

LETTER OF TRANSMITTAL

TO: Saratoga Springs Planning Department
City Hall
Saratoga Springs, NY 12866

DATE: 6/23/2016 JOB NO.: 201178

RE: 246 West Avenue Apartments

WE ARE SENDING YOU Attached Under separate cover via _____ the following items

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
3			Full size Site Plan Application Plan Sets
1			Site Plan Application fee check for \$2,650
3			Site plan application form
3			Site plan application check lists
3			Cost Estimate for Letter of Credit
3			Stormwater Management Report (within SWPPP)
3			Draft SWPPP
3			Engineer's Utility Report
3			11 x 17 Architectural plans (elevations and floor plans)
3			Complete Streets Checklist
3			Water Service Agreement
3			Short EAF
3			Special use permit application form
1			Special use permit fee \$750
1			CD of application materials

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your records Approved as noted Submit _____ copies for distribution
 As requested Return for corrections Return _____ corrected prints
 For review and comments _____
 FOR BIDS DUE _____ 20____ PRINTS RETURNED AFTER LOAN TO US

REMARKS:

cc:

SIGNED: _____



CITY OF SARATOGA SPRINGS

PLANNING BOARD

City Hall - 474 Broadway
Saratoga Springs, New York 12866-2296
Tel: 518-587-3550 fax: 518-580-9480
<http://www.saratoga-springs.org>

[FOR OFFICE USE]

(Application #)

(Date received)

<p>APPLICATION FOR: SITE PLAN REVIEW (INCLUDING PUD)</p>

(Rev: 12/2015)

*****Application Check List - All submissions must include completed application check list and all required items.**

Project Name: _____

Property Address/Location: _____

Tax Parcel #: _____ Zoning District: _____
(for example: 165.52-4-37)

Proposed Use: _____

Date special use permit granted (if any): _____ Date zoning variance granted (if any): _____

Is property located within (check all that apply)?: Historic District Architectural Review District
 500' of a State Park, city boundary, or county/state highway

<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
Name _____	_____	_____
Address _____	_____	_____
Phone _____	_____	_____
Email _____	_____	_____

Identify primary contact person: Applicant Owner Agent

* An applicant must be the property owner, lessee, or one with an option to lease or purchase the property in question.

Application Fee: A check for the total amount below payable to: "Commissioner of Finance" MUST accompany this application.

<input type="checkbox"/>	<u>Sketch Plan</u> -	\$250	\$ _____
<input type="checkbox"/>	<u>Final Site Plan Approval</u>		
	Residential -	\$250 plus \$150/unit	\$ _____
	Non-Residential -	\$500 plus \$100/1,000 SQ. FT.	\$ _____
<input type="checkbox"/>	<u>Modification</u>		
	Residential -	\$250	\$ _____
	Non-Residential -	\$500	\$ _____
			Total \$ _____

Submission Deadline – Check City’s website (www.saratoga-springs.org) for application deadlines and meeting dates.

Does any City officer, employee or family member thereof have a financial interest (as defined by General Municipal Law Section 809) in this application? YES ____ NO ____ . If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Site Plan Review by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-7.2 of the Zoning Ordinance of the City of Saratoga Springs.

Furthermore, I hereby authorize members of the Planning Board and designated City staff to enter the property associated with this application for purposes of conducting any necessary site inspections relating to this application.

Applicant Signature: _____ Date: _____

If applicant is not current owner, owner must also sign.

Owner Signature: _____ Date: _____



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 (Application #)

 (Date received)

Rev.12/2015

SITE PLAN REVIEW SUBMITTAL CHECKLIST

Project Name: _____

Listed below are the minimum submittal requirements for site plan review as set forth in The City of Saratoga Springs' Zoning Ordinance Appendix B. The Planning Board reserves the right to request additional information, as necessary, to support an application. The Board also reserves the right to reject the application if these minimum requirements are not met. Please complete the checklist below and provide with your submission.

REQUIRED ITEMS: *3 hard copies and 1 digital copy of ALL materials are required.

CHECK EACH ITEM	
<input type="checkbox"/>	1. Completed Site Plan Application (3 hard copies - *1 w/original signature - and 1 digital) and Fee
<input type="checkbox"/>	2. SEQR Environmental Assessment Form- short or long form as required by action.
<input type="checkbox"/>	3. Set of plans including: (3) large scale plans (sheets must be 24" x 36", drawn to a scale of not more than 1"=50 feet). One digital version of all submittal items (pdf) shall be provided.
<input type="checkbox"/>	4. Basic or Full Storm Water Pollution Prevention Plan as required per City Code Chapter 242.
<input type="checkbox"/>	5. Copy of signed DPW water connection agreement for all projects involving new water connections to the City system
<input type="checkbox"/>	6. Engineering Report for Water and Sanitary
<input type="checkbox"/>	7. Complete Streets Checklist
<input type="checkbox"/>	8. Project Cost Estimate-Quantities of work items and estimate of costs

REQUIRED ITEMS ON SITE PLAN, AS APPLICABLE:

<input type="checkbox"/>	1. Property line survey prepared by a licensed land surveyor. Site plan must reference such survey with all corners set and marked on plan. A copy of the original property survey must also be included.
<input type="checkbox"/>	2. North arrow and map scale
<input type="checkbox"/>	3. Parcel tax map number
<input type="checkbox"/>	4. Site location map
<input type="checkbox"/>	5. Site vicinity map (all features within 300 feet of property)
<input type="checkbox"/>	6. Identification of zoning district with corresponding area requirements

<input type="checkbox"/>	7. Building setback lines, either listed or shown on plans.
<input type="checkbox"/>	8. Title block with project name; name and address of applicant; and name and address of property owner (if different)
<input type="checkbox"/>	9. Topography data tied to NGVD 1929 datum
<input type="checkbox"/>	10. Name of all adjacent property owners
<input type="checkbox"/>	11. Parcel street address (existing and any proposed postal addresses)
Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	12. Identification of all existing or proposed easements, covenants or legal rights-of-way on this property
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13. References to all prior variances or special use permits
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. Existing and proposed contours and spot grades (at 2 foot intervals)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Identification of all spoil or borrow areas
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Identification of all watercourses, designated State wetlands, buffers, Federal wetlands, floodplains, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	17. Location of proposed storage
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	20. Location and distance to fire hydrant
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location, size, and material of all existing and proposed utility services
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Parking lot layout plan and identification of all loading areas (number all spaces)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Parking demand calculations
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Identification of parking spaces and access points for physically impaired persons
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	25. Location and screening plan for dumpster or recycling bins
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	26. Location, design, type of construction and materials, proposed use and exterior dimensions of all buildings (existing and proposed) on site
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	27. Identification of storage of any potentially hazardous materials
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	28. Planting plan identifying quantity, species and size of all proposed new plant materials. Label existing plant material to be retained or removed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	29. Lighting plan showing type, location and intensity of all existing and proposed exterior lighting fixtures
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	30. Erosion and sediment control plan – including designated concrete truck washout area

Checklist prepared by: _____ Date: _____

City of Saratoga Springs Complete Streets Checklist

Saratoga Springs Complete Street Policy Vision (May 2012)

The City of Saratoga Springs Complete Streets Policy will encourage the development of a complete streets network throughout the City to create a more balanced transportation system. The Policy shall be consistent with and assist in achieving the goals and recommendations set forth in the City's Comprehensive Plan and other policy documents. The Policy shall ensure new and updated public and private projects are planned, designed, maintained and operated to enable safer, comfortable and convenient travel to the greatest extent possible for users of all abilities including pedestrians, bicyclists, motorists and transit riders.

This checklist is intended to assist the City in achieving its vision for complete streets.

Project Name: _____ **Date:** _____

Project Location / Limits: _____

Project Description: _____

Instructions: For each box checked, please provide a brief description for how the item is addressed, not addressed, or not applicable and include supporting documentation.

Street Classification (identify street or streets within the project area)							
Principal arterial	<input type="checkbox"/>	Minor arterial	<input type="checkbox"/>	Mixed use collector	<input type="checkbox"/>	Mixed use local	<input type="checkbox"/>
Residential collector	<input type="checkbox"/>	Residential local	<input type="checkbox"/>	Special use street	<input type="checkbox"/>		

EXISTING CONDITIONS				
Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
<i>Existing Bicycle & Pedestrian Operations</i>				
Do bicycle and pedestrian accommodations exist? (see page 2 for examples)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Existing Transit Operations</i>				
Do transit facilities exist within the study area, including bus and train stops/stations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the project area on a transit route? (CDTA Service Routes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there bicycle racks, shelters, or parking for transit riders available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Existing Access and Mobility</i>				
Do connective opportunities exist with schools, hospitals, senior care or community centers or persons with disabilities within project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there gaps inhibiting continuous access between schools, hospitals, senior care, or community centers or persons with disabilities within project area?"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Project Area Context</i>				
Are there prominent landmarks, recreation, shopping, employment center, cultural centers or other key destinations that offer opportunities to connect this site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please list and/or describe planning or policy documents addressing bicyclist, pedestrian, transit, or truck/ freight use for the project area. Examples can include: City of Saratoga Springs Comprehensive Plan , City of Saratoga Springs Open Space Plan , Capital District Transportation Committee Bicycle/ Pedestrian Priority Network , City Standard Details , etc.				

PROPOSED DESIGN

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Complete Streets Design				
Bicyclist accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pedestrian accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access and Mobility accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transit accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Truck/ freight accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Streetscape elements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Bike Facilities:	
Off-roadway bike accommodations	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Dedicated bike lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shared-use lane	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shoulder	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable actuated traffic signal bike detection, including turn lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Do signals allow adequate minimum green time for bicyclist to safely cross intersection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Signage and pavement markings specific to proposed bike facilities	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle safe inlet grates	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle parking, eg. bike racks, bike lockers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Transit Facilities:	
Transit shelters	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bus turnouts	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Standing pads	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Has CDTA been contacted?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Access and Mobility Facilities:	
Adequate sidewalk or paved path	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable consideration/provision for accessible pedestrian traffic signal features	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Curb ramps, including detectable warning surface	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable slope and cross-slope for driveway ramps, sidewalks, crossings)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Have conflicts been reduced among pedestrian, bicyclists, and motor vehicles (access management)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Pedestrian Facilities:	
Sidewalks on both sides of the street	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Striped crosswalks	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Geometric modifications to reduce crossing distances such as curb extensions (e.g. bulb-outs)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable provision for pedestrian traffic signal features (e.g. ped. buttons)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian signage for crossing & wayfinding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Safety islands/medians on roadways with two or more traffic lanes in each direction	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Enhanced supplemental pedestrian treatments at uncontrolled marked crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Connectivity:	
Are there proposed connections to other bike paths, pedestrian facilities, or transit facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to any key destinations listed on page 1?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Are there proposed connections to neighborhoods?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Streetscape Elements:	
Are streetscape elements proposed such as landscaping, street trees, planters, buffer strips, etc?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian-level lighting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Public seating or benches	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Design Standards and Guidelines

Design meets guidelines such as described below for bicycle/pedestrian/bus/transit facilities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Describe
--	------------------------------	-----------------------------	-----------------------------	----------

*American Association of State Highway and Transportation Officials (AASHTO) - *A Policy on Geometric Design of Highway and Streets, Guide for the Development of Bicycle Facilities and AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*; [Public Right-of-Way Accessibility Guide \(PROWAG\)](#); [Manual on Uniform Traffic Control Devices \(MUTCD\)](#); [Americans with Disabilities Act Accessibility Guidelines \(ADAAG\)](#); National Association of City Transportation Officials (NACTO) - [Urban Bikeway Design Guide](#). New York State Department of Transportation – [Highway Design Manual](#)

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information				
Name of Action or Project: 246 West Avenue Apartments				
Project Location (describe, and attach a location map): 246 West Avenue				
Brief Description of Proposed Action: 16 residential units with associated parking. Watermain extension along West Ave.				
Name of Applicant or Sponsor:		Telephone:		
		E-Mail:		
Address:				
City/PO:		State:	Zip Code:	
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			NO	YES
			X	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Site plan and Special use permit(Saratoga Springs Planning Board) Saratoga Springs Design review commission approval			NO	YES
				X
3.a. Total acreage of the site of the proposed action?		_____	.51	acres
b. Total acreage to be physically disturbed?		_____	.51	acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		_____	.51	acres
4. Check all land uses that occur on, adjoining and near the proposed action.				
<input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> Other (specify): <u>YMCA</u> <input type="checkbox"/> Parkland				

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____	NO	YES
	X	
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____ _____	NO	YES
	X	
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____ _____	NO	YES
	X	
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor name: _____		Date: _____
Signature: _____		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept “Have my responses been reasonable considering the scale and context of the proposed action?”

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?		
2. Will the proposed action result in a change in the use or intensity of use of land?		
3. Will the proposed action impair the character or quality of the existing community?		
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?		
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?		
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?		
7. Will the proposed action impact existing: a. public / private water supplies? b. public / private wastewater treatment utilities?		
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?		
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?		

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?		
11. Will the proposed action create a hazard to environmental resources or human health?		

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency	Date
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

**Engineering Report
Water and Sanitary Sewer**

For

**246 West Avenue
Residential Apartment Building
SARATOGA SPRINGS, NEW YORK**

Planning Board #16.XXX

Prepared For

**John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306
Contact: John Luke Hodorowski**

Prepared By

**The LA Group, P.C.
40 Long Alley
Saratoga Springs, New York 12866**



June 23, 2016

I. Introduction

John-Paul Builders, LLC is proposing to construct a sixteen-unit apartment building at 246 West Avenue (Tax Map Parcels 178.33-1-20 & 21) in the city of Saratoga Springs, NY. Currently, the site is developed as residence with a single home onsite. There are grassed and forested cover types on the property. The site is generally flat. The surrounding area is developed with a small hotel to the north, the Saratoga Springs YMCA to the south and residential housing to the east. This project is for the construction of a new apartment building.

II. Project Description

The proposed sixteen-unit apartment project will consist of one building. The project is proposing a total of 16 residential units, totaling 18 bedrooms. The units will have internal fire sprinklers, and fire hydrants will be located on West Avenue.

III. Existing Water and Sanitary Sewer Utilities

Water Distribution – A 6-inch cast-iron water line is present on West Avenue, immediately adjacent to the parcel. According to the City of Saratoga Springs DPW, this line is very old and fragile and will not likely support the design flows and pressures required by this project.

Several years ago, the YMCA agreed to and installed a new 12-inch ductile iron water line from the Ballston Avenue intersection up to their new facility. This 12-inch water main is located on the west side of West Avenue and ends approximately 800 feet south of the project.

There is a 12-inch ductile iron water main located on the west side of West Avenue terminating approximately 500 feet north of the project.

Sanitary Sewer – An existing 16-inch sanitary sewer main owned and maintained by the Saratoga County Sewer District No. 1 (SCSD #1) runs in a southeasterly direction past the property in an easement from the YMCA of Saratoga Springs. The nearest access manhole is located on the west side of West Avenue approximately 50 feet south of the southwest property corner.

IV. Projected Water and Wastewater Flows

The table below provides information on the anticipated wastewater flow rates for the project:

<u>Description</u>	<u>Use Rate</u>	<u>Total Use</u>
(18) bedrooms	110 gpd/bedroom ¹	1,980 gpd

Average daily flow for wastewater is estimated to be 1.4 gallons per minute (gpm) based on a 24 hour day. Estimated peak hourly flow is 5.9 gpm (4.2 x average).²

Average daily demand for water is estimated to be approximately equal to the wastewater flow or 1.4 gpm. Instantaneous peak demand is estimated to be 80 gpm.³

For the purposes of input into the City of Saratoga Springs water model, we offer the following estimated water demands for the project:

- Average Day Demand is 1.4 gallons per minute (GPM) over the 24 hour period.
- Max Day Demand is 2.8 gallons per minute (GPM) based on twice the average.
- Peak Hourly Flow is 5.9 gallons per minute (GPM) based on 4.2 times the average.
- Fire Flow Demand is 1,000 gallons per minute (GPM) per ISO guidelines.

V. Proposed Water and Wastewater Utilities

Proposed Water Utilities

To service the project, it was initially proposed to tap the existing 6-inch water main on West Avenue. Following discussions with the City, it was agreed to extend the existing 12-inch water main from the north up to the southerly property line. The line will be extended in a southerly direction, approximately 500 feet terminating with a new hydrant, valve and end cap for future connection. New fire hydrants will be installed to maintain a spacing of 400 feet. This arrangement will benefit the municipality in providing another link in the ultimate connection to the existing 12-inch water main brought up from Ballston Avenue by the YMCA.

The units will receive water service via a six-inch ductile iron water line. Once inside the main

building, the water service will be divided to individual meters to serve the units.

Needed Fire Flow (NFF) for residential occupancies such as apartment buildings protected by an automatic sprinkler system installed in accordance with NFPA 13R is the demand at the base of the automatic sprinkler riser. The minimum NFF is 1,000 gpm at 20 psi for a duration of 2 hours.⁴

Connections and appurtenances, including mechanical joints, tees, isolation valves, thrust blocks, trenching, bedding, service connections, as well as testing and disinfection will all be specified in accordance with City of Saratoga Springs standards.

Proposed Wastewater Utilities

From the main building, sanitary wastewater will be piped in a six-inch PVC lateral installed at a slope of approximately 1.0% across West Avenue to a new sanitary sewer manhole. From this manhole the sewerline will be run adjacent to the westerly line of West Avenue to an existing SCSD #1 manhole.

All sanitary sewer lines and manhole connections will be furnished and installed according to Saratoga County Sewer District No. 1 standards.

Notes

1. *From Table 1, Appendix 75-A Wastewater Treatment Standards - Residential Onsite Systems (110 gallons per day per bedroom)*
2. *From Figure 1, GLUMRB Recommended Standards for Wastewater Facilities*
 $Q = (18 + P \frac{1}{2}) \div (4 + P \frac{1}{2})$ where P = population in thousands
3. *From Table XIV Community Water Systems Source Book, Ameen (5.0 gpm/residence)*
4. *Insurance Services Office, Inc. "Guide for Determination of Needed Fire Flow" (Chapter 1, Note 2)*

Stormwater Pollution Prevention Plan

for:

246 West Avenue Apartments

Owner/Operator(s):

John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306
Contact: John Luke Hodorowski
518-356-1435

SWPPP Contact(s):

The LA Group, PC
40 Long Alley
Saratoga Springs, NY 12866
1-518-587-8100
1-518-587-0180

SWPPP Preparation Date:

June 23, 2016

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Appendices

- A HydroCAD Calculations and Storm Data**
- B Soil Survey and Map Set** – Location Map, Site Preparation and Demolition, Grading and Utility Plan
- C SWPPP Inspection Forms** –SWPPP Inspection Report
- D Other SWPPP Forms** – Construction Sequence, SWPPP Plan Changes, Spill Response Form, Stormwater Management Practice Maintenance Log

1.0 PERMIT OVERVIEW AND REQUIREMENTS

1.1 Permit Overview

This Stormwater Pollution Prevention Plan (SWPPP) is prepared to inform the landowner and construction personnel of the measures to be implemented for controlling runoff and pollutants from the site during and after construction activities.

The operator is responsible to maintain onsite in a secure location that is accessible during normal working hours to an individual performing a compliance inspection, the following information:

- ✓ the SWPPP,
- ✓ All inspection reports.

Technical standards are detailed in the “New York State Standards and Specifications for Sediment and Erosion and Sediment Control (August 2010)”, as well as illustrated on the Grading and Utility Plan included in **Appendix B**.

2.0 SWPPP REVIEW, UPDATE

2.1 SWPPP Review

City of Saratoga Springs requires preparation of a SWPPP for non-residential activities disturbing 0.1 acres or more. The project is proposed to disturb 0.51 acres. Project review will be conducted by the City of Saratoga Springs.

2.2 SWPPP Update

The permittee identified in this SWPPP shall amend the SWPPP under the following conditions:

- ✓ Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharge from the site
- ✓ Whenever there is a change in design, construction or operation that could have an effect on the discharge of pollutants
- ✓ To address issues or deficiencies identified during an inspection by the qualified inspector, the Department or other regulatory authority
- ✓ To identify a new subcontractor or owner that will implement any part of the SWPPP.

If modifications are required to the post-stormwater management practices the City of Saratoga Springs must be notified in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP.

3.0 SITE ASSESSMENT, EVALUATION AND PLANNING

3.1 Project Location

The project is located at 246 West Avenue in the City of Saratoga Springs, Saratoga County, NY 12866.

See **Appendix B** for a general site location map.

3.2 Pre-Development Conditions

Currently, the site is developed as residential with a single home onsite. There are grassed and forested cover types on the property. The site is generally flat. The surrounding area is developed with a small hotel to the north, the Saratoga Springs YMCA to the south and residential housing to the east.

3.3 Project Scope

Specifically, this project is for the construction of a three-story apartment building with a total of 16 units. The total building footprint will be 9,800 square feet. There will be 24 parking spaces provided for the occupants of the apartments, 17 of which will be at the ground level of the three-story building. The Project will disturb approximately +/-0.51 acres.

3.4 Receiving Waters

The closest NYSDEC mapped stream located in the project vicinity that the site drains to is an unnamed tributary to Geysers Creek (NYSDEC # 841-137.) This stream is located approximately 2,000 feet to the west of the site, in an agricultural field. This stream is classified as a C stream by NYSDEC.

3.5 Historic Preservation Determination/Endangered Species

The project received SEQRA and planning board approval on December 9, 2011 at which time it was determined that there were no archeological or endangered species concerns within the project area.

3.6 Soils

The USDA/NRCS soil survey map for this site shows Deerfield loamy fine sand and Windsor loamy sand series mapped in the project vicinity. These soils are classified in the hydrologic soil group 'A'. Soil borings were completed by Dente Engineering in April of 2005 that found the project area to have deep sands. Falling head permeability tests are to be completed to confirm infiltration rates. Soil survey and boring results can be found in **Appendix B**.

4.0 EROSION AND SEDIMENT CONTROL

4.1 Erosion and Sediment Control Practices

Temporary Structural Practices

- ✓ Silt Fence
- ✓ Dust Control
- ✓ Construction Entrance

Permanent Structural Controls

- ✓ Asphalt pavement/concrete walks

Temporary Stabilization Practices (including vegetative practices)

- ✓ Seed and mulch bare soil areas within 14 days of disturbance unless construction will resume in that area within 21 days.

Permanent Stabilization Practices (including vegetative practices)

- ✓ Seed and mulch all disturbed areas. Slopes that are 3:1 or steeper should receive a Rolled Erosion Control Product (RECP), sodding, and or hydro-seeding a homogenous mixture of wood fiber mulch with tackifying agent.

Refer to Construction Drawings attached in **Appendix B** for detailed information on each practice.

4.2 Erosion and Sediment Control Drawings

Erosion and Sediment Control practices are shown on the Construction Drawings included in **Appendix B**.

4.3 Construction Sequence of Operations

- ✓ Temporary structural erosion controls will be installed prior to earthwork as per the attached plans.
- ✓ Areas to be undisturbed for more than 14 days will be temporarily stabilized by seeding.
- ✓ Disturbed areas will be reseeded and mulched immediately after final contours are re-established and no more than 14 days after the completion of construction at that site.
- ✓ Temporary erosion control devices will not be removed until the area served is stabilized by the growth of vegetation and the area is certified as being stabilized by the Erosion Control Inspector.

Construction Activities	Start → Stop
Sequence must include major items such as, but not limited to, clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity resulting in soil disturbance. Include installation of erosion and sediment control practices and timing of installation.	
Install silt fence and construction fence prior to any site disturbance. Maintain erosion control measures for duration of site disturbances.	Week 1
Excavate and install underground utilities.	Weeks 1-3
Parking Lot Construction	Weeks 3-6
Building construction	Week 3- completion
Fine grade and landscape	After completion of building
Remove erosion and sediment control measures upon stabilization of contributing areas.	At completion 80% Germination

4.4 Erosion and Sediment Control Practice Maintenance

Temporary erosion and sediment control practices will need to be maintained frequently during construction. It is the responsibility of the operator to inspect, and maintain the temporary controls so that they are working efficiently. The operator needs to pay close attention to SWPPP Inspection Reports that will advise of needed maintenance. Captured sediment will have to be removed periodically from each practice in order for the control to function properly. Temporary erosion and sediment control practice maintenance needs are listed below:

- ✓ Silt fence – maintenance shall be performed as needed and material removed when “bulges” develop in the silt fence.
- ✓ Stabilized construction entrance – entrance shall be maintained in a condition which shall prevent tracking. This may require periodic top dressing with additional aggregate. All sediment tracked onto or spilled on public rights of way shall be removed immediately. When necessary, wheels must be cleaned to remove sediment prior to entrance on public rights of way. When washing is required, it shall be done in an area stabilized with aggregate.

