



2400 5th Avenue S, Suite 200 | Birmingham, Alabama 35233
Tel 205.879.4462 | GMCNETWORK.COM

TRANSMITTAL COVER SHEET

DATE: 25 June 2024
TO: ALL PLAN HOLDERS OF RECORD
FROM: HUNTER SWATEK, AIA, PROJECT MANAGER
PROJECT: RAINBOW CITY RECREATION CENTER
GMC PROJECT NO. ABHM230021
RE: ADDENDUM NO. 4 AND
ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM NO. 4

ACKNOWLEDGEMENT OF RECEIPT:

PLEASE PRINT RECIPIENT'S NAME, FIRM, AND DATE RECEIVED.

THEN E-MAIL BACK TO alyssa.martin@gmcnetwork.com FOR OUR RECORDS AND
TO ACKNOWLEDGE YOUR RECEIPT OF THIS ADDENDUM.

NAME (PLEASE PRINT)

FIRM (PLEASE PRINT)

DATE RECEIVED (PLEASE PRINT)

If there are any problems with this transmittal, please contact sender, at the number listed above.

ADDENDUM NUMBER 04

June 25, 2024

**PROJECT: RAINBOW CITY RECREATION CENTER
GM&C PROJECT NO. ABHM230021**

AD4-1 GENERAL:

- A. The following revisions and/or additions to the Drawings and Project Manual are hereby made a part of same, and shall be incorporated in the Work of the Contract the same as if originally included in the Bid and Construction Documents.
- B. Bidders shall acknowledge receipt of this Addendum in writing, as provided on the Proposal Form.
- C. When a revision and/or addition is called for to the Drawings or Project Manual, they shall be fully coordinated with and carried through all applicable Drawings and portions of the Project Manual, including in part, all related Civil, Landscaping, Architectural, Structural, Plumbing, Mechanical, Electrical, and other Documents.

AD4-2 PROJECT MANUAL AND SPECIFICATIONS:

- A. **Section 00 4000** - Attachment A
 - a. REVISED and RE-ISSUED
- B. **Section 01 2100** – Allowances
 - a. ADDED TV and TV Enclosure Allowance
- C. **Section 01 2200** – Unit Prices
 - a. Paragraph 3.01
 - i. REVISED items A & B
- D. **Section 01 3000** – Administrative Requirements
 - a. REVISED Electronic Document submittal Service
- E. **Section 03 3000** – Cast-in-place Concrete
 - a. Paragraph 2.03
 - i. ADDED item K:
 - 1. “Water Vapor Reducing Admixture (WVRA): ASTM C494/C494M, Type S; complex catalyzed hydrous silicate, waterproofing and vapor-proofing liquid admixture.
 - a. Location for Use: All slab on grade concrete in Gym 127, the entire extent of the wood gym flooring
 - b. Basis-of-Design Product: Subject to compliance with requirements, provide SPG Specialty Products Group; Vapor Lock 20/20
 - c. Properties:
 - i. Maximum w/cm: Maximum 0.52 without written permission and approval of mix design by WVRA manufacturer.
 - ii. Minimum w/cm: Minimum 0.42 without written permission and approval of mix design by WVRA manufacturer.
 - iii. Water Seepage or Permeability: Not to exceed 2.0 x 10⁻⁹ ft/s (6 x 10⁻⁸ cm/s) according to ASTM D5084.
- F. **Section 05 7200** – Ornamental Handrails and Railings
 - a. REVISED Entire Section
- G. **Section 10 1400** – Signage

- a. Paragraph 1.01
 - i. DELETE items C & D
- b. Paragraph 2.02
 - i. DELETE items C & D
- H. **Section 10 7316** – Canopies
 - a. REVISED section for clarity
- I. **Section 13 1100** – Swimming pool
 - a. REVISED Section
- J. **Section 23 0700** – Variable Refrigerant Flow Zoning Systems
 - a. ADDED Section to Specifications
- K. **Section 23 0785** – Air to Air Energy Recovery Unit
 - a. Paragraph 2.2, A
 - i. ADDED Aeon as approved manufacturer

AD4-3 DRAWINGS:

- A. **G1.02** – General Notes
 - a. REVISED Notes
- B. **A1.02** – Floor Plan Level 2
 - a. ADDED Curtain Wall Horizontal Steel
 - b. LABELED TV Locations
- C. **A5.12** – Wall Sections
 - a. ADDED Curtain Wall Horizontal Steel
- D. **A5.41** – Railing Schedule & Detail
 - a. REVISED Railing Schedule
- E. **A7.05** – Gym Interior
 - a. ADDED TV Enclosure
- F. **A7.06** – Gym Interior
 - a. ADDED TV Enclosure
- G. **A7.07** – Interiors Multi-Purpose
 - a. REVISED Acoustics Pattern
- H. **A9.04** – Amphitheatre
 - a. ADDED Scuppers
- I. **C-101** – Site plan
 - a. REVISED Transformer Pad Location
- J. **C-201** – Grading Plan
 - a. REVISED Note
- K. **L1.01** – Materials Plan
 - a. REVISED Transformer Pad Location
 - b. REVISED Notes
- L. **L1.02** – Materials Plan Alternate
 - a. REVISED Transformer Pad Location
 - b. REVISED Notes
- M. **L5.01** – Landscape Plan
 - a. REVISED Transformer Pad Location
- N. **S1.06** – Typical Details
 - a. REVISED Footing Schedule
- O. **S2.01** – Floor and Foundation Plan
 - a. REVISED Footings @ Multi Purpose
- P. **S2.02** – Second Floor Plan
 - a. ADDED Horizontal Structural Support for Curtain Wall
- Q. **S2.03** – High Roof plan

- a. ADDED New Sections
- R. **S2.05** – Amphitheatre Plans
 - a. REVISED Amphitheatre Canopy
- S. **S3.05** – Sections
 - a. CREATED New Section
- T. **E0.02** – Electrical Site Power
 - a. REVISED Transformer Pad Location
- U. **E5.02** – Panelboard Schedules and Diagrams
 - a. REMOVED RPA1 to RPB2 Connection
- V. **E7.01** – General Electrical Legend & Notes
 - a. ADDED FB1 Note
- W. **SP1.01, SP1.02, SP2.01, SP2.02, SP2.03, SP2.04** – Pool Addendum 04
 - a. REVISED Drawings

AD4-4 MISCELLANEOUS:

- A. Substitution requests
 - a. Accepted
 - i. Tarkett Poly turf Pad
 - ii. Resuflor Deco Flake
 - iii. Colorsonix Acoustical Panels
 - b. Rejected
 - i. Versico PVC KEE

AD4-5 ATTACHMENTS:

- A. RFI Log Addendum 04
- B. Spec Section 00 4000
- C. Spec Section 01 2100
- D. Spec Section 01 2200
- E. Spec Section 01 3000
- F. Spec Section 05 7200
- G. Spec Section 10 7316
- H. Spec Section 13 1100
- I. Spec Section 23 0700
- J. Substitution Requests Listed Above
- K. Drawings Listed Above

END OF ADDENDUM NUMBER 04

PREPARED BY



2400 5th Avenue S, Suite 200 | Birmingham, Alabama 35233
Tel 205.879.4462 | GMCNETWORK.COM
Goodwyn Mills Cawood, LLC.

NO.	Question	ADD #	Response
1	Per the prebid, clarify the city will furnish and deliver dirt to the job site	1	Yes, city will furnish and deliver select fill to the project site
2	Provide civil CAD file	1	We will not provide CAD file
3	Per the prebid, clarify who is responsible for tap, meter, impact fees	1	Sheet C-001 - General Note 15, Section Sheet L6.01 – Irrigation Note 3, Section 33 1000 Paragraph 1.2, and Section 33 3000 Paragraph 1.2 indicate that all utility costs shall be paid by the Contractor and included in the bid. NOTE: The Owner/Utility will waive the impact and tap fees ONLY. All other work and materials associated with the sewer and water services shall be provided by the Contractor in the base bid. The Contractor shall coordinate with the Utility regarding an acceptable meter and any required installation details.
4	Per the prebid, clarify if the city will waive the building permit/plan review fees	1	Yes, city will waive bulding permit / plan review fees
5	Per the prebid, clarify that although the project is tax exempt, bidders are to include an occupational tax of 2%	1	Yes
6	Please provide the total R value of the roof insulation	1	Provide minimum R-25 c.i
7	There seems to be some discrepancy in the intent of alternates 2 and 3 between the Alternates spec, the Bid Form / Tax Form, and the drawings. Are these supposed to be additive alternates or deductive alternates? Please provide more info and clarification on these alts	3	See revised Alternates section and Civil drawings
8	Sheet L1.01 references Arch dwgs for outdoor showers, but cannot seem to locate on arch drawings. Provide spec/detail if to be included by GC in base bid or alt 2	3	Outdoor showers will be included in base bid. Shower location can be found on updated sheet L1.01. Refer to Addendum 02 Plumbing for piping information.
9	Provide detail for seat walls shown at brick paver areas and amphitheater area	3	See attached - L4.01
10	Provide subslab / subgrade prep requirements for brick pavers	3	See attached - L4.01
11	Provide spec for WDP-1 Parklex Wood Paneling	3	See Attached - Addendum 03
13	Please provide a spec section for the pool.	3	See Attached - Addendum 03

NO.	Question	ADD #	Response
14	Please provide the basis of design or brand type for the cement fiber board.	2	Please refer to section 07 4300 in the IFB Specs
15	Please reference Drawings A7.05 and A7.06-Specialty Equipment Schedule: Item 25 is shown as a Scoreboard, which is to be CFCl. Specification Section 11 6623, Part 1.02, B, 4 lists Section 11480-Scoreboard as a Related Section to Section 11 6623. However, Section 11480-Scoreboard is not in the Project Specifications. Please provide specification requirements for the Scoreboard.	3	See Attached - Addendum 03
16	Reference Specification Section 28 78 00, Part 1.01 A: Is the Fire Alarm Contractor the only contractor allowed to conduct the radio signal survey for the Emergency Responder Radio Coverage System? There are other companies that specialize in this scope of work.	2	The company testing the emergency responder radio coverage does not have to be the fire alarm contractor, but the testing company needs to have the proper FCC licenses to allow them to test emergency radio systems.
17	A2.02 shows height to baffles to be 26"-4". Is this meant to be 26'-4"?	2	25'- 6" to Bottom of Baffle, see revised A2.02
18	A6.02 - detail H4 shows honeycomb material above door header. What is this supposed to represent?	2	Closed Cell Foam Insulation
19	Please confirm if windows (SF9, 10, 13 & 17) on A6.12 are actually curtainwall?	2	SF 9, 10, 13 & 17 are all Storefront
20	Please clarify the square drawn to the left of the concession window with no label shown in detail C3/A7.03	2	See ELEC.
21	There is no tag for E11 on A7.03 in any of the enlarged drawings on the page. Please indicate where the detail for the on-wall watercooler/drinking fountain is located.	2	Refer to Floor Plan - Level 1 on sheet A1.01
22	The Finish plans show a WOC-1 condition at entry/exits, while the finish legend shows a WOM-1 condition. Is this the same condition?	2	Yes, it is same condition. Finish legend has been updated to match
23	Is the WDF-1 condition the same as spec section 096466 Wood Athletic Flooring Assemblies? WDF-1 is not included in Finish Legend.	2	WDF - 1 is meant to be WFS - 1, WFS - 1 is referenced in the finish legend
24	On signage type details on A8.51, it shows types A1, A8, & A10. However, there are none of these shown on signage schedule on A8.52. Please clarify if these are included & their quantities & locations.	2	Correct, A1, A8, and A10 are not included in the project
25	Please provide details for the stairs for the amphitheater. Either the landscape or civil plans provide details for the stairs.	3	See attached - L4.01
26	Crushed stone walkway P-102 references detail 7/L4.00. Page L4.00 was not provided, please confirm 7/L4.01 is the correct detail.	3	Detail 7/L4.01 is correct. See attached with updated reference numbers

NO.	Question	ADD #	Response
27	Please provide details of the brick pavers shown on civil plan C-101. Detail not provided in landscape as stated on C-101. Spec section not provided, please issue spec section.	3	Refer to L1.01 - Materials Plan for materials locations. Unilock paver detail is on L4.01, see updated sheet.
28	Please confirm flagpole detail 3 & 4 on L4.01 are correct for F-102 & F-103 type flagpoles	3	These details are correct, see attached with updated reference numbers
29	Civil plan C-101 shows concrete sidewalk 4" & landscape plan L1.01 shows Unilock Paver 8"x24" in same locations. Please clarify what material is to be used	3	See Landscape Materials Plan L1.01 for materials
30	Please clarify the elements of the splash pad, amphitheatre, and playground that are to be included in the base bid vs those to be included in the alternate. The civil plans C-101 & C-102 & landscape plans L1.01 & L1.02 show conflicting information & spec section 01 2300 is unclear.	3	See attached Alternates section
31	Please clarify the number of carousel tables F-101 landscape plan L1.01 shows 5 each, however civil plan C-101 only shows 3 each.	3	Refer to Landscape L1.01 for furniture locations and quantity
32	Please confirm detail 5/L4.01 is the correct detail for the Ameristar fence FE-101 shown on L1.01	3	Detail 05/L4.01 is correct
33	Please provide detail for the Ameristar gate FE-102 shown on L1.01.	3	See attached - L4.01
34	Please provide detail for the bonded rubber surfacing PG-101 shown on L1.01. No detail provided for this material in landscape plans.	3	See attached - L4.01
35	Detail 8/L4.01 looks to be the a 10'x10' detail for the plank pavers P-103 shown on L1.01 & L1.02, please confirm this is the correct detail	3	Detail 8/L4.01 shows a sample area of the Unilock Paver in plan view to show paver layout and color mix. Refer to L1.01 - Materials Plan for location of paver material.
36	Detail H3, A7.03 shows full height wall tile, & is also indicated on A8.03 via the red line indicating full height wall tile. Please indicate what finish the other 3 walls are for this restroom.	2	The other 3 walls to receive PNT-1
37	Please indicate what the wall finish is on CMU walls at men's & women's locker rooms 103,105,107, & 109 that are not full height wall tile as indicated by the red lines on A8.03.	2	Walls that do not receive tile are to receive PNT-1
38	Please confirm the Substitution Request deadline for the project is June 22nd & that the Substitution Request Form has to be provided for the consideration to be considered. Spec 000800 states substitution requests can be submitted up to 5 calendars days prior to the bid; AIA A701 Instruction to Bidders states substitutions are to be submitted 10 days prior to the bid.	2	Correct, substitution requests can be submitted until 5 days prior

NO.	Question	ADD #	Response
39	Please clarify the RFI deadline for the project. AIA A701 Instructions to Bidders states RFIs are to be submitted 7 days prior to the bid.	2	RFI Deadline is 48 hours prior to Bidding - refer to 01 3000, 3.02 A
40	Please confirm if the GC is to pay the Alabama CICT Fee.	2	Yes, GC must pay Alabama CICT Fee
41	Please confirm if the owner is to pay for all final & temporary power usage costs.	2	Temporary Utilities are Contractor's responsibilities - refer to 01 5000, 1.03
42	Please confirm if the owner is to pay for all final & temporary power company fees.	2	Temporary Utilities are Contractor's responsibilities - refer to 01 5000, 1.04
43	Please confirm if the owner will pay for the ADEM permit.	2	Refer to 31 2500 1.3 B
44	Please clarify all the staffing requirements for the project. 001700 Supplementary Conditions 3-f states the only requirement is a superintendent with 5 years' experience, Spec 010150 Special Conditions 1.17-B states the only requirement is a superintendent with 7 years' experience, so based on this, no other qualifications are required for any additional staff on the project. We recommend additional staffing requirement be provided for Project Managers & QA/QC Staff Member & any other personnel that the owner & architect deem needed for this project.	2	Refer to 01 0150 1.17 for the applicable requirements of all contractor personnel
45	Please confirm if BIM modeling & coordination will be required for the project.	2	BIM Modeling and Coordination is not required
46	Please confirm that the substantial completion date will be 425 days from the Owner's official Notice to Proceed. Spec 010150 - 1.02 C doesn't provide a date, but at the pre-bid 425 days was stated on the meeting agenda. Also, please clarify when the notice to proceed will be issued to the awarded GC.	2	Correct. Notice to Proceed will be issued approximately 1 week after bidding. Refer to Addendum 01.
47	Please confirm that the liquated damages are 6% per annum of the total contract amount plus \$250 per day for delay in completion & \$250 after 10 additional days beyond the contracture completion date for the reimbursement of architect.	2	Refer to Section 01 0150 1.02, section is correct and applicable
48	Please confirm that Procore is the required software for construction management & that all cost associated with this software.	4	Procore is not the only possible software, see revised Section 01 3000
49	Please clarify location of interior mock-up referenced in Spec 014000. The spec references both an exterior & interior mock-up, & to see the drawings for additional information. G1.03 provided information on the exterior mock-up, but no information can be found regarding location of an interior mock-up.	2	Interior Mock-Up not required, see revised Spec 01 4000
50	Please clarify if the owner is to pay for all material & laboratory testing for the project.	2	Contractor is responsible for the cost of all required testing except Divisions 3-5 and 31-32

NO.	Question	ADD #	Response
51	Doors 131 & 203 are missing on the hardware set. Is it understood to apply to opening 131 to "2" and opening 203 to "1"	2	See Revised Door Schedule A6.01
52	On drawing G1.02, division 5. states edge angles, embed plates, and similar to be hot-dipped galvanized. Is this to apply to the slab edge material at composite slabs?	2	Yes, apply to edge slab material at composite slab
53	Confirm gym equipment required. Wall pads are included in specs but not shown in drawings. Other equipment per the spec does not specify a quantity (ex. Portable basketball goals)	3	Revised gym equipment specs. We will not have wall pads nor portable basketball goals.
54	Per 09 6466 Section 3.03 B, how many coats of seal and finish are required?	3	Manufacturer's recommendations
55	Specification Section 32 3300 Site Furnishings is missing from the Specifications. Please provide this Specification section.	3	Removed from Specs
56	Drawing L1.01 has note "Pool by Others"; however SP Drawings are included in the Bid Documents. Please confirm all work at the Pool and shown on the SP Drawings is not included in our scope of work.	3	Pool is included in GC scope, note has been updated
57	Drawing L1.01 has not at custom splash pad with Base Bid to include 3" water line stub up, splash pad drainage stub up, and concrete surfacing in Base Bid. Note state blue band shall be concrete with integral color blue. If the blue concrete is to be in our scope of work, a more detailed layout is required for us to consider pricing of this work. Please provide more detailed layout of splash pad area and blue color selection so that we can obtain pricing of this work.	3	See revised Alternates section
58	Can the pool surge tank be relocated to the pool deck, closer to the pool to eliminate the long run of piping? IF approved, we propose the tank be inside the fenced deck area. We would suggest a Bilco TER-1 hatch door in lieu of a metal hatch, as it could be filled with concrete when the deck is poured.	3	Surge Tank shall be located as shown in the docuemnts - see attached.
59	Please allow for Non-AISC steel companies who may not be part of the AISC program but follow the AISC practice and standards on this project. This will help with competitive steel pricing.	3	Non-AISC Companies will be allowed but they shall follow the AISC practice and quality standards and shall have a minimum of 5 years experience on similar projects.
60	For the 2% tax that was mentioned in Addendum #1. Please advise if this 2% tax is added on top the base bid price. Please advise if subs must carry the 2% in their price as well.	3	Any required taxes shall be paid by the contractor. Contractor is responsible to understand the requirements of the city of Rainbow City.
61	Please confirm the exterior letter size on page A4.01.	3	Exterior signage to be designed and confirmed in the future. See 01 2100, Allowance No. 5

NO.	Question	ADD #	Response
62	Specification Section 07 5416, Part 3.06 G requires mechanically fastened and adhered insulation. When mechanically fastening the first layer of insulation, we will penetrate the vapor barrier. Please advise.	3	Acknowledged; If mechanical fasteners are required to satisfy the windstorm resistance classification, then they will penetrate the vapor barrier
63	Spec Section 07 54 16, Part 2.02. C2 requires a Hail-Resistance Rating: SH. I have been told a cover board is required to be installed for a 20 year warranty, but a cover board is not shown on the roofing details. Please advise.	3	Refer to G1.20 - Typical Construction Types
64	Section 07 5416, Part 3.04 required installation of a substrate board. Again, the substrate board installation is not shown on the roofing details. Please advise.	3	Refer to G1.20 - Typical Construction Types
65	Specification Section 01 2100, Part 3.01 E is Allowance 5 for exterior signage. Is this Allowance for the signage shown on Detail J1/A4.4 (letters & logo) or the monumental sign shown on Drawing E.01 (I do not see the monumental sign anywhere else in the Bid Documents). Please clarify.	3	The building mounted Exterior Signage to be covered by allowance No. 5, "EXTERIOR BUILDING SIGN". The Monumental sign to be covered by allowance No. 09, "CONTINGENCY". Electrical for monumental sign to be included in base bid.
66	Simplex is the specified fire alarm system. Will equivalents be considered? Please advise if I need to submit a substitution request for the proposed equivalent.	3	See 28 3100 Paragraph 2.15.
67	The pool designer called out the rebar spacing for the wall but not the floor. See SP1.01, wall detail. Is the floor rebar also 9" OC or different? It appears to be different, please advise	3	See updated Pool Drawings
68	Specification Section 12 6613, Part 2.02 A requires seating to be manually operated. However, Part 2.02, B 6 requires electrically operated. Please clarify.	3	All telescoping bleachers to be manually operated.
69	Porter is specified for the Gymnasium Equipment. However, they are not specified for Section 116653-Gymnasium Dividers. Do they need to submit a Substitution Request to be allowed to bid the Gymnasium Dividers? Usually Gymnasium Equipment and Dividers are supplied by the same vendor.	3	Porter is approved for both gymnasium equipment and dividers.
70	The specifications are calling for the metals to be a 3-coat finish. The supplier just reached out and said that we could not get a quote on this due to the size, we would not meet the minimum order quantity for special finishes. Please advise if we should quote the standard 2-coat finish.	3	The metal panels in 07 4291 can be finished in a 2-coat Fluoropolymer (Kynar) finish
71	From the provided Specs we see that the panel sizes for Cement Fiber Cladding 1 & 2 is to be the following - 18" x 10'. However, per manufacturer Specifications, Nichiha Natura only comes in 6' Panels and only in one color. Also, Nichiha Natura is installed with varied heights, which does not match the pattern drawn out on the architectural elevation pages.	4	Spec Dimensions have been updated, the drawing pattern shows the 6' dimensions. Nichiha Natura is the intended product - the varied heights refer to the planks within each panel, but the panel itself is installed regularly as indicated in the drawings.

NO.	Question	ADD #	Response
72	08 4413. In the curtain wall specifications it calls for a single span 24' using a 7 1/2" system at 28 psf. This curtain wall is 28.36' tall. The i-requirement using these specifications with the correct height is 170.784 in 4. The most I can get out of a 7 1/2" system is 36.114 using SR150 steel w/ 1" bar steel. The most I can get out of a 10" system is 67.678 using the same amount of steel. I could double up the verticals and still not meet the i-requirement. Does the floor plan show steel columns behind vertical mullions by any chance? I know the section drawing does not show any horizontal steel going across the opening to anchor to. Please advise. - SUGGESTION FROM SUB: The only remedy I see is for them to add horizontal steel to anchor to and I would need to know where they would add it so that I could run calculations to see if it would work.	4	See REVISED drawings. A horizontal steel member has been added.
73	On Details E11 & C11/ A7.01, HTW-1 is shown on the face of the bulkheads for the shower stalls but the cross section detail H1/A2.04 shows gyp bd on this face. Which is correct? Also, is the ceiling in the shower stalls tile or gyp bd?	3	H1/A2.04 is a typical detail. E11 & C11 on A7.01 show the intent for that specific instance - use HTW-1 for the bulkheads as referenced by E11 & C11. See RCP for ceiling materials.
74	Per the plans the designer is showing six (6) total ladders and is calling out in the equipment list (6) six 3-tread ladders; reference sheet SP1.01 and SP1.02 equipment list. Per specs, 3.9, A - they call for 8 ladders; 6 with 3 treads and 2 with 4 treads? Can you please clarify? Are there 6 with just 3 treads or is that 4 three treads and two 4 treads or is there to be 8 total?	4	See revisions - Addendum 04
75	There are (4) locations on sheet E2.01 that show a symbol with a designation of "FB1" but there is no "FB1" on sheet E7.01 electrical legend. On sheet E5.02 there are (2) panels with designation "RP-B2" on the single line diagram with one being powered from panel "RP-A1" and one being powered from panel "LP-B2" through transformer T-B2. There is only (1) panelboard schedule shown for panel "RP-B2" and it is the one powered from panel "RP-A1".	4	See REVISED electrical sheets. FB1 has a section on E6.02.
76	Please confirm if there is a tornado storm shelter, the plans have a spec section but are not called out for the storm shelter on the plans. Signage company wants to know what kind of Tornado Signs are needed and where they are to be installed.	4	There is no storm shelter. No Evacuation maps needed either. Signage specs have been revised.

NO.	Question	ADD #	Response
77	Subcontractors want to confirm the insulation strips furnished under steel decking? Is that correct? Do the insulation strips go on top or on the bottom of the decking? Are they wide or narrow strips?	4	Acoustic insulation shall be provided for the acoustic deck only. The acoustic insulation is installed on top of the deck and shall be the full width of the deck flute.
78	Clarification of Splash Pad Alternate	4	<p>The Base Bid includes the Work done outside of the Splash Pad area and utility rough-in. The splash pad contractor will provide the owner-furnished splash pad infill and concrete splash pad surface. The Alternate #2 will require the general contractor to be responsible for the splash pad area infill. See Section 01 2300 and see revised Landscape Notes.</p> <p>NOTE: This RFI response is intended to clarify the scope of work but does not supercede the associated work defined in the contract documents.</p>

**ATTACHMENT "A"
TO PROPOSAL FORM**

GENERAL CONTRACTOR _____

UNIT PRICES: The undersigned proposes the following Unit Prices for additions to or deductions from the Work wherein Unit Prices are applicable as determined by the Architect and Owner. These Unit Prices include all charges for labor and materials, fees, layout, supervision (field and home office), general expenses, taxes, insurance, overhead and profit, for Unit Item of Work in place. The Contract Sum shall be increased or decreased based upon quantity difference multiplied by the applicable Unit Price, in accordance with the General Conditions of the Construction Contract.

Refer to Section 01 2200 – Unit Prices and the respective item Specification Section for the complete Unit Price item description, quantities, units, and measurement thereof.

Submit the following Unit Prices with the Proposal Form on Bid Date.

	UNIT PRICE ITEM	UNIT OF MEASURE	QUANTITY	UNIT PRICE	ALLOWANCE INCLUDED IN BID
A	UNDERCUT AND BACKFILL IN BUILDING CONTROL AREA	CY	675	\$ _____	\$ _____
B	UNDERCUT AND BACKFILL IN PAVING CONTROL AREA	CY	4000	\$ _____	\$ _____

Unit Abbreviations: Each Item (EA), Ton (TN), Cubic Yard (CY), Square Yard (SY), Cubic Foot (CF), Square Foot (SF), Linear Foot (LF).

SIGNED this _____ day of _____, 2024.

CONTRACTOR

(Contractor Company Name)

By:

(Signee's Printed Name and Title)

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SECTION 01 2100
ALLOWANCES

PART 1 GENERAL

1.01 DESCRIPTION OF REQUIREMENTS:

- A. Definitions and Explanations: Certain requirements of the work related to each allowance are shown and specified in contract documents. The allowance has been established in lieu of additional requirements for that work, and further requirements thereof (if any) will be issued by change order.
- B. Types of allowances scheduled herein for the work included the following:
 - 1. Unit cost allowances.
 - 2. Lump sum allowances.
- C. Selection and Purchase:
 - 1. At earliest feasible date after award of Contract, advise Architect/Engineer of scheduled date when final selection and purchase of each product or system described by each allowance must be accomplished in order to avoid delays in performance of the work.
 - 2. As requested by the Architect/Engineer, obtain and submit proposals for the work of each allowance for use in making final selections; include recommendations for selection which are relevant to the proper performance of the work.
 - 3. Purchase products and systems as specified, and as selected (in writing) by the Architect/Engineer.
 - 4. Submit proposals and recommendations, for purchase of products or systems of allowances, in form specified for change orders.
- D. Change Order Data: Include in each change order proposal both the quantities of products being purchased and unit costs, along with total amount of purchases to be made. Where requested, furnish survey-of-requirements data to substantiate quantities. Indicate applicable delivery charges, amounts of applicable trade discounts, and other relevant details as requested by the Architect.
 - 1. Each change order amount for allowances shall be based on the unit price difference between the actual purchase amount and the allowance, multiplied by the final measure or count of work-in-place, with reasonable allowances, where applicable, for cutting losses, tolerances, mixing wastes, normal product imperfections and similar margins.
 - 2. Include overhead and profit in the Contractor's Allowance.
 - 3. When requested, prepare explanations and documentation to substantiate the quantities, costs, and margins as claimed.
- E. Change Order Mark-Up:
 - 1. Except as otherwise indicated, comply with provisions of General Conditions. For each allowance, Contractor's claims for increased costs (for either purchase amount or Contractor's handling, labor, installation, overhead, and profit), because of a change in scope or nature of the allowance work as described in contract documents, must be submitted within 60 days of initial change order authorizing work to proceed on that allowance; otherwise, such claims will be rejected.
 - 2. Where it is not economically feasible to return unused material to the manufacturer/supplier for credit, prepare unused material for the Owner's storage, and deliver to the Owner's storage space as directed. Otherwise, disposal of excess material is the Contractor's responsibility.
- F. Time and Allowance Amounts:
 - 1. Nothing in the Bid or Contract Documents shall be so construed or interpreted as to provide a Contract time extension, due to use or non-use of any Allowance amount.
 - 2. Nothing in the Bid or Contract Documents shall be so construed or interpreted as to allow unused Allowances or any portion thereof, nor any overhead and profit therefor to be retained by or paid to the Contractor.
 - a. Full amount of unused allowances shall be returned to the Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SCHEDULE OF ALLOWANCES:

- A. **Allowance No. 01 - EMERGENCY RESPONDER RADIO COVERAGE SYSTEM (Cash Allowance)**
1. Allow a lump sum price of ONE-HUNDRED THOUSAND DOLLARS (\$100,000) for work associated with the purchase and installation of an Emergency Responder Radio Coverage System if found to be required after testing of the facility.
 2. See Section 28 7800 - Emergency Radio Responder Coverage System for requirements. Costs associated with testing to identify if the system is required shall be included in the Base Bid, and NOT as part of Allowance.
 3. Include overhead and profit in Base Bid and not as part of Allowance.
- B. **Allowance No. 02 - PERMANENT CORES AND KEYS (Cash Allowance)**
1. Allow a lump sum price of TEN THOUSAND DOLLARS (\$10,000) for purchase of permanent keyed cores and keys, as directed by owner. Cores to be used in lock cylinder housings supplied under Division 08 Section 08 7100-Finish Hardware.
 2. See Section 08 7100 - Door Hardware for requirements.
 3. Provide each core with one operating key. New key system shall include five (5) master keys per master key group created, two (2) permanent control keys and five (5) grand master keys and one-hundred (100) blanks.
 4. Installation of the permanent cores, including installation material costs, shall be included in the Base Bid, and not as part of Allowance.
 5. Include overhead and profit in Base Bid and not as part of Allowance.
- C. **Allowance No. 3 - MASONRY MORTAR (Cash Allowance)**
1. Allow a unit cost of \$14.00 per bag, for the purchase of up to one (1) color of colored mortar, delivered to the job site, including all related expenses.
 2. Include overhead and profit in Base Bid, and not as part of Allowance.
 3. Masonry, standard gray mortar at interior (painted and unpainted walls - see Finish Schedule), concealed masonry work, and all mortar installation and installation materials (grout, ties, reinforcing, etc.) with the exception of the mortar of the interior brick masonry walls shall be included in Base Bid, and not as part of Allowance.
 4. Mortar color will be selected by the Architect, after award of the Contract for construction of this project.
- D. **Allowance No. 4 - BRICK MASONRY: (Cash Allowance)**
1. Field Brick & Brick Pavers: Allow a unit cost of \$500.00 per thousand for brick units, including purchase, delivery to the job site, and all related costs. Colors to be selected by Architect.
 2. Include overhead and profit in Base Bid, and not as part of Allowance.
 3. Installation of brick masonry and mortar installation and installation materials (grout, ties, reinforcing, etc.) shall be included in Base Bid, and not as part of Allowance.
 4. Concrete masonry units (CMU), mortar, installation, and installation materials (grout, ties, reinforcing, etc.) shall be in Base Bid, and not as part of Allowance.
 5. The brick will be modular (7-5/8" x 2-1/4" x 3-5/8" depth), unless otherwise indicated, selected by Architect after bidding, with special shapes as indicated and specified.
- E. **Allowance No. 5 - EXTERIOR BUILDING SIGN (Cash Allowance)**
1. Allow a lump sum price of FOURTY-FIVE THOUSAND DOLLARS (\$45,000) for work associated with the design, purchase, and installation of an exterior building sign as indicated in the Drawings.
 2. Installation and installation materials costs shall be included in Allowance, and not as a part of the Base Bid.
 3. Include overhead and profit in Base Bid.
 4. Electrical provisions outlined in the Drawings are to be included in the Base Bid, and not as a part of the Allowance.
- F. **Allowance No. 06 - ACCESS CONTROL SYSTEM (Cash Allowance)**

1. Allow a lump sum price of TWENTY-FIVE THOUSAND DOLLARS (\$25,000) for work associated with the purchase and installation of the access control system to be installed in the facility.
 2. The Access Control System itself (including readers, cabling, head-end equipment, and installation) is not specified in the Contract Documents, however certain provisions including raceways and power service are included in the scope of work and shall be included in the Base Bid, and NOT as part of Allowance.
 3. Include overhead and profit in Base Bid and not as part of Allowance.
- G. Allowance No. 07 - SECURITY CAMERA SYSTEM (Cash Allowance)**
1. Allow a lump sum price of TWENTY-FIVE THOUSAND DOLLARS (\$25,000) for work associated with the purchase and installation of a security camera system to be installed in the facility.
 2. The Security Camera System itself (including cameras, head-end equipment, and installation) is not specified in the Contract Documents, but certain provisions including raceways, power service, and cabling are included in the scope of work and shall be included in the Base Bid, and NOT as part of Allowance.
 3. Include overhead and profit in Base Bid and not as part of Allowance.
- H. Allowance No. 08 - AUDIO VISUAL / LOW VOLTAGE CONTINGENCY (Cash Allowance)**
1. Allow a lump sum price of ONE-HUNDRED THOUSAND DOLLARS (\$100,000) as an Audio Visual / Low Voltage Contingency Allowance.
 2. Include overhead and profit in Base Bid and not as part of Allowance.
- I. Allowance No. 09 - TELEVISIONS, MOUNTS, AND ENCLOSURES (Cash Allowance)**
1. Allow a unit price of \$3000 for the purchase of (2) Televisions and mounts, in addition to gymnasium TV enclosures (protective covers), which includes purchase, delivery to job site, and all related costs. Specific selections will be made by Owner after bidding. Total allowance to be \$6000.
 2. Installation and installation material costs including all wiring and block shall be included in Base Bid, and not as part of Allowance.
 3. Include overhead and profit in Base Bid, and not as part of Allowance.
- J. Allowance No. 10 - CONTINGENCY (Cash Allowance)**
1. Allow a lump sum price of ONE HUNDRED THOUSAND DOLLARS (\$100,000) as a Contingency Allowance.
 2. Include overhead and profit in Base Bid and not as part of Allowance.
- K. Allowance No. 11 - UNDERCUT AND BACKFILL IN BUILDING CONTROL AREA**
1. In accordance with Section 01 2200 - Unit Prices and Section 31 2000 - Earth Moving, include an Allowance for the quantity identified. The Allowance value will be adjusted up or down based on the actual quantity of the Work.
 2. See Section 01 2200 - Unit Prices for costs to be included and procedures for payment of Unit Price work.
 3. Calculating Allowance No. 10:
 - a. Unit Price Item A: Undercut and Backfill in Building Control Area
 - b. Quantity of SIX HUNDRED SEVENTY FIVE (675) Cubic Yards (CY)
 - c. Unit Price for each CY \$ _____.
 - d. Total Allowance No. 10 Value (b x c): \$ _____.
- L. Allowance No. 12 - UNDERCUT AND BACKFILL IN PAVEMENT CONTROL AREA**
1. In accordance with Section 01 2200 - Unit Prices and Section 31 2000 - Earth Moving, include an Allowance for the quantity identified. Undercut and Backfill illustrated in the drawings and specified herein shall be included in the Base Bid, not as part of Allowance. The Allowance value will be adjusted up or down based on the actual quantity of the Work.
 2. See Section 01 2200 - Unit Prices for costs to be included and procedures for payment of Unit Price work.
 3. Calculating Allowance No. 11:
 - a. Unit Price Item B: Undercut and Backfill in Pavement Control Area
 - b. Quantity of FOUR THOUSAND (4000) Cubic Yards (CY)
 - c. Unit Price for each CY \$ _____.
 - d. Total Allowance No. 11 Value (b x c): \$ _____.

END OF SECTION

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SECTION 01 2200
UNIT PRICES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for unit prices.
 - 1. A unit price is an amount proposed by Bidders and stated on "Attachment A to Proposal Form", as a price per unit of measurement for materials and/or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased, in accordance the General Conditions and/or other provisions of the Bid and Contract Documents.
 - 2. Unit prices shall include all necessary material, labor, fees, layout, supervision (field and home office), general expenses, insurance, bonds, overhead, profit and applicable taxes, for unit item of work in place.
 - 3. Refer to other Division 1 Sections and individual Specification Sections for construction activities requiring the establishment of unit prices. Methods of approval, verification, measurement and payment for unit prices are specified in those sections.
- B. Related work specified elsewhere includes:
 - 1. Section 01 0150 - Special Conditions.
 - 2. Division 2 - Existing Conditions Sections.
 - 3. Divisions 31-35 - Site Work Divisions.
- C. Schedule:
 - 1. A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods described under each unit price.
 - 2. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 ITEMIZED UNIT PRICE SCHEDULE

- A. Item No. A - Undercut & Backfill in Building Control Areas:
 - 1. Description: Undercutting below planned subgrade in building control areas, and at least 10-feet beyond, as required due to careful inspection by probing, proofrolling, and testing shall be paid on a unit price basis per cubic yard of undercut. Unit price shall include excavation and legal off-site disposal of unsuitable material and replacement and compaction of owner provided controlled fill back to subgrade elevation in cuts and back to original grade in fills in accordance with Section 31 3200 - "Earth Moving". This shall not apply to previously prepared areas of the site that may become unstable due to construction traffic, rain, etc.
 - 2. Unit of Measure: Cubic Yard (CY) of unsuitable material.
- B. Item No. B - Undercut & Backfill in Non-Building Control Areas.
 - 1. Description: Undercutting below planned subgrade in all areas not included in the building control areas as required due to careful inspection by probing, proofrolling, and testing shall be paid on a unit price basis per cubic yard of undercut. Unit price shall include excavation and legal off-site disposal of unsuitable material and replacement and compaction of owner provided controlled fill back to subgrade elevation in cuts and back to original grade in fills in accordance with Section 31 2000 - "Earth Moving". This shall not apply to previously prepared areas of the site that may become unstable due to construction traffic, rain, etc.
 - 2. Unit of Measure: Cubic Yard (CY) of unsuitable material.

END OF SECTION

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SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Electronic document submittal service.
- B. Requests For Information.
- C. Preconstruction meeting.
- D. Progress meetings.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Requests for Interpretation (RFI) procedures.
- H. Submittal procedures (Including Submittal Numbering/Tracking Guide and form for Transmittal).
- I. Inspections.

1.02 RELATED SECTIONS

- A. Section 01 0150 - Special Conditions: Additional Administrative and Submittal Requirements.
- B. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 REFERENCE STANDARDS

- A. CSI/CSC Form 12.1A - Submittal Transmittal; Current Edition.

1.04 PROJECT COORDINATION

- A. Project Coordinator: Contractor's Project Manager.
- B. Cooperate with the Owner and Architect in allocation of mobilization areas of site; for field offices and sheds, for traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Owner and Architect.
- D. Comply with Owner and Architect's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Owner and Architect for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions of the Owner and Architect.
- G. Make the following types of submittals to Architect:
 - 1. Schedule of Submittals.
 - 2. Requests for interpretation.
 - 3. Requests for substitution.
 - 4. Shop drawings, product data, and samples.
 - 5. Test and inspection reports.
 - 6. Design data.
 - 7. Manufacturer's instructions and field reports.
 - 8. Applications for payment and change order requests.
 - 9. Progress schedules.
 - 10. Coordination drawings.
 - 11. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 12. Closeout submittals.

1.05 PROJECT COORDINATION (WITH CM)

- A. Project Coordinator: Construction Manager.

- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 1000 - Summary.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Architect through the Project Coordinator:
 - 1. Schedule of Submittals.
 - 2. Requests for Interpretation.
 - 3. Requests for substitution.
 - 4. Shop drawings, product data, and samples.
 - 5. Test and inspection reports.
 - 6. Design data.
 - 7. Manufacturer's instructions and field reports.
 - 8. Applications for payment and change order requests.
 - 9. Progress schedules.
 - 10. Coordination drawings.
 - 11. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 12. Closeout submittals.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
 - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
 - 2. Contractor and Architect are required to use this service.
 - 3. It is Contractor's responsibility to submit documents in allowable format.
 - 4. Subcontractors, suppliers, the Architect, all of the Architect's consultants and Engineers, and the Owner shall all have individual access to the service at no extra charge. Include licensed access for the Owner, Architect, and all of the Architect's Consultants and Engineers of not less than one license for each discipline or trade
 - 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 - 6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
 - 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Cost: The cost of the service is to be paid by Contractor; include the cost of the service in the Contract Sum.
- C. Submittal Service: The selected service is:
 - 1. Procore | Construction Management (tel: 1-866-477-6267): www.procore.com
 - 2. Submittal Exchange (tel: 1-800-714-0024): www.submittalexchange.com/#sle.

3. Newforma ConstructEx: www.newforma.com/our-solutions/constructex/#sle.
 4. Substitutions: See Section 01 6000 - Product Requirements.
- D. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of Architect and Contractor participating; further training is the responsibility of the user of the service.
- E. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

3.02 REQUEST FOR INFORMATION

- A. All Pre-Bid Questions, or Requests for Information must be submitted through a prequalified General Contractor via email to the Architect's Project Manager, with a copy to Kayla Thomas (kayla.thomas@gmcnetwork.com). Pre-Bid Questions will be accepted up to 48 hours prior to Bid Opening.
- B. Send requests for information (RFI's) to Architect's Project Manager and administrative assistant, following the example form included at the end of this section.
- C. Sequentially number the Requests for Information (RFI), and date accordingly.
- D. Explanations and interpretations will be issued via Addendum.
- E. After award of the Bid, a Request for Information (RFI), when submitted to the Architect, may result in an Architect's Supplemental Instruction (ASI), Request for Proposal (RFP), or Construction Change Directive (CCD) prior to the issuance of a Change Order.

3.03 PRECONSTRUCTION CONFERENCES

- A. Prior to commencing any work on the project, a pre-construction conference shall be held. Mandatory attendance will be required of the General Contractor and representative of all specialty and principal subcontractors involved in the project. Time and date of said conference shall be established by the Architect after award of construction contract.
- B. Architect will schedule a meeting after Notice of Award.
- C. Attendance Required:
1. Owner.
 2. Architect.
 3. Contractor.
- D. Agenda:
1. Execution of Owner-Contractor Agreement.
 2. Submission of executed bonds and insurance certificates.
 3. Distribution of Contract Documents.
 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 5. Designation of personnel representing the parties to Contract and Architect.
 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.
 8. Other items: To be announced.
- E. Similarly, prior to commencing any major portion of the Work of the project, preconstruction conferences shall be held. Mandatory attendance will be required of the General Contractor and representative of all specialty and principal subcontractors involved in the individual major portions of project. Time and date of said conferences shall be established by the General Contractor, and the Architect, Owner, and appropriate Consultants shall be advised in writing of times and dates, by the General Contractor.
1. "Major portion" may be defined as work items for each Subcontractor working on site, and shall include in part, but not be limited to, earthwork, sitework, site utilities, concrete work, masonry, Division 5, roof framing and Division 6, insulation, roofing systems, finishes, specialties, casework, mechanical, plumbing, and electrical.
- F. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. The Contractor shall record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made. Emails to Project Team are acceptable.
- D. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- E. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to work.

3.05 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect.
- C. Do Not install above ceiling work prior to preparation, submission, and approval of the above ceiling Coordination Drawings .

3.06 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
 - 2. Prepare in a format and with content acceptable to Owner.
 - 3. Prepare using software provided by the Electronic Document Submittal Service.

4. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - c. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
 - a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 2. Owner's, Architect's, and Contractor's names.
 3. Discrete and consecutive RFI number, and descriptive subject/title.
 4. Issue date, and requested reply date.
 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
 1. Indicate current status of every RFI. Update log promptly and on a regular basis.
 2. Note dates of when each request is made, and when a response is received.
 3. Highlight items requiring priority or expedited response.
 4. Highlight items for which a timely response has not been received to date.
 5. Identify and include improper or frivolous RFIs.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
 1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an

- R suffix to the original number.
2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.07 SUBMITTAL SCHEDULE

- A. Submit to Architect for review a schedule for submittals in tabular format.
 1. Submit at the same time as the preliminary schedule specified in Section - 01 3216 - Construction Progress Schedule.
 2. Coordinate with Contractor's construction schedule and schedule of values.
 3. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
 4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
 - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

3.08 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 1. Product data.
 2. Shop drawings.
 3. Samples for selection.
 4. Samples for verification.
- B. Submit to Architect, using the submittal numbering tracking system, for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.09 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 1. Design data.
 2. Certificates.
 3. Test reports.
 4. Inspection reports.
 5. Manufacturer's instructions.
 6. Manufacturer's field reports.
 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.10 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
 1. Project record documents.
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Other types as indicated.

- B. Submit for Owner's benefit during and after project completion.

3.11 NUMBER OF COPIES OF SUBMITTALS (WHEN ELECTRONIC DOCUMENT SUBMITTAL SERVICE IS USED)

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- C. Samples: Submit no less than 3-each of any sample or color chart which is required or otherwise requested, unless more are required in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.
- D. Refer to Section 01 0150 - "Special Conditions" for additional information and requirements.

3.12 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a single transmittal for related items.
 - 2. Transmit using approved form.
 - a. Use Form CSI/CSC Form 12.1A.
 - b. Use Contractor's form, subject to prior approval by Architect.
 - c. Use form generated by Electronic Document Submittal Service software.
 - 3. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 4. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 5. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
 - 6. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Deliver submittals to Architect at business address.
 - b. Deliver submittals to Construction Manager at business address.
 - c. Deliver submittals to _____ at business address.
 - d. Send submittals in electronic format via email to Architect.
 - e. Upload submittals in electronic form to Electronic Document Submittal Service website.
 - 7. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
 - c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days.
 - 8. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 - 9. Provide space for Contractor and Architect review stamps.
 - 10. When revised for resubmission, identify all changes made since previous submission.
 - 11. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 - 12. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
 - 13. Submittals not requested will not be recognized or processed.
 - 14. Submittals not requested will be recognized, and will be returned "Not Reviewed",
- B. Product Data Procedures:

1. Submit only information required by individual specification sections.
 2. Collect required information into a single submittal.
 3. Submit concurrently with related shop drawing submittal.
 4. Do not submit (Material) Safety Data Sheets for materials or products.
 5. Submit sustainable design reporting submittals under separate cover.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 2. Do not reproduce Contract Documents to create shop drawings.
 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Transmit each submittal with approved form.
- E. Transmit each submittal. Sequentially number each transmittal form according to the example shown on the sample Transmittal form provided at the end of this Section. Include the date, project number and name along with number of copies submitted.
- F. Deliver submittals to Architect at business address to the attention of the Contract Administration Coordinator.
- G. A Submittal Schedule must be submitted and approved by Architect prior to review of any and all submittals.

3.13 SCHEDULING OF INSPECTIONS

- A. Contact the design professional by email of the date the project will be ready for an inspection.
- B. The design professional will contact the Local Building Inspector to schedule the first available date for the inspection. Inspections must be requested 14 days in advance.
- C. After Building Inspector notifies design professional of time of inspection, design professional will notify Contractor, and Owner, copying Building Inspector.
- D. Cancellations of any scheduled inspection must be received in writing by email no less than 48 hours prior to the scheduled inspection. The email shall be sent to the Contractor, Building Inspector, and Owner. If an inspection is cancelled, it will be rescheduled subject to Building Inspector's availability.

3.14 MINIMUM REQUIREMENTS FOR REQUIRED INSPECTIONS

- A. Use the following minimum requirements to help determine if a project is ready for required inspection:
- B. PRE-CONSTRUCTION CONFERENCE.
 1. Required Attendees: Contractor, Owner, Architect, Major Subcontractors.
 2. Inspection Requirements:
 - a. Signed construction contract.
 - b. Verification of payment of permit fee.
 - c. Contractor's Statement of Responsibility and Quality Assurance Plan (for storm shelter).
 - d. Fire Alarm Contractor's Certification (from State Fire Marshall).
 - e. ADEM permit, if more than 1 acre of land is disturbed.
- C. PRE-ROOFING CONFERENCE.
 1. Required Attendees: Contractor, Owner, Architect, Roofing Subcontractor, Roofing Manufacturer's Representative.
 2. Inspection Requirements:
 - a. Roofing submittals must be approved by Architect prior to pre-roofing conference.
 - b. Roofing manufacturer must provide documentation that roof design and roofing materials meet code requirements for wind uplift and impact resistance.
 - c. Copy of sample roofing warranty.
- D. ABOVE-CEILING INSPECTION.
 1. Required Attendees: Contractor, Owner, Architect, MEP Engineers, Major Subcontractors.
 2. Inspection Requirements:
 - a. All work must be completed except for installation of ceiling tiles and/or hard ceilings.

- b. Space must be conditioned.
 - c. Permanent power must be connected unless otherwise arranged with the Building Inspector.
 - d. Grease duct must be inspected and approved by the Building Inspector prior to fire wrapping and Above-Ceiling Inspection.
- E. LIFE SAFETY INSPECTIONS AND FINAL INSPECTIONS.
- 1. Required Attendees: Contractor, Owner, Architect, Engineers, Major Subcontractors, Local Fire Marshall.
 - 2. Inspection Requirements:
 - a. Fire alarm certification.
 - b. Kitchen hood fire suppression system certification.
 - c. General Contractor's 5-Year Roofing Warranty (DCM Form C-9).
 - d. Roofing manufacturer's guaranty.
 - e. Above ground and below ground sprinkler certifications.
 - f. Completed Certificate of Structural Engineers Observations for storm shelters.
 - g. Emergency and exit lighting tests.
 - h. Fire alarm must be monitored.
 - i. Elevator Inspection completed and Certificate of Operation provided by the State of Alabama Department of Labor.
 - j. Boiler/Vessels Inspection completed and Certificate of Operation provided by the State of Alabama Department of Labor.
 - k. Flush test for underground sprinkler lines (witnessed by local fire marshall, fire chief and/or Building Inspector).
 - l. Flush/pressure test for new and/or existing fire hydrants.
 - m. Must have clear egress/access and emergency (for first responders) access to building.
 - n. Must have ADA access completed.
- F. YEAR-END INSPECTIONS.
- 1. Required Attendees: Contractor, Owner, Architect, Engineers and/or Major subcontractors may also be required to attend.
 - 2. Inspection Requirements:
 - a. Owner's list of documented warranty items.

END OF SECTION

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SECTION 05 7200
ORNAMENTAL HANDRAILS AND RAILINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Railing and guardrail assemblies.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section 05 5000 - Metal Fabrications: Supports.
- C. Section 05 5213 - Pipe and Tube Railings: Other handrails not specified with stairs.

1.03 REFERENCE STANDARDS

- A. ASTM A555/A555M - Standard Specification for General Requirements for Stainless Steel Wire and Wire Rods; 2005 (Reapproved 2009).
- B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2010.
- C. ASTM E935 - Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings; 2000 (Reapproved 2006).
- D. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2010.
- E. AWS D1.6 - Structural Welding Code - Stainless Steel; 1999.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Meeting: Schedule and conduct a preinstallation meeting one week before starting work of this section. Attendees shall include, but not be limited to:
 - 1. Contractor.
 - 2. Manufacturer's representative.
 - 3. Architect.
 - 4. Owner's representative.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturer's product data including description of materials, components, finishes, fabrication details, glass, anchors, and accessories.
- C. Shop Drawings: Indicate railing system elevations and sections, details of profile, dimensions, sizes, connection attachments, anchorage, size and type of fasteners, and accessories. Indicate anchor and joint locations, brazed connections, transitions, and terminations.
 - 1. Shop drawings shall be sealed, signed, and certified by a Registered Structural Engineer in the State in which the Project is located, to be in conformance with all requirements specified herein, and in conformance with all State and local codes and regulations.
 - a. Include the design engineer's stamp or seal on each sheet of shop drawings.
- D. Test Reports: Submit test reports from an independent testing agency showing compliance with specified design and performance requirements.
- E. Manufacturer's Installation Instructions.
- F. Maintenance Data: Manufacturer's instructions for care and cleaning.
- G. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company having performed at least 3 installations of comparable quality and size within last 3 years, and acceptable to manufacturer.s
- B. Single Source Responsibility: To ensure compatibility, all Materials and related components shall be supplied by a single source.
- C. Execution tolerance plus/minus 5/64" (2 mm)
- D. Mock-ups: Construct a railing of each type specified. Locate mock-ups where directed.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver railing materials in factory provided protective coverings and packaging.
- B. Protect railing materials against damage during transit, delivery, storage, and installation at site.
- C. Inspect railing materials upon delivery for damage. Repair damage to be indistinguishable from undamaged areas; if damage cannot be repaired to be indistinguishable from undamaged parts and finishes, replace damaged items.
- D. Prior to installation, store materials and components under cover, in a dry location, away from uncured concrete and masonry.
- E. Materials must be kept in their original packaging until installation.

1.08 FIELD CONDITIONS

- A. Do not install railings until project is enclosed and ambient temperature of space is minimum 65 degrees F and maximum 95 degrees F.

1.09 WARRANTY

- A. Warranty: Manufacturer's standard one year warranty against defects in materials, fabrication, finishes, and installation commencing on Date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Decorative Metal Railings:
 - 1. HDI Railing Systems; KOTO Flatbar Stainless Steel Cable Railing System: www.handrail-design.com
 - 2. Substitutions: See Section 01 6000 - Product Requirements.

2.02 RAILING SYSTEMS

- A. Railings - General: Factory- or shop-fabricated in design indicated, to suit specific project conditions, and for proper connection to building structure, and in largest practical sizes for delivery to site.
 - 1. Design Criteria: Design and fabricate railings and anchorages to resist the following loads without failure, damage, or permanent set; loads do not need to be applied simultaneously.
 - a. Lateral Force: 75 lb minimum, at any point, when tested in accordance with ASTM E935.
 - b. Distributed Load: 50 pounds per foot minimum, applied in any direction at the top of the handrail, when tested in accordance with ASTM E935.
 - c. Concentrated Loads on Intermediate Rails: 50 pounds per square ft, minimum.
 - d. Concentrated Load: 200 pounds minimum, applied in any direction at any point along the handrail system, when tested in accordance with ASTM E935.
 - 2. Assembly: Join lengths, seal open ends, and conceal exposed mounting bolts and nuts using slip-on non-weld mechanical fittings, flanges, escutcheons, and wall brackets.
 - 3. Joints: Tightly fitted and secured, machined smooth with hairline seams.
 - 4. Field Connections: Provide sleeves to accommodate site assembly and installation.
 - 5. Welded Joints: Make exposed joints butt tight, flush, and hairline; use methods that avoid discoloration and damage of finish; grind smooth, polish, and restore to required finish.
 - a. Ease exposed edges to small uniform radius.
 - b. Welded Joints:

- 1) Carbon Steel: Perform welding in accordance with AWS D 1.1/D 1.1M.
 - 2) Stainless Steel: Perform welding in accordance with AWS D 1.6.
- B. Cable Railing System:
1. Description: Post and cable railing system.
 2. Stainless Steel Tube: Type 304 stainless steel.
 - a. Guardrail Mid Post: 1/2" x 3" post as indicated in drawings.
 - b. Guardrail End Post: 1" x 3" post as indicated in drawings.
 - c. Handrail: 1-1/2 inch outside diameter.
 - d. Top Rail: 3 1/2" x 1/2" flat bar.
 3. Cable: ASTM A555/555M.
 - a. Fabricate from ASTM A666 stainless steel, Type 304 or Type 316.
 - b. Size: 3/16 inch diameter.
 4. Fittings: Type 316 stainless steel, non-swedge.
 5. Fasteners: Stainless steel.
 6. Finishes:
 - a. Exposed Stainless Steel Pipe and Tubing: ____.

2.03 MATERIALS

- A. Materials: As detailed, and as described below.
- B. Stainless Steel Components:
1. ASTM A666, Type 304.
 2. Stainless Steel Finish: No. 4 Satin.

2.04 ACCESSORIES

- A. Welding Fittings: Factory- or shop-welded from matching pipe or tube; joints and seams ground smooth.
- B. Anchors and Fasteners: Provide anchors and other materials as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.
1. For anchorage to concrete, provide inserts to be cast into concrete for bolting anchors.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that substrate and site conditions are acceptable and ready to receive work.
- B. Verify field dimensions of locations and areas to receive work.
- C. Notify Architect immediately of conditions that would prevent satisfactory installation.
- D. Do not proceed with work until detrimental conditions have been corrected.
- E. Furnish components to be installed in other work to installer of that other work, including but not limited to blocking, sleeves, inserts, anchor bolts, embedded plates and supports for attachment of anchors.

3.02 PREPARATION

- A. Protect existing work.
- B. Review installation drawings before beginning installation. Coordinate diagrams, templates, instructions and directions for installation of anchorages and fasteners.
- C. Clean surfaces to receive units. Remove materials and substances detrimental to the installation.

3.03 INSTALLATION

- A. Comply with manufacturer's drawings and written instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects and with tight joints, except where necessary for expansion.
- C. Anchor securely to structure.

- D. Conceal anchor bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.
- E. Isolate dissimilar materials with bituminous coating, bushings, grommets or washers to prevent electrolytic corrosion.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per floor level, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

3.05 CLEANING

- A. Remove protective film from exposed metal surfaces.
- B. Metal: Clean exposed metal finishes with potable water and mild detergent, in accordance with manufacturer recommendations; do not use abrasive materials or chemicals, detergents or other substances that may damage the material or finish.

3.06 PROTECTION

- A. Protect installed components and finishes from damage after installation.
- B. Repair damage to exposed finishes to be indistinguishable from undamaged areas.
 - 1. If damage to finishes and components cannot be repaired to be indistinguishable from undamaged finishes and components, replace damaged items.

END OF SECTION

SECTION 10 7316
CANOPIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Work in this section includes furnishing and installation of extruded aluminum canopy to be installed over structural steel frame.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section 04 2000 - Unit Masonry: Masonry work.
- C. Section 05 5000 - Metal Fabrications: Miscellaneous metals.
- D. Section 07 6200 - Sheet Metal Flashing and Trim: Sheet metal flashing.
- E. Section 07 9005 - Joint Sealers: Sealants.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2005.
- B. Aluminum Design Manual 2000, Specifications & Guidelines for Aluminum Structures.A.
- C. ASCE 7, Minimum Design Loads for Buildings and Other Structures.
- D. American Architectural Manufacturer's Association (AAMA).
- E. American Society for Testing and Materials (ASTM).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's product information, specifications and installation instructions for building components and accessories.
- C. Shop Drawings: Indicate all necessary plan dimensions, elevations and details. General Contractor shall verify all dimensions and provide elevations at each column, finish floor, and related soffit before releasing to manufacturer for fabrication.
- D. Certification: Submit design calculations signed by a Registered Professional Engineer, licensed in Alabama. Design calculations shall state that the canopy system complies with the wind requirements of ASCE 7-95, the applicable building code, and all other governing criteria.
- E. Warranty: Submit manufacturer's warranty (as described below) and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Designer Qualifications: Perform design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience, and approved by manufacturer.
- D. Wind Uplift: Provide roof and vertical panel systems including supports meeting requirements of Underwriters Laboratories, Inc. for Class 90 wind uplift resistance.
 - 1. Design to Minimum Code Wind Load at Site in accordance with the applicable edition(s) of the International Building Code.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store all canopy components in protected areas.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Canopy system, including materials and workmanship, shall be warranted from defects for a period of one year from substantial completion of installation.
- C. Provide 10 year manufacturer warranty for canopy system remaining intact (without perceptible deformation) and completely leak-free for 10-years from date of acceptance of project (this warranty need not cover damage from winds exceeding the velocities and/or loading required by the International Building Code).
- D. Provide 10 year manufacturer warranty covering finish of canopy when finished with fluoropolymer coating.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Steel Frame Supported Canopy System:
 - 1. Architectural Shade Products: www.architecturalshade.com.
 - 2. Mitchell Metals: www.mitchellmetals.net.
 - 3. Superior Mason Products LLC: www.superiormetalproducts.com.
 - 4. Tennessee Valley Metals, Inc.: www.tvmetals.com. [Basis of Design]
 - 5. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MATERIALS:

- A. Structural Components (including but not limited to decking, beams, posts, fascia, channels, tubes, angles, mounting plates and hanger rods) shall be extruded aluminum, alloy 6063-T6.
- B. Fasteners: aluminum, 18-8 stainless steel or 300 series stainless steel.

