

GENERAL

- 1. NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONTRACT DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF OWNER, CONTRACTOR, DESIGN PROFESSIONAL, SUPPLIER, OR ANY OF THEIR CONSULTANTS, AGENTS, OR EMPLOYEES FROM THOSE SET FORTH IN THE CONTRACT DOCUMENTS. NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE DESIGN PROFESSIONAL OF RECORD OR ANY OF THE DESIGN PROFESSIONAL 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 CONTRACT DOCUMENTS.

CODE/DESIGN CRITERIA

- 1. STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
INTERNATIONAL BUILDING CODE, 2012 EDITION WITH GEORGIA AMENDMENTS.
2. GRAVITY LOADS
2.1 UNIFORM FLOOR LIVE LOADS (REDUCED AS ALLOWED BY THE BUILDING CODE):
CLASROOMS 50 PSF
PUBLIC ROOMS 100 PSF
CORRIDORS - ABOVE FIRST FLOOR 80 PSF
MECHANICAL ROOMS 125 PSF
STAIRS 100 PSF
STORAGE 125 PSF
PARTITIONS 15 PSF
2.2 UNIFORM ROOF LIVE LOADS:
ROOF 20 PSF
GROUND SNOW LOAD, P_g 5 PSF
PONDING AND DRIFT EFFECTS HAVE BEEN INCLUDED IN THE DESIGN.
2.3 CONCENTRATED FLOOR LOADS: DISTRIBUTED OVER AN AREA OF 2-1/2 SQUARE FEET, UNLESS NOTED OTHERWISE:
SCHOOLS 100 LB
2.4 DEAD LOADS (IN ADDITION TO STRUCTURE SELF-WEIGHT):
FLOOR:
MISCELLANEOUS 3 PSF
CEILING 3 PSF
ROOF:
ROOFING 3 PSF
INSULATION 5 PSF
MISCELLANEOUS 3 PSF
CEILING/MEP 3 PSF
3. WIND LOADS:
ULTIMATE DESIGN WIND SPEED, V_{ult} = 120
NOMINAL DESIGN WIND SPEED, V_{50} = 93
RISK CATEGORY II
EXPOSURE B
INTERNAL PRESSURE COEFFICIENT = +/- 0.18
SEE COMPONENT AND CLADDING DESIGN WIND PRESSURE DIAGRAM ON 50-02 AND 50-03.
4. EARTHQUAKE LOADS:
RISK CATEGORY III
SEISMIC IMPORTANCE FACTOR, I = 1.25
SHORT PERIOD MAPPED SPECTRAL RESPONSE COEFFICIENT, S_s = 0.182
1 SECOND PERIOD MAPPED SPECTRAL RESPONSE COEFFICIENT, S_1 = 0.069
SITE CLASS D
SHORT PERIOD DESIGN SPECTRAL RESPONSE COEFFICIENT, S_D = 0.194
1 SECOND PERIOD DESIGN SPECTRAL RESPONSE COEFFICIENT, S_D1 = 0.142
SEISMIC DESIGN CATEGORY, C
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
PARTS A AND D
BASIC SEISMIC-FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILS
FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR: 36 KIPS
1 SECOND RESPONSE COEFFICIENT, C_1 = 0.065
RESPONSE MODIFICATION FACTOR, R = 3
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
PARTS B AND C
BASIC SEISMIC-FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILS
FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR: 191 KIPS
SEISMIC RESPONSE COEFFICIENT, C_1 = 0.065
RESPONSE MODIFICATION FACTOR, R = 3
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
5. UNLESS NOTED OTHERWISE CALCULATED INDIVIDUAL MEMBER DEFLECTIONS (IN INCHES) DO NOT EXCEED THE FOLLOWING:
ROOF MEMBERS: DEAD LOAD L/240 LIVE LOAD L/360 DEAD + LIVE LOAD L/240
