STRUCTURAL NOTES

CONTRACTOR NOTE:

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. O'DONNELL, NACCARATO, MIGNOGNA & JACKSON, INC. IS NOT RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION OR FOR RELATED SAFETY PRECAUTIONS AND PROGRAMS.

010 CODES AND STANDARDS

1. WIND LOADS AS PER:
   - A. SECTION 1609 OF THE FLORIDA BUILDING CODE 7TH EDITION (2020) WITH AN ULTIMATE WIND SPEED VULT = 190 MPH (NOMINAL WIND SPEED VASD = 147 MPH), FOR RISK CATEGORY IV, EXPOSURE C AND INTERNAL PRESSURE COEFFICIENT +/- 0.18.
   - B. THIS BUILDING IS DESIGNED AS AN ENCLOSED BUILDING.

2. DESIGN LOADS:
   - A. LIVE LOADS – COMMERCIAL:
     - 1.1 ROOF 20 PSF
     - 1.2 CORRIDORS ABOVE 1ST FLOOR 80 PSF
     - 1.3 LOBBY 100 PSF
     - 1.4 STAIRS AND EXITS 100 PSF
     - 1.5 ASSEMBLY 100 PSF
     - 1.6 LIGHT STORAGE 125 PSF
     - 1.7 OFFICE 50 PSF
     - PARTITION LOAD 15 PSF (IN ADDITION TO OFFICE LOAD)
     - 1.8 SERVER ROOM 125 PSF
     - 1.9 MECHANICAL ROOM 125 PSF
     - 2.0 ROOF TRUSSES
       - A. TOP CHORD LL = 20 PSF
       - B. BOTTOM CHORD LL = 10 PSF
   - B. ROOF SUPERIMPOSED DEAD LOADS:
     - 2.1 MEP / MISC 5 PSF
     - 2.2 ARCH'L FINISHES 10 PSF
     - 2.3 CEILING / ROOFING 15 PSF
     - 2.4 ROOF TRUSSES
       - A. TOP CHORD SDL = 15 PSF
       - B. BOTTOM CHORD SDL = 10 PSF
   - C. FLOOR SUPERIMPOSED DEAD LOADS:
     - 3.1 MEP / MISC 5 PSF
     - 3.2 ARCH'L FINISHES 10 PSF
     - 3.3 CEILING / ROOFING 10 PSF

3. THE PROJECT WAS DESIGNED IN ACCORDANCE WITH THE:
   - A. FLORIDA BUILDING CODE 7TH EDITION (2020).
   - B. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318/LATEST EDITION).
   - C. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315/ LATEST EDITION).
   - D. MANUAL OF STANDARD PRACTICE FOR WELDING REINFORCING STEEL, INSERTS & CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION. AWS. D1.4/LATEST EDITION.
   - E. SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) AISC STEEL CONSTRUCTION MANUAL.
   - F. SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 301/LATEST EDITION.
   - G. NATIONAL DESIGN SPECIFICATION, WOOD CONSTRUCTION NDS/LATEST EDITION.
   - H. BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530, 530.1/ASCE 5, 6/TMS 402, 602/LATEST EDITIONS).

5. ARCHITECTURAL AND MECHANICAL DRAWINGS:
   - A. THE STRUCTURAL DRAWINGS ARE PART OF THE CONTRACT DOCUMENTS AND DO NOT BY THEMSELVES PROVIDE ALL THE INFORMATION REQUIRED TO PROPERLY COMPLETE THE PROJECT STRUCTURE. THE GENERAL CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE THE INFORMATION CONTAINED IN THESE DRAWINGS WITH THE STRUCTURAL DRAWINGS TO PROPERLY CONSTRUCT THE PROJECT.
   - B. REFER TO ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, DEPRESSIONS, FINISHES, INSERTS, BOLTS SETTINGS, DRAINS, REGLETS, ETC.
   - C. BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS TO PROPERLY SIZE OR FIT THE WORK. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED BY THE OWNER RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT.
   - D. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY WORK.
   - E. ALL STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LOADS LISTED ONLY AS COMPLETED STRUCTURES. THE GENERAL CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT WORK IN PROGRESS UNTIL THE STRUCTURES ARE COMPLETED. THE GENERAL CONTRACTOR SHALL ALSO ENSURE THAT ITS OPERATIONS AND PROCEDURES PROVIDE NO LOADING GREATER THAN THE DESIGN LOADS LISTED ON ANY MEMBER.

6. SECTIONS AND DETAILS:

   ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.

7. THRESHOLD INSPECTIONS SHALL BE PERFORMED DURING CONSTRUCTION OF THIS BUILDING AS REQUIRED BY SECTION 110.8 OF FBC.

8. MATERIALS AND ASSEMBLY TEST AS FOLLOWS:
   - A. EXTERIOR WINDOWS, SLIDING AND PATIO GLASS DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY, AND SHALL BE LABELED WITH AN APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED PRODUCT CERTIFICATION AGENCY, TESTING LABORATORY, EVALUATION ENTITY OR FLORIDA STATE WIDE PRODUCT APPROVAL NUMBER TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

     ANSI/AAMA/NWWDA 101/I.S. 2-97 OR TAS 202 (HVHZ SHALL COMPLY WITH TAS 202)
   - B. EXTERIOR DOOR ASSEMBLIES SHALL BE TESTED FOR STRUCTURAL INTEGRITY IN ACCORDANCE WITH ASTM E330 AT A LOAD OF 1.5 TIMES THE REQUIRED DESIGN PRESSURE LOAD. THE LOAD SHALL BE SUSTAINED FOR 10 SECONDS WITH NO PERMANENT DEFORMATION OF ANY MAIN FRAME OR PANEL MEMBER IN EXCESS OF 0.4 PERCENT OF ITS SPAN AFTER THE LOAD IS REMOVED. HVHZ SHALL COMPLY WITH TAS 202. AFTER EACH SPECIFIED LOADING, THERE SHALL BE NO GLASS BREAKAGE, PERMANENT DAMAGE TO FASTENERS, HARDWARE PARTS, OR ANY OTHER DAMAGE, WHICH CAUSES THE DOOR TO BE INOPERABLE.
   - C. SECTIONAL GARAGE DOORS SHALL BE TESTED FOR DETERMINATION OF STRUCTURAL PERFORMANCE UNDER UNIFORM STATIC AIR PRESSURE DIFFERENCE IN ACCORDANCE WITH ANSI/DASMA 108 OR TAS 202 (HVHZ SHALL COMPLY WITH TAS 202).
   - D. CUSTOM (ONE OF A KIND) EXTERIOR DOOR ASSEMBLIES SHALL BE TESTED BY AN APPROVED TESTING LABORATORY OR BE ENGINEERED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES.
   - E. WINDOW AND DOOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE DESIGN PRESSURE SPECIFIED. SUBSTITUTE ANCHORING SYSTEM USED FOR SUBSTRATES NOT SPECIFIED BY THE FENESTRATION MANUFACTURER SHALL PROVIDE EQUAL OR GREATER ANCHORING PERFORMANCE AS DEMONSTRATED BY ACCEPTED ENGINEERING PRACTICE.

9. ALL FASTENERS DESIGNATED, AS STAINLESS STEEL SHALL CONFORM TO AISI 316 STAINLESS STEEL.

011 SPECIALTY ENGINEERED PRODUCTS

1. THE GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE THE PROPER SUBMISSION OF SPECIALTY ENGINEERED/DELEGATED DRAWINGS WHICH SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THE SPECIALTY ENGINEERED DRAWINGS ARE SUBMITTED IN A TIMELY MANNER SO AS TO ALLOW REVIEWS AND RESUBMISSIONS AS REQUIRED. ALL SPECIALTY ENGINEERED PRODUCTS SHALL BE DESIGNED FOR THE APPROPRIATE GRAVITY LOADS AND WIND LOADS INCLUDING UPLIFT AND LATERAL LOADS. INTERIOR SPECIALTY PRODUCTS SHALL BE DESIGNED FOR LATERAL LOADS TO ASSURE STABILITY. SPECIALTY ENGINEERED PRODUCTS SHALL BE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   - A. LIGHT GAUGE METAL, INCLUDING BUT NOT LIMITED TO, SOFFITS, CLADDING, CEILINGS, ETC.
   - B. MISCELLANEOUS METALS INCLUDING STEEL STAIRS, HAND RAILS AND SAFETY RAILS, MECHANICAL EQUIPMENT SUPPORTS, FRAMES THAT SUPPORT MACHINES, PIPES OR OTHER STRUCTURAL METAL USED FOR SUPPORT OF MECHANICAL SYSTEMS.
   - C. MISCELLANEOUS HANGERS, CHANDELIERS, CABINETS, METAL FRAMES, LADDERS, RIGGING, HANGING WALLS, RAILINGS, GLAZING FRAMES, CLADDING SUCH AS STONE, PRECAST CONCRETE, ALUMINUM, METAL PANELS, CABLE BARRIER SYSTEMS, ETC. OR ANY OTHER MISCELLANEOUS PRODUCT REQUIRED BY ANY OF THE CONSTRUCTION DOCUMENTS.
   - D. IN ADDITION TO THE LOADS SHOWN IN THE DESIGN LOAD SCHEDULE, THE SPECIALTY ENGINEER SHALL DESIGN FOR THE WEIGHT OF ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND FIXTURES, AS WELL AS CHANDELIER FIXTURES, BAR CABINETS, AND ART WORK / MOBILES.

