

5.9 Air Quality

This Section discusses existing air quality of the region and Site, analyzes the potential impacts to air quality from the Project and alternatives presented in Chapter 3, and presents mitigation measures for potential Project air quality impacts.

5.9.1 Existing Air Quality

The environmental setting for air quality is separated into two subsections, area wide/regional air quality and air quality on the Site as a result of impacts from historic and surrounding uses. The area wide/regional air quality includes an evaluation of National Ambient Air Quality Standards (NAAQS) and an assessment of Greenhouse Gas Emissions from on-site emissions.

5.9.1.1 Area Wide / Regional Air Quality

This Subsection evaluates data from annual NYS Ambient Air Quality Reports and compares regional air quality identified in those reports to USEPA NAAQS for six common pollutants: carbon monoxide (CO); lead (Pb); nitrogen oxides (NO_x) (note that USEPA uses NO₂ as the indicator for the larger group of NO_x); ozone; particulates (PM₁₀ and PM_{2.5} are required to be monitored by USEPA); and sulfur dioxide (SO₂). A summary of these are below:

- CO concentrations in and around the Project are predominantly influenced by motor vehicle activity.
- NO_x emissions are due to both mobile and stationary sources.
- Emissions of SO_x are associated mainly with stationary sources.
- Emissions of particulate matter are associated with stationary sources. Mobile sources of particulate matter are to a lesser extent and are from diesel-fueled mobile sources (trucks and buses).
- Lead emissions, were historically influenced principally by motor vehicle activity, have been substantially reduced due to the elimination of lead from gasoline.
- Ozone is not directly emitted to the atmosphere. Rather, it is created from reactions of NO_x and VOCs. Ozone in the Project area is anticipated to be created from mobile and stationary sources.

The pollutants of concern are each discussed further below:

Carbon Monoxide

The USEPA provides the following information on Carbon Monoxide (<http://www.epa.gov/airquality/carbonmonoxide/>):

Carbon monoxide (CO) is a colorless, odorless gas emitted from combustion processes. Nationally and, particularly in urban areas, the majority of CO emissions to ambient air come from mobile sources. CO can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. At extremely high levels, CO can cause death.

EPA first set air quality standards for CO in 1971. For protection of both public health and welfare, EPA set a 8-hour primary standard at 9 parts per million (ppm) and a 1-hour primary standard at 35 ppm.

In a review of the standards completed in 1985, EPA revoked the secondary standards (for public welfare) due to a lack of evidence of adverse effects on public welfare at or near ambient concentrations.

The last review of the CO NAAQS was completed in 1994 and the Agency chose not to revise the standards at that time.

Nitrogen Oxides

The USEPA provides the following information on NO_x (<http://www.epa.gov/airquality/nitrogenoxides/>):

Nitrogen dioxide (NO₂) is one of a group of highly reactive gasses known as “oxides of nitrogen,” or “nitrogen oxides (NO_x).” Other nitrogen oxides include nitrous acid and nitric acid. EPA’s National Ambient Air Quality Standard uses NO₂ as the indicator for the larger group of nitrogen oxides. NO₂ forms quickly from emissions from cars, trucks and buses, power plants, and off-road equipment. In addition to contributing to the formation of ground-level ozone, and fine particle pollution, NO₂ is linked with a number of adverse effects on the respiratory system.

EPA first set standards for NO₂ in 1971, setting both a primary standard (to protect health) and a secondary standard (to protect the public welfare) at 0.053 parts per million (53 ppb), averaged annually. The Agency has reviewed the standards twice since that time, but chose not to revise the annual standards at the conclusion of each review. In January 2010, EPA established an additional primary standard at 100 ppb, averaged over one hour. Together the primary standards protect public health, including the health of sensitive populations - people with asthma, children, and the elderly. No area of the country has been found to be out of compliance with the current NO₂ standards.

NO_x are of concern primarily because most of those compounds react in sunlight to form photochemical oxidants, including ozone. This reaction occurs comparatively slowly and ordinarily takes place far downwind from the site of actual pollutant emission. The effects of these pollutants are examined on an areawide, or mesoscale, basis.

Particulate Matter

The USEPA provides the following information on Particulate Matter (<http://www.epa.gov/airquality/particulatepollution/>):

“Particulate matter,” also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles.

The size of particles is directly linked to their potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. EPA groups particle pollution into two categories:

- *“Inhalable coarse particles,” such as those found near roadways and dusty industries, are larger than 2.5 micrometers and smaller than 10 micrometers in diameter.*
- *“Fine particles,” such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as*

forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

Particulate matter is emitted by a variety of sources, both natural and man-made. Natural sources include the condensed and reacted forms of natural organic vapors; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and debris from live and decaying plant and animal life; particles eroded from beaches, desert, soil and rock; and particles from volcanic and geothermal eruptions and forest fires. Major man-made sources of particulate matter include the combustion of fossil fuels, such as vehicular exhaust; power generation and home heating; chemical and manufacturing processes; all types of construction (including equipment exhaust and re-entrained dust); agricultural activities; and wood-burning fireplaces. Fine particulate matter is also derived from combustion material that has volatilized and then condensed to form primary particulate matter (often after release from a stack or exhaust pipes) or from precursor gases reacting in the atmosphere to form secondary particulate matter. It is also derived from mechanical breakdown of coarse particulate matter, e.g., from building demolition or roadway surface wear. Of particular health concern are particles that are smaller than or equal to 10 microns (PM10) and 2.5 microns (PM2.5) in size. The principal health effects of airborne particulate matter are on the respiratory system.

Sulfur Dioxide

The USEPA provides the following information on Sulfur Dioxide (<http://www.epa.gov/airquality/sulfurdioxide/>):

Sulfur dioxide (SO₂) is one of a group of highly reactive gasses known as “oxides of sulfur.” The largest sources of SO₂ emissions are from fossil fuel combustion at power plants (73%) and other industrial facilities (20%). Smaller sources of SO₂ emissions include industrial processes such as extracting metal from ore, and the burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. SO₂ is linked with a number of adverse effects on the respiratory system.

EPA first set standards for SO₂ in 1971. EPA set a 24-hour primary standard at 140 ppb and an annual average standard at 30 ppb (to protect health). EPA also set a 3-hour average secondary standard at 500 ppb (to protect the public welfare). In 1996, EPA reviewed the SO₂ NAAQS and chose not to revise the standards.

In 2010, EPA revised the primary SO₂ NAAQS by establishing a new 1-hour standard at a level of 75 parts per billion (ppb). EPA revoked the two existing primary standards because they would not provide additional public health protection given a 1-hour standard at 75 ppb.

High concentrations of SO₂ affect breathing and may aggravate existing respiratory and cardiovascular disease. In urban areas, especially in the winter, smaller stationary sources, such as space heating, contribute to elevated SO₂ levels.

Lead

The USEPA provides the following information on Lead (<http://www.epa.gov/airquality/lead/>):

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been from fuels in on-road motor vehicles (such as cars and trucks) and industrial sources. As a result of EPA’s regulatory efforts to remove lead from on-road motor vehicle gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and

levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline.

Ozone

The USEPA provides the following information on Ozone (<http://www.epa.gov/airquality/ozonepollution/>):

Ground level or “bad” ozone is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC. Breathing ozone can trigger a variety of health problems, particularly for children, the elderly, and people of all ages who have lung diseases such as asthma. Ground level ozone can also have harmful effects on sensitive vegetation and ecosystems.

Sources of NOx in the Project Area are emissions from motor vehicle exhaust. VOCs may result from chemical solvents, or gasoline vapors.

National and State Ambient Air Quality Standards

NAAQS are concentrations set for each of the criteria pollutants specified by USEPA that have been developed primarily to protect human health. The secondary goal is to protect the nation’s welfare and account for the effect of air pollution on soil, water, vegetation and other aspects of general welfare. For the most part, NYS has adopted the NAAQS as state ambient air quality standards. Timeframes, based on ways that these pollutants adversely affect health, have also been established. These standards, together with their health-related averaging periods, are presented in Table 5.9-1.

Pollutant		Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]		8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]		1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Annual	53 ppb	Annual Mean
Ozone [73 FR 16436, Mar 27, 2008]		8-hour	0.075 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution Dec 14, 2012	PM _{2.5}	Primary Annual	12 µg/m ³	annual mean, averaged over 3 years
		Secondary Annual	15 µg/m ³	
		24-hour	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	24-hour	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years

Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	3-hour	0.5 ppm	Not to be exceeded more than once per year
Lead [73 FR 66964, Nov 12, 2008]	Rolling 3 month average	0.15 µg/m ³	Not to be exceeded

Note: Information obtained from <http://www.dec.ny.gov/chemical/8542.html>

Table 5.9-1: National Ambient Air Quality Standards (NAAQS) (LaBella)

Table 5.9-2 contains data from excerpts of an Air Quality Statistics Report generated from the USEPA for NYS for 2014 (http://www.epa.gov/airquality/airdata/ad_rep_con.html). Data from the closest monitoring locations to the Site is displayed for each parameter, with the pollutants identified in the first column and monitoring locations in the subsequent columns.

Pollutant	Averaging Time	Location			
		Corning, NY	Ithaca, NY	Rochester, NY	Syracuse, NY
Carbon Monoxide	2nd Max 8-hr (ppm)	0.2	-	0.7	-
	2nd Max 1-hr (ppm)	0.2	-	1	-
Nitrogen Dioxide	98th Percentile 1-hr (ppb)	-	-	26	-
	Annual Mean (ppb)	-	-	9	-
Ozone	2nd Max 1-hr (ppm)	0.06	0.07	0.07	0.07
	4th Max 8-hr (ppm)	0.058	0.059	0.064	0.063
PM _{2.5}	98th Percentile 24-hr (µg/m ³)	15	-	17	16
	Weighted Mean 24-hr (µg/m ³)	1.1	-	7.3	6.7
PM ₁₀	2nd Max 24-hr (µg/m ³)	-	-	-	-
Sulfur Dioxide	99th Percentile 1-hr (ppb)	10	-	21	5
	2nd Max 3-hr (ppb)	-	-	-	-

Notes: Lead is not included in Air Quality Statistics reports available from USEPA.gov.

---"---" indicates no USEPA Air Quality Statistics available for 2014

Table 5.9-2: USEPA Air Quality Statistics Report Data (LaBella)

The Air Quality data available for Ithaca and for the cities in proximity do not exceed the NAAQS.

5.9.1.2 On-Site Air Quality

On-Site air quality has been documented over numerous investigations for over a decade at the Site. A summary of the most significant on-site investigations for air quality is provided below and may be found In Appendix K:

- Letter to NYSDOH Re: Indoor Air Testing Results for EPT Facility Buildings in December 2005
- Letter to NYSDOH Re: Indoor Air Testing Results for EPT Facility Buildings in February 2006
- Indoor Air Testing Results for EPT Facility Buildings, Emerson Power Transmission Facility, Ithaca, New York, Order on Consent #A7-0125-87-09 dated May 25, 2010

- LaBella Associates Phase II ESA Report dated March 2014 (Phase II ESA) (see Appendix G1)

The above reports summarize sampling of VOCs in sub-slab soil vapor, indoor air and outdoor air. Each of the above sampling events was completed in accordance with the NYSDOH *Final Guidance For Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 (NYSDOH Air Guidelines). A summary of the analytical testing completed is in Table 5.9-3 found within the next Subsection.

5.9.1.2.1 Soil Vapor Intrusion and Indoor Air Quality

Soil vapor intrusion is the process by which volatile compounds in the subsurface migrate into indoor air. It is assessed through multiple lines of evidence and includes sampling of sub-slab soil vapor, indoor air and outdoor air. The potential for SVI to impact indoor air quality of existing buildings at the Site was evaluated by Emerson with additional investigation presented in the Phase II ESA completed in 2013 to support the repurposing of the Site to mixed-use. These evaluations were completed in accordance with the NYSDOH Air Guidelines.

Indoor air investigations completed by Emerson were conducted under NYSDEC and NYSDOH oversight. See Appendix K1. As documented in these reports, the indoor air results in some buildings exceeded the NYSDOH Air Guidelines and sub-slab soil vapors in a majority of these locations also indicated a concentration gradient that creates a potential for vapor intrusion. Based on the testing completed, Buildings 3, 3A, 4, 4A, 6A, 8, 8A, 10, 21, and 24 indicated the need for mitigation.

The Phase II ESA tested buildings for soil vapor intrusion that were not previously assessed or to confirm previous results. See Appendix G1.

TCE is the primary VOC contaminant of concern at the Site. Table 5.9-3 summarizes the TCE sampling results from the Emerson and Phase II ESA investigations. NYSDOH revised the Air Guidelines for TCE from 5 µg/m³ to 2 µg/m³ in August 2015, after these investigations. Table 5.9-3 reflects the new lower guidance value for TCE.

Building	Testing Completed By	Date	NYSDOH Decision Matrices Evaluation for TCE	TCE Results	
				Sub-Slab Result (µg/m ³)	Indoor Air Result (µg/m ³)
1	LaBella	2013	Take Reasonable*	2.4	2.5 ^(A)
2 (lower level)	Environmental Strategies Consulting LLC	2005	Monitor	7.97	0.819
	LaBella	2013	Monitor	6.4	2.3 ^(A)
2 (upper level)	LaBella	2013	Take Reasonable*	1.4	2.1 ^{(1) (A)}
3	Environmental Strategies Consulting LLC	2005	Mitigate	92.3	12.8
		2006	Mitigate	86.3	3.88
		2009	--	--	3.5
		2010	--	--	1.6
4 (location A)	Environmental Strategies Consulting LLC	2005	Mitigate	11.1	7.54
		2006	Mitigate	297	5.35
		2009	--	--	4.7
		2010	--	--	0.75

4 (location B)	Environmental Strategies Consulting LLC	2005	Mitigate	1,400	12.8
		2006	Mitigate	1,620	7.92
		2009	--	--	8.6
		2010	--	--	4.7
5	LaBella	2013	Mitigate	22	80 ⁽²⁾ (A)
6	LaBella	2013	Mitigate	33	80 ⁽²⁾ (A)
6A	Environmental Strategies Consulting LLC	2005	Monitor	4.26	1.69
6A (lower level)	Environmental Strategies Consulting LLC	2005	Mitigate	116	1.26
		2009	--	--	ND
		2010	--	--	ND
8	Environmental Strategies Consulting LLC	2005	Mitigate	760	1.37
		2009	--	--	0.86
		2010	--	--	0.39
9	Environmental Strategies Consulting LLC	2005	Monitor/ Mitigate	84.1	0.437
9 (location 6SS)	LaBella	2013	Take Reasonable*	1.5	4.2 ⁽¹⁾ (A)
9 (location 5SS)	LaBella	2013	Monitor	18	4.2 ⁽¹⁾ (A)
10	Environmental Strategies Consulting LLC	2005	Mitigate	1,000	0.765
		2009	--	--	0.81
		2010	--	--	0.26
11A	Environmental Strategies Consulting LLC	2005	Monitor	41.5	0.492
	LaBella	2013	Take Reasonable*	1.4	2.1 ⁽¹⁾⁽³⁾ (A)
13A	Environmental Strategies Consulting LLC	2005	Monitor	5.3	0.382
13A (location 12SS)	LaBella	2013	Take Reasonable*	1.2	0.55 ⁽⁴⁾
13A (location 15SS)	LaBella	2013	Monitor	27	0.55 ⁽⁴⁾
13B	Environmental Strategies Consulting LLC	2005	Monitor	61.2	ND
	LaBella	2013	Take Reasonable*	1.7	0.55 ⁽⁴⁾
14	LaBella	2013	Take Reasonable*	1.4	0.44 ⁽⁵⁾
15	LaBella	2013	Take Reasonable*	1.4	0.44 ⁽⁵⁾
17	LaBella	2013	Take Reasonable*	2.3	0.82
18 (location 6SS)	LaBella	2013	Take Reasonable*	4.4	5.4 ^(A)
18 (location 7SS)	LaBella	2013	Mitigate	5.0	5.4 ^(A)
24 (location A)	Environmental Strategies Consulting LLC	2005	Mitigate	770	7.81
		2006	Mitigate	236	4.1
		2009	--	--	2.1
		2010	--	--	0.45

24 (location B)	Environmental Strategies Consulting LLC	2005	Monitor	19.7	1.8
		2006	Monitor	15.2	1.31
		2009	--	--	0.24
		2010	--	--	0.41
33	Environmental Strategies Consulting LLC	2005	Monitor	6.28	0.437
33 (lower level)	Environmental Strategies Consulting LLC	2005	Mitigate	14.2	8.52
		2006	Monitor	20.8	0.82
		2009	--	--	0.81
		2010	--	--	0.21
34 (location C)	Environmental Strategies Consulting LLC	2005	Monitor/ Mitigate	51.3	0.328
34 (location D)	Environmental Strategies Consulting LLC	2005	Monitor	5.08	2.46
34 (lower level, location A)	Environmental Strategies Consulting LLC	2005	Mitigate	249	1.37
		2009	--	--	ND
		2010	--	--	ND
34 (lower level, location B)	Environmental Strategies Consulting LLC	2005	Mitigate	3,800	1.47
		2009	--	--	ND
		2010	--	--	ND
35	Environmental Strategies Consulting LLC	2005	No further Action	5.79	ND
	LaBella	2013	Take Reasonable*	2.2	0.6

ND indicates the sample was non-detect for TCE

--indicates only an indoor air sample was collected (e.g., sub-slab samples were not collected) and the NYS-DOH decisions matrices do not apply

* Take reasonable and practical actions to identify source(s) and reduce exposures

- (1) A re-test was completed here with all doors/windows closed for approximately 8 hrs prior to test. Results shown are re-test.
- (2) Sample for indoor air for buildings 5 & 6 was collected between sub-slab sampling points. Floor slab removal from Bldg. 4 likely influenced indoor air result.
- (3) Sample for indoor air for building 11A was assumed to be similar to building 2 indoor air based on proximity and open air
- (4) Sample for indoor air for buildings 13A & B was collected at a location between sub-slab sampling points.
- (5) Sample for indoor air for buildings 14 & 15 was collected at a location between the buildings 14 & 15 sub-slab sampling point locations.
- (A) Sample results exceed the NYSDOH revised Air Guideline for TCE which was decreased from 5 µg/m³ to 2 µg/m³ in August 2015.

Table 5.9-3: Soil Vapor Intrusion Sampling Results for TCE (LaBella)

Concentrations of TCE were also compared to the Building Assessment and Survey Evaluation (BASE) 90th Percentile values. The BASE included an evaluation of 100 randomly selected buildings by the USEPA from 1994 through 1996 to generate representative concentrations of various compounds, including VOCs, in indoor air.

Of the 49 indoor air samples collected during 2005, 2006, 2009 and 2010 indoor air testing, 10 samples detected TCE at concentrations that exceed USEPA BASE Database 90th Percentile (Buildings 3, 4, 24 and 33). Of the 12 indoor air samples collected during the Phase II ESA, 2 samples detected TCE at concentrations that exceeded USEPA BASE Database 90th Percentile (Buildings 5/6 and Building 18).

5.9.1.2.2 Outdoor Air Quality

All of the various indoor air assessments also included outdoor air sampling. This is typically conducted as a control sample to assess indoor air results; however, it can also be used to assess general area wide air quality in relation to VOCs. It should be noted that air sampling for VOCs typically includes a large list of VOCs (standard list of volatiles for the analytical testing method) and the sampling completed at the Site included VOCs that are not Site related contaminants. Furthermore, outdoor air has numerous VOCs due to man-made sources (such as gasoline, paints, nail polish, etc.). VOCs are routinely detected in both outdoor and indoor air because of modern society's conveniences. Assessment of outdoor air for VOCs is typically conducted by evaluating outdoor air from numerous areas to assess if conditions are within typical background ranges or if there may be an atypical situation. Appendix C4 of the NYSDOH Air Guidelines includes the National Ambient VOC Database by USEPA (1988).

Table 5.9-4 below presents an assessment of outdoor air sampling results from previous testing and compares it to the USEPA National Ambient VOC Database for the relevant Site contaminants. For a complete summary of sampling completed and results, refer to the specific reports in Appendix K1.

Compound	Range from 2005 to 2014 On-Site Testing	Mean from 2005 to 2014 On-Site Testing*	USEPA National Ambient VOC Database Mean Concentrations
Tetrachloroethene	ND – 0.83	0.56	5.8
Trichloroethene	ND – 1.09	0.41	2.7
Cis-1,2-Dichloroethene	ND	0.40	1.3
Trans-1,2-Dichloroethene	ND	0.40	3
Vinyl Chloride	ND	0.26	32
1,1,1-Trichloroethane	ND	0.53	5
1,2-Dichloroethane	ND	0.47	1.6
Methylene Chloride	ND – 3.71	2.2	5.6

ND – Denotes Compound Not Detected above the laboratory detection limit.

* - Denotes detection limit utilized as concentration for determining mean. This provides a worst-case assessment of outdoor air.

Table 5.9-4: Phase II ESA Outdoor Air Sampling Results (LaBella)

Based on the above comparison, the Site related contaminants in outdoor air are below the average concentrations identified in the USEPA National Ambient VOC Database.

5.9.2 Potential Impacts

The Project Sponsor evaluated whether the Project would result in violations of ambient air quality standards or health-related guidance values related to vehicle emissions, building emissions and historical impacts.

5.9.2.1 Vehicle Traffic Emissions

New vehicle trips and altered traffic conditions are a part of most any project. Traffic generated as a result of the Project that could have an impact on air quality was evaluated based on peak hour volumes after completion of the Phase I and entire Project.

An analysis of vehicle emissions for the Project was completed utilizing the following guidance documents:

- the USEPA's Intersection Modeling Guidelines (USEPA, 1992);
- USEPA's United States Green Book – Air Quality Planning and Standards, which is available online (EPA); and,
- the NYSDOT's Environmental Procedures Manual (EPM) (NYSDOT, 2001).

Guidelines established by NYSDOT's EPM specify screening procedures to determine sites that require detailed analysis. The following criteria were used to evaluate air impacts from Project generated traffic:

1. Ten percent or more reduction in source-receptor distances (the straight line distance between the edge of the travel lane closest to the receptor and that point of the receptor closest to the roadway);
2. Ten percent or more increase in traffic volumes on the affected roadways;
3. Ten percent or more increase in vehicle emissions due to speed changes, changes in operating conditions (hot/cold starts), changes in vehicle mix, etc.;
4. Any increase in the number of queued lanes; and
5. Twenty percent reduction in speeds, when the Build estimated average speed following Project completion is 30 MPH or less.

Based on the NYSDOT EPM (Chapter 1.1, Section 9 (a)(i)(1-2) – *“If the impacted intersection or roadway meets any one of the applicable criteria above, the use of the volume and emission factor chart is needed to do the volume threshold screening.”*

The proposed development scenarios do not meet the criteria established in items 1, 2, 3 or 5 above; however, as discussed in Section 5.7.3.3 (specifically, Table 5.7-16), two intersections were indicated for addition of queued lanes. Specifically, the following intersections in Table 5.9-5 were noted for further screening:

Intersection	Mitigation Measure
Proposed Driveway I/Aurora Street	Installation of 3 color traffic signal.
NYS Route 96B /Coddington Road /Proposed Driveway IV	Realign, restripe the intersection to include opposing northbound/southbound left-turn lanes and install 3 color traffic signal.

Table 5.9-5: Microscale Analysis Screening Locations (LaBella)

It should be noted that additional mitigation measures that included the addition of signals and queued lanes were included for other intersections; however, these intersections were noted to have high levels of service, i.e., A,B or C, as a result so do not require microscale analysis based on the NYSDOT EPM.

5.9.2.1.1 Volume Threshold Screening

The volume threshold screening is utilized to determine the need for a microscale air quality analysis (with the exception of State Implementation Plan (SIP) intersections, which none are listed in proximity to the Site). Vehicle threshold tables have been developed by NYSDOT that tie the volume threshold with emission factors. This approach takes into account emission factors determined by project area specific vehicle speed, thermal states, and emission control strategies in the determination of vehicle

thresholds. A wind speed of 1 m/s and an atmospheric stability of E, i.e., slightly stable, are assumed in the development of the tables provided by NYSDOT. Atmospheric stability is evaluated on a scale of A through F with F being most stable. The thresholds establish traffic volumes below which a violation of the NAAQS for carbon monoxide is extremely unlikely. Projects that are equal to or below the applicable threshold do not need a microscale air quality analysis.

For this assessment, Tables 3B and 3C of the NYSDOT EPM were utilized to assess the intersections in question. Table 5.9-6 below is a summary of the values utilized in the assessment:

Intersection	Peak Hour Volumes ⁽¹⁾	Estimated Emission Factor ⁽²⁾		Peak Hour Traffic Volume Threshold
		Table 3B	Table 3C (Free Flow/Queue)	
Proposed Driveway I/ Aurora Street	410	<5.0	<5.0 / <50	>8,000
NYS Route 96B / Coddington Road / Proposed Driveway IV	641	<5.0	<5.0 / <50	4,000

Notes:

(1) Based on intersections with available data.

(2) Emission factors derived from Upstate Counties, a weighted average of vehicle types for the area, and the speed limit of South Aurora Street. It should be noted that this assessment is for screening level only.

Table 5.9-6: Summary of Volume Threshold Criteria (LaBella)

Based on the above, the peak hour volumes for traffic are significantly lower than thresholds required to complete a microscale air quality analysis.

Although, there will be some air quality impacts during construction due to vehicle emissions, these will be for a limited timeframe and the overall vehicle traffic in this area will also be higher subsequent to completing the Project. However, the Project does not meet any of the applicable criteria; as such, a quantitative air quality assessment was not performed. An air quality analysis is not necessary since this Project will not increase traffic volumes, reduce source-receptor distances or change other existing conditions to such a degree as to jeopardize attainment of the National Ambient Air Quality Standards.

5.9.2.1.2 Building Emissions

In addition to the vehicle emissions, Greenhouse Gases (GHG) from Building emissions have also been evaluated. The NYSDEC Full Environmental Assessment Form (FEAF) Workbook (p. 184), lists the following criteria to be considered by regulatory agencies to determine the level of impact:

- More than 1000 tons/year of carbon dioxide (CO₂) are emitted
- More than 3.5 tons/year of nitrous oxide (N₂O) are emitted
- More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) are emitted
- More than 0.045 tons/year of sulfur hexafluoride (SF₆) are emitted
- More than 1000 tons/year of carbon dioxide equivalent of hydrochlorofluorocarbons (HFCs) are emitted
- 43 tons/year of more of methane are emitted

- 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutant are emitted
- 5 lbs/hour total contaminant are emitted or a heat source capable of producing more than 10 million BTUs per hour
- The Proposed Action may reach 50% of any thresholds above
- The Proposed Action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour

If one or more criteria are exceeded, a moderate to large impact could occur.

GHG emissions resulting from the use of natural gas (45,901 mmBTU annually) to serve the buildings for the Project are projected to total 2,686 Tons of Carbon Dioxide equivalent (CO₂e). The GHG components include Carbon Dioxide (CO₂ - 2,685 MT/yr), Methane (CH₄- 0.048 MT/yr) and Nitrous Oxide (N₂O - 0.00025 MT/yr). These emission projections are based upon the 2003 Mid Atlantic Commercial Building Survey and 2009 Mid Atlantic Residential Building Survey (attached apartments) for energy consumption. It is assumed that total energy consumption is 98,000 BTU/sf for commercial space and 94,000 BTU/sf for residential space for the purposes of estimating annual baseline usage. Natural gas usage is estimated at 32% of the total usage. Therefore the natural gas usage annual base line is 45,900 MMBTUs for the Project. See Utilities Subsection 5.8.2.4. Emissions from the use of natural gas are based on factors published by the US EPA's "Emission Factors for Greenhouse Gas Inventories (Last Modified 4 April 2014)" <http://www.epa.gov/climateleadership/documents/emission-factors.pdf>.