FLOOR MEMBERS: DEAD LOAD L/240 LIVE LOAD L/360 DEAD + LIVE LOAD L/240
WHERE, L = SPAN LENGTH (IN INCHES) BETWEEN SUPPORTS, FOR CANTILEVERS, L IS TWICE THE LENGTH OF THE CANTILEVER. NOTE THAT THE TOTAL MAXIMUM CALCULATED FLOOR SYSTEM DEFLECTION WILL BE THE SUM OF THE DEFLECTIONS OF THE SUPPORTED ELEMENTS IN A BAY.
THE CALCULATED DEFLECTION FOR INDIVIDUAL MEMBERS SUPPORTING MASONRY DO NOT EXCEED L/600 FOR DESIGN LOADS APPLIED AFTER THE INSTALLATION OF THE MASONRY.
6. SPECIAL INSPECTIONS:
6.1 THE STRUCTURAL TESTING/INSPECTION AGENCY (SEE SPECIFICATION SECTION 04252) WILL PERFORM SPECIAL INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE BUILDING CODE. MATERIALS AND WORK TO BE INSPECTED INCLUDE SOIL, CONCRETE, MASONRY AND STEEL CONSTRUCTION. SEE SPECIFICATION SECTIONS 04252 FOR A COMPLETE LIST OF WORK REQUIRING SPECIAL INSPECTIONS.
6.2 SPECIAL INSPECTION AS REQUIRED BY CHAPTER 17 OF THE BUILDING CODE ARE REQUIRED FOR STRUCTURAL COMPONENTS AND ASSEMBLIES WHICH ARE NOT FABRICATED AT THE CONSTRUCTION JOB SITE INCLUDING BUT NOT LIMITED TO FLOOR AND ROOF TRUSSES AND JOISTS OF WOOD AND STEEL MATERIALS, STRUCTURAL STEEL FRAMING, AND PRECAST CONCRETE, AND CLADDING.
6.3 SPECIAL INSPECTION AS REQUIRED BY CHAPTER 17 OF THE BUILDING CODE MAY BE WAIVED FOR ITEMS WHICH ARE PRODUCED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND BY PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY. THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE CHIEF COMMERCIAL BUILDING INSPECTOR OR HIS DESIGNEE WHICH STATES THAT THE FABRICATION WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
6.4 THE PROJECT OWNER WILL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PERFORM INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE BUILDING CODE DURING CONSTRUCTION OF THE PROJECT. DOCUMENTS THAT SUMMARIZE THE QUALIFICATION AND EXPERIENCE OF EACH SPECIAL INSPECTOR AND DEMONSTRATES COMPETENCE FOR INSPECTION OF EACH PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION SHALL BE SUBMITTED TO THE CHIEF COMMERCIAL BUILDING INSPECTOR OR HIS DESIGNEE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
6.5 APPROVED SPECIAL INSPECTORS SHALL FURNISH INSPECTION REPORTS TO THE CHIEF COMMERCIAL BUILDING INSPECTOR OR HIS DESIGNEE AND TO THE DESIGN PROFESSIONAL WHICH INDICATE THAT THE WORK INSPECTED WAS DONE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL REPORTS WHICH CUMULATE THE RESULTS OF THE SPECIAL INSPECTIONS PERFORMED SHALL BE SUBMITTED TO THE DESIGN PROFESSIONAL DURING INSPECTION SERVICES SUBMITTED PERIODICALLY AS A SERVICE AGENCY APPROVED BY CHIEF COMMERCIAL BUILDING INSPECTOR OR HIS DESIGNEE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
7. NO PROVISIONS HAVE BEEN MADE FOR FUTURE HORIZONTAL OR VERTICAL EXPANSION.

