



CITY OF SARATOGA SPRINGS PLANNING BOARD

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

MARK TORPEY, *Chair*
ROBERT F. BRISTOL, *Vice-Chair*
TOM L. LEWIS
CLIFFORD VAN WAGNER
HOWARD PINSLEY
JANET CASEY
JAMIN TOTINO
AMY DURLAND, *Alternate*
RUTH HORTON, *Alternate*

Planning Board Meeting City Council Room – 7:00 PM

Agenda

Joint Planning Board - Design Review Commission Meeting

Thursday, May 26, 2016

City Council Room - 6:00pm

- A. 15.041 77 Excelsior Mixed-Use Development
77 Excelsior Ave, Site plan review for mixed-use development with 90 multi-family residential units and 1,440 sq ft of commercial space in the Transect-5 Neighborhood Center (T-5) District.
Documents: 15.041 77EXCELSIORMIXEDUSE_APP_REDACTED.PDF, LA GROUP RESPONSE TO PLANNING COMMENTS 11.4.15.PDF, PLANS UPDATED 11-4-15.PDF, WATER SERVICE CONNECTION AGREEMENT.PDF
- B. 16.015 West Ave Mixed-Use
106-120 West Ave, Sketch site plan review for mixed-use development of 36 residential units and 4,100sf of commercial within the T-5 District.

Planning Board Meeting – Thursday, May 26, 2016

City Council Room – 7:00 PM

5:00 P.M. Workshop

Salute To Flag

Applications Under Consideration

- A. 15.049 Lands Of Stone
68 Weibel Avenue, sketch plan review of office, retail, and multi-family residential in the Transect-4 Urban Neighborhood (T-4) District.
Documents: 15.049 WEIBELAVEMIXEDUSESTONE_TRAFFICASSESMENT2-3-16UPDATE.PDF, 15.049 WEIBELAVEMIXEDUSESTONE_PLANS.PDF
- B. 16.014 21 Park Place Condominiums (App 2)
21 Park Place, Sketch 2 lot residential subdivision within the Urban Residential-4 (UR-4) District.
Documents: 16.014 21PARKPLACECONDOSSKETCHSUB_APP_REDACTED.PDF

Approval Of Minutes
May 12, 2016

Next Meeting:
Thursday, June 23, 2016 (w/ Monday, June 20, 2016 caravan & workshop)



CITY OF SARATOGA SPRINGS

PLANNING BOARD

CITY HALL - 474 BROADWAY
SARATOGA SPRINGS, NEW YORK 12866-2296
TEL: 518-587-3550 FAX: 518-580-9480
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[FOR OFFICE USE]

(Application #)

(Date received)

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

(Rev: 1/04/11)

1. Project Name: 77 Excelsior Mixed Use Development

2. Project Data

Location: Excelsior Avenue

Current Zoning: T-5, Neighborhood Center

Proposed Use: Mixed Use, commercial/residential

Date zoning variance granted (if any): None

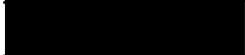
Tax Parcel Number: 166.5-5-5.41

3. Professional Representing Applicant:

Name: David Carr, Jr., RLA

Phone: 

Address: The LA Group, P.C.

Fax: 

40 Long Alley, Saratoga Springs, NY 12866

4. Application Fee: Total \$ 11,830

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

- Sketch Plan - \$250
- Final Site Plan Approval

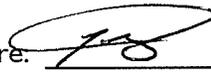
Residential -	\$250 plus \$150/unit	\$ <u>11,200</u>
Non-Residential -	\$500 plus \$100/1,000 SQ. FT	\$ <u>630</u>
- Extension

Residential -	\$250
Non-Residential -	\$500
- Modification

Residential -	\$250
Non-Residential -	\$500

5. Environmental Assessment Form - All applications must include a completed SEQR Short Form.
6. Cost estimates for Letter of Credit - All applications must include cost estimates.
7. Application Check List - All applications must include application check list.
8. Estimate of increase in water consumption: 13,880 gallons/day.
9. For all projects including new water connections to the City system, a copy of a signed water service connection fee agreement with the City Department of Public Works is required and **MUST** be submitted with this application.
10. 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 X . If yes, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.
11. Submit 12 copies of complete application including checklist, SEQR form, and all plans (must be 24" x 36").
12. Submission Deadline - All completed applications are due 4 weeks before the Planning Board meeting date.

I, the undersigned owner, leasee or purchaser under contract for the property, hereby request Site Plan approval by the Planning Board for the identified property above. I agree to meet all requirements under Section 240-5.4 of the Zoning Code of the City of Saratoga Springs.

Applicant Signature:  - Member
 Name: Prime Beechwood³LLC
 Address: 621 Columbia Street
Cohoes, NY 12047

Date: 9/9/15
 Phone: 
 Fax: _____

If applicant is leasee, owner must also sign.

Owner Signature: _____

Date: _____



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SITE PLAN REVIEW REQUIRED SITE PLAN SUBMITTAL CHECK LIST

1. Project Name: 77 Excelsior Mixed Use Development
2. Checklist Prepared By: Excelsior Avenue Date: 8/19/2015

Listed below are the minimum submittal requirements as set forth in Chapter 240-5.4 for any site plan application before the Saratoga Springs Planning Board. The 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 minimal requirements are not met.

(for reviewers use) YES NO N/A	YOUR SITE PLAN SUBMITTAL SHOULD INCLUDE THE FOLLOWING ITEMS, AS APPLICABLE:
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1. Correct plan size and scale. Sheets <u>must be</u> 24" x 36", drawn to a scale of not more than 1"=50 feet
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2. 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3. Building setback lines, either listed or shown on plans
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	4. Identification of all existing or proposed easements
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5. Identification of existing zoning
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6. References to all prior variances or special use permits
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7. Topography data tied to NGVD 1929 datum
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8. Parcel tax map number
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	9. Name of all adjacent property owners
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10. Parcel street address (postal address)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	11. North arrow and map scale
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	12. Title block with project name; name and address of applicant; and name and address of property owner (if different)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13. Site location map
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. Site vicinity map (all features within 300 feet of property)

<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Existing and proposed contours and spot grades (at 2 foot intervals)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Identification of all spoil or borrow areas
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	17. Identification of all watercourses, designated State wetlands, Federal wetlands, rock outcroppings, etc.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	18. Location of proposed storage, if any
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19. Identification of all existing or proposed sidewalks or pedestrian paths (show type, size and condition of existing sidewalks)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	20. Location, design specifications and construction material for all proposed site improvements (drains, culverts, retaining walls, berms, fences, etc.)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	21. Location and distance to fire hydrant
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22. Location, size, and material of all existing and proposed utility services
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	23. Parking lot layout plan and identification of all loading areas (number all spaces)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24. Parking demand calculations
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	25. Identification of parking spaces and access points for physically impaired persons
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	26. Location and screening plan for dumpster or recycling bins
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	27. 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 checked="" type="checkbox"/>	28. Identification of storage of any potentially hazardous materials
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	29. Planting plan identifying quantity, species and size of all proposed new plant materials. Label existing plant material to be retained or removed.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	30. Lighting plan showing type, location and intensity of all existing and proposed exterior lighting fixtures
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	31. Drainage plan and stormwater management report
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	32. Soil erosion protection measures
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	33. Identification of all federal, state, county, and local permits needed
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	34. Quantities of work items and estimates of costs
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	35. Estimate of increase in water consumption
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	36. Copy of signed water connection agreement with DPW for all projects involving new water connections to the City system
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	37. OTHER: _____ _____ _____

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: 77 Excelsior Avenue Mixed Use Development **Date:** 09/9/2015

Project Location / Limits: 77 Excelsior Avenue

Project Description: Mixed use development with up to 101 residential units and up to 1,300 sf of commercial space.

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 checked="" 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
Existing Bicycle & Pedestrian Operations				
Do bicycle and pedestrian accommodations exist? (see page 2 for examples)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pedestrian sidewalks along project frontage; bike lanes along Excelsior Avenue.
Existing Transit Operations				
Do transit facilities exist within the study area, including bus and train stops/stations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CDTA bus stop existing along Excelsior Avenue
Is the project area on a transit route? (CDTA Service Routes)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Route 472
Are there bicycle racks, shelters, or parking for transit riders available?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bike racks only proposed.
Existing Access and Mobility				
Do connective opportunities exist with schools, hospitals, senior care or community centers or persons with disabilities within project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Project Area not adjacent or contiguous
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 checked="" type="checkbox"/>	<input type="checkbox"/>	There are no gaps within the project area
Project Area Context				
Are there prominent landmarks, recreation, shopping, employment center, cultural centers or other key destinations that offer opportunities to connect this site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Connections existing via sidewalks to adjacent shopping.
Please list and/or describe planning or policy documents addressing bicyclist, pedestrian, transit, or truck/ freight use for the project area. Examples can include: <u>City of Saratoga Springs Comprehensive Plan</u> , <u>City of Saratoga Springs Open Space Plan</u> , <u>Capital District Transportation Committee Bicycle/ Pedestrian Priority Network</u> , <u>City Standard Details</u> , etc.				

PROPOSED DESIGN

Item to Be Addressed/ Checklist Consideration	YES	NO	N/A	Required Description
Complete Streets Design				
Bicyclist accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bike Racks, safe inlets
Pedestrian accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks proposed
Access and Mobility accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adequate sidewalks
Transit accommodations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing CDTA bus stop
Truck/ freight accommodations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Streetscape elements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Additional sidewalks, landscaping and lighting

Bike Facilities:	
Off-roadway bike accommodations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Dedicated bike lane	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Shared-use lane	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Shoulder	<input checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> NA
Do signals allow adequate minimum green time for bicyclist to safely cross intersection?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Signage and pavement markings specific to proposed bike facilities	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle safe inlet grates	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Bicycle parking, eg. bike racks, bike lockers	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Transit Facilities:	
Transit shelters	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Bus turnouts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Standing pads	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Has CDTA been contacted? *	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Access and Mobility Facilities:	
Adequate sidewalk or paved path	<input checked="" 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 checked="" type="checkbox"/> NA
Curb ramps, including detectable warning surface	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Acceptable slope and cross-slope for driveway ramps, sidewalks, crossings)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Have conflicts been reduced among pedestrian, bicyclists, and motor vehicles (access management)?	<input checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> NA
Striped crosswalks	<input checked="" 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 checked="" 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 checked="" type="checkbox"/> NA
Pedestrian signage for crossing & wayfinding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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 checked="" type="checkbox"/> NA
Enhanced supplemental pedestrian treatments at uncontrolled marked crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Connectivity:	
Are there proposed connections to other bike paths, pedestrian facilities, or transit facilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Existing Connection
Are there proposed connections to any key destinations listed on page 1?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Existing Connection
Are there proposed connections to neighborhoods?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Existing Connection
Streetscape Elements:	
Are streetscape elements proposed such as landscaping, street trees, planters, buffer strips, etc?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Pedestrian-level lighting	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Public seating or benches	<input checked="" 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 checked="" 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*

*CDTA was contacted for the Excelsior Avenue Mixed Use Development

Cost Estimate for Letter of Credit				PB # 14.059
Project No:	201391			
Project:	77 Excelsior Avenue Mixed Use Development			
Location:	77 Excelsior Avenue			
	Saratoga Springs, New York			
Date:	9/8/2015			
<i>ON-SITE WORK</i>				
Item	Quantity	Unit	Unit Cost	Subtotal
<u>Site Preparation and Grading</u>				
Erosion Control (including silt fence & access)	1	LS	\$3,500.00	\$3,500.00
Tree clearing	1	LS	\$3,000.00	\$3,000.00
Rough Grading	1	LS	\$6,000.00	\$6,000.00
<u>Hardscape</u>				
Concrete Walk	5,120	SF	\$5.25	\$26,880.00
Asphalt pavement	18,125	SF	\$3.00	\$54,375.00
Cast in Place Concrete Curb	1,095	LF	\$18.00	\$19,710.00
<u>Site Amenities</u>				
Parking lot light pole	5	EA	\$2,200.00	\$11,000.00
Decorative street light	1	EA	\$3,000.00	\$3,000.00
Traffic signs	4	EA	\$350.00	\$1,400.00
Striping	1	LS	\$3,500.00	\$3,500.00
Bike Rack	2	EA	\$500.00	\$1,000.00
Retaining wall	720	LF	\$125.00	\$90,000.00
Decorative Fence	248	LF	\$35.00	\$11,900.00
<u>Site Utilities</u>				
Catch Basins/ Manholes	11	EA	\$1,200.00	\$13,200.00
Yard Drains	9	EA	\$1,000.00	\$9,000.00
Outlet Control Structure	3	EA	\$2,300.00	\$6,900.00
Stormwater Planter	4465	SF	\$12.00	\$53,580.00
Underground sand filter	1	EA	\$15,000.00	\$15,000.00
Underground Storage	1	LS	\$25,000.00	\$25,000.00
Underground Infiltration	1	LS	\$20,000.00	\$20,000.00
6" HDPE Storm Line	94	LF	\$16.00	\$1,504.00
10" HDPE Storm Line	38	LF	\$18.00	\$684.00
12" HDPE Storm Line	570	LF	\$20.00	\$11,400.00
Perforated storm line	400	LF	\$12.00	\$4,800.00
6" PVC Sanitary Line	213	LF	\$20.00	\$4,260.00
Sewer Manhole	2	EA	\$2,300.00	\$4,600.00
Connection to sanitary manhole	1	LS	\$1,000.00	\$1,000.00
6" DIP Water Line	109	LF	\$28.00	\$3,052.00
8" DIP Water Line	25	LF	\$28.00	\$700.00
Water Fittings	1	LS	\$2,000.00	\$2,000.00
<u>Landscaping</u>				
Trees	20	EA	\$500.00	\$10,000.00
Shrubs	9	EA	\$50.00	\$450.00
<i>On-Site Total</i>				\$422,395.00
<i>On-Site Total X .25</i>				\$105,598.75

<i>OFF-SITE WORK</i>				
Asphalt pavement	60	SF	\$3.00	\$180.00
Concrete Walk	1,735	SF	\$5.25	\$9,108.75
Cast in Place Concrete Curb	10	LF	\$18.00	\$180.00
Bench	4	EA	\$400.00	\$1,600.00
6" PVC Sanitary line	29	LF	\$20.00	\$580.00
6" DIP Water Line	30	LF	\$28.00	\$840.00
Water Tapping Sleeve and Valve connection	1	EA	\$3,500.00	\$3,500.00
6" HDPE Storm Line	48	LF	\$16.00	\$768.00
12" HDPE Storm Line	27	LF	\$20.00	\$540.00
Trees	5	EA	\$500.00	\$2,500.00
As Built Drawings	1	LS	\$3,500.00	\$3,500.00
<i>Off-Site Total</i>				\$23,296.75
<i>Total Site Work</i>				\$445,691.75
Letter of Credit Amounts				
Total off-site work				\$23,296.75
Total on-site work x .25				\$105,598.75
<i>Total</i>				\$128,895.50
L.O.C. amount				\$129,000.00

**Engineering Report
Water and Sanitary Sewer**

For

**77 EXCELSIOR AVENUE
MIXED USE DEVELOPMENT**

**EXCELSIOR AVENUE
SARATOGA SPRINGS, NEW YORK**

Planning Board #15.____

Prepared For

**Prime Beachwood LLC
621 Columbia Street
Cohoes, NY 12047
Contact:**

Prepared By

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



September 9, 2015

I. Introduction

This Project involves the construction and operation of three buildings located on the land adjacent to the Fresh Market property at 77 Excelsior Avenue in Saratoga Springs, Saratoga County. The Project includes the construction of three (3) apartment buildings, one with commercial space fronting Excelsior Avenue. The remainder of the proposed site improvements includes construction of a parking lot, site lighting, landscaping, stormwater controls, and connections to the municipal water and sewer systems.

II. Project Description

The applicant proposes to construct (1) mixed-use building and (2) residential buildings on approximately 2.2 acres. The buildings will include a total of 90 apartment units of 1, 2 or 3 bedrooms, approximately 1,300+/- SF of commercial space, along with garage and exterior parking. Access to the project is proposed from the west access driveway to the Fresh Market site as previously approved.

III. Existing Water and Sanitary Sewer Utilities

Municipal water mains are located along Excelsior and Marion Avenue and are provided by the City of Saratoga Springs Sewer & Water Department. Along Excelsior Avenue there is a 12-inch and 20-inch water main. The 20-inch waterline is a transmission line that feeds the adjacent water treatment plant. The water main along Marion Avenue is an 8-inch branch line that tees off the 12-inch Excelsior Avenue main. An 8-inch service lateral was recently installed for the Fresh Market off the Marion Avenue main. This service line was capped to the west of the Fresh Market building for a future connection and extension into the 77 Excelsior Avenue property.

Municipal sewer services are located along Excelsior and Marion Avenue. The sewer main along Marion Avenue is owned by the City of Saratoga Springs Sewer & Water Department. The sewer main along Excelsior Avenue is owned by the Saratoga County Sewer District No. 1. To service the Fresh Market development, a six-inch gravity lateral was connected to the SCSD main on the south side of Excelsior Avenue. This lateral runs up the access driveway between the Fresh Market development and the 77 Excelsior Avenue development.

IV. Projected Water and Wastewater Flows**Sanitary Sewer Flow Calculations**

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

Description	Use Rate	Total Use
<u>Building 4</u>		
(9) 1-bedroom units	110 gpd/unit ¹	990 gpd
(7) 2-bedroom units	220 gpd/unit ¹	1,540 gpd
1,300 sf commercial	0.1 gpd/sf ¹	130 gpd
	Sub-total	2,660 gpd
<u>Building 5</u>		
(18) 1-bedroom units	110 gpd/unit ¹	1,980 gpd
(9) 2-bedroom units	220 gpd/unit ¹	1,980 gpd
	Sub-total	3,960 gpd
<u>Building 6</u>		
(29) 1-bedroom units	110 gpd/unit ¹	3,190 gpd
(17) 2-bedroom units	220 gpd/unit ¹	3,740 gpd
(1) 3-bedroom units	330 gpd/unit ¹	330 gpd
	Sub-total	7,260 gpd
Total		13,880 gpd

Average Daily Flow (ADF) for wastewater is estimated to be 19.3 gallons per minute (gpm) based on a 12 hour day (720 minutes).

Peak Hourly Flow (PHF) = $(13,880 \text{ gpd} \div 720 \text{ minutes per day}) \times (4.2 \text{ peaking factor})^2 = 81.0 \text{ gpm}$.

Domestic Water Demand Calculations

Domestic water average day demand (ADD) is assumed to be equal to sanitary sewer ADF.

Average Day Demand (ADD) = $13,880 \text{ gallons per day (gpd)} \div 720 \text{ minutes per day} = 19.3 \text{ gallons per minute (gpm) average}$.

Peaking factor for instantaneous water use is estimated to be 10 times the average based upon past experience. Maximum Instantaneous Water Demand is estimated at 193 gpm.

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 19.3 gallons per minute (GPM) over a 12 hour period.
- Max Day Demand is 38.6 gallons per minute (GPM) based on twice the average.
- Peak Hourly Flow is 81.0 gallons per minute (GPM) based on 4.2 times the average.
- Fire Flow Demand is 1,500 gallons per minute (GPM) per ISO guidelines.

V. Proposed Water and Wastewater Utilities

Proposed Water Utilities

To service the project, the existing 8-inch water service line installed with the Fresh Market project is proposed to be extended with an 8-inch ductile iron pipe and new 6-inch DIP building service laterals to serve Building 5 and 6. A separate 6-inch wet-tap off of the existing 12-inch water main along Excelsior Avenue will service Building 4.

The new buildings will have fire sprinklers and the domestic service will be metered. Water system pressure available at the buildings has been calculated based on hydrant flow tests. Water pressure calculations and pressure at all the buildings are provided in Attachment D.

Fire hydrants in the project area include one between the Fresh Market building and proposed Building 6, one at the southeast corner of the Fresh Market building, one on Marion Avenue near Building 2, one on Marion Avenue near the Excelsior Avenue intersection, one on Excelsior Avenue near the Marion Avenue intersection and two on East Avenue near the Excelsior Avenue intersection. These existing hydrants provide adequate coverage for the proposed building development. See Attachment B for a sketch showing the fire hydrant locations.

Needed Fire Flow (NFF) calculations using the ISO Guide for Determination of Needed Fire Flow are presented in Attachment C. The calculation shows a NFF of 1,500 gallons per minute. The hydrant flow test data indicates approximately 8,000 gpm at 20 psi. Based on this information, there is adequate fire protection water supply available at the site.

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

Sewer service for the project will be provided from the Saratoga County Sewer District No. 1 sewer main along Excelsior Avenue via the existing on-site service lateral previously installed with the Fresh Market project. No new connection to the SCSD sewer main is proposed. A 6-inch sewer service from Building 5 and 6 is proposed to wye into the existing 6-inch PVC sewer lateral approximately 50' south of the existing sewer manhole (SMH #2). A cleanout is proposed prior to connection into each building and the individual building laterals will maintain a minimum slope of 2%. Sewer service from Building 6 will be provided by a 6" gravity sewer which will run south into a new manhole (SMH #6) then east and pick up the flow from Building 5 at a new manhole (SMH #5). The existing 6-inch sewer line wyes into the existing SCSD sewer main on the south side of Excelsior Avenue approximately 400' west of Marion Avenue.

The capacity of the existing 6-inch PVC service line and the proposed 6-inch PVC service lateral was checked with estimated peak hourly flows.

- Peak hourly flow in the proposed pipe between SMH #5 and the existing 6-inch service line is estimated to be 65.5 gpm. The 6-inch pipe at 1.00% slope is flowing 2.0 inches deep at a velocity of 2.4 feet per second or about 52% of ½ full capacity.
- Peak hourly flow in the proposed pipe between existing SMH #2 and existing SMH #3 is estimated to be 99.1 gpm. The 6-inch pipe at 4.3% slope is flowing 1.7 inches deep at a velocity of 4.5 feet per second or about 38% of ½ full capacity.
- Peak hourly flow in the proposed pipe between existing SMH #3 and existing SCSD main is estimated to be 114.6 gpm. The 6-inch pipe at 3.3% slope is flowing 2.0 inches deep at a velocity of 4.3 feet per second or about 50% of ½ full capacity.

Manholes, pipe, trenching, bedding, service connections, and testing will be specified in accordance with City of Saratoga Springs minimum standards.

Notes

1. From Table B-3, NYSDEC 2014 Design Standards for Wastewater Treatment Works.
2. From Figure 1, GLUMRB Recommended Standards for Wastewater Facilities.

Attachments

Attachment A	Hydrant Flow Test Data
Attachment B	Fire Hydrant Location Sketch
Attachment C	Needed Fire Flow (NFF) Calculations
Attachment D	Water Pressure Calculations
Attachment E	Sanitary Sewer Calculations

ATTACHMENT A
HYDRANT FLOW TEST DATA



North East Fire Protection Systems Inc.

P.O. BOX 508 BURNT HILLS, N.Y. 12027 (518) 885-1115 FAX (518) 885-0526

HYDRANT FLOW TEST REPORT

LOCATION: MARION C EXCELSIOR AV -

SARATOGA SPRINGS N.Y

TEST BY: JIM FANTAUZZ / CARY STEWART

WITNESS STAN BORDEN

DATE: 4-24-13 TIME: 2:15 PM

TARGET HYD. LOCATION (B) CORNER OF

TEST RESULTS : STATIC PRESSURE (B) 102 PSI

RESIDUAL PRESSURE (B) 98 PSI WITH 1570 (A) GPM FLOWING

RESIDUAL PRESSURE (B) _____ PSI WITH _____ (A) GPM FLOWING

FLOW HYD. LOCATION (A) _____

1) PORT FLOWED (A) 1 DIAMETER 2 1/2

2) PORT FLOWED (A) _____ DIAMETER _____

3) PORT FLOWED (A) _____ DIAMETER _____

1) PITOT or FLOW METER READING (A) 87 PSI AT 1570 GPM

2) PITOT or FLOW METER READING (A) _____ PSI AT _____ GPM

3) PITOT or FLOW METER READING (A) _____ PSI AT _____ GPM

OUTLET COEFFICIENT USED _____

(smooth 0.90) (square & sharp 0.88) (projecting into barrel 0.77)

$$Q_{20} = Q \left(\frac{P_s - P_{20}}{P_s - P_r} \right)^{.54} = 1570 \left(\frac{102 - 20}{102 - 98} \right)^{.54} = 8021 \text{ gpm}$$

ESTIMATED FLOW AT 20 PSI 8021 GPM

LOCATION SKETCH ATTACHED ? YES X NO _____



North East Fire Protection Systems, Inc.

P.O. Box 508

BURNT HILLS, N.Y. 12027

(518) 885-1115

FAX (518) 885-0526

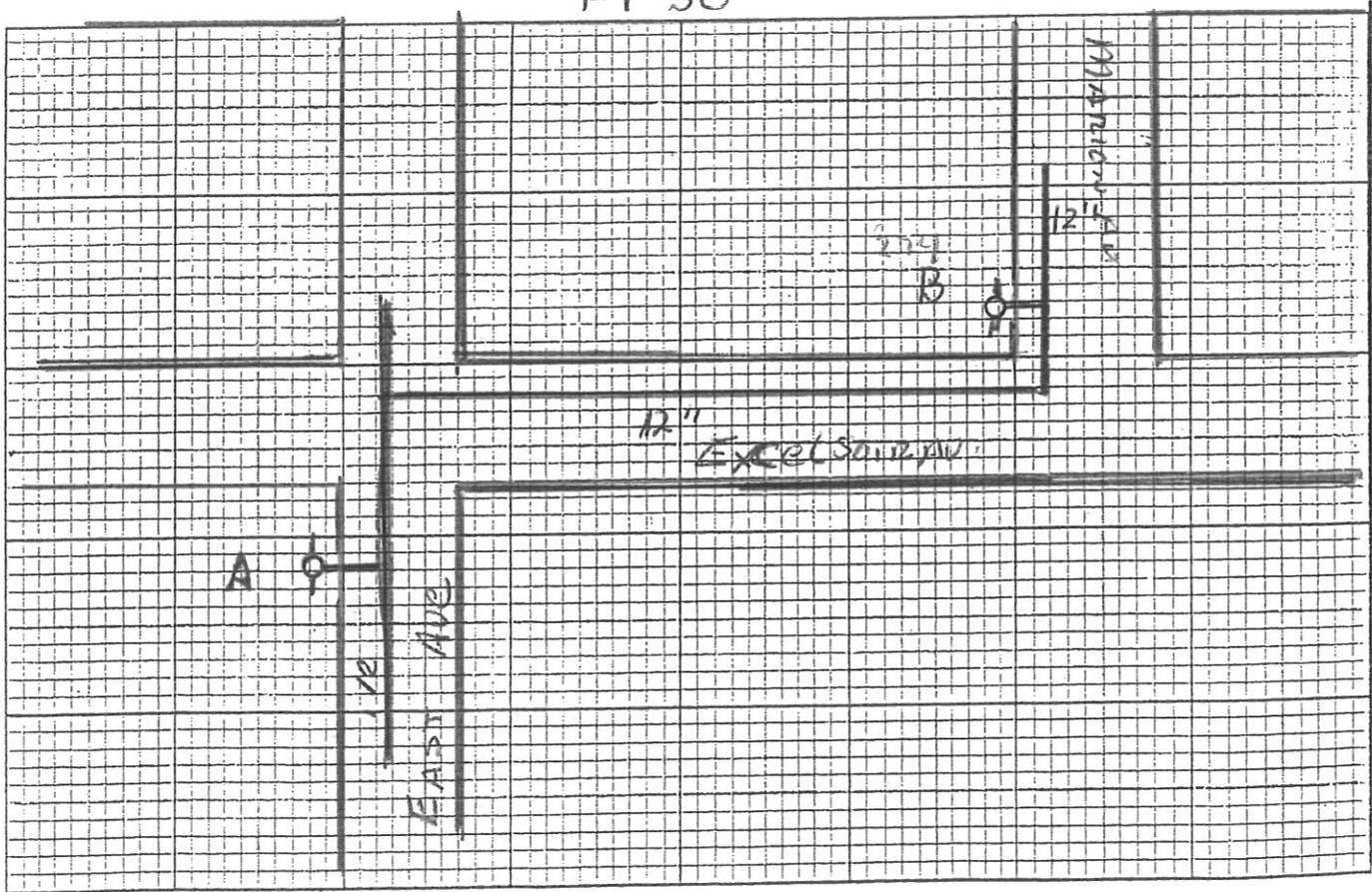
By JMF / CS
 WIT STAN BORDON
 DATE 4-24-13 - 2:15 PM

TEST DATA

TYPE OF TEST (HYDRANT, DRAIN, OR PUMP)	STATIC OR SUCTION- PRESSURE (PSI)	RESIDUAL OR DISCHARGE PRESSURE (PSI)	USG Etc.	PUMP SPEED (RPM)	PITOT PRES.	NO. OF FLOW OPENINGS	DIA. OF FLOW OPENING (IN.)	FLOW AT C = .90 C = .97 (GPM)	OPENING COEFFICIENT C = _____	ACTUAL FLOW (GPM)
	102		274							
		98	261		87	1	2'2	.90		1570

SKETCH OF TEST LOCATION (Show pipe sizes and lengths)

RT 50



NOTES

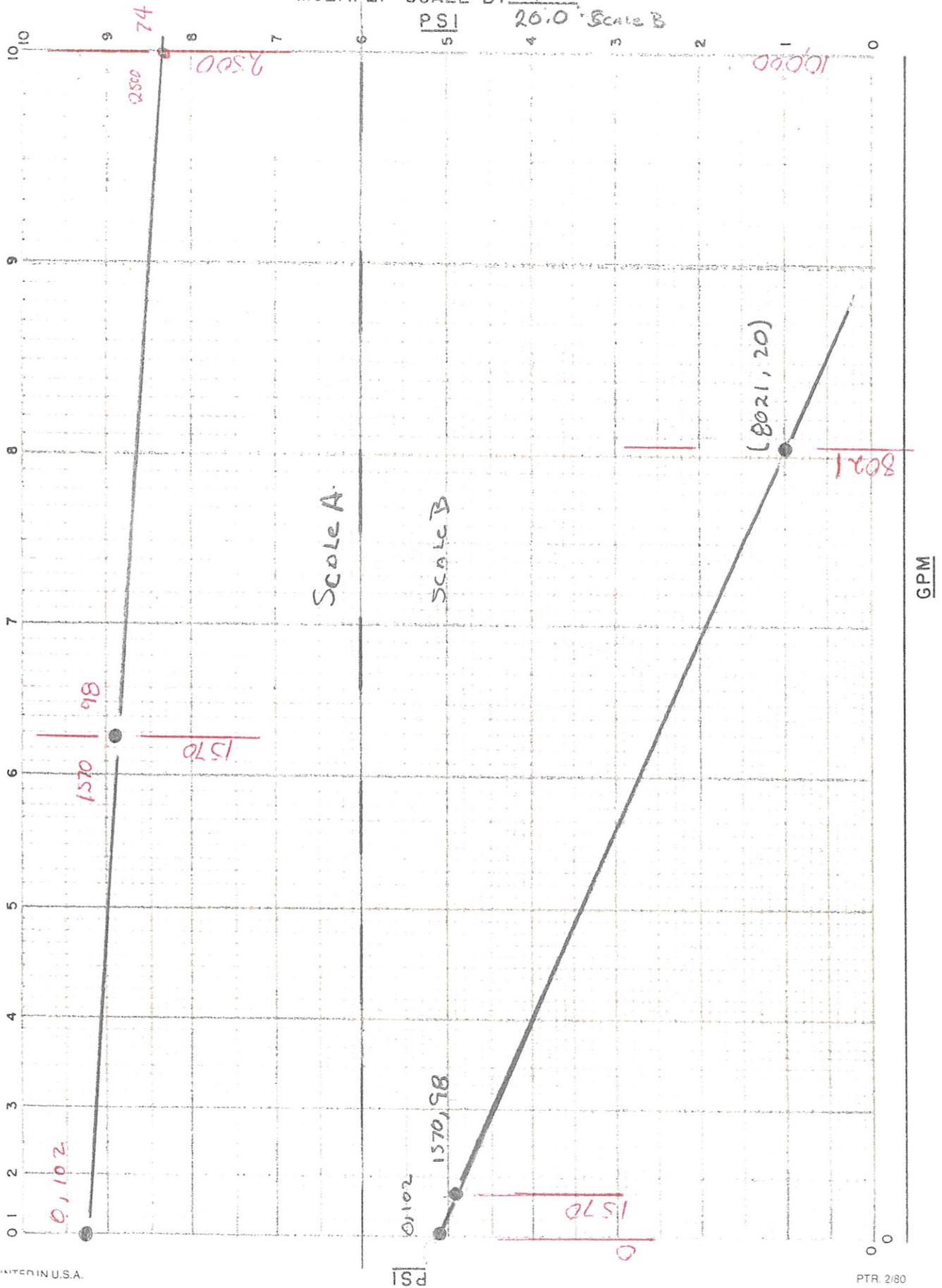


CONTRACT NO. _____
 NAME: Marion Ave @ Excelsior Ave
 ADDRESS: Sanitoga Springs 714

SHEET NO. _____ OF _____
 SYSTEM NO. _____
 DATE: 4-24-13

MULTIPLY SCALE BY $\frac{11.0}{20.0}$ SCALE A
 PSI SCALE B

MULTIPLY SCALE BY $\frac{150}{1000}$ SCALE A
 GPM SCALE B



ATTACHMENT B
FIRE HYDRANT LOCATION SKETCH



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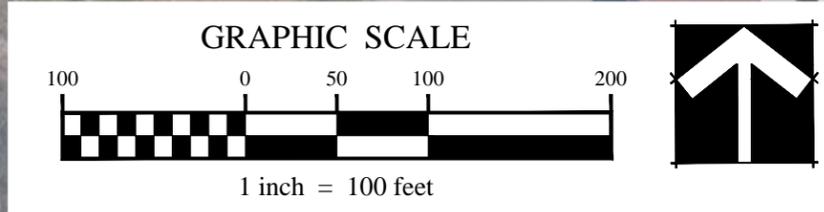
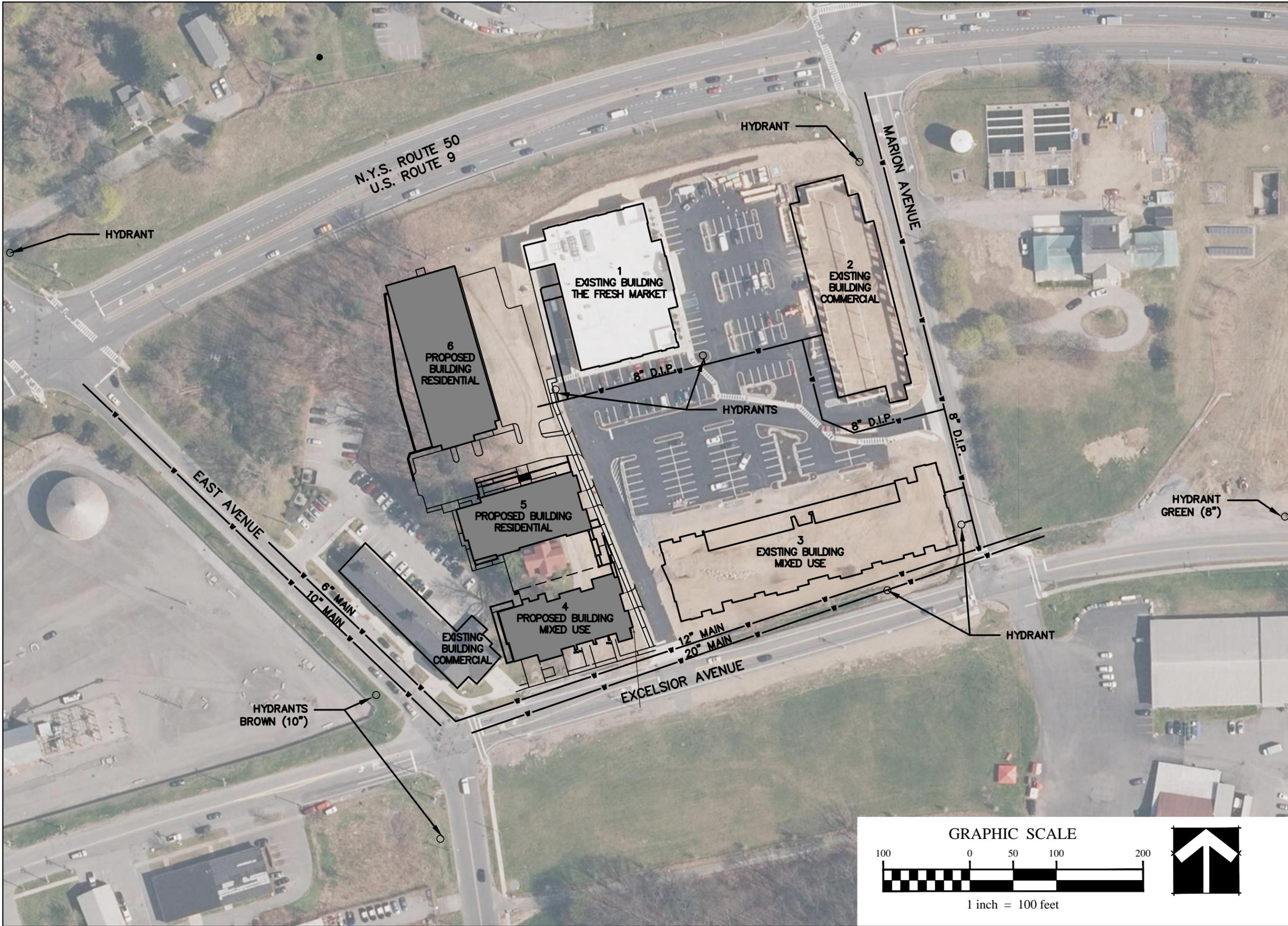
Prepared for:
Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.: 201391
Design: DPD
Drawn: KMK Chk'd: DPD
Date: 09/09/15 Scale: 1"=100'