GENERAL CONTRACTOR TO INCLUDE IN THEIR BID THE COST OF THE ABOVE NOTED SPECIALTY ENGINEERING.

012 PRE-ENGINEERED STRUCTURES AND METAL BUILDINGS

1. STRUCTURAL DELEGATED ENGINEERING DOCUMENTS SHALL IDENTIFY THE PROJECT AND LIST LOADING OTHER DESIGN CRITERIA. STRUCTURAL DELEGATED ENGINEERING DOCUMENTS SHALL INCLUDE FABRICATION AND ERECTION DRAWINGS WHICH INDICATE IN DETAIL THE CONSTRUCTION OF THE STANDARD STRUCTURE USED OR AS MODIFIED TO COMPLY WITH THE REQUIREMENTS OF THE PARTICULAR PROJECT. THEY SHALL INDICATE ALL CONNECTION DETAILS, OPENINGS AND OTHER SPECIAL DETAILS. THEY SHALL SHOW THE MAGNITUDE AND LOCATION OF BUILDING REACTIONS ON THE FOUNDATION UNDER ALL DESIGN CONDITIONS. CALCULATIONS SUPPORTING THE DESIGN SHALL BE SUBMITTED.

2. PRE-ENGINEERED ITEMS SHALL BE SUBMITTED SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE STATE OF FLORIDA.

013 SHOP DRAWINGS

1. THE SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DRAWINGS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTACT DOCUMENTS AS TO QUALITY, LENGTH, ELEVATIONS, DIMESIONS, ETC.
2. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED.
3. IN ALL INSTANCES, THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
4. PRE-ENGINEERED ITEMS SHALL BE SUBMITTED SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE STATE OF FLORIDA.
5. ALL SHOP DRAWINGS SHALL BE SUBMITTED VIA ELECTRONIC FORMAT, UNLESS OTHERWISE REQUIRED FOR A SPECIFIC COMPONENT OR SYSTEM.

015 DEMOLITION

1. CONTRACTOR TO:
   - A. OBTAIN DEMOLITION PERMIT BEFORE PROCEEDING WITH THE WORK. CONTACT LOCAL BUILDING AUTHORITIES TO BECOME FAMILIAR WITH LOCAL LAWS AND REGULATIONS GOVERNING THIS WORK.
   - B. PROVIDE THE NECESSARY LABOR, MATERIAL, SCAFFOLDING AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION AS DESCRIBED IN THE DRAWINGS.
   - C. DISCONNECT ALL ELECTRICAL, PLUMBING AND AIR CONDITIONING SYSTEMS WITHIN THE AREA TO BE DEMOLISHED BEFORE PROCEEDING WITH DEMOLITION WORK.
   - D. DEMOLISH ONLY THE MEMBERS INDICATED IN THE DRAWINGS. DEMOLISH CONCRETE MEMBERS IN SMALL SECTIONS. TAKE EVERY PRECAUTION TO PROTECT EXISTING STRUCTURE THAT IS TO REMAIN. USE BRACING AND SHORING AS NECESSARY TO AVOID COLLAPSE OF STRUCTURE.
   - E. REMOVE ALL RUBBISH AND DEBRIS FROM BUILDING AND FROM PROPERTY.

016 SHORING AND RESHORING

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SHORING, BRACING AND STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. SUBMIT SIGNED AND SEALED SHOP DRAWINGS PREPARED BY A DELEGATED ENGINEER EXPERIENCED IN SUCH WORK AND LICENSED IN THE STATE OF FLORIDA. SUBMIT DRAWINGS TO THE ARCHITECT, ENGINEER, SPECIAL INSPECTOR, AND BUILDING OFFICIAL FOR RECORD ONLY. SHORING AND RESHORING DESIGN AND CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE ENGINEER IN HIS EMPLOY.

   THE DELEGATED ENGINEER WHO PREPARES THE SHORING AND RESHORING DRAWINGS SHALL INSPECT THE SHORING AND RESHORING. THEY SHALL PROVIDE A FIELD REPORT OF EACH INSPECTION TO THE CONTRACTOR AND ARCHITECT.
2. THE BRACING DETAILS OF THE EXTERIOR WALLS OF WHICH IN SOME CASES, THE ROOF DECK DIAPHRAGM AND ROOFING MEMBERS WILL BE REMOVED LEAVING THE EXTERIOR WALLS UNBRACED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HIRE A SPECIALTY SHORING AND BRACING ENGINEER TO PROVIDE THE REQUIRED DOCUMENTS FOR THIS EFFORT.

020 FOUNDATION

1. ALL SITE PREPARATION AND EXCAVATION WORK IS TO BE PERFORMED IN STRICT ACCORDANCE WITH THE:
   - A. REPORT ON SOILS AND FOUNDATION INVESTIGATION PREPARED BY ARDAMAN & ASSOCIATES, INC. DATED JULY 28, 2020.
   - B. THE GENERAL CONTRACTOR SHALL SUBMIT THE FINAL GEOTECHNICAL REPORT SIGNED AND SEALED TO THE BUILDING OFFICIAL WHEN SUBMITTING FOR PERMIT.
2. THE BUILDING SITE SHOULD BE EXCAVATED TO THE DEPTH AND EXTENT INDICATED IN THE SOILS REPORT. ALL SUBGRADES SHALL BE APPROVED IN WRITING BY THE SOILS ENGINEER PRIOR TO BACKFILLING. GENERAL CONTRACTOR SHALL SUPPLY SURVEYOR'S FLOOD PLANE CERTIFICATION THAT THE FLOOR SLAB ELEVATION IS ABOVE THE GOVERNING AUTHORITY'S REQUIRED FLOOR ELEVATION BEFORE COMMENCING ANY WORK OR ORDERING ANY MATERIALS.
3. BOTTOM OF FOOTINGS ASSUMED TO BEAR ON SOIL CAPABLE OF SAFELY SUPPORTING PSF.
4. SOILS SUPPORTING ALL FOOTINGS MUST BE INSPECTED AND APPROVED BY A REGISTERED SOILS ENGINEER BEFORE COMMENCING WORK, ORDERING MATERIALS, OR MOVING FORWARD IN ANY WAY. APPROVAL IN WRITING MUST INDICATE THE SOIL IS ADEQUATE TO SAFELY SUSTAIN SPECIFIED SOIL BEARING PRESSURE.
5. TOP OF FOOTINGS SHALL BE MINIMUM 1'-4"BELOW EXTERIOR FINISH GRADE AND MINIMUM 1'-4"BELOW TOP OF SLAB.
6. EXCAVATION & BACKFILL:
   - A. ALL EXCAVATION SHALL BE KEPT DRY. DE-WATERING WILL BE REQUIRED AND SHALL BE PROVIDED BY THE CONTRACTOR. THE DE-WATERING SHALL BE PROVIDED SO ALL EXCAVATIONS ARE DRY AND THE TESTING AGENCY CAN TAKE THE APPROPRIATE DENSITY TESTS AND ALL OTHER REQUIREMENTS OF THE GEOTECHNICAL REPORT AND PROJECT CONSTRUCTION DOCUMENTS ARE MET. EXCAVATE TO DEPTHS AND DIMENSIONS INDICATED. TAKE EVERY PRECAUTION TO GUARD AGAINST ANY MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES, UTILITIES, PIPING, ETC.
   - B. PROVIDE ANY BRACING OR SHORING NECESSARY TO AVOID SETTLEMENT OR DISPLACEMENT OF EXISTING FOUNDATION OR STRUCTURES.
7. CENTERLINE OF FOOTINGS: SHALL COINCIDE WITH CENTERLINE OF COLUMNS UNLESS OTHERWISE NOTED ON DRAWINGS.
8. DIMENSIONS: ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE VERIFIED AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS BY THE CONTRACTOR BEFORE PROCEEDING WITH THE CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER IN WRITING BEFORE PROCEEDING WITH ANY WORK.

030 CONCRETE

1. CONCRETE ELEMENTS TO HAVE THE FOLLOWING STRENGTHS:
   - A. FOUNDATIONS 4000 PSI
   - B. SLAB-ON-GRADE 4000 PSI
   - C. COLUMNS 4000 PSI
   - D. WALLS 4000 PSI
   - E. BEAMS 4000 PSI
   - F. TIE BEAMS 4000 PSI
   - G. STRUCTURAL SLABS 4000 PSI
   - H. MASONRY GROUT 3000 PSI

   ALL OTHER CONCRETE TO BE 4000 PSI UNLESS NOTED OTHERWISE.
2. ALL CONCRETE SHALL BE READY MIX AND MEET THE FOLLOWING REQUIREMENTS:
   - A. A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI @ 28 DAYS
   - B. SLUMPS SHALL BE 3 MINIMUM AND 5 MAXIMUM.
   - C. ALL CONCRETE TO HAVE MAXIMUM WATER/CEMENT RATIO OF 0.55.
   - D. JOBSITE WATER SHALL NOT BE ADDED.
   - E. CEMENT SHALL CONFORM WITH ASTM C150 TYPE 1. SLAG, ASTM C989 SHALL BE LIMITED TO 50% (BY WEIGHT OF CEMENTITIOUS MATERIAL AND FLY ASH, ASTM C618, CLASS F, SHALL BE LIMITED TO 25% (BY WEIGHT) OF CEMENTITIOUS MATERIAL.
3. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE ACI BUILDING CODE (ACI 318/ LATEST EDITION), THE ACI DETAILING MANUAL (ACI 315/ 1994 EDITION), AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301/ LATEST EDITION).