FOUNDATION

- 1. FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT PREPARED BY GEOHYDRO, REPORT NUMBER 190160-20 DATED APRIL 6, 2019. DESIGN PROFESSIONAL IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT TO THOSE ASSUMED FOR DESIGN.
2. STRUCTURAL TESTING/INSPECTION AGENCY SHALL CERTIFY THE BEARING MEDIUM.
3. INDIVIDUAL SPREAD FOOTINGS AND CONTINUOUS FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUPPORTING 3,000 PSF.
3.1 NO FOOTINGS SHALL BEAR ON ROCK. UNDERCUT ROCK A MINIMUM OF 2 FEET BELOW BOTTOM OF FOOTING AND REPLACE WITH STRUCTURAL FILL.
4. FOUNDATION WALLS ARE DESIGNED FOR LATERAL PRESSURES DUE TO THE FOLLOWING EQUIVALENT FLUID DENSITIES:
WALLS SUPPORTED AT TOP (AT REST CONDITION): 63 PCF
WALLS FREE TO DISPLACE AT TOP (ACTIVE CONDITION): 42 PCF
5. BACKFILL PLACED AGAINST EXTERIOR OR RETAINING WALLS SHALL NOT EXCEED 120 PCF WEIGHT.
6. PROOF ROLL BUILDING AREAS WITH TWO COMPLETE COVERAGES OF A LOADED DUMP-TRUCK OR SCRAPER REPLACE SOFT AREAS WITH COMPACTED STRUCTURAL FILL AS REQUIRED BY THE SPECIFICATIONS.
7. FOR BUDGETING PURPOSES, APPROXIMATELY 20 PERCENT OF THE AGGREGATE BUILDING AREA WILL REQUIRE UNDERCUTTING AND REPLACEMENT WITH COMPACTED STRUCTURAL FILL AS REQUIRED BY THE SPECIFICATIONS.
8. STRUCTURAL FILL SHALL CONTAIN NO ORGANIC MATERIAL AND BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. STRUCTURAL FILL UNDER SLABS AND WITHIN 10" OF THE BUILDING FOOTPRINT SHALL BE PLACED IN LIFTS OF THICKNESS DETERMINED BY THE INDEPENDENT TESTING AGENCY AND COMPACTED TO AT LEAST 95% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698. THE TOP 12" SUB-BASE UNDER SLABS ON GRADE SHALL BE COMPACTED TO AT LEAST 98% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY. ALL BACKFILL, COMPACTED AND PROOF ROLLING OPERATIONS SHALL BE OBSERVED BY AN INDEPENDENT TESTING LABORATORY. STRUCTURAL FILL SOIL DENSITY SHALL BE 110 PCF.
9. SLABS-ON-GRADE SHALL BE PLACED ON A 4" GRANULAR BASE, COMPACTED TO 98% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698, AND COVERED WITH A CONTINUOUSLY SEALED VAPOR BARRIER. SEE SPECIFICATION 07 26 00 FOR VAPOR BARRIER. THE BASE FOR SLABS-ON-GRADE SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO EACH PLACEMENT OF CONCRETE.
10. BACKFILL SHALL NOT BE PLACED AGAINST EXTERIOR OR RETAINING WALLS UNTIL THE WALLS HAVE ACHIEVED THEIR DESIGN STRENGTH AND THEIR LATERAL SUPPORT ELEMENTS ARE INSTALLED PROVIDE ADEQUATE DRAINAGE AT BASEMENT AND RETAINING WALLS (SEE ARCHITECTURAL).
11. FOOTINGS SHALL BE CENTERED ABOUT COLUMN LINES UNLESS NOTED OTHERWISE.
12. ALL FOOTINGS AND TURN DOWN SLAB EDGES SHALL PENETRATE TO A MINIMUM DEPTH OF 12" BELOW FINISHED GRADE.
REINFORCEMENT
1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 AND HAVE MINIMUM SIZE AND END LAPS OF 8".
3. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.
4. 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 CONTRACTOR. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITINGS BY THE DESIGN PROFESSIONAL.
5. PROVIDE DOWELS FROM FOUNDATIONS THE SAME SIZE AND NUMBER AS THE VERTICAL WALL OR COLUMN REINFORCING, UNLESS NOTED OTHERWISE.
