STRUCTURAL NOTES

1. BUILDING CODES

   A. THE 2018 INTERNATIONAL BUILDING CODE (IBC) AND ALL SUBSEQUENT SUPPLEMENTS
   B. 2020 CODE OF NEW YORK STATE
   C. THE BUILDING CODE APPLICABLE TO THE CITY
   D. GOVERNING LOCAL BUILDING CODE

2. DESIGN LOADS

   A. IN ADDITION TO SELF WEIGHT, THE BUILDING IS DESIGNED FOR THE FOLLOWING LOADS:

	LIVE LOAD	SUPERIMPOSED DEAD LOAD
TYPICAL FLOOR	**125 PSF**	**5 PSF**
ROOF	**20 PSF**	**13 PSF**

   B. ROOF SNOW LOAD DESIGN CRITERIA:

GROUND SNOW LOAD (P_g):	30 PSF
FLAT ROOF SNOW LOAD (P_f):	23.1 PSF
EXPOSURE FACTOR (C_e):	0.9
SNOW LOAD IMPORTANCE FACTOR (I_S):	1.0
THERMAL FACTOR (C_t):	1.1

   C. WIND LOAD DESIGN CRITERIA:

ULTIMATE WIND SPEED (V_{ult}):	112 MPH
RISK CATEGORY:	II
WIND EXPOSURE CATEGORY:	B
INTERNAL PRESSURE COEFFICIENT (GC_{pi}):	+/-0.18*

   D. SEISMIC LOAD DESIGN CRITERIA:

RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I_e):	1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S_s = 0.199 S_1 = 0.066
SOIL SITE CLASS:	D
DESIGN SPECTRAL RESPONSE COEFFICIENTS:	S_{ds} = 0.213 S_{d1} = 0.106
SEISMIC DESIGN CATEGORY:	B
BASIC SEISMIC FORCE RESISTING SYSTEM:	LIGHT FRAME (COLD-FORMED STEEL) WALL SYSTEM USING FLAT STRAP BRACING LIGHT FRAME (COLD-FORMED STEEL) WALLS SHEATHED WITH STEEL SHEETS
RESPONSE MODIFICATION FACTOR (R):	4.0
SEISMIC RESPONSE COEFFICIENT (C_s):	0.0308
DESIGN BASE SHEAR (V):	0.0308*W KIPS
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE METHOD:

   E. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATION WHICH WILL EXCEED THE DESIGN LIVE LOADINGS NOTED.

   F. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE FLOORS AND ROOF AND COMPLETE CONSTRUCTION OF ALL SHEAR WALLS. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHOD OF CONSTRUCTION AND SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE AND TO SUPPORT CONSTRUCTION LOADS DURING CONSTRUCTION, INCLUDING SOILS ON WALLS FROM BACKFILLING PRIOR TO PLACING SLABS ON GRADE. DESIGN OF ALL BRACING IS THE CONTRACTORS RESPONSIBILITY.

   G. THE FRAMING HAS BEEN DESIGNED FOR THE WEIGHT OF EQUIPMENT SHOWN ON THE STRUCTURAL DRAWINGS. IF ACTUAL WEIGHT OF EQUIPMENT EXCEEDS THAT SHOWN OR IF EQUIPMENT NOT SHOWN EXCEEDS 500 POUNDS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

   H. ALL STAIRS, RAILINGS, STUD WALLS, GLASS STORE FRONT, AND EXTERIOR CEILINGS AND SOFFITS SHALL BE DESIGNED FOR THE LOADS INDICATED OR SPECIFIED BY THE BUILDING CODE.

3. GENERAL CONSTRUCTION REQUIREMENTS

   A. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. TYPICAL DETAILS ARE TO BE USED FOR ALL CONDITIONS WHERE THE DETAIL IS APPLICABLE, WHETHER OR NOT NOTED ON PLAN. TYPICAL DETAILS MAY BE SLIGHTLY ALTERED IF REQUIRED DUE TO PROJECT CONDITIONS, ONLY WHEN SUBMITTED AND THE ENGINEER'S APPROVAL IS OBTAINED PRIOR TO PERFORMING THE WORK.

   B. ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS, WITH THE EXCEPTION OF STRUCTURAL MEMBER SIZES, ARE GENERATED BY OTHER DISCIPLINES. ANY DIMENSIONS OR ELEVATIONS OMITTED OR NOT SHOWN ON THE STRUCTURAL DRAWINGS SHOULD BE OBTAINED FROM THE DRAWINGS OF THE OTHER DISCIPLINES. STRUCTURAL DRAWINGS ARE NOT "STAND-ALONE"DOCUMENTS AND SHOULD BE USED IN CONJUNCTION WITH, AND COORDINATED WITH THE SPECIFICATIONS, ARCHITECTURAL DRAWINGS AND ALL OTHER DISCIPLINE'S DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER AND ARCHITECT PRIOR TO PERFORMING THE WORK.

   C. IF DIFFERENCES OCCUR WITHIN OR BETWEEN DRAWINGS AND SPECIFICATIONS REGARDING MATERIALS, STRENGTHS OR QUANTITIES, THE BETTER MATERIAL, HIGHER STRENGTH, AND GREATER QUANTITY INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED.

