ADDENDUM NO. 2

TO

CONTRACT DOCUMENTS

AND

TECHNICAL SPECIFICATIONS

FOR

ASPIRE BREWING

PROPOSED TAP ROOM & BREWERY

FOR

SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE, LOWER LEVEL
MIDDLETOWN, NY 10941

LAN Job #4.1552.01
November 11, 2021

Michael J. McGovern, RA
NYS #022257

1.0 General: The original contract documents dated **October 15, 2021,** hereby amended as noted in this addendum which shall become part of said contract documents, as if originally included therein. Bidders must acknowledge receipt of this addendum and all other addenda on the proposal form when submitting proposals. In case any bidder fails to acknowledge receipt of addenda, his proposal will nevertheless be construed as though it has been received, acknowledged, and the submission of his proposal shall constitute acknowledgment by the bidder of the receipt of same.

Note that the bid due date and time shall be **Thursday, November 18, 2021, at 10:00 a.m.**

2.0 Amendment to Application:

N/A

3.0 Amendments to Specifications:

Section No.	Page No.	Addendum Requirements
TOC		The Table of Contents has been revised.
004116	All	Specification Section 004116 has been revised to include Add Alternate #2 – Generator.
012300	All	Specification Section 012300 has been revised to include Add Alternate #2 – Generator.
081116	All	Specification Section 081116 has been added.
081216	All	Specification Section 081216 has been added.
081743	All	Specification Section 081743 has been added.
081744	All	Specification Section 081744 has been added.

4.0 Amendments to Drawings:

Drawing No.	Addendum Requirements
A2.02	Drawing sheet has been modified to show brewery equipment labels.
A5.00	Drawing sheet has been modified to include a detail at the bar area soffit.
A6.01	Drawing sheet has been modified to include changes to the door schedule.
A6.10	Drawing sheet has been modified to include changes to the window schedule.
E2.00	Drawing sheet has been modified to indicate generator work as Add Alternate #2.
E6.01	Drawing sheet has been modified to indicate generator work as Add Alternate #2.

5.0 Requests for Information (RFIs):

No.	Comment / Response

1 Comment: Please clarify the walk-in cooler and freezer scope that the GC is to include in their proposal. During a recent walk-through we observed a number of pallets of cooler panels. Are these for this job? Has refrigeration equipment been purchased? Is the GC to install this equipment? How about start-up and commissioning?

Response: The owner has the refrigeration equipment and panels on order. The panels currently in the space are for the Beer World Chester location but will be removed before the start of construction. The owner will setup the cooler and equipment. The Bidder is to make the electrical connections to the coolers, install flooring per the drawings, and provide and install all framing and finish work shown on the drawings.

2 Comment: Please clarify the brewing equipment scope of work. Will the equipment be delivered to the site and put in place by the owner? What is the schedule for delivery of the equipment? Is the installation expected to be completed before June 30, 2022? Who performs start-up and commissioning? What materials, equipment, and/or accessories on M6.04 do we need to provide?

Response: The brewing equipment is to be Owner provided and delivered to the site. The Bidder will move the equipment to its final location and install. The Owner would like to prioritize the construction of the Brewery area and would like to speed up the timeline for the brew equipment delivery if the manufacturing side of the project can be completed first. Owner and brew equipment company will take care of startup and commissioning. The arrangement between the brewing equipment manufacturer and the owner has been made an attachment for the bidders' reference.

3 Comment: Please provide a mechanical demolition plan for the second floor.

Response: All mechanical demolition work on the second floor is indicated on the first floor and roof plan. All ductwork only passes through second floor and should be removed entirely between first floor and roof. As part of Add alternate #1, all MEP systems shall be re-routed/modified as required for clear installation of skylight. Contractor shall verify extents of work required to system(s) for skylight installation.

4 Comment: Will the second-floor space be emptied prior to the start of work?

Response: The Owner will empty the second floor space prior to the start of construction.

5 Comment: Please provide information on the structural framing needed around new roof penetrations.

Response: Please refer to "Typical Support Frame for Roof Openings and Equipment Curbs" on "Typical Details" sheet S6.02.

6 Comment: Please confirm that structural steel support is not needed for the interior roll-up doors.

Response: Confirmed. Structural steel support is not required for the interior roll-up doors (D09, D12, & D56). Basis of design for doors D09 and D12 shall be rolling steel service door model 610 with 22-gauge curtain, face of wall mounting, chain hoist, and padlockable chain keeper in color as selected by Owner. Basis of design for door D56 shall be fire-rated rolling steel door "FireKing" Model 630 with 22-gauge curtain, face of wall mounting, chain hoist, and padlockable chain keeper with stainless steel finish.

5.0 Requests for Information (RFIs): (continued)

No.	Comment / Response

7 Comment: We will be collecting long-lead information as we proceed with the bid process. We anticipate, due to recent experience, that this information will prohibit substantial completion by May 27, 2022. How will this issue be addressed when considering liquidated damages?

Response: The material supply chains have been disrupted by the impacts of COVID and delays are well documented in the industry. LAN knows this is out of the bidder's control and we have apprised the Owner of these concerns. If a supplier cannot deliver product/material/equipment to meet the schedule, and you provided documentation from the supplier indicating their delays, and you have exhausted alternate options (such as approved substitutions with equivalent products/materials), we cannot penalize the Contractor by imposing liquidated damages. We respectfully request that all of the bidders who deem it appropriate submit a letter stating your concerns with your bid proposal so that we can have an honest conversation with the Owner about realistic expectations as a starting point for a final contract negotiations.

8 Comment: Please provide additional Substantial and Final Completion schedule information as it relates to the start-up of the brewing and canning operations.

Response: The owner would like to prioritize construction of the Brewery manufacturing space. Completion schedule for brewing equipment coincides with substantail completion as shown in the Milestone Schedule Spec Section 011100. The owner expects to brew beer to serve before opening date.

9 Comment: To what extent can the road easement and parking lot be blocked during construction?

Response: Access and parking for the existing gym tenant is to be preserved during construction, the extent of which is to be worked out with the Owner. All easements / fire lanes should be preserved and kept clear during construction.

10 Comment: Our Insurance Company has requested a copy of the Builders Risk Policy the owner would be carrying. Would it be possible to obtain this?

Response: The insurance requirements will be provided during contract negotiations.

11 Comment: Please note that one of the kitchen equipment suppliers needs some additional elevations.

Response: Further details are noted in the general / products specifications of the Food Service Equipment spec section 114000.

12 Comment: Drawing P 2.02 shows PC installing a 4" Pumped drain from the pump lift station overhead to the batch neutralizer. On page 7.01 Pumping Pipe schedule says to use threaded ductile pipe. Ductile Iron gets assembled with mechanical fittings not threaded. Could the use of schedule 40 groove pipe with groove fittings be accepted? Please advise.

Response: The use of schedule 40 piping is not acceptable. The use of grooved ductile iron piping with grooved fittings rated for 200F and a ph range of 2-14, similar to Victaulic 31 grooved couplings with grade "M" gaskets is acceptable. The use of Charlotte Chemdrain CPVC piping with Chemdrain fittings and Chemdrain solvent cement is also acceptable.

5.0 Requests for Information (RFIs): (continued)

No.		Comment / Response
13	Comment:	Per the Fire Alarm Riser, this is an add to the existing fire alarm system. Can you please provide the existing Fire Alarm Manufacturer / Company in the building for pricing and equipment purchasing?
	Response:	The existing main fire alarm panel in the second floor electrical room is a Simplex 4002 zoned panel.
14	Comment:	Please clarify the HVAC Controls. Please clarify if building is to have a BMS system or not. The sequence of operations says everything is stand alone or with a time clock, but then the VAV sequence mentions communicating with the RTU, even though the RTU doesn't mention it.
	Response:	A BMS is not required. The RTUs that are specified come standard with a DDC controller (MicroTech III) that controls all unit functions. The RTU controller is given a target discharge air temperature and a pressure set-point. VAV boxes operate independently to maintain their own space temperatures. Unit mounted controls are indicated in the "General" section of the sequence of operations for the RTUs. The variable air volume RTU sequence of operations indicates the static pressure controls required for fan speed adjustment
15	Comment:	10/A4.11 shows a horizontal coping detail to span from Level 1 and Level 2 down to Level 0. We aren't sure what is intended for the vertical conditions.
	Response:	No flashing is required at the vertical conditions.
16	Comment:	Drawing P2.02 indicates equipment P-44 two times in the brewer room above what appears to be the canning equipment. The illustration appears to be some type of hose bib or wall hydrant similar to P-17, P-18, P-19, or P-23. Can you confirm what this equipment is?
	Response:	P-44 should be labeled P-43. P-43 is a ground mounted hydrant, Zurn model Z1360XL. Hydrant shall have ¾" male hose connection, D.C.C.I box, heavy duty cover, flashing flange and clamp collar.
17	Comment:	In addition to the above, the Plumbing Equipment Schedule ends at P-42 on Page P7.03, it doesn't have a P-44.
	Response:	P-44 (P-43) is missing from schedule, please refer to description above for specification on fixture P-43.
18	Comment:	On the same page, P7.03, the plumbing equipment P-41 and P-42 from Burt Process Equipment (Neutralization System within Shipping Container and Duplex Transfer Pump Lift Station) both appear to be standalone systems to which several Plumbing Subcontractors have expressed that this is possibly contracted directly by Aspire Brewery. Can you please confirm if this is already contracted by ownership? Also, is it ok if we contact Mark Girgenti from Burt Processing Equipment to confirm information on both of these items?
	Response:	This system is to be purchased and installed by the plumbing contractor. You are welcome to reach out to Mark Girgenti for additional information, contact info: 1-203-508-1244, markgirgenti@burtprocess.com

5.0 Requests for Information (RFIs): (continued)

No.	Comment / Response
19	Comment: We have spoken to Codi Manufacturing and Alpha Brewing. Both have mentioned that they are already contracted to furnish and deliver their equipment, they will just need Aspire or the GC to unload equipment delivered. Can we include an allowance to unload equipment on Aspire's behalf using our forklift or should we exclude unloading?
	Response: Bidders should include unloading of the brewing equipment as part of their base bid.
20	Comment: Please provide either an allowance for the stone at the fireplace and the counters or more details regarding type, finish, and edge profile.
	Response: Bidders to assume areas of stone to be polished granite, variety and color to be selected by owner. Edge profiles to be square with eased edges, typical. Attach with concealed anchors/fasteners typical. See section through fireplace 5/A4.20 and wall section 1/A4.10 for additional information.
21	Comment: Is there any waterproofing required over the ½" plywood called out on the Column Details shown on A4.11?
	Response: No waterproofing is required at these locations.
22	Comment: Please provide details for the header over the exterior storefront at the Main Entrance.
	Response: Please see 1/A6.06.
23	Comment: Please provide base connection details for the 4x4 steel tube columns shown at the counters on A4.10.
	Response: Tube steel post shall be welded to 4" x 6" x 1/4" steel base plate. Concrete curb shall have (2) 1/2" diameter x 9" long steel bolts embedded in concrete curb. Base plate shall be bolted to steel bolts.
24	Comment: E5.01 indicates that the light fixtures are by the 'Cooler Vendor - typical of 5 coolers'. Please clarify.
	Response: Light fixtures at these cooler locations are to be provided by the owner as part of the cooler package and installed by the contractor.
25	Comment: A2.02 indicates that there is a section, 3/A4.20, at the Bar 104. This section shows the Water Feature.
	Response: Please see Bar Counter Section 4/A9.11 and Back of Bar Sections 5/A9.11.
26	Comment: A2.02 calls out 2 TVs at the Bar. Elevation 5/A7.03 does not show these. Please clarify.
	Response: Elevation 5/A7.03 shows the back of bar area. Please refer to elevation 6/A7.01
27	Comment: A5.02 shows a small ceiling at Bar 104. Please provide a section.
	Response: Please see new detail 2/A5.00 "Soffit Detail @ Bar" for additional information.

5.0 Requests for Information (RFIs): (continued)

No.	Comment / Response

28 Comment: Does the Egress Corridor get repainted?

Response: The entirety of Corridors 131A, 131B, and 131C are to receive new paint, color to be selected by owner. The remainder of the existing Egress Corridor beyond is to be existing to remain except for where it applies to new work.

29 Comment: M.604 shows the tanks, control valves, RTD sensors etc. The schedules however do not show the brewing boilers. Are these or any controls for them to be included in the GC's scope?

Response: To be worked out between owner, owner's vendor, and contractor during contract negotiations.

30 Comment: BMS controls: The sequence of operations says everything is stand alone or with a time clock, but then the VAV sequence mentions communicating with the RTU, even though the RTU doesn't mention it.

Response: Refer to response for question #14.

31 Comment: How many taps are required for Cooler 124?

Response: A total of (44) beer taps and (3) water taps are to be provided at Cooler 124. Please also note, a total of (44) beer taps are to be provided at the Bar 104 area.

32 Comment: P-33 is mis-labelled. Is it supposed to be tagged P-21?

Response: P-33 within cabinetry shall be P-21.

33 Comment: Who is providing the water softener in the boiler room? Please forward specifications if the contractor is to provide.

Response: Water softener is to be provided by owner.

34 Comment: Please provide specifications on P-44.

Response: Refer to response for question #16.

35 Comment: How does the hot and cold water terminate at column K-10 (at the masher & kettle)?

Response: Refer to drawing P2.01 for continuation. Hot and cold water piping to connect to sink on brewhouse.

36 Comment: Please provide the names and layout of the brewery equipment. Softened water is required at some equipment, but there is no way to identify the equipment.

Response: Revised sheet A2.02 is included as an attachment showing equipment labels for the Bidders' reference.

37 Comment: Please provide submittal information for the chiller, boiler, and condensate feed water system so that we can include the cost to pipe them properly.

Response: The basis of design brewery equipment cut-sheets have been made an attachment for the Bidders' reference.

5.0 Requests for Information (RFIs): (continued)

No.	Comment / Response
38	Comment: What concentration of glycol is required?
	Response: Chiller shall have a 40% glycol concentration.
39	Comment: The rooftop units and MAU unit are shown to be sitting on a steel platform. However, the equipment schedule and equipment details imply that they are roof mounted. Please clarify.
	Response: Rooftop units and the MUA unit shall be installed on roof curbs on the steel dunnage platform. Units shall be provided with roof curbs to elevate units off of platform.
40	Comment: Are there any seismic requirements?
	Response: Please refer to seismic information shown in the “Design Loads” note box on sheet S6.01.

6.0 Substitution Requests:

Specification Section No.
N/A

7.0 Clarifications:

No.	
1	The arrangement between the brewing equipment manufacturer and the owner has been made an attachment for the bidders’ reference.
2	Bidders should be note that the Owner will now be providing and installing the cooler package. Please see RFI Comment / Response #1 in this document. This affects items shown in the drawing set labeled with key notes: 19, 20, 21, 22, and 81. Electrical connections and all finish work beyond initial cooler setup to be provided and installed by contractor as indicated on the drawings.
3	Door numbers D05, D06, D08, D10, D11, D13, D18, D20, D23, D24, D25, D29, D30, and D31 as well as window number W17 have been revised. Revised sheets A6.01 and A610 are included in this addendum. Where a difference may arise between the door schedule and a door elevation or detail the door schedule shall take precidence. Additionally, specification sections 081116, 081216, 081743, and 081744 have been included. Please note, this change supercedes response #16 in Addendum #1. The panelized wood grain pattern of the SL-19 door and matching transom panel will take the place of the adhered wood slats. “Wood slat note” on sheet A6.06 is superceded as it relates to doors only.
4	Ceiling type CT-5, called out as “Cubes” by “Rulon” is to be “Beams” by “Rulon” with matching closed ends. The remainder of note for CT-5 is to remain as written.
5	The proposed generator, concrete generator pad, bollards at generator, trenching for generator, and all associated work shall now be part of Add Alternate #2. Revised Specification sections 004116 and 0123000 as well as revised drawing sheets E2.00 and A6.01 have been included as an attachment.

7.0 Clarifications: (continued)

No.	
6	This addendum is the last response that will be provided prior to the bid due date. Bidders shall aknowledge receipt of Addendum No.'s 1 and 2 with their bid proposal package.

END OF ADDENDUM NO. 2

Attachments:
- #1 Revised Table of Contents
- #2 Revised Specification Section 004116
- #3 Revised Specification Section 012300
- #4 Added Specification Section 081116
- #5 Added Specification Section 081216
- #6 Added Specification Section 081743
- #7 Added Specification Section 081744
- #8 Revised sheet A2.02 "Proposed Partial First Floor Plan"
- #9 Revised sheet A5.00 "Ceiling Types and Details"
- #10 Revised sheet A6.01 "Door Schedule"
- #11 Revised sheet A6.10 "Window Schedule & Window Types"
- #12 Revised sheet E2.00 "First Floor Plan"
- #13 Revised sheet E6.01 "Details"
- #14 Brew Equipment Commissioning Service Agreement & Checklist
- #15 Brewery Equipment Cutsheets

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To: Sonny Patel Brewing Company, inc.
590 Route 211
Middletown, NY 10941

Project: Aspire Brewing – Proposed Tap Room & Brewery

Date: _____

Submitted by: _____
(full name
and address) _____

_____

Telephone No. _____

1.1 OFFER

Having examined the Place of The Work and having familiarized himself with the local conditions and any other conditions affecting the Construction Work of this Project, including the availability of materials and labor, and fully understanding the requirements of the Bidding and Contract Documents for the above mentioned Project, the Undersigned Contractor hereby offers to furnish all labor, supervision, materials, tools, equipment, transportation, and services necessary to perform and complete the Construction Work of the Project in strict accordance with the Contract Documents within the time limit, and that if this Bid is accepted, the Undersigned agrees to enter into the Contract with the Owner to perform and complete this Work for the Sum of:

BASE BID (includes allowances per Section 012100)

$_____
(figures)

_____ dollars,
(written)

in lawful money of the United States of America.

We have included the Security Bid Bond as required by the instruction to Bidders.

Bidder shall submit their bid breakdown by CSI division as an attachment.
Failure to do so will result in a rejected bid.

1.2 UNIT PRICES – None

1.3 ALLOWANCES

The Bidder hereby certifies that the Base Bid includes the following a contingency allowance as stipulated in the Specifications.

a. Allowance 1: Contractor shall include a contingency allowance of $500,000.00 for use according to the Owner's Instructions.

1.4 ADD ALTERNATES

The Undersigned Contractor hereby offers to furnish all labor, supervision, materials, tools, equipment, transportation, and services necessary to perform and complete the Add Alternate Work for the Sum of:

ADD ALTERNATE #1 - Skylight (See Specification Section 012300)

$_____
(figures)

_____ dollars,
(written)

ADD ALTERNATE #2 - Generator (See Specification Section 012300)

$_____
(figures)

_____ dollars,
(written)

1.5 ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for forty-five (45) calendar days from the Bid closing date. Contract Award shall be determined by the Lowest Responsible Base Bid plus any combination of Alternates at the discretion of the Owner.

If this Bid is accepted by the Owner within the time period stated above, we will

- Execute the Agreement within seven (7) days of receipt of Notice to Proceed.
- Furnish the required bonds within seven (7) days of receipt of Notice to Proceed in the form described in Contract Documents.
- Commence Work within seven (7) days after written Notice to Proceed.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds, the Bid security shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the Bid security or the difference between this Bid and the Bid upon which a Contract is signed.

In the event our Bid is not accepted within the time stated above, the required security deposit will be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders, unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

The sum given in the Base Bid represents the entire cost of the Project. The sum given shall include any and all cost for insurance, including all insurance required by the Agreement, any and all fees for licenses and permits. The Undersigned agrees that no claim will be made for any additional costs regardless of any increases in costs such as higher wage scales or material prices.

The Undersigned has carefully checked all the figures used in compiling the sum given in the Base Bid and understands that the Owner will not be responsible for any errors or omissions incurred by the Undersigned in making up of this Bid. The Undersigned further understands that no modification or withdrawal of this proposal will be permitted after the time specified for the receipt of Bids.

The Undersigned has examined the location of the proposed Construction Work, Drawings, Specifications and other Contract Documents and is familiar with local conditions at the place where said Work is to be performed, including, without limitation, the Center for Disease Control (CDC) guidelines, NYS Governor's Executive Order 202.34, NYS Interim Guidance for Construction Activities during the COVID-19 Public Health Emergency and any other federal, state or local requirements and guidelines related to the COVID-19 pandemic. Refer to the General Conditions of the Contract for Construction for additional requirements.

1.6 CONTRACT TIME

If this Bid is accepted, we will

- Substantially Complete the Work as noted in Milestone Schedule 011100. Final Completion shall be within Thirty (30) days from Substantial Completion.

1.7 ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the bid sum.

Addendum #1 Dated _____
Addendum #2 Dated _____
Addendum #3 Dated _____
Addendum #4 Dated _____

1.8 BID FORM SIGNATURES

The Corporate Seal of

_____
(Bidder – print the full name of your firm)
was hereunto affixed in the presence of:

_____
(Authorized signing officer Title)
(Seal)

_____
(Authorized signing officer Title)
(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF SECTION 004116

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.03 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.04 PROCEDURES

A. Make certain the Bid Form clearly states that costs listed for each alternate include costs of related coordination, modification, or adjustment.

B. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 SCHEDULE OF ALTERNATES

A. Add Alternate No. 1 – Skylight:
The Contractor shall provide and install the skylight, fire rated shaft at the Second Floor, and all associated work. See areas labeled “ADD ALTERNATE #1” throughout the drawing set.

B. Add Alternate No. 2 – Generator:
The Contractor shall provide and install the generator, concrete pad, and all associated work. See areas labeled “ADD ALTERNATE #2” on the Electrical sheets.

END OF SECTION 012300

SECTION 081116 – Wide Stile Monumental Door

PART 1 GENERAL

1.01 SECTION INCLUDES

A. SL-15 Wide Stile Monumental Door installed in Thermally Broken Aluminum Framing.

B. SL-16 Flush Aluminum Door installed in Thermally Broken Aluminum Framing.

1.02 REFRENCES

A. AAMA 1503-98 – Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.

B. ASTM-B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

C. ASTM-B221 – Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

D. ASTM-C518 – Standard test Method for Steady-State Thermal Transmission Properties by Means of Heat Flow Meter Apparatus.

E. ASTM-D256 – Standard Test Methods for Determining the Pendulum Impact Resistance of Plastics.

F. ASTM-D570 – Standard Test Method for Water Absorption of Plastics.

G. ASTM-D638 – Standard Test Method for Tensile Properties of Plastics.

H. ASTM-D790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

I. ASTM-D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics.

J. ASTM-D1622 – Standard Test Method for Apparent Density of Rigid Cellular Plastics.

K. ASTM-D1623 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.

L. ASTM-D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.

M. ASTM-D2583 – Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

N. ASTM-D3029 – Test Methods for Impact Resistance of Flat Rigid Plastic Specimens by Means of a Tup (Falling Weight) (Withdrawn 1995) (Replaced by ASTM-D5420).

O. ASTM-D5116 – Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/ Products.

P. ASTM-D6670 – Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/ Products.

Q. ASTM-E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

R. ASTM-E283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

S. ASTM-E330 – Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

T. ASTM-E1886 – Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

U. ASTM-F1642-04 – Standard Test Method for Glazing Systems Subject to Air Blast Loading.

V. NFRC 100 – Procedure for Determining Fenestration Products U-Factors.

W. NFRC 400 – Procedure for Determining Fenestration Products Air Leakage.

1.03 SUBMITTALS

A. Must comply with Section 01 33 00 – Submittal Procedures.

B. Action Submittals/ Informational Submittals.

1. Product Data.

a. Submit manufacturer’s product data sheets, catalog pages illustrating the products, description of materials, components, fabrication, finishes, installation instructions, and applicable test reports.

2. Shop Drawings.

a. Submit manufacturer’s shop drawings, including elevations, sections, and details indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.

3. Samples.

a. Submit manufacturer’s door sample composed of door face sheet, core, framing and finish.
b. Submit manufacturer’s sample of standard colors for door face and frame.

4. Testing and Evaluation Reports.

a. Submit testing reports and evaluations provided by manufacturer conducted by and accredited independent testing agency certifying doors and frames comply with specified performance requirements listed in Section 2.04.

5. Manufacturer Reports.

a. Manufacturer's Project References.

1. Submit list of successfully completed projects including project name, location, name of architect, type, and quantity of doors manufactured.

C. Closeout Submittals.

1. Operation and Maintenance Manual.

a. Submit manufacturer's maintenance and cleaning instructions for doors and frames, including maintenance and operating instructions for hardware.

2. Warranty Documentation.

a. Submit manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

A. Manufacturer's Qualifications.

1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years concurrent successful experience.

2. Door and frame components must be fabricated by same manufacturer.

3. Evidence of a documented complaint resolution quality management system.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Delivery.

1. Deliver materials to site in manufacturer's original, unopened, containers and packaging.

2. Labels clearly identifying opening, door mark, and manufacturer.

B. Storage.

1. Store materials in a clean, dry area, indoors in accordance with manufacturer's instructions.

C. Handling.

1. Protect materials and finish from damage during handling and installation.

1.06 WARRANTY

A. Warrant doors, frames, and factory installed hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.

B. Standard Period.

1. Ten years starting on date of shipment.

C. Limited lifetime

1. Covers failure of corner joinery, core deterioration, and delamination or bubbling of door skin and corrosion of all-fiberglass products while the door is in its specified application in its original installation.

D. Finish

1. Kynar painted aluminum: 10 years.

2. Painted SL-17, SL-18, SL-19, SL-19-1, SL-20 face sheets: 5 years.

3. Painted AF-100, AF-200, AF-150 frames, AF-250 frames: 3 years.

4. Painted FR doors: 3 years.

5. Stained SL-18, SL-19, and SL-19-1 face sheets: 5 years.

6. Anodized, aluminum:10 years.

7. Thresholds do not have a finish warranty.

PART 2 PRODUCTS

2.01 FRP/ALUMINUM HYBRID DOORS

A. Manufacturer.

1. Special-Lite, Inc.

a. PO Box 6, Decatur, Michigan 49045.
b. Toll Free (800) 821-6531, Phone (269) 423-7068, Fax (800) 423-7610.
c. Web Site www.special-lite.com.

2.02 DESCRIPTION

A. Model.

1. SL-15 Wide Stile Monumental Door.

2. SL-16 Flush Aluminum Door.

B. Door Opening Size.

1. As indicated on drawings.

C. Construction.

1. Door Thickness.

a. 1-3/4”.

2. Stiles.

a. 4-3/4” wide with integral glass stop on exterior side, no snap or applied stops allowed.
b. Aluminum extrusions made from 6063 aluminum alloys with a minimum temper of T5.
c. Screw or snap in place applied caps are not acceptable.
d. Meeting stiles to include integral pocket to accept pile brush weather seal.

3. Rails.

a. Top Rail Height.

1. 6-1/2".

b. Bottom Rail Height.

1. 10".

c. Integral glass stops on exterior side, no snap or applied stops allowed.

d. Aluminum extrusions made from 6063 aluminum alloys with a minimum temper of T5.

e. Screw or snap in place applied caps are not acceptable.

4. Corners.

a. True mortise and tenon joints.

b. Secured with 3/8” diameter full-width steel tie rod.

c. Weld, glue, or other methods of corner joinery are not acceptable.

5. Mid Panel. (Where applicable)

a. Model SL-484.

b. 12” high.

c. Core.

1. Poured-in-place polyurethane foam.
2. Laid in foam cores are not acceptable.
3. Foam Plastic Insulated Doors: IBC 2603.4.

    a. Foam plastic shall be separated from the interior of a building by an approved thermal barrier.
    b. Approved thermal barrier must meet the acceptance criteria of the Temperature Transmission Fire Test and Integrity Fire Test as stated in NFPA 275.
    c. IBC 2603.4.1.7 foam plastic insulation, having a flame spread index less than 75 and a smoke developed index of not more than 450 shall be permitted as a door core when the face is metal minimum 0.032” aluminum or 0.016” steel.
    d. Standard door assembly can be tested to show it meets these requirements without the use of thermal barrier. If no independent testing conducted all doors with foam plastic core must have a thermal barrier.

4. Frame.

    a. Aluminum extrusions with extruded spline and interlocking edges to secure face sheet.

5. Secured to stiles with mortise & tenon joints and two 3/8” steel tie rods with locking hex nuts.

d. Face Sheet.

    a. Aluminum

        1. Standard 0.062” thick smooth aluminum sheet.
        2. Optional 0.125” thick smooth aluminum sheet.
        3. Texture.

            a. Available in 0.062” thickness.
            b. Embossed.
            c. Fluted.

2. Interior.

    a. Aluminum

        1. Standard 0.062” thick smooth aluminum sheet.
        2. Optional 0.125” thick smooth aluminum sheet.
        3. Texture.

            a. Available in 0.062” thickness.
            b. Embossed.
            c. Fluted.

6. Hardware.

a. Pre-machine doors in accordance with templates from specified hardware manufacturers.
b. Surface mounted closures will be reinforced for but not prepped or installed at factory.
c. Factory install door hardware.

7. Reinforcements.

a. Aluminum extrusions made from 6061 or 6063 aluminum alloys.
b. Sheet and plate to conform to ASTM-B209.
c. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.
d. Bars and tubes to meet ASTM-B221.

D. Sustainability Characteristics.

1. LEED Declaration.

a. Entrance Products contribute to point calculations for the following credits:

1. MR Credit 4.1 Recycled Content 10% (post-consumer = ½ pre-consumer) 1 point.
2. MR Credit 4.2 Recycled Content 20% (post-consumer = ½ pre-consumer) 1 point.

b. All aluminum extrusions are produced using prime-equivalent billet produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes. The USGBC classifies these extrusions as pre-consumer recycled material.

c. Manufacturing facility located within 500 miles of major components and materials, including aluminum extrusions.

d. The point of recovery and smelting of pre-consumer recycled material within 500 miles of the manufacturing facility.

2.03 FRAMING

A. Framing

1. Thermally Broken Aluminum Framing.

a. Model.

1. SL-600TB.

b. Materials.

1. See 2.05.A.

c. Perimeter Frame Members.

1. Storefront frame with thermally broken pocket filler.

2. Factory fabricated.
3. Open-back framing is not acceptable.

d. Thermal Strut.

1. Fiber reinforced plastic, no other materials will be accepted.

e. Applied Door Stops.

1. 5/8” x 1-1/4” or 5/8” x 1-3/4”, 0.125” wall thickness, with screws and weather-stripping.
2. Provide solid ½” aluminum bar behind door stop for closer shoe attachment.
3. Pressure gasketing for weathering seal.
4. Counterpunch fastener holes in door stop to preserve full-metal thickness under fastener head.
5. Minimum ½” aluminum bar reinforcement under doorstop for required hardware attachments, aluminum to meet ASTM-B221.

f. Caulking.

1. Caulk joints before assembling frame members.

g. Frame Member to Member Connections.

1. Secure joints with fasteners.
2. Provide hairline butt joint appearance.
3. Shear block construction only, no screw spline allowed.

h. Hardware

1. Pre-machine and reinforce frame members for hardware in accordance with manufacturer's standards and door hardware schedule.
2. Surface mounted closures will be reinforced for but not prepped or installed at factory.
3. Factory install door hardware.

i. Anchors:

1. Anchors appropriate for wall conditions to anchor framing to wall materials.
2. Door Jamb and Header Mounting Holes: Maximum of 24-inch centers.
3. Secure head and sill members of transom, side lites, and similar conditions.

2.04 MATERIALS

A. Aluminum Members.

1. Aluminum extrusions made 6061 or 6063 aluminum alloys.

2. Sheet and plate to conform to ASTM-B209.

3. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.

B. Fiberglass.

1. See 2.02.C.5.d.

C. Fasteners.

1. All exposed fasteners will have a finish to match material being fastened.

2. 410 stainless steel or other non-corrosive metal.

3. Must be compatible with items being fastened.

2.05 FABRICATION

A. Factory Assembly.

1. Door and frame components from the same manufacturer.

2. Required size for door and frame units, shall be as indicated on the drawings.

3. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.

4. All cut edges to be free of burs.

5. Welding of doors or frames is not acceptable.

6. Maintain continuity of line and accurate relation of planes and angles.

7. Secure attachments and support at mechanical joints with hairline fit at contact surfaces.

B. Shop Fabrication

1. All shop fabrication to be completed in accordance with manufactures process work instructions.

2. Quality control to be performed before leaving each department.

2.06 FINISHES

A. Door.

1. Aluminum.

a. Anodizing.

1. Class 1 Anodizing, minimum 0.7 mils thick.

a. Color.

1. As indicated by architect from mfg's full range of color options.

B. Frame

1. Aluminum.

a. Anodizing.

1. Class 1 Anodizing, minimum 0.7 mils thick.

a. Color.

1. As indicated by architect from mfg's full range of color options.

2.07 ACCESSORIES

A. Vision Lites.

1. Factory Glazing.

a. Glazing Thickness.

1. As indicated by architect.

B. Hardware.

1. Pre-machine doors in accordance with templates from specified hardware manufactures and hardware schedule.

2. Factory install hardware.

3. Hardware Schedule.

a. As specified on drawings unless indicated in this section.

1. Hinges.

a. SL-11HD.

2. Concealed adjustable bottom brush.

a. SL-301.

1. Not for use with CVR type hardware.

3. Concealed adjustable meeting stile astragal.

a. Adjustable astragal by Special-Lite.

4. Thresholds.

    a. Aluminum threshold by Special-Lite.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas to receive doors.

B. Notify architect of conditions that would adversely affect installation or subsequent use.

C. Do no proceed with installation until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.03 ERECTION

A. Install doors in accordance with manufacturer's instructions.

B. Install doors plumb, level, square, true to line, and without warp or rack.

C. Anchor frames securely in place.

D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by architect.

E. Set thresholds in bed of mastic and back seal.

F. Install exterior doors to be weathertight in closed position.

G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by architect.

H. Remove and replace damaged components that cannot be successfully repaired as determined by architect.

3.04 FIELD QUALITY CONTROL

A. Manufacture's Field Services.

1. Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

3.05 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.

3.06 CLEANING

A. Clean doors promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that would damage finish.

3.07 PROTECTION

A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

END OF SECTION 081116

SECTION 081216 – Interior Aluminum Framing

PART 1 GENERAL

1.01 SECTION INCLUDES

A. LiteSpace™ Interior Aluminum Framing.

1.02 REFRENCES

A. AAMA 607.1 – Voluntary Guide Specification and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.

B. AAMA 608.1 – Voluntary Guide Specification and Inspection Methods for Electrolytically deposited Color Anodic Finishes for Architectural Aluminum.

C. AAMA 2604 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix).

D. ASTM-B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

E. ASTM-B221 – Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

F. ASTM-C518 – Standard test Method for Steady-State Thermal Transmission Properties by Means of Heat Flow Meter Apparatus.

