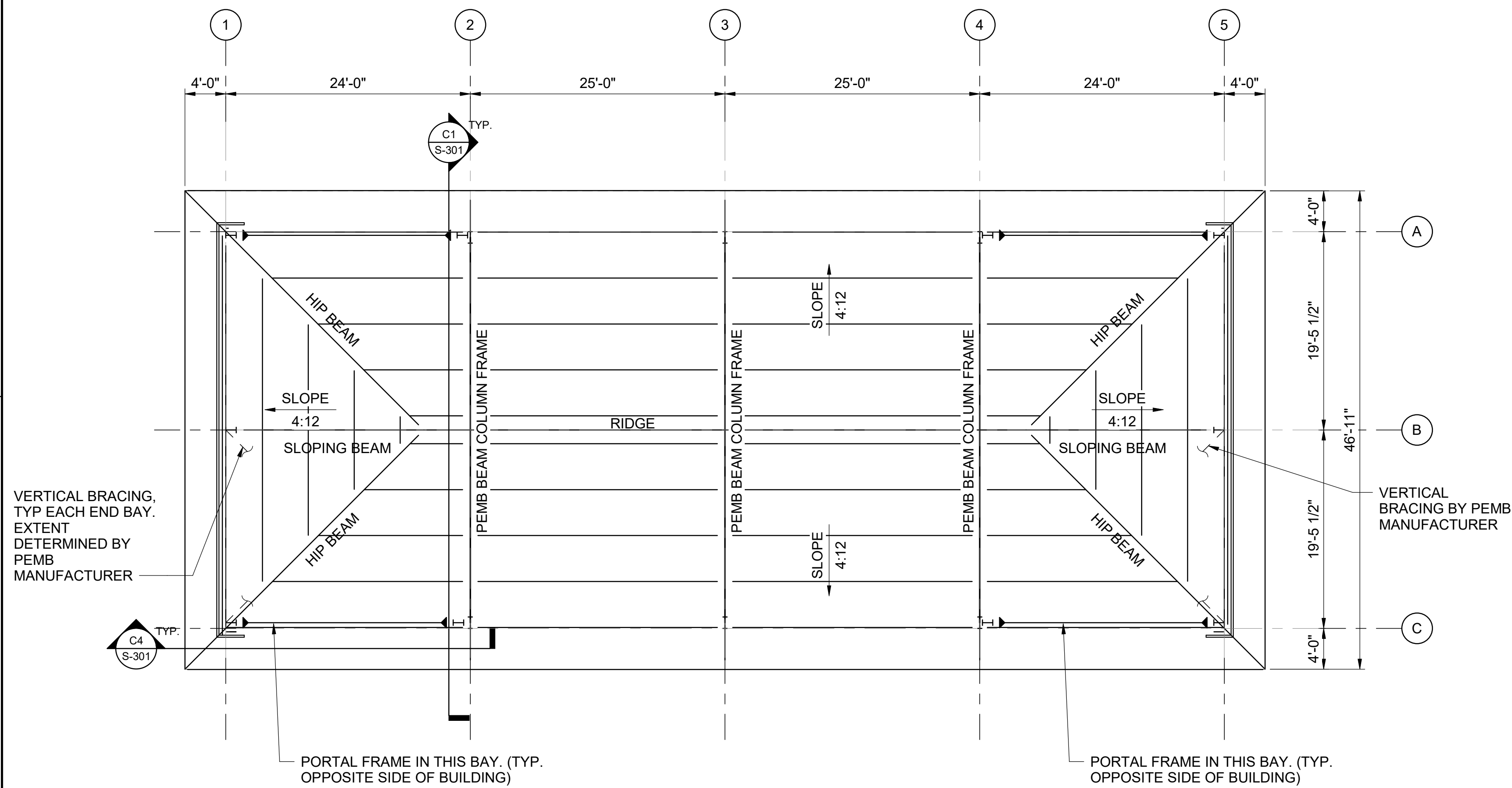
100% ISSUED FOR CONSTRUCTION

D

C

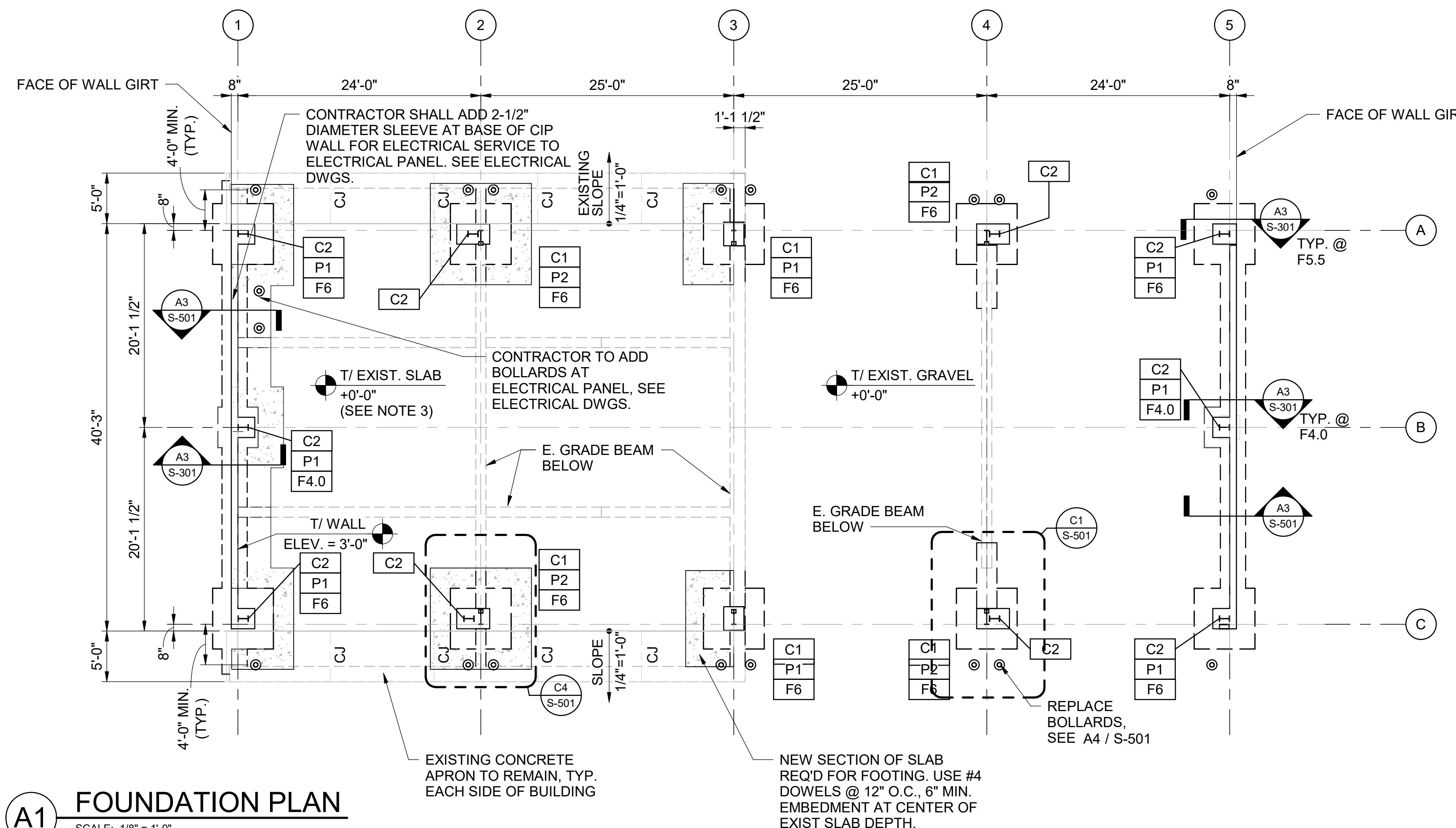
B

A



## C1 NEW ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"



## A1 FOUNDATION PLAN

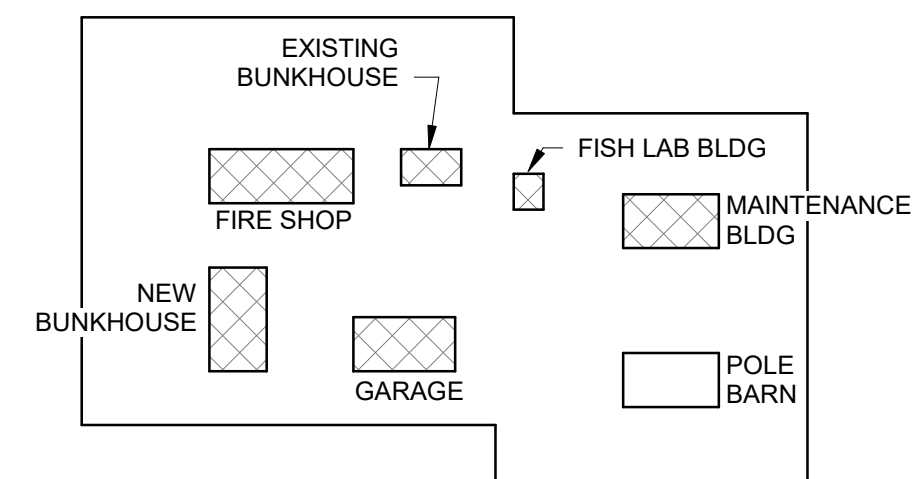
SCALE: 1/8" = 1'-0"

F5.5	NEW FOOTING = 5'-6" X 5'-6" X 1'-0"
C#	NEW PRE-ENGINEERED BUILDING COLUMNS
P#	NEW COLUMN PEDESTAL TYPE, SEE DETAILS ON S-301
CJ	EXISTING SLAB CONTROL JOINT

PIER SCHEDULE		
PIER MARK	SIZE	REINFORCEMENT
P1	24 x 28	SEE A1/S-301
P2	24 x 39	SEE A1/S-301

FOUNDATION SCHEDULE		
FOOTING MARK	SIZE	REINFORCEMENT
F4.0	4'-0" x 4'-0" x 1'-0"	(4) - #6 BARS E.W., T&B
F6	6'-0" x 6'-0" x 1'-0"	(6) - #6 BARS E.W., T&B

COLUMN SCHEDULE		
C1	TAPERED COLUMN	12" LONG AT BASE
C2	STRAIGHT COLUMN	12" LONG AT COLUMN



1

2

3

4

5



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Georgia 30092

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EOR/AOR SEAL

CONSULTANT

CLIENT INFORMATION



US Fish & Wildlife Services

PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: D. SKULLY  
DRAWN BY: D. SKULLY  
CHECKED BY: W. HAYNES  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

FOUNDATION AND  
FRAMING  
SECTIONS

SHEET NUMBER

S-301

ORIGINAL SHEET SIZE:  
24" X 36"

D

C

B

A

HAVE 1" OVERHANG  
AT END OF FRAME  
(TYP)

4'-0"

PURLINS

PEMB BEAM COLUMN FRAME

14'-0" CLEAR HEIGHT ABOVE  
EXISTING SLAB ON GRADE  
(THROUGH OUT ALL MEMBERS)

4'-0"

PURLINS

HIP BEAM

8"

GIRTS AND  
SHEATHING

PEMB DESIGNER  
TO ADD CHANNEL  
TO END OF ROOF  
DECK AT  
OUTRIGGER

USE 90 DEGREE  
CUT AT END OF  
OUTRIGGER

PEMB END COLUMN-  
BEAM- MOMENT FRAME

PEMB BEAM COLUMN FRAME

## C1 ROOF FRAMING AT BEAM-COLUMN FRAME

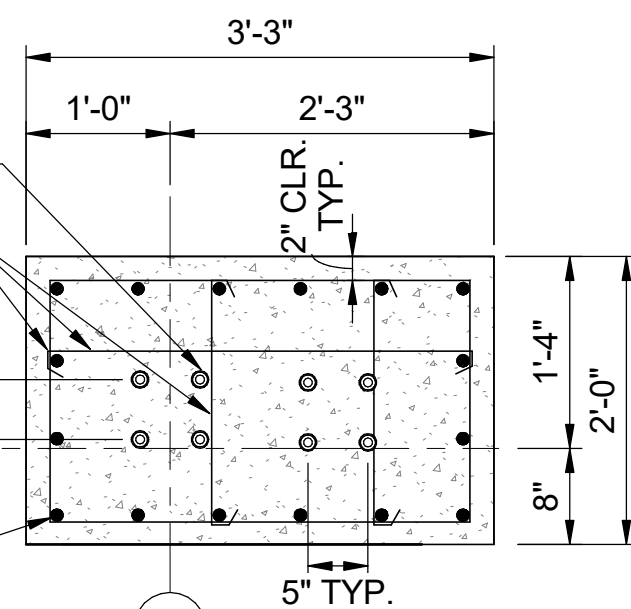
N.T.S

## C4 ROOF FRAMING AT HIP

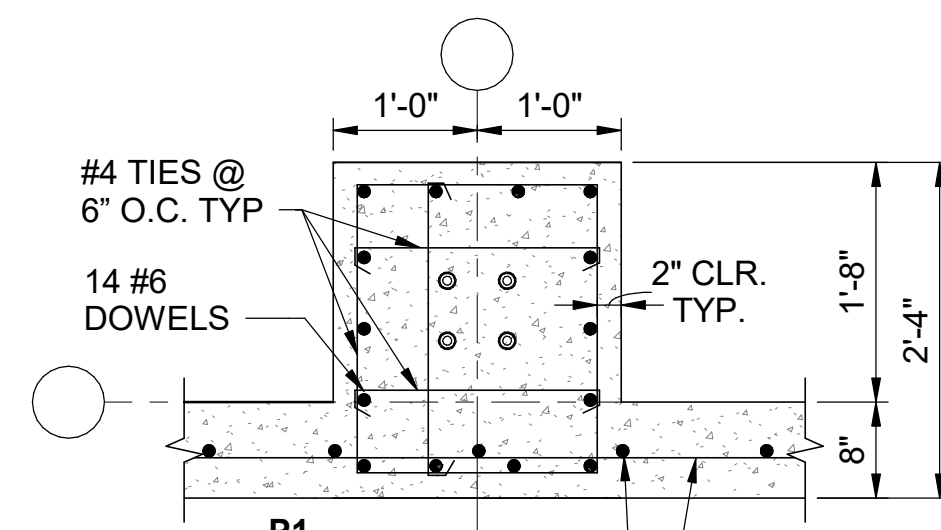
N.T.S

ANCHOR CONFIGURATION  
SHOWN IS SCHEMATIC ONLY.  
8" MIN. EDGE DISTANCE TYP.  
PENDING COORDINATION  
WITH PEMB DESIGN.

#4 TIES @ 6" O.C. TYP



P2



CONTINUE WALL  
REINFORCEMENT  
THROUGH PEDESTAL,  
SEE PLAN FOR WALL  
LOCATIONS

## A1 TYP. PEDESTAL SECTION

N.T.S

STRAIGHT OR  
TAPERED COLUMNS

3'-0" A.F.F.

PASS WALL  
REINFORCEMENT THRU  
PEDESTAL. SEE SECT.  
A3/S-501 FOR ADDITIONAL  
INFO.

GRADE

8" 1'-8"

2" CLR

3" CLR

1/2" PJF MATERIAL

ADD #5s AT 12" O.C. AND DOWEL INTO  
EXISTING SLAB 5" USING EPOXY ADHESIVE.  
PLACE AT CENTER OF SLAB. EXTEND #5s INTO  
WALL/PEDESTAL, WITH STANDARD HOOK.

