

1) GENERAL INFORMATION	2) SLABS-ON-GRADE:.....4,000 PSI 3) ALL OTHER STRUCTURAL CONCRETE, U.N.O.:.....4,000 PSI	7) FOUNDATION NOTES	5) VAPOR RETARDER: A 15 MIL VAPOR RETARDER SHALL BE PLACED IMMEDIATELY BELOW THE CONCRETE SLAB. VAPOR RETARDER SHALL BE SEALED AT ALL LAPS AND SEALED TO PREVIOUSLY PLACED CONCRETE AS RECOMMENDED BY VAPOR RETARDER MANUFACTURER. BEFORE PLACING CONCRETE, PATCH AND SEAL ANY RIPS, TEARS OR HOLES IN VAPOR RETARDER INCURRED DURING CONSTRUCTION.
A. GOVERNING BUILDING CODE: IBC-2018 "INTERNATIONAL BUILDING CODE".	B. CONCRETE REINFORCEMENT (MINIMUM YIELD STRENGTH) 1) ALL PLAIN AND DEFORMED BARS (ASTM A615, GRADE 60).....FY = 60 KSI 2) WELDABLE REINFORCING BARS (ASTM A706)FY = 60 KSI	A. GEOTECHNICAL REPORT: A PREVIOUSLY SUBMITTED GEOTECHNICAL ENGINEERING SERVICES REPORT AND IBC-2015 PRESUMPTIVE SOIL INFORMATION HAS BEEN UTILIZED FOR THE NEW OFFICE ADDITION AT SOUTHGATE ELEMENTARY SCHOOL, IN MOORE, OKLAHOMA. THE GEOTECHNICAL REPORT WAS PERFORMED BY TERRACON CONSULTANTS, INC. (TERRACON), DATED SEPTEMBER 9, 2015 (TERRACON PROJECT NO. 03155149).	6) MOIST CURING OF SLAB: SLABS-ON-GRADE SHALL BE WATER CURED FOR A MINIMUM OF 7 DAYS BY PONDING, SPRAYING, SPRINKLING OR BY USE OF SATURATED COVERINGS. CURING COMPOUNDS ARE EXPRESSLY PROHIBITED.
B. BUILDING RISK CATEGORY: THE BUILDING RISK CATEGORY ACCORDING TO IBC-2018 TABLE 1604.5 AND ASCE 7-16 TABLE 1.5-1 IS CATEGORY II.	C. STRUCTURAL STEEL (MINIMUM YIELD STRENGTH) 1) ALL WIDE FLANGE SHAPES (ASTM A992).....FY = 50 KSI 2) SQUARE AND RECTANGULAR HSS (ASTM A500, GRADE C).....FY = 50 KSI 3) ANCHOR RODS (ASTM F1554, GRADE 55, SUPPLEMENTARY REQUIREMENT S1, WELDABLE).....FY = 55 KSI 4) ALL OTHER SHAPES AND PLATES UNLESS NOTED (ASTM A36).....FY = 36 KSI (FABRICATOR MAY OPTIONALLY USE ASTM A572-50 PLATE MATERIAL)	B. SITE SUB-GRADE PREPARATION: 1) STRIPPING: VEGETATION, CONCRETE, DELETERIOUS MATERIALS, AND SOFT AND LOOSE SOIL IN THE CONSTRUCTION AREAS, SHALL BE STRIPPED FROM THE SITE. THE DEPTH OF REMOVAL SHALL BE DETERMINED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. UTILITIES SHALL BE LOCATED AND REDROUT AS NECESSARY. 2) PROOF-ROLLING: AFTER STRIPPING AND MAKING ANY REQUIRED CUTS, BUT BEFORE PLACING FILL, THE CONSTRUCTION AREA SHALL BE PROOF-ROLLED WITH A TANDUM AXLE DUMP TRUCK WEIGHING AT LEAST 9 TONS/AXLE. THE PROOFROLLING SHOULD INVOLVE OVERLAPPING PASSES IN MUTUALLY PERPENDICULAR DIRECTIONS AND SOILS WHICH ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD SHALL BE UNDERCUT AND RECOMPACTED IN PLACE OR REPLACED WITH PROPERLY COMPACTED ENGINEERED FILL. THE RECOMPACTED SOIL OR STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED DURING PLACEMENT. THE PROOF-ROLLING AND UNDERCUTTING ACTIVITIES SHALL BE WITNESSED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER AND SHALL BE PERFORMED DURING A PERIOD OF DRY WEATHER. 