Rev.	Description	Date

Drawing Title:
Hydrant Locations
Drawing No.:
ATTACHMENT B



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ATTACHMENT C
NEEDED FIRE FLOW (NFF) CALCULATIONS

**Assumptions: Tallest building is 4 stories with basement (Bldg 6).
 Wood frame construction.
 Residential apartments.
 Largest unit is 1,886 SF on 4th floor. Remaining area on floor is 260 SF.
 Largest unit on third floor is 1,580 SF then 1,158 SF on 1st and 2nd floors.**

References: 1. Insurance Services Office (ISO) Guide for Determination of Needed Fire Flow
Edition 06-2014

Needed Fire Flow Formula:

$$NFF_i = (C_i)(O_i)[1.0 + (X + P)]$$

where:

- NFF = the needed fire flow in gallons per minute
- C_i = a factor related to the type of construction and effective area
- O_i = a factor related to the type of occupancy
- X = a factor related to the exposure hazard of adjacent buildings
- P = a factor related to the communication hazard with adjacent buildings

CONSTRUCTION TYPE

Construction Class 1 (wood frame construction)
 Construction type coefficient (F) = 1.5 (Chapter 2, Reference 1)
 Effective area (A) = 3,964 SF 1,886 + (260/2) + ((1,580 + 1,158 + 1,158) x 50%)

$$C = 18F \times A^{1/2}$$

C = 1,699.93 gpm
 C = 1,750 gpm (rounded to nearest 250 gpm)

OCCUPANCY TYPE

Residential (apartments)
 Occupancy combustibility class C-2 (Limited Combustibility)
 Occupancy Factor (O) = 0.85 (Chapter 3, Reference 1)

EXPOSURES AND COMMUNICATION

Exposure Factor (X) = none (Chapter 4, Reference 1, exception for habitational and sprinklered)
 Exposure and Communication Factor (X + P) = 0.00

CALCULATION

$$NFF = (C)(O)(1+(X+P))$$

NFF = 1,487.50 gpm
 NFF = 1,500 gpm (rounded to nearest 250 gpm)

ATTACHMENT D

WATER PRESSURE CALCULATIONS

77 EXCELSIOR AVENUE - NEW DEVELOPMENT

AUGUST 17, 2015

MINOR LOSS COMPUTATION

SEGMENT	FLOW** (GPM)	PIPE DIA. (IN)	PIPE VELOCITY (FT/SEC)	PIPE SEGMENT LENGTH (FT)	FTGS, VALVES EQUIV. LENGTH (FT)	TOTAL LENGTH (FT)	HEAD LOSS (DYNAMIC)		SEGMENT NODE	HGL (FT)	GROUND SURFACE ELEV (FT)	PRESSURE*			SEGMENT	DIA (IN)	NO. OF VALVES	SUB-TOTAL EQUIV. LENGTH	NO. OF SIDE TEES	SUB-TOTAL EQUIV. LENGTH	NO. OF THRU TEES	SUB-TOTAL EQUIV. LENGTH	NO. OF 90 DEG. BENDS	SUB-TOTAL EQUIV. LENGTH	NO. OF 45 DEG. BENDS	SUB-TOTAL EQUIV. LENGTH	TOTAL EQUIV. LENGTH (FT)		
							C=140 (PSI)	(FT)				STATIC (PSI)	RESIDUAL (FT)	(PSI)															
FROM 12-INCH CITY MAIN ON EXCELSIOR AVENUE AT MARION AVENUE INTERSECTION:																													
AB	3500	8	22.34	60	22.7	83	5.9	13.5	AB	A	509.6	274	102.0	235.6	102.0	AB	8	1	2.7	1	20	0	0	0	0	0	0	0	22.7
BC	3500	8	22.34	105	23.9	129	9.1	21.1	BC	B	496.1	277	100.7	219.1	94.8	BC	8	0	0	1	20	1	3.9	0	0	0	0	0	23.9
CD	3500	8	22.34	235	39.2	274	19.4	44.9	CD	C	475.0	281	99.0	194.0	84.0	CD	8	1	2.7	1	20	1	3.9	0	0	2	12.6	39.2	
DE	3500	8	22.34	110	22.7	133	9.4	21.7	DE	D	430.1	285	97.2	145.1	62.8	DE	8	1	2.7	1	20	0	0	0	0	0	0	0	22.7
EF	2500	8	15.96	165	3.9	169	6.4	14.8	EF	E	408.4	284	97.7	124.4	53.8	EF	8	0	0	0	0	1	3.9	0	0	0	0	0	3.9
FG	2000	8	12.77	40	6.6	47	1.2	2.7	FG	F	393.5	279	99.8	114.5	49.6	FG	8	1	2.7	0	0	1	3.9	0	0	0	0	0	6.6
										G	390.8	283	98.1	107.8	46.7														
BRANCH LINES (BUILDING SERVICES):																													
FH	500 (BLDG. 1)	6	5.67	140	17.3	157	1.2	2.9	FH	F	393.5	279	99.8	114.5	49.6	FH	6	2	5.2	0	0	1	3.1	0	0	2	9	17.3	
										H	390.7	281	99.0	109.7	47.5														
DI	500 (BLDG. 2)	6	5.67	40	17.6	58	0.5	1.0	DI	D	430.1	285	97.2	145.1	62.8	DI	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										I	429.0	287	96.4	142.0	61.5														
BJ	500 (BLDG. 3)	6	5.67	25	17.6	43	0.3	0.8	BJ	C	475.0	281	99.0	194.0	84.0	BJ	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										I	474.2	283	98.1	191.2	82.8														
GK	500 (BLDG. 6)	6	5.67	50	5.7	56	0.4	1.0	GK	G	390.8	283	98.1	107.8	46.7	GK	6	1	2.6	0	0	1	3.1	0	0	0	0	0	5.7
										K	389.8	284	97.7	105.8	45.8														
GL	500 (BLDG. 5)	6	5.67	70	17.6	88	0.7	1.6	GL	G	390.8	283	98.1	107.8	46.7	GL	6	1	2.6	1	15	0	0	0	0	0	0	0	17.6
										L	389.2	276	101.1	113.2	49.0														
* Static pressure 102 psi measured on 4/24/13. ** Assumes building demand at 500 GPM, fire hydrants flowing 1000 GPM. Assumes (2) hydrants flowing simultaneously. Assumes (3) buildings demanding fire flows simultaneously. Assumes no contribution of flow from the north end of Marion Avenue water main.																													



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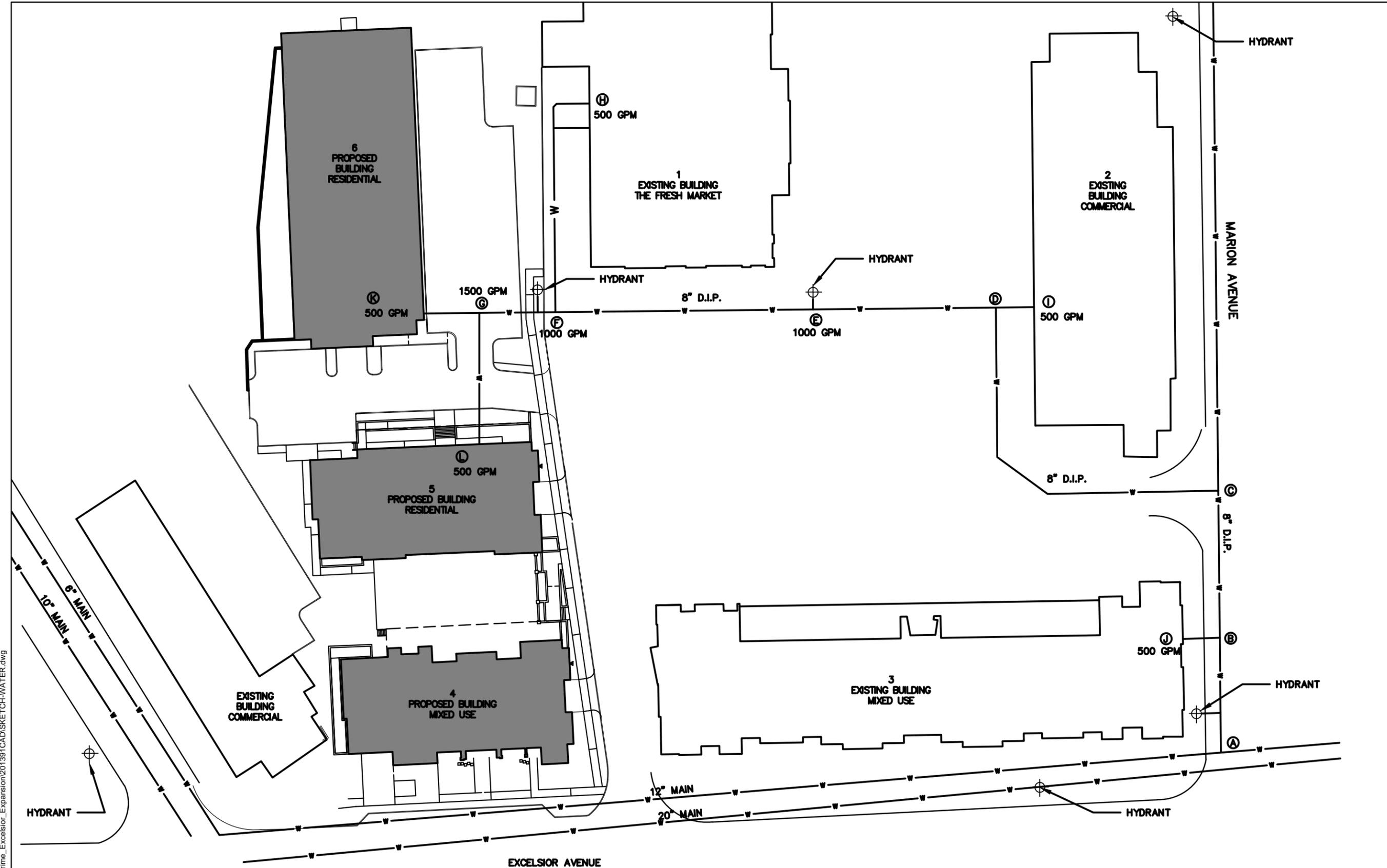
Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.: 201391
Design: DPD
Drawn: KMK Chk'd: DPD
Date: 09/09/2015 Scale: 1"=60'

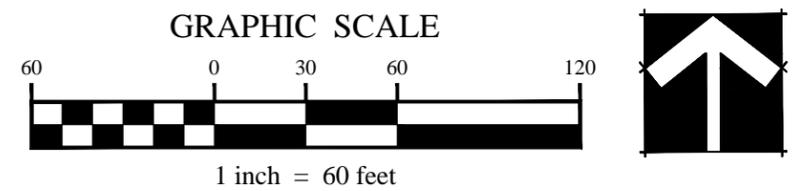
Rev.	Description	Date

Drawing Title:
Waterlines & Fire Hydrants Location

Drawing No.:
ATTACHMENT D



SCENARIO:
(2) FIRE HYDRANTS FLOWING @ 1,000 GPM EACH.
(3) BUILDINGS DEMANDING 500 GPM EACH.



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ATTACHMENT E

SANITARY SEWER CALCULATIONS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 4:

APARTMENTS (1BR):

NO. OF APARTMENTS 9 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 990 GPD

APARTMENTS (2BR):

NO. OF APARTMENTS 7 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 1,540 GPD

COMMERCIAL:

NO. SQ FT 1,300 SF
DESIGN FLOW, Q_c = 0.1 GPD/SF (NYSDEC)

 130 GPD
=====

MAX. DAILY FLOW, Q = 2,660 GPD (Q_a + Q_b + Q_c)

AVG. DAILY FLOW, Q_{av} = 3.69 GPM (BASED ON A 12 HOUR DAY)

PEAK FLOW, Q_p = 15.5 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

 Flow, Q = 0.40 CFS or 178.1 GPM
 Velocity, V = 4.04 FPS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 5:

APARTMENTS (1BR):

NO. OF APARTMENTS 18 EA
DESIGN FLOW, Q_a = 110 GPD/EA (NYSDEC)

 1,980 GPD

APARTMENTS (2BR):

NO. OF APARTMENTS 9 EA
DESIGN FLOW, Q_b = 220 GPD/EA (NYSDEC)

 1,980 GPD

=====

MAX. DAILY FLOW, Q = 3,960 GPD ($Q_a + Q_b$)

AVG. DAILY FLOW, Q_{av} = 5.50 GPM (BASED ON A 12 HOUR DAY)

PEAK FLOW, Q_p = 23.1 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.020 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.40 CFS or 178.1 GPM
Velocity, V = 4.04 FPS

ESTIMATE MAXIMUM DAILY FLOW BUILDING 6:

APARTMENTS (1BR):			
NO. OF APARTMENTS	29	EA	
DESIGN FLOW, Q _a =	110	GPD/EA	(NYSDEC)

	3,190	GPD	
APARTMENTS (2BR):			
NO. OF APARTMENTS	17	EA	
DESIGN FLOW, Q _b =	220	GPD/EA	(NYSDEC)

	3,740	GPD	
APARTMENTS (3BR):			
NO. OF APARTMENTS	1	EA	
DESIGN FLOW, Q _c =	330	GPD/EA	(NYSDEC)

	330	GPD	
	=====		
MAX. DAILY FLOW, Q =	7,260	GPD	(Q _a + Q _b + Q _c)
AVG. DAILY FLOW, Q _{av} =	10.08	GPM	(BASED ON A 12 HOUR DAY)
PEAK FLOW, Q _p =	42.4	GPM	(4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation where:

Cross-sectional area,	A =	0.10	SF
Wetted perimeter,	P =	0.79	FT
Channel slope,	S =	0.020	FT/FT
Roughness coefficient,	n =	0.013	(10 States minimum)

Flow, Q =	0.40	CFS or	178.1	GPM
Velocity, V =	4.04	FPS		

ESTIMATE TOTAL MAXIMUM DAILY FLOW:

MAX. DAILY FLOW, Q =	13,880	GPD	(BLDGS 4,5 & 6)
AVG. DAILY FLOW, Q _{av} =	19.28	GPM	(BASED ON A 12 HOUR DAY)
PEAK FLOW, Q _p =	81.0	GPM	(4.2 x AVG)

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #2 TO SMH #3:

BLDG 1 (FRESH MARKET) 3,600 GPD (FROM PREVIOUS STUDY)
BLDG 2 (COMMERCIAL): 2,160 GPD (FROM PREVIOUS STUDY)
BLDG 5 (RESIDENTIAL): 3,960 GPD
BLDG 6 (RESIDENTIAL): 7,260 GPD

MAX. DAILY FLOW, Q = 16,980 GPD

AVG. DAILY FLOW, Q_{av} = 23.58 GPM (BASED ON A 12 HOUR DAY)

PEAK HOURLY FLOW, Q_p = 99.1 GPM (4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area, A = 0.10 SF
Wetted perimeter, P = 0.79 FT
Channel slope, S = 0.043 FT/FT
Roughness coefficient, n = 0.013 (10 States minimum)

Flow, Q = 0.58 CFS or 261.1 GPM
Velocity, V = 5.93 FPS

At a peak hourly flow = 99.1 GPM, sewer is flowing at a depth of
1.7 inches and a velocity of
4.5 feet per second.

ESTIMATE PEAK HOURLY FLOW BETWEEN SMH #3 TO DISCHARGE (MAIN):

BLDG 1 (FRESH MARKET)	3,600	GPD	(FROM PREVIOUS STUDY)
BLDG 2 (COMMERCIAL):	2,160	GPD	(FROM PREVIOUS STUDY)
BLDG 4 (RES/COMM):	2,660	GPD	
BLDG 5 (RESIDENTIAL):	3,960	GPD	
BLDG 6 (RESIDENTIAL):	7,260	GPD	

MAX. DAILY FLOW, Q =	19,640	GPD	
AVG. DAILY FLOW, Q_{av} =	27.28	GPM	(BASED ON A 12 HOUR DAY)
PEAK HOURLY FLOW, Q_p =	114.6	GPM	(4.2 x AVG)

Check capacity of 6 -inch sewer (flowing 1/2 full):

Use Manning's Equation, $Q = 1.486/n \times AR^{2/3} \times S^{1/2}$
where $R = A/P$

Cross-sectional area,	A =	0.10	SF
Wetted perimeter,	P =	0.79	FT
Channel slope,	S =	0.033	FT/FT
Roughness coefficient,	n =	0.013	(10 States Standards)

Flow, Q =	0.51	CFS	or	228.7	GPM
Velocity, V =	5.19	FPS			

At a peak hourly flow = 114.6 GPM, sewer is flowing at a depth of
2.0 inches and a velocity of
4.3 feet per second.



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November 4, 2015

Kate Maynard, AICP
Principal Planner
City of Saratoga Springs
474 Broadway
Saratoga Springs, NY 12866
kate.maynard@saratoga-springs.org

REC'D NOV 4 2015

**RE: 77 Excelsior Comments and Responses
City Project # 15.041**

Dear Ms. Maynard:

The following are The LA Group's responses to your comments in an email dated October 23, 2015.

Site Layout

Comment: Number of units noted as 73, while SUP permits 101. Confirmation of correct amount needed.

Response: **Project proposes 90 units. Plans and Site Plan application have been revised.**

Comment: Uses determined for 1,300 s.f. of commercial space?

Response: **Proposed use of the commercial space is unknown at this time.**

Comment: 1,440 s.f. shown on DRC application, confirmation of which is correct.

Response: **Plans and Site Plan application have been revised to indicate 1,440 s.f. of commercial use.**

Comment: Walk in office portion of 3 live/work units – present at grade. Note should be added to plans that require ground level space to remain commercial.

Response: **A note has been added to Layout & Materials Plan indicating ground level spaces shall remain commercial.**

Comment: Is flexibility for adapting units possible? Example: second story of residential unit able to be sealed off from lower level to allow for commercial space to be rented separately.

Response: **Second story units could be sealed off if necessary, but not currently proposed.**

Comment: Overhang from existing site to west appears to encroach on subject parcel- is this accurate? If so, how resolved?

Response: **The dashed line on the adjacent property is depicting a stone drip strip. The**

stone drip strip will be reconstructed along the property line as part of the project. Per a site visit, it does not appear that water from the adjacent roof will drip onto the subject parcel.

Comment: Building 6 (third building) does not appear to tie in well with remainder of site-suburban style with parking on both sides. Ability to break down mass of building, create two buildings.

Response: Due to the existing City drainage easement through the northeast portion of the site, there is no ability to break down the mass of the building and create two buildings. Building 6 will be smaller in mass than Phase 1 Building 3, which is directly adjacent to the project.

Comment: What is the small structure at west side of parking lot?

Response: Transformer. The location has been discussed with National Grid.

Comment: Access ramp- is there enough clearance to turn wheelchair on ramp?

Response: Access ramp has been revised due to building changes. Access ramp meets ADA guidelines.

Comment: Left turn lane at East/Excelsior Avenue installed with Fresh Market site project. Additional pedestrian crosswalks, landing pads and pedestrian signals needed for at north, west, and southern legs of intersection.

Response: This will be discussed with the Planning Board.

Comment: Bike lanes need to be shown on plan.

Response: Bike lanes are depicted on Sheet L-2.0, Layout & Materials Plan.

Comment: Excelsior Avenue street condition – condition is fair to poor with construction still remaining for subject project. Applicant should provide how street will be repaired once construction is complete.

Response: This will be discussed with the Planning Board.

Comment: Cross access connection desirable to continue through to west?

Response: Easement has been added to allow for future cross connection.

Comment: Building 4 – how is parking provided for commercial uses versus residential? Tandem parking appears to be for residential only?

Response: Tandem parking has been removed from Building 4. Garage will have a door that will only be accessible by residents. Parking for commercial uses will be along the street and rear parking lot.

Comment: Proposed parking only addresses office use. Eating and drinking #'s need to be provided for comparison of parking needs.

Response: Parking calculations have been revised to depict parking needs for a restaurant which would be the use that requires the maximum amount of parking.

Comment: Building 3 and 4 are creating commercial destinations along Excelsior. This is desirable for the neighborhood. On street parking has been deemed critical for success of commercial uses in Transect districts. Is current proposed and existing sufficient? More on-street parking desirable? Ability to create on shared access drive,

or along south side of Excelsior (National Grid former ice rink site)?

Response: Access drive was investigated and determined to not be feasible. Existing utility poles along the south side of Excelsior along with the need for additional sidewalk make parking along the south side of Excelsior problematic.

Comment: 101 units proposed on site- public civic space is required for project. Proposed on private property, public access easement or other means required to ensure public able to access.

Response: Public access easement is proposed over the civic space.

Comment: Courtyard- water feature wall still has height of over 12', ability to break down wall through materials, articulation, potentially a clear fence at top? Bench placement from illustration needs to be clarified.

Response: A fence is proposed on either side of the water feature. A rendering will be shown at the Planning Board meeting of this wall. The seat wall will be used for seating.

Comment: No dumpster appears to be provided. Details required.

Response: A trash/recycle room is proposed in the garages of each unit. For pickup, the trash truck will pull along the garages and the contractor will enter the garage and pull out the internal dumpsters to be emptied. This is a similar approach as the previous phase, Building 3.

Comment: Condition of Planning Board approval of land disturbance permit was 20' buffer and retaining number of large trees within Route 50 facing portion. Plan proposes to remove all remaining trees on property. Mature, taller trees can assist with softening perspective of new 50' building being constructed. No new trees appear to be proposed currently.

Response: A few of the trees along Rte. 50 are outside of the property and will remain. A rendering of the Rte 50 view will be provided at the Planning Board meeting.

Comment: 67' in diameter oak tree identified as potentially largest Oak tree in City by Urban Forestry Plan. Opportunity to preserve should be considered.

Response: The large oak tree along the north western portion of the site appears to be in poor condition. Tree will be removed to prevent an unsafe situation.

Comment: Illustration of remaining vegetation for view from west (and East Ave) be provided?

Response: Renderings will be presented at the Planning Board meeting.

Comment: Fencing- Chainlink fence proposed to remain along Route 50. Recommend upgrading to match black wrought iron look fence along Fresh Market Route 50 frontage.

Response: Fence along Rte 50 will be upgraded to match Fresh Market site.

Comment: Utility- Confirmation cross-access, utility easements signed for infrastructure crossing property lines?

Response: Utility easements will be provided as necessary.

Comment: National Grid approval for proposed transformer location provided on plans?

Response:

National Grid will not approve the transformer location until the project is approved. LA Group has met with NG to discuss the anticipated location and have received positive feedback.

Sincerely,



Douglas B. Heller, PE
Civil Engineer
dheller@thelagroup.com

77 Excelsior Avenue Mixed Use Development

Site Plan Review Application

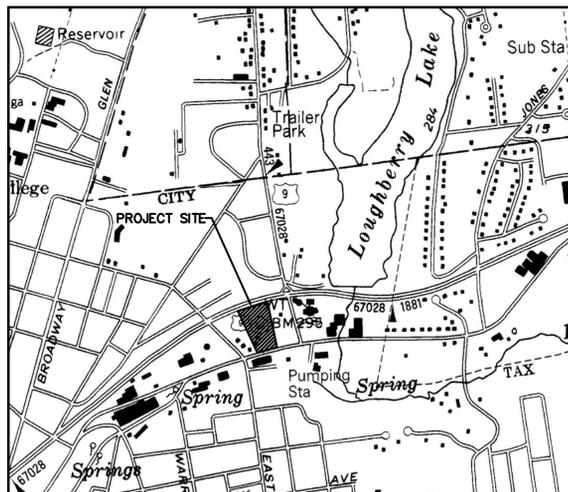
77 Excelsior Avenue
Saratoga Springs, New York

August 19, 2015
Revised November 4, 2015



Vicinity Map:

SCALE: NTS



Project Location Map:

SCALE: NTS

CITY OF SARATOGA SPRINGS STANDARD NOTES

- ALL WORK MUST CONFORM TO ALL FEDERAL AND CITY CODES, SPECIFICATIONS, ORDINANCES, RULES AND REGULATIONS.
- THE EVALUATION BASE FOR THE CONTOURS AND BENCHMARKS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM, 1929.
- ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR TO A
- THE CONTRACTOR MUST SET UP A PRE-CONSTRUCTION MEETING WITH THE CITY ENGINEER OR A DESIGNATED REPRESENTATIVE IS REQUIRED.
- THE COST OF CONSTRUCTION INSPECTIONS IS THE RESPONSIBILITY OF THE APPLICANT/DEVELOPER. AN ESCROW ACCOUNT TO COVER THE COST OF INSPECTIONS MUST BE ESTABLISHED PRIOR TO ANY CONSTRUCTION.
- THE CONTRACTOR MUST OBTAIN A BLASTING PERMIT FROM THE BUILDING INSPECTOR IF ANY BLASTING IS REQUIRED FOR THE PROJECT.
- THE CONTRACTOR MUST OBTAIN A STREET OPENING PERMIT ISSUED BY THE DEPARTMENT OF PUBLIC WORKS FOR ANY WORK IN THE STREET OF RIGHT-OF-WAY OF ANY CITY STREET, ROAD OR ALLEY.
- ALL POINTS OF CONSTRUCTION INGRESS OR EGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT OR DEBRIS ONTO A PUBLIC ROAD.
- 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.

SITE STATISTICS

PROPOSED USE:	COMMERCIAL RETAIL, OFFICE, EATING & DRINKING ESTABLISHMENT, SERVICE ESTABLISHMENT RESIDENTIAL APARTMENTS: 101 UNITS (ALLOWED) 90 UNITS (PROPOSED)
PARCEL SIZE:	2.20 ACRES
TAX MAP PARCEL NUMBER:	166.5-5-4.1
EXISTING ZONING:	T-5 NEIGHBORHOOD CENTER
FRONTAGE BUILD-OUT:	(MINIMUM 70%) 71% PROPOSED
BUILD TO LINE ALL BUILDINGS FROM FRONTAGE LINE	0 TO 12 FT
SIDE SETBACK	0 FT MINIMUM

PARKING DEMAND

AREA/USE	#UNITS/SEATS	REQUIREMENTS/ZONING	# REQUIRED	# PROVIDED
APARTMENTS	90 UNITS	1.5/UNIT	135	
COMMERCIAL/ EATING & DINING	1,440 SF 6 EMPLOYEES	1/4 SEATS (40) 1/2 EMPLOYEES	10 (BASED ON EATING & DRINKING ESTABLISHMENT) 3	
TOTAL REQUIRED			148	
SITE				49
STREET PARKING				5
GARAGE				111
TOTAL PROVIDED				165

SHEET INDEX:

S-01	COVER
L-1.0	SURVEY
L-2.0	SITE PREPARATION, EROSION & SEDIMENT CONTROL PLAN
L-2.1	LAYOUT & MATERIALS PLAN
L-3.0	PARKING & LIGHTING PLAN
L-4.0	GRADING & DRAINAGE PLAN
L-5.0	UTILITY PLAN
L-6.0	LANDSCAPE PLAN
L-6.1	SITE DETAILS
L-6.2	SITE DETAILS
L-6.3	STORMWATER DETAILS
L-6.4	STORMWATER DETAILS
L-6.5	STORMWATER DETAILS
L-6.6	UTILITY DETAILS



CITY OF SARATOGA SPRINGS
PLANNING BOARD
City Hall - 474 Broadway
Saratoga Springs, New York 12866
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www.saratoga-springs.org

MARK TORPEY, Chair
ROBERT F. BRISTOL, Vice-Chair
CLIFFORD VAN WAGNER
TOM L. LEWIS
DAN GABA
HOWARD PINSLEY
JANET CASEY

NOTICE OF DECISION

In the matter of the special use permit application #14.059 of: **RECEIVED**
77 Excelsior Avenue Mixed Use
77 Excelsior Avenue
Saratoga Springs, NY 12866
JUL 14 2015
ACCOUNTS DEPARTMENT

Involving the premises at 77 Excelsior Avenue, tax parcel #166.5-5-4.1, in the City of Saratoga Springs, on an application for a permanent special use permit for 101 multi-family residential units; up to 5,000SF for office uses; 30,000SF for parking facility; and up to 2,000SF of retail, bakery/retail, real estate office, art gallery, financial institution, eating and drinking establishment, recreational facility, or service establishment uses in a Transit-5 Neighborhood Center District with the Planning Board who met on July 8, 2015 and made the following decision(s) with a 6-0 vote (In favor: Torpey, Bristol, Lewis, Gaba, Pinsley, Casey; Absent: Van Wagner):

- Following review of the SEQRA Part 1 and completion of the Part 2 of the short Environmental Assessment Form, issued a SEQRA negative declaration.
- Following evaluation of the identified six standards for the issuance of special use permits as set forth in Article 240-6.4 of the City of Saratoga Springs Zoning Ordinance, moved to approve the permanent special use permit with the following conditions:
 - \$8,500 contribution towards Excelsior Avenue Cross-Section Plan is accepted with appreciation by the Planning Board.

Unless otherwise extended by the Planning Board, this approval shall expire if the applicant fails to comply with any required conditions and start actual construction, or otherwise implement this approval within 18 months from this date.

July 13, 2015
Date

Mark R. Torpey
Chair

cc: Steve Shaw, Bldg Inspector
Tim Wales, City Engineer
File
Accounts Dept.
Todd Curley, Beechwood Prime
Dave Carr, LA Group

Approval

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

Planning Board # 15.041

Applicant/Owner:

Prime Beechwood, LLC
621 Columbia Street
Cohoes, New York 12047

Prepared By:

The LA GROUP
Landscape Architecture & Engineering P.C.
People. Purpose. Place.
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Saratoga Springs # 518-587-0180
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Architect:

balzer + tuck | architecture · pllc
468 broadway · saratoga springs · new york · 12866
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GENERAL NOTES

- EXISTING CONDITIONS ARE TAKEN FROM A SURVEY PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY MAP OF LANDS OWNED BY 77 EXCELSIOR AVENUE, LLC, LOCATED AT ST. NO. 77 EXCELSIOR AVENUE", DATED FEBRUARY 4, 2014, AS PREPARED BY ADVANCED ENGINEERING & SURVEYING, PLLC.
- PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL CONTACT U.P.O. (1-800-962-7862) AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANY HAVING JURISDICTION TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY COSTS INCURRED BY THE CONTRACTOR DUE TO FAILURE TO CONTACT THE PROPER AUTHORITIES SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.
- THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCE, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). EXCAVATION REQUIRED WITHIN PROXIMITY OF UTILITY LINES SHALL BE DONE BY HAND. ANY DAMAGE AND INCURRED COSTS DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCY BETWEEN THE PLANS AND THE ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT.
- LIMIT OF WORK LINE IS NOTED ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL MEET LINE AND GRADE OF EXISTING CONDITIONS AT LIMIT OF WORK LINE. IF NO LIMIT OF WORK IS SHOWN, THE PROPERTY LINE SHALL BE THE LIMIT OF WORK.
- THE CONTRACTOR SHALL ESTABLISH PERMANENT BENCH MARKS. MAINTAIN ALL ESTABLISHED BOUNDS AND BENCH MARKS AND REPLACE AS DIRECTED ANY WHICH ARE DESTROYED OR DISTURBED.
- CONTRACTOR SHALL EMPLOY SPECIAL CARE IN SCHEDULING CONSTRUCTION SO AS TO MAINTAIN EXISTING VEHICULAR TRAFFIC PATTERNS, AND MINIMIZE DISRUPTION TO SURROUNDING PEDESTRIAN TRAFFIC. CONTRACTOR SHALL EMPLOY SPECIAL CARE TO PROTECT SAFETY OF PEDESTRIANS INSIDE AND OUTSIDE OF THE LIMIT OF WORK LINE.
- VARIOUS PERMITS ARE REQUIRED FOR THIS WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL REQUIRED PERMITS FROM ALL JURISDICTIONS AFFECTED BY THIS WORK ARE IN PLACE PRIOR TO CONSTRUCTION. FOR PERMITS ALREADY ISSUED, CONTRACTOR SHALL OBTAIN COPIES OF PERMITS AND STRICTLY ADHERE TO PERMIT CONDITIONS. PERMITS THAT ARE OUTSTANDING SHALL BE SECURED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE.
- ALL ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE CONTRACTOR ON "AS-BUILT DRAWINGS," AS SPECIFIED
- STORAGE AREAS FOR THE GENERAL CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE LOCATED WITHIN THE LIMITS OF WORK AS SHOWN ON THE PLANS OR AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- SHOULD ANYTHING BE OMITTED FROM THE PLANS WHICH IS NECESSARY FOR A COMPLETE UNDERSTANDING OF THE WORK, OR SHALL ANY ERROR APPEAR IN THE VARIOUS INSTRUMENTS FURNISHED OR IN THE WORK BY OTHER CONTRACTORS AFFECTING THE WORK COVERED HEREBY, THE CONTRACTOR SHALL AND WILL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE, AND IN THE EVENT OF THE CONTRACTOR'S FAILURE TO DO SO, HE SHALL AND WILL MAKE GOOD OF ANY DAMAGE OR DEFECT IN HIS WORK CAUSED THEREBY.
- PROVIDE EXPANSION JOINTS AT ALL CURBS, WALLS, STEPS, LIGHT POLE BASES, PULL BOXES, MANHOLES, TRAFFIC CONTROLLER BOXES AND AS SHOWN ON PLAN.
- CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXISTING INFRASTRUCTURE FOR THE DURATION OF CONSTRUCTION.
- CONTRACTOR SHALL PROTECT AND SUSTAIN IN NORMAL SERVICE ALL EXISTING UTILITIES, STRUCTURES, EQUIPMENT, ROADWAYS AND DRIVEWAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS EFFORTS OF DEMOLITION, REMOVALS AND OR RELOCATION WORK WITH ALL TRADES, IF APPLICABLE. CONSULT ALL DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
- CONTRACTOR TO COMPLY WITH ALL OSHA AND OTHER STATE AND LOCAL SAFETY REQUIREMENTS DURING CONSTRUCTION (PROPER SHORING, ETC.).
- CONTRACTOR SHALL MAINTAIN PROPER SIGNS, BARRICADES, FENCES, TO PROPERLY SURROUNDING PEDESTRIAN TRAFFIC. CONTRACTOR SHALL EMPLOY SPECIAL CARE TO PROTECT SAFETY OF PEDESTRIANS INSIDE AND OUTSIDE OF THE SITE SHALL NOT BE IMPEDED.



The LA GROUP

Landscape Architecture & Engineering P.C.

People. Purpose. Place.