Electricity will not be generated on-Site; therefore, GHG emissions from electricity usage are not relevant to the on-Site assessment.

Based on the criteria identified in the NYSDEC FEF Workbook (p. 184) and the assessment of the GHG emissions due to the Project, there are impacts to air quality from the Project due to carbon dioxide emissions. A comparison of greenhouse gas emissions from the Project and the alternatives is found in Subsection 5.9.4.4. Measures for mitigation of these impacts are identified in Subsection 5.9.3.

In addition to GHG from building emissions related to energy consumption, tenants with certain types of commercial or industrial operations may emit pollutants into the air. The degree and type of air pollutants emitted depends on the tenant's specific operations. NYS law and regulations require any owner or operator of a stationary air contamination source to elevate the impacts to air from that source and obtain a permit or registration from NYSDEC for the construction and operation of such source. See 6 NYCRR Part 201. The potential impacts to air from specific operations are evaluated through that regulatory process. Further evaluation at this time is not feasible without information on the specific potential pollutants and operations involved.

5.9.2.1.3 Historical Impacts

Since the Project includes occupation of many existing buildings not routinely occupied, adverse impacts to public health have the potential to arise from occupying Buildings 1, 2, 3, 4, 5, 6, and 6A (any remaining portions), 8, 10, 13A, 13B, 15, 24, 33 (remaining portions), 34 and 35. These impacts are also discussed in Public Health and Environment Subsection 5.5.1. The Project includes mitigation measures to avoid such adverse impacts as described in the following Subsection 5.9.3 and Public Health and Environment Subsection 5.5.3.

The potential for SVI into existing buildings to be occupied and new buildings would need to be addressed by mitigation, monitoring, or further analysis as described in Subsection 5.9.3 and Public Health and Environment Subsection 5.5.1.14.

5.9.3 Mitigation Measures

Vehicle Emissions

The analysis of vehicle emissions from traffic conditions related to the Project reveals no significant impacts so no mitigation measures are proposed beyond those set forth under Traffic, Subsection 5.7.3.

Building Emissions

The Project and each alternative exceed the threshold criteria for CO₂ in the NYSDEC FEF Workbook. As such, each scenario indicates a moderate to large impact could occur in each scenario. Emissions will be mitigated via the following:

- As a participant in the City NY Prize microgrid study, alternative energy measures are being investigated for the Site including PV, wind, and CHP or cogeneration systems.
- New buildings will meet LEED ND criteria and include efficient design and renewable energy systems necessary to achieve at least a 70% reduction in fossil fuel use in compliance with the Architecture 2030 Challenge. That would reduce total energy usage by up to 53,000 MMBTUs per year (note, only a portion of this would be for on-site building emissions).
- Any commercial or industrial tenant having operations with the potential to emit air pollutants are required to identify and control those sources of air pollutants through the NYS Air Pollution Control Program set forth under 6 NYCRR Part 201 and any other applicable laws and regulations. No other mitigation measures for specific tenant operations concerning air pollutants are required beyond compliance with that program.

Historic Impacts

The previous testing for soil vapor intrusion will be utilized by the Project Sponsor in coordination with the NYSDEC and NYSDOH to determine which structures warrant mitigation or monitoring. Existing buildings likely to require mitigation, monitoring or additional analysis include:

- Mitigation of Buildings 1, 2 (basement portion), 3, 4, 5, 6 and 6A (remaining portions), 8, 10, 18, 21, 24, 33 (remaining portions) and 34
- Monitoring of Buildings 13A, and 17
- Buildings 2 (upper portion), 10A, 13B, 15 and 35 may require some additional actions to identify sources and reduce exposure; however, based on the buildings being interconnected it appears the source of impacts detected is due to SVI impacts from other buildings and not due to an SVI concern for that particular area itself.

Prior to any new building construction in the CW3 or CW4 Sub Areas, the VOCs data for soil and groundwater within the proposed building footprint will be analyzed for the potential for soil vapor intrusion and mitigation will be included as part of the construction as warranted.

Mitigation of sub-slab soil vapor is a routine technique utilized in many manufacturing, commercial and residential structures. Mitigation of sub-slab soil vapor is completed in the same way that mitigation of radon gas is completed. The techniques and practices for mitigation are well known and routinely implemented. Mitigation with subsequent indoor air monitoring to confirm efficacy would be required prior to occupancy of the structures. All sub-slab soil vapor mitigation systems will require long term operation, maintenance and monitoring plans that will be part of the SMP approved by NYSDEC. Public Health and Environment Subsection 5.5.3 provides additional details.

5.9.4 Alternatives to Proposed Action

This Subsection describes impacts to air quality under various alternatives to the Project described in Chapter 3.

5.9.4.1 No Action

Vehicle Traffic Emissions

The No Action Alternative would not add any additional traffic and therefore vehicle emissions would not impact air quality.

Building Emissions

GHG emissions resulting from the current use of natural gas (20,872 mmBTU annually) to serve the buildings in the No Action Scenario are projected to total 1,221 Tons of Carbon Dioxide equivalent (CO₂e). The GHG components include Carbon Dioxide (CO₂ - 1,220 T/yr), Methane (CH₄ - 0.023 T/yr) and Nitrous Oxide (N₂O - 0.00012 T/yr). These projections are based on the methodology described under Subsection 5.9.2.1.2. Electricity will not be generated on-Site; therefore, GHG emissions from electricity usage are not relevant to the on-Site assessment.

Under the No Action Alternative, increase in any air emissions, greenhouse gas or otherwise, from building emissions or traffic will not occur. However, the analysis of GHG indicates carbon dioxide emissions are currently above the NYSDEC FEAR Workbook (p. 184) criteria. Note that the carbon dioxide emission estimate is likely to be an over estimate because Emerson is not heating the buildings to the degree buildings in the survey are heated since the Site buildings are not in use.

The Site is currently not actively used so no impacts to air quality from industrial operations occurs at this time.

Historical Impacts

Based on the fact that NYSDEC and NYSDOH have not required remediation or mitigation of SVI occurring on the Site because the buildings are not routinely occupied, there would be no improvement to indoor air quality of the on-Site buildings.

5.9.4.2 Development in Accordance with Existing Zoning

Vehicle Traffic Emissions

Development in Accordance with Existing Zoning would increase the current vehicle traffic and thus emissions. However, the Development in Accordance with Existing Zoning would generate less traffic than the Project and as noted previously, the Project does not meet any of the applicable criteria. Therefore, a quantitative air quality assessment was not performed. An air quality analysis is not necessary since this Project will not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS. Refer to Section 5.9.2.

Building Emissions

GHG emissions resulting from the use of natural gas (26,516 mmBTU annually) to serve the buildings in the Development In Accordance with Existing Zoning Scenario are projected to total 1,552 Tons of

Carbon Dioxide equivalent (CO₂e). The GHG components include Carbon Dioxide (CO₂ - 1,551 T/yr), Methane (CH₄ - 0.024 T/yr) and Nitrous Oxide (N₂O - 0.00012 T/yr). These projections are based on the methodology described under Subsection 5.9.2.1.2. Electricity will not be generated on-Site; therefore, GHG emissions from electricity usage are not relevant to the on-Site assessment.

Based on the criteria identified in the NYSDEC FEAF Workbook (p. 184) and the assessment of the GHG emissions due to the Development in Accordance with Existing Zoning Scenario, there are impacts to air quality due to carbon dioxide emissions.

Depending on the industrial use, air quality could be impacted under the existing zoning alternative. Any air quality impacts would depend on the specific use proposed at that time. However, proper permitting or registration for air emissions along with any air emission controls would be required to comply with laws, which can minimize any air quality impacts.

Historical Impacts

Development in Accordance with Existing Zoning would include occupation of many existing buildings not routinely occupied, adverse impacts to public health have the potential to arise from occupying Buildings 1,2,3,4,5,6, 6A, 8, 10, 13A, 13B, 15, 24, 33, 34 and 35. These impacts are also discussed in Public Health and Environment Subsection 5.5.6.1. NYSDEC would require mitigation measures to avoid such adverse impacts as described in Subsection 5.9.4 and Public Health and Environment Subsection 5.5.6.3.

The potential for SVI into existing buildings to be occupied and new buildings would need to be addressed by mitigation, monitoring or further analysis as described in Subsection 5.9.3 and Public Health and Environment Subsection 5.5.3.

5.9.4.3 Maximum Development Scenario

Vehicle Traffic Emissions

The Project does not meet any of the applicable criteria; as such, a quantitative air quality assessment was not performed. An air quality analysis is not necessary since this Project will not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS. Refer to Section 5.9.2.

Building Emissions

GHG emissions resulting from the use of natural gas (57,168 mmBTU annually) to serve the buildings in the Maximum Development Scenario are projected to total 3,785 Tons of Carbon Dioxide equivalent (CO₂e). The GHG components include Carbon Dioxide (CO₂ - 3,783 T/Yr), Methane (CH₄ - 0.059 T/Yr) and Nitrous Oxide (N₂O - 0.00031 T/Yr). These projections are based on the methodology described under Subsection 5.9.2.1.2. Electricity will not be generated on-Site; therefore, GHG emissions from electricity usage are not relevant to the on-Site assessment.

Emissions from the use of natural gas are based on factors published by the USEPA's "Emission Factors for Greenhouse Gas Inventories (Last Modified 4 April 2014)"

<http://www.epa.gov/climateleadership/documents/emission-factors.pdf> .

Based on the criteria identified in the NYSDEC FEAF Workbook (p. 184) and the assessment of the GHG emissions due to the Maximum Development Scenario, there are impacts to air quality due to carbon dioxide emissions.

Tenants with commercial or industrial uses with air emissions will be required to obtain an air permit or registration from the NYSDEC and employ any necessary pollution control devices to meet air emissions regulations. Therefore, any air quality impacts from the commercial and industrial uses themselves will be minimized.

Historical Impacts

Since the Project includes occupation of many existing buildings not routinely occupied, adverse impacts to public health have the potential to arise from occupying Buildings 1, 2, 3, 4, 5, 6, and 6A (any remaining portions), 8, 10, 13A, 13B, 15, 24, 33 (remaining portions), 34, and 35. These impacts are also discussed in Public Health and Environment Subsection 5.5.6.1. The Project includes mitigation measures to avoid such adverse impacts as described in Subsection 5.9.3 and Public Health and Environment Subsection 5.5.3.

The potential for SVI into existing buildings to be occupied and new buildings would need to be addressed by mitigation, monitoring or further analysis as described in Subsection 5.9.3 and Public Health and Environment Subsection 5.5.3.

5.9.4.4 Comparison of Project and Alternatives

Vehicle Traffic Emissions

The Project and each scenario do not meet any of the applicable criteria; as such, a quantitative air quality assessment was not performed. An air quality analysis is not necessary since this Project will not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS. Refer to Subsection 5.9.2.

Building Emissions

Each alternative and the proposed action are compared to the NYSDEC FEAF Workbook criteria for Impacts on Air in the following Table 5.9-7.

Historical Impacts

Since the development scenarios include occupation of many existing buildings not routinely occupied,

Gas	Units	No Action	Redevelop with Existing Zoning	Maximum Development	Project	Threshold*
CO ₂	metric tons/ year	1,220	1,551	3,783	2,685	1,000
CH ₄	metric tons/ year	0.023	0.024	0.059	0.048	43
N ₂ O	metric tons/ year	0.00012	0.00012	0.00031	0.00025	3.50

Notes:

* NYSDEC FEAF Workbook (p. 184); **Bold** indicates the projected value exceeds the threshold criteria

Table 5.9-7: Comparison of Greenhouse Gas Emissions from Natural Gas (LaBella)

adverse impacts to public health have the potential to arise from occupying Buildings 1,2,3,4,5,6 and 6A (any remaining portions), 8, 10, 13A, 13B, 15, 24, 33 (remaining portions), 34 and 35. These impacts are also discussed in Public Health and Environment Subsection 5.5.6.1. The Project includes mitigation measures to avoid such adverse impacts as described in the following Subsection 5.9.4 and Public Health and Environment Subsection 5.5.3.

The potential for SVI into existing buildings to be occupied and new buildings would need to be addressed by mitigation, monitoring or further analysis as described in Subsection 5.9.4 and Public Health and Environment Subsection 5.5.3.

5.10 Visual and Aesthetic Resources

Visual and aesthetic resources are characterized by various elements that form a viewer's perception and aesthetic response to a place, object, or setting (NYSDEC, 1988). Visual quality results from the way elements in the built and natural environment relate to one another and create a sense of harmony, while giving viewers the ability to orient themselves in an area.

Critical vantage and viewpoints where the visual environment is considered an important aspect of the Site from within the City and Town were identified. Many of these views are listed in the Town Scenic Resource Inventory & Analysis and the Tompkins County Scenic Resources Inventory, such as Danby Road, Taughannock Blvd., Cliff Street, Hector Street, West Haven Park, Sheffield Road, Upper Botswick Road, East Shore Park, and Tutelo Park. Specific points in the City include Meadow Street, Route 13 heading south mid-way down the hill, Stewart Park, Allan H. Treman State Marine Park, Cass Park, South Cayuga Street heading south, and Cornell University on East Hill.

Figure 5.10-1 is a viewshed map that illustrates areas from which the Site may be visible based upon topography and line of sight analysis, as described above. These viewpoints were determined during the Scoping Process. The viewpoints, photographic perspectives, and narrative descriptions that follow in Subsection 5.10.1 reference the viewpoint location numbers on the Figure. Existing and potential impacts to visual and aesthetic resources of the Site are evaluated and compared for each viewpoint in order to assess the visual and aesthetic impacts the Project may have upon area views.

This Section of the DGEIS cannot strictly be analyzed in relation to the defined zoning Sub Areas, as it must be analyzed based on previously determined critical viewpoints. However, where applicable, Sub Areas are referenced.

5.10.1 Existing and Potential Impacts to Visual and Aesthetic Resources

Rather than separating the existing conditions from potential impacts as previous Sections are structured, this Subsection combines the analysis for existing conditions and the proposed Project to allow for a clear and immediate understanding of the potential impacts to each viewshed in Figure 5.10-1. Subsection 5.10.1.20 provides a summary of potential impacts to viewsheds evident from the comparison of existing and proposed conditions.

When there is an unfavorable effect on the perceived beauty of a place or structure, impacts to visual and aesthetic resources occur. Significant aesthetic impacts are considered to be those that may cause a loss in the public enjoyment and appreciation of an inventoried resource.

To discuss potential impacts to existing visual and aesthetic conditions, field analysis includes a before/after comparison using photography to collect near and distant views. Existing views were documented in late February during leaf off conditions in order to capture the maximum visual impact. Massing models have also been created to illustrate the potential visual and aesthetic impacts of proposed development in the context of existing Site conditions.

The visual impact analysis includes the following:

- Photographs of existing views of the Site during leaf off conditions, as identified in the Scoping Document.
- Photographic perspectives, visual renderings, and visual simulations of the Project from each critical receptor point, providing a before/after comparison.
- Maps of each viewshed illustrating the sight lines and views internal and external to the Site.
- View descriptions from critical vantage points of the proposed development using photographs



View Points

- | | | |
|--------------------------------------|-------------------------------------|-------------------------|
| 1. Meadow Street | 7. Cornell University (East Hill) | 13. Hector Street |
| 2. Route 13 | 8. Danby Road | 14. Westhaven Preserve |
| 3. Stewart Park | 9. South Aurora Street | 15. Sheffield Road |
| 4. Allen H. Treman State Marine Park | 10. View across Cayuga Lake | 16. Upper Botswick Road |
| 5. Cass Park | 11. Taughannock Boulevard | 17. East Shore Park |
| 6. South Cayuga Street | 12. Trumansburg Road / Cliff Street | 18. Tutelo Park |

Figure 5.10-1: Viewshed Locations Map (WPD)

and graphic illustrations.

- Compatibility discussion of the Project with the surrounding visual context. This includes the use of the Design Standards, which provides guidelines for new and redeveloped buildings compatible with the existing character of the Site.
- Discussion of the significance and character of the visual impact of the Project, including lighting, on the surrounding neighborhood, South Hill, and the larger Ithaca community.

The viewsheds documented below are analyzed using existing photographs, proposed views using the same photographs, maps that illustrate viewsheds and existing visual buffers that affect views of the Site, referencing the Town of Ithaca's Scenic Resources Inventory mapping methods, and detailed narratives of the existing and proposed visual landscape of the Site from representative locations designated by the Scope. Project components that may result in a change in the views from these critical vantage points,

including building colors, materials, height, and roof pitch, are also described.

It is noted that the Site sits high above the center of the City, and the existing buildings are a prominent feature from points within the downtown area and residential neighborhoods to the north. The Site extends for approximately $\frac{3}{4}$ of a mile along South Aurora Street, along which views of the existing buildings and parking areas are often screened by mature vegetation and limited low-density residential development. There is one prominent view into the Site from South Aurora Street at the northernmost corner. There are various expansive views to Cayuga Lake and surrounding areas from within the Site. Although the Site is a prominent feature throughout the City and Town, when viewed from larger distances of about 1.5-2+ miles from the Site, visual and aesthetic impacts resulting from the Project are minimal. Lighting impacts resulting from the Project are discussed in Subsection 5.8.2.6 Lighting. Additionally, the Design Standards provide standards for Site lighting, which is referenced as mitigation.

5.10.1.1 View 1: Meadow Street / Wegman's Parking Lot looking Southeast towards South Hill

5.10.1.1.1 Existing View 1

This existing view looking southeast from the Wegman's Parking Lot near and west of Meadow Street, Ithaca's commercial strip, is located below the elevation of the Site. View 1 is largely dominated by the parking lot in the foreground, 2-story brick buildings in the middle ground, with the Site higher in elevation in the background (Figure 5.10-2a). This area of Ithaca is characterized by its flat topography and proximity to South Hill, allowing for its sloped face and northwestern edge of the Site to be visible. Moving left to



Figure 5.10-2a: Existing view of Site from Wegman's Parking Lot (WPD)



Figure 5.10-2b: Viewshed analysis from Meadow Street / Wegman's Parking Lot (WPD)

right in the middle ground, visible contextual buildings include two brick buildings of the Meadow Court Inn, a single-family home, Rite Aid, and a little further beyond, a 10-story apartment building.

From this viewpoint, the existing buildings of the former Morse Chain Factory on the Site sit approximately mid-slope along South Hill. A majority of the existing buildings are fully to partially visible from this viewpoint (Figure 5.10-2b). Buildings at the edges of the core are screened by either the upper canopies of vegetation in the foreground, or vegetation on site. In other cases, some existing buildings in the foreground on the Site screen aspects of buildings beyond. The smoke stack is also visible from this location and is a dominant vertical feature of the Site, while buildings in the core are dominant horizontal features.

5.10.1.1.2 Proposed View 1

As illustrated in Figure 5.10-2c, View 1 offers visibility of the northwest façades of the existing and proposed structures. Proposed development on the North end of the Site (Existing and Proposed Buildings in CW3; left of the image) maintains the same height as Building 24, continuing the horizontality of the existing structures and Site across the landscape. The fenestration of these proposed structures extend the same rhythm and character as the existing structures. The extension of the Site's urban form knits the existing structures into the surrounding area, allowing the Site to have greater connectivity to its surroundings rather than being a large void in the fabric of the City and Town.

Along the crest of the visible area of the hill, or the upper right portion of the image, is another zone of proposed development (CW3) located along State Route 96B on the eastern area of the Site. The proposed structures, oriented vertically, step along the topography of the Site, appearing to be embedded into the hillside. The rhythm of fenestration of the proposed structures also extends from the existing buildings on Site, maintaining the same architectural characteristics throughout the Site.



Figure 5.10-2c: Proposed View from Meadow Street / Wegman's Parking Lot (CJS)

5.10.1.2 View 2: Route 13 Southbound mid-slope looking South

5.10.1.2.1 Existing View 2

This viewpoint on Route 13 Southbound, mid-slope, looking south, provides a panoramic view of South Hill (Figure 5.10-3a). From a viewpoint over 3 miles away, the entire Site is in view. This State Road is characterized as one of the most heavily travelled roads in Ithaca, and is regarded as an entry point into Ithaca, particularly from the airport. The existing views are largely dominated by trees along the roadway's edge, the southeastern shoreline of Cayuga Lake with Stewart Park, the Boynton Middle School and Ithaca High School campus, including athletic fields, and other associated structures in the foreground with a tree line as a backdrop to the Park; the Site sits in the mid-ground, nestled mid-slope into South Hill among other taller buildings downtown, down-slope from the Site, such as Hotel Ithaca and Hilton Garden Inn; and Ithaca College and the crest of South Hill sit in the background.

This viewpoints' sight line elevation is almost in line with the elevation of the Site on South Hill as drivers descend East Hill along the edge of Cayuga Lake. From this angle and viewpoint, northeastern and northwestern facades of the existing Morse Chain Factory buildings are visible. Many of the low-lying buildings are screened by foreground and middle ground vegetation (Figure 5.10-3b). The smokestack is a dominant vertical feature of the Site, while the overall building complex sits along the slope of South Hill in a horizontal manner. Route 96B / Danby Road can be seen in the background of the Site and provides visual separation between Ithaca College and the Site.



Figure 5.10-3a: Existing view of Site from Route 13 Southbound (WPD)

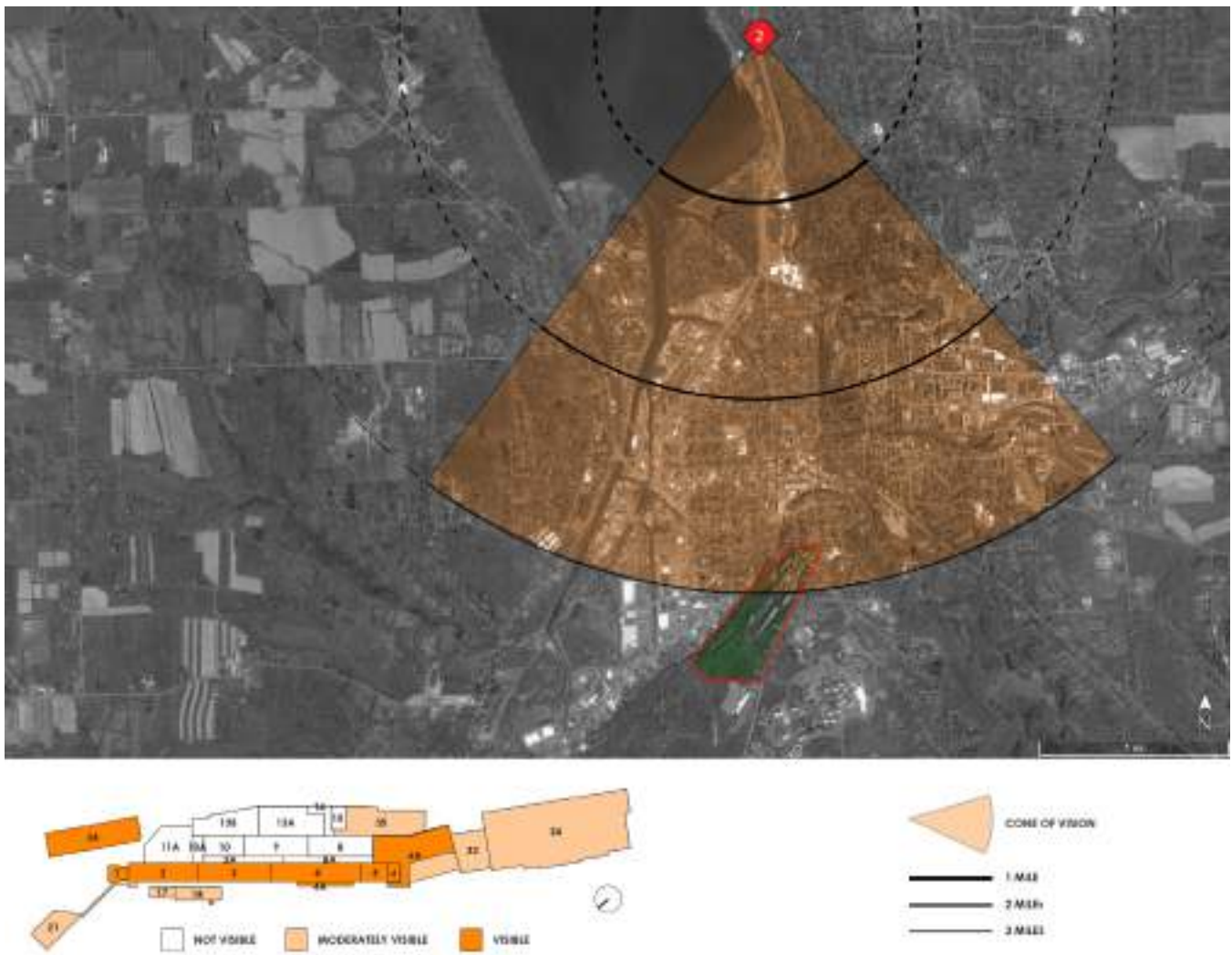


Figure 5.10-3b: Viewshed analysis from Route 13 Southbound (WPD)

5.10.1.2.2 Proposed View 2

As illustrated in Figure 5.10-3c, the proposed development on the North end of the Site (CW3 Proposed Development; center of the image) is fully visible from this location, in addition to existing buildings as described in Subsection 5.10.1.2.1. The proposed development maintains the same height as Building 24, continuing the horizontality of the existing structures and Site across the landscape. The fenestration of these proposed structures extend the same rhythm and character as the existing structures. As was evident with View 1, the extension of the Site’s urban form across the Site knits the existing structures into the surrounding area, allowing the Site to have greater connectivity to its surroundings rather than being a large void in the built fabric of the City and Town. The proposed development complements the rhythm and spacing of buildings from the flats up the north face of South Hill.

Two-thirds of the way up the hill (middle of the image) is another zone of proposed development located along State Route 96B on the eastern area of the Site (CW3). The proposed structures, oriented vertically, step along the topography of the Site, and mimic the form of the other buildings on South Hill that are in this viewshed. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings on Site, maintaining the same architectural characteristics throughout

Two-thirds of the way up the hill (upper right of the image), just to the left of the trees in the foreground, is another Sub Area of proposed development (CW2) on the southern area of the Site. The northwest façades of the northern portion of this proposed development is visible. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings, maintaining the same architectural characteristics throughout the Site. The location of this proposed development further uphill, inline with much of the Ithaca College campus creates a visual connection between the developed and proposed development areas. The proposed developments do not obstruct the expansive view South and West Hills.



Figure 5.10-3c: Proposed View from Route 13 (CJS)

5.10.1.3 View 3: Stewart Park Entrance looking South

5.10.1.3.1 Existing View 3

Moving approximately 1 mile closer to the Site, this existing viewpoint, looking south, is at the vehicular entrance of Stewart Park from Gardner Parkway, and sits at the intersection of Gardner Parkway, Gibbs Drive, and the on and off ramp to Route 13. The Site is partially visible approximately mid-slope along South Hill as one turns south on the park road. The line of sight from this location is lower than the elevation of the Site. From left to right, power lines, signage, the railroad tracks and Route 13, and thick, forested vegetation dominate the view in the foreground, with the Site in the mid-ground almost half way up the slope face of South Hill, and Ithaca College in the background with the crest of South Hill beyond (Figure 5.10-4a). A large portion of the Site is screened by vegetation in the foreground and mid-ground, and screens the site entirely from within the park. Only a few northwestern facades of existing structures are visible on the Site (Figure 5.10-4b). Route 96B / Danby Road is also slightly visible just passed the existing Morse Chain Factory's structures, and creates a visual separation between the Site and Ithaca College.



