GENERAL

A. THE FOLLOWING NOTES APPLY TO ALL STRUCTURAL DRAWINGS. NOTES SHALL APPLY UNLESS OTHERWISE INDICATED BY STRUCTURAL DRAWINGS OR SPECIFICATIONS.

B. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION OR PLAN NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL SIMILAR OR LIKE CONDITIONS UNLESS NOTED OTHERWISE.

C. ALL DESIGN AND CONSTRUCTION IS BASED ON AND SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2012 EDITION WITH APPLICABLE GA STATE AMENDMENTS. ALL REFERENCED STANDARDS SHALL BE OF THE EFFECTIVE DATE NOTED IN THE CONTROLLING BUILDING CODE.

D. NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONSTRUCTION DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF OWNER, CONTRACTOR, ENGINEER, SUPPLIER, OR ANY OF THEIR CONSULTANTS, AGENTS, OR EMPLOYEES FROM THOSE SET FORTH IN THE CONSTRUCTION DOCUMENTS. NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE STRUCTURAL ENGINEER OF RECORD OR ANY OF THE STRUCTURAL ENGINEER OF RECORD'S CONSULTANTS, AGENTS, OR EMPLOYEES ANY DUTY OR AUTHORITY TO SUPERVISE OR DIRECT THE FURNISHING OR PERFORMANCE OF THE WORK OR ANY DUTY OR AUTHORITY TO UNDERTAKE RESPONSIBILITIES CONTRARY TO THE PROVISIONS OF THE CONSTRUCTION DOCUMENTS.

E. CONSTRUCTION DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO, THE STRUCTURAL DOCUMENTS (DRAWINGS AND SPECIFICATIONS), BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR MATERIAL PREPARED AND SUBMITTED BY THE GENERAL CONTRACTOR.

F. CONSTRUCTION DOCUMENTS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE CODE OF PRACTICE OR SPECIFICATIONS OF ACI, PCI, AISC, SJI OR OTHER STANDARDS. WHERE A CONFLICT OCCURS WITHIN THE CONSTRUCTION DOCUMENTS, THE STRICTEST REQUIREMENT SHALL GOVERN.

G. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS AND NOTIFY ARCHITECT/STRUCTURAL ENGINEER OF RECORD OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH WORK. FOR DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.

H. DO NOT SCALE FOR DIMENSIONS NOT SHOWN ON DRAWINGS. SEND WRITTEN REQUEST FOR INFORMATION TO THE ARCHITECT FOR DIMENSIONS NOT PROVIDED.

I. THE STRUCTURE SHOWN ON THESE DRAWINGS IS SELF-SUPPORTING ONLY IN ITS COMPLETED FORM. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE DESIGN, ADEQUACY, SAFETY, AND STABILITY OF TEMPORARY ERECTION BRACING AND SHORING.

J. NO PROVISIONS HAVE BEEN MADE IN THE DESIGN FOR THE SUPPORT OF A CONCENTRATED LOAD FROM PLUMBING, MECHANICAL OR HVAC EXCEPT AS SHOWN ON THE DRAWINGS.

K. THE GENERAL CONTRACTOR SHALL COORDINATE ALL SIZES AND LOCATIONS OF FLOOR, ROOF, AND WALL PENETRATIONS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. ALL PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD UNLESS NOTED OTHERWISE.

L. THE GENERAL CONTRACTOR SHALL VERIFY THAT MISCELLANEOUS FRAMING SHOWN ON THE STRUCTURAL DRAWINGS FOR MECHANICAL EQUIPMENT, OWNER-FURNISHED ITEMS, PARTITIONS, ETC. IS CONSISTENT WITH THE REQUIREMENTS OF SUCH ITEMS.

M. ELEVATIONS SHOWN ARE TO TOP OF FOUNDATIONS, SLABS OR STEEL BEAMS UNLESS NOTED OTHERWISE.

N. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ORDER TO COMPLY WITH THE CONSTRUCTION DOCUMENTS.

O. THE GENERAL CONTRACTOR HAS SOLE RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.

P. THE STRUCTURAL ENGINEER OF RECORD HAS DELEGATED THE DESIGN OF PRECAST CONCRETE, GLAZING SYSTEMS, COLD FORMED METAL FRAMING, RAILING, SKYLIGHTS, AND STAIRS, OR OTHER SYSTEMS NOT SHOWN IN THE STRUCTURAL DRAWINGS. SUCH SYSTEMS SHALL BE DESIGNED, FURNISHED, AND INSTALLED AS REQUIRED BY OTHER PORTIONS OF THE CONTRACT DOCUMENTS.

Q. FOR ELEVATORS ASSOCIATED WITH THIS PROJECT, EDGE OF SLAB OPENINGS AT PIT, FOUNDATION, FLOOR FRAMING AND ROOF FRAMING HAVE BEEN COORDINATED FOR DIMENSIONS PROVIDED BY THE ARCHITECTURAL DRAWINGS. SLAB EDGE SUPPORTS, HOIST BEAM SUPPORTS, GUIDE RAIL SUPPORTS, AND EQUIPMENT SUPPORTS HAVE BEEN COORDINATED BASED ON ELEVATOR CUT SHEETS PROVIDED DURING THE DESIGN PHASE OF THIS PROJECT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ELEVATOR MANUFACTURER FOR THE ELEVATOR(S) TO BE INSTALLED ON THE PROJECT AND SHALL ADJUST SLAB OPENING DIMENSIONS, AS WELL AS ADJUST FRAMING OR PROVIDE MISCELLANEOUS FRAMING AS REQUIRED FOR SLAB OPENING ADJUSTMENTS, SLAB EDGE SUPPORTS, GUIDE RAIL SUPPORTS, HOIST BEAM SUPPORTS, AND EQUIPMENT SUPPORTS AS REQUIRED. THE GENERAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR ALL REQUIRED ADJUSTMENTS AS NOTED AND SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH ANY REQUIRED ADJUSTMENTS NOTED ABOVE FOR INSTALLATION OF ELEVATOR(S) AT NO ADDITIONAL COST TO OWNER.

R. ALL TESTING SHALL BE PAID FOR BY THE OWNER (CONTRACTOR SHALL COORDINATE WITH OWNER TO ENSURE THAT COST OF TESTING IS ACCURATE AND PRESENTED TO OWNER WITH CONSTRUCTION COSTS).

SHOP DRAWINGS

A. STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

B. THE GENERAL CONTRACTOR SHALL SUBMIT, AS REQUIRED, PRINTS OR ELECTRONIC COPIES, AS DIRECTED, OF SHOP DRAWINGS FOR ALL FABRICATED MATERIALS TO ARCHITECT FOR REVIEW.

C. REVIEW OF SHOP DRAWINGS BY THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE GENERAL CONTRACTOR OF THE SOLE RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THOSE SHOP DRAWINGS.

