

BUILDING ENVELOPE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS (IECC TABLE C402.1.3)							
BUILDING ELEMENT	MIN. R-VALUE**	R-VALUE PROVIDED	CODE				
WALLS - WOOD FRAMED	20	20	2015 IECC - TABLE C402.1.3				
ROOF	38	39	2015 IECC - TABLE C402.1.3				
floors - Slab on Grade	NOT REQUIRED	0	2015 IECC - TABLE C402.1.3				
CLIMATE ZONE	2A,	2A, BALDWIN COUNTY 24					

PLUMBING FIXTURE SCHEDULE (IBC TABLE 2902.1)

OCCUPANCY		WATER CLOSETS		LAVATORIES	DRINKING	
OCC CLASS	OCCUPANT LOADS	MALE FEMALE		MALE/FEMALE EACH	FOUNTAIN	OTHER
A-3		1 PER 125	1 PER 65	1 PER 200	1 PER 500	
ASSEMBLY	127	0.51	0.98	0.32 EACH	0.25	1 SERVICE SINK
B BUSINESS 32	32		1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR REMAINDER		1 PER 100	
		0.64	0.64	0.4 EACH	0.32	1 SERVICE SINK
TOTAL REQ'D	159	1.15	1.62	0.72 EACH	0.57	
TOTAL	PROVIDED	9	9 9		5	6 SERVICE SINK

CODE REVIEW REFER SITE & CIVIL PACKAGE FOR ADDITIONAL INFORMATION SUCH AS FIRE DEPARTMENT ACCESS.

(GROUP B)

(GROUP A-3)

(NOT SPRINKLED)

APPLICABLE CODES 2021 INTERNATIONAL BUILDING CODE 2021 INTERNATIONAL FIRE CODE 2021 INTERNATIONAL FUEL & GAS CODE 2021 INTERNNATIONAL MECHANICAL CODE

2018 INTERNATIONAL PLUMBING CODE 2020 NATIONAL ELECTRICAL CODE (NFPA 70) 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN CITY OF GULF SHORES SUPPLEMENTAL REQUIREMENTS

OCCUPANCY CLASSIFICATION: MIXED OCCUPANCY BUSINESS ASSEMBLY

GENERAL BUILDING HEIGHTS AND AREAS (Chapter 5)

TYPE VB CONSTRUCTION TYPE: AUTOMATIC SPRINKLER SYSTEM: A-3 = 6,000 SF (NOT SPRINKLED) ALLOWABLE AREAS: B = 9,000 SFALLOWABLE HEIGHT ABOVE GRADE (VB): A-3,B = 40 FT

ALLOWABLE NUMBER OF STORIES (VB): A-3 = 1 STORY (UNDER ROOF) PROJECT AREAS: 6,551 SF BUILDING FRONTAGE IS FULLY OPEN ON ALL SIDES PER IBC 506.3.2 AND 506.3.3, INCREASING THE ALLOWABLE AREA (A-3) BY 75% TO 10,500 SF.

BUILDING OCCUPANCIES ARE NONSEPARATED PER IBC 508.3 WITH A-3 OCCUPANCY BEING THE MOST RESTRICTIVE.

TYPES OF CONSTRUCTION (Chapter 6)

STRUCTURAL ELEMENTS CONSIST OF CONCRETE SLAB ON ON GRADE WITH WOOD FRAMED WALLS AND SHOP-FABRICATED WOOD TRUSSES. NO FIRE-RESISTANT ASSEMBLIES REQUIRED FOR BUILDING ELEMENTS OR

FIRE AND SMOKE PROTECTION FEATURES (Chapters 7 & 9) FOR ELEVATIONS WITH FIRE SEPARATION DISTANCE OF 20'-0" TO LESS THAN 25'-0", ONLY 45% OF ELEVATION IS ALLOWED TO BE OPEN WITHOUT PROTECTION PER IBC TABLE 705.8

PER IBC 903.2.1.3, AUTOMATIC SPRINKLERS ARE NOT REQUIRED.
ASSEMBLY (A-3) OCCUPANT LOAD IS LESS THAN 300; FIRE AREA DOES
NOT EXCEED 12,000 SF; FIRE AREA IS NOT LOCATED ON A FLOOR OTHER THAN THE LEVEL OF EXIT DISCHARGE.

MEANS OF EGRESS (Chapter 10)

OCCUPANCIES: GROSS FLOOR AREAS:

3,472 SF (INTERIOR CONDITIONED) 2,105 SF (EXTERIOR COVERED)
5,577 SF TOTAL OCCUPANT LOAD:

REQ'D EXIT WIDTH: $159 \times 0.2 = 31.8$ " REFER PLAN REQ'D EXIT AMT: EXITS PROVIDED:

REFER PLAN FOR EXITS AND EXIT ACCESS TRAVEL DISTANCE ALLOWED: 200 FT (NONSPRINKLED)

MAX COMMON PATH: 75 FT (NONSPRINKLED)

ACCESSIBILITY (CHAPTER 11)

ACCESSIBLE ROUTES AND ENTRANCES ARE PROVIDED FOR IN THE DESIGN. REFER SITE & CIVIL PACKAGE FOR ACCESSIBLE PARKING REQUIREMENTS AND LOCATIONS.

REFER ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS FOR ACCESSIBILITY REQUIREMENTS AT RESTROOMS AND OTHER FIXTURES AND EQUIPMENT.

PLUMBING FIXTURES (CHAPTER 29)

REFER PLUMBING FIXTURE SCHEDULE THIS SHEET FOR REQUIREMENTS AT THIS

FAMILY-ASSISTED RESTROOM PROVIDED.

REFER SITE & CIVIL PACKAGE FOR PLUMBING REQUIREMENTS FOR ENTIRE CAMPUS AND LOCATIONS OF PROVIDED FACILITIES.

BUILDING ENVELOPE REFER TO PROVIDED TABLE ON THIS SHEET. **TOURISM &**

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WATERSHED

Building Sustain*ability*

302 Magnolia Avenue

Fairhope, AL 36532

ABILITY

p 251.929.0514

SHEET SPECIFIC NOTES

PATH OF TRAVEL BEGINNING POINT OF TRAVEL DIVERGENCE PATH DISCHARGE TO PUBLIC RIGHT OF WAY

TOTAL EGRESS TRAVEL DISTANCE

112'-7" COMMON PATH OF EGRESS TRAVEL DISTANCE

EXIT OR EXIT ACCESS

LIFE SAFETY PLAN

WELCOME HUB

1/8" = 1'-0"

1-HOUR FIRE BARRIER OR FIRE RESISTANT ASSEMBLY

FIRE EXTINGUISHER LOCATION

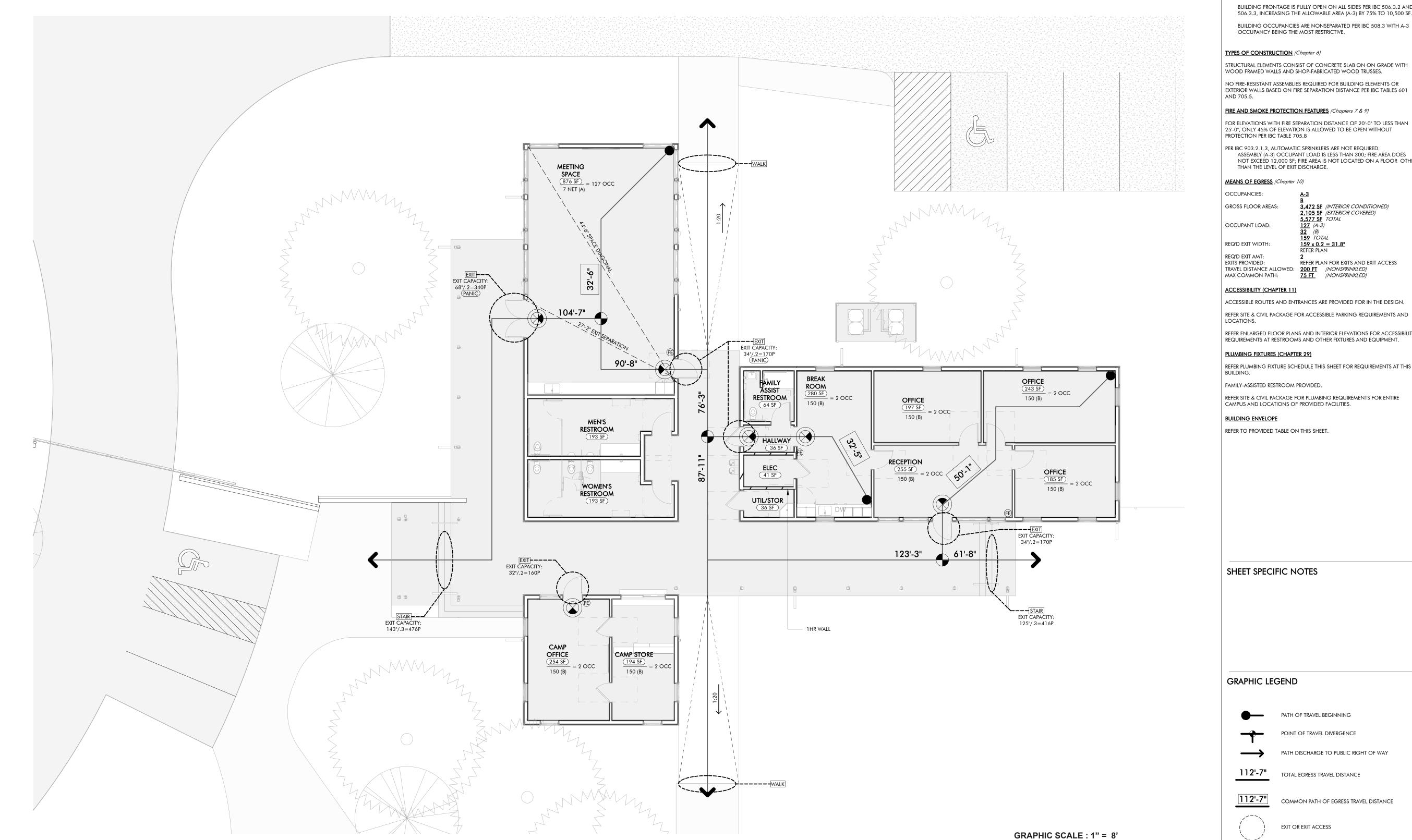
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PROJECT STATUS CONFORMANCE SET

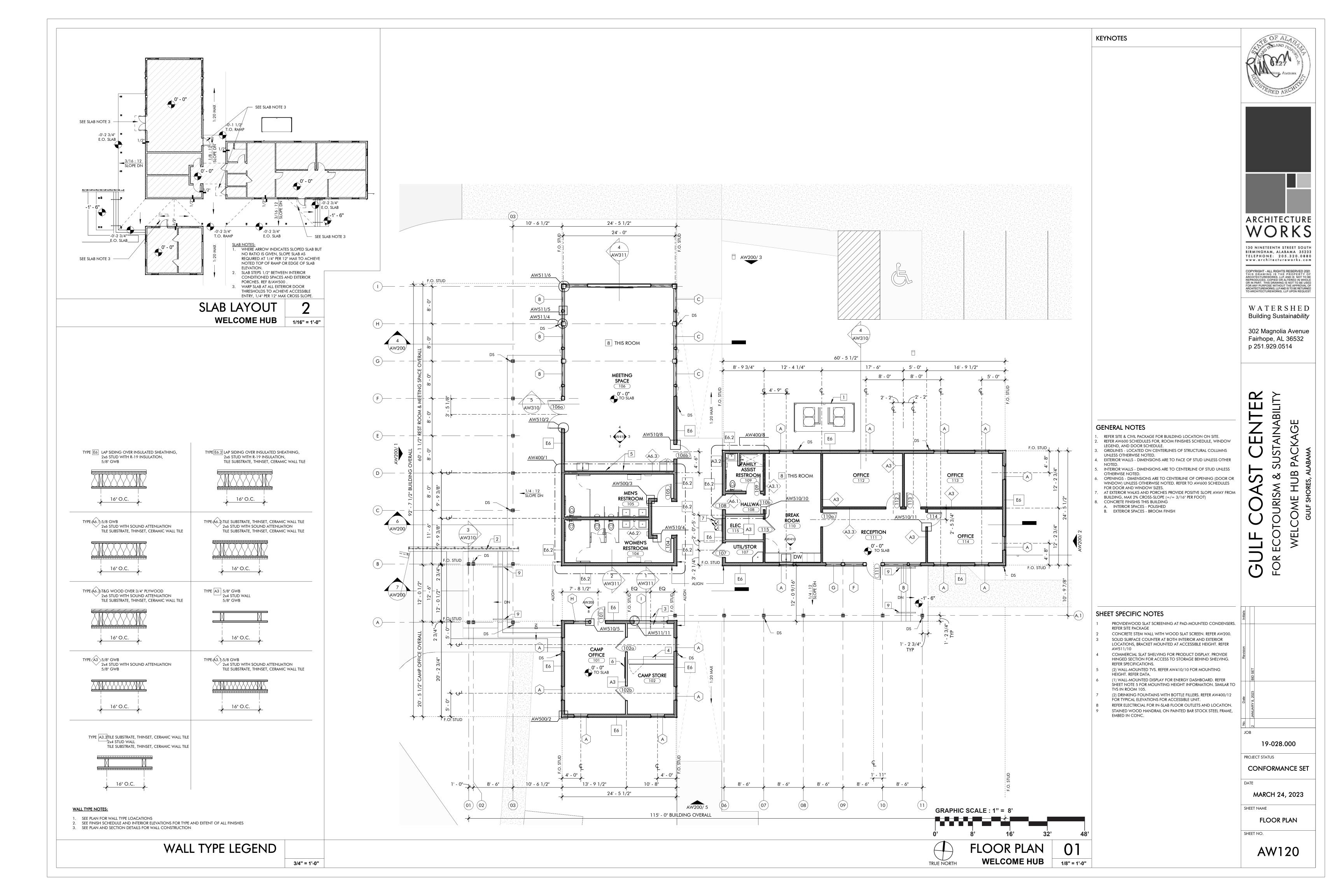
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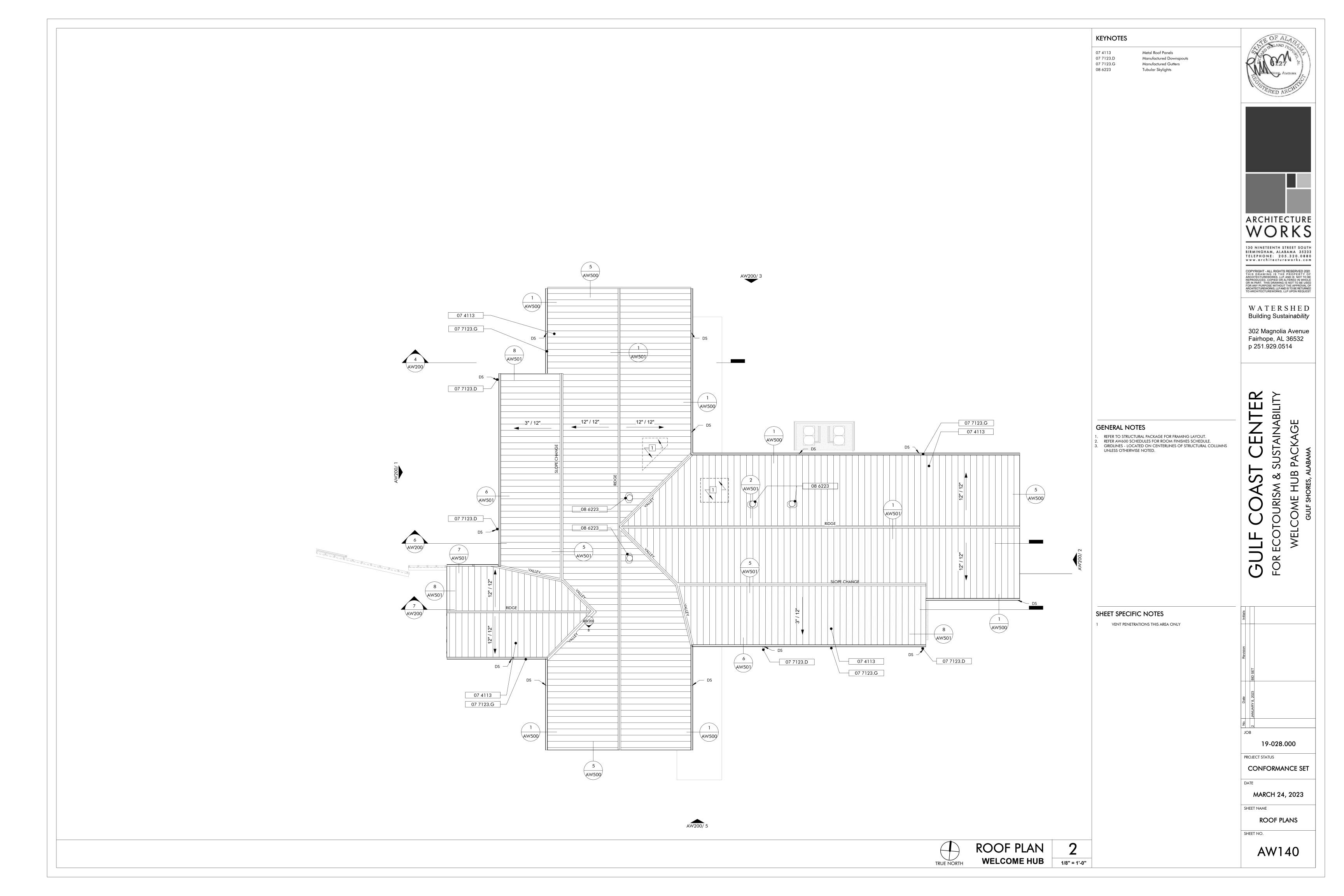
SHEET NAME CODE REVIEW & LIFE

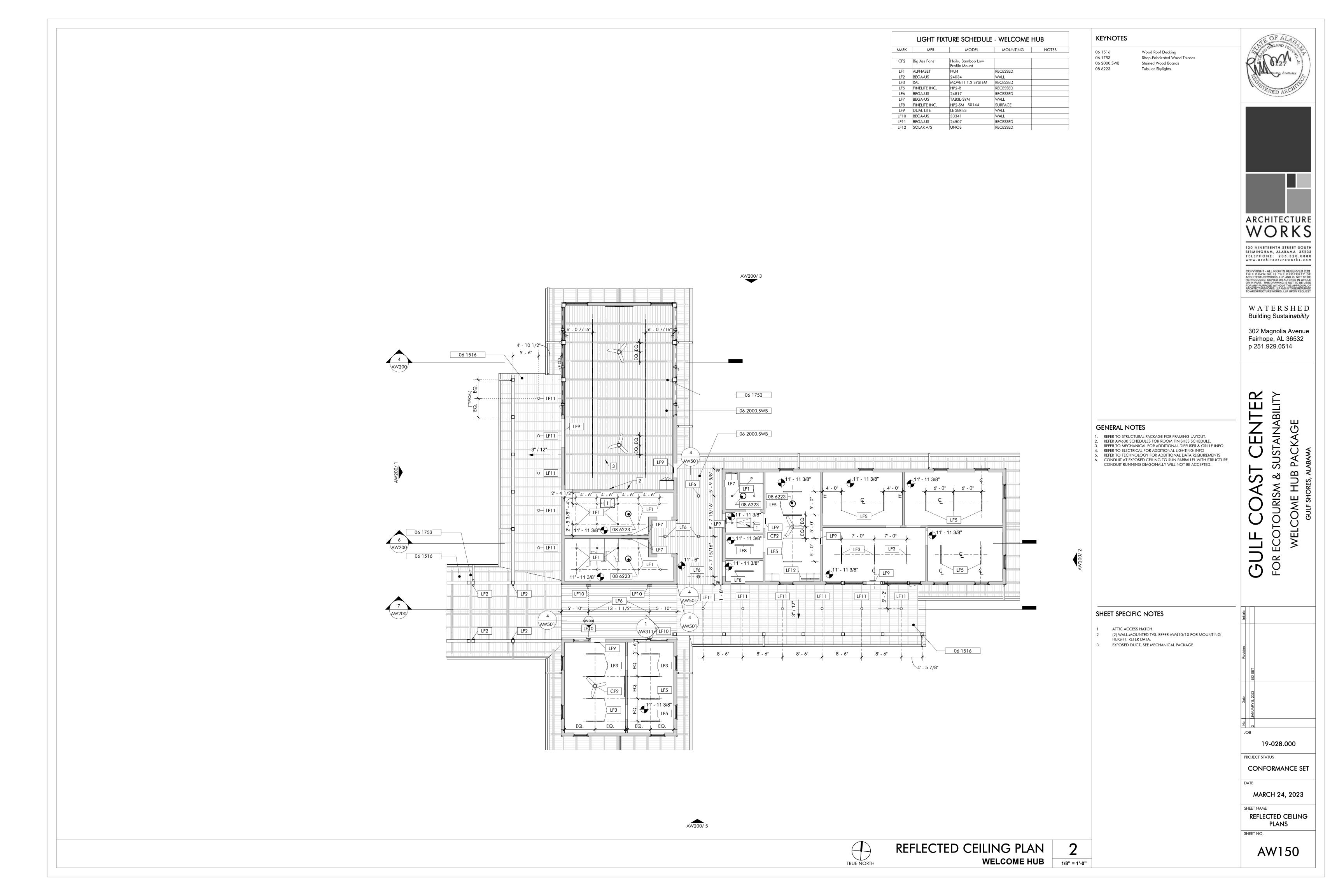
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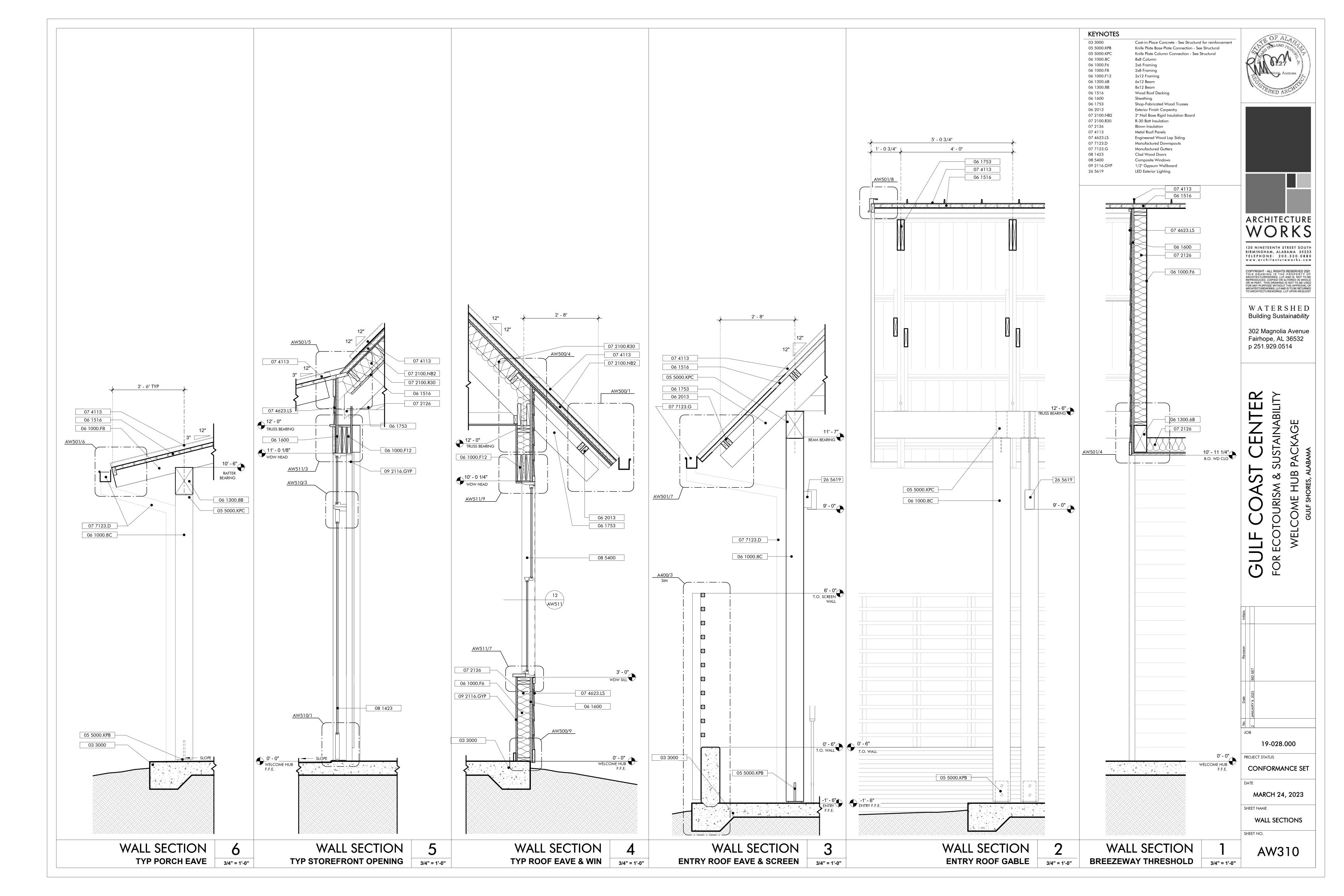


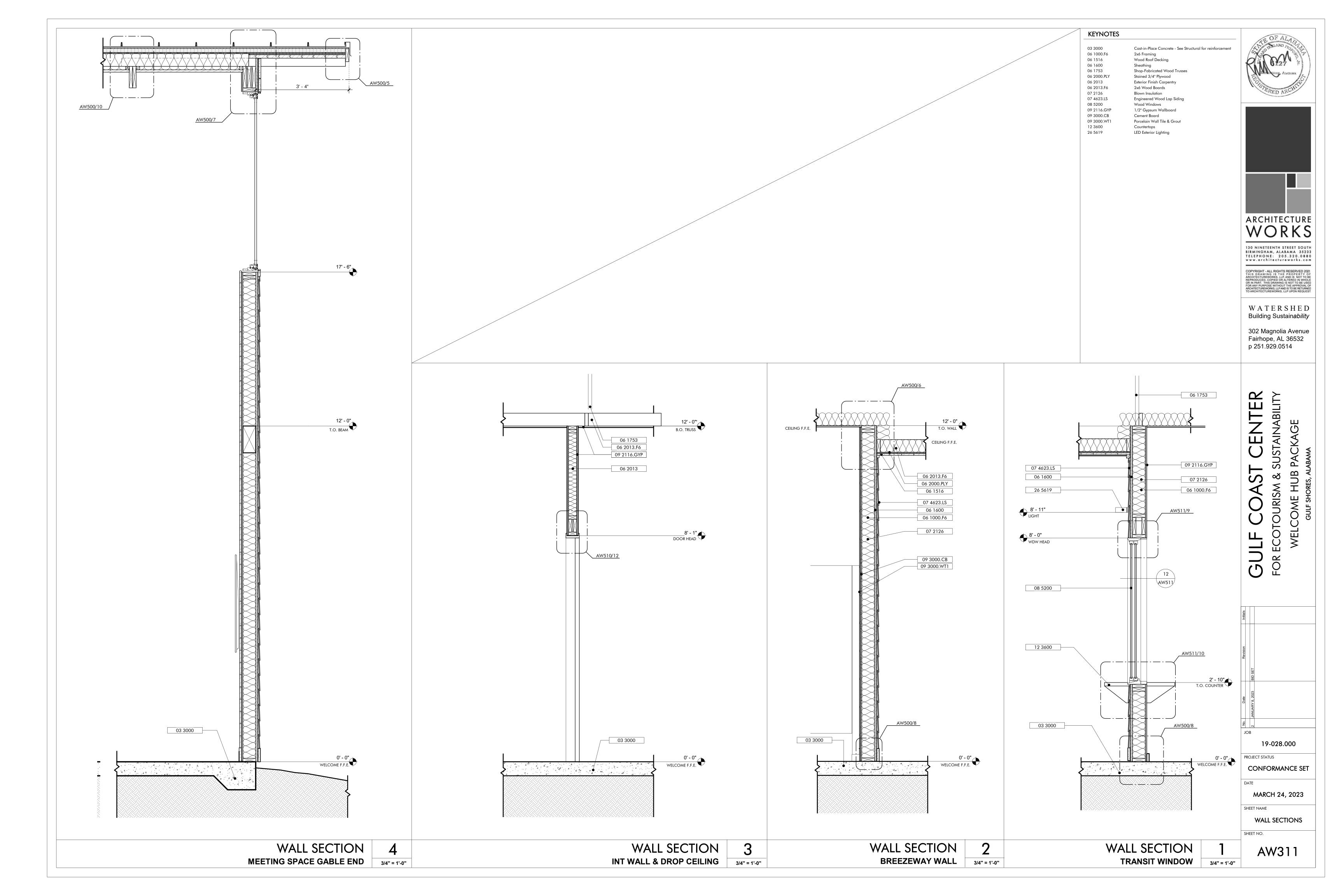


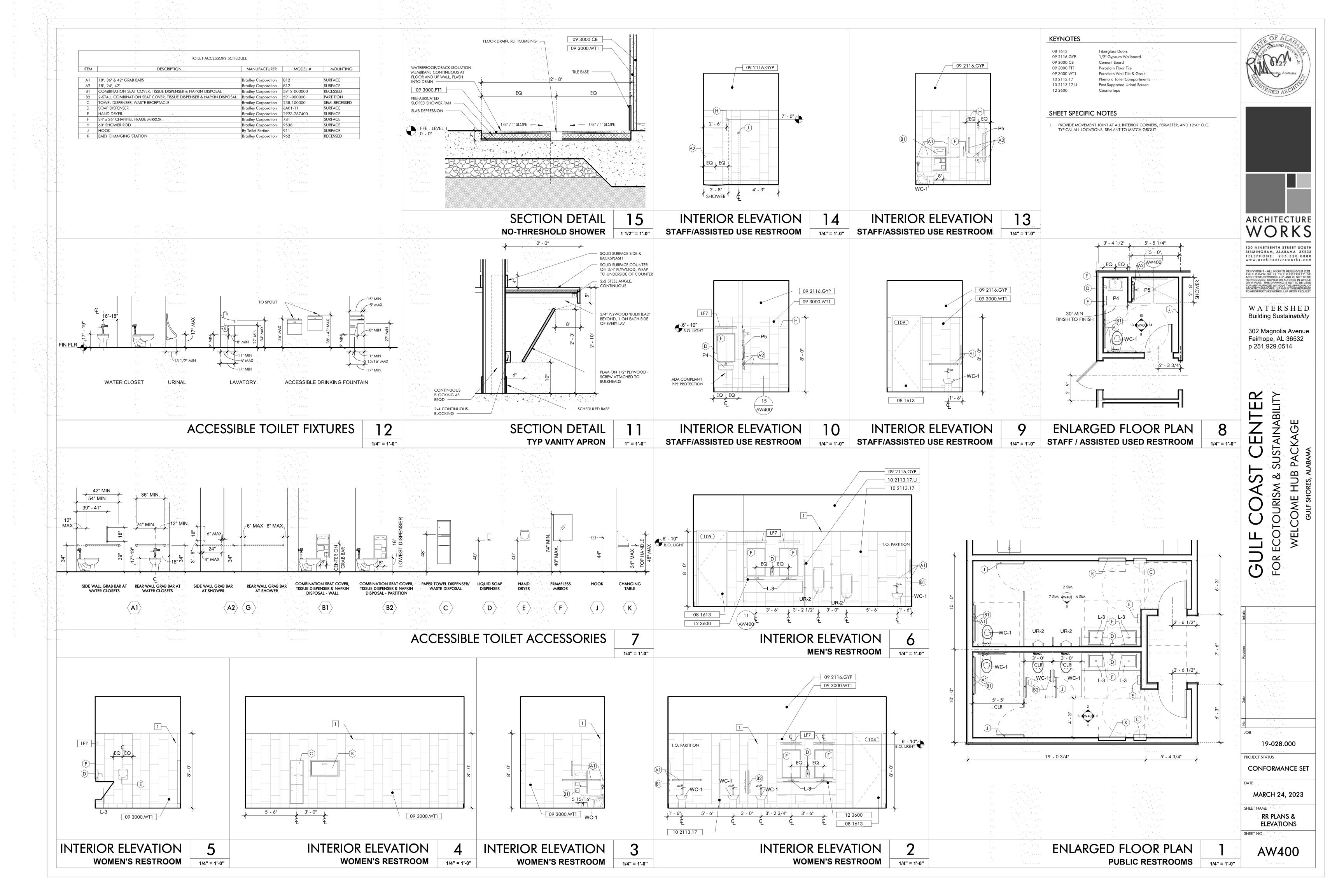


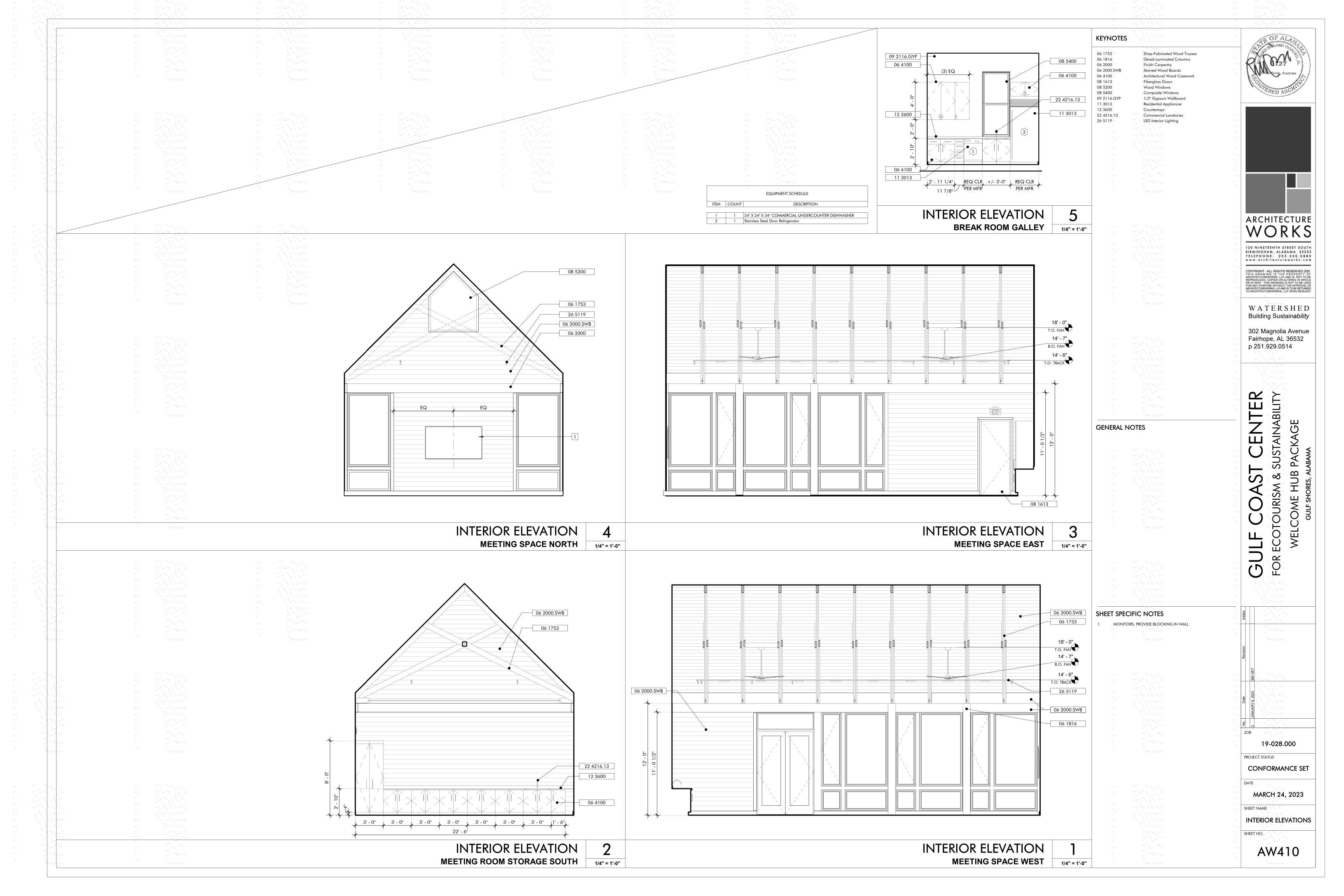


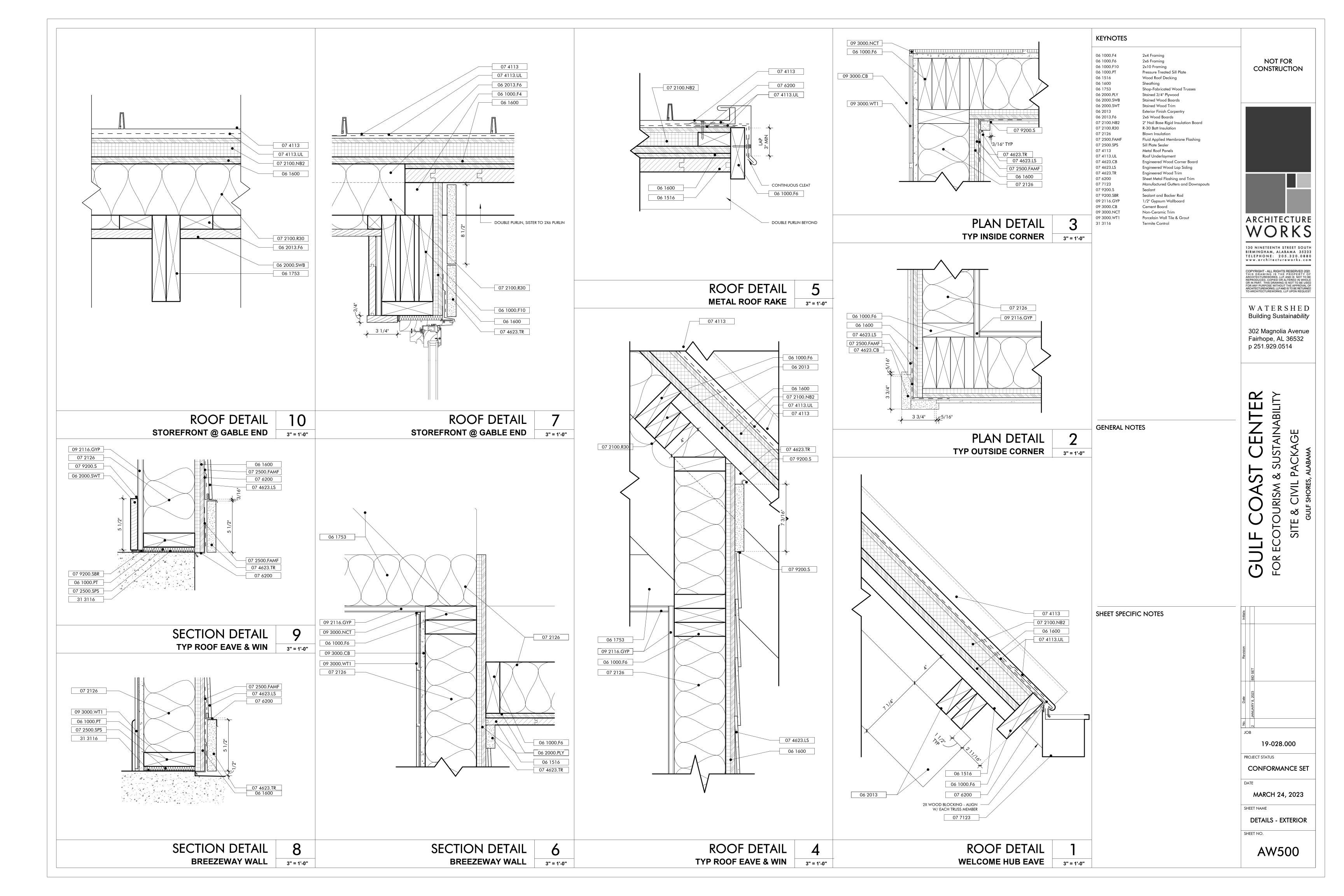


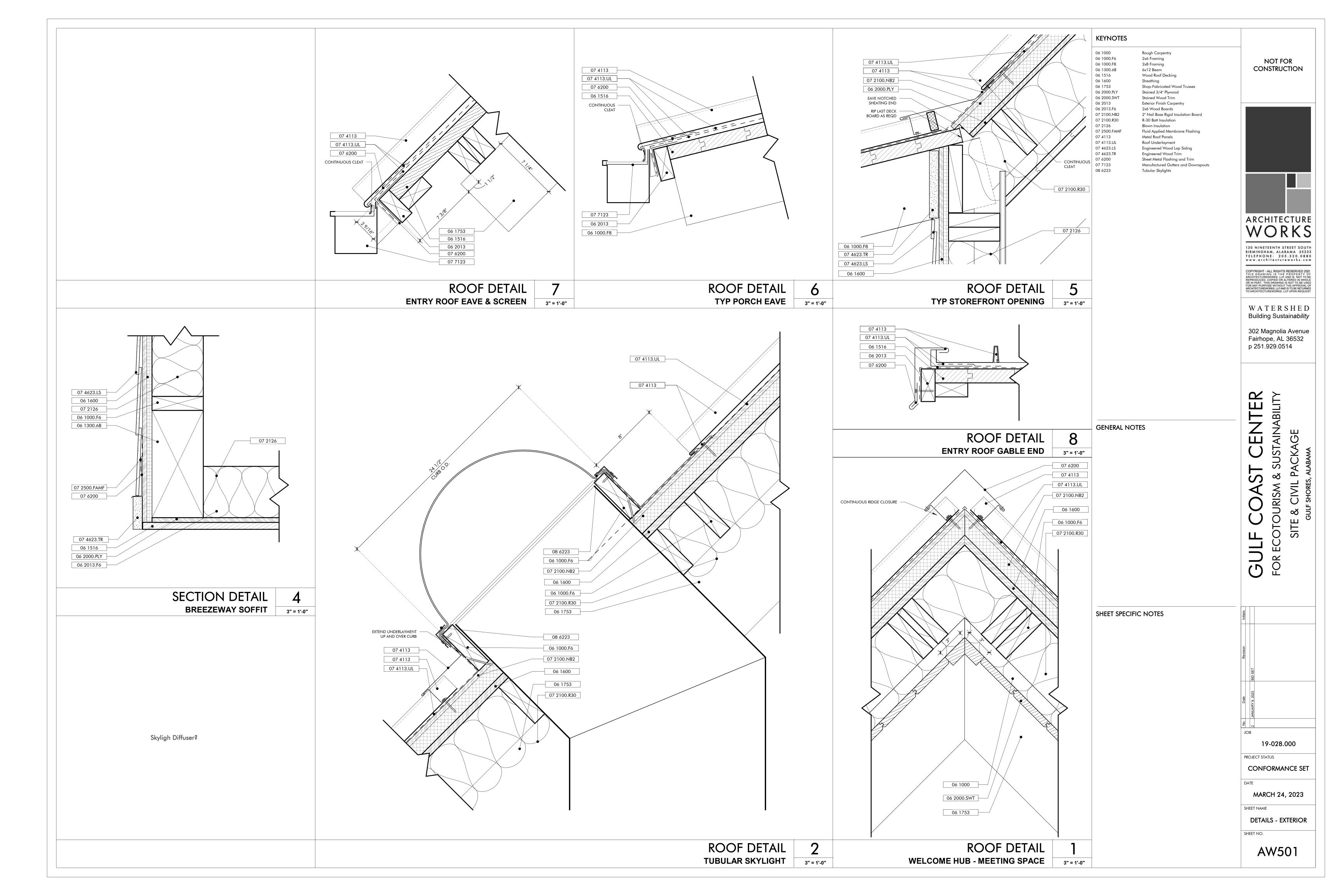


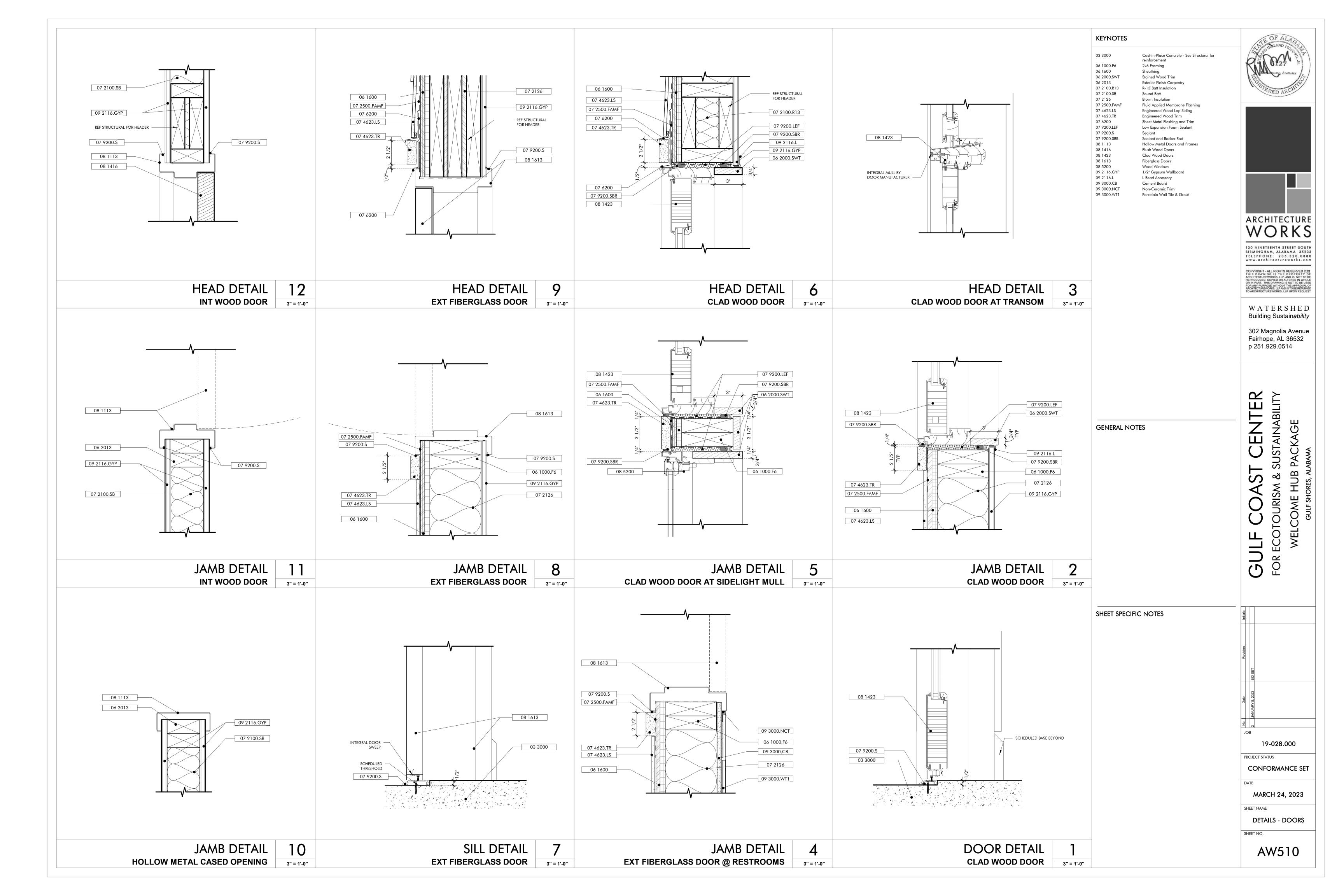


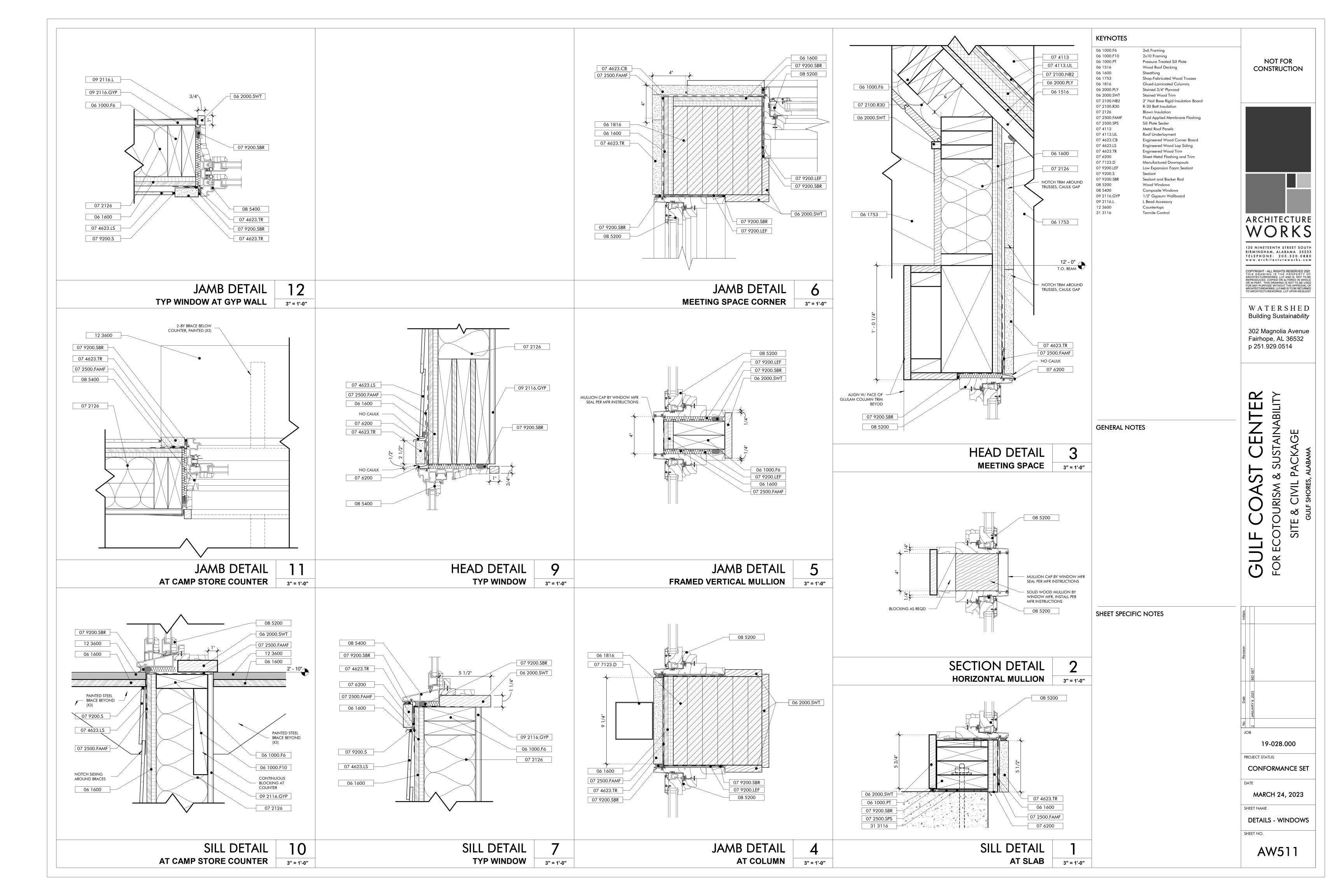


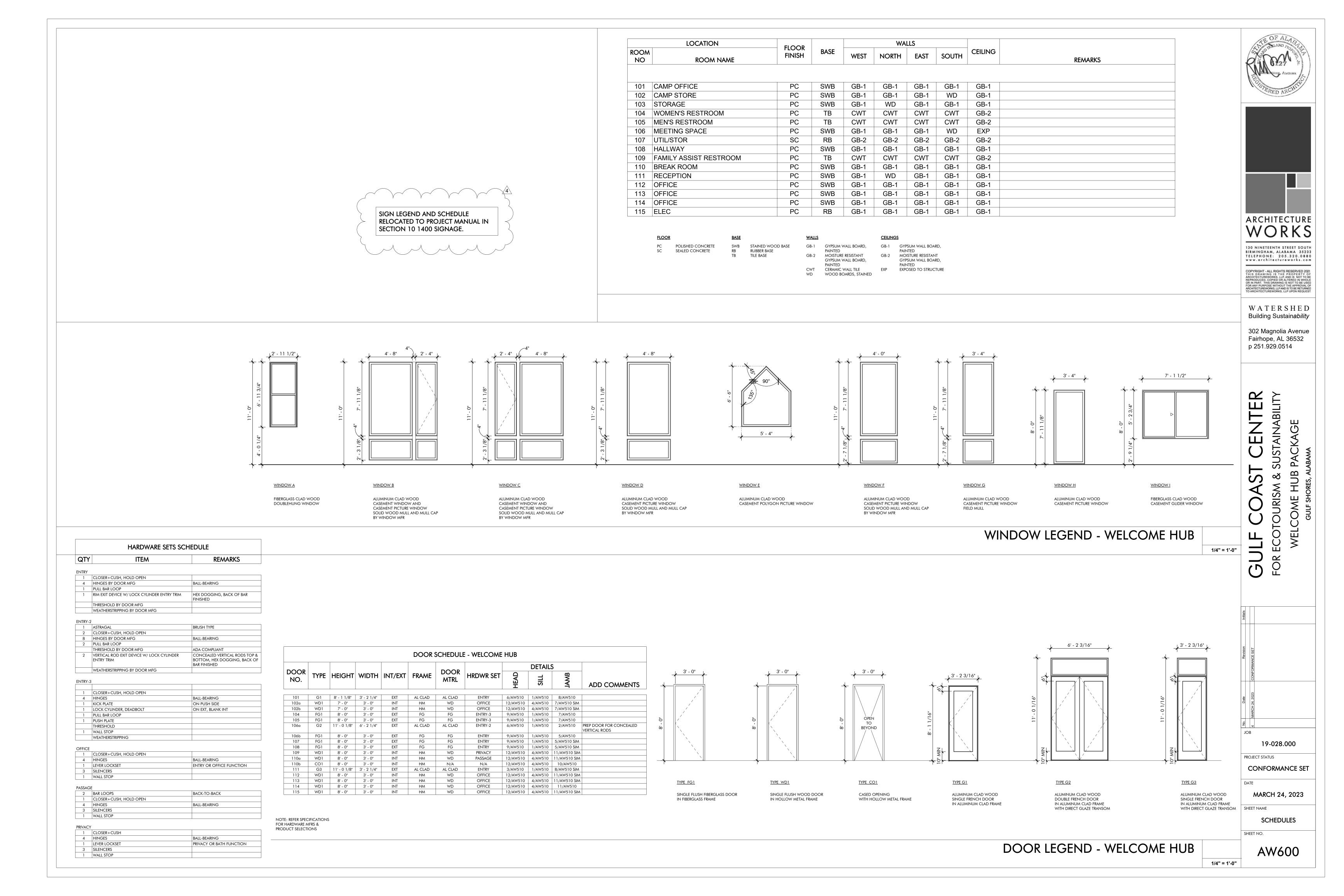












GENERAL REQUIREMENTS:

- THESE STRUCTURAL DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. ALL CONSTRUCTION SHALL CONFORM TO THE EDITION OF THE INTERNATIONAL BUILDING CODE REFERENCED. REFERENCE TO OTHER SPECIFICATIONS OR CODES SHALL MEAN THE VERSION INDICATED IN THE INTERNATIONAL BUILDING CODE.
- 2. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH ALL OTHER DISCIPLINES DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER.
- THE CONTRACTOR SHALL VERIFY SITE CONDITIONS AND COORDINATE STRUCTURAL DIMENSIONS, ELEVATIONS AND SECTIONS WITH ARCHITECTURAL DIMENSIONS, ELEVATIONS, AND SECTIONS AND REPORT ANY DISCREPANCY TO THE ARCHITECT/ENGINEER PRIOR TO THE FABRICATION OR INSTALLATION OF
- 4. STRUCTURAL DRAWINGS SHOW TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY AND SHALL APPLY FOR LIKE OR SIMILAR CONDITIONS UNLESS NOTED OTHERWISE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS SIMILAR TO THOSE SHOWN. IF THERE IS A QUESTION REGARDING THE APPLICABILITY OF A DETAIL, CONTACT THE ARCHITECT/ENGINEER IN WRITING REQUESTING CLARIFICATION.
- 5. COORDINATE AND VERIFY ALL OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL, MECHANICAL, PLUMBING, AND/OR ELECTRICAL DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. STRUCTURAL DRAWINGS ONLY SHOW OPENINGS RELATIVE TO THE STRUCTURE.
- 6. COORDINATE ALL LIMITS AND DEPTHS OF DEPRESSIONS FOR FLOOR FINISHES WITH ARCHITECTURAL DRAWINGS AND SCHEDULES. LIMITS SHOWN ON STRUCTURAL DRAWINGS ARE SCHEMATIC. COORDINATE FLOOR JOINTS WITH ARCHITECTURAL FLOOR FINISHES.
- 7. STRUCTURAL MEMBERS SHALL NOT BE CUT, NOTCHED, CHANGED OR MODIFIED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

 8. DO NOT SCALE FOR DIMENSIONS NOT SHOWN ON THE DRAWINGS. SEND A
- WRITTEN REQUEST FOR INFORMATION TO THE ARCHITECT/ENGINEER FOR DIMENSIONS NOT PROVIDED.

