



# Submittal #131100-1.R1 131100 - Pools

Brinkmann Constructors  
11101 Switzer Road  
Suite 310  
Overland Park, Kansas 66210  
Phone: (913) 717-9007  
Fax: (913) 717-9407

Project: 1386 - Signature at West Pryor  
2100 NW Lowenstein Dr.  
Lee's Summit, Missouri 64081

## Pool Shop Drawings

REVISION:	R1	SUBMITTAL MANAGER:	Nick Wintjen (Brinkmann Constructors)
STATUS:	Closed	DATE CREATED:	03/1/2022
Date Ordered:			
ISSUE DATE:	03/1/2022	SPEC SECTION:	131100 - Pools
RESPONSIBLE CONTRACTOR:	RECEIVED FROM:		
RECEIVED DATE:	SUBMIT BY:		
FINAL DUE DATE:	03/22/2022	LOCATION:	
		COST CODE:	
		TYPE:	
APPROVERS:	Rich Beardmore (Latimer, Sommers and Associates), Matt Thomas (Latimer, Sommers and Associates), Lindsey King (Tegethoff Development, LLC), Michaela Silva (TR,i Architects)		
BALL IN COURT:			
DISTRIBUTION:			
Nick Wintjen (Brinkmann Constructors)			
DESCRIPTION:			

## SUBMITTAL WORKFLOW

NAME	SENT DATE	DUE DATE	RETURNED DATE	RESPONSE	ATTACHMENTS	COMMENTS
General Information Attachments					<a href="#">131100-1-R1 Pool Shop Drawings - 3.1.22.pdf</a>	
Rich Beardmore	03/01/2022	02/24/2022	03/05/2022	For Record Only	<a href="#">131100-1-R1 Pool Shop Drawings - 3.1.22.pdf</a>	
Matt Thomas	03/01/2022	02/24/2022		Pending		
Lindsey King	03/05/2022	03/08/2022	03/07/2022	For Record Only		
Michaela Silva	03/07/2022	03/22/2022	03/07/2022	Approved	<a href="#">131100-1-R1 Pool Shop Drawings - 3.1.22_TRi Reviewed.pdf (Current)</a>	

BY

DATE

COPIES TO

**Project:** Signature at West Pryor  
Lee's Summit, MO

**Date:** March 5, 2022

**Architect:** TR,i Architects  
9812 Manchester Rd  
St. Louis, MO 63119

**Distribution:** Scott Grause  
LeeAnn Polowy  
Michaela Silva

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**Description: Swimming Pool Drawings Re-Submittal**  
**Reference: Drawings**

These comments represent a cursory review of the referenced shop drawing for general conformance with the contract documents. This is provided as a courtesy to the contractor and not intended to be all inclusive nor an approval to use the submitted equipment or materials. Corrections or comments made on the shop drawings or absence of comments during this review do not relieve the contractor from complying with the requirements of the plans and specifications. The contractor must adhere to the contract documents and request clarification if any discrepancy exists. See the specifications for further requirements. The required list of any differences between the specified and submitted equipment can assist in the review process. Items submitted, whether marked or not, are assumed to be provided. Items in the contract, but not submitted are assumed to be provided as specified and/or intended. The Contractor is responsible for, but not limited to: dimensions to be confirmed and correlated at the jobsite; quantities of materials, equipment capacities, information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades; and performing all Work in a safe and satisfactory manner.

**Remarks:**

1. LSA review is only concerning mechanical, electrical, plumbing rough-in requirements and excludes any pool or pool equipment design. LSA cannot approve of any cost impact of the equipment provided.
2. Electrical panel or junction box shown on equipment pad, but unclear if it is provided by pool contractor. No panel is listed in the pool equipment list. Panel "P" in the building storage room designed for pool. Only one pump shown on submittal. Panel breaker, pump starter shown on ME203 not needed and can be credited to the project. Heater gas piping, wiring and circuit may also be deleted as no heater is on submittal. Coordinate with electrical contractor.
3. ~~Note on schedule states pump will not work on 208V. This is the building voltage, so pump type needs to change.~~ Re-submittal shows transformer to be installed. Pool contractor to dictate size.
4. ~~Pool fill not shown on submittal. If the intent is a hose, the 3/4" backflow preventer shown in the mechanical room may be deleted and credited to the project.~~ Pool fill shown as 1/2". Inside BFP can reduce to 1/2" and the difference credited to the project.
5. No further comments.



Richard R. Beardmore, P.E.

Nick Wintjen, Project Engineer  
**Brinkmann Constructors**  
11101 Switzer Road, Suite 310  
Overland Park, KS 66210

Date: 3/1/2022

To:  
**TR,i Architects**  
Attn: Michaela Silva  
1790 S Brentwood Blvd  
St. Louis, MO 63144

Re: **Signature at West Pryor**  
2100 NW Lowenstein Dr.  
Lee's Summit, MO 64081  
Job #: 1386

**We are sending:**

- ☐ Product Data
- ☐ Reports
- ☒ Shop Drawings
- ☐ Samples
- ☐ Other

**Transmitted as checked:**

- ☒ For Approval
- ☐ For Your Use
- ☐ As Requested
- ☐ Approved as Submitted
- ☐ Other

**Transmitted via:**

- ☒ Via email (PDF)
- ☐ Copies to follow (USPS/Ground)

Submittal Number	Description	Date Submitted	Due Date
131100-1-R1	Revised Pool Shop Drawings	3/1/2022	3/31/2022

REVIEWED ☒

DATE RECEIVED:

REVIEWED AS NOTED ☐

DATE REVIEWED: 3/7/2022

REVISE AND RESUBMIT ☐

REVIEWED BY: michaela.silva

SUBMITTAL HAS BEEN REVIEWED ONLY FOR CONFORMANCE WITH INFORMATION AND DESIGN CONCEPTS EXPRESSED IN THE CONTRACT DOCUMENTS. REVIEW DOES NOT COVER AND CONTRACTOR REMAINS RESPONSIBLE FOR: QUANTITIES, ACCURACY, DIMENSIONS, FIT, INSTALLATION, PERFORMANCE OF EQUIPMENT OR SYSTEMS, COORDINATION WITH OTHER TRADES, ETC., AS OUTLINED IN AIA DOCUMENT A201, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, APPLICABLE EDITION. REVIEW DOES NOT AUTHORIZE ANY CHANGES IN THE CONTRACT REQUIREMENTS UNLESS STATED IN AN APPROVED CHANGE ORDER.



1790 Brentwood Blvd.  
St. Louis, Missouri 63144  
314.395.9750  
www.triarchitects.com

**Brinkmann Approval**

Submittals bearing this stamp have been verified or will be verified as to materials, field measurements and construction criteria related thereto and have been coordinated with the Contract Documents. The Sub-contractor is responsible to the General Contractor for dimensions to be confirmed and correlated at the job site, and for information that pertains to the fabrication process or to the technique of construction and for coordination of the work with all trades.

