

WATER ENGINEER'S REPORT

**19 Erie Boulevard
Mixed Use Project**

CITY OF ALBANY
COUNTY OF ALBANY
STATE OF NEW YORK

Applicant: 21 Erie Associates, LLC

Prepared by:

**Hershberg&Hershberg Consulting Engineers
and Land Surveyors**

18 Locust Street
Albany, NY 12203-2908
(518) 459-3096
Fax (518)459-5683
hhershberg@aol.com

October 5, 2021

Revised November 4, 2021

INTRODUCTION:

Hershberg & Hershberg, Consulting Engineers and Land Surveyors, were retained by 19 Erie Associates, LLC (hereinafter the “Applicant”) with an address of 204 Lafayette Street, Schenectady, NY to prepare a report on water use for the adaptive reuse of 19 Erie Boulevard. This report is to review water use and fire protection for the consideration of the Department of Water & Water Supply and the City of Albany Planning Board.

DESCRIPTION OF EXISTING SITE:

PARCEL AREA

The existing parcel is Tax Map Parcels #65.16-5-4.1 & 65.16-5-4.2 as shown photo below with a site area of 9.06 +/- Acres.



Fig. No. 1 - Aerial Photo of Site

DESCRIPTION OF INTENDED SITE DEVELOPMENT AND USE

Under the adaptive reuse plan, the applicant proposes to renovate the existing warehouse and furniture store into a mixture of apartments and commercial use. There are 261 apartment units proposed which will be a mixture of studio, 1 bedroom, 1 bedroom with den, 2 bedrooms and 2 bedrooms with den. A total of 307 bedrooms will be contained in the apartment units. In addition, a 1,200± SF coffee shop, and a 9,195 SF gym and rock-climbing facilities. A furniture store of 25,000± SF will be remodeled and retained.

POTABLE WATER USE

The existing site is currently occupied. Based upon the water use bills for the past five years an average daily water use of 747 GPD was determined. See Appendix #1. To establish proposed water use, the *New York State Design Standards for Intermediate Sized Wastewater Treatment Systems (March 5, 2014)*¹ is used to compute the Average Daily Flow. For apartments this computation is based upon 50 GPD per bed (Method 3 Water Usage Data Hydraulic Loading Rates). This is taken from the computation below from 132 apartments at 16-30 Sheridan Avenue by the same developer. For the gym & rock climbing area, the value is taken for health club and 50 patrons is the maximum usage proposed for the 9,195 SF area. For the coffee shop, 25 seats is estimated. For the furniture store, we prorated the proposed 25,000 SF compared with the existing building of 200,000 SF. Based upon the current usage of 747 GPD the projected use is 93 GPD.

Computation of Average Water Use at 16-30 Sheridan Avenue
Data from bill from City of Albany Department of Water & Water Supply

<u>Period</u>	<u>Water Used (CF)</u>
3/4/20 to 7/1/20	97,100
	97,100
Total Days	118
Daily Use (CF)	822.88
Daily Use (Gallons)	6,163
Usage in GPD per Apt (132)	46.69
For Report Value (GPD)	50

Figure No. 2 – Average Water Use Calculation for Apartments

Water Use
19 Erie Boulevard Conversion

<u>Use</u>	<u>Unit</u>	<u>Value</u>	<u>Water Use- Gallons per day (GPD) per unit</u>	<u>Water Use (GPD)</u>
			<u>See Notes 1, 2 & 3</u>	
Apartments	Bed	306	50	15300
Gym & Rock Climbing Facility	Patron	50	20	1000
Coffee Shop	Seat	25	25	625
Furniture Store	SF	25000		<u>93</u>
		TOTAL		17,018
Average Use (GPM)				11.82
Peak Use (at 400%) in GPM				47.27

1) Source: Data per bed use for apartments based on Sheridan Avenue Apartments in accordance with Method 3 from New York State Design Standards for Intermediate Sized Wastewater Treatment Works, NYSDEC, March 5, 2014