2.03 COMPONENTS:

- A. Beams: Beams shall be open-top tubular extrusion of size and shape indicated, top edges thickened for strength and designed to receive deck members in self-flashing manner. Provide structural ties in tops of all beams.
- B. Channels, Tubes, Angles, Hanger Rods, and Mounting Plates: Structural aluminum extrusions.
- C. Deck: Deck shall be extruded self-flashing sections interlocking into a composite unit.
- D. Fascia: Fascia shall be size and shape as indicated.
- E. Flashing: Flashing shall be .040" aluminum (min.).

2.04 FABRICATION (STEEL FRAME-SUPPORTED TYPE):

- A. Support channels and beams shall be designed to receive and secure the gutter beams.
- B. Beams and Gutters shall be positively connected with neatly mitered corners.
- C. Deck shall be manufactured of extruded modules that interlock in a self-flashing manner. Assemble deck with sufficient camber to offset dead load deflection.
- D. Concealed drainage: Water shall drain from covered surfaces into integral gutter beam and be directed to ground level discharge via scuppers.

2.05 FACTORY FINISHING:

- A. 70% Fluoropolymer (Kynar) finish: AAMA 2605, three coat.
- B. Color: Selected from manufacturer's standard colors.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that substrates are ready to receive work.

3.02 PREPARATION

- A. Erection shall be performed after all concrete, masonry, and roofing work in the vicinity is complete and cleaned.
- B. Any blocking necessary to install wall supported canopy shall be in place and installed according to approved shop drawings prior to canopy installation.

3.03 INSTALLATION

- A. Installation shall be in strict accordance with manufacturer's recommendations and approved shop drawings.
- B. Blockouts, if required, shall be provided by manufacturer, and installed by General Contractor.
- C. All fasteners penetrating building face shall be sealed.
- D. Canopies shall be installed with slope of 1/8" per foot for water to drain from top of canopy to draining scuppers/downspouts and eliminate ponding.
- E. All exposed fasteners shall be painted to match canopy color.
- F. Decking shall be aligned and secured to aluminum frame structure.

3.04 CLEANING

- A. After installation, entire system shall be left in a clean condition.

3.05 PROTECTION

- A. Protect the finish during handling and erection.
- B. Take all precautions needed to protect entire canopy system from damage during subsequent construction activity until time of Substantial Completion.

END OF SECTION

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SECTION 13 1100
SWIMMING POOL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND GENERAL INFORMATION

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

1.02 SCOPE

- A. The work specified in this section is the complete construction of the swimming pool together with all equipment listed on the drawings and specified herein.
- B. The work shall include, but is not necessarily limited to, the furnishing and installation of completely operational and finished swimming pools, pool filtration systems, piping, pool deck equipment and other accessories in accordance with the drawings and specifications.
- C. Bidders should take note of all other sections.
- D. It is the intention of these specifications and drawings to call for documented finished work, tested and ready for operation meeting all regulatory and operational requirements of the authorities having jurisdiction and the drawings and specifications for this project. Furnish all labor, materials, equipment, supervision, regulatory documentation, permits, submittals and services necessary to install the aquatic venue per the intent of the complete construction documents to include the pool structure, gutter and tile, depth markers, signage, deck equipment, filter system, sanitation system, safety and maintenance equipment. This contractor shall coordinate the swimming pool work as directed by the general contractor. The plans are not intended to show in complete detail all the work to be done; but are for the purpose of illustrating the scope of work and special conditions considered necessary for the experienced contractor to take off his materials and lay out his work. This contractor shall be responsible for taking such measurements as may be necessary at the job and adapting his work to local conditions.

1.2 QUALITY ASSURANCE

- A. Qualifications of Pool Contractor: The contractor and his mechanics, to be eligible, must have had at least 5 years experience in the construction of school, municipal and large commercial type swimming pools of similar construction; and must be able to list at least three pools of this type, each with a water surface area of not less than 5,000 square feet which he has constructed and which, upon investigation, would be found by the Owner to have been completed in a satisfactory manner.
- B. Contractors with limited experience are advised that very close tolerances will be strictly enforced on all phases of this work. Improper work will be immediately rejected.
- B. The contractor shall furnish complete evidence to the owner that he has the facilities, equipment, and personnel to perform the work involved in the pool structure, pool gutter, trim and finish, plumbing and installation of mechanical and deck equipment with his own organization and/or obtain prior approval before entering into any subcontract for this work.

1.3 QUALITY CONTROL

- A. The architect, and owner shall be the sole judge whether work installed under this contract has met the quality required. The contractor, at no additional expense to the owner, is subject to replacing or correcting any work not judged acceptable by the architect.
- B. Execute preconstruction submittals
- C. Submit for approval for all changes, modifications or clarifications of the original contract

- D. Execute the sealed drawings approved by the authority having jurisdiction
- E. Execute work per drawings and specifications as directed by the general contractor
- F. Provide all reports as directed by the general contractor.
- G. Schedule inspections as required by the authority having jurisdiction

1.4 SUBMITTALS

- A. Equipment cut sheets, product data, and shop drawings of all items shall be submitted as specified unless equal or greater substitution is approved following ALTERANTE MATERIALS procedure in section below.

1.5 POOL AS-BUILT DOCUMENTS

- A. The as-built information shall be combined with the construction documents to provide a complete set of final record documents. The contractor shall have sole responsibility to provide a complete set of as-built documents to be included in the project closeouts. All changes or modifications to be included. provide photos, sketches, and product data. Provide the owner and architect one hard copy and a .pdf electronic document.

1.6 ATTIC STOCK

- A. Material to be left with the owner for future repair purposes shall include 3% of the ordered amount of tile, caulk, backer rod, grout, mortar mix, coping, and gutter grating pieces.

1.7 START UP AND TRAINING

- A. The pool contractor shall provide all the necessary chemicals, labor and materials to bring the pool water chemistry into compliance with all state and local regulations. Beginning at the initial fill-up the pool contractor shall ensure the water chemistry meets the requirements for the pH Saturation Index (+/- 0.3) for balancing pool water. The pH of Saturation shall be maintained until after the pool has been turned over to the owner.

- B. Accurate operational records and water chemistry levels per local or state health code requirements and/or per owner shall be kept including, but not limited to, the following:

- a. Chemical testing of the pool water to maintain proper levels of halogens, pH, total alkalinity and total hardness
- b. Automatic feed controller readings
- c. Vacuum and Pressure readings for pumps and filters
- d. Water level controller readings as to timer settings and position of the high and low water probe from the top of the plate support
- e. Flow rate for all systems
- f. Heater or cooler settings
- g. Water temperature and heater thermostat setting
- h. Execute the required documents.

- C. **PROTECTING THE INSTALLED CONSTRUCTION:** The pool contractor shall be responsible for operating the pools until a certificate of occupancy is issued and all startup, initial training and close out submittal requirements have been met. The pool contractor shall coordinate the time and day for the required owner training. The pool contractor shall train the owner using and maintaining all components of the swimming pool. Notes from the training shall be documented at the facility including an owner sign off stating that the training has occurred and has posted operating instructions and understands the instructions provided.

1.6 WARRANTY AND GUARANTEE

- A. The Contractor shall furnish an extended one-year guarantee covering the pool structure, interior permanent pool finish, and all pool recirculating piping or as stated in the following detailed specification sections below.
- B. The guarantee shall specifically include the following:

1. 100% repair of any defective materials, structural failures or other damages to the filter face piping and filter chamber not caused by deliberate or abusive action by persons not employed by the Contractor or attributable to normal wear and usage.
 2. Filters will perform in complete accordance with the specifications.
 3. 100% repair of the pool structure covering any defects, cracks, and/or leaking in the pool shell caused by defective workmanship or materials.
 4. 100% repair of any failure to the "plaster" pool finishes and ceramic tile due to defective workmanship or materials within 3 years of substantial completion.
- C. Correct defective Work within a one year period after Date of Substantial Completion. Provide one year manufacturer warranty for the new portion of the installation against defects due to faulty materials, faulty workmanship or failure due to negligence of the Contractor. This warranty shall exclude undisturbed structure and pool equipment. This warranty shall exclude normal wear and tear, maintenance, lubrication, replacement of expendable components or abuse. The warranty period shall begin on the date of the final acceptance and shall continue for a period of 12 months during which time the Contractor shall make good such defective workmanship and materials and any damage resulting there from, within a reasonable time of notice given by the Owner. Equipment warranties shall be provided in the submittal data prior to installation and shall be included in this work and the standard warranty duration listed within these specifications or honored by the manufacturer. Product warranties shall be transferred to the owner. The plaster shall remain attached to the subsurface for three years from the date of substantial completion of the pool providing that the pool is emptied and filled under the supervision of the installing contractor. If the plaster surface does release from the subsurface then the contractor shall repair that area at no additional cost of materials or labor. The cost of the water and the necessary chemicals to bring the water back into balance is the responsibility of the contractor. Provide completed manufacturer's 5 Year Limited Warranty to commercial pool owner. Warranty must state products, colors, and production batch numbers for all quartz plaster products used on job in order to be accepted as valid. A copy of the warranty shall be included in the close out submittal.

1.7 ALTERNATE MATERIALS

- A. A level of quality has been established by the selection of specific manufacturers' model numbers for the various equipment and materials for this work. Equal equipment and materials by other manufacturers and supplies are acceptable providing the equipment and materials meet or exceed the specifications. Cut sheets for any variances to be submitted with the bid. The cut sheet shall include necessary description of the equipment, product or materials. Substitution of any materials or equipment specified under this division shall be in accordance with the General Conditions. Brand names used in this section are to establish a standard. Swimming pool equipment which will perform substantially the same as the specified design will be considered equally acceptable provided the material or equipment so proposed is, in the opinion of the Designer and Owner, of equal substance and function.

1.8 MANUFACTURER'S DIRECTIONS

- A. The contractor shall provide services of a competent and experienced representative for a period of at least 3 days to inspect and test the completed installation, place in operation and give operating instructions relative to care and use. During the installation of the equipment he shall give adequate assistance and help for proper installation.
- B. Upon completion and acceptance of all work under this section, the Contractor shall furnish to the Owner three complete copies of Operating and Maintenance Instructions for all items of equipment which normally require instructions prior to operation and/or periodic maintenance. A typed or lettered sheet of instructions, embracing the operating functions and recurring maintenance processes involved in connection with the complete filtration and chemical treatment system and

manufacturer's literature embracing the characteristics, care and operation of the special items of equipment, such as chemical feeders, pumps, motors, etc.

- C. A data plate shall be attached to the filter plant, containing the following information (minimum):
 - 1. Manufacturer's Name and Address
 - 2. Filter Model Number
 - 3. Filter Serial Number
 - 4. Effective Filter Area in Square Feet
 - 5. Design Flow Rate for Filtration and Backwash in USGPM
 - 6. Maximum Working Pressure

- D. A data plate shall be attached to the face of the swimming pool control center, containing the following information:
 - 1. Start Up Data
 - 2. Operating Data
 - 3. Chemical and Temperature Ranges
 - 4. Shut-Off Data
 - 5. Other Pertinent Data concerning System Operation

- E. Layout of work shall be accomplished in accordance with the provision of the General Conditions. The Contractor and equipment manufacturer shall provide all sleeve diagrams and templates necessary for coordinating and construction of all work of this section and related work.

1.9 ASSEMBLY AND INSTALLATION

- A. The Contractor shall coordinate, assemble, and/or install the complete system of filtration equipment, overflow gutter, and recirculation system, including pumps, motors, special parts and accessories, as shown on the drawings and in accordance with the intent of these specifications and the detailed layouts and shop drawings of the equipment supplier.

- B. The Contractor shall provide all the necessary water piping and drainage work necessary to complete the job. The drawings indicate in diagrammatic form the desired arrangement of the principal apparatus, piping and equipment and shall be followed by the equipment supplier and the Contractor as closely as practicable, exercising care in the work to secure proper headroom access, and space conditions, with a neat and workmanlike arrangement of piping and valving.

- C. Contractor shall seal all penetrations, all walls and floors where pool piping enters and exits with approved sealant.

- D. In addition to the material hereinafter indicated to be furnished by the equipment supplier, the Contractor shall furnish all other material and parts necessary to complete the installations, including pipe, fittings, and certain special items such as the reducing tees to receive the chemical feeders, plastic injection nozzles, and the copper tubing, adapters, etc., as shown on the drawings or required for operation.

- E. The contractor shall install gutter system for the pool so that pool water level shall not be lower than the lip of the gutter when pool is not occupied.

- F. The equipment supplier shall attach valve tags to conform to the numbered valve schedule and shall mount the instruction panel as directed.

- G. Special Precaution: For the installation of the flow meter sensor, allow a straight run of pipe on the upstream side equal in length to 10 times the inside diameter of the pipe or as recommended by the manufacturer.

1.10 EXCAVATION AND GRADING

- A. The rough excavation and hand trim shall be carried on as one operation to aid in eliminating over excavation. In order to obtain an even wall line, templates shall be used. The floor area shall be fine graded by placing of screeds at intervals.
- B. As the pool is excavated, all excavated materials shall be disposed of as directed by the General Contractor.
- C. Porous fill shall be installed under pool floor to a minimum thickness of 6" (12" at drains) or as specified in drawings.
- D. Porous fill shall be free draining limestone or river gravel meeting ASTM C33 size number 57. All porous fill shall be tamped in place for consolidation and compaction.
- E. Contractor shall take note of main drain installation and hydrostatic relief devices.
- F. Before completion of the pool excavation, the beam at the top of the pool wall, which is a monolithic portion of the pool shell, shall be formed to the dimensions shown on the drawings. A header shall be installed completely around the pool, the inside face of which shall be anchored in place by 2 x 4 or 2 x 6 braces. A taut cutting line shall be so anchored to ensure the dimensional integrity of the pool structure. The purpose of this wire is to act as a cutting line for the interior face of the shotcrete wall.

1.11 PLACE FITTINGS

- A. The Contractor shall place, before concrete work, all special pool fittings that are to be embedded in concrete and shall be responsible for their correct positioning and grounding as needed.

1.12 GROUNDING

- A. The Pool contractor shall ground all pool reinforcing steel, pumps and motors, lighting and all deck equipment and anchoring according to all electrical standards pertinent to swimming pool installations. The contractor shall adhere to the National Electrical Code for swimming pool grounding. Provide a 15' minimum #4 solid copper pigtail at six locations around the pool for connection by others.

PART 2 PRODUCTS

2.1 CONCRETE POOL STRUCTURE

- A. This work includes swimming pools, aprons, and other related items necessary to complete the project indicated by contract documents unless specifically excluded.
- B. The swimming pool will be constructed by using steel reinforcement cast-in-place concrete or shotcrete floors and walls. Comply with Section 03 3000 (Cast-in place Concrete) for all cast-in-place concrete and shotcrete as specified in this division. Ratio of the shotcrete concrete and mix design for the concrete and water cement ratios shall be submitted to the Owner for approval before commencing any work. (Shotcrete walls of same strength will be acceptable with prior approval.)

C. Materials:

A. STEEL REINFORCING BARS

1. Steel reinforcing bars shall be in the sizes and configuration shown on the applicable sections of the Drawings. Space shall be provided for splicing bars in an approved manner
2. All steel reinforcing bars and associated materials shall be Grade 60 bars and shall be new, free of rust and scale, and satisfy the applicable standards specified in Section 1.8(E), "Applicable Industry Standards".

B. CONCRETE

1. Spray applied or air placed concrete may be "Shotcrete" as specified in Section 2.5.
2. The terms "Shotcrete" and "Gunitite" as used in this Specification (and the applicable ACI Publications) are defined as follows:
3. Gunitite (or "Shotcrete - dry method"), as herein specified, is a trade name used to designate a mixture of Portland cement and thoroughly dried sand, passed through a cement gun and conveyed by air through a flexible hose, hydrated at the nozzle at the end of the hose and deposited by air pressure in its place of final repose. The method of mix may be factory blended, delivered, and stored at the site in a weathertite tanker truck, or site mixed using caution in the preparation of said mix to insure the quality of the final product.
4. Gunitite is not allowed on this project unless this Engineer provides specific written approval.
5. Shotcrete ("Shotcrete - wet method"), as herein specified, is a trade name used to designate ready-mixed concrete that is pneumatically and mechanically applied by the use of a concrete pump and mixed with air at the nozzle located at the applicator's end of a hose. The Shotcrete cement/sand mixture must have a minimum 4,000 psi [27,579 kPa] mix-design. Note that "near-zero" porosity is vital in the mix design. A water / cement ratio can be no greater than 0.45, is hereby mandatory, shall be observed in the mix design for the pool structure, and be verified by the concrete delivery tickets.

D. Curing:

1. Concrete shall be kept wet for at least 7 days after placing. No Concrete may be placed when the temperature is below 40 degrees F. without approval of the Architect. Concrete shall not be placed against frosted surfaces.

E. Tests:

1. Cast in Place Concrete:
 - a. A minimum of four test cylinders shall be taken each day for each 50 cubic yards or fraction thereof unless otherwise directed by the Architect. The test cylinders shall be typical of the quality of the concrete placed in the structure.
 - b. Separate test cylinders shall be taken at the same place and time. Compressive strength tests shall be made at the age of 7 days and 28 days. One cylinder shall be broken at 7 days and two cylinders shall be broken at 28 days. One cylinder shall be made and held in reserve should additional tests be necessary. The cylinders tested at 7 days shall develop a minimum compressive strength of 3,000 psi and at the age of 28 days, 4,000 psi.

F. Shell Preparation For Finishes:

1. Concrete pool shall be free from cracks, honeycombing, spalls or other defects.

2. Cut back all tie wire to not less than one inch (1") below surface and fill holes with neat cement.
3. Finish of surface to receive tile and plaster to be a medium rough bush hammer to pointer surface.
4. Surface to be true to plane, plumb, and level with true radii and curves.

G. Ceramic Tile:

1. **Materials:**

- a. **Tile:** Standard grade, frostproof, cushion edge, dust pressed white non-vitreous body, machine made, self spacing, bright glazed tile, 6"x6" as shown in drawings. Colors and patterns shall be as selected by the Architect/Owner. Tile indicated to be placed on horizontal surfaces shall have a slip resistant finish.
- b. **Portland Cement:** ASTM C-150 Type I.
- c. **Sand:** ASTM C-144.
- d. **Lime:** ASTM C-205 Type S or ASTM C-207 Type S.
- e. **Water:** Potable.
- f. **Metal Lath:** Diamond mesh, galvanized steel weighing 340# per square yard.

2. **Installation of Other Tile:** Apply with mortar bed consisting of one (1) part Portland Cement, 1/2 part lime and four (4) parts dry sand. Apply tile with bond coat of Portland Cement paste.
3. **Grouting:** Mix one part Portland Cement and one part 30 mesh sand by volume. Force grout into joints, avoiding air traps and voids. Tool joints slightly concave. Cut off excess mortar and wipe from face of tile.
4. **Curing:** Immediately after grouting has had its initial set, give wall surface protective coat of non-corrosive soap or protect by other approved method and damp cure joints for 72 hours.

H. Interior Finish:

1. **Materials:** White plaster specially formulated for interior swimming pool surfaces; equal to "Diamond Brite" Exposed Aggregate Finish by Southern Grouts & Mortars, Inc. Submit samples for owner and architect selection prior to ordering materials.
2. **Preparation of Surfaces:** Clean base surfaces of projections, dust loose particles, grease, bond breakers and foreign matter; make sufficiently rough to provide a strong mechanical bond. Sandblast if required to provide proper bonding. Do not apply plaster directly to the surfaces of masonry or concrete that are coated with any membrane-forming curing compound or similar agent until compound or agent is completely removed by sandblasting. Prior to plastering thoroughly wash entire surface with 200 psi high pressure water. Wet cementitious base surfaces with a fine fog water spray to produce a uniformly moist condition and check screeds, pool equipment, and accessories for correct alignment before plastering is started. Do not apply plaster to base surfaces containing frost. Install

temporary coverings as required to protect adjoining surfaces from staining or damage by plastering operations.

3. Workmanship: Apply finish plaster in two coats by "double back" method with second coat applied as soon as first coat is tamped and initially floated. Apply plaster with sufficient pressure to provide a good bond on bases. Work plaster to screeds at intervals of from 5 feet to 8 feet, or closer as required on curved surfaces. Finish plaster to tolerance of -0 to +1/8 inch in thickness and to 1/8 inch in 10 feet on straight surfaces. Apply smooth trowel finish without waves, cracks, trowel marks, ridges, pits, crazing, discoloration, projections, or other imperfections. Form plaster carefully around curves and angles, well up to screeds. Take special care to prevent sagging and consequent drooping of applications. Produce surfaces free of visible junction marks in finish coat where one day's work adjoins another.
4. Curing: Cure plaster with fine fog water spray applied to finish coat as frequently as required to prevent dry-out of plaster. Keep plaster damp until pool is filled. Prevent damage or staining of plaster by troweling or curing.
5. Plaster shall not be applied until the deck areas are completely poured and finished, until all painting of ceiling and/or walls and fixtures is completed and all hanging of ceiling and wall fixtures is completed. The plastering phase of the pool shall be conducted as one part of the final phase of the project to avoid the possibility of stains due to dust, nails, etc.

PART 3. POOL PIPING, EQUIPMENT AND ACCESSORIES

3.1 GENERAL

- A. Scope: Furnish all plans, labor, equipment, applications, and materials and perform all operations in connection with the installation of all pool piping, equipment, and accessories.
- B. All work in connection with the pool shall be subject to all requirements of the General Conditions. All work shall be done in a neat, workmanlike arrangement with ample headroom and operating space. If other equipment is approved as being equal to that specified, the Contractor shall be responsible for the physical size and arrangement of the other equipment so that it will fit in the allotted space. Enlarging the spaces and/or relocation of the equipment will be at the expense of the Contractor without cost to the Owner. All equipment and materials shall be new, shall be essentially the standard product of the manufacturer and shall be installed in accordance with the recommendation of the manufacturer.
- C. Coordination
 1. The Contractor shall coordinate his work with that of other trades and shall install his work in accordance with the General Contractor's erection schedule.
 2. The successful Bidder shall furnish to the designer within 20 days after signing the contract, five (5) complete sets of shop drawings of all equipment, fittings, and accessories including installation details. Approval of shop drawings shall denote only approval of general characteristics and shall not be construed to mean approval of hydraulics or mechanical characteristics. Final approval will not be given until all work is installed and found to meet the requirements of the specifications.

3.2 MATERIAL AND INSTALLATION

- A. Pool Piping and Fittings for circulation, vacuum, skimming, main drain and filter room piping, unless otherwise noted, shall be solvent weld Schedule 40 PVC plastic pipe. All weights, outside diameter and inside diameter dimensions shall be in accordance with specifications approved by the Plastic Pipe Institute. All pipe shall bear the NSF seal of approval.
- B. All piping shall be pressure tested prior to concrete being poured.
- C. Valves: Circulation system valves located above ground in the filter building shall be wafer valves or gate valves of appropriate size. Valves located underground shall be all bronze and each valve shall be provided with a cast iron valve box. Valves for the pool fill lines, new and old, located above ground shall be iron body bronze mounted wheel operated.
- D. Main Drains shall be installed per the drawings.
- E. Main Drain Sump, frame, and grate, shall meet the dimensions per the drawings.
- E. Hydrostatic relief valve shall be 2" as shown on drawings and as manufactured Hayward SP-1057. Collection Tube shall be Hayward SP-1055.
- F. Automatic Water Level Controller: Water Level Controller shall be an integral part of the collector tank. Pool contractor shall be responsible for fresh water line from filter equipment room to water level controller as well as all necessary valves, valve deck boxes and valve handles.
- G. Pipe work shown on the drawings and/or specifications or implied herein and required for a complete and operating system shall be done by experienced plumbers in a neat and workmanlike manner and subject to the approval of the Consultant. Because of the small scale of the drawings, it is not possible to indicate all offsets, fittings and accessories which may be required and it shall be the responsibility of the Contractor to furnish and install all materials and equipment required for the operating systems. The piping shall be installed as shown on the plans with strict conformity to the sizes listed and due provisions for expansion and contraction. Vacuuming operations. Draining the pool of water. Operation of kill switch. All controls and interconnections. Pool chemicals for initial pool startup. Storage of the pool if seasonal.

3.3 PIPING IDENTIFICATION

- 1. Main color bands shall be painted on each pipeline. Approved pressure sensitive tape may be acceptable – submit for approval in accordance with the Specifications.
- 2. Main color bands shall be 3 in. [75 mm] wide and shall be placed at 10 ft [3 m] intervals along all pipe runs, immediately preceding the passage of the line through a wall, ceiling, or floor, and at each equipment connection or line valve.
- 3. Adjacent to each color band, an abbreviation of the name of the pipe / valve function shall be stenciled / placed.
- 4. Stencil letters shall be 0.5 in. [13 mm] high uppercase, applied with black Effecto Enamel, or approved pressure sensitive tape.

3.3 PERIMETER RECIRCULATION SYSTEM

- A. The method of water recirculation specified and shown on the detailed drawings is intended as the basis for receiving bids.
- B. It is not the intent of the specifications to in any way limit competition or restrict the bidder in the preparation of his bid. Each bidder shall submit prior to or with their bid, a full equipment list of all items he intends to supply, showing filter tank, gutter system, automatic features and other pertinent data as outlined in the specification.

3.4 GUTTER SYSTEM

- A. Work Included: System per the drawings, Installed, finished product for required Deck-level water surface swimming pool construction, covering integral Surge Trench into which pool recirculating water and deck runoff flow.
- B. Products: Approved manufacturer: Products shall provide a minimum 5 year fully rated warranty.

- C. Installation: Determine levelness of walls to provide level perimeter gutter system with 1/8" or a tolerance of 1/16" variance from true level.

3.6 FILTRATION EQUIPMENT

A. General

- 1. It is the intent of these specifications to describe a filtering unit complete with all accessory items. It is the further intent of these specifications that the filter, from pump strainer to the backwash and filter control valves as hereinafter specified with all accessories, be supplied as a complete filtering unit and guaranteed by one manufacturer.

B. Filters

- 1. Filtration System specified shall be a dual tank system. All tanks shall be of the pressure, high rate sand type with a minimum total square footage as noted. The manufacturer shall be as noted below. The filter shall be the product of a manufacturer regularly engaged in the fabrication of water filtration equipment and shall have a minimum of 5 years experience in this field. The filter shall be approved by the National Sanitation Foundation Testing Laboratory and the local Health Department.
- 3. Pool Filter Tank: Per drawings
- 4. Filter tanks shall pass a hydrostatic pressure test of 80 PSIG (777kPa), and shall comply with all governing Pressure Vessel Code requirements. All hydrostatic pressure tests must be verified at the place of manufacture by a Professional Engineer and must be accompanied by a certificate to that effect signed by such a professional engineer.
- 5. An integrally mounted combination media dump port and drain complete with an ABS media retainer shall be located in the filter tank(s) body.
- 6. Influent and effluent connections shall be integrally molded. A continuous, water tight exterior seal at the influent and effluent ports of the filter tank shall be provided with the use of integrally molded flanged connections on the influent and effluent distribution connections. Support brackets shall be provided for the upper distribution and lower collection headers on the interior of the dished head opposite to the influent and effluent flanged connections.
- 7. Filter tanks shall be tested in compliance to ANSI/NSF Sanitation Standard 50-1992 by a government certified and recognized testing agency. Filters shall have passed all applicable tests outlined in this standard and shall bear a label complete with registration number to confirm compliance. Filters lacking accreditation of compliance to this standard will not be considered equal and shall not be acceptable.
- 8. Internal Distribution/Collection System
 - a. Internal filter tank equipment shall include an upper distribution system and a lower collection system, hydraulically balanced to prevent turbulence and/or displacement of the filter media during service operation or backwash. Standard pipe arrangements or an internal valving system will not be acceptable.
 - b. The upper distribution system include hydraulic distribution lenses, injection molded ABS plastic, located over the filter bed. They shall be joined to the influent connection by means of a 4" Schedule 80 PVC header, 1 1/4" nipples and elbows.

- c. The lower collection system shall consist of a 4" Schedule 80, PVC header and 1 ½" molded ABS plastic laterals designed to retain filter media with a minimum head loss. The internal collection system shall be designed to promote media bed circulation during backwash.
9. External face piping shall be 4" Schedule 80 PVC pipe and fittings. Flanges shall be located so as to allow for easy dismantling of face piping. All fittings shall be solvent cemented and joint welded by suitable heat gun using 5/32" PVC welding rod.
10. Piping shall be drilled and tapped where necessary to accommodate gauge tubing connectors.
11. Valves shall be a single multi-port type for each filter. Multi-port valves with six (6) positions, Filter, Backwash, Waste, Rinse (filter-to-waste), closed and Recirculate. All valves shall be provided with ten position latch lock handle for manual operation. All bolts and nuts shall be corrosion resilient zinc plated steel with plated washers to be used when secured to PVC flanges.
12. Standard accessory items shall include 1 1/2" bronze sight glass with "Pyrex" glass, remote mounted gauge panel with two 4" diameter pressure gauges scaled from 0-60 P.S.I.G. The pressure gauges shall be connected to influent and effluent pressure points with air relief cocks, compression fittings and semi rigid PVC tubing.
13. Air Release: An air release system shall be provided for the tank.
14. Filter Media: Tank shall be supplied with filter media of uniformly graded silica sand and shall clean and free from any clay or limestone. The media shall be #20, effective size range 0.45-0.55 mm with a uniformity coefficient of 1.6 maximum. The filter will require a filter bed depth which shall extend to an approximate level of 12" below the top of the hydraulic distribution lenses.

3.7 PUMPS AND ACCESSORIES

- A. Circulating Pump and Motor: Per drawings
- B. Pump Strainer: There shall be supplied one integral pump strainer with quick removable cover plate, gasket, and yolk bolts. The basket shall be perforated and its open area shall exceed the pipe size. Pump strainer shall be of size to match suction piping with a spare basket.
- C. Pump starter motors shall be provided with an auxiliary contact which will energize a duplex receptical to prevent the chemical feeder from operating when the pump is off. Pool Contractor shall provide the duplex outlet and a separate 20 amp circuit to the equipment room electrical panel.
- E. Guarantee: The filter manufacturer shall guarantee, in writing, that if the filter supplied is operated in accordance with written instructions given and accepted by the Owner, it will perform in complete accord with specifications and all requirements of local and State Health Departments.
- F. Flow Meter Indicator: There shall be supplied one pitot tube type flow meter designed specifically for swimming pools. Indicator shall be calibrated to read required flow of filter. Install in line flowing clean, filtered water.

3.8 SWIMMING POOL SANITIZING EQUIPMENT

- A. General

1. Equipment shall be furnished in accordance with the list of equipment. In each case, manufacturer's full catalog specifications shall apply and installation shall be in strict accordance with the manufacturer's recommendations and approved shop drawings.

B. Equipment

1. Chemical Testing Kit shall have the following features: DPD type testing procedure for chlorine reading, PH reading, test for total alkalinity, acid/base demand, cyanuric acid test as manufactured by Taylor (Model 2006-Salt) or equal.
 2. Automated chemical control shall be provided with the specified system to function with the sanitation and pH control equipment provided.
 3. Liquid fed chlorinators shall be installed according to manufacturer's instructions. Chlorinators shall be equipped with flow meter and all other items necessary for a complete installation.
 4. Salt/Chlorine generator shall be provided as the main sanitizer for the pool. Owner training and chemical control automation setup shall be provided by the pool contractor and equipment manufacturers.
3. Chemical Feeder: Furnish one Stenner Chemical Feeder Model No. 45M5 or equal for each pool or as noted on drawings. The chemical feeder shall be electrically interlocked with the filter pump such that no chemicals will be fed when the filter pump is off. The unit shall be capable of feeding 50 gallons of water treatment solution per day. There shall be one 50 gallon crock furnished.

3.9 SWIMMING POOL DECK EQUIPMENT

- A. Ladders: Provide 4, 3-tread stainless steel, cross braced ladders and 2, 4-tread stainless steel, cross braced ladders for the competition pool. Tubes shall be 1.900" x 0.065" and steps shall be stainless steel with a deeply formed non-skid surface. Ladders shall be custom fabricated by S.R. Smith or approved equal.
- B. Handrail; 2 required: Handrail shall be 1.900" x 0.065" stainless steel tube and shall have verticals equally spaced at a maximum of 6'-0" on center.
- C. Anchor Sockets, 26 required: Sockets shall be Frost #A-41653 or equal. The body shall be of cast bronze 4 1/4" and be made to receive a 1.900" O.D. tubing. Two longitudinal ridges shall run the full depth of the inside diameter to prevent sideways. The locking wedge shall be bronze and bolt shall be 18-8 stainless steel.
- D. Escutcheon Plates, 26 required: Escutcheon plates shall be Frost #A-41663 or equal. It shall be Deluxe stainless Steel and it shall slip over 1.900" O.D. tubing.
- E. Lifeguard Chairs, 1 required: Lifeguard Chairs shall be KDI Paragon ParaFlyte Club #21001, or equal. The Chairs shall provide a molded plastic swivel seat above the deck and have a stainless steel, sloping support. Each chair shall be mounted upon a platform of laminated hardwood which is coated with polyester resin and be impregnated with a grit to provide a non-skid surface. The platform shall be reached by a 20" wide sloping ladder at the rear of each chair. The framework of the chairs shall be rigidly bolted and shall be fabricated of stainless steel tubing, 1.900" O.D. x .049 wall thickness, Type 304, polished to a 320 grit. The steps shall be injection- molded Cyclicolac, 20" long x 5" wide, with raised, nonskid, pattern.

- F. Handicap Lift Anchor, 1 required: Pool Lift Anchor shall match the provided lift as noted in the equipment list. Locate as noted on the pool plan. The lift anchor shall have a flush fitting plug.
- G. Starting Platform Anchors, 8 required: Standard Starting Platform anchors shall be a single socket for each platform. This socket shall be of cast bronze and shall be furnished with a closure plate. The sockets shall be furnished and installed by the Pool Contractor. Coordinate with the Owner for the exact platform model required.
- H. Racing Lane Dividers Anchors, 9 required: Integral anchor by Kenematics.
- ~~I. Safety Line, 1 required: One safety line shall be installed as noted in the drawings. Safety line shall be 3/4", made from color safe, strong, floating polypropylene. As manufactured by Rainbow or equal. Floats shall be self locking 5" x 9", non fading polyethylene floats, as manufactured by Rainbow or equal at 5' 0" on center maximum.~~
- K. Stanchion Posts Anchors, six (6) required: Provide two (2) anchors for the false start stanchions and four (4) for the back-stroke line stanchions.

3.10 CLEANING AND MAINTENANCE EQUIPMENT

- A. All vacuuming for the competition pool shall be remotely.
- B. Vacuum: provide portable cleaning system.
- C. Vacuum cleaner head shall be Rainbow Model 207 or equal.
- D. Vacuum Hose and Handle hose shall be 50' in length 2 inch inside diameter, of smooth bore, wire reinforced, white, complete with clamps. Handles shall be fabricated of seamless aluminum tubing, with screw joints Frost No. A-41426 and A- 41428 at one end and shall consist of two Rainbow 820 12 feet.
- E. Leaf Skimmer head shall have a nonferrous handle bracket with high plastic rim which holds a plastic net. The handle bracket shall have a quick detachable mount for use with standard 1 1/4 inch diameter cleaning tool handles. Standard net shall have a minimum 3 inch depth. Skimmer shall be Rainbow 126 or equal.
- F. Telescopic Handle: Provide one telescopic handle consisting of two 8 foot lengths of anodized aluminum tubing, a 1 inch tube fitting inside a 1 1/4 inch tube. Handle shall be adjustable from 8 feet to approximately 16 feet having a threaded bushing type clamp to lock handle at desired position. The attachment shall have a quick disconnect arrangement which will attach to the cleaning tools. Handle shall be Rainbow 812-16 or equal.
- G. Pool Brush: Provide one pool brush, 18 inch curved type. Handle bracket shall be quick detachable mount to fit standard 1 1/4 inch diameter handles. Brush shall be Rainbow 920 or equal.

3.11 SAFETY EQUIPMENT

- A. All safety equipment shall be sized and shall conform to the local health department code.
- B. Two (2) 20" ring buoys with 60' of 1/4" rope shall be provided by the Owner.
- C. Shepherd's Crook with 16' pole, Rainbow 10138 or equal. Two (2) shall be provided.

- D. Signage: All signage shall be to conform to the local health department code. Coordinate sign rules with drawings and owner requirements. Two signs minimum required (min. 1" high letters) containing at least the following (See drawings for additional sign requirements):
1. NO GLASS OR BREAKABLE CONTAINERS
 2. ADULT SUPERVISION REQUIRED FOR CHILDREN
 3. NO SOLO SWIMMING
 4. NO RUNNING
 5. NO ROUGH PLAY
 6. NO SHARP ITEMS

3.12 POOL MARKINGS AS FOLLOWS:

- A. Depth markings must be placed within the pool gutter and on the deck per the swimming pool code, no greater than 25' apart with numerals minimum 4" in height. Color shall be contrasting with background. Deck depth markers shall be ceramic tile.
- B. "NO DIVING" shall be painted (stenciled) on the deck a minimum of four places on each side of the length and three places at each end, minimum of 6" high letters for both pools.

PART 4. EXECUTION

4.1 INSTALLATION

- A. Install equipment, accessories and fittings in accordance with manufacturer's instructions.
- B. Install piping to conserve building space, not to interfere with use of space and other work. Route piping in orderly manner, and maintain gradient. Group whenever practical at common elevations.
- C. Install piping to allow for expansion and contraction with stressing pipe, joints, or connected equipment. Provide access to valves and fittings.
- D. Pipe relief valve outlet to nearest floor drain and backwash to the backwash pit. Install unions downstream of valves and at equipment or apparatus connections.
- D. Prior to decks being poured, the indoor pool and outdoor pool must be thoroughly cleaned and filled with water. The pool system shall be placed in circulation and all lines tested for leaks. Pools shall be run a minimum of three days and monitored. All leaks must be repaired prior to decks being poured and final plaster applied.

END OF SECTION

SECTION 23 0700

VARIABLE REFRIGERANT FLOW ZONING SYSTEM

PART 1 – GENERAL

1.1 SYSTEM DESCRIPTION

- A. The Basis of Design manufacturer for the variable capacity, heat pump heat recovery air conditioning system shall be a Trane/Mitsubishi CITY MULTI VRFZ (Variable Refrigerant Flow Zoning) System. The Trane/Mitsubishi CITY MULTI VRFZ systems shall be the R2-Series (simultaneous cooling and heating) split system heat pump and the Y-Series (cool/heat) split system heat pump. Trane models, systems, and equipment equivalent to the Mitsubishi models, system, and equipment named in this specification section are considered equal/same. Other acceptable manufacturers are: Sanyo, LG – subject to Engineer review of submittal to verify equivalent system performance characteristics.
- B. The R2-Series system shall consist of a PURY outdoor unit, BC (Branch Circuit) Controller(s) (Single, Main, or Main with Sub(s), multiple indoor units (-E models), and M-NET DDC (Direct Digital Controls). The PURY outdoor unit shall be a vertical discharge, 208/230 of 460 volt, three phase unit. Each indoor unit or group of indoor units shall be independently controlled.

1.2 QUALITY ASSURANCE

- A. The units shall be listed by Electrical Laboratories (ETL) and bear the ETL label.
- B. All wiring shall be in accordance with the National Electrical Code (N.E.C.).
- C. The units shall be manufactured in a facility registered to ISO 9001 and ISO14001 which is a set of standards applying to environmental protection set by the International Standard Organization (ISO).
- D. A full charge of R-410A for the condensing unit only shall be provided in the condensing unit.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Unit shall be stored and handled according to the manufacturer's recommendation.

1.4 WARRANTY

- A. The units shall be covered by the manufacturer's limited warranty for a period of one (1) year from date of installation.
 - 1. Warranty shall include parts and labor.
 - 2. In addition the compressor shall have a manufacturer's limited warranty for a period of six (6) years from date of installation.
- B. The system shall be installed by a manufacturer's authorized trained and certified dealer. Mandatory contractor service and installation training should be performed by the manufacturer.

PART 2 – PRODUCTS

2.1 R2-SERIES OUTDOOR UNIT

- A. Manufacturers:
 - 1. Trane/Mitsubishi
 - 2. Daikin
 - 3. LG
 - 4. Fujitsu
 - 5. Carrier
- B. General:

The System shall consist of the PURY outdoor unit, Branch Circuit (BC) Controller, indoor units (-E models), and M-NET DDC (Direct Digital Controls). The PURY outdoor units shall be equipped with multiple circuit boards that interface to the M-NET controls system and shall perform all functions necessary for operation. The outdoor unit shall have a powder coated finish. The outdoor unit shall be completely factory assembled, piped and wired. Each unit shall be run tested at the factory.

- 1. The sum of connected capacity of all indoor air handlers shall range from 50% to 150% of outdoor rated capacity.
- 2. Outdoor unit shall have a sound rating no higher than 63 dB(A).

3. Both refrigerant lines from the outdoor unit to the BC (Branch Circuit) Controller (Single or Main) shall be insulated.
 4. The outdoor unit shall have an accumulator with refrigerant level sensors and controls.
 5. The outdoor unit shall have a high pressure safety switch, over-current protection and DC bus protection.
 6. The outdoor unit shall have the ability to operate with a maximum height difference of 164 feet and have total refrigerant tubing length of 984-1312 feet. The greatest length is not to exceed 492 feet between outdoor unit and the indoor units without the need for line size changes or traps.
 7. The outdoor unit shall be capable of operating in heating down to -4°F ambient temperature without additional low ambient controls.
 8. The outdoor unit shall have a high efficiency oil separator plus additional logic controls to ensure adequate oil volume in the compressor is maintained.
- C. Unit Cabinet:
1. The casing(s) shall be fabricated of galvanized steel, bonderized and finished with a powder coated baked enamel.
- D. Fan:
1. The outdoor units shall be furnished with direct drive, variable speed propeller type fans.
 2. All fan motors shall have inherent protection, have permanently lubricated bearings, and be completely variable speed.
 3. All fan motors shall be mounted for quiet operation.
 4. All fans shall be provided with a raised guard to prevent contact with moving parts.
 5. The outdoor unit shall have vertical discharge airflow.
- E. Refrigerant:
1. R410A refrigerant shall be required for outdoor unit systems.
- F. Coil:
1. The outdoor coil shall be of nonferrous construction with lanced or corrugated plate fins on copper tubing.
 2. The coil shall be protected with an integral metal guard.
 3. Refrigerant flow from the outdoor unit shall be controlled by means of an inverter driven compressor.
 4. The outdoor coil shall include 4 circuits with two position valves for each circuit, except for the last stage.
- G. Compressor:
1. The outdoor unit shall be equipped with one inverter driven scroll hermetic compressor and one scroll hermetic compressor. (If more than one compressor is required).
 2. A crankcase heater(s) shall be factory mounted on the compressor(s).
 3. The outdoor unit compressor shall have an inverter to modulate capacity. The capacity shall be completely variable down to 16% of rated capacity.
 4. The compressor will be equipped with an internal thermal overload.
 5. The compressor shall be mounted to avoid the transmission of vibration.
- H. Electrical:
1. The outdoor unit electrical power shall be 460 volts, 3 phase, 60 hertz.
 2. The outdoor unit shall be capable of satisfactory operation within voltage limits of 414-506 volts.
 3. The outdoor unit shall be controlled by integral microprocessors.
 4. The control circuit between the indoor units, BC Controller and the outdoor unit shall be 24VDC completed using a 2-conductor, twisted pair shielded cable to provide total integration of the system.

2.2 BRANCH CIRCUIT (BC) CONTROLLERS

A. General:

1. The BC (Branch Circuit) Controllers shall be specifically used with R410A R2-Series systems. These units shall be equipped with a circuit board that interfaces to the M-NET controls system and shall perform all functions necessary for operation. The unit shall have a galvanized steel finish. The BC Controller shall be completely factory assembled, piped and wired. Each unit shall be run tested at the factory. This unit shall be mounted indoors. The sum of connected capacity of all indoor air handlers shall range from 50% to 150% of rated capacity.

B. BC Unit Cabinet:

1. The casing shall be fabricated of galvanized steel.
 2. Each cabinet shall house a liquid-gas separator and multiple refrigeration control valves.
 3. The unit shall house two tube-in-tube heat exchangers.
- C. Refrigerant:
1. R410A refrigerant shall be required for BC Controllers in conjunction with outdoor unit systems.
- D. Refrigerant Valves:
1. The unit shall be furnished with multiple two position refrigerant valves.
 2. Each circuit shall have one (54,000 Btu/h or smaller indoor unit section) two-position liquid line valve and a two-position suction line valve.
 3. When connecting a 54,000 Btu/h or larger indoor unit section, two branch circuits shall be joined together at the branch controller to deliver an appropriate amount of refrigerant. The two refrigerant valves shall operate simultaneously.
 4. Linear electronic expansion valves shall be used to control the variable refrigerant flow.
- E. Integral Drain Pan:
1. An integral condensate pan and drain shall be provided.
- F. Electrical:
1. The unit electrical power shall be 208/230 volts, 1 phase, 60 hertz.
 2. The unit shall be capable of satisfactory operation within voltage limits of 187-228 volts (208V/60Hz) or 207-253V (230V/60Hz).
 3. The BC Controller shall be controlled by integral microprocessors.
 4. The control circuit between the indoor units and the outdoor unit shall be 24VDC completed using a 2-conductor, twisted pair shielded cable to provide total integration of the system.

2.3 (4-WAY CEILING-RECESSED CASSETTE WITH GRILLE) INDOOR UNIT

- A. General:
1. The PLFY shall be a four-way cassette style indoor unit that recesses into the ceiling with a ceiling grille and shall have a modulating linear expansion device. The PLFY shall be used with the R2-Series outdoor unit and BC Controller. The PLFY shall support individual control using M-NET DDC controllers.
- B. Indoor Unit.
1. The indoor unit shall be factory assembled, wired and run tested. Contained within the unit shall be all factory wiring, piping, electronic modulating linear expansion device, control circuit board and fan motor. The unit shall have a self-diagnostic function, 3-minute time delay mechanism, an auto restart function, an emergency operation function and a test run switch. Indoor unit and refrigerant pipes shall be charged with dehydrated air before shipment from the factory.
- C. Unit Cabinet:
1. The cabinet shall be space-saving ceiling-recessed cassette.
 2. The cabinet panel shall have provisions for a field installed filtered outside air intake.
 3. Branch ducting shall be allowed from cabinet.
 4. Four-way grille shall be fixed to bottom of cabinet allowing two, three or four-way blow.
- D. Fan:
1. The indoor fan shall be an assembly with a turbo fan direct driven by a single motor.
 2. The indoor fan shall be statically and dynamically balanced to run on a motor with permanently lubricated bearings.
 3. The indoor fan shall consist of four (4) speeds, Low, Mid1, Mid2, and High.
 4. The indoor unit shall have an adjustable air outlet system offering 4-way airflow, 3-way airflow, or 2-way airflow.
 5. The auto air swing vanes shall be capable of automatically swinging up and down for uniform air distribution.
- E. Filter:
1. Return air shall be filtered by means of a long-life washable permanent filter.
- F. Coil:
1. The indoor coil shall be of nonferrous construction with smooth plate fins on copper tubing.
 2. The tubing shall have inner grooves for high efficiency heat exchange.

3. All tube joints shall be brazed with phos-copper or silver alloy.
4. The coils shall be pressure tested at the factory.
5. A condensate pan and drain shall be provided under the coil.
6. The condensate lift mechanism shall be able to raise drain water 33 inches above the condensate pan.
7. Both refrigerant lines to the PLFY indoor units shall be insulated.

G. Electrical:

1. The unit electrical power shall be 208/230 volts, 1-phase, 60 hertz.
2. The system shall be capable of satisfactory operation within voltage limits of 187-228 volts (208V/60Hz) or 207-253 volts (230V/60Hz).

H. Controls:

1. This unit shall use controls provided by Mitsubishi Electric to perform functions necessary to operate the system. Please refer to Part 5 of this guide specification for details on controllers and other control options.

2.4 (ALTERNATE HIGH STATIC OPTION, CEILING-CONCEALED DUCTED) INDOOR UNIT

A. General:

1. The unit shall be a high-performance ceiling concealed ducted indoor fan coil that mounts above the ceiling with a fixed rear return and a horizontal discharge supply, and shall have a modulating linear expansion device. The unit shall be used with the R2-Series outdoor unit and BC Controller. The unit shall support individual control using M-NET DDC controllers. Unit shall feature external static pressure settings up to 0.80 in. WG (230 Volts).

B. Indoor Unit:

1. The indoor unit shall be factory assembled, wired and run tested. Contained within the unit shall be all factory wiring, piping, electronic modulating linear expansion device, control circuit board and fan motor. The unit shall have a self-diagnostic function, 3-minute time delay mechanism, and an auto restart function. Indoor unit and refrigerant pipes shall be charged with dehydrated air before shipment from the factory.

B. Unit Cabinet:

1. The cabinet shall be ceiling-concealed, ducted.
2. The cabinet panel shall have provisions for a field installed filtered outside air intake.

C. Fan:

1. The indoor unit fan shall be an assembly with one or two Sirocco fan(s) direct driven by a single motor.
2. The indoor fan shall be statically and dynamically balanced to run on a motor with permanently lubricated bearings.
3. The indoor fan shall consist of various speeds, as indicated in below table which are selectable by the room controller.
4. The indoor unit shall have a ducted air outlet system and ducted return air system.

D. Filter:

1. Return air shall be filtered by a field-supplied filter.
2. Rear return filter box with long-life filter shall be available for all indoor units.

E. Coil:

1. The indoor coil shall be of nonferrous construction with smooth plate fins on copper tubing.
2. The tubing shall have inner grooves for high efficiency heat exchange.
3. All tube joints shall be brazed with phos-copper or silver alloy.
4. The coils shall be pressure tested at the factory.
5. A condensate pan and drain shall be provided under the coil.
6. The condensate shall be gravity drained from the fan coil.
7. Both refrigerant lines to the indoor units shall be insulated.

F. Electrical:

1. The unit electrical power shall be 208/230 volts, 1-phase, 60 hertz.
2. The system shall be capable of satisfactory operation within voltage limits of 187-228 volts (208V/60Hz) or 207-253 volts (230V/60Hz).

G. Controls:

1. This unit shall use controls provided by manufacturer to perform functions necessary to operate the system. Please refer to Part 3 of this guide specification for details on controllers and other control options.

PART 3 – CONTROLS

3.1 OVERVIEW

A. General:

The CITY MULTI Controls Network (CMCN) shall be capable of supporting remote controllers, schedule timers, system controllers, centralized controllers, an integrated web based interface, graphical user workstation, and system integration to Building Management Systems via BACnet®.

3.2 ELECTRICAL CHARACTERISTICS

A. General:

The CMCN shall operate at 24VDC. Controller power and communications shall be via a common non-polar communications bus.

B. Wiring:

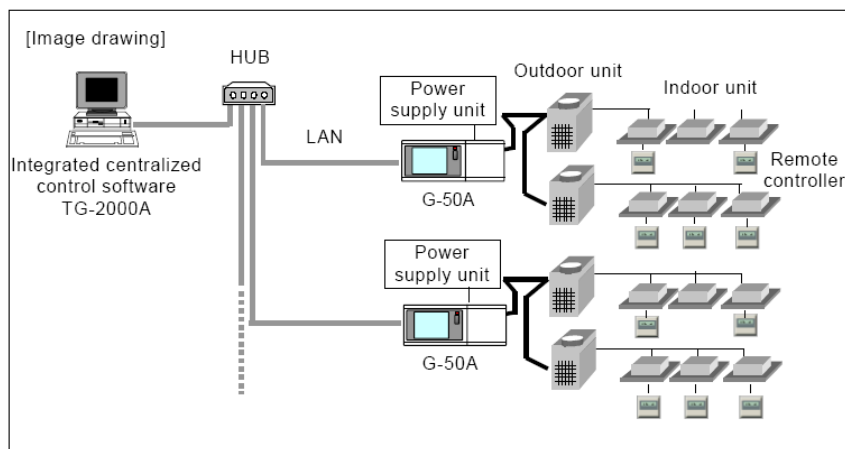
1. Control wiring shall be installed in a system daisy chain configuration from indoor unit to ME remote controller to indoor unit, to the BC controller (main and subs, if applicable) and to the outdoor unit. Control wiring to remote controllers shall be run from the indoor unit terminal block to the controller associated with that unit.
2. Control wiring for schedule timers, system controllers, and centralized controllers shall be installed in a daisy chain configuration from outdoor unit to outdoor unit, to system controllers, to the power supply.
3. Control wiring for the Deluxe MA, Simple MA, and Wireless MA remote controllers shall be from the remote controller to the first associated indoor unit (TB-15) then to the remaining associated indoor units (TB-15) in a daisy chain configuration.
4. The G-50A and GB-50A system controller shall be capable of being networked with other G-50A and GB-50A system controllers for web based control.

C. Wiring type:

1. Wiring shall be 2-conductor (16 AWG or 18 AWG), twisted shielded pair, stranded wire, as defined by the Design Tool AutoCAD output.

3.3 CONTROLS NETWORK

The Controls Network consists of remote controllers, schedule timers, system controllers, centralized controllers, and/or integrated web based interface communicating over a high-speed communication bus. The Controls Network shall support operation monitoring, scheduling, error email distribution, personal browsers, tenant billing, online maintenance support, and integration with Building Management Systems (BMS) using BACnet® interfaces. The below figure illustrates a sample CMCN System Configuration.



System Configuration

3.4 CMCN: REMOTE CONTROLLERS

- A. Deluxe MA Remote Controller (PAR-21MAA) or equivalent current model.

The Deluxe MA Remote Controller (PAR-21MAA) shall be capable of controlling up to 16 indoor units (defined as 1 group). The Deluxe MA Remote Controller shall be approximately 5” x 5” in size and white in color with a light-green LCD display. The PAR-21MAA shall support a selection from multiple languages (Spanish, German, Japanese, Chinese, English, Russian, Italian, or French) for display information. The Deluxe MA supports temperature display selection of Fahrenheit or Celsius. The Deluxe MA Remote Controller shall control the following grouped operations: On/Off, Operation Mode (cool, heat, auto (R2-Series only), dry, and fan), temperature set point, fan speed setting, and airflow direction setting. The Deluxe MA Remote Controller shall support timer settings of on/off/temperature up to 8 times in a day in 1-minute increments. The Deluxe MA Remote Controller shall support an Auto Off timer. The Deluxe MA Remote Controller shall be able to limit the set temperature range from the Deluxe MA. The room temperature shall be sensed at either the Deluxe MA Remote Controller or the Indoor Unit dependent on the indoor unit dipswitch setting. The Deluxe MA Remote Controller shall display a four-digit error code in the event of system abnormality/error.

The Deluxe MA Remote Controller shall only be used in the same group with other Deluxe MA Remote Controllers (PAR-21MAA), Wireless MA (PAR-FL32MA-E / PAR-FA32MA-E), or Simple MA Remote Controllers (PAC-YT51CRA), with up to two remote controllers per group.

The Deluxe MA Remote Controller shall require no addressing. The Deluxe MA Remote Controller shall connect using two-wire, stranded, non-polar control wire to TB15 connection terminal on the indoor unit. The PAR-21MAA shall require cross-over wiring for grouping across indoor units.

PAR-21MAA (Deluxe MA Remote Controller)			
Item	Description	Operation	Display
ON/OFF	Run and stop operation for a single group	Each Group	Each Group
Operation Mode	Switches between Cool/Dry/Auto/Fan/Heat. Operation modes vary depending on the air conditioner unit. Auto mode is in the R2-Series only.	Each Group	Each Group
Temperature Setting	Sets the temperature for a single group. Range of temperature setting Cool/Dry: 67°F-87°F (57°F-87°F for PEFY/PDFY/PFFY-E) Heat: 63°F-83°F (63°F-83°F for PEFY/PDFY/PFFY-E) Auto: 67°F-83°F (63°F-83°F for PEFY/PDFY/PFFY-E)	Each Group	Each Group
Fan Speed Setting	Models with 4 air flow speed settings: Hi/Mid-2/Mid-1/Low Models with 3 air flow speed settings: Hi/Mid/Low Models with 2 air flow speed settings: Hi/Low	Each Group	Each Group
Air Flow Direction Setting	Air flow direction angles 100%-80%-60%-40%, Swing, Louver ON/OFF. Air flow direction settings vary depending on the model.	Each Group	Each Group
Weekly Scheduler	ON/OFF/Temperature setting can be done up to 8 times one day in the week. The time can be set by the 1-minute interval.	Each Group	Each Group
Permit / Prohibit Local Operation	Individually prohibit operation of each local remote control function (Start/Stop, Change operation mode, Set temperature, Reset filter). *1: Centrally Controlled is displayed on the remote controller for prohibited functions.	N/A	Each Group *1

PAR-21MAA (Deluxe MA Remote Controller)			
Item	Description	Operation	Display
Prohibition / Permission of Specified Mode	Setting via the System Controller, the operation for the following modes is prohibited: Cooling Prohibited: Cool, Dry, Auto Heating Prohibited: Heat, Auto Cooling-Heating Prohibited: Cool, Heat, Dry, Auto	N/A	Each Group
Display Indoor Unit Intake Temp	Measures and displays the intake temperature of the indoor unit when the indoor unit is operating.	N/A	Each Group
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed	N/A	Each Unit
Test Run	Operates air conditioner units in test run mode.	Each Group	Each Group
Ventilation Equipment	Up to 16 indoor units can be connected to an interlocked system that has one LOSSNAY unit. LOSSNAY items that can be set are "Hi", "Low", and "Stop". Ventilation mode switching is not available.	Each Group	Each Group
Set Temperature Range Limit	The range of room temperature setting can be limited by the initial setting. The lowest limit temperature can be made higher than the usual (67°F) in cool/dry mode, while the upper limit temperature lower than the usual (83°F) in heat mode. *Function does not work in auto mode setting	Each Group	Each Group
Auto Lock Out Function	Setting/releasing of simplified locking for remote control buttons can be performed. <ul style="list-style-type: none"> • Locking of all buttons • Locking of all buttons except ON/OFF button 	Each Group	Each Group

3.5 CMCN: CENTRALIZED CONTROLLER

A. GB-50A Centralized Controller or equivalent current model.

The GB-50A Centralized Controller shall be capable of controlling via a PC a maximum of 50 indoor units across multiple CITY MULTI outdoor units. A field supplied PC shall be required for the GB-50A Centralized Controller. The GB-50A Centralized Controller shall be approximately 5"x11" in size and shall be powered from a Power Supply Unit (PAC-SC50KUA). The GB-50A Centralized Controller shall support operation superceding that of the remote controllers, system configuration, daily/weekly/annual scheduling, monitoring of operation status, error email notification, online maintenance tool and malfunction monitoring. The GB-50A Centralized Controller shall have basic operation controls which can be applied to an individual indoor unit, a group of indoor units (up to 50 indoor units), or all indoor units (collective batch operation). This basic control set of operation controls for the GB-50A Centralized Controller shall include on/off, operation mode selection (cool, heat, auto (R2-Series only), dry, and fan), temperature setting, fan speed setting, airflow direction setting, error email notification, and online maintenance. Since the GB-50A provides centralized control it shall be able to enable or disable operation of local remote controllers via the PC.

In terms of scheduling, the GB-50A Centralized Controller shall allow the user to define daily, weekly, and annual schedules with operations consisting of ON/OFF, mode selection, temperature setting, and permit/prohibit of remote controllers.