G. ASTM-D5116 – Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/ Products.

H. ASTM-D6670 – Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/ Products.

I. ASTM-E90 – Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.

1.03 SUBMITTALS

A. Must comply with Section 01 33 00 – Submittal Procedures.

B. Action Submittals/ Informational Submittals.

1. Product Data.

a. Submit manufacturer’s product data sheets, catalog pages illustrating the products, description of materials, components, fabrication, finishes, installation instructions, and applicable test reports.

2. Shop Drawings.

a. Submit manufacturer's shop drawings, including elevations, sections, and details indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.

3. Samples.

a. Submit manufacturer's door sample composed of door and finish.
b. Submit manufacturer's sample of standard colors for door and frame.
c. Provide two samples of each type of framing member required, not less than 10" long in Clear 204 R1 finish.

4. Testing and Evaluation Reports.

a. Submit testing reports and evaluations provided by manufacturer conducted by and accredited independent testing agency certifying doors and frames comply with specified performance requirements listed in Section 2.04.

5. Manufacturer Reports.

a. Manufacturer's Project References.

1. Submit list of successfully completed projects including project name, location, name of architect, type, and quantity of doors manufactured.

C. Closeout Submittals.

1. Operation and Maintenance Manual.

a. Submit manufacturer's maintenance and cleaning instructions for doors and frames, including maintenance and operating instructions for hardware.

2. Warranty Documentation.

a. Submit manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

A. Manufacturer's Qualifications.

1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years concurrent successful experience.

2. Door and frame components must be fabricated by same manufacturer.

3. Evidence of a documented complaint resolution quality management system.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Delivery.

1. Deliver materials to site in manufacturer's original, unopened, containers and packaging.

2. Labels clearly identifying elevations.

3. Inspect frames upon delivery for damage.

a. Repair minor damage to polyester finish by using air drying spray enamel of matching color.
b. Replace frames that cannot be satisfactorily repaired.

B. Storage.

1. Store materials in a clean, dry area, indoors in accordance with manufacturer's instructions.

C. Handling.

1. Protect materials and finish from damage during handling and installation.

1.06 WARRANTY

A. Omega and LiteSpace Interior Aluminum Framing.

1. Special-Lite, Inc. warrants its LiteSpace interior aluminum framing products to be manufactured free from defective material and faulty workmanship for a period of 5 years from the date of shipment, when the product is installed and used in accordance with the company's published instructions. This warranty is extended to Special-Lite's dealers and or authorized distributors, who are acquiring the product directly from Special-Lite. Special-Lite's only obligation to this warranty is limited to repair or replacement of material, at the sole discretion of Special-Lite, Inc. All material replacement shall be F.O.B. Special-Lite's current manufacturing location. This warranty will not apply to any of the supplied product that has been subject to abuse, neglect or damage during shipment or at time of installation. This warranty is limited to manufacturing of the product and does not include any such warranty on installation performed by its dealers, distributors or other contractors. No warranty is made for any non-standard materials requested, selected and used at the request of the customer. Special-Lite, Inc. makes no other warranties or representations, either expressed or implied, concerning a product's fitness for a purpose. In no event will Special-Lite, Inc. be liable for direct, indirect, special or consequential damages including but not limited to loss of profits or use.

B. Other Manufacturer's Products & Hardware used within an Installation.

1. Special-Lite warrants any hardware or mechanisms that are installed at the plant or in the field by Special-Lite personnel is installed in accordance with the hardware manufacturer's specifications and instructions. The hardware or mechanism is securely mounted and, in normal usage will not separate from the door. Special-Lite makes no warranties of any kind as to the other manufacturer's hardware, mechanisms, or other products that are installed at Special-Lite or in

the field by non-Special-Lite personnel. Any such warranty shall be covered by these product manufacturer's warranty which shall run concurrently with this warranty.

C. Standard Period.

1. Five years starting on date of shipment.

D. Finish

1. Special-Lite makes the following finish warranties: Natural variations that fall within die lot range variances that may occur in aluminum and vinyl, of which the manufacturer has no control, shall not be considered defects. While the standard anodized finish is covered under this warranty, all special finishes; painted, anodized or other, are covered by the finish manufacturer's warranty and Special-Lite warrants that the finish has been applied in accordance with the finish manufacturer's application specifications. This warranty runs concurrently with the same period as the finish manufacturer's warranty. The warranties on finish in this section do not cover normal wear and aging of the finish.

E. Use of Special-Lite SL-Series Doors.

1. All Special-Lite's SL- and AF- Series doors are covered in accordance within Special-Lite's Limited 10-year Warranty. SLI Series must be interior installation.

PART 2 PRODUCTS

2.01 LITESPACE™ INTERIOR ALUMINUM FRAMING

A. Manufacturer.

1. Special-Lite, Inc.

a. PO Box 6, Decatur, Michigan 49045.
b. Toll Free (800) 821-6531, Phone (269) 423-7068, Fax (800) 423-7610.
c. Web Site www.special-lite.com.

2.02 DESCRIPTION

A. Model.

1. LiteSpace Interior Aluminum Framing.

B. Materials.

1. See 2.05. A.

C. Perimeter Frame Members.

1. Rectilinear design with 1-3/4" face.

2. Overall depth of 2-3/8”.

3. Accommodates framed aluminum doors, sliding frameless glass doors 3/8” or ½” thick.

4. Vertical aluminum mullions.

D. Integrated Door Stops.

1. Mohair door gasket black or grey coordinated with framing finish color.

E. Frame Member to Member Connections.

1. Secure joints with fasteners.

2. Provide hairline butt joint appearance.

3. No exposed clips for member to member connections.

F. Hardware

1. Pre-machine and reinforce frame members for hardware in accordance with manufacturer's standards and door hardware schedule.

2. Surface mounted closures will be reinforced for but not prepped or installed at factory.

G. Glazing.

1. Thickness and type.

a. ¼” tempered or laminated safety glazing.

2. Able to accept multiple glazing thicknesses.

3. Vinyl glazing bulb grey, white, or black to match extrusions.

4. Glazing system designed to allow replacement of glass.

5. Glazing vinyl internal to extrusion to provide clean sight line.

6. Glass butt joints with polycarbonate glazing channel with integral glazing tape that provides a minimum 120 oz/ inch peel strength.

H. Anchors:

1. Anchors appropriate for wall conditions to anchor framing to wall materials.

I. Sustainability Characteristics.

1. LEED Declaration.

a. Entrance Products contribute to point calculations for the following credits:

1. MR Credit 4.1 Recycled Content 10% (post-consumer = ½ pre-consumer) 1 point.
2. MR Credit 4.2 Recycled Content 20% (post-consumer = ½ pre-consumer) 1 point.

b. All aluminum extrusions are produced using prime-equivalent billet produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes. The USGBC classifies these extrusions as pre-consumer recycled material.

c. Manufacturing facility located within 500 miles of major components and materials, including aluminum extrusions.

d. The point of recovery and smelting of pre-consumer recycled material within 500 miles of the manufacturing facility.

2.02 MATERIALS

A. Aluminum Members.

1. Aluminum extrusions made 6061 or 6063 aluminum alloys.

2. Sheet and plate to conform to ASTM-B209.

3. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.

B. Fasteners.

1. All exposed fasteners will have a finish to match material being fastened.

2. 410 stainless steel or other non-corrosive metal.

3. Must be compatible with items being fastened.

2.03 FABRICATION

A. Factory Assembly.

1. Frame components from the same manufacturer.

2. Required size for frame units, shall be as indicated on the drawings.

3. All cut edges to be free of burs.

4. Welding of frames is not acceptable.

5. Maintain continuity of line and accurate relation of planes and angles.

B. Shop Fabrication

1. All shop fabrication to be completed in accordance with manufactures process work instructions.

2. Quality control to be performed before leaving each department.

2.04 FINISHES

A. Frame

1. Aluminum.

a. Anodizing.

1. Class 2 Anodizing, minimum 0.4 to 0.7 mils thick.

a. Color.

1. As indicated by architect from mfg's full range of color options.

b. Paint.

1. Aluminum.

a. KYNAR®.

1. Topcoat.

a. 70% KYNAR® or HYLAR® 5000 Coating, meets or exceeds all AAMA 2605 specifications, 2.5 to 4.0 wet mils, 1.00 to 1.20 dry mils.

2. Color.

a. Consult manufacturer.

2.05 ACCESSORIES

A. Glazing Materials.

1. Vinyl Glazing Bulb.

a. Color

1. Black.

2. Polycarbonate Gasket.

a. Thickness.

1. As indicated by architect.

b. Glazing Tape.

1. Installed on Polycarbonate Gasket.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas to receive doors.

B. Notify architect of conditions that would adversely affect installation or subsequent use.

C. Do no proceed with installation until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.03 ERECTION

A. Install doors in accordance with manufacturer's instructions.

B. Install doors plumb, level, square, true to line, and without warp or rack.

C. Anchor frames securely in place.

D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by architect.

E. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by architect.

F. Remove and replace damaged components that cannot be successfully repaired as determined by architect.

3.04 FIELD QUALITY CONTROL

A. Manufacture's Field Services.

1. Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

3.05 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.

3.06 CLEANING

A. Clean doors promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that would damage finish.

C. Clean once a year or as needed with a non-acidic or alkaline cleaning product.

D. Light scratches may be removed with a light abrasive, such as ground pumice.

3.07 PROTECTION

A. Protect installed doors to ensure that doors will be without damage or deterioration at time of substantial completion.

END OF SECTION 081216

SECTION 081743 – Rustic Wood Grain FRP/ Aluminum Hybrid Door

PART 1 GENERAL

1.01 SECTION INCLUDES

A. SL-19 Rustic Wood Grain FRP/ Aluminum Hybrid Door installed in Fiberglass Framing.

1.02 REFRENCES

A. ASTM-B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

B. ASTM-B221 – Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

C. ASTM-C518 – Standard test Method for Steady-State Thermal Transmission Properties by Means of Heat Flow Meter Apparatus.

D. ASTM-D256 – Standard Test Methods for Determining the Pendulum Impact Resistance of Plastics.

E. ASTM-D570 – Standard Test Method for Water Absorption of Plastics.

F. ASTM-D638 – Standard Test Method for Tensile Properties of Plastics.

G. ASTM-D790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

H. ASTM-D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics.

I. ASTM-D1622 – Standard Test Method for Apparent Density of Rigid Cellular Plastics.

J. ASTM-D1623 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.

K. ASTM-D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.

L. ASTM-D2583 – Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

M. ASTM-D5116 – Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/ Products.

N. ASTM-D6670 – Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/ Products.

1.03 SUBMITTALS

A. Must comply with Section 01 33 00 – Submittal Procedures.

B. Action Submittals/ Informational Submittals.

1. Product Data.

a. Submit manufacturer's product data sheets, catalog pages illustrating the products, description of materials, components, fabrication, finishes, installation instructions, and applicable test reports.

2. Shop Drawings.

a. Submit manufacturer's shop drawings, including elevations, sections, and details indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.

3. Samples.

a. Submit manufacturer's door sample composed of door face sheet, core, framing and finish.

b. Submit manufacturer's sample of standard colors for door face and frame.

4. Testing and Evaluation Reports.

a. Submit testing reports and evaluations provided by manufacturer conducted by and accredited independent testing agency certifying doors and frames comply with specified performance requirements listed in Section 2.04.

5. Manufacturer Reports.

a. Manufacturer's Project References.

1. Submit list of successfully completed projects including project name, location, name of architect, type, and quantity of doors manufactured.

C. Closeout Submittals.

1. Operation and Maintenance Manual.

a. Submit manufacturer's maintenance and cleaning instructions for doors and frames, including maintenance and operating instructions for hardware.

2. Warranty Documentation.

a. Submit manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

A. Manufacturer’s Qualifications.

1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years concurrent successful experience.

2. Door and frame components must be fabricated by same manufacturer.

3. Evidence of a documented complaint resolution quality management system.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Delivery.

1. Deliver materials to site in manufacturer’s original, unopened, containers and packaging.

2. Labels clearly identifying opening, door mark, and manufacturer.

B. Storage.

1. Store materials in a clean, dry area, indoors in accordance with manufacturer’s instructions.

C. Handling.

1. Protect materials and finish from damage during handling and installation.

1.06 WARRANTY

A. Warrant doors, frames, and factory installed hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.

B. Standard Period.

1. Ten years starting on date of shipment.

C. Limited lifetime

1. Covers failure of corner joinery, core deterioration, and delamination or bubbling of door skin and corrosion of all-fiberglass products while the door is in its specified application in its original installation.

D. Finish

1. Kynar painted aluminum: 10 years.

2. Painted SL-17, SL-18, SL-19, SL-19-1, and SL-20 face sheets: 5 years.

3. Painted AF-100, AF-200, AF-150 frames, AF-250 frames: 3 years.

4. Stained SL-18, SL-19, and SL-19-1 face sheets: 5 years.

5. Anodized, aluminum:10 years.

6. Thresholds do not have a finish warranty.

PART 2 PRODUCTS

2.01 FRP/ALUMINUM HYBRID DOORS

A. Manufacturer.

1. Special-Lite, Inc.

a. PO Box 6, Decatur, Michigan 49045.

b. Toll Free (800) 821-6531, Phone (269) 423-7068, Fax (800) 423-7610.

c. Web Site www.special-lite.com.

2.02 DESCRIPTION

A. Model.

1. SL-19 Rustic Wood Grain FRP/ Aluminum Hybrid Door with vertical panels.

B. Door Opening Size.

1. As listed on drawings.

C. Construction.

1. Door Thickness.

a. 1-3/4”.

2. Stiles & Rails.

a. Aluminum extrusions made from 6063 aluminum alloys with a minimum temper of T5.

b. Minimum 2-5/16” deep one-piece extrusion with have integral reglets to accept face sheet on both interior and exterior side of door which secure face sheet into place and permit flush appearance.

c. Screw or snap in place applied caps are not acceptable.

d. Top rails must have integral legs for interlocking continuous extruded aluminum flush cap.

3. Corners.

    a. Mitered.

    b. Secured with 3/8” diameter full-width steel tie rod through extruded splines top and bottom which are integral to standard tubular shaped rails.

    c. 1-1/4” x 1-1/4” x 3/16” 6061 aluminum angle reinforcement at corner to give strong, flat surface for locking hex nut to bear on.

    d. Weld, glue, or other methods of corner joinery are not acceptable.

4. Core.

    a. Poured-in-place polyurethane foam.

    b. Laid in foam cores are not acceptable.

5. Face Sheet.

    a. Interior and Exterior

        1. 0.120” thick, rustic wood grain custom color, stained FRP sheet.

        2. Optional painted finish consult manufacturer.

    b. Attachment of face sheet.

        1. Extruded stiles and rails to have integral reglets to accept face sheet on both interior and exterior side of door which secure face sheet into place and permit flush appearance.

        2. Use of glue to bond face sheet to core or extrusions is not acceptable.

6. Cutouts.

    a. Manufacture doors with cutouts for required vision lites, louvers, and panels.

7. Hardware.

    a. Pre-machine doors in accordance with templates from specified hardware manufacturers.

    b. Surface mounted closures will be reinforced for but not prepped or installed at factory.

    c. Factory install door hardware.

8. Reinforcements.

    a. Aluminum extrusions made from 6061 or 6063 aluminum alloys.

b. Sheet and plate to conform to ASTM-B209.

c. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.

d. Bars and tubes to meet ASTM-B221.

D. Sustainability Characteristics.

1. LEED Declaration.

a. Entrance Products contribute to point calculations for the following credits:

1. MR Credit 4.1 Recycled Content 10% (post-consumer = ½ pre-consumer) 1 point.

2. MR Credit 4.2 Recycled Content 20% (post-consumer = ½ pre-consumer) 1 point.

b. All aluminum extrusions are produced using prime-equivalent billet produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes. The USGBC classifies these extrusions as pre-consumer recycled material.

c. Manufacturing facility located within 500 miles of major components and materials, including aluminum extrusions.

d. The point of recovery and smelting of pre-consumer recycled material within 500 miles of the manufacturing facility.

2.03 FRAMING

A. Framing

1. AF-150.

a. Jamb Depth.

1. As indicated on drawings.

b. Materials.

1. See 2.05.A.

c. Perimeter Frame Members.

1. ¼” thick pultruded fiberglass open throat with return.
2. Factory fabricated.
3. 2” or 4” face available for frame headers.

d. Transoms and Sidelites.

1. Same as perimeter frame members.
2. Removable stop for ¼”, 5/8” or 1” glass or panels.

e. Integral Door Stops.

1. 5/8” x 2-1/4”.

f. Frame Assembly.

1. Standard knock down.

2. Optional chemically welded consult factory for details.

g. Frame Member to Member Connections.

1. Corners mitered with 4” x 4” x 3/8” pultruded FRP angle reinforcement with interlocking pultruded FRP brackets.

2. All member-to-member connections chemically welded at factory.

3. Provide hairline butt joint appearance.

h. Reinforcements.

1. Standard.

a. ¼” thick aluminum chemically welded to frame at all hinge, strike, and closer locations.

i. Hardware

1. Pre-machine and reinforce frame members for hardware in accordance with manufacturer's standards and door hardware schedule.

2. Surface mounted closures will be reinforced for but not prepped or installed at factory.

j. Anchors:

1. Masonry.

a. Existing concrete or block punch and dimple.
b. Sill anchor.
c. Concealed existing masonry anchor.
d. Fiberglass masonry t anchor.

2. Drywall.

a. Standard jamb anchor tuck.
b. KD wrap.
c. Optional punch and dimple tuck with either metal or wood studs.

2.04 MATERIALS

A. Aluminum Members.

1. Aluminum extrusions made 6061 or 6063 aluminum alloys.

2. Sheet and plate to conform to ASTM-B209.

3. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.

B. Fiberglass.

1. See 2.02.C.5.

C. Fasteners.

1. All exposed fasteners will have a finish to match material being fastened.

2. 410 stainless steel or other non-corrosive metal.

3. Must be compatible with items being fastened.

2.05 FABRICATION

A. Factory Assembly.

1. Door and frame components from the same manufacturer.

2. Required size for door and frame units, shall be as indicated on the drawings.

3. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.

4. All cut edges to be free of burs.

5. Welding of doors or frames is not acceptable.

6. Maintain continuity of line and accurate relation of planes and angles.

7. Secure attachments and support at mechanical joints with hairline fit at contact surfaces.

B. Shop Fabrication

1. All shop fabrication to be completed in accordance with manufactures process work instructions.

2. Quality control to be performed before leaving each department.

2.06 FINISHES

A. Door.

1. Aluminum.

a. Anodizing.

1. Class 1 Anodizing, minimum 0.7 mils thick.

a. Color.

1. As indicated by architect from mfg's full range of color options.

b. Powder Coat.

1. Special-Lite's® Wood Expressions™.

a. Color.

1. As indicated by architect from mfg's full range of color options.

b. Durability against humidity, warping and cracking.

c. Resists fading from UV rays.

d. Natural, high-definition grains with the look and feel of real wood.

e. Durable powder coat protects against scratching.

2. FRP Face Sheets

a. Stained.

1. Color.

a. As indicated by architect from mfg's full range of color options.

2. Custom colors available consult manufacturer.

B. Frame

a. Powder Coat.

1. Special-Lite's® Wood Expressions™.

a. Color.

1. As indicated by architect from mfg's full range of color options and custom colors.

b. Durability against humidity, warping and cracking.

c. Resists fading from UV rays.

d. Natural, high-definition grains with the look and feel of real wood.

e. Durable powder coat protects against scratching.

2. Fiberglass.

a. Two-part aliphatic polyurethane paint.

1. Color.

a. As indicated by architect from mfg's full range of color options.

2. Custom colors available consult manufacturer.

3. Unique, high-solids, high-build, multifunctional coating.

4. Low VOC, high-gloss, self-priming coating.

5. Impact Resistance, ASTM-D2794: 140 in·lbs (direct), 50 in·lbs (reverse) @ 5 mils thickness.

6. Taber Abrasion, 1 kg load, 1000 cycles, CS-17 wheel: 60.2 mg.

7. Graffiti cleaning with Amerase with gloss retention: 100 cycles.

8. Chemical Resistance.

a. Excellent.

1. Acidic.

2. Alkaline.

3. Salt Solutions.

4. Seawater.

5. Fresh Water.

6. Petroleum Products.

2.07 ACCESSORIES

A. Vision Lites.

1. Factory Glazing.

a. Model.

1. FL Standard.

b. Glazing Thickness.

1. As indicated by architect.

B. Hardware.

1. Pre-machine doors in accordance with templates from specified hardware manufactures and hardware schedule.

2. Factory install hardware.

3. Hardware Schedule.

    a. As specified on drawings unless indicate din this section.

        1. Hinges.

            a. SL-11HD.

        2. Concealed adjustable bottom brush.

            a. SL-301.

                1. Not for use with CVR type hardware.

        3. Concealed adjustable meeting stile astragal.

            a. Adjustable astragal by Special-Lite.

        4. Thresholds.

            a. Aluminum threshold by Special-Lite.

C. Architectural Panels.

1. FRP Panels.

    a. SL-39 with vertical panels to match the SL-19 doors.

        1. Size, as indicated on drawings.

        2. Thickness.

            a. 1".

        3. Face Sheet.

            a. Material.

                1. Standard exterior and interior face, 0.120” thick, rustic wood grain, painted FRP.

                2. Color.

        4. Performance.

            a. Face Sheet.

                1. See 2.04.A.

            b. 1” Thick Panel.

1. Polyurethane foam core.
2. Impervious to water.

c. 1-3/4” Thick Panel.

1. Wood or aluminum frame perimeter.
2. Poured-in-place Polyurethane Foam Core.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas to receive doors.

B. Notify architect of conditions that would adversely affect installation or subsequent use.

C. Do no proceed with installation until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.03 ERECTION

A. Install doors in accordance with manufacturer’s instructions.

B. Install doors plumb, level, square, true to line, and without warp or rack.

C. Anchor frames securely in place.

D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by architect.

E. Set thresholds in bed of mastic and back seal.

F. Install exterior doors to be weathertight in closed position.

G. Repair minor damages to finish in accordance with manufacturer’s instructions and as approved by architect.

H. Remove and replace damaged components that cannot be successfully repaired as determined by architect.

3.04 FIELD QUALITY CONTROL

A. Manufacture’s Field Services.

1. Manufacturer’s representative shall provide technical assistance and guidance for installation of doors.

3.05 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.

3.06 CLEANING

A. Clean doors promptly after installation in accordance with manufacturer’s instructions.

B. Do not use harsh cleaning materials or methods that would damage finish.

3.07 PROTECTION

A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

END OF SECTION 081743

SECTION 081744 – AF Series Fire-Rated FRP Doors and Frames

PART 1 GENERAL

1.01 SECTION INCLUDES

A. AF-200FR Smooth Fire-Rated Fiberglass Door installed in Fire-Rated Fiberglass Framing.

1.02 REFRENCES

A. ASTM-D256 – Standard Test Methods for Determining the Pendulum Impact Resistance of Plastics.

B. ASTM-D570 – Standard Test Method for Water Absorption of Plastics.

C. ASTM-D638 – Standard Test Method for Tensile Properties of Plastics.

D. ASTM-D790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

E. ASTM-D2583 – Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

F. ASTM D2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

G. ASTM-E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

H. CAN / ULC S104 – Standard Method for Fire Tests of Door Assemblies.

I. UL 10B – Standard for Fire Tests of Door Assemblies.

J. UL 10C – Standard for Positive Pressure Fire Tests of Door Assemblies.

K. NFPA 80 – Standard for Fire Doors and Other Opening Protectives.

L. NFPA 252 – Fire Tests of Door Assemblies.

1.03 SUBMITTALS

A. Must comply with Section 01 33 00 – Submittal Procedures.

B. Action Submittals/ Informational Submittals.

1. Product Data.

a. Submit manufacturer's product data sheets, catalog pages illustrating the products, description of materials, components, fabrication, finishes, installation instructions, and applicable test reports.

2. Shop Drawings.

a. Submit manufacturer's shop drawings, including elevations, sections, and details indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.

3. Samples.

a. Submit manufacturer's door sample composed of door face sheet, core, framing and finish.
b. Submit manufacturer's sample of standard colors for door face and frame.

4. Testing and Evaluation Reports.

a. Submit testing reports and evaluations provided by manufacturer conducted by and accredited independent testing agency certifying doors and frames comply with specified performance requirements listed in Section 2.01 C.

5. Manufacturer Reports.

a. Manufacturer's Project References.

1. Submit list of successfully completed projects including project name, location, name of architect, type, and quantity of doors manufactured.

C. Closeout Submittals.

1. Operation and Maintenance Manual.

a. Submit manufacturer's maintenance and cleaning instructions for doors and frames, including maintenance and operating instructions for hardware.

2. Warranty Documentation.

a. Submit manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

A. Manufacturer's Qualifications.

1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years concurrent successful experience.

2. Door and frame components must be fabricated by same manufacturer.

3. Evidence of a documented complaint resolution quality management system.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Delivery.

1. Deliver materials to site in manufacturer's original, unopened, containers and packaging.

2. Labels clearly identifying opening, door mark, and manufacturer.

B. Storage.

1. Store materials in a clean, dry area, indoors in accordance with manufacturer's instructions.

C. Handling.

1. Protect materials and finish from damage during handling and installation.

1.06 WARRANTY

A. Warrant doors, frames, and factory installed hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.

B. Standard Period.

1. Ten years starting on date of shipment.

C. Limited lifetime

1. Covers failure of corner joinery, core deterioration, and delamination or bubbling of door skin and corrosion of all-fiberglass products while the door is in its specified application in its original installation.

D. Finish

1. Painted AF-150 frames, AF-250 frames: 3 years.

2. Painted FR doors: 3 years.

PART 2 PRODUCTS

2.01 FRP/ALUMINUM HYBRID DOORS

A. Manufacturer.

1. Special-Lite, Inc.

    a. PO Box 6, Decatur, Michigan 49045.

    b. Toll Free (800) 821-6531, Phone (269) 423-7068, Fax (800) 423-7610.

    c. Web Site www.special-lite.com.

2.02 DESCRIPTION

A. AF-200FR Smooth Fire-Rated Fiberglass Door.

1. Door Opening Size.

    a. 4’0” x 8’0” maximum size single swing.

    b. 8’0” x 8’0” maximum size standard pairs.

2. Construction.

    a. Door Thickness.

        1. 1-3/4”.

    b. Stiles.

        1. Single Swing.

            a. Hinge and lock stile, 2” minimum tectonite with Palusol P-100 Intumescent and 0.090” thick fiberglass edge painted to match door face.

        2. Standard Pairs.

            a. Hinge stile, 2” minimum tectonite with Palusol P-100 Intumescent and 0.090” thick fiberglass edge painted to match door face.
            b. Meeting edge, 3” minimum with Palusol P-100 Intumescent and 0.090” thick fiberglass edge painted to match door face.

    c. Rails.

        1. Top rail, 6” minimum tectonite with Palusol P-100 Intumescent and 0.090” thick fiberglass edge painted to match door face.
        2. Bottom rail, 4” minimum for single swing, 4-1/2” minimum for pairs tectonite with 0.090” thick fiberglass edge painted to match door face.

    d. Core.

        1. WSCP-412 proprietary mineral core.
        2. 1-1/2” nominal thickness.
        3. 18 pcf minimum density.

4. 5 pieces maximum for single swing and 3 pieces per leaf maximum for standard pairs.

e. Face Sheet.

1. 0.090” thick, smooth fiberglass painted with two-part aliphatic polyurethane coating.
2. Bonded to core with adhesive according to manufactures listing.

f. Cutouts.

1. Manufacture doors with cutouts for required vision lites per the manufactures listing.

g. Hardware.

1. Pre-machine doors in accordance with templates from specified hardware manufacturers.
2. Field apply factory supplied gaskets and seals, full width intumescent and smoke seal required at top of door, smoke seals required on both jambs.

2.03 FRAMING

A. Framing

1. FR-Series Framing

a. Materials.

1. ¼” thick, solid, pultruded, FRP profiles.
2. No corrosive components or reinforcements.
3. Solid tectonite filler.
4. No steel or aluminum filler is allowed.

b. Perimeter Frame Members.

1. Factory fabricated.
2. Integral 5/8” x 2-1/4” doorstop.
3. Mitered with 4” x 4” x 3/8” pultruded FRP angle reinforcement with interlocking pultruded FRP brackets.
4. 5-3/4” or 6-3/4” jamb depth.
5. 2” face on jambs.
6. 2” or 4” face on header.
7. Knocked down for field assembly.

c. Anchors

1. Factory furnished as specified by drawings.
2. Drywall tuck available.

2. Any category C standard frame.

3. Any category C proprietary frame.

2.04 MATERIALS

A. Fiberglass.

1. See 2.02.A.2.e.

2. See 2.02.B.2.e.

3. See 2.02.C.2.e

B. Fasteners.

1. All exposed fasteners will have a finish to match material being fastened.

2. 410 stainless steel or other non-corrosive metal.

3. Must be compatible with items being fastened.

2.05 FABRICATION

A. Factory Assembly.

1. Door and frame components from the same manufacturer.

2. Required size for door and frame units, shall be as indicated on the drawings.

3. Maintain continuity of line and accurate relation of planes and angles.

4. Secure attachments and support at mechanical joints with hairline fit at contact surfaces.

B. Shop Fabrication

1. All shop fabrication to be completed in accordance with manufactures process work instructions.

2. Quality control to be performed before leaving each department.

2.06 FINISHES

A. Door.

1. FRP Face Sheets

a. Painted.

1. 2-part aliphatic polyurethane low VOC industrial coating, 5 mills thick, and gloss finish.
2. Impact Resistance ASTM D2794 @ 5 mills thick, 140 in·lbs.
3. Taber Abrasion, 1 kg load, 1000 cycles, CS-17 wheels, 60.2 mg.
4. Color.

a. As indicated by architect from mfg's full range of color options.

5. Custom colors available consult manufacturer.

B. Frame

1. Painted.

1. Color.

a. As indicated by architect from mfg's full range of color options.

2. Custom colors available consult manufacturer.

2.07 ACCESSORIES

A. Vision Lites.

1. Factory Glazing.

2. Stainless Steel vison kit with 3/16" NGP Firelite NT, clear.

3. Size as indicated on the drawings.

4. 60 to 90-minute rated doors.

a. Maximum 704 in² in listed and labeled kit for positive pressure applications using listed glazing. Minimum 5" from top or edge of door to lite cutout and minimum 5" from latch cutout to lite cutout.

b. Maximum 32" high.

c. Maximum 22" wide.

d. Multiple lights are allowed when the sum of the areas does not exceed the tested area with the maximum length and width limitations.

5. 20 to 45-minute rate doors.

a. Listed metal vison frames and listed glazing are limited to a maximum clear view area of 616 in² per lite with a maximum of 1232 in². Lite kits exceeding 100 in² void the temperature requirements per NFPA 80 unless temperature resistive glazing is used.

B. Louvers.

1. Listed and labeled louvers.

2. Maximum 100 in².

3. Must be below 40" from bottom of door.

C. Hardware.

1. All hardware must be listed and labeled for use in mineral core fire doors.

2. Pre-machine doors in accordance with templates from specified hardware manufactures and hardware schedule.

3. Factory install hardware.

4. EPT Units

a. Allowed between top and middle hinge locations.

b. 1/16” maximum clearance per side when installing EPT.

c. Limited to maximum 60 min positive and neutral pressure applications.

d. Intumescent caulk or strips are required on bottom, top, and side of EPT device.

5. Hardware Schedule.

a. As specified on drawings unless indicated in this section.

1. Hinges Per NFPA 80, Table 6.4.3.1.

a. SL-11HD.

2. Locking Hardware

a. Single point latching on singles, 4-point latching for pairs.
b. Must be listed for use with mineral-core fire doors.
c. 3-point latching for 60 min and lower pairs with rated astragal.
d. Surface vertical rod less bottom rod allowed on 45-min and lower pairs and singles with door to door or door to floor fire pin installed in each leaf.
e. Rim x Rim with listed mullion allowed for 90-min pairs.

D. Wire Raceway

1. Single swing applications only.

2. 3/8” x 3/8” bore.

3. Maximum height of 40” from bottom edge of door.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas to receive doors.

B. Notify architect of conditions that would adversely affect installation or subsequent use.

C. Do no proceed with installation until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.03 ERECTION

A. Install doors in accordance with manufacturer's instructions.

B. Install doors plumb, level, square, true to line, and without warp or rack.

C. Anchor frames securely in place.

D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by architect.

E. Set thresholds in bed of mastic and back seal.

F. Install exterior doors to be weathertight in closed position.

G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by architect.

H. Remove and replace damaged components that cannot be successfully repaired as determined by architect.

3.04 FIELD QUALITY CONTROL

A. Manufacture's Field Services.

1. Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

3.05 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.

3.06 CLEANING

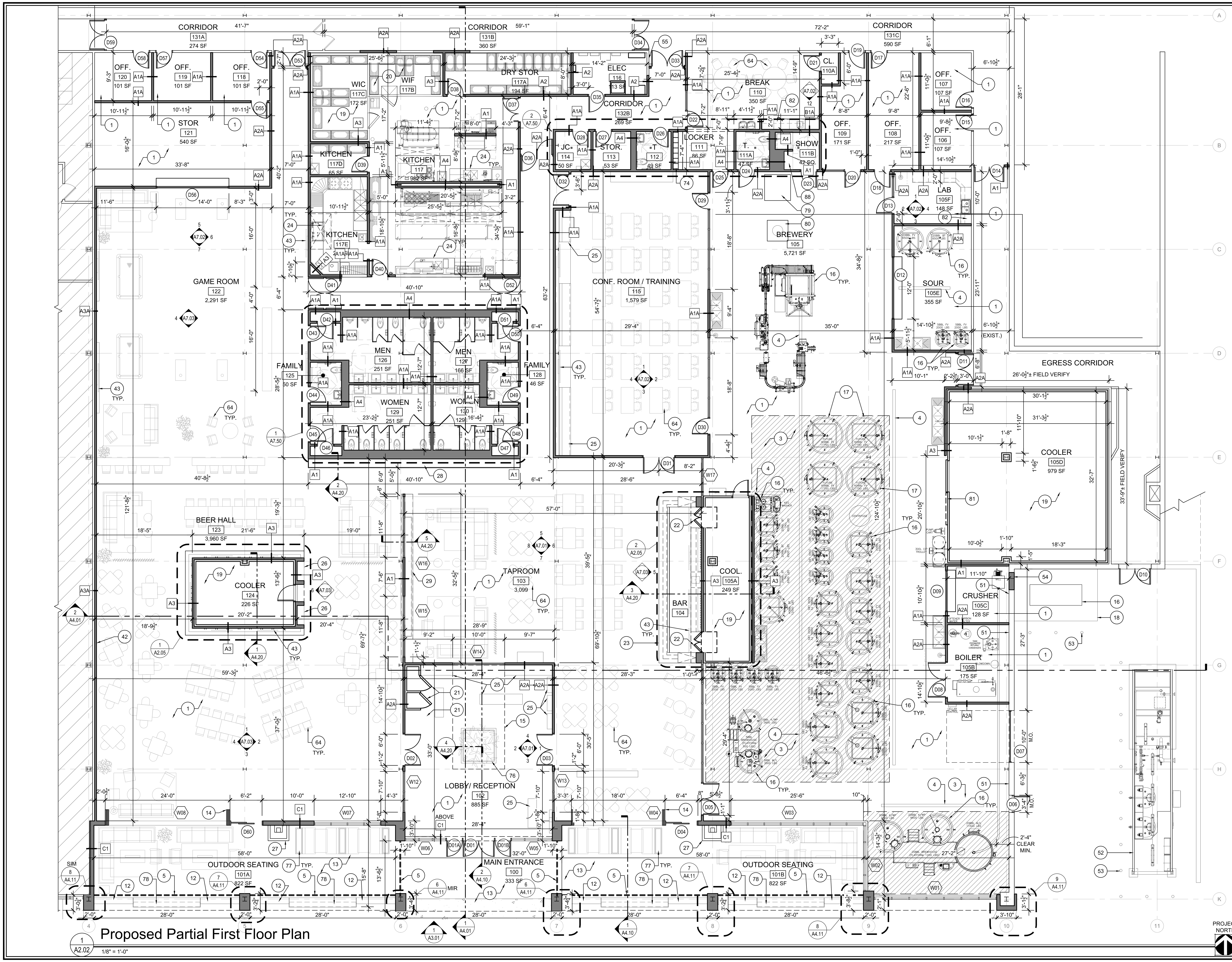
A. Clean doors promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that would damage finish.