 9. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE MEANS,
- METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

 10. THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETED FORM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. THE ENGINEER WILL NOT ADVISE ON OR ISSUE DIRECTION RELATED TO SAFETY REQUIREMENTS. IT IS THE CONTRACTOR'S
- DIRECTION RELATED TO SAFETY REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE OSHA REGULATIONS.

 11. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS/ROOFS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOAD.
- WHERE SPECIFIED, POST INSTALLED ANCHORING SYSTEMS SUCH AS MANUFACTURED BY SIMPSON OR HILTI, SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. SPECIAL ATTENTION SHALL BE GIVEN TO THE DRILLING, CLEANING, AND PREPARATION OF HOLES. WHERE ADHESIVE ANCHORS ARE SHOWN, SPECIAL ATTENTION SHALL BE GIVEN TO THE REQUIRED MIXING, APPLICATION, AND CURING TIME OF THE ADHESIVE SPECIFIED.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION THAT MIGHT BE AFFECTED BY, OR OTHERWISE INTERFERE WITH, INSTALLATION OF NEW WORK. THIS INCLUDES THOSE THAT MIGHT BE DAMAGED BY NEW FOUNDATIONS OR OTHER WORK, AND THOSE WHOSE PRESENCE MIGHT LEAD DAMAGE TO THE NEW WORK (e.g. DIFFERENTIAL SETTLEMENT).

DESIGN CRITERIA

- 1. GENERAL BUILDING CODE:

 1 INTERNATIONAL BUIL
- INTERNATIONAL BUILDING CODE, IBC 2021 EDITION. ALL CODES BELOW ARE THE EDITION REFERENCED IN THE IBC.
 DESIGN LOAD CRITERIA:
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7.
- BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318.
 STRUCTURAL STEEL:
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AMERICAN INSTITUTE
 OF STEEL CONSTRUCTION, AISC 360.

 TIMBER:
- 1. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, AMERICAN FOREST & PAPER ASSOCIATION/AMERICAN WOOD COUNCIL, NDS.

DESIGN LOADS:

DESIGN DEAD LOAD IS ACTUAL WEIGHT OF THE STRUCTURE. ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.

LIVE LOADS (PSF):

	ა.	FLOOR	100
3.	LIVE LOAD RE	DUCTIONS HAVE BEEN APPLIED IN ACC	CORDANCE WITH THE
	BUILDING COL	DE WHEN PERMITTED.	
4.	SNOW LOADS	(PSF):	
	1.	GROUND SNOW LOAD (Pg)	0.0
5.	WIND LOADS:		
	1.	DESIGN WIND SPEED (V)	160 MPH
	2.	ALLOWABLE WIND SPEED (Vasd)	124 MPH
	3.	RISK CATEGORY	<u>II</u>
	4.	EXPOSURE CATEGORY	C

STAIRS, EXIT WAYS

6. PRESSURE COEFFICIENT (PAR. ENCLOSED) +/- 0.55
7. PRESSURE COEFFICIENT (OPEN) +/- 0.00
6. SEE DRAWINGS FOR EXTERIOR COMPONENT AND CLADDING WIND PRESSURES, EDGE STRIP WIDTH "a", AND PRESURE COEFFICIENT USED.

PRESSURE COEFFICIENT (ENCLOSED)

THIS STRUCTURE IS LOCATED WITHIN A WIND BORNE DEBRIS REGION AND REQUIRES IMPACT RESISTANT GLAZING.

SEISMIC LOADS:

1 RISK CATEGORY

RESPONSE MODIFICATION FACTOR (R)

9. <u>DESIGN BASE SHEAR</u> 0.059W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE METHOD
BASIC SEISMIC-FORCE-RESISTING SYSTEM: G6 - CANTILEVERED COLUMN
SYSTEMS DETAILED TO CONFORM TO THE REQUIREMENTS FOR TIMBER FRAMES.

SPECIAL INSPECTIONS:

- 1. SPECIAL INSPECTIONS ARE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE. AN APPROVED SPECIAL INSPECTOR WITH QUALIFICATIONS SATISFACTORY TO THE BUILDING OFFICIAL SHALL PERFORM THE REQUIRED SPECIAL TESTS AND
- 2. OBSERVATION BY THE STRUCTURAL ENGINEER'S OFFICE DOES NOT REPLACE TESTING AND INSPECTIONS BY THE TESTING AGENCY OR THE SPECIAL INSPECTOR.
- 3. THE COSTS OF THE SPECIAL INSPECTOR'S SERVICES SHALL BE PAID FOR BY THE OWNER. THE COSTS OF OTHER INSPECTIONS AND TESTING SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE PAID FOR BY THE CONTRACTOR.
- 4. THE FOLLOWING DOCUMENTS HAVE BEEN PREPARED FOR THIS PROJECT AS A PART OF THESE CONSTRUCTION DOCUMENTS:

 1. STATEMENT OF SPECIAL INSPECTIONS
- SCHEDULE OF SPECIAL INSPECTIONS
 CONTRACTOR AND SUBCONTRACTORS ENGAGED IN CONSTRUCTION OF MAIN WIND FORCE OR SEISMIC FORCE RESISTING SYSTEMS SHALL SUBMIT A STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 17 OF THE IBC.
- 6. THE CONTRACTOR SHALL COORDINATE THE INSPECTION SERVICES IN ACCORDANCE WITH PROGRESS OF THE WORK. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO THE INSPECTOR TO ALLOW PROPER SCHEDULING OF PERSONNEL.
- 7. ALL REPORTS AND SHOP CERTIFICATIONS OF SPECIAL INSPECTIONS TO BE PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP SHALL BE SUBMITTED TO THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTING THESE REPORTS TO THE SPECIAL INSPECTOR, THE ARCHITECT, AND THE STRUCTURAL ENGINEER IN A TIMELY MANNER.
- 8. THE SPECIAL INSPECTOR SHALL PREPARE THE REQUIRED QUALITY ASSURANCE PLANS AND SUBMIT THE PLAN TO THE BUILDING OFFICIAL AND TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- 9. ALL SPECIAL INSPECTION REPORTS SHALL BE PREPARED BY AND BEAR THE SEAL OF THE SPECIAL INSPECTOR AND ALL REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND TO THE STRUCTURAL ENGINEER. THE FREQUENCY OF REPORTS SHALL BE AS AGREED UPON BY THE BUILDING OFFICIAL.
- 10. REPORTS SHALL INDICATE THAT THE WORK WAS PERFORMED AND CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALL NONCONFORMING ITEMS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE BUILDING OFFICIAL, ARCHITECT, AND THE STRUCTURAL ENGINEER.
- 11. THE SPECIAL INSPECTOR, UPON COMPLETION OF THE WORK AND PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, SHALL SUBMIT A SIGNED AND SEALED FINAL REPORT DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES IN THE PRIOR REPORTS.

SHOP DRAWINGS AND SUBMITTALS:

- 1. THE USE OR REPRODUCTION OF THE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS IS NOT PERMITTED.
- 2. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT AS INDICATED ON THE DRAWINGS.
- 3. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS SPECIFIED IN THE CONTRACT DOCUMENTS. ALL SHOP DRAWINGS MUST BE REVIEWED AND "APPROVED" BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER. REVIEW OF SHOP DRAWINGS AND OTHER SUBMITTALS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES.
- 4. SHOP DRAWINGS AND CALCULATIONS SUBMITTED AS PART OF A DELEGATED DESIGN SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF THE PROJECT.
- HARDCOPY SHOP DRAWING SUBMITTALS: SUBMIT ALL SHOP DRAWINGS ON THREE PRINTS ONLY. ONE PRINT WILL BE RETURNED TO THE CONTRACTOR. ALL PRINTS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE AFTER APPROVED SHOP DRAWINGS ARE RETURNED. IF ADDITIONAL PRINTS ARE SUBMITTED, THEY WILL BE RETURNED LINMARKED.
- 6. ELECTRONIC SHOP DRAWING SUBMITTALS: SUBMIT ALL ELECTRONIC SHOP DRAWINGS IN PDF FORMAT. REVIEWED SHOP DRAWINGS WILL BE RETURNED IN PDF FORMAT. ALL PRINTS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE AFTER APPROVED SHOP DRAWINGS ARE RETURNED.
- 7. RESUBMITTED SHOP DRAWINGS: RESUBMITTED SHOP DRAWINGS SHALL HAVE ALL CHANGES SINCE THE PREVIOUS SUBMISSION IDENTIFIED BY CLOUDING OR OTHER CLEAR COMMUNICATION. RE-REVIEWED SHOP DRAWINGS WILL ONLY BE REVIEWED FOR IDENTIFIED CHANGES.
- 8. SHOP DRAWINGS: SEE THE RELATED MATERIAL SECTION FOR THE REQUIRED SUBMITTALS AND SHOP DRAWINGS.

SOILS, SLABS, WALLS, AND SHALLOW FOUNDATIONS:

- 3. THE FOUNDATION AND SLAB ON GRADE DESIGN IS BASED ON CRITERIA ESTABLISHED IN THE GEOTECHNICAL REPORT BY THOMPSON ENGINEERING TITLED "GULF COAST CENTER FOR ECOTOURISM AND SUSTAINABILITY PROJECT, PROJECT NO.20-1101-0049, DATED MARCH 22, 2021". THE CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL REQUIREMENTS AND RECOMMENDATIONS.
- 4. MAX ALLOWABLE BEARING PER GEOTECHNICAL REPORT (PSF):
- 1. UNLESS NOTED OTHERWISE 2000

 5. ALL FOUNDATION BEARING SURFACES SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE TO ENSURE THEIR COMPLIANCE WITH THE PRESSURES NOTED, THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS, AND THE GEOTECHNICAL REPORT.
- 6. ALL FOOTING ELEVATIONS ARE ESTIMATED AND MAY BE ADJUSTED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.
 7. COMPACTED FILL SHALL MEET THE REQUIREMENTS NOTED IN THE GEOTECHNICAL
- 8. WHEN EXCAVATIONS APPROACH THE GROUND WATER TABLE, THE WATER LEVEL SHALL BE LOWERED BY AN ACCEPTABLE DEWATERING SYSTEM SO THAT THE WATER LEVEL IS MAINTAINED CONTINUOUSLY A MINIMUM OF 2' BELOW THE EXCAVATION DURING CONSTRUCTION.
- 9. CONTRACTOR SHALL FOLLOW THE SITE WORK AND SUBGRADE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT.
- 10. EARTH SUPPORTED SLAB:
 1. <u>SUBGRADE MODULUS (SHORT/LONG)</u> 100/35 PCI
 11. PROVIDE 4" COMPACTED GRANULAR FILL BENEATH ALL EARTH SUPPORTED SLABS
- PROVIDE A 10 MIL MINIMUM VAPOR BARRIER BETWEEN BOTTOM OF SLAB AND TOP OF GRANULAR FILL.

 12. PROVIDE ½" P.E.J FILLER AROUND PERIMETER OF SLABS WHERE THEY ABUT VERTICAL SURFACES AND AT COLUMN ISOLATION JOINTS AS DETAILED.
- VERTICAL SURFACES AND AT COLUMN ISOLATION JOINTS AS DETAILED.

 13. SEE PROJECT SPECIFICATIONS FOR FLOOR FLATNESS AND FLOOR LEVELNESS REQUIREMENTS.

 14. SIDES OF FOUNDATIONS SHALL BE FORMED UNLESS CONDITIONS PERMIT EARTH
- FORMING.

 15. HORIZONTAL BARS IN FOOTINGS AND STEM WALLS SHALL BE CONTINUOUS.

 PROVIDE CORNER BARS AT ALL INTERSECTIONS UNLESS NOTED OTHERWISE.

 16. SUPPORT BOTTOM REINFORCING IN FOOTINGS WITH CONCRETE BRICKS OR
- POSITIONED TO PROVIDE A MINIMUM OF 3" CLEAR TO BOTTOM OF LOWEST REINFORCING BAR.

PLASTIC CHAIRS SPACED A MAXIMUM OF 3'-0" EACH WAY. SUPPORTS SHALL BE

- 17. CONSTRUCTION JOINTS IN CONTINUOUS FOOTINGS SHALL BE FORMED VERTICALLY WITH A CLASS B LAP IN HORIZONTAL REINFORCING.
- 18. POUR A 2" MUD MAT OF LEAN CONCRETE IN THE BOTTOM OF A FOOTING EXCAVATION THAT WILL BE EXPOSED TO RAIN.
 19. ALL REINFORCING SHALL BE TIED IN PLACE PRIOR TO PLACING CONCRETE
- 19. ALL REINFORCING SHALL BE TIED IN PLACE PRIOR TO PLACING CONCRETE.
 20. FOUNDATION PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER.
- WHERE FOOTING STEPS ARE REQUIRED, THEY SHALL BE NO STEEPER THAN ONE VERTICAL TO TWO HORIZONTAL.
 WHERE GRAVITY PLUMBING LINES OCCUR BELOW TOP OF WALL FOOTING, STEP FOOTING DOWN TO PROVIDE CLEARANCE. COORDINATE WITH PLUMBING
- DRAWINGS FOR LOCATIONS, SIZES, AND INVERTS.

 23. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS AND FROM PONDING ON PREPARED SUBGRADES AND SLABS. DO NOT USE
- EXCAVATED TRENCHES AS TEMPORARY DRAINAGE DITCHES.

 24. DEWATER EXCAVATIONS AND REMOVE ANY WET MATERIAL PRIOR TO THE PLACING
- 25. IMMEDIATELY NOTIFY THE OWNERS REPRESENTATIVE AND ENGINEER IF UNUSUAL SOIL CONDITIONS ARE FOUND.

CONCRETE:

- ALL CONCRETING OPERATIONS SHALL COMPLY WITH ACI 301, "SPECIFICATIONS FOR
- STRUCTURAL CONCRETE FOR BUILDINGS".

 2. DETAIL CONCRETE REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH ACI
 315 "DETAILING MANUAL"
- 3. THE CONTRACTOR SHALL SUBMIT FOR THE STRUCTURAL ENGINEER'S REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS.

 1. CONCRETE MIX DESIGNS (40% FLY ASH)
- CONCRETE REINFORCING (100% RECYCLED CONTENT)
 CONTRACTOR SHALL NOT FABRICATE OR PLACE REINFORCEMENT UNTIL
 REINFORCEMENT SHOP DRAWINGS, REVIEWED AND STAMPED BY THE
 STRUCTURAL ENGINEER, ARE RECEIVED ON THE JOB SITE. SHOP DRAWINGS
 SHALL CONSIST OF BOTH "CUT" AND PLACEMENT SHEETS. PLACEMENT SHEETS
 SHALL CONTAIN ALL INFORMATION NECESSARY TO POSITION ALL REINFORCING
 STEEL IN THE FIELD WITHOUT HAVING TO REFER TO THE STRUCTURAL DRAWINGS.
 ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL NOT BE COPIED OR
 REPRODUCED FOR USE AS SHOP DRAWINGS.
- 5. A QUALITY ASSURANCE PROGRAM CONSISTING OF SUBMITTALS, TESTING, AND INSPECTIONS SHALL BE USED TO VERIFY THAT CONSTRUCTION IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. MATERIAL QUALITY, HANDLING, STORAGE, PREPARATION, PLACEMENT, AND CONSTRUCTION SHALL
- CONFORM TO THE REQUIREMENTS OF THE CODE.

 6. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED CONCRETE DESIGN STRENGTH IS THE CONTRACTOR'S.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 AND CONTAIN 100% RECYCLED CONTENT.
 WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064 AND CONTAIN 100% RECYCLED CONTENT. MINIMUM LAP AND EMBEDMENT TO BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2" OR 8". WWR SHALL BE SUPPLIED
- IN FLAT SHEETS (NOT ROLLS).

 9. SEE CONCRETE MIX DESIGN SCHEDULE FOR REQUIRED CONCRETE STRENGTH AND

 PROPERTIES CONCRETE DESIGN SHALL INCLUDE 400/ FLY ASH.
- PROPERTIES. CONCRETE DESIGN SHALL INCLUDE 40% FLY ASH.

 10. USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS
- NOT PERMITTED.

 11. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4 INCH CHAMFER.

 12. CONSTRUCTION JOINTS IN A HORIZONTAL PLANE ARE NOT PERMITTED.
- 13. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS. MAKE ALL REINFORCING CONTINUOUS THROUGH CONSTRUCTION JOINTS. CONTROL JOINTS FOR CONCRETE SLABS ON GRADE SHALL BE AS DETAILED AND LOCATED AS SHOWN IN THE CONSTRUCTION
- 14. EARTH SUPPORTED SLABS: 4" THICK, REINFORCED WITH 4X4 W2.9/W2.9 WWR AT MID-DEPTH OF SLAB, UNLESS NOTED OTHERWISE.
- 15. COAT ALL SLABS WITH CURING COMPOUND WITHIN 24 HOURS OF PLACING. PRODUCT USED SHALL CONFORM WITH ASTM C309, AND SHALL BE COMPATIBLE WITH ADHERED FINISHES. A DISSIPATING FORMULATION SHALL BE USED AT CEMENTITIOUS FINISHES.
- 16. SLAB JOINTS SHALL BE FILLED WITH AN APPROVED MATERIAL. THIS SHOULD TAKE PLACE AS LATE AS POSSIBLE, PREFERABLY 4 TO 6 WEEKS AFTER THE SLAB HAS BEEN CAST. PRIOR TO FILLING, REMOVE ALL DEBRIS FROM THE SLAB JOINTS, THEN FILL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AS FOLLOWS: 6" SLABS FILL WITH EPOLY AND THE SLABS FILL WITH FIELD
- MOLDED OR ELECTROMETRIC SEALANT.

 17. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF DEPRESSED SLABS AND
- DRAINS. SLOPE SLAB TO DRAINS WHERE SHOWN.

 18. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND VENDOR DRAWINGS FOR SLEEVES, EMBEDDED ITEMS, ACCESSORIES, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PLACING ALL SLEEVES, EMBEDDED ITEMS, ACCESSORIES, ETC.
- SEE CONCRETE COVER SCHEDULE FOR REQUIRED STEEL COVERAGE.
 REINFORCING BAR PLACING ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE. WHERE CONCRETE IS EXPOSED IN FINISHED BUILDING, PROVIDE ACCESSORIES WITH RUSTPROOF LEGS. WHERE CONCRETE IS SAND-BLASTED OR BUSH-HAMMERED, PROVIDE ACCESSORIES OF STAINLESS
- 21. ALL SPLICES SHALL BE CLASS "B" TENSION LAP SPLICE, UNLESS NOTED
- OTHERWISE.

 22. TIE ALL REINFORCING STEEL AND EMBEDMENT'S SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED.
- 23. ADDITIONAL REINFORCING AND THE QUANTITY OF REINFORCING OCCURRING AT OPENINGS SHALL BE PLACED EQUALLY EACH SIDE OF OPENINGS AS DETAILED.
 24. HOOKS IN REINFORCING ARE IN ADDITION TO LENGTH SHOWN.
- 25. FIELD BENDING OF BARS LARGER THAN #4 IS NOT PERMITTED. ALL BENDS FOR BARS LARGER THAN #4 SHALL BE SHOP MADE COLD BENDS.

STRUCTURAL STEEL

- FABRICATE AND ERECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
 THE CONTRACTOR SHALL SUBMIT FOR THE STRUCTURAL ENGINEER'S REVIEW SHOP DRAWINGS WHICH INCLUDE ERECTION DRAWINGS, MATERIALS,
- STRUCTURAL STEEL
 STRUCTURAL STEEL:
- 1. ASTM A36 FOR ALL STEEL

 HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE (
- 4. HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE C. STEEL PIPE: ASTM A53, TYPE E OR S, GRADE B.
- 6. WELDED CONNECTIONS: E70XX ELECTRODES, MINIMUM SIZE FILLET WELD 3/16".
 ALL SHOP AND FIELD WELDING SHALL BE BY A CERTIFIED WELDER AND IN
 ACCORDANCE WITH AMERICAN WELDING SOCIETY D1.1 SPECIFICATION.

"SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".

CONNECTIONS, FABRICATION, AND ALL DETAILS FOR THE FOLLOWING ITEMS.

- 7. HEADED ANCHOR RODS: ASTM F1554, GRADE 55, WELDABLE ANCHOR AND HEAVY HEX NUT, UNLESS INDICATED OTHERWISE.
- 8. ENGINEER SHALL BE CONTACTED FOR APPROVAL OF ANY FIELD MODIFICATIONS OR REPAIRS OF ANCHOR BOLTS OR RODS, AND COLUMN BASE PLATES.
 9. BOLTED CONNECTIONS: BEARING TYPE A325-N IN ACCORDANCE WITH AISC
- USE SNUG TIGHT BEARING CONNECTIONS FOR ALL BOLTED CONNECTIONS.

 10. ALL EXTERIOR ELEMENTS AND THOSE ELEMENTS NOTED TO BE GALVANIZED SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AFTER SANDBLAST CLEANING PER SSPC-SP10. USE ASTM A325 BOLTS HOT DIPPED GALVANIZED WITH GALVANIZED HARDENED WASHERS AND GALVANIZED HEAVY
- HEX NUTS FOR BOLTING OF GALVANIZED ITEMS.

 11. ALL STEEL BELOW GRADE SHALL HAVE A MINIMUM 3" CONCRETE COVER.

MASONRY

- MASONRY CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE MASONRY SOCIETY AND THE AMERICAN CONCRETE INSTITUTE.

 ALL MASONRY SHALL BE RUNNING BOND, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL SUBMIT FOR THE STRUCTURAL ENGINEER'S REVIEW THE BELOW LISTED ITEMS.
 MORTAR MATERIALS CERTIFICATES AND MIX DESIGN
- GROUT MATERIALS CERTIFICATES AND MIX DESIGN
 THE CONTRACTOR SHALL SUBMIT FOR THE STRUCTURAL ENGINEER'S REVIEW SHOP DRAWINGS SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. PROVIDE CONCRETE MASONRY UNITS WITH A MINIMUM COMPRESSIVE STRENGTH OF f'm = 2500 PSI, AS
- DETERMINED IN ACCORDANCE WITH ASTM C140.

 5. PROVIDE HOLLOW, LOAD BEARING CONCRETE MASONRY UNITS CONFORMING TO
- ASTM C90.
 6. PROVIDE TYPE "S" MORTAR IN ACCORDANCE WITH ASTM C270, UNLESS NOTED OTHERWISE.
- 7. COURSE MASONRY GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8". MINIMUM COMPRESSIVE STRENGTH SHALL BE 2500 PSI AT 28 DAYS. STOP GROUT 2" SHORT OF TOP BED JOINT TO CREATE A SHEAR KEY WITH THE NEXT LIET.
 - WITH THE NEXT LIFT.
 MASONRY GROUT SHALL BE MECHANICALLY CONSOLIDATED AT THE TIME OF
- PLACEMENT AND THEN RECONSOLIDATED WITHIN 45 MINUTES.

 9. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

 10. ALL REINFORCING IN MASONRY WALLS SHALL BE FULLY ENCLOSED WITH

PROPERLY CONSOLIDATED GROUT.

I1. WHEN LAYING BLOCK MORE THAN FIVE FEET FOUR INCHES VERTICAL PRIOR TO GROUTING (HIGH LIFT), PROVIDE A 4"X4" CLEAN OUT OPENING AT THE BOTTOM COURSE OF EACH LIFT AT EACH REINFORCED CELL. CELLS SHALL BE THOROUGHLY CLEANED PRIOR TO GROUTING. SEAL OPENING DURING GROUTING. PROVIDE 9 GA. GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCEMENT

COMPLYING WITH ASTM A82 OR ASTM A951 AT 16" OC VERTICALLY FOR FULL WALL

HEIGHT. LAP 6" MINIMUM AND PROVIDE PREFAB CORNERS AND TEES. SEE ARCHITECTURAL FOR BRICK TIES FABRICATED INTEGRAL WITH JOINT REINFORCING, IF REQUIRED.

3. ADEQUATE TEMPORARY BRACING OF CMU WALLS MUST BE PROVIDED BY THE CONTRACTOR UNTIL REQUIRED CONNECTIONS OR ELEMENTS ARE IN PLACE TO

PROVIDE ADEQUATE LATERAL STABILITY TO THE WALL

WOOD FRAMING:

- WOOD CONSTRUCTION SHALL COMPLY WITH THE INTERNATIONAL BUILDING
- CODE AND THE AMERICAN WOOD COUNCIL REQUIREMENTS.

 2. A QUALITY ASSURANCE PROGRAM CONSISTING OF SUBMITTALS AND INSPECTIONS SHALL BE USED TO VERIFY THAT THE CONSTRUCTED WOOD IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. MATERIAL QUALITY, HANDLING, STORAGE, PREPARATION, PLACEMENT, AND CONSTRUCTION SHALL
 - CONFORM TO THE REQUIREMENTS OF THE CODE.

 3. WOOD FRAMING MEMBERS: VISUALLY GRADED DIMENSIONED #2 SOUTHERN
 - PINE.
 4. TRUSSES SPANNING GREATER THAN TWENTY-FOUR FEET: VISUALLY GRADED
- DIMENSIONED #1 SOUTHERN PINE.

 5. SILL PLATES, SOLE PLATES AND TOP PLATES SHALL BE OF THE SAME SIZE AS THE STUDS TO WHICH THEY ARE CONNECTED. GRADE SHALL BE AS SPECIFIED
- 6. ALL PRESSURE TREATED LUMBER SHALL BE PRESSURE TREATED WITH ALKALINE COPPER QUATERNARY (ACQ) OR MICRONIZED COPPER AZOLE (MCA) IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD.
- PRESERVATIVE RETENTION:
 1. 0.60 LBS/FT3 PERMANENT WOOD FOUNDATIONS
- 2. 0.40 LBS/FT3 GROUND CONTACT
- 0.25 LBS/FT3 ABOVE GROUND
 ALL FASTENERS, NAILS AND OTHER METAL PRODUCTS USED WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP GALVANIZED, STAINLESS STEEL, OR AS
- LUMBER SHALL NOT BE IN DIRECT CONTACT WITH ALUMINUM PRODUCTS.

 DIMENSIONED LUMBER FLOOR JOISTS AND BEAMS SHALL BE LATERALLY BRACED
 AT ENDS, POINTS OF BEARING AND MAXIMUM INTERVALS OF 8'-0" BY SOLID
 BLOCKING, BRIDGING, OR TRANSVERSE BEAMS IN ORDER TO PREVENT

RECOMMENDED BY THE PRESERVATIVE MANUFACTURER. PRESSURE TREATED

- 10. ALL MANUFACTURED WOOD FRAMING CONNECTORS TO BE BY SIMPSON STRONG-TIE COMPANY, INC. OR APPROVED EQUAL. ALL CONNECTORS SHALL BE FASTENED TO FRAMING MEMBERS FILLING THE REQUIRED NUMBER OF CONNECTOR HOLES WITH THE TYPE AND SIZE FASTENERS SPECIFIED BY THE
- MANUFACTURER.

 11. FLOOR SHEATHING: 3/4" TONGUE & GROOVE PLYWOOD OR OSB, APA SINGLE FLOOR RATED SHEATHING, EXPOSURE 1. PANEL IDENTIFICATION INDEX 48/24. LONG DIMENSION OF PANEL PERPENDICULAR TO SUPPORTS WITH JOINTS
- STAGGERED.

 12. FLOOR SHEATHING NAILING, UNLESS NOTED: 10D HOT-DIPPED GALVANIZED
- COMMON NAILS AT 6 INCHES AT DIAPHRAGM BOUNDARIES, 8 INCHES AT PANEL ENDS AND INTERMEDIATE SUPPORTS.

 13. ROOF SHEATHING (TYPICAL): 15/32" PLYWOOD OR OSB, APA STRUCTURAL I RATED SHEATHING, EXPOSURE I. PANEL IDENTIFICATION INDEX 32/16. LONG DIMENSION
- OF PANEL PERPENDICULAR TO TONGUE AND GROOVE WITH JOINTS STAGGERED.

 14. ROOF SHEATHING (WELCOME HUB): 23/32" PLYWOOD OR OSB, APA STRUCTURAL I
 RATED SHEATHING, EXPOSURE I. PANEL IDENTIFICATION INDEX 32/16. LONG
 DIMENSION OF PANEL PERPENDICULAR TO TONGUE AND GROOVE WITH JOINTS
 STAGGERED.
- 15. ROOF SHEATHING NAILING, UNLESS NOTED: 16D HOT-DIPPED GALVANIZED COMMON NAILS AT 6 INCHES AT DIAPHRAGM BOUNDARIES, 6 INCHES AT ALL FOUR PANEL EDGES AND 12 INCHES AT INTERMEDIATE SUPPORTS.
- 16. TONGUE AND GROOVE ROOF DECKING: PRESSURE TREATED 2X6 T&G SOUTHERN PINE NO. 1 GRADE SOLID TIMBER DECKING WITH TONGUE INSTALLED UP-SLOPE. TWO SPAN MINIMUM WITH END JOINT SPACING A MINIMUM OF FOUR FEET.
 17. TONGUE AND GROOVE ROOF DECKING NAILING: ATTACH AT EACH SUPPORT
- NAILED.

 18. SHEAR WALL SHEATHING: 15/32" PLYWOOD OR OSB, APA STRUCTURAL I RATED SHEATHING, EXPOSURE 1. PANEL IDENTIFICATION INDEX 32/16. LONG DIMENSION OF PANEL PARALLEL OR PERPENDICULAR TO STUDS. ALL PLYWOOD EDGES
- BACKED WITH TWO-INCH NOMINAL OR WIDER FRAMING.

 19. SHEAR WALL SHEATHING NAILING, UNLESS NOTED: 10D HOT-DIPPED GALVANIZED COMMON NAILS AT 4 INCHES AT SHEAR WALL BOUNDARIES, 4 INCHES AT ALL FOUR PANEL EDGES AND 12 INCHES AT INTERMEDIATE MEMBERS.

WITH THREE 16D COMMON NAILS, ONE THROUGH THE TONGUE AND TWO FACE

- 20. GLUED LAMINATED TIMBER SHALL BE SOUTHERN YELLOW PINE, UNLESS NOTED OTHERWISE.
 21. GLUED LAMINATED TIMBER SHALL CONFORM TO THE REQUIREMENTS OF THE "STRUCTURAL GLUED LAMINATED TIMBER," AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, AITC A190.1 AND "STANDARD APPEARANCE GRADES FOR
- STRUCTURAL GLUED LAMINATED TIMBER," AITC 110, ARCHITECTURAL APPEARANCE.

 22. USE WET-USE (WATERPROOF) ADHESIVES FOR ALL GLUED LAMINATED TIMBER.

 23. ALL PRESSURE TREATED GLUED LAMINATED TIMBER FRAMING SHALL BE PRESSURE TREATED WITH PENTACHLOROPHENOL IN MINERAL SPIRITS IN ACCORDANCE WITH AITC 109 "STANDARD FOR PRESERVATIVE TREATMENT OF
- STRUCTURAL GLUED-LAMINATED TIMBER." ALL TREATED GLUED LAMINATED TIMBER SHALL BE SEALED WITH 2 COATS OF URETHANE FURNISHED BY THE GLUED LAMINATED SUPPLIER AND APPLIED BY THE CONTRACTOR.

 24. GLUE LAMINATED TIMBER STRESS GRADES SHALL PROVIDE THE FOLLOWING

MINIMUM PROPERTIES (PSI) FOR BENDING A	BOUT THE X-X /	AXIS:
LOAD	DRY USE	WET USE
BENDING (Fb)	2400	<u> 1900</u>
TENSION (Ft)	1100	880
COMP PARALLEL TO GRAIN (Fc PAR)	1350	985
COMP PERPEND TO GRAIN (Fc PER)	560	<u> 295</u>
SHEAR PARALLEL TO GRAIN (Fv)	200	<u> 175</u>
MODULUS OF ELASTICITY (E)	1,700,000	1,400,000

SHOP FABRICATED WOOD TRUSSES:

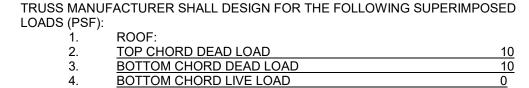
- HOP FABRICATED WOOD TRUSSES:

 DESIGN, FABRICATE, AND ERECT SHOP FABRICATED WOOD TRUSSES IN
- ACCORDANCE WITH THE "DESIGN SPECIFICATION FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES" OF THE TRUSS PLATE INSTITUTE.

 2. THE CONTRACTOR SHALL SUBMIT FOR THE STRUCTURAL ENGINEER'S RECORD ERECTION PLANS, TRUSS CALCULATIONS, AND CONNECTION CALCULATIONS, AS
- DESIGNED BY THE CONTRACTOR. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

 3. A QUALITY ASSURANCE PROGRAM CONSISTING OF SUBMITTALS AND INSPECTIONS SHALL BE USED TO VERIFY THAT THE CONSTRUCTED WOOD IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. MATERIAL QUALITY, HANDLING, STORAGE,
- PREPARATION, PLACEMENT, AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE CODE.

 4. THE WOOD TRUSS SYSTEM ENGINEER SHALL DESIGN THE COMPLETE TRUSS SYSTEM. THE TRUSS SYSTEM IS AN ASSEMBLAGE OF TRUSSES AND TRUSS GIRDERS, TOGETHER WITH ALL BRACING, CONNECTIONS AND OTHER STRUCTURAL ELEMENTS AND ALL SPACING AND LOCATION CRITERIA, THAT, IN
- COMBINATION, FUNCTION TO SUPPORT THE LOADS APPLICABLE TO THE STRUCTURE.



- SEE "DESIGN LOADS" SECTION OF THE GENERAL NOTES FOR LIVE LOADS APPLIED TO THE TOP CHORD.
 DESIGN ROOF TRUSSES TO RESIST THE WIND UPLIFT LOADING IN ACCORDANCE WITH THE BUILDING CODE.
- 8. IN ADDITION TO THE ABOVE LOADS, WOOD TRUSSES SHALL BE DESIGNED FOR CONCENTRATED LOADS HUNG FROM OR SUPPORTED ON TRUSSES. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR LOADING INFORMATION AND LOCATION. LOADING AS REQUIRED BY OTHER SUBCONTRACTORS, SUCH AS FIRE PROTECTION, SHALL BE COORDINATED BY THE
- CONTRACTOR.

 9. ALL MANUFACTURED TRUSS HOLD-DOWNS TO BE BY SIMPSON STRONG-TIE
 COMPANY, INC. OR APPROVED EQUAL. ALL CONNECTORS SHALL BE FASTENED TO
 FRAMING MEMBERS FILLING THE REQUIRED NUMBER OF CONNECTOR HOLES WITH

THE TYPE AND SIZE FASTENERS SPECIFIED BY THE MANUFACTURER.

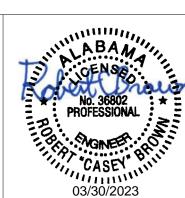
MANUFACTURER.

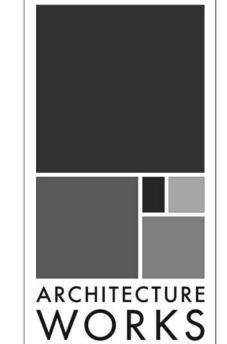
10. ALL TEMPORARY AND PERMANENT BRACING MEMBERS AND CONNECTIONS
 REQUIRED FOR WOOD TRUSSES SHALL BE DETAILED ON THE WOOD TRUSS
 MANUFACTURER'S ERECTION PLANS.
 11. TEMPORARY BRACING SHALL NOT IMPOSE ANY FORCE ON THE SUPPORTING
 STRUCTURE. PERMANENT BRACING FORCES SHALL BE TRANSFERRED TO THE

ROOF OR FLOOR DIAPHRAGM BY THE BRACING DESIGN PROVIDED BY THE TRUSS



Thompson Engineering, Inc. 2970 Cottage Hill Road Ste. 190 Mobile, AL 36606 Tel: 251.666.2443





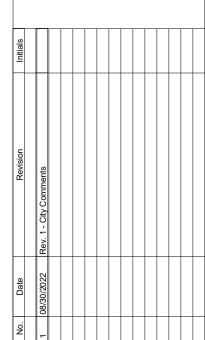
130 NINETEENTH STREET SOUTH BIRMINGHAM, ALABAMA 35233 TELEPHONE: 205.320.0880 www.architectureworks.com

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W A T E R S H E D Building Sustain*ability*

302 Magnolia Avenue Fairhope, AL 36532 p 251.929.0514

FOR ECOTOURISM & SUSTAINABILITY



20-1101-0049

PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

GENERAL NOTES

SW001

SHEET NAME

AB	ANCHOR BOLT	VERT.	VERTICAL
AFF	ABOVE FINISH FLOOR	JST.	JOIST
BOT.	BOTTOM	JT.	JOINT
B.O. BM	BOTTOM OF BEAM	JG.	JOINT JOIST GIRDER
B.O. COL	BOTTOM OF COLUMN	K	KIPS (1000 LBS)
B.O. COL	BOTTOM OF COLOMN BOTTOM OF CONCRETE	KLF	KIPS (1000 LBS) KIPS PER LINEAR FOOT
B.O. FTG	BOTTOM OF FOOTING	KSP	KIPS PER SQUARE FOOT
B.O. FTG	BOTTOM OF FOOTING	KSP	KIPS PER SQUARE FOOT
B.O. JST	BOTTOM OF JOIST	KSI	KIPS PER SQUARE FOOT
B.O. SLAB	BOTTOM OF SLAB	LB/S	POUND/POUNDS
B.O. STL	BOTTOM OF STEEL	LLH	LONG LEG HORIZONTAL
B.O. WALL	BOTTOM OF WALL	LLV	LONG LEG VERTICAL
BFF	BELOW FINISH FLOOR	LIN.	LINEAR
BRG.	BEARING	LIN. FT.	LINEAR FOOT
BLK.	BLOCK	MISC.	MISCELLANEOUS
BM.	BEAM	NS	NEAR SIDE
BP	BASE PLATE	NTS	NOT TO SCALE
BRIDG.	BRIDGING	NOM.	NOMINAL
BRG.	BEARING	O.C.	ON CENTER
C/C	CENTER TO CENTER	O.F.	OUTSIDE FACE
CL	CENTERLINE	OPNG.	OPENING
CONN.	CONNECTION	OPP.	OPPOSITE
CMU	CONCRETE MASONRY UNIT	PL	PLATE
CONST. JT.	CONSTRUCTION JOINT	PAF	POWDER ACTUATED FASTENERS
	CONTINUOUS	PLF	
CONT.			POUNDS PER CURIO FOOT
CJ	CONTROL JOINT	PCF	POUNDS PER CUBIC FOOT
CONC.	CONCRETE	PCI	POUNDS PER CUBIC INCH
COL.	COLUMN	WP	WORK POINT
CTR.	CENTER	REV.	REVISION
DBL.	DOUBLE	REINF.	REINFORCING
DBA	DEFORMED ANCHOR BAR	REQ'D.	REQUIRED
DBE	DECK BEARING ELEVATIONS	SIM.	SIMILAR
EJ	EXPANSION JOINT	SCHED.	SCHEDULE
ELEV.	ELEVATION	SLH	SHORT LEG HORIZONTAL
EMBED.	EMBEDMENT	SLV.	SHORT LEG VERTICAL
EXIST. GR.	EXISTING GRADE	SJ	SAW JOINT
EXIST.	EXISTING	SPA.	SPACING
EOS	EDGE OF SLAB	SF	SQUARE FOOT
FF	FINISH FLOOR	STD.	STANDARD
F.O. BM.	FACE OF BEAM	STIFF.	STIFFENER
F.O. COL.	FACE OF COLUMN	STRUCT.	STRUCTURAL
F.O. CONC.	FACE OF COLOMIN FACE OF CONCRETE	TBR	TO BE REMOVED
F.O. FTG.	FACE OF CONCRETE FACE OF FOOTING	T&B	TO BE KEMOVED TOP AND BOTTOM
F.O. FIG. F.O. JST.		T.O. BM	TOP AND BOTTOM TOP OF BEAM
	FACE OF SLAP		
F.O. SLAB	FACE OF STEEL	T.O. COL	TOP OF COLUMN
F.O. STL.	FACE OF STEEL	T.O. CONC	TOP OF CONCRETE
F.O. WALL	FACE OF WALL	T.O. FTG	TOP OF FOOTING
FLR.	FLOOR	T.O. JST	TOP OF JOIST
FDN.	FOUNDATION	T.O. SLAB	TOP OF SLAB
FTG.	FOOTING	T.O. STL	TOP OF STEEL
HS	HEADED STUD	T.O. WALL	TOP OF WALL
HK.	HOOK	THK.	THICK
HORIZ.	HORIZONTAL	THRU	THROUGH
TYP	TYPICAL	W/O	WITHOUT

CAST-IN-PLACE CONCRETE MIX SCHEDULE									
APPLICATION EXPOSURE CLASS STRENGTH TYPE W/C RATIO SLUMP AIR MAX CONCRETE FIBER CONTENT AGGREGATE WEIGHT (PCF)								FIBER	
SLAB ON GRADE / PEDESTALS	F0, S0, P0, CO	4,000	NORMAL WT.	0.45 (40% ASH)	3" TO 5"		3/4"		NO
SHALLOW FOUNDATIONS	F0, S0, P0, CO	3,000	NORMAL WT.	0.50 (40% ASH)	4" TO 6"		3/4"		NO

EXPOSURE CLASS FOR FREEZE/THAW, SULFATES, PERMEABILITY, AND CORROSION ARE PER ACI 318, SECTION 4.2.

WHERE NO W/C RATIO, SLUMP, OR AIR CONTENT IS NOTED, VALUES SHALL BE AS RECOMMENDED BY THE READY MIX SUPPLIERS ENGINEER. WHERE AIR ENTRAINMENT IS NOT REQUIRED PER THE ABOVE TABLE, THE CONTRACTOR, INSTALLER, OR SUPPLIER MAY CHOOSE TO INCLUDE AIR ENTRAINMENT TO IMPROVE PLACEMENT AND FINISHING CHARACTERISTICS. AIR ENTRAINMENT IS NOT PERMITTED IN NORMAL WEIGHT CONCRETE TO RECEIVE A HARD TROWEL FINISH, AND ENTRAPPED AIR SHALL NOT EXCEED 3%. AIR ENTRIANMENT IN LIGHT WEIGHT CONCRETE SLABS IS REQUIRED TO MEET FIRE RATING REQUIREMENTS. SLABS SHALL BE PROPERLY FINISHED TO AVOID SURFACE IMPERFECTIONS SUCH AS BLISTERING OR DELAMINATION.

CEMENT AND AGGREGATES SHALL BE FROM A SINGLE SOURCE.

CIP CONCRETE CLEAR COVER	
LOCATION	COVER mm (IN)
CONCRETE CAST AGAINST & EXPOSED TO EARTH	76 (3")
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 TO #18 BARS	51 (2")
#5, W31, AND SMALLER BARS	38 (1 1/2")
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:	
SLABS, WALLS, AND JOISTS	
#14 AND #18 BARS	38 (1 1/2")
#11 AND SMALLER BARS	19 (3/4")
BEAMS AND COLUMNS	38 (1 1/2")
FOOTINGS, GRADE BEAMS, AND PILE CAPS	51 (2") TOP 76 (3") BOTT. & SIDES
DRILLED PIERS AND BELLED PIERS	76 (3") CLEAR OF TIES
PEDESTALS AND COLUMNS	38 (1 1/2") CLEAR OF TIES
BASEMENT WALLS	51 (2") EXT. & 19 (3/4") INT.
RETAINING WALLS	51 (2") BOTH FACES
SUMP AND PIT WALLS	51 (2") BOTH FACES
ELEVATED SLABS NOT EXPOSED TO WEATHER	19 (3/4") TOP & BOTT.
POST TENSIONED SLABS EXPOSED TO WEATHER	25 (1") TOP & BOTT.
ELEVATED SLABS EXPOSED TO WEATHER:	
#5 AND SMALLER BARS	38 (1 1/2") TOP & 19 (3/4") BOT
#6 AND GREATER BARS	51 (2") TOP & 19 (3/4") BOTT.
WELDED WIRE REINFORCEMENT:	
5" OR LESS SLAB THICKNESS	CENTER
6" OR GREATER SLAB THICKNESS	51 (2") FROM TOP
SLAB ON WELL GRADED SUBGRADE OR VAPOR BARRIERS	19 (3/4") TOP 38 (1 1/2") BOTT.
BEAMS	38 (1 1/2") CLEAR OF STIRRUF
JOISTS	38 (1 1/2") ALL SIDES
WIDE MODULE JOISTS	19 (3/4")

	CONCRETE TENSION SPLICE LAP LENGTHS											
		f'c = 30	000 PSI			f'c = 40	000 PSI		f'c = 5000 PSI			
BAR SIZE	TOP	BARS	OTHER	RBARS	TOP	BARS	OTHER	BARS	TOP	BARS	OTHER	RBARS
	Α	В	А	В	А	В	А	В	Α	В	А	В
#3	22	28	17	22	19	25	15	19	17	22	13	17
#4	29	38	22	29	25	33	19	25	23	29	17	23
#5	36	47	28	36	31	41	24	31	28	36	22	28
#6	54	56	33	43	37	49	29	37	34	44	26	34
#7	63	81	48	63	54	71	42	54	49	63	38	49
#8	72	93	55	72	62	81	48	62	56	72	43	56
#9	81	105	62	81	70	91	54	70	63	81	48	63
#10	91	118	70	91	79	102	61	79	71	92	54	71
#11	101	131	78	101	87	114	67	87	78	102	60	78

ALL LENGTHS ARE IN INCHES.

BAR COVER AND TRANSVERSE REINFORCEMENT SHALL MEET CODE MINUMUM.

LAP SPLICING OF #14 & #18 BARS IS NOT ALLOWED.

LAP LENGTHS ARE FOR NORMAL WEIGHT CONCRETE WITH UNCOATED, 60 KSI BARS. WHEN LAPPING BARS OF DIFFERENT SIZES USE THE SPLICE LAP LENGTH OF THE SMALLER BAR, OR THE DEVELOPMENT LENGTH OF THE LARGER BAR, WHICHEVER IS GREATER. THE "A" VALUE FROM THE TABLE IS EQUAL TO THE BAR DEVELOPMENT

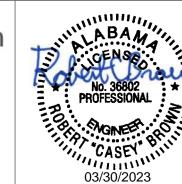
TOP BARS ARE HORIZONTAL REINFORCEMENT WITH MORE THAN 12" OF CONCRETE

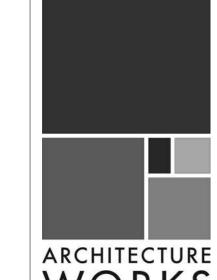
CAST BELOW THE REINFORCEMENT.

	SPECIAL	INSPECTIONS
SPECIAL CASES (IBC 1705.1.1)	EDECUENOV.	INICEPLICATIONS / COMMENTS
ITEM INSPECT WORK THAT IS DEEMED "UNUSUAL" BY THE BUILDING OFFICIAL.	FREQUENCY CONTINUOUS	INSTRUCTIONS / COMMENTS AS DEFINED BY THE BUILDING OFFICIA OR REGISTERED DESIGN PROFESSIONAL.
SOILS CONSTRUCTION (IBC 1705.6)		i Noi Editoria.
ITEM	FREQUENCY	EXTENT / COMMENTS
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC	AS RECOMMENDED IN APPROVED SOIL REPORT AND CONTAINED IN THE CONSTRUCTION DOCUMENTS.
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	
VERIFY CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS	
OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY PRIOR TO PLACEMENT OF COMPACTED FILL.	PERIODIC	
CONCRETE CONSTRUCTION (IBC 1705.3)	EDECHENOV	EVIENT / COMMENTS
ITEM	FREQUENCY	EXTENT / COMMENTS
SPREAD FOOTING ARE EXCEPTED FROM INSPECTIONS, BUT NOT MATERIALS TESTING.		
CONTINUOUS FOOTINGS ARE EXCEPTED FROM INSPECTIONS, BUT NOT MATERIALS TESTING.		
SLABS ON GRADE ARE EXCEPTED FROM INSPECTIONS, BUT NOT MATERIALS TESTING.		
CONCRETE FOUNDATION WALLS ARE EXCEPTED FROM INSPECTIONS, BUT NOT MATERIALS TESTING.	Service.	
INSPECT ANCHORS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.	PERIODIC	
INSPECT ANCHORS POST-INSTALLED IN	PERIODIC	INSPECT ACCORDING TO RESEARCH
HARDENED CONCRETE.	1 21110210	REPORT FOR THE ANCHOR ISSUED.
VERIFY THAT CORRECT CONCRETE	PERIODIC	FOR EACH POUR.
DESIGN MIX IS BEING USED.		
AT THE TIME CONCRETE IS SAMPLED FOR STRENGTH TESTS, TEST CONCRETE FOR SLUMP, AIR CONTENT, AND TEMPERATURE.	CONTINUOUS	DURING PLACEMENT OPERATIONS. REFERENCE CONCRETE SPECIFICATIONS FOR SPECIFIC TESTS AND FREQUENCIES.
INSPECT CONCRETE/SHOTCRETE PLACEMENT AND PLACEMENT METHODS EXCEPT AS NOTED ABOVE.	CONTINUOUS	
INSPECT ALL CONCRETE CURING OPERATIONS.	PERIODIC	MONITOR DURING HOT, COLD AND WINDY CONDITIONS. REFERENCE CONCRETE SPECIFICATIONS.
MEASURE FLOOR AND SLAB FLATNESS AND LEVELNESS ACCORDING TO ASTM E 1155.	PERIODIC	FOR EACH POUR. DO NOT SUBMIT REPORTS TO BUILDING OFFICIAL.
STRUCTURAL STEEL CONSTRUCTION (IBC		
ITEM	FREQUENCY	EXTENT / COMMENTS
INSPECT ANCHOR RODS AND OTHER EMBEDMENTS. VERIFY DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM AND	PERIODIC	APPLIES TO EMBEDDED POST/COLUMN CONNECTIONS.
THE EXTENT OF DEPTH OF EMBEDMENT PRIOR TO PLACEMENT OF CONCRETE.		
WOOD CONSTRUCTION (IBC 1705.5)	FREQUENCY	EXTENT / COMMENTS
INSPECT SITE-BUILT ASSEMBLIES INCLUDING SITE BUILT TRUSSES. INSPECT ERECTED TRUSSES INCLUDING BRIDGING AND ATTACHMENTS.	PERIODIC	LATERT / GOWINIERTS
	NOTES	
NOTE: THE INSPECTION AND TESTING AG	ENT(S) SHALL BE	



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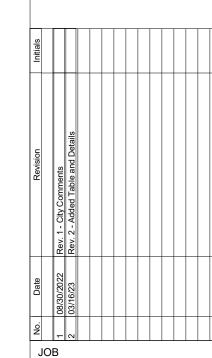


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MARCH 24, 2023

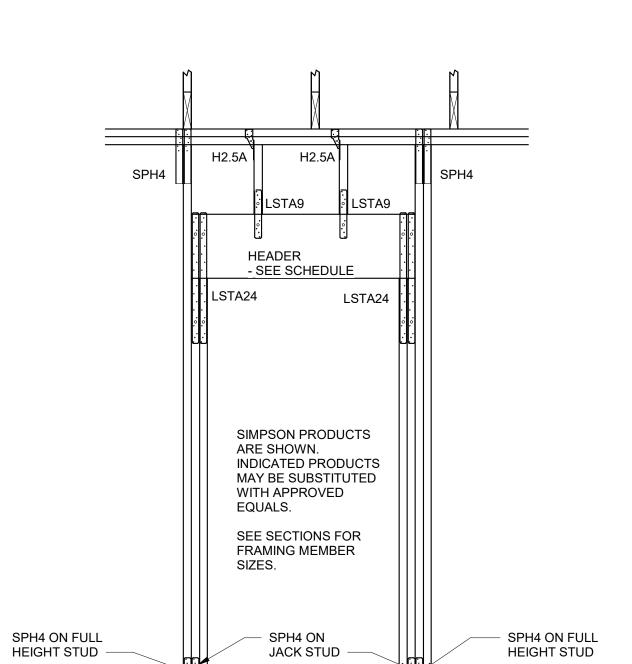
SHEET NAME ABBREVIATIONS **SCHEDULES & TABLES**

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENERS	SPACING AND LOCATION
	ROOF	
BLOCKING BETWEEN CEILING JOISTS, RAFTERS, OR TRUSSES TO TOP PLATE OR OTHER FRAMING	3-8D COMMON (2 1/2"X0.131"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2-8D COMMON (2 1/2"X0.131") 2-3"X0.131" NAILS 3-3" 14 GAGE STAPLES	EACH END, TOENAIL
	2-16D COMMON (3 1/2"X0.162") AT 6" O.C. 3-3"X0.131" NAILS 3-3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16D COMMON (2 1/2"X0.131") AT 6" O.C.	FACE NAIL
CEILING JOISTS TO TOP PLATE	3-8D COMMON (2 1/2"X0.131"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST, TOENAIL
CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	3-16D COMMON (2 1/2"X0.131"); OR 4-10D BOX (3"X0.128"); OR 4-3"X0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL
COLLAR TIE TO RAFTER	3-10D COMMON (3"X0.148"); OR 4-10D BOX (3"X0.128"); OR 4-3"X0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.5, TABLE 1308.7.5)	3-10D COMMON (3"X0.148"); OR 3-16D COMMON (2 1/2"X0.131"); OR 4-10D BOX (3"X0.128"); OR 4-3"X0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16D COMMON (3 1/2"X0.162"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
	3-10D COMMON (3"X0.148"); OR 4-16D BOX (3 1/2"X0.135"); OR 4-10D BOX (3"X0.128"); OR 4-3"X0.131 NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
	WALL	
STUD TO STUD (NOT AT BRACED WALL PANELS)	16D COMMON (3 1/2"X0.162")	24" O.C. FACE NAIL
	10D BOX (3"X0.128"); OR 4-3"X0.131 NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED	16D COMMON (3 1/2"X0.162")	16" O.C. FACE NAIL
WALL PANELS)	16D BOX (3 1/2"X0.162")	12" O.C. FACE NAIL
	3"X0.131 NAILS; OR 3" 14 GUAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
BUILT-UP HEADER (2" TO 2" HEADER)	16D COMMON (3 1/2"X0.162")	16" O.C. EACH EDGE, FACE NAIL
	10D BOX (3"X0.128")	12" O.C. EACH EDGE, FACE NAIL
CONTINUOUS HEADER TO STUD	4-8D COMMON (2 1/2"X0.131"); OR 4-10D BOX (3"X0.128")	TOENAIL
TOP PLATE TO TOP PLATE	16D COMMON (3 1/2"X0.162")	16" O.C. FACE NAIL
	10D BOX (3"X0.128"); OR 4-3"X0.131 NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
TOP PLATE TO TOP PLATE, AT END JOINTS	8-16D COMMON (3 1/2"X0.162"); OR 12-10D BOX (3"X0.128"); OR 12-3"X0.131" NAILS; OR 12-3" 14 GAGE STAPLES, 7/16" CROWN	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16D COMMON (3 1/2"X0.162")	16" O.C. FACE NAIL
The state of the s	16D BOX (3 1/2"X0.135"); OR 3"X0.131 NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
BOTTOM PLATE TO JOIST, RIM JIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	2-16D COMMON (3 1/2"X0.162"); OR 3-16D BOX (3"X0.135"); OR 4-3"X0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL
STUD TO TOP OR BOTTOM PLATE	2-16D COMMON (3 1/2"X0.162"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
TOP PLATES, LAPS AT CORNERS, AND INTERSECTIONS	2-16D COMMON (3 1/2"X0.162"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
1" BRACE TO EACH STUD AND PLATE	2-8D COMMON (2 1/2"X0.131"); OR 2-10D BOX (3"X0.128"); OR 2-3"X0.131" NAILS; OR 2-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
1"X6" SHEATHING TO EACH BEARING	2-8D COMMON (2 1/2"X0.131"); OR 2-10D BOX (3"X0.128")	FACE NAIL
1"X8" AND WIDER SHEATHING TO EACH BEARING	3-8D COMMON (2 1/2"X0.131"); OR 3-10D BOX (3"X0.128")	FACE NAIL

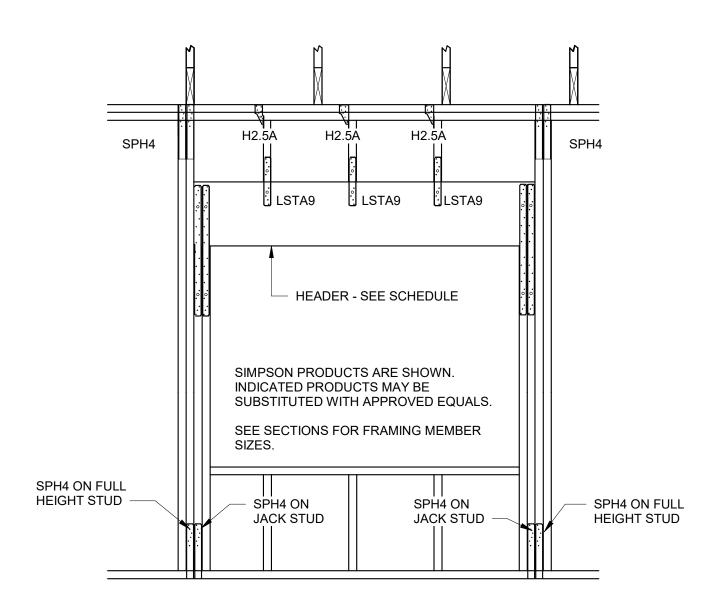
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENERS	SPACING AND LOCATION
	FLOOR	
JOIST TO SILL, TOP PLATE, OR GIRDER	3-8D COMMON (2 1/2"X0.131"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131 NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL, OR OTHER FRAMING BELOW	8D COMMON (2 1/2"X0.131"); OR 10D BOX (3"X0.128"); OR 3"X0.131 NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	6" O.C., TOENAIL
1"X6" SUBFLOOR OR LESS TO EACH JOIST	2-8D COMMON (2 1/2"X0.131"); OR 2-10D BOX (3"X0.128")	FACE NAIL
2" SUBFLOOR TO JOIST OR GIRDER	2- 16D COMMON (3 1/2"X0.162")	FACE NAIL
2" PLANKS (PLANK AND BEAM - FLOOR AND ROOF)	2- 16D COMMON (3 1/2"X0.162")	EACH BEARING, FACE NAIL
BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20D BOX (4"X0.192")	32" O.C., FACE NAIL AT TOP AN BOTTOM STAGGERED ON OPPOSITE SIDES
	10D BOX (3"X0.128"); OR 3"X0.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND 2-20D COMMON (4"X0.192"); OR 3-10D BOX (3"X0.128"); OR 3-3"X0.131" NAILS; OR 3-3" 14 GAUGE STAPLES, 7/16 CROWN	ENDS AND AT EACH SPLICE, FACE NAIL
LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16D COMMON (3 1/2"X0.162"); OR 4-10D BOX (3"X0.128"); OR 4-3"X0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST OR RAFTER, FACE NAIL
JOIST TO BAND JOIST OR RIM JOIST	3-16D COMMON (3 1/2"X0.162"); OR 4-10D BOX (3"X0.128"); OR 4-3"X0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
BRIDGING OR BLOCKING TO JOIST, RAFTER, OR TRUSS	2-8D COMMON (2 1/2"X0.131"); OR 2-10D BOX (3"X0.128"); OR 2-3"X0.131 NAILS; OR 2-3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL

FOR USE WHEN A SPECIFIC CONNECTION IS NOT PROVIDED IN DETAILS AND SECTIONS.

