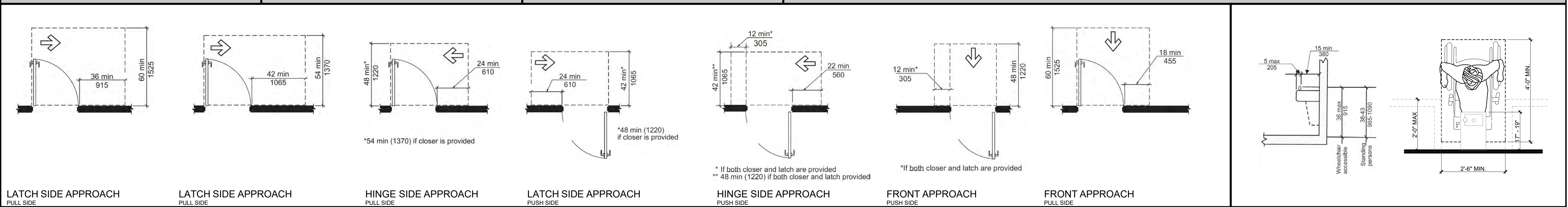
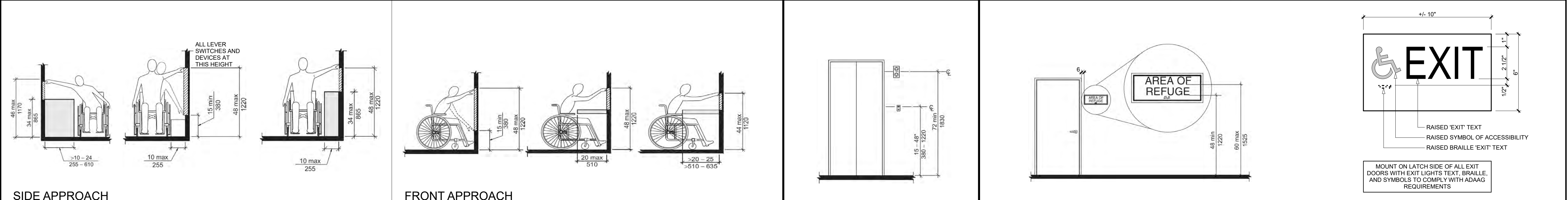


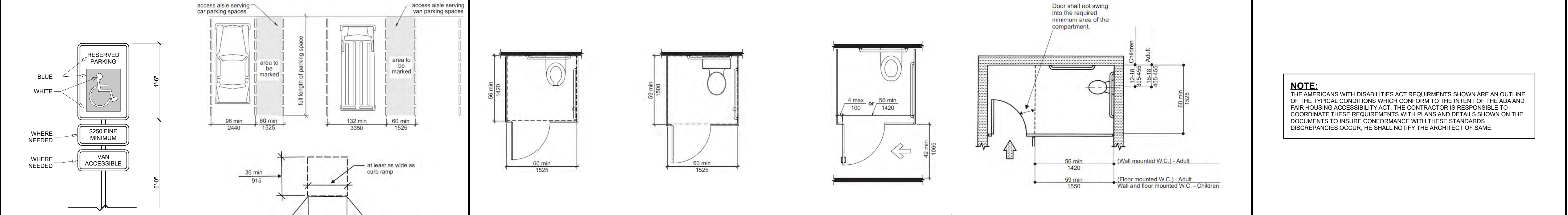
DIMENSIONS **CLEARANCE** **WHEELCHAIR TURNING** **STAIRS**



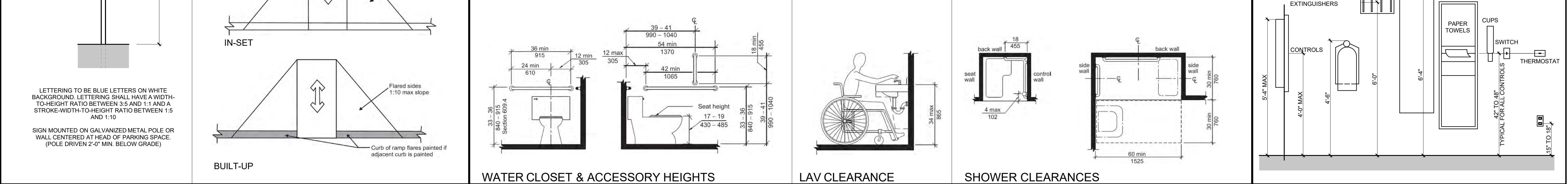
DOOR CLEARANCE **DRINKING FOUNTAINS**



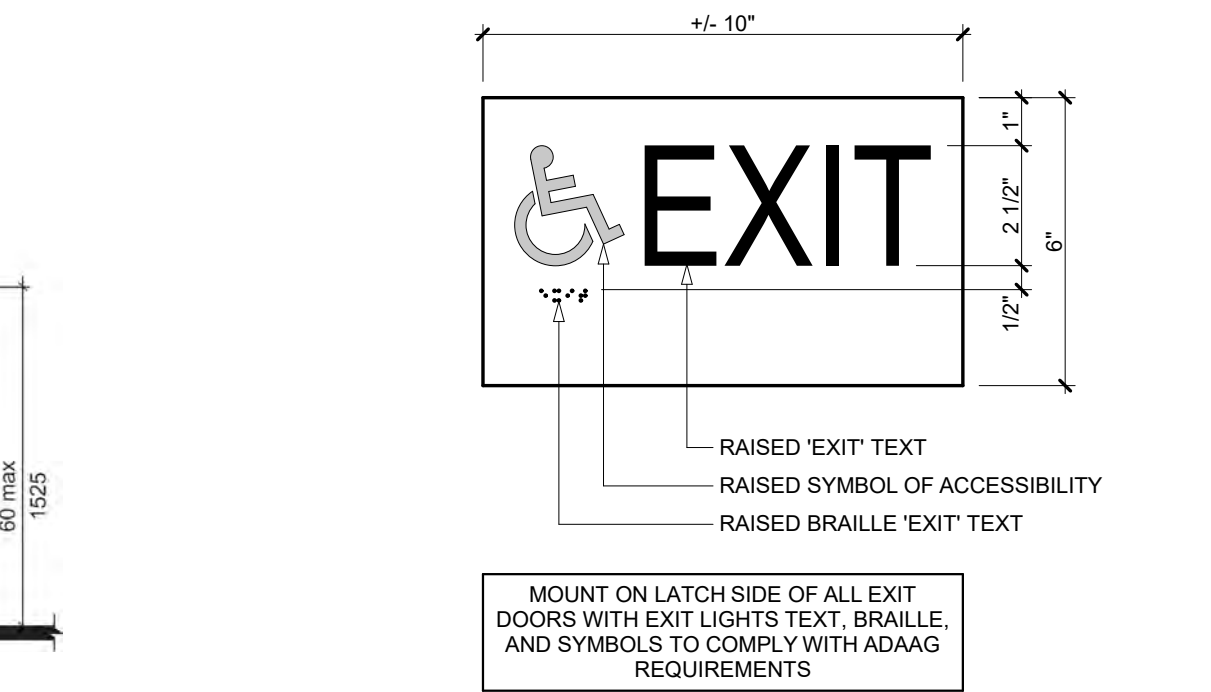
SIDE APPROACH **FRONT APPROACH** **ELEVATOR** **SIGNAGE** **TACTILE EXIT SIGN DETAIL**



REACH DIMENSIONS **WATER CLOSET & ACCESSORY HEIGHTS** **LAV CLEARANCE** **SHOWER CLEARANCES**



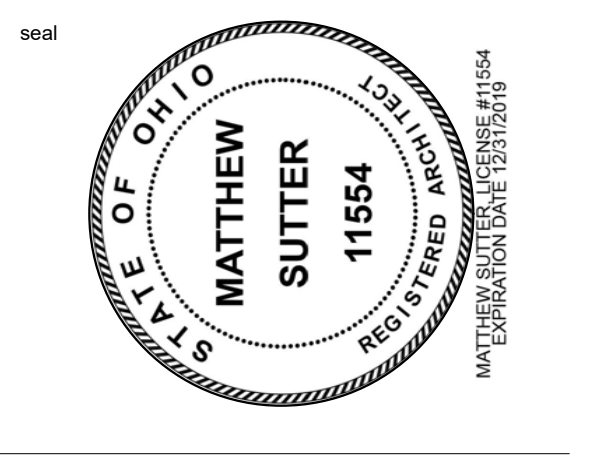
SITE INFORMATION **RESTROOMS** **HEIGHTS**



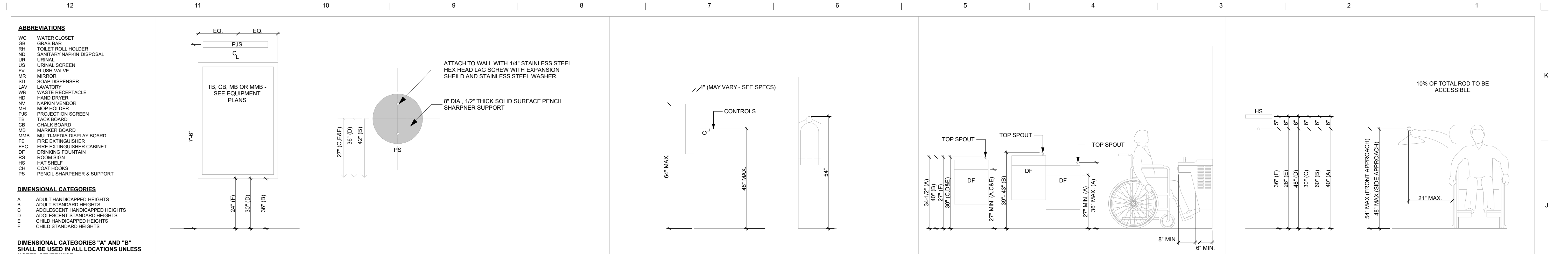
NOTE:
THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS SHOWN ARE AN OUTLINE OF THE TYPICAL CONDITIONS WHICH CONFORM TO THE INTENT OF THE ADA AND FAIR HOUSING ACCESSIBILITY ACT. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THESE REQUIREMENTS WITH PLANS AND DETAILS SHOWN ON THE DOCUMENTS TO INSURE CONFORMANCE WITH THESE STANDARDS. DISCREPANCIES OCCUR, HE SHALL NOTIFY THE ARCHITECT OF SAME.

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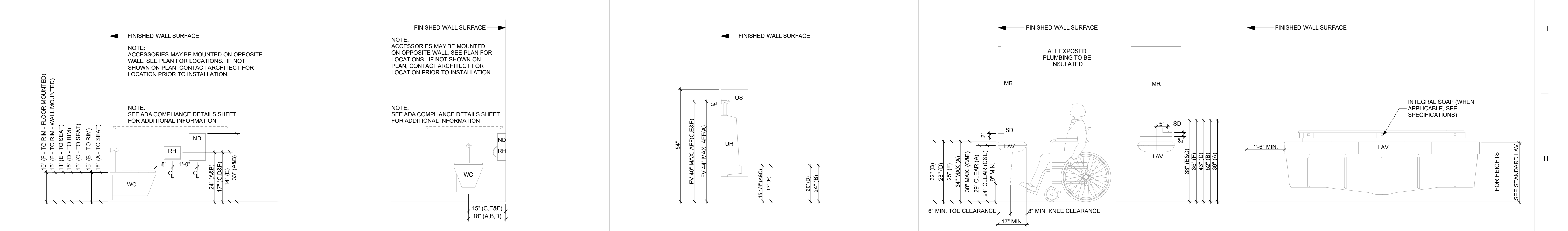
revision	date	issued



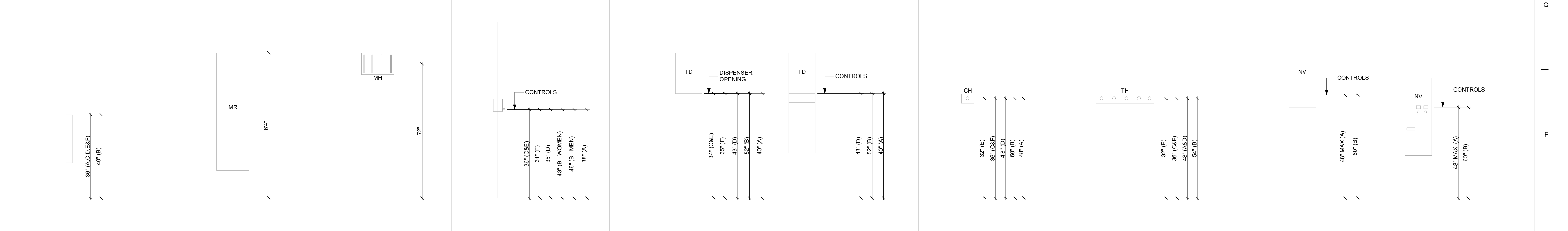
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LEGEND DISPLAY BOARD PENCIL SHARPENER SUPPORT FIRE EXTINGUISHER DRINKING FOUNTAIN HAT SHELF & HANGER ROD



