**Engineers Report** 

# For the Extension of a Public Water Main and Sewer Connection

1211 Western Ave, Albany, NY

PREPARED FOR

GSX Ventures 7 Old Solomon's Island Road Annapolis, MD 21401

PREPARED BY



100 Great Oaks Boulevard Suite 118 Albany, NY 12203 518.389.3600

October 12, 2018



# **1** Project Information

## Purpose of the Report

This Report has been prepared for the extension of a water main within the City of Albany Department of Water and Water Supply District to serve the proposed Apartment Project in the City of Albany, NY. This report outlines the proposed project area, estimates the proposed water demands and sewer generation and, together with the Site Plans and SWPPP, identifies the proposed infrastructure needs to serve the extension.

## **Existing Site Description**

The overall property consists of a single parcel located on the north side of Western Ave., west of Tudor Road, in the City of Albany, Albany County, New York. The project consists of the following parcels of land, totaling approximately 0.92 acres:

• 64.22-1-10

The project coordinates obtained from the NYSDEC Environmental Resource Mapper are:

Longitude and Latitude:	W -73.821	N 42.676
NYTM:	E: 596569	N: 4725530

The property is currently developed with an office building and associated parking lot. The general area surrounding the property is a mixture of residential, commercial and institutional properties. The project site is located within the existing City of Albany Department of Water and Water Supply, and within the Albany County Water Purification District South Plant.

## **Proposed Project Description**

The project will consist of 136 apartments with a total of 262 bedrooms, accessed via Western Ave. A small public fitness center will be located on the ground floor. The project will be served with municipal water and sanitary sewer and stormwater infrastructure.

## **Existing Water and Sewer Infrastructure**

### Sanitary Sewer System

The project site currently is provided with sewer by the City of Albany and is part of the City of Albany Department of Water and Water Supply District water district and the Albany County Water Purification District South Plant sewer district. The existing City of Albany sewer collection system in this area flows to the existing Woodville Pump Station and pumped to another City Pump Station and ultimately to the South Plant Wastewater Treatment Facility. The treatment plant discharges to the Hudson River under a current State Pollution Discharge Elimination System (SPDES) Permit. A 12" VCP main is located in front of the building to connect to the public system.

This area is currently under a CSO that requires mitigation to obtain lesser combined sewer flows.

### Water Distribution System

The project site currently is provided with water by the City of Albany and is part of the City of Albany Department of Water and Water Supply District water district and the Albany County Water Purification District South Plant sewer district.

There is currently a 12-inch watermain in Western Ave which dated to approximately 1915. A second existing 20-inch watermain constructed in 1975 is located just down Western Ave. within the Magazine Street right-of-way.

# 2 Proposed Sewer and Water Services

## **Existing Districts**

The proposed development is located within the existing City of Albany Department of Water and Water Supply District water district and the Albany County Water Purification District South Plant sewer district. There are no proposed water or sewer district changes required.

## Summary

Public water and sewer is available in relatively close proximity to the project site. A new 12" public watermain will be installed from the project site to the existing 20" City of Albany waterline located in Magazine Street, just east of the project site. The 20" main will be extended across Western Ave. connecting to the 12" main in Western Ave as it crosses. The 20" main will then be reduced to 12" and continue to the westerly boundary of 1211 Western Ave where it will connect the existing 12" main again. An existing section of 12" water main will be abandoned after the existing service connections are reconnected to the new 12" main. A single sanitary sewer service connection is proposed, directly in front of the project site. Refer to the Site Plans for details.

Reduced-sized copies of the Utility Plans are included as Appendix C to this report.

## **Design Flows**

The proposed development consists of a 262-bed residential apartment building with a small retail space. Using a design flow of 30.5 gallons per day per bedroom (based on an identically developed dormitory's records provided by the Albany Water Department). The project also proposes a fitness center which would generate an estimated 225 gpd, resulting in an initial design flow is 8,216 gallons per day for the new development. Using a peaking factor of 4, the initial peak flow would be approximately 32,864 gallons per day for the new development.

As the project is simultaneously removing an existing office building of 40 employees at 15 gallons per day, wherein 600 gallons per day is removed from the design flow and 2,400 gallons per day is removed from the peak flow.

The total design flow is **7,616 gallons per day (5.29 gpm)** for the new development. Using a peaking factor of 4, the peak flow would be approximately 30,464 gallons per day (21.16 gpm) for the new development.

The pump station will utilize a 26'x12' precast concrete structure with a capacity of approximately 12,400 gallons and a duplex (alternating) grinder pump system pumping at 100 gpm (each). Pump system details from the supplier will be provided for review and approval during the permitting process.

Detailed calculations are provided in Appendix A of this report.

## Sanitary Sewer System

We are proposing to construct a new sanitary sewer service line from the building to the sanitary sewer main located within Western Ave. Refer to Site Plans for details and specifications. All construction shall comply City of Albany permitting agency requirements. Refer to the Site Plans for plan and details.

To mitigate additional flows, this project eliminates the peak flow to 1X (rather than 4X) by installing a private on-site pump station, so as to "meter" flow within the system. This project also reduces flows to the combined storm sewer system at a peak rate of 67 gpm during the Water Quality storm event through the use of a "Blue Roof" and quantity controls. The Blue Roof reduces discharge into the storm system from 0.15 c.f.s. to 0.07 c.f.s. during the Water Quality storm event, thereby meeting the requirement to reduce stormwater discharge by 50% during the water quality storm event.

Sanitary flow is mitigated at a rate of 100 gpm (0.07 c.f.s.) during the peak water quality storm event by disconnecting the existing catch basin in front of the site from the combined sewer system and re-connecting it to the dedicated storm sewer trunk in Western Avenue.

## Water Distribution System

A new 12"/20" public water main (approximately 530 l.f.) will be installed from the project site to the existing City of Albany waterline located in Magazine Street, just east of the project site and will be dedicated to the City. The building water service will connect to the new 12" water main, as will existing services connected to the portion of existing 12" main to be abandoned. This building will be equipped with a sprinkler system and will require a 6" service connection. Refer to the Site Plans for plan and details.

An 12-inch Ductile Iron Class 52 main will be installed within the Western Avenue right-of-way, following the road to connect to the extended 20" main in Magazine Street as shown on the Site Plans.

## **Project Costs**

The cost of the water and sewer infrastructure will be covered by the developer, including all of the materials and labor associated with the installation. All materials provided will meet the standard specifications of the City, and will be turned over to the City of Albany upon completion of construction and acceptance.

The preliminary estimated costs for the water extensions outlined herein are as follows:

Water Distribution System: \$55,000

## Summary

This Engineer's Report, submitted for the 1211 Western Ave. project outlines and summarizes the proposed water and sewer facilities associated with the project and

the anticipated water demand and sewer flow rates. All of the facilities have been designed and sized in accordance with applicable regulations, and will provide sustainable water and sewer service for the proposed project, while reducing rates of discharge to the City sanitary sewer system.

In addition to this Report, the detailed design drawings, permit applications and fees must be completed and submitted to the City of Albany Water & Sewer for construction approval and to the New York State Department of Health for the water main extension.

## Appendix A

Calculations

USE	UNITS	RATE (GPD)	TOTAL GPD	peak	peak gpm	gpm
Residential						
Per Bedroom	262	30.5	7991	31964	22.20	5.55
Fitness center						
Per employee	15	15	225	900	0.63	0.16
Daily Flow			5.29	32864	22.82	5.71
Subtract Existing	Office Use		600	3000	2.08	0.42
SUBTOTAL			7616			5.29
Total water usag	e		7616			
i etal italei aeag						
Peaking Factor			4			
Peak Flow			30464			
Daily peak Flow			21.16	GPM		

VHB	Vanasse Hangen Brustlin, Inc.	Contributing Flow To Sanitary Pump Station No. 1				
	Consulting Engineers and Planners	Project:	1211 Western Ave	Proj. No.:	26138.0	
	100 Great Oaks Blvd., Suite 118			Date:	9.14.18	
	Albany, NY 12203	Location:	Albany	Rev. Date		
	(518) 389-3606			Computed by:	MBT	
				Checked by:		

	Development Use	Quantity	Unit	Unit Flow (GAL)	Average Flows (GPD)	Hours Operating (hours)	Adjusted Avg. Flow (GPD)	Peaking Factor	Peak Flow (GPD)
Flow	Basis	_							
	Fitness center Bedrooms	15 262	employees Units	15 30.5	225 7991	24 24	225 7991		
Totals							8,216	4.0	32,864
	Contributing Flow T	o Pump Stati	on(gpm)				5.7 g	pm	22.8

