

**VILLAGE OF LAKE BLUFF  
ARCHITECTURAL BOARD OF REVIEW**

**TUESDAY, DECEMBER 6, 2016 – 7:00 P.M.**

**VILLAGE HALL BOARD ROOM  
40 E. CENTER AVENUE, LAKE BLUFF, ILLINOIS**

**AGENDA**

---

---

- 1. Call to Order and Roll Call**
- 2. Consideration of the October 4, 2016 Architectural Board of Review Meeting Minutes**
- 3. Non-Agenda Items and Visitors (Public Comment Time)**  
The Architectural Board of Review Chair and Board Members allocate fifteen (15) minutes during this item for those individuals who would like the opportunity to address the Board on any matter not listed on the agenda. Each person addressing the Architectural Board of Review is asked to limit their comments to a maximum of three (3) minutes.
- 4. A Public Hearing to Consider a Site Plan to Review Exterior Alterations to Install an Argon Tank and Alter a Dumpster Enclosure at 940 North Shore Drive**
- 5. Consideration of the 2017 Architectural Board of Review Meeting Schedule**
- 6. Staff Report**
  - **Next Regular Meeting – January 3, 2017 (1<sup>st</sup> Tuesday)**
- 7. Adjournment**

The Village of Lake Bluff is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities, are requested to contact R. Drew Irvin at 234-0774 or TDD number 234-2153 promptly to allow the Village of Lake Bluff to make reasonable accommodations.

**VILLAGE OF LAKE BLUFF  
ARCHITECTURAL BOARD OF REVIEW  
REGULAR MEETING  
OCTOBER 4, 2016**

**DRAFT MINUTES**

**1. Call to Order and Roll Call**

The meeting of the Architectural Board of Review (ABR) of the Village of Lake Bluff was called to order on October 4, 2016 at 7:00 p.m. in the Village Hall Board Room (40 E. Center Avenue) and the following were present.

Present:           Stephen Rappin  
                      Carol Russ  
                      John Sorenson  
                      Bob Hunter, Chair

Absent:           Neil Dahlmann  
                      Edward Deegan  
                      Matthew Kerouac

Also Present:   Mike Croak, Building Codes Supervisor (BCS)

**2. Consideration of the September 6, 2016 ABR Regular Meeting Minutes**

Member Russ moved to approve the minutes of the September 6, 2016 ABR meeting with corrections to the typographical errors. Member Rappin seconded the motion. The motion passed on a unanimous voice vote.

**3. Non-Agenda Items and Visitors (Public Comment Time)**

Chair Hunter stated the ABR Chair and Board Members allocate fifteen minutes during this item for those individuals who would like the opportunity to address the Board on any matter not listed on the agenda.

There were no request to address the ABR.

**4. Consideration of a Sign Permit for Lifesource at 223 Waukegan Road**

Chair Hunter introduced the agenda item and invited Mr. Gary Demma, of Bright Signs and Awnings, the sign contractor for Lifesource, to the podium.

Mr. Demma stated the existing Lifesource wall sign is in disrepair and the request is to replace it with a new slightly smaller wall sign with white lettering and the Lifesource logo. Mr. Demma reviewed the materials for the project noting it will be LED lighting and a low voltage power supply.

Chair Hunter asked for comments from the commissioners.

Member Russ expressed her concern regarding the position of the sign. Mr. Demma stated it is difficult to center the sign on the building due to the confined space. Member Russ stated the new sign would look dignified and had no further questions.

Members Rappin and Sorenson had no comments.

Chair Hunter stated the requested signage complies with the sign code for that particular property.

Member Russ asked the Petitioner to remove all the debris from the existing signage and color the building appropriately.

Member Sorenson moved to approve the signage with the condition that it be centered appropriately on the building. Member Rappin seconded the motion. The motion passed on following roll call vote:

Ayes: Rappin, Sorenson, Russ and Chair Hunter  
Nays: None  
Absent: Dahlmann, Deegan and Kerouac

**5. A Public Hearing to Consider a Site Plan to Install a Generator at 925 Sherwood Drive**

Chair Hunter introduced the agenda item and invited Dr. Tina Venetos of North Shore Dermatology to the podium.

Dr. Venetos stated the request is to install a generator on the east side of their building between the driveway and the building just north of the electrical service. The existing bushes will be used to screen the generator and additional vegetation will be added if needed.

