

WATER ENGINEER'S REPORT

Lofts at Pine Hills

Proposed No. 237 Western Avenue

CITY OF ALBANY
COUNTY OF ALBANY
STATE OF NEW YORK

Applicant: Lofts at Pine Hills LLC.

Prepared by:

Hershberg & Hershberg
Consulting Engineers and Land Surveyors

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February 26, 2019
Revised April 23, 2019
Revised May 23, 2019
Revised August 23, 2021

INTRODUCTION:

Hershberg & Hershberg, Consulting Engineers and Land Surveyors, were retained by Lofts at Pine Hills, LLC (hereinafter the “Applicant”) with an address of PO Box 16281, Albany, NY 12212 as site engineer for the development plan to be known as Lofts at Pine Hills located at 237 Western Avenue. This report is 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 site consists of 9 properties known as 233 and 237 Western Avenue, (Tax Map Parcels # 65.61-5-41.1,42), 177, 179, 181, 183, 185, and 187 (Tax Map Parcels 65.61-5-26,27,28,29,30,31) and Rear 694 State Street (Tax Map Parcel #65.61-5-14) which the applicant proposes to consolidate to create Proposed 237 Western Avenue with a site area of 70,794 SF or 1.62 Acres.



Fig. No. 1 - Aerial Photo of Site

DESCRIPTION OF INTENDED SITE DEVELOPMENT AND USE

Under the current applications the Applicant is proposing to construct a 4-story mixed use building with 83 residential units for multi-family housing, and approximately 6,240± SF for commercial use. The site will include 71 of street parking spaces, lighting, landscaping, and a stormwater management system.

POTABLE WATER USE

In absence of existing water records, the *New York State Design Standards for Intermediate Sized Wastewater Treatment Systems (March 5, 2014)*¹ is used to compute the Average Daily Flow. Currently, there are 8 existing residential dwellings with an assumed total of 46 beds. Based upon 110 GPD per bed (Method 1: Typical Per-Unit Hydraulic Loading Rates) 46 beds will generate an estimated 5,060 GPD or an average flow of 3.51 GPM. Peak existing water use is estimated at 400% of average flow or 14.04 GPM.

After construction, the residential portion of the building will contain 83 units consisting of 135 beds. The commercial portion of the building consists of 6,240± SF for commercial/restaurant use. Of this 2,000± SF is proposed for commercial (non-restaurant or bar use). The 4,240± SF for restaurant use would allow for 120 seats. Based upon 110 GPD per bed, 0.1 G/SF for commercial (non-restaurant or bar use) and 35 GPD per restaurant seat, will generate an estimated 19,050 GPD or 13.22 GPM. See Fig. No. 2 below. Peak water use is estimated at 400% of average flow or 52.9 GPM. In comparison to existing conditions, the net increase in water usage is estimated to be 13,990 GPD or 9.72 GPM.

Water Use
237 Western Avenue

<u>Floor/Use</u>	<u>Unit</u>	<u>Value</u>	<u>Water Use Per Unit per day(GPD) See Note 1</u>	<u>Water Use (GPD)</u>
Residential	Bedroom	135	110	14850
General retail/Office	SF	2000	0.1	200
Restaurant	Seat	120	35	<u>4200</u>
TOTAL				19,050

1) Source: New York State Design Standards for Intermediate Sized Wastewater Treatment Works,

Fig. No. 2 – Potable Water Usage

WATER SYSTEM

The total water treated in 2019 at the Feura Bush Water Filtration Plant was 6,473,227,216 gallons. The daily water production averaged 17,734,869 gallons, with maximum daily production of 22,272,288 gallons. The capacity of this treatment plant is 32,000,000 GPD. The 19,050 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 a 6 inch main on the north side of Western Avenue constructed in 1877 as shown in an excerpt from Sheet 127 of the Water Atlas which reproduced below.

