



CELEBRATING OVER 35 YEARS OF SERVICE TO OUR CLIENTS

LIZABETH M. MACDONALD
JOHN J. RATIGAN
DENISE A. POULOS
ROBERT M. DEROSIER
CHRISTOPHER L. BOLDT
SHARON CUDDY SOMERS
DOUGLAS M. MANSFIELD
KATHERINE B. MILLER
CHRISTOPHER T. HILSON
HEIDI J. BARRETT-KITCHEN
JUSTIN L. PASAY
ERIC A. MAHER
CHRISTOPHER D. HAWKINS
ELAINA L. HOEPPNER
WILLIAM K. WARREN
BRIANA L. MATUSZKO
ALI GENNARO

RETIRED
MICHAEL J. DONAHUE
CHARLES F. TUCKER
ROBERT D. CIANDELLA
NICHOLAS R. AESCHLIMAN

March 21, 2024

Phyllis Eldridge, Chair
Zoning Board of Adjustment
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

RE: Lonza Biologics
101 International Drive, Tax Map 305, Lot 6
LU-23-108

Dear Chair Eldridge and Board Members:

By this letter we are notifying the Board that we are withdrawing the above application which is scheduled to be heard on March 26, 2024. We anticipate resubmitting the application in the near future.

If you have any questions or require additional information do not hesitate to contact me.

Very truly yours,
DONAHUE, TUCKER & CIANDELLA, PLLC

Justin L. Pasay
JLP/sac

cc: Lonza Biologics
Tighe & Bond
Pease Development Authority

4883-1886-8137, v. 2

DONAHUE, TUCKER & CIANDELLA, PLLC
16 Acadia Lane, P.O. Box 630, Exeter, NH 03833
111 Maplewood Avenue, Suite D, Portsmouth, NH 03801
Towle House, Unit 2, 164 NH Route 25, Meredith, NH 03253
83 Clinton Street, Concord, NH 03301



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HAND DELIVERED

February 27, 2024

Phyllis Eldridge, Chair
Zoning Board of Adjustment
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

RE: Lonza Biologics
101 International Drive, Tax Map 305, Lot 6

Dear Chair Eldridge and Board Members:

Enclosed please find supporting materials to accompany the information submitted via the City’s on-line permitting system requesting variance relief to permit the installation at the above referenced property of four (4) above ground fuel tank which exceeds the maximum permitted capacity of 2,000 gallons per PDA 308.02(c).

We respectfully request that this matter be placed on the Board’s March 19, 2024 agenda. In the meantime, if you have any questions or require additional information do not hesitate to contact me.

Very truly yours,
DONAHUE, TUCKER & CIANDELLA, PLLC

Justin L. Pasay
JLP/sac
Enclosures

cc: Lonza Biologics
Tighe & Bond
Pease Development Authority

4883-1886-8137, v. 1

DONAHUE, TUCKER & CIANDELLA, PLLC
16 Acadia Lane, P.O. Box 630, Exeter, NH 03833
111 Maplewood Avenue, Suite D, Portsmouth, NH 03801
Towle House, Unit 2, 164 NH Route 25, Meredith, NH 03253

83 Clinton Street, Concord, NH 03301

VARIANCE APPLICATION FOR
Lonza Biologics, Inc. (“**Lonza**” or the “**Applicant**”) for property located at 101 International Drive (City Assessor Map 305, Lot 6) (the “**Property**”).

The Applicant seeks a variance from Section 308.02(c) of the Pease Development Authority’s (“PDA”) Land Use Controls to permit four (4) above ground storage (fuel) tanks (“ASTs”), each of which exceeds the maximum 2,000-gallon capacity pursuant to Section 308.02(c), at the Property. As detailed below, the ASTs will support generators which will back-up the Central Utility Building (the “CUB”) and the Vertex Building recently approved for fit-up by the City’s Planning Board and already under construction at the Property. See Enclosure 1 (Planning Board Notice of Decision dated 22 November 2023). The Applicant requests that the City’s Board of Adjustment recommend approval of the Applicant’s variance request to the PDA’s Board of Directors pursuant the process outlined in Section 317.03 of the PDA’s Land Use Controls. The Applicant anticipates that the PDA Board of Directors will vote to authorize the Applicant to appear before the Board of Adjustment’s 19 March 2024 meeting, at the PDA Board’s 14 March 2024 meeting.

A. Factual Context

The Property, which is leased by Lonza from the PDA, is 46.03 acres in size and is located onboard the PDA within the Airport, Business and Commercial Zoning District. The Property has frontage along International Drive and Corporate Drive and is the location of Lonza’s Portsmouth facility.

In January of 2019, the City’s Planning Board approved, among other things, Lonza’s Site Plan Review application for the construction of three proposed industrial buildings, a parking garage, the CUB, as well as paving, lighting, utility, landscaping, drainage and associated site improvements for the Property, which approval was slightly amended by the PDA in August of 2019 and again in January of 2023 (collectively referred to as the “Phase 1 Approval”). The Phase 1 Approval permitted the construction of the shells for both Building 1 and the CUB, which construction work began in the late summer of 2023.

As detailed in **Enclosure 1**, in November 2023, Lonza obtained Amended Site Plan approval for Phase 2 of the Project from the City’s Planning Board which includes the fit-up of Building 1 and the CUB as well as the construction of a temporary surface parking lot and gravel area for construction trailers, parking and laydown area in the location of Proposed Building #2. See Enclosure 2 (approved Phase 2 Overall Site Plan).

Building #1 will be utilized by Vertex Pharmaceuticals Incorporated (“Vertex”) for a groundbreaking cell therapy manufacturing facility (hereinafter referred to as the “Vertex Building”). The Vertex Building will support the development and commercialization of the Vertex type 1 diabetes cell therapy portfolio. As detailed in a 30 August 2023 press release from Lonza (see Enclosure 3), the Vertex Building, which will be operated by Lonza, is being built adjacent to Lonza’s existing Portsmouth facility, will span more than 130,000 square feet, and is anticipated to generate up to 300 new jobs at peak capacity. Id.

As depicted on **Enclosure 2**, the Vertex Building and the CUB will be located in the central area of the so-called Iron Parcel portion of the Property, northwest of Lonza's existing facilities. See Enclosure 4 (aerial view of the Property); **Enclosure 5** (City Assessor Map 305).

Like nearly all buildings within Lonza's operations, the Vertex Building and the CUB must be supported by emergency generators to ensure protection of the sensitive and important operations and processes that will be occurring inside the buildings in the event of an electrical outage. As a result, the Applicant proposes installing four (4) CAT 3516C diesel generators (the "Generators") with corresponding ASTs, two to serve the CUB and two to serve the Vertex Building. The location of the four (4) new generators and ASTs, as well as the locations of all other generators in use by Lonza at the Property, are depicted on **Enclosure 6**. Details of the Generators and ASTs can be found in **Enclosure 7**, which includes specifications and other information for both.¹

The Generators and the ASTs will be located on the interior of the Property and meet all applicable setback requirements. See Enclosure 6. They will also observe and conform to the requirements of all applicable regulations, to include NFPA 30, the Flammable and Combustible Liquids Code, and they will require additional State approvals before operation. See also Enclosure 8, which includes two photographs of the proposed Generator and AST sites.

Section 308.02(c) of the PDA Land Use Controls prohibits ASTs, to include fuel tanks, with capacities greater than 2,000 gallons. As the proposed ASTs to serve the Generators will have an estimated capacity of 4,400 gallons each, variance relief is required.

The Applicant has previously obtained, on two separate occasions, unanimous recommendation for variance approval from the City's Board of Adjustment for similar generator/AST proposals. More specifically, in 2019, the Applicant installed two nearly identical generators and ASTs on the northern portion of the Property after receiving the requisite variance relief. See Enclosure 9. Then, in July of 2021, the Applicant received unanimous recommendation for variance approval from the Board of Adjustment to accommodate a generator and AST located on the southeastern portion of the Property which now serve Lonza's Lynx Project. See Enclosure 10.

We note that the proposed ASTs will be the 22nd through 25th storage facilities at the Property. See Enclosure 11. Further, each AST will be double walled, will have a 110% rupture basis, a low fuel level alarm switch, a fuel in rupture basis switch, a lockable mechanical fuel port, an overfill prevention valve with five (5) gallon lockable spill box, emergency vents, and a fill alarm panel and digital fuel level gauge. Further, all four proposed Generators/ASTs will be incorporated into Lonza's existing Spill Prevention, Control, and Countermeasures Plan and Emergency Spill Response Program and, like all similar equipment on the Property, they

¹ We note that the four (4) generator/AST concept depicted on **Enclosure 6** is the result of a risk analysis performed by Lonza's Environmental Health and Safety Department, Lonza engineers and corresponding manufacturing professionals which collectively determined what systems and configuration are warranted considering the proposed use of the Vertex Building and CUB. In this case, the design choice to use four (4) integrated above ground tanks to service the four (4) generators mitigated, to the extent possible, risks posed by underground storage tanks, which are not permitted at the PDA, or a single consolidated generator/tank concept with corresponding fuel lines.

will be regularly inspected by Lonza and tested for operating efficiency, etc. Additionally, each Generator/AST will be installed with security fencing and/or bollards to protect them.

Because the Applicant's proposal will not be inconsistent with the essential character of the surrounding area, will not compromise the public health in any way, will provide substantial justice, will not compromise the property values of surrounding properties, and because there is no rational connection between the general purposes of the PDA's Land Use Controls and their specific application to the Property under the unique circumstances of this case, as outlined below, we respectfully request that the Board of Adjustment recommend approval of Lonza's variance request.

B. Variance Criteria

The variance criteria outlined in PDA 317.01(c) generally mirror those found within RSA 674:33, and will thus be analyzed pursuant to the statute and corresponding case law interpreting the same.

To obtain a variance pursuant to PDA 317.01, an applicant must show that that the variance is in harmony with the general purpose and intent of the PDA Land Use Controls and meets the following criteria: (1) no adverse effect or diminution in values of surrounding properties will be suffered; (2) granting the variance would be of benefit to the public interest; (3) denial of the variance would result in unnecessary hardship to the person seeking it; (4) granting the variance would be substantial justice; and (5) the proposed use would not be contrary to the spirit of the zoning rule.

1. No adverse effect or diminution in values of surrounding properties will be suffered if the variance request is approved.

Given the nature of the area and the existing use of the Property and surrounding properties, none of the surrounding properties will suffer any diminution in value or other adverse effect as a result of granting the requested variance. Certainly, the Applicant is aware of no evidence to the contrary. Use of the Generators in the proposed locations is permitted by right and the size of the corresponding ASTs will have no discernible impact on surrounding properties which are themselves, commercial in nature. See Enclosures 4, 6. Indeed, several other generators are already in operation at the Property which use ASTs that exceed the 2,000 gallon limit. See Enclosure 11. The new ASTs will be incorporated into Lonza's existing Spill Prevention, Control, and Countermeasures Plan as well as Lonza's Emergency Spill Response Program, and they will be regularly inspected by Lonza. Lonza will also comply with all applicable regulations and requirements regarding use of the Generators and ASTs. The neighborhood is already commercial and/or industrial in nature.

Accordingly, the Applicant respectfully requests that the Board of Adjustment find that the requested variance will not diminish surrounding property values or cause other adverse effect.

2. Granting the variance will be of benefit to the public interest.

The New Hampshire Supreme Court has indicated that the requirement that a variance not be “contrary to the public interest” is coextensive and related to the requirement that a variance be consistent with the spirit of the ordinance. See Chester Rod & Gun Club v. Town of Chester, 152 N.H. 577, 580 (2005); Malachy Glen Associates, Inc. v. Town of Chichester, 155 N.H. 102, 105-06 (2007); and Farrar v. City of Keene, 158 N.H. 684, 691 (2009). A variance is contrary to the public interest only if it “unduly, and in a marked degree conflicts with the ordinance such that it violates the ordinance’s basic zoning objectives.” Chester Rod & Gun Club, 152 N.H. at 581; Farrar, 158 N.H. at 691. See also Harborside Associates, L.P. v. Parade Residence Hotel, LLC, 162 N.H. 508, 514 (2011) (“[m]ere conflict with the terms of the ordinance is insufficient.”) Moreover, these cases instruct boards of adjustment to make the determination as to whether a variance application “unduly” conflicts with the zoning objectives of the ordinance “to a marked degree” by analyzing whether granting the variance would “alter the essential character of the neighborhood” or “threaten the public health, safety or welfare” and to make that determination by examining, where possible, the language of the Zoning Ordinance.

While PDA 308, regulating above and below-ground storage facilities, does not have an express purpose provision, the general purpose of the PDA’s Zoning Ordinance is to:

[P]romote the public health, safety and general welfare, promote the safe operation of air transportation, conserve the value of property within the jurisdiction of the Pease Development Authority, assure the most efficient use of the existing natural and manmade resources, provide adequate light, air and open space, encourage the appropriate and wise use of land and promote high quality economic development and employment.

PDA 301.01. See also PDA 317.01(c)(requiring that in addition to satisfying the variance criteria, variances “shall not be approved or recommended for approval unless it is in harmony with the general purpose and intent of these regulations ...”).

As a foundational matter, the Applicant’s proposal is in harmony with the general purpose and intent of the PDA Land Use Controls, and therefore not contrary to the public interest, because it will advance the general purposes articulated in PDA 301.01. Specifically, the Generators and ASTs will serve the Vertex Building and corresponding CUB and therefore support the development and commercialization of the Vertex type 1 diabetes cell therapy portfolio and in so doing, the creation of up to 300 local jobs, both of which benefit the public. The Applicant’s proposal is also consistent with the PDA’s stated purpose of encouraging the appropriate and wise use of land and promoting high quality economic development and employment, and it will not, in light of the Property’s existing conditions and uses, implicate in any negative way the provision of adequate light, air and open space. Rather, Phase 2 of the project is a major step forward with regard to long-standing efforts to facilitate development on the so-called Iron Parcel. Further, as referenced above, the Generators and ASTs will be incorporated into Lonza’s existing Spill Prevention, Control and Countermeasures Plan as well as Lonza’s Emergency Spill Response Program, and they will be regularly inspected and maintained by Lonza and will obtain all other applicable approvals before operation.

The Applicant's proposal also satisfies the tests articulated under the case law. First, the Generators and ASTs will not alter the essential character of the neighborhood. On the contrary, they will be consistent with the current status and use of the Property and Lonza's other operations as well as surrounding commercial properties, specifically consistent with the configuration and installation of other generators and ASTs approved in 2019 and 2021 which are in use, and otherwise comply with all applicable regulations and requirements. See Enclosures 1, 2, 6, 9, 10, 11.

Similarly, the requested variance from PDA 308.02(c) will not threaten the public health, safety or welfare. If the proposed ASTs had a capacity of 2,000 gallons or less, no zoning relief would be required at all. As the Applicant explained to the Board during the May 2019 and July 2021 hearings, the size of the generator dictates the size of the fuel tank and the size of the Generators in this case, are required due to the nature and scope of the Vertex Building operations. Further, the ASTs have several safety features as discussed above. See Enclosure 7.

As the Applicant's variance proposal will be consistent with and advance the general purposes of the PDA Land Use Controls, and as it will not alter the essential character of the neighborhood or threaten the public health or safety, it would be reasonable and appropriate for the Board of Adjustment to conclude that granting the variances will benefit the public interest.

3. Denial of the variance would result in unnecessary hardship to Lonza.

In New Hampshire, there are two options by which the Board of Adjustment can find that an unnecessary hardship exists:

- (A) For purposes of this subparagraph, "unnecessary hardship" means that, owing to special conditions of the property that distinguish it from other properties in the area:
- (i) No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of that provision to the property; and
 - (ii) The proposed use is a reasonable one.

or,

(B) If the criteria in subparagraph (A) are not established, an unnecessary hardship will be deemed to exist if, and only if, owing to special conditions of the property that distinguish it from other properties in the area, the property cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it.

See RSA 674:33, I.

The "special conditions" of the Property for purposes of this variance criterion include the size of the Property leased by Lonza from the PDA which, at approximately 46 acres, appears larger than all surrounding privately leased parcels, the Property's unique ability to accommodate the development originally approved in 2019 and to advance the core purposes of

the PDA, to include the size and scale of approved Building 1, which is already under construction, the size and scale of the Vertex operation inside the building which will utilize approximately 130,000 sf, the sensitive and important nature of the use and the need for considerable generators to protect same in the event of an emergency power outage, and the Property's ability to accommodate the Generators and ASTs in the locations proposed in a manner that complies with all applicable regulations aside from PDA 308.02(c) which pertains to the size of the AST. See Enclosures 1, 2, 3, 6, 8, 9.

In Harborside Assocs. v. Parade Residence Hotel, the New Hampshire Supreme Court upheld the Portsmouth Board of Adjustment's finding that the physical improvements on a property, in that case the size of a building when compared to other buildings in the area within the context of sign variance request, could be considered "special circumstances." Affirming the analysis of the Board of Adjustment, the Supreme Court stated:

The [Respondent] is not attempting to meet the 'special conditions' test by showing that its *signs* would be unique in their settings, but that its *property* – the hotel and conference center – has unique characteristics that make the signs themselves a reasonable use of the property.

Harborside, 162 N.H. at 518 (emphasis added). Cf Farrar, 158, N.H. 689 (where variance sought to convert large, historical single use residence to mixed use of two residence and office space, size of residence was relevant to determining whether property was unique in its environment).

Here, the Property's physical characteristics to include its large size which facilitated the underlying site plan approvals for the Vertex Building, the size of the Vertex Building itself which is currently under construction, and the sensitive and important nature of the Vertex Building's operations make the proposed variance reasonable under the circumstances because due to the size of the building and the scale of the anticipate operations, the Project requires the specific generators which are proposed and those generators require the specific ASTs proposed.

Due to these special conditions of the Property, there is no fair and substantial relationship between the public purposes of the PDA Land Use Controls and their specific application to the Property in this case. On the contrary, despite the technical lack of conformity, and as discussed above, the Applicant's proposal is consistent with PDA 301.01 because the Generators and ASTs will service the Vertex Building and therefore support the manufacturing of pharmaceuticals which will benefit the public, because the project will create up to 300 local jobs, and because the variance is consistent with the PDA's stated purpose of encouraging the appropriate and wise use of land and promoting high quality economic development and employment. Further, the requested variance will replicate existing conditions at the Property vis-à-vis other generators and ASTs and will otherwise comply with all applicable regulations.

Put another way, strictly enforcing the PDA 308.02(c) will not advance the public purposes of the PDA Land Use Controls, but granting the requested variances will clearly will.

The Applicant respectfully reminds the Board of Adjustment that the mere fact that the Applicant is seeking a variance from the express provisions of the PDA Land Use Controls is not

a valid reason for denying the variance. See Malachy Glen Associates, Inc. v. Town of Chichester, 155 N.H. 102, 107 (2007); see also Harborside Associates, 162 N.H. at 2011 (“mere conflict with the terms of the ordinance is insufficient”).

Finally, because the Applicant’s proposed Generators and ASTs will be substantially similar to existing uses on the Property, will serve a critical need vis-à-vis the Vertex Building and operation, and will otherwise comply with all applicable regulations, it is reasonable under the circumstances. See Vigeant v. Town of Hudson, 151 N.H. 747, 752 - 53 (2005); and Malachy Glen, 155 N.H. at 107; see also Harborside at 518-519 (applicant did not need to show signs were “necessary” rather only had to show signs were a “reasonable use”).

Accordingly, the Applicant respectfully asserts that its application complies with the standard for Option A of the unnecessary hardship criterion and the Board of Adjustment should so find.

4. Granting the variance will be substantial justice.

As noted in Malachy Glen, *supra*, “perhaps the only guiding rule [on this factor] is that any loss to the individual that is not outweighed by a gain to the general public is an injustice.” Malachy Glen, *supra*, citing 15 P. Loughlin, New Hampshire Practice, Land Use Planning and Zoning § 24.11, at 308 (2000) (quoting New Hampshire Office of State Planning, The Board of Adjustment in New Hampshire, A Handbook for Local Officials (1997)). In short, there must be some gain to the general public from denying the variance that outweighs the loss to the Applicant from its denial.

Granting the variance will provide a great benefit to Lonza as it will permit the installation of the Generators and ASTs which will accommodate the Vertex Building and its operations. By extension, the relief will facilitate the creation of a ground breaking cell therapy to treat people with type 1 diabetes, which is a great benefit to the public. This infrastructure will also help Lonza expand its operations at the Portsmouth Facility and advance its business plans in accordance with the goals of the PDA, and the long-standing development proposal for the Iron Parcel.

On the contrary, there is no discernible benefit to the general public that could be gained by denying the requested variance because the opposite is true: granting the variance will be a great benefit to the general public. First, the Generators are permitted by right at the proposed locations but relief is needed due only to the size of the corresponding ASTs which exceed, by an estimated 2,400 gallons, the limitation contained within PDA 308.02(c). Beyond this, the Generators and ASTs will support the Vertex Building which will contribute to the manufacturing of pharmaceuticals which have self-evident value to the general public, as referenced above, as do the creation of up to 300 jobs which the project will create. Further, this initiative will help Lonza continue to grow roots in a manner that is beneficial to the PDA, the City of Portsmouth and the surrounding areas, and the State of New Hampshire.

Because granting the requested variance will provide a significant benefit both to the Applicant and to the general public, and because there is no discernible benefit to the general public by denying the variance, Lonza's proposal accomplishes substantial justice.

5. The proposed use would not be contrary to the spirit of PDA 308.02(c).

As referenced in Section 2, above, the requested variance will satisfy the "public interest" prong of the variance criteria because it advances the general purpose and intent of the PDA Land Use Controls and will not alter the essential character of the neighborhood or threaten the public health and welfare. As the New Hampshire Supreme Court has indicated in both Chester Rod & Gun Club and in Malachy Glen, the requirement that the variance not be "contrary to the public interest" is coextensive and is related to the requirement that the variance be consistent with the spirit of the ordinance. See Chester Rod & Gun Club, 152 N.H. at 580. A variance is contrary to the spirit of the ordinance only if it "unduly, and in a marked degree conflicts with the ordinance such that it violates the ordinance's basic zoning objectives." Chester Rod & Gun Club, 152 N.H. at 581; Farrar, 158 N.H. at 691. As discussed above, the requested variance is consistent with the general purpose and intent of the PDA Land Use Controls because of the reasons stated in Section 2. Further, generators and ASTs of this size are commonly associated with the work Lonza performs, which is why Lonza has sought and received similar relief for ASTs that exceed the 2,000-gallon limit in the past. As a result, for the reasons stated above, the Applicant respectfully asserts that it would be reasonable and appropriate for the Board of Adjustment to conclude that the requested variance will not be contrary to the spirit of the PDA's Land Use Controls.

C. Conclusion

Lonza respectfully submits that its Variance Application meets the underlying standard of review and respectfully requests the same be granted.

4884-3060-6505, v. 1



CITY OF PORTSMOUTH

Planning Department
1 Junkins Avenue
Portsmouth, New
Hampshire 03801
(603) 610-7216

PLANNING BOARD

November 22, 2023

Dave Morgan
Lonza Biologics
230 Corporate Drive
Portsmouth, New Hampshire 03801

RE: Amended Site Plan approval request for property located at 101 International Drive (LU-23-108)

Dear Property Owner:

The Planning Board, at its regularly scheduled meeting of Thursday, November 16, 2023, considered your application for Amended Site Plan approval for Phase 2 which includes fit-up of Building #1 and the utility building, construction of a temporary surface parking lot and gravel area for construction trailers, parking and laydown area in the location of Proposed Building #2. Said property is shown on Assessor Map 305 Lot 6 and lies within the Airport Business Commercial (ABC) District. As a result of said consideration, the Board voted recommend Amended Site Plan Approval to the PDA Board with the following **condition**:

1.1) A recommendation for the PDA to request a review of the project by the Rockingham Regional Planning Commission for a project of regional impact for traffic and water use.

This approval is granted subject to all conditions of approval by the Planning Board on January 17, 2019 and to all other requirements stated in the Planning Board letter of decision dated January 18, 2019.

The Board's decision may be appealed up to thirty (30) days after the vote. Any action taken by the applicant pursuant to the Board's decision during this appeal period shall be at the applicant's risk. Please contact the Planning Department for more details about the appeals process.

Unless otherwise indicated above, applicant is responsible for applying for and securing a building permit from the Inspection Department prior to starting any approved work.

The Planning Director must certify that all conditions of approval have been completed prior to issuance of a building permit unless otherwise indicated above.