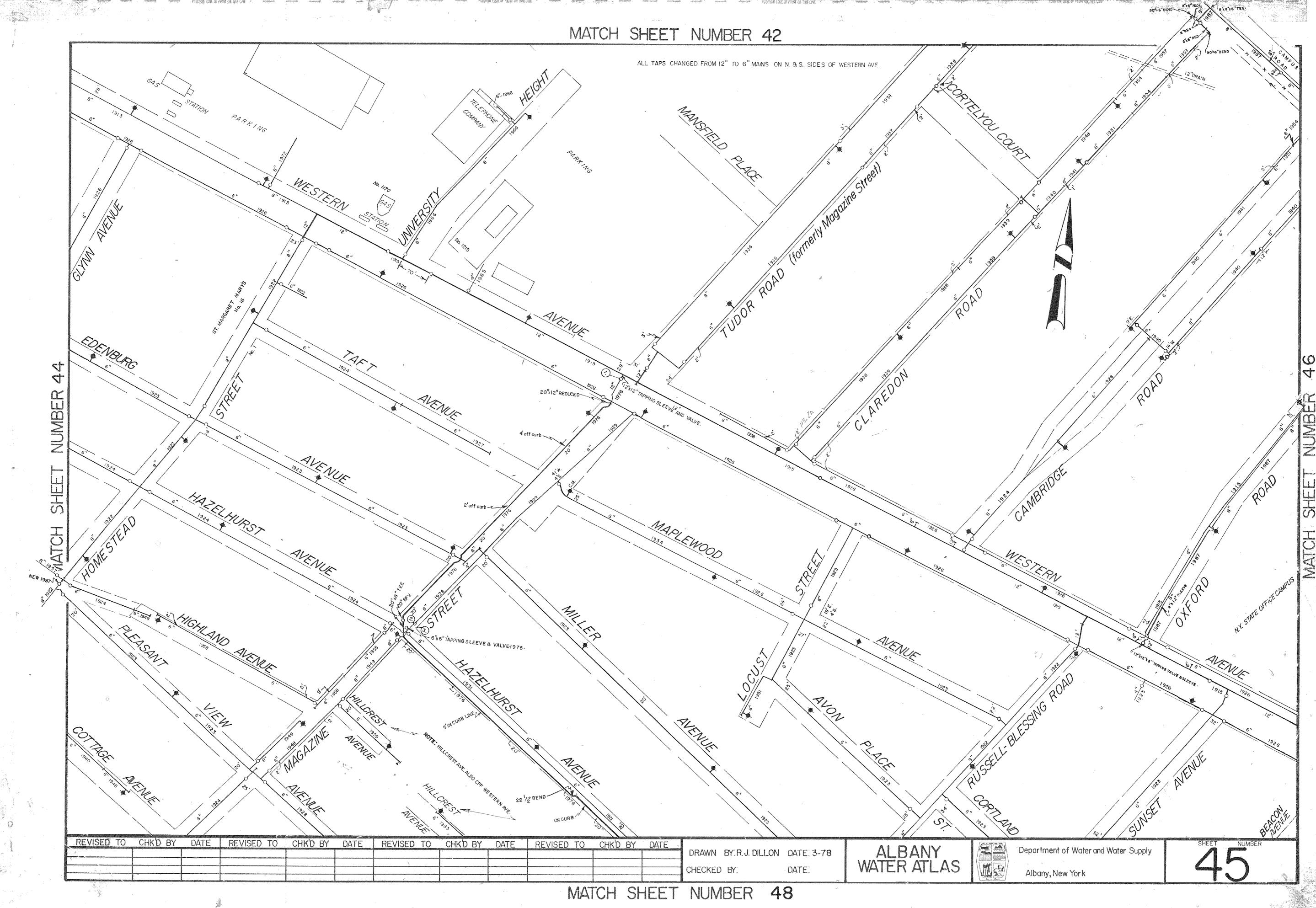
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Heading	Onita	s inculation Dest	nption		1 Pump	<b>`</b>
neading						•
Wetwell Dimensions						
Depth of fluid in Wetwell	ft				5.33	
Wetwell Diameter	ft				0	
Wetwell Cross Sectional Are	ea sf	pi x (diameter/2	$(2)^{2}$		312.0	
Wetwell Volume	cf	Area x depth			1663	
Wetwell Volume	gal	Area x depth x	7.48 gal/cf		12439	
Emergency Storage Capac	vity Cala	ulation				
Storage Time Required	Min				240.00	
Peak Flow	GPM				22.8	
Storage Volume	Gal	time x peak flow	N		5477.3	
Storage Volume	cf	gal/7.48			732	
Storage Depth	Feet	cf vol / cross se	ection		2	
Flow Basis						
Average Daily Flow	gpd	From Inflow Ca	Iculation Sheet		8,216	
Average Daily Flow	gpm		gpd / (24 hr/day	x 60min/hr)	5.7	
Peak Daily Flow	gpd	From Inflow Ca	•••••••	,	32,864	
Peak Flow	gpm	Peak Inflow gpo	d / (24 hr/day x 60	)min/hr)	22.8	
Pump Flow	gpm	Points on the fa	actory pump curve	e	75.0	
Pump Run Times for Avera	ade Flow	Conditions				
Time to pump wetwell(avg)	min		ump Output - Ave	rage inflow)	179.5	
Time to fill(avg)= Residence		Wetwell Vol./Av	• •	<u> </u>	2180.1	
Average - Pump On	min	Average time to	pump wetwell		179.5	
Average - Pump Off	min	Time to pump +	A time to fill		4539.8	
Time in Wetwell(average)	min	Time to pump +	⊦ time to fill		2359.7	
Pump Run Times for Peak	Flow Co	nditions				
Time to pump wetwell(peak)			Pump Output - Pe	ak inflow)	238.4	
Time to fill(peak)	min	Wetwell Vol./Pe		,	545.0	
Peak - Pump On	min	Peak time to pu	ump wetwell		238.4	
Peak - Pump Off	min	Time to pump +	A time to fill		1328.5	
Time in Wetwell(peak)	min	Time to pump +	⊦ time to fill		783.4	
Posidonco Timo of Sonitor	W Sowoo	o in Dumn Stati	on and Earon Ma	in		
Residence Time of Sanitar Force Main Diameter	in in	e in Fump Statio			2.00	
Force Main Velocity	ft/s				7.7	
Force Main Length	ft				25.0	
Force Main Volume	gal	(d/2) <sup>2</sup> sf*PI*lend	gth ft*7.48gal/cf		4	
Average Daily Flow	gpm				5.7	
Avg.Residence Time In Fm	min	Average daily f	low / force main v	olume	1	
Time in Wetwell & FM	min	time in Wetwell			2360	