In response to a question from Member Sorensen, Dr. Venetos stated currently the building does not have a generator.

Member Russ expressed her concern regarding the appearance of the COMED equipment located near the building.

After a discussion, Member Rappin moved to recommend the Village Board approve a site plan to install a generator at 925 Sherwood Drive as presented. Member Sorenson seconded the motion. The motion passed on the following roll call vote:

Ayes: Sorenson, Russ, Rappin and Chair Hunter  
Nays: None  
Absent: Dahlmann, Deegan and Kerouac

**6. Staff Report**

BCS Croak reported the next regular meeting will be on November 1, 2016.

**7. Adjournment**

There being no further business to consider and upon a motion duly made and seconded, the meeting was adjourned.

Respectfully submitted,

Mike Croak, CBO, CBCO  
Building Codes Supervisor

## VILLAGE OF LAKE BLUFF

### Memorandum

**TO:** Chairman Hunter and Members of the Architectural Board of Review

**FROM:** Mike Croak, Building Codes Supervisor

**DATE:** December 2, 2016

**SUBJECT:** **Agenda Item #4 -- A Public Hearing to Consider a Site Plan to Review Exterior Alterations to Install an Argon Tank and Alter a Dumpster Enclosure at 940 North Shore Drive**

---

GPI performs 3D printing in the building at 940 North Shore Drive. The process uses argon which is currently stored in a small tank indoors. They have two dumpster enclosures behind the building, a small one against the building wall by the rear door and a larger one in the northwest corner of the lot.

They would like to replace the existing indoor argon tank with a somewhat larger outdoor tank. They propose to move the existing small trash enclosure away from the back wall of the building so that the new argon tank can be placed between the trash enclosure and the building.

The new tank will be 9'-9" tall. The color will be polished stainless steel. The tank and the dumpster enclosure will be screened by a 6' chain link fence with brown slats that will match the fences currently in place on the existing dumpster enclosures.

### Recommendation:

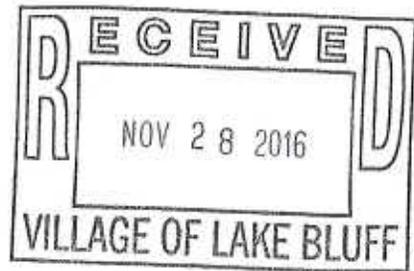
It is recommended the ABR conduct a public hearing to consider the site plan, appropriately question the Petitioner as needed, entertain public comments and questions from the petitioner and make one of the following recommendations regarding the site plan:

- Recommend that the Village Board approve the proposed site plan as presented or with conditions;
- Recommend that the Village Board deny the proposed site plan; or
- Request the petitioner to provide additional information for the ABR's consideration.

Jon Green, owner of GPI, and Village Staff will be in attendance at Tuesday's meeting to respond to questions from the ABR. If you should have any questions regarding this matter, please feel free to contact me at 847-283-6885.

### Attachments:

- Application and Drawings



VILLAGE OF LAKE BLUFF  
SITE PLAN REVIEW APPLICATION

Address of Project: 940 N Shore Dr  
Applicant: GPI Prototype and Manufacturing  
Mailing Address: 940 N Shore Dr  
Contact Individual for Project: Jon Green  
Telephone: 847-615-8900 Email Address: jon@gpianatomicals.com

**APPLICATION REQUIREMENTS**

Any applicant seeking site plan approval shall submit to the Village Administrator, or his designee, 13 copies of each of the following documents listed below plus a non-refundable application fee of \$300.00 (see current fee schedule) plus an amount determined by the Village Administrator to reimburse the Village for all anticipated out of pocket expenses incurred in connection with the delivery of notice pursuant to this section.

- o A **survey** showing existing conditions including buildings, structures, trees over four inches in trunk diameter, streets, utility easements, rights-of-way, land use, and other data required by the Lake Bluff Subdivision Ordinance.
- o A **site plan** showing proposed building locations and land use areas, sidewalks, pedestrian walks, parking lot and walkway lighting, signage, and site plan amenities. The location of garbage and refuse collection points, mail pick-up points, and loading areas shall also be specified.
- o A **vehicle and traffic parking plan** for access location, access geometric, onsite traffic circulation and parking areas.
- o **Preliminary drawings** for buildings to be constructed, including floor plans, exterior elevations and sections, building materials, and a color, three dimensional rendering thereof.
- o **Preliminary engineering plans** and engineering feasibility studies including: lighting; street improvements; drainage system; sewer system; and Public utility extensions. All requirements of the Lake Bluff Subdivision Ordinance must be fully complied with, including but not limited to construction of underground electrical and telephone service.
- o **Preliminary landscape plans**, including site grading, irrigations, and landscape design.
- o **Streetscape elevation plans** with regard to property in the CBD or R-5 district showing elevations for neighboring buildings and structures.