The minutes and audio recording of this meeting are available by contacting the Planning Department.

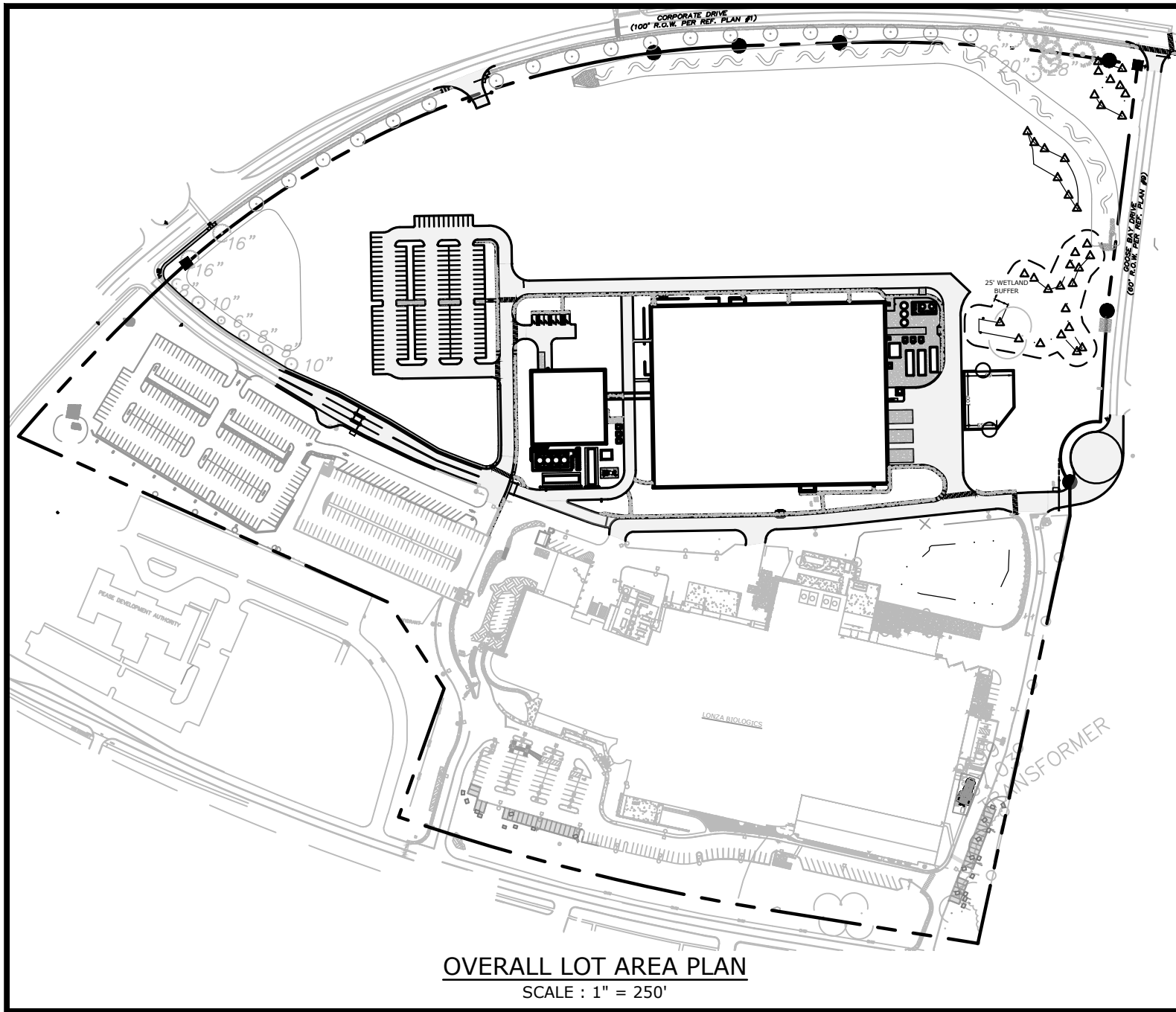
Very truly yours,

A handwritten signature in black ink, appearing to read "Rick Chellman". The signature is fluid and cursive, with a large initial "R" and "C".

Rick Chellman, Chairman of the Planning Board

cc: Shanti Wolph, Chief Building Inspector

Neil Hansen, Tighe & Bond



SITE DATA

LOCATION: TAX MAP 305, LOTS 1 & 2
70 & 80 CORPORATE DRIVE
PORTSMOUTH, NH

TAX MAP 305, LOT 6
101 INTERNATIONAL DRIVE
PORTSMOUTH, NH

ZONING DISTRICT: AIRPORT, BUSINESS & COMMERCIAL (ABC)

DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA:	5 AC	43.4± AC
MINIMUM STREET FRONTAGE:	200 FT	1,038 FT
MINIMUM FRONT YARD SETBACK:	70 FT	70 FT
SIDE SETBACK:	30 FT	30 FT
REAR SETBACK:	50 FT	51 FT
MINIMUM OPEN SPACE:	25 %	59.9± %

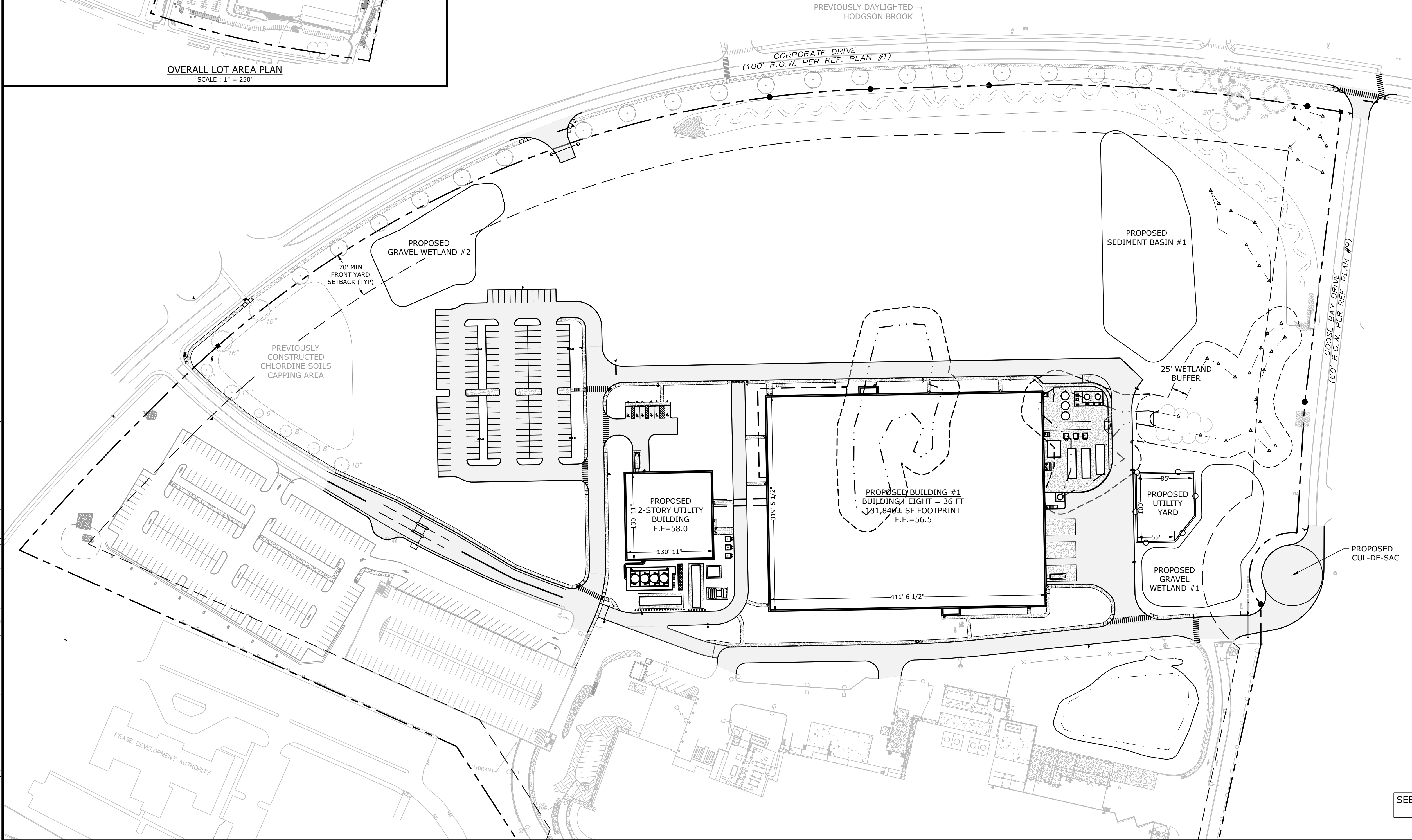
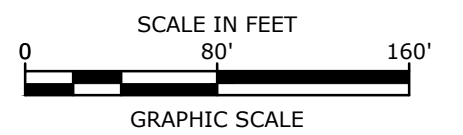
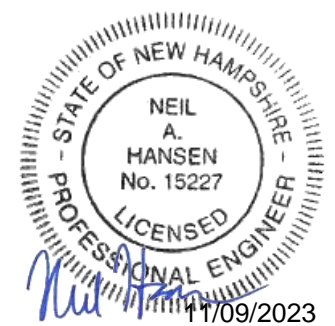
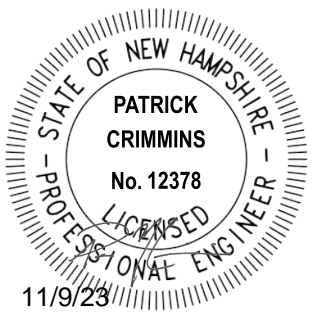
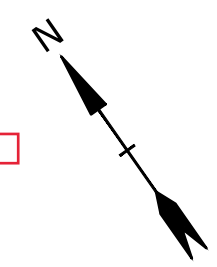
MAXIMUM STRUCTURE HEIGHT SHALL NOT EXCEED FAA CRITERIA.

PARKING REQUIREMENTS:

REQUIRED PARKING	PROVIDED
2 SPACES PER 3 EMPLOYEES ON LARGEST SHIFT	801 SPACES
990 EXISTING EMPLOYEES	156 SPACES
180 ANTICIPATED EMPLOYEES	120 SPACES
TOTAL REQUIRED:	957 SPACES

PARKING PROVIDED	PROVIDED
EXISTING SPACES:	801 SPACES
PROPOSED SURFACE PARKING:	156 SPACES
TOTAL:	957 SPACES

Enclosure 2



Proposed Industrial Development

Lonza Biologics

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
N	11/9/2023	Revised P.B. Submission
M	9/27/2023	P.B. Submission
L	9/1/2022	Issued for Construction
K	5/27/2022	Issued for Bid
J	5/23/2022	Third Party Rev. Comments
I	4/26/2022	Revised PB Stipulations

PROJECT NO:	L-0700-013
DATE:	04/03/2018
FILE:	L-0700-026-C-DSGN.dwg
DRAWN BY:	CIJ
CHECKED BY:	NAH
APPROVED:	PMC

PHASE 2 OVERALL SITE PLAN

SCALE: AS SHOWN

C-164

SEE SHEET C-165 FOR LEGEND AND SITE NOTES

Last Save Date: November 9, 2023 11:03 AM By: NAHANSEN
 Plot Date: Thursday, November 09, 2023 Plotted By: Neil A. Hansen
 P&E File Location: J:\110700 Lonza Biologics Expansion.was 12/20/2026 Project Subarea Drawings\AutoCAD\11-0700-026-C-DSGN.dwg Layout Tab: C-164

Media Advisory

30 Aug 2023

Lonza and Vertex Celebrate Groundbreaking of Cell Therapy Manufacturing Facility in Portsmouth (US)

- The large-scale facility will support the development and commercialization of the Vertex type 1 diabetes (T1D) cell therapy portfolio
- At the facility's groundbreaking event on August 30th, Lonza and Vertex were joined by New Hampshire government officials to commemorate the milestone

Portsmouth, NH (US), August 30, 2023 – Today, Lonza and Vertex Pharmaceuticals Incorporated (Vertex) celebrated the groundbreaking of a dedicated manufacturing facility in Portsmouth, New Hampshire (US). This marks a milestone in the [strategic collaboration](#) between the two companies, which aims to accelerate the development and commercialization of Vertex's potentially transformative cell therapies for type 1 diabetes (T1D).

The new facility is being built adjacent to Lonza's existing campus in Portsmouth, and is a co-investment project between the two companies. Operated by Lonza, the facility will span more than 130,000 square feet and is anticipated to generate up to 300 new jobs at peak capacity, in areas including manufacturing operations, quality assurance and quality control. Initial hiring for roles relating to the facility's construction, fit out and qualification is already underway.

The large-scale manufacturing facility will support the commercial production of the Vertex T1D cell therapy portfolio, with a focus on the VX-880 and VX-264 programs currently in clinical trials. Vertex's first clinical program, VX-880, has already demonstrated clinical proof-of-concept, while its second approach, VX-264, is being studied in a Phase 1/2 clinical trial.

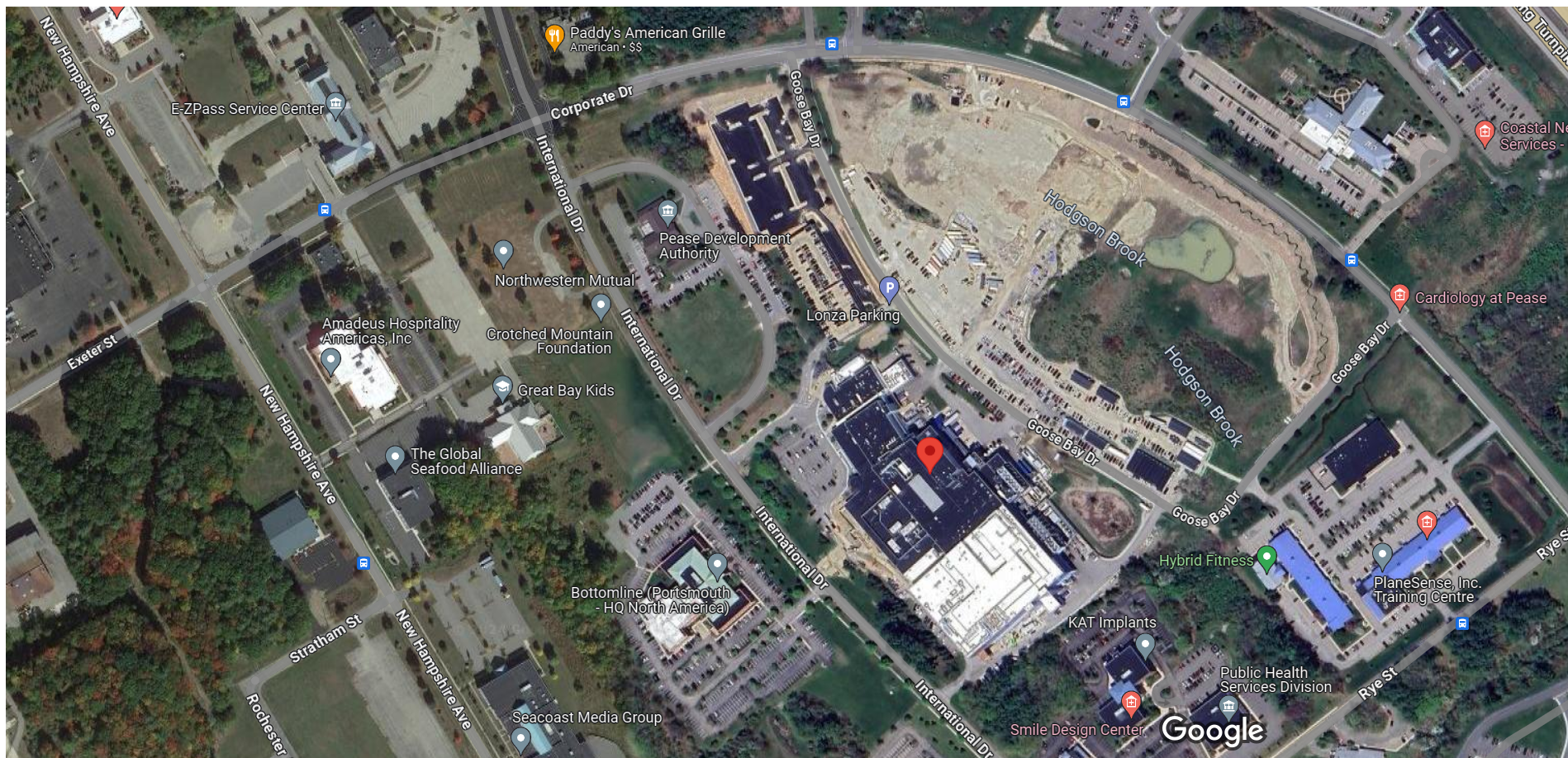
A groundbreaking ceremony was held on August 30, 2023 to mark the beginning of the facility's construction. Lonza and Vertex's leadership teams were joined at the event by several New Hampshire government officials, including United States Senator Jeanne Shaheen, and the Mayor of Portsmouth, Deaglan McEachern.

Reshma Kewalramani, M.D., Chief Executive Officer and President of Vertex, said: "Establishing this strategic partnership with Lonza, a world-class manufacturing organization, is a critical milestone in Vertex's journey to transform the treatment of type 1 diabetes. Today is an exciting day for both Vertex and Lonza and for patients living with T1D."

Pierre-Alain Ruffieux, CEO of Lonza, commented: "Today's groundbreaking demonstrates Lonza's continued commitment to helping our customers bring their innovative therapies to life. The facility will play a major role in delivering Vertex's ambition to shape the future for patients living with T1D. We are proud to support Vertex on this journey with a combination of deep scientific, regulatory and manufacturing expertise, alongside our established track record in supporting the commercialization of cell therapy products. Portsmouth is the ideal location for the new facility, as it enables us to build upon our existing infrastructure, capabilities and talent in the area."



Google Maps 101 International Dr



Imagery ©2024 Airbus, Maine GeoLibrary, Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2024 200 ft

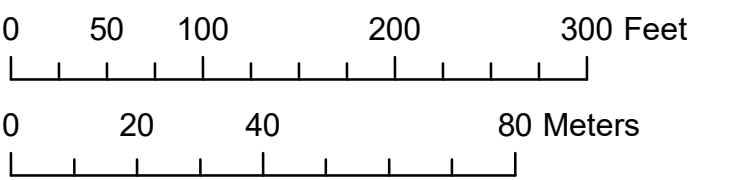


Enclosure 5

Partial Legend

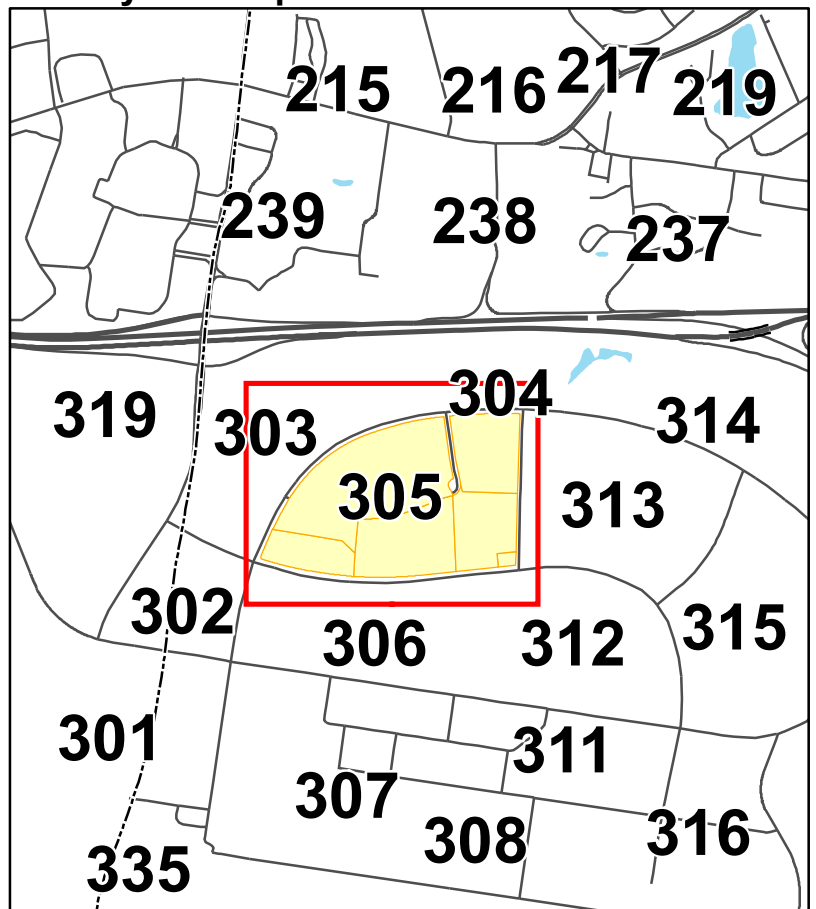
See the cover sheet for the complete legend.

- 7-5A** Lot or lot-unit number
- 2.56 ac Parcel area in acres (ac) or square feet (sf)
- Address number
- 233-137 Parcel number from a neighboring map
- 68' Parcel line dimension
- SIMS AVE Street name
- Parcel/Parcel boundary
- Parcel/ROW boundary
- Water boundary
- Structure (1994 data)
- Parcel covered by this map
- Parcel from a neighboring map (see other map for current status)

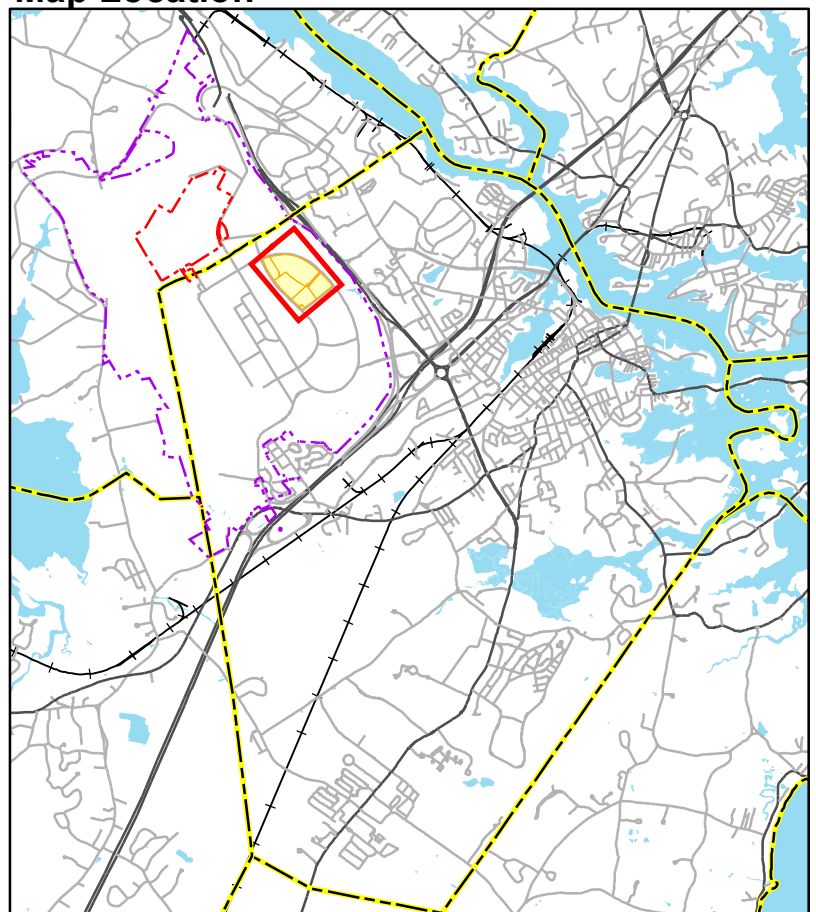


This map is for assessment purposes only. It is not intended for legal description or conveyance. Parcels are mapped as of April 1. Building footprints are 2006 data and may not represent current structures. Streets appearing on this map may be paper (unbuilt) streets. Lot numbers take precedence over address numbers. Address numbers shown on this map may not represent posted or legal addresses.