2) Source: Data per patron taken as a Health Club. per seat taken as fast food restaurant, in accordance with Method 1 from New York State Design Standards for Intermediate Sized Wastewater Treatment Works, NYSDEC, March 5, 2014

3) Prorated from existing use for 200,000 SF at 747 GPD

Figure No. 3 – Potable Water Use

Increase in Water Use
19 Erie Boulevard Conversion

<u>Use</u>	<u>Unit</u>	<u>Value</u>	<u>Water Use- Gallons</u>	
			<u>per day (GPD) per unit</u>	
			<u>See Notes 1 & 2</u>	<u>Water Use (GPD)</u>
Apartments	Bed	306	50	15300
Gym & Rock Climbing Facility	Patron	50	20	1000
Coffee Shop	Seat	25	25	625
Furniture Store	SF	25000		<u>93</u>
		Sub Total		17,018
Average Daily Use from Existing Use				<u>-747</u>
		TOTAL		16,271
Increase in Average Use (GPM)				11.30
Increase in Peak Use (at 400%) in GPM				45.20

1) Source: Data per bed use for apartments based on Sheridan Avenue Apartments in accordance with Method 3 from New York State Design Standards for Intermediate Sized Wastewater Treatment Works, NYSDEC, March 5, 2014

2) Source: Data per patron taken as a Health Club. per seat taken as fast food restaurant, in accordance with Method 1 from New York State Design Standards for Intermediate Sized Wastewater Treatment Works, NYSDEC, March 5, 2014

3) Prorated from existing use for 200,000 SF at 747 GPD

Figure No. 4 – Increase in Potable Water Use

WATER SYSTEM

The total water treated in 2020 at the Feura Bush Water Filtration Plant was 6,316,555,488 gallons. The daily water production averaged 17,258,348 gallons, with maximum daily production of 24,833,984 gallons. The capacity of this treatment plant is 32,000,000 GPD. The 17,018 GPD average daily flow from this project represents an insignificant portion of (0.10%) of the average daily water production.

The Albany Water Board maintains water service to this site by way of an 8-inch main on the east side on Erie Boulevard installed in 1928 as shown

in an excerpt from Sheet 131 of the Water Atlas which reproduced below. This is connected to an 8" main installed in 1992.