6. PLACE REINFORCEMENT AS FOLLOWS, UNLESS NOTED OTHERWISE:
6.1 CONCRETE REINFORCEMENT COVER
EXPOSED TO EARTH OR WEATHER:
UNFORMED CAST AGAINST EARTH 3" CLEAR
FORMED #5 AND LARGER 2" CLEAR
FORMED #5 AND SMALLER 1-1/2" CLEAR
NOT EXPOSED TO EARTH OR WEATHER:
WALLS L/240
COLUMNS (TEES) 1-1/2" CLEAR
SLABS 3/4" CLEAR
6.2 MASONRY REINFORCING STEEL SHALL BE PLACED IN THE CENTER OF THE WALL UNLESS NOTED OTHERWISE.
7. REINFORCING STEEL DESIGNATED CONTINUOUS SHALL BE APPLIED AS FOLLOWS:
CONCRETE REINFORCEMENT: CLASS B TENSILE
MASONRY REINFORCEMENT: 4B BAR DIAMETERS
8. ADHESIVE FOR REINFORCING DOWELS IN EXISTING CONCRETE SHALL CONFORM TO ASTM C881-02, TYPE IV, GRADE 3, CLASS A, B, & C EXCEPT GEL TIME AND EPOXY CONTENT. ADHESIVE SHALL BE APPLIED TO THE SURFACE OF THE EXISTING CONCRETE TO A MINIMUM OF 1/2" DEPTH AND BE CONNECTED TO A MIXING NOZZLE WHICH THOROUGHLY MIXES THE COMPONENTS AS IT IS INJECTED INTO THE HOLE. ADHESIVE SHALL BE PASSED ICC EVALUATION SERVICES, INC (ICCES) ACCEPTANCE CRITERIA 308 AND BE SPECIFICALLY APPROVED FOR USE IN CRACKED CONCRETE THAT MAY BECOME CRACKED UNDER SERVICE LOADS. THE ADHESIVE SHALL BE EVALUATED BY ICES ACCEPTANCE CRITERIA 308 AND BE SPECIFICALLY APPROVED FOR USE IN CRACKED CONCRETE. CONTRACT DESIGN PROFESSIONAL FOR DETERMINATION OF CRACKED OR UNCRACKED CONCRETE CONDITION. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE MINIMUM EMBEDMENT LENGTH SHALL BE 12 BAR DIAMETERS, UNLESS NOTED OTHERWISE.
9. ALL DOWELS AND TERMINATING BARS SHALL HAVE A STANDARD 90 DEGREE HOOK.
10. ALL HORIZONTAL REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL AND/OR CONSTRUCTION JOINTS AND CORNERS.
CANAL WALLS/SLAB CONCRETE
1. CONCRETE WORK SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.
2. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM SPECIFIED 28-DAY COMPRESSIVE STRENGTH:
2.1 NORMAL WEIGHT STRUCTURAL CONCRETE:
FOOTINGS/PIERS 3000 PSI
SLABS-ON-GRADE 4000 PSI
FOUNDATION WALLS 4500 PSI
2.2 LIGHTWEIGHT STRUCTURAL CONCRETE:
(110-120 PCF FRESH UNIT WEIGHT/107-116 PCF AIR-DRYED UNIT WEIGHT)
(USE 113 PCF AS UPPER LIMIT FOR 3-HR, 6-14" SLAB)
SLABS ON COMPOSITE STEEL DECK 3500 PSI
3. PIPES OR DUCTS SHALL NOT EXCEED ONE-THIRD THE SLAB OR WALL THICKNESS INCLUDING CROSSING UNLESS SPECIFICALLY DETAILED IN THE STRUCTURAL DOCUMENTS. ALL PIPES AND DUCTS SHALL BE PLACED IN THE MIDDLE THIRD OF THE SLAB OR WALL THICKNESS UNLESS SPECIFICALLY DETAILED OTHERWISE IN THE STRUCTURAL DOCUMENTS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES, ETC.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE ENCASED IN CONCRETE AND FOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.
5. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE DESIGN PROFESSIONAL. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED EXCEPT THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
6. DEFECTIVE AREAS IN CONCRETE INCLUDING, BUT NOT LIMITED TO, HONEY-COMBING, SPALLS, AND CRACKS WITH WIDTHS EXCEEDING 0.016 INCH SHALL BE REPAIRED. EXTENT OF DEFECTIVE AREA TO BE DETERMINED BY THE DESIGN PROFESSIONAL.