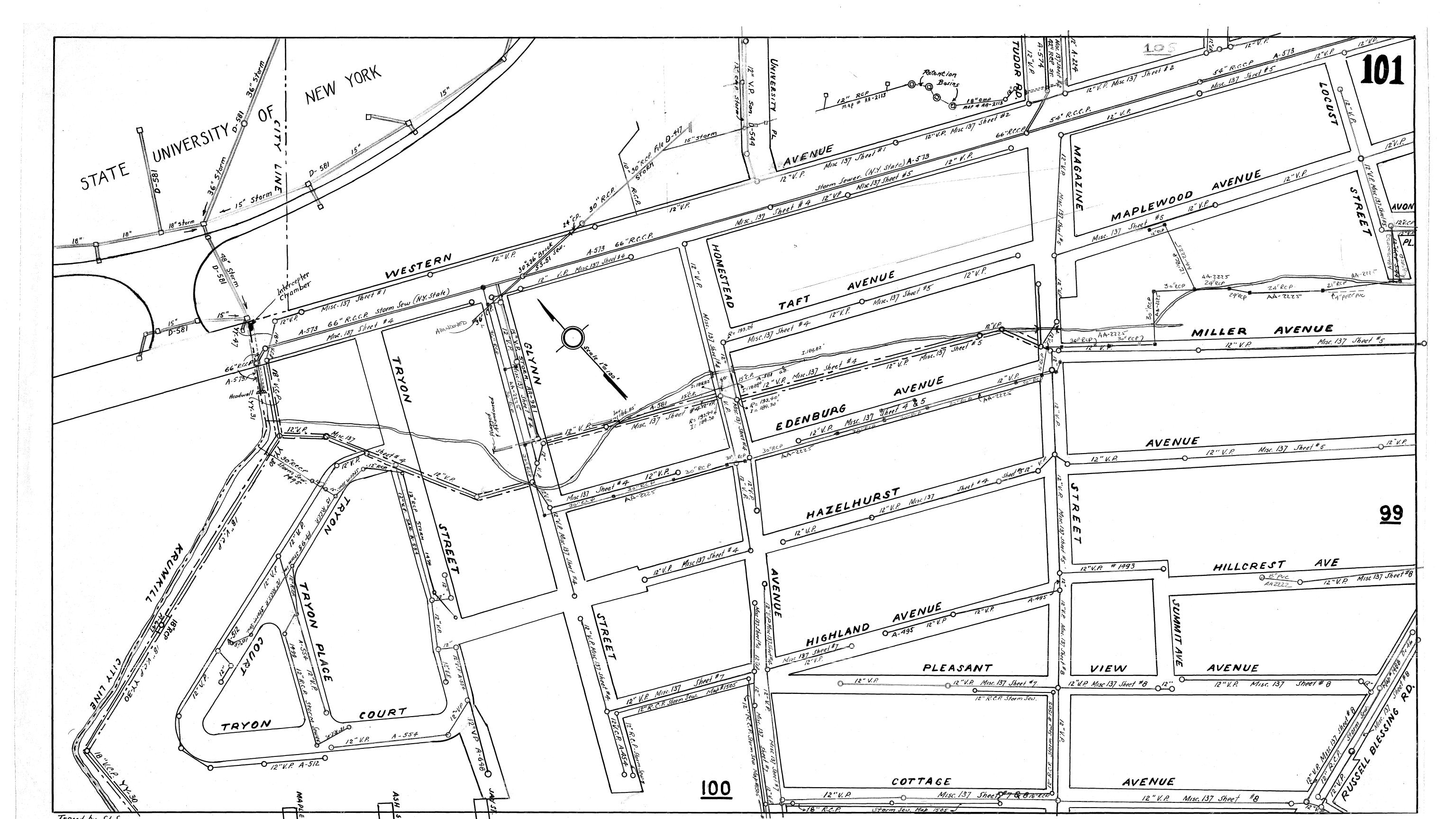
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Consulting Eng			Project:	1211 Western	Proj. No.:	26138
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Albany, NY 12			Location:	Albany	Rev. Date	
(518) 389-3606	5				Computed by	
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File: \\vhb\gbl\proj\Albar				Report\[Pump Station 1	I.xls]Wetwell Volumes	;
ltem	Units	alculation Desc	ription			
Heading					1 Pump	)
Wetwell Dimensions						
Depth of fluid in Wetwell	ft				5.33	7
Wetwell Diameter	ft				0	
Wetwell Cross Sectional Area	a sf	pi x (diameter/2	$(2)^{2}$		312.0	
Wetwell Volume	cf	Area x depth			1663	
Wetwell Volume	gal	Area x depth x	7.48 gal/cf		12439	
	4. O-1-					_
Emergency Storage Capaci Storage Time Required	Min	Ingliqu			240.00	٦
Peak Flow	GPM				22.8	
Storage Volume	Gal	time x peak flow	N		5477.3	1
Storage Volume	cf	gal/7.48			732	
Storage Depth	Feet	cf vol / cross se	ection		2	
Flow Basis						
Average Daily Flow	gpd	From Inflow Ca	Iculation Sheet		8,216	٦
Average Daily Flow	gpm		gpd / (24 hr/day	x 60min/hr)	5.7	
Peak Daily Flow	gpd	From Inflow Ca	•••••••	,	32,864	
Peak Flow	gpm	Peak Inflow gpo	d / (24 hr/day x 60	)min/hr)	22.8	
Pump Flow	gpm	Points on the fa	actory pump curve	Э	100.0	
Pump Run Times for Avera	ae Flow	Conditions				
Time to pump wetwell(avg)	min		ump Output - Ave	rage inflow)	131.9	٦
Time to fill(avg)= Residence		Wetwell Vol./A		J - /	2180.1	1
Average - Pump On	min	Average time to	-		131.9	
Average - Pump Off	min	Time to pump +			4492.2	
Time in Wetwell(average)	min	Time to pump +	time to fill		2312.1	
Pump Run Times for Peak I		nditions				
Time to pump wetwell(peak)	min		ump Output - Pe	ak inflow)	161.2	7
Time to fill(peak)	min	Wetwell Vol./Pe			545.0	
Peak - Pump On	min	Peak time to pu	Imp wetwell		161.2	
Peak - Pump Off	min	Time to pump +			1251.2	
Time in Wetwell(peak)	min	Time to pump +	time to fill		706.2	
Residence Time of Sanitary	Source	o in Pumn Stati	on and Force Ma			
Force Main Diameter	in in				2.00	
Force Main Velocity	ft/s				10.2	
Force Main Length	ft				25.0	
Force Main Volume	gal	(d/2) <sup>2</sup> sf*PI*lend	gth ft*7.48gal/cf		4	
Average Daily Flow	gpm	(			5.7	
Avg.Residence Time In Fm	min	Average dailv f	low / force main v	olume	1	
Time in Wetwell & FM	min	time in Wetwell			2313	1

Consulting Engineers and Planners 100 Great Oaks Blvd., Suite 118 Albary, NY 12203         Location: City of Albary         Project:         1211 Western Ave Date:         Project:         10/3/18           (518) 389-3606         Computed by:         MBT         Computed by:         MBT           Use Pit Components         Diameter         Computed by:         MBT           Diameter         2         0.0         Equ. L Pipe         20         20.0           15         0         0.0         Equ. L Pipe         20         20.0         Equ. L Pipe         10/3         Terms Nin	VHB	Vanasse	Hangen B	rustlin, Inc.		Total D	namic Head Cal	culation	S					
100 Great Oaks Bivd., Suite 118 Albary, NY 12203 (518) 389-3606         Date: 10/3/18 Wetwell Components Interest 2 Checked by:           Network 2013         Date: 10/3/18 Computed by: MBT Checked by:           Checked by:           THE: Wholghlorg/Albany/28138.00 GSX Student Housing/reports/Engineers Report/Pump Station 1.x/s[TDH Components Units Equ. L Pipe 20 20.0 46 0 0.0 61 0 0.0											26138			
Albany, NY 12203 (519) 389-3606         Location: City of Albany         Rev. Date Computed by:         MBT Checked by:           File:         Whblgb/iprojAlbany/26138.00 GSX Student Housing/reports/Engineers Report/Pump Station 1.48/JDH         Terms: Total Equ. Langth           Diameter         2         10.3         Errors: Min Components in Diameter         Force Min Components in Diameter         Terms: Total Equ. Langth         Total Dynamic Head           Sate Valve         0         0.0         Errors: Min Component in Diameter         Total Equ. Langth         Total Equ. Equ Min Equ M		•				,								
(518) 389-3606           Computed by:         MBT Checked by: Checked by:           File: Whb/gb/tprojAlbany/26138.00 GSX Student Housing/reports/Engineers Report[Pump Station 1.x8][TDH           Terms: Components           Terms: Components           Components         Terms: Components           Components         Terms: Components         Terms: Components           Components         Terms: Components         Terms: Components         Terms: Components         Terms: Components           Units         Equ. L Pipe         200         Terms: Components         Terms: Components           Components         Terms: Components         Terms: Components         Terms: Components           Components         Terms: Components         Terms: Components           Components         Terms: Components         Terms: Components           Components         Terms: Components         Terms: Components           Terms: Components         Terms: Components         Terms: Components         Terms: Components         <				-		Location:	City of Albany			;				
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Components         Units         Equ. L Pipe         20         20.0           45         0         0.0         90         2         10.3         Gate Valve         0         0.0         90         2         10.3         Gate Valve         0         0.0         90         2         10.3         Gate Valve         0         0.0         0	Wetwell Comp	onents		Valve Pit Cor	nponents		Force Main Cor	mponents		Terms:				
Pipe         20         20.0           45         0         0.0           90         2         10.3           Gate Valve         0         0.0           10         2         10.3           Gate Valve         0         0.0           Check Valve         0         0.0           System High Point         200         Check Valve         0         0.0           System High Point         200         Valve Pit Piping         Force Main         Head           Diameter         2         Cn         120         Cn         120           Flow         TDH         SH         D         V         DH-WW         D         V         DH-VP           (gpm)         (ft)         (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (gpm)         10         0.16667         0.11         7.77         0.17         10.21	Diameter	2		Diameter	2		Diameter	2		TDH	Total Dynar	nic Head		
45         0         0.0           90         2         10.3           Gate Valve         0         0.0           Check Valve         0         0.0           System High Point         200         Valve Pit Piping         Pump           System High Point         200         Valve Pit Piping         Force Main         Pump           System High Point         200         Valve Pit Piping         Valve Pit Piping         Porce Main         Pump           System High Point         200         0.16667         0.00         0.0         0.17         0.00         0.00         0.17         0.00         0.00         0.17         0.00         0.00         0.17         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00	Components		Equ. L	Componen		Equ. L	Components		Equ. L	SH	Static Head			
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Gate Valve         0         0.0           Check Valve         0         0.0           Check Valve         0         0.0           Total Equ. Length         30.3           Low Water Elevation         190           System High Point         200           Velocity Head         100           Diameter         2           Cn         120           Conc         120           Conc         120           Static Head         100           Diameter         2           Conc         120           Flow         TDH           SH         D         V           Di         0.16667         0.00           0         0.16667         10.21           0         10.0         0.16667         10.21         7.77           10         0.16667         10.21         7.77         11         12.48           200         12.53         10.16667         10.21         7.77         11         1.21           100         1.6667         10.21         7.77         17         17         1.21         1.2.53         1.7         1.2.1         1.62		-								V	-			
Check Valve         0         0.0           Total Equ. Length         30.3         Check Valve         1         1.4         Check Valve         0         0.0         DH-FM         Dynamic Head - Force Main           Low Water Elevation         190         H.L. = 3.02LD <sup>(-1.167)</sup> (V/C <sub>n</sub> ) <sup>1.85</sup> Pump         Force Main         Head           System High Point         200         Wetwell Piping         Valve Pit Piping         Force Main         Head           Con         120         Diameter         2         Diameter         2         Force Main         Head           flow         TDH         SH         D         V         DH-WW         D         V         DH-VP         Cn         120         (ft)           0         10.00         10         0.16667         5.11         2.16         0.17         5.01         0.00         0.00         0.17         0.00         0.00         0.17         0.00         0.00         0.17         0.00         0.00         0.17         12.1         1.62         0.17         12.1         2.72         0.40           100         41.73         10         0.16667         10.21         7.77         0.17         10.21         12.53								-			-			
Total Equ. Length         30.3         Total Equ. Length         48.9         Total Equ. Length         38.3         VH         Velocity Head           Low Water Elevation Static Head         190         H.L. = 3.02LD <sup>(-1.167)</sup> (V/C <sub>h</sub> ) <sup>1.85</sup> Force Main         Head           System High Point Static Head         100         Wetwell Piping Diameter         Valve Pit Piping         Force Main         Head           Cn         120         Cn         120         Cn         120         (ft)           (gpm)         (ft)         (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           0         10.00         10         0.16667         5.01         2.16         0.17         0.00         0.00         0.17         0.00         0.00         0.00         0.01         0.16667         1.21         7.77         0.17         10.21         12.53         0.17         10.21         9.81         1.62           100         41.73         10         0.16667         20.43         28.02         0.17         20.43         35.35         6.48           250         184.16         10         0.16667         25.53         42.34         0.17         25.53         68.27         0.17		-												
Low Water Elevation190H.L. = $3.02LD^{(-1.167)}(V/C_h)^{1.86}$ PumpSystem High Point200Wetwell PipingValve Pit PipingForce MainHeadStatic Head10Diameter2Diameter2Diameter2Cn120Cn120Cn120(ft)FlowTDHSHDVDH-WWDVDH-VPDV010.00100.166670.000.000.170.000.000.170.000.005018.76100.1666710.217.770.1710.2112.530.1710.219.811.6210041.73100.1666710.217.770.1710.2112.5320.763.64200125.04100.1666725.5342.340.1725.5368.270.1720.4335.356.48250184.16100.1666735.757.8910.1735.7512.7.230.1735.7599.5619.84400427.27100.1666735.757.8910.1735.75127.230.1745.8635.4210.12550764.38100.1666756.17182.080.1756.17293.580.1745.8432.80450529.43100.1666756.17182.080.1756.17293.580.1745.8432.80550764.3810<		-						Ţ					ain	
	Total Equ. Ler	ngth	30.3	Total Equ. Le	ength	48.9	Total Equ. Lenç	gth	38.3	VH	Velocity He	ad		
						(1167)	1.05	1						
Static Head         10         Diameter Cn         2         Diameter         2         <	Low Water E	levation	190	H	I.L. = 3.0	2LD <sup>(-1.167)</sup>	$(V/C_{h})^{1.85}$							Pump
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	System High	Point	200	Wetwell Pip	ing		Valve Pit Pipir	ng		Force Ma	in			Head
FlowTDHSHDVDH-WWDVDH-VPDVDH-FMVH(gpm)(ft) <td< td=""><td>Static Head</td><td></td><td>10</td><td>Diameter</td><td>2</td><td></td><td>Diameter</td><td>2</td><td></td><td>Diameter</td><td>2</td><td></td><td></td><td>From Curve</td></td<>	Static Head		10	Diameter	2		Diameter	2		Diameter	2			From Curve
(gpm)(ft)(				Cn	120		Cn	120		Cn	120			(ft)
0         10.00         10         0.16667         0.00         0.00         0.17         0.00         0.00         0.17         0.00         0.00         0.00         0.00           50         18.76         10         0.16667         5.11         2.16         0.17         5.11         3.48         0.17         5.11         2.72         0.40           100         41.73         10         0.16667         10.21         7.77         0.17         10.21         12.53         0.17         10.21         9.81         1.62           150         77.40         10         0.16667         20.43         28.02         0.17         20.43         45.18         0.17         20.43         35.35         6.48           200         125.04         10         0.16667         26.53         42.34         0.17         25.53         68.27         0.17         25.35         53.42         10.12           300         254.42         10         0.16667         35.75         78.91         0.17         35.75         127.23         0.17         36.64         74.85         14.58           350         335.53         10         0.16667         40.85         101.02         0.17	Flow	TDH						V	DH-VP	D		DH-FM		
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## Appendix B