TOILET & ACCESSORIES TOILET & ACCESSORIES URINAL & SCREEN LAVATORY & ACCESSORIES MULTI-LAVATORY



WASTE RECEPTACLE LARGE MIRROR MOP HOLDER HAND DRYER PAPER TOWEL DISPENSER COAT HOOKS TOWEL HOOKS NAPKIN VENDOR



BID SET
Not For Construction

revision	date	issued



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FLOOR PLAN NOTES

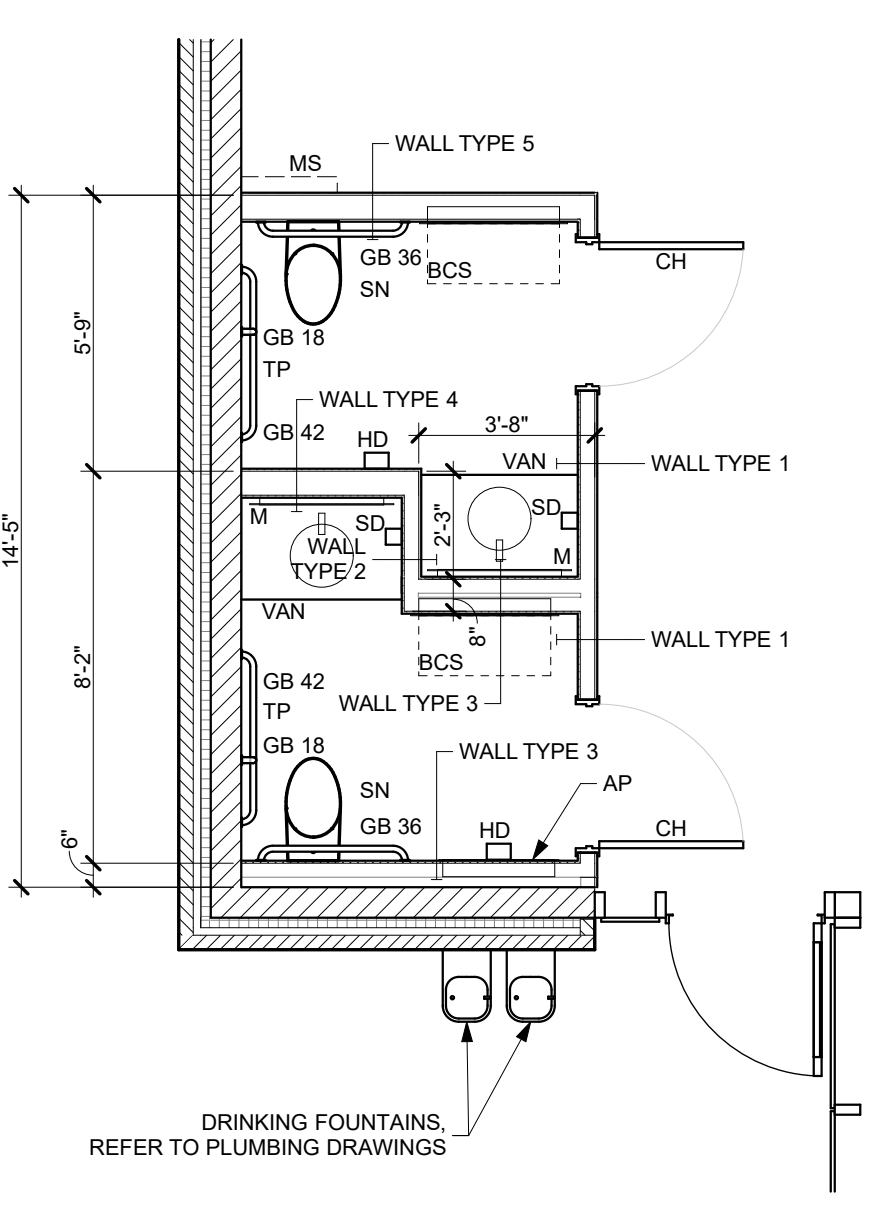
1. ALL WORK SHALL CONFORM TO THE FEDERAL, STATE AND LOCAL CODES AND REQUIREMENTS.
2. IT IS SOLELY THE CONTRACTORS RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
3. EACH PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION OF THEIR PROSPECTIVE WORK.
4. ALL CONTRACTORS TO COORDINATE WITH STRUCTURAL, ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS.
5. ALL DIMENSIONS THAT ARE UNCLEAR OR UN-INDICATED SHALL BE VERIFIED WITH THE ARCHITECT. EACH CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES BEFORE PROCEEDING WITH THEIR WORK. COMMENCEMENT OF THE WORK CONSTITUTES ACCEPTANCE OF THE EXISTING AND/OR NEW CONDITIONS.
6. COORDINATE DIMENSIONS WITH STRUCTURAL DRAWINGS - TYPICAL.
7. ALL MASONRY DIMENSIONS ARE NOMINAL.
8. ALL CONCRETE MASONRY UNITS THAT DO NOT LAY-OUT IN FULL OR HALF-BLOCK LENGTHS SHALL BE BALANCED SUCH THAT MASONRY PIECES SHALL HAVE NO LESS THAN 4" EXPOSED TO VIEW.
9. FILL IN ALL MASONRY VOIDS WITH MORTAR OR CONCRETE WHERE MASONRY ANCHORS OCCUR.
10. ALL INTERIOR CONCRETE MASONRY UNIT OUTSIDE CORNERS, HORIZONTAL OR VERTICAL, SHALL BE BULLNOSE (U.N.O. OR DETAILED OTHERWISE).
11. REFER TO PLAN AND DETAILS FOR EXACT LOCATIONS OF INTERIOR PARTITIONS RELATIVE TO EXISTING AND/OR EXISTING WALLS.
12. ALL STUD WALL PARTITIONS ARE DIMENSIONED TO BLOUGH FRAMING.
13. NON-COMBUSTIBLE BLOCKING SHALL BE REQUIRED IN STUD WALLS FOR EQUIPMENT, CASEWORK, TOILET ACCESSORIES, HANDRAILS, ETC. NON-COMBUSTIBLE BLOCKING TO BE FURNISHED AND INSTALLED BY THE TRADE REQUIRING THE BLOCKING. ALL EQUIPMENT SUPPLIED BY OWNER, BLOCKING SHALL BE FURNISHED AND INSTALLED BY FRAMING CONTRACTOR.
14. REFER TO DRAWING A601-C FOR DOOR / WINDOW INSTALLATION DETAILS.

STUD WALL TYPES

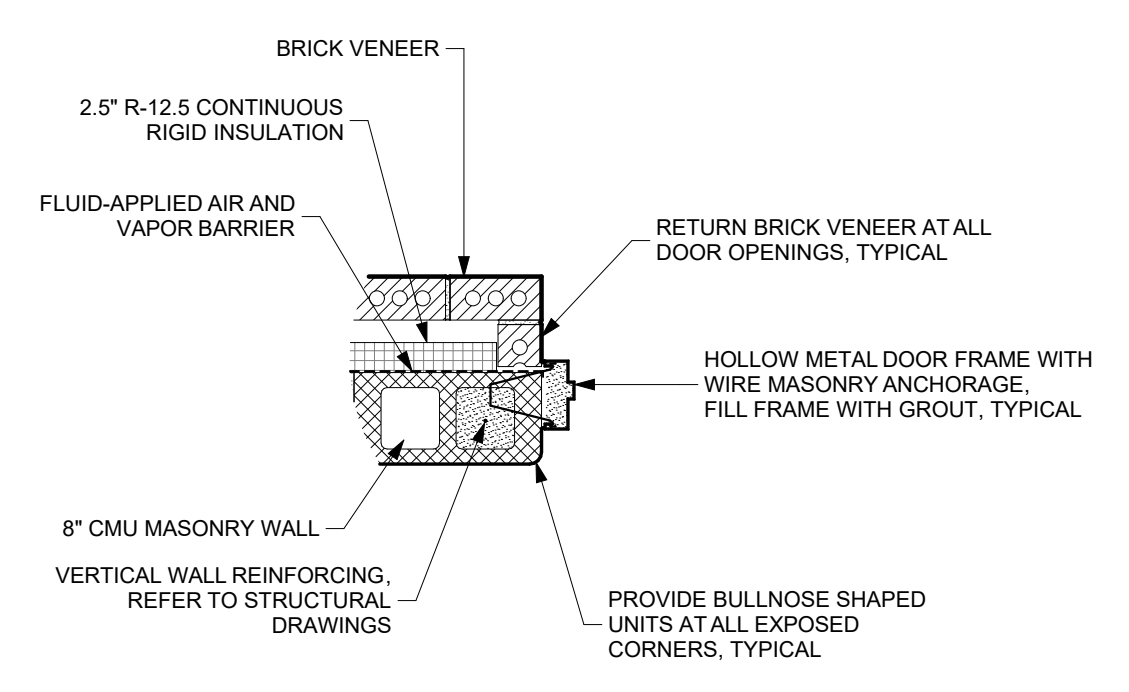
- WALL TYPE 1 3-5/8" 18 GAUGE STUDS @ 16" O.C. PUBLIC SIDE - 5/8" HIGH IMPACT DRYWALL 8'-0" HIGH. INSTALL 5/8" DRYWALL FROM 8'-0" TO METAL ROOF DECK RESTROOM SIDE - 5/8" TILE BACKER BOARD 8'-0" HIGH. INSTALL 5/8" DRYWALL FROM 8'-0" TO METAL ROOF DECK
- WALL TYPE 2 3-5/8" 18 GAUGE STUDS @ 16" O.C. BOTH SIDES - 5/8" TILE BACKER BOARD 8'-0" HIGH. INSTALL 5/8" DRYWALL FROM 8'-0" TO METAL ROOF DECK
- WALL TYPE 3 3-5/8" 18 GAUGE STUDS @ 16" O.C. ONE SIDE - 5/8" TILE BACKER BOARD 8'-0" HIGH. INSTALL 5/8" DRYWALL FROM 8'-0" TO METAL ROOF DECK
- WALL TYPE 4 6" 18 GAUGE STUDS @ 16" O.C. BOTH SIDES - 5/8" TILE BACKER BOARD 8'-0" HIGH. INSTALL 5/8" DRYWALL FROM 8'-0" TO METAL ROOF DECK
- WALL TYPE 5 6" 18 GAUGE STUDS @ 16" O.C. PUBLIC SIDE - 5/8" HIGH IMPACT DRYWALL 8'-0" HIGH. RESTROOM SIDE - 5/8" TILE BACKER BOARD 8'-0" HIGH. INSTALL 5/8" DRYWALL FROM 8'-0" TO METAL ROOF DECK

TOILET ACCESSORIES LEGEND

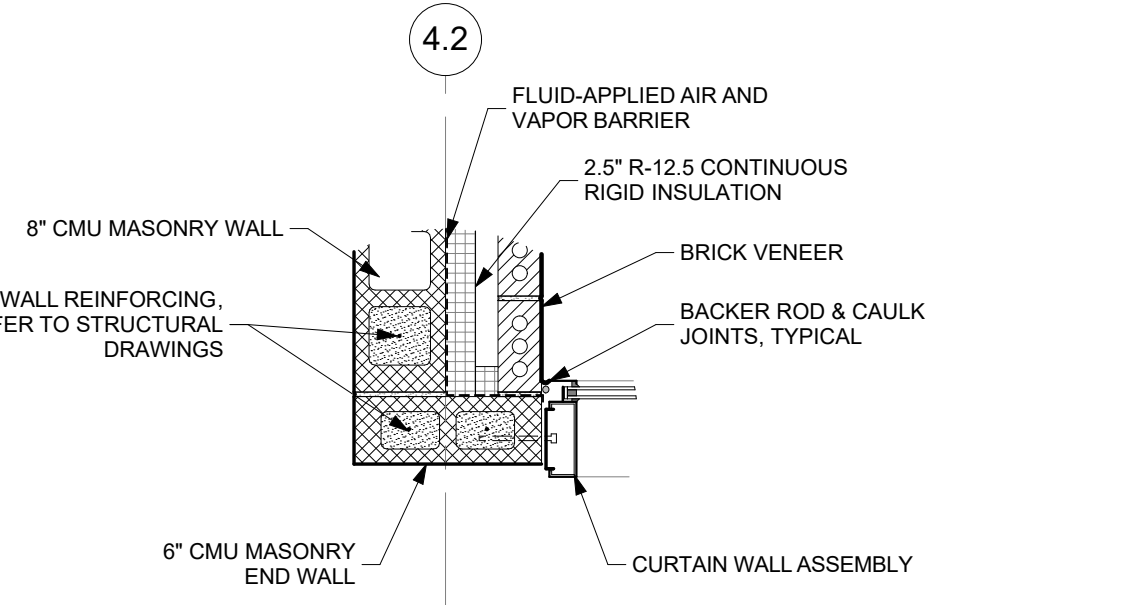
- GB 42 GRAB BAR 42" LONG
GB 36 GRAB BAR 36" LONG
GB 18 GRAB BAR 18" LONG
TP TOILET PAPER HOLDER
SD SOAP DISPENSER
SN SANITARY NAPKIN / DISPOSAL
M 36" WIDE x 42" HIGH LIGHTED MIRROR (REFER TO TOILET ACCESSORIES SPECIFICATIONS)
HD HAND DRYER (REFER TO SPECIFICATIONS)
VAN SOLID SURFACE VANITY COUNTER TOP WITH INTEGRAL BOWL SINK (REFER TO PLUMBING DRAWINGS)
BCS RECESSED BABY CHANGING STATION (REFER TO SPECIFICATIONS)
CH COAT HOOK (REFER TO SPECIFICATIONS)
AP ACCESS PANEL 24" WIDE x 24" HIGH (REFER TO SPECIFICATIONS)
- NOTE: SEE ALSO FINISH PLAN & STANDARD HEIGHT REQUIREMENT SHEET FOR INSTALLATION HEIGHTS FOR ITEMS LISTED ABOVE (U.N.O.)



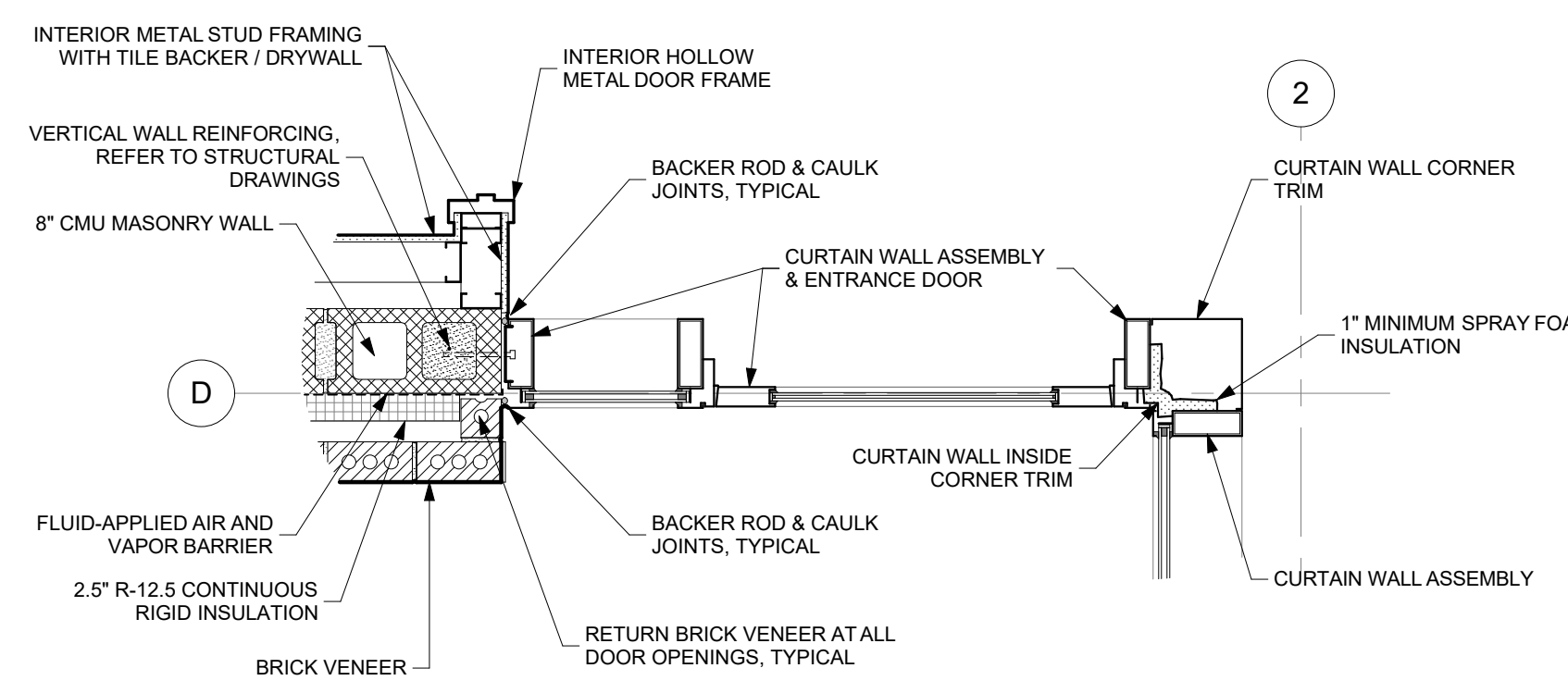
2 RESTROOM PLAN
SCALE: 1/4" = 1'-0"