D. SHOP DRAWINGS AND CALCULATIONS FOR DELEGATED DESIGN ITEMS AS DICTATED BY THE CONSTRUCTION DOCUMENTS SHALL BE SIGNED AND SEALED BY A REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED BEFORE SUBMITTING FOR REVIEW BY THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD.

E. COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF ALL APPLICABLE SPECIALTY ITEMS INCLUDING, BUT NOT LIMITED TO PRECAST CONCRETE, GLAZING SYSTEMS, COLD FORMED METAL FRAMING, RAILING, SKYLIGHTS, AND STAIRS SHALL BE SIGNED AND SEALED BY A REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED, AND SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.

F. REPRODUCTION/DUPLICATION OF THE STRUCTURAL DRAWINGS FOR USE IN THE PRODUCTION OF SHOP DRAWINGS IS PROHIBITED, UNLESS NOTED OTHERWISE. IN THE EVENT THAT THE GENERAL CONTRACTOR OR SUBCONTRACTOR ELECTS TO PRODUCE SHOP DRAWINGS BY COPYING ELECTRONIC OR PAPER COPIES OF THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL REQUEST FROM THE STRUCTURAL ENGINEER OF RECORD A SHOP DRAWING WAIVER ALONG WITH THE SPECIFIC SHEETS REQUIRED. SIGNATURE OF THE WAIVER BY THE GENERAL CONTRACTOR, ALONG WITH PAYMENT OF A FEE TO THE STRUCTURAL ENGINEER OF RECORD WILL BE REQUIRED. THE GENERAL CONTRACTOR SHALL CONTINUE TO ASSUME RESPONSIBILITY FOR ERRORS, OMISSIONS AND COORDINATION REQUIRED FOR SHOP DRAWING PRODUCTION, REGARDLESS OF THE USE OF COPIES OF THE STRUCTURAL DRAWINGS FOR SHOP DRAWING PRODUCTION.

DESIGN LOADS

A. DESIGN ROOF DEAD LOAD:
1. 23 PSF

B. DESIGN ROOF LIVE LOAD:
1. 20 PSF
2. REDUCTIONS APPLIED PER TRIBUTARY AREA AS PERMITTED BY CODE

C. DESIGN ROOF RAIN LOAD
1. DESIGN RAINFALL: 3.75 "/HR (100-YEAR, 1-HOUR RAINFALL)
2. MAXIMUM DEPTH OF RAINWATER AT LOWEST POINT OF ROOF SHALL NOT EXCEED 3-1/2" DURING DESIGN RAINFALL

D. DESIGN FLOOR DEAD LOAD:
1. SEE LOAD DIAGRAM ON THIS SHEET

E. DESIGN FLOOR LIVE LOAD:
1. 150 PSF SLAB-ON-GRADE
2. 40 PSF ELEVATED CLASSROOMS
3. 80 PSF ELEVATED CORRIDORS
4. 100 PSF ELEVATED STORAGE & MECHANICAL ROOMS
5. THE FLOOR DESIGN LIVE LOAD FOR EACH ELEVATED FLOOR STRUCTURE OR PORTION THEREOF THAT EXCEEDS 50 POUNDS PER SQUARE FOOT SHALL BE STATED ON DURABLE SIGNS AND CONSPICUOUSLY POSTED BY THE OWNER IN THE APPLICABLE AREA(S) OF THE BUILDING. SEE ARCH FOR SINAGE REQUIREMENTS
6. REDUCTIONS APPLIED PER TRIBUTARY AREA AS PERMITTED BY CODE

F. DESIGN SNOW LOAD:
1. GROUND SNOW LOAD, Pg = 5.0 PSF

G. DESIGN WIND LOAD:
1. ULTIMATE DESIGN WIND SPEED, Vult = 120 MPH
2. NOMINAL DESIGN WIND SPEED, Vasd = 93 MPH
3. RISK CATEGORY: III
4. WIND EXPOSURE CATEGORY: [illegible]
5. COMPONENTS AND CLADDING WIND PRESSURE: (SEE SCHEDULE ON S1.2)
6. INTERNAL PRESSURE COEFFICIENT (GCpi): +/-0.18

H. DESIGN SEISMIC INFORMATION:
1. RISK CATEGORY: III
2. MAPPED SPECTRAL RESPONSE COEFFICIENT, Ss = 0.174 (PER PROBABALISTIC SEISMIC HAZARD ANALYSIS BY GEO-HYDRO ENGINEERS DATED 10/15/2018)
3. MAPPED SPECTRAL RESPONSE COEFFICIENT, S1 = 0.075 (PER PROBABALISTIC SEISMIC HAZARD ANALYSIS BY GEO-HYDRO ENGINEERS DATED 10/15/2018)
4. SPECTRAL RESPONSE COEFFICIENT, Sds = 0.186
5. SPECTRAL RESPONSE COEFFICIENT, Sd1 = 0.120
6. SITE CLASS: [illegible]
7. BASIC SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE, INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
8. DESIGN BASE SHEAR: 810 K (SOUTH OF EXPANSION JOINT), 200 K (NORTH OF EXPANSION JOINT)
9. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (ASCE 7, SECTION 12.8)
10. RESPONSE MODIFICATION FACTOR, R: 3
11. SEISMIC DESIGN CATEGORY: B
12. SEISMIC IMPORTANCE FACTOR, Ie = 1.25
13. SEISMIC RESPONSE COEFFICIENT, Cs = 0.077

I. NO PROVISIONS HAVE BEEN MADE FOR FUTURE HORIZONTAL OR VERTICAL EXPANSION.

SUSPENDED LOADS AT STRUCTURE

A. ATTACHMENT TO ROOF DECK FOR ANY SUSPENDED LOADS IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM ARCHITECT/STRUCTURAL ENGINEER OF RECORD.

B. PIPE HANGERS SHALL BE ATTACHED TO BOTTOM FLANGES OF JOISTS OR BEAMS WITH APPROVED CLAMPS/CONNECTIONS.

C. ALL MULTIPLE TIER CABLE TRAYS, PIPE RACKS OR GROUPS OF PIPES OR DUCTS SHALL BE SUPPORTED FROM EACH ROOF FRAMING MEMBER WHERE THE GROUP CROSSES THE MEMBER OR AT 8'-0" O.C. MAX. WHERE GROUP IS ORIENTED PARALLEL TO THE MEMBER, UNLESS NOTED OTHERWISE ON DRAWINGS.