By: **Nick Wintjen**

Date: 3/1/2022

Brinkmann Comments in Green

# The Signature at West Pryor Lee's Summit, MO

## PROJECT INFORMATION

STATE: Missouri  
COUNTY: Jackson  
CITY: Lee's Summit  
TYPE: Inground pool, non-diving  
SCOPE: Single body pool  
CONSTRUCTION METHOD: Concrete  
SANITATION: Intellichem with acid and chlorine injection  
COVER: YES - Winter Safety Cover  
HEATED: NO

## PROJECT TEAM

### MIDWEST CUSTOM POOLS

GLEN WESTERVELT, PRESIDENT  
785.766.1111  
GLEN@MIDWESTCUSTOMPOOLS.COM

ERIK MILLER, PROJECT MANAGER  
785.304.0171  
ERIK@MIDWESTCUSTOMPOOLS.COM

## GENERAL NOTES

- > ANY CHANGES IN CONSTRUCTION PLANS OR EQUIPMENT MUST BE APPROVED BY THE GOVERNING HEALTH DEPARTMENT. CHANGES MAY REQUIRE ADDITIONAL PLAN CHECK FEES AND RE-SUBMITTAL.
- > POOL PLAN APPROVAL DOES NOT AUTHORIZE THE VIOLATION OF ANY LAW, ORDINANCE, OR REGULATION AND FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION.
- > ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- > ALL EQUIPMENT AND MATERIALS NOT SHOWN OR SPECIFIED ON THESE PLANS, BUT REQUIRED TO COMPLETE THIS PROJECT, SHALL BE SUPPLIED BY THE POOL CONTRACTOR AS PART OF THIS CONTRACT WORK.

## LOCATION MAP



## POOL DATA

PERIMETER: 183 - FT  
SURFACE AREA: 1667 - SQFT  
APPROXIMATE VOLUME: 27,715 - GALLONS  
MINIMUM TURN OVER: 6 - HOURS  
MINIMUM FLOW RATE: 76.98 - GPM  
MAXIMUM FLOW OF PUMP: 120 - GPM  
MINIMUM DEPTH OF POOL AT SUN-LEDGE: 0' - 6"  
MAXIMUM DEPTH OF POOL AT DRAIN: 4' - 0"

## CODE COMPLIANCE

- > ANSI POOL AND SPA STANDARD TO PREVENT SUCTION ENTRAPMENT
- > VIRGINIA GRAEME BAKER SAFETY ACT
- > JACKSON COUNTY ENVIRONMENTAL SANITARY CODE ISPSC 2018
- > JACKSON COUNTY CODE OF REGULATIONS FOR BUILDINGS AND CONSTRUCTION.

## SHEET INDEX

P0.00	COVER SHEET
P1.00	SITE PLAN
P2.00	EQUIPMENT SCHEDULE
P3.00	FLOW CALCULATIONS
P4.00	LAYOUT - PLAN VIEW
P4.01	LAYOUT - POOL DIMENSIONS
P4.02	SECTIONS
P5.00	EQUIPMENT LAYOUT - PLAN VIEW
P5.01	EQUIPMENT LAYOUT - DIMENSIONS
P6.00	PLUMBING PLAN - SUCTION
P6.01	PLUMBING PLAN - RETURN
P7.00	ELECTRICAL PLAN
P8.00	BONDING PLAN
P9.00	DETAILS

MIDWEST CUSTOM POOLS  
600 Lincoln Street  
Lawrence, KS 66044  
P: 785.843.9119  
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MidwestCustomPools.com



The Signature at West Pryor  
2100 & 2150 NW LOWENSTEIN DR.  
LEE'S SUMMIT, MO 64081

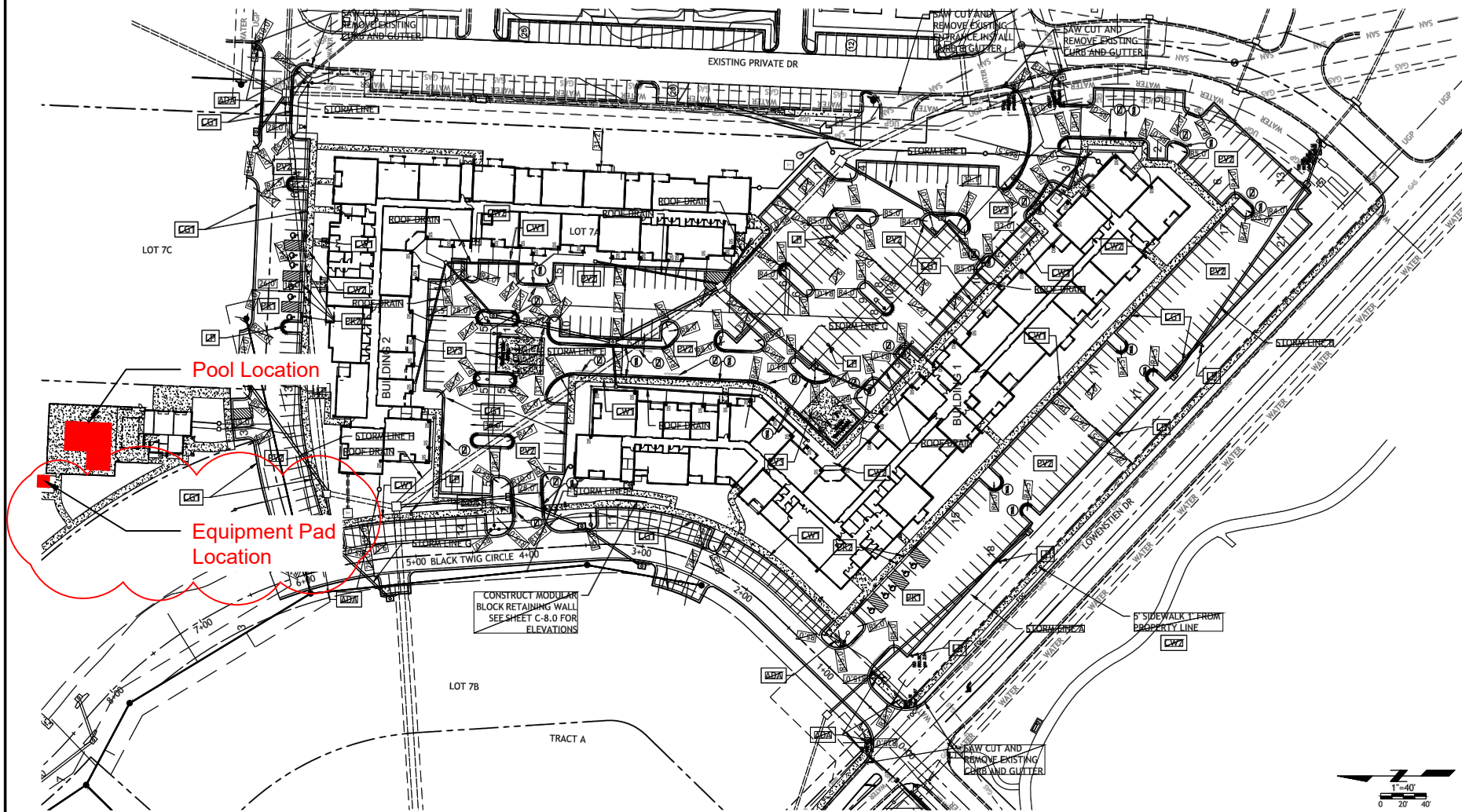
Plan Date:

01.2022

Drawn By: EM

SHEET NO.