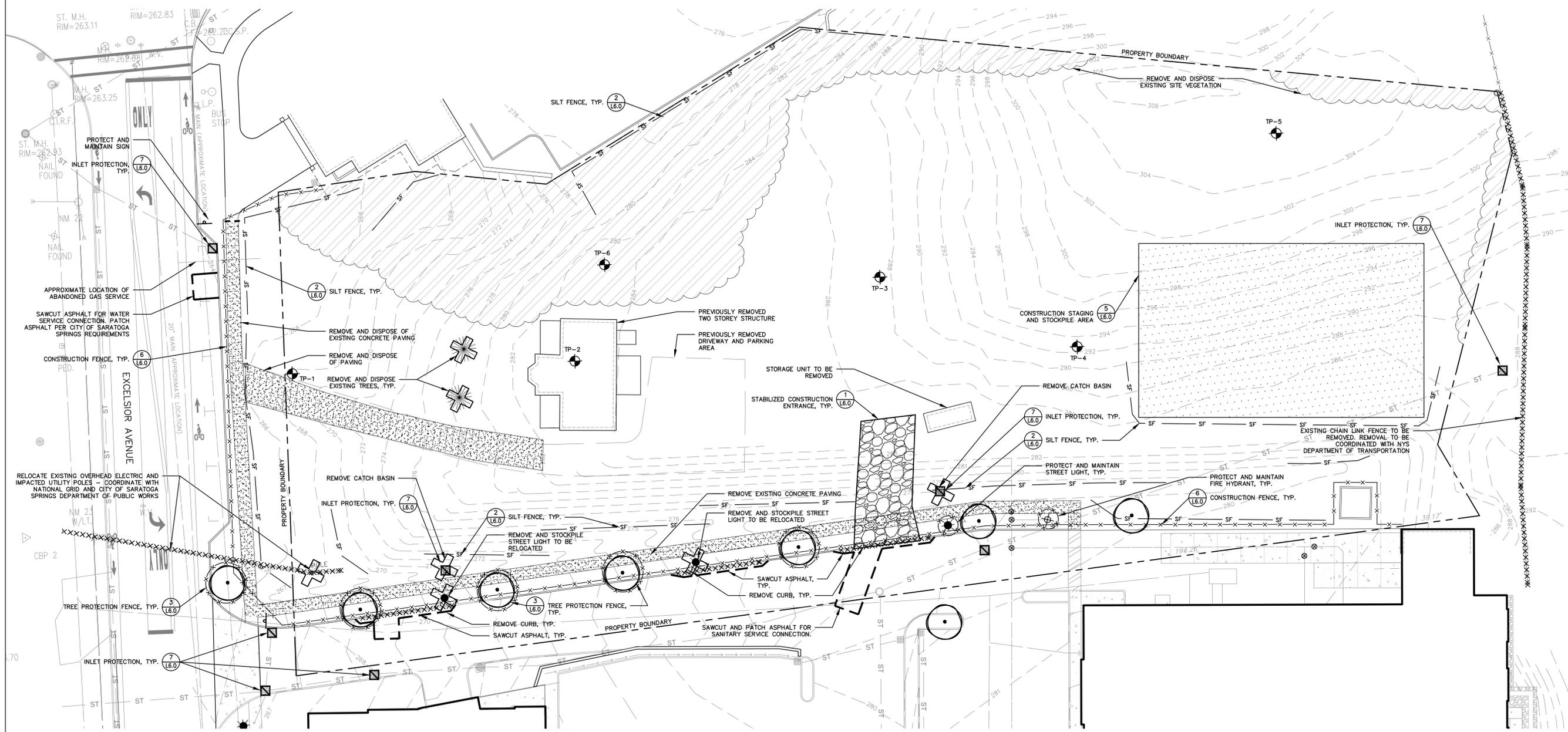
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Prepared for:

Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047



SITE PREPARATION & DEMOLITION NOTES

1. 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.
2. 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.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS THAT ARE DUE TO CONTRACTOR OPERATIONS AND WHICH ARE OUTSIDE THE LIMIT OF WORK.
4. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY AND PAY ALL ASSOCIATED COSTS.
5. 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.
6. CONTRACTOR SHALL SECURE ALL PERMITS THAT MAY BE REQUIRED FROM ALL JURISDICTIONS AFFECTED BY THIS WORK.
7. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES NOT TO BE REMOVED.

EROSION & SEDIMENT CONTROL NOTES

1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH NYS DEC AND THE CITY OF SARATOGA SPRINGS REQUIREMENTS.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL THE AREA SERVED IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
6. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
7. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
8. PAVED AREAS MUST BE KEPT CLEAN AT ALL TIMES.
9. ALL STORM DRAINAGE OUTLETS SHALL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
10. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO PREVENT EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
11. ANY OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
12. A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
13. DUST SHALL BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO NYS DEC AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
14. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
15. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
16. ROADWAY SHOULD BE SWEEPED ONCE A DAY (MIN.) TO KEEP IT CLEAR OF TRACKING AND DEBRIS.

MAINTENANCE

1. THE CONTRACTOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS.
2. SEDIMENT SHALL BE REMOVED FROM SEDIMENT TRAPS WHENEVER THEIR CAPACITY HAS BEEN REDUCED BY SOX.
3. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSPECTED WITHIN 24 HOURS OF A STORM EVENT AND REPAIRED AND/OR MODIFIED AS REQUIRED TO BE IN GOOD WORKABLE CONDITION.
4. THE CONTRACTOR SHALL CONDUCT AN INSPECTION OF THE SITE ON A DAILY BASIS TO COLLECT LITTER AND CONSTRUCTION DEBRIS AND DISPOSE OF LEGALLY.
5. ANY STOCKPILES OF FILL, TOPSOIL, EXCAVATED MATERIAL SHALL BE COVERED OR CONTAINED BY SILT FENCE TO PREVENT EROSION. IF STOCKPILE IS TO REMAIN LONGER THAN 14 DAYS IT SHOULD BE TEMPORARILY STABILIZED.

SOIL BORING NOTES

TEST PITS PERFORMED ON 07/01/15 BY THE LA GROUP.

TEST PIT NO. 1
 • 0 - 6" 10 YR 3/2 LOOSE SAND AND GRAVEL FILL
 • 6 - 8" 7.5 YR 2/2 FINE SANDY LOAM
 • 8 - 64" 7.5 YR 4/4 SILTY MOTTLED CLAY WITH WEAK SEEPS AT 8 INCHES AND STRONG SEEPS AT 64 INCHES

SHWT AT 8"
 GROUND WATER AT 64 INCHES
 NO PERMEABILITY TEST

TEST PIT NO. 2
 THIS TEST PIT IS LOCATED AT THE FORMER HOUSE SITE.
 • 0 - 8" 10 YR 3/2 LOOSE SAND AND GRAVEL FILL
 • 8 - 84" 10 YR 3/6 LOOSE SAND FILL
 • 84 - 96" 7.5 Y 4/3 SILTY MOTTLED CLAY, VERY FIRM, BLOCKY STRUCTURE
 • 96 - 132" 10 YR 4/3 MOTTLED FINE SAND
 • 132 - 166" 7.5 Y 4/3 SILTY MOTTLED CLAY, VERY FIRM, BLOCKY STRUCTURE

SHWT AT 84"
 GREATER THAN 166 INCHES TO THE WATER TABLE OR BEDROCK
 FALLING HEAD PERMEABILITY TEST AT 48 INCHES
 00:00:45, 00:00:55, 00:01:05, 00:01:07, 00:01:07, 00:01:00, 00:01:36, 00:01:40, 00:01:31

TEST PIT NO. 3
 • 0 - 8" 10 YR 3/2 LOOSE SAND AND GRAVEL FILL
 • 8 - 32" 10 YR 3/6 FINE SILTY LOAM
 • 32 - 52" 7.5 Y 4/4 MOTTLED CLAY, VERY FIRM, BLOCKY STRUCTURE
 • 52 - 76" 10 YR 4/4 MOTTLED FINE SAND
 • 76 - 88" 7.5 Y 4/3 MOTTLED CLAY, VERY FIRM, BLOCKY STRUCTURE
 • 88 - 120" 10 YR 4/3 MOTTLED FINE SAND

SHWT AT 32"
 GREATER THAN 120 INCHES TO THE WATER TABLE OR BEDROCK
 NO FALLING HEAD PERMEABILITY TEST

LEGEND

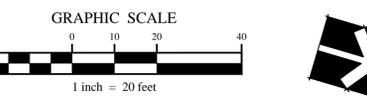
	EXISTING PAVEMENT TO BE REMOVED
	STAGING AREA AND TOPSOIL STOCKPILE
	STABILIZED CONSTRUCTION ENTRANCE
	CLEAR VEGETATION
	REMOVE CURB
	REMOVE ITEM
	REMOVE ITEM
	INLET PROTECTION
	CONSTRUCTION FENCE
	SILT FENCE
	PROPERTY LINE

CONSTRUCTION SEQUENCING

1. STAKE THE GRADING LIMITS OF THE PROJECT SITE AND INSTALL SILT FENCE IN AREAS INDICATED AND AS REQUIRED TO CONTAIN RUNOFF.
2. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE(S) AS DETAILED.
3. STRIP TOPSOIL FROM AREAS TO BE GRADED AND STOCKPILE IN AN AREA AWAY FROM DRAINAGE SWALES AND DRAINAGE TRAPS. INSTALL SILT FENCE AROUND STOCKPILES.
4. INSTALL UNDERGROUND UTILITIES MAINTAINING GENERAL DRAINAGE PATTERNS FOR STREET RIGHT-OF-WAYS AND UTILITY EASEMENTS. PLACE SILT FENCE AROUND SOIL STOCKPILES THAT ARE TO REMAIN IN PLACE FOR MORE THAN 14 DAYS.
5. CONSTRUCT PARKING AREA SUBGRADE AND BASE COURSE MAINTAINING GENERAL DRAINAGE PATTERNS AND DIRECTING ALL RUNOFF TOWARD SEDIMENT DEVICES.
6. KEEP ALL STORMWATER DIRECTED TO SEDIMENT DEVICES UNTIL ALL PAVING IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED.
7. WHEN PAVING IS COMPLETE AND NON-PAVED AREAS ARE STABILIZED, AND PROPOSED PERMANENT STORMWATER FACILITIES HAVE BEEN INSTALLED, REMOVE ALL SEDIMENT AND COLLECTED DEBRIS, REMOVE THE SILT FENCE AND DISPOSE OF IN A LEGAL MANNER. OVERSEED AREAS WHERE LAWN IS NOT ESTABLISHED AND MULCH.

Planning Board # 15.041

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



Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No: 201391
 Design: DBR
 Drawn: KMK Ch'kd: DBR
 Date: 09/09/2015 Scale: 1"=20'

Rev	Description	Date
1	Revised per TDE Comments	11/4/15

Drawing Title
Site Preparation, Erosion & Sediment Control Plan

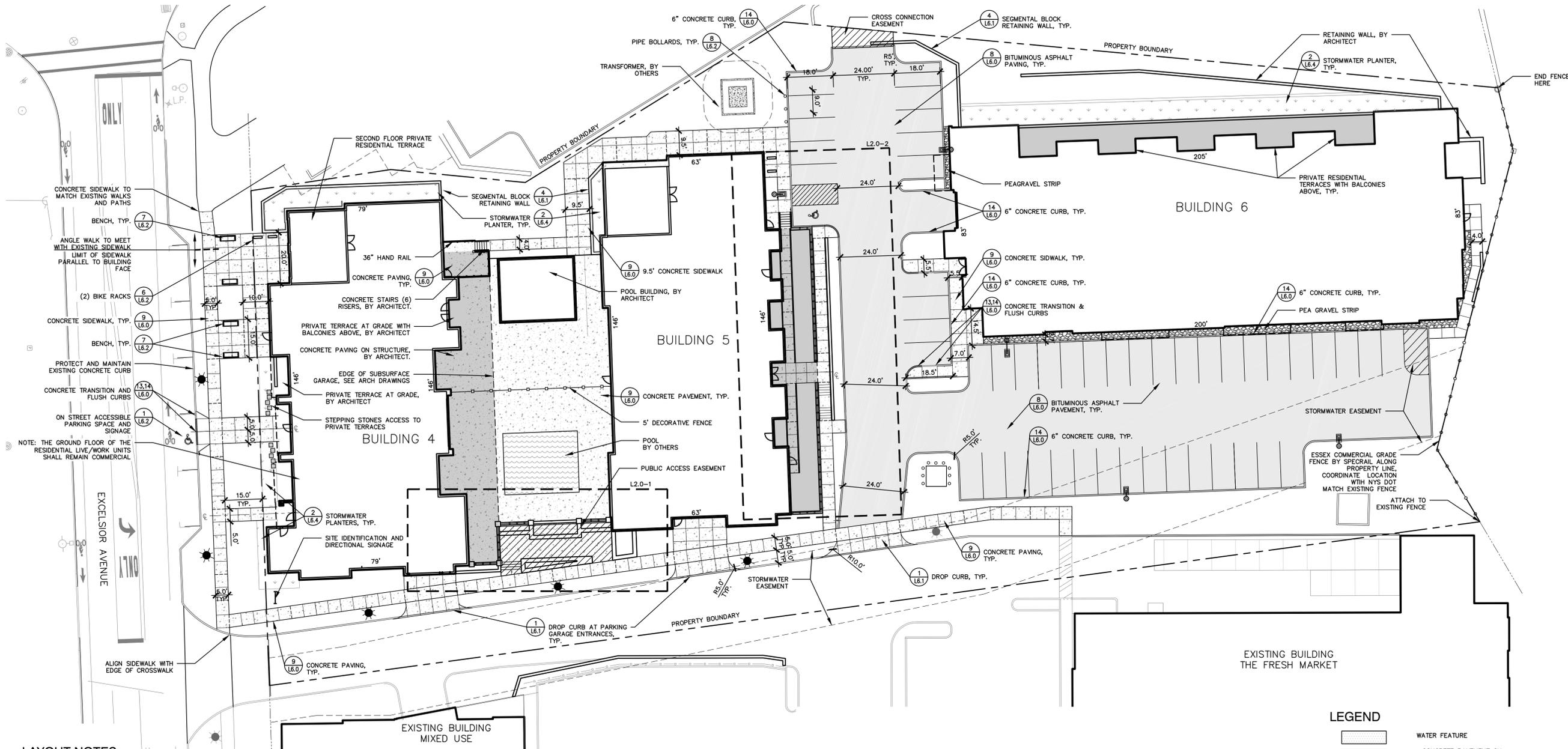
Drawing No.

L-1.0

Project No: 201391, Drawing Title: Site Preparation, Erosion & Sediment Control Plan, Drawing No: L-1.0, Date: 11/4/15, 11:40:15 AM, Scale: 1"=20', File Name: G:\11\2015\201509\15041_Site_Prep_Erosion_Sediment_Control_Plan.dwg

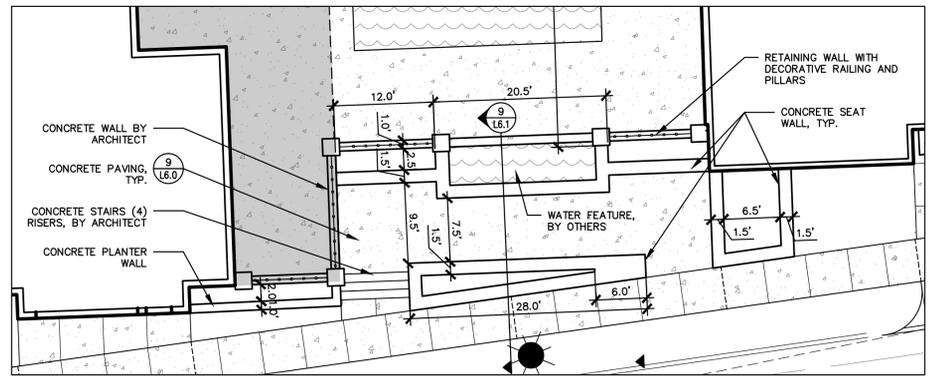
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 Prepared for:
Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047

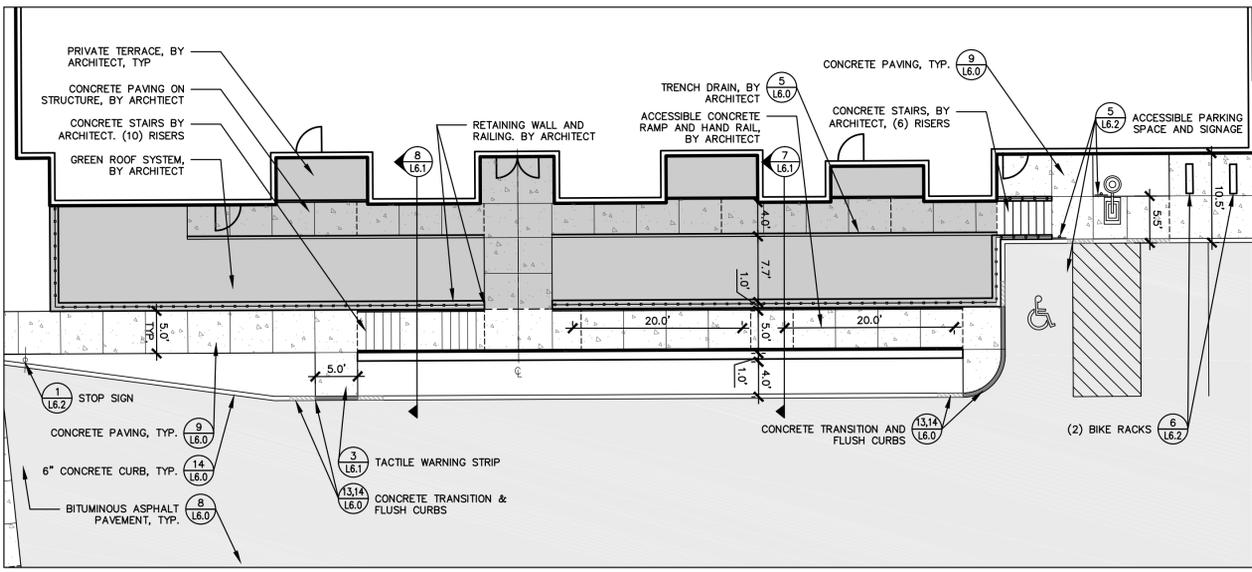


LAYOUT NOTES

1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. ALL LINE AND GRADE PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A NEW YORK STATE REGISTERED CIVIL ENGINEER OWNER'S REPRESENTATIVE OR SURVEYOR ENGAGED BY THE CONTRACTOR. ALL STACKED LAYOUTS OF PAVEMENTS AND SITE IMPROVEMENTS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE ON AND WITHIN LIMITS OF WORK AS SHOWN ON THE PLANS AND AS APPROVED BY THE OWNER'S REPRESENTATIVE.
4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
5. AT ALL LOCATIONS WHERE EXISTING CURBING, BITUMINOUS CONCRETE ROADWAY OR CONCRETE SIDEWALK ADJUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE.
6. FIELD ADJUSTMENTS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE AND CITY ENGINEER PRIOR TO CONSTRUCTION.
7. ALL EXISTING UTILITIES SHOWN IN THEIR RELATIVE POSITION. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE VERTICAL AND HORIZONTAL POSITION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.



1 PLAZA ENLARGEMENT
 SCALE: NTS
 1 inch = 10 feet



2 STAIRS & RAMP ENLARGEMENT
 SCALE: NTS
 1 inch = 10 feet

LEGEND

- WATER FEATURE
- CONCRETE PAVEMENT ON STRUCTURE
- CONCRETE PAVEMENT ON GRADE
- ASPHALT PAVEMENT
- CURB
- RETAINING WALL
- CONCRETE SIDEWALK
- ACCESSIBLE PARKING
- TRAFFIC PATTERN ARROW
- SIGNAGE
- PROPOSED LIGHT FIXTURE
- EXISTING LIGHT FIXTURE
- BOLLARD
- DECORATIVE RAILING
- DECORATIVE FENCE
- BENCH / BIKE RACK
- PROPERTY LINE

Planning Board # 15.041

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

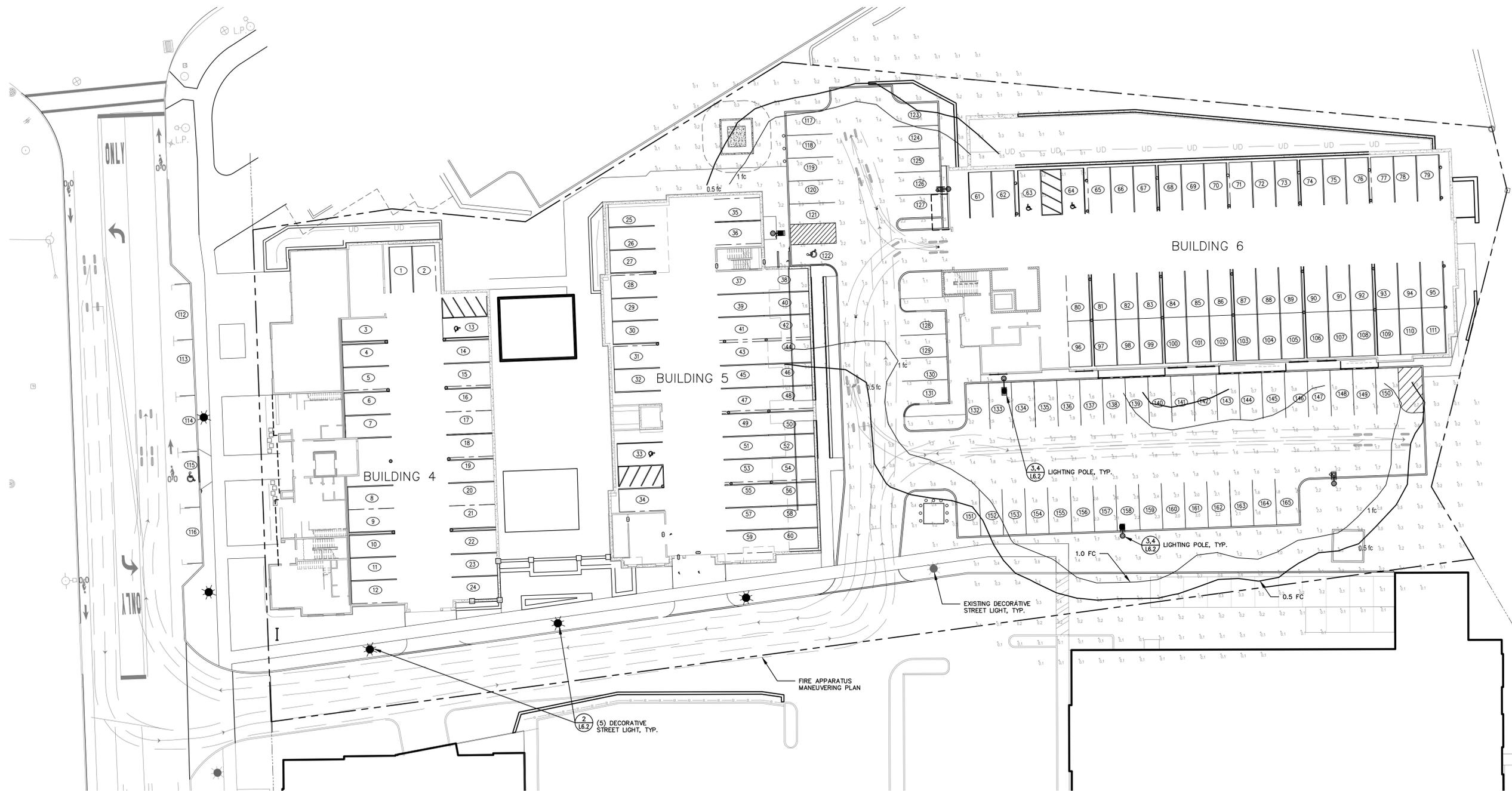
Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391	
Design:	DRC	
Drawn:	KMK Ch'kd: DRC	
Date:	09/09/2015 Scale: 1"=20'	
Rev:	Description: Date:	
1	Revised per TDE Comments	11/4/15

Layout & Materials Plan

Drawing No.
L-2.0

Drawn by: KATELYN MOSEBY
 Scale Date: 11/04/15 11:03 AM
 File Name: G:\Proj\20150720\77 Prime_Beechwood_Saratoga\2015_07_20_1507.dwg



LUMINAIRE SCHEDULE						
SYMBOL	QTY	TYPE	DESCRIPTION	LLF	LUM. WATTS	LUM. LUMENS
	2	L-4	FORM 10 LED - EH19L - TYPE 4 - 110LA-NW	0.850	107.7	11050
	3	L-3	FORM 10 LED - EH19L - TYPE 3 - 110LA-NW	0.850	107.9	11053

CALCULATION SUMMARY						
AREA	UNITS	AVG	MAX	MIN	AVG / MIN	MAX / MIN
SITE - LED_GROUND	Fc	0.39	2.9	0.0	N.A.	N.A.

LEGEND

- (20) PARKING COUNT
- PROPOSED LIGHT FIXTURE
- ☀ EXISTING LIGHT FIXTURE
- PHOTOMETRIC POINTS
- FOOT CANDLE CONTOURS
- ▭ PARKING GARAGE
- - - PROPERTY LINE

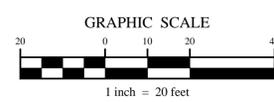
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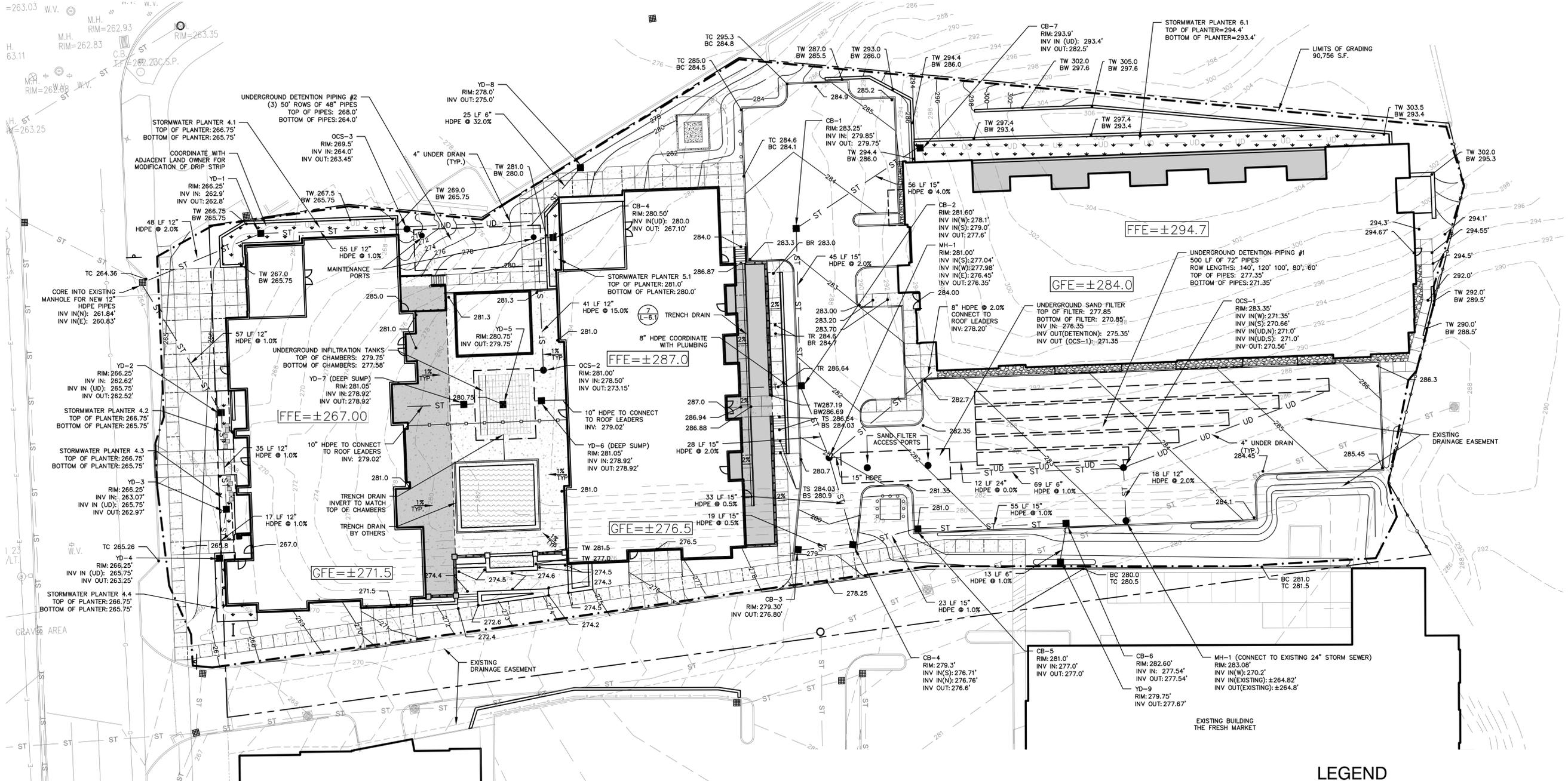
Planning Board # 15.041

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Drawing Title:
Parking & Lighting Plan

Drawing No.:
L-2.1



GRADING NOTES

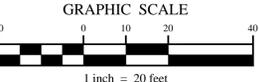
1. SURVEY INFORMATION FROM MAP TITLED BOUNDARY & TOPOGRAPHIC SURVEY MAP OF LANDS OWNED BY 77 EXCELSIOR AVENUE, LLC, CREATED BY ADVANCED ENGINEERING AND SURVEYING, PLLC., DATED FEBRUARY 4, 2014.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL CONDITIONS TO THE OWNERS REPRESENTATIVE.
3. THE CONTRACTOR SHALL VERIFY PROPOSED GRADES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNERS REPRESENTATIVE.
4. THE CONTRACTOR SHALL PROVIDE DUST AND EROSION CONTROL AS INCLUDED IN THE ORIGINAL SWPPP BY THE LA GROUP.
5. ALL FILL SLOPES 3:1 OR GREATER SHALL RECEIVE BIO-DEGRADABLE FABRIC OR APPROVED EQUAL FOR EROSION CONTROL, UNLESS OTHERWISE SHOWN OR DIRECTED BY THE PROJECT ENGINEER.
6. THE CONTRACTOR SHALL BLEND ALL NEW EARTHWORK INTO EXISTING GRADES AT THE LIMITS OF GRADING. PROVIDE SMOOTH ROUNDED TRANSITIONS AT ALL TOP AND BOTTOM OF SLOPES.
7. PITCH EVENLY BETWEEN SPOT GRADES. ALL AREAS SHALL PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-EIGHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES PROHIBITING THIS SHALL BE REPORTED TO THE PROJECT ENGINEER PRIOR TO CONTINUING WORK.
8. EXCAVATION REQUIRED WITHIN 3 FEET OF EXISTING UTILITY LINES SHALL BE DONE BY HAND; DO NOT EXCAVATE SOIL WITH MACHINERY. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS.
9. ANY AREA OUTSIDE THE PROJECT LIMITS THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
10. PRIOR TO PROJECT CLOSE-OUT, CONTRACTOR SHALL REMOVE ALL DEBRIS & EXCESS MATERIAL FROM THE SITE. ALSO, ANY DAMAGE TO FIELD OR FACTORY FINISHES SHALL BE REPAIRED.

LEGEND

- 320 — CONTOUR LINE
- — — — — PROPERTY LINE
- - - - - STORM WATER EASEMENT
- ST — STORM SEWER LINE
- UD — PERFORATED UNDERDRAINS
- STORM SEWER CATCH BASIN/YARD DRAIN (2/16.3, 3/16.3)
- STORM SEWER MANHOLE (5/16.3)
- SF — SILT FENCE (2/16.4)
- STORMWATER PLANTER (2/16.4)
- EXISTING CATCH BASIN
- - - - - ROOF LEADERS

Planning Board # 15.041

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Prepared for:
Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.: 201391
 Design: BCS
 Drawn: BCS Ch'k'd: DBH
 Date: 09/09/2015 Scale: 1"=20'

Rev.	Description	Date
1	Revised per TDE Comments	11/4/15

Drawing Title
Grading & Drainage Plan

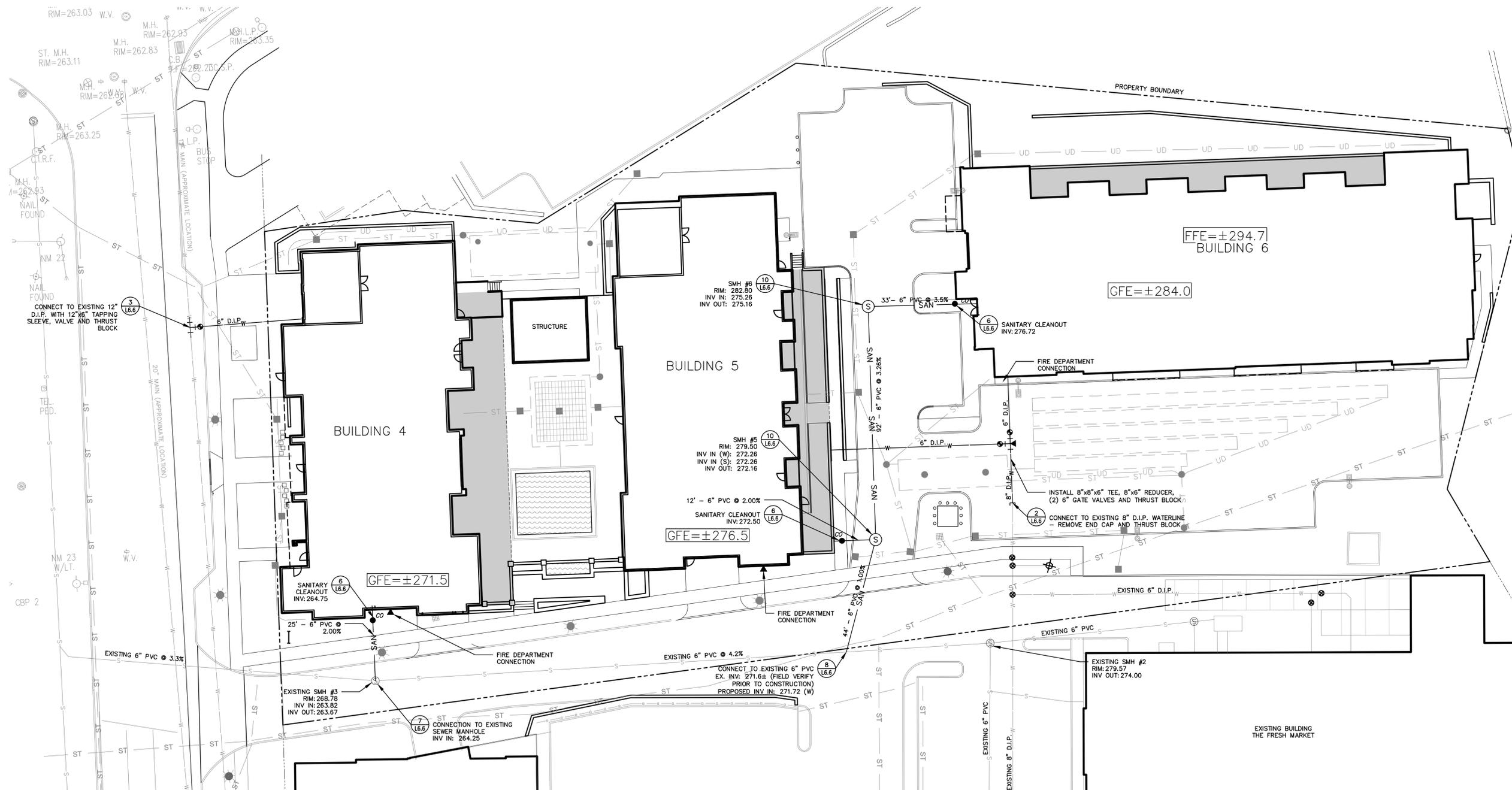
Drawing No.
L-3.0

Drawn By: MATTIENI, NICKY
 Checked By: MATTIENI, NICKY
 File Name: C:\Proj\20130101\77_Excelsior_Expansion\DWG\GRADING\DRAIN\DWG.dwg

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 621 Columbia Street
 Cohoes, NY 12047



GENERAL NOTES

1. LOCATION OF UTILITY CONNECTIONS AT BUILDING TO BE FIELD VERIFIED AND RECORDED ON AS-BUILT PLANS TO BE PROVIDED TO THE OWNER.
2. ALL UTILITY INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL CODES AND LOCAL BUILDING CODES.
3. CONTRACTOR SHALL COORDINATE ALL REQUIRED UTILITY INSPECTIONS BY MUNICIPAL DEPARTMENTS IN ACCORDANCE WITH THEIR RESPECTIVE REQUIREMENTS.