4.5 Erosion and Sediment Control Inspection

- A qualified inspector shall conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed to ensure overall preparedness of the site for commencement of construction.
- This qualified inspector must be a Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 4 hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the qualified inspector shall receive 4 hours of training every 3 years.
- The day-to-day erosion control activities on the site will be monitored by the construction manager. The qualified inspector and his crews will make **at least one inspection every seven (7) days** of erosion control devices, and non-stabilized areas during construction. A maintenance inspection report will be completed by the qualified inspector after each inspection. The report form to be completed by the inspector is attached in **Appendix C**. Reports should be compiled and maintained on-site in the SWPPP 3-ring binder.
- All measures will be maintained in good working order; if repair is necessary, it will be initiated within 24 hours of report. The qualified inspector shall take photographs of any needed repairs and also photograph when the repairs are completed. These photographs will be time and date stamped and attached to the weekly inspection report.
- Seeded and planted areas will be inspected for bare spots, washouts, and healthy growth. If necessary, spot reseeding or sodding will be implemented.
- A trained contractor will be an employee from the contracting company responsible for the implementation of the SWPPP. This person will be onsite when any soil disturbing activities are being conducted. The trained contractor must have received 4 hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the qualified inspector shall receive 4 hours of training every 3 years. This trained contractor cannot conduct the regular SWPPP compliance inspections unless they meet the qualified inspector qualifications.

4.6 Contractor Sequence Form

The operator shall prepare a summary of construction status using the Construction Sequence Form (included in **Appendix D**) once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and updated.

5.0 POST CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

5.1 Stormwater Management Controls

The project is proposing the use of underground infiltration chambers and an infiltration basin to capture and treat site runoff.

Stormwater runoff from the roof will discharge to the underground infiltration chambers. Runoff will be pretreated via an isolator row.

5.2 Post Construction Stormwater Management Drawings

Post construction stormwater management controls are shown on the Construction Drawings included in **Appendix B**.

5.3 Hydraulic and Hydrologic Analysis

The program utilized for quantifying stormwater runoff rates and volumes was **HydroCAD** software, produced by Applied Microcomputer Systems of Chocorua, NH. The SCS 24-hour Type II design storms for 1, 10, and 100-year frequency rainfall were analyzed (**Appendix A**).

- ✓ Hydrologic/hydraulic analysis for all structural components of the stormwater control system for the applicable design storms.
- ✓ Comparison of post-development stormwater runoff conditions with pre-development conditions.
- ✓ Dimensions, material specifications and installation details for each post-construction stormwater control practice.

5.4 Comparison of Pre and Post Construction Stormwater Runoff

Stormwater Quantity. These calculations are based on the HydroCAD analysis.

The design storms used for the pre-development versus post-development comparison were the 1, 10, and 100-year, 24-hour duration, SCS Type II events.

The rainfall amounts for these storms are 2.15, 3.75, and 6.20 inches, respectively.

Under pre-development conditions the majority of the site drains to the south east where runoff flows off site to lands owned by the Saratoga YMCA (AP-2) while the north western portion of the site flows to West Avenue (AP-1).

Post-development stormwater runoff will be directed to a proposed underground infiltration chamber gallery, infiltration trench and an infiltration basin ultimately entering the underlying soils.

The project proposes no increase in flow offsite to the south east or to West Avenue.

	Pre-Development	Post-Development
10 year, 24 hour storm (Qp)	0.28 CFS	0.11 CFS
100 year, 24 hour storm (Qf)	0.57 CFS	0.20 CFS

5.5 Water Quality Volume

The following formula was utilized to determine water quality volume:

$$WQ_v = \frac{(P)(R_v)(A)}{12}$$

Where:

WQ_v = Water Quality Volume (acre/feet)

P = 90% Rainfall Event

R_v = $0.05 + 0.009(I)$ where I is impervious cover in percent

A = Subcatchment area in acres

Water quality volume at the site will be managed through the use of underground infiltration chambers and an infiltration pond.

SMP	Type	Provided
		(ac-ft)
SMP-1	Underground Infiltration Chambers	0.025
SMP-2	Infiltration Basin/Trench	0.011
Total		0.036

Stormwater runoff from the proposed parking lot and entrance drive will be piped to the underground infiltration chambers (SMP-1). The northern half of the roof will also be directed to the underground infiltration chambers while the southern portion will be directed into gravel drip strips (SMP-2). The remainder of the site and overflow from the gravel drip strips will be directed to the infiltration basin located in

the south east corner of the site (SMP-2). All practices provide WQv/RRv through infiltration. The required WQv for the project site is 0.036 ac-ft which equals the WQv provided (0.036 ac-ft).

5.6 Runoff Reduction Volume

The total Runoff Reduction for this project is 0.036 ac-ft provided by SMP-1 and SMP-2. This is equal to 100% of the WQv.

5.7 Channel Protection Volume (CPv)

Channel protection volume is not required as the entire CPv is reduced through infiltration.

6.0 POST CONSTRUCTION STORMWATER MAINTENANCE

6.1 Mechanism of Operation and Maintenance

John-Paul Construction, Inc. will be responsible for the long term operation and maintenance of the stormwater management practices for the life of the site.

6.2 Maintenance to be Performed

Post-construction maintenance for this project will consist of regular inspections of permanent stormwater management facilities. These maintenance procedures are essential to assure continual performance of the stormwater management practices on your site. During the inspection and any maintenance activity to the stormwater management practices, the responsible party should fill out an inspection and maintenance log (**Appendix C**) to record that it was done.

The operator shall retain a qualified professional to: 1) summarize the inspections conducted, maintenance activities performed and repairs made throughout the year, and 2) certify to the City that the specific stormwater management facilities installed at the site are being properly maintained, are in good operation condition and functioning as intended.

Underground Pipe Storage/Infiltration System

- The systems should be inspected quarterly for the first year and if there are no problems, the system can be inspected annually after the first year.
- If sediment is accumulating on the bottom of the system, pump in water via a flushing port or observation well and then pump the sediment laden water out via the flushing port or the inlet. This can be done with a vacuum truck. The system may have to be flushed multiple times until it is clean of sediment.

- Also, the manifold feeding the pipe storage should be flushed by pumping water in the manhole access and out the flushing port. This should be done during the routine inspection.

Infiltration Basin

- The systems should be inspected quarterly for the first year and if there are no problems, the system can be inspected semi-annually after the first year.
- Periodically mow infiltration basin embankments and remove woody vegetation. Stabilize eroded banks and repair undercut and eroded areas at inflow location, as needed.
- If infiltration system does not drain within 72-hours following a rainfall event, then a qualified professional should assess the condition of the system to determine measures required to restore infiltration function, including but not limited to removal of accumulated sediments or reconstruction of the system.
- Every year disc aerate bottom of ponds.
- Every 5-years scrape bottom of ponds to remove sediment and restore to original cross-section and infiltration rate. Seed or sod to restore ground cover.

Drip Strip (Infiltration Trench)

- Ensure strip is clear of debris and dewatering between storms.
- Replace stone as necessary if strip does not dewater between storms.

Catch Basins

- Sediment removal with a vacuum truck should be done at least once a year, preferably after spring runoff and then in early fall, or when they are at 50% capacity, whichever comes first.
- Any mechanical valves should be operated for inspection every two months.

7.0 CONSTRUCTION WASTE

Waste Materials: All waste materials generated during construction will be disposed at a suitable landfill or transfer station.

Hazardous Waste: The project will not be a generator of hazardous waste and it is not anticipated that any hazardous waste will be generated during construction. If there are any materials generated, a licensed hazardous waste carrier will be contracted to dispose the hazardous material at a suitable disposal site. If hazardous materials are discovered during construction, the work will be stopped until the issue is resolved.

Waste: Portable sanitary facilities will be made available to construction personnel and will be serviced regularly.

8.0 TEMPORARY STABILIZATION FOR FROZEN CONDITIONS

The following temporary stabilization measures **MUST** be performed when construction is occurring during winter/frozen ground conditions. The following requirements do not supersede any other requirements of this SWPPP as they apply to non-frozen ground conditions.

- Perimeter erosion control **MUST** still be installed prior to earthwork disturbance as per this SWPPP.
- Any areas that cannot be seeded to turf by October 1st or earlier will receive a temporary seeding. The temporary seeding will consist of winter rye seeded at the rate of 120 pounds per acre (2.5 pounds per 1,000 square feet) or stabilized as per the temporary stabilization for winter construction/frozen conditions.
- Any area of disturbance that will remain inactive for a period of 14 consecutive days **MUST** be mulched. This includes any previously disturbed areas that are covered with snow.
- Mulch **MUST** consist of loose straw applied at the rate of 2 to 3 bales (90 to 100 pounds) per thousand square feet.
- Mulch **MUST** be applied uniformly over the area of bare soil or bare soil that is covered with snow. For the latter condition, mulch **MUST** be applied on top of snow.
- Using a tracked vehicle, mulch **MUST** be crimped into the bare soil/snow. The tracked vehicle **MUST** be driven across the mulched areas in at least two directions to maximize crimping of mulch into the soil/snow.
- If mulch gets blown off an area to a significant degree, the site inspector **WILL** require that an area be re-mulched in accordance with Items 2 through 5 above, and this area **WILL** be included on the inspection checklist for the next inspection.
- If a particular area repeatedly experiences loss of mulch due to wind, then the inspector **WILL** require that an alternative method be used to secure the mulch in place. Such alternatives may include the use of netting, tackifier or other methods deemed appropriate by the inspector.
- During periods when snow is melting and/or surface soils are thawing during daytime hours, mulched areas **MUST** be re-tracked (crimped) as per Item 5 above at least once every seven days, more frequently if directed by the inspector. Additional mulch may be required to obtain complete coverage of an area. Biodegradable erosion control matting may be required on steeper slopes.
- Additional stabilization measures for non-frozen ground conditions described in this SWPPP **WILL** be implemented at the time deemed appropriate by the inspector.

During the winter season, if a site has been stabilized and soil disturbing activities have been suspended for the winter, weekly inspections can be suspended. However, monthly inspections must still be conducted. All normal weekly inspections must resume when soil disturbing activities resume.

9.0 SPILL PREVENTION PRACTICES

Good Housekeeping and Material Management Practices

The following good housekeeping and material management practices will be followed on site during the construction project to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

- Materials will be brought on site in the minimum quantities required.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposal.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The construction manager or his designee will inspect regularly to ensure proper use and disposal of materials on site.
- The contractor shall prohibit washing of tools, equipment, and machinery in or within 100 feet of any watercourse or wetland.
- All above grade storage tanks are to be protected from vehicle damage by temporary barriers.

Inventory for Pollution Prevention Plan

The materials and substances listed below are expected to be on-site during construction.

- Petroleum for fueling vehicles will be stored in above ground storage tanks. Tanks will either be steel with an enclosure capable of holding 110% of the storage tank volume or of a Con-Store, concrete encased type typically employed by NYSDOT. Hydraulic oil and other oils will be stored in their original containers. Concrete and asphalt will be stored in the original delivery trucks.
- Fertilizer may be stored on site in its original container for a short period of time prior to seeding. Original containers will be safely piled on pallets or similar devices to protect from moisture.

- Paints and other similar materials will be stored in their original containers and all empty containers will be disposed of in accordance with label directions.
- Portable sanitary facilities, which contain chemical disinfectants (deodorants) will be located on-site, with the disinfectants held in the tank of the toilet.

Hazardous Products

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data sheets will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

Spill Prevention

The following product specific practices will be followed on site.

Petroleum Products:

- Construction personnel should be made aware that emergency telephone numbers are located in this SWPPP.
- The contractor shall immediately contact NYSDEC in the event of a spill, and shall take all appropriate steps to contain the spill, including construction of a dike around the spill and placing absorbent material over this spill.
- The contractor shall instruct personnel that spillage of fuels, oils, and similar chemicals must be avoided and will have arranged with a qualified spill remediation company to serve the site.
- Fuels, oils, and chemicals will be stored in appropriate and tightly capped containers. Containers shall not be disposed of on the project site.
- Fuels, oils, chemicals, material, equipment, and sanitary facilities will be stored/located away from trees and at least 100 feet from streams, wells, wet areas, and other environmentally sensitive sites.
- Dispose of chemical containers and surplus chemicals off the project site in accordance with label directions.
- Use tight connections and hoses with appropriate nozzles in all operations involving fuels, lubricating materials or chemicals.
- Use funnels when pouring fuels, lubricating materials or chemicals.
- Refueling and cleaning of construction equipment will take place in parking areas to provide rapid response to emergency situations.

- All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Any vehicle leaking fuel or hydraulic fuel will be immediately scheduled for repairs and use will be discontinued until repairs are made.

Fertilizers:

- Fertilizer will be stored in its original containers on pallets with water resistant coverings.
- Proper delivery scheduling will minimize storage time.
- Any damaged containers will be repaired immediately upon discovery and any released fertilizer recovered to the fullest extent practicable.

Paints:

- All containers will be tightly sealed and stored when not required for use.
- Excess paint will not be discharged to the storm water system or wastewater system, but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks:

- Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water only at designated locations on site.

Asphalt Trucks:

- Asphalt trucks shall not discharge surplus asphalt on the site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup. The construction manager or site superintendent responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the onsite construction office or trailer.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies. Any spill in excess or suspected to be in excess of two gallons will be reported to the NYSDEC Regional Spill Response Unit. Notification to the

NYSDEC (1-800-457-7362) must be completed within two hours of the discovery of the spill.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to absorbent pads, brooms, dust pans, mops, rags, gloves, goggles, activated clay, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with spilled substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size

10.0 CERTIFICATIONS

Preparer Certification of Compliance with Federal, State, and Local Regulations

This Stormwater Pollution Prevention Plan was prepared in accordance with the City of Saratoga Springs regulations.

Name: Douglas Heller Title: Professional Engineer

Signature: _____ Date: _____

Company Name: The LA Group, PC

Owner Pollution Prevention Plan Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who are directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

I understand that SWPPP requires site inspections be conducted by a qualified professional once every seven (7) days. These inspections shall be performed by a qualified professional as defined in the SWPPP.

The Owner/Operator will be held financially responsible for any and all fines related to work tasks that are not specified by the Contractor(s)/Subcontractor(s) below.

Name: John Luke Hodorowski Title: Owner

Signature: _____ Date: _____

Company Name: John-Paul Builders, Inc.

Contractor and Subcontractor Certification

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

- SWPPP Components You Are Responsible For
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

SWPPP Components You Are Responsible For

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

Contractor and Subcontractor Certification

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceeding.

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Address _____

City, State, Zip _____

Phone Number _____

- 1. _____
- 2. _____
- SWPPP Components You Are Responsible For 3. _____
- 4. _____
- 5. _____
- 6. _____

Name of Trained Individual Responsible for SWPPP Implementation _____ Title _____

Signature of Trained Individual Responsible for SWPPP Implementation _____ Date _____

11.0 DEFINITIONS

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition, or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, tree removal, stump removal and/or brush removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Phasing Plan - a plan designed to construct particular portions of an individual project at different times. Phasing is often used when a project is very large to limit the disturbance at a single time to 5 acres per phase.

Erosion and Sediment Control Practices – temporary measures installed prior to construction and maintained during construction to temporarily treat any stormwater runoff. Once construction is completed and post-construction stormwater management practices are installed and the site is stabilized, the erosion and sediment control practices are removed from the site.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete pavement.

Green Infrastructure – in the context of stormwater management, the term green infrastructure includes a wide array of practices at multiple scales to manage and treat stormwater, maintain and restore natural hydrology and ecological function by infiltration, evapotranspiration, capture and reuse of stormwater, and establishment of natural vegetative features. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed or ecoregion. On the local scale green infrastructure consist of site and neighborhood specific practices and runoff reduction techniques. Such practices essentially result in runoff reduction and or establishment of habitat areas with significant utilization of soils, vegetation, and engineered media rather than traditional hardscape collection, conveyance and storage structures. Some examples include green roofs, trees and tree boxes, pervious pavement, rain gardens, vegetated swales, planters, reforestation and protection and enhancement of riparian buffers and floodplains.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways, and sidewalks); building rooftops, and miscellaneous impermeable structures such as patios, pools, and sheds.

Municipal Separate Storm Sewer (MS4) – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- i. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State.
- ii. Designed or used for collecting or conveying stormwater
- iii. Which is not a combined sewer
- iv. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Notice of Intent – a standardized format notification sent to the NYSDEC to inform them of the proposed activity to be sent after the SWPPP has been completed.

Owner or Operator – means the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Post-Construction Stormwater Management Practices – permanent devices constructed or installed onsite to treat stormwater from a site when construction is completed.

Qualified Inspector - a Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 4 hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the qualified inspector shall receive 4 hours of training every 3 years.

Regulated, Traditional Land Use Control MS4 - means a city, town, or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Sequence of Operations – the individual steps and their specific order which are undertaken in order to construct a project or a given phase of a project from beginning to end. (i.e. clearing, grading, foundation work, landscaping, etc.)

State Pollutant Discharge Elimination System (SPDES) – means the system established pursuant to Article 17 of the Environmental Conservation Law (ECL) and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Stormwater Pollution Prevention Plan (SWPPP) - a report that is compiled providing detailed information about the proposed activity and the specifics to how the stormwater will be managed during construction and after construction is completed.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic Ocean, within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800-941.

Temporary Stabilization – means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Trained Contractor – means an employee from a contracting (construction) company responsible for the day to day implementation of the SWPPP. The trained contractor must have received 4 hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the qualified inspector shall receive 4 hours of training every 3 years.

It can also mean an employee from the contracting (construction) company that meets the qualified inspector qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received 4 hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity.

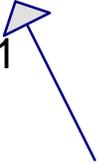
Appendix A

HydroCAD Calculations and Storm Data

**HYDROCAD CALCULATIONS
PRE DEVELOPMENT**



AP-1



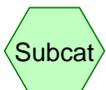
Subcat E1



Subcat E2



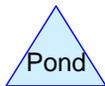
AP-2



Subcat



Reach



Pond



Link

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
19,423	39	>75% Grass cover, Good, HSG A (E1, E2)
2,705	98	Paved parking, HSG A (E1, E2)
9,702	30	Woods, Good, HSG A (E2)
31,830	41	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
31,830	HSG A	E1, E2
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
31,830		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
19,423	0	0	0	0	19,423	>75% Grass cover, Good	
2,705	0	0	0	0	2,705	Paved parking	
9,702	0	0	0	0	9,702	Woods, Good	
31,830	0	0	0	0	31,830	TOTAL AREA	

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Type II 24-hr 1 Year Rainfall=2.15"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Subcat E1 Runoff Area=6,599 sf 22.24% Impervious Runoff Depth>0.43"
Flow Length=80' Slope=0.0190 '/' Tc=9.3 min CN=WQ Runoff=0.09 cfs 235 cf

Subcatchment E2: Subcat E2 Runoff Area=25,231 sf 4.91% Impervious Runoff Depth>0.09"
Flow Length=215' Tc=12.3 min CN=WQ Runoff=0.07 cfs 198 cf

Link AP-1: AP-1 Inflow=0.09 cfs 235 cf
Primary=0.09 cfs 235 cf

Link AP-2: AP-2 Inflow=0.07 cfs 198 cf
Primary=0.07 cfs 198 cf

Total Runoff Area = 31,830 sf Runoff Volume = 433 cf Average Runoff Depth = 0.16"
91.50% Pervious = 29,125 sf 8.50% Impervious = 2,705 sf

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Type II 24-hr 10 Year Rainfall=3.75"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Subcat E1 Runoff Area=6,599 sf 22.24% Impervious Runoff Depth>0.80"
Flow Length=80' Slope=0.0190 '/' Tc=9.3 min CN=WQ Runoff=0.16 cfs 439 cf

Subcatchment E2: Subcat E2 Runoff Area=25,231 sf 4.91% Impervious Runoff Depth>0.19"
Flow Length=215' Tc=12.3 min CN=WQ Runoff=0.12 cfs 390 cf

Link AP-1: AP-1 Inflow=0.16 cfs 439 cf
Primary=0.16 cfs 439 cf

Link AP-2: AP-2 Inflow=0.12 cfs 390 cf
Primary=0.12 cfs 390 cf

Total Runoff Area = 31,830 sf Runoff Volume = 829 cf Average Runoff Depth = 0.31"
91.50% Pervious = 29,125 sf 8.50% Impervious = 2,705 sf

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Type II 24-hr 100 Year Rainfall=6.20"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Subcat E1 Runoff Area=6,599 sf 22.24% Impervious Runoff Depth>1.71"
Flow Length=80' Slope=0.0190 '/' Tc=9.3 min CN=WQ Runoff=0.29 cfs 943 cf

Subcatchment E2: Subcat E2 Runoff Area=25,231 sf 4.91% Impervious Runoff Depth>0.61"
Flow Length=215' Tc=12.3 min CN=WQ Runoff=0.28 cfs 1,286 cf

Link AP-1: AP-1 Inflow=0.29 cfs 943 cf
Primary=0.29 cfs 943 cf

Link AP-2: AP-2 Inflow=0.28 cfs 1,286 cf
Primary=0.28 cfs 1,286 cf

Total Runoff Area = 31,830 sf Runoff Volume = 2,228 cf Average Runoff Depth = 0.84"
91.50% Pervious = 29,125 sf 8.50% Impervious = 2,705 sf

Summary for Subcatchment E1: Subcat E1

Runoff = 0.29 cfs @ 12.01 hrs, Volume= 943 cf, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
5,132	39	>75% Grass cover, Good, HSG A
1,468	98	Paved parking, HSG A
6,599		Weighted Average
5,132		77.76% Pervious Area
1,468		22.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	80	0.0190	0.14		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"

Summary for Subcatchment E2: Subcat E2

Runoff = 0.28 cfs @ 12.06 hrs, Volume= 1,286 cf, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
14,291	39	>75% Grass cover, Good, HSG A
1,238	98	Paved parking, HSG A
9,702	30	Woods, Good, HSG A
25,231		Weighted Average
23,993		95.09% Pervious Area
1,238		4.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0300	0.18		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
3.1	115	0.0150	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
12.3	215	Total			

Summary for Link AP-1: AP-1

Inflow Area = 6,599 sf, 22.24% Impervious, Inflow Depth > 1.71" for 100 Year event
Inflow = 0.29 cfs @ 12.01 hrs, Volume= 943 cf
Primary = 0.29 cfs @ 12.01 hrs, Volume= 943 cf, Atten= 0%, Lag= 0.0 min

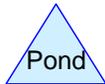
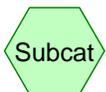
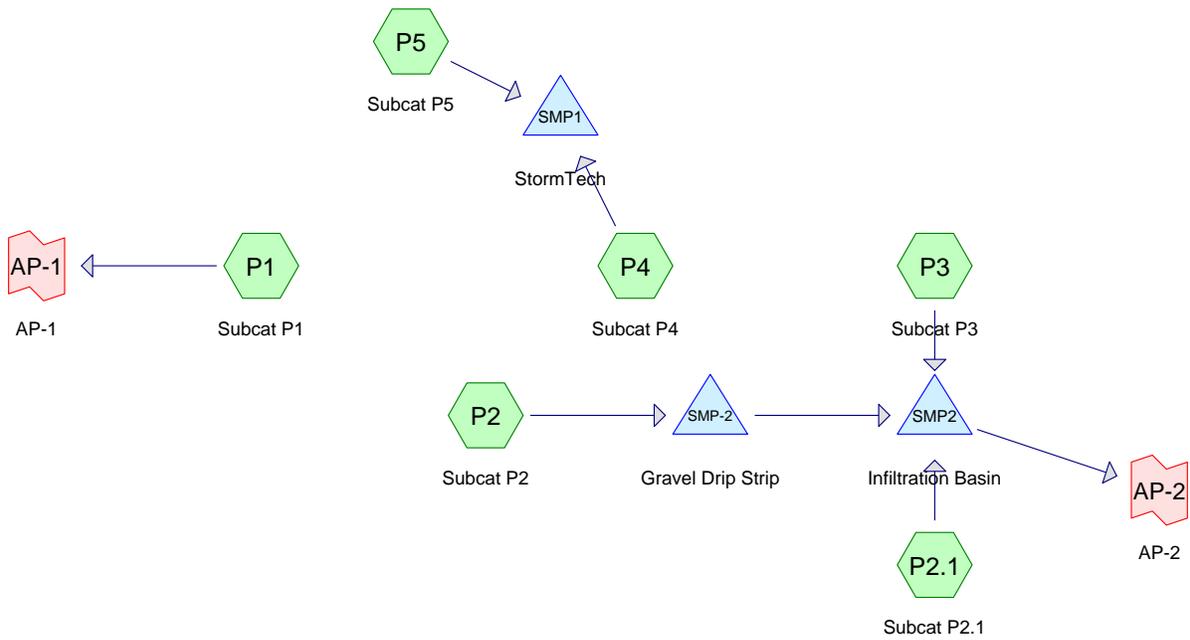
Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: AP-2

Inflow Area = 25,231 sf, 4.91% Impervious, Inflow Depth > 0.61" for 100 Year event
Inflow = 0.28 cfs @ 12.06 hrs, Volume= 1,286 cf
Primary = 0.28 cfs @ 12.06 hrs, Volume= 1,286 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

**HYDROCAD CALCULATIONS
POST DEVELOPMENT**



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Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
14,181	39	>75% Grass cover, Good, HSG A (P1, P2, P2.1, P3, P4, P5)
17,663	98	Paved parking, HSG A (P1, P2, P2.1, P3, P4, P5)
31,844	72	TOTAL AREA