6X6-W2.9XW2.9 WWF

EXIST. SLAB

T/ EXIST. SLAB

T/ FTG

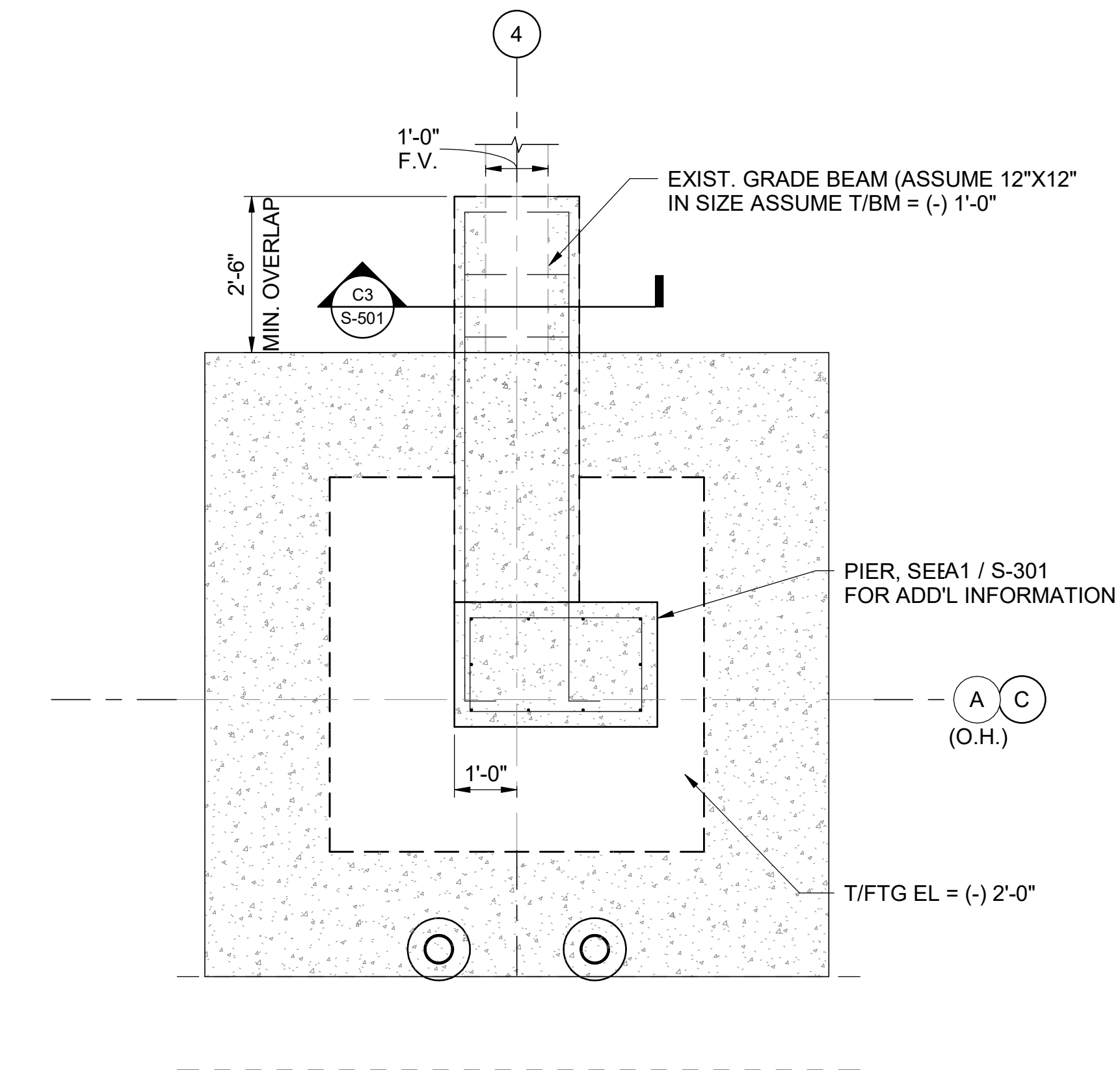
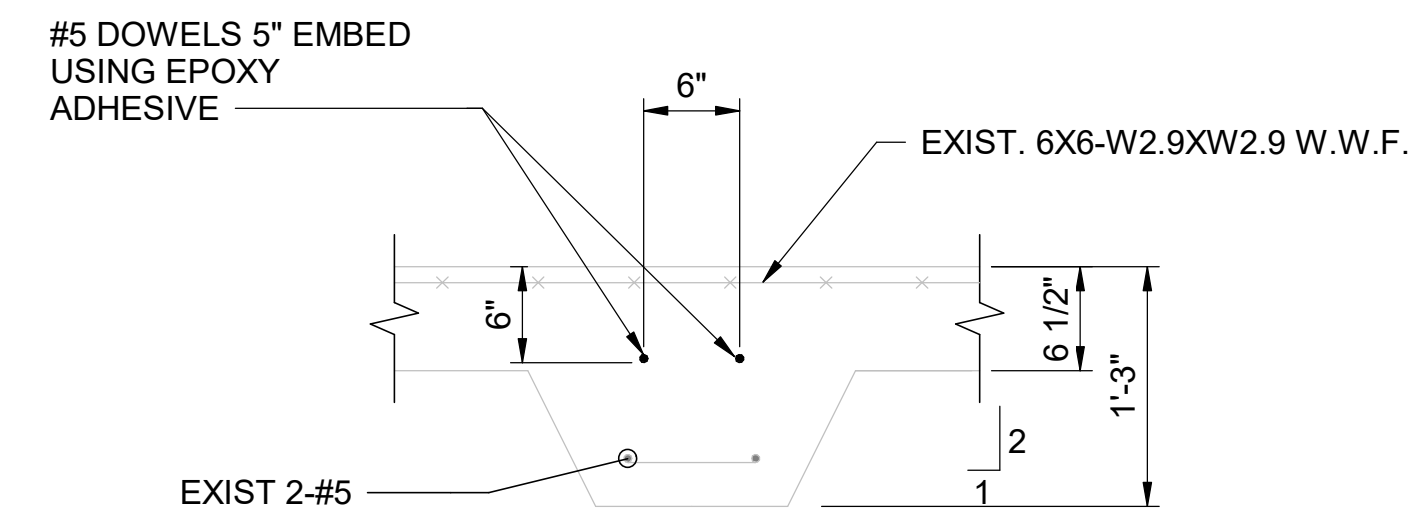
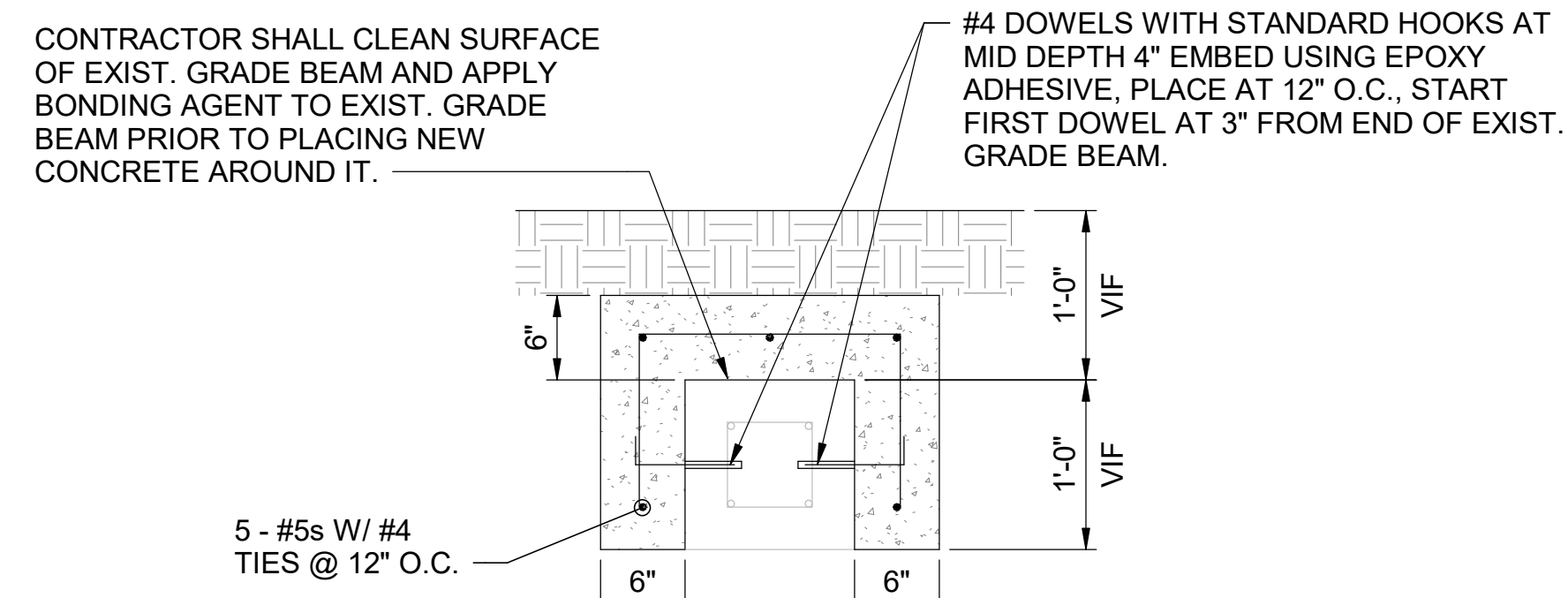
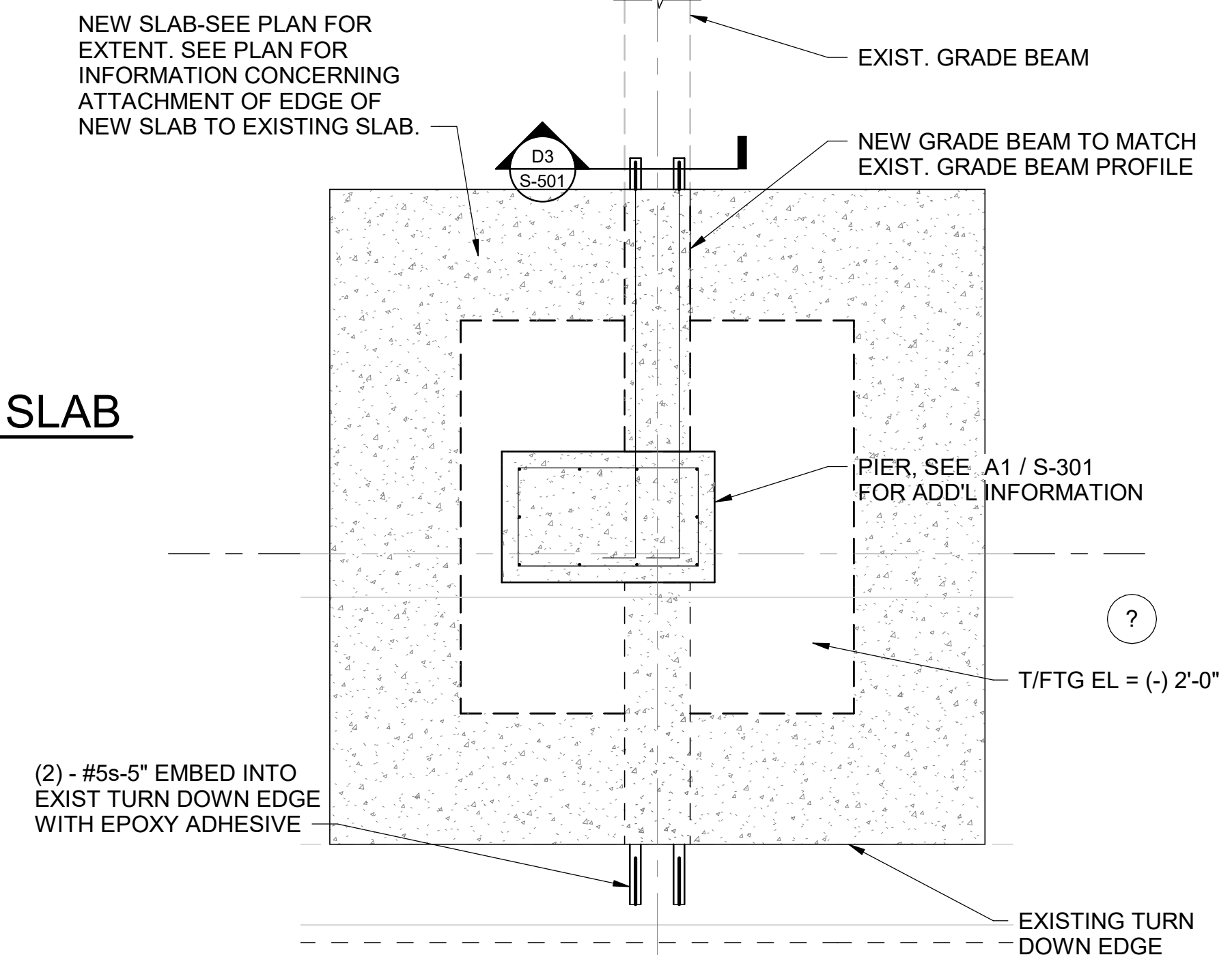
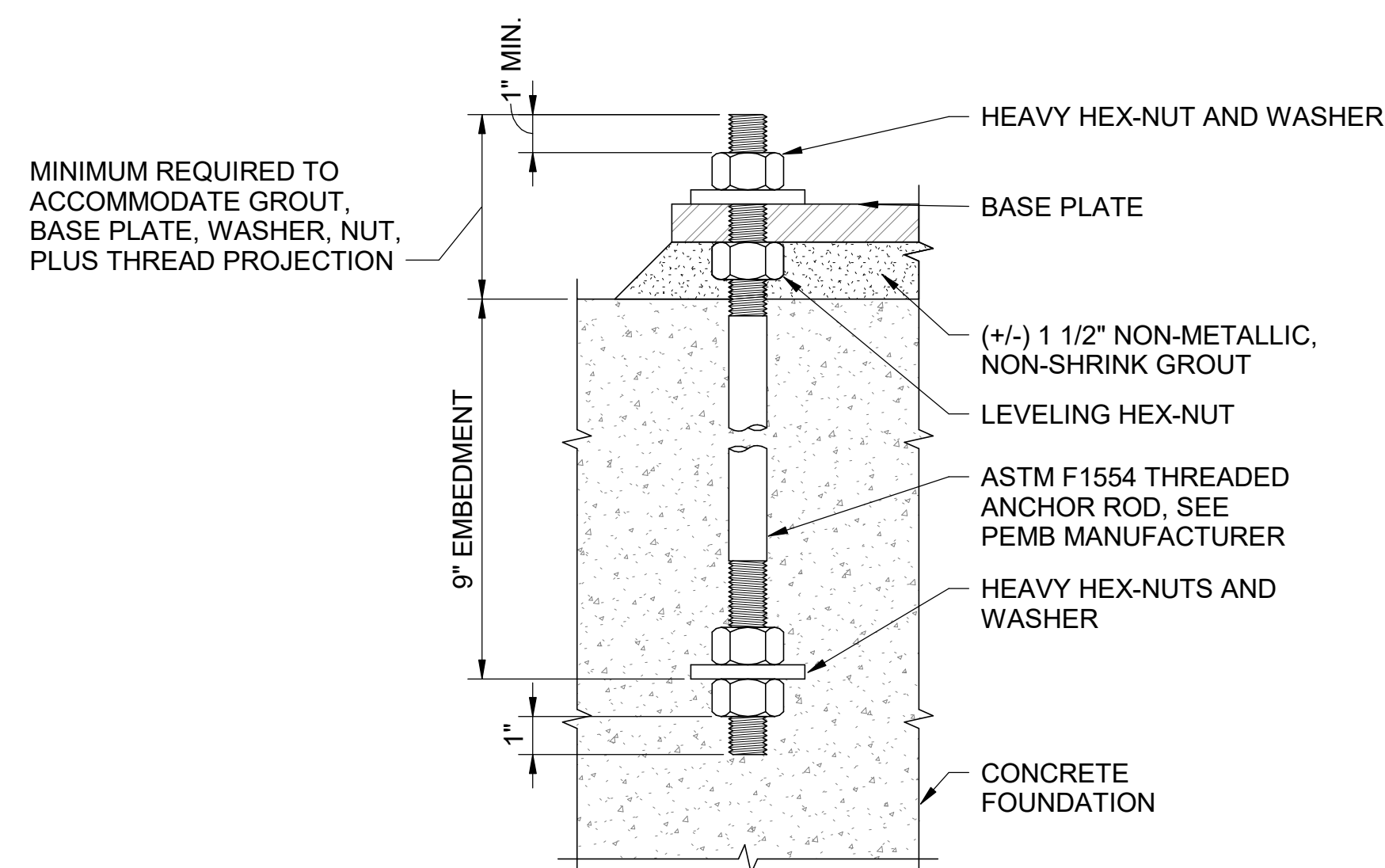
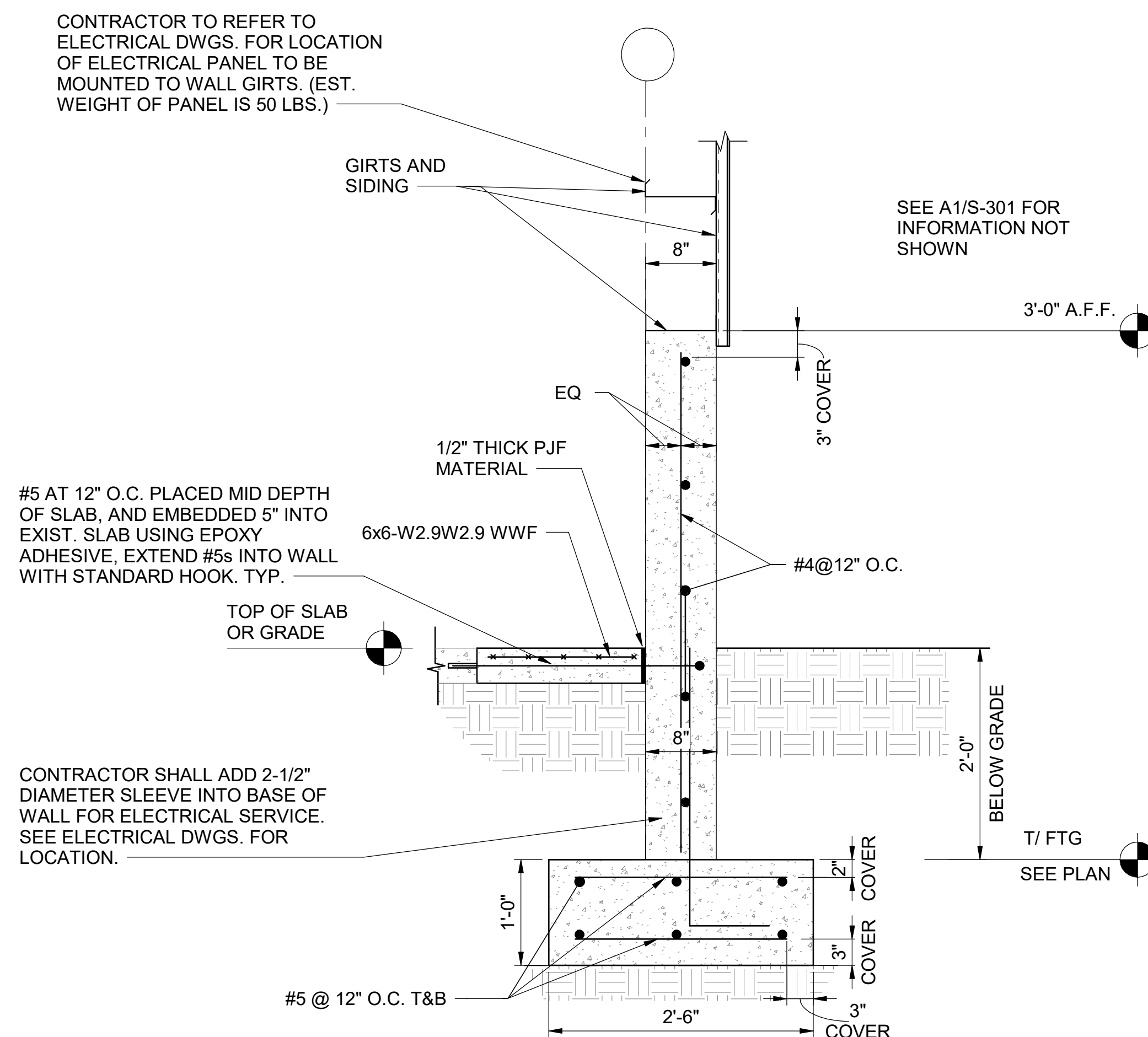
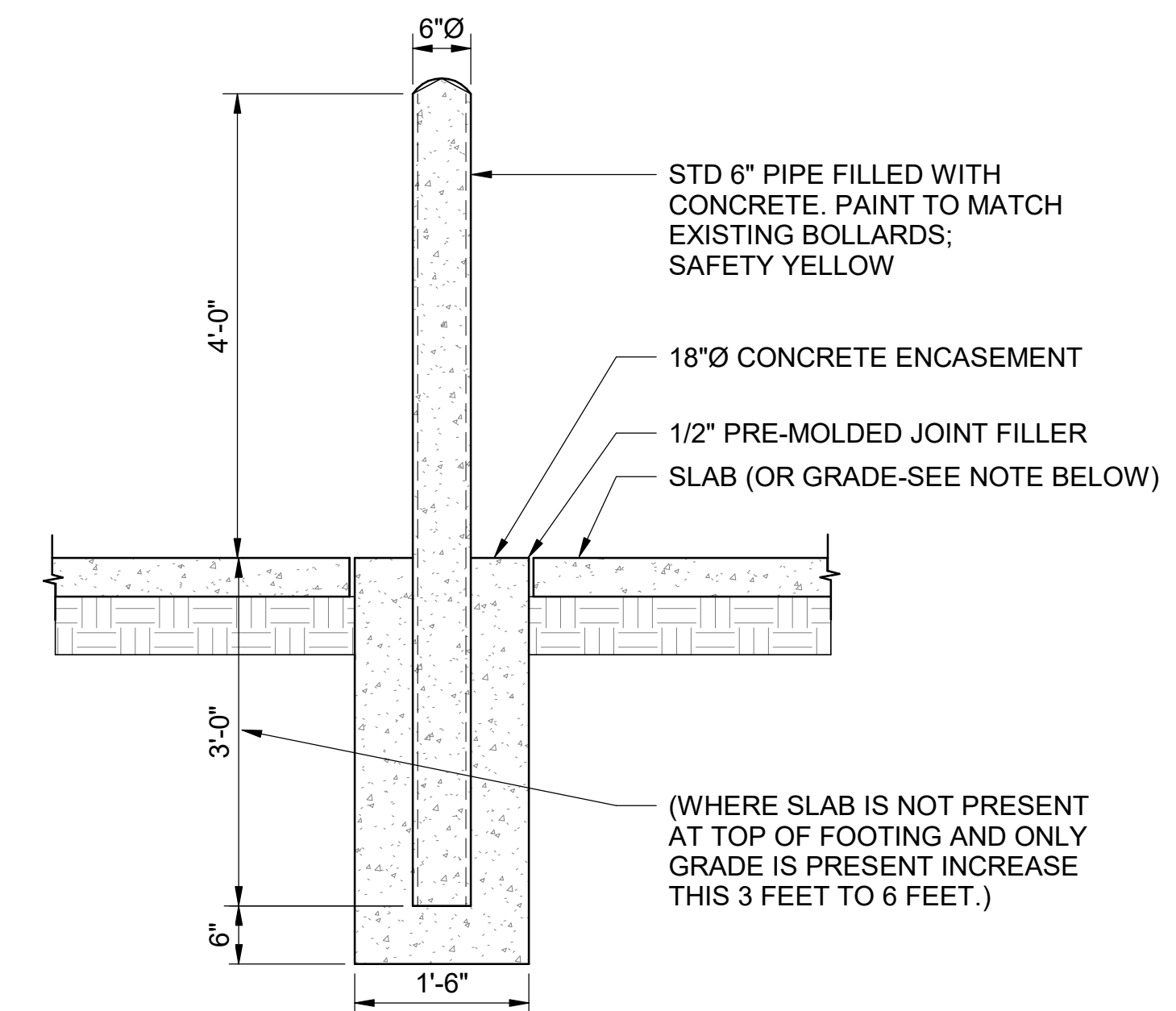
SEE PLAN

