### 1.0 GENERAL

- 1. All work shall conform to the "2020 New York Building code" and to all other applicable Federal, State, and Local regulations.
- 2. In case of conflict between the General Notes, Specifications, and details, the most rigid requirements shall govern.
- 3. Work not indicated on a part of the drawings but reasonably implied to be similar to that shown at corresponding places shall be repeated.
- 4. Job site safety and construction procedures are the sole responsibility of the Contractor.
- 5. The Contractor shall provide for dewatering as required during excavation and construction.
- 6. The Contractor shall coordinate openings, sleeves, concrete housekeeping pads, inserts, and depressions shown on the Architectural, Structural, Mechanical, Electrical, and Plumbing Drawings.
- 7. See Architectural Drawings for locations of masonry and drywall non-load bearing partitions. Provide slip connections that allow vertical movement at the heads of all such partitions. Connections shall be designed to support the top of the walls laterally for the code—required
- 8. All costs of investigation and/or redesign due to Contractor improper installation of structural elements or other items not in conformance with the Contract Documents shall be at the Contractor's expense.
- 9. The structural drawings shall be used in conjunction with the specifications, architectural and mechanical drawings. If there is a discrepancy between drawings, it is the Contractor's responsibility to notify the Architect prior to performing the work.
- 10. The Contractor shall verify and/or establish all existing conditions and dimensions at the site. Failure to notify Architect/Engineer of unsatisfactory conditions constitutes acceptance of unsatisfactory conditions.
- 11. If the existing field conditions do not permit the installation of the work in accordance with the details shown, the Contractor shall notify the Architect/Engineer immediately and provide a sketch of the condition with his proposed modification of the details given on the Contract
- Documents. Do not commence work until condition is resolved and modification is approved by the Architect. 12. Where alterations involve the existing supporting structure, the Contractor shall provide shoring and protection required to ensure the structural integrity of the existing structure.
- 13. The Contractor shall be responsible to determine allowable construction loads and to provide design and construction of falsework, formwork,
- stagings, bracing, sheeting, and shoring, etc. 14. Contractor to provide sheeting, bracing, and underpinning as necessary to prevent any lateral or vertical movements of existing buildings, streets, and any existing utility lines.
- 15. Bracing, sheeting, shoring, etc., required to insure the structural integrity of the existing buildings or new construction, sidewalks, utilities, etc., shall be designed by a Professional Engineer engaged by the Contractor. Detailed signed and sealed shop drawings shall be prepared indicating all work to be performed. Submit the shop drawings in accordance with the Contract requirements.
- 16. In no case shall heavy equipment be permitted closer than 8'-0" from any foundation wall. If it is necessary to operate such equipment closer than 8'-0" to the wall, the Contractor shall be the sole responsible party and, at his own expense, shall provide adequate supports or brace the wall to withstand the additional loads superimposed from such equipment.
- 17. No blasting shall be permitted without written approval.
- 18. The Contractor shall submit, for review, drawings and calculations for all performance assemblies identified in the General Notes and listed below: The design of these assemblies is the responsibility of the Contractor's Engineer registered in the Project's jurisdiction. All submittals shall bear this Engineer's seal and signature. Review shall be for general conformance with the project requirements as indicated on the Drawings and in the General Notes.
- A. Non—load bearing stud wall and curtain wall systems and related connections: Designs shall take into account all vertical and lateral loads required by applicable building codes. Back up system and curtain wall shall be designed for a maximum deflection of 1/600 of the span, or 3/8", whichever is less, at the applicable design wind load without the code applied reduction factors.
- B. Metal stairs and metal railings: Designs shall take into account all vertical and lateral loads required by applicable building codes. Where headers or other types of structural members have been designated by the Structural Engineer of Record to support the stairs, the connections from the stairs shall be designed so that no eccentric or torsional forces are induced in these structural members. The
- Contractor shall be responsible for furnishing and installing hardware as required by the stair design. 19. Shop drawings for all structural materials to be submitted to Architect for review prior to the start of fabrication or commencement of work.
- Review period shall be a minimum of two (2) weeks. 20. Reproduction of any portion of the Structural Contract Drawings for resubmittal as shop drawings is prohibited. Shop drawings produced in
- such a manner will be rejected and returned. 21. Shop drawings shall bear the Contractor's stamp of approval which shall constitute certification that the Contractor has verified all
- construction criteria, materials, and similar data and has checked each drawing for completeness, coordination, and compliance with the
- 22. The shop drawings shall include dimensioned floor and roof edges, openings and sleeves at all floors required for all trades. 23. The drawings have been produced entirely on MPP Engineers Cadd System. Any other lettering, lines or symbols, other than professional
- stamps and signatures, have been made without the authorization of MPP Engineers are invalid. 24. The structural drawings shall govern the work for all structural features, unless noted otherwise. The architectural drawings shall govern the
- work for all dimensions. 25. Inspection is required of all construction delineated on the Structural Drawings and/or specifications. The Owner shall employ a
- Testing/Inspection Agency which shall provide personnel with the following minimum qualifications:
- A. Certified by Institute of Certified Engineering Technicians, or other recognized comparable organization, and, 1. For inspection, sampling, testing concrete and masonry: ACI Certified Concrete Field—Testing Technician, Grade I; and Construction Inspector,
- 2. Structural Steel Inspection: AWS Certified Welding Inspector.
- 26. Submit periodic reports within one business day after receipt by the Contractor to Architect/Engineer and the construction code official during construction. Submit final inspection report summary for each division of work, certified by a licensed professional Engineer, that inspections were performed and that work was performed in accordance with Contract Documents.
- 27. All materials shall be stored to protect them from exposure to the elements.

# 2.0 EARTHWORK

- 1. Engineered (controlled compacted) fill within the building area shall be constructed prior to footing excavation
- 2. Excavation shall be performed so as not to disturb existing adjacent buildings, streets, and utility lines. Verify location of all utilities prior to commencement of work. Hand excavate around utilities as required.
- 3. See the specifications and geotechnical report for excavation, backfill and preparation of the foundation and slab—on—grade subgrade, 4. Satisfactory fill materials are those complying with ASTM D2487, groups GW, GP, GM, SM, SW, and SP. On site borrow material shall be tested
- to determine suitability for use as fill material. 5. Compact soil to not less than the following percentages of maximum density of modified proctor (ASTM D1557):
- Under building foundations 98%
- Under building slabs, steps, pavements 95%
- 6. Remove existing vegetation, topsoil, and unsatisfactory soil materials. Proof roll subgrade to obtain uniformly densified substrata prior to placing fill material evenly in 8" thick (maximum) layers and compacting to required density.
- 7. The Owner shall retain the services of a Professional Geotechnical Engineer, subject to the approval of the Architect, to perform soil testing and inspection. The engineer shall inspect the subgrade to verify bearing levels and ensure that the safe bearing capacity meets or exceeds the design value indicated below. Reports shall be submitted to the Architect outlining the work performed and test results.
- 8. Backfill shall be brought up simultaneously on each side of walls and grade beams, with a grade difference not to exceed 2'-0" at any time.

# 3.0 FOUNDATIONS

- 1. Foundations have been designed and footing elevations established on the basis of a Subsurface Investigation Report and recommendations prepared by Melick—Tully & Associates Dated September 14th 2021. See the report for additional requirements. The requirements contained in the geotechnical report are part of the Construction Documents. 2. Footings shall bear on undisturbed stratum or engineered fill with a minimum bearing capacity of 4000 psf.
- 3. Prior to footing concrete placement, the footing subgrade shall be approved by the inspecting Geotechnical Engineer (County of Rockland). If
- conditions prove to be unacceptable at elevations shown, footing bottoms shall be lowered to acceptable subgrade material. Fill over-excavation with lean concrete (2,500 psi).
- 4. The bottom of exterior footings shall be a minimum of 3'-6" below finished grade, or as required by Local building codes. 5. The bearing elevations of new footings adjacent to existing footings are to match the adjacent existing footing bearing elevations unless
- 6. Slabs on grade shall bear on mechanically compacted soil capable of supporting 150 psf. Drainage fill under slabs shall be compacted gravel or crushed stone.
- 7. Concrete for foundations shall be poured on the same day the subgrade is approved by the Geotechnical Engineer.
- 8. Utility lines shall not be placed through or below foundations without the Structural Engineer's approval.
- 9. Provide a continuous waterstop at all horizontal and vertical construction joints in the elevator pit and all other pit walls.
- 10. The Contractor shall observe water conditions at the site and take the necessary precautions to ensure that the foundation excavations remain dry during construction. Any sheeting or shoring required for dewatering shall be the responsibility of the Contractor.

# 4.0 CAST-IN-PLACE CONCRETE

- 1. Concrete shall be designed and detailed in accordance with the Building Code Requirements for Structural Concrete (ACI-318-14), and constructed in accordance with the CRSI Manual of Standard Practice.
- 2. Concrete for foundation and exterior concrete foundation wall shall have a minimum compressive 28—day strength of 4,500 psi, all other concrete shall be 4000 psi: Air Entrainment 4% to 6% in all exposed concrete work.
- 3. Maximum water/cement ratios:

indicated otherwise on plans.