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Soil Listing (selected nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
31,844	HSG A	P1, P2, P2.1, P3, P4, P5
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
31,844		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
14,181	0	0	0	0	14,181	>75% Grass cover, Good
17,663	0	0	0	0	17,663	Paved parking
31,844	0	0	0	0	31,844	TOTAL AREA

Sub
Num

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Type II 24-hr 1 Year Rainfall=2.15"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P1: Subcat P1 Runoff Area=2,357 sf 40.48% Impervious Runoff Depth>0.78"
Tc=6.0 min CN=WQ Runoff=0.06 cfs 153 cf

Subcatchment P2: Subcat P2 Runoff Area=4,076 sf 84.94% Impervious Runoff Depth>1.63"
Tc=6.0 min CN=WQ Runoff=0.23 cfs 554 cf

Subcatchment P2.1: Subcat P2.1 Runoff Area=7,028 sf 16.75% Impervious Runoff Depth>0.32"
Flow Length=160' Slope=0.0250 '/' Tc=10.3 min CN=WQ Runoff=0.07 cfs 188 cf

Subcatchment P3: Subcat P3 Runoff Area=4,048 sf 1.07% Impervious Runoff Depth>0.02"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 7 cf

Subcatchment P4: Subcat P4 Runoff Area=6,146 sf 99.96% Impervious Runoff Depth>1.92"
Tc=6.0 min CN=WQ Runoff=0.41 cfs 984 cf

Subcatchment P5: Subcat P5 Runoff Area=8,189 sf 71.84% Impervious Runoff Depth>1.38"
Tc=6.0 min CN=WQ Runoff=0.39 cfs 942 cf

Pond SMP-2: Gravel Drip Strip Peak Elev=309.55' Storage=63 cf Inflow=0.23 cfs 554 cf
Discarded=0.08 cfs 506 cf Primary=0.11 cfs 48 cf Outflow=0.19 cfs 554 cf

Pond SMP1: StormTech Peak Elev=304.84' Storage=521 cf Inflow=0.81 cfs 1,926 cf
Outflow=0.16 cfs 1,925 cf

Pond SMP2: Infiltration Basin Peak Elev=304.27' Storage=104 cf Inflow=0.18 cfs 243 cf
Discarded=0.03 cfs 241 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 241 cf

Link AP-1: AP-1 Inflow=0.06 cfs 153 cf
Primary=0.06 cfs 153 cf

Link AP-2: AP-2 Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Total Runoff Area = 31,844 sf Runoff Volume = 2,828 cf Average Runoff Depth = 1.07"
44.53% Pervious = 14,181 sf 55.47% Impervious = 17,663 sf

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Type II 24-hr 10 Year Rainfall=3.75"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P1: Subcat P1	Runoff Area=2,357 sf 40.48% Impervious Runoff Depth>1.44" Tc=6.0 min CN=WQ Runoff=0.11 cfs 282 cf
Subcatchment P2: Subcat P2	Runoff Area=4,076 sf 84.94% Impervious Runoff Depth>2.99" Tc=6.0 min CN=WQ Runoff=0.41 cfs 1,015 cf
Subcatchment P2.1: Subcat P2.1	Runoff Area=7,028 sf 16.75% Impervious Runoff Depth>0.61" Flow Length=160' Slope=0.0250 '/' Tc=10.3 min CN=WQ Runoff=0.12 cfs 356 cf
Subcatchment P3: Subcat P3	Runoff Area=4,048 sf 1.07% Impervious Runoff Depth>0.06" Tc=6.0 min CN=WQ Runoff=0.01 cfs 21 cf
Subcatchment P4: Subcat P4	Runoff Area=6,146 sf 99.96% Impervious Runoff Depth>3.51" Tc=6.0 min CN=WQ Runoff=0.73 cfs 1,799 cf
Subcatchment P5: Subcat P5	Runoff Area=8,189 sf 71.84% Impervious Runoff Depth>2.53" Tc=6.0 min CN=WQ Runoff=0.70 cfs 1,727 cf
Pond SMP-2: Gravel Drip Strip	Peak Elev=309.71' Storage=86 cf Inflow=0.41 cfs 1,015 cf Discarded=0.08 cfs 802 cf Primary=0.31 cfs 213 cf Outflow=0.39 cfs 1,015 cf
Pond SMP1: StormTech	Peak Elev=305.56' Storage=1,153 cf Inflow=1.43 cfs 3,525 cf Outflow=0.17 cfs 3,524 cf
Pond SMP2: Infiltration Basin	Peak Elev=305.15' Storage=290 cf Inflow=0.44 cfs 589 cf Discarded=0.08 cfs 590 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 590 cf
Link AP-1: AP-1	Inflow=0.11 cfs 282 cf Primary=0.11 cfs 282 cf
Link AP-2: AP-2	Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf

Total Runoff Area = 31,844 sf Runoff Volume = 5,198 cf Average Runoff Depth = 1.96"
44.53% Pervious = 14,181 sf 55.47% Impervious = 17,663 sf

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Type II 24-hr 100 Year Rainfall=6.20"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P1: Subcat P1 Runoff Area=2,357 sf 40.48% Impervious Runoff Depth>2.71"
Tc=6.0 min CN=WQ Runoff=0.20 cfs 533 cf

Subcatchment P2: Subcat P2 Runoff Area=4,076 sf 84.94% Impervious Runoff Depth>5.14"
Tc=6.0 min CN=WQ Runoff=0.69 cfs 1,744 cf

Subcatchment P2.1: Subcat P2.1 Runoff Area=7,028 sf 16.75% Impervious Runoff Depth>1.41"
Flow Length=160' Slope=0.0250 '/' Tc=10.3 min CN=WQ Runoff=0.24 cfs 828 cf

Subcatchment P3: Subcat P3 Runoff Area=4,048 sf 1.07% Impervious Runoff Depth>0.56"
Tc=6.0 min CN=WQ Runoff=0.05 cfs 189 cf

Subcatchment P4: Subcat P4 Runoff Area=6,146 sf 99.96% Impervious Runoff Depth>5.95"
Tc=6.0 min CN=WQ Runoff=1.21 cfs 3,050 cf

Subcatchment P5: Subcat P5 Runoff Area=8,189 sf 71.84% Impervious Runoff Depth>4.42"
Tc=6.0 min CN=WQ Runoff=1.17 cfs 3,017 cf

Pond SMP-2: Gravel Drip Strip Peak Elev=309.95' Storage=118 cf Inflow=0.69 cfs 1,744 cf
Discarded=0.08 cfs 1,246 cf Primary=0.56 cfs 499 cf Outflow=0.64 cfs 1,744 cf

Pond SMP1: StormTech Peak Elev=307.10' Storage=2,253 cf Inflow=2.39 cfs 6,067 cf
Outflow=0.18 cfs 6,065 cf

Pond SMP2: Infiltration Basin Peak Elev=305.97' Storage=662 cf Inflow=0.83 cfs 1,516 cf
Discarded=0.14 cfs 1,435 cf Primary=0.00 cfs 0 cf Outflow=0.14 cfs 1,435 cf

Link AP-1: AP-1 Inflow=0.20 cfs 533 cf
Primary=0.20 cfs 533 cf

Link AP-2: AP-2 Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Total Runoff Area = 31,844 sf Runoff Volume = 9,361 cf Average Runoff Depth = 3.53"
44.53% Pervious = 14,181 sf 55.47% Impervious = 17,663 sf

Summary for Subcatchment P1: Subcat P1

Runoff = 0.20 cfs @ 11.97 hrs, Volume= 533 cf, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
1,403	39	>75% Grass cover, Good, HSG A
954	98	Paved parking, HSG A
2,357		Weighted Average
1,403		59.52% Pervious Area
954		40.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P2: Subcat P2

Runoff = 0.69 cfs @ 11.96 hrs, Volume= 1,744 cf, Depth> 5.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
614	39	>75% Grass cover, Good, HSG A
3,462	98	Paved parking, HSG A
4,076		Weighted Average
614		15.06% Pervious Area
3,462		84.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P2.1: Subcat P2.1

Runoff = 0.24 cfs @ 12.03 hrs, Volume= 828 cf, Depth> 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
5,851	39	>75% Grass cover, Good, HSG A
1,177	98	Paved parking, HSG A
7,028		Weighted Average
5,851		83.25% Pervious Area
1,177		16.75% Impervious Area

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Type II 24-hr 100 Year Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0250	0.17		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.4	60	0.0250	2.37		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
10.3	160	Total			

Summary for Subcatchment P3: Subcat P3

Runoff = 0.05 cfs @ 12.01 hrs, Volume= 189 cf, Depth> 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
4,004	39	>75% Grass cover, Good, HSG A
43	98	Paved parking, HSG A
4,048		Weighted Average
4,004		98.93% Pervious Area
43		1.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P4: Subcat P4

Runoff = 1.21 cfs @ 11.96 hrs, Volume= 3,050 cf, Depth> 5.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

Area (sf)	CN	Description
3	39	>75% Grass cover, Good, HSG A
6,144	98	Paved parking, HSG A
6,146		Weighted Average
3		0.04% Pervious Area
6,144		99.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment P5: Subcat P5

Runoff = 1.17 cfs @ 11.96 hrs, Volume= 3,017 cf, Depth> 4.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=6.20"

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Type II 24-hr 100 Year Rainfall=6.20"

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Area (sf)	CN	Description
2,306	39	>75% Grass cover, Good, HSG A
5,883	98	Paved parking, HSG A
8,189		Weighted Average
2,306		28.16% Pervious Area
5,883		71.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond SMP-2: Gravel Drip Strip

Inflow Area = 4,076 sf, 84.94% Impervious, Inflow Depth > 5.14" for 100 Year event
 Inflow = 0.69 cfs @ 11.96 hrs, Volume= 1,744 cf
 Outflow = 0.64 cfs @ 11.99 hrs, Volume= 1,744 cf, Atten= 7%, Lag= 1.9 min
 Discarded = 0.08 cfs @ 11.65 hrs, Volume= 1,246 cf
 Primary = 0.56 cfs @ 11.99 hrs, Volume= 499 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 309.95' @ 11.99 hrs Surf.Area= 350 sf Storage= 118 cf

Plug-Flow detention time= 2.3 min calculated for 1,744 cf (100% of inflow)
 Center-of-Mass det. time= 2.2 min (745.3 - 743.1)

Volume	Invert	Avail.Storage	Storage Description
#1	309.10'	196 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 490 cf Overall x 40.0% Voids
#2	309.10'	84 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 210 cf Overall x 40.0% Voids
		280 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	245	0	0
311.10	245	490	490

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	105	0	0
311.10	105	210	210

Device	Routing	Invert	Outlet Devices
#1	Discarded	309.10'	10.000 in/hr Exfiltration over Surface area
#2	Primary	309.35'	6.0" Round Culvert L= 43.0' Ke= 0.500 Inlet / Outlet Invert= 309.35' / 306.00' S= 0.0779 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Discarded OutFlow Max=0.08 cfs @ 11.65 hrs HW=309.15' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.55 cfs @ 11.99 hrs HW=309.94' (Free Discharge)

↳ **2=Culvert** (Inlet Controls 0.55 cfs @ 2.80 fps)

Summary for Pond SMP1: StormTech

Inflow Area = 14,335 sf, 83.89% Impervious, Inflow Depth > 5.08" for 100 Year event
 Inflow = 2.39 cfs @ 11.96 hrs, Volume= 6,067 cf
 Outflow = 0.18 cfs @ 12.53 hrs, Volume= 6,065 cf, Atten= 92%, Lag= 33.9 min
 Discarded = 0.18 cfs @ 12.53 hrs, Volume= 6,065 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 307.10' @ 12.53 hrs Surf.Area= 1,307 sf Storage= 2,253 cf

Plug-Flow detention time= 86.2 min calculated for 6,065 cf (100% of inflow)
 Center-of-Mass det. time= 86.0 min (829.3 - 743.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	304.00'	1,165 cf	20.50'W x 52.28'L x 3.50'H Field A Z=0.5 4,211 cf Overall - 1,298 cf Embedded = 2,913 cf x 40.0% Voids
#2A	304.50'	1,298 cf	StormTech SC-740 x 28 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 4 rows
		2,463 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	304.00'	6.000 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.18 cfs @ 12.53 hrs HW=307.10' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.18 cfs)

Summary for Pond SMP2: Infiltration Basin

Inflow Area = 15,151 sf, 30.90% Impervious, Inflow Depth > 1.20" for 100 Year event
 Inflow = 0.83 cfs @ 12.00 hrs, Volume= 1,516 cf
 Outflow = 0.14 cfs @ 12.21 hrs, Volume= 1,435 cf, Atten= 83%, Lag= 12.6 min
 Discarded = 0.14 cfs @ 12.21 hrs, Volume= 1,435 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 305.97' @ 12.21 hrs Surf.Area= 623 sf Storage= 662 cf

Plug-Flow detention time= 71.1 min calculated for 1,435 cf (95% of inflow)
 Center-of-Mass det. time= 40.0 min (832.5 - 792.5)

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Volume	Invert	Avail.Storage	Storage Description
#1	299.50'	31 cf	6.00'D x 4.50'H Vertical Cone/Cylinder 127 cf Overall - 50 cf Embedded = 77 cf x 40.0% Voids
#2	300.00'	50 cf	4.00'D x 4.00'H Vertical Cone/Cylinder Inside #1
#3	304.00'	958 cf	Custom Stage Data (Irregular) Listed below (Recalc)
		1,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
304.00	65	45.0	0	0	65
305.00	285	95.0	162	162	626
306.00	605	115.0	435	597	977
306.50	845	130.0	361	958	1,276

Device	Routing	Invert	Outlet Devices
#1	Discarded	299.50'	10.000 in/hr Exfiltration over Horizontal area
#2	Primary	306.00'	30.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.14 cfs @ 12.21 hrs HW=305.97' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=299.50' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link AP-1: AP-1

Inflow Area = 2,357 sf, 40.48% Impervious, Inflow Depth > 2.71" for 100 Year event
 Inflow = 0.20 cfs @ 11.97 hrs, Volume= 533 cf
 Primary = 0.20 cfs @ 11.97 hrs, Volume= 533 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: AP-2

Inflow Area = 15,151 sf, 30.90% Impervious, Inflow Depth = 0.00" for 100 Year event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

**HYDROCAD CALCULATIONS
POST DEVELOPMENT
FROZEN CONDITIONS**

Summary for Pond 1P: Frozen Infiltration Basin

Inflow Area = 15,151 sf, 30.90% Impervious, Inflow Depth > 2.16" for 100 Year event
 Inflow = 0.91 cfs @ 12.01 hrs, Volume= 2,721 cf
 Outflow = 0.89 cfs @ 12.01 hrs, Volume= 2,030 cf, Atten= 2%, Lag= 0.4 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Primary = 0.89 cfs @ 12.01 hrs, Volume= 2,030 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 306.05' @ 12.01 hrs Surf.Area= 654 sf Storage= 708 cf

Plug-Flow detention time= 173.5 min calculated for 2,026 cf (74% of inflow)
 Center-of-Mass det. time= 72.7 min (858.3 - 785.6)

Volume	Invert	Avail.Storage	Storage Description
#1	299.50'	31 cf	6.00'D x 4.50'H Vertical Cone/Cylinder 127 cf Overall - 50 cf Embedded = 77 cf x 40.0% Voids
#2	300.00'	50 cf	4.00'D x 4.00'H Vertical Cone/Cylinder Inside #1
#3	304.00'	958 cf	Custom Stage Data (Irregular) Listed below (Recalc)
		1,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
304.00	65	45.0	0	0	65
305.00	285	95.0	162	162	626
306.00	605	115.0	435	597	977
306.50	845	130.0	361	958	1,276

Device	Routing	Invert	Outlet Devices
#1	Primary	306.00'	30.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Discarded	299.50'	10.000 in/hr Exfiltration over Surface area from 299.50' - 300.00' Excluded Surface area = 28 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=299.50' (Free Discharge)
 ↳2=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=0.71 cfs @ 12.01 hrs HW=306.05' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 0.71 cfs @ 0.51 fps)

Summary for Pond 2P: Frozen Gravel Drip Strip

Inflow Area = 4,076 sf, 84.94% Impervious, Inflow Depth > 5.14" for 100 Year event
 Inflow = 0.69 cfs @ 11.96 hrs, Volume= 1,744 cf
 Outflow = 0.63 cfs @ 12.00 hrs, Volume= 1,703 cf, Atten= 9%, Lag= 2.1 min
 Primary = 0.63 cfs @ 12.00 hrs, Volume= 1,703 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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Peak Elev= 310.04' @ 12.00 hrs Surf.Area= 350 sf Storage= 132 cf

Plug-Flow detention time= 32.0 min calculated for 1,703 cf (98% of inflow)
Center-of-Mass det. time= 16.8 min (759.9 - 743.1)

Volume	Invert	Avail.Storage	Storage Description
#1	309.10'	196 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 490 cf Overall x 40.0% Voids
#2	309.10'	84 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 210 cf Overall x 40.0% Voids
		280 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	245	0	0
311.10	245	490	490

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
309.10	105	0	0
311.10	105	210	210

Device	Routing	Invert	Outlet Devices
#1	Primary	309.35'	6.0" Round Culvert L= 43.0' Ke= 0.500 Inlet / Outlet Invert= 309.35' / 306.00' S= 0.0779 1/8" Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.62 cfs @ 12.00 hrs HW=310.04' (Free Discharge)
 ↑**1=Culvert** (Inlet Controls 0.62 cfs @ 3.18 fps)

Stormwater Practice Sizing

Job Name and # 246 West Avenue Apartments

Water Quality Volume Calculation

6/23/2016

$$WQv = [(P)(Rv)(A)]/12$$

Where:

$$Rv = 0.05 + 0.009(I)$$

I = impervious cover in percent

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

A = Area in acres

SMP-1: Underground Infiltration Chambers

% Impervious 83.89%

Rv 0.81

90% Rainfall 1.15

Area in Square Feet 14335

WQv Required = 1106 ft³ 0.025 ac-ft

SMP-2: Infiltration Basin/Trench

% Impervious 30.90%

Rv 0.33

90% Rainfall 1.15

Area in Square Feet 15151

WQv Required = 476 ft³ 0.011 ac-ft

Job Name and # 246 West Avenue Apartments

Minimum Runoff Reduction Volume

6/23/2016

$$RR_v = [(P)(R_v^*)(A_i)]/12$$

Where:

$$A_i = (S)(A_{ic})$$

$R_v = 0.05 + 0.009(I)$ where I is 100% impervious

A_i = impervious cover targeted for runoff reduction

A_{ic} = Total area of new impervious cover

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

S = Hydrologic Soil Group (HSG) Specific Reduction Factor (S)

A=0.55, B=0.40, C=0.30, D=0.20

S (HSG A)	0.55
A_{ic}	0.34 acres
R_v	0.95
90% Rainfall	1.15
A_i	0.187

$$RR_v = 0.017 \text{ acre feet} = 742 \text{ ft}^3$$

Appendix B

Soil Survey and Map Set

Custom Soil Resource Report for Saratoga County, New York



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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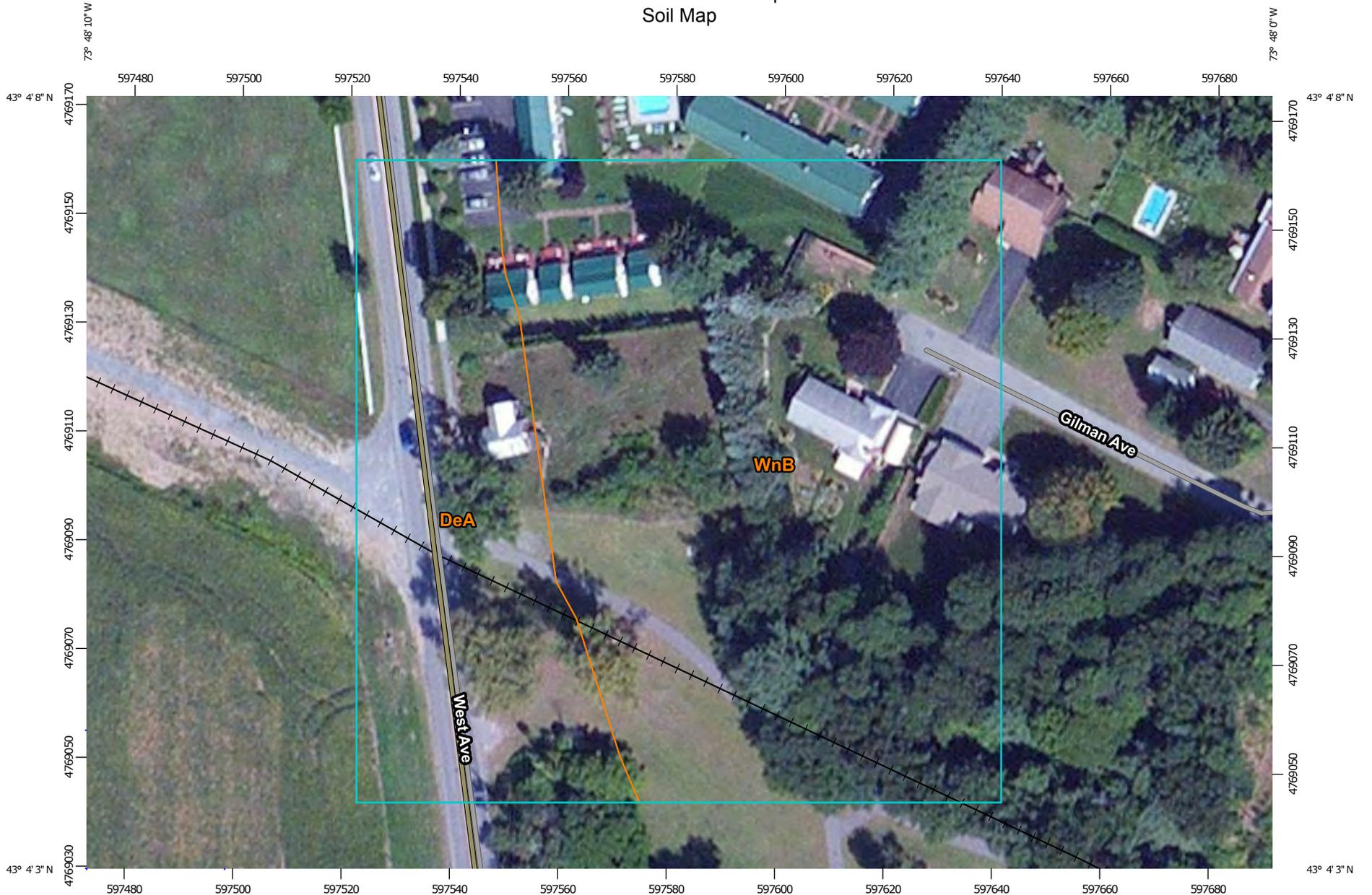
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Saratoga County, New York.....	10
DeA—Deerfield loamy fine sand, nearly level.....	10
WnB—Windsor loamy sand, 3 to 8 percent slopes.....	11

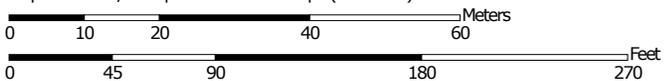
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:1,000 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Saratoga County, New York
 Survey Area Data: Version 15, Sep 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2010—Oct 11, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Saratoga County, New York (NY091)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DeA	Deerfield loamy fine sand, nearly level	1.1	30.1%
WnB	Windsor loamy sand, 3 to 8 percent slopes	2.4	69.9%
Totals for Area of Interest		3.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If

Custom Soil Resource Report

intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Saratoga County, New York

DeA—Deerfield loamy fine sand, nearly level

Map Unit Setting

National map unit symbol: 9w9t

Elevation: 0 to 1,000 feet

Mean annual precipitation: 36 to 48 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 125 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Deerfield and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Deltas, outwash plains, terraces

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciofluvial or deltaic deposits derived mainly from granite, gneiss, or sandstone

Typical profile

H1 - 0 to 10 inches: loamy fine sand

H2 - 10 to 26 inches: loamy fine sand

H3 - 26 to 72 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: A

Minor Components

Oakville

Percent of map unit: 10 percent

Claverack

Percent of map unit: 7 percent

Wareham

Percent of map unit: 4 percent

Wareham

Percent of map unit: 4 percent

WnB—Windsor loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svkf

Elevation: 0 to 1,210 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Deltas, dunes, outwash plains, outwash terraces

Landform position (three-dimensional): Riser, tread

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex

Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loamy sand

Bw - 3 to 25 inches: loamy sand

C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Low (about 4.5 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Minor Components

Hinckley, loamy sand

Percent of map unit: 10 percent

Landform: Deltas, eskers, kames, outwash plains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise

Down-slope shape: Convex

Across-slope shape: Convex, linear

Deerfield, loamy sand

Percent of map unit: 5 percent

Landform: Deltas, outwash plains, terraces

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Linear

Appendix C

SWPPP Inspection Form

**246 West Ave. Apartments
WEEKLY SWPPP INSPECTION REPORT**

Inspector Name:	Date:
Signature (required):	Time:
Weather:	Inspection #:
Soil Conditions (dry, saturated, etc):	

Note: Digital photos, with date stamp required for all practices requiring corrective action, before and after, to be attached to the inspection report.