Nearby Tax Maps

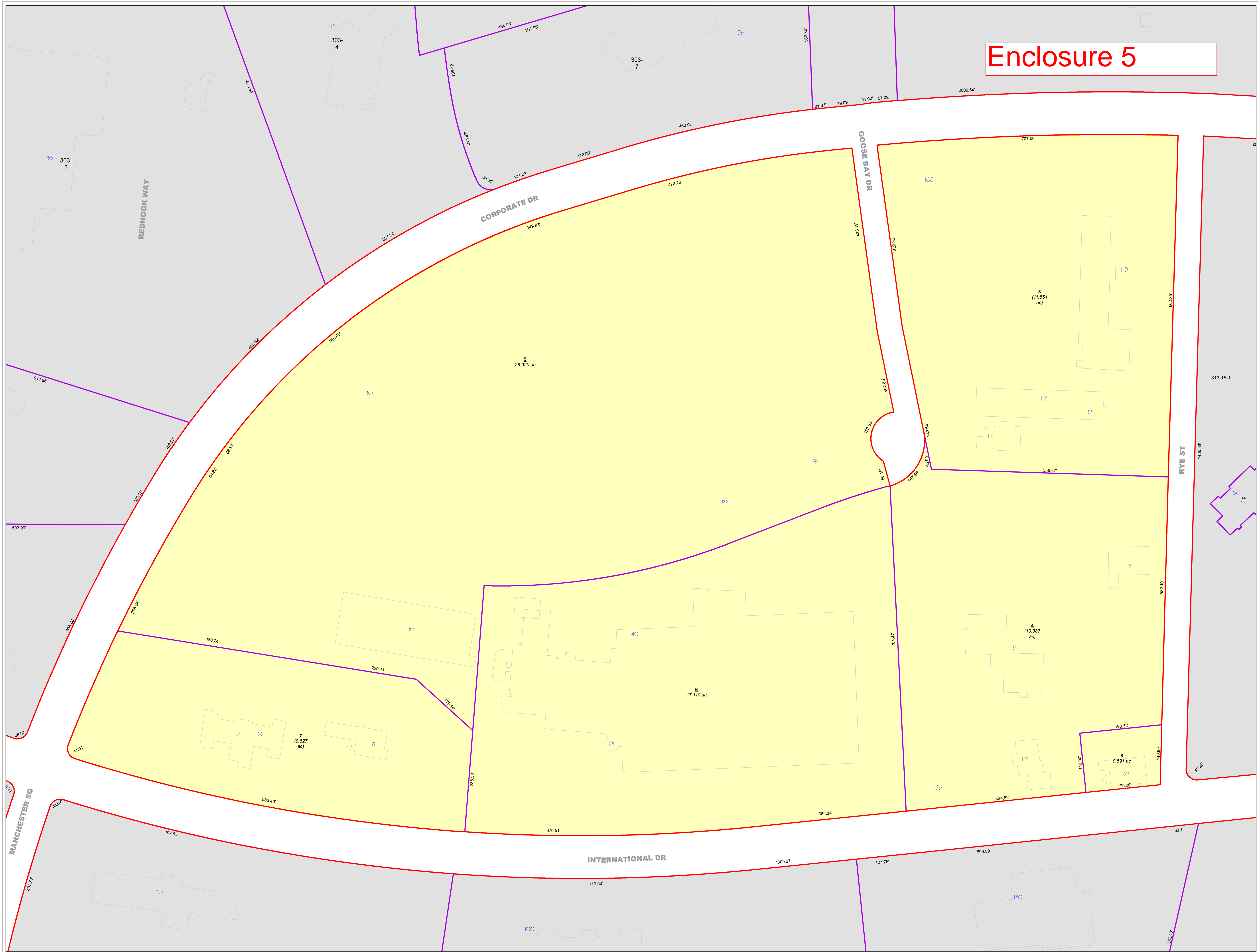


Map Location

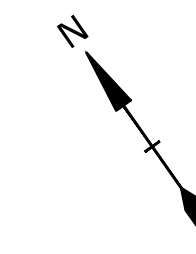


Portsmouth, New Hampshire
2023

Tax Map 305

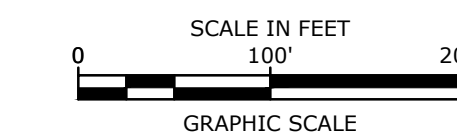
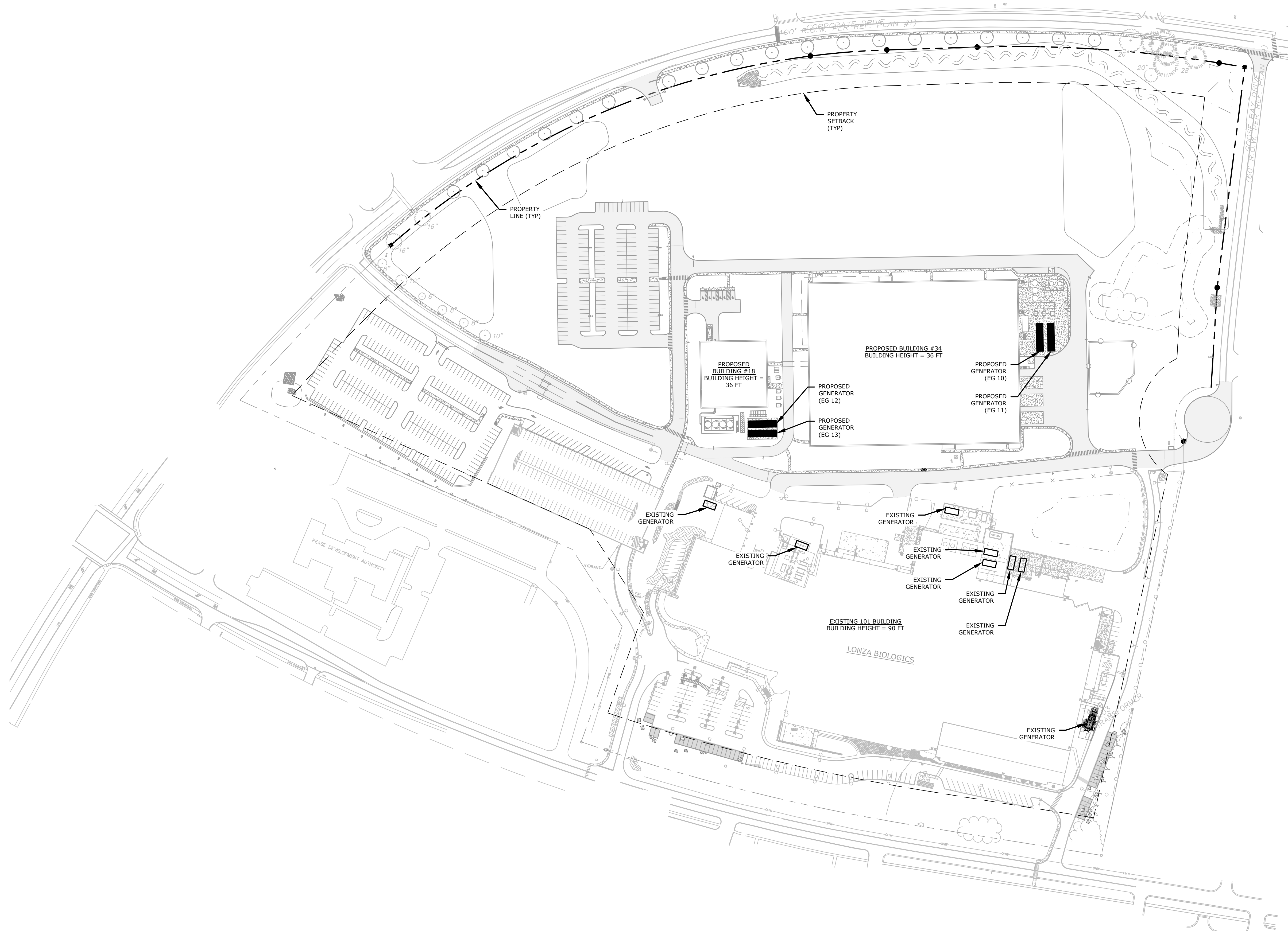


Enclosure 6



LEGEND

- PROPERTY LINE
- - - PROPERTY SETBACK
- PROPOSED GENERATOR
- EXISTING GENERATOR



Proposed Industrial Development

Lonza Biologics

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
PROJECT NO:	L-0700-013	
DATE:	2/26/2024	
FILE:	L-0700-026-C-DSGN-SPCC.dwg	
DRAWN BY:	CJK	
CHECKED:	NAH	
APPROVED:	PMC	

OVERALL SITE PLAN

SCALE: AS SHOWN

PERFORMANCE DATA[EM1895]

Performance Number: EM1895

Change Level: 06

SALES MODEL:	3516C	COMBUSTION:	DIRECT INJECTION
BRAND:	CAT	ENGINE SPEED (RPM):	1,800
MACHINE SALES MODEL:		HERTZ:	60
ENGINE POWER (BHP):	3,634	FAN POWER (HP):	130.1
GEN POWER WITH FAN (EKW):	2,500.0	ASPIRATION:	TA
COMPRESSION RATIO:	14.7	AFTERCOOLER TYPE:	ATAAC
RATING LEVEL:	MISSION CRITICAL STANDBY	AFTERCOOLER CIRCUIT TYPE:	JW+OC, ATAAC
PUMP QUANTITY:	1	INLET MANIFOLD AIR TEMP (F):	122
FUEL TYPE:	DIESEL	JACKET WATER TEMP (F):	219.2
MANIFOLD TYPE:	DRY	TURBO CONFIGURATION:	PARALLEL
GOVERNOR TYPE:	ADEM3	TURBO QUANTITY:	4
ELECTRONICS TYPE:	ADEM3	TURBOCHARGER MODEL:	GT6041BN-48T-1.10
CAMSHAFT TYPE:	STANDARD	CERTIFICATION YEAR:	2006
IGNITION TYPE:	CI	CRANKCASE BLOWBY RATE (FT3/HR):	3,619.4
INJECTOR TYPE:	EUI	FUEL RATE (RATED RPM) NO LOAD (GAL/HR):	16.0
FUEL INJECTOR:	3920221	PISTON SPD @ RATED ENG SPD (FT/MIN):	2,539.4
UNIT INJECTOR TIMING (IN):	64.34		
REF EXH STACK DIAMETER (IN):	12		
MAX OPERATING ALTITUDE (FT):	2,953		

INDUSTRY	SUBINDUSTRY	APPLICATION
ELECTRIC POWER	STANDARD	PACKAGED GENSET
OIL AND GAS	LAND PRODUCTION	PACKAGED GENSET

General Performance Data

THIS STANDBY RATING IS FOR A STANDBY ONLY ENGINE ARRANGEMENT. RERATING THE ENGINE TO A PRIME OR CONTINUOUS RATING IS NOT PERMITTED.

THE INLET MANIFOLD AIR TEMP LISTED IN THE HEADER, AND IN THE GENERAL PERFORMANCE DATA, IS THE AVERAGE INLET MANIFOLD TEMP FRONT TO REAR ON THE ENGINE.

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	ISO BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	ISO VOL FUEL CONSUMPTN (VFC)	ELEC SPEC FUEL CONSUMPTN (ESFC)	ISO ELEC SPEC FUEL CONSUMPTN (ESFC)
EKW	%	BHP	PSI	LB/BHP-HR	LB/BHP-HR	GAL/HR	GAL/HR	LB/EKW-HR	LB/EKW-HR
2,500.0	100	3,633	336	0.334	0.328	171.3	168.0	0.486	0.477
2,250.0	90	3,283	303	0.335	0.329	155.1	152.1	0.489	0.480
2,000.0	80	2,935	271	0.339	0.333	140.4	137.7	0.498	0.489
1,875.0	75	2,760	255	0.342	0.336	133.2	130.7	0.504	0.494
1,750.0	70	2,586	239	0.346	0.339	126.0	123.6	0.511	0.501
1,500.0	60	2,237	207	0.354	0.347	111.5	109.4	0.527	0.517
1,250.0	50	1,889	174	0.365	0.358	97.1	95.2	0.551	0.540
1,000.0	40	1,547	143	0.373	0.366	81.4	79.8	0.577	0.566
750.0	30	1,203	111	0.385	0.378	65.3	64.1	0.618	0.606
625.0	25	1,029	95	0.394	0.386	57.2	56.1	0.649	0.637
500.0	20	854	79	0.403	0.396	48.6	47.6	0.689	0.676
250.0	10	497	46	0.441	0.433	30.9	30.3	0.877	0.860

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP
EKW	%	BHP	IN-HG	DEG F	DEG F	IN-HG	DEG F	IN-HG	DEG F
2,500.0	100	3,633	78.1	121.9	1,235.7	67.6	853.1	85	466.7
2,250.0	90	3,283	71.3	119.4	1,190.0	61.3	824.5	78	443.1
2,000.0	80	2,935	64.3	116.9	1,158.9	55.3	810.7	70	417.8
1,875.0	75	2,760	60.7	115.8	1,145.6	52.3	804.8	66	404.7
1,750.0	70	2,586	57.1	114.7	1,133.3	49.3	798.9	63	391.3
1,500.0	60	2,237	49.5	112.7	1,112.4	43.2	787.1	55	363.6
1,250.0	50	1,889	41.3	111.0	1,091.8	36.8	775.1	46	334.7
1,000.0	40	1,547	31.4	109.4	1,061.5	29.3	770.6	36	297.5
750.0	30	1,203	21.7	107.9	1,010.3	22.1	752.8	25	249.8
625.0	25	1,029	17.2	107.2	968.3	18.7	731.8	21	223.4
500.0	20	854	12.7	106.4	902.0	15.5	695.6	16	197.2
250.0	10	497	4.8	104.1	700.7	9.8	562.6	7	152.3

General Performance Data (Continued)

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
EKW	%	BHP	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
2,500.0	100	3,633	7,133.1	18,497.4	31,696.1	32,910.2	6,927.7	6,289.9
2,250.0	90	3,283	6,756.8	17,036.6	29,886.4	30,985.9	6,522.8	5,944.9
2,000.0	80	2,935	6,350.9	15,740.8	28,028.8	29,019.5	6,092.1	5,568.4
1,875.0	75	2,760	6,132.5	15,125.9	27,059.2	27,998.2	5,881.4	5,382.5
1,750.0	70	2,586	5,902.5	14,507.6	26,056.9	26,945.9	5,667.5	5,192.6
1,500.0	60	2,237	5,408.9	13,196.0	23,934.4	24,726.5	5,204.1	4,777.6
1,250.0	50	1,889	4,844.0	11,701.1	21,447.3	22,136.3	4,659.1	4,284.7
1,000.0	40	1,547	4,122.0	9,918.3	18,264.4	18,842.5	3,963.7	3,647.8
750.0	30	1,203	3,423.6	8,121.4	15,177.8	15,642.9	3,293.2	3,036.5
625.0	25	1,029	3,105.0	7,237.8	13,766.9	14,173.7	2,986.8	2,759.5
500.0	20	854	2,791.1	6,276.7	12,375.6	12,721.7	2,671.3	2,475.8
250.0	10	497	2,236.2	4,428.4	9,910.4	10,129.4	2,129.9	1,997.8

Heat Rejection Data

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	REJECTION TO JACKET WATER	REJECTION TO ATMOSPHERE	REJECTION TO EXH	EXHAUST RECOVERY TO 350F	FROM OIL COOLER	FROM AFTERCOOLER	WORK ENERGY	LOW HEAT VALUE ENERGY	HIGH HEAT VALUE ENERGY
EKW	%	BHP	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN
2,500.0	100	3,633	46,992	9,146	142,265	70,115	19,835	44,723	154,077	372,403	396,702
2,250.0	90	3,283	44,242	8,557	127,929	62,041	17,960	39,380	139,243	337,204	359,207
2,000.0	80	2,935	41,477	8,162	116,879	56,282	16,262	34,167	124,444	305,311	325,233
1,875.0	75	2,760	40,076	8,007	111,588	53,551	15,425	31,612	117,053	289,608	308,505
1,750.0	70	2,586	38,657	7,874	106,293	50,817	14,588	29,085	109,651	273,881	291,752
1,500.0	60	2,237	35,755	7,684	95,729	45,311	12,915	24,201	94,874	242,485	258,307
1,250.0	50	1,889	32,626	7,527	85,184	39,388	11,245	19,401	80,109	211,118	224,893
1,000.0	40	1,547	29,235	7,262	72,693	33,148	9,427	13,873	65,583	176,995	188,544
750.0	30	1,203	25,476	6,784	59,425	26,293	7,565	8,706	51,005	142,037	151,305
625.0	25	1,029	23,394	6,435	52,542	22,520	6,621	6,496	43,653	124,317	132,429
500.0	20	854	21,006	5,995	44,739	18,221	5,624	4,534	36,223	105,594	112,484
250.0	10	497	15,737	5,026	27,795	8,787	3,578	1,916	21,071	67,181	71,564

Sound Data

SOUND PRESSURE DATA FOR THIS RATING CAN BE FOUND IN PERFORMANCE NUMBER - DM8779.

Emissions Data

DIESEL

RATED SPEED NOMINAL DATA: 1800 RPM

GENSET POWER WITH FAN	EKW	2,500.0	1,875.0	1,250.0	625.0	250.0
PERCENT LOAD	%	100	75	50	25	10
ENGINE POWER	BHP	3,633	2,760	1,889	1,029	497
TOTAL NOX (AS NO2)	G/HR	19,123	11,751	5,837	2,974	2,654
TOTAL CO	G/HR	1,515	725	607	831	1,165
TOTAL HC	G/HR	376	375	408	307	329
TOTAL CO2	KG/HR	1,740	1,340	966	559	296
PART MATTER	G/HR	132.5	88.4	94.3	99.6	100.7
TOTAL NOX (AS NO2) (CORR 5% O2)	MG/NM3	2,349.1	1,857.9	1,286.9	1,127.3	1,858.5
TOTAL CO (CORR 5% O2)	MG/NM3	195.4	118.8	140.1	330.3	862.6
TOTAL HC (CORR 5% O2)	MG/NM3	42.1	54.8	81.8	105.8	212.3
PART MATTER (CORR 5% O2)	MG/NM3	14.1	11.8	18.4	34.7	63.0
TOTAL NOX (AS NO2) (CORR 15% O2)	MG/NM3	871.7	689.4	477.5	418.3	689.6

PERFORMANCE DATA[EM1895]

February 12, 2024

TOTAL CO	(CORR 15% O2)	MG/NM3	72.5	44.1	52.0	122.6	320.1
TOTAL HC	(CORR 15% O2)	MG/NM3	15.6	20.3	30.4	39.3	78.8
PART MATTER	(CORR 15% O2)	MG/NM3	5.2	4.4	6.8	12.9	23.4
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,144	905	627	549	905
TOTAL CO	(CORR 5% O2)	PPM	156	95	112	264	690
TOTAL HC	(CORR 5% O2)	PPM	79	102	153	197	396
TOTAL NOX (AS NO2)	(CORR 15% O2)	PPM	425	336	233	204	336
TOTAL CO	(CORR 15% O2)	PPM	58	35	42	98	256
TOTAL HC	(CORR 15% O2)	PPM	29	38	57	73	147
TOTAL NOX (AS NO2)		G/HP-HR	5.32	4.30	3.12	2.92	5.39
TOTAL CO		G/HP-HR	0.42	0.26	0.32	0.82	2.37
TOTAL HC		G/HP-HR	0.10	0.14	0.22	0.30	0.67
PART MATTER		G/HP-HR	0.04	0.03	0.05	0.10	0.20
TOTAL NOX (AS NO2)		G/KW-HR	7.23	5.84	4.24	3.96	7.33
TOTAL CO		G/KW-HR	0.57	0.36	0.44	1.11	3.22
TOTAL HC		G/KW-HR	0.14	0.19	0.30	0.41	0.91
PART MATTER		G/KW-HR	0.05	0.04	0.07	0.13	0.28
TOTAL NOX (AS NO2)		LB/HR	42.16	25.91	12.87	6.56	5.85
TOTAL CO		LB/HR	3.34	1.60	1.34	1.83	2.57
TOTAL HC		LB/HR	0.83	0.83	0.90	0.68	0.72
TOTAL CO2		LB/HR	3,836	2,955	2,130	1,233	654
PART MATTER		LB/HR	0.29	0.19	0.21	0.22	0.22
OXYGEN IN EXH		%	9.4	10.4	11.3	12.2	14.4
DRY SMOKE OPACITY		%	1.7	1.4	1.9	2.6	4.0
BOSCH SMOKE NUMBER			0.83	0.80	0.85	0.97	1.13

RATED SPEED POTENTIAL SITE VARIATION: 1800 RPM

GENSET POWER WITH FAN	EKW	2,500.0	1,875.0	1,250.0	625.0	250.0	
PERCENT LOAD	%	100	75	50	25	10	
ENGINE POWER	BHP	3,633	2,760	1,889	1,029	497	
TOTAL NOX (AS NO2)	G/HR	22,948	14,101	7,004	3,568	3,185	
TOTAL CO	G/HR	2,726	1,304	1,092	1,496	2,098	
TOTAL HC	G/HR	500	499	543	408	437	
PART MATTER	G/HR	185.5	123.7	132.1	139.5	141.0	
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	2,818.9	2,229.5	1,544.3	1,352.7	2,230.2
TOTAL CO	(CORR 5% O2)	MG/NM3	351.8	213.9	252.3	594.6	1,552.7
TOTAL HC	(CORR 5% O2)	MG/NM3	55.9	72.8	108.8	140.7	282.4
PART MATTER	(CORR 5% O2)	MG/NM3	19.7	16.5	25.8	48.5	88.2
TOTAL NOX (AS NO2)	(CORR 15% O2)	MG/NM3	1,046.0	827.3	573.0	502.0	827.6
TOTAL CO	(CORR 15% O2)	MG/NM3	130.5	79.4	93.6	220.6	576.2
TOTAL HC	(CORR 15% O2)	MG/NM3	20.8	27.0	40.4	52.2	104.8
PART MATTER	(CORR 15% O2)	MG/NM3	7.3	6.1	9.6	18.0	32.7
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,373	1,086	752	659	1,086
TOTAL CO	(CORR 5% O2)	PPM	281	171	202	476	1,242
TOTAL HC	(CORR 5% O2)	PPM	104	136	203	263	527
TOTAL NOX (AS NO2)	(CORR 15% O2)	PPM	510	403	279	244	403
TOTAL CO	(CORR 15% O2)	PPM	104	63	75	177	461
TOTAL HC	(CORR 15% O2)	PPM	39	50	75	97	196
TOTAL NOX (AS NO2)		G/HP-HR	6.38	5.15	3.74	3.50	6.47
TOTAL CO		G/HP-HR	0.76	0.48	0.58	1.47	4.26
TOTAL HC		G/HP-HR	0.14	0.18	0.29	0.40	0.89
PART MATTER		G/HP-HR	0.05	0.05	0.07	0.14	0.29
TOTAL NOX (AS NO2)		G/KW-HR	8.67	7.01	5.09	4.76	8.79
TOTAL CO		G/KW-HR	1.03	0.65	0.79	2.00	5.79
TOTAL HC		G/KW-HR	0.19	0.25	0.39	0.54	1.21
PART MATTER		G/KW-HR	0.07	0.06	0.10	0.19	0.39
TOTAL NOX (AS NO2)		LB/HR	50.59	31.09	15.44	7.87	7.02
TOTAL CO		LB/HR	6.01	2.88	2.41	3.30	4.62
TOTAL HC		LB/HR	1.10	1.10	1.20	0.90	0.96
PART MATTER		LB/HR	0.41	0.27	0.29	0.31	0.31

Regulatory Information

EPA EMERGENCY STATIONARY	2011 - ----
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 60 SUBPART IIII AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE EMERGENCY STATIONARY REGULATIONS.	