3) SCARIFICATION: AFTER STRIPPING, MAKING ANY REQUIRED CUTS AND PROOF ROLLING, BUT BEFORE FILL PLACEMENT, THE EXPOSED SOILS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES AND THEN PROCESSED AT A MOISTURE CONTENT AT OR ABOVE ITS OPTIMUM VALUE AS DETERMINED BY THE STANDARD PROCTOR TEST. THE SUBGRADE SOILS SHALL BE RECOMPACTED TO AT LEAST 95 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST METHOD (ASTM D-698). 4) ACCEPTABLE FILL: STRUCTURAL FILL MATERIALS SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, HAVE A MAXIMUM PARTICLE SIZE OF 3 INCHES, HAVE A LIQUID LIMIT NOT MORE THAN 35, A PLASTICITY INDEX IN THE RANGE OF 5 AND 18 AND FINE MATERIAL PASSING THE NO. 200 SEIVE NOT LESS THAN 60%. 5) FILL PLACEMENT: FILL SHALL BE PLACED IN MAXIMUM LIFTS OF 8 INCHES OF LOOSE MATERIAL AND SHALL BE COMPACTED WITHIN THE RANGE OF 2 PERCENTAGE POINTS BELOW AND 3 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE TESTED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. THE EDGES OF COMPACTED FILL SHALL EXTEND 5 FEET LATERALLY BEYOND THE BUILDING FOOTPRINT PRIOR TO SLOPING ON AS FLAT A GRADIENT AS PRACTICAL. STRUCTURAL FILL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. 6) DEPTH OF FILL: THE FLOOR SLAB SHALL BE GRADE SUPPORTED ON 2'-0" OF PROPERLY COMPACTED STRUCTURAL FILL. THE SHALLOW FOUNDATIONS SHALL BEAR ON 2'-0" OF PROPERLY COMPACTED STRUCTURAL FILL. 7) FILL PLACEMENT TESTING: EACH LIFT OF COMPACTED FILL SHALL BE TESTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. FIELD DENSITY TESTS SHALL BE TAKEN AT A MINIMUM OF ONE PER EVERY 2500 SF, BUT AT LEAST THREE SETS OF DENSITY TESTS SHALL BE TAKEN FOR EACH LIFT. 8) SITE DRAINAGE: GRADING OF THE SITE AROUND THE STRUCTURE'S PADS SHALL BE ACCOMPLISHED TO ENABLE POSITIVE DRAINAGE AWAY FROM THE PADS BY PROVIDING AN ADEQUATE GRADIENT. THE SURFACE GRADIENT PROVIDED WILL BE DEPENDENT ON THE LANDSCAPING TYPE AND VEGETATION. WATER INFILTRATION AND SEEPAGE INTO THE FOUNDATION SHALL BE REDUCED AS MUCH AS POSSIBLE. IF IT IS POSSIBLE FOR WATER TO COLLECT BENEATH THE FOUNDATION AND FOUNDATION AREAS, IT WILL BE NECESSARY TO USE INTERCEPTOR DRAINS TO REMOVE THE COLLECTED WATER. 9) MAINTENANCE OF SOIL MOISTURE: SOIL MOISTURE SHALL BE MAINTAINED UP UNTIL CONCRETE PLACEMENT TO PREVENT SHRINKAGE AND SUBSEQUENT POST-CONSTRUCTION SWELL OF SUBGRADE SOILS.	7) ISOLATION JOINTS: PROVIDE SLAB ISOLATION AROUND COLUMNS PENETRATING THE SLAB-ON-GRADE. PROVIDE 1/2 INCH PREMOLED EXPANSION JOINT MATERIAL AROUND PERIMETER OF ISOLATION JOINTS. REFER TO TYPICAL DETAILS AND ADDITIONAL INFORMATION. 8) SLAB JOINTS: SLAB JOINTS SHALL BE PROVIDED AS SHOWN ON THE PLANS AND TYPICAL DETAILS. THE FOLLOWING JOINT TYPES ARE SHOWN ON THE DRAWINGS: A) CJ = CONSTRUCTION JOINT B) SJ = SAWED CONTRACTION JOINT