P0.00



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P1.00

A Site Plan

Scale: N.T.S.

Reviewer requested to change pump type in first review to match building voltage.  
 From pool contractor: We can't change the pump to get something that will run off of 208 Voltage and still have a VS pump. The Electrician will need provide a buckboost transformer to change the voltage for that pump from 208 to 240. Not aware of a VS pump that will run on 208. Energy codes have pretty much eliminated single speed pump production. May be able to get a single speed 3 HP pump, and they are cheaper, however they hammer the piping so much when they start and stop it is not advisable to use them.

Equipment						
Equipment Name	Manufacturer Part#	Warehouse Part#	Qty	Power Requirements	Hookup Responsibility	Notes
2"-2.5" FloVis Flow Gauge	FV-C	EMO-56-1000	1	N/A	MCP	
Hayward Skimmer	SP1082	HAY-25-1641	5	N/A	MCP	
Intellichem	522578	PAC-45-0596	1	110V 5A	MCP - Plumbing Electrician - Hookup	
2"-2.5" 3-Way Diverter Valve	263028	PAC-56-4102	5	N/A	MCP	
36" Sand Filter - TR140C	140316	PAC-05-708	1	N/A	MCP	
2"S Hiflow sand/quad DE SM Multiport Valve	261050	PAC-06-245	1	N/A	MCP	
3 HP Intelliflo VSP	011056	PUR-10-1662	1	230 V 20 amp breaker must be Siemens GFI breaker	MCP - Plumbing Electrician - High Voltage	Will not work on 208 VAC
Black Plastic 5-Hole J-Box	PJB4175	INT-57-110	3	N/A	MCP	
300W Transformer	PX300	INT-30-745	1	300W 120 VAC 3 A Max	MCP - Low Voltage Electrician - High Voltage	
Globrite Led Lights	602055	AMP-30-7002	9	15W 12V	MCP	
Spectrum Aquatics ADA Chair Lift w/ Battery Power	153121	SPM-42-8516	1	110 VAC (Charger Only)	MCP	
Levelor - Autofill	25514-000-000	SPG-56-5000	1	N/A	MCP	Back-flow Preventor By Others
Buck Boost Transformer	PH488489	MT-BBT	1	208V Primary - 240V Secondary, 23.4 Amps, 50/60Hz	To be provided and installed by Electrician	Install to increase voltage from 208 to 240

## A Equipment schedule

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01.2022

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SHEET NO.

P2.00



# A Flow Calculations

Flow Calculations Signature at West Pryor		
Pump(s)	1	Pentair Intelliflow
Pool Capacity GALLONS	27,715	
Required Turn Over (6 hours or 4 times per day)	4	
Required Gallons Per 24 Hours	110,860	
Required Gallons Per Hour	4619.167	
Required Gallons Per Minute	76.98611	
Required Per Pump	76.98611	
Filter(s)	1	Pentair TR140-C
Filter Sq Ft (Each)	7.06	
Filter rate per Gallon	10.90	
Filter rate at max pump (sq ft per Gallon)	17.00	
Max Pump Flow GPM	120	From Pump Chart (see Submittals)
Max Velocity Suction Required	6 FPS	From Jackson County Code
Max Velocity at Max Pump Flow Feet Per Second (Suction)	5.45	<a href="https://www.engineeringtoolbox.com/pipe-velocity-d_1096.html">https://www.engineeringtoolbox.com/pipe-velocity-d_1096.html</a>
Max Velocity Return Required	8 FPS	From Jackson County Code
Max Velocity at Max (Return)	7.84	
Minimum Pipe Size Suction	3"	
Minimum Pipe Size Return	2.5"	
Minimum Pipe Size Suction (after first tee on suction)	2"	
Minimum Pipe Size Return (after first tee on return)	2"	
Max Flow Requirements for Main Drain - Gallons Per Minute	120	
Max Flow Requirements for Main Drain Specified		
Floor Gallons Per Minute	308	
Wall Gallons Per Minute	212	
Main Drain Specified	25506-320-000	32" Unblockable main drain. 2.5" outside connections



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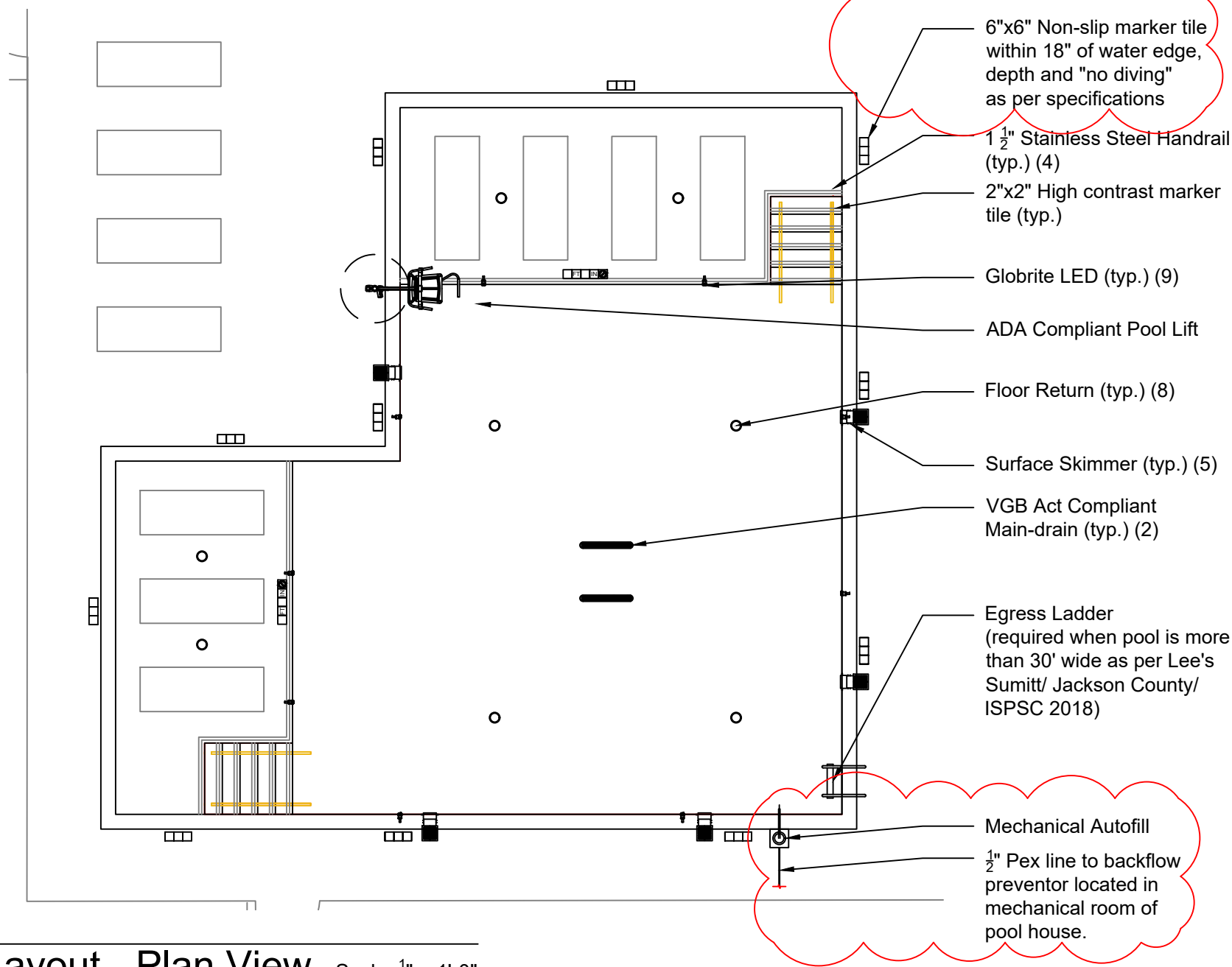
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**P3.00**