Locality U.S. (INCL CALIF)	Agency EPA	Regulation STATIONARY	Tier/Stage EMERGENCY STATIONARY	Max Limits - G/BKW - HR CO: 3.5 NOx + HC: 6.4 PM: 0.20
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Altitude Derate Data

STANDARD

ALTITUDE CORRECTED POWER CAPABILITY (BHP)

AMBIENT OPERATING TEMP (F)	30	40	50	60	70	80	90	100	110	120	NORMAL
ALTITUDE (FT)											
0	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634
1,000	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,561	3,634
2,000	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,604	3,541	3,480	3,634
3,000	3,628	3,628	3,628	3,628	3,628	3,603	3,537	3,474	3,413	3,354	3,628
4,000	3,504	3,504	3,504	3,504	3,504	3,471	3,408	3,347	3,289	3,232	3,504
5,000	3,384	3,384	3,384	3,384	3,384	3,344	3,283	3,225	3,168	3,113	3,384
6,000	3,269	3,269	3,269	3,269	3,269	3,221	3,162	3,105	3,051	2,998	3,269
7,000	3,159	3,159	3,159	3,159	3,159	3,101	3,044	2,990	2,937	2,887	3,159
8,000	3,052	3,052	3,052	3,052	3,041	2,985	2,930	2,878	2,827	2,779	3,052
9,000	2,950	2,950	2,950	2,950	2,926	2,872	2,820	2,769	2,721	2,674	2,950
10,000	2,851	2,851	2,851	2,851	2,815	2,763	2,713	2,664	2,617	2,544	2,851

Cross Reference

Test Spec	Setting	Engine Arrangement	Engineering Model	Engineering Model Version	Start Effective Serial Number	End Effective Serial Number
4577176	LL1858	5084280	GS336	-	SBK02000	
4581567	LL6760	5157721	PG243	-	LYM00001	

Supplementary Data

Type	Classification	Performance Number
SOUND	SOUND PRESSURE	DM8779

Performance Parameter Reference

Parameters Reference:DM9600-14 PERFORMANCE DEFINITIONS
--

PERFORMANCE DEFINITIONS DM9600

APPLICATION:

Engine performance tolerance values below are representative of a typical production engine tested in a calibrated dynamometer test cell at SAE J1995 standard reference conditions. Caterpillar maintains ISO9001:2000 certified quality management systems for engine test Facilities to assure accurate calibration of test equipment. Engine test data is corrected in accordance with SAE J1995. Additional reference material SAE J1228, J1349, ISO 8665, 3046-1:2002E, 3046-3:1989, 1585, 2534, 2288, and 9249 may apply in part or are similar to SAE J1995. Special engine rating request (SERR) test data shall be noted.

PERFORMANCE PARAMETER TOLERANCE FACTORS:

- Power +/- 3%
- Torque +/- 3%
- Exhaust stack temperature +/- 8%
- Inlet airflow +/- 5%
- Intake manifold pressure-gage +/- 10%
- Exhaust flow +/- 6%
- Specific fuel consumption +/- 3%
- Fuel rate +/- 5%

PERFORMANCE DATA[EM1895]

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Specific DEF consumption +/- 3%

DEF rate +/- 5%

Heat rejection +/- 5%

Heat rejection exhaust only +/- 10%

Heat rejection CEM only +/- 10%

Heat Rejection values based on using treated water.

Torque is included for truck and industrial applications, do not use for Gen Set or steady state applications.

On C7 - C18 engines, at speeds of 1100 RPM and under these values are provided for reference only, and may not meet the tolerance listed.

On 3500 and C175 engines, at speeds below Peak Torque these values are provided for reference only, and may not meet the tolerance listed.

These values do not apply to C280/3600. For these models, see the tolerances listed below.

C280/3600 HEAT REJECTION TOLERANCE FACTORS:

Heat rejection +/- 10%

Heat rejection to Atmosphere +/- 50%

Heat rejection to Lube Oil +/- 20%

Heat rejection to Aftercooler +/- 5%

TEST CELL TRANSDUCER TOLERANCE FACTORS:

Torque +/- 0.5%

Speed +/- 0.2%

Fuel flow +/- 1.0%

Temperature +/- 2.0 C degrees

Intake manifold pressure +/- 0.1 kPa

OBSERVED ENGINE PERFORMANCE IS CORRECTED TO SAE J1995 REFERENCE AIR AND FUEL CONDITIONS.

REFERENCE ATMOSPHERIC INLET AIR

FOR 3500 ENGINES AND SMALLER

SAE J1228 AUG2002 for marine engines, and J1995 JAN2014 for other engines, reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity at the stated aftercooler water temp, or inlet manifold temp.

FOR 3600 ENGINES

Engine rating obtained and presented in accordance with ISO 3046/1 and SAE J1995 JANJAN2014 reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity and 150M altitude at the stated aftercooler water temperature.

MEASUREMENT LOCATION FOR INLET AIR TEMPERATURE

Location for air temperature measurement air cleaner inlet at stabilized operating conditions.

REFERENCE EXHAUST STACK DIAMETER

The Reference Exhaust Stack Diameter published with this dataset is only used for the calculation of Smoke Opacity values displayed in this dataset. This value does not necessarily represent the actual stack diameter of the engine due to the variety of exhaust stack adapter options available. Consult the price list, engine order or general dimension drawings for the actual stack diameter size ordered or options available.

REFERENCE FUEL

DIESEL

Reference fuel is #2 distillate diesel with a 35API gravity;

A lower heating value is 42,780 KJ/KG (18,390 BTU/LB) when used at 15 deg C (59 deg F), where the density is 850 G/Liter (7.0936 Lbs/Gal).

GAS

Reference natural gas fuel has a lower heating value of 33.74 KJ/L (905 BTU/CU Ft). Low BTU ratings are based on 18.64 KJ/L (500 BTU/CU FT) lower heating value gas. Propane ratings are based on 87.56 KJ/L (2350 BTU/CU Ft) lower heating value gas.

ENGINE POWER (NET) IS THE CORRECTED FLYWHEEL POWER (GROSS) LESS EXTERNAL AUXILIARY LOAD

Engine corrected gross output includes the power required to drive standard equipment; lube oil, scavenge lube oil, fuel transfer, common rail fuel, separate circuit aftercooler and jacket water pumps. Engine net power available for the external (flywheel) load is calculated by subtracting the sum of auxiliary load from the corrected gross flywheel out put power. Typical auxiliary loads are radiator cooling fans, hydraulic pumps, air compressors and battery charging alternators. For Tier 4 ratings additional Parasitic losses would also include Intake, and Exhaust Restrictions.

ALTITUDE CAPABILITY

Altitude capability is the maximum altitude above sea level at standard temperature and standard pressure at which the engine could develop full rated output power on the current performance data set.

Standard temperature values versus altitude could be seen on TM2001.

When viewing the altitude capability chart the ambient temperature is the inlet air temp at the compressor inlet.

Engines with ADEM MEUI and HEUI fuel systems operating at conditions above the defined altitude capability derate for atmospheric pressure and temperature conditions outside the values

PERFORMANCE DATA[EM1895]

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defined, see TM2001.

Mechanical governor controlled unit injector engines require a setting change for operation at conditions above the altitude defined on the engine performance sheet. See your Caterpillar technical representative for non standard ratings.

REGULATIONS AND PRODUCT COMPLIANCE

TMI Emissions information is presented at 'nominal' and 'Potential Site Variation' values for standard ratings. No tolerances are applied to the emissions data. These values are subject to change at any time. The controlling federal and local emission requirements need to be verified by your Caterpillar technical representative.

Customer's may have special emission site requirements that need to be verified by the Caterpillar Product Group engineer.

EMISSION CYCLE LIMITS:

Cycle emissions Max Limits apply to cycle-weighted averages only. Emissions at individual load points may exceed the cycle-weighted limit.

WET & DRY EXHAUST/EMISSIONS DESCRIPTION:

Wet - Total exhaust flow or concentration of total exhaust flow

Dry - Total exhaust flow minus water vapor or concentration of exhaust flow with water vapor excluded

EMISSIONS DEFINITIONS:

Emissions : DM1176

EMISSION CYCLE DEFINITIONS

1. For constant-speed marine engines for ship main propulsion, including diesel-electric drive, test cycle E2 shall be applied, for controllable-pitch propeller sets test cycle E2 shall be applied.

2. For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied.

3. For constant-speed auxiliary engines test cycle D2 shall be applied.

4. For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

HEAT REJECTION DEFINITIONS:

Diesel Circuit Type and HHV Balance : DM9500

HIGH DISPLACEMENT (HD) DEFINITIONS:

3500: EM1500

RATING DEFINITIONS:

Agriculture : TM6008

Fire Pump : TM6009

Generator Set : TM6035

Generator (Gas) : TM6041

Industrial Diesel : TM6010

Industrial (Gas) : TM6040

Irrigation : TM5749

Locomotive : TM6037

Marine Auxiliary : TM6036

Marine Prop (Except 3600) : TM5747

Marine Prop (3600 only) : TM5748

MSHA : TM6042

Oil Field (Petroleum) : TM6011

Off-Highway Truck : TM6039

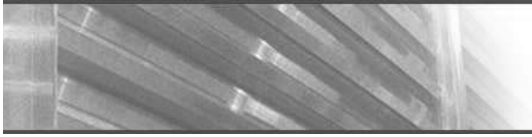
On-Highway Truck : TM6038

SOUND DEFINITIONS:

Sound Power : DM8702

Sound Pressure : TM7080

Date Released : 10/27/21



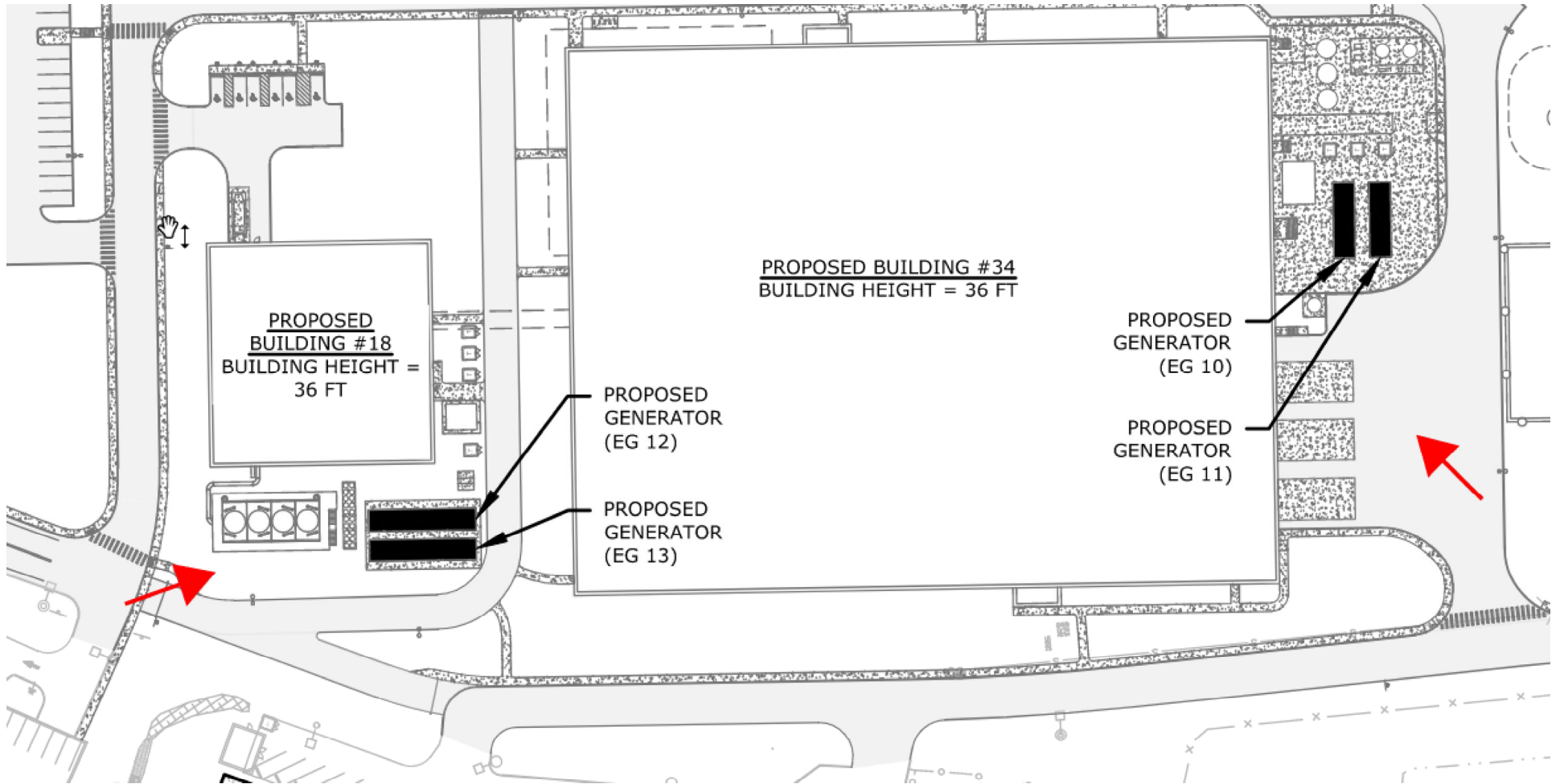
- Miscellaneous Items:
 - ✓ Flexible coolant and oil drains to exterior with shut valves.
 - ✓ Hennig to install customer supplied vibration isolators.
 - ✓ Powder Coat Finish - All enclosure panels are individually powder coated inside and out. Color is TBD by end-user at a later date. Please select color from Hennig standard powder chart. Color chart will be provided at time of order.

Hennig Enclosure Systems Tank Proposal: Est. Overall Size: 425”L x 130”W x 19.5”H

- Sub-base UL 142 Certified Fuel Tank. Standard package includes:
 - ✓ Designed for 3,312 usable gallons, 24 hours of runtime at full load.
 - ✓ 110% Rupture basin containment.
 - ✓ Primary & secondary tanks are individually tested per UL142 requirements.
 - ✓ 2” Lockable fill port.
 - ✓ Supply & return ports w/ flexible fuel lines (sized for specified generator).
 - ✓ Low level switch.
 - ✓ 2” Normal vent.
 - ✓ Rupture basin switch.
 - ✓ Emergency vents (sized to meet UL standards).
 - ✓ (2) Extra 2” fittings with plugs.
 - ✓ Generator electrical stub up.
 - ✓ Lifting lugs.
 - ✓ 200 lbs/sq ft floor capacity (top of tank).
 - ✓ Painted black (textured finish).
- Additional Tank Items:
 - ✓ Slip resistant surface in walkways; mastic coating w/ silica.
- New Hampshire Code Adders:
 - ✓ Overfill prevention valve w/ 5-gallon lockable spill box, mounted outside enclosure.
 - ✓ External normal & emergency vents.
 - ✓ Fill alarm panel, lithium battery powered w/ 90% level switch.
 - ✓ Clock fuel gauge.
 - ✓ NFPA & tank information labels

Generator Information:

- Model No.: 3516C
- Size: 267”L x 94”W x 116.5”H
- Weight: 35,000 lbs.
- Pre-installed breaker(s); **side facing**.
- **Rear facing** control panel.









The motion passed by unanimous vote, 7-0.

Ms. Eldridge returned to alternate status, and Mr. Hagaman assumed a voting seat.

2) Case 5-9

Petitioners: Lonza Biologics, Inc.
Property: 101 International Drive
Assessor Plan: Map 305, Lot 6
District: (Pease) Airport Business Commercial District
Description: Add two new generators, above ground storage tanks, a transformer pad, and gear/switch enclosure.
Requests: Variances and/or Special Exceptions necessary to grant the required relief from the Pease Development Ordinance including the following variances:
a) from Section 308.02(c) to allow above ground storage tanks (AST) exceeding 2,000 gallons per facility.

SPEAKING IN FAVOR OF THE PETITION

Patrick Crimmins of Tigie and Bond was present on behalf of the applicant. He reviewed the petition, noting that the tanks would require other State approvals. He said the project would involve construction of new electric equipment to support it. He noted that there were already four generators that exceeded 2,000 gallons. He referenced his letter that addressed the criteria.

In response to the Board’s questions, Mr. Crimmins said the following:

- Two generators and tanks would be added and not replace the existing ones. Some of the tanks were smaller;
- There had been no spillage and the tanks were regularly inspected;
- One tank exceeded the 2,000 gallons and had no issues. The tanks would be replaced in kind if they failed or the applicant would return for approval if a larger tank were necessary;
- The material of the new tanks consisted of a rubber lining, with steel on the outside;
- He didn’t know the percentage of space that had not been outfitted in the existing envelope but said a shell was done in 2008 and was dormant for eight years but was in the process of being fit up. He said they were getting close to capacity because generators were catching up to existing space as new projects evolved;
- In a catastrophe, there were pits under the tanks to contain any leakage;
- Generators would routinely be tested to ensure that they were operating efficiently;
- Tanks greater than 2,000 gallons were necessary because they wanted generators that were similar to those on other sites and were running out of space due to the limited footprint.

**SPEAKING IN OPPOSITION TO THE PETITION AND/OR
SPEAKING TO, FOR, OR AGAINST THE PETITION**

No one rose to speak, and Chairman Rheume closed the public hearing.

DECISION OF THE BOARD

Mr. Parrott moved to recommend approval, and Mr. Lee seconded.

Mr. Parrott said it was a straightforward request and similar to what was used in many other facilities. He noted that the applicant would have a regular auditing program to check the integrity of the tanks and that the secondary backup of the pit arrangement would allow any adverse effect to be detected before getting out to the environment. He said the project would have no adverse effect or diminution of value of surrounding properties because it was just a continuation of existing machinery and facilities and there was plenty of room. He said it would be a benefit to the public interest to see the business prosper and would not pose any harm to the environment. In terms of the hardship, he said the company was the best one to know about backup or emergency power to keep their operation running smoothly, and denying the request would be detrimental to them and not have a positive effect on anyone else. He said substantial justice would be done and could see no effect on the public interest. He said the proposed use was not contrary to the spirit of the zoning of the rule, noting that people operated their businesses as they needed to in a safe and responsible fashion. He said he was satisfied that the request met all the criteria.

Mr. Lee concurred and had nothing to add.

Chairman Rheume said he would support the motion. He noted that Lonza at some point should consider whether there was a better way to provide a central tank location that would be easier to inspect than all the smaller tanks. He said it might be a positive benefit to think longer-term about having one large tank so that they didn't have to return before the Board.

The motion passed by unanimous vote, 7-0.

Mr. Hagaman returned to Alternate status, and Ms. Eldridge assumed a voting seat.

3) Case 5-10

- Petitioners: Weeks Realty Trust, Kaley E. Weeks, Trustee and Chad Carter, owners and Tuck Realty Corporation, applicant
- Property: 3110 Lafayette Road and 65 Ocean Road
- Assessor Plan: Map 292, Lots 151-1, 151-2 and 153
- District: Single Residence B
- Description: Construct 23 townhouses on three merged lots.
- Requests: Variances and/or Special Exceptions necessary to grant the required relief from the Zoning Ordinance including the following variance:
- a) from Section 10.513 to allow more than one dwelling per lot;

Vice-Chair McDonell and Mr. Mulligan recused themselves from the vote.

Chairman Rheume said the applicant requested to postpone because only five Board members were available to vote, due to recusals.

DECISION OF THE BOARD

*Mr. Parrott moved to **postpone** the petition to the August 17 meeting, seconded by Mr. Hagaman.*

Mr. Parrott said it was a first-time request and reasonable, and he saw no reason to not postpone it. Mr. Hagaman concurred.

*The motion **passed** by unanimous vote, 5-0.*

- K) Petition of **Lonza Biologics, Inc.** for property located at **101 International Drive** to add an above ground storage tank which requires the following: 1) from Section 308.02(c) of the Pease Development Ordinance to allow an above ground storage tank (AST) exceeding 2,000-gallon capacity per facility. Said property is shown on Assessor Plan 305 Lot 6 and lies within the (Pease) Airport Business Commercial (ABC) District.

SPEAKING TO THE PETITION

Attorney Justin Pasay was present on behalf of the applicant, with project manager Patrick Crimmins and Ricardo Santana of Lonza. Attorney Pasay said the generator would support Lonza's LINKS program and was the same relief granted for a previous similar generator. He reviewed the PDA criteria and said they would be met.

In response to the Board's questions, Attorney Pasay said the generator was unique to the LINKS program and that general generator support would be necessary if an incident or loss of power occurred. He said there was no toxic issues. He said the size of the tank was dictated by the operational time for the generator; the previous tanks that were recommended for approval were located on the back side of that building; and the pit under the tank was lined with a fuel-proof liner and large enough to contain a full drain of the tank.

Chairman Rheume opened the public hearing.

SPEAKING TO, FOR, OR AGAINST THE PETITION

No one was present to speak, and Chairman Rheume closed the public hearing.

DECISION OF THE BOARD

*Mr. Mulligan moved to **recommend approval**, and Mr. Parrott seconded.*

Mr. Mulligan reviewed the PDA criteria. He said granting the variance would pose no adverse effect or diminution in values of surrounding properties because the site was a fully-developed and highly industrial one and the values of surrounding properties would not be affected by the introduction of the mechanical utility. He said the use itself was permitted but just in a smaller size. The benefit to the public interest was that the essential characteristics of the surrounding vicinity would not change with the introduction of a tank that as larger than the 2,000-gallon limit. He said the denial of the variance would result in unnecessary hardship due to special conditions of the large size of the lot and the very large building on it and the fact that there several similar generators with tanks that were previously approved. He said those were special conditions of the property that were different from properties in the nearby vicinity. He said there was no fair and sub relationship between the purpose of the 2,000-gallon requirements and its application to the property. He said the use was permitted but just at a different size, so it was a reasonable use and met the unnecessary hardship test. He said granting the variance would result in substantial justice because the loss to the applicant would outweigh any gain to the PDA if the requirement was strictly adhered to. He said the proposed use would not be contrary to the spirit of the zoning rule because the use was allowed and it was just the size of the use that the relief was sought for, and that size had been approved before, plus the fact that the site was highly industrial and fully developed. He said the Board should recommend approval.

Mr. Parrott concurred and had nothing to add.

*The motion **passed** by unanimous vote, 7-0.*

II. OTHER BUSINESS

There was no other business.

III. ADJOURNMENT

The meeting was adjourned at 10:15 p.m.

Respectfully submitted,

Joann Breault
BOA Recording Secretary

ENCLOSURE 11

Lonza Biologics Storage Facilities located at 101 International Drive Portsmouth, NH

Location	Service	PDA Classification	Capacity	Year Installed	Equipment #	Storage Facility Description	Lonza Comments
101A Utility Yard	Wastewater	Not Regulated	12,000 G	N/A	T-17001	Non Hazardous Material	Not Currently In use
101A Gas Yard	Liquid Nitrogen	No Spill Risk	1,500 G	N/A	X-680	Crygenic Liquid -Gasify and Disperse	
101A Gas Yard	Liquid Carbon Dioxide	No Spill Risk	3,300 G	N/A	X-695	Crygenic Liquid -Gasify and Disperse	
101A Cold Storage Bldg	Generator-Diesel	Regulated	1,075 G	2013	101A-EGEN-B	Double Walled Tank with Interstitial Monitoring	
101A Utility Yard	Generator-Diesel	Regulated	2,400 G	2000	101A-EGEN-B	Double Walled Tank with Interstitial Monitoring	
101B Gas Yard	Liquid Nitrogen	No Spill Risk	6,000 G	N/A	X-33050	Crygenic Liquid -Gasify and Disperse	Orriginal Volume - 1500 G
101B Gas Yard	Liquid Carbon Dioxide	No Spill Risk	7,100 G	N/A	X33040	Crygenic Liquid -Gasify and Disperse	
101B Gas Yard	Liquid Oxygen	No Spill Risk	5,855 G	N/A	X-33030	Crygenic Liquid -Gasify and Disperse	
101B Gas Yard	Gaseous helium	No Spill Risk	43,535 SCF 2,244 G	N/A	X-33060	Crygenic Liquid -Gasify and Disperse	
101B Gas Yard	Brine solution	Not Regulated	50 Tons	N/A	X-30010	Saturated Salt Solution	No Significant hazzards Mostly Dry Tank
101B Electrical Yard	Generator Diesel	Regulated	3,640 G	2003	101B-EGEN	Double Walled Tank with Interstitial Monitoring	
101B Electrical Yard	Generator Diesel	Regulated	3,312 G	2019	101B-EGEN	Double Walled Tank with Interstitial Monitoring	
101B Electrical Yard	Generator Diesel	Regulated	3,312 G	2019	101B-EGEN	Double Walled Tank with Interstitial Monitoring	
101C Underground	Nitrogen Wastewater- Currently not in use	Not Regulated	50,000 G	N/A	T-33011	Epoxy Lined	Non Hazardous
101C Underground	triton Wastewater	Not Regulated	50,000 G	N/A	T-33012	Epoxy Lined	Non Hazardous
101C Underground	Waste water (not used)	Not Regulated	50,000 G	N/A	T-33013	Epoxy Lined	WW flushed into chemical drains in building flow to this lined tank for equilzaion. Following Equalizaition the Ww is diverted back into the building's wast Neutralization systems
101C Gas Yard	liquid nitrogen	No Spill Risk	3,000 G	N/A	T-43410	Crygenic Liquid -Gasify and Disperse	
101C Electrical Yard	Generator -Diesel	Regulated	3,312 G	2016	101C-EGEN	Double Walled Tank with Interstitial Monitoring	
101C Electrical Yard	Generator -Diesel	Regulated	3,312 G	2016	101C-EGEN	Double Walled Tank with Interstitial Monitoring	
101C Electrical Yard	Generator -Diesel	Regulated	3,312 G	2021	101C-EGEN	Double Walled Tank with Interstitial Monitoring	
Bldg 230	Generator -Diesel	Regulated	660 G	N/A	230-EGEN	Double Walled Tank with Interstitial Monitoring	
Bldg 34	Generator -Diesel	Regulated	4,400 G	2024	EG-10	Double Walled Tank with Interstitial Monitoring	
Bldg 34	Generator -Diesel	Regulated	4,400 G	2024	EG-11	Double Walled Tank with Interstitial Monitoring	
bldg 18	Generator -Diesel	Regulated	4,400 G	2024	EG-12	Double Walled Tank with Interstitial Monitoring	
bldg 18	Generator -Diesel	Regulated	4,400 G	2024	EG-13	Double Walled Tank with Interstitial Monitoring	



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HAND DELIVERED

LIZABETH M. MACDONALD
JOHN J. RATIGAN
DENISE A. POULOS
ROBERT M. DEROSIER
CHRISTOPHER L. BOLDT
SHARON CUDDY SOMERS
DOUGLAS M. MANSFIELD
KATHERINE B. MILLER
CHRISTOPHER T. HILSON
HEIDI J. BARRETT-KITCHEN
JUSTIN L. PASAY
ERIC A. MAHER
CHRISTOPHER D. HAWKINS
ELAINA L. HOEPPNER
WILLIAM K. WARREN
BRIANA L. MATUSZKO
ALI GENNARO

RETIRED
MICHAEL J. DONAHUE
CHARLES F. TUCKER
ROBERT D. CIANDELLA
NICHOLAS R. AESCHLIMAN

February 27, 2024

Phyllis Eldridge, Chair
Zoning Board of Adjustment
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

RE: Lonza Biologics
101 International Drive, Tax Map 305, Lot 6

Dear Chair Eldridge and Board Members:

Enclosed please find supporting materials to accompany the information submitted via the City's on-line permitting system requesting variance relief to permit the installation at the above referenced property of four (4) above ground fuel tank which exceeds the maximum permitted capacity of 2,000 gallons per PDA 308.02(c).