**Back-up Documentation** 









CITY OF ALBANY DEPARTMENT OF WATER & WATER SUPPLY 10 NORTH ENTERPRISE DRIVE ALBANY, NEW YORK 12204 TELEPHONE (518) 434-5300 FAX (518) 434-5332

KATHY M. SHEEHAN MAYOR JOSEPH E. COFFEY, JR., P.E. COMMISSIONER

DATE: September 1, 2010

BE: Water/Sewer Permit Application Process

To our respected contractors,

This letter is being sent to notify you of the new changes to our water and sewer permit process.

In order to apply for a permit, a detailed sketch must be submitted along with your bond, insurance and permit fee. All permits will now undergo a 2-5 business day review. A permit number will not be issued until after this review. Once the permit application has been approved, you will receive an approval letter which will contain your permit number. Also, each approved permit is only good for 30 days. If the deadline expires and the work has not been completed, a new permit will need to be applied for and the base fee will need to be repaid. This notification will need to be shown to Department personnel during the final inspection of the job.

In the event of an emergency situation, please contact Luigi DiNardo, the supervisor on duty, or the engineer at 434-5300. A permit number may be issued over the phone, but only if a representative of the Department deems the situation an emergency.

We have enclosed instructions detailing the new permit requirements, including an example of a sketch. Please use this as a reference with your application. It is important that all applicants read, understand, and comply with the new requirements.

If you have questions about the new permit requirements or the application process, you may contact the Department of Water and Water Supply by phone, Monday through Friday, between the hours of &:30 AM and 4:30 PM at (518) 434-5300 or by e-mail at water@cl.albany.ny.us.

Sincerel ing Di hade

Luigi DiNardo, Contractor Foreman, Permit Reviewer

## WATER AND SEWER PERMIT INSTRUCTIONS FOR APPLICANTS

No person shall uncover, make any connection with or opening into, use, alter, or disturb any public water or sewer line of appurtenances thereof, without first obtaining a written permit from the Department of Water and Water Supply.

To apply for a water or sewer permit, the applicant shall file a completed permit form with the Department of Water and Water Supply. The following shall be provided with the completed permit form at the time the application is filed:

- Plans, specifications, or other information as required by the Department;
- Permit and Inspection fees;
- Certificate of Insurance; and
- Performance Bond;

The attached pages contain information regarding these submittal requirements. Please note that if the water or sewer work is located within the City's right-of-way, a City of Albany Street and Sidewalk Opening Permit is required. The Street and Sidewalk Opening Permit is required for <u>any</u> work within the City's right-of –way (i.e., street, curb, sidewalk, lawn, etc. ...). This permit application is available at the City of Albany Department of General Services.

Applicants must plan for adequate time for review and approval by the City, and any other involved agencies. Generally, the greater the scope, the longer the permit review and approval process will take. A telephone call to the Department of Water and Water Supply, well in advance of any scheduled work, can provide early guidance. It is important that all applicants read and understand and comply with the City's requirements.

Individuals with questions about permit requirements or the application process may contact the Department of Water and Water Supply, Monday through Friday, between 8:30 am and 4:30 pm as follows:

City of Albany Department of Water and Water Supply 10 North Enterprise Drive Albany, New York 12204 Telephone: (518) 434-5300 Fax: (518) 434-5332

Excavations for water and sewer services (General requirements)

- The water and sewer permittee is responsible for all necessary excavation work.
- All excavations must be in compliance with EXCAVATION STANDARD 29 CFR PART 1926 SUBPART (P) of the current OSHA regulations, prior to any Water Department staff entering the excavation.

- The contractor must provide a form of egress form the excavation.
- The contractor must supply a pump for dewatering purposes.
- The Water Department staff must inspect all water and sewer service work prior to backfilling the excavation.

Requirements for New Water Service Taps

- All water service taps are made by Water Department staff
- Schedule time and date for the tap with the Water Department Dispatcher (518) 434-5332) at least 48 hours in advance).
- All existing water services and branches at the water main must be terminated by the contractor at the property owners expense before a new service can be established

Taps up to and including 2" in diameter

The City of Albany does not supply any corporation stops, tap bend connectors or tap saddles. Depending on the size of the tap to be installed, saddles may not be needed. Water Department staff will make this determination. The contractor performing the work must provide all plumbing supplies including the corporation stop and gooseneck. The City of Albany has standardized on using the following corporations stops – Ford F 600 for <sup>3</sup>/<sub>4</sub> inch and Ford F-B 600 for 1, 1 <sup>1</sup>/<sub>2</sub>, and 2 inch. Tap saddles, when required, are also standardized to be ford manufactured.

• The City currently uses manual and battery operated tapping equipment. Taps larger than 2" in diameter

- The contractor must supply a <u>stainless steel tapping sleeve</u> for all wet cuts. No other type of sleeve will be allowed on the City of Albany owned water mains.
- The contractor must clean the water main in the area to be tapped.
- All wet sleeves and valves must be pressure tested to <u>150 psi</u>. <u>This test must be</u> witnessed by the City of Albany Water Department staff.
- The contractor must supply the water test pump.
- The contractor must supply an air compressor capable of obtaining a continuous air pressure of <u>125 psi</u> for the purpose of supplying air to the drilling machine used by the City of Albany Water Department staff.
- The contractor must supply a backhoe with an experienced operator to assist in lowing and raising the drilling machine in and out of the excavation.
- When the outside temperature is below 32 degrees Fahrenheit, the contractor must supply an approved heat source to protect the equipment from freezing.

Requirements for new sewer service laterals

- The contractor supplies all the materials to construct the sewer lateral including the saddle for the sewer main.
- The contractor will do all installation work for the lateral including the connection to the sewer main. All City Code requirements will be adhered to.