3.07 PROTECTION

A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

END OF SECTION 081744


CORRIDOR
131A
274 SF
CORRIDOR
131B
360 SF
CORRIDOR
131C
590 SF
OFF.
120
OFF.
119
OFF.
118
STOR
121
540 SF
WIC
117C
WIF
117B
DRY STOR
117A
194 SF
ELEC
116
CORRIDOR
132B
269 SF
BREAK
110
350 SF
CL.
110A
OFF.
107
107 SF
OFF.
106
107 SF
OFF.
109
171 SF
OFF.
108
217 SF
KITCHEN
117D
65 SF
KITCHEN
117
982 SF
KITCHEN
117E
JC
114
50 SF
STOR.
113
53 SF
T
112
49 SF
LOCKER
111
86 SF
T.
111A
47 SF
SHOW
111B
42 SQ
LAB
105F
148 SF
BREWERY
105
5,721 SF
SOUR
105E
355 SF
GAME ROOM
122
2,291 SF
CONF. ROOM / TRAINING
115
1,579 SF
FAMILY
125
50 SF
MEN
126
251 SF
MEN
127
166 SF
FAMILY
128
46 SF
WOMEN
129
251 SF
WOMEN
130
129 SF
EGRESS CORRIDOR
COOLER
105D
979 SF
BEER HALL
123
3,960 SF
COOLER
124
226 SF
TAPROOM
103
3,099
COOL.
105A
249 SF
BAR
104
CRUSHER
105C
128 SF
BOILER
105B
175 SF
LOBBY/ RECEPTION
102
885 SF
MAIN ENTRANCE
100
333 SF
OUTDOOR SEATING
101A
822 SF
OUTDOOR SEATING
101B
822 SF
PROJECT NORTH

Proposed Partial First Floor Plan

1/8" = 1'-0"

NOTE: SEE FURNISHING PLAN **A9.10** FOR MILLWORK ITEMS

NOTE: REFER TO SHEET **A2.00** FOR CONSTRUCTION KEY NOTES

Date	10/15/21
Checked	CTB
Drawn	CC

MATTHEW T. MILNAMOW, R.A.

Title REGISTERED ARCHITECT License No. 32407

Revisions:

1. PERMIT SET 10/15/21
2. BID ADDENDUM #2 11/11/21

LAN ASSOCIATES

engineering • planning • architecture • surveying

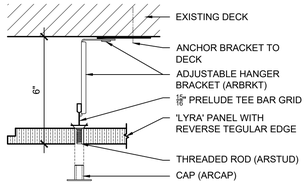
252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)615-0350

PROPOSED PARTIAL FIRST FLOOR PLAN

ASPIRE BREWING TAP ROOM & BREWERY
FOR SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE LOWER LEVEL
TOWN OF WALLKILL, NY 10941

Job No. 4.1552.01

A2.02



1 A5.00 — ACT Support Detail

3" = 1'-0"

Symbol Legend

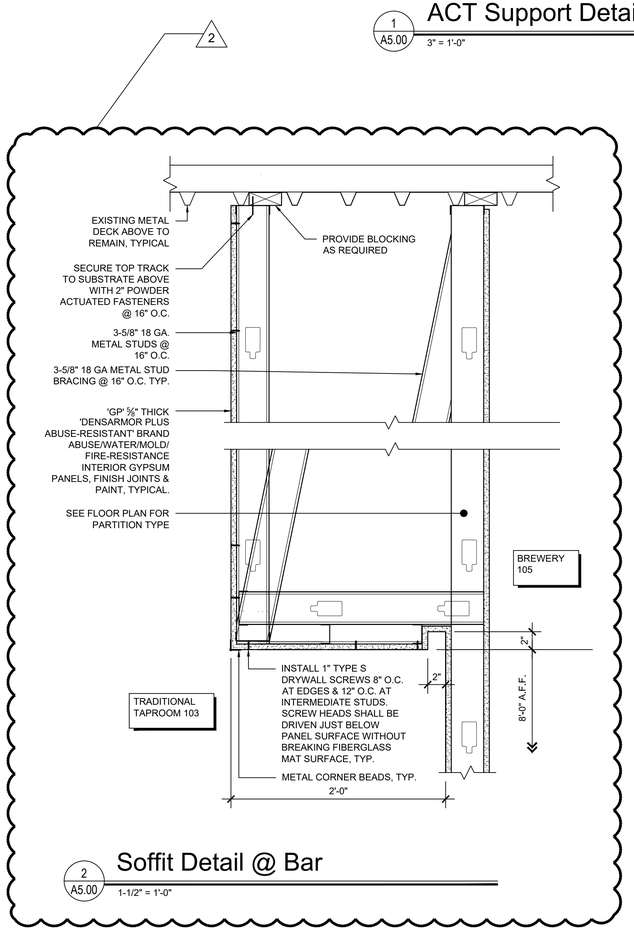
SYMBOL	DESCRIPTION
0'-0"	DATUM: FINISH CEILING HEIGHT ABOVE FINISH FLOOR
CT-#	CEILING TYPE (REFER TO CEILING TYPES SCHEDULE)
	LIGHTING FIXTURES - REFER TO ELECTRICAL PLANS FOR EXACT LIGHTING FIXTURE LOCATIONS. CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR CEILING DIFFUSER LOCATIONS.
C PROJ	CEILING MOUNTED EQUIPMENT - REFER TO ELECTRICAL PLANS FOR EXACT FIXTURE LOCATIONS. CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR CEILING DIFFUSER LOCATIONS. MECHANICAL DIFFUSERS - REFER TO MECHANICAL PLANS FOR EXACT CEILING DIFFUSER LOCATIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR LIGHT FIXTURE LOCATIONS.

Typical Ceiling Notes

1. PENETRATIONS THROUGH CEILINGS ARE TO BE PROTECTED PER RATED DESCRIPTIONS. REFER TO FIRE RESISTANT RATED ASSEMBLIES WALL AND CEILING TYPES.
2. ALL ACCESS PANELS, HATCHES/LADDERS, GYPSUM BOARD SOFFITS, BULKHEAD, HVAC GRILLES AND REGISTERS, SHALL BE PAINTED TO MATCH CEILING FINISHES.
3. SUSPENDED ACOUSTIC TILE CEILINGS SHALL BE CENTERED IN SPACE IN BOTH DIRECTIONS TO MINIMIZE WASTE AS REQUIRED. UNLESS OTHERWISE INDICATED, FIELD VERIFY.
4. ALL AREAS NOT GRIDDED AS CEILING TILE SHALL BE OPEN TO ABOVE UNLESS OTHERWISE NOTED.
5. TENT ALL LIGHT FIXTURES IN RATED FLOOR/CEILING, ROOF/CEILING ASSEMBLIES AS REQUIRED. REFER TO FIRE RESISTANT RATED ASSEMBLIES DRAWING FOR ADDITIONAL INFORMATION.
6. ALL CONTRACTORS (I.E. MECHANICAL, ELECTRICAL, PLUMBING) ARE REQUIRED TO COORDINATE THEIR WORK WITH INDIVIDUAL CEILING FINISHES. ALL DISTURBED AREAS RESULTING FROM CONTRACTORS OPERATIONS SHALL BE PATCHED AND DAMAGED AREAS AS A RESULT OF CONTRACTORS OPERATIONS SHALL BE PATCHED AND REPAIRED TO MATCH.
7. FIELD VERIFY ALL DIMENSIONS AND CLEARANCES. COORDINATE INSTALLATION OF LIGHTING, EQUIPMENT, MECHANICAL DUCTWORK, ETC. TO ENSURE PROPER INSTALLATION.
8. ALL COLORS AND PATTERNS TO BE SELECTED BY OWNER, TYPICAL.
9. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY ACCESSORIES INCLUDING PERIMETER MOLDINGS, FASTENERS, SUPPORT WIRES, TRIM, ETC. FOR A COMPLETE INSTALLATION.
10. ALL LIGHTING FIXTURES SHOWN ON REFLECTED CEILING PLAN ARE SHOWN FOR DIAGRAMMATIC PURPOSES ONLY, REFER TO ELECTRICAL LIGHTING PLAN FOR ACTUAL LOCATIONS.
11. AT LOCATIONS WHERE NEW CEILING ADJOINS, ABUTS, OR EXTENDS AN EXISTING CEILING, NEW CEILING GRID SHALL MATCH THAT OF EXISTING.

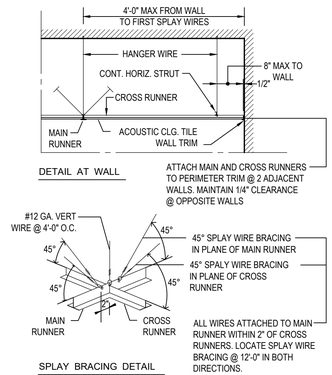
Ceiling Types

MARK	DESCRIPTION	SYMBOL
CT-1	"ARMSTRONG" 2'x2'x9/16" "ULTIMA" BEVELED TEGULAR ACOUSTIC CEILING TILE W/ ARMSTRONG "SUPRAFINE" 9/16" EXPOSED TEE GRID	
CT-2	"GP" 5/8" THICK "DENSARMOR PLUS ABUSE-RESISTANT" BRAND ABUSE/WATER/MOLD/FIRE-RESISTANCE INTERIOR PANELS." FINISH JOINTS AND PAINT, TYP. USE DRYWALL SUSPENSION GRID UNO.	
CT-3	PAINT ENTIRE EXPOSED CEILING AREA INCLUDING ALL STRUCTURE AND EXPOSED PIPING AND WIRING WITH WATER RESISTANT PAINT SUITABLE FOR PROTECTING STEEL IN WET LOCATIONS. COLOR TO BE SELECTED BY OWNER / ARCHITECT	
CT-4	FIBER CEMENT PANELS SHALL BE "LARGO CARAT", 8MM THICK WITH EXPOSED COLOR-MATCHED FASTEERS, AS MANUFACTURED BY "SWISSPEARL GROUP" (917) 584-7538. WIDTH OF SOFFIT ELEMENTS & LOCATION OF SEAMS TO BE COORDINATED WITH ARCHITECT PRIOR TO FABRICATION OF SOFFIT.	
CT-5	CUSTOM 36" x 36" x 6" DEEP "CUBES" WOOD TRELLIS BY "RULON" SUSPENDED FROM STRUCTURE ABOVE. FINISH TO BE SELECTED BY OWNER / ARCHITECT. SEE RCP FOR LAYOUT DIRECTION	
CT-6	ARMSTRONG 2'x2'x5/8" "KITCHEN ZONE" SQUARE LAY-IN ACOUSTIC CEILING TILE W/ ARMSTRONG "PRELUDE XL" 15/16" EXPOSED TEE GRID	
CT-7	RESERVED	
CT-8	"ACOUSTIBUILT" SEAMLESS ACOUSTICAL CEILING SYSTEM BY "ARMSTRONG". USE DRYWALL SUSPENSION GRID UON	
CT-9	'LYRA PB CAPZ' PANELS AND SUSPENSION SYSTEM BY 'ARMSTRONG'. CUSTOM COLOR PANELS AND HARDWARE COLOR TO BE SELECTED FROM MANUFACTURER'S FULL RANGE. COORDINATE CUT-OUT LOCATIONS FOR LIGHT FIXTURES, SUSPENSION LOCATION FOR DUCTWORK, ETC. COORDINATE SUPPORT LOCATIONS PER MANUFACTURERS INSTRUCTIONS. SEE TYPICAL INSTALLATION DETAIL **1/A5.00**. SEE TYPICAL LAYOUT **3/A5.02**	
OTA	OPEN TO ABOVE- PAINT ALL EXPOSED CEILING STRUCTURE, TYP.	



2 A5.00 — Soffit Detail @ Bar

1-1/2" = 1'-0"

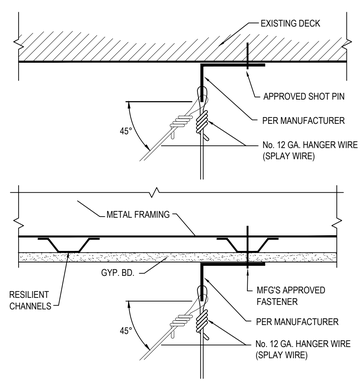


DETAIL AT WALL

SPLAY BRACING DETAIL

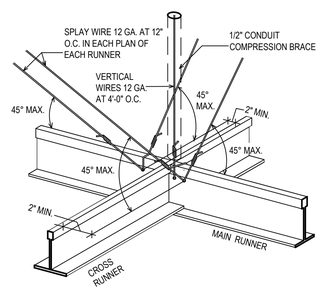
A A5.00 — Typ. Seismic Bracing Detail

3/8" = 1'-0" — SUSPENSION CEILING SYSTEM



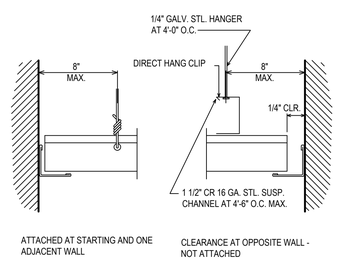
B A5.00 — Typ. Hanger Wire Detail

1-1/2" = 1'-0" — SUSPENSION CEILING SYSTEM



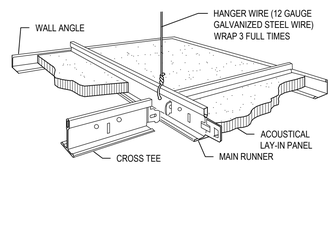
C A5.00 — Typ. Susp. Ceiling Detail

1-1/2" = 1'-0" — SUSPENSION CEILING SYSTEM



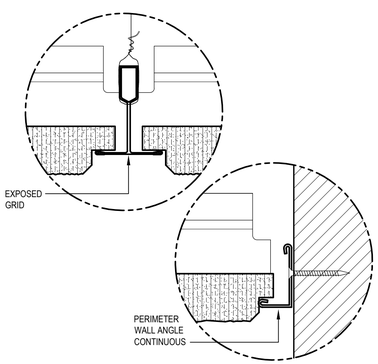
D A5.00 — Typ. Clng. Moulding Detail

1-1/2" = 1'-0" — SUSPENSION CEILING SYSTEM



E A5.00 — Typ. Susp. Ceiling System

1-1/2" = 1'-0" — ACOUSTIC PANEL SUSP. SYSTEM



F A5.00 — Typ. Susp. System Profiles

1-1/2" = 1'-0" — ACOUSTIC PANEL SUSP. SYSTEM

Date	10/15/21
Checked	CTB
Drawn	CC

MATTHEW T. MILNAMOW, R.A.
License No. 32407
Title REGISTERED ARCHITECT

Revisions:

1 PERMIT SET 10/15/21

2 BID ADDENDUM #2 11/11/21

LAN ASSOCIATES
engineering • planning • architecture • surveying
252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)615-0350

CEILING TYPES AND DETAILS

ASPIRE BREWING TAP ROOM & BREWERY
FOR SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE LOWER LEVEL
TOWN OF WALLKILL, NY 10941

Job No. 4.1552.01

File No. 4155201A500

A5.00

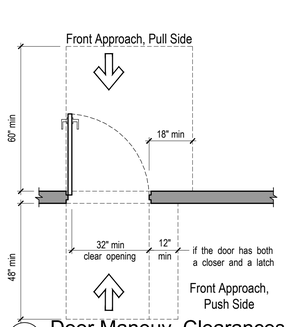
DOOR SCHEDULE

DOOR NO.	DOOR TYPE	ROOM NAME/ NUMBER	DOOR							FRAME			SILL	HARDWARE (SEE A6.04 & A6.05)			NOTES
			ACTION	MATERIAL	FIRE RATING	DOOR FINISH	DOOR SIZE		VISION PANEL	DETAIL NO.			DETAIL NO.	HARDWARE SET	CLOSER	PANIC	
							WIDTH	HEIGHT		MAT.	HEAD	JAMB					
FIRST FLOOR																	
D01	A	102 LOBBY/ RECEPTION	DOUBLE SWING	ALUM.	-	FACTORY FINISH	6'-0"	9'-0"	■	MTL	1/A6.06	2 & 3 /A6.06	4/A6.06	CR01	■	■	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.
D01A	A	102 LOBBY/ RECEPTION	SINGLE SWING	ALUM.	-	FACTORY FINISH	3'-0"	9'-0"	■	MTL	1/A6.06	2 & 3 /A6.06	4/A6.06	01A	■	■	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.
D01B	A	102 LOBBY/ RECEPTION	SINGLE SWING	ALUM.	-	FACTORY FINISH	3'-0"	9'-0"	■	MTL	1/A6.06	2 & 3 /A6.06	4/A6.06	01	■	■	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.
D02	B	102 LOBBY/ RECEPTION	PAIR SINGLE SWING	WOOD	45 MIN	STAIN	6'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	01A.1	■	■	
D03	B(MIR)	102 LOBBY/ RECEPTION	PAIR SINGLE SWING	WOOD	45 MIN	STAIN	6'-0"	9'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	01A.1	■	■	
D04	C	103 TRADITIONAL TAPROOM	SLIDING	ALUM.	-	FACTORY FINISH	6'-0"	7'-0"	■	MTL	11 /A6.06	12 /A6.06	4 /A6.11	SL			BASIS OF DESIGN: "DURA-GLIDE 2000" BY "STANLEY" KYNAR FINISH, COLOR TO BE SELECTED BY ARCH. W/ SPECIAL LITE SL-450TB TRANSOM
2 D05	D	105 BREWERY	PAIR SINGLE SWING	FRP/ ALUM.	-	STAIN	6'-0"	7'-0"	■	FIBER GLASS	15,20 /A6.06	16,21 /A6.06	17, 22 /A6.06	07A			BASIS OF DESIGN: "SL-19" BY "SPECIAL-LITE" RUSTIC WOODGRAIN FRP/ALUM. HYBRID DOOR INSTALLED IN "AF-150" FIBERGLASS FRAMING. 1" THICK "SL-39" PANEL TO MATCH DOOR IN TRANSOM. SEE SPEC.
D06	E	105 BREWERY	SINGLE SWING	ALUM.	-	FACTORY FINISH	3'-0"	7'-0"	-	EXIST.	25 /A6.06	26 /A6.06	27 /A6.06	CR01.1	■	■	BASIS OF DESIGN: "SL-16" BY "SPECIAL-LITE"
D07	F	105 BREWERY	OVERHEAD SECTIONAL	ALUM.	-	FACTORY FINISH	10'-0"	12'-0"	-	EXIST.	1/A6.07	2/A6.07	-	RU			INSULATED EXTERIOR OVERHEAD SECTIONAL DOOR
2 D08	G	105B BOILER	PAIR SINGLE SWING	FIBER GLASS	-	PAINT	6'-8"	7'-0"	-	FIBER GLASS	6/A6.06	7/A6.06	9/A6.06	01A.5	■	■	BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D09	L	105C CRUSHER	OVERHEAD COILING	HM	-	PAINT	8'-0"	12'-0"	-	MTL	5/A6.07	6/A6.07	9/A6.06	RU			
2 D10	H	EGRESS COPRRIDOR	PAIR SINGLE SWING	ALUM.	-	FACTORY FINISH	6'-0"	7'-0"	-	EXIST.	25 /A6.06	26 /A6.06	27 /A6.06	01A.2	■	■	BASIS OF DESIGN: "SL-16" BY "SPECIAL-LITE"
D11	H	105 BREWERY	SINGLE SWING	FIBER GLASS	45 MIN	PAINT	3'-0"	7'-0"	-	FIBER GLASS	6/A6.06	7/A6.06	9/A6.06	01A.3	■	■	BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D12	L	105E SOUR	OVERHEAD COILING		-	FACTORY FINISH	12'-0"	12'-0"	-	N/A	5/A6.07	6/A6.07	-	RU			
2 D13	S	105F LAB	SINGLE SWING	FIBER GLASS	45 MIN	FACTORY FINISH	3'-0"	7'-0"	■	FIBER GLASS	6/A6.06	7/A6.06	-	02.2			BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D14	H	EGRESS CORRIDOR	PAIR DOUBLE SWING	HM	-	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	01D	■	■	
D15	J	106 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	05	■		
D16	J	107 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	05	■		
D17	J	108 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	05	■		
2 D18	J	108 OFFICE	SINGLE SWING	FIBER GLASS	45 MIN	PAINT	3'-0"	7'-0"	■	FIBER GLASS	6/A6.06	7/A6.06	10 /A6.06	05.1	■		BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D19	J	109 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	05	■		
2 D20	J	109 OFFICE	SINGLE SWING	FIBER GLASS	45 MIN	PAINT	3'-0"	7'-0"	■	FIBER GLASS	6/A6.06	7/A6.06	10 /A6.06	05.2	■		BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D21	K	110A CLOSET	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	02.1			
D22	J	110 BREAK ROOM	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	10 /A6.06	02.3	■		
2 D23	K	111B SHOWER	SINGLE SWING	FIBER GLASS	45 MIN	PAINT	3'-0"	7'-0"	-	FIBER GLASS	6/A6.06	7/A6.06	-	04.2	■		BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D24	K	111A TOILET	SINGLE SWING	FIBER GLASS	45 MIN	PAINT	3'-0"	7'-0"	-	FIBER GLASS	6/A6.06	7/A6.06	-	04.2	■		BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D25	K	111 LOCKER	SINGLE SWING	FIBER GLASS	45 MIN	PAINT	3'-0"	7'-0"	-	FIBER GLASS	6/A6.06	7/A6.06	-	02.1	■		BASIS OF DESIGN: "AF-200FR" BY "SPECIAL-LITE" INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D26	K	112 TOILET	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	04	■		
D27	K	113 STORAGE	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	02	■		
D28	K	114 JC	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	02	■		

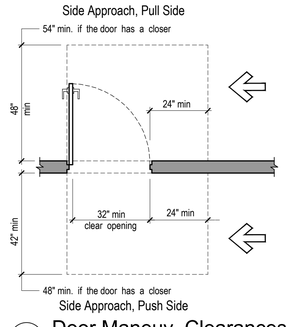
DOOR SCHEDULE (cont.)

DOOR NO.	DOOR TYPE	ROOM NAME/ NUMBER	DOOR							FRAME			SILL	HARDWARE (SEE A6.04 & A6.05)			NOTES
			ACTION	MATERIAL	FIRE RATING	DOOR FINISH	DOOR SIZE		VISION PANEL	DETAIL NO.			DETAIL NO.	HARDWARE SET	CLOSER	PANIC	
							WIDTH	HEIGHT		MAT.	HEAD	JAMB					
2 D29	P	115 CONF. ROOM/ TRAINING	SINGLE SWING	FRP/ ALUM.	-	STAIN	3'-0"	7'-0"	■	FIBER GLASS	15,20 /A6.06	16,21 /A6.06	17, 22 /A6.06	07.1	■		BASIS OF DESIGN: "SL-19" BY "SPECIAL-LITE" RUSTIC WOODGRAIN FRP/ALUM. HYBRID DOOR INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D30	N	115 CONF. ROOM/ TRAINING	SINGLE SWING	FRP/ ALUM	-	STAIN	3'-0"	7'-0"	■	FIBER GLASS	15,20 /A6.06	16,21 /A6.06	17, 22 /A6.06	07.1	■		BASIS OF DESIGN: "SL-19" BY "SPECIAL-LITE" RUSTIC WOODGRAIN FRP/ALUM. HYBRID DOOR INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D31	T	115 CONF. ROOM/ TRAINING	PAIR SINGLE SWING	FRP/ ALUM	-	STAIN	6'-0"	7'-0"		FIBER GLASS	20 /A6.06	21 /A6.06	13 /A6.06	07A.2	■	■	BASIS OF DESIGN: "SL-19" BY "SPECIAL-LITE" RUSTIC WOODGRAIN FRP/ALUM. HYBRID DOOR INSTALLED IN "AF-150" FIBERGLASS FRAMING. SEE SPEC.
D32	M	115 CONF. ROOM/ TRAINING	PAIR SINGLE SWING	WOOD	-	STAIN	6'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	13 /A6.06	07A.1	■	■	
D33	H	132B CORRIDOR	PAIR SINGLE SWING	HM	45 MIN	PAINT	6'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	14 /A6.06	01A.4	■	■	
D34	H	EGRESS CORRIDOR	PAIR DOUBLE SWING	HM	-	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	01D	■	■	
D35	K	116 ELECTRIC ROOM	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	19 /A6.06	02.4	■	■	
D36	H	132B CORRIDOR	PAIR OPPOSING SWING	HM	45 MIN	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	01C	■	■	
D37	Q	117 KITCHEN	PAIR SINGLE SWING	HM	45 MIN	PAINT	6'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	23 /A6.06	02B			(1)4'-0" LEAF & (1) 2'-0" LEAF
D38	K	117A DRY STORAGE	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	02	■		
D39	K	117D KITCHEN	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	07			
D40	K	117 KITCHEN	SINGLE SWING	HM	-	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	-	02	■		
D41	H	117F SERVICE	PAIR DOUBLE SWING	WOOD	-	STAIN	6'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	10 /A6.06	01B			
D42	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	03			
D43	K	126 MEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	07.3	■		
D44	K	125 FAMILY ROOM	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	04	■		
D45	K	129 WOMEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	07.3	■		
D46	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	03			
D47	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	03			
D48	K	130 WOMEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	07.3	■		
D49	K	128 FAMILY ROOM	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	04	■		
D50	K	127 MEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	07.3	■		
D51	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	03			
D52	H	117F SERVICE	PAIR DOUBLE SWING	WOOD	-	STAIN	6'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	-	01B			
D53	H	131 CORRIDOR	PAIR SINGLE SWING	WOOD	45 MIN	STAIN	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	01A.4	■	■	
D54	K	118 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	14 /A6.06	05	■		
D55	K	121 STORAGE	SINGLE SWING	HM	-	PAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	14 /A6.06	02			
D56	L	121 STORAGE	OVERHEAD COILING	METAL	45 MIN	FACTORY FINISH	14'-0"	10'-0"	-	MTL	5/A6.07	6/A6.07	10 /A6.06	RU			
D57	J	119 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	14 /A6.06	05	■		
D58	J	120 OFFICE	SINGLE SWING	HM	45 MIN	PAINT	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	14 /A6.06	05	■		
D59	H	131A CORRIDOR	PAIR DOUBLE SWING	HM	-	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	01D	■	■	
D60	C	123 BEER HALL	SLIDING	ALUM.	-	FACTORY FINISH	6'-0"	7'-0"	■	MTL	11 /A6.06	12 /A6.06	4 /A6.11	SL			BASIS OF DESIGN: "DURA-GLIDE 2000" BY "STANLEY" KYNAR FINISH, COLOR TO BE SELECTED BY ARCH. W/ SPECIAL LITE SL-450TB TRANSOM
D61	R	EXISTING GYM TENANT	SINGLE SWING	ALUM	-	FACTORY FINISH	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	01.1	■	■	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.
D62	R	EXISTING RETAIL TENANT	SINGLE SWING	ALUM	-	FACTORY FINISH	3'-0"	7'-0"	■	MTL	6/A6.06	7/A6.06	8/A6.06	01.1	■	■	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.

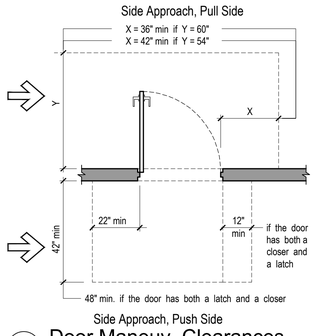
NOTE: SEE SHEETS A6.04 & A6.05 FOR HARDWARE SETS.



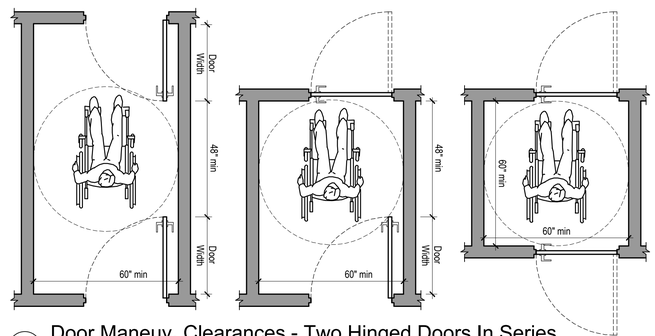
A Door Maneuv. Clearances
N.T.S.



B Door Maneuv. Clearances
N.T.S.



C Door Maneuv. Clearances
N.T.S.



D Door Maneuv. Clearances - Two Hinged Doors In Series
N.T.S.

Marking Fire Rated Glazing Assemblies

FIRE TEST STANDARD	MARK	DEFINITION OF MARKING
ASTM E119 OR UL 263	W	MEETS WALL ASSEMBLY CRITERIA
NFPA 257 OR UL 9	OH	MEETS FIRE WINDOW ASSEMBLY CRITERIA INCLUDING THE HOSE STREAM TEST.
NFPA 252 OR UL 10B OR UL 10C	D	MEETS FIRE DOOR ASSEMBLY CRITERIA.
	H	MEETS FIRE DOOR ASSEMBLY HOSE STREAM TEST.
	T	MEETS 450°F TEMPERATURE RISE CRITERIA FOR 30 MINUTES.
	XXX	THE TIME IN MINUTES OF FIRE-RESISTANCE OR FIRE PROTECTION RATING OF THE GLAZING ASSEMBLY.

Energy Code Requirements

2020 ECC OF N.Y. - Table C402.4

Climate Zone: 5

Vertical Fenestration - **U-factor**

Fixed fenestration:	0.38
Operable fenestration:	0.45
Entrance doors:	0.77

Vertical Fenestration - **SHGC**

PF < 0.2:	0.38
0.2 ≤ PF < 0.5:	0.46
PF ≥ 0.5:	0.61
Skylight U-factor	0.50
Skylight SHGC	0.40

NOTE: ALL EXTERIOR DOORS AND WINDOWS SHALL MEET OR EXCEED THE ENERGY CODE MINIMUM REQUIREMENTS.