**Note:** In addition to the paper submission, please email a copy of the drawings to Mike Croak, Building Codes Supervisor, at [mircroak@lakebluff.org](mailto:microak@lakebluff.org).

**NOTICE:** All materials must be received by the Village at least 20 days prior to the meeting date. The applicant/Architect or their designee must attend the review meeting. The Architectural Board of Review generally meets the first Tuesday of each month at 7:00 p.m. in the Village Hall Board Room (40 E. Center Avenue).

November 28, 2016

Village of Lake Bluff  
RE: GPI Prototype & Manufacturing Permit Request  
940 N Shore Dr.  
Lake Bluff, IL 60044

To the Permitting Office:

The following requests permit for GPI Prototype & Manufacturing to install a 3000L Cryogenic Argon tank on the outside of their facility. This installation will follow pertinent NFPA, CGA and OSHA guidelines for installing an inert cryogenic vessel. Please review this plan, the corresponding attachments, and approve or comment as necessary.

**Narrative of Operation and Use of the Proposed Tank and Its Contents:**

- The proposed 3000 Liter Cryogenic Storage system will hold liquid argon that will be boiled into gas within the head space of the tank. From this head pressure in the tank, the customer can draw gaseous argon at a max pressure of 450 PSI through the final line regulation assembly mounted next to the tank. The final line regulation assembly will be set at approximately 110 psi for the customer use. Both the cryogenic holding tank and final line assembly have 500 MAWP pressure safeties to ensure that neither the tank nor subsequent usage lines exceed the published safety ratings. Please see the attached sheets for the Chart Permacyl and CTR regulation assembly for detailed mechanical working diagrams for these items.
- PLEASE NOTE: All proposed systems work under pressure and ambient heat. No electrical components are needed for the storage and usage of the product.