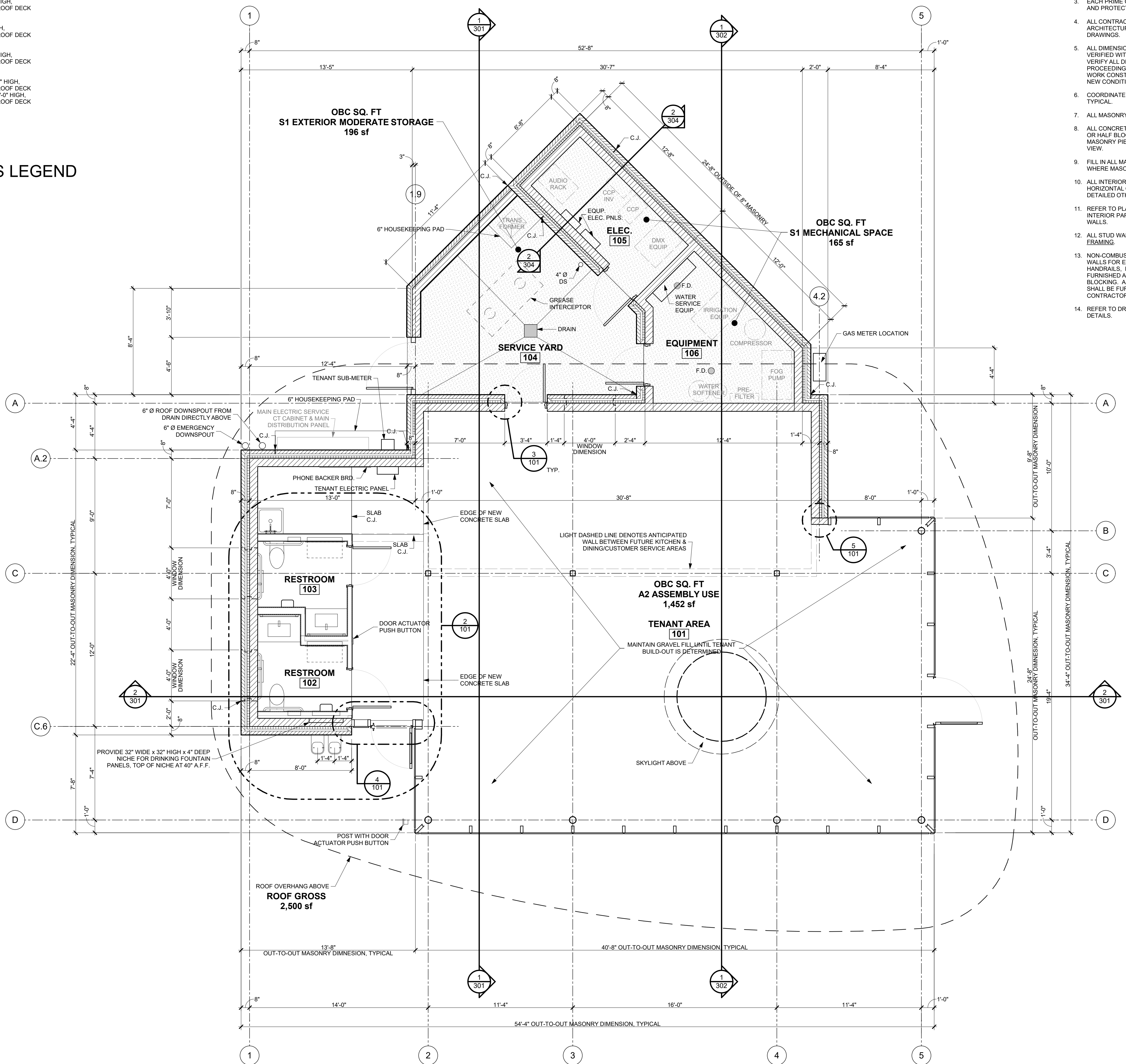
3 TYP. JAMB DETAIL
SCALE: 3/4" = 1'-0"



5 CURTAIN WALL JAMB DETAIL
SCALE: 3/4" = 1'-0"

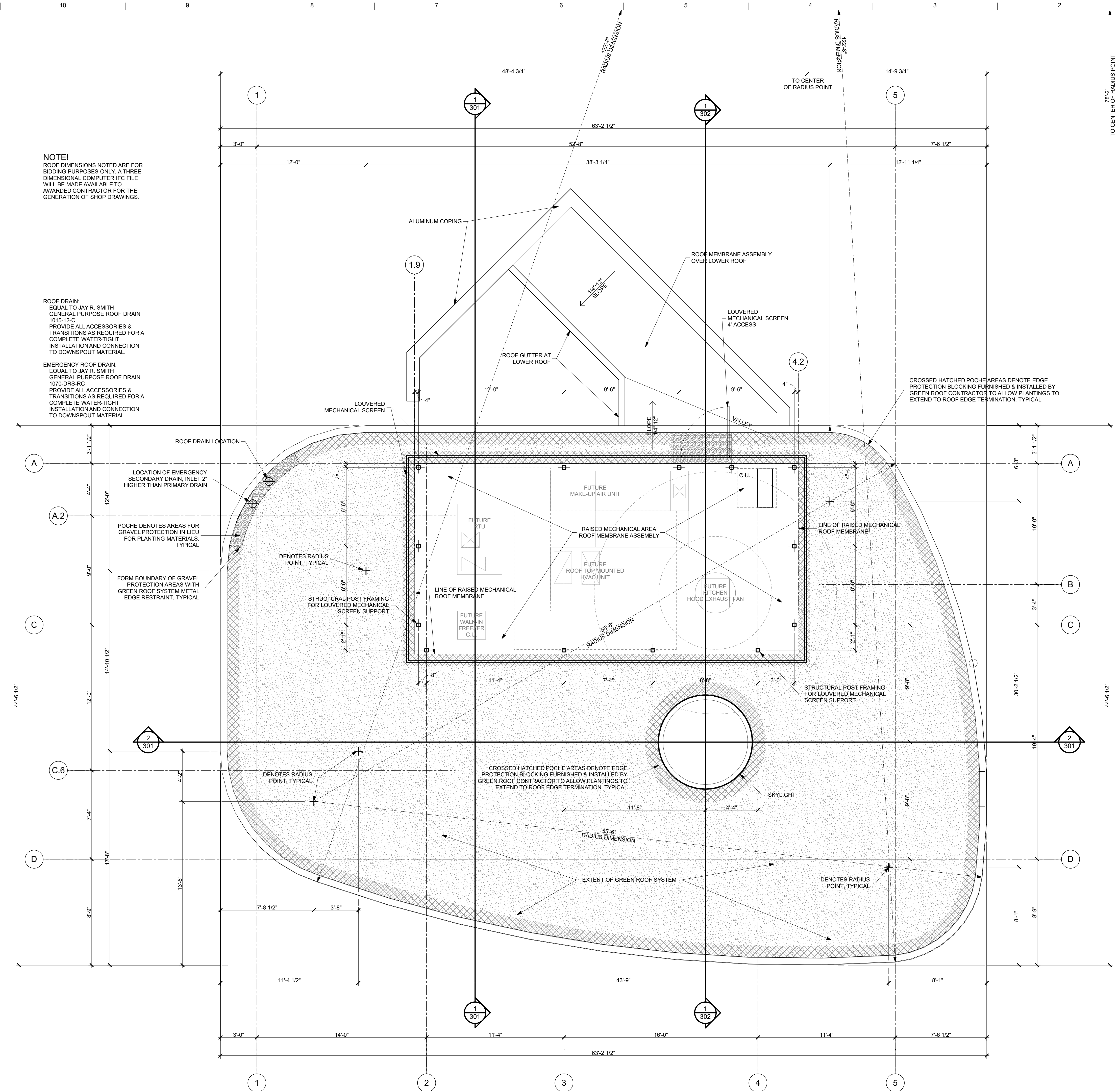


4 CURTAIN WALL JAMB DETAIL
SCALE: 3/4" = 1'-0"



PLAN NORTH
GROUND FLOOR LEVEL
SCALE: 1/4" = 1'-0"

revision	date	issued



NOTE!
ROOF DIMENSIONS NOTED ARE FOR BIDDING PURPOSES ONLY. A THREE DIMENSIONAL COMPUTER IFC FILE WILL BE MADE AVAILABLE TO AWARDED CONTRACTOR FOR THE GENERATION OF SHOP DRAWINGS.

ROOF DRAIN:
EQUAL TO JAY R. SMITH GENERAL PURPOSE ROOF DRAIN 1515-12-C PROVIDE ALL ACCESSORIES & TRANSITIONS AS REQUIRED FOR A COMPLETE WATER-TIGHT INSTALLATION AND CONNECTION TO DOWNSPOUT MATERIAL.

EMERGENCY ROOF DRAIN:
EQUAL TO JAY R. SMITH GENERAL PURPOSE ROOF DRAIN 1070-08-08-C PROVIDE ALL ACCESSORIES & TRANSITIONS AS REQUIRED FOR A COMPLETE WATER-TIGHT INSTALLATION AND CONNECTION TO DOWNSPOUT MATERIAL.

PLAN NORTH
ROOF LEVEL
SCALE: 1/4" = 1'-0"

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FINISH PLAN SCHEDULE AND NOTES

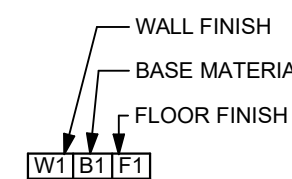
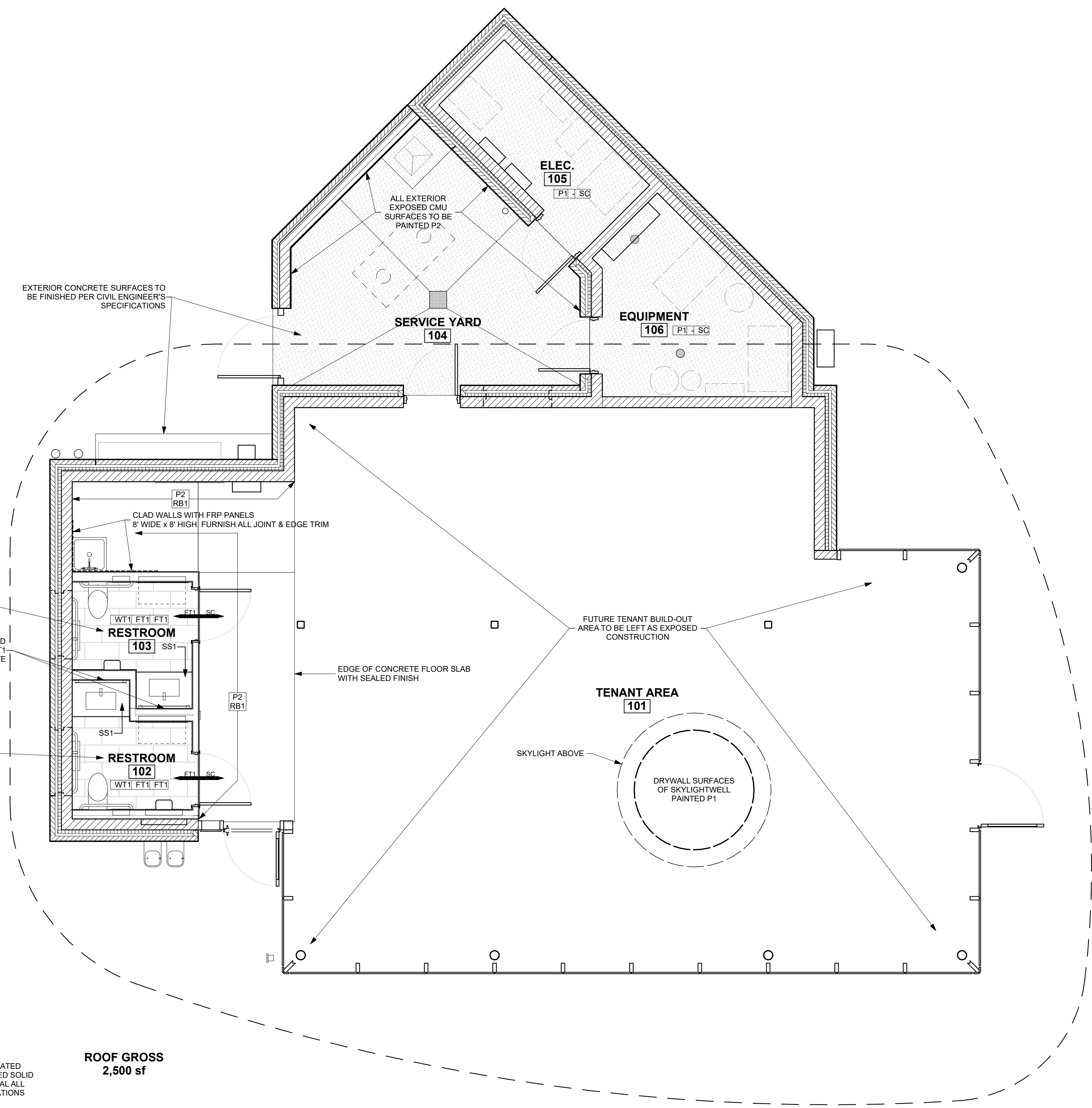
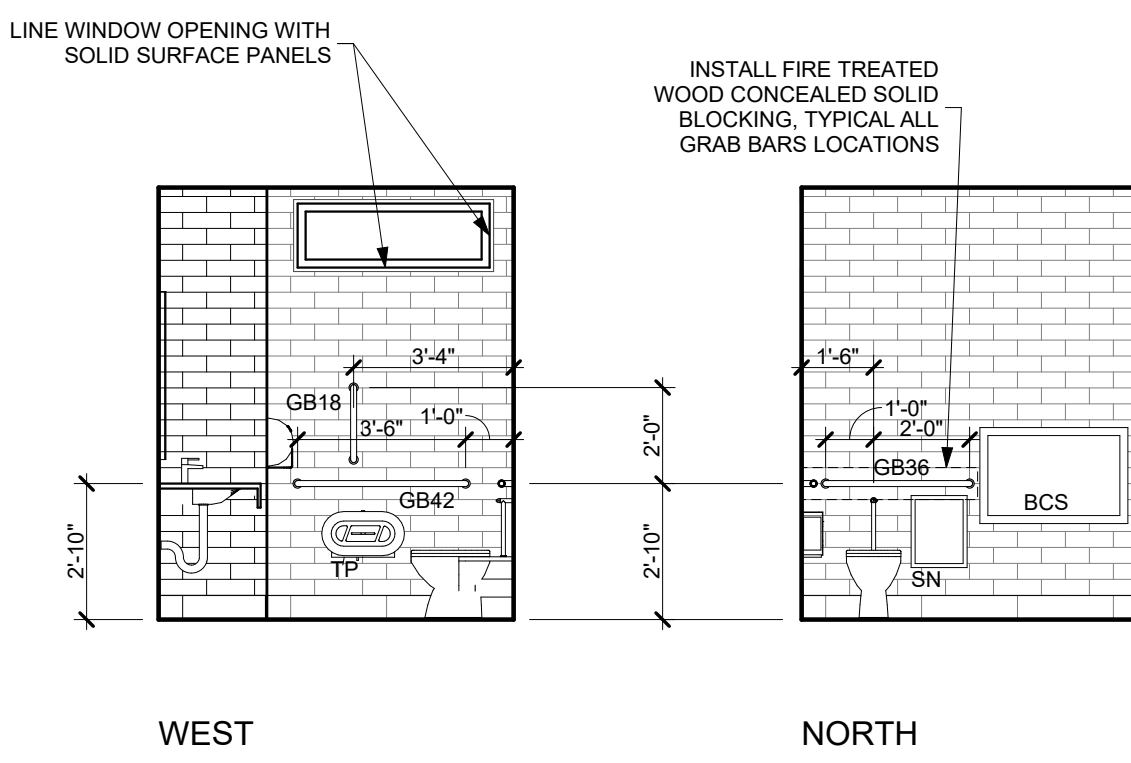


Table with columns: CODE, MANUFACTURER/STYLE, COLOR. Sections include FLOOR, BASE, WALL, SOLID SURFACE/PLASTIC LAMINATE, and GROUT.

