BUILDING CODES AND STANDARDS

A. 2023 FLORIDA BUILDING CODE, 8TH EDITION
B. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-22)
C. FOR ALL OTHER REFERENCED STANDARDS, USE THE LATEST EFFECTIVE VERSION

DESIGN CRITERIA AND LOADS

A. OCCUPANCY
   1. RISK CATEGORY.......................................II
   2. CLASSIFICATION.......................................RE: ARCH DWGS
B. DEAD LOADS
   1. ROOF.......................................20 PSF
C. LIVE LOADS
   1. ROOF.......................................20 PSF (REDUCIBLE)
   2. SLAB ON GROUND.......................................125 PSF (LIGHT STORAGE)
D. SNOW LOADS
   1. GROUND SNOW LOAD (P_g)....................................... 0 PSF
   2. SNOW LOAD IMPORTANCE FACTOR (I_s).......................................1.0
   3. TEMPERATURE FACTOR (C_t).......................................1.0
   4. EXPOSURE FACTOR(C_e).......................................1.0
   5. FLAT ROOF SNOW LOAD (P_f).......................................0 PSF
E. RAIN LOADS
   1. INTENSITY.......................................4.54 IN/HR (100 YEAR STORM)
F. WIND LOADS
   1. BASIC WIND SPEED (V ULT) ....160 MPH
   2. BASIC WIND SPEED (V ASD) ....123.9 MPH
   3. WIND EXPOSURE.......................................C
   4. INTERNAL PRESSURE COEFFICIENT.......................................+/-0.18
   COMPONENT AND CLADDING DESIGN WIND PRESSURES.................. SEE WIND TABLE
G. EARTHQUAKE DESIGN DATA
   1. SEISMIC RISK CATEGORY.......................................II
   2. SEISMIC IMPORTANCE FACTOR (I_e) 1.0
   3. S_S 0.047
   4. S_1 ....0.024
   5. SITE CLASS.......................................D
   6. SPECTRAL RESPONSE COEFFICIENTS
      a. S_{DS}....................................... 0.05
      b. S_{D1}.......................................0.039
   7. SEISMIC DESIGN CATEGORY.......................................A
   8. BASIC SEISMIC-FORCE RESISTING SYSTEM
      a. ORDINARY STEEL CONCENTRIC BRACED FRAMES
         • SEISMIC RESPONSE COEFFICIENT (C_s) 0.010
         • RESPONSE MODIFICATION FACTOR (R) 3.25
         • DESIGN BASE SHEAR....................... 0.010W
   9. ANALYSIS PROCEDURE.......................EQUIVALENT LATERAL FORCE

GENERAL REQUIREMENTS

A. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY STRUCTURAL ENGINEER OF RECORD (SEOR) OF ANY DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE OF WORK.

B. DO NOT SCALE DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.

C. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. VERIFY WITH OTHER TRADES THE REQUIREMENTS FOR CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS, AND WALL OPENINGS. REPORT ANY DISCREPANCY TO THE SEOR PRIOR TO FABRICATING OR INSTALLING STRUCTURAL MEMBERS. DEVIATIONS FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE SEOR PRIOR TO IMPLEMENTING THE CHANGES.

D. DETAILS LABELED "TYPICAL" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY SEOR OF CONFLICT REGARDING APPLICABILITY.

E. OBTAIN SEOR APPROVAL PRIOR TO LOADING SLAB ON GROUND OR SUPPORTED SLABS WITH CRANES, LIFTS, OR ANY OTHER ERECTION EQUIPMENT. UNLESS NOTED OTHERWISE, SLABS HAVE NOT BEEN DESIGNED FOR CONSTRUCTION LOADING.

F. DO NOT STORE OR STACK CONSTRUCTION MATERIALS ON POURED OR ERECTED FLOORS/ROOFS IN EXCESS OF 80 PERCENT OF LIVE LOAD. GENERAL CONTRACTOR SHALL ENSURE THAT ALL SUB-CONTRACTORS ARE INFORMED OF LOADING RESTRICTIONS. AVOID IMPACT WHEN PLACING MATERIALS ON POURED OR ERECTED FLOORS OR ROOF.

G. BEFORE PROCEEDING WITH ANY WORK WITHIN THE PROJECT AREA, THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH EXISTING STRUCTURE AND OTHER CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACINGS, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF EXISTING STRUCTURES AND FACILITIES IN A SAFE CONDITION DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF EXISTING STRUCTURES AND FACILITIES WHICH ARE TO REMAIN.

H. THE CONTRACT STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. PROVIDE ALL MEASURES REQUIRED TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION; INCLUDING BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, FORMS AND SCAFFOLDING, SHORING OF RETAINING WALLS AND OTHER TEMPORARY SUPPORTS AS REQUIRED. COMPLY WITH APPLICABLE REQUIREMENTS OF OSHA AND OTHER GOVERNING BODIES HAVING JURISDICTION AT THE SITE.

I. LOADINGS FOR MECHANICAL EQUIPMENT ARE BASED ON THE UNITS SHOWN ON THE MECHANICAL DRAWINGS. ANY CHANGES IN TYPE, SIZE, OR NUMBER OF PIECES OF EQUIPMENT SHALL BE REPORTED TO THE SEOR FOR VERIFICATION OF THE ADEQUACY OF SUPPORTING MEMBERS PRIOR TO THE PLACEMENT OF SUCH EQUIPMENT.

SUBMITTAL REVIEW

A. SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. CORRECTIONS OR COMMENTS MADE ON THIS REVIEW DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS, AND FROM COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. CORRECTIONS OR COMMENTS DO NOT AUTHORIZE AN INCREASE IN THE CONSTRUCTION BUDGET.

B. APPROVAL OF SHOP DRAWINGS DOES NOT INDICATE ACCEPTANCE OF DEVIATIONS FROM CONTRACT DOCUMENTS OR PREVIOUS SHOP DRAWING REVIEW, UNLESS SPECIFICALLY NOTED THEREIN BY ENGINEER OF RECORD.

C. ANY CHANGES TO THE DESIGN CONCEPT SHOWN IN CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO SUBMITTING SHOP DRAWINGS.

D. SHOP DRAWINGS SHALL BE "APPROVED", SIGNED AND DATED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER AND ARCHITECT OF RECORD.

E. SHOP DRAWINGS SHALL NOT CONTAIN REPRODUCTIONS OF THE CONTRACT DRAWINGS.

F. DELEGATED ENGINEERING SUBMITTALS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

G. SUBMITTAL REQUIREMENTS:

   1. INFORMATION SUBMITTALS:
      a. CONCRETE PRODUCTS
      b. MASONRY PRODUCTS
      c. CONCRETE TEST REPORTS
      d. POST-INSTALLED ANCHOR PRODUCTS

   2. ACTION SUBMITTALS:
      a. CONCRETE MIX DESIGNS
      b. CONCRETE REINFORCING
      c. MASONRY REINFORCING
      d. STRUCTURAL STEEL SHOP DRAWINGS
      e. METAL DECK SHOP DRAWINGS

   3. DELEGATED ENGINEERING SUBMITTALS:
      a. STEEL JOISTS
      b. PRE-ENGINEERED CANOPIES, AWNINGS, AND MARQUEES

FOUNDATIONS

A. FOUNDATION DESIGN IS BASED UPON THE GEOTECHNICAL REPORT TITLED, "SUBSURFACCE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT" PERFORMED BY ECS FLORIDA, LLC, PROJECT NO. 25:4345, DATED FEBRUARY 27, 2025. REFER TO GEOTECHNICAL REPORT FOR ALL SITE PREPARATION REQUIREMENTS.

B. NET ALLOWABLE SOIL BEARING CAPACITY....................................... 3000 PSF
FOUNDATIONS PROPORTIONED FOR 1500 PSF PER MAVIS.

C. THE CONTRACTOR SHALL PROVIDE AND OPERATE DEWATERING EQUIPMENT AND BE RESPONSIBLE FOR MAINTAINING EXCAVATIONS AND WORK AREAS IN A DRY CONDITION.

D. ARRANGE FOR OWNERS INDEPENDENT TESTING AGENCY TO MONITOR CUT AND FILL OPERATIONS, PERFORM FIELD DENSITY TESTS, AND INSPECT BEARING AREAS FOR FOUNDATIONS PRIOR TO PLACEMENT OF ANY CONCRETE.

E. ALL BACKFILL AND TRENCHING OPERATIONS SHALL COMPLY WITH GEOTECHNICAL REPORT (IF APPLICABLE) AS WELL AS ALL CURRENT AND APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

F. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE SHORING OF THE NEW AND EXISTING CONSTRUCTION DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT ANY DAMAGE DUE TO BACKFILLING AND TRENCHING.

G. DO NOT PLACE FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE.

H. PROTECT PIPES AND CONDUITS RUNNING THROUGH WALLS AND SLABS WITH 1/2 INCH EXPANSION MATERIAL. AT CONFLICTS BETWEEN BURIED PIPES AND CONDUITS THROUGH FOUNDATIONS, CONTACT SEOR.

I. COORDINATE WITH ELECTRICAL CONTRACTOR AND ELECTRICAL ONE-LINE DIAGRAM FOR PROPER BONDING OF THE FOOTING REINFORCEMENT TO THE GROUNDING SYSTEM.

CAST-IN-PLACE CONCRETE

A. STANDARDS
   1. ACI 117R/117R - SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS AND COMMENTARY
   2. ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE
   3. ACI 302.1R - GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION
   4. ACI 305R - HOT WEATHER CONCRETING
   5. ACI 306.1 - STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING
   6. ACI 308.1 - STANDARD SPECIFICATION FOR CONCRETE CURING
   7. ACI 318/318R - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
   8. ACI 347R - GUIDE TO FORMWORK FOR CONCRETE
   9. ACI – SP-004: FORMWORK FOR CONCRETE
   10. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) - MANUAL OF STANDARD PRACTICE

B. MATERIALS
   1. CONCRETE MIXTURES SHALL BE THE NORMAL WEIGHT TYPE (145 PCF) AND DESIGNED PER ACI 318 USING THE FOLLOWING PARAMETERS:

      a. ALL BUILDING ELEMENTS, UNLESS NOTED OTHERWISE:
         • 28 DAY COMPRESSIVE STRENGTH (f'c).......3,000 PSI
         • CATEGORY F CLASS.......................F0
         • CATEGORY S CLASS.......................S0
         • CATEGORY W CLASS.......................W0
         • CATEGORY C CLASS.......................C0
      b. PIERS/FOUNDATION WALLS:
         • 28 DAY COMPRESSIVE STRENGTH (f'c).......3,000 PSI
         • CATEGORY F CLASS.......................F0
         • CATEGORY S CLASS.......................S0
         • CATEGORY W CLASS.......................W0
         • CATEGORY C CLASS.......................C0
      c. INTERIOR SLABS:
         • 28 DAY COMPRESSIVE STRENGTH (f'c)........4,000 PSI
         • CATEGORY F CLASS.......................F0

      d. PROVIDE AIR ENTRAINING ADMIXTURE FOR CATEGORIES F1, F2, AND F3. REFER TO ACI 318.

      e. CEMENTITOUS MATERIAL: LIMIT FLY ASH AND SLAG TO 25% OF TOTAL CEMENT

C. MATERIALS

   2. NO CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE. MIX MATERIALS SHALL COMPLY WITH THE FOLLOWING:
      a. PORTLAND CEMENT.......................ASTM C150
      b. FLY ASH.......................ASTM C618 CLASS C OR F
      c. SILICA FUME.......................ASTM C1240
      d. SLAG CEMENT.......................ASTM C969 GRADE 100 OR 120
      e. NORMAL WEIGHT AGGREGATE........ASTM C33 CLASS 3S
      f. WATER.......................ASTM C94 POTABLE
      g. AIR-ENTRAINING.......................ASTM C260
      h. WATER-REDUCING.......................ASTM C494 TYPE A
      i. RETARDING.......................ASTM C494 TYPE B
      j. WATER-REDUCING/RETARDING........ASTM C494 TYPE D
      k. PLASTICIZING/RETARDING................ASTM C1017 TYPE II

   3. CHEMICAL ADMIXTURES MUST BE CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES AND THAT DO NOT CONTRIBUTE WATER-SOLUBLE CHLORINE IONS EXCEEDING THOSE ALLOWED IN HARDENED CONCRETE.

   4. STEEL REINFORCEMENT:
      a. DEFORMED BARS, ASTM A615 GRADE 60.
      b. DEFORMED BARS, ASTM A706, GRADE 60 WELDABLE.
      c. WELDED WIRE REINFORCEMENT (WWR), ASTM A1064 PLAIN 65,000 PSI YIELD STRESS IN FLAT SHEETS.
      d. CHAIRS SHALL BE GALVANIZED STEEL OR PLASTIC.

   5. VAPOR RETARDERS: ASTM E1745, CLASS A, NOT LESS THAN 10 MIL THICK.

   6. ACCESSORIES:
      a. DOWEL AND ANCHOR GROUT: SIKADUR 32 HI-MOD OR APPROVED EQUAL.
      b. BONDING AGENT: SIKA ARMATEC 110 EPOCEM OR APPROVED EQUAL.
      c. CONTRACTION OR CONSTRUCTION JOINT SEALANT: SIKADUR 51 SL OR APPROVED EQUAL.
      d. ISOLATION JOINT SEALANT: SIKAFLEX -1a OR APPROVED EQUAL.
      e. PREMOLDED EXPANSION JOINT FILLER (PMF): HOMEX 300 OR APPROVED EQUAL

D. EXECUTION
   1. UNLESS NOTED OTHERWISE MAINTAIN THE FOLLOWING CONCRETE COVER FOR REINFORCEMENT.
   2. CONCRETE CAST AGAINST EARTH.......................3 INCHES
   3. CONCRETE EXPOSED TO THE WEATHER:
      • #5 AND SMALLER BARS.......................1 1/2 INCHES
      • #6 AND LARGER BARS.......................2 INCHES
   c. CONDITIONS OTHER THAN ABOVE:
      • #11 AND SMALLER BARS.......................3/4 INCHES
      • #14 AND #18 BARS.......................1 1/2 INCH

   2. STEEL REINFORCING SHALL BE FABRICATED ACCORDING TO CRSI.

   3. ALL REINFORCEMENT SHALL BE SUPPORTED AND HELD IN PLACE BY MANUFACTURED STEEL WIRE OR PLASTIC BAR SUPPORTS IN ACCORDANCE WITH CRSI. USE OF ANY OTHER MATERIALS WITHOUT WRITTEN AUTHORIZATION BY THE SEOR IS PROHIBITED.

   4. PROVIDE STANDARD 90° HOOKS IN ACCORDANCE WITH ACI 318 UNLESS NOTED OTHERWISE.

   5. RESHAPING OF BARS AFTER INITIAL BENDING IS NOT PERMITTED.

   6. PROVIDE CLASS "B" REINFORCEMENT SPLICES FOR CONTINUOUS REINFORCEMENT. REINFORCEMENT SPLICES AND DEVELOPMENT LENGTHS SHALL BE IN ACCORDANCE WITH ACI318 AND THE TABLES PROVIDED WITH THESE DRAWINGS. WHERE THERE IS A CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

   7. SPLICES FOR WELDED WIRE FABRIC SHALL BE TWO (2) INCHES IN ADDITION TO ONE SPACING OF CROSS WIRES.

   8. PROVIDE CONTINUOUS HORIZONTAL WALL REINFORCEMENT WITH 90° BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON TYPICAL REINFORCEMENT DETAILS.

   9. ALL RE-ENTRANT CORNERS FOR SLAB-ON-GRADE CONSTRUCTION SHALL BE REINFORCED WITH (2) #4 BY 3'-0" LONG (MIN) AT 45° FROM THE SLAB EDGES AND AT SLAB MID-DEPTH.

   10. WHERE REQUIRED AND UNLESS NOTED OTHERWISE, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF MAIN REINFORCEMENT.

   11. DO NOT WELD REINFORCEMENT IN THE FIELD UNLESS SPECIFIED ON THE DRAWINGS OR APPROVED BY THE SEOR.

   12. FORMWORK MAY BE OMITTED FOR FOUNDATIONS PROVIDED EARTH IS FIRM AND STABLE AND CONCRETE SURFACES WILL NOT BE EXPOSED TO PUBLIC VIEW. EXCAVATIONS SHALL BE CUT NEAT AND ACCURATE TO SIZE. LOOSE AND UNSTABLE MATERIALS SHALL BE COMPACTED OR REMOVED.

   13. COORDINATE PLACEMENT OF CAST-IN-PLACE EMBEDMENTS AND ANCHOR RODS WITH A TEMPLATE. SECURELY ATTACH EMBEDMENT ITEMS TO FORMWORK OR REINFORCING.