SEE FOUNDATION SCHEDULE 6-#5 EA WAY T&amp;B

## A3 FOUNDATION SECTION

SCALE: 1" = 1'-0"

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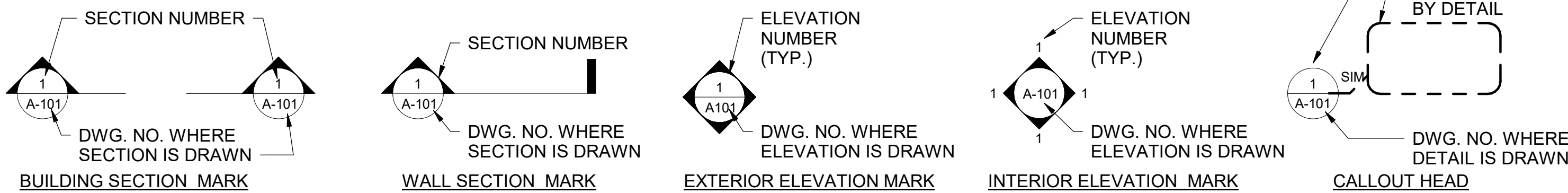
**C1** ENLARGED PLAN AT GRADE BEAM  
SCALE: 1/2" = 1'-0"**D3** SECTION THRU GRADE BEAM AT EXISTING SLAB  
SCALE: 1" = 1'-0"**C3** SECTION THRU GRADE BEAM  
SCALE: 1" = 1'-0"**C4** ENLARGED PLAN AT GRADE BEAM WITH SLAB  
SCALE: 1/2" = 1'-0"**A1** TYPICAL ANCHOR BOLT  
N.T.S.**A3** SECTION THRU CONCRETE KNEE WALL  
SCALE: 1" = 1'-0"**A4** TYP. EMBEDDED BOLLARD  
SCALE: 3/4" = 1'-0"

2/12/2025 11:18:11 AM BIM 360//1220834 Cameron Prairie NWR/1220834\_Cameron NWR\_Pole Barn\_ARCH\_V21.rvt

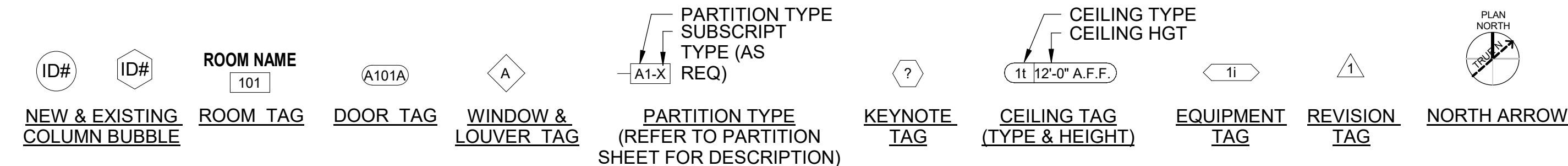
ARCHITECTURAL ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR	FDN	FOUNDATION	PL	PLATE
ADAAG	AMERICAN W/ DISABILITIES ACCESSIBILITY GUIDELINES	GA	GAGE / GAUGE	PLMB	PLUMBING
ADJ	ADJUST/ ADJUSTABLE	GALV	GALVANIZED	PLYWD.	PLYWOOD
ACT	ACOUSTICAL CEILING TILE	GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED	PT	PORCELAIN TILE
ANOD	ANODIZED		GOVERNMENT FURNISHED CONTRACTOR INSTALLED	LBS. OR #	POUNDS
AL / ALUM.	ALUMINUM	GFGI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED	PSF	POUNDS / SQUARE FOOT
APPROX	APPROXIMATE	GL	GLASS / GLAZING	PSI	POUNDS / SQUARE INCH
AR/ARCH	ARCHITECTURAL	GOVT	GOVERNMENT	PEMB	PRE-ENGINEERED
AT / FP	ANTI TERRORISM / FORCE PROTECTION	GYP	GYPSPUM	METAL BUILDING	PREFABRICATED
		GWB	GYPSPUM WALL BOARD	QUARRY TILE	
AVG	AVERAGE	HDW	HARDWARE	PRE-FAB	
A / V	AUDIO/VISUAL	HGT	HEIGHT	Q.T.	RAISED ACCESS FLOOR
BLKG	BLOCKING	HM	HOLLOW METAL	RCPT	RECEPTIONIST / RECEPTION
BD	BOARD	HORIZ	HORIZONTAL	REF	REFERENCE
BTM	BOTTOM	HB	HOSE BIBB	REINF	REINFORCEMENT / REINFORCED
B / O	BOTTOM OF BUILDING	HVAC	HEATING VENTILATION & AIR CONDITIONING	REQ'D	REQUIRED
BLDG	BUILDING		INSULATED METAL PANEL	REV	REVISIONS / REVISED
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	IMP	INCH	R / D	ROOF DRAIN
		IN	INSULATION	RH	RIGHT HAND
CFMF	COLD FORMED METAL FRAMING	INSUL	INTERIOR	RHR	RIGHT HAND REVERSE ROOM
		INT	JANITOR	RM	ROUGH OPENING
CPT	CARPET	JAN	JANITOR'S CLOSET	RO	RUBBER BASE
CLG	CEILING	JC	JOINT	RB	SAFETY GLASS / GLAZING
CLG HT	CEILING HEIGHT	JT	KICK PLATE	SG	SEALED CONCRETE
CTR	CENTER	KP		SC	SCHEDULE
¢	CENTER LINE			SCHED	SECTION
CT	CERAMIC TILE	LAM	LAMINATE	SECT	SERVICE SINK
CLR	CLEAR	LDG	LANDING	SSK	SIMILAR
CO	CLEANOUT	LAV	LAVATORY	SIM	SOUND TRANSMISSION CLASS
COL	COLUMN	LH	LEFT HAND	STC	SPECIFICATION
CONC	CONCRETE	LHR	LEFT HAND REVERSE	STC	SPRAYED FIRE
CORR	CORRIDOR	LGT	LENGTH	SPEC(S)	RESISTIVE MATERIAL
CMU	CONCRETE MASONRY UNIT	LT	LIGHT	SFRM	SQUARE
CONF	CONFERENCE	LTG	LIGHTING		STAIN
CONST	CONSTRUCTION	LONG	LONGITUDINAL	ST	STAINLESS STEEL
CONT	CONTINUOUS	LVR	LOUVER	S.S.	STANDARD
CONTR	CONTRACTOR	L / V	LOW VOLTAGE	STD	STEEL
CJ	CONTROL JOINT	MAS	MASONRY	STL	STORAGE
CY	CUBIC YARD	MO	MASONRY OPENING	STOR	STRUCTURAL
DET	DETAIL	MGR	MANAGER	STR	SUSPENDED
DIA	DIAMETER	MANUF	MANUFACTURER	SUSP	TELECOMMUNICATIONS
DIM	DIMENSION	MATL	MATERIAL	TELECOMM	TELEPHONE
DISP	DISPENSER	MAX	MAXIMUM	TEL	THICK / THICKNESS
DN	DOWN	MECH	MECHANICAL	THK	TOILET
DS	DOWNSPOUT	MTL	METAL	TLT	TOP OF
DESC	DESCRIPTION	MWP	METAL WALL PANEL	T / O	TYPICAL
DWG	DRAWING	MB	MINI BLIND	U.L.	UNDERWRITERS
EA	EACH	MIN	MINIMUM		LABORATORIES
ELEC	ELECTRICAL OR ELECTRIC	MIR	MIRROR	UNFIN	UNFINISHED
EL	ELEVATION	MISC	MISCELLANEOUS	U.N.O.	UNLESS NOTED OTHERWISE
EW	ELECTRIC WATER COOLER	N.I.C.	NOT IN CONTRACT	VERT	VERTICAL
EP	EPOXY PAINT	NO. (#)	NUMBER	VEST	VESTIBULE
ENGR	ENGINEER	NTS	NOT TO SCALE	VCT	VINYL COMPOSITION TILE
EOS	EDGE OF SLAB	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	VCB	VINYL COVE BASE
EQUIP	EQUIPMENT			WDT	WIDTH
EQ	EQUAL	O.C.	ON CENTER	W /	WITH
EXIST	EXISTING	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	WC	WATER CLOSET
EXP	EXPOSED			WD	WOOD
EJ	EXPANSION JOINT	OFGI	OWNER FURNISHED CONTRACTOR INSTALLED	WDW	WINDOW
EXP ST	EXPOSED TO STRUCTURE			W / O	WITHOUT
EXT	EXTERIOR	O.H.	OPPOSITE HAND	WRGB	WATER RESISTANT
FDC	FIRE DEPARTMENT CONNECTION	OPNG	OPENING		GYPSPUM BOARD
		OPP	OPPOSITE	YD	YARD
FT	FEET	O.D.	OUTSIDE DIAMETER		
FV	FIELD VERIFY	OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT		
FIN	FINISH				
FF	FINISHED FLOOR	OVHD / OH	OVERHEAD		
FE	FIRE EXTINGUISHER	O / D	OVERFLOW DRAIN		
FEC	FIRE EXTINGUISHER CABINET	PT / PNT	PAINT		
FP	FIRE PROTECTION	PR	PAIR		
FLR	FLOOR	PNL	PANEL		
FD	FLOOR DRAIN	PART	PARTITION		
F / O	FACE OF	PLAS	PLASTIC		
FTG	FOOTING	PLAM	PLASTIC LAMINATE		

SYMBOLS:



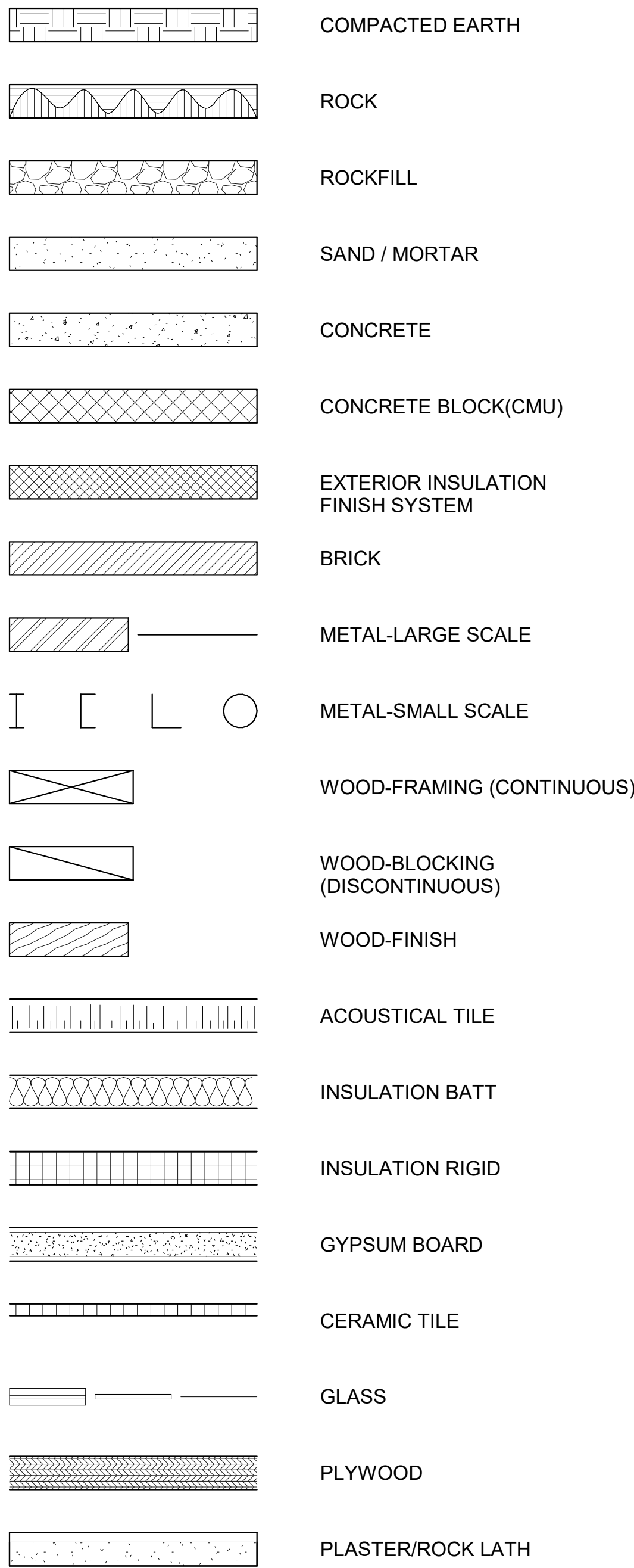
PLAN SYMBOLS:



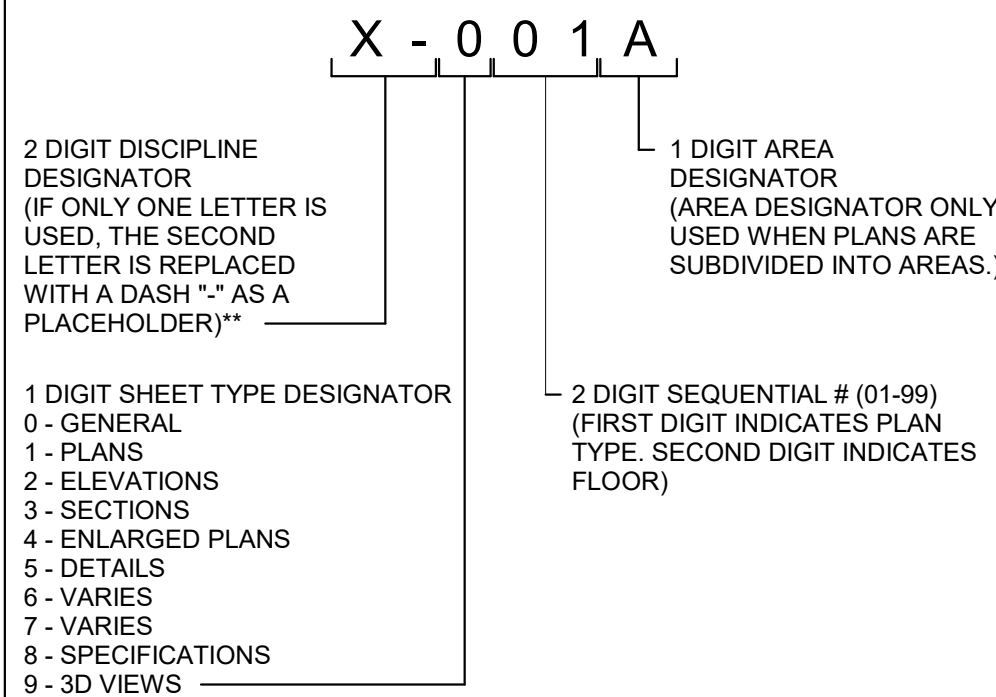
ARCHITECTURAL GENERAL NOTES:

- THE DRAWINGS INDICATE THE GENERAL EXTENT OF WORK. THE DRAWINGS ARE NOT INTENDED TO INDICATE OR DESCRIBE ALL WORK REQUIRED FOR THE FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE ENUMERATION OF PARTICULAR ITEMS OF WORK IN ONE PORTION OF THE CONTRACT DOCUMENTS SHALL NOT BE CONSTRUED TO EXCLUDE OTHER ITEMS NECESSARY OR IMPLIED THEREFROM.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE WORK SO THAT NO WORK SHALL BE LEFT IN AN UNFINISHED OR INCOMPLETE CONDITION.
- WORK SHALL CONFORM TO APPLICABLE INDUSTRY AND MANUFACTURER'S PUBLISHED STANDARDS FOR QUALITY OF MATERIALS AND WORKMANSHIP AS WELL AS REQUIREMENTS IN THE CONSTRUCTION DOCUMENTS. ANY CONFLICTING REQUIREMENTS OF THE SOURCES LISTED ABOVE SHALL BE BROUGHT TO THE CONTRACTING OFFICER'S ATTENTION PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL PROTECT EXISTING, IN-PLACE, AND NEW WORK.
- WORK NOTED "N.I.C." IS NOT MEANT TO BE PART OF THE CONSTRUCTION SCOPE OF WORK AGREEMENT.
- THE CONTRACTOR SHALL PAY FOR AND COORDINATE THE REMOVAL AND LEGAL DISPOSAL OF MATERIALS AND RUBBISH.
- ONCE ON SITE, THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS THAT CORRESPOND TO THOSE SHOWN ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IN WRITING OF ANY DIFFERING CONDITIONS BEFORE COMMENCEMENT OF WORK.
- DO NOT SCALE DRAWINGS; DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALL SCALE DETAILS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IN WRITING OF ANY DIFFERING CONDITIONS BEFORE COMMENCEMENT OF WORK.
- DIMENSIONS NOTED AS "HOLD" SHALL NOT VARY BY MORE THAN 1/8" FROM SIDE TO SIDE OR FROM FRONT TO BACK, FINISHED SURFACE TO FINISHED SURFACE.
- THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES AND REGULATORY AGENCIES AND SHALL OBTAIN NECESSARY BUILDING AND FIRE PERMITS FROM AUTHORITIES HAVING JURISDICTION.
- DISSIMILAR METALS SHALL BE ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
- NOTES APPEAR ON VARIOUS SHEETS FOR DIFFERENT SYSTEMS AND MATERIALS. SHEETS ARE TO BE REVIEWED AND NOTES ON INDIVIDUAL SHEETS SHALL BE APPLIED TO RELATED DRAWINGS AND DETAILS.
- A FINISH INDICATION ON A WALL SHALL MEAN THE ENTIRE LENGTH AND HEIGHT OF WALL IS TO BE FINISHED OR FIRE-RATED AS INDICATED.
- DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE DETAILED. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE CONTRACTING OFFICER BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL COORDINATE MECHANICAL AND ELECTRICAL FLOOR AND WALL SLEEVES INCLUDING CONDUITS WITH MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- PROVIDE ACCESS PANELS AS REQUIRED BY APPLICABLE CODES AND AS REQUIRED FOR MECHANICAL EQUIPMENT AND PLUMBING WORK.
- PIPE DUCTS AND BUS DUCTS THAT PENETRATE FLOOR SLABS OR WALL PARTITIONS SHALL BE INSTALLED IN A MANNER THAT WILL PRESERVE THE MOISTURE RESISTIVENESS, FIRE RATING, AND STRUCTURAL INTEGRITY OF THE BUILDING.
- DO NOT CUT INTO, REMOVE OR ALTER ANY STRUCTURAL MEMBER OR PORTION OF THE FLOOR SYSTEM UNLESS IT IS SPECIFICALLY NOTED OR SHOWN ON THE STRUCTURAL DRAWINGS.
- PROVIDE EXPANSION AND CONTROL JOINTS IN WORK AS PER PRODUCT MANUFACTURER'S STANDARDS.
- THE CONTRACTOR SHALL PLAN HIS/HER WORK TO PROVIDE ADEQUATE PROTECTION FOR PERSONS AND PROPERTY AT ALL TIMES, AND EXECUTE THE WORK IN SUCH A MANNER TO AVOID ANY HAZARD TO PERSONS AND PROPERTY AS NECESSARY.
- THE CONTRACTOR SHALL COORDINATE THE PHASING OF THE WORK TO BE PERFORMED IN OR ABOUT EXISTING FACILITIES, IF APPLICABLE, WITH THE OWNER PRIOR TO START OF SUCH WORK.

MATERIALS



SHEET NAMING CONVENTION



SHEET NAMING CONVENTION

FLOOR PLANS, ELEVATIONS & DETAILS

FLOOR PLANS, ELEVATIONS, SECTIONS AND DETAIL VIEWS TITLE



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EOR/AOR SEAL

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CLIENT INFORMATION



US Fish & Wildlife Services

PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: R. ELLIOTT  
DRAWN BY: U. MARGULL  
CHECKED BY: K. KOTELLOS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

GENERAL NOTES,  
ABBREVIATIONS &  
SYMBOLS

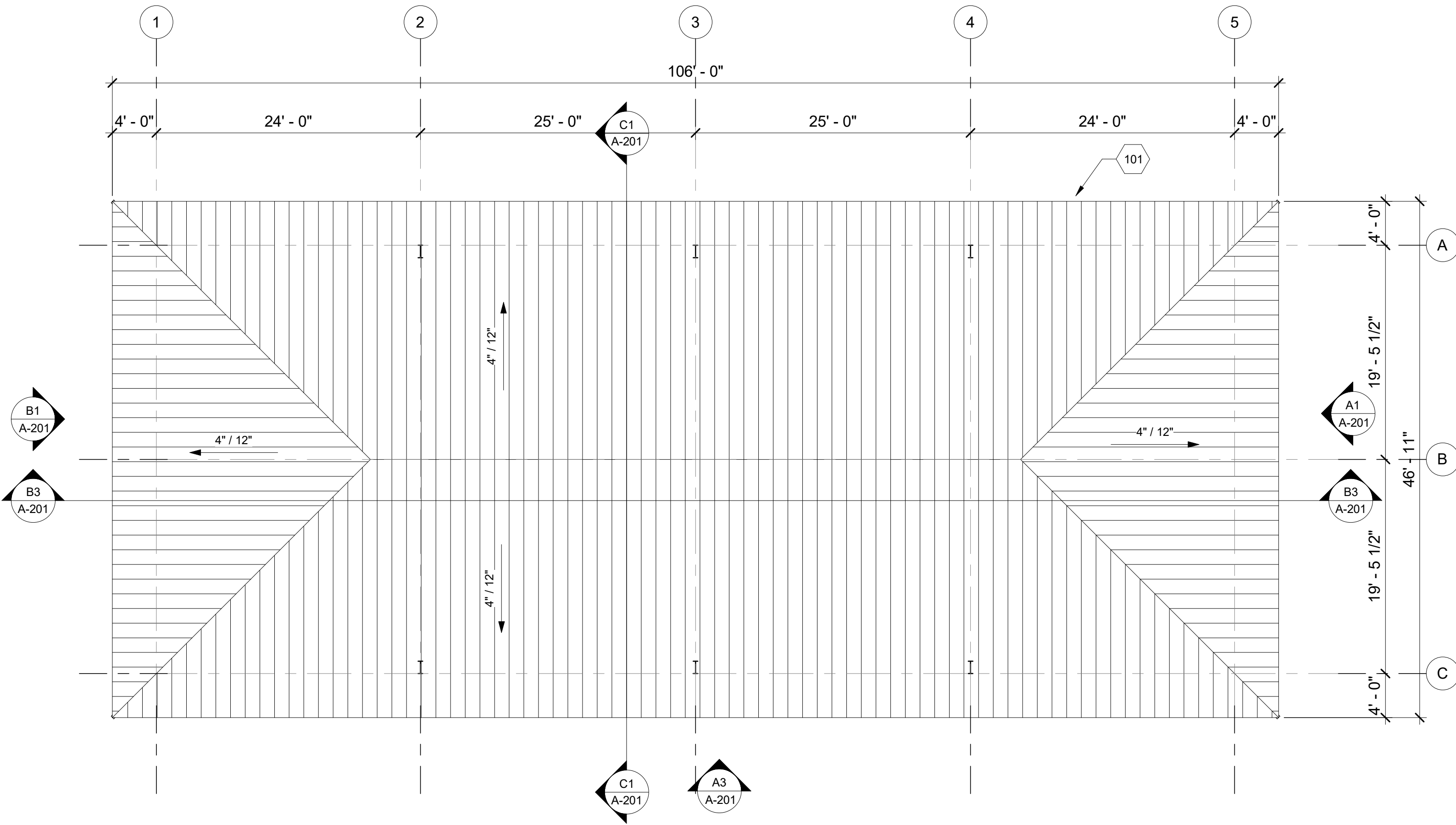
SHEET NUMBER

A-001

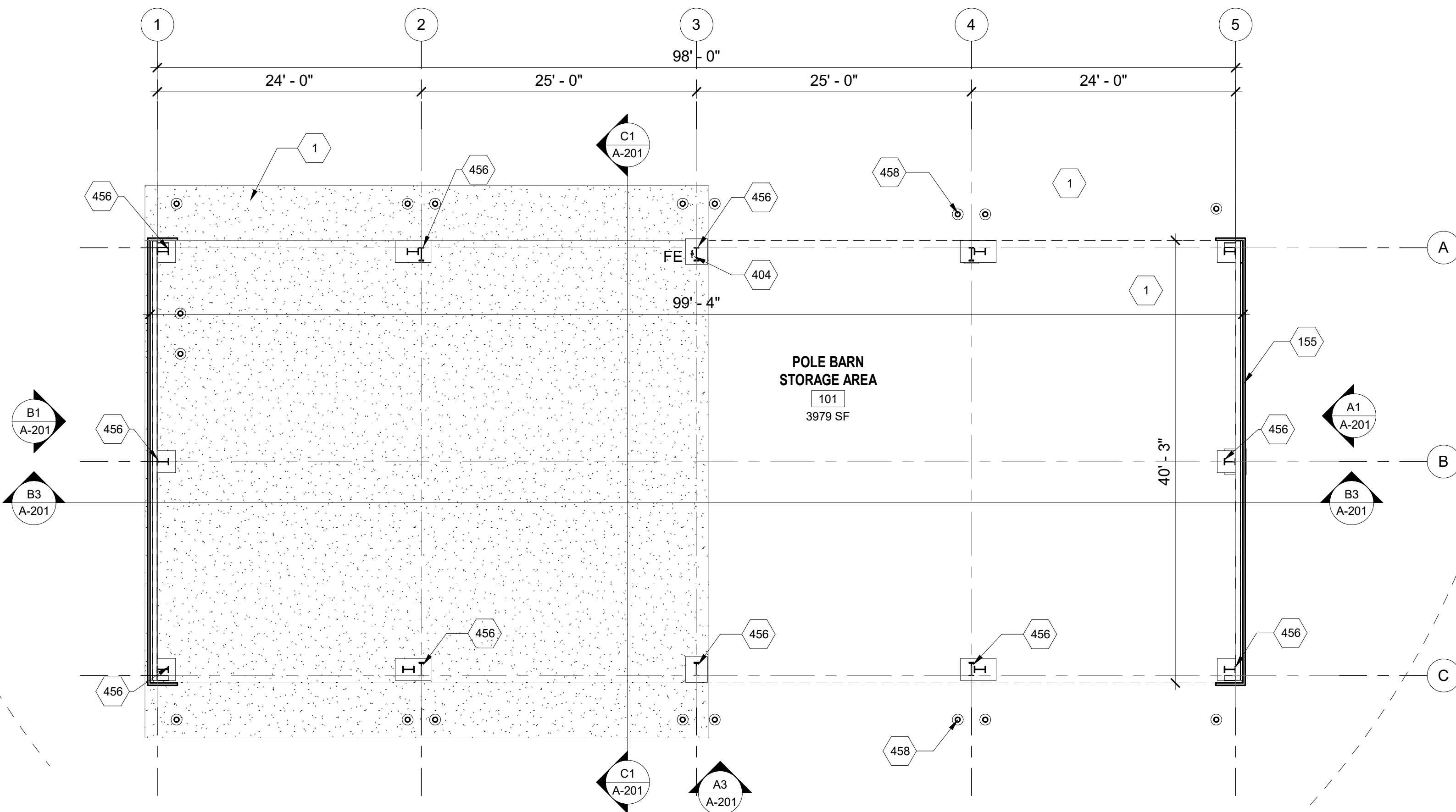
ORIGINAL SHEET SIZE:  
24" X 36"

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2/12/2025 11:18:12 AM BIM 360//1220834 Cameron Prairie NWR/1220834\_Cameron NWR\_Pole Barn\_ARCH\_V21.rvt



**C1 ROOF PLAN**  
SCALE: 1/8" = 1'-0"



**A1 OVERALL FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

## SHEET NOTES

- SEE SHEET A-001 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND MATERIALS.
- DIMENSIONS OF EXTERIOR WALLS ARE TO INSIDE FACE OF CMU OR EXTERIOR FINISH FACE U.N.O.
- DIMENSIONS OF INTERIOR WALLS AND PARTITIONS ARE TO FACE OF STUD, FACE OF CMU OR FACE OF IMP U.N.O.
- DOOR OPENINGS SHALL BE LOCATED @ 8" FROM FACE OF ADJACENT PARTITION IN CMU PARTITIONS OR 5" FROM FACE OF PARTITION IN STUD AND PANEL PARTITIONS, U.N.O.
- CONTRACTOR SHALL LOCATE BLOCKING AND BACKING AS REQUIRED FOR WALL MOUNTED EQUIPMENT, CASEWORK/MILLWORK AND FURNISHINGS.
- ROOF MATERIALS & INSTALLATION SHALL COMPLY WITH APPLICABLE CODES & STANDARDS AS SET FORTH BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- ROOF(S) SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT.