Requirements for final inspection of service

- The excavation will not be backfilled until the water and/or sewer service has been inspected by the Department of Water staff.
- The contractor will schedule the final inspection of the service with the Water Department Dispatcher a (518) 434-5322, giving the Department as much advance notice as possible. The Department will endeavor to conduct the inspection within 4 hours of being notified. Inspections will be scheduled during regular operating hours, Monday through Friday. In case of emergency or special circumstances pre-approved by Water Department management, inspections may be conducted during holidays and weekends.
- It is the responsibility of the contractor to ensure that a Department representative is present for the required inspection. If the contractor backfills the trench prior to the Department representative's inspection, the Department will require the contractor, at the contractor's sole cost, to remove all work up to a point, at the Department's discretion.
- If the contractor is not ready for an inspection at the time set by the Department, the contractor must contact the Department Dispatch a minimum of one (1) hour prior to the scheduled inspection to reschedule the inspection. If the inspection is scheduled for another day, the contractor shall comply with all City regulations and procedures to protect the area.

## <u>City of Albany</u> <u>Water and Sewer Permit Performance Bond Requirements</u>

## SURETY BOND (PERFORMANCE)

Bond #

Amount \$10,000.00

KNOW ALL MEN BY THESE PRESENTS, that we,

as Principal; and the

duly authorized to transact business in the State of New York, having an office and usual place of business at

as Surety, are held and firmly bound unto City of Albany, City Hall, Eagle Street, Albany, New York in the sum of Ten thousand and no\100 Dollars (\$10,000) for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Signed and sealed with our seals this \_\_\_\_\_ day of \_\_\_\_\_, 200 .

WHEREAS, the above bounden Principal has received and will apply from time to time for permits for the <u>purpose of water</u>, sewer and site restoration work.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bounden Principal shall indemnify and save harmless the said City of Albany from all liability, damages, and expenses of every kind and nature, resulting directly, or indirectly to persons or property and arising from and in consequence of any license or permit, and shall well, truly and faithfully perform the duties and privileges pertaining to any license or permit, and <u>shall perform all required water</u>, sewer and site restoration work, then this obligation to void, otherwise to remain in full force and effect.

And shall further indemnify, save harmless and pay the City of Albany any damages, loss, charges, or expenses which, in any way, be sustained or incurred by it in relation to or in connection with any and all such claims, suits, or proceedings at law or in equity.

This bond takes effect	, 20	and expires on
	, 20	



## **CITY OF ALBANY**

## <u>Water and Sewer Permit</u> Certificate of Insurance Requirements

Before a permit is granted, the applicant shall provide a certificate of insurance of a duly authorized insurance company, in the sum of one million dollars (\$1,000,000) designating the City as additional insured and evincing coverage to indemnify and save harmless the City of Albany from all loss, damage, cost, and liability whatever which the City may sustain or incur by reason of any accident, act or omission of the person to whom such permit is granted or any person employed by him while engaged in such employment and performing any of the work done under or pursuant to such permits.

The applicant shall also provide proof of coverage for compensation and disability insurance.

City of Albany Department of Water and Water Supply 10 North Enterprise Drive Albany, New York 12204 (518) 434-5300

## ALBANY WATER BOARD SCHEDULE OF PROPOSED RATE STRUCTURE EFFECTIVE SEPTEMBER 15, 2012

	RESIDENTIAL/ COMMERCIAL RATE <sup>(A)</sup> (per 100 cf)	TIER I LARGE USER RATE <sup>(C)</sup> (per 100 cf)	TIER II LARGE USER RATE <sup>(C)</sup> (per 100 cf)	UNMETERED RATE (per unit, <u>per cycle)</u>	VACANT PROPERTY (per front foot, <u>per year)</u>
Rates Prior to July 1, 2010	\$2.45	\$4.44	\$5.33	\$355.00	\$2.21
Rates through September 15, 2011 <sup>(8)</sup>	\$2.57	\$4.66	\$5.60	\$355.00	\$2.32
Rates Effective September 15, 2012	\$2.67	\$4.85	\$5.82	\$355.00	\$2.41

------ SEWER CHARGE IS BILLED AT 100% OF ABOVE WATER RATES ------

- (A) The minimum water charge for residential customers will be increased 4.0%, from \$33.57 (per 4 month billing cycle) to \$34.91 (per 4 month billing cycle). The minimum amount includes 1,300 cubic feet of water per billing cycle.
- (B) Prior rates were effective July 1, 2010.
- (C) Tier I customers are defined as those customers who utilize in excess of 120,000 cubic feet of water per billing cycle. Tier II customers are defined as those customers who utilize in excess of 600,000 cubic feet of water per billing cycle. Tier I and Tier II large user rates apply to all water usage for those customers who meet the user definition.
- (D) A 1% monthly finance charge (or 12% annually) is currently charged on any unpaid accounts (those not paid within 30 days of the date billed) based on the average monthly balance of the account. This finance charge will remain unchanged.
- (E) A one time penalty of 5% is currently charged to all accounts not paid within 30 days of the initial date of billing. An additional penalty of 5% is currently charged to all accounts delinquent as of November 15 of each year and, as such, subject to rollover and collection by the City of Albany on the City's general taxes. These penalties will remain unchanged.
- (F) Albany's water measurements, billings and rates are expressed in units of 100 cubic feet (cf). Approximately 1 cf is equivalent to 7.48 gallons; approximately 100 cf is equivalent to 748 gallons.

RATE-STR 9/2012

## ALBANY WATER BOARD SCHEDULE OF COST RECOVERY AND OTHER COMMERCIAL RATES EFFECTIVE SEPTEMBER 15, 2012

<u>Air Conditioning (Annual)</u> Recirculating Non-recirculating	\$19.00/H.P. \$92.00/H.P.
<u>Refrigeration (applies to existing services only)</u> Recirculating	\$19.00/Ton
Non-recirculating	\$92.00/H.P.
<u>Fire Service/Sprinklers (Annual)</u> 3" service or less 4" service	\$181.00 \$296.00
6" service 8" service	\$539.00 \$718.00
Over 8" service Fire Hydrant Charges	\$1,076.00
Base permit charge for up to 5,000 gallons (Up to 10 calendar days) Charge for each additional day (beyond 10 days)	\$475.00 \$42.00
Charge for each 1,000 gallons (Over 5,000 gallons)	\$7.15
Fire hydrant meter deposit Fire hydrant meter back flow valve (city owned) deposit Daily use fee (up to 10 calendar days)	\$500.00 \$200.00 \$10.00
Charge for each additional day beyond (10 calendar days) Fire hydrant meter back flow valve (private owned) inspection only Unauthorized hydrant use fee/penalty	\$20.00 \$25.00 \$1,000.00

### **Closing Meter Reading Charge**

A charge of \$50.00 will be made for each closing reading taken by Water Department personnel.

## Fire Flow Charges

\$330.00 each test.

### Turn On/Shut Off Charges

Curb box \$40.00; branch valve \$55.00 (4" or larger).

### Missed Appointment Charge

A charge of \$50 will be assessed for any missed appointment/no show (after the second attempt).

## <u>Other</u>

Charges for labor and materials, for work performed on private property pursuant to a signed consent form, will be billed on a flat basis.

## ALBANY WATER BOARD SCHEDULE OF MATERIAL AND LABOR FEES EFFECTIVE SEPTEMBER 15, 2012

Тарр	ing Charges
34"	\$389.00
1"	\$486.00
1 1⁄2"	\$584.00
2"	\$683.00
4 <sup>n</sup>	\$879.00
6"	\$1,073.00
8"	\$1,268.00
12"	\$1,455.00

All tapping rates include material and equipment charges.

Fees on Water Meters	Fees on Water Meters					
Meter with Orion Head 5/8"	\$211.00					
Meter with Orion Head 1"	\$321.00					
Meter with Orion Head 1-1/2"	\$645.00					
Meter with Orion Head 2"	\$810.00					
Meter only: 5/8"	\$66.00					
Meter only: 1"	\$190.00					
Meter only: 1-1/2"	\$504.00					
Meter only: 2"	\$728.00					
Orion Head only: 5/8" through 2"	\$160.00					

## Fees on water meters are based upon current market conditions and are subject to change. Please call for current prices of meters or heads in excess of 2".

Due to uncertain freight costs, the Albany Water Board reserves the right to adjust the costs for meters and heads.