Figure 5.10-4a: Existing view of Site from Stewart Park Entrance (WPD)

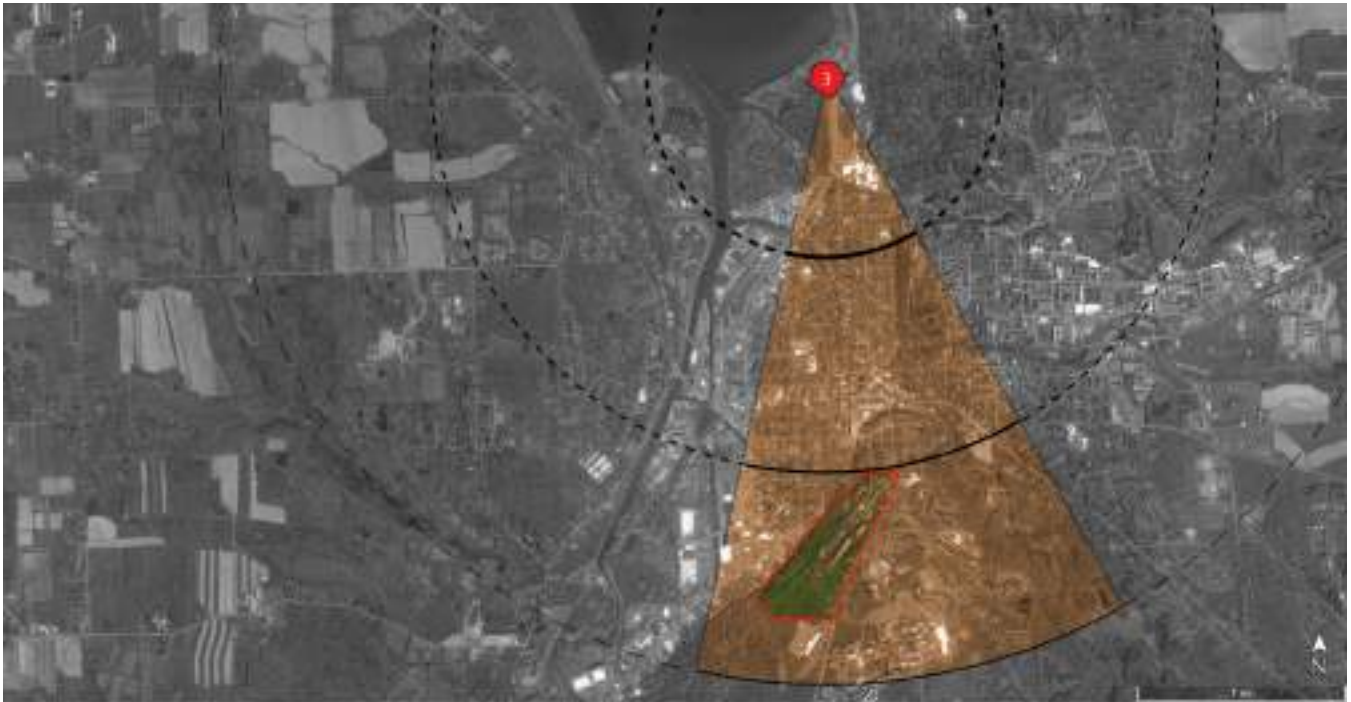


Figure 5.10-4b: Viewshed analysis from Stewart Park Entrance (WPD)

5.10.1.3.2 Proposed View 3

As illustrated in Figure 5.10-4c, the viewshed from this location approximately 2 miles north of the Site, has partially obstructed visibility of the north facades of the existing Buildings 1, 2, and 24 and proposed structures to the north (CW3). Proposed development (CW3) on the North end of the Site (middle of the image) maintains the same height as Building 24, continuing the horizontality of the existing structures and Site across the landscape. The fenestration of these proposed structures extend the same rhythm and character as the existing structures. By continuing the buildings across the Site, it is better integrated into the surrounding developed areas. With existing buildings up slope, including the Ithaca College campus, the Proposed buildings read as a continuation of the character from the Site's context.

Slightly visible through the right side of the foreground trees is a glimpse of the western edge of another zone of proposed development in CW3 located along Route 96B on the eastern area of the Site. The fenestration of these proposed buildings is not visible from this location. The location of these Proposed structures surrounded by the other buildings on South Hill reads as a seamless extension of the built environment in this area of the City and Town.



Figure 5.10-4c: Proposed View from Stewart Park (CJS)

5.10.1.4 View 4: Alan H. Treman State Marine Park looking South

5.10.1.4.1 Existing View 4

This existing viewpoint from the Allen H. Treman State Marine Park on the east side of the inlet is from the Cayuga Waterfront Trail near the vehicular entrance of the Park. Cass Park skating rink is visible in the foreground. The viewshed is at a lower elevation than the Site, which is approximately 2 miles to the south. It overlooks the sport fields with interspersed vegetation in the foreground, the Site and vegetative cover in the mid-ground, approximately halfway up the slope face of South Hill, and Ithaca College and single-family homes dotting the slope face of South Hill in the background. A large portion of the site is screened by vegetation in the foreground and mid-ground (Figure 5.10-5a). From this vantage point, the existing buildings of the former Morse Chain Factory on the Site sit approximately one-half of the way up South Hill. The existing buildings in view are partially screened and framed by foreground vegetation (Figure 5.10-5b). Route 96B / Danby Road is also slightly visible just passed the existing Morse Chain Factory's structures, and creates a visual separation between the Site and Ithaca College. The smokestack is a dominant vertical feature of the Site from this view, while the overall visible building complex sits along the slope of South Hill in a horizontal manner.



Figure 5.10-5a: Existing view of Site from Alan H. Treman State Marine Park (WPD)

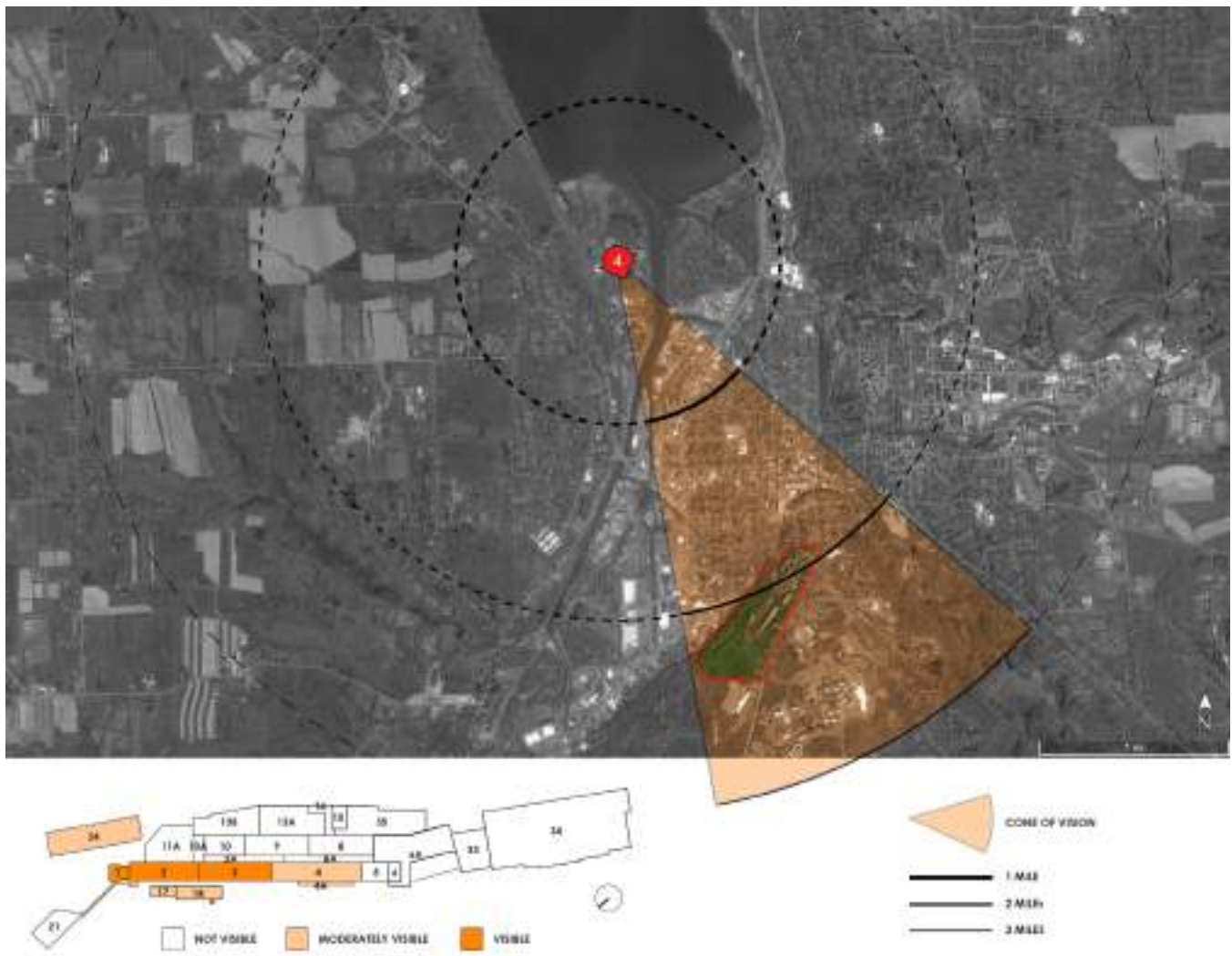


Figure 5.10-5b: Viewshed analysis from Alan H. Treman State Marine Park (WPD)

5.10.1.4.2 Proposed View 4

As illustrated in Figure 5.10-5c, this viewshed offers partially obstructed visibility of the northwest facades of the existing and proposed structures (CW3) on Site. Limited visibility is due to trees and utilities on the south end of the park sports fields and buildings in the midground, as described in Subsection 5.10.1.4.1. Proposed development on the North end of CW3 (lower left of the image) is visible to the left of the pair of evergreen trees. Trees dominate and screen the view of the area surrounding the existing and proposed buildings. The Proposed new development is the same height as existing buildings on the Site. The fenestration of these proposed structures extend the same rhythm and character as the existing structures.

To the west (middle of the image) a portion of proposed development in CW3, located along State Route 96B, is visible. Another section of proposed development (CW2) is visible to the west of the row of trees in the foreground (right of the image). Similar materials between the existing and proposed buildings enable the proposed development to blend into the viewpoint. The fenestration of these zones of proposed development continues the same rhythm and character as the existing structures on the Site.



Figure 5.10-5c: Proposed View from Alan H. Treman State Marine Park (CJS)

5.10.1.5 View 5: Cass Park looking South

5.10.1.5.1 Existing View 5

Travelling slightly south, across Taughannock Boulevard, this viewpoint is from the vehicular entrance to Cass Park. The viewshed looks across Taughannock Boulevard and the Cayuga Inlet onto South Hill. The sight line from this location is lower than the elevation of the Site. Vegetation in the foreground frames the view to the Site. The City of Ithaca's Department of Public works is in the mid-ground with vegetative cover that screens parts of the Site, which is visible approximately halfway up the slope face of South Hill. In the background, Ithaca College is seen above the Site with single-family homes dotting the slope face of South Hill. Many areas of the Site are screened by vegetation in the foreground and mid-ground (Figure 5.10-6a). From this viewpoint, the existing buildings of the former Morse Chain Factory sit approximately two-thirds of the way up South Hill. A majority of the existing buildings on the Site are in view, and are also partially screened by this vegetation (Figure 5.10-6b). Route 96B / Danby Road is also slightly visible just passed the existing Morse Chain Factory's structures, and creates a visual separation between the Site and Ithaca College. The smokestack is a dominant vertical feature of the Site from this view, while the overall visible building complex sits horizontally across the hill.



Figure 5.10-6a: Existing view of Site from Cass Park Entrance (WPD)

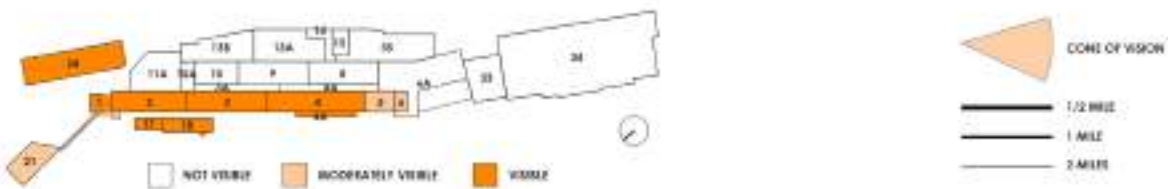


Figure 5.10-6b: Viewshed analysis from Cass Park Entrance (WPD)

5.10.1.5.2 Proposed View 5

As illustrated in Figure 5.10-6c, this viewshed, showing the Site approximately 2 miles to the south, provides a full view of the northwest facades of existing buildings as described in Subsection 5.10.1.5.1. Proposed development on the North end of CW3 (left of the image) is somewhat visible through the evergreen trees in the foreground. The proposed development is the same height as the buildings on the Site to the south. The fenestration of these proposed structures extend the same rhythm and character as the existing structures.

To the south (right of the image) another zone of proposed development in CW3 located along Route 96B is visible. This proposed development is fully visible from this location, as the branches of one evergreen tree and one lamppost minimally screen the view. As described in previous view, the horizontal alignment and fenestration of this proposed development mimics the existing and proposed structures on the Site lower down the slope.



Figure 5.10-6c: Proposed View from Cass Park (CJS)

5.10.1.6 View 6: South Cayuga Street looking South

5.10.1.6.1 Existing View 6

This existing view from South Cayuga Street is halfway down the road, southbound, between Green and Clinton Streets. The viewshed looks up the street onto South Hill, and is located at a lower elevation to the Site, which is approximately 0.5 miles to the south. Street trees and buildings in the foreground consisting of the Tompkins Public Library to the immediate left, Cayuga Street Garage further beyond, and Hotel Ithaca to the right, frame the view to the Site. South Cayuga Street slopes upwards towards the Site in the mid-ground, with vegetative cover screening parts of the Site, which is situated at almost the top of the slope face of South Hill from this vantage point. Dense vegetation in the background is seen just beyond the Site (Figure 5.10-7a). Most of the Site is blocked by the urban elements in the foreground, with the visible existing buildings screened by vegetation in the foreground and mid-ground (Figure 5.10-7b). The smokestack is a dominant vertical feature of the Site from this view, while the visible building complex sits horizontally at the top of the road's crest.



Figure 5.10-7a: Existing view of Site from South Cayuga Street (WPD)

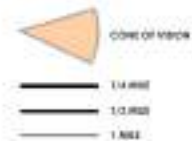


Figure 5.10-7b: Viewshed analysis from South Cayuga Street (WPD)

5.10.1.6.2 Proposed View 6

As illustrated in Figure 5.10-7c, this viewshed contains a narrow, framed view of the west side of the center of existing buildings described in Subsection 5.10.1.6.1. The penthouse addition on the visible existing buildings is also seen from this location.

To the south (top of the image) two zones of proposed development, CW3 located along Route 96B and CW2 located along Route 96B and on the southern area of the Site, are visible. The visibility of this proposed development from this location is partially obscured by the Cayuga Street Garage and the smokestack on the left. The upper two floors of this area of proposed development rise above the crest of South Hill. Trees near the top of South Hill and street trees on the west side of South Cayuga Street largely obscure the middle section of the proposed development towards the south. This area is located further downslope from Route 96B and from this angle does not rise above the crest of the hill. The remainder of the southern portion of the Site is fully obscured by the Hotel Ithaca, as the top floor of this building rises above the crest of South Hill. The horizontal alignment and fenestration of this proposed development mimics the existing structures on the Site. The placement and varying height of proposed development provides a visual break, reflecting the form that exists between the buildings in the foreground resulting from the alignment of South Cayuga Street.



Figure 5.10-7c: Proposed View from South Cayuga Street (CJS)

5.10.1.7 View 7: East Hill Cornell University looking South

5.10.1.7.1 Existing View 7

This existing viewpoint from Cornell University, East Hill, and the end of Central Avenue and at the top of Libe Slope, looking southwest, provides a panoramic view of South Hill (Figure 5.10-8a). Vegetation in the foreground screens and frames the Site in the mid-ground, tucked mid-slope up South Hill as the lower-sitting structures among other visible buildings further upslope from the Site. Ithaca College and the crest of South Hill are in the background.

Located approximately 2 miles from the Site, this viewpoints' sight line elevation is higher than the elevation of the Site, creating the ability to see the roof lines of the existing structures and the landscape beyond the Site. From this angle and viewpoint, northeastern and northwestern facades of the existing Morse Chain Factory buildings are visible. Many of the low-lying and southerly-located buildings are screened by foreground and middle ground vegetation (Figure 5.10-8b). The smokestack is a dominant vertical feature of the Site, while the overall building complex sits along the slope of South Hill in a linear manner as it recesses into the background. Route 96B / Danby Road can be seen to the left of the Site and provides visual separation between Ithaca College and the Site.



Figure 5.10-8a: Existing view of Site from Cornell University, East Hill (WPD)

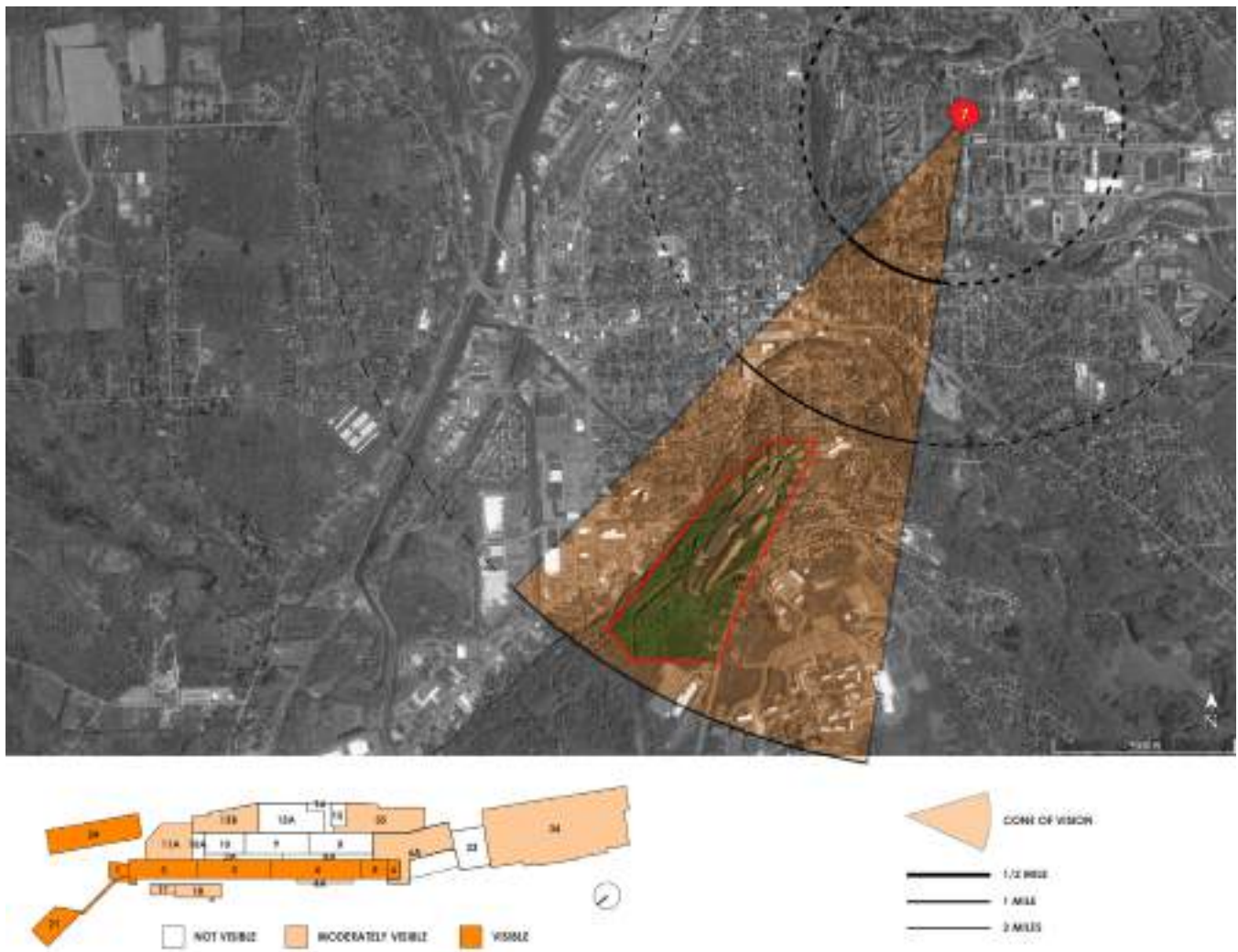


Figure 5.10-8b: Viewshed analysis from Cornell University, East Hill (WPD)

5.10.1.7.2 Proposed View 7

This viewshed includes views of existing buildings in CW3 and CW4, as described in Subsection 5.10.1.7.1. As illustrated in Figure 5.10-8c, trees in the foreground frame a view of the Site, with proposed new development in CW3 on the north end of the Site partially screened by trees in the foreground. The fenestration and horizontal alignment of the proposed development mimics the existing structures and topography on Site.

To the south (top of the image) another zone of proposed development, CW2 located along Route 96B and on the southern area of the Site is visible. This proposed development is three-quarters of the way up South Hill. Existing trees in the foreground frame the view, with some screening provided towards the north end of the development. The fenestration and horizontal alignment of this proposed development mimics the existing on-site structures seen in the midground. The layout of the proposed development also reflects the existing building complex. The proposed development is nestled into the gentle, flatter terrain of South Hill, following and adapting to the slope. The location of this proposed development is in line with the existing development to the east on South Hill with steeper areas on Site to remain forested.



Figure 5.10-8c: Proposed View from East Hill Cornell University (CJS)

5.10.1.8 View 8: Danby Road looking North

5.10.1.8.1 Existing View 8

Located less than 0.5 miles south from the Site, this view from Danby Road/Route 96b, northbound, mid-slope, looking north, provides a panoramic view of Cayuga Lake and East Hill (Figure 5.10-9a). This State Road is characterized as a heavily travelled road in Ithaca, and is at times regarded as an entry point into Ithaca, particularly from South Hill. Listed on Town of Ithaca's Scenic Resources, the existing view is largely dominated by expansive views of Cayuga Lake and East Hill. A densely wooded tree line sits in the foreground, screening views in the middle and background. The southern facades of the South Hill Business Campus can be seen through the dense vegetation in the mid-ground, and further beyond, Route 13 as a visual extension of the road, with Cayuga Lake, East Hill, and Lansing in the background. This viewpoints' sight line elevation is higher than the elevation of the Site, and almost directly in line with Lansing as drivers descend South Hill. From this angle and viewpoint, the existing Morse Chain Factory buildings and Site are not visible due to the dense vegetation and the turn in the road (Figure 5.10-9b).



Figure 5.10-9a: Existing view of Site from Danby Road, Northbound (WPD)



Figure 5.10-9b: Viewshed analysis from Danby Road, Northbound (WPD)

5.10.1.8.2 Proposed View 8

As illustrated in Figure 5.10-9c, this view does not offer any visibility of the existing or proposed structures. As described in Subsection 5.10.1.8.1, this viewpoint is at a higher elevation than the Site, which combined with the topography and existing vegetation, fully obscure the Site. This view is listed on the Town of Ithaca's Scenic Resources and is not impacted by the Project.



Figure 5.10-9c: Proposed View from Danby Road (CJS)

5.10.1.9 View 9: South Aurora Street looking Northwest

5.10.1.9.1 Existing View 9

This existing view from South Aurora Street is just passed the entrance along the road, southbound, as the street curves from south to southwest. The viewshed looks across the northeastern edge of the Site. Existing trees and vegetation in the foreground screen large portions of the Site from this angle, and as one drives up the road, views of the Site are intermittently screened by dense vegetation and single-family homes. In the mid-ground, the top two stories of the southeastern and northeastern facades of Building 24 are visible, but screened by the foreground vegetation, and appear close to the road. The lower stories of Building 24 are hardly visible due to dense vegetation and the building siting lower in elevation than the road (Figure 5.10-10a). Portions of Downtown and West Hill are seen just beyond the Site in the background (Figure 5.10-10b).



Figure 5.10-10a: Existing view of Site from South Aurora Street, looking Northwest (WPD)



Figure 5.10-10b: Viewshed analysis from South Aurora Street, looking Northwest (WPD)

5.10.1.9.2 Proposed View 9

As illustrated in Figure 5.10-10c, this viewshed contains the eastern border of the Site, and is filled by portions of the proposed buildings and vegetation in CW3. In comparison to the existing view (Figure 5.10-10a), Building 24 and the view of West Hill are behind this proposed development. The proposed view includes adjacent landscape plantings and a pedestrian sidewalk.



Figure 5.10-10c: Proposed View from South Aurora Street (CJS)

5.10.1.10 View 10: View Across Lake looking North

5.10.1.10.1 Existing View 10

This view from Danby Road/Route 96b, northeast bound, mid-slope, looking north, provides a panoramic view of Cayuga Lake and West and East Hill (Figure 5.10-11a). This State Road is characterized as a heavily travelled road in Ithaca, and is at times regarded as an entry point into Ithaca, particularly from South Hill. Listed on Town of Ithaca's Scenic Resources, the existing view is largely dominated by expansive views of Cayuga Lake. The viewpoint is located just passed the most southerly vehicular entrance to the Site, Morse Chain Road. A densely wooded tree line sits in the foreground, screening views in the middle and background. Cayuga Lake can be seen in the background through the dense vegetation, with West and East Hills edging the Lake. This viewpoints' sight line elevation is higher than the elevation of the Site and almost directly in line with Lansing, as drivers descend South Hill. From this angle and viewpoint, the existing Morse Chain Factory buildings are tucked downslope from the road and are not visible due to this topographic condition. At this point, the road runs along the Site boundary, and the dense vegetation of its street frontage is visible (Figure 5.10-11b).



Figure 5.10-11a: Existing view of Site from Danby Road/Route 96b towards Cayuga Lake (WPD)



Figure 5.10-11b: Viewshed analysis from Danby Road/Route 96b towards Cayuga Lake (WPD)

5.10.1.10.2 Proposed View 10

As illustrated in Figure 5.10-11c proposed buildings in CW3 along Danby Road/Route 96B will be highly visible. The elevation of the proposed buildings follows the slope of South Hill, as can be seen by the roofline of the building in the middle ground stepping down to the left. The proposed development is below the existing surrounding trees. From this viewpoint, the view of Cayuga Lake and West Hill are fully obscured, however the view of East Hill is maintained.



Figure 5.10-11c: Proposed View Across Lake (CJS)

5.10.1.11 View 11: Taughannock Boulevard looking South

5.10.1.11.1 Existing View 11

This view from Taughannock Boulevard, southbound, mid-slope, looking south, provides a framed view of a segment of South Hill (Figure 5.10-12a) and is located over 3 miles from the Site. This State Road is characterized as a moderately travelled road in Ithaca, and can be regarded as one entry point into Ithaca from the Cayuga Lake shore frontage of West Hill. Listed on Town of Ithaca's Scenic Resources and part of the Cayuga Lake Scenic Byway, the existing view is largely dominated by views of Cayuga Lake and South Hill. Densely wooded tree lines occupy both sides of the road in the foreground and mid-ground, screening views beyond the dense vegetation. The vistas towards South Hill from this viewpoint open as the road and tree line descend. This viewpoints' sight line elevation is higher than the elevation of the Site and directly in line with Ithaca College. From this angle and viewpoint, few of the existing Morse Chain Factory buildings are visible. A majority of remaining existing structures are screened by foreground and middle ground vegetation (Figure 5.10-12b). Route 96B / Danby Road can be seen upslope from the existing structures, and provides visual separation between Ithaca College and the Site.