   14. PLACE CONCRETE IN ONE LAYER OR IN HORIZONTAL LAYERS OF SUCH THICKNESS SO THAT NO NEW CONCRETE WILL BE PLACED ON CONCRETE THAT HAS HARDENED ENOUGH TO CAUSE SEAMS OR PLANES OF WEAKNESS (COLD JOINTS).

   15. PROVIDE CONSTRUCTION, CONTRACTION AND ISOLATION JOINTS AS INDICATED ON DRAWINGS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED OR APPROVED BY THE SEOR. PROPOSED JOINT LOCATIONS THAT ARE DIFFERENT OR IN ADDITION TO THE JOINT LOCATIONS INDICATED ON THE DRAWINGS MUST BE REVIEWED AND APPROVED BY THE SEOR.

   16. SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

   17. UNLESS NOTED OTHERWISE, CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4 INCH.

   18. ALL INTERIOR SLABS-ON-GRADE SHALL BE PLACED OVER A 10 MIL (MINIMUM) VAPOR RETARDER. ALL EDGES OF THE VAPOR RETARDER SHALL BE LAPPED A MINIMUM OF 6 INCHES AND TAPED TO PREVENT ANY AND ALL PASSAGE OF MOISTURE. PLACE, PROTECT, AND REPAIR SHEET VAPOR RETARDER ACCORDING TO ASTM E 1643 AND MANUFACTURERS WRITTEN INSTRUCTIONS.

   19. BEGIN CURING PROCEDURES IMMEDIATELY AFTER COMPLETING PLACEMENT AND CONTINUE FOR AT LEAST SEVEN (7) ACCEPTABLE DAYS. CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES AND MECHANICAL INJURY.

   20. UNCOATED ALUMINUM MATERIALS ARE NOT PERMITTED TO BE EMBEDDED IN CONCRETE.

   21. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE MIXTURE ON SITE UNLESS WATER IS WITHHELD AT THE PLANT AND NOTED AS SUCH ON THE BATCH TICKET. ONLY THE AMOUNT WITHHELD MAY BE ADDED ON SITE. ANY WATER ADDED OUTSIDE OF THIS PARAMETER CHANGES THE DESIGN SPECIFICATIONS OF THE APPROVED MIX AND MAY RESULT IN REJECTION OF THE BATCH AT THE CONTRACTOR'S EXPENSE.

   22. ALL CONCRETE SHALL BE VIBRATED BY MECHANICAL VIBRATORS.

CONCRETE UNIT MASONRY

A. STANDARDS

   1. THE MASONRY SOCIETY (TMS): TMS 402/602 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES

B. MATERIALS

   1. LOAD BEARING MASONRY, ASTM C90, LIGHT WEIGHT (105 PCF), COMPRESSIVE STRENGTH OF MASONRY (f'm) = 2,000 PSI.

   2. MORTAR AND GROUT MATERIALS:
   a. PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR II
   b. HYDRATED LIME: ASTM C 207
   c. MASONRY CEMENT: ASTM C91/C 91M
   d. MORTAR CEMENT: ASTM C 1329/C 1329M
   e. AGGREGATE FOR MORTAR: ASTM C 144
   f. AGGREGATE FOR GROUT: ASTM C 404
   g. WATER: POTABLE

   3. MORTAR SHALL BE TYPE M OR S

   4. GROUT COMPRESSIVE STRENGTH SHALL BE 2,500 PSI AT 28 DAYS. ALL GROUTING SHALL BE LOW LIFT (64 INCHES MAX). CONSOLIDATE EACH LIFT BY MECHANICAL VIBRATION.

   5. STEEL REINFORCEMENT
      a. DEFORMED AND PLAIN BARS.......................ASTM A615 GRADE 60
      b. LADDER TYPE REINFORCING.......................ASTM A951

C. EXECUTION

   1. ALL LOAD BEARING CMU WALLS REQUIRE INSPECTION. INSPECTION CONTROL SHALL BE ESTABLISHED TO ASSURE THAT THE MASONRY MATERIALS AND CONSTRUCTION PRACTICES COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

   2. LAYING MASONRY WALLS: UNLESS OTHERWISE INDICATED, LAY MASONRY IN RUNNING BOND; DO NOT USE UNITS WITH LESS-THAN-NOMINAL 4-INCH (100-MM) HORIZONTAL FACE DIMENSIONS AT CORNERS OR JAMBS. ALIGN ALL CELLS VERTICALLY TO MAINTAIN A CLEAR, UNOBSTRUCTED SYSTEM OF FLUES.

   3. LAY HOLLOW CMU AS FOLLOWS:
      a. BED FACE SHELLS IN MORTAR AND MAKE HEAD JOINTS OF DEPTH EQUAL TO BED JOINTS.
      b. BED WEBS IN MORTAR IN ALL COURSES OF PIERS, COLUMNS, AND PILASTERS.
      c. BED WEBS IN MORTAR IN GROUTED MASONRY, INCLUDING STARTING COURSE ON FOOTINGS.
      d. FULLY BED ENTIRE UNITS, INCLUDING AREAS UNDER CELLS, AT STARTING COURSE ON FOOTINGS WHERE CELLS ARE NOT GROUTED.

   4. ALL CMU WALLS SHALL HAVE GALVANIZED, 9 GAUGE LADDER TYPE REINFORCEMENT SPACED VERTICALLY AT 16" OC MAXIMUM. PROVIDE CORNER AND "TEE" SECTIONS OF REINFORCEMENT AT ALL WALL INTERSECTIONS. LAP ALL JOINT REINFORCEMENT EIGHT (8) INCHES MINIMUM.

   5. ALL CMU WALLS SHALL BE REINFORCED AS SHOWN ON THE DRAWINGS FOR THE FULL HEIGHT OF THE WALL. DOWEL ALL MASONRY VERTICAL BARS TO FOUNDATION.

   6. REINFORCEMENT SPLICES SHALL BE IN ACCORDANCE WITH TMS 402/602 AND THE TABLES PROVIDED WITH THESE DRAWINGS. WHERE THERE IS A CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

   7. POSITION AND HOLD REINFORCING IN PLACE BY THE USE OF PREFABRICATED STEEL WIRE BAR POSITIONERS. REINFORCING SHALL BE LOCATED IN CENTER OF CELLS UNLESS NOTED OTHERWISE ON DRAWINGS. CONSOLIDATE GROUT WHEN PLACING BY USING A MECHANICAL VIBRATOR. RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

   8. LINTELS BEARING ON CMU SHALL HAVE A MINIMUM BEARING LENGTH OF (8) INCHES. UNLESS OTHERWISE NOTED, A MINIMUM OF TWO (2) MASONRY COURSES, 24 INCHES WIDE SHALL BE FULLY GROUTED FOR LINTEL BEARING.

   9. ALL BOND BEAMS INDICATED ON DRAWINGS SHALL BE GROUTED SOLID INCLUDING HEAD JOINTS.

   10. PROVIDE BOND BEAMS WITH (1)#5 CONTINUOUS BAR, UNLESS OTHERWISE NOTED, AT THE TOP OF FOUNDATION WALLS, TOP OF PARAPET WALLS, AT FLOOR AND ROOF LEVELS, AND WHERE SHOWN ON THE DRAWINGS.

   11. PROVIDE LINTELS WHERE SHOWN AND WHERE OPENINGS OF MORE THAN 16 INCHES ARE SHOWN WITHOUT STRUCTURAL STEEL OR OTHER SUPPORTING ELEMENTS. PROVIDE MINIMUM BEARING OF 8 INCHES AT EACH JAMB UNLESS OTHERWISE INDICATED. PROVIDE TWO (2) #5 BARS, FULLY GROUTED ON ALL SIDES OF THE OPENING UNLESS NOTED.

   12. ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID.

   13. LOCATE CONTROL AND EXPANSION JOINTS WHERE INDICATED ON PLANS. IF LOCATIONS ARE NOT INDICATED, MASONRY CONTROL JOINTS SHALL BE PROVIDED AT:
      a. THE LESSER OF 1.5 TO 1 LENGTH TO HEIGHT RATIO AND 25 FT - 4 INCHES FOR EXTERIOR WALLS
      b. THE LESSER OF 3 TO 1 LENGTH TO HEIGHT RATIO AND 40 FT FOR INTERIOR WALLS
      c. ONE HALF OF MAXIMUM SPACING FROM CORNERS
      d. AT CHANGES IN WALL THICKNESS AND AT CHANGES IN WALL HEIGHTS
      e. BETWEEN MAIN AND PERPENDICULAR WALLS AT INTERSECTIONS
      f. DO NOT LOCATE CONTROL JOINTS AT PILASTERS, COLUMNS, OR JAMB REINFORCING AT OPENINGS.

   14. ALL EXPOSED MASONRY SHALL BE THOROUGHLY CLEANED AND LEFT FREE OF MORTAR SPOTS AND DROPPINGS. MASONRY WORK SHALL BE PROTECTED FROM DAMAGE DURING SUBSEQUENT CONSTRUCTION OPERATIONS.

STRUCTURAL STEEL

A. STANDARDS

   1. AISC 360, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
   2. AISC 303, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS & BRIDGES".
   3. AISC 341, "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS".
   4. RCSC, "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
   5. AWS D1.1, "STRUCTURAL WELDING CODE – STEEL"

B. MATERIALS

   1. WIDE FLANGE AND WT SHAPES........ASTM A992, GRADE 50
   2. ANGLES, CHANNELS AND PLATES...ASTM A36
   3. HOLLOW STRUCTURAL SHAPES......ASTM A500, GRADE C OR ASTM A1085 (50 KSI)
   4. ANCHOR RODS.......................ASTM F1554, GRADE 36 UNLESS NOTED
      (WHERE GRADE 55 ANCHOR RODS ARE SPECIFIED ON PLANS, PROVIDE S1 SUPPLEMENT MATERIAL FOR WELDABILITY)
   7. SHEAR/ANCHOR STUDS...................ASTM A108
      (MANUAL ARC WELDING OF STUDS IS NOT PERMITTED)
   8. BOLTS, HIGH STRENGTH...................ASTM A325, TYPE 1
      (PROVIDE (2) 3/4" DIA MINIMUM PER CONNECTION)
   9. NUTS.......................ASTM A563, GRADE C
   10. HARDENED WASHERS.....................ASTM F436, TYPE 1
   11. PLATE WASHERS.......................ASTM A36
   12. WELD ELECTRODES.......................AWS CLASS E70XX (LOW HYDROGEN)
   13. GROUT.......................ASTM C1107
      (NON-METALLIC AND SHRINKAGE RESISTANT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000 PSI)

C. EXECUTION

   1. DESIGN AND DETAIL STRUCTURAL STEEL ELEMENTS IN ACCORDANCE WITH ALL APPLICABLE STANDARDS. STRUCTURAL STEEL ERECTION SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.

   2. PROVIDE WASHERS FOR ALL CONNECTIONS THAT INCLUDE STANDARD, OVERSIZE AND SHORT-SLOTTED HOLES. 5/16" THICK MINIMUM PLATE STEEL WASHERS SHALL BE PROVIDED FOR ALL LONG-SLOTTED HOLES. PLATE WASHERS SHALL COMPLETELY COVER ALL LONG-SLOTTED HOLES.

   3. PROVIDE MINIMUM SIZE FILLET WELDS AND MINIMUM EFFECTIVE THROAT THICKNESSES OF PARTIAL PENETRATION GROOVE WELDS AS SPECIFIED BY SPECIFICATION SECTION "J" OF THE AISC MANUAL. DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER(S) JOINED ON ALL SHOP AND FIELD WELDS UNLESS NOTED OTHERWISE ON THE DESIGN DRAWINGS. ALL WELD LENGTHS ARE CONTINUOUS FOR THE FULL LENGTH OF THE MEMBER(S) UNLESS NOTED OTHERWISE ON THE DESIGN DRAWINGS.

   4. FABRICATION:

      a. PRIOR TO AND DURING FABRICATION PROCEDURES, ALL STRUCTURAL STEEL SHALL BE FREE OF MILL SCALE, RUST, OIL, GREASE OR ANY OTHER FOREIGN MATTER. IN ADDITION, ALL STEEL SURFACES TO BE PAINTED SHALL BE PREPARED IN ACCORDANCE TO SSPC-SP2, "HAND TOOL CLEANING".

      b. FABRICATE AND ASSEMBLE STRUCTURAL STEEL MEMBERS AND ASSEMBLIES IN THE SHOP TO THE GREATEST EXTENT POSSIBLE. SHOP WELDING PROCEDURES SHALL BE PERFORMED AND SEQUENCED SO AS TO MINIMIZE WELD SHRINKAGE STRESSES AND DISTORTION OF THE MEMBER(S).

      c. UNLESS OTHERWISE NOTED IN PLANS, PROVIDE SIMPLE SHEAR CONNECTIONS AS FOLLOWS: AT HSS COLUMNS PROVIDE STANDARD AISC SINGLE PLATE SHEAR TAB BOLTED CONNECTIONS UTILIZING THE MAXIMUM NUMBER OF A325N BOLTS IN A SINGLE ROW AS PERMITTED BY WEB GEOMETRY. AT W SECTION CONNECTIONS TO OTHER W SECTIONS PROVIDE STANDARD AISC DOUBLE ANGLE CONNECTIONS UTILIZING THE MAXIMUM NUMBER OF A325N BOLTS IN A SINGLE ROW AS PERMITTED BY WEB GEOMETRY. EXTENDED SHEAR TAB CONNECTIONS NOT PERMITTED.

      d. FINISH STEEL COLUMN ENDS TO FIT FLUSH WITH BASE AND CAP PLATES. FINISH BEAM ENDS TO FIT FLUSH WITH END PLATES. FIELD ASSEMBLY OF THESE PLATE ELEMENTS IS NOT PERMITTED.

      e. ALL STRUCTURAL STEEL ELEMENTS AND CONNECTIONS THAT ARE PERMANENTLY EXPOSED TO THE WEATHER OR EMBEDDED IN CONCRETE SHALL BE HOT DIP GALVANIZED PER ASTM A123. IN ADDITION TO THE STRUCTURAL DESIGN DRAWINGS, REFER TO THE ARCHITECTURAL DESIGN DRAWINGS FOR ALL ITEMS THAT REQUIRE TO BE HOT DIP GALVANIZED.

      f. WITH THE EXCEPTION OF CONTACT SURFACES FOR "SLIP- CRITICAL" CONNECTIONS AND STRUCTURAL STEEL TO BE EMBEDDED IN CONCRETE, ALL STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF RUST-INHIBITIVE PRIMER AS SELECTED AND APPROVED BY THE OWNER WITH A MINIMUM 1.5 MILS DRY FILM THICKNESS. FURNISH SHOP PRIMER TO THE ERECTOR IN SUFFICIENT QUANTITY FOR FIELD-TOUCH OF ALL FIELD WELDS AND ABRASIONS. OMIT PRIMER ON STEEL SURFACES WHERE SPRAY-ON FIRE-PROOFING IS REQUIRED.

      g. UNLESS OTHERWISE NOTED, ALL STEEL EXPOSED TO SOIL SHALL BE COATED WITH AN ASPHALTIC BASED CORROSION RESISTANT COATING.

   5. ERECTION:

      a. USE PROCEDURES, INCLUDING TEMPORARY BRACES OR GUYS, AS REQUIRED AT ALL TIMES TO MAINTAIN SAFETY AND STABILITY OF THE STRUCTURE. TEMPORARY BRACING PROCEDURES IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL REMAIN IN PLACE PRIOR TO THE COMPLETE INSTALLATION OF ALL PERMANENT BRACING ELEMENTS AND SYSTEMS.

      b. FIELD CORRECTIONS AND GAS CUTTING OF FABRICATED STRUCTURAL STEEL MEMBERS IS NOT PERMITTED. SPLICING OF STRUCTURAL STEEL MEMBERS CAN NOT BE PERFORMED WITHOUT PRIOR APPROVAL OF THE SEOR.

      c. INSTALL GROUT UNDER COLUMN BASE PLATES AND BEARING PLATES IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FILL ENTIRE GROUT SPACE SO AS TO PROVIDE FULL PLATE BEARING.

      d. ALL STRUCTURAL STEEL SURFACES TO BE FIELD WELDED SHALL BE PREPARED AND CLEANED SO AS TO BE FREE OF ALL FOREIGN MATTER WITHIN ONE INCH MINIMUM OF THE WELD LINE. ERECTOR SHALL TOUCH-UP ALL FIELD WELDS AND ABRASIONS WITH SHOP PRIMER FURNISHED BY THE FABRICATOR.

         • CLEAN AREAS WHERE GALVANIZING IS DAMAGED OR MISSING AND REPAIR GALVANIZING TO COMPLY WITH ASTM A780/A780M.