D. HANGERS SHALL BE ADDED AT ALL PIPE VALVE AND FITTING LOCATIONS.

E. CONTRACTORS AND SUBCONTRACTORS SUSPENDING LOADS FROM STRUCTURE SHALL ACCOUNT FOR AND PROVIDE ALL CONNECTIONS, STRUTS, TIES AND RIGGING REQUIRED FOR COMPLETE INSTALLATION AND SHALL FURNISH DRAWINGS SHOWING POINTS OF SUPPORT, SUPPORT LOADS AND ALL REQUIRED SUPPLEMENTAL BRACING. PROVIDE SUPPORTS AND HANGERS AS REQUIRED FOR PIPING AND EQUIPMENT SO THAT ALL COMBINED LOADING SHALL NOT EXCEED ALLOWABLE LOADINGS OF STRUCTURE AS SHOWN ON STRUCTURAL DRAWINGS. SUPPORT LOCATIONS SHALL BE COORDINATED WITH OTHER TRADES AND SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS OF THE ITEMS SUPPORTED.

F. EXPENSE RESULTING FROM IMPROPER COORDINATION OR LOCATION OF ANCHOR BOLTS, OPENINGS, SLEEVES, INSERTS, HANGERS OR OTHER SUPPORTS REQUIRED FOR PIPING AND EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SPECIAL INSPECTIONS

A. SPECIAL INSPECTIONS ARE REQUIRED IN ADDITION TO THE INSPECTIONS SPECIFIED IN SECTION 110 OF THE BUILDING CODE.

B. ALL SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH DIVISION 01 SPECIFICATIONS.

SOILS, SHALLOW FOUNDATIONS, & RETAINING WALLS

A. THE SITE SHALL BE PREPARED IN ACCORDANCE WITH SPECIFICATIONS AND THE CIVIL DRAWINGS. THE STRUCTURAL DESIGN IS BASED ON RECOMMENDATIONS CONTAINED IN THE REPORT OF SUBSURFACE INVESTIGATION BY GEO-HYDRO ENGINEERS NO. 180612.20-REVISION 1 DATED OCTOBER 15, 2018. THE GENERAL CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT AND REVIEW THE RECOMMENDATIONS AND REQUIREMENTS INCLUDED THEREIN FOR THE SELECTED FOUNDATION SYSTEM IN THE CONSTRUCTION DOCUMENTS. A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY ALL ASSUMPTIONS AND REPORT TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD ANY VARIATIONS.

B. DESIGN SOIL BEARING PRESSURE IS 5000 PSF ON RAMMED AGGREGATE PIERS (2000 PSF @ SITEWALLS - SOIL BEARING). RAMMED AGGREGATE PIERS SHALL BE DESIGNED TO ACHIEVE THE BEARING CAPACITY AND MAINTAIN DIFFERENTIAL SETTLEMENT REQUIREMENTS BY A SPECIALTY ENGINEER AS REQUIRED IN THE GEOTECHNICAL REPORT. CONTRACTOR SHALL SUBMIT ENGINEERED DESIGN TO DESIGN TEAM FOR REVIEW PRIOR TO INSTALLATION OF PIERS.

C. DESIGN SOIL LATERAL PRESSURES ON STRUCTURE ARE DUE TO THE FOLLOWING EQUIVALENT FLUID DENSITIES:
1. AT REST CONDITION: 65 PCF
2. ACTIVE CONDITION: 44 PCF
3. PASSIVE CONDITION: 350 PCF
4. COEFFICIENT OF FRICTION FOR SLIDING: 0.40

D. ALL EXCAVATIONS AND GRADES PREPARED FOR BEARING SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THE DESIGN ASSUMPTIONS AND REPORT NONCONFORMING CONDITIONS.

E. WHERE FILL IS REQUIRED, IT SHALL BE SELECTED AND PLACED IN ACCORDANCE WITH INSTRUCTIONS OF A QUALIFIED GEOTECHNICAL ENGINEER TO MAINTAIN DESIGN BEARING PRESSURE.

F. FROST DEPTH FOR THIS PROJECT IS 18" BELOW GRADE. FINISHED GRADE SHALL BE MAINTAINED A MINIMUM OF 18" ABOVE BOTTOM OF FOUNDATIONS.

G. TOP OF FOOTING ELEVATIONS PROVIDED ON CONSTRUCTION DRAWINGS ARE FOR PURPOSES OF DESIGN. NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF TOP OF FOOTING ELEVATIONS NEED TO BE ADJUSTED BASED ON CONTRACTOR'S FIELD COORDINATION.
1. GENERAL CONTRACTOR SHALL COORDINATE REQUIRED ADJUSTMENT OF FOOTING ELEVATIONS TO AVOID INFLUENCE BETWEEN FOUNDATIONS AND BURIED UTILITIES. ALL REQUIRED ADJUSTMENTS SHALL BE FORWARDED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW. SEE "TYPICAL FOOTING ADJACENT TO TRENCH" DETAIL.

H. DO NOT EMBED PIPING WITHIN OR PASS PIPING VERTICALLY OR HORIZONTALLY THROUGH FOUNDATIONS WITHOUT REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD. PIPING MAY PASS BELOW CONTINUOUS FOOTINGS WHERE INSTALLED IN ACCORDANCE WITH "TYPICAL PIPE UNDER FOOTING" DETAIL.

I. FOOTINGS SHALL BE CENTERED ABOUT COLUMN LINES UNLESS NOTED OTHERWISE.

J. THE DESIGN OF WALLS RETAINING EARTH ASSUMES DRAINAGE SYSTEM IS IN PLACE, AND DOES NOT INCLUDE HYDROSTATIC PRESSURE LOADS UNLESS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL PROVIDE DRAINAGE SYSTEM IN ALL BACKFILL CONDITIONS (SEE CIVIL/ARCHITECTURAL DRAWINGS FOR DRAINAGE SPECIFICATIONS).

K. THE DESIGN OF WALLS RETAINING EARTH DOES NOT INCLUDE SURCHARGE LOADS THAT MAY BE INDUCED FROM CONSTRUCTION ACTIVITIES. SEE GENERAL NOTES SECTION REGARDING GENERAL CONTRACTOR'S RESPONSIBILITIES FOR TEMPORARY ERECTION BRACING AND SHORING.

L. BACKFILL SHALL NOT BE PLACED AGAINST WALLS UNTIL THE WALLS HAVE ACHIEVED SPECIFIED DESIGN STRENGTH. BACKFILL AGAINST WALLS SHALL BE DEPOSITED EVENLY IN 12" TO 18" LIFTS AGAINST BOTH SIDES OF WALL UNTIL THE LOWER FINAL GRADE IS REACHED.
1. UNLESS SPECIFICALLY NOTED AS "CANTILEVERED" ON STRUCTURAL DRAWINGS, WALLS RETAINING EARTH SHALL NOT BE BACKFILLED AGAINST UNTIL STRUCTURAL SLABS PROVIDING LATERAL RESTRAINT FOR THE WALLS HAVE BEEN INSTALLED AND HAVE REACHED SPECIFIED DESIGN STRENGTH. WHERE THIS CANNOT BE ACCOMMODATED THE WALL SHALL BE SHORED CONTINUALLY.