**Details about installation of Liquid Argon tank (Attachments):**

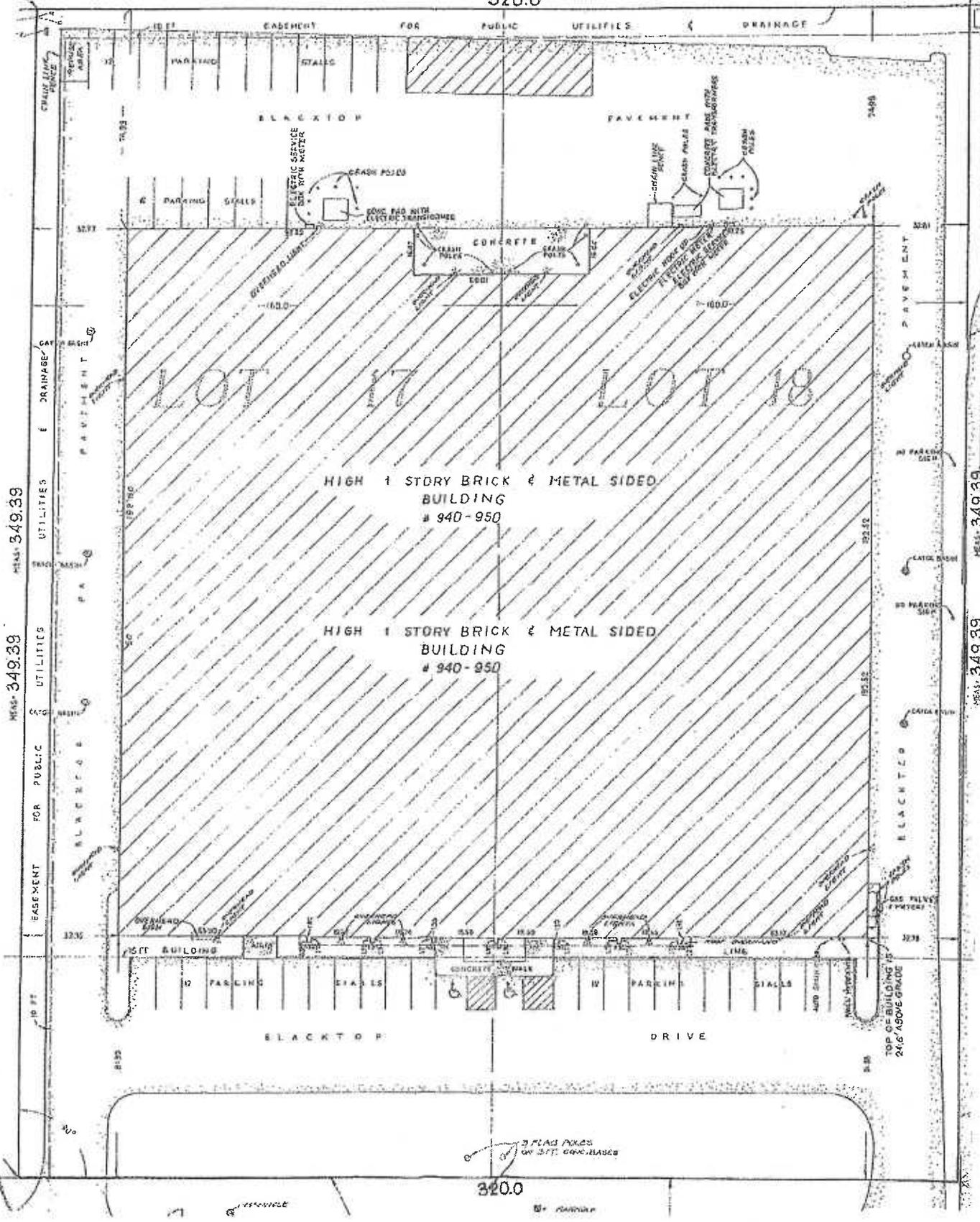
- Plat of Surveys
- Over Head Pictures of Area
- Chart 3000L Permacyl Data Sheet w/ mechanical operations chart
- CTR Final Line Regulation Assembly Data Sheet
- Tank Pad Print w/ State of Illinois Structural Stamp
- MBP1 – Pad Installation Procedure
- MBP2 – Standard Bollard Detail
- MBE1 – Tank Anchoring Procedure
- Refrigerated Argon Safety Data Sheet

Please review these documents and respond with any further questions or requests. I am more than happy to meet to discuss this project in person or discuss over the phone.

Thank you.

Jake Downs  
Bulk Gas Sales Specialist  
C: (224) 500-0000  
[jake.downs@airgas.com](mailto:jake.downs@airgas.com)

320.0



MEAS- 349.39

MEAS- 349.39

320.0



GPI Prototype & Manufacturing...

940 N Shore Dr, Lake Bluff, IL 60044



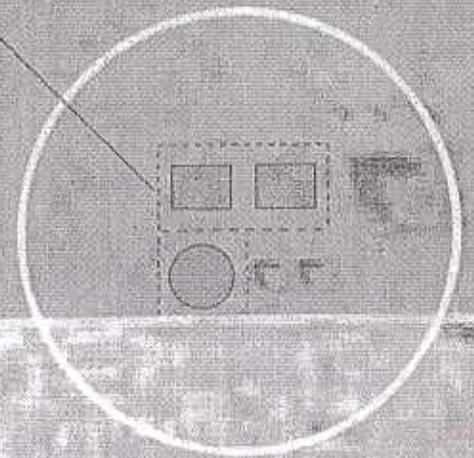
Dr

N Shore Dr

N Shore Dr

N Shore Dr

Proposed area of development



**GPI Prototype &  
Manufacturing...**

940 N Shore Dr, Lake Bluff, IL 60044

# PERMA-CYL® 3000 HP

HIGH PRESSURE - HIGH CAPACITY

---

The innovative Perma-Cyl® 3000HP is the latest addition to the Perma-Cyl product line of fast fill at-site MicroBulk storage vessels. Designed for configuration to any gas application, the Perma-Cyl 3000HP is flexible to supply service from low pressure liquid nitrogen to high pressure, high flow gas supply. The relief valve setting is 350 psig (24.1 barg), and with our industry-exclusive *configure to order* plumbing you can build your own Perma-Cyl 3000HP to meet your distribution practice and your customer's needs economically.