   D. THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTOR OR SUBCONTRACTOR CONTRACTS.

   E. AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING MEANS AND METHODS OF CONSTRUCTION AND SAFETY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK AT THE JOBSITE IS FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT ONLY AND IS NOT EVER TO BE CONSTRUED AS A REVIEW OF MEANS AND METHODS OF CONSTRUCTION AND SAFETY METHODS.

   F. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR PROTECTING THE COMPLETED OR INCOMPLETE STRUCTURAL FRAMING FROM DAMAGE DUE TO TEMPORARY CONSTRUCTION LOADINGS.

   G. COSTS OF INVESTIGATION AND/OR REDESIGN DUE TO CONTRACTOR ERRORS WILL BE AT THE CONTRACTOR'S EXPENSE.

   H. ANY APPROVED CONTRACTOR REQUESTED CHANGES TO THESE DRAWINGS WILL BE DONE AT NO COST TO THE OWNER. APPROVAL OF CONTRACTOR REQUESTED CHANGES IN NO WAY STATES OR IMPLIES APPROVAL OF A CHANGE IN SCOPE OR CHANGE IN CONTRACT COST.

   I. UNLESS EXPLICITLY NOTED AS "ISSUED FOR BID", THESE DRAWINGS ARE NOT SUITABLE FOR OBTAINING BIDS FROM GENERAL OR SUBCONTRACTORS. BIDDING OF DRAWINGS PRIOR TO DESIGN COMPLETION AND "ISSUED FOR BID"IS DONE AT THE SOLE RISK OF THE BIDDING CONTRACTOR. ADDITIONS OR CORRECTIONS TO DRAWINGS THAT ARE BID PRIOR TO DESIGN COMPLETION AND "ISSUED FOR BID"WILL NOT BE CONSIDERED AS DESIGN ERRORS OR OMISSIONS. STRUCTURAL DESIGN, BY NATURE, CANNOT BE COMPLETE PRIOR TO COMPLETION OF ARCHITECTURAL AND MECHANICAL DRAWINGS.

   J. ALL REFERENCES TO WATER/DAMPPROOFING, FIREPROOFING, AND UTILITIES ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY. SEE ARCHITECTURAL DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS FOR ALL WATER/DAMPPROOFING, FIREPROOFING AND UTILITY DETAILS AND REQUIREMENTS. COORDINATE ALL UNDERGROUND UTILITY REQUIREMENTS WITH THE CIVIL/MEP DRAWINGS. ALL UTILITIES SHALL BE ABOVE/BELOW FOOTING AND NOT LOCATED WITHIN THE FOOTINGS. NOTIFY ENGINEER OF RECORD IF OTHERWISE.

   K. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY. THE CONTRACTOR MUST PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. THIS SKETCH MUST BE SUBMITTED TO AND APPROVAL MUST BE GRANTED BY THE ENGINEER PRIOR TO PERFORMING THE WORK.

   L. SUBMIT SHOP DRAWINGS SUCH THAT BY THE TIME THEY ARE RECEIVED BY KCI TECHNOLOGIES, THERE WILL BE AT LEAST 14 DAYS BEFORE REVIEWED SUBMITTALS WILL BE NEEDED. ANY REVIEW THAT IS REQUIRED MORE EXPEDIENTLY WILL BE AT THE CONTRACTOR'S EXPENSE. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL CERTIFYING THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. IF REVIEW OF AN INCOMPLETE SHOP DRAWING IS REQUIRED, THAT SHOP DRAWING SHALL BE CLEARLY MARKED AS INCOMPLETE. THE AREA THAT NEEDS TO BE REVIEWED SHALL BE CLEARLY NOTED WITH AN EXPLANATION FOR THE REASON FOR PARTIAL APPROVAL.

   M. IN NO CASE SHALL HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0"FROM ANY FOUNDATION/BASEMENT WALL. IF THE CONTRACTOR DEEMS IT NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THEN 8'-0", THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND, AT HIS OWN EXPENSE, PROVIDE ADEQUATE SUPPORTS OR WALL BRACES TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT.

   N. SIZE AND/OR LOCATION OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, ETC. SHOWN ON THE STRUCTURAL DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO COORDINATE ALL CONTRACT DOCUMENTS TO DETERMINE THE SIZE AND/OR LOCATION OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, ETC.

   O. SIZE AND/OR LOCATION OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE STRUCTURAL DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY BY FIELD MEASUREMENTS/INVESTIGATION THE SIZE AND/OR LOCATION OF ALL EXISTING STRUCTURES AND UTILITIES.

   P. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED SHOWING DESIGNS OF METAL STAIRS, METAL RAILINGS AND CONNECTIONS TO STRUCTURE TAKING INTO ACCOUNT THE VERTICAL AND LATERAL LOADS STATED IN THE GOVERNING CODES. WHERE HEADERS OR OTHER TYPES OF STRUCTURAL MEMBERS HAVE BEEN DESIGNATED ON THE STRUCTURAL CONTRACT DOCUMENTS TO SUPPORT THE STAIRS, THE CONNECTIONS FROM THE STAIRS SHALL BE DESIGNED SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE IMPOSED ON THESE STRUCTURAL MEMBERS. IF ECCENTRIC CONNECTIONS ARE USED, CONTRACTOR SHALL PROVIDE BRACING ELEMENTS FOR ALL SUPPORTING STEEL TO ELIMINATE THE TORSIONAL EFFECTS OF THE ECCENTRIC CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL EMBEDDED ITEMS AND HARDWARE AS REQUIRED PER THE STAIR DESIGN.