CONCRETE

A. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH DIVISION 03 SPECIFICATIONS.

B. COORDINATE CONCRETE MIXTURES WITH THE SCHEDULE ON S1.2.

C. THE GENERAL CONTRACTOR SHALL SUBMIT TO STRUCTURAL ENGINEER OF RECORD PROPOSED CONSTRUCTION JOINT LOCATIONS FOR APPROVAL. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED EXCEPT THOSE SHOWN ON THE STRUCTURAL DRAWINGS. WHERE NEW CONCRETE IS TO BE POURED ONTO EXISTING CONCRETE, BONDING IS REQUIRED AS NOTED IN ACI 301.

D. THE FOLLOWING CRITERIA REGARDING PIPES AND CONDUITS EMBEDDED IN CONCRETE SHALL BE ADHERED TO (SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATION OF SLEEVES, PIPES, CONDUIT, ACCESSORIES, ETC). THIS CRITERIA WILL BE STRICTLY ENFORCED.
1. CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE SHALL BE PERMITTED TO BE EMBEDDED IN CONCRETE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE.
3. CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A SLAB, WALL, OR BEAM SHALL NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE CONSTRUCTION.
4. CONDUITS AND PIPES SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
5. CONDUITS AND PIPES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER. CONCRETE COVER FOR PIPES, CONDUITS AND FITTINGS SHALL NOT BE LESS THAN 1 1/2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER, NOR 3/4" FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND.
6. CONDUITS AND PIPES SHALL BE PLACED BETWEEN TOP AND BOTTOM SLAB REINFORCEMENT. CONDUITS AND PIPES SHALL BE PLACED IN THE MIDDLE THIRD OF THE SLAB OR WALL THICKNESS UNLESS NOTED OTHERWISE.
7. CONDUITS AND PIPES SHALL BE SO FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.
8. CONDUITS AND PIPES, WITH FITTINGS, EMBEDDED WITHIN A COLUMN SHALL NOT DISPLACE MORE THAN 4 PERCENT OF THE AREA OF CROSS SECTION NOTED ON DRAWINGS OR AS REQUIRED BY FIRE PROTECTION.
9. PIPES AND FITTINGS SHALL BE DESIGNED TO RESIST EFFECTS OF MATERIAL, PRESSURE AND TEMPERATURE TO WHICH THEY WILL BE SUBJECTED.
10. REINFORCEMENT WITH AN AREA NOT LESS THAN 0.002 TIMES THE AREA OF CONCRETE SECTION SHALL BE PROVIDED NORMAL TO PIPING. THIS REINFORCEMENT SHALL BE IN ADDITION TO REINFORCEMENT NOTED ON DRAWINGS.
11. REFER TO ACI 318 SECTION 6.3 FOR ADDITIONAL REQUIREMENTS FOR CONDUITS AND PIPES EMBEDDED IN CONCRETE.

E. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, RUSTICATIONS, INSERTS ANCHORS AND OTHER EMBEDDED ITEMS NOT NOTED ON STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PLACING ALL EMBEDDED ITEMS SHOWN ON DRAWINGS & ADDITIONAL ITEMS NOTED IN THIS NOTE, AS REQUIRED BY OTHER TRADES. UNLESS SHOWN ON STRUCTURAL DRAWINGS, NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. SHOW ALL OPENINGS AND SLEEVES ON THE SHOP DRAWINGS.

F. CORING OF SLABS AND USE OF DRILLED ANCHORS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD. IF APPROVED, COORDINATE ANCHOR LOCATIONS SO THAT NO CONTACT IS MADE WITH ANY REINFORCING OR PT TENDONS.

G. POWDER ACTUATED FASTENERS (OR POWDER DRIVEN FASTENERS) SHALL BE ANCHORED IN CONCRETE WITH MINIMUM FASTENER SPACING OF 3" AND MINIMUM EDGE DISTANCE OF 2". FASTENERS SHALL NOT EXCEED 5/8" EMBEDMENT UNLESS APPROVED BY STRUCTURAL ENGINEER OF RECORD.

H. WHERE POLYSTYRENE RIGID INSULATION IS INDICATED AS A FILL MATERIAL BELOW CONCRETE SLABS, INSULATION SHALL CONFORM TO ASTM C-578 WITH MINIMUM COMPRESSIVE RESISTANCE OF 40 PSI AND MINIMUM DENSITY OF 1.8 PCF. INSULATION SHALL ALSO COMPLY WITH ADDITIONAL DIVISION 07 SPECIFICATION REQUIREMENTS WHERE IT IS INTENDED TO PERFORM AS AN INSULATION MATERIAL.

SLAB-ON-GRADE

A. CONCRETE SLAB CONTROL JOINTS SHALL BE CUT INTO THE SLABS AT A DEPTH OF 1/3 TIMES THE THICKNESS OF THE SLAB FOR FIBER REINFORCED SLABS, 1/4 TIMES THE THICKNESS OF THE SLAB FOR ALL OTHER SLABS USING CONVENTIONAL WET-CUT SAW, AND 1/5 TIMES THE THICKNESS OF THE SLAB FOR ALL OTHER SLABS USING EARLY-ENTRY DRY-CUT SAW. SLAB SHALL BE SAWCUT WITHIN 4 HOURS OF CONCRETE PLACEMENT USING EARLY-ENTRY DRY-CUT SAW OR WITHIN 12 HOURS USING WET-CUT SAW. MAXIMUM SPACING OF INTERIOR SLAB CONTROL JOINTS, UNLESS NOTED OTHERWISE, SHALL BE 12'-0" (MAX.) IN EACH DIRECTION. CONSTRUCTION OF CONTROL JOINTS SHALL BE SUCH THAT THE AREA CONTAINED HAS A MAXIMUM RATIO OF LONG SIDE TO SHORT SIDE OF 1.5 TO 1, OR AS SHOWN ON THE CONSTRUCTION DRAWINGS.

B. SLAB CONSTRUCTION JOINTS SHALL BE USED IN PLACE OF CONTROL JOINTS WHERE NEEDED TO INTERRUPT A CONTINUOUS POUR.

C. PLACEMENT OF WELDED WIRE REINFORCEMENT IN SLAB, WHERE SPECIFIED, SHALL BE AT A CONSISTENT DEPTH OF 1 1/2" FROM T/SLAB. WELDED WIRE REINFORCEMENT SHALL BE PROPERLY CHAIRED ABOVE GRADE.

D. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DOCUMENTS FOR SLAB FINISHES, SLAB DEPRESSIONS, THICKENED SLABS (IN ADDITION TO THICKENED SLABS NOTED ON STRUCTURAL DRAWINGS), ELEVATIONS, AND ENCASED OR EMBEDDED ITEMS.

