GENERAL STRUCTURAL NOTES

NOTES APPLY TO ALL DRAWINGS

GENERAL NOTES

STRUCTURAL DRAWINGS SHALL BE USED WITH SPECIFICATIONS AND WITH ARCHITECTURAL, MECHANICAL, CIVIL AND ELECTRICAL DRAWINGS WHICH SHALL BE CONSULTED FOR SIZE, LOCATION, ETC. OF ALL OPENINGS, INVERTS, PIPING, AND OTHER PROVISIONS FOR ARCHITECTURAL, MECHANICAL, CIVIL AND ELECTRICAL REQUIREMENTS.

BUCHART HORN WILL ASSUME NO RESPONSIBILITY AND/OR LIABILITY FOR PROBLEMS WHICH ARISE FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND THE DESIGN INTENT THEY CONVEY OR FOR FROM PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL APPLICABLE CODES AND REGULATIONS. APPROPRIATE SAFETY MEASURES SATISFYING LOCAL AND OSHA REQUIREMENTS SHALL BE PROVIDED.

PROPER TEMPORARY BRACING OF ALL CONSTRUCTION WORK IN PROGRESS IS THE CONTRACTOR'S RESPONSIBILITY.

IF DURING DEMOLITION EXISTING CONDITIONS DO NOT AGREE WITH INFORMATION SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. DESIGN

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION AND THE REPAIR OF ANY DAMAGED FACILITIES.

SECTIONS AND DETAILS SHOWN, WHILE DRAWN FOR SPECIFIC LOCATIONS, ARE INTENDED TO ESTABLISH THE GENERAL TYPES OF DETAILS TO BE USED THROUGHOUT. DRAWINGS SHOULD NOT BE SCALED. CONTACT THE ENGINEER FOR CLARIFICATION OF ANY DIMENSION IN QUESTION.

ANCHOR BOLT LAYOUT SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL LAND SURVEYOR.

ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR. LAYOUT SHALL BE CHECKED AND COORDINATED BETWEEN ALL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS PRIOR TO THE START OF WORK.

SHOP DRAWINGS PREPARED BY THE SUBCONTRACTORS, SUPPLIERS, ETC. SHALL BE REVIEWED BY THE ENGINEER FOR CONFORMANCE WITH DESIGN CONCEPT ONLY. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED, INITIALED AND DATED AS BEING REVIEWED BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR. WORK SHALL NOT BEGIN WITHOUT THE REVIEW BY THE ENGINEER.

ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW OR RECORD SHALL THE STAMP AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE IN BEAR WHICH THE PROJECT IS LOCATED.

WHERE THESE SPECIFICATIONS CONFLICT WITH OTHER PROJECT SPECIFICATIONS, THE MORE STRICT (I.E., HIGHER COST OPTION) SHALL GOVERN.

GC SHALL PROVIDE ALL CONCRETE PADS. COORDINATE WITH DRAWINGS FROM ALL OTHER TO DETERMINE LOCATION AND SIZE OF CONCRETE PADS. COORDINATE WITH EQUIPMENT CONTRACTORS DISCIPLINES TO CONFIRM FINAL SIZE OF SELECTED EQUIPMENT.

LOADING NOTES

LOADS SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE.

DEAD LOADS:	
MEMBRANE –	1.5 PSF
METAL DECK –	3 PSF
FRAMING –	3 PSF
INSULATION –	1.5 PSF
GYPSUM CEILING –	3 PSF
MECH AND ELEC –	4 PSF
MISC –	4 PSF
TOTAL	20 PSF
LIVE LOADS:	
SLAB-ON-GRADE –	100 PSF
SNOW LOADS:	
GROUND SNOW LOAD, Pg=	30 PSF
FLAT-ROOF SNOW LOAD, Pf=	25 PSF
SNOW EXPOSURE CATEGORY, Ce=	1.0
THERMAL FACTOR, Ct=	1.0
IMPORTANCE FACTOR Is=	1.2
WIND LOADS:	
BASIC WIND SPEED =	125 MPH (3-SEC. GUST)
ALLOWABLE STRESS WIND SPEED =	97 MPH
RISK CATEGORY =	4
EXPOSURE CATEGORY	B
INTERNAL PRESSURE COEFF.=	± 0.18
COMPONENTS & CLADDING –	TBD
RAIN LOADS:	
RAIN INTENSITY, i	3.5 IN/HR
SEISMIC CRITERIA:	
I_E=	1.5
SITE CLASS=	C
S_S=	16.09%g
S_1=	4.50%g
S_{DS}=	0.139
S_{D1}=	0.045
SEISMIC DESIGN CATEGORY=	A
SEISMIC USE GROUP=	4
DESIGN BASE SHEAR, V=	0.01W
ANALYSIS PROCEDURE=	EQUIVALENT LATERAL-FORCE