We respectfully request that this matter be placed on the Board's March 19, 2024 agenda. In the meantime, if you have any questions or require additional information do not hesitate to contact me.

Very truly yours,
DONAHUE, TUCKER & CIANDELLA, PLLC

Justin L. Pasay
JLP/sac
Enclosures

cc: Lonza Biologics
Tighe & Bond
Pease Development Authority

4883-1886-8137, v. 1

DONAHUE, TUCKER & CIANDELLA, PLLC
16 Acadia Lane, P.O. Box 630, Exeter, NH 03833
111 Maplewood Avenue, Suite D, Portsmouth, NH 03801
Towle House, Unit 2, 164 NH Route 25, Meredith, NH 03253
83 Clinton Street, Concord, NH 03301

VARIANCE APPLICATION FOR
Lonza Biologics, Inc. (“**Lonza**” or the “**Applicant**”) for property located at 101 International Drive (City Assessor Map 305, Lot 6) (the “**Property**”).

The Applicant seeks a variance from Section 308.02(c) of the Pease Development Authority’s (“PDA”) Land Use Controls to permit four (4) above ground storage (fuel) tanks (“ASTs”), each of which exceeds the maximum 2,000-gallon capacity pursuant to Section 308.02(c), at the Property. As detailed below, the ASTs will support generators which will back-up the Central Utility Building (the “CUB”) and the Vertex Building recently approved for fit-up by the City’s Planning Board and already under construction at the Property. See Enclosure 1 (Planning Board Notice of Decision dated 22 November 2023). The Applicant requests that the City’s Board of Adjustment recommend approval of the Applicant’s variance request to the PDA’s Board of Directors pursuant the process outlined in Section 317.03 of the PDA’s Land Use Controls. The Applicant anticipates that the PDA Board of Directors will vote to authorize the Applicant to appear before the Board of Adjustment’s 19 March 2024 meeting, at the PDA Board’s 14 March 2024 meeting.

A. Factual Context

The Property, which is leased by Lonza from the PDA, is 46.03 acres in size and is located onboard the PDA within the Airport, Business and Commercial Zoning District. The Property has frontage along International Drive and Corporate Drive and is the location of Lonza’s Portsmouth facility.

In January of 2019, the City’s Planning Board approved, among other things, Lonza’s Site Plan Review application for the construction of three proposed industrial buildings, a parking garage, the CUB, as well as paving, lighting, utility, landscaping, drainage and associated site improvements for the Property, which approval was slightly amended by the PDA in August of 2019 and again in January of 2023 (collectively referred to as the “Phase 1 Approval”). The Phase 1 Approval permitted the construction of the shells for both Building 1 and the CUB, which construction work began in the late summer of 2023.

As detailed in **Enclosure 1**, in November 2023, Lonza obtained Amended Site Plan approval for Phase 2 of the Project from the City’s Planning Board which includes the fit-up of Building 1 and the CUB as well as the construction of a temporary surface parking lot and gravel area for construction trailers, parking and laydown area in the location of Proposed Building #2. See Enclosure 2 (approved Phase 2 Overall Site Plan).

Building #1 will be utilized by Vertex Pharmaceuticals Incorporated (“Vertex”) for a groundbreaking cell therapy manufacturing facility (hereinafter referred to as the “Vertex Building”). The Vertex Building will support the development and commercialization of the Vertex type 1 diabetes cell therapy portfolio. As detailed in a 30 August 2023 press release from Lonza (see Enclosure 3), the Vertex Building, which will be operated by Lonza, is being built adjacent to Lonza’s existing Portsmouth facility, will span more than 130,000 square feet, and is anticipated to generate up to 300 new jobs at peak capacity. Id.

As depicted on **Enclosure 2**, the Vertex Building and the CUB will be located in the central area of the so-called Iron Parcel portion of the Property, northwest of Lonza's existing facilities. See Enclosure 4 (aerial view of the Property); **Enclosure 5** (City Assessor Map 305).

Like nearly all buildings within Lonza's operations, the Vertex Building and the CUB must be supported by emergency generators to ensure protection of the sensitive and important operations and processes that will be occurring inside the buildings in the event of an electrical outage. As a result, the Applicant proposes installing four (4) CAT 3516C diesel generators (the "Generators") with corresponding ASTs, two to serve the CUB and two to serve the Vertex Building. The location of the four (4) new generators and ASTs, as well as the locations of all other generators in use by Lonza at the Property, are depicted on **Enclosure 6**. Details of the Generators and ASTs can be found in **Enclosure 7**, which includes specifications and other information for both.¹

The Generators and the ASTs will be located on the interior of the Property and meet all applicable setback requirements. See Enclosure 6. They will also observe and conform to the requirements of all applicable regulations, to include NFPA 30, the Flammable and Combustible Liquids Code, and they will require additional State approvals before operation. See also Enclosure 8, which includes two photographs of the proposed Generator and AST sites.

Section 308.02(c) of the PDA Land Use Controls prohibits ASTs, to include fuel tanks, with capacities greater than 2,000 gallons. As the proposed ASTs to serve the Generators will have an estimated capacity of 4,400 gallons each, variance relief is required.

The Applicant has previously obtained, on two separate occasions, unanimous recommendation for variance approval from the City's Board of Adjustment for similar generator/AST proposals. More specifically, in 2019, the Applicant installed two nearly identical generators and ASTs on the northern portion of the Property after receiving the requisite variance relief. See Enclosure 9. Then, in July of 2021, the Applicant received unanimous recommendation for variance approval from the Board of Adjustment to accommodate a generator and AST located on the southeastern portion of the Property which now serve Lonza's Lynx Project. See Enclosure 10.

We note that the proposed ASTs will be the 22nd through 25th storage facilities at the Property. See Enclosure 11. Further, each AST will be double walled, will have a 110% rupture basis, a low fuel level alarm switch, a fuel in rupture basis switch, a lockable mechanical fuel port, an overfill prevention valve with five (5) gallon lockable spill box, emergency vents, and a fill alarm panel and digital fuel level gauge. Further, all four proposed Generators/ASTs will be incorporated into Lonza's existing Spill Prevention, Control, and Countermeasures Plan and Emergency Spill Response Program and, like all similar equipment on the Property, they

¹ We note that the four (4) generator/AST concept depicted on **Enclosure 6** is the result of a risk analysis performed by Lonza's Environmental Health and Safety Department, Lonza engineers and corresponding manufacturing professionals which collectively determined what systems and configuration are warranted considering the proposed use of the Vertex Building and CUB. In this case, the design choice to use four (4) integrated above ground tanks to service the four (4) generators mitigated, to the extent possible, risks posed by underground storage tanks, which are not permitted at the PDA, or a single consolidated generator/tank concept with corresponding fuel lines.

will be regularly inspected by Lonza and tested for operating efficiency, etc. Additionally, each Generator/AST will be installed with security fencing and/or bollards to protect them.

Because the Applicant's proposal will not be inconsistent with the essential character of the surrounding area, will not compromise the public health in any way, will provide substantial justice, will not compromise the property values of surrounding properties, and because there is no rational connection between the general purposes of the PDA's Land Use Controls and their specific application to the Property under the unique circumstances of this case, as outlined below, we respectfully request that the Board of Adjustment recommend approval of Lonza's variance request.

B. Variance Criteria

The variance criteria outlined in PDA 317.01(c) generally mirror those found within RSA 674:33, and will thus be analyzed pursuant to the statute and corresponding case law interpreting the same.

To obtain a variance pursuant to PDA 317.01, an applicant must show that that the variance is in harmony with the general purpose and intent of the PDA Land Use Controls and meets the following criteria: (1) no adverse effect or diminution in values of surrounding properties will be suffered; (2) granting the variance would be of benefit to the public interest; (3) denial of the variance would result in unnecessary hardship to the person seeking it; (4) granting the variance would be substantial justice; and (5) the proposed use would not be contrary to the spirit of the zoning rule.

1. No adverse effect or diminution in values of surrounding properties will be suffered if the variance request is approved.

Given the nature of the area and the existing use of the Property and surrounding properties, none of the surrounding properties will suffer any diminution in value or other adverse effect as a result of granting the requested variance. Certainly, the Applicant is aware of no evidence to the contrary. Use of the Generators in the proposed locations is permitted by right and the size of the corresponding ASTs will have no discernible impact on surrounding properties which are themselves, commercial in nature. See Enclosures 4, 6. Indeed, several other generators are already in operation at the Property which use ASTs that exceed the 2,000 gallon limit. See Enclosure 11. The new ASTs will be incorporated into Lonza's existing Spill Prevention, Control, and Countermeasures Plan as well as Lonza's Emergency Spill Response Program, and they will be regularly inspected by Lonza. Lonza will also comply with all applicable regulations and requirements regarding use of the Generators and ASTs. The neighborhood is already commercial and/or industrial in nature.

Accordingly, the Applicant respectfully requests that the Board of Adjustment find that the requested variance will not diminish surrounding property values or cause other adverse effect.

2. Granting the variance will be of benefit to the public interest.

The New Hampshire Supreme Court has indicated that the requirement that a variance not be “contrary to the public interest” is coextensive and related to the requirement that a variance be consistent with the spirit of the ordinance. See Chester Rod & Gun Club v. Town of Chester, 152 N.H. 577, 580 (2005); Malachy Glen Associates, Inc. v. Town of Chichester, 155 N.H. 102, 105-06 (2007); and Farrar v. City of Keene, 158 N.H. 684, 691 (2009). A variance is contrary to the public interest only if it “unduly, and in a marked degree conflicts with the ordinance such that it violates the ordinance’s basic zoning objectives.” Chester Rod & Gun Club, 152 N.H. at 581; Farrar, 158 N.H. at 691. See also Harborside Associates, L.P. v. Parade Residence Hotel, LLC, 162 N.H. 508, 514 (2011) (“[m]ere conflict with the terms of the ordinance is insufficient.”) Moreover, these cases instruct boards of adjustment to make the determination as to whether a variance application “unduly” conflicts with the zoning objectives of the ordinance “to a marked degree” by analyzing whether granting the variance would “alter the essential character of the neighborhood” or “threaten the public health, safety or welfare” and to make that determination by examining, where possible, the language of the Zoning Ordinance.

While PDA 308, regulating above and below-ground storage facilities, does not have an express purpose provision, the general purpose of the PDA’s Zoning Ordinance is to:

[P]romote the public health, safety and general welfare, promote the safe operation of air transportation, conserve the value of property within the jurisdiction of the Pease Development Authority, assure the most efficient use of the existing natural and manmade resources, provide adequate light, air and open space, encourage the appropriate and wise use of land and promote high quality economic development and employment.

PDA 301.01. See also PDA 317.01(c)(requiring that in addition to satisfying the variance criteria, variances “shall not be approved or recommended for approval unless it is in harmony with the general purpose and intent of these regulations ...”).

As a foundational matter, the Applicant’s proposal is in harmony with the general purpose and intent of the PDA Land Use Controls, and therefore not contrary to the public interest, because it will advance the general purposes articulated in PDA 301.01. Specifically, the Generators and ASTs will serve the Vertex Building and corresponding CUB and therefore support the development and commercialization of the Vertex type 1 diabetes cell therapy portfolio and in so doing, the creation of up to 300 local jobs, both of which benefit the public. The Applicant’s proposal is also consistent with the PDA’s stated purpose of encouraging the appropriate and wise use of land and promoting high quality economic development and employment, and it will not, in light of the Property’s existing conditions and uses, implicate in any negative way the provision of adequate light, air and open space. Rather, Phase 2 of the project is a major step forward with regard to long-standing efforts to facilitate development on the so-called Iron Parcel. Further, as referenced above, the Generators and ASTs will be incorporated into Lonza’s existing Spill Prevention, Control and Countermeasures Plan as well as Lonza’s Emergency Spill Response Program, and they will be regularly inspected and maintained by Lonza and will obtain all other applicable approvals before operation.

The Applicant's proposal also satisfies the tests articulated under the case law. First, the Generators and ASTs will not alter the essential character of the neighborhood. On the contrary, they will be consistent with the current status and use of the Property and Lonza's other operations as well as surrounding commercial properties, specifically consistent with the configuration and installation of other generators and ASTs approved in 2019 and 2021 which are in use, and otherwise comply with all applicable regulations and requirements. See Enclosures 1, 2, 6, 9, 10, 11.

Similarly, the requested variance from PDA 308.02(c) will not threaten the public health, safety or welfare. If the proposed ASTs had a capacity of 2,000 gallons or less, no zoning relief would be required at all. As the Applicant explained to the Board during the May 2019 and July 2021 hearings, the size of the generator dictates the size of the fuel tank and the size of the Generators in this case, are required due to the nature and scope of the Vertex Building operations. Further, the ASTs have several safety features as discussed above. See Enclosure 7.

As the Applicant's variance proposal will be consistent with and advance the general purposes of the PDA Land Use Controls, and as it will not alter the essential character of the neighborhood or threaten the public health or safety, it would be reasonable and appropriate for the Board of Adjustment to conclude that granting the variances will benefit the public interest.

3. Denial of the variance would result in unnecessary hardship to Lonza.

In New Hampshire, there are two options by which the Board of Adjustment can find that an unnecessary hardship exists:

- (A) For purposes of this subparagraph, "unnecessary hardship" means that, owing to special conditions of the property that distinguish it from other properties in the area:
- (i) No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of that provision to the property; and
 - (ii) The proposed use is a reasonable one.

or,

(B) If the criteria in subparagraph (A) are not established, an unnecessary hardship will be deemed to exist if, and only if, owing to special conditions of the property that distinguish it from other properties in the area, the property cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it.

See RSA 674:33, I.

The "special conditions" of the Property for purposes of this variance criterion include the size of the Property leased by Lonza from the PDA which, at approximately 46 acres, appears larger than all surrounding privately leased parcels, the Property's unique ability to accommodate the development originally approved in 2019 and to advance the core purposes of

the PDA, to include the size and scale of approved Building 1, which is already under construction, the size and scale of the Vertex operation inside the building which will utilize approximately 130,000 sf, the sensitive and important nature of the use and the need for considerable generators to protect same in the event of an emergency power outage, and the Property's ability to accommodate the Generators and ASTs in the locations proposed in a manner that complies with all applicable regulations aside from PDA 308.02(c) which pertains to the size of the AST. See Enclosures 1, 2, 3, 6, 8, 9.

In Harborside Assocs. v. Parade Residence Hotel, the New Hampshire Supreme Court upheld the Portsmouth Board of Adjustment's finding that the physical improvements on a property, in that case the size of a building when compared to other buildings in the area within the context of sign variance request, could be considered "special circumstances." Affirming the analysis of the Board of Adjustment, the Supreme Court stated:

The [Respondent] is not attempting to meet the 'special conditions' test by showing that its *signs* would be unique in their settings, but that its *property* – the hotel and conference center – has unique characteristics that make the signs themselves a reasonable use of the property.

Harborside, 162 N.H. at 518 (emphasis added). Cf Farrar, 158, N.H. 689 (where variance sought to convert large, historical single use residence to mixed use of two residence and office space, size of residence was relevant to determining whether property was unique in its environment).

Here, the Property's physical characteristics to include its large size which facilitated the underlying site plan approvals for the Vertex Building, the size of the Vertex Building itself which is currently under construction, and the sensitive and important nature of the Vertex Building's operations make the proposed variance reasonable under the circumstances because due to the size of the building and the scale of the anticipate operations, the Project requires the specific generators which are proposed and those generators require the specific ASTs proposed.

Due to these special conditions of the Property, there is no fair and substantial relationship between the public purposes of the PDA Land Use Controls and their specific application to the Property in this case. On the contrary, despite the technical lack of conformity, and as discussed above, the Applicant's proposal is consistent with PDA 301.01 because the Generators and ASTs will service the Vertex Building and therefore support the manufacturing of pharmaceuticals which will benefit the public, because the project will create up to 300 local jobs, and because the variance is consistent with the PDA's stated purpose of encouraging the appropriate and wise use of land and promoting high quality economic development and employment. Further, the requested variance will replicate existing conditions at the Property vis-à-vis other generators and ASTs and will otherwise comply with all applicable regulations.

Put another way, strictly enforcing the PDA 308.02(c) will not advance the public purposes of the PDA Land Use Controls, but granting the requested variances will clearly will.

The Applicant respectfully reminds the Board of Adjustment that the mere fact that the Applicant is seeking a variance from the express provisions of the PDA Land Use Controls is not

a valid reason for denying the variance. See Malachy Glen Associates, Inc. v. Town of Chichester, 155 N.H. 102, 107 (2007); see also Harborside Associates, 162 N.H. at 2011 (“mere conflict with the terms of the ordinance is insufficient”).

Finally, because the Applicant’s proposed Generators and ASTs will be substantially similar to existing uses on the Property, will serve a critical need vis-à-vis the Vertex Building and operation, and will otherwise comply with all applicable regulations, it is reasonable under the circumstances. See Vigeant v. Town of Hudson, 151 N.H. 747, 752 - 53 (2005); and Malachy Glen, 155 N.H. at 107; see also Harborside at 518-519 (applicant did not need to show signs were “necessary” rather only had to show signs were a “reasonable use”).

Accordingly, the Applicant respectfully asserts that its application complies with the standard for Option A of the unnecessary hardship criterion and the Board of Adjustment should so find.

4. Granting the variance will be substantial justice.

As noted in Malachy Glen, *supra*, “perhaps the only guiding rule [on this factor] is that any loss to the individual that is not outweighed by a gain to the general public is an injustice.” Malachy Glen, *supra*, citing 15 P. Loughlin, New Hampshire Practice, Land Use Planning and Zoning § 24.11, at 308 (2000) (quoting New Hampshire Office of State Planning, The Board of Adjustment in New Hampshire, A Handbook for Local Officials (1997)). In short, there must be some gain to the general public from denying the variance that outweighs the loss to the Applicant from its denial.

Granting the variance will provide a great benefit to Lonza as it will permit the installation of the Generators and ASTs which will accommodate the Vertex Building and its operations. By extension, the relief will facilitate the creation of a ground breaking cell therapy to treat people with type 1 diabetes, which is a great benefit to the public. This infrastructure will also help Lonza expand its operations at the Portsmouth Facility and advance its business plans in accordance with the goals of the PDA, and the long-standing development proposal for the Iron Parcel.

On the contrary, there is no discernible benefit to the general public that could be gained by denying the requested variance because the opposite is true: granting the variance will be a great benefit to the general public. First, the Generators are permitted by right at the proposed locations but relief is needed due only to the size of the corresponding ASTs which exceed, by an estimated 2,400 gallons, the limitation contained within PDA 308.02(c). Beyond this, the Generators and ASTs will support the Vertex Building which will contribute to the manufacturing of pharmaceuticals which have self-evident value to the general public, as referenced above, as do the creation of up to 300 jobs which the project will create. Further, this initiative will help Lonza continue to grow roots in a manner that is beneficial to the PDA, the City of Portsmouth and the surrounding areas, and the State of New Hampshire.

Because granting the requested variance will provide a significant benefit both to the Applicant and to the general public, and because there is no discernible benefit to the general public by denying the variance, Lonza's proposal accomplishes substantial justice.

5. The proposed use would not be contrary to the spirit of PDA 308.02(c).

As referenced in Section 2, above, the requested variance will satisfy the "public interest" prong of the variance criteria because it advances the general purpose and intent of the PDA Land Use Controls and will not alter the essential character of the neighborhood or threaten the public health and welfare. As the New Hampshire Supreme Court has indicated in both Chester Rod & Gun Club and in Malachy Glen, the requirement that the variance not be "contrary to the public interest" is coextensive and is related to the requirement that the variance be consistent with the spirit of the ordinance. See Chester Rod & Gun Club, 152 N.H. at 580. A variance is contrary to the spirit of the ordinance only if it "unduly, and in a marked degree conflicts with the ordinance such that it violates the ordinance's basic zoning objectives." Chester Rod & Gun Club, 152 N.H. at 581; Farrar, 158 N.H. at 691. As discussed above, the requested variance is consistent with the general purpose and intent of the PDA Land Use Controls because of the reasons stated in Section 2. Further, generators and ASTs of this size are commonly associated with the work Lonza performs, which is why Lonza has sought and received similar relief for ASTs that exceed the 2,000-gallon limit in the past. As a result, for the reasons stated above, the Applicant respectfully asserts that it would be reasonable and appropriate for the Board of Adjustment to conclude that the requested variance will not be contrary to the spirit of the PDA's Land Use Controls.

C. Conclusion

Lonza respectfully submits that its Variance Application meets the underlying standard of review and respectfully requests the same be granted.

4884-3060-6505, v. 1



CITY OF PORTSMOUTH

Planning Department
1 Junkins Avenue
Portsmouth, New
Hampshire 03801
(603) 610-7216

PLANNING BOARD

November 22, 2023

Dave Morgan
Lonza Biologics
230 Corporate Drive
Portsmouth, New Hampshire 03801

RE: Amended Site Plan approval request for property located at 101 International Drive (LU-23-108)

Dear Property Owner:

The Planning Board, at its regularly scheduled meeting of Thursday, November 16, 2023, considered your application for Amended Site Plan approval for Phase 2 which includes fit-up of Building #1 and the utility building, construction of a temporary surface parking lot and gravel area for construction trailers, parking and laydown area in the location of Proposed Building #2. Said property is shown on Assessor Map 305 Lot 6 and lies within the Airport Business Commercial (ABC) District. As a result of said consideration, the Board voted recommend Amended Site Plan Approval to the PDA Board with the following **condition**:

1.1) A recommendation for the PDA to request a review of the project by the Rockingham Regional Planning Commission for a project of regional impact for traffic and water use.

This approval is granted subject to all conditions of approval by the Planning Board on January 17, 2019 and to all other requirements stated in the Planning Board letter of decision dated January 18, 2019.

The Board's decision may be appealed up to thirty (30) days after the vote. Any action taken by the applicant pursuant to the Board's decision during this appeal period shall be at the applicant's risk. Please contact the Planning Department for more details about the appeals process.

Unless otherwise indicated above, applicant is responsible for applying for and securing a building permit from the Inspection Department prior to starting any approved work.

The Planning Director must certify that all conditions of approval have been completed prior to issuance of a building permit unless otherwise indicated above.

The minutes and audio recording of this meeting are available by contacting the Planning Department.