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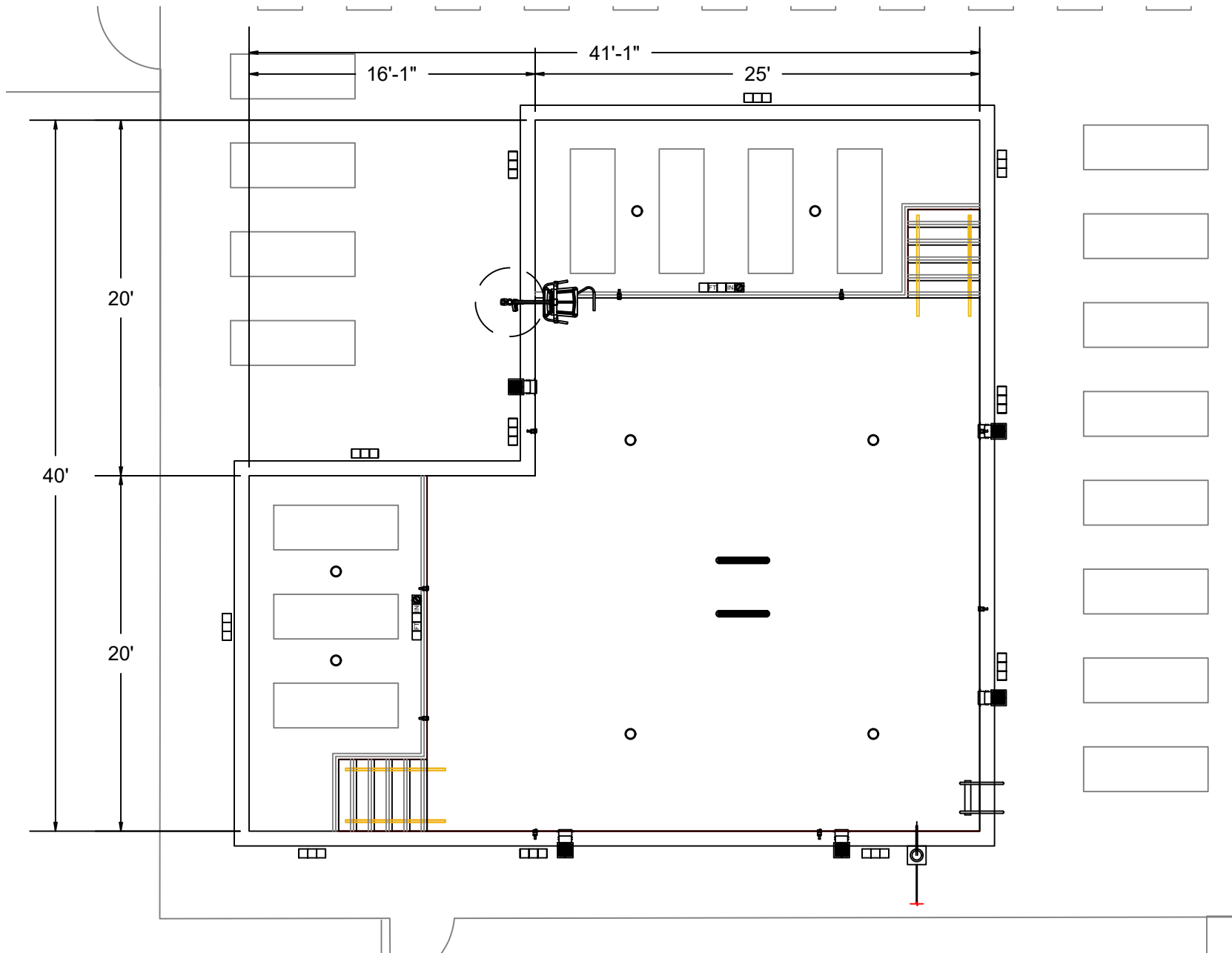
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P4.00