## ALBANY WATER BOARD SCHEDULE OF MATERIAL AND LABOR FEES EFFECTIVE SEPTEMBER 15, 2012

## Frozen meter replacements

Customer will be charged for the cost of a new meter, for the size currently in place, plus labor and materials:

- Labor charge during working hours: \$170.00 (Plus cost of meter)
- Labor charge during non-working hours: \$255.00 (Plus cost of meter)

Water Service Repair Charges/Term	ination
¾" up to 1" service repair	\$4,673.00
1 ¼" up to 2" service repair	\$5,102.00

4" \$4,736.00 6" \$4,873.00 8" \$4,983.00	Fire Branch an	d Private Water Mai	n Repair Charges
6" \$4,873.00		9 9	
	4"		• •
8" \$4,983.00	6"		\$4,873.00
	8"		\$4,983.00

### **Other Fees/Charges:**

Base permit fee on all water and sewer applications: \$55.00

New sewer connection fees:

Residential	\$155.00
Commercial	\$365.00
Industrial	\$675.00

Hydrant Repair/Replacement Fees:

Repair	\$520.00 (plus materials)
Replacement	\$4,673.00

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RATE-STR 9/2012

Permit #	 	

CITY OF ALBANY WATER AND SEWER SERV	ICE PERMIT
Service Address:	Date:
Property Owner's Name:	
Applicant's Name:	Phone:
Address:	Fax:
E-Mail Address:	
Water Service: (Check all that apply)	
Residential New Service	Domestic
Commercial Service Re-Hab	Fire Protection
Industrial Termination	DGS Permits Required
Size of Service:	28
Contractor's Name:	Phone:
Address:	
Sewer Service: (Check all that apply)	
Residential New Service	Sanitary Sewer
Commercial Service Re-Hab	Storm Sewer
Industrial Termination	DGS Permits Required
Size of Service	
Contractor's Name:	Phone:
Plans Designed by:	
Plans Drawn by:	
To the best of my knowledge the above information is understand the provisions of the Code of the City of A systems and shall comply with said Code. Also, I will be backfilling as required to restore pavement to City spe years.	Ibany concerning use of its water and sewer e responsible for excavation, removal, and
Applicant's Signature:	Date:
Please Print Name:	
This section to be filled out by	y the Water Department:

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Permit #	
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## CITY OF ALBANY WATER AND SEWER SERVICE PERMIT (FOR DEPARTMENT USE ONLY)

### MAINTENANCE DIVISION

Size of Water Main to be Tapped	Size of Tap Installed
Size of Sewer Main to be Connected	Size of Service Installed
Approved by	Date
Water Service Inspected by	Date
Sewer Service Inspected by	Date
Comments	

## METERING DIVISION

Correct Service Address		Parcel Number
Needs new meter?	es 🗌 No	
Size of Meter	Meter Serial #	Head #
Approved by		Date
Comments		

## **FINANCE DIVISION**

Bond	Yes	No	Date Expires _	,,,,,,,	
Insurance	Yes	No	Date Expires	ð.	
Checked by _				_ Date	
Approved by				_ Date	
Water Servic	e Charge	\$			
Sewer Servic	e Charge	\$			
Total Permit	Charge	\$			
Amount Paid		\$			
Check #					

CITY OF ALBANY – WATER AND SEXURE SERVICE PENNIT SKETCH         PENNIT SKETCH         SERVICE PENNIT SKETCH NET         <
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Service Address:       Proposed Start Date:         This form shall be used, unless construction plans are to be submitted. Please provide an accurate scaled sketch of the proposed work, including the Neuvers: <ul> <li>Neuverst:</li> <li>Show location of work to be done (claimeter, material, length of plae);</li> <li>Show location of site frastures (utility poles, hydrants, manholes, valves, overhead and underground utilities, building, driveways, curbs, sidewalts, etc.)</li> <li>Show location of site frastures (utility poles, hydrants, manholes, valves, overhead and underground utilities, building, driveways, curbs, sidewalts, etc.)</li> <li>Show location of site frastures (utility poles, hydrants, manholes, valves, overhead and underground utilities, building, driveways, curbs, sidewalts, etc.)</li> </ul>
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To: Bill Simcoe Albany Dept. of Water & Water Supply 10 N. Enterprise Drive Albany, NY 12204 Date: June 7, 2018

Project #: 26138.00

From: Patrick Mitchell, VHB

Re: Revised Understanding of Sanitary Availability

On Thursday, June 7 we met and discussed the GSX residential project at 1211 Western Avenue. The discussion revolved around the mitigation required for the addition of sanitary flow required for the proposed project.

We confirmed that we will use the Alexander at Patroon Creek data to calculate 1211's water/sewer gpd. Based on the flows from an identical use (Alexander at Patroon Creek) provided by the Water Department, 30.5 gallons per day (gpd) per bedroom are required. The following values were used to determine the total estimated sanitary flow;

327 beds x 30.5 gpd= 9,974 gpd. Subtracting the existing sanitary usage of 15 gpd per employee x 40 employees = 600 gpd. This leaves an added usage of approximately 9,374 gpd of sanitary discharge to the existing sanitary system directly in front of the project. This City owned main contributes to the Woodville Pump Station. As NYSDEC requires that we mitigate sewer usage of more than 2,500 gpd at a rate of 4x the daily usage. The applicant will mitigate the 4x (peak rate) by installing a holding tank and pump system that would allow a consistent flow rate with no peak. This equates to 5.26 gpm to be mitigated through the reduction of Infiltration & Inflow. The applicant is researching a further reduction by re-cycling the "gray" water discharge to be used to flush toilets.

Neil O'Connor and Bill Simcoe confirmed that there is sufficient capacity in Woodville station to accommodate our project's flows. Project sponsor will be required to reduce Infiltration and Inflow within the system in an amount equal to 4x GPD usage. Neil will provide the CT Male study from Liberty Terrace that sets out needed Infiltration and Inflow work projects. Project sponsor and City will agree upon suitable Infiltration and Inflow reduction projects that will be the responsibility of the project sponsor to perform.

100 Great Oaks Boulevard Suite 118 Albany, NY 12203-7924 P 518.389.3600

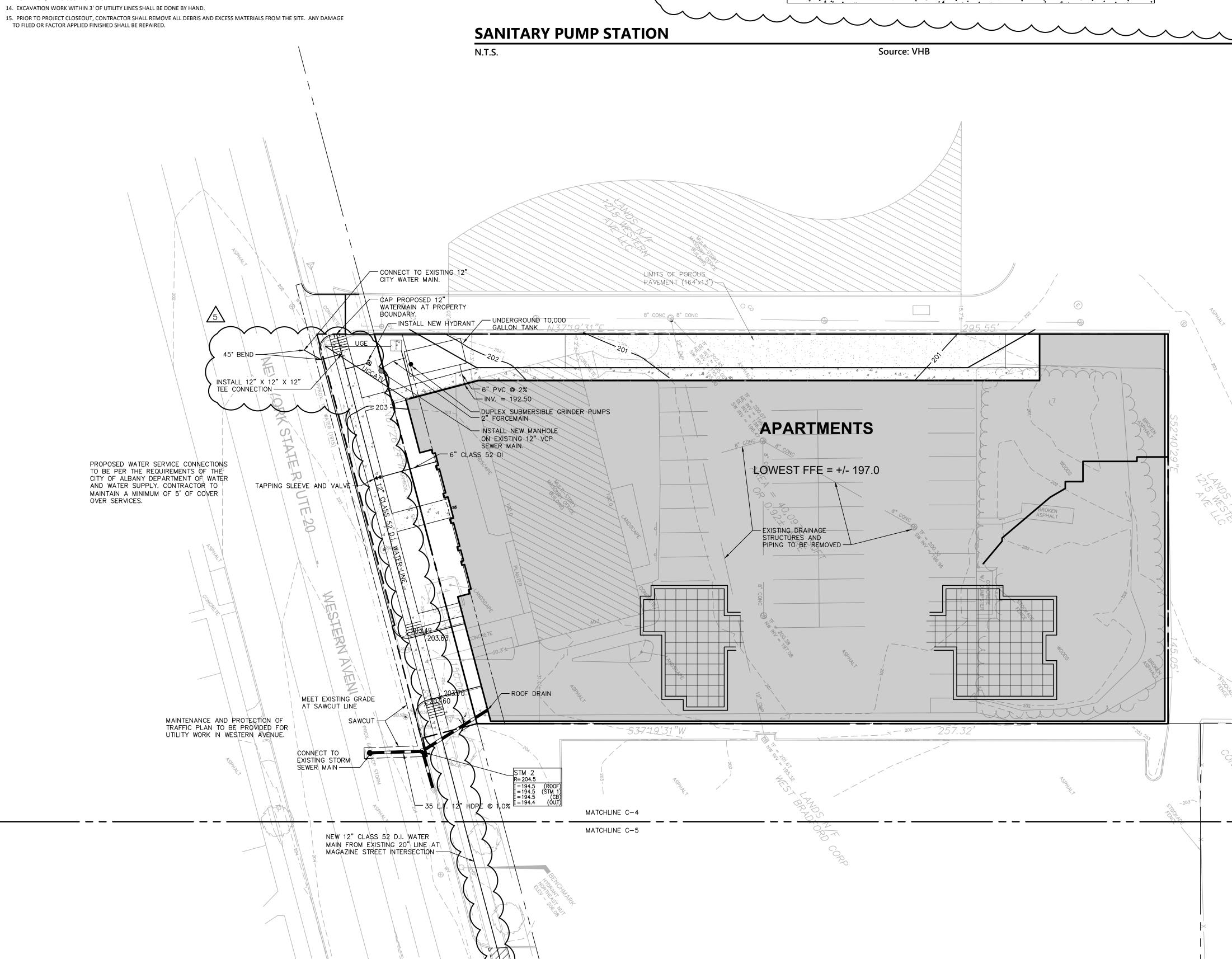
## Appendix C

**Utility Plans** 

//vhb/gbl/proj/Albany/26138.00 GSX Student Housing/cad/ld/Planset/26138.00 - GD.dwg