WOOD HEADER TABLE						
HEADER	MAX SPAN	DESCRIPTION	DETAIL			
HD428	5'-0"	2X4 WALL WITH DOUBLE 2X8 BEAMS w/ 1/2" PLYWOOD SHIMS. NAIL TOGETHER w/ (2) 16D NAILS @12" OC.				
HD4212	8'-0"	2X4 WALL WITH DOUBLE 2X12 BEAMS w/ 1/2" PLYWOOD SHIMS. NAIL TOGETHER w/ (3) 16D NAILS @12" OC.				
HD628	6'-6"	2X6 WALL WITH TRIPLE 2X8 BEAMS w/ 1/2" PLYWOOD SHIMS. NAIL TOGETHER w/ (2) 16D NAILS @12" OC.				
HD6212	10'-0"	2X6 WALL WITH TRIPLE 2X12 BEAMS w/ 1/2" PLYWOOD SHIMS. NAIL TOGETHER w/ (3) 16D NAILS @12" OC.				
HD628i	5'-6"	2X6 WALL WITH DOUBLE 2X8 HEADER BEAMS w/ 2X6 T&B PLATES. NAIL TOGETHER w/ 16D NAILS @6" OC.				
HD6212i	8'-6"	2X6 WALL WITH DOUBLE 2X12 HEADER BEAMS w/ 2X6 T&B PLATES. NAIL TOGETHER w/ 16D NAILS @6" OC.				
HD6212hs	12'-0"	2X6 WALL WITH TRIPLE 2X12 HEADER BEAMS w/ 2X6 T&B PLATES. NAIL TOGETHER w/ (3) 16D NAILS @12" OC SIDES, & 16D NAILS @6" OC T&B.				



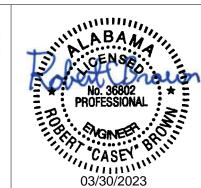
TYPICAL DOOR OPENING HOLD-DOWN

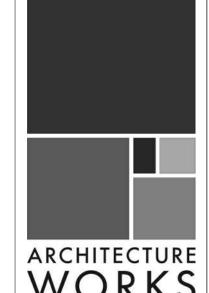


TYPICAL WINDOW OPENING HOLD-DOWN



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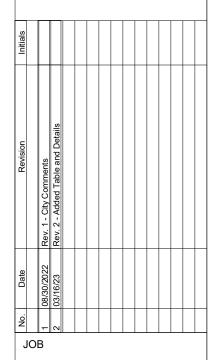
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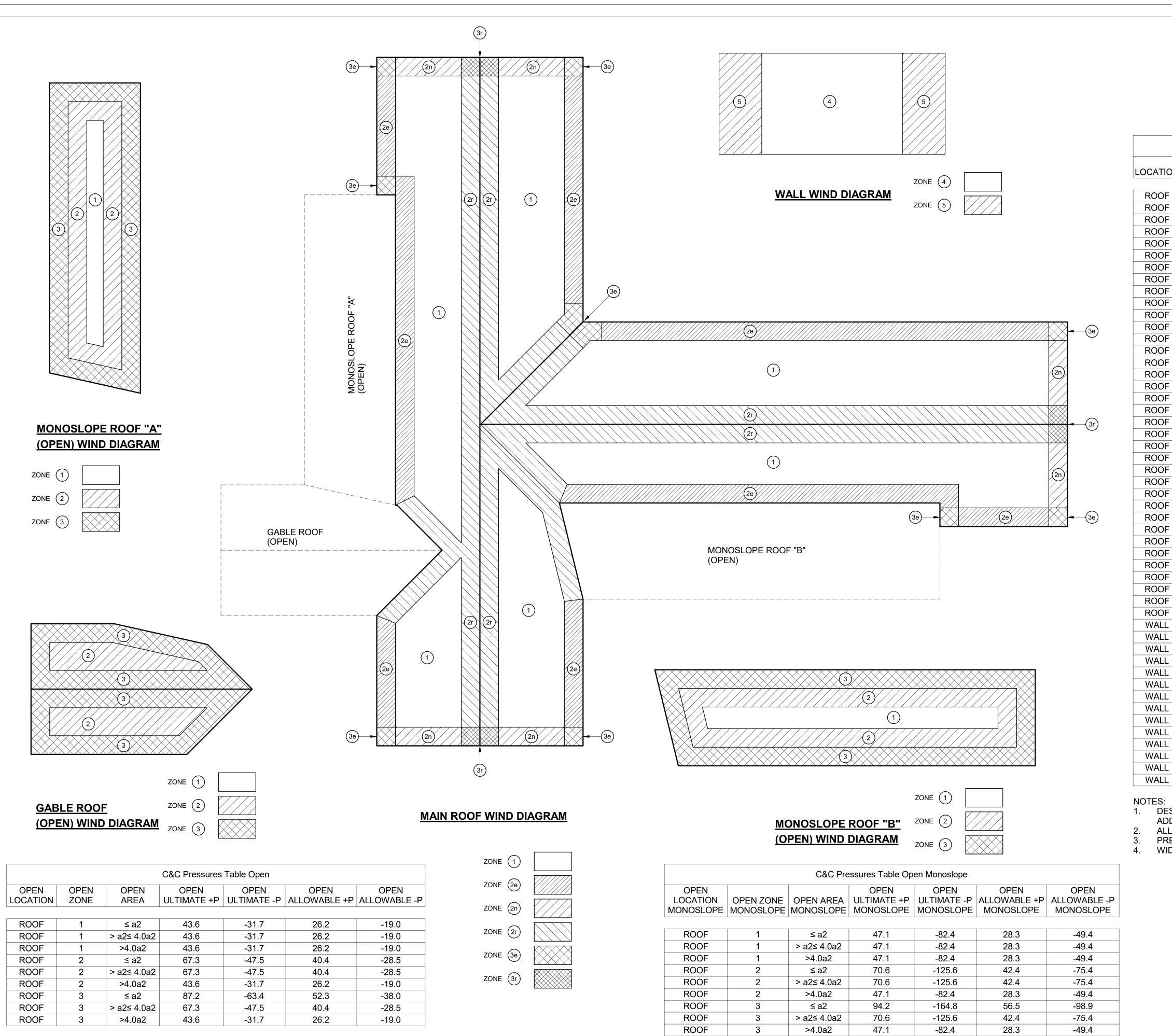
PROJECT STATUS

CONFORMANCE SET

SHEET NAME **SCHEDULES & TABLES**

MARCH 24, 2023

SHEET NO.



1. DESIGN BASED ON ASCE 7-16, SECTION 30. SEE GENERAL NOTES FOR

ALLOWABLE WIND LOADS ARE 60% OF ULTIMATE WIND LOADS.

ADDITIONAL INFORMATION.

4. WIDTH OF EDGE STRIP, "a" = 3'-0".

PRESSURE CATEGORY, OPEN (GABLE).

						1 61.	231.000.24	+0
				C&C Press	ures Table			
LOCATION	ZONE	AREA	ULTIMATE +P	ULTIMATE -P	ALLOWABLE +P	ALLOWABLE -P	OH ULT. -P	OH ALL. -P
ROOF	1	10	69.9	-113.4	41.9	-68.0	-151.9	-91.14
ROOF	1	20	65.1	-98.9	39.1	-59.3	-137.5	-82.5
ROOF	1	50	56.0	-79.6	33.6	-47.8	-118.2	-70.92
ROOF	1	100	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	1	200	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	1	500	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2e	10	69.9	-113.4	41.9	-68.0	-151.9	-91.14
ROOF	2e	20	65.1	-98.9	39.1	-59.3	-137.5	-82.5
ROOF	2e	50	56.0	-79.6	33.6	-47.8	-118.2	-70.92
ROOF	2e	100	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2e	200	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2e	500	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2r	10	69.9	-113.4	41.9	-68.0	-151.9	-91.14
ROOF	2r	20	65.1	-98.9	39.1	-59.3	-137.5	-82.5
ROOF	2r	50	56.0	-79.6	33.6	-47.8	-118.2	-70.92
ROOF	2r	100	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2r	200	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2r	500	50.6	-65.1	30.4	-39.1	-103.7	-62.22
ROOF	2n	10	69.9	-123.0	41.9	-73.8	-161.6	-96.96
ROOF	2n	20	65.1	-112.4	39.1	-67.4	-151.5	-90.9
ROOF	2n	50	56.0	-97.0	33.6	-58.2	-136.5	-81.9
ROOF	2n	100	50.6	-84.9	30.4	-50.9	-124.5	-74.7
ROOF	2n	200	50.6	-74.8	30.4	-44.9	-113.4	-68.04
ROOF	2n	500	50.6	-74.8	30.4	-44.9	-113.4	-68.04
ROOF	3e	1-2	69.9	-180.9	41.9	-108.5	-219.5	-131.7
ROOF	3e	10	69.9	-147.1	41.9	-88.3	-185.7	-111.42
ROOF	3e	20	65.1	-132.7	39.1	-79.6	-171.2	-102.72
ROOF	3e	50	56.0	-113.4	33.6	-68.0	-151.9	-91.14
ROOF	3e	100	50.6	-98.9	30.4	-59.3	-137.5	-82.5
ROOF	3e	200	50.6	-84.4	30.4	-50.6	-122.0	-73.2
ROOF	3e	300	50.6	-74.8	30.4	-44.9	-113.4	-68.04
ROOF	3e	500	50.6	-74.8	30.4	-44.9	-113.4	-68.04
ROOF	3r	10	69.9	-123.0	41.9	-73.8	-161.6	-96.96
ROOF	3r	20	65.1	-112.4	39.1	-67.4	-151.5	-90.9
ROOF	3r	50	56.0	-97.0	33.6	-58.2	-136.5	-81.9
ROOF	3r	100	50.6	-84.9	30.4	-50.9	-124.5	-74.7
WALL	3r	200	50.6	-74.8	30.4	-44.9	-113.4	-68.04
WALL	3r	500	50.6	-74.8	30.4	-44.9	-113.4	-68.04
WALL	4	10	74.8	-79.6	44.9	-47.8		
				1	1			

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OR

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NOTES:

- 1. DESIGN BASED ON ASCE 7-16, SECTION 30. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
- ALLOWABLE WIND LOADS ARE 60% OF ULTIMATE WIND LOADS.
- PRESSURE CATEGORY, PARTIALLY ENCLOSED.
- WIDTH OF EDGE STRIP, "a" = 3'-2".

20

50

100

200

500

10

20

50

100

200

5

5 500

70.9

67.1

65.6

64.2

60.3

74.8

70.9

67.1

65.6

64.2

60.3

-77.2

-73.8

-70.9

-68.5

-65.1

-94.1

-89.2

-82.0

-76.2

-72.4

-65.1

42.5

40.3

39.4

38.5

36.2

44.9

42.5

40.3

39.4

38.5

36.2

-46.3

-44.3

-42.5

-41.1

-39.1

-56.5

-53.5

-49.2

-45.7

-43.4

-39.1

20-1101-0049

PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

SHEET NAME C&C WIND **DIAGRAMS AND** TYPICAL DETAILS

NOTES:	

- DESIGN BASED ON ASCE 7-16, SECTION 30. SEE GENERAL NOTES FOR
- PRESSURE CATEGORY, OPEN (MONOSLOPE).
- WIDTH OF EDGE STRIP, "a" = 3'-0".

- ADDITIONAL INFORMATION. ALLOWABLE WIND LOADS ARE 60% OF ULTIMATE WIND LOADS.





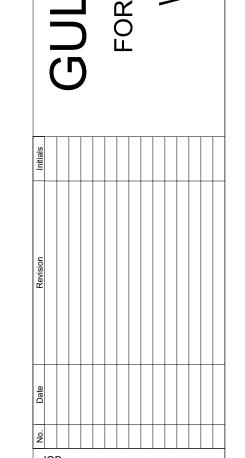


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302 Magnolia Avenue Fairhope, AL 36532 p 251.929.0514

USTAINABILITY PACKAGE -ABAMA



FOR

20-1101-0049

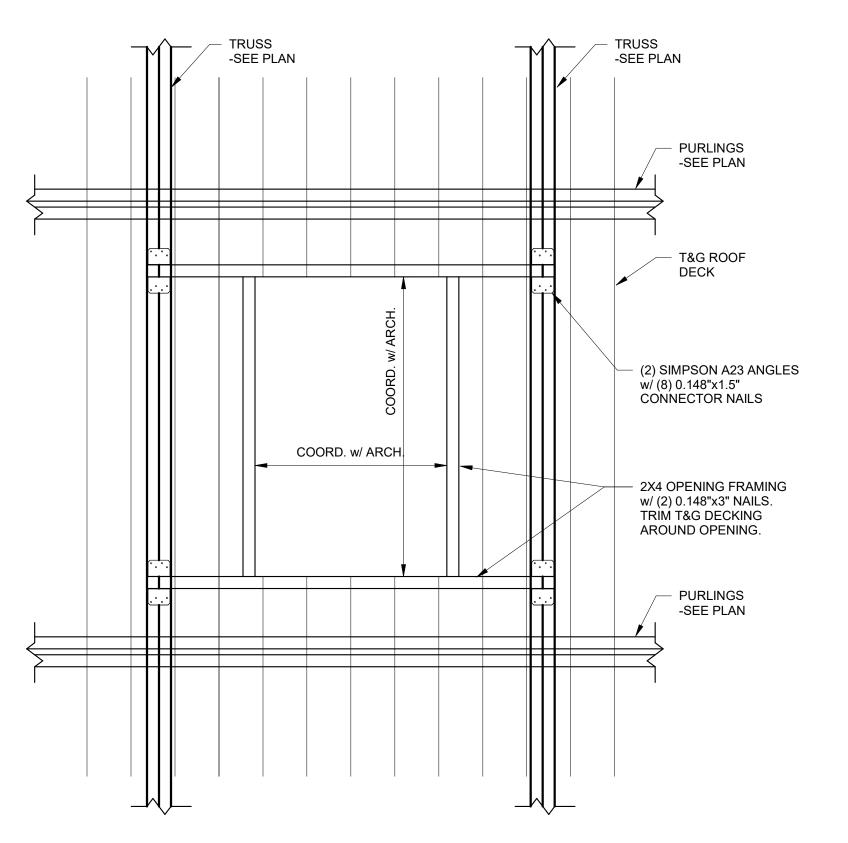
PROJECT STATUS

CONFORMANCE SET

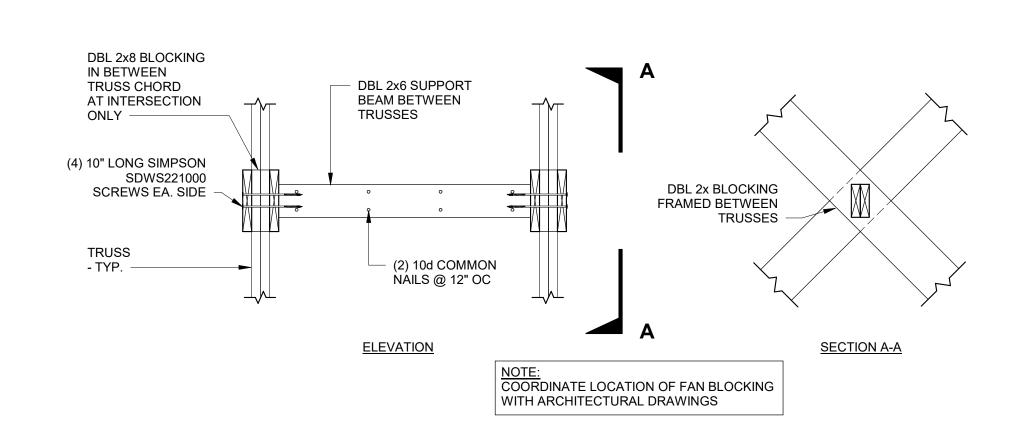
MARCH 24, 2023 SHEET NAME

TYPICAL DETAILS

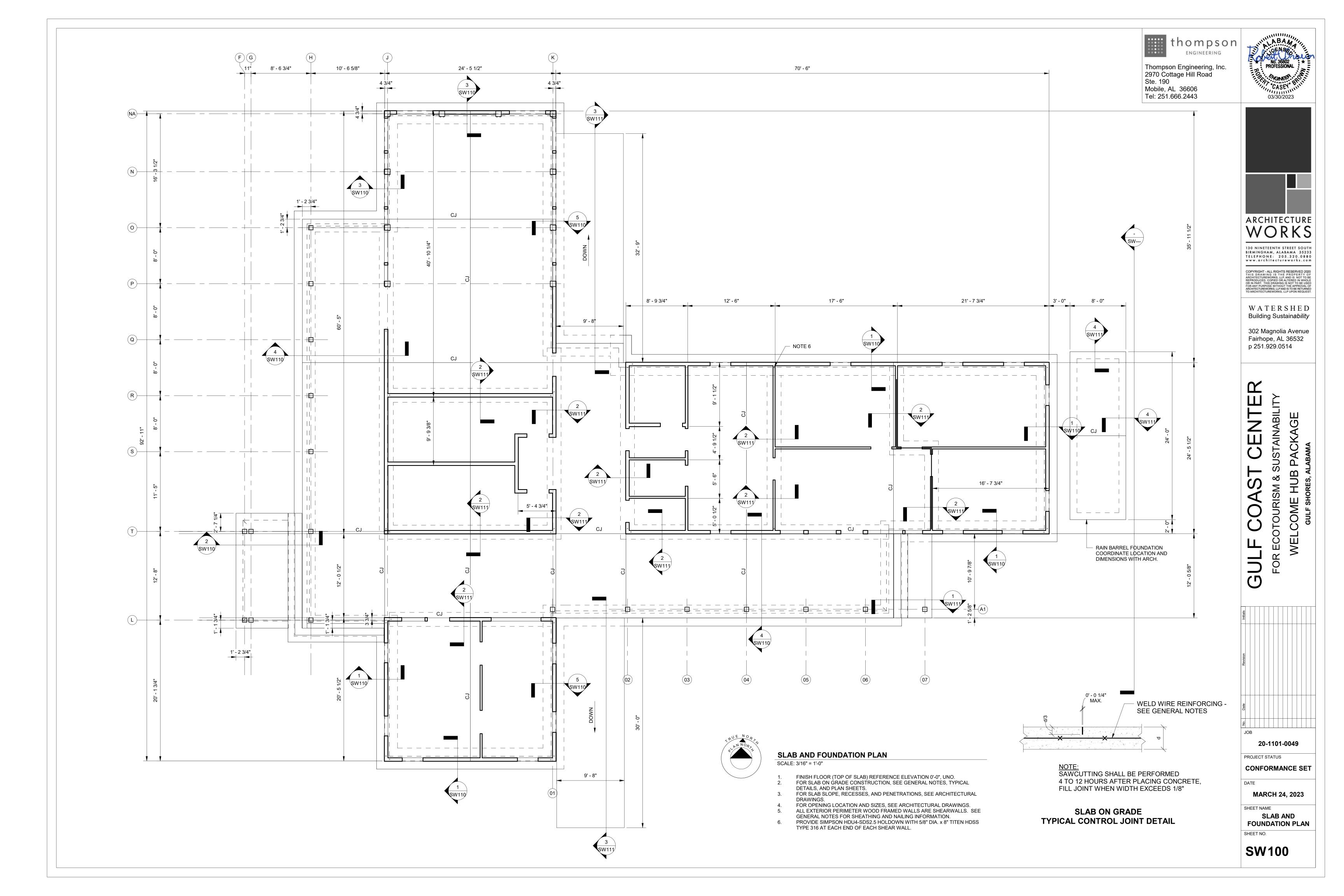
SW005

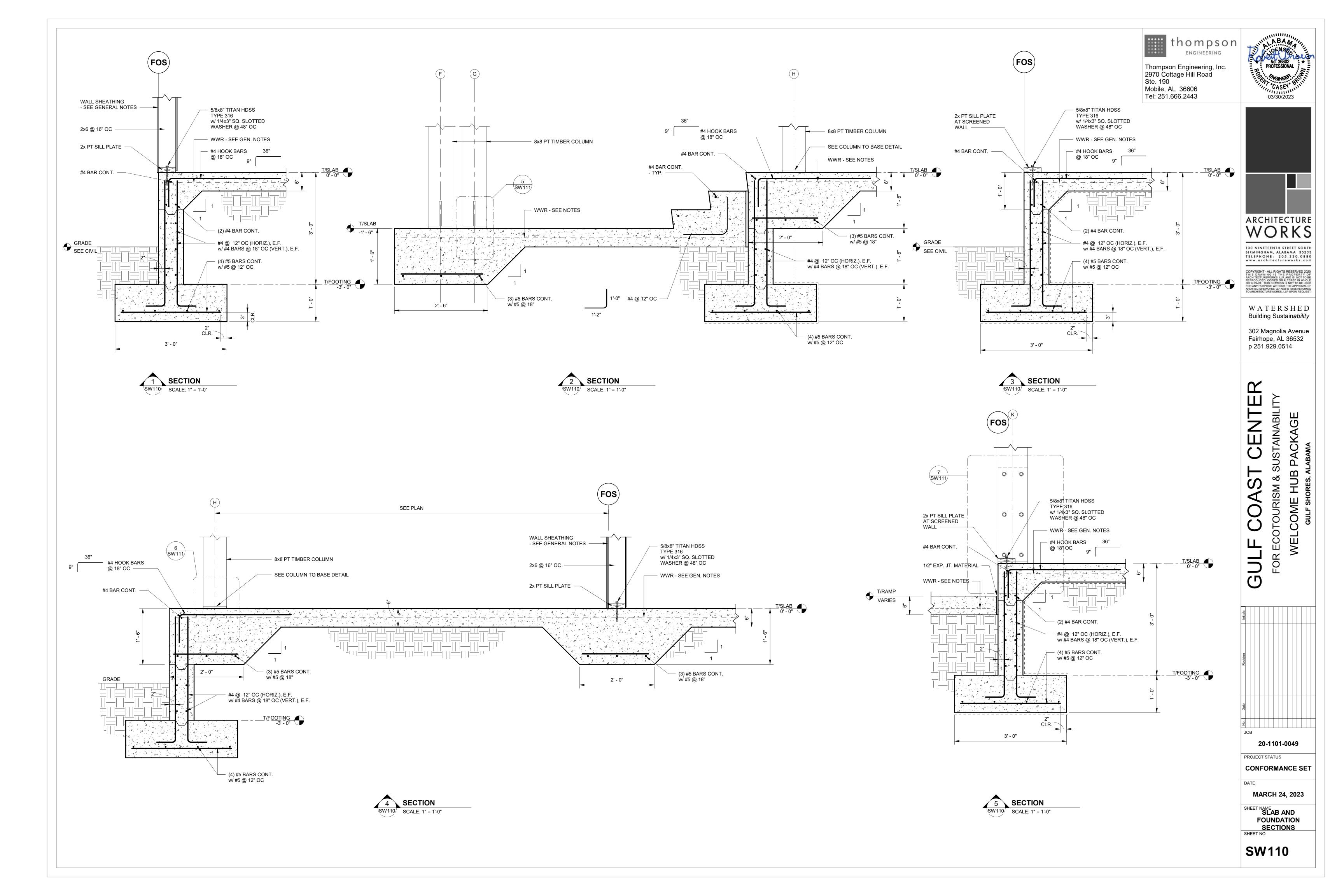


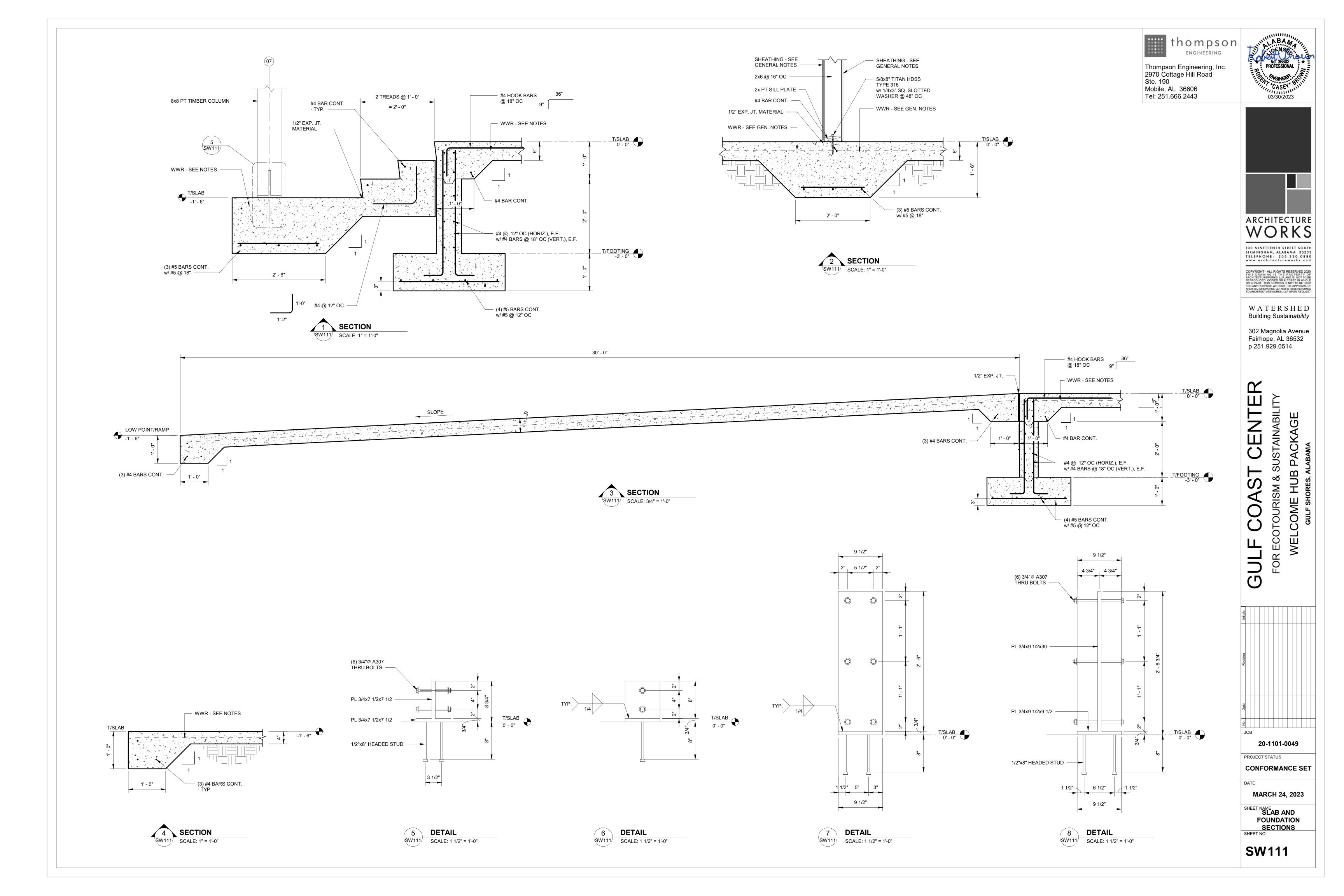
ROOF PENETRATION DETAIL

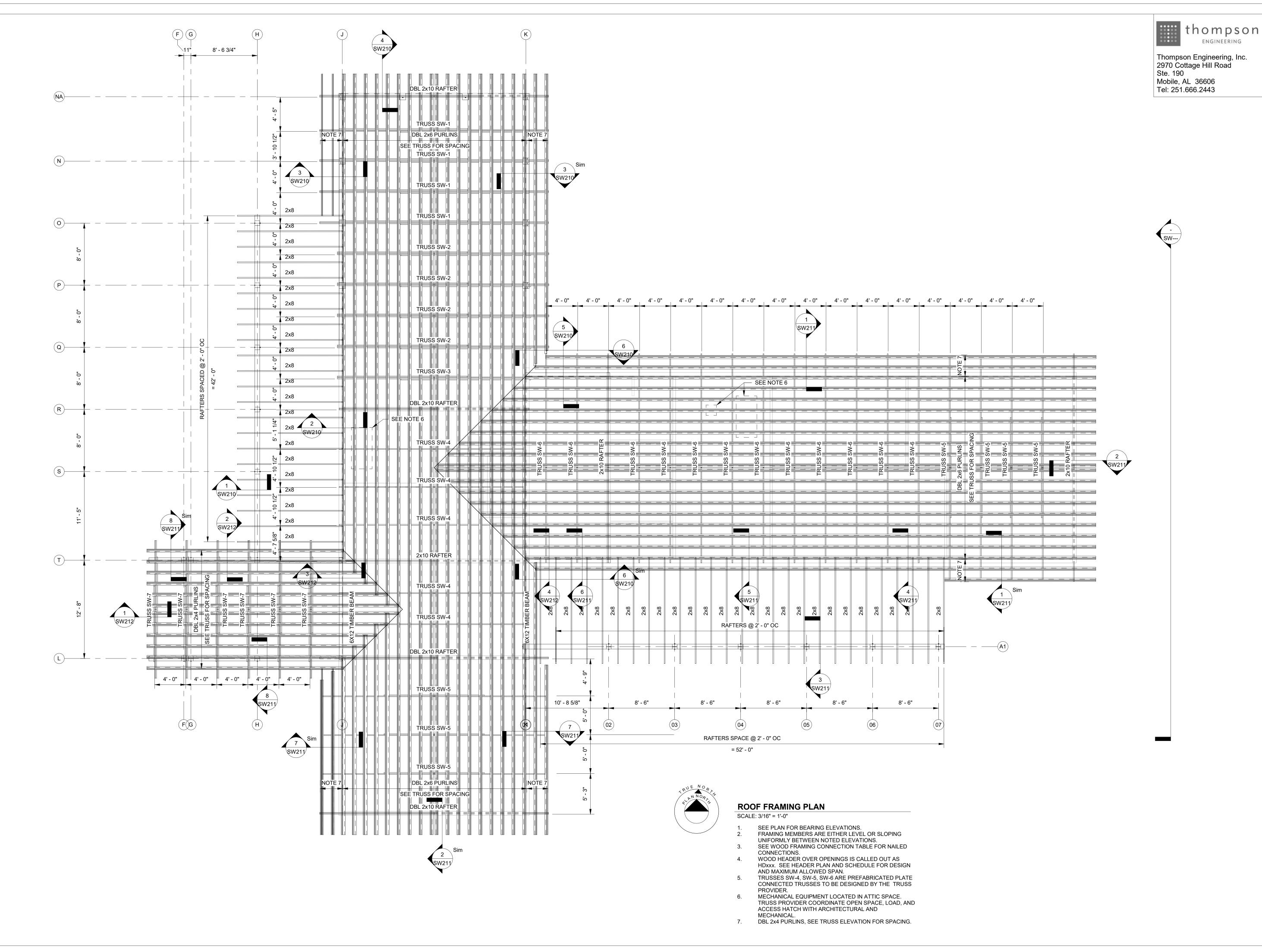


FAN SUPPORT BEAM DETAIL











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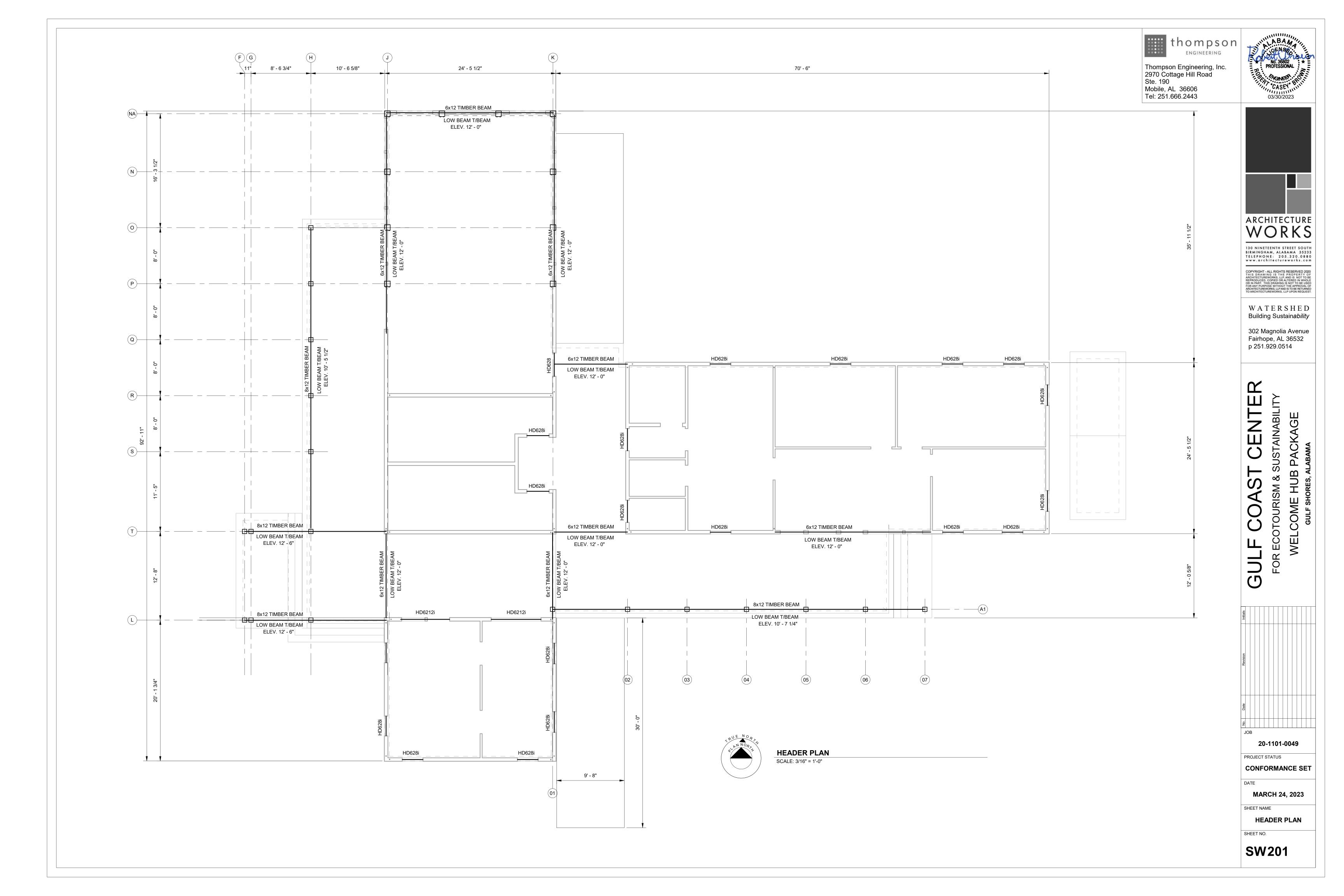
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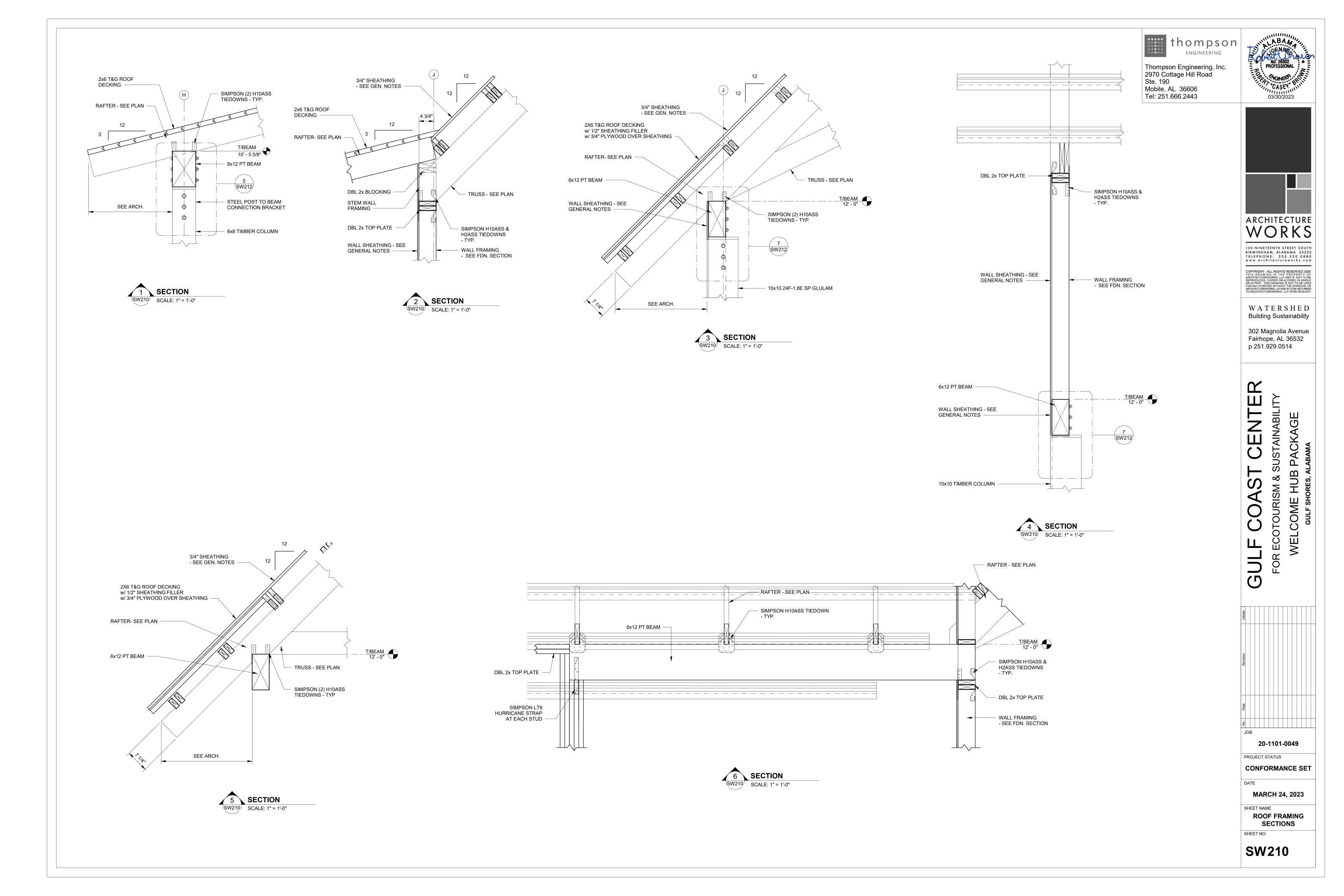
MARCH 24, 2023

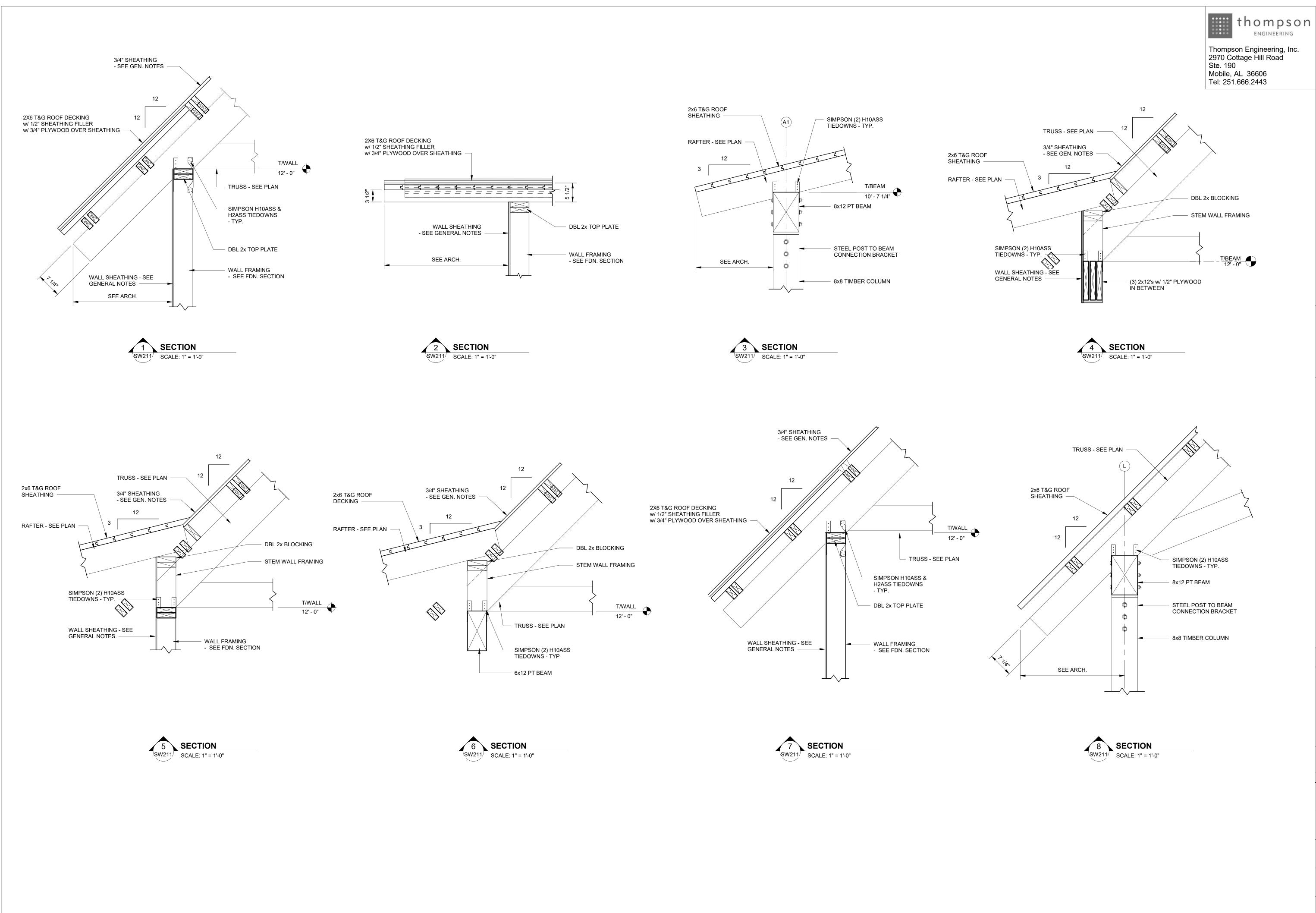
SHEET NAME **ROOF FRAMING** PLAN

SW200

SHEET NO.











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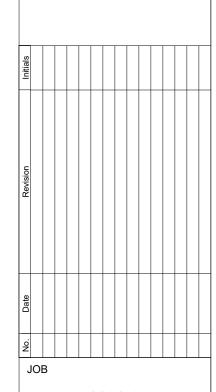
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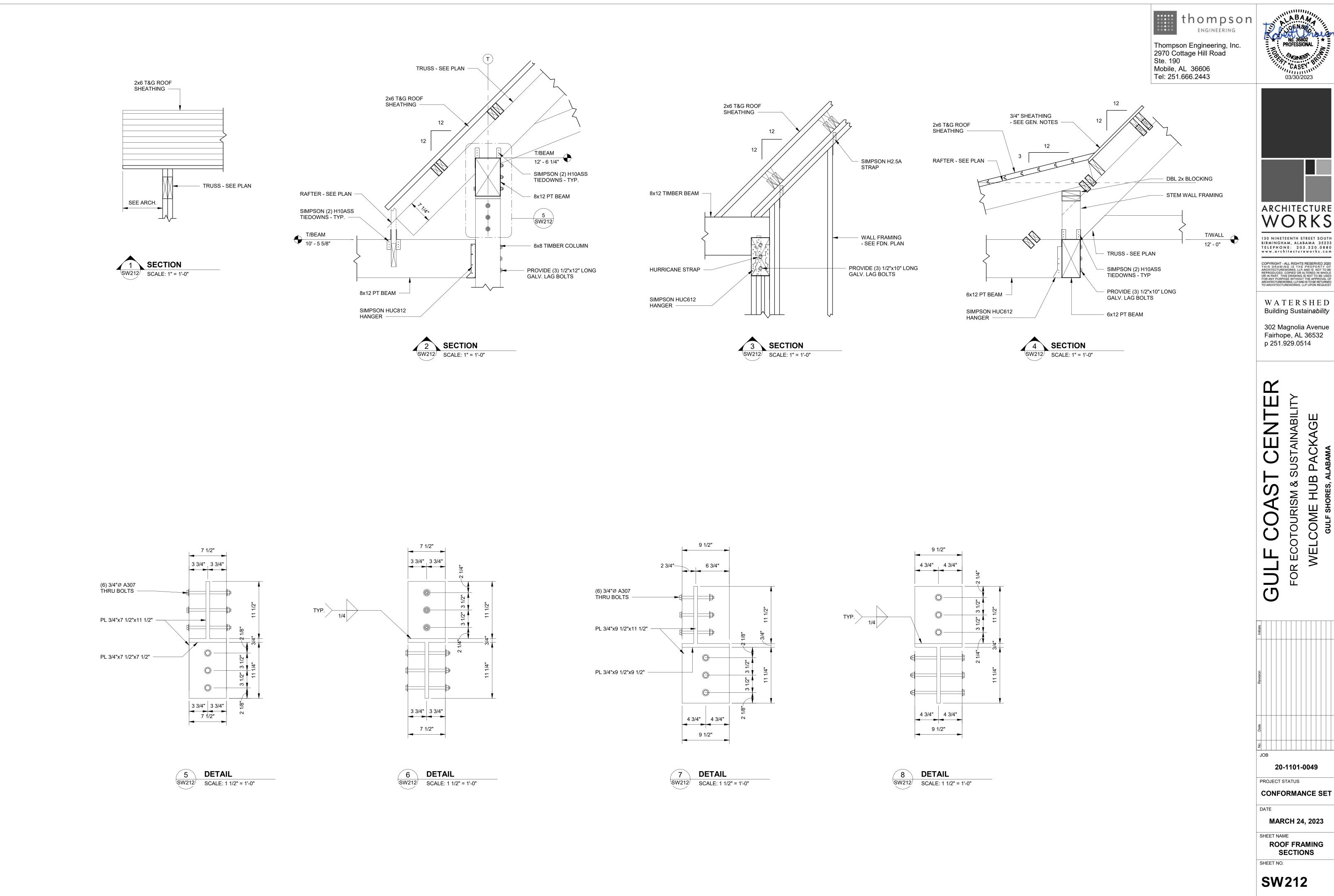
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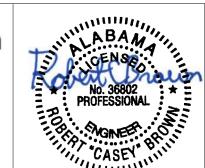
PROJECT STATUS

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SHEET NAME **ROOF FRAMING SECTIONS** SHEET NO.