Figure 5.10-12a: Existing view of Site from Taughannock Boulevard, Southbound (WPD)

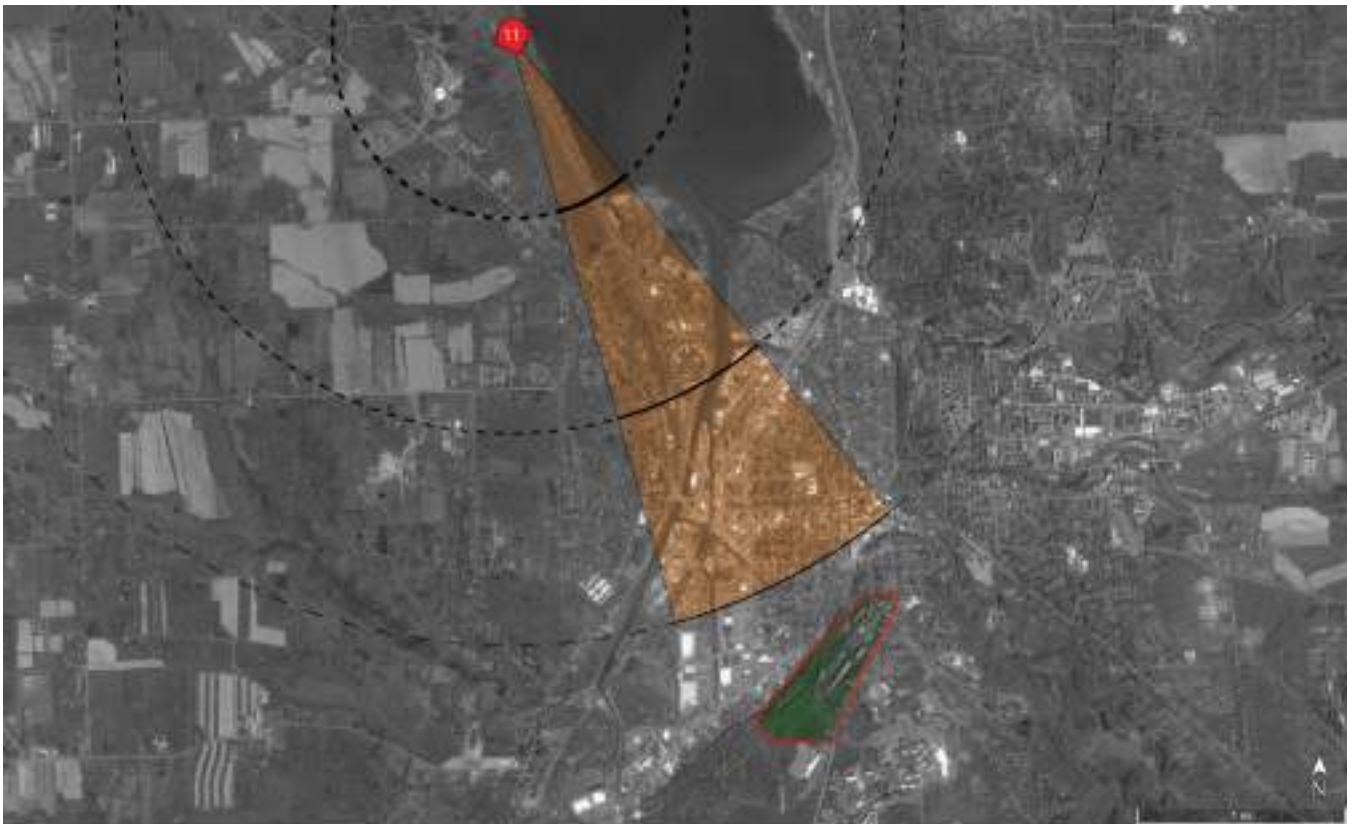


Figure 5.10-12b: Viewshed analysis from Taughannock Boulevard, Southbound (WPD)

5.10.1.11.2 Proposed View 11

As illustrated in Figure 5.10-12c, the heavy vegetation on either side of the road frames this northeasterly view of the Site. Proposed development as additions on the existing building complex is not visible.

To the south (middle of the image) a zone of proposed development in CW3 along Danby Road/Route 96B is visible. This proposed development is approximately half-way up South Hill, downslope from Route 96B. The existing trees in the fore and midground frame the view and provide screening of the north and south areas of these proposed buildings. The fenestration and horizontal alignment of this proposed development mimics the existing structures seen on the Site lower down the hill. The proposed development is nestled into the hill and gently follows the existing topography. This proposed development knits together the existing buildings on Site and the Ithaca College campus in the background. The vegetated slope rising uphill from Ithaca College to the crest of South Hill is visible.



Figure 5.10-12c: Proposed View from Taughannock Boulevard (CJS)

5.10.1.12 View 12: Cliff Street looking South

5.10.1.12.1 Existing View 12

This existing view from Cliff Street and the parking lot of the Black Diamond Trail entrance, mid-slope, looking southeast, is approximately 2.5 miles northwest of the Site and provides a panoramic view of South Hill (Figure 5.10-13a). This street is characterized as a moderately travelled road in Ithaca, and can be regarded as an entry point into Ithaca from West Hill. The western end of downtown Ithaca and the northern slope-face of South Hill largely dominate the existing views. A semi-dense tree line sits and descends in foreground with the Ithaca Children's Garden and the Cayuga Inlet at the base of the slope. The Site is in the mid-ground, tucked mid-slope into South Hill among single-family homes down-slope, cross-slope, and up-slope from the Site, while Ithaca College and the crest of South Hill are seen in the background.

This viewpoints' sight line elevation is directly in line with the elevation of the Site as drivers descend West Hill. From this angle and viewpoint, northeastern and northwestern facades of the existing Morse Chain Factory buildings are visible. Most of the existing buildings are screened by foreground vegetation, especially many of the low-lying and southerly buildings on the Site (Figure 5.10-13b). The smokestack, although also screened by foreground vegetation, is a dominant vertical feature of the Site, while the overall building complex sits along the slope of South Hill in a horizontal manner. Route 96B / Danby Road can be seen in the background of the Site and provides visual separation between Ithaca College and the Site.



Figure 5.10-13a: Existing view of Site from Cliff Street / Black Diamond Trail entrance, Southeast (WPD)

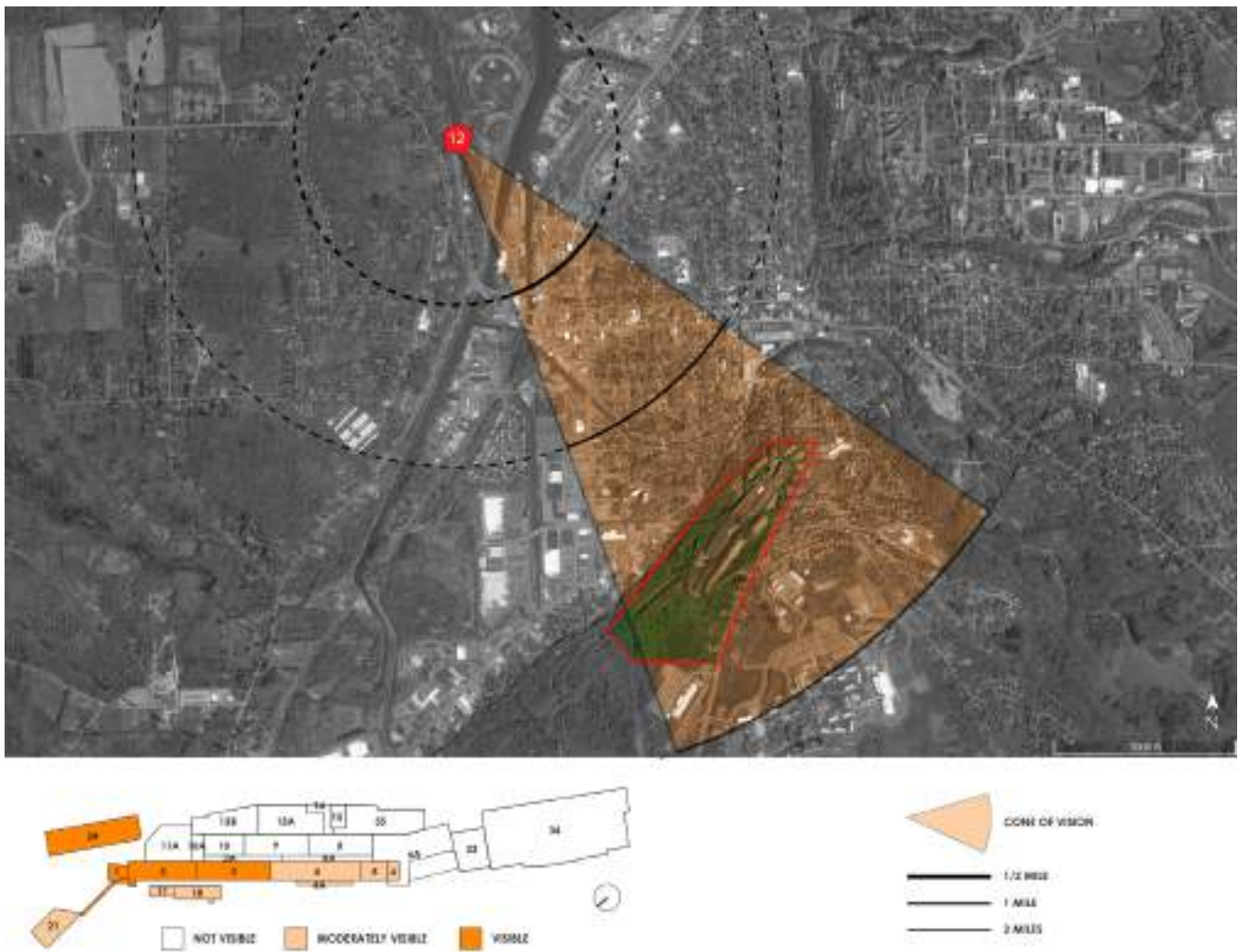


Figure 5.10-13b: Viewshed analysis from Cliff Street / Black Diamond Trail entrance, Southeast (WPD)

5.10.1.12.2 Proposed View 12

As illustrated in Figure 5.10-13c, the semi-dense tree line in the foreground provides moderate screening of the existing buildings, as characterized in Subsection 5.10.1.12.1. Proposed additions to these buildings in CW3 are also visible. The proposed development of existing buildings and new development in CW3 on the north end of the Site (left of the image) continues the horizontality of the existing structures and Site across the landscape. The proposed development sits three-quarters up the northern slope of South Hill, below the crest of the hill. The fenestration of these proposed structures extend the same rhythm and character as the existing structures. The extension of the Site's urban form knits the existing structures into the surrounding area, allowing for greater connectivity to its surroundings rather than being a large void in the built fabric of the City and Town.

To the south (right of the image) is another zone of proposed development, CW2, located along Route 96B on the eastern and southern areas of the Site. This proposed development is minimally visible through the dense foreground vegetation. The proposed structures, oriented horizontally, step down the slope following the topography of the Site and mimic the form of the other buildings on South Hill that are in this viewshed. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings, maintaining the same architectural characteristics throughout the Site. In the background the Ithaca College campus and vegetated upper slope and crest of South Hill are visible.



Figure 5.10-13c: Proposed View from Cliff Street (CJS)

5.10.1.13 View 13: Hector Street looking South, Southbound

5.10.1.13.1 Existing View 13

Approximately 2.5 miles northwest of the Site, this view from Hector Street, southbound, mid-slope, looking south, provides a framed view of a segment of South Hill (Figure 5.10-14a). This road is characterized as a moderately travelled road in Ithaca, and can be regarded as one entry point into Ithaca from the most western end of West Hill. The existing view is largely dominated by views of South Hill and beyond. Densely wooded tree lines occupy both sides of the road in the foreground and mid-ground, screening views beyond the tree line. The vistas towards South Hill from this viewpoint open as the road and tree line descend. This viewpoints' sight line elevation is higher than the elevation of the Site and directly in line with Ithaca College. From this angle and viewpoint, several northwestern facades of the existing Morse Chain Factory buildings are visible. Most of the existing visible buildings are partially screened by foreground vegetation, especially many of the low-lying, northern and southern buildings on the Site. The remaining existing structures are screened by foreground and middle ground vegetation (Figure 5.10-14b). The smokestack is a dominant vertical feature of the Site, while the overall visible building complex sits along the slope of South Hill in a horizontal manner. Route 96B / Danby Road can be seen upslope from the existing structures, and provides visual separation between Ithaca College and the Site.



Figure 5.10-14a: Existing view of Site from Hector Street, Southbound (WPD)



Figure 5.10-14b: Viewshed analysis from Hector Street, Southbound (WPD)

5.10.1.13.2 Proposed View 13

As illustrated in Figure 5.10-14c and as characterized in Subsection 5.10.1.13.1, the existing buildings and proposed development in CW3 are visible mid-slope. Existing foreground vegetation and utilities moderately screen this area. Proposed development in the north end of CW3 (left of the image) is only slightly visible from this location. The fenestration of these proposed structures extend the same rhythm and character as the existing structures. The extension of the Site's urban form across the Site also knits the existing structures into the surrounding area.

To the south (right of the image) another zone of proposed development in CW3 located along Route 96B on the eastern area of the Site is visible. The northern edge of this proposed development is slightly visible through the vegetation on the right of the image. The portion of proposed structures, oriented vertically, step along the topography of the Site, and mimic the form of the other buildings on South Hill that are in this view shed. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings on Site, maintaining the same architectural characteristics throughout the Site.

The existing view of the vegetation continuing up the slope to the crest of South Hill, with distant hills located in the background are maintained.



Figure 5.10-14c: Proposed View from Hector Street (CJS)

5.10.1.14 View 14: West Haven looking Southeast

5.10.1.14.1 Existing View 14

Located approximately 3 miles east of the Site, this viewpoint from West Haven Preserve, east of Eco Village, looking southeast, provides a panoramic view of the upper portions of East and South Hills and the hills beyond (Figure 5.10-15a). Listed on Town of Ithaca's Scenic Resources, the existing view is largely dominated by expansive views of East and South Hill. A densely wooded tree line sits in the middle and foreground, screening views in the middle and background. Ithaca College is screened, but visible in the background, to the right of the viewshed, with large spanning vistas of the landscape beyond. This viewpoints' sight line elevation is slightly above the elevation of the Site, which is seen through the opening of the trees at the center of the view. From this angle and viewpoint, several northwestern facades of the existing Morse Chain Factory buildings are slightly visible. Most of the existing visible buildings are partially screened by foreground vegetation, especially many of the low-lying, and southern buildings on the Site. The remaining existing structures are screened by foreground and middle ground vegetation (Figure 5.10-15b). The smokestack is a dominant vertical feature of the Site, while the overall visible building complex sits horizontally on South Hill.



Figure 5.10-15a: Existing view of Site from West Haven Preserve looking Southeast (WPD)

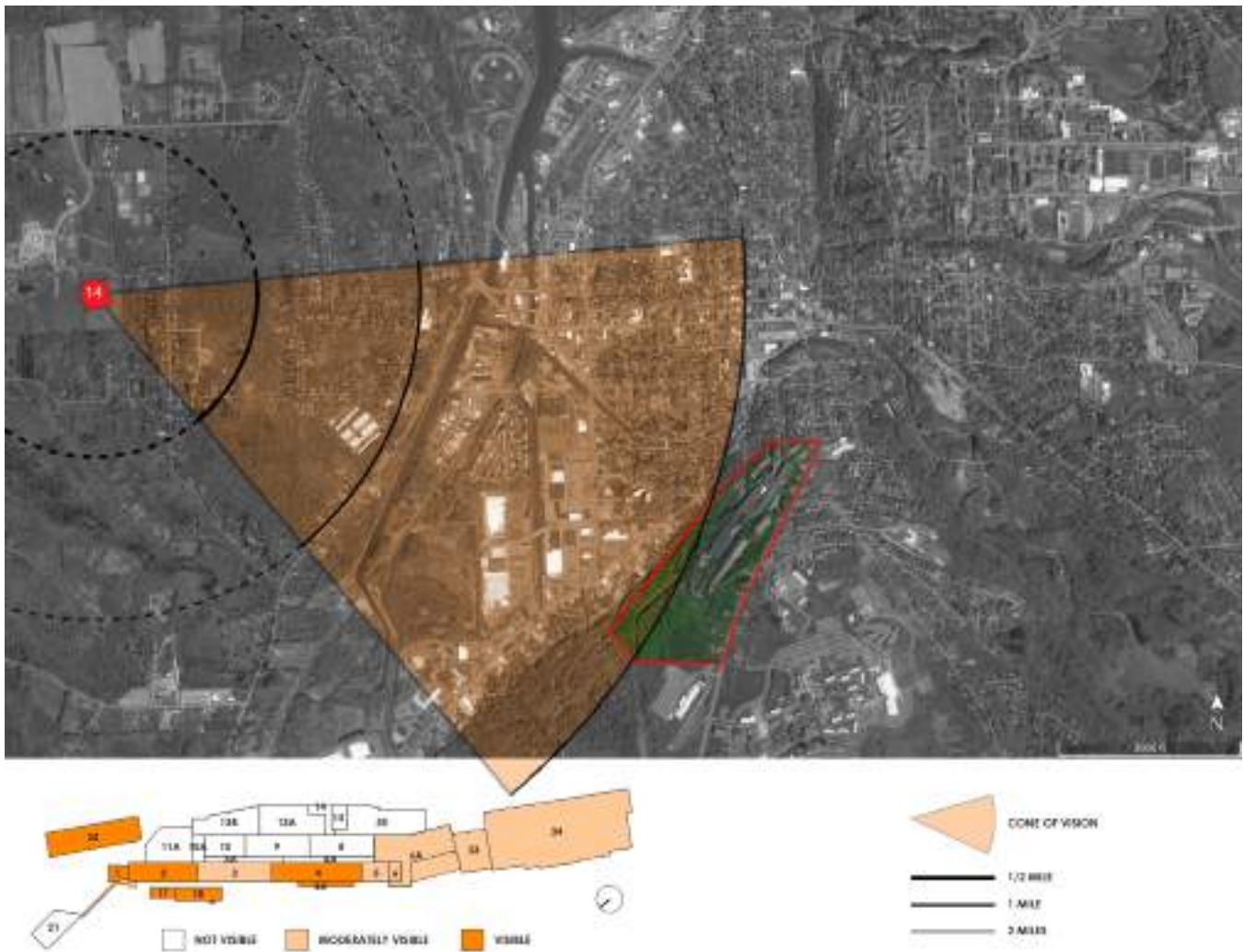


Figure 5.10-15b: Viewshed analysis from West Haven Preserve looking Southeast (WPD)

5.10.1.14.2 Proposed View 14

As illustrated in Figure 5.10-15c and as described in Subsection 5.10.1.14.1, the northwest facades of existing buildings are visible. Proposed development in CW3 on the north end of the Site and proposed additions to existing buildings are moderately visible. Existing vegetation in the middle ground screens much of the proposed development. While proposed structures are screened, their fenestration is visible through the leafless deciduous trees in the winter months. On the far north area of the Site the roofline of proposed structures in CW3 peeks above a lower section of the middle ground vegetation. The elevation of this building, lower than the rest of the buildings on Site, echoes the surrounding buildings seen on South Hill that step down the slope towards downtown.

To the south (right of middle of the image) is another zone of proposed development in CW3 located along Route 96B on the eastern area of the Site. The east side of this proposed development is visible above and through the canopy of the vegetation in the midground. The proposed structures, oriented vertically, step down along the topography, reminiscent of the surrounding existing buildings on South Hill. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings on Site, maintaining the same architectural characteristics throughout the Site. The location of this proposed development close to the Ithaca College campus creates a visual connection between the developed and proposed development areas. Visible in the background are the Ithaca College campus, other buildings and developments on South and East Hill, and the vegetated slopes and crests of South and East Hills and other hills in the far distance.



Figure 5.10-15c: Proposed View from West Haven (CJS)

5.10.1.15 View 15: Sheffield Road, South of Mecklenburg, looking Southeast

5.10.1.15.1 Existing View 15

Located over 3.5 miles southeast of the Site, this view from Sheffield Road, south of Mecklenburg, north bound, looking southeast, provides a panoramic view of the upper portions of East and South Hills and beyond (Figure 5.10-16a). Listed on Town of Ithaca's Scenic Resources, the existing view is largely dominated by expansive views of East and South Hill. A densely wooded tree line sits in the foreground, screening views in the middle ground. Ithaca College is visible in the middle to background, with large spanning vistas of the landscape beyond. This viewpoints' sight line elevation is directly in line with the elevation of Ithaca College and the crest of South Hill. From this angle and viewpoint, the existing Morse Chain Factory buildings are tucked downslope to the left of Ithaca College, and are not visible due to this topographic condition and the dense vegetation in the foreground (Figure 5.10-16b).



Figure 5.10-16a: Existing view of Site from Sheffield Road looking Southeast (WPD)

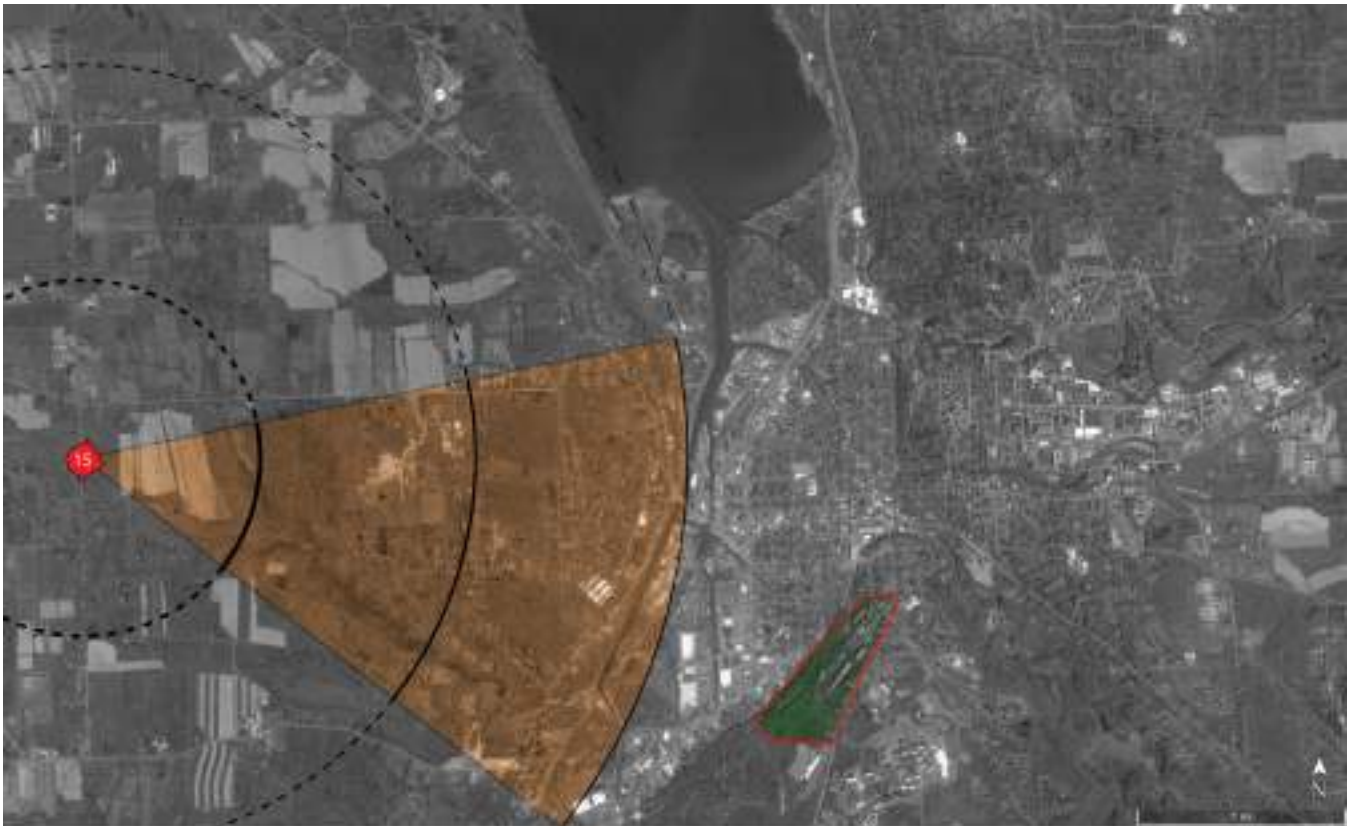


Figure 5.10-16b: Viewshed analysis from Sheffield Road looking Southeast (WPD)

5.10.1.15.2 Proposed View 15

As illustrated in Figure 5-10.16c, this panoramic view of the upper portions of East and South Hills and beyond does not include any of the existing or proposed developments on the Site. Topography and existing dense vegetation in the foreground mask any visibility of the Site. This view is listed on the Town of Ithaca's Scenic Resources and therefore will not be impacted by the Project.



Figure 5.10-16c: Proposed View from Sheffield Road (CJS)

5.10.1.16 View 16: Upper Botswick Road, Eastbound looking Northeast

5.10.1.16.1 Existing View 16

Located over 2.5 miles east of the Site, this view from Upper Botswick Road, eastbound, looking northeast, provides a panoramic view of the upper portions of East and South Hills, and distant hills beyond (Figure 5.10-17a). Listed on Town of Ithaca's Scenic Resources, the existing view is largely dominated by expansive views of East and South Hill. A densely wooded tree line sits in the foreground, screening views to the middle ground. Ithaca College is visible in the middle to background to the right, with large spanning vistas of the landscape beyond. The Site sits at the center of the viewpoint, and at the base of the visible portion of South Hill. This viewpoints' sight line elevation is directly in line with the elevation of Ithaca College and the crest of South Hill, while the Site's elevation is lower. From this angle and viewpoint, several northwestern facades of the existing Morse Chain Factory buildings are visible. Most of the existing visible buildings are partially screened by foreground vegetation, especially many of the low-lying, northern and southern buildings on the Site. The remaining existing structures are screened by foreground and middle ground vegetation (Figure 5.10-17b). The smokestack, although also screened by vegetation, is a dominant vertical feature of the Site, while the overall visible building complex sits along the slope of South Hill in a horizontal manner. Route 96B / Danby Road can be seen upslope from the existing structures, and provides visual separation between Ithaca College and the Site.