YES NO N/A				
1.	<input type="checkbox"/>	<input type="checkbox"/>	Routine Inspection.	Date of last inspection: _____
2.	<input type="checkbox"/>	<input type="checkbox"/>	Inspection following rain event.	Date/time of storm ending: _____
	<input type="checkbox"/>	<input type="checkbox"/>		Rainfall amount: _____
	<input type="checkbox"/>	<input type="checkbox"/>		Recorded by: _____
3.	<input type="checkbox"/>	<input type="checkbox"/>	Is this a final site inspection?	
4.	<input type="checkbox"/>	<input type="checkbox"/>	Has site undergone final stabilization?	
	<input type="checkbox"/>	<input type="checkbox"/>	If so, have all temporary erosion and sediment controls been removed?	

Site Disturbance (Indicate Locations on Plan)

YES NO N/A			
1.	<input type="checkbox"/>	<input type="checkbox"/>	Areas previously disturbed, but have not undergone active site work in the last 14 days?
2.	<input type="checkbox"/>	<input type="checkbox"/>	Areas disturbed within last 14 days?
3.	<input type="checkbox"/>	<input type="checkbox"/>	Areas expected to be disturbed in next 14 days?
4.	<input type="checkbox"/>	<input type="checkbox"/>	Do areas of steep slopes or complex stabilization issues exist? If "YES" explain:
5.	<input type="checkbox"/>	<input type="checkbox"/>	Are there currently more than 5 acres of disturbed soil at the site? If so make sure there is an approval letter from NYS DEC.

Additional Comments: _____

Inspection of Erosion and Sediment Control Devices

Type of Control Device	Accumulation (if any) in %	Repairs/Maintenance Needed
1.		
2.		
3.		
4.		
5.		
6.		

Stabilization/Runoff

YES NO N/A			
1.	<input type="checkbox"/>	<input type="checkbox"/>	Are all existing disturbed areas contained by control devices? Type of devices:
2.	<input type="checkbox"/>	<input type="checkbox"/>	Are there areas that require stabilization within the next 14 days? Specify Area:
3.	<input type="checkbox"/>	<input type="checkbox"/>	Have stabilization measures been initiated in inactive areas?
4.	<input type="checkbox"/>	<input type="checkbox"/>	Is there current snow cover or frozen ground conditions?
5.	<input type="checkbox"/>	<input type="checkbox"/>	Rills or gullies?
6.	<input type="checkbox"/>	<input type="checkbox"/>	Slumping/deposition?
7.	<input type="checkbox"/>	<input type="checkbox"/>	Loss of vegetation?
8.	<input type="checkbox"/>	<input type="checkbox"/>	Lack of germination?
9.	<input type="checkbox"/>	<input type="checkbox"/>	Loss of mulching?

Receiving Structures/Water Bodies (Indicate locations where runoff leaves the project site on the site plan)

YES NO N/A

1. Surface water swale or natural surface waterbody?

If natural waterbody:

Is waterbody located onsite, or adjacent to property boundary?

Description of condition: _____

2. Municipal or community system?

Inspect locations where runoff from project site enters the receiving waters and indicate if there is evidence of:

- a. Rills or gullies?
- b. Slumping/deposition?
- c. Loss of vegetation?
- d. Undermining of structures?
- e. Was there a discharge into the receiving water on the day of inspection?
- f. Is there evidence of turbidity, sedimentation, or oil in the receiving waters?

Additional Comments: _____

Inspection of Post-Construction Stormwater Management Control Devices

Type of Control Device	Phase of Construction	Repairs/Maintenance Needed
1.		
2.		
3.		
4.		

General Site Condition

YES NO N/A

- 1. Have action items from previous reports been addressed?
- 2. Does routine maintenance of protection components occur on a regular basis?
- 3. Does cleaning and/or sweeping affected roadways occur, at minimum, daily?
- 4. Is debris and litter removed on a monthly basis, or as necessary?
- 5. Is the site maintained in an orderly manner?

Describe the condition of all natural waterbodies within or adjacent to the project that receive runoff from the site:

Contractors progress over last 7 days: _____

Anticipated work to be begun in the next 7 days: _____

Additional Comments: _____

Visual Observations

YES NO N/A

- 1. All erosion and sediment control measures have been installed/constructed?
- 2. All erosion and sediment control measures are being maintained properly?

SUMMARY OF ACTION ITEMS TO REPAIR/REPLACE/MAINTAIN/CORRECT DEFICIENCIES

Action Reported To (no signature required): _____

Company: _____

Appendix D

Other SWPPP Forms

Construction Sequence
SWPPP Plan Changes
Spill Response Form
Stormwater Management Practice Maintenance Log

The operator shall prepare a summary of construction status using the Construction Sequence Form below once every month. Significant deviations to the sequence and reasons for those deviations (i.e. weather, subcontractor availability, etc.), shall be noted by the contractor. The schedule shall be used to record the dates for initiation of construction, implementation of erosion control measures, stabilization, etc. A copy of this table will be maintained at the construction site and updated in addition to the individual Inspection Reports completed for each inspection.

Construction Sequence Form

Construction Activities (Identify name of planned practices)	Date Complete
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	

**STORM WATER POLLUTION PREVENTION PLAN
PLAN CHANGES, AUTHORIZATION, AND CHANGE CERTIFICATION**

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

REQUESTED BY: _____

DATE: _____

AUTHORIZED BY: _____

DATE: _____

CERTIFICATION OF CHANGES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the penal code.

SIGNATURE: _____

DATE: _____

SPILL RESPONSE REPORT

Within 1 hour of a spill discovery less than 2 gallons in volume the following must be notified:

John Luke Hodorowski, John-Paul Builders, LLC
(518)356-1435

Within 1 hour of a spill discovery greater than 2 gallons the following must be notified:

John Luke Hodorowski
NYSDEC Spill Response Hotline 1-800-457-7362
Spill Response Contractor

Material Spilled: _____

Approximate Volume: _____

Location: _____

Distance to nearest down gradient drainage: _____

Distance to nearest down gradient open water: _____

Temporary control measures in place: _____

Cost Estimate for Letter of Credit				PB #
Project No:	201178			
Project:	246 West Ave			
Location:	246 West Avenue			
	Saratoga Springs, New York			
Date:	6/23/2016			
<u>ON-SITE WORK</u>				
Item	Quantity	Unit	Unit Cost	Subtotal
<u>Site Preparation and Grading</u>				
Erosion Control (including silt fence & construction acc	1	LS	\$2,000.00	\$2,000.00
Remove Bituminous Asphalt Pament	110	SY	\$3.00	\$330.00
Tree Removal and grubbing	1	LS	\$2,000.00	\$2,000.00
Rough Grading	1	LS	\$1,500.00	\$1,500.00
Pump station removal	1	LS	\$500.00	\$500.00
<u>Hardscape</u>				
Porous Pavement and base	5,360	SF	\$4.50	\$24,120.00
Concrete Walk	460	SF	\$5.25	\$2,415.00
Cast in Place Concrete Curb	206	LF	\$18.00	\$3,708.00
<u>Site Amenities</u>				
Parking lot light pole	2	EA	\$2,200.00	\$4,400.00
Traffic signs	1	LS	\$3,500.00	\$3,500.00
Striping	1	LS	\$1,000.00	\$1,000.00
<u>Site Utilities</u>				
Catch Basins/ Drain Inlets	3	EA	\$1,200.00	\$3,600.00
Clean Outs	3	EA	\$1,200.00	\$3,600.00
Storm Drywell	1	EA	\$2,300.00	\$2,300.00
Stormtech infiltrator basin	1	LS	\$9,000.00	\$9,000.00
6" HDPE Roof Leader	74	LF	\$12.00	\$888.00
8" HDPE Storm Line - perf	166	LF	\$20.00	\$3,320.00
12" HDPE Storm Line	100	LF	\$20.00	\$2,000.00
8" PVC Storm line	39	LF	\$22.00	\$858.00
6" PVC Sanitary Line	52	LF	\$20.00	\$1,040.00
2" DIP Waterline	45	LF	\$12.00	\$540.00
6" DIP Water Line	12	LF	\$28.00	\$336.00
Nyloplast yard drain	5	EA	\$600.00	\$3,000.00
<u>Landscaping</u>				
Deciduous Trees	1	EA	\$700.00	\$700.00
Evergreen Trees	30	EA	\$350.00	\$10,500.00
Shrubs	25	EA	\$220.00	\$5,500.00
<i>On-Site Total</i>				\$92,655.00
<i>On-Site Total X .25</i>				\$23,163.75
<u>OFF-SITE WORK</u>				
Concrete Sidewalk	800	SF	\$5.25	\$4,200.00
Cast in Place Concrete Curb	130	LF	\$18.00	\$2,340.00
Bike Rack	1	EA	\$600.00	\$600.00

Interprative signage	1	EA	\$350.00	\$350.00
Concrete Pavers	171	SF	\$8.00	\$1,368.00
6" PVC Sanitary line	43	LF	\$20.00	\$860.00
8" PVC Sanitary Line	56	LF	\$22.00	\$1,232.00
8" PVC Storm Line	37	LF	\$22.00	\$814.00
12"x6" Sleeve / valve	1	EA	\$3,200.00	\$3,200.00
12" Ductile Iron Pipe (Water)	585	LF	\$100.00	\$58,500.00
12" Gate Valve components	1	EA	\$750.00	\$750.00
12" DIP termination and cap on new waterline	1	EA	\$200.00	\$200.00
Fire Hydrant and Valve Assembly	2	EA	\$4,500.00	\$9,000.00
6" DIP Waterline	48	LF	\$28.00	\$1,344.00
Sanitary Manholes	1	EA	\$3,500.00	\$3,500.00
Decorative Street Lights	1	EA	\$3,000.00	\$3,000.00
Deciduous Trees	10	EA	\$700.00	\$7,000.00
Connection to SAN MH @ West Ave w/ drop	1	LS	\$3,000.00	\$3,000.00
Connection to existing 12" DIP line on West	1	EA	\$500.00	\$500.00
As Built Drawings	1	LS	\$3,500.00	\$3,500.00
Off-Site Total				\$105,258.00
Total Site Work				\$197,913.00
Letter of Credit Amounts				
Total off-site work				\$105,258.00
Total on-site work x .25				\$23,163.75
Total				\$128,421.75
L.O.C. amount				\$128,500.00



City of Saratoga Springs
OFFICE OF PUBLIC WORKS
5 Lake Avenue
Saratoga Springs, New York 12866

ANTHONY J. SCIROCCO
COMMISSIONER
TIMOTHY J. COGAN
DEPUTY COMMISSIONER

Phone 518-587-3550 ** Fax 518-587-2417
www.saratoga-springs.org

**NEW WATER SERVICE CONNECTION
AGREEMENT & APPLICATION FORM**

Property Owner's Name: John-Paul Builders, LLC

Project Name (if applicable): 246 West Ave Apartments

Property Address: 246 West Ave

Tax Map#: 178.33-1-20 & 21

Size of Tap (check one below):
 3/4" 1"

Greater than 1": _____

RESIDENTIAL

Minimum fee is \$3,000 for the 1st dwelling
and \$2,000 for each additional dwelling

NON-RESIDENTIAL

Minimum fee is \$3,000 for the 1st unit of water
and \$2,000 for each additional unit of water. A
unit of water is 14,000 cubic feet of water per year.

Number of Dwellings: 16

Estimated Cubic Feet of Water per Year:

Appraised Value: _____
If \$120,000 or less please provide copy of
certified appraisal

Permit Fee: 33,000

To be paid in full without any contingencies or protest, on or before the Building Inspector approves the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.

The undersigned acknowledges the fees as estimated above and outlined in the City of Saratoga Springs Water Ordinance and Resolution, section 12, printed on the reverse side of this document.

The undersigned represents to the City that they have full and complete authority to execute this document and find and commit the developer to pay fee(s) as required by the City Water Ordinance. This agreement shall be binding on all of the undersigned transferees.

The undersigned acknowledges that a copy of this document will be delivered to all appropriate and necessary governmental entities, and the undersigned further acknowledges that it shall pay as provided herein.

Authorized Signature: _____ Company Name: John-Paul Builders, LLC
Company Address: 796 Burdeck Street, Schenectady, NY 12306
Phone Number: 518-356-1435 Date: 06-23-2016

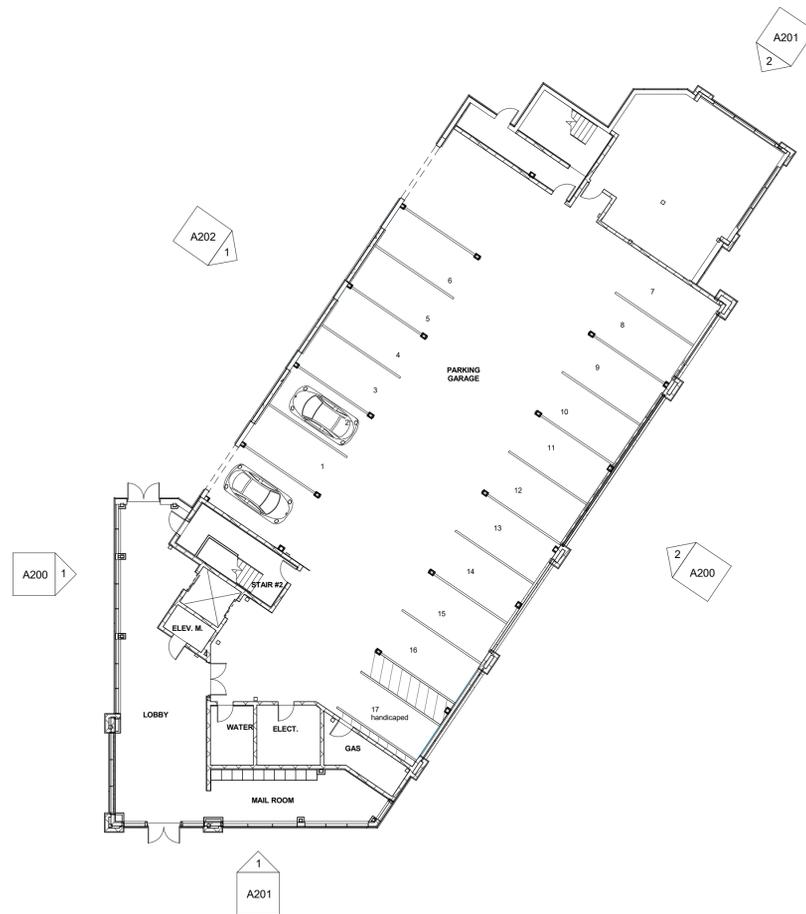
Department of Public Works Approval: _____ Date: _____

Rev Account – WATCON

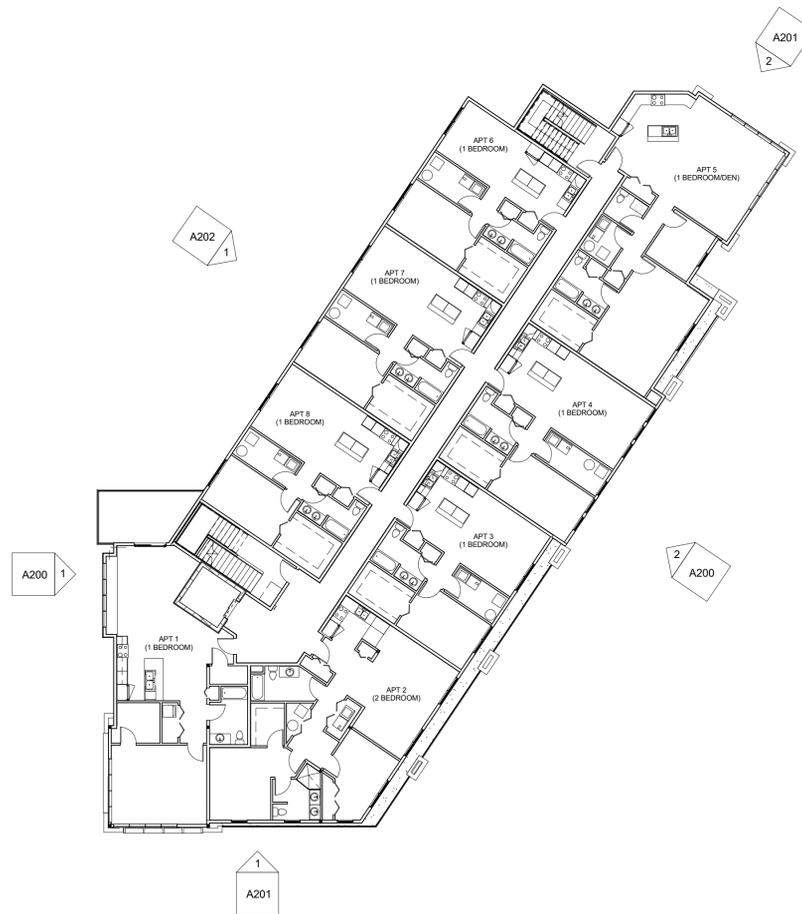
12. ...

There shall also be a service connection fee with the following provisions:

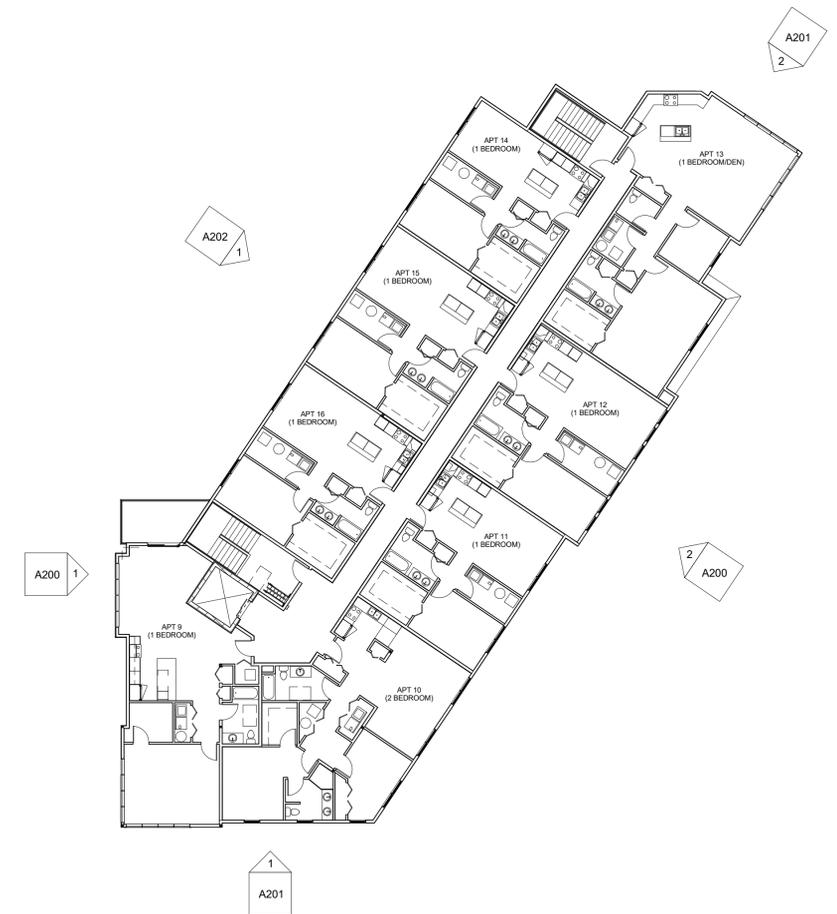
- A. Any new service connections (3/4 inch and 1 inch taps) to the City's water system shall be a minimum of \$3,000.00 (three thousand dollars) per unit. Unless waived, the service connection fee must be paid in full on or before the Building Inspector approves the rough plumbing, including the installation of the water meter, or at the time of the issuance of a tapping permit.
- B. Any new service connection for either:
 - 1. Non-residential use (greater than a 1 inch tap) shall be estimated to use more than one (1) unit of water per year shall be charged a minimum service connection fee of three thousand dollars (\$3,000) for the first unit of water and **two thousand dollars (\$2000)** for each additional unit of water or part thereof; or
 - 2. Residential use where more than one residential dwelling per parcel is served by a single service connection shall be charged a minimum service connection fee of three thousand dollars (\$3,000) for the first dwelling and **two thousand dollars (\$2,000)** for each additional dwelling unit.
- C. A unit of water shall be defined as fourteen thousand (14,000) cubic feet of water per year.
- D. Any project that improves the City's water distribution system at the sole cost of a developer, the cost of the improvement by the developer will be deducted from the cost of the service connection fee. If the cost of the improvement is greater than the cost of the service connection, then no service connection fee will be charged. To be considered for eligibility, the diameter of the watermain installed must be 12" or greater.
- E. Exemptions to these new service connection fees will be all properties within Water's Edge at Saratoga Lake Planned Unit Development District not to exceed 304 units (amended June 6, 1998), Phase I and II of the Meadowbrook subdivision and existing homes in the Knoll Spring Park water district. Also, credit for 69 taps will be credited to Interlaken Phase "B" (Regatta View). The exemptions for these projects will be granted due to the fact that the cost to extend the infrastructure of the City to these projects was not borne by the City and are of greater cost than the service connection fee. Also exempt shall be all connections made to that portion of the Doten Avenue and East Broadway water line financed by federal funds because federal regulations prohibit the imposition of a service connection fee. Also exempt shall be the pre-existing homes defined in the Gilbert Road/Meadowbrook Road Special Assessment District.
- F. Taps that are to be used solely for sprinkler system and fire protection will not be affected.
- G. 1.) A Low Income House shall be defined as any new residential house and lot whose agreed to selling price is \$120,000 or less or any existing residential house and lot whose appraised value is \$120,000 or less. Proof of price or value has to be provided by documents from the lending institution or a certified appraiser.
2.) All dwellings meeting the above stated requirements shall be considered Low Income Housing and subject to a service connection fee of \$500 (five hundred dollars) per house. All other conditions remain the same. Low Income Housing price will be determined on an annual basis by increasing rate of Consumer Price Index for this region.
3.) If a Low Income House is sold within five (5) years of the installation of a new service connection at a price that is greater than the definition of a Low Income House at that time, the seller will be responsible to pay the City the full cost of a service connection fee.
- H. Anyone constructing a house on speculation will be charged the full service connection fee that is applicable at the time. When proof of price is submitted, a rebate will be issued if warranted, to be determined by the Commissioner of Public Works.
- I. All monies raised by the new service connection fees are to be maintained in a dedicated fund for capital improvements under the control of the Commissioner of Public Works. The monies are not to be used for maintenance, or the reduction of water rates.