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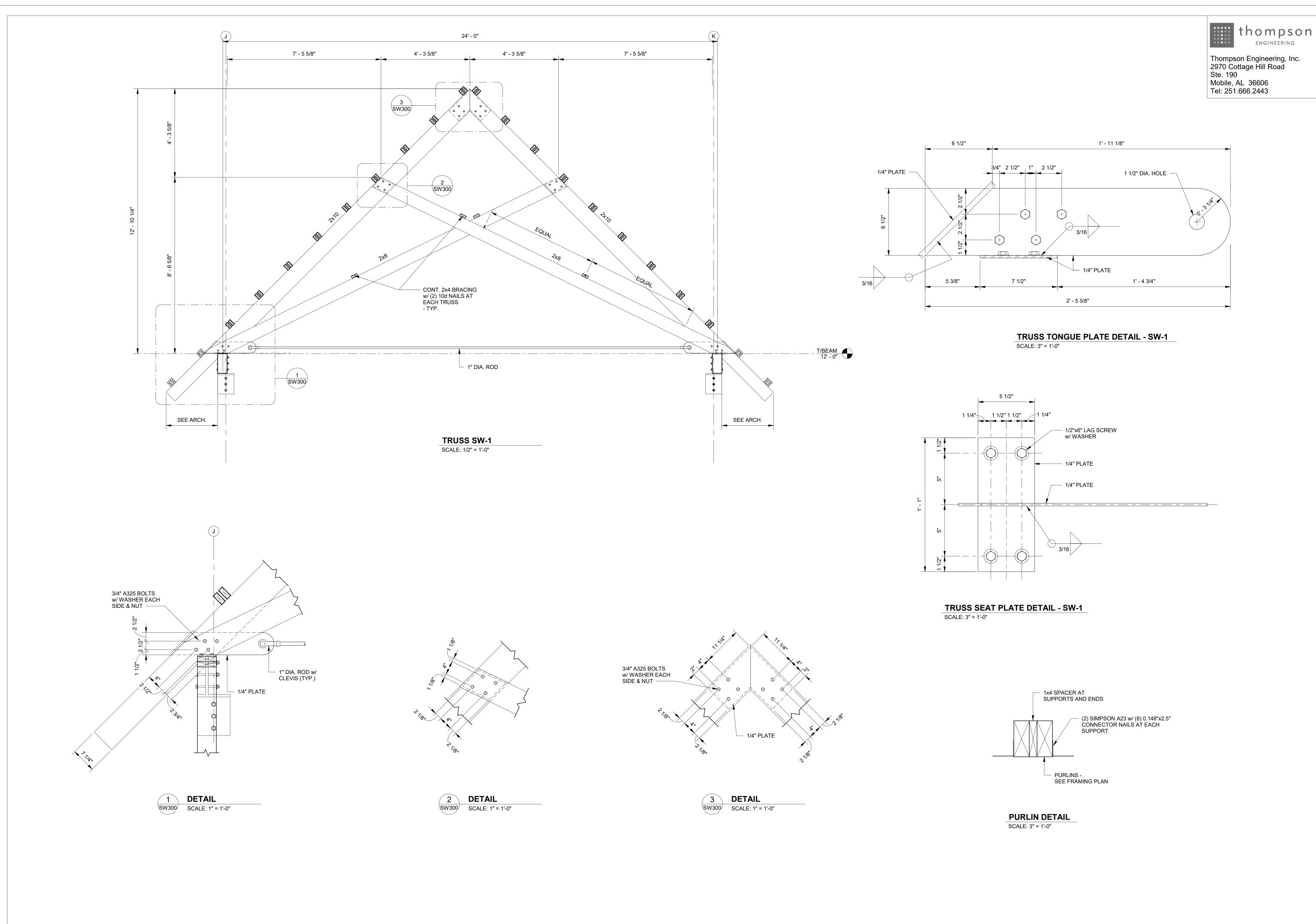
USTAINABILIT PACKAGE WELCOME HUB GULF SHORES, AI FOR ECOTOURISM &

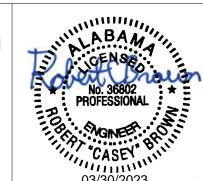
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ROOF FRAMING SECTIONS





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SHEET NAME

TRUSS ELEVATIONS



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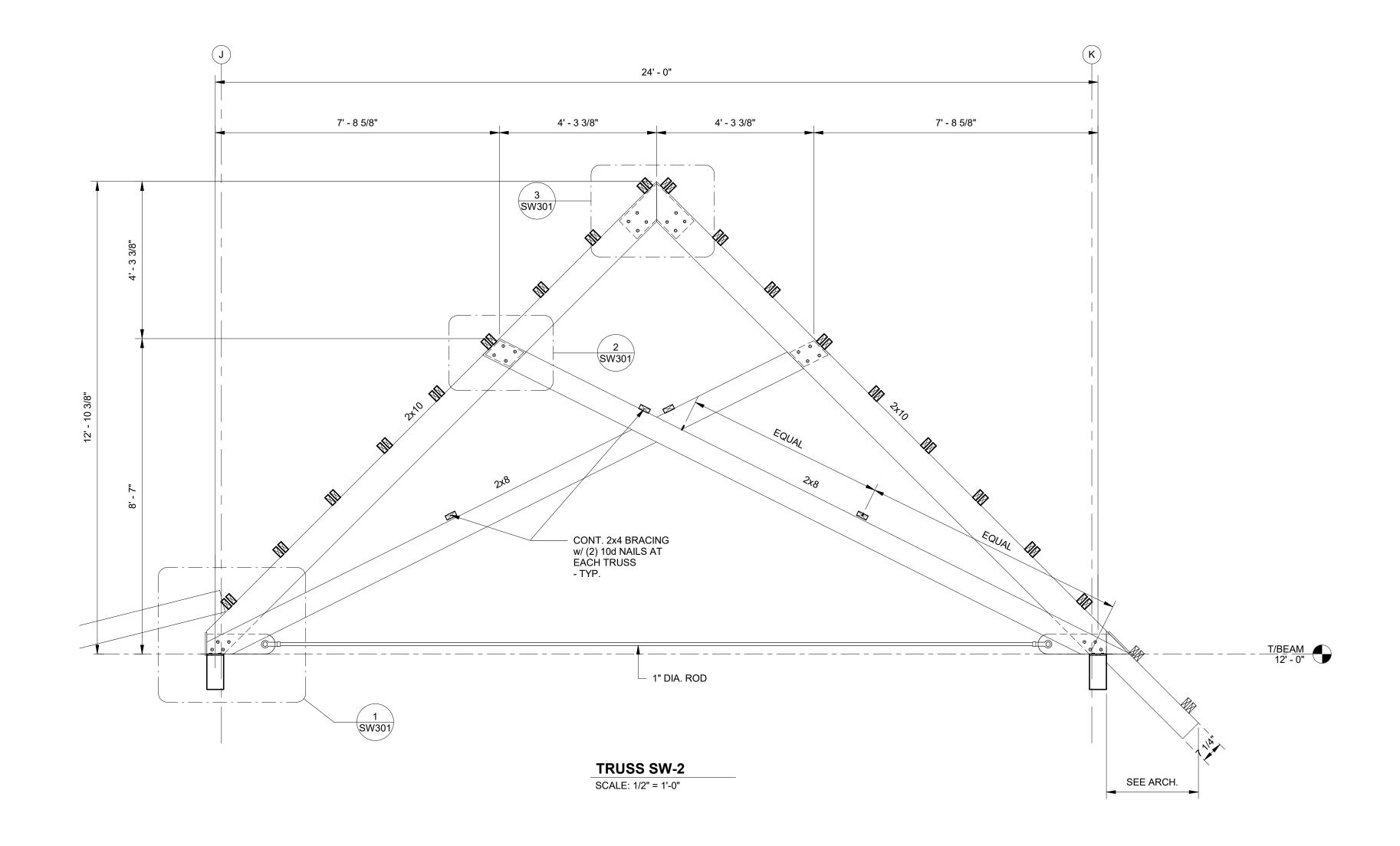
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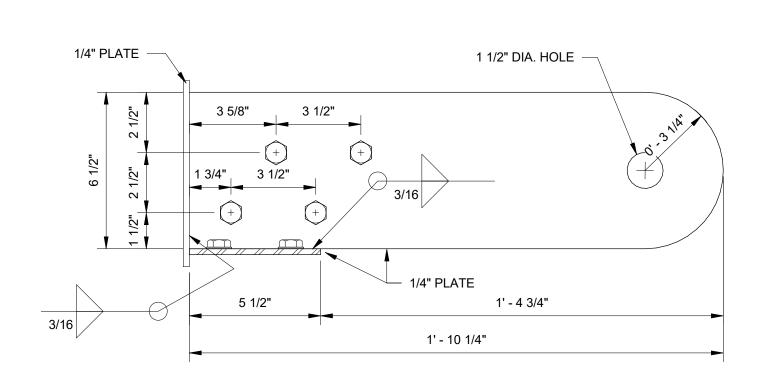
Building Sustainability

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PACKAGE -ABAMA

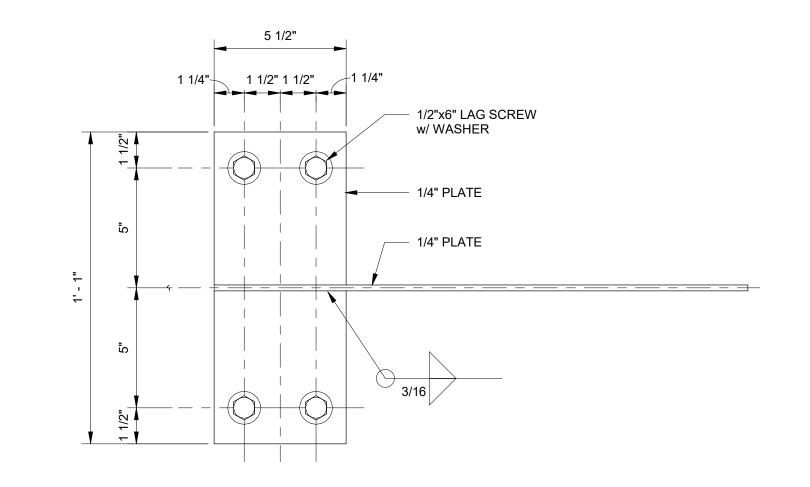
p 251.929.0514



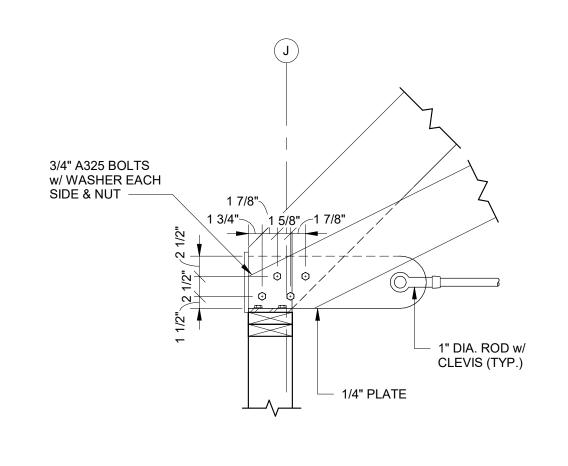


TRUSS TONGUE PLATE DETAIL - SW-2

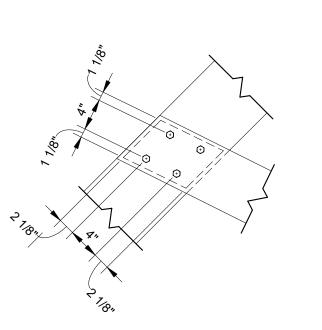
SCALE: 3" = 1'-0"



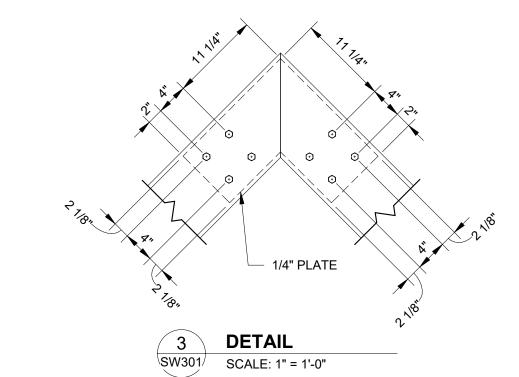
TRUSS SEAT PLATE DETAIL - SW-2 SCALE: 3" = 1'-0"

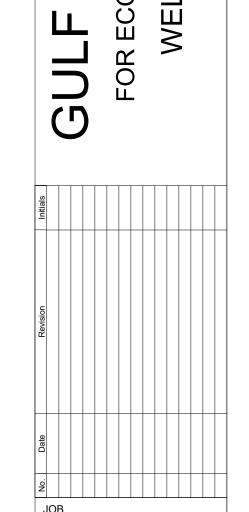












FOR ECOTOURISM

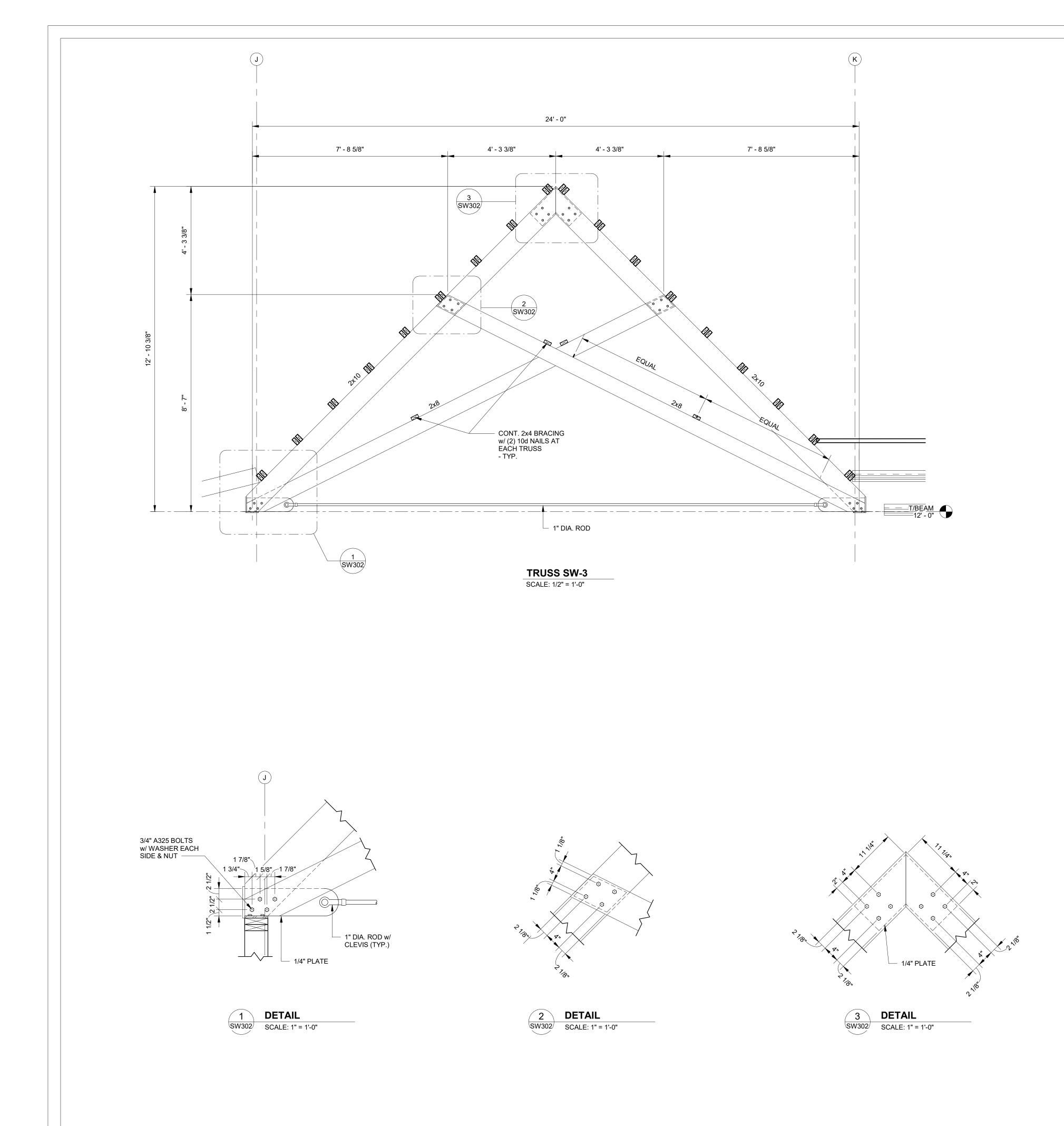
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MARCH 24, 2023

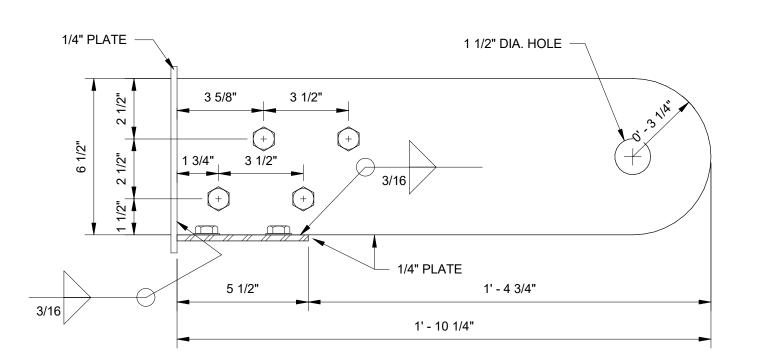
SHEET NAME TRUSS ELEVATIONS





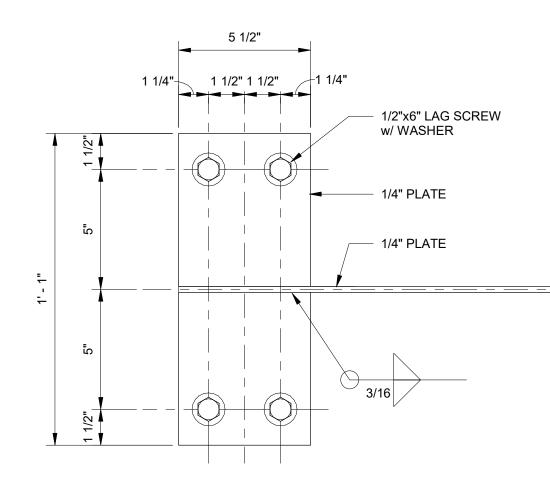
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TRUSS TONGUE PLATE DETAIL - SW-3

SCALE: 3" = 1'-0"



TRUSS SEAT PLATE DETAIL - SW-3 SCALE: 3" = 1'-0"



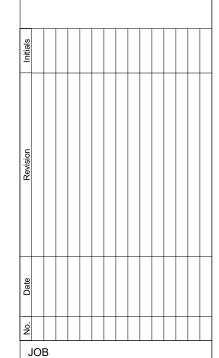
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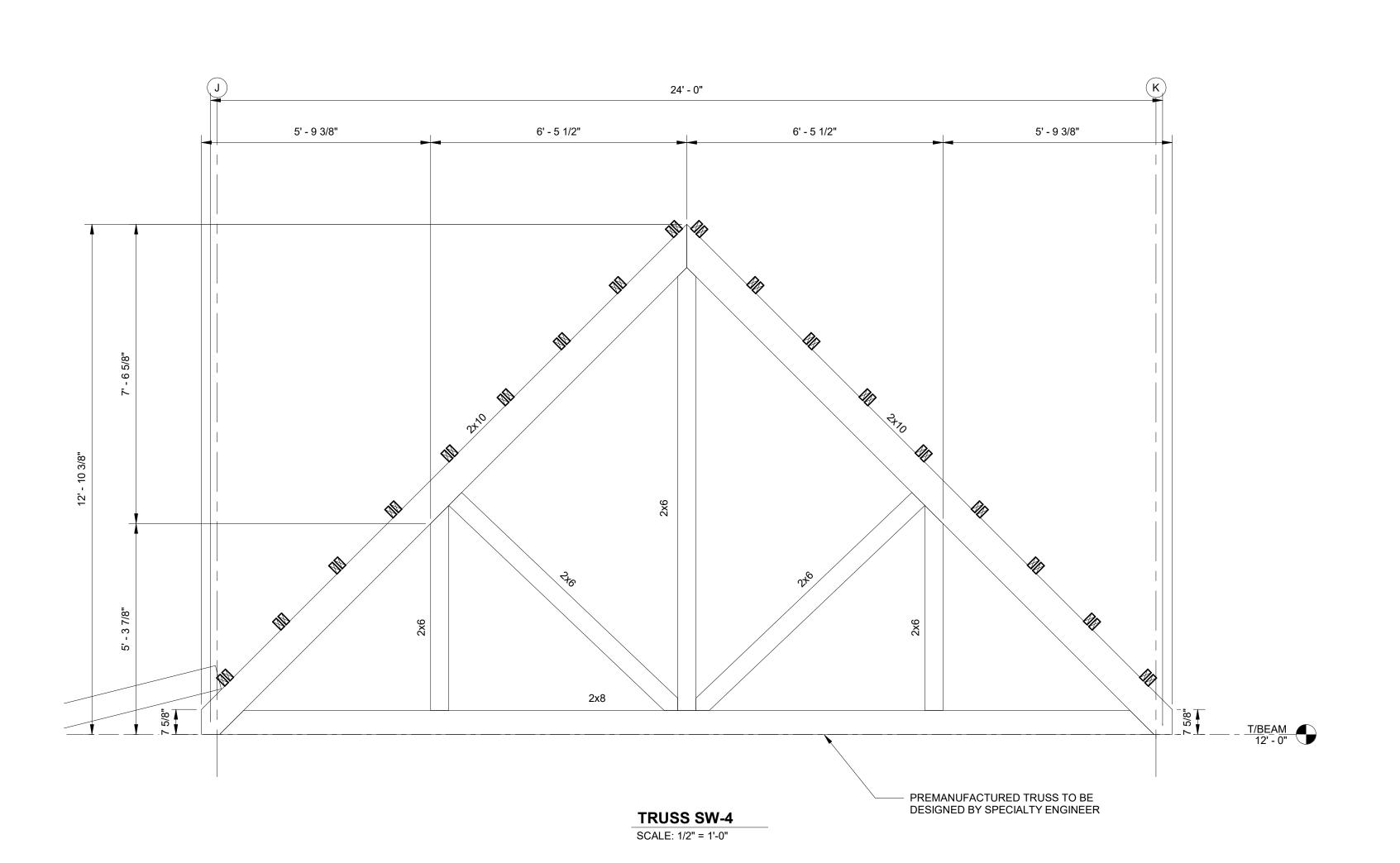
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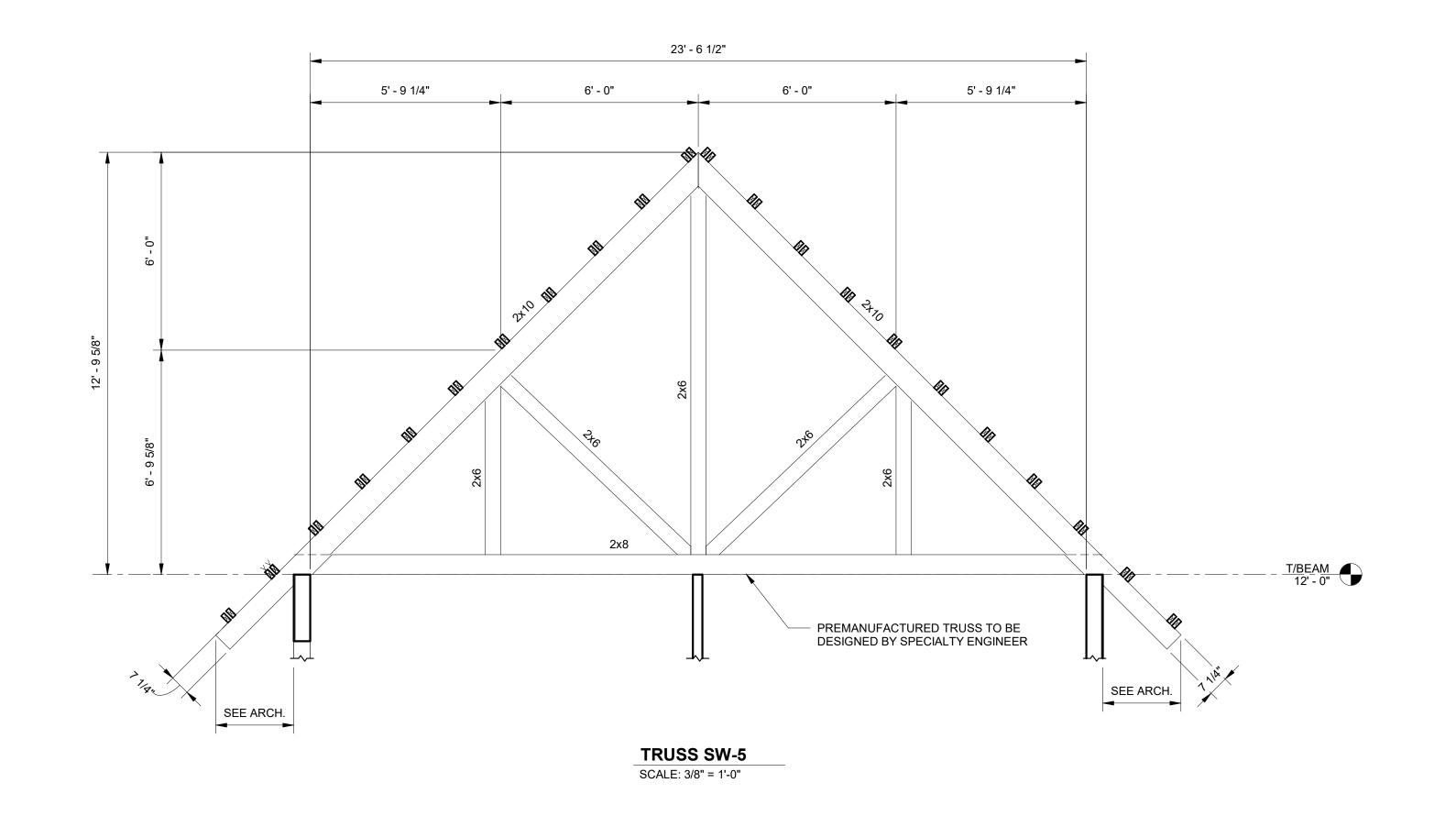
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CONFORMANCE SET

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TRUSS ELEVATIONS

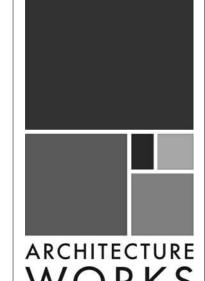






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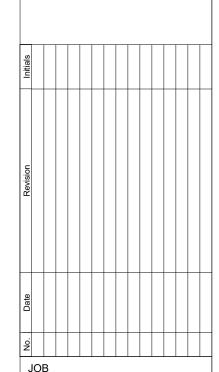
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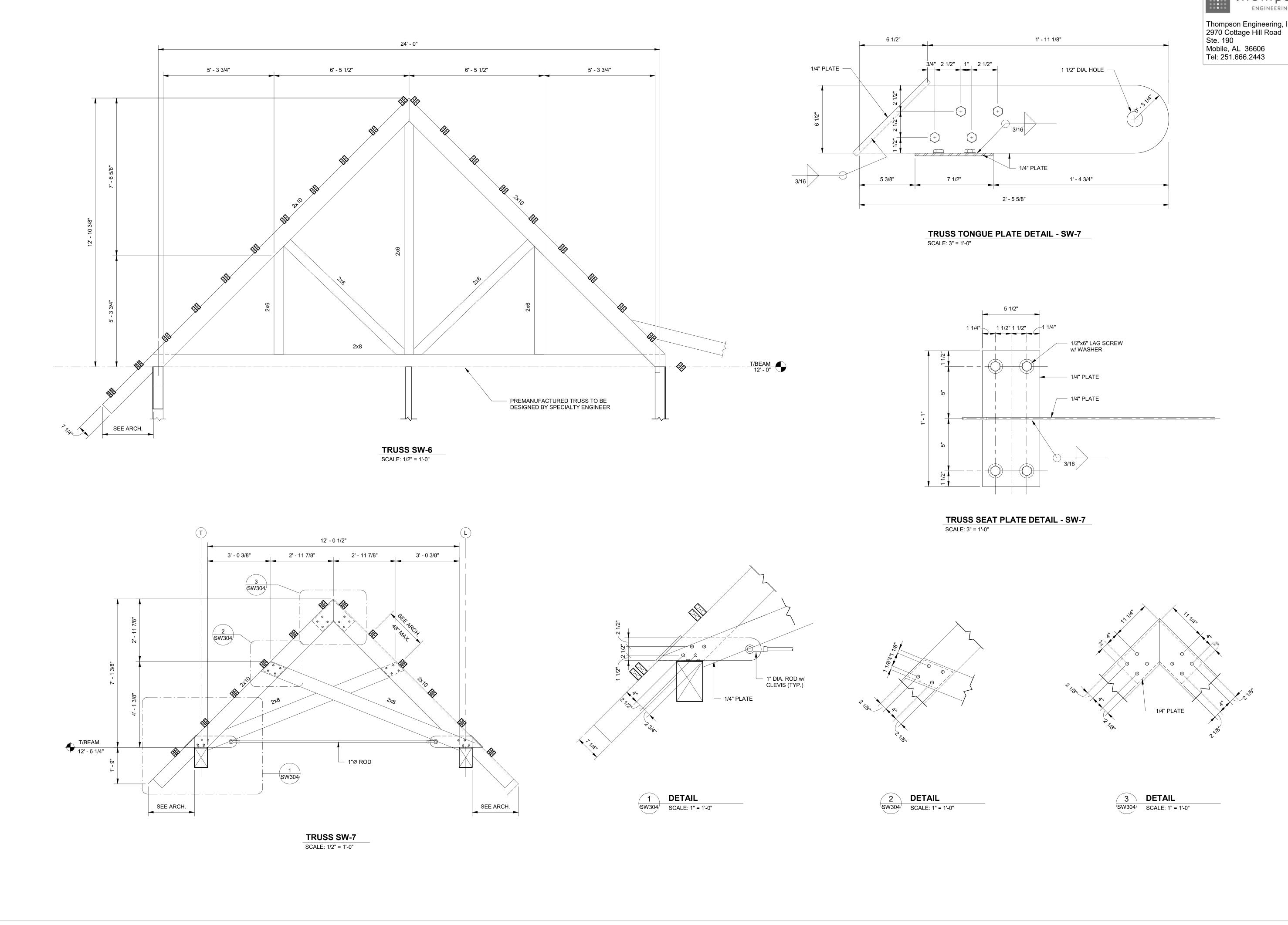


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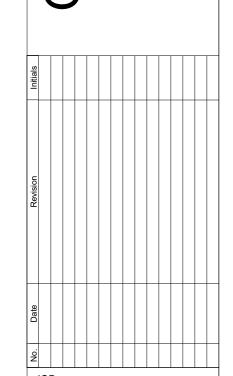
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PACKAGE GULF



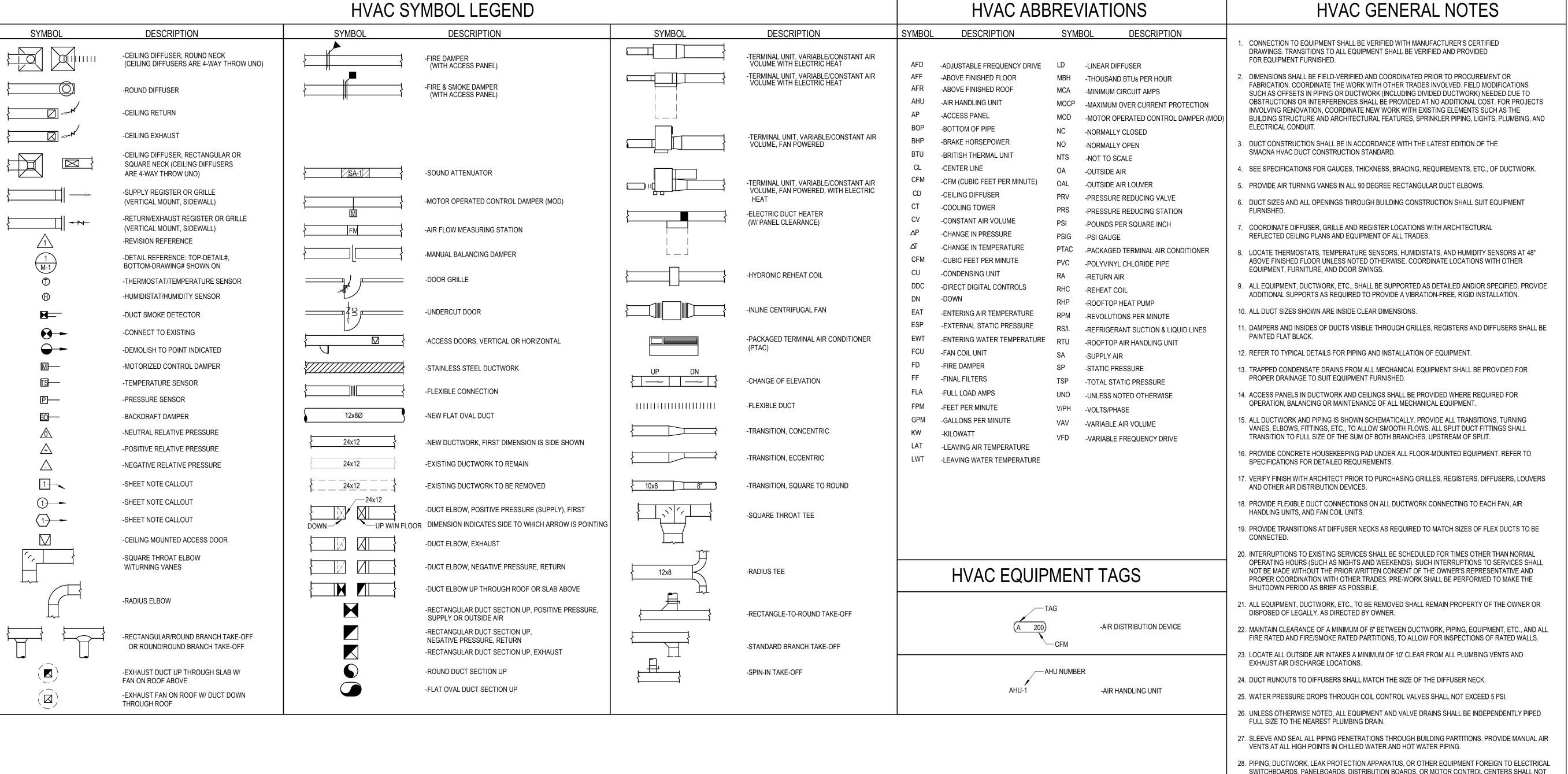
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PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

TRUSS ELEVATIONS

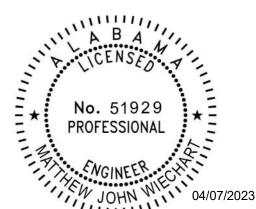




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LF COAST CENTER
ECOTOURISM & SUSTAINABILITY
WELCOME HUB PACKAGE
GULF SHORES, ALABAMA

JOB

19-028.000

PROJECT STATUS

FOR

PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

MECHANICAL LEGEND AND SHEET

RAVA/002

INDEX

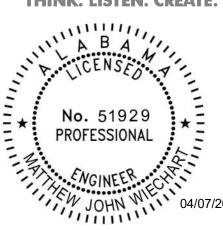
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FOR

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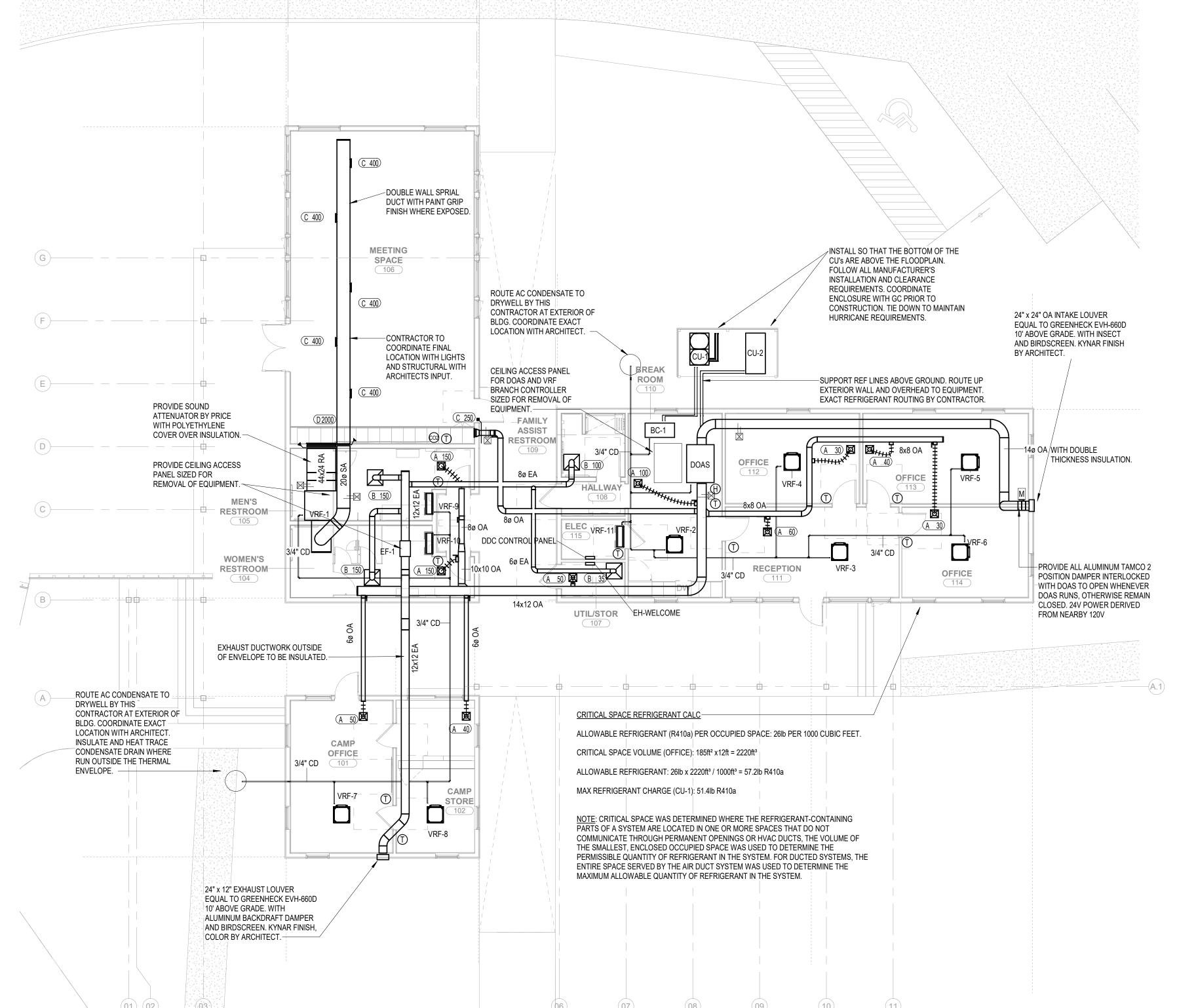
CONFORMANCE SET

MARCH 24, 2023

WELCOME HUB **MECHANICAL FLOOR**

PLAN

MW100



VENTILATION CRITERIA (LVL 1)											
			2018 International Mechanical Code								
NAME	AREA	PEOPLE	CFM/PERSON	CFM/SF	OCCUPANCY CLASSIFICATION	EFFICIENCY	MINIMUM OA				
BREAKROOM	280 SF	8	5	0.12	Office Buildings - Break rooms	0.8	92				
CAMPUS OFFICE	254 SF	2	5	0.06	Office Buildings - Office space	0.8	32				
MEETING	883 SF	30	5	0.06	General - Conference/meeting	0.8	254				
OFFICE 1	197 SF	2	5	0.06	Office Buildings - Office space	0.8	27				
OFFICE 2	243 SF	3	5	0.06	Office Buildings - Office space	0.8	37				
OFFICE 3	185 SF	2	5	0.06	Office Buildings - Office space	0.8	26				
RECEPTION	255 SF	6	5	0.06	Office Buildings - Reception areas	0.8	57				
STORE	194 SF	1	8	0.12	Retail - Sales	0.8	39				
	2491 SF	54	•		•	•	564				

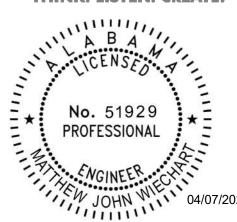
LEVEL 1 - WELCOME HUB -

MECHANICAL 1/8" = 1'-0"



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FOR

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MARCH 24, 2023

MECHANICAL SCHEDULES

MW300

												AHU	SCI	HEDI	ULE													
DI ANI				AIRFLOW	I		FAN I	DATA				CC	OLING				HE	EATING		HOT GA	AS REHEAT	Т		ELECTI	RICAL DAT	TA		
MARK	MANUFACTURER	MODEL NO.	TOTAL			EXT.		MOTOR	VFD	CAP	ACITY	EA	AΤ	LA	AT	FACE VEL.	CAPACITY			CAPACITY	LA	·Τ						UNIT WEIGHT,
INICIAL			CFM	OA CFM	FILTER	SP	FAN RPM	HP	YES/NO	SEN. MBH	TOTAL MBH	DB	WB	DB	WB	FPM	(MBH)	EAT	LAT	(MBH)	DB	WB	VOLTAGE	PHASE	FLA	MCA	MOCP	LBS
DOAS	AAON	H3B	950	950	MERV-13	1.00	2580	1.34	Yes	38	68.5	97.0	79.0	57.8	57.6	257	46	30	74	23	80	65	208	3	3.0	4	15	550

- 1. PROVIDE AUXILIARY DRAIN PAN WITH OVERFLOW SWITCH TO SHUT UNIT DOWN ON OVERFLOW. PROVIDE PLEATED FILTER SECTION. UNIT TO HAVE DOUBLE WALL CONSTRUCTION WITH 3LBS/FT^3 INSULATION AND ELECTROFIN COIL COATING.
- 2. PROVIDE HOT GAS REHEAT COIL WITH MODULATING CONTROL VALVE. 3. LOCATE UNIT ABOVE CEILING AND BELOW TRUSSES. PROVIDE ADEQUATE CLEARANCE FOR MAINTENANCE ACCESS. COORDINATE WITH STRUCTURAL FOR LOCATION.
- 4. DISCONNECT BY ELECTRICAL.

							VARIAB	LE REFRIGER	ANT VOLUME	UNIT S	CHEDULE									
									COOLING				HEATIN	NG			ELECTRICAL MOT	OR DATA		
MARK	MODEL	CONDENSING UNIT	TYPE	AREA SERVED	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	NOMINAL CAPACITY (MBH)	ACTUAL TOTAL COOLING CAPACITY (MBH)	ACTUAL SENSIBLE COOLING CAPACITY (MBH)	EAT (DB/WB, °F)	ESTIMATED COOLING LAT (DB, °F)	NOMINAL CAPACITY (MBH)	ACTUAL HEATING CAPACITY (MBH)		ESTIMATED HEATING LAT (DB, °F)	INPUT POWER (kW)	VOLTS/PHASE	MCA	MOCP	NOTES
VRF-1	PEFY-P72	CU-1	DUCTED FCU	MEETING ROOM	2000	250 CFM	72	64.7	51.2	76.8/66.7	57.9	80	69.9	70.0	95.8	0.63	208/1	7.70 A	15.00 A	1,2,5,6
VRF-2	PKFY-P18	CU-1	2' x 2' CASSETTE	BREAKROOM	450	100 CFM	18	16.5	11.2	76.6/66.3	56.6	20	17.6	70.0	105.6	0.04	208/1	0.50 A	15.00 A	3,4,5,6
VRF-3	PKFY-P08	CU-1	2' x 2' CASSETTE	RECEPTION	350	60 CFM	8	7.4	5.9	75.9/64.5	62.1	9	7.9	70.0	93.4	0.02	208/1	0.28 A	15.00 A	3,4,5,6
VRF-4	PKFY-P08	CU-1	2' x 2' CASSETTE	OFFICE 112	250	30 CFM	8	7.4	5.9	75.9/64.5	62.1	9	7.9	70.0	93.4	0.02	208/1	0.28 A	15.00 A	3,4,5,6
VRF-5	PKFY-P08	CU-1	2' x 2' CASSETTE	OFFICE 113	250	40 CFM	8	7.4	5.9	75.9/64.5	62.1	9	7.9	70.0	93.4	0.02	208/1	0.28 A	15.00 A	3,4,5,6
VRF-6	PKFY-P08	CU-1	2' x 2' CASSETTE	OFFICE 114	250	30 CFM	8	7.4	5.9	75.9/64.5	62.1	9	7.9	70.0	93.4	0.02	208/1	0.28 A	15.00 A	3,4,5,6
VRF-7	PKFY-P12	CU-1	2' x 2' CASSETTE	CAMPUS OFFICE	400	50 CFM	12	11.0	7.7	75.9/64.5	58.4	13.5	11.9	70.0	103.0	0.02	208/1	0.29 A	15.00 A	3,4,5,6
VRF-8	PKFY-P12	CU-1	2' x 2' CASSETTE	CAMPUS STORE	400	40 CFM	12	11.0	7.7	75.9/64.5	58.4	13.5	11.9	70.0	103.0	0.02	208/1	0.29 A	15.00 A	3,4,5,6
VRF-9	PKFY-P06	CU-1	WALL MOUNTED	MENS RR	200	150 CFM	6	5.5	4.0	75.9/64.5	59.9	6.7	5.9	70.0	98.7	0.02	208/1	0.24 A	15.00 A	3,4,5,6
VRF-10	PKFY-P06	CU-1	WALL MOUNTED	WOMENS RR	200	150 CFM	6	5.5	4.0	75.9/64.5	59.9	6.7	5.9	70.0	98.7	0.02	208/1	0.24 A	15.00 A	3,4,5,6
VRF-11	PKFY-P06	CU-1	WALL MOUNTED	ELECTRICAL	200	0 CFM	6	5.5	4.0	75.9/64.5	59.9	6.7	5.9	70.0	98.7	0.02	208/1	0.24 A	15.00 A	3,4,5,6

1. PROVIDE WITH OPTIONAL FILTER PACKAGE.

6. DISCONNECT BY ELECTRICAL.

- 2. PROVIDE AUXILIARY DRAIN PAN UNDER UNIT WITH OVERFLOW SWITCH.
- 3. PROVIDE WITH CONDENSATE PUMP POWERED BY THE ASSOCIATED INDOOR UNIT. WHERE GRAVITY DRAIN IS POSSIBLE, RETURN UNINSTALLED PUMP TO OWNER/MAINTENANCE.
- 4. PROVIDE INLINE CONDENSATE OVERFLOW DETECTION TO SHUT FAN OFF ON OVERFLOW.
- 5. BASIS OF DESIGN: MITSUBISHI (TRANE). SEE SPECS FOR EQUALS.

							CONDENS	ING UNIT SCHED	DULE									
ı								COOLING DATA				ELECTRICAL DA	TA					
						TOTAL COOLING	EER AT AHRI	AMBIENT AIR TEMP	AMBIENT AIR TEMP									
	PLAN MARK	MANUFACTURER	MODEL	AREA SERVED	AH SERVING	RATING (MBH)	CONDITIONS	(COOLING MODE) (DEG. °F)	(HEATING MODE) (DEG. °F)	FLA	MCA	MOCP	VOLTS	PHASE	REFRIG.	REF CHARGE	WEIGHT (LB)	NOTES
	CU-1	MITSUBISHI	TURY-P144 HEAT RECOVERY	WELCOME HUB	VRF	144	11.6	97	30		48	70	208	3	R-410A	51.4	650	1,2,3,4
	CU-2	AAON	CFA 007 HEAT PUMP	WELCOME HUB	DOAS	67	12.1	97	30	23	28	45	208	3	R-410A		600	1,2,3,4,

- 1. CONDENSING UNITS MUST HAVE FULLY MODULATING INVERTER COMPRESSORS.
- 2. PROVIDE ELECTROFIN COIL COATING ON ALL COILS.
- 3. PROVIDE CONCRETE PAD 6" ABOVE FLOOD ZONE, SECURE CONDENSING UNITS TO STRUCTURE TO RESIST HURRICANE WINDS.
- 4. PROVIDE WITH LINESETS SIZED PER MANUFACTURER'S RECOMMENDATIONS. 5. PROVIDE MANUFACTURER TRAPS AND REFRIGERANT PIPE ACCOMMODATION TO ENSURE PROPER REFRIGERANT AND OIL CIRCULATION THROUGH SYSTEM.

		VARIA	ABLE REFRIGERA	ANT VOLUN	//E BRANCH C	ONTROLLEF	R SCHEDULE	Ξ		
MADIZ	MODEL	CONDENSING	TYPE	AREA SERVED	MAX CONNECTABLE		ELECTRICAL MOT	OR DATA		WEIGHT (LDC)
MARK	MODEL	UNIT	ITPE	AKEA SEKVED	CAPACITY (MBH)	INPUT POWER (kW)	VOLTS/PHASE	MCA	MOCP	WEIGHT (LBS)
BC-1	TCMBM	CU-1	16 BRANCH HEAT RECOVERY	WELCOME HUB	336	0.35	208/1	1.82 A	15.00 A	150.00 lb

1. LOCATE ABOVE CEILING IN ACCESSIBLE LOCATION, 12 FEET AWAY FROM ANY INDOOR UNIT. COORDINATE LOCATION WITH STRUCTURAL.

4. DISCONNECT BY ELECTRICAL.

			F	AN SCHE	DULE WELC	OME				
PLAN MARK	MODEL	AREA SERVED	TYPE	TOTAL CFM	EXT. SP (IN WG.)	MAX FAN BHP	MOTOR HP	FAN RPM	VOLTS/PHASE	WEIGHT (lb)
EF-1	SQ-99-VG	WELCOME HUB	DIRECT DRIVE INLINE	450	0.75	0.17	1/4	1725	208/1	60
	,	NTEGRAL SPEED CONTROL STED.	LER.							

		HEATER S	SCHEDULE V	VELCOME	HUB		
PLAN MARK	MODEL	AREA SERVED	TYPE	VOLTS/PHASE	WATTS	AMPS	WEIGHT (lb)
EH-WELCOME	E3322TD-RP	WELCOME HUB	WALL MOUNTED	120/1	1000	8.3	30

1. PROVIDE WITH INTEGRAL MANUAL DISCONNECT. COORIDNATE MCA AND MOCP WITH ELECTRICAL CONTRACTOR. 2. CONTROL BY ADJUSTABLE THERMOSTAT INTEGRAL TO UNIT. HEATER TO RUN WHENEVER INDOOR TEMPERATURE IS BELOW 70 DEG (ADJ)

3. BASIS OF DESIGN TPI. EQUALS BY INDEECO AND BRASCH.

3. PROVIDE EXTRUDED ALUMINUM BACKDRAFT DAMPER.

			AIF	R DISTRIBUTION SCHEDULE	
PLAN MARK	CFM	NECK SIZE	FACE SIZE	DESCRIPTION	ADDITIONAL REQUIREMENTS
A	000-180 181-280 281-385 386-540 541-725 726-860 000-140 141-240	6" 8" 10" 12" 14" 15" 6"	24x24 24x24 24x24 24x24 24x24 24x24 12X12 12X12	BASIS OF DESIGN: PRICE ASPD COLOR: AS SELECTED BY ARCHITECT MATERIAL: ALUMINUM OPPOSED BLADE DAMPERS: NO	SUPPLY CEILING DIFFUSER SURFACE-MOUNT: BORDER TYPE 31 WITH AMF FRAME LAY-IN: BORDER TYPE 31
В	000-145 146-315 316-480 481-630 631-825 826-1120 1121-1450 1451-1945	6x6 8x8 10x10 12x12 14x14 16x16 18x18 20x20 22x22	FACE SIZE EQUALS NECK SIZE PLUS 2".	BASIS OF DESIGN: PRICE-80 COLOR: AS SELECTED BY ARCHITECT MATERIAL: ALUMINUM VOLUME DAMPERS: NO 1/2"x1/2"x1/2" EGGCRATE GRID, SQUARE NECK & FACE. FOR RETURN & EXHAUST, SIZE PER SCHEDULE FOR TRANSFER, SEE PLANS FOR SIZE.	RETURN/EXHAUST CEILING GRILLE SURFACE-MOUNT: BORDER TYPE F LAY-IN: BORDER TYPE TB W/24x24 FACE
С	000-180 181-275 276-360 361-540 541-900 901-1380 1381-2140	8x6 12x6 12x8 18x8 24x12 24x18 36x18	FACE SIZE EQUALS NECK SIZE PLUS 2".	BASIS OF DESIGN: PRICE-620D COLOR: AS SELECTED BY ARCHITECT MATERIAL: ALUMINUM OPPOSED BLADE DAMPERS: YES DOUBLE DEFLECTION, 3/4" BLADE SPACING, FRONT BLADES PARALLEL TO LONG DIMENSION	SIDEWALL SUPPLY REGISTER SURFACE-MOUNT: BORDER TYPE F
D	000-180 181-275 276-360 361-540 541-900 901-1380 1381-2140	8x6 12x6 12x8 18x8 24x12 24x18 36x18 40x24	FACE SIZE EQUALS NECK SIZE PLUS 2".	BASIS OF DESIGN: PRICE-610Z COLOR: AS SELECTED BY ARCHITECT MATERIAL: ALUMINUM OPPOSED BLADE DAMPERS: NO 0° FIXED DEFLECTION, 3/4" BLADE SPACING, FRONT BLADES PARALLEL TO LONG DIMENSION	RETURN/EXHAUST SIDEWALL GRILLE SURFACE-MOUNT: BORDER TYPE F

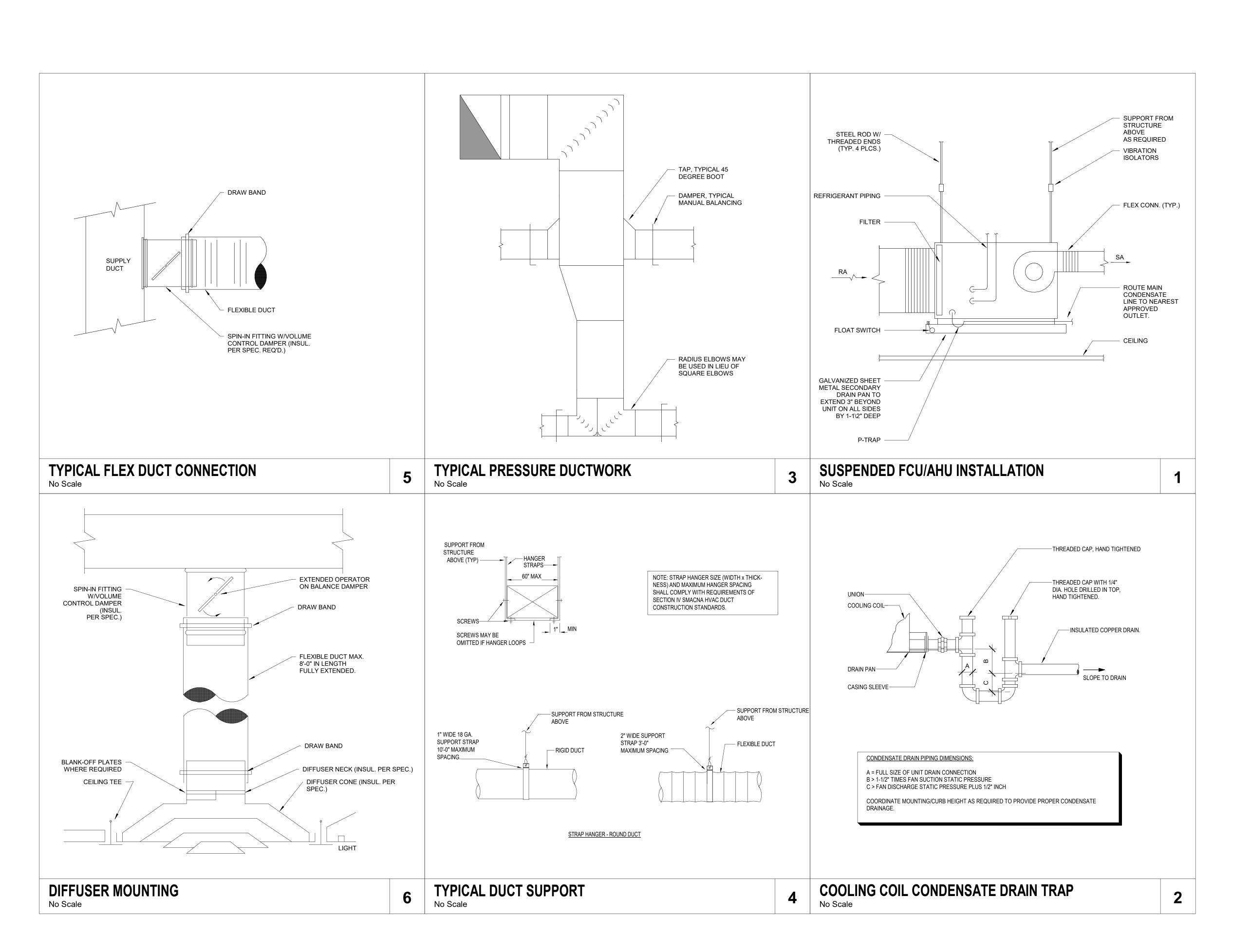
1381-2140 48x30

1. AIR DISTRIBUTION DEVICES LOCATED WITHIN ACCOUSTICAL TILE CEILINGS SHALL BE PROVIDED WITH BORDER FOR LAY-IN MOUNTING. AIR DISTRIBUTION DEVICES LOCATED WITHIN GYPSUM BOARD CEILINGS OR WALLS SHALL BE PROVIDED WITH BORDER FOR SURFACE MOUNTING. REFER TO ARCHITECTURAL DOCUMENTS FOR CEILING TYPES.

2. AIR DISTRIBUTION DEVICES LOCATED IN SMALL ROOMS WHERE FULL 24x24 LAY-IN GRID SPACE IS NOT AVAILABLE SHALL BE PROVIDED WITH SURFACE MOUNTING BORDERS IN LIEU OF LAY-IN, AND SHALL BE SURFACE-MOUNTED IN A CEILING TILE. SECURE EACH SUCH DEVICE TO CEILING GRID WITH FIELD-FABRICATED SUPPORTS ON TOP SIDE OF TILE, SO THAT TILE DOES NOT SAG OR CRACK.

3. BRANCH DUCTWORK SHALL BE RAN FULL SIZE OF DIFFUSER/GRILLE NECK SIZE UNLESS OTHERWISE NOTED.

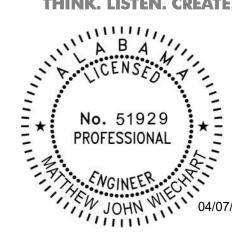
4. DIFFUSER/GRILLE SHALL BE PAINTED TO MATCH CEILING COLOR. REFER TO ARCHITECTURAL & INTERIOR DOCUMENTS FOR CEILING COLOR.