E. PLUMBING AND ELECTRICAL CONDUITS SHALL BE PLACED BELOW THE SLAB AND NOT WITHIN THE SLAB. VERTICAL PENETRATIONS ARE ALLOWED.

F. COLUMN BOX-OUTS SHALL BE USED TO ISOLATE AN ADEQUATE AREA AROUND COLUMN BASE PLATES TO PROVIDE FOR COLUMN PLACEMENT AND LEVELING. BOX-OUTS ARE TO BE CLEAN AND FREE OF DEBRIS TO TOP OF FOOTING PRIOR TO FILLING WITH CONCRETE.

CONCRETE MASONRY

A. ALL MASONRY WORK SHALL BE IN ACCORDANCE WITH DIVISION 04 SPECIFICATIONS.

B. MASONRY GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28-DAYS.

C. F'M SHALL BE 1500 PSI (MIN. NET AREA CMU COMPRESSIVE STRENGTH = 1900 PSI).

D. SEE ARCHITECTURAL DRAWINGS FOR LAYING MASONRY AND DIMENSIONED LOCATION OF OPENINGS. LAY IN RUNNING BOND UNLESS NOTED OTHERWISE.

E. CONCRETE MASONRY UNITS SHALL BE CUT BELOW BEAMS, LINTELS, OR BOND BEAMS AS REQUIRED IN ORDER TO GET CONTINUOUS BEAM, LINTEL, OR BOND BEAMS AT THE PROPER ELEVATION.

F. ALL CELLS BELOW GRADE AND SLAB ON GROUND SHALL BE FULLY GROUTED.

G. JOINT REINFORCING SHALL BE LADDER TYPE, 9 GAUGE SPACED VERTICALLY AT 16" UNLESS NOTED OTHERWISE. PROVIDE JOINT REINFORCING SPACED AT 8" AT MASONRY BELOW GRADE. PROVIDE 2 ROWS OF JOINT REINFORCING SPACED AT 8" AT TOP AND BOTTOM OF OPENINGS (EXTEND 24" EACH SIDE). PROVIDE 2 ROWS OF JOINT REINFORCING SPACED AT 8" AT BOND BEAMS.

H. THE FOLLOWING CRITERIA REGARDING PIPES AND CONDUITS EMBEDDED IN MASONRY SHALL BE ADHERED TO (SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATIONS OF SLEEVES, PIPES, CONDUIT, ACCESSORIES, ETC). THIS CRITERIA WILL BE STRICTLY ENFORCED.
1. CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO MASONRY AND MEETING THE CRITERIA BELOW SHALL BE PERMITTED TO BE EMBEDDED IN MASONRY. ALL OTHER CONDUITS, PIPES, AND SLEEVES SHALL NOT BE EMBEDDED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL MASONRY.
3. CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A WALL SHALL NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE CONSTRUCTION. CONDUITS, PIPES, AND SLEEVES SHALL NOT PASS THROUGH JAMBS, LINTELS, BOND BEAMS, OR SHEAR WALL WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
4. CONDUITS AND PIPES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER.
5. CONDUITS AND PIPES SHALL BE SO FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.
6. CONDUITS AND PIPES, WITH FITTINGS, EMBEDDED WITHIN A COLUMN OR WALL SHALL NOT DISPLACE MORE THAN 2 PERCENT OF THE NET SECTION OR AS REQUIRED BY FIRE PROTECTION.

REINFORCING STEEL

A. REINFORCING STEEL AND ACCESSORIES WORK SHALL BE IN ACCORDANCE WITH DIVISION 03 SPECIFICATIONS.

B. ALL TENSION SPLICES, INCLUDING SPLICES FROM BARS LABELED CONTINUOUS, SHALL CONFORM TO ACI 318. SPLICES SHALL BE CLASS B IN ACCORDANCE WITH ACI 318, UNLESS NOTED OTHERWISE. REINFORCEMENT SHALL BE SPLICED ONLY AT LOCATIONS SHOWN OR NOTED IN THE STRUCTURAL DOCUMENTS, EXCEPT REINFORCEMENT MARKED "CONTINUOUS" CAN BE SPLICED AT LOCATIONS DETERMINED BY THE GENERAL CONTRACTOR. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.

C. LONGITUDINAL REINFORCING BARS IN FOOTINGS SHALL BE PLACED CONTINUOUS AT CORNERS AND INTERSECTIONS.

D. FOR EVERY VERTICAL OR HORIZONTAL BAR DISCONTINUED BY AN OPENING, ONE BAR (MIN. OF 2 BARS) SHALL BE ADDED AT SIDE OF OPENING (HALF TO EACH SIDE - TYPICAL).

E. PROVIDE DOWELS FROM FOUNDATIONS, THE SAME SIZE AND NUMBER AS THE VERTICAL WALL OR COLUMN REINFORCING, UNLESS NOTED OTHERWISE.

WELDING

A. MINIMUM WELD SIZE SHALL BE 3/16" FILLET WELD UNLESS NOTED OTHERWISE.

B. FIELD WELDING SHALL BE SHOWN ON SHOP DRAWINGS AND ERECTION DRAWINGS.

C. REFER TO ARCHITECTURAL DOCUMENTS FOR EXPOSED STEEL AND JOINT LOCATIONS AND REQUIREMENTS. ALL EXPOSED WELDED CONNECTIONS SHALL BE GROUND SMOOTH AND SUBJECT TO ARCHITECT APPROVAL. FABRICATOR SHALL ALTER JOINT DETAILING AS REQUIRED TO ENSURE THAT EFFECTIVE THROAT SPECIFIED IN WELD DETAIL IS MAINTAINED AFTER GRINDING OF WELD SURFACE.

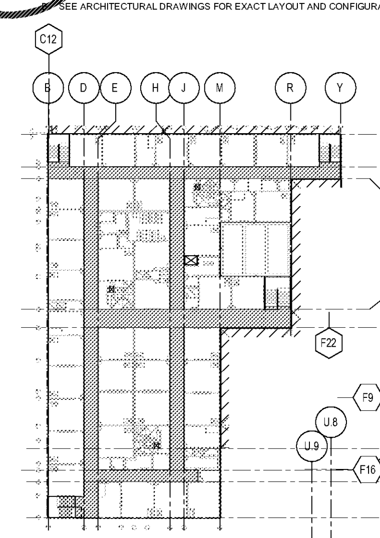
D. WELDS INDICATED IN STRUCTURAL DETAILS ARE INTENDED AS THE BASIS OF DESIGN. FABRICATOR AND ERECTOR HAVE THE OPTION TO PROPOSE THE USE OF ALTERNATIVE WELDING PROCEDURES. ALTERNATIVE WELDS SHALL BE INDICATED ON SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD.