① Level 1 (GROUND LEVEL PARKING)
1/16" = 1'-0"



② LEVEL 2
1/16" = 1'-0"



③ LEVEL 3
1/16" = 1'-0"

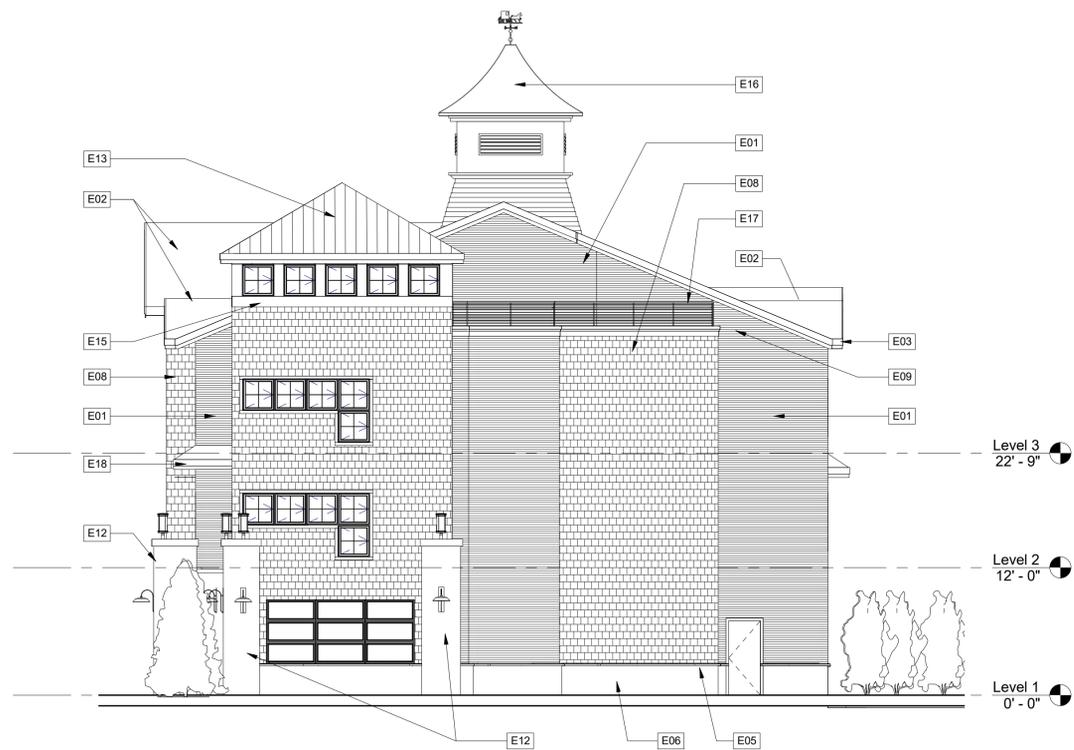


1 NORTH ELEVATION
1/8" = 1'-0"

ELEVATION NOTES	
LABEL	ELEVATION NOTE
E01	"SMARTSIDE" ENGINEERED WOOD LAP SIDING FACTORY FINISHED COLOR TBD
E02	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E03	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E05	CULTURED STONE SILL
E06	CULTURED STONE VENEER TBD
E07	DECORATIVE HEAVY TIMBER BRACKETS, PAINTED COLOR TBD
E08	"SMARTSIDE" ENGINEERED WOOD SHAKE SIDING FACTORY FINISHED COLOR TBD
E09	COLUMNS WRAPED WITH "SMARTSIDE" ENGINEERED WOOD TRIM BORADS FACTORY FINISHED COLOR TBD
E10	FYPON OR EQUAL DECORATIVE ROUND LOUVER & TRIM
E11	DECORATIVE TRUSS & TRIM PAINTED COLOR TBD
E12	CULTURED STONE VENEER PIER WITH CONCRETE CAP
E13	STANDING SEAM METAL ROOF, COLOR TBD
E14	"MIRATEC" AND "EXTIRA" COMPOSITE BOARDS (PANEL & TRIMS) PAINTED, COLOR TBD
E15	"SMARTSIDE" ENGINEERED WOOD TRIM BOARDS FACTORY FINISHED COLOR TBD
E16	CUPOLA (CONTRACTORS OPTION TO BUILD IN PLACE OR INSTALL PREMANUFACTURED UNIT)
E17	CABLE PIPE RAIL WITH PAINTED POSTS COLOR TBD
E18	ROOF CANOPY WITH ASPHALT SHINGLES AND "SMARTSIDE" FASCIA BOARDS & SOFFITS



2 SOUTH (BIKE PATH) ELEVATION
1/8" = 1'-0"



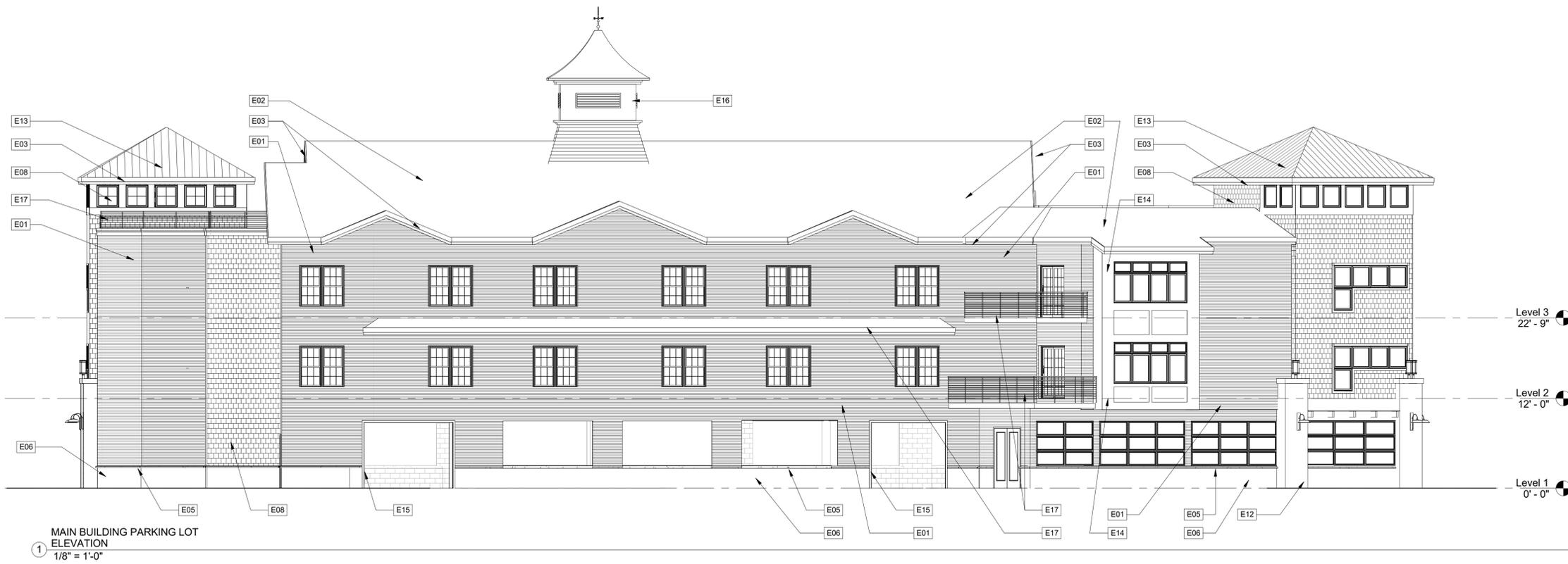
② EAST ELEVATION
1/8" = 1'-0"



① WEST ELEVATION
1/8" = 1'-0"

ELEVATION NOTES	
LABEL	ELEVATION NOTE
E01	"SMARTSIDE" ENGINEERED WOOD LAP SIDING FACTORY FINISHED COLOR TBD
E02	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E03	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E05	CULTURED STONE SILL
E06	CULTURED STONE VENEER TBD
E07	DECORATIVE HEAVY TIMBER BRACKETS, PAINTED COLOR TBD
E08	"SMARTSIDE" ENGINEERED WOOD SHAKE SIDING FACTORY FINISHED COLOR TBD
E09	COLUMNS WRAPED WITH "SMARTSIDE" ENGINEERED WOOD TRIM BORADS FACTORY FINISHED COLOR TBD
E10	FYPON OR EQUAL DECORATIVE ROUND LOUVER & TRIM
E11	DECORATIVE TRUSS & TRIM PAINTED COLOR TBD
E12	CULTURED STONE VENEER PIER WITH CONCRETE CAP
E13	STANDING SEAM METAL ROOF, COLOR TBD
E14	"MIRATEC" AND "EXTIRA" COMPOSITE BOARDS (PANEL & TRIMS) PAINTED, COLOR TBD
E15	"SMARTSIDE" ENGINEERED WOOD TRIM BOARDS FACTORY FINISHED COLOR TBD
E16	CUPOLA (CONTRACTORS OPTION TO BUILD IN PLACE OR INSTALL PREMANUFACTURED UNIT)
E17	CABLE PIPE RAIL WITH PAINTED POSTS COLOR TBD
E18	ROOF CANOPY WITH ASPHALT SHINGLES AND "SMARTSIDE" FASCIA BOARDS & SOFFITS

ELEVATION NOTES	
LABEL	ELEVATION NOTE
E01	"SMARTSIDE" ENGINEERED WOOD LAP SIDING FACTORY FINISHED COLOR TBD
E02	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E03	"SMARTSIDE" ENGINEERED WOOD TRIM FASCIA BOARDS & VENTED SOFFIT FACTORY FINISHED COLOR TBD
E04	"SMARTSIDE" ENGINEERED WOOD TRIM CORNER BOARDS FACTORY FINISHED COLOR TBD
E05	CULTURED STONE SILL
E06	CULTURED STONE VENEER TBD
E07	DECORATIVE HEAVY TIMBER BRACKETS, PAINTED COLOR TBD
E08	"SMARTSIDE" ENGINEERED WOOD SHAKE SIDING FACTORY FINISHED COLOR TBD
E09	COLUMNS WRAPED WITH "SMARTSIDE" ENGINEERED WOOD TRIM BORADS FACTORY FINISHED COLOR TBD
E10	FYPON OR EQUAL DECORATIVE ROUND LOUVER & TRIM
E11	DECORATIVE TRUSS & TRIM PAINTED COLOR TBD
E12	CULTURED STONE VENEER PIER WITH CONCRETE CAP
E13	STANDING SEAM METAL ROOF, COLOR TBD
E14	"MIRATEC" AND "EXTIRA" COMPOSITE BOARDS (PANEL & TRIMS) PAINTED, COLOR TBD
E15	"SMARTSIDE" ENGINEERED WOOD TRIM BOARDS FACTORY FINISHED COLOR TBD
E16	CUPOLA (CONTRACTORS OPTION TO BUILD IN PLACE OR INSTALL PREMENUFACTURED UNIT)
E17	CABLE PIPE RAIL WITH PAINTED POSTS COLOR TBD
E18	ROOF CANOPY WITH ASPHALT SHINGLES AND "SMARTSIDE" FASCIA BOARDS & SOFFITS



Site Plan

246 West Avenue Apartments

City of Saratoga Springs, New York

City PB#

June 23, 2016



Vicinity Map:

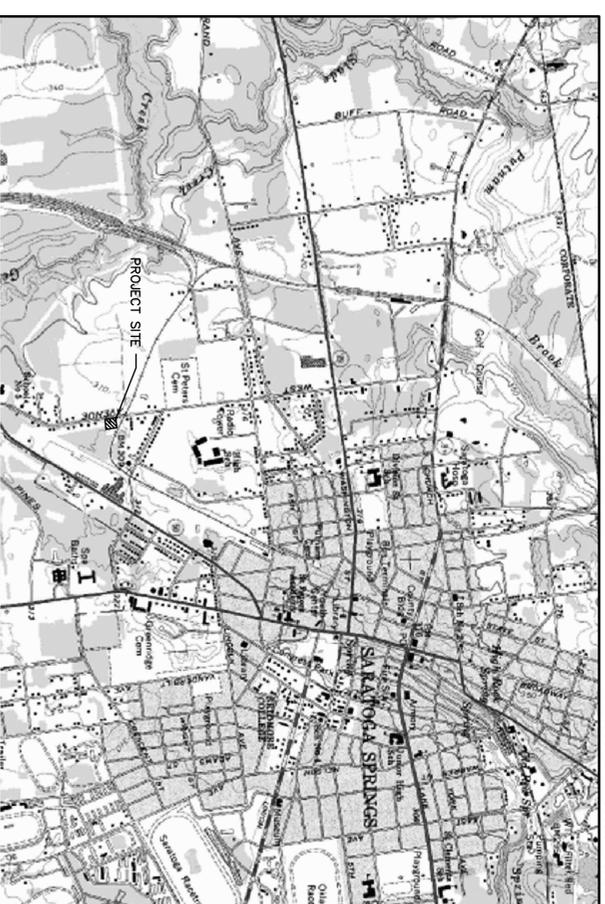
SCALE: NTS



CITY OF SARATOGA SPRINGS STANDARD NOTES

1. All work must conform to all Federal, State and City Codes, specifications, ordinances, rules and regulations.
2. The elevation base for the contours and benchmarks are based on the National Geodetic Vertical Datum, 1929.
3. All refuse, debris and miscellaneous items to be removed shall be legally disposed of off-site by the Contractor to a location approved by the City Engineer.
4. The Contractor must set up a pre-construction meeting with the City Engineer prior to any construction. Construction inspections by the a designated representative of design professional are required. The cost of the construction inspection is the responsibility of the Applicant/Developer.
5. The contractor must obtain a blasting permit from the Building Inspector if any blasting is required for the project.
6. The contractor must obtain a street opening permit issued by the Department of Public Works for any work in the street or right-of-way of any City street, road or alley.
7. All points of construction ingress or egress shall be maintained to prevent tracking or flowing of sediment or debris onto a public road.
8. No Certificate of Occupancy will be issued until all site work has been completed in accordance with the approved plans; and an as-built drawing has been prepared in accordance with the requirements of the City Engineer.
9. The applicant must verify that the proposed project can accommodate the turning movements of any fire truck that the fire department so designates.

SITE STATISTICS	
PROPOSED USE:	16 Apartments
TAX MAP PARCEL NUMBER	178.33-1-20&21
LEASE LOT SIZE	.51 ACRES
EXISTING ZONING	T-4 Urban Neighborhood
BUILDING SETBACKS	REQUIRED
BUILD-TO-LINE	12'-18"
FRONTAGE BUILDOUT	50% MIN.
SIDE SETBACK	12' AVERAGE PRINCIPAL BLDG
REAR SETBACK	6' MIN OUTBUILDING
	24' PRINCIPAL BLDG
	5' MIN OUTBUILDING
BUILDING HEIGHT	2 STORY MIN, 40' MAX HT.
	3 STORY, 40'-0"
PARKING REQUIREMENTS	24 SPACES
RESIDENCES WITHIN T-4 ZONE	24 SPACES
1.5 PER DWELLING UNIT	7 SPACES OUTSIDE BUILDINGS
	17 SPACES WITHIN THE BUILDINGS
	PROPOSED
	12.5'
	63%
	15.5'
	8.02'
	27.07"
	9.34'



Project Location Map:

SCALE: NTS



SHEET INDEX:

L-1	COVER SHEET
L-1	BOUNDARY AND TOPOGRAPHIC SURVEY
L-2	SITE DEMOLITION AND PREPARATION PLAN
L-2	SITE LAYOUT AND MATERIALS PLAN
L-3	SITE GRADING AND DRAINAGE PLAN
L-4	SITE UTILITY PLAN
L-4.1	OFF-SITE WATERLINE CONNECTION
L-5	SITE LANDSCAPE PLAN
L-6	SITE LIGHTING PLAN
L-7	SITE DETAILS
L-8	SITE DETAILS
L-9	SITE DETAILS
L-10	SITE DETAILS
L-11	STORMWATER DETAILS
L-12	SITE DETAILS

Applicant:

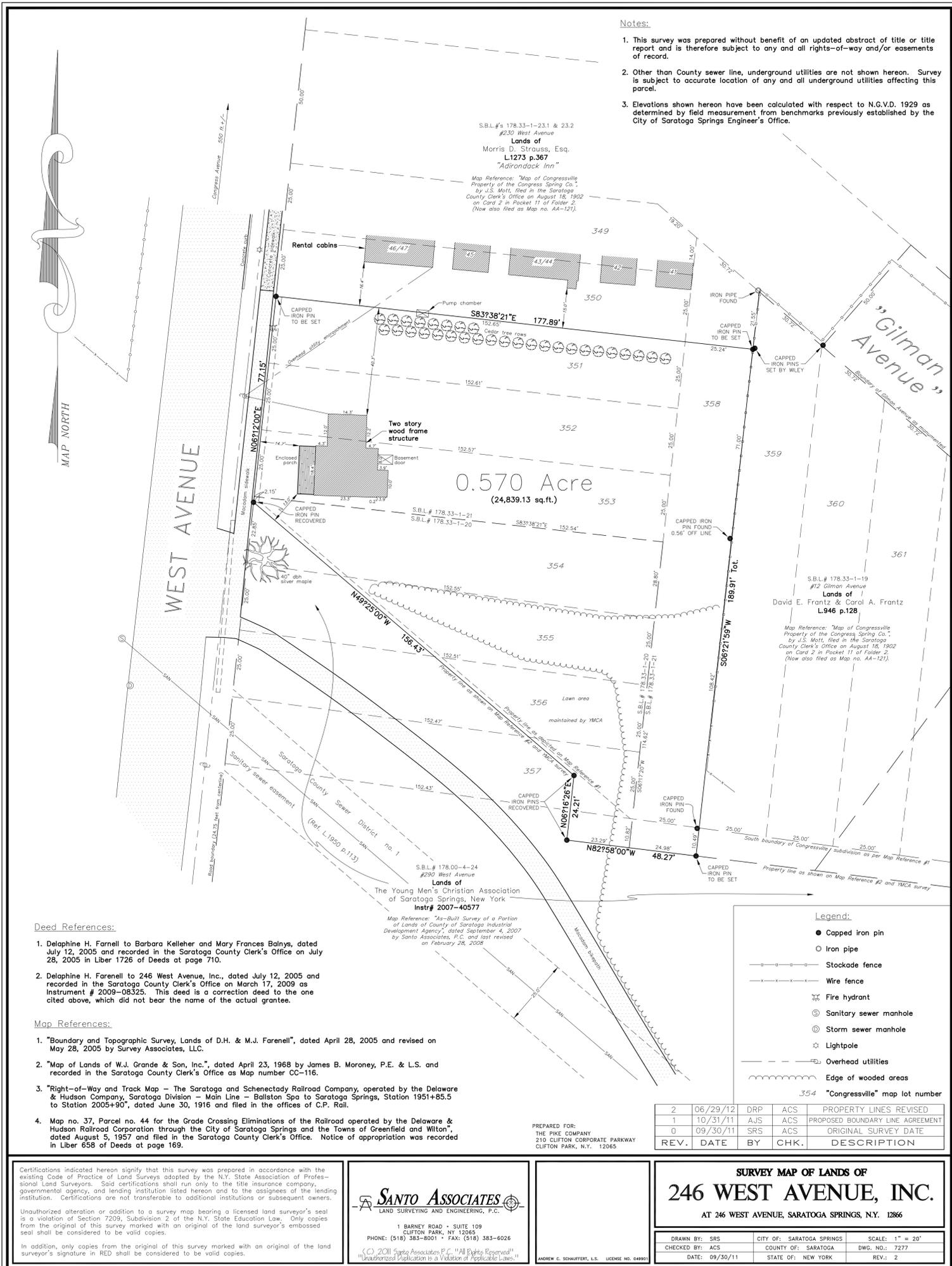
John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306

Prepared By:

the LA group
Landscape Architecture
and Engineering, P.C.

40 Long Alley
Saratoga Springs
New York 12866
518/567-8100
Telefax 518/567-0180

Approval _____
Approved under authority of a resolution adopted
by the Planning Board of the City of Saratoga Springs
Chairperson _____
Date Signed _____



Certifications indicated hereon signify that this survey was prepared in accordance with the existing Code of Practice of Land Surveys adopted by the N.Y. State Association of Professional Land Surveyors. Said certifications shall run only to the title insurance company, governmental agency, and lending institution listed hereon and to the assignees of the lending institution. Certifications are not transferable to additional institutions or subsequent owners.

Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of Section 7209, Subdivision 2 of the N.Y. State Education Law. Only copies from the original of this survey marked with an original of the land surveyor's embossed seal shall be considered to be valid copies.

In addition, only copies from the original of this survey marked with an original of the land surveyor's signature in RED shall be considered to be valid copies.

SANTO ASSOCIATES
 LAND SURVEYING AND ENGINEERING, P.C.

1 BARNEY ROAD • SUITE 109
 CLIFTON PARK, NY 12065
 PHONE: (518) 383-8001 • FAX: (518) 383-6026

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PREPARED FOR:
 THE PIKE COMPANY
 210 CLIFTON CORPORATE PARKWAY
 CLIFTON PARK, N.Y. 12065

SURVEY MAP OF LANDS OF
246 WEST AVENUE, INC.
 AT 246 WEST AVENUE, SARATOGA SPRINGS, N.Y. 12866

DRAWN BY: SRS CITY OF: SARATOGA SPRINGS SCALE: 1" = 20'
 CHECKED BY: ACS COUNTY OF: SARATOGA DWG. NO.: 7277
 DATE: 09/30/11 STATE OF: NEW YORK REV.: 2

**SITE PREPARATION &
DEMOLITION NOTES:**

- ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED, THAT ARE NOT TO BE STOCKPILED FOR LATER USE ON THE PROJECT OR DELIVERED TO THE OWNER, SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS APPLICABLE, AND REUSED AS DIRECTED BY THE OWNER OR LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
- CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL TO FULL DEPTH WITHIN LIMIT OF GRADING BEFORE COMMENCING EXCAVATION AND GRADING OPERATIONS. TOPSOIL SHALL NOT BE REMOVED FROM THE SITE, UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS THAT ARE DUE TO CONTRACTOR OPERATIONS AND WHICH ARE OUTSIDE THE LIMIT OF WORK.
- THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY AND PAY ALL ASSOCIATED COSTS.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS. ANY MUD ON PUBLIC WAYS ORIGINATING FROM THE JOB SITE SHALL BE CLEANED BY THE CONTRACTOR DAILY.
- CONTRACTOR SHALL SECURE ALL PERMITS THAT MAY BE REQUIRED FROM ALL JURISDICTIONS AFFECTED BY THIS WORK.
- ANY TREE AND SHRUB REMOVAL SHALL INCLUDE THE FILLING, CUTTING, GRUBBING OUT OF ENTIRE ROOT SYSTEM AND SATISFACTORY OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS, VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED THROUGH THE REMOVAL OPERATIONS.
- CONTRACTOR SHALL APPLY FOR AND OBTAIN DEMOLITION PERMIT FROM CITY PRIOR TO ANY DEMOLITION WORK ON-SITE. EXISTING WATER AND SEWER CONNECTIONS MUST BE DEMONSTRATED TO CITY ENGINEER.

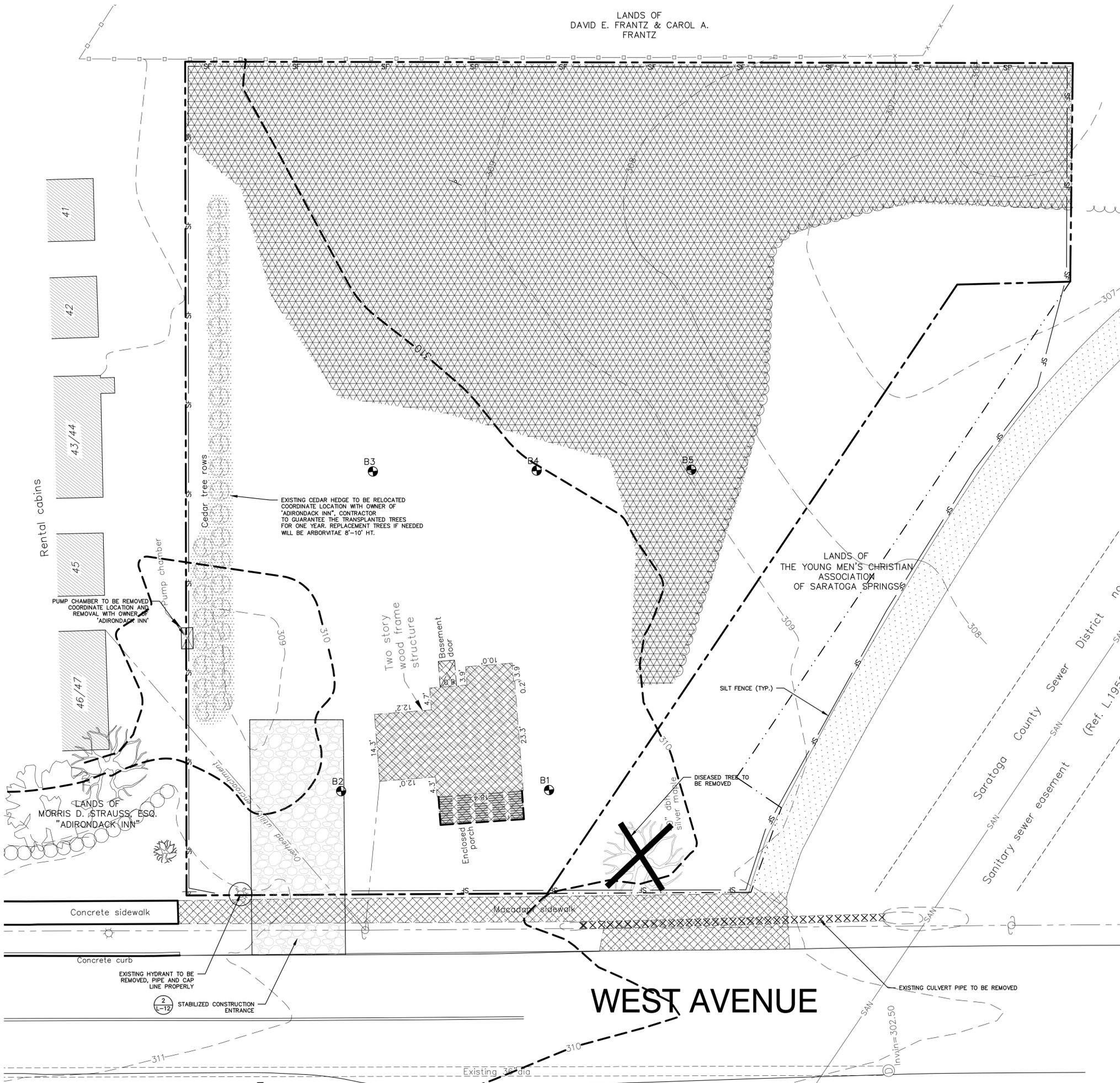
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Design MCB
Drawn MCB
Checked CMI

PREPARED FOR:
John-Paul Builders, LLC
796 Burdett Street
Schenectady, NY 12306

246 WEST AVENUE APARTMENTS
SARATOGA SPRINGS, NY
Title
SITE DEMOLITION AND PREPERATION PLAN

Revisions
City #: 201178
Project: 6/23/2016
Date: 6/23/2016
Drawing
L-1



BORING RESULTS FROM GEOTECHNICAL EVALUATION FOR PROPOSED OFFICE COMPLEX: PREPARED BY, DENTE ENGINEERING: APRIL 2005

BORING 1:
0-8" TOPSOIL
8"-96" BROWN F-M SAND, TRACE SILT: WET AT 84"
96"-21' GRADES F-C SAND, LITTLE FINE GRAVEL, TRACE SILT
21"-26' GRADES DARK GRAY
26"-31' GRADES GRAY FINE SAND, TRACE SILT
31"-46' GRAY F-M SAND, SOME SILT
46"-51' GRADES SILT, TRACE FINE SAND
51"-52' GRADES FINE SAND, TRACE SILT