## # KEYNOTES

- |     |  |
|-----|--|
| 1   | EXISTING FOUNDATION - SEE STRUCTURAL                             |
| 101 | 180 DEG MECHANICALLY SEALED STANDING SEAM METAL ROOF             |
| 155 | PREFINISHED FLAT METAL WALL PANEL SYSTEM - CONCEALED FASTENER    |
| 404 | BRACKET MOUNTED FIRE EXTINGUISHER                                |
| 456 | PRE-ENGINEERED METAL BUILDING (P.E.M.B) RIGID FRAME - GALVANIZED |
| 458 | 8" DIA. x 4' H CONCRETE FILLED STEEL BOLLARD PTD SAFETY YELLOW   |



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## CLIENT INFORMATION



US Fish & Wildlife Services

## PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

## DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: R. ELLIOTT  
DRAWN BY: U. MARGULL  
CHECKED BY: K. KOTELLOS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

## SHEET TITLE

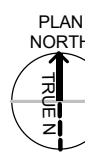
FLOOR PLAN &  
ROOF PLAN

## SHEET NUMBER

A-101

ORIGINAL SHEET SIZE:  
24" X 36"

0 4' 8' 16'  
SCALE: 1/8" = 1'-0"



100% ISSUED FOR CONSTRUCTION

## SHEET NOTES

- SEE SHEET A-001 FOR GENERAL NOTES
- SEE CIVIL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- ELEVATIONS GIVEN ARE RELATIVE TO GROUND LEVEL T.O. SLAB (0'-0").
- VERTICAL DIMENSIONS ARE FROM FINISHED FLOOR (T.O. SLAB), UNLESS NOTED OTHERWISE.

## # KEYNOTES

- |     |  |
|-----|--|
| 101 | 180 DEG MECHANICALLY SEAMED STANDING SEAM METAL ROOF             |
| 155 | PREFINISHED FLAT METAL WALL PANEL SYSTEM - CONCEALED FASTENER    |
| 404 | BRACKET MOUNTED FIRE EXTINGUISHER                                |
| 456 | PRE-ENGINEERED METAL BUILDING (P.E.M.B) RIGID FRAME - GALVANIZED |
| 457 | PRE-ENGINEERED METAL BUILDING (P.E.M.B) PURLINS - GALVANIZED     |
| 458 | 8" DIA. x 4' H CONCRETE FILLED STEEL BOLLARD PTD SAFETY YELLOW   |

**C1 BUILDING SECTION 1**

SCALE: 1/8" = 1'-0"

**C2 SECTION DETAIL - EAVE**

SCALE: 1" = 1'-0"

**C4 SECTION DETAIL - BOTTOM OF WALL**

SCALE: 1 1/2" = 1'-0"

**B1 WEST ELEVATION**

SCALE: 1/8" = 1'-0"

**B3 BUILDING SECTION 2**

SCALE: 1/8" = 1'-0"

**A1 EAST ELEVATION**

SCALE: 1/8" = 1'-0"

**A3 SOUTH ELEVATION**

SCALE: 1/8" = 1'-0"

0 4' 8' 16'  
SCALE: 1/8" = 1'-0"0 6" 1'-0" 1'-6"  
SCALE: 1 1/2" = 1'-0"

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Georgia 30092

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EOR/AOR SEAL

CONSULTANT

## CLIENT INFORMATION



US Fish &amp; Wildlife Services

## PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole BarnLA-27  
Bell City, LA 70630

## DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: R. ELLIOTT  
DRAWN BY: U. MARGULL  
CHECKED BY: K. KOTELLOS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

## SHEET TITLE

EXTERIOR  
ELEVATIONS,  
BUILDING  
SECTIONS, AND  
SECTION DETAILS

## SHEET NUMBER

A-201

ORIGINAL SHEET SIZE:  
24" X 36"

2/7/2025 12:44:41 PM BIM 360://1220834 Cameron Prairie NWR/1220834\_Cameron NWR\_Pole Barn\_MEPF\_V21.rvt

D

C

B

A

NOTE:

1. NOT ALL ABBREVIATIONS SHOWN WILL BE USED ON THIS PROJECT.

NOTES:

1. ALL EXISTING EQUIPMENT IS SHOWN IN THIN LINEWORK. ALL DEMOLISHED EQUIPMENT IS SHOWN IN BOLD LINEWORK, DASHED AND HATCHED. ALL NEW OR RELOCATED EQUIPMENT IS SHOWN IN BOLD LINEWORK. BELOW IS AN EXAMPLE OF EACH:

 EXISTING EQUIPMENT

 NEW OR RELOCATED EQUIPMENT

 HATCH INDICATES EQUIPMENT TO BE DEMOLISHED

WIRE SIZE FOR ALL 120V, 20A CIRCUITS,U10:

FOR ALL ONE-WAY CIRCUITS OF LENGTH LESS THAN 75 FT, PROVIDE 2#12 & 1#12G, 3/4"C.

FOR ALL ONE-WAY CIRCUITS OF LENGTH LESS THAN 125 FT AND GREATER THAN OR EQUAL TO 75 FT, PROVIDE 2#10 & 1# 10G, 3/4"C.

FOR ALL ONE-WAY CIRCUITS OF LENGTH LESS THAN 190 FT AND GREATER THAN OR EQUAL TO 125 FT, PROVIDE 2#8 & 1#8G, 3/4"C.

FOR ALL ONE-WAY CIRCUITS OF LENGTH LESS THAN 300 FT AND GREATER THAN OR EQUAL TO 190 FT, PROVIDE 2#6 & 1#6G, 3/4"C. PROVIDE CABLE REDUCING ADAPTER PRIOR TO TERMINATION INTO CIRCUIT BREAKER AS NECESSARY.

ELECTRICAL GENERAL NOTES

1. THE WORK MUST CONFORM WITH ALL REQUIREMENTS OF:  
A. NFPA 70-2020 (NATIONAL ELECTRICAL CODE) WITH AMENDMENTS  
B. INTERNATIONAL BUILDING CODE (IBC), 2021 AMENDMENTS  
C. INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2009  
D. APPLICABLE LOCAL CODES AND FEDERAL AND STATE LAWS.
2. MINIMUM RACEWAY SIZE MUST BE 3/4". INCREASE RACEWAY SIZE AS REQUIRED TO LIMIT RACEWAY FILL RATIO TO LESS THAN 40% FULL.
3. CONTRACTOR MUST COORDINATE WORK WITH OTHER TRADES AND MUST BE RESPONSIBLE FOR SECURING SPACE REQUIREMENTS FOR ELECTRICAL EQUIPMENT, CLEARANCE FOR LUMINAIRES, AND CORRECT ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS.
4. CONTRACTOR MUST BE RESPONSIBLE FOR VERIFYING CATALOG NUMBERS ON THESE DRAWINGS TO MATCH WITH MATERIAL DESCRIPTIONS INDICATED.
5. ALL FEEDERS AND BRANCH CIRCUITS MUST INCLUDE A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR, SIZE PER NATIONAL ELECTRICAL CODE, OR AS SHOWN, CONNECTED TO EACH DEVICE AND OUTLET BOX ON THE CIRCUIT AND TO THE PANELBOARD GROUND BUS. PROVIDE NEUTRAL CONDUCTORS AS INDICATED HEREIN. MULTIPLE BRANCH CIRCUITS IN ONE RACEWAY REQUIRE ONLY ONE EQUIPMENT GROUNDING CONDUCTOR.
6. NEW WORK MUST BE MADE TO TIE INTO THE EXISTING IN A UNIFORM MANNER. SIMILAR ITEMS OF NEW WORK MUST BE CHECKED AGAINST EXISTING WORK FOR TYPE MOUNTING, MOUNTING HEIGHTS, ETC. ITEMS SHOWN IN NEW WORK AT VARIANCE FROM THE EXISTING MUST BE REFERRED TO THE ARCHITECT FOR DECISION BEFORE ROUGH-IN.
7. REFER TO ONE-LINE DIAGRAMS, SCHEDULES AND RISER DIAGRAMS FOR CONDUCTOR AND CONDUIT SIZES NOT SHOWN ON PLANS.
8. PROVIDE IS AN INCLUSIVE TERM USED TO DESCRIBE ASPECTS OF THE WORK THAT MUST BE ACCOMPLISHED, AND IS HEREBY DEFINED TO REQUIRE TO STORE, FURNISH, INSTALL, MOUNT, CONNECT, CONTROL AND POWER EQUIPMENT INDICATED, AS WELL AS ALL APPURTENANCES REQUIRED TO MAKE ELECTRICAL SYSTEMS OPERATE AS INDICATED WITHIN THESE DRAWINGS AND SPECIFICATIONS AND TO FULFILL THE SCOPE OF WORK.
9. ALL CONDUCTORS MUST BE COPPER UNLESS SPECIFICALLY NOTED AS ALUMINUM.
10. CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCUREMENT OF ANY MATERIALS AND DEVELOPMENT OF ANY SHOP DRAWINGS OR SUBMITTALS.
11. PROVIDE LABELS ON ALL RECEPTACLES, WALL MOUNTED LIGHT SWITCHES AND JUNCTION BOXES INDICATING THE SOURCE PANEL & CIRCUIT(S). HANDWRITTEN LABELS ARE NOT PERMITTED EXCEPT FOR JUNCTION BOXES LOCATED ABOVE FINISHED CEILING WHICH MAY BE HANDWRITTEN WITH AN INDELIBLE MARKER.

ELECTRICAL ABBREVIATIONS

A or AMP	AMPERE(S)	HZ	HERTZ
AC	AIR COMPRESSOR or AIR CURTAIN or ALTERNATING CURRENT	IDS	INTRUSION DETECTION SYSTEM
	AIR COOLED CHILLER	IMC	INTERMEDIATE METAL CONDUIT
ACC	AMP FRAME	IRH	INFRARED HEATER
AF	ABOVE FINISHED FLOOR	J OR JB	JUNCTION BOX
AFG	ABOVE FINISHED GRADE	K	KILO
AHU	AIR HANDLING UNIT	KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
AIC	AMPERE INTERRUPTING CAPACITY	KCMIL	THOUSAND OF CIRCULAR MILS
AL	ALUMINUM	KEF	KITCHEN EXHAUST FAN
AM	AMMETER	KH	KITCHEN HOOD
ASYM	ASYMMETRICAL	KK	KIRK KEY INTERLOCK
AT	AMP TRIP	KV	KILOVOLT
ATS	AUTOMATIC TRANSFER SWITCH	KVA	KILOVOLT AMPERES
AUTO	AUTOMATIC	KVAR	KILOVOLT AMPERES REACTIVE
AWG	AMERICAN WIRE GAUGE	KW	KILOWATT
B	BOILER	KWHR	KILOWATT-HOUR
BC	BRANCH CONTROLLER	L	LENGTH
BCW	BARE COPPER WIRE	LA	LIGHTNING ARRESTOR
BFF	BELOW FINISHED FLOOR	LAN	LOCAL AREA NETWORK
BFG	BELOW FINISHED GRADE	LAV	LAVATORY
BLDG	BUILDING	LS	LONG TIME, SHORT TIME
C	CONDUIT	LSI	LONG TIME, SHORT TIME & INSTANTANEOUS
CAT	CATEGORY	LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS & GROUND FAULT
CB	CIRCUIT BREAKER	LTG	LIGHTING
CCT	CORRELATED COLOR TEMPERATURE	MAU	MAKE-UP AIR UNIT
CCTV	CLOSED CIRCUIT TELEVISION	MAX	MAXIMUM
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	MCA	MINIMUM CIRCUIT AMPACITY
CH	CHILLER	MCB	MAIN CIRCUIT BREAKER
CHWCP	CHILLED WATER CIRCULATING PUMP	MCC	MOTOR CONTROL CENTER
CHWP	CHILLED WATER PUMP	MGB	MAIN GROUND BAR
CHWSP	CHILLED WATER SUPPLY PUMP	MH	MANHOLE
CKT	CIRCUIT	MIN	MINIMUM
CMH	COMMUNICATIONS MANHOLE	MLO	MAIN LUGS ONLY
CP	CONDENSATE PUMP	MOD	MOTOR OPERATED DAMPER
CPT	CONTROL POWER TRANSFORMER	MRS	MOTOR RATED SWITCH
CRAC	COMPUTER ROOM AC UNIT	MT or MTD	MOUNT or MOUNTED
CRI	COLOR RENDERING INDEX	N	NEUTRAL
CT	CURRENT TRANSFORMER or COOLING TOWER	N/A	NOT APPLICABLE
CU	COPPER	NC	NORMALLY CLOSED
CWP	CONDENSER WATER PUMP	NEC	NATIONAL ELECTRICAL CODE
D	DEPTH	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
DC	DIRECT CURRENT	NESC	NATIONAL ELECTRICAL SAFETY CODE
DF	DESTRATIFICATION FAN	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DH	DUCT HEATER or DEHUMIDIFIER	NL	NIGHT LIGHT
DHWCP	DOMESTIC HOT WATER CIRCULATING PUMP	NO	NORMALLY OPEN
DISC	DISCONNECT SWITCH	NTS	NOT TO SCALE
DOAS	DEDICATED OUTSIDE AIR SYSTEM	P	POLE(S) or PUMP
DPDT	DOUBLE POLE DOUBLE THROW	PA	PUBLIC ADDRESS
DPST	DOUBLE POLE SINGLE THROW	PDU	POWER DISTRIBUTION UNIT
DSCU	DUCTLESS SPLIT CONDENSING UNIT	PF	POWER FACTOR
DSHP	DUCTLESS SPLIT HEAT PUMP	PH	PHASE
DSS	DUCTLESS SPLIT SYSTEM (INDOOR UNIT)	PIU	PRIMARY INDUCTION UNIT (VAV TERMINAL UNIT)
DUH	DUCT UNIT HEATER	PMT	PAD MOUNTED TRANSFORMER
DWBP	DOMESTIC WATER BOOSTER PUMP	PNL	PANEL OR PANELBOARD
DX	DIRECT EXPANSION COOLING COIL	PTAC	PACKAGED THRU-WALL AIR CONDITIONER
E or EMER	EMERGENCY	PVC	POLYVINYL CHLORIDE
EC	EMPTY CONDUIT	RECP	RECEPTACLE
EF	EXHAUST FAN	RF	RETURN FAN
ELEC	ELECTRICAL	RH	RADIANT HEATERS (ELECTRIC)
EMEW	EMERGENCY EYEWASH	RMC	RIGID METAL CONDUIT
EMH	ELECTRICAL MANHOLE	RMS	ROOT MEAN SQUARE
EMSH	EMERGENCY SHOWER	RTU	ROOF TOP UNIT
EMT	ELECTRICAL METALLIC TUBING	RVNR	REDUCED VOLTAGE NON-REVERSING
EPA	EFFECTIVE PROJECTED AREA	SA	SURGE ARRESTOR
EQUIP	EQUIPMENT	SBB	SECONDARY BONDING BAR
ERU	ENERGY RECOVERY UNIT	SCCR	SHORT CIRCUIT CURRENT RATING
ERV	ENERGY RECOVERY VENTILATOR	SD	SMOKE DAMPER
ESEW	EMERGENCY SHOWER / EYEWASH	SF	SUPPLY FAN
EUH	ELECTRIC UNIT HEATER	S/N	SOLID NEUTRAL
EWC	ELECTRIC WATER COOLER	SP	SUMP PUMP
EWH	ELECTRIC WATER HEATER	SPD	SURGE PROTECTIVE DEVICE
EX or EXIST	EXISTING	SPDT	SINGLE POLE DOUBLE THROW
EXP	EXPLOSION PROOF	SPEC	SPECIFICATIONS
F	FUSE	SPST	SINGLE POLE SINGLE THROW
FACP	FIRE ALARM CONTROL PANEL	SWBD	SWITCHBOARD
FCU	FAN COIL UNIT	SWGR	SWITCHGEAR
FLEX	FLEXIBLE	TMGB	TELECOMMUNICATIONS MAIN GROUNDING
FWE	FURNISHED WITH EQUIPMENT		BUSBAR
G or GND	GROUND		THERMAL OVERLOAD
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TOL	
GUH	GAS UNIT HEATER	TP	TWISTED PAIR
GWH	GAS WATER HEATER	TYP	TYPICAL
H or HT	HEIGHT	U	URINAL
HAC	HEATED AIR CURTAIN	UG	UNDERGROUND
HOA	HAND-OFF AUTOMATIC	UH	UNIT HEATER
HP	HORSE POWER or HEAT PUMP	U10	UNLESS INDICATED OTHERWISE
HT	HEAT TRACKING	UL	UNDERWRITERS LABORATORY
HVU	HEATING/VENTILATING UNIT	UTP	UNSHIELDED TWISTED PAIR
HWCP	HEATING WATER CIRCULATING PUMP	V	VOLTS
HWP	HEATING WATER PUMP	VA	VOLT AMPERES
HWRP	HOT WATER RECIRCULATION PUMP	VAR	VOLT AMPERES REACTIVE
HWSP	HEATING WATER SUPPLY PUMP	VAV	VAV TERMINAL UNIT
HWUH	HOT WATER UNIT HEATER	VEF	VEHICLE EXHAUST FAN
		VM	VOLTMETER
		VRF	VARIABLE REFRIGERANT FLOW SYSTEM
		W	WATTS or WIRE
		WC	WATER CLOSET
		WEF	WELDING EXHAUST FAN
		WH	WATER HEATER
		WHDM	WATTHOUR DEMAND METER
		WP	WEATHERPROOF
		WSHP	WATER SOURCE HEAT PUMP
		XFMR	TRANSFORMER
		Z	IMPEDANCE