WATER SYSTEM NOTES

1. WATER MAINS AND SERVICES SHALL BE INSTALLED AT A MINIMUM DEPTH OF COVER BELOW FINISHED GRADE OF 5'-0".
2. ALL CAST IRON AND DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT, DOUBLE CEMENT LINED, PAINT SEAL COATED, 350 P.S.I. PRESSURE RATING.
3. CHLORINATION, PRESSURE AND LEAKAGE TESTS OF WATER MAINS SHALL BE IN CONFORMANCE WITH THE CITY OF SARATOGA SPRINGS AND A.W.W.A. STANDARDS AND SHALL BE PERFORMED UNDER THE SUPERVISION OF THE CITY ENGINEER. BACTERIA EXAMINATION AFTER DISINFECTION AT A N.Y.S.D.H. APPROVED LABORATORY WILL TAKE PLACE PRIOR TO TURNING WATER MAIN OVER TO THE CITY TO VERIFY SANITARY QUALITY.
4. THERE SHALL BE A MINIMUM HORIZONTAL SEPARATION OF TEN FEET BETWEEN ANY WATER MAIN AND ANY SANITARY OR STORM SEWER MEASURED EDGE TO EDGE. THERE SHALL ALSO BE A MINIMUM VERTICAL SEPARATION OF EIGHTEEN INCHES BETWEEN ANY WATER MAIN AND ANY SANITARY OR STORM SEWER.
5. THRUST BLOCKING SHALL COMPLY WITH DETAILS ON THESE DRAWINGS AND CITY STANDARDS.
6. DURING ALL EXCAVATION IN WHICH THE EXISTING WATER MAIN IS OR CAN EASILY BE EXPOSED, THE CONTRACTOR SHALL LOCATE THE WATER LINE, BOTH HORIZONTALLY AND VERTICALLY. THIS INFORMATION SHALL BE PROVIDED TO THE CITY OF SARATOGA SPRINGS AND INCORPORATED IN THE AS-BUILT DRAWINGS.
7. THE CONTRACTOR SHALL PROVIDE TWO (2) BRONZE WEDGES AT EACH BELL JOINT OF PUSH-ON PIPE.
8. THE CONTRACTOR SHALL PROVIDE ID TAPE ABOVE WATER LINES AS SHOWN ON THE TRENCHING DETAIL.
9. MECHANICAL JOINT TAPPING SLEEVE SHALL CONFORM TO ANSI B16.1, CLASS 125 FLANGE, MSS SP-60 STANDARD, AND ANSI/AWWA C111 STANDARD, AND HAVE A MAXIMUM WORKING PRESSURE OF 200PSIG FOR SERVICES 4-INCH THRU AND INCLUDING 12-INCH.
10. MECHANICAL JOINT RESILIENT WEDGE TAPPING VALVES SHALL CONFORM TO AWWA C500 STANDARD AND HAVE A MAXIMUM WORKING PRESSURE OF 200 PSIG. VALVE SHALL BE NON-RISING STEM TYPE AND SHALL OPEN "RIGHT" (CLOCKWISE)
11. VALVE BOXES
 - A. CAST IRON TWO PIECE VALVE BOX AS MANUFACTURED BY CLOW (MODEL F2494), OR APPROVED EQUAL.
 - B. COVER SHALL BE STAY-PUT TYPE (CLOW MODEL F2490), OR APPROVED EQUAL, AND BE CLEARLY MARKED "WATER".

SANITARY SEWER NOTES

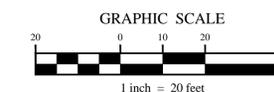
1. PVC SANITARY SEWERS, FITTINGS AND SERVICE LATERALS TO PROPERTY LINES SHALL CONFORM TO AND BE INSTALLED AND TESTED IN ACCORDANCE WITH THE CITY OF SARATOGA SPRINGS STANDARDS AND SARATOGA COUNTY SEWER DISTRICT NO. 1.
2. ALL SEWER PIPING AND FITTINGS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PVC PIPE, ASTM DESIGNATION D-3034-78 OR LATEST REVISION AND TO THE DIMENSIONS AND TOLERANCES OF CLASSIFICATION SDR-26 WITH SINGLE GASKET PUSH-ON JOINTS.
3. INFORMATION AND SHOP DRAWINGS FOR MATERIALS USED SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO THE PLACEMENT OF ANY ORDERS OF SAID MATERIALS.
4. LEAKAGE OUTWARD OR INWARD SHALL NOT EXCEED 100 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 AND SHALL BE IN ACCORDANCE WITH CITY OF SARATOGA STANDARDS.
5. FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LA GROUP AND THE CITY OF SARATOGA SPRINGS CITY ENGINEER, PRIOR TO INSTALLATIONS.
6. LOW PRESSURE AIR TESTING IS PERMITTED. TEST IS TO CONFORM TO UNIBELL PVC PIPE ASSOCIATION, UNI-B-6-98.

LEGEND

- ST — STORM SEWER LINE
- STORM SEWER CATCH BASIN
- STORM SEWER MANHOLE
- ⊙ SANITARY SEWER MANHOLE
- SAN — SANITARY SEWER LINE
- W — WATER LINE
- ⊕ VALVE AND THRUST BLOCK

Planning Board # 15.041

Approval
 Approved under authority of a resolution adopted _____
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 Date Signed _____ Chairperson



Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391
Design:	DBH
Drawn:	KMK Ch'kd: DBH
Date:	09/09/2015 Scale: 1"=20'

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

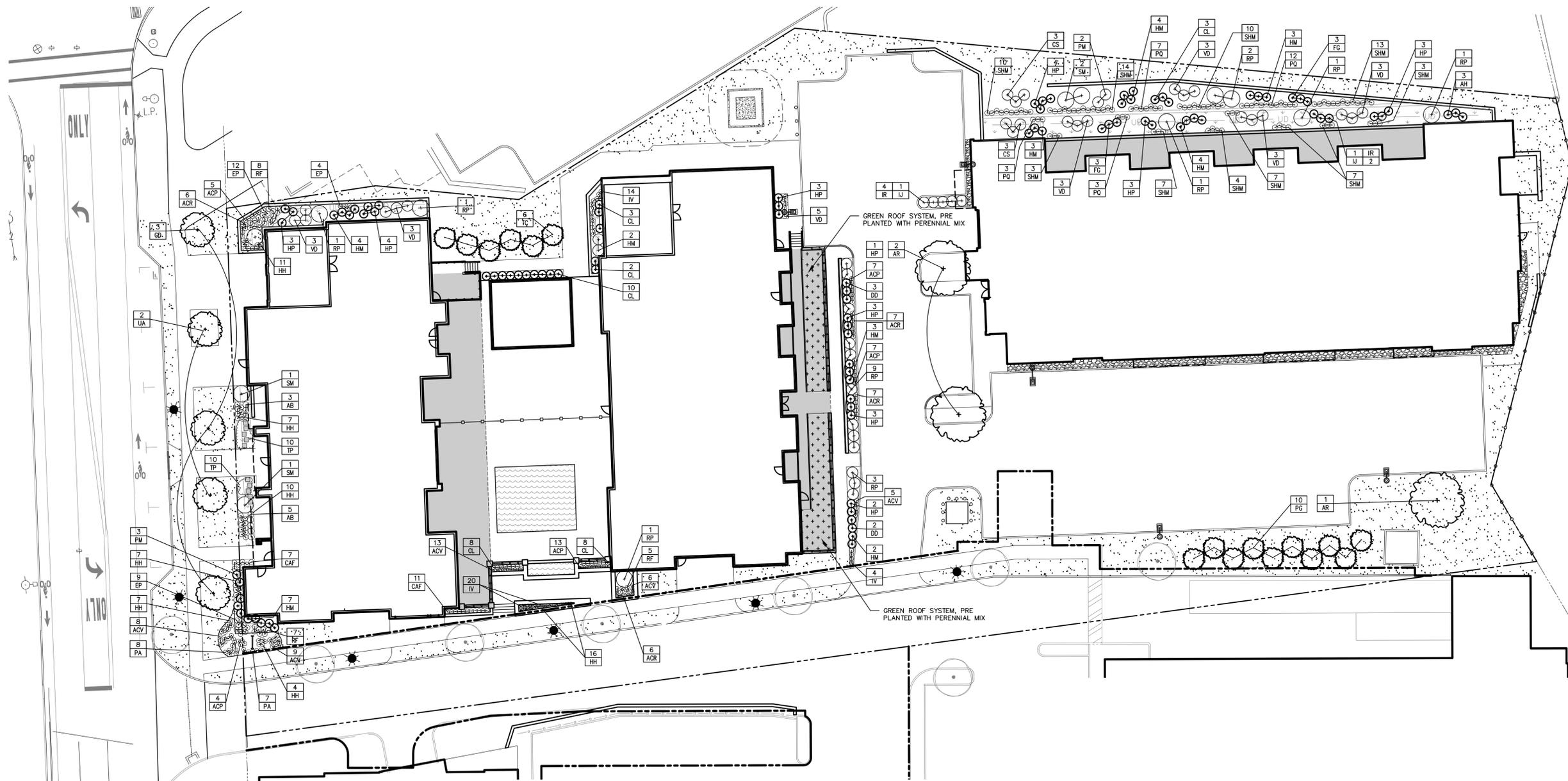
Drawing Title
Utility Plan

Drawing No.
L-4.0

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LANDSCAPE NOTES

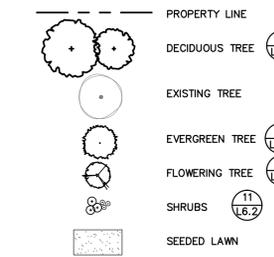
- ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- ALL NEW PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER GROWN UNLESS OTHERWISE NOTED ON PLANT SCHEDULE.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- ALL NEW PLANT MATERIAL SHALL BE OF SPECIMEN QUALITY UNLESS APPROVED OTHERWISE BY THE OWNER'S REPRESENTATIVE.
- WHERE PLANT 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 QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN PLANT APPROVAL FROM THE OWNER'S REPRESENTATIVE AFTER DELIVERY AND PRIOR TO INSTALLATION.
- LAWN MIX SHALL CONSIST OF THE FOLLOWING RATIOS:
 30% BY WEIGHT SPECIES TALL FESCUE 90%
 20% HYBRID KENTUCKY BLUE 87%
 50% TURF-TYPE PERENNIAL RYE 90%
 90% PERENNIAL RYE 90%
- THE CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITIES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL STAKE THE LOCATIONS OF ALL PROPOSED PLANTING FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF PLANTING.
- NEW PLANT MATERIAL SHALL BARE THE SAME RELATIONSHIP TO FINISH GRADE AS IT DID IN THE NURSERY.
- ALL PLANT BEDS TO RECEIVE THREE INCHES (3") MIN. OF SHREDDED BARK MULCH ON WEED BARRIER FABRIC.
- PREPARE ALL PLANTING BEDS TO MIN. OVERALL DEPTHS SHOWN ON PLANTING DETAILS.
- AMENDED TOPSOIL BACKFILL SHALL CONSIST OF ONE (1) PART MANURE TO EIGHT (8) PARTS TOPSOIL AND BONEMEAL @ 20 LBS. TO 4 CY TOPSOIL.
- ALL DISTURBED AREAS NOT SCHEDULED FOR OTHER WORK SHALL RECEIVE SIX INCHES (6") OF SUITABLE ON-SITE OR IMPORTED PLANTING SOIL PRIOR TO SEEDING OR SODDING.
- CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A MIN. OF ONE (1) YEAR.
- THE CONTRACTOR SHALL MAINTAIN ALL WORK INCLUDING WATERING, MOWING, AND PROTECTION FROM TRAFFIC UNTIL 18. FINAL ACCEPTANCE OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ALL ITEMS DAMAGED OUTSIDE THE CONSTRUCTION LIMITS, AND ITEMS WITHIN THE SITE THAT ARE NOT PART OF THE IDENTIFIED WORK OF THIS CONTRACT.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION CONTROL MEASURES AS SHOWN ON THE PLANS.

PLANT SCHEDULE

NOTES:
 NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL FROM OWNER'S REPRESENTATIVE

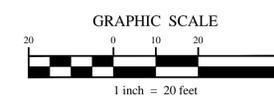
KEY	QTY.	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	ROOT	COMMENT
TREES						
AR	3	<i>Acer rubrum</i> 'Autumn Flame'	RED SUNSET MAPLE	4" CAL.	B&B	
UA	2	<i>Ulmus americana</i> 'Valley Forge'	VALLEY FORGE ELM	4" CAL.	B&B	
GD	3	<i>Gymnocladus dioica</i> 'Espresso'	KENTUCKY COFFEE TREE	4" CAL.	B&B	
PQ	10	<i>Picea glauca</i>	WHITE SPRUCE	8"-10" HT	B&B	
TC	6	<i>Tsuga canadensis</i>	CANADIAN HEMLOCK	8"-10" HT	B&B	
SHRUBS						
CS	6	<i>Cornus alba</i> 'Siberica'	RED-TWIG DOGWOOD	30"-36" HT.	CONT.	
SM	4	<i>Syringa meyeri</i> 'Paladin'	MEYER LILAC	36"-48" HT.	CONT./B&B	
FG	6	<i>Fothergilla gardenii</i>	DWARF FOTHERGILLA	24"-30" HT.	CONT.	
HM	32	<i>Hydrangea macrophylla</i> 'Balmer'	ENDLESS SUMMER HYDRANGEA	30"-36" HT.	CONT.	
HP	29	<i>Hydrangea paniculata</i> 'Quickfire'	QUICKFIRE HYDRANGEA	42" HEAD/TREE FORM	CONT./B&B	
RP	20	<i>Rhododendron</i> 'PJM'	PJM RHODODENDRON	30"-36" HT.	CONT./B&B	
VD	23	<i>Viburnum dentatum</i>	ARROWWOOD VIBURNUM	30"-36" HT.	CONT./B&B	
IR	6	<i>Ilex verticillata</i> 'Red Sprite'	RED SPRITE WINTERBERRY	30"-36" HT.	CONT.	
IJ	2	<i>Ilex verticillata</i> 'Jim Dandy'	RED SPRITE WINTERBERRY (MALE)	30"-36" HT.	CONT.	
PM	5	<i>Philadelphus</i> 'Minin Snowflake'	MINI SNOWFLAKE MOCKORANGE	30"-36" HT.	CONT.	
PERENNIALS/GROUND COVERS/BULBS						
ACP	36	<i>Astilbe cinensis</i> 'Purple Candles'	PURPLE CANDLE (PURPLE) ASTILBE	#2 CONT.	CONT.	24"O.C.
ACR	20	<i>Astilbe cinensis</i> 'Rock and Roll'	ROCK AND ROLL (WHITE) ASTILBE	#2 CONT.	CONT.	24"O.C.
ACV	41	<i>Astilbe cinensis</i> 'Visions'	VISIONS (PINK) ASTILBE	#2 CONT.	CONT.	24"O.C.
HH	62	<i>Hemerocallis</i> 'Happy Returns'	'HAPPY RETURNS' DAYLILY	#2 CONT.	CONT.	24"O.C.
PA	15	<i>Pennisetum alopecuroides</i> 'Hameln'	DWARF FOUNTAIN GRASS	#2 CONT.	CONT.	24"O.C.
RF	20	<i>Rudbeckia fulgida</i> 'Goldsturm'	BLACK EYED SUSAN	#2 CONT.	CONT.	24"O.C.
EP	25	<i>Echinacea purpureum</i>	ECHINACEA	#2 CONT.	CONT.	24"O.C.
IV	38	<i>Iris versicolor</i>	BLUE FLAG IRIS	#2 CONT.	CONT.	24"O.C.
CAF	18	<i>Calamagrostis acutiflora</i> 'Karl Foerster'	KARL FERSTER REED GRASS	#2 CONT.	CONT.	
SHM	78	<i>Schizophragma hydrangeoides</i> 'Moonlight'	MOONLIGHT JAPANESE HYDRANGEA	#2 CONT.	CONT.	
AH	3	<i>Athyrium filix-femina</i> 'Regal Red'	REGAL RED FERN	#2 CONT.	CONT.	
DD	5	<i>Dryopteris dilatata</i>	FERN	#2 CONT.	CONT.	
CL	34	<i>Chasmanthium latifolium</i>	NORTHERN SEA OATS	#2 CONT.	CONT.	
AB	8	<i>Andropogon</i> 'Blue Stem'	BLUE STEM ANDROPOGON	#2 CONT.	CONT.	
TP	20	<i>Thymus praecox</i> 'Coccineus'	CREeping THYME	#1 CONT.	CONT.	
PQ	25	<i>Parthenocissus quinquefolia</i>	VIRGINIA CREEPER	#1 CONT.	CONT.	

LEGEND



Planning Board # 14.059

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 Date Signed _____ Chairperson



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77 Excelsior Mixed Use Development
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Project No: 201391
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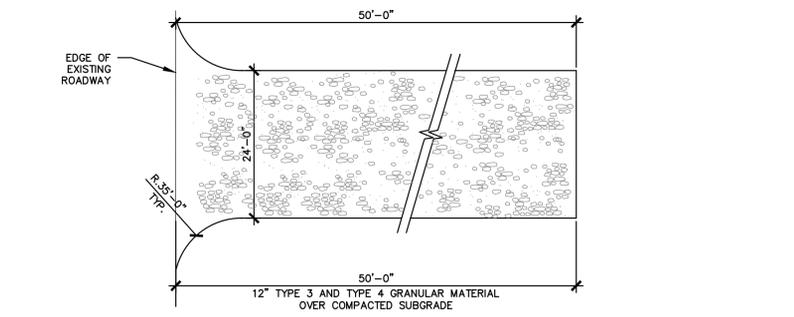
Landscape Plan

Drawing No.
L-5.0

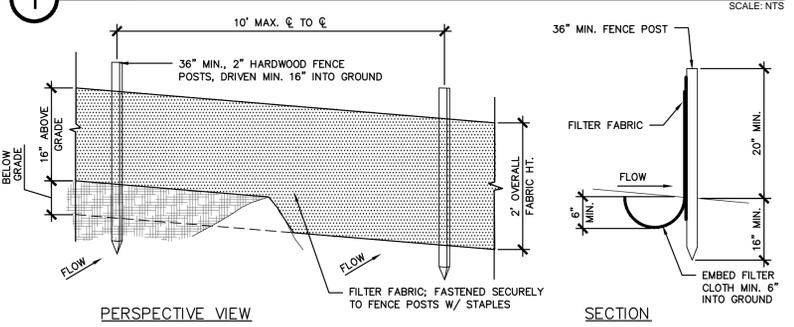
Project No: 201391
 Drawing No: L-5.0
 Date: 11/4/15
 Scale: 1"=20'
 Author: KMK
 Designer: DRC
 Checker: DRC
 Title: Landscape Plan

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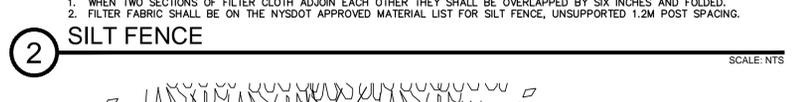
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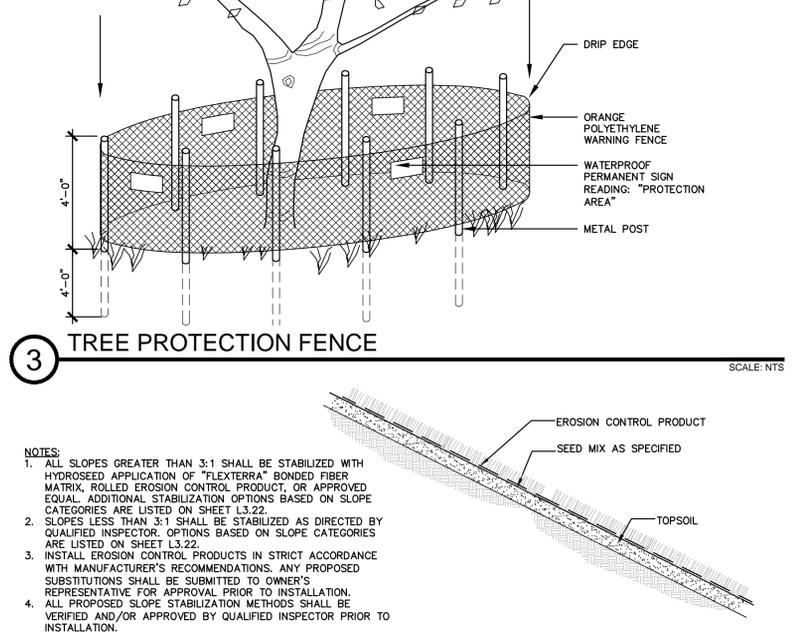
1 STABILIZED CONSTRUCTION ENTRANCE SCALE: NTS



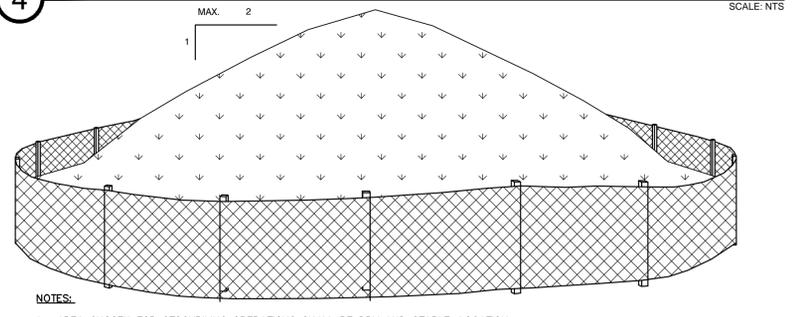
2 SILT FENCE SCALE: NTS



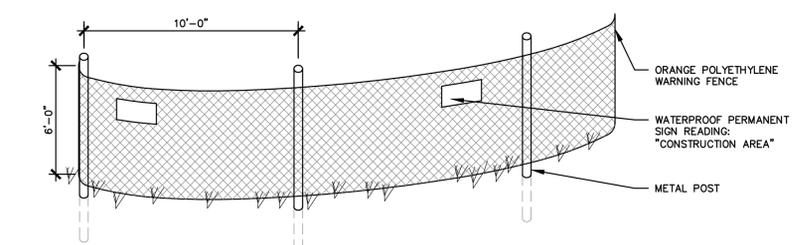
3 TREE PROTECTION FENCE SCALE: NTS



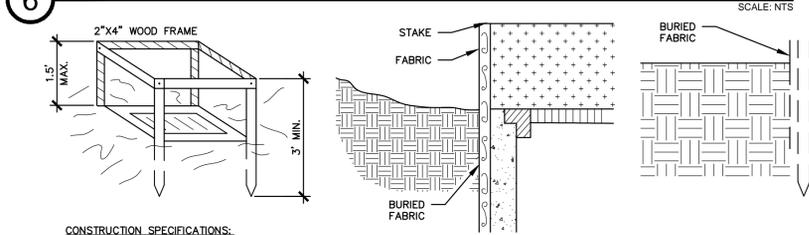
4 SLOPE STABILIZATION SCALE: NTS



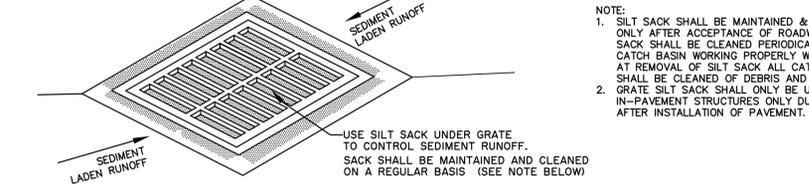
5 TEMPORARY STOCKPILE SCALE: NTS



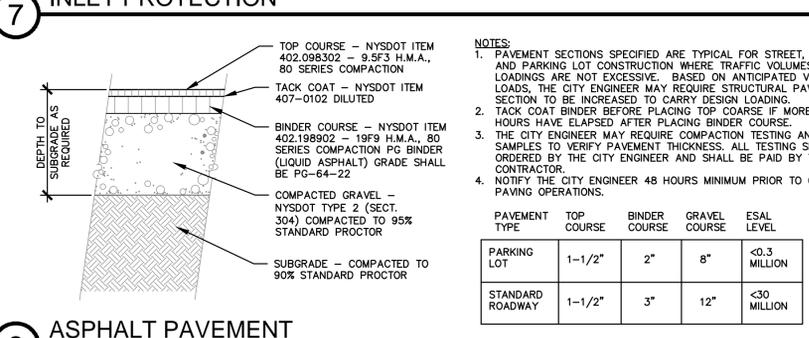
6 CONSTRUCTION FENCE SCALE: NTS



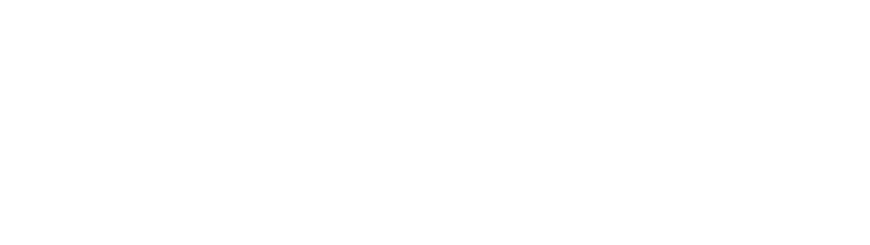
7 INLET PROTECTION SCALE: NTS



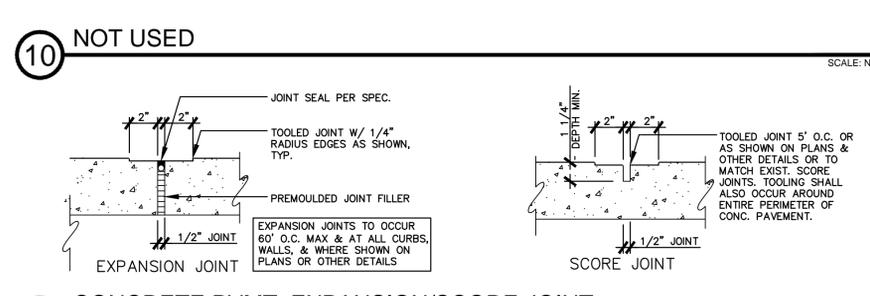
8 ASPHALT PAVEMENT SCALE: NTS



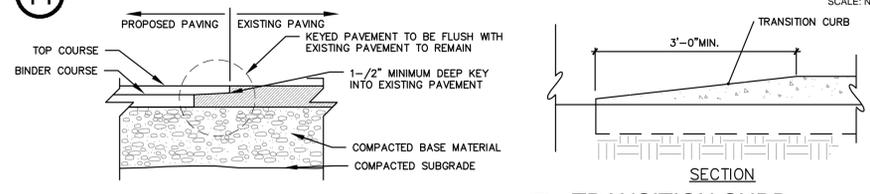
9 CONCRETE PAVEMENT ON GRADE SCALE: NTS



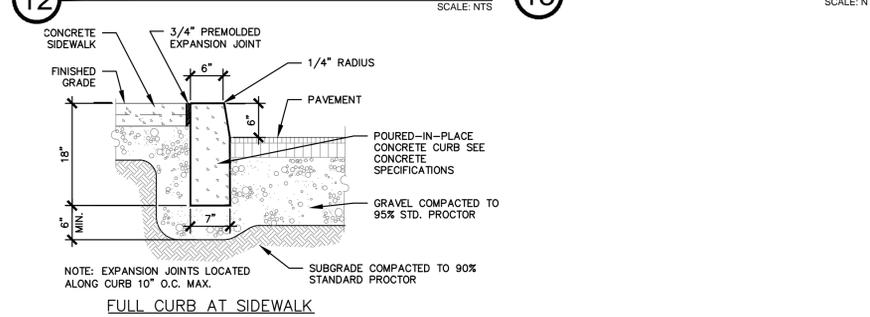
10 NOT USED SCALE: NTS



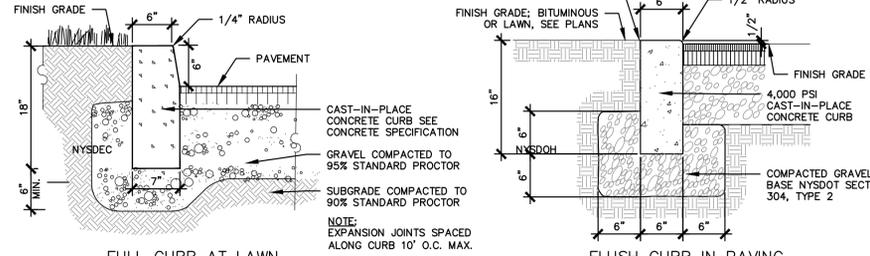
11 CONCRETE PVMT. EXPANSION/SCORE JOINT SCALE: NTS



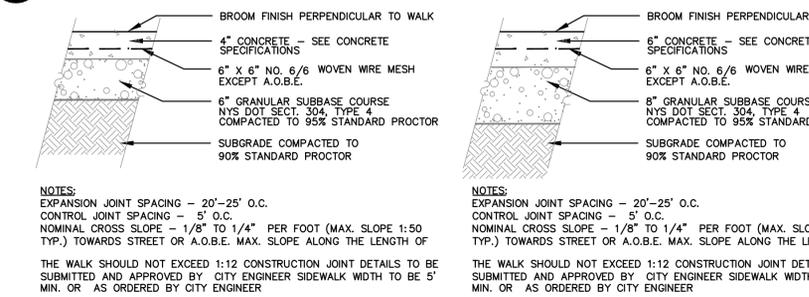
12 PAVEMENT KEY SCALE: NTS



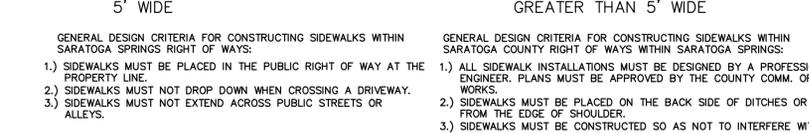
13 TRANSITION CURB SCALE: NTS



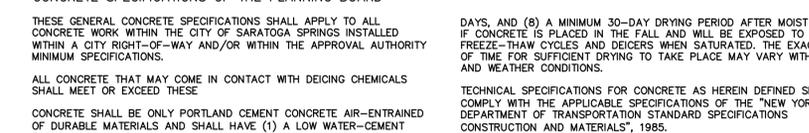
14 CONCRETE CURB SCALE: NTS



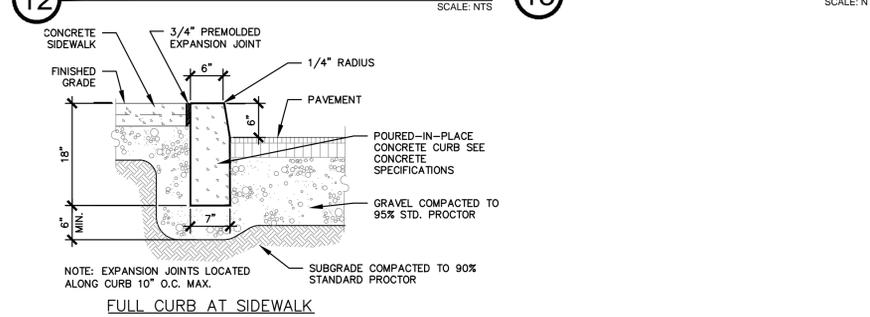
7 INLET PROTECTION SCALE: NTS



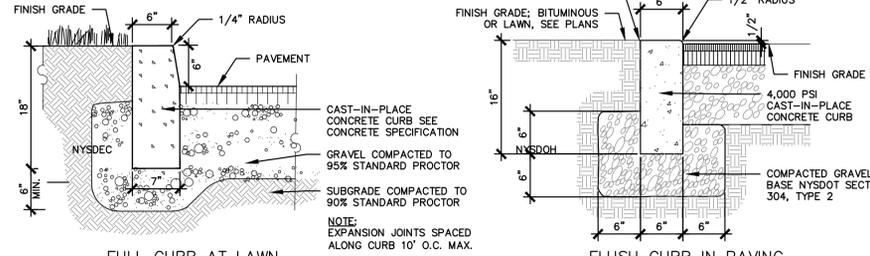
8 ASPHALT PAVEMENT SCALE: NTS



9 CONCRETE PAVEMENT ON GRADE SCALE: NTS



12 PAVEMENT KEY SCALE: NTS



14 CONCRETE CURB SCALE: NTS

Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391
Design:	DRC
Drawn: KMK	Ch'cd: DRC
Date: 09/09/2015	Scale: NTS

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Drawing Title
Site Details

Drawing No.
L-6.0

Planning Board # 15.041
 Approval _____
 Approved under authority of a resolution adopted by the Planning Board of the City of Saratoga Springs.
 Date Signed _____ Chairperson

Project No. 201391, Title: 77 Excelsior Mixed Use Development, Drawing Title: Site Details, Drawing No. L-6.0, Date: 09/09/2015, Scale: NTS, Author: KMK, Checker: DRC, Plot Date: 11/02/15 10:00 AM, File Name: C:\p\201391\Site_Details.dwg



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Landscape Architecture & Engineering P.C.

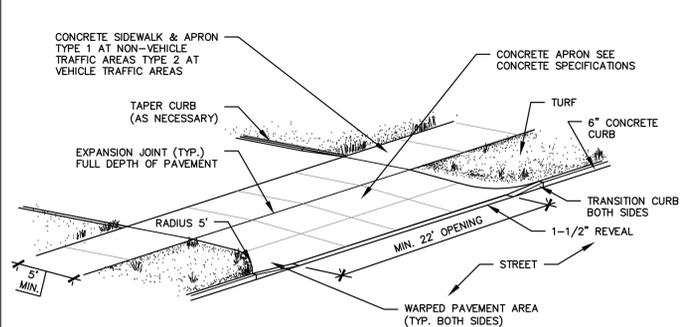
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40 Long Alley Saratoga Springs NY 12866
p. 518-587-8100 f. 518-587-0180 www.thelagroup.com

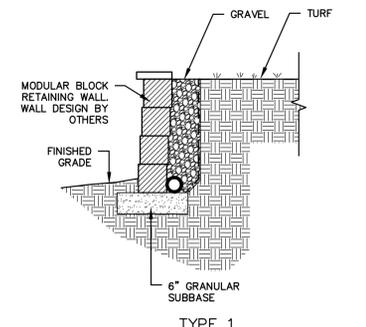
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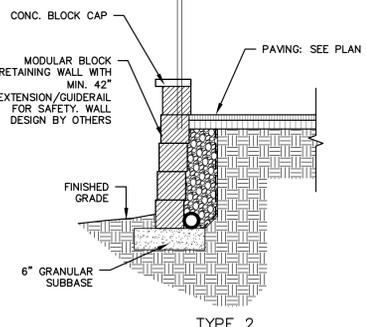
Prepared for:
Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047



1 DROP CURB AT PARKING GARAGE ENTRANCES
SCALE: NTS

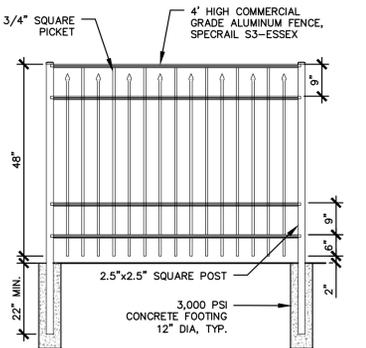


TYPE 1

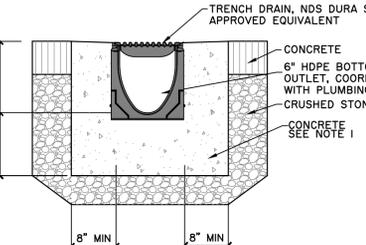


TYPE 2
NOTE: RETAINING WALL SHALL BE DESIGNED AND STAMPED BY AN ENGINEER LICENSED IN NEW YORK.