CONCRETE NOTES

ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REINFORCED CONCRETE, LATEST EDITION AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE REQUIREMENTS FOR BUILDINGS, LATEST EDITION, INCLUDING ALL REVISIONS, EXCEPT AS MODIFIED HEREIN.

CONCRETE SHALL BE SUPPLIED BY A QUALIFIED READY-MIXED CONCRETE PLANT IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

	f'c	W/C	SLUMP
BURIED FOOTINGS	3000PSI	0.5	3"-5"
INTERIOR SLABS ON GRADE	4000PSI	0.45	3"-5"
EXTERIOR CONCRETE	45000PSI	0.40	3"-5"

ENTRAINED AIR = 4 TO 7% FOR (ALL EXPOSED CONCRETE, FOOTINGS, PIERS, EXTERIOR SLABS, AND WHERE OTHERWISE NOTED). ALL CONCRETE EXPOSED TO FREEZING TEMPERATURE SHALL BE AIR-ENTRAINED, U.N.O.

COARSE AGGREGATE SHALL BE AASHTO NO. 57 STONE. MAXIMUM AGGREGATE SIZE = 1.5" SUBMIT MIX DESIGNS TO ENGINEER FOR APPROVAL.

NO ADMIXTURES PERMITTED WITHOUT ENGINEER'S APPROVAL. CHLORIDE CONTAINING ADMIXTURES ARE NOT PERMITTED.

FINE AGGREGATE MUST BE NATURAL SAND, UNLESS APPROVED BY THE ENGINEER.

AIR-ENTRAINING ADMIXTURES ARE NOT PERMITTED ON TROWEL FINISHED SLABS.

AT CONTRACTOR'S OPTION, FLY ASH, GROUND GRANULATED BLAST FURNACE SLAG, OR OTHER POZZOLANS MAY BE SUBSTITUTED FOR PORTLAND CEMENT, UP TO 25% OF THE CEMENTITIOUS CONTENT. CONCRETE MIXES USING THESE MATERIALS MUST BE APPROVED BY THE ENGINEER.

WHEN CONCRETE ARRIVES AT THE PROJECT WITH SLUMP BELOW THAT SUITABLE FOR PLACEMENT, AS INDICATED BY THE SPECIFICATIONS, WATER MAY BE ADDED ONLY IF NEITHER THE MAXIMUM PERMISSIBLE WATER-CEMENT RATIO NOR THE MAXIMUM SLUMP IS EXCEEDED. THE WATER SHALL BE INCORPORATED BY ADDITIONAL MIXING EQUAL TO AT LEAST HALF OF THE TOTAL MIXING REQUIRED.

DISCHARGE OF THE CONCRETE SHALL BE COMPLETED WITHIN 1-1/2 HOURS, OR BEFORE THE TRUCK DRUM HAS REVOLVED 300 REVOLUTIONS, WHICHEVER COMES FIRST, AFTER THE INTRODUCTION OF THE MIXING WATER TO THE CEMENT AND AGGREGATES OR THE INTRODUCTION OF THE CEMENT TO THE AGGREGATES.

TRUCK BATCH SLIPS MUST INCLUDE TIME OF BATCHING, TOTAL DRUM REVOLUTIONS UPON ARRIVAL AT SITE, AND QUANTITY OF WATER (IN GALLONS) PER CUBIC YARD AVAILABLE TO BE ADDED TO ATTAIN THE MAXIMUM DESIGN WATER-CEMENT RATIO.

REINFORCING STEEL SHALL BE DEFORMED, BILLET-STEEL CONFORMING TO ASTM A615 – GRADE 60. WELDING OF REINFORCING STEEL MUST BE APPROVED BY THE ENGINEER AND SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS CODE, D1.4, STRUCTURAL WELDING CODE – REINFORCING STEEL LATEST EDITION AND BE PERFORMED ONLY BY QUALIFIED WELDERS.