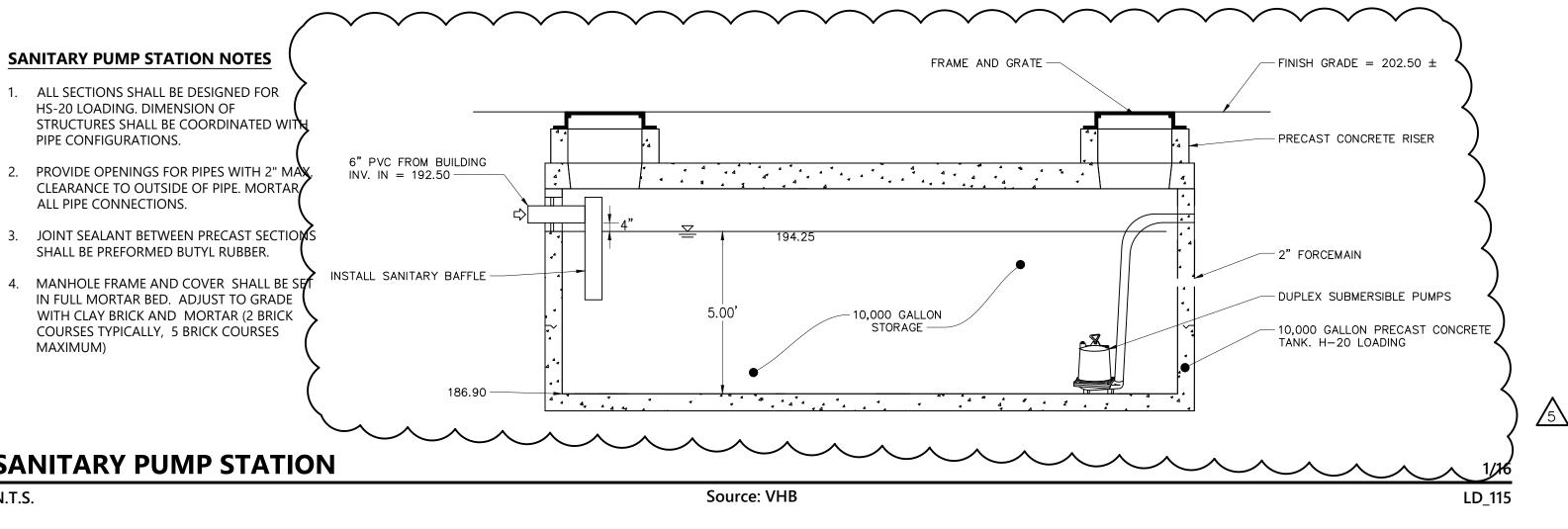
**GENERAL SITE PREPARATION NOTES:** 

- 1. OWNER'S REPRESENTATIVE SHALL BE CONSULTED BEFORE ANY WORK SHALL COMMENCE. 2. CONTRACTOR SHALL HOLD A PRECONSTRUCTION MEETING WITH THE CITY ENGINEER AND DESIGN ENGINEER PRIOR TO
- CONSTRUCTION 3. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL
- CONDITIONS TO THE OWNER'S REPRESENTATIVE. 4. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL SECURE ALL PERMITS REQUIRED FROM ANY UTILITY OR
- GOVERNMENTAL AGENCY HAVING JURISDICTION.
- 5. THE CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK (1-800-962-7962) TO CONFIRM THE LOCATION OF EXISTING UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING WORK.
- 6. CONTRACTOR SHALL PROTECT AND SUSTAIN NORMAL SERVICE IN ALL EXISTING UTILITIES, STRUCTURES, EQUIPMENT, ROADWAYS,
- AND DRIVEWAYS. 7. CONTRACTOR SHALL MAINTAIN PROPER SIGNS, BARRICADES, AND FENCES TO PROTECT WORK, EQUIPMENT, PERSONS, AND
- PROPERTY FROM DAMAGE.
- 8. ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH AND LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR. 9. ALL PROPOSED GRADES SHALL BE SET IN THE FIELD BY A NEW YORK STATE LICENSED LAND SURVEYOR. 10. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS
- TO THE OWNER AND THE OWNER'S REPRESENTATIVE. 11. ALL SLOPES 3:1 OR GREATER SHALL RECEIVE BIODEGRADABLE FABRIC OR APPROVED EQUIVALENT FOR EROSION CONTROL. 12. CONTRACTOR SHALL BLEND ALL NEW EARTHWORK INTO EXISTING GRADES AT THE LIMIT OF CONSTRUCTION. CONTRACTOR SHALL DECOMPACT ALL GRASSED AREAS PRIOR TO TOPSOILING PER THE NYSDEC GUIDLINES FOR DEEP RIPPING AND
- DECOMPACTION PROVIDED IN THE BMP SECTION OF THE SWPPP. 13. ANY AREA DISTURBED OUTSIDE THE LIMIT OF WORK SHALL BE RESTORED TO ITS ORIGINAL CONDITION, INCLUDING REPLACING VEGETATION, AT NO COST TO THE OWNER.
- 15. PRIOR TO PROJECT CLOSEOUT, CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS FROM THE SITE. ANY DAMAGE TO FILED OR FACTOR APPLIED FINISHED SHALL BE REPAIRED.



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SAWOUT AND PATCH-





Engineering, Surveying & Landscape Architecture, PC 100 Great Oaks Boulevard Suite 118 Albany, NY 12203 518.389.3600

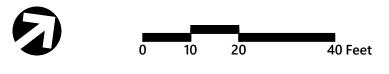
## UTILITY NOTES

PRESSURE AND LEAKAGE TESTING OF THE WATER MAIN AND BACTERIOLOGICAL TESTING SHALL BE WITNESSED BY ALBANY WATER DEPARTMENT STAFF AND ACCEPTED BY THE WATER DEPARTMENT PRIOR TO FINAL ACCEPTANCE OF NEW WATER MAIN.

PROVIDE 48-HOUR NOTICE TO THE ALBANY WATER DEPARTMENT FOR INSPECTIONS

## NOTES:

- 1. THIS WORK WILL REQUIRE MAINTENANCE AND PROTECTION OF TRAFFIC PLANS.
- 2. THIS WORK WILL REQUIRE A PERMIT FROM THE CITY OF ALBANY AND MAY REQUIRE INSPECTION.



## 1211 Western Avenue

1211 Western Avenue Albany, New York 12203

No.	Revision	Date	Appvo
5	City of Albany Comments	10/12/2018	MBT
4	P.B Submission	9/17/2018	MBT
3	Revised Building	5/1/2018	MBT
2	Revised Building	3/6/2018	MBT
1	Revised Building	12/28/2017	MBT