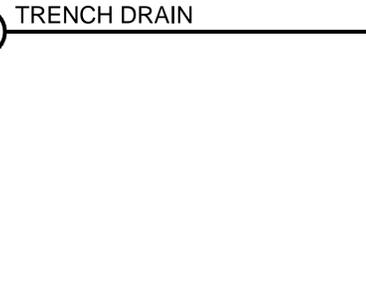
4 SEGMENTAL BLOCK RETAINING WALL
SCALE: NTS



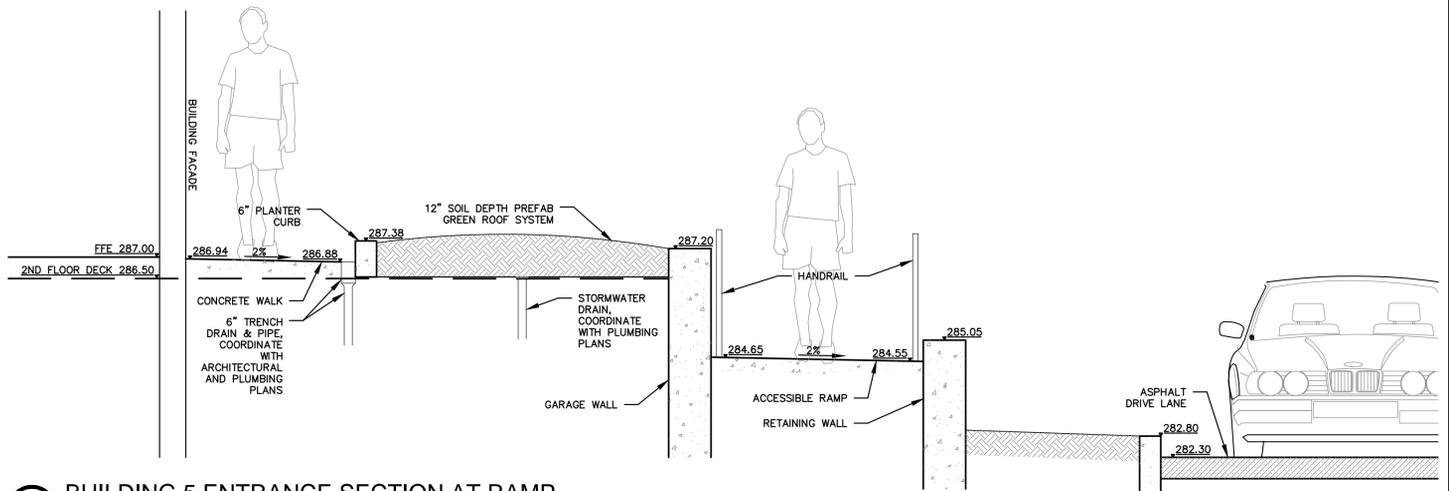
5 ALUMINUM FENCE
SCALE: NTS



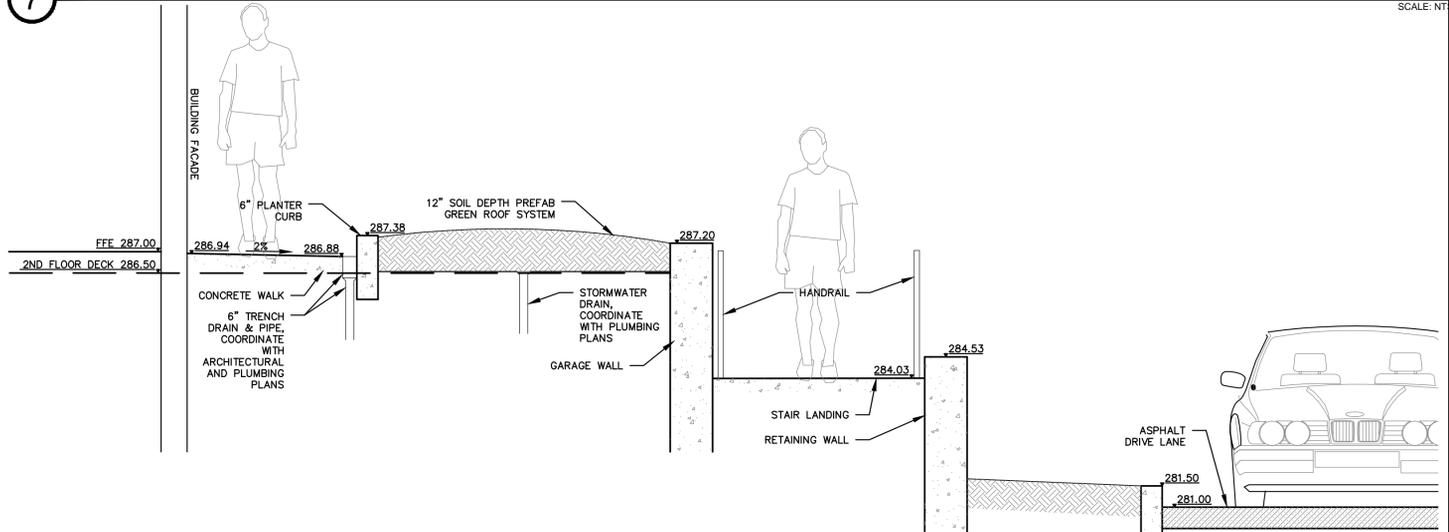
6 TRENCH DRAIN
SCALE: NTS



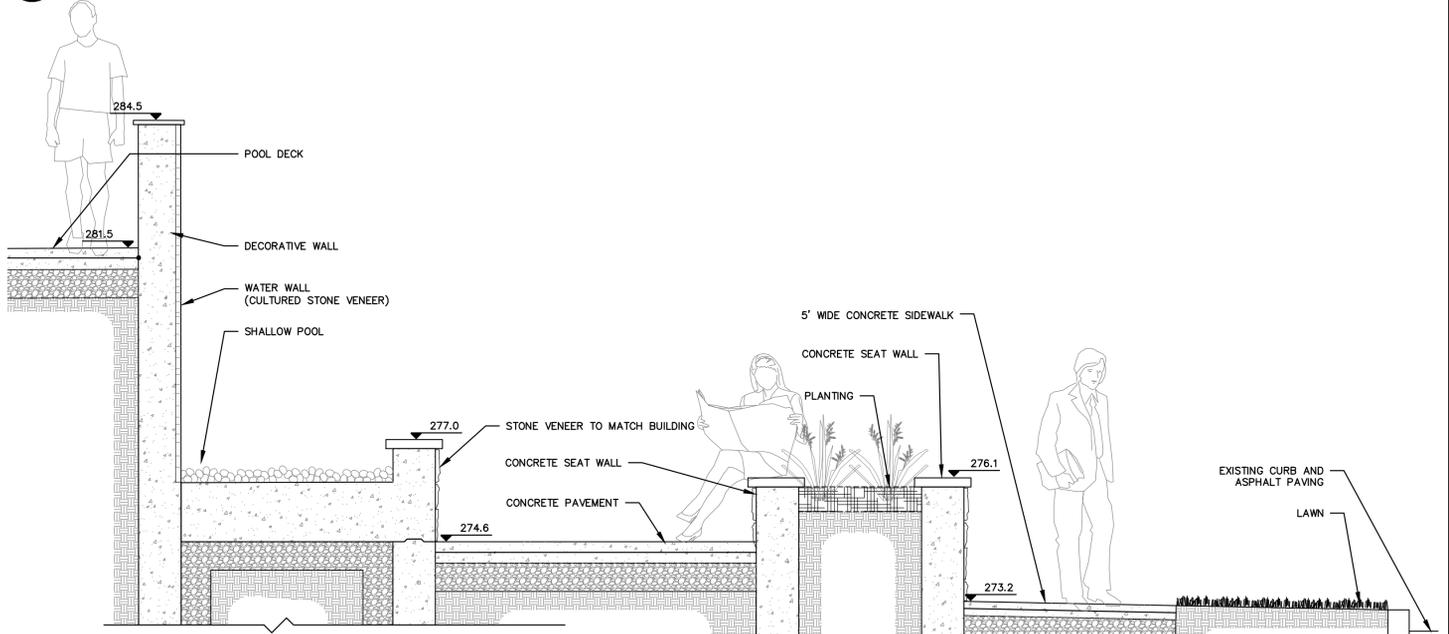
6 TRENCH DRAIN
SCALE: NTS



7 BUILDING 5 ENTRANCE SECTION AT RAMP
SCALE: NTS



8 BUILDING 5 ENTRANCE SECTION AT STAIRS
SCALE: NTS



9 COURTYARD SECTION
SCALE: NTS

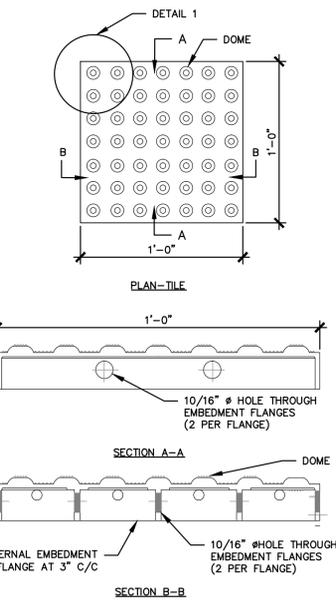
Planning Board # 15.041

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

Armor-Tile Tactile Systems

ENGINEERED PLASTICS, INC.
300 INTERNATIONAL DR., SUITE 100
WILLIAMSVILLE, NY
USA, 14221
1 (800) 682-2525
PHONE: (716) 826-3826
FAX: 1 (800) 769-4463
www.armor-tile.com

- 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 2. DO NOT SCALE DRAWINGS.
- 3. FOR CUSTOM SIZING CONTACT MANUFACTURER.
- 4. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT WWW.CADDETAILS.COM/INFO/REFERENCE NUMBER 681-001A.



3 TACTILE WARNING STRIP
SCALE: NTS

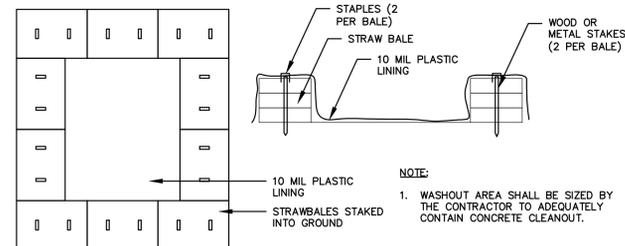
Project Title:
77 Excelsior Mixed
Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Drawing Title
Site Details

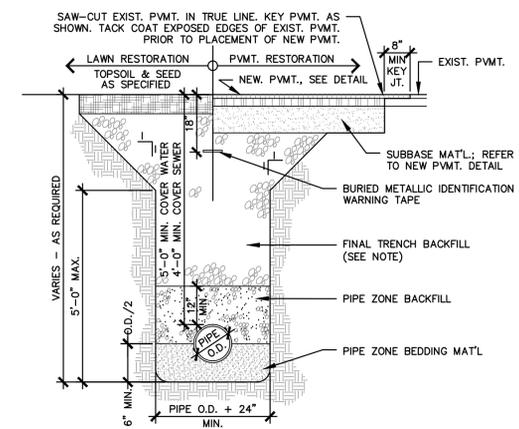
Drawing No.
L-6.1

Plot Date: 11/11/2015 10:05:01 AM
Sheet Title: 11/11/2015 10:05:01 AM
File Name: C:\p\15012015\15012015_P\prime_beechwood\armor-tile-details.dwg



1 CONCRETE WASHOUT DETAIL

SCALE: NTS

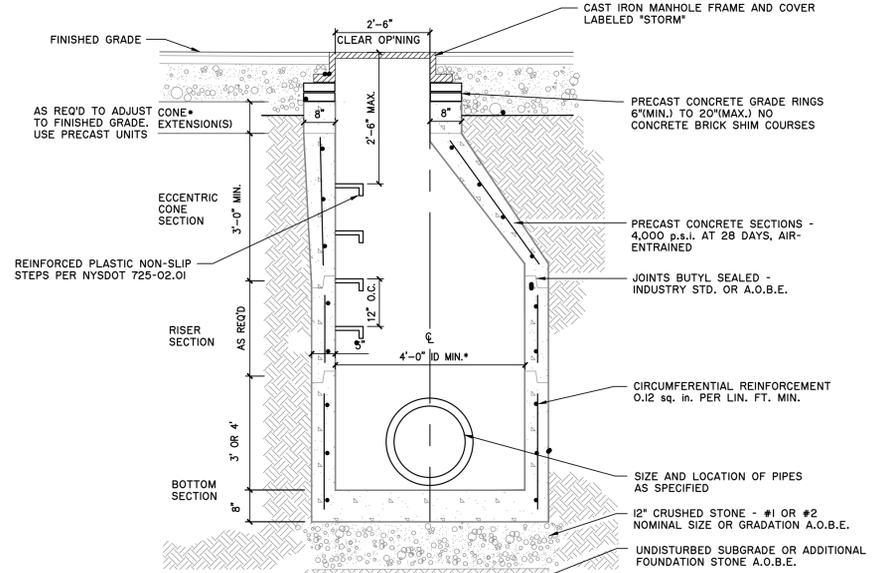


4 PIPE TRENCH SECTION

SCALE: NTS

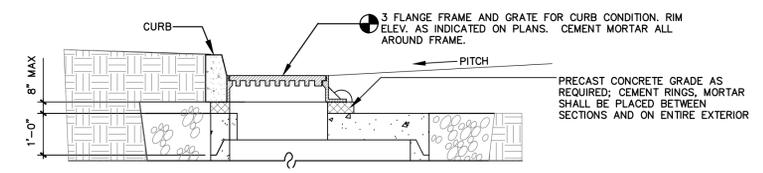
ITEM	DEPTH	MATERIAL	NYSDOT TYPE	METHOD OF PLACEMENT
PIPE ZONE BEDDING	6" MIN.	ANGULAR CRUSHED STONE	1&2	MECHANICAL COMPACTION
PIPE ZONE BACKFILL	12" MIN. COVER	CLEAN SAND OR GRAVEL	1A OR 1	MECHANICAL COMPACTION
FINAL TRENCH BACKFILL	VARIES	SEE NOTE	SEE NOTE	MECHANICAL COMPACTION

NOTES:
 1. FINAL TRENCH BACKFILL
 1.a. IN NON-PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE EXCAVATED MATERIAL WHEN DETERMINED SUITABLE BY THE ENGINEER OF RECORD; OTHERWISE IT SHALL BE NYSDOT TYPE 1 (ITEM NO. 304.02). MIN. MOD. PROCTOR DENSITY SHALL BE 85 PERCENT.
 1.b. IN PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE NYSDOT TYPE 1 (ITEM NO. 304.02). MIN. MODIFIED PROCTOR DENSITY SHALL BE 95 PERCENT.
 2. ALL PIPE ZONE BEDDING, PIPE ZONE BACKFILL, AND FINAL TRENCH BACKFILL SHALL BE PLACED IN 6 INCH MAX. COMPACTED LIFTS. ALL BEDDING AND BACKFILL MATERIALS SHALL BE MECHANICALLY COMPACTED TO THE SATISFACTION OF THE ENGINEER. EXCAVATION SHALL BE KEPT DRY AND DEWATERED AT ALL TIMES.

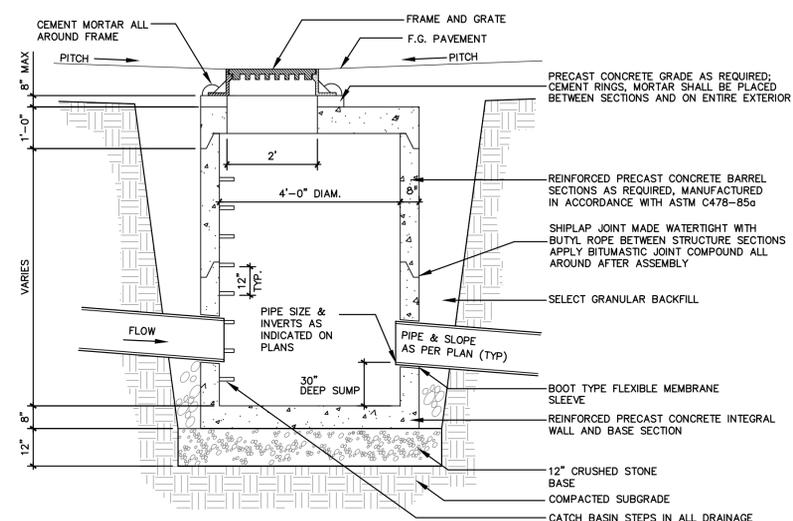


5 PRECAST CONCRETE MANHOLE FOR STORM

SCALE: NTS



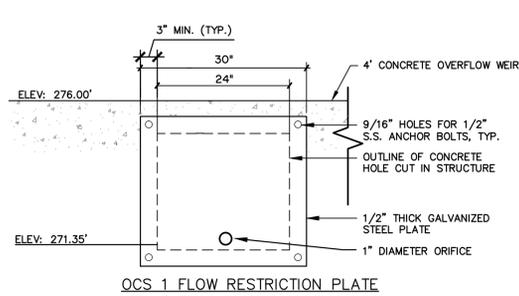
A. 3 FLANGE FRAME & GRATE ALONG CURB



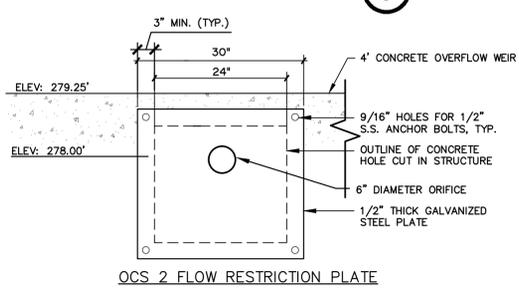
B. 4 FLANGE FRAME & GRATE

2 CATCH BASIN DETAIL

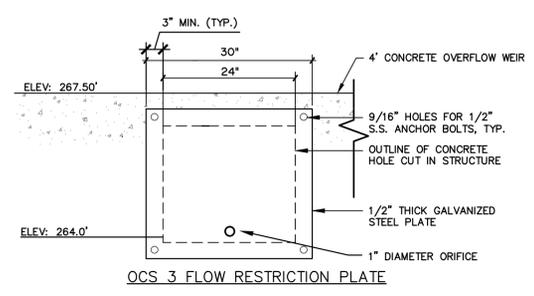
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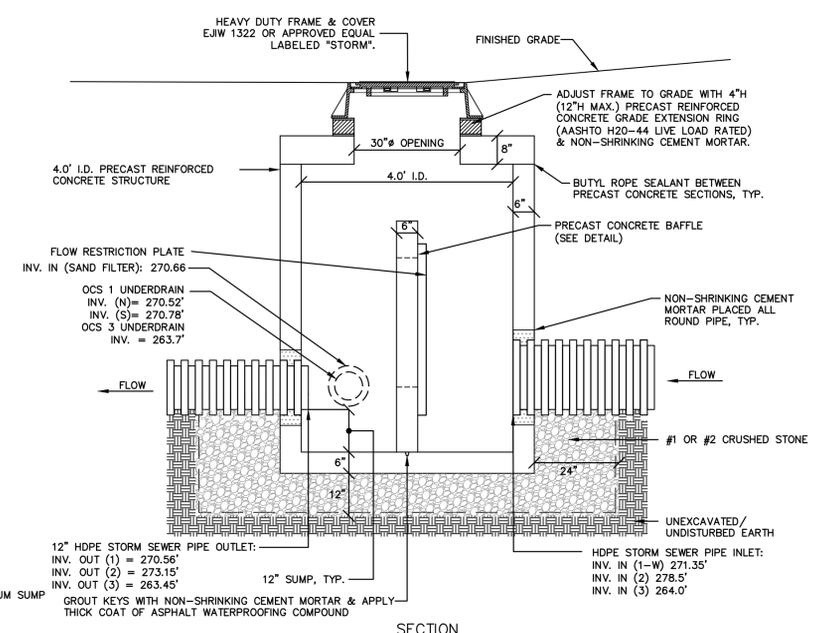
OCS 1 FLOW RESTRICTION PLATE



OCS 2 FLOW RESTRICTION PLATE



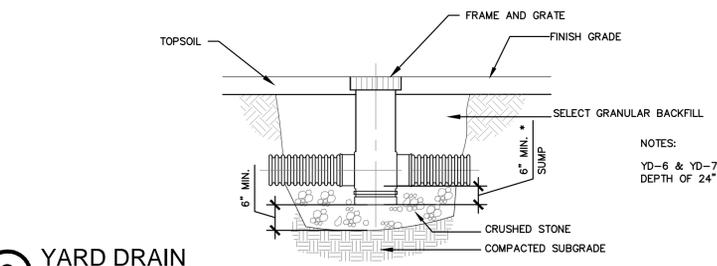
OCS 3 FLOW RESTRICTION PLATE



SECTION

6 OUTLET CONTROL STRUCTURE

SCALE: NTS



3 YARD DRAIN

SCALE: NTS

NOTES:
 YD-6 & YD-7 SHALL HAVE A MINIMUM SUMP DEPTH OF 24"

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Prepared for:
 Prime Beechwood, LLC
 621 Columbia Street
 Cohoes, NY 12047

Project Title:
 77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391
Design:	DR
Drawn:	KMK Ch'kd: DRC
Date:	09/09/2015 Scale: NTS

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Drawing Title

Stormwater Details

Drawing No.

L-6.3

Planning Board # 15.041

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

Project No.: 14781-14-000001
 Sheet No.: 11/4/2015 11:26 AM
 File Name: C:\p\p\20150901_P\p\p\Excelsior_Edplan\20150901\DETAILS\STORMWATER.dwg



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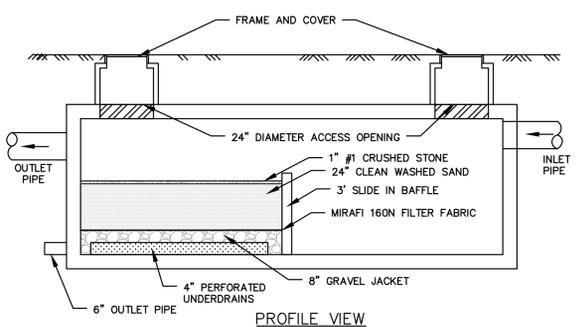
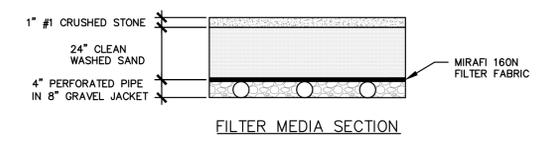
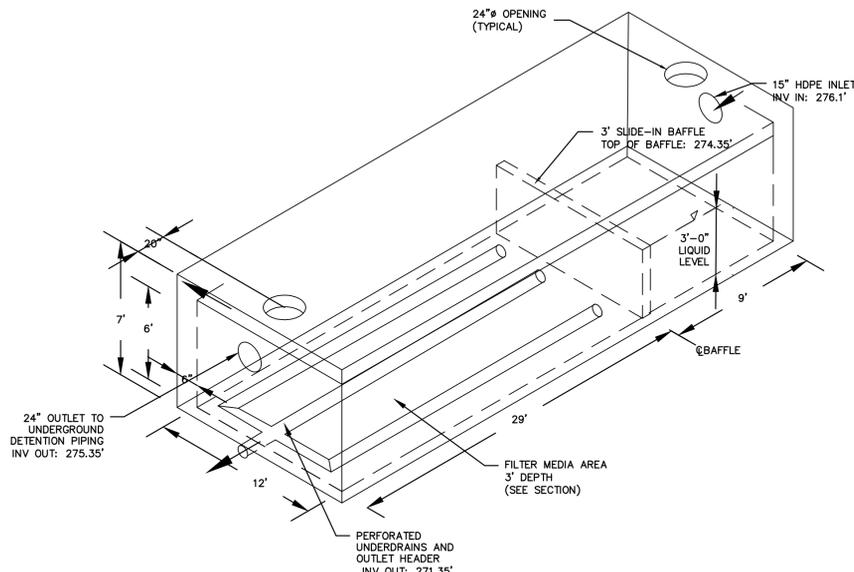
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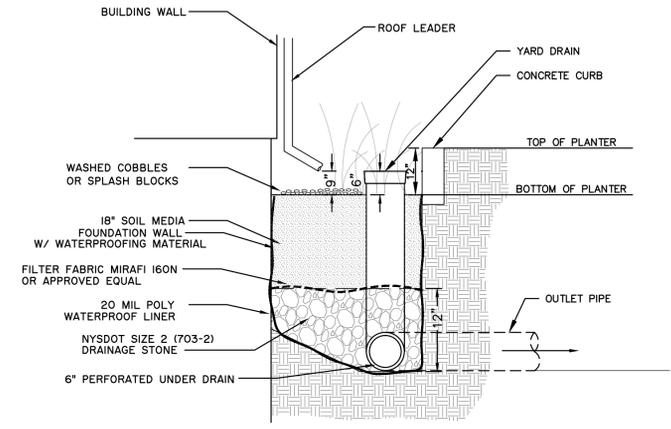
Prepared for:

Prime Beechwood, LLC

621 Columbia Street
Cohoes, NY 12047

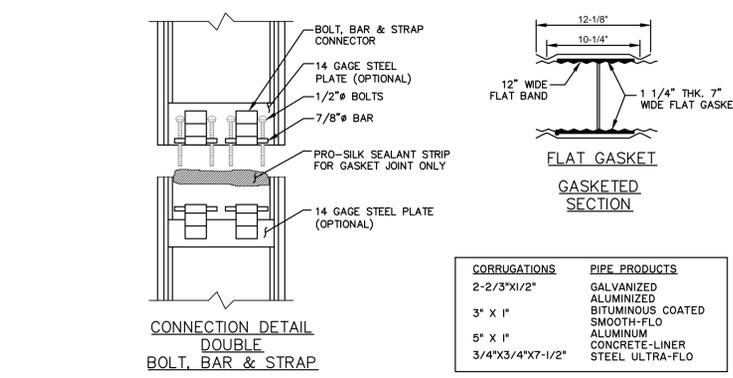
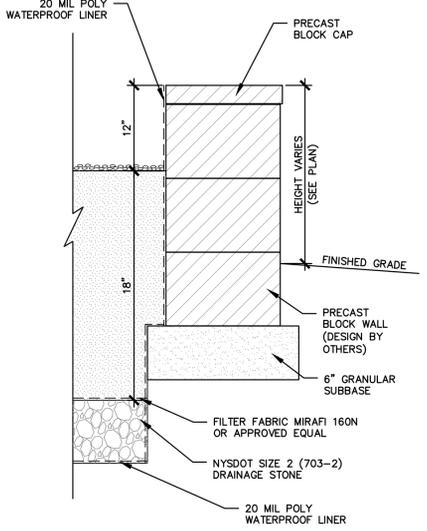


1 UNDERGROUND SAND FILTER SCALE: NTS



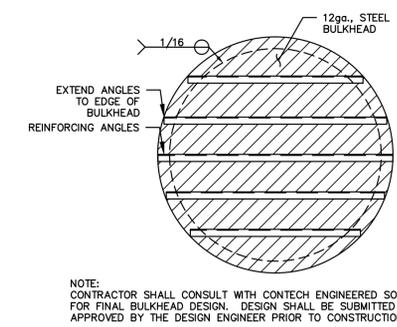
NOTE:
 1. SOIL MEDIA INFILTRATION RATE ± 2 " PER HOUR. MEDIA TO CONSIST OF 70% SAND, (100% PASSING 1" SIEVE, 5% PASSING NO. 200 SIEVE) AND 30% TOPSOIL (5% ORGANIC MATERIAL)
 2. VEGETATION SELECTED SHALL BE IN ACCORDANCE WITH NYSDEC STORMWATER MANUAL AND BE RELATIVELY SELF-SUSTAINING AND ADAPTABLE. ALL PLANTS SHALL BE CONTAINER-GROWN WITH A WELL ESTABLISHED ROOT SYSTEM, PLANTED ON ONE-FOOT CENTERS. PLEASE SEE DWG L-5 FOR LANDSCAPING DETAILS.

2 STORMWATER PLANTER SCALE: NTS



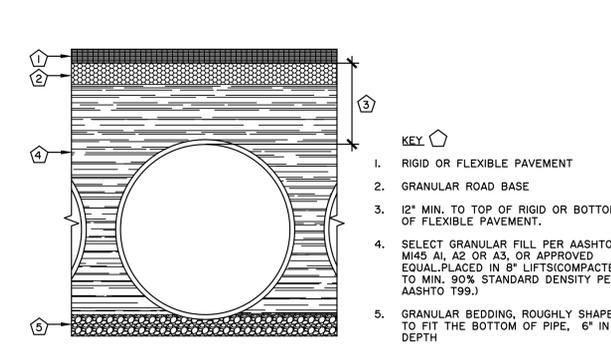
CORRUGATIONS	PIPE PRODUCTS
2-2/3" X 1/2"	GALVANIZED ALUMINIZED
3" X 1"	BITUMINOUS COATED ALUMINUM
5" X 1"	SMOOTH-FLO CONCRETE-LINER
3/4" X 3/4" X 7-1/2"	STEEL ULTRA-FLO

3 H-12 HUGGER BAND DETAIL SCALE: NTS

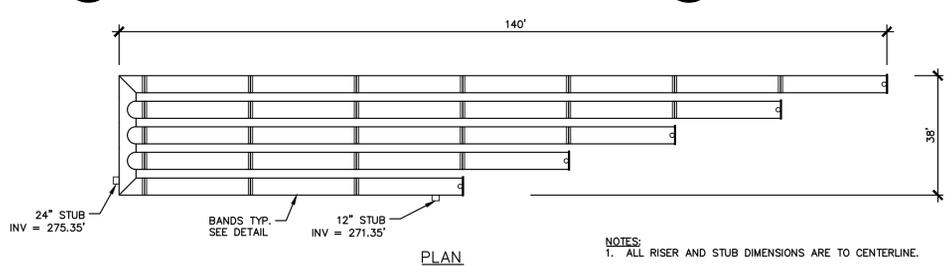


NOTE:
 CONTRACTOR SHALL CONSULT WITH CONTECH ENGINEERED SOLUTIONS, LLC FOR FINAL BULKHEAD DESIGN. DESIGN SHALL BE SUBMITTED AND APPROVED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

4 BULKHEAD DETAIL SCALE: NTS

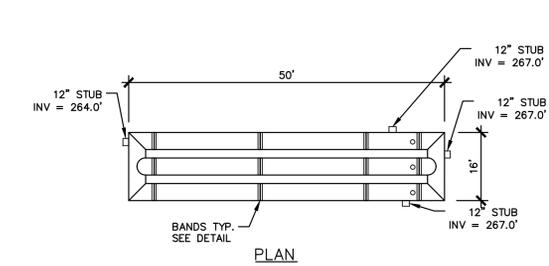


5 BACKFILL DETAIL SCALE: NTS



NOTES:
 1. ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
 2. ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
 3. ALL RISERS AND STUBS ARE 2-2/3" X 1/2" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
 RISERS TO BE FIELD TRIMMED TO GRADE.

6 UNDERGROUND DETENTION SYSTEM #1 SCALE: NTS



NOTES:
 1. ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
 2. ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
 3. ALL RISERS AND STUBS ARE 2-2/3" X 1/2" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
 RISERS TO BE FIELD TRIMMED TO GRADE.

7 UNDERGROUND DETENTION SYSTEM #2 SCALE: NTS

GENERAL NOTES:
 1. REFER TO CONTECH BAND SELECTION GUIDE FOR BAND WIDTH, GAGE, AND FASTENER TYPES.
 2. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS. ALL ALUMINUM BANDS, BOTH SINGLE AND DOUBLE BB&S, ARE FURNISHED WITH A 14 GAGE ALUMINUM BACK-UP PLATE WELDED TO THE BAND AND THE STRAP.
 3. REROLLED ANNULAR END CORRUGATIONS ARE NORMALLY 2-2/3" X 1/2".
 4. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
 5. ORDER SHALL DESIGNATE GASKET OPTION.

Planning Board # 15.041

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

 Chairperson

Project Title:
77 Excelsior Mixed Use Development
 77 Excelsior Avenue
 Saratoga Springs, New York

Project No.:	201391
Design:	DRC
Drawn:	KMK Ch'kd: DRC
Date:	09/09/2015 Scale: NTS

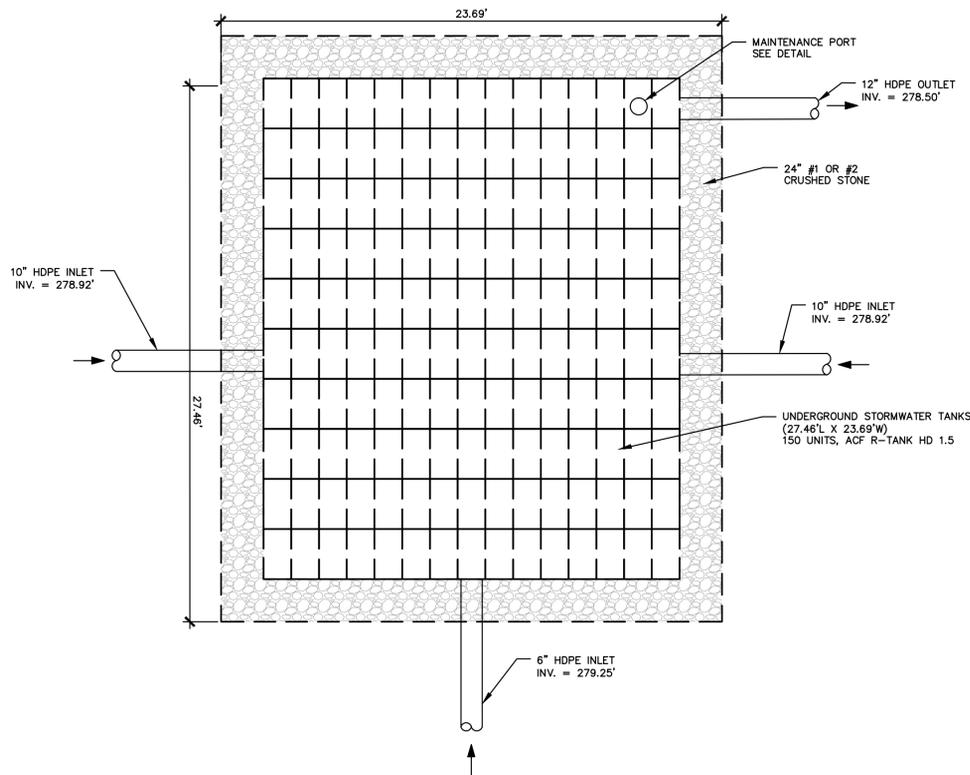
Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Stormwater Details

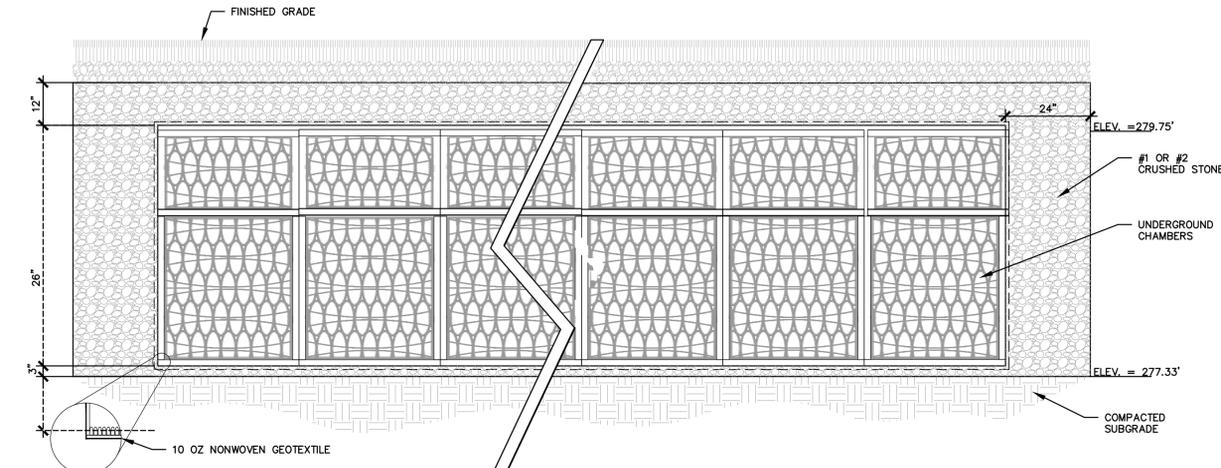
Drawing No.

L-6.4

Project No.: 14781-114-001
 Sheet No.: 11/02/15 11:26 AM
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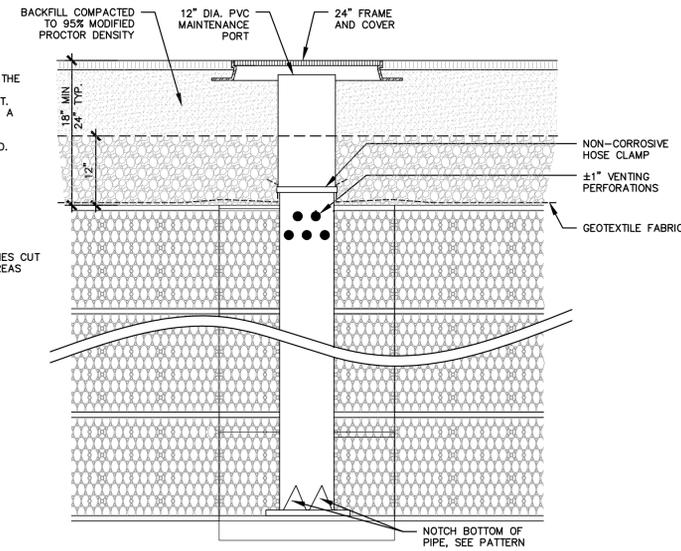
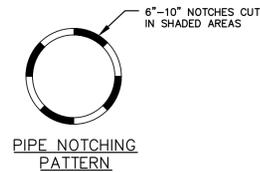


1 UNDERGROUND CHAMBERS (PLAN) SCALE: NTS

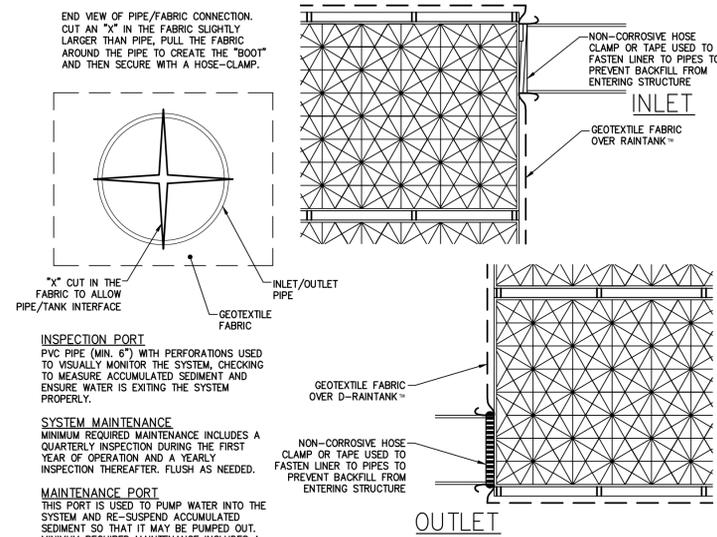


3 UNDERGROUND CHAMBERS (SECTION) SCALE: NTS

MAINTENANCE PORT NOTE:
THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.