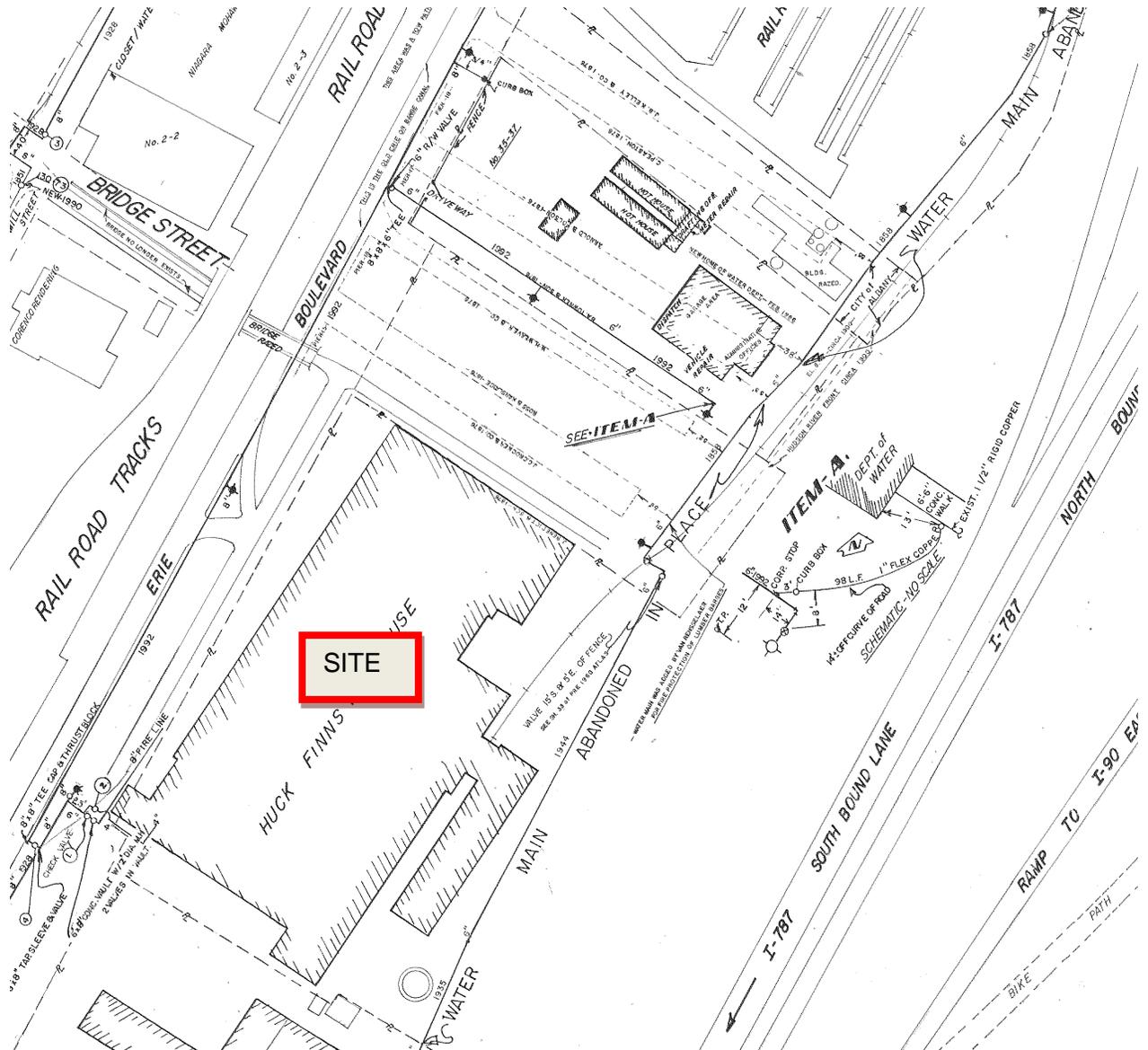


Fig. No. 5 – Portion of Water Atlas Sheet 131

Existing service to the building utilizes an 8" fire service and a 4" water service. See Fig. No. 6 below. Applicant proposes to deactivate the existing 4" water service and utilize the 8" fire service. This will be split inside the building into a 6" potable water service with a recording meter protected with double backflow valves. A 6" fire service line is currently proposed which will be based upon the final design by the sprinkler contractor. This will be protected with double backflow valves. An application for Approval of Backflow Prevention Devices (DOH-347) will be required.