GB-50A (Centralized Controller)			
Item	Description	Operation	Display

GB-50A (Centralized Controller)			
Item	Description	Operation	Display
ON/OFF	Run and stop operation for a single group	Each Group or Collective	Each Group or Collective
Operation Mode	Switches between Cool/Dry/Auto/Fan/Heat. (Group of Lossnay unit: automatic ventilation/vent-heat/interchange/normal ventilation) Operation modes vary depending on the air conditioner unit. Auto mode is in the CITY MULTI R2-Series only.	Each Group or Collective	Each Group
Temperature Setting	Sets the temperature for a single group. Range of temperature setting: Cool/Dry: 67°F-87°F (57°F-87°F for PEFY/PDFY/PFFY-E) Heat: 63°F-83°F (63°F-83°F for PEFY/PDFY/PFFY-E) Auto: 67°F-83°F (63°F-83°F for PEFY/PDFY/PFFY-E) * Range of temperature setting varies depending on the model.	Each Group or Collective	Each Group
Fan Speed Setting	Models with 4 air flow speed settings: Hi/Mid-2/Mid-/Low Models with 3 air flow speed settings: Hi/Mid/Low Models with 2 air flow speed settings: Hi/Low	Each Group or Collective	Each Group
Air Flow Direction Setting	Air flow direction angles 100%-80%-60%-40%, Swing, *1. Louver cannot be set. Air flow direction settings vary depending on the model.	*1 Each Group or Collective	Each Group
Permit / Prohibit Local Operation	Individually prohibit operation of each local remote control function (Start/Stop, Change operation mode, Set temperature, Reset filter). *2: Centrally Controlled is displayed on the remote controller for prohibited functions.	Each Group or Collective	*2 Each Group
Indoor Unit Intake Temp	Measures the intake temperature of the indoor unit when the indoor unit is operating.	N/A	Each Group
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed *3 When an error occurs, the LED flashes. The operation monitor screen shows the abnormal unit by flashing it. The error monitor screen shows the abnormal unit address, error code and source of detection. The error log monitor screen shows the time and date, the abnormal unit address, error code and source of detection	N/A	*3 Each Unit or Collective
Ventilation Equipment	This interlocked system settings can be performed by the master system controller. When setting the interlocked system, use the ventilation switch the free plan LOSSNAY settings between “Hi”, “Low” and “Stop”. When setting a group of only free plan LOSSNAY units, you can switch between “Normal ventilation”, “Interchange ventilation” and “Automatic ventilation”.	Each Group	Each Group

GB-50A (Centralized Controller)			
Item	Description	Operation	Display
External Input / Output	By using accessory cables you can set and monitor the following. Input By level: "Batch start/stop", "Batch emergency stop" By pulse: "batch start/stop", "Enable/disable remote controller" Output: "start/stop", "error/Normal" *4: Requires the external I/O cables (PAC-YG10HA-E) sold separately.	*4 Collective	*4 Collective

*GB-50A needs a PC (field supplied) connected together to monitor and operate the air conditioner system.

Standard software functions shall allow the building manager to securely log into each GB-50A via the PC's web browser to support operation monitoring, scheduling, error email, and online maintenance diagnostics. Standard software functions shall not expire. Additional optional software functions shall be available of personal browser for PCs and MACs, Tenant Billing that requires TG-2000 Integrated System software in conjunction with GB-50A Centralized Controllers. BACnet® interface shall be available through software operating on a dedicated PC and a GB-50A license. Optional software functions shall require advance purchasing and can only be activated upon receipt of a license number from Mitsubishi Electric HVAC. The optional software functions shall be licensed for a fixed term, subject to renewal and associated fees upon term expiration.

3.6 CMCN: SYSTEM INTEGRATION

The CMCN shall be capable of supporting integration with Building Management Systems (BMS) via BACnet® interface.

A. PAC-YTG31CDA: BACnet® Interface

The Mitsubishi Electric HVAC BACnet® interface, PAC-YG31CDA, shall be compliant with BACnet®/IP (ANSI/ASHRAE 135-1995, 135a) and UDP/IP of Ethernet (ANSI/ASHRAE 135-1995, 135b). The BACnet® interface shall require a dedicated network computer and activated BACnet® software function via Mitsubishi Electric HVAC issued license for a fixed term, subject to renewal and associated fees. The BACnet® software license shall be on a per G-50A/GB-50A basis for a maximum of 50 indoor units controlled by one G-50A/GB-50A Centralized Controller. The BACnet® interface shall support a maximum of ten G-50A/GB-50A Centralized Controllers for a maximum of 500 indoor units. Operation and monitoring points include, but are not limited to, on/off, operation mode, fan speed, prohibit remote controller, filter sign reset, alarm state, error code, and error address.

END OF SECTION



SUBSTITUTION REQUEST (During the Bidding Phase)

Project: Rainbow City Recreational Center
Substitution Request Number
From: Zachary Wilson (Versico Representative)
To: Goodwyn Mills Cawood LLC
Date: 6/20/2024
A/E Project Number:
Contract For: Rainbow City
Re: Pre-bid approval PVC KEE Roofing

Specification Title: Ethylene Interpolymer (KEE) Roofing
Description: 50 Mil PVC KEE Fully Adhered Roofing System
Sections: 075416 Page: all
Article/Paragraph: all

Proposed Substitution: Versico's 50 Mil PVC KEE Fully Adhered Roofing System
Manufacturer: Versico Roofing Systems Address: Carlisle, PA Phone: 334.224.2849
Trade Name: Versiflex Model No.: Versiflex 50 MIL PVC KEE

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
Same warranty will be furnished for proposed substitution as for specified product.
Same maintenance service and source of replacement parts, as applicable, is available.
Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
Proposed substitution does not affect dimensions and functional clearances.
Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Zac Wilson
Signed by: Zac Wilson
Firm: Exterior Materials LLC
Address:
Telephone: 334.224.2849

A/E REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01330.
Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
Substitution rejected - Use specified materials.
Substitution Request received too late - Use specified materials.

Signed by: Daniel Mejia
Date: 25 June 2024

Supporting Data Attached: Drawings Product Data Samples Tests Reports

SUBSTITUTION REQUEST

Project: Rainbow City Recreational Center Substitution Request Number: 01
From: Sport Pro Surfacing
To: Rainbow City Recreational Center Date: 6/17/2024
Attn: T'Ana Yebba A/E Project No.: ABHM230021
Re: _____ Contract For: 096566 Resilient Athletic Flooring

Specification Title: 096566 Resilient Athletic Flooring Description: Polyurethane Flooring Over Rubberized Base Mat
Section: 09 6566 Resilient Athletic Flooring Page and Paragraph: PART 2 PRODUCTS, 2.01, C

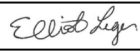
Proposed Substitution: Tarkett Polyturf Pad & Pour 7+2
Trade Name: Tarkett Polyturf Pad & Pour 7+2
Manufacturer: Tarkett Model No.: Polyturf Pad & Pour 7+2
Mfg. Address: 175 N. Industrial Blvd. NE. City, State, zip: Calhoun, GA 30701 Phone: 800-364-6541

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Elliot Leger, Estimator
Signed by: 
Firm: Sport Pro Surfacing
Address: 892 Plain St Ste 1, Marshfield, MA 02050
Telephone: +1 (508) 816-2604 E-mail: elliott@spsurfacing.org

A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specifications, Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specifications Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by: Daniel Mejia  Date: 21 June, 2024

Supporting Data Attached: Drawings Product Data Samples Tests Reports _____

SUBSTITUTION REQUEST

Project: Rainbow City Rec Center
To: Goodwyn Mills Cawood, LLC.
Attn: Alyssa Martin
Re: AWP-1 Substitution

Substitution Request Number: 013
From: Rafe Stewart
Date: 06/21/24
A/E Project No.: GM&C PROJECT NO. ABHM230021
Contract For: Dominguez & Persons, LLC

Specification Title: 098400 Acoustical Wall Panels
Section: 098400

Description: AcousTech 2-1/16" Abuse Resistant
Page and Paragraph: Pg 2. 2.02.B

Proposed Substitution: MBI Colorsonix Acoustical Wall Panels, 2" w/ Hi Impact face, NRC = 1.05
Trade Name: Acoustical Wall Panels
Manufacturer: MBI Model No.: 1818F-2060-ZIN
Mfg. Address 801 Bond St City, State, zip: Elyria, OH 44035 Phone: 440.322.6500

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Marc Cordes, PE
Signed by: Marc Cordes
Firm: Commercial Acoustics
Address: 6301 N Florida Ave, Tampa FL 33604
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A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specifications, Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specifications Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by: Daniel Mejia 

Date: 25 June 2024

Supporting Data Attached: Drawings Product Data Samples Tests Reports

GENERAL NOTES

THE GENERAL NOTES BELOW ARE INTENDED TO COMPLEMENT, RATHER THAN REPLACE, REQUIREMENTS PUT FORTH BY THE PROJECT SPECIFICATIONS. SHOULD A DISCREPANCY BE FOUND BETWEEN THESE GENERAL NOTES AND THE PROJECT SPECIFICATIONS THE GC SHALL NOTIFY THE ARCHITECT FOR CLARIFICATION PRIOR TO PROCEEDING.

A DIVISION 1 - GENERAL REQUIREMENTS

- 1.01. COMPLETE CONTRACT DOCUMENTS:** COMPLETE DRAWINGS, SPECIFICATIONS, ADDENDA, AND CLARIFICATIONS ISSUED BY FIELD ORDER OR SIMILAR INSTRUMENTS CONSTITUTE THE CONTRACT DOCUMENTS AND SHALL REMAIN INTACT. GENERAL CONTRACTOR IS FULLY RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS INCLUDED, OR REASONABLY INFERRED THEREIN. CONSTRUCTION MANAGER OR GENERAL CONTRACTOR (AS APPLICABLE) MUST NOT ISSUE PARTIAL SETS OR OTHERWISE CAUSE INCOMPLETE CONTRACT INFORMATION TO BE PROVIDED TO PARTIES TO THE CONTRACT, INCLUDING ASSOCIATED SUB-CONTRACTORS, OR SUB-SUB-CONTRACTORS.
- 1.02. MULTI-TRADE COORDINATION:** ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. NO ALLOWANCES WILL BE MADE FOR CONTRACTORS FAILURE TO COORDINATE BETWEEN MULTIPLE DISCIPLINES, SYSTEMS OR EQUIPMENT. UNCOORDINATED WORK THAT RESULTS IN THE INEFFICIENT USE OF AVAILABLE SPACE AND/OR ENCROACHES ON THE WORK OF OTHER TRADES WILL BE SUBJECT TO REJECTION AND RE-INSTALLATION.
- 1.03. VERIFICATION:** GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, CONSTRUCTION, MATERIALS, METHODS OF CONSTRUCTION, GRADES AND ELEVATIONS. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS WITHIN THE DOCUMENTS PRIOR TO BID. CONSTRUCTION, AND/OR INSTALLATION OF ASSOCIATED WORK. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE THAT THE EXISTING CONDITIONS ARE CONSISTENT WITH THOSE OF THE CONTRACT DOCUMENTS. ANY CHANGE ORDER REQUEST ASSOCIATED WITH AN IDENTIFIABLE EXISTING CONDITION, WHETHER IN CONFLICT OR COMPLIANCE WITH THE CONTRACT DOCUMENTS, WILL NOT BE ACCEPTED. THIS PROVISION SHALL NOT APPLY TO WORK PERFORMED UNDER UNIT PRICE OR ALLOWANCE FEE STRUCTURES.
- 1.04. DISCREPANCIES:** GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT PROMPTLY UPON IDENTIFICATION OF ANY DISCREPANCIES OR CONFLICTS IN THE CONTRACT DOCUMENTS, WITH THE OBJECTIVE OF RESOLVING THE CONFLICT OR DISCREPANCY IN A TIMELY MANNER AND PRIOR TO ANY IMPACT TO CONTRACT TIME OR CONTRACT COST. GENERAL CONTRACTOR SHALL INCLUDE THE MORE EXPENSIVE, COMPLEX, AND TIME CONSUMING COMPONENTS OF ANY DISCREPANCIES IN THE BASE BID PRICE. FAILURE TO NOTIFY THE ARCHITECT PROMPTLY OF A KNOWN DISCREPANCY CONSTITUTES ACCEPTANCE OF FULL RESPONSIBILITY FOR THE ASSOCIATED COST AND SCHEDULE IMPACT.
- 1.05. DRAWING SCALE:** REPROGRAPHIC TECHNIQUES MAY RENDER DRAWINGS DIFFERENTLY THAN THE INTENDED PRINTED SCALE. THEREFORE, DO NOT RELY UPON THE SCALE OF ANY PRINTED DRAWINGS. CONTACT THE ARCHITECT FOR REQUIRED DIMENSIONS THAT ARE NOT PROVIDED CLEARLY IN NUMERIC FORM HEREIN. FAILURE TO REQUEST CRITICAL DIMENSIONAL INFORMATION FROM THE ARCHITECT MAY RESULT IN THE REJECTION OF INSTALLED WORK.
- 1.06. DIMENSIONAL STANDARDS:** STANDARD DIMENSION CONVENTIONS UTILIZED HEREIN CALL FOR DIMENSIONS TO FACE OF STUD (MASONRY) OF FINISHED PARTITION, FACE OF FINISH, OR CENTERLINE OF COLUMN LINE OR OTHER REFERENCE LINE, UNLESS OTHERWISE NOTED OR GRAPHICALLY ILLUSTRATED. DIMENSIONS NOTED AS "CLEAR", "MIN", OR "MAX" SHALL BE STRICTLY ENFORCED.

- 1.07. PM SOFTWARE:** REFER TO SPECIFICATION SECTION 01 3000
- 1.08. PERMITTING:** THE GENERAL CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY AND REQUIRED PERMITS AND APPROVALS FROM JURISDICTIONAL AUTHORITIES, PRIOR TO COMMENCING THE WORK. THIS REQUIREMENT SHALL APPLY TO ON-SITE AND OFF-SITE WORK REQUIRED BY THE CONTRACT DOCUMENTS.
- 1.09. CODE COMPLIANCE:** THE WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH ALL APPLICABLE LAWS, CODES, AND ORDINANCE. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL PERFORM THEIR WORK IN COMPLIANCE WITH ALL APPLICABLE BUILDING CODES, LAWS, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL CAREFULLY READ AND FAMILIARIZE THEMSELVES WITH THE CODE COMPLIANCE DATA INCLUDED IN THE DRAWINGS AND SPECIFICATIONS.

- 1.10. NON-COMBUSTIBLE CONSTRUCTION TYPES:** THE PROPOSED BUILDING STRUCTURE IS NON-COMBUSTIBLE IN ACCORDANCE WITH APPLICABLE CODES, AND THEREFORE REQUIRES NON-COMBUSTIBLE CONSTRUCTION TECHNIQUES. ALL NEW CONSTRUCTION SHALL BE IN COMPLIANCE WITH APPLICABLE REQUIREMENTS, INCLUDING WOOD BLOCKING, FURRING, FRAMING, SHEATHING, BACK-BOARDS, AND RELATED WORK. FIRE RETARDANT TREATED (FRT) IS PERMITTED WHERE ALLOWED BY CODE. SEE CODE COMPLIANCE DRAWINGS FOR DETAILED INFORMATION AND REQUIREMENTS.

- 1.11. TEMPORARY GUARDS:** THE GENERAL CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY GUARDS AT ALL SLAB EDGES, PIT EDGES, ELEVATED PLATFORM EDGES, AND SIMILAR CONDITIONS WHERE REQUIRED BY OSHA, ANY APPLICABLE CODE OR ORDINANCE, AND AT MINIMUM ALL CHANGES IN ELEVATION IN EXCESS OF THIRTY INCHES (30") INCLUDING BOTH SIDES OF STAIRS AND LADDERS. TEMPORARY GUARDS MUST BE MAINTAINED UNTIL THE PERMANENT GUARDS ARE INSTALLED.

- 1.12. LIFE-SAFETY MEASURES DURING CONSTRUCTION:** THE GENERAL CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS REQUIRED BY OSHA, CODE, AND OTHER APPLICABLE REGULATORY AUTHORITIES.

- 1.13. MEANS OF EGRESS:** THE GENERAL CONTRACTOR SHALL MAINTAIN CLEAR AND UNOBSTRUCTED MEANS OF EGRESS AT ALL TIMES DURING CONSTRUCTION, WITHOUT EXCEPTION.

- 1.14. CONSTRUCTION LOADS:** THE GENERAL CONTRACTOR SHALL NEVER LOAD NEW OR EXISTING CONSTRUCTION BEYOND ITS DESIGN CAPACITY WITH STORED MATERIAL, CONSTRUCTION EQUIPMENT, TEMPORARY LOADS ASSOCIATED WITH MATERIAL MOVEMENT, HOISTING, STORAGE, OR SIMILAR CONDITIONS.

- 1.15. GENERAL CLEAN-UP:** THE GENERAL CONTRACTOR SHALL INCLUDE ONGOING CLEAN-UP OF THE PROPERTY AND BUILDING, INCLUDING REMOVAL OF TRASH AND WASTE MATERIALS, ON A REGULAR BASIS DURING CONSTRUCTION. RECYCLING OF CONSTRUCTION WASTE IS ENCOURAGED.

- 1.16. OWNER FURNISHED EQUIPMENT:** LOOSE FURNISHINGS, WORKSTATIONS, OFFICE EQUIPMENT, COPIERS, VENDING MACHINES, KITCHEN EQUIPMENT, AND SIMILAR ITEMS THAT ARE BOTH LABELED "OWNER FURNISHED" OR "OF/OI", AND SHOWN DASHED OR IN GRAY-TONE SHALL BE CONSIDERED OWNER-FURNISHED EQUIPMENT. OWNER-FURNISHED EQUIPMENT IS SHOWN FOR THE GENERAL CONTRACTOR'S KNOWLEDGE AND UNDERSTANDING TO FACILITATE COORDINATION WITH THE OWNER'S WORK. THE GENERAL CONTRACTOR SHALL CAREFULLY REVIEW THE SCOPE OF WORK, AND REQUEST CLARIFICATION FROM THE ARCHITECT IN THE EVENT OF ANY UNCERTAINTY ABOUT THE DEFINITION OF OWNER FURNISHED WORK.

- 1.17. TEMPORARY BRACING:** PRIOR TO REMOVAL OF ANY EXISTING STRUCTURAL ELEMENTS, THE GENERAL CONTRACTOR SHALL TEMPORARILY SHORE AND/OR BRACE EXISTING CONSTRUCTION TO REMAIN AS REQUIRED TO SUPPORT EXISTING LOADS AND/OR LOADS IMPOSED DURING CONSTRUCTION. FURTHER, THE GENERAL CONTRACTOR SHALL DESIGN, INSTALL AND MAINTAIN ANY TEMPORARY BRACING OR SUPPORT FRAMING REQUIRED TO SUPPORT NEW CONSTRUCTION COMPONENTS WHICH ARE NOT FULLY SECURED IN A COMPLETE STRUCTURAL ASSEMBLY, OR ARE OTHERWISE SUBJECTED TO LOADS IN EXCESS OF THE POST-CONSTRUCTION LOADS FOR WHICH THE ELEMENT IS DESIGNED.

B DIVISION 2 - EXISTING CONDITIONS

- 2.01. POSITIVE DRAINAGE AT BUILDING:** SLOPE EXTERIOR GRADE AWAY FROM THE BUILDING IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
- 2.02. SITE PAVING EXPANSION AND CONTROL JOINTS:** WHETHER SPECIFICALLY INDICATED OR NOT, PROVIDE CONTROL JOINTS IN ALL SITE CONCRETE PAVING FOR PEDESTRIAN TRAFFIC AT AN INTERVAL OF NO MORE THAN FIVE FEET (5') EACH WAY. IN ADDITION, PROVIDE CONTROL JOINTS AT NO MORE THAN THIRTY FOOT (30') INTERVAL, EACH WAY. ALL EXPANSION JOINTS, INCLUDING THOSE BETWEEN HORIZONTAL PAVING AND VERTICAL ABUTMENTS, SHALL RECEIVE SPECIFIED JOINT FILLER, AS SPECIFIED IN SECTION 079000.

C DIVISION 3 - CONCRETE

- 3.01. SLAB-ON-GRADE:** SEE SPECIFICATION SECTION 033000 FOR DETAILED REQUIREMENTS OF SLAB-ON-GRADE CONSTRUCTION, INCLUDING REQUIREMENTS FOR REINFORCING, CONCRETE ADMIXTURES, VAPOR BARRIER, AND SURFACE TREATMENTS (IF ANY). ALL SLAB-ON-GRADE CONSTRUCTION SHALL BE INSTALLED OVER MINIMUM FOUR INCH (4") THICK COMPACTED POROUS DRAINAGE LAYER UNLESS NOTED OTHERWISE.
- 3.02. SLAB EXPANSION AND CONTROL JOINTS:** SEE STRUCTURAL DRAWINGS FOR REQUIRED SLAB EXPANSION AND CONTROL JOINTS. ALL EXPANSION JOINTS AND CONTROL JOINTS IN FLOOR SLABS, AND BETWEEN FLOOR SLABS AND VERTICAL ABUTMENTS SHALL RECEIVE TRAFFIC BEARING SEALANT JOINT MATERIAL.
- 3.03. CORE DRILLING - FLOOR SLABS:** THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF THE LOCATION AND DIMENSION OF ANY PROPOSED CORES THROUGH STRUCTURAL FLOOR SLABS, PRIOR TO COMMENCING CORING ACTIVITIES. CORE DRILLING IS STRICTLY PROHIBITED (SLEEVES ONLY) IN ANY POST-TENSIONED STRUCTURED FLOOR SLAB ASSEMBLIES.
- 3.04. FLOOR LOADING DURING CONSTRUCTION:** NO LOADS EXCEEDING THE SPECIFIED FLOOR LIVE LOAD INCLUDING CONSTRUCTION EQUIPMENT OR LIFTS SHALL BE PLACED ON THE ELEVATED SLABS WITHOUT REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER. ANY REQUESTS SHALL BE MADE IN WRITING BY THE GENERAL CONTRACTOR INCLUDING CUT SHEETS AND PROPOSED LOADING CRITERIA. DO NOT PROCEED UNTIL WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER HAS BEEN PROVIDED.

D DIVISION 4 - MASONRY

- 4.01. SEAL VENEER ANCHORS:** ALL EXTERIOR VENEER SYSTEM ANCHORS SHALL BE SET IN FULL, FRESH BED OF TROWEL GRADE AIR/MOISTURE BARRIER COATING, OR DOW 795 OR EQUIVALENT AT THE PLANE OF THE AIR/ MOISTURE BARRIER.
- 4.02. WORKMANSHIP:** THE CONTRACTOR SHALL CAREFULLY REVIEW THE BRICK MASONRY LAYOUT, DETAILS, COURSING, AND DIMENSIONS TO ACHIEVE THE DESIGN AS INDICATED ON THE CONTRACT DOCUMENTS.
- 4.03. BRICK COURSING:** THE CONTRACTOR AND MASON SHALL COORDINATE THE WORK ESPECIALLY AS RELATED TO THE STACK BOND PATTERN TO MAINTAIN FULL BRICKS, AND VERTICALLY ALIGNED JOINTS FOR THE ENTIRE HEIGHT OF THE WALL. INCORRECTLY ALIGNED WORK OR VERTICAL JOINTS THAT ARE OUT OF ALIGNMENT TOLERANCE SHALL BE REMOVED AND REPLACED AS REQUIRED BY ARCHITECT

E DIVISION 5 - METALS

- 5.01. EMBEDDED STEEL:** ALL MISCELLANEOUS STEEL ITEMS INCLUDING STEEL EDGE ANGLES, EMBEDDED PLATE, AND SIMILAR WORK SHALL BE HOT-DIPPED GALVANIZED. THIS PROVISION DOES NOT APPLY TO REINFORCING STEEL, WHICH SHALL COMPLY WITH SPECIFICATION DIVISION 033000.
- 5.02. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL:** ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) IS INCLUDED IN THIS PROJECT. THESE STEEL FABRICATIONS SHALL BE PROVIDED IN COMPLIANCE WITH THE PROJECT SPECIFICATION FOR AESS INCLUDING THE REQUIREMENTS FOR REMOVAL OF IMPERFECTIONS, AND FULLY WELDED CONNECTIONS AS INDICATED WHICH ARE GROUND SMOOTH FOR A FULLY FINISHED ASSEMBLY.
- 5.03. FINISH PREPARATION:** FOR STEEL CONSTRUCTION EXPOSED TO VIEW IN FINISHED AREAS; FILLET WELDS OR SIMILAR CONNECTIONS WHICH ARE NOT STRUCTURALLY SPECIFIED TO BE CONTINUOUS SHALL RECEIVE A SEALANT FILLET BEAD PRIOR TO PAINTING.

F DIVISION 6 - WOOD, PLASTICS & COMPOSITES

- 6.01. WOOD IN CONTACT WITH CONCRETE/ MASONRY:** ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY CONSTRUCTION SHALL BE PRESSURE TREATED (PT) UNLESS OTHERWISE NOTED TO BE FIRE RETARDANT TREATED (FRT).
- 6.02. FIELD VERIFICATION:** THE CASEWORK OR MILLWORK CONTRACTOR SHALL OBTAIN AND VERIFY ALL FIELD MEASUREMENTS AND CONDITIONS AFFECTING HIS WORK AND SHALL BE RESPONSIBLE FOR ALL DETAILS AND DIMENSIONS ASSURING PRECISION AND PROPER ASSEMBLY OF HIS PRODUCTS.
- 6.03. MILLWORK BASE:** PROVIDE FINISHED BASE TO MATCH MATERIAL AND FINISH OF ADJACENT SCHEDULED WALL BASE, AT TOE-KICK AT ALL EXPOSED FRONT, SIDE, AND REAR FACES OF MILLWORK OR CASEWORK.
- 6.04. MILLWORK SPLASH:** PROVIDE BACKSPASH AT ALL COUNTERTOPS UNLESS OTHERWISE INDICATED ON PLAN. PROVIDE SIDESPLASH OF SAME MATERIAL, DIMENSION, AND FINISH EVERYWHERE A COUNTERTOP BACKSPASH ABUTS A VERTICAL WALL SURFACE AT ONE OR MORE OF ITS SIDES UNLESS OTHERWISE INDICATED ON PLAN.

G DIVISION 7 - THERMAL & MOISTURE PROTECTION

- 7.01. GENERAL SEALANTS:** CONTINUOUSLY SEAL PERIMETER OF ALL DOOR AND WINDOW FRAMES, MILLWORK AND CASEWORK, TRIM, CABINETS, AND SIMILAR FIXED CONSTRUCTION WITH PAINTABLE, SILICONIZED LATEX SEALANT. ALL VERTICAL SURFACE CONTROL AND EXPANSION JOINTS AT MASONRY WALLS SHALL BE CONTINUOUSLY SEALED, BOTH SIDES OF JOINT.
- 7.02. SLOPE TO DRAIN:** ALL ROOF SURFACES SHALL BE SLOPED TO DRAIN, WITH MINIMUM PITCH OF 1/4" PER LINEAR FOOT. PROVIDE TAPERED INSULATION, CRICKETS AS NECESSARY TO ASSURE THE MINIMUM SLOPE IS ACHIEVED.
- 7.03. WALK-PADS:** FURNISH AND INSTALL COMPATIBLE ROOF WALK-PADS AT ALL MEMBRANE ROOF SURFACES THAT ARE TRAVELED TO ACCESS SERVICEABLE ROOFTOP EQUIPMENT SUCH AS HVAC UNITS, FANS, ELECTRICAL EQUIPMENT, AND SIMILAR EQUIPMENT REQUIRING SERVICE ACCESS.

H DIVISION 8 - OPENINGS

- 8.01. LABELED FIRE-RATED DOORS AND FRAMES:** ALL FIRE DOORS AND FRAMES SHALL BE LABELED BY AN APPROVED AGENCY PER NFPA 80, AND SHALL BE PERMANENTLY AFFIXED THERETO, AND THE LIFE OF THE LABEL AND THE ATTACHMENT THEREOF CAN REASONABLY BE EXPECTED TO EQUAL THE LIFE OF THE COMPONENT TO WHICH IT IS ATTACHED. LABELS MUST BE PROVIDED BY A MANUFACTURER THAT HAS BEEN APPROVED BY A LABORATORY OR ORGANIZATION TO PROVIDE TESTING AND FOLLOW-UP SERVICES FOR FIRE-RATED OPENING ASSEMBLIES. ALL LABELS SHALL INCLUDE THE FIRE RESISTANCE RATING IN HOURS AND/OR MINUTES. LABELS ON FRAMES WITH TRANSOMS AND/OR SIDELIGHTS MUST IDENTIFY THAT THE OPENING ASSEMBLY INCLUDES SAME.
- (A) LABELS SHALL BE RAISED OR EMBOSSED ON METAL LABELS.
(B) PLASTIC OR PAPER LABELS ARE UNACCEPTABLE.
(C) LABELS MUST BE VISIBLE AND LEGIBLE AT ALL TIMES AND SHALL NOT BE PAINTED.
1. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL REQUIRE PAINTER TO REIMBURSE OWNER FOR COSTS OF RE-LABELING RATED DOORS AND FRAMES.
- 8.02. FIRE-RATED CERAMIC GLAZING:** AT FIRE-RATED DOORS, SIDELITES, AND TRANSOMS, PROVIDE FIRE-RATED CERAMIC GLAZING AT ANY VISION PANEL THAT EXCEEDS THE MAXIMUM ALLOWABLE GLASS SIZE PER IBC TABLE 716.5 (IBC 2015) or 716.1(2) (IBC 2018) AS APPLICABLE. SEE SPECIFICATION SECTION 08 8000 GLAZING FOR CERAMIC GLAZING.
- 8.03. TEMPERED GLASS:** PROVIDE TEMPERED SAFETY GLASS EVERYWHERE REQUIRED BY APPLICABLE CODE, INCLUDING ANY GLASS IN DOORS, OPERABLE WINDOWS, ADJACENT TO DOORS OR OPERABLE WINDOWS, WITHIN 36" OF THE ADJACENT FLOOR OR GRADE LEVEL, OR OTHERWISE WHERE REQUIRED BY CODE.
- 8.04. BLOCKING:** FURNISH AND INSTALL BLOCKING IN METAL STUD FRAMED WALLS AND PARTITIONS THAT ARE SCHEDULED TO RECEIVE DOOR BUMPERS/ STOPS, MAGNETIC LOCK DEVICES, AND SIMILAR DOOR RELATED DEVICES THAT WILL SUBJECT THE PARTITION TO DOOR MOVEMENT LOADS AND IMPACT.
- 8.05. HOLLOW METAL FRAMES:** COORDINATE THE THROAT DEPTH OF ALL HOLLOW METAL FRAMES WITH THE DEPTH OF THE PARTITION SCHEDULED TO RECEIVE THE DOOR OR WINDOW FRAME.

I DIVISION 9 - FINISHES

- 9.01. INDOOR ENVIRONMENTAL CONDITIONS:** NO INTERIOR SOFT CONSTRUCTION (IE, DRYWALL, CEILINGS, CARPET, MILLWORK, OR SIMILAR WORK THAT IS SUBJECT TO TEMPERATURE AND HUMIDITY INSTABILITY) SHALL COMMENCE, NOR SHALL MATERIALS BE STORED ON SITE, UNTIL STABLE INTERIOR ENVIRONMENTAL CONDITIONS ACCEPTABLE TO THE PRODUCT MANUFACTURER ARE PROVIDED AND IN PLACE FOR A DURATION SUFFICIENT TO ESTABLISH CONSISTENT AND ACCEPTABLE INDOOR TEMPERATURE AND HUMIDITY LEVELS. FAILURE TO PROVIDE AN INDOOR ENVIRONMENT IN STRICT COMPLIANCE WITH THE PRODUCT MANUFACTURERS PRINTED REQUIREMENTS WILL SUBJECT THE INSTALLING CONTRACTOR TO FULL RESPONSIBILITY FOR ANY COSTS ASSOCIATED WITH RE-WORK DUE TO MOLD OR MILDEW GROWTH, WARPING, CUPPING, DE-LAMINATION, OR SIMILAR DETERIORATION OF THE STORED OR INSTALLED CONSTRUCTION.
- 9.02. FLOOR & WALL TILE:** INSTALL FLOOR AND WALL TILE IN ALL SCHEDULED AREAS IN ACCORDANCE WITH APPLICABLE TILE COUNCIL OF AMERICA (TCA) METHOD.
- 9.03. FLOOR FINISH TRANSITIONS:** UNLESS OTHERWISE INDICATED, TRANSITION FLOOR FINISHES AT CENTERLINE OF DOOR IN CLOSED LOCATION. TRANSITION FLOOR MATERIAL UNDER CENTER OF DOORS & WHERE NOTED. PROVIDE SCHEDULED TRANSITION MATERIALS AT CHANGES IN FLOOR MATERIAL TYPE.
- 9.04. PARTITIONS:** SEE PARTITION NOTES AND SPECIFICATIONS FOR REQUIREMENTS OF PARTITION CONSTRUCTION.

- 9.05. EQUIPMENT ACCESS DOORS:** THE GENERAL CONTRACTOR SHALL PROVIDE PROPOSED LOCATION OF CEILING ACCESS DOORS TO THE ARCHITECT FOR APPROVAL. ACCESS DOORS SHALL BE PAINTED TO MATCH ADJACENT FINISH.
- 9.06. CASEWORK AND MILLWORK ANCHORAGE:** COORDINATE INSTALLATION OF IN-WALL STEEL ANCHORAGE, GROUND, AND REQUIRED BLOCKING WITH OTHER TRADES FOR PRECISE LOCATION.

- 9.07. PARTITION COORDINATION WITH OTHER TRADES:**
(A) COORDINATE BETWEEN TRADES BEFORE FRAMING PARTITIONS. PARTITION FRAMING SHALL BE LAID OUT 50 AS TO PERMIT THE INSTALLATION OF PIPING, CONDUITS, AND DUCTWORK WITH A MINIMUM OF CUTTING BY OTHER TRADES.
(B) EXCEPT FOR PIPING LOCATED IN EQUIPMENT ROOMS, ALL PIPING INSIDE THE BUILDING SHALL BE CONCEALED WITHIN PARTITIONS AND FURRED SPACES. WHERE IT OCCURS THAT PIPING CANNOT BE EASILY CONCEALED, NOTIFY THE ARCHITECT IN WRITING FOR CLARIFICATION. IN ANY CASE, SUCH PIPING SHALL BE CONCEALED AT NO ADDITIONAL COST.
(C) COORDINATE WITH OTHER TRADES AND OWNERS' SCHEDULED EQUIPMENT VENDORS FOR SUPPORT REQUIREMENTS OF WALL-MOUNTED AND SUSPENDED ITEMS. SIZE STUD GAUGE AND SPACING MUST BE ABLE TO SUPPORT ANY ADDITIONAL LOADS IMPOSED BY THESE ITEMS. MAX. DEFLECTION 1/360 @ 5 PSF HORIZ. LOAD.
(D) PROVIDE AND INSTALL ALL BLOCKING, STIFFENERS, BRACES, BACK-UP PLATES, AND SUPPORTING BRACKETS AS REQUIRED FOR THE INSTALLATION OF WALL-MOUNTED OR SUSPENDED MECHANICAL ELECTRICAL, CASEWORK, MILLWORK AND ANY OTHER MISCELLANEOUS EQUIPMENT OR WALL-MOUNTED ACCESSORIES.
(E) ANY ADDITIONAL WORK OR, RE-WORK, AS A RESULT OF A FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL NOT BE GIVEN CONSIDERATION FOR CHANGE ORDER.

- 9.08. FIRE-RATED PARTITIONS AND FIRE-RATED SMOKE BARRIER IDENTIFICATION**
(A) FIRE-RATED PARTITIONS AND FIRE-RATED SMOKE BARRIERS SHALL BE PERMANENTLY LABELED IN RED STENCILED LETTERING ABOVE FINISHED CEILING AT 1'-0" ABOVE CEILING.
1. EACH NEW FIRE WALL, FIRE BARRIER, FIRE PARTITION, SMOKE BARRIER, SMOKE PARTITION, OR ANY OTHER NEW WALL REQUIRED TO HAVE PROTECTED OPENINGS SHALL BE PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ABOVE ANY DECORATIVE CEILING AND IN CONCEALED SPACES WITH THE WORDING, "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS", OR SIMILAR LANGUAGE. SUCH SIGNS OR STENCILING SHALL BE IN 4 INCH HIGH LETTERS, 1/2 INCH STROKE, AND NOT MORE THAN 15 FEET ON-CENTER.
(B) UNLESS OTHERWISE REQUIRED OTHERWISE BY LOCAL JURISDICTION IDENTIFY RATED PARTITIONS AND WALLS AS FOLLOWS (G.C. MUST CONFIRM VERBIAGE WITH LOCAL AHJ) :
1-HOUR FIRE BARRIER - PROTECT ALL OPENINGS
1-HOUR FIRE & SMOKE BARRIER - PROTECT ALL OPENINGS
2-HOUR FIRE BARRIER - PROTECT ALL OPENINGS
2-HOUR FIRE & SMOKE BARRIER - PROTECT ALL OPENINGS
3-HOUR FIRE WALL - PROTECT ALL OPENINGS
4-HOUR FIRE WALL - PROTECT ALL OPENINGS

J DIVISION 10 - SPECIALTIES

NA

K DIVISION 11 - EQUIPMENT

- 11.01. EQUIPMENT GENERAL:** FOR EQUIPMENT OR SYSTEMS INSTALLED UNDER SEPARATE CONTRACT, GENERAL CONTRACTOR SHALL COOPERATE FULLY WITH SEPARATE CONTRACTORS SO WORK ON THOSE CONTRACTS MAY BE CARRIED OUT SMOOTHLY, WITHOUT INTERFERING WITH OR DELAYING WORK UNDER THIS CONTRACT OR OTHER CONTRACTS. COORDINATE THE WORK OF THIS CONTRACT WITH WORK PERFORMED UNDER SEPARATE CONTRACTS. WORK TO BE PERFORMED UNDER SEPARATE CONTRACT MAY INCLUDE BUT IS NOT LIMITED TO THE SPLASH PAD AND PLAYGROUND ALTERNATES AS DESCRIBED BY THE CONTRACT DOCUMENTS.

L DIVISION 12 - FURNISHINGS

- 12.01. CASEWORK BASE:** PROVIDE FINISHED BASE TO MATCH MATERIAL & FINISH OF ADJACENT WALL BASE, AT TOE KICK, AT ALL EXPOSED FRONT, SIDE, & REAR FACES OF CASEWORK.
- 12.02. CASEWORK SPLASH:** PROVIDE BACKSPASH AT ALL COUNTERTOPS UNLESS OTHERWISE INDICATED ON PLAN. PROVIDE SIDESPLASH OF SAME MATERIAL, DIMENSION, AND FINISH EVERYWHERE A COUNTERTOP BACKSPASH ABUTS A VERTICAL WALL SURFACE AT ONE OR MORE OF ITS SIDES UNLESS OTHERWISE INDICATED ON PLAN.

M DIVISION 13 - SPECIAL CONSTRUCTION

- 13.01. MULTI-TRADE COORDINATION:** THE GENERAL CONTRACTOR SHALL PROVIDE ALL REQUIRED WORK AND COORDINATION BETWEEN TRADES TO PROVIDE A COMPLETE FULLY FUNCTIONAL POOL SYSTEM AS REQUIRED BY THE CONTRACT DOCUMENTS. THE INSTALLATION SHALL INCLUDE ALL EQUIPMENT AND UTILITY CONNECTIONS.

N DIVISION 14 - CONVEYING SYSTEMS

- 14.01. STRUCTURAL FOUNDATION COORDINATION:** COORDINATE EXACT BOTTOM OF ELEVATOR SHAFT WITH PIT DEPTH REQUIREMENTS OF SELECTED ELEVATOR MANUFACTURER. EXACT LOCATION OF PUMP PUMP AS DICTATED BY SELECTED ELEVATOR MANUFACTURER. AREA BETWEEN BOTTOM OF SLAB OF ELEVATOR SHAFT & STRUCTURAL CONCRETE MAT FOOTING TO BE POROUS FILL.
- 14.02. STRUCTURAL CMU WALL COORDINATION:** COORDINATE ALL REQUIRED ELEVATOR SHAFT WALL PENETRATIONS, EMBED LOCATIONS, SPECIAL HOISTWAY INFILL BRACKETS (IF REQUIRED FOR INSTALLATION IN SHAFT PROVIDED), ROUGH OPENINGS FOR DOORS, ETC. WITH SELECTED ELEVATOR MANUFACTURER.
- 14.03. ELECTRICAL COORDINATION:** COORDINATE A MINIMUM QUANTITY (2) PER CAB, ELEVATOR DISCONNECTS WITH SELECTED ELEVATOR MANUFACTURER.
- 14.04. COMPLIANCE:** THE ELEVATOR AND ALL ASSOCIATED EQUIPMENT AND CONTROLS SHALL BE PROVIDED AND INSTALLED PER THE REQUIREMENTS OF THE CURRENT APPLICABLE CODE.

O DIVISION 21 - FIRE SUPPRESSION

- 21.01. FIRE PROTECTION SYSTEMS:** WHERE REQUIRED, INSTALL FIRE PROTECTION SYSTEMS IN STRICT ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES, INCLUDING NFPA. ALL EQUIPMENT UTILIZED IN THE FIRE PROTECTION SYSTEM SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL).
- 21.02. FIRE PROTECTION SYSTEM DESIGN:** WHERE DESIGN OF THE FIRE PROTECTION SYSTEM IS THE RESPONSIBILITY OF THE CONTRACTOR AS REQUIRED BY A PERFORMANCE SPECIFICATION, THE SYSTEM DESIGN SHALL BE SUPERVISED BY AN INDIVIDUAL WHO IS A REGISTERED FIRE PROTECTION ENGINEER AND/OR IS CERTIFIED AT LEVEL III OR HIGHER IN FIRE PROTECTION ENGINEERING TECHNOLOGY AUTOMATIC SPRINKLER SYSTEM LAYOUT BY THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGY (NICET).
- 21.03. FIRE PROTECTION PIPING:** SPRINKLER PIPING SHALL BE UNENCUMBERED BY THE WORK OF ANY OTHER TRADE THROUGHOUT THE ENTIRE BUILDING. UNDER NO CIRCUMSTANCES SHALL ANYTHING BE SUPPORTED BY, DRAPED OVER, TIE-OFF TO, OR SUSPENDED BY, SPRINKLER PIPING. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO CONTINUOUSLY MONITOR ONGOING WORK IN THE VICINITY OF SPRINKLER PIPING AND SHALL DIRECT ANY OTHER CONTRACTOR OR TRADESMAN TO IMMEDIATELY REMOVE AND RE-INSTALL ANY ITEM NOT IN COMPLIANCE WITH THIS REQUIREMENT.

P DIVISION 22 - PLUMBING

- 22.01. CONCEALED PIPING:** ALL PIPING, DUCTWORK, ELECTRICAL RACEWAYS & CONDUITS SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL INCLUDE, IN THE BASE BID, REQUIRED FURRING TO CONCEAL THESE SYSTEMS WHETHER OR NOT THE FRAMING AND FURRING IS ILLUSTRATED IN THE DRAWINGS.
- 22.02. GAS PIPING:** TIE ALL PIPING "HARD" TO STRUCTURE.
- 22.03. GAS PIPING EXPOSED ON ROOF:** WHERE GAS PIPING IS EXPOSED ON THE ROOF, PAINT GAS PIPING "YELLOW".
- 22.04. PLUMBING FIXTURES:** CAREFULLY REVIEW THE DIMENSIONAL STANDARDS FOR INSTALLED PLUMBING FIXTURES, AND PLAN THE WORK TO ASSURE FULL COMPLIANCE OF CODE REQUIRED FIXTURE CLEARANCES.

Q DIVISION 23 - HVAC

- 23.01. MEP DEVICE/ FIXTURE COORDINATION:** COORDINATE LOCATIONS FOR DIFFUSERS, AND RETURN AIR GRILLES TO THE GREATEST EXTENT POSSIBLE IN ORDER TO MAINTAIN LIGHTING LAYOUT INDICATED IN THE DRAWINGS. MEPEFP CONTRACTORS SHALL COORDINATE WORK WITH OTHER TRADES PRIOR TO INSTALLATION.

R DIVISION 26 - ELECTRICAL

- 26.01. MEP DEVICE/ FIXTURE COORDINATION:** COORDINATE LOCATIONS FOR DIFFUSERS, AND RETURN AIR GRILLES TO THE GREATEST EXTENT POSSIBLE IN ORDER TO MAINTAIN LIGHTING LAYOUT INDICATED IN THE DRAWINGS. MEPEFP CONTRACTORS SHALL COORDINATE WORK WITH OTHER DISCIPLINES PRIOR TO INSTALLATION. ALL ELECTRICAL ITEMS INDICATED IN OR ON CABINETS OR MILLWORK SHALL BE SUPPLIED, INSTALLED AND COORDINATED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
- 26.02. CENTER CEILING DEVICES:** CENTER LIGHTS, SUPPLY DIFFUSERS, RETURN GRILLES, SPRINKLER HEADS, ETC. IN CEILING PANELS IF NOT OTHERWISE INDICATED.
- 26.03. ELECTRICAL BOXES IN RATED PARTITIONS:** WHERE ELECTRICAL BOXED ARE INSTALLED IN FIRE-RATED METAL STUD PARTITIONS, INSTALL BOXES NO LARGER THAN SIXTEEN SQUARE INCHES (16 SI) IN AREA, AND DO NOT EXCEED ONE-HUNDRED SQUARE INCHES (100 SI) OF METALLIC BOX PER ONE-HUNDRED SQUARE FEET (100 SF) OF FIRE-RATED WALL AREA. WHERE ELECTRICAL REQUIREMENTS DICTATE A HIGHER RATION, TREAT THE ELECTRICAL BOXES WITH CODE APPROVED METHOD TO ASSURE CONTINUOUS RATING. FURTHER, DO NOT INSTALL ELECTRICAL BOXES BACK-TO-BACK IN THE SAME STUD CAVITY WITHOUT APPROVED FIRE-RATED TREATMENT.
- 26.04. ELECTRICAL DEVICES IN OR NEAR MILLWORK:** CAREFULLY LOCATE ELECTRICAL BOXES FOR DEVICES IN OR NEAR MILLWORK AND/OR CASEWORK TO ASSURE COORDINATED INSTALLATION. LOCATE ELECTRICAL DEVICES ABOVE COUNTERTOP SUCH THAT THE DEVICE COVER PLATE WILL NOT INTERFERE WITH SCHEDULED BACKSPASH OR SIDESPLASH.

R DIVISION 31-EARTHWORK

- 31.01. OWNER PROVIDED MATERIAL:** THE OWNER WILL PROVIDE, DELIVERED TO THE PROJECT CONSTRUCTION SITE, FILL MATERIAL (CHERT) SUITABLE FOR USE AS FILL ON THIS PROJECT. THE CONTRACTOR REMAINS RESPONSIBLE FOR THE PLACEMENT, COMPACTION, AND ALL RELATED ONSITE ACTIVITIES AS REQUIRED AND OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
- 31.02. SCHEDULE AND QUANTITY:** THE CONTRACTOR SHALL PROVIDE A SCHEDULE TO THE OWNER UPON AWARD OF CONTRACT OUTLINING THE APPROXIMATE TIMES AND DURATIONS FOR WHICH FILL MATERIAL IS TO BE DELIVERED. THE CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED OWNER'S REPRESENTATIVE TO REQUEST MATERIAL QUANTITIES ACCORDING TO AN AGREED UPON SCHEDULE WHICH WILL NOT DELAY THE WORK.

GENERAL NOTES

G1.02

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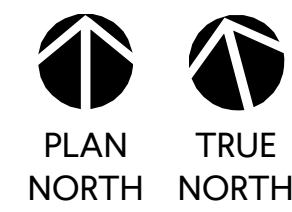
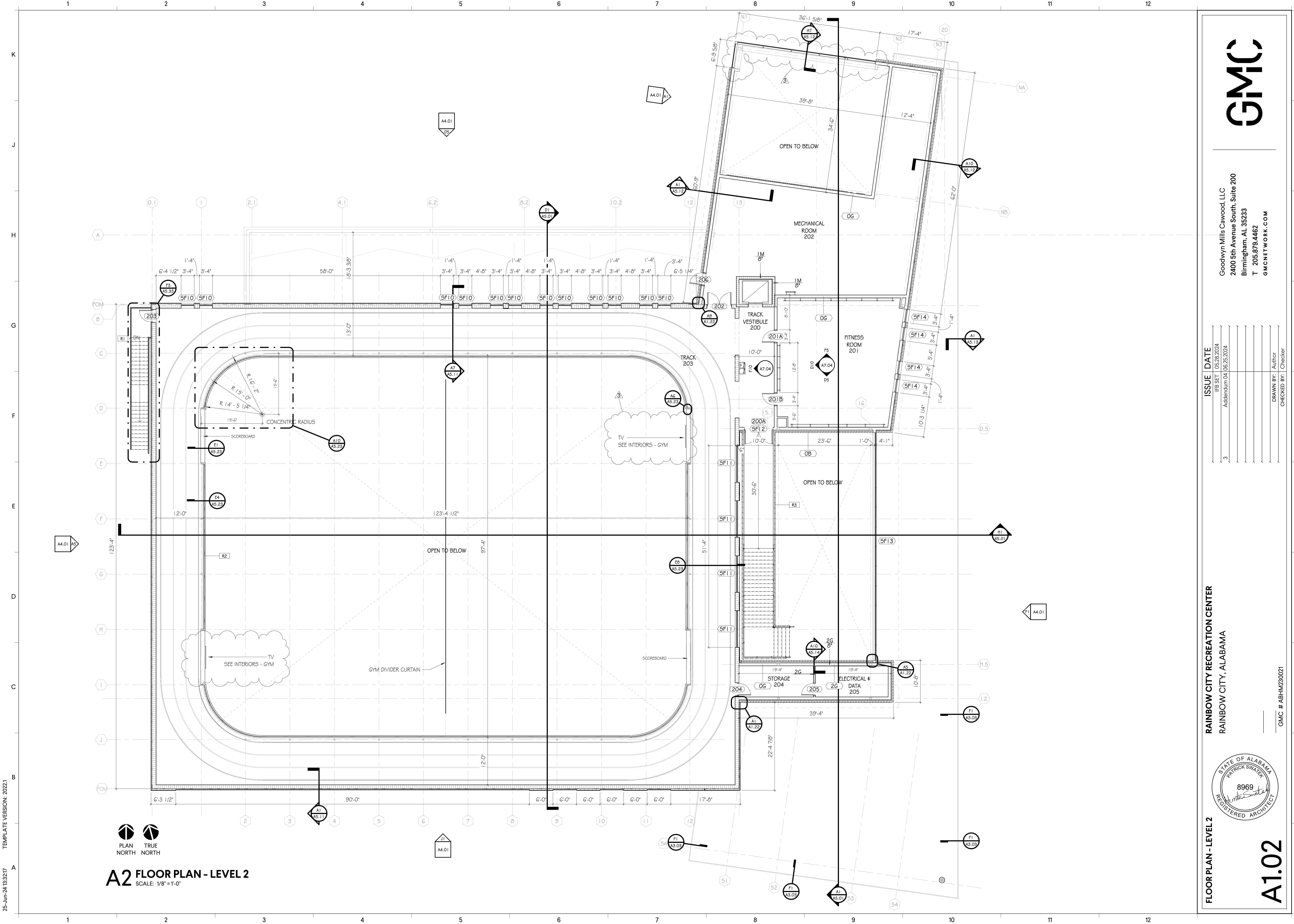
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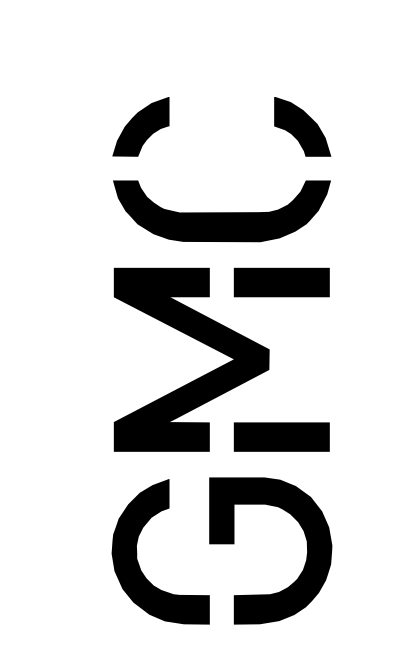
STATE OF ALABAMA
PATRICK SWARTZ
8969
REGISTERED ARCHITECT

25-Jun-24 17:37:57
TEMPLATE VERSION: 2023.1

25-Jun-24 13:32:17



A2 FLOOR PLAN - LEVEL 2
SCALE: 1/8"=1'-0"



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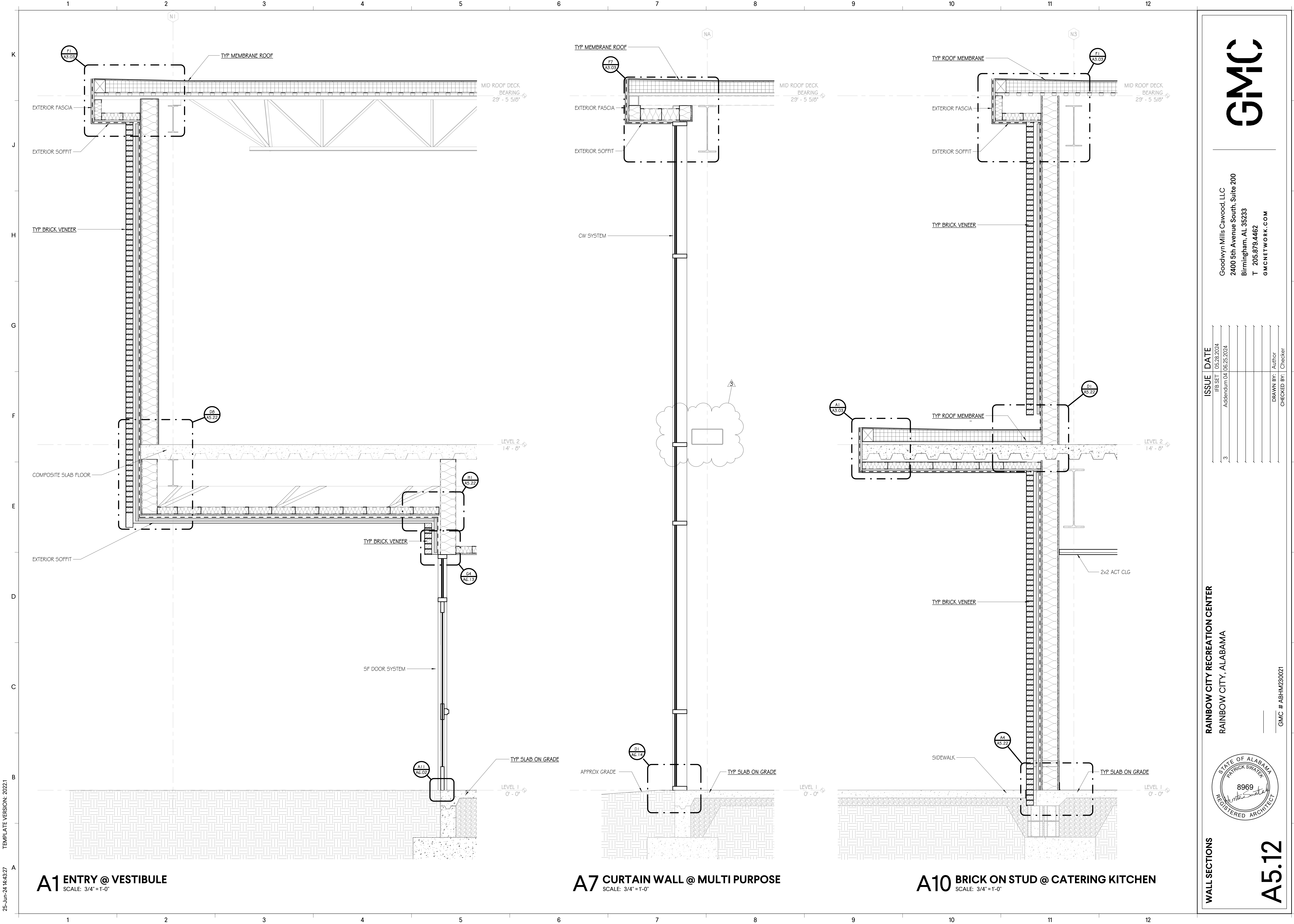
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FLOOR PLAN - LEVEL 2



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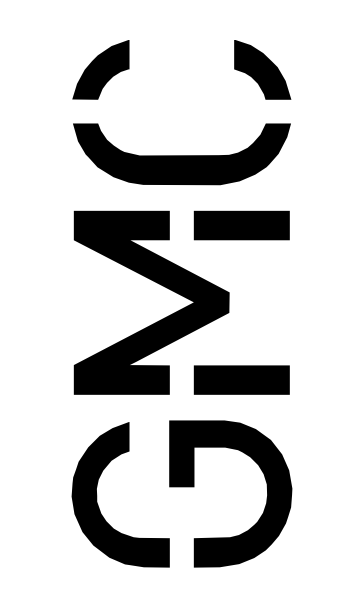
A1.02



A1 ENTRY @ VESTIBULE
SCALE: 3/4"=1'-0"

A7 CURTAIN WALL @ MULTI PURPOSE
SCALE: 3/4"=1'-0"

A10 BRICK ON STUD @ CATERING KITCHEN
SCALE: 3/4"=1'-0"

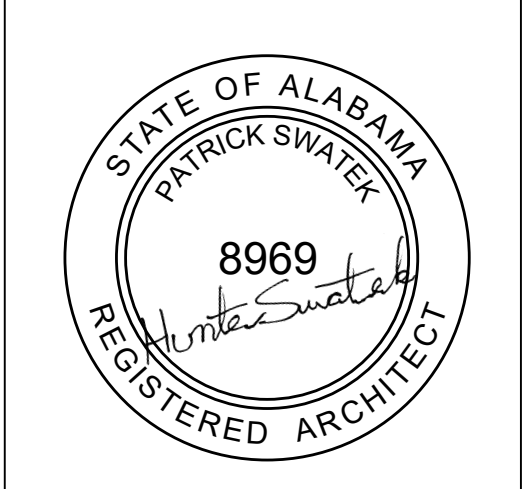


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WALL SECTIONS
GMC # ABHM230021
A5.12

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RAILING GENERAL NOTES

- R.01. **CODE COMPLIANCE:** SEE GENERAL NOTES DIVISION 1 GENERAL REQUIREMENTS ITEM 1.09 FOR CODE COMPLIANCE.
- R.02. **MULTI-TRADE COORDINATION:** SEE GENERAL NOTES DIVISION 1 GENERAL REQUIREMENTS ITEM 1.02 FOR MULTI-TRADE COORDINATION.
- R.03. **HANDRAIL DIMENSIONS:** DIMENSIONS FOR HAND RAILINGS AS INDICATED IN CONTRACT DOCUMENTS. WIDTH BETWEEN HANDRAILS AT STAIRS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT BE LESS THAN 44 INCHES CLEAR. WIDTH BETWEEN HANDRAILS AT RAMP AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT BE LESS THAN 36 INCHES. HEIGHT OF HANDRAILS ABOVE STAIR TREAD NOSING OR FINISH SURFACES OF RAMP AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL BE UNIFORM AND NOT LESS THAN 24 INCHES AND NOT MORE THAN 38 INCHES. DIAMETER OF HANDRAILS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT HAVE AN OUTSIDE DIAMETER OF LESS THAN 1-1/4 INCHES AND NOT GREATER THAN 2 INCHES. NON CIRCULAR HANDRAILS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES AND NOT GREATER THAN 6-1/4 INCHES WITH A MAXIMUM CROSS-SECTION DIMENSION OF 2-1/4 INCHES. EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCHES. HANDRAIL EXTENSIONS AS INDICATED IN CONTRACT DOCUMENTS, BUT WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN FLIGHTS, THE HANDRAILS SHALL EXTEND HORIZONTALLY AT LEAST 12 INCHES BEYOND THE TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT RAMP WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN RUNS, THE HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12 INCHES MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. THE EXTENSIONS OF HANDRAILS SHALL BE IN THE SAME DIRECTION OF THE STAIR FLIGHT AS STAIRWAYS AND RAMP RUNS AT RAMP. CLEAR SPACE BETWEEN HANDRAIL AND WALL OR OTHER SURFACE AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL BE A MINIMUM OF 1-1/2 INCHES.
- R.04. **GUARDRAIL DIMENSIONS:** DIMENSIONS FOR GUARDRAILS AS INDICATED IN CONTRACT DOCUMENTS. HEIGHT OF GUARDRAILS ABOVE ADJACENT WALKING SURFACES, ADJACENT FIXED SEATING, OR THE LINE CONNECTING THE LEADING EDGE OF TREADS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT BE LESS THAN 42 INCHES. OPENINGS IN GUARDRAILS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT ALLOW THE PASSAGE OF A SPHERE 4 INCHES IN DIAMETER FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT (FOR ROOF ACCESS SHALL PREVENT THE PASSAGE OF A SPHERE 21 INCHES IN DIAMETER). FROM A HEIGHT OF 36 INCHES TO 42 INCHES GUARDS SHALL NOT HAVE OPENINGS WHICH ALLOW PASSAGE OF A SPHERE 4-3/8 INCHES IN DIAMETER. THE TRIANGULAR OPENINGS AT THE OPEN SIDES OF A STAIR FORMED BY THE RISER, TREAD, AND BOTTOM RAIL SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER.