- A. Foundations
- B. Interior Slabs
- C. Exterior Slabs 0.44
- 4. All concrete shall be normal weight concrete (144 pcf +) with all cement conforming to ASTM C150, Type I. Maximum aggregate size shall be  $1\frac{1}{2}$ " for footings and  $\frac{3}{4}$ " for walls and slabs, conforming to ASTM C33.
- 5. Reinforcing steel: ASTM A615 Grade 60.
- 6. Welded Wire Reinforcement: (WWR) ASTM A-185.
- 7. Leveling Grout shall be non-shrink, non-metallic type, factory pre-mixed grout in accordance with CE-CRD-C621 or ASTM C109, with a minimum compressive 28-day strength of 5,000 psi.
- 8. Reinforcing steel clear cover shall be as follows unless noted otherwise: A. Concrete cast against and permanently exposed to earth 3".
- B. Concrete exposed to earth or weather
- #5 bars and smaller
- #6 bars and larger

- #6 bars and larger #5 bars and smaller
- C. Concrete not exposed to weather or in contact with ground Slabs, walls, joists
- #11 bars and smaller Beams and columns Primary reinforcement, ties, stirrups, or spirals
- 9. Submit to Architect/Engineer reinforcing steel shop drawings for approval and mix designs for review prior to placing any concrete.
- 10. All reinforcement shall be securely held in place while placing concrete. If required, additional bars, stirrups or chairs shall be provided by the Contractor to furnish support for all bars.
- 11. Lap welded wire reinforcement two (2) full wire spaces at splices and wire together.
- 12. Provide plastic tipped bolsters and chairs at all locations where the concrete surface in contact with the bolsters or chairs is exposed.
- 13. Placing of concrete shall not start until the placement of reinforcing has been approved by the Inspection Agency.
- 14. Bonding agent shall be used where new concrete is placed against existing concrete.
- 15. Epoxy adhesive shall be used where dowels are to be installed into existing concrete. Submit manufacturer information for engineer review. 16. No sleeve shall be placed through any concrete element unless shown on the approved shop drawings or specifically authorized in writing by the Structural Engineer. The Contractor shall verify dimensions and locations of all slots, pipe sleeves, etc. as required for mechanical trades
- before concrete is placed. 17. Pipes or conduits placed in slabs shall not have an outside diameter larger than 🄏 the slab thickness and shall not be spaced closer than 3 diameters on center. Aluminum conduits shall not be placed in concrete. No conduits shall be placed in slabs within 12 inches of column
- face or face of bearing wall. No conduits may be placed in exterior slabs or slabs subjected to fluids. 18. Prior to placing concrete, the Contractor shall submit for review by the structural engineer, a concrete pour schedule showing location of all
- proposed construction joints and waterstops. 19. Prior to concrete placement, the Contractor shall submit to the structural engineer for review, concrete mix designs prepared in accordance
- with the specifications and requirements indicated in the general notes. 20. Concrete shall not be pumped through aluminum pipes and shall not be placed in contact with aluminum forms, mixing drums, buggies,
- chutes, conveyors or other equipment made of aluminum. 21. All inserts and sleeves shall be cast-in-place whenever feasible. Drilled or powder driven fasteners will be permitted when proven to the
- satisfaction of the Structural Engineer that the fasteners will not spall the concrete and have the same capacity as cast—in—place inserts. 22. When installing expansion bolts or adhesive anchors, the Contractor shall take measures to avoid drilling or cutting of any existing reinforcing and destruction of concrete. Holes shall be blown clean prior to placing bolts or adhesive anchors.
- 23. Chamfer all exposed concrete corners unless noted otherwise on Architectural Drawings. 24. Early drying out of concrete, especially during the first 24 hours, shall be carefully guarded against. All surfaces shall be moist cured or protected using a membrane curing agent applied as soon as forms are removed. If membrane curing agent is used, exercise care not to
- damage coating. 25. Cold weather concreting shall be in accordance with ACI-306. Hot weather concreting shall be in accordance with ACI-305R.
- 26. Throughout construction, the concrete work shall be adequately protected against damage due to excessive loading, construction equipment, materials or methods, ice, rain, snow, excessive heat, and freezing temperatures. 27. Prepare concrete test cylinders from each day's pour. Cylinders shall be properly cured and stored. Sample fresh concrete in accordance with
- 28. Retain laboratory (County of Rockland) to provide testing service. Slump per ASTM C1431 air content per ASTM C231 or C173, cylinder tests per ASTM C31 and C39. One set of six (6) cylinders for each 50 cubic yards for each mix used. Reports of all tests to be submitted to the Architect.

### 5.0 CONCRETE ANCHORS

- 1. All headed concrete anchors shall be manufactured from material which conforms to ASTM A108 for low carbon steel.
- 2. All welds shall be made in accordance with the structural welding code, ANSI/AWS D1.4, latest edition and with the recommendations of the
- 3. All adhesive anchors shall be anchored using the "Hilti HY200 Max" system by Hilti Fastening Systems, Inc. or an approved equal.
- 4. The spacing, minimum embedment, and installation of the anchors shall be in accordance with the manufacturer's recommended procedures.
- 5. Anchor rods used in adhesive anchorage systems shall conform to the manufacturer's recommended steel. 6. Stud anchors shall conform to ASTM A108 and the nuts shall conform to ASTM A563.

### 6.0 MASONRY

- 1. Masonry has been designed in accordance with the Building Code Requirements for Masonry Structures (TMS 402-2016) and shall be constructed in accordance with the Specifications for Masonry Structures (TMS 602-2016), except where otherwise modified by these General Notes and Specifications.
- 2. Mortar shall conform to ASTM C270, Type M or S. All Portland cement shall conform to ASTM C150, Type I. Lime shall conform to ASTM C207 and masonry cement shall conform to ASTM C91.
- 3. Grout shall conform to ASTM C476 and shall have a minimum 28 day compressive strength of 3000 psi. Slump of grout shall be 8 to 10 inches and the maximum aggregate size shall be  $\frac{3}{8}$ " (aggregate graded to produce fine grout in conformance with ASTM C476 and C404).
- 4. Concrete Block Units: A. Solid and hollow load bearing units per ASTM C90, Type N-1, as required to provide 28 day compressive strength, f'm as noted below.
- 5. Minimum 28-day compressive strength of masonry, f'm shall be 1,500 psi, unless noted otherwise.
- 6. Full bed and head joints shall be provided. 7. Horizontal Joint Reinforcing: ASTM A82; 9-gage ladder-type, galvanized.

prefabricated units at 8"o.c. at all wall corners and intersections.

- 8. Deformed bar reinforcement shall conform to ASTM A615, Grade 60 and shall be full height of walls unless otherwise noted. Provide bar spacers and positioners as required to properly locate and stabilize reinforcing during grouting operations. Grout all reinforced cells solid with
- 9. Hollow concrete units below grade and slab on grade shall be normal weight and have all cells grouted solid. 10. Provide and install temporary bracing required insuring stability of all walls during construction and until erection of attached structural
- 11. Provide galvanized horizontal joint reinforcement in all walls and partitions at 16" o.c. unless otherwise shown or noted. Provide one (1) piece
- 12. Lap splices for deformed reinforcing bars used in masonry construction shall be 50 bar diameters.
- 13. Submit grout mix design and masonry unit certifications to the Architect for review.
- 14. Grout placement shall not start until the placement of reinforcing has been approved by the Inspection Agency.
- 15. Fill all cells in top two courses below finished floor, CMU lintels, bond beams, and beam bearings and cells with reinforcement full height solid
- 16. Allow grout in reinforced CMU walls to cure a minimum of 48 hours before imposing concentrated or other loads from above. 17. Provide masonry anchors set on coursing and attached to all beams at 32" o.c. horizontal, columns at 24" o.c. vertical, partitions and walls
- at 16" o.c at all beams, columns, partitions and walls abutting or embedded in masonry unless noted otherwise on Architectural and Structural 18. Provide bond beams with two (2) #4 horizontal reinforcement continuous in all masonry walls at each framing level. Provide a minimum of two (2) #4 bars at the ends of all walls and on each side of each opening.
- 19. All piers and partitions shall be bonded or anchored to adjacent masonry walls. Provide ties to adjacent floor and roof construction in accordance with details on drawings. 20. The Contractor shall verify all openings below lintels indicated are adequate to accept doorframes, louvers, etc. as shown on the Architectural
- 21. No openings shall be placed above any lintel within a height less than or equal to the width of the clear opening below the lintel, unless specifically shown or approved by the Structural Engineer.

and Mechanical Drawings. Notify the Architect and Structural Engineer of any discrepancies prior to lintel installation.

- 22. All masonry work to be executed in cold weather shall be in conformance with the recommendations for cold weather construction found in the Building Code Requirements for Masonry Structures (TMS 402-2016) and shall be constructed in accordance with the Specifications for Masonry Structures (TMS 602-2016) with the following additions: For all conditions when temperatures fall below 40 degrees F, the temperature of the newly laid masonry or newly grouted masonry shall be maintained above 32 degrees F for a minimum of 24 hours using the methods described in ACI 530.1.
- 23. The Testing and Inspection Agency (County of Rockland) shall monitor the proportioning, mixing, and consistency of mortar and grout; the placement of mortar, grout, and masonry units; and the placement of reinforcing steel for compliance with the Contract Documents.
- 24. All wall sections and piers less than two square feet in cross-sectional area shall be fully grouted. 25. Provide vertical masonry control joints at maximum 25'-0" on center unless detailed on Architectural drawings, coordinate locations with Architect.

# 7.0 STRUCTURAL STEEL

- 1. Fabrication and erection of structural steel shall conform to the "Steel Construction Manual", 15th Edition, American Institute of Steel Construction including Specifications for Structural Steel Buildings, Specification for Structural Joints Using ASTM A325 or A490 Bolts, and AISC
- Code of Standard Practice except Sections 4.2 and 7.9 which shall not be applicable to this project. 2. All welding shall be performed by certified welders and shall conform to "Structural Welding Code ANSI/AWS D1.4—17", American Welding

ASTM A500, Grade B.

- 3. Wide flange shapes: ASTM A992 or A572, Grade 50. ASTM A36, A572 or A992. 4. Structural shapes & plates: ASTM A53, GRADE B. 5. Steel pipe:
- 7. Galvanized structural steel:

6. Steel tubing (square, rect. or round):

- A. Structural shapes and rods ASTM A123. B. Bolts, fasteners and hardware ASTM A153.
- 8. All bolted connections shall be with ASTM A325 high strength bolts  $\frac{3}{4}$ " minimum diameter, unless noted otherwise. 9. All bolted connections on wind bracing members and columns shall be slip critical connections.
- 10. Anchor rods shall conform to ASTM F1554, Grade 36, unless noted otherwise.
- Minimum weld size shall be  $\frac{3}{16}$ " unless noted otherwise. 12. Welding of reinforcing bars to other bars or structural steel: E90-XX electrode.
- 13. Cuts, holes, coping, etc. required for other trades or field conditions shall be shown on the shop drawings and made in the shop. Cutting or burning of main structural members in the field will not be permitted.

11. Welding electrodes shall be E70XX for manual arc welding and F7X—EXXX for submerged arc welding. All welders shall be certified by the AWS.

