ROOF

OCCUPANCY CATEGORY

ANALYSIS PROCEDURE

**GENERAL NOTES** 

A. 2018 INTERNATIONAL BUILDING CODE

BUILDING AND DESIGN CODES:

DESIGN WIND PRESSURES (COMPONENTS & CLADDING

AMERICAN WELDING SOCIETY, WELDING CODES

		SURFACE PRESSURE (PSF)		
		10 SF AREA	20 SF AREA	50 SF AREA
ROOF ZONES	1. INTERIOR	+16.0 / -46.8	+16.0 / -73.4	+16.0 / -73.4
ZONES	2. END	+16.0 / -44.1	+16.0 / -69.7	+16.0 / -69.7
	3. CORNER	+16.0 / -38.0	+16.0 / -61.2	+16.0 / -61.2
WALL ZONES	4. INTERIOR	+32.0 / -32.0	+32.0 / -32.0	+29.4 / -30.3
ZUNES	5. END	+32.0 / -58.6	+32.0 / -58.6	+29.4 / -51.8

TMS 402/ACI 530/ASCE 6: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, LATEST EDITION

100 PSF

20 PSF

+/- 0.18

115 MPH (ULTIMATE)

NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, LATEST EDITION

(+) VALUES INDICATE PRESSURES TOWARDS THE BUILDING. (-) VALUES INDICATE PRESSURES AWAY FROM THE FOR SMALLER TRIBUTARY AREAS, LOADS WILL BE LARGER THAN SHOWN. CALCULATE PER CODE REQUIREMENTS.

**ENVELOPE PROCEDURE FOR LOW-RISE BUILDINGS** 

WIDTH OF END ZONES

SNOW LOADS A. GROUND SNOW LOAD, Pa 20 PSF

SNOW EXPOSURE FACTOR, Ce IMPORTANCE FACTOR, I THERMAL FACTOR, C

SEISMIC LOADS:

IMPORTANCE FACTOR, I B. RISK CATEGORY MAPPED SPECTRAL RESPONSE ACCELERATIONS  $S_S = 0.101$  $S_1 = 0.069$ D. SITE CLASS DESIGN SPECTRAL RESPONSE ACCELERATIONS  $S_{D1} = 0.069$ 

F. SEISMIC DESIGN CATEGORY G. BASIC SEISMIC FORCE RESISTING SYSTEM N/S DIRECTION: STEEL ORDINARY MOMENT FRAME E/W DIRECTION: PLYWOOD SHEAR WALLS

DESIGN BASE SHEAR  $V = Cs \times W$ SEISMIC RESPONSE COEFFICIENT

 $N/S: C_S = 0.025$  $E/W: C_S = 0.011$ RESPONSE MODIFICATION FACTOR N/S: R = 3.5E/W: R = 6.5

K. ANALYSIS PROCEDURE **EQUIVALENT LATERAL FORCE PROCEDURE** 

#### GENERAL REQUIREMENTS

SPECIFICATIONS ARE PART OF THE CONSTRUCTION DOCUMENTS AND MUST BE USED IN CONJUNCTION WITH THE DRAWINGS. WHERE REQUIREMENTS INDICATED ON THE STRUCTURAL DRAWINGS DIFFER FROM THE SPECIFICATIONS,

VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY A/E OF DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE OF WORK.

VERIFY WITH OTHER DISCIPLINE DRAWINGS THE LOCATION OF CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS, AND WALL OPENINGS.

DO NOT SCALE DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.

DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY A/E OF CONFLICTS REGARDING APPLICABILITY OF "TYPICAL DETAILS".

DO NOT LOAD THE SLAB-ON-GRADE OR SUPPORTED SLAB WITH ERECTION CRANES OR ERECTION EQUIPMENT. THE SLABS HAVE NOT BEEN DESIGNED FOR CRANE LOADS AND WILL REQUIRE AN INCREASE IN THICKNESS AND/OR REINFORCEMENT. SUBMIT FOR A/E REVIEW A PROPOSED CRANE SUPPORT PLAN FOR SLABS PRIOR TO COMMENCING WORK.

DO NOT STORE OR STACK CONSTRUCTION MATERIALS ON SUPPORTED SLABS, ELEVATED FLOORS, OR ROOFS IN EXCESS OF 80 PERCENT OF LIVE LOAD. GENERAL CONTRACTOR WILL BE RESPONSIBLE AND ENSURE THAT ALL SUB-CONTRACTORS ARE INFORMED AND DO NOT VIOLATE THIS IMPORTANT REQUIREMENT. AVOID IMPACT WHEN PLACING MATERIALS ON POURED OR ERECTED FLOORS OR ROOF.

THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS INDICATED OTHERWISE, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. PROVIDE ALL MEASURES REQUIRED TO PROTECT THE STRUCTURE, WORKMEN AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, FORMS AND SCAFFOLDING, SHORING OF RETAINING WALLS AND OTHER TEMPORARY SUPPORTS AS REQUIRED.

PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON DRAWINGS. EXAMINE THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR THE REQUIRED OPENINGS AND PROVIDE FOR REQUIRED OPENINGS WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT. VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH THE MECHANICAL CONTRACTOR. BRING ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS TO THE ENGINEER'S ATTENTION FOR APPROVAL

COORDINATE AND PROVIDE ALL MISCELLANEOUS FRAMING MEMBERS SHOWN ON THE ARCHITECTURAL DRAWINGS. THESE MEMBERS MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS.

ARCHITECTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED

TO RESIST SEISMIC FORCES AS DETERMINED IN CHAPTER 13 OF ASCE 7.

**FOUNDATION NOTES** 

REFER TO THE GEOTECHNICAL REPORT AND SPECIFICATIONS FOR GENERAL REQUIREMENTS OF EARTHWORK, OVER EXCAVATION. SUBGRADE PREPARATION. FILL AND COMPACTION. WATERPROOFING AND OTHER PERTINENT. REQUIREMENTS AND

FOUNDATION DESIGNS AND SUBGRADE PREPARATION ARE BASED UPON THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNIGAL REPORT NUMBER B3225012 BY TERRAGON, DATED 09/02/2022.

OOTING DESIGNS ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF (FACTOR OF SAFETY = 3). THE ALLOWABLE SOIL BEARING PRESSURE MAY BE INCREASED BY ONE-THIRD WHEN CONSIDERING TOTAL LOADS, INCLUDING LOADS OF SHORT DURATION SUCH AS WIND FORCES. FOOTINGS SHALL BEAR IN SPECIFIED BEARING MATERIAL AS NOTED IN THE

CONTRACTOR AND TESTING LABORATORY REPRESENTATIVE SHALL READ THE GEOTECHNICAL REPORT AND BECOME THOROUGHLY FAMILIAR WITH SITE AND SUBGRADE INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT QUANTITIES OF CUT AND FILL FOR ESTIMATING AND CONSTRUCTION. SUBGRADE SHALL BE PREPARED AS NOTED IN THE

ARRANGE FOR OWNER'S INDEPENDENT TESTING AGENCY TO MONITOR CUT AND FILL OPERATIONS, AND PERFORM FIELD DENSITY AND MOISTURE CONTENT TESTS TO VERIFY COMPACTION AND APPROVE FOOTING SUBGRADE PRIOR TO PLACING CONCRETE. CUT AND FILL OPERATIONS SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

A QUALIFIED AND REGISTERED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND WORKING FOR THE TESTING LABORATORY, SHALL DETERMINE CONFORMANCE OF THE FOUNDATION BEARING STRATA WITH THE FOUNDATION DESIGN CRITERIA ABOVE, AND ALL OTHER CONTRACT DOCUMENTS, AND VERIFY SIZE, REINFORCING STEEL, THICKNESS, EMBEDMENT DEPTH, AND REMOVAL OF CUT MATERIAL. TESTING LABORATORY SHALL NOTIFY CONTRACTOR AND A/E OF ANY CONDITIONS NOT IN ACCORDANCE WITH FOUNDATION DESIGN CRITERIA OR CONTRACT DOCUMENTS.

USE ONLY STRUCTURAL FILL MATERIAL AS NOTED IN THE GEOTECHNICAL REPORT FOR FILL BELOW THE BUILDING. EXTEND FILL AT LEAST FIVE FEET BEYOND THE BUILDING PERIMETER ON ALL SIDES. REFER TO THE GEOTECHNICAL REPORT FOR THE DEPTH OF THE STRUCTURAL FILL MATERIAL AND COMPACTION REQUIREMENTS.

MAINTAIN SUBGRADE AND FILL MOISTURE CONTENT UNTIL FOUNDATIONS ARE PLACED.

DO NOT PLACE GRADE BEAMS, WALLS, FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.

MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION TO ENSURE SURFACE RUNOFF AWAY FROM STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.

KEEP OPEN EXCAVATIONS AROUND BUILDING DRY. BACKFILL AGAINST FOUNDATIONS AND GRADE BEAMS AS SOON AS PRACTICAL. PUMP WATER OUT OF OPEN EXCAVATIONS IF FLOODING OCCURS PRIOR TO BACKFILLING.