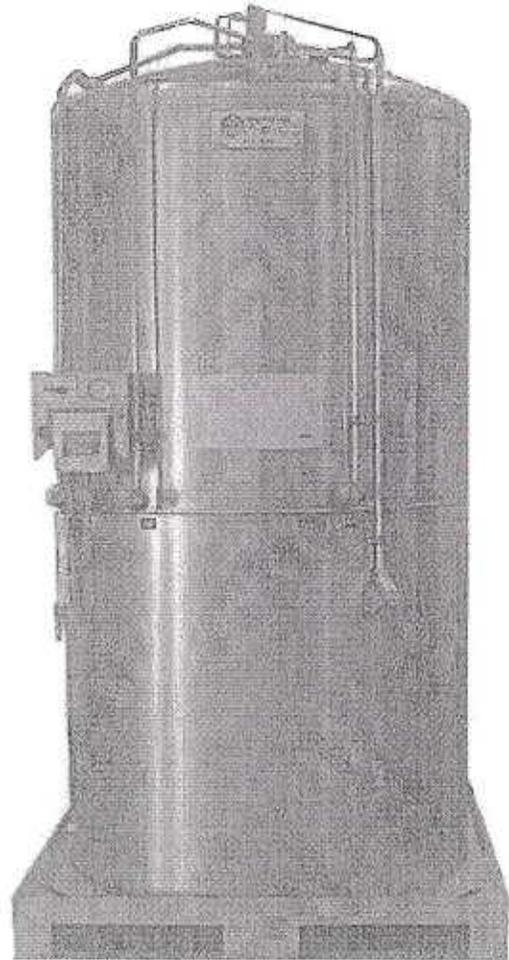
The Perma-Cyl 3000HP comes with all the standard Perma-Cyl features. Alternatively, this model can be supplied with a vacuum-insulated bottom withdrawal connection in the *configure to order* process, keeping the lead time to a minimum.

When filled with the Orca® delivery system, the Perma-Cyl 3000HP is designed for a safe automatic shut-off with no filling losses under normal operating conditions. The Perma-Cyl series is designed to store liquefied gas contents for long periods of time without venting – thus, limiting product losses during periods with little or no use.

## PRODUCT HIGHLIGHTS

---

- Fast accurate fills
  - Automatic fill shut-off works with Orca delivery system
  - Top fill circuit to optimize fill time
- Cyl-Tel® contents gauge
  - Digital and accurate
  - Telemetry ready for Onsite® and Data Online™
  - Built-in user-selectable scales
- Easy to use instruments and controls
  - Located at user height
  - Single-adjustment metered combo regulator
  - Isolation valves for regulator and level gauge
- Long-life low-maintenance
  - Stainless steel piping and outer vessel
  - Heavy-duty galvanized pallet base
- Any application - Any time
  - Choice of configurations to meet customer needs
  - Easy low-cost installation – outdoors or indoors (local codes permitting)
  - Service: N<sub>2</sub>/Ar/O<sub>2</sub>/CO<sub>2</sub>
  - VIP/MVIP/Python option for LN<sub>2</sub>
  - Optional external pressure builder/vaporizer



Pat. No. 6,799,429



Innovation. Experience. Performance.™

# PERMA-CYL® 3000 HP

HIGH PRESSURE - HIGH CAPACITY

| <b>CAPACITIES</b>                               |                       |                        |
|---|-----------------------|------------------------|
| Gross Volume                                    | 770 gal               | 2911 liters            |
| Net Volume                                      | 715 gal               | 2707 liters            |
| Gas Storage Capacity (@ 1 Atm & 58° F / 20° C)* |                       |                        |
| Oxygen  | 82,239 scf            | 2161 Nm <sup>3</sup>   |
| Nitrogen  | 66,592 scf            | 1750 Nm <sup>3</sup>   |
| Argon   | 80,425 scf            | 2115 Nm <sup>3</sup>   |
| Carbon Dioxide                                  | 52,954 scf            | 1390 Nm <sup>3</sup>   |
| <b>GENERAL SPECIFICATIONS</b>                   |                       |                        |
| Relief Valve Setting / MAWP                     | 350 psi               | 24.1 bar               |
| Overall Height w/ Piping                        | 117 in                | 2970 mm                |
| Width w/ Lab Base                               | 61 in                 | 1549 mm                |
| Tank Diameter                                   | 59 in                 | 1499 mm                |
| Tare Weight                                     | 4500 lbs              | 2045 kg                |
| <b>PERFORMANCE</b>                              |                       |                        |
| Normal Evaporation Rate (% per day)**           |                       |                        |
| Nitrogen  | 1%                    | 1%                     |
| Oxygen & Argon                                  | 0.62%                 | 0.62%                  |
| Gas Supply Rate                                 | 1350 scfh             | 35.4 Nm <sup>3</sup> H |
| High-Flow Option (side mount)                   | 2000 scfh             | 52.4 Nm <sup>3</sup> H |
| <b>CONSTRUCTION</b>                             |                       |                        |
| Design & Manufacturing Code                     | ASME Sec. VIII Div. 1 |                        |
| Outer Vessel                                    | Type 304 SS           |                        |