   CONTRACTOR TO PROVIDE CONCRETE AND ALL OTHER CONCRETE BASED PRODUCTS THAT COMPLY WITH LOCAL, STATE AND FEDERAL REQUIREMENTS REGARDING RADON OFF GASSING.
4. CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS REQUIRED BY ACI SPECIFICATIONS.
5. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A1064/A1064M, UNLESS OTHERWISE SPECIFIED. PLACE FABRIC 2" CLEAR FROM TOP OF THE SLAB IN SLAB ON GRADE AND SUPPORT ON SLAB BOLSTERS SPACED AT 3'-0" O.C.
6. REQUIREMENTS:
   - A. REINFORCING STEEL SHALL CONFORM TO ASTM DESIGNATION A 615 GRADE 60.
   - B. WWF SHALL COMPLY WITH ASTM A1064/A1064M.
   - C. GALVANIZED REBAR SHALL CONFORM TO ASTM A767.
   - D. PROVIDE 10 MIL VAPOR BARRIER COMPLIANT WITH ASTM E1745 BELOW ALL SLAB ON GRADE.
7. LAP ALL BARS WITH CLASS B TENSION LAP SPLICE UNLESS OTHERWISE NOTED ON DRAWINGS. LAP ALL WWF A MINIMUM OF 12 INCHES (UNLESS OTHERWISE NOTED).
8. REINFORCING BARS:
   - A. AT CORNERS OF CONCRETE WALLS, BEAMS AND CONTINUOUS WALL FOOTINGS, PROVIDE MATCHING HORIZONTAL BENT BARS FOR EACH HORIZONTAL BAR SCHEDULED AT EACH FACE. SEE WALL CORNER DETAIL (5'-0"MINIMAL LENGTH).
   - B. WHERE COLUMNS ARE AN INTEGRAL PART OF CONCRETE WALLS, WALL REINFORCEMENT SHALL BE CONTINUOUS THRU THE COLUMNS.
   - C. ALL HOOKS SHOWN IN REINFORCEMENT SHALL BE ACI RECOMMENDED HOOKS UNLESS OTHERWISE NOTED.
   - D. FOR BALCONIES, SLABS AND WALKWAYS EXPOSED TO WEATHER ALL REINFORCING STEEL (TOP AND BOTTOM) AS WELL AS SPACERS AND OTHER DEVICES FOR SPACING, SUPPORTING AND FASTENING REINFORCING SHALL BE GALVANIZED CONFORMING TO ASTM A767. BOLSTERS AND CHAIRS TO BE PLASTIC. CONCRETE PLACED IN THESE AREAS TO HAVE .40 W/C RATIO MAXIMUM AND CONTAIN 2.5 GALLONS OF CALCIUM NITRATE PER CUBIC YARD. REBAR COVER TO BE 1.5" MINIMUM.
   - E. ALL REBARS THAT ARE TO BE DRILLED AND FASTENED WITH ADHESIVE ANCHORS (ONLY IN AN OVERHEAD, INCLINED UPWARD OR HORIZONTAL POSITION) INTO CONCRETE, REQUIRE THE INSTALLER BE ACI CERTIFIED PER ACI 318 (LATEST EDITION). THE ALTERNATIVE IS TO PERFORM A PULL TEST ON EVERY REBAR.
9. CONSTRUCTION JOINTS IN STRUCTURAL SLABS AND BEAMS SHALL BE AT MID-SPAN AND KEY JOINTED WITH REINFORCING CONTINUOUS ACROSS JOINT AND ADDITIONAL SHEAR FRICTION REINFORCING. CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. CONSTRUCTION JOINTS IN POST-TENSION SLABS SHALL BE LOCATED AND DESIGNED BY SPECIALTY ENGINEER.
10. ALL MECHANICAL COUPLERS SHALL DEVELOP 1.25 FY OF REBAR IN TENSION OR COMPRESSION AND COMPLY WITH ACI 318.
11. CONCRETE LINTELS:
    - A. DROP BOTTOM OF BEAM OR SLAB AT WINDOWS, DOORS, ANY OVERHEAD OPENINGS,AND MASONRY OPENINGS AS REQUIRED TO PROVIDE A CONCRETE CLOSURE BETWEEN THE BOTTOM OF THE BEAM AND REQUIRED OPENINGS OR PROVIDE A PRECAST CONCRETE LINTEL BY CASTCRETE IF NOT NEXT TO A POURED CONCRETE COLUMN.
    - B. MAXIMUM DROP SHALL BE 24". PROVIDE 2 #5 EACH FACE @12"O.C. AND AT BOTTOM OF DROP INCLUDING #3 TIES @ 24" O.C. EXTENDING TO TOP OF BEAM REINFORCING. IF THE LINTEL EXCEEDS THE ABOVE LIMIT OF DROP, A SEPARATED LINTEL SHALL BE PROVIDED AS FOLLOWS:
      - L1. OPENING LESS THAN 6'0" WIDE 8" X 8" W/2 #5 BOTTOM BARS.
      - L2. OPENING BETWEEN 6'0" AND 12'0" WIDE 8" X 16" W/2 #6 TOP AND BOTTOM BARS AND #3 @ 6'0 O.C.
    - C. LINTELS TO HAVE 8" MINIMUM BEARING AT EACH END.
    - D. IF THE MASONRY OPENING HAS AN END ADJACENT TO A CONCRETE COLUMN PROVIDE (2) #5 OR #6 DOWELS, AS THE CASE MAY BE, IN THE CONCRETE COLUMN WITH SHEAR KEY 1-1/2 INCH DEEP BY LINTEL'S DEPTH AND WIDTH FOR ITS SUBSEQUENT CONSTRUCTION.

040 MASONRY

1. MASONRY UNITS SHALL BE
   - A. LOAD BEARING ASTM C90
   - B. TYPE II NON-MOISTURE CONTROLLED
   - C. NORMAL WEIGHT
   - D. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR IN RUNNING BOND (U.N.O.).
2. THE COMPRESSIVE STRENGTH OF MASONRY (F'M) SHALL BE 2500 PSI AS CALCULATED IN ACCORDANCE WITH ASTM C1314 WITH TYPE M OR S MORTAR AS REQUIRED.
3. ALL MORTAR SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION C270.
   - A. FROM FIELD OBTAINED TEST CUBES. (MIN. OF TWO)
4. GROUT SHALL BE A HIGH SLUMP MIX
   - A. IN ACCORDANCE WITH ASTM SPECIFICATION C476
   - B. HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI
   - C. FROM FIELD OBTAINED TEST CUBES. (MIN. OF TWO)
5. ALL CONCRETE MASONRY BEARING AND SHEAR WALLS SHALL BE
   - A. CONSTRUCTED
   - B. INSPECTED BY A CERTIFIED INSPECTION COMPANY AND CONSTRUCTED

   IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENT FOR MASONRY STRUCTURES" (ACI 530/ASCE 5/TSM 402) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TSM 602)/ LATEST EDITIONS.
6. PROVIDE 8" X 8" OR 8"X 12"DEPENDING ON MASONRY WALL MASONRY BEAM WITH 2 #5 CONT. AT EVERY WINDOW SILL. EXTEND BEAM 8" BEYOND EDGE OF OPENING.
7. PROVIDE HOT DIPPED GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCEMENT (9 GA.) AT 16" ON CENTER VERTICAL IN ALL MASONRY WALLS. PROVIDE DOVE TAIL SLOT ANCHORS AT CONCRETE COLUMNS.

   FOR JOINT REINFORCEMENT, WALL TIES, ANCHORS AND INSERTS, APPLY A MINIMUM COAT OF 1.5 OUNCES PER SQUARE FOOT (PSF) (458/G/M2) COMPLY WITH THE REQUIREMENTS OF ASTM A153, CLASS B.
8. PROVIDE CONTROL JOINTS IN MASONRY WALLS AT A SPACING OF 30' + O.C. AND ALIGN WITH ARCHITECTURAL CONTROL JOINTS.
9. EPOXY GROUT SHALL BE NON-SHRINK HIGH CREEP RESISTANT, AND SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE PROPERTIES:
   - TENSILE STRENGTH, ASTM C 307: 1,500 PSI
   - FLEXURAL STRENGTH, ASTM C 580: 4,000 PSI
   - COMPRESSIVE STRENGTH, ASTM C 579: 1,600 PSI/7 DAYS.
10. MINIMUM LAP SPLICES FOR REINFORCED CMU AS FOLLOWS:

BAR SIZE	#4	#5	#6	#7	#8
	24"	30"	36"	42"	48"

    - A. LAP SPLICES SHALL OCCUR DIRECTLY ABOVE FOOTINGS AND SLABS. NO SPLICES ARE ALLOWED AT MID-HEIGHT OF WALL.
    - B. LAP SPLICES THAT DO NOT OCCUR AT TOP OF FOOTING AND DIRECTLY ABOVE FLOOR SLAB SHALL BE INCREASED BY 50% TO 72 BAR DIAMETERS.
    - C. LAP SPLICES THAT OCCUR AT CANTILEVERED WALLS SUCH AS: PARAPETS, RETAINING WALLS, ETC. SHALL HAVE LAP SPLICE LENGTHS INCREASED BY 50% TO 72 BAR DIAMETERS.
11. MASONRY LINTELS:
    - A. A PRECAST CONCRETE LINTEL BY CASTCRETE OR EQUAL MAY BE PROVIDED OVER MASONRY WALL OPENINGS UNLESS A CAST-IN-PLACE LINTEL IS REQUIRED IN THE CONCRETE LINTEL NOTES. THE LINTEL SHALL BE FULLY GROUTED.
    - B. LINTELS TO HAVE 4" MINIMUM BEARING AT EACH END.
    - C. SHORE PRECAST LINTEL PER MANUFACTURER'S INSTRUCTIONS.
12. MASONRY JAMBS
    - A. ADJACENT TO ANY EXTERIOR/INTERIOR WALL OPENING, PLACE (1) MATCHING VERTICAL BARS IN CELLS GROUTED SOLID FULL HEIGHT PER THE DRAWINGS.
    - B. AT ENDS, CORNERS, AND INTERSECTION OF WALLS PLACE (1) MATCHING VERTICAL IN CELL GROUTED SOLID FULL HEIGHT. U.N.O.