D. CONTRACT DOCUMENTS: 1) THE CONTRACT DOCUMENTS CONSIST OF THE AGREEMENT BETWEEN THE OWNER AND CONTRACTOR, CONDITIONS OF THE CONTRACT, DRAWINGS, SPECIFICATIONS, ADDENDA ISSUED PRIOR TO EXECUTION OF THE CONTRACT, OTHER DOCUMENTS LISTED IN THE AGREEMENT AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. 2) THE GENERAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND DISSEMINATING ALL CONTRACT DOCUMENTS AND LATEST ADDENDA TO ALL SUB-CONTRACTORS PRIOR TO DETAILING, FABRICATION, OR INSTALLATION OF WORK. 3) CORRELATION OF THE CONTRACT DOCUMENTS: THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IF CONFLICTING REQUIREMENTS ARE FOUND BETWEEN THE DRAWINGS, SPECIFICATIONS AND/OR THESE GENERAL NOTES, THE MORE STRINGENT AND HIGHEST COST REQUIREMENT SHALL CONTROL UNLESS DIRECTED OTHERWISE IN WRITING BY THE OWNER'S REPRESENTATIVE. 4) THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DISCREPANCIES BETWEEN EACH SET, AND WITHIN EACH SET OF DRAWINGS, AND REPORT DISCREPANCIES, IF ANY, TO THE OWNER'S REPRESENTATIVE PRIOR TO THE DETAILING, FABRICATION, AND INSTALLATION OF AFFECTED WORK. 5) GENERAL CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF OPENINGS THROUGH FLOORS, ROOF, AND WALLS SHOWN ON ELECTRICAL, PLUMBING, AND FIRE SUPPRESSION SYSTEM DESIGN DOCUMENTS WITH ASSOCIATED SUBCONTRACTORS. 6) ALTHOUGH NOT NECESSARILY SPECIFICALLY REFERENCED IN THE CONTRACT DOCUMENTS, TYPICAL DETAILS AND GENERAL NOTES APPLY TO THE ENTIRE PROJECT WHEREVER CONDITIONS SIMILAR TO THOSE DETAILED OR NOTED EXIST. 7) THE USE OF ELECTRONIC FILES OR REPRODUCTION OF CONTRACT DOCUMENTS BY ANY TRADE OR MATERIAL SUPPLIER IN LIEU OF COMPLETELY INDEPENDENT PREPARATION OF SHOP DRAWINGS SIGNIFIES THE SUPPLIER'S CERTIFICATION THAT ALL INFORMATION SHOWN IN THE SHOP DRAWINGS IS CORRECT, AND ASSIGNS THEMSELVES TO RESPONSIBILITY FOR ANY JOB EXPENSE ARISING DUE TO ANY ERRORS OCCURRING THEREIN.	4) CONSTRUCTION LOADS AND STABILITY A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL TEMPORARY CONSTRUCTION LOADS CAN BE SAFELY SUPPORTED BY THE STRUCTURE DURING CONSTRUCTION. B. THE STRUCTURAL FRAMING SYSTEM AND FOUNDATIONS HAVE BEEN DESIGNED AS A COMPLETE STRUCTURAL SYSTEM FOR SUPPORT OF THE LOADS INDICATED IN THE CONSTRUCTION DOCUMENTS. THE STRUCTURE HAS NOT BEEN DESIGNED OR CHECKED FOR TEMPORARY CONSTRUCTION LOADS NOR HAS IT BEEN DESIGNED OR CHECKED FOR ADEQUACY OR STABILITY AS A PARTIALLY ERRECTED STRUCTURE. C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE ABILITY OF THE PARTIALLY COMPLETED OR FULLY COMPLETED STRUCTURE TO RESIST ALL CONSTRUCTION LOADS INCLUDING BUT ARE NOT NECESSARILY LIMITED TO MATERIAL STAGING, PERSONNEL, AND EQUIPMENT. D. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORES, GUYS, BRACES, AND OTHER SUPPORTS DURING CONSTRUCTION TO KEEP STRUCTURAL FRAMING COMPONENTS SECURE, PLUMB, AND IN ALIGNMENT AGAINST TEMPORARY CONSTRUCTION LOADS AND LOADS EQUAL IN INTENSITY TO DESIGN LOADS. THE TEMPORARY SUPPORTS SHALL BE SUFFICIENT TO SECURE THE PARTIALLY ERRECTED STRUCTURE OR ANY PORTION THEREOF AGAINST LOADS THAT ARE LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE DUE TO WIND AND THOSE THAT RESULT FROM CONSTRUCTION OPERATIONS. E. THE CONTRACTOR SHALL NOT REMOVE TEMPORARY SUPPORTS UNTIL THE INSTALLATION OF ALL STRUCTURAL ELEMENTS IS COMPLETE AND HAS BEEN ACCEPTED AS COMPLETE BY THE ENGINEER. FOR THE PURPOSES OF THIS PARAGRAPH, "ALL STRUCTURAL ELEMENTS" INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING STRUCTURAL ELEMENTS: 1) FOUNDATIONS 2) STRUCTURAL STEEL FRAMING WITH COMPLETED STEEL CONNECTIONS, INCLUDING PERMANENT VERTICAL AND/OR HORIZONTAL BRACING 3) ROOF DECK	F. FOUNDATION MISCELLANEOUS 1) GROUNDWATER CONDITIONS: GROUNDWATER WAS ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING. HOWEVER, IT IS POSSIBLE THAT TRANSIENT OVER-SATURATED GROUND CONDITIONS COULD DEVELOP AT SHALLOW DEPTHS AT A LATER TIME DUE TO PERIODS OF HEAVY PRECIPITATION, LANDSCAPE WATERING, LEAKING WATER LINES, OR OTHER UNFORESEEN CAUSES. THE CONTRACTOR SHALL DETERMINE THE ACTUAL GROUNDWATER LEVELS AT TIME OF CONSTRUCTION. IF GROUNDWATER ISSUES ARE ENCOUNTERED DURING CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED. 2) DRAINAGE CONSIDERATIONS DURING CONSTRUCTION: DUE TO ADVERSE EFFECT ON STRUCTURE, FILL SHALL NOT BE ALLOWED TO COLLECT IN THE FOUNDATION EXCAVATION OR ON PREPARED SUBGRADE OF THE CONSTRUCTION AREA EITHER DURING OR AFTER CONSTRUCTION. UNDERCUT OR EXCAVATED AREAS SHALL BE SLOPED TOWARD ONE CORNER TO FACILITATE REMOVAL OF ANY COLLECTED RAINWATER, OR POSITIVE RUNOFF SHALL BE PROVIDED. THE CONTRACTOR SHALL EXERCISE CARE IN CREATING DRAINAGE PATHS FOR WATER DURING THE CONSTRUCTION PHASE OF THE PROJECT. TO REDUCE INFILTRATION OF SURFACE WATER AROUND THE PERIMETER OF THE BUILDING AND BENEATH THE FLOOR SLABS, POSITIVE DRAINAGE SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION. 3) FINAL SITE GRADING: PER SECTION 1804.4 OF IBC-2015, THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET PERPENDICULAR TO THE PERIMETER OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET OF HORIZONTAL DISTANCE, A 5-PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF 2-PERCENT WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING SHALL BE SLOPED A MINIMUM OF 2-PERCENT AWAY FROM THE BUILDING. 