- 14. Submit shop drawings for fabrication and erection of structural steel. Clearly indicate coordinated dimensions of mechanical unit and roof penetration sizes. Shop and Erection drawings must show all shop/floor and field welds. Initial shop drawing submittal shall include proposed connection details and job standards. Provide signed and sealed calculations for all non—standard connection details, braced bay connections
- 15. Steel members shown on plan shall be equally spaced unless noted otherwise.

and moment connections showing design capacities.

- 16. Camber indicated on these drawings is the required camber after final erection and includes all mill tolerances.
- 17. The General Contractor and Steel Erector shall notify the Structural Engineer of any fabrication or erection errors or deviations and receive written approval before any field corrections are made.
- 18. Alternate connection details may be used if such details are submitted to the engineer for review and approval. However, the engineer shall be the sole judge of acceptance and the Contractor's bid shall anticipate the use of those details shown on the drawings. The Contractor is responsible for the design of such alternate details which he proposes.
- 19. Main support members for the metal deck are shown. During preparation, submission, and review of shop drawings, any additional angles or miscellaneous attachment details required to support the metal deck at the required elevation shall be provided by the Structural Steel
- 20. All steel shall be painted with shop standard primer unless noted otherwise.
- 21. Steel angles and plates along with bolts and washers, in direct contact with exterior finish masonry, and all exterior exposed structural steel, shall be hot—dipped galvanized.
- 22. All exterior exposed structural steel shall be hot-dipped galvanized per ASTM A123.
- 23. Spandrels and columns adjacent to masonry shall have adjustable masonry ties. 24. Existing framing requiring welding shall be thoroughly cleaned to ensure proper welding. Provide temporary shoring when welding to existing
- 25. Field welded surfaces within four (4) inches of weld shall be cleaned and ground smooth. After welding coat the exposed area with appropriate primer/paints as specified.
- 26. Guys and other bracing required to provide lateral stability to steel frame shall be adequately sized and anchored. This bracing shall remain until permanent bracing elements and attached construction is installed.
- 27. The steel structure is a non—self—supporting steel frame and is dependent upon diaphragm action of the metal (roof/floor) deck and attachment to the masonry walls and braced bays for stability and for resistance to wind and seismic forces. Provide all temporary supports required for stability and for resistance to wind and seismic forces until these elements are complete and are capable of providing this
- 28. All connections shall be "Framed Beam Connections" designed in accordance with the AISC Manual and the ends reactions from the "Uniform Load Tables", but not less than 6 kips. Provide double angle connections or knife plates connections full depth of supporting beam, unless otherwise approved. Minimum two (2) bolts per connection. Unless otherwise noted, composite beams to be designed for 80% of the "total" uniform load capacity. Single angle or shear tab connections are not acceptable. All beam to column connections shall be designed for the
- minimum shear reaction indicated above in combination with a 10 kip axial force (acting in both tension and compression). 29. Visually inspect all fillet welds. 10% of all field fillet welds in primary connections and multi-pass welds shall be tested by the magnetic
- particle method, complying with E109, performed on the root pass and on the finished weld. 30. 100% of full penetration welds shall have ultrasonic inspection, complying with ASTM E164.
- 31. 100% of welds in beam and column moment connections shall have ultrasonic inspection, complying with ASTM E164.
- 32. Field test bolted connections and shear studs in accordance with AISC.
- 33. Delete paint on all steel to receive sprayed—on fireproofing or concrete encasement. 34. All steel shall be thoroughly cleaned by power tool cleaning prior to painting. All architecturally exposed structural steel shall be cleaned with commercial blast cleaning.
- 35. All dissimilar metals shall be treated or properly separated to prevent galvanic and/or corrosive effects.
- 36. All connections shall be symmetrical about the axis of the member connected. Provide only one grade of bolt for each bolt diameter to be used in the connections. Do not mix grade of bolts.
- 37. The contractor shall prepare a written erection plan & calculations to be submitted to the engineer for review. This plan is to indicate, as a minimum, sequence of erection operations, calculations indicating erection stresses, field splice locations, field splice details, and location of temporary shoring, scaffolding, bracing, etc. The stresses caused during erection and handling shall not exceed allowable member stresses. The erection plan and calculations shall be prepared and stamped by a registered professional engineer in the project's jurisdiction.

- 8.0 METAL DECK Metal deck shall be designed and detailed in accordance with "Design Manual for Floor Decks and Roof Decks— SDI—NC—2017 & SDI-R-2017", Steel Deck Institute. All composite steel floor deck shall be in conformance with the "Specifications for Composite Steel Floor
- Deck SDI-C-2017" of the Steel Deck Institute, latest edition. 2. Deck properties are based on products manufactured by United Steel Deck, Inc. (USD). Decks by other manufacturer's may be supplied provided load carrying capacity based on manufacturer's standard load tables, deflection characteristics, and UL fire ratings equal or exceed those of materials specified and if approved by the Architect and Structural Engineer.
- 3. Install in accordance with SDI suggested Specifications unless noted otherwise on the drawings. Individual deck sheets shall extend over at least three spans, with laps to be placed over supports. 4. Deck supplier shall provide all additional framing, closure angles and plates, pour stops, screed angles, and roof sump pans as required at
- the edges of all openings and at all slab depressions, or changes of deck direction, including those which have not been detailed. 5. Roof and non—composite decks shall be welded to steel supports, including the edge support parallel to the deck span with 🖔 diameter (effective fusion diameter) plug welds at 12" on center interior and 6" on center at edge of deck sheet. Fasten side laps with #10
- 6. All steel floor deck shall be welded to all supporting steel elements. Welding washers shall be used as required by the deck manufacturer. 7. No mechanical or electrical piping, fixtures, units or systems may be hung directly from the roof deck.

2. All stud and/or joist framing members shall be of the type, size, and gage as required by design. Size and gage shall not be less than

- 1. Light gage metal framing shall be designed and detailed according with "Specification for the Design of Cold—Formed Steel Structural Members - AISI S100-16", American Iron and Steel Institute.
- shown on drawings.

self—tapping screws at 36" o.c. maximum spacing.

3. The first set of numbers indicate the web size (nominal member depth):

9.0 LIGHT GAGE METAL FRAMING

- 6" member 3-5/8" member = 362
- 4. Flange Designations: = 1 $\frac{1}{8}$ " Flange S162 C stud = 2" Flange
- C-Stud = 2½" Flange Runner Track = 1¼" Leg
- 5. The last two numbers indicate the steel thickness: Design Thickness Minimum Thickness SSMA 0.0329" 0.0346" 33 mils 0.0451" 43 mils 0.0538" 54 mils 0.0713" 0.0677" 68 mils

requirements of ASTM A653, Grade 50, with a minimum yield of 50,000 psi.

11. Cutting of steel framing shall be by saw, shear or plasma cutting equipment only.

studs as required at all openings which exceed 24 inches.

to loosening. Fasteners shall be of compatible material.

distances requirements and torque requirements.

- 0.1017" 97 mils 6. All galvanized studs, joists, track, bridging, and accessories, 12, 14, and 16 gage, shall be formed from steel that corresponds to the
- 7. All galvanized studs, joist, and track, bridging and accessories, 18 and 20 gage, shall be formed from steel that corresponds to the requirements of ASTM A653, Grade 33, with a minimum yield of 33,000 psi. 8. All studs, joist, and accessories, shall be formed from steel having a G60 galvanized coating in conformance with ASTM C955.
- Include with the drawings cross sections, plans and/or elevations depicting components types and locations for each unique framing application, connection details depicting fastener type, and quantity. Submit signed and sealed Calculations prepared by an Engineer registered

9. Prior to prefabrication of framing, the Contractor shall submit signed and sealed fabrication and erection drawings to the Architect for review.

- 10. Framing components may be preassembled into panels prior to erecting. Prefabricated panels shall be square with components attached in a manner as to prevent racking and to minimize distortion while lifting and transporting.
- 12. Temporary bracing shall be provided until erection is complete and all attached adjacent framing is complete.
- 13. Insulation shall be placed in components inaccessible to the insulation contractor after their installation. 14. Splices in axially loaded studs are not permitted.

16. Studs shall be plumbed, aligned, and securely attached to the flanges or webs of both upper and lower tracks.

- 15. Where splicing of track is necessary between stud spacing, a piece of stud shall be placed between adjacent tracks and fastened by welds or screws to each side of the track, each end.
- 17. Axially loaded studs shall be installed in a manner which will assure that ends of the studs are positioned against the inside track web, prior to stud and track attachment. Studs shall be squarely cut and positively clamped and positioned until properly fastened.

18. Wall stud bridging shall be attached in a manner to prevent stud rotation. Bridging, of the type and spacing shown on the Contract or Shop

Drawings shall be installed prior to loading. Bridging spacing shall be as required by design but shall not exceed 5'-0" on center. 19. Provision for structure vertical movement shall be provided where indicated on the plans using vertical slide clips or other means. Frame both sides of expansion joints with separate studs; do not bridge the expansion joints with stud system components.

20. Framed wall openings shall include headers and supporting studs as shown on the plans and shop drawings. Provide additional jack and king

23. Connections shall be by welding, riveting, bolting or other approved fastening devices or methods providing positive attachment and resistance

- 21. Joists shall be located directly over bearing studs or a load distribution member to be provided at the top track. 22. Provide an additional joist under parallel, non-load bearing partitions that run more than  $\frac{1}{3}$  the span of the joist.
- 24. Welded connections shall be performed in accordance with AWS Specification for Welding Sheet Steel in Structures, D1.4. 25. Contractor shall refer to installation instructions published by the screw manufacturer and ASTM C954 for minimum spacing and edge

26. Design of trusses, truss bracing, and detailing of truss connections in accordance with the requirements of the Contract Documents shall be the responsibility of the Fabricator's Engineer registered in the Project's jurisdiction. Calculations and shop drawings consisting of truss layout plans and truss details, shall be submitted bearing the Engineer's seal and signature.

maximum deflection of 1/600 of the span, or  $\frac{3}{8}$ ", whichever is less, at the applicable design wind load without the code applied reduction

27. Exterior stud walls directly resisting the lateral and/or gravity forces as well as curtain wall systems and related connections: Designs shall take into account all vertical and lateral loads required by applicable building codes. Back up system and curtain wall shall be designed for a

### 10.0 DESIGN DATA

B. Concentrated...

- 1. Governing Code: 2020 New York State Building code/2018 International Building code 2. Floor Live Load: A. Uniform..... ..150 PSF
- C. Live Load Reduction. ..As Per Code 3. Roof Live Load
- A. Live Load... ...30 PSF B. Snow Load: ....30 PSF

### Pg (Ground Snow Load).. ..25.2 PSF Pf (Flat Snow Load).... Ce (Snow Exposure Factor).. I (Snow Load Importance Factor)...