Site Plan Review	November 1, 2017
Issued for	Date
Designed by	Checked by MBT

Not Approved for Construction

Grading, Drainage & **Utility Plan** 

Drawing Number



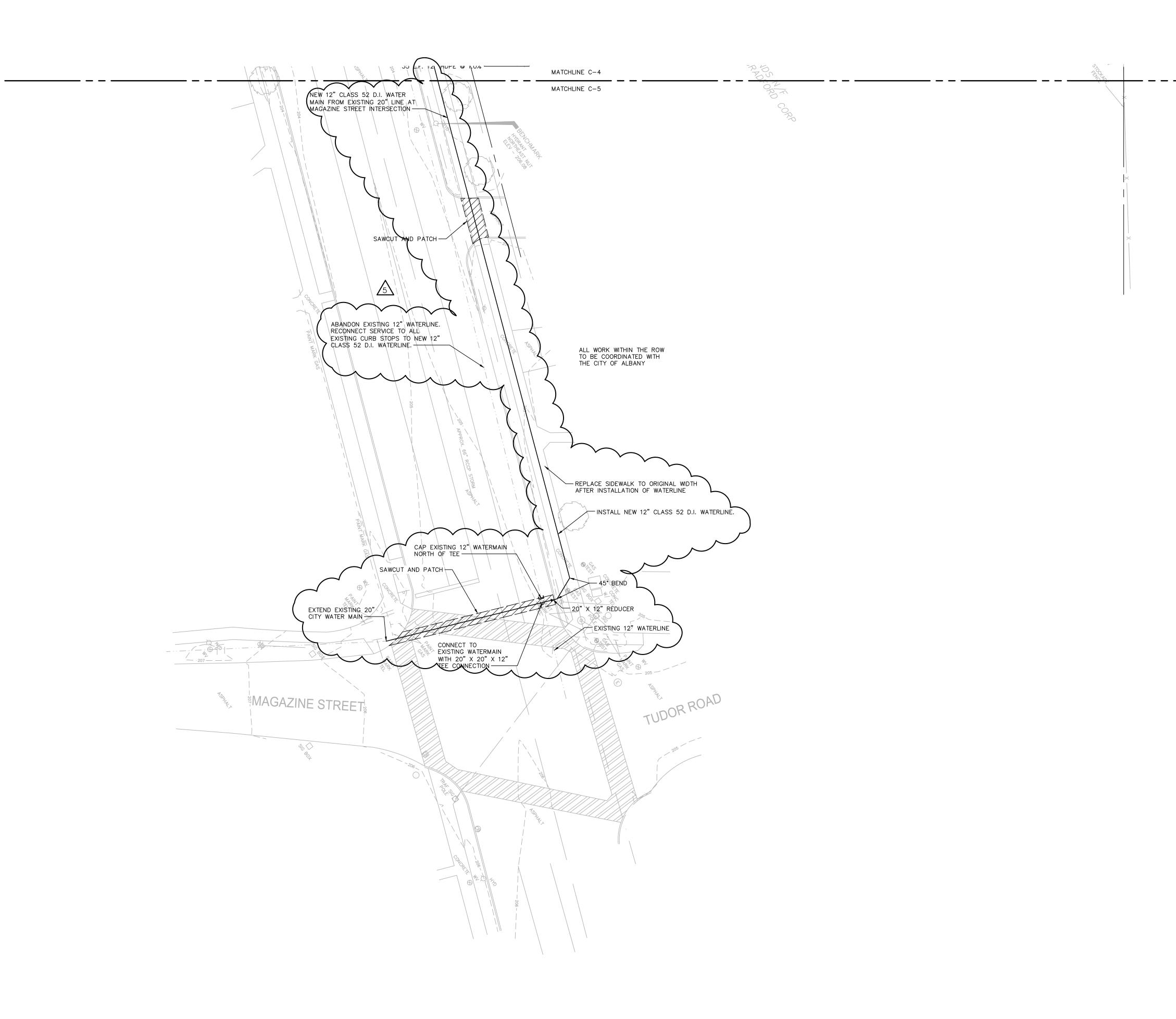


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Project Number 26138.00







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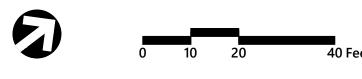
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Drawing Number

**C-5** 

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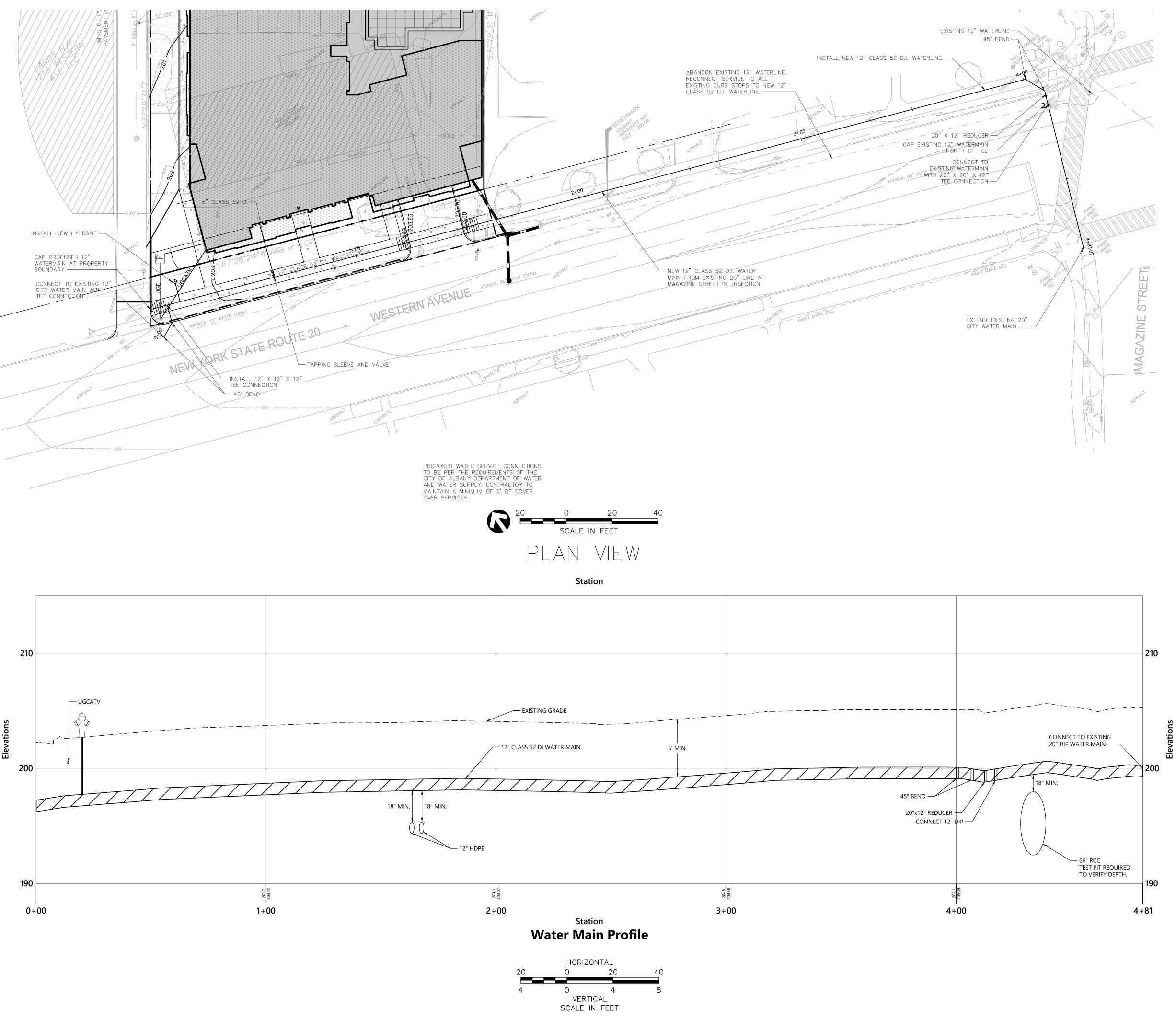
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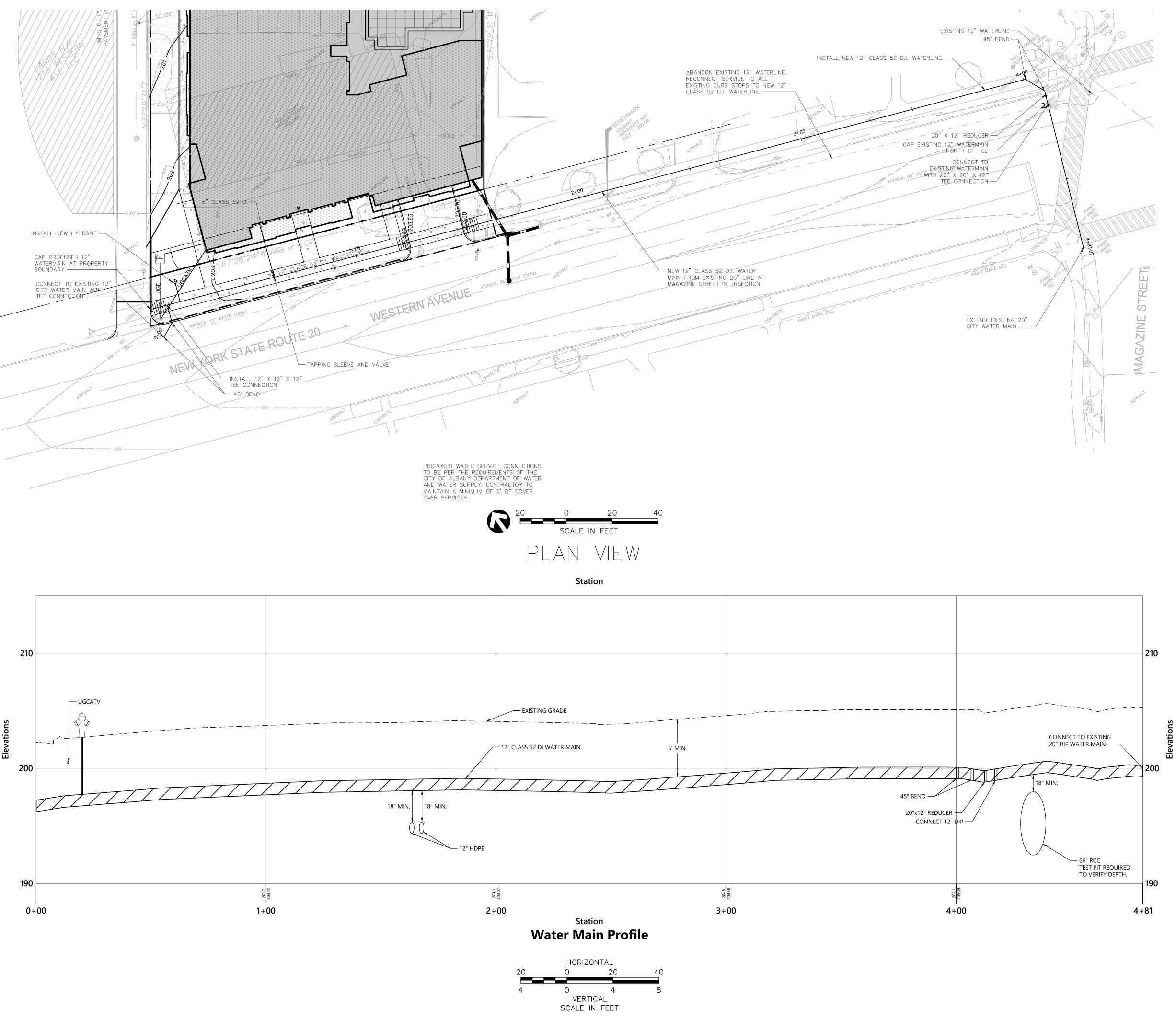
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