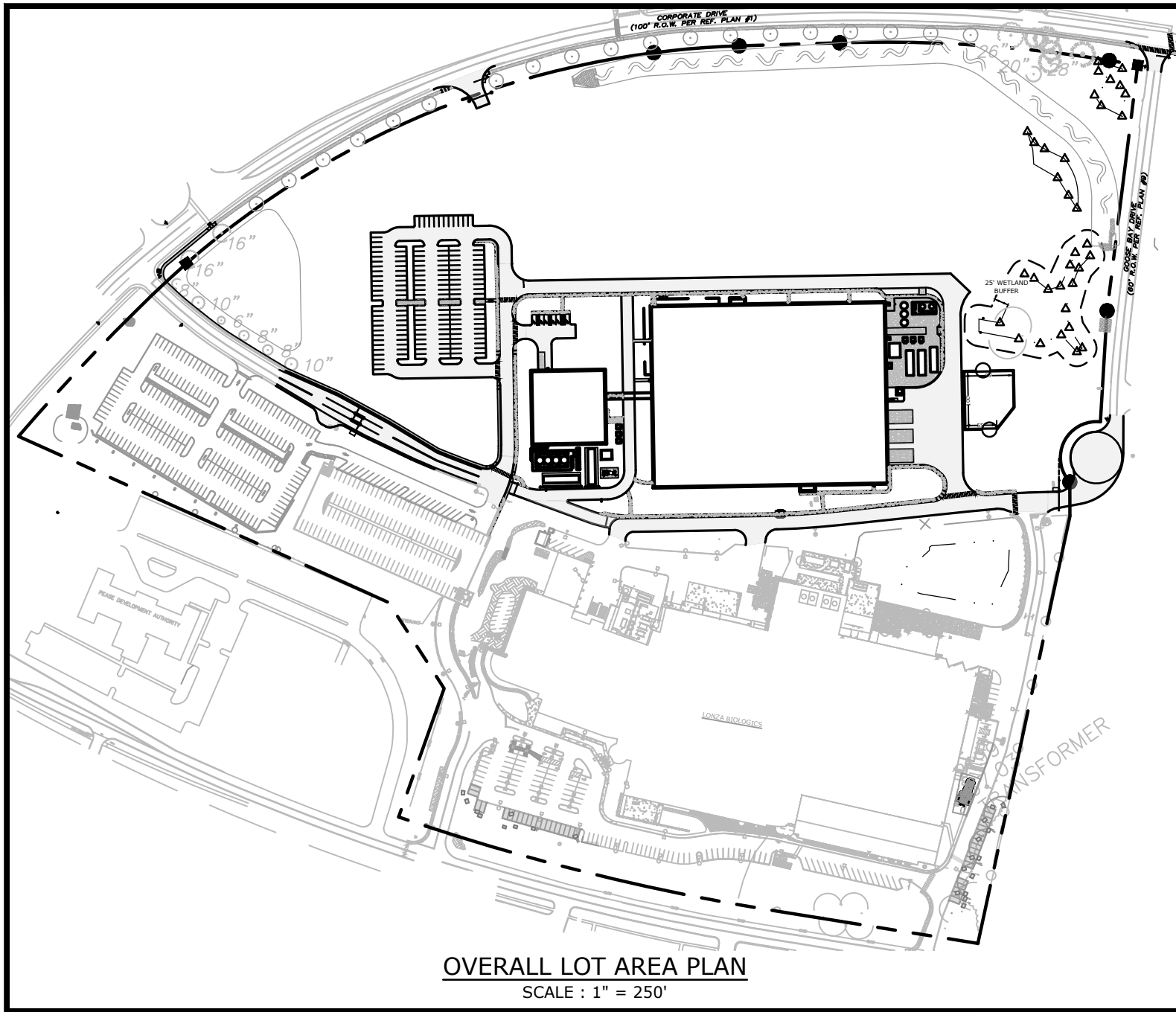
Very truly yours,

A handwritten signature in black ink, appearing to read "Rick Chellman". The signature is fluid and cursive, with a large initial "R" and "C".

Rick Chellman, Chairman of the Planning Board

cc: Shanti Wolph, Chief Building Inspector

Neil Hansen, Tighe & Bond



SITE DATA

LOCATION: TAX MAP 305, LOTS 1 & 2
70 & 80 CORPORATE DRIVE
PORTSMOUTH, NH

TAX MAP 305, LOT 6
101 INTERNATIONAL DRIVE
PORTSMOUTH, NH

ZONING DISTRICT: AIRPORT, BUSINESS & COMMERCIAL (ABC)

DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA:	5 AC	43.4± AC
MINIMUM STREET FRONTAGE:	200 FT	1,038 FT
MINIMUM FRONT YARD SETBACK:	70 FT	70 FT
SIDE SETBACK	30 FT	30 FT
REAR SETBACK	50 FT	51 FT
MINIMUM OPEN SPACE	25 %	59.9± %

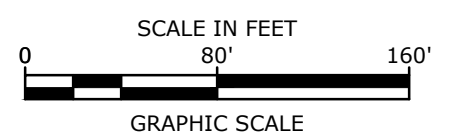
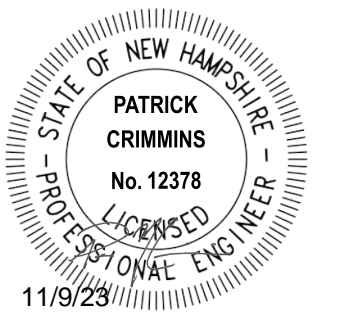
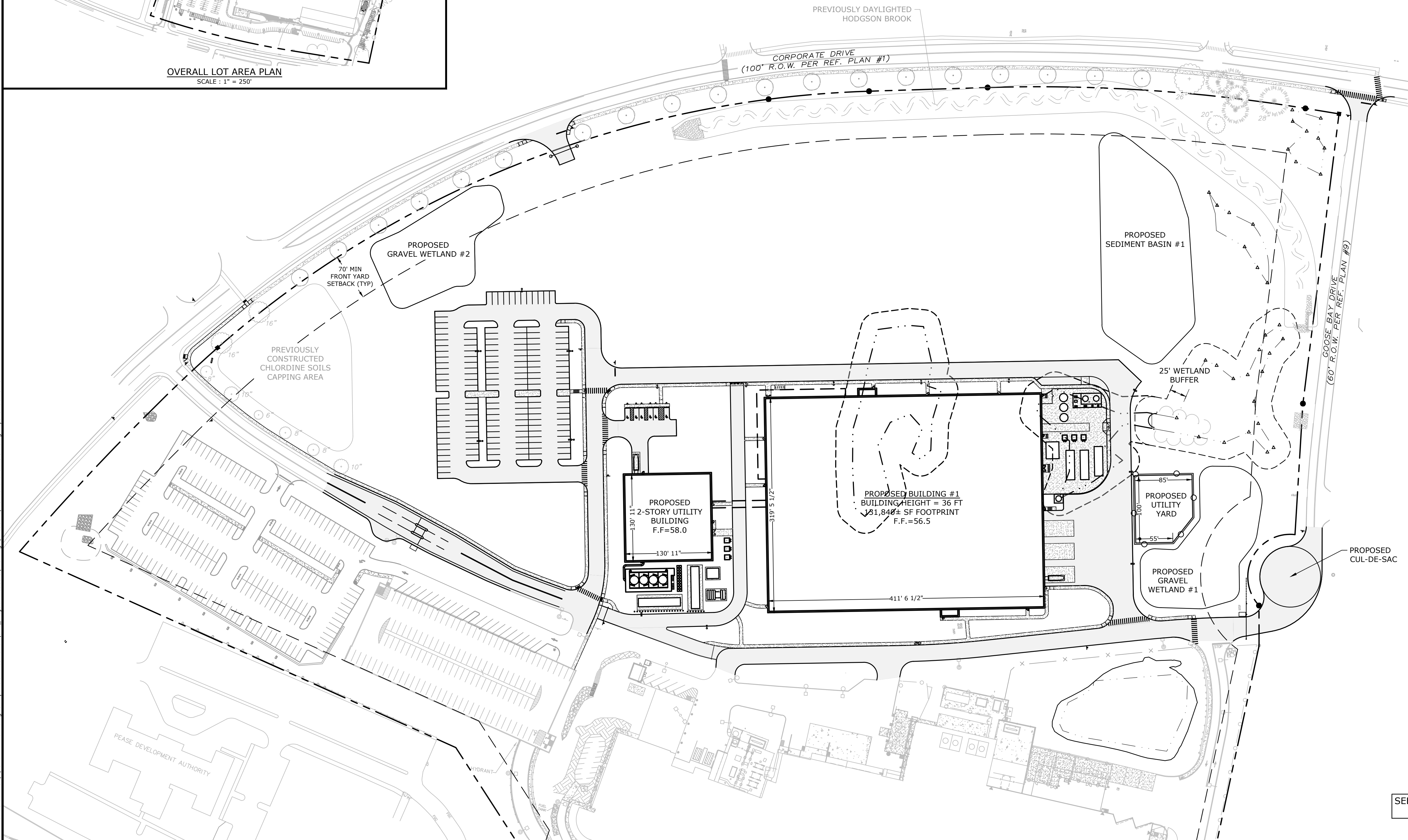
MAXIMUM STRUCTURE HEIGHT SHALL NOT EXCEED FAA CRITERIA.

PARKING REQUIREMENTS:

REQUIRED PARKING	PROVIDED
2 SPACES PER 3 EMPLOYEES ON LARGEST SHIFT	801 SPACES
990 EXISTING EMPLOYEES	156 SPACES
180 ANTICIPATED EMPLOYEES	120 SPACES
TOTAL REQUIRED:	957 SPACES

PARKING PROVIDED	PROVIDED
EXISTING SPACES:	801 SPACES
PROPOSED SURFACE PARKING:	156 SPACES
TOTAL:	957 SPACES

Enclosure 2



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION
N	11/9/2023	Revised P.B. Submission
M	9/27/2023	P.B. Submission
L	9/1/2022	Issued for Construction
K	5/27/2022	Issued for Bid
J	5/23/2022	Third Party Rev. Comments
I	4/26/2022	Revised PB Stipulations

PROJECT NO:	L-0700-013
DATE:	04/03/2018
FILE:	L-0700-026-C-DSGN.dwg
DRAWN BY:	CIK
CHECKED BY:	NAH
APPROVED:	PMC

PHASE 2 OVERALL SITE PLAN

SCALE: AS SHOWN

C-164

SEE SHEET C-165 FOR LEGEND AND SITE NOTES

Last Save Date: November 9, 2023 11:03 AM By: NAHANSEN
 Plot Date: Thursday, November 09, 2023 Plotted By: Neil A. Hansen
 P&E File Location: J:\L-0700-Lonza Biologics Expansion.was 12/20/2026 Project Subarea Drawings\AutoCAD\L-0700-026-C-DSGN.dwg Layout Tab: C-164

Media Advisory

30 Aug 2023

Lonza and Vertex Celebrate Groundbreaking of Cell Therapy Manufacturing Facility in Portsmouth (US)

- The large-scale facility will support the development and commercialization of the Vertex type 1 diabetes (T1D) cell therapy portfolio
- At the facility's groundbreaking event on August 30th, Lonza and Vertex were joined by New Hampshire government officials to commemorate the milestone

Portsmouth, NH (US), August 30, 2023 – Today, Lonza and Vertex Pharmaceuticals Incorporated (Vertex) celebrated the groundbreaking of a dedicated manufacturing facility in Portsmouth, New Hampshire (US). This marks a milestone in the [strategic collaboration](#) between the two companies, which aims to accelerate the development and commercialization of Vertex's potentially transformative cell therapies for type 1 diabetes (T1D).

The new facility is being built adjacent to Lonza's existing campus in Portsmouth, and is a co-investment project between the two companies. Operated by Lonza, the facility will span more than 130,000 square feet and is anticipated to generate up to 300 new jobs at peak capacity, in areas including manufacturing operations, quality assurance and quality control. Initial hiring for roles relating to the facility's construction, fit out and qualification is already underway.

The large-scale manufacturing facility will support the commercial production of the Vertex T1D cell therapy portfolio, with a focus on the VX-880 and VX-264 programs currently in clinical trials. Vertex's first clinical program, VX-880, has already demonstrated clinical proof-of-concept, while its second approach, VX-264, is being studied in a Phase 1/2 clinical trial.

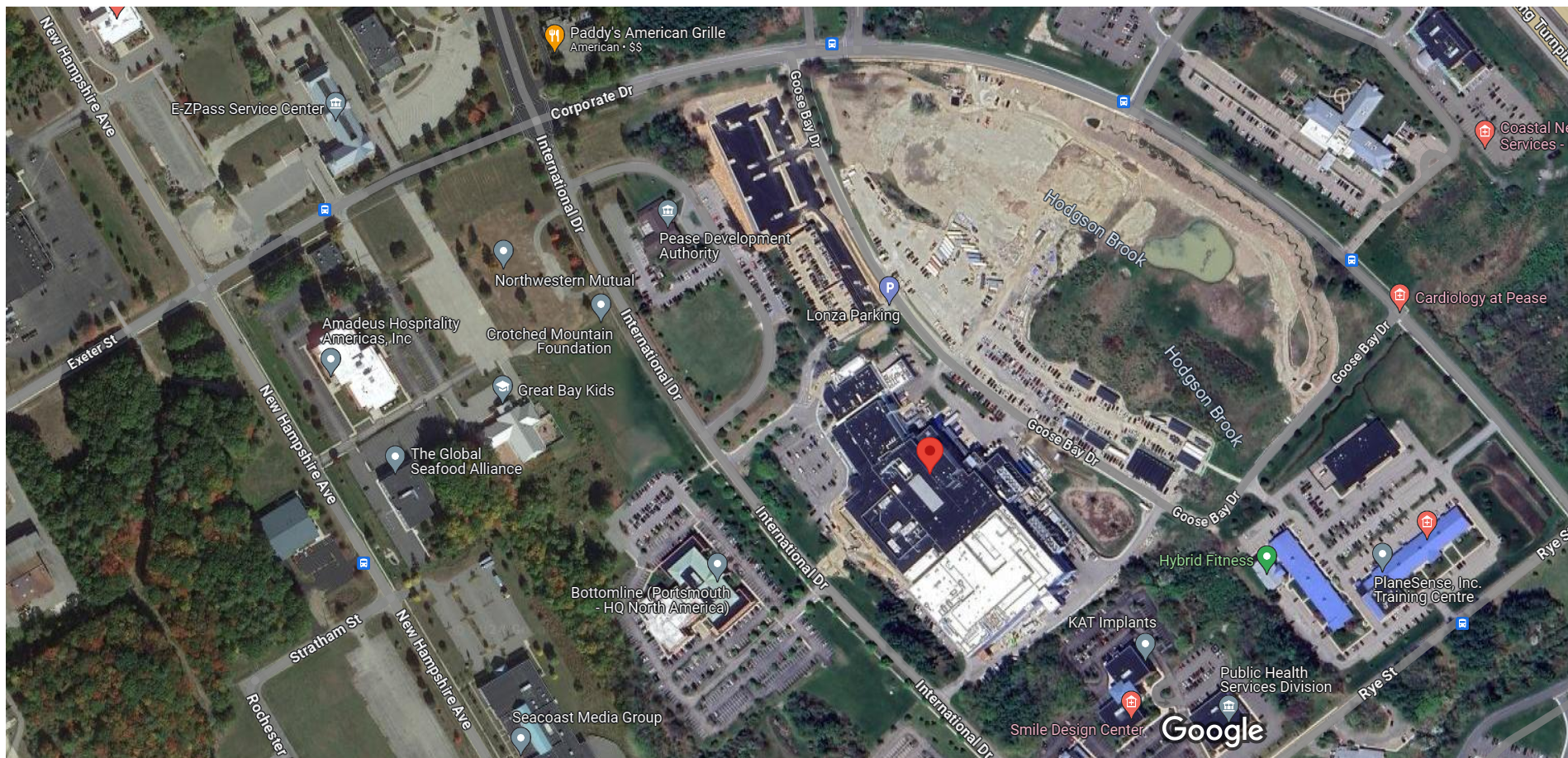
A groundbreaking ceremony was held on August 30, 2023 to mark the beginning of the facility's construction. Lonza and Vertex's leadership teams were joined at the event by several New Hampshire government officials, including United States Senator Jeanne Shaheen, and the Mayor of Portsmouth, Deaglan McEachern.

Reshma Kewalramani, M.D., Chief Executive Officer and President of Vertex, said: "Establishing this strategic partnership with Lonza, a world-class manufacturing organization, is a critical milestone in Vertex's journey to transform the treatment of type 1 diabetes. Today is an exciting day for both Vertex and Lonza and for patients living with T1D."

Pierre-Alain Ruffieux, CEO of Lonza, commented: "Today's groundbreaking demonstrates Lonza's continued commitment to helping our customers bring their innovative therapies to life. The facility will play a major role in delivering Vertex's ambition to shape the future for patients living with T1D. We are proud to support Vertex on this journey with a combination of deep scientific, regulatory and manufacturing expertise, alongside our established track record in supporting the commercialization of cell therapy products. Portsmouth is the ideal location for the new facility, as it enables us to build upon our existing infrastructure, capabilities and talent in the area."



Google Maps 101 International Dr



Imagery ©2024 Airbus, Maine GeoLibrary, Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2024 200 ft



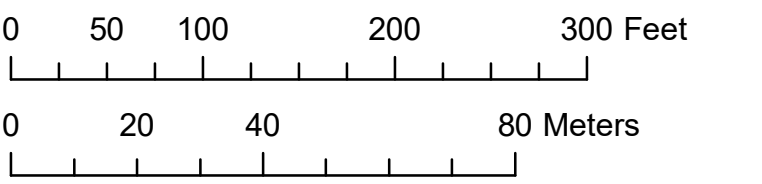
Enclosure 5

Partial Legend

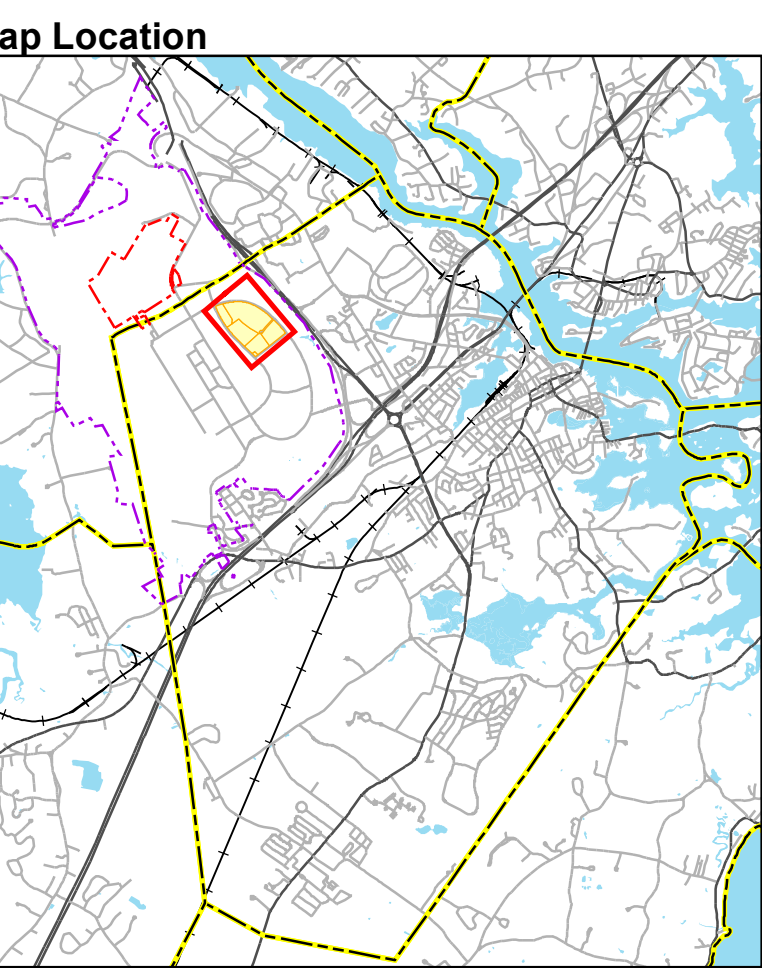
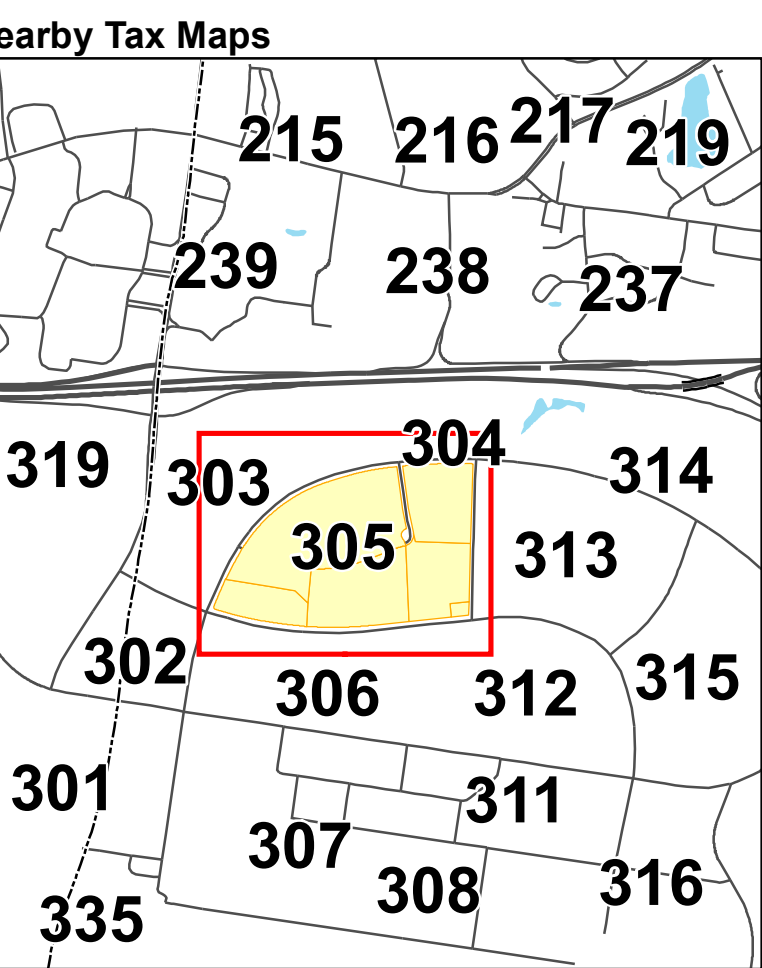
See the cover sheet for the complete legend.