050 STEEL

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE. STRUCTURAL STEEL SHALL CONFORM TO:
   - A. ASTM SPECIFICATION A 992 GRADE 50 FOR ALL WIDE FLANGE BEAMS.
   - B. ASTM SPECIFICATION A 36 FOR MISCELLANEOUS STEEL SHAPES (ANGLES, PLATES, ETC.).
   - C. SQUARE OR RECTANGULAR HSS SHALL CONFORM TO ASTM SPECIFICATION A 500 GRADE B (FY=46 KSI).
   - D. ROUND HSS SHALL CONFORM TO ASTM SPECIFICATION A500, GRADE B (FY=42 KSI). ROUND HSS WITH A WALL THICKNESS GREATER THAN 5/8", SHALL CONFORM TO ASTM A53, GRADE B (FY=35 KSI).
   - E. ALL STEEL TO HAVE A SHOP COAT OF RUST INHIBITIVE PAINT.
   - F. DELETE PAINT ON ALL STEEL TO RECEIVE SPRAYED ON FIREPROOFING OR CONCRETE ENCASEMENT.
   - G. ALL MILL CAMBER TO BE ORIENTED UPWARD DURING FABRICATION AND ERECTION.
   - H. STEEL BEAMS INSTALLED IN PARALLEL WITH STEEL BAR JOISTS MUST HAVE CAMBER EQUAL TO BAR JOISTS.
   - I. ALL EXTERIOR STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED.
2. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" (AWS D1.1), TO PERFORM THE TYPE OF WORK REQUIRED.
3. ALL CONNECTIONS SHALL BE BOLTED WITH 3/4" DIAMETER, A-325 HIGH STRENGTH BOLTS OR WELDED (UNLESS SHOWN OTHERWISE ON THE DRAWINGS).
   - A. FULL DEPTH DOUBLE CLIP ANGLE CONNECTIONS ARE TO BE USED ON ALL GIRDER AND BEAM CONNECTIONS TO COLUMNS. BOLTS TO BE AT 3-INCH O/C VERTICAL.
   - B. ALL CONNECTIONS TO HOLLOW STRUCTURAL SECTION (HSS) COLUMNS ARE TO BE THRU-PLATE UNLESS NOTED OTHERWISE.
   - C. ALL CONNECTIONS SHALL BE DOUBLE ANGLES UNLESS NOTED OTHERWISE.
   - D. MOMENT CONNECTIONS OR BRACED FRAMES SHALL FOLLOW THE AISC CODE FOR CONSTRUCTION TYPE N1.
   - E. THE STEEL FABRICATOR SHALL BE RESPONSIBLE FOR DESIGNING THE CONNECTIONS AND PROVIDING SIGNED AND SEALED CALCULATIONS.
4. ALL ALUMINUM AND STEEL MEMBERS TO BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.
5. ALL STEEL WELDING RODS SHALL BE E70XX ELECTRODES.
6. SUBMIT ALL STEEL SHOP DRAWINGS FOR APPROVAL PRIOR TO ANY FABRICATION.
7. STAINLESS STEEL SHALL CONFORM TO THE LATEST AISC CODE. STAINLESS STEEL ROD MATERIAL SHALL MEET THE REQUIREMENTS OF ASTM F593 (AISI 304). STAINLESS STEEL WASHERS SHALL MEET ANSI B18.22.1/LATEST EDITION, TYPE A PLAIN, REQUIREMENTS. STAINLESS STEEL NUTS SHALL MEET ASTM F594 REQUIREMENTS.
8. EQUIPMENT SUPPORTS:

   PROVIDE ALL SUPPORTING STEEL NOT INDICATED ON PLAN AS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT AND MATERIALS, INCLUDING ANGLES, CHANNELS, BEAMS, HANGERS, ETC. DO NOT SUPPORT EQUIPMENT OR PIPING FROM METAL DECKING.
9. DECK SUPPORTS:

   PROVIDE 1/4" BENT PLATES AT ALL HIPS, VALLEYS, SKEWED BEAMS AND OTHER AREAS FOR DECK SUPPORT.

051 PREFABRICATED METAL ROOF TRUSSES

1. TRUSS SUBMITTALS AND DESIGN LOADS:
   - A. SHOP DRAWINGS AND DESIGN COMPUTATIONS:
     1. ENGAGE THE SERVICES OF A PROFESSIONAL DELEGATED ENGINEER REGISTERED IN THE STATE OF FLORIDA TO PREPARE COMPLETE SHOP DRAWINGS AND STRUCTURAL DESIGN COMPUTATIONS FOR WORK OF THIS SECTION. DRAWINGS SHALL BEAR THE ENGINEER'S PROFESSIONAL SEAL.
     2. THE SHOP DRAWINGS SHALL SHOW ALL PERTINENT DETAILS OF CONSTRUCTION, INSTALLATION, AND ANCHORAGE OF THE LIGHT GAUGE STEEL FRAMING WORK.
     3. THE STRUCTURAL DESIGN COMPUTATIONS SHALL PROVIDE A COMPLETE STRUCTURAL ANALYSIS OF ALL TYPICAL AND SPECIAL CONDITIONS OF CONSTRUCTION, AND SHALL CERTIFY CONFORMANCE TO THE GOVERNING LAWS AND BUILDING CODES.
     4. STRICTLY FOLLOW L.G.S.E.A.'S "FIELD INSTALLATION GUIDE FOR COLD-FORMED STEEL ROOF TRUSSES" FOR THE PROPER STORAGE, HANDLING AND BRACING REQUIREMENTS.
   - B. METAL TRUSS MANUFACTURER TO DESIGN BOTTOM CHORDS OF METAL TRUSSES FOR A MINIMUM OF 20 PSF LIVE LOAD AND 20 PSF DEAD LOAD. BOTTOM CHORDS OF METAL ATTIC TRUSSES TO BE DESIGNED FOR 30 PSF MINIMUM LIVE LOAD. IN ADDITION TO THE LOADS SHOWN IN THE DESIGN LOAD SCHEDULE, THE SPECIALTY ENGINEER SHALL DESIGN FOR THE WEIGHT OF ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND FIXTURES, AS WELL AS CHANDELIER FIXTURES, BAR CABINETS, AND ART WORK / MOBILES.
   - C. SAMPLES: SUBMIT REPRESENTATIVE SAMPLES OF ALL LIGHT GAUGE STEEL FRAMING COMPONENTS TO ARCHITECT FOR APPROVAL.
   - D. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA FOR ALL COMPONENTS TO BE USED IN THE CONSTRUCTION AND ANCHORING OF THE LIGHT GAUGE STEEL FRAMING. INCLUDE SPECIFICATIONS, INSTALLATION INSTRUCTIONS, AND DATA SUBSTANTIATING THAT THE MATERIALS COMPLY WITH SPECIFIED REQUIREMENTS.
2. FRAMING COMPONENTS FOR METAL ROOF TRUSSES:
   - A. 1. SYMMETRIC SHAPES SHALL BE 18-GAGE OR HEAVIER MEMBERS.

     SHALL BE MANUFACTURED FROM STEEL MEETING THE REQUIREMENTS OF ASTM A653, GRADE D WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI. MEMBERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A653 G60 COATING DESIGNATION. MAXIMUM SPACING OF TRUSSES SHALL BE 4'-0" O.C.
   - B. TRACKS SHALL BE 18 GAUGE OR HEAVIER UN-PUNCHED TRACKS MANUFACTURED OF COMMERCIAL QUALITY STEEL SHEET MEETING THE REQUIREMENTS OF ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI. TRACKS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A653, G60 COATING DESIGNATION. PROVIDE SPECIAL SHAPED TRACKS WITH ONE 4 INCH HIGH LEG WHERE INDICATED ON DRAWINGS.
   - C. BRIDGING SHALL BE MANUFACTURER'S RECOMMENDED TYPE AS REQUIRED TO MEET THE DESIGN CRITERIA SET FORTH ABOVE.
   - D. ATTACHMENT ANGLES, CLOSURE ANGLES, AND OTHER MISCELLANEOUS COMPONENTS SHALL BE MANUFACTURED OF COMMERCIAL QUALITY STEEL SHEET MEETING THE REQUIREMENTS OF ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI AND SHALL BE FORMED TO PROFILES AS REQUIRED. ALL COMPONENTS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A653, G60 COATING DESIGNATION.
   - E. SUBCONTRACTOR SHALL COORDINATE TRUSS LOCATIONS WITH MECHANICAL TRADES.
3. FIELD TOUCH UP:
   - A. TOUCH UP ALL FIELD WELDS AND ABRASIONS OF GALVANIZED MATERIALS WITH ZINC RICH PAINT IN ACCORDANCE WITH ASTM A 780, ANNEX A2.
   - B. TOUCH UP WORK SHALL BE COMPLETED PRIOR TO ATTACHMENT OF THE WORK OF ANY OTHER SECTIONS TO THE LIGHT GAUGE STEEL FRAMING.