CONCRETE MASONRY

- 1. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF CONCRETE MASONRY SHALL BE FM = 1500 PSI.
2. MORTAR SHALL COMPLY WITH THE BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY AND SHALL BE OF THE FOLLOWING TYPE:
WALLS BELOW GRADE TYPE M
TYPE IV OR S
3. CONCRETE MASONRY UNITS SHALL BE GROUTED WITH 2500 PSI COARSE GROUT AS SHOWN IN THE STRUCTURAL DOCUMENTS. GROUT FOR REINFORCED AND NONREINFORCED MASONRY SHALL CONFORM TO ASTM C476.
4. PROVIDE HORIZONTAL JAIL REINFORCEMENT WITH NO. 9 GAGE LONGITUDINAL WIRES AT 16" O/C VERTICALLY UNLESS NOTED OTHERWISE. PROVIDE SPECIAL ACCESSORIES FOR CORNERS, FINTEDES, ETC.
5. PROVIDE OPEN BOTTOM BEAM BLOCK UNITS WITH 7" DEEP MINIMUM WEB OPENINGS AT HORIZONTAL REINFORCEMENT LOCATIONS. A MINIMUM CLEAR SPACE OF ONE BAR DIAMETER SHALL BE PROVIDED BETWEEN THE REINFORCING BARS AND THE FACE OF MASONRY UNITS.
6. PROVIDE CONTROL JOINTS IN ALL CONCRETE MASONRY WALLS AT LOCATIONS APPROVED BY THE DESIGN PROFESSIONAL AT A MAXIMUM SPACING OF 3 TIMES THE WALL HEIGHT OR 40'-0", WHICHEVER IS LESS.
7. PROVIDE DOVETAIL ANCHORS AT 16" O/C UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABOUT CONCRETE SURFACES.
8. SUBMIT WRITTEN CONSTRUCTION PROCEDURES PRIOR TO THE START OF MASONRY CONSTRUCTION.
9. MINIMUM VERTICAL WALL REINFORCEMENT SHALL BE #6@32" O/C UNLESS NOTED OTHERWISE.
10. SUBMIT SHOP DRAWINGS FOR MASONRY REINFORCEMENT IN ACCORDANCE WITH SPECIFICATION SECTION 032000.
STRUCTURAL STEEL
1. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, UNLESS NOTED OTHERWISE.
STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.
STRUCTURAL CHANNELS, MISCELLANEOUS PLATES AND CONNECTION MATERIAL SHALL CONFORM TO ASTM A36, UNLESS NOTED OTHERWISE.
2. BOLTS AND ANCHORS:
2.1 BOLTED CONNECTIONS SHALL BE TYPE II (BEARING TYPE WITH THREADS INCLUDED IN SHEAR PLANE) WITH MINIMUM 3/4" DIAMETER A325 BOLTS. SUBMIT PROPOSED BOLT TIGHTENING PROCEDURES FOR REVIEW.
2.2 ANCHOR BOLTS SHALL BE HEADED BOLTS CONFORMING TO ASTM F1554 AND SHALL BE HEADED RODS OR THREADED RODS WITH HEAVY HEXAGONAL NUT WELDED TO THE BOTTOM OF THE THREADED ROD, GRADE A36, UNLESS NOTED OTHERWISE.
2.3 EXPANSION ANCHORS SHALL HAVE BEEN EVALUATED BY THE ICC EVALUATION SERVICES, INC (ICCES) WITH A PUBLISHED EVALUATION REPORT. ANCHORS INSTALLED IN CONCRETE THAT DO NOT MEET THE SEVERE LOAD REACTION OF 10 KIPS UNLESS OTHERWISE NOTED ON THE DRAWINGS SHALL BE SPECIFICALLY APPROVED FOR USE IN CRACKED CONCRETE. CONTACT DESIGN PROFESSIONAL FOR DETERMINATION OF CRACKED OR UNCRACKED CONCRETE CONDITION UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL ANCHORS SHALL BE APPROVED FOR RESISTING WIND AND SEISMIC LOADS. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT LENGTH SHALL BE EQUAL TO 4.5 TIMES THE ANCHOR DIAMETER, UNLESS NOTED OTHERWISE.
2.4 ADHESIVE ANCHORS SHALL CONSIST OF EPOXY RESIN AND STEEL ANCHOR WITH THE RESIN CONFORMING TO ASTM C881-02, TYPE IV, GRADE 3, CLASS A, B, & C EXCEPT GEL TIME AND EPOXY CONTENT. ADHESIVE SHALL BE APPLIED TO THE SURFACE OF THE EXISTING CONCRETE TO A MINIMUM OF 1/2" DEPTH AND BE CONNECTED TO A MIXING NOZZLE WHICH THOROUGHLY MIXES THE COMPONENTS AS IT IS INJECTED INTO THE HOLE. ADHESIVE SHALL BE PASSED ICC EVALUATION SERVICES, INC (ICCES) ACCEPTANCE CRITERIA 308 FOR LONG TERM CURE AND BE SPECIFICALLY APPROVED FOR USE IN CRACKED CONCRETE. CONTRACT DESIGN PROFESSIONAL FOR DETERMINATION OF CRACKED OR UNCRACKED CONCRETE CONDITION. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE MINIMUM EMBEDMENT SHALL BE EQUAL TO 4.5 TIMES THE ANCHOR DIAMETER, UNLESS NOTED OTHERWISE.
3. STRUCTURAL STEEL SHALL BE FABRICATED AND SHIPPED ACCORDING TO BOTH THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS AND THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDING CONNECTIONS.
4. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN IN THE CONTRACT DOCUMENTS. CONNECTIONS SHALL BE DETAILED BASED ON THE DESIGN INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS. CONNECTIONS SHALL BE DETAILED FOR THE SEVERE LOAD REACTION OF 10 KIPS UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS. FOR STEEL MEMBERS WHOSE REACTIONS ARE NOT SHOWN, THE DESIGN REACTION SHALL BE DETERMINED FROM THE TABLES ENTITLED "MAXIMUM TOTAL UNIFORM LOAD" IN PART 3 OF THE AISC "MANUAL OF STEEL CONSTRUCTION", FOURTEENTH (14TH) EDITION. THE DESIGN REACTION IS EQUAL TO HALF THE TABULATED VALUE FOR NONCOMPOSITE BEAMS AND EQUAL TO THE TABULATED VALUE FOR COMPOSITE BEAMS. DEVIATION FROM THE CONNECTION DETAILS DEPICTED IN THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE DESIGN PROFESSIONAL. REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE FULL RESPONSIBILITY FOR THE DESIGN AND DETAIL OF SUCH CONNECTIONS. DESIGN PROFESSIONAL SHALL BE COMPENSATED BY THE CONTRACTOR FOR THE COST INVOLVED IN THE REDESIGN OF CONNECTIONS FOR THE CONVENIENCE OF THE CONTRACTOR. SINGLE ANGLE CONNECTIONS ARE NOT ACCEPTABLE. STEEL CONNECTIONS NOT COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE CONTRACTOR. THE DESIGN SERVICE SHALL BE INCLUDED IN THE CONTRACTOR'S SCOPE OF SERVICES. SHOP DRAWINGS AND CALCULATIONS FOR SUCH CONNECTIONS SHALL BE SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE. REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE FULL RESPONSIBILITY FOR THE DESIGN AND ADEQUACY OF SUCH CONNECTIONS. FOR CONNECTION DETAILS DEPICTING ARRANGEMENT CONCEPT OF THE CONNECTION WITHOUT COMPLETE DETAILS, THE CONNECTION DESIGN ENGINEER SHALL FOLLOW THAT ARRANGEMENT CONCEPT IN THE CONNECTION DESIGN.
5. USE PRE-QUALIFIED WELDED JOINTS IN ACCORDANCE WITH AISC AND THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY. "NON-PRE-QUALIFIED JOINTS" SHALL BE QUALIFIED PRIOR TO FABRICATION.
6. SHEAR CONNECTORS SHALL BE 3/4" DIAMETER X 3-7/8" LONG HEADED STUDS UNLESS NOTED OTHERWISE.
7. STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED.
STEEL JOISTS
1. STEEL JOISTS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED, FABRICATED, AND ERECTED ACCORDING TO THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE (SJI).
2. STEEL ROOF JOISTS AND BRIDGING SHALL BE DESIGNED FOR A NET UNIFORM UPLIFT LOAD AS INDICATED ON THE DRAWINGS.
3. BRIDGING SHALL BE DESIGNED TO FULLY BRACE TOP CHORD OF JOISTS UNDER SERVICE LOADS FOR ROOF JOISTS NOT BRACED BY STEEL ROOF DECK.
4. DESIGN OF STEEL JOISTS, BRIDGING, AND THEIR CONNECTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE DRAWINGS SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE, REVIEW OF SHOP DRAWINGS SHALL BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS AND CONTRACT DOCUMENT DETAILS. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE DESIGN OF THE STEEL JOISTS, BRIDGING AND THEIR CONNECTIONS.
5. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION AND ERECTION OF WALLS, BEAM FRAMING, METAL DECKING, ETC. TO ENSURE COMPATIBILITY OF ROOF AND WALL SYSTEMS CONSIDERING PITCH AND CAMBER OF STEEL JOISTS.
METAL DECK
1. DECK DESIGN IS BASED ON THE STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS.
2. PROVIDE GALVANIZED ROOF DECK WITH THE FOLLOWING MINIMUM PROPERTIES:
1.5 INCH DEPTH
22 GAGE THICKNESS
0.195 IN^2/FT SECTION MODULUS
0.155 IN^4/FT MOMENT OF INERTIA
33,000 PSI YIELD STRESS
3. PROVIDE GALVANIZED ACOUSTIC ROOF DECK WITH THE FOLLOWING MINIMUM PROPERTIES:
1.5 INCH DEPTH
22 GAGE THICKNESS
0.195 IN^2/FT SECTION MODULUS
0.155 IN^4/FT MOMENT OF INERTIA
33,000 PSI YIELD STRESS
PROVIDE GALVANIZED ACOUSTIC ROOF DECK WITH THE FOLLOWING MINIMUM PROPERTIES:
3 INCH DEPTH
22 GAGE THICKNESS
0.382 IN^2/FT SECTION MODULUS
0.659 IN^4/FT MOMENT OF INERTIA
33,000 PSI YIELD STRESS
4. PROVIDE COMPOSITE FLOOR DECK WITH THE FOLLOWING MINIMUM PROPERTIES:
2 INCH DEPTH
18 GAGE THICKNESS
0.495 IN^2/FT SECTION MODULUS
0.659 IN^4/FT MOMENT OF INERTIA
50,000 PSI YIELD STRESS
5. DECK IS SPECIFIED BASED ON A THREE SPAN CONDITION, FURNISH HEAVIER GAGE DECK IF REQUIRED FOR ONE OR TWO SPAN CONDITIONS.
6. FASTEN ROOF DECK TO RESIST A NET UPLIFT OF AS INDICATED ON THE DRAWINGS.
7. FASTEN DECK TO RESIST A UPHRAGM SHEAR FORCE OF XX POUNDS PER LINEAR FOOT.