COA 15

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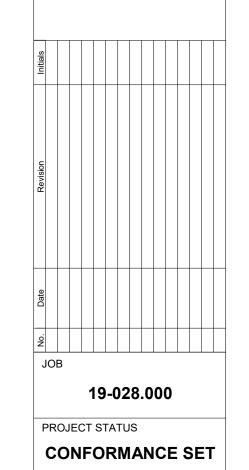
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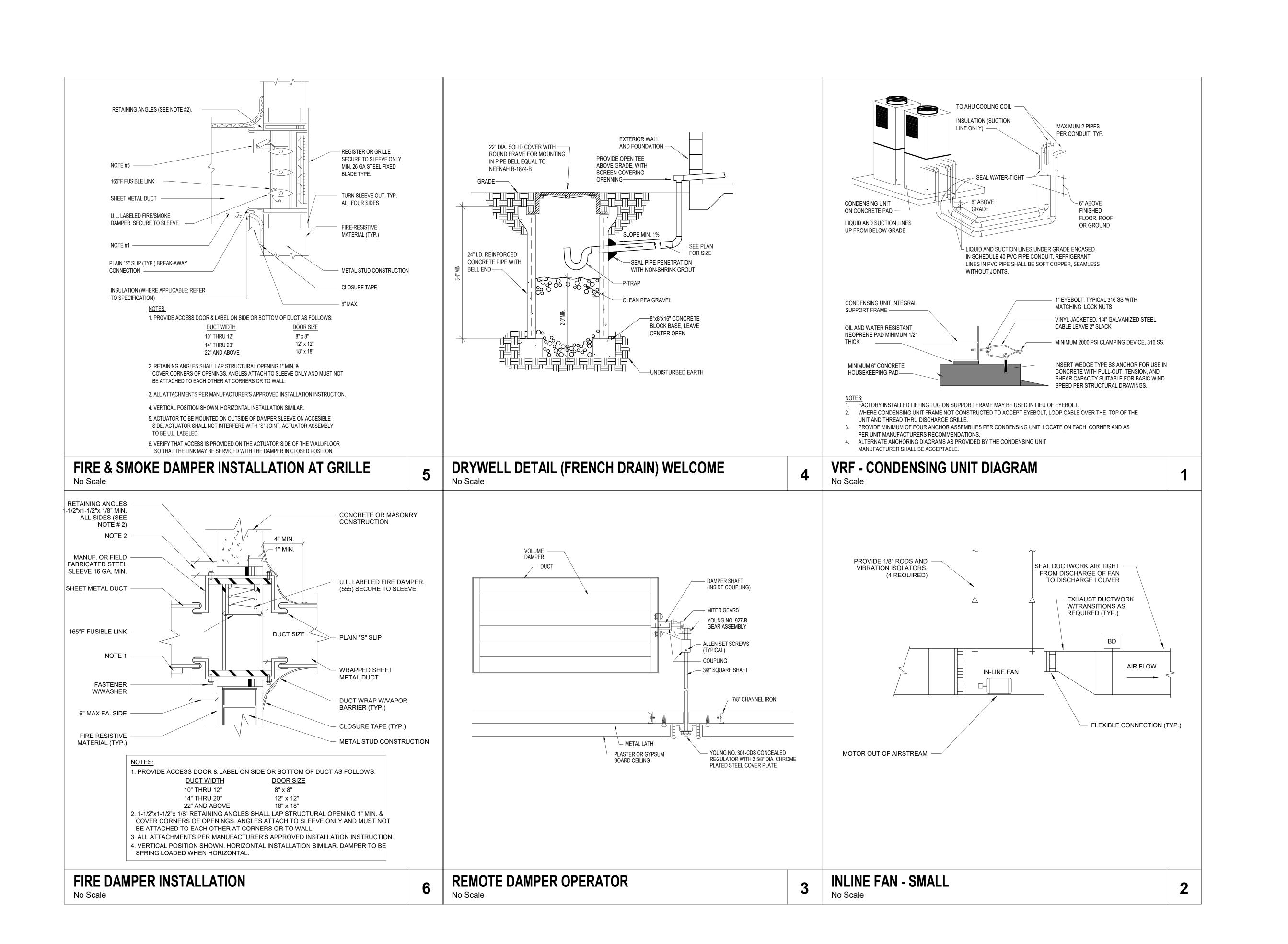
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FOR ECOTOURISM & SUSTAINABILITY
WELCOME HUB PACKAGE
GULF SHORES, ALABAMA



MW500

MARCH 24, 2023

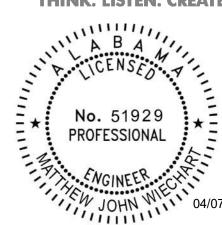
MECHANICAL DETAILS





COA 15

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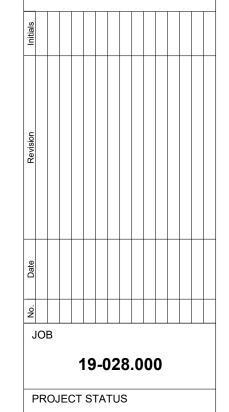
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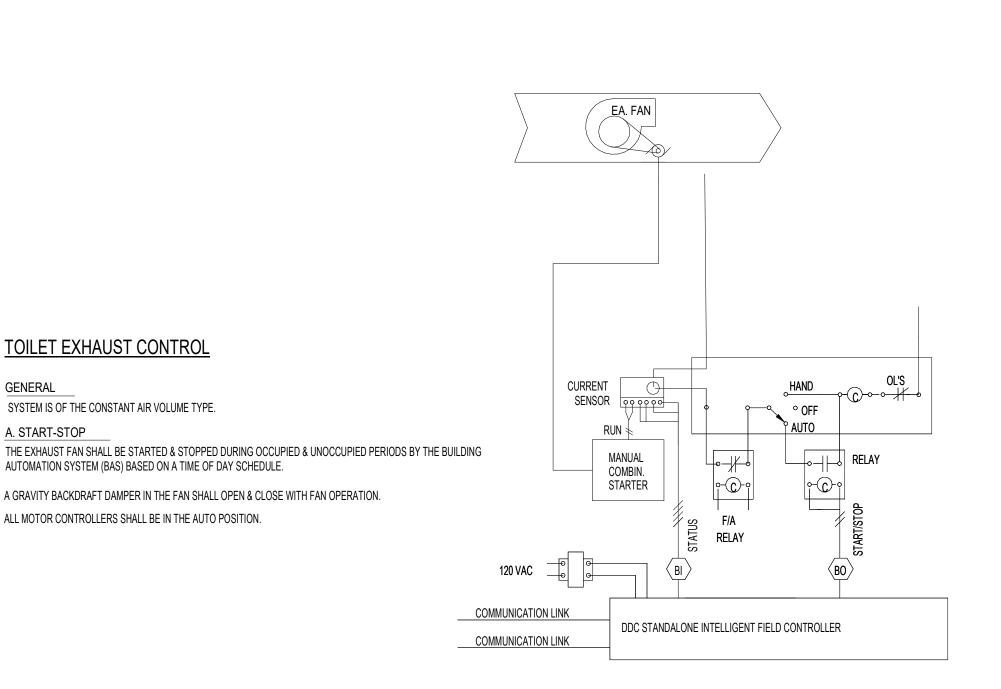
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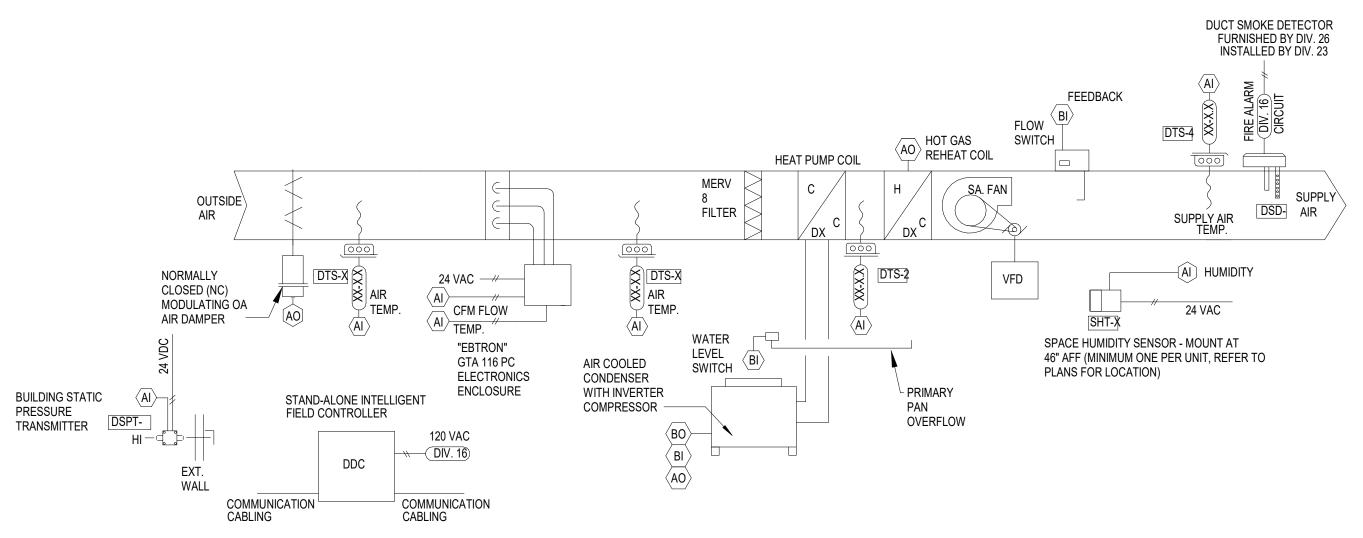
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MECHANICAL DETAILS

MW501





CONSTANT VOLUME OUTSIDE AIR UNIT

SEQUENCE OF OPERATION

THE SYSTEM IS OF THE DX CONSTANT VOLUME FLOW TYPE COMPLETE WITH A DEDICATED OUTDOOR AIR SPLIT SYSTEM UNIT. THE SYSTEM IS COMPLETE WITH FANS, COILS, AND CONTROLS.

PROVIDE A DEDICATED, STANDALONE INTELLIGENT FIELD CONTROLLER FOR EACH UNIT. PROVIDE RESIDENT IN EACH CONTROLLER INDEPENDENTLYADJUSTABLE PID CONTROL LOOPS FOR THE FOLLOWING FUNCTIONS: FAN CONTROL

TEMPERATURE CONTROL HUMIDITY & TEMPERATURE OVERRIDE CONTROL

PROVIDE A SEPARATE HEATING AND COOLING (BOTH DAY AND NIGHT) SETPOINT SCHEDULE FOR EACH UNIT.

PROVIDE CUSTOMIZED GRAPHICS SCREENS DEPICTING UNIT OPERATION, COMPLETE WITH ALL REQUIRED FIELD ADJUSTABLE PARAMETERS, UNIT STATUS DATAPOINTS, ALARM POINTS, ETC... (ADDRESSES TO BE PROVIDED IN SUBMITTAL FOR ALL POINTS INDICATED IN DIAGRAM)

AHU FAN AND DAMPER CONTROL

OUTSIDE AIR DAMPER CONTROL

WHEN SCHEDULED "ON" VIA THE TIME OF DAY (TOD) SCHEDULE (WITH OPTIMUM START/STOP), NIGHT SETBACK LIMITS, TIMED OVERRIDE, OR AS MANUALLY REQUESTED BY THE OPERATOR, THE SUPPLY AND EXHAUST FANS OF UNIT SHALL BE

THE UNIT SUPPLY FAN VARIABLE FREQUENCY DRIVE (VFD) SHALL BE USED FOR BALANCING AND OTHERWISE BE RUN AT CONSTANT SPEED.

OUTSIDE AIR SETPOINT SHALL BE CONSTANT AND BE PROVIDED WHEN UNIT IS OCCUPIED MODE. MODULATE DAMPER TO

MAINTAIN SCHEDULED OUTSIDE AIR. CLOSE OUTSIDE AIR DAMPER WHEN UNIT IS IN UNOCCUPIED MODE.

TEMPERATURE CONTROL

THE COOLING COIL COMPRESSOR SHALL MODULATE TO MEET CHANGING LOAD, CONTINUOUSLY VARIABLE FROM 10% TO 100% OF LOAD. SEE BELOW FOR COOLING REQUIREMENT FOR DEHUMIDIFICATION. AT LEAST ONE COMPRESSOR SHALL MODULATE CONTINUOUSLY TO ALLOW FOR 100% CONTINUOUS MODULATION THROUGH UNIT'S ENTIRE CAPACITY RANGE.

- WHEN THE OA TEMPERATURE IS BELOW 52 DEG. F (ADJ.), INCOMING AIR TO BE HEATED TO MAINTAIN SUPPLY AIR TEMPERATURE OF 70 DEG. F (ADJ.) - WHEN THE OA TEMPERATURE IS BETWEEN 52 DEG. F AND 75 DEG. F (ADJ.) INCOMING AIR TO BE COOLED TO 52 DEG. F (ADJ.) AND REHEAT VIA MODULATING HOT GAS REHEAT COIL TO 70 DEG. F.

- WHEN THE OA TEMPERATURE IS ABOVE 75 DEG. F (ADJ.), INCOMING AIR TO BE COOLED TO MAINTAIN SUPPLY AIR TEMPERATURE

HUMIDITY CONTROL (55% RH ADJ.)

OFF COOLING COIL OF 52 DEG. F (OFF UNIT SUPPLY 55 DEG. F).

UPON SPACE AIR HUMIDITY SENSOR ABOVE SETPOINT (55% RH ADJUSTABLE) COOLING COIL DISCHARGE AIR TEMPERATURE SHALL BE RESET TO DESIGN COOLING TEMPERATURE AND HOT GAS-REHEAT COIL(S) SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE. WHEN RELATIVE HUMIDITY IS 5% BELOW MAXIMUM SETPOINT.

THE SUPPLY, EXHAUST AND OUTSIDE AIR FANS, AND ASSOCIATED DAMPERS (CONTROL, FIRE/SMOKE, ETC.), SHALL SHUT DOWN WHEN ANY AUTOMATIC OR MANUAL FIRE ALARM DEVICE IS PLACED INTO ALARM BY THE BUILDING FIRE ALARM CONTROL PANEL. UPON FIRE ALARM PANEL BEING RESET TO NORMAL OPERATION, THE EMS SYSTEM SHALL AUTOMATICALLY RESUME SCHEDULED OPERATION OF THE UNIT, AND DAMPERS.

ON SENSING OF CONDENSATE OVERFLOW, SHUT UNIT FAN DOWN AND CLOSE CONTROL VALVE, SEND ALARM TO MAINTENANCE.

PROVIDE FIXED DRYBULB ECONOMIZER MODE, PROVIDE SEQUENCE TO ALLOW FREE COOLING. (65 DEG. ADJ.) SUBJECT TO HUMIDTY CONTROL SEQUENCE. (DEHUMIDIFICATION SEQUENCE OVERRIDES ECONOMIZER MODE)

PROVIDE CO2 SENSOR IN WELCOME HUB MEETING SPACE. PROVIDE ALARM TO MAINTENANCE WHENEVER CO2 LEVELS

PROVIDE EMS DISPLAY AND ALARMS FOR: - SUPPLY FAN START/STOP - SPACE AIR RELATIVE HUMIDITY (%R/H) - OUTDOOR AIR FLOW (CFM) ALL VFD POINTS INDICATED - DUCT OVERPRESSURE - OA FLOW BELOW SETPOINT (OCCUPIED ONLY) - ALARM COOLING SUPPLY AIR TEMPERATURE & SETPOINT - SUPPLY FAN STATUS - CURRENT SENSOR - ALL MOTORIZED DAMPER POSITIONS - SPACE TEMPERATURE EXCEEDS 80°F. (ADJ.) - ALARM HEATING SUPPLY AIR TEMPERATURE & SETPOINT - COOLING COIL LEAVING AIR TEMP °F. - SUPPLY FAN SPEED - SUPPLY FAN FAILED TO START - ALARM - GLOBAL OUTDOOR AIR TEMPERATUE °F. - SPACE HUMIDITY EXCEEDS SETPOINT - ALARM SPACE TEMPERATURE - HEATING COIL LEAVING AIR TEMP F. SPACE RELATIVE HUMIDITY (% - SUPPLY AIR TEMP (°F) AND SETPOINT - O.A.RELATIVE HUMIDITY ALL OTHER POINTS INDICATED - BUILDING AVERAGE DIFFERENTIAL PRESSURE - SUPPLY AIR TEMP. FAILS TO REACH TEMP. - CONDENSATE OVERFLOW DDC LOOP PARAMETERS - SUPPLY FANS FAILED TO START ALARM WITHIN 5 DEG. OF TEMP. SETPOINT.

CONTROL DIAGRAM FOR CONSTANT VOLUME TOILET EXHAUST FAN

MISCELLANEOUS ENERGY MANAGEMENT CONTROL - DDC

ALL CONTROL DAMPERS AND BACKDRAFT DAMPERS TO BE ALL ALUMINUM CONSTRUCTION (FRAME AND BLADES - NO EXCEPTIONS). MANUAL VOLUME DAMPERS TO BE SAME AS DUCT MATERIAL. DAMPERS FOR OA INTAKE SHALL BE FAIL CLOSED UNLESS NOTED OTHERWISE.

TOILET EXHAUST CONTROL

SYSTEM IS OF THE CONSTANT AIR VOLUME TYPE.

AUTOMATION SYSTEM (BAS) BASED ON A TIME OF DAY SCHEDULE.

ALL MOTOR CONTROLLERS SHALL BE IN THE AUTO POSITION.

A GRAVITY BACKDRAFT DAMPER IN THE FAN SHALL OPEN & CLOSE WITH FAN OPERATION.

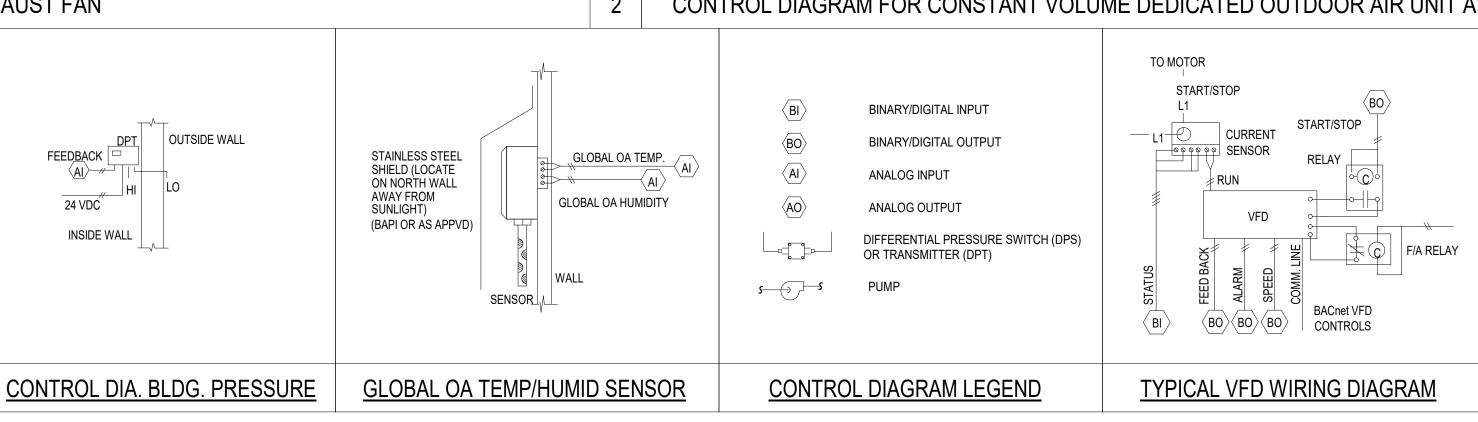
A. START-STOP

CONTROLS CONTRACTOR TO PROVIDE ALL SOFTWARE, HARDWARE, PROGRAMMING, LABOR AND ACCOMPANYING EQUIPMENT TO ENABLE THE BELOW SEQUENCES TO BE CONTROLLED BY THE DDC SYSTEM. DDC SYSTEM SHALL BE INTEGRATED WITH REST OF CAMPUS SYSTEM SO ALL CONTROL POINTS, ALARMS AND ADJUSTABLE VARIABLES ARE AVAILABLE FROM ANY COMPUTER TERMINAL WITH INTERNET ACCESS AND THE PROPER SECURITY CODE. ALL ALARMS SHALL NOTIFY MAINTENANCE PERSONNEL

PROVIDE UPS BACKUP ON BUILDING LEVEL DDC SYSTEM TO ALLOW RIDE THRU OF A MINIMUM OF 10 MINUTE

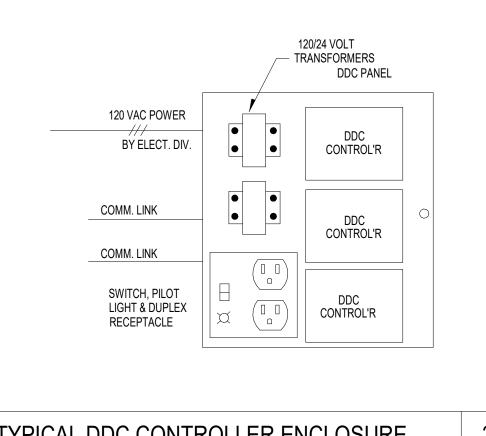
CONTROL SCHEMATICS MUST BE LOADED ON BAS SERVER DATABASE AT END OF PROJECT AND LINK PROVIDED ON THE BAS GRAPHIC INTERFACE THAT REPRESENTS THIS PROJECT.

PROPIETARY VRF/VRV SYSTEMS SHALL BE PROVIDED WITH A BACNET GATEWAY INTEGRATOR WITH THE ABILITY TO COMMUNICATE WITH THE DDC SYSTEM, THAT ALLOWS FULL FUNCTION, CONTROL AND MONITORING OF VRF/VRV SYSTEM. MONITORING/ADJUSTMENT SHALL INCLUDE OCCUPANCY SCHEDULE, HEATING/COOLING SETPOINTS, ALARMS, ETC.



MISCELLANEOUS CONTROL ITEMS

CONTROL DIAGRAM FOR CONSTANT VOLUME DEDICATED OUTDOOR AIR UNIT AND ERV (RTU-3, 4)



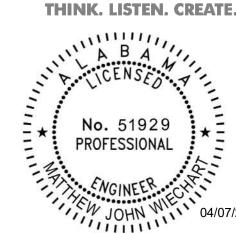
TYPICAL DDC CONTROLLER ENCLOSURE

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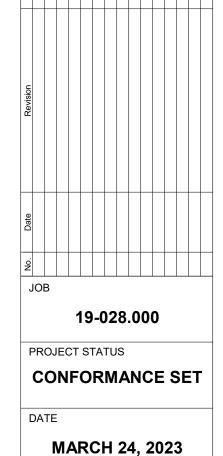
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MECHANICAL

CONTROLS

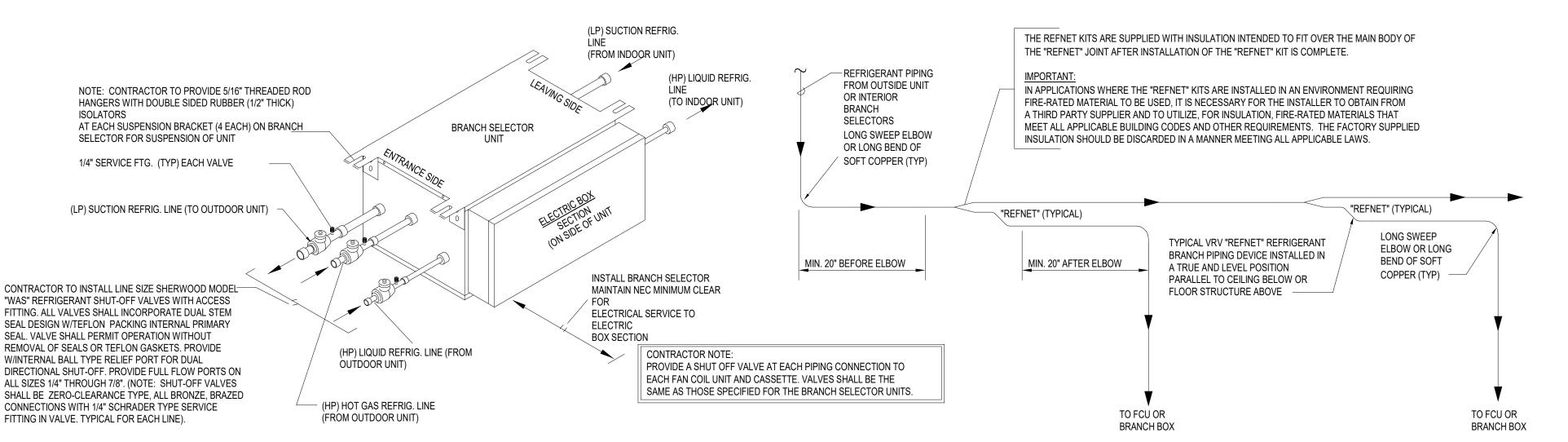
- 1. ALL JOINTS SHALL BE BRAZED EXCEPT AT THE INDOOR UNITS WHICH SHALL BE FLARED. ANY DEVIATIONS TO THE DESIGNED PIPING LAYOUTS MUST BE SUBMITTED FOR MANUFACTURER'S WRITTEN APPROVAL BEFORE PROCEEDING. PIPING (AFTER ANNEALING) SHALL HAVE SUFFICIENT WALL THICKNESS FOR A CONTINUOUS OPERATING PRESSURE OF 600 PSI PER ASME B
- 2. COPPER TUBING WALL THICKNESSES MUST BE SUITABLE FOR THE SYSTEM MANUFACURER'S HIGHER OPERATING PRESSURES.
- 3. ALL FLARED COPPER TUBING SHALL HAVE A SMOOTH, EVEN ROUND FLARE OF SUFFICIENT LENGTH TO FULLY ENGAGE THE MATING SURFACE OF THE FLARE NUT, WITHOUT PROTRUBING INTO THE THREADS. USE ONLY "PVE" REFRIGERATION OIL WHEN MAKING FLARES, OIL BACK SIDE OF FLARE WITH MANUFACTURER'S APPROVED OIL AND THREADS ON FITTINGS. USE A DEDICATED FLARE BLOCK AND TOOL. USE ONLY SYNTHETIC OIL ON THE FLARE TOOL.
- 4. ALL EXTERIOR PIPING SHALL BE A MINIMUM OF TYPE "L", "ACR" RATED STRAIGHT PIPE FOR R-410A OR AS SPECIFIED. ALL INTERIOR PIPING SHALL BE TYPE "L", "ACR' RATED ROLLED SOFT COPPER OR LINE SET FOR R-410A OR AS SPECIFIED.
- 5. DRY NITROGEN MUST BE USED DURING ALL BRAZING (PRESSURE REGULATED TO 3 PSI) TO PREVENT COPPER PLATE OR OXIDATION FORMATION.
- FOR PRESSURE TESTING, TIGHTEN DOWN ALL STOP VALVES BEFORE ANY PRESSURE TESTING TO PREVENT NITROGEN FROM LEAKING BACK THROUGH CONDENSER AND CONTAMINATING REFRIGERANT. PRESSURE TESTING SHALL BE DONE IN THREE
- LEAK TEST FOR 3 MINUTES AT 150 PSI. LEAK CHECKED AFTER 5 MINUTES AT 325 PSI.
- LEAK CHECK AFTER 24 HOURS AT 550 PSI
- CHECK FLARE NUTS USING BUBBLE SOLUTION AS RECOMMENDED BY SYSTEM MANUFACTURER. ALL PRESSURE TESTING MUST BE STRICTLY ADHERED TO, DOCUMENTED AND SUBMITTED FOR APPROVAL.
- 7. ALL LEAK TESTING AND EVACUATION SHALL BE PROVIDED IN ACCORDANCE WITH THE US EPA "GREEN CHILL BEST PRACTICES GUIDELINE ENSURING A LEAK-TIGHT INSTALLATION OF COMMERCIAL REFRIGERATION EQUIPMENT"

- EVACUATION PROCEDURESSHALL BE PERFORMED AS FOLLOWS
- A. EVACUATE THE SYSTEM TO 4000 MICRONS. BREAK VACUUM WITH DRY NITROGEN TO A PRESSURE OF 2-3 PSI AND HOLD FOR
- B. EVACUATE THE SYSTEM TO 1500 MICRONS AND MAINTAIN FOR 20 MINUTES. BREAK VACUUM WITH DRY NITROGEN TO A PRESSURE OF 2-3 PSI AND HOLD FOR 15 MINUTES.
- C. EVACUATE SYSTEM TO BELOW 500 MICRONS AND HOLD FOR 60 MINUTES.
- D. EVACUATE SYSTEM TO BELOW 300 MICRONS AND HOLD FOR 24 HOURS.
- VACUUM PUMP CHECK VALVE SHALL BE USED TO PREVENT MINERAL OIL FROM BEING DRAWN INTO THE SYSTEM.
- THESE PROCEDURES MUST BE STRICTLY ADHERED TO, DOCUMENTED AND SUBMITTED FOR APPROVAL
- REFRIGERANT CHARGING-WEIGH IN ADDITIONAL REFRIGERANT WITH DIGITAL SCALES. CALCULATE CHARGE BASED ON TOTAL LINE LENGTH PLUS LB./FT. OF DIAMETER. CHECK WITH EACH UNIT MODEL FOR CORRECT MULTIPLIER. AFTER THE AMOUNT OF REFRIGERANT TO BE ADDED IS DETERMINED, WRITE IT DOWN ON THE LABEL, ON THE BACK SIDE OF THE FRONT COVER. AFTER THE VACUUM/DRYING IS COMPLETE, CHARGE THE ADDITIONAL REFRIGERANT IN ITS LIQUID STATE THROUGH THE LIQUID STOP VALVE SERVICE PORT.
- CONFIRM THE USE OF MANUFACTURER'S RECOMMENDED INSTALLATION TOOLS USED EXCLUSIVELY ON R-410A INSTALLATIONS TOWITHSTAND THE PRESSURE AND TO PREVENT FOREIGN MATERIAL FROM MIXING INTO THE SYSTEM.
- 10. ALL EXTERIOR INSULATED REFRIGERATION PIPING AND "REFNETS" SHALL BE PROVIDED WITH AN ALUMINUM JACKET EQUIVALENT TO "PABCO-CHILDERS METALS" ALUMINUM ROLL JACKETING, 0.016" THICK, COMPLYING WITH 3105/3003 STANDARD ALLOYS, STUCCO EMBOSSED FINISH WITH POLYSURLYN MOISTURE RETARDER. PROVIDE 0.5" ALUMINUM BAND CLAMP EVERY 10

INSULATION TECHNIQUES-ALL PIPE WORK MUST BE INSULATED ALONG IT'S FULL RUN USING CODE COMPLIANT (25/50 RATED), ARMA-FLEX MODEL "UT/SOLAFLEX", 3/4" THICK, HIGH TEMPERATURE & UV RESISTANT CLOSED CELL INSULATION. ALL PIPING INSULATION SHALL BE PERFORMED AFTER AIR TIGHT TEST AND VACUUM DRYING PER NOTE 8. INSULATE ALL LIQUID PIPING. HP/LP GAS PIPING, THE GAS PIPING. THE EQUALIZER PIPE (BETWEEN THE OUTDOOR UNITS FOR THE OUTDOOR MULTI SYSTEM) AND THESE PIPE CONNECTIONS. INSULATION SHALL WITHSTAND TEMPERATURES OF 248 DEGREES F. OR MORE FOR THE HP/LP GAS PIPING, THE EQUALIZER PIPE AND GAS PIPING. COVER FLARE NUTS ON THE FAN COIL UNITS AND CASSETTES USING THE INSULATION PROVIDED TO PREVENT CONDENSATION FROM OCCURING AND CAUSING LEAKS.

12. UN-INSULATED JOINTS WILL CONDENSE MOISTURE AROUND THE FITTINGS. LINE COMPONENTS-DO NOT INSTALL DRIERS, OIL TRAPS, SIGHT GLASSES, OR ANY OTHER LINE COMPONENT IN THE PIPE WORK AS THIS WILL EFFECT THE PERFORMANCE AND

- 13. VRV SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASHRAE 15.
- 14. VRV SYSTEMS SHALL BE INSTALLED ONLY BY A MANUFACTURER CERTIFIED AND TRAINED CONTRACTOR AND SHALL HAVE DOCUMENTATION OF VRV INSTALLATION & COMMISSIONING TRAINING. FIELD SUPERINTENDENT SHALL HAVE VRV TRAINING AND CERTIFICATION, CERTIFICATION TRAINING AND COMMISSIONING DOCUMENTATION TO BE FURNISHED BY CONTRACTOR PRIOR TO NOTICE TO PROCEED.
- IN APPLICATIONS WHERE THE "REFNET" KITS ARE INSTALLED IN AN ENVIRONMENT REQUIRING FIRE-RATED MATERIAL TO BE USED, IT IS NECESSARY FOR THE INSTALLER TO OBTAIN FROM A THIRD PARTY SUPPLIER AND TO UTILIZE, FOR INSULATION, FIRE-RATED MATERIALS THAT MEET ALL APPLICABLE BUILDING CODES AND OTHER REQUIREMENTS. THE FACTORY SUPPLIED INSULATION SHOULD BE DISCARDED IN A MANNER MEETING ALL APPLICABLE LAWS.



TYPICAL BRANCH SELECTOR UNIT PIPING (ALL MECHANICAL EQUIPMENT SHALL BE IN COMPLIANCE WITH ASHRAE 90.1)

"REFNET" PIPING DIAGRAM CLEARANCE REQUIREMENTS (REFER TO MANUFACTURERS INSTRUCTIONS)

45 deg. MAX

IN CASES WHERE PIPING/TUBING NEEDS TO DROP BELOW OBJECTS, (BEAMS, DUCTS, CONDUITS, PIPES ETC.) PIPING SHALL HAVE LONG RADIUS TURNS AS INDICATED ABOVE (NO MORE THAN 45 DEGREES PER FITTING) TO PREVENT TRAPPING OF REFRIGERANT.

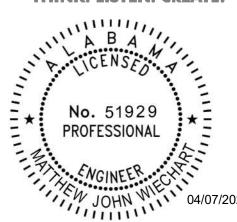
TYPICAL ELEVATION-PIPING OFFSET BELOW OBJECT

ENGINEERING SOLUTIONS 13099 S. Cleveland Avenue, Suite 500

Fort Myers, FL 33907 P 239.275.4240 www.tlc-engineers.com

COA 15

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WATERSHED Building Sustainability

302 Magnolia Avenue Fairhope, AL 36532 p 251.929.0514

BIL TAINA ∞ **TOURISM**

19-028.000

OR

PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

MECHANICAL CONTROLS

MW601

RAIN WATER CALCULATION GULF SHORES Gulf Shores, AL Rainfall Rate Rate, 65% of versus in Tank at End Roof Area - Sq. | Average Monthly Available | Average Weekly Useage Mean Monthly Rain Fall - Inches -1,706 4,800 3,094 9,200 4,072 1,200 4,800 2,647 (2,153) -2,153 4,800 5,850 1,200 3,802 -998 2,498 (2,302)-2,302 10,380 1,200 4,800 6,747 1,947 12,216 1,200 4,800 7,940 3,140 13,535 8,798 3,998 4,800 1,200 3,998 7,226 1,200 4,800 4,697 -103 -1,557

RAIN WATER FIRST FLUSH FILTER

B1. XERXES GENERAL BACKFILL REQUIREMENTS REFER TO INSTALLATION GUIDE FOR ADDITIONAL INFORMATION

B1.1. THE BACKFILL MATERIAL SURROUNDING AN UNDERGROUND STORAGE TANK (UST) IS A CRITICAL PART OF A PROPER TANK INSTALLATION. THIS DOCUMENT 2.1. XERXES PREFABRICATED DEADMEN GIVES GUIDELINES FOR CHOOSING THE PRIMARY BACKFILL MATERIAL TO USE WHEN INSTALLING XERXES FIBERGLASS TANKS. B1.2. THE XERXES INSTALLATION MANUAL SPECIFIES THAT SELECT ROUNDED STONES OR CRUSHED STONES ARE TO BE USED AS PRIMARY BACKFILL MATERIAL.

B1.3. PRIMARY BACKFILL MATERIAL IS TO BE CLEAN, FREE-FLOWING, AND FREE OF DIRT, SAND, LARGE ROCKS, ROOTS, ORGANIC MATERIALS, DEBRIS, ICE AND B1.4. NO BACKFILL MATERIAL SHALL BE FROZEN OR CONTAIN LUMPS OF FROZENMATERIAL AT ANY TIME DURING PLACEMENT.

B1.5. ANOTHER IMPORTANT CHARACTERISTIC OF GOOD BACKFILL MATERIAL IS HARDNESS OR STABILITY WHEN EXPOSED TO WATER OR LOADS. MOST MATERIALS HAVE NO PROBLEMS MEETING THE HARDNESS REQUIREMENT.

B1.5.1. MATERIALS LIKE SOFT LIMESTONE, SANDSTONE, SEA SHELLS OR SHALE SHOULD NOT BE USED AS BACKFILL BECAUSE THEY BREAK DOWN OVER TIME

B2.1. COARSE AGGREGATE IS A TECHNICAL TERM FOR THE MATERIAL (ROUNDED STONES AND CRUSHED STONES) THAT MEETS XERXES' BACKFILL SIZE REQUIREMENTS. B2.2. ASTM INTERNATIONAL AND THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) HAVE SPECIFICATIONS FOR STANDARD SIZES OF COARSE AGGREGATE. B2.3. REFER TO TABLE B1-1 IN THE INSTALLATION MANUAL FOR STANDARD SIZES OF COARSE AGGREGATE THAT MEET XERXES' BACKFILL MATERIAL

SPECIFICATIONS FOR ROUNDED STONES AND CRUSHED STONES. IT IDENTIFIES STANDARD SIEVE SIZES USED TO GRADE AGGREGATE MATERIAL. FOR EACH AGGREGATE SIZE, THE AMOUNT OF MATERIAL FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) IS GIVEN AS A PERCENTAGE OF THE TOTAL WEIGHT OF THE SAMPLE. NOTE: ASTM USES SIZE NUMBERS 6, 67, 7 AND 8 TO DESCRIBE SPECIFIC GRADATION PROFILES FOR MATERIALS THAT PASS THROUGH A SERIES 2.3.4. WHEN USING DEADMEN MAN-OUT-OF-HOLE STRAPPING APPLICATIONS, ALIGN THE ANCHOR OF SIEVES. DO NOT CONFUSE THESE GRADATION PROFILES WITH SIEVE SIZES. B2.3.1. THE PERCENTAGES GIVE AN INDICATION OF THE PARTICLE SIZE DISTRIBUTION OR GRADATION WITHIN A GIVEN AGGREGATE SIZE. WITH AGGREGATESIZE

ROUNDED STONES MUST CONFORM TO THE SPECIFICATIONS OF ASTM C 33, SIZES 6, 67 OR 7 B3.3. NO MORE THAN 5 PERCENT (BY WEIGHT) OF THE BACKFILL MAY PASS THROUGH A #8 SIEVE. SEE TABLE B1-1 FOR ADDITIONAL INFORMATION ABOUT

SPECIFICATIONS. NOTE: GENERALLY, ROUNDED STONES THAT MEET THE GRADATION REQUIREMENTS ARE LARGER THAN ALLOWABLE CRUSHED STONES.

B4.1. WHEN USING CRUSHED STONES, THE MATERIAL IS TO BE A MIX OF ANGULAR PARTICLES, SIZES BETWEEN 1/8 INCH AND 1/2 INCH. B4.2. THE CRUSHED STONES MUST CONFORM TO THE SPECIFICATIONS OF ASTM C 33, SIZES 7 OR 8.

ANCHORING TANKS

2.1.1. XERXES-SUPPLIED PREFABRICATED DEADMEN ARE PRE-ENGINEERED AND SIZED TO THE TANK ORDERED AND INCLUDE GALVANIZED ADJUSTABLE ANCHOR POINTS (SUBSEQUENTLY REFERRED TO AS "ANCHOR POINTS"). AS WITH ANY DEADMAN, WATER-TABLE HEIGHT, NUMBER OF ATTACHED COLLAR RISERS AND BURIAL DEPTH MUST BE CONSIDERED IN SIZING THE DEADMAN SYSTEM.

2.2.1. THE MINIMUM SPACING BETWEEN TANKS MUST BE INCREASED AS NEEDED TO ACCOMMODATE DEADMEN.

2.2.2. ALWAYS PROVIDE SUFFICIENT CLEARANCE TO ALLOW THE DEADMEN TO BE SET OUTSIDE OF THE TANK "SHADOW." SEE TANK SPACING SUBSECTION IN THE EXCAVATION PARAMETERS SECTION OF THE INSTALLATION MANUAL.

THESE ANCHOR POINTS PROTRUDE UP THROUGH THE SLOTS IN THE DEADMEN AND ARE TEMPORARILY SUPPORTED WITH COTTER PINS. (SEE FIGURE 2-2.)

2.3.2. USE ONLY ONE STRAP PER ANCHOR POINT. 2.3.3. ALIGN THE ANCHOR POINTS WITH THE HOLD-DOWN STRAP LOCATIONS ON THE TANK (MARKED BY ARROWHEAD SYMBOLS). SEE ANCHORING TANKS SECTION OF THE INSTALLATION MANUAL. POINTS WITH THE PROPER RIBS BEFORE SETTING THE DEADMEN IN THE HOLE. 2.3.5. CARE SHOULD BE TAKEN TO KEEP BACKFILL FROM ENTERING THE ALIGNMENT SLOTS UNTIL

FINAL ADJUSTMENT IS MADE. PLACING SOMETHING (FOR EXAMPLE, A PIECE OF WOOD) OVER THE

SLOTS DURING BACKFILL PLACEMENT MAY HELP KEEP BACKFILL FROM ENTERING THE ALIGNMENT

2.4.1. THE TOP OF THE DEADMEN SHOULD BE ALIGNED TO THE BOTTOM OF THE TANK.

2.4.2. THE DEADMEN ARE TYPICALLY PLACED DIRECTLY ON THE EXCAVATION FLOOR. 2.4.3. IF XERXES 18-INCH WIDE LOW-PROFILE DEADMEN ARE USED AS A CONSTRUCTION GUIDE, THEY MAY NEED TO BE ELEVATED. THIS CAN BE ACACCOMPLISHED BY PUTTING 3-1/2 INCH OF BACKFILL OR A WOOD 4X4 (OR EQUIVALENT) UNDERNEATH, SO THAT THE TOP OF THE DEADMEN ARE 12 INCHES OFF OF THE BOTTOM OF THE EXCAVATION. (SEE FIGURE 2-3.)

2.4.4. MAKE SURE THE ANCHOR POINTS ARE POSITIONED CORRECTLY. 2.4.5. SOME CONTRACTORS USE THE DEADMEN AS A GUIDE FOR PROPER DEPTH OF BEDDING.

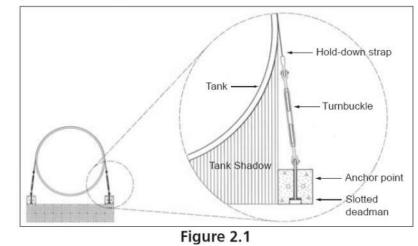


Figure 2-2

18"-wide low-profile deadmen

Anchor point

Chain or Sling

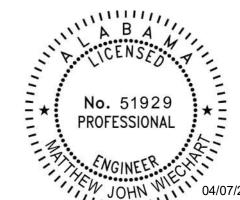
Anchor point

Alignment slot

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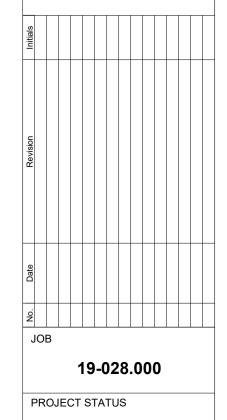
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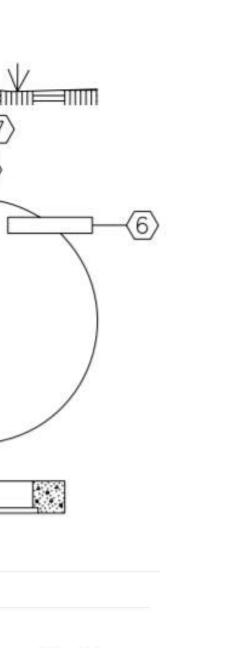


CONFORMANCE SET

MARCH 24, 2023

WELCOME HUB **GRAVITY FLOOR**

PW100





Graf Optimax Filter - Pedestrian

Our most popular in-ground filter. High efficiency, self-cleaning, below ground

Over 95% yield

rainwater filtration system.

- Self-cleaning filter Max. 3,750 sq ft with 4" connections
- ▶ Max. 7,500 sq ft with 6" connections



BASIS OF DESIGN XERXES - SINGLE WALL RAIN WATER TANK 8 FT DIA. 10,000 GALLONS X 31'-61/2" - WEIGHT DRY 4,200LB. PROVIDE FACTORY DEAD -MAN AT 100% FLOOD. XERXES SHALL PROVIDE **UPLIFT CALCULATIONS** 16 3/4* (TYP)

RAIN WATER STORAGE TANK WITH DEADMEN

NO. DESCRIPTION

3 24 FRP OPENING

4 30 FRP OPENING

RAINWATER DISCHARGE

XERXES SINGLE WALL FRP TANK

6 6 SCH. 40 PVC STRAIGHT PIPE OVERFLOW

9 30 FRP RISER WITH TOP FLANGE AND FRP LID

8 24" RIBBED PVC RISER W/ FRP LID

10 PVC SPLICE BOX W/ CORD GRIPS

12 24" x 24" FRP PUMP PLATFORM

13 2" DOMESTIC WATER SUPPLY 14 6 SCH 40 PVC SCREEN VENT

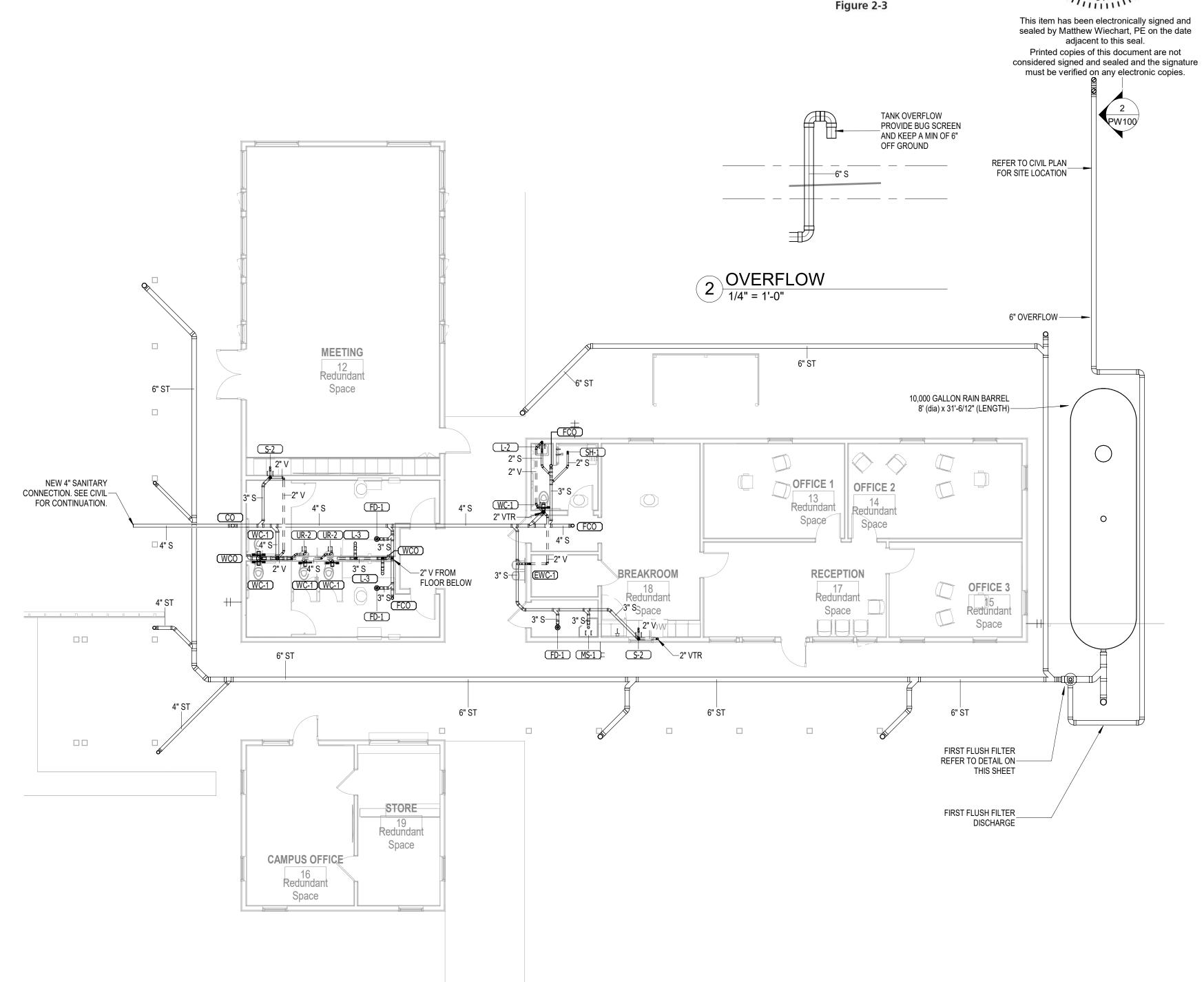
15 GRAF FILTER 16 FLEX COUPLING

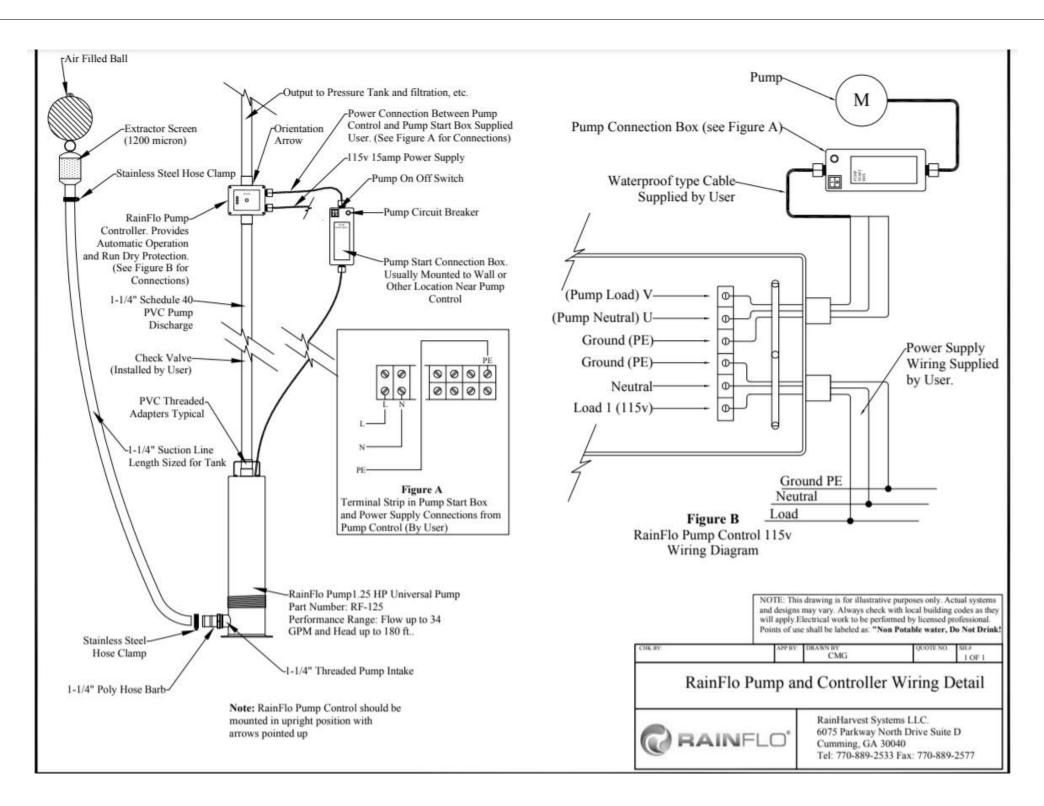
XERXES PRECAST DEADMAN SYSTEM W/ HOLD DOWN STRAP AND TURNBUCKLE ASSEMBLY

BASE MOUNTED EFFLUENT PUMP W/ LEVEL CONTROL FLOAT ASSEMBLY - FLOATING SUCTION

5 6 SCH. 40 PVC INLET PIPING W/ SMOOTHING INLET AND FLEX COUPLING

LEVEL 1 - WELCOME HUB -PLUMBING- GRAVITY





RAIN WATER PUMP -FILTER -PUMP CONTROLER

<u>PUMP</u>

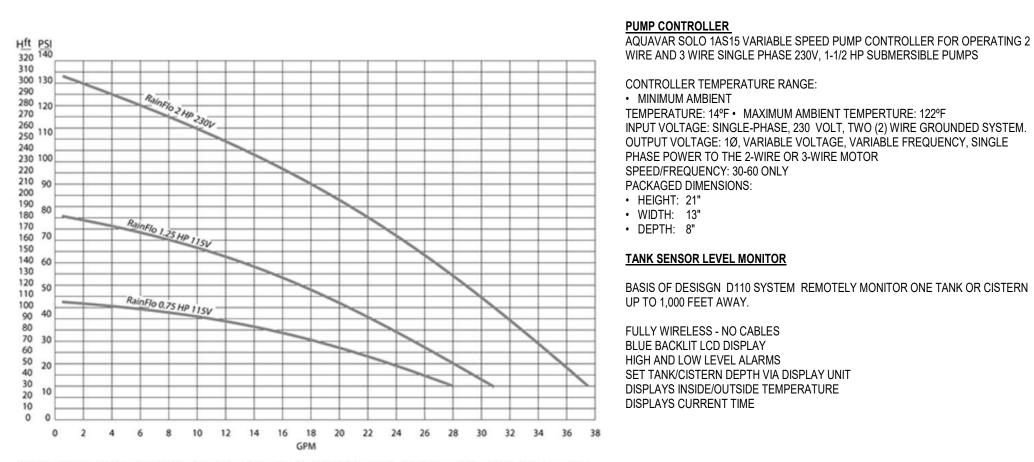
RAINFLO RF125 115V SERIES PUMP. THE RF125 115V IS A HEAVY-DUTY, HIGH PERFORMANCE 115V/60HZ 1.25 HORSEPOWER 3-STAGE SUBMERSIBLE PUMP WITH 1.25" THREADED INLET TO PROVIDE A FLOATING EXTRACTOR. THE PUMP IS INTERNALLY COOLED BY THE WATER FLOWING THROUGH THE INLET SO THE PUMP CAN BE INSTALLED EITHER SUBMERSED IN A TANK OR EXTERNALLY ON THE GROUND OR OTHER MOUNTING PLATFORM.

CONSTRUCTION CONSISTS OF A 304 STAINLESS STEEL HOUSING, DUAL ITALIAN MECHANICAL SEALS, AMERICAN THERMAL PROTECTION, STAINLESS STEEL DIFFUSER AND IMPELLERS, EXTERNAL STARTING CAPACITOR FOR SERVICEABILITY AND LONG LIFE, 45 FOOT POWER CORD, PUMP START BOX WITH MASTER ON/OFF SWITCH AND CIRCUIT BREAKER WHICH ALSO SERVES AS A WIRE

OIL CHAMBER SHALLED BE FILLED WITH NON-TOXIC COOLING OIL. BALL BEARINGS SHALL BE SELF-LUBRICATING AND INTERNAL CAST IRON COMPONENTS ARE COATED WITH POLYBUTADIENE VARNISH BY ELECTROPHORESIS TO PREVENT CORROSION WHICH IS SOMETIMES ASSOCIATED WITH THE TYPICAL LOWER PH OF RAINWATER.

INSTALLATION MAY VERTICAL AVAILABLE AT THE INTAKE TO PREVENT A RUN-DRY CONDITION.