Date 10/15/21
Checked CTB
Drawn CC

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Revisions:

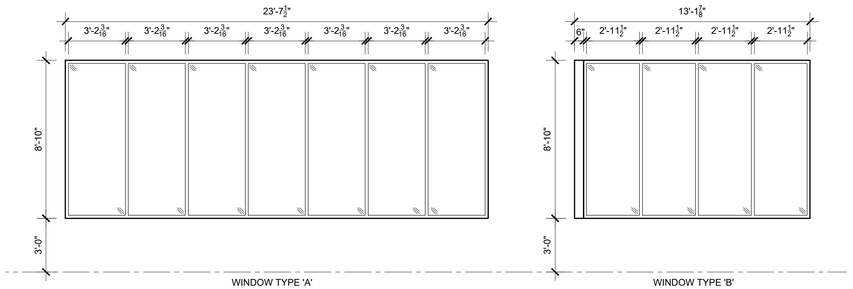
1 PERMIT SET 10/15/21

2 BID ADDENDUM #2 11/11/21

DOOR SCHEDULE
ASPIRE BREWING TAP ROOM & BREWERY
FOR SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE LOWER LEVEL
TOWN OF WALLKILL, NY 10941

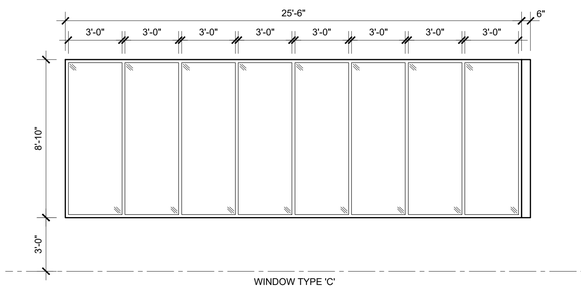
Job No. 4.1552.01
File No. 4155201A601

A6.01



WINDOW TYPE 'A'

WINDOW TYPE 'B'



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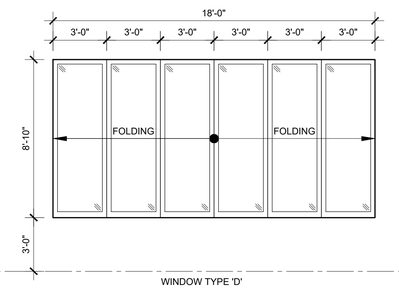

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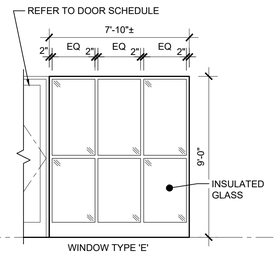

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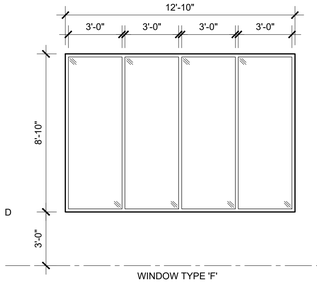

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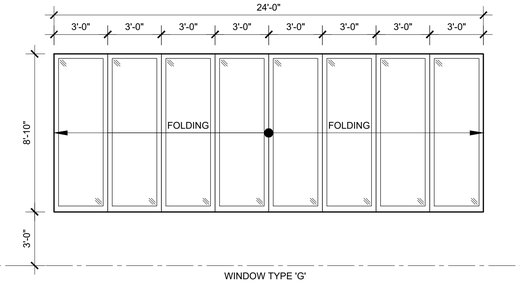

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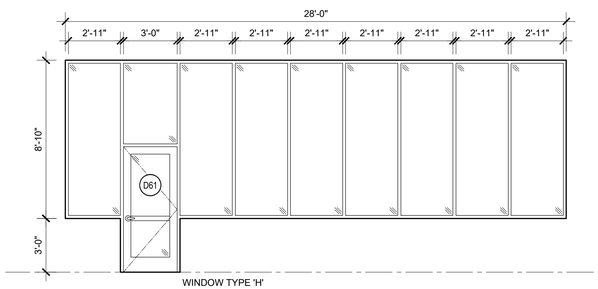

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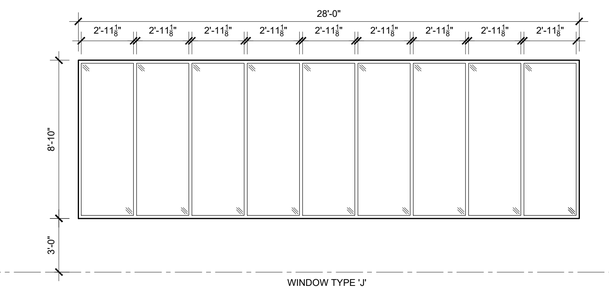

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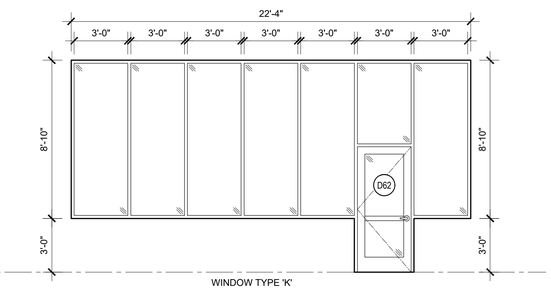

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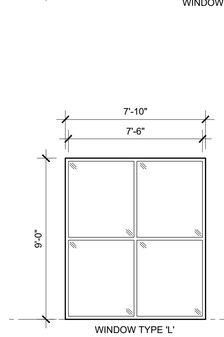

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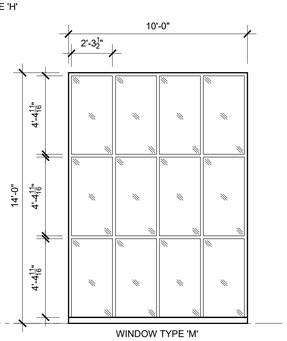

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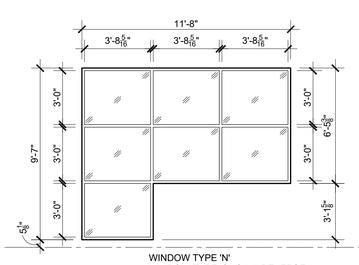
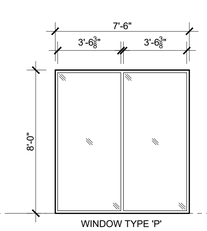


WINDOW TYPE 'N'
WINDOW TYPE 'Q' IS "N" REVERSE



WINDOW TYPE 'P'

WINDOW SCHEDULE

WINDOW NO.	WINDOW TYPE	ROOM NAME/ NUMBER	OPERATION	MATERIAL	GLAZING	ROUGH OPENING		WINDOW DETAILS			NOTES
						WIDTH	HEIGHT	HEAD	JAMB	SILL	
FIRST FLOOR											
W01	A	BREWERY / 105	FIXED	ALUM.	TEMP.	23'-7 ½"	8'-10"	1/A6.11	2/A6.11	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W02	B	BREWERY / 105	FIXED	ALUM.	TEMP.	13'-2"	8'-10"	4/A6.11	2/A6.11 SIM.	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W03	C	BREWERY / 105	FIXED	ALUM.	TEMP.	26'-0"	8'-10"	4/A6.11	8/A6.11	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W04	D	BAR / 104	OPERABLE	ALUM.	TEMP.	18'-0"	8'-10"	5/A6.11	6/A6.11	7/A6.11	"NANAWALL" EXTERIOR STOREFRONT SYSTEM MODEL "SL-70-CL"
W05	E	LOBBY RECEPT. / 102	FIXED	ALUM.	TEMP.	7'-10"	9'-0"	10/A6.11	11/A6.11	1/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W06	E	LOBBY RECEPT. / 102	FIXED	ALUM.	TEMP.	7'-10"	9'-0"	10/A6.11	11/A6.11	1/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W07	E MIR.	BEER HALL / 123	FIXED	ALUM.	TEMP.	12'-10"	9'-0"	4/A6.11	2/A6.11	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W08	G	BEER HALL / 123	OPERABLE	ALUM.	TEMP.	24'-0"	8'-10"	5/A6.11	6/A6.11	7/A6.11	"NANAWALL" EXTERIOR STOREFRONT SYSTEM MODEL "SL-70-CL"
W09	H	EXIST. GYM TENANT AREA	FIXED	ALUM.	TEMP.	28'-0"	8'-10"	1/A6.11	2/A6.11	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W10	J	EXIST RETAIL TENANT AREA	FIXED	ALUM.	TEMP.	28'-0"	8'-10"	1/A6.11	2/A6.11	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W11	K	EXIST RETAIL TENANT AREA	FIXED	ALUM.	TEMP.	22'-4"	8'-10"	1/A6.11	2/A6.11	3/A6.11	"SPECIAL LITE" THERMALLY BROKEN FRAMING SL-600TB
W12	L	LOBBY RECEPT. / 102	FIXED	ALUM.	TEMP.	7'-10"	9'-0"	15/A6.11	16/A6.11	17/A6.11	"TGP FIREFRAMES" DESIGNER SERIES, "OH" 45 MIN RATED ASSEMBLY PER NFPA 257
W13	L	LOBBY RECEPT. / 102	FIXED	ALUM.	TEMP.	7'-10"	9'-0"	15/A6.11	16/A6.11	17/A6.11	"TGP FIREFRAMES" DESIGNER SERIES, "OH" 45 MIN RATED ASSEMBLY PER NFPA 257
W14	M	LOBBY RECEPT. / 102	FIXED	ALUM.	TEMP.	10'-0"	14'-0"	15/A6.11	16/A6.11	17/A6.11	"TGP FIREFRAMES" DESIGNER SERIES, "OH" 45 MIN RATED ASSEMBLY PER NFPA 257
W15	N	TAPROOM / 103	FIXED	ALUM.	TEMP.	11'-8"	8'-10"	20/A6.11	21/A6.11	22/A6.11	"SPECIAL LITE" INTERIOR ALUMINUM FRAMING SYSTEM "LITE SPACE"
W16	Q	TAPROOM / 103	FIXED	ALUM.	TEMP.	11'-8	8'-10"	20/A6.11	21/A6.11	22/A6.11	"SPECIAL LITE" INTERIOR ALUMINUM FRAMING SYSTEM "LITE SPACE"
W17	P	TAPROOM / 103	FIXED	FIBER GLASS	TEMP.	7'-6"	8'-0"	20/A6.11	21/A6.11	22/A6.11	"AF-150" FIBERGLASS FRAMING BY "SPECIAL-LITE". SEE SPEC.

2

Energy Code Requirements

2020 ECC OF N.Y. - Table C402.4

Climate Zone: 5

Vertical Fenestration - **U-factor**	
Fixed fenestration:	0.38
Operable fenestration:	0.45
Entrance doors:	0.77
Vertical Fenestration - **SHGC**	
PF < 0.2:	0.38
0.2 ≤ PF < 0.5:	0.46
PF ≥ 0.5:	0.61
Skylight U-factor	0.50
Skylight SHGC	0.40

NOTE: ALL EXTERIOR DOORS AND WINDOWS SHALL MEET OR EXCEED THE ENERGY CODE MINIMUM REQUIREMENTS.

Window Types

1/4" = 1'-0"

Date	10/15/21
Checked	CTB
Drawn	CC

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Revisions:
1 PERMIT SET 10/15/21
2 BID ADDENDUM #2 11/11/21

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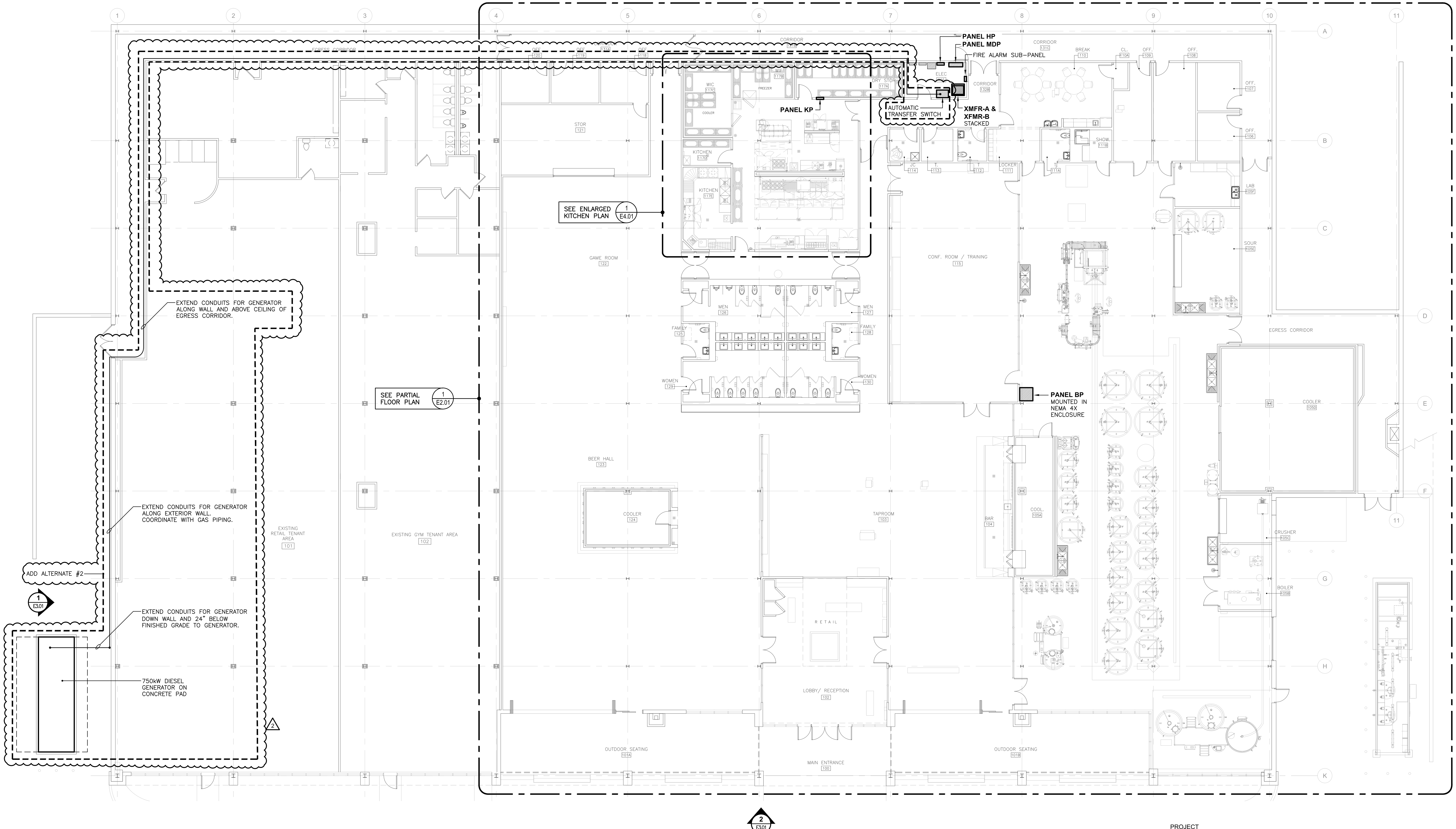
WINDOW SCHEDULE & WINDOW TYPES
ASPIRE BREWING TAP ROOM & BREWERY
FOR SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE LOWER LEVEL
TOWN OF WALLKILL, NY 10941

Job No. 4.1552.01
File No. 4155201A610

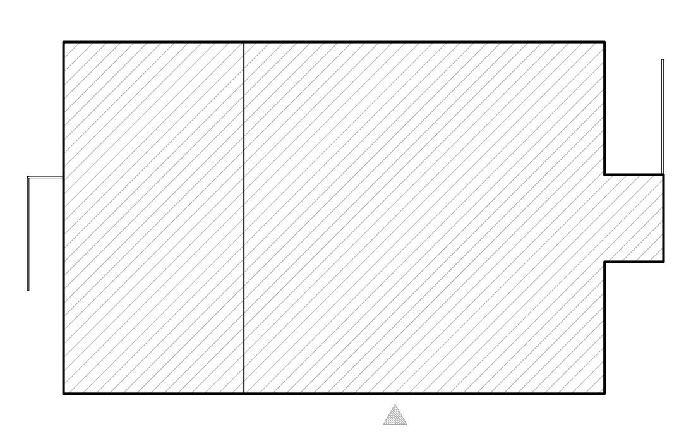
A6.10



ELECTRICAL: FIRST FLOOR PLAN

1 E2.00

SCALE: 3/32" = 1'-0"



KEY PLAN

NOT TO SCALE

Date	10/15/21
Checked	SZ
Drawn	BH/DC/KC

GERARD HLUCHAN

Title LICENSED PROFESSIONAL ENGINEER New York License No. 069684

Revisions:

1 PERMIT SET 10/15/21

2 BID ADDENDUM #2 11/11/21

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ELECTRICAL: FIRST FLOOR PLAN

ASPIRE BREWING TAP ROOM & BREWERY
FOR SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE LOWER LEVEL
MIDDLETOWN, NY 10941

Job No. 4.1552.01

File No. 4155201 E200

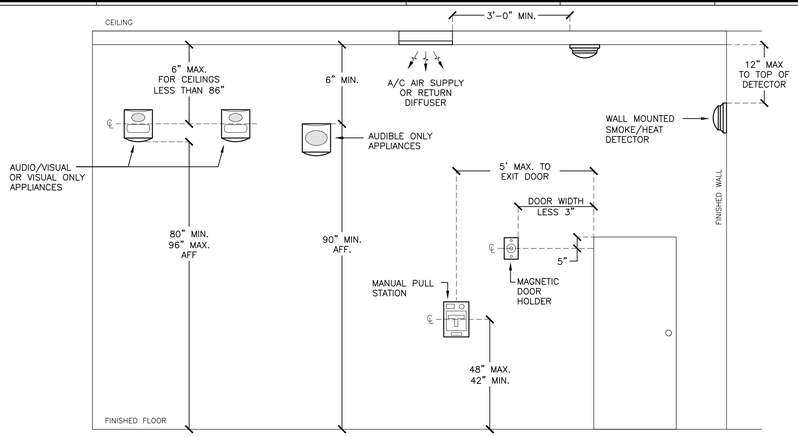
E2.00

FIRE ALARM NOTES

1. FIRE ALARM SYSTEM WIRING, NUMBER AND SIZE OF CONDUCTORS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS BUT NOT LESS THAN 18 AWG. COPPER CONDUCTOR. UL LISTED PLENUM RATED SIGNALING CABLE MAY BE USED IN CONCEALED SPACES.
2. FIRE ALARM SYSTEM SHALL BE FULLY ADDRESSABLE, WITH DISCREET ADDRESSES FOR EACH ACTIVATING DEVICE. MAIN PANEL SHALL IDENTIFY DEVICE BY ROOM NAMES AND LOCATIONS TO BE PROVIDED BY THE BUILDING OPERATOR.
3. FIRE ALARM SYSTEM SHALL BE COMPATIBLE WITH AND INTERFACE WITH EXISTING BUILDING FIRE ALARM SYSTEM. CONTRACTOR TO COORDINATE.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERABLE FIRE ALARM AND SMOKE DETECTION SYSTEM IN ACCORDANCE WITH NFPA 72, BUILDING CODE OF NEW YORK STATE AND ALL LOCAL CODES, INCLUDING ALL CIRCUITRY, SMOKE DETECTORS, HEAT DETECTORS, ZONE MODULES, ANNUNCIATION DEVICES, FIRE ALARM PANEL, POWER MODULES, BATTERY BACKUP, MUNICIPAL TIE AND CONNECTION AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THIS DRAWING TO RENDER FIRE ALARM SYSTEM COMPLETE AND OPERATIVE.
5. ELECTRICAL CONTRACTOR SHALL HIRE MANUFACTURER'S REPRESENTATIVE TO FULLY DEMONSTRATE SYSTEM FUNCTION, OPERATION AND MAINTENANCE OF FIRE ALARM SYSTEM TO OWNER.
6. HVAC CONTRACTOR SHALL INSTALL DUCT SMOKE DETECTORS IN DUCTS. DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL WIRING, RELAYS AND MISCELLANEOUS EQUIPMENT ASSOCIATED WITH HVAC AIR HANDLER UNIT SHUTDOWN FROM FIRE ALARM PANEL.
8. FIRE ALARM CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PREPARED BY PERSONS WHOM ARE TRAINED AND CERTIFIED BY MANUFACTURER IN FIRE-ALARM SYSTEM DESIGN, NICET-CERTIFIED FIRE-ALARM TECHNICIAN (LEVEL III MINIMUM), OR LICENSED/CERTIFIED BY AUTHORITIES HAVING JURISDICTION. SUBMITTALS SHALL COMPLY WITH RECOMMENDATIONS IN "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS OF FIRE ALARM SYSTEMS" CHAPTER IN NFPA 72 AND SHALL SHOW THE FOLLOWING:
   - 8.1. PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED ON PLANS.
   - 8.2. VOLTAGE DROP CALCULATIONS FOR NOTIFICATION APPLIANCE CIRCUITS.
   - 8.3. BACKUP BATTERY CAPACITY CALCULATIONS.
   - 8.4. SINGLE-LINE CONNECTION DIAGRAM.
   - 8.5. FLOOR PLANS TO INDICATE FINAL OUTLET LOCATIONS SHOWING ADDRESS OF EACH ADDRESSABLE DEVICE. SHOW SIZE AND ROUTE OF CABLE AND CONDUITS.
9. FIRE ALARM CONTRACTOR SHALL PROVIDE OWNER WITH ALL OPERATION AND MAINTENANCE DATA FOR FIRE ALARM SYSTEM.
   - 9.1. PROVIDE OPERATION AND MAINTENANCE MANUALS.
   - 9.2. PROVIDE 'RECORD OF COMPLETION' DOCUMENTS.
   - 9.3. PROVIDE 'MAINTENANCE, INSPECTION, AND TESTING RECORDS'
   - 9.4. PROVIDE COPY OF SITE-SPECIFIC SOFTWARE, SOFTWARE OPERATING AND UPGRADE MANUALS, SOFTWARE BACKUP, AND DEVICE ADDRESS LIST.
10. FIRE ALARM CONTROL PANEL SHALL BE FIELD-PROGRAMMABLE, MICROPROCESSOR-BASED, MODULAR, POWER-LIMITED DESIGN, COMPLY WITH UL 864, AND LISTED AND LABELED BY AN NRTL. PANEL SHALL INCLUDE:
   - 10.1. REAL-TIME CLOCK FOR TIME ANNOTATION OF EVENTS ON THE EVENT RECORDER AND PRINTER.
   - 10.2. ANNUNCIATOR AND DISPLAY: LIQUID-CRYSTAL TYPE
   - 10.3. KEYPAD: ARRANGED TO PERMIT ENTRY AND EXECUTION OF PROGRAMMING, DISPLAY, AND CONTROL COMMANDS.
   - 10.4. 24Vdc PRIMARY POWER OBTAINED THROUGH 120V POWER SUPPLY MODULE. ALARM CURRENT DRAW OF ENTIRE FIRE-ALARM SYSTEM SHALL NOT EXCEED 80 PERCENT OF THE POWER SUPPLY MODULE RATING.
   - 10.5. SECONDARY POWER THROUGH 24Vdc SUPPLY SYSTEM WITH BATTERIES, AUTOMATIC BATTERY CHARGER, AND AUTOMATIC TRANSFER SWITCH.

FIRE ALARM EQUIPMENT SCHEDULE

SYMBOL	MANUFACTURER	CATALOG #	DESCRIPTION
ANN	———	———	WALL MOUNTED REMOTE FIRE ALARM ANNUNCIATOR WITH LCD DISPLAY AND COMMON CONTROLS, COLOR: RED.
P	———	———	DOUBLE ACTION ADDRESSABLE MANUAL PULL STATION
P OR	———	———	DOUBLE ACTION ADDRESSABLE MANUAL PULL STATION, WITH WEATHERSTOPPER COVER, (2) GASKETS, SPACER, AND CONDUIT GASKET.
S	———	———	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR WITH 4-INCH MOUNTING BASE AND TRIM SKIRT
CO	———	———	ADDRESSABLE CARBON MONOXIDE DETECTOR WITH SOUNDER BASE. UPON ACTIVATION, DETECTOR SHALL INDICATE A SYSTEM SUPERVISORY SIGNAL AND ACTIVATE THE SOUNDER BASE ALARM. TONE GENERATOR SHALL BE REQUIRED TO PRODUCE APPROPRIATE CO TONE PATTERN.
HL	———	———	COMPACT WALL MOUNTED FIRE ALARM STROBE LIGHT, COLOR: RED, MARKING: 'FIRE', FIELD SELECTABLE OUTPUT OF 15, 30, 75 CANDELAS.
HL OR	———	———	OUTDOOR RATED WALL MOUNTED FIRE ALARM STROBE LIGHT, COLOR: RED, MARKING: 'FIRE', FIELD SELECTABLE OUTPUT OF 15, & 75 CANDELAS.
L C	———	———	CEILING MOUNTED FIRE ALARM STROBE LIGHT, COLOR: RED, MARKING: 'FIRE', FIELD SELECTABLE OUTPUT OF 15, 30, 75 & 115 CANDELAS.
H H/L	———	———	COMPACT WALL MOUNTED FIRE ALARM HORN/STROBE LIGHT, COLOR: RED, MARKING: 'FIRE', FIELD SELECTABLE OUTPUT OF 15, 30, 75 CANDELAS.
H H/L OR	———	———	OUTDOOR RATED WALL MOUNTED FIRE ALARM HORN/STROBE LIGHT, COLOR: RED, MARKING: 'FIRE', FIELD SELECTABLE OUTPUT OF 15, 29, 70, & 87 CANDELAS. PROVIDE AND INSTALL WITH RED SURFACE SKIRT, FULL BODY MOUNTING GASKET, AND SURFACE MOUNT OUTDOOR RATED BOX.
H/L C	———	———	CEILING MOUNTED FIRE ALARM HORN/STROBE LIGHT, COLOR: RED, MARKING: 'FIRE', FIELD SELECTABLE OUTPUT OF 15, 30, 75 & 115 CANDELAS.
R	———	———	FAN SHUTDOWN RELAY
S	———	———	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR. INSTALLED IN RETURN DUCTWORK OF INDICATED SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR MEASUREMENT OF DUCTWORK TO DETERMINE SAMPLING TUBE SIZE. PROVIDE DETECTOR IN WATERTIGHT ENCLOSURE WHERE DEVICE IS LOCATED IN WET LOCATION.
KM	———	———	ADDRESSABLE CONTROL MODULE
AM	———	———	ADDRESSABLE MONITOR MODULE

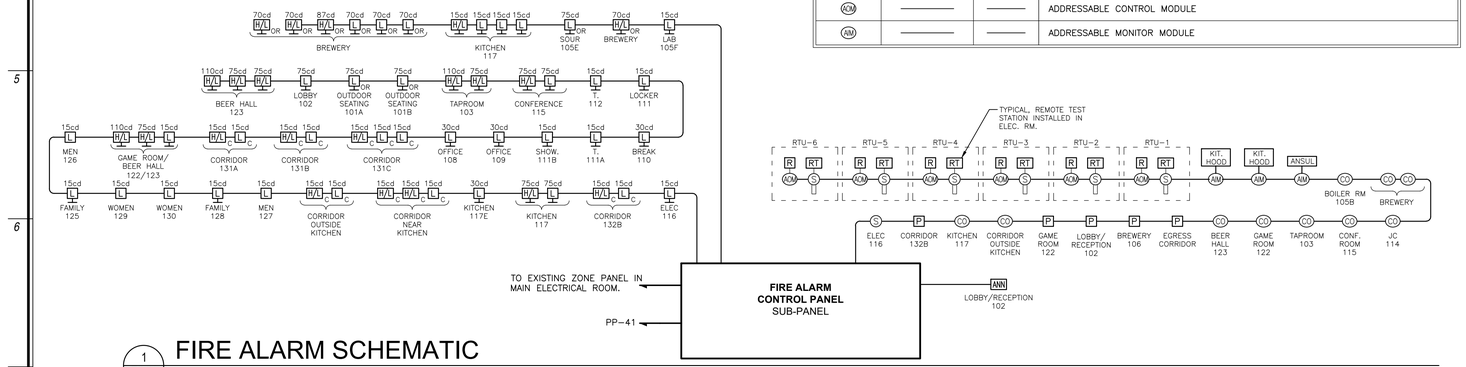


2 E6.01 FIRE ALARM MOUNTING REFERENCE (PER NFPA 72)

NOT TO SCALE

GENERAL ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE TYPEWRITTEN SCHEDULES OF ALL CIRCUITRY IN ALL PANELS. SCHEDULES SHALL MATCH THE LOADS SHOWN IN THE PROJECT PANEL SCHEDULE INCLUDED WITH THESE DRAWINGS. ALL SPARE PANEL SPACES SHALL BE FULLY PROTECTED WITH METAL BLANKS.
2. ELECTRICAL DEVICES MATERIALS AND PACKAGED EQUIPMENT SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) SUCH AS UNDERWRITERS LABORATORIES INC. (UL), FOR THE INTENDED USE, AND SHALL BEAR ITS LABEL. NOTE THAT NRTL APPROVAL OF INDIVIDUAL COMPONENTS OF PACKAGED EQUIPMENT DOES NOT CONSTITUTE APPROVAL OF THE ENTIRE PACKAGE.
3. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE 2017 EDITION (NFPA 70), AND THE BUILDING CODE OF NEW YORK STATE.
4. ELECTRICAL CONTRACTOR SHALL OBTAIN, PAY FOR AND COMPLY WITH ALL REQUIRED PERMITS. THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO OWNER PRIOR TO COMPLETION OF PROJECT.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS, NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE ELECTRICAL INSTALLATION COMPLETE AND OPERATIVE, AND IN COMPLIANCE WITH APPLICABLE CODES.
6. ALL WIRING SHALL BE COPPER CONDUCTOR, MINIMUM SIZE #12 AWG.
7. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING EQUIPMENT AND NOTE CONDITIONS AND AREAS WHERE WORK WILL OCCUR IN FIELD.
8. ELECTRICAL CONTRACTOR SHALL SEAL AROUND ALL PIPE PENETRATIONS THROUGH WALLS, FLOORS AND CEILINGS WITH AN INTUMESCENT FIRE STOP MATERIAL TO MAINTAIN FIRE AND SMOKE RATINGS.
9. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH AND MEET ALL REQUIREMENTS OF SERVING POWER UTILITY COMPANY.
10. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO AVOID CONFLICTS OF EQUIPMENT INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL EQUIPMENT CONNECTIONS, WIRING DEVICES AND LIGHTING WITH ARCHITECT PRIOR TO INSTALLATION.
11. ELECTRICAL CONTRACTOR SHALL SUBMIT EQUIPMENT SHOP DRAWINGS FOR APPROVAL BY ARCHITECT PRIOR TO COMMENCING INSTALLATION.
12. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND PAINTING ASSOCIATED WITH ELECTRICAL WORK.
13. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF COMPLETION AND ACCEPTANCE BY THE OWNER. CONTRACTOR AGREES TO REPLACE ANY DEFECTIVE EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER FOR THE DURATION OF THE GUARANTEE PERIOD.
14. MOUNTING HEIGHTS FROM FINISHED FLOOR TO CENTER LINE OF DEVICES SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED ON DRAWINGS:
    - CONVENIENCE OUTLETS: 18"
    - LIGHT SWITCHES: 48"
    - COMMUNICATIONS OUTLETS: 18"
    - FIRE ALARM PULL STATIONS: 48"
    - FIRE ALARM HORNS AND STROBES: 80"



1 E6.01 FIRE ALARM SCHEMATIC

NOT TO SCALE

4 E6.01 ELECTRICAL SCHEMATIC

NOT TO SCALE

SCHEMATIC KEYED NOTES (APPLIES TO THIS SHEET ONLY)

1. REMOVE (2) EXISTING FEEDER CONDUITS WITH 350mcm CABLE BETWEEN EXISTING 600A CIRCUIT BREAKER AND 800A CT CABINET.
2. PROVIDE AND INSTALL 1200 AMPERE, 3-POLE CIRCUIT BREAKER (GE SKLA36AT1200) WITH 900A TRIP (SRPK1200A900) IN EXISTING MAIN SWITCHBOARD AND EXTEND NEW FEEDER TO CT CABINET AS SHOWN. CONTRACTOR TO VERIFY CIRCUIT BREAKER IN FIELD. CIRCUIT BREAKER SHALL BE LISTED FOR USE WITH EXISTING SWITCHBOARD AND MATCH A.I.C. RATING OF EXISTING CIRCUIT BREAKERS. PROVIDE SIGNAGE AT SERVICE DISCONNECT AS INDICATED.
3. BASE BID: EXTEND (1) SET OF (4) 350mcm THHN, #2/0 GROUND IN 3" EMT PARALLEL TO (2) EXISTING SETS BETWEEN CT CABINET AND PANEL MDP. ADD ALTERNATE #2: EXTEND (1) SET OF (4) 350mcm THHN, #2/0 GROUND IN 3" EMT PARALLEL TO (2) EXISTING SETS BETWEEN CT CABINET AND AUTOMATIC TRANSFER SWITCH.
4. BASE BID: DISCONNECT AND REMOVE EXISTING PANEL MP. INSTALL METAL JUNCTION BOX TO EXISTING AND NEW 3" CONDUITS. MODIFY CONDUITS AS NECESSARY. SPLICE (2) EXISTING SETS OF 350mcm THHN, #1 GROUND, IN BOX AND EXTEND IN (2) 3" EMT TO PANEL MDP. NEW SET OF 350mcm, #2/0 GROUND SHALL PASS THROUGH BOX WITHOUT SPLICE AND EXTEND IN 3" CONDUIT TO PANEL MDP. PROVIDE AND INSTALL GROUNDING BUSHING ON ENDS OF (3) CONDUITS IN PANEL MDP AND CT CABINET AND EXTEND #2/0 GROUNDING CONDUCTORS TO CONNECT CONDUIT TO EQUIPMENT GROUND. ADD ALTERNATE #2: DISCONNECT AND REMOVE EXISTING PANEL MP. INSTALL METAL JUNCTION BOX TO EXISTING AND NEW 3" CONDUITS. MODIFY CONDUITS AS NECESSARY. SPLICE (2) EXISTING SETS OF 350mcm THHN, #1 GROUND, IN BOX AND EXTEND IN (2) 3" EMT TO NEW AUTOMATIC TRANSFER SWITCH. NEW SET OF 350mcm, #2/0 GROUND SHALL PASS THROUGH BOX WITHOUT SPLICE AND EXTEND IN 3" CONDUIT TO ATS. PROVIDE AND INSTALL GROUNDING BUSHING ON ENDS OF (3) CONDUITS IN ATS AND CT CABINET AND EXTEND #2/0 GROUNDING CONDUCTORS TO CONNECT CONDUIT TO EQUIPMENT GROUND.

WIRE & CONDUIT SCHEDULE

TAG	FEEDER SIZE	WIRING AND CONDUIT	DESCRIPTION
A	90A, 3-PHASE	(3) #4 THHN, #8 GROUND, 1¼" EMT	TRANSITION FROM EMT TO LFMC FOR CONNECTION TO TRANSFORMER
B	150A, 3-PHASE	(3) #1/0 THHN, #6 GROUND, 2" EMT	TRANSITION FROM EMT TO LFMC FOR CONNECTION TO TRANSFORMER
C1	230A, 3-PHASE	(4) #4/0 THHN, #4 GROUND, 2½" LFMC	10'-0" LENGTH MAXIMUM
C2	230A, 3-PHASE	(4) #4/0 THHN, #4 GROUND, 2½" EMT	–
D1	400A, 3-PHASE	(4) #500mcm THHN, #3 GROUND, 3½" LFMC	10'-0" LENGTH MAXIMUM
D2	400A, 3-PHASE	(4) #500mcm THHN, #3 GROUND, 3½" EMT	–
E	930A, 3-PHASE	(3) SETS: (4) #350mcm THHN, #2/0 GROUND, 3" EMT	–

DRY-TYPE TRANSFORMER SCHEDULE

TAG	LOCATION	kVA RATING	PRIMARY VOLTAGE	SECONDARY VOLTAGE	ENCLOSURE	SUPPLY FROM	SUPPLY TO	ENCLOSURE DIMENSIONS	NOTES
XFMR-A	ELEC. 116	75kVA	480V DELTA	208Y/120V	NEMA 2	PANEL MP	PANEL KP	30½"Wx43"Hx23"D	EATON DOE 2016 ENERGY-EFFICIENT, 3-PHASE 98.6% EFFICIENCY, 150° TEMPERATURE RISE, ALUMINUM WINDINGS
XFMR-B	ELEC. 116	112.5kVA	480V DELTA	208Y/120V	NEMA 2	PANEL MP	PANEL BP	34½"Wx51"Hx31½"D	EATON DOE 2016 ENERGY-EFFICIENT, 3-PHASE 98.74% EFFICIENCY, 150° TEMPERATURE RISE, ALUMINUM WINDINGS

Date	10/15/21
Checked	SZ
Drawn	BH/DC/KC

GERARD HLUCHAN
The LICENSED PROFESSIONAL ENGINEER New York License No. 069684

Revisions:

1. PERMIT SET 10/15/21
2. BID ADDENDUM #2 11/11/21

GERARD ASSOCIATES
CONSULTING ENGINEERS, P.C.
ELECTRICAL • TELECOMMUNICATIONS
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252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)615-0350

ELECTRICAL: DETAILS

ASPIRE BREWING TAP ROOM & BREWERY
FOR SONNY PATEL BREWING COMPANY, INC.
400/600 NORTH GALLERIA DRIVE LOWER LEVEL
MIDDLETOWN, NY 10941

Job No. 4.1552.01

File No. 4155201 E601

E6.01

Brew Equipment Commissioning Service Agreement & Checklist

Aspire Brewing Co

Overview: Alpha Brewing Operations, LLC (Alpha, ABO) agrees to provide optimal brew equipment Commissioning Service for the Aspire Brewing Co (the Company, Company) located in Middletown, NY. Aspire Brewing agrees to the terms and conditions as detailed below.

Personnel: ABO agrees to provide a properly qualified technician for up to five (5) calendar days, including travel time. This estimated service schedule has been invoiced and pre-paid by company. Additional technician time if required will be billed at $700 per technician, per day which includes travel, lodging and meal expenses. Additional technician time will be billed and due immediately following completion of service. Payment must be received within 5 business days by way of check, wire transfer, or credit card.

If additional time is required due to circumstances beyond the control of Alpha Brewing Operations, such as, unavailability of electrical power, product water source capacity, lack of necessary consumables, incomplete electrical wiring, incomplete plumbing (water, glycol, compressed air, gas/propane), incomplete mechanical connections (brew house piping, auger etc.), absence of brewery personnel for training/brewing, The Company will be billed for any additional hours at the rate of $90.00 per hour, plus expenses. Alpha reserves the right to withdraw personnel from premises for incomplete preparations resulting in rescheduling the commission service.