E. REINFORCING STEEL WELDING SHALL CONFORM TO AWS D1.4, STRUCTURAL WELDING CODE - REINFORCING STEEL BY AMERICAN WELDING SOCIETY FOR COMPLIANCE WITH ACI 318, SECTION 26.5.2.

METAL STAIRS AND RAILING

A. ALL METAL STAIR AND RAILING WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS.

B. SEE ARCHITECTURAL DRAWINGS FOR EXACT LAYOUT AND CONFIGURATION.



ELEVATED FLOOR DEAD LOAD DIAGRAM (1/S1.1)

SCALE: 1/64" = 1'-0"

NOTES:
1. [hatched] DENOTES 22 PSF + SLAB SW
2. [blank] DENOTES 12 PSF + SLAB SW

STRUCTURAL STEEL

A. ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS.

B. SLOTTED HOLES FOR BEAM END CONNECTIONS ARE NOT ALLOWED FOR BEAMS ASSOICATED WITH A BRACED FRAME OR MOMENT FRAME, OR NOTED WITH A REQUIRED AXIAL CONNECTION FORCE, UNLESS NOTED OTHERWISE

C. GUSSET PLATES AND STIFFENER PLATES SHALL BE 3/8" MINIMUM, WELDED BOTH SIDES CONTINUOUSLY, UNLESS NOTED OTHERWISE.

D. MEMBERS SUPPORTING DECK AT THE PERIMETER OF THE BUILDING SHALL BE CONTINUOUS EXCEPT AT EXPANSION JOINTS. SQUARE GROOVE WELD (BUTT JOINT) CONTINUOUS MEMBERS PLACED END TO END UNLESS NOTED OTHERWISE.

E. STEEL COLUMNS AND BASE PLATES SHALL HAVE MINIMUM 3" CONCRETE COVER PROTECTION.

F. POWDER ACTUATED FASTENERS (OR POWDER DRIVEN FASTENERS) SHALL BE ANCHORED IN STEEL WITH MINIMUM FASTENER SPACING OF 1 1/2" AND MINIMUM EDGE DISTANCE OF 1/2".

G. GROUT UNDER BEARING PLATES SHALL BE MIN. 6,000 PSI COMPRESSIVE STRENGTH. LOADING OF STRUCTURE SHALL NOT OCCUR UNTIL GROUT IS INSTALLED UNDER BASE PLATES AND PROPERLY CURED.

H. MATERIALS:
1. W-SHAPES: ASTM A 992.
2. CHANNELS, ANGLES, M, S-SHAPES: ASTM A 36.
3. PLATE AND BAR: ASTM A 36.
4. COLD-FORMED HOLLOW STRUCTURAL SECTIONS: ASTM A 500, GRADE C, STRUCTURAL TUBING.
5. STEEL PIPE: ASTM A 53, TYPE E OR S, GRADE B.
6. HIGH-STRENGTH BOLTS, NUTS, AND WASHERS: ASTM A 325, TYPE 1 OR ASTM A 490 TYPE 1 HEAVY HEX STEEL STRUCTURAL BOLTS ASTM A 563, GRADE DH, HEAVY HEX CARBON-STEEL NUTS; AND ASTM F 436, TYPE 1, HARDENED CARBON-STEEL WASHERS WITH PLAIN FINISH.
7. SHEAR CONNECTORS: ASTM A 108, GRADES 1010 THROUGH 1020, HEADED-STUD TYPE, COLD-FINISHED CARBON STEEL; AWS D1.1, TYPE B.
8. UNHEADED ANCHOR RODS: ASTM F 1554, GRADE 36. CONFIGURATION TO BE STRAIGHT.
9. PLATE WASHERS: ASTM A 36 CARBON STEEL.
10. WASHERS: ASTM F 436, TYPE 1, HARDENED CARBON STEEL.
11. THREADED RODS: ASTM A 36.
12. NONMETALLIC, SHRINKAGE-RESISTANT GROUT: ASTM C 1107, FACTORY-PACKAGED, NONMETALLIC AGGREGATE GROUT, NONCORROSIVE AND NONSTAINING, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME.

I. CONNECTIONS: PROVIDE DETAILS OF CONNECTIONS REQUIRED BY THE CONSTRUCTION DOCUMENTS TO BE SELECTED OR COMPLETED BY STRUCTURAL-STEEL FABRICATOR, INCLUDING COMPREHENSIVE ENGINEERING DESIGN BY A REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED, TO WITHSTAND LOADS INDICATED AND COMPLY WITH OTHER INFORMATION AND RESTRICTIONS INDICATED.
1. AN EXPERIENCED STEEL DETAILER SHALL SELECT OR COMPLETE STANDARD CONNECTIONS USING SCHEMATIC DETAILS AND LOADS INDICATED IN CONSTRUCTION DRAWINGS AS PER "OPTION 2" OF AISC 303.
2. USE ASD; DATA ARE GIVEN AT SERVICE-LOAD LEVEL.
3. WHERE BEAM SHEAR IS NOT NOTED, THE CONNECTIONS SHALL DEVELOP THE BEAM SHEAR V = W/2 WHERE W IS THE TOTAL ALLOWABLE BEAM UNIFORM LOAD BASED ON LATERALLY SUPPORTED SIMPLE SPAN MOMENTS PER TABLES LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION.
4. CONNECTIONS SHALL BE DESIGNED AS SNUG-TIGHT CONNECTIONS WITH THREADS IN THE SHEAR PLANE, UNLESS NOTED OTHERWISE. ALL BOLTS NOTED AS PRE-TENSIONED OR SLIP CRITICAL IN THE DRAWINGS SHALL BE TIGHTENED TO THE MINIMUM PRETENSION VALUE SHOWN IN TABLE J3.1 OF THE AISC STEEL MANUAL, USING COMPRESSIBLE-WASHER-TYPE DIRECT TENSION INDICATOR DEVICES CONFORMING TO ASTM F959 OR TENSION-CONTROL, HIGH STRENGTH BOLT-NUT-WASHER ASSEMBLIES CONFORMING TO ASTM 1852.

HOT-DIP GALVANIZED STRUCTURAL STEEL

A. ALL HOT-DIP GALVANIZATION WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS.

B. ALL BOLTS USED FOR CONNECTIONS AT GALVANIZED STEEL MEMBERS SHALL BE GALVANIZED PER STANDARDS NOTED.

C. REFER TO ASTM A143, A-384 AND D-6386 FOR ADDITIONAL STANDARD PRACTICES RELATED TO SPECIAL CONDITIONS FOR HOT-DIP GALVANIZING.

D. GALVANIZED FAYING SURFACES AT SLIP CRITICAL CONNECTIONS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND SHALL BE ROUGHENED BY MEANS OF HAND WIRE BRUSHING. POWER WIRE BRUSHING IS NOT PERMITTED.