BORING 2:
0-10" TOPSOIL
10"-60" BROWN F-M SAND, TRACE SILT
60"-84" BROWN FINE SAND & SILT WITH PARTINGS FINE SAND, TRACE SILT
84"-17' FROWN F-C SAND, TRACE TO LITTLE FINE GRAVEL, TRACE SILT: WET AT 84"

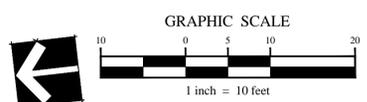
BORING 3:
0-12" TOPSOIL BECOMES BROWN F-M SAND TRACE SILT
12"-9" DARK BROWN F-M SAND, TRACE SILT: WET AT 9"
9"-16' BROWN F-C SAND, TRACE TO LITTLE FINE GRAVEL, TRACE SILT
16'-17' BECOMES GRAY SAND

BORING 4:
0-12" TOPSOIL BECOMES BROWN F-M SAND, TRACE SILT
12"-96" BROWN F-M SAND, TRACE SILT
96"-10' MOTTLED SILT, SOME FINE SAND: WET AT 10'
10"-16' BROWN F-C SAND, TRACE SILT
16'-17' GRADES TRACE FINE GRAVEL

BORING 5:
0-8" TOPSOIL
8"-84" BROWN F-M SAND, SOME SILT TRACE GRAVEL: POSSIBLE FILL: WET AT 60"
84"-16' BROWN F-C SAND TRACE GRAVEL & SILT
16'-17' BECOMES GRAY/BROWN SAND

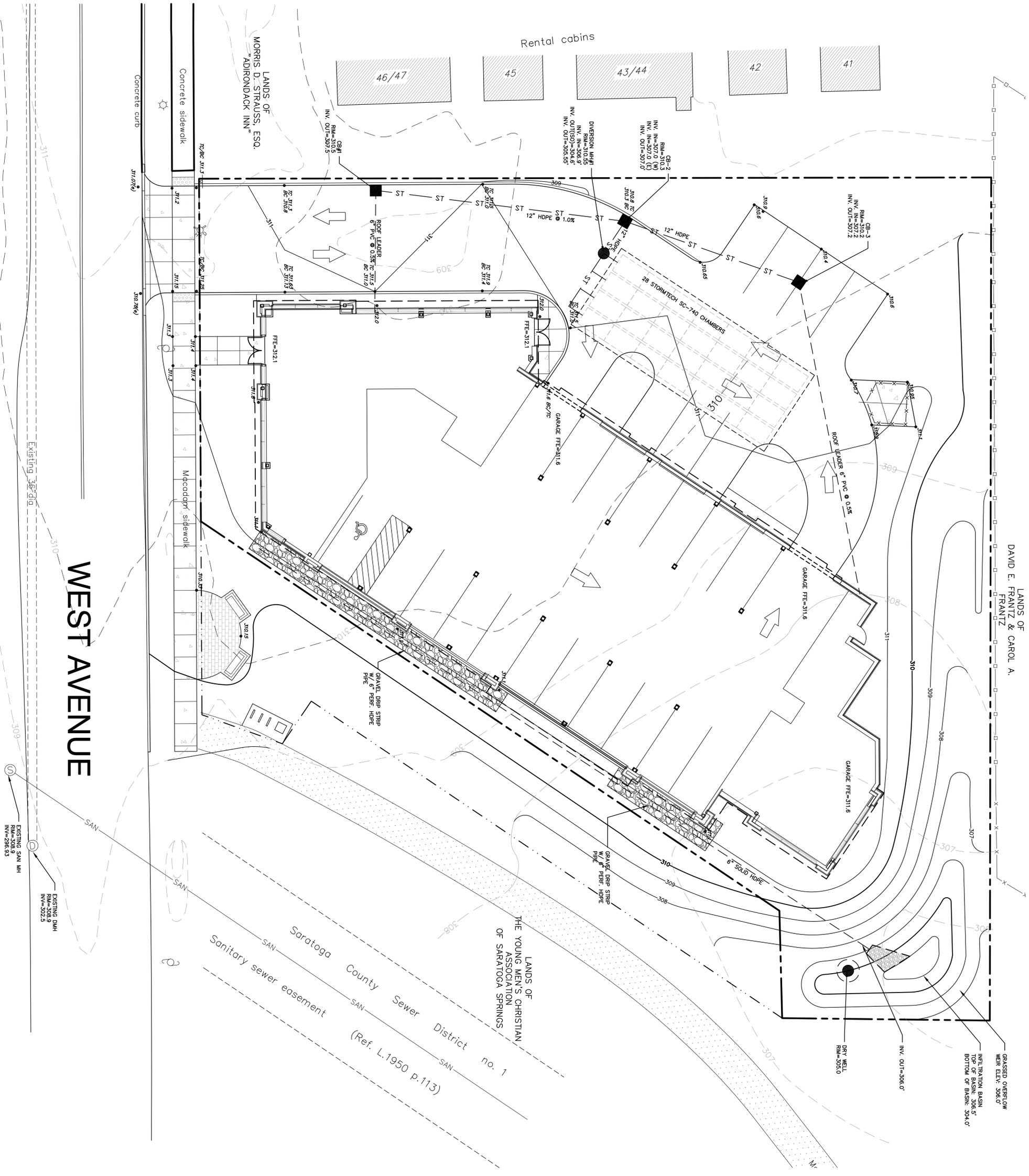
LEGEND

- EXISTING BUILDING OR PAVEMENT TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- SILT FENCE TYP. (L-17)



Approval
Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
Date Signed _____
Chairperson

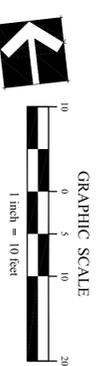
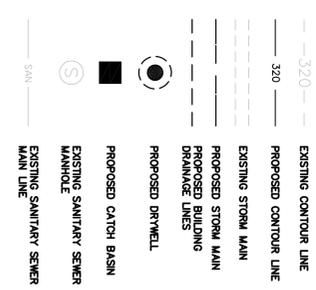
Prepared By: ANDREW LONGACKE
Date: 6/23/2016 11:58 AM
Drawing: 06/23/2016 11:58 AM, West_Ave_2462017180001.dwg



LANDS OF
 DAVID E. FRANITZ & CAROL A.
 FRANITZ

WEST AVENUE

- GRADING NOTES**
1. SURVEY INFORMATION PROVIDED BY SAITO ASSOCIATES, LAND SURVEYING AND ENGINEERING, P.C. HAS BEEN USED IN FIELD SURVEY CONDUCTED SEPTEMBER 30, 2011.
 2. ALL GRADES SET IN THE FIELD SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
 3. THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE.
 4. THE CONTRACTOR SHALL VERIFY PROPOSED GRADES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
 5. THE CONTRACTOR SHALL PROVIDE DUST AND EROSION CONTROL, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
 6. ALL TILT SLOPES 3:1 OR GREATER SHALL RECEIVE BIO-DEGRADABLE FABRIC OR APPROVED EQUAL FOR EROSION CONTROL, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
 7. THE CONTRACTOR SHALL BLEND ALL NEW EXISTING EARTHWORK PROVIDE SMOOTH ROUNDED TRANSITIONS AT ALL TOP AND BOTTOM OF SLOPES.



Approval: _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed: _____
 Chairperson: _____



the LA group
 Landscape Architecture
 and Engineering, PC
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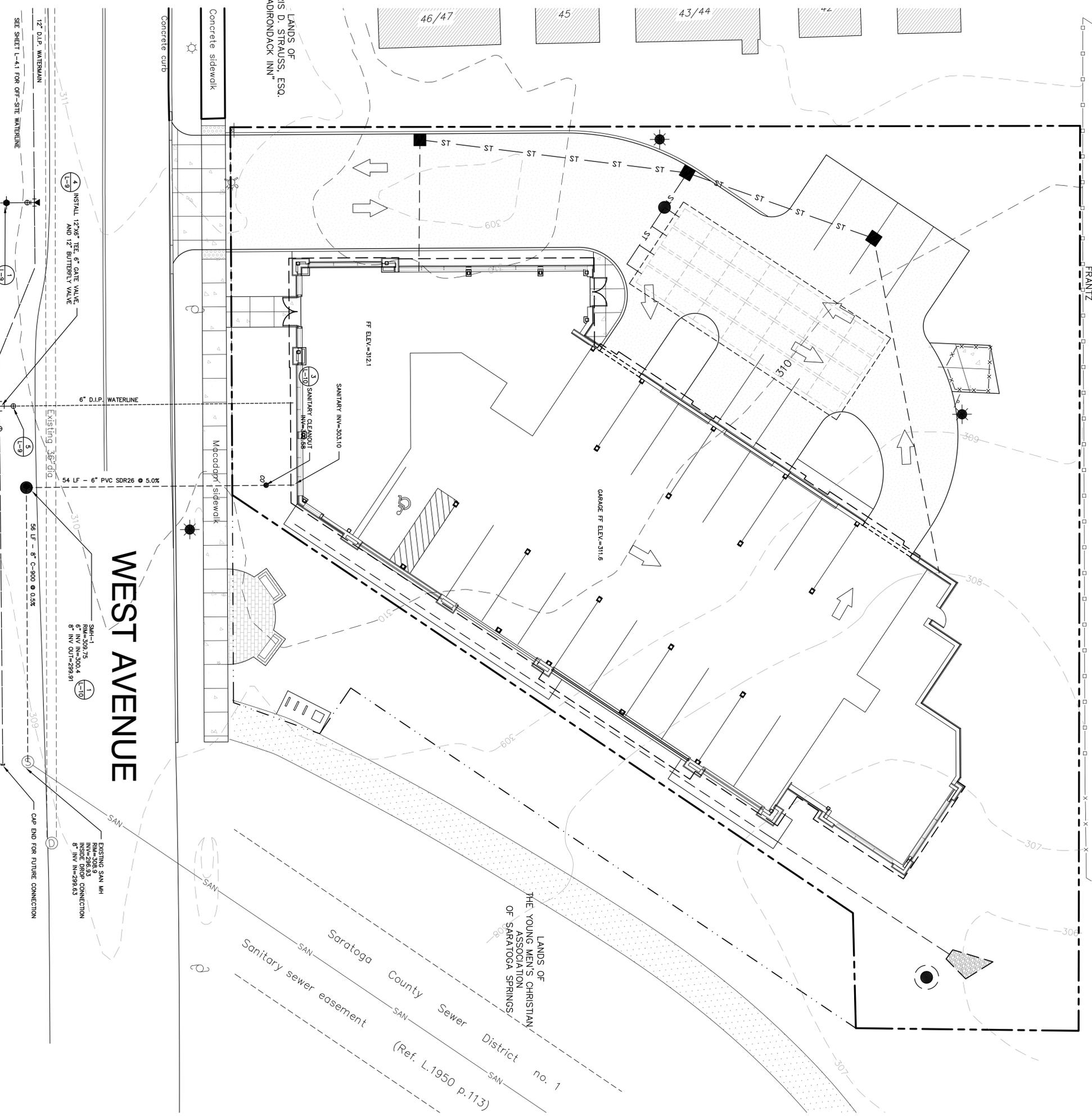
Design: MCB
 Drawn: MCB
 Checked: CMI

PREPARED FOR:
 John-Paul Builders, LLC
 796 Burdeck Street
 Schenectady, NY 12306

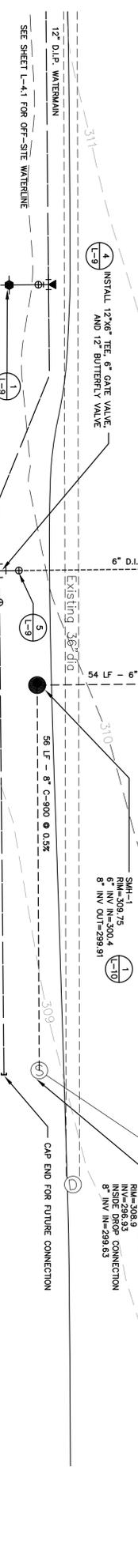
246 WEST AVENUE APARTMENTS
 SARATOGA SPRINGS, NY

Title: **SITE GRADING AND DRAINAGE PLAN**

Revisions: _____
 City #: 201178
 Project #: 623/2016
 Date: _____
 Drawing: **L-3**



WEST AVENUE



WATER SYSTEM NOTES

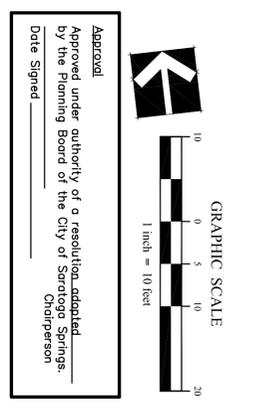
- A. The location of underground utilities shown on this plan is based on records and field investigation. It may not be shown. The Contractor shall contact U.F.P.O. (1-800-982-7962) and the proper local authorities or respective utility company having jurisdiction to field verify the location of all utilities. The Contractor shall be responsible for any damage to existing utilities. Any costs incurred by the Contractor due to failure to contact the proper authorities shall become the responsibility of the Contractor.
- B. Extend designated limit of work as necessary to accomplish site utility work as required by these Drawings and Specifications.
- C. Water Service lines 4-inch and larger:
 1. Pipe and Fittings
 - a. Ductile Iron Pipe: Class 52, ANSI/AWWA C151/A21.51
 - b. Mechanical joint fittings: ANSI standard A21.10 and A21.11 (AWWA C10 and C11) Class 350.
 2. Couplings
 - a. Double cement mortar lining on interior and coal tar seal ANSI/AWWA C109/A21.11
 3. Joints
 - a. Conforming with ANSI/AWWA C111/A21.11
 - b. Pipe - push on joint
 - c. Fittings - mechanical joint, plain rubber
 - d. Fittings - Tapered with resumer glands having steel set screws.
 4. Valve Boxes
 - a. Cast from two piece valve box as manufactured by Clay (Model F2451), or approved equal.
 - b. Cast from one piece valve box as manufactured (F2460), or approved equal, and be clearly marked "Water".
 5. Anchorage
 - a. Concrete thrust blocks must be used at all changes in direction of flow or grade, and at all tees, caps, fittings, hydrants and plugs.
- D. Water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch):
 1. Pipe
 - a. Copper water tube, type K, soft temper for underground service.
 2. Corporation Stops
 - a. Mueller H-15008 with AWWA inlet threads or approved equal. 1 1/2-inch and larger must be used with tapping sleeve.
 3. Cap-stop
 - a. Mueller H-15209 or H-15219 curb-stops, non-draining or approved equal.
- E. Fire hydrants shall be Mueller A-423 compression-type hydrant, or approved equal having the following features:
 1. Valves - Mueller A-2380-20
 - a. All valves under 12-inches in diameter shall be mechanical joint resilient wedge (R/W).
 - b. R/W valves, 3-inches and larger shall be AWWA C509. Gland bolts shall be zinc coated steel.
 - c. All valves shall have a maximum working pressure of 200 psi.
 - d. All valves shall have mechanical joint ends conforming to ANSI A21.10/A21.11
 - e. Valves shall open right (clockwise) with an arrow cast on it showing the direction of opening. Each valve shall be furnished complete with necessary nuts, bolts, studs and gaskets.
 2. Butterfly Valves - Mueller Lineval III
 - a. With the exception of tapping valves, all valves 12-inches in diameter and larger shall be Mueller, or approved equal, butterfly valves.
 - b. Butterfly valves shall be furnished with a cast iron body, bronze mounted, 360-degree rubber seat with stainless steel shaft conforming to AWWA C504. Gland bolts shall be zinc coated steel.
 - c. All valves shall have a minimum working pressure rating of 200 psi.
 - d. All valves shall have mechanical joint ends conforming to ANSI A21.10, A21.11 with a standard 2-inch square operating nut with arrow cast on it showing the direction of opening.
 - e. The valve shall be furnished complete with necessary nuts, bolts, studs, and gaskets which conform to AWWA C-110, AWWA C-111.
 3. Fire hydrants shall be Mueller A-423 compression-type hydrant, or approved equal having the following features:
 - a. 5 1/4-inch valve opening with a 6-inch inlet.
 - b. Two (2) 2 1/2-inch hose nozzles and one (1) 4" operating nut shall be national standard.
 - c. Pentagon shaped, 1/8-inch point to flat.
 - d. Break flange - traffic type construction.
 - e. Hydrants one to be painted a minimum of one industrial enamel as per paint schedule.
 - f. Hydrants cover depth below finished grade of 5'-0".
- F. Water mains and services shall be installed at a minimum cover depth below finished grade of 5'-0".
- G. Chlorination, pressure and leakage tests of water mains shall be in accordance with the specifications, NYSOEH regulations, and AWWA Standards and shall be performed under the supervision of a NYSOEH approved laboratory. Bacteria examination after disinfection at a NYSOEH approved laboratory will take place prior to turning water main over to the Owner.
- H. Water valve boxes, existing structure firms, new structure firms, etc., shall be adjusted to conform to new finished pavement grades unless otherwise noted and/or directed by Owner's Representative.

LEGEND

- 320- EXISTING CONTOUR LINE
- 320- PROPOSED CONTOUR LINE
- - - EXISTING STORM MAIN
- - - PROPOSED STORM MAIN
- - - EXISTING BUILDING DRAINAGE LINES
- - - PROPOSED DRYWELL
- PROPOSED CATCH BASIN
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MAIN LINE
- PROPOSED SANITARY SEWER MAIN LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE

SEWER SYSTEM NOTES

1. Installation of polypropylene plastic (PP) sewer pipe shall be in accordance with manufacturer's installation recommendations, and in accordance with ASTM D 2321.
2. Manhole frames and covers shall be Campbell Foundry Co. pattern No. 12023 or approved equal. The cover shall be cast iron with a minimum weight of 100 lbs. Provide (4) 7/8" dia. vent holes in cover. Sanitary sewer.
3. Sanitary sewer manholes shall be precast reinforced concrete with a minimum depth of 4'-0" below finished floor. Top section shall be pre-cast with integral floor. Top section shall be required. Steps of cast-in-place concrete shall be installed to provide a minimum depth of 4'-0" below finished floor. Connection shall be "Press-Wedge" II seat, or approved equivalent.
4. All sewer piping and fittings shall conform to the Standard Specifications for PVC pipe, ASTM designation D-3034-79 or latest revision and to the dimensions and push-on joints.
5. Product data, information and shop drawings for materials to be used shall be submitted to the Architect for review and approval by the Architect prior to the placement of any orders for solid materials.
6. Leaksage outward or inward shall not exceed 200 gallons per inch of pipe diameter per mile per day for any section of the system. Leakage test shall be performed with a minimum positive head of 2 feet.



Approval: _____
Approved under authority of a resolution, adopted by the Planning Board of the City of Saratoga Springs.
Date Signed: _____
Chairperson



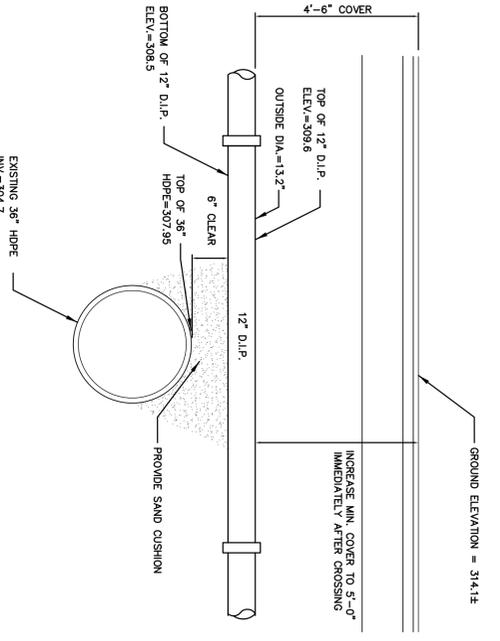
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Design: MCB
Drawn: MCB
Checked: CMI

PREPARED FOR:
John-Paul Builders, LLC
796 Burdeck Street
Schenectady, NY 12306

WATER SYSTEM NOTES

- A. The location of underground utilities shown on this plan shall be as shown. The Contractor shall contact U.P.O. (1-800-982-7892) and the proper local authorities or the utility company having jurisdiction to help verify the location of all utilities before commencing any work. Any costs incurred by the Contractor due to failure to contact the proper authorities shall become the responsibility of the Contractor.
- B. Extend designated limit of work as necessary to accomplish site utility work as required by stress drawings and specifications.
- C. Water service lines 4-inch and larger:
 1. Pipe and fittings
 - a. Ductile Iron Pipe: Class 52, ANSI/AWWA C151/A21.51
 - b. Mechanical Joint fittings: ANSI standard A21.10 and A21.11 (AMWA C110 and C111) Class 350.
 2. Coatings
 - a. Double cement mortar lining on interior and coal tar epoxy on exterior of pipe in accordance with ANSI/AWWA C104/A21.11
 3. Joints
 - a. Conforming with ANSI/AWWA C111/A21.11
 - b. Pipe - push on joint.
 - c. Fittings - mechanical joint, plain rubber gaskets.
 - d. Fittings - mechanical joint, plain rubber gaskets with rubber gaskets having steel set screws.
 4. Valve Boxes
 - a. Cast Iron Two piece valve box as manufactured by Clay (Model T2451), or approved equal.
 - b. Cast Iron Two piece valve box as manufactured by F2490), or approved equal, and be clearly marked "Water".
 5. Anchorage
 - a. Concrete thrust blocks must be used at all all tees, caps, fittings, hydrants and plugs, and at all water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch).
- D. Water service lines 2 1/2-inch and smaller (no line shall be smaller than 3/4-inch):
 1. Pipe
 - a. Copper water tube, Type K, soft temper for underground service.
 2. Cooperation Stops
 - a. Mueller H-1500B with AWWA inlet threads or approved equal.
 - b. Valve: 1 1/2-inch and larger must be used with tapping sleeve.
 3. Curb-stop
 - a. Mueller H-1920S or H-15219 curb-stops, non-draining or approved equal.
 4. Couplings
 - a. Mueller H-15403 110 compression connections or approved equal, three part union for copper-to-copper type construction.
 5. Curb-box
 - a. Mueller H-10314
 - b. Extension type with orth pattern base or approved equal.
 - c. Staircase (Mueller or approved equal).
 - d. Stationary rod
 - E. Valves, Hydrants, etc.:
 1. Valves - Mueller A-2360-20
 - a. All valves under 12-inches in diameter shall be mechanical joint water (R/W) valves.
 - b. R/W valves, 3-inches and larger, shall be iron body, non-rising stem conforming to AWWA C504. All valves shall have a minimum working pressure rating of 200 psig.
 - c. All valves shall have mechanical joint ends.
 - d. Valves shall open right (clockwise) with a standard 2-inch square operating nut with arrow cast on it showing the direction of opening.
 - e. All valves shall be equipped with a mechanical necessary nuts, bolts, studs and gaskets.
 2. Butterfly Valves - Mueller Unseal III
 - a. With the exception of tapping valves, all valves shall be Mueller, or approved equal, butterfly valves.
 - b. Butterfly valves, 12-inches and larger, shall be iron body, bronze mounted, 360-degree rubber lined, with a minimum working pressure rating of 200 psig.
 - c. All valves shall have a minimum working pressure rating of 200 psig, mechanical joint ends conforming to ANSI A21.10, A21.11.
 - d. Valves shall open right (clockwise) with a standard 2-inch square operating nut with arrow cast on it showing the direction of opening.
 - e. The valve dash shall hold at any position.
 - f. The valve shall be equipped with a mechanical stop to prevent overtravel.
 - g. Each valve shall be furnished complete with necessary nuts, bolts, studs and gaskets which conform to AWWA C-110, AWWA C-111.
 3. Fire Hydrants shall be Mueller A-403 compression-type hydrants, or approved equal having the following features
 - a. 5 1/4-inch valve opening with a 6-inch inlet.
 - b. Two (2) 2 1/2-inch hose nozzles and one (1) 4" Storz pumper nozzle, national standard thread.
 - c. Operating nut shall be national standard.
 - d. Break tongue - traffic type construction.
 - e. Open right (clockwise).
 - f. Hydrants are to be painted a minimum of one coat of red primer and one coat of white industrial enamel as per paint schedule.
 - F. Water mains and services shall be installed at 5'-0" minimum cover depth below finished grade of 5'-0".
 - G. Obstruction, pressure and leakage tests of water mains shall be performed in accordance with applicable regulations, and AWWA Standards and shall be performed under the supervision of the Owner's Representative and City Engineer. Bacteria examination and distribution of a NIOSH approved laboratory will be done prior to turning water main over to the Owner.
 - H. Water valve boxes, including structure fire, new structure fire, etc., shall be adjusted to conform to new finished pavement grades unless otherwise noted and/or directed by Owner's Representative.