**A** Pool Layout - Plan View Scale: 1/8" = 1'-0"

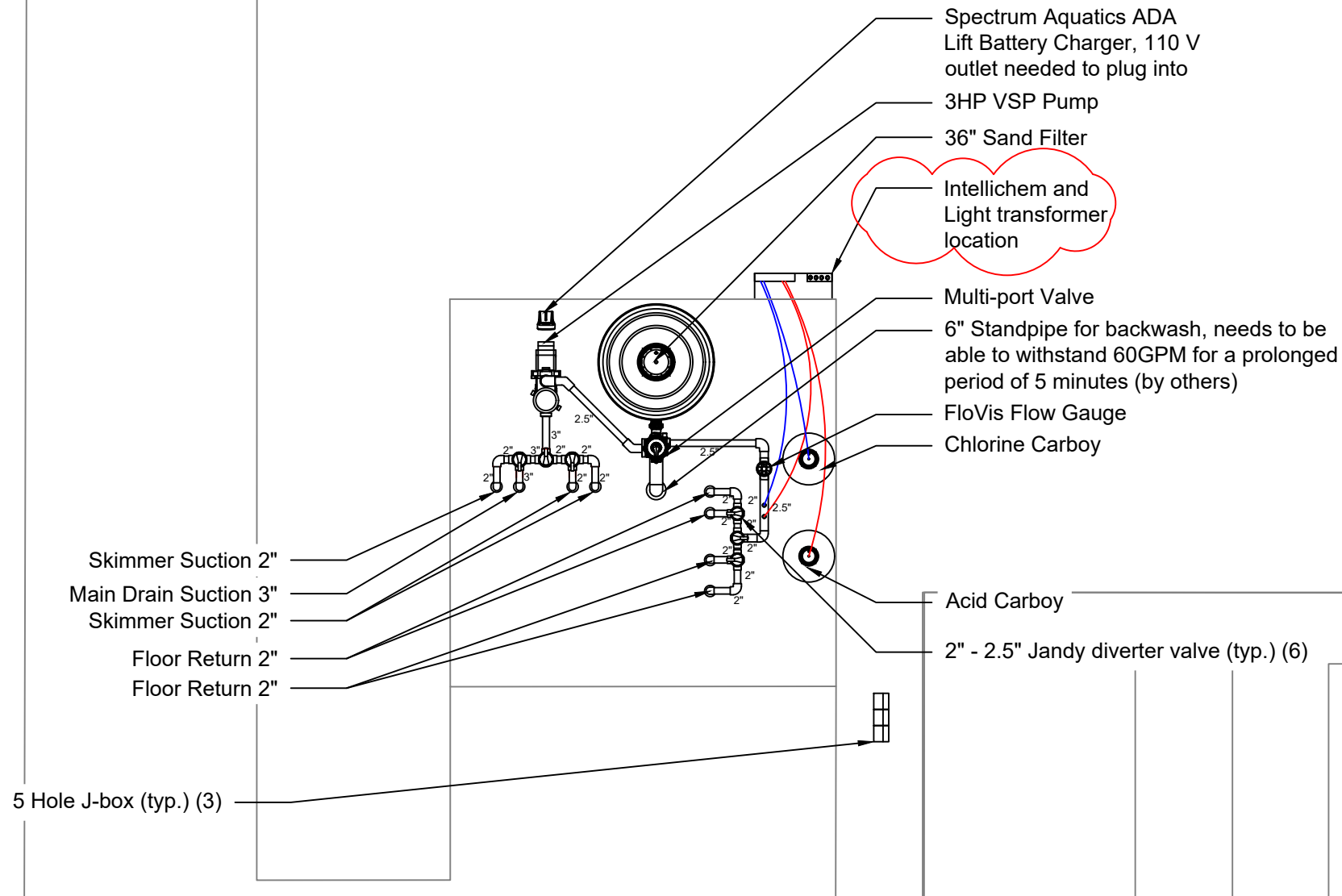




**A** Pool Layout - Plan View Scale:  $\frac{1}{8}" = 1'-0"$

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<p> <b>Midwest</b> CUSTOM POOLS</p>	
<p>The Signature at West Pryor 2100 &amp; 2150 NW LOWENSTEIN DR. LEE'S SUMMIT, MO 64081</p>	
<p>Plan Date: 01.2022</p>	
<p>Drawn By: EM</p>	
<p>SHEET NO.</p>	
<p><b>P4.01</b></p>	





**A** Pool Layout - Equipment Pad Scale:  $\frac{1}{4}" = 1'-0"$

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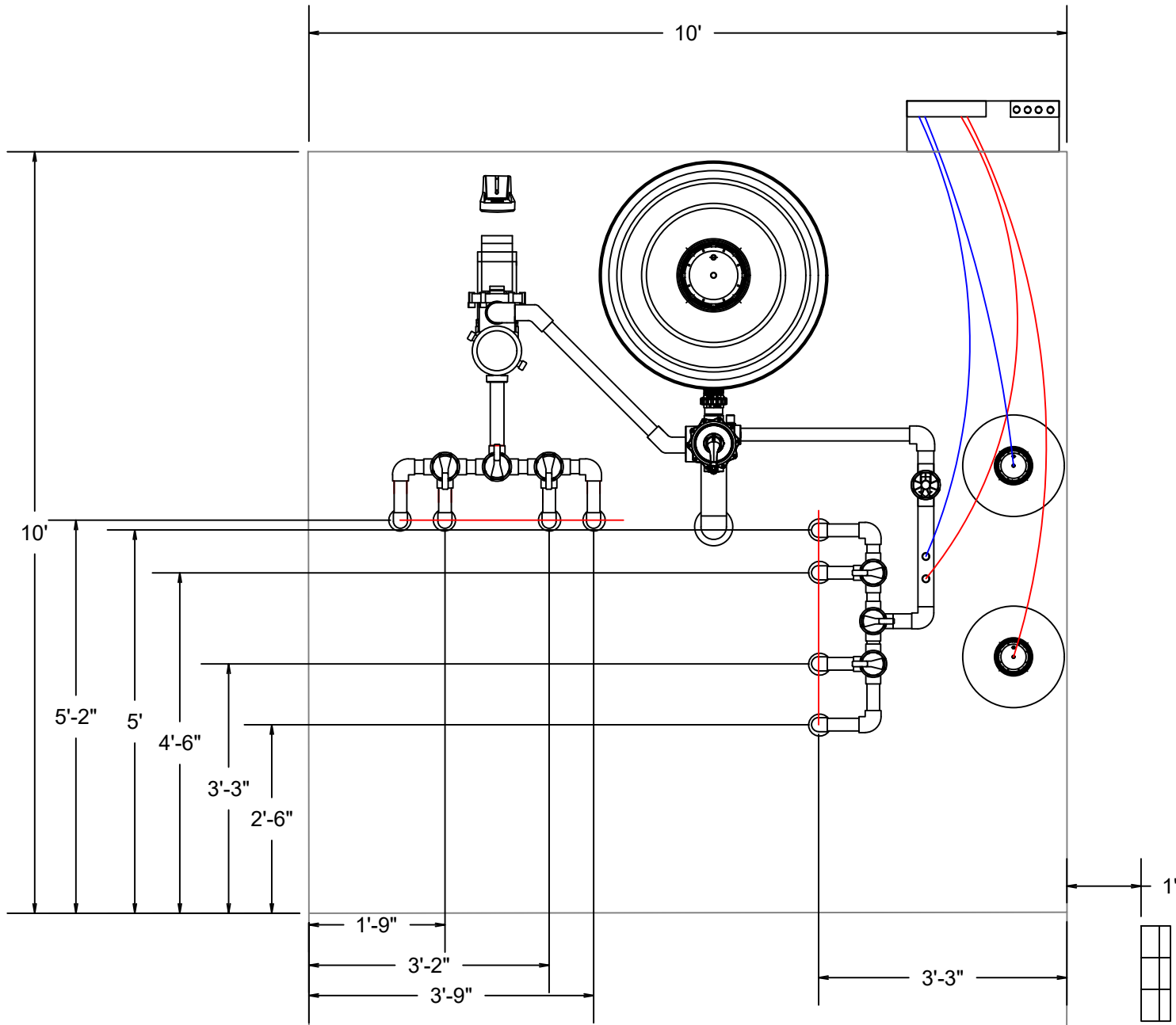
Plan Date:

01.2022

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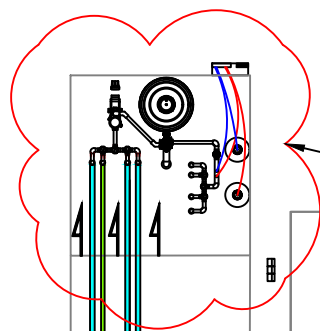
**P5.00**