4 UNDERGROUND CHAMBERS MAINTENANCE PORT SCALE: NTS



2 RAIN-TANK INLET/OUTLET DETAIL SCALE: NTS

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.:	201391
Design:	DRC
Drawn:	KMK Ch'kd: DRC
Date:	09/09/2015 Scale: NTS

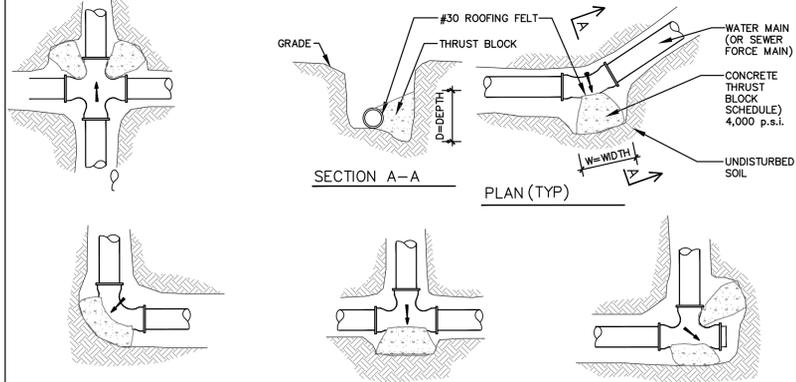
Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Drawing Title
Stormwater Details

Drawing No.
L-6.5

Planning Board # 15.041

Approval
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Date Signed _____ Chairperson



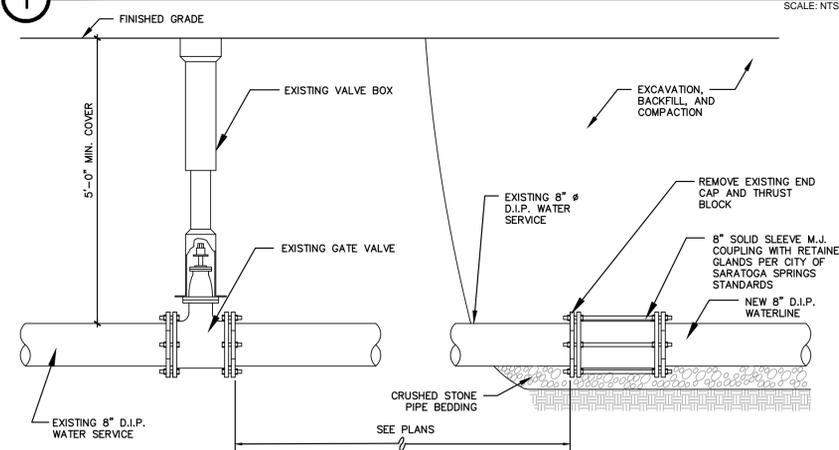
NOTES:

- FOR REQUIRED BEARING AREA AND DIMENSIONS L AND D, SEE SCHEDULE BELOW. VALUES OF L AND D OTHER THAN THOSE SHOWN IN THE TABLE MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO OR LARGER THAN THAT REQUIRED.
- CONCRETE NOT TO OVERLAP ANY JOINT.
- CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.
- BEARING AREAS FOR THRUST BLOCKS FOR WATER MAINS LARGER THAN 12" DIA. TO BE APPROVED BY CITY ENGINEER.
- APPROXIMATE VOLUME OF CONCRETE THRUST BLOCK: $V \pm = LD (W \pm LD) - LD$ ST
WHERE:
V = VOLUME IN CUBIC YARDS
L = LENGTH OF BLOCK IN FEET
D = DEPTH OF BLOCK IN FEET
W = WIDTH OF BLOCK IN FEET
LD = INSIDE DIAMETER OF PIPE IN FEET
- REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 2000 p.s.i. WITH A SAFETY FACTOR OF 1.7. PRESSURE OF FLUID FLOW IS BASED ON A 300' HEAD.
- IN MUCK, PEAT OR RECENTLY PLACED FILL ALL THRUST SHALL BE RESISTED BY PILES OR THE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THRUSTS, ALL AS REQUIRED BY THE ENGINEER.

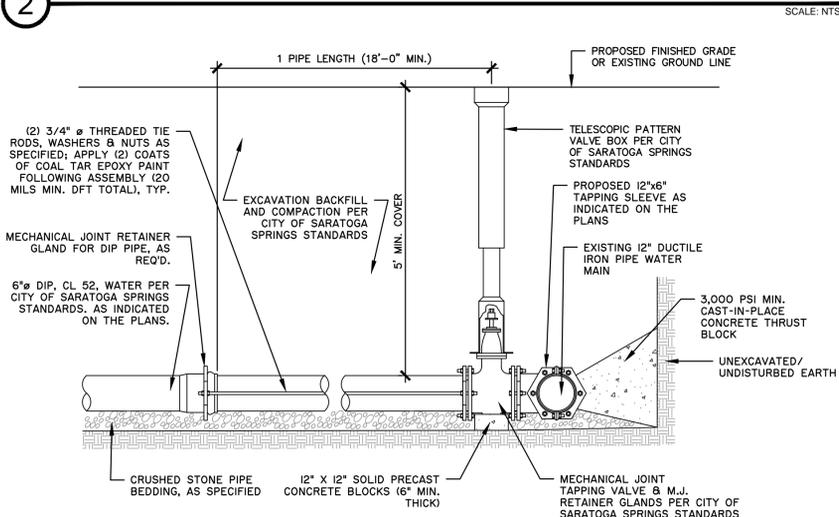
REQUIRED BEARING AREAS & DIMENSIONS FOR CONCRETE THRUST BLOCKS

PIPE SIZE INCHES	TEE AREA SQ. FT.	90° (1/4) BEND		45° (1/8) BEND		22-1/2° (1/16) BEND		11-1/4° (1/32) BEND		
		DIMENSIONS D x L	AREA SQ. FT.	DIMENSIONS D x L	AREA SQ. FT.	DIMENSIONS D x L	AREA SQ. FT.	DIMENSIONS D x L	AREA SQ. FT.	
4	1.4	1.0 x 1.5	2.0	1.0 x 2.0	1.1	1.0 x 1.5	1.6	.5 x 1.5	0.3	0.5 x 1.0
6	3.2	1.5 x 2.5	4.5	2.0 x 2.5	2.4	1.5 x 2.0	1.2	1.0 x 1.5	0.6	0.5 x 1.5
8	5.7	2.0 x 3.0	8.0	2.0 x 4.0	4.3	2.0 x 2.5	2.2	1.5 x 1.5	1.1	1.0 x 1.5
10	8.8	2.5 x 3.5	12.5	3.0 x 4.5	6.8	2.0 x 3.0	3.4	1.5 x 2.5	1.7	1.0 x 2.0

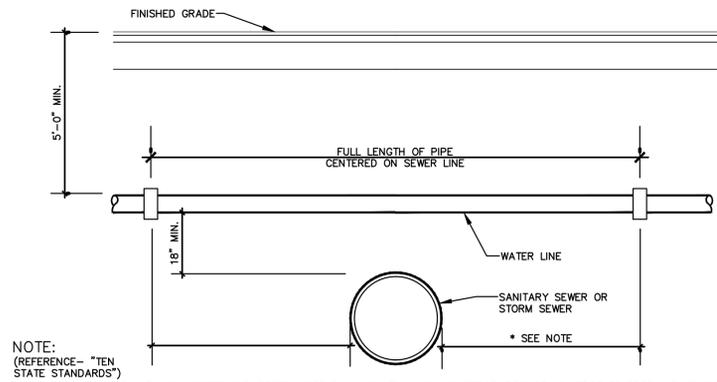
1 THRUST BLOCK



2 CONNECTION TO EXISTING WATER SERVICE

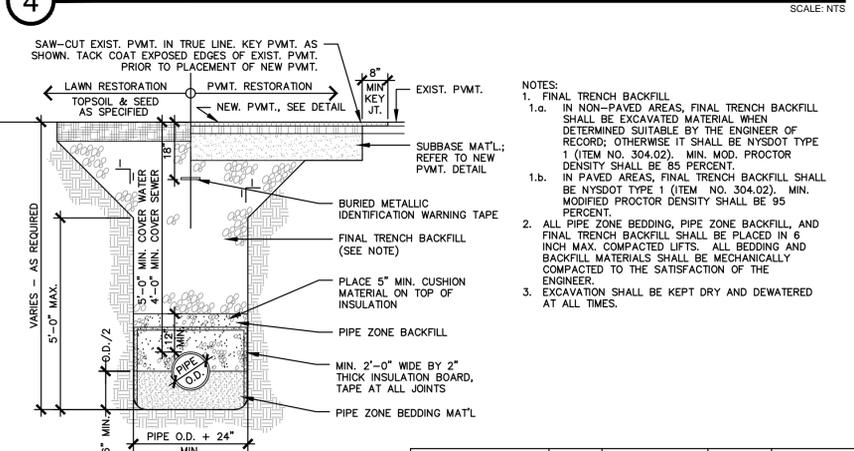


3 CONNECTION TO EXISTING WATER MAIN



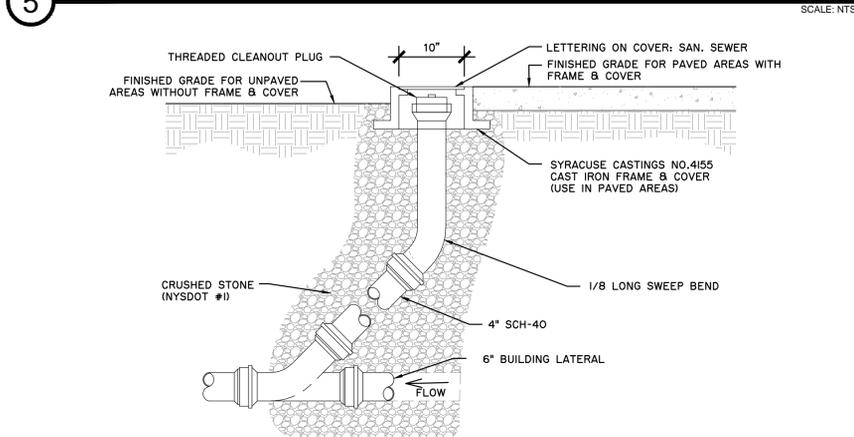
NOTE: (REFERENCE - "TEN STATE STANDARDS")
WHEN INSTALLED PARALLEL, ALL WATER AND SEWER LINES SHALL HAVE A MINIMUM SEPARATION OF 10', EDGE TO EDGE. IF MINIMUM CANNOT BE MAINTAINED, WATER MAIN SHALL BE IN SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELVE TO ONE SIDE OF SEWER, WITH BOTTOM OF WATER MAIN 18" MINIMUM ABOVE TOP OF SEWER PIPE. WHEN CROSSING, MAINS SHALL BE INSTALLED TO INSURE 18" MINIMUM VERTICAL SEPARATION BETWEEN MAINS, OUTSIDE TO OUTSIDE. WHERE WATER MAIN IS UNDERNEATH SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO WATER MAIN. WHEN IT IS IMPOSSIBLE TO PROVIDE THE ABOVE MINIMUMS, THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE, AND SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHT PRIOR TO BACKFILLING.

4 UTILITY CROSSING

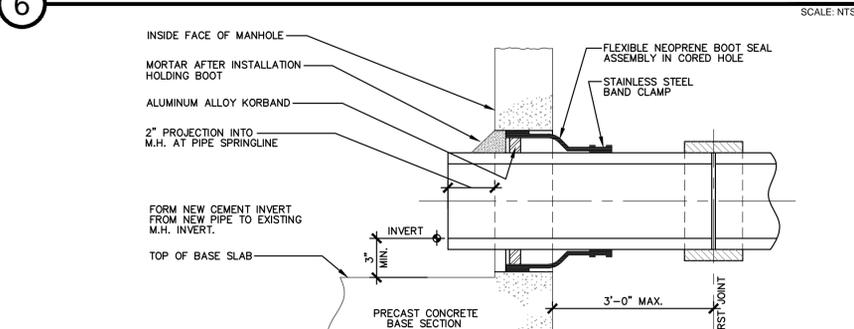


ITEM	DEPTH	MATERIAL	NYSDOT TYPE	METHOD OF PLACEMENT
PIPE ZONE BEDDING	6" MIN.	ANGULAR CRUSHED STONE	1&2	MECHANICAL COMPACTION
PIPE ZONE BACKFILL	12" MIN. COVER	CLEAN SAND OR GRAVEL	1A OR 1	MECHANICAL COMPACTION
FINAL TRENCH BACKFILL	VARIES	SEE NOTE	SEE NOTE	MECHANICAL COMPACTION

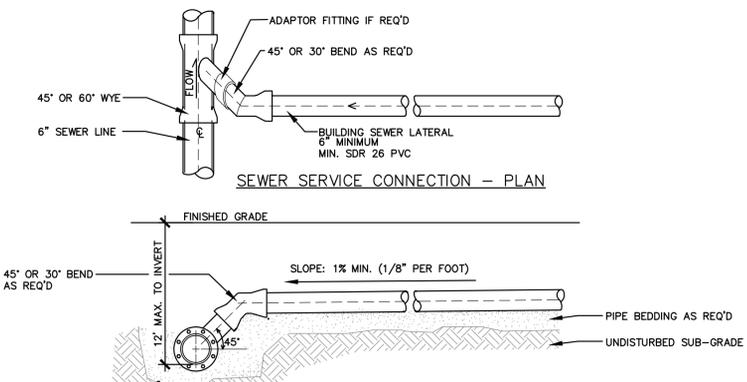
5 PIPE TRENCH-SECTION



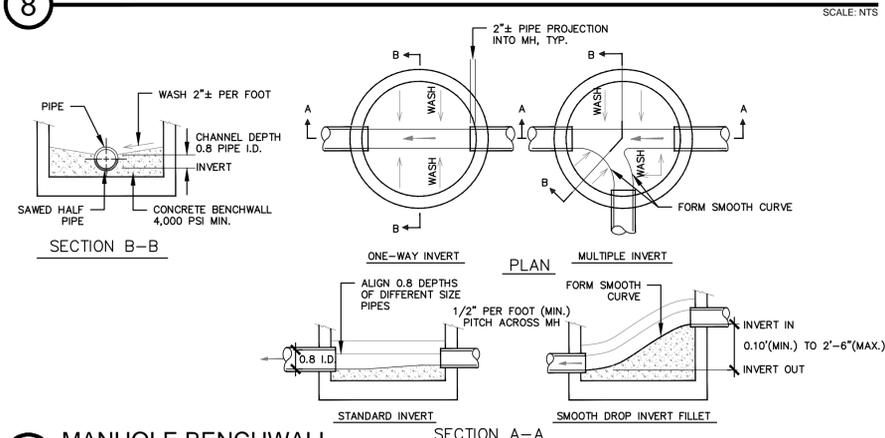
6 SANITARY SEWER CLEANOUT



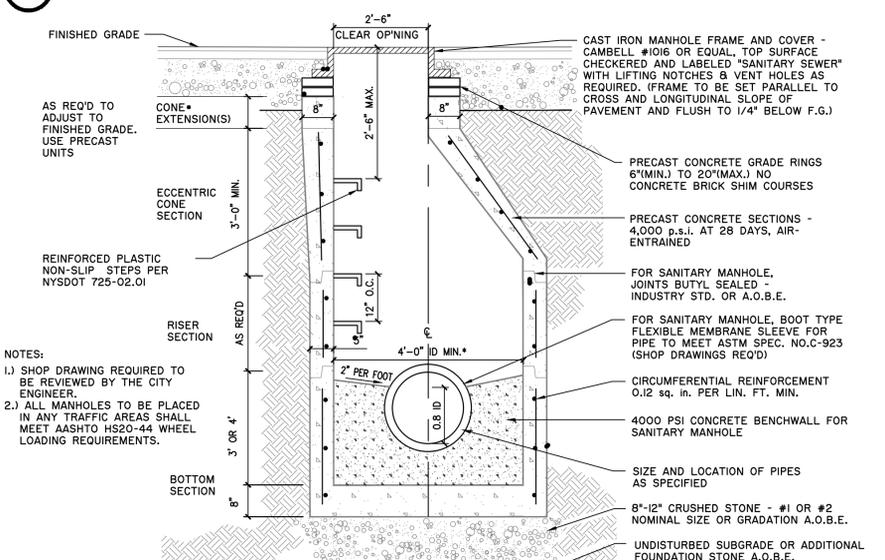
7 CONNECTION TO EXISTING MANHOLE



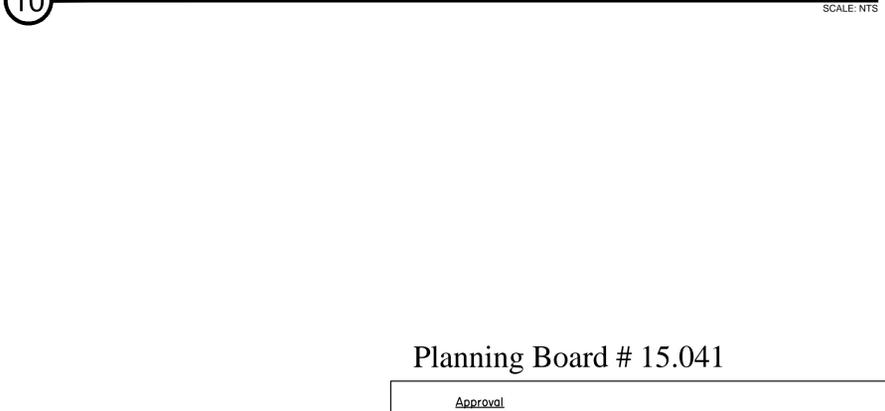
8 CONNECTION TO EXISTING SEWER SERVICE



9 MANHOLE BENCHWALL



10 SANITARY MANHOLE



Planning Board # 15.041

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

Unauthorized alteration or addition to this document is a violation of Section 7209 of the New York State Education Law.

© The LA Group 2014
Prepared for:
Prime Beechwood, LLC
621 Columbia Street
Cohoes, NY 12047

Project Title:
77 Excelsior Mixed Use Development
77 Excelsior Avenue
Saratoga Springs, New York

Project No.:	201391
Design:	DRC
Drawn:	KMK
Ch'kd:	DRC
Date:	09/09/2015
Scale:	NTS

Rev.	Description:	Date:
1	Revised per TDE Comments	11/4/15

Utility Details

Drawing No.

L-6.6



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: Prime Beechwood³ LLC

Project Name (if applicable): 77 Excelsior Mixed Use Development

Property Address: Excelsior Avenue

Tax Map#: 166.5-5-5.41

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.

N/A

~~Number of Dwellings: 101~~

Estimated Cubic Feet of Water per Year:

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

Permit Fee: \$0 - N/A (P)

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: [Signature] - Member

Company Name: Prime Beechwood³ LLC

Company Address: 621 Columbia Street, Cohoes, NY 12047

Phone Number: (518) 577-2005 785-9006

Date: 9/9/2015

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.

ENGINEERS
PLANNERS
SURVEYORS

November 19, 2015
Updated February 3, 2016



REC'D FEB 05 2016

Mr. Gary Stone
A Stone Container Rentals
10 P D Harris Road
Saratoga Springs, New York 12866

RE: Traffic Assessment, Weibel Avenue Commercial Lands, 459 Lake Avenue, City of Saratoga Springs, Saratoga County, New York; CM Project No. 115-193

Dear Mr. Stone:

Creighton Manning Engineering, LLP (CM) has conducted a traffic assessment for the proposed *Weibel Avenue Commercial Lands* development located in the northeast quadrant of the Private Road intersection with Weibel Avenue in the City of Saratoga Springs. This evaluation is based on information provided in the "Site Plan," prepared by Environmental Design Partnership, LLP (EDP), dated June 12, 2015 (See Attachment A). *This letter is an update to the original letter dated November 19, 2015. The only revision includes changing the name of "Mellor Lane" to a "Private Road". A street sign is not posted and online mapping resources stating "Mellor Lane" are not correct.*

1.0 Project Description

The proposed project includes the construction of a 42,000 square foot (SF) mixed-use development consisting of 14,000 SF of general office space, 14,000 SF of commercial retail space, and six apartments in two separate buildings which will replace the approximate 720 SF *Cote Insurance Agency* office. Access to the site will be provided via two driveways on a Private Road which also services a golf range, the *Saratoga Book Warehouse*, and *Saratoga Pool and Tub*. This portion of the project will be referred to as Phase 1. It is noted that the Applicant also controls approximately 60 additional acres of land located east of the Phase 1 development. A sensitivity analysis was conducted to confirm that adequate access can be provided to Weibel Avenue if this portion of the property (Phase 2) is developed in the future and is summarized in this letter.

The study area for the traffic assessment includes the adjacent unsignalized intersection of the Private Road with Weibel Avenue to the west. Phase 1 of the project is anticipated to be operational in 2018. The project location and study area intersection are shown on Figure 1.

It is noted that development of Phase 1 and Phase 2 was included as part of a *Traffic Feasibility Study* completed by Creighton Manning Engineering in September 2005 which evaluated a Master Plan development scenario along the Weibel Avenue corridor. As such, the Private Road will connect to a future "central roadway" to the east that will also connect to other mixed-use projects including the existing development called *The Springs*. It is noted that the Applicant supports the internal connections and access management associated with the development of the "center roadway".

2.0 Existing Conditions

Roadways Serving the Site

Weibel Avenue is a north-south roadway that extends from NY Route 50 to NY Route 29 (Lake Avenue) and is classified as an urban minor arterial. In the project vicinity, Weibel Avenue provides one 12-foot wide travel lane in each direction with five to six foot wide paved shoulders. An approximate 350 foot long and a 725 foot long concrete sidewalk is provided on the east side of Weibel Avenue in front of *The Springs* mixed-use development which is located on both side of the Private Road. An approximate 115 foot long asphalt walkway provided along the project frontage on Weibel Avenue and connects the two concrete sidewalk segments. On the west side of Weibel Avenue, a 550 foot long sidewalk is provided in front of the *Tractor Supply/Kohl's* plaza while an approximate 115 foot long sidewalk is provided in front of the *Springs Dental/Printing & Signs/Allstate* plaza, both north of the project site. The posted speed limit is 40-mph adjacent to the site. Traffic volumes recorded by the New York State Department of Transportation (NYSDOT) in 2013 show that Weibel Avenue currently serves approximately 12,620 vehicles per day (vpd) in the project vicinity and has an 85th percentile speed of 48-mph. Land uses along Weibel Avenue include a mix of commercial, residential, recreational, a cemetery, and undeveloped land.

The Private Road is a local road that provides access to the *Cote Insurance Agency*, a golf range, *Saratoga Pool and Tub*, and the *Saratoga Book Warehouse*. The Private Road provides one 12-foot wide travel lane in each direction. This is a paved road up to the insurance land use and transitions to a gravel road that provides access to the remaining uses. An approximate 160 foot long sidewalk is provided on the south side of the road adjacent to *The Springs* mixed-use development and there is a posted 5-mph speed limit on the gravel section of the road.

Study Area Intersection

The Private Road intersection with Weibel is a three-leg intersection controlled by a stop-sign on the westbound Private Road approach. The northbound and southbound Weibel Avenue approaches and the westbound Private Road approach each provide a single lane for shared travel movements.

Transit and Pedestrians

Transit service in the Capital Region is provided by the Capital District Transportation Authority (CDTA). CDTA Route 472 (Lake Avenue) travels from the Saratoga Springs Amtrak Rail Station located off of West Avenue to the Wilton Mall along Weibel Avenue adjacent to the project site with a stop at the *Hannaford Plaza* located north of the site. Buses travel through the area once an hour from about 7:00 a.m. until 8:00 p.m. on Monday through Saturday and from about 10:00 a.m. until 5:00 p.m. on Sundays. It is noted that CDTA Route 540 (Northway Express) also travels past the site on Weibel Avenue; however, this route does not stop in the vicinity of the project.

Data Collection

Turning movement counts were conducted at the Private Road intersection with Weibel Avenue on Thursday, October 22, 2015 during the morning peak period from 7:00 to 9:00 a.m. and on Tuesday, October 20, 2015 during the afternoon peak period from 4:00 to 6:00 p.m. which coincides with peak operating periods of the development and on the adjacent roadway network. The existing through traffic volumes on Weibel Avenue were seasonally factored

based on information provided by the City of Saratoga Springs to estimate June conditions. The adjusted traffic volumes for the AM and PM peak hours shown on Figure 1-1 provide base year 2015 conditions and form the basis for all traffic forecasts. The raw turning movement count data is included in Attachment B.

3.0 Traffic Assessment

Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from a given site. The Institute of Transportation Engineers (ITE) *Trip Generation*, 9th edition, is the industry standard used for estimating trip generation for proposed land uses based on data collected at similar uses. The trip generation for Phase 1 of the proposed project was estimated using land use code (LUC) 220 for apartments, LUC 710 for general office space, and LUC 826 for specialty retail center. Table 1 summarizes the trip generation estimate for the AM and PM peak hours.

It can be expected that some trips to the site originate from traffic that is already passing the site on Weibel Avenue. Pass-by trips are vehicles on the roadway network traveling on Weibel Avenue that will stop at the site before continuing on to their primary destination. Based on data provided by ITE, a pass-by trip percentage was applied to the retail portion of the development during both peak hours.

Table 1 – Trip Generation Summary

Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Apartments – 6 units	1	2	3	3	1	4
General Office Space – 14,000 SF	19	3	22	4	17	21
Specialty Retail Space – 14,000 SF	6	4	10	17	21	38
Retail Pass-By (30% AM/PM)	-1	-1	-2	-6	-6	-12
Total Trips	25	8	33	18	33	51

Phase 1 development is expected to generate 33 new vehicle trips during the AM peak hour and 51 new vehicle trips during the PM peak hour. This is less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one approach for off-site intersection analysis. This guidance was developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersections and screen out locations from requiring detailed analysis that do not reach the 100 vehicle threshold; therefore, the analysis of the site focused on the Private Road intersection with Weibel Avenue located immediately adjacent to the site providing access for all vehicles entering and exiting the site.

Future Traffic Volumes

To evaluate the impact of the proposed development, traffic projections were prepared for 2018, the expected year of project completion. Historical traffic volume data on Weibel Avenue provided by NYSDOT indicates that traffic volumes in the vicinity of the site have increased by approximately 0.42 percent per year over the last several years. To provide a conservative estimate, traffic projections were prepared for the anticipated year of completion by applying a ½ percent per year growth rate for three years to the 2015 Existing

traffic volumes. In addition to general background traffic growth, vehicle trips associated with other developments in the project area were considered when developing the No-Build traffic volumes. The City of Saratoga Springs and the Town of Wilton indicated that the following developments could contribute to future background traffic volumes adjacent to the project site:

- 60 Weibel Avenue – Mixed-use development on Weibel Avenue
- 72 Weibel Avenue – Mixed-use development on Weibel Avenue
- St. John Neumann Residence – Senior housing on Lake Avenue
- Saratoga Independent School – School expansion on Lake Avenue
- Excelsior Avenue Apartments – Mixed-use development on Excelsior Avenue
- Excelsior Park – Mixed-use development on Excelsior Avenue
- 77 Excelsior Avenue – Mixed-use development on Excelsior Avenue
- Excelsior Avenue Mixed Use Development – Mixed-use development on Excelsior Avenue
- Mixed-Use Development – Mixed-use development on Excelsior Avenue
- Pine Brook Landing – Single family homes on Louden Road
- Louden Road Conservation Subdivision – Single family homes on Louden Road
- Floral Estates – Single family homes on Louden Road
- Wilton Senior Community – Senior independent and assisted living apartments on Perry Road

The 2018 No-Build traffic volumes are shown on Figure 1-2 and represent the expected traffic volumes in 2018 without construction of Phase 1 development. It is noted that a combination of the general background growth and other development traffic volumes have conservatively take into account all expected growth in the corridor that may occur over the next three years prior to the construction of the proposed project. The combined growth scenario detailed above increased 2015 Existing traffic volumes by approximately 10 percent during the AM peak hour and approximately 8 percent during the PM peak hour on Weibel Avenue.

Traffic generated by the proposed project was distributed to the study area intersection based on existing observed travel patterns in the project area and the probable travel routes for residents, employees, and patrons of the proposed development. It is expected that approximately 55 percent of the new development traffic will travel to and from the north on Weibel Avenue while the remaining 45 percent will travel to and from the south on Weibel Avenue. The primary and pass-by trip distribution patterns are shown on Figure 1-3 and Figure 1-4 while the associated site-generated traffic volumes are shown on Figure 2-1 and Figure 2-2. The site-generated trips were then added to the 2018 No-Build traffic volumes, resulting in the 2018 Build traffic volumes for the weekday AM and PM peak hours (Figure 2-3).

Traffic Operations

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using Synchro version 8 software which automates the procedures contained in the *Highway Capacity Manual*. Levels of service range from A to F with LOS A conditions considered excellent with very little delay while LOS F generally represents conditions with very long delays. In general, overall level of service D or better conditions are desirable during peak hour operating conditions on each intersection lane group; however, in some cases, lesser levels of service are accepted by

municipalities and NYSDOT during peak operating periods. The relative impact of the proposed project can be determined by comparing the level of service during the 2018 design year for the No-Build and Build condition. Table 2 summarizes the results of the level of service calculations for the proposed project during an average hour. The detailed level of service analyses are included in Attachment C.

Table 2 – Level of Service Summary

Intersection	Control	AM Peak Hour			PM Peak Hour		
		2015 Existing	2018 No-Build	2018 Build	2015 Existing	2018 No-Build	2018 Build
Weibel Avenue/Private Road	U						
Weibel Avenue SB	L	A (8.1)	A (8.2)	A (8.2)	A (8.7)	A (8.9)	A (9.0)
Private Road WB	LR	B (11.5)	B (11.9)	B (13.1)	C (20.8)	C (23.2)	D (27.8)

U = Unsignalized intersection

EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches

L, T, R = Left-turn, Through, and/or Right-turn movements

X (Y.Y) = Level of service (Average delay in seconds per vehicle)

The impact of the project can be described by comparing the analysis of the No-Build and Build operating conditions. The following observations are evident from this analysis:

Weibel Avenue and Private Road Intersection – The level of service summary indicates that the westbound Private Road approach currently operates at LOS B/C during the AM and PM peak hours with the southbound Weibel Avenue approach operating at LOS A during both peak hours. This intersection will continue to operate at the same levels of service during No-Build conditions. After development of the project, the westbound Private Road approach will operate at LOS B/D during the AM and PM peak hours with an increase in delay less than five seconds. Vehicle queues at this intersection will not increase significantly as a result of Phase 1. It is noted that this represents a conservative analysis since the existing *Cote Insurance Agency* building will be removed to allow for re-development of the site; however, since the existing traffic from this land use is small, a credit was not taken for removal of this volume in the Phase 1 analysis. It is recommended that the Private Road continue to provide a single lane entering and exiting the site with the westbound approach operating under stop-sign control.

A review of the site plan indicates that connections to *The Springs* mixed-use development located on either side of the Private Road will be made approximately 700-feet east of Weibel Avenue which is consistent with the *Traffic Feasibility Study*. Access to *The Springs* mixed-use development is currently provided via unsignalized intersections on Weibel Avenue at Standish Road to the north and at Biven Way to the south. While the internal connections will allow traffic from *The Springs* mixed-use development to use the Private Road intersection as a secondary access point, it is not anticipated that a large number of residents and/or patrons will use this intersection after Phase 1 development since adequate operations are currently provided at Standish Road and Biven Way. These internal connections may become more heavily used after full build-out of Phase 2 development and the potential installation of a traffic signal at the Private Road intersection with Weibel Avenue which was a recommendation of the *Traffic Feasibility Study*.

4.0 Sensitivity Analysis

A sensitivity analysis was completed to determine the potential future geometry and intersection control needed at the Private Road intersection with Weibel Avenue associated with the development of Phase 2 (approximately 60 acres of land located east of Phase 1) and to ensure the proposed layout of the buildings and accompanying parking lots associated with Phase 1 are not impacted by the future conditions. It is noted that the general master plan developed for the *Traffic Feasibility Study* conducted by Creighton Manning in 2005 considered development of the land associated with Phase 2; therefore, since a detailed plan has not been prepared for Phase 2, it is assumed that the general land use scenario presented in the *Traffic Feasibility Study* is still a valid development plan. It is noted that the land uses located nearest to Louden Road were modified to be consistent with the existing Transect-4 zoning. The analysis assumed that parcels associated with Phase 2 would consist of 125 townhouses, 270 apartments, 40,000 SF of shopping center space, and 50,000 SF of mixed office and general retail space. Access to Weibel Avenue and Louden Road will be provided with full development of the Phase 2.

Phase 2 trip generation was estimated using LUC 220 for apartments, LUC 230 for townhouses, LUC 710 for general office space, LUC 826 for specialty retail center, and LUC 820 for shopping center. Similar to Phase 1, it can be expected that some trips to the site originate from traffic that is already passing the site on Weibel Avenue. Table 3 summarizes the trip generation estimate for the AM and PM peak hours.

Table 3 – Sensitivity Analysis Trip Generation Summary

Land Use		AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Phase 1	Apartments – 6 units	1	2	3	3	1	4
	General Office Space – 14,000 SF	19	3	22	4	17	21
	Specialty Retail Space – 14,000 SF	6	4	10	17	21	38
	Retail Pass-By (30% AM/PM)	-1	-1	-2	-6	-6	-12
	Total Phase 1 New Trips	25	8	33	18	33	51
Phase 2	Townhouses – 125 units	11	51	62	48	24	72
	Apartments – 150 units	15	62	77	65	35	100
	General Office Space – 25,000 SF	34	5	39	6	31	37
	Specialty Retail Space – 25,000 SF	11	7	18	30	38	68
	Retail Pass-By (30% AM/PM)	-3	-3	-6	-10	-10	-20
	Shopping Center Space – 40,000 SF	55	34	89	156	168	324
	Shopping Center Pass-By (30% AM/PM)	-13	-13	-26	-49	-49	-98
	Apartments – 120 units	13	50	63	55	29	84
Total Phase 2 New Trips	123	193	316	301	266	567	
Total Phase 1 and Phase 2 Pass-By Trips		-17	-17	-34	-65	-65	-130
Total Phase 1 and Phase 2 New Trips		148	201	349	319	299	618

Table 3 shows that Phase 2 is expected to generate 316 additional vehicle trips during the AM peak hour (123 entering and 193 exiting) and 567 additional vehicle trips during the PM peak hour (301 entering and 266 exiting).

It is anticipated that Phase 2 would not be constructed until at least 2023; therefore, 2023 No-Build traffic volumes were developed based on the same methodology used for Phase 1 conditions. Existing traffic volumes associated with the existing developments on the Private

Road was removed from the analysis since these buildings will be demolished as part of Phase 2 development. Trips associated with Phase 2 were regionally distributed through the network consistent with Phase 1 conditions; however, it is noted that access will be provided to both Weibel Avenue and Louden Road. In order to provide a worst-case assessment of the Private Road intersection, all site generated traffic by Phase 2 development anticipated to travel to and from the site via Weibel Avenue was assigned to the Private Road intersection even though other unsignalized intersection can be accessed on Weibel Avenue (Standish Road and Biven Way). It is anticipated that approximately 70 percent of site generated traffic associated with Phase 2 development would use the Private Road intersection with Weibel Avenue to access the site while the remaining 30 percent would utilize a new access driveway on Louden Road. The Phase 1 and Phase 2 trip assignments were added to the 2023 No-Build traffic volumes to develop the 2023 Build traffic volumes. The 2023 Build traffic volumes for Phase 2 represent future traffic volumes after complete development of the parcels located east of the Phase 1 project (shown to the right).

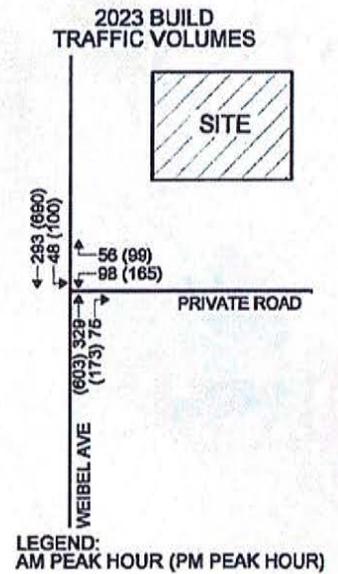


Table 4 summarizes the results of the Phase 2 intersection level of service calculations prepared for three potential access alternatives. The detailed level of service analyses are included in Attachment D.