054 JOISTS

1. ALL JOISTS SHALL HAVE A SHOP COAT OF RUST INHIBITIVE NON BITUMINOUS PAINT.
2. JOIST FABRICATOR SHALL HAVE A SPECIALTY ENGINEER REGISTERED IN THE STATE OF FLORIDA SIGN AND SEAL ALL STEEL JOIST SHOP DRAWINGS. THESE SHOP DRAWINGS SHALL CONTAIN A STATEMENT CERTIFYING THAT THE STEEL JOISTS CAN SAFELY RESIST THE WIND UPLIFT FORCES AS NOTED.

   IN ADDITION TO THE LOADS SHOWN IN THE DESIGN LOAD SCHEDULE, THE SPECIALTY ENGINEER SHALL DESIGN FOR THE WEIGHT OF ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND FIXTURES, AS WELL AS CHANDELIER FIXTURES, BAR CABINETS, AND ART WORK / MOBILES.
3. STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED TO THE REQUIREMENTS OF THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE FOR:
   - A. SERIES K JOISTS
   - B. SERIES LH JOISTS
   - C. SERIES DLH JOISTS
   - D. SERIES SLH JOISTS
   - E. SERIES G JOIST GIRDERS
   - F. OTHER

   MANUFACTURER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE. PROVIDE BRIDGING IN ACCORDANCE WITH SJI STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

   JOIST SHALL HAVE THE FOLLOWING CAMBERS UNDER THEIR OWN WEIGHTS:
   - 30' SPAN OR LESS – CAMBER = 0
   - 30' SPAN TO 60' SPAN – CAMBER = 1" MAXIMUM
   - 60' SPAN TO 100' SPAN – CAMBER = 1-1/2" MAXIMUM
4. JOIST MANUFACTURER MUST DESIGN BRIDGING ASSUMING NO BRACING IS PROVIDED BY THE ROOF DECK.

055 DECK

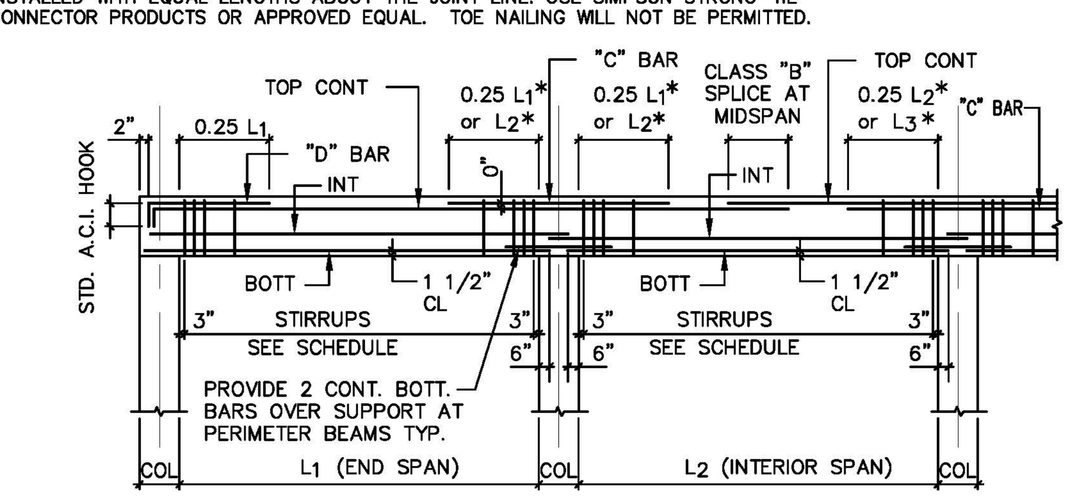
1. STEEL ROOF DECK SHALL BE:
   - A. 1-1/2", 20 GA. TYPE B METAL DECK, GALVANIZED, WITH MINIMAL COATING CLASS OF G AS SHOWN ON ROOF PLAN AS MANUFACTURED BY VULCRAFT/NUCOR OI APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. ROOF DECK MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS. ROOF DECK WITH LIGHTWEIGHT INSULATING CONCRETE SHALL BE VENTED.
2. ALL ROOF DECK TO BE DESIGNED, MANUFACTURED, AND INSTALLED IN ACCORDANCE WITH LATEST FACTORY MUTUAL STANDARDS.
3. WELDING WASHERS ARE TO BE USED ON ALL CONNECTIONS OF STEEL DECK WITH METAL THICKNESS LESS THAN 22 GA. TO STRUCTURAL STEEL SUPPORTS.
4. IN AREAS OF WARPED ROOF DECK, SELF DRILLING SCREWS ARE TO BE USED ON CONNECTIONS OF STEEL ROOF DECK TO STRUCTURAL STEEL SUPPORTS. SCREW SIZES TO COMPLY WITH MANUFACTURER'S AND FACTORY MUTUAL REQUIREMENTS. ATTACH DECK TO ALL SUPPORTING ROOF JOISTS.
5. 1-1/2" METAL ROOF DECK IS TO BE ATTACHED TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS (MINIMUM OF 5 WELDS PER SHEET PER JOIST). SIDE JOINTS SHALL BE FASTENED TOGETHER WITH #10 SELF DRILLING SCREWS AT MID SPAN BETWEEN SUPPORTS (MINIMUM OF 3 PER SPAN), UNLESS INDICATED OTHERWISE ON THE DRAWINGS. ROOF DECK WITH LIGHTWEIGHT INSULATING CONCRETE SHALL BE VENTED. G.C. SHALL VERIFY AND COORDINATE DECK FASTENING WITH ROOFING AND INSULATION NOA'S.
7. FLOOR DECK TO BE GALVANIZE 9/16", 20 GAGE FORM DECK. AS MANUFACTURED BY VULCRAFT/NUCOR OR APPROVED EQUAL. FLOOR DECK MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL FLOOR DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.
10. ALL ROOF DECK SHALL BE VENTED AND FILLED WITH LIGHTWEIGHT INSULATING CONCRETE (OR APPROVED EQUAL) WITH 2.5" MINIMUM THICKNESS. LIGHTWEIGHT INSULATING CONCRETE SHALL BE APPROVED BY FBC AND HAVE MIAMI-DADE COUNTY PRODUCT APPROVAL.
11. STEEL ROOF AND FLOOR DECK 20 GA OR THINNER SHALL BE GALVANIZED (G90) PER ASTM A653.

060 WOOD

1. ALL STRUCTURAL WOOD MEMBERS ARE DESIGNED AS "DRY-USE". MOISTURE CONTENT MUST BE 19% OR LESS. STORE WOOD FRAMING ABOVE GROUND AND UNDER TARPS WITH PROPER AIR CIRCULATION.
2. ALL LUMBER SHALL BE SOUTHERN PINE SPECIES #2 GRADE OR APPROVED EQUAL. ALLOWABLE DESIGN STRESSES SHALL FOLLOW NATIONAL DESIGN SPECIFICATION (NDS) (LATEST EDITION).
3. HEADERS AT NON BEARING CONDITIONS SHALL BE AS FOLLOWS:

OPENING SIZE	HEADER
UP TO 4' -0"	(2) 2" X 6"
4'- 0" TO 6'- 0"	(2) 2" X 8"
6'- 0" TO 9'- 0"	(2) 2" X 10"

4. PROVIDE SP ACQ PRESSURE TREATED LUMBER IN ACCORDANCE WITH AWPA STANDARDS TO A MINIMUM 0.40 PCF RETENTION WHERE LUMBER IS IN CONTACT WITH CONCRETE/MASONRY OR OUTSIDE OF BUILDING. ALL METAL CONNECTORS IN CONTACT WITH PRESSURE TREADED LUMBER SHALL BE GALVANIZED WITH A RATING OF G-185 AND CONFORM TO ASTM A653. ALL NAILS AND SCREWS USED WITH PRESSURE TREATED LUMBER ARE TO BE HOT-DIPPED GALVANIZED AND TO CONFORM TO ASTM A153 CLASS D. ELECTROGALVANIZED FASTENERS SHALL HAVE A CLASS RATING PER ASTM B695 NO LESS THAN 55. ALUMINUM NOT TO BE USED IN DIRECT CONTACT WITH ACQ TREATED LUMBER.
5. PLYWOOD SHEATHING:
   - A. FLOOR: USE 3/4" T&G APA 24oc STURD-I-FLOOR, EXP. 1, PLYWOOD SUB-FLOOR SHEATHING.
   - B. WALL: Use (15/32" OR 19/32") APA 32/16 RATED, STRUCTURAL 1, EXP. 1, PLYWOOD SHEATHING.
   - C. ROOF: Use (19/32" OR 23/32") 40/20 RATED, STRUCTURAL 1, EXP. 1, PLYWOOD SHEATHING.
   - D. SEE FRAMING PLANS FOR NAILING AND/OR BLOCKING REQUIREMENTS. USE 8'- 0" LONG X 4'-0" WIDE SHEETS WITH LENGTH ACROSS FRAMING. STAGGER PANEL END JOINTS 4'-0" TYP., ALLOW 1/8" SPACE ALONG PANEL EDGES AND END JOINTS.
   - E. FLOOR SHEATHING TO BE SCREWED WITH #10 WOOD SCREWS AT 6" O.C. AND GLUED FOR PARTIAL COMPOSITE ACTION. SELECT ADHESIVE WITH APA AFG-01 SPECIFICATION AND FOLLOW APA RECOMMENDATIONS.
   - F. SEE FRAMING PLANS FOR DIAPHRAGM NAILING TYPE, SIZE, SPACING AND LOCATIONS.
6. WOOD CONNECTIONS – ALL NAILS USED FOR STRUCTURAL FRAMING MEMBERS SHALL BE COMMON WIRE, U.N.O. ALL NAILS, TRUSS HANGERS, TRUSS ANCHORS AND STRAPS SHALL BE GALVANIZED FOR CORROSIVE RESISTANCE. ALL METAL STRAPS MUST BE INSTALLED WITH EQUAL LENGTHS ABOUT THE JOINT LINE. USE SIMPSON STRONG-TIE CONNECTOR PRODUCTS OR APPROVED EQUAL. TOE NAILING WILL NOT BE PERMITTED.