1 WATER AND STORM DRAIN CROSSING DETAIL
SCALE: NTS

SEWER SYSTEM NOTES

1. Installation of polyvinyl chloride plastic (PVC) sewer pipe shall be in accordance with manufacturer's recommendations, and in accordance with ASTM D 2221.
2. Manhole frames and covers shall be Compulac Roundtop Co. (Model 2023) or approved equal, and shall be installed in accordance with "City of Saratoga Springs Sanitary Sewer" Provide (4) 7/8" dia. vent holes in cover.
3. Sanitary sewer manholes shall be precast reinforced concrete, complying with ASTM C 478. Base section to be pre-cast with integral floor. Top section shall be required. Steps of coarser polypropylene integrally cast into the manhole sidewalls. Pipes to manhole connection shall be Press-Wedge II steel, or approved equivalent.
4. All sewer piping and fittings shall conform to the Standard Specifications for PVC pipe, ASTM designation D 3034, with a minimum wall thickness of 1/2 inch and a tolerance of classification SDR-26 with single gasket push-on joints.
5. Product data information and shop drawings for materials proposed for use by the contractor shall be submitted to and approved by the Architect prior to the placement of materials. Copy City Engineer on shop drawings/submitals.
6. Leakage outward or inward shall not exceed 200 gallons per day per linear foot of pipe for a 24-hour test section of the system. Leakage test shall be performed with a minimum positive head of 2 feet.

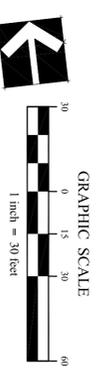
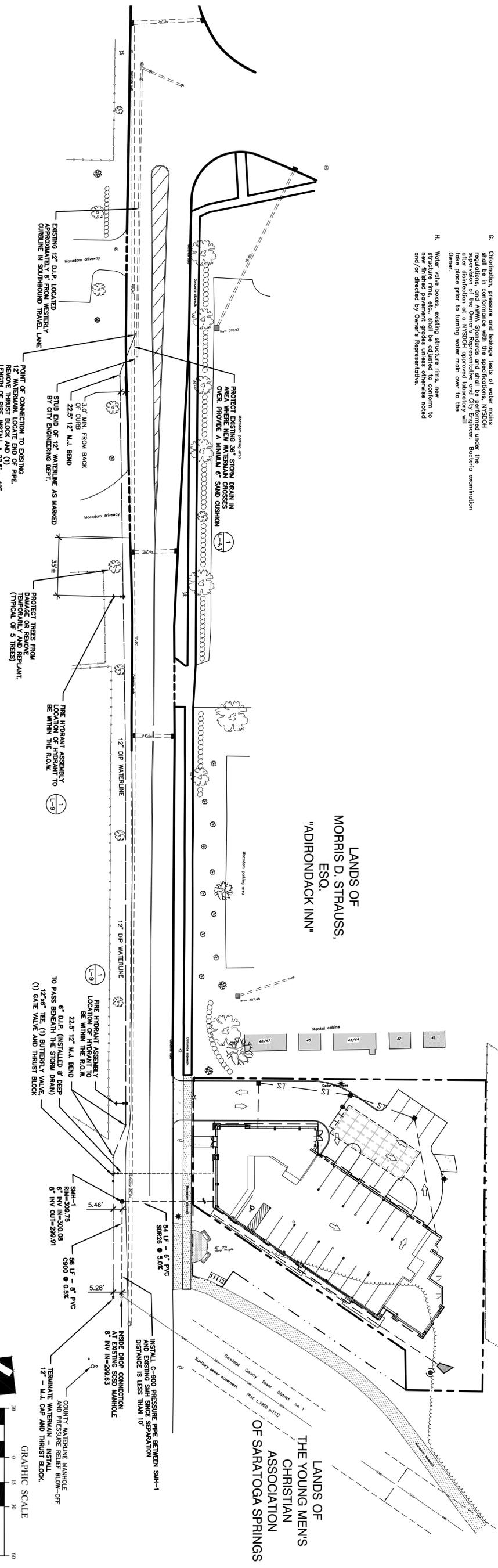
NOTES PER SARATOGA COUNTY SEWER DISTRICT

1. SDR 26 PIPE WITH SDR 26/25 FITTINGS WILL BE USED FOR SERVICE LATERALS.
2. THE CONTRACTOR WILL CONTACT SDRS 26/25 AT LEAST 48 HOURS BEFORE CONSTRUCTION BEGINS.
3. NO DISCHARGE OF FLOWS WILL BE ALLOWED UNTIL FINAL APPROVAL OF THE PROJECT HAS BEEN GRANTED.

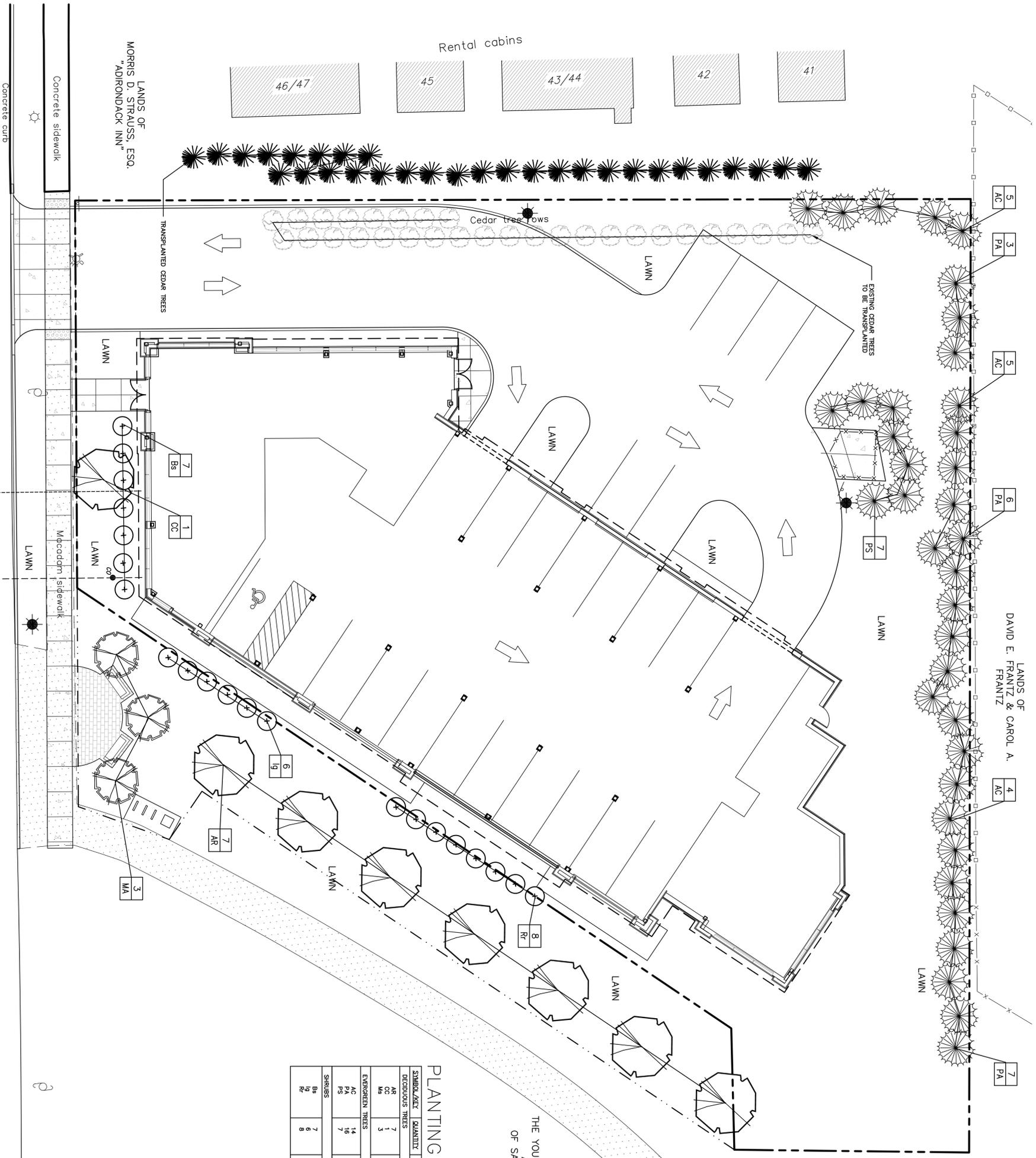
LANDS OF
DAVID E. FRANTZ &
CAROL A. FRANTZ

LANDS OF
MORRIS D. STRAUSS,
ESQ.
"ADIRONDACK INN"

LANDS OF
THE YOUNG MEN'S
CHRISTIAN
ASSOCIATION
OF SARATOGA SPRINGS



Approval _____
Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
Date Signed _____
Chairperson _____



WEST AVENUE

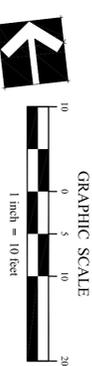
PLANTING SCHEDULE

SYMBOL/ACCT	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS TREES						
AR	7	Acer rubrum Red Sunset	Red Sunset Red Maple	2 1/2" - 3" cal	B & B	
CC	3	Cornus fragilis Inermis	Hamamelis, cockspur hawthorn	2 1/2" - 3" cal	B & B	Use small tree from zoning because of fragrant leaves
MA	3	Malus 'Sargento'	Crabapple	2 1/2" - 3" cal	B & B	
EVERGREEN TREES						
AC	14	Abies concolor	White Fir	6 - 7' ht	B & B	
PA	16	Picea Abies	Norway Spruce	6 - 7' ht	B & B	
FS	7	Pinus Strobus	White Pine	6 - 7' ht	B & B	
SHRUBS						
Ba	7	Buxus sempervirens	Common Boxwood	30 - 36"	B & B	
Ig	6	Ilex obtusifolia	Inhberry	18 - 24"	C.C.	
Rt	8	Rosa rugosa	Rose bush	24 - 30"	C.C.	

LANDS OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF SARATOGA SPRINGS

- PLANTING NOTES**
- All new plant material shall conform to the minimum guidelines established by the American Standard Nurserymen, Inc.
 - All new plants to be balled and burlapped or container-grown unless otherwise noted on plant list.
 - Any proposed substitutions of plant species shall be provided in writing, including a drawing of the plant, height, and only as approved by the Owner's Representative.
 - All new plant material for the project shall be of specimen quality unless approved otherwise by the Owner's Representative.
 - Where plants size is indicated as a range, the plants provided shall be a fair representation of that range.
 - The Contractor shall supply all new plant material in the Drawings, except to complete the planting shown on the Drawings, to the satisfaction of the Owner's Representative after delivery and prior to installation.
 - Contractor shall obtain plant approval from Owner's Representative after delivery and prior to installation. **Lawn Mix:**
 - * BY WEIGHT SPECIES % GERMINATION**

30%	Tall Fescue	90%
50%	Perennial Ryegrass	90%
50%	Turf-Type Perennial Ryegrass	90%
 - Contractor shall locate and verify all existing utility lines prior to planting and shall report any conflicts to the Owner's Representative.
 - Stake location of all proposed planting for approval by the Owner's Representative prior to the commencement of planting.
 - New plant material shall bear some relationship to finished grade as it sits to previous grade in the nursery.
 - All plant boxes to receive three inches (3") of bark mulch and shall be watered daily or as per specifications.
 - Prepare all planting areas to minimum overall depths shown on drawings.
 - Amended topsoil backfill shall consist of (1) part to 4 cu. yds. topsoil.
 - All disturbed areas not scheduled for other work shall receive four inches (4") of suitable on-site or imported topsoil prior to seeding or sodding as specified.
 - Contractor shall guarantee all planted materials a minimum of 1 year time.
 - Contractor shall maintain all work including watering, mowing, and protection from traffic until final completion of the project.
 - Contractor is responsible to repair or replace all items damaged outside construction limits or disturbed on site which are not part of the identified work of this Contract.
 - Contractor to provide and maintain erosion control in the field. Remove upon stabilization of ground cover.



Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Chairperson

246 WEST AVENUE APARTMENTS
 SARATOGA SPRINGS, NY
 Title
 SITE LANDSCAPE PLAN

PREPARED FOR:
 John-Paul Builders, LLC
 796 Burdeck Street
 Schenectady, NY 12306

the LA Group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-4100
 F 518/587-4180
 www.thelagroup.com

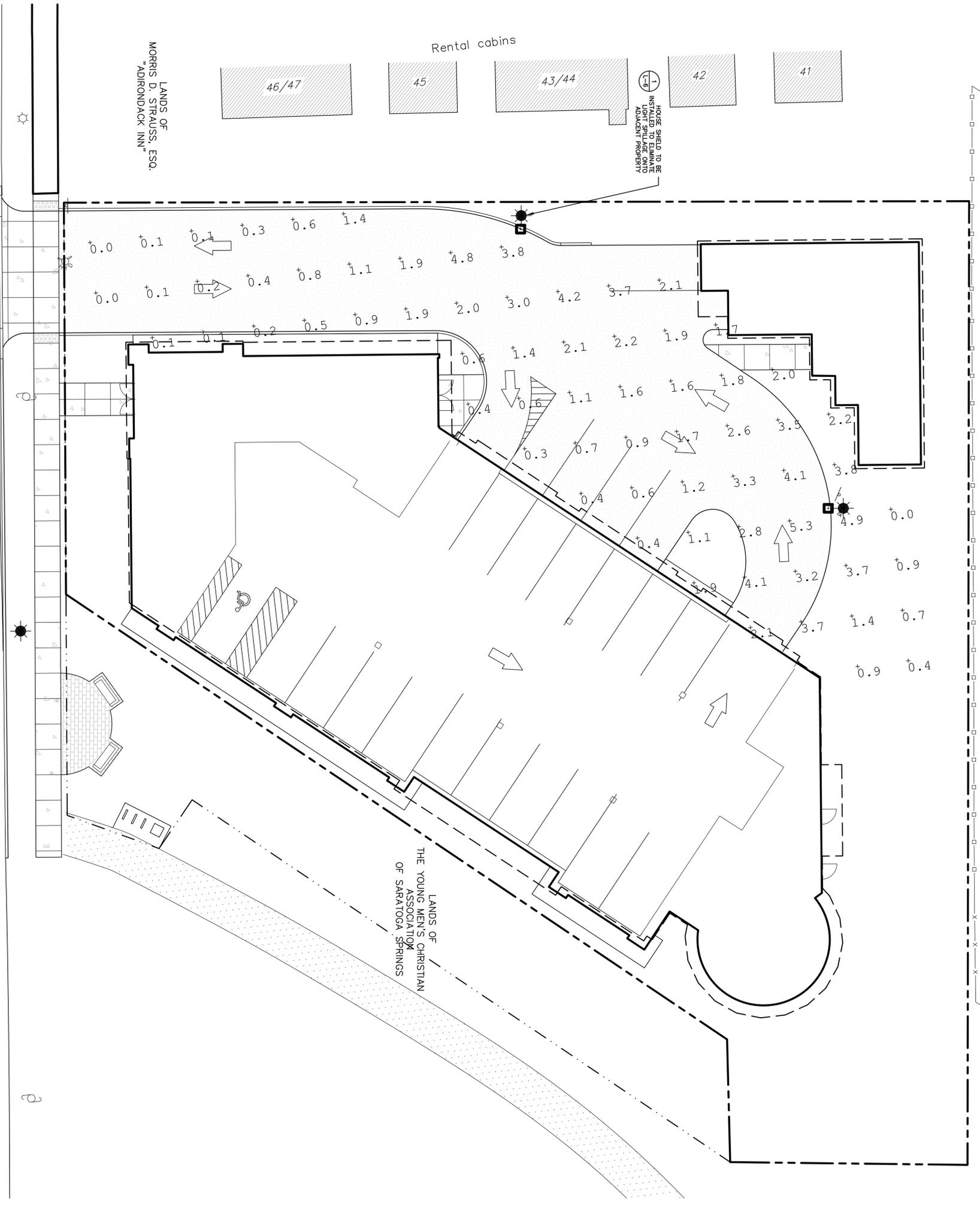
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Design	MCB
Drawn	MCB
Checked	CMI

City #: 201178
 Project: 623/2016
 Date: 6/23/2016
 Drawing
 L-5

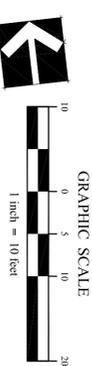
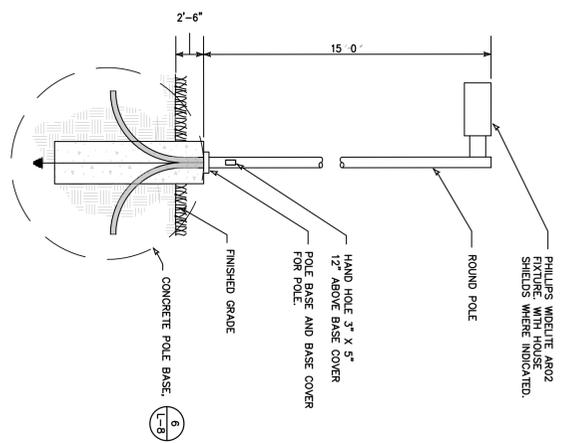
LANDS OF
 DAVID E. FRANTZ & CAROL A.
 FRANTZ



WEST AVENUE

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	Description
LF	2	AR02	SINGLE	13000	AR02-150H Type 2

1 PARKING LOT LIGHT POLE DETAIL



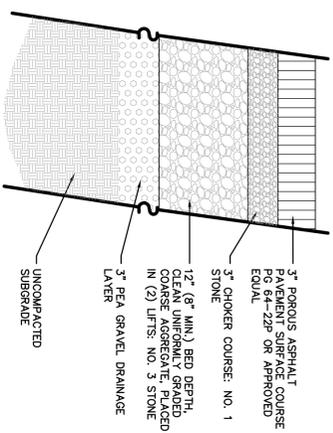
Approval
 Approved under authority of a resolution adopted
 by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher

246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY
 Title
SITE LIGHTING PLAN

PREPARED FOR:
 The PIKE Company, INC.
 210 Clifton Corporate Parkway
 Clifton Park, NY 12065

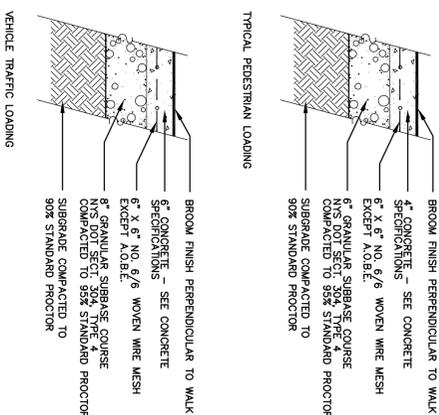
the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-4100
 F 518/587-0180
 www.thelagroup.com
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 Drawn: MCB
 Checked: CMI

Revisions
 MYLAR CHECK SET
 9/28/2012
 MYLAR SET
 NOVEMBER 2012
 MAY 2014
 City #: 12.006.1
 Project: 201178
 Date: 1/25/2012
 Drawing
L-6



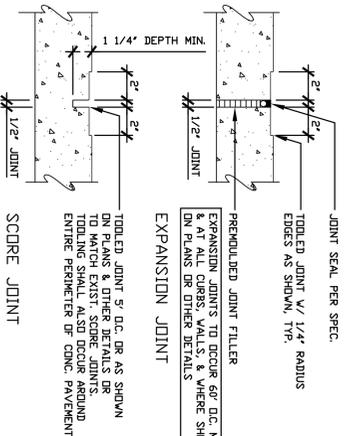
1 POROUS PAVEMENT
N.T.S.

NOTES:
 EXPANSION JOINT SPACING - 20'-25'
 O.C.
 CONTROL JOINT SPACING - 5' O.C.
 NOMINAL CROSS SLOPE SHALL BE 1/4% TYP. TOWARDS STREET OR A.O.B.E. MAX. SLOPE ALONG THE LENGTH OF THE WALK SHOULD NOT EXCEED 1:12 CONSTRUCTION AND APPROVED BY CITY ENGINEER. SIDEWALKS WITH NO BE SUBMITTED AND APPROVED BY CITY ENGINEER.

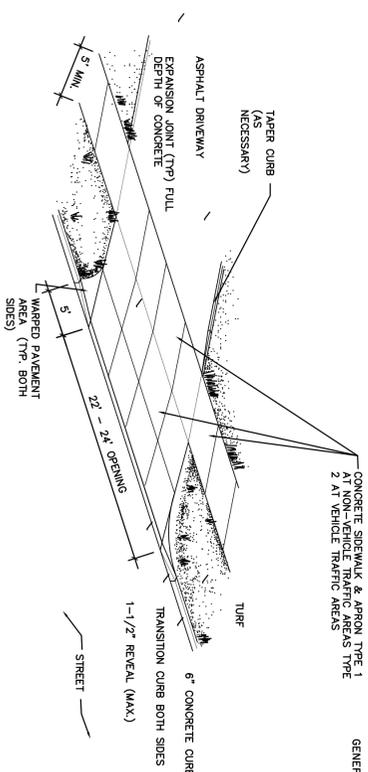


GENERAL DESIGN CRITERIA FOR CONSTRUCTING SIDEWALKS WITHIN SARATOGA SPRINGS, N.Y. RIGHT OF WAY AT THE PROPERTY LINE.
 1) SIDEWALKS MUST BE PLACED IN THE PUBLIC RIGHT OF WAY AT THE PROPERTY LINE.
 2) SIDEWALKS MUST NOT DROP DOWN WHEN CROSSING A DRIVEWAY.
 3) SIDEWALKS MUST NOT EXTEND ACROSS PUBLIC STREETS OR ALLEYS.
 GENERAL DESIGN CRITERIA FOR CONSTRUCTING SIDEWALKS WITHIN SARATOGA COUNTY RIGHT OF WAYS WITHIN SARATOGA SPRINGS:
 1) ALL SIDEWALK INSTALLATIONS MUST BE DESIGNED BY A PROFESSIONAL ENGINEER. PLANS MUST BE APPROVED BY THE COUNTY COMM. OR PUBLIC WORKS.
 2) SIDEWALKS MUST BE PLACED ON THE BACK SIDE OF DITCHES OR 8'(MIN.) FROM THE EDGE OF SHOULDER.
 3) SIDEWALKS MUST BE CONSTRUCTED SO AS NOT TO INTERFERE WITH DRAINAGE.

5 CONCRETE PAVEMENT DETAIL
N.T.S.

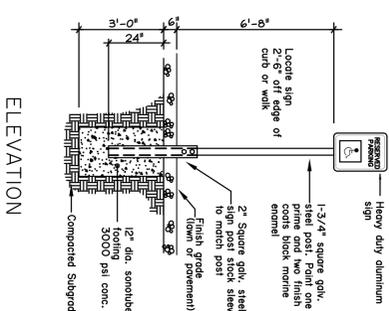


6 CONCRETE PAVT. EXPANSION SCORE JOINT DETAIL
N.T.S.

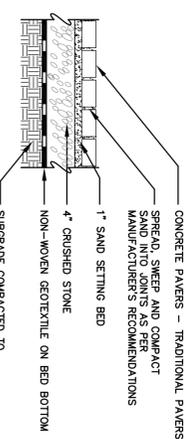


8 TRAFFIC SIGN DETAIL / SIGN SCHEDULE
N.T.S.

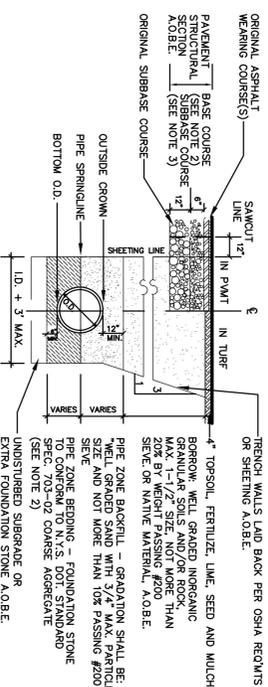
TEXT	LETTER	APPROX. SIZE OF SIGN	MULT. C.D. NO.
STOP	A	30x30"	R1-C
	SEE MULT.C.D.	6.25 S.F.	



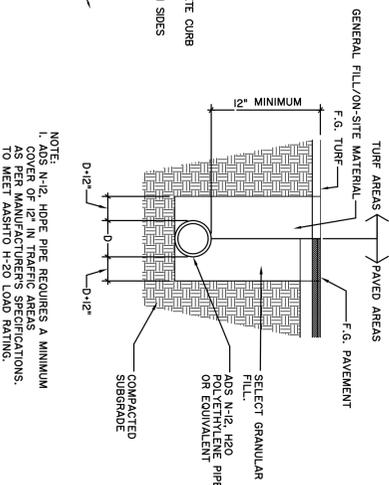
12 UNIT PAVER WALKS
N.T.S.