The normal work day for the ABO technician is ten (10) hours, including 1 hour of break time and including travel time to and from their lodging. ABO technicians may offer, or be asked to work longer than 10 hours in a 24 hour period. Additional time worked beyond the 10 hour period will be billed at the overtime rate of $90.00 per hour and must be approved by an authorized Company representative. Alpha requires a minimum of 10 hours rest between work periods for ABO technicians.

Travel: The ABO technician(s) will be available for the Commissioning Service between the period of _____ through _____ including travel days. The transportation expense for the ABO technician(s) to travel to Company premises and back to Lincoln, NE will be included in the service fee.

Local Transportation: The local transportation expense during the Commissioning Service will be included in the service fee.

Lodging: The expense for lodging for the ABO technicians during the Commissioning Service will be included in the service fee.

Meals: The meal expense for the technician(s) will be included in the service fee.

Alpha personnel will provide startup and operational testing of ABO supplied equipment. The training will include a review of operator manuals, proper demonstrations, maintenance and troubleshooting of the equipment. Typical service includes CIP of brew house tanks, water brew, and first full production wort brew.

Equipment Placement and Setup:

Brew House:
Upon receiving the brew house: Setup and reconnection of the brew house platform, vessels and piping are the responsibility of the Company. ABO labels pipe connections for Company personnel to follow.

_____ **(Company Initials)**

Notes:

Cellar Tanks:
Upon receiving the cellar tanks: Placement of the fermenters, brite tanks, single wall serving tanks, hot and cold liquor tanks per the approved layout are the responsibility of the Company.

_____ **(Company Initials)**

Notes:

Grain Handling Equipment:
Upon receiving grain handling equipment: Placement of the grain mill, hopper, auger(s) per the approved layout are the responsibility of the Company. Installation and hanging of auger(s) systems are the responsibility of the Company.

_____ **(Company Initials)**

Notes:

Electrical Connections:
The connection of all supplied equipment to the brewery's electrical supply is the responsibility of the Company. ABO personnel are not licensed, or permitted to complete electrical connections outside of ABO supplied equipment. Installation of all electrical services to ABO equipment must be completed prior to ABO technician arrival. The Company must have a qualified electrician quickly available at the brewery during ABO technician presence on-site in order to troubleshoot any electrical connections.

_____ **(Company Initials)**

Notes:

Cellar Control Cabinet:
It is the responsibility of the Company to run control wire from RTD sensors on tanks to the cellar control cabinet. Wires should be labeled accurately from temp controller #, or input to corresponding tank #. Running low voltage wire from temp controllers, or outputs in the cabinet, to glycol solenoid valves is the responsibility of the Company.

_____ ***(Company Initials)***

Notes:

Hot and Cold Liquor Pumps:
It is the responsibility of the Company to run wire from hot and cold liquor pumps into the brew house control cabinet. If hot liquor tank is heated electrically, it is the responsibility of the company to run wires from heating elements to the brew house control cabinet, or remote HLT cabinet if supplied. If remote HLT cabinet is supplied for electrically heated tank, main power wiring to this cabinet is the responsibility of the Company. Final termination of wires inside the control cabinet is the responsibility of an ABO technician.

_____ ***(Company Initials)***

Notes:

Steam Valves:
It is the responsibility of the Company to run wires from steam valves into the brew house control cabinet. Final termination of wires inside the control cabinet is the responsibility of an ABO technician. If Companies electrician can finish terminating wires, they can call ahead of time and ask for termination assistance.

_____ ***(Company Initials)***

Notes:

Keg Washer, Washer/filler:
Setup of keg washer is the responsibility of the company including supply and plumbing of compressed air, compressed CO2, steam (option), supply water and drains. Startup of the compressor must be completed prior to ABO technician(s) arrival, including pressure testing of plumbing. Air compressor should be sized properly for all air supplied equipment. Air should be clean/dry air. A refrigerated air drier system is recommended.

_____ **(Company Initials)**

Notes:

CIP Trolley and Pump Cart:
Installation of proper voltage, amperage and female receptacle(s) is the responsibility of the company.

_____ **(Company Initials)**

Notes:

Brewers hose:
Cutting brewers hose to desired lengths is the responsibility of the company. Installation of support fittings such as hose barb fittings, hose clamps and desired tees and elbows supplied by ABO and others, are the responsibility of the company.

_____ **(Company Initials)**

Notes:

Gas/Propane Connections:
The connection of all supplied brew equipment to the facility's gas, or propane supply is the responsibility of the Company. ABO personnel are not licensed, or permitted to make, or change any gas connections. Installation of all properly sized gas lines to the equipment must be completed and properly tested for leakage prior to ABO technician arrival. A qualified technician must be quickly available to the brewery during ABO technician presence on-site in order to troubleshoot any gas/propane supply connections.

_____ **(Company Initials)**

Notes:

Plumbing Connections:
All pertinent plumbing (water, glycol, steam, compressed air, CO2, O2) to and from the ABO supplied equipment is the responsibility of the Company. ABO personnel are not licensed, or permitted to complete, or change plumbing outside of ABO supplied equipment. Plumbing connections must be completed, leak tested and flushed prior to ABO technician(s) arrival. The Company must have a qualified plumber/pipe fitter quickly available to the brewery during ABO technician presence on-site in order to troubleshoot any plumbing lines and connections

_____ **(Company Initials)**

Notes:

Steam Boiler:

Installation and startup of the steam boiler and related components (feed tank, condensate return system, blow down tank etc.) are the responsibility of the Company. ABO personnel are not licensed, or permitted to install, commission, or troubleshoot steam boilers. Startup of the steam boiler must be completed prior to ABO technician(s) arrival. A qualified technician must be quickly available to the brewery during ABO technician presence on-site in order to troubleshoot the boiler.

_____ **(Company Initials)**

Notes:

_____

_____

_____

_____

Direct-fire Burner:

Installation and startup of direct-fire burners are the responsibility of the Company. ABO personnel are not licensed, or permitted to install, commission, or troubleshoot direct-fire burners. A qualified burner technician must be on-site as soon as the ABO technician is able to turn on the brew house control system. The burner technician will calibrate the combustion of the burner.

_____ **(Company Initials)**

Notes:

_____

_____

_____

_____

Glycol Chiller:

Installation and startup of the glycol chiller are the responsibility of the Company. ABO personnel are not licensed, or permitted to install, commission, or troubleshoot glycol chillers. Startup of the glycol chiller must be completed prior to ABO technician(s) arrival, including pressure testing of plumbing, flushing of plumbing and glycol reservoir filled with proper glycol mix ratio. A qualified technician must be quickly available to the brewery during ABO technician presence on-site in order to troubleshoot the chiller.

_____ **(Company Initials)**

Notes:

_____

_____

_____

_____

Air compressor and drier:
Installation and startup of any air compressor and driers supplied by Company, or by ABO is the responsibility of the Company. Startup of the compressor must be completed prior to ABO technician(s) arrival, including pressure testing of plumbing. Air compressor should be sized properly for all air supplied equipment. Air should be clean/dry air. A refrigerated air drier system is recommended.

_____ **(Company Initials)**

Notes:

Water Treatment:
Installation and startup of water treatment systems (carbon filters, softeners, reverse osmosis systems etc.) are the responsibility of the Company. ABO personnel are not licensed, or permitted to install, or commission water treatment systems. ABO technicians can troubleshoot and program water treatment equipment. Startup of the water treatment equipment must be completed prior to ABO technician(s) arrival including proper filling of carbon and other media. A qualified technician must be quickly available to the brewery during ABO technician presence on-site in order to troubleshoot said equipment.

_____ **(Company Initials)**

Notes:

Passivation:
Passivation of ABO supplied stainless steel tanks is the responsibility of the Company. ABO personnel are not permitted to passivate all tanks in the scope of supply to the Company. All ABO supplied tanks have been passivated at the factory. ABO recommends passivation of tanks after commissioning service is completed. Passivation standard operating procedures must be supplied by the chemical supplier.

_____ **(Company Initials)**

Notes:

By signing this agreement, the Company swears to its knowledge that the preparatory responsibilities described herein have been completed. Once ABO receives this signed document the commissioning service will be scheduled with the Company. This document also serves as a commissioning completion acknowledgement to be signed by the Company and ABO technician prior to technician departure.

This agreement is entered into at Lincoln, Nebraska on _____ and is construed in accordance with the laws of the State of Nebraska.

Pre-commissioning checklist signatures:

Aspire Brewing Co

_____
Alex Kemp Date

Alpha Brewing Operations, LLC

_____
Adam Moore Date
Director of Customer Service

Commissioning service completion signatures:

Aspire Brewing Co

_____
Alex Kemp Date

Alpha Brewing Operations, LLC

_____
A.B.O. Service Technician Date

Technician Overtime Approval Sheet

Aspire Brewing Co

Overtime work is granted and approved at $90 per hour by:

_____ _____
Company Representative NAME (Print) (DATE)

_____
Company Representative NAME (Signature)

Overtime start time: _____

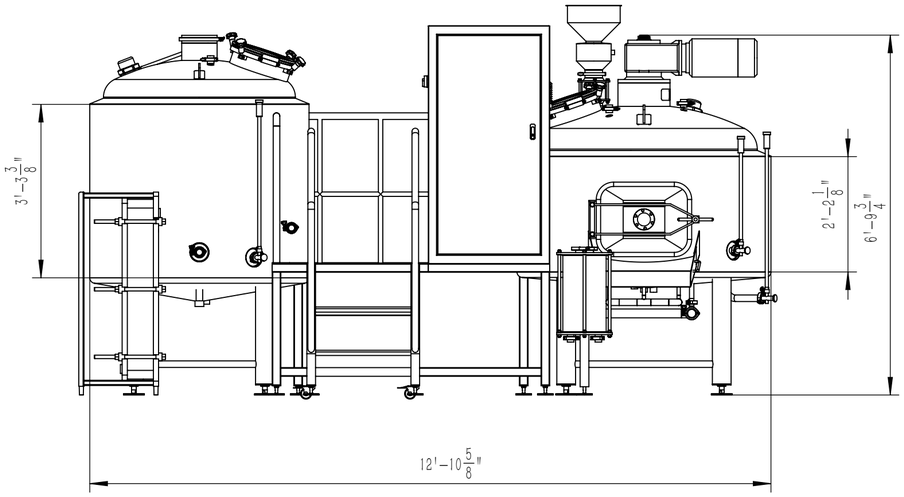
Overtime end time: _____

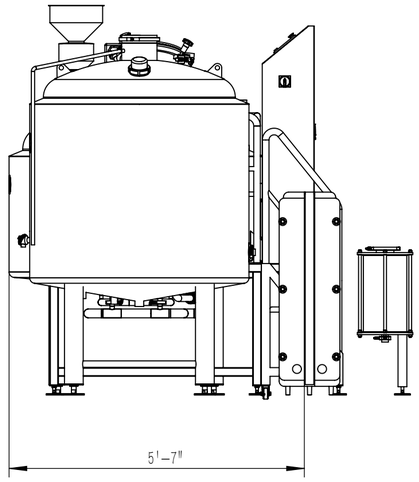
Overtime hours total: _____

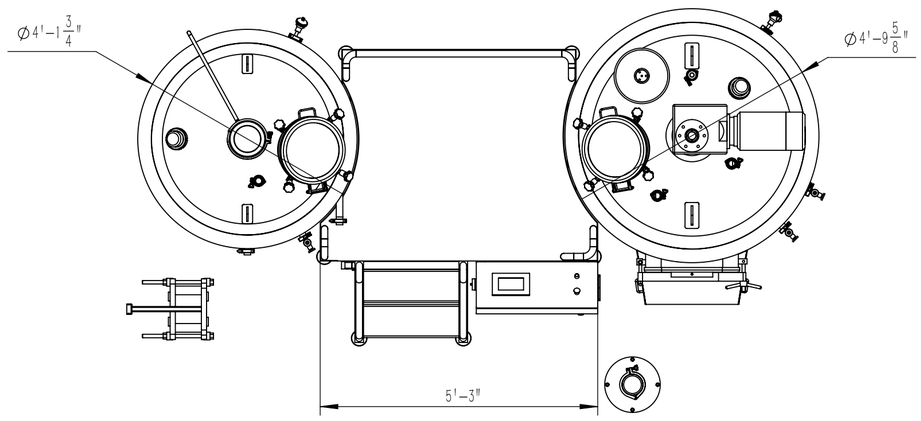
Overtime pay total: _____

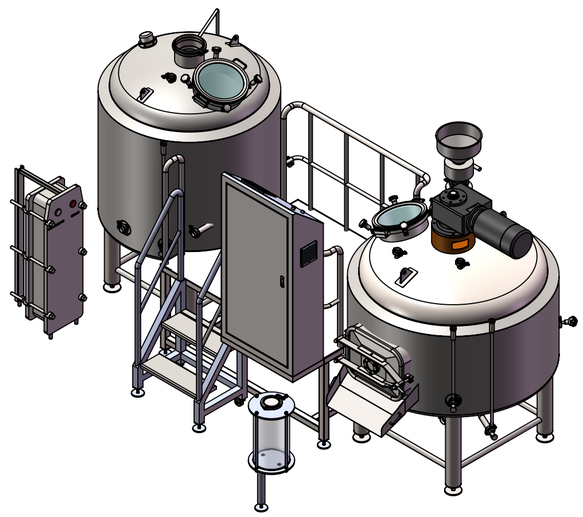
_____
Alpha Brewing Operations Technician NAME (Print)

DESIGN DATA SHEET			
VESSEL CLASS	PARAMETERS		
TANK NAME	MLT	KWP	Hopper
WORKING TEMPERATURE	0-110℃	0-110℃	
DESIGN TEMPERATURE	0-110℃	0-110℃	
MEDIUM	BEER	BEER	WATER
MATERIAL	AISI304	AISI304	AISI304
GROSS VOLUME BBL	9.2	9.3	
GROSS VOLUME(NO DOME) BBL	7.1	8	
DESIGN VOLUME BBL	5	5	
RESERVED CAPACITY	42%	58%	
INSULATION MATERIAL	PU	PU	/
INSULATION THICKNESS mm	80	80	/









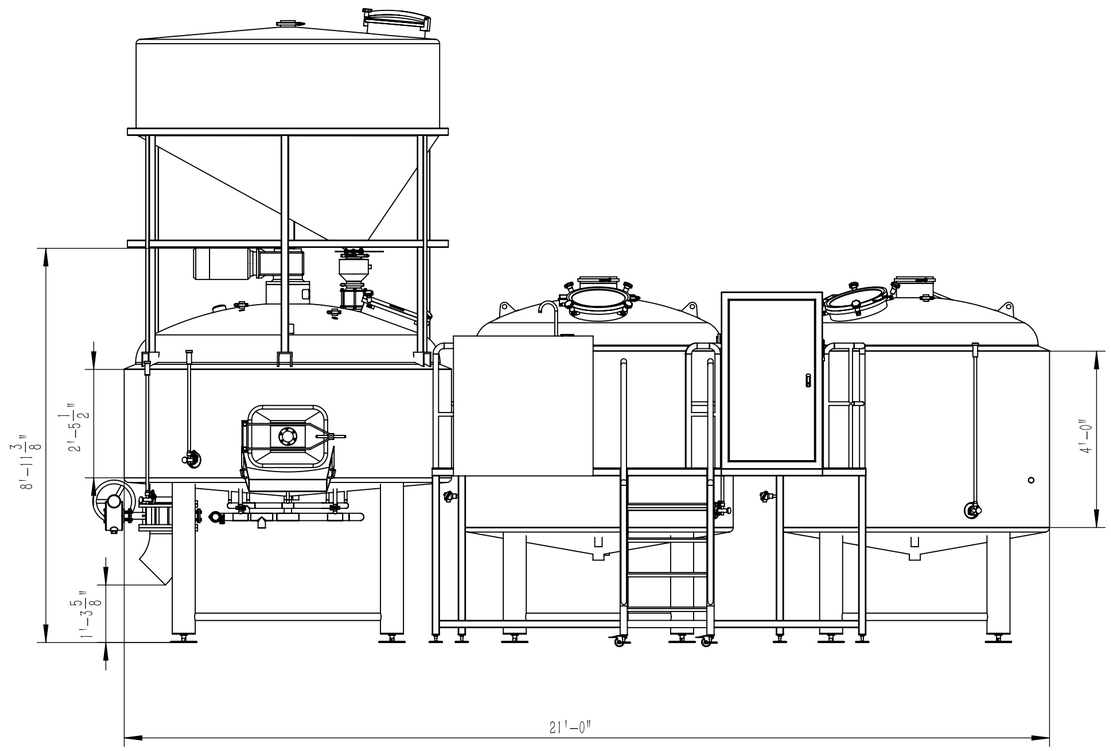
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:	FINISH:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION -.01

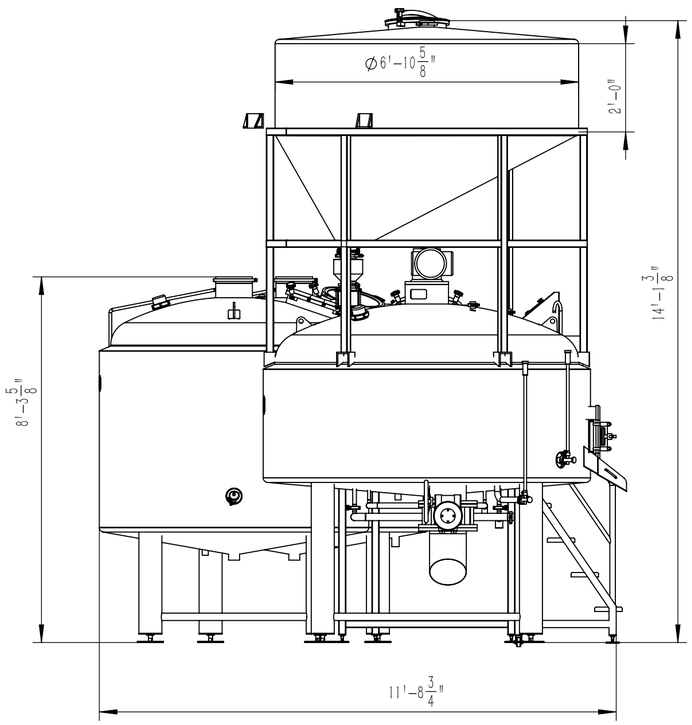
	NAME	SIGNATURE	DATE
DRAWN			
CHK'D			
APPV'D			
MFG			
Q.A			

ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT

5BBL 2V Brew House without

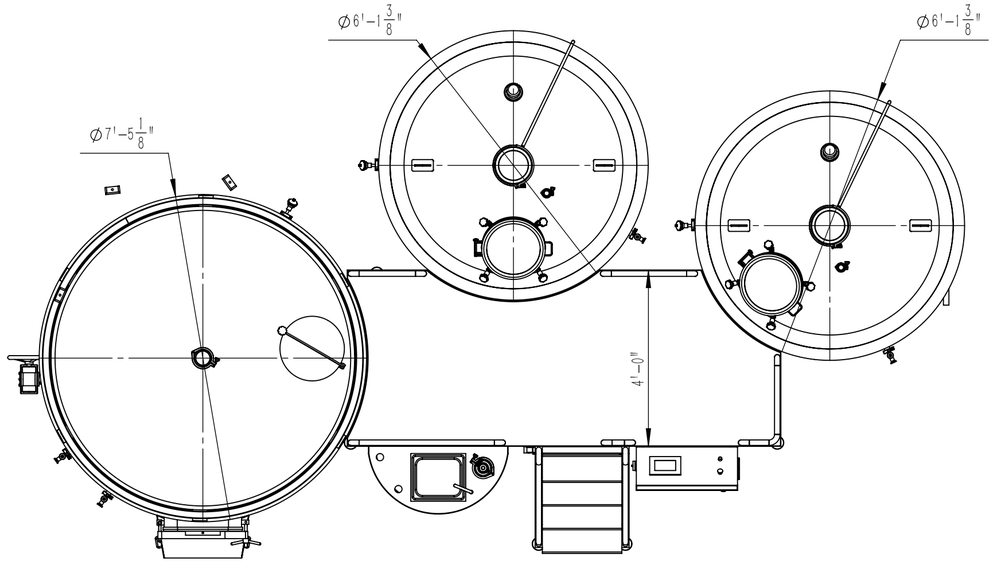
WEIGHT: 1836.245 | SCALE:1:25 | SHEET 1 OF 1





DESIGN DATA SHEET

VESSEL CLASS	PARAMETERS			
TANK NAME	MT	KT	WT	Hopper
WORKING TEMPERATURE	0-110℃	0-110℃	0-110℃	
DESIGN TEMPERATURE	0-110℃	0-110℃	0-110℃	
MEDIUM	BEER	BEER	BEER	WATER
MATERIAL	AISI304	AISI304	AISI304	AISI304
GROSS VOLUME BBL	30	28.2	28.2	118CU/FT
GROSS VOLUME(NO DOME) BBL	21.1	23.6	23.6	
DESIGN VOLUME BBL	20	20	20	
RESERVED CAPACITY	%	18%	18%	
INSULATION MATERIAL	PU	PU	PU	/
INSULATION THICKNESS mm	80	80	80	/



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
LINEAR:
ANGULAR:

FINISH:

DEBUR AND BREAK SHARP EDGES

DO NOT SCALE DRAWING | REVISION -.01

	NAME	SIGNATURE	DATE
DRAWN			
CHK'D			
APPV'D			
MFG			
Q.A			

WEIGHT: 2567.375

TITLE:

DWG NO. 20BBL 3V Brew House

A2

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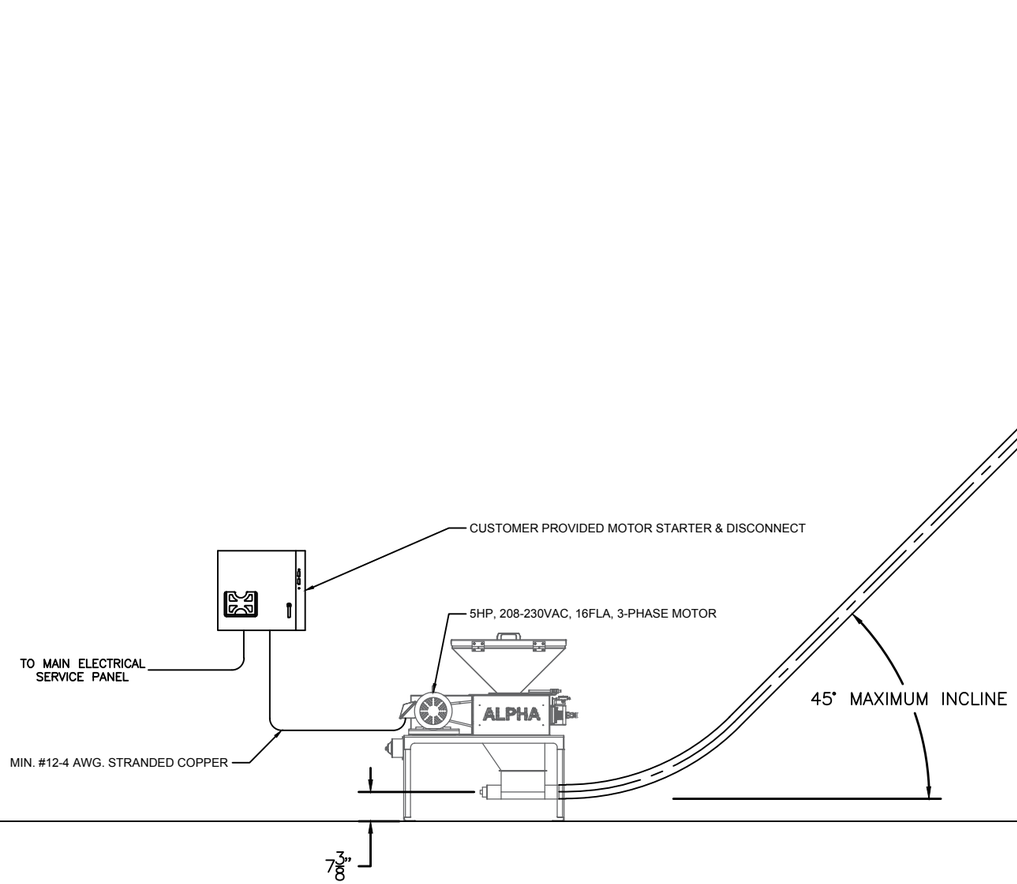
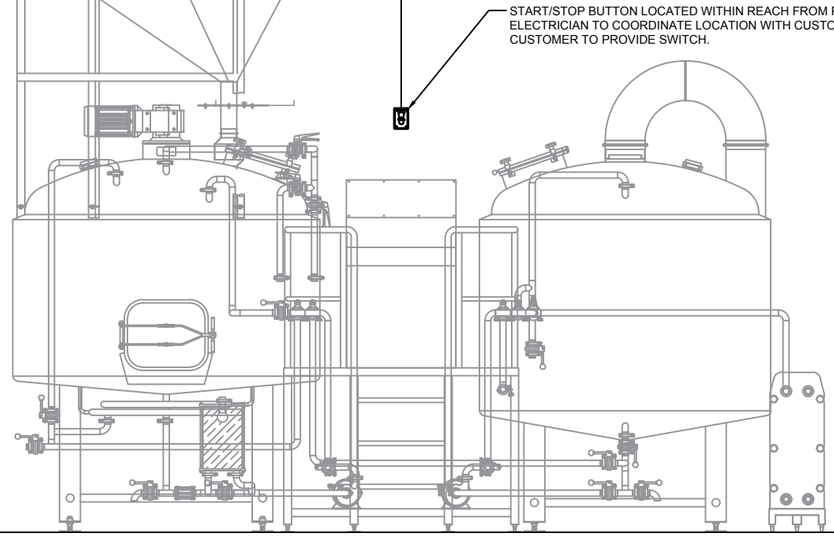
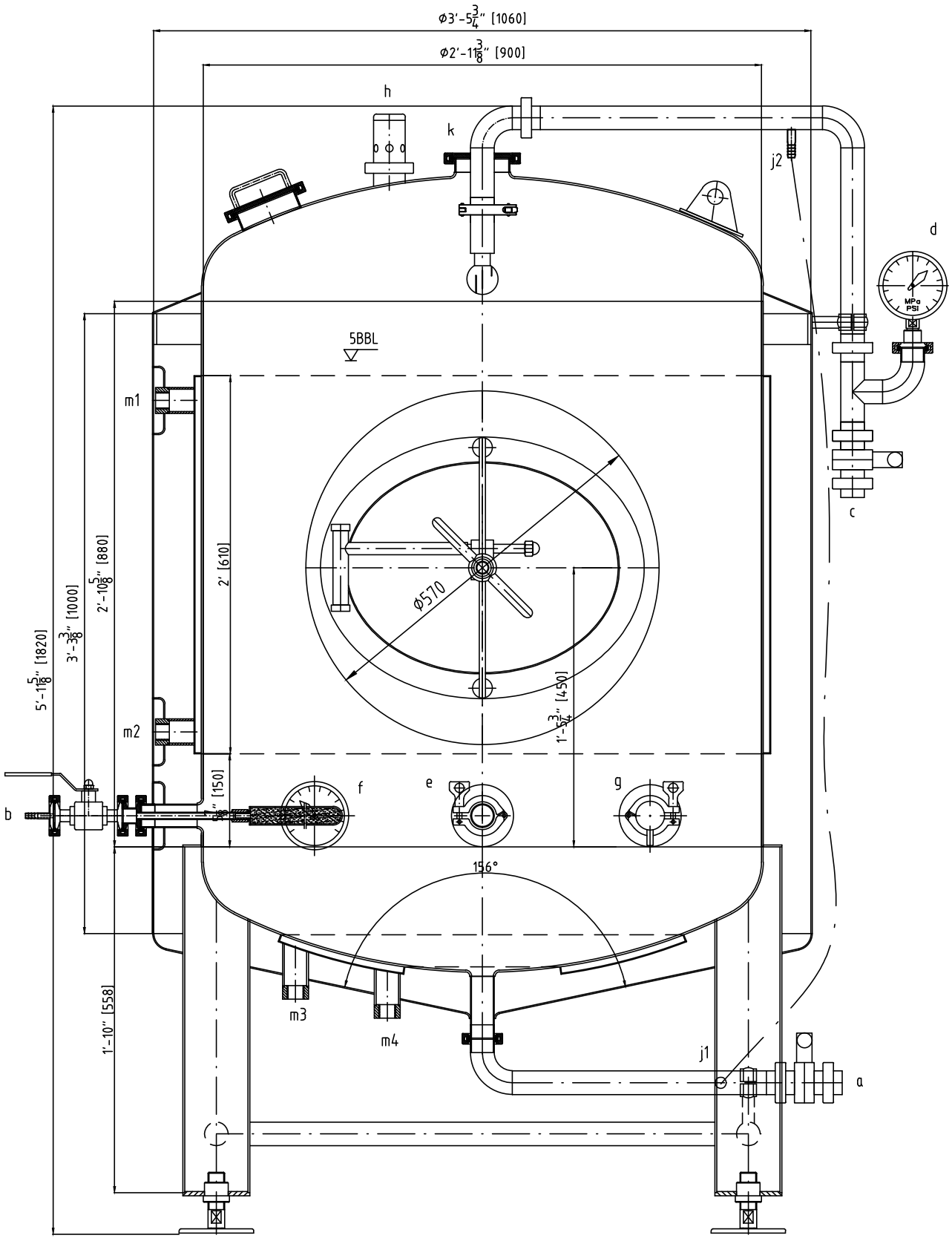
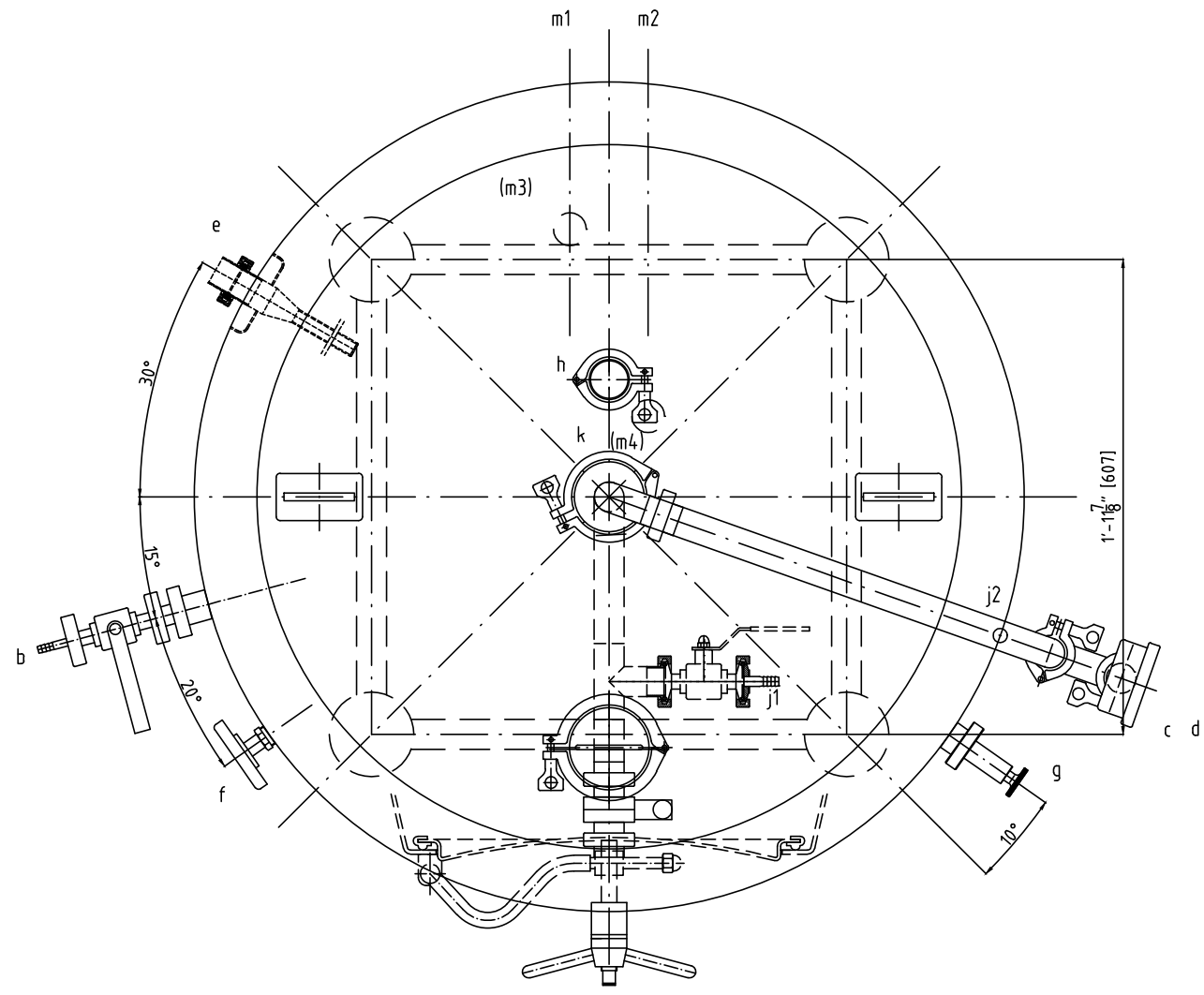




ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT	DWN BY WLS	CUSTOMER SIGNATURE:	SHEET B–1
PROPRIETARY DO NOT DUPLICATE		DESC AUGER LAYOUT & WIRING	DATE 10/17/19





(Design Data Sheet)

(Design parameters)