OPEN-WEB STEEL JOISTS

A. ALL STRUCTURAL STEEL JOIST AND JOIST GIRDER WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS.

B. JOISTS SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES OR OTHER SPECIFICALLY LOCATED FRAMING MEMBERS UNLESS NOTED OTHERWISE.

C. STAGGER CONNECTION FOR BEARING NOTE.

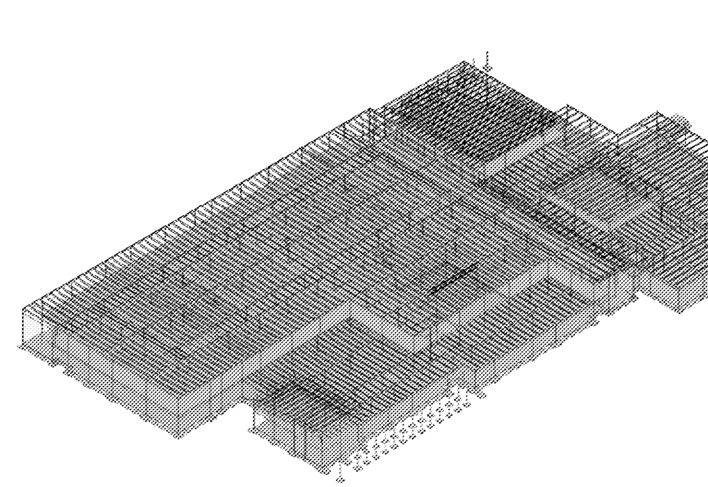
D. EXTEND LOWER JOIST CHORD AT ALL COLUMNS. DO NOT WELD TO STEEL TAB PLATE.

E. UNLESS NOTED OTHERWISE, K-SERIES STEEL JOIST SHALL HAVE 2 1/2" DEEP BEARING, LH-SERIES SHALL HAVE 5" DEEP BEARING.
1. WHERE STEEL JOIST OR GIRDER SLOPE EXCEEDS 1/4" PER FT., PROVIDE SLOPED BEARING AS NOTED IN SLOPED SEAT REQUIREMENTS OF SJI.

F. HORIZONTAL BRIDGING SHALL BE PER SJI REQUIREMENTS.
1. BRIDGING SHALL BE DESIGNED TO FULLY BRACE TOP CHORD OF JOISTS UNDER SERVICE LOADS FOR JOISTS NOT BRACED BY STEEL ROOF DECK.
2. BOTTOM CHORD OF ROOF JOISTS SHALL BE DESIGNED FOR NET UPLIFT OF 24 PSF (COMPONENTS & CLADDING), UNLESS NOTED OTHERWISE.
3. BOTTOM CHORD OF ROOF JOIST GIRDERS SHALL BE DESIGNED FOR NET UPLIFT OF 11 PSF (MAIN WIND FORCE RESISTING SYSTEM).
4. PROVIDE ADDITIONAL BOTTOM CHORD BRIDGING AS REQUIRED FOR NET UPLIFT OF 11 PSF (MAIN WIND FORCE RESISTING SYSTEM) FOR ROOF FRAMING.

G. AT A MINIMUM, K-SERIES STEEL JOISTS SHALL BE CONNECTED TO STEEL BY 1/8" WELD, 1 1/2" EACH SIDE OR (2) 1/2" DIAMETER BOLTS. AT A MINIMUM, LONG SPAN STEEL JOISTS SHALL BE CONNECTED TO STEEL BY 1/4" WELD, 2" LONG EACH SIDE OR (2) 3/4" DIAMETER BOLTS. AT A MINIMUM, JOIST GIRDERS SHALL BE CONNECTED TO STEEL BY 1/4" WELD, 6" LONG EACH SIDE OR (2) 3/4" DIAMETER BOLTS. JOIST SEAT CONNECTION DETAILS SHALL BE PROVIDED BY FABRICATOR (BOLTED OR WELDED CONNECTIONS) BASED ON SJI AND LOADING REQUIREMENTS.

H. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF WALLS, BEAM FRAMING, METAL DECKING, ETC. WITH THE PITCH AND CAMBER OF STEEL JOISTS TO ENSURE COMPATIBILITY OF ROOF FRAMING AND WALL SYSTEMS.



3D PERSPECTIVE (2/S1.1)

NOT TO SCALE

DRAWING ISSUE RECORD

DATE:	REVISIONS:	NO.
11-1-18	ISSUED TO BID	

COMPOSITE STEEL FLOOR SYSTEM

A. STEEL HEADED STUD ANCHORS (SHEAR CONNECTORS / SHEAR STUDS) SHALL BE TYPE B AND CONFORM TO AWS D1.1 AND ASTM A108 SPECIFICATIONS FOR 1010 THROUGH 1020 MILD STEELS. MINIMUM TENSILE STRENGTH= 65,000 PSI.

B. WHERE COMPOSITE BEAM DESIGNATION OCCURS ON FRAMING PLAN THROUGH THE CALLING OUT OF A NUMBER OF REQUIRED STEEL HEADED STUD ANCHORS, FLOOR AND BEAM ARE DESIGNED TO ACT COMPOSITE BY USE OF SHEAR STUDS ON TOP BEAM FLANGE.
1. SEE DISTRIBUTED STEEL HEADED STUD ANCHOR PLACEMENT DETAIL FOR PLACEMENT REQUIREMENTS.
2. IF LONGITUDINAL HEADED STUD ANCHOR SPACING EXCEEDS 12", ATTACH DECK TO SUPPORT WITH PUDDLE WELDS BETWEEN STUDS.

C. ALL STEEL HEADED STUD ANCHORS SHALL BE 3/4" DIAMETER x (FLUTE HT. + 1 1/2") AFTER WELDING, UNLESS OTHERWISE NOTED.
1. MINIMUM CLEARANCE FROM TOP OF STUD TO TOP OF SLAB IS 1".

D. MAINTAIN INDICATED MINIMUM SLAB THICKNESS OVER BEAMS THROUGHOUT SPAN. ELEVATED SLAB SHALL BE PLACED WITH MINIMUM THICKNESS THROUGHOUT WITH NO MORE THAN 1/2" OF ADDITIONAL THICKNESS IN ANY LOCATION TO HELP WITH THE LEVELING OF THE SLAB.

COMPOSITE STEEL FLOOR DECK

A. ALL COMPOSITE STEEL FLOOR DECK WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS.

B. STEEL COMPOSITE DECK SHALL BE ASTM A653 GALVANIZED G90, WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI UNLESS NOTED OTHERWISE.