         • IMMEDIATELY AFTER ERECTION, CLEAN EXPOSED AREAS WHERE PRIMER IS DAMAGED OR MISSING AND PAINT WITH THE SAME MATERIAL AS USED FOR SHOP PAINTING TO COMPLY WITH SSPC-PA 1 FOR TOUCHING UP SHOP-PAINTED SURFACES.

   6. QUALITY ASSURANCE

      a. FABRICATOR QUALIFICATIONS: CERTIFIED IN THE AISC QUALITY MANAGEMENT SYSTEM (QMS) PROGRAM, IAS FABRICATOR INSPECTION PROGRAM FOR STRUCTURAL STEEL (AC 172), OR ISO 9001.

      b. INSTALLER QUALIFICATIONS: CERTIFIED IN THE AISC QUALITY MANAGEMENT SYSTEM (QMS) PROGRAM

      c. WELDING QUALIFICATIONS: QUALIFY PROCEDURES AND PERSONNEL ACCORDING TO AWS D1.1/D1.1M "STRUCTURAL WELDING CODE - STEEL." AND D1.8/D1.8M "STRUCTURAL WELDING CODE - SEISMIC" .

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CLIENT

JEFFREY PAUL BRINSER
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STATE OF FLORIDA
PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Jeffrey Paul Brinser on the date adjacent to the seal using a secure digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MARK	DATE	COMMENTS
03	03/19/2026	FACADE UPDATES
02	10/22/2025	2ND ROUND PERMIT COMMENTS
01	08/21/2025	1ST ROUND PERMIT COMMENTS
	07/01/2025	PERMIT SUBMISSION

MAVIS TIRES & BRAKES #2308 - CITY OF WESTLAKE, FL
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STRUCTURAL NOTES

Project No.: 11432-180-1
Sheet No.:

S-001

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

STEEL JOISTS

A. STANDARDS

1. STEEL JOIST INSTITUTE (SJI) – AMERICAN NATIONAL STANDARD (SJI-100) - STANDARD SPECIFICATION FOR K-SERIES, LH-SERIES, AND DLH-SERIES OPEN WEB STEEL JOISTS AND FOR JOIST GIRDERS.

B. MATERIALS

1. JOISTS AND JOIST GIRDERS: STRUCTURAL STEEL SHAPES MEETING THE ASTM SPECIFICATIONS PRESCRIBED IN SJI STANDARD SPECIFICATIONS

2. ACCESSORIES:
   a. BRIDGING.....ASTM A36
   b. BEARING AND SPLICE PLATES.....ASTM A36
   c. BOLTS, HIGH STRENGTH.....ASTM A325, TYPE 1
   d. SHEAR/ANCHOR STUDS.....ASTM A108
   e. NUTS.....ASTM A563, GRADE C
   f. HARDENED WASHERS.....ASTM F436, TYPE 1
   g. WELD ELECTRODES.....AWS CLASS E70XX (LOW HYDROGEN)

C. EXECUTION

1. EXAMINE SUPPORTING SUBSTRATES, EMBEDDED BEARING PLATES, AND ABUTTING STRUCTURAL FRAMING FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

2. DO NOT INSTALL JOISTS UNTIL SUPPORTING CONSTRUCTION IS IN PLACE AND SECURED. INSTALL JOISTS AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE; SECURELY FASTEN TO SUPPORTING CONSTRUCTION ACCORDING TO SJI'S "SPECIFICATIONS".

3. ALL HANGERS SUPPORTING MECHANICAL EQUIPMENT, SPRINKLER LINES, ETC. FROM THE JOISTS SHALL BE LOCATED VERTICALLY, ON CENTER WITH THE JOISTS CHORD MEMBERS AND AT THE JOIST CHORD PANEL POINTS WHERE SUPPORTED LOAD EXCEEDS 100 LBS. JOISTS SHALL BE ADEQUATELY REINFORCED WHERE IT IS IMPRACTICAL TO LOCATE SUPPORT HANGERS AT JOIST CHORD PANEL POINTS.

4. DETAIL AND FABRICATE BRIDGING ACCORDING TO SJI'S "SPECIFICATIONS". FURNISH ADDITIONAL ERECTION BRIDGING IF REQUIRED FOR STABILITY.

5. INSTALL AND CONNECT BRIDGING CONCURRENTLY WITH JOIST ERECTION, BEFORE CONSTRUCTION LOADS ARE APPLIED. ANCHOR ENDS OF BRIDGING LINES AT TOP AND BOTTOM CHORDS IF TERMINATING AT WALLS OR BEAMS.

6. SHOP PAINT SHALL CONFORM TO THE STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION SSPC NO. 15 OR MEET THE MINIMUM PERFORMANCE REQUIREMENTS OF THE EXPOSURE/APPLICATION OF THE JOISTS AND THEIR ACCESSORIES. FURNISH SHOP PRIMER TO THE ERECTOR IN SUFFICIENT QUANTITY FOR FIELD-TOUCH OF ALL FIELD WELDS AND ABRASIONS. OMIT PAINT/PRIMER ON STEEL SURFACES WHERE SPRAY-ON FIRE-PROOFING IS REQUIRED.

7. AFTER INSTALLATION, PROMPTLY CLEAN, PREPARE, AND PRIME OR REPRIME FIELD CONNECTIONS, RUST SPOTS, AND ABRADED SURFACES OF PRIME-PAINTED JOISTS, BEARING PLATES, AND ACCESSORIES.

8. QUALITY ASSURANCE

   a. MANUFACTURER QUALIFICATIONS: A MANUFACTURER CERTIFIED BY SJI TO MANUFACTURE JOISTS COMPLYING WITH APPLICABLE STANDARD SPECIFICATIONS AND LOAD TABLES IN SJI'S "SPECIFICATIONS".

   b. MANUFACTURER'S RESPONSIBILITIES INCLUDE PROVIDING PROFESSIONAL ENGINEERING SERVICES FOR DESIGNING SPECIAL JOISTS TO COMPLY WITH PERFORMANCE REQUIREMENTS.

   c. WELDING QUALIFICATIONS: QUALIFY FIELD-WELDING PROCEDURES AND PERSONNEL ACCORDING TO AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE -STEEL."

STEEL DECKING

A. STANDARDS

1. ANSI/SDI SD - STANDARD FOR STEEL DECK
2. ANSI/SDI QA/QC - STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK
3. ANSI/SDI C - STANDARD FOR COMPOSITE FLOOR DECK –SLABS
4. ANSI/SDI T-CD - TEST STANDARD FOR COMPOSITE STEEL DECK – SLABS
5. ANSI/SDI NC - STANDARD FOR NONCOMPOSITE STEEL FLOOR DECK
6. ANSI/SDI RD - STANDARD FOR STEEL ROOF DECK

B. MATERIALS

1. ROOF, NON-COMPOSITE AND COMPOSITE FLOOR DECK: ASTM A792 OR ASTM A653 GRADE 33

2. DECK FINISH (UNLESS NOTED OTHERWISE): GALVANIZED G60 (MIN) PER ASTM A653

3. TYPICAL DECK PROPERTIES ARE AS NOTED ON THE DRAWINGS

C. EXECUTION

1. EXAMINE SUPPORTING FRAME AND FIELD CONDITIONS FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

2. METAL DECK IS TO BE INSTALLED IN A THREE (3) SPAN CONDITION UNLESS NOTED OTHERWISE WITH A MINIMUM END BEARING OF 1-1/2 INCHES OVER SUPPORTING FRAME. WHERE PARTIAL PANELS MAY BE REQUIRED TO COMPLETE DECK INSTALLATION AT THE STRUCTURE PERIMETER, FASTEN EACH DECK FLUTE TO STEEL FRAMING SUPPORT MEMBERS.

3. FASTEN DECK TO STEEL FRAMING SUPPORT MEMBERS AS INDICATED AND IN ACCORDANCE WITH SDI STANDARDS AND METAL DECK MANUFACTURER'S INSTRUCTIONS. WHERE WELDS ARE INDICATED, USE ARC SPOT (PUDDLE) WELDS OF THE SURFACE DIAMETER INDICATED OR ARC SEAM WELDS WITH AN EQUAL PERIMETER THAT IS NOT LESS THAN 1-1/2 INCHES LONG. PROVIDE SIDE-LAP FASTENERS AS INDICATED.

4. PROVIDE WELDING MATERIALS AND INSTALLATION PROCEDURES TO PREVENT THE BURNING OF HOLES IN THE METAL DECK. USE WELD WASHERS AS REQUIRED.

5. WHERE CHANGES IN SPAN DIRECTION OCCUR, PROVIDE SIX (6) INCH CLOSURE STRIP OF THE SAME GAGE AND MATERIAL AS THE METAL DECK AND FASTEN EACH DECK FLUTE TO CLOSURE STRIP. WHERE REQUIRED, PROVIDE ADEQUATE CLOSURE STRIPS AND POUR STOPS AT TERMINAL EDGES OF METAL DECK.

6. PREPARE AND REPAIR DAMAGED GALVANIZED COATINGS ON BOTH SURFACES OF DECK WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS. WHERE METAL DECK IS SCHEDULED TO BE EXPOSED TO VIEW, DE-SLAG, CLEAN AND TOUCH-UP ALL WELDS AND ABRASIONS WITH A ZINC-RICH PRIMER OR COATING THAT MATCHES THE SPECIFIED FINISH.

COLD-FORMED METAL FRAMING

A. STANDARDS

1. AISI S100 - NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS
2. AISI S200 SERIES - FRAMING STANDARDS
3. STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) – PRODUCT TECHNICAL GUIDE
4. AWS STRUCTURAL WELDING CODE - SHEET STEEL (AWS D1.3)

B. MATERIALS

1. STEEL STUDS, TRACK AND ACCESSORIES SHALL CONFORM TO ASTM A1003 AND ASTM C955 WITH A G60 COATING. FRAMING MEMBERS OF 18 GA AND 20 GA SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI. ALL OTHER FRAMING MEMBERS SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.

2. PROVIDE MANUFACTURER'S STANDARD THICKNESS AND CONFIGURATION FOR FRAMING ACCESSORIES, UNLESS OTHERWISE INDICATED. FABRICATE STEEL-FRAMING ACCESSORIES FROM STEEL SHEET, ASTM A1003/A1003M.

3. STEEL STUDS OR JOISTS: SSMA TYPE S
   - MINIMUM BASE METAL THICKNESS: 43 MILS (18 GA)
   - MINIMUM FLANGE WIDTH: 1 5/8"

4. STRUCTURAL TRACK: SSMA TYPE T
   - MINIMUM BASE METAL THICKNESS: TO MATCH STUDS BUT NOT LESS THAN 43 MILS (18 GA)
   - MINIMUM FLANGE WIDTH: 1 1/4"

5. STEEL TAPPING SCREWS: ASTM C1513

6. POWER-ACTUATED FASTENERS: ASTM E1190

7. VERTICAL DEFLECTION AND LATERAL DRIFT CONNECTIONS SHALL ALLOW FOR POSITIVE ATTACHMENT TO STRUCTURE AND STUD WEB USING STEP-BUSHING TECHNOLOGY TO PROVIDE FRICTIONLESS, MOVEMENT.

8. ALL CONNECTION PRODUCTS ARE REQUIRED TO HAVE A VALID ICC ES REPORT OR EQUIVALENT COMPLYING WITH ICC ACCEPTANCE CRITERIA AC261.

C. EXECUTION

1. ONLY MANUFACTURERS WHO ARE MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) WILL BE ACCEPTED. THE INSTALLATION SHALL COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. FABRICATE COLD-FORMED STEEL FRAMING AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE, AND WITH CONNECTIONS SECURELY FASTENED, ACCORDING TO REFERENCED AISI'S SPECIFICATIONS AND STANDARDS, AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

3. EXAMINE SUPPORTING SUBSTRATES AND ABUTTING STRUCTURAL FRAMING FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

4. INSTALL FRAMING MEMBERS IN ONE-PIECE LENGTHS UNLESS SPLICE CONNECTIONS ARE INDICATED FOR TRACK OR TENSION MEMBERS.

5. INSTALL AXIALLY LOADED STUDS IN A MANNER WHICH WILL ASSURE THAT THEIR ENDS ARE POSITIONED AGAINST THE INSIDE OF TRACK WEB PRIOR TO FASTENING. PLUMB, ALIGN AND SECURELY ATTACH STUDS TO THE FLANGES OF BOTH UPPER AND LOWER TRACKS.

6. ISOLATE NON-LOAD-BEARING STEEL FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT.

7. DO NOT BRIDGE BUILDING EXPANSION JOINTS WITH COLD-FORMED STEEL FRAMING. INDEPENDENTLY FRAME BOTH SIDES OF JOINTS.

8. INSTALL HORIZONTAL BRIDGING IN WALL STUDS, SPACED VERTICALLY IN ROWS NOT MORE THAN 48 INCHES APART. FASTEN AT EACH STUD INTERSECTION.

9. SECURELY ANCHOR TRACKS TO THE SUPPORTING STRUCTURE. PROVIDE COMPLETE, UNIFORM AND LEVEL BEARING SUPPORT FOR THE TOP AND BOTTOM TRACKS.

10. INSTALL MISCELLANEOUS FRAMING COMPONENTS INCLUDING WEB STIFFENERS TO PROVIDE A COMPLETE WALL-FRAMING SYSTEM.

11. PROTECT COLD-FORMED METAL FRAMING FROM CORROSION, DEFORMATION AND OTHER DAMAGE DURING DELIVERY, STORAGE AND HANDLING. PREPARE AND REPAIR DAMAGED GALVANIZED COATINGS ON FABRICATED AND INSTALLED COLD-FORMED STEEL FRAMING WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

12. PROVIDE FINAL PROTECTION AND MAINTAIN CONDITIONS, IN A MANNER ACCEPTABLE TO MANUFACTURER AND INSTALLER, THAT ENSURE THAT COLD-FORMED STEEL FRAMING IS WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

POST-INSTALLED ANCHORS

A. STANDARDS

1. ACI 318/318R - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
2. ACI 355.2 – QUALIFICATION OF POST-INSTALLED MECHANICAL ANCHORS
3. ACI 355.4 – QUALIFICATION OF POST-INSTALLED ADHESIVE ANCHORS

B. MATERIALS

1. ALL ANCHORS ARE REQUIRED TO HAVE A VALID ICC ES REPORT OR EQUIVALENT COMPLYING WITH ICC ACCEPTANCE CRITERIA AC193 OR AC308.

2. UNLESS OTHERWISE NOTED, ADHESIVE ANCHORS SHALL BE:
   a. TO CONCRETE:
      - HILTI: HIT-HY-200 V3 ADHESIVE ANCHOR (ICC-ES ESR-4868)
   b. TO SOLID GROUTED MASONRY:
      - HILTI: HIT-HY 270 ADHESIVE ANCHOR (ICC-ES ESR-4143)
   c. TO HOLLOW MASONRY:
      - HILTI: HIT-HY 270 ADHESIVE ANCHOR (ICC-ES ESR-4143)

3. UNLESS OTHERWISE NOTED, MECHANICAL ANCHORS SHALL BE:
   a. TO CONCRETE:
      - HILTI: KWIK BOLT KH-EZ (ICC-ES ESR-3027)
   b. TO SOLID GROUTED MASONRY:
      - HILTI: KWIK BOLT KH-EZ (ICC-ES ESR-3056)
   c. TO HOLLOW MASONRY:
      - NA

4. ANCHORS NOT EXPOSED TO WEATHER SHALL BE CARBON STEEL UNLESS NOTED.

5. ANCHORS EXPOSED TO WEATHER SHALL BE GALVANIZED OR STAINLESS STEEL UNLESS NOTED.

6. SUBSTITUTIONS MUST BE REQUESTED IN WRITING AND APPROVED BY THE SEOR PRIOR TO INSTALLATION.

C. EXECUTION

1. DO NOT BEGIN ANCHOR INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY CLEANED AND PREPARED UNDER THE CURRENT PROJECT CONDITIONS AND PER THE REQUIREMENTS PROVIDED BY THE ANCHOR SYSTEM MANUFACTURER.

2. ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL WITH PROPER TRAINING. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).

3. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.

4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 2,500 PSI AT THE TIME OF ANCHOR INSTALLATION.