Pump Performance Curve:



RainFlo 25 GPM Complete UV Disinfection System

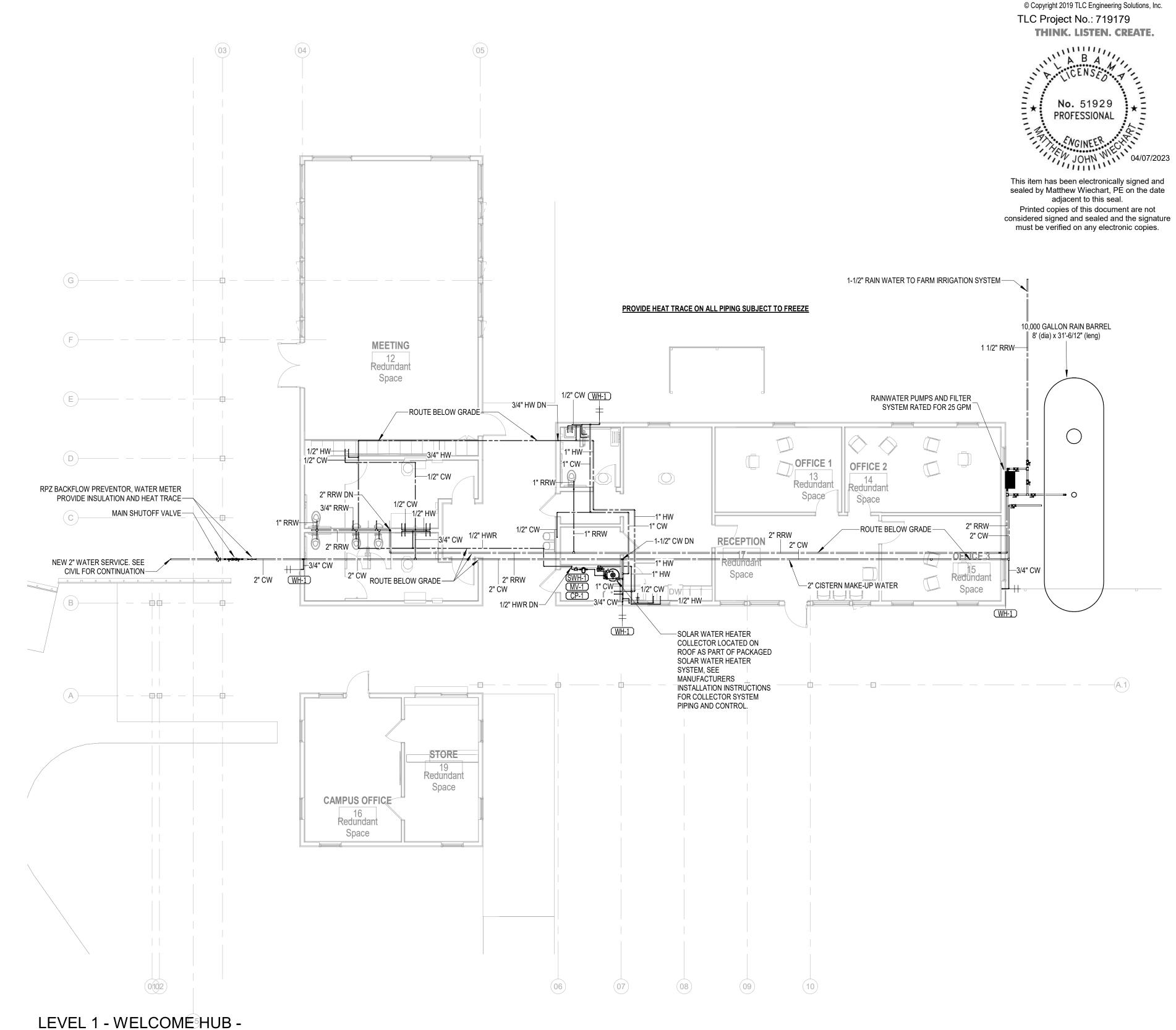


The RainFlo complete UV disinfection systems feature superior performance, utilizing sediment filtration and UV disinfection to clean and disinfect rainwater for indoor potable* plumbing and/or non-potable irrigation applications.

FROM INPUT TO OUTPUT, THE FILTER CARTRIDGES SHALL HAVE A 20 MICRON PLEATED SEDIMENT FILTER, A 5 MICRON PLEATED SEDIMENT FILTER, AND A 1 MICRON ACTIVATED CARBON BLOCK

HAS AN ELECTRONIC CONTROLLER WHICH COMES EQUIPPED WITH AN LED SCREEN FOR VISUAL MANAGEMENT OF THE SYSTEM'S PERFORMANCE AND EASE OF TROUBLESHOOTING

1 PLUMBING PRESSURE
1/8" = 1'-0"



RAIN WATER FILTER

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ARCHITECTURE

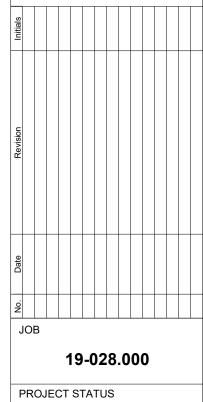
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STAINABILITY FOR

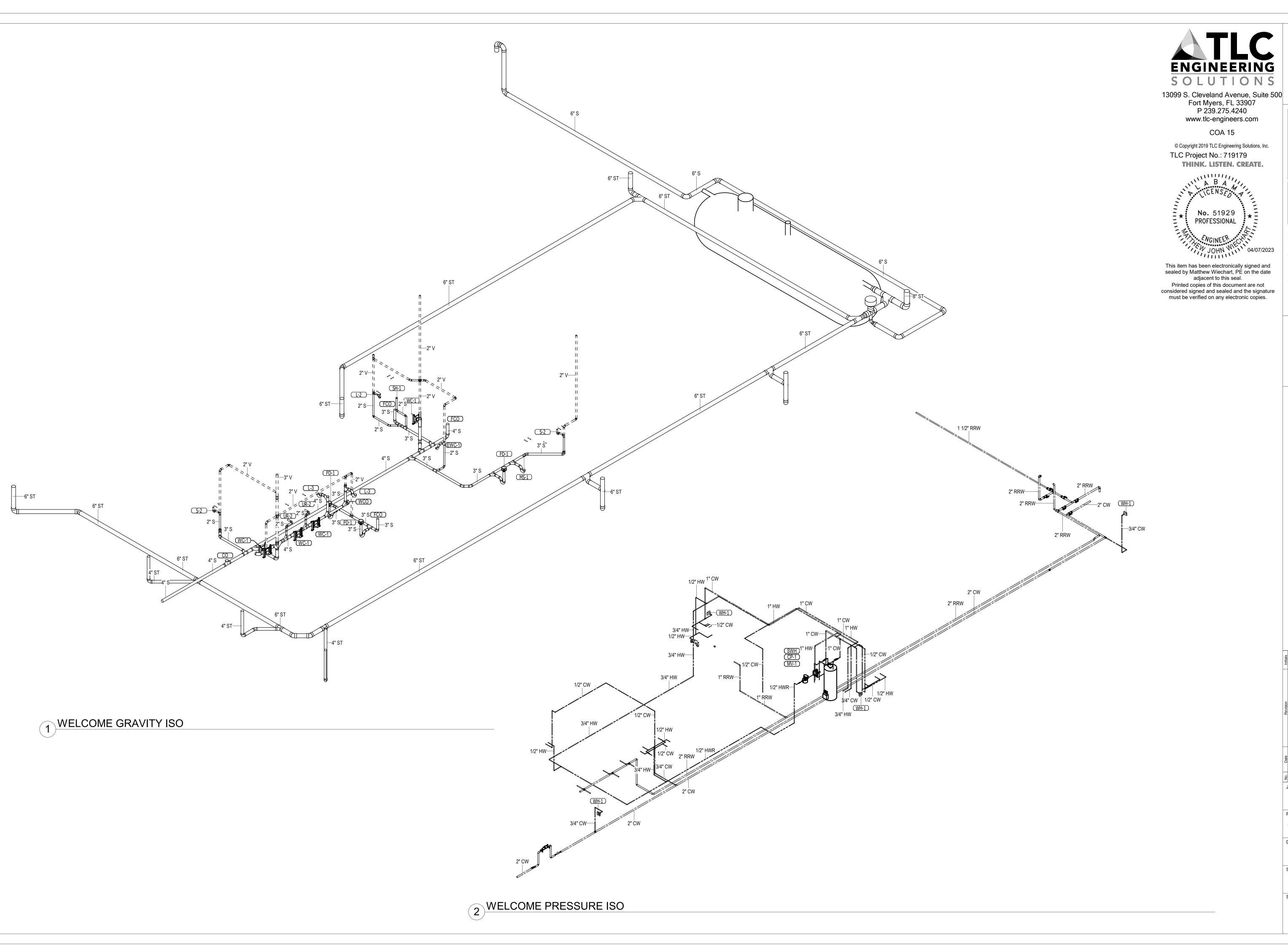


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MARCH 24, 2023

WELCOME HUB PRESSURE FLOOR PLAN

PW101



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SUSTAINABILITY FOR ECOTOURISM &

19-028.000

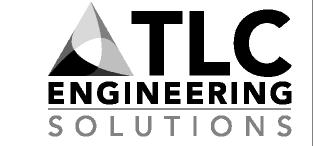
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MARCH 24, 2023

PLUMBING ISOMETRICS

PW700

SASC MATERIALS
March Marc
CANAGO CONTROL CONTROL OF STATE CONTR



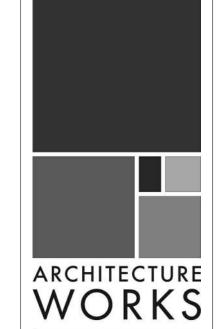
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GULF COAST CENTER
FOR ECOTOURISM & SUSTAINABILITY
MAWWFIELD SHED PACKAGEE3E
GULF SHORES, ALABAMA

JOB
19-028.000

19-028.000
PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

SHEETELECTRICAL
LEGEND,
ABBREVIATIONS,
SHAND SHEET INDEX

ELECTRICAL GENERAL NOTES

- THE DRAWINGS AND APPLICABLE SPECIFICATIONS SHALL BE CONSIDERED SUPPLEMENTARY, ONE TO THE OTHER AND ARE CONSIDERED THE "CONTRACT DOCUMENTS". ALL WORKMANSHIP, METHODS AND/OR MATERIALS DESCRIBED OR IMPLIED BY ONE AND NOT DESCRIBED OR IMPLIED BY THE OTHER SHALL BE PROVIDED, FURNISHED OR PERFORMED AS IF IT HAD APPEARED IN BOTH SECTIONS. THE TERM "CONTRACT DOCUMENTS" DESCRIBED HEREIN IS NOT LIMITED SOLELY TO THE ELECTRICAL PORTION OF THE DRAWINGS AND SPECIFICATIONS, BUT ENCOMPASSES THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS AS A WHOLE.
- PROVIDE AN OPERATING AND MAINTENANCE MANUAL TO OWNER PRIOR TO THE FINAL ACCEPTANCE. THE MANUAL SHALL INCLUDE, AS A MINIMUM, (1) SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. ALSO PROVIDE TWO OPERATIONS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS AND METHOD OF OPERATION FOR EQUIPMENT SHALL BE CLEARLY IDENTIFIED, AND THE NAME, PHONE NUMBER AND ADDRESS OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
- INCLUDE ALL COSTS FOR EXCAVATION, SAW CUTTING, DIRECTIONAL BORING, CORE DRILLING, BACKFILLING, SURFACE RESTORATION, REPAIR OF FINISHES, ETC. THAT IS REQUIRED IN ORDER TO MEET THE PROJECT REQUIREMENTS.
- INCLUDE IN BID ALL COSTS ASSOCIATED WITH TEMPORARY ELECTRICAL SERVICE AS REQUIRED FOR USE BY ALL TRADES DURING CONSTRUCTION. REMOVE TEMPORARY POWER AT THE COMPLETION OF THE PROJECT. OBTAIN AND PAY FOR ALL REQUIRED PERMITS FOR TEMPORARY POWER. ENGINEER OF RECORD SHALL BE PROVIDED WITH ADDITIONAL COMPENSATION FROM THE CONTRACTOR WHERE SIGNED & SEALED DRAWINGS ARE REQUESTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD IF REQUIRED BY THE AHJ FOR THE TEMPORARY POWER.
- PROVIDE A COMPLETE UL LISTED LIGHTNING PROTECTION SYSTEM WITH A MASTER LABEL FOR THE ENTIRE FACILITY PER THE REQUIREMENTS OF NFPA 780, AND THE DIVISION 26 SPECIFICATIONS, UNLESS NOTED OTHERWISE. LIGHTNING PROTECTION SYSTEM SHALL INCLUDE BURIED COUNTERPOISE, UNLESS NOTED OTHERWISE.
- LOCATE, IDENTIFY, PROTECT AND DOCUMENT ALL UTILITY LINES LOCATED WITHIN THE PROJECT BOUNDARY. FOR LOCATING SITE UTILITIES, CONTACT SUNSHINE STATE ONE CALL OF FLORIDA, INC. AT LEAST 48 HOURS IN ADVANCE PRIOR TO DIGGING, AT 1-800-432-4770.
- INCLUDE IN BID THE TRANSPORT AND DISPOSAL OR RECYLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES, REGULATIONS AND GUIDELINES APPLICABLE. COMPLY FULLY WITH FLORIDA STATUTES REGARDING MERCURY-CONTAINING DEVICES, AND WITH ALL DEP AND EPA APPLICABLE GUIDELINES AT THE TIME OF DISPOSAL. PROVIDE OWNER WITH WRITTEN CERTIFICATION OF ACCEPTED DISPOSAL.
- COORDINATION:
 VERIFY AND COORDINATE LOCATIONS OF ANY MISCELLANEOUS EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS (I.E., COPIERS, FAX MACHINES, PRINTERS, KITCHEN APPLIANCES, LAUNDRY APPLIANCES, PROJECTION SCREENS, SHOP TOOLS, MACHINE, ELEVATORS, ETC.) WITH APPROVED SHOP DRAWINGS, OWNER-PROVIDED CUT SHEETS, MANUFACTURER'S INSTRUCTIONS, AND EQUIPMENT NAMEPLATE INFORMATION, PRIOR TO ROUGH IN, AND PROVIDE ALL NECESSARY ELECTRICAL REQUIRED.
- VERIFY AND COORDINATE LOCATIONS AND EXACT ELECTRICAL REQUIREMENTS FOR ALL MECHANICAL, PLUMBING AND FIRE PROTECTION EQUIPMENT PRIOR TO SUBMITTAL OF SHOP DRAWINGS OF ELECTRICAL EQUIPMENT. PROVIDE ALL NECESSARY RACEWAYS, CONDUCTORS, BOXES, EQUIPMENT, ACCESSORIES, ASSOCIATED DISCONNECT SWITCHES, CIRCUIT BREAKERS CONTROL TRANSFORMERS, FIRE ALARM SHUTDOWN, ETC. REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. COORDINATE WITH APPROPRIATE TRADE'S APPROVED SHOP DRAWINGS. MANUFACTURER'S INSTRUCTIONS. AND EQUIPMENT NAMEPLATE INFORMATION. PRIOR TO ROUGH IN, AND PROVIDE ALL NECESSARY ELECTRICAL REQUIRED, UNLESS OTHERWISE NOTED.
- THIS PROJECT REQUIRES COORDINATION DRAWINGS BY THE CONTRACTOR, PARTICIPATE IN THE COORDINATION DRAWING PREPARATION PROCESS AND PROVIDE ALL NECESSARY INFORMATION REQUIRED TO COORDINATE ALL TRADE INFORMATION.
- ALL WORK ON THE ELECTRICAL SYSTEM REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE COORDINATED WITH THE WORK OF ALL OTHER DIVISIONS/TRADES PRIOR TO COMMENCEMENT OF WORK. AVOID INTERFERENCES WITH THE PROGRESS OF OTHER DIVISIONS/TRADES.
- WHERE STRUCTURAL WALLS ARE OF TILT-UP CONSTRUCTION, PROVIDE COORDINATION FOR EXACT DIMENSIONS AND OPENINGS REQUIRED FOR ALL ELECTRICAL COMPONENTS INSTALLED WITHIN TILT-UP WALLS DURING THE SHOP DRAWING REVIEW PROCESS OF THE TILT-UP WALLS, PRIOR TO MANUFACTURE OF THE TILT-UP WALLS.
- LOCATIONS OF VFD'S, DISCONNECTS, MOTOR STARTERS, ETC, FOR HVAC EQUIPMENT ARE DIAGRAMMATIC ON THE PLAN DRAWINGS. EXACT LOCATIONS ARE TO BE COORDINATED WITH CONTRACTOR'S COORDINATION DRAWINGS PRIOR TO ROUGHING IN TO ENSURE PROPER NEC CLEARANCES AND APPROPRIATE MOUNTING SURFACE.
- COORDINATE RECEPTACLE LOCATIONS WITH TECHNOLOGY DRAWINGS OR OWNER'S VENDOR DRAWINGS SO THAT A 120V 20A 5-20R RECEPTACLE IS LOCATED ADJACENT TO EACH VOICE/DATA OUTLET AND TV OUTLET INDICATED ON PLANS. RECEPTACLE IS TO BE CONNECTED TO NEAREST 120V RECEPTACLE CIRCUIT, UNLESS OTHERWISE NOTED ON PLANS.
- REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, CIVIL, LANDSCAPE, INTERIOR DESIGN, TECHNOLOGY, STRUCTURAL, AND KITCHEN EQUIPMENT DRAWINGS FOR RELATED INFORMATION AND ADDITIONAL INSTALLATION REQUIREMENTS TO BE PERFORMED AS PART OF THE WORK.
- WHERE A DISCREPANCY OR CONFLICT IS FOUND BETWEEN ONE DRAWING AND ANOTHER. OR BETWEEN A DRAWING AND APPLICABLE SPECIFICATIONS, NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IN WRITTEN FORM. IN GENERAL, THE MOST STRINGENT REQUIREMENT SHALL GOVERN UNLESS THE DISCREPANCY CONFLICTS WITH APPLICABLE CODES OR OWNER'S DESIGN STANDARDS, WHEREIN THE CODE OR OWNER'S DESIGN STANDARDS SHALL GOVERN.
- CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND/OR SITE AFFECTED BY THIS WORK PRIOR TO SUBMITTAL BID PRICE, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT MAY AFFECT EXECUTION OF THE WORK. SUBMISSION OF A BID PRICE SHALL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR. EQUIPMENT AND/OR MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED THAT COULD HAVE BEEN REASONABLY OBSERVED WILL NOT BE RECOGNIZED.
- COORDINATE ALL PROJECT SCHEDULING AND PHASING REQUIREMENTS WITH ARCHITECT/ENGINEER AND OWNER PRIOR TO SUBMITTING BID PRICE. THIS PROJECT MAY REQUIRE PHASING SEQUENCES AND POTENTIAL PREMIUM TIME WORK AND ALL COSTS FOR SUCH SHALL BE INCLUDED IN THE BID PRICE. PROVIDE ADEQUATE WORK FORCE AND EQUIPMENT, AND INCLUDE PREMIUM TIME AS MAY BE REQUIRED IN ORDER TO ADHERE TO THE PROJECT SCHEDULE. ADDITIONALLY, ENSURE THAT LONG LEAD ITEMS DO NOT IMPACT THE PROJECT'S SCHEDULE OR PHASING.
- ANY TEMPORARY INTERRUPTION ON POWER REQUIRED FOR THE SYSTEM TIE-IN OR SWITCHOVER FOR ANY PORTION OF THE ELECTRICAL SYSTEM SHALL BE PRE-APPROVED IN WRITING BY THE OWNER AND SCHEDULED IN ADVANCE
- COORDINATE EXACT REQUIREMENTS WITH THE LOCAL UTILITY COMPANIES AND PROVIDERS (ELECTRIC, TELEPHONE, CABLE TV, ETC.) AND INCLUDE ALL COSTS FOR PROVIDING TEMPORARY AND PERMANENT SERVICES REQUIRED FOR THIS PROJECT IN THE BID PRICE. BID PRICE SHALL INCLUDE, BUT NOT BE LIMITED TO, EXCAVATION, RACEWAYS, BACKFILL, EQUIPMENT, EQUIPMENT PADS, BACKBOARDS, METERS, GROUNDING, UTILITY ENGINEERING AND IMPACT FEES.
- 3. CONDUCT WORK OPERATIONS AND DEBRIS REMOVAL IN A MANNER THAT ENSURES MINIMUM INTERFERENCE WITH NORMAL BUSINESS OPERATIONS, TRAFFIC, PARKING, ETC. ONGOING IN ADJACENT OCCUPIED SPACES OR FACILITIES. PROVIDE ALL THAT IS REQUIRED TO EFFECTIVELY PROTECT SURROUNDING OCCUPANTS, EQUIPMENT, FINISHES, FURNITURE, ETC. FROM DAMAGE OR EXCESSIVE NOISE THROUGHOUT THE DURATION OF THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR ANY LOSSES OR DAMAGE. ANY DAMAGE RESULTING FROM THE FAILURE TO ADHERE TO THIS REQUIREMENT. RESTORE DAMAGED ELEMENTS TO ORIGINAL CONDITION BY THE CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT/ENGINEER AND OWNER, AT NO ADDITIONAL COSTS. REPORT OF ANY SUCH OCCURRENCE TO THE ARCHITECT/ENGINEER AND OWNER IMMEDIATELY AND AWAIT WRITTEN DIRECTION PRIOR TO PROCEEDING WITH REPAIRS.
- COORDINATE THE LOCATION OF ALL LIGHT FIXTURES, DEVICES AND BOXES WITH WINDOWS, MIRRORS, MILLWORK, CABINETS, GLASS CURTAIN WALLS, AND GLASS WALLS PRIOR TO INSTALLATION OF CONDUITS OR BOXES. REVIEW ALL CONTRACT DRAWINGS TO ASCERTAIN ANY CONFLICTS PRIOR TO BIDDING. OBTAIN CLARIFICATION FROM A/E PRIOR TO BID. CONTRACTOR SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION FOR WORK REQUIRED TO RELOCATE OUTLET BOXES OR RACEWAYS FOR COORDINATION WITH OTHER TRADE'S WORK.
- **ELECTRICAL EQUIPMENT**:
- EQUIPMENT SHALL BE OF MATERIALS SUITABLE FOR AND RATED FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED. ALL COMPONENTS OF THE ELECTRICAL SYSTEM LOCATED OUTDOORS OR INDOORS WHERE EXPOSED TO SIGNIFICANT MOISTURE SHALL BE WEATHERPROOF, NEMA 3R, AS A MINIMUM, WHETHER INDICATED ON THE CONTRACT DRAWINGS OR NOT.
- TERMINATION PROVISIONS FOR ALL ELECTRICAL EQUIPMENT (PANELBOARDS, SWITCHBOARD. TRANSFORMERS, DISCONNECT SWITCHES, MOTOR CONTROLLERS, AUTOMATIC TRANSFER SWITCHES, ENCLOSED CIRCUIT BREAKERS, WIREWAYS, ETC.) SHALL BE LISTED AND IDENTIFIED FOR USE WITH MINIMUM 75 DEG. F CONDUCTORS IN ACCORDANCE WITH NEC.
- WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT SHALL BE IN COMPLIANCE WITH NEC. THE EXCLUSIVELY DEDICATED SPACE EXTENDING FROM FLOOR TO 6' ABOVE FOUIPMENT OR STRUCTURAL CEILING, WHICHEVER DISTANCE IS LOWER, WITH A WIDTH AND DEPTH OF THE PANELBOARD OR SWITCHBOARD MUST BE CLEAR OF ALL PIPING, DUCTS, EQUIPMENT FOREIGN TO
- THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES IN ACCORDANCE WITH NEC. PROVIDE A REINFORCED CONCRETE PAD. SIZED 4" LARGER IN ALL DIRECTIONS THAN THE FOOTPRINT OF THE EQUIPMENT, AND 4" HIGH, FOR ALL FREESTANDING, FLOOR-MOUNTED ELECTRICAL EQUIPMENT. PROVIDE VIBRATION ISOLATORS AND/OR ANCHORS PER MANUFACTURER'S INSTRUCTIONS.

- PROVIDE HACR RATED CIRCUIT BREAKER FOR ALL HVAC EQUIPMENT.
- PROVIDE AFCI PROTECTION TO COMPLY WITH NEC IN ALL GUEST ROOMS AND GUEST SUITES
- WITH PROVISIONS FOR COOKING, IN ALL DWELLING UNITS, APARTMENTS AND CONDOMINIUMS. ALL PANELBOARDS OR DISCONNECT SWITCHES LOCATED IN KITCHEN AREAS SHALL BE STAINLESS STEEL (COVER AND DOOR WHERE PANEL IS FLUSH MOUNTED, PANEL BOX, COVER & DOOR WHERE SURFACE MOUNTED)
- PROVIDE SURGE PROTECTION DEVICE FOR ALL MAIN SERVICE EQUIPMENT, PANELBOARDS SERVING SENSITIVE FLECTRONIC EQUIPMENT (DATA RACKS) OR COMPUTERS, LIGHTING PANELS. SERVING EXTERIOR LIGHTING, POWER CIRCUITS OR LOW VOLTAGE (FIRE ALARM, TELECOMMUNICATIONS) EXITING THE BUILDING. PROVIDE MINIMUM 30A/3P BREAKER IN PANELBOARDS AND 60A/3P DISTRIBUTION PANEL OR SWITCHBOARD, UNLESS OTHERWISE NOTED, OR PER THE SPD MANUFACTURER'S RECOMMENDATIONS FOR SURGE PROTECTION DEVICE.
- CONTRACTOR IS TO SUBMIT FOR APPROVAL TO THE ENGINEER OF RECORD FINAL COORDINATED SETTINGS REQUIRED FOR MAIN CIRCUIT BREAKER AND ALL DOWNSTREAM ADJUSTABLE OVERCURRENT PROTECTIVE DEVICES, BASED ON SELECTED EQUIPMENT MANUFACTURER.

- PROVIDE TYPED PANEL DIRECTORIES FOR ALL NEW PANELBOARDS, AND EXISTING PANELBOARDS AFFECTED BY THIS PROJECT. DIRECTORIES SHALL REFLECT PROJECT AS-BUILT CONDITIONS FOR ALL BRANCH CIRCUITS. DIRECTORIES SHALL INCLUDE WHERE EACH PANEL IS FED FROM. ADDITIONALLY, EACH BRANCH CIRCUIT LOAD DESCRIPTION SHALL INCLUDE THE ROOM NUMBER(S) FOR EACH LOAD SERVICE (I.E., RECEPTACLES-RMS 501,503), ROOM NUMBERS SHALL BE BASED ON ACTUAL ROOM SIGNAGE INSTALLED IN FIELD. COORDINATE EXACT ROOM NUMBERS WITH A/E AND OWNER PRIOR TO COMPLETION OF PANEL DIRECTORIES.
- PROVIDE ENGRAVED PLASTIC LAMINATE NAME TAGS ON EACH SWITCHBOARD, SWITCHGEAR, DISTRIBUTION PANEL, PANELBOARD, MOTOR CONTROL CENTER, SAFETY SWITCH, ENCLOSED CIRCUIT BREAKER, CABINET, STEP-DOWN TRANSFORMER, TRANSFER SWITCH, ETC., AND ANY OTHER MAJOR COMPONENT OF THE ELECTRICAL SYSTEM.
- PROVIDE ENGRAVED PLASTIC LAMINATE NAME TAGS FOR EACH DISTRIBUTION BREAKER OR BRANCH CIRCUIT BREAKER IN SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND OTHER DISTRIBUTION EQUIPMENT. NAME TAG SHALL INCLUDE LOAD DESCRIPTION AND ROOM NUMBER FOR EACH LOAD SERVICE.
- ARC FLASH DANGER/WARNING LABELS SHALL BE APPLIED TO SWITCHBOARD, PANELBOARDS, AND EQUIPMENT CONTROLLERS PER NEC.
- PROVIDE LABELS ON THE INSIDE OF EACH DEVICE COVERPLATE, IDENTIFYING THE PANEL(S)/ CIRCUIT NUMBER(S) DEVICE IS CONNECTED TO.
- PROVIDE NEATLY, HANDWRITTEN IDENTIFICATION ON THE EXTERIOR COVER OF ALL JUNCTION BOXES PULLBOXES AND WIREWAYS, IDENTIFYING THE PANEL(S)/ CIRCUIT NUMBER(S) CONTAINED WITHIN. PROVIDE A PERMANENT SIGN ON THE MAIN ELECTRICAL ROOM DOOR TO THE BUILDING STATING THAT THE MAIN SERVICE DISCONNECTING MEANS IS LOCATED INSIDE.
- PROVIDE A PERMANENT LABEL ON ALL PANELBOARDS, SWITCHBOARDS, SWITCHGEAR, MOTOR CONTROLS CENTERS AND DISTRIBUTION PANELS STATING "DO NOT WORK ON EQUIPMENT WHILE ENERGIZED. LOCK-OUT TAG-OUT REQUIRED".
- PROVIDE REQUIRED IDENTIFICATION PER ANSI STANDARDS, NEC REQUIREMENTS, AND OWNER'S PUBLISHED DESIGN STANDARDS WHERE APPLICABLE.

ELECTRICAL DEVICES, OUTLET BOXES, JUNCTION BOXES:

- LIGHT SWITCHES SHALL BE MOUNTED 48 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE, UNLESS OTHERWISE NOTED.
- RECEPTACLES, VOICE/DATA OUTLETS, WALL FURNITURE FEEDS SHALL BE MOUNTED 18 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE, UNLESS OTHERWISE NOTED. ABOVE COUNTER RECEPTACLES SHALL BE MOUNTED 6" ABOVE BACK SPLASH TO CENTERLINE OF DEVICE, UNLESS OTHERWISE NOTED.
- WHEN ELECTRICAL BOXES ARE LOCATED IN VERTICAL FIRE-RESISTIVE ASSEMBLIES, (CLASSIFIED AS FIRE/SMOKE AND SMOKE PARTITIONS). THEY SHALL BE INSTALLED WITHOUT AFFECTING THE FIRE CLASSIFICATION. ALL OF THE FOLLOWING CONDITIONS SHALL BE MET:
 - A. ALL ELECTRICAL BOXES SHALL BE METALLIC.
 - BOX OPENING SHALL OCCUR ONLY ON ONE SIDE OF FRAMING SPACE.
 - BOX OPENING SHALL NOT EXCEED 16 SQUARE INCHES
- ALL CLEARANCES BETWEEN OUTLET BOX AND GYPSUM BOARD SHALL BE COMPLETELY FILLED WITH JOINT COMPOUND (OR OTHER APPROVED MATERIAL).
 - PROVIDE A WALL AROUND OUTLETS LARGER THAN 16 SQUARE INCHES. THE INTEGRITY OF THE WALL RATING SHALL BE MAINTAINED.
 - THE TOTAL AGGREGATE SURFACE AREA OF THE BOXES SHALL NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET.
 - OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE RESISTIVE ASSEMBLIES SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES.
- OUTLET BOXES SHALL BE SECURELY FASTENED TO WALL FRAMING MEMBERS.
- THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT NOT TO EXCEED 1/8 INCH BETWEEN THE EDGES OF THE OUTLET BOX AND THE EDGES OF THE OPENING. IT IS THE INTENT THAT ALL DEVICE OUTLET BOXES (POWER AND SYSTEMS) BE FLUSH MOUNTED IN
- WALLS, CEILINGS OR FLOORS, AND JUNCTION BOXES FLUSH MOUNTED IN WALLS, CEILINGS, OR FLOORS, OR CONCEALED ABOVE ACCESSIBLE CEILINGS, AND NOT SURFACE MOUNTED, UNLESS SPECIFICALLY NOTED ON THE CONTRACT DRAWINGS, OR UNLESS A/E GRANTS WRITTEN PERMISSION. ALL COMPONENTS OF THE ELECTRICAL SYSTEM (INCLUDE RACEWAYS, ELECTRICAL EQUIPMENT,
- OUTLET BOXES, JUNCTION BOXES, ETC.) LOCATED IN A HAZARDOUS (CLASSIFIED) LOCATION SHALL BE APPROVED FOR USE IN SAID LOCATION, AS DEFINED BY THE NEC, WHETHER INDICATED ON THE CONTRACT DOCUMENTS OR NOT.
- ALL DEVICES SHALL BE MOUNTED VERTICALLY, UNLESS OTHERWISE NOTED.
- ALL RECEPTACLES SHALL BE MOUNTED SUCH THAT THE GROUND PIN IS MOUNTED UP. WHERE DEVICES ARE SHOWN IN WALLS BACK-TO-BACK ON OPPOSITE SIDES, INSTALL SO THAT
- THEY ARE SEPARATED BY AT LEAST 12". RECEPTACLES OR JUNCTION BOXES FOR ELECTRIC WATER COOLERS SHALL BE LOCATED
- DIRECTLY BEHIND ELECTRIC WATER COOLER, CONCEALED FROM DIRECT VIEW. RECEPTACLES SHALL BE GFCI TYPE. JUNCTION BOXES FOR HARD-WIRED CONNECTION TO EWC SHALL BE CIRCUITED TO GFCI PROTECTED CIRCUIT BREAKER IN PANELBOARD. ALL EXTERIOR RECEPTACLES OR RECEPTACLES LOCATED IN AREAS SUBJECT TO MOISTURE
- (PARKING GARAGE, WASHDOWN AREAS IN KITCHEN, ETC) SHALL BE GFCI TYPE. ALL EXTERIOR RECEPTACLES SHALL BE PROVIDED WITH CAST METAL, IN-USE COVER UNLESS NOTED OTHERWISE ALL RECEPTACLES LOCATED IN KITCHENS, BATHROOMS OR WITHIN 6' OF THE INSIDE FACE OF A SINK, IN MECHANICAL ROOMS, JANITOR CLOSETS, ELEVATOR SHAFTS, ELEVATOR SUMP PUMP,
- AND ELEVATOR EQUIPMENT ROOMS SHALL BE GFCI TYPE OR GFCI PROTECTED. ALL RECEPTACLES LOCATED IN DAY CARES, PEDIATRIC CLINICS OR AREAS, AND OTHER AREAS AS REQUIRED BY NEC AND STATE OF FLORIDA REQUIREMENTS FOR EDUCATIONAL FACILITIES
- FLEXIBLE METAL CONDUIT AND LIQUIDTIGHT METAL CONDUIT (FMC & LFMC) SHALL NOT BE USED IN LENGTHS THAT EXCEED 6'-0" UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS A/E
- ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS, INCLUDING LOW VOLTAGE SYSTEMS, SHALL BE INSTALLED IN A COMPLETE RACEWAY SYSTEM (CONDUIT) UNLESS SPECIFIED NOTED OTHERWISE. THE USE OF ELECTRICAL NON-METALLIC TUBING (ENT) AND LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT (LFNC) ARE PROHIBITED UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS A/E OR
- CONNECTIONS TO TRANSFORMERS, AHU'S, AND PUMPS SHALL BE WITH LIGUIDTIGHT. FLEXIBLE METAL CONDUIT

OWNER GRANTS WRITTEN PERMISSION

- NO PVC CONDUIT MAY BE USED INSIDE OF BUILDING UNLESS ROUTED UNDERGROUND, AND UNLESS OTHERWISE NOTED. ALL CONDUIT TERMINATIONS AT TERMINAL BOARDS ARE TO HAVE GROUNDING BUSHINGS AT
- ALL CONDUITS ARE TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO EXISTING CONDITIONS (I.E., EXPOSED CEILINGS, BUILDING EXTERIOR WALL RUNS). CONCEAL ALL CONDUITS ABOVE CEILINGS OR IN WALLS AND MILLWORK. WHERE EXISTING CONDITIONS DICTATE THAT CONDUITS CANNOT BE CONCEALED, NOTIFY ARCHITECT/ENGINEER PRIOR TO INSTALLING CONDUIT FOR RESOLUTION TO
- ROUTING. SEAL ALL PENETRATIONS AND OPENINGS MADE DURING EXECUTION OF WORK IN FIRE-RATED WALLS. WALLS SHALL BE SEALED WITH UL-APPROVED PRODUCT WITH THE SAME OR GREATER RATING OF WALL PENETRATED.

- PROVIDE ALL PENETRATIONS THROUGH FLOORS, WALL, CEILINGS AND ROOFS WHERE REQUIRED. COORDIANTE LOCATIONS AND SIZES WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS, FIELD CONDITIONS AND WORK OF ALL OTHER DIVISIONS/TRADES. ALL OPENINGS ARE TO BE SEALED WATERTIGHT.
- ALL RACEWAYS THAT TURN UP INTO THE SLAB OR ELECTRICAL EQUIPMENT FROM UNDERGROUND SHALL BE RIGID GALVANIZED STEEL (RGS) WITH BITUMASTIC COATING FOR AT LEAST THE FINAL 18" IN LENGTH. THE USE OF NON-METALLIC CONDUIT ABOVE GRADE IS PROHIBITED.
- PANEL SCHEDULES AND FLOOR PLANS MAY INDICATE DEDICATED HOMERUNS FOR EACH BRANCH CIRCUIT. BRANCH CIRCUITS MAY BE GROUPED IN A COMMON HOMERUN WHERE THE HOMERUN DOES NOT EXCEED 3 PHASE CONDUCTORS, 3 NEUTRAL CONDUCTORS, AND 1 EQUIPMENT GROUND. THE HOMERUN RACEWAY SIZE AND CONDUCTOR SIZE SHALL BE INCREASED AS NECESSARY TO
- COMPLY WITH THE NEC FOR 40% MAXIMUM FILL AND DERATING REQUIREMENTS.
 IT IS THE INTENT THAT ALL RACEWAYS BE CONCEALED IN WALLS, ABOVE CEILINGS, IN SLAB, OR BELOW SLAB UNLESS SPECIFICALLY NOTED OTHERWISE. OR UNLESS A/E GRANTS WRITTEN PERMISSION. WHERE RACEWAYS ARE INSTALLED IN SLABS, THE MINIMUM SPACING, MAXIMUM RACEWAY SIZE, AND ANY OTHER STRUCTURAL LIMITATIONS SHALL BE COORDINATED WITH THE STRUCTURAL DRAWINGS AND THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- PROVIDE SEAL OFF FITTINGS, APPROVED FOR SUCH USE, WHERE RACEWAYS PENETRATE BETWEEN A DRY, CONDITIONED ENVIRONMENT AND THE EXTERIOR OR WET ENVIRONMENTS
- SUCH AS WALK-IN COOLERS OR FREEZERS, KITCHEN WASH-DOWN AREAS, ETC. PROVIDE POLYOLEFIN JET-LINE #232 (NYLON PULL STRING) IN EACH EMPTY CONDUIT WITH
- ENGRAVED METAL TAG INDICATING CONDUIT DESIGNATION. MINIMUM RACEWAY SIZE SHALL BE 3/4" UNLESS NOTED OTHERWISE.
- 16. SET SCREW FITTINGS SHALL BE USED FOR EMT CONDUIT.
- ALL WIRE SHALL BE SIZED AS SHOWN ON THE DRAWINGS. IF NO SIZE IS SHOWN, THEN WIRE SHALL BE #12 AWG, EXCEPT THAT BRANCH HOMERUNS OVER 100' IN LENGTH SHALL BE MINIMUM #10 AWG FOR 120/208 VOLT CIRCUITS, AND HOMERUNS OVER 200' IN LENGTH SHALL BE MINIMUM #10 AWG FOR 277/480 VOLT CIRCUITS. REFER TO BRANCH CIRCUIT VOLTAGE DROP TABLES BELOW. BRANCH CIRCUIT WIRING SHALL BE SIZED TO LIMIT THE VOLTAGE DROP TO 3% OF NOMINAL VOLTAGE OR
- BRANCH CIRCUITS SHALL BE INCREASED IN SIZE AS REQUIRED TO COMPENSATE FOR VOLTAGE DROP FROM LENGTH OF CIRCUIT DUE TO FIELD ROUTING. FINAL INSTALLATION SHALL NOT EXCEED A MAXIMUM OF 3% VOLTAGE DROP FOR BRANCH CIRCUITS. REFER TO VOLTAGE DROP TABLE

BELOW FOR CONDUCTOR SIZES FOR BRANCH CIRCUITS: 120V (BASED ON 1500W LOAD) MIN. CONDUCTOR SIZE INCREASE FOR VOLTAGE DROP CIRCUIT LENGTH

0 FT - 70 FT 71 FT - 115 FT #10 AWG 116 FT - 180 FT #8 AWG 181 FEET AND LONGER: SUBMIT WIRE SIZE TO ENGINEER OF RECORD FOR WRITTEN APPROVAL.

277V (BASED ON 4155W LOAD) MIN. CONDUCTOR SIZE INCREASE FOR VOLTAGE DROP CIRCUIT LENGTH 0 FT - 140 FT #12 AWG 141 FT - 220 FT #10 AWG 221 FT - 350 FT #8 AWG

- ALL WIRE SIZES ARE BASED ON AMPACITIES FOR 75 DEG. F TEMPERATURE RATING LISTED IN NEC. ALL CONDUCTORS IN CABINETS MUST BE CAREFULLY FORMED AND HARNESSED SO THAT EACH CONDUCTOR DROPS OFF DIRECTLY OPPOSITE TO TERMINAL.
- ALL CONDUCTORS SHALL BE COPPER, THHN/THWN, AND SOLID FOR #10 AWG AND SMALLER, AND STRANDED FOR #8 AWG AND LARGER.
- THE USE OF ALUMINUM CONDUCTORS, RACEWAYS, BOXES, BUSSING, WINDINGS, ETC. ARE PROHIBITED. ALL MATERIALS SHALL BE COPPER, UNLESS SPECIFICALLY NOTED OTHERWISE OR UNLESS A/E OR OWNER GRANTS WRITTEN PERMISSION.

- FIRE PROTECTION PIPING SHALL NOT BE USED FOR GROUNDING. ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR.
- METAL RACEWAYS SHALL NOT BE USED AS EQUIPMENT GROUND. WHERE A PHASE CONDUCTOR IS INCREASED IN SIZE DUE TO VOLTAGE DROP. THE EQUIPMENT GROUND CONDUCTOR SHALL BE INCREASED IN SIZE PROPORTIONATELY.
- PROVIDE A GROUND BUS BAR IN EACH ELECTRICAL ROOM AND TELECOMMUNICATIONS / IDF/ MDF ROOM FOR ALL NEW CONSTRUCTION AND NEW ROOMS IN EXISTING CONSTRUCTION, AND IN EXISTING CONSTRUCTION WHERE THERE IS NONE INSTALLED WITHIN AN EXISTING ROOM.

CONTROLS

- LIGHT FIXTURES SUPPORTED BY CEILING GRID SHALL BE SUPPORTED AS FOLLOWS: LIGHT FIXTURES WEIGHING LESS THAN 10 POUNDS SHALL HAVE 12-GAUGE HANGER WIRE CONNECTED FROM THE LIGHT FIXTURE TO THE STRUCTURE ABOVE. LIGHT FIXTURES WEIGHING 10 POUNDS OR MORE SHALL HAVE (2) 12-GAUGE HANGER WIRES ATTACHED AT OPPOSITE CORNERS OF THE LIGHT FIXTURE TO THE STRUCTURE ABOVE.
- COORDINATE EXACT LOCATIONS OF LIGHT FIXTURES IN LAY-IN AND GYPBOARD CEILINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS, AND WALL MOUNTED EXTERIOR AND INTERIOR LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION. WHERE THE QUANTITY OF LIGHTS DIFFERS BETWEEN THE ARCHITECTURAL RCP AND THE ELECTRICAL LIGHTING PLANS, PROVIDE THE HIGHEST QUANTITY OF FIXTURES IN THE BID PRICE. THE DISCREPANCY IN QUANTITY SHALL BE BROUGHT TO THE ATTENTION OF THE A/E. THE HIGHEST QUANTITY SHALL BE CIRCUITED TO THE LOCAL ROOM OR AREA LIGHTING CIRCUITS AND LIGHTING CONTROL DEVICES. UNLESS
- OTHERWISE DIRECTED IN WRITING BY THE ARCHITECT/ENGINEER. VERIFY ACTUAL CEILING CONSTRUCTION TYPE AS DEFINED ON THE ARCHITECTURAL DRAWINGS AND FURNISH ALL LIGHT FIXTURES WITH THE CORRECT MOUNTING DEVICES WHETHER OR NOT SUCH VARIATIONS ARE INDICATED BY THE LIGHT FIXTURE CATALOG NUMBER. VERIFY THE DEPTH OF ALL RECESSED LIGHT FIXTURES WITH THE ARCHITECTURAL DRAWINGS PRIOR TO ORDERING LIGHT FIXTURES. ANY DISCREPANCIES THAT WOULD CAUSE THE RECESSED LIGHT FIXTURES NOT TO FIT INTO CEILING SHALL BE REPORTED TO ARCHITECT/ENGINEER PRIOR TO ORDERING LIGHT FIXTURES.
- LIGHT FIXTURES RECESSED IN FIRE-RATED CEILINGS SHALL BE PROVIDED WITH APPROVED FIRE-RATED ENCLOSURE WITH A FIRE RATING EQUAL TO THAT OF THE CEILING. PROVIDE A MINIMUM OF 3" CLEARANCE FROM SIDES AND TOP OF RECESSED LIGHT FIXTURES.
- MODIFY ALL LIGHT FIXTURE CATALOG NUMBERS AS REQUIRED TO COORDINATE WITH THE LIGHTING BRANCH CIRCUIT VOLTAGES INDICATED. COORDINATE THE CATALOG NUMBERS WITH THE EXACT FIXTURE MOUNTING AND TRIM REQUIRED BY THE CEILING IN WHICH EACH FIXTURE IS BEING
- ALL LIGHT FIXTURES SHALL BE PROVIDED COMPLETE WITH LAMPS, UNLESS OTHERWISE NOTED. ALL EXIT LIGHTS. LIGHT FIXTURES INDICATED WITH UNSWITCHED CIRCUIT (NIGHTLIGHT N/L). EMERGENCY TWIN-HEAD FIXTURES WITH INTEGRAL BATTERY PACKS, AND BATTERY PACKS INTEGRAL TO LIGHT FIXTURES, SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING OR LIGHTING
- PROVIDE UL WET LABEL OR IP67 RATED LIGHT FIXTURES FOR ALL FIXTURES LOCATED OUTSIDE OR IN PARKING GARAGES, IN SHOWERS, OR OPEN STRUCTURES PROVIDE 0-DEGREE BALLASTS FOR EXTERIOR FLUORESCENT OR HID LIGHT FIXTURES.
- PROVIDE FUSING FOR ALL EXTERIOR LIGHT FIXTURES, OR FIXTURES IN PARKING GARAGES OR OPEN STRUCTURES.
- PROVIDE ALL TEMPORARY NORMAL LIGHTING, EMERGENCY LIGHTING AND EXIT SIGNAGE REQUIRED DURING THE PROJECT CONSTRUCTION PHASE.
- COORDINATE EXACT FOUNDATION AND/OR COMPACTING REQUIREMENTS FOR ALL POLE MOUNTED LIGHT FIXTURES WITH MANUFACTURER'S AND/OR INSTALLER'S STRUCTURAL ENGINEER. POLE BASES SHALL MEET OR EXCEED ALL WIND LOAD RATINGS, GUST FACTORS, IMPORTANCE FACTORS, ETC. REQUIRED BY NATIONAL AND/OR LOCAL CODES. SHOP DRAWINGS SHALL INCLUDES STRUCTURAL DRAWINGS FOR ALL POLE BASES, POLE, ASSEMBLY AND OVERTURN CALCULATIONS REQUIRED IN THIS PROJECT, SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE PROJECT STATE.

- 13. WHERE THERE IS NO EMERGENCY GENERATOR/ LIFE SAFETY DISTRIBUTION BRANCH AVAILABLE. PROVIDE INTEGRAL BATTERY PACKS, RATED FOR A MINIMUM OF 90 MINUTES, FOR FIXTURES SHOWN WITH SOLID SHADING AND/OR WITH "E" AFTER FIXTURE TAG, AND FOR ALL EXIT LIGHTS, OR UNLESS OTHERWISE NOTED.
- REFER TO LIGHT FIXTURE SCHEDULE FOR LIGHT FIXTURE TYPES, DESCRIPTIONS, CATALOG NUMBERS AND ADDITIONAL INFORMATION PERTINENT TO THE LIGHT FIXTURE OR INSTALLATION
- COORDINATE LIGHT FIXTURE TRIM TYPE AND FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING. EACH LIGHTING CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL
- PROVIDE AS PART OF BID PRICE, AN ADDITIVE ALTERNATE FOR THE SERVICES OF AN INDEPENDENT COMMISSIONING AGENT FOR THE LIGHTING SYSTEM FUNCTIONAL TESTING, INCLUDING ALL REQUIRED REPORTS. WHERE OCCUPANCY SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULED LIGHTING CONTROLS, PHOTOSENSORS AND DAYLIGHTING CONTROLS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:
 - A. CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANCY SENSORS YIELD ACCEPTABLE PERFORMANCE. B. CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULED LIGHTING CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF. C. CONFIRM THAT THE PLACEMENT AND SENSITIVITY ADJUSTMENTS FOR PHOTOSENSOR CONTROLS REDUCE ELECTRIC LIGHT BASED ON AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS

MISCELLANEOUS CIRCUIT & INSTALLATION REQUIREMENTS:

- THE INFRASTRUCTURE FOR THE ACCESS CONTROL/ CCTV OR SECURITY ELECTRONICS SYSTEM (CONDUITS, ELECTRICAL BOXES) SHALL BE INSTALLED BY DIVISION 26. THE ACCESS CONTROL/ CCTV OR SECURITY ELECTRONICS SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL THE WIRE AND CABLE FOR THE SYSTEM AND ALL REQUIRED EQUIPMENT. INSTALLATION OF THE CONDUITS AND ELECTRICAL BOXES SHALL BE UNDER THE DIRECT SUPERVISION OF THE ACCESS CONTROL/ CCTV SYSTEM CONTRACTOR. COORDINATE EXACT LOCATIONS OF DEVICES, RACEWAY LOCATIONS SIZES AND QUANTITY, CONDUIT STUB-UPS PRIOR TO ROUGH IN.
- THE INFRASTRUCTURE FOR THE VOICE/DATA TELECOMMUNICATIONS SYSTEM (CONDUITS. ELECTRICAL BOXES) SHALL BE INSTALLED BY DIVISION 26. THE TELECOMMUNICATIONS CONTRACTOR SHALL PROVIDE AND INSTALL THE WIRE AND CABLE FOR THE SYSTEM AND ALL REQUIRED EQUIPMENT AND COMPONENTS. INSTALLATION OF THE CONDUITS AND ELECTRICAL BOXES SHALL BE UNDER THE DIRECT SUPERVISION OF THE TELECOMMUNICATIONS CONTRACTOR. COORDINATE EXACT LOCATIONS OF DEVICES, RACEWAY LOCATIONS, SIZES AND QUANTITY, CONDUIT STUB-UPS PRIOR TO ROUGH IN.
- PROVIDE 120V 20A 5-20R RECEPTACLE AT ALL FAN COIL UNITS FOR CONDENSATE PUMP POWER AND HOT WATER RECIRCULATING PUMPS, WHETHER SHOWN ON PLANS OR NOT. RECEPTACLE IS TO BE CONNECTED TO NEAREST 120V RECEPTACLE CIRCUIT.
- PROVIDE 120V CONNECTION TO ALL MOTORORIZED DAMPERS INDICATED ON MECHANICAL PLANS, WHETHER SHOWN ON DIVISION 26 DRAWINGS OR NOT. FIRE/SMOKE DAMPER CIRCUITS ARE TO BE PROVIDED FROM EMERGENCY BRANCH PANEL (LEGALLY REQUIRED BRANCH IF AVAILABLE). MOTORIZED DAMPERS WITHIN THE SAME AREA CAN BE CIRCUITED TO THE SAME CIRCUIT (I.E., DEDICATED CIRCUIT IS NOT REQUIRED).
- PROVIDE PHONE/DATA OUTLET WITH 1" RACEWAY, AND 120V RECEPTACLE ON DEDICATED CIRCUIT ADJACENT TO EACH AIR HANDLING UNIT FOR CONTROL POWER.
- PROVIDE 120V DEDICATED CIRCUIT TO EACH AIR HANDLING UNIT WITH SEPARATE CONNECTIONS T UNIT UV LIGHT, UNIT LIGHTS, UNIT RECEPTACLE, AND BI-POLAR IONIZATION FILTER WHERE PROVIDED. COORDINATE WITH DIVISION 23 SHOP DRAWINGS.
- ACCESS CONTROLLED DOOR POWER NOTE: ENSURE ALL 120V CONVENIENCE RECEPTACLE CIRCUITS UTILIZED FOR ACCESS CONTROL POWER SUPPLY ARE UNDER NORMAL OPERATION ALWAYS ENERGIZED AND NOT CONTROLLED THROUGH PLUG LOAD CONTROL / LIGHTING CONTROLS / EPO STATIONS. THIS IS APPLICABLE TO ALL ACCESS CONTROL NOTES THROUGHOUT
- ENSURE ALL SHUNT TRIP RELAYS ARE CONTINUOUS DUTY RATED OR CONTAIN A SAFETY MECHANISM THAT ENSURES RELAYS GET DE-ENERGIZED AFTER ACTUATING TO PREVENT

THE ELECTRICAL SET.

FIRE ALARM SYSTEM NOTES

- ALL FIRE ALARM EQUIPMENT IS TO BE NEW. UL LISTED FOR FIRE SERVICE, AND SHALL BE COMPATIBLE WITH THE SYSTEM BEING USED.
- ALL WIRING AND CONDUIT IS TO CONFORM TO NEC ARTICLE 760. WIRING SHALL BE UL LISTED. MINIMUM 300V TYPE FPLP PLENUM RATED SOLID COPPER OR STANDARD COPPER WITH MAXIMUM
- LOW VOLTAGE CONDUCTORS: PROVIDE CONDUCTORS IN ACCORDANCE WITH NFPA 70 AND NFPA 72, AND AS RECOMMENDED BY THE FIRE ALARM SYSTEM MANUFACTURER. CONDUCTORS SHALL BE COPPER, MINIMUM NO. 14 AWG, TWISTED SHIELDED PAIR. SURVIVABILITY: A 1-HOUR RATED CABLE ASSEMBLY SHALL BE PROVIDED FOR NOTIFICATION

APPLIANCE CIRCUITS AND ANY OTHER CIRCUITS NECESSARY FOR THE OPERATION OF THE

NOTIFICATION APPLIANCE CIRCUITS FROM THE POINT AT WHICH THEY EXIT THE CONTROL UNIT UNTIL THE POINT THAT THEY ENTER THE NOTIFICATION ZONE THAT THEY SERVE. MANUAL PULL STATIONS ARE TO BE INSTALLED AT 42" TO BOTTOM OF DEVICE AND NO HIGHER

PROVIDE MINIMUM 3/4" CONDUIT AND WIRING BETWEEN EACH FIRE ALARM DEVICE AND FROM

LAST DEVICE TO FACP UNLESS OTHERWISE NOTED. PROVIDE FIRE ALARM RELAY AND DUCT DETECTOR CONNECTED TO FIRE ALARM SYSTEM. WITHIN 5' OF ALL DUCT PENETRATIONS THROUGH FIRE/SMOKE WALLS, WHETHER INDICATED

THAN 48" TO HANDLE ABOVE FINISHED FLOOR.