4) EXCAVATION AND TEMPORARY SLOPES: THE CONTRACTOR, DESIGNATED AS "RESPONSIBLE PERSON" IN OSHA CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, IS SOLELY RESPONSIBLE FOR PLANNING AND IMPLEMENTING ALL SAFETY PROCEDURES. ALL EXCAVATION HEIGHT, SLOPE, AND DEPTH MUST ADHERE TO ALL SPECIFICATIONS OUTLINED IN LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. THE STRUCTURAL ENGINEER DOES NOT ASSUME ANY RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY OR ANY PARTY'S, INCLUDING THE CONTRACTOR'S, COMPLIANCE WITH THE APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS OR ANY OTHER APPLICABLE REGULATIONS. 5) TRENCH BACKFILL: ALL REQUIRED TRENCH BACKFILL SHALL BE ACCEPTABLE FILL MATERIAL AS DEFINED ABOVE AND SHALL BE MECHANICALLY COMPACTED IN LAYERS TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. SOME SETTLEMENT OF THE BACKFILL MAY BE EXPECTED AND ANY UTILITIES WITHIN THE TRENCHES SHALL BE CONSTRUCTED TO ALLOW THESE DIFFERENTIAL MOVEMENTS. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 6) CONSTRUCTION MONITORING: A GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATIONS AND TESTING OF SOILS EXPOSED DURING PROJECT CONSTRUCTION IN ORDER TO VERIFY THAT SOIL CONDITIONS ARE AS ANTICIPATED. CONSTRUCTION ACTIVITIES PERTAINING TO EARTHWORK AND OTHER RELATED ACTIVITIES SHALL ALSO BE OBSERVED BY THE GEOTECHNICAL ENGINEER AS OUTLINED ABOVE.	6) CONCRETE MIXTURES: 1) CEMENTITIOUS MATERIALS A) OPTION 1 - ORDINARY PORTLAND CEMENT (OPC): ASTM C150 TYPE I OR II UNLESS SPECIFICALLY NOTED OTHERWISE. B) OPTION 2 - PORTLAND LESTONE CEMENT (PLC): ASTM C595 TYPE II UNLESS SPECIFICALLY NOTED OTHERWISE. C) FLY ASH: ASTM C618 CLASS C OR F. THE MAXIMUM PERCENTAGE OF FLY ASH SHALL NOT EXCEED 25 PERCENT OF THE TOTAL CEMENTITIOUS MATERIAL. 2) ALL CONCRETE MIXES SHALL BE COMPRISED OF NORMAL WEIGHT AGGREGATES CONFORMING TO ASTM C33, EXCEPT WHERE SPECIFICALLY INDICATED AS LIGHTWEIGHT, IN WHICH CASE AGGREGATES SHALL CONFORM TO ASTM C330. 3) MIXING WATER SHALL CONFORM TO ASTM C1062. MIXING WATER, INCLUDING THAT PORTION OF MIXING WATER CONTRIBUTED IN THE FORM OF FREE MOISTURE ON AGGREGATES, SHALL NOT CONTAIN DELETERIOUS AMOUNTS OF CHLORIDE IONS. 4) ADMIXTURES, IF USED, SHALL CONFORM TO THE FOLLOWING: A) WATER REDUCTION AND SETTING TIME MODIFICATION: ASTM C494. B) PRODUCING FLOWING CONCRETE: ASTM C1017. C) AIR ENTRAINMENT: ASTM C260. D) INHIBITTING CORROSION INDUCED CORROSION: ASTM C1582. E) MOISTURE VAPOR REDUCING ADMIXTURE, MVRA: ASTM C494. 5) MIX DESIGNS SHALL BE PROPORTIONED BASED ON THE FOLLOWING MIX CHARACTERISTICS: A) FOUNDATIONS 1) FREEZING AND THAWING EXPOSURE CATEGORY (F): CLASS F1 2) SULFATE EXPOSURE CATEGORY (S): CLASS S0 3) WATER EXPOSURE CATEGORY (W): CLASS W0 4) CORROSION PROTECTION CATEGORY (C): CLASS C1 5) 28-DAY COMPRESSIVE STRENGTH: 3,500 PSI 6) MAXIMUM WATER/CEMENT RATIO: 0.55 7) MAXIMUM AGGREGATE SIZE: 1 1/2 INCHES 8) TARGET AIR CONTENT: 4.5 PERCENT PLUS OR MINUS 1.5 PERCENT 9) MAXIMUM WATER-SOLUBLE CHLORIDE ION CONTENT IN CONCRETE, PERCENT BY WEIGHT OF CEMENTITIOUS MATERIALS: 0.30