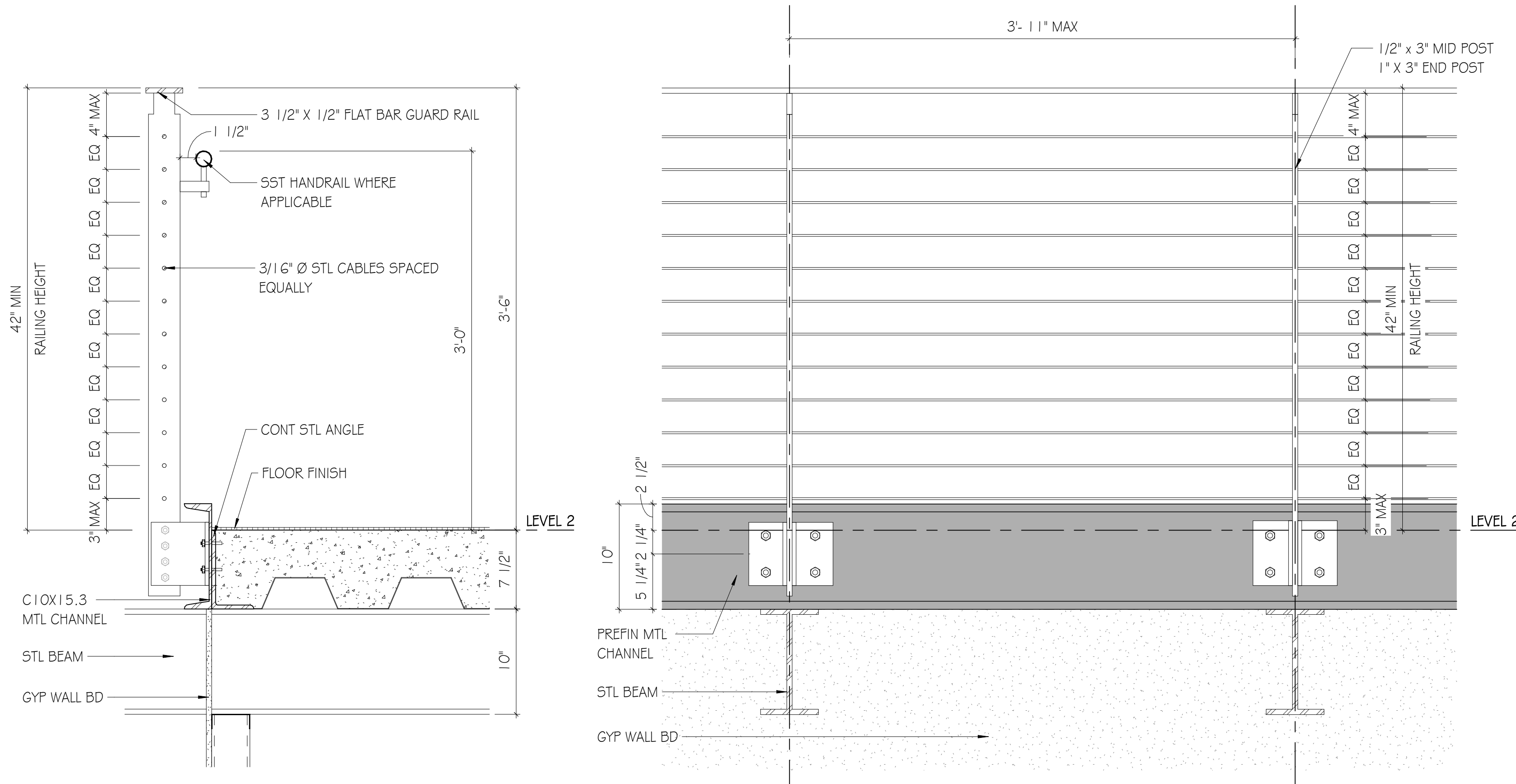
RAILING SCHEDULE

RAIL TYPE	DESCRIPTION	LOCATION	MOUNT	PARTS	MATERIAL	FINISH	COMMENTS
R1	BALUSTER GUARDRAIL WITH HANDRAIL	FIRE EGRESS STAIRS	SMW	GR / HR - I	STL	GALVANIZED	CONTRACTOR FABRICATED
R1	BALUSTER GUARDRAIL WITH HANDRAIL	FIRE EGRESS STAIRS	SMW	GR / HR - I	STL	GALVANIZED	CONTRACTOR FABRICATED
R2	CABLE GUARDRAIL	GYM TRACK	SSM	GR	STL	PNT	CONTRACTOR FABRICATED
R3	CABLE GUARDRAIL	LOBBY BRIDGE	SSM	GR / HR - I	SSS	SATIN	ORNAMENTAL RAILINGS
R3	CABLE GUARDRAIL WITH HANDRAIL	GRAND STAIRS	SSM	GR / HR - I	SSS	SATIN	ORNAMENTAL RAILINGS
R3	CABLE GUARDRAIL WITH HANDRAIL	GRAND STAIRS	SSM	GR / HR - I	SSS	SATIN	ORNAMENTAL RAILINGS
R3	CABLE GUARDRAIL	LOBBY BRIDGE	SSM	GR / HR - I	SSS	SATIN	ORNAMENTAL RAILINGS

RAILING ABBREVIATIONS

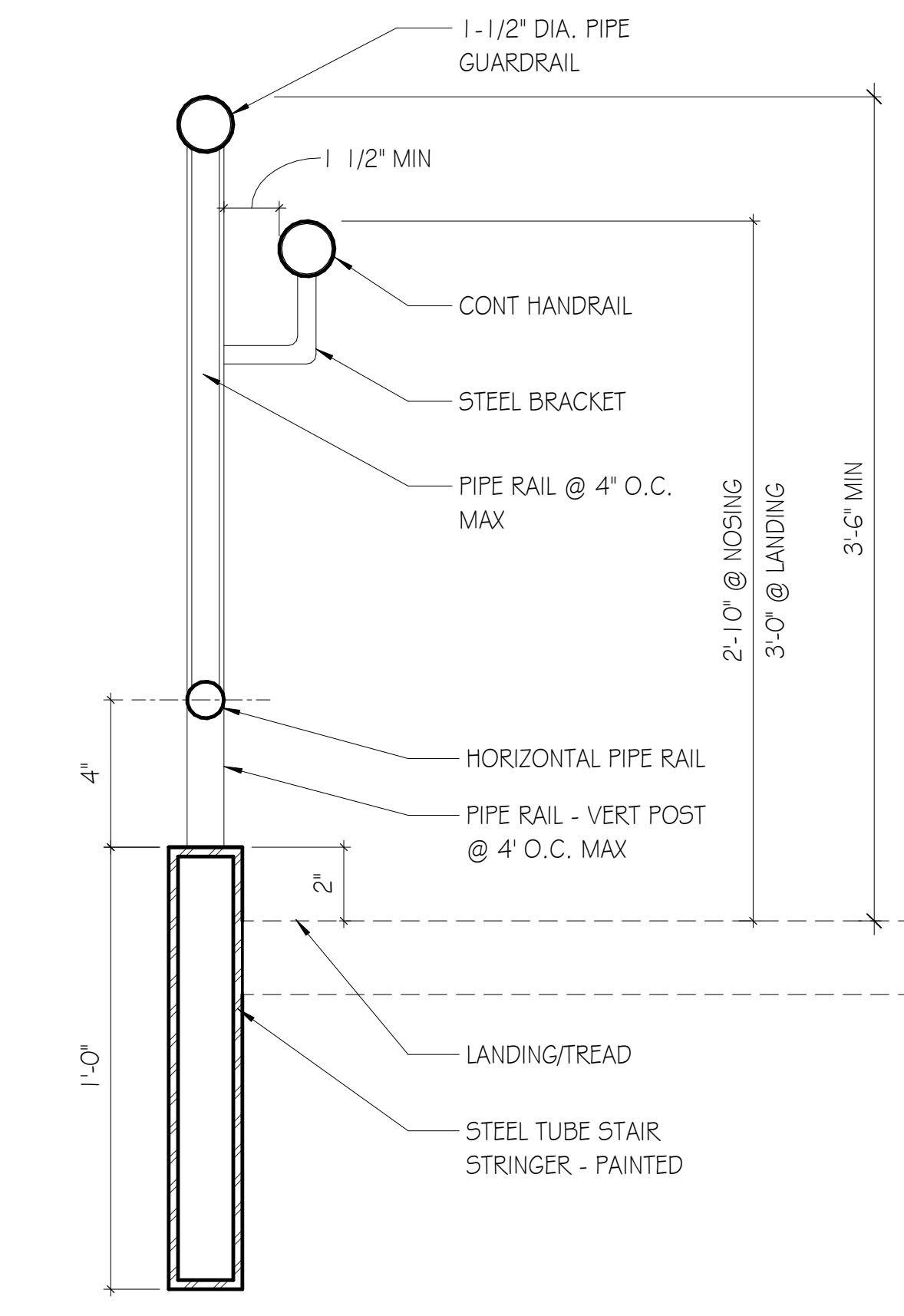
- WM - WALL MOUNTED
- FMW - FLOOR MOUNTED/WELDED TO EMBED
- FMC - FLOOR (TREAD/LANDING) MOUNTED/CORED
- PF - PREFINISHED
- PNT - PAINTED FINISH
- SSS - STAINLESS STEEL
- STL - STEEL
- G - GLASS RAILING INFILL
- HR-1 - HANDRAIL
- HR-2 - DOUBLE SIDED HANDRAIL
- GR - GUARDRAIL
- SMW - STRINGER MOUNTED/WELDED
- ALUM - ALUMINUM
- CBL - CABLE RAILING INFILL
- WD - WOOD
- STN - STAINED FINISH
- SL - SEALED FINISH
- WI - WROUGHT IRON
- SSM - SIDE STRINGER MOUNTED

* FOR R2 ELEVATIONS AND SECTIONS, SEE A5.23

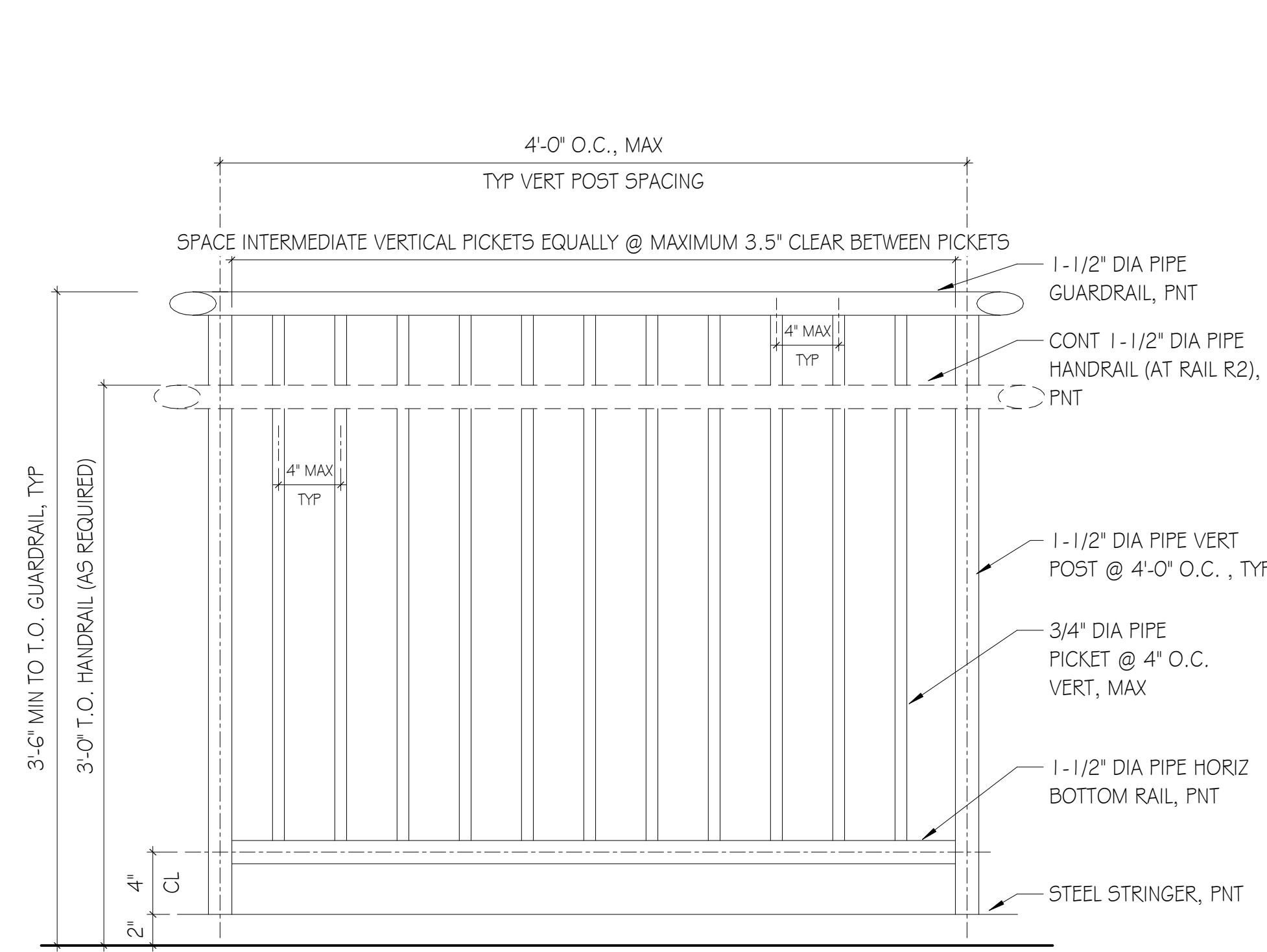


D1 CABLE RAIL SECTION - R3
SCALE: 1 1/2" = 1'-0"

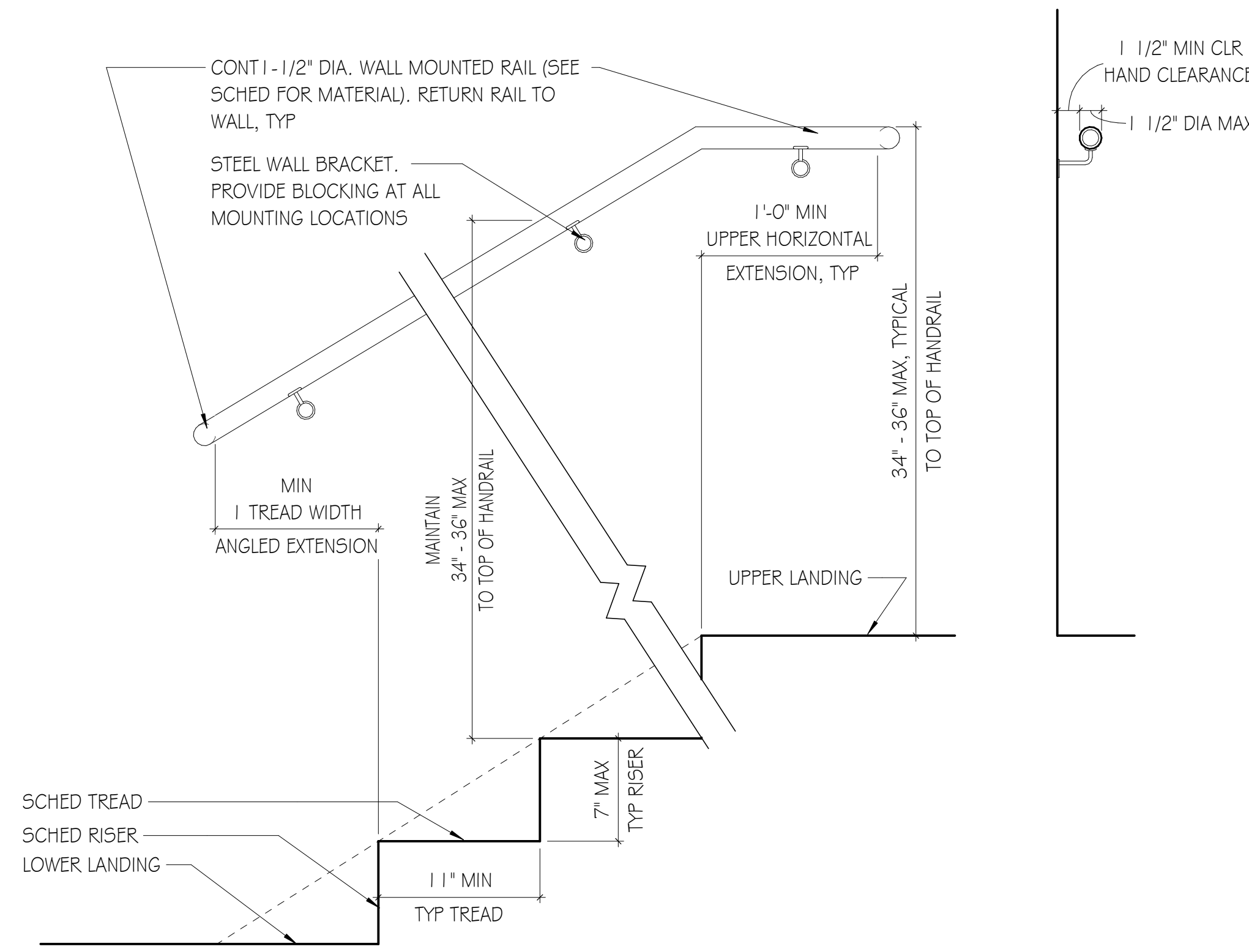
D4 CABLE RAIL ELEVATION - R3
SCALE: 1 1/2" = 1'-0"



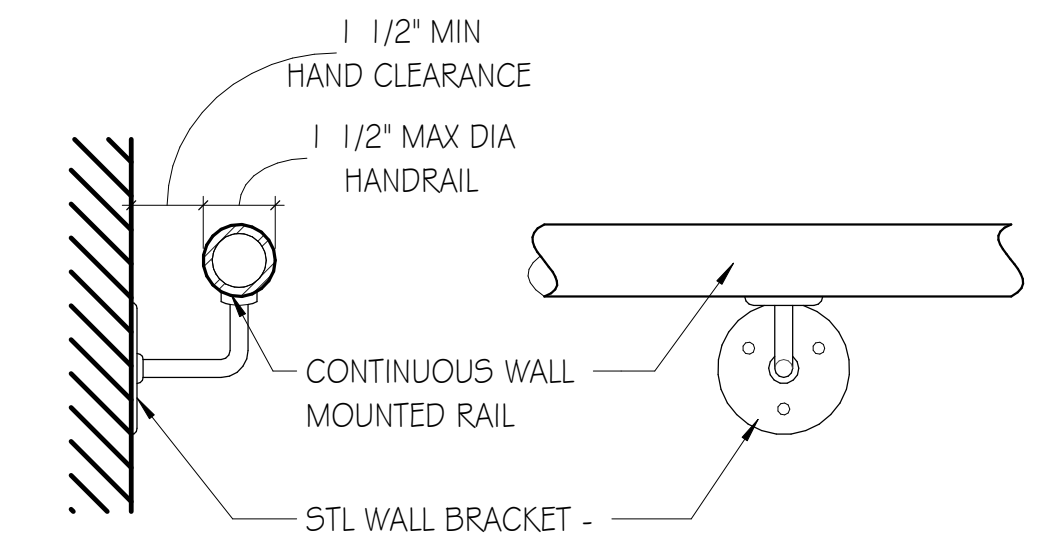
A1 TYPICAL RAIL MOUNT - R1
SCALE: 3" = 1'-0"



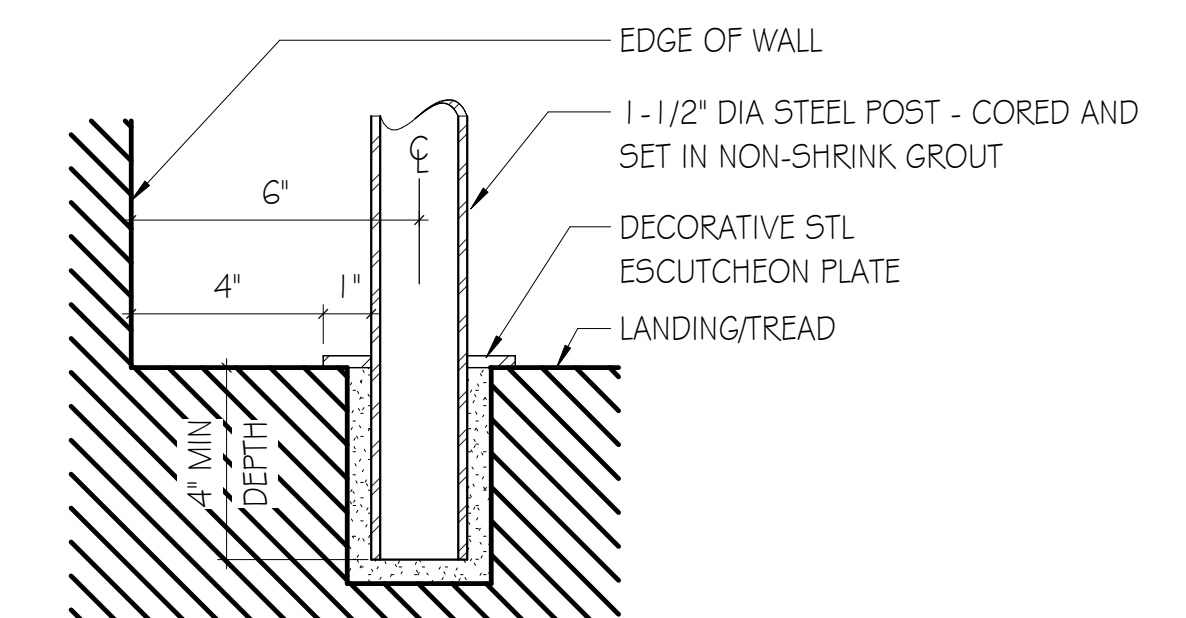
A4 TYPICAL GUARDRAIL ELEVATION - R1
SCALE: 1 1/2" = 1'-0"



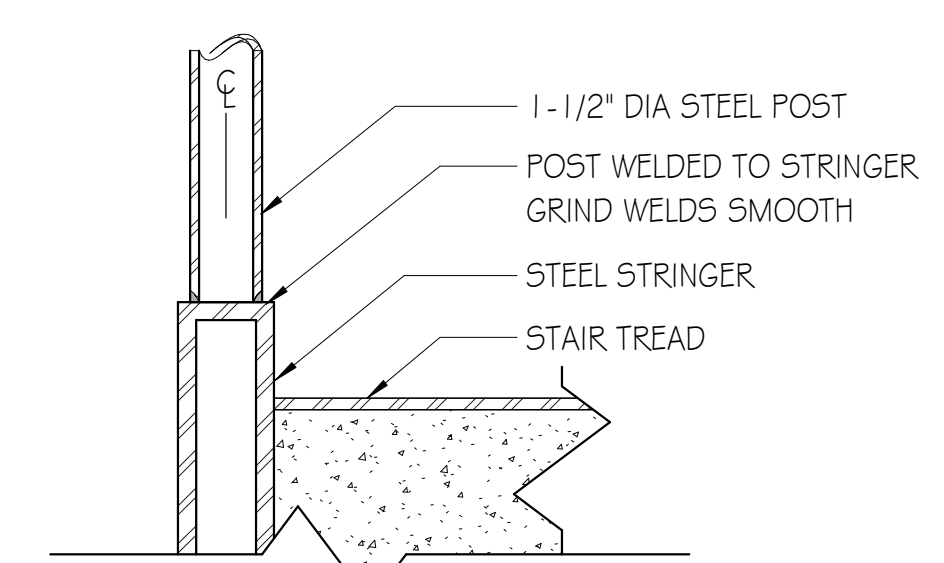
A7 TYPICAL WALL MOUNTED HANDRAIL - SLOPED EXTENSION
SCALE: 1 1/2" = 1'-0"



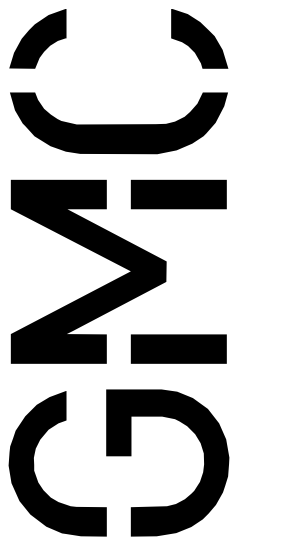
TYPICAL WALL MOUNTING



TYPICAL CORED LANDING/TREAD MOUNTING



TYPICAL INSIDE STRINGER MOUNTING

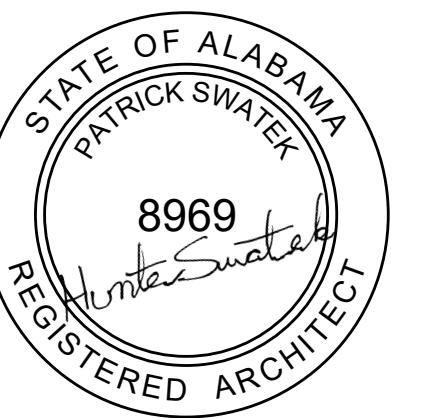


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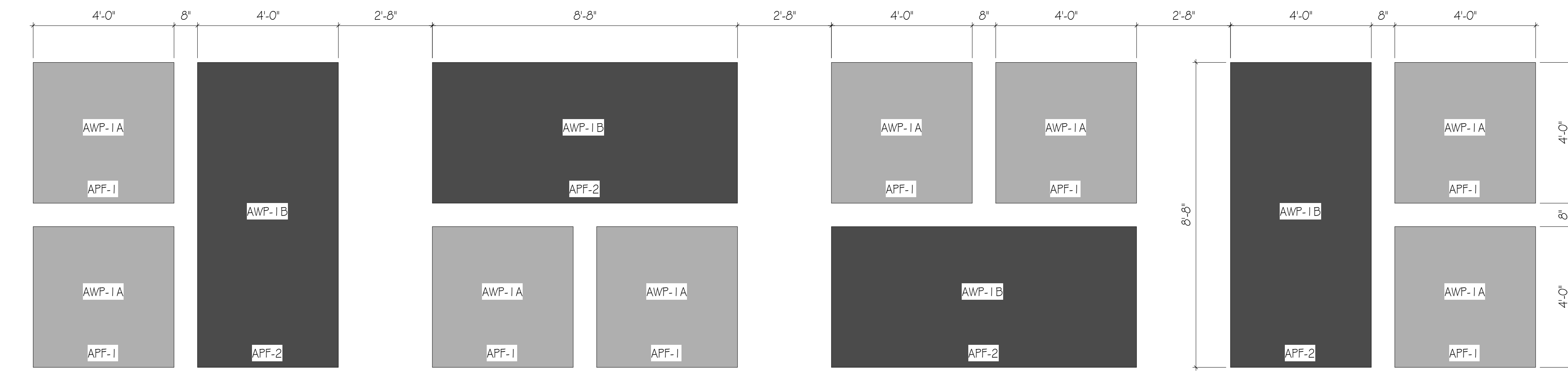
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RAILING SCHEDULE & DETAILS

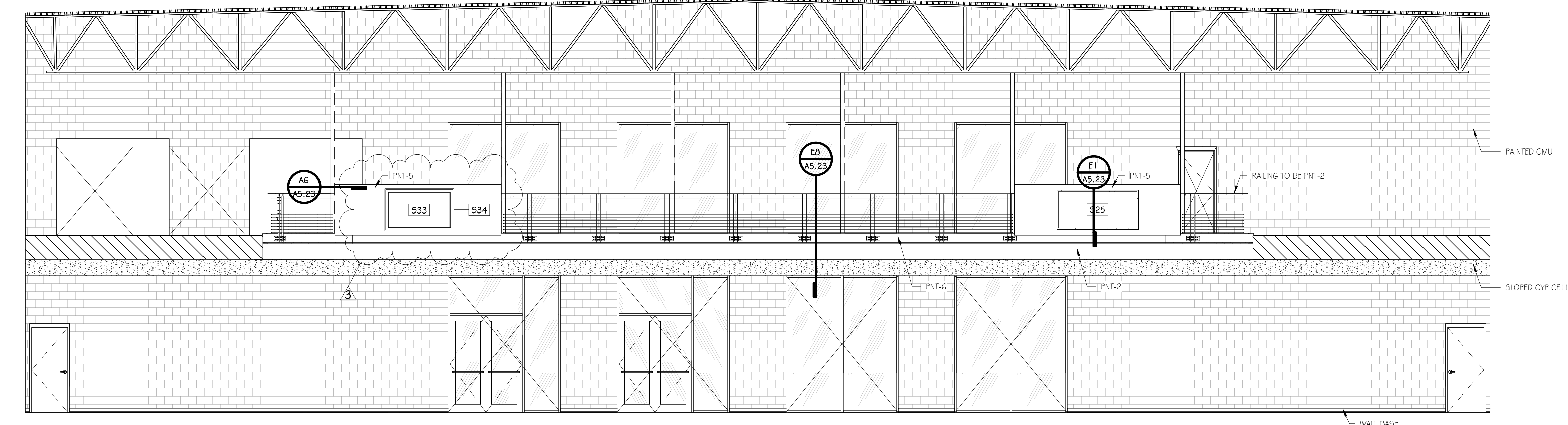
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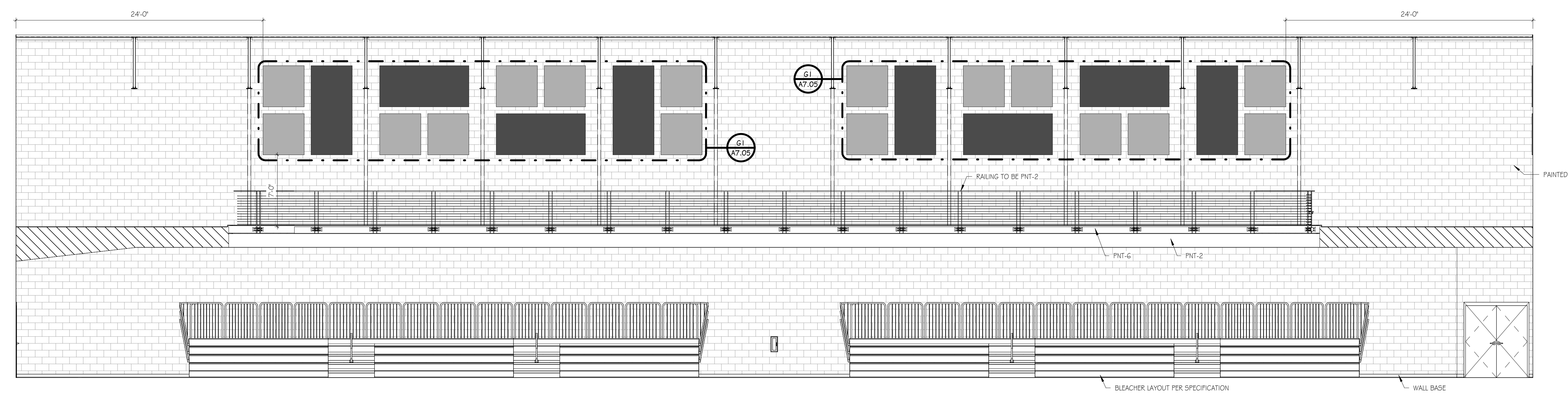


G1 GYM ACOUSTIC PANEL REPEAT
 SCAL 1/2" = 1'-0"
 E:

SPECIALTY EQUIPMENT SCHEDULE		
TAG	DESCRIPTION	COMMENTS
51	RESIDENTIAL WASHER	OFOI
52	RESIDENTIAL DRYER	OFOI
53	KEURIG COFFEE MAKER	OFOI
54	SIDE BY SIDE REFRIGERATOR	OFOI
56	2 TIER METAL LOCKER - 15' W x 18' D x 66" H	CFCI
57	3 TIER PHENOLIC LOCKER - 15' W x 18' D x 56 1/2" H	CFCI
58	SUMMIT BIM44GADA UNDERCOUNTER ICE MACHINE	CFCI
59	MICROWAVE - UNDERCOUNTER CABINET INSTALL	OFOI
510	WALL MOUNTED PROJECTION SCREEN - MANUAL	CFCI
511	3 TIER PHENOLIC LOCKER - 15' W x 18' D x 76" H	CFCI
512	ICE MACHINE - LARGE	OFOI
513	STAINLESS STEEL SHELF - ULINE H7500 - 60" W x 12" D x 10" H	CFCI
521	SQUARE ACOUSTICAL PANEL	CFCI
523	MIRROR - 4' W x 7' H	CFCI
524	MOUNTED BALLET BAR	CFCI
525	SCOREBOARD	CFCI
532	TV - 55"	OFOI
533	TV - 70"	CFCI
534	GYMNASIUM TV ENCLOSURE	CFCI



D1 GYM ELEVATION - EAST
 SCAL 3/16" = 1'-0"
 E:



A1 GYM ELEVATION - SOUTH
 SCAL 3/16" = 1'-0"
 E:

GMC

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 GMC # ABHM230021

STATE OF ALABAMA
 PATRICK SWATER
 8969
 Registered Architect

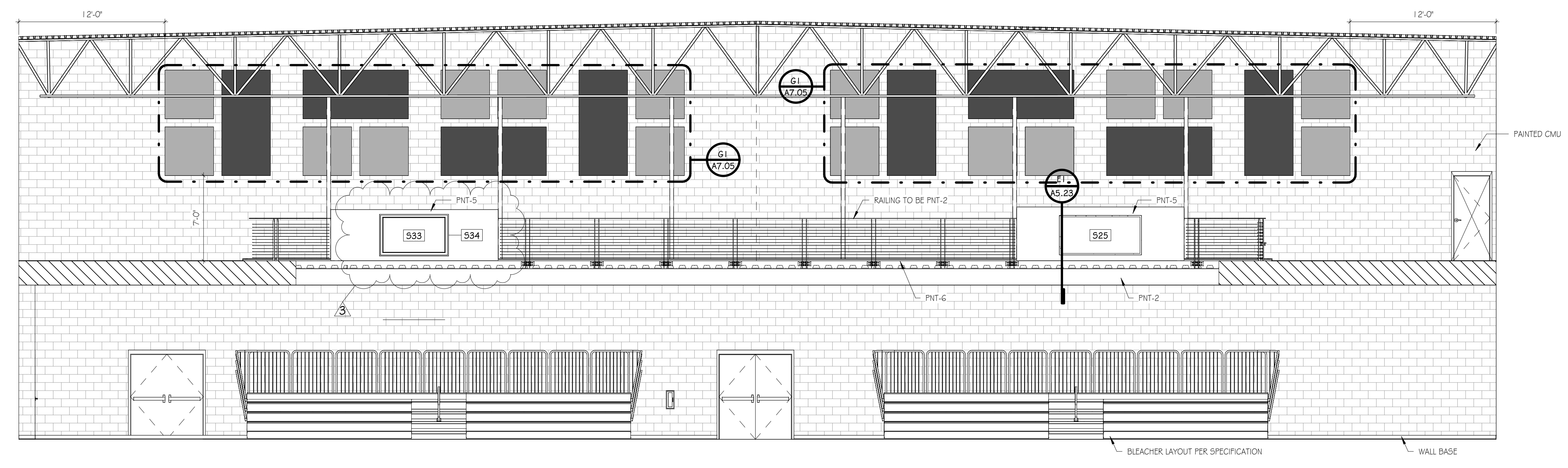
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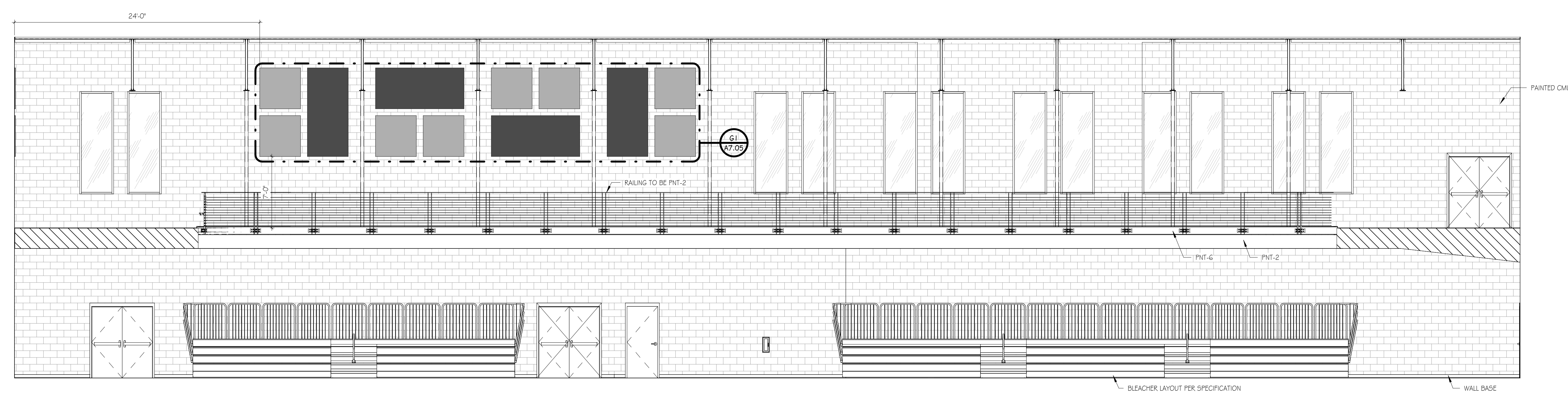
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K
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SPECIALTY EQUIPMENT SCHEDULE		
TAG	DESCRIPTION	COMMENTS
S1	RESIDENTIAL WASHER	OFOI
S2	RESIDENTIAL DRYER	OFOI
S3	KEURIG COFFEE MAKER	OFOI
S4	SIDE BY SIDE REFRIGERATOR	OFOI
S6	2 TIER METAL LOCKER - 15" W x 18" D x 66" H	CFCI
S7	3 TIER PHENOLIC LOCKER - 15" W x 18" D x 56 1/2" H	CFCI
S8	SUMMIT BIM44GADA UNDERCOUNTER ICE MACHINE	CFCI
S9	MICROWAVE - UNDERCOUNTER CABINET INSTALL	OFOI
S10	WALL MOUNTED PROJECTION SCREEN - MANUAL	CFCI
S11	3 TIER PHENOLIC LOCKER - 15" W x 18" D x 76" H	CFCI
S12	ICE MACHINE - LARGE	OFOI
S13	STAINLESS STEEL SHELF - ULINE H7500 - 60" W x 12" D x 10" H	CFCI
S21	SQUARE ACOUSTICAL PANEL	CFCI
S23	MIRROR - 4' W x 7' H	CFCI
S24	MOUNTED BALLET BAR	CFCI
S25	SCOREBOARD	CFCI
S32	TV - 55"	OFOI
S33	TV - 70"	CFCI
S34	GYMNASIUM TV ENCLOSURE	CFCI

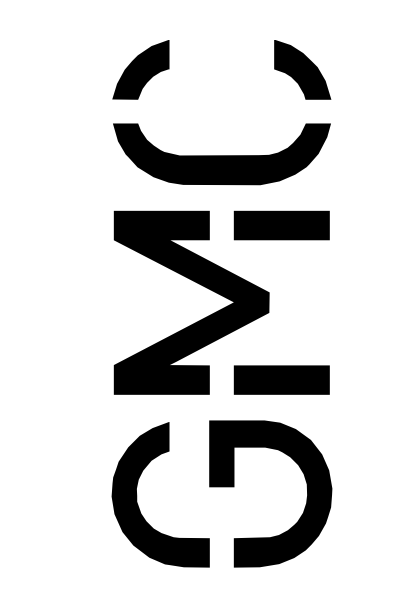


D1 GYM ELEVATION - WEST
 SCAL 3/16" = 1'-0"
 E:



A1 GYM ELEVATION - NORTH
 SCAL 3/16" = 1'-0"
 E:

1 2 3 4 5 6 7 8 9 10 11 12



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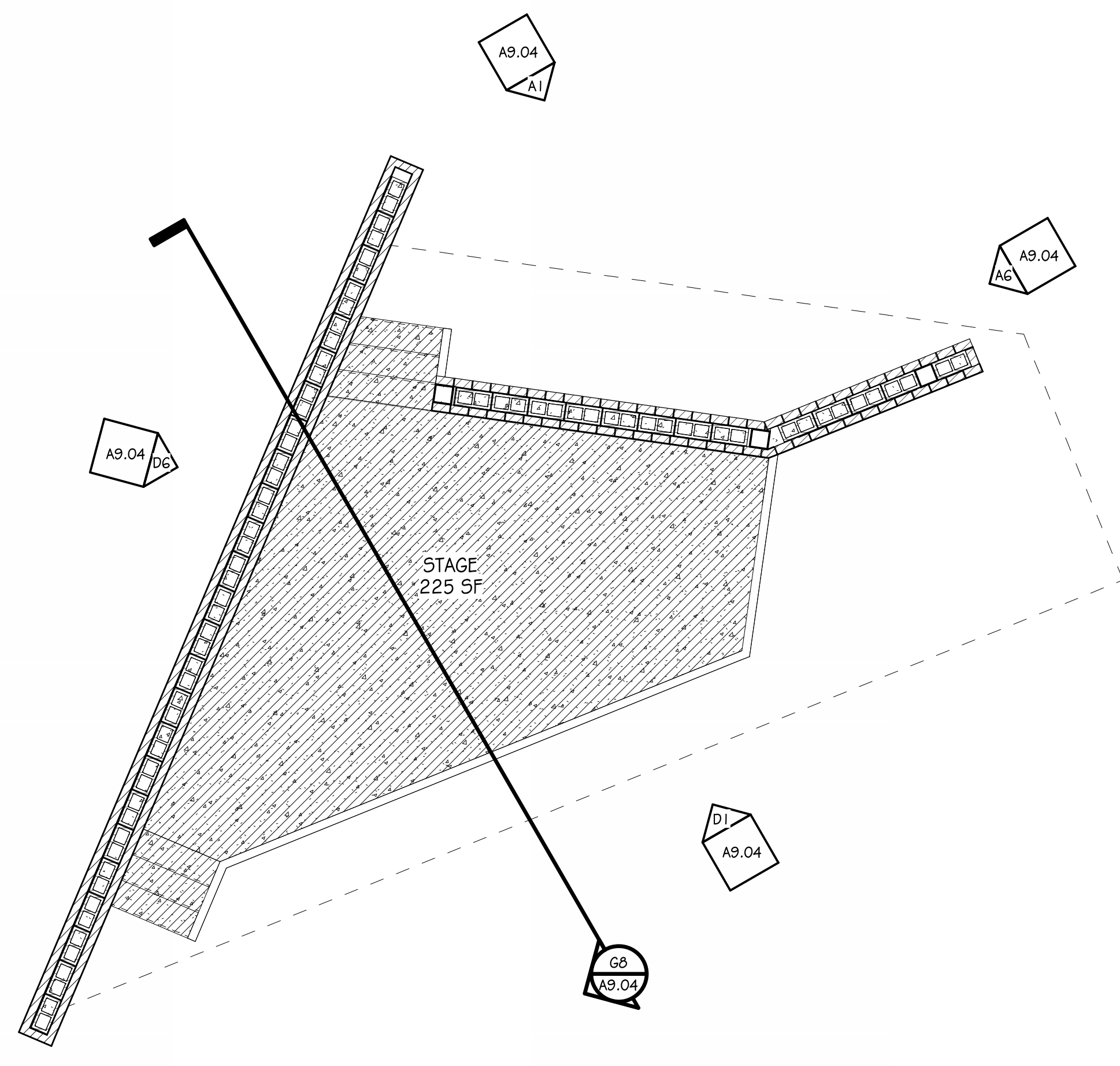


INTERIORS - GYM

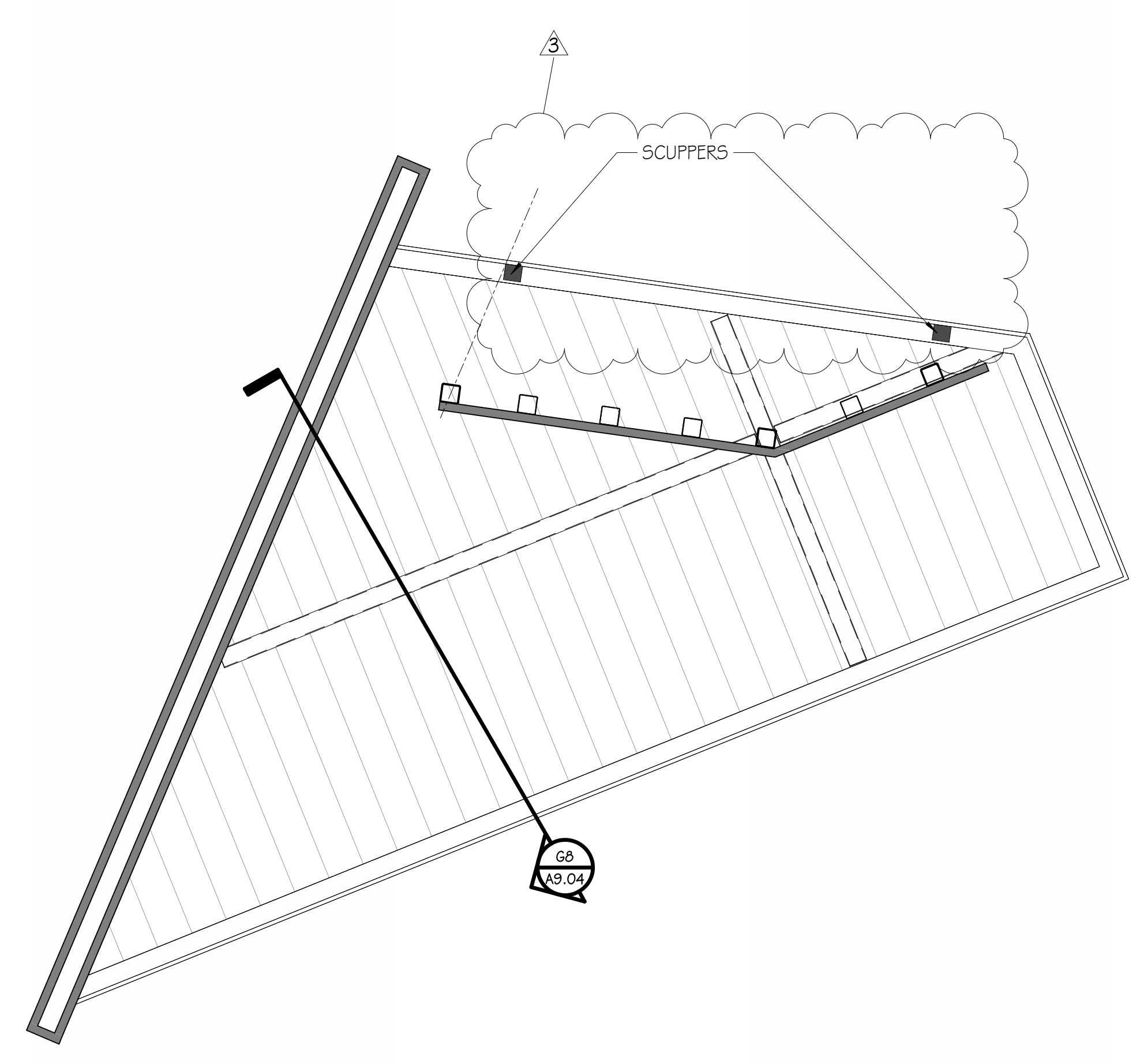
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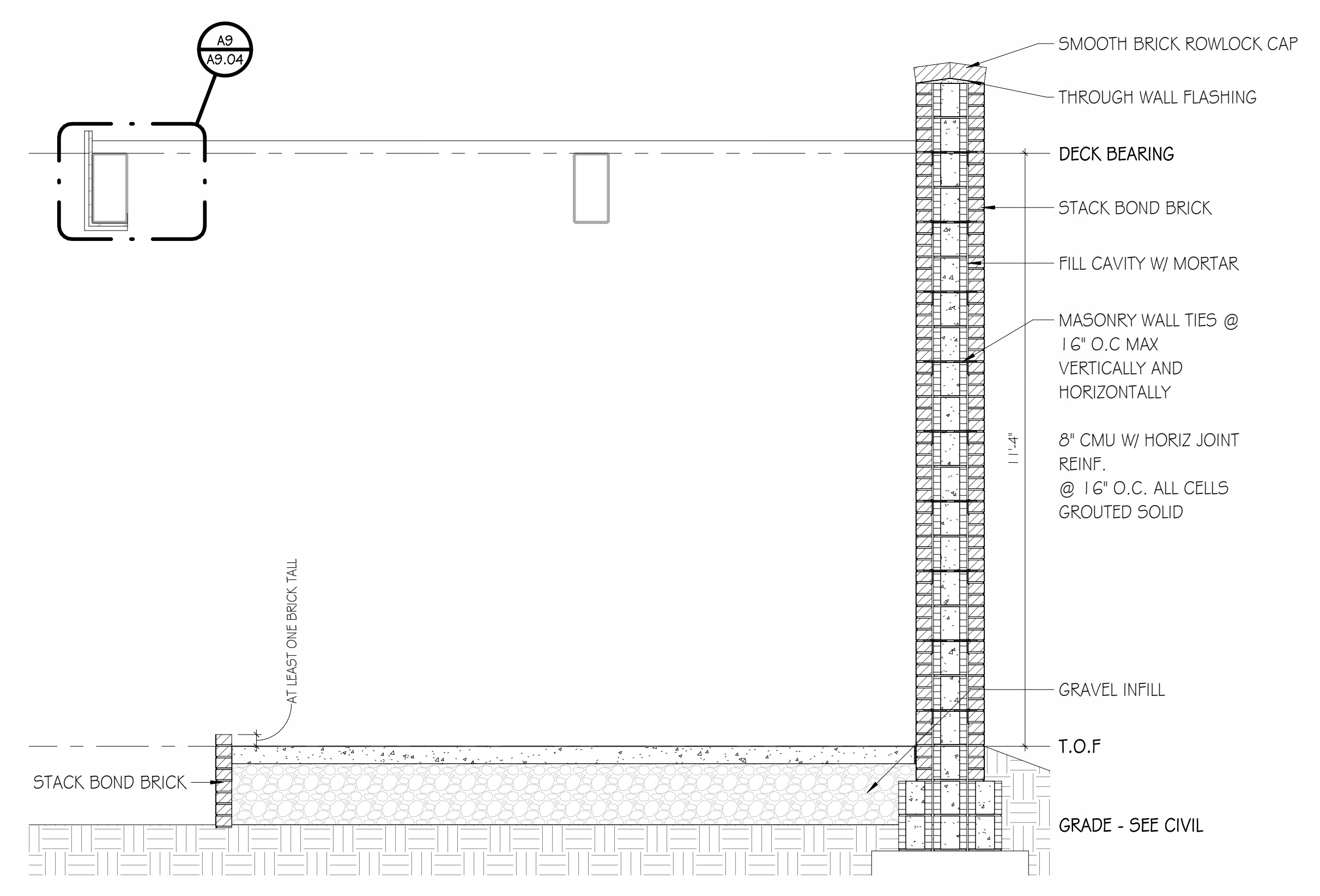
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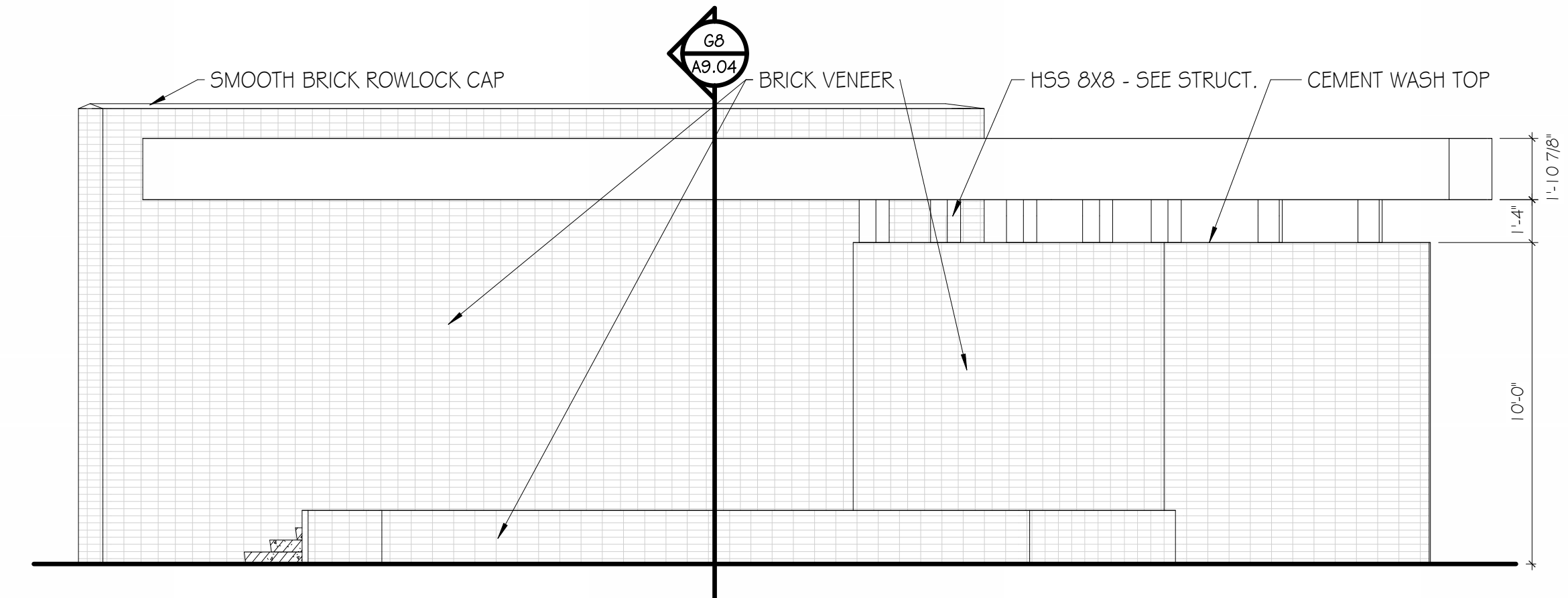
G1 AMPHITHEATRE PLAN
SCALE: 1/4" = 1'-0"



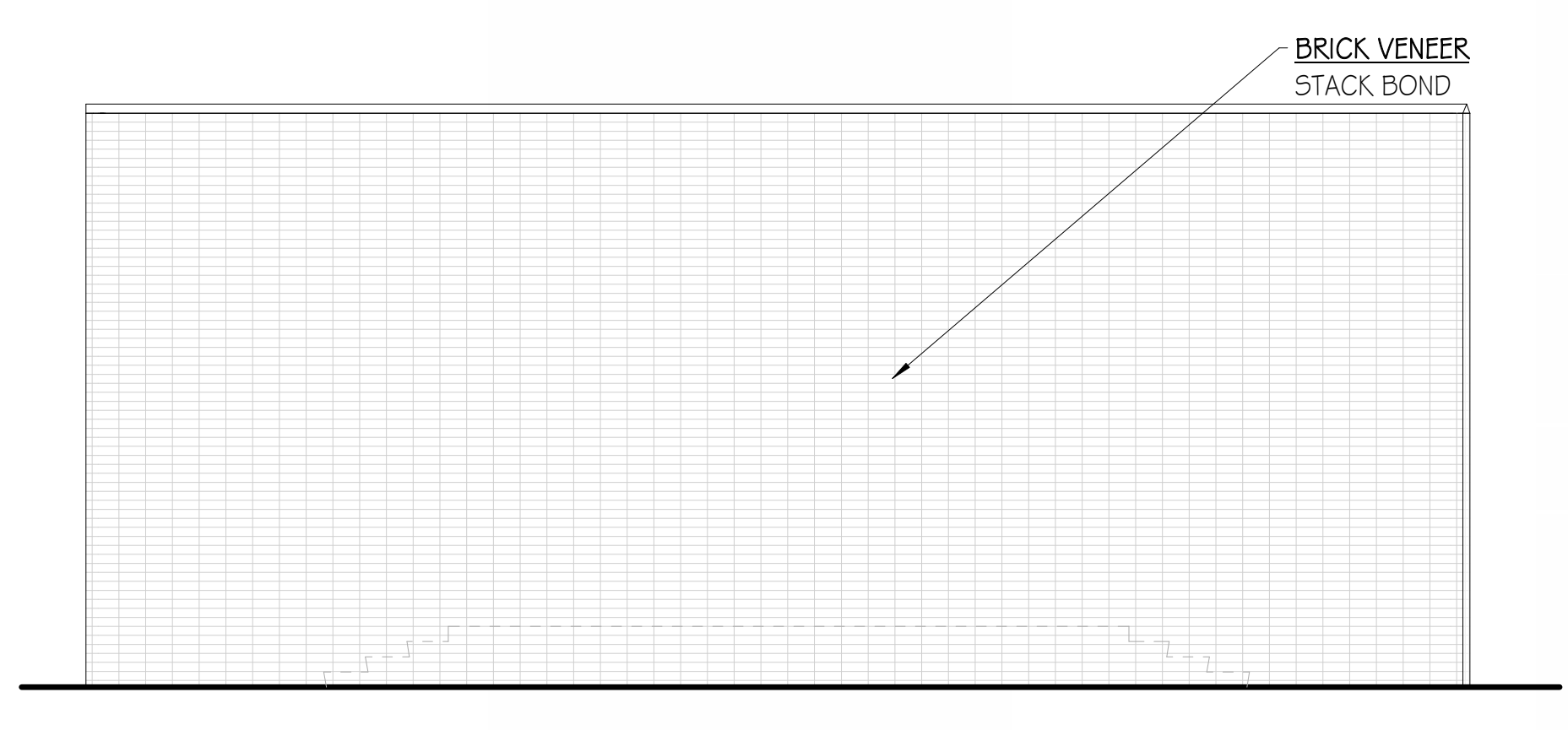
G5 AMPHITHEATRE RCP
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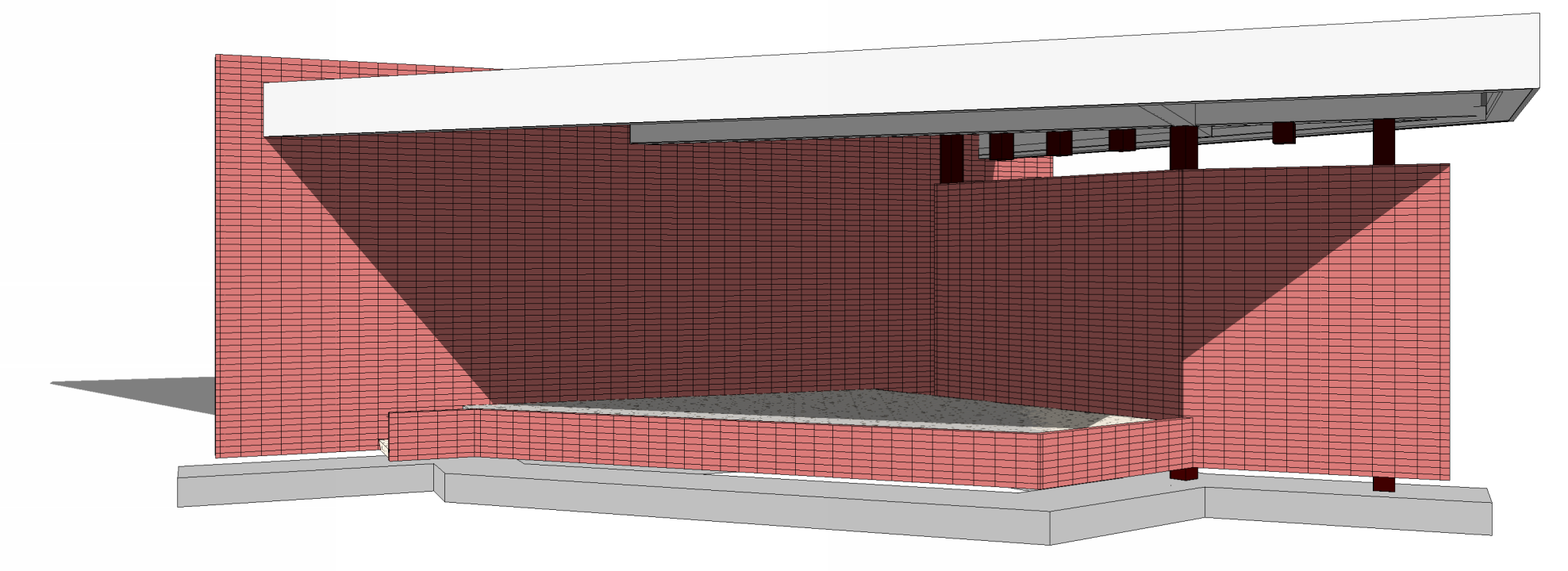
G8 AMPHITHEATRE SECTION
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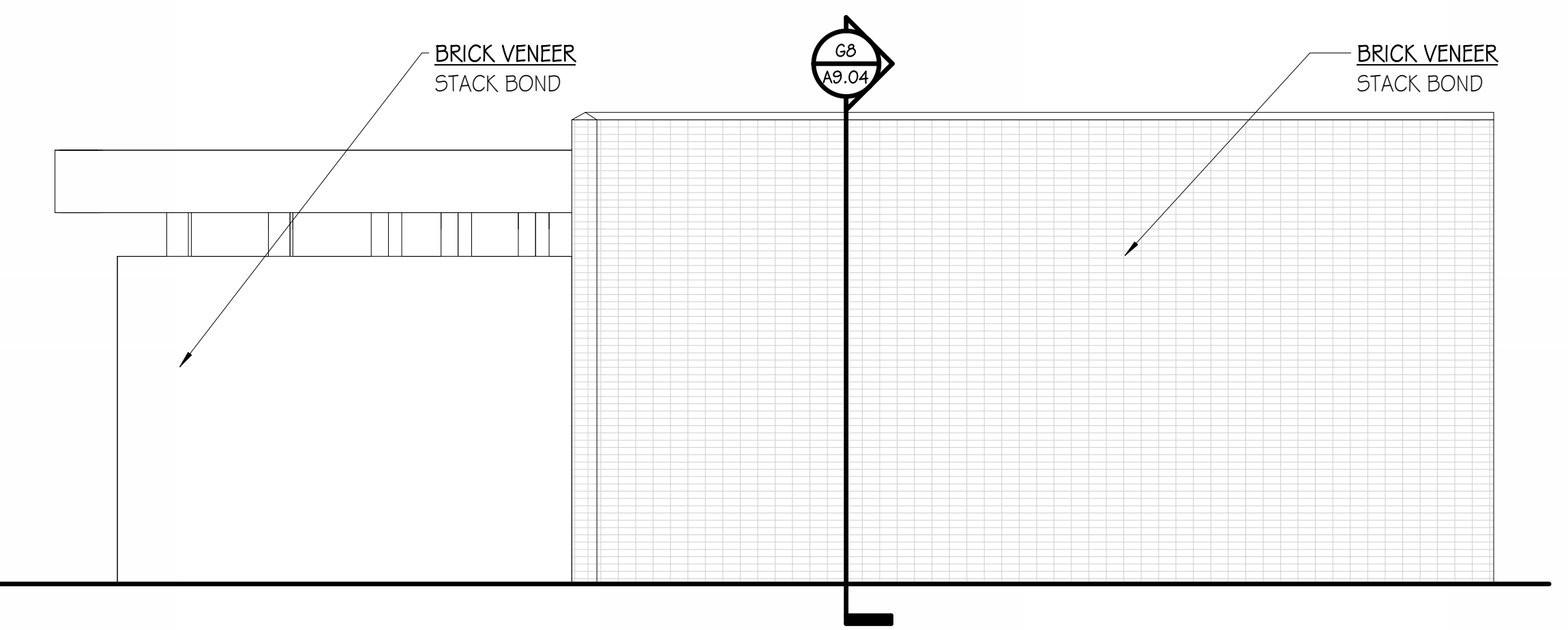
D1 SOUTH AMPHITHEATRE
SCALE: 1/4" = 1'-0"