**A** Pool Layout - Equipment Pad Dimensions

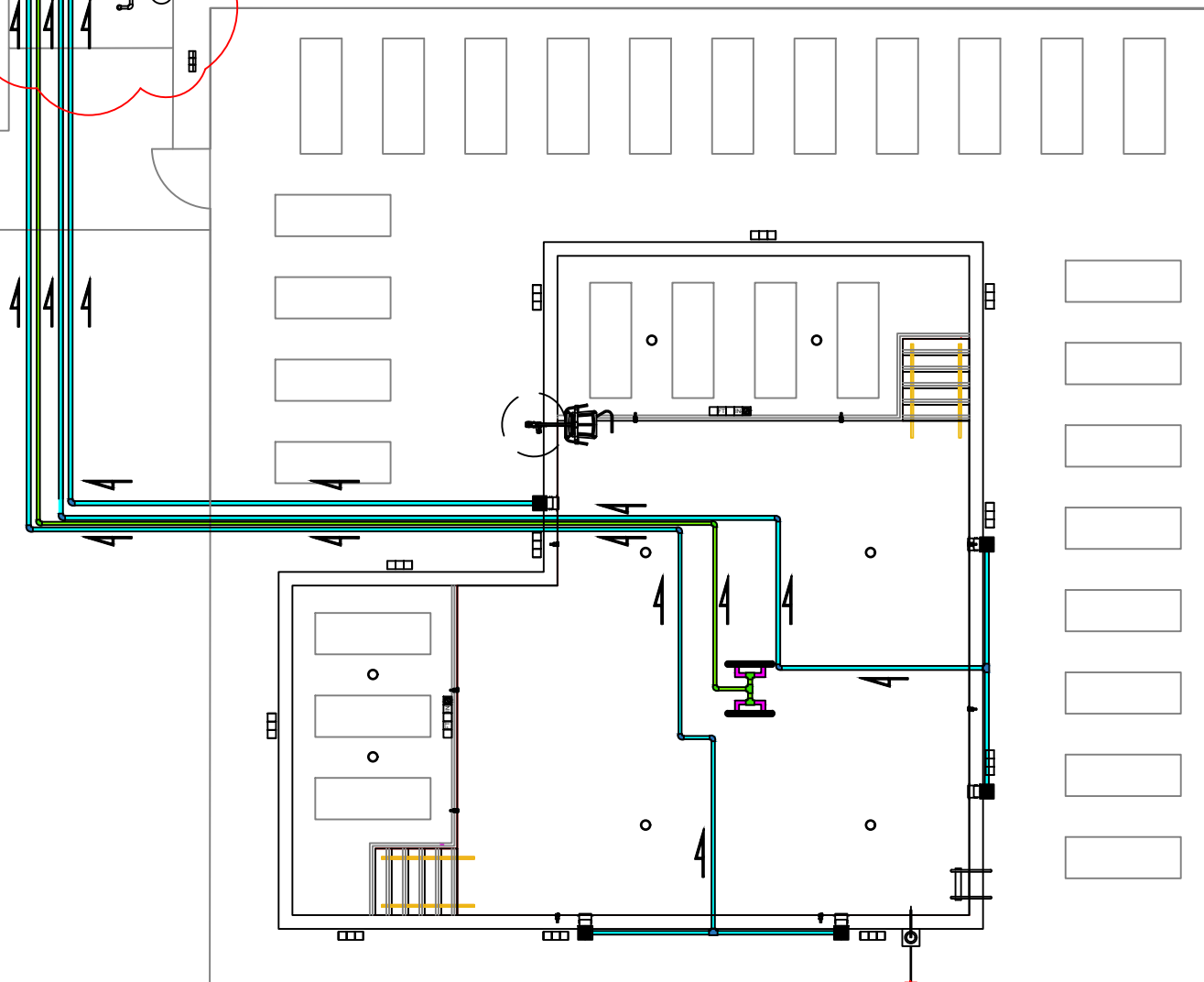
Scale:  $\frac{1}{4}" = 1'-0"$

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<b>P5.01</b>		




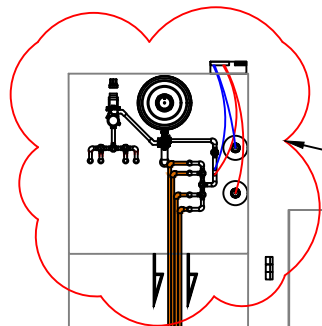
Moved location as per civil PC3.0

-  Flow Direction
-  3" Suction SCH 40 PVC
-  2.5" Suction SCH 40 PVC
-  2" Suction SCH 40 PVC



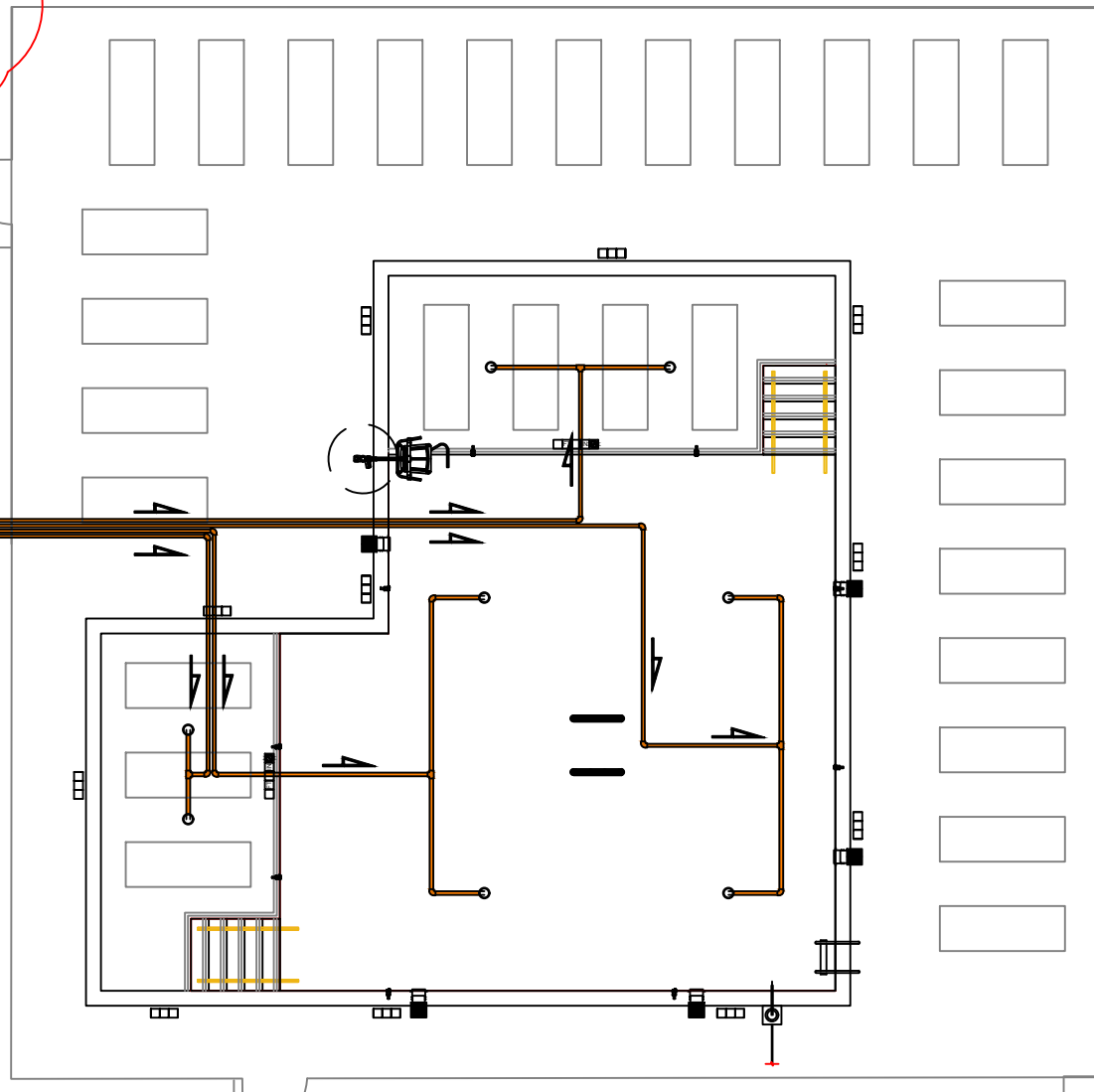
**A** Plumbing plan - Suction Scale:  $\frac{3}{32}" = 1'-0"$