PROTECT PIPES AND CONDUITS RUNNING THRU WALLS AND SLABS WITH 1/2 INCH EXPANSION MATERIAL. LOWER CONTINUOUS FOOTINGS AND GRADE BEAMS PERPENDICULAR TO PIPE RUNS, TO ALLOW PIPES TO PASS ABOVE THE FOOTINGS OR THOUGH THE GRADE BEAMS. ALTERNATIVELY, PROVIDE A CONCRETE JACKET IF PIPES ARE LOW ENOUGH TO BE PLACED BELOW THE FOOTINGS AND GRADE BEAMS. LOWER FOOTINGS AND GRADE BEAMS PARALLEL TO PIPE RUNS TO AVOID SURCHARGE ONTO ADJACENT TRENCH EXCAVATIONS.

13. PLACE FOUNDATIONS WITHIN 8 HOURS AFTER EXCAVATION. DO NOT LEAVE EXCAVATION OPEN OVERNIGHT

AVOID DAMAGING EXISTING UNDERGROUND UTILITIES SUCH AS WATER MAINS, SANITARY SEWERS, BURIED CABLES, ETC., WHICH MIGHT EXTEND ACROSS OR ADJOING THE SITE.

REFER TO CIVIL DRAWINGS FOR LIMITS OF EXCAVATIONS.

# **CONCRETE NOTES**

PROVIDE CONCRETE AS SHOWN BELOW. PROVIDE BATCH MIXING, TRANSPORTATION, PLACING AND CURING OF CONCRETE IN ACCORDANCE WITH RECOMMENDATIONS OF ACI 301, ACI 318 AND ASTM C94. USE TYPE I PORTLAND CEMENT UNLESS OTHERWISE NOTED. PROVIDE ADMIXTURES AND SPECIAL REQUIREMENTS AS SPECIFIED

NORMAL WEIGHT (150 PCF), F'c = 3,000 PSI CONCRETE AT 28 DAYS

SLAB-ON-GRADE, GRADE BEAMS, FOOTINGS ALL CONCRETE NOT SPECIFICALLY COVERED

REFER TO THE SPECIFICATIONS FOR MAXIMUM WATER/CEMENT RATIOS, MINIMUM CEMENT CONTENTS AND OTHER MIX DESIGN REQUIREMENTS. PROVIDE CONCRETE MIXES DESIGNED BY A QUALIFIED TESTING LABORATORY FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER.

PROVIDE CONSTRUCTION AND CONTROL JOINTS AS INDICATED ON THE DRAWINGS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED OR APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY THE STRUCTURAL ENGINEER OF PROPOSED CONSTRUCTION JOINT OR CONTROL JOINT LOCATIONS WHICH ARE DIFFERENT OR IN ADDITION TO JOINTS INDICATED ON THE DRAWINGS. PROVIDE 6,000-SQUARE FOOT MAXIMUM AREA OF CONCRETE PLACEMENT IN THE SLAB BETWEEN CONSTRUCTION JOINTS. PROVIDE 75-FOOT MAXIMUM SPACING OF CONSTRUCTION JOINTS IN GRADE BEAMS. PROVIDE GRADE BEAM CONSTRUCTION JOINTS IN MIDDLE 1/3 OF THE SPAN. WHEN A BEAM INTERSECTS A GIRDER WITHIN THE MIDDLE 1/3 OF THE GIRDER'S SPAN, OFFSET THE JOINT IN THE GIRDER A DISTANCE EQUAL TO TWICE THE WIDTH OF THE BEAM.

WHERE DOWELS ARE SHOWN ON THE DRAWINGS, BUT NOT SIZED, PROVIDE DOWELS THAT MATCH SIZE AND LCOATION OF MAIN REINFORCING STEEL AND LAP SPLICE WITH THE MAIN REINFORCING STEEL. REINFORCING BARS SHALL BE SPLICED AS NOTED IN THE REINFORCING LAP SCHEDULE.

CHAMFER EXPOSED EDGES 3/4 INCH UNLESS OTHERWISE NOTED.

WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS PRIOR TO POURING NEW CONCRETE.

REFERENCE THE APPROPRIATE DISCIPLINE'S DRAWINGS FOR SUB SLAB PIPING, FLOOR DRAINS, AND SLAB AND WALL

PROVIDE ADEQUATE STRUCTURAL FRAMING AS APPROVED BY THE STRUCTURAL ENGINEER FOR MECHANICAL OPENINGS THROUGH THE SLABS, WALLS, AND FLOOR DECK. OPENINGS ARE NOT PERMITTED THROUGH BEAMS UNLESS SPECIFICALLY DETAILED.