   Q. STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATORS, INERTIA PADS, ETC.

   R. EXACT LOCATIONS OF ROOF PENETRATIONS TO BE COORDINATED BY THE GENERAL CONTRACTOR BETWEEN STEEL/JOIST/DECK/HVAC SUBCONTRACTORS. SEE DETAIL FOR ROOF FRAME REQUIREMENTS

   S. THE CONTRACTOR SHALL LOCATE ALL UTILITIES IN THE AREA OF CONSTRUCTION AND PREVENT DAMAGE TO THEM. SHOULD DAMAGE OCCUR TO ANY UTILITIES, THE CONTRACTOR IS REQUIRED TO REPAIR THE DAMAGE TO THE SATISFACTION OF THE OWNER AT HIS OWN EXPENSE.

   T. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.

   U. THE CONTRACTOR SHALL REVIEW THE ARCHITECTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION AND DIMENSION OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS WHICH IMPACT THE STRUCTURAL COMPONENTS.

   V. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION.

   W. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP DRAWINGS.

   X. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

4. SPREAD FOOTING FOUNDATIONS

   A. REFER TO "CAST IN PLACE CONCRETE" FOR APPLICABLE CODES AND STANDARDS.

   B. REFER TO GEOTECHNICAL SUBSURFACE INVESTIGATION AND REPORT BY LABELLA ASSOCIATES, D.P.C. AND DATED 04/12/2022 FOR SITE PREPARATION AND RECOMMENDATIONS.
      1. MINIMUM DEPTH TO BOTTOM OF EXTERIOR FOOTINGS FOR FROST PROTECTION = 48 INCHES BELOW GRADE
      2. NET ALLOWABLE BEARING CAPACITY = 4000 PSF

   C. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOUNDATIONS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 4000 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

   D. ALL EXCAVATION AND BACKFILLING OPERATIONS WITHIN THE BUILDING FOOTPRINT, INCLUDING ALL COMPACTION TESTS AND INSPECTIONS, SHALL BE DONE UNDER THE DIRECTION AND SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER. PREPARE SUBGRADE FOR SLAB/ FOOTING CONSTRUCTION PER GEOTECHNICAL ENGINEERING REPORT RECOMMENDATIONS AS FOLLOWS:

      INTERIOR AND EXTERIOR FOOTINGS FOR THE PROPOSED BUILDING ARE PREPORTIONED USING AN ALLOWABLE BEARING PRESSURE OF 4000 PSF. THIS BEARING PRESSURE IS BASED ON THE FOLLOWING GENERAL SUBGRADE PREPARATION MEASURES.

      1. AFTER GENERAL SITE PREPARATION TO APPROXIMATE GROUND FLOOR ELEVATION, INCLUDING REMOVAL OF EXISTING STRUCTURE, FOUNDATIONS IN THEIR ENTIRETY, SELECTIVE DEMOLITION OF PAVEMENT AREAS, AND COMPLETION OF GENERAL REGRADING AND ROCK REMOVAL ACTIVITIES AT THE PROJECT SITE, THE AREA SHOULD BE RESTORED TO AN ACCEPTABLE BASELINE CONDITION. PROOF ROLL NATURAL SOILS LEFT IN PLACE AFTER PRELIMINARY EXCAVATION ACTIVITIES ARE COMPLETE. IF DURING FOUNDATION PREPARATION, SUBGRADE MATERIALS ARE DETERMINED TO BE UNSATISFACTORY (I.E. PUMPING, WEAVING, FROZEN, BECOMING SATURATED, ORGANICS OR COBBLES/BOULDERS PRESENT) BY THE SPECIAL INSPECTOR, THE AREA SHOULD BE OVER EXCAVATED BY UP TO 12-INCHES AND BACKFILLED WITH PLACED AND COMPACTED GRANULAR FILL TO ACHIEVE A PROPER BEARING AREA AS PREVIOUSLY INDICATED.

      2. EXCAVATE TO ELEVATION REQUIRED FOR PLACEMENT OF FOOTINGS AND FOR PLACEMENT OF 12" THICK LAYER OF STONE FILL CONSISTING OF EITHER COMPACTED GRAVEL OR COMPACTED CRUSHED STONE BELOW SLAB-ON-GRADE.

      3. OVER EXCAVATE A MINIMUM OF 12" BELOW BOTTOM OF FOOTING ELEVATION FOR FOOTING LOCATIONS THAT WOULD OTHERWISE BEAR ON BEDROCK. PLACE AND COMPACT 12" OF STONE FILL FOR SUPPORT OF FOOTINGS.

      PROTECTION OF FOOTING EXCAVATION SHOULD CONSIST OF DIVERTING SURFACE WATER FROM EXCAVATION TRENCHES AND MINIMIZING THE TIME THAT THE SUBGRADE SOIL IS EXPOSED TO WEATHER CONDITIONS. AREAS THAT BECOME SOFT AND WET SHALL BE OVER EXCAVATED AND REPLACED WITH 3/4" CS UNLESS OTHERWISE DIRECTED BY THE REGISTERED GEOTECHNICAL ENGINEER SUPERVISING THE EXCAVATIONS.