C. DECK SHALL BE SUPPORTED BY A MINIMUM OF FOUR SUPPORT LOCATIONS (THREE SPAN CONDITION).

D. COMPOSITE STEEL FLOOR DECK SHALL BE ATTACHED TO THE SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS. WHEN DECK THICKNESS IS LESS THAN 0.028 INCHES, WELDS SHALL BE MADE THROUGH MIN. 16 GAUGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS FOLLOWS:
1. AT BUTTED ENDS: AT 12" O.C.
2. AT PERIMETER/EDGES OF BUILDING: AT 12" O.C.
3. INTERMEDIATE SUPPORTS: AT 12" O.C.
4. SIDE LAPS: AT MID-SPAN OR AT 3'-0" O.C., WHICHEVER IS SMALLER. HEX HEAD SCREWS SIZE #10 OR CRIMPING (BUTTON PUNCHING) MAY BE USED AT SIDE LAP CONNECTIONS.

STEEL ROOF DECK

A. ALL STEEL ROOF DECK WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS

B. STEEL DECK FINISHES SHALL BE AS FOLLOWS:
1. INTERIOR, NOT EXPOSED TO VIEW: ASTM A1008 FACTORY PRIME PAINTED.
2. INTERIOR, EXPOSED TO VIEW: ASTM A1008 FACTORY PRIME PAINTED TO RECEIVE FINISH PAINT. SEE ARCHITECTURAL DRAWINGS FOR EXTENTS.
3. DECK RECEIVING SPRAY APPLIED FIREPROOFING AND/OR CONCRETE TOPPING: ASTM 653 GALVANIZED G60.
4. EXTERIOR EXPOSURE (TOP OR BOTTOM OF DECK EXPOSED TO ELEMENTS): ASTM A653 GALVANIZED G90.

C. MINIMUM YIELD STRENGTH SHALL BE 33,000 PSI, UNLESS NOTED OTHERWISE.

D. DECK SHALL BE SUPPORTED BY A MINIMUM OF FOUR SUPPORT LOCATIONS (THREE SPAN CONDITION).

E. MINIMUM FINAL ROOF SLOPE SHALL BE 1/4" PER 1 FT. WHERE SLOPE IS NOT ACHIEVED BY STEEL STRUCTURE, CREATE IT WITH INSULATION ABOVE THE DECK (SEE ARCHITECTURAL DRAWINGS).

F. STEEL ROOF DECK SHALL BE ATTACHED TO STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS AND TO COLD FORMED STEEL FRAMING WITH #12 HEX HEAD SCREWS. WHEN DECK THICKNESS IS LESS THAN 0.028 INCHES, WELDS MUST BE MADE THROUGH MIN. 16 GAUGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS FOLLOWS
1. AT PERIMETER/EDGES OF BUILDING AND WITHIN 12' OF THE PERIMETER/EDGES OF BUILDING : AT 36/7 PATTERN OR 6" O.C.
2. INTERMEDIATE SUPPORTS: AT 36/4 PATTERN OR 12" O.C.
3. SIDE LAPS: PROVIDE 4 CONNECTIONS PER SPAN. HEX HEAD SCREWS SIZE #10 SHALL BE USED AT SIDE LAP CONNECTIONS.
4. SEE PLAN FOR ADDITIONAL ROOF DECK ATTACHMENT REQUIREMENTS

G. SUBSTITUTION REQUESTS, FOR FASTENING SYSTEMS OTHER THAN THOSE SPECIFIED (E.G., POWDER-DRIVEN FASTENERS, SCREW, ETC), SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD WITH CALCULATIONS SHOWING THAT THE SUBSTITUTED FASTENING SYSTEM WILL ACHIEVE AN EQUIVALENT DIAPHRAGM STRENGTH AND STIFFNESS AS THE SPECIFIED FASTENING SYSTEM. CALCULATIONS SHALL INCLUDE A REVIEW OF SEISMIC AND WIND REQUIREMENTS, AND INTERACTION OF WIND SHEAR AND UPLIFT FORCES. THE FASTENER SPACING AT THE BUILDING PERIMETER AND CORNER ZONES FOR THE SUBSTITUTED PRODUCTS SHALL NOT BE LESS THAN THE SPACING SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

H. ALTERNATE FASTENING SYSTEMS SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL SHALL HAVE A VALID RESEARCH REPORT, ALSO KNOWN AS EVALUATION REPORT, INDICATING COMPLIANCE WITH APPROPRIATE ACCEPTANCE CRITERIA REQUIRED BY THE BUILDING CODE. RESEARCH REPORTS SHALL BE ISSUED BY A SOURCE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

COLD-FORMED STEEL FRAMING (STUDS AND JOISTS)

A. ALL COLD-FORMED STEEL FRAMING WORK SHALL BE IN ACCORDANCE WITH DIVISION 05 SPECIFICATIONS.

B. ISOLATION OF NON-LOAD-BEARING FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF VERTICAL LOADS SHALL ALLOW FOR A MINIMUM OF X/X" MOVEMENT FROM LIVE LOAD.

C. SEE ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALLS AND TO VERIFY ALL DIMENSIONS SHOWN FOR LOAD BEARING WALLS.

Sheet List

Sheet Number	Sheet Name
S0.1	SITEWALL NOTES AND SCHEDULES
S0.2	SITEWALL SECTIONS & DETAILS
S1.1	GENERAL NOTES & SCHEDULE
S1.2	GENERAL NOTES & SCHEDULE
S2.0	OVERALL FOUNDATION PLAN
S2.1	PARTIAL FOUNDATION PLAN
S2.2	PARTIAL FOUNDATION PLAN
S2.3	PARTIAL FOUNDATION PLAN
S2.4	PARTIAL FOUNDATION PLAN
S3.0	OVERALL FRAMING PLAN
S3.1	PARTIAL FLOOR FRAMING PLAN
S3.2	PARTIAL FLOOR FRAMING PLAN
S4.0	OVERALL ROOF FRAMING PLAN
S4.1	PARTIAL ROOF FRAMING PLAN
S4.2	PARTIAL ROOF FRAMING PLAN
S4.3	PARTIAL ROOF FRAMING PLAN
S4.4	PARTIAL ROOF FRAMING PLAN
S6.1	SECTIONS & DETAILS
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S6.3	SECTIONS & DETAILS
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S7.3	SECTIONS & DETAILS
S8.1	SECTIONS & DETAILS
S8.2	SECTIONS & DETAILS
S8.3	SECTIONS & DETAILS
S9.1	CMU SHEARWALL ELEVATIONS & DETAILS
S9.2	BRACED FRAME ELEVATIONS & DETAILS

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GEORGIA REGISTERED 15724 PROFESSIONAL ENGINEER ROBERT M. STONE
11/01/2018

HARMONY LELAND-CLAY REPLACEMENT ELEMENTARY SCHOOL

6326 FACTORY SHOALS RD, SW
MABLETON, GA 30126
FOR COBB COUNTY SCHOOL DISTRICT
COBB COUNTY, GA
CCSD PROJECT No. A004 / DOE FACILITY CODE

CK. BY RMS
DWG. BY TJL
JOB NO. SHL-D02-18
DATE JULY 16, 2018

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S1.1