WHEN SPECIFIED, WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SUPPLIED IN FLAT SHEETS ONLY. BAR CHAIRS ARE REQUIRED AT THE RECOMMENDED SPACING FOR STRUCTURAL SLABS.

REINFORCING STEEL SPLICES SHALL BE ACI CLASS B SPLICES UNLESS INDICATED OTHERWISE.

PROVIDE ADEQUATE BOLSTERS, HI-CHAIRS, SUPPORT BARS, ETC., TO MAINTAIN SPECIFIED CLEARANCE FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. PROVIDE ACCESSORIES WHICH ARE PLASTIC TIPPED OR GALVANIZED WITH TURNED-UP ENDS FOR REINFORCEMENT AT ALL FACES OF EXPOSED CONCRETE, INTERIOR OR EXTERIOR.

SHOP DRAWINGS FOR THE FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE FABRICATION COMMENCES.

CONCRETE SHALL BE PLACED ONLY AFTER APPROVAL OF THE REINFORCEMENT AND MIX DESIGNS BY THE ACTING SPECIAL INSPECTION AGENCY OR THE ENGINEER.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSPECTIONS PRIOR TO CONCRETE PLACEMENT. SCHEDULE THE POURING OF FOUNDATIONS ON THE SAME DAY THE EXCAVATION IS COMPLETED.

CURE ALL CONCRETE IN ACCORDANCE WITH ACCEPTED ACI STANDARDS AND CONFORMANCE TO ACI 308.1, STANDARD SPECIFICATION FOR CURING CONCRETE, LATEST EDITION, FOR THE WORST CASE WEATHER CONDITIONS ANTICIPATED DURING THE CURING PERIOD.

ALL CONCRETE CONSTRUCTION AND PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF ACI 306.1, STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING, LATEST EDITION.

NO ALUMINUM OF ANY TYPE SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.

MECHANICALLY VIBRATE CONCRETE. SLABS-ON-GRADE NEED ONLY BE VIBRATED AROUND FLOOR DUCTS AND OTHER EMBEDDED ITEMS. DO NOT PLACE PIPES, DUCTS, REGLETS OR CHASES IN STRUCTURAL CONCRETE OR COMPOSITE FLOOR SYSTEMS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

MAXIMUM FREE DROP OF ANY CONCRETE = 5'-0".

PROVIDE A MINIMUM OF CONCRETE COVER FOR REINFORCING BARS AS FOLLOWS UNLESS NOTED OTHERWISE ON DRAWINGS: FOOTINGS = 3 INCHES EARTH FACE, 2 INCHES ALL OTHERS, U.N.O. CONCRETE WALLS, BEAMS, AND PIERS = 2 INCHES EARTH FACE, 1-1/2 INCHES ALL OTHERS, U.N.O.

SIX (6) TEST CYLINDERS SHALL BE PREPARED FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED ON ANY GIVEN DAY TO REPRESENT ALL CONCRETE PLACED ON THAT DAY. TWO (2) CYLINDERS SHALL BE TESTED AT SEVEN (7) DAYS AND TWO (2) CYLINDERS SHALL BE TESTED AT 28 DAYS FOR VERIFICATION OF CONCRETE DESIGN STRENGTH WITH TWO (2) CYLINDERS REMAINING.

CONCRETE FINISHES, AS DEFINED IN CHAPTER 5 OF ACI 301, SHALL BE AS FOLLOWS, U.N.O.:

FORMED SURFACES NOT EXPOSED TO PUBLIC VIEW: ROUGH-FORM FINISH
FORMED SURFACES EXPOSED TO PUBLIC VIEW: SMOOTH-FORM FINISH
WALLS AS INDICATED: RUBBED FINISH
TYPICAL INTERIOR COMMERCIAL/INDUSTRIAL FLOOR: TROWELED FINISH
FLOORS TO RECEIVE CERAMIC TILE, PORTLAND CEMENT, TERRAZZO, ETC.: SCRATCH FINISH
EXTERIOR SLABS ON GRADE, WALKWAYS, ETC.: NON-SLIP BROOM FINISH

U.N.O. PROVIDE VERTICAL CONSTRUCTION JOINTS IN CONCRETE WALLS AND SLABS AT A MAXIMUM 20'-0" O.C. SPACING. DO NOT EXCEED 1.5:1 LENGTH TO WIDTH RATIO. DO NOT PROVIDE JOINTS WITHIN A REBAR SPLICE OR HOOK.