   E. ALL EXISTING SOIL CONTAINING GRAVEL, CONSTRUCTION OR DEMOLITION DEBRIS, ORGANIC SUBSTANCES, OR OTHER FOREIGN OBJECTS SHALL BE REMOVED FROM THE REGION WITHIN THE FOOTPRINT OF THE STRUCTURE.

5. STRUCTURAL SPECIAL INSPECTIONS

   A. THE QUALIFIED AGENCY RETAINED BY THE OWNER FOR THESE SPECIAL INSPECTION SERVICES SHALL BE APPROVED BY THE OWNER, THE ARCHITECT, AND THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION. AN OUTLINE OF THE SCOPE OF SERVICES TO BE PERFORMED BY THE INSPECTING AGENCY IS TO BE SUBMITTED PRIOR TO THE START OF CONSTRUCTION.
   B. IN ACCORDANCE WITH SECTION 1704 OF THE INTERNATIONAL BUILDING CODE, AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS, AN INDEPENDENT APPROVED AGENCY SHALL MAKE PERIODIC AND/OR CONTINUOUS INSPECTIONS OF THE CONSTRUCTION PROGRESS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

STEEL CONSTRUCTION	SECTION 1704.3, TABLE 1704.3
CONCRETE CONSTRUCTION	SECTION 1704.4, TABLE 1704.4
MASONRY CONSTRUCTION	SECTION 1704.5.1, TABLE 1704.5.1-.3
SOILS	SECTION 1704.7, TABLE 1704.7

   C. IN ACCORDANCE WITH SECTIONS 1707.1 THROUGH 1707.5 (1705.12.1 THROUGH 1705.12.9 FOR IBC 2015) OF THE INTERNATIONAL BUILDING CODE AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS, AN INDEPENDENT APPROVED AGENCY SHALL MAKE PERIODIC AND/OR CONTINUOUS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE OF THE CONSTRUCTION PROGRESS.

6. CAST IN PLACE CONCRETE

   A. CODES AND STANDARDS:
      1. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
      2. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
      3. ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
      4. ACI 305 "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING"
      5. ACI 306 "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING"
      6. ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORM WORK"
      7. ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
      8. CRSI "MANUAL OF STANDARD PRACTICE"

   B. REINFORCING MATERIALS:
      1. STEEL REINFORCEMENT: ASTM A 615, GRADE 60, DEFORMED
      2. PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185

   C. CONCRETE MATERIALS:
      1. PORTLAND CEMENT: ASTM C 150, TYPE I/II
      2. FLY ASH: ASTM C 618, CLASS F
      3. GROUND GRANULATED BLAST FURNACE SLAG: ASTM C 989, GRADE 120
      4. NORMAL WEIGHT AGGREGATES: ASTM C 33
         a. MAXIMUM COARSE AGGREGATE SIZE: 1 INCH NOMINAL
         b. FINE AGGREGATE SHALL BE FREE OF MATERIAL WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.
      5. LIGHT WEIGHT AGGREGATES: ASTM C 330, 1 INCH NOMINAL MAXIMUM AGGREGATE SIZE
      6. WATER: ASTM C 94, POTABLE

   D. ADMIXTURES:
      1. AIR ENTRAINMENT: ASTM C 260
      2. WATER-REDUCER: ASTM C 494
      3. SILICA FUME: ASTM C 1240
      4. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED.

   E. CONCRETE MIXTURES:
      1. FLY ASH, POZZOLAN, GROUND GRANULATED BLAST FURNACE SLAG, AND SILICA FUME MAY BE USED AS NEEDED TO REDUCE THE TOTAL AMOUNT OF PORTLAND CEMENT WHICH WOULD OTHERWISE BE USED BY NOT MORE THAN 40 PERCENT.
         a. MAXIMUM SUBSTITUTION OF FLY ASH SHALL BE 20 PERCENT.
         b. MAXIMUM SUBSTITUTION OF SILICA FUME SHALL BE 10 PERCENT.

   F. PROPORTION NORMAL WEIGHT CONCRETE MIXES AS FOLLOWS:

LOCATION	28 DAY STRENGTH (f'c)	WATER-CEMENTIOUS RATIO	SLUMP LIMIT	AIR CONTENT
FOUNDATIONS, WALLS BELOW GRADE	4000 PSI	0.50	4" ± 1"	6.0% ± 1.5%
SLABS ON GRADE	4000 PSI	0.50	4" ± 1"	4.5% ± 1.5%
FRAMED SLABS (INTERIOR)	3000 PSI	0.50	4" ± 1"	3.0% ± 1.5%

   G. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.

   H. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACING OF ANY CONCRETE.

   I. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND RESHORING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INDICATE THE TYPE, EXTENT, SIZE, AND LOCATION OF ALL SHORING AND RESHORING AS WELL AS THE SEQUENCE OF CONSTRUCTION.

   J. MINIMUM COVER FOR ALL REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:

FOUNDATIONS	3 INCHES
SLABS ON GRADE	2 INCHES (TOP)
COLUMNS AND BEAMS	1 1/2 INCHES
FRAMED SLABS	3/4 INCHES
WALLS	3/4 INCHES
WALLS BELOW GRADE	2 INCHES

   K. THE GENERAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL PENETRATIONS THROUGH THE FRAMED CONCRETE SLABS. THE OPENINGS SHALL BE ACCURATELY LOCATED AND DIMENSIONED.