Table 4 – Level of Service Summary Sensitivity Analysis – Build 2023

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Unsignalized		Signalized	Unsignalized		Signalized
		Alt. 1	Alt. 2	Alt. 3	Alt. 1	Alt. 2	Alt. 3
Weibel Avenue/Private Road	U						
Weibel Avenue SB	L	A (8.5)	A (8.5)	--	B (10.1)	B (10.1)	--
Private Road WB	LR	D (27.4)	--	--	F (>200)	--	--
	L	--	C (17.4)	--	--	F (63.8)	--
	R	--	B (11.7)	--	--	C (16.4)	--
Private Road WB	L	--	--	B (12.1)	--	--	C (23.6)
	R	--	--	B (11.1)	--	--	C (20.4)
Weibel Avenue NB	TR	--	--	A (5.8)	--	--	A (6.3)
Weibel Avenue SB	L	--	--	A (7.8)	--	--	B (11.8)
	T	--	--	A (5.0)	--	--	A (5.2)
Overall		--	--	A (6.5)	--	--	A (8.4)

S, U = Signalized and Unsignalized Intersections
 EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
 L, T, R = Left-turn, Through, and/or Right-turn movements
 X (Y.Y) = Level of service (Average delay in seconds per vehicle)

The following summarizes three geometric and intersection control alternatives for the Private Road intersection with Weibel Avenue:

- Alternative 1 – This is considered the “Null” alternative and shows operations under current geometric and intersection control conditions. The analysis indicates that the westbound Private Road approach will operate at LOS D/F during the AM and PM peak hours under stop-sign control. This alternative will not provide adequate operations at the study area intersection with the project Phase 2 development.

- Alternative 2 – It is noted that the *Traffic Feasibility Study* recommended the Private Road provide separate left and right turn lanes on the westbound approach. It also recommended that an exclusive southbound left-turn lane be constructed on Weibel Avenue at the Private Road intersection and that Weibel Avenue be widened to accommodate a two-way left-turn lane (TWLTL) from the Private Road intersection up to the ice rink driveway. A portion of the TWLTL has already been constructed at the Biven Way intersection located approximately 750-feet south of the Private Road as part of *The Springs* mixed-use development.

Left-turn lane criteria published by American Association of State Highway and Transportation Officials (AASHTO) in *A Policy on Geometric Design of Highways and Streets, 2011* was reviewed at the Private Road intersection with Weibel Avenue. A review of the Phase 2 traffic volumes on Weibel Avenue indicates that the guidelines for a left-turn lane are met at this intersection; therefore, consistent with the *Traffic Feasibility Study*, for Alternative 2 Weibel Avenue would be widened to provide a southbound left-turn lane at the Private Road that transitions into a TWLTL that extends to the Biven Way intersection. The TWLTL will allow vehicles turning left from the Private Road to execute a two stage left-turn movement when exiting the site and entering southbound traffic flows on Weibel Avenue. It is anticipated that adequate right-of-way (ROW) is available along Weibel Avenue to provide the proposed geometry since this concept was adopted prior to construction of *The Springs* mixed-use development. The level of service analysis indicates that these geometric improvements will significantly decrease delay on the Private Road; however, the westbound left-turn lane will still operate at LOS C/F during the AM and PM peak hours under stop-sign control. The operations expected during the PM peak hour during Phase 2 conditions (and likely Saturday peak hour considering the potential retail component of the site) are not uncommon at unsignalized intersections along built-up corridors; however, a review of the *Traffic Feasibility Study* shows that the installation of a traffic signal is likely desirable to mitigate these conditions and to provide a controlled access that will be accessible to numerous developments located on the east side of Weibel Avenue.

- Alternative 3 – Alternative 3 included the installation of a traffic signal at the Private Road intersection with Weibel Avenue after full build-out of the subject parcels. The two-way traffic volumes on Weibel Avenue and the westbound traffic volumes on the Private Road were compared to the signal warrant criteria contained in the 2009 Manual of Uniform Traffic Control Devices (National MUTCD), published by The Federal Highway Administration (FHWA). Warrant 3 (Peak Hour) is met when for any one hour of an average day, points plotted on the graph presented on Figure 4C-4 of the National MUTCD fall above the appropriate curve. A review of the Phase 2 traffic volumes indicates that Warrant 3 will be satisfied for the PM peak hour. It is noted that a detail traffic signal warrant analysis will likely be conducted as a more specific site plan is developed for Phase 2; however, a review of Warrant 3 shows that the results of the intersection analysis is consistent with the *Traffic Feasibility Study*.

The level of service analysis indicates that this intersection will operate at an overall

LOS A with all movements operating at LOS C or better during both peak hours with the installation of a traffic signal and the geometry proposed under Alternative 2. A review of queuing on the westbound Private Road approach indicates that during worst-case PM peak hour conditions, the 95th percentile queue in the right-turn lane will be approximately two vehicles (50-feet) while the 95th percentile queue on the left-turn lane will be approximately five vehicles (125-feet). This would not impact the proposed internal site driveway located approximately 170-feet east of a stop bar that would be installed on the Private Road for a traffic signal at the Weibel Avenue intersection. This alternative is consistent with the *Traffic Feasibility Study* and will provide adequate operations at the study area intersection. An evaluation was conducted to determine if separate left and right turn lanes are still necessary on the Private Road if a traffic signal is installed for Phase 2 conditions. The analysis indicates that this intersection will operate adequately during both peak hours with a single lane on the westbound approach; however, it is noted that the 95th percentile queue on the westbound approach will increase to approximately seven vehicles (175-feet) which could potentially impact operations of the internal driveways on the Private Road and therefore would not be recommended. In addition, it is anticipated that the internal connections to *The Springs* mixed-use development may be used more frequently to access the proposed traffic signal as Phase 2 develops and as mainline traffic on Weibel Avenue increases. This supports maintaining separate left and right turn lanes on the Private Road which will increase capacity on the westbound approach.

Analysis Summary

The sensitivity analysis indicates that the following improvements at the Private Road intersection with Weibel Avenue will provide the most desirable operating conditions:

- Installation of a traffic signal.
- Construction of separate westbound left and right turn lanes on the Private Road.
- Construction of a southbound left-turn lane on Weibel Avenue that transitions into a TWLTL toward the Biven Way intersection.

It is noted that roadway connections will be made from *The Springs* mixed-use development to the Private Road. This will allow residents and patrons of this development to access a traffic signal on Weibel Avenue when necessary. A review of the level of service analysis indicates that adequate capacity will be available at the proposed traffic signal and that additional traffic can be accommodated at this study area intersection. In addition, it is noted that the *Traffic Feasibility Study* also recommended that a northbound right-turn lane be constructed on Weibel Avenue at the Private Road intersection; however, this improvement is not necessary to increase capacity at this intersection based on an analysis of the current land use scenario for Phase 1 and 2 conditions. The construction of a northbound right-turn lane on Weibel Avenue was included in the *Traffic Feasibility Study* to provide a deceleration lane for drivers entering the Private Road at the traffic signal which would minimize impacts to through traffic.

5.0 Conclusions

Phase 1 of the proposed *Weibel Avenue Commercial Lands* development consists of the construction of a 42,000 SF mixed use development consisting of 14,000 SF of general office space, 14,000 SF of commercial retail space, and six apartments in two separate buildings which will replace the approximate 720 SF *Cote Insurance Agency* office. Access to the site will

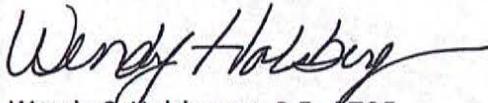
be provided via two driveways on a Private Road. It is noted that the Applicant also controls approximately 60 additional acres of land located east of the Phase 1 development. A sensitivity analysis was conducted to confirm that adequate access can be provided to Weibel Avenue if Phase 2 is developed in the future. Phase 1 of the project is expected to be completed in 2018. The following is noted regarding the proposed development:

- Phase 1 of the proposed project is expected to generate 33 new vehicle trips during the AM peak hour and 51 new vehicle trips during the PM peak hour.
- The Private Road intersection with Weibel Avenue will continue to provide adequate operations after construction of Phase 1 with the current geometry and intersection control. The westbound approach and the southbound left-turn movement will experience minor increases in the average vehicle delay as a result of increased traffic associated with the proposed development. It is recommended that the Private Road continue to provide a single lane entering and exiting with the westbound approach operating under stop-sign control.
- The sensitivity analysis indicates that Phase 2 of the project is expected to generate an additional 316 new vehicle trips during the AM peak hour and an additional 567 new vehicle trips during the PM peak hour. The analysis assumed that parcels associated with Phase 2 would consist of 125 townhouses, 270 apartments, 40,000 SF of shopping center space, and 50,000 SF of mixed office and general retail space. Access to Weibel Avenue and Louden Road will be provided with full development of the Phase 2.
- An evaluation of the Private Road intersection with Weibel Avenue indicates that the following improvements will provide the most desirable operating conditions for Phase 2 development if approximately 70 percent of site generated traffic access the development at this intersection:
 - Installation of a traffic signal.
 - Construction of separate westbound left and right turn lanes on the Private Road.
 - Construction of a southbound left-turn lane on Weibel Avenue that transitions into a TWLTL toward the Biven Way intersection.

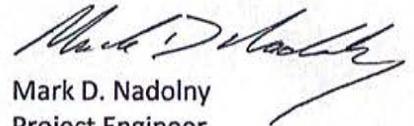
It is noted that these improvements are consistent with the *Traffic Feasibility Study*.

Please call our office if you have any questions or comments regarding the above analysis.

Respectfully submitted,
Creighton Manning Engineering, LLP



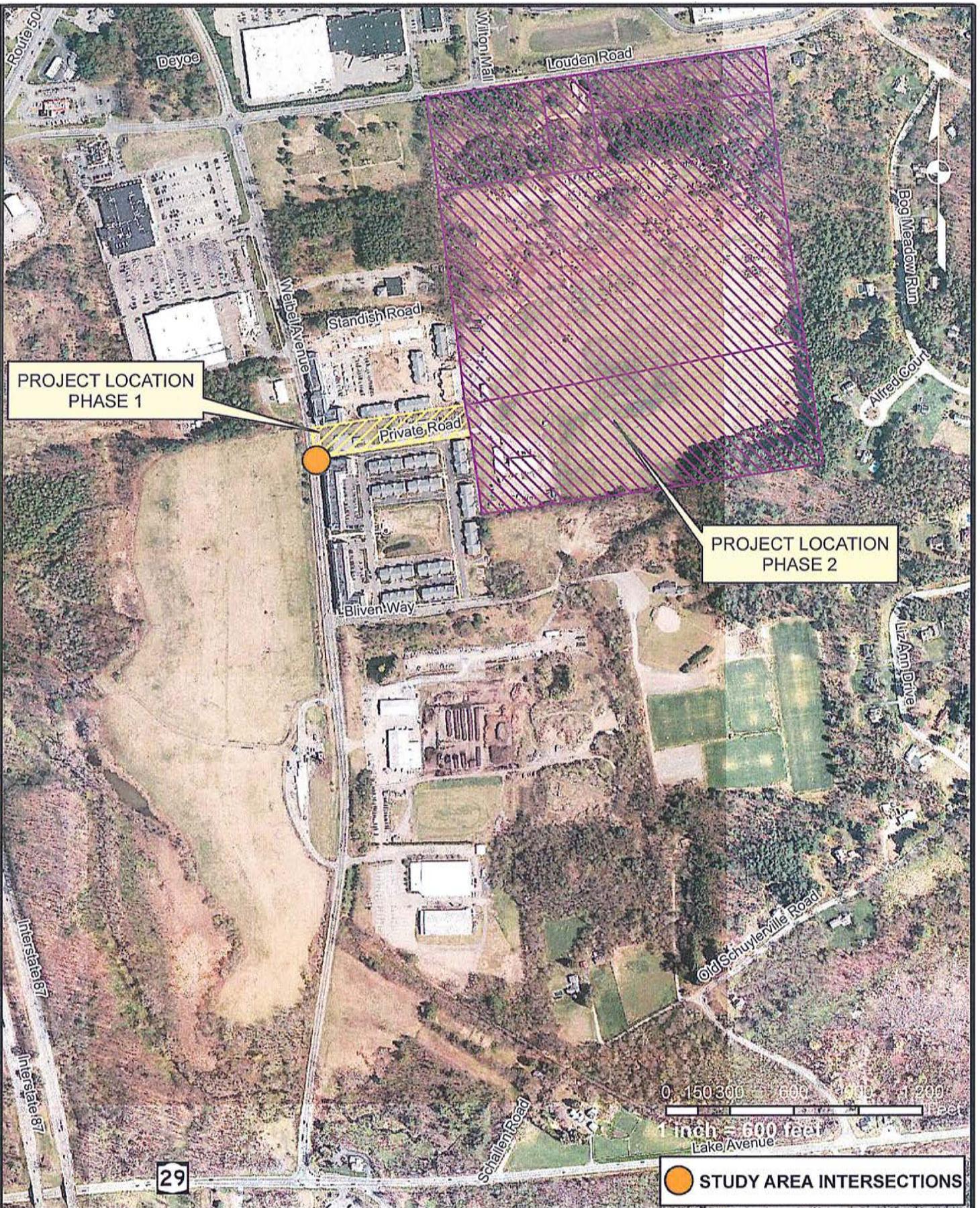
Wendy C. Holsberger, P.E., PTOE
Associate



Mark D. Nadolny
Project Engineer

c:\ Gavin Vuillaume – Environmental Design Partnerships, LLP

Path: N:\Projects\2015\115-193 Weibel Ave Mixed Use\cadd\gis\115193_project_location_20160120.mxd



PROJECT LOCATION
PHASE 1

PROJECT LOCATION
PHASE 2

0 150 300 600 900 1200
1 inch = 600 feet

STUDY AREA INTERSECTIONS

PROJECT LOCATION

WEIBEL AVENUE COMMERCIAL LANDS
CITY OF SARATOGA SPRINGS, NEW YORK



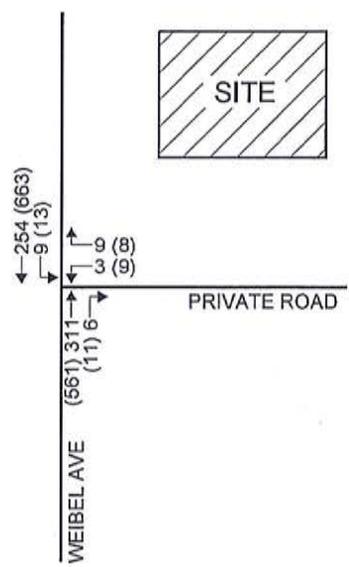
PROJECT: 115-193

DATE: 01/2016

FIGURE: 1

1

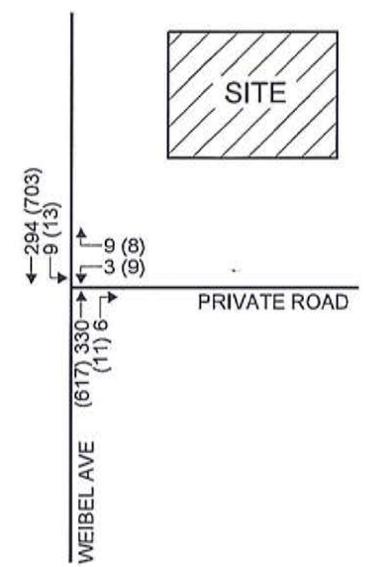
2015 EXISTING TRAFFIC VOLUMES



LEGEND:
AM PEAK HOUR (PM PEAK HOUR)

2

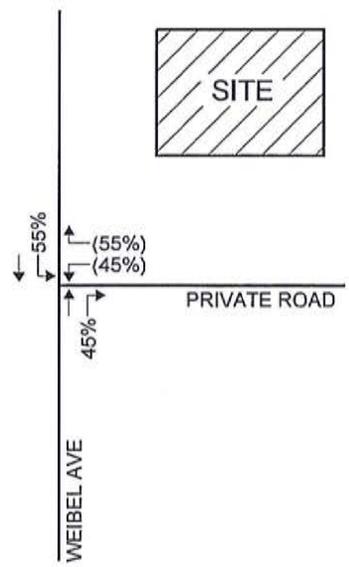
2018 NO-BUILD TRAFFIC VOLUMES



LEGEND:
AM PEAK HOUR (PM PEAK HOUR)

3

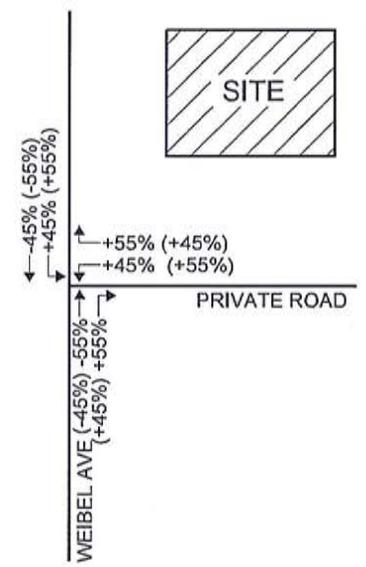
TRIP DISTRIBUTION PRIMARY



LEGEND:
ENTERING (EXITING)

4

TRIP DISTRIBUTION PASS-BY



LEGEND:
AM PEAK HOUR (PM PEAK HOUR)

TRAFFIC VOLUMES

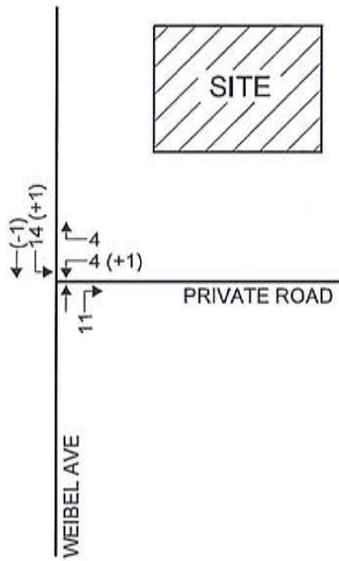
WEIBEL AVENUE COMMERCIAL LANDS
CITY OF SARATOGA SPRINGS, NY



N:\Projects\2015\115-193 Weibel Ave Mixed Use\Code\fig\115-193_fig_traf_01.dgn

1

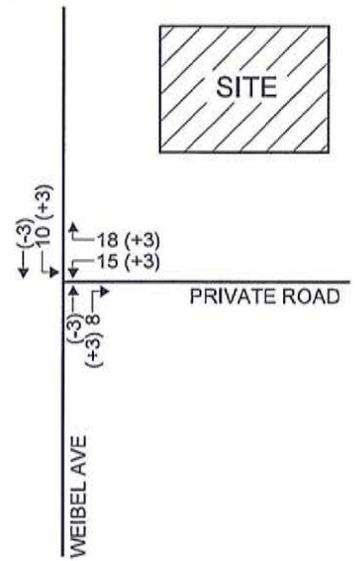
TRIP ASSIGNMENT AM PEAK HOUR



LEGEND:
PRIMARY (PASS-BY)

2

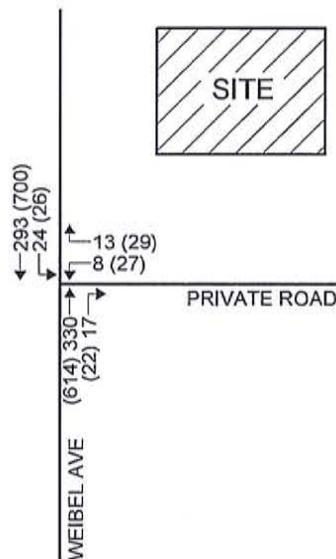
TRIP ASSIGNMENT PM PEAK HOUR



LEGEND:
PRIMARY (PASS-BY)

3

2018 BUILD TRAFFIC VOLUMES



LEGEND:
AM PEAK HOUR (PM PEAK HOUR)

TRAFFIC VOLUMES

WEIBEL AVENUE COMMERCIAL LANDS
CITY OF SARATOGA SPRINGS, NY



Attachment A
Site Plan

Weibel Avenue Commercial Lands
City of Saratoga Springs, New York



SITE LOCATION MAP
SCALE: 1" = 2000'

SITE STATISTICS:

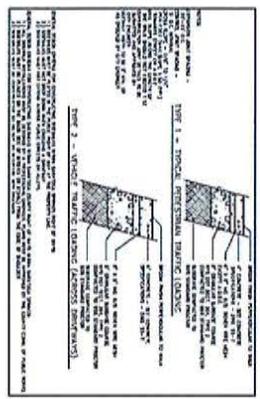
DESIGN ZONING	T-4 URBAN INTERMEDIATE
PARCEL LIA. NO.	1434-1-112
SITE AREA	2226 SQUARE FEET
EXISTING LAND USE	OFFICE, OFFICE & SERVICE BUILDING

ADDED SPECIFICATIONS:

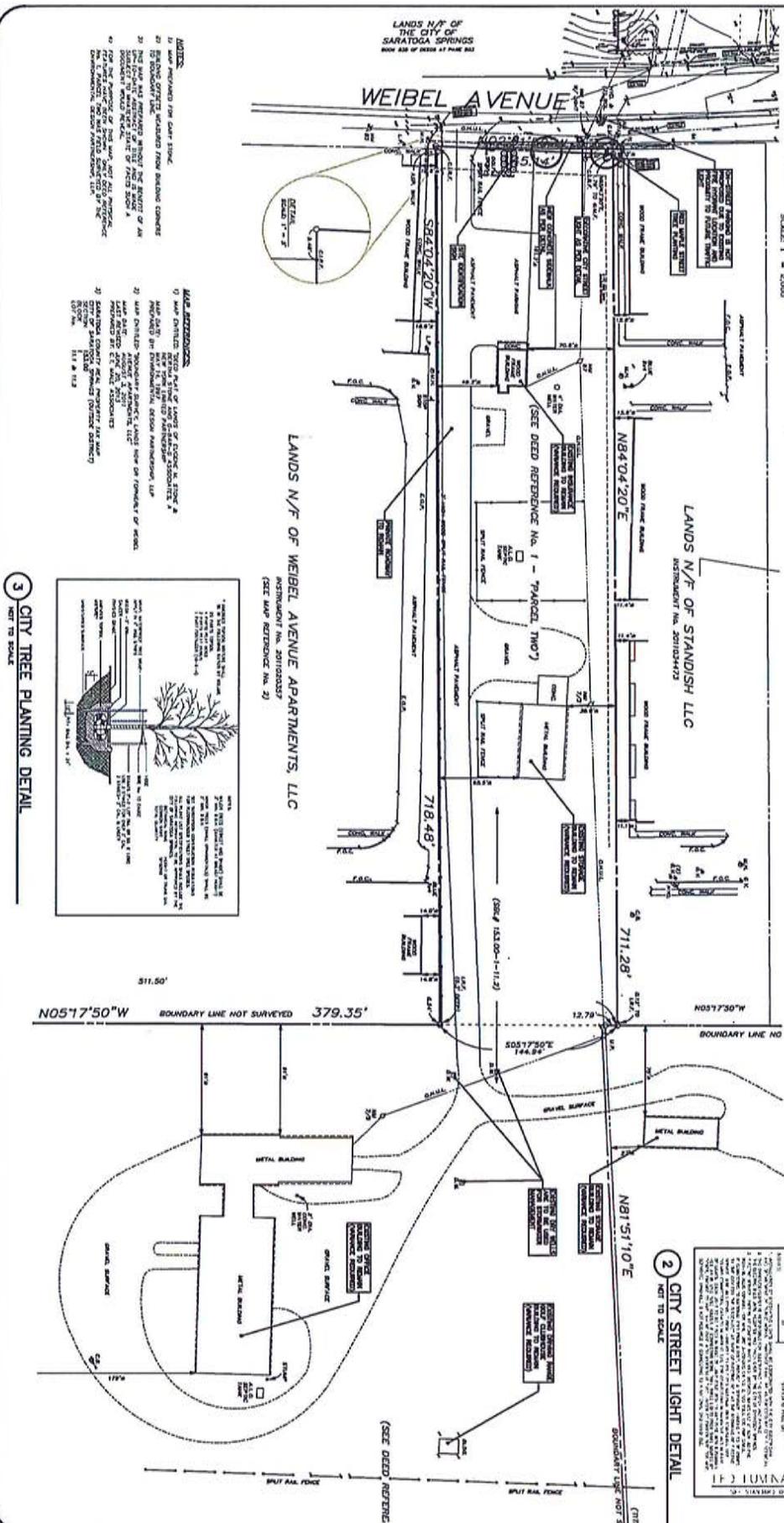
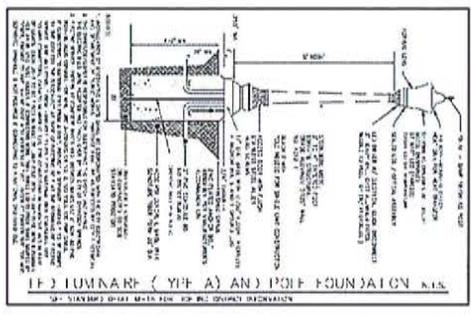
1. ALL EXISTING UTILITIES TO BE DELETED AND RELOCATED TO THE PROPERTY LINE.
2. ALL EXISTING UTILITIES TO BE DELETED AND RELOCATED TO THE PROPERTY LINE.
3. ALL EXISTING UTILITIES TO BE DELETED AND RELOCATED TO THE PROPERTY LINE.

RECORD NORTH AS PER
DEED REFERENCE NO. 21

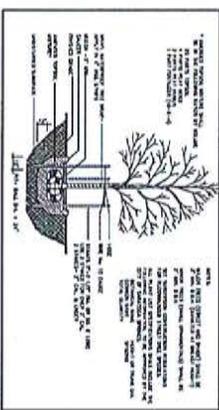
1 CITY CONCRETE SIDEWALK DETAIL
NOT TO SCALE



2 CITY STREET LIGHT DETAIL
NOT TO SCALE



3 CITY TREE PLANTING DETAIL
NOT TO SCALE



SCALE:
1" = 40'

SHEET No.

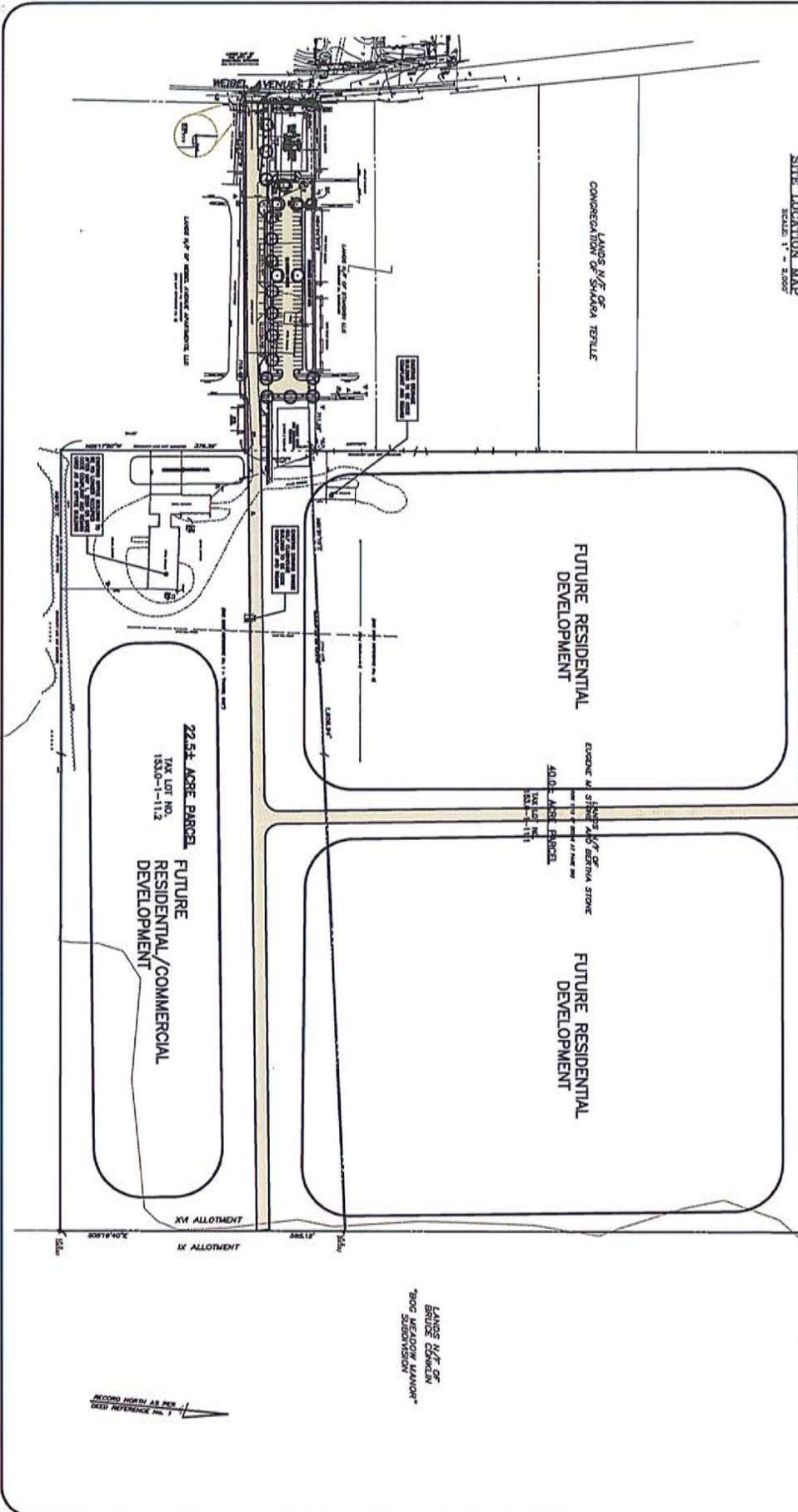
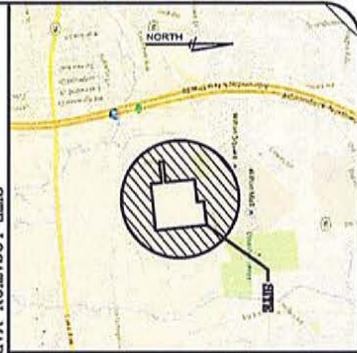
REVISIONS	DATE BY

SHEET TITLE
SITE IMPROVEMENTS & VARIANCE PLAN

68 WEIBEL AVENUE
COMMERCIAL LANDS
OF GARY E. STONE
CITY OF SARATOGA SPRINGS

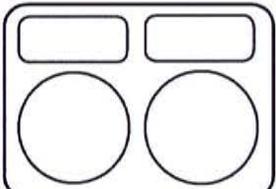
SARATOGA COUNTY, NEW YORK
DECEMBER 16, 2015

ENVIRONMENTAL DESIGN PARTNERSHIP, LLP
ROUTE 446 CLIFTON PARK, N.Y. 12065 (518) 374-7621
ENGINEERING LANDSCAPE ARCHITECTURE LAND SURVEYING



SCALE:
1" = 100'

SHEET No.
2



REVISIONS	DATE BY

SHEET TITLE

FUTURE DEVELOPMENT MASTER PLAN (OVERALL SITE)

WEIBEL AVENUE COMMERCIAL LANDS OF GARY E. STONE
CITY OF SARATOGA SPRINGS SARATOGA COUNTY, NEW YORK
FEBRUARY 2, 2016

ENVIRONMENTAL DESIGN PARTNERSHIP, LLP
ROUTE 146 CLIFTON PARK, N.Y. 12065 (518) 371-7621
ENGINEERING LANDSCAPE ARCHITECTURE LAND SURVEYING

Attachment B
Turning Movement Counts

Weibel Avenue Commercial Lands
City of Saratoga Springs, New York

Project No.: 115-193
 Counted By: DJK
 Location: Saratoga Springs, NY
 Comments:

File Name : TM115193AM1
 Site Code : 15-193-1
 Start Date : 10/22/2015
 Page No : 1

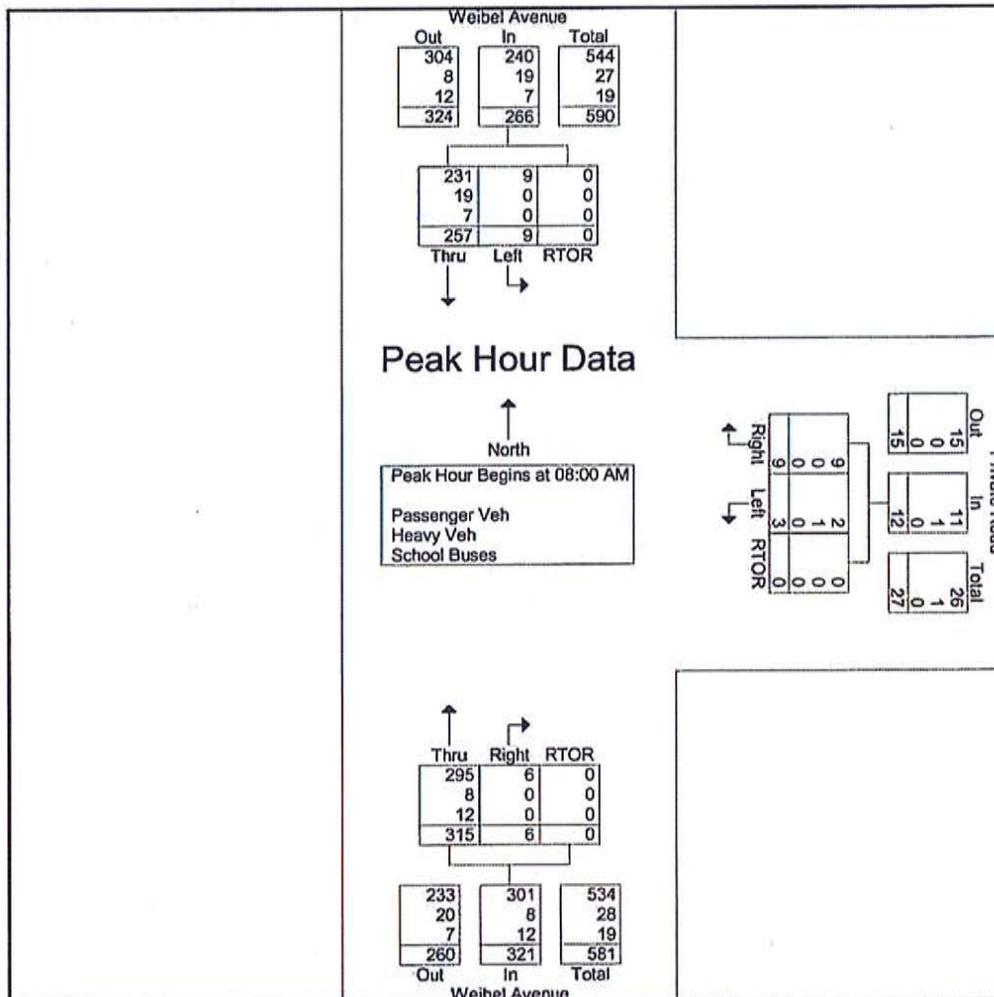
Groups Printed- Passenger Veh - Heavy Veh - School Buses

Start Time	Private Road Westbound				Weibel Avenue Northbound				Weibel Avenue Southbound				Int. Total
	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	
07:00 AM	0	1	0	1	34	0	0	34	0	37	0	37	72
07:15 AM	0	2	0	2	36	0	0	36	0	44	0	44	82
07:30 AM	0	0	0	0	68	0	0	68	0	57	0	57	125
07:45 AM	0	0	0	0	57	0	0	57	1	56	0	57	114
Total	0	3	0	3	195	0	0	195	1	194	0	195	393
08:00 AM	0	0	0	0	70	1	0	71	6	55	0	61	132
08:15 AM	1	0	0	1	62	0	0	62	0	61	0	61	124
08:30 AM	1	2	0	3	87	2	0	89	0	67	0	67	159
08:45 AM	1	7	0	8	96	3	0	99	3	74	0	77	184
Total	3	9	0	12	315	6	0	321	9	257	0	266	599
Grand Total	3	12	0	15	510	6	0	516	10	451	0	461	992
Apprch %	20	80	0		98.8	1.2	0		2.2	97.8	0		
Total %	0.3	1.2	0	1.5	51.4	0.6	0	52	1	45.5	0	46.5	
Passenger Veh	2	12	0	14	478	6	0	484	9	411	0	420	918
% Passenger Veh	66.7	100	0	93.3	93.7	100	0	93.8	90	91.1	0	91.1	92.5
Heavy Veh	1	0	0	1	20	0	0	20	1	33	0	34	55
% Heavy Veh	33.3	0	0	6.7	3.9	0	0	3.9	10	7.3	0	7.4	5.5
School Buses	0	0	0	0	12	0	0	12	0	7	0	7	19
% School Buses	0	0	0	0	2.4	0	0	2.3	0	1.6	0	1.5	1.9

Project No.: 115-193
 Counted By: DJK
 Location: Saratoga Springs, NY
 Comments:

File Name : TM115193AM1
 Site Code : 15-193-1
 Start Date : 10/22/2015
 Page No : 2