5. CONCRETE AT TIME OF ADHESIVE ANCHOR INSTALLATION SHALL HAVE A MINIMUM AGE OF 21 DAYS.

CMU REINFORCING LAP SPLICE SCHEDULE

BAR SIZE	BAR SPACING	8" CMU	10" CMU	12" CMU
#3	CENTERED	12"	12"	12"
3/8" Ø	EDGE	13"	13"	13"
#4	CENTERED	13"	12"	12"
1/2" Ø	EDGE	22"	22"	22"
#5	CENTERED	20"	16"	13"
5/8" Ø	EDGE	35"	35"	35"
#6	CENTERED	38"	29"	24"
3/4" Ø	EDGE	54"	54"	54"
#7	CENTERED	52"	40"	33"
7/8" Ø	EDGE	63"	63"	63"

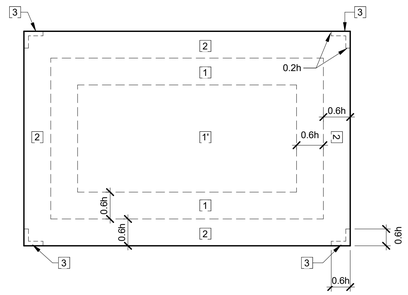
NOTES:
1. MASONRY f'm = 2000 PSI
2. STEEL REINFORCING fy = 60000 PSI
3. APPLIES TO BOTH VERITCAL AND HORIZONTAL REINFORCING
4. WHERE HORIZONTAL REINFORCING REQUIRED 1 BAR, USE CENTER SPACING
5. WHERE HORIZONTAL REINFORCING REQUIRES 2 BARS, USE EDGE SPACING

TENSION BAR LAP SPLICE LENGTH FOR CLASS B SPLICES

BAR SIZE	GRADE 60 BAR	3000 PSI		4000 PSI		4500 PSI		5000 PSI	
	BAR SPACING	(3) Bar Dia or More	Less Than (3) Bar Dia	(3) Bar Dia or More	Less Than (3) Bar Dia	(3) Bar Dia or More	Less Than (3) Bar Dia	(3) Bar Dia or More	Less Than (3) Bar Dia
#3	TOP BARS:	28	42	25	37	23	35	22	33
3/8" Ø	OTHER BARS:	22	33	19	28	18	27	17	25
#4	TOP BARS:	38	56	33	49	31	46	29	44
1/2" Ø	OTHER BARS:	29	43	25	37	24	35	23	34
#5	TOP BARS:	47	70	41	61	38	57	36	54
5/8" Ø	OTHER BARS:	36	54	31	47	30	44	28	42
#6	TOP BARS:	56	84	49	73	46	69	44	65
3/4" Ø	OTHER BARS:	43	65	37	56	35	53	34	50
#7	TOP BARS:	81	122	71	106	67	100	63	95
7/8" Ø	OTHER BARS:	63	94	54	81	51	77	49	73
#8	TOP BARS:	93	139	81	121	76	114	72	108
1" Ø	OTHER BARS:	72	107	62	93	59	88	56	83
#9	TOP BARS:	105	157	91	136	86	128	81	122
1.128" Ø	OTHER BARS:	81	121	70	105	66	99	63	94
#10	TOP BARS:	118	177	102	153	96	144	92	137
1.270" Ø	OTHER BARS:	91	136	79	118	74	111	71	106
#11	TOP BARS:	131	196	114	170	107	160	102	152
1.410" Ø	OTHER BARS:	101	151	87	131	82	123	78	117

NOTES:
1. LENGTHS APPLY TO UNCOATED REINFORCEMENT IN NORMAL WEIGHT CONCRETE ONLY.
2. TOP BARS REFERS TO HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONRETE IS CAST IN THE MEMBER BELOW THE DEVELOPEMENT LENGTH OR SPLICE.

WIND ZONES



PLAN

ELEVATION, TYP

WIND DATA

COMPONENTS & CLADDING WIND PRESSURES

MIN PARAPET HEIGHT		2.0 ft						h =	20.0 ft
ROOF ANGLE		1.2 deg						a =	5.2 ft
TYPE OF ROOF		MONOSLOPE							
ULTIMATE LOADS		BASIC WIND SPEED =	160.0 mph						
		BASE PRESSURE =	50.3 psf	Qh					
ROOF		SURFACE PRESSURE (PSF)							
	AREA	10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf
	NEGATIVE ZONE 1	-1.9	-1.5	-1.2	-1.2	-94.5	-73.8	-59.3	-59.3
	NEGATIVE ZONE 1'	-1.1	-1.1	-0.7	-0.6	-54.3	-54.3	-36.7	-29.2
	NEGATIVE ZONE 2	-2.5	-2.0	-1.6	-1.6	-124.7	-98.1	-79.4	-79.4
	NEGATIVE ZONE 3	-3.4	-2.3	-1.6	-1.6	-170.0	-116.7	-79.4	-79.4
	POSITIVE ALL ZONES	0.5	0.4	0.4	0.4	24.1	19.1	19.1	19.1
	OVERHANG ZONE 1&1'	-1.7	-1.6	-1.0	-1.0	-85.5	-80.4	-50.3	-50.3
	OVERHANG ZONE 2	-2.3	-1.6	-1.1	-1.1	-115.6	-80.1	-55.3	-55.3
	OVERHANG ZONE 3	-3.2	-2.0	-1.1	-1.1	-160.9	-98.8	-55.3	-55.3
WALLS		SURFACE PRESSURE (PSF)							
	AREA	10 sf	100 sf	200 sf	500 sf				
	NEGATIVE ZONE 4	-58.8	-50.8	-48.4	-45.3				
	NEGATIVE ZONE 5	-72.4	-56.4	-51.6	-45.3				
	POSITIVE ZONE 4 AND 5	54.3	46.3	43.9	40.7				
PARAPETS		SURFACE PRESSURE (PSF)							
	Area	10 sf	20 sf	50 sf	100 sf	200 sf	500 sf		
CASE A:	ZONE 2 :	164.6	153.9	139.8	129.2	118.5	104.4		
	ZONE 3 :	210.9	192.0	167.1	148.2	129.3	104.4		
CASE B :	INTERIOR ZONE :	-97.2	-92.3	-85.8	-80.9	-75.9	-69.4		
	CORNER ZONE :	-111.1	-103.7	-93.9	-86.6	-79.2	-69.4		

NET UPLIFT FOR JOISTS (SERVICE LEVEL PRESSURES)

ROOF		SURFACE PRESSURE (PSF)							
	AREA	10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf
	NEGATIVE ZONE 1	3.7	3.9	4.1	4.1	-51.9	-39.5	-30.8	-30.8
	NEGATIVE ZONE 1'	4.2	4.2	4.4	4.5	-27.8	-27.8	-17.2	-12.7
	NEGATIVE ZONE 2	3.3	3.6	3.9	3.9	-70.0	-54.0	-42.9	-42.9
	NEGATIVE ZONE 3	2.8	3.4	3.9	3.9	-97.2	-65.2	-42.9	-42.9

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MAVIS TIRES & BRAKES #2308 - CITY OF WESTLAKE, FL
16775 PERSIMMON BLVD, WESTLAKE, FL 33470

STRUCTURAL NOTES

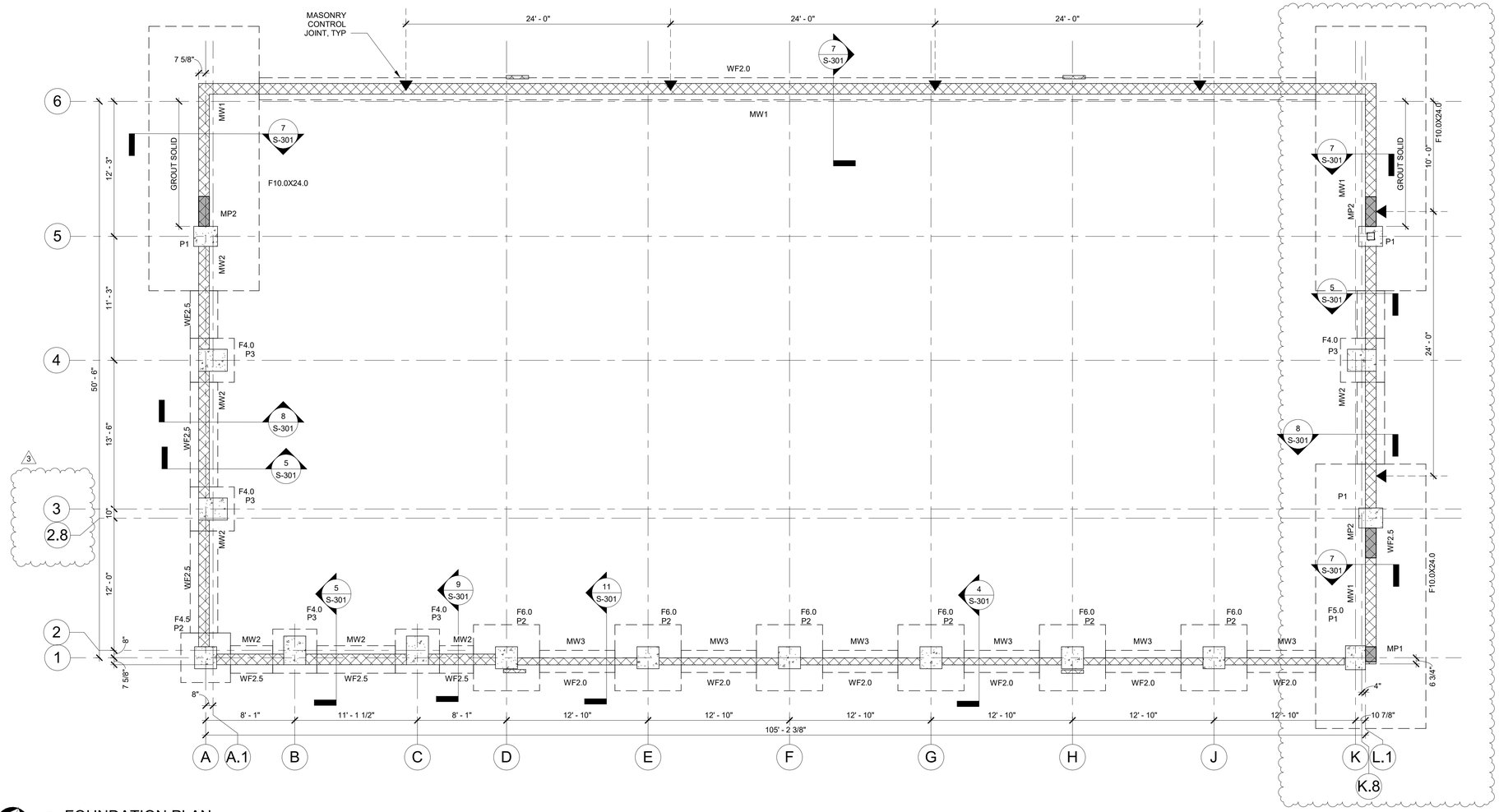
Project No.: 11432-180-1

Sheet No.:

S-002

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

CIVIL DRAWINGS NOT PROVIDED DURING DESIGN. FOUNDATIONS ARE BASED ON FLAT SITE. SIGNED AND SEALED CIVIL DRAWINGS ARE REQUIRED TO BE PROVIDED TO EOR PRIOR TO CONSTRUCTION FOR FOOTING ELEVATION COORDINATION. FOOTINGS MUST BEAR AT REQUIRED MINIMUM FROST DEPTH.



1 FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

TRUE NORTH

FOUNDATION SCHEDULE						
MARK	LENGTH	WIDTH	FOUNDATION THICKNESS	TOP REINFORCING	BTM REINFORCING	COMMENTS
F4.0	4' - 0"	4' - 0"	1' - 0"	NA	(5)#5 EW	
F4.5	4' - 6"	4' - 6"	1' - 0"	NA	(5)#5 EW	
F5.0	5' - 0"	5' - 0"	1' - 0"	NA	(6)#5 EW	
F6.0	6' - 0"	6' - 0"	1' - 4"	NA	(7)#5 EW	
F10.0X24.0	24' - 0"	10' - 0"	1' - 8"	#7 @12 OC EW	#7 @12 OC EW	<varies>

WALL FOUNDATION SCHEDULE					
MARK	WIDTH	FOUNDATION THICKNESS	TOP REINFORCING	BTM REINFORCING	COMMENTS
WF2.0	2' - 0"	1' - 0"	N/A	(3)#5 CONT	
WF2.5	2' - 6"	1' - 0"	N/A	(4)#5 CONT	

CONCRETE PIER SCHEDULE					
MARK	WIDTH	LENGTH	VERT REINFORCING	HORIZ REINFORCING	COMMENTS
P1	2' - 2"	1' - 9 3/4"	(12)#5	#3 CLOSED TIES @ 12" OC	(3) #3 TIES IN FIRST 6" OF PIER
P2	2' - 0"	2' - 0"	(12)#5	#3 CLOSED TIES @ 12" OC	(3) #3 TIES IN FIRST 6" OF PIER
P3	2' - 7 1/4"	2' - 0"	(16)#5	#3 CLOSED TIES @ 12" OC	(3) #3 TIES IN FIRST 6" OF PIER

FOUNDATION PLAN NOTES:

1. ALL EXTERIOR FOOTING ELEVATIONS ARE RELATIVE TO FINISHED FLOOR.

   -2'-0" TO TOP OF FOOTING
   UNLESS NOTED OTHERWISE.

2. ALL EXTERIOR PIER ELEVATIONS ARE RELATIVE TO FINISHED FLOOR.

   -1'-0" TO TOP OF PIER
   UNLESS NOTED OTHERWISE

3. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND DETAILS.
4. COORDINATE ALL CONDUIT EMBEDMENTS AND PLUMBING STUB-UP LOCATIONS WITH ELECTRICAL AND PLUMBING PLANS AND DETAILS AND ALL PRIME CONTRACTORS.
5. COORDINATE WITH ELECTRICAL PLANS AND DETAILS AND ELECTRICAL CONTRACTOR FOR REINFORCEMENT BONDING TO GROUND SYSTEM.
6. FOUNDATION WALLS HAVE NOT BE DESIGNED FOR CONSTRUCTION LOADS.
7. AFTER ACHIEVING FINISHED SUBGRADE IN CUT AREAS, AND PRIOR TO PLACEMENT OF STRUCTURAL FILL IN AREAS BELOW FINISHED SUBGRADE, THE EXPOSED SUBGRADE SHALL BE EVALUATED BY A GEOTECHNICAL ENGINEER TO CONFIRM ALL UNSUITABLE MATERIALS HAVE BEEN REMOVED.
8. FOUNDATIONS SHALL NOT BE CONSTRUCTED OVER EXISTING FILL MATERIALS UNLESS SPECIFICALLY APPROVED A LICENSED GEOTECHNICAL ENGINEER.
9. CONTINUE ALL WFX.X CONTINUOUS REINFORCING THROUGH ADJACENT FX.X FOOTINGS.