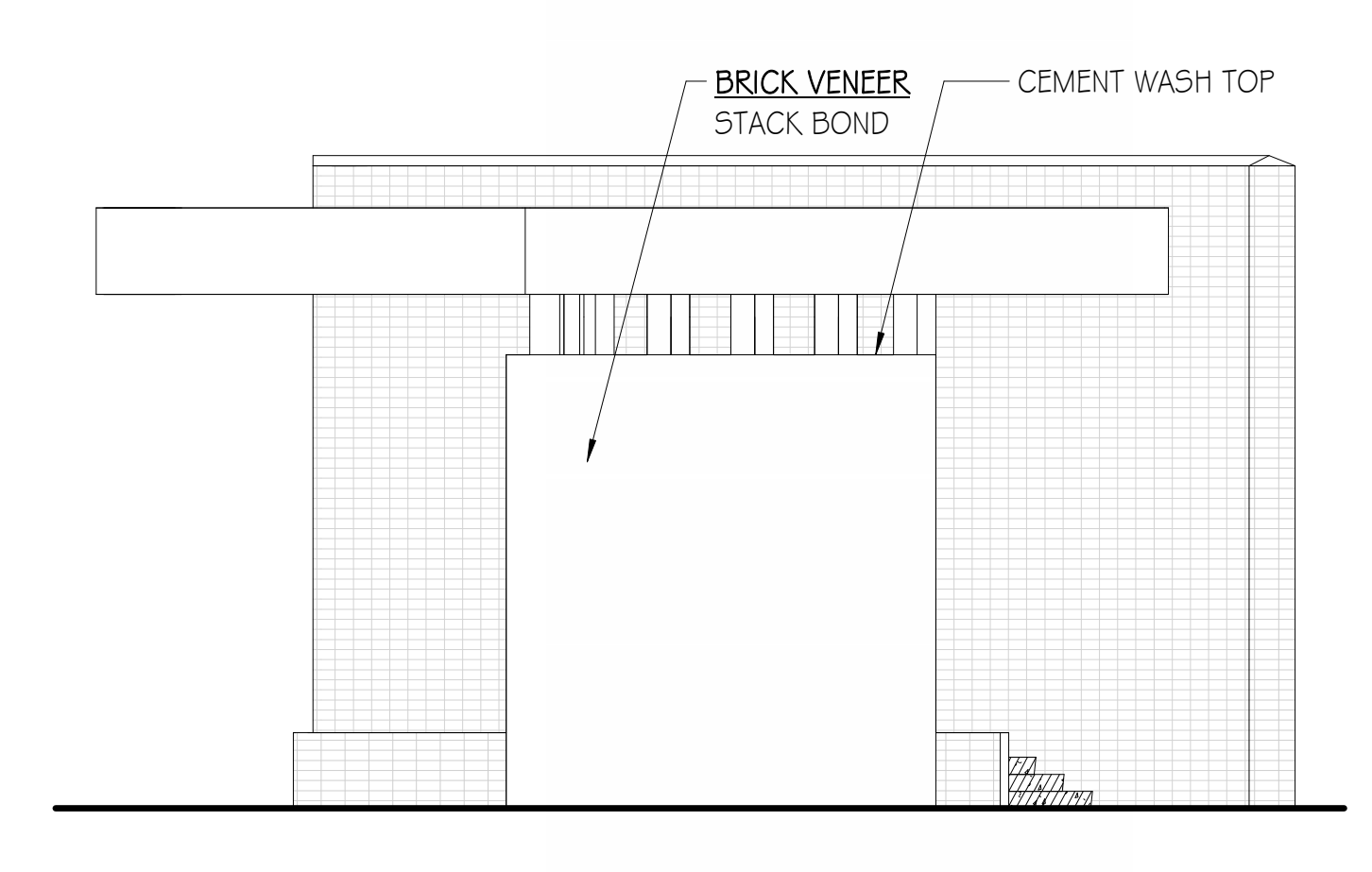
D6 WEST AMPHITHEATRE
SCALE: 1/4" = 1'-0"



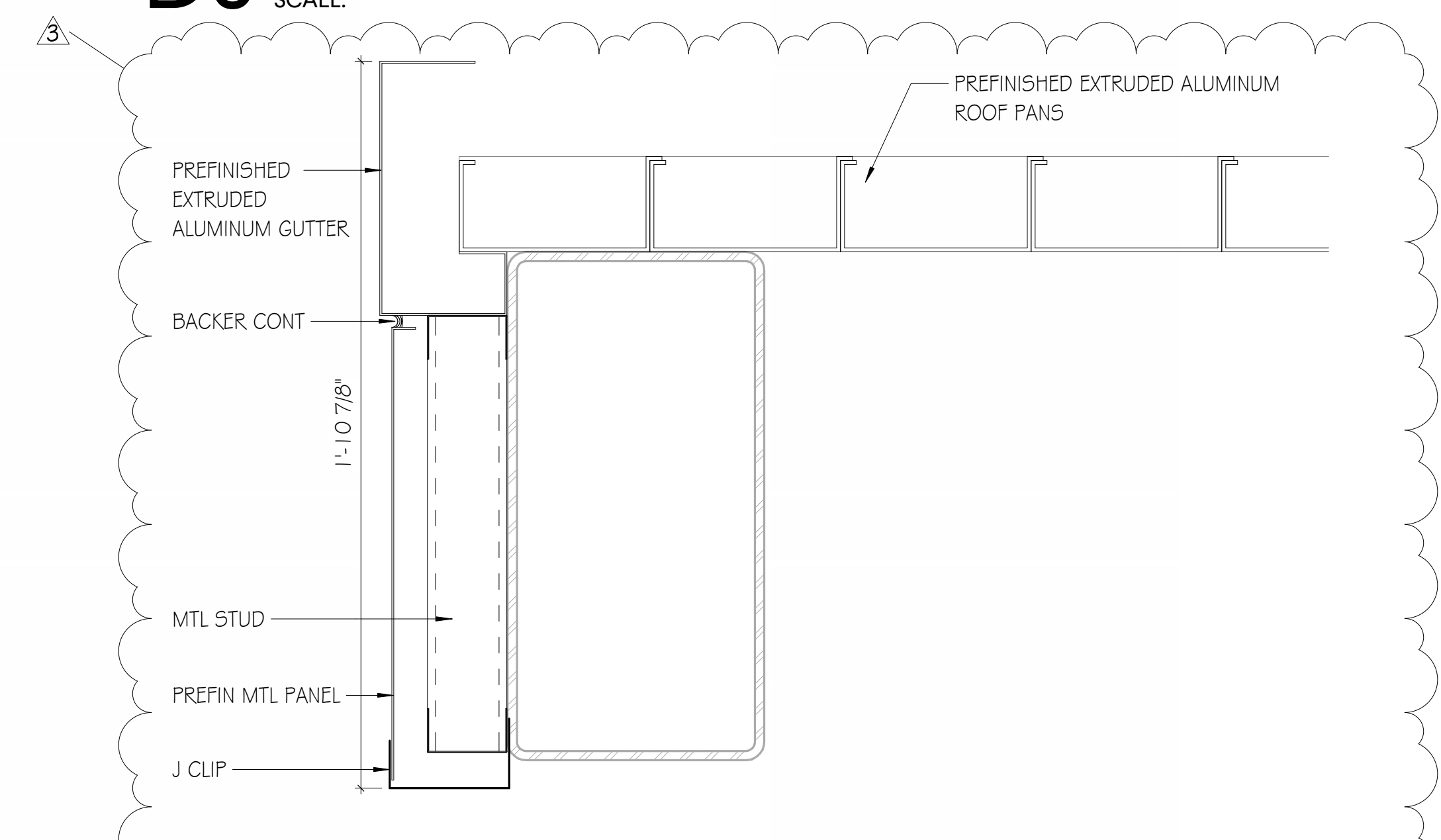
D9 AMPHITHEATRE 3D VIEW
SCALE:



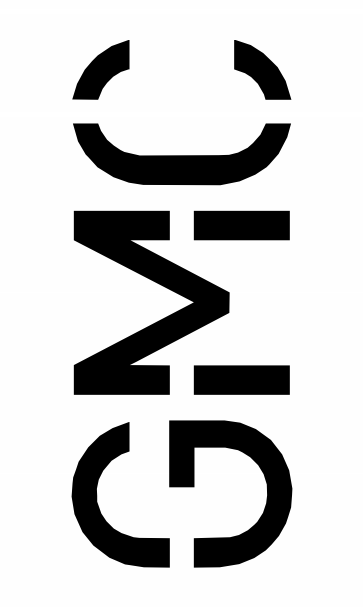
A1 NORTH AMPHITHEATRE
SCALE: 1/4" = 1'-0"



A6 EAST AMPHITHEATRE
SCALE: 1/4" = 1'-0"



A9 AMPHITHEATRE SECTION DETAIL
SCALE: 3" = 1'-0"



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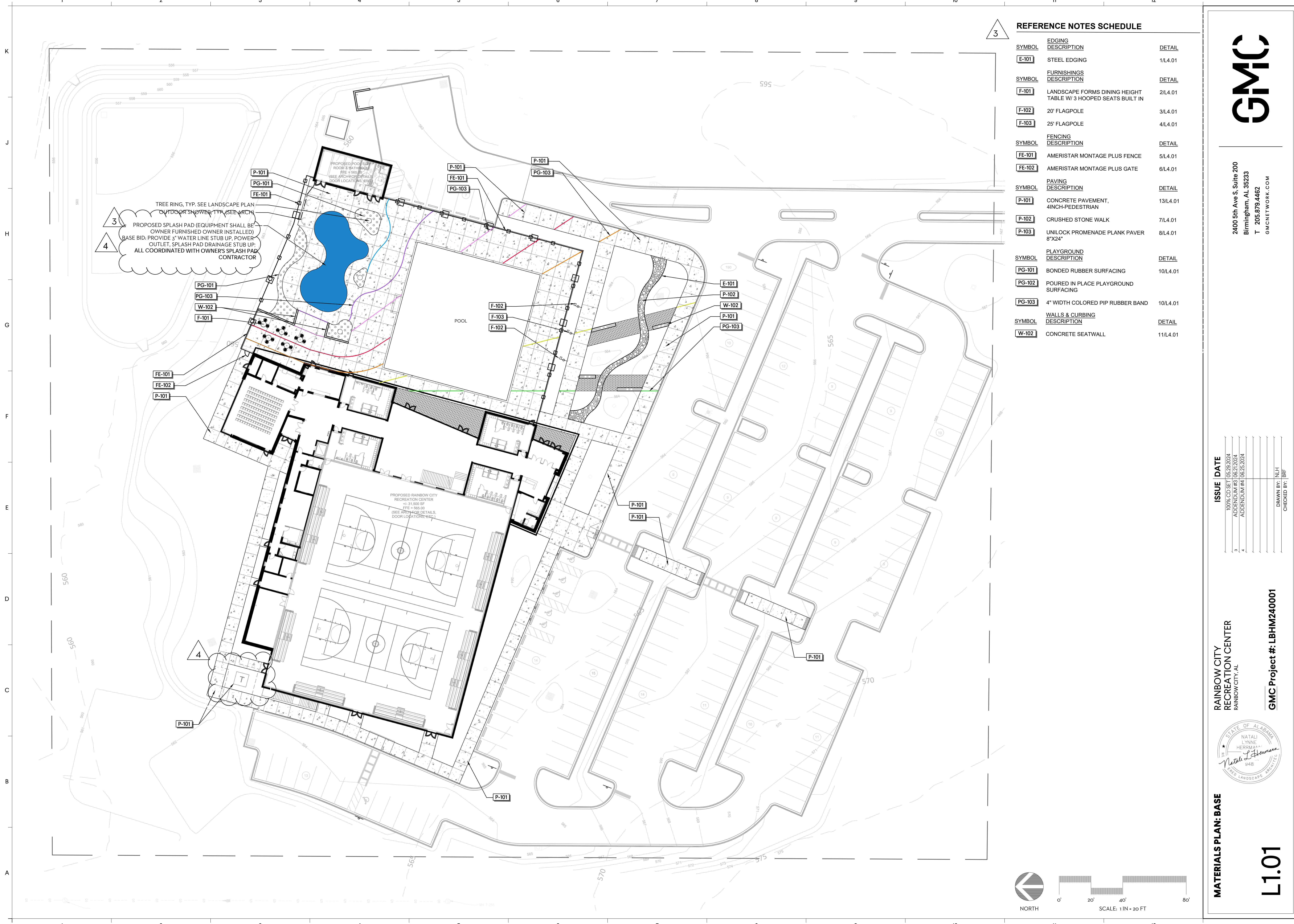


AMPHITHEATRE -
ALTERNATE 1

A9.04

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REFERENCE NOTES SCHEDULE

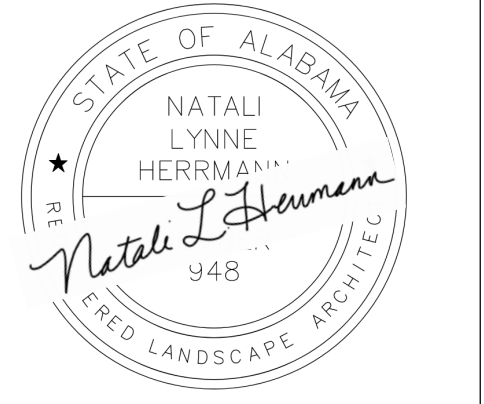
SYMBOL	EDGING DESCRIPTION	DETAIL
E-101	STEEL EDGING	1/L4.01
SYMBOL	FURNISHINGS DESCRIPTION	DETAIL
F-101	LANDSCAPE FORMS DINING HEIGHT TABLE W/ 3 HOOPED SEATS BUILT IN	2/L4.01
F-102	20' FLAGPOLE	3/L4.01
F-103	25' FLAGPOLE	4/L4.01
SYMBOL	FENCING DESCRIPTION	DETAIL
FE-101	AMERISTAR MONTAGE PLUS FENCE	5/L4.01
FE-102	AMERISTAR MONTAGE PLUS GATE	6/L4.01
SYMBOL	PAVING DESCRIPTION	DETAIL
P-101	CONCRETE PAVEMENT, 4INCH-PEDESTRIAN	13/L4.01
P-102	CRUSHED STONE WALK	7/L4.01
P-103	UNILOCK PROMENADE PLANK PAVER 8"X24"	8/L4.01
SYMBOL	PLAYGROUND DESCRIPTION	DETAIL
PG-101	BONDED RUBBER SURFACING	10/L4.01
PG-102	POURED IN PLACE PLAYGROUND SURFACING	
PG-103	4" WIDTH COLORED PIP RUBBER BAND	10/L4.01
SYMBOL	WALLS & CURBING DESCRIPTION	DETAIL
W-102	CONCRETE SEATWALL	11/L4.01

ISSUE	DATE
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3	ADDENDUM #3
4	ADDENDUM #4

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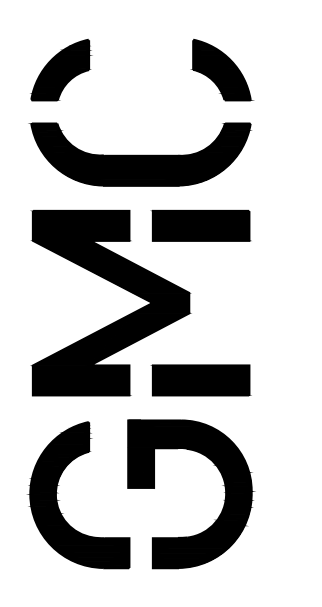
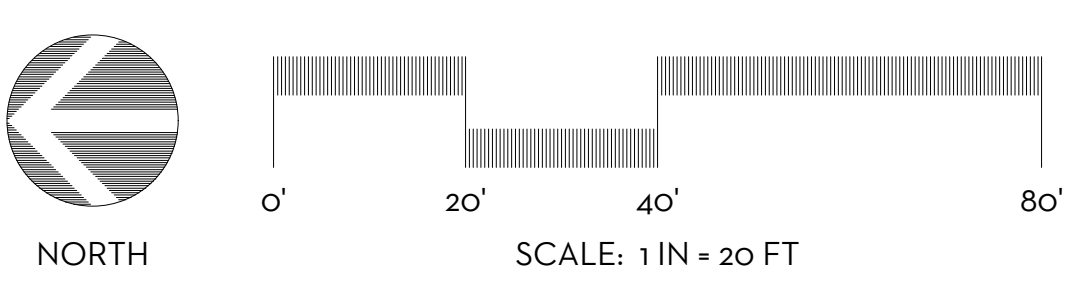
RAINBOW CITY RECREATION CENTER
RAINBOW CITY, AL

GMC Project #: LBHM240001

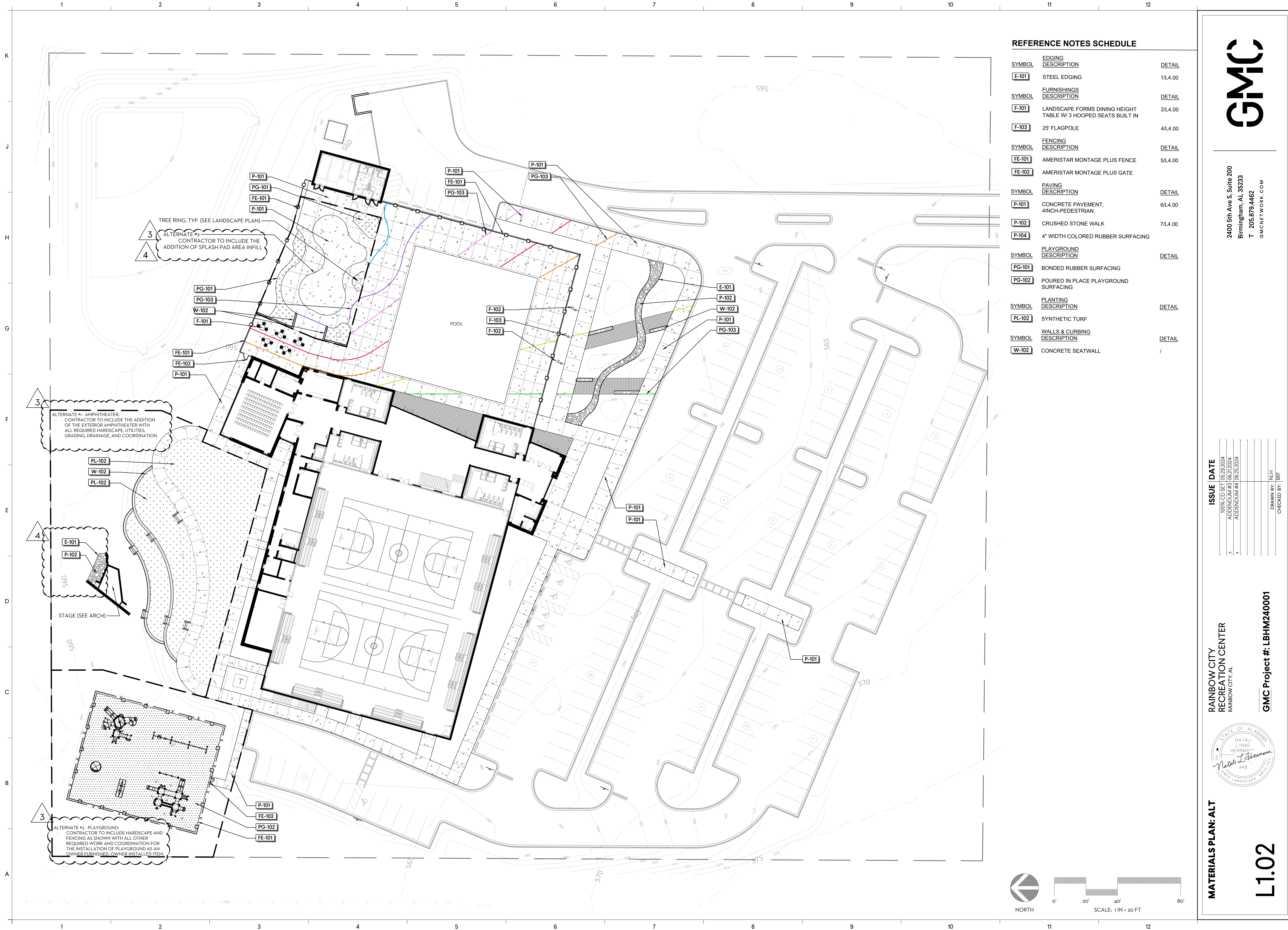


MATERIALS PLAN: BASE

L1.01



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3
4
TREE RING, TYP. (SEE LANDSCAPE PLAN)
ALTERNATE #2 - CONTRACTOR TO INCLUDE THE ADDITION OF SPLASH PAD AREA INFILL

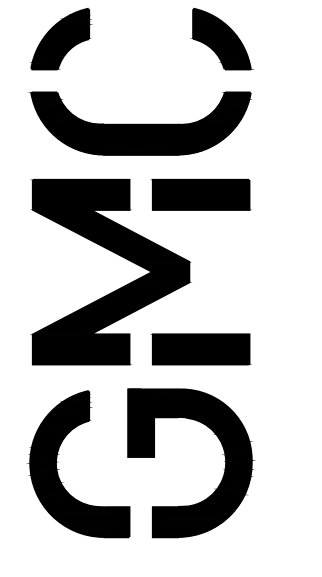
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ALTERNATE #1 - AMPHITHEATER
CONTRACTOR TO INCLUDE THE ADDITION OF THE EXTERIOR AMPHITHEATER WITH ALL REQUIRED HARDSCAPE, UTILITIES, GRADING, DRAINAGE, AND COORDINATION.

4
E-101
P-102
STAGE (SEE ARCH)

3
ALTERNATE #3 - PLAYGROUND
CONTRACTOR TO INCLUDE HARDSCAPE AND FENCING AS SHOWN WITH ALL OTHER REQUIRED WORK AND COORDINATION FOR THE INSTALLATION OF PLAYGROUND AS AN OWNER FURNISHED, OWNER INSTALLED ITEM.

REFERENCE NOTES SCHEDULE

SYMBOL	EDGING DESCRIPTION	DETAIL
E-101	STEEL EDGING	1/L4.00
SYMBOL	FURNISHINGS DESCRIPTION	DETAIL
F-101	LANDSCAPE FORMS DINING HEIGHT TABLE W/ 3 HOOPED SEATS BUILT IN	2/L4.00
F-103	25' FLAGPOLE	4/L4.00
SYMBOL	FENCING DESCRIPTION	DETAIL
FE-101	AMERISTAR MONTAGE PLUS FENCE	5/L4.00
FE-102	AMERISTAR MONTAGE PLUS GATE	
SYMBOL	PAVING DESCRIPTION	DETAIL
P-101	CONCRETE PAVEMENT, 4INCH-PEDESTRIAN	6/L4.00
P-102	CRUSHED STONE WALK	7/L4.00
P-104	4" WIDTH COLORED RUBBER SURFACING	
SYMBOL	PLAYGROUND DESCRIPTION	DETAIL
PG-101	BONDED RUBBER SURFACING	
PG-102	POURED IN PLACE PLAYGROUND SURFACING	
SYMBOL	PLANTING DESCRIPTION	DETAIL
PL-102	SYNTHETIC TURF	
SYMBOL	WALLS & CURBING DESCRIPTION	DETAIL
W-102	CONCRETE SEATWALL	/




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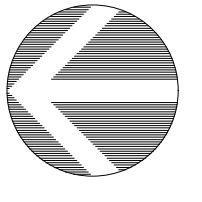
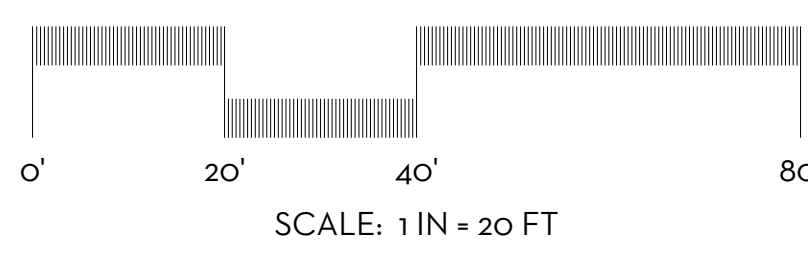
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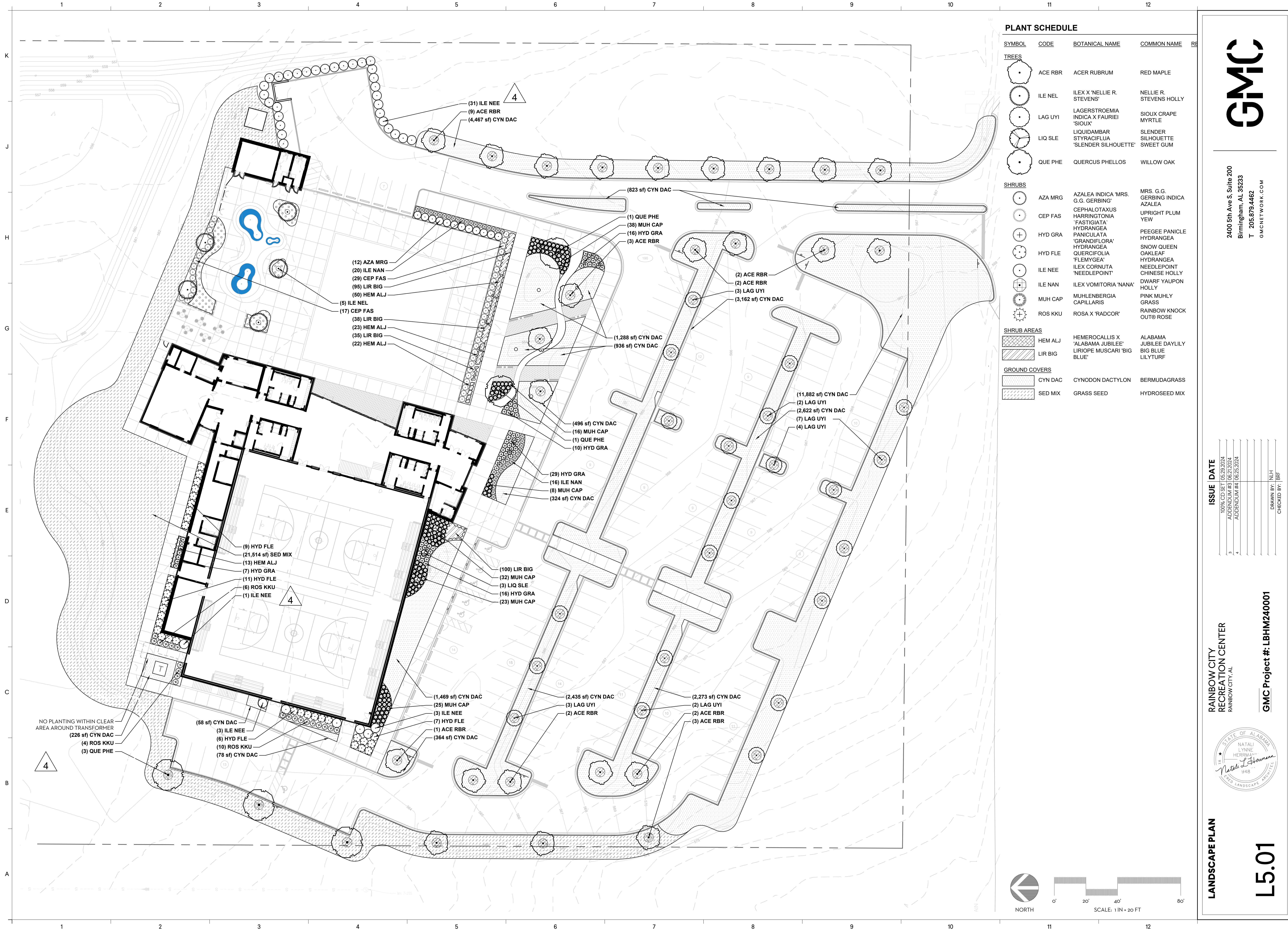
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4 ADDENDUM #4
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MATERIALS PLAN: ALT

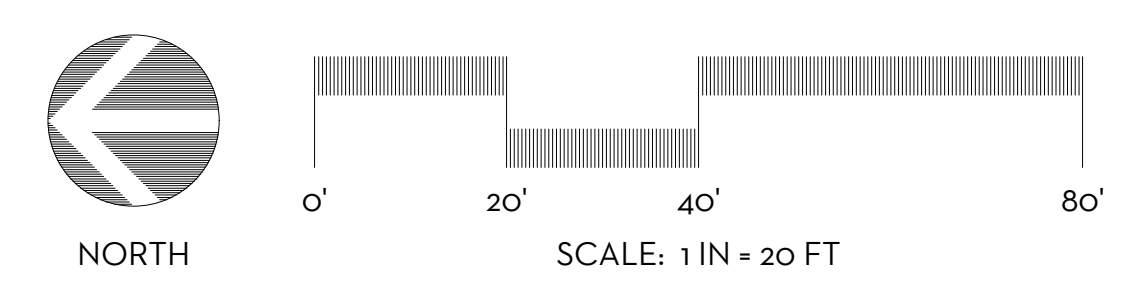
L1.02



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME
TREES			
	ACE RBR	ACER RUBRUM	RED MAPLE
	ILE NEL	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY
	LAG UYI	LAGERSTROEMIA INDICA X FAURIEI 'SIOUX'	SIOUX CRAPE MYRTLE
	LIQ SLE	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE SWEET GUM
	QUE PHE	QUERCUS PHELLOS	WILLOW OAK
SHRUBS			
	AZA MRG	AZALEA INDICA 'MRS. G. G. GERBING'	MRS. G. G. GERBING INDICA AZALEA
	CEP FAS	CEPHALOTAXUS HARRINGTONIA 'FASTIGIATA'	UPRIGHT PLUM YEW
	HYD GRA	HYDRANGEA PANICULATA 'GRANDIFLORA'	PEEGEE PANICLE HYDRANGEA
	HYD FLE	HYDRANGEA QUERCIFOLIA 'FLEMINGEA'	SNOW QUEEN OAKLEAF HYDRANGEA
	ILE NEE	ILEX CORNUTA 'NEEDLEPOINT'	NEEDLEPOINT CHINESE HOLLY
	ILE NAN	ILEX VOMITORIA 'NANA'	DWARF YAUPON HOLLY
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS
	ROS K KU	ROSA X 'RADCOR'	RAINBOW KNOCK OUT® ROSE
SHRUB AREAS			
	HEM ALJ	HEMEROCALLIS X 'ALABAMA JUBILEE'	ALABAMA JUBILEE DAYLILY
	LIR BIG	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILY TURF
GROUND COVERS			
	CYN DAC	CYNODON DACTYLON	BERMUDAGRASS
	SED MIX	GRASS SEED	HYDROSEED MIX



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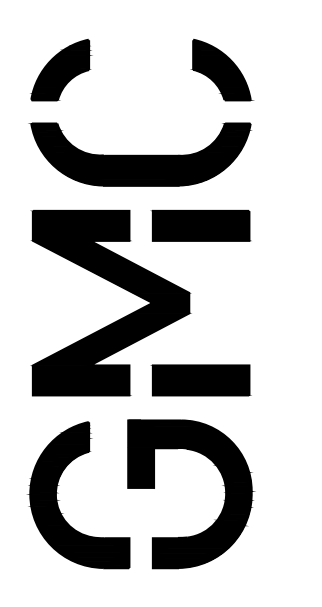
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 RAINBOW CITY, AL

GMC Project #: LBHM240001



LANDSCAPE PLAN

L5.01



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TYPICAL DETAILS

S1.06

FOOTING SCHEDULE					
FOOTING DESIGNATION	DEPTH	REINF EW.	LENGTH	WIDTH	NOTES
F3.0	1'-0"	4#6	3'-0"	3'-0"	
F4.0	1'-0"	5#5	4'-0"	4'-0"	
F5.0	1'-6"	5#6	5'-0"	5'-0"	
F6.0	1'-6"	7#6	6'-0"	6'-0"	
F7.0	1'-6"	8#6	7'-0"	7'-0"	
F8.0	1'-6"	9#6 T&B	8'-0"	8'-0"	
F10.0	2'-0"	11#6	10'-0"	10'-0"	

PLATE WASHER AND BASEPLATE HOLE Ø SCHEDULE		
BOLT Ø	HOLE Ø	PLATE WASHER
3/4"	1-5/16"	1/4"x2"x2"
1"	1-7/8"	3/8"x3"x3"
1 1/4"	2-1/8"	1/2"x3-1/2"x3-1/2"
1 1/2"	2-3/8"	1/2"x4"x4"
2"	3-1/4"	3/4"x5"x5"

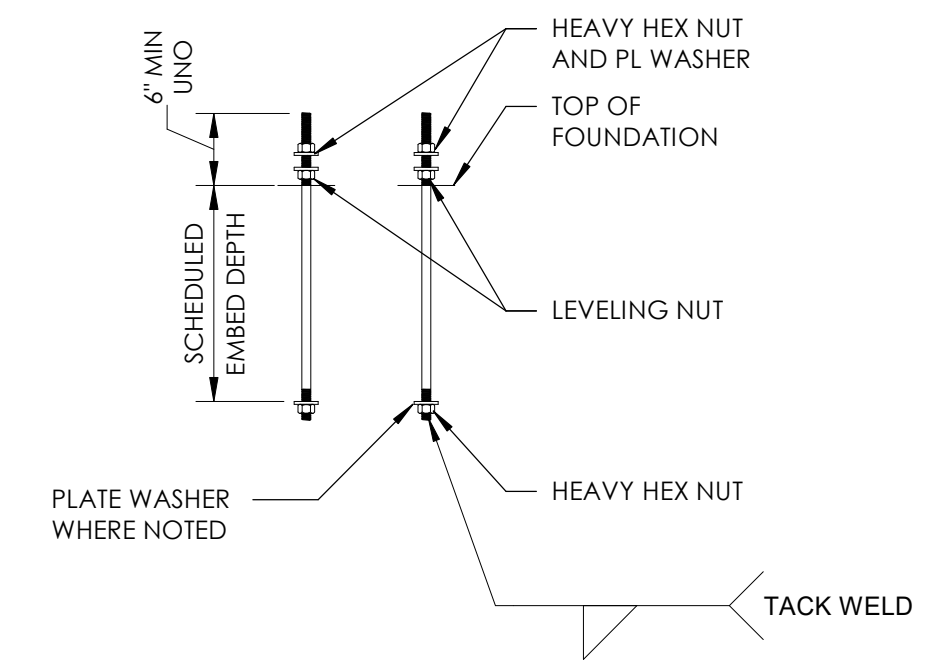
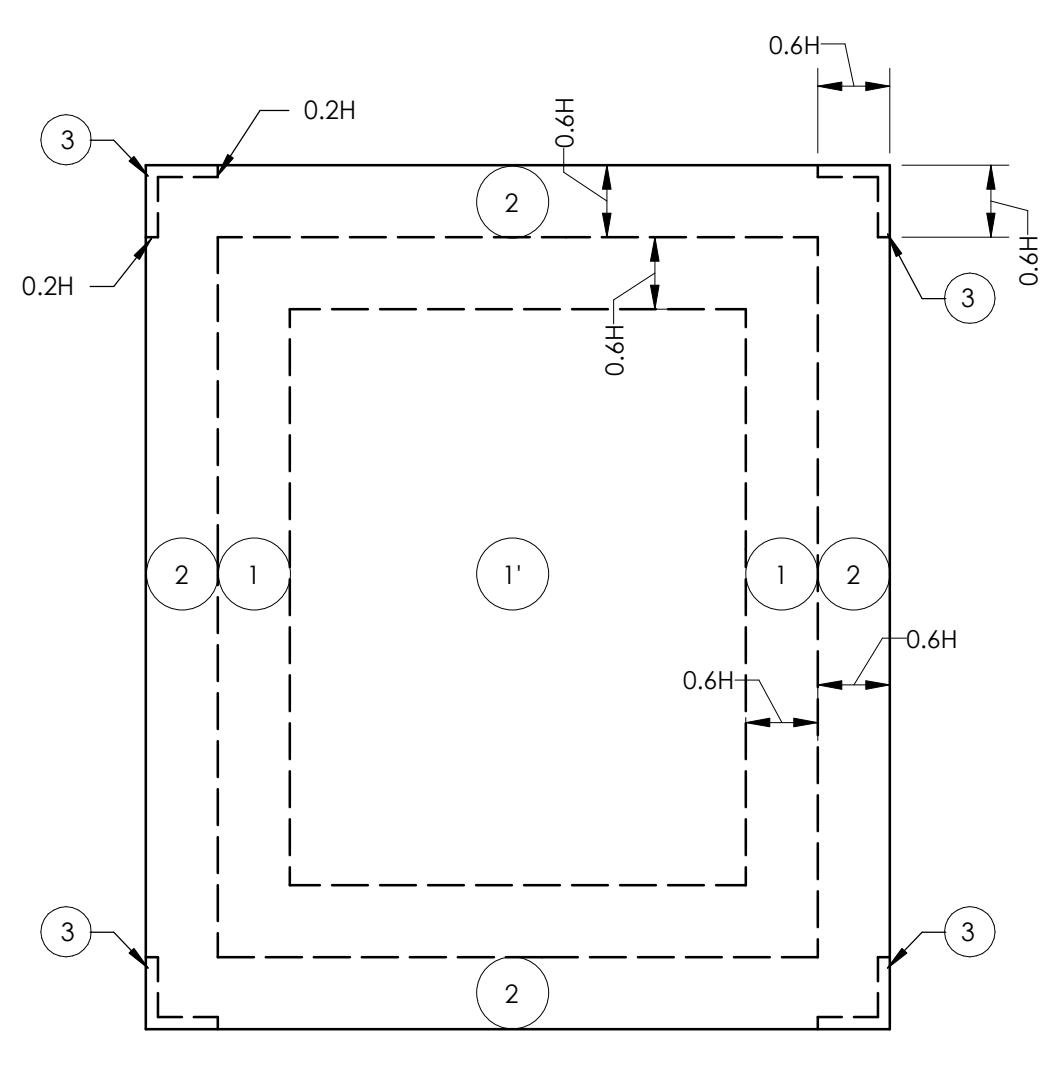


PLATE WASHER SCHEDULE



COMPONENT AND CLADDING ROOF ZONES

NOTES:
 1. a = 12'-6"
 2. H = 34'-8"

C&C WIND LOADS - ASCE 7-16
 Only Valid for Buildings with Heights <60ft and Up to 45° Roof Slope

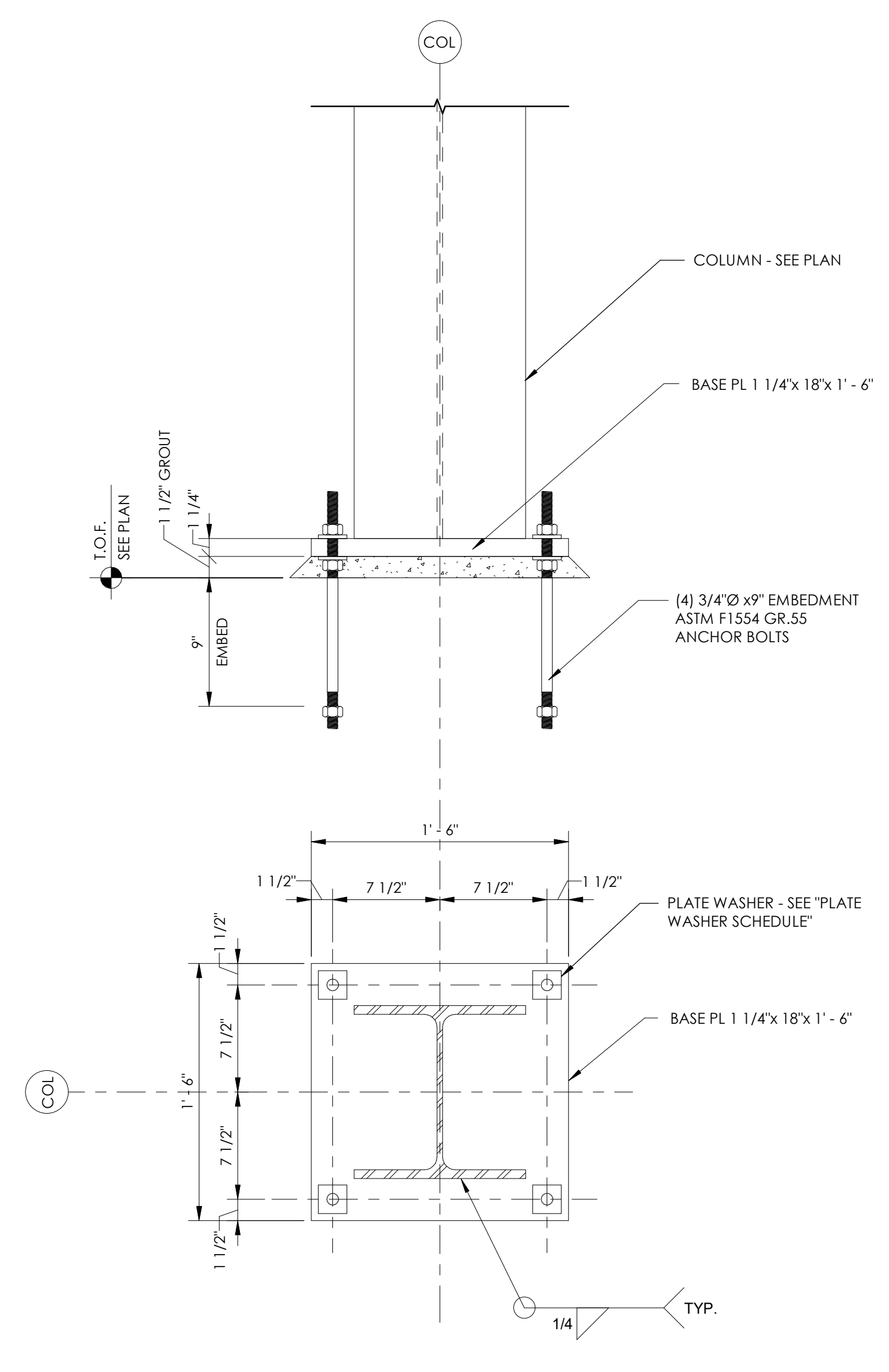
Effective Wind Area	Zone 5 GC _p +		Zone 5 GC _p -		
	psf	psf	psf	psf	
Wall Pressures for Zone 5, distance "a" from the corner of the building. Calculate "a" in accordance with ASCE7 - Figure 30.3-1	< 10 sq. ft.	22.98	33.06	-44.27	-34.19
	20 sq. ft.	21.58	31.66	-41.47	-31.38
	50 sq. ft.	18.77	28.86	-37.27	-27.18
	100 sq. ft.	17.37	27.46	-34.47	-24.38
	200 sq. ft.	15.97	26.06	-31.66	-21.58
	> 500 sq. ft.	14.57	24.66	-27.46	-17.37

IMPORTANT: All Wind Pressures are Ultimate.

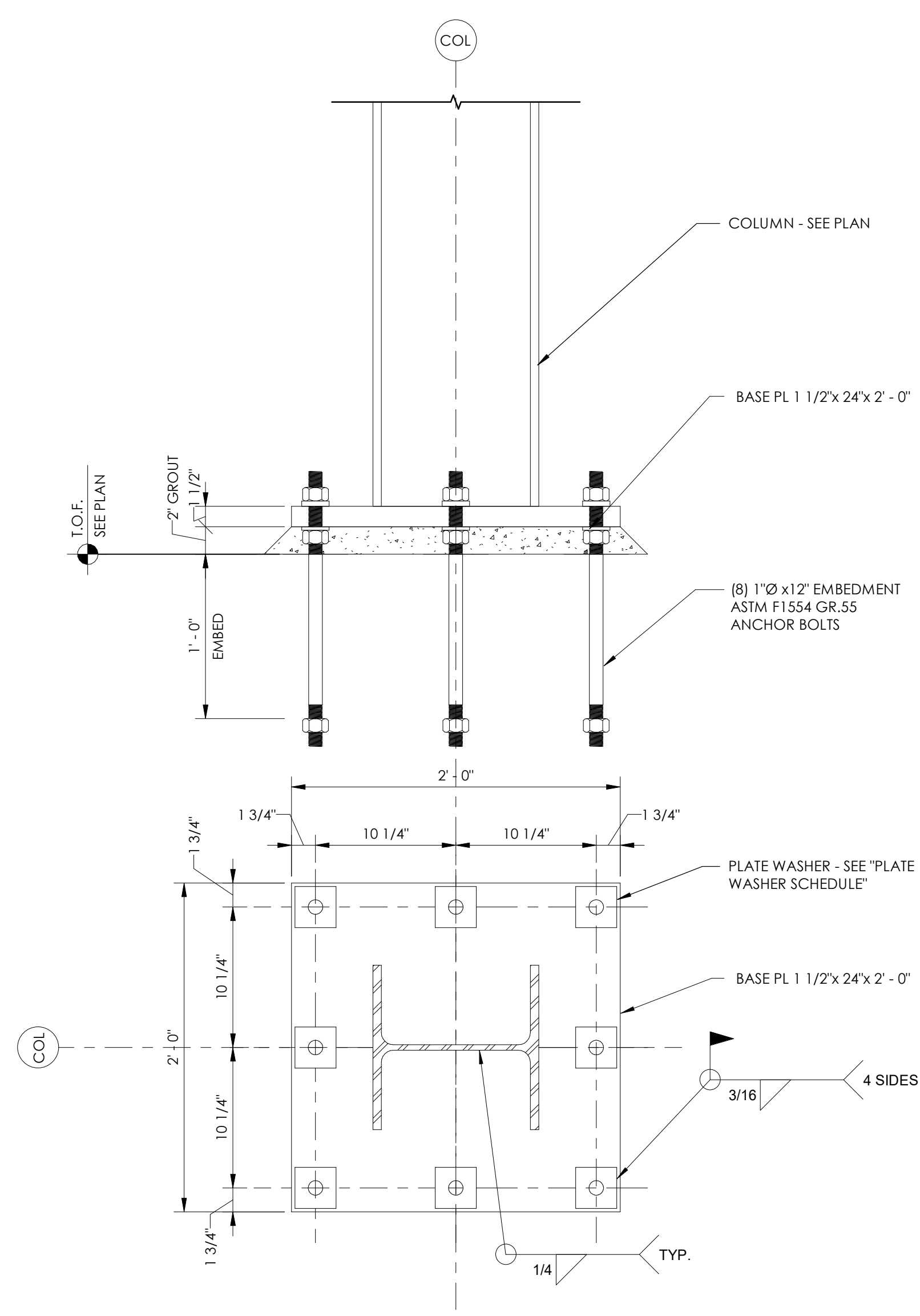
C&C WIND LOADS - ASCE 7-16
 Only Valid for Buildings with Heights <60ft and Up to 45° Roof Slope

Effective Wind Area	Zone 3 GC _p +		Zone 3 GC _p -		
	psf	psf	psf	psf	
Wall Pressures for Zone 3, the corner portion of the roof. Refer to ASCE7 - Figure 30.3-2A	< 10 sq. ft.	3.36	13.45	-94.71	-84.62
	20 sq. ft.	1.96	12.05	-86.30	-76.22
	50 sq. ft.	1.26	11.35	-73.70	-63.61
	100 sq. ft.	0.56	10.65	-65.29	-55.20
	200 sq. ft.	0.56	10.65	-56.88	-46.79
	> 500 sq. ft.	0.56	10.65	-44.27	-34.19

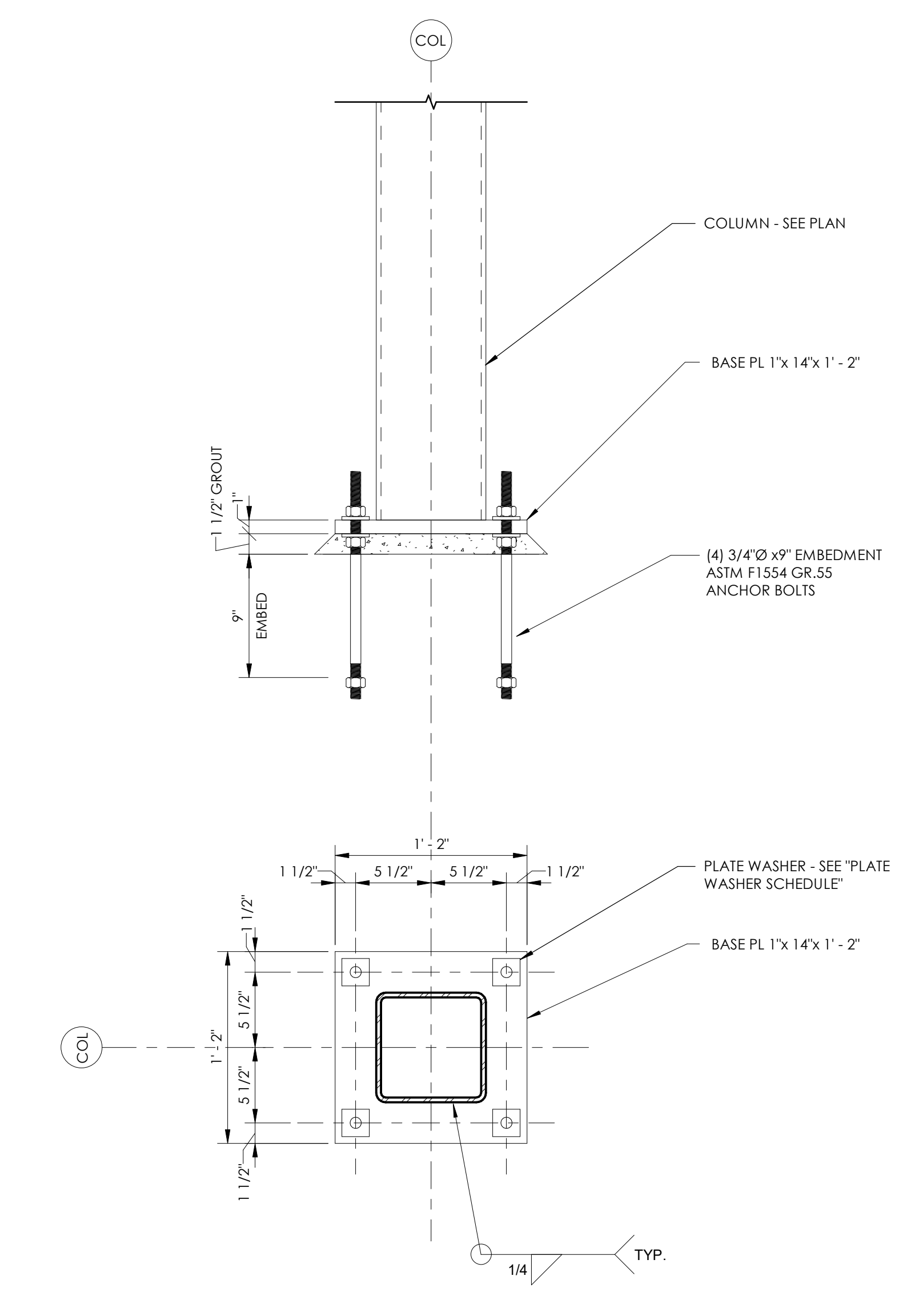
IMPORTANT: All Wind Pressures are Ultimate.



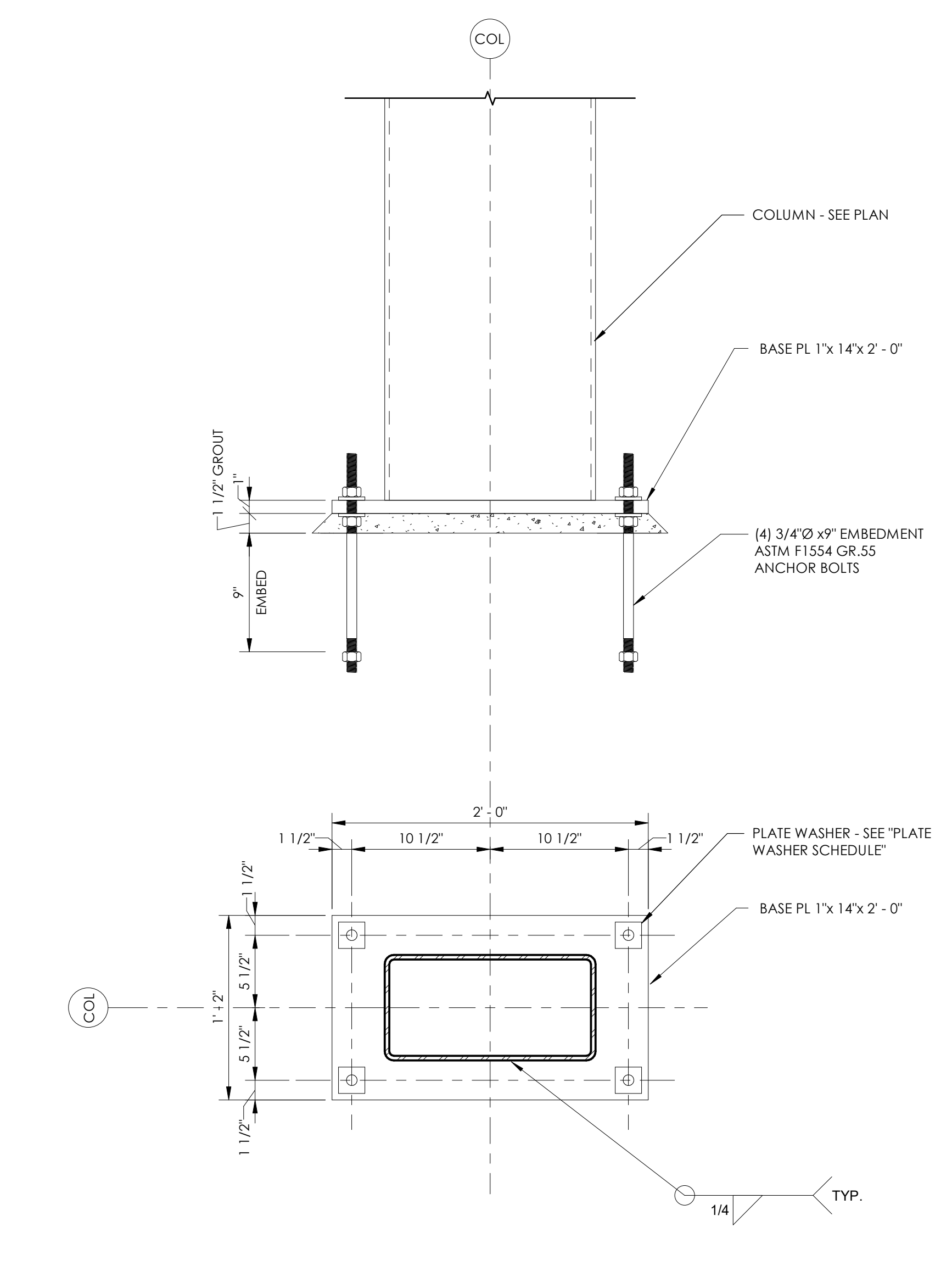
BP - 1



BP - 2



BP - 3



BP - 4

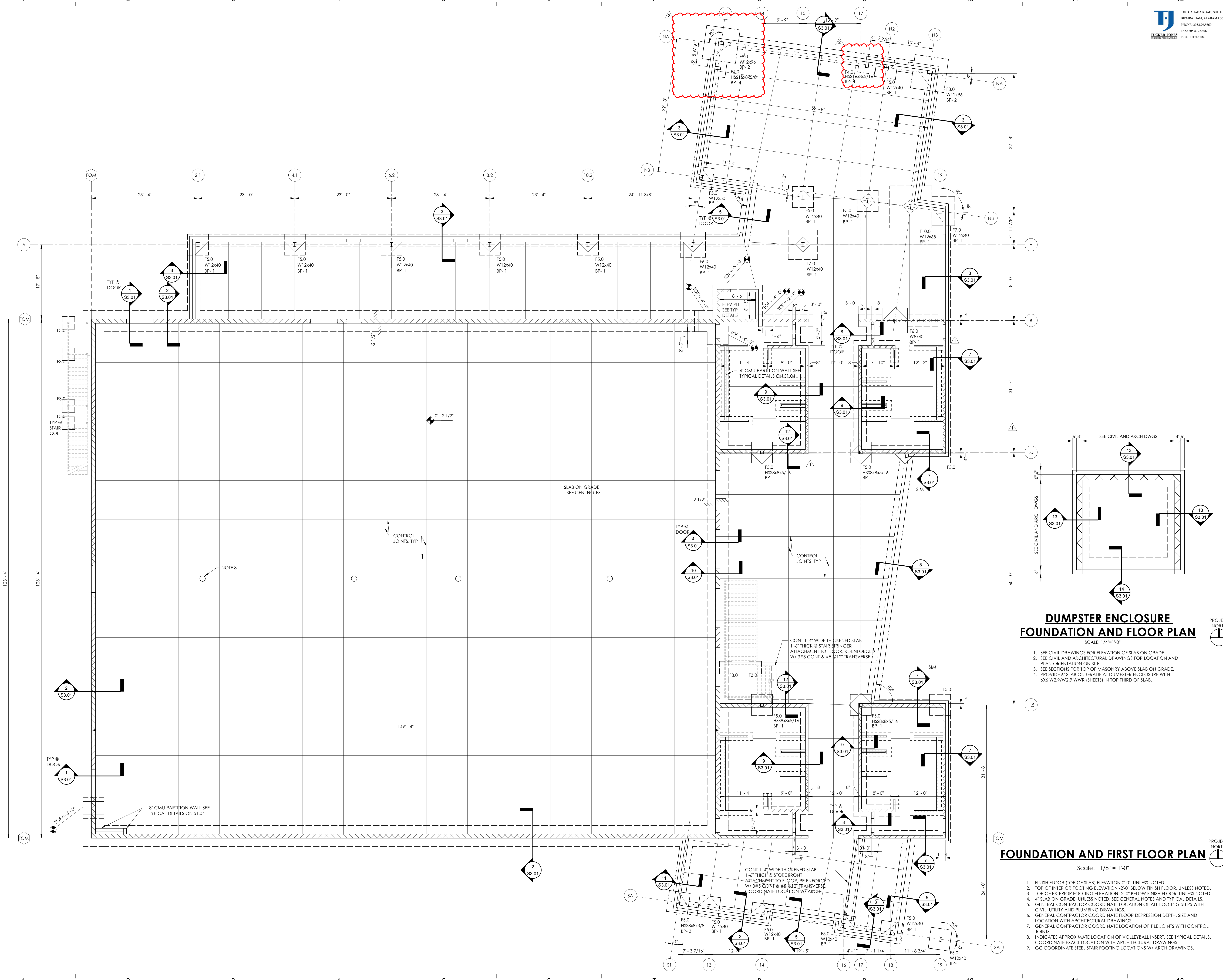
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 3. Addendum 4

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FLOOR AND FOUNDATION PLAN
 S2.01

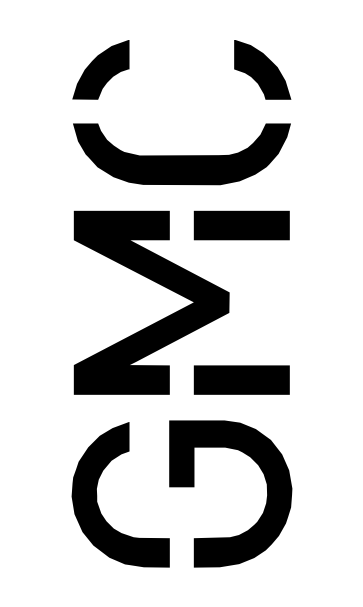


DUMPSTER ENCLOSURE FOUNDATION AND FLOOR PLAN
 SCALE: 1/4"=1'-0"

1. SEE CIVIL DRAWINGS FOR ELEVATION OF SLAB ON GRADE.
2. SEE CIVIL AND ARCHITECTURAL DRAWINGS FOR LOCATION AND PLAN ORIENTATION ON SITE.
3. SEE SECTIONS FOR TOP OF MASONRY ABOVE SLAB ON GRADE.
4. PROVIDE 6" SLAB ON GRADE AT DUMPSTER ENCLOSURE WITH 6x6 W2.9/W2.9 WWR (SHEETS) IN TOP THIRD OF SLAB.