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CLIENT INFORMATION



U.S. Fish & Wildlife Services

PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: J. REYES  
DRAWN BY: J. REYES  
CHECKED BY: J. WILLIAMS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

ELECTRICAL  
GENERAL NOTES  
AND  
ABBREVIATIONS

SHEET NUMBER

E-001

ORIGINAL SHEET SIZE:  
24" X 36"

100% ISSUED FOR CONSTRUCTION

2/7/2025 12:44:41 PM BIM 360://1220834 Cameron Prairie NWR/1220834\_Cameron NWR\_Pole Barn\_MEFF\_V21.rvt

1

2

3

4

5

NOTE:

1. NOT ALL SYMBOLS SHOWN WILL BE USED ON THIS PROJECT.

ELECTRICAL LEGEND

LUMINAIRES

	LUMINAIRE AND OUTLET BOX. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	LUMINAIRE AND OUTLET BOX WIRED FOR MULTILEVEL SWITCHING, LOWER CASE LETTER INDICATES SWITCHLEG DESTINATION.
	LUMINAIRE AND OUTLET BOX, WITH PROVISIONS FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	WALL MOUNTED LUMINAIRE AND OUTLET BOX. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	CEILING OR WALL MOUNTED EXIT SIGN AND OUTLET BOX. PROVIDE NUMBER OF ARROWS AND FACES INDICATED. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE. WALL MOUNT AT 96" ABOVE FINISHED FLOOR.
	RECESSED OR PENDANT MOUNTED LUMINAIRE AND OUTLET BOX. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	WALL MOUNTED LUMINAIRE AND OUTLET BOX. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	CEILING OR WALL MOUNTED LUMINAIRE AND OUTLET BOX WITH PROVISIONS FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	EMERGENCY LIGHT UNIT. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	REMOTE HEAD OR FLOOD LUMINAIRE. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	WALL WASH DOWNLIGHT. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	POLE MOUNTED LUMINAIRE. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
	POST-TOP OR BOLLARD LUMINAIRE. LETTER INDICATES LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE.
<b>EQUIPMENT</b>	
	MOTOR, HORSEPOWER AS INDICATED
	MOTORIZED DAMPER
	3-POLE COMBINATION MOTOR CONTROLLER/DISCONNECT (POLES/FRAME SIZE/FUSE SIZE/NEMA ENCLOSURE) NF = NONFUSED
	DISCONNECT SWITCH, (FRAME SIZE/FUSE SIZE/POLES/NEMA ENCLOSURE) NF = NON-FUSED
	INDIVIDUALLY MOUNTED CIRCUIT BREAKER, (CIRCUIT BREAKER SIZE/ POLES/ NEMA ENCLOSURE)
	MOTOR CONTROLLER MOUNTED 48" AFF. UNLESS OTHERWISE NOTED.
	DRY TYPE TRANSFORMER
	SURFACE MOUNTED PANELBOARD. DASHED BOX INDICATES WORKING ACCESS REQUIRED BY CODE.
	RECESSED MOUNTED PANELBOARD. DASHED BOX INDICATES WORKING ACCESS REQUIRED BY CODE.
	DISTRIBUTION PANELBOARD. DASHED BOX INDICATES WORKING ACCESS REQUIRED BY CODE.
	EQUIPMENT AS INDICATED
	CEILING OR WALL MOUNTED JUNCTION BOX
	PULL OR JUNCTION BOX
	CEILING MOUNTED BLUE LIGHT SYSTEM ROTATING BEACON
	WHITE NOISE PLENUM SPEAKER; MOUNT ABOVE DROP CEILING
	52" CEILING FAN WITHOUT LIGHTS AND REMOTE

WIRING DEVICES

	SIMPLEX RECEPTACLE NEMA 5-20R, MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE.
	DUPLEX RECEPTACLE NEMA 5-20R, MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 6" ABOVE COUNTERTOP (TO BOTTOM OF DEVICE) OR 4" ABOVE BACKSPLASH (TO BOTTOM OF DEVICE)
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE NEMA 5-20R, MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE NEMA 5-20R, MOUNT 6" ABOVE COUNTERTOP (TO BOTTOM OF DEVICE) OR 4" ABOVE BACKSPLASH (TO BOTTOM OF DEVICE)
	DOUBLE-DUPLEX RECEPTACLE NEMA 5-20R, MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE
	SPLIT YOE, DUPLEX RECEPTACLE NEMA 5-20R WITH ONE CONTROLLED AND ONE NON-CONTROLLED RECEPTACLE. MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE.
	SPLIT YOE, DUPLEX RECEPTACLE NEMA 5-20R WITH ONE CONTROLLED AND ONE NON-CONTROLLED RECEPTACLE. MOUNT 6" ABOVE COUNTERTOP (TO BOTTOM OF DEVICE) OR 4" ABOVE BACKSPLASH (TO BOTTOM OF DEVICE)
	SPLIT YOE, DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE NEMA 5-20R WITH ONE CONTROLLED AND ONE NON-CONTROLLED RECEPTACLE. MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE
	SPLIT YOE, DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE NEMA 5-20R WITH ONE CONTROLLED AND ONE NON-CONTROLLED RECEPTACLE. MOUNT OR 6" ABOVE COUNTERTOP (TO BOTTOM OF DEVICE) OR 4" ABOVE BACKSPLASH (TO BOTTOM OF DEVICE)
	DOUBLE-DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE, NEMA 5-20R, MOUNTED CONCEALED BEHIND ELECTRIC WATER COOLER
	FLOOR BOX WITH DUPLEX RECEPTACLE NEMA 5-20R. PROVIDE FIRE RATED POKE-THROUGH DEVICES ON ALL FLOORS ABOVE GROUND LEVEL.
	FLOOR RECEPTACLE NEMA 5-30R. PROVIDE FIRE RATED POKE-THROUGH DEVICES ON ALL FLOORS ABOVE GROUND LEVEL.
	SPECIAL RECEPTACLE, NEMA TYPE AS INDICATED, MOUNT 18" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE
	CEILING BOX WITH DUPLEX RECEPTACLE, NEMA 5-30R
	CEILING BOX WITH DUPLEX RECEPTACLE, NEMA 5-20R
<b>RECEPTACLE SUBSCRIPTS</b>	
	WP = IN-USE WEATHER PROOF TR = TAMPER RESISTANT TV = TELEVISION, MOUNT AT 60" ABOVE FINISHED FLOOR AFCI = ARC FAULT CIRCUIT INTERRUPTER
	FLOOR BOX SUITABLE FOR CONCRETE FLOOR POUR; TWO COMPARTMENTS - POWER AND TELECOMMUNICATIONS; FLUSH COVER/FLANGE WITH HINGED ACCESS TO RECEPTACLES AND JACKS RECESSED BELOW COVER IN FLOOR BOX. PROVIDE 8" FIRE RATED POKE-THROUGH ABOVE GROUND FLOOR.
	WALL SWITCH, AC TYPE, SPST, MOUNT 48" ABOVE FINISHED FLOOR
	WALL SWITCH, AC TYPE, DPDT, MOUNT 48" ABOVE FINISHED FLOOR
	3-WAY WALL SWITCH, MOUNT 48" ABOVE FINISHED FLOOR

WIRING DEVICES

	4-WAY WALL SWITCH, MOUNT 48" ABOVE FINISHED FLOOR
	SLIDE DIMMER, MOUNT 48" ABOVE FINISHED FLOOR
	MOTOR RATED DISCONNECT SWITCH WITH THERMAL OVERLOADS, SINGLE POLE SINGLE THROW, MOUNT ON UNIT, UNLESS INDICATED OTHERWISE.
	WALL MOUNTED, DUAL TECHNOLOGY OCCUPANCY SWITCH, MOUNT 48" ABOVE FINISHED FLOOR
	WALL MOUNTED, DUAL TECHNOLOGY VACANCY SWITCH, MOUNT 48" ABOVE FINISHED FLOOR
	LOW VOLTAGE ON/OFF WALL SWITCH, WALL MOUNT 48" ABOVE FINISHED FLOOR. PROVIDE DIMMER CONTROL WITH DIMMABLE FIXTURES INTEGRAL WITH SWITCH.
	BLUE LIGHT LOCAL CONTROL SWITCH; MOUNT 48" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE
	WHITE NOISE ROTARY VOLUME CONTROL; MOUNT 48" ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE.
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
	CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR
	CEILING MOUNTED DAYLIGHT SENSOR
	PHOTOELECTRIC CELL
<b>WIRING</b>	
	CIRCUIT HOMERUN TO PANELBOARD. P2A-1,3,5, ADJACENT TO ARROW, INDICATES HOMERUN CIRCUITS 1, 3, AND 5 IN PANEL P2A. MARKS ACROSS RACEWAY INDICATE THE NUMBER OF PHASE CONDUCTORS AND NEUTRALS IN RACEWAY. NEUTRAL CONDUCTORS ARE INDICATED BY LONGER HASHMARKS. NO MARKS ACROSS RACEWAY INDICATES 2#12 CONDUCTORS AND 1#12 GROUND CONDUCTOR. CONDUCTOR SIZE #12 UNLESS INDICATED OTHERWISE.
	PANEL, BRANCH CIRCUIT AND WIRE SIZE (IF OTHER THAN #12)
	RECEPTACLE TYPE IF APPLICABLE (SEE SHEET E-002 - WIRING DEVICES)
	PANEL, BRANCH CIRCUIT AND WIRE SIZE (IF OTHER THAN #12)
	LUMINAIRE TYPE (SEE SHEET E-611)
	PANEL, BRANCH CIRCUIT AND WIRE SIZE (IF OTHER THAN #12)
	LUMINAIRE TYPE (SEE SHEET E-611)
	PANEL, BRANCH CIRCUIT AND WIRE SIZE (IF OTHER THAN #12)
	RACEWAY EXPOSED TO VIEW
	CONCEALED RACEWAY, LOCATED IN WALL OR ABOVE FINISHED CEILING
	UNDERGROUND RACEWAY, LOCATED BELOW GRADE OR CONCRETE SLAB
	FLEXIBLE RACEWAY
	RACEWAY TURNED TOWARD VIEWER
	RACEWAY TURNED AWAY FROM VIEWER
	RACEWAY TERMINATION, STUB-OUT AND CAP
	PLUG-IN BUSWAY, UNLESS INDICATED OTHERWISE
	SURFACE METAL RACEWAY OR MULTIOUTLET ASSEMBLY AS INDICATED
	LADDER TYPE CABLE TRAY (SIZE AS INDICATED ON PLAN)

GROUNDING AND LIGHTNING PROTECTION

	3/4" x 10'-0" COPPERCLAD GROUND ROD, 18" BELOW FINISHED GRADE
	GROUND ROD TEST WELL
	BARE COPPER GROUND CONDUCTOR, 1/0 UNLESS INDICATED OTHERWISE.
	4/0 BARE COPPER GROUND CONDUCTOR
	LIGHTNING PROTECTION SYSTEM AIR TERMINAL
	LIGHTNING PROTECTION ROOF CONDUCTOR
	ELECTRICAL CONNECTION
<b>SITE</b>	
	ELECTRICAL MANHOLE
	ELECTRICAL HANDHOLE
	PAD MOUNTED TRANSFORMER
	POWER POLE
	DOWN GUY AND ANCHOR (QUANTITY AS INDICATED)
	DUCTBANK, TEXT INDICATES QUANTITY AND SIZE OF DUCTS (I.E. 2W4" = TWO 4" DUCTS)
<b>ONE-LINE</b>	
	TRANSFORMER
	CURRENT TRANSFORMER
	FUSE
	ELECTRICAL CONNECTION
	CIRCUIT BREAKER
	SWITCH
	SURGE ARRESTORS
	SEPARABLE CONNECTION
	DRY TYPE TRANSFORMER, KVA AS INDICATED
	GROUND
	INDIVIDUALLY MOUNTED MOTOR STARTER OR VARIABLE FREQUENCY DRIVE, NEMA SIZE AS INDICATED
	FUSED DISCONNECT, FRAME, POLE AND FUSE SIZE AS INDICATED.
	INDIVIDUALLY MOUNTED CIRCUIT BREAKER, TRIP AND POLE SIZE AS INDICATED.
<b>SCHEMATIC</b>	
	PILOT LIGHT (G=GREEN, R=RED, Y=AMBER)
	CONTROL RELAY COIL
	SHUNT TRIP COIL
	TIME DELAY RELAY COIL
	MOTOR STARTER COIL
	METER
	ELECTRONIC METER



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EOR/AOR SEAL

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Us Fish & Wildlife Services

PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole Barn

LA-27  
Bell City, LA 70630

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: J. REYES  
DRAWN BY: J. REYES  
CHECKED BY: J. WILLIAMS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

SHEET TITLE

ELECTRICAL  
LEGEND

SHEET NUMBER

E-002

ORIGINAL SHEET SIZE:  
24" X 36"

100% ISSUED FOR CONSTRUCTION

## SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR ELECTRICAL GENERAL NOTES, ABBREVIATIONS & LEGEND.
2. REFER TO SHEET E-601 FOR ELECTRICAL FEEDER SCHEDULE, ONE-LINE DIAGRAM, AND LUMINAIRE SCHEDULE.
3. ALL ELECTRICAL CONDUITS SHALL BE RMC WITH STAINLESS STEEL FASTENERS.