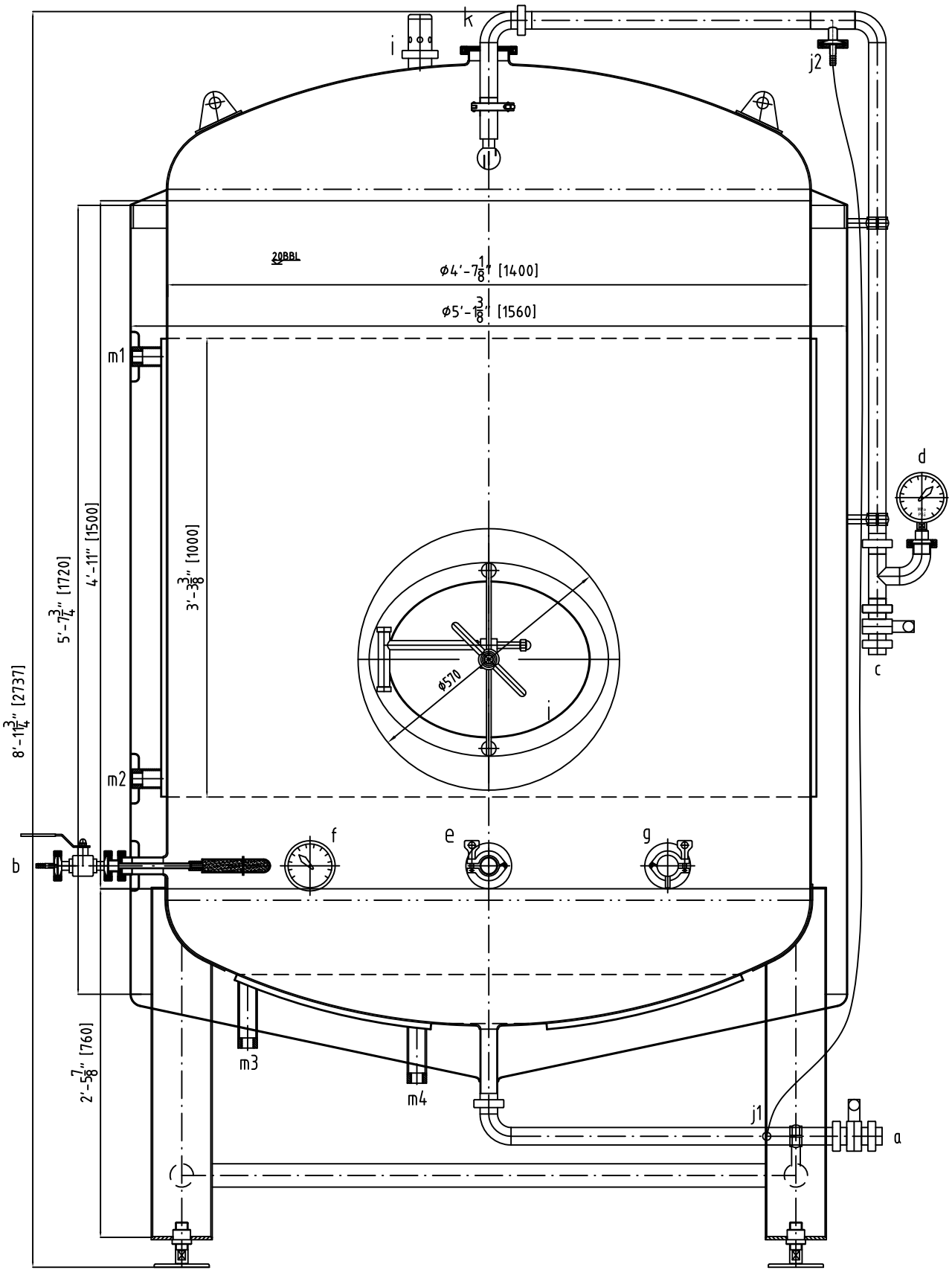
(Container class)		(Pressure)	
(Parameter Name)		(Container)	(Jacket)
(Working pressure)	MPa	0.2	0.3
(Design pressure)	MPa	0.2	0.4
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(Beer)	(Cooling)
(Material)		304	304
(Full volume)	BBL	6.275	
(Effective volume)	BBL	5	
(Maximum filling ratio)		79.7%	
(Safety valve ACt pressure)	MPa	0.2	
(Weight)	Kg		
(Insulation material)			
(Insulation thickness)	mm		
(Pressure test)	MPa	0.2	0.6
(Air-tightness test)	MPa		

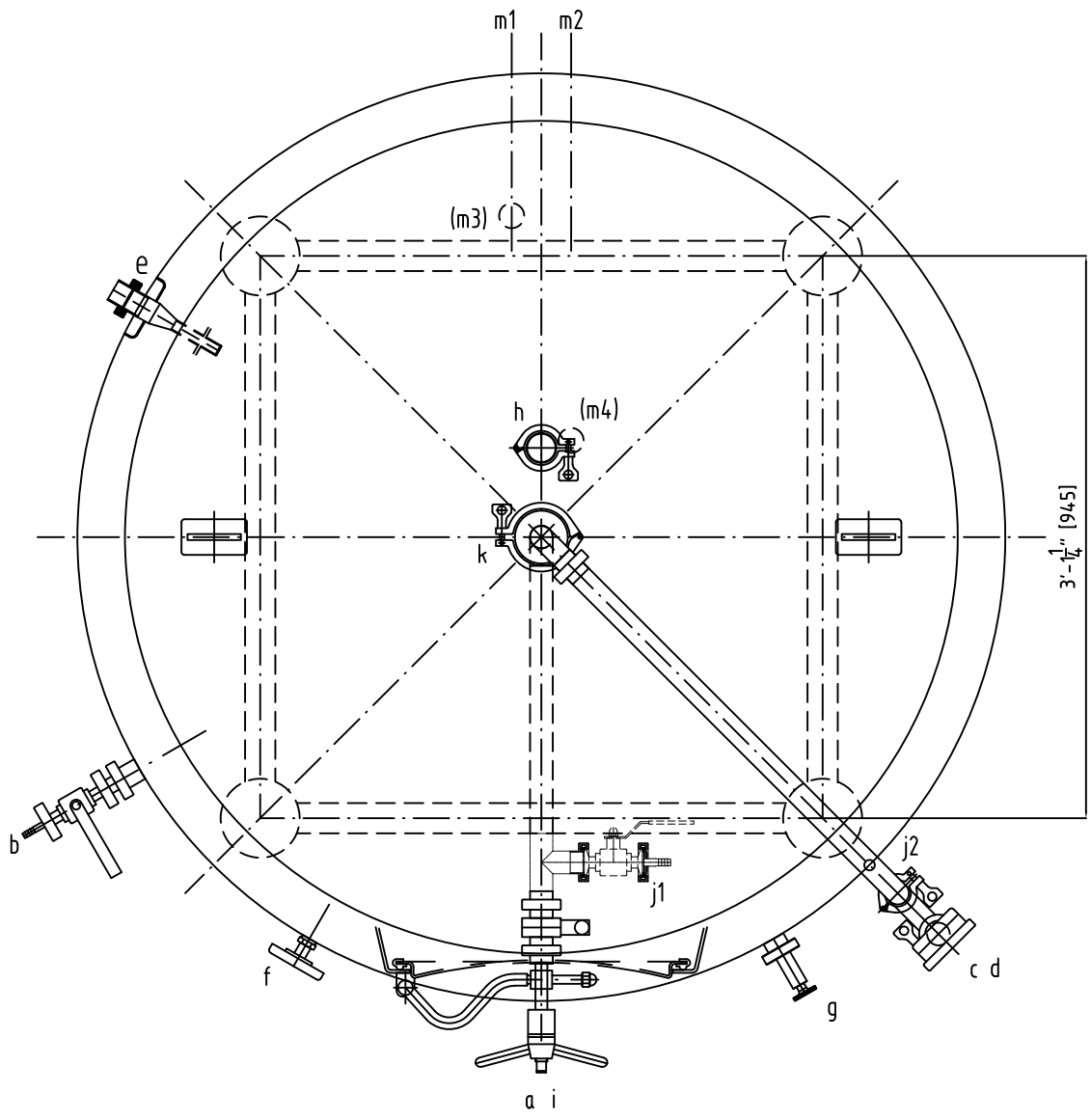
1. Shell welds shall be parallel to the inner wall, with double-sided welding shall be smooth, not having concave and convex edges and scratch, all interfaces with the inner cylinder welding arc light repair processing.
2. Head and polishing the surface, the inner cylinder body and the inner surface of cone 2B, cylinder and cone foreskin surface adopts mechanical drawing polishing processing.The inner surface of the cylinder body
pickling and passivating treatment.
3. After the completion of the manufacture, equipment to 0.2MPa hydrostatic test, the inside of the jacket to the 0.5MPa hydraulic pressure test, pressure 30min, equipment is not lying testing water pressure test.

(CONNECTIONS)

MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARKS
a	1.5"	(Beer outlet)	Φ38.1X1.5	(Clamp)
b	1.5"	(CO2 inlet)	Φ38.1X1.5	(Clamp)
c	1.5"	(CIP inlet)	Φ38.1X1.5	(Clamp)
d	1.5"	(Pressure gauge)	Φ38.1X1.5	(Clamp)
e	1.5"	(Thermowell)	Φ38.1X1.5	(Clamp)
f	1.5"	(Thermometer)	Φ38.1X1.5	(Clamp)
g	1.5"	(Sample cock)	Φ38.1X1.5	(Clamp)
h	2"	(PVRV)	Φ50.8X1.5	(Clamp)
i	580X480	(Manway)	580X480X133	(Weld)
j	Φ18	(Level Interface)	Φ18	(Clamp)
k	4"	(Conection)	Φ101.6X2	(Clamp)
n	4"	(Hop)	Φ101.6X2	(Clamp)
m1-4	3/4"	(Coolant inlet)	NPT3/4"	(Thread)

Design		Standard		AISI 304	ALPHA BREWING OPERATIONS
Drafting		Examine			
Examine		Approval		Phase marker / Weight (LBS) / Proportion	Brite Tank-5BBL
Technology		Date		580 / 1:1	BBT-5BBL





(Design Data Sheet)

(Design parameters)

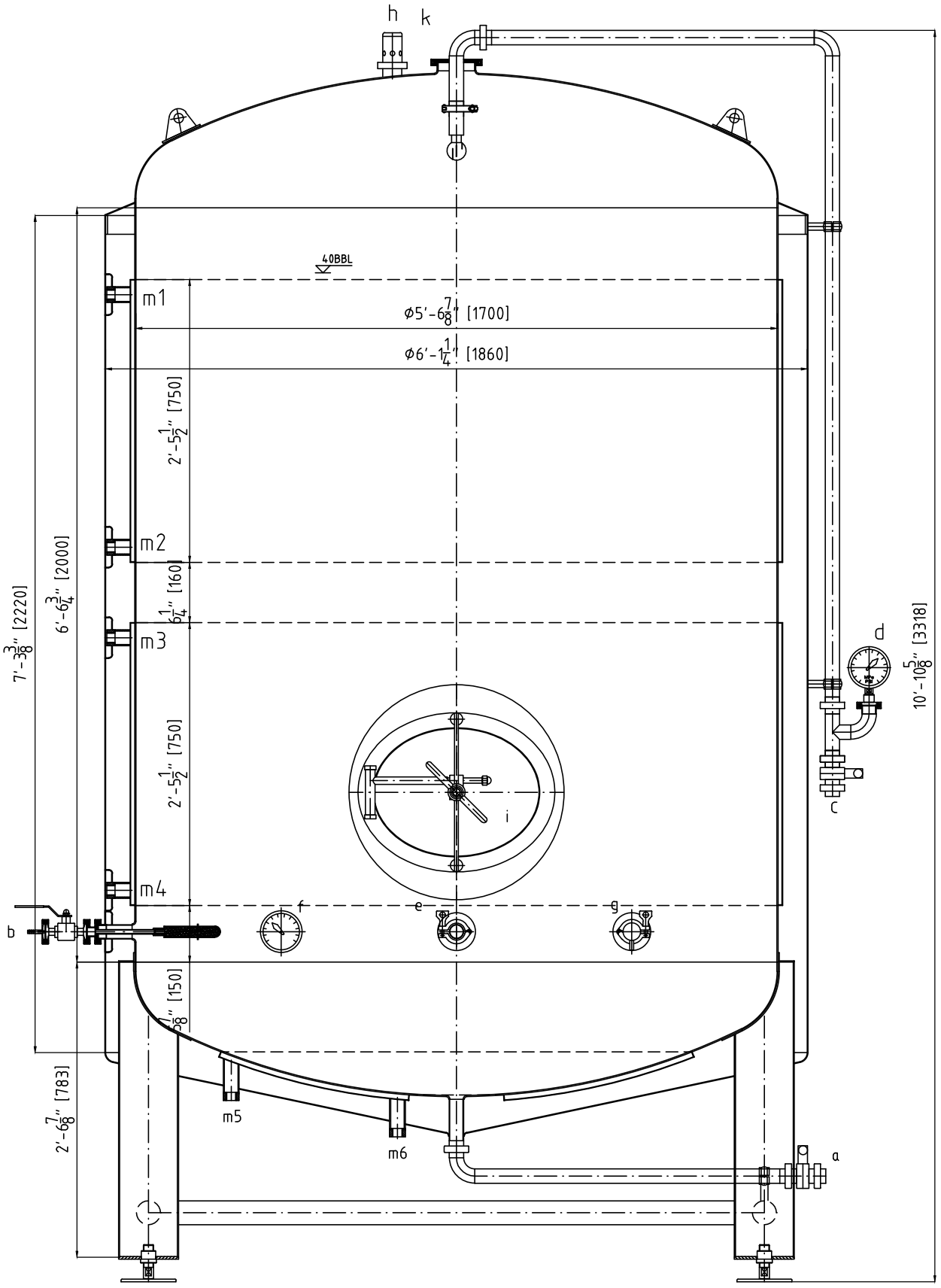
(Container class)		(Pressure)	
(Parameter Name)		(Container)	(Jacket)
(Working pressure)	MPa	0.2	0.3
(Design pressure)	MPa	0.2	0.4
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(Beer)	(Cooling)
(Material)		304	304
(Full volume)	BBL	24.971	
(Effective volume)	BBL	20	
(Maximum filling ratio)		80.1%	
(Safety valve ACt pressure)	MPa	0.2	
(Weight)	Kg		
(Insulation material)		(PU)	
(Insulation thickness)	mm	80	
(Pressure test)	MPa	0.2	0.6
(Air-tightness test)	MPa		

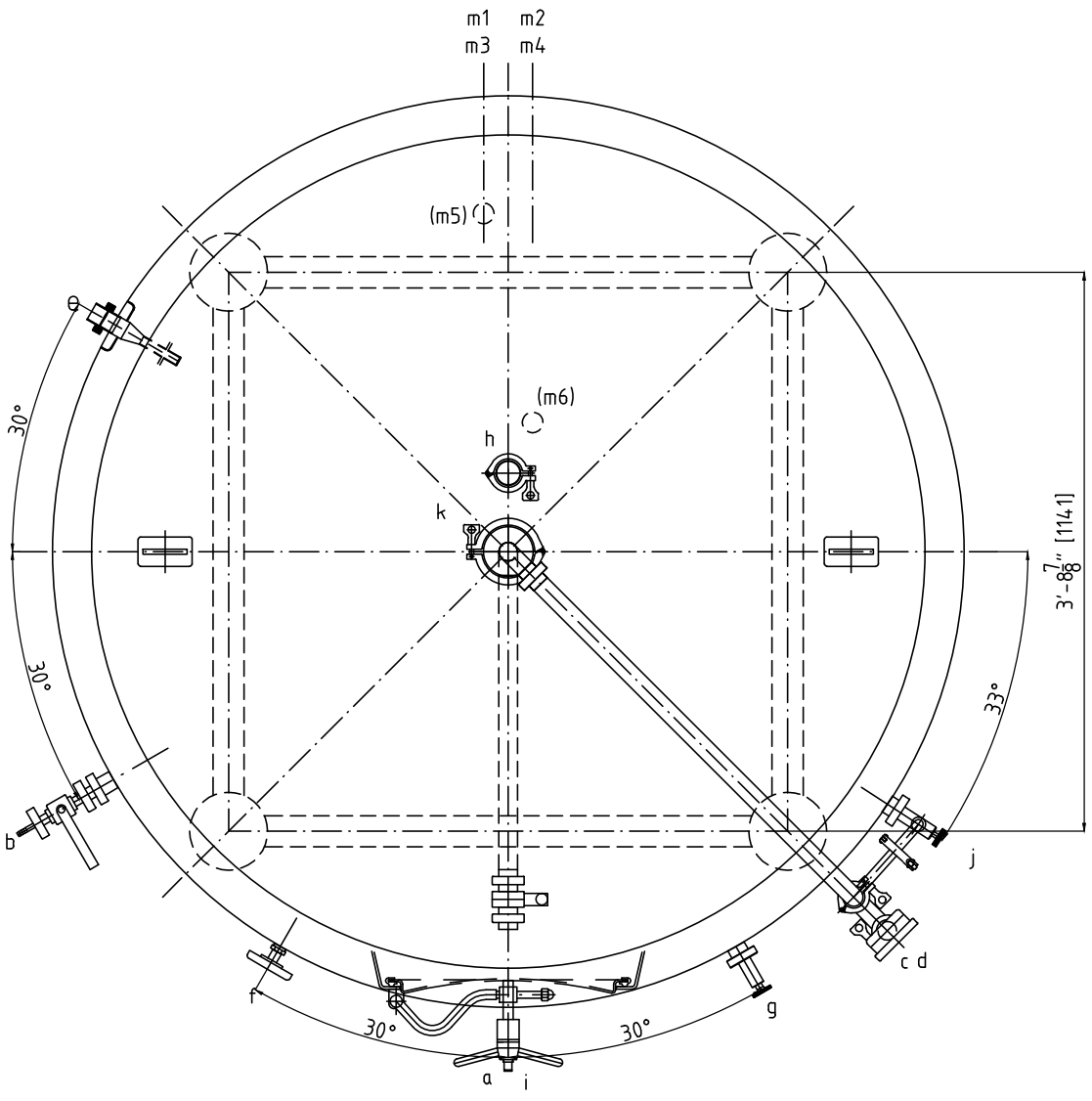
1. Shell welds shall be parallel to the inner wall, with double-sided welding shall be smooth, not having concave and convex edges and scratch, all interfaces with the inner cylinder welding arc light repair processing.
2. Head and polishing the surface, the inner cylinder body and the inner surface of cone 2B, cylinder and cone foreskin surface adopts mechanical drawing polishing processing.The inner surface of the cylinder body pickling and passivating treatment.
3. After the completion of the manufacture, equipment to 0.2MPa hydrostatic test, the inside of the jacket to the 0.6MPa hydraulic pressure test, pressure 30min, equipment is not lying testing water pressure test.

(CONNECTIONS)

MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARKS
a	1.5"	(Beer outlet)	φ38.1X1.5	(Clamp)
b	1.5"	(CO2 inlet)	φ38.1X1.5	(Clamp)
c	1.5"	(CIP inlet)	φ38.1X1.5	(Clamp)
d	1.5"	(Pressure gauge)	φ38.1X1.5	(Clamp)
e	1.5"	(Thermowell)	φ38.1X1.5	(Clamp)
f	1.5"	(Thermometer)	φ38.1X1.5	(Clamp)
g	1.5"	(Sample cock)	φ38.1X1.5	(Clamp)
h	2"	(PVRV)	φ50.8X1.5	(Clamp)
i	580X480	(Manway)	580X480X133	(Weld)
j	1.5"	(Level Interface)	φ38.1X1.5	(Clamp)
k	4"	(Connection)	φ101.6X2	(Clamp)
m1-4	3/4"	(Coolant inlet/outlet)	NPT3/4"	(Thread)

Design		Standard		AISI 304	ALPHA BREWING OPERATIONS
Drafting		Examine			
Examine		Approval		Phase marker / Weight / Proportion	Bright Beer Tank-20BBL
Technology		Date		1367LBS 1:1	BBT-20BBL





(Design Data Sheet)

(Design parameters)

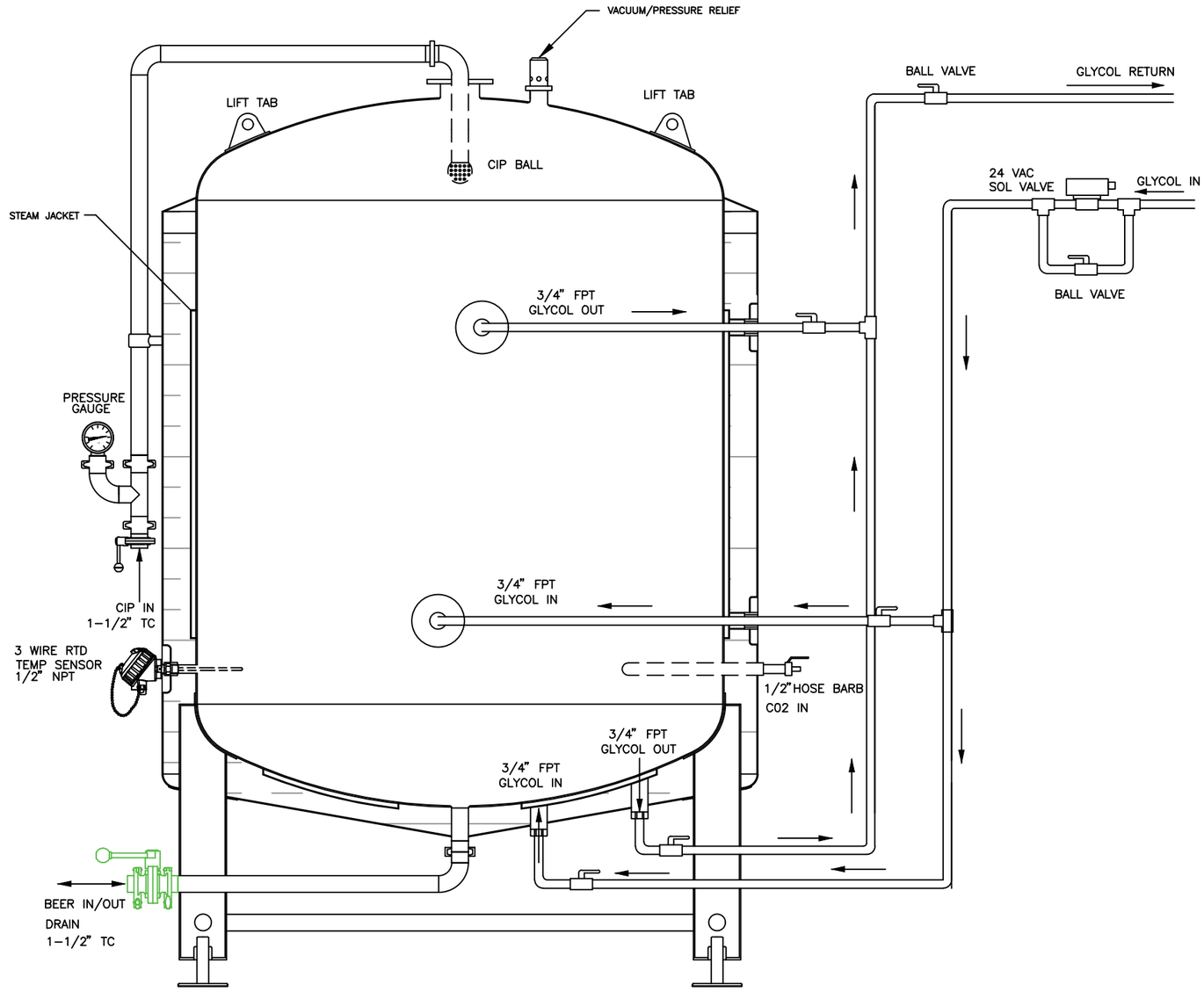
(Container class)		(Pressure)	
(Parameter Name)		(Container)	(Jacket)
(Working pressure)	MPa	0.2	0.3
(Design pressure)	MPa	0.2	0.4
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(Beer)	(Cooling)
(Material)		304	304
(Full volume)	BBL	47.959	
(Effective volume)	BBL	40	
(Maximum filling ratio)		83.4%	
(Safety valve ACt pressure)	MPa	0.2	
(Weight)	Kg		
(Insulation material)		(PU)	
(Insulation thickness)	mm	80	
(Pressure test)	MPa	0.2	0.6
(Air-tightness test)	MPa		

1. Shell welds shall be parallel to the inner wall, with double-sided welding shall be smooth, not having concave and convex edges and scratch, all interfaces with the inner cylinder welding arc light repair processing.
2. Head and polishing the surface, the inner cylinder body and the inner surface of cone 2B, cylinder and cone foreskin surface adopts mechanical drawing polishing processing.The inner surface of the cylinder body pickling and passivating treatment.
3. After the completion of the manufacture, equipment to 0.2MPa hydrostatic test, the inside of the jacket to the 0.6MPa hydraulic pressure test, pressure 30min, equipment is not lying testing water pressure test.

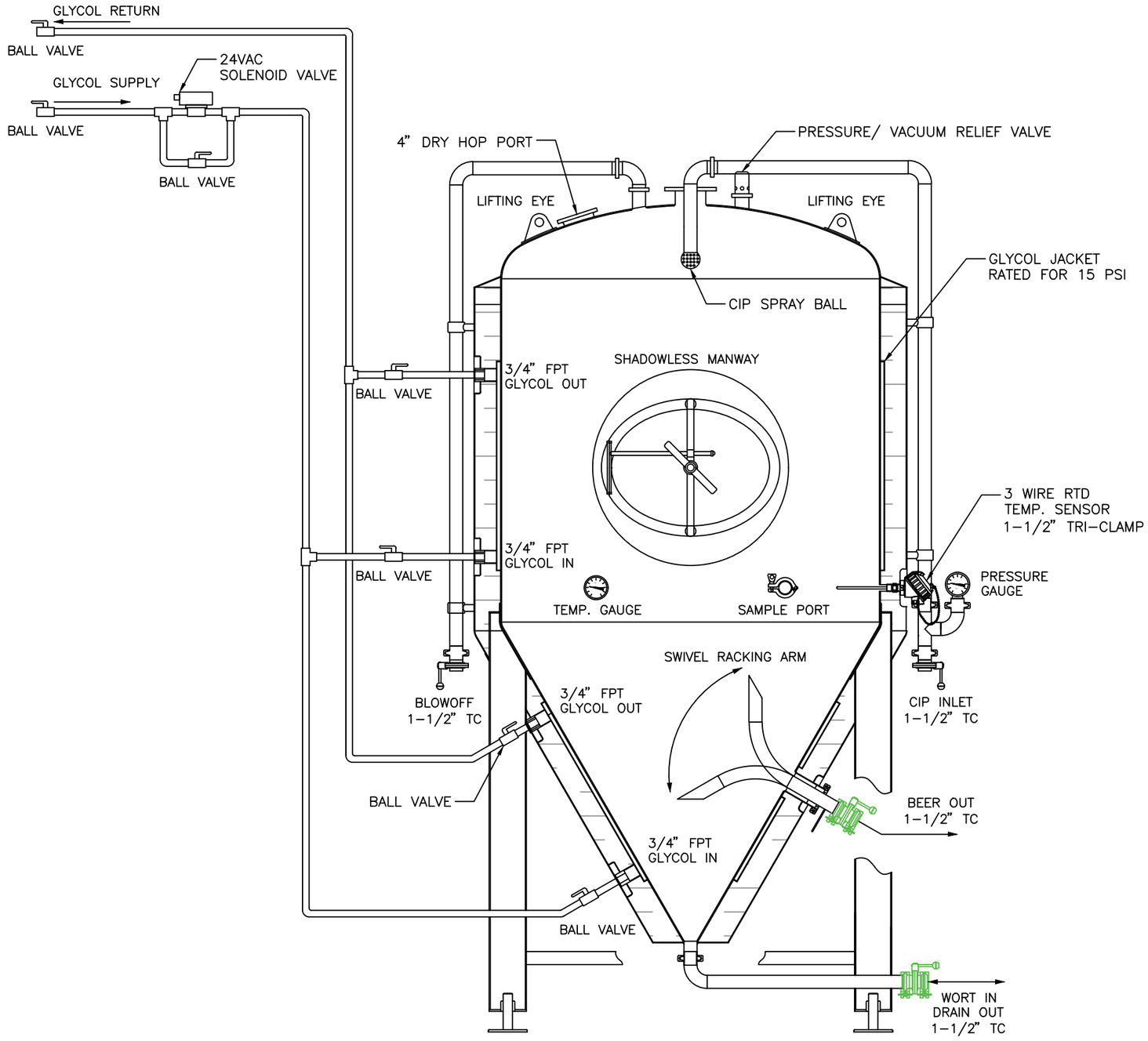
(CONNECTIONS)

MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARKS
a	1.5″	(Beer outlet)	ϕ38.1X1.5	(Clamp)
b	1.5″	(CO2 inlet)	ϕ38.1X1.5	(Clamp)
c	1.5″	(CIP inlet)	ϕ38.1X1.5	(Clamp)
d	1.5″	(Pressure gauge)	ϕ38.1X1.5	(Clamp)
e	1.5″	(Thermowell)	ϕ38.1X1.5	(Clamp)
f	1.5″	(Thermometer)	ϕ38.1X1.5	(Clamp)
g	1.5″	(Sample cock)	ϕ38.1X1.5	(Clamp)
h	2″	(PVRV)	ϕ50.8X1.5	(Clamp)
i	580X480	(Manway)	580X480X133	(Weld)
j	1.5″	(Level gauge)	ϕ38.1X1.5	
k	4″	(Connection)	ϕ101.6X2	
m1-6	1″	(Coolant inlet/outlet)	NPT1″	(Thread)

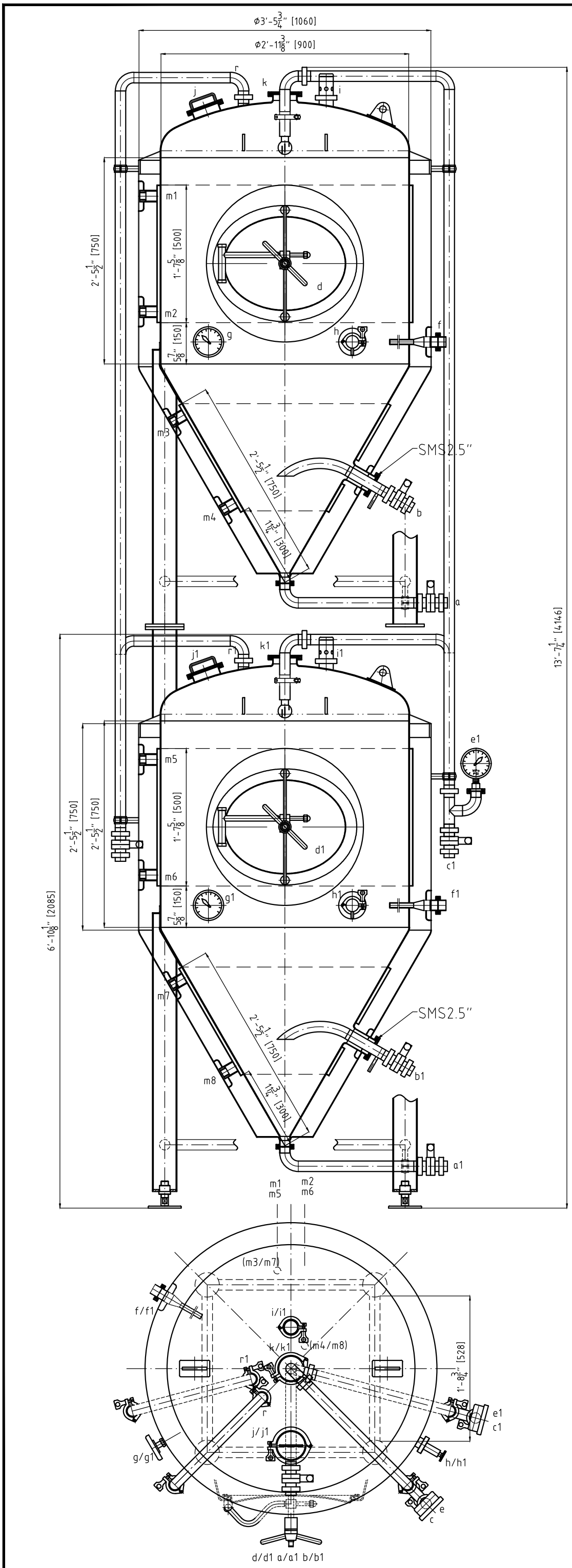
Design		Standard		General View/304	ALPHA BREWING OPERATIONS
Drafting		Examine			
Examine		Approval		Phase marker / Weight (LBS) / Proportion	Brite Tank-40BBL
Technology		Date		2050 / 1:1	BBT-40BBL



ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT	DWN BY WLS	CUSTOMER SIGNATURE:	SCALE:
PROPRIETARY DO NOT DUPLICATE		DESC BRITE TANK PLUMBING	DATE 3/10/2020



ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT	DWN BY: WLS	CUSTOMER SIGNATURE:	SHEET: B-9
PROPRIETARY DO NOT DUPLICATE		DESC: TYPICAL GLYCOL PLUMBING	DATE: 3/10/20



(Design Data Sheet)

(Design parameters)

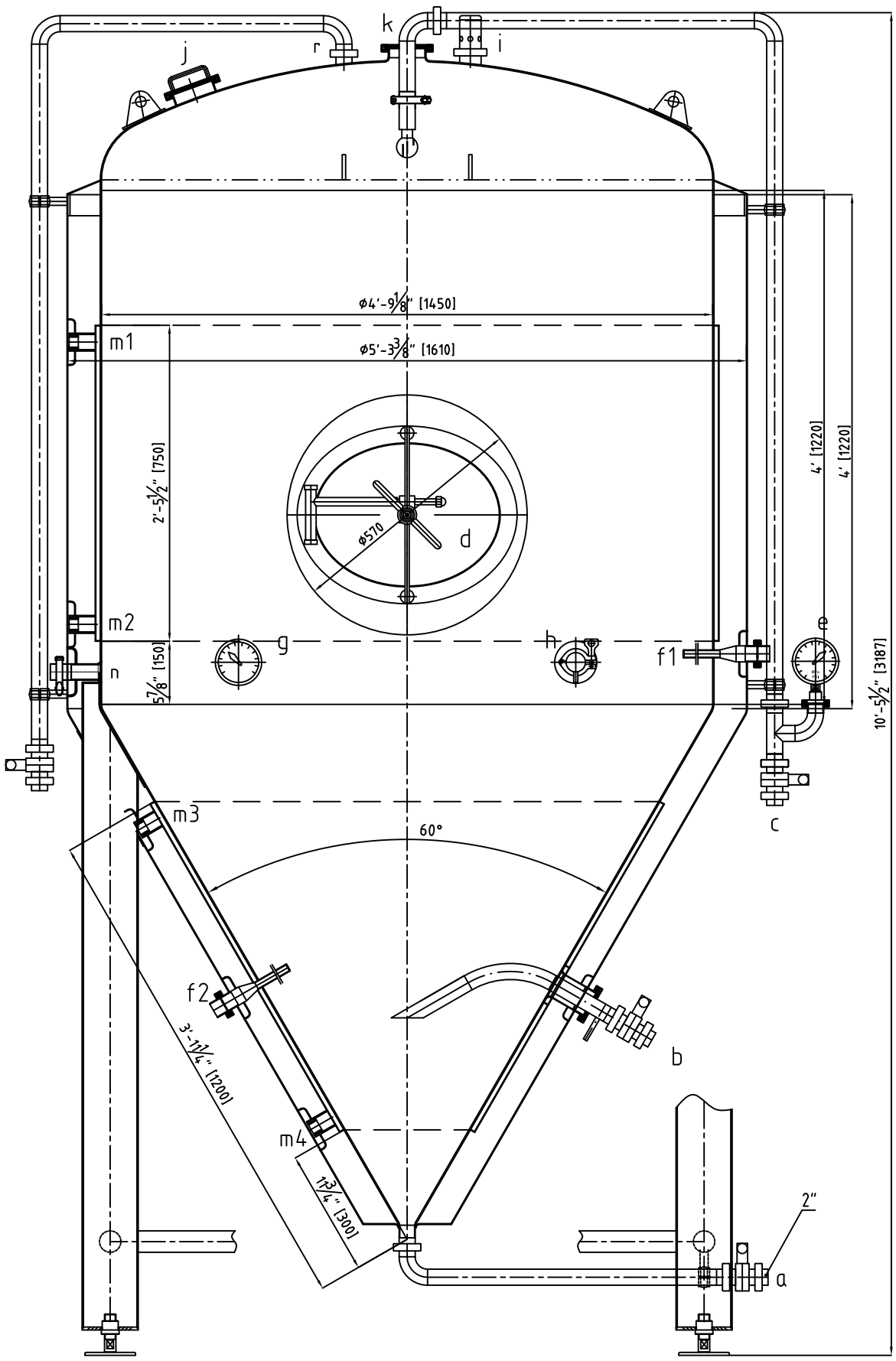
(Container class)		(Pressure)	
(Parameter Name)		(Container)	(Jacket)
(Working pressure)	MPa	0.2	0.3
(Design pressure)	MPa	0.2	0.4
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(Beer)	(Cooling)
(Material)		304	304
(Full volume)	BBL	6.228	
(Effective volume)	BBL	5	
(Maximum filling ratio)		80.3%	
(Safety valve ACt pressure)	MPa	0.2	
(Weight)	Kg		
(Insulation material)		(PU)	
(Insulation thickness)	mm	80	
(Pressure test)	MPa	0.2	0.6
(Air-tightness test)	MPa		