Figure 5.10-17a: Existing view of Site from Upper Botswick Road, looking Northeast (WPD)

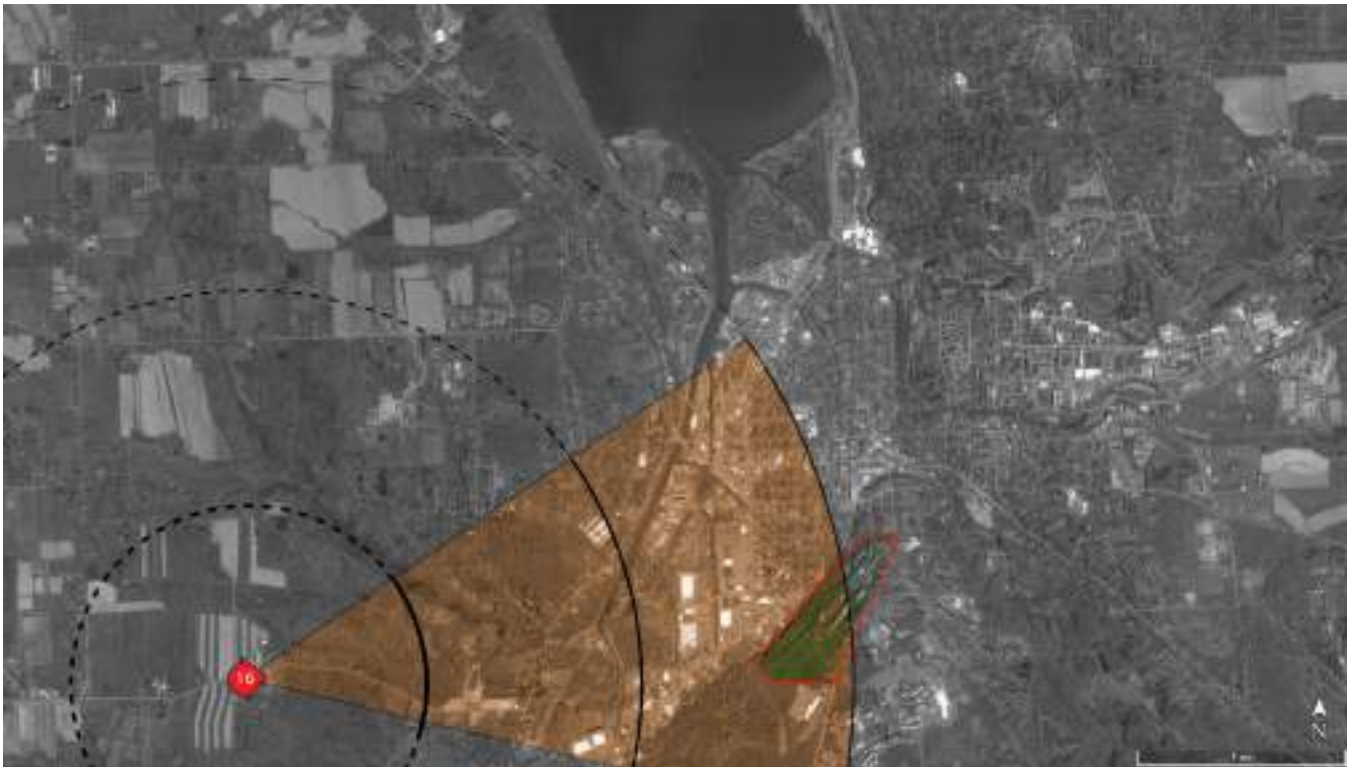


Figure 5.10-17b: Viewshed analysis from Upper Botswick Road, looking Northeast (WPD)

5.10.1.16.2 Proposed View 16

As illustrated in Figure 5.10-17c, the west facades of three clusters of buildings on the Site are visible. On the north side of the Site (left middle of image), partially visible above the tree line are existing buildings as characterized in Subsection 5.10.1.16.1, and proposed additions and new development in CW3. The fenestration of these proposed structures extend the same rhythm and character as the existing structures. The extension of the Site's urban form across the Site also knits the existing structures into the surrounding area.

To the south (middle of the image) is another zone of proposed new development in CW3 located along Route 96B on the eastern area of the Site. The west façade of this proposed development is visible above the canopy of the vegetation in the foreground. The proposed structures, oriented vertically, step up along the topography of the Site. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings on Site, maintaining the same architectural characteristics throughout the Site.

To the south (right of middle of the image) is another zone of proposed new development in CW2 on the southern area of the Site. The west façade of the northern portion of this proposed development is visible above the canopy of the vegetation in the foreground. The southern portion of this proposed development is partially visible through the canopy of the vegetation in the foreground. The rhythm of fenestration of the proposed structures echoes that of the other existing and proposed buildings on Site, maintaining the same architectural characteristics throughout the Site. The location of this proposed development close to the Ithaca College campus creates a visual connection between the developed and proposed development areas. In the background the Ithaca College Campus, crest of South Hill, East Hill and distant hills are visible. The existing view is listed on the Town of Ithaca's Scenic Resources and proposed new structures do not obstruct the expansive view of East and South Hills.



Figure 5.10-17c: Proposed View from Upper Botswick Road (CJS)

5.10.1.17 View 17: East Shore Park looking South

5.10.1.17.1 Existing View 17

This existing view from East Shore Park, approximately 2.5 miles north of the Site on the southeastern coastline of Cayuga Lake, looking south, is largely dominated by Cayuga Lake in the foreground, Stewart Park in the middle ground, with Ithaca College higher in elevation on South Hill in the background (Figure 5.10-18a). Listed on Town of Ithaca's Scenic Resources, the existing view is largely dominated by expansive views of Cayuga Lake and the upper portions of South Hill. The densely wooded areas of Stewart Park, the Fuertes Bird Sanctuary, and the City of Ithaca Golf Course in the middleground screen downtown and the base and lower sections of South Hill. Ithaca College is visible in the background, with larger spanning vistas of the landscape beyond. This viewpoints' sight line elevation is directly in line with the elevation of Stewart Park. From this angle and viewpoint, the existing Morse Chain Factory buildings are tucked downslope below Ithaca College, and are not visible due to this topographic condition and the dense vegetation in the mid-ground (Figure 5.10-18b).



Figure 5.10-18a: Existing view of Site from East Shore Park looking South (WPD)

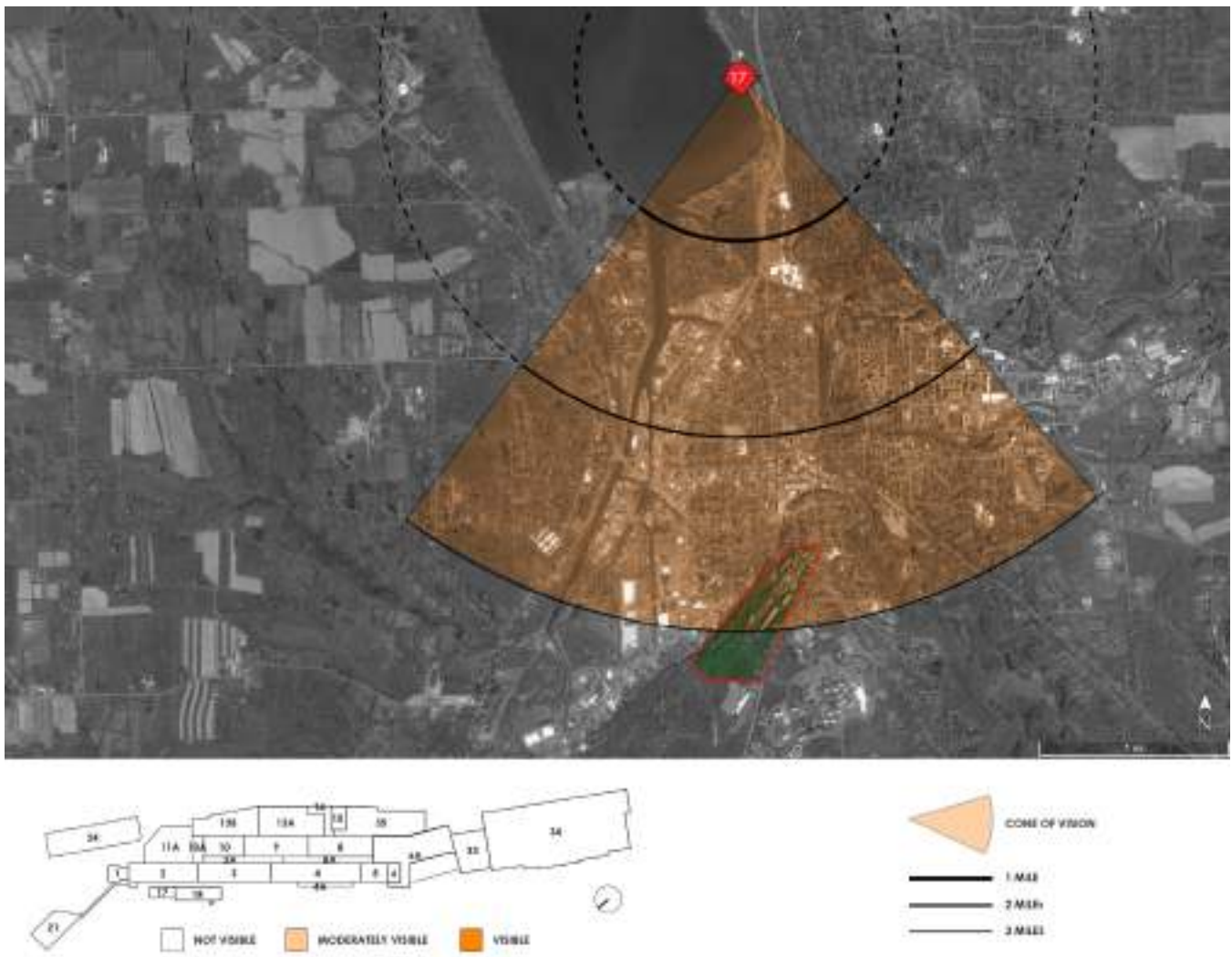


Figure 5.10-18b: Viewshed analysis from East Shore Park looking South (WPD)

5.10.1.17.2 Proposed View 17

As Illustrated in Figure 6.10-18c the viewshed includes Cayuga Lake in the foreground, Stewart Park in the middle ground, and Ithaca College and the crest of South Hill in the background. Due to the topographic conditions and existing dense vegetation none of the existing or proposed buildings on the Site are visible. This view is listed on the Town of Ithaca’s Scenic Resources and will not be affected by the Project.



Figure 5.10-18c: Proposed View from East Shore Park (CJS)

5.10.1.18 View 18: Tutelo Park looking Northeast

5.10.1.18.1 Existing View 18

This view from Tutelo Park, located approximately 2.5 miles southwest of the Site and south of Botswick Road, looking northeast, looks across the Park onto South Hill (Figure 5.10-19a). The existing view is largely dominated by views South Hill. A densely wooded tree line sits in the foreground, screening views in the middle ground, which is also densely forested. Ithaca College is screened and hardly visible in the middle to background to the right of the viewshed. This viewpoints' sight line elevation is at the base of South Hill, below the elevation of Ithaca College and the Site. From this angle and viewpoint, the existing Morse Chain Factory buildings are tucked upwards within densely wooded areas of South Hill, to the left of Ithaca College. The top portion of the smokestack as a visible vertical element is seen at the center of the viewpoint, framed by the branches of the trees in the middle ground. The remainder of the existing structures and Site is not visible due to this topographic condition and the dense vegetation in the foreground (Figure 5.10-19b).



Figure 5.10-19a: Existing view of Site from Tutelo Park looking South (WPD)

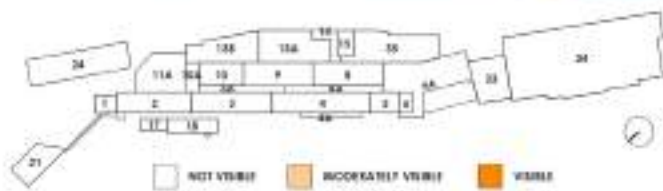


Figure 5.10-19b: Viewshed analysis from Tutelo Park looking South (WPD)

5.10.1.18.2 Proposed View 18

As Illustrated in Figure 6.10-19c, the existing dense tree line in the foreground screens the views of the densely forested midground. The existing trees screen Ithaca College, making it barely visible on the right of the viewshed. With the exception of the top portion of the existing smokestack (middle of the image) none of the existing or proposed buildings are visible due to the topography and dense existing vegetation. Therefore, the Project will not impact this viewpoint.



Figure 5.10-19c: Proposed View from Tutelo Park (CJS)

5.10.1.19 Phase I Elevations

Phase I of the Project is depicted in the Site Plan drawings included in Appendix B2. Phase I includes improvements to Buildings 21 and 24. Buildings 33 and 34 will not have major structural or architectural modifications. Building 21 modifications include new window openings, modifications to entries and other façade improvements. Building 24 also includes similar modifications as well as the construction of an additional story. Figures 5.10-20 and 5.10-21 depict the conceptual building elevations for Buildings 21 and 24.

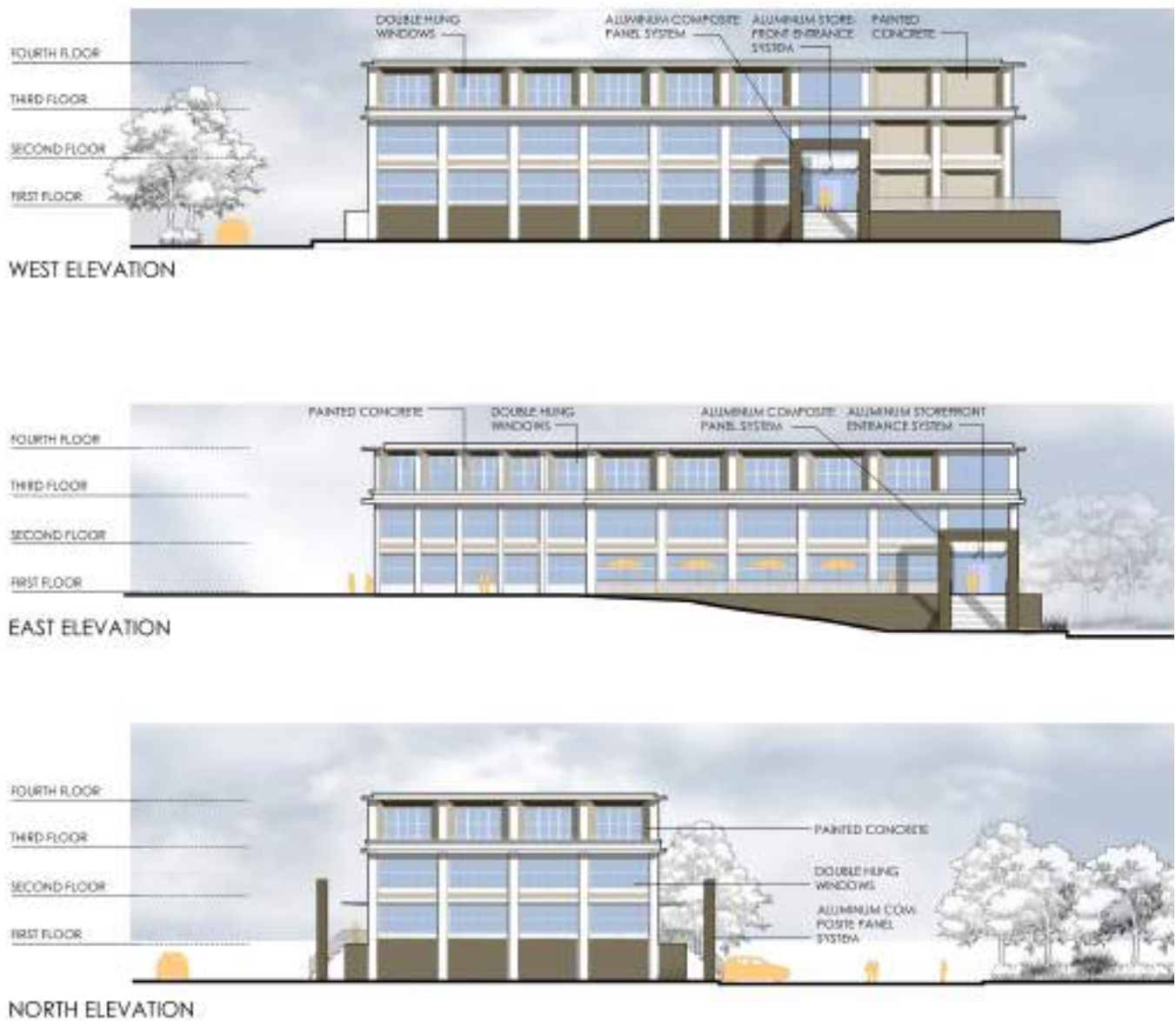


Figure 5.10-20: Building 21 Proposed Elevations (CJS) *

5.10.1.20 Summary of Potential Impacts

The existing Site buildings are, and some proposed new buildings will be, visible from a number of locations throughout the City and Town in varying degrees, as described throughout this Subsection 5.10.1. The visual and aesthetic character of Route 96B, as illustrated in viewsheds 9 and 10, will incur the greatest impacts, as the Project will create a new and vibrant street front. More distant views and views of limited visibility of the Project, such as viewsheds 1, 2, 3, 4, 5, 6, 7, 11, 12, 13 and 14 will have far less impacts, as the proposed new structures relate to and blend with the existing structures from a distance. The Project has no impact to viewsheds 8, 15, 17, and 18 as the Site is not visible from these locations due to topographic conditions and/or vegetation screening the Site.



Figure 5.10-21: Building 24 Proposed Elevations (CJS) *

5.10.2 Mitigation Measures

Mitigation tactics to minimize visual impacts that may result from the Project employed here include strategies such as architectural approaches and themes consistent with the surrounding neighborhood, visual screening and planting/landscaping and, carefully locating components within the Project. The Conceptual Site Layout Plan serves as mitigation.

The Conceptual Site Layout Plan mitigates visual impacts through the careful placement of the proposed structures, which follows existing Site topography and relates to the horizontality of the existing structures and Site across the landscape.

Sub Area CW1, as described in Section 2.7.1, is designated as a Natural Area, which includes the steep slopes on the western side of the Site and will include the Gateway Trail. This Sub Area is highly visible from many viewpoints and will be preserved creating a beneficial impact. The existing vegetation in this area provides some screening of the existing upslope buildings. Designating Sub Area CW1 as a Natural Area mitigates potential impacts from proposed buildings.

The Design Standards (Appendix C2) also specify stylistic aspects of the existing and proposed buildings, directly affecting the visual appearance of the Project. Design Standards propose that new development to be of a similar character with the existing structures thereby minimizing potential visual impacts. For example, the application of architecture strategies such as fenestration of the proposed structures that continue the rhythm and character of the existing structures allows for these new structures to blend in with the existing character of the Site. The Design Standards include detailed limits on the heights of proposed building (different limits for each Sub Area), building setbacks, maximum façade length, and public frontages.

The Project Sponsor will be following LEED ND guidelines, as described in Section 2.5. LEED ND guidelines include compact development, tree-lined and shaded streetscapes, and minimized site disturbance. Following these guidelines is a mitigation measure for visual and aesthetic impacts resulting from the Project.

5.10.3 Alternatives to Proposed Action

Below describes how Alternatives to the Project may impact visual and aesthetic resources.

5.10.3.1 No Action

Impacts to visual and aesthetic resources if No Action were taken are described below.

As described in Section 3.1 No Action, this alternative would result in no change or alteration of the existing physical development by the Project Sponsor. The existing large single structure would continue to be an idle entity occupying a visually accessible and prominent setting on the South Hill hillside of the City and Town of Ithaca.

There would be no visual impact that would occur from a development standpoint, as what exists would largely remain the same. However, there would be a negative impact as the buildings and Site would continue to deteriorate and eventually become consumed by the unmanaged vegetative growth surrounding the existing buildings.

5.10.3.2 Development in Accordance with Existing Zoning

Impacts to visual and aesthetic resources if the Project were to be Developed in Accordance with Existing Zoning is described below.

As described in Section 3.2 Development in Accordance with Existing Zoning, the Project Sponsor would maintain the existing structures with nominal rehabilitation. The existing visual conditions on the Site would largely remain unchanged. However, some buildings may be rehabilitated or upgraded to accommodate industrial uses and approximately 50,000 square feet of new buildings similar in height and character to the existing buildings would be developed on several existing parking lots that would be visible from several of the viewpoints. Overall, the impacts to visual and aesthetic resources from this alternative would be less than from the Project.

5.10.3.3 Maximum Development Scenario

Impacts to visual and aesthetic resources if the Project were to be developed under the Maximum Development Scenario is described below.

As described in Chapter 3.3 Maximum Development Scenario, the developer would increase the density of the development by 25% over the Project. Due to the topography, Site slopes, and elevation differences present on the Site, the Site Plan and building footprint options would be limited, thereby resulting in an increase in buildings heights. Additionally, the southern development area (CW2) would change from a mix of townhouses and apartments to higher density multi-family units. From some viewpoints the proposed buildings in the Maximum Development Scenario would be seen rising above the crest of South Hill, whereas none of the proposed buildings in the Project do so. The Maximum Development Scenario would have a greater visual impact from a number of viewpoints than the Project as the proposed buildings would be taller, less in character with the surrounding buildings due to this increased height, block portions of the background, and have an overall impact on the many views analyzed in Section 5.10.1.

5.11 Community Services

Various existing Community Services relevant to the Site including government facilities; educational facilities (e.g., school, etc.); cultural facilities (e.g., libraries, museums, etc.); religious facilities; hospitals, health facilities; and emergency services (police, fire and EMS) are described and potential impacts from the Project and alternatives described in Chapter 3 evaluated. Measures necessary to mitigate potential Project impacts are also discussed.

5.11.1 Existing Community Services

Community Services are evaluated in the following categories: Government Facilities, Solid Waste Management, Educational Facilities, Cultural Facilities, Religious Facilities, Health Care Services, and Public Safety (which is further discussed as Police Protection, Fire Protection, and Emergency Medical Services).

5.11.1.1 Government Facilities

The Site, located in both the City and Town, is relevant to both municipalities' offices. The City of Ithaca City Hall is located at 108 East Green Street and the Town of Ithaca Town Hall is located at 215 North Tioga Street, each respectively 0.5 miles and 0.6 miles north from the Site.

The United States Postal Service Downtown Ithaca Office is located at 213 North Tioga Street, approximately 0.6 miles north of the Site. Additionally, a number of approved postal provider satellite sites are located within a 1.5-mile radius from the Site. Figure 5.11-1 illustrates the locations of the previously described Government Facilities relative to the Site and the approximate population they serve.

5.11.1.2 Solid Waste Management

Tompkins County's refuse collection system is administered by the Tompkins County Recycling and Solid Waste Center (TCRSWC), and would serve the Site. All solid waste, recyclable, and compostable materials from existing residents and businesses in the City and the Town are received and processed by the TCRSWC. The TCRSWC also includes a household hazardous waste collection facility.

The TCRSWC's current capacity is 255 tons/day of solid waste and 120 tons of recyclables. In 2013 the TCRSWC received a total of 16,821 tons of waste (equivalent to 54 tons/day) and 15,323 tons of recyclables (equivalent to 49 tons/day). In 2013 the amount of solid waste and recyclables received and processed were, respectively 21% and 41% of the facility's capacity. During the DGEIS process, 2014 data was not available, however Leo Riley, the Assistant Solid Waste Manager, has confirmed that the volumes from 2013 to 2014 have not changed dramatically.

Solid waste collected by TCRSWC is deposited at Seneca Meadows Landfill, while solid waste collected by the licensed haulers may use Seneca Meadows Landfill or other destinations of their choosing for disposal. Figure 5.11-1 illustrates the location of the TCRSWC relative to the Site, and the approximate population it serves.

Contracted private haulers, municipal DPWs, or municipal contracted collectors, pick up all solid waste in Tompkins County. The TCRSWC does not collect any municipal solid waste.

Tompkins County contracts Casella-ReCommunity / Casella Waste Systems, Inc. to pick up recyclables from residences, businesses, and institutions within the county. Residents and business owners may also contract with one of the other licensed haulers operating in the county.

Through a partnership between Tompkins County and Cayuga Compost, food scrap and yard waste

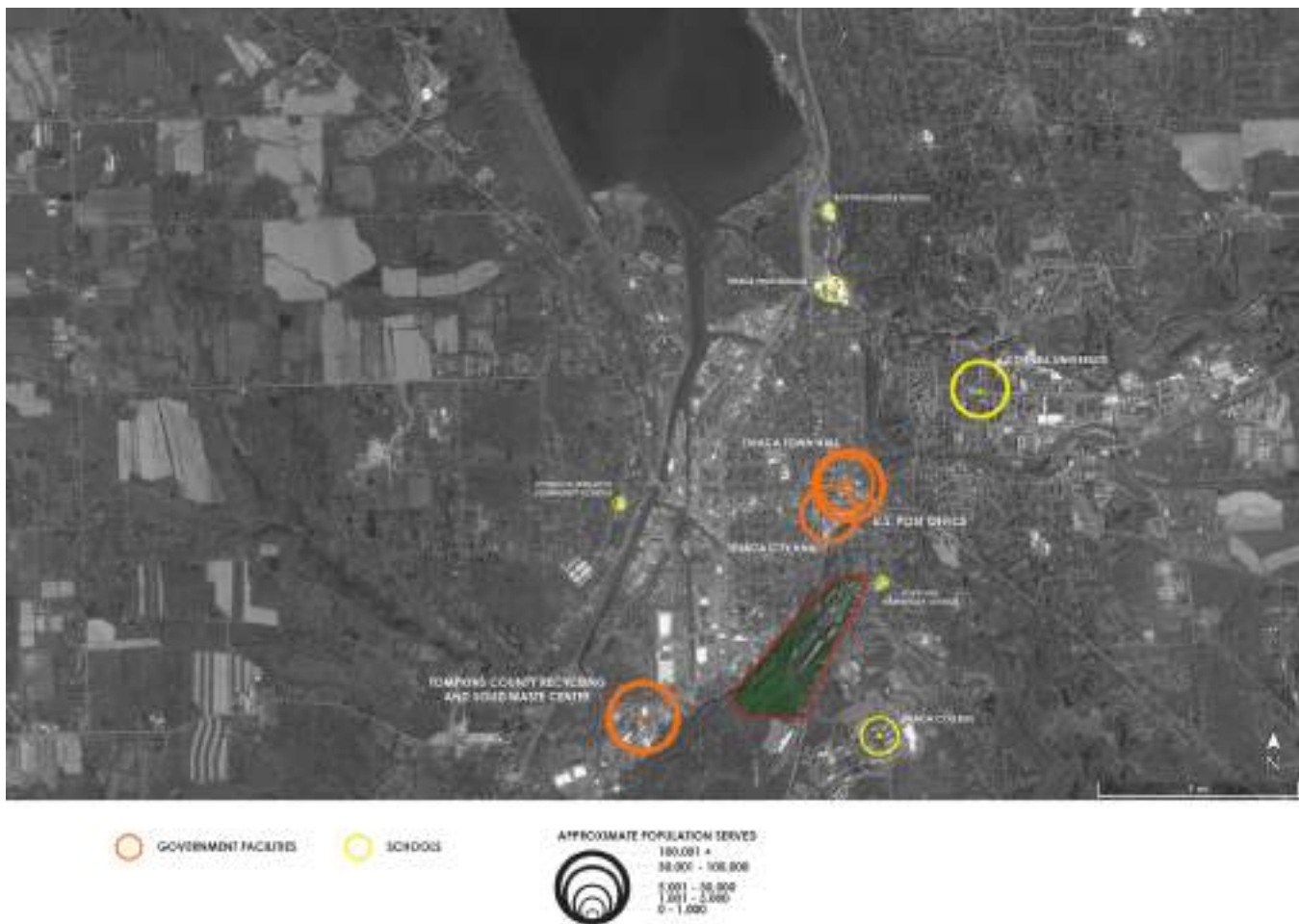


Figure 5.11-1: Existing Government, Solid Waste, and Educational Facilities (WPD)

composting is available. The TCRSWC launched a pilot residential food scraps recycling pickup program in 2014. The collected materials are taken to Cayuga Compost in Trumansburg, where they are mixed with other organic materials to create compost.

Increased education and promotion of the recycling program, food scraps recycling at the public drop-off, and the pilot program to compost food scraps, resulted in a nearly 11% decrease of solid waste received from 2012 to 2013.

5.11.1.3 Educational Facilities

The Site is located within the Ithaca City School District (ICSD) boundary. Data related to ICSD was collected on May 4, 2015. The Site is located in the catchment area for South Hill Elementary School, Boynton Middle School, and Ithaca High School. Currently, South Hill Elementary School, Boynton Middle School, and Ithaca High School are operating at capacities of 83.6%, 92.5% and 90.8%, respectively. South Hill Elementary School is located at 520 Hudson Street, approximately 0.2 miles east of the Site. In addition to the South Hill neighborhood, South Hill Elementary School serves the Danby, Willseyville, and Brooktondale communities. South Hill Elementary School currently has 322 students enrolled in Pre-K to 5th grade with approximately 80 teachers and staff. The average class size at South Hill Elementary School is 18 students with a teacher / student ratio of 1:11. South Hill Elementary School's current estimated capacity is 385 students. Based on the 2014-2015 ICSD budget and enrollment, the average expense per student is \$22,252.