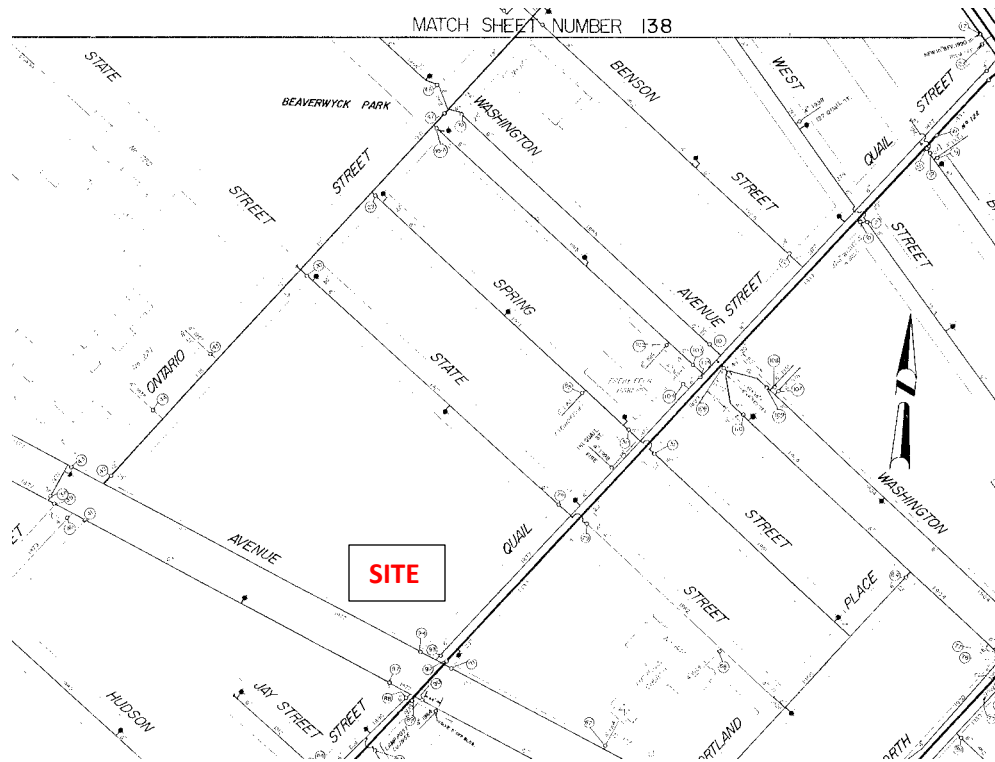


Fig. No. 3 –Excerpt from Water Atlas Sheet 127

FIRE PROTECTION

There are 3 hydrants located in proximity to the site. One hydrant on the south side of Western Avenue across the proposed Western Avenue driveway, one hydrant at the intersection of Western Avenue and Quail Street, and one hydrant at the intersection of Quail Street and State Street. The building will be fully sprinklered and the plan will be reviewed with City officials. Location of Knox boxes and Siamese connections will be coordinated with fire officials. A fire flow test was conducted at the hydrant at the intersection of Quail Street and State Street. The results are included in Appendix B. It showed a static pressure of 62 PSI with an available 2730 GPM at 20 PSI. This will be considered to arrive at a design for fire protection.

POTABLE WATER SERVICE

A 6" DIP CL 52 water service is proposed to connect to the 6" water main on Western Avenue. Water meter detail and backflow preventer detail will be provided with the plumbing plans.

CONCLUSION:

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



Prepared by:

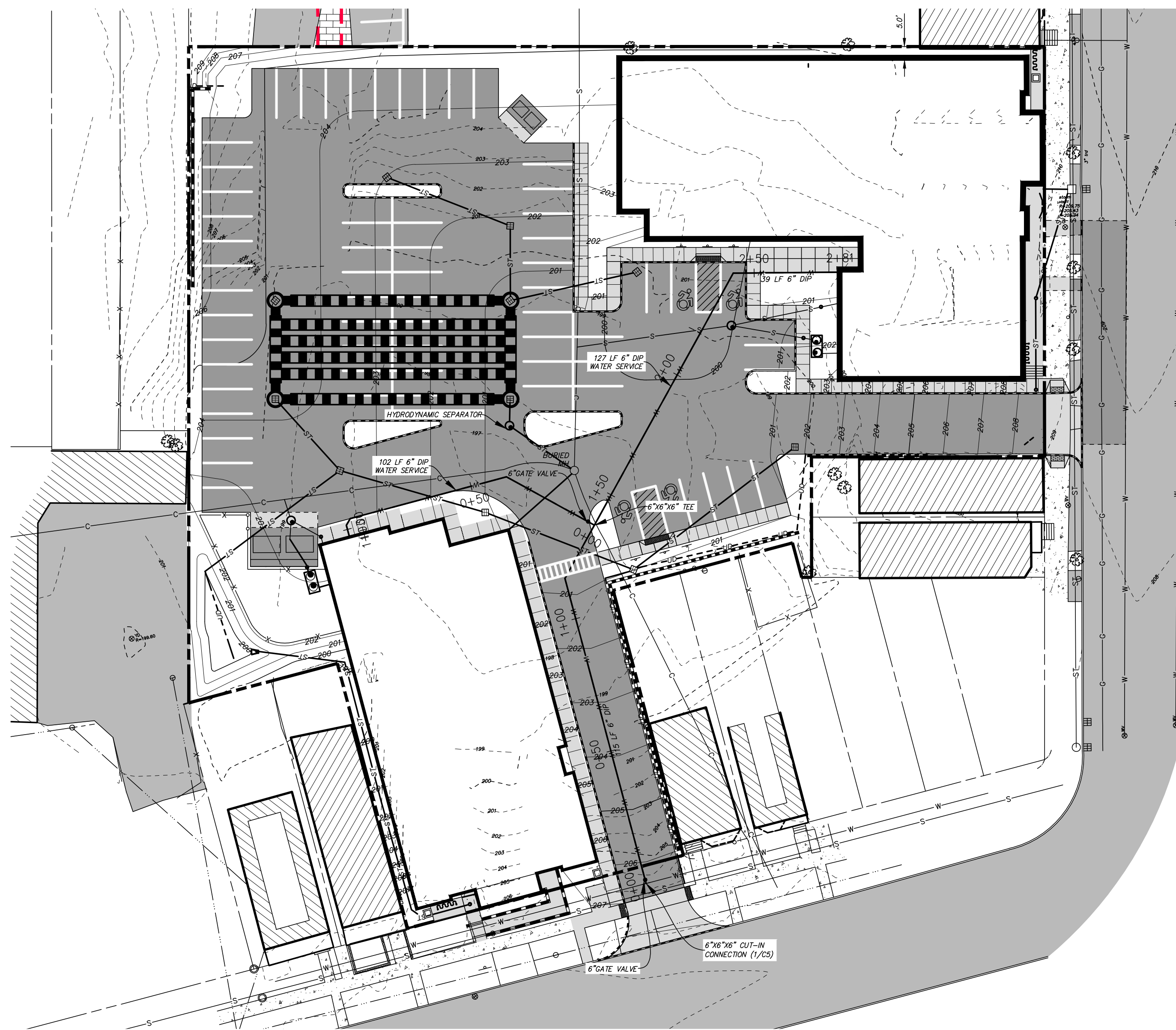
A handwritten signature in black ink, appearing to read "D. Hershberg", is written over a horizontal line.

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

file/dar/ er20180312WATERrev522198 23 21.doc

APPENDIX A

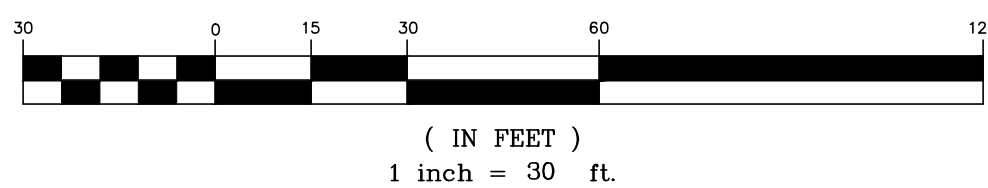
Sheet C5- WATER PLAN



WATER PLAN

SCALE=1"=30'