# Ct (Thermal Factor).... 4. Roof Dead Load: A. Truss Self weight 6 PSF

- B. Sheathing and Insulation. ....5 PSF ..3 PSF C. Ceiling..... D. Misc. Mech/Elec/Plumbing/Collateral... ....5 PSF ...4 PSF E. Roofing..... Total Dead Load. .23 PSF
- 5. Wind Load: ..127 MPH A. Ultimate Wind Speed.. B. I (Wind Importance Factor)... C. Wind Exposure.... .+/- 0.18 D. Internal Pressure Coefficient...
  - E. Components & Cladding Wind Pressure:.. ...As per the Code 6. Earthquake Design Data: A. Seismic Occupancy Category... B. Seismic Importance Factor, I... ...0.29 C. Ss (Mapped Spectral Response Acc. at Short Period)... D. S1 (Mapped Spectral Response Acc. at 1 Second Period)... ...0.061 E. Seismic Site Classification....
- G. Sd1 (Spectral Response Coefficient)... H. Seismic Design Category.... I. Basic Seismic Force Resisting System:..... .....Intermediate Masonry Shear Walls K. Cs..... ...0.130

# 7. ALL FIRE RATED ASSEMBLIES TO BE CONSIDERED UNRESTRAINED

F. Sds (Spectral Response Coefficient)...

L. Analysis Procedure.

.0.303

..Equivalent Lateral Force Procedure

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Allentown, NJ 08501 Phone: (609) 489-5511

MPP Engineers LLC 34 S. Main Street, Suite D

SCOTT W. McCONNELL PROFESSIONAL ENGINEER, N.Y. LIC. No. 08188

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..2000 PSF

SPECI	AL INSPECTIO	N DETAILS	
REQUIRED VERIFICATION AND INSPECTION	CONTINUOS	PERIODIC	REFERENCE STANDARD
STEEL CONSTRUCTION			
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS	-	X	AISC 360, Section A3.3
INSPECTION OF HIGH STRENGTH BOLTING	-	х	AISC 360-16, Section N5.6
INSPECTION OF WELDING - VISUAL SINGLE PASS WELDS 1/6" AND LESS	-	Х	AWS D1.1 AISC 360-16 Section N5.4
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	Х	-	AISC 360-16 Section N5.4
ROOF DECK WELDS	-	Х	AWS D1.3
REINFORCING STEEL	Х	-	AWS D1.4 ACI 318: CHAP 26
PLACEMENT AND INSTALLATION OF HEADED ANCHORS	Х	-	AISC 360-16 Section N5.4
CONCRETE CONSTRUCTION			
. INSPECT REINFORCING STEEL, INCLUDING PLACEMENT	_	х	ACI 318: CHP.20, 25.2, 25.3, 26.6.1-26.6.3
REINFORCING BAR WELDING:			
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	_	Х	AWS D1.4 ACI 318: 26.6.4
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	Х	AWS D1.4 ACI 318: 26.6.4
C. INSPECT ALL OTHER WELDS	Х	-	AWS D1.4 ACI 318: 26.6.4
. INSPECT ANCHORS CAST IN CONCRETE	-	Х	ACI 318: 17.8.2
. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS			
a. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED	X	X	ACI 318:17.8.2.4
ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.			ACI 318: 17.8.2 ACI 318:17.8.2.4
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A	X	X	ACI 318: 17.8.2
. VERIFYING USE OF REQUIRED DESIGN MIX	_	X	ACI 318: Ch.19, 26.4.3, 26.4.4
. CONCRETE SAMPLING FOR STRENGTH, SLUMP, TEMPERATURE AND AIR CONTENT	X	-	ASTM C172, ASTM C31, ACI 318: 26.5, 26.12
. INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF MEMBERS BEING FORMED	_	Х	ACI 318: 26.11.2(b)
. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	Х	ACI 318:26.5.3-26.5.5/IBC 1908.9
MASONRY CONSTRUCTION			
1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED FOR COMPLIANCE:			
. PROPORTIONS OF SITE-PREPARED MORTAR	_	X	TMS 402-16 TMS 602-16
. CONSTRUCTION OF MORTAR JOINTS.	_	X	TMS 402-16 TMS 602-16
. LOCATION OF REINFORCEMENT, CONNECTORS, ANCHORAGES	_	X	TMS 402-16 TMS 602-16
2. THE INSPECTION PROGRAM SHALL VERIFY:			
. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	_	X	TMS 402-16 TMS 602-16
. TYPE, SIZE, AND LOCATION OF ANCHORS	_	X	TMS 402-16 TMS 602-16
. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT	_	X	TMS 402-16
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED FOR		^	TMS 602-16
COMPLIANCE:			TMS 402-16
. GROUT SPACE IS CLEAN	_	X	TMS 602-16
. PLACEMENT OF REINFORCEMENT AND CONNECTORS	-	Х	TMS 402-16 TMS 602-16
. PREPARATION OF GROUT AND MORTAR SPECIMENS	X	-	TMS 402-16 TMS 602-16
SOIL			
. VERIFY MATERIALS BELOW SHALLOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY	_	X	
. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE	_	X	
REACHED PROPER MATERIAL  . PERFORM CLASSIFICATION & TESTING OF COMPACTED FILL MATERIAL	_	X	
. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS	<u>-</u>	^	
DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL  . PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVED SUBGRADE AND	X	-	
VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	X	
EPOXY ANCHORS  COLD FORMED STEEL FRAMING	-	X	
MEMBER SIZES	_	X	
MATERIAL THICKNESS	_	Х	
MECHANICAL CONNECTIONS WELDING	_	X	
FRAMING DETAILS	-	X	
	<u> </u>	1	I.

TYPICAL ABBREVIATIONS

NOTES:	TCAL ABBREVIATIONS MAY NOT BE LISED				
. THESE A	BREVIATIONS MAY NOT BE USED. ABBREVIATIONS APPLY TO STRUCTURAL DWGS ONLY. IGS FOR SEPARATE SYMBOLS AND ABBREVIATIONS LI		C		
BV	AT ABOVE	FV	FIELD VERIFY	PT PTD	POST—TENSIONED PRESSURE TREATED
CI	AMERICAN CONCRETE INSTITUTE	GA	GAUGE, GAGE	R	RADIUS
DΗ	ADHESIVE	GALV	GALVANIZE	RC	REINFORCED CONCRETE
ODL	ADDITIONAL	GB	GRADE BEAM	RD	ROOF DRAIN
OJ	ADJUSTABLE	GC	GENERAL CONTRACTOR	RECT	RECTANGULAR
FF	ABOVE FINISHED FLOOR	GLUM	GLUED LAMINATED	REF	REFER(ENCE)
SC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	GR	GRADE	REINF	REINFORCING
_	ALUMINUM	GYP	GYPSUM	REQD	REQUIRED
_T	ALTERNATE			REV	REVISE; REVISION
PPROX	APPROXIMATELY	H&V	HORIZONTAL AND VERTICAL	RF	ROOF
7	ANCHOR ROD	HEF	HORIZONTAL EACH FACE	RFTR	RAFTER
RCH	ARCHITECT	HI	HIGH		
SCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	HIF	HORIZONTAL INSIDE FACE	SC	SLIP CRITICAL
STM	AMERICAN SOCIETY OF TESTING & MATERIALS	HK	HOOK	SCH	SCHEDULE
WS	AMERICAN WELDING SOCIETY	HOF	HORIZONTAL OUTSIDE FACE	SDL	SUPERIMPOSED DEAD LOAD
	, unit visit in the second in	HORIZ	HORIZONTAL	SECT	SECTION
CX	BOTTOM CHORD EXTENSION	HP	HIGH POINT	SEIS	SEISMIC
LDG	BUILDING	HNGR	HANGER	SHT	SHEET
	BLOCKING	HT	HEIGHT	SHTG	SHEATHING
LKG		111	TIEIOTT		
M	BEAM	IBC	INTERNATIONAL BUILDING CODE	SIM	SIMILAR
OCA	BUILDING OFFICIALS & CODE ADMINISTRATORS	ID	INSIDE DIAMETER	SL	SLOPE
OT	ВОТТОМ			SNT	SEALANT
PL	BEARING PLATE/BASE PLATE	I/F	INSIDE FACE	SOG	SLAB ON GRADE
Τ	BENT	INCL	INCLUSIVE	SP	SPIRAL
		INT	INTERIOR	SPCG	SPACING
ANT	CANTILEVER			SPEC	SPECIFICATION
J	CONTROL JOINT	JST	JOIST	SQ	SQUARE
JT	CONSTRUCTION JOINT	JT	JOINT	SSPC	STEEL STRUCTURES PAINTIN
L	CENTER LINE			SST	STAINLESS STEEL
LR	CLEAR/CLEARANCE	K	KIPS	STD	STANDARD
М	CONSTRUCTION MANAGER	KB	KNEE BRACE	STGR	STAGGER
MU	CONCRETE MASONRY UNIT(S)			STIFF	STIFFENER
OL	COLUMN	L	LONG; LENGTH	STIRR	STIRRUP
ONC	CONCRETE	LAM	LAMINATED	STL	STEEL
ONN	CONNECTION	LAT	LATERAL	STRUCT	STRUCTURAL
ONSTR	CONSTRUCTION	LF	LINEAR FOOT	SWB	SHORT WAY BOTTOM
ONT	CONTINUOUS	LL	LIVE LOAD	SWT	SHORT WAY TOP
OORD	COORDINATE	LLH	LONG LEG HORIZONTAL	SYM	SYMMETRICAL
		LLV	LONG LEG VERTICAL	STW	STIMINETRICAL
R cv /c	CRACK	LO	LOW	T	TOD
SK/S	COUNTERSUNK SCREW	LP	LOW POINT	T T/	TOP
TRD	CENTERED	LS		T/	TOP OF
, .			LAG SCREW	T&B	TOP AND BOTTOM
(penny)	NAILS	LTL	LINTEL	T&G	TONGUE AND GROOVE
	DEPTH	LTW	LIGHTWEIGHT	TCX	TOP CHORD EXTENSION
BE	DECK BEARING ELEVATION	LWB	LONG WAY BOTTOM	TEMP	TEMPORARY
BL	DOUBLE	LWC	LIGHTWEIGHT CONCRETE	THK	THICK
EMO	DEMOLITION	LWT	LONG WAY TOP	THRU	THROUGH
ET	DETAIL			TOS	TOP OF STEEL
EG	DEGREE	MAS	MASONRY	T/SL	TOP OF SLAB
Α	DIAMETER	MAX	MAXIMUM	TU	TILTUP
AG	DIAGONAL	MBR	MEMBER	T/W	TOP OF WALL
M	DIMENSION	MECH	MECHANICAL	TYP	TYPICAL
IR	DIRECTION	MEP	MECHANICAL, ELECTRICAL & PLUMBING		
L	DEAD LOAD	MFR	MANUFACTURER	UBC	UNIFORM BUILDING CODE
N	DOWN	MIN	MINIMUM	UON	UNLESS OTHERWISE NOTED
WG	DRAWING(S)	MISC	MISCELLANEOUS	USACE	UNITED STATES ARMY CORI
WLS	DOWELS	MO	MASONRY OPENING	03/102	ONTIED STATES AND CONT
WLJ	DOWLES	MTL	METAL	VEF	VERTICAL EACH FACE
٨	FACU	1911 -	WEI/AE		VERTICAL EACH FACE
-	EACH Stor	Ш	NUMDED	VERT	
-	EACH FACE	# NIC	NUMBER	VIF	VERTICAL INSIDE FACE
-	ELEVATION	NIC	NOT IN CONTACT	VOF	VERTICAL OUTSIDE FACE
_EV	ELEVATOR	NOM	NOMINAL	VSC	VERTICAL SLOTTED CONNEC
MBED	EMBEDMENT	NS	NEAR SIDE		
NGR	ENGINEER	NTS	NOT TO SCALE	W	WIDTH, WIDE
OD	EDGE OF DECK			W/	WITH
OR	ENGINEER OF RECORD	OA	OVERALL	WD	WOOD
OS	EDGE OF SLAB	OC	ON CENTER	WF	WIDE FLANGE
Q	EQUAL	OD	OUTSIDE DIAMETER	W/O	WITHOUT
QUIP	EQUIPMENT	0/F	OUTSIDE FACE	WPRF	WATERPROOF
N	EACH WAY	OPH	OPPOSITE HAND	WP	WORKING POINT