   L. ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, AS WELL AS THE STRUCTURAL DRAWINGS FOR THE LOCATION, NUMBER, AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING LOCATIONS AND DIMENSIONS OF ALL OPENINGS, SLEEVES, ETC. IN CAST-IN-PLACE CONCRETE SLABS, BEAMS, WALLS, COLUMNS, AND FOUNDATIONS. THESE DRAWINGS SHALL BE COORDINATED BY THE CONTRACTOR. OPENINGS AND SLEEVES THROUGH CAST-IN-PLACE CONCRETE FRAMING IS PROHIBITED EXCEPT WHERE THOSE SLEEVES AND OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS OR WHERE THEY ARE SHOWN ON THE APPROVED SLEEVE AND OPENING DRAWINGS THAT HAVE BEEN SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. SAW-CUTTING, CORING, OR DRILLING OF SLEEVES OR OPENING THROUGH PREVIOUSLY CAST CONCRETE IS NOT PERMITTED EXCEPT WHERE SPECIFICALLY REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER.

   M. LOCATION OF CONSTRUCTION JOINTS IN THE STRUCTURAL SLAB SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER. CONSTRUCTION JOINTS IN STRUCTURAL SLABS AND GRADE BEAMS SHALL BE AT MID-SPAN AND KEY JOINTED WITH REINFORCING CONTINUOUS ACROSS JOINT. CONSTRUCTION JOINTS IN SLABS ON METAL DECK SHALL OCCUR MIDWAY BETWEEN BEAMS AT END THIRD OF GIRDER SPAN.

   N. SUBMIT ALL REINFORCING SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION.

   O. FOR CONCRETE SLABS ON METAL DECK, FLOORS SHALL BE POURED TO THE THICKNESS SHOWN ON DOCUMENTS, NOT TO A LEVEL LINE.

   P. THE CONTRACTOR SHALL INSTALL FLOOR LEVELING MATERIAL AND PERFORM OTHER CORRECTIVE MEASURES IN ALL AREAS, INCLUDING BUT NOT LIMITED TO, AREAS WHERE FLOOR FINISH PROVISIONS DO NOT COMPLY WITH THE FLATNESS AND LEVELNESS REQUIREMENTS. NOTE: UNLESS NOTED OTHERWISE, THE CALCULATED CENTER OF BAY DEFLECTION DUE TO DEAD LOADS ONLY, MEASURED ON A DIAGONAL DIMENSION BETWEEN COLUMNS, IS APPROXIMATELY N1"PER 10'-0"LENGTH.

   Q. EMBEDDED CONDUIT WITHIN CONCRETE SLAB ON METAL DECK IS NOT ALLOWED.

7. CONCRETE MASONRY

   A. CODES AND STANDARDS:
      1. ACI 530/ASCE 5/TMS 4021 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"
      2. ACI 530.1/ASCE 6/TMS 602 "SPECIFICATIONS FOR MASONRY STRUCTURES"
      3. ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"

   B. SUBMITTALS:
      1. MATERIAL CERTIFICATES FOR MASONRY UNITS, GROUT MIXES, MORTAR MIXES, REINFORCEMENT, AND ANCHORS / TIES
      2. SHOP DRAWINGS INCLUDING DETAIL BENDING AND PLACEMENT OF UNIT MASONRY REINFORCING
      3. ADDITIONAL SAMPLE SUBMITTALS MAY BE REQUIRED BY ARCHITECT/OWNER. REFER TO ARCHITECTURAL DRAWINGS.

   C. MATERIALS:
      1. CONCRETE MASONRY ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (f'm) OF 2500 PSI.
      2. MASONRY UNITS SHALL BE TYPE N-1 MEDIUM WEIGHT
         A. ASTM C90 SOLID (GREATER THAN OR EQUAL TO 75 PERCENT SOLID MATERIAL) OR ASTM C90 HOLLOW GROUTED SOLID BELOW GRADE.
         B. ASTM C90 HOLLOW ABOVE GRADE WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI EXCEPT STAIRTOWERS AND ELEVATOR SHAFTS WHICH ARE TO BE C90 SOLID FOR FULL HEIGHT. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR.
      3. FOLLOWING ARE THE BLOCK STRENGTHS REQUIRED: ASTM C90 SOLID 2000 PSI ON GROSS AREA OF INDIVIDUAL UNITS. ASTM C90 HOLLOW 2000 PSI ON NET AREA OF INDIVIDUAL UNITS.
      4. ALL MORTAR SHALL BE ASTM C270 TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS EXCEPT IVANY BLOCK WHICH SHALL BE LAID USING ASTM C270 TYPE M MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS FROM FIELD OBTAINED TEST CYLINDERS
      5. GROUT SHALL BE A HIGH SLUMP MIX IN ACCORDANCE WITH ASTM SPECIFICATION C476 HAVING A MINIMUM COMPRESSIVE STRENGTH OF f'm BUT NOT LESS THAN 2000 PSI FROM FIELD OBTAINED TEST CYLINDERS.
      6. REINFORCEMENT:
         a. UNCOATED STEEL REINFORCING BARS: ASTM A 615, GRADE 60
         b. HORIZONTAL JOINT REINFORCEMENT: ASTM A 951, EITHER LADDER OR TRUSS TYPE WITH MINIMUM 3/16 INCH DIAMETER