FOR PIPE INSTALLED HORIZONTALLY WITHIN SLABS, UNLESS SPECIFICALLY INDICATED IN THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER. FOR PIPES INSTALLED HORIZONTALLY WITHIN THE SLAB, PROVIDE MAXIMUM OUTSIDE DIAMETER OF 30 PERCENT OF THE SLAB THICKNESS. PLACE CONDUIT OR PIPE BETWEEN THE TOP AND BOTTOM LAYERS OF REINFORCEMENT WITHIN THE CENTER THIRD OF THE SLAB. DO NOT SPACE CONDUITS OR PIPES CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER

#### REINFORCING STEEL NOTES

PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING AND ACCESSORIES IN ACCORDANCE WITH ACI 315 AND

COORDINATE PLACEMENT OF CAST-IN-PLACE EMBEDS AND ANCHOR RODS. SET ANCHOR RODS WITH A TEMPLATE. SECURELY ATTACH EMBED ITEMS TO FORMWORK OR REINFORCING.

PROVIDE CLASS "B" REINFORCEMENT SPLICES FOR CONTINUOUS REINFORCEMENT. PROVIDE STANDARD 90-DEGREE HOOKS IN ACCORDANCE WITH ACI 318, UNLESS OTHERWISE NOTED. STAGGER SPLICES UNLESS SPECIFICALLY NOTED.

MAINTAIN THE FOLLOWING CONCRETE COVERAGE FOR REINFORCING STEEL UNLESS OTHERWISE NOTED

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH - 3 INCHES CONCRETE EXPOSED TO WEATHER

a. NO. 6 AND LARGER - 2 INCHES b. NO. 5 AND SMALLER - 1-1/2 INCHES

b. BEAM STIRRUPS - 1-1/2 INCHES

CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND

a. SLABS AND WALLS NO. 14 AND NO. 18 - 1-1/2 INCHES NO. 11 AND SMALLER - 3/4 INCH

DO NOT WELD OR BEND REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN OR APPROVED BY STRUCTURAL

WHEN SPECIFICALLY APPROVED. PROVIDE WELDED REINFORCEMENT IN ACCORDANCE WITH ASTM A706. USE LOW HYDROGEN ELECTRODES FOR WELDING OF REINFORCEMENT IN CONFORMANCE WITH "WELDING REINFORCEMENT STEEL, METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION", AMERICAN WELDING SOCIETY, AWS D1.4.

PROVIDE CONTINUOUS HORIZONTAL WALL REINFORCEMENT WITH 90-DEGREE BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON TYPICAL BAR PLACING DETAILS.

PROVIDE BAR SUPPORT ACCESSORIES IN ACCORDANCE WITH THE LATEST ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. SUPPORT BEAM REINFORCING ON BEAM BOLSTERS SPACED NOT MORE THAN 4 FEET ON

PROVIDE BAR SUPPORTS WITH PLASTIC COATED LEGS OR HOT DIP GALVANIZING AFTER FABRICATION FOR CONCRETE EXPOSED TO VIEW. PROVIDE STAINLESS STEEL BAR SUPPORTS FOR CONCRETE TO RECEIVE A SANDBLAST FINISH.

POST-INSTALLED ANCHOR NOTES

ANCHORS INSTALLED IN HARDENED CONCRETE TO BE USED ONLY WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS CONTRACTOR SHALL OBTAIN APPROVAL FROM THE A/E PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS, PLACE POST-INSTALLED ANCHORS SUCH THAT THEY AVOID CONFLICTING WITH EXISTING REBAR. WHERE INDICATED, PROVIDE THE FOLLOWING POST-INSTALLED ANCHOR:

EPOXY ADHESIVE ANCHORS: SIMPSON SET-3G FOR ANCHORAGE TO CONCRETE

ALLOWABLE ANCHOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE A/E WITH INFORMATION DEMONSTRATING THAT THE ANCHOR SUBSTITUTION PROVIDES EQUAL OR GREATER PERFORMANCE VALUES.

INSTALL ANCHORS IN ACCORDANCE WITH THE CURRENT ICBO REPORT FOR THE ANCHORS AND THE MANUFACTURER'S RECOMMENDATIONS. ALL ANCHORS SHALL BE INSTALLED BY A MANUFACTURER CERTIFIED INSTALLER.

INSTALL ANCHORS PERPENDICULAR TO THE FACE OF THE CONCRETE. DEVIATION FROM PERPENDICULAR GREATER THAN 10 DEGREES IS UNACCEPTABLE.