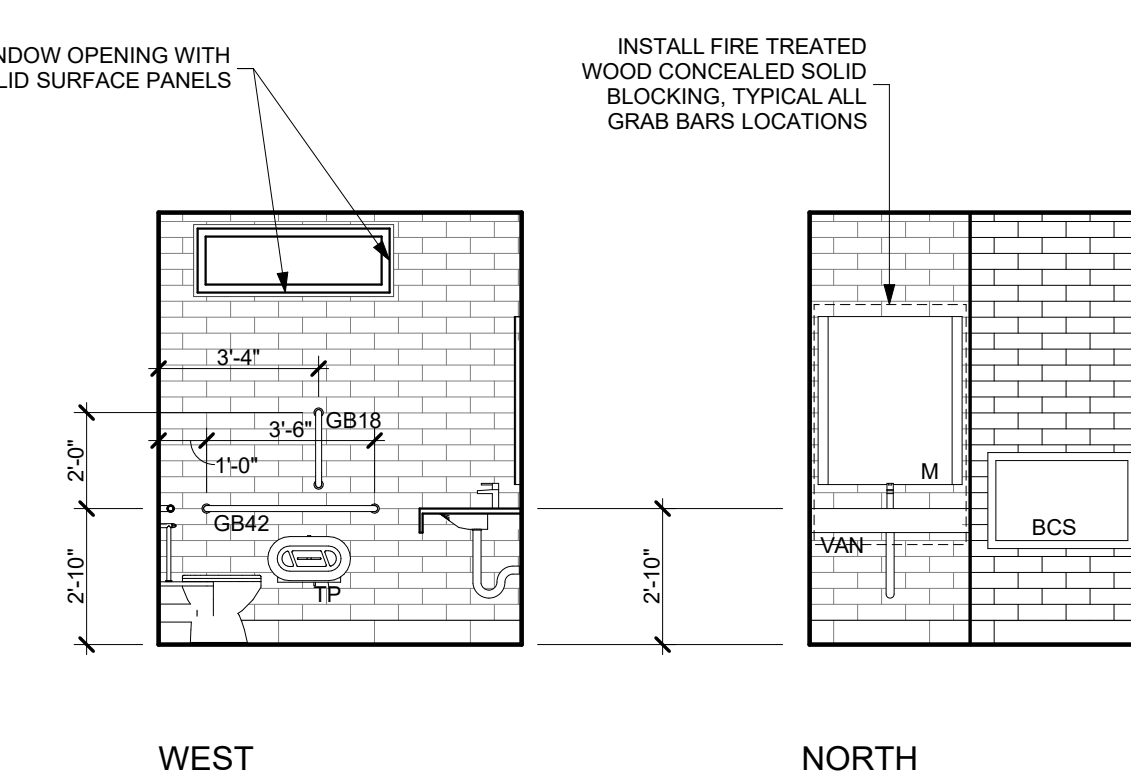
- GENERAL NOTES: 1. HOLLOW METAL DOORS SHALL BE PAINTED P2 U.N.O. 2. CONTRACTOR IS RESPONSIBLE FOR FLOOR PREP/MOISTURE LEVELS PER MFG. REQUIREMENTS. 3. ALL SWITCHFACE PLATES TO MATCH WALL PAINT WHERE INSTALLED...



ROOF GROSS 2,500 sf



13 RESTROOM 103 SCALE: 1/4" = 1'-0"



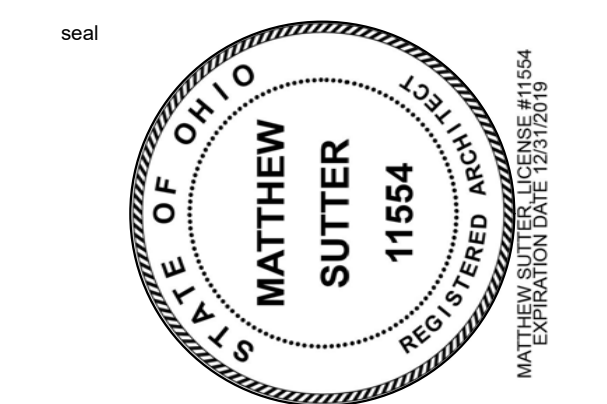
3 RESTROOM 102 SCALE: 1/4" = 1'-0"



GROUND FLOOR LEVEL SCALE: 1/4" = 1'-0"

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Revision table with columns: revision, date, issued. Contains multiple rows for tracking changes.



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revision	date	issued

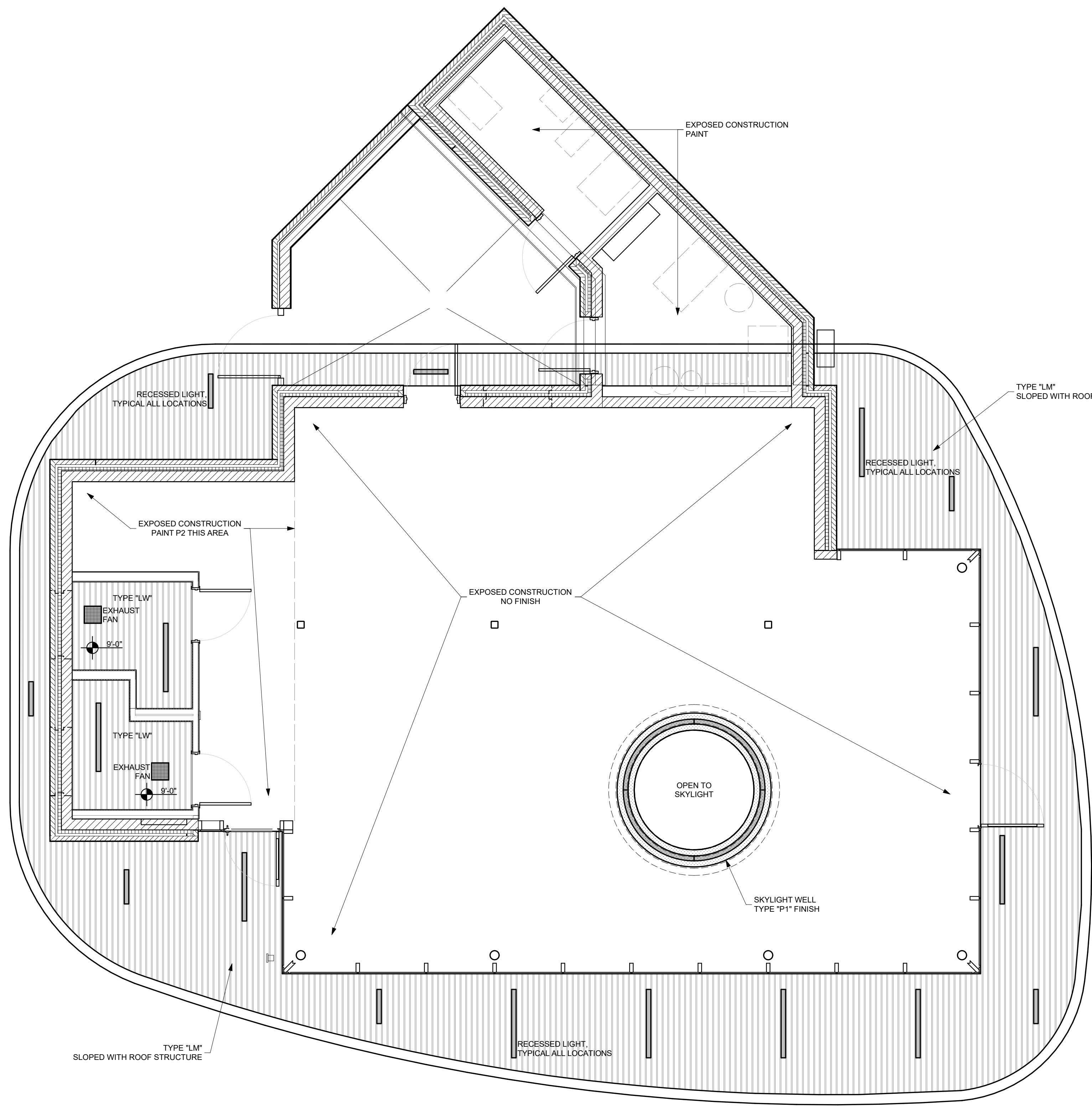


REFLECTED CEILING LEGEND

- TYPE "LM"
LINEAR METAL PANEL
SOFFIT SYSTEM
(EXTERIOR SOFFITS)
- TYPE "LW"
LINEAR WOOD PANEL
CEILING SYSTEM
(INTERIOR CEILINGS)
- TYPE "PP"
PLASTER FINISH - PAINT
(SKYLIGHT WELL)
- EXPOSED STRUCTURE - PAINT
- MECHANICAL SUPPLY AIR DIFFUSER
(SEE MECHANICAL DRAWINGS)
- MECHANICAL RETURN AIR DIFFUSER
(SEE MECHANICAL DRAWINGS)
- RECESSED LIGHT FIXTURE
(SEE ELECTRICAL DRAWINGS)

NOTES:

1. ALL CEILINGS WITHOUT A MATERIAL LABEL ARE EXPOSED STRUCTURE.
2. ALL EXPOSED DUCKWORK, CONDUITS, J-BOXES TO HAVE PAINTED FINISH.



PLAN NORTH
GROUND FLOOR LEVEL RCP
SCALE: 1/4" = 1'-0"

client / owner
City of Canton
project name
CENTENNIAL PLAZA

project address
**301-399 Market Ave N,
Canton, OH 44702**

architect
Tim Lai Architect
491 W TOWN ST
COLUMBUS, OH 43215
p 614.321.9128 | LAIARCHITECT.COM

architect of record
Sol Harris / Day
6677 FRANK AVENUE NW
NORTH CANTON, OH 44720
p 330.493.3722 | SOLHARRISDAY.COM

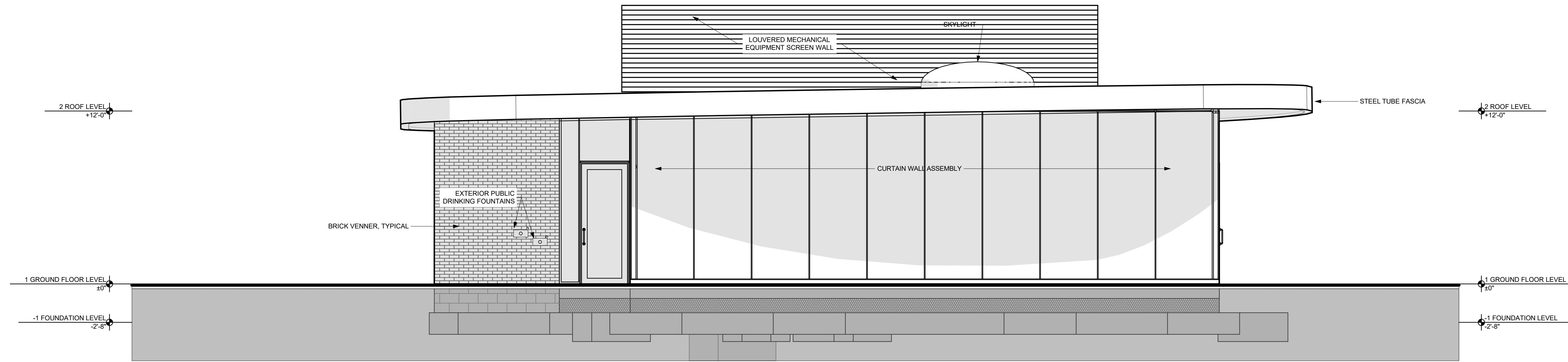
structural engineer
ARUP
77 WATER ST
NEW YORK, NY 10005
p 212.896.3000 | ARUP.COM

civil engineer
ATWELL
7100 E PLEASANT VALLEY RD
SUITE 220
INDEPENDENCE, OH 44131
p 440.249.2000 | ATWELL-GROUP.COM

lighting design / engineer
TEC STUDIO INC.
7510 SLATE RIDGE BLVD
COLUMBUS, OH 43068
p 614.866.2988 | TECSTUDIOINC.COM

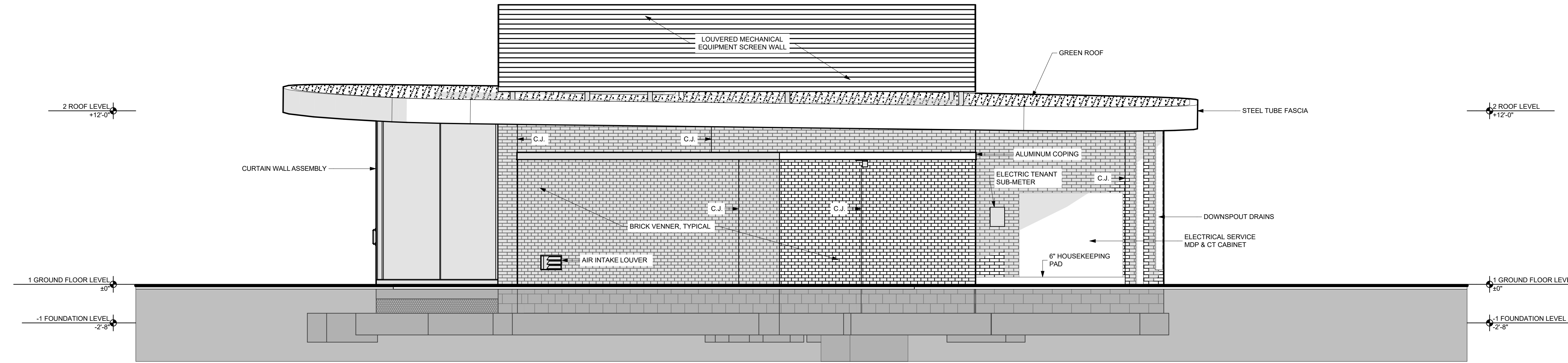
water feature
SOUTHERN AQUATICS, INC.
150 HILDEN RD
SUITE 305
PONTE VEDRA BEACH, FL 32081
p 904.824.1110 | SAFOUNTAINS.COM

cafe engineer
THORSON BAKER + ASSOCIATES
3030 W. STREETSBORO ROAD
RICHFIELD, OH 44286
p 330.859.6898 | THORSONBAKER.COM



SOUTH ELEVATION

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



NORTH ELEVATION

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

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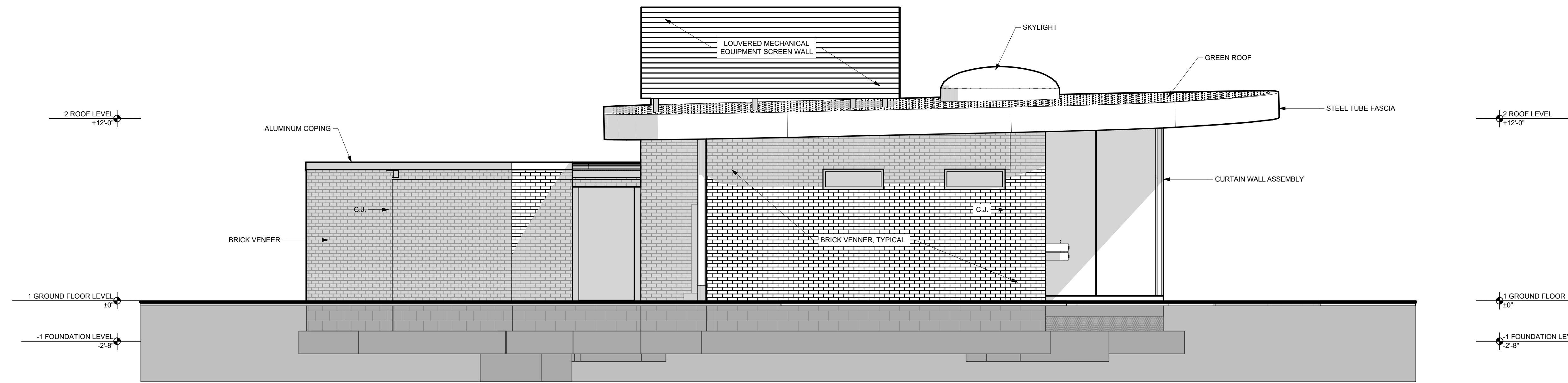


issue date
06.04.2019

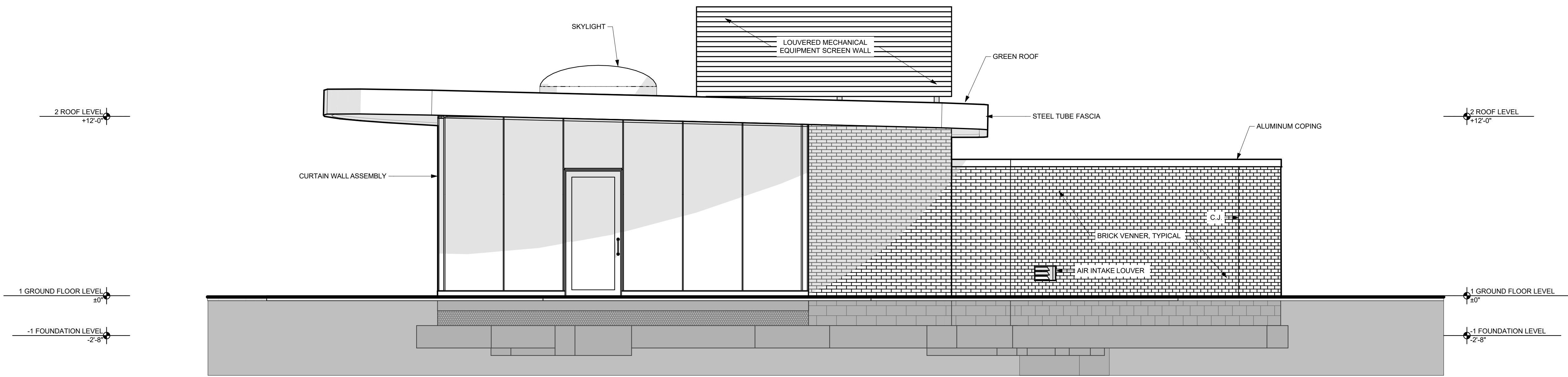
project number
c18514
SHD19.039

sheet name
**EXTERIOR
ELEVATIONS**
sheet number
A201-C

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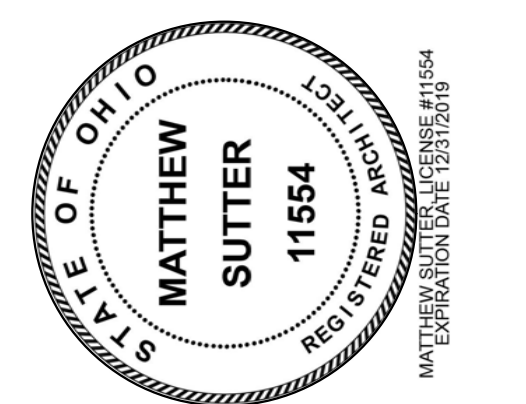
WEST ELEVATION
SCALE: 1/4" = 1'-0"



EAST ELEVATION
SCALE: 1/4" = 1'-0"

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revision	date	issued



GENERAL NOTES

Applicable Building Code: 2017 Ohio Building Code

- Design live loads
 - Floor loads
 - Retail First floor = 100 psf
 - Roof loads
 - Minimum roof live load by code = 20 psf
 - Ground snow load = 20 psf
 - Snow exposure factor (se) = 1.0
 - Snow importance factor (Is) = 1.0
 - Thermal Factor (CT) = 1.0
 - Flat roof snow load (Pf) = 19 psf
 - Rain on snow = 5 psf
 - Total design snow load = 25 psf + drifting
 - Roof design is governed by the minimum roof live load or total design snow load + drifting whichever is more stringent.