MASONRY PILASTER SCHEDULE				
MARK	THICKNESS	WIDTH	VERT REINF	COMMENTS
MP1	11 5/8"	1'-4"	(2) #5 EA CELL	EDGE SPACING, NO HORIZ TIES
MP2	11 5/8"	2'-8"	(2) #5 EA CELL	EDGE SPACING, NO HORIZ TIES

MASONRY WALL SCHEDULE			
MARK	THICKNESS	VERT REINF	COMMENTS
MW1	11 5/8"	(2) #5 @ 40"	EDGE SPACING, FULL HEIGHT WALL
MW2	11 5/8"	(1) #5 @ 40"	CENTER SPACING, KNEE WALL
MW3	7 5/8"	(1) #5 @ 48"	CENTER SPACING, KNEE WALL

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MAVIS TIRES & BRAKES #2308 - CITY OF WESTLAKE, FL
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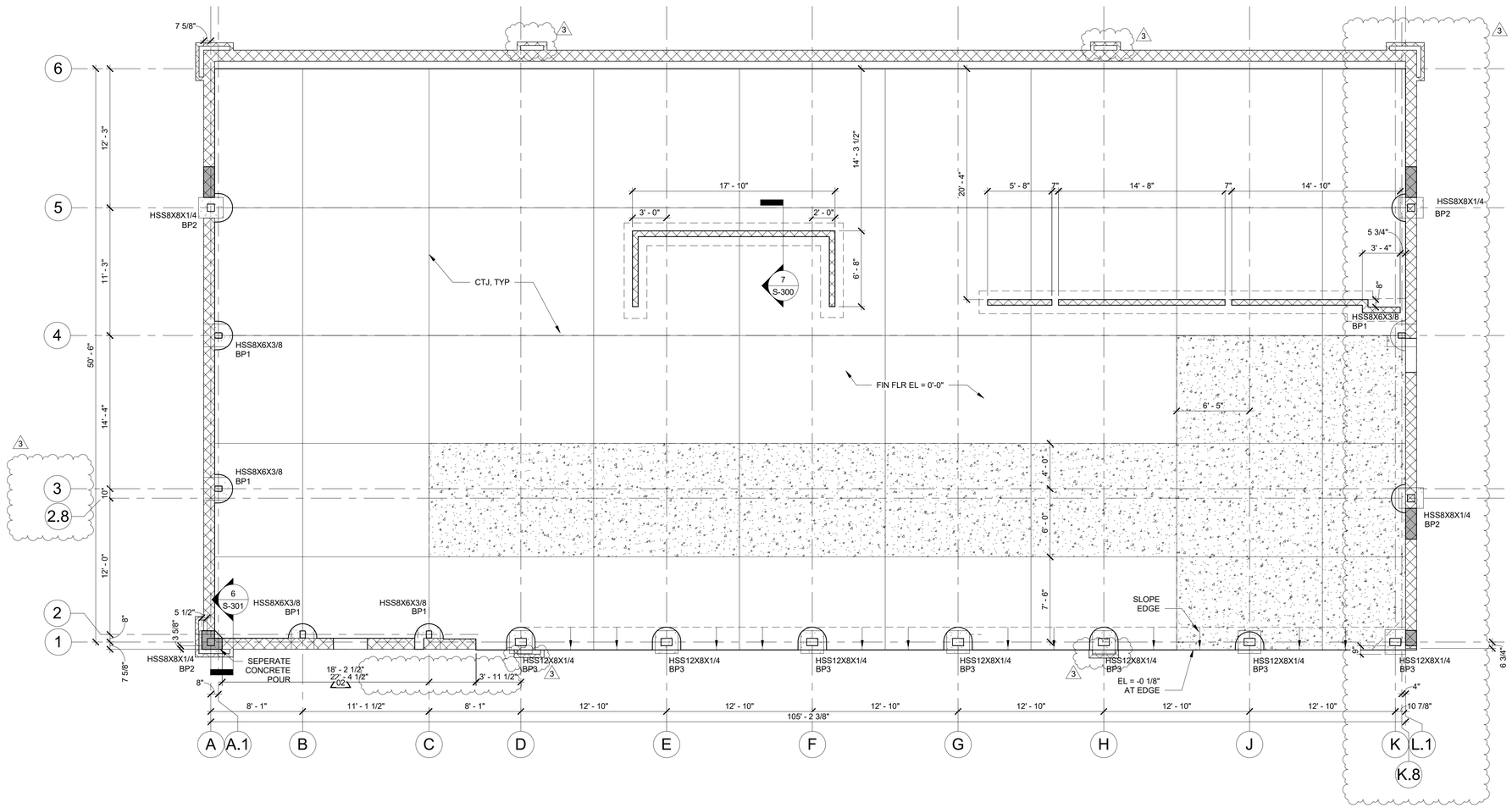
FOUNDATION PLAN

Project No.: 11432-180-1

Sheet No.: S-100

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025



1 SLAB PLAN

SCALE: 3/16" = 1'-0"

TRUE NORTH

STRUCTURAL COLUMN BASE PLATE SCHEDULE				
MARK	LENGTH	WIDTH	PLATE THICKNESS	ANCHORAGE
BP1	1'-2"	1'-2"	3/4"	(4) 3/4" ANCHOR BOLTS OR THREADED HEADED RODS (ASTM F1554 GR 55S1), E=PIER DEPTH LESS 1", P=5"
BP2	1'-4"	1'-4"	3/4"	(4) 3/4" ANCHOR BOLTS OR THREADED HEADED RODS (ASTM F1554 GR 55S1), E=PIER DEPTH LESS 1", P=5"
BP3	1'-4"	1'-4"	3/4"	(4) 3/4" ANCHOR BOLTS OR THREADED HEADED RODS (ASTM F1554 GR 55S1), E=PIER DEPTH LESS 1", P=5"

6" SLAB W/ (1) LAYER OF WWR 6X6-W4.0XW4.0 AT MID-DEPTH OF SLAB, LAP 12" MIN INTO HEAVIER REINFORCED SLAB AREAS.

REGION OF 6" SLAB W/ #4 @ 12" OC EW AT MID-DEPTH OF SLAB

SLAB PLAN NOTES:

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND DETAILS.
2. REFER TO ARCH FOR FLOOR FINISHES.
3. COORDINATE ALL CONDUIT EMBEDMENTS AND PLUMBING STUB-UP LOCATIONS WITH ELECTRICAL AND PLUMBING PLANS AND DETAILS AND ALL PRIME CONTRACTORS.
4. REFER TO ARCH FOR LOCATIONS OF OPENINGS IN CMU WALLS.
5. CJ = CONSTRUCTION JOINT. NOT USED. GC TO PROVIDE CONSTRUCTION JOINT LAYOUT SHOP DRAWINGS FOR REVIEW PRIOR TO PLACING CONCRETE SLABS FOR ANY CONSTRUCTION JOINTS REQUESTED.
6. CTJ = CONTRACTION JOINT
7. 6" CMU INTERIOR WALLS TO BE BUILT AFTER STORAGE RACK SYSTEM IS INSTALLED.
8. CONTRACTOR TO ENSURE NO CRACKS OR CTJ ARE LOCATED WITHIN 6" OF LIFT INSTALLATION ANCHORS.
9. CONTRACTOR TO CONTACT FLOOR POLISHING VENDER ONE WEEK PRIOR TO POURING FLOOR. COORDINATE WITH MAVIS TIRE NATIONAL ACCOUNT VENDOR:
   CPR CONCRETE, ATTN: BRENT SABINO.
   CELL: 865-630-1101 EMAIL: BRET.SABINO@CPRCONCRETE.COM

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

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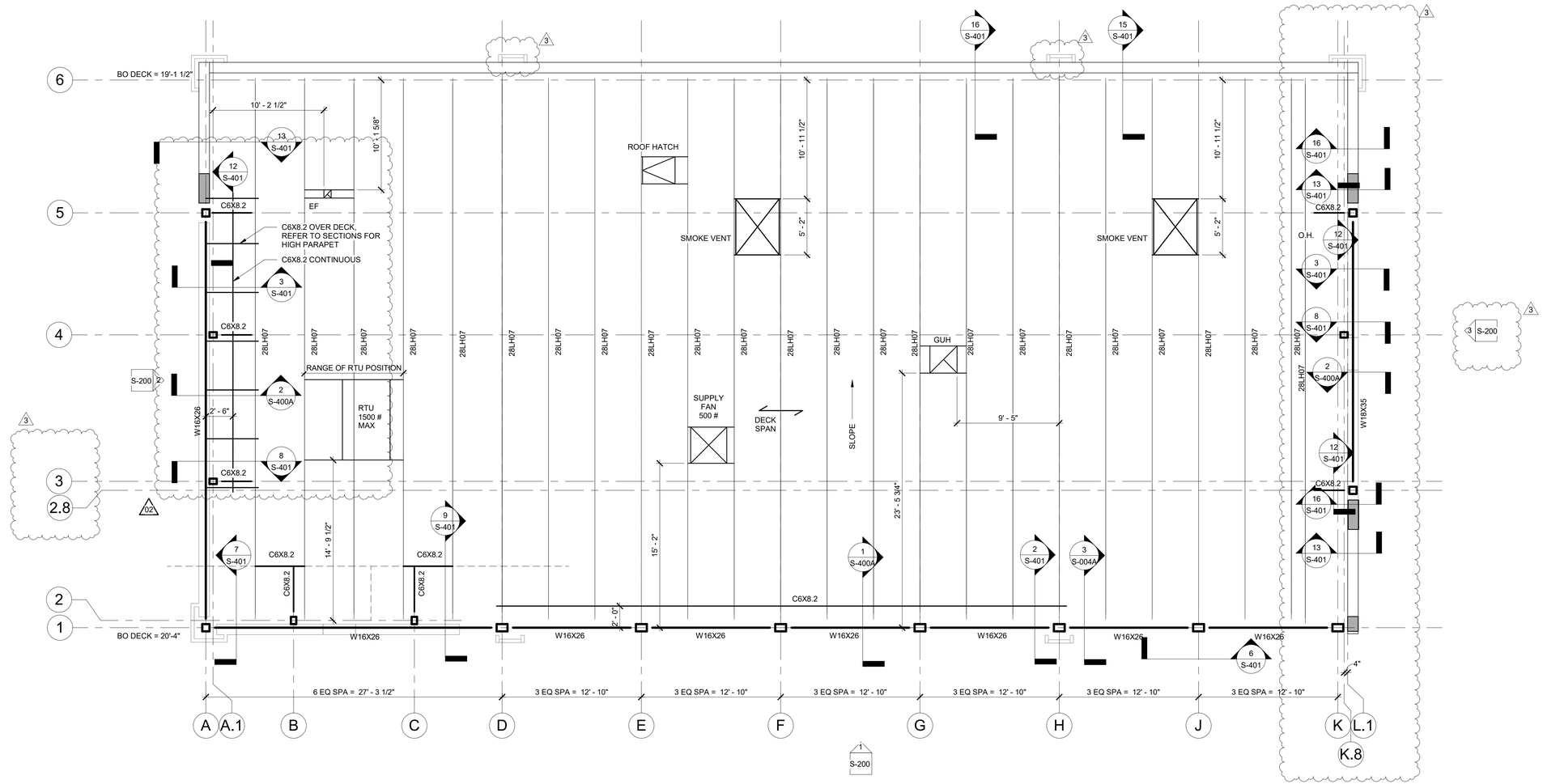
SLAB PLAN

Project No.: 11432-180-1

Sheet No.: **S-101**



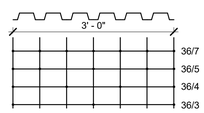
1 ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

TRUE NORTH

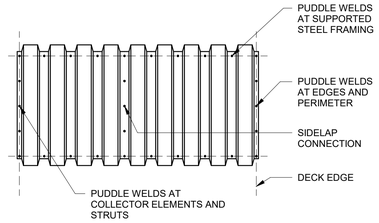
DECK FASTENER SCHEDULE

AREA	DECK	DECK TO STEEL MEMBER CONNECTORS	SIDE LAP CONNECTORS
ROOF	1.5B-20 GA	5/8" PUDDLE WELDS 36/7 PATTERN	#10 TEK SCREWS 5 SCREWS PER SPAN

PERIMETER, EDGES, COLLECTORS, AND STRUTS = 5/8" PUDDLE WELDS AT 6" OC UNLESS OTHERWISE NOTED



REFER TO DECK FASTENER SCHEDULE FOR REQUIRED DECK TO STEEL MEMBER CONNECTOR PATTERN



FRAMING NOTES:

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND DETAILS.
2. COORDINATE EXACT DIMENIONS AND LOCATION OF MECHANICAL EQUIPMENT WITH FINAL DETAILS FROM EQUIPMENT SUPPLIER.
3. REFER TO SPECIFICATIONS FOR JOIST PRIMER/PAINT.
4. ALL LOADS GIVEN ON PLANS ARE ALLOWABLE STRESS DESIGN (ASD) UNLESS OTHERWISE NOTED.
5. ANY PRE-ENGINEERED CANOPIES SHOWN BY ARCHITECT REQUIRE COORDINATION. ADDITIONAL STEEL MAY BE REQUIRED.
6. ALL ROOFTOP EQUIPMENT CURBS TO BE SIZED BASED ON ACTUAL EQUIPMENT ORDERED INCLUDING SUPPORT CURBS.
7. RTU POSITION TO BE VERIFIED FOR SUPPLY AND RETURN DUCTS TO CLEAR JOISTS. JOIST SUPPLIER TO DESIGN JOISTS FOR RANGE OF POTENTIAL RTU POSITION BETWEEN JOISTS.

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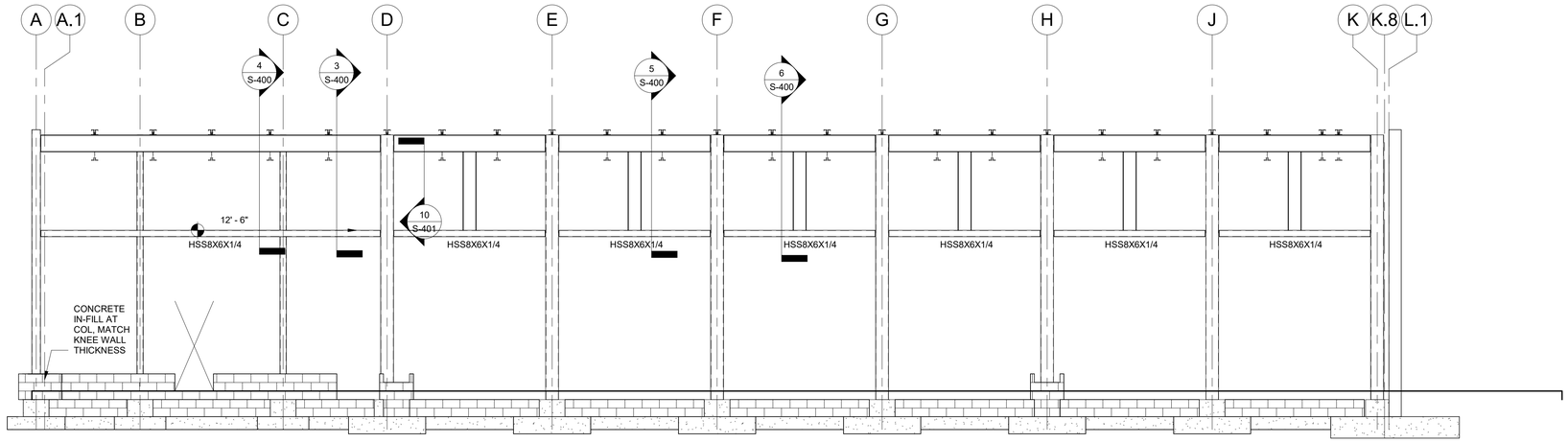
ROOF FRAMING PLAN

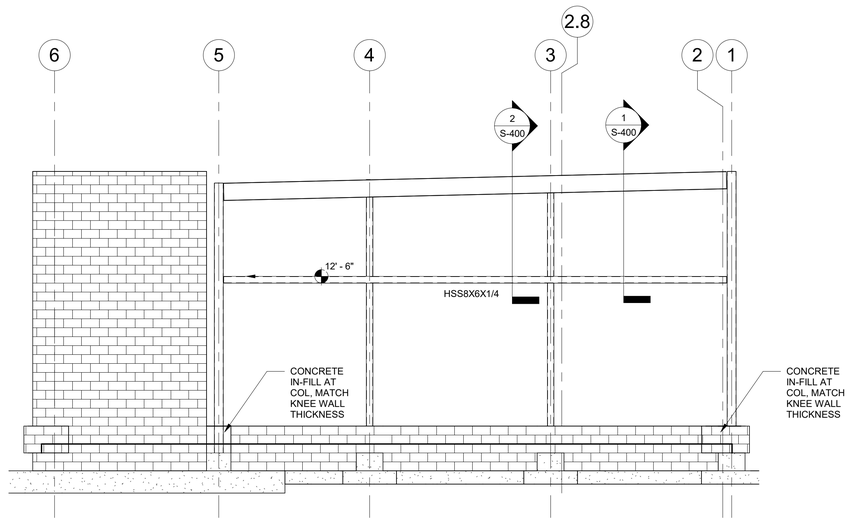
Project No.: 11432-180-1

Sheet No.: S-102

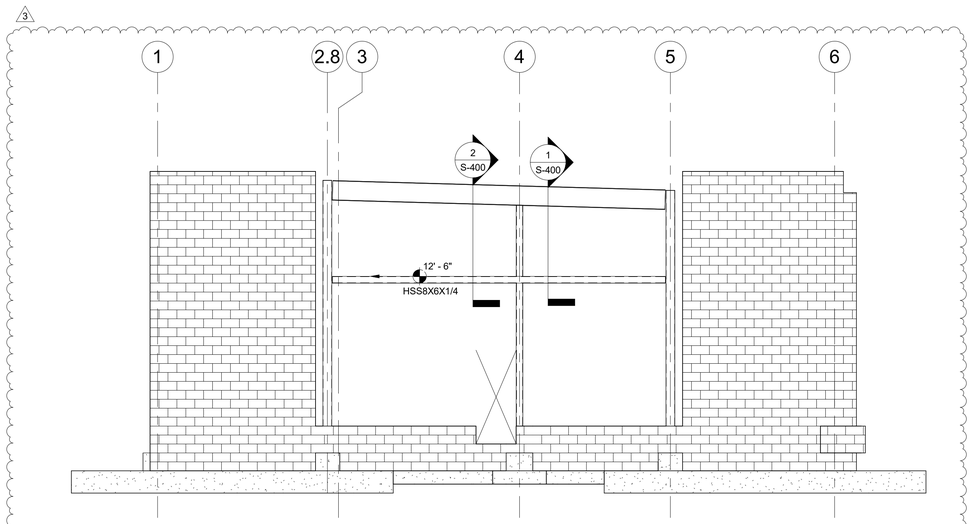
BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025