Boynton Middle School is located at 1601 North Cayuga Street, approximately 2.0 miles north of the

Site. South Hill, Cayuga Heights, Enfield, and Fall Creek Elementary Schools are the feeder schools into Boynton Middle School. Boynton Middle School currently has 555 students enrolled in 6th to 8th grades with approximately 90 teachers and staff. The average class size at Boynton Middle School is 21 students, with a teacher / student ratio of 1:9. Boynton Middle School's current estimated capacity is 600 students.

Ithaca High School is located at 1401 North Cayuga Street, approximately 1.7 miles the north of the Site. Boynton and DeWitt Middle Schools are the feeder schools into Ithaca High School. Ithaca High School currently has 1,362 students enrolled in 9th to 12th grades with approximately 109 teachers. The average class size at Ithaca High School is 21 students with a teacher / student ratio of: 1:10. Ithaca High School's current estimated capacity is 1500 students.

Lehman Alternative Community School (LACS) is located at 111 Chestnut Street, approximately 2.0 miles west of the Site. Students attending LACS must live within the ICSD catchment area and are chosen by a random lottery. LACS is a middle and high school with 127 students enrolled in 6th to 8th grades and 171 students enrolled in 9th to 12th grades.

Higher learning educational facilities in close proximity to the Site include Cornell University located approximately 1.0 mile northeast of the Site, and Ithaca College located approximately 0.5 miles to the southeast.

Other educational resources relevant to the Site include the Community School of Music and Arts (CSMA), which offers art and music instruction to youth and adults. CSMA is located at 330 East State Street, approximately 0.5 Miles north of the Site. Figure 5.11-1 illustrates the locations of described Educational Facilities relative to the Site and the approximate population they serve.

5.11.1.4 Cultural Facilities

The Site is positioned near a variety of existing cultural facilities. The Tompkins County Public Library is located at 101 East Green Street, approximately 0.5 miles from the Site. Cinemapolis, a 5-screen cinema house, is located at 120 East Green Street, approximately 0.5 miles from the Site. The State Theatre of Ithaca, a historic 1,600 seat theatre that hosts bands, dramatic performances, and films, is located at 107 West State Street, 0.6 miles from the Site. CSMA also offers public dances, musical events, and art shows.

Several more cultural facilities are located more than a mile away, but are still relatively near the Site. The Sciencenter, a hands-on science museum, is located at 601 1st Street, approximately 1.3 miles from the Site. The Museum of the Earth is located 1259 Trumansburg Road, approximately 3.5 miles from the Site. Regal Cinema at Ithaca Mall is a 14 screen theatre complex located at 40 Catherwood Road, approximately 4.6 miles from the Site.

Cornell University offers many cultural resources that are available to the wider community. Most of note are the Herbert F. Johnson Museum of Art, located at 114 Central Avenue, approximately 1.6 miles from the Site, Cornell Cinema, located at 104 Willard Straight Hall, approximately 1.4 miles from the Site, and the Schwartz Center for the Performing Arts, located at 430 College Avenue, approximately 1.2 miles from the Site.

Ithaca College also has a number of cultural facilities that are available to the greater Ithaca Community. The Handwerker Gallery is located at 1170 Gannett Center, approximately 1.2 miles from the Site. The Main Stage Theatre is located at 953 Danby Road, approximately 1.1 miles from the Site. Figure 5.11-2 illustrates the locations of Cultural Facilities relative to the Site and the approximate population they serve.



Figure 5.11-2: Existing Cultural Facilities (WPD)

5.11.1.5 Religious Facilities

The City is the home to many religious institutions. The following is a list of the major religious facilities in the Greater Ithaca area that are accessible from the Site. A majority of these facilities are located within 1.0 mile from the Site - the specific distance is listed following the address.

- First Baptist Church, 309 North Cayuga Street (0.7 Miles)
- First Church of Christ, Scientist, 101 University Avenue (0.7 Miles)
- First Presbyterian Church, 315 North Cayuga Street (0.8 Miles)
- Immaculate Conception Church, 113 N. Geneva Street (0.7 Miles)
- Ithaca Friends Meeting, 120 3rd Street (1.2 Miles)
- St. John's Episcopal Church, 210 North Cayuga Street (0.7 Miles)
- St. Paul's United Methodist Church, 302 North Aurora Street (0.5 Miles)
- Temple Beth-El, 402 North Tioga Street (0.7 Miles)
- Tikkun v'Or (Ithaca Reform Temple), 2550 North Triphammer Road (5.1 Miles)
- Unitarian Church of Ithaca, 306 North Aurora Street (0.5 Miles)
- Namgyal Buddhist Monastery, 412 North Aurora Street (0.6 Miles)

Figure 5.11-3 illustrates the locations of Religious Facilities relative to the Site and the approximate population they serve.

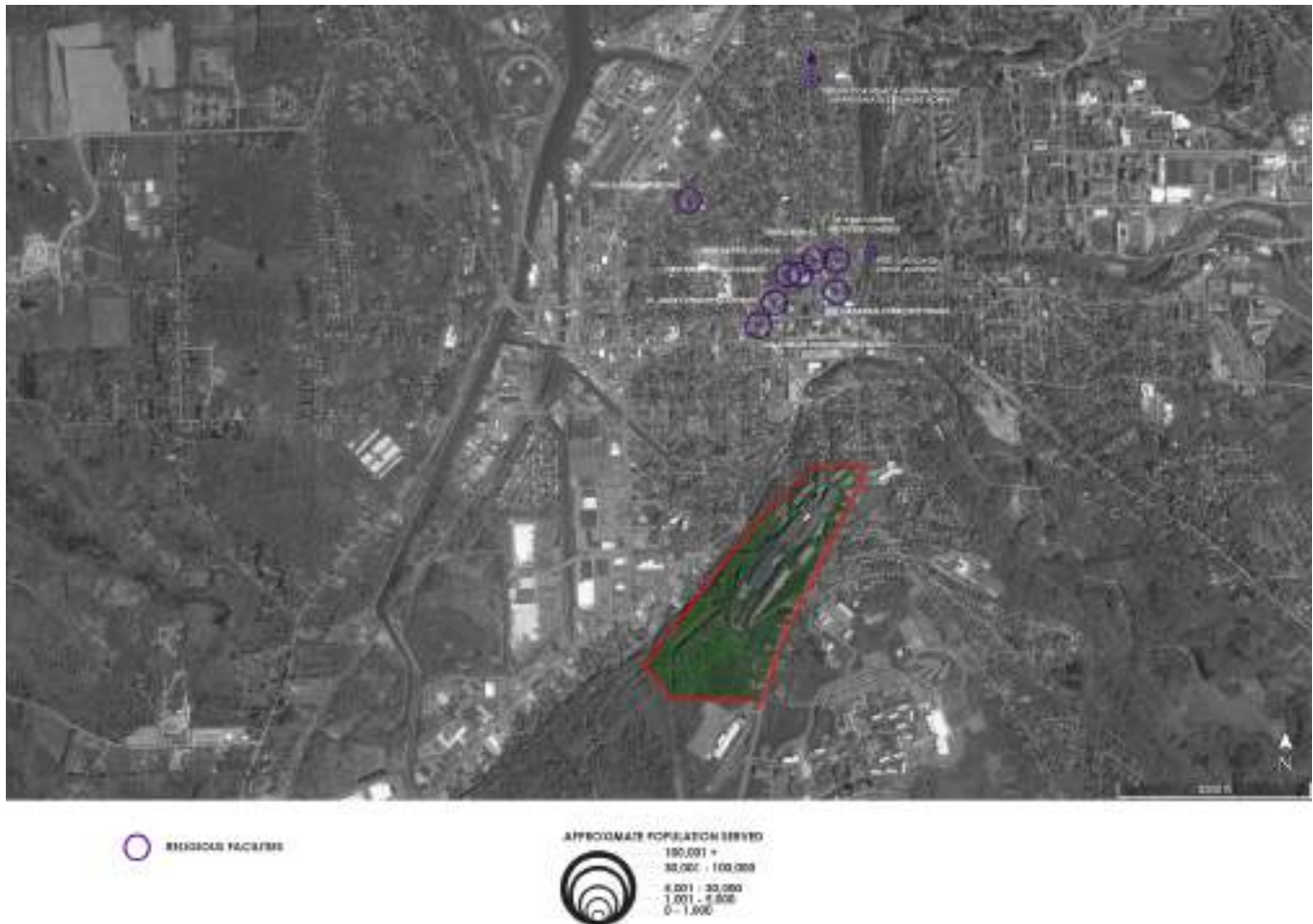


Figure 5.11-3: Existing Religious Facilities (WPD)

5.11.1.6 Health Care Services

The City and Town have a number of facilities, which provide health and medical care. Cayuga Medical Center is the largest medical facility in the area, with a 204-bed acute care hospital serving inpatient and outpatient needs and an Emergency Department that is open 24-hours per day. Cayuga Medical Center is located at 101 Dates Drive, approximately 4.6 miles from the Site. Cayuga Medical Center operates a satellite location, Cayuga Medical Center Convenient Care Center located at 10 Arrowwood Drive, which is also accessible to the Site at a distance of 5.9 miles.

Five Star Urgent Care is a walk-in clinic for non-life threatening health conditions located at 740 South Meadow Street, approximately 1.2 miles to the west of the Site. Figure 5.11-4 illustrates the locations of Health Care Services relative to the Site and the approximate population they serve.

5.11.1.7 Public Safety

One City police station, 2 City fire stations, the Tompkins County Sheriff's Office, the New York State Police, the Tompkins County Department of Emergency Response, and Bangs Ambulance serve the Site.

The Tompkins County Department of Emergency Response is located at 92 Brown Road, approximately 6.3 miles from the Site. They provide coordination between fire, disaster and emergency medical services,

from the Site with a 3 minute travel time. Other IFD stations are:

- South Hill Fire Station, 965 Danby Road, 0.9 miles from Site, 2 minute travel time
- East Hill Fire Station, 309 College Avenue, 1.4 miles from Site, 6 minute travel time
- West Hill Fire Station, 1240 Trumansburg Road, 3.7 miles from Site, 13 minute travel time

IFD fire stations in Ithaca are staffed with career firefighters, 24 hours per day, 365 days per year. Their average turnout from alarm to being enroute to an incident is 75 seconds. Average dispatch process time is 3 minutes. Therefore, depending on which station of origin the response time would be 7-18 minutes.

According to written correspondence with IFD Chief Tom Parsons on October 5, 2015, "the Ithaca Fire Department has serviced this property [Site] for decades without outside support. I believe that we have sufficient resources to serve this property, assuming the buildings are kept code complaint."

The IFD map specifically request additional support for mutual aid from one of the neighboring fire companies in the event of an extreme emergency situation. Surrounding Fire Departments, Stations, and Companies are:

- Cayuga Heights Fire Department: 194 Pleasant Grove Road, Ithaca, 3.8 miles from Site
- Danby Fire Station: 1780 Danby Road, Ithaca, 5.5 miles from Site
- Varna Fire Station: 14 Turkey Hill Road, Ithaca, 4.5 miles from Site
- Newfield Fire Company: 77 Main Street, Newfield, 7.4 miles from Site
- Lansing Fire Department: 80 Ridge Road, Lansing, 8.2 miles from Site, est. response time 20 minutes

5.11.1.7.3 Emergency Medical Services

The Tompkins County Department of Emergency Response is located at 92 Brown Road, approximately 6.3 miles from the Site. They provide coordination between fire, disaster and emergency medical services, enhanced 911, and public safety communications.

Bangs Ambulance provides emergency medical services to the City and Town of Ithaca. Their vehicles and emergency personnel are located at 626 West State Street, approximately 1.2 miles from the Site. Bangs Ambulance operates and responds to calls 24 hours a day, 7 days a week. Their fleet of vehicles includes 10 ambulances, 2 fly cars (advance life support vehicles), and 2 wheel-chair vans. They anticipate an estimated response time of 3-4 minutes to serve the Site.

5.11.2 Potential Impacts

The distribution of Project mixed-uses is anticipated to be 74.8% residential, 9.9% commercial, and 15.3% industrial. These estimates were used to determine the increased demand on services the Project's incremental population growth of both work force and the residents will create over seven to ten years. Existing community service providers have been contacted to determine their capacity to serve the Project. See Appendix L1.

5.11.2.1 Government Facilities

The Project will result in a notable increase of the tax base, as described in Chapter 11 Cumulative Impacts, thereby increasing the revenue for the City, Town and County Governments, helping to maintain

government facilities. The Site's efficiencies include savings on upfront costs for new construction of roads, sewer, water, and other existing infrastructure as described in Section 5.8 Utilities.

5.11.2.2 Solid Waste Management

The Project will result in an increase of solid waste. In addition to the solid waste generated by residences on Site, there will be an increase in commercial and/or manufacturing waste, depending on tenants. A consultation with the TCRSWC revealed it is currently operating at 21% its capacity for waste and 41% for recyclables. Based on correspondences with TCRSWC, the Project is anticipated to generate an additional 182,926 lbs. of solid waste and 45,732 lbs. of recyclable and compostable material per week, or approximately 13 tons of solid waste and 3 tons of recyclable and compostable material per day. Table 5.11-1 below describes the amount of waste material anticipated to be generated based on use. These estimates were determined using statistics from EPA and Tompkins County.

Waste Generation	Residents/ Employees	Gen. Rate (lbs/week)	Total Waste (lbs/week)	Landfilled (lbs/week)	Rec./Comp. (lbs/week)
Residential	1,830	31	56,108	42,081	14,027
Employee - Commercial	476	79	37,576	28,182	9,394
Employee - Manufacturing	488	183	89,242	66,932	22,311
Totals			182,926	137,195	45,732

Table 5.11-1: Anticipated Waste Generation of Project (FE)

It was determined the Project would not extend the TCRSWC beyond their capacity.

5.11.2.3 Educational Facilities

The Project will result in a greater demand on the existing educational facilities. It is anticipated the Project will also increase the number of students enrolled in the ICSD; however, the extent of this increase is dependent on the number of new families with school-aged children who will become residents of the CWD. Additionally, as the Project will be constructed in phases, the increase of children who would attend existing educational facilities will be incremental. The Project estimates there will be approximately 50 children living on Site creating a demand on the ICSD. Based on correspondences with ICSD, schools in the ICSD have the capacity to accommodate future residents of the CWD. See Appendix L1 for full correspondence with ICSD.

Any residents who are enrolled at Ithaca College or Cornell University would not have an impact on either of these institutions, as enrollment would not be a condition of residence in the area.

5.11.2.4 Cultural Facilities

The Project will result in a greater demand on existing cultural facilities. The increase in residents would use existing cultural facilities. Additionally, it is expected that some employees commuting to the CWD would use existing cultural facilities during their non-work hours. It is expected that this will have a positive impact through increased attendance and entrance/admission fees/ticket sales.

The Project will also provide a significant amount of community space resulting from the selective demolition of portions of existing buildings. This increased internal open space will provide opportunities

for markets, collective gatherings, festivals, and other larger community events. Museum display areas, maker/artist spaces, galleries, and flex spaces will also occur in Buildings 6, 6A, 9, 10A, 11A, and 14 and be a part of the larger, collective cultural facilities in the CWD.

5.11.2.5 Religious Facilities

The Project will result in a greater demand on the existing religious facilities. Additionally, it is expected that some employees commuting to the CWD would use existing religious facilities during their non-work hours. It is expected that this would be negligible or otherwise a positive impact through increased attendance, participation, and donations.

5.11.2.6 Health Care Services

The Project will result in a greater demand on the existing health care services due to increased demand largely as a result of the increased residential population, but also to a lesser extent, the workforce employed at the CWD. As described in Subsection 2.7.7, the Project's residential population is expected to be approximately 1,830, and the employee population to range between approximately 800-1,000 people.

Based on correspondences with Cayuga Medical Center, they have the capacity to serve the Project.

5.11.2.7 Public Safety – Police Protection, Fire Protection, Emergency Medical Services

As described in Subsection 2.7.7, the Project will construct approximately 1,830 bedrooms, or approximately 915 units. This will impact the existing public safety services, requiring resources and staff time from the police (City of Ithaca Police Department, the Tompkins County Sheriff's Office and at times the New York State Police), fire (the City of Ithaca Fire Department and as needed adjacent and nearby community fire stations and departments) and emergency medical services. As described in Subsection 5.11.1.7, although the Site lies in both the City and Town, there would be no jurisdictional confusion as police protection operates on a "close-car" concept, and fire protection and emergency medical services operate without regard to the City and Town distinctions. Based on correspondences with IFD and IPD (Appendix L1), they have the capacity to serve the Project and projected population.

5.11.3 Mitigation Measures

Analyses of the community services indicate that there will be adequate capacity for community services despite increased demands resulting from the Project. Any increased demands from the Project on such services will be mitigated by the additional tax base generated by the increased property assessment for the Site, as described in Chapter 8. The assessed value of the Site will increase from \$3.5M to an estimated \$236M (see Appendix L2 for County Assessment of Project). This estimate is based on the current and predicted assessed value of the Site. As a result, the Project will alleviate if not outweigh the potential demand on community services. Table 5.11-2 is a summary of the estimated City and Town taxes, not including school tax, based on the 2015 final tax rates.

Municipality	Building GFA	Development	Assessment	Tax Rate	Tax Amount
Town Total	833,450	48.85%	\$ 115,285,409	\$ 13.421402	\$ 1,547,291.81
City Total	872,700	51.15%	\$ 120,714,591	\$ 19.753750	\$ 2,384,565.86
Total	1,706,150	100.00%	\$ 236,000,000	N/A	\$ 3,931,857.67

Table 5.11-2: Estimated City and Town Taxes from Project (FE)

Table 5.11-2 is based on the full development of the Site as well as a full tax estimate. The Project Sponsor will seek a Payment In Lieu of Tax (PILOT) agreement through the Tompkins County IDA for the individual phases in accordance with the policies and procedures of the IDA. The PILOT program is also described in Chapter 8.

Additional mitigation includes sales tax and other taxes on revenue generated by the operations of the Project as well as individual business operations located on-site. These additional taxes have not been considered in this analysis but would nevertheless further mitigate the cost of providing community services to the Project.

5.11.3.1 Government Facilities

The Project will provide a large increase in tax base, thereby increasing funding for government facilities to continue accommodating a growing population in Ithaca.

5.11.3.2 Solid Waste Management

Although the TCRSWC has more than enough capacity to accommodate waste generated from the Project, the increase in tax base will help support their ability to serve the Site.

5.11.3.3 Educational Facilities

The increase in tax base provided by the Project will provide support to schools within the ICSD, accommodating any potential new families with children who would reside on Site. Table 5.11-4 summarizes the additional \$4M increase in school taxes based on the current and predicted assessed values of the Site and current tax rate of \$18.1611 per \$1,000 AV.

Scenario	Assessment	Per \$1,000	Tax Rate	Tax Amount
Existing Site	\$ 3,500,000	\$ 3,500	\$ 18.1611	\$ 63,563.85
Full Development	\$ 236,000,000	\$ 236,000	\$ 18.1611	\$ 4,286,019.60
Annual Tax Revenue Increase:				\$ 4,222,455.75

Table 5.11-4: Estimated Additional School Taxes from Project (FE)

5.11.3.4 Cultural Facilities

With an increase in population, a greater number of people would attend museums, libraries, and theatres. Private businesses and public organizations will likely see an increase in revenues provided by a greater population with easy access to downtown.

The Project will also provide space for commercial, retail, and event use space that will be available to the residents of the CWD and the surrounding community. This will also increase sales tax income for the State and County.

5.11.3.5 Religious Facilities

The Project will provide an increase in population, which will likely increase the attendance of religious facilities. This increase in members will also provide an increase in donations, helping to support the facilities.

5.11.3.6 Health Care Facilities

The increase in population provided by the Project will also increase the demand on Health Care Facilities. This increase in patronage will also provide additional funding for facilities, helping to support the growing demand.

5.11.3.7 Public Safety Facilities

The increase in tax base provided by the Project will increase the funds distributed to public safety departments, allowing them to continue supporting a growing population. Additionally, revamping the existing built infrastructure positively affects the cost of future service delivery. The geographic configuration and connectivity of the Project saves operating costs due to inherent location efficiencies. Unlike conventional suburban development, which requires service vehicles to drive further into greenfield locations, the actual number of vehicles, facilities, and personnel may not need to be increased as the CWD service area is connected to the City and Town's existing circulation network.

5.11.4 Alternatives to Proposed Action

The impacts to community services from the alternatives to the Project described in Chapter 3 are analyzed below and compared to the impacts from the Project.

5.11.4.1 No Action

The No Action Alternative would result in no construction or modification of the Site, reducing the tax base that would otherwise increase with the development of the Site. Although the population and number of employees in the City and Town may increase as a result of other current and future developments, the increase in tax base and mixed-use facilities the Project will provide is likely greater and more concentrated than on any other site in Ithaca due to the size of the Site and nature of the Project. The No Action Alternative would not introduce a population on Site who would be utilizing and requiring the existing emergency, government, educational, cultural or religious services that currently exist and serve the Site.

The No Action Alternative would not contribute to an increased tax base and would not provide additional funds to the City, Town, and County governments or public safety and emergency services. This large Site is highly built up, yet underutilized, and allowing it to remain would have a negative impact on the City and Town governmental facilities. By taking No Action, this large Site would continue to draw from the existing services, yet contribute only a minimal amount in property taxes based on the current \$3.5M assessment compared to other development scenarios.

The No Action Alternative would not result in additional solid waste, thereby having no significant adverse impact on the TCRSWC. It also would not impact existing educational, cultural, religious, and health care services and facilities.

5.11.4.2 Development in Accordance with Existing Zoning

The Development in Accordance with Existing Zoning Alternative would entail an increase of manufacturing and storage, and office uses ancillary to manufacturing on the Site. This alternative would result in an increase in the number of people employed at and visitors to the Site. As a result, this alternative would increase the tax base, thereby increasing the revenue for the City, Town, and County Governments, as well as for ICSD, although less than would occur with the Project.

This alternative would result in an increase of solid waste. The amount of increase and type of waste

would be dependent upon the number of employees and the nature and extent of manufacturing activities. It is not anticipated that the increase of solid waste would exceed the capacity of the TCRSWC.

This alternative would result in no significant impact on the existing educational facilities. It is possible that some of the employees would relocate to the area and children would be enrolled in the age-appropriate school. Additionally, it would be expected that some employees would choose to partake in the extensive cultural or religious facilities during their non-work hours. Any positive impacts through increased attendance, entrance/admission fees/ticket sales, participation, and donations would be negligible.

This alternative would likely result in a low/moderate impact on the existing health care services and public safety depending on the number of employees and the type of work that would be conducted.

5.11.4.3 Maximum Development Scenario

The Maximum Development Scenario assumes an increased density of 25% a larger increase to the residential and employee population

This alternative would result in the greatest increase to the tax base, thereby having the largest increase in revenue for the City, Town, and County Governments, as well as ICSD.

This alternative would result in an impact on the existing educational facilities, however the extent would depend on the number of families with school-aged children who choose to reside at the CWD. Any residents who were enrolled at Ithaca College or Cornell University would not have an impact on either of these institutions, as enrollment would not be a condition of residence in the area.

This alternative would also result in an increase of solid waste. In addition to the solid waste generated by the residences, there would be an increase in commercial and/or manufacturing waste, depending on the specific tenants. The TCRSWC is currently operating at 21% its capacity for waste and 41% for recyclables. This alternative would not extend the TCRSWC beyond their capacity.

This alternative would result in a moderate to high impact on existing cultural and religious facilities. The marked increase in residents would increase demand on existing cultural and religious facilities. Additionally, it would be likely that some of the commuting employees would make use of these existing facilities during their non-work hours. It is expected that this would have a positive impact through increased attendance and entrance/admission fees/ticket sales, participation, and donations.

This alternative would have the greatest impact on demand for health care services, largely due to the increased residential population, but also to a lesser extent, the workforce at the CWD.

This alternative would have the greatest impact on the existing public safety services, requiring resources and staff time from the police, fire and emergency medical services. Through construction of the Maximum Development Scenario the tax base would be increased, which would in turn increase the funds distributed to these public safety departments.

5.12 Open Space and Recreation

This Section discusses existing open space and recreation areas within and adjacent to the Site, including parks, trails, and other resources. Open space in urban environments is generally characterized as encompassing publicly accessible vegetated areas suitable for passive or active recreation.

5.12.1 Existing Open Space and Recreation

The City, Town, and Tompkins County have many municipally and State owned open spaces within a developed urban environment, and provide residents and visitors with a wide variety of recreational resources, including hiking, biking, boating, fishing, and educational resources. Parks and publicly accessible open spaces in the vicinity of the Site are shown in Figure 5.12-1. Additionally, the Site has expansive views across Cayuga Lake. Approximately 2 miles from the Site, the lake offers many recreational waterfront uses, including the Allen H. Treman State Marine Park, the Newman Municipal Golf Course, and Stewart and Cass Parks.



Figure 5.12-1: Open Space network in the City and Town of Ithaca (WPD) *

Buttermilk Falls State Park, Robert H. Treman State Park, and Unique Natural Areas (UNA) 154, 156, and 149 are some of the closest and largest open spaces in the vicinity of the Site. UNAs are sites with exceptional environmental qualities in Tompkins County, as defined by the Tompkins County Environmental Management Council, that are deserving of special attention for preservation and protection. Baker Park, a maintained open lawn recreational space, and Titus Flats, which has a skatepark, ball courts, and open lawn, are the closest City Parks to the Site.

There is a large quantity of trail networks within and connecting to these Parks, as illustrated in Figure 5.12-2. Buttermilk and Robert H. Treman State Parks have their own internal hiking trails, but are connected by the Finger Lakes Trail System. The Finger Lakes Trail system is over 950 miles in length, and runs from the Pennsylvania-New York border in Allegany State Park to the Long Path in the Catskill Forest

Preserve. As an extension across New York State, it grants the possibility to connect to other National Trail Systems, opening Ithaca up to the U.S. via a hiking trail system. The South Hill Recreation Way, which traverses UNA-156, is the closest trail to the Site, and is on a former rail line. The Black Diamond Trail also provides a major connection between the City and State Parks in the vicinity, running along a power-line easement, ending north at Taughannock Falls State Park.



Figure 5.12-2: Trail network in the City and Town of Ithaca (WPD) *

As described in Section 5.4, the Site currently has approximately seventy-seven acres of potential open space which are currently forested or otherwise with vegetation of low quality, a majority of which is located in the southern area of the Site. The Site is currently private, and is therefore not open to the public for recreational uses.

5.12.2 Potential Impacts

The Project will have a positive impact on open space and recreation, as it will allow the construction of an already proposed trail. The Gateway Trail will provide a missing link between South Hill Recreation Way, Buttermilk Falls State Park, the Finger Lakes Trail, and the Black Diamond Trail, creating broader connections between the City, Town, and Tompkins County. The Project Sponsor supports the proposed Gateway Trail and will work with the planners of the trail in developing an easement for the trail through portions of the Site.

The City's Comprehensive Plan (Plan Ithaca), adopted in June 2015, states the importance of the existing trails and includes a recommendation to connect the Gateway Trail to South Hill Recreation Way. The Town Comprehensive Plan, adopted in September 2014, state goals that include support for the Gateway Trail and providing recreational opportunities near residences' homes and workplaces.