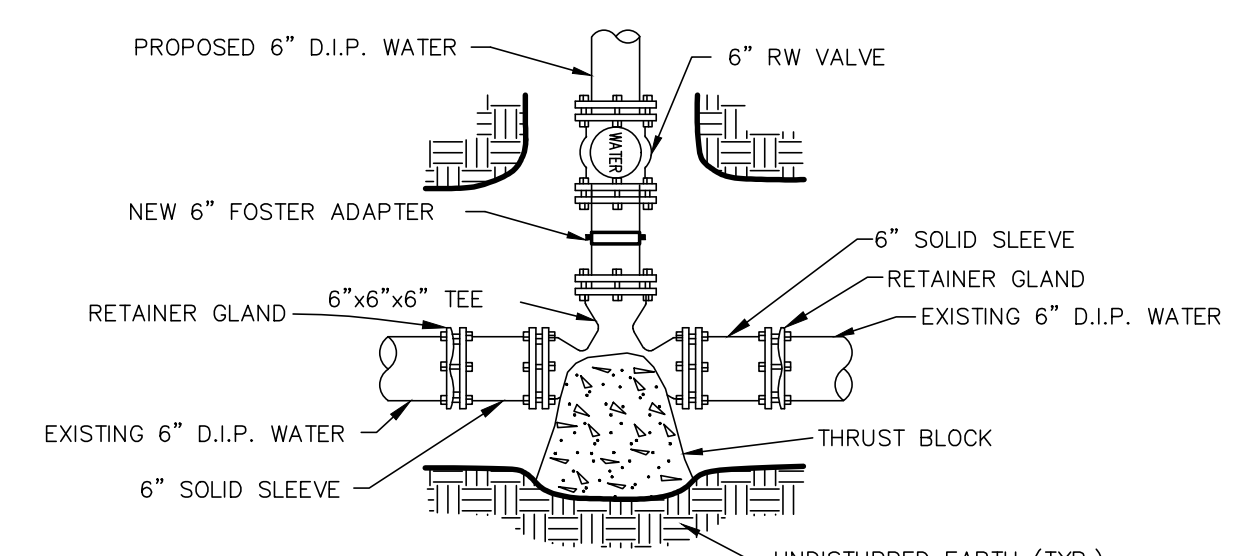
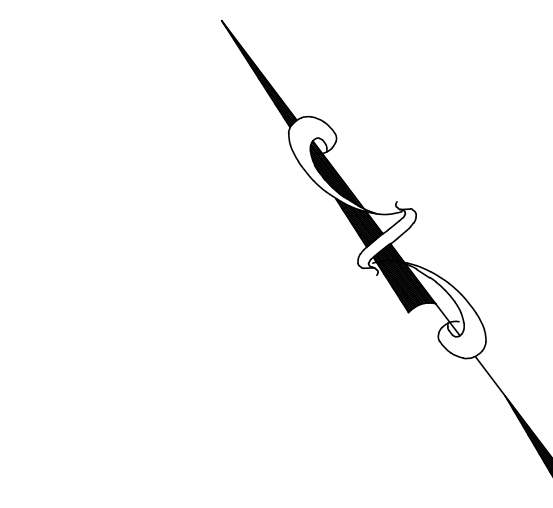
GRAPHIC SCALE