2) DESIGN LOADS	A. GOVERNING STANDARD FOR DESIGN LOADS: ASCE 7-16 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" B. DEAD LOAD: SELF WEIGHT OF MATERIALS, UNLESS NOTED OTHERWISE C. ROOF DEAD LOAD: 1) BUILT-UP ROOFING SYSTEM.....6 PSF 2) RIGID INSULATION.....2 PSF 3) METAL ROOF DECK.....3 PSF 4) JOIST SELF-WEIGHT.....2 PSF 5) CEILING SYSTEM.....2 PSF 6) ROOF COLLATERAL (MEP & MISC. FRAMING).....5 PSF 7) TOTAL.....20 PSF D. UNIFORM LIVE LOADS: 1) ROOF LIVE LOAD (REDUCIBLE).....20 PSF 2) SLAB-ON-GRADE.....250 PSF E. CONCENTRATED LIVE LOADS: 1) ALL FLOORS (ON AN AREA 2.5 FT. X 2.5 FT.).....2,000 LBS 2) ROOFS (ON AN AREA 2.5 FT. X 2.5 FT.).....300 LBS F. WIND LOADS: 1) RISK CATEGORY:II 2) EXPOSURE CATEGORY:C 3) ENCLOSURE CLASSIFICATION:ENCLOSED 4) INTERNAL PRESSURE COEFFICIENT, GPF:.....-0.18 5) TOPOGRAPHIC FACTOR, KZT:.....1.0 6) DIRECTIONALITY FACTOR, KD:.....0.85 7) ULTIMATE DESIGN WIND SPEED, Vu1t:.....109 MPH 8) NOMINAL DESIGN WIND SPEED, Vsd:.....90 MPH G. SNOW LOADS: 1) SNOW IMPORTANCE FACTOR, Is:.....1.0 2) GROUND SNOW LOAD, Pg:.....10 PSF 3) EXPOSURE OF ROOF:PARTIALLY EXPOSED 4) SURFACE ROUGHNESS CATEGORY:C 5) EXPOSURE FACTOR, Ce:.....1.0 6) THERMAL FACTOR, Ct:.....1.0 7) ROOF SLOPE FACTOR, Cs:.....1.0 8) CALCULATED FLAT ROOF SNOW LOAD, Pf:.....7.0 PSF 9) MINIMUM FLAT ROOF SNOW LOAD, I*Pg:.....10 PSF 10) RAIN ON SNOW SURCHARGE LOAD:.....5 PSF H. RAIN LOADS: 1) 15-MINUTE RAIN INTENSITY.....8.72 INCHES/HOUR 2) 60-MINUTE RAIN INTENSITY.....4.44 INCHES/HOUR 3) DEPTH OF WATER ON THE UNDEFLECTED ROOF UP TO THE INLET OF THE SECONDARY DRAINAGE SYSTEM WHEN THE PRIMARY DRAINAGE SYSTEM IS BLOCKED (I.E., THE STATIC HEAD), ds.....4.0 INCHES 4) ADDITIONAL DEPTH OF WATER ON THE UNDEFLECTED ROOF ABOVE THE INLET OF THE SECONDARY DRAINAGE SYSTEM AT ITS DESIGN FLOW (I.E., THE HYDRAULIC HEAD), dh.....2.0 INCHES I. SEISMIC DESIGN CRITERIA: 1) RISK CATEGORY:II 2) SEISMIC IMPORTANCE FACTOR, Is:.....1.00 3) SOIL SITE CLASSIFICATION:.....C 4) 0.2 SEC. MAPPED SPECTRAL ACCELERATION, Ss:.....0.332 5) 1.0 SEC. MAPPED SPECTRAL ACCELERATION, S1:.....0.084 6) SITE COEFFICIENT, 0.2 SEC. PERIOD, Fa:.....1.30 7) SITE COEFFICIENT, 1.0 SEC. PERIOD, Fv:.....1.50 8) 0.2 SEC. DESIGN SPECTRAL ACCELERATION, Sds:.....0.288 9) 1.0 SEC. DESIGN SPECTRAL ACCELERATION, Sd1:.....0.084 10) SEISMIC DESIGN CATEGORY:.....B 11) SEISMIC PARAMETERS FOR BUILDING: A) SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DESIGNED FOR SEISMIC RESISTANCE B) SLAB-ON-GRADE DESIGNED AS A STRUCTURAL DIAPHRAGM.....NO C) RESPONSE MODIFICATION COEFFICIENT, R:.....3.00 D) SYSTEM OVERSTRENGTH FACTOR, O:.....2.50 E) DEFLECTION AMPLIFICATION FACTOR, Cd:.....3.00 F) ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE METHOD. G) SEISMIC RESPONSE COEFFICIENT, Cs:.....0.092 H) TOTAL LATERAL BASE SHEAR, V:.....10 KIPS	5) EXISTING