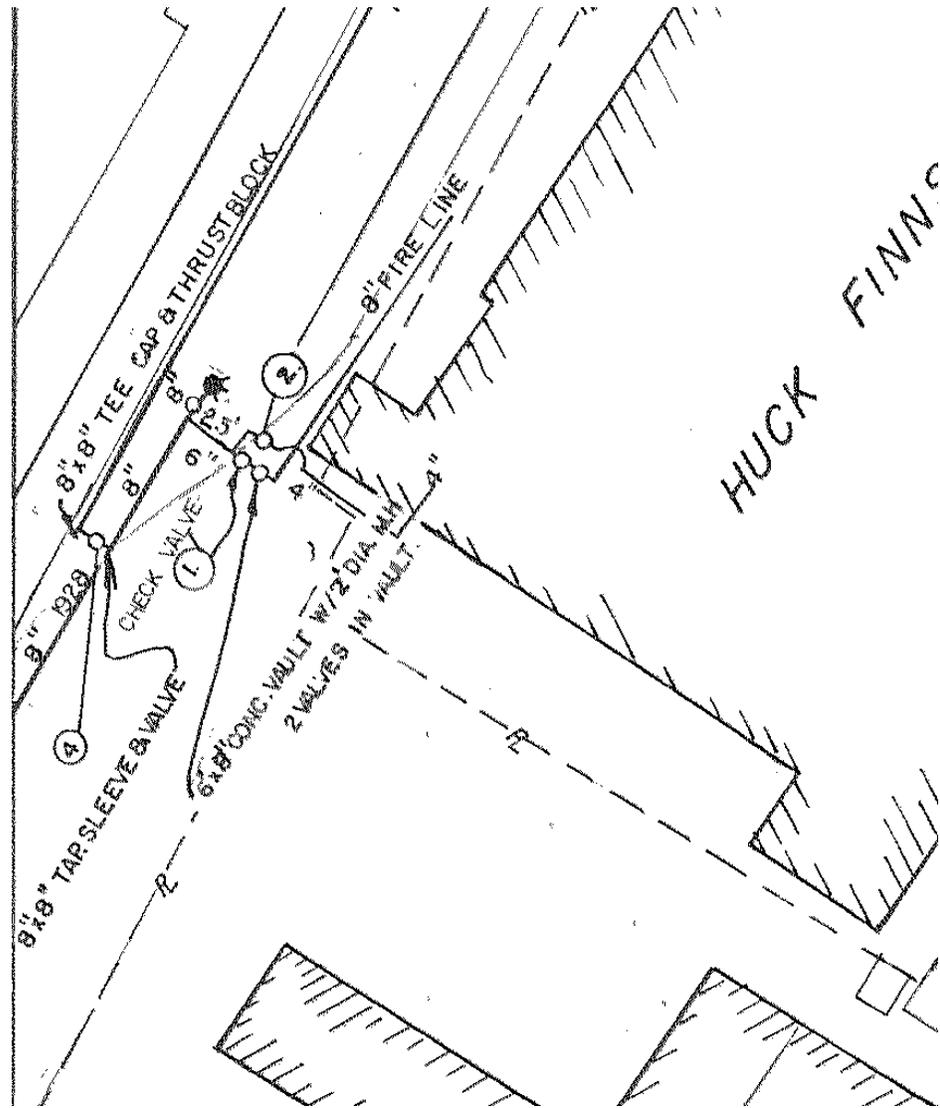


Fig. No. 6 – Enlarged Portion of Water Atlas Sheet 131

FIRE PROTECTION

The warehouse building was built in approximately 1940 and a system of site hydrants was most likely installed at that time. The Applicant proposes to deactivate and remove the existing hydrants. Fire Department Connections are proposed at each sprinkler riser. This will allow for coverage of the entire building. See plan in Appendix 2. There are 2 fire hydrants along Erie Boulevard in the vicinity of this building. One is near the southeast corner of existing building and a second one approximately 200 feet north of the

southeast corner of the building. The building will be fully sprinklered and a system designed in by the sprinkler contractor will be submitted for approval.

CONCLUSION:

It is the Engineer's opinion that this project can be served by the existing public water system with no negative impact on the existing water system.



Prepared by:

A handwritten signature in black ink, appearing to read "D. Hershberg", written over a horizontal line.

HERSHBERG & HERSHBERG
Daniel R. Hershberg, P.E. & L.S.

DRH/dan/er2021water rev.docx

APPENDIX #1

HISTORIC WATER USE AT HUCK FINN WAREHOUSE

HUCK FINN WATER USE

<u>Period Ending</u>	<u>Water USE (CF)</u>	<u>Water Use (Gallons)</u>
11/2/2016	13,900	104,111
3/1/2017	13,600	101,864
7/3/2017	13,600	101,864
11/2/2017	13,000	97,370
3/1/2018	12,700	95,123
7/1/2018	12,600	94,374
11/5/2018	12,000	89,880
3/1/2019	12,800	95,872
7/2/2019	11,500	86,135
11/1/2019	11,500	86,135
3/3/2020	13,400	100,366
7/1/2020	6,100	45,689
11/2/2020	9,100	68,159
3/2/2021	13,400	100,366
7/1/2021	12,900	96,621
Total	182,100	1,363,929
Daily Use	100	747