The construction of the Gateway Trail will benefit the current residents of and visitors to the City, Town, and Tompkins County as a whole, as well as the future residents and employees at the CWD. The

Gateway Trail will provide a much needed trail connection between South Hill Recreation Way, Buttermilk Falls State Park and the Black Diamond Trail. Additionally, the construction of the Gateway Trail will provide another pedestrian route to, from, and through the Site. This will result in the Site becoming an important link and node in connecting an extensive hiking and recreational trail network that allows for non-motorized activities such as snowshoeing and cross-country skiing in the winter. This action promotes transportation efficiency through multimodal transportation and improves public health by encouraging daily physical activity.

The existing impervious area on the Site is 35.75+/- acres. The Project will reduce the overall potential open space on the Site by approximately 11% or 11.2 acres with an increase of development and impervious surfaces in the future. However, much of the existing undeveloped land is overgrown and of poor quality, as described in Section 5.4, and therefore of little value for open space and recreation. Additionally, no portion of this space is accessible legally by area residents or visitors. The Project will create a formalized and accessible open space network, dramatically increasing the number of people who have access to the region's trail network as well as the open spaces on the Site, which will allow the public to appreciate the beautiful expansive views of Cayuga Lake.

In addition to the proposed Gateway Trail, with the development of the Project, the Site will become a bridge between South Hill and Downtown Ithaca. A pedestrian network will traverse the Site, connecting 96B to S. Cayuga Street, allowing for greater accessibility to Downtown amenities and services, and vice versa. A pedestrian network is also being established internally within the Site with sidewalks along many streets and pedestrian-dominated courtyards.

5.12.3 Mitigation Measures

To ensure the long term benefits on open space, Sub Area CW1 Natural Conservation Area is proposed to limit development and uses to only recreationally-base programming and a permanent easement is being established to create the Gateway Trail. The Project Sponsor is willing to consider mechanisms such as appropriate deed restrictions or conservation easements to memorialize the uses allowed in the CW1 Sub Area. Since the Project will create a more organized and accessible open space, dramatically increasing the number of people who have access to the area's trail network and the Site itself, the beneficial impacts to open space and recreation from the Project far outweigh the loss of a small amount of poor quality open space from the new development planned as part of the Project.

5.12.4 Alternatives to Proposed Action

The impacts to open space and recreation from the alternatives to the Project described in Chapter 3 are analyzed below and compared to the impacts from the Project.

5.12.4.1 No Action

In this alternative, the section of the Gateway Trail traversing the Site, which would connect the existing Black Diamond Trail and Buttermilk Falls Trail with the South Hill Recreation Way, would not be constructed because there would not be a partner to facilitate the trail connection. This would negatively impact residents and visitors to the City, Town, and County, as an important link in the area's trail system would not be constructed. With the recent completion of the Cayuga Waterfront Trail, the importance of these trail connections is becoming more appreciated by residents. The Site would remain closed to the public so not even the poor quality open spaces that exist today would be enjoyed by the public.

Adverse impacts to the potential open space and recreational opportunities would be far greater with the No Action Alternative than with the Project.

5.12.4.2 Development in Accordance with Existing Zoning

In developing the Site in Accordance with Existing Zoning, i.e., industrial uses along with some ancillary warehouse and office use, it is anticipated that distinctive common / recreational areas, facilities, or services would not be developed in this alternate scenario. Additionally, a partnership for creating the Gateway Trail would be unlikely. It is also unlikely the Site would be open to public recreational use. While more users accessing the Site for work will have the opportunity to enjoy the open spaces that would remain after the additional 50,000 square feet of industrial development, the existing open spaces would not be preserved and improved as anticipated under the Project and the Site would not be open to the public.

Impacts to the potential open space and recreational opportunities would be greater in the Development In Accordance with Existing Zoning Alternative than in the Project.

5.12.4.3 Maximum Development Scenario

While the topography and steep slopes of the Site limits the buildable area, a larger percentage of buildable area of the Site would likely be utilized under the Maximum Development Scenario, thereby decreasing the area available as open space. As a result, the impact on potential open space and recreation would be greater than under the Project. There would also likely be impacts from increased building massing, as the taller buildings will cast larger shadows on open space and create more visual impacts to users of area parks that can see the Site from their location. See Section 5.10 for visual impact analysis.

5.13 Construction Activities

The development of this multiple phase Project will require construction activities over a seven to ten year period. These activities will vary in intensity depending on the size and scope of each individual phase.

5.13.1 Existing Conditions

The Site has recently been utilized as a construction staging area for previous off-site projects in the area including the City sponsored Commons infrastructure redevelopment project. This project included the replacement of all utilities in that corridor including public water, sanitary sewer, natural gas, electric and storm sewer. Parking Areas 4, 5, and 7A were utilized for construction staging including stockpiling of stone, gravel and sand for bedding material as well as storage areas for pipe and other utility appurtenances. Heavy vehicle and delivery traffic travelled back and forth to the Commons utilizing Driveways I, II and III. The Commons project is located to the north of the Site and the construction traffic exiting the Site required making left turns onto NYS Route 96B. No adverse impacts were reported while the Site was utilized for construction staging.

5.13.2 Potential Impacts

The Project calls for the full development of the Site over a seven to ten year period in multiple phases. Planning and coordination will be required for the construction of the various phases. The NYSDEC ROD amendment and market conditions will influence phasing and timing of the redevelopment plan. The initial Phase I consists of Buildings 21, 24, 33 and 34.

The Project will have multiple phases over many years. As such, there are short and long term potential impacts. Many of these impacts are typical of any construction project. A typical construction sequence is as follows: (1) site work; (2) foundations; (3) steel work; (4) concrete flatwork; (5) exterior wall construction; (6) roofing; (7) interior finish work; and (8) exterior site improvements.

Construction work for the Project in the CW3 and CW4 Sub Areas may encounter impacted media and building materials such as concrete floor slabs. As such, these activities have the potential to impact the on-site workers, neighboring properties or the environment if not properly handled.

Additional construction impacts typical for a project of this nature include:

- Construction Staging – Due to the multiple phases, a construction staging area potentially may impact the residents/occupants of the Site as well as the adjacent property owners.
- Soil Erosion / Dust – The development of the Site includes the clearing and grading of land which creates the potential of soil erosion due to land disturbance and stormwater runoff. Particulate matter and dust generation is also a potential impact due to demolition and grading, should dry conditions prevail at the time of development.
- Solid Waste – Construction and demolition on the Site will generate related solid waste. Those materials not reused or recycled will require disposal.
- Noise / Emissions – Noise, air emissions and vibration will be generated during construction from construction and worker traffic, heavy equipment operation and delivery vehicles.
- Construction Traffic – Traffic volumes will increase from the movement of construction workers and off-site construction equipment.
- Asbestos – Projects that involve demolition typically encounter asbestos containing materials (ACM).

- Lot #6 will be used as a staging area and will minimize traffic interruptions by providing two separate construction access points on NYS Route 96B that can easily be operated and maintained with typical flagging in accordance with NYSDOT requirements or with the addition of temporary traffic signalization. This central staging area will also maintain the pedestrian, bicycle and vehicle access and parking for the CWD population throughout the multiple development phases.
- Limits of disturbance during construction will be clearly delineated to reduce encroachment into sensitive or prohibited areas and the areas of disturbance will be limited to the extent practicable.
- The Site Plan drawings for Phase I include a detailed construction staging plan for that phase. See Appendix B2.
- Project identification and wayfinding signage to distinguish construction and public access points will be used. Signage shall also be provided to indicate contacts for complaints and/or questions regarding the Project. Signage shall be maintained throughout the construction phase.
- Soil Erosion / Dust
 - A generic SWPPP has been prepared for the full development of the Site. A Full SWPPP is developed for the Phase I Site Plans in accordance with the NYS SWMDM and the NYS Erosion and Sediment Control Manual. Mitigation will include coverage under a SPDES General Construction Permit (GP-0-15-002), installation of proper erosion and sediment (E&S) control measures in accordance with the approved SWPPP, and weekly inspections by a Qualified Professional. The generic and full SWPPPs for the Project and Phase I are found in Appendix E.
 - Dust creation is also mitigated by implementing the SWPPP. Specific mitigation will include wetting of roadways and hydroseeding/mulching immediately upon grading to minimize dust and promote vegetative cover. Potential fugitive dust emissions from material storage piles will be controlled through the use of enclosures, seeding, covers or spraying with a dust suppressant as necessary.
 - The generation of airborne demolition related dust will be reduced through standard construction practices including application of dust suppressants over the involved area to minimize blowing and circulation of exposed soils/materials.
 - The need for blasting will be minimized as much as possible. If blasting is deemed necessary, any permits and authorizations will be clearly identified and obtained as part of the Site Plan approval process prior to commencing. Blasting specifications would be developed in accordance with NYSDOT procedures for blasting. Any blasting will be minimized when developing grading plans.
- Solid Waste
 - Prior to demolition, the Project Sponsor will consult with Finger Lakes ReUse organization (<http://www.fingerlakesreuse.org/deconstruction.shtml>) to determine eligibility for their “deconstruction” program that identifies suitable buildings for deconstruction, safely dismantles them by hand to harvest maximum materials, and then sells the materials through their existing ReUse Center at discounted prices. All other metal construction debris will be separated and recycled. Any remaining debris will be disposed of at a permitted construction and demolition (C&D) landfill.

- Construction disposal plan for non-recyclable construction waste handling and removal in accordance with local regulations and following LEED guidelines will be developed. Phase-specific disposal plans will be developed during the Site Plan Approval process.
- All remaining demolition debris will be disposed of at C&D landfills or recycling facilities permitted by NYSDEC per 6 NYCRR 360 Solid Waste Management Facilities. NYSDEC requires demolished materials containing lead paints to be disposed of at permitted C & D facilities.
- Noise / Emissions
 - Proper maintenance of all construction equipment and appropriate muffler systems on all equipment will be required. Construction vehicles will be shut down whenever practicable and the idling of such vehicles will not be permitted.
 - The Project will be governed by the respective City and Town guidelines for construction schedules and local noise ordinances. Hours of operation for exterior construction will be limited to the hours of 7:00 am to 6:00 pm Monday thru Saturday, or as per the City/Town Ordinances for noise. Interior construction will be limited to Monday thru Saturday from 7:00 am to 11:00 pm.
- Construction Traffic
 - A safe construction/delivery routing plan will be developed. This includes the development of an Maintenance and Protection of Traffic Plan for all work zone areas.
 - Parking for construction-related personnel will be located on-site.
- Asbestos / Hazardous Materials
 - BMPs will be employed through the Site Management Plan approved by NYSDEC and monitored by a Qualified Environmental Professional during construction activity that may disturb impacted soils, groundwater, or contaminated building materials not previously remediated.
 - An asbestos survey in accordance with 12 NYCRR 56 Section 5 will be completed for all structures scheduled for renovation or demolition prior to such activity to determine the presence, if any, of asbestos-containing building materials. This survey will be performed by a licensed asbestos inspector certified in compliance with 12 NYCRR 56 Section 3.2.
 - Based on the asbestos survey, all identified materials will be abated and removed from the structures in compliance with 12 NYCRR 56. A licensed asbestos contractor will conduct all removals. Where permitted by 12 NYCRR 56, controlled demolition with asbestos in place may occur. Any controlled demolition will include wetting and dust control. Air monitoring will be required throughout all abatement and demolition work by a licensed asbestos project monitor not associated with the contractor. The plan for abatement and demolition must be written and approved by the NYS DOL Asbestos Control Bureau prior to the start of the work.
- Worker Safety
 - All work will be completed in accordance with OSHA requirements including developing an accident prevention program that provides for frequent and regular inspection of the jobsites, materials, and equipment by competent persons designated by the employers in accordance with 29 CFR 1926.20(b).
 - Worker health and safety plan compliant with the OSHA requirements under 29 CFR

1910.120(e), along with other OSHA requirements applicable to construction activities will be implemented.

- Emergency notification plan listing appropriate contacts will be followed.

5.13.4 Alternatives to Proposed Action

The impacts to construction activities from the alternatives to the Project described in Chapter 3 are analyzed below and compared to the impacts from the Project.

5.13.4.1 No Action

The No Action Alternative would result in no construction-related impacts.

5.13.4.2 Development in Accordance with Existing Zoning

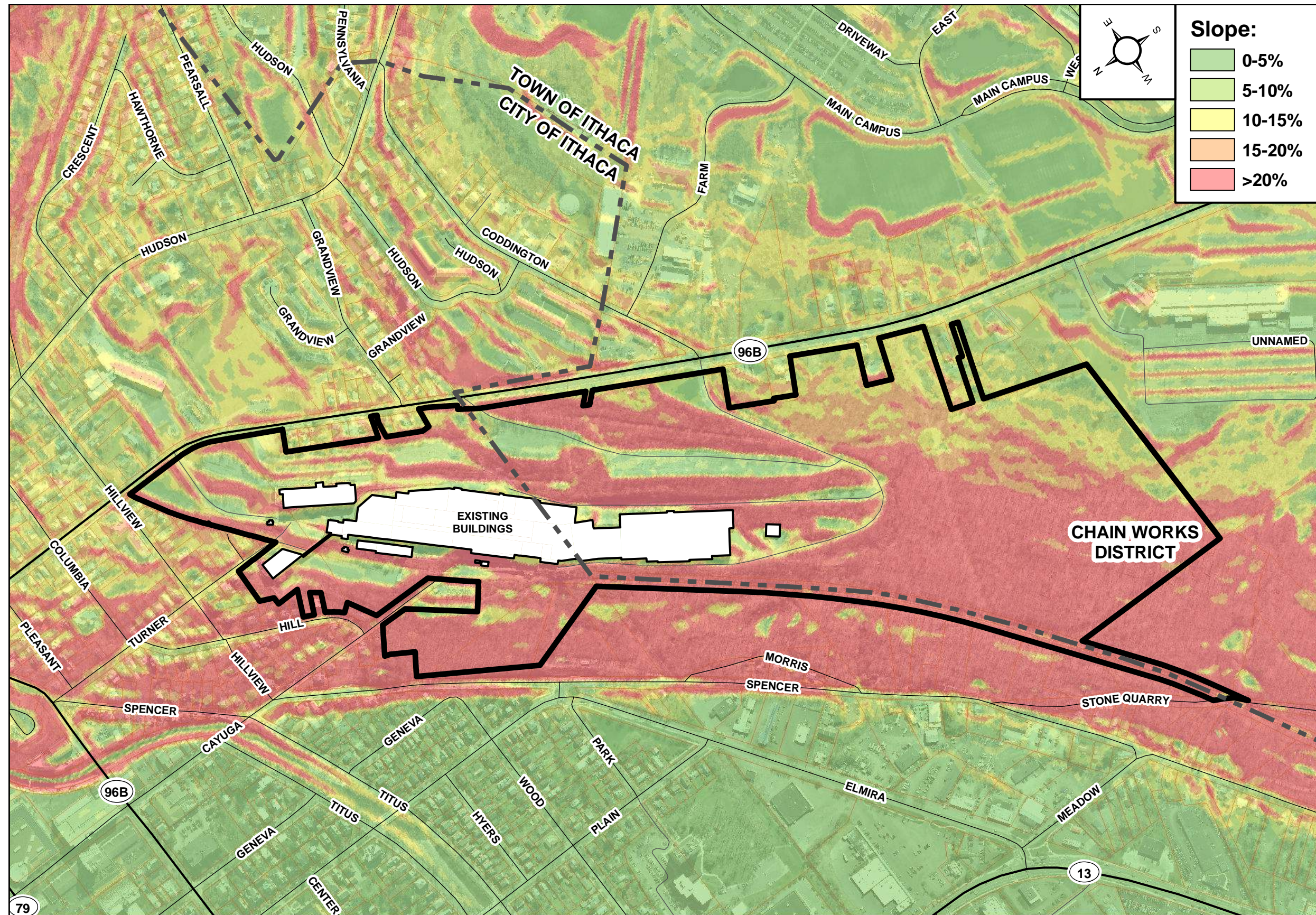
As depicted In Figure 3.2-1, the construction for this Alternative is limited to existing parking areas, which reduces the potential impacts from those of a new development versus redevelopment. Construction impacts will be localized to two parking areas that would be less than one acre each. Much of the existing asphalt areas would be maintained with minimal restoration, such as milling of the top layer and either it's recycling (mill/resurface) or the placement of a new wearing course. Much of the asphalt layers in the proposed building footprints will be removed and disposed of in a legal manner (typically recycled as millings for other projects located off-Site).

Even though the disturbance area is less than one acre, a SWPPP would likely be prepared due to the existing Site slopes and erodibility of the in-situ soils.

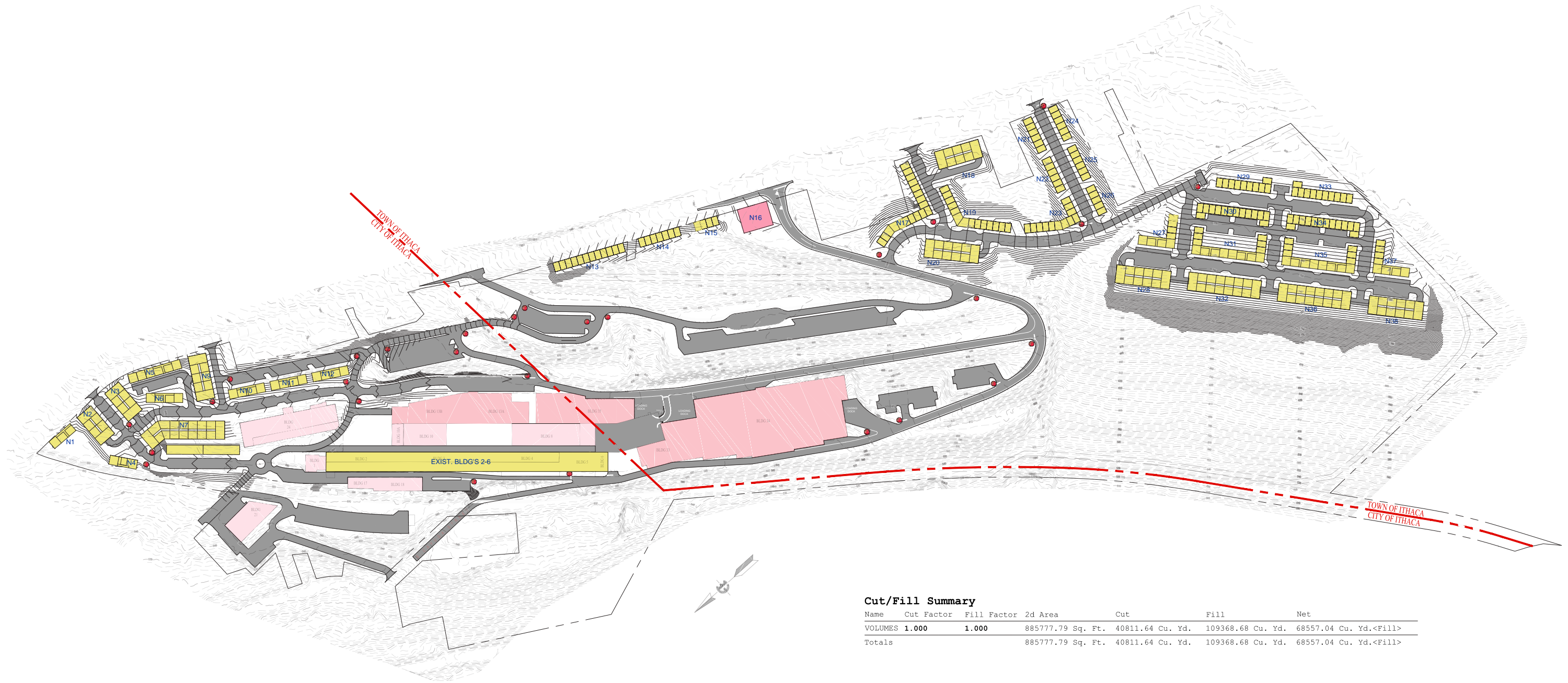
5.13.3.3 Maximum Development Scenario

The Maximum Development Scenario is defined as increasing the building sizes of the Project by 25% however the related construction impacts will be very similar to the proposed Project. The following preliminary description pertains to the Project as well as the Maximum Development Scenario:

- Phase I consists of the redevelopment of Buildings 21, 24, 33 and 34. This initial phase is estimated to commence in the Summer of 2016 with substantial completion in the Spring of 2017. The Site work component for this phase will be minimal consisting of redeveloping the existing parking areas.
- Other redevelopment phases consist of repurposing the remaining core buildings. The Site work component is also minimal for these phases and is largely limited to redevelopment of the paved areas as well as the selective removal of buildings for open space, access drives and courtyards. Most of the selective demolition consists of metal buildings.
- The remaining phases consist of the development of new buildings in largely undeveloped areas with additional impacts associated with larger Site construction projects including earthwork, erosion control and temporary stormwater measures.



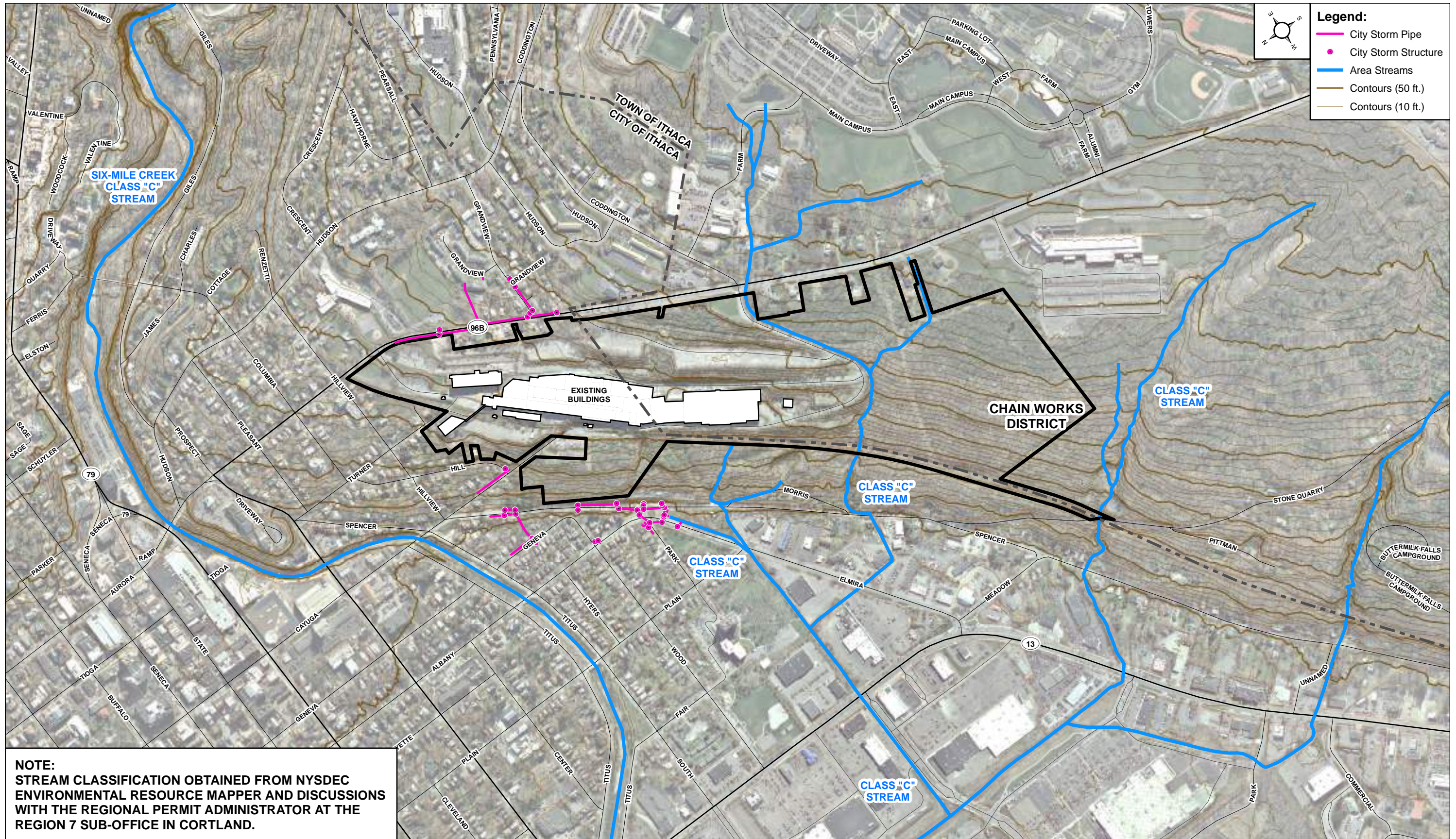
SITE SLOPE ANALYSIS (FE)
FIGURE 5.2-2



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
VOLUMES 1.000		1.000	885777.79 Sq. Ft.	40811.64 Cu. Yd.	109368.68 Cu. Yd.	68557.04 Cu. Yd.<Fill>
Totals			885777.79 Sq. Ft.	40811.64 Cu. Yd.	109368.68 Cu. Yd.	68557.04 Cu. Yd.<Fill>