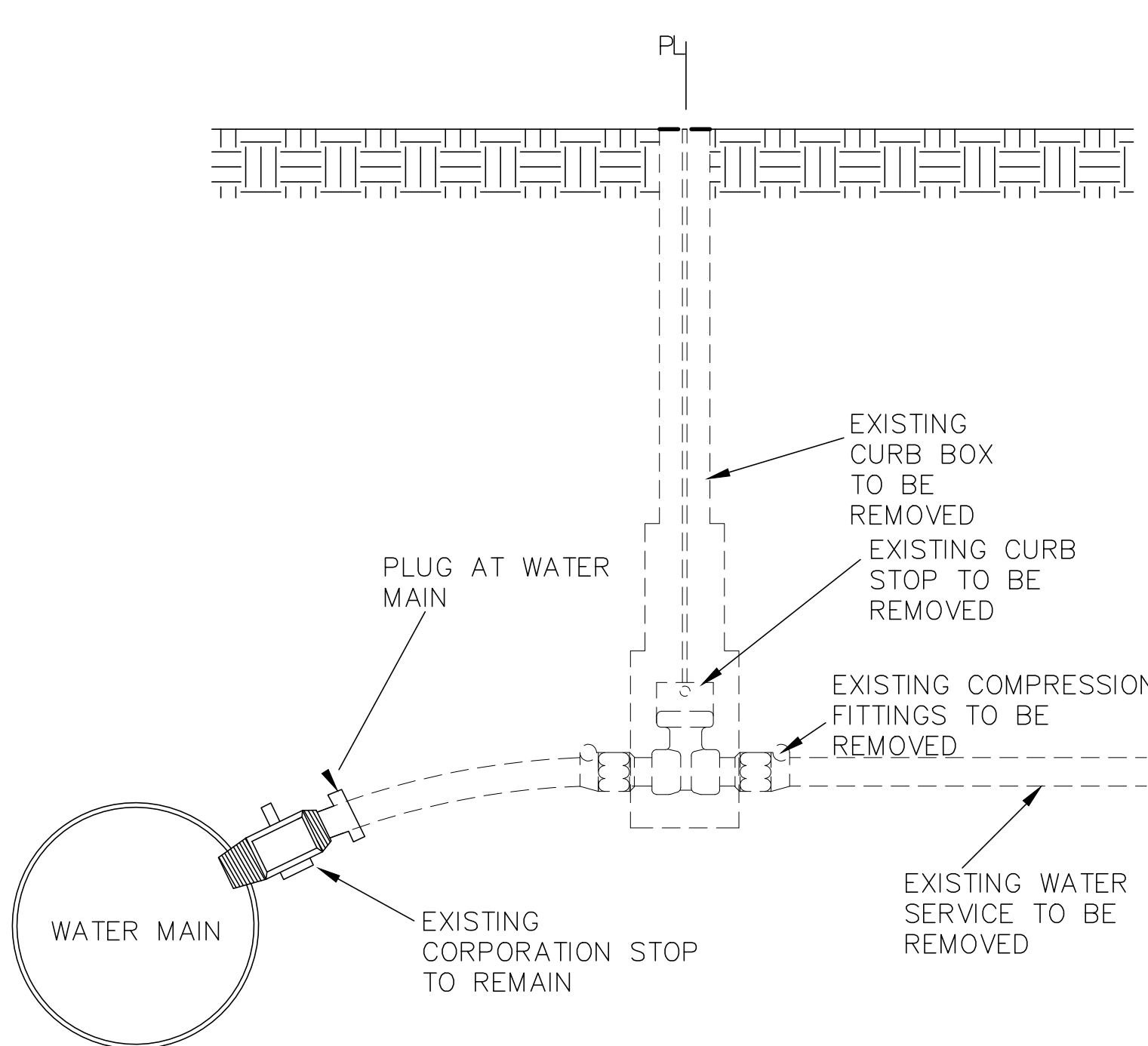
LEGEND			
R.O.W.	RIGHT OF WAY	□	MONUMENT
No.	NUMBER	○	IRON ROD
enc.	ENCROACHMENT	MH	MANHOLE
P.O.B.	POINT OF BEGINNING	⊕	CATCHBASIN
S.F.	SQUARE FEET	—	SIGN
N/F	NOW OR FORMERLY	•	BOLLARD
Fl.	FEET	—	FENCE LINE
Dep.	DEGREE	—	GUARD RAIL
R	RECORD	—	OVERHEAD WIRE, UTILITY POLE & GUY WIRE
M	MEASURED	→	TRAFFIC FLOW ACCESS AREA
N	NORTH	⊕	WATER SHUT OFF
S	SOUTH	⊕	YARD DRAIN
E	EAST	⊕	WATER VALVE
W	WEST	⊕	HYDRANT
tel.	TELEPHONE	⊕	GAS VALVE
elec.	ELECTRIC	⊕	STREET LIGHT
L	LIBER	⊕	LIGHT POLE
P.	PAGE	□	CONCRETE
	TREE	□	PAVEMENT
		□	PROPOSED CONCRETE
		□	PROPOSED PAVEMENT
		—	PROPOSED WATER MAIN
		—	PROPOSED SANITARY SEWER
		—	PROPOSED STORM SEWER
		—	PROPOSED CONTOURS
		□	PROPOSED CATCH BASIN
		—	PROPOSED RETAINING WALL
		—	PROPOSED CONCRETE CURB