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Moved location as per civil PC3.0

 Flow Direction  
 2" Return SCH 40 PVC



**A** Plumbing plan - Return Scale:  $\frac{3}{32}" = 1'-0"$

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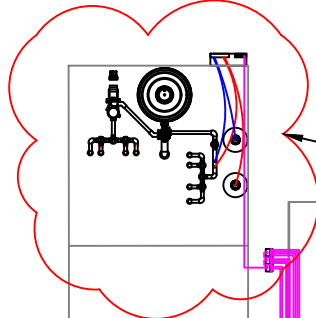
Plan Date:

01.2022

Drawn By: EM

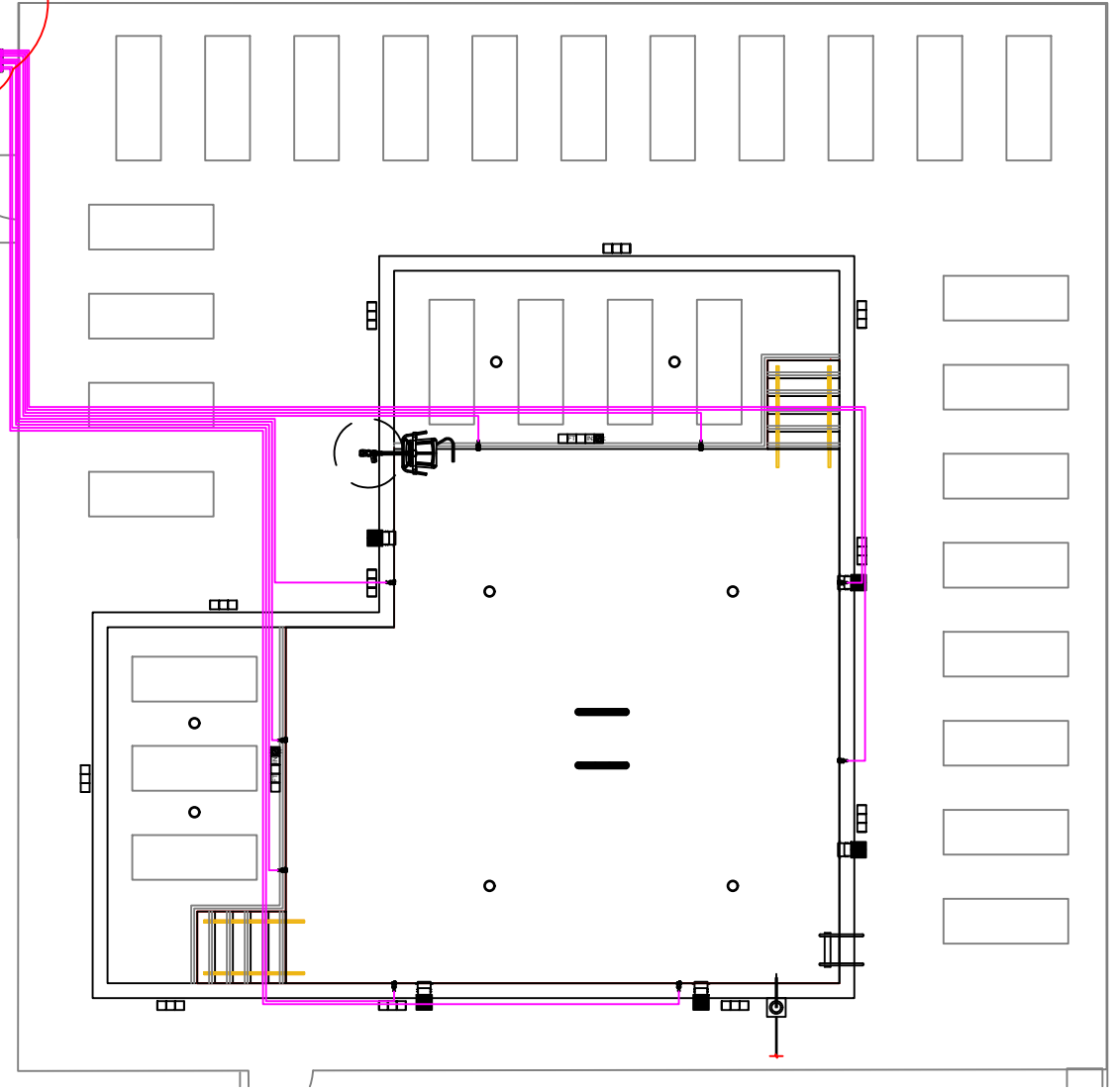
SHEET NO.