PARTITION

PRECAST CONCRETE

PREFABRICATE(D)

POUNDS PER CUBIC FOOT

PROJECT; PROJECTED; PROJECTION

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

PIECE

PLATE

PLYWOOD

PCF

PLYWD

EACH WAY

**EXPANSION** 

FLOOR DRAIN

FOUNDATION

FINISH

FLOOR FACE OF

FRAMING FAR SIDE

FOOT

FOOTING

FTG

FINISHED FLOOR

**EXTERIOR** 

MATERIAL INDICATIONS

<u>DESCRIPTION</u>

– EARTH

DRAINAGE FILL/GRAVEL/STONE

CONCRETE

- CMU GROUTED SOLID

- BRICK

GRATING

STEEL

- PLYWOOD

RIGID INSULATION

BATT INSULATION

LAMINATED WOOD

- CONT SOLID WOOD

- WOOD BLOCKING

BED ROCK

- MASONRY BLOCK (CMU)

D DEAD LOAD

TURES PAINTING COUNCIL

LDING CODE ERWISE NOTED S ARMY CORPS OF ENGINEERS

H FACE FACE TSIDE FACE OTTED CONNECTION

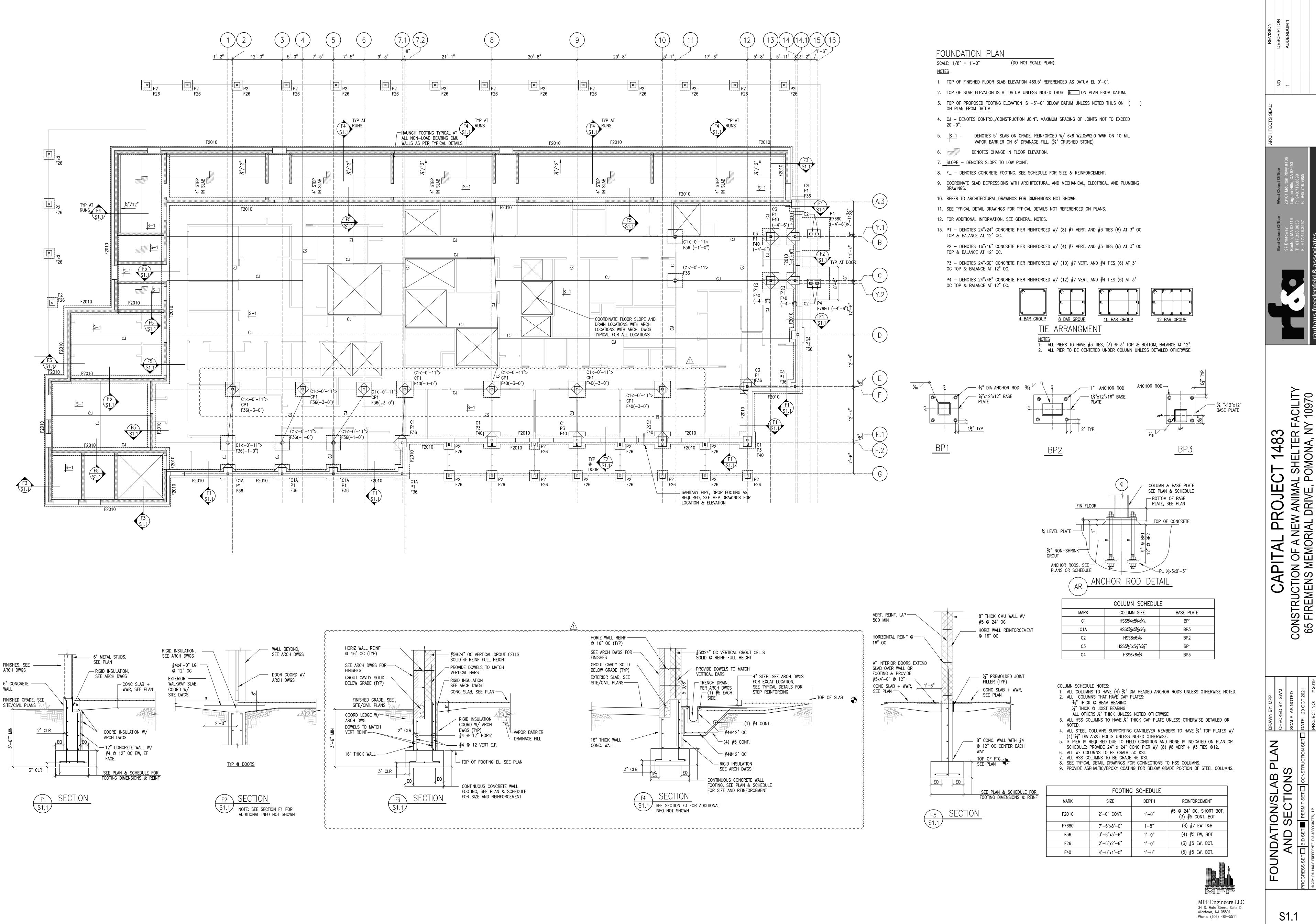
WORKING POINT WATERSTOP

WEIGHT WELDED WIRE REINFORCING

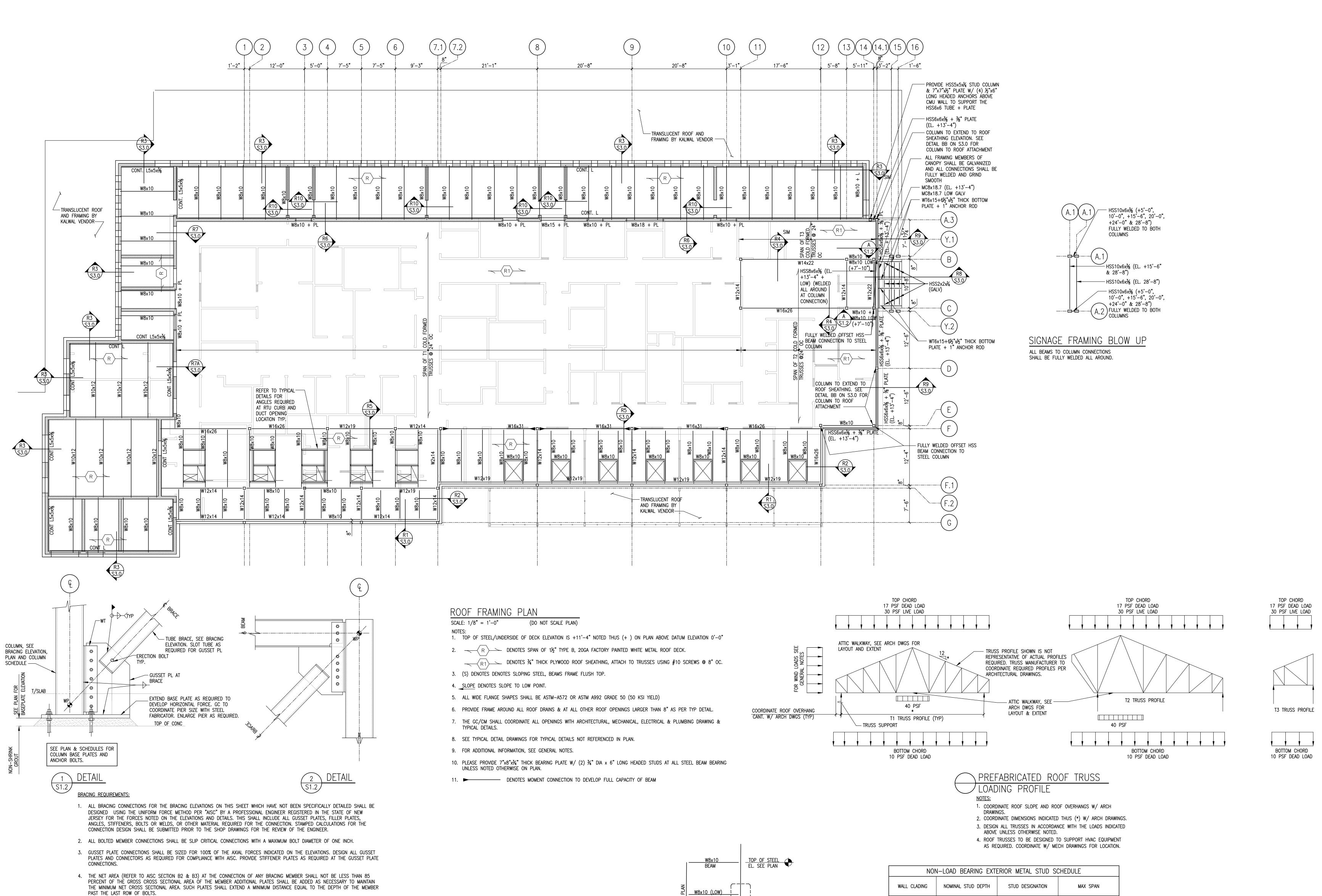
MPP Engineers LLC 34 S. Main Street, Suite D Allentown, NJ 08501 Phone: (609) 489-5511