"C" BAR : TOP BAR AT INTERIOR SUPPORT (IN ADDITION TO TOP CONT BARS) PLACE IN SAME LAYER AS TOP CONT BARS (U.O.N.). LOCATE AT RIGHT SUPPORT OF SPAN INDICATED IN SCHEDULE.

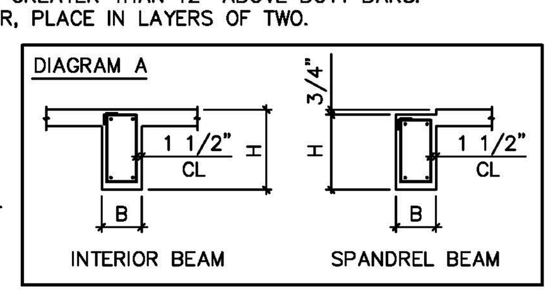
"D" BAR : TOP BAR AT EXTERIOR SUPPORT (IN ADDITION TO TOP CONT BARS) PLACE IN SAME LAYER AS TOP CONT BARS (U.O.N.).

"INT" BARS : INTERMEDIATE BARS LOCATED AT A SPACING EQUAL TO THE WIDTH OF THE BEAM BUT NOT GREATER THAN 12" ABOVE BOTT BARS. IF MORE THAN ONE PAIR, PLACE IN LAYERS OF TWO.

CLASS "B" TENSION SPLICE (3000 PSI)

#4	38"	#7	82"
#5	47"	#8	93"
#6	56"	#9	105"

* WHICHEVER IS GREATER.



NOTES :

WHEN ADJACENT BEAMS OR TIE BEAMS HAVE TOP CONT BARS OF DIFFERENT SIZE, THE TRANSITION SHOULD BE MADE AT MIDSPAN OF THE BEAM WITH SMALLER SCHEDULED BARS. USE LAP SPLICE LENGTH OF SMALLER SIZE BAR.

(2L) – INDICATES BARS PLACE IN TWO LAYERS. WHERE BARS ARE PLACED IN TWO LAYERS, THE SECOND LAYER BARS MUST BE PLACED DIRECTLY UNDER BARS IN THE FIRST LAYER (IF TOP BAR) OR DIRECTLY OVER BAR IN THE FIRST LAYER (IF BOTT BAR). PROVIDE 1" CLEAR DISTANCE BETWEEN LAYERS OR ONE BAR DIAMETER, WHICHEVER IS THE GREATER DISTANCE.

SCHEDULED BEAM SIZES : [SEE DIAGRAM A]

"B" INDICATES BEAM WIDTH DIMENSION. WHEN BEAM IS OVER A BLOCK WALL, USE ACTUAL BLOCK WIDTH (7 5/8" or 11 5/8").
"H" INDICATES BEAM DEPTH DIMENSION. LESS 3/4" FOR RECESS FOR BLOCK WALL DEDUCTED WHERE APPLICABLE, OR MINIMUM DEPTH IN A VARIABLE DEPTH BEAM. COORDINATE BEAM CONFIGURATION WITH ARCHITECTURAL DRAWINGS.

TYPICAL BEAM BAR PLACEMENT DIAGRAM

N.T.S.

CONCRETE WALL SCHEDULE

MARK	THICKNESS	REINFORCING
CW-1	8" CONCRETE WALL	#5 @ 12"o.c. E.F. VERT. & HORIZ.
CW-2	12" CONCRETE WALL	#6 @ 12"o.c. E.F. VERT. & HORIZ.

NOTE: HOOK HORIZONTAL BARS AT ENDS.

MASONRY WALL SCHEDULE

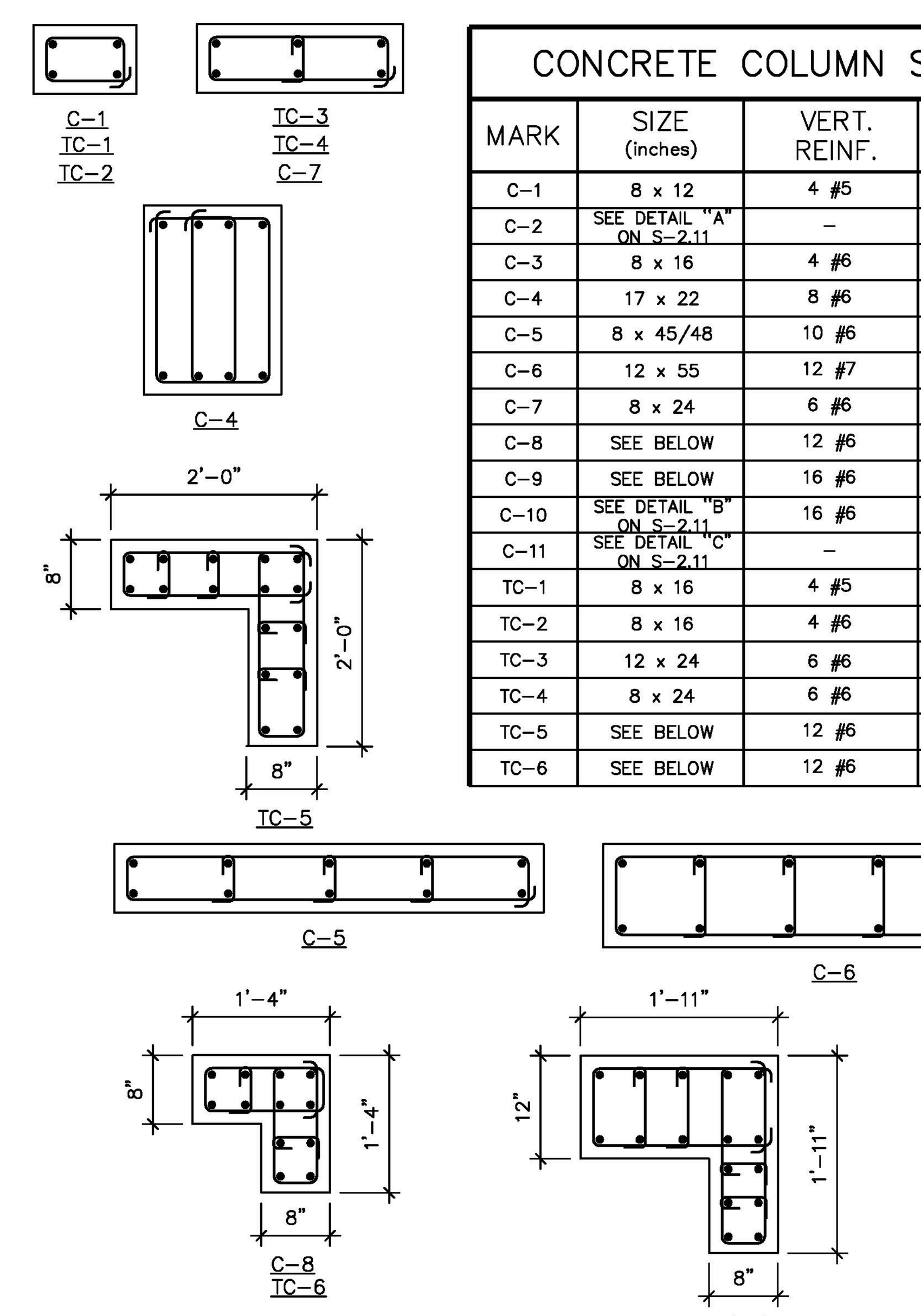
MARK	THICKNESS	REINFORCING
MW-1	8" CMU (f'm=2500 psi)	#6 @ 16" o.c.
MW-2	8" CMU (f'm=2500 psi)	#6 @ 48" o.c
MW-3	8" CMU (f'm=2500 psi)	#6 @ 24" o.c
MW-4	12" CMU (f'm=2500 psi)	#6 @ 48" o.c

MASONRY WALL NOTES:

1. WALL SEGMENTS SHALL BE REINFORCED WITH 9 GA. GALVANIZED LATERAL REINFORCING @ 16" O.C. HORIZ. EXTEND REINFORCING 6" INTO POURED ELEMENTS AND AROUND ENCASED STEEL.
2. ADJACENT TO ANY EXTERIOR/INTERIOR WALL OPENING, PLACE (1) MATCHING VERTICAL IN CELL GROUTED SOLID, FULL HEIGHT.
3. ALL MASONRY REINFORCED CELLS SHALL BE FILLED WITH 3000 PSI GROUT MIX.
4. AT END, CORNERS, AND INTERSECTION OF WALLS PLACE (1) MATCHING VERTICAL IN CELL GROUTED SOLID, FULL HEIGHT.