CREATE A TEMPLATE AT EACH ANCHOR CONNECTION LOCATION PRIOR TO FABRICATING HOLES IN CONNECTION PLATES. MAKE TEMPLATE BY LOCATING EXISTING REBAR WITH THE HELP OF A PACHOMETER. REPOSITION ANCHORS A MAXIMUM OF 1 1/2 INCHES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING REINFORCEMENT.

FILL ALL ABANDONED HOLES WITH EPOXY GROUT.

PROVIDE HOLES IN CONNECTION PLATES NO MORE THAN 1/16 OF AN INCH LARGER THAN THE ANCHOR DIAMETER. IF LARGER HOLES ARE NEEDED FOR ERECTION PURPOSES, PROVIDE PLATE WASHERS WELDED TO THE CONNECTION PLATE TO TRANSFER THE BOLT LOAD.

CLEAN DRILLED HOLES FREE OF DEBRIS/DUST AND INSPECT PRIOR TO APPLYING EPOXY AND INSTALLING ANCHORS.

## STRUCTURAL STEEL NOTES

PROVIDE STRUCTURAL STEEL OF THE FOLLOWING ASTM DESIGNATIONS UNLESS OTHERWISE NOTED:

STRUCTURAL STEEL WIDE FLANGE AND WT SHAPES - ASTM A 992 (GRADE 50)

STRUCTURAL STEEL STANDARD SHAPES, CHANNELS AND ANGLES - ASTM A 36

C. EDGE ANGLES, BENT PLATES, HANGER AND BRACES - ASTM A 36

D. STRUCTURAL PIPE - ASTM A 53, GRADE B

E. STRUCTURAL TUBING (SQUARE OR RECTANGULAR) - ASTM A 500, GRADE C

BASE PLATES AND MISCELLANEOUS STEEL PLATES - ASTM A 36

CONNECTION MATERIALS:

BEAM COLUMN STIFFENER PLATES AND DOUBLER PLATES TO MATCH THE GRADE STEEL OF STRUCTURAL

ALL CONNECTION MATERIALS, EXCEPT AS OTHERWISE NOTED HEREIN OR IN THE DRAWINGS, INCLUDING BEARING PLATES, GUSSET PLATES, STIFFENER PLATES, ANGLES, ETC. - ASTM A 36

HIGH STRENGTH BOLTS - ASTM A 325 OR ASTM F1852

HARDENED STEEL WASHERS - ASTM F 436

ANCHOR RODS - ASTM F1554, GRADE 55

HEAVY HEX NUTS - ASTM A 563

HEADED STUD ANCHORS TO CONFORM TO THE REQUIREMENTS OF ASTM A 29/A 29M, AWS D1.1, AND SECTION A3.6 OF

WELD MINIMUM SIZE AND STRENGTH

AISC 360 SPECIFICATION.

PROVIDE MINIMUM SIZE OF FILLET WELDS AS SPECIFIED IN TABLE J2.4 OF THE AISC MANUAL. USE 1/4 INCH FILLET WELD

PROVIDE MINIMUM EFFECTIVE THROAT THICKNESS OF PARTIAL PENETRATION GROOVE WELDS AS SPECIFIED IN TABLE

DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER ELEMENT JOINED ON ALL SHOP AND FIELD WELDS UNLESS OTHERWISE NOTED ON THE DRAWINGS.

WHERE CONNECTIONS ARE NOTED ON DRAWINGS AS MOMENT CONNECTIONS, PROVIDE WELDS TO DEVELOP FULL FLEXURAL CAPACITY OF THE LESSER MEMBER.

PROVIDE ELECTRODES FOR FIELD OR SHOP WELDING THAT CONFORM TO AWS D1.1 CLASS E70XX.

PROVIDE MINIMUM OF TWO BOLTS PER CONNECTION. MINIMUM BOLT DIAMETER TO BE 3/4 INCH. PROVIDE BOLTS, NUTS AND WASHERS THAT ARE HOT DIP GALVANIZED ACCORDING TO ASTM A 153, CLASS C WHEN USED TO

CONNECT STEEL ELEMENTS THAT ARE HOT DIP GALVANIZED AFTER FABRICATION. PROVIDE SIMPLE SHEAR CONNECTIONS FOR STEEL CONNECTIONS NOT OTHERWISE SPECIFIED UTILIZING HIGH STRENGTH BEARING BOLTS IN SINGLE OR DOUBLE SHEAR. PROVIDE DOUBLE ANGLE OR SINGLE PLATE SHEAR TAB BOLTED CONNECTIONS.