Footnotes: Specifications subject to change without prior notice.

Patents: 5,787,942 • 5,954,101 • 6,799,429.

\*Values are based on net capacity at 0 psig (0 barg). See page 15 of Chart's MicroBulk Systems Product Catalog (P/N 11926802) for conversion densities.

\*\*Values are based on gross volume.

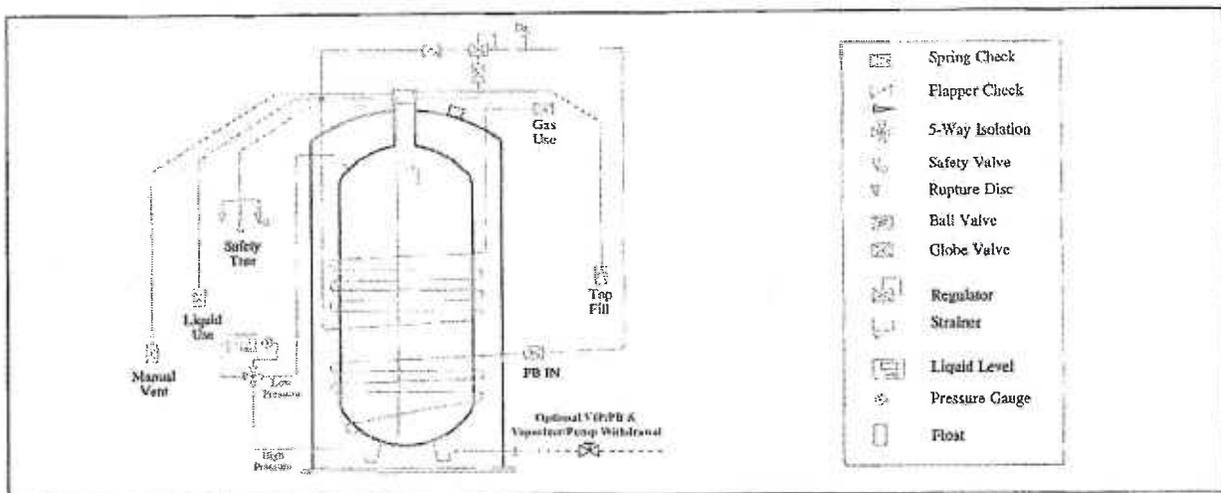
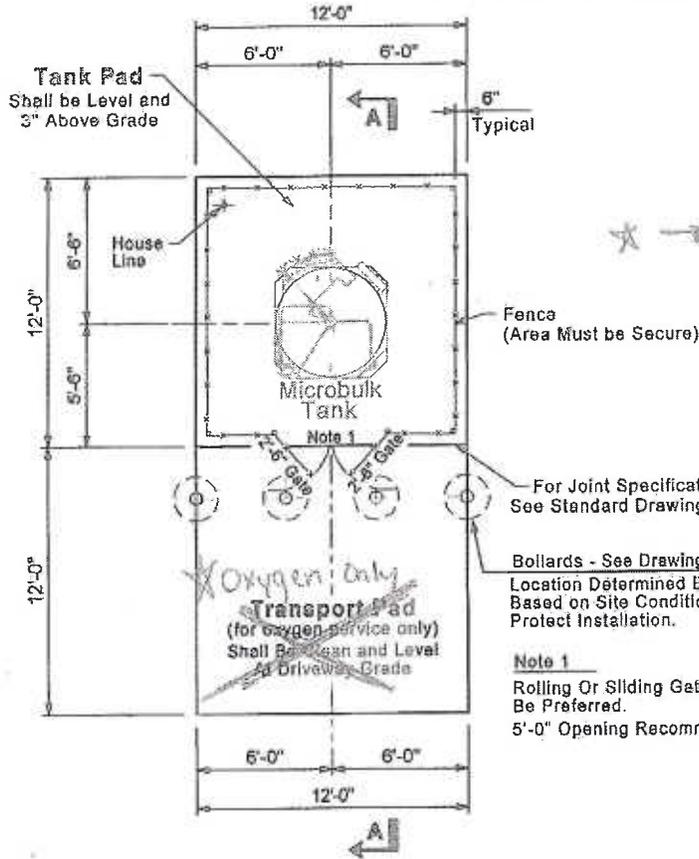