COMPOSITE FLOOR CONSTRUCTION

- 1. COMPOSITE FLOOR MEMBERS ARE DESIGNED TO BE UNSHORED UNLESS NOTED OTHERWISE.
2. COMPOSITE FLOOR SLABS ARE TO BE FINISHED LEVEL. THE WEIGHT OF THE WET CONCRETE WILL CAUSE DEFLECTION OF THE STEEL FRAMING AND DECKING. THIS, CONCRETE OVERRUNS ARE TO BE ANTICIPATED AND INCLUDED IN THE CONTRACTOR'S BASE BID.
3. COORDINATE EMBEDDED ITEMS REQUIRED FOR ARCHITECTURAL, STRUCTURAL, AND MECHANICAL ELEMENTS. OBTAIN WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER FOR PLACEMENT OF EMBEDDED ITEMS, RECESSES OR DEPRESSIONS IN THE SLAB NOT SHOWN ON THE STRUCTURAL DOCUMENTS.
4. CONDUIT, PIPE, OR DUCT CAST WITHIN COMPOSITE SLAB SHALL NOT EXCEED 1 INCH IN OUTSIDE DIAMETER NOR ONE THIRD THE CONCRETE COVER THICKNESS. SHALL BE PLACED WITHIN CROSSOVERS, SHALL HAVE AT LEAST 3/4 INCH OF CONCRETE COVER AND SHALL BE PLACED AT LEAST 19 INCHES APART UNLESS SPECIFICALLY DETAILED AND SHOWN IN STRUCTURAL DOCUMENTS. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE EFFECT OF CONDUIT, PIPE, OR DUCT NOT SPECIFICALLY SHOWN IN THE STRUCTURAL DOCUMENTS ON THE FULFILLMENT OF GOVERNING CODE REQUIREMENTS AND SPECIFIED FIRE RATINGS BY THE COMPOSITE SLAB SYSTEM.
5. PLACEMENT OF CONTROL JOINTS IN THE COMPOSITE FLOOR SLAB IS PROHIBITED.
COLD-FORMED STEEL
1. DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS AND THEIR CONNECTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SUBMIT SHOP DRAWINGS SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE. REVIEW OF SHOP DRAWINGS SHALL BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS AND CONTRACT DOCUMENT DETAILS. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE DESIGN OF THE COLD-FORMED STEEL STRUCTURAL MEMBERS AND THEIR CONNECTIONS WITH THE STRUCTURAL DOCUMENTS.
2. COLD-FORMED STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE "SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND "LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR COLD-FORMED STEEL STRUCTURAL MEMBERS".
3. COLD-FORMED STEEL STUDS, JOISTS AND ACCESSORIES SHALL BE AS SHOWN IN THE STRUCTURAL DOCUMENTS.
4. COLD-FORMED STEEL TRUSSES SHALL BE DESIGNED FOR THE DESIGN LOADS SHOWN IN THE CONTRACT DOCUMENTS. REFER TO THE SPECIFICATIONS FOR DESIGN OF TRUSSES.
5. COLD-FORMED STEEL STRUCTURAL MEMBERS MAY BE ATTACHED BY EITHER WELDS OR SCREWS SEEN BY THE MANUFACTURER'S FIELD SPECIFICATIONS FOR DESIGN LOADS. SEE THE SPECIFICATIONS.
6. CONTRACTOR SHALL FURNISH COMPLETE FABRICATION AND ERECTION DRAWINGS FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO THE COMMENCEMENT OF FABRICATION. INCLUDE PLACING DRAWINGS FOR FRAMING MEMBERS SHOWING SIZE AND GAGE DESIGNATIONS, NUMBER, TYPE, LOCATION AND BRACING. INDICATE SUPPLEMENTAL STRAPPING, BRACING, SPLICES, BRIDGING, AND DETAILS AS REQUIRED FOR PROPER INSTALLATION.
7. ALL COLD-FORMED STEEL STUDS SHALL BE POSITIONED SUCH THAT STUD LOCATION IS DIRECTLY UNDERneath BEAM JOINTS UNLESS NOTED OTHERWISE IN THE STRUCTURAL DOCUMENTS.
8. SPLICES SHALL BE FULLY LOADED STUDS AND FLOOR OR ROOF JOISTS SHALL NOT BE PERMITTED.
9. ALL COLD-FORMED STEEL SHALL BE IN ACCORDANCE WITH THE STANDARD CODE OF ARC WELDING IN BUILDING CONSTRUCTION.