NOTES

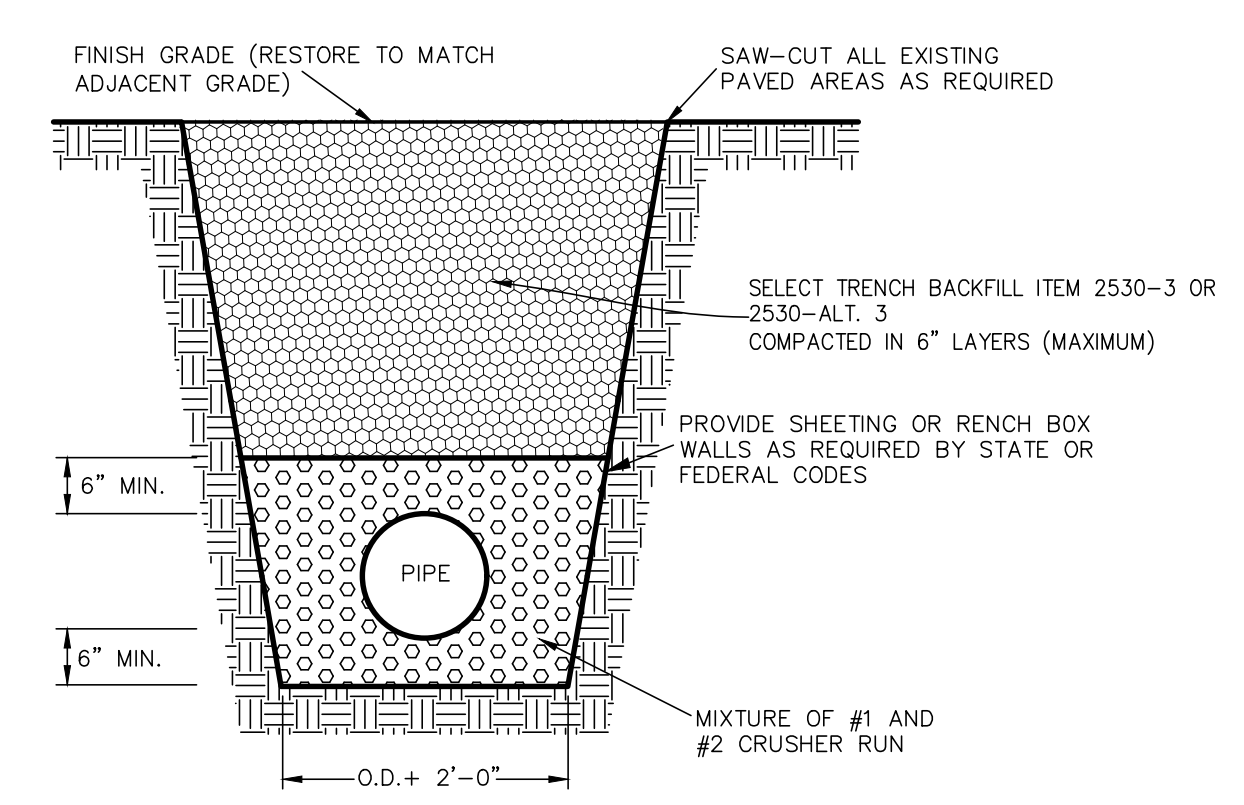
- 48 HOURS NOTICE MUST BE GIVEN TO DEPARTMENT OF WATER FOR INSPECTIONS FOR THE SANITARY, WATER AND STORMWATER UTILITIES.
- PRESSURE AND LEAKAGE TESTING OF THE WATER MAIN SHALL BE WITNESSED BY DEPARTMENT STAFF AND ACCEPTABLE BACTERIOLOGICAL TEST MUST BE SUBMITTED AND ACCEPTED BY THE DEPARTMENT PRIOR TO FINAL OF THE NEW WATER MAIN.
- PRIOR TO USE, ALL WATER LINES MUST BE CHLORINATED AND HAVE A BACTERIOLOGICAL TEST PERFORMED IN ACCORDANCE WITH CITY OF ALBANY STANDARDS.
- FOUNDATION OF BUILDING TO BE WATERPROOF. SEE ARCHITECTURAL DRAWINGS.