Chart Inc.  
U.S.: 800-400-4683  
Worldwide: 952-758-4484



© 2009 Chart Inc.  
P/N 14302325  
www.chart-ind.com

## CONCRETE PAD INSTALLATION DETAILS FOR PERMA-CYL MICROBULK SYSTEMS WITH OXYGEN MODELS 2000L and 3000L (IBC OCCUPANCY CATEGORY 1 OR 2)



### APPROXIMATE TANK DIMENSIONS & CAPACITIES FOR PERMA-CYL MICROBULK SYSTEMS

| Model | Height | Tank Diameter<br>Width | Net Cap.<br>Liters | Weight<br>Empty | Weight<br>Full O <sub>2</sub> |
|-------|--------|------------------------|--------------------|-----------------|-------------------------------|
| 2000L | 9'-9"  | 4'-0"                  | 1945               | 2600 *          | 7500                          |
| 3000L | 10'-2" | 4'-11"                 | 2707               | 3300 *          | 10,200                        |

\* Weights do not include lab base option (base option: 285 lbs.)

### Pad Specifications

Concrete: 4000 PSI @ 28 Days.  
Reinforcing: ASTM A516 Grade 60  
Soil Bearing Capacity: 2000 PSF (minimum)

### Pad Dimensions and Reinforcing:

Tank Pad: 12'-0" x 12'-0" x 10" Thick  
#5 at 12" On Center Each Way  
3" Bottom Clearance

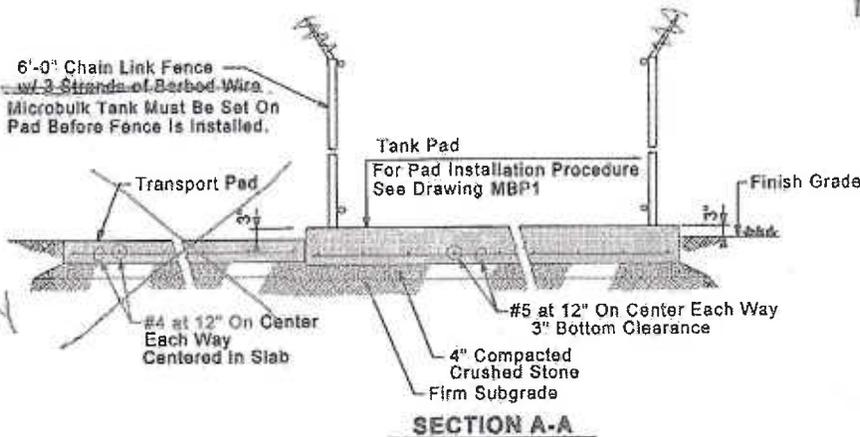
Transport Pad: 12'-0" x 12'-0" x 6" thick  
#4 at 12" On Center Each Way  
Centered In Slab

Work This Drawing With 2015 Versions of  
Airgas National Microbulk Standard Drawings:

MBP1- Pad Installation Procedure  
MBP2- Standard Bollard Detail

MBE1- Tank Anchoring Procedure

### Location of Gate and Orientation of Equipment to Suit Site



This Drawing Prepared For  
Precision Metals  
1209 W Capitol Dr.  
Addison, Illinois 60101  
Project No. 16216



Depending upon exposure, this installation meets the standards set in National Fire  
Protection Association booklet #55 and O.S.H.A. regulation 1910.104.