Start Time	Private Road Westbound				Weibel Avenue Northbound				Weibel Avenue Southbound				Int. Total
	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 8:00:00 AM													
8:00:00 AM	0	0	0	0	70	1	0	71	6	55	0	61	132
8:15:00 AM	1	0	0	1	62	0	0	62	0	61	0	61	124
8:30:00 AM	1	2	0	3	87	2	0	89	0	67	0	67	159
8:45:00 AM	1	7	0	8	96	3	0	99	3	74	0	77	184
Total Volume	3	9	0	12	315	6	0	321	9	257	0	266	599
% App. Total	25	75	0		98.1	1.9	0		3.4	96.6	0		
PHF	.750	.321	.000	.375	.820	.500	.000	.811	.375	.868	.000	.864	.814
Passenger Veh	2	9	0	11	295	6	0	301	9	231	0	240	552
% Passenger Veh	66.7	100	0	91.7	93.7	100	0	93.8	100	89.9	0	90.2	92.2
Heavy Veh	1	0	0	1	8	0	0	8	0	19	0	19	28
% Heavy Veh	33.3	0	0	8.3	2.5	0	0	2.5	0	7.4	0	7.1	4.7
School Buses	0	0	0	0	12	0	0	12	0	7	0	7	19
% School Buses	0	0	0	0	3.8	0	0	3.7	0	2.7	0	2.6	3.2



Project No.: 115-193
 Counted By: DJK
 Location: Saratoga Springs, NY
 Comments:

File Name : TM115193PM1
 Site Code : 15-193-1
 Start Date : 10/20/2015
 Page No : 1

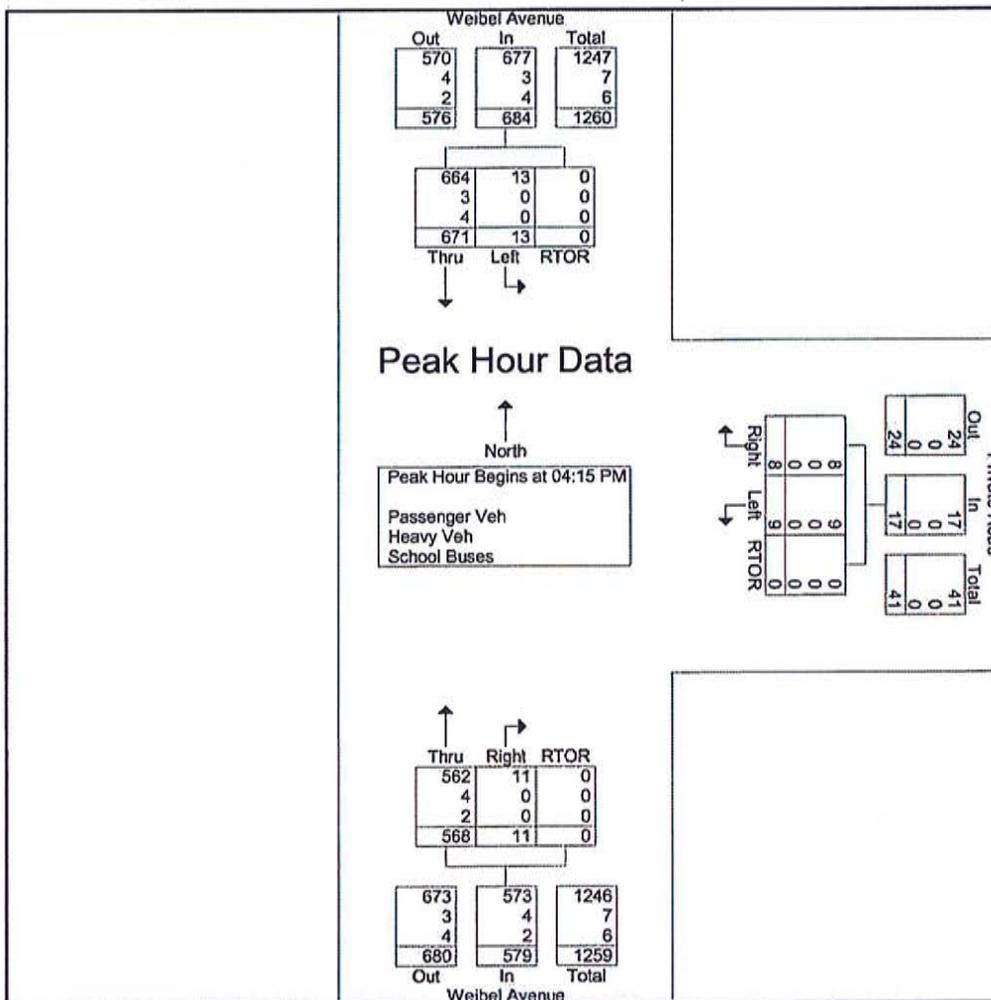
Groups Printed- Passenger Veh - Heavy Veh - School Buses

Start Time	Private Road Westbound				Weibel Avenue Northbound				Weibel Avenue Southbound				Int. Total
	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	
04:00 PM	1	2	0	3	125	0	0	125	1	176	0	177	305
04:15 PM	2	2	0	4	132	3	0	135	2	172	0	174	313
04:30 PM	1	2	0	3	168	0	0	168	2	162	0	164	335
04:45 PM	4	1	0	5	126	2	0	128	5	159	0	164	297
Total	8	7	0	15	551	5	0	556	10	669	0	679	1250
05:00 PM	2	3	0	5	142	6	0	148	4	178	0	182	335
05:15 PM	2	9	0	11	137	3	0	140	2	158	0	160	311
05:30 PM	1	1	0	2	157	1	0	158	3	150	0	153	313
05:45 PM	2	2	0	4	113	1	0	114	3	163	0	166	284
Total	7	15	0	22	549	11	0	560	12	649	0	661	1243
Grand Total	15	22	0	37	1100	16	0	1116	22	1318	0	1340	2493
Apprch %	40.5	59.5	0		98.6	1.4	0		1.6	98.4	0		
Total %	0.6	0.9	0	1.5	44.1	0.6	0	44.8	0.9	52.9	0	53.8	
Passenger Veh	15	22	0	37	1086	16	0	1102	22	1307	0	1329	2468
% Passenger Veh	100	100	0	100	98.7	100	0	98.7	100	99.2	0	99.2	99
Heavy Veh	0	0	0	0	9	0	0	9	0	6	0	6	15
% Heavy Veh	0	0	0	0	0.8	0	0	0.8	0	0.5	0	0.4	0.6
School Buses	0	0	0	0	5	0	0	5	0	5	0	5	10
% School Buses	0	0	0	0	0.5	0	0	0.4	0	0.4	0	0.4	0.4

Project No.: 115-193
 Counted By: DJK
 Location: Saratoga Springs, NY
 Comments:

File Name : TM115193PM1
 Site Code : 15-193-1
 Start Date : 10/20/2015
 Page No : 2

Start Time	Private Road Westbound				Weibel Avenue Northbound				Weibel Avenue Southbound				Int. Total
	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 4:15:00 PM													
4:15:00 PM	2	2	0	4	132	3	0	135	2	172	0	174	313
4:30:00 PM	1	2	0	3	168	0	0	168	2	162	0	164	335
4:45:00 PM	4	1	0	5	126	2	0	128	5	159	0	164	297
5:00:00 PM	2	3	0	5	142	6	0	148	4	178	0	182	335
Total Volume	9	8	0	17	568	11	0	579	13	671	0	684	1280
% App. Total	52.9	47.1	0		98.1	1.9	0		1.9	98.1	0		
PHF	.563	.667	.000	.850	.845	.458	.000	.862	.650	.942	.000	.940	.955
Passenger Veh	9	8	0	17	562	11	0	573	13	664	0	677	1267
% Passenger Veh	100	100	0	100	98.9	100	0	99.0	100	99.0	0	99.0	99.0
Heavy Veh	0	0	0	0	4	0	0	4	0	3	0	3	7
% Heavy Veh	0	0	0	0	0.7	0	0	0.7	0	0.4	0	0.4	0.5
School Buses	0	0	0	0	2	0	0	2	0	4	0	4	6
% School Buses	0	0	0	0	0.4	0	0	0.3	0	0.6	0	0.6	0.5



Attachment C
Level of Service Analyses

Weibel Avenue Commercial Lands
City of Saratoga Springs, New York

LOS Definitions

The following is an excerpt from the 2010 Highway Capacity Manual (HCM).

Level of Service for Signalized Intersections

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay *and* volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The v/c ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following paragraphs describe each LOS.

LOS A describes operations with a control delay of 10 s/veh or less and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operations with control delay between 10 and 20 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operations with control delay between 20 and 35 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operations with control delay between 35 and 55 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operations with control delay between 55 and 80 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operations with control delay exceeding 80 s/veh or a v/c ratio greater than 1.0. This level is typically assigned when the v/c ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 s/veh when the v/c ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and v/c ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

Level of Service Criteria for Unsignalized Intersections

Level of service (LOS) for Two-Way Stop-Controlled (TWSC) intersections is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns by using criteria given in Exhibit 19-1. LOS is not defined for the intersection as a whole or for major-street approaches for three primary reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. LOS F is assigned to the movement if the volume-to-capacity (v/c) ratio for the movement exceeds 1.0, regardless of the control delay.

The LOS criteria for TWSC intersections are somewhat different from the criteria used in Chapter 18 for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals, which can reduce users' delay tolerance.

The LOS criteria for All-Way Stop-Controlled (AWSC) intersections are given in Exhibit 20-2. LOS F is assigned if the v/c ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

**Exhibits 19-1/20-2:
Level-of-Service Criteria for Stop Controlled Intersections**

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c \geq 1.0$
10.0	A	F
>10.0 and ≤ 15.0	B	F
>15.0 and ≤ 25.0	C	F
>25.0 and ≤ 35.0	D	F
>35.0 and ≤ 50.0	E	F
>50.0	F	F

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	3	9	311	6	9	254
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	4	11	384	7	11	314

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	724	389	0	0	391	0
Stage 1	388	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	396	664	-	-	1179	-
Stage 1	690	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	391	663	-	-	1178	-
Mov Cap-2 Maneuver	391	-	-	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	565	1178	-
HCM Lane V/C Ratio	-	-	0.026	0.009	-
HCM Control Delay (s)	-	-	11.5	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	9	8	561	11	13	663
Conflicting Peds, #/hr	0	0	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	9	8	591	12	14	698

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1321	606	602
Stage 1	596	-	-
Stage 2	725	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	174	501	985
Stage 1	554	-	-
Stage 2	483	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	169	497	977
Mov Cap-2 Maneuver	169	-	-
Stage 1	554	-	-
Stage 2	468	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	245	977	-
HCM Lane V/C Ratio	-	-	0.073	0.014	-
HCM Control Delay (s)	-	-	20.8	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	3	9	330	6	9	294
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	4	11	407	7	11	363

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	796	412	0
Stage 1	411	-	-
Stage 2	385	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	359	644	1155
Stage 1	674	-	-
Stage 2	692	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	354	643	1154
Mov Cap-2 Maneuver	354	-	-
Stage 1	674	-	-
Stage 2	683	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	534	1154	-
HCM Lane V/C Ratio	-	-	0.028	0.01	-
HCM Control Delay (s)	-	-	11.9	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	9	8	617	11	13	703
Conflicting Peds, #/hr	0	0	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	9	8	649	12	14	740

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1422	665	0
Stage 1	655	-	-
Stage 2	767	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	152	464	937
Stage 1	521	-	-
Stage 2	462	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	147	460	929
Mov Cap-2 Maneuver	147	-	-
Stage 1	521	-	-
Stage 2	446	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	216	929	-
HCM Lane V/C Ratio	-	-	0.083	0.015	-
HCM Control Delay (s)	-	-	23.2	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	8	13	330	17	24	293
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	10	16	407	21	30	362

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	839	419	0
Stage 1	418	-	-
Stage 2	421	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	339	638	1142
Stage 1	669	-	-
Stage 2	667	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	328	637	1141
Mov Cap-2 Maneuver	328	-	-
Stage 1	669	-	-
Stage 2	644	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	469	1141	-
HCM Lane V/C Ratio	-	-	0.055	0.026	-
HCM Control Delay (s)	-	-	13.1	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection

Int Delay, s/veh 1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	27	29	614	22	26	700
Conflicting Peds, #/hr	0	0	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	28	31	646	23	27	737

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	1450	668	0	0	669	0
Stage 1	658	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	146	462	-	-	931	-
Stage 1	519	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	138	458	-	-	923	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	424	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	216	923	-
HCM Lane V/C Ratio	-	-	0.273	0.03	-
HCM Control Delay (s)	-	-	27.8	9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-

Attachment D
Sensitivity Level of Service Analyses

Weibel Avenue Commercial Lands
City of Saratoga Springs, New York

Intersection

Int Delay, s/veh 5.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	98	56	329	75	48	293
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	121	69	406	93	59	362

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	932	453	0	0	499	0
Stage 1	452	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	298	611	-	-	1075	-
Stage 1	645	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	277	610	-	-	1074	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	583	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.4	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	346	1074	-
HCM Lane V/C Ratio	-	-	0.549	0.055	-
HCM Control Delay (s)	-	-	27.4	8.5	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	3.1	0.2	-

Intersection

Int Delay, s/veh 3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	98	56	329	75	48	293
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	121	69	406	93	59	362

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	932	453	0	0	499	0
Stage 1	452	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	298	611	-	-	1075	-
Stage 1	645	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	281	610	-	-	1074	-
Mov Cap-2 Maneuver	410	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	592	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	410	610	1074	-
HCM Lane V/C Ratio	-	-	0.295	0.113	0.055	-
HCM Control Delay (s)	-	-	17.4	11.7	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0.4	0.2	-

HCM 2010 Signalized Intersection Summary
 Wiebel Avenue Commercial Lands

1: Wiebel Avenue & Private Road
 2023 Build - Phase 2 (signal)_AM Peak

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	98	56	329	75	48	293		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1881		
Adj Flow Rate, veh/h	121	44	406	93	59	362		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81		
Percent Heavy Veh, %	0	0	1	1	0	1		
Cap, veh/h	312	278	742	170	521	944		
Arrive On Green	0.17	0.17	0.50	0.50	0.50	0.50		
Sat Flow, veh/h	1810	1615	1478	338	913	1881		
Grp Volume(v), veh/h	121	44	0	499	59	362		
Grp Sat Flow(s),veh/h/ln	1810	1615	0	1816	913	1881		
Q Serve(g_s), s	1.8	0.7	0.0	5.8	1.5	3.6		
Cycle Q Clear(g_c), s	1.8	0.7	0.0	5.8	7.2	3.6		
Prop In Lane	1.00	1.00		0.19	1.00			
Lane Grp Cap(c), veh/h	312	278	0	912	521	944		
V/C Ratio(X)	0.39	0.16	0.00	0.55	0.11	0.38		
Avail Cap(c_a), veh/h	1179	1052	0	2367	1252	2452		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	11.3	10.8	0.0	5.2	7.7	4.7		
Incr Delay (d2), s/veh	0.8	0.3	0.0	0.5	0.1	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.0	0.3	0.0	2.9	0.4	1.9		
LnGrp Delay(d),s/veh	12.1	11.1	0.0	5.8	7.8	5.0		
LnGrp LOS	B	B		A	A	A		
Approach Vol, veh/h	165		499			421		
Approach Delay, s/veh	11.8		5.8			5.4		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		20.4				20.4		10.3
Change Period (Y+Rc), s		5.0				5.0		5.0
Max Green Setting (Gmax), s		40.0				40.0		20.0
Max Q Clear Time (g_c+l1), s		7.8				9.2		3.8
Green Ext Time (p_c), s		6.2				6.2		0.4
Intersection Summary								
HCM 2010 Ctrl Delay			6.5					
HCM 2010 LOS			A					

Intersection

Int Delay, s/veh 98.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	165	99	603	173	100	690
Conflicting Peds, #/hr	0	0	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	174	104	635	182	105	726

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1663	736	0	0	817	0
Stage 1	726	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 108	422	-	-	820	-
Stage 1	483	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 84	418	-	-	813	-
Mov Cap-2 Maneuver	~ 84	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	298	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	\$ 675.9	0	1.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	120	813	-
HCM Lane V/C Ratio	-	-	2.316	0.129	-
HCM Control Delay (s)	-	-	\$ 675.9	10.1	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	24.1	0.4	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	165	99	603	173	100	690
Conflicting Peds, #/hr	0	0	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	174	104	635	182	105	726

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1663	736	0	0	817	0
Stage 1	726	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 108	422	-	-	820	-
Stage 1	483	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 93	418	-	-	813	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	332	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46	0	1.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	220	418	813	-
HCM Lane V/C Ratio	-	-	0.789	0.249	0.129	-
HCM Control Delay (s)	-	-	63.8	16.4	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	5.7	1	0.4	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 Wiebel Avenue Commercial Lands

1: Wiebel Avenue & Private Road
 2023 Build - Phase 2 (signal)_PM Peak

									
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Volume (veh/h)	165	99	603	173	100	690			
Number	3	18	2	12	1	6			
Initial Q (Qb), veh	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00				
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1881			
Adj Flow Rate, veh/h	174	83	635	182	105	726			
Adj No. of Lanes	1	1	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	1	1	0	1			
Cap, veh/h	253	226	922	264	400	1239			
Arrive On Green	0.14	0.14	0.66	0.66	0.66	0.66			
Sat Flow, veh/h	1810	1615	1400	401	679	1881			
Grp Volume(v), veh/h	174	83	0	817	105	726			
Grp Sat Flow(s),veh/h/ln	1810	1615	0	1801	679	1881			
Q Serve(g_s), s	4.5	2.3	0.0	14.1	5.7	10.7			
Cycle Q Clear(g_c), s	4.5	2.3	0.0	14.1	19.8	10.7			
Prop In Lane	1.00	1.00		0.22	1.00				
Lane Grp Cap(c), veh/h	253	226	0	1186	400	1239			
V/C Ratio(X)	0.69	0.37	0.00	0.69	0.26	0.59			
Avail Cap(c_a), veh/h	728	650	0	1450	499	1515			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	20.3	19.4	0.0	5.3	11.5	4.7			
Incr Delay (d2), s/veh	3.3	1.0	0.0	1.1	0.3	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.5	1.1	0.0	7.2	1.1	5.6			
LnGrp Delay(d),s/veh	23.6	20.4	0.0	6.3	11.8	5.2			
LnGrp LOS	C	C		A	B	A			
Approach Vol, veh/h	257		817			831			
Approach Delay, s/veh	22.6		6.3			6.0			
Approach LOS	C		A			A			
Timer	1	2	3	4	5	6	7	8	
Assigned Phs		2				6		8	
Phs Duration (G+Y+Rc), s		37.7				37.7		12.0	
Change Period (Y+Rc), s		5.0				5.0		5.0	
Max Green Setting (Gmax), s		40.0				40.0		20.0	
Max Q Clear Time (g_c+I1), s		16.1				21.8		6.5	
Green Ext Time (p_c), s		13.0				11.0		0.6	
Intersection Summary									
HCM 2010 Ctrl Delay			8.4						
HCM 2010 LOS			A						

MAP REFERENCES:

- 1) MAP ENTITLED: "DEED PLAT OF LANDS OF EUGENE M. STONE & BERTHA STONE AND G-BAR-G ASSOCIATES, A NEW YORK LIMITED PARTNERSHIP
MAP DATE: MAY 14, 1997
PREPARED BY: ENVIRONMENTAL DESIGN PARTNERSHIP, LLP
- 2) MAP ENTITLED: "BOUNDARY SURVEY, LANDS NOW OR FORMERLY OF WEIBEL AVENUE APARTMENTS, LLC"
MAP DATE: AUGUST 3, 2011
LAST REVISED: JUNE 20, 2013
PREPARED BY: C.T. MALE ASSOCIATES
- 3) SARATOGA COUNTY REAL PROPERTY TAX MAP
CITY OF SARATOGA SPRINGS (OUTSIDE DISTRICT)
SECTION 153.00
BLOCK 7
LOT No. 11.1 & 11.2

DEED REFERENCES:

- 1) **TITLE SOURCE (DEED IN LIEU OF FORECLOSURE)**
GRANTOR: G-BAR-G ASSOCIATES, A NEW YORK LIMITED PARTNERSHIP
GRANTEE: GARY E. STONE
DATED: MARCH 23, 2011
RECORDED: SEPTEMBER 7, 2011
INSTRUMENT No. 2011029632
- 2) **TITLE SOURCE (DEED)**
GRANTOR: BERTHA STONE
GRANTEE: BERTHA STONE
DATED: FEBRUARY 6, 1995
RECORDED: FEBRUARY 16, 1995
BOOK 1406 OF DEEDS AT PAGE 289

NOTES:

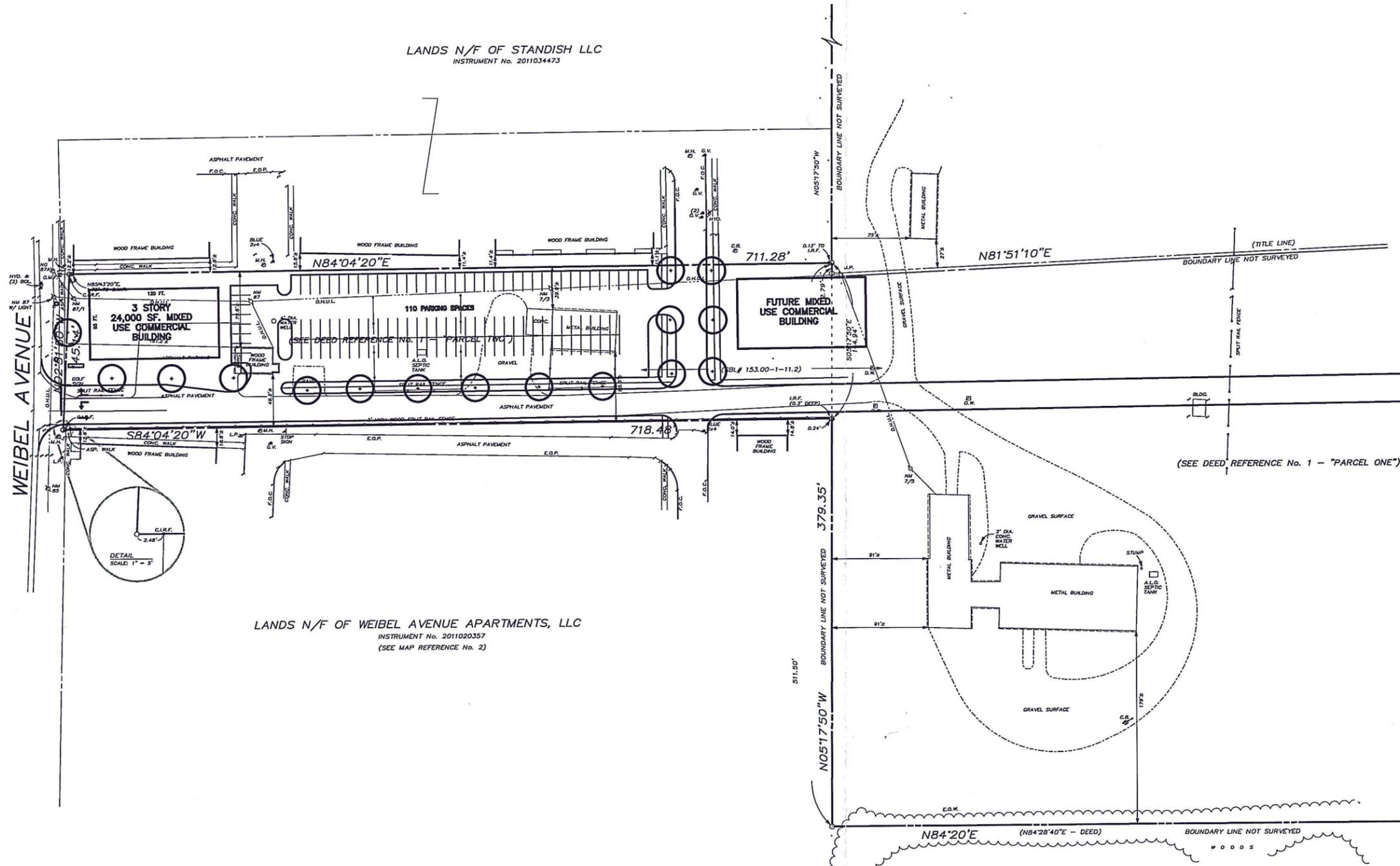
- 1) MAP PREPARED FOR GARY STONE.
- 2) BUILDING OFFSETS MEASURED FROM BUILDING CORNERS TO BOUNDARY LINE.
- 3) THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF AN UP-TO-DATE ABSTRACT OF TITLE AND IS MADE SUBJECT TO WHATEVER STATE OF FACTS SUCH A DOCUMENT WOULD REVEAL.
- 4) FOR THE PURPOSE OF THIS MAP, NOT ALL PHYSICAL FEATURES HAVE BEEN SHOWN. ONLY DEED REFERENCE NO. 1, PARCEL TWO WAS FIELD SURVEYED BY THE ENVIRONMENTAL DESIGN PARTNERSHIP, LLP.

LEGEND:

- ALD. DENOTES BUILDING
- B.D.G. DENOTES CAPPED IRON ROD FOUND
- C.I.R.F. DENOTES CONCRETE
- C.N.C. DENOTES EDGE OF WOODS
- D.I.A. DENOTES GRANITE MONUMENT FOUND
- E.O.W. DENOTES FIRE HYDRANT
- G.H.F. DENOTES IRON ROD FOUND
- H.V.D. DENOTES NOW OR FORMERLY
- I.R.F. DENOTES OUTSIDE DISTRICT
- N.A.F. DENOTES OVERHEAD UTILITY LINES
- O.D. DENOTES UTILITY POLE
- CHULL. UP.

SITE STATISTICS:

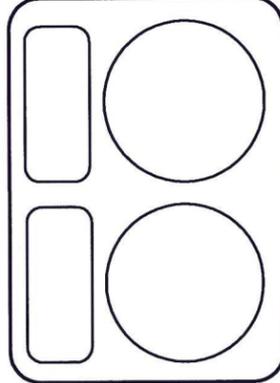
EXISTING ZONING	T-4 URBAN NEIGHBORHOOD
PARCEL I.D. NO.	153.00-1-11.2
SITE AREA	22.5± ACRES
PROPOSED LAND USE	GENERAL OFFICE, RETAIL AND APARTMENTS
BUILDING AREA	8,000± SF. RETAIL (40 PARKING SPACES) 8,000± SF. GENERAL OFFICE (27 PARKING SPACES) 8,000± SF. APARTMENTS/6 UNITS (12 PARKING SPACES) 24,000± SF. TOTAL BUILDING AREA
PARKING	110 SPACES (79 SPACES REQUIRED)



WEIBEL AVENUE
COMMERCIAL LANDS
OF GARY E. STONE
 CITY OF SARATOGA SPRINGS
 SARATOGA COUNTY, NEW YORK
 NOVEMBER 16, 2015
ENVIRONMENTAL DESIGN PARTNERSHIP, LLP
 ROUTE 146 CLIFTON PARK, N.Y. 12065 (518) 371-7621
 ENGINEERING LANDSCAPE ARCHITECTURE LAND SURVEYING

SHEET TITLE
SITE PLAN

REVISIONS	DATE BY



SCALE:
 1" = 50'
 SHEET No.



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)

APPLICATION FOR: SUBDIVISION APPROVAL

(Rev: 12/2015)

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

Project Name: 21 PARK PLACE SUBDIVISION

Property Address/Location: 21 PARK PLACE; CORNER OF PARK PL. & REGENT ST.

Tax Parcel #: 165.84-1.1 Zoning District: UR-4
(for example: 165.52-4-37)

Total Acres: 0.726a Land to be Subdivided Into: 2 Lots

	<u>APPLICANT(S)*</u>	<u>OWNER(S) (If not applicant)</u>	<u>ATTORNEY/AGENT</u>
Name	<u>DAVID GUARINO / LINDA HANER</u>	<u>(same)</u>	<u>ENGINEERING AMERICA Co.</u>
Address		_____	<u>76 WASHINGTON ST.</u>
Phone		_____	<u>SARATOGA SPRINGS, NY</u>
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.

- Sketch Plan - \$400
 - Preliminary Subdivision Plat Approval
 - 1-20 Lots \$400
 - 21-50 Lots \$600
 - 51+ Lots \$1,000
 - Final Subdivision Plat Approval
 - Residential - \$1,000 plus \$100/lot
 - Non-Residential - \$1,500/lot
- Fee submitted \$ _____
- \$ _____
- \$ _____

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

Does any City officer, 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 X. If YES, a statement disclosing the name, residence, nature and extent of this interest must be filed with this application.

I, the undersigned owner or purchaser under contract for the property, hereby request Subdivision consideration by the Planning Board for the identified property above. I agree to meet all requirements under the Subdivision Regulations for 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: 2-15-2016

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

Owner Signature: _____ Date: _____



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)

SUBDIVISION APPROVAL REQUIRED SUBMITTAL CHECK LIST FOR SKETCH PLAN APPROVAL

1. Project Name: 21 PARK PLACE SUBDIVISION
2. Checklist Prepared By: TONYA YASENCHAK Date: 4/20/16

Listed below are the minimum submittal requirements as set forth in the Planning Board's Subdivision Regulations for a Subdivision Sketch Plan application before the Saratoga Springs Planning Board. The 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 minimal requirements are not met.

REQUIRED ITEMS:

CHECK EACH ITEM	
<input checked="" type="checkbox"/>	1. Completed Subdivision Application and Application Fee
<input type="checkbox"/>	2. Set of plans including: (4) large scale plans (sheets <u>must be</u> 24" x 36", drawn to a scale of not more than 1"=50 feet), (8) 11"x17". A digital version of all submittal items (pdf) shall be provided.

REQUIRED ITEMS ON SUBDIVISION PLAT, AS APPLICABLE:

YES	NO	N/A	YOUR SKETCH PLAN SUBMITTAL SHOULD INCLUDE THE FOLLOWING ITEMS, AS APPLICABLE:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Name of subdivision
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Name, address and phone number of owner and purchaser under contract
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Name, address and phone number of subdivision surveyor and/or engineer
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Identification of existing easements, covenants or legal rights-of-way on this property
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Existing zoning and required area and bulk requirements
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Parcel tax map number
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Names of all adjacent property owners within 300 feet
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Identification of all property lines, watercourses, wooded areas and names of adjacent streets
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Identification of size, elevations and slopes of all utilities within 400 feet of site
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. Approximate topography at 10 foot contours or less
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11. Location and width of proposed streets
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Preliminary proposal for utility systems and lateral connections

<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	13. Approximate location, dimensions and areas for all proposed lots and any proposed public recreational land
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14. North arrow and map scale
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15. Site location map (with Standard Title Block and Map Key)
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16. Estimate of increase in water consumption

File No. 2016-1
April 19, 2016

ENGINEERING REPORT

FOR WATER, SANITARY & STORMWATER MANAGEMENT

21 PARK PLACE SUB-DIVISION

File No. 2016-1

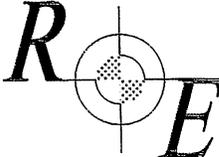
21 PARK PLACE

SARATOGA SPRINGS, NEW YORK 12866

PRELIMINARY

Applicant: David P. Guarino & Linda E. Haner

Prepared by:

<i>REXFORD ENGINEERING PLLC</i>	
ENGINEERING CONSULTANTS	
23 FAIRWAY LANE • REXFORD, NY 12148 • PHONE: (518) 399-0153 • FAX: (253) 484-9242 • EMAIL: RE40JK@GMAIL.COM •	

May 5, 2016

File No. 2016-1

April 19, 2016

Introduction:

Rexford Engineering PLLC has been retained by the applicants David P. Guarino and Linda E. Haner of 21 Park Place, Saratoga Springs, New York to provide land planning and site/civil engineering services in connection with the subdivision application for 21 Park Place, Saratoga Springs, New York 12866, tax map number 166.84-1.1. Subdivision approval will be required from the Planning Board which includes all requirements listed on the City of Saratoga's Preliminary/Final Subdivision Approval Required Submittal Checklist. This report fulfills Item 6 under the Required Items part of that checklist and accompanies Rexford Engineering PLLC drawings S1 and S2. S1 is the subdivision plat and S2 is the sediment and erosion control plan.

Description of Intended Site Development & Use:

21 Park Place is located on the corner of Park Place and Regent Street in Saratoga Springs New York. The 31,363 square foot (0.72 acre) lot has an existing building approximately 5390 square foot in living area containing three dwelling units. There is one 3 bedroom dwelling on the first floor and two 2 bedroom dwellings on the second floor. The building is accessed by two separate driveways, one from Park Place and one from Regent Street. The lot area is nearly level with a maximum elevation difference of 2-3'. The grounds are grassy with ten to eleven fully mature 24 to 36" oak trees.

The proposed subdivision of this parcel would result in dividing the single lot into two lots. The existing lot address would change from 21 Park Place to 106 Regent Street. This lot would retain the two driveways currently used for the property (one on Regent and one on Park Place). The Park Place driveway for the proposed 106 Regent Street lot would be slightly modified to widen and move the driveway closer to the eastern property line. This will maximize the new lots boundary and parking for the existing lot. The resulting change in impermeable area as a result of the existing lot's expansion would be 0.015 square acres. The resulting 106 Regent Street lot would be 19,123 square feet (0.439 acres) in total.

A second lot on the existing parcel would be created and marketed for sale. This lot is assumed to accommodate a single family home (1 dwelling unit) and a 2 car garage. The new lot would have an address of 21 Park Place and be 12,501 square feet (0.287 acres) in area. The 21 Park Place address would be accessible via driveway from Park Place approximately centered on the proposed detached garage.

Compliance with the requirements of Table 3 of the City of Saratoga Springs Zoning Ordinance is as shown on the subdivision plat, S1.

Water Report:

Currently, there are 7 bedrooms within the 3 dwelling units on the property. Using a standard demand of 110 gallons per capita day (gpcd) the existing property can be estimated to have an annual water consumption usage of 281,000 gallons. Assuming the new lot will accommodate a single family home with 4 bedrooms the annual water consumption would increase by 160,600 gallons to 441,600 gallons (1,210 gallons per day).

There is a 4" water main located on both Regent Street and Park Place. The existing service is assumed to be from the Regent Street side. For the new lot a 1" water service line will tap into the 4" water main on Park Place approximately as shown on S1.

On July, 2 2015 North East Fire Protection Systems Incorporated performed a hydrant flow test per NFPA 291. The resulting flow at 20 psi was reported at 522.8 gallons per minute. This flow

File No. 2016-1

April 19, 2016

is adequate for Class B and C hydrants. Rexford Engineering PLLC did not witness this test and thus cannot verify the accuracy of the results.

Sanitary Report:

There are 7 bedrooms within the 3 dwelling units currently on the property. Using a standard sanitary sewer of 110 gallons per capita day (gpcd) the existing property can be estimated to have an annual sanitary load of 281,000 gallons. Assuming the new lot will accommodate a single family dwelling containing 4 bedrooms the annual sanitary load for the two lots will increase by 160,600 gallons to 441,600 gallons.

There is an 8" sanitary sewer main located on Regent Street and a 10" main located on Park Place. A service line connecting the existing building to the sanitary sewer main is assumed to exist on the Regent Street side. A new single dwelling unit building would be expected to use a 4" to 6" diameter PVC service line connecting to the 10" Park Place main. The additional load from the construction of the additional residence is not expected to tax the capacity of the municipal system in any way.

Stormwater Report:

The amount of impervious area on the existing lot will increase by 10% primarily from the reduced lot size but also from the widened driveway. The amount impervious area on the new lot will be 36% (85% Max) which can be mitigated if required by an assortment of green infrastructure techniques. The site soil type is Windsor loamy sand (WnA), nearly level, hydrologic soil group A. The depth to any restrictive feature is greater than 80 inches. The soil is classified as excessively drained with percolation tests resulting in infiltration rates in excess of 5 in/hr, confirmed by Falling Head testing conducted by a soils engineer in 2015. These conditions permit the construction of miscellaneous green infrastructure techniques, infiltration trenches, bioretention facilities, and underground detention, if necessary. All of these have been satisfactorily designed for the site in previous efforts.

Sediment & Erosion Control:

A sediment and erosion control plan has been developed in order to specify minimum controls and measures to reduce sediment runoff during construction. Two construction entrances have been specified in order to accommodate the construction of both the new lot and the expanded driveway construction of the existing lot if they happen simultaneously. A potential topsoil storage area for foundation backfill and topsoil has been identified on S2. In general, excavated soil for foundations that will not be retained for backfill and topsoil grading will be shipped off site daily. Sediment fences have specified to reduce off site erosion migration.

Frank T. Owens P.E.
Rexford Engineering PLLC

PRELIMINARY