CAPITAL PROJECT 1483
CONSTRUCTION OF A NEW ANIMAL SHELTER FACILITY
65 FIREMENS MEMORIAL DRIVE, POMONA, NY 10970

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SCOTT W. McCONNELL PROFESSIONAL ENGINEER, N.Y. LIC. No. 081887



ELEVATION AA

5. ALL CONNECTIONS SHALL BE SYMMETRICAL ABOUT THE AXIS OF THE MEMBER CONNECTED. PROVIDE ONLY ONE GRADE OF BOLT FOR

d. ONE HUNDRED PERCENT OF FULL PENETRATION WELDS SHALL HAVE ULTRASONIC INSPECTION, COMPLYING WITH ASTM E164.

7. THE STEEL FABRICATOR MAY SUBMIT ALTERNATE CONNECTION DETAILS FOR THE REVIEW OF THE ENGINEER FOR POSSIBLE SUBSTITUTION

OF DETAILS INDICATED ON THE STRUCTURAL DRAWINGS. SUBMISSIONS OF ALTERNATES SHALL INCLUDE CALCULATIONS TO VERIFY THE

CONNECTION CAPACITY. CONTRACTOR SHOULD NOTE THAT ACCEPTANCE OF THE ALTERNATE CONNECTIONS IS BASED SOLELY ON THE JUDGEMENT OF THE ENGINEER AND THE CONTRACTOR SHALL ANTICIPATE USING THE CONNECTIONS SHOWN FOR BIDDING PURPOSES.

9. (±XXX) DENOTES AXIAL FORCE IN MEMBER TENSION OR COMPRESSION IN KIPS. LOADS SHOWN ARE RESULTING FROM SERVICE LOAD

COMBINATION AND INCLUDE ALLOWABLE REDUCTION FOR TRANSIENT LOADING. ANY FURTHER LOAD REDUCTION IS NOT ALLOWED.

RANDOMLY INSPECTED BY MAGNETIC PARTICLE METHOD, COMPLYING WITH ASTM E109, PERFORMED ON ROOT PASS AND ON FINISHED

EACH BOLT DIAMETER USED IN THE CONNECTIONS. DO NOT MIX GRADE OF BOLTS.

c. FIFTY PERCENT OF ALL WELDS AT GUSSET PLATE AND WEB MEMBER CONNECTIONS SHALL BE

a. ALL SHOP AND FIELD BOLTS SHALL BE TESTED PER AISC REQUIREMENTS.

8. ALL RECTANGULAR HSS TO BE INSTALLED WITH THE LONG DIMENSION VERTICAL.

6. BOLT AND WELD TESTING:

10. SEE PLAN FOR ALL BEAM SIZES.

11. SEE COLUMN SCHEDULE FOR ALL COLUMN SIZES.

b. ALL WELDS SHOULD BE VISUALLY INSPECTED.

600S162-43 METAL PANEL 0'-6" 600S162-43

1. STUDS DESIGNATIONS AND SPANS ARE BASED ON A MAXIMUM STUD SPACING OF 16". STUD SPACING SHALL BE REDUCED TO 12" AT BUILDING CORNERS.

2. STUD DESIGNATIONS ARE MINIMUMS FOR THE GIVEN SPANS AND TYPE OF WALL CLADDING.

13'-0"

14'-0"

3. THIS TABLE IS PROVIDED FOR BIDDING PURPOSE ONLY. FINAL STUD DESIGNS AND CONNECTION DETAILS ARE TO BE PROVIDED BY THE CONTRACTORS ENGINEER, SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS SHOWING ALL CONNECTION DETAILS AND FRAMING CONFIGURATIONS SHALL BE PROVIDED BY THE CONTRACTORS ENGINEERS PRIOR TO

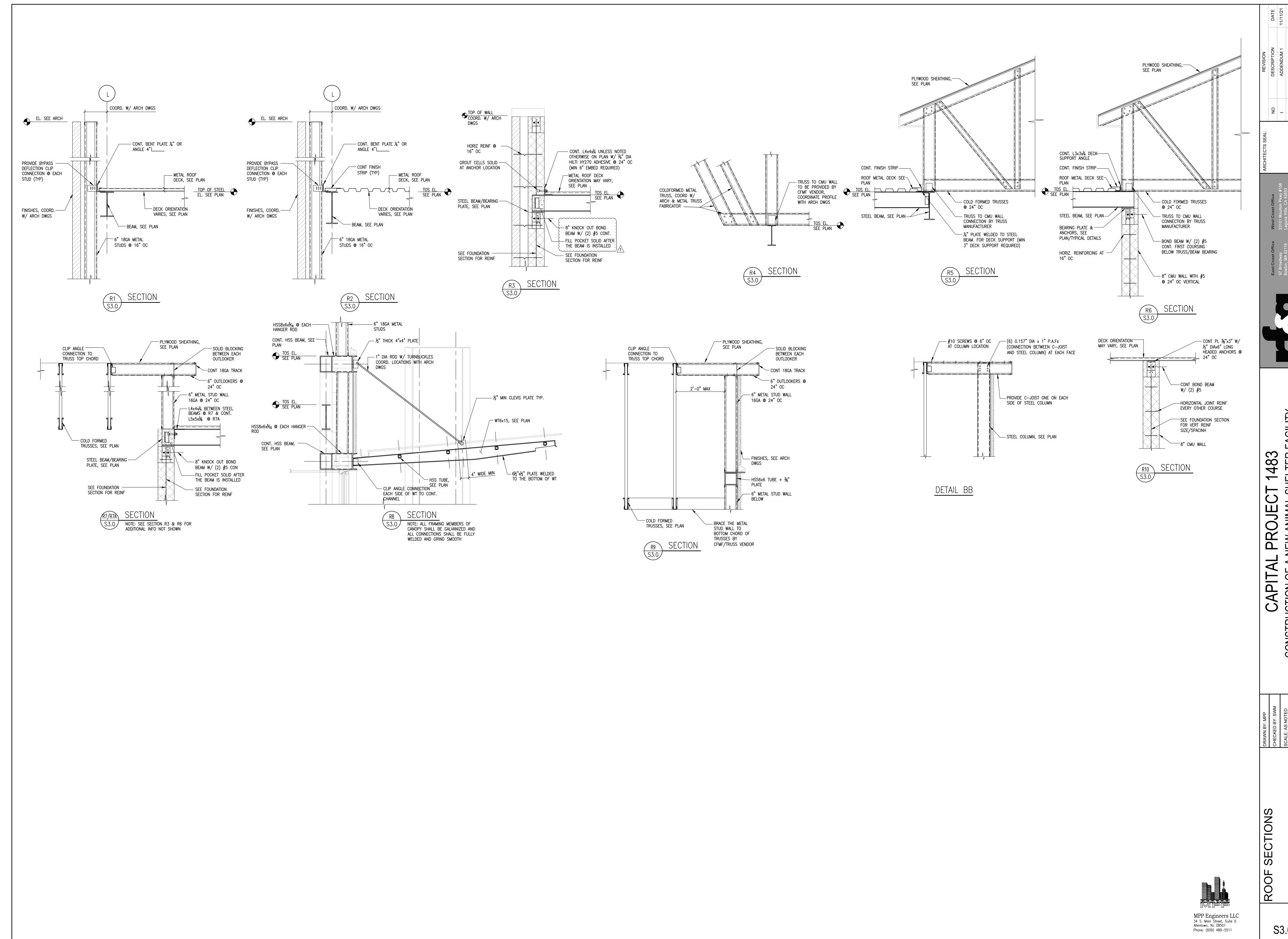
4. ALL STUDS PROVIDED AS BACK-UP FOR MASONRY VENEER SHALL BE 18 GAUGE MINIMUM AND SHALL BE DESIGNED TO LIMIT WALL DEFLECTION UNDER FULL LOADING TO H/600. 5. ALL STUDS PROVIDED AS BACKUP TO METAL PANELS OR OTHER NON-BRITTLE FINISHES SHALL BE 20 GAUGE MINIMUM AND SHALL BE DESIGNED TO LIMIT WALL DEFLECTIONS UNDER FULL LOADING TO H/360