DO NOT ALLOW CONSTRUCTION EQUIPMENT ON NEWLY PLACED SLABS FOR A MINIMUM OF SEVEN (7) DAYS. WHEN STRIP POURING, ALLOW SEVEN (7) DAYS BEFORE PLACING ADJACENT SLAB SECTIONS. A SLAB ON GRADE PRE-CONSTRUCTION CONFERENCE INVOLVING THE OWNER, CONTRACTOR AND ENGINEER IS RECOMMENDED TO REVIEW INSTALLATION PROCEDURES AND REQUIREMENTS.

STRUCTURAL STEEL NOTES

ALL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, MARCH 9, 2005 (AISC 360), THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004, THE CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, MARCH 18, 2005 (AISC 303), AND THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION.

ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS CODE, D1.1, STRUCTURAL WELDING CODE – STEEL, LATEST EDITION, AND AISC SPECIFICATIONS USING THE PROPER ELECTRODE FROM AWS D1.1 TABLE 3.1 AND PERFORMED ONLY BY QUALIFIED WELDERS.

STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A992, WITH A MINIMUM YIELD STRESS OF 50 KSI FOR ALL WIDE FLANGE AND WT SHAPES. ALL OTHER SHAPES, MISCELLANEOUS PLATES, AND CONNECTION MATERIAL SHALL CONFORM TO ASTM A36. SQUARE OR RECTANGULAR STRUCTURAL STEEL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, WITH A MINIMUM YIELD STRESS OF 46 KSI. ROUND HOLLOW STRUCTURAL STEEL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, WITH A MINIMUM YIELD STRESS OF 42 KSI. STRUCTURAL STEEL PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A53, TYPE S, GRADE B, WITH A MINIMUM YIELD STRESS OF 35 KSI.

ALL GALVANIZED STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A123.

SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY FABRICATION OR ERECTION ERRORS OR DEVIATIONS AND RECEIVE WRITTEN APPROVAL BEFORE FIELD CORRECTIONS ARE MADE.

BOLTED CONNECTIONS OF STRUCTURAL STEEL SHALL BE MADE USING HIGH STRENGTH STEEL BOLTS CONFORMING TO ASTM A325. BOLTS SHALL BE 3/4" MINIMUM IN DIAMETER UNLESS NOTED OTHERWISE. THE FAYING SURFACES AT SLIP-CRITICAL CONNECTIONS SHALL BE CLASS A SURFACES, AND SHALL NOT BE PAINTED OR PRIMED. GALVANIZED SURFACES SHALL BE ROUGHENED BY MEANS OF HAND WIRE BRUSHING AS INDICATED IN THE 2004 RCSC SPECIFICATION.

FABRICATOR SHALL SELECT AISC SIMPLE SHEAR CONNECTIONS FOR NON-COMPOSITE BEAMS CAPABLE OF CARRYING EITHER REACTION FORCE WHEN INDICATED OR 75% OF THE TOTAL UNIFORM LOAD FOR THE GIVEN SIZE, SPAN, AND GRADE OF THE BEAM, AS TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS. SIMPLE SHEAR CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE OR SHEAR PLATES, UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS ALL HIGH STRENGTH BOLTS SHALL BE SNUG TIGHT UNLESS NOTED OTHERWISE. A SNUG TIGHT CONDITION IS AS DEFINED IN SECTION 1.2.2. IN THE AISC DESIGN GUIDE 17. BOLTS USED IN SLIP-CRITICAL CONNECTIONS SHALL BE PRETENSIONED IN ACCORDANCE WITH THE 2004 RCSC SPECIFICATION. ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554, WITH A MINIMUM YIELD STRENGTH OF 36 KSI, UNLESS NOTED OTHERWISE. BOLTS SHALL BE 3/4" MINIMUM DIAMETER UNLESS NOTED OTHERWISE.

ALL COLUMNS SHALL HAVE A MINIMUM OF 4 ANCHOR BOLTS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY BRACING OF ALL STEEL DURING ERECTION AND UNTIL CONSTRUCTION IS COMPLETE. THE CONTRACTOR SHALL FURNISH ALL PLATES, CLIP AND SEAT ANGLES, AND CONNECTIONS FOR COMPLETION OF THE STRUCTURE, EVEN IF SUCH ITEMS ARE NOT SPECIFICALLY CALLED FOR ON THE STRUCTURAL DRAWINGS.