1 FRONT ELEVATION
SCALE: 3/16" = 1'-0"



2 STOREFRONT SIDE ELEVATION
SCALE: 3/16" = 1'-0"



3 STOREFRONT RIGHT SIDE ELEVATION
SCALE: 3/16" = 1'-0"

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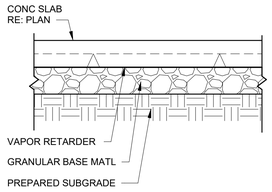
ELEVATIONS

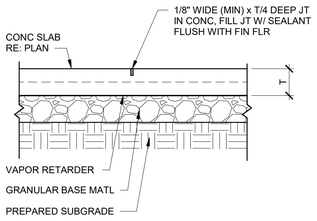
Project No.: 11432-180-1

Sheet No.: **S-200**



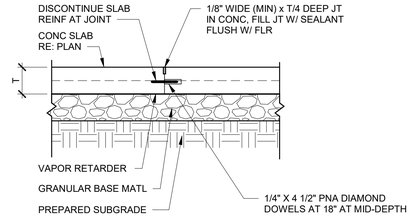
NOTES:
1. GRANULAR BASE (WHERE REQUIRED) = 4" MIN THICKNESS, REFER TO GEOTECHNICAL

1 TYPICAL SLAB CONSTRUCTION
SCALE: 3/4" = 1'-0"



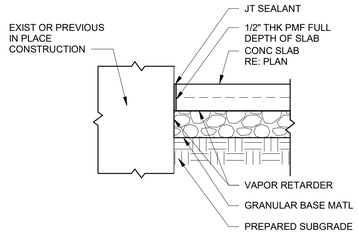
NOTES:
1. REFER TO PLAN FOR JOINT LOCATIONS

2 SLAB CONTRACTION JOINT (CTJ)
SCALE: 3/4" = 1'-0"

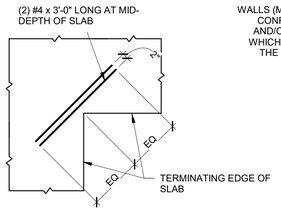


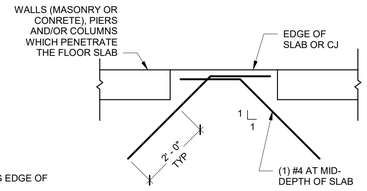
NOTES:
1. LOCATE CONSTRUCTION JOINTS TO CONFORM WITH SLAB JOINTING PATTERN.
2. SURFACE OF CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED.
3. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

3 SLAB CONSTRUCTION JOINT (CJ)
SCALE: 3/4" = 1'-0"

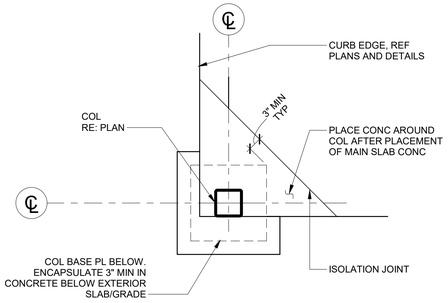


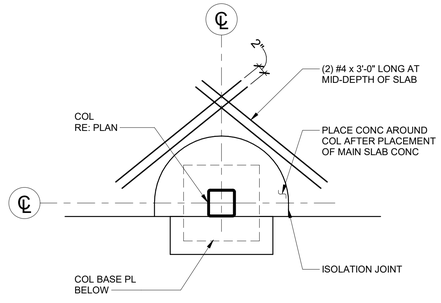
4 SLAB ISOLATION JOINT
SCALE: 3/4" = 1'-0"



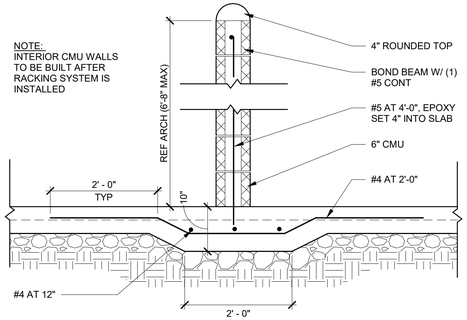


5 SLAB RE-ENTRANT REINF
SCALE: 1/2" = 1'-0"

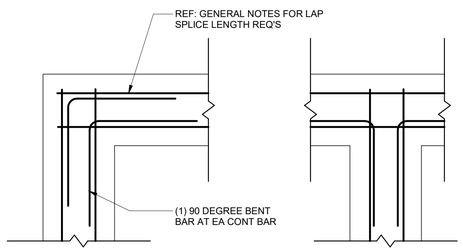




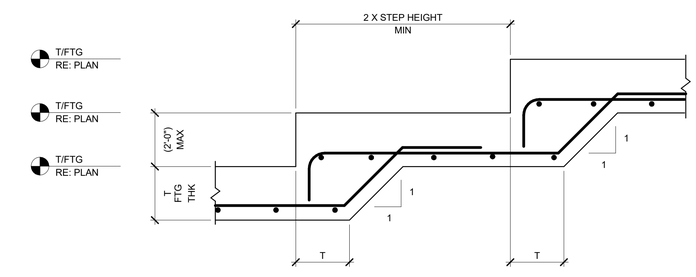
6 TYPICAL EXTERIOR COLUMN ISOLATION JOINTS
SCALE: 3/4" = 1'-0"



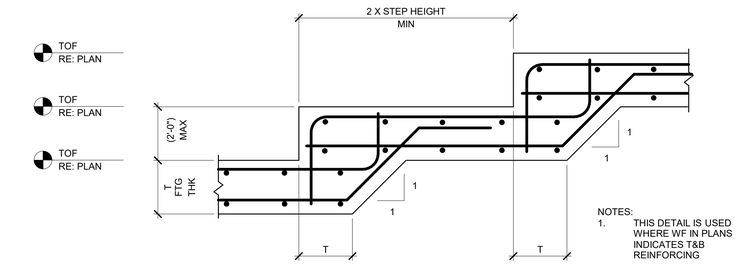
7 THICKENED SLAB AT INTERIOR CMU WALL
SCALE: 3/4" = 1'-0"



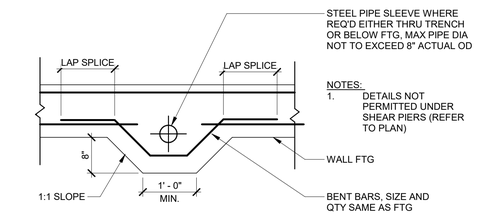
8 CONCRETE CONTINUITY CORNER DETAIL
SCALE: 1" = 1'-0"

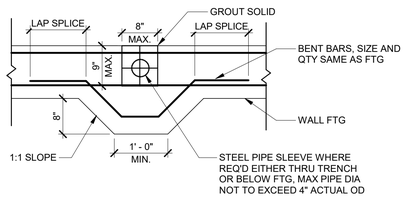


9 STEPPED FOOTING (BTM REINFORCING ONLY)
SCALE: 3/4" = 1'-0"



10 STEPPED FOOTING (TOP AND BTM REINFORCING)
SCALE: 3/4" = 1'-0"





11 SLEEVED PENERTRATIONS AT WALL FOOTINGS
SCALE: 3/4" = 1'-0"

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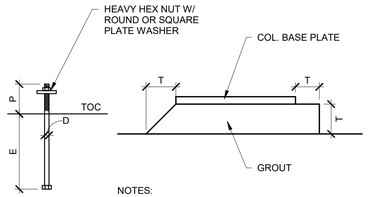
16775 PERSIMMON BLVD, WESTLAKE, FL 33470

SLAB AND FOUNDATION DETAILS

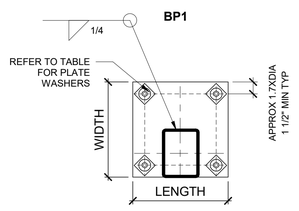
Project No.: 11432-180-1

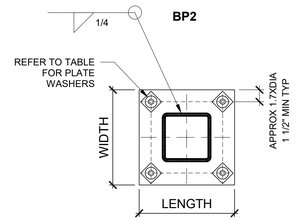
Sheet No.: **S-300**



NOTES:

1. GROUT MAY BE BEVELED OR FORMED
2. EXTEND MINIMUM T BEYOND EDGE OF BASE PLATE.
3. T = 1 1/2" MAX. FOR ANCHOR BOLTS UP TO 1" DIA. AND 2" MAX FOR LARGER ANCHOR BOLTS.
4. USE LEVELING NUTS OR STEEL PLATE SHIMS. STEEL PLATE SHIMS MUST MATCH BASE PLATE LENGTH AND WIDTH.





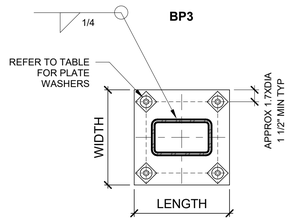
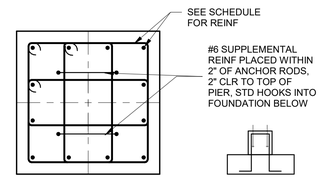


PLATE WASHER SCHEDULE

ANCHOR BOLT DIAMETER (IN)	BASE PLATE HOLE DIA (IN)	MIN WASHER SIZE: DIA (IN)	MIN WASHER THICKNESS (IN)
3/4	1 5/16	2	1/4
1	1 13/16	3	3/8
1 1/4	2 1/16	3 1/2	1/2
1 1/2	2 5/16	4	1/2

P1 (P3 SIM)

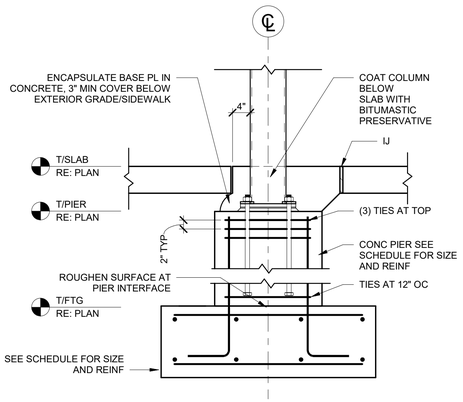


NOTES:
1. VERT REINF TO BE EQUALLY SPACED AROUND PIER.

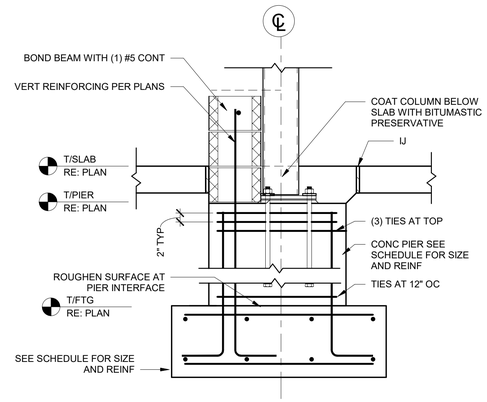
1 TYPICAL BASE PLATES AND ANCHOR RODS
SCALE: 1" = 1'-0"

2 PLATE WASHERS
SCALE: 1" = 1'-0"

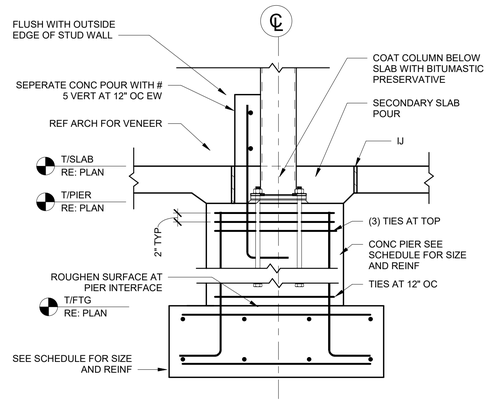
3 PIERS
SCALE: 1" = 1'-0"



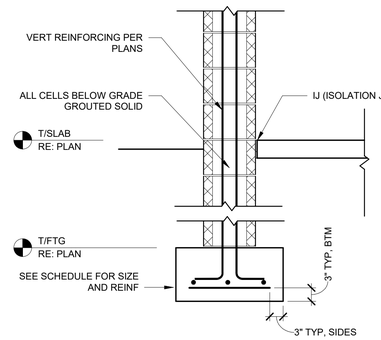
4 COLUMN FTG WITH PIER AT GARAGE
SCALE: 3/4" = 1'-0"



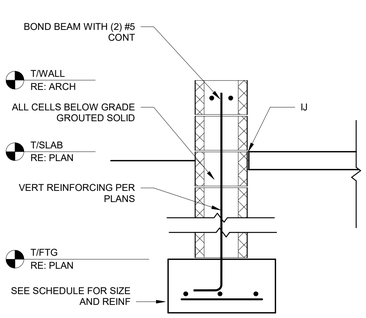
5 COLUMN FTG WITH PIER AND CURB AT STOREFRONT
SCALE: 3/4" = 1'-0"



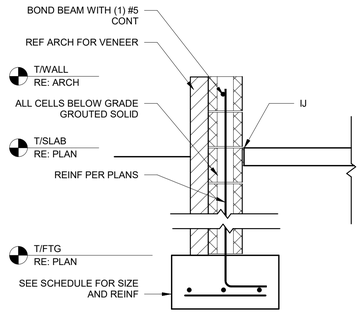
6 CORNER COLUMN FTG AT STOREFRONT
SCALE: 3/4" = 1'-0"



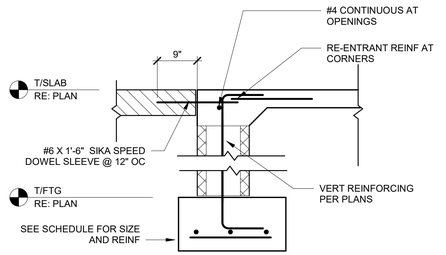
7 CMU EXTERIOR WALL (12")
SCALE: 3/4" = 1'-0"



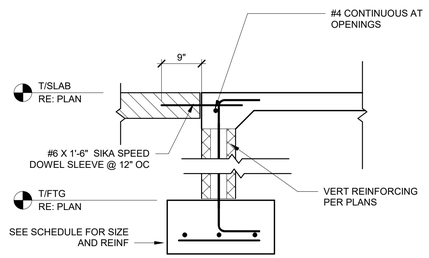
8 CMU EXTERIOR KNEE WALL (12")
SCALE: 3/4" = 1'-0"



9 CMU EXTERIOR KNEE WALL WITH VENEER (8")
SCALE: 3/4" = 1'-0"



10 TYPICAL CMU EXTERIOR WALL AT OPENING (12")
SCALE: 3/4" = 1'-0"



11 CMU EXTERIOR WALL AT OPENING (8")
SCALE: 3/4" = 1'-0"

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

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MAVIS TIRE SUPPLY, LLC
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CLIENT

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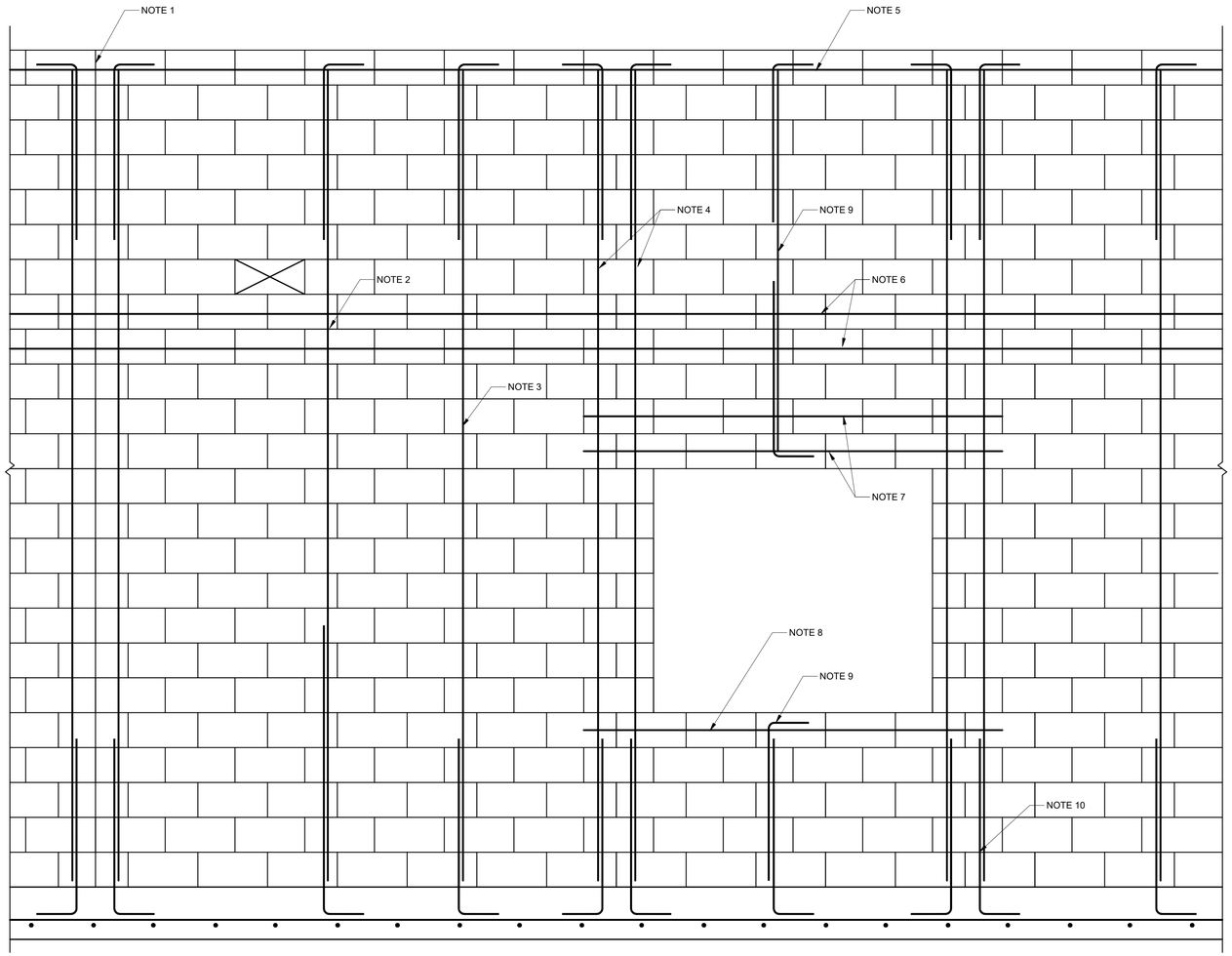
MARK	DATE	COMMENTS
03	03/19/2026	FACADE UPDATES
02	10/22/2025	2ND ROUND PERMIT COMMENTS
01	08/21/2025	1ST ROUND PERMIT COMMENTS
	07/01/2025	PERMIT SUBMISSION