CONSTRUCTION A. ALL VERTICAL AND HORIZONTAL DIMENSIONS, FINISHED FLOOR AND ROOF ELEVATIONS, PLUMBNESS, AND DETAILS FOR THE EXISTING STRUCTURE SHALL BE VERIFIED IN THE FIELD PRIOR TO PROCEEDING WITH ANY DEMOLITION OR INSTALLATION OF NEW WORK. B. PRIOR TO DEMOLITION OR INSTALLATION OF NEW WORK, THE CONTRACTOR SHALL MAKE WRITTEN DOCUMENTATION IF UNFORESEEN CONDITIONS OCCUR IN THE EXISTING CONSTRUCTION. THESE UNFORESEEN CONDITIONS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND A WRITTEN RESPONSE BEFORE PROCEEDING WITH THE WORK. C. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL SHORING, PROPS, AND GUYS REQUIRED FOR THE TEMPORARY SUPPORT OF THE EXISTING STRUCTURE, UTILITIES, ETC. AS MAY BE NECESSARY TO SAFELY COMPLETE DEMOLITION OR NEW WORK. D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES, BOTH CHARTED AND UNCHARTED BEFORE COMMENCING WITH ANY EXCAVATION OR DEMOLITION WORK. DEPTH OF CONCRETE SAW SHALL BE SET SO AS NOT TO CUT ANY LOCAL EMBEDDED OR UNDER-FLOOR PIPING OR WIRING WHICH IS TO REMAIN. E. ALL DRILLING, CUTTING, DEMOLITION OR OTHER MODIFICATIONS TO EXISTING CONSTRUCTION SHALL BE PERFORMED IN A MANNER THAT WILL NOT REDUCE THE STABILITY OR STRUCTURAL INTEGRITY OF THE EXISTING CONSTRUCTION. WHEN SAW CUTTING, SPECIAL CARE SHALL BE TAKEN TO NOT OVER CUT INTO AN EXISTING AREA OF STRUCTURE THAT WILL REMAIN. F. CORING FOR PIPING OR CONDUIT THROUGH EXISTING STRUCTURAL MEMBERS IS NOT ALLOWED UNLESS SPECIFICALLY SHOWN IN THE CONTRACT DOCUMENTS OR SPECIFICALLY ALLOWED BY THE STRUCTURAL ENGINEER IN WRITING. G. DAMAGE TO PORTIONS OF THE EXISTING STRUCTURE OR OTHER EXISTING BUILDING COMPONENTS CAUSED BY DEMOLITION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE AND TO A LEVEL ACCEPTABLE TO THE OWNER'S REPRESENTATIVE. H. WHEN EXISTING FOUNDATIONS ARE TO BE DEMOLISHED, EXCAVATION DEPTHS EXCEEDING 4 FEET SHALL BE BACKFILLED WITH PROPERLY COMPACTED CRUSHED STONE OR FLOWABLE FILL TO WITHIN 4 FEET OF THE REQUIRED FINISHED BACKFILL ELEVATION. THE REMAINING DEPTH OF BACKFILL SHALL BE COMPLETED WITH PROPERLY COMPACTED STRUCTURAL FILL AS OUTLINED IN THE FOUNDATION NOTES. I. THE PROJECT AREA SHALL BE MAINTAINED AS CLEAN AS POSSIBLE WITH DUST BEING LIMITED AS MUCH AS PRACTICAL.	A. SHALLOW FOUNDATIONS: 1) FOOTING DESIGN PARAMETERS: THE PROPOSED BUILDING SHALL BE SUPPORTED ON CONVENTIONAL SHALLOW FOUNDATIONS BASED ON THE FOLLOWING DESIGN PARAMETERS: A) BEARING MATERIAL: 2'-0" OF PROPERLY COMPACTED STRUCTURAL FILL AS OUTLINED ABOVE. B) ALLOWABLE BEARING PRESSURE: 1,500 PSF 2) OBSERVATION OF BEARING CONDITIONS: A GEOTECHNICAL ENGINEER SHALL OBSERVE THE FOUNDATION EXCAVATIONS PRIOR TO STEEL OR CONCRETE PLACEMENT TO DETERMINE IF THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED ABOVE. 