- Design wind loads
 - Basic wind speed (3 second gust) (Ultimate) = 115 mph
 - Exposure = B
 - Risk Category = II
 - Main wind-primary frame (Ultimate)

Height	Interior Zone	End Zone
0-15'	13.9 psf	21.0 psf

- Components and Cladding Wind Loads (PSF) (Ultimate)

Height	Effective Area(sq.ft.)			
	Interior Zone	Exterior Zone	Interior Zone	Exterior Zone
0-20'	21.8	20.9	19.5	18.6

Height	Effective Area(sq.ft.)			
	Interior Zone	Exterior Zone	Interior Zone	Exterior Zone
0-20'	23.6	22.7	21.3	20.4

Zone	Effective Area(sq.ft.)			
	Interior Zone	Gross	Interior Zone	Exterior Zone
Perimeter (5.5' Wide)	39.9	35.9	29.8	25.8
Corner (5.5x5.5')	60.0	50.0	35.9	25.8
Overhang	98.0	84.7	65.8	52.4

Zone	Effective Area(sq.ft.)			
	Interior Zone	Gross	Interior Zone	Exterior Zone
Perimeter (5.5' Wide)	39.9	35.9	29.8	25.8
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Overhang	98.0	84.7	65.8	52.4

- Components and cladding: use the most stringent wind load obtained from code, underwriter criteria (Factory Mutual, etc.), and the project specifications. Cladding manufacturer shall consider increased pressure coefficients at building perimeter, corners, eaves, and rakes. Loads noted in general notes are obtained from code.

- Seismic
 - Ss = 0.107
 - S1 = 0.048
 - S0.1 = 0.114
 - S0.1 = 0.077

- Seismic importance factor (Ie) = 1.0
- Risk Category = D
- Seismic site class = D
- Seismic design category = B
- Response Modification Factor (R) = 0.057
- Seismic Response Coefficient (Cs) = 0.057
- Basic seismic force resistance system = Ordinary reinforced - masonry shear walls

- Analysis procedures
 - Design base shear (V) = 11 Kips (ultimate)
 - Equivalent lateral force method
 - Frost depth = 36"

- Foundation support from perimeter of structure shall be provided in accordance with OSHA requirements as required. Such material shall remain the contractor's property after completion of the project.

- It is the contractor's responsibility to enforce all applicable safety codes and regulations during all phases of construction.

- The contractor shall perform all construction for the project in a manner and sequence that are based on accepted industry standards that recognize the interaction of the components that comprise the structure, without causing distress, unanticipated movements or irregular load paths as a result of the construction means and methods employed.

- Construction loads shall not exceed design live loads. The contractor shall be responsible for all design required to support construction equipment used in constructing this project. Shoring and re-shoring is the responsibility of the contractor.

- Principal openings through the structure are shown on these drawings. The general contractor shall examine the structural and mechanical, electrical, plumbing, and other trades drawings for the required openings and shall verify size and location of all openings with the appropriate trade contractor. Providing all openings required for mechanical, electrical, plumbing, or other trades shall be a part of the general contract, whether or not shown in the structural drawings. Any deviation from the openings shown on the structural drawings shall be brought to the engineer's attention for review.

- All contractors are required to examine the drawings and specifications carefully, visit the site and fully inform themselves as to all existing conditions and limitations, prior to agreeing to perform the work. Failure to visit the site and familiarize themselves with the existing conditions and limitations will in no way relieve the contractor of any materials or performing any work in accordance with drawings and specifications without additional cost to the owner.

- Details labeled "Typical Details" 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 engineer for clarifications regarding applicability of "Typical Details".

- Work these drawings with architectural, mechanical, electrical, and plumbing drawings, along with all other drawings and specifications included in the contract documents.

- Do not scale drawings.

- Any discrepancies between structural and architectural drawings shall be brought to the attention of the architect and structural engineer.

- Should any of the general notes conflict with any details or instructions on plans, or in the specifications, the strictest provision shall govern.

- Shop drawings and submittals:
 - These drawings shall be checked and coordinated with other materials and contracts by the general contractor and shop drawings and submittals shall bear the contractor's review stamp with the checker's initials before being submitted to the architect for approval.
 - When the fabricator has been authorized to use the architect's and engineer's drawings as erection drawings, the fabricator must remove all title blocks, professional seals and any other references to the architect and engineer from that erection drawing. The fabricator's name and title shall be placed on the erection drawing.
 - Where dimensions and elevations of existing construction could affect the new construction, it is the contractor's responsibility to make field measurements in time for their incorporation in the shop drawings.

Building Pad Preparation

- All building pad preparation shall follow the recommendations of the geotechnical report (uno).
- Foundation design is based upon the removal of the upper 18 inches of existing fill materials and replacement with engineered fill per the geotechnical report.
- All trees, brush, roots, topsoil, rubble, organically contaminated or otherwise objectionable materials encountered are to be removed from structural areas of the site per the geotechnical report.
- Subgrade sectors which will exist in cut and those which are to support fill structures are to be proof rolled. Areas exhibiting instability are to be undercut and back filled on a lift-by-lift basis with each lift carefully compacted.
- If unstable subgrade sectors cannot be stabilized by excavation and recompaction, then crushed stone or similar coarse aggregate materials shall be rolled into the subgrade until a firm subgrade reaction is achieved.
- The geotechnical engineer shall determine on site or off site imported material that can be used for engineered fill. All fill material shall be approved by the geotechnical engineer.
- The proposed engineered fill materials are to be placed in lifts not exceeding eight (8) inches in loose measured thickness. Each lift is to be compacted as follows:
 - Slab on grade: Minimum of 98% maximum density by ASTM D698.
 - Footings bearing on fill: Minimum of 98% maximum density by ASTM D698.
- The earthwork program shall be conducted under the supervision of a soils testing laboratory. The in-place densities achieved are to be verified by tests.

Foundation

- The contractor shall familiarize themselves with the survey and the geotechnical investigation report before starting construction. All foundation work shall be in accordance with the recommendations of the geotechnical report by Professional Service Inc. (PSI), dated March 27, 2017 and an email dated May 1, 2019, and pending addendum. (Except where noted otherwise on drawings or specifications.)
- A soils testing laboratory shall be retained by the owner to provide construction review to insure conformance with the construction documents during the excavation, back fill, and foundation phases of the project.
- The soils testing laboratory shall:
 - Discuss with the engineer the design intent of the construction documents and the testing procedures used to ensure conformance with the construction documents before construction begins.
 - Inform the engineer of any variance in these procedures.
- It shall be the responsibility of the soils testing laboratory to:
 - Determine topsoil and excavation stripping depth;
 - Inspect all exposed excavation stripping, site grading, and excavation operations;
 - Approve fill materials, perform density tests of fill to insure placement per specification requirements;
 - Inspect foundation bearing surfaces.
- Foundation design is based on 2000 psf bearing pressure on firm, undisturbed soil, or engineered fill.
- Top of footing elevations, footing steps and thickness of footings are shown on the drawings and are based upon the information from the geotechnical report and the civil drawings available at the time of design. The top and bottom of footing may vary depending on the conditions encountered at the site. Frost depth shall be maintained and coordinated with final grading and location of footing steps. If proper foundation bearing is found to be deeper than that shown on the drawings then foundations shall be thickened maintaining the top of footing elevation to assure proper foundation bearing. The contractor shall submit unit prices for such work and shall qualify the extent of work in the base bid. If top of footing elevations need to vary for final site conditions then the general contractor shall coordinate the effort of other trades.
- Step footings, where required, at a ratio of one (1) vertical to two (2) horizontal with a maximum vertical step of 2'-0" unless noted otherwise.
- Inundation and long term exposure of bearing surfaces, which will result in deterioration of bearing formations, shall be prevented. Footings shall be placed immediately following footing excavations and bearing surface inspection.
- Back filling against basement or pit walls shall not be permitted until the supporting floors are in place and are able to resist the imposed lateral forces. Except for cantilever retaining walls or unless noted otherwise on drawings, the walls are supported by the floor above and below. Proper temporary bracing may be used in lieu of the floor support based upon the design by a professional engineer. The design of temporary bracing is the total responsibility of the contractor.
- All fill materials shall be free of organic contaminations and other deleterious matter.
- For back fill against basement walls, retaining walls, footings, etc., place in 8" thick layers, with each lift compacted at near optimum moisture content, until a minimum in place density of 98% of the maximum density as determined by ASTM D698 is achieved.
- All soil surrounding and under footings shall be protected from frost action and freezing during the course of construction.
- Notify structural engineer of any unusual soil conditions that are in variance with the geotechnical report.

- Foundation design is based on 2000 psf bearing pressure on firm, undisturbed soil, or engineered fill.

- Top of footing elevations, footing steps and thickness of footings are shown on the drawings and are based upon the information from the geotechnical report and the civil drawings available at the time of design. The top and bottom of footing may vary depending on the conditions encountered at the site. Frost depth shall be maintained and coordinated with final grading and location of footing steps. If proper foundation bearing is found to be deeper than that shown on the drawings then foundations shall be thickened maintaining the top of footing elevation to assure proper foundation bearing. The contractor shall submit unit prices for such work and shall qualify the extent of work in the base bid. If top of footing elevations need to vary for final site conditions then the general contractor shall coordinate the effort of other trades.

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- For back fill against basement walls, retaining walls, footings, etc., place in 8" thick layers, with each lift compacted at near optimum moisture content, until a minimum in place density of 98% of the maximum density as determined by ASTM D698 is achieved.

- All soil surrounding and under footings shall be protected from frost action and freezing during the course of construction.

- Notify structural engineer of any unusual soil conditions that are in variance with the geotechnical report.

Concrete

- All concrete construction shall conform to ACI 301, "Specifications for Structural Concrete", ACI 305.1, and ACI 306.1 unless noted otherwise.
- All detailing, fabrication and placing of reinforcing bars, unless otherwise noted, shall conform to ACI 318, "Building Code Requirements for Structural Concrete", ACI 117, and the ACI Detailing Manual.

Type of Concrete	Concrete Types Schedule					
	Minimum Cementitious Content (lb./cu.yd.)	Maximum Water/Cement Ratio (By weight)	Specified 28-Day Compressive Strength (psi)	Specified Air Content Range (by volume)	Specified Air Content Range (by volume)	Maximum Aggregate Size (inches)
• Spread footings & Piers below grade	470	0.60	3000	5	0-3 Entrapped	1 1/2"
• Interior concrete	564	0.48	4000	3-5	0-3 Entrapped	1"
• Concrete permanently exposed to the weather or vulnerable to de-icers or freeze/thaw cycles	564	0.45	4500	5-6	6 ±1.5%	1"

- All cement shall be Type I or Type III Portland Cement per ASTM C150. Types IA and IP are not acceptable. Use one brand of cement throughout the project.
- Minimum cementitious content shall consist of 100% cement or a combination of cement and Fly Ash per Note C. Fly Ash shall not be used in combination with GGBFS as a substitute for cement.
- Fly Ash is permitted and shall conform to ASTM C618 Type C or F, but shall not exceed 20% of cementitious content by weight indicated above on a substitution basis and shall be included in the water-to-cement ratio. If Fly Ash is used, the mix design submittals shall have tests using the same amount of Fly Ash. The contractor's schedule shall account for the use of Fly Ash.
- Ground granulated blast furnace slag (GGBFS) is not permitted.
- Concrete used for floors shall have 1800 psi, 3 day strength. Mixes to be pumped shall be so identified on the mix design submittal. All pumped mixes shall have a mid-range or high-range water reducer.
- All admixtures other than superplasticizers shall be added at the batch plant. Superplasticizers, designed for addition to the mix at the plant, may be added at the batch plant with verifications from the structural engineer and verifications that the water-to-cement ratio has not been exceeded. Superplasticizers added at the site shall be sent in pre-measured containers from the batch plant.
- All concrete used for cast-in-place concrete slabs shall contain the specified water reducing or water reducing/retarding admixture. All concrete slabs, placed at air temperature below 50°F shall contain the specified non-corrosive, non-chloride accelerator. All concrete placed at air temperature above 80°F shall contain specified water-reducing/retarding admixture. All concrete required to be air-entrained shall contain an approved air-entraining admixture. All pumped concrete shall contain the specified high-range water-reducing admixture. Concrete with a water-cement ratio above 0.40 to 0.60 shall contain the specified water reducer.
- All concrete requiring a high slump for placement (e.g. pumping, drilled piers, etc.) shall contain mid-range and high-range superplasticizer. Increased slump may not be achieved by exceeding the specified maximum water/cement ratio. Maximum slump is 8 inches with use of water reducing admixture (ASTM C494).
 - Calcium chloride shall not be permitted, nor shall any admixture containing calcium chloride be permitted.

- All pipe sleeve openings through concrete slabs shall be formed with standard steel pipe.

- No electrical conduit shall be placed above the welded wire fabric or top reinforcing of slabs.

- All aluminum in contact with concrete or dissimilar metals shall be coated with two coats coal tar epoxy, approved by the architect, unless otherwise noted.

- Concrete shall be discharged at the site within 1 1/2 hours after water has been added to the cement and aggregates. Addition of water to the mix at the project site will not be permitted. All water must be added at the batch plant. Slump may be adjusted only through the use of additional water reducing admixture or high range water reducing admixture.

- All concrete shall be placed without horizontal construction joints, except where specifically noted. Horizontal reinforcement shall be continuous through vertical construction joints.

Concrete (cont.)