- ON ELECTRICAL OR MECHANICAL PLANS OR NOT. FIRE ALARM CONTROL PANEL IS TO BE PROVIDED WITH DEDICATED 120V CIRCUIT WITH EQUIPMENT GROUND CONNECTION PER MANUFACTURER'S RECOMMENDATIONS AND ARTICLE 760 OF THE NEC. PROVIDE MINIMUM #12 AWG FOR GROUND CONNECTION. NOTE: PANEL NEUTRAL OR CONDUIT GROUND IS NOT ACCEPTABLE. 120V CIRCUIT SHALL BE FROM
- LIFE SAFETY BRANCH WHERE AVAILABLE. SECONDARY BACK-UP POWER SHALL BE PROVIDED BY INTEGRAL BATTERIES WITHIN THE FIRE ALARM CONTROL PANEL TO SUPPLY POWER TO THE SYSTEM UNDER QUIESCENT LOAD FOR A MINIMUM OF 24 HOURS, AND THEN BE CAPABLE OF AN ADDITIONAL 15 MINUTES ALARM OPERATION AT MAXIMUM CONNECTED LOAD.
- D. ALL FIRE ALARM POWER CIRCUITS SHALL HAVE A DEDICATED 120V 20A BREAKER THAT SHALL BE RED IN COLOR AND MECHANICALLY PROTECTED (LOCKABLE IN THE "ON" POSITION), MARKED AS "FIRE ALARM CIRCUIT"
- A SUPERVISORY SIGNAL SHALL BE ANNUNCIATED UPON ANY TAMPER SWITCH ACTIVATION. FAILURE OR REMOVAL OF ANY DETECTION OR MANUAL DEVICE SHALL ACTIVATE A TROUBLE
- 12. A CERTIFICATION OF COMPLETION AND UL LISTING SHALL BE ISSUED AND INSTALLED ON THE FIRE ALARM CONTROL PANEL. MINIMUM CANDELA RATING OF STROBES IS 75; "110" ADJACENT TO DEVICE INDICATES 110 CANDELA RATING. PROVIDE SYNCHRONIZATION OF STROBES IN ALL ADJACENT AREAS WHERE
- STROBES ARE VISIBLE TO EACH OTHER. 14. ALL STROBES SHALL ACTIVATE UPON INITIATION OF THE GENERAL ALARM.
- 15 ALL STROBES SHALL BE INSTALLED PER ADA MOUNTING HEIGHT REQUIREMENTS. WALL MOUNTED STROBES SHALL BE INSTALLED SO THAT THE BOTTOM OF THE STROBE LENS IS 80" AFF. 16. STROBES SHALL BE INSTALLED WITHIN 15' OF THE ENDS OF ALL CORRIDORS.
- 17. SPEAKER/STROBES, HEAT DETECTORS OR MANUAL PULL STATIONS INSTALLED OUTSIDE OR IN AREAS OPEN TO THE EXTERIOR SHALL BE WEATHERPROOF DEVICES IN APPROVED BACKBOXES.
- 18. SMOKE DETECTORS SHALL BE PHOTO-ELECTRIC ADDRESSABLE TYPE.
- 19. SMOKE DETECTORS ARE TO BE INSTALLED PER NFPA 72. WALL MOUNTED SMOKE DETECTORS SHALL BE MOUNTED 4"-12" BELOW THE CEILING AND AWAY FROM CORNERS. 20. ALL SMOKE DETECTORS SHALL BE INSTALLED A MINIMUM OF 36" AWAY FROM ANY SUPPLY
- OR RETURN AIR VENTS OR DIFFUSERS. 21. DUCT DETECTORS SHALL BE PHOTO-ELECTRIC ADDRESSABLE TYPE, AND RATED FOR VELOCITIES UP TO 5000 FT/MIN.

- 22. HEAT DETECTORS SHALL BE ADDRESSABLE, FIXED TYPE @ 135 DEG F, UNLESS OTHERWISE NOTED.
- 23. WHERE THERE IS A GENERATOR ON THE PROJECT, CIRCUIT THE REMOTE GENERATOR ANNUNCIATOR PANEL ALARM OUTPUTS TO FIRE ALARM CONTROL PANEL PER AUTHORITY HAVING JURISDICTION REQUIREMENTS.
- 24. PROVIDE AN ADDRESSABLE FIRE ALARM SYSTEM PER NFPA AND ALL STATE AND LOCAL CODE REQUIREMENTS. COMPLY WITH NFPA 72 AND ADA REQUIREMENTS, STATE CERTIFIED AND LICENSED FIRE ALARM CONTRACTOR SHALL PREPARE AND SUBMIT SIGNED AND SEALED DRAWINGS FOR THE LOCAL AUTHORITY HAVING JURISDICTION/ FIRE
- 25. FIELD VERIFY LOCATION OF AREA SMOKE DETECTORS AND HEAT DETECTORS. DO NOT LOCATE WITHIN 36" OF AN HVAC DIFFUSER (SUPPLY OR RETURN), IN DIRECT AIR FLOW PATH, OR WITHIN 36" OF A SPRINKLER HEAD UNLESS NOTED OTHERWISE. SMOKE DETECTORS FOR DOOR RELEASE SHALL BE LOCATED ON THE CENTERLINE OF THE DOOR AND A MAXIMUM OF FIVE FEET FROM THE DOOR. THE MINIMUM DISTANCE FROM THE DOOR SHALL BE THE DEPTH OF THE WALL SECTION ABOVE THE DOOR, BUT NOT LESS THAN 12".
- 26. PROVIDE LABELS FOR REMOTE ALARM INDICATORS FOR DUCT MOUNTED SMOKE DETECTORS (I.E., AHU-1 SUPPLY, AHU-2 RETURN, FIRE/SMOKE DAMPER, ETC.). DUCT DETECTORS SHOULD BE LOCATED WITHIN 6 TO 10 EQUIVALENT DIAMETERS OF STRAIGHT, UNINTERRUPTED DUCTWORK. DUCT DETECTORS FOR FIRE/SMOKE DAMPERS SHOULD BE LOCATED BETWEEN THE LAST INLET OR OUTLET UPSTREAM OF THE DAMPER AND THE FIRE INLET OR OUTLET DOWNSTREAM OF THE DAMPER, AND WITHIN FIVE FEET OF THE FIRE/SMOKE WALL.
- 27. EQUIPMENT SHUT DOWN FIRE ALARM RELAYS SHALL BE LOCATED WITHIN THREE (3) FEET OF THE EQUIPMENT CONTROLS AND THE WIRING TO THE RELAY SHALL BE MONITORED BY THE FIRE ALARM SYSTEM.
- 28. FOR EACH FIRE/SMOKE DAMPER, INTERLOCK WITH FIRE ALARM CONTROL PANEL TO CLOSE FIRE/SMOKE DAMPER AND TO CONTROL THE ASSOCIATED MECHANICAL UNIT PER THE MECHANICAL SEQUENCE OF OPERATIONS, UNLESS NOTED OTHERWISE.

COMPLETION OF CONSTRUCTION.

(IDC) AND CLASS "B" STYLE "Y" FOR NOTIFICATION DEVICE CIRCUITS (NAC), UNLESS OTHERWISE NOTED. CLASS "A" SHALL BE PROVIDED FOR WIRING FROM BUILING TO BUILDING SYSTEM SHALL BE AN ADDRESSABLE TYPE VOICE EVACUATION AND SHALL HAVE A SOUND

29. ALL NOTIFICATION APPLIANCES SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED.

30. FIRE ALARM CIRCUITS SHALL BE CLASS "B", STYLE "C" FOR INITIATION DEVICE CIRCUITS

PRESSURE LEVEL OF 15dB ABOVE AVERAGE AMBIENT SOUND LEVELS OR 5dB ABOVE MAXIMUM AMBIENT SOUND LEVEL, WHICHEVER IS GREATER.

32. ALL FIRE ALARM CABLE SHALL BE INSTALLED IN CONDUIT; NO FIRE ALARM CONDUIT SHALL BE

INSTALLED UNDER SLAB. PROVIDE MANUFACTURED RED CONDUIT UNLESS OTHERWISE NOTED.

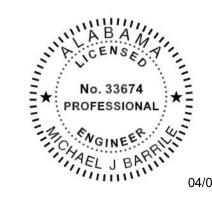
- 33. CONTRACTOR/VENDOR SHALL PREPARE FLORIDA LICENSE P.E. WORKING DRAWINGS INCORPORATING THE FIRE ALARM CRITERIA DESIGN AND CONFIRMING TO AHJ REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL MATERIAL REQUIRED PER AHJ AND DESIGN CRITERIA FOR A FULLY FUNCTIONING AND PERMITTABLE FIRE ALARM SYSTEM. SUBMIT TO DESIGN PROFESSIONAL AS A SHOP DRAWING FOR REVIEW. SUBMIT COMPLETE SIGNED & SEALED DRAWINGS TO PERMITTING AGENCY AND FOR CERTIFICATE OF OCCUPANCY. COMPLETED FIRE ALARM CERTIFICATION SHALL BE PROVIDED TO OWNER AT
- 34. WHERE A FIRE ALARM RISER IS INDICATED, IT IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO REPRESENT A COMPLETE WIRING AND DEVICE DISPLAY. ALL WIRING AND DEVICES SHALL BE IN ACCORDANCE WITH SELECTED VENDOR'S POINT-BY-POINT WIRING DIAGRAM. REFER TO FLOOR PLAN FOR DESIGN INTENT AND PROPOSED QUANTITY OF FIRE ALARM SYSTEM COMPONENTS.



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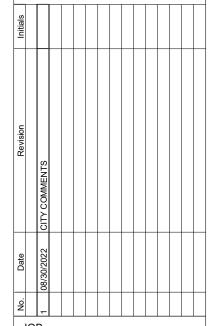
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19-028.000

PROJECT STATUS

CONFORMANCE SET

ELECTRICAL GENERAL NOTES

MARCH 24, 2023

EW001

WHERE THERE IS A DISCREPANCY **BETWEEN ABOVE GENERAL NOTES** AND SPECIFICATIONS, WHERE APPLICABLE, SPECIFICATIONS SHALL **BE FOLLOWED**

APPLICABLE CODES

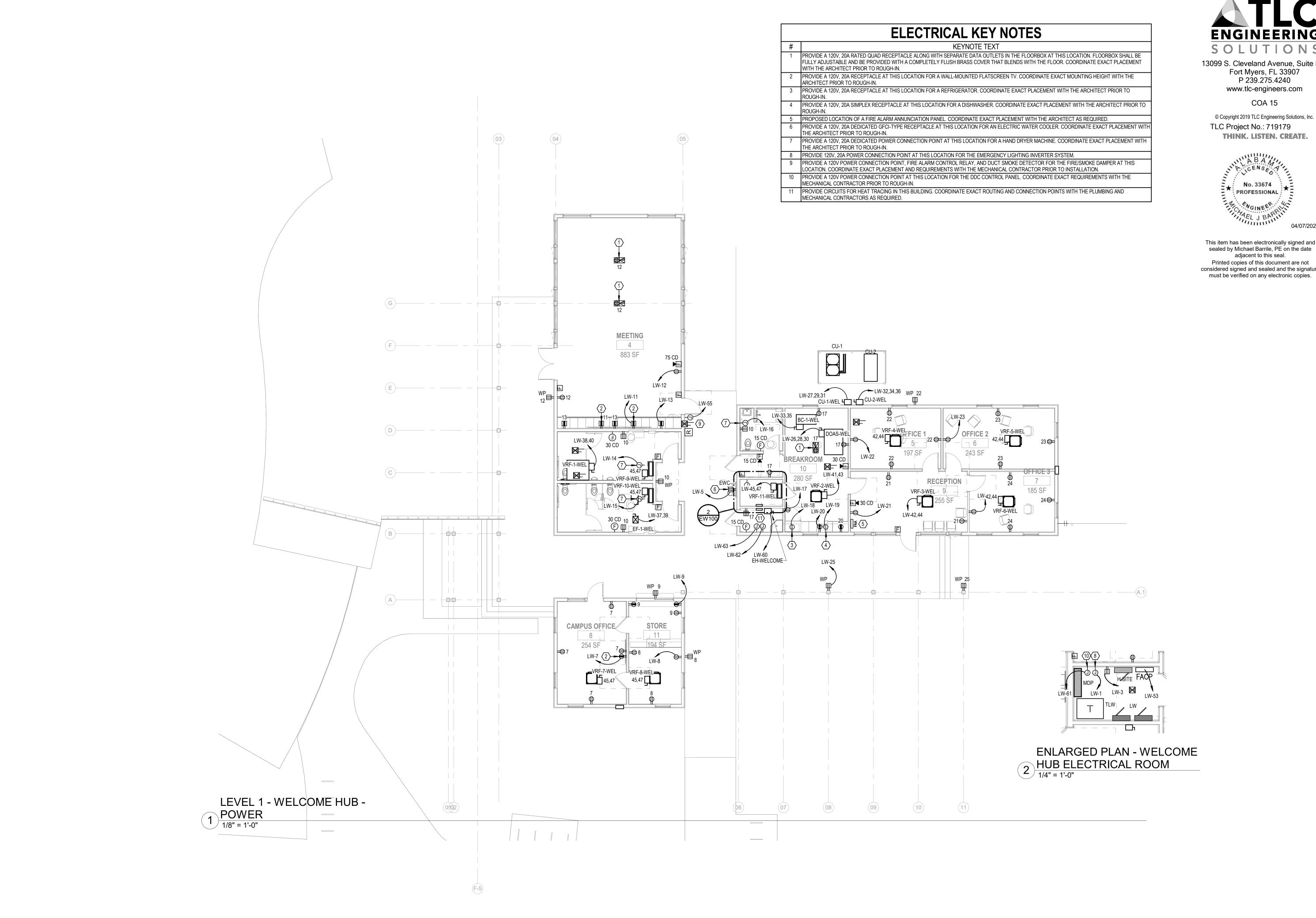
ALL WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE WITH THE CODES, STANDARDS AND PRACTICES LISTED HEREIN:

LIFE SAFETY CODE, NFPA 101. UNDERWRITERS LABORATORIES, INC. (UL) PUBLICATIONS. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) NATIONAL ELECTRICAL CODE (NEC), 2020 EDITION.

INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE). NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA). REQUIREMENTS OF LOCAL POWER COMPANY. THE AMERICANS WITH DISABILITIES ACT (ADA).

OWNER'S PUBLISHED DESIGN STANDARDS.

INTERNATIONAL BUILDING CODE. ICC 2021 ASHRAE 90.1 2013





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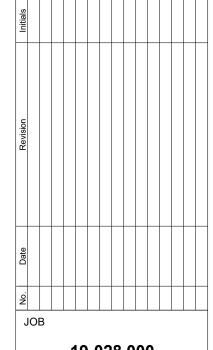
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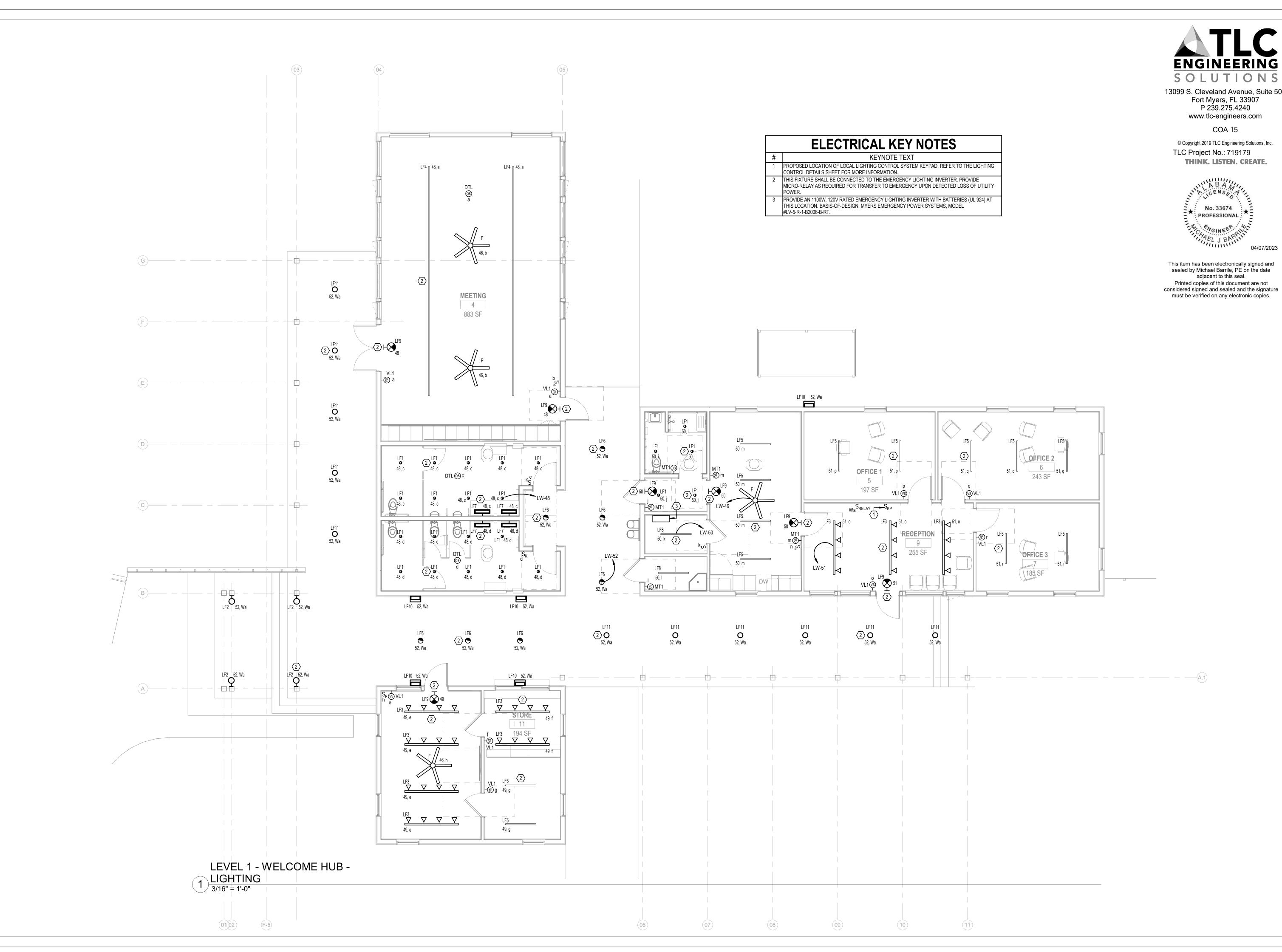
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WELCOME HUB
POWER FLOOR PLAN





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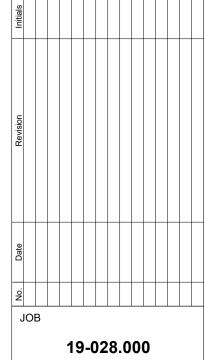
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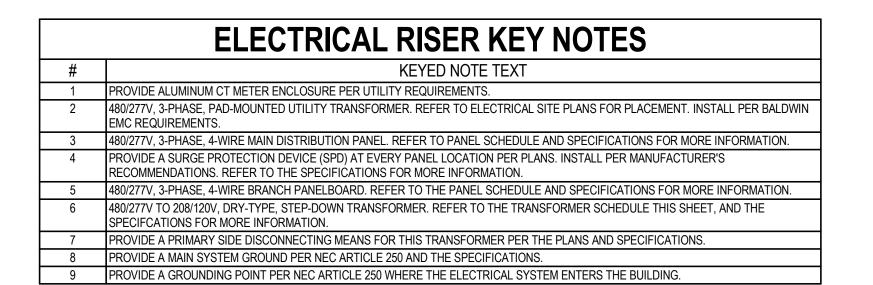


PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

WELCOME HUB
LIGHTING FLOOR PLAN



NO SCALE

TRANSF	ORMI	ER SCH	IEDULE	(COPP	ER WINDINGS)
TRANSFORMER	KVA		PRIMARY VOLTAGE (D=DFLTA Y=	SECONDARY VOLTAGE (D=DELTA,Y=	GROUNDING ELECTRODE
NAME	RATING	PHASE	WYE)	WYE)	CONDUCTOR
TLF	30	3	480D	120/208Y	#6
TLG	45	3	480D	120/208Y	#6
TLH	75	3	480D	120/208Y	#2
TLW	75	3	480D	120/208Y	#2
TLM	30	3	480D	120/208Y	#6
TLFS	15	3	480D	120/208Y	#8
TLMS	30	3	480D	120/208Y	#6
TLJ	15	3	480D	120/208Y	#8

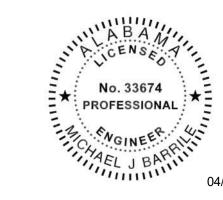


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Revision									
Date									
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PROJECT STATUS **CONFORMANCE SET**

MARCH 24, 2023

ELECTRICAL RISER DIAGRAM & SCHEDULES

	LMS SPD LMS SPD LMS SPD SEC. 1 SPD SEC. 1 TISS TSON TISS
UTILITY XFMR 480/277V	MDP SPD LW LW SEC.1 SEC.2 (TYP.) (TYP
	RISER DIAGRAM - WELCOME HUB NOTE: SCOPE OF WORK FOR THIS PARTICULAR BUILDING DRAWING SET ON THE RISER IS SHOWN IN BOLD. ALL OTHER PROJECT WORK NOT DIRECTLY ASSOCIATED WITH THIS BUILDING IS HALF-TONED.

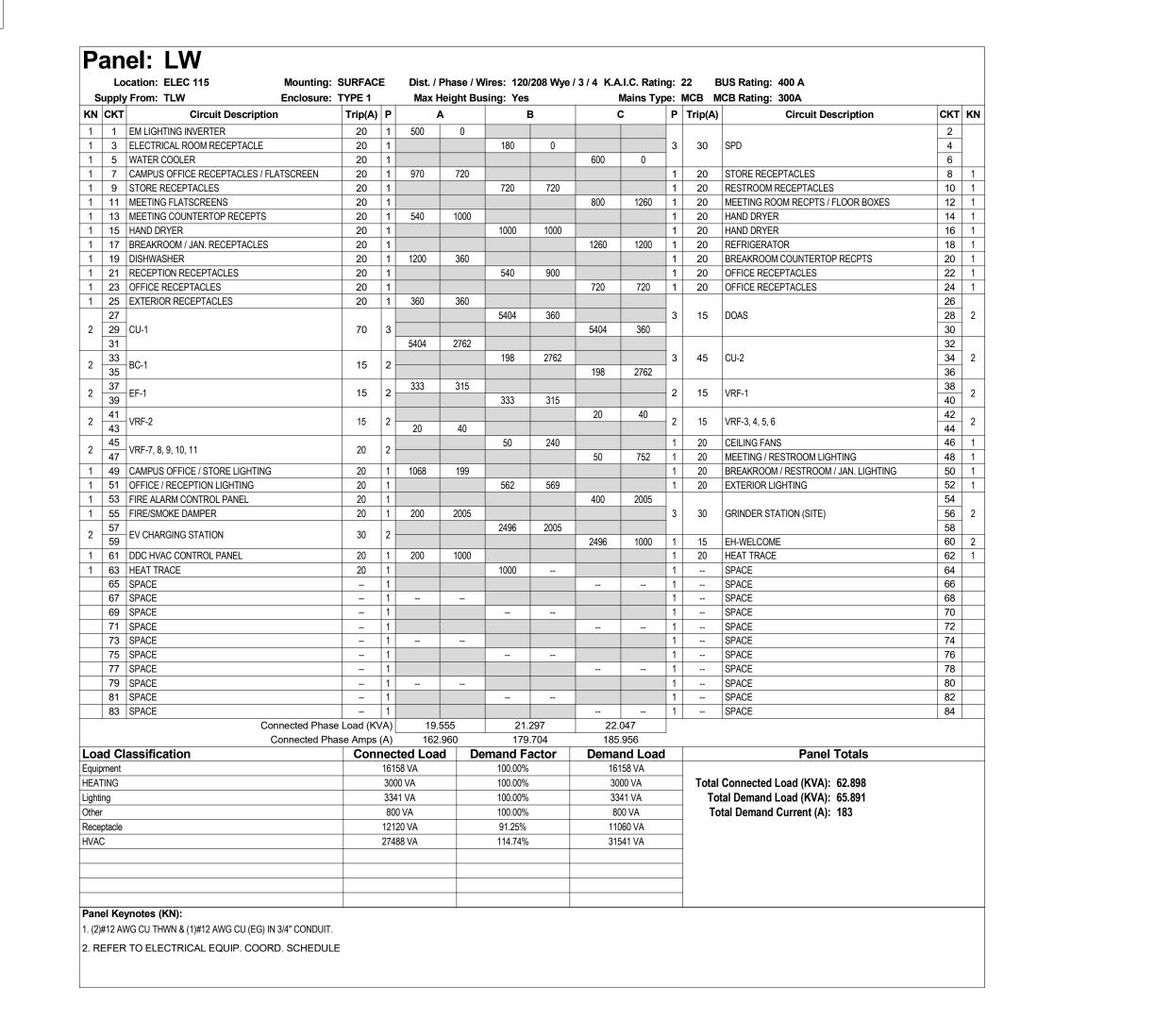
			ELECTRICA	AL LOAD	SUMMA	ARY			
PANEL NAME	SUPPLIED FROM	AIC RATING	DEMAND (VA)	DEMAND (A)	VOLTAGE	PHASE	NO. OF SPACES/POLES	MAINS TYPE	ENCLOSURE TYPE
			0 VA	Not Computed		Not Computed			
H-SITE	MDP	42	825 VA	1 A	480/277V	3	42	MLO	TYPE 1
LF	TLF	10	11608 VA	32 A	208/120V	3	42	MCB	TYPE 1
LFS	TLFS	10	3708 VA	10 A	208/120V	3	42	MCB	TYPE 1
LG	TLG	10	24656 VA	68 A	208/120V	3	42	MCB	TYPE 1
LH	TLH	10	58979 VA	164 A	208/120V	3	84	MCB	TYPE 1
LJ	TLJ	10	2274 VA	6 A	208/120V	3	42	MCB	TYPE 1
LM	TLM	10	18687 VA	52 A	208/120V	3	42	MCB	TYPE 1
LMS	TLMS	10	32048 VA	89 A	208/120V	3	42	MCB	TYPE 1
LW	TLW	22	65891 VA	183 A	208/120V	3	84	MCB	TYPE 1
MDP		65	199467 VA	240 A	480/277V	3		MCB	TYPE 1

		С	COPPER CONDUCTOR/FEEDER SCHEDULE											
		PHASE	NEUTRAL	GROUNDING	CONDUIT									
		CONDUCTORS	CONDUCTORS	CONDUCTORS	SIZE									
	NUMBER OF	(QUANTITY)	(QUANTITY)	(QUANTITY)	(QUANTITY)									
SYMBOL	SETS	SIZE - AWG	SIZE - AWG	SIZE - AWG	SIZE	REMARKS								
125	1	(3) #1	(1) #1	(1) #6	(1) 1 1/2"									
MTR/CT	1				(1) 1-1/4"	GALVANIZED RIGID CONDUIT WITH WIRING AND MOUNTING PER UTILITY COMPANY REQUIREMENTS								
SVC300	1	(3) #350 KCMIL	(1) #350 KCMIL		(1) 3"									
T15P	1	(3) #10		(1) #10	(1) 3/4"	15KVA TRANSFORMER PRIMARY								
T15S	1	(3) #4	(1) #4	(1) #8	(1) 1 1/4"	15KVA TRANSFORMER SECONDARY								
T30P	1	(3) #6		(1) #10	(1) 1"	30KVA TRANSFORMER PRIMARY								
T30S	1	(3) #1	(1) #1	(1) #6	(1) 1 1/2"	30KVA TRANSFORMER SECONDARY								
T45P	1	(3) #4		(1) #8	(1) 1"	45KVA TRANSFORMER PRIMARY								
T45S	1	(3) #1/0	(1) #1/0	(1) #6	(1) 2"	45KVA TRANSFORMER SECONDARY								
T75P	1	(3) #2		(1) #6	(1) 1 1/4"	75KVA TRANSFORMER PRIMARY								
T75S	1	(3) #4/0	(1) #4/0	(1) #2	(1) 2 1/2"	75KVA TRANSFORMER SECONDARY								

									CIRCUIT		STARTER			DISC	CONNECT		
TAG	HP	LOAD	FLA (AMPS)	VOLTAGE	PHASE	CONDUIT/WIRE (AWG)	PANEL	NUMBER	NEMA SIZE	ENCLOS. TYPE	FURN. BY (DIV.)	SWITCH SIZE	NO. OF POLES	ENCLOS. TYPE	FURN. BY (DIV.)	COMMENTS	
BC-1-WEL		395 VA	1.9A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	33,35				20A	2	NEMA 1	26		
CU-1-WEL		16212 VA	45A	208 V	3	1" CONDUIT WITH 3#6 AND 1#8 GROUND	LW	27,29,31				60A	3	NEMA 3R	26		
CU-2-WEL		8286 VA	23A	208 V	3	1" CONDUIT WITH 3#8 AND 1#10 GROUND	LW	32,34,36				60A	3	NEMA 3R	26		
DOAS-WEL	1.5	1080 VA	3.0A	208 V	3	3/4" CONDUIT WITH 3#12 AND 1#12 GROUND	LW	26,28,30				30A	3	NEMA 1	26		
EF-1-WEL	1/4	665 VA	3.2A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	37,39	00	NEMA 1	26	20A	2	NEMA 1	26		
EH-WELCOME		1000 VA	8.3A	120 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	60				30A	2	NEMA 1	26		
VRF-1-WEL		630 VA	7.7A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	38,40				20A	2	NEMA 1	26		
VRF-2-WEL		40 VA	0.5A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	41,43				20A	2	NEMA 1	26		
VRF-3-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	42,44				20A	2	NEMA 1	26		
VRF-4-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	42,44				20A	2	NEMA 1	26		
VRF-5-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	42,44				20A	2	NEMA 1	26		
VRF-6-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	42,44				20A	2	NEMA 1	26		
VRF-7-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	45,47				20A	2	NEMA 1	26		
VRF-8-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	45,47				20A	2	NEMA 1	26		
VRF-9-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	45,47				20A	2	NEMA 1	26		
VRF-10-WEL		20 VA	0.3A	208 V	1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	45,47				20A	2	NEMA 1	26		
VRF-11-WEL		20 VA	0.3A	208 V	1 1	3/4" CONDUIT WITH 2#12 AND 1#12 GROUND	LW	45,47				20A	2	NEMA 1	26		

Sı		cation: ELEC 115 Mounting From: MDP Enclosure	: SURFAC	_			using: Yes	_	/3/4 K.A	Mains Ty	_		US Rating: 125 A CB Rating:	
	CKT	Circuit Description	Trip(A)	Р		VA)		(VA)		(VA)		Trip(A)	Circuit Description	СКТ
1	1	SITE LIGHTING	20	1	825	0								2
	3	SPARE	20	1			0	0			3	30	SPD	4
1	5	SPARE	20	1					0	0				6
I	7	SPARE	20	1	0						1		SPACE	8
Ī	9	SPACE		1				-			1		SPACE	10
	11	SPACE		1							1		SPACE	12
T	13	SPACE		1							1		SPACE	14
T	15	SPACE		1							1		SPACE	16
Ī	17	SPACE		1							1		SPACE	18
Ī	19	SPACE		1							1		SPACE	20
T	21	SPACE		1							1		SPACE	22
T	23	SPACE		1							1		SPACE	24
1	25	SPACE		1							1		SPACE	26
T	27	SPACE		1							1		SPACE	28
Ť	29	SPACE		1							1		SPACE	30
T	31	SPACE		1							1		SPACE	32
T	33	SPACE		1			-	-			1		SPACE	34
T	35	SPACE		1							1		SPACE	36
Ť	37	SPACE		1							1		SPACE	38
1	39	SPACE		1							1		SPACE	40
İ		SPACE		1							1		SPACE	42
_		Connected Pha	se Load (K\	/A)	3.0	325	0.0	000	0.0	000				
		Connected P	•	′ L	2.9	977	0.0	000	0.0	000	_			
a	lO t	assification			ted Loa	d D	emand F	actor	Dema	nd Loa	d		Panel Totals	
ntir					5 VA	-	100.00%			25 VA	-			
	<u> </u>											Total	Connected Load (KVA): 0.825	
													al Demand Load (KVA): 0.825	
													tal Demand Current (A): 1	
													tai bemana carrent (A).	
_														
_		ynotes (KN):												

Supp	ly From: Encl	osure: TYPE	1	Max	Height I	Busing: Y	es		Mains 1	Гуре: МСВ	MCB Rating: 300A	
СКТ	Circuit Descr	ption		# of Poles	Frame (A)	Trip Rating (A)	Load (KV	A)			Remarks	
	SPD	•		3	60 A	60 A	0.00					
2	TRANSFORMER TLF			3	100 A	50 A	11.60		FARM HUB			
3	TRANSFORMER TLFS			3	100 A	30 A	3.70		FIELD SHED			
4	TRANSFORMER TLG			3	100 A	70 A	26.80		GATHERING HU	JB		
5	TRANSFORMER TLMS			3	100 A	50 A	31.46		MAINTENANCE	SHED		
6	TRANSFORMER TLH			3	200 A	175 A	64.66		MAKER HUB			
7	TRANSFORMER TLM			3	100 A	50 A	18.67		MOBILITY HUB			
8	TRANSFORMER TLW			3	200 A	175 A	62.90		WELCOME HUE	3		
9	TRANSFORMER TLJ			3	100 A	30 A	2.27		WETLAND HUB	i		
10	PANEL H-SITE			3	200 A	125 A	0.82		480/277V SITE E	ELEMENTS		
11												
12												
Load	Classification		Conne	ected L	.oad	Deman	d Factor	De	emand Load		Panel Totals	
Equip	ment		86	958 V <i>A</i>	١	100.	00%		86958 VA			
HEA	TING		23	250 VA	١	100.	00%		23250 VA	Total C	Connected Load (KVA): 223	
HVA			34	465 VA	١	111.	76%		38518 VA	Total Con	nected Demand (KVA): 199	
Lighti	ng		9:	384 VA		100.	00%		9384 VA	Tota	al Demand Current (A): 240	
Other			3(600 VA		100.	00%		3600 VA			
Rece	ptacle		64320 V	4		57.	77%	37160	VA			
EQUI	P.		800 VA			100.	00%	300 V	4			
Swite	chboard Notes:									1		



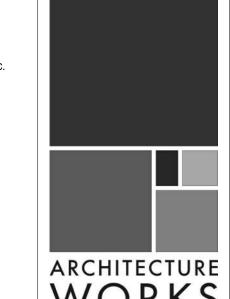


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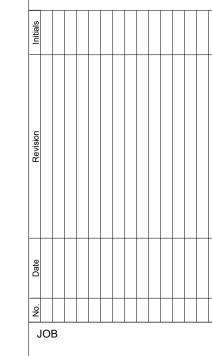
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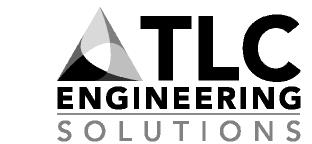
19-028.000

PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023

PANEL SCHEDULES



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FIRE ALARM RISER, **DETAILS, AND** NOTES

EW400

FIRE ALARM SYSTEM SEQUENCE OF OPERATION

TYPE OF SYSTEM:

- FULLY ADDRESSABLE FIRE ALARM SYSTEM AND STANDBY BATTERY MONITORED BY CENTRAL STATION

- 24 HOURS OF STANDBY, 5 MINUTES OF ALARM USED FOR BATTERY CALCULATIONS

- VOICE EVACUATION WITH PRE-RECORDED DIGITAL MESSAGE AND MANUAL ANNOUNCEMENT VIA MICROPHONE

TYPE OF CIRCUITS: - SIGNALING LINE CIRCUIT (SLC) = CLASS B, SURVIVABILITY LEVEL 0

- NOTIFICATION APPLIANCE CIRCUIT (NAC) = CLASS B, SURVIVABILITY LEVEL 0

WIRING METHOD:

- "FPLR" CABLE IN CONDUIT.

- WET LOCATION LISTED CABLE FOR UNDERGROUND, SLAB, AND UNCONDITIONED SPACE CONDUIT.

- ACTIVATION OF AN ALARM INITIATING DEVICE WILL CAUSE THE NOTIFICATION DEVICES (SPEAKERS AND STROBES) TO ACTIVATE THROUGHOUT THE BUILDINGS. ALL ALARM CONDITIONS WILL BE ANNUNCIATED AT THE FIRE ALARM CONTROL PANEL (FACP) AND REMOTE ANNUNCIATOR AND WILL BE TRANSMITTED TO THE

OWNER-SELECTED OFFSITE MONITORING COMPANY. - SUPERVISORY CONDITIONS WILL BE ANNUNCIATED AT THE FACP AND REMOTE ANNUNCIATOR. A SUPERVISORY CONDITION WILL BE TRANSMITTED BY THE FACP TO THE

OWNER-SELECTED OFFSITE MONITORING COMPANY. - TROUBLE CONDITIONS WILL BE ANNUNCIATED AT THE FACP AND REMOTE ANNUNCIATOR. A TROUBLE CONDITION WILL BE TRANSMITTED BY THE FACP TO THE OWNER-SELECTED OFFSITE MONITORING COMPANY.

- SPRINKLER FLOW SWITCH : THE FIRE PROTECTION SPRINKLER SYSTEM MAIN FLOW SWITCH SHALL BE CONNECTED AS AN ALARM INITIATING DEVICE AND SHALL BE ANNUNCIATED SEPARATELY. FIRE PROTECTION SPRINKLER SYSTEM ZONE FLOW SWITCHES SHALL BE CONNECTED AS AN AUTOMATIC INITIATING DEVICE AND EACH SWITCH SHALL BE SEPARATELY ANNUNCIATED.

- SPRINKLER FLOW SWITCH SHALL TRANSMIT A SEPARATE ALARM SIGNAL FROM OTHER ALARM CONDITIONS.

- SPRINKLER SYSTEM TAMPER SWITCH: TAMPER SWITCHES CONNECTED TO THE VALVES OF THE

FIRE PROTECTION SYSTEM SHALL BE ANNUNCIATED AS SUPERVISORY CONDITION. - ALL SIGNALS SHALL BE ANNUNCIATED AT THE

ALARM SILENCE:

- AUDIBLE NOTIFICATION DEVICES MAY BE SILENCED.

- VISUAL DEVICES WILL REMAIN ON UNTIL THE SYSTEM IS RESET.

INITIATING DEVICE OPERATIONS:

PULL STATIONS WILL CAUSE A GENERAL ALARM.

- SPRINKLER FLOW SWITCHES WILL CAUSE A GENERAL ALARM.
- DUCT DETECTORS WILL CAUSE A SUPERVISORY CONDITION.
- ANY TAMPER SWITCH WILL CAUSE A SUPERVISORY CONDITION. - SMOKE/HEAT DETECTORS WILL CAUSE A GENERAL ALARM AFTER AN ALARM VERIFICATION PROCESS.
- **AUXILIARY CONTROLS:**
- AIR HANDLING UNITS CONTROLLED BY THE FIRE ALARM SYSTEM WILL SHUTDOWN THROUGHOUT THE BUILDING ON AN ALARM CONDITION.
 UPON SILENCING FIRE ALARM SYSTEM HVAC SYSTEM SHALL AUTOMATICALLY RETURN TO NORMAL OPERATION STATUS

FIRE ALARM SYSTEM WIRE SCHEDULE

- A SIGNALLING LINE CIRCUIT: 2 CONDUCTOR #18 AWG, SOLID, SHIELDED, TWISTED PAIRS. TYPE "FPLR" CABLE. CLASS B / SURVIVABILITY LEVEL 0
- NOTIFICATION APPLIANCE CIRCUIT: 2 CONDUCTOR #14 AWG, SOLID, SHIELDED CABLE. TYPE "FPLR" CABLE. CLASS B / SURVIVABILITY LEVEL 0
- NITIATING DEVICE CIRCUIT (IDC): 2 CONDUCTOR #18 AWG, SOLID, SHIELDED TWISTED PAIRS. TYPE "FPLR" CABLE.
- SIGNALLING LINE CIRCUIT: 2 CONDUCTOR #18 AWG, SOLID, SHIELDED, TWISTED PAIRS.

 TYPE "FPLR" CABLE. CLASS A / SURVIVABILITY LEVEL 3. (INTER-BUILDING)

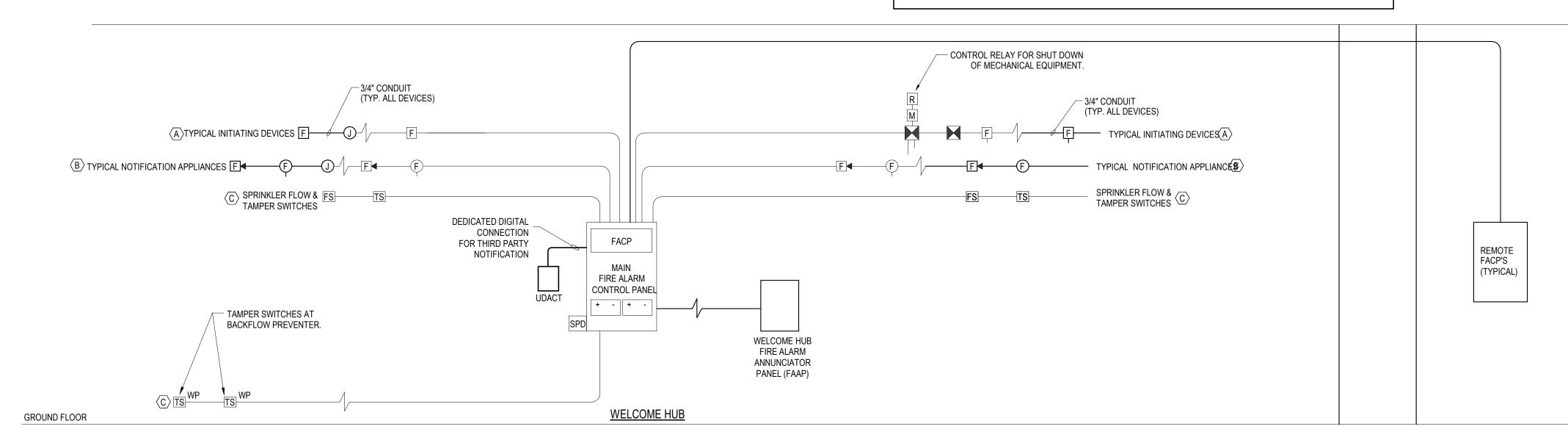
* FIRE ALARM SYSTEM WIRING SHALL BE POWER LIMITED.

- * ALL WIRING BELOW GRADE TO BE LISTED FOR WET LOCATIONS.
- * REFER TO POWER AND SYSTEMS PLANS FOR DEVICE LOCATION AND QUANITY.
- * ALL STROBES SHALL BE 75cd MINIMUM UNLESS OTHERWISE NOTED ON THE FLOOR PLANS.

FIRE ALARM NOTES:

- 1. ALL EQUIPMENT AND DEVICES SHALL BE U.L. LISTED.
- 2. ALL WIRING SHALL CONFORM TO NFPA 72 AND NEC ARTICLE 760 USING FPLR COPPER CABLING IN CONDUIT.
- 3. COLOR CODING AND PROPER LABELING SHALL APPLY TO ALL SYSTEMS WIRING.
- 4. ROUTE FIRE ALARM SYSTEM CONDUIT ACCORDING TO FIRE ALARM CONTRACTOR SHOP DRAWINGS. COORDINATE WITH THE ELECTRICAL CONTRACTOR.
- 5. ALL FIRE ALARM VISUAL SIGNALS IN OPEN AREA SHALL HAVE A THREE PLUS TEMPORAL PATTERN. MULTIPLE STROBES SIMULTANEOUSLY IN VIEW SHALL BE SYNCHRONIZED.
- 6. ALL FIRE ALARM AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL AT LEAST 15 dB ABOVE THE AVERAGE AMBIENT OR 5 dB ABOVE THE MAXIMUM SOUND LEVEL, WHICHEVER IS GREATER.
- 7. MOUNT FIRE ALARM SYSTEM STROBES AND HORN/STROBES AT 80" AFF OR 6" BELOW CEILING, WHICH EVER IS LOWER.
- 8. SMOKE DETECTOR INSTALLATIONS SHALL BE AS PER NFPA 72.
- 9. ADDRESSABLE MONITOR MODULES SHALL BE PROVIDED WITHIN 3' OF ANY NON-ADDRESSABLE INITIATING DEVICES.
- 10. FIRE ALARM CONTROL PANEL SHALL INCLUDE BATTERIES.
- 11. PROVIDE CERTIFICATE OF COMPLETION AT THE FINAL INSPECTION OF THE FIRE ALARM SYSTEM.
- 12. FIRE ALARM CONTRACTOR SHALL PROVIDE A DETAILED SET OF SHOP DRAWINGS (INCLUDING DEVICE CUT-SHEETS), A COMPLETE POINT TO POINT WIRING DIAGRAM, COMPLETE BATTERY CALCULATIONS, & VOLTAGE DROP CALCULATIONS TO THE AUTHORITY HAVING JURISDICTION AT THE TIME OF APPLICATION FOR BUILDING PERMIT.
- 13. PROVIDE THE OWNER WITH A COMPLETE FIRE ALARM SYSTEM OPERATING AND INSTALLATION MANUAL COVERING ALL SYSTEM EQUIPMENT INSTALLED FOR THIS PROJECT. KEEP AT THE FIRE ALARM CONTROL PANEL.
- 14. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY AN OFFSITE CENTRAL STATION.
- 15. PROVIDE A SURGE PROTECTION DEVICE (SPD) AT ALL POINTS WHERE CLASS A WIRING LEAVES AND ENTERS ANY BUILDING.

OTHER BUILDINGS



FIRE ALARM RISER DIAGRAM

LIGHTING CONTROL SYSTEM SPECIFICATIONS

1. LIGHTING CONTROL SYSTEM SHALL BE DIGITAL AND CONSIST OF A MASTER LCP WITH UP TO 32 INDIVIDUAL RELAYS, SLAVE LCPS WITH UP TO 32 INDIVIDUAL RELAYS IN EACH PANEL, A MICRO LCP WITH UP TO 4 INDIVIDUAL RELAYS, WHICH CAN BE SWITCHABLE OR 0-10VDC DIMMABLE, DIGITAL SWITCHES AND DIGITAL INTERFACE CARDS. ALL SYSTEM COMPONENTS SHALL CONNECT IN A "DAISY CHAIN" STYLE CONFIGURATION AND BE CONTROLLED VIA CATEGORY 5 PATCH CABLE WITH RJ45 CONNECTORS, PROVIDING REAL-TIME TWO WAY COMMUNICATION WITH EACH SYSTEM COMPONENT. ANALOG SYSTEMS ARE NOT ACCEPTABLE. ALL CABLES SUPPLIED BY CONTRACTOR.

2. RELAY PANELS SHALL BE PRE-WIRED, PRE-ASSEMBLED, PROGRAMMED TO OWNER REQUIREMENTS, AND LISTED TO UL 936 (EMERGENCY LIGHTING RELAYS INTERMIXED). PANELS SHALL BE PROVIDED WITH DUAL VOLTAGE POWER SUPPLY AND 16 GAGE BARRIERS TO SEPARATE HIGH AND LOW VOLTAGE POWER.

3. STANDARD RELAYS SHALL HAVE NORMALLY CLOSED (NC) CONTACTS RATED FOR 120/277V 20A TUNGSTEN OR BALLAST. STANDARD RELAYS SHALL BE ZERO-CROSS TYPE, NO EXCEPTIONS. OPTIONAL 600V, 200 POLE RELAY, NO OR NC, AND 347 SINGLE POLE RELAY SHALL BE AVAILABLE.

4. RELAY PANEL ELECTRONICS SHALL PROVIDE CURRENT VISUAL STATUS AND CONTROL OF EACH RELAY OR ZONE. ALL SYSTEM CONTROL ELECTRONICS SHALL STORE PROGRAMMING IN A NON-VOLATILE MEMORY AND PROVIDE 10 YEAR BATTERY BACK UP FOR TIME OF DAY.

5. LIGHTING CONTROL PANEL SHALL CONSIST OF A MASTER AND SLAVE PANEL(S) CONTROLLED BY A 32-CHANNEL DIGITAL TIME CLOCK (DTC) THAT CONTROLS AND PROGRAMS THE ENTIRE LIGHTING CONTROL SYSTEM. THE DTC SHALL SUPPLY ALL TIME FUNCTIONS AND ACCEPT OTHER INPUTS. THE DTC SHALL ACCEPT CONTROL LOCALLY USING BUILT IN BUTTON PROMPTS AND USE OF AN 8 LINE 21-LETTER DISPLAY, FROM A COMPUTER, MODEM, ETHERNET OR INTERNET. ALL COMMANDS SHALL BE IN PLAIN ENGLISH. HELP PAGES SHALL DISPLAY ON THE DTC SCREEN.

6. ALL SWITCHES SHALL COMMUNICATE VIA RS485, CAT 5 PATCH CABLE WITH RJ45 CONNECTORS. CONTACT CLOSURE STYLE SWITCHES ARE NOT ACCEPTABLE. ANY SWITCH BUTTON FUNCTION SHALL BE ABLE TO BE CHANGED LOCALLY (AT THE DTC OR A PC) OR REMOTELY, VIA MODEM ETHERNET OR INTERNET. REFER TO SINGLE LINE DRAWING FOR WIRING DETAILS. SWITCHES WHICH CANNOT BE PROGRAMMED REMOTELY SHALL NOT BE ACCEPTABLE.

7. PHOTOCELL, EXTERIOR (PCO) OR INTERNET (PCI), SHALL PROVIDE READOUT ON THE DTC SCREEN IN NUMBER VALUES ANALOGOUS TO FOOT CANDLES. EACH PHOTOCELL SHALL PROVIDE A MINIMUM OF 14 TRIGGER POINTS. EACH TRIGGER CAN BE PROGRAMMED TO CONTROL ANY RELAY OR ZONE. EACH TRIGGER SHALL BE SET THROUGH DTC , LOCALLY OR REMOTELY. PHOTOCELLS THAT REQUIRE THE USE OF SET SCREWS OR MANUAL ADJUSTMENTS AT THE PHOTOCELL CONTROL CARD SHALL NOT BE ACCEPTABLE.

8. STANDARD LIGHTING CONTROL SYSTEM SOFTWARE, PRE-INSTALLED INTO THE DTC, SHALL CONSIST OF AND USE STANDARD GRAPHICAL MANAGEMENT SOFTWARE (GMS) PAGES. GMS SHALL PROVIDE VIA LOCAL OR REMOTE PC A VISUAL REPRESENTATION OF EACH DEVICE ON THE BUS, SHOW REAL TIME STATUS AND THE ABILITY TO CHANGE THE STATUS OF ANY INDIVIDUAL DEVICE, RELAY OR ZONE. OPTIONAL SOFTWARE THAT ACCEPTS JOB SPECIFIC GRAPHICS SHALL BE AVAILABLE. NO EXCEPTIONS.

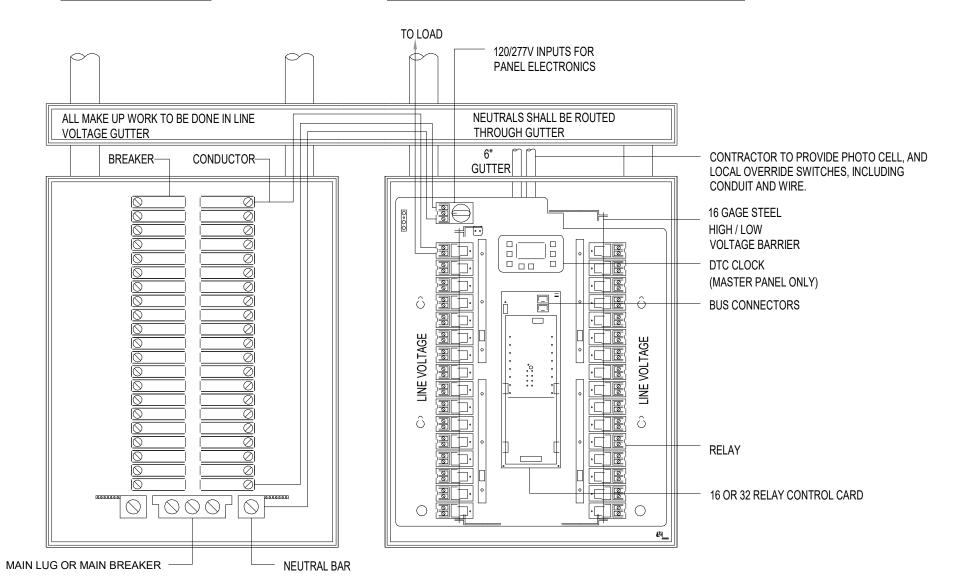
9. TELEPHONE FACTORY DIAL-UP SUPPORT SHALL BE AVAILABLE AT NO ADDITIONAL COST TO THE EC OR OWNER BOTH DURING AND AFTER THE 3 YEAR WARRANTY PERIOD. FACTORY TO PREPROGRAM THE LIGHTING CONTROL SYSTEM PER PLANS AND APPROVED SUBMITTAL. THE LIGHTING CONTROL MANUFACTURER, AT NO ADDED COST, SHALL PROVIDE ADDITIONAL PROGRAMMING VIA MODEM AS REQUIRED BY THE EC OR OWNER FOR THE OPERATIONAL LIFE OF THE SYSTEM. MANUFACTURER WARRANTS THE DTC SOFTWARE CAN BE UPGRADED AND MONITORED REMOTELY. NO EXCEPTIONS.

10. SHOP DRAWINGS: SUBMIT DIMENSIONED DRAWINGS OF LIGHTING CONTROL SYSTEM AND ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, RELAY PANELS, SWITCHES, DTC, PHOTOCELLS AND OTHER INTERFACES. DRAWINGS SHALL INDICATE EXACT LOCATION AND PROGRAMMING OF EACH DEVICE. INDICATE ALL TIME SCHEDULES AND SWITCH BUTTON ENGRAVING.

11. LIGHTING CONTROL SYSTEM SHALL ACCOMMODATE DAYLIGHT HARVESTING THROUGH DAYLIGHTING

TYPICAL BRANCH PANELBOARD

TYPICAL LIGHTING RELAY PANEL



NOTE: COORDINATE CONTROL ZONE & SWITCHING LAYOUT WITH OWNER PRIOR TO PROGRAMMING & INSTALLATION.

NOTE: CONTRACTOR SHALL PROVIDE SEEMLESS CONNECTIVITY AMONG ALL THE BUILDINGS SHOWN WITH KEYPADS, LIGHTING CONTROL PANELS, AND FIXTURES DESIGNATED WITH RELAY-BASED SWITCH LEGS.