UNLESS LARGER REACTION IS SHOWN ON DRAWINGS, PROVIDE MINIMUM DESIGN FORCES AS FOLLOWS:

CONNECTED BEAM. OBTAIN END REACTION FROM UNIFORM LOAD TABLES OF THE AISC MANUAL OF STEEL CONSTRUCTION. PROVIDE MINIMUM SHEAR CAPACITY OF 12,000 POUNDS FOR BEAMS 8 INCHES AND 10 INCHES DEEP. PROVIDE MINIMUM SHEAR CAPACITY OF 8,000 POUNDS FOR BEAMS LESS THAN 8 INCHES DEEP.

NONCOMPOSITE BEAMS: BEAM-TO-BEAM OR BEAM-TO-COLUMN CONNECTION TO DEVELOP THE REACTION OF

ADD TO REACTIONS LISTED ABOVE LOADS OR REACTIONS OF MEMBERS SUPPORTED BY BEAM WITHIN THREE FEET OF BEAM END AND VERTICAL COMPONENTS OF FORCES IN BRACE MEMBERS FRAMING INTO BEAM.

STEEL FABRICATION

FABRICATE AND ASSEMBLE STRUCTURAL MEMBERS/ASSEMBLIES IN SHOP TO GREATEST EXTENT POSSIBLE.

CAMBER OF STRUCTURAL STEEL MEMBERS IS INDICATED ON THE DRAWINGS. WHERE POSSIBLE, CAMBER OF BEAMS TO BE APPLIED BY COLD BEND PROCESS. CAMBER INDICATED ON DRAWINGS ARE INTENDED TO BE FINAL CAMBER AT TIME OF ERECTION, AND WITHIN A TOLERANCE OF MINUS ZERO TO PLUS 1/8 INCH FOR EACH TEN FEET OF MEMBER LENGTH.

C. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL BY THE A/E.

STEEL FABRICATOR SHALL BE RESPONSIBLE FOR ALL ERRORS OF DETAILING ON THE SHOP DRAWINGS, ERRORS IN FABRICATION, AND THE CORRECT FITTING OF STRUCTURAL STEEL MEMBERS.

CONFORM TO THE AISC CODE OF STANDARD PRACTICE, FOR ERECTION TOLERANCES. FIELD MODIFICATION TO STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL BY THE A/E.

CLEAN STEEL OF RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS WHERE REQUIRED FOR FABRICATION, FITTING UP, DO NOT CUT STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR REVIEW AND APPROVAL OF THE

AFTER FABRICATION, HOT DIP GALVANIZE STRUCTURAL STEEL AND THEIR CONNECTIONS PERMANENTLY EXPOSED TO THE

OUTSIDE. SUCH ITEMS INCLUDE BUT ARE NOT LIMITED TO:

SHELF ANGLES PARAPET WALL SUPPORTING MEMBERS SCREEN WALL SUPPORTING MEMBERS

EMBEDDED PLATES IN CONCRETE BUILDING CLADDING SUPPORT STEEL ALL OTHER STEEL MEMBERS EXPOSED TO WEATHER

EXAMINE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR OTHER ITEMS THAT REQUIRE HOT DIPPED GALVANIZATION.

PROVIDE NON-SHRINK/NON-METALLIC GROUT FOR BASE PLATES WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 8000 PSI.

13. SUBMIT CALCULATIONS FOR CONNECTION DESIGNS NOT DETAILED ON DRAWINGS. DESIGN CONNECTIONS UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.

THE STRUCTURAL STEEL FABRICATOR MUST FURNISH STEEL SHOP DRAWINGS FOR ARCHITECT'S AND STRUCTURAL ENGINEER'S REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS MUST INCLUDE WELDING PROCEDURES, TESTING PROGRAMS FOR WELDING AND HIGH STRENGTH BOLTING, COATING MATERIAL, AND ERECTION SEQUENCE ON SHOP DRAWINGS.

MILL STEEL COLUMN ENDS TO FIT FLUSH WITH BASE PLATE, CAP PLATE, AND END PLATES. FIELD ASSEMBLY OF THESE STEEL

ELEMENTS TO THE COLUMNS IS PROHIBITED. BE RESPONSIBLE FOR ANY TEMPORARY SHORING OR BRACING DURING CONSTRUCTION PHASE PRIOR TO COMPLETING CONNECTIONS AND POURING FLOOR SLABS.