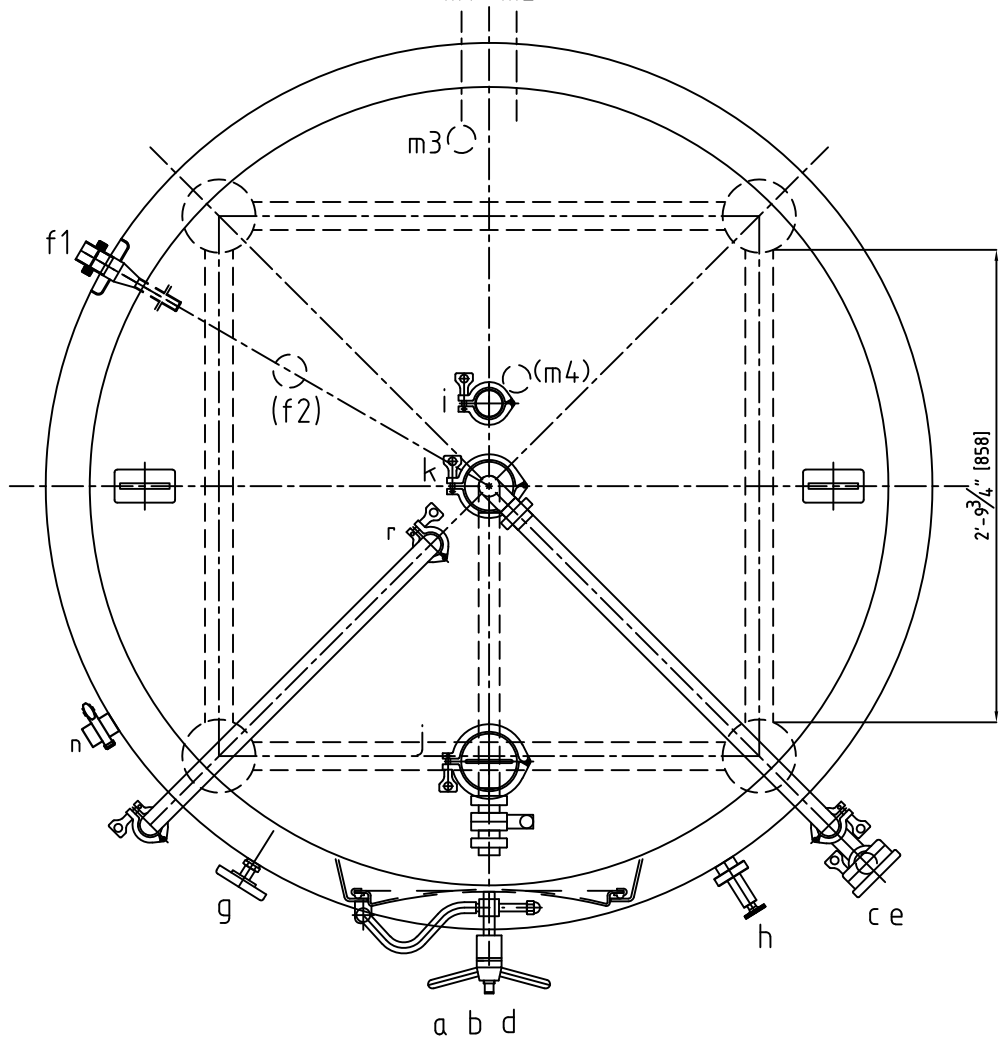
1. Shell welds shall be parallel to the inner wall, with double-sided welding shall be smooth, not having concave and convex edges and scratch, all interfaces with the inner cylinder welding arc light repair processing.
2. Head and polishing the surface, the inner cylinder body and the inner surface of cone 2B, cylinder and cone foreskin surface adopts mechanical drawing polishing processing.The inner surface of the cylinder body pickling and passivating treatment.
3. After the completion of the manufacture, equipment to 0.2MPa hydrostatic test, the inside of the jacket to the 0.5MPa hydraulic pressure test, pressure 30min, equipment is not lying testing water pressure test.

CONNECTION

MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARKS
a	1.5"	Yeast outlet	Φ38.1X1.5	Clamp
b	1.5"	Beer outlet	Φ38.1X1.5	Clamp
c	1.5"	CIP inlet	Φ38.1X1.5	Clamp
d	580X480	Manway	580X480X133	Weld
e	1.5"	Pressure gauge	Φ38.1X1.5	Clamp
f	1.5"	Thermowell	Φ38.1X1.5	Clamp
g	1.5"	Thermometer	Φ38.1X1.5	Clamp
h	1.5"	Sample cock	Φ38.1X1.5	Clamp
i	2"	PVRV	Φ50.8X1.5	Clamp
j	4"	Hop port	Φ101.6X2	Clamp
k	4"	Connection port	Φ101.6X2	Clamp
r	1.5"	CO2 collect	Φ38.1X1.5	Clamp
m1-8	3/4"	Coolant inlet/outlet	NPT3/4"	Thread

Design		Standard		AISI 304	ALPHA BREWING OPERATIONS
Drafting		Examine			
Examine		Approval		Phase marker / Weight (LBS) / Proportion	Fermentor-5BBL
Technology		Date		1160 / 1:1	FV-5BBL





(Design Data Sheet)

(Design parameters)

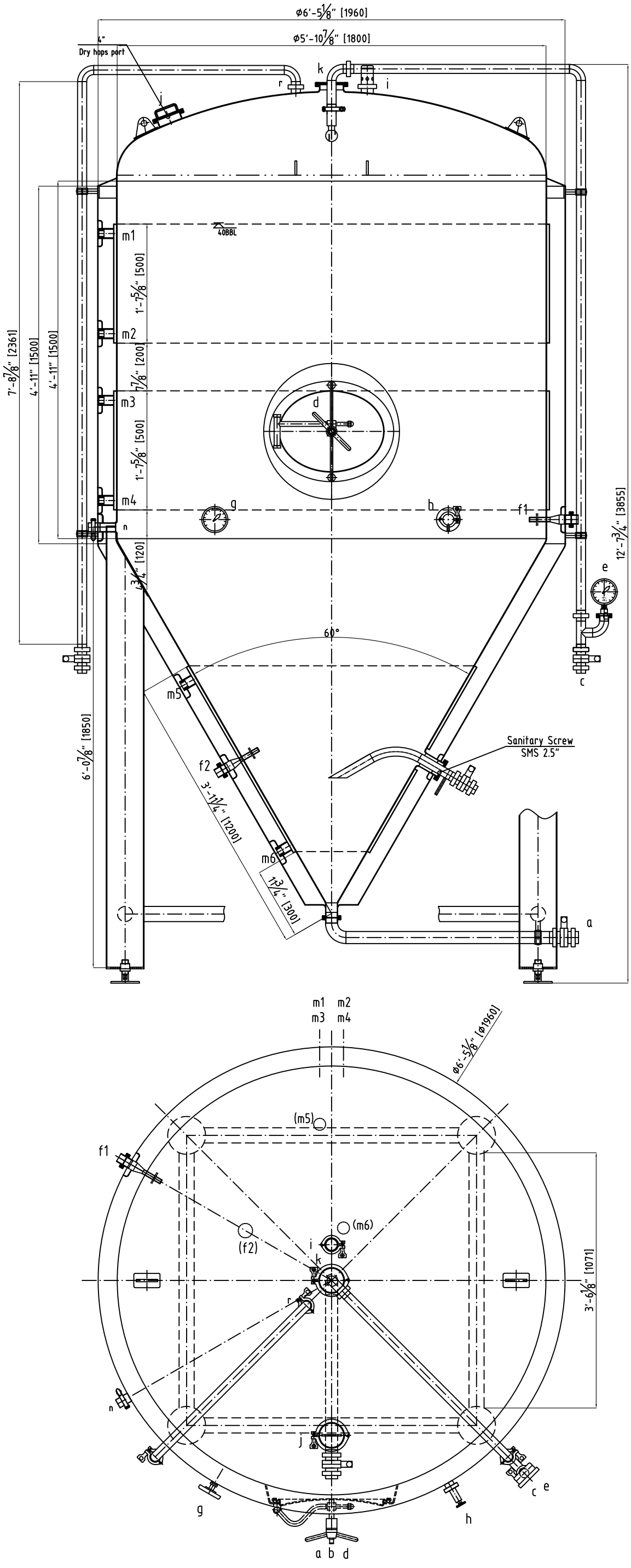
(Container class)		(Pressure)	
(Parameter Name)		(Container)	(Jacket)
(Working pressure)	MPa	0.2	0.3
(Design pressure)	MPa	0.2	0.4
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(Beer)	(Cooling)
(Material)		304	304
(Full volume)	BBL	25.992	
(Effective volume)	BBL	20	
(Maximum filling ratio)		76.9%	
(Safety valve ACt pressure)	MPa	0.2	
(Weight)	Kg		
(Insulation material)		(PU)	
(Insulation thickness)	mm	80	
(Pressure test)	MPa	0.2	0.6
(Air-tightness test)	MPa		

1. Shell welds shall be parallel to the inner wall, with double-sided welding shall be smooth, not having concave and convex edges and scratch, all interfaces with the inner cylinder welding arc light repair processing.
2. Head and polishing the surface, the inner cylinder body and the inner surface of cone 2B, cylinder and cone foreskin surface adopts mechanical drawing polishing processing.The inner surface of the cylinder body pickling and passivating treatment.
3. After the completion of the manufacture, equipment to 0.2MPa hydrostatic test, the inside of the jacket to the 0.6MPa hydraulic pressure test, pressure 30min, equipment is not lying testing water pressure test.

(CONNECTIONS)

MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARKS
a	2"	(Yeast outlet)	ϕ50.8X1.5	(Clamp)
b	1.5"	(Beer outlet)	ϕ38.1X1.5	(Clamp)
c	1.5"	(CIP inlet)	ϕ38.1X1.5	(Clamp)
d	580X480	(Manway)	580X480X133	(Weld)
e	1.5"	(Pressure gauge)	ϕ38.1X1.5	(Clamp)
f1-2	1.5"	(Thermowell)	ϕ38.1X1.5	(Clamp)
g	1.5"	(Thermometer)	ϕ38.1X1.5	(Clamp)
h	1.5"	(Sample cock)	ϕ38.1X1.5	(Clamp)
i	2"	(PVRV)	ϕ50.8X1.5	(Clamp)
j	4"	(hop port)	ϕ101.6X2	(Clamp)
k	4"	(Conection port)	ϕ101.6X2	(Clamp)
r	1.5"	(CO2 collect)	ϕ38.1X1.5	(Clamp)
n	1.5"	(CO2 Carb Stone)	ϕ38.1X1.5	(Clamp)
m1-4	3/4"	(Coolant inlet/outlet)	NPT3/4"	(Thread)

Design		Standard		AISI 304	ALPHA BREWING OPERATIONS
Drafting		Examine		Phase marker / Weight / Proportion	Fermentor-20BBL
Examine		Approval		660kg 1:1	FV-20BBL
Technology		Date			



(Design Data Sheet)

(Design parameters)

(Container class)		(Pressure)	
(Parameter Name)		(Container)	(Jacket)
(Working pressure)	MPa	0.1	0.3
(Design pressure)	MPa	0.2	0.4
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(Beer)	(COOLING)
(Material)		304	304
(Full volume)	BBL	49.277	
(Effective volume)	BBL	40	
(Maximum filling ratio)		81.2%	
(Safety valve ACt pressure)	MPa	0.2	
(Weight)	Kg		
(Insulation material)		(PU)	
(Insulation thickness)	mm	80	
(Pressure test)	MPa	0.1	0.6
(Air-tightness test)	MPa		

1. Shell welds shall be parallel to the inner wall, with double-sided welding shall be smooth, not having concave and convex edges and scratch, all interfaces with the inner cylinder welding arc light repair processing.
2. Head and polishing the surface, the inner cylinder body and the inner surface of cone 2B, cylinder and cone foreskin surface adopts mechanical drawing polishing processing.The inner surface of the cylinder body pickling and passivating treatment.
3. After the completion of the manufacture, equipment to 0.2MPa hydrostatic test, the inside of the jacket to the 0.6MPa hydraulic pressure test, pressure 30min, equipment is not lying testing water pressure test.

CONNECTIONS

MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARK
a	2"	Yeast outlet	ø50.8X1.5	Clamp
b	1.5"	Beer outlet	ø38.1X1.5	Clamp
c	1.5"	CIP inlet	ø38.1X1.5	Clamp
d	580X480	Manway	580X480X133	Weld
e	1.5"	Pressure gauge	ø38.1X1.5	Clamp
f1-2	1.5"	Thermowell	ø38.1X1.5	Clamp
g	1.5"	Thermometer	ø38.1X1.5	Clamp
h	1.5"	Sample valve	ø38.1X1.5	Clamp
i	2"	PVRV	ø50.8X1.5	Clamp
j	4"	Hop port	ø101.6X2	Clamp
k	4"	Connection port	ø101.6X2	Clamp
n	1.5"	CO2 Carb Stone	ø38.1X1.5	Clamp
r	1.5"	CO2 Collect	ø38.1X1.5	Clamp
m1-6	3/4"	Coolant inlet/outlet	NPT3/4"	Thread

						AISI 304		ALPHA BREWING OPERATIONS
Design			Standard			Phase marker	Weight / Proportion	Fermentor-40BBL
Drafting			Examine				970kg / 1:1	
Examine			Approval					FV-40BBL
Technology			Date					

CHILLER MODEL: GD-27H

230 Volt 1 Phase	
FLA	-
MCA	-
MOC	-

230 Volt 3 Phase	
FLA	122
MCA	133
MOC	178

460 Volt 3 Phase	
FLA	62
MCA	70
MOC	91

Dimensions[1]	48"W x 120"L x 81"H
Frame	Powder Coated Steel
Housing	Powder Coated Aluminum
Tank	230 Gallon Crosslinked Poly (PEX)
Compressor HP	13.5 (x2)
Condenser	Air-Cooled
Process Pump HP	5
GPM @ 25 PSI	150
Connection Size	2" CTS Flange
Chiller Pump HP	1.5
Heat Exchanger	Stainless Steel Brazed Plate
Controls	Multi Stage Digital

Electrical Enclosure	NEMA 3R
Shipping Weight	2500 lbs
Decibels @ 10'	70
Refrigerant	R404a

Cooling Capacity by Leaving Fluid Temperature [2]

LFT	Btu/H	kW
20 °F	155,822	45.7
30 °F	190,164	55.7
40 °F	228,386	66.9

[1] *Dimensions accurate for package chiller, remote condenser options will vary*

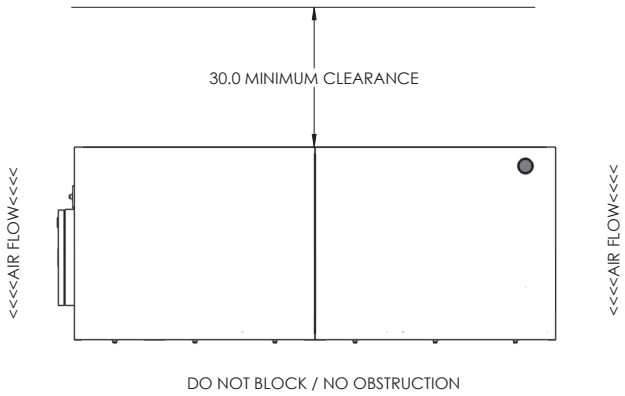
[2] *All capacities at 90 °F ambient*

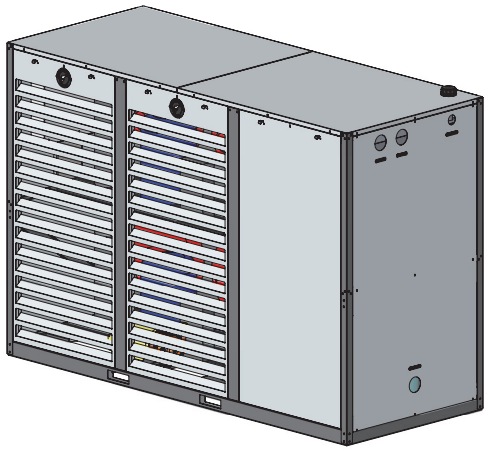
[3] *VFD available upon request*

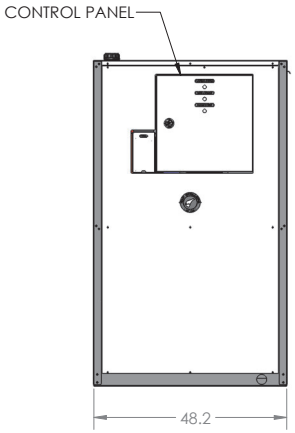
Chiller package consists of the following:

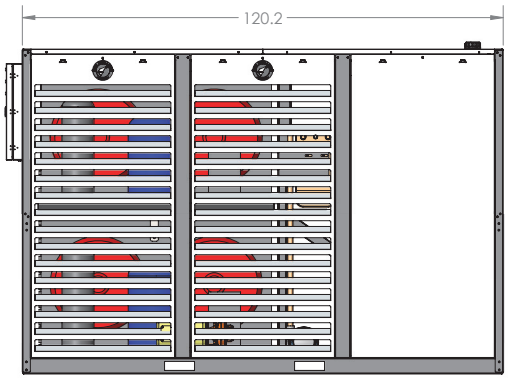
- Two complete refrigeration circuits
- Air-cooled condenser
- Process pump[3]
- Chiller pump
- Fluid bypass valve
- Freeze stat safety switch
- All insulated copper piping
- Powder coated steel frame
- Powder coated aluminum housing
- Digital temperature controller with alternating relay for equal runtime of each compressor
- Engineered high efficiency heat exchanger for maximum energy savings
- Insulated crosslinked polyethylene (PEX) glycol reservoir
- ETL (UL508) listed complete control panel with single point electrical connection, breakers, starters & safety switches
- CTS flange glycol supply and return connections
- Louvered aluminum access panels for easy service & maintenance
- Factory run tested and fully charged with refrigerant

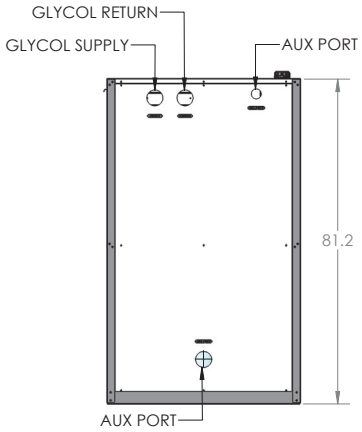
2 Year Parts and 1 Year Labor Warranty

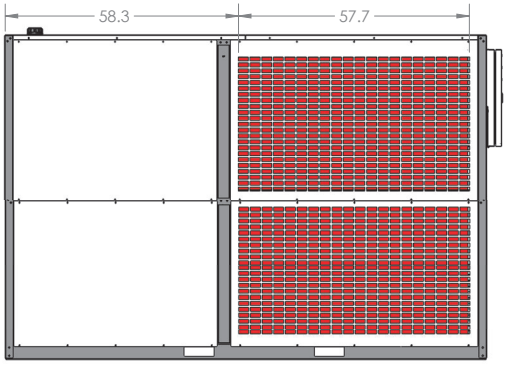












GD-20H/27H

STATIONARY CHILLER

G&D CHILLERS

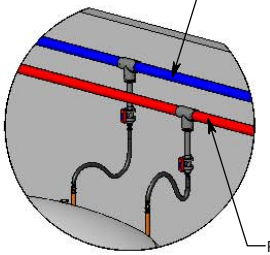
COMMITTED TO COLD

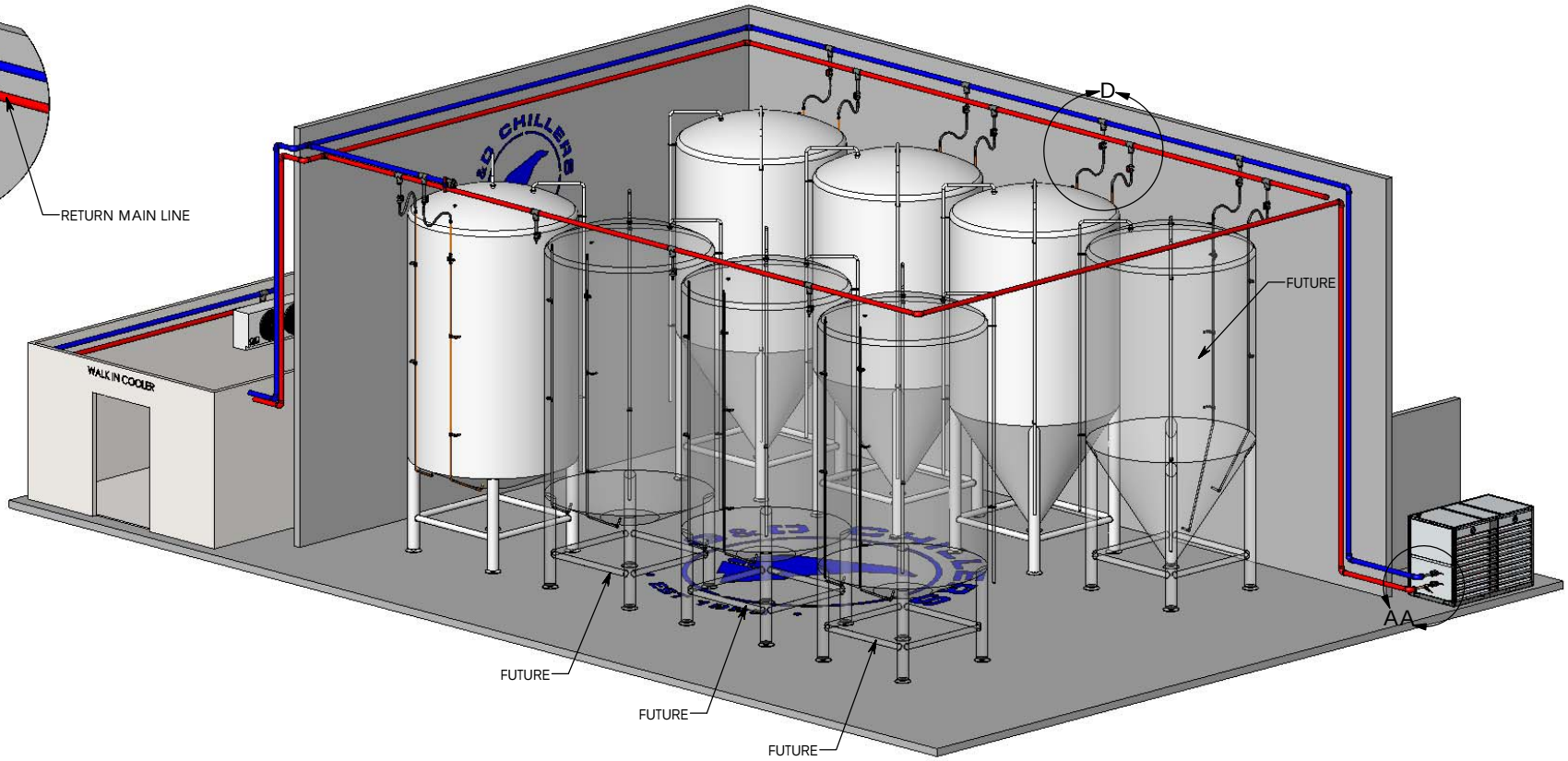
○ EST 1993 ○

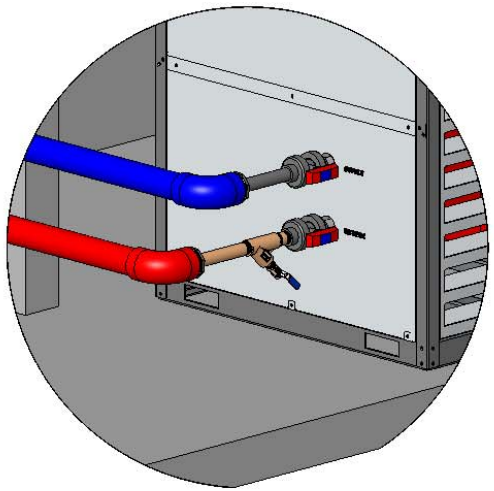
760 BAILEY HILL RD, EUGENE, OR 97402 - TEL (541) 345-3903 (800) 555-0973

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

DETAIL D
SCALE 1 : 34







DETAIL AA
SCALE 1 : 12

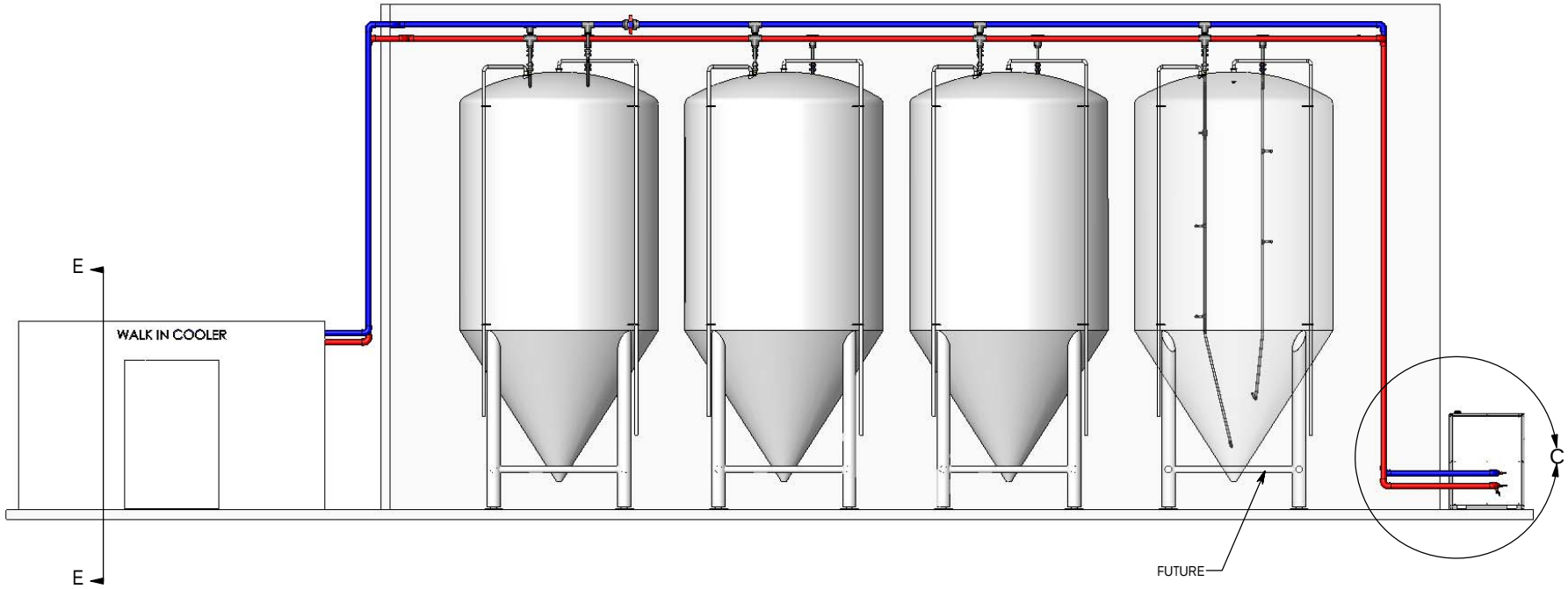
GENERAL PIPING LAYOUT

G&D CHILLERS

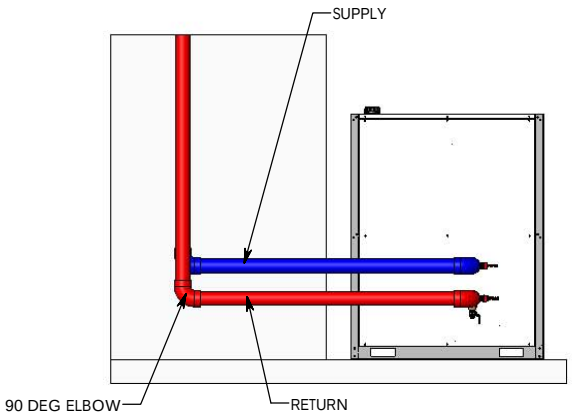
COMMITTED TO COLD

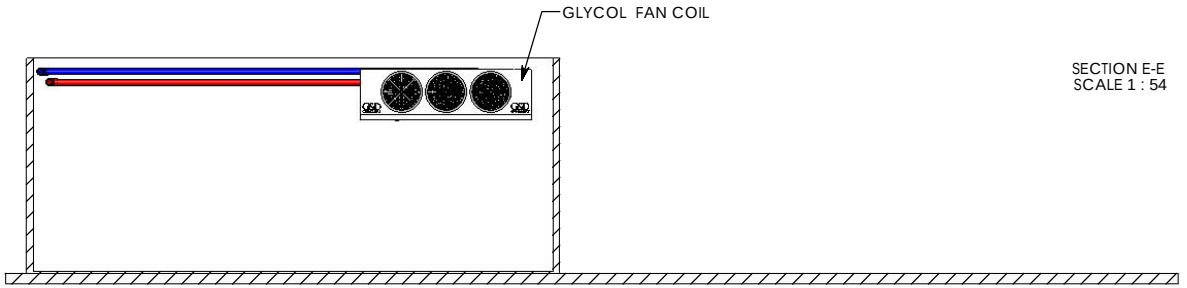
○ EST 1993 ○

3498 WEST FIRST, SUITE 1 EUGENE, OR 97402 - TEL (541) 345-3903 (800) 555-0973



DETAIL C
SCALE 1 : 24



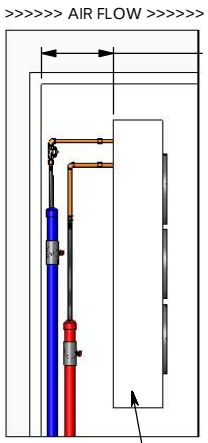


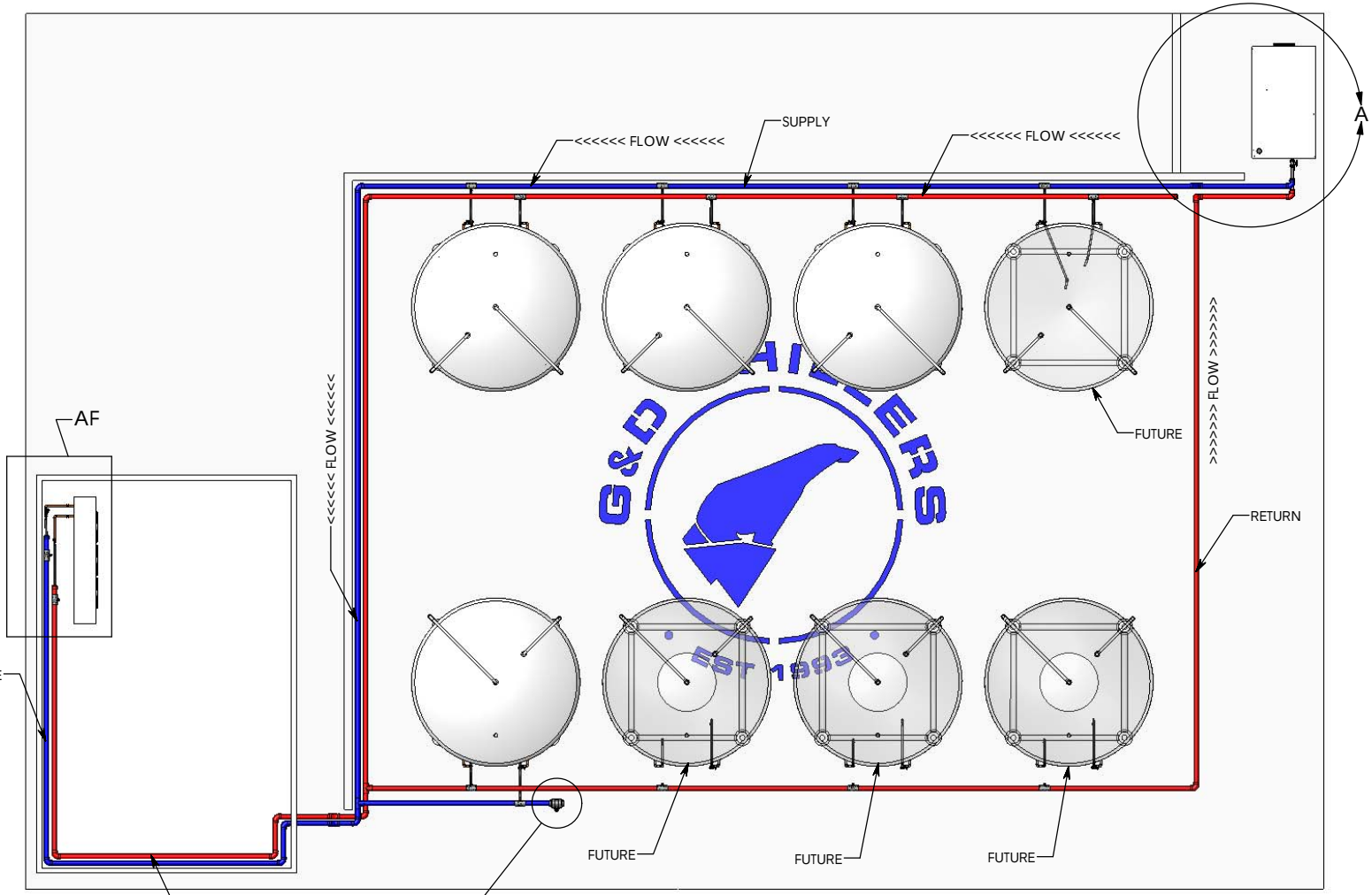
SECTION E-E
SCALE 1 : 54

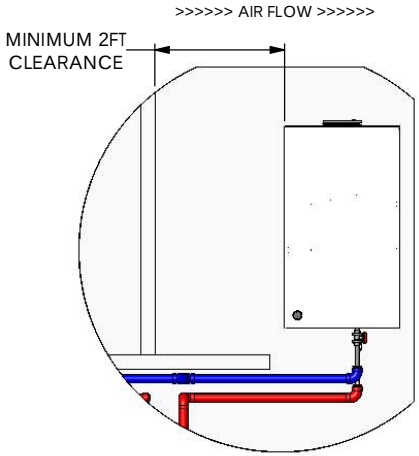
GENERAL PIPING LAYOUT

G&D CHILLERS
COMMITTED TO COLD
○ EST 1993 ○
3498 WEST FIRST, SUITE 1 EUGENE, OR 97402 - TEL (541) 345-3903 (800) 555-0973