CONCRETE COLUMN SCHEDULE

MARK	SIZE (inches)	VERT. REINF.	TIES	SPACING
C-1	8 x 12	4 #5	#3	@ 8"o.c.
C-2	SEE DETAIL "A" ON S-2.11	–	–	–
C-3	8 x 16	4 #6	#3	@ 8"o.c.
C-4	17 x 22	8 #6	#3	@ 8"o.c.
C-5	8 x 45/48	10 #6	#3	@ 8"o.c.
C-6	12 x 55	12 #7	#3	@ 8"o.c.
C-7	8 x 24	6 #6	#3	@ 8"o.c.
C-8	SEE BELOW	12 #6	#3	@ 8"o.c.
C-9	SEE BELOW	16 #6	#3	@ 8"o.c.
C-10	SEE DETAIL "B" ON S-2.11	16 #6	#3	@ 8"o.c.
C-11	SEE DETAIL "C" ON S-2.11	–	–	–
TC-1	8 x 16	4 #5	#3	@ 8"o.c.
TC-2	8 x 16	4 #6	#3	@ 8"o.c.
TC-3	12 x 24	6 #6	#3	@ 8"o.c.
TC-4	8 x 24	6 #6	#3	@ 8"o.c.
TC-5	SEE BELOW	12 #6	#3	@ 8"o.c.
TC-6	SEE BELOW	12 #6	#3	@ 8"o.c.



Structural Drawing Updated 05-28-2021
Based on Architectural Backgrounds Dated 05-28-2021

BEAM SCHEDULE

MARK	SIZE BxH (inches)	REINFORCING BOTT	REINFORCING TOP	REINFORCING INT	STIRRUPS TIES	STIRRUPS SPACING
B-1	8 x 16	2 #5	2 #5	–	#3	@ 6" o.c.
B-2	8 x 21	2 #5	2 #5	2 #5	#3	@ 12" o.c. TYP. & @ 9" o.c. OVER OPENINGS
B-3	8 x 24	2 #5	2 #5	2 #5	#3	@ 9" o.c.
B-4	20 x 20	4 #6	4 #6	–	#3	@ 8" o.c.
B-5	8 x 24	2 #6	2 #6	–	#3	@ 10" o.c.
B-6	8 x 16	2 #6	2 #6	–	#3	@ 6" o.c.
B-7	8 x 56	2 #6	2 #6	12 #5	#3	@ 12" o.c.
B-8	19 x 18	4 #8	4 #8	2 #6	#3	@ 7" o.c.
B-9	12 x 48	3 #8	3 #8	10 #5	#3	@ 12" o.c.
B-10	24 x 31	5 #7	5 #7	4 #5	#3	@ 11" o.c.
B-11	24 x 18	6 #8	6 #8	–	#3	@ 7" o.c.
B-12	10 1/2" x 27"	2 #7	2 #7	4 #5	#3	@ 12" o.c.
B-13	24 x 17	5 #6	5 #6	–	#3	@ 7" o.c.
B-14	24 x 33	5 #6	5 #6	4 #5	#3	@ 11" o.c.
B-15	20 x 14	4 #5	4 #5	–	#3	@ 6" o.c.
B-16	20 x 15	4 #5	4 #5	–	#3	@ 6" o.c.
B-17	8 x 16	2 #5	2 #5	2 #5	#3	@ 4" o.c.
TB-1	8 x 16	2 #5	2 #5	–	#3	NOTE 2
TB-2	8 x 52	2 #6	2 #6	10 #5	#3	@ 12" o.c.
TB-3	8 x 16	2 #6	2 #6	4 #6	#3	@ 12" o.c.
TB-4	8 x 32	2 #6	2 #6	6 #6	#3	@ 12" o.c.
TB-5	8 x 24	2 #5	2 #5	2 #5	#3	NOTE 2
TB-6	24 x 16	2 #7	2 #7	4 #7	#3	@ 12" o.c.
GB-1	30 x 36	6 #10	6 #10	–	#4	@ 12" o.c.

NOTES :

1. TIE-BEAMS INTENDED TO BE CAST ATOP MASONRY WALLS – EXTEND AND HOOK WALL REINFORCING INTO TIE-BEAM.
2. STIRRUPS AT 6"o.c. OVER OPENINGS AND 12"o.c. REMAINDER.
3. * INDICATES 3 LAYERS OF REINFORCEMENT

FOOTING SCHEDULE

MARK	SIZE	REINFORCING
F40	4'-0" x 4'-0" x 12"	4 #5 BOTTOM EACH WAY
F50	5'-0" x 5'-0" x 12"	10 #4 BOTTOM EACH WAY
F50A	5'-0" x 5'-0" x 16"	10 #4 TOP AND BOTTOM EACH WAY
F60	6'-0" x 6'-0" x 14"	8 #5 BOTTOM EACH WAY
F60A	6'-0" x 6'-0"x 14"	8 #5 TOP & BOTTOM E.W. HOOKED AT BEAM
F60.14	6'-0" x CONT. x 14"	7 #5 CONT BOTTOM & #5 @ 8"o.c. TRANSVERSE BOTTOM
F70	7'-0" x 7'-0" x 18"	7 #6 BOTTOM EACH WAY
F80	8'-0" x 8'-0" x 19"	7 #7 BOTTOM EACH WAY
F90	9'-0" x 9'-0" x 19"	7 #8 BOTTOM EACH WAY
F8530	8'-6" x 3'-0" x 18"	4 #5 T&B HOOKED AT ENDS IN LG DIR. AND #5 @ 9"o.c. BOTT. HOOKED AT ENDS IN SHORT. DIR.
F9046	9'-0" x 4'-6" x 20"	7 #5 BOTTOM IN LONG DIR. AND #5 @ 9"o.c. BOTT. IN SHORT. DIR.
F9070	9'-0" x 7'-0" x 16"	8 #5 BOTTOM IN LONG DIR. HOOKED AT ENDS AND #5 @ 9"o.c. BOTT. IN SHORT. DIR. HOOKED AT ENDS
F16565	16'-6" x 6'-6" x 18"	7 #8 TOP AND BOTTOM IN LONG DIR. AND #5 @ 9"o.c. BOTT. IN SHORT. DIR.
F20.12	2'-0" x CONT. x 12"	2 #5 CONT BOTTOM & #5 @ 48"o.c. TRANSVERSE
F30.12	3'-0" x CONT. x 12"	3 #5 CONT BOTTOM & #5 @ 24"o.c. TRANSVERSE
F40.16	4'-0" x CONT. x 16"	5 #5 CONT BOTTOM & #5 @ 12"o.c. TRANSVERSE BOTTOM
F45.12	4'-6" x CONT. x 12"	4 #5 CONT BOTTOM & #5 @ 12"o.c. TRANSVERSE BOTTOM
F50.12	5'-0" x CONT. x 12"	5 #5 CONT BOTTOM & #5 @ 10"o.c. TRANSVERSE BOTTOM
F55.13	5'-5" x CONT. x 13"	6 #5 CONT BOTTOM & #5 @ 10"o.c. TRANSVERSE BOTTOM
F60.14	6'-0" x CONT. x 14"	7 #5 CONT BOTTOM & #5 @ 8"o.c. TRANSVERSE BOTTOM

STEEL COLUMN SCHEDULE

MARK	SIZE	BASE ℙ	A.B.	REM
SC-1	HSS6x6x5/16"	12x12x3/4"	(4) 3/4"ø	–
SC-2	HSS8x8x5/16"	14x14x7/8"	(4) 3/4"ø	
SC-3	HSS6x6x1/2"	12x12x3/4"	(4) 3/4"ø	
SC-4	HSS6x6x1/4"	12x12x1/2"	(4) 3/4"ø	
SC-5	HSS6x6x5/8"	12x12x7/8"	(4) 3/4"ø	
SC-6	HSS8x8x3/8"	14x14x7/8"	(4) 3/4"ø	
SC-7	HSS8x8x1/4"	14x14x3/4"	(4) 3/4"ø	
SC-8	HSS10x10x1/2"	16x16x3/4"	(4) 3/4"ø	
SC-9	HSS4x4x1/4"	10x10x3/4"	(4) 3/4"ø	

CONSTRUCTION DOCS.
5/28/21

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The Village of ROYAL PALM BEACH FLORIDA Incorporated 1959

Village Hall of Royal Palm Beach

1050 Royal Palm Beach Blvd.
Royal Palm Beach, FL 33411

NO.	DATE	DESCRIPTION
1	06/14/21	ADDENDUM 1

DATE	05-28-2021
DESIGNER	PJR
DRAWN	EEN
CHECKED	PJR
REG #	19024

Structural Notes and Schedules

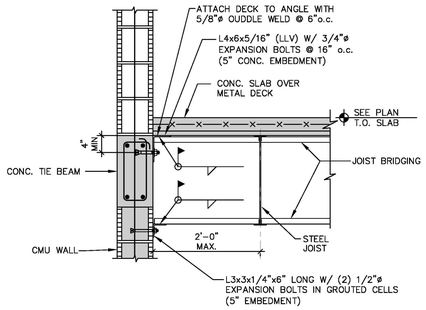
Construction Documents

S-2.00

ADD-4

NOT USED

SECTION 3/4" = 1'-0"