STRUCTURAL AND MISCELLANEOUS STEEL FABRICATORS SHALL BE RESPONSIBLE FOR OBTAINING ALL FIELD DIMENSIONS NECESSARY FOR THE COMPLETION OF THEIR WORK. MINIMUM SIZE OF FILLET WELDS, UNLESS OTHERWISE NOTED, IS TO BE 3/16-INCH FILLET. CHIP, WIRE BRUSH CLEAN, AND PRIME PAINT ALL FIELD WELDS. SURFACES WITHIN 2 INCHES OF WELDS SHALL BE FREE OF MATERIAL THAT WOULD PREVENT PROPER WELDING OR PRODUCE OBJECTIONABLE FUMES WHILE WELDING IS BEING DONE. FOR STRUCTURAL STEEL THAT WILL RECEIVE SPRAYED FIREPROOFING: NO PRIMER OR FINISH PAINT. IF STEEL IS PAINTED, A PROPER BONDING AGENT MUST BE APPLIED TO ENSURE PROPER ADHESION OF THE SPRAYED FIREPROOFING.

PROVIDE 1/8" CAP PLATE FOR ALL OPEN ENDS OF HSS MEMBERS. INCREASE CAP PLATE THICKNESS TO 3/4" FOR ANY LOCATIONS WHERE JOISTS BEAR ON THE COLUMN CAP. ANY VENT HOLES REQUIRED IN TUBE WALLS FOR WELDING SHOULD BE PLACED IN NON-VISIBLE LOCATIONS FOR EXPOSED MEMBERS IF POSSIBLE.

STEEL JOISTS SHAL BE DESIGN FOR A MINIMUM NET UPLIFT OF 30 PSF

ALL STEEL COLUMNS IN CMU WALLS SHALL HAVE TIES AT 16" O.C. VERTICALLY. PROVIDE TIES ON EACH FACE OF COLUMN IN CONTACT WITH CMU

MEMBERS NOTED AS CONTINUOUS (CONT) ARE INTENDED TO HAVE FULL PENETRATION WELDS AT ANY SPLICES.

FOUNDATION NOTES

NO CONSTRUCTION ON SUBGRADE SURFACES SHALL BE PERMITTED PRIOR TO THE GEOTECHNICAL REPRESENTATIVES INSPECTION AND APPROVAL OF SUBGRADE SURFACES.

TO BE CONFIRMED BY THE PROJECT GEOTECHNICAL ENGINEER, MAXIMUM ALLOWABLE BEARING PRESSURES FOR NEW STRUCTURE FOUNDATIONS ARE AS FOLLOWS:

2000 PSF

NO CONSTRUCTION ON SUBGRADE SURFACES SHALL BE PERMITTED PRIOR TO THE ENGINEER'S INSPECTION AND APPROVAL OF SUBGRADE SURFACES.

IF TESTING REVEALS LOWER ALLOWABLE BEARING PRESSURES THAN LISTED ABOVE, CONTACT THE STRUCTURAL ENGINEER. DO NOT PERFORM CUT AND FILL PROCEDURES WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. ANY CUT AND FILL PROCEDURES PERFORMED IN ORDER TO RAISE THE ALLOWABLE BEARING WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER WILL BE AT THE CONTRACTORS EXPENSE.

AGGREGATE BACKFILL SHALL BE AS PER THE SPECIFICATIONS.

ALL EXCAVATIONS SHALL BE PROPERLY AND CONTINUOUSLY DE-WATERED DURING CONSTRUCTION. GROUNDWATER <u>MUST</u> BE MAINTAINED (1) FOOT BELOW THE BOTTOM OF THE EXCAVATION UNTIL TANK CONSTRUCTION IS COMPLETE. SIMILARLY, OSHA-APPROVED SLOPES SHALL BE CONTINUOUSLY PROTECTED AGAINST EROSION.

BOTTOM OF ALL FOOTING TO BE PLACED 3'-6" BELOW FINISH GRADE, UNLESS NOTED TO BE OF GREATER DEPTH.

OVEREXCAVATE ALL FOOTINGS TO A DEPTH OF 1/2 OF THE FOOTING WIDTH MINIMUM. ON SITE REPRESENTATIVE TO DETERMINE IF ADDITIONAL OVEREXCAVATION WILL BE REQUIRED BASED ON FIELD CONDITIONS.