FOUNDATION AND FIRST FLOOR PLAN
 Scale: 1/8"=1'-0"

1. FINISH FLOOR (TOP OF SLAB) ELEVATION 0'-0", UNLESS NOTED.
2. TOP OF INTERIOR FOOTING ELEVATION -2'-0" BELOW FINISH FLOOR, UNLESS NOTED.
3. TOP OF EXTERIOR FOOTING ELEVATION -2'-0" BELOW FINISH FLOOR, UNLESS NOTED.
4. 4" SLAB ON GRADE, UNLESS NOTED. SEE GENERAL NOTES AND TYPICAL DETAILS.
5. GENERAL CONTRACTOR COORDINATE LOCATION OF ALL FOOTING STEPS WITH CIVIL, UTILITY AND PLUMBING DRAWINGS.
6. GENERAL CONTRACTOR COORDINATE FLOOR DEPRESSION DEPTH, SIZE AND LOCATION WITH ARCHITECTURAL DRAWINGS.
7. GENERAL CONTRACTOR COORDINATE LOCATION OF TILE JOINTS WITH CONTROL JOINTS.
8. INDICATES APPROXIMATE LOCATION OF VOLLEYBALL INSERT. SEE TYPICAL DETAILS. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.
9. GC COORDINATE STEEL STAIR FOOTING LOCATIONS W/ ARCH DRAWINGS.



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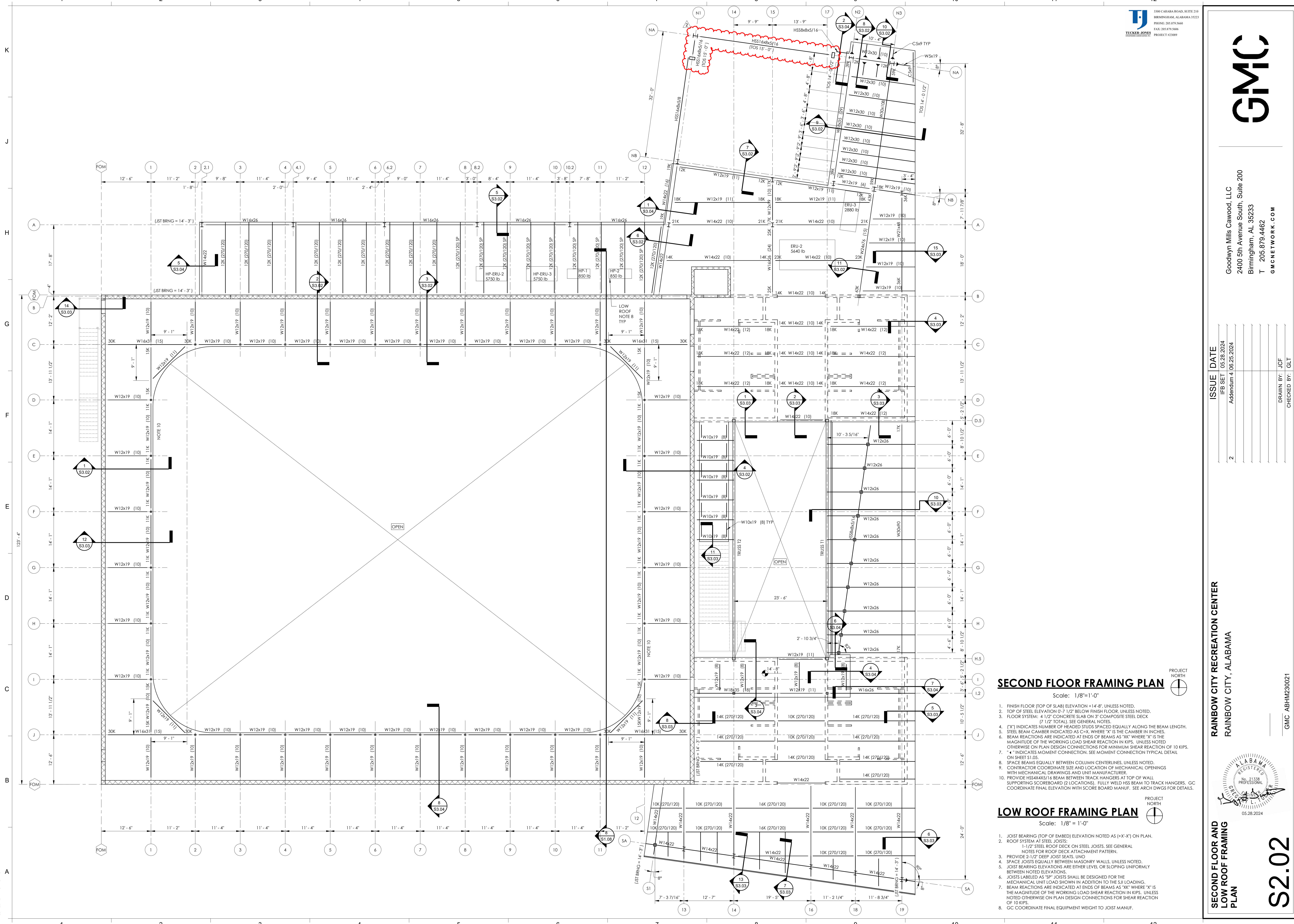
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RAINBOW CITY RECREATION CENTER
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SECOND FLOOR AND
 LOW ROOF FRAMING
 PLAN

S2.02

GMC ABHM230021

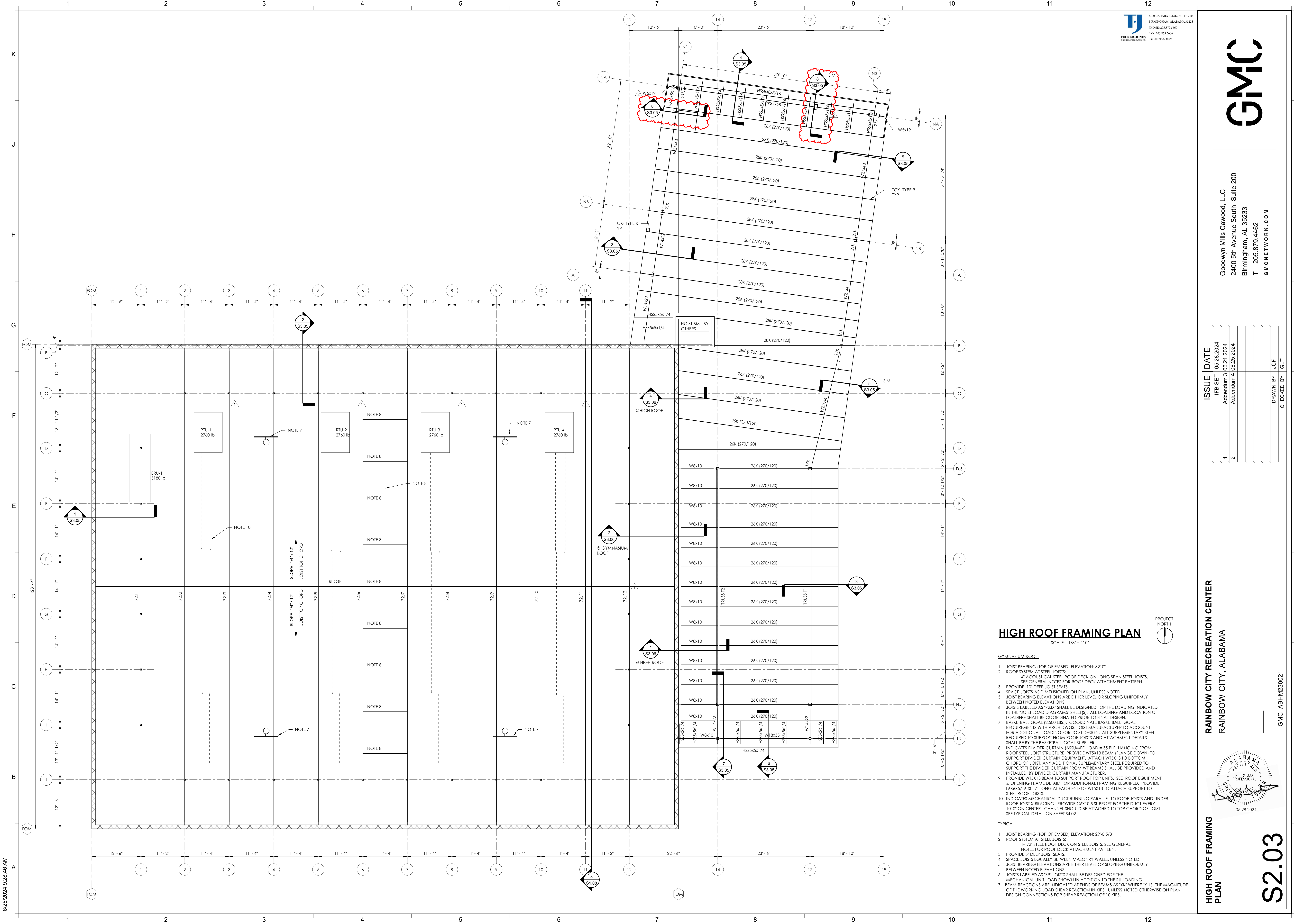


SECOND FLOOR FRAMING PLAN

- Scale: 1/8" = 1'-0"
1. FINISH FLOOR (TOP OF SLAB) ELEVATION +14'-8". UNLESS NOTED.
 2. TOP OF STEEL ELEVATION 0'-7 1/2" BELOW FINISH FLOOR, UNLESS NOTED.
 3. FLOOR SYSTEM: 4 1/2" CONCRETE SLAB ON 3" COMPOSITE STEEL DECK (7 1/2" TOTAL). SEE GENERAL NOTES.
 4. (X) INDICATES NUMBER OF HEADED STUDS SPACED EQUALLY ALONG THE BEAM LENGTH.
 5. STEEL BEAM CAMBER INDICATED AS C+X, WHERE "X" IS THE CAMBER IN INCHES.
 6. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "R" WHERE "X" IS THE MAGNITUDE OF THE WORKING LOAD SHEAR REACTION IN KIPS. UNLESS NOTED OTHERWISE ON PLAN DESIGN CONNECTIONS FOR MINIMUM SHEAR REACTION OF 10 KIPS.
 7. "4" INDICATES MOMENT CONNECTION. SEE MOMENT CONNECTION TYPICAL DETAIL ON SHEET S1.05.
 8. SPACE BEAMS EQUALLY BETWEEN COLUMN CENTERLINES, UNLESS NOTED.
 9. CONTRACTOR COORDINATE SIZE AND LOCATION OF MECHANICAL OPENINGS WITH MECHANICAL DRAWINGS AND UNIT MANUFACTURER.
 10. PROVIDE HSS4X4X5/16 BEAM BETWEEN TRACK HANGERS AT TOP OF WALL SUPPORTING SCOREBOARD (2 LOCATIONS). FULLY WELD HSS BEAM TO TRACK HANGERS, GC COORDINATE FINAL ELEVATION WITH SCORE BOARD MANUF. SEE ARCH DWGS FOR DETAILS.

LOW ROOF FRAMING PLAN

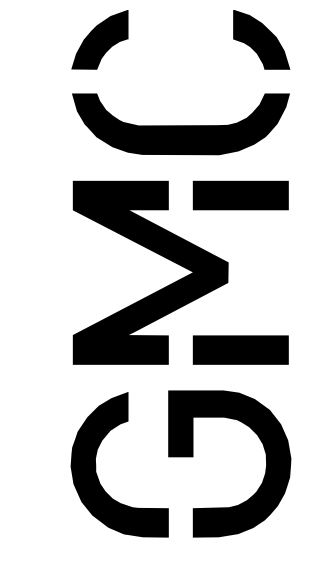
- Scale: 1/8" = 1'-0"
1. JOIST BEARING (TOP OF EMBED) ELEVATION NOTED AS (+X-X") ON PLAN.
 2. ROOF SYSTEM AT STEEL JOISTS:
 1-1/2" STEEL ROOF DECK ON STEEL JOISTS. SEE GENERAL NOTES FOR ROOF DECK ATTACHMENT PATTERN.
 3. PROVIDE 2-1/2" DEEP JOIST SEATS. UNO.
 4. SPACE JOISTS EQUALLY BETWEEN MASONRY WALLS, UNLESS NOTED.
 5. JOIST BEARING ELEVATIONS ARE EITHER LEVEL OR SLOPING UNIFORMLY BETWEEN NOTED ELEVATIONS.
 6. JOISTS LABELED AS "SP" JOISTS SHALL BE DESIGNED FOR THE MECHANICAL UNIT LOAD SHOWN IN ADDITION TO THE SJ LOADING.
 7. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "R" WHERE "X" IS THE MAGNITUDE OF THE WORKING LOAD SHEAR REACTION IN KIPS. UNLESS NOTED OTHERWISE ON PLAN DESIGN CONNECTIONS FOR SHEAR REACTION OF 10 KIPS.
 8. GC COORDINATE FINAL EQUIPMENT WEIGHT TO JOIST MANUF.



HIGH ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



- GYMNASIUM ROOF:**
1. JOIST BEARING (TOP OF EMBED) ELEVATION: 32'-0"
 2. ROOF SYSTEM AT STEEL JOISTS:
4" ACQUISICAL STEEL ROOF DECK ON LONG SPAN STEEL JOISTS.
SEE GENERAL NOTES FOR ROOF DECK ATTACHMENT PATTERN.
 3. PROVIDE 10" DEEP JOIST SEATS.
 4. SPACE JOISTS AS DIMENSIONED ON PLAN, UNLESS NOTED.
 5. JOIST BEARING ELEVATIONS ARE EITHER LEVEL OR SLOPING UNIFORMLY BETWEEN NOTED ELEVATIONS.
 6. JOISTS LABELED AS "72JK" SHALL BE DESIGNED FOR THE LOADING INDICATED IN THE "JOIST LOAD DIAGRAMS" SHEETS. ALL LOADING AND LOCATION REQUIREMENTS WITH ARCH DWGS. JOIST MANUFACTURER TO ACCOUNT FOR ADDITIONAL LOADING FOR JOIST DESIGN. ALL SUPPLEMENTARY STEEL REQUIRED TO SUPPORT FROM ROOF JOISTS AND ATTACHMENT DETAILS SHALL BE BY THE BASKETBALL GOAL SUPPLIER.
 7. BASKETBALL GOAL (2,500 LBS.). COORDINATE BASKETBALL GOAL REQUIREMENTS WITH ARCH DWGS. JOIST MANUFACTURER TO ACCOUNT FOR ADDITIONAL LOADING FOR JOIST DESIGN. ALL SUPPLEMENTARY STEEL REQUIRED TO SUPPORT FROM ROOF JOISTS AND ATTACHMENT DETAILS SHALL BE BY THE BASKETBALL GOAL SUPPLIER.
 8. INDICATES DIVIDER CURTAIN (ASSUMED LOAD = 35 PLF) HANGING FROM ROOF STEEL JOIST STRUCTURE. PROVIDE WTSX13 BEAM (FLANGE DOWN) TO SUPPORT DIVIDER CURTAIN EQUIPMENT. ATTACH WTSX13 TO BOTTOM CHORD OF JOIST. ANY ADDITIONAL SUPPLEMENTARY STEEL REQUIRED TO SUPPORT THE DIVIDER CURTAIN FROM W1 BEAMS SHALL BE PROVIDED AND INSTALLED BY DIVIDER CURTAIN MANUFACTURER.
 9. PROVIDE WTSX13 BEAM TO SUPPORT ROOF TOP UNITS. SEE "ROOF EQUIPMENT & OPENING FRAME DETAIL" FOR ADDITIONAL FRAMING REQUIRED. PROVIDE L6x6x5/16 X0'-7" LONG AT EACH END OF WTSX13 TO ATTACH SUPPORT TO STEEL ROOF JOISTS.
 10. INDICATES MECHANICAL DUCT RUNNING PARALLEL TO ROOF JOISTS AND UNDER ROOF JOIST X-BRACING. PROVIDE C6x10.5 SUPPORT FOR THE DUCT EVERY 10'-0" ON CENTER. CHANNEL SHOULD BE ATTACHED TO TOP CHORD OF JOIST. SEE TYPICAL DETAIL ON SHEET S4.02
- TYPICAL:**
1. JOIST BEARING (TOP OF EMBED) ELEVATION: 29'-0 5/8"
 2. ROOF SYSTEM AT STEEL JOISTS:
1-1/2" STEEL ROOF DECK ON STEEL JOISTS. SEE GENERAL NOTES FOR ROOF DECK ATTACHMENT PATTERN.
 3. PROVIDE 5" DEEP JOIST SEATS.
 4. SPACE JOISTS EQUALLY BETWEEN MASONRY WALLS, UNLESS NOTED.
 5. JOIST BEARING ELEVATIONS ARE EITHER LEVEL OR SLOPING UNIFORMLY BETWEEN NOTED ELEVATIONS.
 6. JOISTS LABELED AS "SIP" JOISTS SHALL BE DESIGNED FOR THE MECHANICAL UNIT LOAD SHOWN IN ADDITION TO THE SJI LOADING.
 7. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "X" WHERE "X" IS THE MAGNITUDE OF THE WORKING LOAD SHEAR REACTION IN KIPS. UNLESS NOTED OTHERWISE ON PLAN DESIGN CONNECTIONS FOR SHEAR REACTION OF 10 KIPS.



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S2.03

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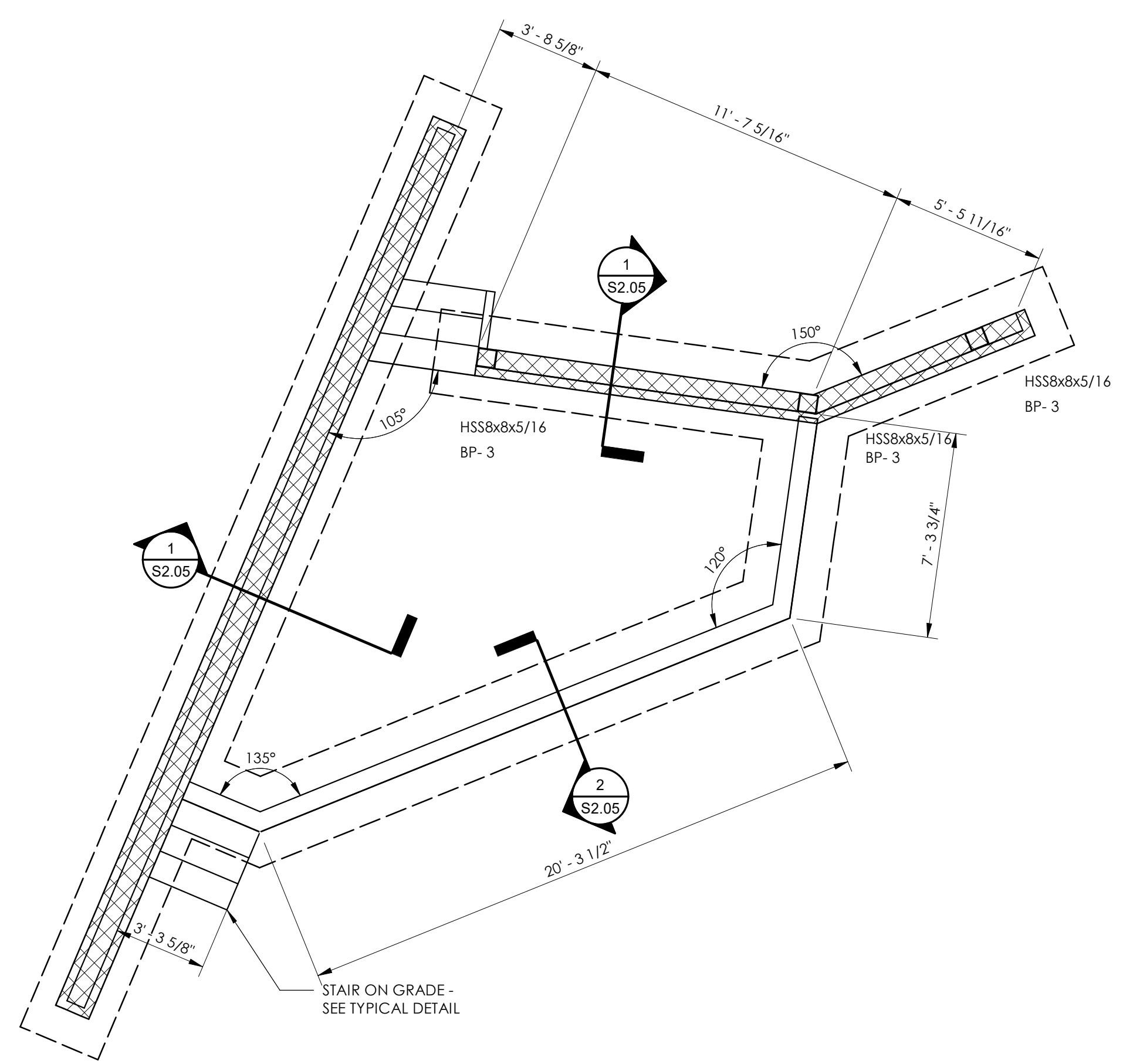
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AMPHITHEATRE PLANS

S2.05

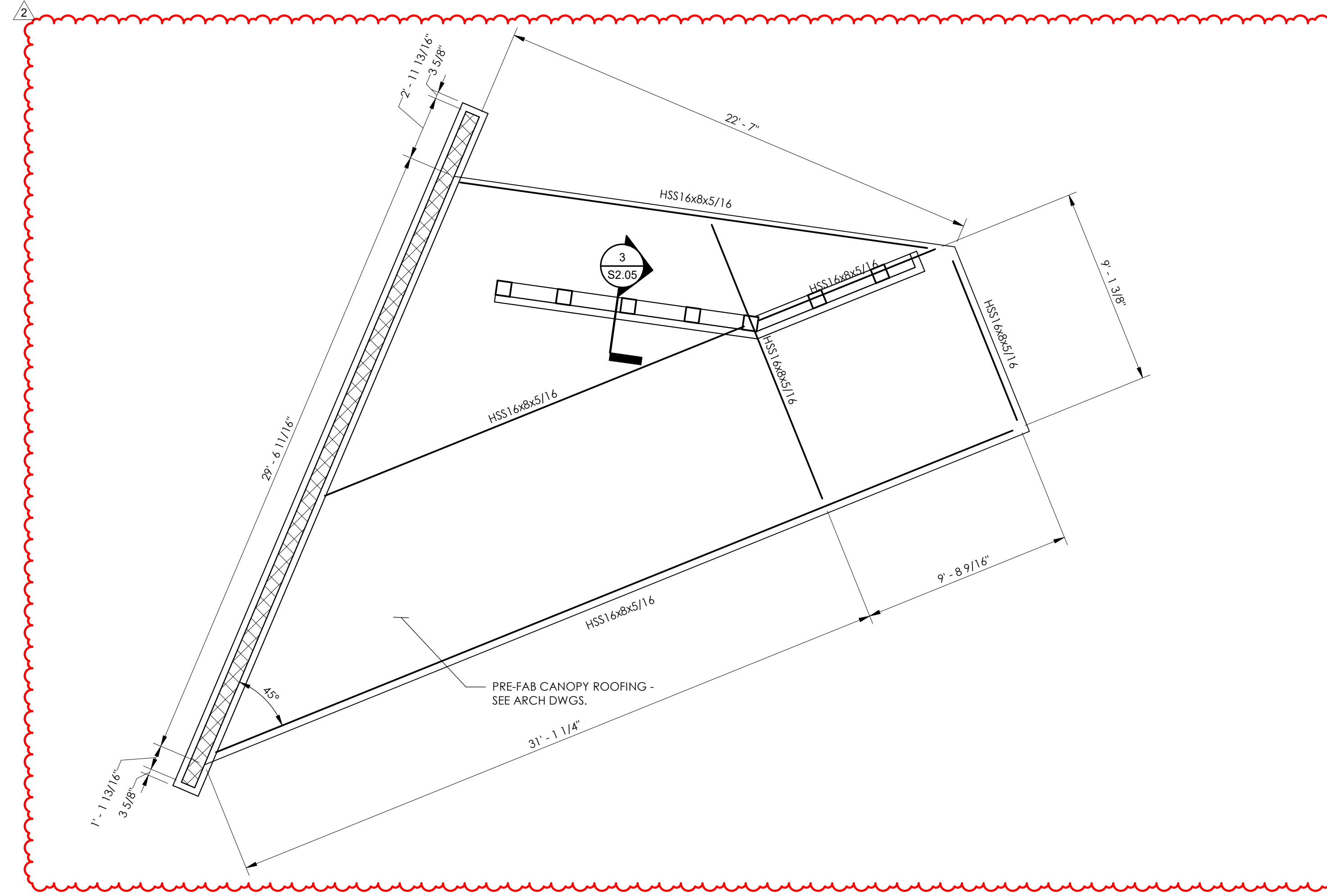
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AMPHITHEATRE FOUNDATION PLAN

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

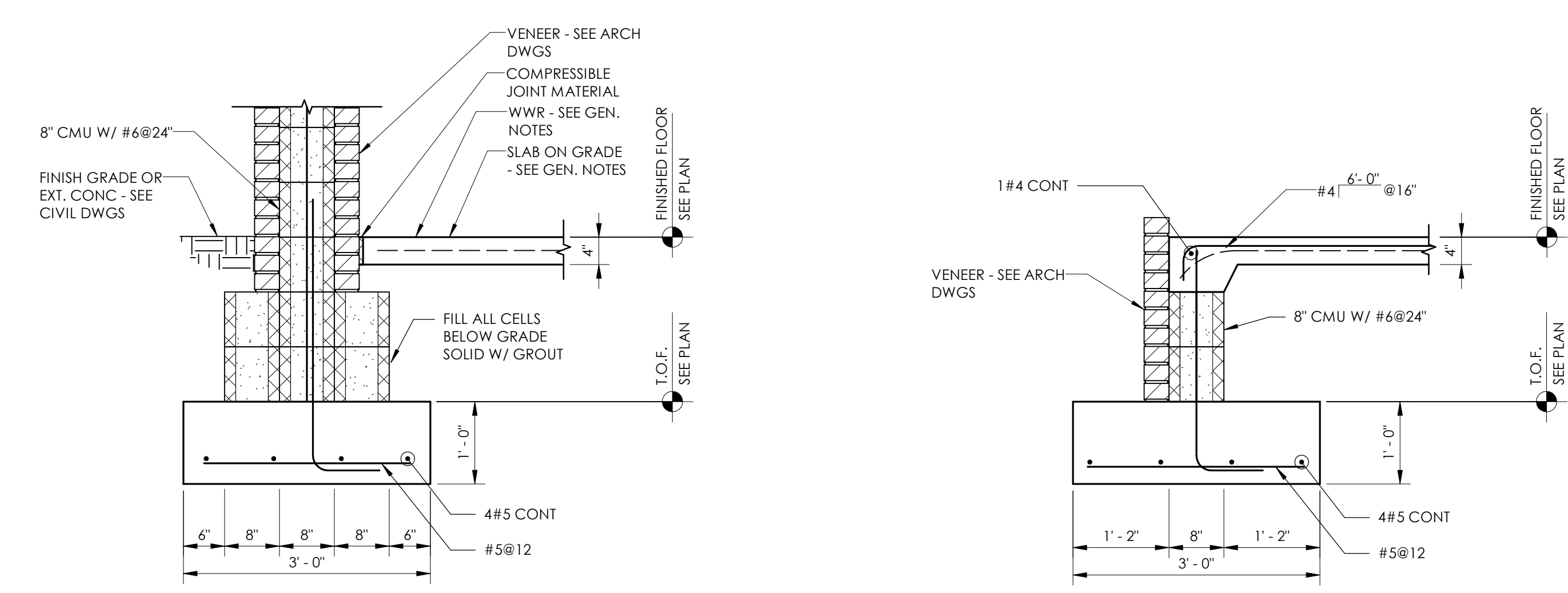
1. FINISH FLOOR (TOP OF SLAB) ELEVATION 0'-0", UNLESS NOTED.
2. TOP OF INTERIOR FOOTING ELEVATION -2'-0" BELOW FINISH FLOOR, UNLESS NOTED.
3. TOP OF EXTERIOR FOOTING ELEVATION -2'-0" BELOW FINISH FLOOR, UNLESS NOTED.
4. 4" SLAB ON GRADE, UNLESS NOTED, SEE GENERAL NOTES AND TYPICAL DETAILS.
5. GENERAL CONTRACTOR COORDINATE LOCATION OF ALL FOOTING STEPS WITH CIVIL, UTILITY AND PLUMBING DRAWINGS.
6. GENERAL CONTRACTOR COORDINATE FLOOR DEPRESSION DEPTH, SIZE AND LOCATION WITH ARCHITECTURAL DRAWINGS.
7. GENERAL CONTRACTOR COORDINATE LOCATION OF TILE JOINTS WITH CONTROL JOINTS.



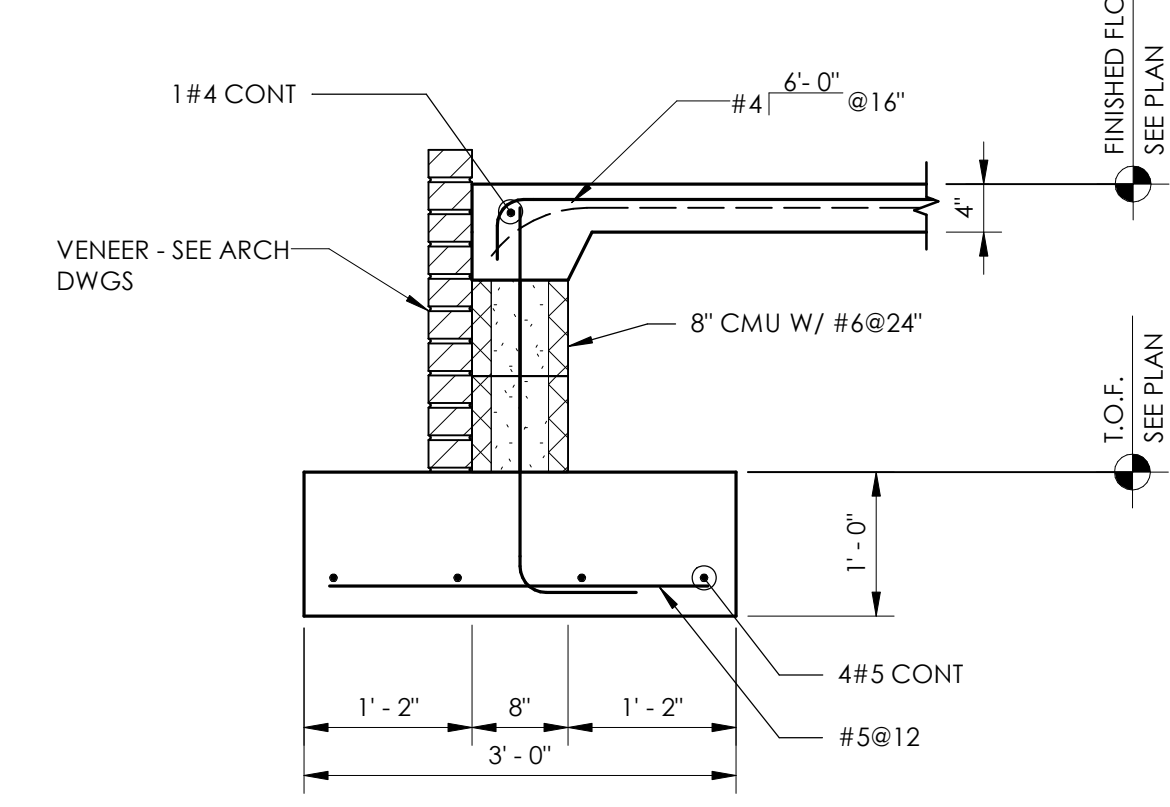
AMPHITHEATRE ROOF

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

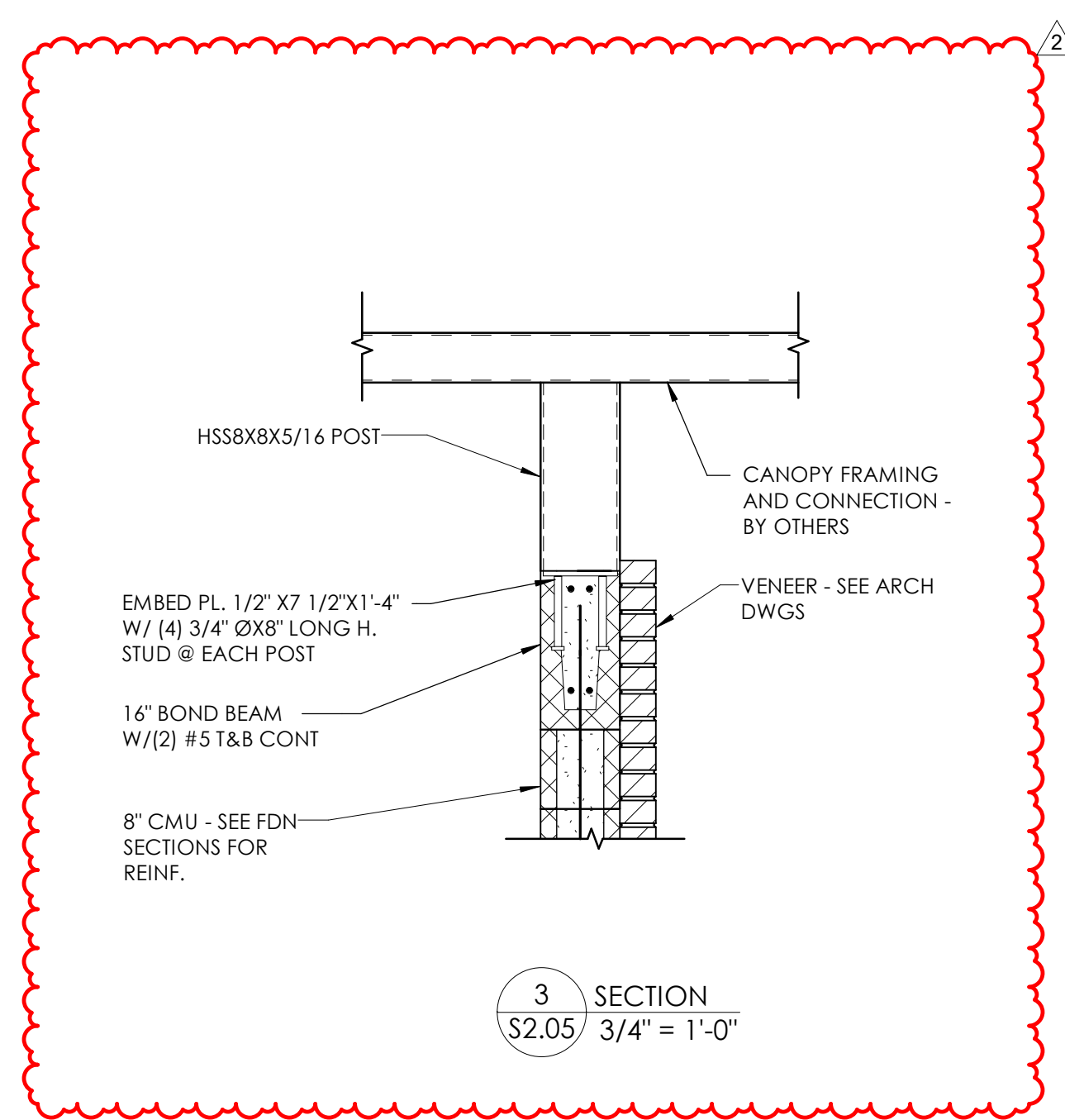
1. TOP OF STEEL ELEVATION: (11'-4")
2. ROOF SYSTEM AT BEAMS:
 1-1/2" STEEL ROOF DECK ON STEEL BEAMS, SEE GENERAL NOTES FOR ROOF DECK ATTACHMENT PATTERN.
3. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "X"; WHERE "X" IS THE MAGNITUDE OF THE WORKING LOAD SHEAR REACTION IN KIPS. UNLESS NOTED OTHERWISE ON PLAN DESIGN CONNECTIONS FOR SHEAR REACTION OF 10 KIPS.
4. ALL STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED.



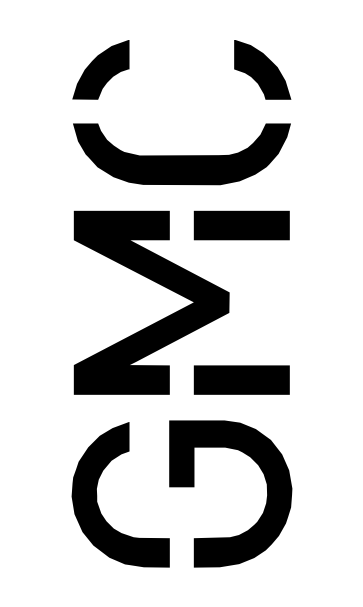
1 SECTION S2.05 3/4" = 1'-0"



2 SECTION S2.05 3/4" = 1'-0"



3 SECTION S2.05 3/4" = 1'-0"



Goodwyn Mills Cawood, LLC
 2400 5th Avenue South, Suite 200
 Birmingham, AL 35233
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ISSUE	DATE
1	05.28.2024
2	06.21.2024
3	06.21.2024
4	06.25.2024

1
2
3
4

IFB SET
Addendum 3
Addendum 4

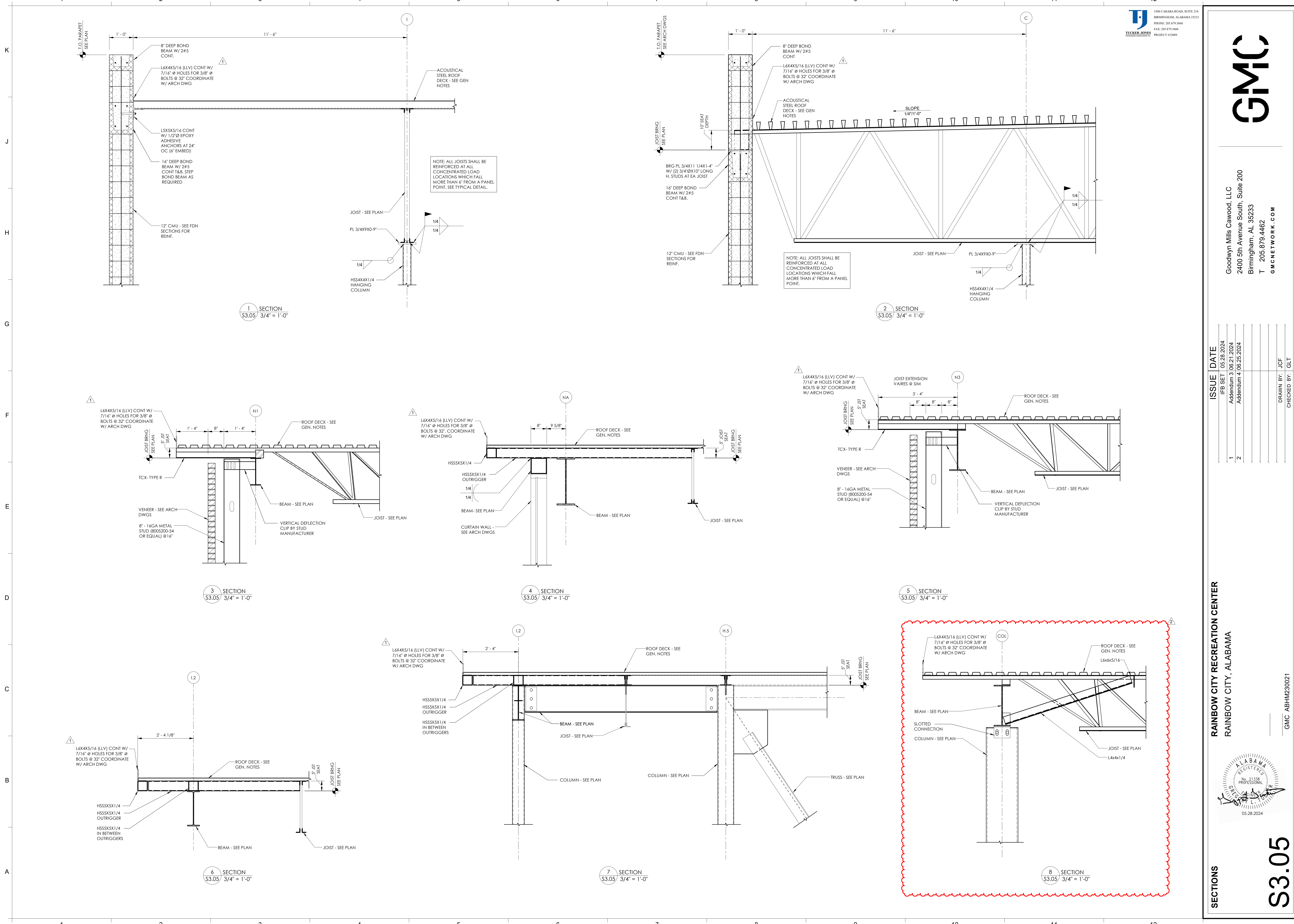
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CHECKED BY: GLT

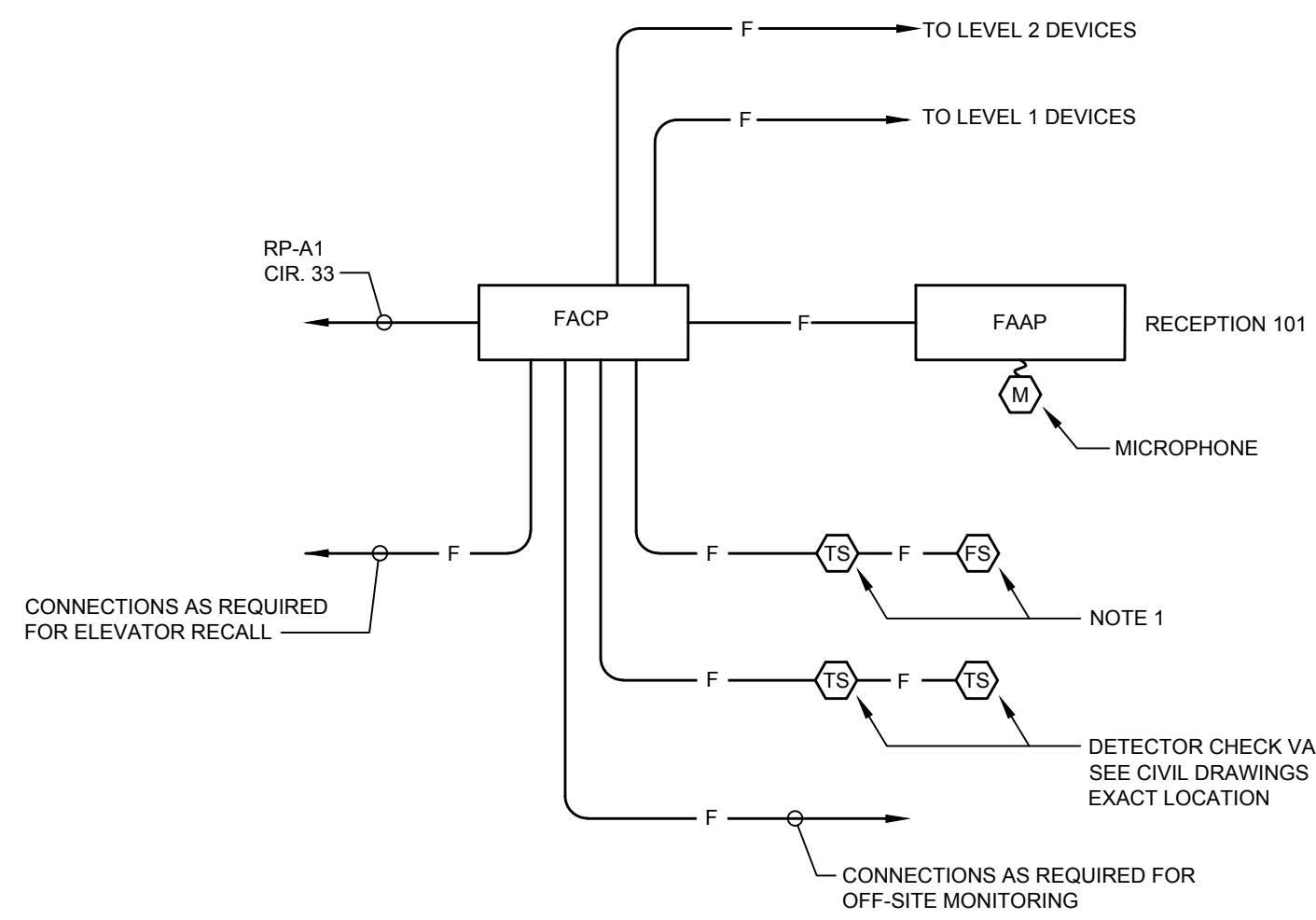
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 RAINBOW CITY, ALABAMA



S3.05

SECTIONS

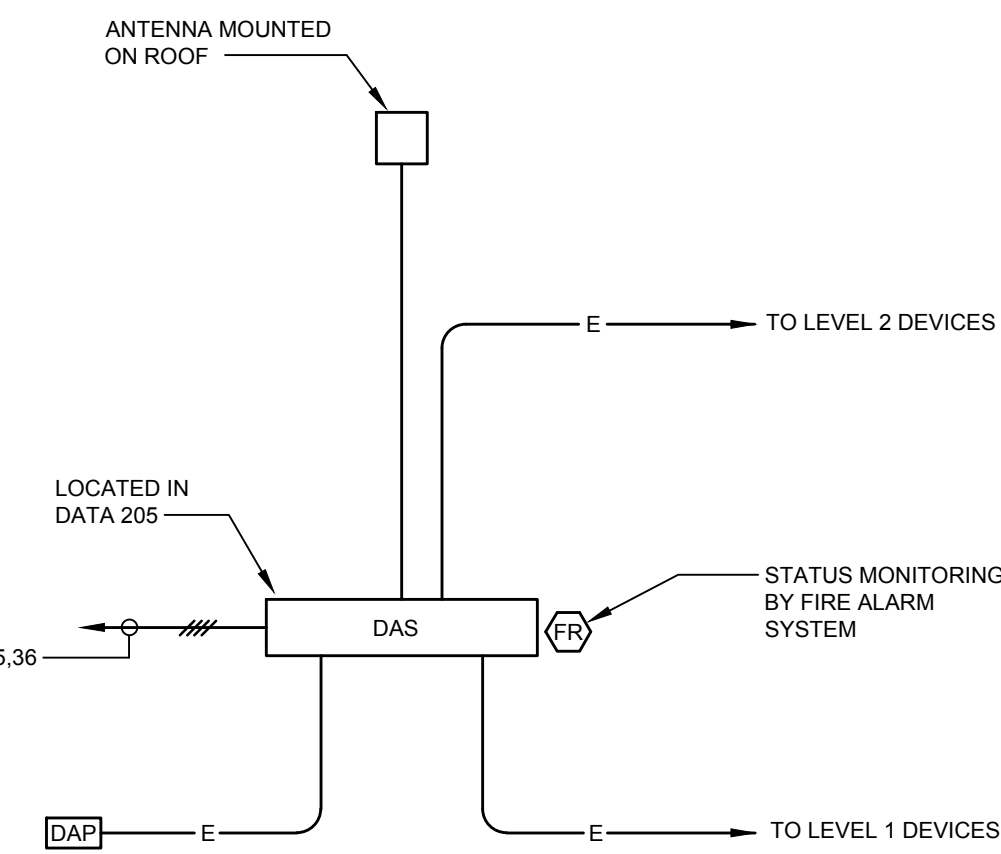




FIRE ALARM SYSTEM RISER DIAGRAM
SCALE : NONE

FIRE ALARM SYSTEM NOTES

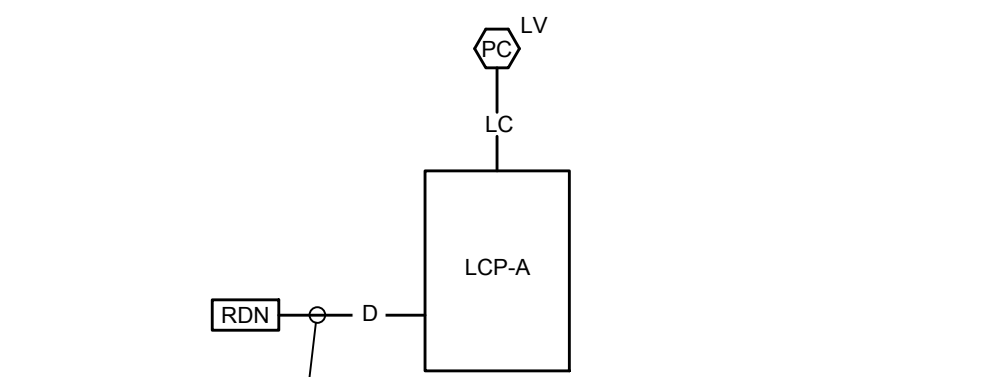
- THIS CONTRACTOR SHALL VERIFY EXACT QUANTITY AND LOCATION OF ALL SPRINKLER SYSTEM FLOW SWITCHES AND TAMPER SWITCHES FROM FIRE PROTECTION SYSTEM PLANS AND SPECIFICATIONS PRIOR TO BID AND FURNISH ALL MATERIAL AND LABOR REQUIRED TO CONNECT EACH AS A SEPARATELY ZONED DEVICE. COORDINATE ALL WORK REQUIRED WITH FIRE PROTECTION SYSTEM SUB-CONTRACTOR.
- COORDINATE WITH OWNER IN REGARD TO ACQUISITION OF DEDICATED PHONE LINES FROM UTILITY OR REQUIREMENTS FOR OTHER OFF-SITE MONITORING COMMUNICATION TECHNOLOGY. EXACT/ADDITIONAL COMMUNICATION TECHNOLOGY SHALL BE AS REQUIRED BY APPLICABLE CODE AND AHJ. OFF-SITE MONITORING SERVICE SHALL BE IN OPERATION PRIOR TO ACCEPTANCE TEST.
- FIRE ALARM EQUIPMENT SUPPLIER SHALL PROVIDE A COMPLETE SET OF FIRE ALARM EQUIPMENT SHOP DRAWINGS TO LOCAL FIRE MARSHALL FOR HIS APPROVAL.
- ALL FIRE ALARM WIRING SHALL BE RUN IN CONDUIT. NO EXCEPTIONS.
- PROVIDE SURGE PROTECTION DEVICES ON EACH END OF ALL COPPER FIRE ALARM CIRCUITS WITH ANY PORTION LOCATED OUTSIDE OF BUILDINGS.
- INSTALL DUCT MOUNTED SMOKE DETECTOR(S) AND CONTROL RELAY AT EACH MECHANICAL UNIT AND AT FIRE/SMOKE DAMPERS WHERE REQUIRED FOR UNIT SHUTDOWN. COORDINATE ALL WORK REQUIRED WITH MECHANICAL. CONTRACTOR SHALL REVIEW MECHANICAL PLANS TO CONFIRM UNIT LOCATIONS AND THAT QUANTITY OF REQUIRED DUCT DETECTORS AND CONTROL RELAYS MATCH THOSE SHOWN ON ELECTRICAL PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST INVOLVED WITH OBTAINING A SEPARATE PERMIT AS REQUIRED BY LOCAL AUTHORITIES FOR INSTALLATION OF THE FIRE ALARM SYSTEM.



EMERGENCY RESPONDER RADIO SYSTEM RISER DIAGRAM
SCALE : NONE

EMERGENCY RESPONDER RADIO SYSTEM NOTES

- THIS CONTRACTOR SHALL SURVEY BUILDING ONCE STRUCTURE IS COMPLETE AND IMMEDIATELY PRIOR TO CEILINGS BEING INSTALLED TO DETERMINE RADIO COVERAGE IN ALL AREAS OF THE BUILDING. FURNISH REPORT TO THE ARCHITECT INDICATING SIGNAL AREAS AT ALL AREAS OF THE BUILDING(S). IF IT IS DETERMINED THAT AN EMERGENCY RADIO COVERAGE IS REQUIRED, IT WILL BE INSTALLED UNDER THE DAS SYSTEM ALLOWANCE OF THE SPECIFICATIONS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 275310 OF THE SPECIFICATIONS. SYSTEM SHALL INCLUDE A COMPLETE OPERATING SYSTEM CONSISTING OF NECESSARY AMPLIFIERS, FILTERS, SURGE SUPPRESSION, CABLING, ANTENNA, ETC.



LIGHTING CONTROL PANEL RISER DIAGRAM
SCALE : NONE

LIGHTING CONTROL PANEL RISER DIAGRAM NOTES

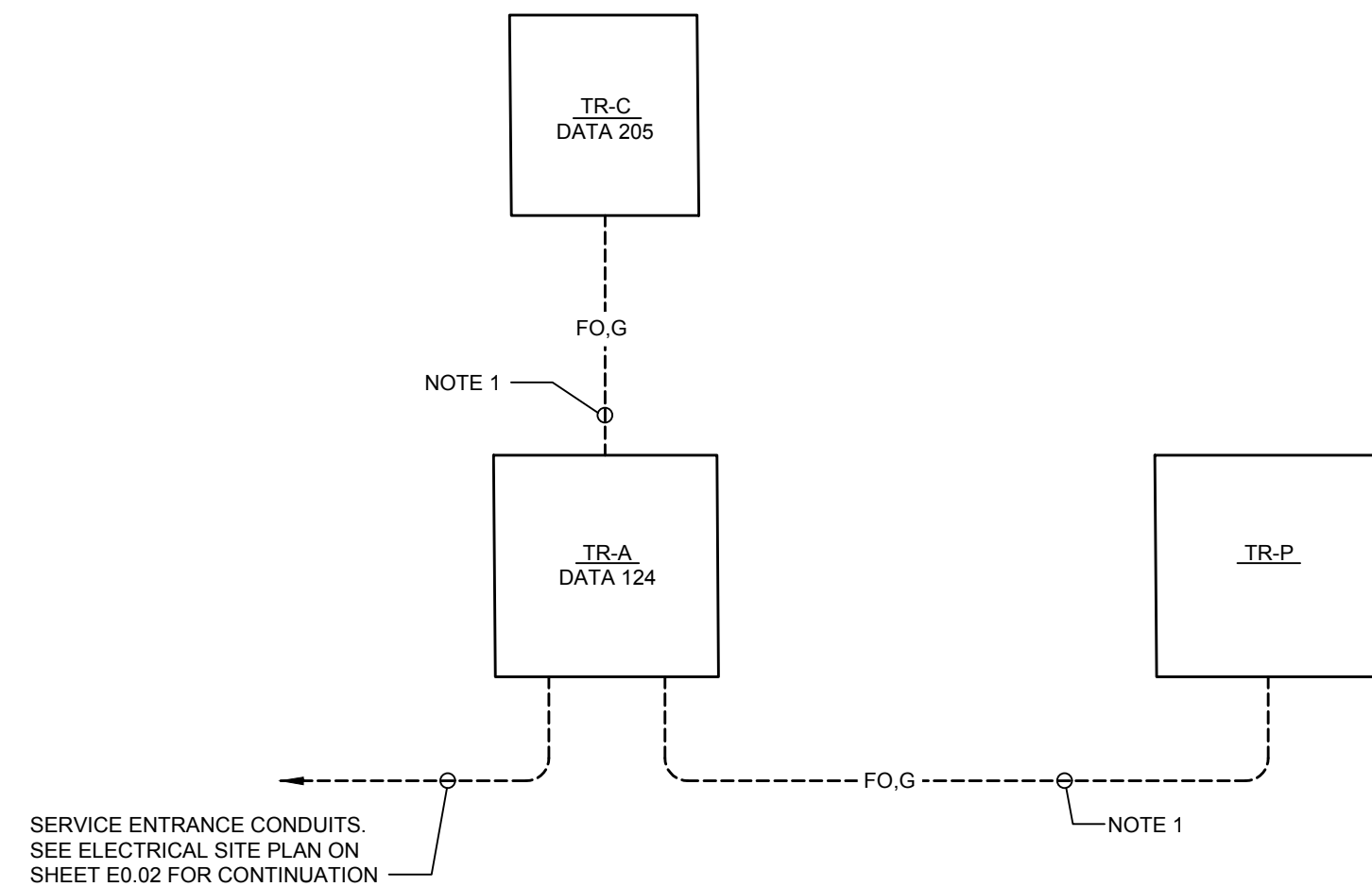
- PROVIDE 120V NORMAL POWER TO EACH LIGHTING CONTROL PANEL. CONNECT TO RP PANEL IN ROOM WITH CONTROL PANEL.

PANELBOARD SCHEDULE - RP-PH										
PANEL TYPE: SQUARE D' TYPE NQ				AIC RATING: 10KAC (MINIMUM)						
VOLTAGE: 120/208V-3P-4W				MOUNTING: SURFACE		LOCATION: SEE PLANS				
AMPS & TYPE: 100/3 MAIN BKR				FEEDER: 4#3 & 1#6G - 1 1/2" C						
CKT. NO.	NOTES	BKR	DESCRIPTION	WATTS	PHASE	WATTS	DESCRIPTION	BKR	NOTES	CKT. NO.
1	-	20/1	RECEPTACLES	800	A	500	RPZ	20/1	-	22
2	-	20/1	RECEPTACLES	800	B	1,500	HAND DRYER	20/1	-	23
3	GFCI	20/1	DRINKING FOUNTAINS	1,000	C	1,500	HAND DRYER	20/1	-	24
4	-	20/1	TR-P	500	A	-	-	20/1	-	25
5	GFCI	20/1	CHLORINATOR	1,000	B	-	-	20/1	-	26
6	GFCI	20/1	CHLORINE FEEDER	1,000	C	-	-	20/1	-	27
7	GFCI	20/1	PH FEEDER	1,000	A	-	-	20/1	-	28
8	GFCI	20/1	POOL LIGHTS	1,000	B	-	-	20/1	-	29
9	GFCI	20/1	AUTO-FILL	1,000	C	-	-	20/1	-	30
10	GFCI	20/1	TANK PUMP	1,000	A	-	-	20/1	-	31
11	-	30/1	WATER HEATER	2,500	B	-	-	20/1	-	32
12	-	20/1	SPLASHPAD CONTROL PNL	800	C	-	-	20/1	-	33
13	-	20/1	SPARE		A	-	-	20/1	-	34
14	-	20/1	SPARE		B	-	-	20/1	-	35
15	-	20/1	SPARE		C	-	-	20/1	-	36
16	-	20/1	SPARE		A	-	-	20/1	-	37
17	-	20/1	SPARE		B	-	-	20/1	-	38
18	-	20/1	SPARE		C	-	-	20/1	-	39
19	-	20/1	SPARE		A	-	-	20/1	-	40
20	-	20/1	SPARE		B	-	-	20/1	-	41
21	-	20/1	SPARE		C	-	-	20/1	-	42
NOTES:				PH. A	PH. B	PH. C	TOTAL CONNECTED LOAD:		15.9 KVA	
1. PROVIDE INTEGRAL 160KA (PER PHASE) SPD.				3,800	6,800	5,300	TOTAL DEMAND LOAD:		44.2 AMPS	
2. *GFCI = BE GFI-TYPE BKR. (5mA TRIP)								TOTAL COMPUTED LOAD:		15.9 KVA
										44.2 AMPS

TRANSFORMER SCHEDULE									
MARK	SIZE (KVA)	DESCRIPTION	PRIMARY VOLTAGE & PHASE	SECONDARY VOLTAGE & PHASE	PANEL FED	MOUNTING	GROUND SIZE	REMARKS	
T-A1	75	DRY-TYPE	480V-3P-3W	120/208V-3P-4W	RP-A1	FLOOR	#2	ELEC 125	
T-B2	75	DRY-TYPE	480V-3P-3W	120/208V-3P-4W	RP-B2	FLOOR	#2	MECH 202	
T-C2	45	DRY-TYPE	480V-3P-3W	120/208V-3P-4W	RP-C2	FLOOR	#6	DATA 205	
T-PH	30	DRY-TYPE	480V-3P-3W	120/208V-3P-4W	RP-PH	FLOOR	#8	POOL ELEC. ROOM	

TRANSFORMER SCHEDULE NOTES:

- EXACT TRANSFORMER LOCATIONS SHALL BE FIELD COORDINATED TO PROVIDE CODE-REQUIRED CLEARANCES AND WORKING SPACES AROUND TRANSFORMERS AND ADJACENT EQUIPMENT (SUCH AS PANELBOARDS).
- ALL TRANSFORMERS SHALL BE MOUNTED ON VIBRATION ISOLATORS PER SPECIFICATION REQUIREMENTS.