- Construction joint locations other than shown on the drawings are permitted subject to prior approval of the engineer. Expansion joint and control joint locations are mandatory as shown. Contractor shall submit drawings showing intended placing sequences and location of construction joints to the engineer for approval. At pour-in place walls, construction joints shall be located so as to provide a 60'-0" maximum horizontal length of concrete placement in any direction.
- All exposed edges of concrete members shall be chamfered 3/4" unless shown otherwise on architectural drawings.
- See architectural drawings for concrete finishes, masonry anchors, and for miscellaneous embedded plates, bolts, sleeves, angles, etc.
- The placement of sleeves, outlet boxes, box-outs, anchors, etc., for the mechanical, electrical and plumbing trades is the responsibility of the trade involved; however, any box-outs not covered by typical details in the structural drawings shall be submitted for approval.
- The general contractor shall coordinate locations and dimensions of all openings and sleeves required for mechanical, electrical, and plumbing penetrations before concrete is placed. Shop drawings of all slab openings and sleeves shall be submitted for review by structural engineer. Openings shall not be cut or drilled in slabs without prior approval by structural engineer.
- Reinforcing bars shall conform to ASTM A615, grade 60. No tack welding of reinforcing in the field will be permitted.
- Reinforcing bars for welded applications shall conform to ASTM A706, 60 ksi yield strength.
- Deformed bar anchors (DBA) shall conform to ASTM A496, 70 ksi yield strength.
- Welded wire fabric reinforcing shall conform to ASTM A1064 and be furnished in flat sheets and installed on chairs.
- Reinforcing bar sizes #3 through #5 may be bent cold the first time, provided reinforcing bar temperature is above 32°. For other bar sizes, preheat reinforcing bars before bending. See procedures as outlined in ACI 301.
- Wire bar supports shall be furnished for all reinforcing within slabs, inclusive of welded wire fabric. Bottom bars in slabs on grade may be supported by other suitable supports. Reinforcing shall be properly positioned prior to concrete placement and may not be re-positioned once concrete operations have begun. Wire bar and other types of supports shall be in accordance with the Concrete Reinforcing Steel Institute Manual of Standard Practice.
- Reinforcement shall be continuous through all construction joints unless otherwise noted on drawings.
- All hooks shown on drawings shall be standard hooks unless otherwise noted.
- Where continuous bars are called for, they shall run continuously around corners and be lapped at necessary splices, or hooked at discontinuous ends. Lap lengths shall be as given in the splice and development table. Lap beam top bars at mid-span and beam bottom bars at supports, unless otherwise noted.
- Provide additional reinforcing at the sides and corners of all openings in concrete in accordance with the typical details. Extend bars a minimum of 2'-0" beyond openings, hook where extension is not possible. Minimum additional requirements are as follows:
 - (2)#5 top and bottom in slabs
 - (2)#5 each face in walls
 - (2)#5 x 4'-0" long diagonally each corner of opening
- In reinforced concrete walls and footings provide corner dowels of same size and spacing as horizontal reinforcing. Dowels shall have a class "B" lap with horizontal reinforcing in each direction.

Minimum Lap Splice and Anchorage Dimension Table

Bar size	Top Bars		Other Bars	
	Lap	Anchorage	Lap	Anchorage
#3	22"	22"	22"	17"
#4	37"	29"	29"	22"
#5	47"	36"	36"	25"
#6	56"	43"	43"	33"

Bar Size	Top Bars		Other Bars	
	Lap	Anchorage	Lap	Anchorage
#3	24"	19"	19"	15"
#4	33"	25"	25"	19"
#5	41"	31"	31"	24"
#6	49"	37"	37"	29"

- "Top Bars" as noted in the tables indicates the condition where horizontal bars are so placed that more than 12 inches of fresh concrete is cast below the splice.
- Where mechanical splice, "ms", is specified in the tables, use a mechanical splice that develops 125 percent of the bar yield strength. No other type of splice will be accepted.

- When lapping two different size bars, use the lap dimension of the smaller bar or the anchorage dimension of the larger bar. Use whichever dimension is larger.

Minimum Concrete Cover for Reinforcing

- Unless noted otherwise, concrete reinforcing shall be placed with proper cover to provide protection in accordance with ACI 318, and within deviation tolerances listed in ACI 117.

Location	Minimum Cover
Footings and grade beams cast against and permanently exposed to earth	3"
Slabs on grade (W.W.F.)	1/3 slab thickness from top of slab
Interior slabs	3/4"
Exterior slabs:	#5 and smaller 1 1/2" #6 and larger 2"
Piers (vert. reinf.)	2"
Pier ties	1 1/2"

- All cores with reinforcing shall be filled solid with grout. All grout shall be consolidated in place by vibrating to insure complete filling of cells.

- Place reinforcing bars before grouting. Properly secure reinforcing bars to maintain the positions indicated on the drawings. Bars to be located in cells unless otherwise noted.

- Mortar protrusions, extending into cells or cavities to be reinforced and filled, shall be removed.

- Place grout with pour height not exceeding 5 feet. Consolidate each pour by mechanical vibration. Reconsolidate after initial water loss and settlement has occurred.

- Grout pour height may be increased where the following conditions are met:
 - Limit pour height based on a minimum width of grout space in accordance with Table 7 of ACI308.1/ASCE 6 /ITMS 602.
 - Place grout not exceeding the limitations specified in ACI308.1/ASCE 6 /ITMS 602.
 - Consolidate each pour by mechanical vibration. Reconsolidate after initial water loss and settlement has occurred.
 - Form a grout key between pours according to ACI308.1/ASCE 6 /ITMS 602.

- Provide an inspection port (cleanout) at each cell to be grouted at the base of each pour.

- Submit shop drawings detailing the proposed grouting procedure along with (3) references of previous successful projects.

- Lay masonry units with full mortar coverage on horizontal and vertical face slabs. Bed weeds in mortar in starting course on footing and in all courses of columns and pilasters, and where adjacent to cells or cavities to be reinforced or filled with concrete grout.

- Provide 16" solid masonry under wall bearing beams unless noted otherwise.

- All corners to be tied by masonry bond.

- Grout cores solid a minimum of one course below any change in wall thickness.

- Provide 8" solid masonry 24" wide minimum under wall bearing joists.

- All masonry walls shall have vertical control joints at a maximum spacing of 25'. Coordinate with locations indicated on architectural drawings. Control joints shall extend through the entire wall thickness, except at continuous bond beams where the masonry shall be scored only.

- All CMU shall be temporarily braced during construction in accordance with the governing building code for lateral design loads until permanent restraints have been installed. Temporary bracing is the sole responsibility of the contractor. The contractor is responsible for all costs associated with repairs resulting from improper or insufficient bracing.

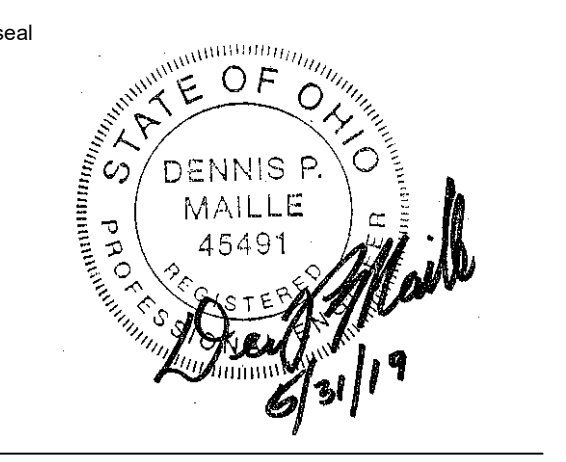
- The collar joint in multi-wythe walls below grade shall be fully grouted as the wall is constructed.

- CMU walls 12" or less in width shall be single-wythe. CMU walls greater than 12" wide may be constructed as multi-wythe, provided the collar joint is continuously grouted solid, continuous header course is provided at 40' o.c. maximum vertically and header covers the collar joint by 3" minimum. Use single wythe for walls greater than 12" and exposed to view.

- Miscellaneous Steel Lintel Schedule
 - For masonry walls 8" or thicker:
 - For openings up to 4'-0" use L3 1/2x3 1/2x5/16.
 - For openings from 4'-0" to 5'-0" use L4x3 1/2x5/16 LLV.
 - For openings from 5'-0" to 6'-0" use L5x3 1/2x5/16 LLV.
 - Use one angle for each 4" wythe of masonry.
 - Angles shall be oriented with vertical legs back-to-back.
 - For 4" masonry veneer:
 - For openings up to 4'-0" use L3 1/2x3 1/2x5/16.

BID SET Not For Construction

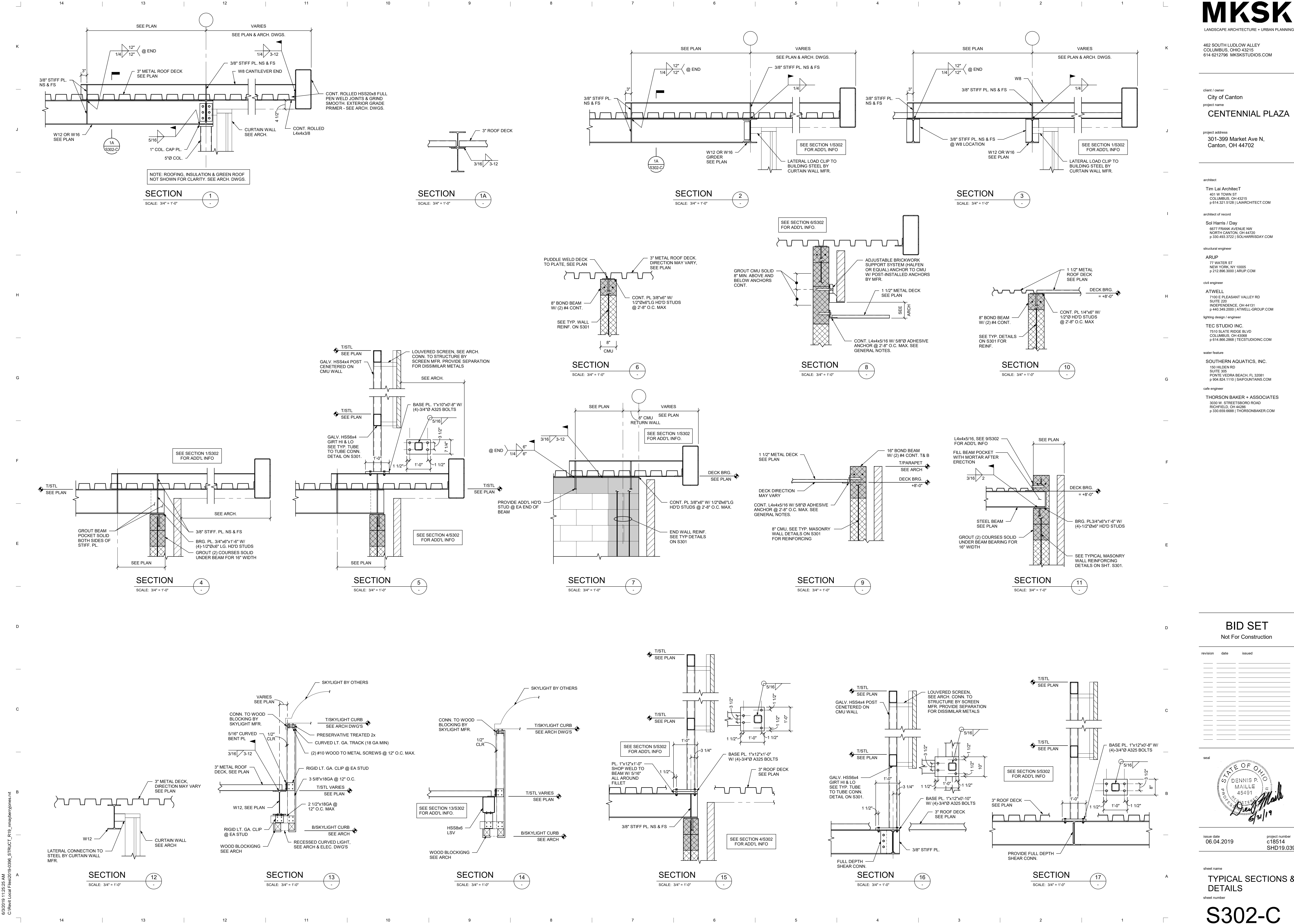
revision	date	issued



issue date: 06.04.2019
project number: c18514
SHD19.039

sheet name
TYPICAL SECTIONS & DETAILS
sheet number

S302-C



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CODES AND STANDARDS

- 1. WHERE DOCUMENTS ARE REFERENCED IN THE GENERAL AND DESIGN NOTES, THEY SHALL BE THE LATEST APPLICABLE EDITIONS, UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE OHIO BUILDING CODE, INCLUDING REFERENCE STANDARDS, ADDENDA AND APPENDICES.
3. IN ADDITION, THE FOLLOWING CODES, STANDARDS AND SPECIFICATIONS SHALL APPLY WHERE MORE STRINGENT AND AS MODIFIED BY THE BUILDING CODE:
A. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY"
B. AISC "STEEL CONSTRUCTION MANUAL" AND AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
C. AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
D. AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS" AND AISC SPEC
E. AWS D1.1 "STRUCTURAL WELDING CODE"
F. AWS D1.4 FOR STAINLESS STEEL AS APPLICABLE

PROJECT DOCUMENTS

- 1. THIS SET OF DRAWINGS, TOGETHER WITH THE SPECIFICATIONS, CONSTITUTES THE COMPLETE DOCUMENT BY WHICH ALL WORK IS TO BE CARRIED OUT.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE. THE CONTRACTOR SHALL USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION AND ALL OTHER RELEVANT CONSULTANTS' DRAWINGS BEFORE COMMENCING WITH THE WORK AND SHALL NOTIFY THE ARCHITECT AND COMMENCING WITH THE WORK AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES REQUIRING CLARIFICATION OR REVISION.
3. SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL INFORMATION ONLY. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED BY SCALING FROM THE DRAWINGS.
4. IN THE EVENT THAT CERTAIN DETAILS OF THE CONSTRUCTION ARE NOT FULLY SHOWN OR NOTED ON DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME TYPE AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED, SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL.
5. REFER TO LANDSCAPE ARCHITECTS' DRAWINGS FOR THE FOLLOWING:
A. GRADING PLANS
B. SIZE AND LOCATION OF ALL CONCRETE CURBS, DRAINS, SLOPES, INSERTS, ETC. EXCEPT AS SHOWN.
C. FINISHES
D. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
6. REFER TO MEP DRAWINGS FOR THE FOLLOWING:
A. PIPE AND DUCT RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, EXCEPT AS SHOWN OR NOTED.
B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS, EXCEPT AS SHOWN OR NOTED.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE PROPER SHORING AND BRACING DURING CONSTRUCTION WHEREVER NECESSARY, WHICH SHALL NOT BE REMOVED AS LONG AS REQUIRED FOR SAFETY.

SUBMITTALS

- 1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS AS BOTH SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER AS REQUIRED BY THE SPECIFICATIONS, FOR ENGINEER'S APPROVAL.
2. ONLY SHOP DRAWINGS MARKED "NO EXCEPTIONS TAKEN," "REVISE AS NOTED" OR "SEE COMMENTS NOTED" MAY BE USED BY CONTRACTOR IN THE WORK. SHOP DRAWINGS MARKED "REJECTED" OR "RESUBMIT FOR REVIEW" SHALL BE CORRECTED AND COMPLETED AS REQUIRED AND RESUBMITTED TO THE ARCHITECT BEFORE THEY ARE USED IN THE WORK.
3. CONTRACTOR SHALL PREPARE AND MAINTAIN A SCHEDULE OF ALL SUBMITTALS INCLUDING INTENDED DATES OF SUBMISSION AND NUMBER OF DRAWINGS TO BE SUBMITTED EACH WEEK.
4. THE CONTRACTOR SHALL BE AWARE THAT SUBMITTALS WILL BE REVIEWED IN THE ORDER IN WHICH THEY ARE RECEIVED. THE CONTRACTOR SHALL PLAN ACCORDINGLY.
5. SUBMIT ALL ITEMS IN ACCORDANCE WITH THE SPECIFICATIONS. THE ENGINEER RESERVES THE RIGHT TO NOT REVIEW ANY OTHER ITEMS.