Pad Design Parameters: (Based Upon The International Building Code - 2012)  
Soil Type D, Ultimate Wind Speed = 115 mph, Risk Category = 2, Exposure = C  
Seismic: 0.2 Sec. Spectral Response Acceleration of 15% gravity

Issued By \_\_\_\_\_ Date \_\_\_\_\_

### CONFIDENTIAL NOTICE

This document and the designs, specifications and engineering information disclosed hereon are the proprietary property of the Airgas company providing it and are not to be disseminated or reproduced without the prior express written consent of such Airgas company. This proprietary document is being sent in confidence and only for consideration of the matter herein. In accepting the loan of this document, recipient agrees to keep it and the matter disclosed hereon in confidence and shall not use or permit their use in any way detrimental to any Airgas companies. The Airgas companies accept no responsibility for the use of this document by any recipient, this document is only for illustrative purposes.

Tank Pad For Microbulk Oxygen Systems  
National Standard  
For Industrial Use

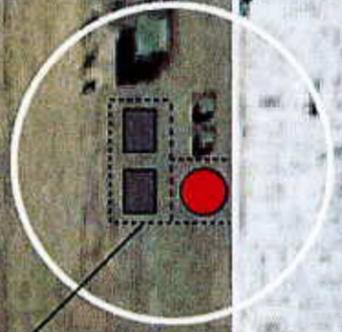
# Proposed Argon Tank Location



Dumpster in NW corner to remain as is.



Proposed area of development



GPI Prototype & Manufacturing...

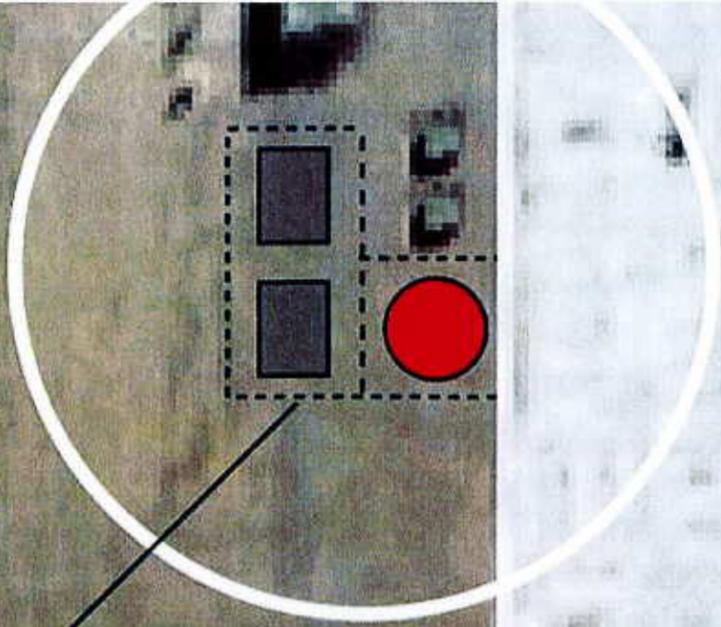
940 N Shore Dr, Lake Bluff, IL 60044

N Shore Dr

N Shore Dr

N St

Proposed area of development



**GPI Prototype &  
Manufacturing...**

940 N Shore Dr, Lake Bluff, IL 60044

## **NOTICE**

**SCHEDULE OF THE REGULAR MEETINGS  
ARCHITECTURAL BOARD OF REVIEW  
VILLAGE OF LAKE BLUFF  
LAKE COUNTY, ILLINOIS**

### **2017**

PUBLIC NOTICE IS HEREBY GIVEN that the regular meetings of the ARCHITECTURAL BOARD OF REVIEW of the Village of Lake Bluff, Lake County, Illinois, during the year 2017 will be held at 7:00 P.M. in the Lake Bluff Village Hall, 40 East Center Avenue, Lake Bluff, Illinois on the following dates:

|            |             |
|------------|-------------|
| January 3  | July 11*    |
| February 7 | August 1    |
| March 7    | September 5 |
| April 4    | October 3   |
| May 2      | November 7  |
| June 6     | December 5  |

***\* Meetings are scheduled for the first Tuesday of the month, except for the July meeting which is the second Tuesday due to the 4<sup>th</sup> of July holiday.***

This schedule is subject to change as the Architectural Board of Review of the Village of Lake Bluff shall determine and as the law shall allow. These meeting dates will only be used as needed. All such meetings shall be open to the public, except as to those the Village of Lake Bluff shall determine to hold in private and which the law shall allow to be held in private.

---

Mike Croak  
Building Codes Supervisor

Notice of this schedule given this \_\_\_ day of December, 2016.