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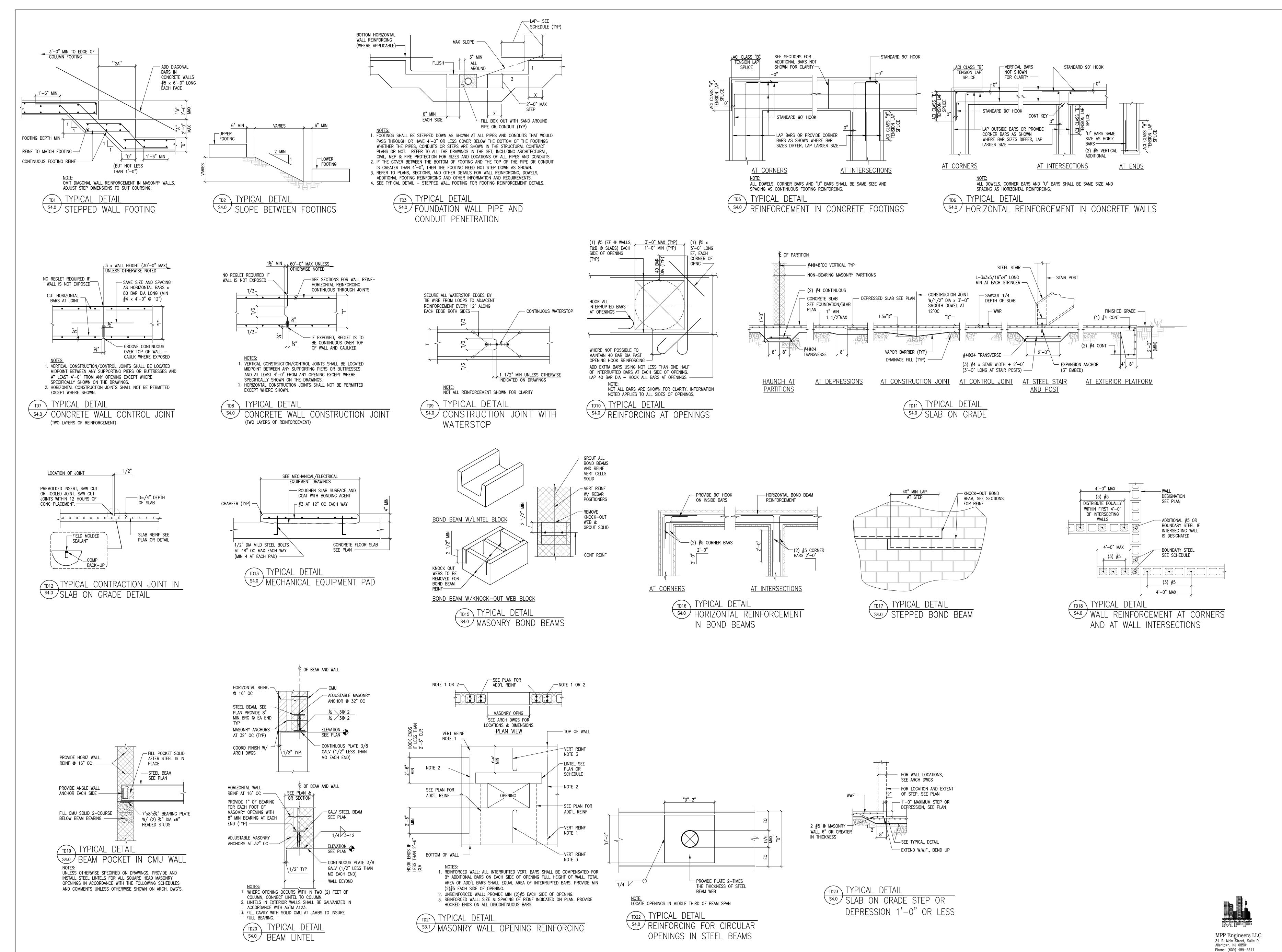
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SCOTT W. McCONNELL PROFESSIONAL ENGINEER, N.Y. LIC. No. 081887-



CAPITAL PROJECT 1483
CONSTRUCTION OF A NEW ANIMAL SHELTER FACILITY
65 FIREMENS MEMORIAL DRIVE, POMONA, NY 10970

SCOTT W. McCONNELL PROFESSIONAL ENGINEER, N.Y. LIC. No. 08188



SCOTT W. McCONNELL PROFESSIONAL ENGINEER, N.Y. LIC. No. 08188.

ST 1483 SHELTER FACILITY POMONA, NY 10970

**PROJE**(

**CAPITAL** 

CONSTRUCTION OF A NEW ANIMAL 65 FIREMENS MEMORIAL DRIVE, P.

TD24 TYPICAL DETAIL S4.1 ROOF DECK ATTACHMENT

- 1. DECK SHALL BE ATTACHED TO ALL STRUCTURAL SUPPORTS WITH 5/8" DIA PUDDLE WELDS.
- 2. SIDE LAPS BETWEEN STRUCTURAL SUPPORTS SHALL BE FASTENED BY #10 TEK SCREWS. 3. DECK SHALL BE ATTACHED TO ALL PERIMETER SUPPORTS WITH 5/8" DIA PUDDLE WELDS
- @ 6"OC MAX
- 4. END LAPS SHALL BE A MINIMUM OF 3" AND SHALL OCCUR OVER SUPPORTS. 5. CAPACITY BASED ON 6'-0" DECK SPAN.

MISCELLANEOUS STEEL ANGLE MASONRY WALL LINTEL SCHEDULE					
WALL THICKNESS	MASONRY OPENING UP TO 4'-0"	MASONRY OPENING 4'-1" TO 6'-0"	MASONRY OPENING 6'-1" TO 8'-0"		
4" WALL	L 3 1/2x3 1/2x5/16	L 4x3 1/2x5/16	L 6x3 1/2x5/16		
6" WALL	JL 3 1/2x2 1/2x5/16	JL 3 1/2x2 1/2x5/16	JL 3 1/2x2 1/2x3/8		
8" WALL	JL 3 1/2x3 1/2x5/16	JL 4x3 1/2x5/16	JL 6x3 1/2x5/16		
10" WALL	L 5x3 1/2x1/4( * ) + L 4x3 1/2x1/4( * )	L 5x3 1/2x1/4( * ) + L 4x3 1/2x1/4( * )	L 5x5x5/16( * ) + L 4x4x5/16( * )		
12" WALL	JL L 3 1/2x3 1/2x5/16	JL L 4x3 1/2x5/16	JL L 6x3 1/2x5/16		
16" WALL	JL JL 3 1/2x3 1/2x5/16	JL JL 4x3 1/2x5/16	JL JL 6x3 1/2x5/16		

- 1. THIS SCHEDULE IS FOR THOSE OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCH AND MECH DRAWINGS FOR LOCATION AND SIZE OF OPENINGS FOR
- NON-BEARING MASONRY WALLS. 2. PROVIDE MINIMUM 6" BEARING ON BRICK, SOLID OR GROUTED SOLID CONCRETE BLOCK, BUT NOT LESS THAN 1" OF BEARING PER FOOT OF SPAN.
- 3. WHERE OPENINGS ARE LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL, CONNECTION NOT TO PROTRUDE INTO OPENING. 4. ALL EXTERIOR LINTELS SHALL BE HOT DIPPED GALVANIZED PER ASTM 123.
- 5. ALL ANGLES LONG LEG VERTICAL UNLESS NOTED BY (  $\star$  ) WHEN NOTED BY (  $\star$  )
- USE LONG LEG HORIZONTAL. 6. AT CAVITY WALLS, INCREASE THE HORIZONTAL LEG OF EXTERIOR ANGLE BY WIDTH

OF CAVITY. TD25 TYPICAL DETAIL S4.1 MISCELLANEOUS STEEL ANGLE MASONRY

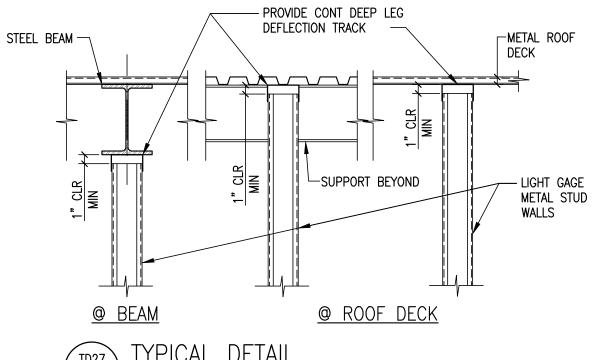
WALL LINTEL SCHEDULE

8"x8" BOND BEAM W/(1) #5 TOP & BOT 8"x16" BOND BEAM W/(1) #6 TOP & BOT 8"x16" BOND BEAM W/(2) #5 TOP & BOT OR 10"x8" CONC W/(2) #4 TOP & BOT OR 10"x8" BOND BEAM W/(2) #4 TOP & BOT OR 10"x16" BOND BEAM W/(2) #4 TOP & BOT OR 10"x16" BOND BEAM W/(2) #6 TOP & BOT OR 12"x8" CONC W/(2) #4 TOP & BOT OR 12"x8" CONC W/(2) #6 TOP & BOT OR 12"x8" CONC W/(2) #4 TOP & BOT OR 12"x8" CONC W/(2) #6 TOP & BOT OR 12"x8" CONC W/(2) #4 TOP & BOT OR 12"x8" CONC W/(2) #6 TOP & BOT OR 12"x8" CONC W/(2) #4 TOP & BOT OR 12"x8" CONC W/(2) #6 TOP & BOT OR 12"x8" CONC W/(	MISCELLANEOUS BOND OR PRECAST MASONRY LINTEL SCHEDULE				
8"x8" BOND BEAM W/(1) #5 TOP & BOT 8"x16" BOND BEAM W/(1) #6 TOP & BOT 8"x16" BOND BEAM W/(2) #5 TOP & BOT OR 10"x8" CONC W/(2) #4 TOP & BOT OR 10"x8" BOND BEAM W/(2) #4 TOP & BOT OR 10"x16" BOND BEAM W/(2) #4 TOP & BOT OR 10"x16" BOND BEAM W/(2) #6 TOP & BOT OR 12"x8" CONC W/(2) #4 TOP & BOT OR 12"x8" CONC W/(2) #6 TOP & BOT OR 12"x8" CONC W/(				1 2 2 1 1 1 2 1 2 1 1 1 2 1 2 1 1 1 1 1	
10"x8" BOND BEÁM W/(2) #4 TOP & BOT 10"x16" BOND BEÁM W/(2) #5 TOP & BOT 10"x16" BOND BEÁM W/(2) #6 TOP & BOT OP	8" WALL			8"x12" CONC W/(2) #5 TOP & BOT OR 8"x16" BOND BEAM W/(2) #5 TOP & BOT	
12"v8" CONC W /(2) #4 TOP & BOT OP 12"v8" CONC W /(2) #4 TOP & BOT OP 12"v12" CONC W /(2) #6 TOP & BOT OP	10" WALL			10"x12" CONC W/(2) #6 TOP & BOT OR 10"x16" BOND BEAM W/(2) #6 TOP & BOT	
	12" WALL	12"x8" CONC W/(2) #4 TOP & BOT OR 12"x8" BOND BEAM W/(2) #5 TOP & BOT	12"x8" CONC W/(2) #4 TOP & BOT OR 12"x16" BOND BEAM W/(2) #5 TOP & BOT	12"x12" CONC W/(2) #6 TOP & BOT OR 12"x16" BOND BEAM W/(2) #6 TOP & BOT	

1. PROVIDE MINIMUM 6" BEARING ON BRICK, SOLID OR GROUTED SOLID CONCRETE BLOCK. 2. THIS SCHEDULE IS FOR THOSE OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCH & MECH DRAWINGS FOR LOCATION AND SIZE OF FOR NON-BEARING MASONRY WALL.