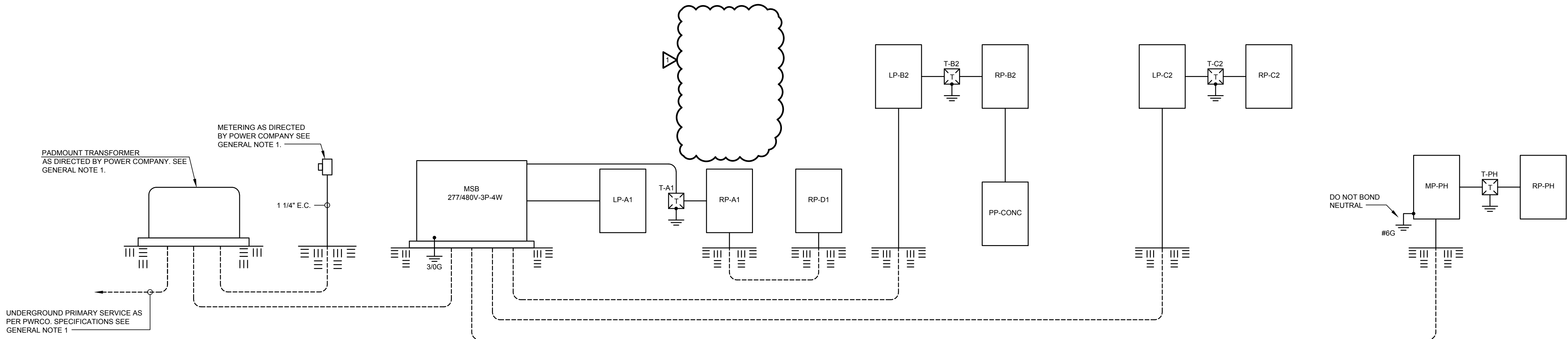
STRUCTURED CABLING RISER DIAGRAM
SCALE : NONE

STRUCTURED CABLING SYSTEM NOTES

- 12-STRAND SINGLE-MODE FIBER CABLE AND 1#4/0 IN 4" CONDUIT AND ONE (1) SPARE 4" EMPTY CONDUIT. PROVIDE INNERDUCT IN BOTH CONDUITS.
- ALL BACKBONE CABLING SHALL HOMERUN TO MDF FROM EACH IDF. CABLE CAN LOOP THROUGH IDF'S AS SHOWN ON RISER DIAGRAM.

PANELBOARD SCHEDULE - PP-CONC													
PANEL TYPE: SQUARE D' TYPE NQ				AIC RATING: 10KAC (MINIMUM)									
VOLTAGE: 120/208V-3P-4W				MOUNTING: FLUSH		LOCATION: SEE PLANS							
AMPS & TYPE: 100 AMP - MLO				FEEDER: SEE PANELBOARD SCHEDULE - RP-B2 (SECT. 1)									
CIR. NO.	ITEM NO.	DESCRIPTION	VOLTS	P	HP	KW OR KVA	AMPS	BKR SIZE	WIRE AND COND. SIZE	REMARKS			
1		REFRIGERATOR	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
2		REFRIGERATOR	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
3		REFRIGERATOR	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
4		REFRIGERATOR	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
5		CONCESSIONS OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C					
6		CONCESSIONS OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C					
7		CONCESSIONS OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C					
8		SPARE											
9		ICE MACHINE	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
10		CATERING KITCHEN OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C					
11		CATERING KITCHEN OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C					
12		ICE MACHINE	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
13		CATERING KITCHEN OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C					
14		REFRIGERATOR	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
15		MICROWAVE	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
16		MICROWAVE	120	1		1.5	20/1	2#12 & 1#12G - 1/2" C		GFCI			
17		CONCESSIONS OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C		GFCI			
18		CONCESSIONS OUTLETS	120	1		1.0	20/1	2#12 & 1#12G - 1/2" C		GFCI			
19,20		AC-5, 6	208	1		0.2	15/2	2#12 & 1#12G - 1/2" C					
21		SPARE											
22		SPARE											
23		SPARE											
24		SPARE											
25		SPARE											
26		SPARE											
27		SPARE											
28		SPARE											
29		SPARE											
30		SPARE											
TOTAL CONNECTED LOAD:								21.7 KVA	NOTES:				
TOTAL DEMAND LOAD:								60.3 AMPS	1. PROVIDE INTEGRAL 160KA (PER PHASE) SPD.				
TOTAL COMPUTED LOAD:								14.2 KVA	2. *GFCI = BE GFI-TYPE BKR. (5mA TRIP).				
								39.4 AMPS					
								14.2 KVA					
								39.4 AMPS					

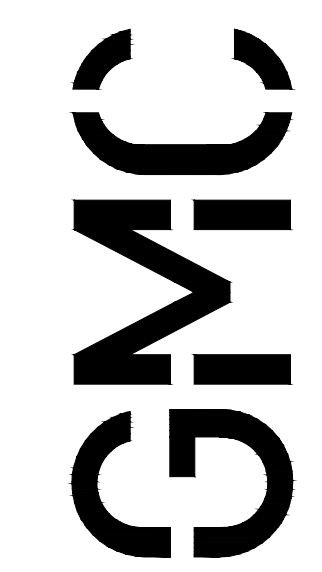
PANELBOARD SCHEDULE - MP-PH													
PANEL TYPE: SQUARE D' I-LINE SERIES				AIC RATING: 18KAC (MINIMUM)									
VOLTAGE: 277/480V-3P-4W				MOUNTING: SURFACE		LOCATION: SEE PLANS							
AMPS & TYPE: 125/3 MAIN BKR				FEEDER: SEE PANELBOARD SCHEDULE - MSB									
CIR. NO.	DESCRIPTION	VOLTS	P	HP	KW OR KVA	AMPS	BKR SIZE	LOCAL SAFETY SW RATING	WIRE AND COND. SIZE	REMARKS			
1	RP-PH (30 KVA X-FORMER)	480	3		15.9		80/3	-	3#4 & 1#8G - 1 1/4" C				
2	POOL HOUSE LIGHTING	277	1		0.9		20/1	-	2#12 & 1#12G - 1/2" C				
3	EVH-2	277	1		2.0		30/2		2#12 & 1#12G - 1/2" C				
4	ECH-1	277	1		4.0		20/1	30/2	2#12 & 1#12G - 1/2" C				
5	ECH-2	277	1		4.0		20/1	30/2	2#12 & 1#12G - 1/2" C				
6	FILTER PUMP	480	3	20			60/3	INTEGRAL	3#6 & 1#8G - 1" C				
7	SPACE							-3					
8	SPACE							-3					
9	SPACE							-3					
10	SPACE							-3					
TOTAL CONNECTED LOAD:							48.4 KVA	NOTES:					
TOTAL DEMAND LOAD:							48.4 KVA	1. PROVIDE INTEGRAL 160KA (PER PHASE) SPD.					
TOTAL COMPUTED LOAD:							51.1 KVA						
							60.5 AMPS						
							63.9 AMPS						



SINGLE LINE DIAGRAM
SCALE : NONE

SINGLE LINE DIAGRAM NOTES

- REFER TO PANELBOARD SCHEDULES ON THIS SHEET FOR FEEDER SIZES.



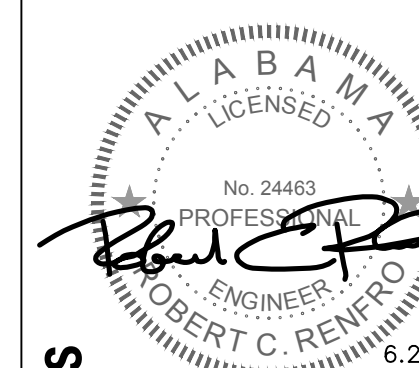
Goodwyn Mills Cawood, LLC
2400 5th Avenue South, Suite 200
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T 205.879.4462
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ISSUE	DATE
IFB SET	05-28-2024
ADDENDUM 04	06-25-2024

DRAWN BY: SNJ
CHECKED BY: RCR

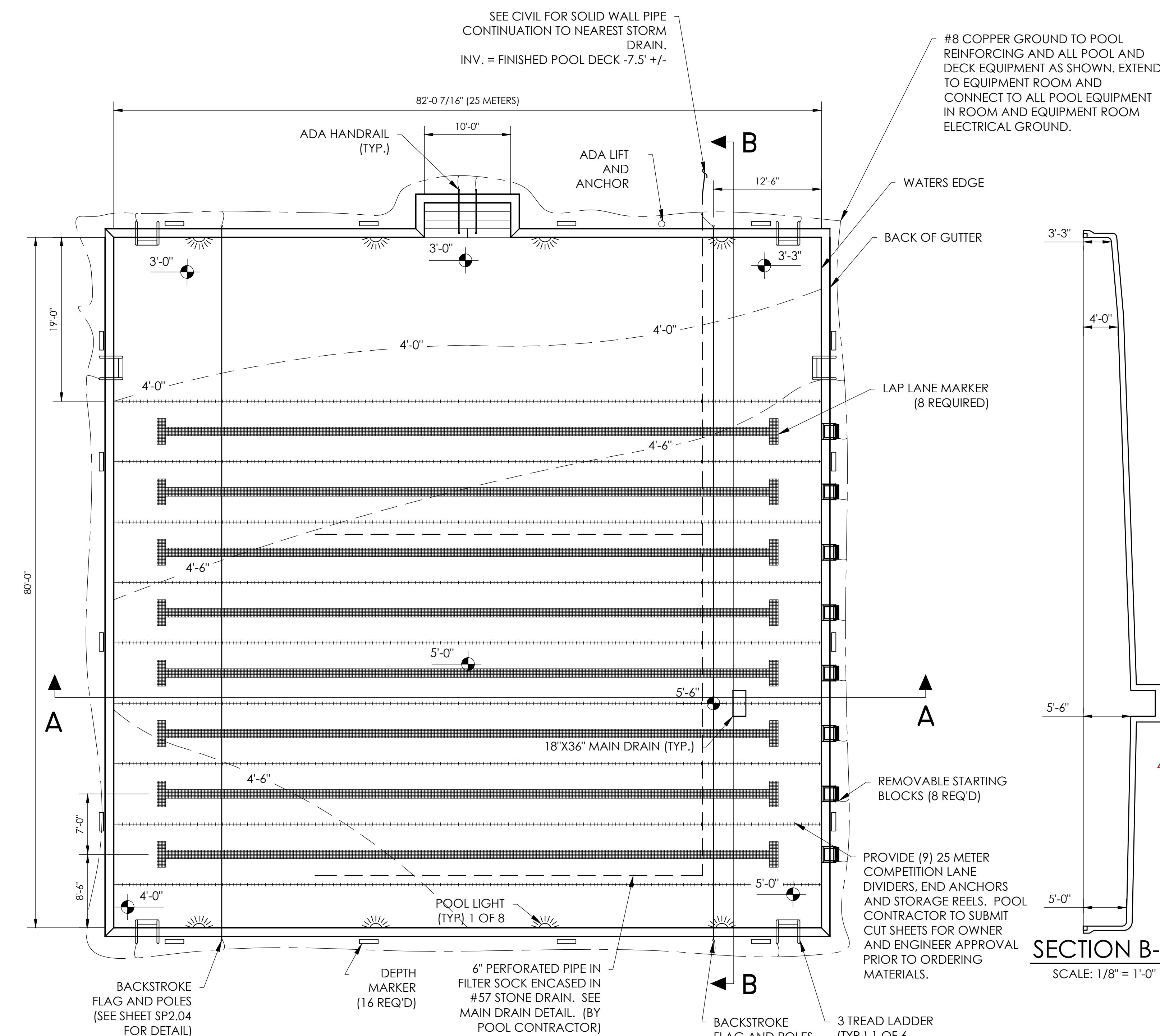
RAINBOW CITY RECREATION CENTER
RAINBOW CITY, ALABAMA

GMC # ABHM230021



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ROBERT RENFRO, PE
bobby@jra.com
(205) 536-7107
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TRA REG. NO. 12312
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E5.02



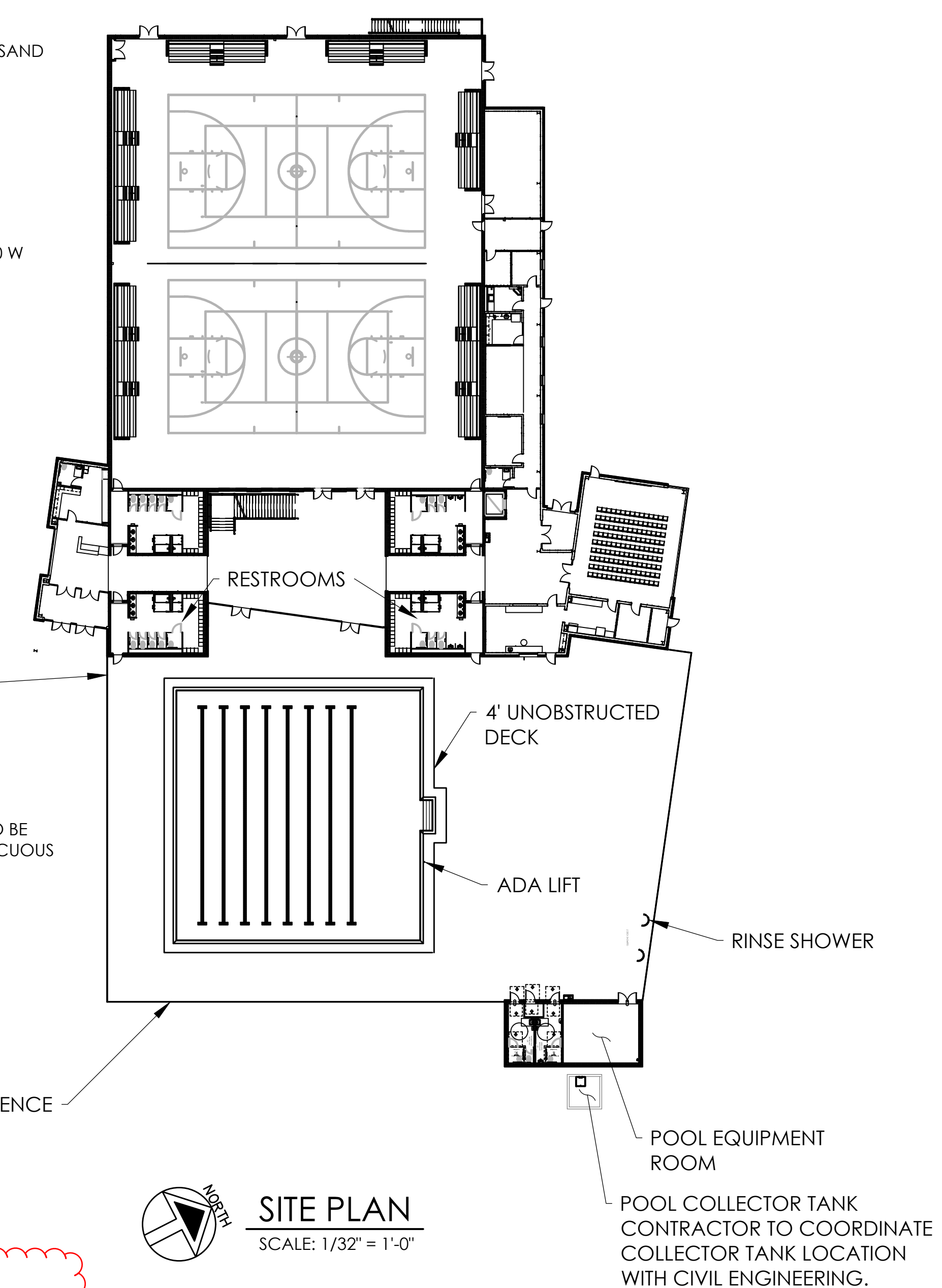
POOL DATA
 PERIMETER = 332'-0" (WATERLINE)
 AREA = 6,599 SQ. FT.
 VOLUME TOTAL = 221,332 GALLONS
 REQ'D TURN OVER RATE = 615 GPM
 POOL CLASSIFICATION: CLASS A
 DESIGN FLOW RATE = 820 GPM

FILTER AREA = 60 SQ. FT.
 FILTER TYPE = FIBERGLASS HORIZONTAL PRESSURE SAND
 FILTER RATE = 13.67 GPM/SQ. FT.

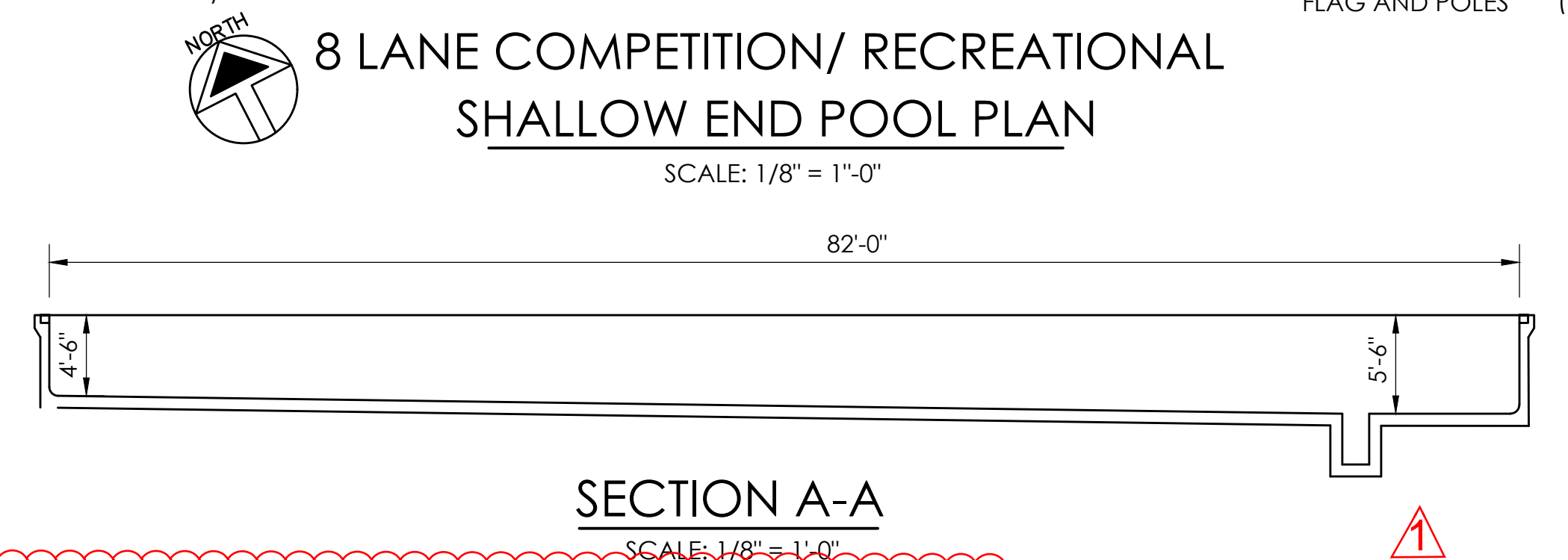
MAXIMUM USER LOAD CALCULATION:
 DECK AREA AT LEAST EQUAL TO WATER
 BATHING LOAD CALC. = 15 SF/USER
 BATHING LOAD = 439 PERSONS

POOL LIGHTING CALCULATION:
 REQ'D LIGHTING = 6,599 SF X 0.5 WATTS/SF = 3,300 W
 PROVIDED LIGHTING = 8 X 500 W = 4,000 WATTS

SECTION B-B
 SCALE: 1/8" = 1'-0"



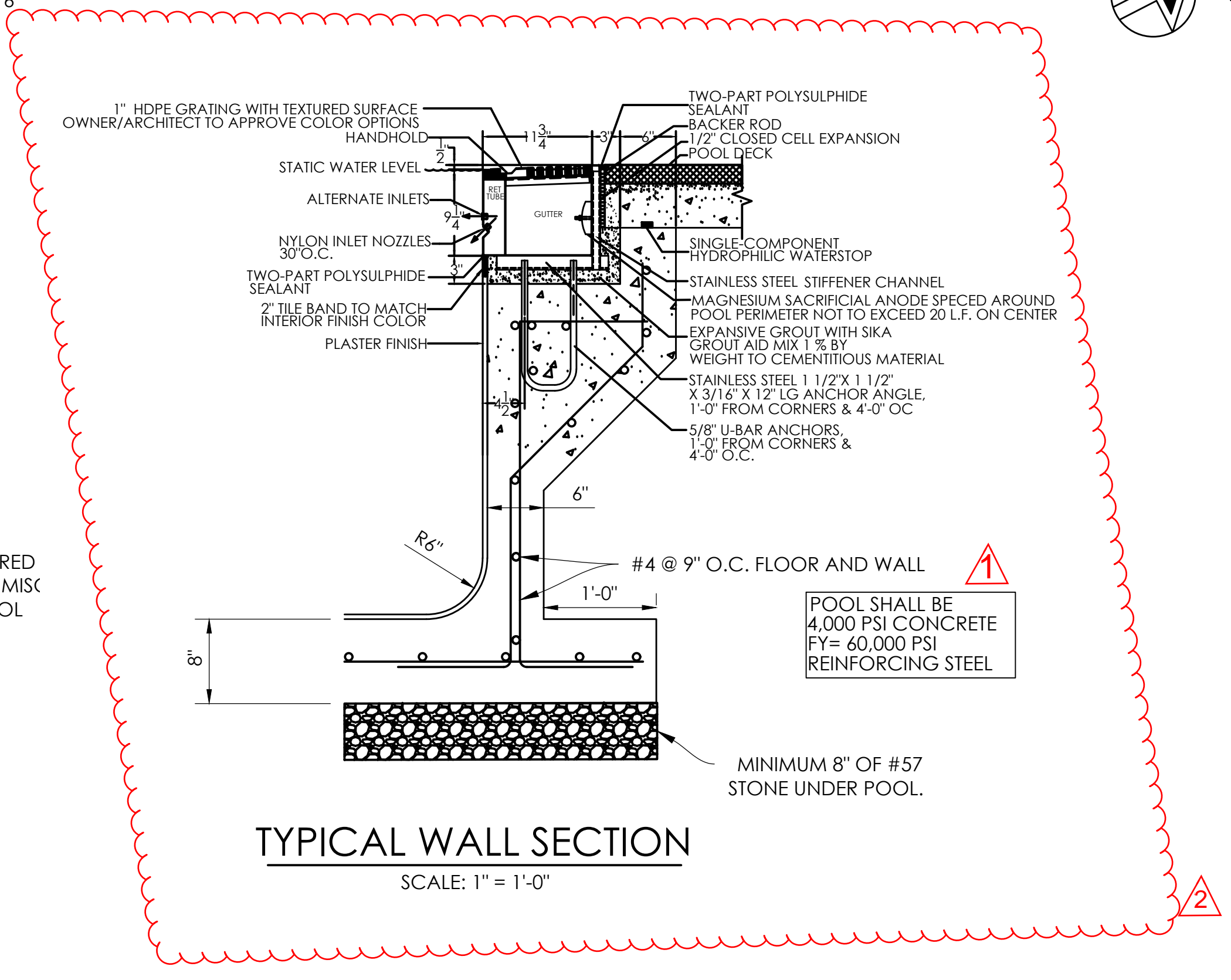
SITE PLAN
 SCALE: 1/32" = 1'-0"



SECTION A-A
 SCALE: 1/8" = 1'-0"

- O&M NOTES**
1. Pool contractor to provide operation and maintenance training and documentation to owner.
 2. Establish a proper grounding of all equipment being installed at aquatic facilities. Make it a point that dissimilar metals are not in direct contact of one another.
 3. Provide Start-up and cleaning instructions and safe chemical products for stainless steel and HDPE grating.

ALL REINFORCING STEEL SHALL BE CENTERED FLOOR & WALLS GENERALLY, BUT OTHER MISC BARS SHALL HAVE MIN 2" COVER ON POOL FINISH SIDE & 3" COVER ON EARTH SIDE.



TYPICAL WALL SECTION
 SCALE: 1" = 1'-0"

STRUCTURAL POOL SHELL NOTES:

A GEOTECHNICAL REPORT HAS BEEN PREPARED BY GMC, REPORT # GBHM230043. TESTING WILL BE PROVIDED BY THE OWNER'S GEOTECHNICAL ENGINEER. ALL BEARING SURFACES SHALL BE TESTED TO MEET THE DESIGN PARAMETERS OUTLINED IN THE REPORT. COMPACTED FILL SHALL MEET THE REQUIREMENTS SET FORTH IN THE REPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REQUEST TESTING AND ENSURE CONCRETE IS NOT PLACED ON UNSATISFACTORY SUBSURFACE MATERIAL WITHOUT APPROVAL FROM THE GEOTECHNICAL ENGINEER.

BACKFILL FOR POOL WALLS SHALL BE A FREE DRAINING GRANULAR MATERIAL SUCH AS #57 STONE. BACKFILL SHALL BE COMPACTED SUFFICIENTLY TO PREVENT SUBSIDENCE OF SURFACE ADJACENT TO WALL. WALLS SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS OBTAINED THE 28 DAY COMPRESSIVE STRENGTH. POOL BASE SLAB SHALL BE CAST IN PLACE CONCRETE.

POOL WALLS SHALL BE EITHER CAST IN PLACE CONCRETE OR SHOTCRETE (WET-MIX). 4000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS WITH 6% AIR ENTRAINMENT.

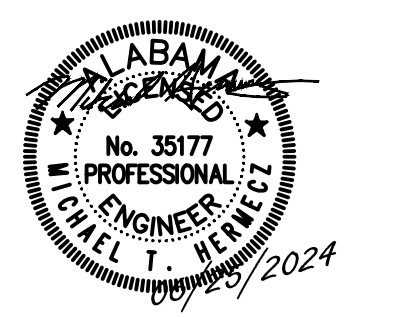
ALL REINFORCING SHALL BE GRADE 60, CONFORMING TO ASTM A615.

REINFORCING CLEARANCE SHALL BE 2" FOR WALLS. AND 3" FOR CAST SURFACES OR SHOT AGAINST EARTH.

ISSUE DATE

100% CDS	05.14.2024
IFB SET	05.28.2024
ADDENDUM 3 (REV 1)	06.21.2024
ADDENDUM 4 (REV 2)	06.25.2024

DRAWN BY: TCD
CHECKED BY: MTH



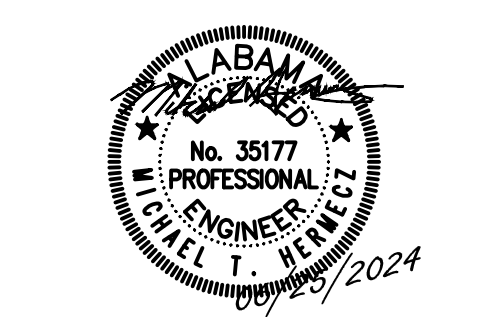
RAINBOW CITY RECREATION CENTER
 RAINBOW CITY, ALABAMA

GMC # ABHM230021

SP1.01

POOL LAYOUT

ISSUE DATE	05/14/2024
100% CDS	05/14/2024
IFB SET	05/28/2024
ADDENDUM 3 (REV 1)	06/21/2024
ADDENDUM 4 (REV 2)	06/25/2024
DRAWN BY:	TCD
CHECKED BY:	MTM



RAINBOW CITY RECREATION CENTER
 RAINBOW CITY, ALABAMA

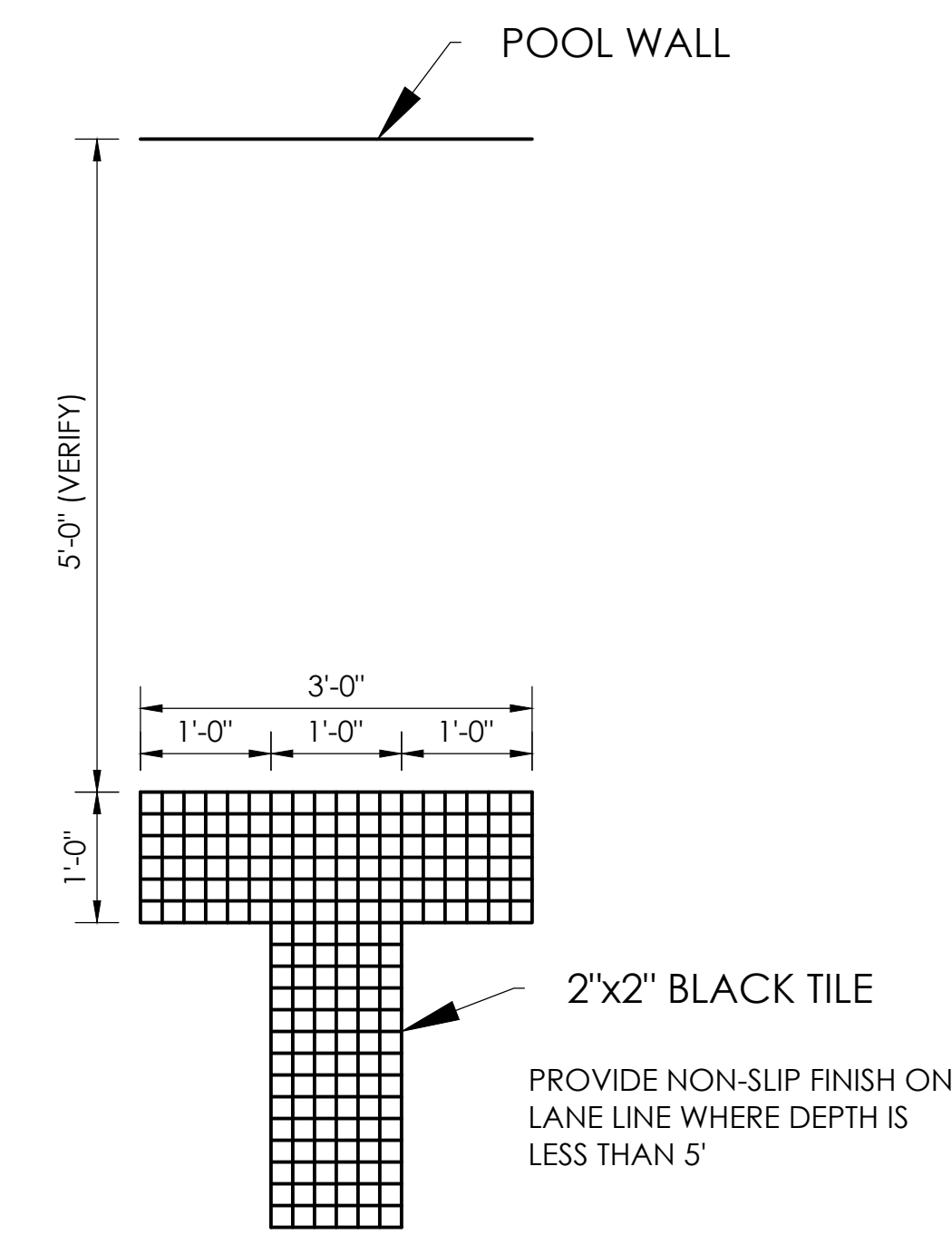
POOL EQUIPMENT

SP1.02

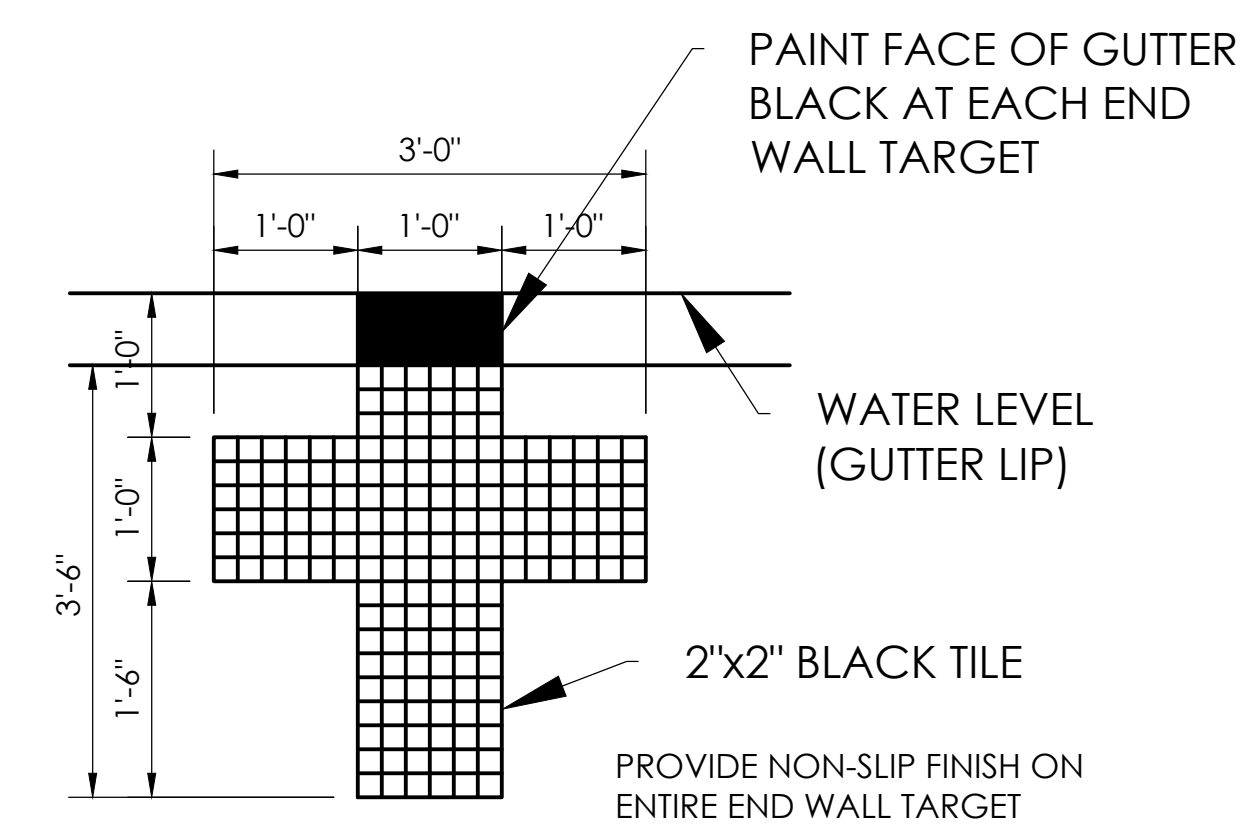
GMC # ABHM230021

POOL EQUIPMENT LIST				
ITEM	QUANTITY	MANUFACTURER	DESCRIPTION	VOLTS-AMPS
MAIN DRAIN FRAME & GRATE & SUMP	1	DALDORADO	DdMAX-SG-183634 18"X36"X34" SUMP AND GRATE PACKAGE	
FILTER	2	PADDOCK	HZF-48-30 48" FIBERGLASS HORIZONTAL PRESSURE SAND 60 SQ. FT. (30 SQ. FT. EA.) TOTAL AREA = 13.67 GPM/ SQ. FT.)	
FILTER PUMP	1	GRUNDFOS	LC 40957 (20 hp) W/ HAIR AND LINT STRAINER * AND SPARE BASKET. (820 GPM @ 60 FT. T.D.H.) WITH VFD	460 V 3 PHASE
VFD	1	SIEMENS	SEE SHEET SP2.03	
FLOW METER	1	BLUE WHITE	CF-30800P, 8" 300 TO 2200 GPM	
PRESSURE GAUGE	2	BLUE WHITE	2 1/2" FACE 0 TO 60" PSI	
VACUUM GAUGE	1	BLUE WHITE	2 1/2" FACE 0 TO 30" VACUUM	
CHLORINATOR	1	PROMINENT	SERIES CONCEPT PLUS, PN CN-PB-0215NPB2ND010 LIQUID NAOCL SANITIZER * DIAPHRAGM PUMP, 0.95 GAL/24 HRS, W/ (2) DOUBLED WALL 50 GALLON CROCKS	120V 60Hz
PH FEEDER	1	PROMINENT	SERIES CONCEPT PLUS, PN CN-PB-0215NPB2ND010 HCL PH CONTROL * DIAPHRAGM PUMP, 0.95 GAL/24 HRS, (2) DOUBLED WALL 50 GALLON CROCKS	120V 60Hz
SALT-CHLORINE GENERATOR	4	HAYWARD	HCS110 4" UNION 10 LBS/DAY *	120V 60Hz 1PH
CHEMICAL CONTROLLER	1	PROMINENT	MODEL DCM-513 SERIES PN 1093020 COMPLETE PACKAGE	5A/120V
AUTO-FILL	1	JANDY	JANDY LEVELOR K-1100	0.5A/120V
LADDER	6	PADDOCK	SEE SHEET SP2.04 316L S.S. (SEE DETAIL FOR QUANTITY.)	
HANDRAIL	2	S.R. SMITH	3HR-SADA 5'-0" 3 BEND-065 1.90x.065 316L SS (60")	
DEPTH MARKERS	16	PADDOCK	SEE SHEET SP2.04	
ESCUTCHEON AND WEDGE ANCHOR	16	PADDOCK	SEE SHEET SP2.04	
LIGHT W/ NICHE	8	HAYWARD	LPWU511XXX LED LIGHTS 72 WATTS (500 WATTS EQUIVALENT)	
TEST KIT	1	TAYLOR	2006 - SALT	
LIFE RING	2	CAL-JUNE	20" USCG LIFE RING-WHITE W/ 60' ROPE	120V
LIFE HOOK W/ POLE	2	AQUALITY	10138 RESCUE HOOK (RH1038)/4004 16' POLE	
STARTING BLOCK	8	PADDOCK	SEE SHEET SP2.04	
STARTING BLOCK ANCHOR	8	PADDOCK	SEE SHEET SP2.04	
LEAF SKIMMER	1	HAYWARD	PLASTIC - SP1700	
BRUSH	1	RAINBOW	18" CURVED BRUSH #902	
VACUUM CLEANER	1	WATERCO	PORTABLE WITH ON-BOARD CARTRIDGE FILTER	
VACUUM CLEANER HEAD	1	PENTAIR	R201269 29" VACUUM HEAD W/ 48" POLE AND 50' VACUUM HOSE	
PERIMETER GUTTER & GRATING	340'-0"	PADDOCK	SEE SHEET SP2.04 316L S.S. (MEASURED AT OUTSIDE OF GRATE)	
MOVEABLE LIFE GUARD CHAIR	1	PADDOCK	SEE SHEET SP2.04	
ADA LIFT AND ANCHOR	1	AQUA CREEK	F-MTY600 W/ F-8085A ANCHOR	

TOTAL OPEN AREA: 401.76 SQ. IN.
 VGB FLOOR FLOW RATE 2869 gpm
 (ANSI/APS-16 2017 COMPLIANT)



TYPICAL FLOOR MARKER DETAIL
 SCALE: 3/4" = 1'-0"



TYPICAL WALL TARGET DETAIL
 SCALE: 3/4" = 1'-0"

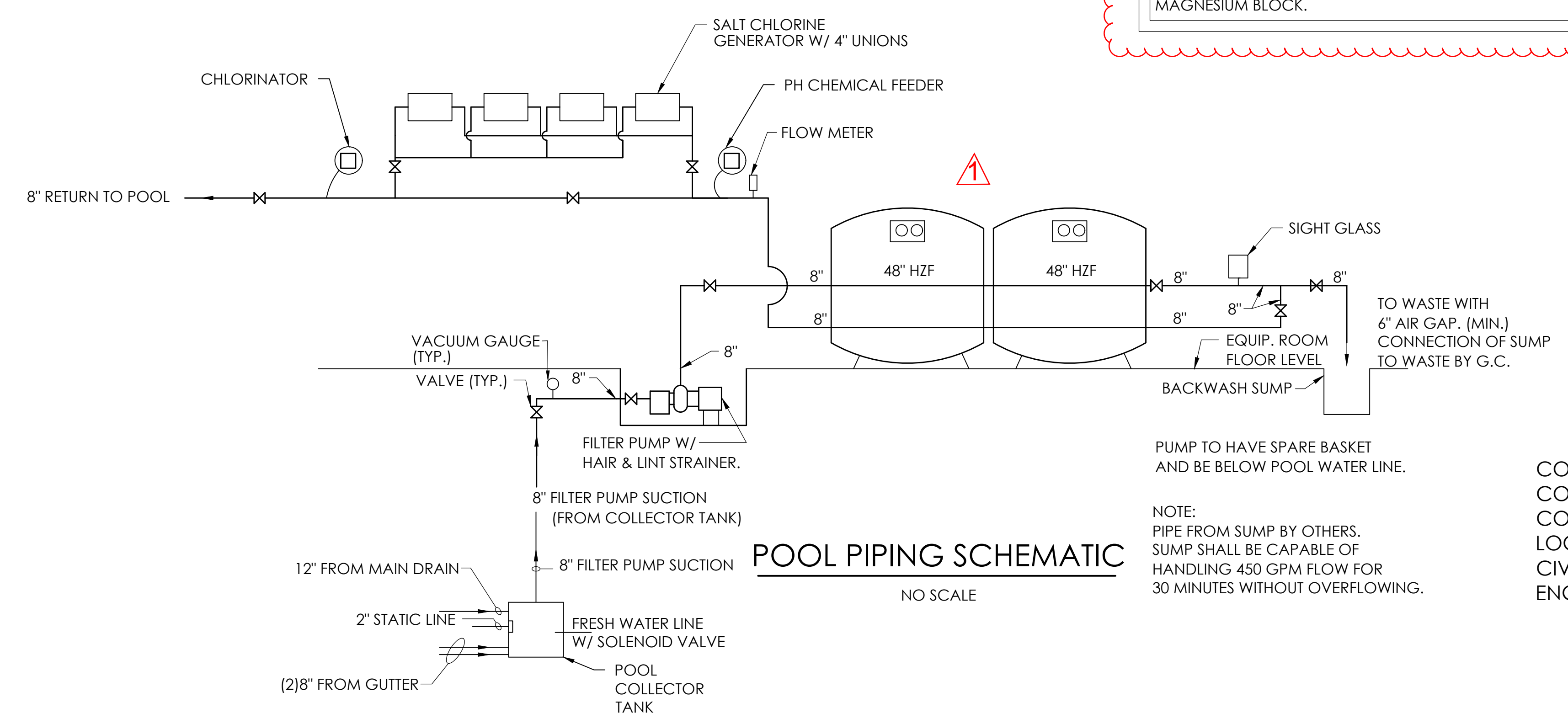
NOTE: ALTERNATE VENDORS FOR POOL EQUIPMENT SPECIFICATIONS MAY BE IMPLEMENTED GIVEN SUBMITTAL INFORMATION IS REVIEWED AND APPROVED BY POOL ENGINEER.

S.S. STEEL GUTTER TO HAVE MINIMUM 5 YEAR WARRANTY.

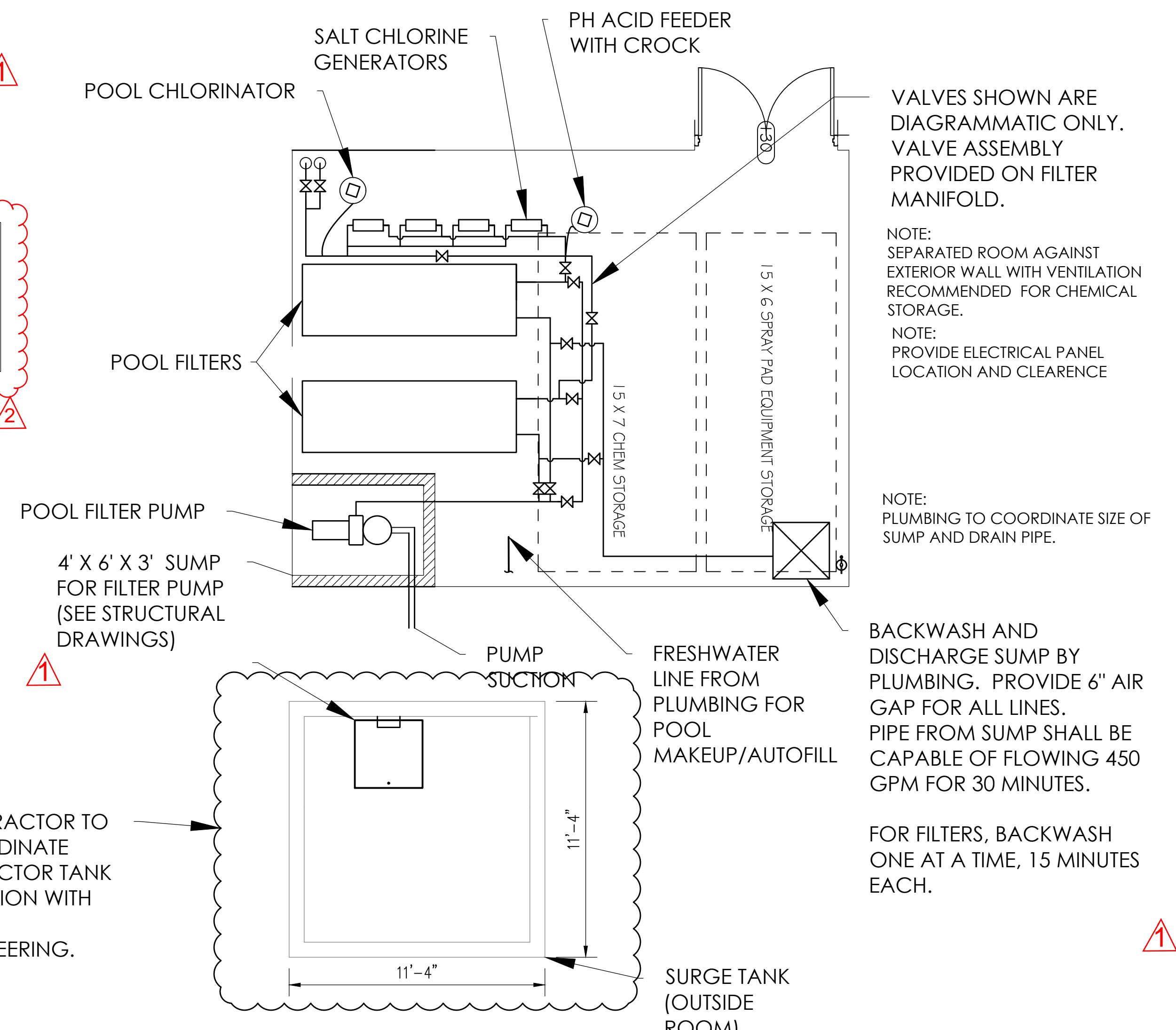
STAINLESS STEEL GUTTER SYSTEM SHALL BE ENTIRELY MADE OF 316L WITH THE EXCEPTION OF FASTENERS AND SCREWS MAY BE 316. SACRIFICIAL ANODES WILL BE WELDED STUDS AND MAGNESIUM BLOCK.

* NOTE: CHLORINATORS AND CHEMICAL FEEDERS TO BE ELECTRICALLY INTERLOCKED TO PREVENT OPERATION WHEN MAIN FILTER PUMP IS NOT WORKING AND SHALL HAVE MEANS TO PREVENT BACKFLOW. PROVIDE METHOD TO START/STOP CHEMICAL FEEDER WHEN PUMP IS RUNNING.

CHLORINATOR CALCULATION:
 (820 GPM x 60MIN/HR x 24 HRS/DAY x 62.4 #/CF x 0.000006 PPM) / (7.48 GAL/CF) = 59.1 PPD



POOL PIPING SCHEMATIC
 NO SCALE

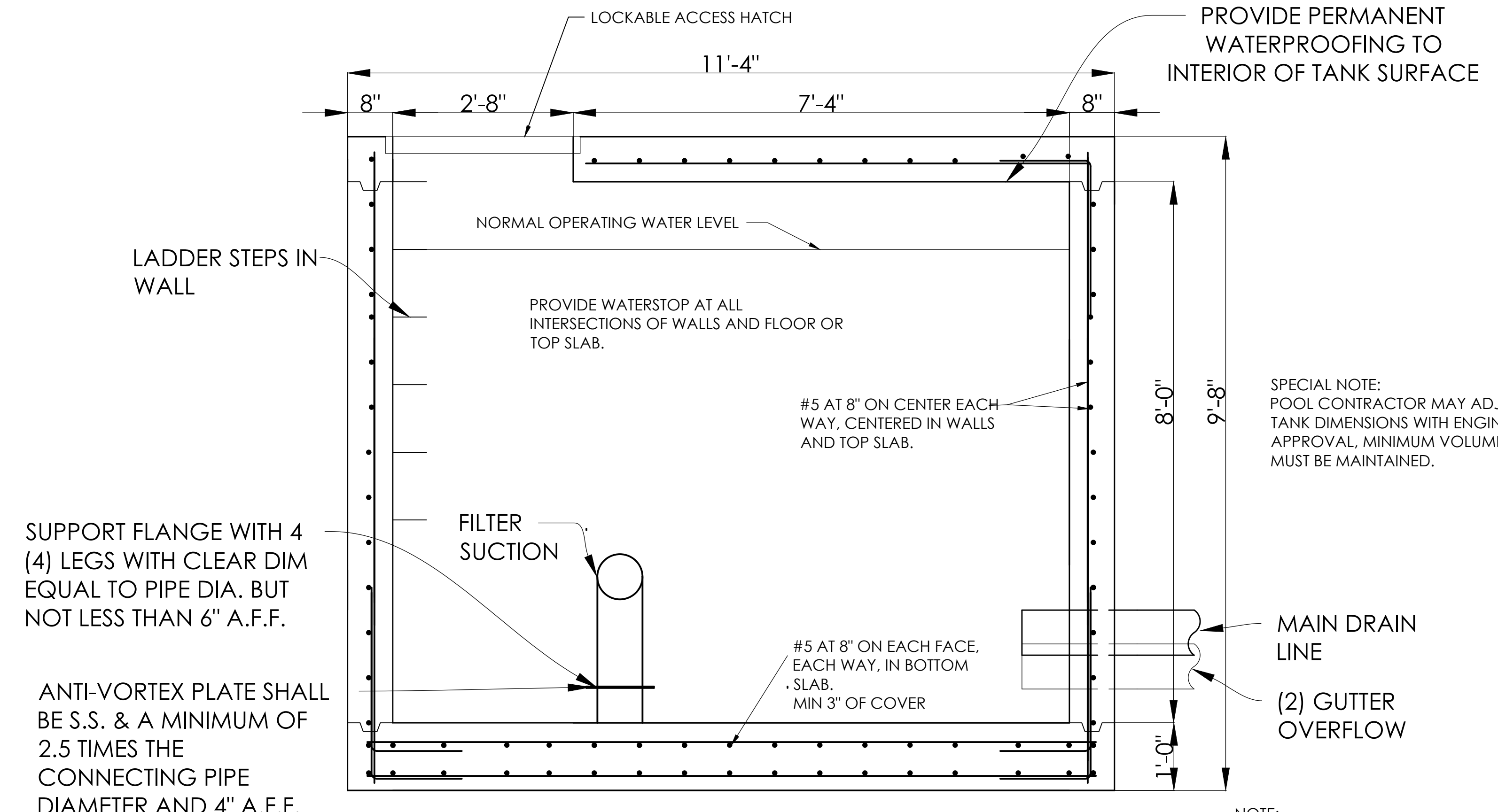


FILTER EQUIPMENT BUILDING PLAN
 SCALE: 1/4" = 1'-0"

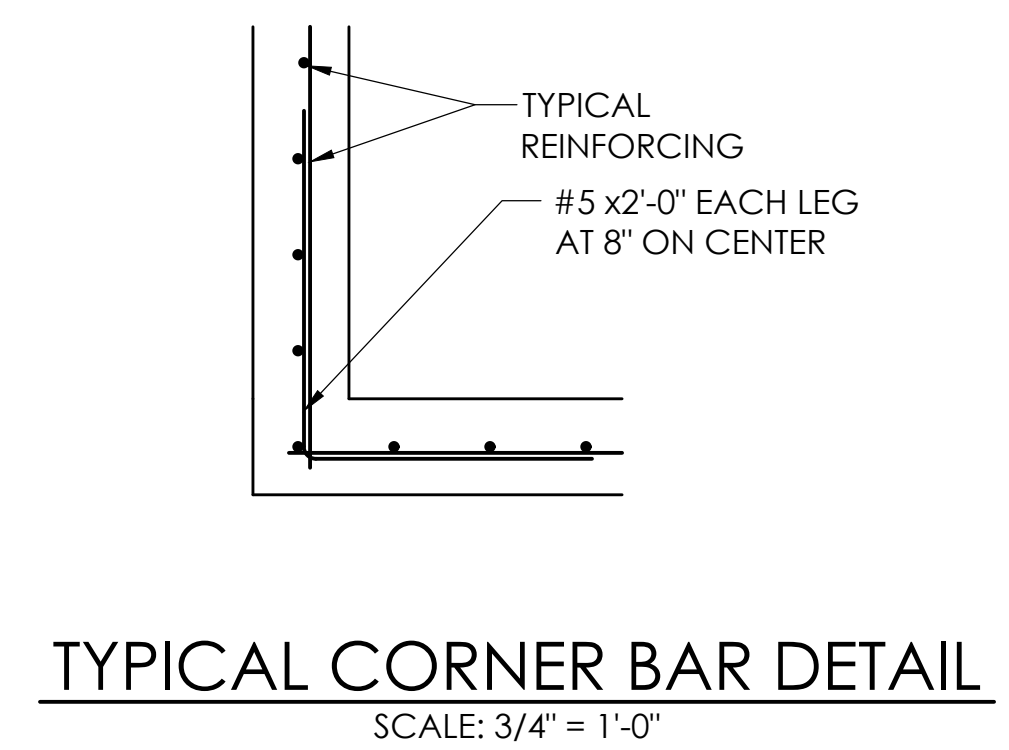
CONTRACTOR TO COORDINATE COLLECTOR TANK LOCATION WITH CIVIL ENGINEERING.

BACKWASH AND DISCHARGE SUMP BY PLUMBING. PROVIDE 6" AIR GAP FOR ALL LINES. PIPE FROM SUMP SHALL BE CAPABLE OF FLOWING 450 GPM FOR 30 MINUTES.

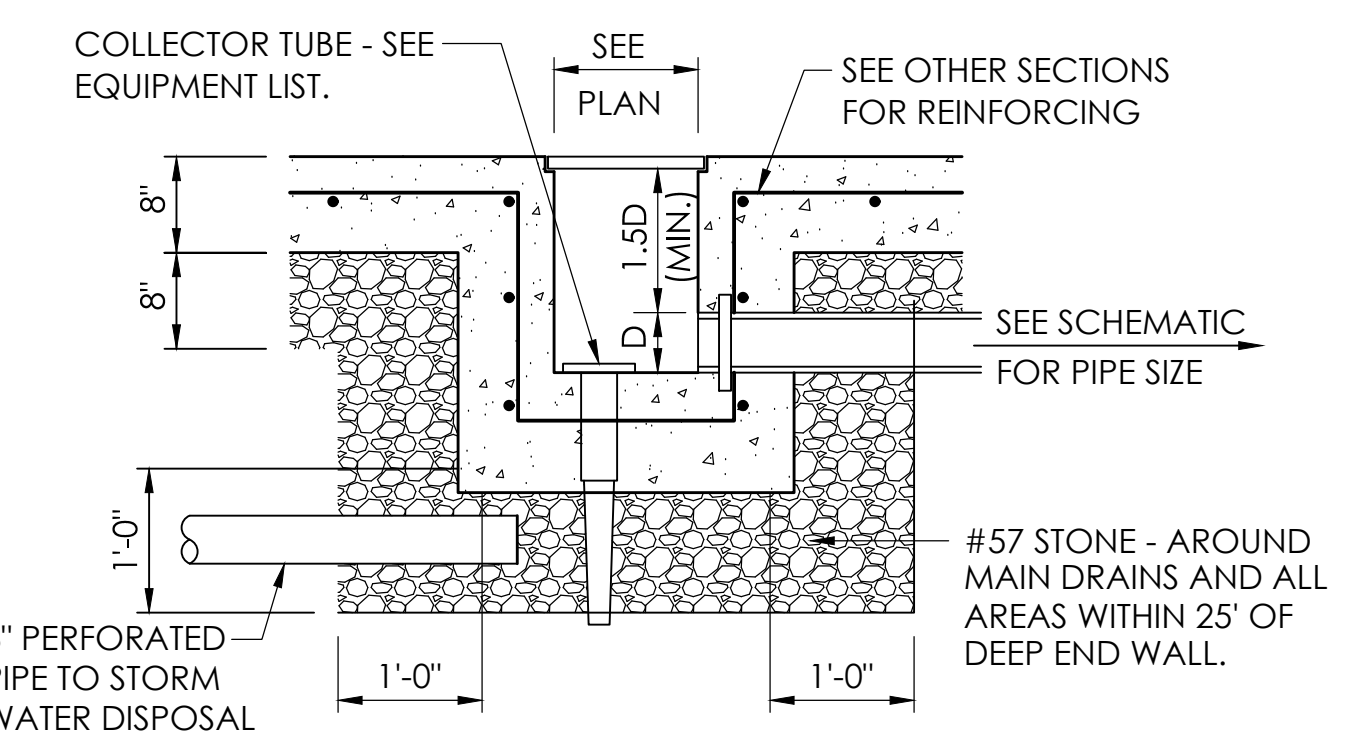
FOR FILTERS, BACKWASH ONE AT A TIME, 15 MINUTES EACH.