MAVIS TIRES & BRAKES #2308 - CITY OF WESTLAKE, FL
16775 PERSIMMON BLVD, WESTLAKE, FL 33470

FOUNDATION AND WALL DETAILS

Project No.: 11432-180-1

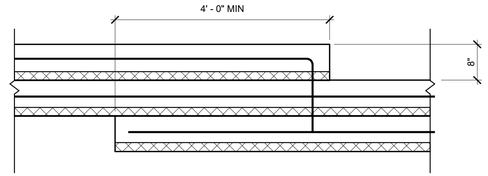
Sheet No.: **S-301**



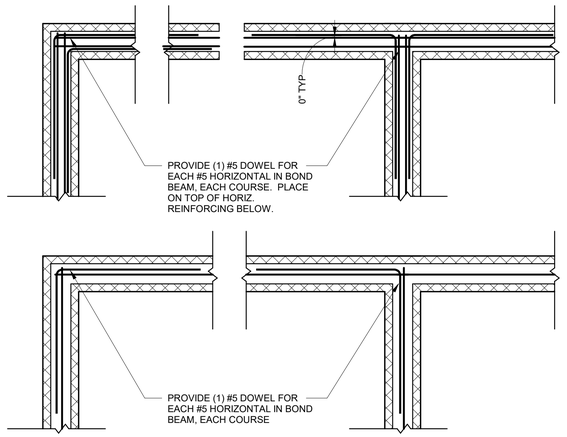
NOTES:
1. CONTROL JOINT LOCATION. BOND BEAM REINFORCING CONTINUOUS THROUGH CONTROL JOINTS.
2. PLACE REINF ADJACENT TO MISC OPENINGS TO MAINTAIN OC SPACING.
3. TYPICAL WALL REINF.
4. JAMB REINF FOR OPENINGS. ONE REINFORCED FILLED CELL UNLESS OTHERWISE NOTED IN PLANS OR ELEVATIONS.
5. PARAPET BOND BEAM.
6. ROOF BOND BEAM.
7. LINTEL REINF. EXTEND FULL WIDTH OF JAMB REINF. SEE SEISMIC NOTE BELOW.
8. UNO, PROVIDE MINIMUM OF (1) #5 CONTINUOUS AT WINDOWS WITH 8" CMU AND (2) #5 AT WINDOWS WITH 10" OR 12" CMU. EXTEND REINF FULL WIDTH OF JAMB REINF. SEE SEISMIC NOTE BELOW.
9. REINFORCING ABOVE AND BELOW OPENINGS SAME AS MAIN WALL REINF.
10. DOWELS TO MATCH VERTICAL REINF SIZE, QTY, AND SPACING, TYP.

FOR SEISMIC CATEGORIES "C" AND "D", EXTEND ALL LINTEL AND SILL REINFORCING 24" MINIMUM IN GROUTED CELLS EACH SIDE OF ALL OPENINGS.

STEPPED BOND BEAM

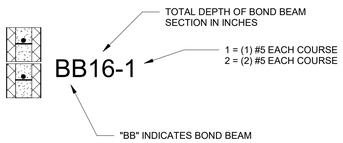


HORIZ REINF CONTINUITY



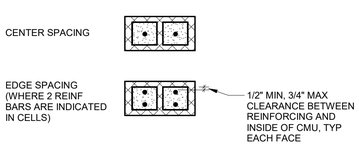
NOTES:
1. LOCATE CORNER REINFORCING ABOVE, BELOW, OR AT SIDE OF BOND BEAM REINFORCING AS NECCESSARY TO AVOID CONGESTION

BOND BEAMS



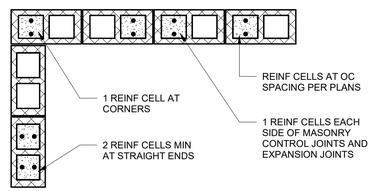
NOTES:
1. BOND BEAMS CAN BE BOND BEAM BLOCK OR KO BLOCK.
2. BOND BEAMS SHALL BE SAME WIDTH AS THE WALL IN WHICH THEY ARE PLACED.
3. BOND BEAMS SHALL RUN CONTINUOUS EXCEPT AT EXPANSION JOINTS LOCATED SPECIFICALLY IN PLANS AND/OR ELEVATIONS.
4. GROUT ALL HEAD JOINTS.

VERT REINF PLACEMENT



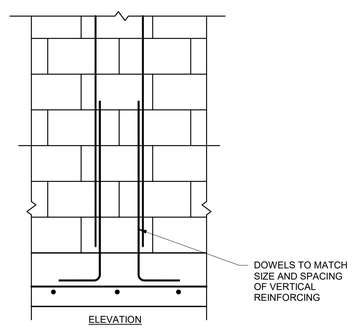
NOTES:
1. ALL REINF SPLICES OF VERTICAL REINF SHALL BE MADE AT SIDES OF VERTICAL REINF.
2. BOND BEAM REINF GOES INSIDE THE VERTICAL REINF WHEN VERTICAL REINF IS EDGE SPACING.

TYPICAL VERT REINF

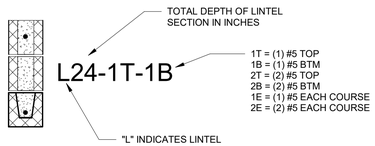


NOTES:
1. REINF SHALL BE SAME SIZE AS VERT REINF IN WALL (REFER TO PLANS). SIZE AND PLACEMENT IN CELLS [CENTERED OR EDGE SPACING].

MASONRY PILASTER

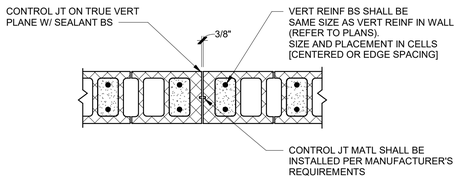


LINTELS



NOTES:
1. ALL LINTELS USE PRECAST BASE. KO BLOCK ABOVE.
2. LINTELS SHALL BE SAME WIDTH AS THE WALL IN WHICH THEY ARE PLACED.
3. ALL OPENINGS LARGER THAN 8" (16" IF DIRECTLY UNDER A BOND BEAM) SHALL USE LINTELS AT TOP OF OPENINGS.

MASONRY CONTROL JOINTS



NOTES:
1. JOINT REINFORCING DISCONTINUOUS AT CONTROL JOINTS.
2. BOND BEAMS ARE CONTINUOUS AT CONTROL JOINTS.

1 MASONRY CONSTRUCTION
SCALE: 3/4" = 1'-0"

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

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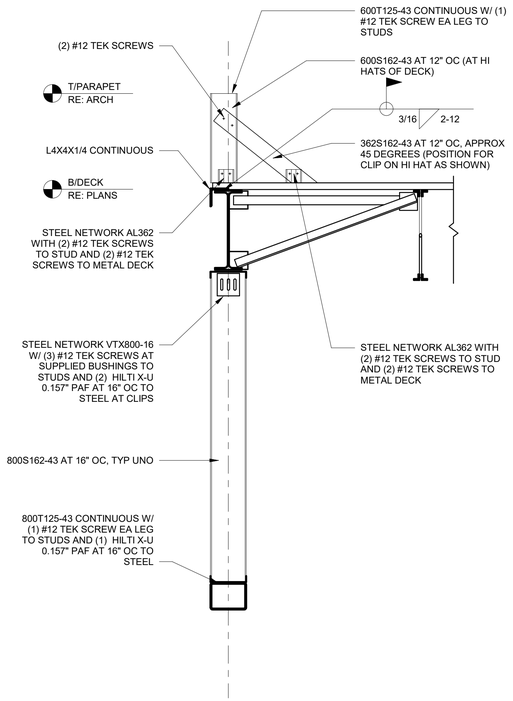
16775 PERSIMMON BLVD, WESTLAKE, FL 33470

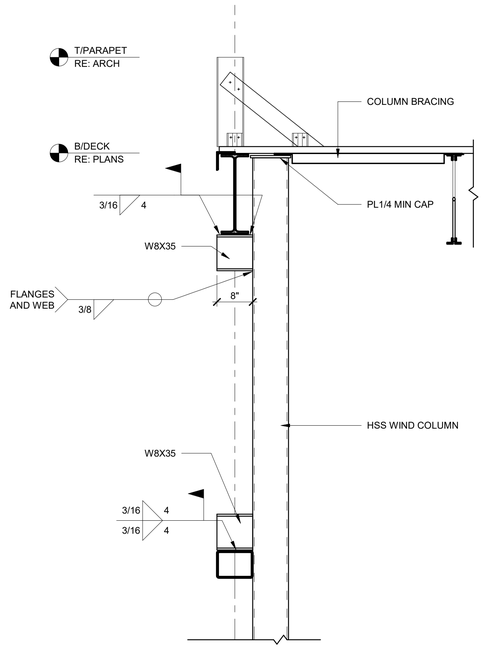
TYPICAL MASONRY CONSTRUCTION

Project No.: 11432-180-1

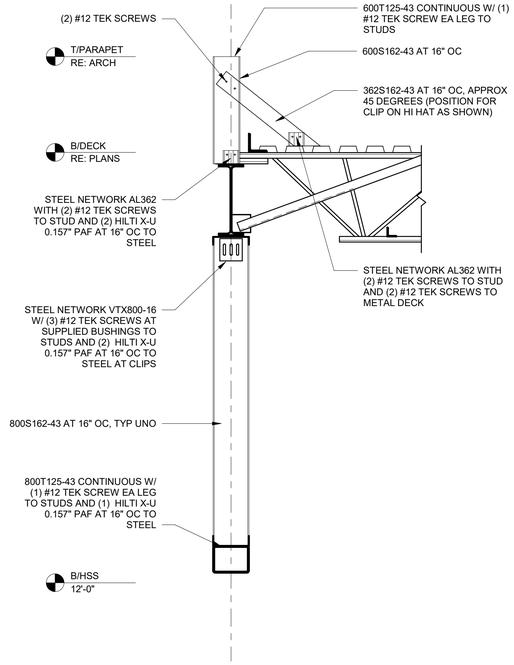
Sheet No.: S-302



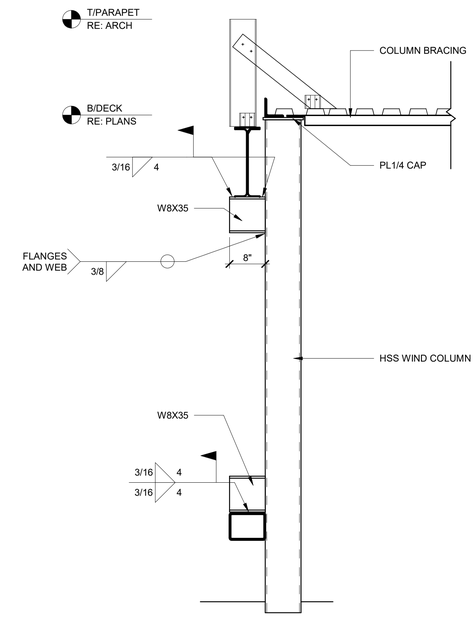
1 STOREFRONT SECTION (DECK BRG)
SCALE: 3/4" = 1'-0"



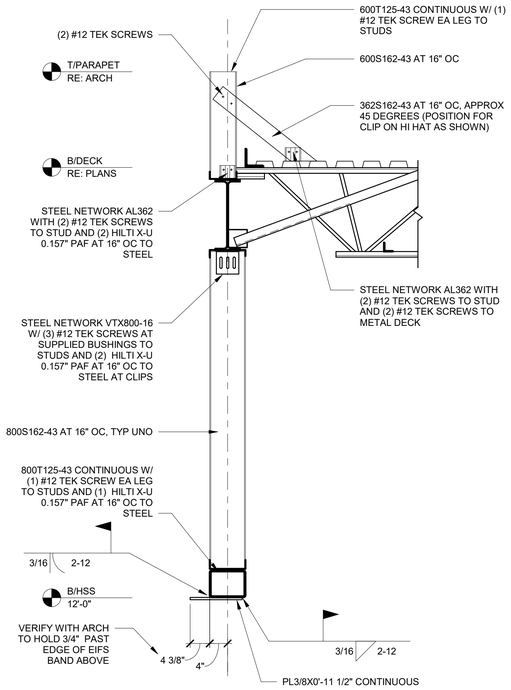
2 STOREFRONT SECTION AT COLUMN (DECK BRG)
SCALE: 3/4" = 1'-0"



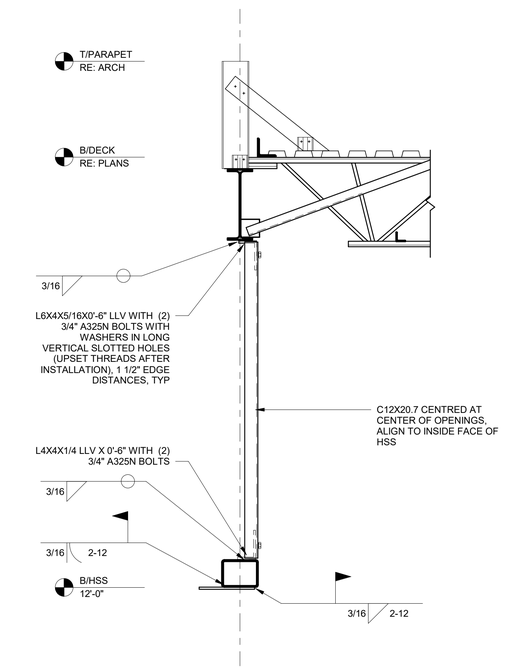
3 STOREFRONT SECTION (JST BRG)
SCALE: 3/4" = 1'-0"



4 STOREFRONT SECTION AT COLUMN (JST BRG)
SCALE: 3/4" = 1'-0"



5 GARAGE SECTION (JST BRG)
SCALE: 3/4" = 1'-0"



6 GARAGE SECTION AT CENTER (JST BRG)
SCALE: 3/4" = 1'-0"

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

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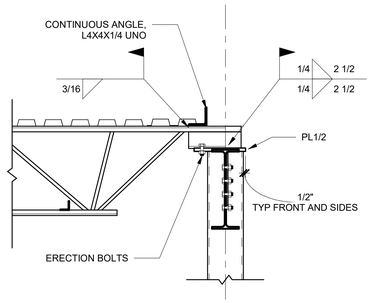
16775 PERSIMMON BLVD, WESTLAKE, FL 33470