**POND**3500 Parkway Lane  
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## CLIENT INFORMATION



U.S. Fish &amp; Wildlife Services

## PROJECT NAME

Cameron Prairie  
National Wildlife  
Refuge  
Pole BarnLA-27  
Bell City, LA 70630

## DRAWING ISSUE

DATE

DESCRIPTION

MARK

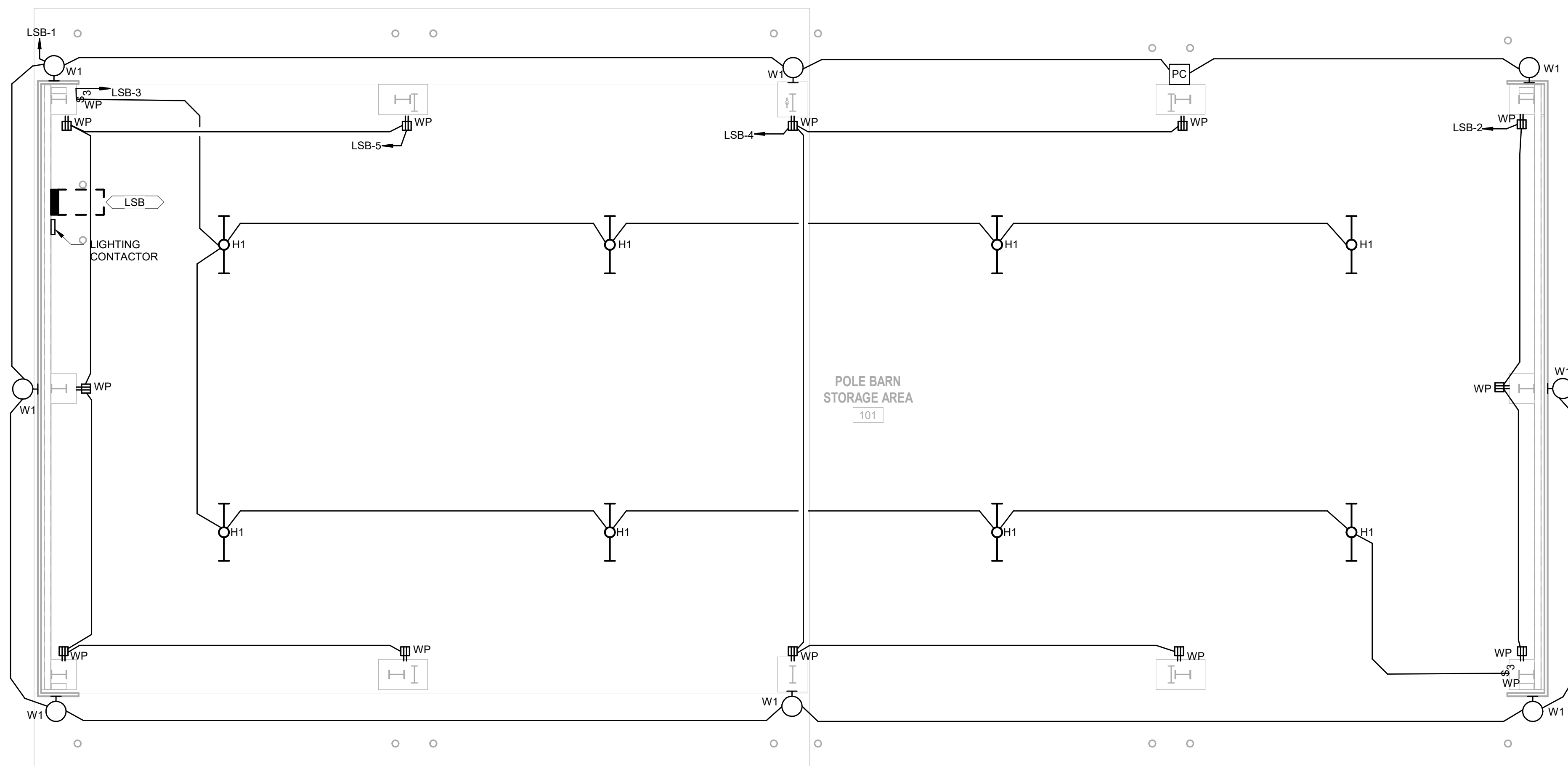
DESIGNED BY: J. REYES  
DRAWN BY: J. REYES  
CHECKED BY: J. WILLIAMS  
SUBMITTED BY: C. CUSICK  
DATE: 02/12/2025  
PROJECT #: 1220834

## SHEET TITLE

ELECTRICAL  
LIGHTING AND  
POWER PLAN

## SHEET NUMBER

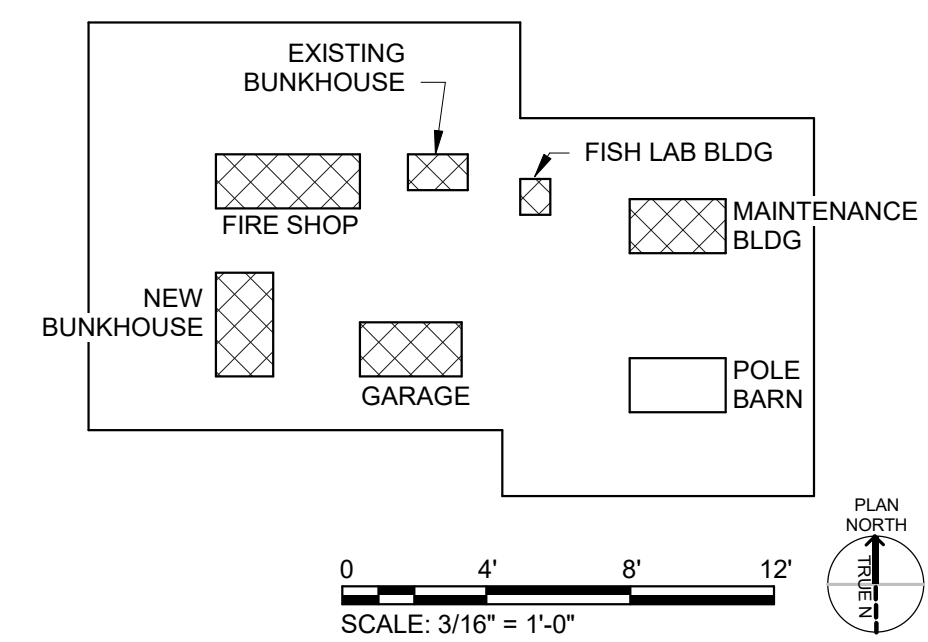
E-111

ORIGINAL SHEET SIZE:  
24" X 36"

A1

## ELECTRICAL LIGHTING AND POWER PLAN

SCALE: 3/16" = 1'-0"



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## SHEET NOTES

- REFER TO SHEETS E-001 AND E-002 FOR ELECTRICAL GENERAL NOTES, ABBREVIATIONS & LEGEND.

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Pole BarnLA-27  
Bell City, LA 70630

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## SHEET TITLE

ELECTRICAL  
DETAILS

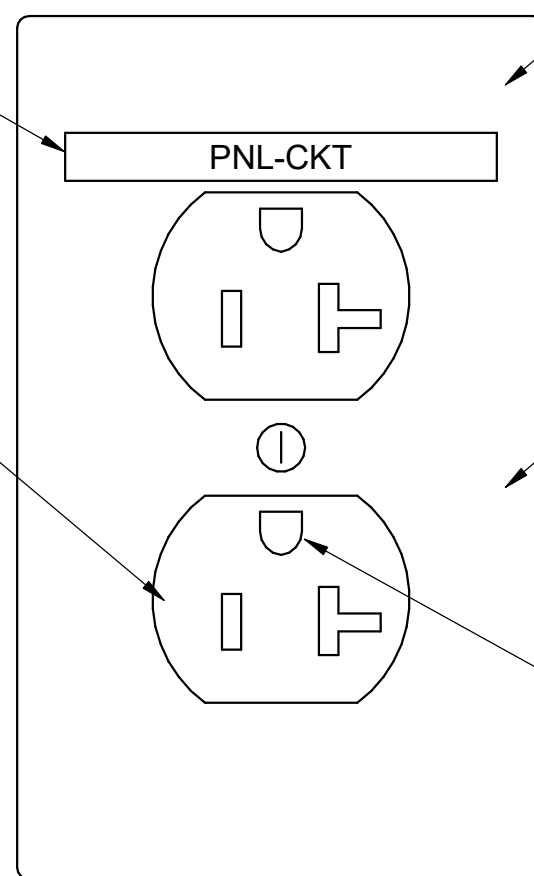
## SHEET NUMBER

E-501

ORIGINAL SHEET SIZE:  
24" X 36"

CLEAR LABEL TAPE WITH  
TYPED, BLACK LETTERING  
DESIGNATING PANEL AND  
CIRCUIT NUMBER.

PROVIDE RECEPTACLES IN THE  
FOLLOWING COLORS:  
• WHITE: NORMAL POWER



PROVIDE DURABLE  
WIRE MARKERS OR  
TAGS INSIDE THE  
OUTLET BOX.

FACEPLATE COLOR PER  
SPECIFICATIONS.

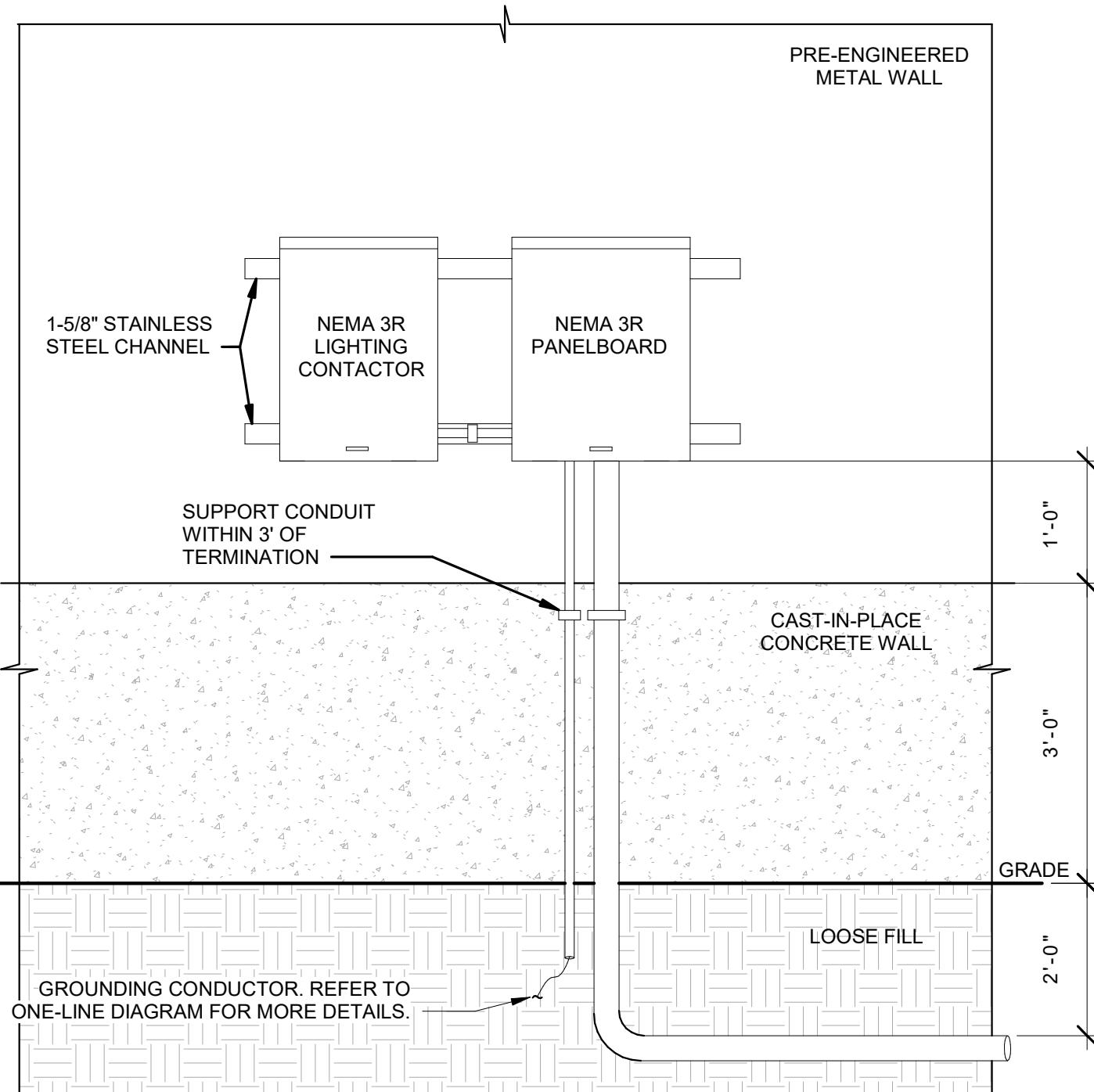
INSTALL GROUND PIN  
ON TOP

## NOTE:

- PROVIDE VAPORTIGHT AND INSECT RESISTANT RECEPTACLE.

## C1 RECEPTACLE DETAIL (TYP)

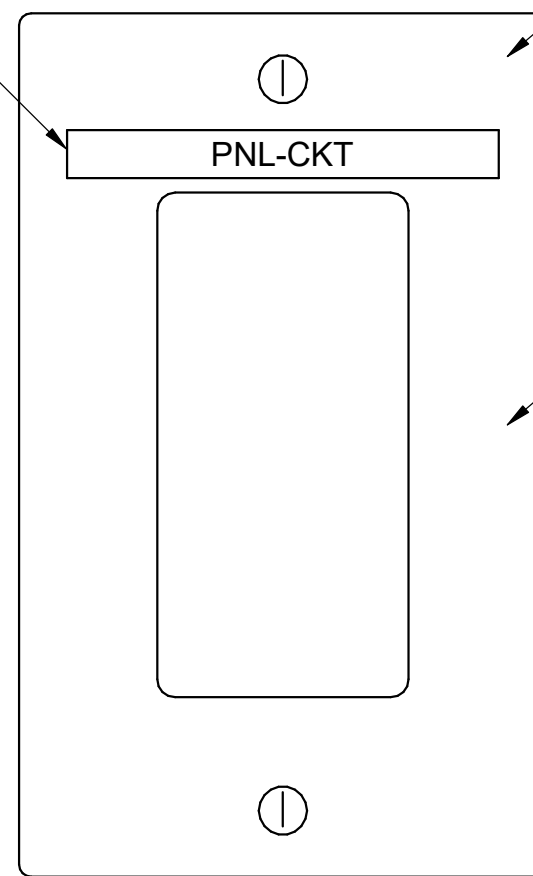
SCALE: N.T.S.



## C3 ELECTRICAL EQUIPMENT RACK WITH GROUNDING

SCALE: N.T.S.

CLEAR LABEL TAPE WITH  
TYPED, BLACK LETTERING  
DESIGNATING PANEL AND  
CIRCUIT NUMBER.



PROVIDE DURABLE  
WIRE MARKERS OR  
TAGS INSIDE THE  
OUTLET BOX.

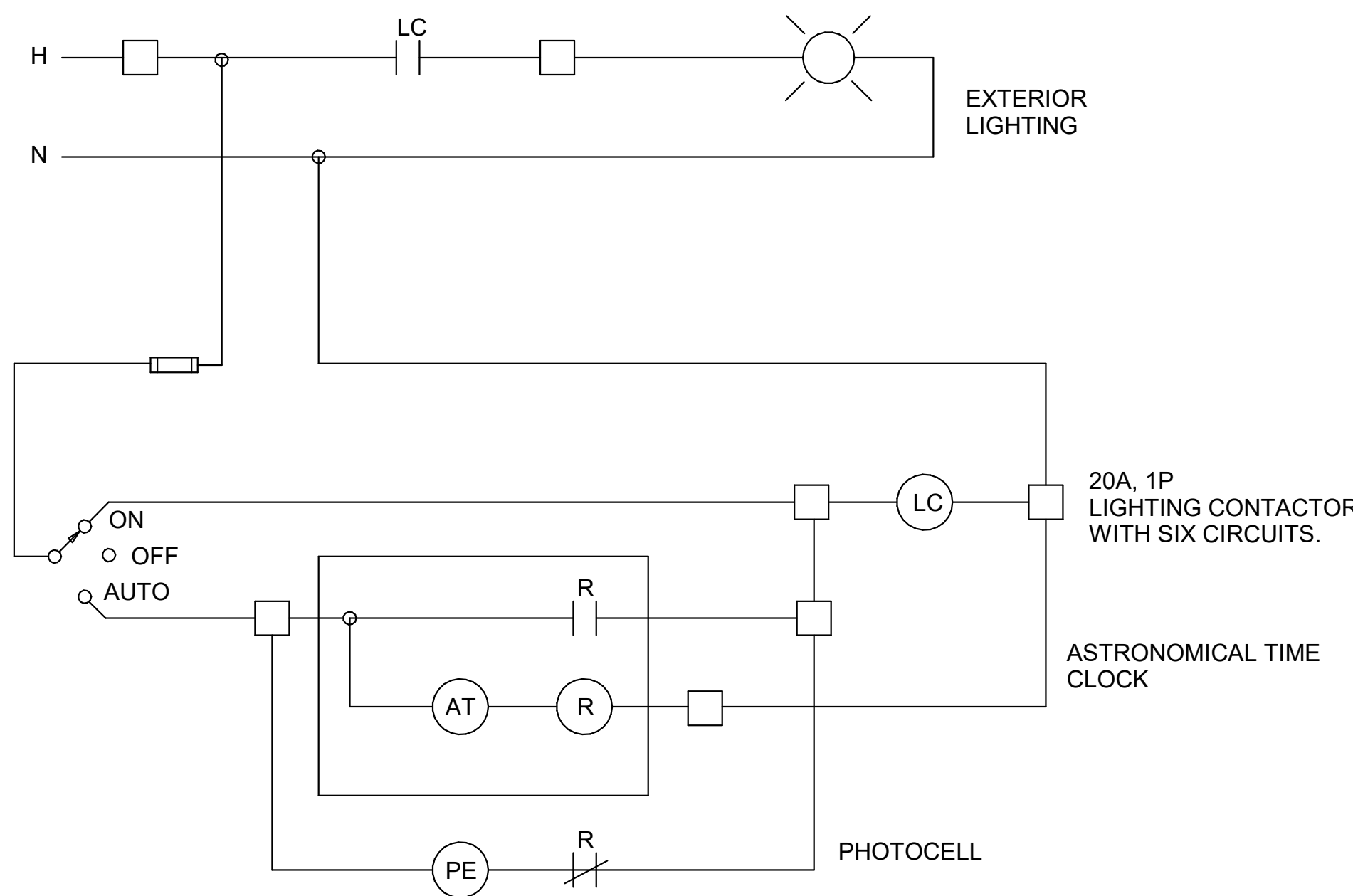
FACEPLATE COLOR PER  
SPECIFICATIONS.