**P6.01**




Moved location as per civil PC3.0

1" SCH 40 PVC Conduit

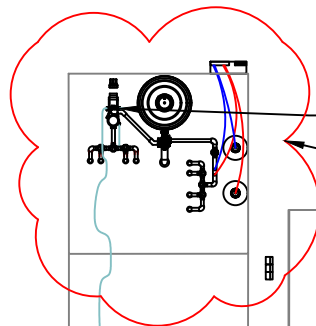


# A Electrical Plan

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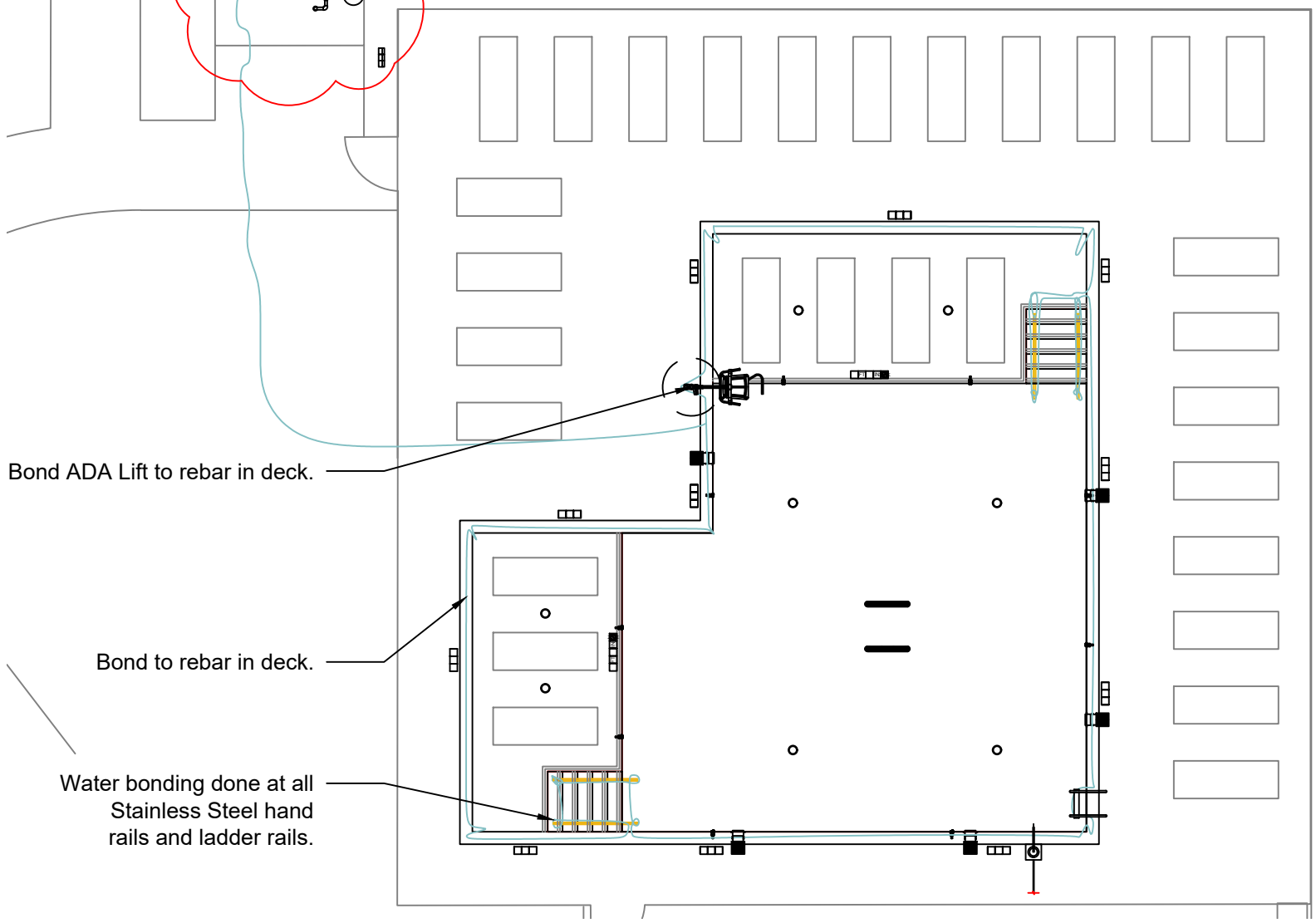
<p>MIDWEST CUSTOM POOLS 600 Lincoln Street Lawrence, KS 66044 P: 785.843.9119 F: 785.843.6524 MidwestCustomPools.com</p>		<p>The Signature at West Pryor 2100 &amp; 2150 NW LOWENSTEIN DR. LEE'S SUMMIT, MO 64081</p>	<p>Plan Date:</p>	<p>01.2022</p>	<p>Drawn By: EM</p>	<p>SHEET NO.</p>	<p>P7.00</p>
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Equipment to be bonded.  
 Moved location as per civil PC3.0

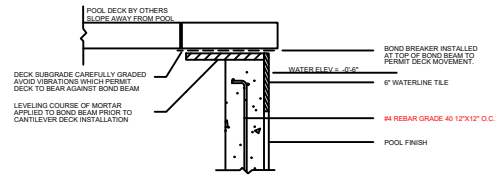
— #8 AWG Copper Bonding Wire



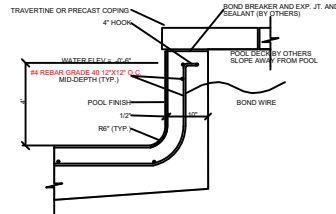
# A Bonding plan

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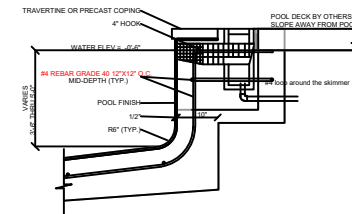
<p>MIDWEST CUSTOM POOLS          600 Lincoln Street          Lawrence, KS 66044          P: 785.843.9119          F: 785.843.6524          MidwestCustomPools.com</p>		<p>The Signature at West Pryor          2100 &amp; 2150 NW LOWENSTEIN DR.          LEE'S SUMMIT, MO 64081</p>	<p>Plan Date:          01.2022</p> <p>Drawn By: EM</p> <p>SHEET NO.  <b>P8.00</b></p>
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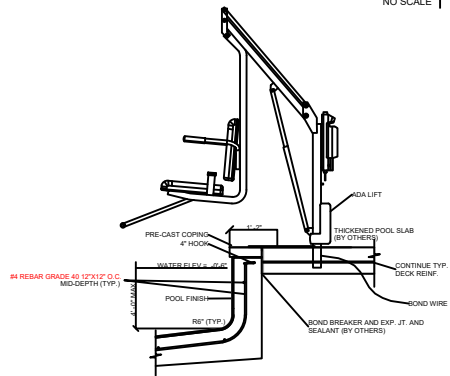
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NO SCALE



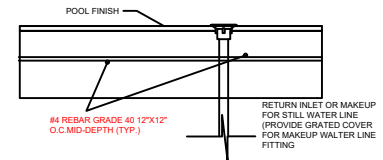
TYPICAL POOL WALL SECTION | 02  
NO SCALE



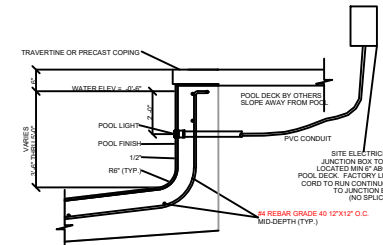
TYPICAL POOL SKIMMER SECTION | 03  
NO SCALE



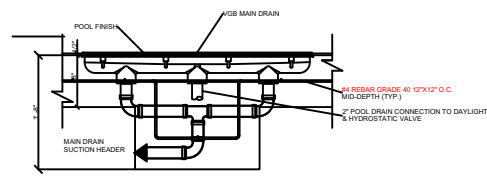
POOL ADA LIFT SECTION | 04  
NO SCALE



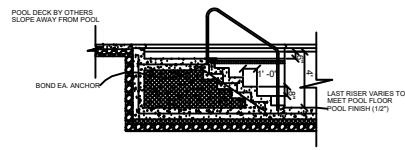
POOL FLOOR RETURN INLET SECTION | 05  
NO SCALE



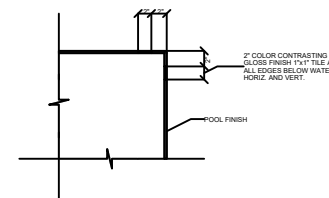
POOL LIGHT SECTION | 06  
NO SCALE




POOL MAIN DRAIN SECTION | 07  
NO SCALE



POOL STAIR DETAIL | 08  
NO SCALE



STAIR TREAD AND UNDER WATER EDGE DETAIL | 09  
NO SCALE



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P9.00