9 SANITARY PIPE TRENCH DETAIL
N.T.S.

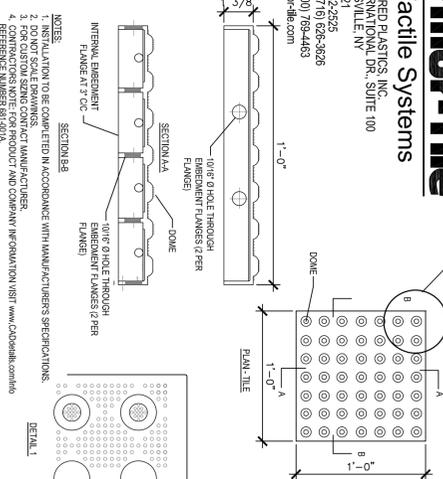


NOTES:
 1. STREET OPENING PERMIT IS REQUIRED
 2. FOUNDATION STONE - N.Y.S. DOT STD. SPEC. 703-02
 SIZE DETERMINATION #1: 100% PASSING 1\"/>



10 PIPE TRENCH (STORM SYSTEM)
N.T.S.

11 TACTILE WARNING STRIP
N.T.S.

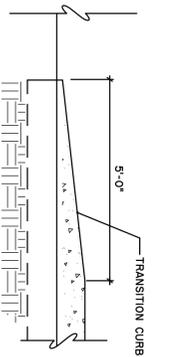


Armor-Tile
 Tactile Systems
 ENGINEERED PLASTICS, INC.
 300 INTERNATIONAL DR., SUITE 100
 WESTVILLE, NY
 USA 44221
 PHONE: (716) 626-9226
 FAX: 1 (800) 759-4463
 www.armor-tile.com

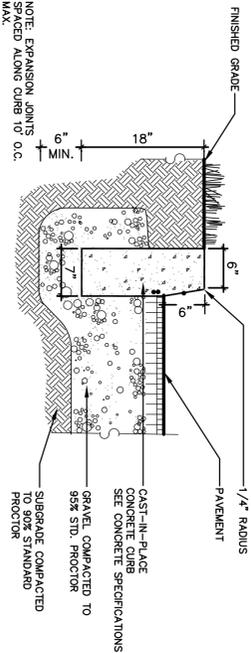
4 CONCRETE SPECIFICATIONS
N.T.S.

THESE GENERAL CONCRETE SPECIFICATIONS SHALL APPLY TO ALL CONCRETE WORK WITHIN THE CITY OF SARATOGA SPRINGS INSTALLED WITHIN A CITY RIGHT-OF-WAY AND/OR WITHIN THE APPROVAL AUTHORITY OF THE PLANNING BOARD.
 ALL CONCRETE THAT MAY COME IN CONTACT WITH DEIONIC CHEMICALS SHALL MEET OR EXCEED THESE MINIMUM SPECIFICATIONS.
 CONCRETE SHALL BE ONLY PORTLAND CEMENT CONCRETE AIR-ENTRAINED OR DURABLE MATERIALS AND SHALL HAVE (1) A LOW WATER-CEMENT RATIO (MAXIMUM 0.45), (2) A SLUMP OF 4 INCHES OR LESS, (3) A MAX. COMPRESSIVE STRENGTH OF 4000 PSI PER CYLINDRICAL SPECIMEN, (4) A PROPER FINISH, (5) A MAX. CURING TIME OF 7 DAYS MOST CURING AT OR ABOVE 50 DEGREES F, (7) A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, AND (8) A MINIMUM 30-DAY DRYING PERIOD AFTER BEGINS WHEN SATURATED. THE EXACT LENGTH OF TIME FOR SUFFICIENT DRYING TO TAKE PLACE MAY VARY WITH CLIMATE AND WEATHER CONDITIONS.
 TECHNICAL SPECIFICATIONS FOR CONCRETE AS HEREIN DEFINED SHALL COMPLY WITH THE APPLICABLE SPECIFICATIONS OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND MATERIALS '1985.
 ANY CLARIFICATION, REVISIONS, MODIFICATIONS THERETO SHALL ONLY BE MADE SUBJECT TO APPROVAL OF THE CITY OF SARATOGA SPRINGS PLANNING BOARD.

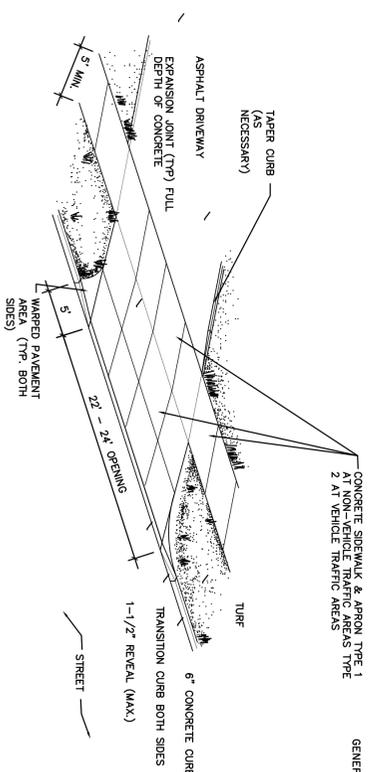
3 CURB END TRANSITION DETAIL
N.T.S.



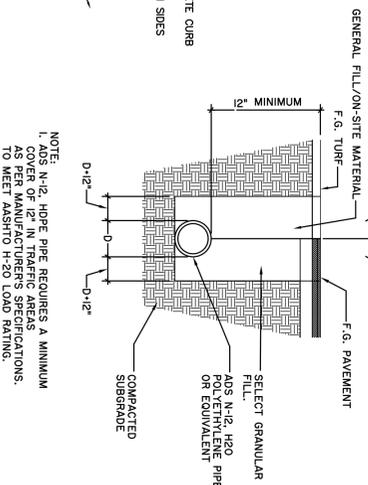
2 CONCRETE CURB DETAIL
N.T.S.



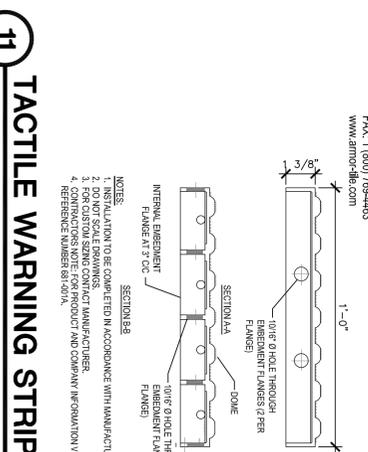
7 COMMERCIAL ENTRANCE DETAIL
N.T.S.

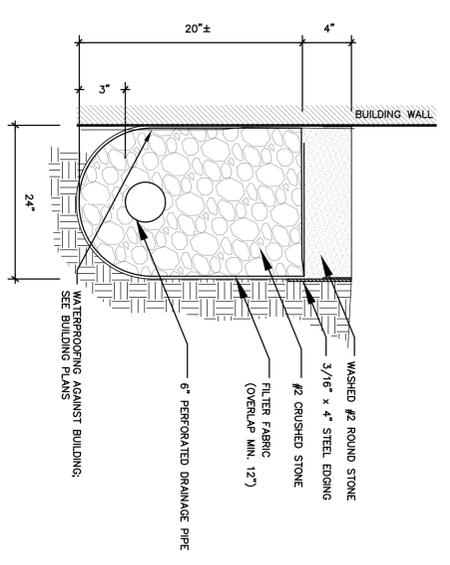


10 PIPE TRENCH (STORM SYSTEM)
N.T.S.

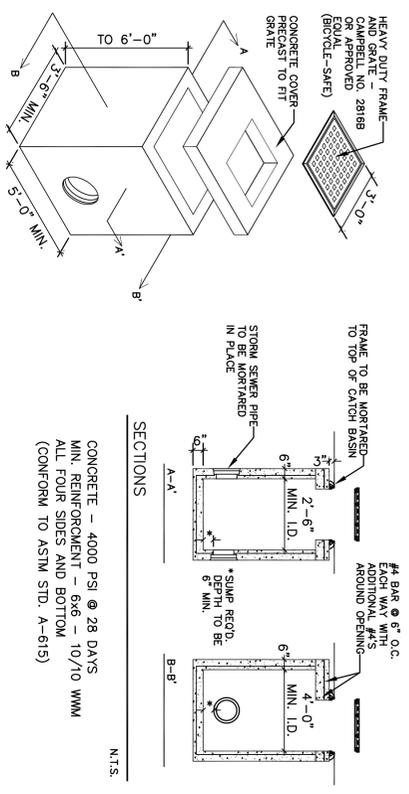


11 TACTILE WARNING STRIP
N.T.S.

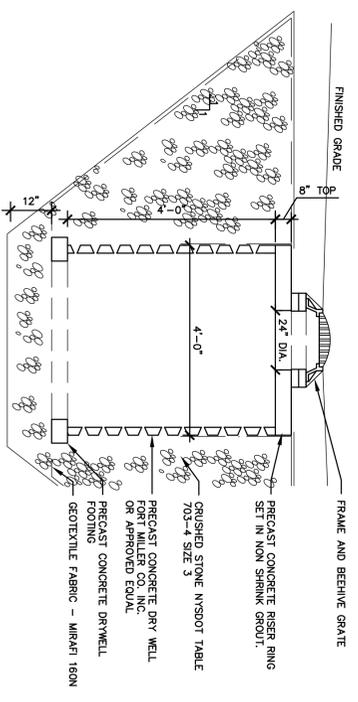




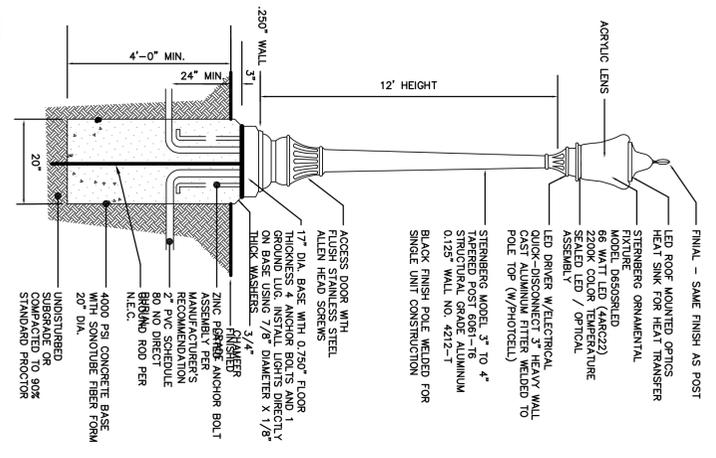
1 PERFORATED DRAINAGE TRENCH DETAIL
 N.T.S.



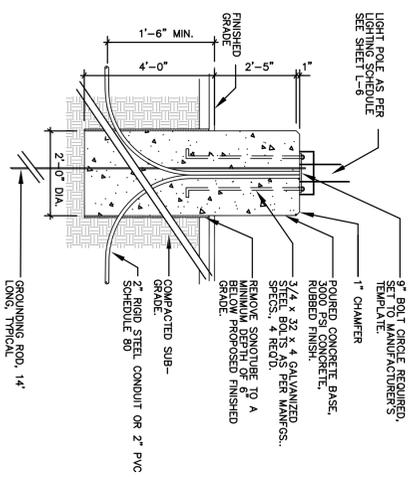
2 CATCH BASIN DETAIL
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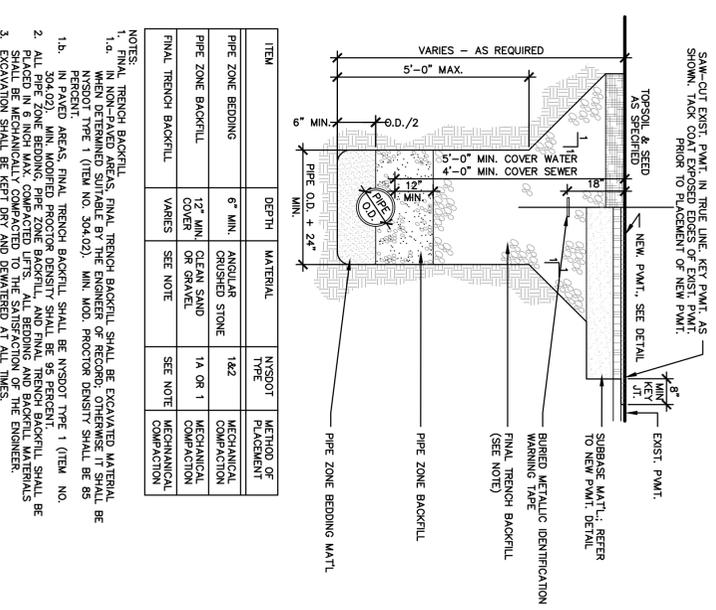
3 DRYWELL DETAIL
 N.T.S.



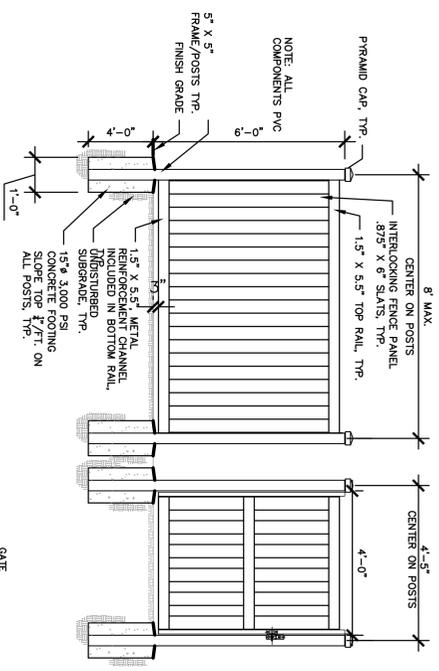
4 DECORATIVE STREET LIGHT DETAIL
 N.T.S.



6 LIGHT POLE BASE - PEDESTAL DETAIL
 N.T.S.



7 PIPE TRENCH-SECTION
 SCALE: 1/8\"/>



8 DUMPSTER PAD ENCLOSURE
 SCALE: 1/8\"/>

Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Chairperson _____



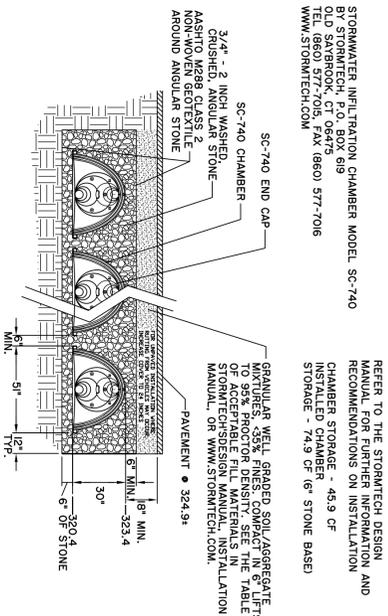
the LA Group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
 Saratoga Springs
 New York 12866
 P 518/587-9100
 F 518/587-0180
 www.thelagroup.com

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 Drawn MCB
 Checked CMI

PREPARED FOR:
 John-Paul Builders, LLC
 796 Burdeck Street
 Schenectady, NY 12306

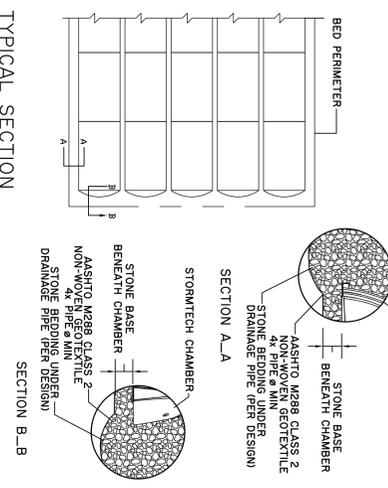
246 WEST AVENUE APARTMENTS
 SARATOGA SPRINGS, NY
 Title
 SITE DETAILS

Revisions _____
 City #: 201178
 Project: 623/2016
 Date: 6/23/2016
 Drawing L-8



STORMWATER INFILTRATION CHAMBER MODEL SC-740
 BY STORMTECH, P.O. BOX 618
 1000 W. 10TH AVENUE
 TEL. (860) 577-7015, FAX (860) 577-7016
 WWW.STORMTECH.COM

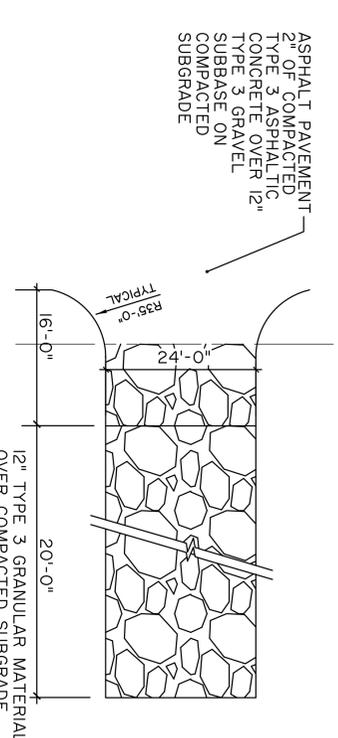
REFER TO THE STORMTECH DESIGN MANUAL FOR FURTHER INFORMATION AND RECOMMENDATIONS ON INSTALLATION
 CHAMBER STORAGE - 45.9 CF
 INSTALLED CHAMBER - 74.9 CF (6\"/>



TYPICAL SECTION

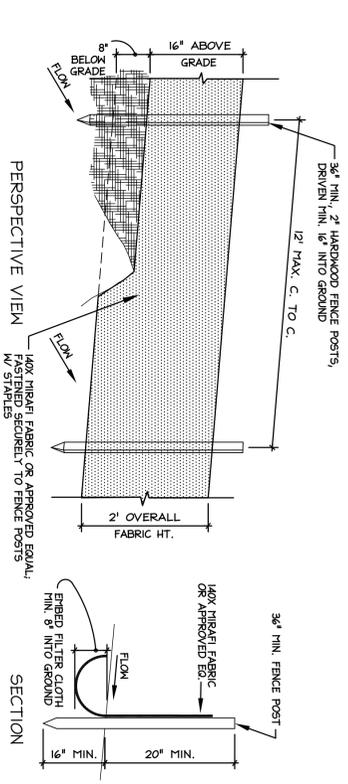
1 STORMWATER INFILTRATION CHAMBER DETAIL

N.T.S.



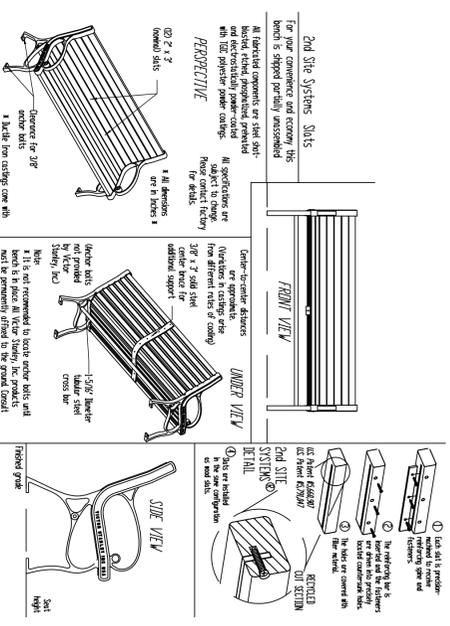
2 STABILIZED CONSTRUCTION ACCESS

N.T.S.



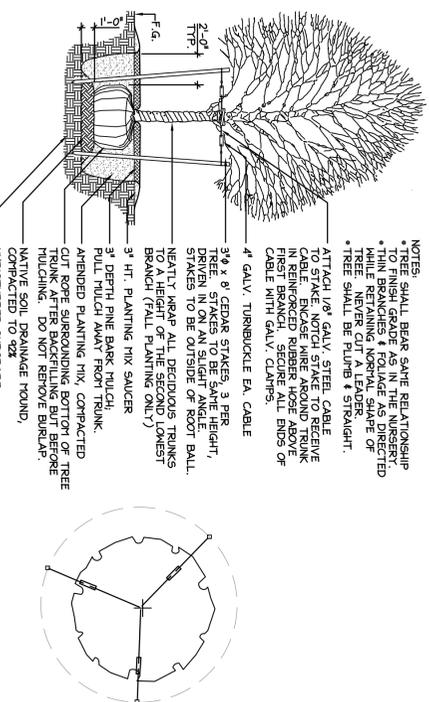
3 SILT FENCE DETAIL

N.T.S.



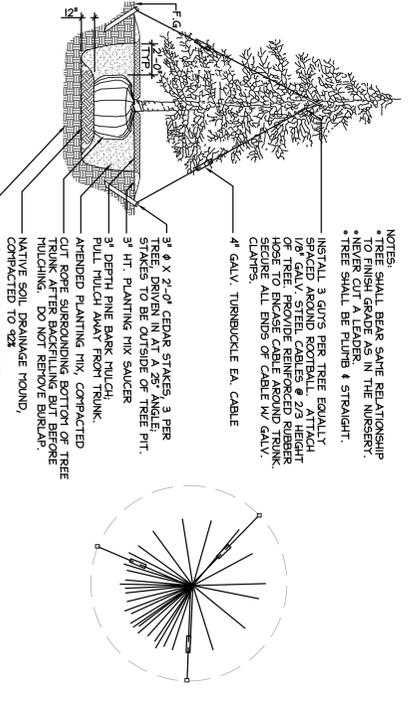
4 6' BENCH DETAIL

N.T.S.



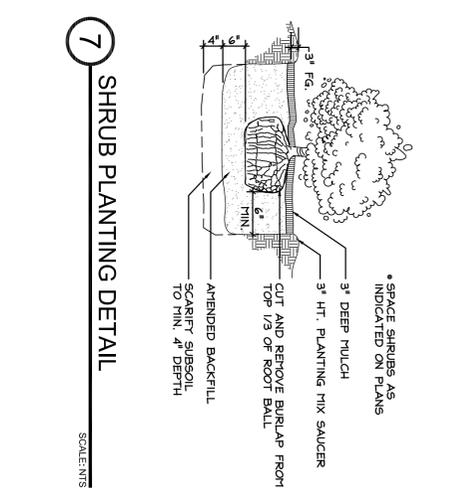
5 DECIDUOUS TREE PLANTING

SCALE N.T.S.



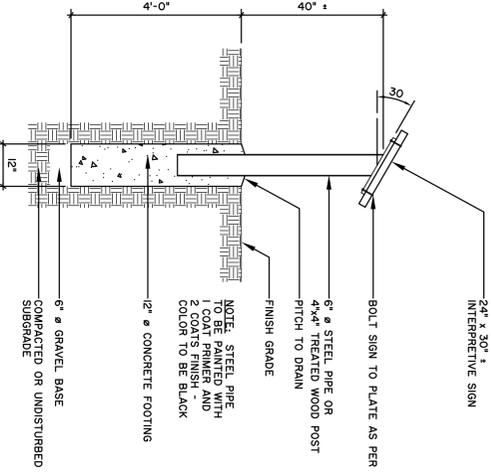
6 EVERGREEN TREE PLANTING

SCALE N.T.S.



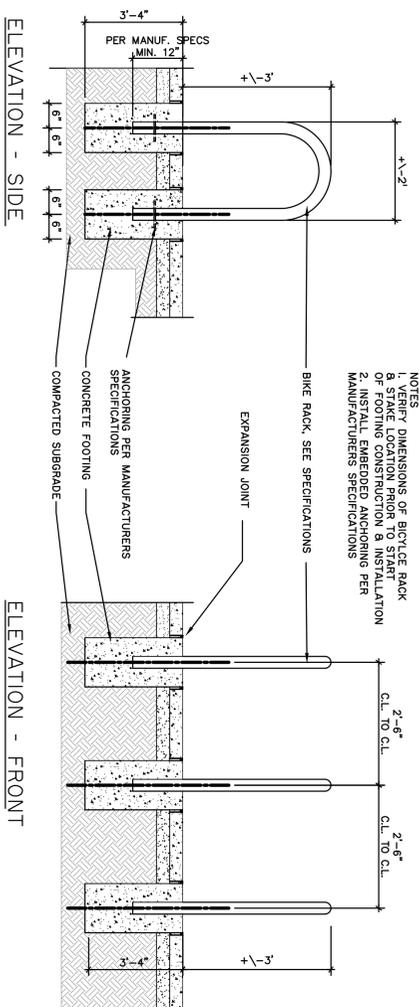
7 SHRUB PLANTING DETAIL

SCALE N.T.S.



8 INTERPRETIVE SIGN DETAIL

SCALE 1/2\"/>



9 BICYCLE RACK

N.T.S.

Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____
 Christopher



the LA group
 Landscape Architecture
 and Engineering, PC
 40 Long Alley
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 New York 12866
 P 518/587-4100
 F 518/587-4180
 www.thelagroup.com

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Design	MCB
Drawn	MCB
Checked	CMJ

PREPARED FOR:
 The PIKE Company, INC.
 210 Clifton Corporate Parkway
 Clifton Park, NY 12065

246 WEST AVENUE
 RESIDENTIAL CONDOMINIUM COMPLEX
 SARATOGA SPRINGS, NY
 Title
 SITE DETAILS

City #:	12.006.1
Project:	201178
Date:	1/25/2012
Revisions	
MYLAR CHECK SET	9/28/2012
MYLAR SET	NOVEMBER 2012
	May 2014

Drawing
L-11



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE



RE4ORM ARCHITECTURE



246 WEST AVE APARTMENTS

Saratoga, New York

PERSPECTIVE