PROVIDE SURGE PROTECTION DEVICES (SPD'S) AT ALL POINTS WHERE LIGHTING CONTROL SYSTEM WIRING ENTERS ANY BUILDING FROM THE

NOTE:

- ALL LIGHTING ZONES/RELAYS ARE INDIVIDUALLY PROGRAMMABLE, FOR CONTROL BY BUILDING AUTOMATION SYSTEM INTEGRAL ELECTRONIC CLOCK, PHOTOCELL OR MANUAL OVERRIDE.
- REFER TO MANUFACTURER PROVIDED SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TO BE MOUNTED WITHIN 12" OF PANEL



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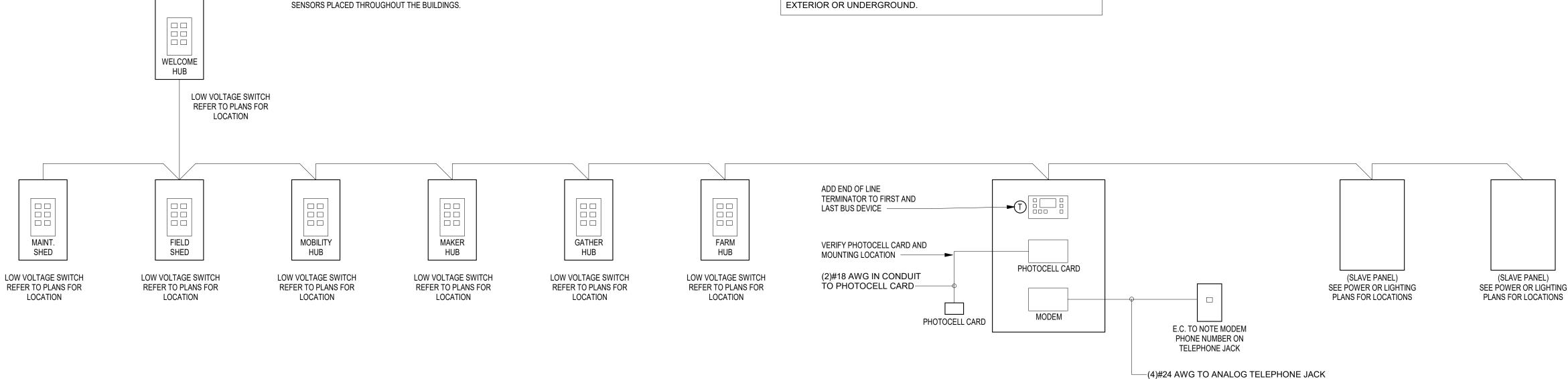
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MARCH 24, 2023

SHEET LIGHTING CONTROLS, NOTES, AND SCHEDULES



	OCCUPANCY / VACANCY SENSOR SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER	MODEL	Type Comments						
DTL	CEILING MOUNTED, DUAL TECHNOLOGY, LINE VOLTAGE OCCUPANCY SENSOR	GREENGATE WATTSTOPPER ACUITY	OAC-DT-2000-MV DT-355 CMR-PDT-9/10	AUTO ON / AUTO OFF - PROVIDE POWER PACKS AND OTHER ANCILLIARY ITEMS AS REQUIRED						
MT1	WALL-MOUNTED, DUAL TECHNOLOGY, LINE VOLTAGE OCCUPANCY SENSOR WITH SINGLE LEVEL CONTROL	GREENGATE WATTSTOPPER ACUITY LEVITON	ONW-D-1001-MV DSW-100 WSX-PDT-XX OSSMT-MDW	AUTO ON / AUTO OFF WITH PUSH-BUTTON OVERRIDE						
Standard 2										
VL1	WALL-MOUNTED, LINE VOLTAGE, DUAL TECHNOLOGY VACANCY SENSOR WITH SINGLE LEVEL CONTROL	GREENGATE WATTSTOPPER ACUITY LEVITON	VNW-D-1001-MV DSW-100 WSX-PDT-SA-XX OSSMD-MDW	MANUAL ON / AUTO OFF WITH PUSH-BUTTON OVERRIDE						

	LIGHTING CONTROL RELAY SCHEDULE - WELCOME HUB										
Relay Number	Panel	Circuit Number	Switch Type	Controlled By	Zone Designation	Note	Voltage	Area Controlled			
1	LW	52	RELAY	ASTRONOMICAL TIME-CLOCK WITH KEYPAD OVERRIDE	Wa			WELCOME HUB EXTERIOR LIGHTING			



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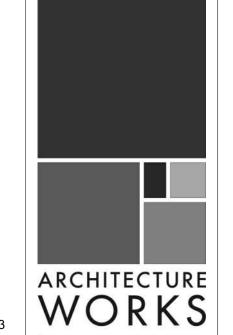
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		LIGHT	ING FIXTURE SCHEDULE		
TYPE	DESCRIPTION	MANUFACTURER	MODEL	TYPE	COMMENTS
F	ARCHITECTURAL GRADE CEILING FAN	BY ARCHITECT	SELECTIONS BY ARCHITECT	LED	CEILING FANS TO BE SELECTED BY THE ARCHITECT. LINE-ITEM SHOWN FOR REFERENCE ONLY.
LF1	4" LED TUNABLE WHITE DOWNLIGHT	ALPHABET PORTFOLIO BOLD	NU4-RD-TW-13LM-2765-95-HE45-UNV-MOUNTING-COLOR LD4B15DE010W2N2765 EU4B1020W2N902765 4LBXXX CRF4-NIC-T-U-S-0-TW-F-FINISH-FINISH-11-D	LED	MOUNTING SELECTION TO BE DETERMINED BY CONTRACTOR. COLOR SELECTIONS & LIGHT COLOR TUNING TO BE SELECTED BY ARCHITECT.
LF2	DECORATIVE LED WALL CYLINDER FIXTURE	BEGA LIGMAN FC LIGHTING	24034 K35 UMV-30002-20W-N-W35 FCC400-11-WM-UNV-935-10L-FINISH-50-LD	LED	MOUNT FIXTURE 10'-0" ABOVE FINISHED GRADE, FINISH TO BE SELECTED BY ARCHITECT, VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN
LF3	RECESSED "MOVE IT" DECROATIVE LED TRACK LIGHTING	XAL LITELINE	MOVE1.2-RTL-BL-48V-010V-ST-XXFT KL-I-T-XX-C-X-R-BK	LED	DECORATIVE RECESSED TRACK LIGHTING SYSTEM. COORDINATE WITH ARCHITECT ON LENGTH & SHAPE PRIOR TO ORDERING.
LF4	SURFACE-MOUNT "MOVE IT" DECORATIVE DIRECT/INDIRECT LED TRACK LIGHTING	XAL LITELINE	MOVE1.1-PDT-BL-BW-35K-C90-48V-010V-0500LF-ST-XXFT KL-I-F/S-XX-C-XX-X-BK/KL-SPOT-BK	LED	DECORATIVE SURFACE/PENDANT TRACK LIGHTING SYSTEM. COORDINATE WITH ARCHITECT ON LENGTH & SHAPE PRIOR TO ORDERING.
LF5	RECESSED 2" X 4' LED LINEAR FIXTURE	FINELITE NEORAY MARK ARCHITECTURAL	HP-2-R-D-4'-S-935-F-96LG-120-SC-MOUNTING S122DR-S350D935-XX4F0-1-UDD-F-W SL2L-LOP-4FT-FLP-FL-90CRI-35K-1000LMF-MIN1-120	LED	MOUNTING SELECTION TO BE DETERMINED BY CONTRACTOR.
LF6	5 5/8" LED RECESSED DOWNLIGHT	BEGA LIGMAN LIGHTHEADED	24817 35K UMO-80012-21W-M-W35 2-116-T-04-BRO36-35-8014-WET / D4B-FVR-R-T-3-P-VOLT	LED	COLOR SELECTION TO BE BY ARCHITECT.
LF7	DECORATIVE WALL-MOUNTED LED VANITY FIXTURE	BEGA	50144-FINISH	LED	FINAL MOUNTING HEIGHT TO BE COORDINATED WITH ARCHITECT. FINISH SELECTION TO BE BY ARCHITECT.
LF8	SURFACE/PENDANT-MOUNT 2" X 4' LED LINEAR FIXTURE	FINELITE NEORAY MARK ARCHITECTURAL	HP-2-SM-D-4'-S-935-F-96LG-120-SC-MOUNTING-FE-FINISH S122DM/DP-C350D935-XX-XX4F0-1-UDD-F S2LS-LLP-4FT-90CRI-1000LMF-MIN1-120-WHT	LED	COORDINATE SURFACE OR PENDENT MOUNT WITH ARCHITECT. FINISH SELECTION TO BE BY ARCHITECT.
LF9	RECESS-MOUNT, EDGE-LIT, LED EXIT SIGN	DUAL-LITE SURE-LITES BEGHELLI	LECXRX-FINISH-E EUX7RXX OL2-SA-LR-1/2-C-CR-FINISH	LED	DIRECTIONAL CHEVRONS, WALL OR CEILING MOUNT, SINGLE OR DOUBLE FACE TO BE COORDINATED AT EACH LOCATION.
LF10	ARCHITECTURAL WALL-MOUNT LED FIXTURE	BEGA LIGMAN SISTEMALUX	33341 35K UGN-30031-2X12W-W35 S.7252W/MOD35K-DF-UNV-FINISH	LED	VERIFY FINISH AND MOUNTING HEIGHT WITH ARCHITECT.
LF11	8" DIA. LED PENDANT MOUNT CYLINDER	BEGA LIGMAN FC LIGHTING	24507 35K UJE-9511-39W-W-W35 FCC800-17-SPM/LENGTH-UNV-935-30L-FINISH-40-LD	LED	VERIFY FINISH AND MOUNTING HEIGHT WITH ARCHITECT.
LF13	DECORATIVE LED SITE BOLLARD FIXTURE	LIGMAN FC LIGHTING BEGA	ULI-10021-29W-T4-W35-FINISH-120/277V FCBT690-UNV-42-4K-19L-FINISH 88977 K35 FINISH 79 802	LED	VERIFY FINISH WITH ARCHITECT.
LF14	SECORATIVE LED SITE COLUMN LIGHT FIXTURE	LIGMAN WE-EF LUMINIS	UBE-20011-20W-W35-FINISH-120/277V 645-3421 LQ641-L1L15-R2-LQP669-120/277-FINISH	LED	VERIFY FINISH WITH ARCHITECT.



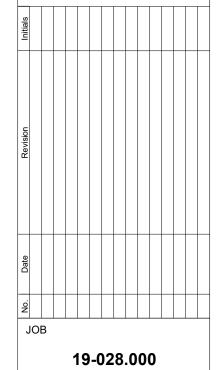
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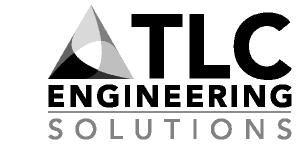


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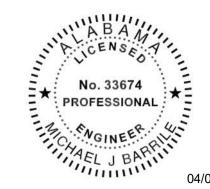
LIGHTING FIXTURE SCHEDULE



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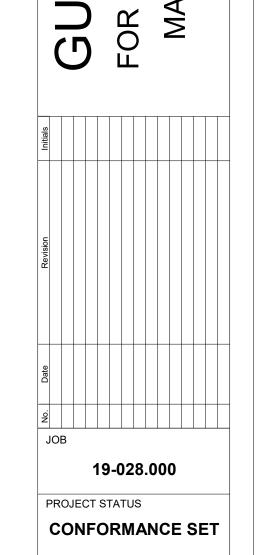
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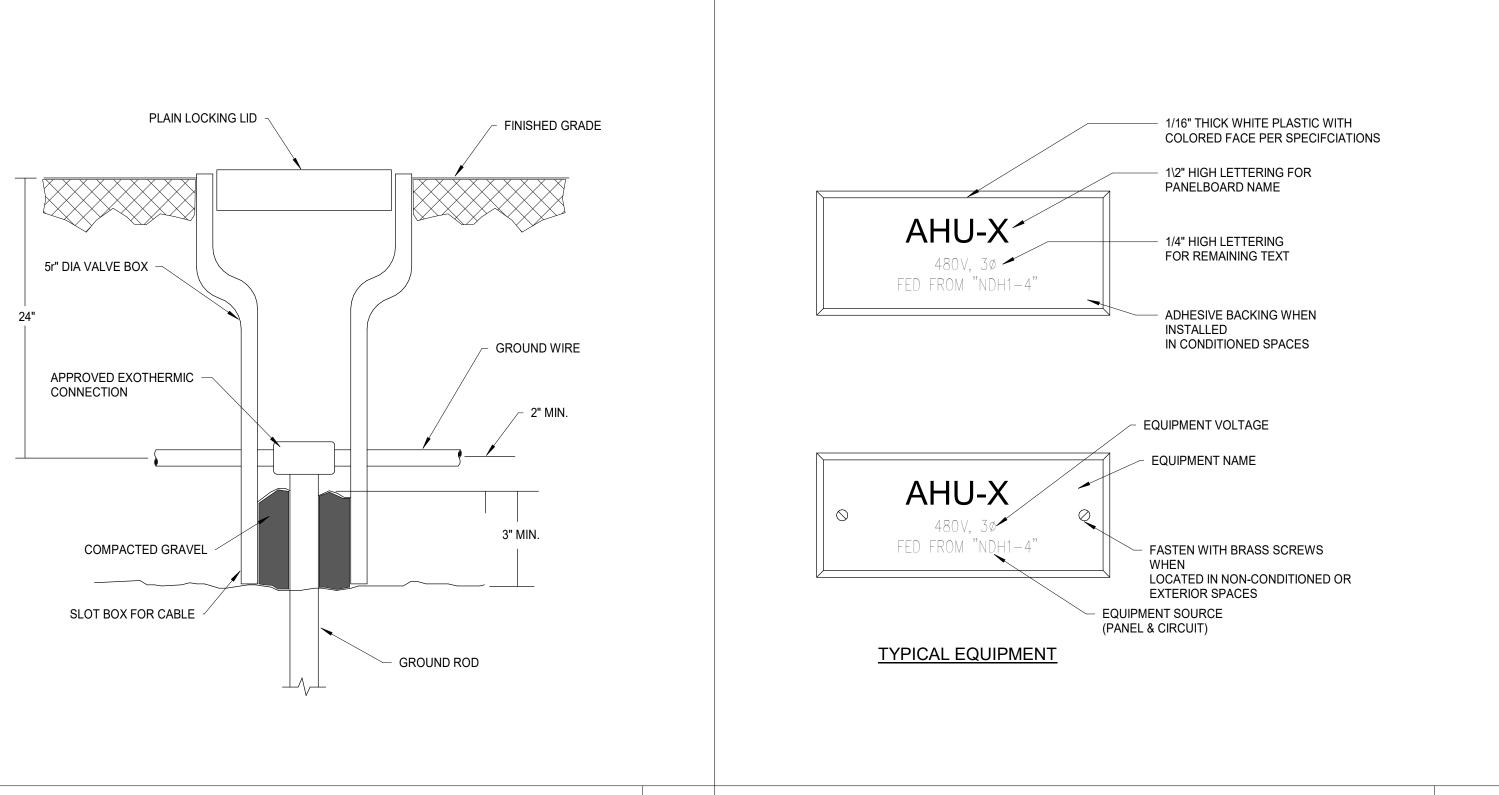


MARCH 24, 2023

ELECTRICAL DETAILS

EW500

ECO



GROUND BAR DETAIL No Scale

CADWELD B544A018 OR EQUAL

#4/0 GROUNDING CONDUCTOR TO NEXT

BAR OR TO MAIN SERVICE GOUND.

#6 GROUNDING CONDUCTOR

NEAREST METAL WATER PIPE.

MOUNTING BRACKET (TYP.)

#6-32 (TYP.) -

9/32" 0

(TYP.)

Ø Ø

FRONT VIEW

ISOMETRIC ELEVATION

GND. ROD INSPECTION WELL AT ALL ROD LOCATIONS

EQUIPMENT NAMEPLATE DETAIL No Scale

> BREAKER FEEDING SURGE PROTECTION

DEVICE (TYP)

TWIST ALL LEADS

(AS MANY TURNS AS

PRACTICAL) AND TIE WRAP

PRIMARY PHASE CONDUCTORS PRIMARY EQUIPMENT GROUNDING CONDUCTOR (PER NEC 250-122) DRY-TYPE TRANSFORMER DELTA **GROUND BAR** BONDING JUMPER TO (PER NEC 250.28,102) GROUNDING ELECTRODE CONDUCTOR WYE (PER NEC 250.66) GROUNDING ELECTRODE, VIA GROUND BAR (PER NEC 250.30) **BONDING JUMPER** (PER NEC 250.28,102, SECONDARY PHASE CONDUCTORS NEUTRAL SECONDARY EQUIPMENT NEC 250.30 GROUNDING CONDUCTOR (PER NEC 250.66)

STEP DOWN TRANSFORMER GROUNDING

OPTIONAL SPD DEVICE LOCATIONS (CAT B3 OR C1 AS INDICATED ON DRAWINGS) **BREAKER FEEDING** SURGE NEUTRAL SUPPRESSOR BUS CONNECTIO NEUTRAL BUS CONNECTION **PANELBOARD** SERVICE ENTRANCE OR DISTRIBUTION PANEL NOTE: MOUNT SPD DEVICE IN A LOCATION TO MAINTAIN ALL LEADS AS SHORT AS POSSIBLE. (18" MAX.)

TYPICAL SPD DEVICE

INDICATED ON

TOGETHER

DRAWINGS)

LOCATIONS (CAT C3 OR

TWIST ALL LEADS

(AS MANY TURNS AS

PRACTICAL) AND TIE WRAP

SPD EXTERIOR MOUNT INSTALLATION

CABLE TO CABLE HEAVY DUTY TYPE CADWELD "TA" SERIES CABLE TO GROUND ROD DUTY TYPE CADWELD #115000CM COPPER CABLE "GT" SERIES. **COPPERWELD GROUND ROD** 5/8" X 20'-0" **VERTICALLY** CABLE TO GROUND #115000CM HEAVY DUTY TYPE CADWELD "GT" COPPER SERIES. COPPERWELD GROUND ₽ ROD 5/8" X 20'-0" VERTICALLY DRIVEN. ROD € MAINTAIN 20'-0" BETWEEN 1. LOCATE GROUND RODS A MINIMUM OF 2'-0" FROM BUILDING FOUNDATION. 2. TOP OF GROUND ROD SHALL BE A MINIMUM OF 1'-0" BELOW FINISHED GRADE

CADWELD

B544A018

INSULATOR

#6 TO COMMUNICATIONS RACK

QUANTITY AS REQUIRED.

INSULATOR

GROUND CONDUCTORS

STANDOFF BRACKET

3

OR

0

GROUND BUS BAR

TYP. GROUND ROD CONNECTION

No Scale

6



COA 15

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> WATERSHED Building Sustainability

ARCHITECTURE

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p 251.929.0514

SUSTAINABILITY FOR ECOTOURISM & SUSTAINABII
MAWWFIELD SHED PACKAGEE3E
GULF SHORES, ALABAMA GULF

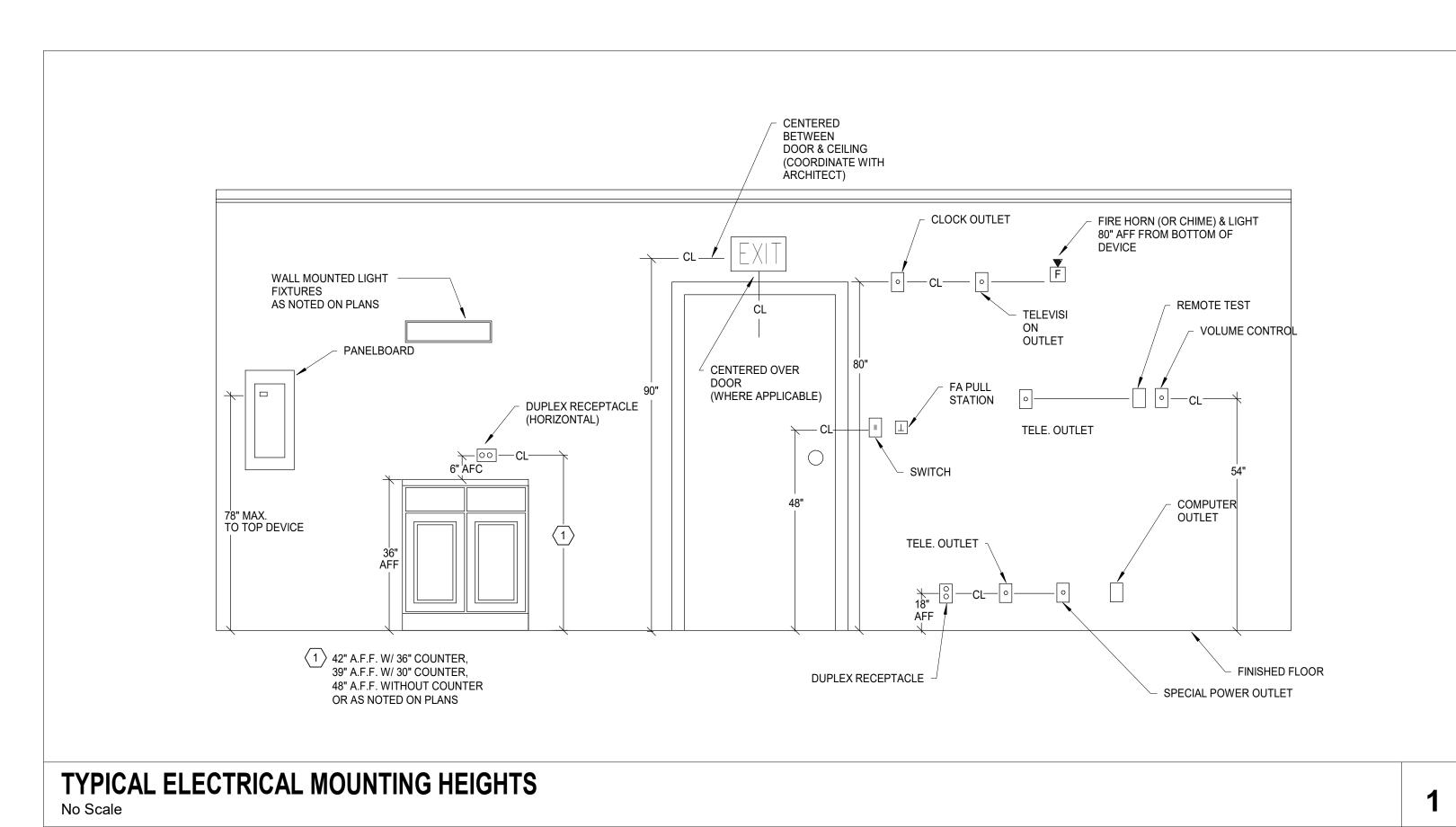
19-028.000

PROJECT STATUS

CONFORMANCE SET

MARCH 24, 2023 **ELECTRICAL**

DETAILS





VIDEO SURVEILLANCE SYSTEMS PAN/TILT/ZOOM CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER PAN/TILT/ZOOM CCTV CAMERA, CEILING MOUNTED $\mathbb{Z}_{X,C}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER FIXED CCTV CAMERA, WALL MOUNTED $\bigcup_{X,C} X$ = CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER FIXED CCTV CAMERA, CEILING MOUNTED $\mathcal{L}_{X,C}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 180° CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 180° CCTV CAMERA, CEILING MOUNTED $\mathbb{U}_{\mathsf{X},\mathsf{C}}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 180° MULTI-IMAGER CCTV CAMERA, WALL MOUNTED $\mathbb{Z}_{X,C}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 180° MULTI-IMAGER CCTV CAMERA, CEILING MOUNTED $\bigvee_{X,C} X = CAMERA TYPE (1,2,3)$, SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 360° CCTV CAMERA, WALL MOUNTED $_{\rm X,C}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 360° CCTV CAMERA, CEILING MOUNTED $\mathcal{Y}_{\mathsf{X},\mathsf{C}}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 360° MULTI-IMAGER CCTV CAMERA, WALL MOUNTED \bigotimes $_{X,C}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER 360° MULTI-IMAGER CCTV CAMERA, CEILING MOUNTED $\bigotimes_{X,C}$ X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER CCTVFLAT PANEL DISPLAY WITH MOUNT XX XX= SCREEN SIZE +YY YY= HEIGHT TO CENTER OF SCREEN SECURITY SYSTEM WORKSTATION, DESK MOUNTED SECURITY X X= TYPE **ELECTRONIC SECURITY SYSTEM** CR CARD READER, WALL MOUNTED CARD READER WITH INTEGRATED KEYPAD, WALL MOUNTED BIOMETRIC ACCESS CONTROL DEVICE, WALL MOUNTED KEYPAD, WALL MOUNTED WIRED IP LOCK, DOOR MOUNTED WIRELESS MORTISE LOCK, DOOR MOUNTED WIRELESS CYLINDRICAL LOCK, DOOR MOUNTED INTRUSION ALARM KEYPAD ELECTRIC MORTISE LOCK OR ELECTRIC TRIM DELAYED EGRESS LATCH LOCK DELAYED EGRESS MAG LOCK ELECTRIC CYLINDRICAL LOCK ELECTRIC LATCH RETRACTION LOCK (M) ELECTROMAGNETIC LOCK (D) ELECTRONIC DETENTION LOCK ES ELECTRIC DOOR STRIKE © ELECTRIC DOOR OPERATOR (ACTUATOR ARM) DPS DOOR POSITION SWITCH BMS BALANCED MAGNETIC SWITCH PIM MODULE FOR WIRELESS LOCKS, WALL MOUNTED +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF ALARM, BLUE LIGHT, WALL MOUNTED +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF LOCAL ALARM - HORN/STROBE, WALL MOUNTED +H = MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF SIREN ALARM FOR INTRUSION DETECTION, WALL MOUNTED +H = MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF ASSISTANCE STATION, WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO SPECIFICATION FOR TYPE +H +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF ASSISTANCE STATION (BLUE LIGHT), TOWER STATION $^{(AS)}$ X X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO SPECIFICATION FOR TYPE INTERCOM SUBSTATION (DOOR STATION), WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO RISER FOR TYPE +H +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF INTERCOM MASTER STATION, DESK MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO RISER FOR TYPE INTERCOM MASTER STATION, WAII MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO RISER FOR TYPE +H +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF CALL STATION (THROUGH PHONE LINE) FOR BUILDING ENTRY, WALL MOUNTED +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF X= TYPE (A1,C3,B6..) REFER TO SECURITY DOOR DETAILS DOOR RELEASE BUTTON, WALL MOUNTED X= A: ADA ACCESSIBLE - (PALM ACTUATOR), W: HAND WAVE, NO TYPE: REGULAR PUSH BUTTON DOOR RELEASE BUTTON, DESK MOUNTED REQUEST TO EXIT DEVICE (IR SENSOR), MOUNT CENTERED ABOVE DOOR FRAME GLASS BREAK SENSOR, WALL MOUNTED GLASS BREAK SENSOR, WALL WOOM LD +H = MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF

VOICE AND DATA SYSTEM TELECOMMUNICATION OUTLET X= MOUNTING: (E= EXISTING, F= FLUSH, S= SURFACE, M= MODULAR FURNITURE ADAPTER, P= POLE, L= FLÒOR, R= RACEWAY) N= NUMBER OF DATA CABLES IN THE FACEPLATE Y= NOT USED Z= NUMBER OF FIBER OPTIC STRANDS IN THE FACEPLATE U= USER(IF APPLICABLE) +H= INSTALLATION HEIGHT IN INCHES AT CENTER OF OUTLET, COORDINATE WITH ELECTRICAL. IF NOT SHOWN INSTALL AT TYPICAL RECEPTACLE HEIGHT. W= WALL TELEPHONE FACEPLATE WITH SUPPORT STUDS, INSTALLED AT 48" AFF AT CENTER OF OUTLET AND 12" FROM EDGE OF WALL. WP=WEATHERPROOF EXAMPLE: F2 = TWO DATA JACKS IN A SINGLE FACEPLATE, FLUSH MOUNTED MECH OUTLET FOR MECHANICAL/ ELECTRICAL/ FIRE ALARM/ ELEVATOR/ STAR CONNECTION Y: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET +H= IF NOT SHOWN, COORDINATE EXACT LOCATION WITH DEVICE CEILING MOUNTED INFORMATION OUTLET, MOUNTED ON FINISHED CEILING XY: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET WAP OUTLET FOR WIRELESS ACCESS POINT, WALL MOUNTED Y: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET +H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF WAP OUTLET FOR WIRELESS ACCESS POINT, MOUNTED ON FINISHED CEILING XY: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET FLOOR BOX FOR TECHNOLOGY SYSTEMS AND POWER OUTLETS. REFER TO POKE-THRU/ FLOORBOX SCHEDULE FOR MORE INFORMATION F= FLOOR CONDITION: (C= CONCRETE TYPE, G= GRADE, R= RAISED FLOOR, W= WOOD) Y= DENOTES # OF GANGS (1,2,3...) Z= DENOTES PLATE TYPE (A,B,C....), A= NO AUDIO/VISUAL LN= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET POKE-THRU FOR TECHNOLOGY SYSTEMS AND POWER OUTLETS. REFER TO POKE-THRU & FLOOR BOX SCHEDULE FOR MORE INFORMATION Y= DENOTES POKE-THRU SIZE (4=4", 6=6" 8=8".....) Z= DENOTES PLATE TYPE (A,B,C....), A= NO AUDIO/VISUAL LN= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET FLOOR BOX USED TO FEED CABLES TO MODULAR FURNITURE, REFER TO DETAIL SHEET X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT POKE-THRU USED TO FEED CABLES TO MODULAR FOR X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT POKE-THRU USED TO FEED CABLES TO MODULAR FURNITURE, REFER TO DETAIL SHEET AV BACKBOX, INSTALLED BEHIND DISPLAY/ CREDENZA RACK, COORDINATE BACKBOX PRIOR TO ROUGH-IN. REFER TO DETAIL & SCHEDULE FOR MORE INFORMATION G= DENOTES # OF GANGS +H XY= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET +H= MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE RECESS IN-WALL STORAGE BOX, INSTALLED BEHIND DISPLAY, COORDINATE BACKBOX PRIOR TO ROUGH-IN. REFER TO DETAIL & SCHEDULE FOR MORE INFORMATION G= DENOTES # OF GANGS *H XY= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET +H= MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE POWER POLE FOR COMBINED USE - TECHNOLOGY SYSTEMS AND POWER. X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT FIBER OPTICS ROUTING TAG FOR BACKBONE CABLING N= DENOTES CONNECTION TYPE (P=PRIMARY, S=SECONDARY) XX= DENOTES FIBER STAND QUANTITY Z= DENOTES RUN NUMBER REFER TO FIBER OPTICS RISER FOR MORE INFORMATION. **COVERAGE FOR IDF** COVERAGE OF EACH TELECOM ROOM. THE SHADED REGIONS REPRESENT THE MAXIMUM DISTANCE LOW VOLTAGE CABLES CAN BE RUN FROM EACH IDF. **COVERAGE FOR IT ROOM 2** COVERAGE FOR IT ROOM

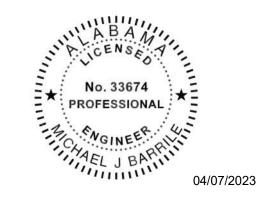
	T - WELCOME SHEET LIST	
Sheet Number	Sheet Name	TLC_Sub Discipline
TW000	TECHNOLOGY LEGEND AND SHEET INDEX	WELCOME
TW100	WELCOME HUB TECHNOLOGY FLOOR PLAN	WELCOME
TW101	WELCOME HUB AUDIO/VISUAL FLOOR PLAN	WELCOME
TW400	TECHNOLOGY RISER DIAGRAM	WELCOME
TW500	TECHNOLOGY DETAILS	WELCOME



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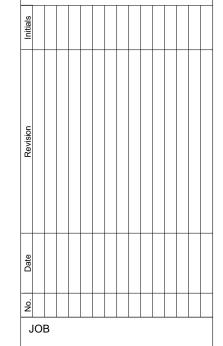
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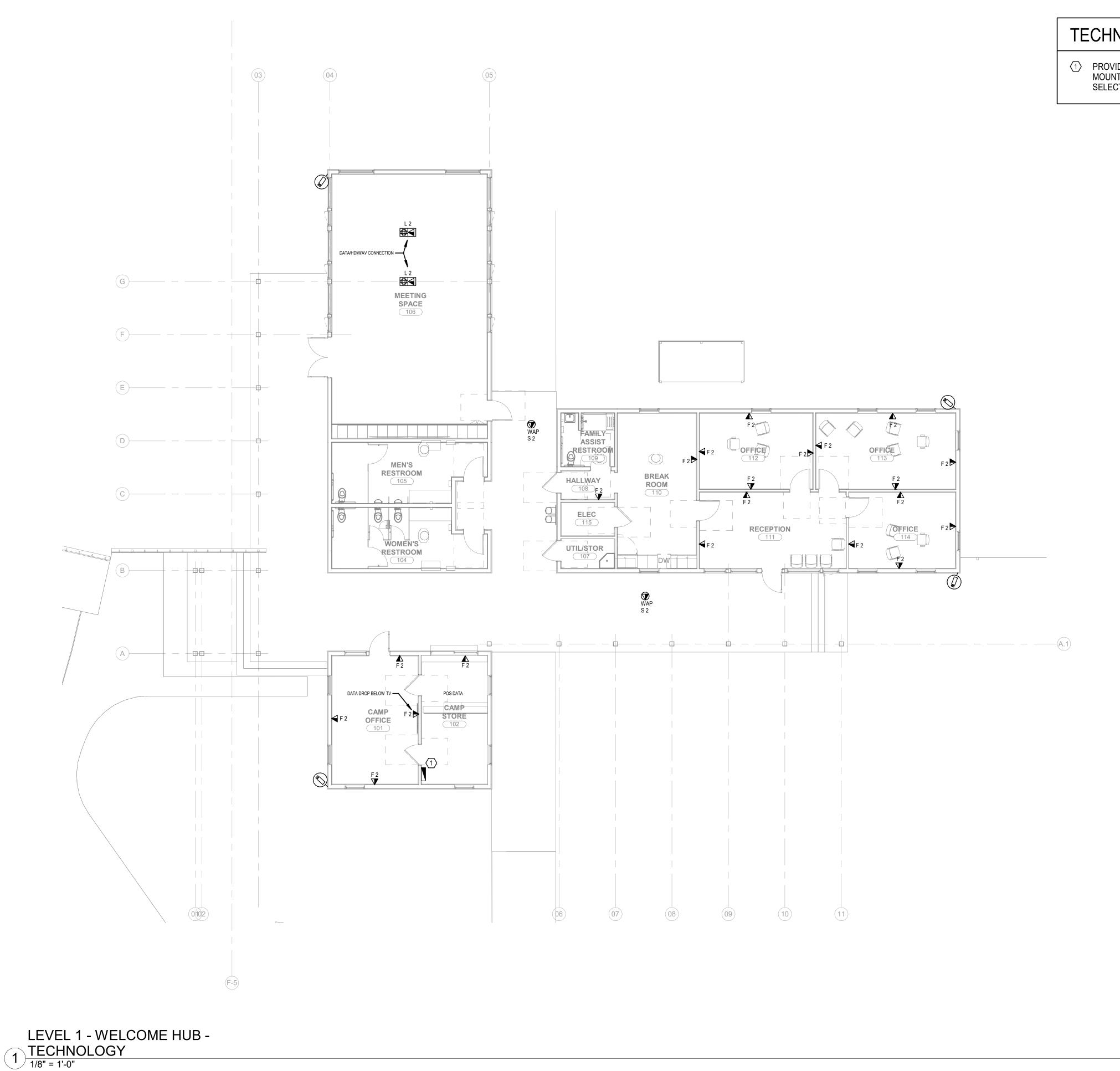
19-028.000

PROJECT STATUS CONFORMANCE SET

MARCH 24, 2023

TECHNOLOGY **LEGEND AND SHEET** INDEX

TW000





PROVIDE WALL MOUNTED EQUIPMENT RACK MOUNTED TO 3/4" PLYWOOD BACKBOARD. DESIGN SELECTION: DWR-12-26PD



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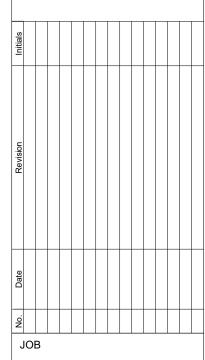
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LLF COAST CENTER

ECOTOURISM & SUSTAINABILITY

WELCOME HUB PACKAGE

GULF SHORES, ALABAMA



FOR

19-028.000

PROJECT STATUS

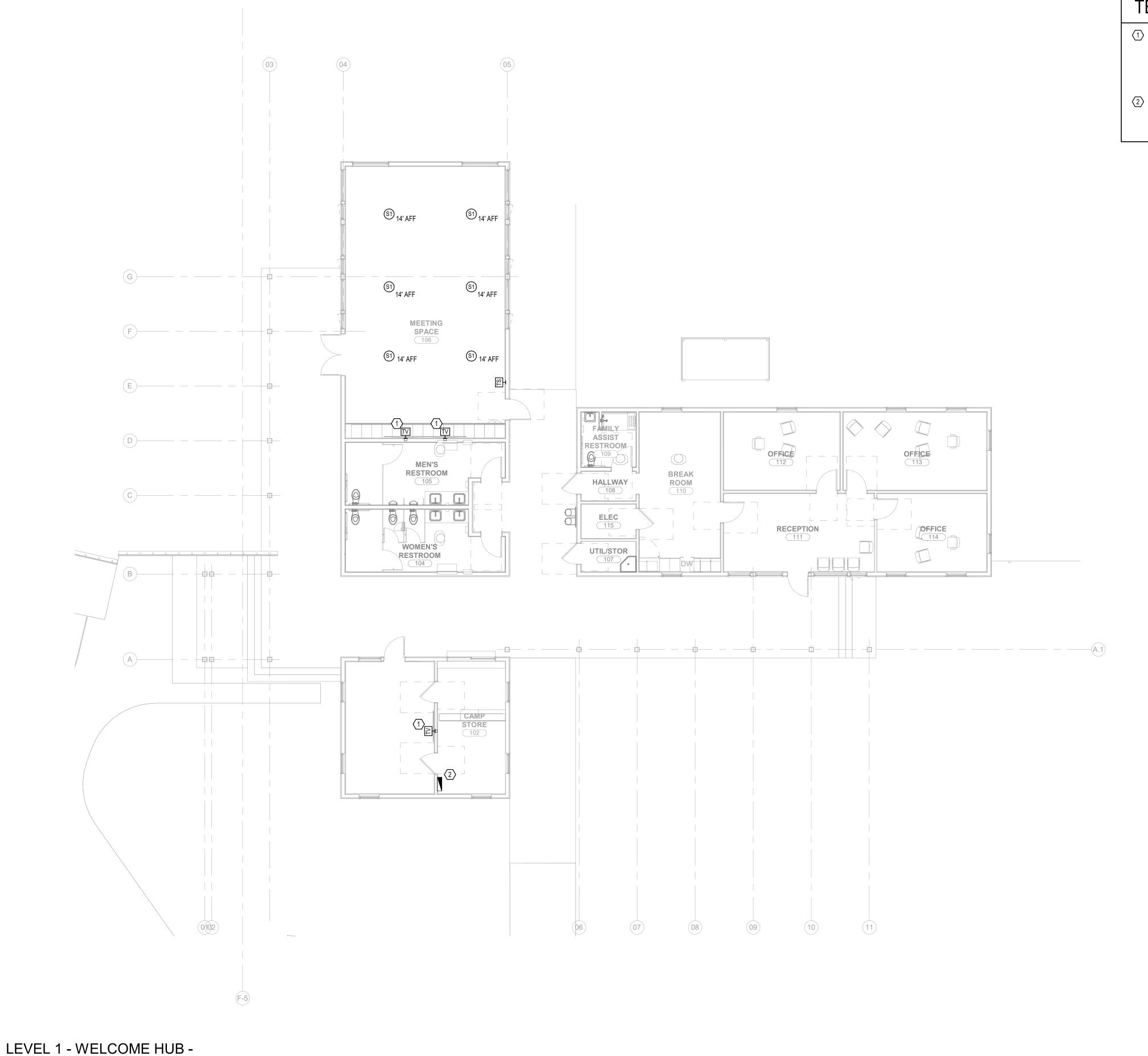
CONFORMANCE SET

MARCH 24, 2023

SHEET WELCOME HUB TECHNOLOGY

FLOOR PLAN

TW100



1 AUDIO/VISUAL PLAN 1 1/8" = 1'-0"

TECHNOLOGY KEYED NOTES

- 1 PROVIDE 65" 4K HDR PROFESSIONAL DISPLAY WITH BRACKET AND IN-WALL STORAGE. DESIGN SELECTION: CHIEF LTM1U AND PAC525F OR APPROVED EQUAL. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS.
- 2 PROVIDE WALL MOUNTED EQUIPMENT RACK MOUNTED TO 3/4" PLYWOOD BACKBOARD. DESIGN SELECTION: DWR-12-26PD

MEETING SPACE AV DESGN NOTES: PROVIDE QSC NV-32-H (CORE CAPABLE) MOUNTED BEHIND TV'S IN MEETING ROOM SPACE 106. PROVIDE QSC (TSC-55w-G2) WALL MOUNTED TOUCH SCREEN

PROVIDE QSC (AD-P6T) PENDENT SPEAKERS MOUNTED @ 14' AFF, TAP SPEAKERS @ 15W EACH. PROVIDE FOLLOWING AV EQUIPMENT IN WALL MOUNTED RACK LOCATED

IN CAMP STORE 102: PROVIDE QSC NS SERIES NETWORK SWITCH (NS12-720++)FOR AV

PROVIDE QSC (SPA-200) 2 CHANNEL AMPLIFIER FOR MEETING ROOM PENDENT SPEÄKERS. PROVIDE MIDDLE ATLANTIC (PD-915RC-20) RACK MOUNT POWER STRIP. SEE SHEET TW400 FOR RISER DIAGRAM. ENGINEERING SOLUTIONS

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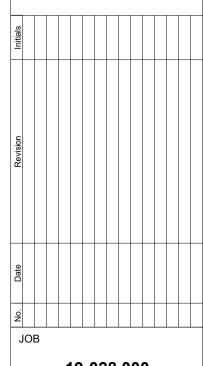
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SUSTAINABILITY WELCOME HUB F ECOTOURISM & FOR



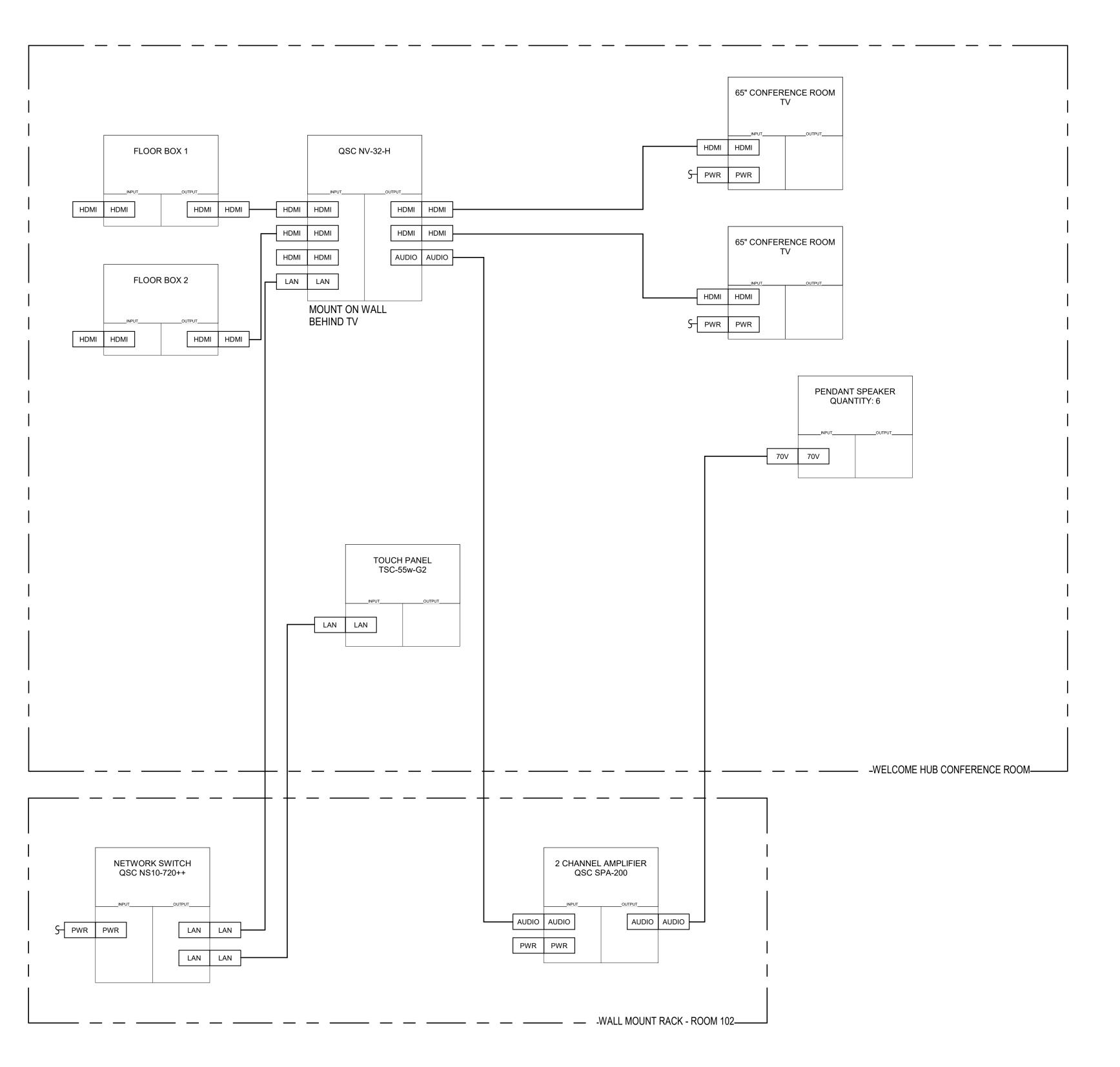
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PROJECT STATUS **CONFORMANCE SET**

MARCH 24, 2023

WELCOME HUB
AUDIO/VISUAL FLOOR PLAN

TW101



ENGINEERING SOLUTIONS

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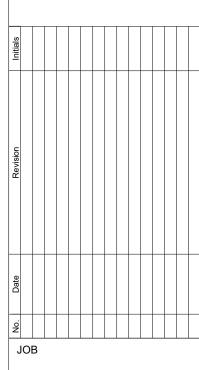
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PROJECT STATUS

CONFORMANCE SET

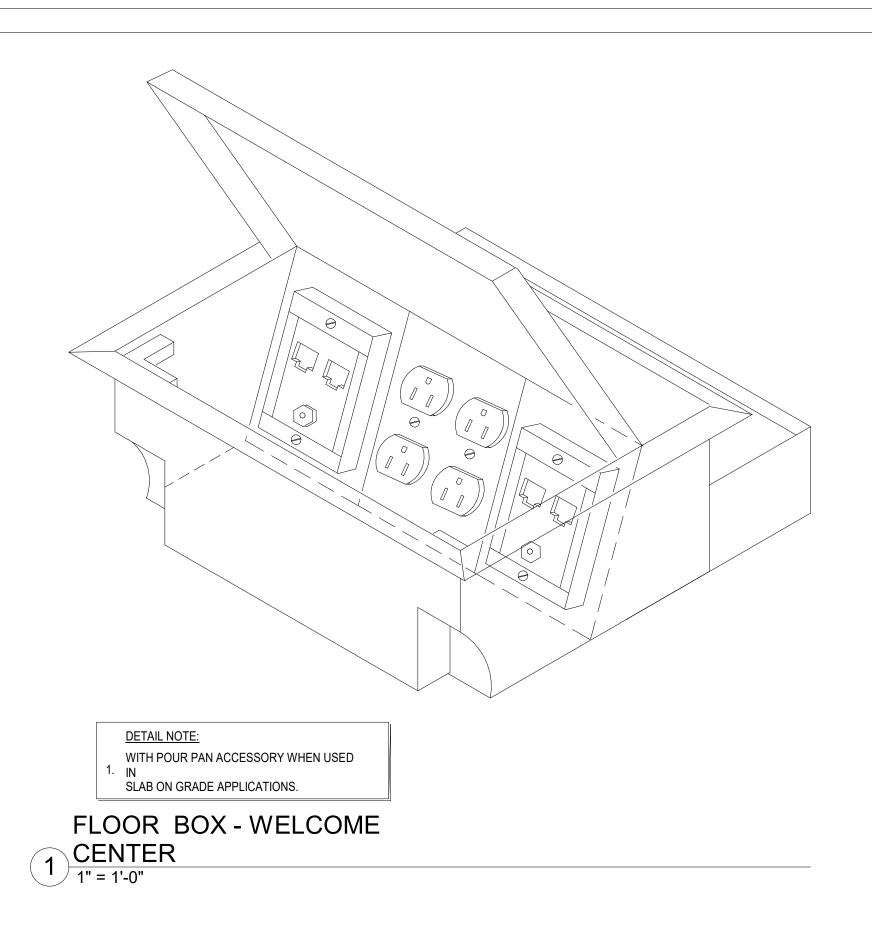
DATE

MARCH 24, 2023

TECHNOLOGY RISER DIAGRAM

TW400

1 WELCOME HUB AV RISER
12" = 1'-0"



PROVIDE 2" CONDUIT FOR SERVICE
PROVIDER CABLING. STUB TO INTERNET

-1" CONDUIT FOR POWER COORDINATE
WITH ELECRICAL CONTRACTOR

-PROVIDE DOUBLE GANG BOX FOR POWER.

 $^{f L}$ PROVIDE (2) 3" CONDUITS FOR DATA CABLING. STUB CONDUIT TO CABLE TRAY LOCATION.

EQUIPMENT INSTALLER.

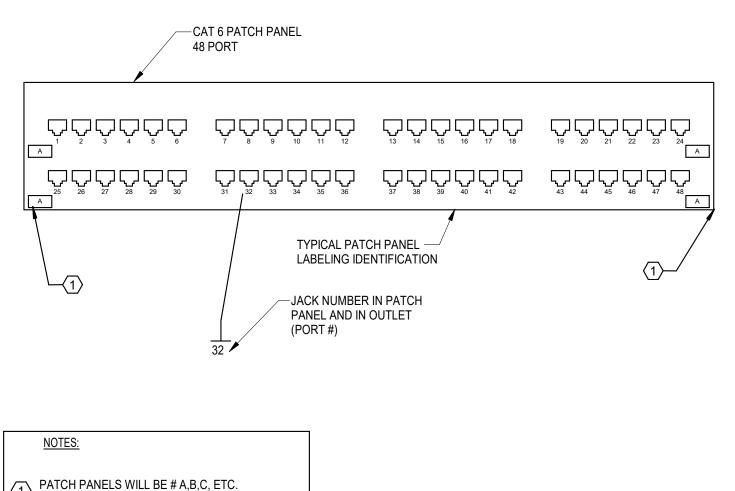
COORDINATE POWER REQUIREMENTS WITH

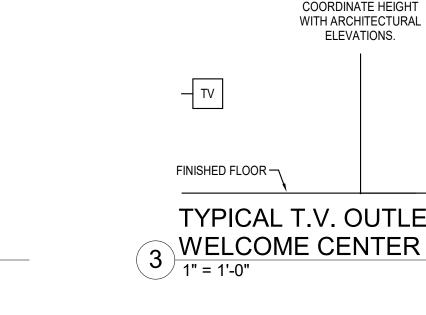
-PROVIDE SWING OUT WALL MOUNT RACK WITH BACKPLANE

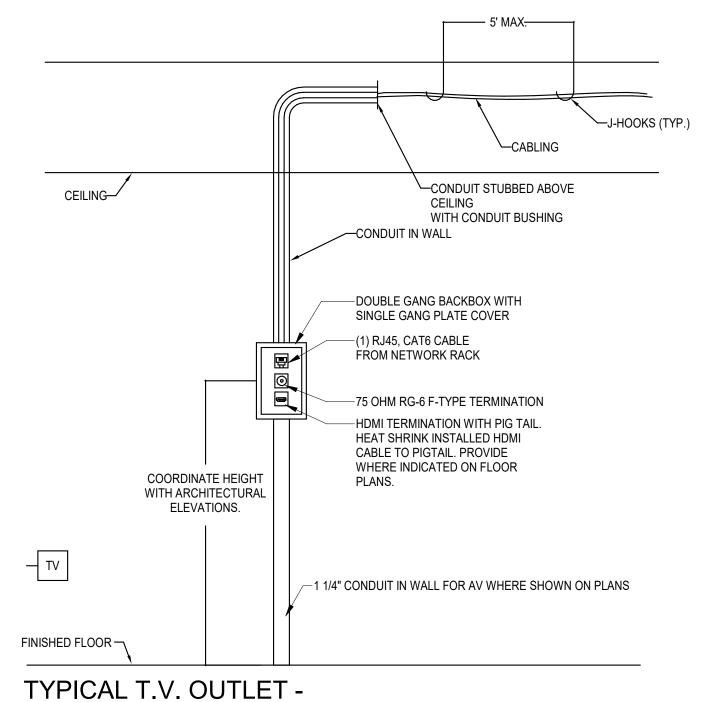
(MIDDLE ATLANTIC DWR-18-26PD). RACK SHALL HAVE (2) 3" KNOCK OUTS, (2) 2" CONDUIT & (2) 1" KNOCKOUTS AT THE TOP AS WELL AS SINGLE AND DOUBLE GANG KNOCK OUTS ON THE

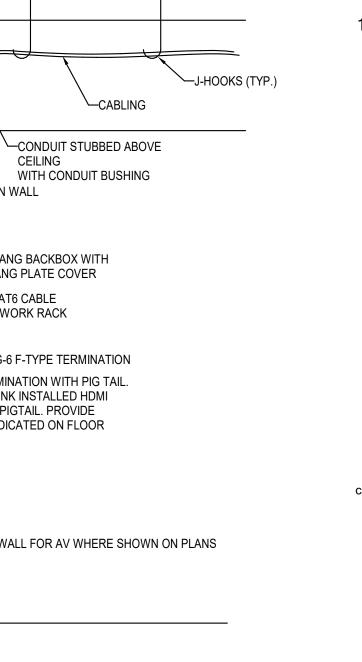
SERVICE CABLE ENTRY.

SIDE







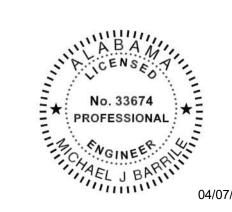




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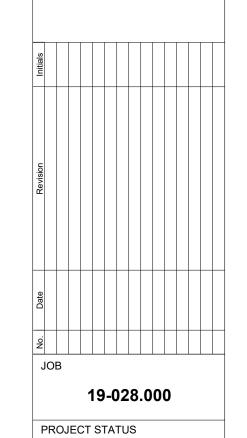
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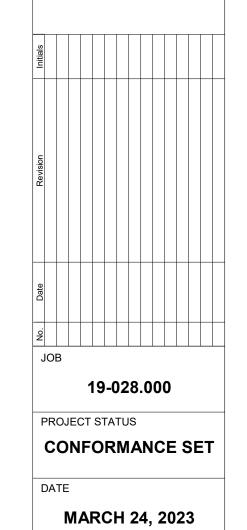
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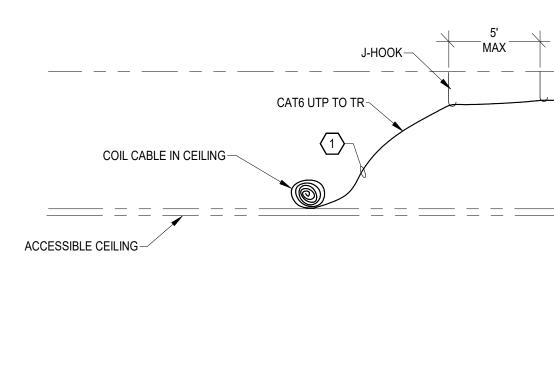
SUSTAINABILITY
S PACKAGE
ALABAMA CENTER ECOTOURISM & S
WELCOME HUB F
GULF SHORES, AL FOR



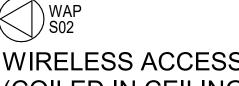


TECHNOLOGY DETAILS

TW500



NOTE: WIRELESS ACCESS POINT AND ANTENNA NOT IN CONTRACT. DETAIL NOTE: 1 COIL 20' LOOP IN CEILING.



WELCOME CENTER

1" = 1'-0"

WIRELESS ACCESS POINT (COILED IN CEILING) -

PATCH PANEL PORT COUNT TBD PER BUILDING.

PATCH PANEL - WELCOME

2 CENTER 1" = 1'-0"

- J-HOOK RANDOMLY INSTALLED AT 3',4', AND 5' - ACCESSIBLE CEILING 1" CONCEALED CONDUIT EMT DEEP 4 SQUARE BOX WITH
 SINGLE GANG STEEL PLASTER - FACEPLATE

FLOOR SLAB

TYPICAL FLUSH MOUNT OUTLET (CONCEALED 6 CONDUIT) - WELCOME CENTER

WALL MOUNTED RACK DETAIL -WELCOME CENTER

3/4" = 1'-0"

MOUNT TO STUDS PER
MANUFACTURER INSTALLATION

INSTRUCTIONS-



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MARCH 24, 2023

SHEET NAME furniture plan

IDW100