TESTING AND INSPECTIONS

- 1. SPECIAL INSPECTIONS SHALL BE PROVIDED BY AN INDEPENDENT TESTING LAB IN ACCORDANCE WITH THE CODE AND ALL APPLICABLE LOCAL ORDINANCES, AND THE PROJECT SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH CONSTRUCTION DOCUMENTS. THIS WORK TO BE PERFORMED BY A SPECIAL INSPECTOR CERTIFIED BY THE LOCAL BUILDING OFFICIAL TO PERFORM THE SPECIFIED TYPES OF INSPECTIONS AND TESTS. THE SPECIAL INSPECTOR SHALL SEND REPORTS TO THE BUILDING OFFICIAL, ARCHITECT, ENGINEER, CONTRACTOR AND OWNER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. WHEN WORK IS DONE TO THE SATISFACTION OF THE BUILDING OFFICIAL, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK WAS COMPLETED IN CONFORMANCE WITH THE PLANS, SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODES.
2. FOR THIS PROJECT INSPECTION OF THE FOLLOWING STRUCTURAL RELATED CONSTRUCTION ACTIVITIES IS REQUIRED IN ACCORDANCE WITH IBC CHAPTER 17 AND THE OHIO BUILDING CODE:

Table with 4 columns: ITEM, CONT, PERIODIC, COMMENTS. Rows include SOILS, GRADING, EXCAVATION & FILL, FINAL FOUNDATION PREPARATION, CONCRETE, REBAR PLACEMENT, REBAR MECHANICAL COUPLING, ANCHOR ROD EMBEDMENT/PLACEMENT, PREPARATION OF TEST SPECIMENS, CONCRETE PLACEMENT, EXPANSION OR ADHESIVE ANCHOR PLACEMENT, STEEL CONSTRUCTION, MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS, INSPECTION OF HIGH-STRENGTH BOLTING, MATERIAL VERIFICATION OF STRUCTURAL STEEL, MATERIAL VERIFICATION OF WELD FILLER MATERIALS, INSPECTION OF WELDING, I) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS, III) MULTI-PASS FILLET WELDS, IV) SINGLE-PASS FILLET WELDS > 5/16, IV) SINGLE-PASS FILLET WELDS < 5/16, INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

STRUCTURAL DESIGN CRITERIA

- 1. DESIGN IN ACCORDANCE WITH THE APPLICABLE CODE AND ALL APPLICABLE LOCAL ORDINANCES.
2. FOR GRAVITY LOADING INCLUDING SUPERIMPOSED DEAD LOAD AND LIVE LOAD, SEE THE LOADING DIAGRAMS.
3. SNOW LOADING:

Table with 4 columns: GROUND SNOW LOAD, IMPORTANCE FACTOR (FOR SNOW), EXPOSURE CATEGORY (FOR SNOW), ROOF SLOPE FACTOR, THERMAL FACTOR, UNBALANCED DRIFT. Values include Pg = 25 PSF, Is = 1.0, Ce = 1.0, Cs = 1.0, Ct = 1.2, PER CODE.

- 4. WIND LOADING:

Table with 4 columns: DESIGN WIND SPEED (3 SEC GUST), IMPORTANCE FACTOR (FOR WIND), EXPOSURE CATEGORY (FOR WIND), INTERNAL PRESSURE COEFFICIENT, DIRECTIONALITY FACTOR, DIRECTIONALITY FACTOR, WIND TUNNEL REPORT. Values include 90 MPH, Iw = 1.0, C, +/-0.18 (ENCLOSED), +/-0.55 (PARTIALLY ENCLOSED), Kd = 0.85.

- 5. SEISMIC LOADING:

Table with 4 columns: IMPORTANCE FACTOR (SEISMIC), SITE CLASS, MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS, DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS, SITE COEFFICIENTS, SEISMIC DESIGN CATEGORY. Values include I = 1.0, D, Ss = 0.107, S1 = 0.049, Sds = 0.114, Sd1 = 0.078, FA = 1.6, FV = 2.4, B.

Table with 4 columns: LATERAL SYSTEM, RESPONSE MODIFICATION COEFFICIENT, SYSTEM OVERSTRENGTH FACTOR, DEFLECTION AMPLIFICATION FACTOR, ANALYSIS METHOD, DESIGN BASE SHEAR. Values include R = 2, psi = 2, Cd = 1.25, LINEAR RESPONSE SPECTRUM MODAL ANALYSIS, 13.2 KIPS (X-DIRECTION), 19.6 KIPS (Y-DIRECTION).

FOUNDATIONS

- 1. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT PREPARED BY INTERTEK PSI, DATED MARCH 17, 2017. COPIES ARE AVAILABLE FOR REVIEW AT THE ARCHITECT'S OFFICE.
2. THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURES WERE USED IN THE PREPARATION OF THESE DRAWINGS:
A. ALLOWABLE CAISSON END BEARING PRESSURE = 6000 PSF
B. ALLOWABLE SHALLOW FOUNDATION BEARING PRESSURE = 3000 PSF
3. CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SURFACE AND SUBSURFACE CONDITIONS IN ADDITION TO THE INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT.
4. CONTRACTOR SHALL PROVIDE FOR PROPER DEWATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC. SUCH ACTIVITIES SHALL NOT DAMAGE ADJACENT STRUCTURES.
5. CONTRACTOR SHALL PROVIDE FOR THE INSTALLATION AND DESIGN OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY AND ADEQUATELY RETAIN EXCAVATIONS, EARTH BANKS AND SUPPORT ANY EXISTING STRUCTURES.
6. FOOTINGS SHALL BE PLACED ACCORDING TO DEPTH SHOWN IN THE STRUCTURAL DRAWINGS. ALL FOUNDATION BASES SHALL BE INSPECTED WHEN THE DEPTH INDICATED HAS BEEN ACHIEVED. THE GEOTECHNICAL ENGINEER WILL DETERMINE THE SUITABILITY OF THE SOIL AT THIS LEVEL FOR THE PROPOSED IMPOSED LOADS AND MAY INSTRUCT FURTHER EXCAVATION UNTIL A SUITABLE BEARING SURFACE IS ATTAINED. THE GEOTECHNICAL ENGINEER SHALL GIVE THE FINAL APPROVAL FOR ANY CHANGES IN FOOTING DEPTH, AND SHALL GIVE WRITTEN NOTIFICATION TO THE ARCHITECT AND ENGINEER. NO FOOTINGS SHALL BE CAST WITHOUT THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
7. FOOTINGS SHALL BE FORMED TO DIMENSIONS SHOWN IN DRAWINGS WHERE SOIL CONDITIONS ARE ADEQUATE. FOOTINGS MAY BE CAST IN NEAT TRENCHED EXCAVATIONS. WHERE FOOTINGS ARE CAST IN TRENCHED EXCAVATIONS THE FOOTING DIMENSIONS SHALL BE INCREASED BY 3 INCHES. WATER SHALL NOT BE ALLOWED TO STAND IN TRENCHES BEFORE OR AFTER CONCRETE IS PLACED. IF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE THE FOOTINGS ARE CAST, THE CONTRACTOR SHALL EXCAVATE THE SOFTENED MATERIAL AND REPLACE WITH CONCRETE. LOOSE MATERIAL SHALL BE REMOVED FROM THE BASE OF THE FOOTING PRIOR TO CASTING.
8. NEW FOOTINGS, WHICH ARE LOCATED IMMEDIATELY ADJACENT TO EXISTING FOOTINGS, SHALL BE FOUNDED AT THE SAME ELEVATION AS THE EXISTING FOOTINGS, UNLESS OTHERWISE NOTED. EXISTING ADJACENT FOOTINGS SHALL NOT BE UNDERMINED BY EXCAVATION OR NEW CONSTRUCTION.
9. EXTERIOR FOOTINGS, AND OTHER FOOTINGS SUSCEPTIBLE TO DAMAGE RESULTING FROM FROST ACTION, SHALL BE FOUNDED AT A MINIMUM DEPTH OF 36 INCHES BELOW FINAL GROUND LEVEL, UNLESS OTHERWISE NOTED.
10. TEMPORARY FROST PROTECTION SHALL BE PROVIDED DURING COLD WEATHER CONSTRUCTION FOR ALL FOOTINGS.
11. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE SITE'S PERIMETER SHALL BE MECHANICALLY COMPACTED IN LAYERS, TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
12. BACKFILL AGAINST FOUNDATION WALLS, WHERE THERE IS GRADE ON BOTH SIDES OF THE WALL, SHALL BE CARRIED OUT IN SUCH A MANNER THAT THE DIFFERENCE IN SOIL LEVELS IS NEVER MORE THAN 2 FEET.

REINFORCED CONCRETE

- 1. STRUCTURAL CONCRETE STRENGTHS AND TYPES USED IN THIS PROJECT SHALL BE AS FOLLOWS:

Table with 3 columns: LOCATION IN STRUCTURE, fc (PSI), AGGREGATE. Rows include FOOTINGS, CAISSONS (4000, NORMAL WEIGHT), SLAB ON GRADE (4000, NORMAL WEIGHT), LEAN CONCRETE (2500, LIGHTWEIGHT).

- 2. ALL CONCRETE MIXES SHALL COMPLY WITH THE REQUIREMENTS OF THE BUILDING CODE AND THE ACI 318. MIX DESIGNS FOR EACH TYPE AND STRENGTH SHALL BE PREPARED BY CONTRACTOR AND TESTED BY AN INDEPENDENT TESTING LABORATORY. THE MIX DESIGNS SHALL THEN BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
3. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. WHERE CONCRETE IS IN CONTACT WITH SOIL, THE TYPE OF EXPOSURE SHALL DETERMINE THE CEMENT TYPE:
A. S0 - NO TYPE RESTRICTION
B. S1 - TYPE II
C. S2 - TYPE V
D. S3 - TYPE V PLUS POZZOLAN OR SLAG CEMENT
CONTRACTOR SHALL DETERMINE THE LEVEL OF EXPOSURE BY TESTING OR OTHER SUITABLE MEANS.
4. FLY ASH MAY BE USED IN CONCRETE MIXES. THE FLY ASH SHALL CONFORM TO ASTM C618, CLASS F AND ITS ADDITION SHALL NOT EXCEED 15% OF THE CEMENT WEIGHT.
5. NORMAL WEIGHT AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33.
6. LIGHTWEIGHT AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C330 AND ASTM C157.
7. CONCRETE FORMS SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS INDICATED ON THE STRUCTURAL DRAWINGS, AND SHALL COMPLY WITH REQUIREMENTS OF ACI 318
8. THE PROJECTING CORNERS OF COLUMNS, BEAMS, WALLS, ETC. SHALL BE FORMED WITH 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
9. CONSTRUCTION JOINTS SHALL BE DOWELED, KEYED AND THE SURFACES SHALL BE CLEANED AND LAITANCE REMOVED, ALTERNATIVELY, WHERE APPROVED BY THE ENGINEER, PROVIDE JOINTS CLEANED AND ROUGHENED TO 1/4 INCH AMPLITUDE BY MECHANICAL METHODS.
10. LOCATION OF CONSTRUCTION JOINTS SHALL BE AS INDICATED ON STRUCTURAL DRAWINGS. PROVIDE WATERSTOPS FOR ALL CONSTRUCTION JOINTS BELOW WATER TABLE.
11. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60. REINFORCING BARS, WHICH ARE TO BE WELDED, SHALL CONFORM TO APPLICABLE ASTM AND AWS SPECIFICATIONS.
12. ALL REINFORCING BARS MARKED "CONTINUOUS" SHALL BE TENSION SPLICED, UNLESS OTHERWISE SHOWN ON DRAWINGS.
13. ALL BARS AT NON-CONTINUOUS ENDS SHALL HAVE A STANDARD HOOK.
14. PROVIDE DEVELOPMENT AND SPLICES OF REINFORCEMENT ACCORDING TO THE TYPICAL DETAIL TABLES.
15. UNLESS OTHERWISE NOTED, ALL DOWELS SHALL BE FULLY DEVELOPED IN TENSION, UNLESS OTHERWISE NOTED.

- 16. DOWEL TO WALLS AND COLUMNS SHALL MATCH THE CORRESPONDING REINFORCING OF THE WALL OR COLUMN.
17. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. USE ONLY FLAT SHEETS.
18. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH, WHICHEVER IS GREATER.
19. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN ORDER TO MAINTAIN ITS POSITION WHILE CONCRETE IS POURED. CHAIRS, TIES, SPACERS, ADDITIONAL BARS AND STIRRUPS, ETC. SHALL BE PROVIDED BY THE CONTRACTOR.
20. CONTRACTOR SHALL COORDINATE AND INSTALL ALL REQUIRED EMBEDDED ITEMS, SLEEVES, POCKETS, ETC. PRIOR TO CONCRETE PLACEMENT. REFER TO TYPICAL DETAILS OF PENETRATIONS FOR LIMITATIONS ON THEIR POSITIONING IN RESPECT TO REINFORCING. DO NOT CUT ANY REINFORCING THAT MIGHT INTERFERE WITH EMBEDDED ITEMS PLACEMENT.
21. MECHANICAL PIPES AND/OR ELECTRICAL CONDUITS SHALL NOT PASS THROUGH CONCRETE COLUMNS AND BEAMS, UNLESS SPECIFICALLY DETAILED ON DRAWINGS.
22. NO ALUMINUM SHALL BE EMBEDDED IN CONCRETE.
23. CONTRACTOR SHALL NOTIFY TESTING AGENCY AND OWNER, 24 HOURS BEFORE POURING OF CONCRETE, FOR INSPECTION OF REINFORCEMENT LAYOUT. NO CONCRETE SHALL BE POURED UNLESS ALL REINFORCEMENT AND INSTALLATIONS HAVE BEEN INSPECTED AND APPROVED BY THE TESTING AGENCY.
24. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATION.

STRUCTURAL STEEL - PAVILION

- 1. STRUCTURAL STEEL SHALL BE PROVIDED AS FOLLOWS:

Table with 4 columns: SHAPE, ASTM STANDARD, Fy (KSI). Rows include WIDE FLANGES (A992, 50), CHANNELS (A572 GRADE 50, 50), HSS (RECTANGULAR AND SQUARE) (A500 GRADE B, 46), HSS (ROUND) (A500 GRADE B, 42), PIPES (A53 GRADE B, 35), PLATE AND BAR (A36, 50), TIE RODS (A36, 36).