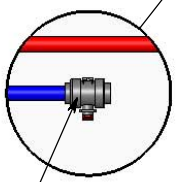
DETAIL AF
SCALE 1 : 32







DETAIL A
SCALE 1 : 40



DETAIL AG
SCALE 1 : 22

GENERAL PIPING LAYOUT

G&D CHILLERS

COMMITTED TO COLD

○ EST 1993 ○

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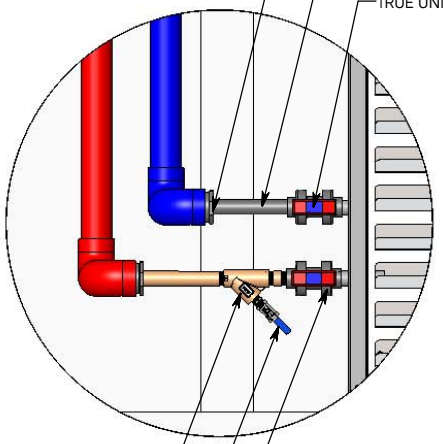
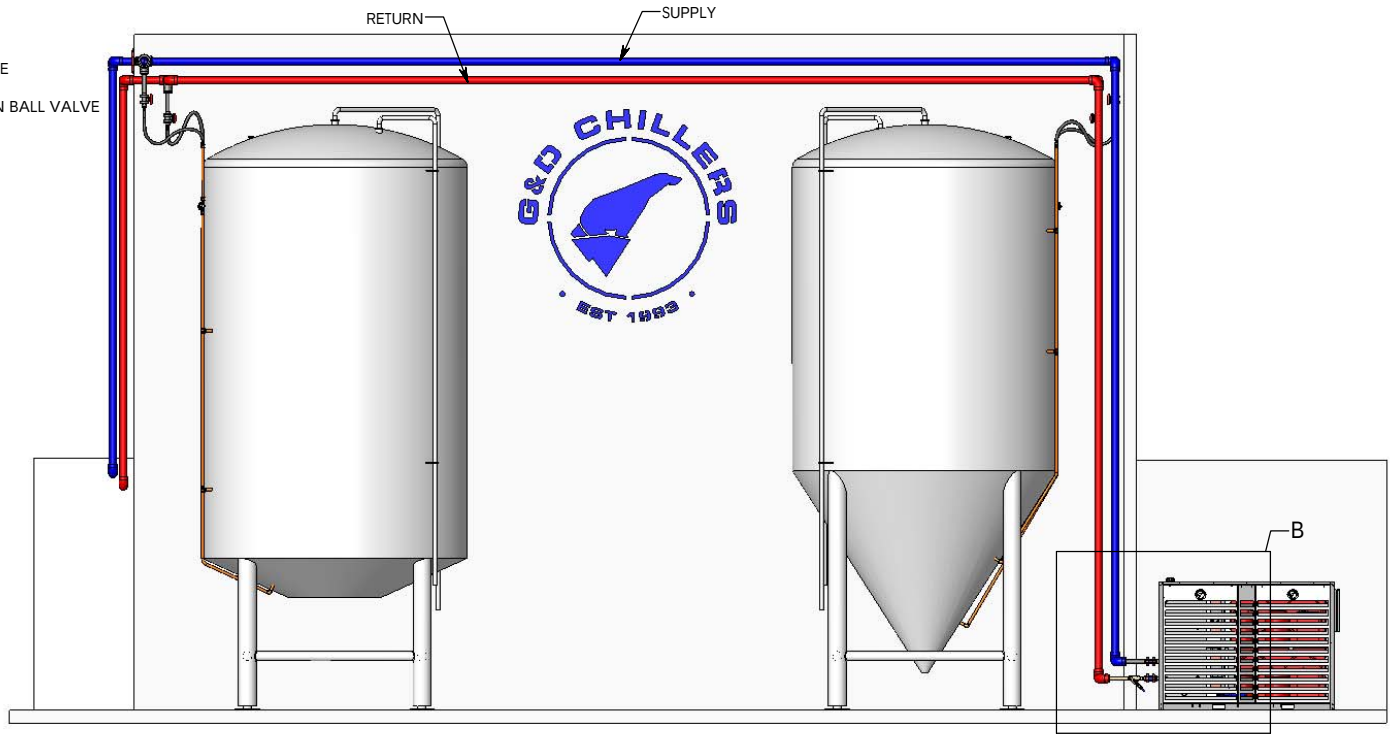
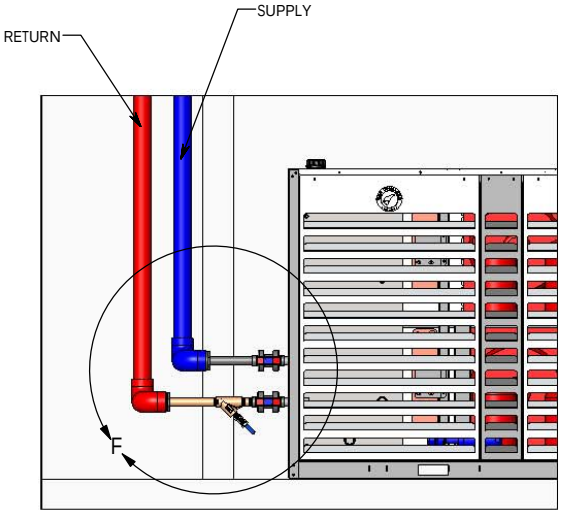
DETAIL F
SCALE 1 : 11







DETAIL B
SCALE 1 : 19

GENERAL PIPING LAYOUT

G&D CHILLERS

COMMITTED TO COLD

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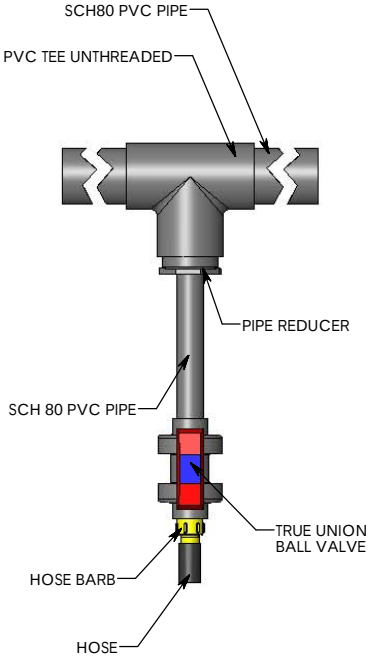
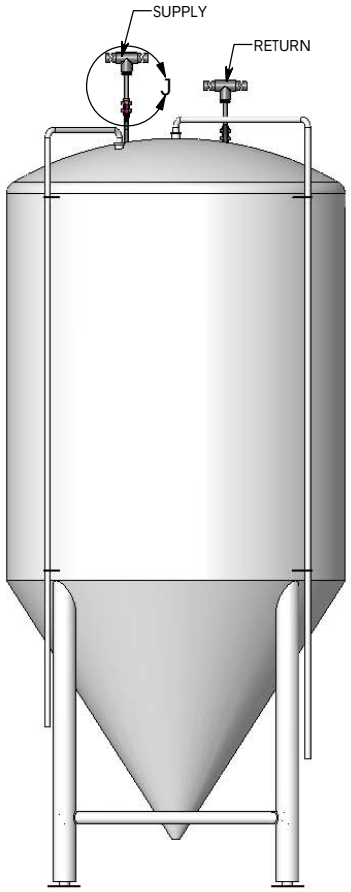
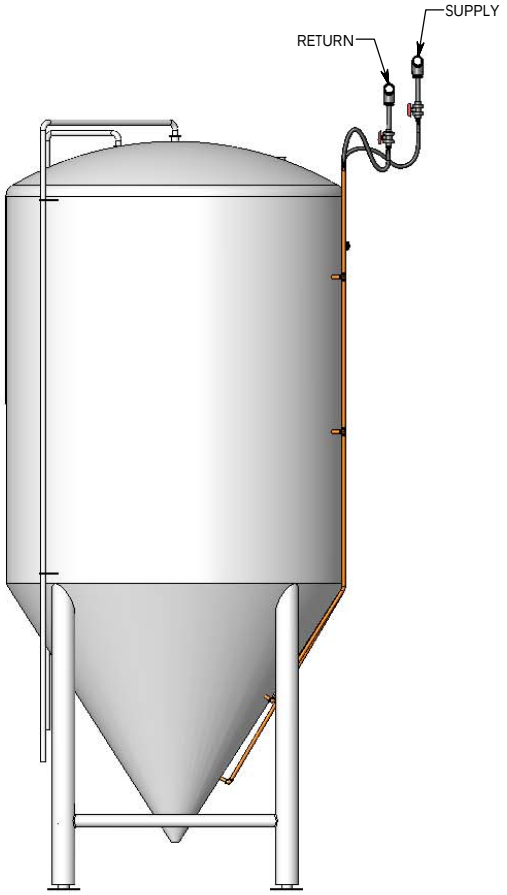
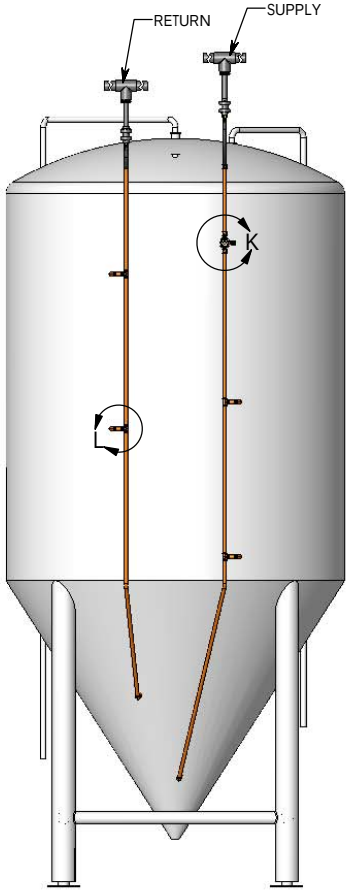
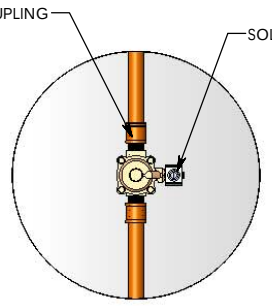
DETAIL J
SCALE 1 : 6



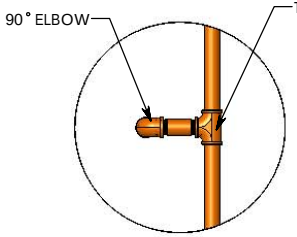








DETAIL K



DETAIL L

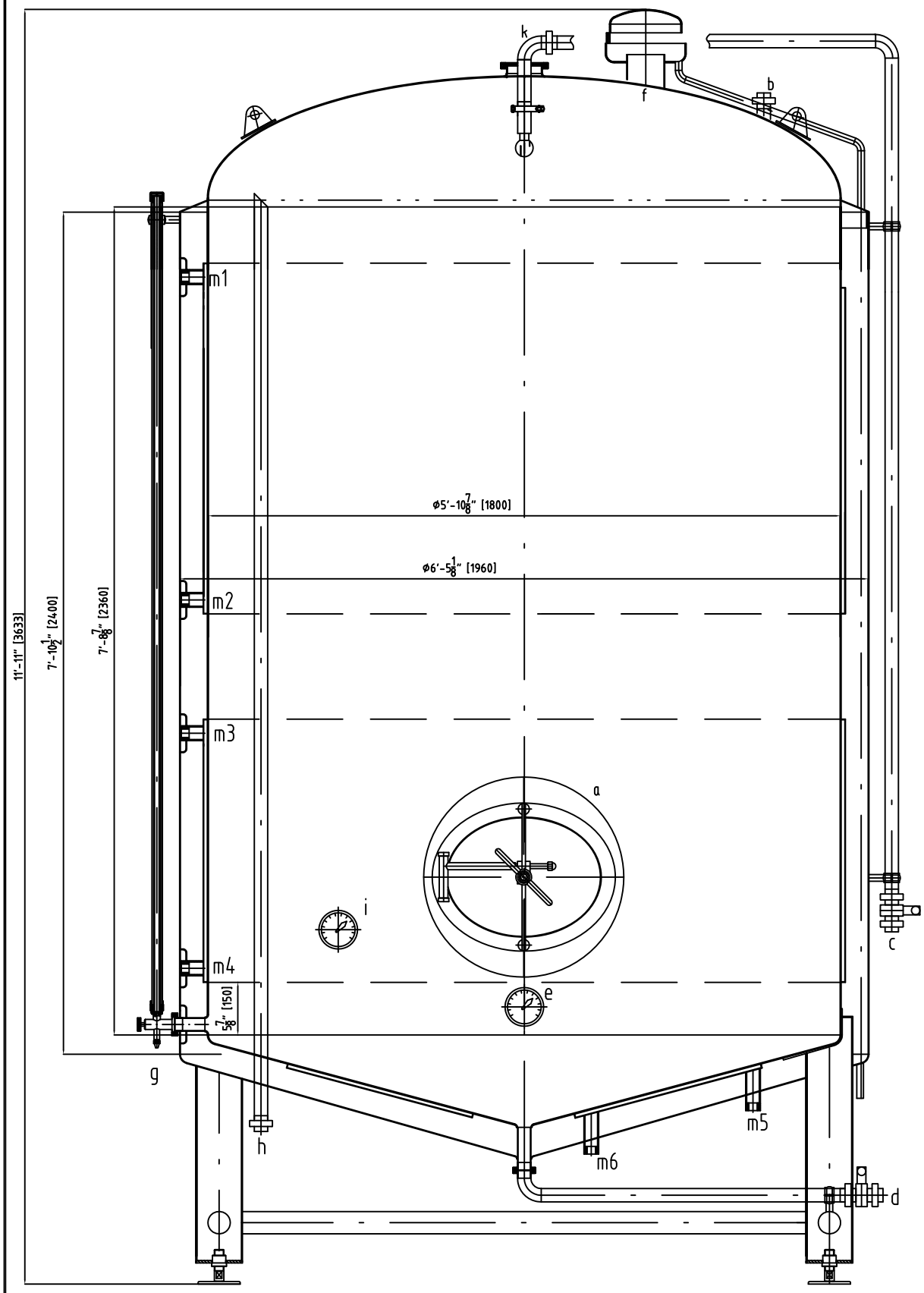
GENERAL PIPING LAYOUT

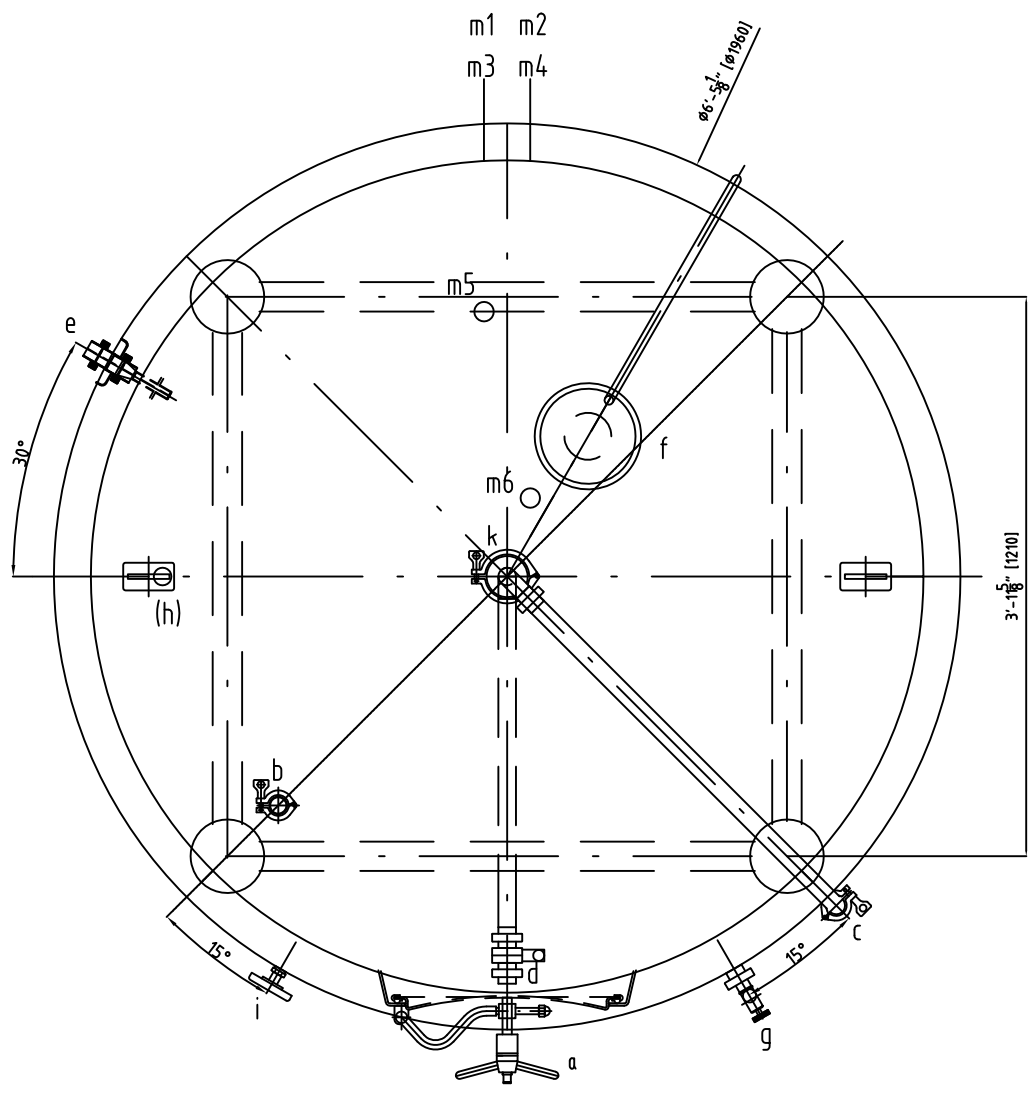
G&D CHILLERS

COMMITTED TO COLD

○ EST 1993 ○

3498 WEST FIRST, SUITE 1 EUGENE, OR 97402 - TEL (541) 345-3903 (800) 555-0973





(Design Data Sheet)

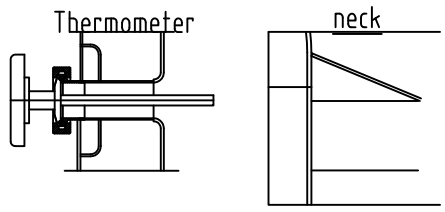
(Design parameters)

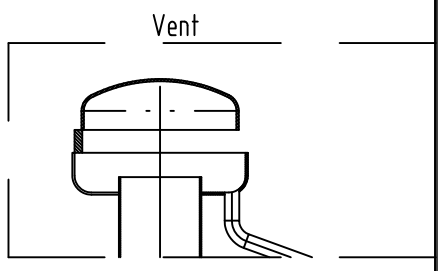
(Vessel Category)		(Pressure)	
(Description Of Parameter)		(Container)	(Jacket)
(Working pressure)	MPa		
(Design pressure)	MPa		
(Working Temperature)	℃	-5~40℃	
(Design Temperature)	℃	-5~40℃	
(Medium)		(water)	(Coolant)
(Material)		304	304
(Gross Volume)	BBL	59.162	
(Net Volume)	BBL	50	
(Maximum filling ratio)		81.68%	
(Safety valve ACt pressure)	MPa		
(Weight)	Kg		
(Insulation material)		(PU)	
(Insulation thickness)	mm	80	
(Hydraulic Test Pressure)	MPa		0.6
(Dry Check Pressure)	MPa		

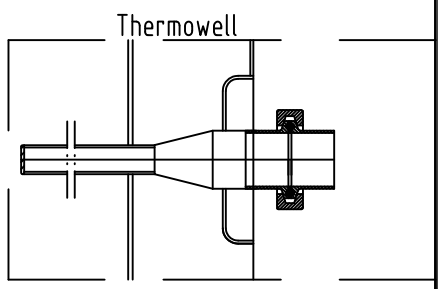
1. The inner wall of the welding seam shall be flat, use double-welding to ensure full welding,the welding seam on inner and outer surface shall be grinded.Concave-cover arris and scratch mark are not allowed. The inner surface of the cylinder,top dish and bottom cone shall be 2B.
2. After finishing constraction of tank, the inner surface of stainless steel should be pickled and passivated.
3. After finishing tank construction, do 2.0bar (meter pressure) water pressure test for tank, do 6.0bar (meter indicated) for jacket during 30 minutes. It is not allowed do water test with horizontal condition.

(CONNECTIONS)

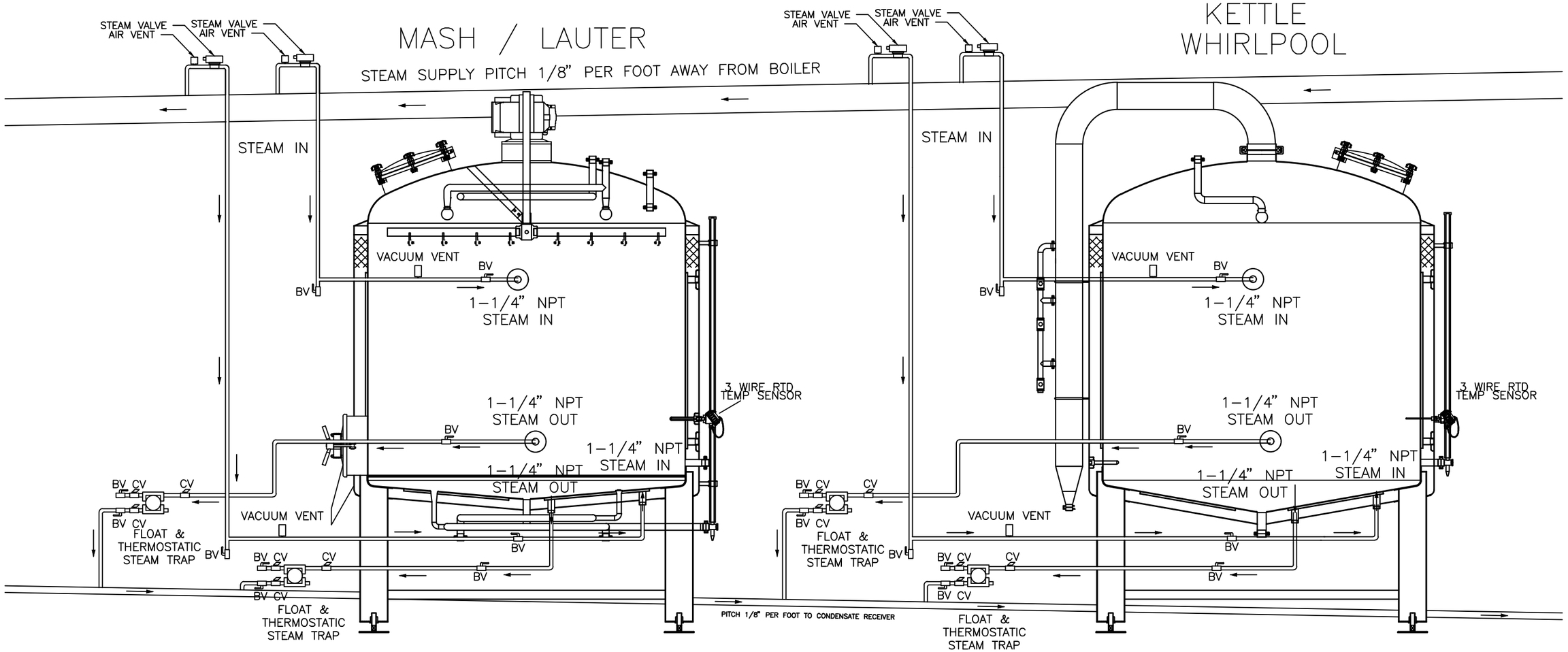
MARK	SIZE	DESCRIPTION	CONNECT SIZE	REMARKS
a	580X480	(Manway)	580X480X133	Weld
b	1.5"	(Water inlet)	ø38.1X1.5	(Clamp)
c	1.5"	(CIP inlet)	ø38.1X1.5	(Clamp)
d	1.5"	(sewage)	ø38.1X1.5	(Clamp)
e	1.5"	(Thermowell)	ø38.1X1.5	(Clamp)
f	4"	(Vent)	ø101.6X2	(Weld)
g	1.5"	(Level gauge mouth)	ø38.1X1.5	(Clamp)
h	1.5"	(Overflow)	ø38.1X1.5	(Clamp)
i	1.5"	(Thermometer)	ø38.1X1.5	(Clamp)
k	4"	(Connection)	ø101.6X2	(Clamp)
m1-6	NPT3/4"	(Steam inlet&outlet)	NPT3/4"	(Thread)







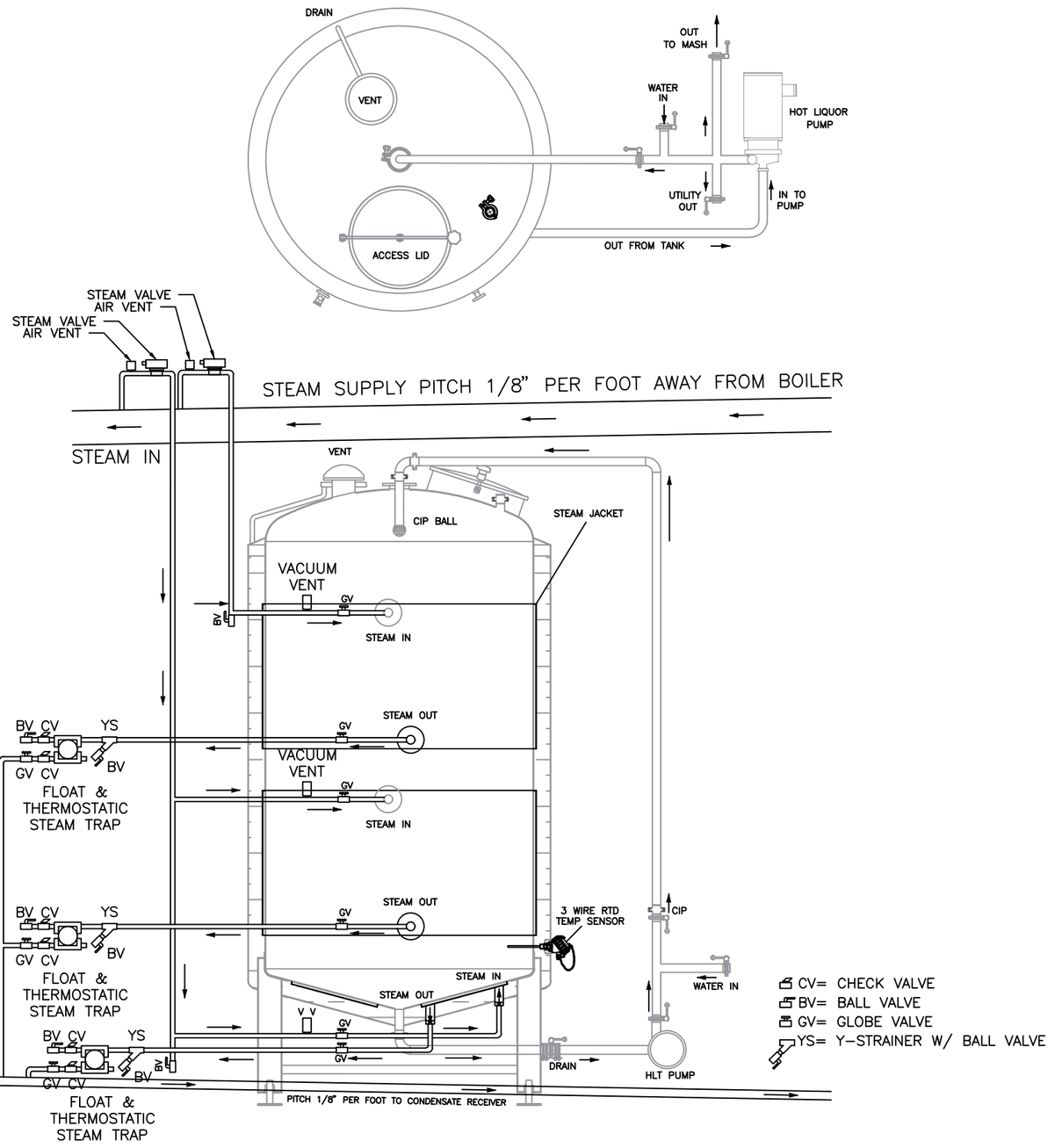
Design			Standard			AISI 304		ALPHA BREWING OPERATIONS
Drafting			Examine			Phase marker	LBS / Proportion	HLT-50BBL
Examine			Approval				2150 / 1:1	
Technology			Date					



STEAM FLOW SUPPLY REQUIREMENTS:

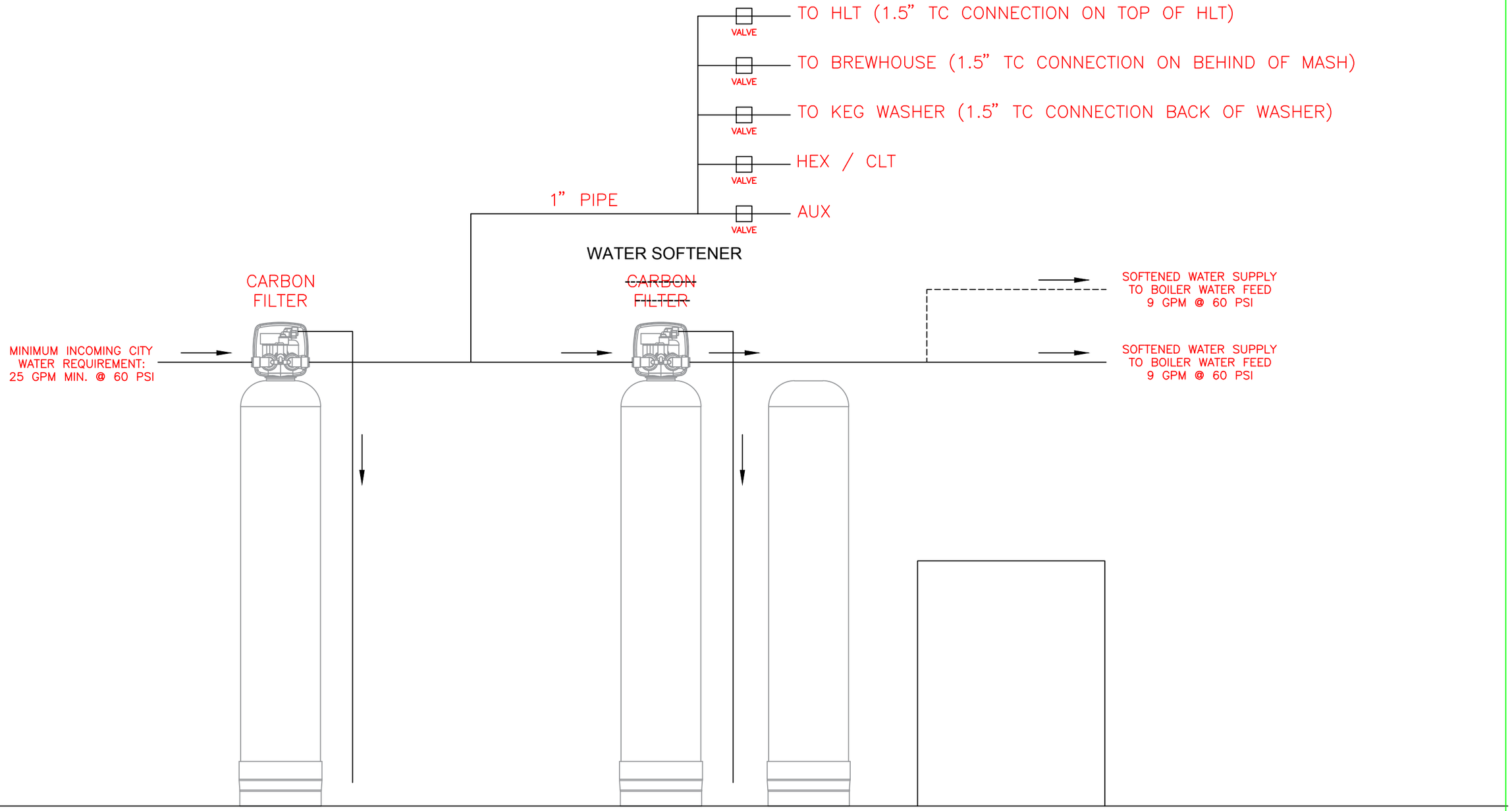
- 7BBL BREWHOUSE: 129 LBS/HR.
- 10BBL BREWHOUSE: 181 LBS/HR.
- 15BBL BREWHOUSE: 271 LBS/HR.
- 20BBL BREWHOUSE: 361 LBS/HR.
- 30BBL BREWHOUSE: 542 LBS/HR.

ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT	DWN BY WLS	CUSTOMER SIGNATURE:	DATE
PROPRIETARY DO NOT DUPLICATE		DESC BREWHOUSE STEAM PLUMBING	DATE



STEAM FLOW SUPPLY REQUIRMENTS:
-7BBL HLT: 72LBS/HR
-10BBL HLT: 89LBS/HR
-15BBL HLT: 133LBS/HR
-20BBL HLT: 178LBS/HR
-30BBL HLT: 267LBS/HR
-40BBL HLT: 356LBS/HR
-50BBL HLT: 445LBS/HR
-60BBL HLT: 533LBS/HR
-90BBL HLT: 800LBS/HR
NOTE: ALL FLOW RATES ASSUMING 12-14PSI OPERATING PRESSURE

ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT	DWN BY WLS	CUSTOMER SIGNATURE:	SHEET
PROPRIETARY DO NOT DUPLICATE		DESC TYPICAL HLT STEAM PLUMBING	DATE



ALPHA BREWING OPERATIONS — LEADING THE WAY IN CRAFT	DWN BY WLS	CUSTOMER SIGNATURE:	SHEET
PROPRIETARY DO NOT DUPLICATE		DESC WATER FILTRATION DIAGRAM	DATE 11/6/18