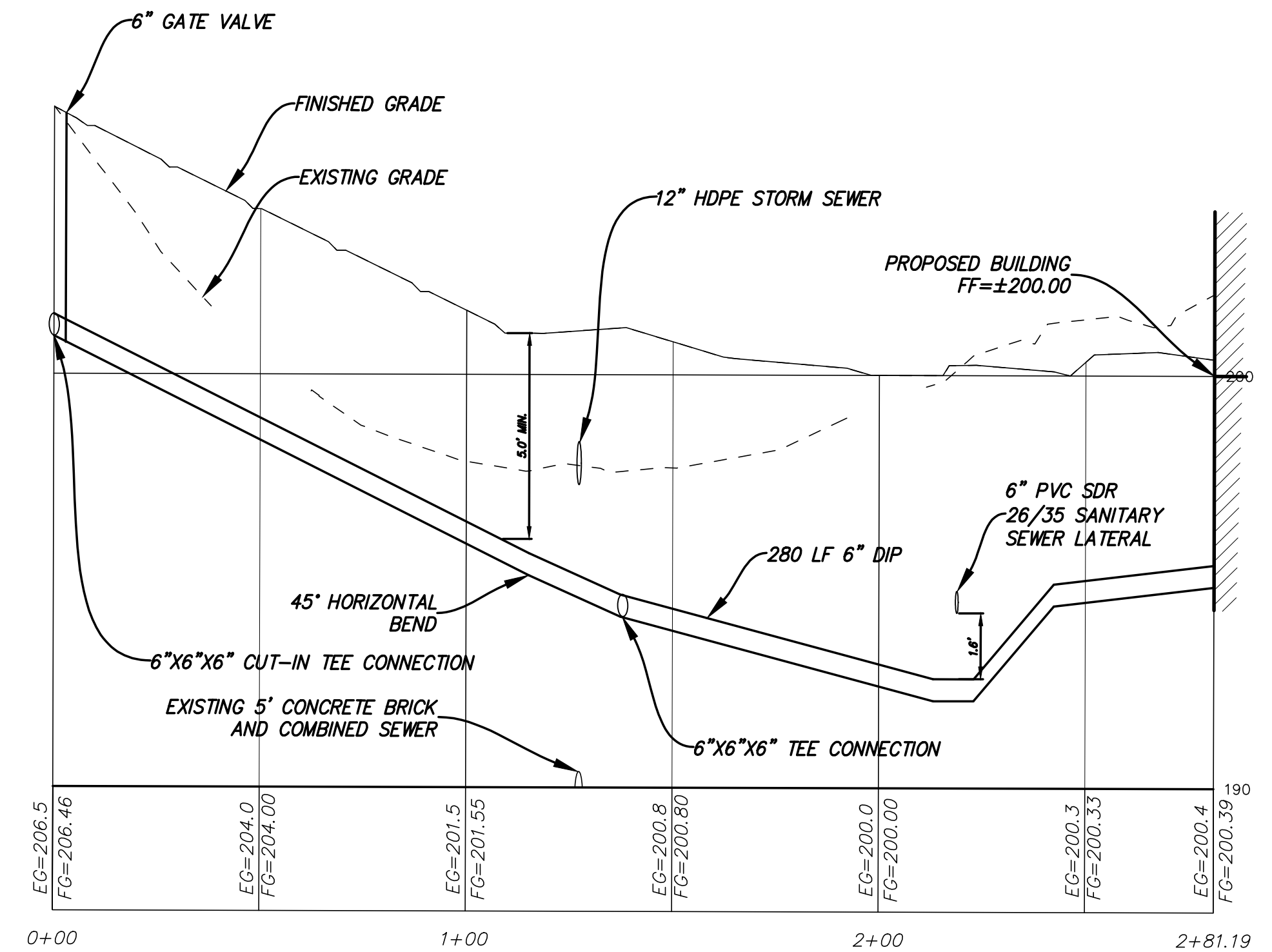
1 CUT IN TEE DETAIL
NOT TO SCALE



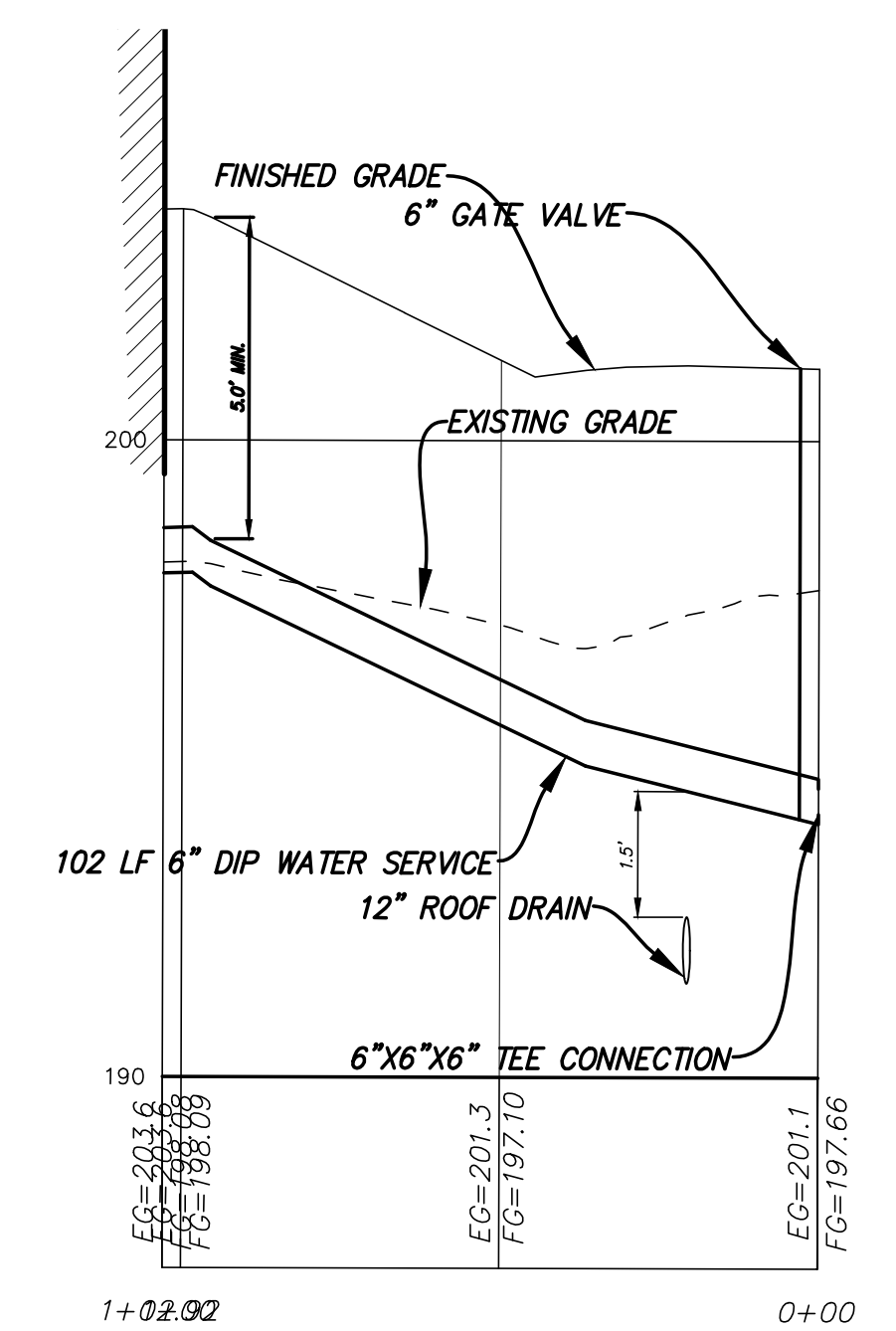
2 WATER SERVICE ABANDONMENT DETAIL
NOT TO SCALE