SPECIAL INSPECTION NOTES

OWNER SHALL HIRE AN INDEPENDENT TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE IBC. REFER TO TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFO. PROVIDE TEST/INSPECTION REPORTS TO THE STRUCTURAL ENGINEER ON A WEEKLY BASIS MINIMUM.

MASONRY NOTES

ALL CONCRETE MASONRY SHALL CONFORM TO THE REQUIREMENTS OF ASTM C90 UNLESS NOTED OTHERWISE. CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF ACI 530/ASCE 5/TMS 402, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, LATEST EDITION AND ACI 530.1/ASCE 6/TMS 602, SPECIFICATIONS FOR MASONRY STRUCTURES, LATEST EDITION, INCLUDING ALL SUPPLEMENTS.

28 DAY DESIGN COMPRESSIVE STRENGTH OF MASONRY (F'M) USED IS AS FOLLOWS: STANDARD MASONRY = 1900 PSI

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY BRACING OF ALL MASONRY CONSTRUCTION. BRACING SHALL REMAIN IN PLACE UNTIL MASONRY HAS HAD SUFFICIENT TIME TO GAIN DESIGN STRENGTH. WHERE MASONRY ATTACHES TO FLOOR AND/OR ROOF SYSTEMS, BRACING SHALL REMAIN IN PLACE UNTIL THE DIAPHRAGM HAS BEEN ANCHORED IN ITS FINAL POSITION.

GROUT LIFTS FOR REINFORCED MASONRY WALLS SHALL NOT EXCEED 5 FEET IN HEIGHT. HIGH LIFT GROUT PROCEDURES MAY BE USED ONLY AFTER WRITTEN APPROVAL IS PROVIDED BY THE ENGINEER.

ALL MORTAR SHALL CONFORM TO ASTM C270. MORTAR SHALL BE TYPE M (BELOW GRADE/EXPOSED TO EARTH), TYPE S (ABOVE GRADE) WITH AN AVERAGE 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.

GROUT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C476. FILL GROUTED CORES, BOND BEAMS, AND WALL REINFORCEMENT WHERE SHOWN ON PLANS WITH 3000 PSI SMALL AGGREGATE CONCRETE MIX WITH 8"-11" SLUMP. GROUT SAMPLES SHALL BE TESTED PER THE CAST-IN-PLACE CONCRETE CONSTRUCTION SPECIFICATIONS.

ALL STEEL LINTELS SHALL BE TEMPORARILY SHORED WHERE A HEIGHT OF MASONRY GREATER THAN HALF THE SPAN OF THE LINTEL WILL BE PLACED ABOVE THE LINTEL PRIOR TO MASONRY GAINING DESIGN STRENGTH. SHORING SHALL REMAIN IN PLACE UNTIL MASONRY HAS GAINED DESIGN STRENGTH AND ALL REQUIRED PERMANENT BRACING IS INSTALLED. ALL STEEL LINTELS FOR EXTERIOR MASONRY SHALL BE PAINTED.

PROVIDE VERTICAL CONTROL JOINTS IN ABOVE GRADE MASONRY WALLS SO THAT THE DISTANCE BETWEEN JOINTS DOES NOT EXCEED THE LESSER OF 1 1/2 TIMES THE OVERALL WALL HEIGHT, OR 25 FEET. CONTROL JOINTS SHALL NOT BE PLACED LESS THAN 8" FROM A BEARING PLATE OR JAMB OF AN OPENING. A CONTROL JOINT SHALL BE PLACED AT ONE SIDE OF AN OPENING LESS THAN 6'-0" WIDE AND AT BOTH SIDES OF OPENINGS OVER 6'-0" WIDE. PROVIDE VERTICAL CONTROL JOINTS AT INTERSECTIONS OF REINFORCED & UNREINFORCED WALLS, U.N.O. SUBMIT A SHOP DRAWING SHOWING CONTROL JOINT LOCATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. COORDINATE EXACT CONTROL JOINT & EXPANSION JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.