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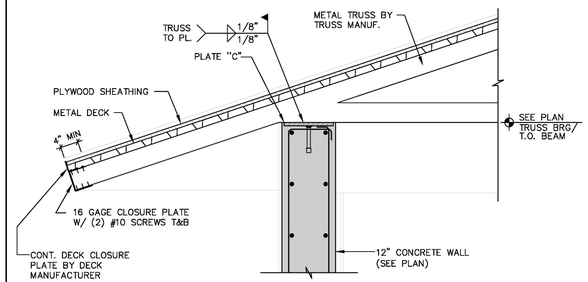

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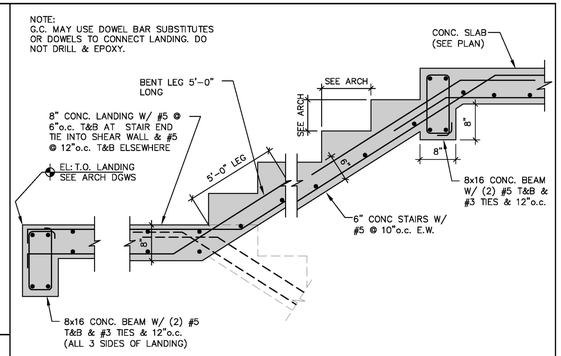

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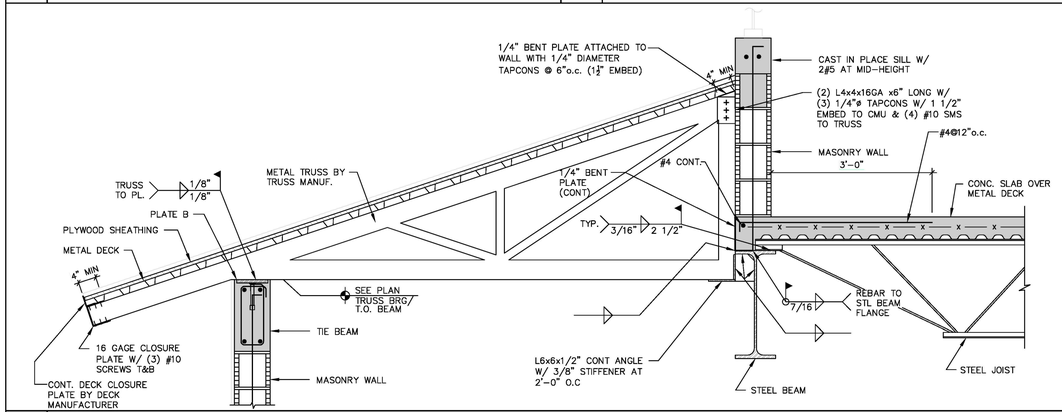

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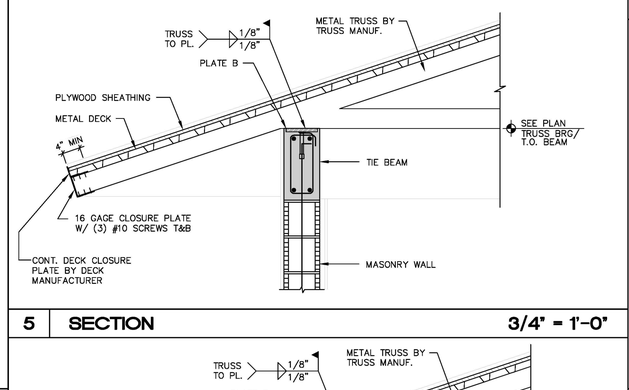

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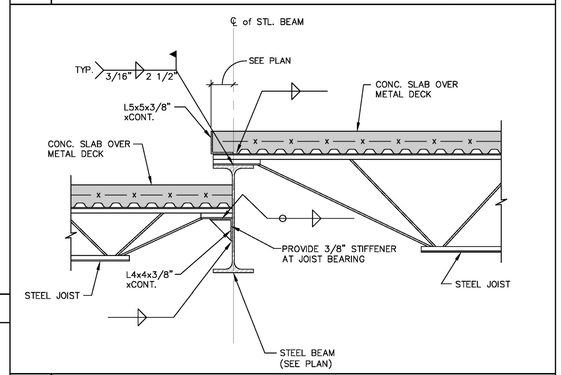

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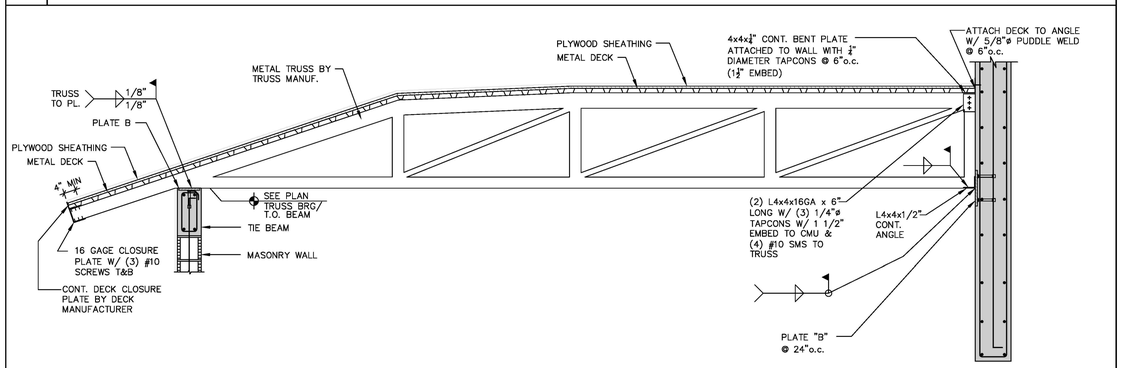

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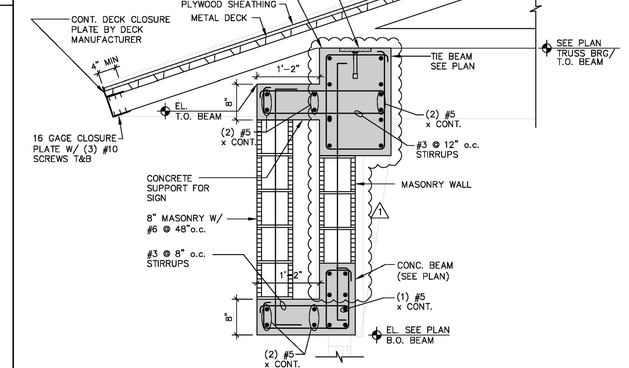

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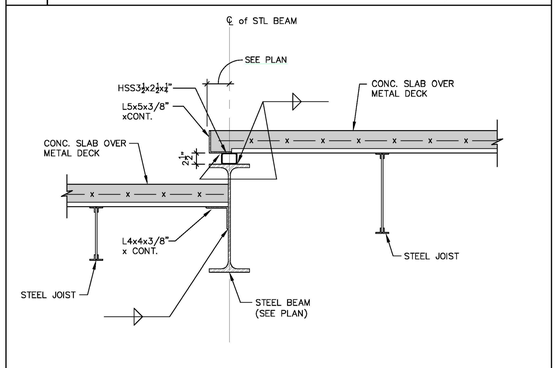

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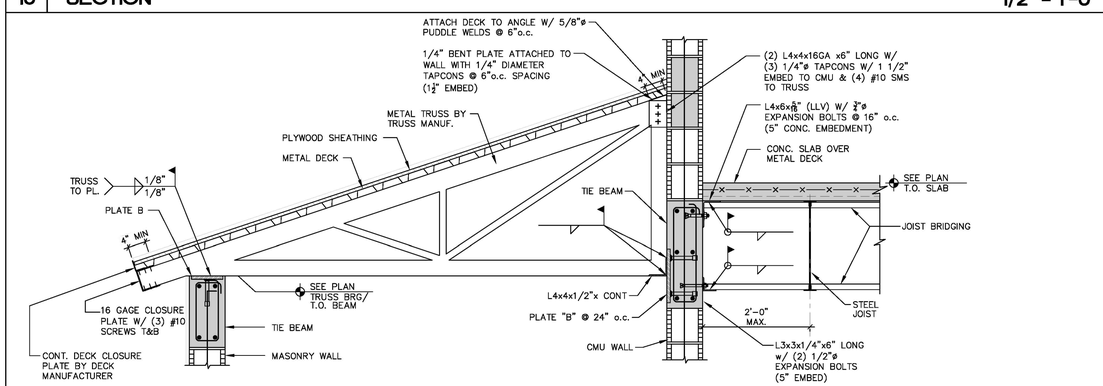

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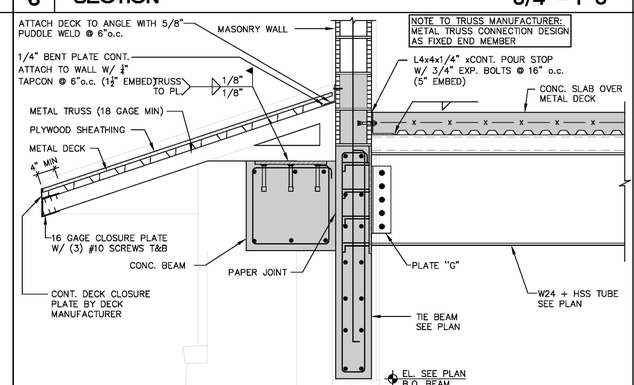

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