PROJECT NAME: CONTRACTOR'S NAME: DATE SUBMITTED: DESCRIPTION OF ITEMS SUBMITTED, IDENTIFY WORK AND PRODUCT BY SPECIFICATION SECTION NUMBER OF DRAWINGS AND OTHER PERTINENT DATA.
17.3 CONTRACTOR SHALL DIRECT SPECIFIC ATTENTION ON THE SUBMITTAL TO ANY DEVIATION FROM THE CONTRACT DOCUMENTS. CONTRACTOR SHALL STAMP AND SIGN EACH SHEET OF SHOP DRAWINGS AND PRODUCT DATA, AND SIGN OR INITIAL EACH SAMPLE TO CERTIFY COMPLIANCE WITH REQUIREMENTS OF CONTRACT DOCUMENTS. SUBMITTALS RECEIVED WITHOUT THE CONTRACTOR'S STAMP OF REVIEW WILL BE RETURNED TO THE CONTRACTOR FOR REVIEW AND RESUBMITTAL.
17.4 WORK REQUIRING SHOP DRAWINGS, WHETHER CALLED FOR BY THE CONTRACT DOCUMENTS OR REQUESTED BY THE CONTRACTOR, SHALL NOT COMMENCE UNTIL THE SUBMISSION HAS BEEN REVIEWED BY THE DESIGN PROFESSIONAL. WORK MAY COMMENCE IF THE CONTRACTOR VERIFIES THE ACCURACY OF THE DESIGN PROFESSIONAL'S CORRECTIONS AND NOTATIONS AND COMPLES WITH THEM WITHOUT EXCEPTION AND WITHOUT REQUESTING CHANGE IN CONTRACT SUM OR CONTRACT TIME AT COPY OF THE MARKED STRUCTURAL SHOP DRAWINGS WITH THE DESIGN PROFESSIONAL'S REVIEW STAMP IS TO BE MAINTAINED AT THE JOB SITE.

Table with columns: MEMBER, DEAD LOAD, LIVE LOAD, DEAD + LIVE LOAD. Includes roof and floor members with span lengths and load values.

Table with columns: MEMBER, UNIFORMED CAST AGAINST EARTH, FORMED #5 AND LARGER, FORMED #5 AND SMALLER. Includes details for earth and weather exposure.

Table with columns: MEMBER, 1" CLEAR, 1-1/2" CLEAR, 3/4" CLEAR. Includes details for non-exposed to earth or weather.

Table with columns: MEMBER, 3" CLEAR, 2" CLEAR, 1-1/2" CLEAR. Includes details for exposed to earth or weather.

REVISIONS / PRINTED: DATE, DATE, REMARKS. PROJECT INFORMATION: PROJECT NO., PROJECT NAME, PROJECT LOCATION, PROJECT DATE, PROJECT VALUE. PROJECT SUBMITTAL: PROJECT NO., PROJECT NAME, PROJECT LOCATION, PROJECT DATE, PROJECT VALUE. PROJECT INFORMATION: PROJECT NO., PROJECT NAME, PROJECT LOCATION, PROJECT DATE, PROJECT VALUE. PROJECT SUBMITTAL: PROJECT NO., PROJECT NAME, PROJECT LOCATION, PROJECT DATE, PROJECT VALUE.

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GENERAL NOTES: J.H. HOUSE ELEMENTRY SCHOOL, 3100 Zingira Road NE, Conyers, GA 30012. DATE: 10.01.2019. JOB NO: 218036.00. SHEET NO: S0-01. ISSUED FOR CONSTRUCTION.