**WOOD FRAMING NOTES** 

WOOD FRAMING SHALL MEET THE FOLLOWING MINIMUM STRESS PROPERTIES UNLESS NOTED OTHERWISE:

		MEMBER SIZE	BENDING F <sub>b</sub> (PSI)	TENSION PARALLEL TO GRAIN Ft (PSI)	SHEAR PARALLEL TO GRAIN F <sub>v</sub> (PSI)	COMPRESSION PERPENDICULAR TO GRAIN F <sub>c</sub> (PSI)	COMPRESSION PARALLEL TO GRAIN Fc (PSI)	ELASTIC MODULUS E (PSI)
_	SOUTHERN PINE #2 OR BETTER	2x6	1,000	600	175	565	1,400	1,400,000
		2x10	800	475	175	565	1,300	1,400,000
		2x12	750	450	175	565	1,250	1,400,000
	ROSBORO GLULAM X-BEAM	SEE DWGS	2,400	-	265	650	-	1,800,000

PROVIDE SIMPSON STRONG-TIE CONNECTORS OR EQUIVALENT FOR WOOD FRAMING CONNECTIONS TO SUPPORTING MEMBERS USE STRONG-TIE CONNECTORS AND NAILS OF APPROPRIATE SIZE AND CAPACITY FOR THE SUPPORTED MEMBER AND INSTALL ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

ALL ROOF AND EXTERIOR WALL SHEATHING SHALL BE APA RATED CDX PLYWOOD WITH EXTERIOR GLUE (EXPOSURE 1) OR ORIENTED STRAND BOARD (OSB) WITH EXTERIOR GLUE (EXPOSURE 1), AND SHALL BEAR THE STAMP OF AN APPROVED TESTING

INSTALL ROOF SHEATHING WITH THE LONG DIMENSION OF THE PANEL PERPENDICULAR TO SUPPORTS UNLESS NOTED OTHERWISE, AND WITH PANEL CONTIUOUS OVER TWO OR MORE SPANS. STAGGER END JOINTS.

ALL ROOF SHEATHING SHALL BE APA RATED EXPOSURE 1 CDX PLYWOOD SHEATHING WITH A MINIMUM THICKNESS OF 5/8 INCH. DOC PS-1 OR PS-2, WITH A SPAN RATING OF AT LEAST 32/16 NAILED WITH 10d GALVANIZED COMMON NAILS AT 4 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. 10d NAILS SHALL HAVE A MINIMUM 0.148 INCH DIAMETER AND 1 1/2 INCHMINIMUM PENETRATION INTO SUPPORTING FRAMING.

OUTSIDE OF EXTERIOR WALLS SHALL BE SHEATHED WITH APA RATED EXPOSURE 1 OSB OR CDX PLYWOOD SHEATHING WITH A MINIMUM THICKNESS OF 5/8 INCH, DOC PS-1 OR PS-2. REFER TO S5.4 FOR FASTENING REQUIREMENTS OF SHEAR WALLS IDENTIFIED ON S1.1. WALLS NOT IDENTIFIED AS SHEAR WALLS SHALL BE FASTENED TO WALL STUDS WITH 10d GALVANIZED COMMON NAILS AT 6 INCHES ON CENTER AT EDGES AND 12 INCHES IB CENTER AT INTERMEDIATE SUPPORTS. PROVIDE BLOCKING AT UNSUPPORTED PANEL EDGES. 10d NAILS SHALL HAVE A MINIMUM OF 0.148 INCH DIAMETER AND 1 1/2 INCH MINIMUM PENETRATION INTO SUPPORTING FRAMING.

INSTALL JOISTS, RAFTERS, HEADERS AND BEAMS "CROWN UP."

ALL JOISTS SHALL HAVE DIAGONAL BRIDGING OR FULL DEPTH BLOCKING AT 8 FEET ON CENTER MAXIMUM ALONG THE SPAN AND AT SUPPORTING BEAMS OR WALLS.

CUTTING, BORING OR NOTCHING OF FRAMING MEMBERS, IF REQUIRED, SHALL CONFORM TO THE LIMITATIONS PRESCRIBED BY THE IBC AND MAY BE DISALLOWED FOR SOME FRAMING MEMBERS BY THE A/E.

ALL WOOD IN CONTACT WITH CONCRETE AND EXTERIOR MASONRY SHALL BE PRESSURE TREATED

REFER TO THE IBC FOR MINIMUM FASTENING CRITERIA. ALL NAILS TO BE COMMON WIRE SIZE. NAILING SHALL COMPLY WITH REQUIREMENTS OF NAILING SCHEDULE UNLESS NOTED OTHERWISE.

12. MOISTURE CONTENT OF ALL WOOD MEMBERS SHALL NOT EXCEED 19%.

### PRE-ENGINEERED TRUSS NOTES

ALL TRUSSES CALLED OUT IN THE DRAWINGS SHALL BE PRE-ENGINEERED, MANUFACTURED TRUSSES. TRUSSES SHALL CONFORM TO THE SPACING, DIMENSIONS AND LAYOUTS CALLED OUT IN THESE NOTES AND ON THE PLANS AND SHALL BE DESIGNED FOR SPECIFIED LOADINGS.