- 7-5A** Lot or lot-unit number
- 2.56 ac Parcel area in acres (ac) or square feet (sf)
- Address number
- 233-137 Parcel number from a neighboring map
- 68' Parcel line dimension
- SIMS AVE Street name

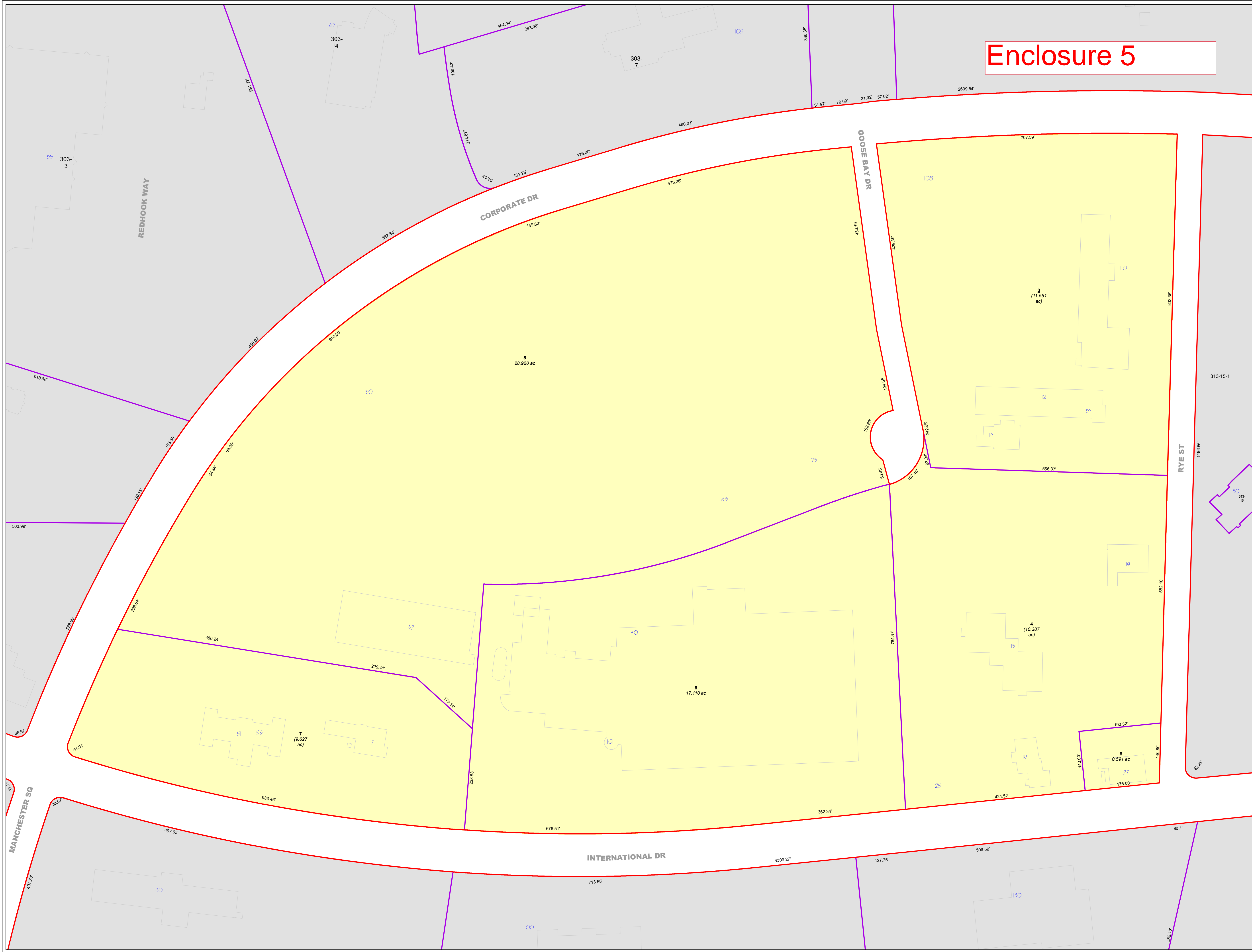
- Parcel/Parcel boundary
- Parcel/ROW boundary
- Water boundary
- Structure (1994 data)
- Parcel covered by this map
- Parcel from a neighboring map (see other map for current status)



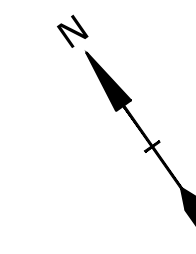
This map is for assessment purposes only. It is not intended for legal description or conveyance. Parcels are mapped as of April 1. Building footprints are 2006 data and may not represent current structures. Streets appearing on this map may be paper (unbuilt) streets. Lot numbers take precedence over address numbers. Address numbers shown on this map may not represent posted or legal addresses.



Portsmouth, New Hampshire
2023
Tax Map 305

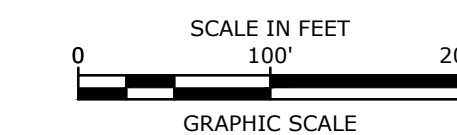
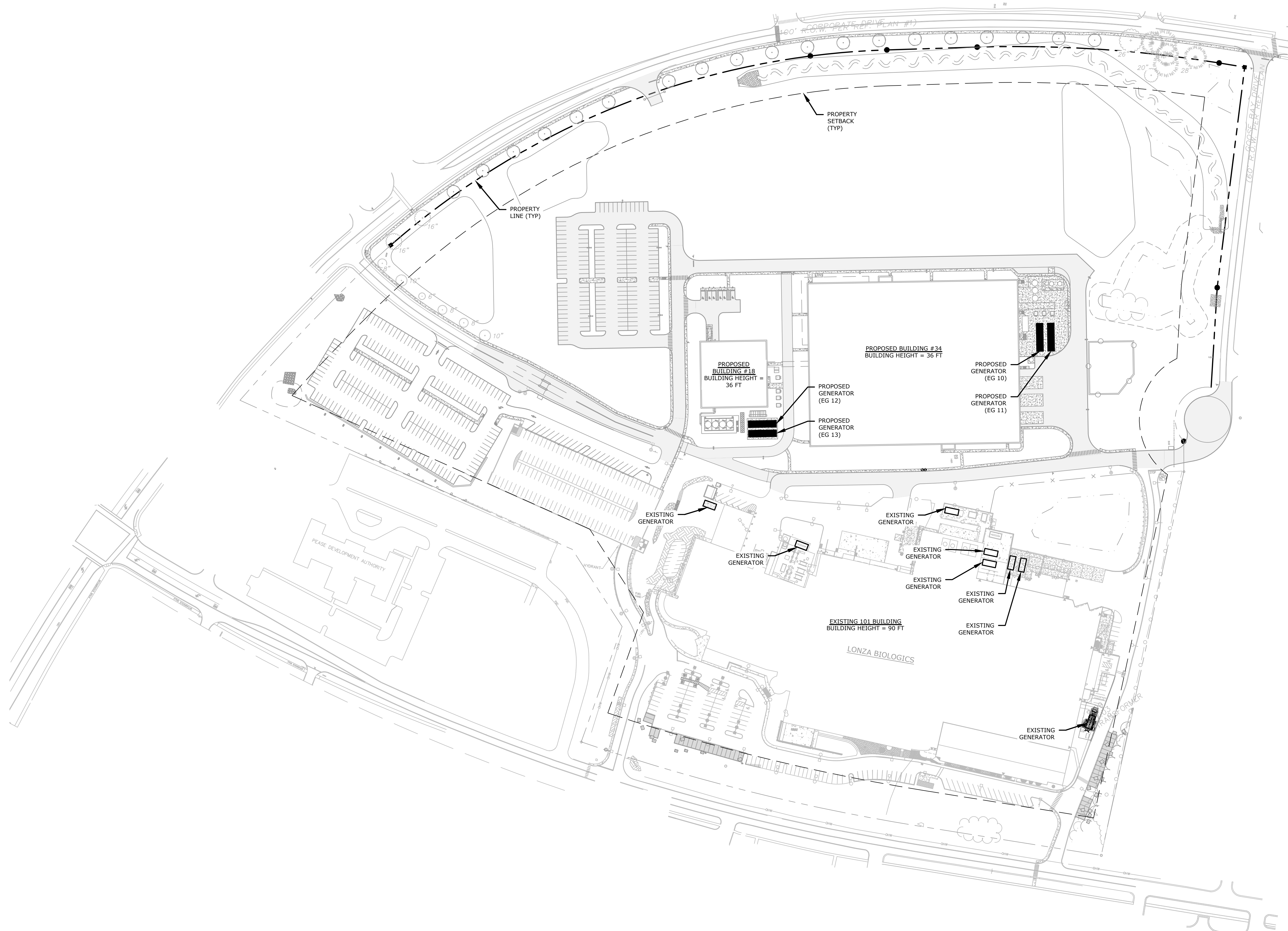


Enclosure 6



LEGEND

- PROPERTY LINE
- - - PROPERTY SETBACK
- PROPOSED GENERATOR
- EXISTING GENERATOR



Proposed Industrial Development

Lonza Biologics

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
PROJECT NO:	L-0700-013	
DATE:	2/26/2024	
FILE:	L-0700-026-C-DSGN-SPCC.dwg	
DRAWN BY:	CJK	
CHECKED:	NAH	
APPROVED:	PMC	

OVERALL SITE PLAN

SCALE: AS SHOWN

PERFORMANCE DATA[EM1895]

Performance Number: EM1895

Change Level: 06

SALES MODEL:	3516C	COMBUSTION:	DIRECT INJECTION
BRAND:	CAT	ENGINE SPEED (RPM):	1,800
MACHINE SALES MODEL:		HERTZ:	60
ENGINE POWER (BHP):	3,634	FAN POWER (HP):	130.1
GEN POWER WITH FAN (EKW):	2,500.0	ASPIRATION:	TA
COMPRESSION RATIO:	14.7	AFTERCOOLER TYPE:	ATAAC
RATING LEVEL:	MISSION CRITICAL STANDBY	AFTERCOOLER CIRCUIT TYPE:	JW+OC, ATAAC
PUMP QUANTITY:	1	INLET MANIFOLD AIR TEMP (F):	122
FUEL TYPE:	DIESEL	JACKET WATER TEMP (F):	219.2
MANIFOLD TYPE:	DRY	TURBO CONFIGURATION:	PARALLEL
GOVERNOR TYPE:	ADEM3	TURBO QUANTITY:	4
ELECTRONICS TYPE:	ADEM3	TURBOCHARGER MODEL:	GT6041BN-48T-1.10
CAMSHAFT TYPE:	STANDARD	CERTIFICATION YEAR:	2006
IGNITION TYPE:	CI	CRANKCASE BLOWBY RATE (FT3/HR):	3,619.4
INJECTOR TYPE:	EUI	FUEL RATE (RATED RPM) NO LOAD (GAL/HR):	16.0
FUEL INJECTOR:	3920221	PISTON SPD @ RATED ENG SPD (FT/MIN):	2,539.4
UNIT INJECTOR TIMING (IN):	64.34		
REF EXH STACK DIAMETER (IN):	12		
MAX OPERATING ALTITUDE (FT):	2,953		

INDUSTRY	SUBINDUSTRY	APPLICATION
ELECTRIC POWER	STANDARD	PACKAGED GENSET
OIL AND GAS	LAND PRODUCTION	PACKAGED GENSET

General Performance Data

THIS STANDBY RATING IS FOR A STANDBY ONLY ENGINE ARRANGEMENT. RERATING THE ENGINE TO A PRIME OR CONTINUOUS RATING IS NOT PERMITTED.

THE INLET MANIFOLD AIR TEMP LISTED IN THE HEADER, AND IN THE GENERAL PERFORMANCE DATA, IS THE AVERAGE INLET MANIFOLD TEMP FRONT TO REAR ON THE ENGINE.

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	ISO BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	ISO VOL FUEL CONSUMPTN (VFC)	ELEC SPEC FUEL CONSUMPTN (ESFC)	ISO ELEC SPEC FUEL CONSUMPTN (ESFC)
EKW	%	BHP	PSI	LB/BHP-HR	LB/BHP-HR	GAL/HR	GAL/HR	LB/EKW-HR	LB/EKW-HR
2,500.0	100	3,633	336	0.334	0.328	171.3	168.0	0.486	0.477
2,250.0	90	3,283	303	0.335	0.329	155.1	152.1	0.489	0.480
2,000.0	80	2,935	271	0.339	0.333	140.4	137.7	0.498	0.489
1,875.0	75	2,760	255	0.342	0.336	133.2	130.7	0.504	0.494
1,750.0	70	2,586	239	0.346	0.339	126.0	123.6	0.511	0.501
1,500.0	60	2,237	207	0.354	0.347	111.5	109.4	0.527	0.517
1,250.0	50	1,889	174	0.365	0.358	97.1	95.2	0.551	0.540
1,000.0	40	1,547	143	0.373	0.366	81.4	79.8	0.577	0.566
750.0	30	1,203	111	0.385	0.378	65.3	64.1	0.618	0.606
625.0	25	1,029	95	0.394	0.386	57.2	56.1	0.649	0.637
500.0	20	854	79	0.403	0.396	48.6	47.6	0.689	0.676
250.0	10	497	46	0.441	0.433	30.9	30.3	0.877	0.860

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP
EKW	%	BHP	IN-HG	DEG F	DEG F	IN-HG	DEG F	IN-HG	DEG F
2,500.0	100	3,633	78.1	121.9	1,235.7	67.6	853.1	85	466.7
2,250.0	90	3,283	71.3	119.4	1,190.0	61.3	824.5	78	443.1
2,000.0	80	2,935	64.3	116.9	1,158.9	55.3	810.7	70	417.8
1,875.0	75	2,760	60.7	115.8	1,145.6	52.3	804.8	66	404.7
1,750.0	70	2,586	57.1	114.7	1,133.3	49.3	798.9	63	391.3
1,500.0	60	2,237	49.5	112.7	1,112.4	43.2	787.1	55	363.6
1,250.0	50	1,889	41.3	111.0	1,091.8	36.8	775.1	46	334.7
1,000.0	40	1,547	31.4	109.4	1,061.5	29.3	770.6	36	297.5
750.0	30	1,203	21.7	107.9	1,010.3	22.1	752.8	25	249.8
625.0	25	1,029	17.2	107.2	968.3	18.7	731.8	21	223.4
500.0	20	854	12.7	106.4	902.0	15.5	695.6	16	197.2
250.0	10	497	4.8	104.1	700.7	9.8	562.6	7	152.3

General Performance Data (Continued)

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
EKW	%	BHP	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
2,500.0	100	3,633	7,133.1	18,497.4	31,696.1	32,910.2	6,927.7	6,289.9
2,250.0	90	3,283	6,756.8	17,036.6	29,886.4	30,985.9	6,522.8	5,944.9
2,000.0	80	2,935	6,350.9	15,740.8	28,028.8	29,019.5	6,092.1	5,568.4
1,875.0	75	2,760	6,132.5	15,125.9	27,059.2	27,998.2	5,881.4	5,382.5
1,750.0	70	2,586	5,902.5	14,507.6	26,056.9	26,945.9	5,667.5	5,192.6
1,500.0	60	2,237	5,408.9	13,196.0	23,934.4	24,726.5	5,204.1	4,777.6
1,250.0	50	1,889	4,844.0	11,701.1	21,447.3	22,136.3	4,659.1	4,284.7
1,000.0	40	1,547	4,122.0	9,918.3	18,264.4	18,842.5	3,963.7	3,647.8
750.0	30	1,203	3,423.6	8,121.4	15,177.8	15,642.9	3,293.2	3,036.5
625.0	25	1,029	3,105.0	7,237.8	13,766.9	14,173.7	2,986.8	2,759.5
500.0	20	854	2,791.1	6,276.7	12,375.6	12,721.7	2,671.3	2,475.8
250.0	10	497	2,236.2	4,428.4	9,910.4	10,129.4	2,129.9	1,997.8

Heat Rejection Data

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	REJECTION TO JACKET WATER	REJECTION TO ATMOSPHERE	REJECTION TO EXH	EXHAUST RECOVERY TO 350F	FROM OIL COOLER	FROM AFTERCOOLER	WORK ENERGY	LOW HEAT VALUE ENERGY	HIGH HEAT VALUE ENERGY
EKW	%	BHP	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN
2,500.0	100	3,633	46,992	9,146	142,265	70,115	19,835	44,723	154,077	372,403	396,702
2,250.0	90	3,283	44,242	8,557	127,929	62,041	17,960	39,380	139,243	337,204	359,207
2,000.0	80	2,935	41,477	8,162	116,879	56,282	16,262	34,167	124,444	305,311	325,233
1,875.0	75	2,760	40,076	8,007	111,588	53,551	15,425	31,612	117,053	289,608	308,505
1,750.0	70	2,586	38,657	7,874	106,293	50,817	14,588	29,085	109,651	273,881	291,752
1,500.0	60	2,237	35,755	7,684	95,729	45,311	12,915	24,201	94,874	242,485	258,307
1,250.0	50	1,889	32,626	7,527	85,184	39,388	11,245	19,401	80,109	211,118	224,893
1,000.0	40	1,547	29,235	7,262	72,693	33,148	9,427	13,873	65,583	176,995	188,544
750.0	30	1,203	25,476	6,784	59,425	26,293	7,565	8,706	51,005	142,037	151,305
625.0	25	1,029	23,394	6,435	52,542	22,520	6,621	6,496	43,653	124,317	132,429
500.0	20	854	21,006	5,995	44,739	18,221	5,624	4,534	36,223	105,594	112,484
250.0	10	497	15,737	5,026	27,795	8,787	3,578	1,916	21,071	67,181	71,564

Sound Data

SOUND PRESSURE DATA FOR THIS RATING CAN BE FOUND IN PERFORMANCE NUMBER - DM8779.

Emissions Data

DIESEL

RATED SPEED NOMINAL DATA: 1800 RPM

GENSET POWER WITH FAN	EKW	2,500.0	1,875.0	1,250.0	625.0	250.0
PERCENT LOAD	%	100	75	50	25	10
ENGINE POWER	BHP	3,633	2,760	1,889	1,029	497
TOTAL NOX (AS NO2)	G/HR	19,123	11,751	5,837	2,974	2,654
TOTAL CO	G/HR	1,515	725	607	831	1,165
TOTAL HC	G/HR	376	375	408	307	329
TOTAL CO2	KG/HR	1,740	1,340	966	559	296
PART MATTER	G/HR	132.5	88.4	94.3	99.6	100.7
TOTAL NOX (AS NO2) (CORR 5% O2)	MG/NM3	2,349.1	1,857.9	1,286.9	1,127.3	1,858.5
TOTAL CO (CORR 5% O2)	MG/NM3	195.4	118.8	140.1	330.3	862.6
TOTAL HC (CORR 5% O2)	MG/NM3	42.1	54.8	81.8	105.8	212.3
PART MATTER (CORR 5% O2)	MG/NM3	14.1	11.8	18.4	34.7	63.0
TOTAL NOX (AS NO2) (CORR 15% O2)	MG/NM3	871.7	689.4	477.5	418.3	689.6

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TOTAL CO	(CORR 15% O2)	MG/NM3	72.5	44.1	52.0	122.6	320.1
TOTAL HC	(CORR 15% O2)	MG/NM3	15.6	20.3	30.4	39.3	78.8
PART MATTER	(CORR 15% O2)	MG/NM3	5.2	4.4	6.8	12.9	23.4
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,144	905	627	549	905
TOTAL CO	(CORR 5% O2)	PPM	156	95	112	264	690
TOTAL HC	(CORR 5% O2)	PPM	79	102	153	197	396
TOTAL NOX (AS NO2)	(CORR 15% O2)	PPM	425	336	233	204	336
TOTAL CO	(CORR 15% O2)	PPM	58	35	42	98	256
TOTAL HC	(CORR 15% O2)	PPM	29	38	57	73	147
TOTAL NOX (AS NO2)		G/HP-HR	5.32	4.30	3.12	2.92	5.39
TOTAL CO		G/HP-HR	0.42	0.26	0.32	0.82	2.37
TOTAL HC		G/HP-HR	0.10	0.14	0.22	0.30	0.67
PART MATTER		G/HP-HR	0.04	0.03	0.05	0.10	0.20
TOTAL NOX (AS NO2)		G/KW-HR	7.23	5.84	4.24	3.96	7.33
TOTAL CO		G/KW-HR	0.57	0.36	0.44	1.11	3.22
TOTAL HC		G/KW-HR	0.14	0.19	0.30	0.41	0.91
PART MATTER		G/KW-HR	0.05	0.04	0.07	0.13	0.28
TOTAL NOX (AS NO2)		LB/HR	42.16	25.91	12.87	6.56	5.85
TOTAL CO		LB/HR	3.34	1.60	1.34	1.83	2.57
TOTAL HC		LB/HR	0.83	0.83	0.90	0.68	0.72
TOTAL CO2		LB/HR	3,836	2,955	2,130	1,233	654
PART MATTER		LB/HR	0.29	0.19	0.21	0.22	0.22
OXYGEN IN EXH		%	9.4	10.4	11.3	12.2	14.4
DRY SMOKE OPACITY		%	1.7	1.4	1.9	2.6	4.0
BOSCH SMOKE NUMBER			0.83	0.80	0.85	0.97	1.13

RATED SPEED POTENTIAL SITE VARIATION: 1800 RPM

GENSET POWER WITH FAN	EKW	2,500.0	1,875.0	1,250.0	625.0	250.0	
PERCENT LOAD	%	100	75	50	25	10	
ENGINE POWER	BHP	3,633	2,760	1,889	1,029	497	
TOTAL NOX (AS NO2)	G/HR	22,948	14,101	7,004	3,568	3,185	
TOTAL CO	G/HR	2,726	1,304	1,092	1,496	2,098	
TOTAL HC	G/HR	500	499	543	408	437	
PART MATTER	G/HR	185.5	123.7	132.1	139.5	141.0	
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	2,818.9	2,229.5	1,544.3	1,352.7	2,230.2
TOTAL CO	(CORR 5% O2)	MG/NM3	351.8	213.9	252.3	594.6	1,552.7
TOTAL HC	(CORR 5% O2)	MG/NM3	55.9	72.8	108.8	140.7	282.4
PART MATTER	(CORR 5% O2)	MG/NM3	19.7	16.5	25.8	48.5	88.2
TOTAL NOX (AS NO2)	(CORR 15% O2)	MG/NM3	1,046.0	827.3	573.0	502.0	827.6
TOTAL CO	(CORR 15% O2)	MG/NM3	130.5	79.4	93.6	220.6	576.2
TOTAL HC	(CORR 15% O2)	MG/NM3	20.8	27.0	40.4	52.2	104.8
PART MATTER	(CORR 15% O2)	MG/NM3	7.3	6.1	9.6	18.0	32.7
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,373	1,086	752	659	1,086
TOTAL CO	(CORR 5% O2)	PPM	281	171	202	476	1,242
TOTAL HC	(CORR 5% O2)	PPM	104	136	203	263	527
TOTAL NOX (AS NO2)	(CORR 15% O2)	PPM	510	403	279	244	403
TOTAL CO	(CORR 15% O2)	PPM	104	63	75	177	461
TOTAL HC	(CORR 15% O2)	PPM	39	50	75	97	196
TOTAL NOX (AS NO2)		G/HP-HR	6.38	5.15	3.74	3.50	6.47
TOTAL CO		G/HP-HR	0.76	0.48	0.58	1.47	4.26
TOTAL HC		G/HP-HR	0.14	0.18	0.29	0.40	0.89
PART MATTER		G/HP-HR	0.05	0.05	0.07	0.14	0.29
TOTAL NOX (AS NO2)		G/KW-HR	8.67	7.01	5.09	4.76	8.79
TOTAL CO		G/KW-HR	1.03	0.65	0.79	2.00	5.79
TOTAL HC		G/KW-HR	0.19	0.25	0.39	0.54	1.21
PART MATTER		G/KW-HR	0.07	0.06	0.10	0.19	0.39
TOTAL NOX (AS NO2)		LB/HR	50.59	31.09	15.44	7.87	7.02
TOTAL CO		LB/HR	6.01	2.88	2.41	3.30	4.62
TOTAL HC		LB/HR	1.10	1.10	1.20	0.90	0.96
PART MATTER		LB/HR	0.41	0.27	0.29	0.31	0.31

Regulatory Information

EPA EMERGENCY STATIONARY	2011 - ----
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 60 SUBPART IIII AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE EMERGENCY STATIONARY REGULATIONS.	

Locality U.S. (INCL CALIF)	Agency EPA	Regulation STATIONARY	Tier/Stage EMERGENCY STATIONARY	Max Limits - G/BKW - HR CO: 3.5 NOx + HC: 6.4 PM: 0.20
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Altitude Derate Data

STANDARD

ALTITUDE CORRECTED POWER CAPABILITY (BHP)

AMBIENT OPERATING TEMP (F)	30	40	50	60	70	80	90	100	110	120	NORMAL
ALTITUDE (FT)											
0	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634
1,000	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,561	3,634
2,000	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,604	3,541	3,480	3,634
3,000	3,628	3,628	3,628	3,628	3,628	3,603	3,537	3,474	3,413	3,354	3,628
4,000	3,504	3,504	3,504	3,504	3,504	3,471	3,408	3,347	3,289	3,232	3,504
5,000	3,384	3,384	3,384	3,384	3,384	3,344	3,283	3,225	3,168	3,113	3,384
6,000	3,269	3,269	3,269	3,269	3,269	3,221	3,162	3,105	3,051	2,998	3,269
7,000	3,159	3,159	3,159	3,159	3,159	3,101	3,044	2,990	2,937	2,887	3,159
8,000	3,052	3,052	3,052	3,052	3,041	2,985	2,930	2,878	2,827	2,779	3,052
9,000	2,950	2,950	2,950	2,950	2,926	2,872	2,820	2,769	2,721	2,674	2,950
10,000	2,851	2,851	2,851	2,851	2,815	2,763	2,713	2,664	2,617	2,544	2,851

Cross Reference

Test Spec	Setting	Engine Arrangement	Engineering Model	Engineering Model Version	Start Effective Serial Number	End Effective Serial Number
4577176	LL1858	5084280	GS336	-	SBK02000	
4581567	LL6760	5157721	PG243	-	LYM00001	

Supplementary Data

Type	Classification	Performance Number
SOUND	SOUND PRESSURE	DM8779

Performance Parameter Reference

Parameters Reference:DM9600-14 PERFORMANCE DEFINITIONS
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PERFORMANCE DEFINITIONS DM9600

APPLICATION:

Engine performance tolerance values below are representative of a typical production engine tested in a calibrated dynamometer test cell at SAE J1995 standard reference conditions. Caterpillar maintains ISO9001:2000 certified quality management systems for engine test Facilities to assure accurate calibration of test equipment. Engine test data is corrected in accordance with SAE J1995. Additional reference material SAE J1228, J1349, ISO 8665, 3046-1:2002E, 3046-3:1989, 1585, 2534, 2288, and 9249 may apply in part or are similar to SAE J1995. Special engine rating request (SERR) test data shall be noted.