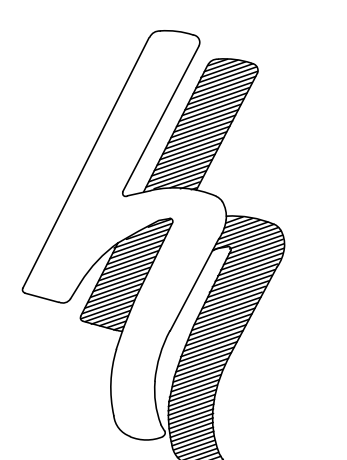
3 TYPICAL SANITARY SEWER & WATER MAIN TRENCH DETAIL
NOT TO SCALE



WATER SERVICE PROFILE
SCALE=1"=30' (H) 1"=3' (V)



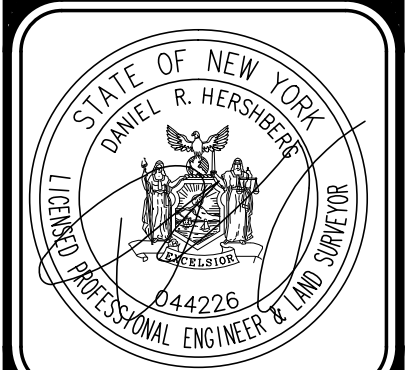
WATER SERVICE PROFILE
SCALE=1"=30' (H) 1"=3' (V)



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ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, IS ILLEGAL.



DATE	REVISIONS
4/24/19	GENERAL REVISIONS
5/22/19	AND COMMENT LETTER
7/24/19	PERMIT SET
9/9/19	AND COMMENTS
9/10/19	STORM SEWER REVISED
8/27/21	GENERAL REVISIONS

WATER PLAN, PROFILE, AND DETAILS FOR
LOFTS AT PINE HILLS
237 WESTERN AVENUE
CITY OF ALBANY, NEW YORK STATE, ALBANY COUNTY

FILE: 180312
SCALE: 1"=30'
CHK: DRH
GATE: 2/26/19
180312-1.DWG

APPENDIX B

FIRE FLOW TEST RESULTS

Albany Water Department Fire Hydrant Flow Test

ID			
323			
Location			
237 western ave			
Date	By	Representing	Witnessed By
2/23/2019	Gerard Jones	AWD	Tom Romand
Purpose of Test		System Demand MGD	
Requested by Hershberg		18MGD	
Pumps In Operation			
NA			
Pressure Regulated Zone			
<input type="checkbox"/>			
Flow Hydrant Location			
167 Quail st			
Nozzle Size	Number of Nozzles	Pitot Pressure	Pitot Flow GPM
2 1/2"	1	25	865
Total Flow GPM			
865			
Residual Hydrant Location			
oppisite 158 morning star			
Static Pressure PSI	Residual Pressure PSI	Fire Flow at 20 psi	
62	57	2730	
Remarks			
Hydrant fed off of 6" main			