HORIZONTAL JOINT REINFORCEMENT SHALL CONSIST OF TRUSS TYPE ASTM A82 COLD DRAWN NO. 9 GAUGE GALVANIZED WIRE STEEL, LOCATED 16" O.C. CROSS RODS TO BE WELDED TO SIDE RODS AT 16" O.C. TO FORM A TRUSS. LAP SPLICES 6" MINIMUM. PROVIDE HORIZONTAL REINFORCING IN THE TWO COURSES ABOVE AND BELOW OPENINGS AND AT THE TOP OF WALLS OR PARTITIONS.

MASONRY CORES BELOW GRADE SHALL BE GROUTED SOLID. HEAD JOINTS SHALL BE MORTARED SOLID THE FULL DEPTH OF THE FACE SHELL. WEBS SHALL BE FULLY MORTARED AT GROUTED CORES. A MINIMUM OF ONE COURSE OF MASONRY SHALL BE GROUTED SOLID BELOW TRANSITIONS IN MASONRY THICKNESS.

COLD WEATHER MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF AC1 530.1/ASCE 6/TMS602, LATEST EDITION.

MASONRY STAIR SHAFTS AND ELEVATOR SHAFTS SHALL BE GROUTED SOLID, UNLESS NOTED OTHERWISE.

REINFORCING STEEL SHALL BE DEFORMED, BILLET-STEEL CONFORMING TO ASTM A615 -GRADE 60. WELDING OF REINFORCING STEEL MUST BE APPROVED BY THE ENGINEER AND SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS CODE, D1.4, STRUCTURAL WELDING CODE – REINFORCING STEEL LATEST EDITION AND BE PERFORMED ONLY BY QUALIFIED WELDERS.

SHOP DRAWINGS FOR THE FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE FABRICATION COMMENCES. SUBMITTALS REQUIRED TO BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONCRETE MASONRY CONSTRUCTION INCLUDE, BUT ARE NOT LIMITED TO: MIX DESIGNS, REINFORCEMENT SHOP DRAWINGS, VERTICAL CONTROL JOINT LOCATION PLANS. MORTAR SHALL BE SAMPLED AND TESTED ACCORDING TO ASTM C 270, C 780, AND C 1586.

WET SETTING OF REINFORCING STEEL IS PROHIBITED UNLESS APPROVED BY THE ENGINEER.

METAL DECK NOTES

INSTALLATION OF ALL DECKING SHALL BE IN STRICT ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS AND WITH MANUFACTURER'S RECOMMENDATIONS.

STEEL DECK SHALL BE MANUFACTURED BY A MEMBER OF THE STEEL DECK INSTITUTE. ALL FLOOR AND ROOF DECK SHALL BE GALVANIZED.

DECK SHALL BE ATTACHED TO THE STEEL STRUCTURE IN ACCORDANCE WITH THE TYPICAL DETAIL. ALTERNATE FASTENERS MUST BE APPROVED BY THE ENGINEER.

STORE AND HANDLE DECKING SO AS TO PREVENT DAMAGE.

SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

PROVIDE ACCESSORIES AS NEEDED TO PROVIDE A COMPLETE SYSTEM. CONTRACTOR SHALL REFER TO MANUFACTURER'S SPECIFICATIONS FOR ACCESSORIES FOR SPECIALTY DECK TYPES (E.G. EPICORE, ARCH DECK, ETC.). ALL FLOOR OR ROOF DECK PENETRATIONS > 6" (SQUARE OR DIA.) SHALL BE PROPERLY REINFORCED WITH ANGLE FRAMES OR SLAB REINFORCING AS SPECIFIED BY THE ENGINEER.

ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS CODE, D1.3, STRUCTURAL WELDING CODE – SHEET STEEL, LATEST EDITION, AND SHALL BE PERFORMED ONLY BY QUALIFIED WELDERS.

STAIR NOTES

THE STAIR SUPPLIER SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL STAIRS, LANDINGS, AND CONNECTIONS.
DRAWINGS AND CALCULATIONS SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. STAIRS & LANDINGS SHALL BE DESIGNED FOR A MINIMUM LIVE LOAD OF 100 PSF IN ADDITION TO ANY APPLICABLE DEAD LOADS; INCLUDING THEIR SELF-WEIGHT.

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REVISIONS

MARK	ISSUED DATE	DESCRIPTION

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ISSUED DATE:	03/27/23
DRAWN BY:	JTK
CHECKED BY:	JTK

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SHEET TITLE:

STRUCTURAL GENERAL NOTES

ISSUED FOR BID

SHEET NO:
S-001