PERFORMANCE PARAMETER TOLERANCE FACTORS:

- Power +/- 3%
- Torque +/- 3%
- Exhaust stack temperature +/- 8%
- Inlet airflow +/- 5%
- Intake manifold pressure-gage +/- 10%
- Exhaust flow +/- 6%
- Specific fuel consumption +/- 3%
- Fuel rate +/- 5%

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Specific DEF consumption +/- 3%

DEF rate +/- 5%

Heat rejection +/- 5%

Heat rejection exhaust only +/- 10%

Heat rejection CEM only +/- 10%

Heat Rejection values based on using treated water.

Torque is included for truck and industrial applications, do not use for Gen Set or steady state applications.

On C7 - C18 engines, at speeds of 1100 RPM and under these values are provided for reference only, and may not meet the tolerance listed.

On 3500 and C175 engines, at speeds below Peak Torque these values are provided for reference only, and may not meet the tolerance listed.

These values do not apply to C280/3600. For these models, see the tolerances listed below.

C280/3600 HEAT REJECTION TOLERANCE FACTORS:

Heat rejection +/- 10%

Heat rejection to Atmosphere +/- 50%

Heat rejection to Lube Oil +/- 20%

Heat rejection to Aftercooler +/- 5%

TEST CELL TRANSDUCER TOLERANCE FACTORS:

Torque +/- 0.5%

Speed +/- 0.2%

Fuel flow +/- 1.0%

Temperature +/- 2.0 C degrees

Intake manifold pressure +/- 0.1 kPa

OBSERVED ENGINE PERFORMANCE IS CORRECTED TO SAE J1995 REFERENCE AIR AND FUEL CONDITIONS.

REFERENCE ATMOSPHERIC INLET AIR

FOR 3500 ENGINES AND SMALLER

SAE J1228 AUG2002 for marine engines, and J1995 JAN2014 for other engines, reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity at the stated aftercooler water temp, or inlet manifold temp.

FOR 3600 ENGINES

Engine rating obtained and presented in accordance with ISO 3046/1 and SAE J1995 JANJAN2014 reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity and 150M altitude at the stated aftercooler water temperature.

MEASUREMENT LOCATION FOR INLET AIR TEMPERATURE

Location for air temperature measurement air cleaner inlet at stabilized operating conditions.

REFERENCE EXHAUST STACK DIAMETER

The Reference Exhaust Stack Diameter published with this dataset is only used for the calculation of Smoke Opacity values displayed in this dataset. This value does not necessarily represent the actual stack diameter of the engine due to the variety of exhaust stack adapter options available. Consult the price list, engine order or general dimension drawings for the actual stack diameter size ordered or options available.

REFERENCE FUEL

DIESEL

Reference fuel is #2 distillate diesel with a 35API gravity;

A lower heating value is 42,780 KJ/KG (18,390 BTU/LB) when used at 15 deg C (59 deg F), where the density is

850 G/Liter (7.0936 Lbs/Gal).

GAS

Reference natural gas fuel has a lower heating value of 33.74 KJ/L (905 BTU/CU Ft). Low BTU ratings are based on 18.64 KJ/L (500 BTU/CU FT) lower heating value gas. Propane ratings are based on 87.56 KJ/L (2350 BTU/CU Ft) lower heating value gas.

ENGINE POWER (NET) IS THE CORRECTED FLYWHEEL POWER (GROSS) LESS EXTERNAL AUXILIARY LOAD

Engine corrected gross output includes the power required to drive standard equipment; lube oil, scavenge lube oil, fuel transfer, common rail fuel, separate circuit aftercooler and jacket water pumps. Engine net power available for the external (flywheel) load is calculated by subtracting the sum of auxiliary load from the corrected gross flywheel out put power. Typical auxiliary loads are radiator cooling fans, hydraulic pumps, air compressors and battery charging alternators. For Tier 4 ratings additional Parasitic losses would also include Intake, and Exhaust Restrictions.

ALTITUDE CAPABILITY

Altitude capability is the maximum altitude above sea level at standard temperature and standard pressure at which the engine could develop full rated output power on the current performance data set.

Standard temperature values versus altitude could be seen on TM2001.

When viewing the altitude capability chart the ambient temperature is the inlet air temp at the compressor inlet.

Engines with ADEM MEUI and HEUI fuel systems operating at conditions above the defined altitude capability derate for atmospheric pressure and temperature conditions outside the values

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defined, see TM2001.

Mechanical governor controlled unit injector engines require a setting change for operation at conditions above the altitude defined on the engine performance sheet. See your Caterpillar technical representative for non standard ratings.

REGULATIONS AND PRODUCT COMPLIANCE

TMI Emissions information is presented at 'nominal' and 'Potential Site Variation' values for standard ratings. No tolerances are applied to the emissions data. These values are subject to change at any time. The controlling federal and local emission requirements need to be verified by your Caterpillar technical representative.

Customer's may have special emission site requirements that need to be verified by the Caterpillar Product Group engineer.

EMISSION CYCLE LIMITS:

Cycle emissions Max Limits apply to cycle-weighted averages only. Emissions at individual load points may exceed the cycle-weighted limit.

WET & DRY EXHAUST/EMISSIONS DESCRIPTION:

Wet - Total exhaust flow or concentration of total exhaust flow

Dry - Total exhaust flow minus water vapor or concentration of exhaust flow with water vapor excluded

EMISSIONS DEFINITIONS:

Emissions : DM1176

EMISSION CYCLE DEFINITIONS

1. For constant-speed marine engines for ship main propulsion, including diesel-electric drive, test cycle E2 shall be applied, for controllable-pitch propeller sets test cycle E2 shall be applied.

2. For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied.

3. For constant-speed auxiliary engines test cycle D2 shall be applied.

4. For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

HEAT REJECTION DEFINITIONS:

Diesel Circuit Type and HHV Balance : DM9500

HIGH DISPLACEMENT (HD) DEFINITIONS:

3500: EM1500

RATING DEFINITIONS:

Agriculture : TM6008

Fire Pump : TM6009

Generator Set : TM6035

Generator (Gas) : TM6041

Industrial Diesel : TM6010

Industrial (Gas) : TM6040

Irrigation : TM5749

Locomotive : TM6037

Marine Auxiliary : TM6036

Marine Prop (Except 3600) : TM5747

Marine Prop (3600 only) : TM5748

MSHA : TM6042

Oil Field (Petroleum) : TM6011

Off-Highway Truck : TM6039

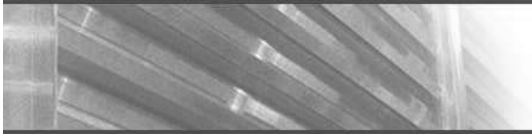
On-Highway Truck : TM6038

SOUND DEFINITIONS:

Sound Power : DM8702

Sound Pressure : TM7080

Date Released : 10/27/21



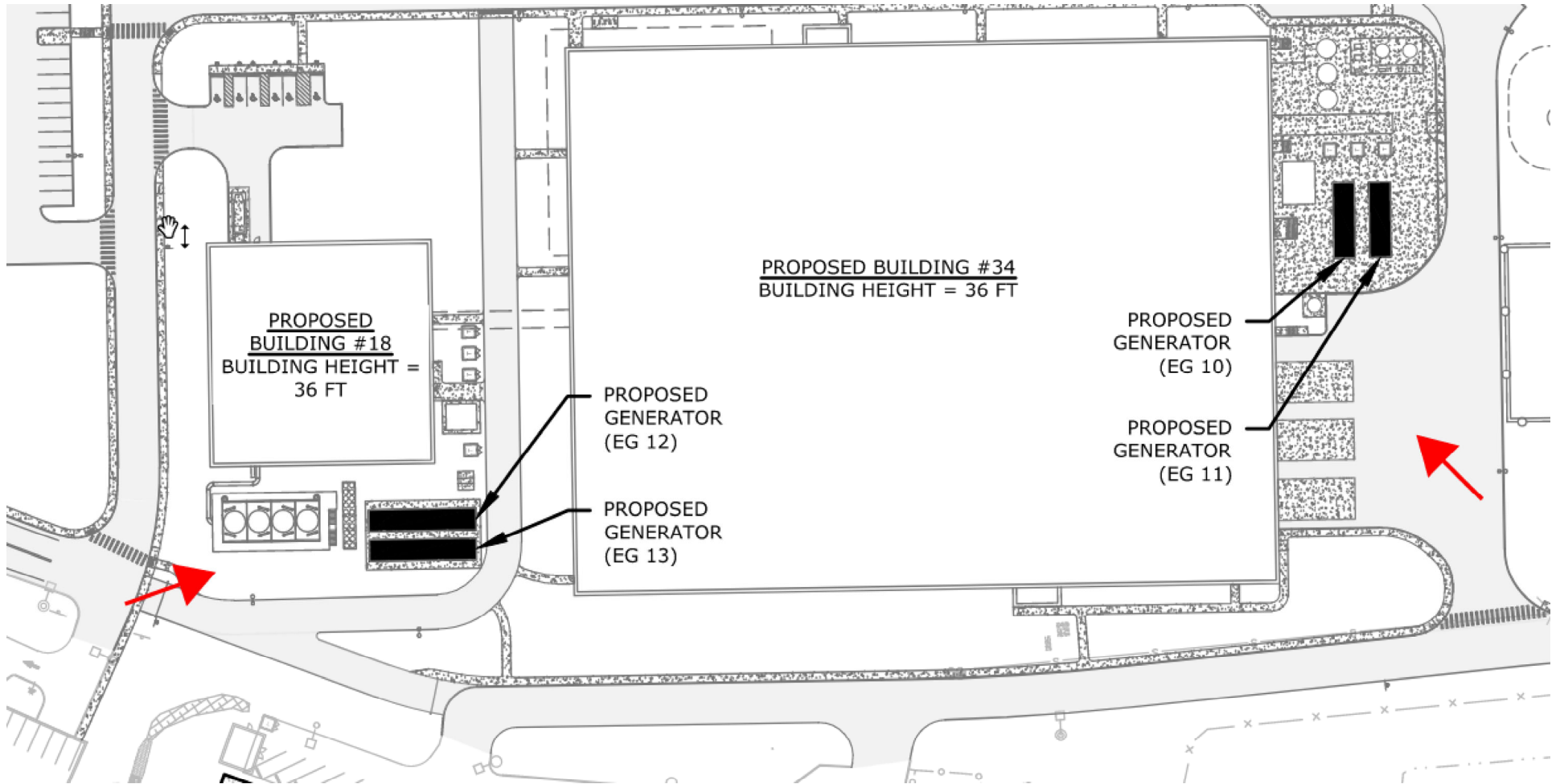
- Miscellaneous Items:
 - ✓ Flexible coolant and oil drains to exterior with shut valves.
 - ✓ Hennig to install customer supplied vibration isolators.
 - ✓ Powder Coat Finish - All enclosure panels are individually powder coated inside and out. Color is TBD by end-user at a later date. Please select color from Hennig standard powder chart. Color chart will be provided at time of order.

Hennig Enclosure Systems Tank Proposal: Est. Overall Size: 425”L x 130”W x 19.5”H

- Sub-base UL 142 Certified Fuel Tank. Standard package includes:
 - ✓ Designed for 3,312 usable gallons, 24 hours of runtime at full load.
 - ✓ 110% Rupture basin containment.
 - ✓ Primary & secondary tanks are individually tested per UL142 requirements.
 - ✓ 2” Lockable fill port.
 - ✓ Supply & return ports w/ flexible fuel lines (sized for specified generator).
 - ✓ Low level switch.
 - ✓ 2” Normal vent.
 - ✓ Rupture basin switch.
 - ✓ Emergency vents (sized to meet UL standards).
 - ✓ (2) Extra 2” fittings with plugs.
 - ✓ Generator electrical stub up.
 - ✓ Lifting lugs.
 - ✓ 200 lbs/sq ft floor capacity (top of tank).
 - ✓ Painted black (textured finish).
- Additional Tank Items:
 - ✓ Slip resistant surface in walkways; mastic coating w/ silica.
- New Hampshire Code Adders:
 - ✓ Overfill prevention valve w/ 5-gallon lockable spill box, mounted outside enclosure.
 - ✓ External normal & emergency vents.
 - ✓ Fill alarm panel, lithium battery powered w/ 90% level switch.
 - ✓ Clock fuel gauge.
 - ✓ NFPA & tank information labels

Generator Information:

- Model No.: 3516C
- Size: 267”L x 94”W x 116.5”H
- Weight: 35,000 lbs.
- Pre-installed breaker(s); **side facing**.
- **Rear facing** control panel.









The motion passed by unanimous vote, 7-0.

Ms. Eldridge returned to alternate status, and Mr. Hagaman assumed a voting seat.

2) Case 5-9

Petitioners: Lonza Biologics, Inc.
Property: 101 International Drive
Assessor Plan: Map 305, Lot 6
District: (Pease) Airport Business Commercial District
Description: Add two new generators, above ground storage tanks, a transformer pad, and gear/switch enclosure.
Requests: Variances and/or Special Exceptions necessary to grant the required relief from the Pease Development Ordinance including the following variances:
a) from Section 308.02(c) to allow above ground storage tanks (AST) exceeding 2,000 gallons per facility.

SPEAKING IN FAVOR OF THE PETITION

Patrick Crimmins of Tigie and Bond was present on behalf of the applicant. He reviewed the petition, noting that the tanks would require other State approvals. He said the project would involve construction of new electric equipment to support it. He noted that there were already four generators that exceeded 2,000 gallons. He referenced his letter that addressed the criteria.

In response to the Board’s questions, Mr. Crimmins said the following:

- Two generators and tanks would be added and not replace the existing ones. Some of the tanks were smaller;
- There had been no spillage and the tanks were regularly inspected;
- One tank exceeded the 2,000 gallons and had no issues. The tanks would be replaced in kind if they failed or the applicant would return for approval if a larger tank were necessary;
- The material of the new tanks consisted of a rubber lining, with steel on the outside;
- He didn’t know the percentage of space that had not been outfitted in the existing envelope but said a shell was done in 2008 and was dormant for eight years but was in the process of being fit up. He said they were getting close to capacity because generators were catching up to existing space as new projects evolved;
- In a catastrophe, there were pits under the tanks to contain any leakage;
- Generators would routinely be tested to ensure that they were operating efficiently;
- Tanks greater than 2,000 gallons were necessary because they wanted generators that were similar to those on other sites and were running out of space due to the limited footprint.

**SPEAKING IN OPPOSITION TO THE PETITION AND/OR
SPEAKING TO, FOR, OR AGAINST THE PETITION**

No one rose to speak, and Chairman Rheume closed the public hearing.

DECISION OF THE BOARD

Mr. Parrott moved to recommend approval, and Mr. Lee seconded.

Mr. Parrott said it was a straightforward request and similar to what was used in many other facilities. He noted that the applicant would have a regular auditing program to check the integrity of the tanks and that the secondary backup of the pit arrangement would allow any adverse effect to be detected before getting out to the environment. He said the project would have no adverse effect or diminution of value of surrounding properties because it was just a continuation of existing machinery and facilities and there was plenty of room. He said it would be a benefit to the public interest to see the business prosper and would not pose any harm to the environment. In terms of the hardship, he said the company was the best one to know about backup or emergency power to keep their operation running smoothly, and denying the request would be detrimental to them and not have a positive effect on anyone else. He said substantial justice would be done and could see no effect on the public interest. He said the proposed use was not contrary to the spirit of the zoning of the rule, noting that people operated their businesses as they needed to in a safe and responsible fashion. He said he was satisfied that the request met all the criteria.

Mr. Lee concurred and had nothing to add.

Chairman Rheume said he would support the motion. He noted that Lonza at some point should consider whether there was a better way to provide a central tank location that would be easier to inspect than all the smaller tanks. He said it might be a positive benefit to think longer-term about having one large tank so that they didn't have to return before the Board.

The motion passed by unanimous vote, 7-0.

Mr. Hagaman returned to Alternate status, and Ms. Eldridge assumed a voting seat.

3) Case 5-10

- Petitioners: Weeks Realty Trust, Kaley E. Weeks, Trustee and Chad Carter, owners and Tuck Realty Corporation, applicant
- Property: 3110 Lafayette Road and 65 Ocean Road
- Assessor Plan: Map 292, Lots 151-1, 151-2 and 153
- District: Single Residence B
- Description: Construct 23 townhouses on three merged lots.
- Requests: Variances and/or Special Exceptions necessary to grant the required relief from the Zoning Ordinance including the following variance:
- a) from Section 10.513 to allow more than one dwelling per lot;

Vice-Chair McDonell and Mr. Mulligan recused themselves from the vote.

Chairman Rheume said the applicant requested to postpone because only five Board members were available to vote, due to recusals.

DECISION OF THE BOARD

*Mr. Parrott moved to **postpone** the petition to the August 17 meeting, seconded by Mr. Hagaman.*

Mr. Parrott said it was a first-time request and reasonable, and he saw no reason to not postpone it. Mr. Hagaman concurred.

*The motion **passed** by unanimous vote, 5-0.*

- K) Petition of **Lonza Biologics, Inc.** for property located at **101 International Drive** to add an above ground storage tank which requires the following: 1) from Section 308.02(c) of the Pease Development Ordinance to allow an above ground storage tank (AST) exceeding 2,000-gallon capacity per facility. Said property is shown on Assessor Plan 305 Lot 6 and lies within the (Pease) Airport Business Commercial (ABC) District.

SPEAKING TO THE PETITION

Attorney Justin Pasay was present on behalf of the applicant, with project manager Patrick Crimmins and Ricardo Santana of Lonza. Attorney Pasay said the generator would support Lonza's LINKS program and was the same relief granted for a previous similar generator. He reviewed the PDA criteria and said they would be met.

In response to the Board's questions, Attorney Pasay said the generator was unique to the LINKS program and that general generator support would be necessary if an incident or loss of power occurred. He said there was no toxic issues. He said the size of the tank was dictated by the operational time for the generator; the previous tanks that were recommended for approval were located on the back side of that building; and the pit under the tank was lined with a fuel-proof liner and large enough to contain a full drain of the tank.

Chairman Rheume opened the public hearing.

SPEAKING TO, FOR, OR AGAINST THE PETITION

No one was present to speak, and Chairman Rheume closed the public hearing.

DECISION OF THE BOARD

*Mr. Mulligan moved to **recommend approval**, and Mr. Parrott seconded.*

Mr. Mulligan reviewed the PDA criteria. He said granting the variance would pose no adverse effect or diminution in values of surrounding properties because the site was a fully-developed and highly industrial one and the values of surrounding properties would not be affected by the introduction of the mechanical utility. He said the use itself was permitted but just in a smaller size. The benefit to the public interest was that the essential characteristics of the surrounding vicinity would not change with the introduction of a tank that as larger than the 2,000-gallon limit. He said the denial of the variance would result in unnecessary hardship due to special conditions of the large size of the lot and the very large building on it and the fact that there several similar generators with tanks that were previously approved. He said those were special conditions of the property that were different from properties in the nearby vicinity. He said there was no fair and sub relationship between the purpose of the 2,000-gallon requirements and its application to the property. He said the use was permitted but just at a different size, so it was a reasonable use and met the unnecessary hardship test. He said granting the variance would result in substantial justice because the loss to the applicant would outweigh any gain to the PDA if the requirement was strictly adhered to. He said the proposed use would not be contrary to the spirit of the zoning rule because the use was allowed and it was just the size of the use that the relief was sought for, and that size had been approved before, plus the fact that the site was highly industrial and fully developed. He said the Board should recommend approval.

Mr. Parrott concurred and had nothing to add.

*The motion **passed** by unanimous vote, 7-0.*

II. OTHER BUSINESS

There was no other business.

III. ADJOURNMENT

The meeting was adjourned at 10:15 p.m.

Respectfully submitted,

Joann Breault
BOA Recording Secretary

ENCLOSURE 11

Lonza Biologics Storage Facilities located at 101 International Drive Portsmouth, NH

Location	Service	PDA Classification	Capacity	Year Installed	Equipment #	Storage Facility Description	Lonza Comments
101A Utility Yard	Wastewater	Not Regulated	12,000 G	N/A	T-17001	Non Hazardous Material	Not Currently In use
101A Gas Yard	Liquid Nitrogen	No Spill Risk	1,500 G	N/A	X-680	Crygenic Liquid -Gasify and Disperse	
101A Gas Yard	Liquid Carbon Dioxide	No Spill Risk	3,300 G	N/A	X-695	Crygenic Liquid -Gasify and Disperse	
101A Cold Storage Bldg	Generator-Diesel	Regulated	1,075 G	2013	101A-EGEN-B	Double Walled Tank with Interstitial Monitoring	
101A Utility Yard	Generator-Diesel	Regulated	2,400 G	2000	101A-EGEN-B	Double Walled Tank with Interstitial Monitoring	
101B Gas Yard	Liquid Nitrogen	No Spill Risk	6,000 G	N/A	X-33050	Crygenic Liquid -Gasify and Disperse	Orriginal Volume - 1500 G
101B Gas Yard	Liquid Carbon Dioxide	No Spill Risk	7,100 G	N/A	X33040	Crygenic Liquid -Gasify and Disperse	
101B Gas Yard	Liquid Oxygen	No Spill Risk	5,855 G	N/A	X-33030	Crygenic Liquid -Gasify and Disperse	
101B Gas Yard	Gaseous helium	No Spill Risk	43,535 SCF 2,244 G	N/A	X-33060	Crygenic Liquid -Gasify and Disperse	
101B Gas Yard	Brine solution	Not Regulated	50 Tons	N/A	X-30010	Saturated Salt Solution	No Significant hazzards Mostly Dry Tank
101B Electrical Yard	Generator Diesel	Regulated	3,640 G	2003	101B-EGEN	Double Walled Tank with Interstitial Monitoring	
101B Electrical Yard	Generator Diesel	Regulated	3,312 G	2019	101B-EGEN	Double Walled Tank with Interstitial Monitoring	
101B Electrical Yard	Generator Diesel	Regulated	3,312 G	2019	101B-EGEN	Double Walled Tank with Interstitial Monitoring	
101C Underground	Nitrogen Wastewater- Currently not in use	Not Regulated	50,000 G	N/A	T-33011	Epoxy Lined	Non Hazardous
101C Underground	triton Wastewater	Not Regulated	50,000 G	N/A	T-33012	Epoxy Lined	Non Hazardous
101C Underground	Waste water (not used)	Not Regulated	50,000 G	N/A	T-33013	Epoxy Lined	WW flushed into chemical drains in building flow to this lined tank for equilzaion. Following Equalizaion the Ww is diverted back into the building's wast Neutralization systems
101C Gas Yard	liquid nitrogen	No Spill Risk	3,000 G	N/A	T-43410	Crygenic Liquid -Gasify and Disperse	
101C Electrical Yard	Generator -Diesel	Regulated	3,312 G	2016	101C-EGEN	Double Walled Tank with Interstitial Monitoring	
101C Electrical Yard	Generator -Diesel	Regulated	3,312 G	2016	101C-EGEN	Double Walled Tank with Interstitial Monitoring	
101C Electrical Yard	Generator -Diesel	Regulated	3,312 G	2021	101C-EGEN	Double Walled Tank with Interstitial Monitoring	
Bldg 230	Generator -Diesel	Regulated	660 G	N/A	230-EGEN	Double Walled Tank with Interstitial Monitoring	
Bldg 34	Generator -Diesel	Regulated	4,400 G	2024	EG-10	Double Walled Tank with Interstitial Monitoring	
Bldg 34	Generator -Diesel	Regulated	4,400 G	2024	EG-11	Double Walled Tank with Interstitial Monitoring	
bldg 18	Generator -Diesel	Regulated	4,400 G	2024	EG-12	Double Walled Tank with Interstitial Monitoring	
bldg 18	Generator -Diesel	Regulated	4,400 G	2024	EG-13	Double Walled Tank with Interstitial Monitoring	