   D. INSTALLATION:
      1. UNLESS OTHERWISE INDICATED, ALL BOND BEAMS SHALL BE REINFORCED WITH 2-#5 BARS RUNNING CONTINUOUS AND LAP SPLICED A MINIMUM OF 36 BAR DIAMETERS. PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS.
      2. VERTICAL WALL REINFORCING SHALL BE CUT AND LAP SPLICED PER DETAILS FOR MAXIMUM 5'-0" GROUT LIFTS. MASONRY CORES CONTAINING VERTICAL REINFORCING SHALL BE GROUTED SOLID.
      3. THE CONTRACTOR SHALL PROVIDE HOLLOW BLOCK FILLED SOLID WITH GROUT DIRECTLY BELOW ALL CHANGES IN WALL THICKNESS.
      4. THE CONTRACTOR SHALL PROVIDE A 1 INCH SOFT JOINT BETWEEN TOP OF NON-BEARING MASONRY WALLS AND THE UNDERSIDE OF THE STRUCTURAL FLOOR OR ROOF FRAMING ABOVE.
      5. CONTROL JOINTS SHALL BE PLACED IN THE MASONRY WALL TO FORM PANELS WITH A LENGTH TO HEIGHT RATIO OF 2.5 OR LESS. THE MAXIMUM PANEL LENGTH SHALL NOT EXCEED 45 FEET. ADDITIONAL JOINTS SHALL BE PLACED WHERE ABRUPT CHANGES IN WALL OCCUR.
      6. CONTRACTOR IS RESPONSIBLE FOR BRACING AND SHORING OF ALL MASONRY WALLS AS REQUIRED UNTIL ROOF AND FLOOR SYSTEMS HAVE BEEN COMPLETELY INSTALLED.

   E. INSPECTIONS BY INDEPENDENT INSPECTION AGENCY:
      1. ALL MASONRY SHALL BE FIELD INSPECTED IN ACCORDANCE WITH IBC LEVEL 1 SPECIAL INSPECTIONS INCLUDING VERIFICATION OF THE MASONRY COMPRESSIVE STRENGTH, VERIFICATION OF GROUT COMPRESSIVE STRENGTH, COMPLIANCE OF ALL MATERIALS TO CONTRACT DOCUMENTS, THE CONDITION, SIZE, SPACING, AND PLACEMENT OF REINFORCEMENT, AND THE QUALITY AND PLACEMENT OF ALL JOINTS.

8. STRUCTURAL AND MISCELLANEOUS STEEL

   A. CODES AND STANDARDS:
      1. AISC "STEEL CONSTRUCTION MANUAL", 13TH EDITION.
      2. AISC 303 "CODE OF STANDARD PRACTICE FOR BUILDINGS AND BRIDGES"
      3. AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
      4. RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS"
      5. AWS D1.1 "STRUCTURAL WELDING CODE"
      6. AISC "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL"

   B. SUBMITTALS:
      1. SHOP DRAWINGS INDICATING THE SIZES, EXTENT, AND LOCATION OF ALL STRUCTURAL AND MISCELLANEOUS STEEL FRAMING INCLUDING ALL CONNECTIONS, FASTENERS, AND BEARINGS.

   C. MATERIALS:
      1. W-SHAPES: ASTM A 992
      2. CHANNELS, ANGLES, PLATES: ASTM A 36
      3. HOLLOW SECTIONS (HSS): ASTM A 500, GRADE "B"
      4. STEEL PIPE: ASTM A 53, TYPE E OR S, GRADE B
      5. PRIMER: FABRICATOR'S STANDARD LEAD AND CHROMATE FREE, NONASPHALTIC, RUST INHIBITING, COMPLY WITH MPI#79
      6. NON-METALLIC, SHRINKAGE RESISTANT GROUT: ASTM C 1107 WITH MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS
      7. GALVANIZE: HOT-DIP ZINC COATING, ASTM A 123

   D. CONNECTIONS:
      1. WELDED CONNECTIONS: E70XX ELECTRODES
      2. HIGH-STRENGTH BOLTS: ASTM A 325, TYPE 1, HEAVY-HEX STEEL STRUCTURAL BOLTS
      3. HIGH-STRENGTH BOLTS: ASTM A 490, TYPE 1, HEAVY-HEX STEEL STRUCTURAL BOLTS
      4. SHEAR CONNECTORS: ASTM A 108, GRADES 1015 THROUGH 1020, HEADED STUD TYPE
      5. UNHEADED ANCHOR RODS: ASTM F 1554, GRADE 36, HOOKED
      6. HEADED ANCHOR RODS: ASTM F 1554, GRADE 36, STRAIGHT, WITH ASTM A 563 HEAVY-HEX CARBON STEEL NUTS

   E. INSPECTIONS BY INDEPENDENT INSPECTION AGENCY:
      1. BOLTED CONNECTIONS: RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING A-325 OR A-490 BOLTS"
      2. WELDED CONNECTIONS: VISUAL INSPECTION, TESTING AND INSPECTION PER AWS D1.1
      3. VERIFY, WITH ERECTOR PRESENT, ELEVATIONS OF CONCRETE AND MASONRY BEARING SURFACES AND LOCATIONS OF ANCHOR BOLTS AND OTHER EMBEDDED ITEMS.