MAXIMUM LIVE LOAD DEFLECTION FOR TRUSSES NOT TO EXCEED L/360. MAXIMUM TOTAL LOAD DEFLECTION NOT TO EXCEED L/240, WHICHEVER IS GREATER.

TRUSSES AND CONNECTOR PLATES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST REVISION OF THE TRUSS PLATE

INSTITUDE SPECIFICATIONS. TRUSS MANUFACTURER SHALL DESIGN THE TRUSS TO WALL CONNECTIONS, U.N.O. ON THE DETAILS.

PROVIDE FRAMING ANCHORS AND/OR TRUSS HANGERS AS REQUIRED AND AS SHOWN ON THE DRAWINGS. PROVIDE TRUSS SHOP DRAWINGS, INSTALLATION DRAWINGS, AND CALCULATIONS PREPARED BY THE TRUSS MANUFACTURER IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, ETC.

CONTINUOUSLY BRACE AND SUPPORT TRUSSES DURING UNLOADING TO PREVENT EXCESSIVE STRESS ON THE JOINTS. DO NOT PERMIT TRUSSES TO DROP, SAG, OR BE SUPPORTED IN A DIRECTION PERPENDICULAR TO THE TRUSS PLANE. INSTALL TRUSSES IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, INCLUDING PROPER HANDLING, SAFETY PRECAUTIONS, TEMPORARY BRACING DURING ERECTION AND ALL OTHER SAFEGUARDS.

INSTALL ALL PERMANENT CHORD BRACING REQUIRED BY TRUSS SHOP DRAWINGS (TYPICALLY 3 ROWS OF 2x4 - FULL LENGTH OF

INSPECT ALL TRUSSES AFTER INSTALLATION FOR DAMAGE. NOTIFY A/E IMMEDIATELY OF DAMAGED TRUSSES. REMOVE AND REPLACE ALL DAMAGED TRUSSES.

TRUSSES ARE A DEFERRED SUBMITTAL ITEM AND CONTRACTOR IS REQUIRED TO COMPLETE THE FOLLOWING: FIRST, THE TRUSS PLANS AND CALCULATIONS, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED, SHALL BE SUBMITTED TO THE A/E FOR REVIEW BEFORE SUBMITTING TO THE BUILDING DEPARTMENT. SECOND, THE SHOP DRAWINGS SHALL BE SUBMITTED WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE A/E AND HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE BUILDING DESIGN. THE TRUSS DESIGN SHALL BE APPROVED BY THE BUILDING DEPARTMENT BEFORE THE TRUSSES ARE FABRICATED. GENERAL CONTRACTOR SHOULD PLAN FOR REVIEW TIME BY BOTH THE A/E AND

## METAL STUD FRAMING NOTES

METAL STUDS USED AT THE COOK LINE WALL SHALL HAVE A YIELD STRENGTH OF 33KSI

BUILDING OFFICIAL IN THE CONSTRUCTION SCHEDULE.

STUD SIZE, GAUGE, AND CONNECTION SHALL BE PER DETAILS.

TRACK SIZE, GAUGE, AND CONNECTION SHALL BE PER DETAILS.

# **BRICK TIE NOTES**

MASONRY (BRICK) VENEER SHALL BE ATTACHED WITH ADJUSTABLE WIRE TIES SPACED AT 16" O.C. VERTICALLY AND 16" O.C. HORIZONTALLY. ADDITIONAL TIES ALONG ALL OPENINGS GREATER THAN 16" ARE REQUIRED TO BE LOCATED WITHIN 12" OF OPENING AND SPACED AT 32" O.C. MAX. AROUND OPENING PERIMETER.

BRICK TIES SHALL BE MANUFACTURED BY HOHMANN & BARNARD, INC MODEL NUMBER HB-213 OR APPROVED EQUAL

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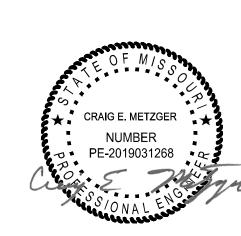
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PROFESSIONAL OF RECORD: CRAIG E. METZGER NO. 2019031268

EXP DATE: 12/31/23

REV	DESCRIPTION	DATE
1	Building Permit Resubmittal	09/15/22

Client Project No..

Project No.:

**GENERAL NOTES** 

te:	06.29.2022	Phase:	PERM
signed:	DMS	Drawing No.:	
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