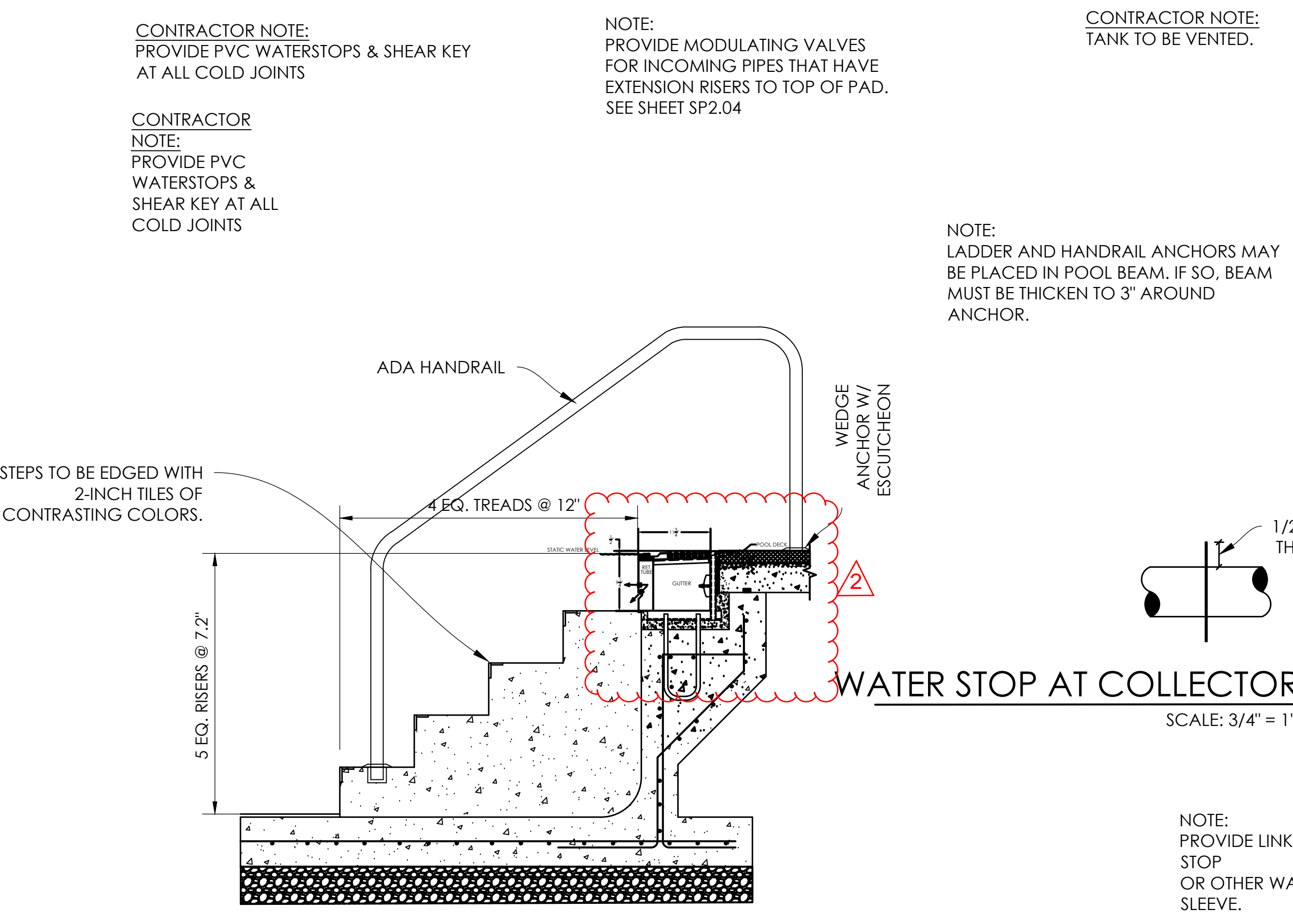
CAST IN PLACE POOL FILTER COLLECTOR TANK SECTION
 SCALE: 3/4" = 1'-0"



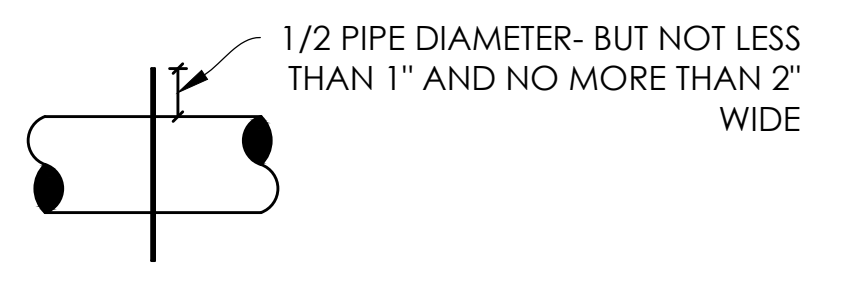
TYPICAL CORNER BAR DETAIL
 SCALE: 3/4" = 1'-0"



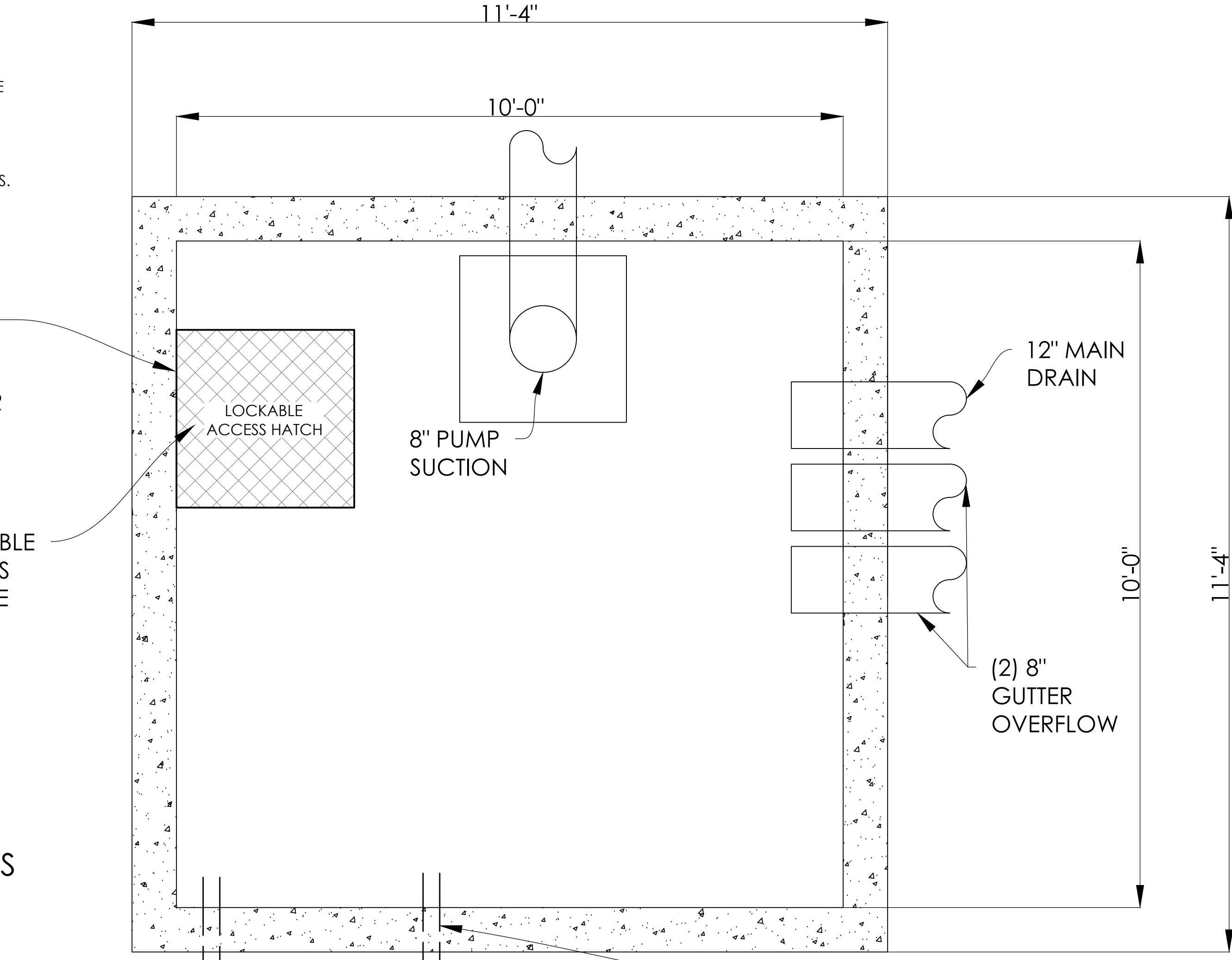
TYPICAL MAIN DRAIN DETAIL
 SCALE: 3/4" = 1'-0"



TYPICAL STAIR SECTION
 SCALE: 3/4" = 1'-0"

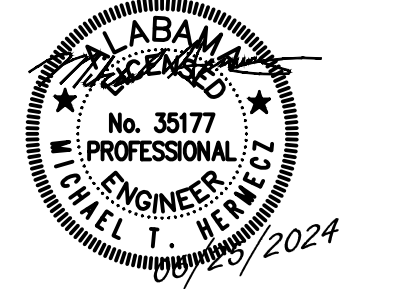


WATER STOP AT COLLECTOR TANK PENETRATIONS
 SCALE: 3/4" = 1'-0"



CAST IN PLACE POOL FILTER COLLECTOR TANK PLAN
 SCALE: 3/4" = 1'-0"

ISSUE DATE	DESCRIPTION
100% CDS 05/14/2024	
IFB SET 05/28/2024	
ADDENDUM 3 (REV 1) 06/21/2024	
ADDENDUM 4 (REV 2) 06/25/2024	



RAINBOW CITY RECREATION CENTER
 RAINBOW CITY, ALABAMA

POOL DETAILS

SP2.01

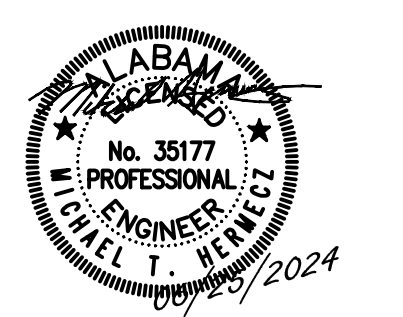
GMC # ABHM230021

DRAWN BY: TCD
 CHECKED BY: MTH

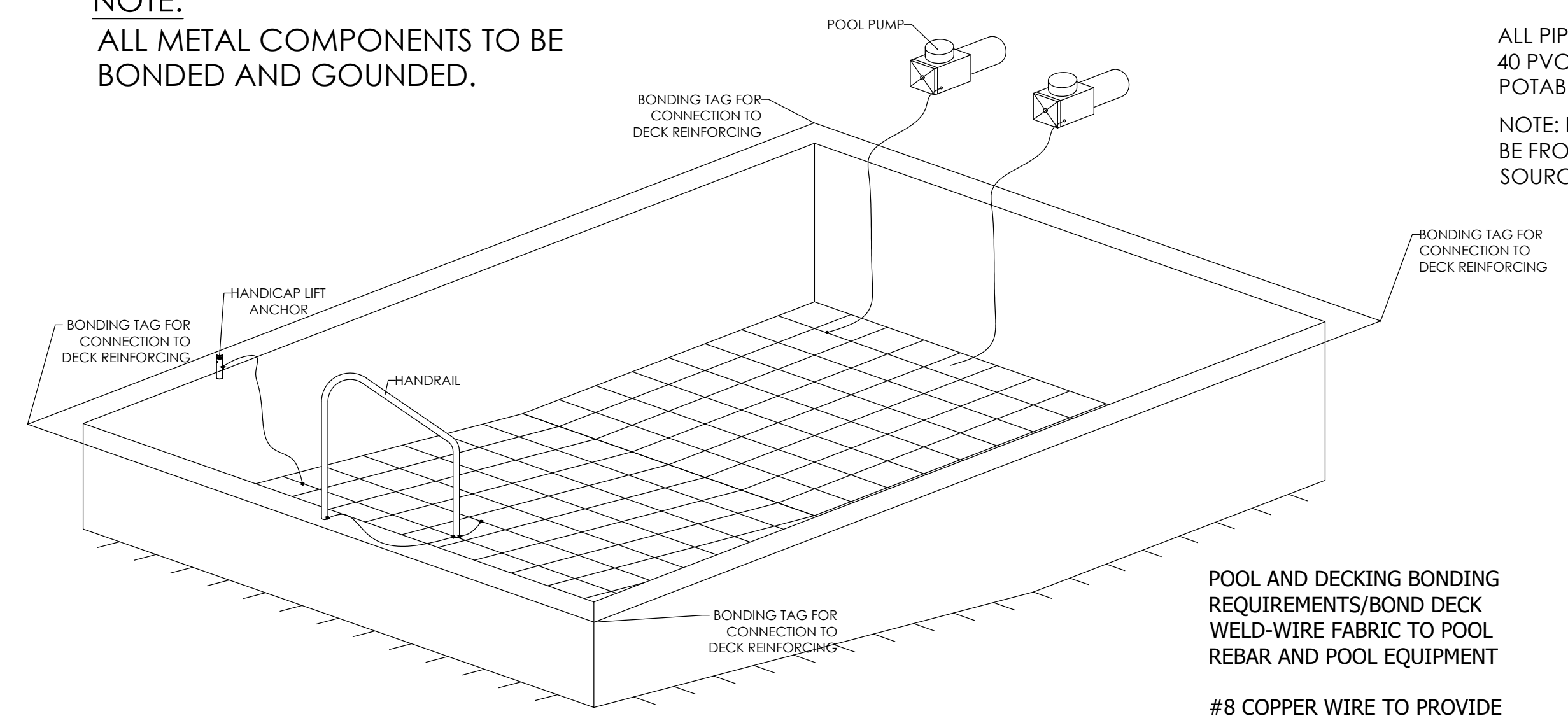
ISSUE DATE

100% CDS	05.14.2024
IFB SET	05.28.2024
ADDENDUM 3 (REV 1)	06.21.2024
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DRAWN BY: TCD
 CHECKED BY: MTH

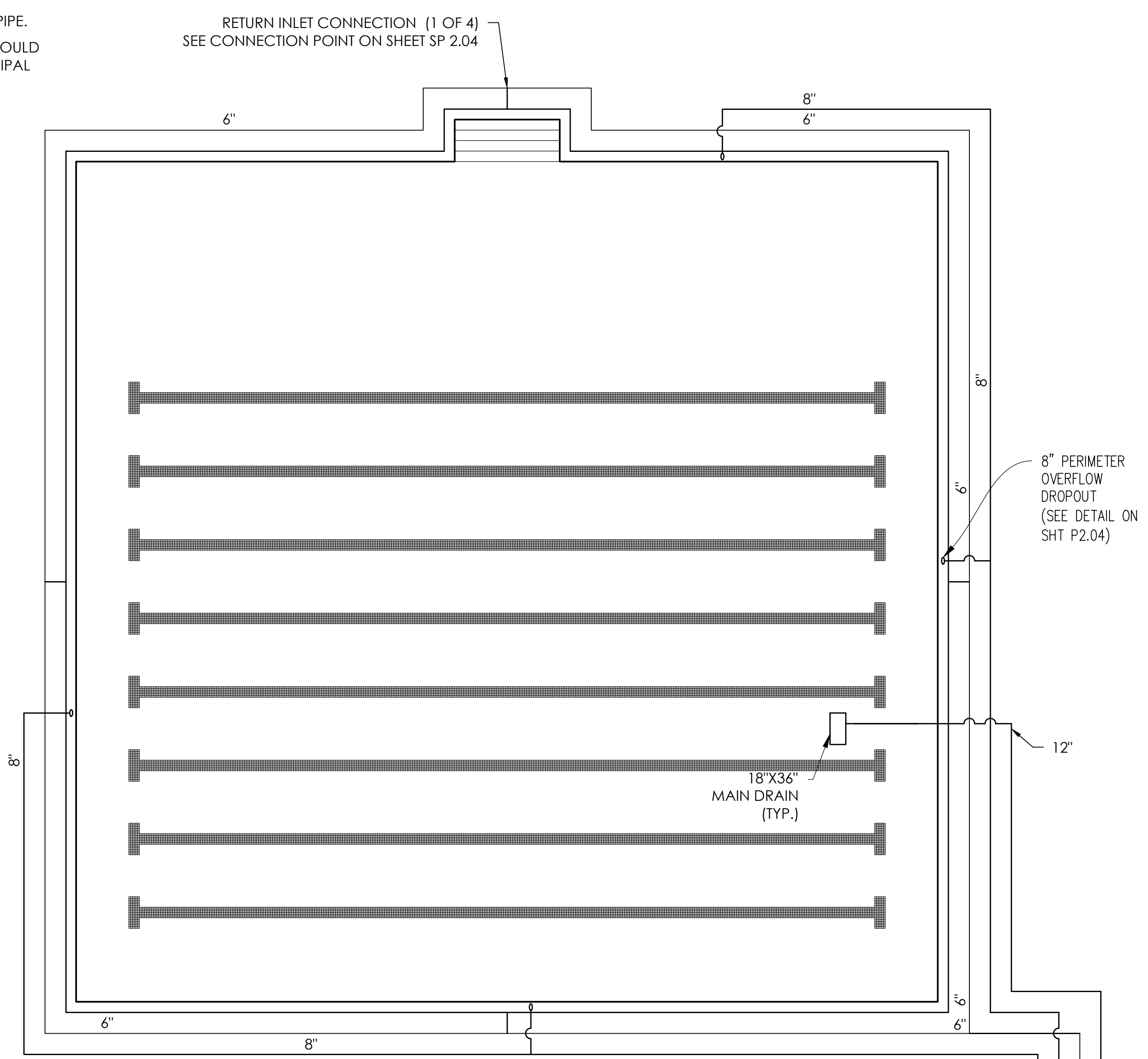


NOTE:
 ALL METAL COMPONENTS TO BE BONDED AND GOUNDED.

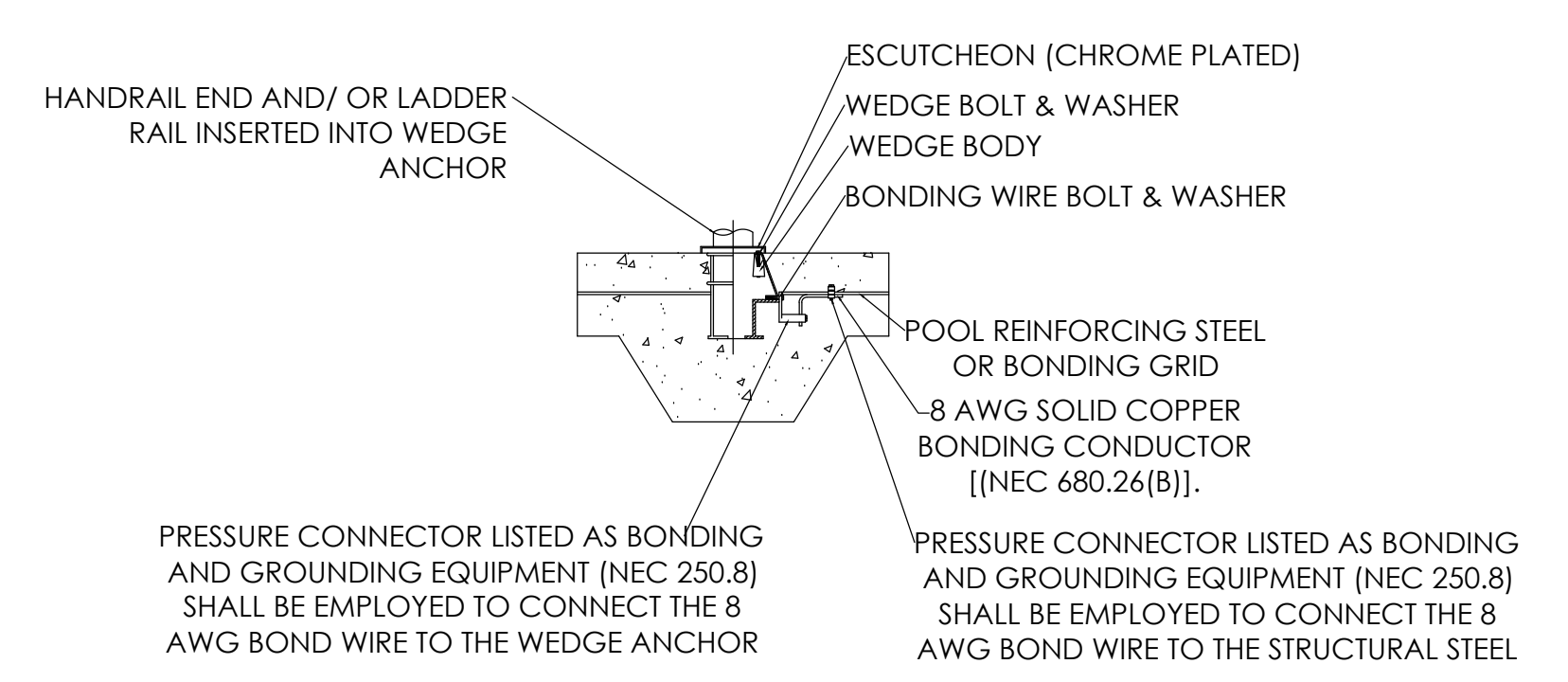


POOL AND DECKING BONDING REQUIREMENTS/BOND DECK WELD-WIRE FABRIC TO POOL REBAR AND POOL EQUIPMENT
 #8 COPPER WIRE TO PROVIDE CONTINUOUS LOOP AROUND POOL HITTING 4 CORNERS AND STINGERS FROM THE SHELL. (BY OTHERS)

ALL PIPING SHALL BE SCHEDULE 40 PVC - N.S.F. APPROVED FOR POTABLE WATER W/ LOGO ON PIPE.
 NOTE: POOL MAKEUP WATER SHOULD BE FROM AN APPROVED MUNICIPAL SOURCE.



PIPING PLAN
 SCALE: 1/8" = 1'-0"

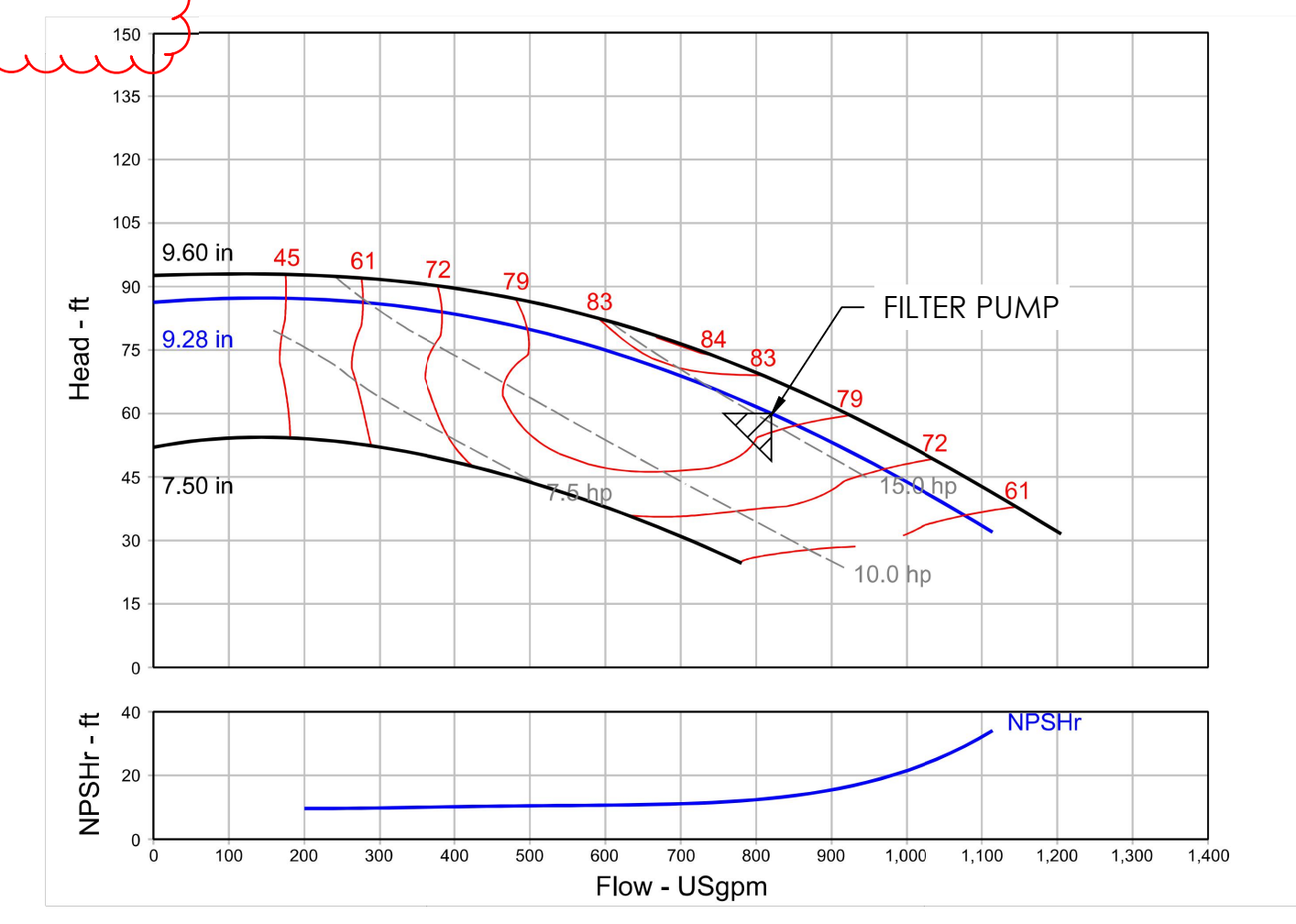


TYPICAL BONDING DETAIL FOR METALLIC PARTS
 NOT TO SCALE

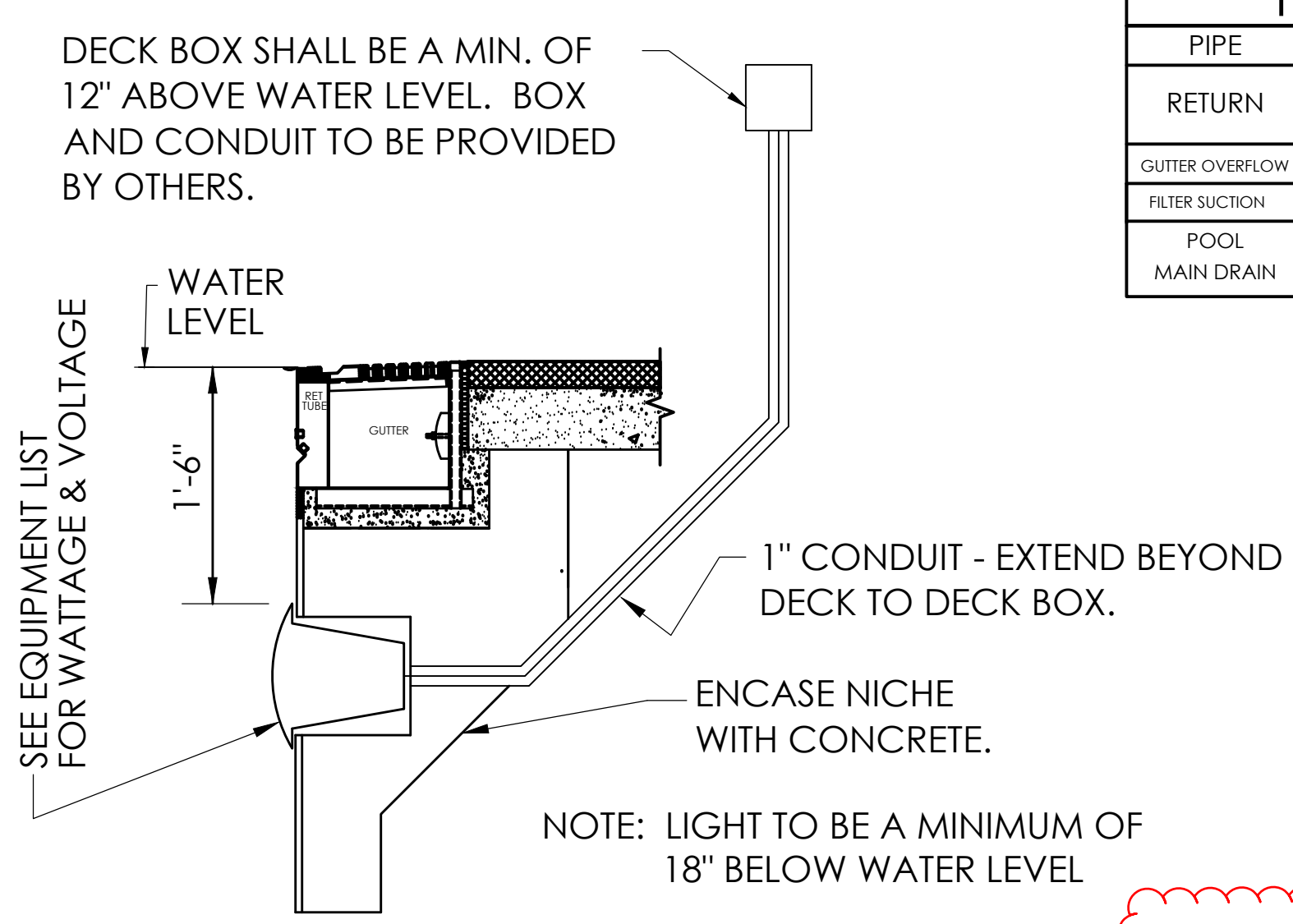
- EQUIPMENT NOTES**
- EQUIPMENT AREA SHALL BE PROTECTED FROM UNAUTHORIZED ACCESS BY LOCKABLE DOOR. AREA SHALL BE MINIMUM 257 SQ. FT. OPEN AREA PER ARCHITECTURAL DRAWING.
 - FLOOR SHALL BE CONCRETE WITH A SLIP RESISTANT FINISH.
 - FLOOR SHALL HAVE POSITIVE DRAINAGE.
 - PROVIDE A HOSE BIB WITH VACUUM BREAKER IN THE EQUIPMENT AREA.
 - EQUIPMENT AREA SHALL BE LIGHTED TO PROVIDE A MINIMUM OF 30 FT. CANDLES AT FLOOR LEVEL.
 - EQUIPMENT AREA SHALL HAVE A MINIMUM OVERHEAD CLEARANCE OF 7'.
 - FULL LOUVERED EXTERIOR DOOR AND EXHAUST FAN FOR POOL EQUIPMENT ROOM VENTILATION. (SEE MECHANICAL DRAWINGS)
 - SEE PIPING SCHEMATICS FOR PIPE SIZES AND ADDITIONAL INFORMATION.
 - POOL CONTRACTOR SHALL VERIFY ARRANGEMENT OF EQUIPMENT AREA WITH CONTRACTOR AND ARCHITECTURAL DRAWINGS.
- FILTER ROOM NOTES**
- RETURN LINES, MAIN DRAIN LINES, AND SURFACE OVERFLOW SYSTEM LINES SHALL EACH HAVE PROPORTIONING VALVES.
 - ALL ELECTRICAL EQUIPMENT SHALL CONFORM WITH THE N.E.C. AND SHALL COMPLY WITH LOCAL CODES.
 - FILTER ROOM SHALL NOT BE USED FOR STORAGE OF CHEMICALS OR OTHER ITEMS THAT COULD IMPAIR OPERATION OR INSPECTION OF SYSTEM.
 - ALL COMPONENTS ARE DESIGNED FOR CONTINUOUS USE
 - COLLECTOR TANK TO HAVE COVED INTERSECTION BETWEEN WAL AND FLOOR, AND FLOOR SHALL SLOPE TO DRAIN.
 - ALL CHEMICAL FEEDERS ARE INTERLOCKED WITH RECIRCULATION PUMP
 - ALL VALVES, PIPES, AND CHEMICAL FEEDERS ARE PERMANENTLY MARKED
 - ALL PIPING IS NSF-PW APPROVED AND IS SO MARKED
 - ALL PUMPS ARE SELF-PRIMING OR BELOW WATER LEVEL
 - FLOOR DRAIN PROVIDED IN EQUIPMENT ROOM BY OTHERS.
 - FLOWMETER IS LOCATED AS PER MANUFACTURERS INSTRUCTIONS AND IS CAPABLE OF READING 1.5 TIMES THE DESIGNED FLOW RATE
 - 30 FT. CANDLE (MIN.) LIGHTING PROVIDED BY OTHERS

POOL FLOW SCHEDULE

PIPE	SIZE	FLOW	VELOCITY	HEAD LOSS
RETURN	8"	820 gpm	5.25 fps	1.11'
	6"	410 gpm	4.55 fps	1.79'
GUTTER OVERFLOW	8"	410 gpm	2.62 fps	0.30'
FILTER SUCTION	8"	820 gpm	5.25 fps	1.11'
POOL MAIN DRAIN	12"	820 gpm	2.32 fps	0.15'
	18X36 401.76 sf	1200 gpm	0.96 fps	



NOTE: PIPE ROUTING AS SHOWN AND DETAILED ON THE DRAWINGS IS DIAGRAMATIC ONLY AND IS NOT INTENDED TO SHOW MINOR DETAILS OR EXACT LOCATIONS OF PIPING SYSTEMS. INSTALLATION IS REQUIRED TO BE ADJUSTED TO ACCOMMODATE INTERFERENCE AND ADJUSTMENTS ANTICIPATED AND ENCOUNTERED. PIPE SIZES ON PLANS REFER TO NOMINAL INSIDE DIAMETER OF THE PIPE.



TYPICAL LIGHT DETAIL
 N.T.S.

SITE PLAN NOTES:

- POOL FILTER EFFLUENT WILL BE CONTAINED ON SITE AND NOT CONNECTED TO THE SANITARY SEWER OR DRAIN ONTO ADJACENT PROPERTY.
 - REFER TO SITE GRADING AND DRAINAGE PLANS FOR EARTHWORK/CHANGES IN GRADES. POOL CONSTRUCTION SHALL NOT AFFECT DRAINAGE PATTERNS.
 - POOL CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR TO ENSURE EROSION CONTROL MEASURES ARE IN PLACE AND MAINTAINED TO PREVENT OFFSITE SEDIMENTATION DURING SITEWORK FOR POOL CONSTRUCTION.
- NOTE:**
 SEE ARCHITECTURAL DRAWINGS FOR FENCE EXTENTS AND CONSTRUCTION. 3'-0" GATE TO BE SELF CLOSING AND POSITIVE SELF LATCHING W/ 4'-0" MIN. HEIGHT REQUIREMENT. LATCH TO BE LOCATED AT A HEIGHT OF AT LEAST 54" AND SHALL BE EQUIPPED WITH PERMANENT LOCKING DEVICES OR LOCATED ON THE POOL SIDE OF THE GATE AT LEAST 3" FROM THE TOP OF THE GATE, WITHOUT OPENINGS GREATER THAN 1/2" WITHIN 18" OF THE RELEASE MECHANISM.

POOL NOTES

- LOCATE AND SET 4" HIGH, PERMANENT DEPTH MARKERS IN CONTRASTING COLOR ON INSIDE OF POOL AND ON POOL DECK.
- MARKERS SHALL BE LOCATED AT THE FOLLOWING LOCATIONS (MINIMUM):
 a) SHALLOW END
 b) DEEP END
 c) BOTH SIDES OF DEEP END
- PROVIDE A DRINKING FOUNTAIN WITH ANGLE JET. (NOT BY POOL CONTRACTOR)
- POOL MAKEUP WATER SHALL BE FROM AN APPROVED SOURCE.
- POOL FINISH COLOR SHALL BE LIGHT IN COLOR.
- POOL HOURS SHALL BE CONTINGENT UPON PROPER POOL AND DECK LIGHTING.
- SEE POOL RULES FOR ADDITIONAL RULES TO BE POSTED ON SIGN FROM NOTE 9.

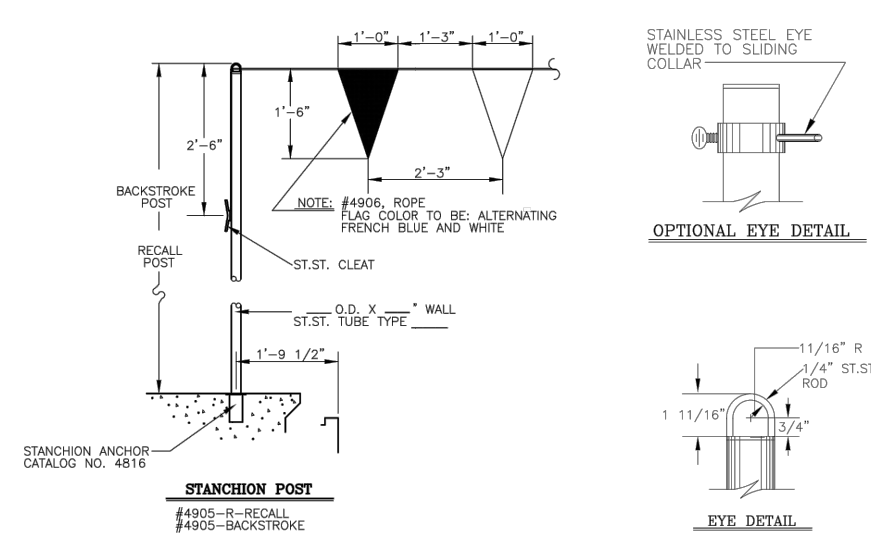
GENERAL NOTES

- TRAFFIC BARRIERS SHALL BE PROVIDED TO PREVENT OBSTRUCTION OF DECK WHERE NEEDED.
- POOL WASTE LINE SHALL HAVE AN AIR GAP BEFORE DISPOSAL.
- PROVISIONS SHALL BE MADE FOR STORAGE OF CHEMICALS UNDER ROOF AND FOR PROTECTION FROM UNAUTHORIZED ACCESS.
- FIRST AID EQUIPMENT SHALL BE PROVIDED.
- POOL SURFACE AND POOL DECK TO HAVE 10 FOOT CANDLES OF LIGHTING.
- ALL PIPING TO BE SCHEDULE 40 PVC OR GREATER AND SHALL HAVE NSF-PW APPROVED STAMP WITH MANUFACTURERS NAME.
- ALL ELECTRICAL WORK AND POOL GROUNDING SHALL COMPLY WITH ALL APPLICABLE CODES.
- UNDERWATER LIGHTS TO MEET N.E.C. INCLUDING LOW WATER CUT OFF PROTECTION.
- NO FOOD OR DRINK FACILITIES TO BE WITHIN 12' OF POOL.
- MINIMUM OVERHEAD CLEARANCE OF POOL AND DECK TO BE 20'.
- POOL WALLS TO BE WITHIN 5 DEGREES OF VERTICAL FOR POOL DEPTH MINUS 2 1/2" WITH A MAXIMUM RADIUS AT BOTTOM OF 2 1/2" FOR POOL DEPTHS GREATER THAN 5'-0".
- FOR POOL DEPTHS OF 5' AND LESS, WALLS TO BE WITHIN 5 DEGREES OF VERTICAL FOR 2 1/2" WITH A MAXIMUM RADIUS AT BOTTOM OF 2 1/2".

- POOL RULES** (to be posted in 1" high letters)
- NO ANIMALS IN POOL OR ON POOL DECK.
 - NO FOOD OR DRINK IN POOL OR ON POOL DECK.
 - SHOWER BEFORE ENTERING POOL.
 - BATHING LOAD: 439 PERSONS
 - POOL HOURS: A.M. TO P.M.
 - "NO DIVING" TO BE POSTED IN 4" LETTERS.
 - NO GLASS IN THE POOL AREA
 - BATHERS WITH DIARRHEA, SKIN DISEASES, OPEN LESIONS, ETC. SHALL BE EXCLUDED FROM THE POOL



Stanchion Post



Paddock's Backstroke Posts and Recall Posts are fabricated from Type 304 or 316L stainless steel tubing with outside diameter of 1.90" and standard wall thickness .083" (1.20" and 1.45" are also available)

Each post is provided with an eyebolt at the top and a cleat for securing rope. Posts are held by anchor sockets located in pool bottom and pool deck so they can be removed if necessary.

Standard height of backstroke post is 7 feet. Also available in other heights.

Standard height of recall post is 5 feet. Also available in other heights.

Sliding collar is optional.

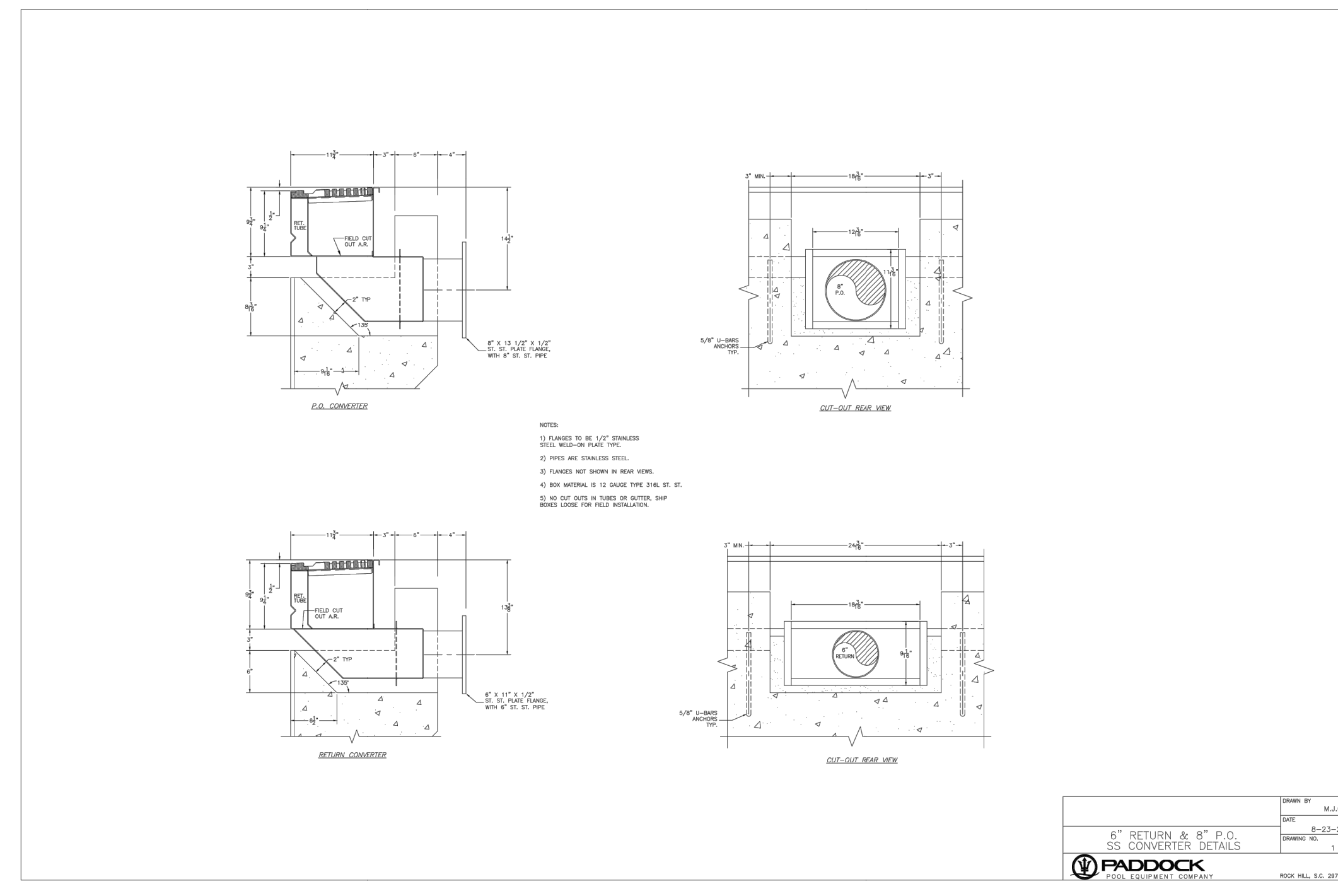
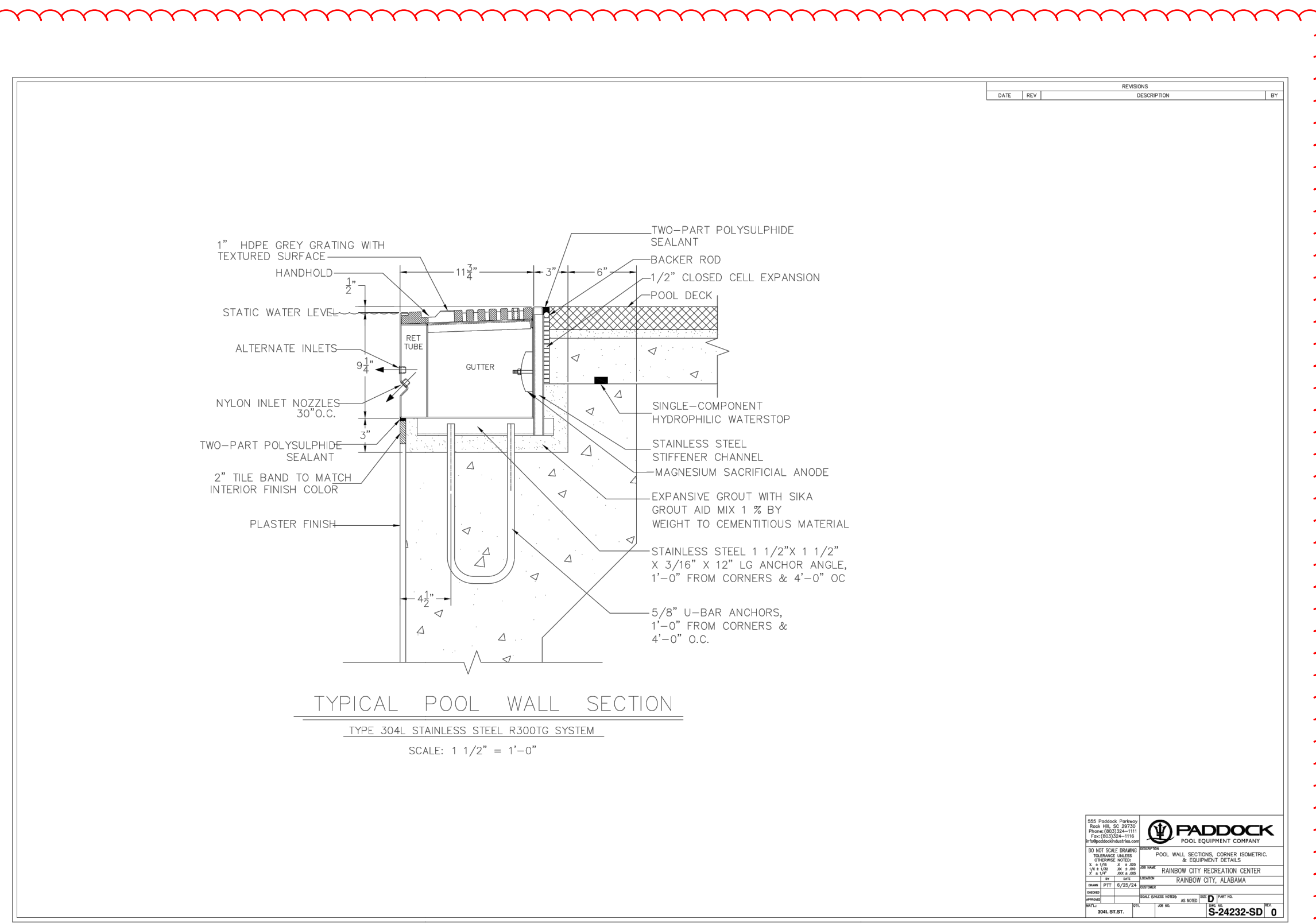
P/N _____ Model 4905 _____ Backstroke Post Height Required _____ FT _____" OD x _____" Wall Type _____ Qty _____

P/N _____ Model 4905R _____ Recall Post Height Required _____ FT _____" OD x _____" Wall Type _____ Qty _____

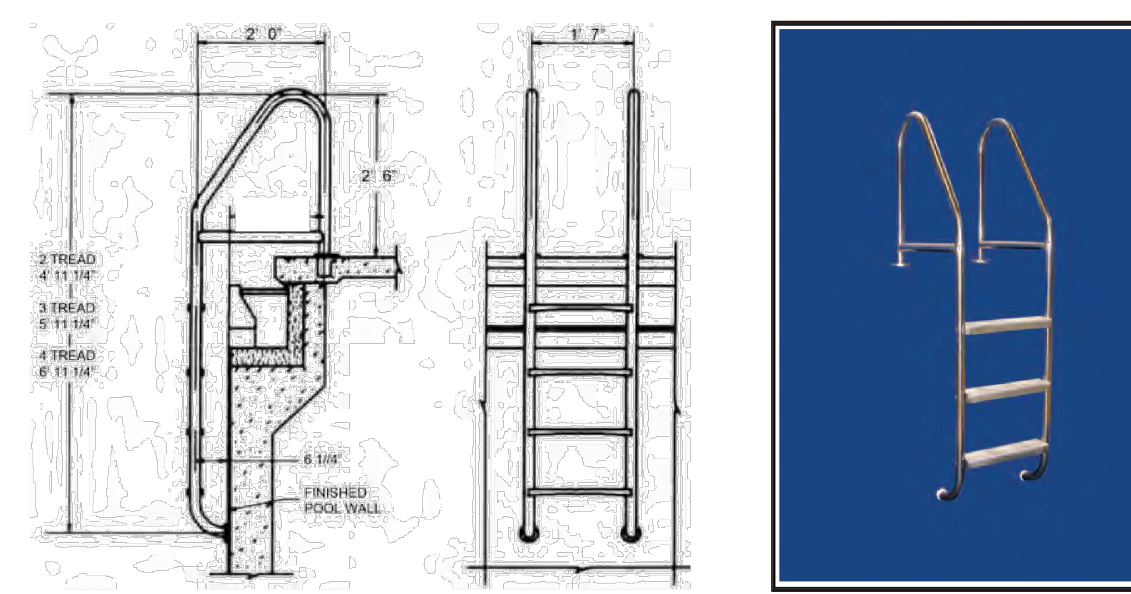
P/N 9500043, Model 4905SC, Sliding Collar with Eyebolt Qty _____

P/N _____ Model 4906, Backstroke Pennant Line, 48 Nylon Pennants per 100' Line Qty _____

555 Paddock Parkway, Rock Hill, SC 29730 T: 800-849-2729 F: 803-324-1116 www.paddockindustries.com



Ladder



Paddock's Ladders are fabricated from Type 304 or 316L stainless steel tubing with an outside diameter of 1.90" and standard wall thickness of .083". (Outside diameter of 1.5" or wall thickness of .720" is also available)

Ladder rails are spaced 19" apart with a cross brace for added stability and furnished with slip-resistant stainless steel treads.

Exposed surfaces shall be polished to a Paddock buff finish.

A rubber bumper on each rail protects the interior pool finish.

Paddock deck anchors with Paddock escutcheon plates are available.

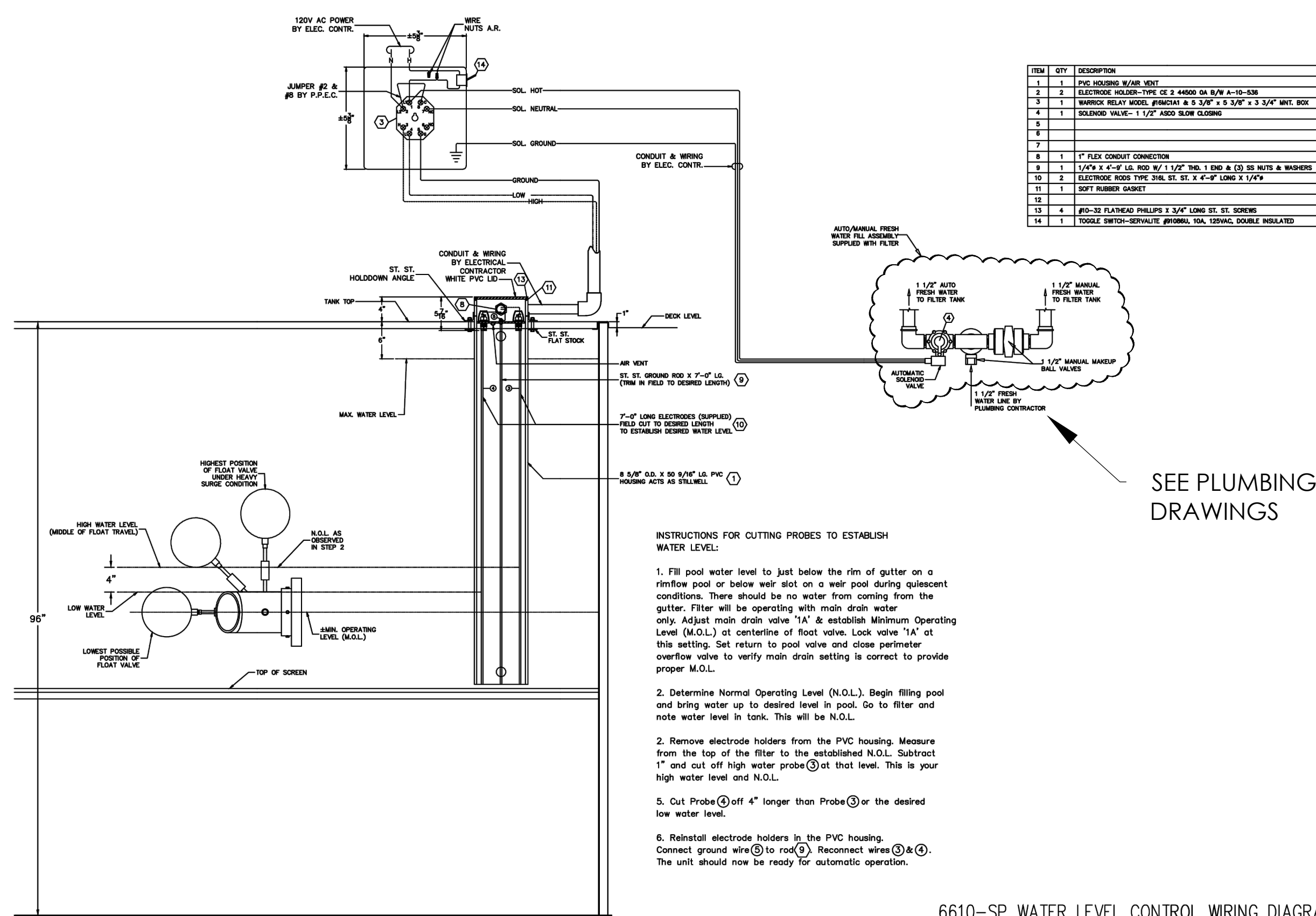
P/N _____ Model 4539 _____ 2-Tread Ladder Type _____" OD x _____" Wall Less Anchors, Qty _____

P/N _____ Model 4540 _____ 4-Tread Ladder Type _____" OD x _____" Wall Less Anchors, Qty _____

P/N _____ Model 4541 _____ 2-Tread Ladder Type _____" OD x _____" Wall Less Anchors, Qty _____

P/N _____ Model 4542 _____ 5-Tread Ladder Type _____" OD x _____" Wall Less Anchors, Qty _____

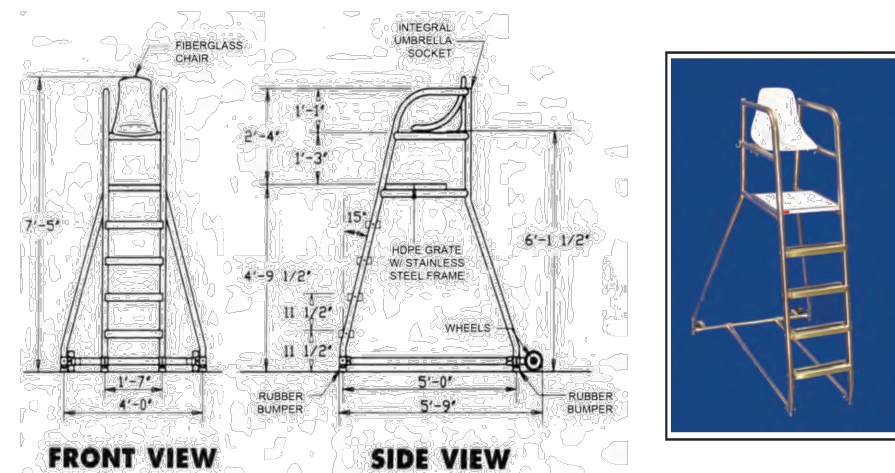
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6610-SP WATER LEVEL CONTROL WIRING DIAGRAM & INSTRUCTIONS.



Movable Lifeguard Chair



Paddock's Movable Lifeguard Chair features a welded Type 304 or 316L stainless steel frame with a molded fiberglass seat six feet above the pool deck.

The rigid 19" wide slip-resistant high density polyethylene platform is reached via a 15 degree sloping ladder with 19" stainless steel treads.

Ladder treads shall be stainless steel 19" long x 4" wide with slip-resistant surface.

Rubber bumpers protect the deck when the chair is in place.

Wheels secured to the frame allow for easy positioning at various poolside locations.

An umbrella socket on one side behind the seat is an integral part of the chair frame.

There is a 7" hook on each rear upright for the Life Ring & Rope.

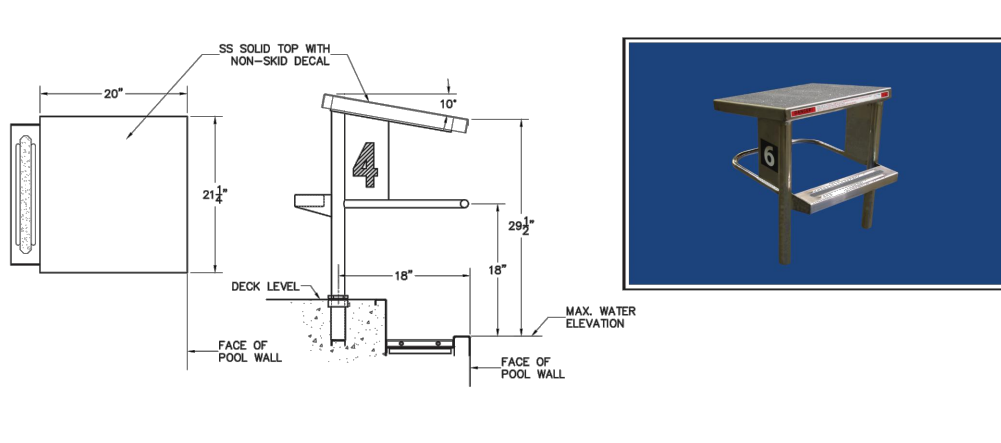
P/N 9400062, Model 4707-G, Type 304, Qty _____

P/N 9400063, Model 4707-G, Type 316L, Qty _____

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EZ Set II Starting Platform



Paddock's EZ Set II Starting Platform is quickly and easily removable.

Platform shall be rear mounted and have a 20" wide x 21 1/4" long top.

Flush with the front edge of the platform is a backstroke starting bar.

A mounting track shall be positioned off the rear legs. Tread shall have a deeply formed integral, slip resistant surface firmly attached to the legs by welded stainless steel gussets.

At each side of the platform, attached to the legs, shall be a stainless steel plate on which the lane number is displayed with a 4" standard numeral.

Top of starting platform shall be with a non-slip solid surface.

Colors, custom logos and vertical backstroke grips are available as options.

4909-A anchors with 19" spacing are sold separately.

4909-S EZ Set II Starting Platform St. St. Type _____ Qty _____

Also available in Long Reach with 24" Setback St. St. Type _____ Qty _____

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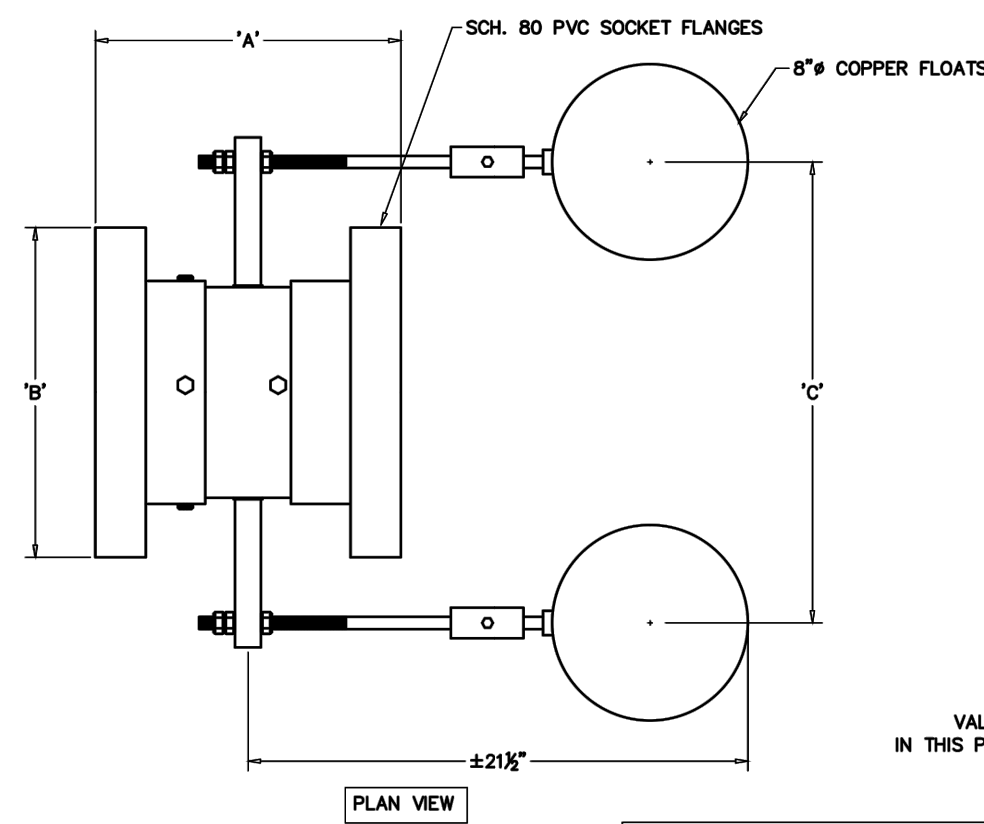


Table with columns: VALVE SIZE, PIPE, FLANGE, & FLOAT CENTER DISTANCE. Rows show different sizes and their corresponding dimensions.

Table with columns: QTY., SIZE, A, B, C. Rows show different quantities and sizes with their corresponding dimensions.

Table with columns: DO NOT SCALE DRAWING, DIMENSIONS, TOLERANCES, etc. Rows show different dimensions and tolerances.

Waterco advertisement for UltraVac Vacuum Cart. Includes a photo of the cart, a list of features, and contact information for Waterco in various countries.



UltraVac Vacuum Cart System Operation The UltraVac can operate in two different modes: 1. Filtration Mode: By recirculating the water through the 100 sq. ft. cartridge you can remove debris being vacuumed out of the pool without losing water. 2. Waste Mode: For removal of large amounts of debris or to avoid clogging the cartridge you can rotate the valve handle to bypass the filter and discharge the water directly to waste and not return to the pool. Cart Construction Welded from strong structural steel tubing and powder coated for protection the mobile portion of this revolutionary cleaning solution is capable of lasting many years even in the most demanding environments. Maintenance The 100 Square Foot Element in the filter housing is made from high strength polyester backed up with a sturdy plastic core for years of use. A simple locking arrangement on the filter lid is used to make cleaning the element quick and easy. Warranty Waterco warrants the UltraVac cart and all of its components for a period of 1 year under normal operating conditions.

RAINBOW CITY RECREATION CENTER RAINBOW CITY, ALABAMA

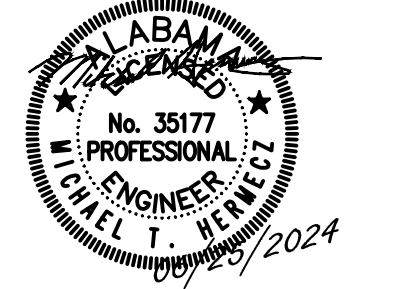
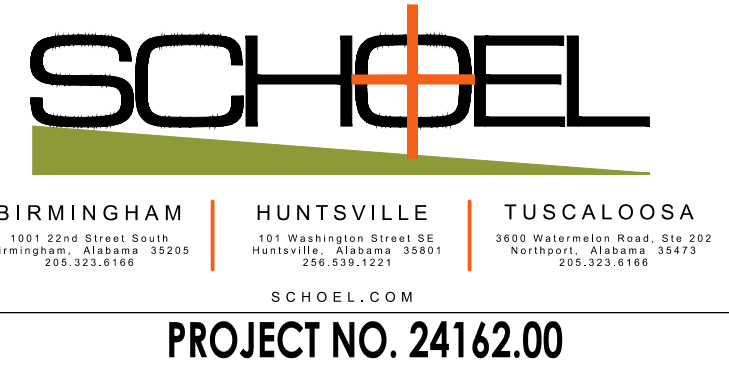
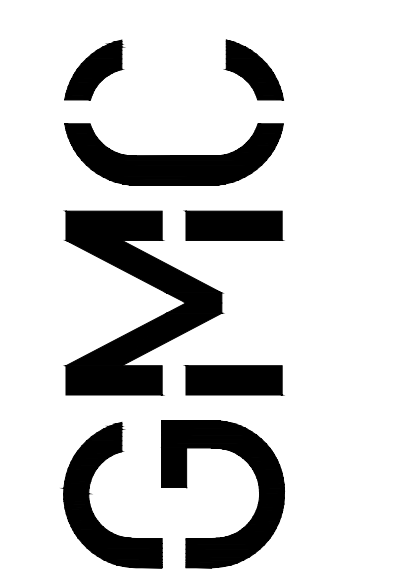


Table with columns: ISSUE DATE, 100% CDs, IFB SET, ADDENDUM 3, ADDENDUM 4. Rows show dates for each stage.

Goodwyn Mills Cowood, LLC 2400 5th Avenue South, Suite 800 Birmingham, AL 35233 T: 205.879.4462 G.M.C.NET.W.O.R.K.COM



SP2.04

GMC # ABHM230021

POOL DETAILS