   F. INSTALLATION
      1. ALL CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE DOUBLE ANGLE OR SINGLE PLATE SHEAR CONNECTIONS DESIGNED AND DETAILED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION.
         a. MINIMUM EDGE DISTANCE: 1 1/2 INCHES
         b. BOLT SPACING: 3 INCHES
      2. BEAM CONNECTIONS SHALL USE NO LESS THAN TWO 3/4" DIAMETER ASTM A 325N OR A 490 HIGH STRENGTH BOLTS.
      3. ALL SHOP AND FIELD WELDS SHALL BE PERFORMED BY CERTIFIED WELDERS.
      4. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED UNLESS OTHERWISE INDICATED.
      5. THE CONTRACTOR SHALL NOT SPLICE OR CUT OPENINGS IN STEEL MEMBERS NOT SHOWN ON CONTRACT DRAWINGS WITHOUT THE PERMISSION OF THE STRUCTURAL ENGINEER.

9. STEEL DECKING

   A. REFER TO "STRUCTURAL STEEL" SECTION FOR APPLICABLE CODES AND STANDARDS. IN ADDITION, COMPLY WITH THE FOLLOWING:
      1. STEEL DECK INSTITUTE "STANDARD SPECIFICATIONS FOR FLOOR AND ROOF DECK"
      2. ANSI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS"

   B. SUBMITTALS:
      1. SHOP DRAWINGS INDICATING LAYOUT, MATERIAL PROPERTIES OR LOAD TABLES, ANCHORAGE DETAILS, PANS, AND DECK ACCESSORIES.
      2. PRODUCT DATA AND STRUCTURAL LOAD TABLES OF MECHANICAL FASTENERS, IF APPLICABLE.

   C. STEEL ROOF DECK SHALL BE 3" 22 GAGE TYPE N METAL DECK GRADE 33 (MINIMUM FY = 33 KSI) AS MANUFACTURED BY CANAM OR APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. ROOF DECK FABRICATION AND INSTALLATION MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, PIPES (INCLUDING FIRE PROTECTION), OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL DECK.

   D. ATTACH TYPE N METAL ROOF DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS, OR EQUIVALENT MECHANICAL FASTENER, (4 CONNECTIONS (MIN., UNO) PER 24" WIDE SHEET PER SUPPORT). FASTEN SIDE JOINTS TOGETHER WITH #10 SELF DRILLING SCREWS, OR WELD, AT 3'-0"ON-CENTER MAXIMUM BETWEEN SUPPORTS.

   E. USE WELDING WASHERS ON ALL CONNECTIONS OF STEEL DECK WITH METAL THICKNESS LESS THAN 22 GAGE TO STRUCTURAL STEEL SUPPORTS.

   F. FLOOR DECK SHALL BE: GALVANIZED 3" -20 GAGE LOK-FLOOR COMPOSITE METAL DECK AS SHOWN ON DRAWINGS AS MANUFACTURED BY CANAM OR APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. FLOOR DECK FABRICATION AND INSTALLATIONMUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL FLOOR DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.

   G. ATTACH LOK-FLOOR COMPOSITE METAL DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS, OR EQUIVALENT MECHANICAL FASTENER, (4 CONNECTIONS (MIN., UNO) PER 36" WIDE SHEET PER SUPPORT). FASTEN SIDE JOINTS WITH #10 SELF-DRILLING SCREW, OR WELD, AT 3'-0" ON-CENTER MAXIMUM BETWEEN SUPPORTS.

   H. NO CONDUIT SHALL BE PLACED WITHIN CONCRETE SLABS ON METAL DECK WITHOUT COMPLIANCE WITH THE LATEST VERSION OF THE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND OBTAIN WRITTEN APPROVAL PRIOR TO ANY INSTALLATION.

   I. INSTALLATION:
      1. REFER TO TYPICAL DETAILS FOR PERIMETER AND SIDE LAP CONNECTION REQUIREMENTS.
      2. WELDING WASHERS SHALL BE USED ON ALL METAL DECK WHICH IS 22 GA. OR LESS IN THICKNESS.
      3. ALL WELDS AND BURN AREAS SHALL BE CLEANED AND PAINTED WITH APPROVED PRIMER OR GALVANIZING REPAIR PAINT AS REQUIRED.
      4. THE CONTRACTOR SHALL PROVIDE SUPPORT FOR METAL DECK EDGES AT OPENINGS GREATER THAN 10 INCHES SQUARE. REFER TO TYPICAL DETAILS ON DRAWINGS FOR ADDITIONAL INFORMATION.
      5. THE CONTRACTOR SHALL PROVIDE ALL ACCESSORIES NECESSARY TO PROPERLY INSTALL THE METAL DECK.