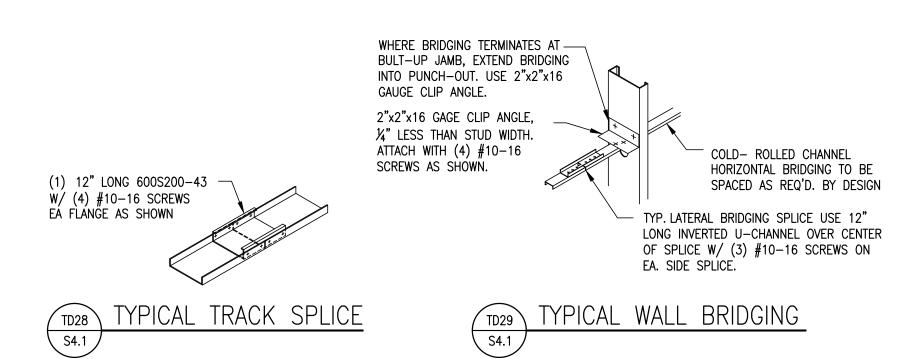
TD26 TYPICAL DETAIL

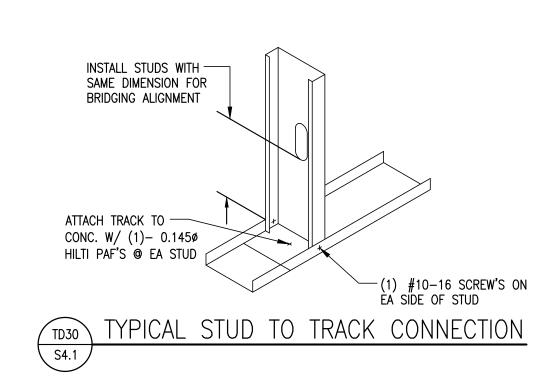
S4.1 MISCELLANEOUS BOND OR PRECAST MASONRY LINTEL SCHEDULE FOR NON-LOAD BEARING WALLS

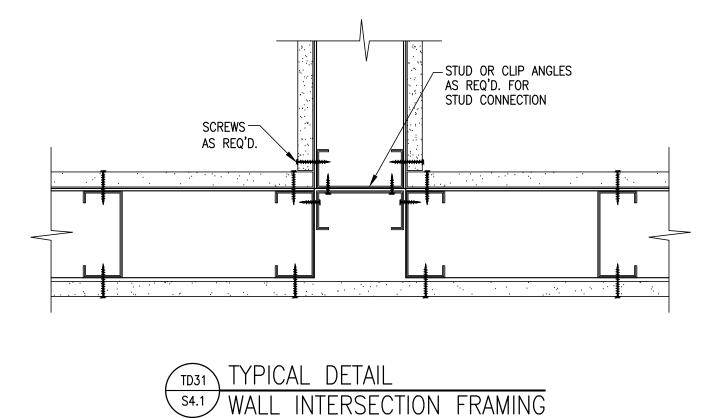


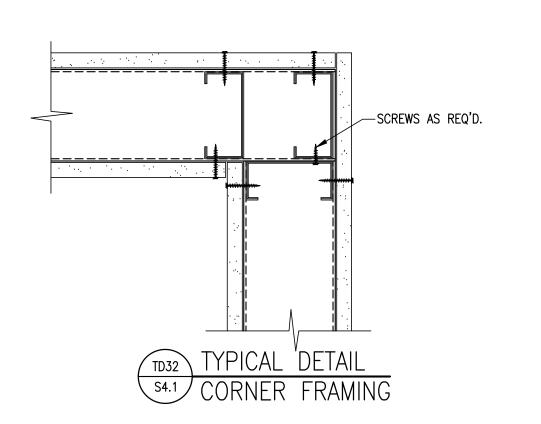
TD27 TYPICAL DETAIL

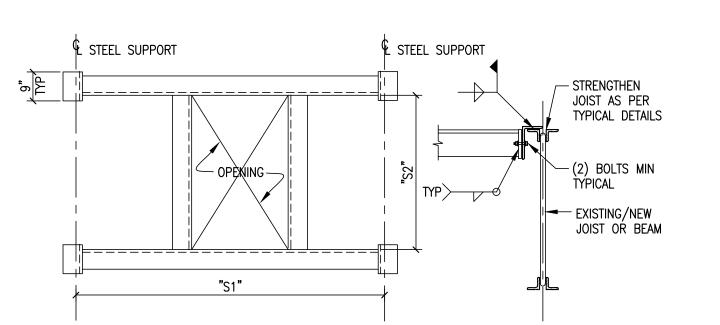
S4.1 METAL STUD BRACING AT BEAM/DECK





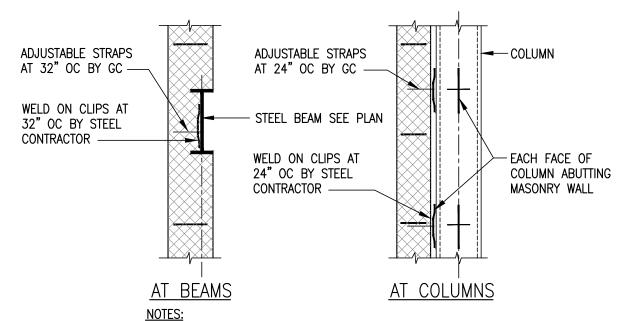






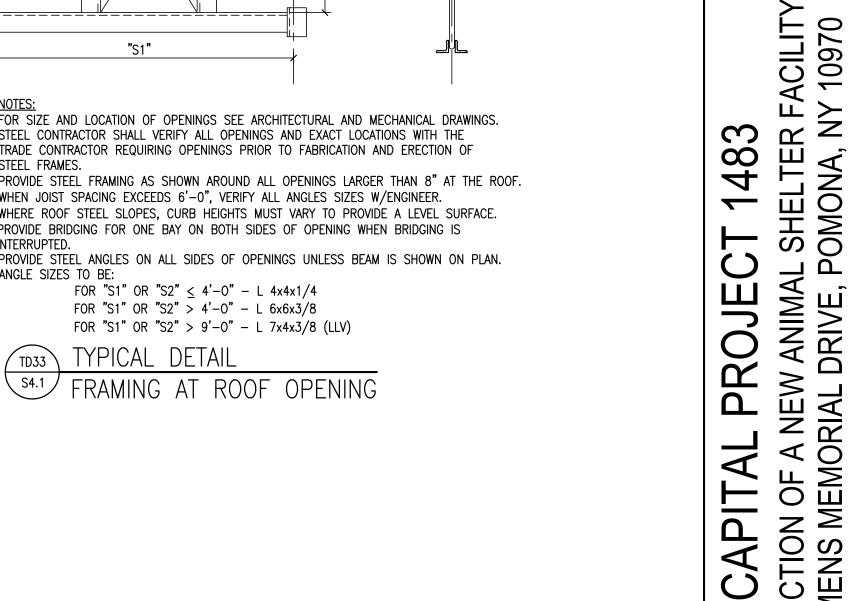
1. FOR SIZE AND LOCATION OF OPENINGS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. STEEL CONTRACTOR SHALL VERIFY ALL OPENINGS AND EXACT LOCATIONS WITH THE TRADE CONTRACTOR REQUIRING OPENINGS PRIOR TO FABRICATION AND ERECTION OF

- STEEL FRAMES.
  3. PROVIDE STEEL FRAMING AS SHOWN AROUND ALL OPENINGS LARGER THAN 8" AT THE ROOF. 4. WHEN JOIST SPACING EXCEEDS 6'-0", VERIFY ALL ANGLES SIZES W/ENGINEER. 5. WHERE ROOF STEEL SLOPES, CURB HEIGHTS MUST VARY TO PROVIDE A LEVEL SURFACE. 6. PROVIDE BRIDGING FOR ONE BAY ON BOTH SIDES OF OPENING WHEN BRIDGING IS
- 7. PROVIDE STEEL ANGLES ON ALL SIDES OF OPENINGS UNLESS BEAM IS SHOWN ON PLAN.
  ANGLE SIZES TO BE:
  - FOR "S1" OR "S2"  $\leq 4'-0$ " L 4x4x1/4FOR "S1" OR "S2" > 4'-0" - L 6x6x3/8FOR "S1" OR "S2" > 9'-0" - L 7x4x3/8 (LLV)



- PROVIDE WELD ON ADJUSTABLE MASONRY ANCHORS ON ALL BEAMS AND COLUMNS ABUTTING MASONRY WALLS. 2. USE HECKMAN ( OR APPROVED EQUAL ) #316 ADJUSTABLE STRAPS
- BY G.C. & #315 WELD ON CLIPS BY STEEL CONTRACTOR.
- 3. ANCHORS TO BE KEPT IN BLOCK COURSING.4. STEEL CONTRACTOR SHALL COORDINATE ANCHOR LOCATION

WITH ARCHL. DRAWINGS PRIOR TO FABRICATION.



MPP Engineers LLC
34 S. Main Street, Suite D Allentown, NJ 08501 Phone: (609) 489-5511