- Fy IS THE MINIMUM TENSILE YIELDING STRESS TO BE PROVIDED UNLESS OTHERWISE NOTED.
2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS CONFORMING TO ASTM A 325 OR ASTM A 490. ALL CONNECTIONS SHALL BE TYPE N UNLESS OTHERWISE NOTED ON DRAWINGS.
3. NUTS SHALL CONFORM TO ASTM A563, DH OR ASTM A194, 2H. PROVIDE WASHERS CONFORMING TO ASTM F436 AT EACH THREADED ROD OR BOLT.
4. BOLT HOLES IN STEEL MEMBERS, WITH THE EXCEPTION OF BASE PLATES, SHALL BE 1/16 INCH LARGER IN DIAMETER THAN THE NOMINAL SIZE OF BOLT USED, UNLESS NOTED OTHERWISE ON DRAWINGS.
5. BOLT HOLES IN STEEL BASE PLATES SHALL BE OF THE SIZE MARKED ON DRAWINGS. PROVIDE WELDED PLATE WASHERS 3"x 3"x 3/8" THICK MINIMUM.
6. ANCHOR BOLTS SHALL BE ROUND BAR STOCK, THREADED, CONFORMING TO ASTM F1554, GRADE 36 UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL BE SUPPLIED WITH CORRESPONDING NUTS AND WASHERS.
7. THREADED RODS SHALL HAVE THREADS CONFORMING TO UNC CLASS 2A (EXTERIOR THREADS) AND 2B (INTERNAL THREADS).
8. WELDING MATERIALS SHALL CONFORM TO AWS D1.1. ELECTRODES SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI AND BE LOW-HYDROGEN TYPE.
9. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTHS REQUIRED.
10. AT PARTIAL PENETRATION WELDS THE SIZE GIVEN IS THE MINIMUM EFFECTIVE THROAT. FABRICATOR SHALL PROVIDE PROPER JOINT PREPARATION TO ACHIEVE THE MINIMUM EFFECTIVE THROAT AS REQUIRED BY THE AWS CODE.
11. SPLICES SHALL BE DESIGNED TO DEVELOP THE FULL CAPACITY OF THE MEMBER AT THE POINT OF SPLICE. SPLICES SHALL BE MADE ONLY AT LOCATIONS INDICATED ON DRAWINGS. FULL DETAIL AND BACK-UP CALCULATIONS OF SPLICES REQUIRE REVIEW AND APPROVAL BY THE ENGINEER.
12. SHAPE AND SIZE GUSSET PLATES IN SUCH A MANNER AS TO CLEAR ALL ARCHITECTURAL FINISHES AND MECHANICAL FIXTURES (DUCTS, PIPES, ETC.). SUBMIT THE CONFIGURATION OF ALL GUSSET PLATES EXPOSED TO VIEW TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL.
13. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING, GUYING AND CONNECTING MEMBERS REQUIRED TO ERECT THE STRUCTURE, MAINTAIN CORRECT ALIGNMENT AND SAFELY RESIST ALL POSSIBLE COMBINATIONS OF DEAD, CONSTRUCTION, ERECTION, WIND AND OTHER LATERAL LOADS.
14. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL STRUCTURAL STEELWORK FORMING THE PAVILION IS DEFINED AS ARCHITECTURALLY EXPOSED STRUCTURAL STEEL CATEGORY 2, ACCORDING TO ANSIAISC 303 SECTION 10.
15. ALL STEEL IS TO BE PAINTED ACCORDING TO THE FOLLOWING SPECIFICATION:
SURFACE PREPARATION: ABRASIVE BLAST CLEAN TO SSPC SPECIFICATION SP10
PRIMER: EPOXY ANTI CORROSIVE PRIMER, 2 TO 3 MIL THICKNESS, SHOP APPLIED
INTERMEDIATE: EPOXY INTERMEDIATE, 4 TO 5 MIL THICKNESS, SHOP APPLIED
FINISH: POLYURETHANE, 2 TO 3 MIL THICKNESS, SITE APPLIED, PURE WHITE RAL 9010

STRUCTURAL STEEL - ROTUNDA

- 1. STRUCTURAL STEEL SHALL BE PROVIDED AS FOLLOWS:

Table with 4 columns: SHAPE, ASTM STANDARD, Fy (KSI). Rows include STAINLESS STEEL PLATES (A240 S31603 GRADE 316L, 35), CARBON STEEL PLATES (A36, 36).

- 2. Fy IS THE MINIMUM TENSILE YIELDING STRESS TO BE PROVIDED UNLESS OTHERWISE NOTED.
3. Fy NOTED FOR 316L STAINLESS STEEL SHALL BE DETERMINED BY THE 0.2% OFFSET METHOD.
4. SULFUR CONTENT FOR TYPE 316L STAINLESS STEEL CANNOT EXCEED 0.005.
5. ANCHOR BOLTS SHALL BE ROUND BAR STOCK, THREADED, CONFORMING TO ASTM F1554, GRADE 36 UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL BE SUPPLIED WITH CORRESPONDING NUTS AND WASHERS.
6. THREADED RODS SHALL HAVE THREADS CONFORMING TO UNC CLASS 2A (EXTERIOR THREADS) AND 2B (INTERNAL THREADS).
7. CARBON STEEL WELDING MATERIALS SHALL CONFORM TO AWS D1.5. ELECTRODES SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI AND BE LOW-HYDROGEN TYPE.
8. STAINLESS WELDING PROCESSES MEETING AWS 316L SPECIFICATIONS A5.9, A5.4, AND A5.22 SHALL BE USED WITH A MAXIMUM SULFUR CONTENT OF 0.005.
9. SPLICES SHALL BE DESIGNED TO DEVELOP THE FULL CAPACITY OF THE MEMBER AT THE POINT OF SPLICE. SPLICES SHALL BE MADE ONLY AT LOCATIONS INDICATED ON DRAWINGS. FULL DETAIL AND BACK-UP CALCULATIONS OF SPLICES REQUIRE REVIEW AND APPROVAL BY THE ENGINEER.
10. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING, GUYING AND CONNECTING MEMBERS REQUIRED TO ERECT THE STRUCTURE, MAINTAIN CORRECT ALIGNMENT AND SAFELY RESIST ALL POSSIBLE COMBINATIONS OF DEAD, CONSTRUCTION, ERECTION, WIND AND OTHER LATERAL LOADS.
11. WHERE STEEL THICKNESS EXCEEDS 1", PLATES SHALL BE TESTED PER THE SPECIFICATION FOR LAMINATIONS.
12. ALL GROOVE WELDS AND FILLET WELDS WITH LEG LENGTH OVER 3/8" IN MATERIAL GREATER THAN OR EQUAL TO 3/4" FOR THE ROTUNDA SHALL BE ULTRASONICALLY INSPECTED A SECOND TIME A MINIMUM OF 2 WEEKS AFTER COMPLETION OF THE WELDS.
13. CONTRACTOR SHALL ENSURE THAT THE EXTERIOR SURFACE OF THE ROTUNDA IS PROTECTED FROM DAMAGE DURING TRANSPORT AND ERECTION.
14. STEEL PLATE FORMING THE ROTUNDA EXTERIOR AND INTERIOR SHALL NOT BE DRILLED, TAPPED, OR OTHERWISE MACHINED EXCEPT AS NOTED ON THE DRAWINGS.
15. DAMAGE TO STAINLESS STEEL FINISH DURING INSTALLATION AND ERECTION MUST BE MINIMIZED. WE SUGGEST FULLY WRAPPING THE STRUCTURE IN PROTECTION FOR AS LONG AS POSSIBLE. ANY DAMAGE IS TO BE REPAIRED TO MEET THE SAME STANDARD AS THE MOCK-UP
16. PRIOR TO ANY MANUFACTURE THE CONTRACTOR SHALL COMPLETE THE MOCK-UP AND MAKE IT AVAILABLE FOR REVIEW BY ENGINEER, OWNER, ARCHITECT. THESE PARTIES MAY APPROVE OR REJECT THE MOCK-UP BASED ON THE REQUIREMENTS OF THESE DOCUMENTS AND INDUSTRY STANDARDS FOR STAINLESS STEEL FINISHES. THE MOCK-UP SHALL BECOME THE REFERENCE STANDARD FOR THE FINAL CONSTRUCTION'S TOLERANCES AND FINISHES.

STRUCTURAL STEEL CONNECTIONS

- 1. CONTRACTOR SHALL PROVIDE THE DESIGN FOR ALL STRUCTURAL STEEL CONNECTIONS NOT COMPLETELY DEFINED IN THE DRAWINGS. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OHIO TO DESIGN SUCH CONNECTIONS.
2. REFER TO STEEL CONNECTION TYPICAL DETAILS FOR STEEL CONNECTION REQUIREMENTS, MINIMUM REACTIONS AND ADDITIONAL INFORMATION.

STRUCTURAL STEEL FRAMING

- 1. STEEL MEMBERS ARE ASSUMED TO BE VERTICAL AND DIMENSIONED TO THEIR CENTERLINE UNLESS OTHERWISE INDICATED.
2. STEEL MEMBERS NOT LOCATED IN PLAN BY A DIMENSION LINE SHALL BE EQUALLY SPACED BETWEEN DIMENSIONED MEMBERS.
3. FOR SLOPING MEMBERS, THE TOP OF STEEL ELEVATIONS AT THE LOW AND HIGH POINTS SHALL COINCIDE WITH THE TOP OF STEEL ELEVATIONS OF THE MEMBERS THEY ARE FRAMING TO AT THESE LOCATIONS, UNLESS OTHERWISE NOTED.

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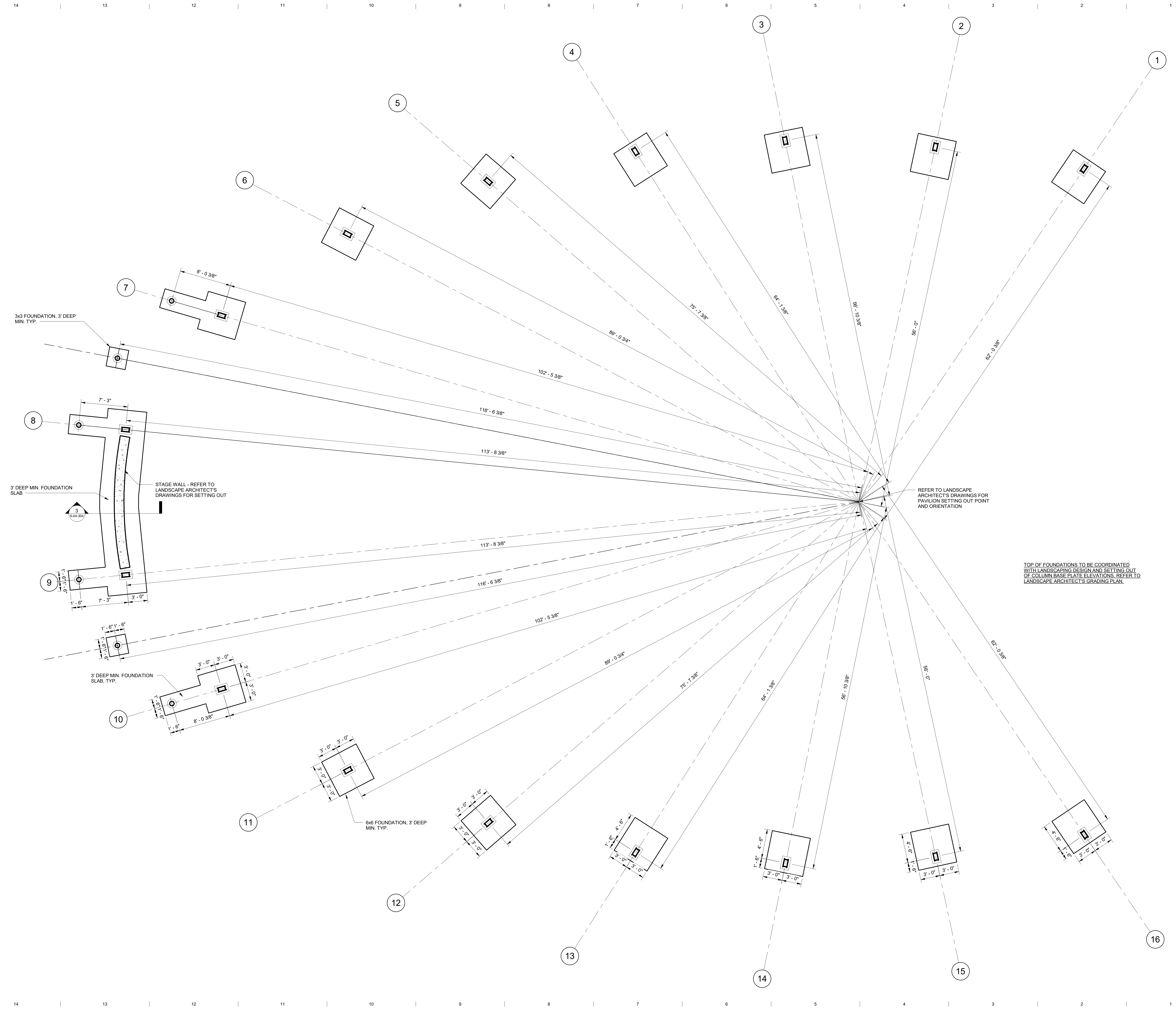
Table with 3 columns: revision, date, issued. Includes a row for 06/04/2019 BID SET.



issue date 06/04/2019 project number c267125-00

sheet name STRUCTURAL GENERAL NOTES

sheet number S-00-002



REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR PAVILION SETTING OUT POINT AND ORIENTATION

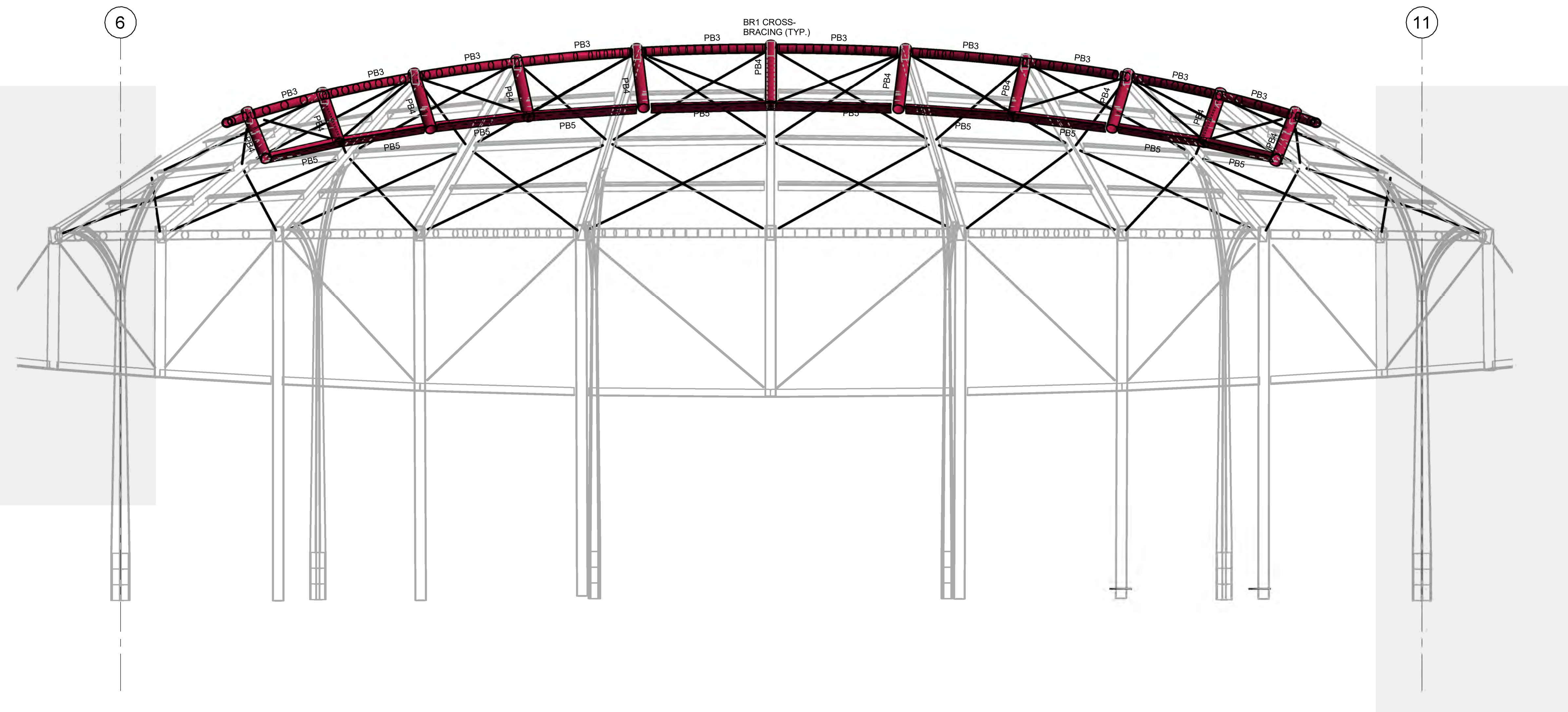
TOP OF FOUNDATIONS TO BE COORDINATED WITH LANDSCAPING DESIGN AND SETTING OUT OF COLUMN BASE PLATE ELEVATIONS. REFER TO LANDSCAPE ARCHITECT'S GRADING PLAN.

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1 INTERNAL ELEVATION (GRIDS 6 THRU 11)
1/4" = 1'-0"



2 INTERNAL ELEVATION (GRIDS 1 THRU 6)
1/4" = 1'-0"

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revision	date	issued

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