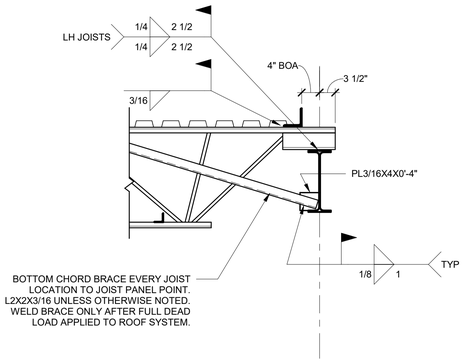
FRAMING DETAILS

Project No.: 11432-180-1

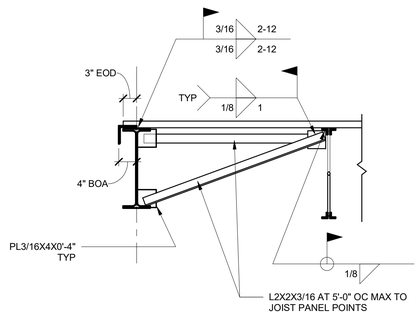
Sheet No.: **S-400**



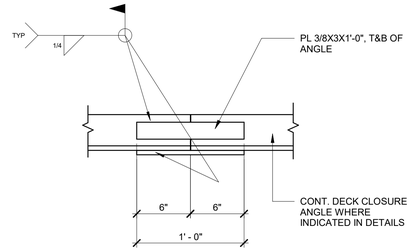
1 JOIST BEARING AT COLUMN TOP
SCALE: 3/4" = 1'-0"



2 JOIST BRG ON W BEAM AT EXTERIOR
SCALE: 3/4" = 1'-0"

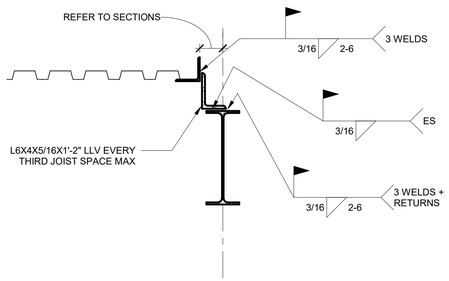


3 DECK BEARING ON W BEAM AT EXTERIOR
SCALE: 3/4" = 1'-0"

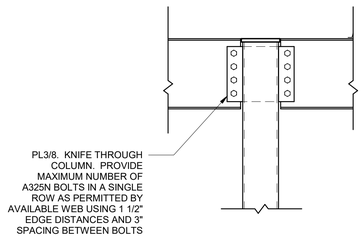


ALTERNATE: FULL BUTT-SPLICES, CONCAVE OUTWARDS

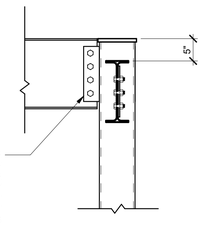
4 DECK ANGLE CONTINUITY
SCALE: 1 1/2" = 1'-0"



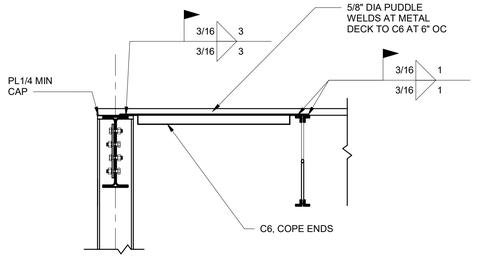
5 BETWEEN JOIST BRG
SCALE: 1" = 1'-0"



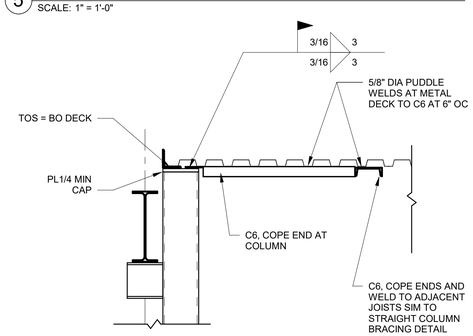
6 W BEAM TO COLUMN
SCALE: 3/4" = 1'-0"



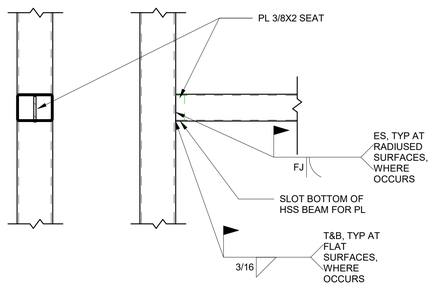
7 CORNER WITHOUT BRACED FRAME
SCALE: 3/4" = 1'-0"



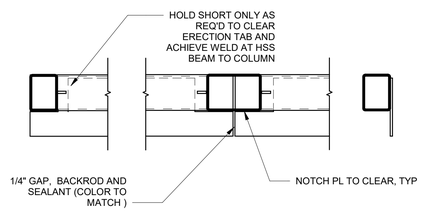
8 STRAIGHT COLUMN BRACING
SCALE: 3/4" = 1'-0"



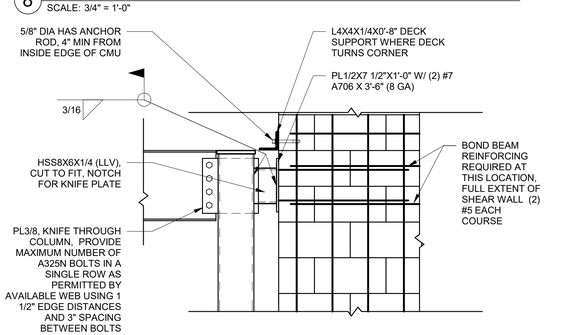
9 T COLUMN BRACING
SCALE: 3/4" = 1'-0"



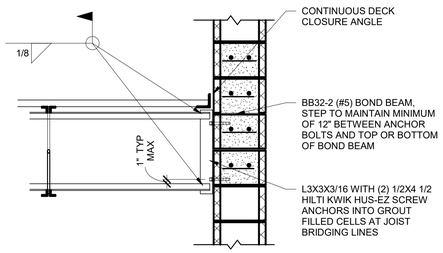
10 HSS TO HSS COL CONNECTION
SCALE: 3/4" = 1'-0"



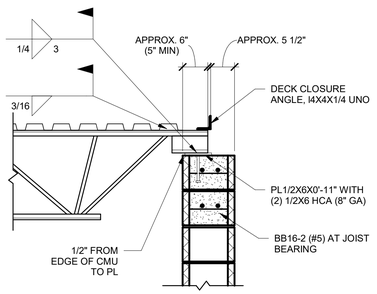
11 PLATE AT HSS DETAILING AT ENDS
SCALE: 3/4" = 1'-0"



12 DRAG CONNECTION TO CMU
SCALE: 3/4" = 1'-0"

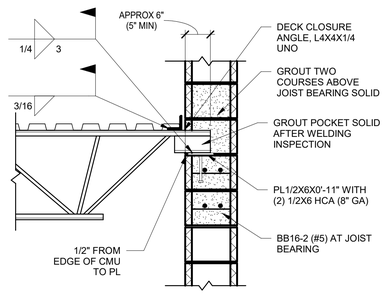


13 BETWEEN JOIST BRG
SCALE: 3/4" = 1'-0"

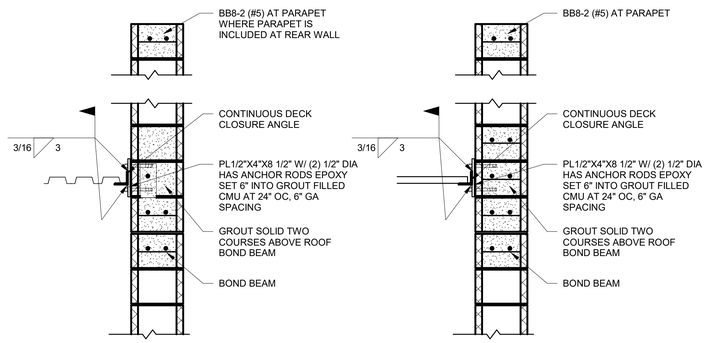


NOT USED

14 JOIST BEARING ON CMU (12") W/O PARAPET
SCALE: 3/4" = 1'-0"



15 JOIST BEARING ON CMU (12") W/ PARAPET
SCALE: 3/4" = 1'-0"



16 BETWEEN JOIST BRG AND AT SIDE WALLS
SCALE: 3/4" = 1'-0"

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

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03	03/19/2026	FACADE UPDATES
02	10/22/2025	2ND ROUND PERMIT COMMENTS
01	08/21/2025	1ST ROUND PERMIT COMMENTS
	07/01/2025	PERMIT SUBMISSION

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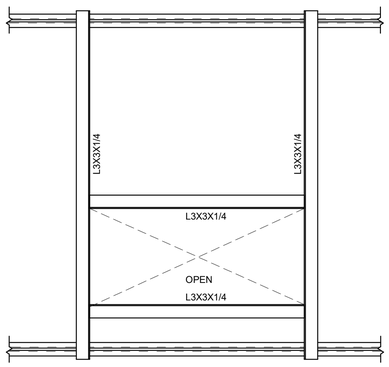
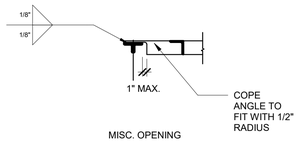
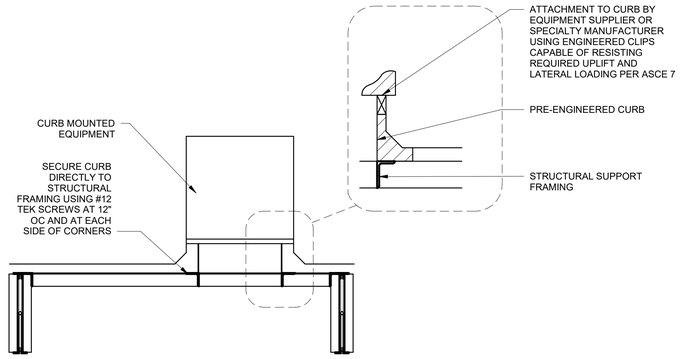


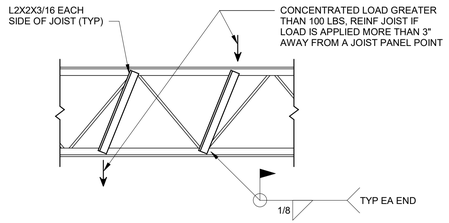
MISC. OPENING (EQUIPMENT WEIGHT <500 LB)



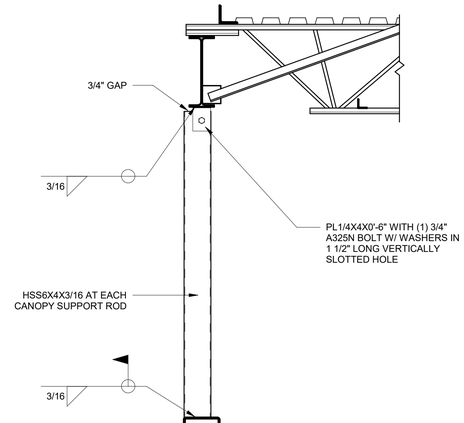
MISC. OPENING



1 RTU SUPPORT FRAMES
SCALE: 3/4" = 1'-0"



2 JOIST REINF FOR CONCENTRATED LOADS
SCALE: 3/4" = 1'-0"



3 STOREFRONT SECTION AT CANOPY ROD (JOIST BRG)
SCALE: 3/4" = 1'-0"

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FRAMING DETAILS

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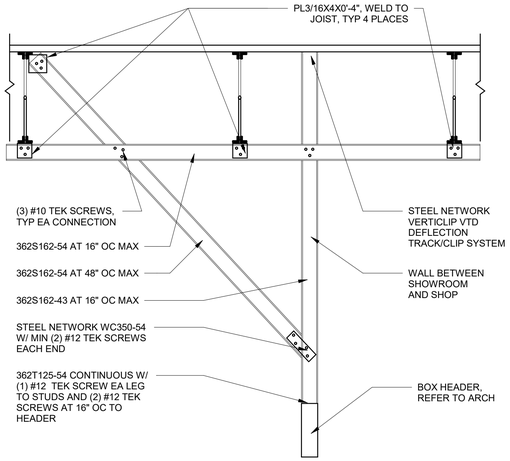
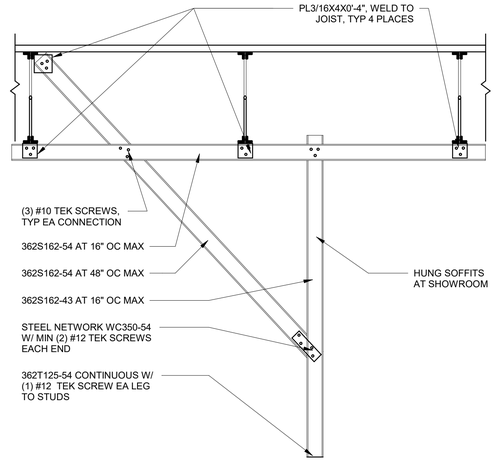
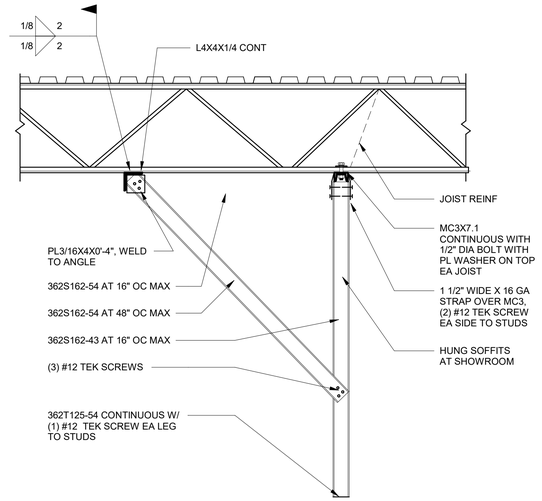
Sheet No.: **S-402**



1 INTERIOR WALL FRAMING
SCALE: 3/4" = 1'-0"



2 HUNG SOFFITS (PARALLEL TO JOISTS)
SCALE: 3/4" = 1'-0"



3 HUNG SOFFITS (PERPENDICULAR TO JOISTS)
SCALE: 3/4" = 1'-0"

4 BOX HEADER TO HSS
SCALE: 3/4" = 1'-0"

5 KNEE WALL BASE
SCALE: 3/4" = 1'-0"

6 TYPICAL INTERIOR WALL BASE
SCALE: 3/4" = 1'-0"

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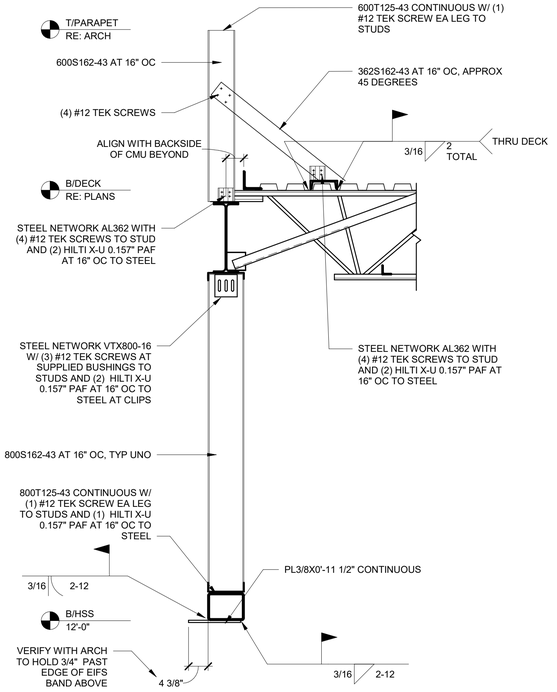
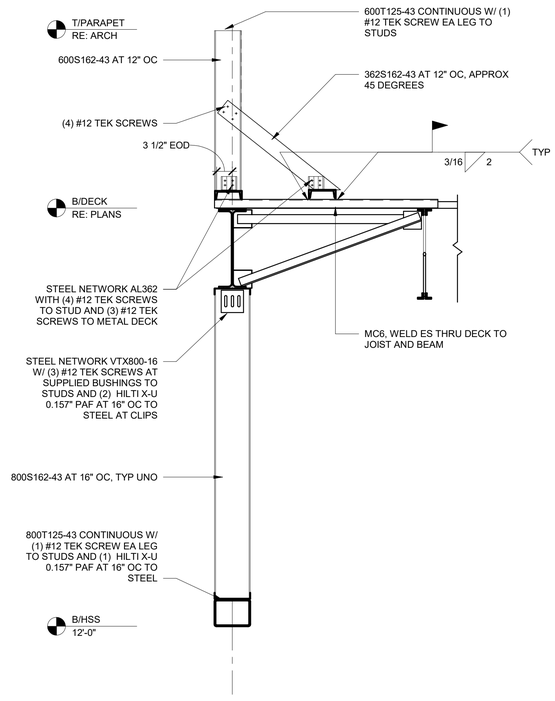


1 GARAGE SECTION AT CENTER (JST BRG, HIGH PARAPET)

SCALE: 3/4" = 1'-0"



2 STOREFRONT SECTION (DECK BRG, HIGH PARAPET)

SCALE: 3/4" = 1'-0"

02

BASED ON 6-BAY PROTOTYPE DATED FEB 20 2025

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S-400A