## NOTE:

- PROVIDE VAPORTIGHT AND INSECT RESISTANT LIGHT SWITCH.

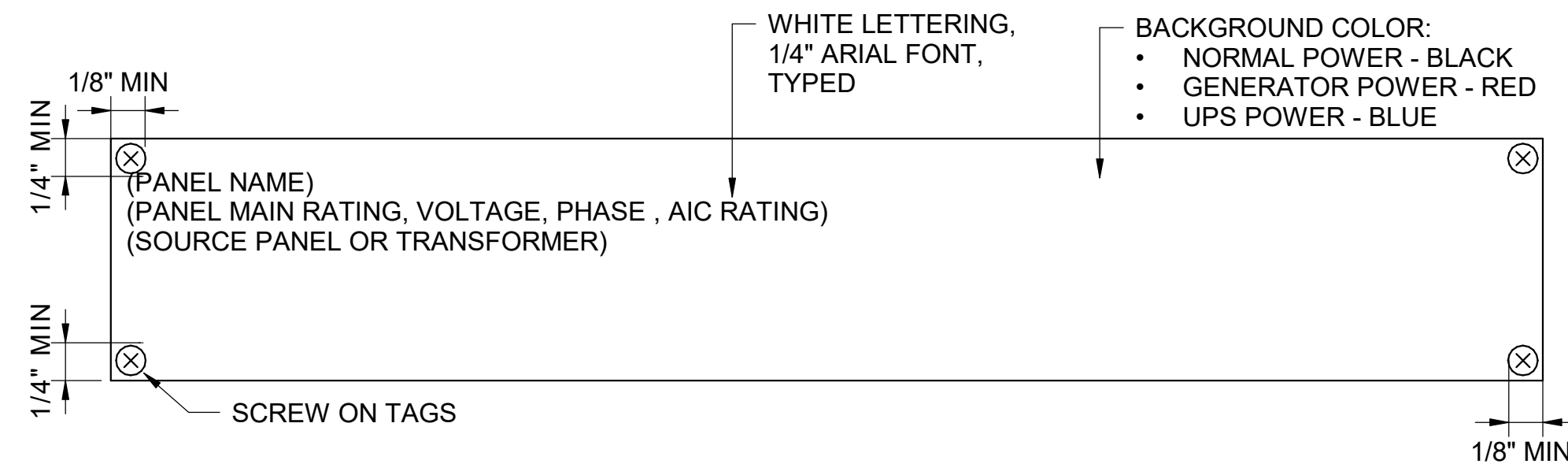
## B3 LIGHT SWITCH DETAIL (TYP)

SCALE: N.T.S.



## A1 EXTERIOR LIGHTING CONTROL SCHEMATIC

SCALE: N.T.S.



## A3 PANELBOARD LABEL

SCALE: 12" = 1'-0"

## EXAMPLE:

P21A  
150A MCB, 208V, 3Ø, 4W, 10KAIC  
SOURCE: T-P21A

SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR ELECTRICAL GENERAL NOTES, ABBREVIATIONS & LEGEND.



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PROJECT #: 1220834

SHEET TITLE

ELECTRICAL  
FEEDER  
SCHEDULES AND  
ONE-LINE  
DIAGRAM

SHEET NUMBER

E-601

ORIGINAL SHEET SIZE:  
24" X 36"

100% ISSUED FOR CONSTRUCTION

FEEDER SCHEDULE

FEEDER TAG	COPPER FEEDER
20CU	4#12 & 1#12G, 3/4"C.
25CU	4#10 & 1#10G, 3/4"C.
30CU	4#10 & 1#10G, 3/4"C.
35CU	4#8 & 1#10G, 1"C.
40CU	4#8 & 1#10G, 1"C.
45CU	4#6 & 1#10G, 1"C.
50CU	4#6 & 1#10G, 1"C.
60CU	4#4 & 1#10G, 1-1/2"C.
70CU	4#4 & 1#8G, 1-1/2"C.
80CU	4#2 & 1#8G, 1-1/2"C.
90CU	4#2 & 1#8G, 1-1/2"C.
100CU	4#1 & 1#8G, 2"C.
110CU	4#1 & 1#6G, 2"C.
125CU	4#1/0 & 1#6G, 2"C.
150CU	4#1/0 & 1#6G, 2"C.
175CU	4#2/0 & 1#6G, 2"C.
200CU	4#3/0 & 1#6G, 3"C.
225CU	4#4/0 & 1#4G, 3"C.
250CU	4-250 KCMIL & 1#4G, 3"C.
300CU	4-350 KCMIL & 1#4G, 3"C.
350CU	4-500 KCMIL & 1#2G, 4"C.
400CU	4-500 KCMIL & 1#2G, 4"C.
450CU	TWO 3-INCH CONDUITS, EACH WITH FOUR 4/0 AND ONE #2G
500CU	TWO 3-INCH CONDUITS, EACH WITH FOUR 250 KCMIL AND ONE #2G
600CU	TWO 3-INCH CONDUITS, EACH WITH FOUR 350 KCMIL AND ONE #1G
700CU	TWO 4-INCH CONDUITS, EACH WITH FOUR 500 KCMIL AND ONE 1/0G
800CU	TWO 4-INCH CONDUITS, EACH WITH FOUR 500 KCMIL AND ONE 1/0G
1000CU	THREE 4-INCH CONDUITS, EACH WITH FOUR 500 KCMIL AND ONE 2/0G
1200CU	FOUR 3-INCH CONDUITS, EACH WITH FOUR 350 KCMIL AND ONE 3/0G
1600CU	FIVE 4-INCH CONDUITS, EACH WITH FOUR 500 KCMIL AND ONE 4/0G
2000CU	SIX 4-INCH CONDUITS, EACH WITH FOUR 500 KCMIL AND ONE 250KCMIL G

- NOTES:
- FEEDER TAGS WITH A " \* " IN THE TAG HAVE BEEN INCREASED IN SIZE TO ACCOUNT FOR VOLTAGE DROP.
  - COORDINATE PANEL LUG SIZE AND QUANTITIES WITH THE SPECIFIED CONDUCTOR SIZES AND NUMBER OF PARALLEL RUNS AS APPLICABLE. LUG SIZES AND QUANTITIES MUST ACCOUNT FOR CONDUCTORS THAT WERE INCREASED IN SIZE AND/OR PARALLEL RUNS ADDED TO ACCOUNT FOR VOLTAGE DROP.
  - ALUMINUM CONDUCTORS ARE NOT PERMITTED TO BE USED FOR MECHANICAL EQUIPMENT OR ANY OTHER EQUIPMENT REQUIRING FLEXIBLE CONNECTIONS.

LUMINAIRE SCHEDULE

FIXTURE	DESCRIPTION	LAMP	LUMENS	CRI	CCT	VOLTAGE	WATTAGE	MOUNTING	MANUFACTURER	NOTES
H1	LED VAPOR TIGHT, WHITE FINISH	LED	8000	80	4000	MVOLT	50.5 W	PENDANT AT 18' AFG TO THE BOTTOM OF FIXTURE	LITHONIA LIGHTING FEM-L48-8000LM-LPACL-WD-MVOLT-GZ10-40K-80CRI-STSL	1, 2
W1	LED WALL PACK ,BLACK FINISH	LED	1200	80	4000	MVOLT	48 W	WALL AT 9' AFG	LITHONIA LIGHTING WDGE2 LED-P3-40K-80CRI-VF-MVOLT-DBLXD	1

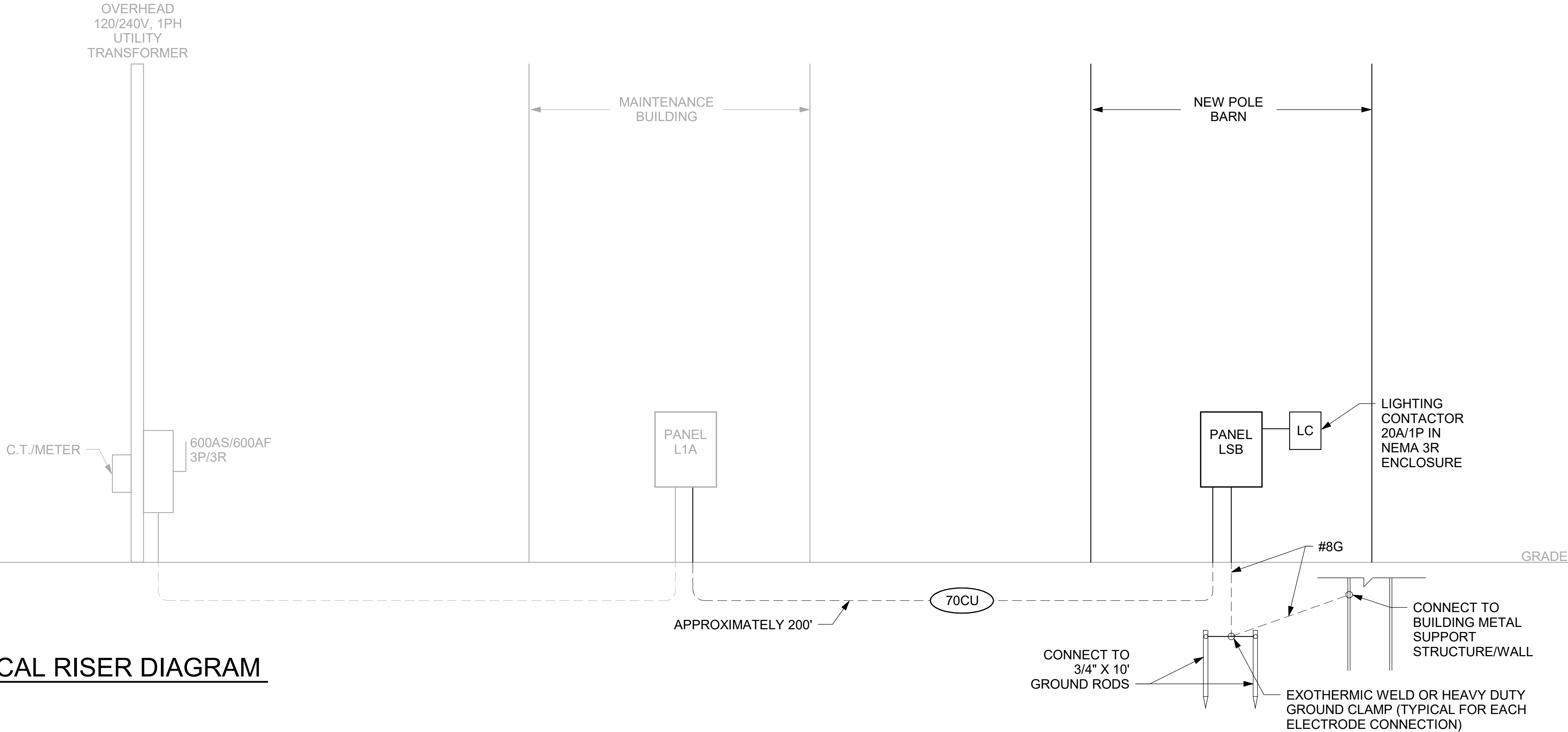
- NOTES:
- DESIGN BASIS SHOWN FOR REFERENCE ONLY. FIXTURES OF EQUAL QUALITY AND PERFORMANCE ARE ACCEPTABLE. ALL FIXTURES MUST BE EQUAL IN MATERIAL, QUALITY, WARRANTY, PHOTOMETRIC, SIZE AND FINISH.
  - LUMINAIRE SHALL BE UL LISTED FOR DAMP LOCATIONS.

NEW PANELBOARD SCHEDULE: LSB

LOCATION: POLE BARN STORAGE ARE...			MAINS RATING: 70A MCB			MINIMUM BREAKER SCCR: 10,000						
SUPPLY FROM: L1A			VOLTAGE: 240/120									
MOUNTING: SURFACE			PHASES: 1									
ENCLOSURE: NEMA 3R			WIRES: 3									
CONNECTED LOAD KVA												
	CKT	CIRCUIT DESCRIPTION	TRIP	POLE	A		B		POLE	TRIP	CIRCUIT DESCRIPTION	CKT
	1	WALL PACKS	20 A	1	0.38	0.54			1	20 A	RECEPTACLES	2
	3	LIGHTING	20 A	1			0.40	0.72	1	20 A	RECEPTACLES	4
	5	RECEPTACLES	20 A	1	0.90	0.00			1	20 A	SPARE	6
	7	SPARE	20 A	1			0.00	0.00	1	20 A	SPARE	8
	9	SPARE	20 A	1	0.00	0.00			1	20 A	SPARE	10
	11	SPARE	20 A	1			0.00	0.00	1	20 A	SPARE	12
	13	SPARE	20 A	1	0.00	0.00			1	20 A	SPARE	14
	15	SPARE	20 A	1			0.00	0.00	1	20 A	SPARE	16
	17	SPARE	20 A	1	0.00	0.00			1	20 A	SPARE	18
	19	SPARE	20 A	1			0.00	0.00	1	20 A	SPARE	20
	21	SPARE	20 A	1	0.00	0.00			1	20 A	SPARE	22
	23	SPARE	20 A	1			0.00	0.00	1	20 A	SPARE	24
	25	SPACE	--	1	--	--			1	--	SPACE	26
	27	SPACE	--	1	--	--	--	--	1	--	SPACE	28
	29	SPACE	--	1	--	--			1	--	SPACE	30
TOTAL LOAD:					1.82		1.12					
NOTES:												
Load Classification			Connected Load			Estimated Demand			Panel Totals			
Lighting			0.79 kVA			0.79 kVA			Total Conn. Load: 2.94 kVA			
Recp - General Purpose			2.16 kVA			2.16 kVA			Total Est. Demand Load: 2.94 kVA			
									Total Conn. Current: 12 A			
									Total Est. Demand Current: 12 A			
									Total Est. Design Current: 12 A			

EXISTING PANELBOARD SCHEDULE: L1A

LOCATION: MAINTENANCE BLDG				MAINS RATING: 400A MCB				MINIMUM BREAKER SCCR: 10,000			
SUPPLY FROM: UTILITY XFMR				VOLTAGE: 240/120							
MOUNTING: SURFACE				PHASES: 1							
ENCLOSURE: NEMA 1				WIRES: 3							
CONNECTED LOAD KVA											
CKT	CIRCUIT DESCRIPTION	TRIP	POLE	A		B		POLE	TRIP	CIRCUIT DESCRIPTION	CKT
1	EXISTING LOAD	20 A	1	1.00	2.70		1.00	2.70	2	50 A EXISTING LOAD	2
3	EXISTING LOAD	20 A	1				1.00	2.70	--	--	4 --
5	EXISTING LOAD	50 A	2	2.70	4.80				2	60 A EXISTING LOAD	6
--	7 --	--	--				2.70	4.80	--	--	8 --
9	SPARE	20 A	1	0.00	2.70				2	50 A EXISTING LOAD	10
11	EXISTING LOAD	20 A	1				1.20	2.70	--	--	12 --
13	EXISTING LOAD	20 A	1	1.20	1.35				2	40 A EXISTING LOAD	14
15	EXISTING LOAD	20 A	1				1.20	1.35	--	--	16 --
17	EXISTING LOAD	20 A	1	1.20	1.82				2	70 A NEW PANEL LSB	18
19	EXISTING LOAD	20 A	1				0.70	1.12	--	--	20 --
21	EXISTING LOAD	60 A	2	4.80	0.40				1	20 A EXISTING LOAD	22
--	23 --	--	--				4.80	0.12	1	20 A EXISTING LOAD	24
25	EXISTING LOAD	20 A	1	1.20	0.60				1	20 A EXISTING LOAD	26
27	EXISTING LOAD	20 A	2				1.20	0.90	1	20 A EXISTING LOAD	28
--	29 --	--	--	1.20	1.80				2	20 A EXISTING LOAD	30
31	EXISTING FISH LAB PNL	90 A	2				5.80	1.80	--	--	32 --
--	33 --	--	--	5.60	1.20				1	20 A EXISTING LOAD	34
35	EXISTING LOAD	20 A	1				0.00	1.20	1	20 A EXISTING LOAD	36
37	EXISTING LOAD	20 A	1	1.00	1.00				1	20 A EXISTING LOAD	38
39	EXISTING LOAD	20 A	1				1.00	1.00	2	30 A EXISTING LOAD	40
41	EXISTING LOAD	30 A	1	1.50	1.00				--	--	42 --
TOTAL LOAD:				40.77		37.29					
NOTES:											
Load Classification		Connected Load		Estimated Demand		Panel Totals					
Lighting		0.79 kVA		0.79 kVA		Total Conn. Load: 78.06 kVA					
Recp - General Purpose		2.16 kVA		2.16 kVA		Total Est. Demand Load: 78.06 kVA					
Spare		75.12 kVA		75.12 kVA		Total Conn. Current: 325 A					
Existing Load						Total Est. Demand Current: 325 A					
						Total Est. Design Current: 325 A					



A1

ELECTRICAL RISER DIAGRAM

SCALE: N.T.S.