APPENDIX #2

LOCATION OF FIRE SPRINKLER AREAS AND FIRE DEPARTMENT CONNECTION

LAYOUT NOTES

- EXPANSION JOINTS TO BE NO FARTHER APART THAN 2 TO 3 TIMES THE TOTAL WIDTH OF THE CONCRETE SLAB. JOINTS TO BE PLACED AROUND STRUCTURES THAT GO DEEPER THAN THE CONCRETE SLAB SUCH AS COLUMNS OR WALLS.
- CONTROL JOINTS TO BE A MINIMUM OF 1/4" DEEP. SCORE LINES TO BE IMPLEMENTED AS SHOWN ON LAYOUT PLAN.
- REDI-ROCK WALLS OR APPROVED EQUAL TO BE INSTALLED PER MANUFACTURERS STANDARDS.
- ORNAMENTAL BOULDERS TO BE SOURCED FROM ON-SITE. POSITIONING OF BOULDERS AROUND FLAGPOLES TO BE RANDOM.

SPECIAL NOTES

- GRANITE CURBS TO BE INSTALLED ONLY ALONG ERIE BOULEVARD. ALL OTHER CURBS ARE TO BE CONCRETE CURBS.

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR TO ALTER ANY ITEM IN ANY WAY BY ANY ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL. ANY ALTERATION OF THE DOCUMENT IS ALTERED. THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND SPECIFIC DESCRIPTION OF THE ALTERATION.



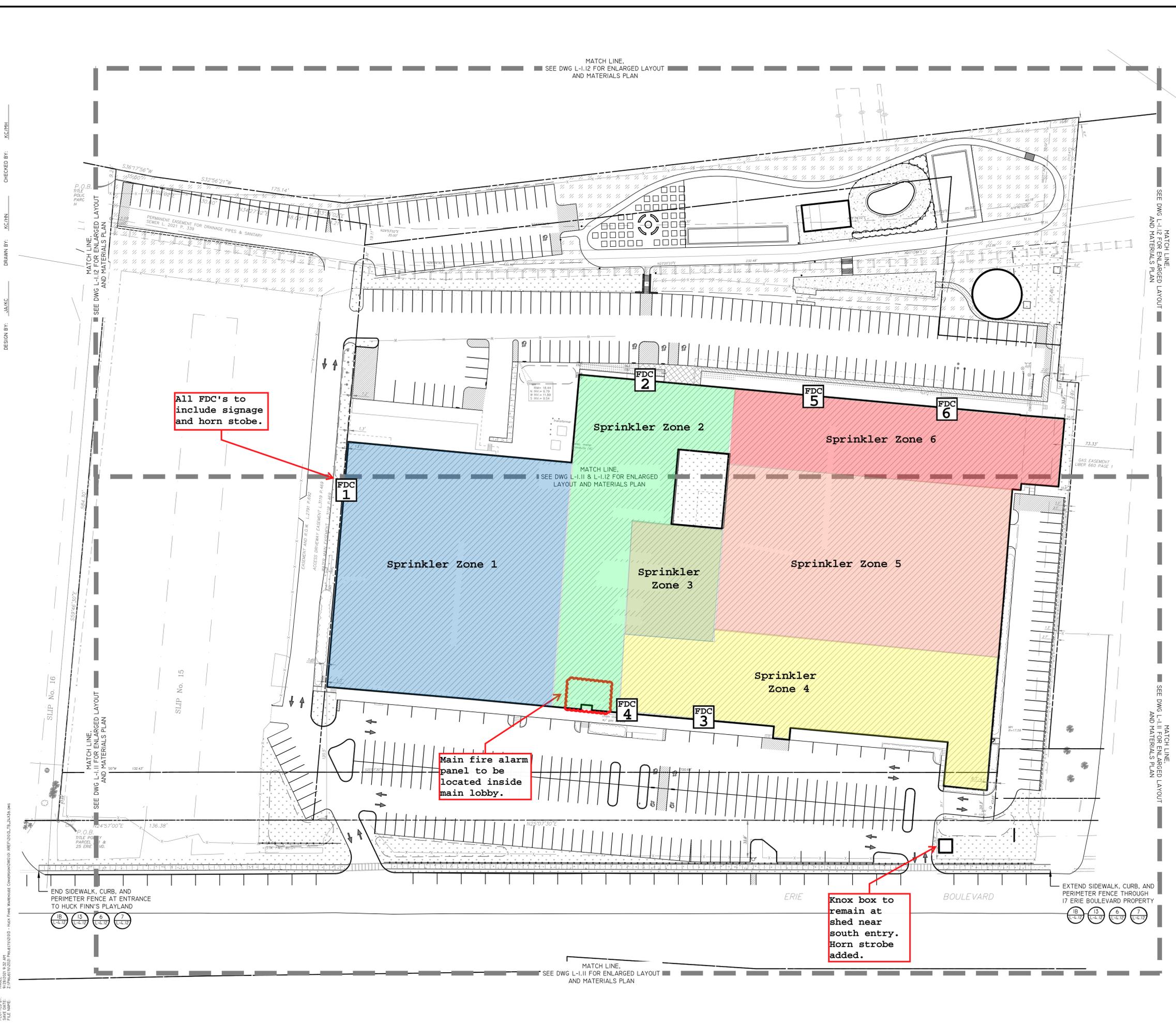
REVISIONS	DATE	DESCRIPTION	CITY COMMENTS	REVISIONS PER CLIENT
	08/30/21			
	09/28/21			