10. CONCRETE SLABS ON STEEL FRAMED STRUCTURES

   A. REFER TO "CAST IN PLACE CONCRETE" SECTION AND "METAL DECK" SECTION FOR APPLICABLE CODES AND STANDARDS.

   B. CONCRETE MATERIALS:
      1. CONCRETE SUPPORTED BY STEEL FRAMING OR METAL DECK SHALL BE AS PER CONCRETE SECTION. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED.
   C. INSTALLATION:
      1. FRAMED CONCRETE SLABS SHALL BE PLACED IN STRIPS PERPENDICULAR TO THE STEEL SUPPORTING MEMBERS. THE CONTRACTOR SHALL SUBMIT FOR REVIEW A LOCATION DRAWING SHOWING ALL CONSTRUCTION JOINTS AND THE SEQUENCE OF POURS PRIOR TO PLACING ANY CONCRETE.
      2. REFER TO THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR THE SIZE AND LOCATION OF ALL SLAB OPENINGS NOT SHOWN.
      3. THE CONTRACTOR SHALL MAKE ALLOWANCES FOR ADDITIONAL CONCRETE REQUIRED DURING PLACEMENT DUE TO THE DEFLECTION OF THE SUPPORTING STEEL FRAMING. THE SLAB THICKNESS INDICATED IS THE MINIMUM REQUIRED.
      4. CONCRETE SLABS SHALL BE SCREEDED, FLOATED, AND STEEL TROWELED TO FORM A SMOOTH, DENSE, AND PLANE SURFACE WITH TOLERANCES OF F(F) 25 (FLOOR FLATNESS) AND f(L) 20 (FLOOR LEVELNESS) MEASURED ACCORDING TO ASTM E 1155.

11. STEEL STAIRS

   A. REFER TO "STRUCTURAL STEEL" SECTION FOR APPLICABLE CODES AND STANDARDS.
      1. REFER TO ARCHITECTURAL DRAWINGS FOR RISERS, TREADS, AND LANDING REQUIREMENTS.

   B. SUBMITTALS:
      1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER FOR ALL STEEL STAIRS.

   C. STRUCTURAL PERFORMANCE REQUIREMENTS:
      1. ALL STEEL STAIR FRAMING SHALL BE DESIGNED BY THE CONTRACTOR TO SUPPORT ALL DEAD LOADS PLUS A MINIMUM LIVE LOADING OF 100 PSF.
      2. WHERE STEEL FRAMING BEARS ON MASONRY WALLS, PROVIDE STEEL BEARING PLATES AS REQUIRED TO LIMIT THE BEARING STRESS TO A MAXIMUM OF 25 PERCENT OF THE SPECIFIED COMPRESSIVE STRENGTH OF MASONRY.

   D. INSTALLATION:
      1. THE CONTRACTOR SHALL PROVIDE ALL STEEL HANGERS, CLIP ANGLES ETC., AS REQUIRED TO SUPPORT THE STAIR FRAMING.

12. COLD FORMED METAL FRAMING

   A. CODES AND STANDARDS:
      1. AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" INCLUDING THE "STANDARD FOR COLD FORMED STEEL FRAMING".
      2. LIGHTGAGE METAL STUD DESIGNATION SHOWN ON STRUCTURAL DRAWINGS ASSUME MARINOWARE AS A DESIGN BASIS. MANUFACTURER MUST SUBMIT LITERATURE INDICATING THAT THE MEMBERS SUPPLIED PROVIDE EQUIVALENT STRENGTH AND STIFFNESS. MANUFACTURER AND/OR SUPPLIER TO PREPARE INFORMATION INDICATING CAPACITY OF MEMBERS, FRAMING DETAILS, CONNECTIONS, BRACING, BRIDGING AND ALL OTHER APPURTENANCES OF MEMBERS TO CONFORM TO LOAD CRITERIA AS DIRECTED BY CONTRACTOR/CONSTRUCTION MANAGER.

   B. SUBMITTALS:
      1. SHOP DRAWINGS INDICATING THE SIZE, LOCATION, AND CONNECTION DETAILS FOR ALL MEMBERS, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
      2. CALCULATIONS FOR ALL COLD FORMED MEMBERS AND COMPONENTS INCLUDING MEMBER SIZE, GAUGE, LOCATION, CONNECTION, AND LATERAL BRACING DETAILS, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER.

   C. MATERIALS:
      1. COLD FORMED METAL MEMBERS 16 GAUGE OR HEAVIER: ASTM A 446 WITH A MINIMUM YIELD STRENGTH OF 50 KSI.
      2. COLD FORMED METAL MEMBERS 18 GAUGE OR LIGHTER: ASTM A 446 WITH A MINIMUM YIELD STRENGTH OF 33 KSI.
      3. GALVANIZING OF ALL COLD FORMED MEMBERS SHALL MEET THE REQUIREMENTS OF ASTM A 525 WITH A MINIMUM G 60 COATING.

   D. INSTALLATION:
      1. WELDING OF COLD FORMED METAL MEMBERS SHALL BE COMPLETED IN ACCORDANCE WITH AWS D1.1 AND AWS D1.3.
      2. ALL COLD FORMED METAL MEMBERS SHALL BE SHEARED OR SAW CUT. CUTTING OF MEMBERS WITH A TORCH IS NOT PERMITTED.
      3. SPLICES IN COLD FORMED METAL MEMBERS ARE NOT PERMITTED UNLESS DETAILED ON THE CONTRACT DRAWINGS.

REVISIONS

No.	Date	Description
1	7/1/2022	ISSUED FOR PERMIT

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DRAWING TITLE:

GENERAL NOTES

POUGHKEEPSIE NY STORAGE

DIAMOND POINT DEVELOPMENT

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STATE OF NEW YORK ★ ERIC SCOTT KOHL ★ LICENSED PROFESSIONAL ENGINEER 085123-1
07/01/2022

FILE No.: **28220745**

DATE: **07/01/2022**

SCALE: **AS NOTED**

DRAWN BY: **CTK**

DRAWING No.: **S-001**

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