3) IMPROVEMENT OF BEARING CONDITIONS: SOFT OR LOOSE SOIL ZONES ENCOUTNRD AT THE BOTTOM OF THE FOOTING EXCAVATIONS SHALL BE REMOVED TO THE LEVEL OF STIFF OR DENSE SOIL AS DIRECTED BY THE GEOTECHNICAL ENGINEER. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHALL BE BACKFILLED WITH ENGINEERED FILL, LEAN CONCRETE OR FLOWABLE FILL, AS DETERMINED BY THE GEOTECHNICAL ENGINEER. CARE SHALL BE TAKEN TO PREVENT WETTING OR DRYING OF THE BEARING MATERIALS DURING CONSTRUCTION. ANY EXTREMELY WET OR DRY MATERIAL, OR ANY LOOSE OR DISTURBED MATERIAL IN THE BOTTOM OF THE FOOTING EXCAVATIONS SHALL BE REMOVED PRIOR TO PLACING CONCRETE. 4) TRENCHED FOOTINGS: EARTH-FORMED TRENCHED FOOTINGS ARE PERMITTED, EXCEPT WHERE BRICK LEDGES OR EXPOSED SURFACES REQUIRE FORMING AND/OR WHERE SOIL SIDE WALLS SLOUGH INTO THE TRENCH. IN ORDER TO ACHIEVE 3" MINIMUM CONCRETE COVER OVER STEEL REINFORCING ON SIDEWALLS, EARTH FORMED TRENCHES SHALL BE A MINIMUM OF 2" WIDER THAT THE FORMED DIMENSIONS SHOWN IN ALL SECTIONS AND DETAILS. 5) PIPE PENETRATIONS: ALL HORIZONTAL PIPE OR SIMILAR PENETRATIONS OR SLEEVES THROUGH FOOTINGS SHALL OCCUR WITHIN THE MIDDLE 1/3 OF THE FOOTING DEPTH. AT PENETRATIONS, PROVIDE (4) #5 DIAGONAL BARS AT EACH FOOTING FACE (3" CLEAR BETWEEN BAR AND PENETRATION AND 3" CLEAR FROM FOOTING BEARING). IF PENETRATION OCCURS NEAR THE BOTTOM OF THE FOOTING, REFER TYPICAL DETAILS FOR STANDARD DETAIL TO TRANSITION AND THICKEN FOOTING TO ACCOMMODATE PENETRATION. E. SLAB-ON-GRADE CONSTRUCTION 1) SLAB THICKNESS AND REINFORCING: SLABS-ON-GRADE SHALL BE 4" THICK CONCRETE REINFORCED WITH #3 BARS AT 15" ON CENTER EACH WAY. REINFORCING BARS SHALL BE PLACED 1X" CLEAR FROM TOP OF SLAB USING CHAIRS OR SLAB BOLSTERS COMPLYING WITH CRSI'S "MANUAL OF STANDARD PRACTICE". 2) SLAB SUBGRADE: THE FLOOR SLAB SHALL BE GRADE-SUPPORTED AS OUTLINED IN THE SITE SUB-GRADE PREPARATION NOTES SHOWN ABOVE. 3) CONSTRUCTION MONITORING: CONSTRUCTION ACTIVITY MAY CAUSE DAMAGE AND DETEIORATION TO THE PREPARED SUBGRADE. A FIELD REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE FINAL SUBGRADE PRIOR TO PLACEMENT OF THE SLAB ON GRADE, PERFORM FURTHER TESTING AS NECESSARY, AND DETERMINE IF ANY REMEDIAL MEASURES ARE NECESSARY PRIOR TO SLAB PLACEMENT. 4) AGGREGATE BASE COURSE: A 4-INCH THICK, FREE-DRAINING AGGREGATE BASE COURSE SHALL BE PLACED BENEATH THE FLOOR SLAB TO ENHANCE DRAINAGE AND PROVIDE INCREASED SUBGRADE STRENGTH. AT THE TIME OF THE SLAB PLACEMENT, THE AGGREGATE BASE SHALL BE MOIST, BUT FREE OF ANY STANDING OR SELF-DRAINING WATER. THE AGGREGATE BASE COURSE MATERIAL SHALL MEET THE OKLAHOMA DEPARTMENT OF TRANSPORTATIONS STANDARD SPECIFICATION 701.3 TYPE "A" CRITERIA.
3) MATERIAL DESIGN VALUES	A. CONCRETE (MIN. COMPRESSIVE STRENGTH AT 28 DAYS, NORMAL WEIGHT U.N.O.) 1) FOUNDATIONS:.....3,500 PSI		



CC
drawn by
BB
checked by
APRIL 2026
date
revisions