PREPARED FOR
REDBURN DEVELOPMENT
204 LAFAYETTE STREET
SCHENECTADY, NY 12305

PROJECT
HISTORIC REDEVELOPMENT OF 19 ERIE BOULEVARD

DRAWING TITLE
OVERALL SITE LAYOUT PLAN

DATE: 09/28/2021
PROJECT NO. 21013
DRAWING NO. **L-1.10**
DWG 4 OF 12

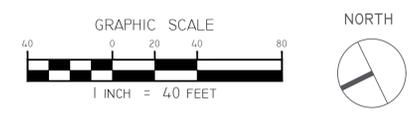


All FDC's to include signage and horn stobe.

Main fire alarm panel to be located inside main lobby.

Knox box to remain at shed near south entry. Horn strobe added.

- LEGEND:**
- PROPERTY LINE
 - DIRECTION OF TRAFFIC
 - SNOW STORAGE AREA
 - PROPOSED TREES
 - PROPOSED LAWN AREA
 - PROPOSED WILDFLOWER/NO MOW SEED MIX
 - PROPOSED SHRUBS/ORNAMENTAL GRASSES
 - PROPOSED CONTROL JOINTS



DESIGN BY: JAJ/KC
DRAWN BY: JSC/JIN
CHECKED BY: JSC/JMH

PLOTTED BY: JSC/JMH
PLOT DATE: 09/28/2021 10:32:04 AM
FILE NAME: C:\projects\21013\21013-10-Overall Site Layout.dwg

MAP REFERENCE:
BASE SURVEY INFORMATION OBTAINED FROM TAX PARCEL NO. 65.16-5-4.1 AND 65.16-5-4.2, CITY OF ALBANY, ALBANY COUNTY, NEW YORK. SURVEY PRODUCED BY HERSHBERG & HERSHBERG CONSULTING AND LAND SURVEYORS ON 11/23/2020 AND 7/27/2021.

DIG SAFE NOTE:
THIS PLAN SET WAS DRAFTED WITHOUT THE BENEFIT OF "DIG SAFE" MARKINGS. UTILITIES SHOWN ARE NOT WARRANTED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT "DIG SAFE" AT 811 BEFORE COMMENCING ANY WORK AND SHALL PRESERVE EXISTING UTILITIES WHICH ARE NOT SPECIFIED TO BE REMOVED IN THIS PLAN SET.