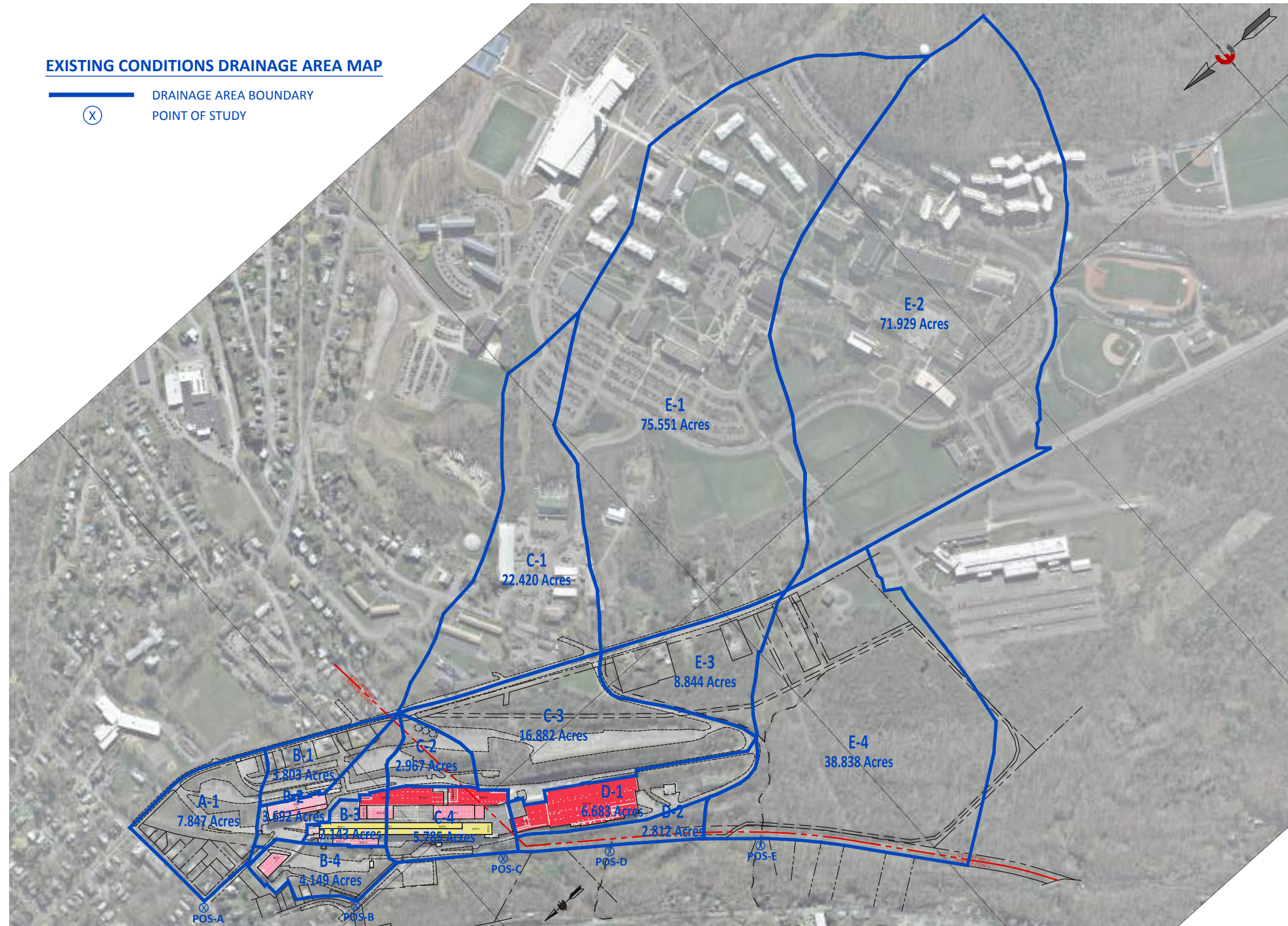
CONCEPT GRADING PLAN (FE)
FIGURE 5.2-3



STREAMS WITHIN AND IN THE VICINITY OF THE SITE (FE)
 FIGURE 5.3-1

EXISTING CONDITIONS DRAINAGE AREA MAP

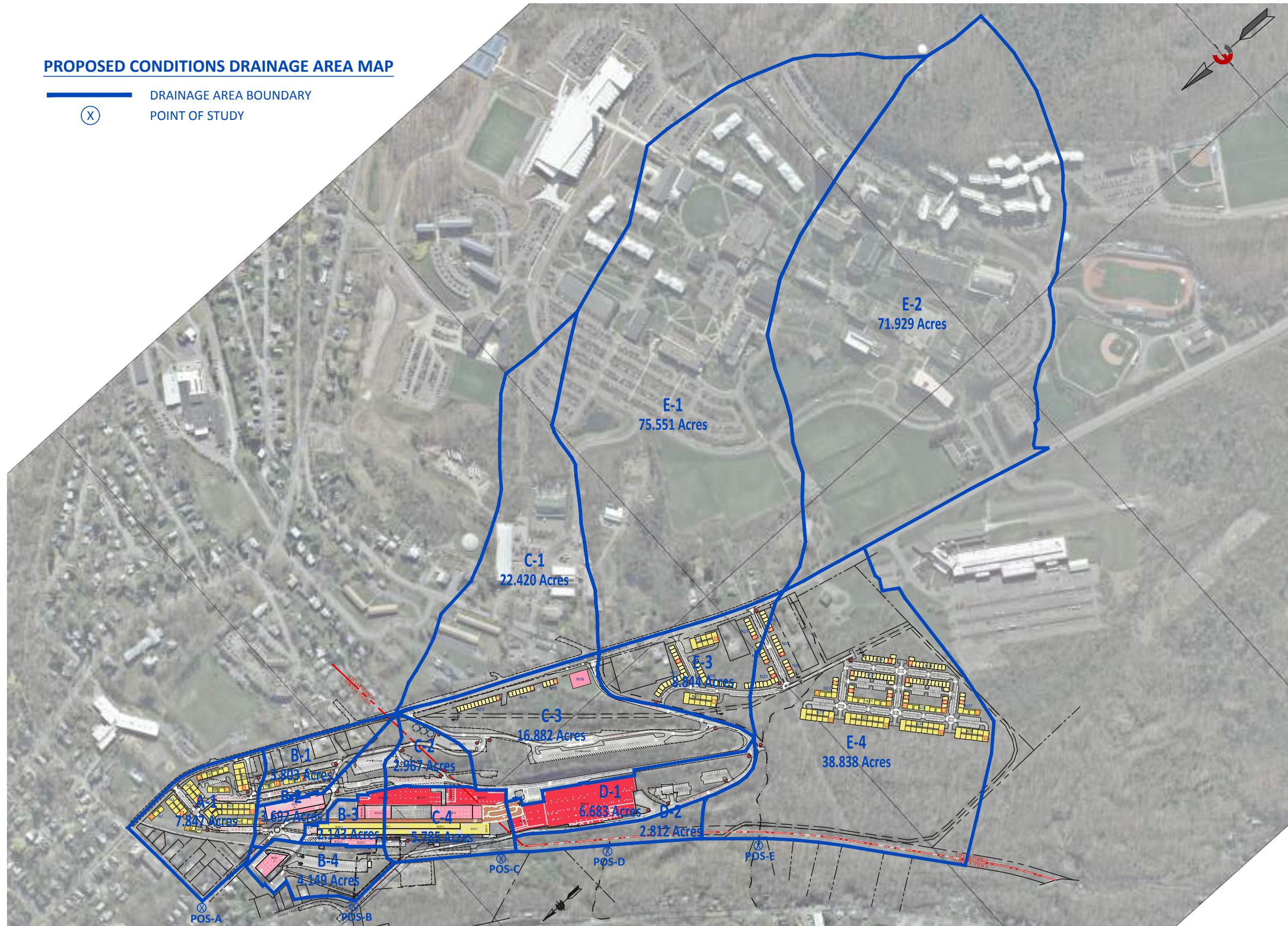
- DRAINAGE AREA BOUNDARY
- ⊗ POINT OF STUDY



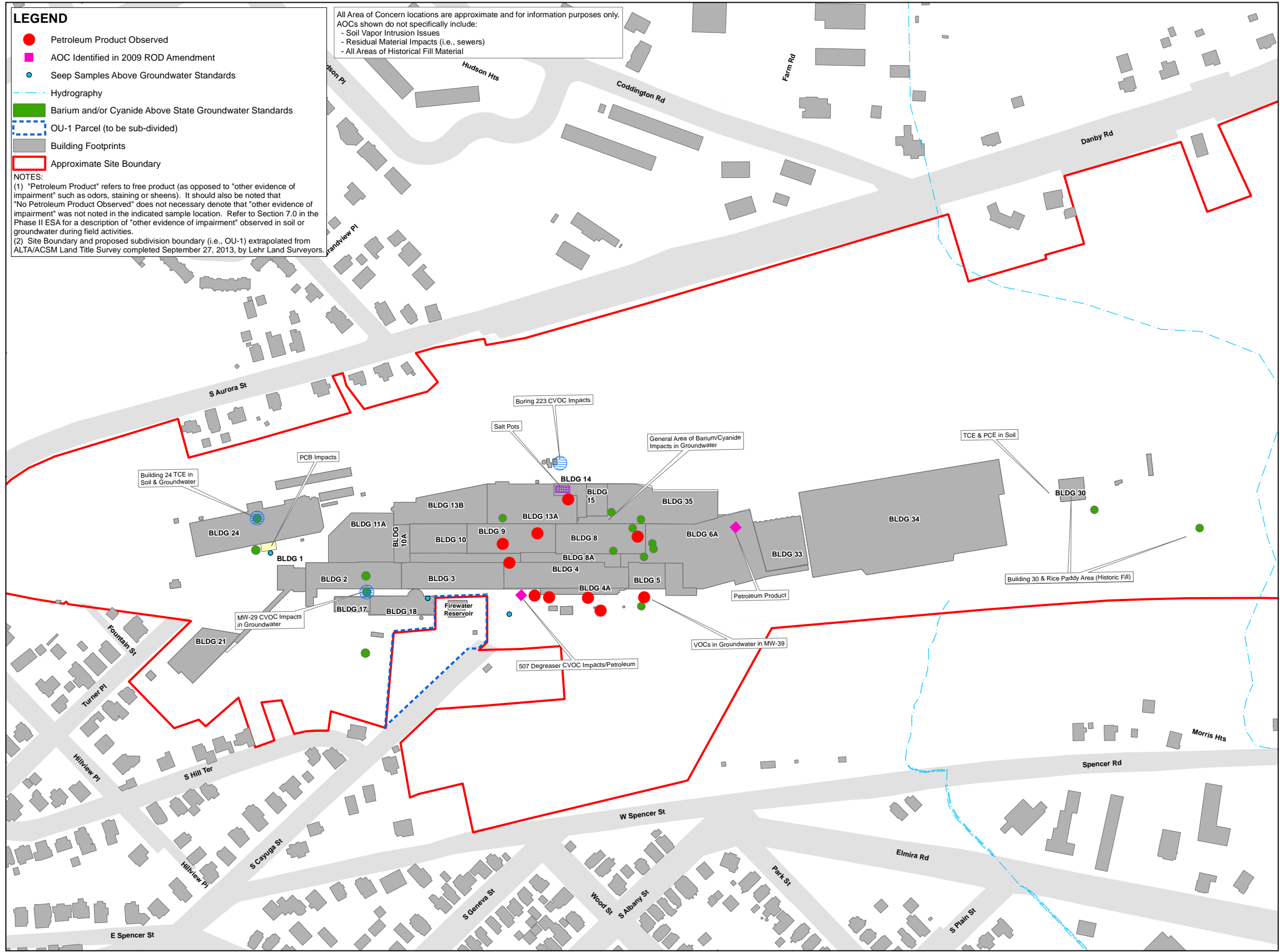
EXISTING CONDITIONS DRAINAGE AREA MAP + FIVE POS (FE)
FIGURE 5.3-2

PROPOSED CONDITIONS DRAINAGE AREA MAP

— DRAINAGE AREA BOUNDARY
 (X) POINT OF STUDY



PROPOSED CONDITIONS DRAINAGE AREA MAP + FIVE POS (FE)
 FIGURE 5.3-3



**SCOPING DOCUMENT:
 DRAFT GENERAL
 ENVIRONMENTAL
 IMPACT STATEMENT**

**EMERSON POWER
 TRANSMISSION FACILITY**

**620 S. AURORA ST
 ITHACA, NEW YORK**

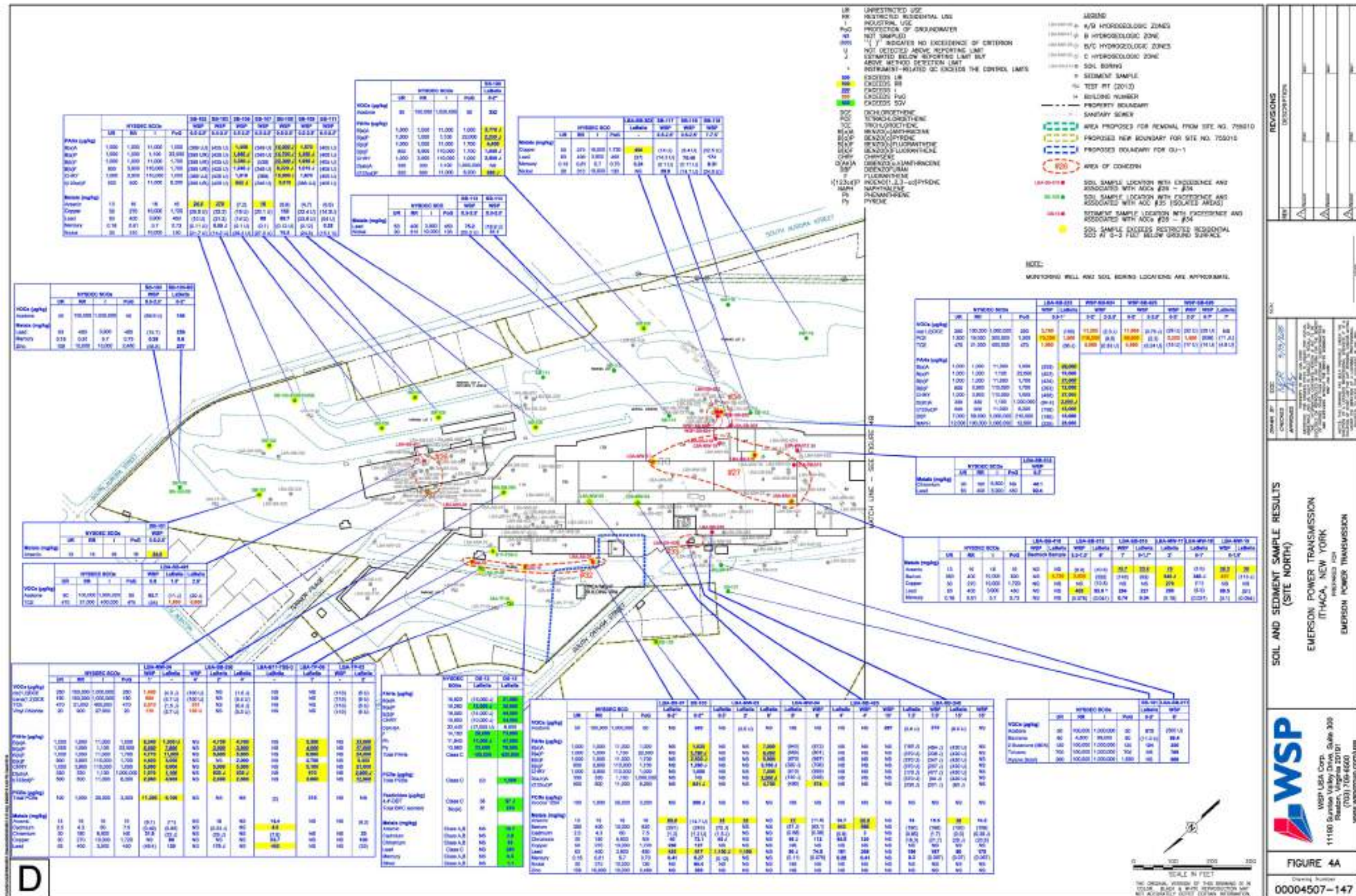
Areas of Concern



0 125 250
 1 inch = 100 feet
 Intended to print in Arch D size.

[213582]
 [FIGURE A]

AREAS OF CONCERN + OU-1 (LABELLA)
 FIGURE 5.5-1



SOIL AND SEDIMENT SAMPLING DATA SUMMARY - PART 1 (LABELLA)
FIGURE 5.5-2

EMERSON POWER TRANSMISSION FACILITY

**620 S. AURORA ST
ITHACA, NEW YORK**

Targeted Compound Exceedences of Part 703 Groundwater Standards in Groundwater Samples

Northeastern Portion of Site

Legend

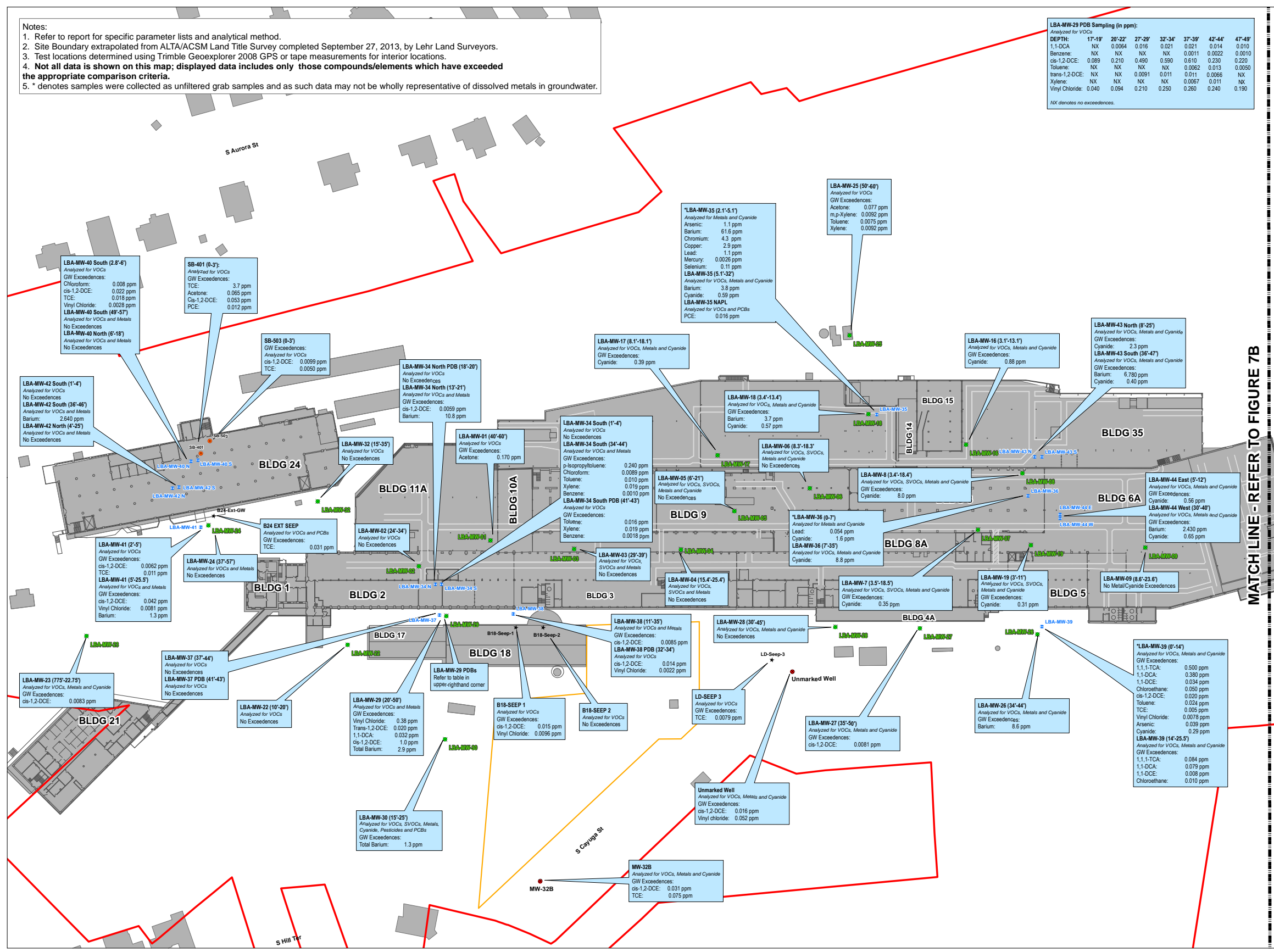
- + Monitoring Well Location
- * Seep Samples
- OU-1 Parcel (to be sub-divided)
- Site Boundary
- + Supplemental Bedrock Wells



0 25 50 100
1 inch = 50 feet
Intended to print in Arch D size.

213582

FIGURE 7A



Notes:

1. Refer to report for specific parameter lists and analytical method.
2. Site Boundary extrapolated from ALTA/ACSM Land Title Survey completed September 27, 2013, by Lehr Land Surveyors.
3. Test locations determined using Trimble Geoexplorer 2008 GPS or tape measurements for interior locations.
4. **Not all data is shown on this map; displayed data includes only those compounds/elements which have exceeded the appropriate comparison criteria.**
5. * denotes samples were collected as unfiltered grab samples and as such data may not be wholly representative of dissolved metals in groundwater.

MATCHLINE - REFER TO FIGURE 7B

GROUNDWATER AND SEEP SAMPLING RESULTS - PART 1 (LABELLA)
FIGURE 5.5-4




PHASE II ESA
EMERSON POWER TRANSMISSION FACILITY

**620 S. AURORA ST
ITHACA, NEW YORK**

Targeted Compound Exceedences of Part 703 Groundwater Standards in Groundwater Samples

Southwestern Portion of Site

Legend

-  Monitoring Well Location
-  Hydrography
-  Site Boundary

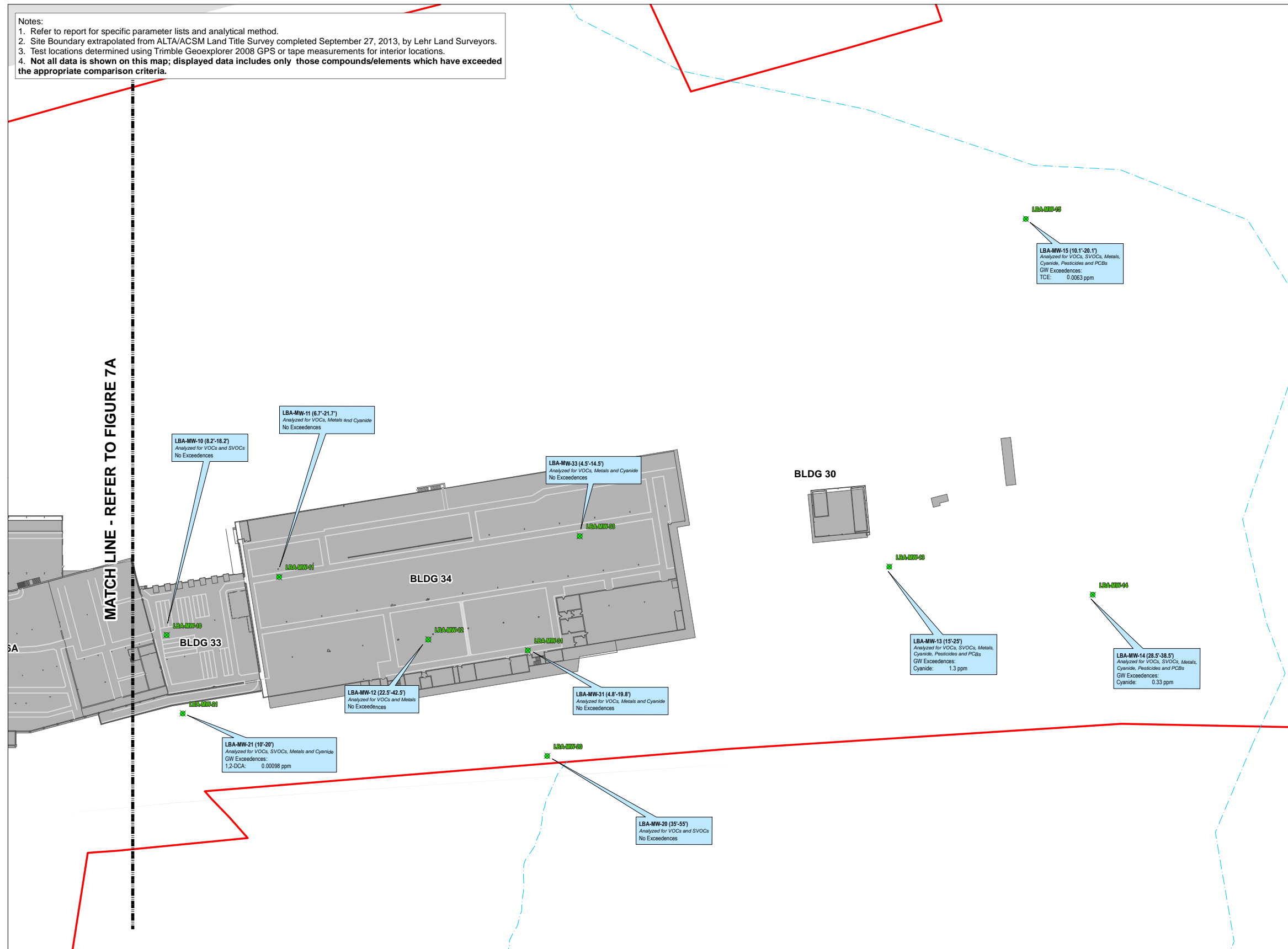


0 25 50 100
1 inch = 50 feet
Intended to print in Arch D size.

[213582]

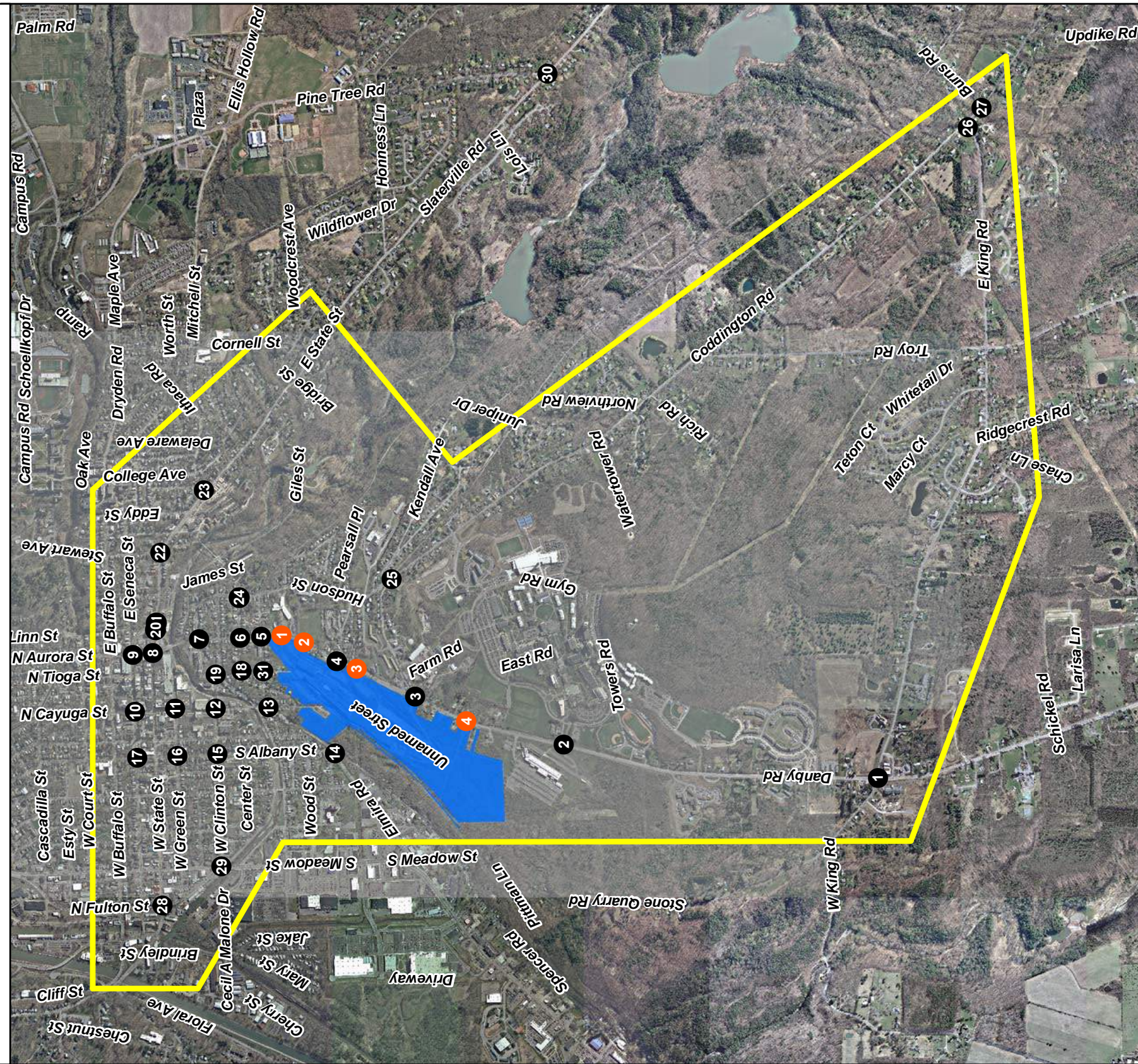
[FIGURE 7B]

Notes:
1. Refer to report for specific parameter lists and analytical method.
2. Site Boundary extrapolated from ALTA/ACSM Land Title Survey completed September 27, 2013, by Lehr Land Surveyors.
3. Test locations determined using Trimble Geoplotter 2008 GPS or tape measurements for interior locations.
4. **Not all data is shown on this map; displayed data includes only those compounds/elements which have exceeded the appropriate comparison criteria.**



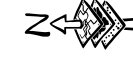
GROUNDWATER AND SEEP SAMPLING RESULTS - PART 2 (LABELLA)
FIGURE 5.5-5

FIGURE 5.7-1 - SITE LOCATION AND STUDY AREA

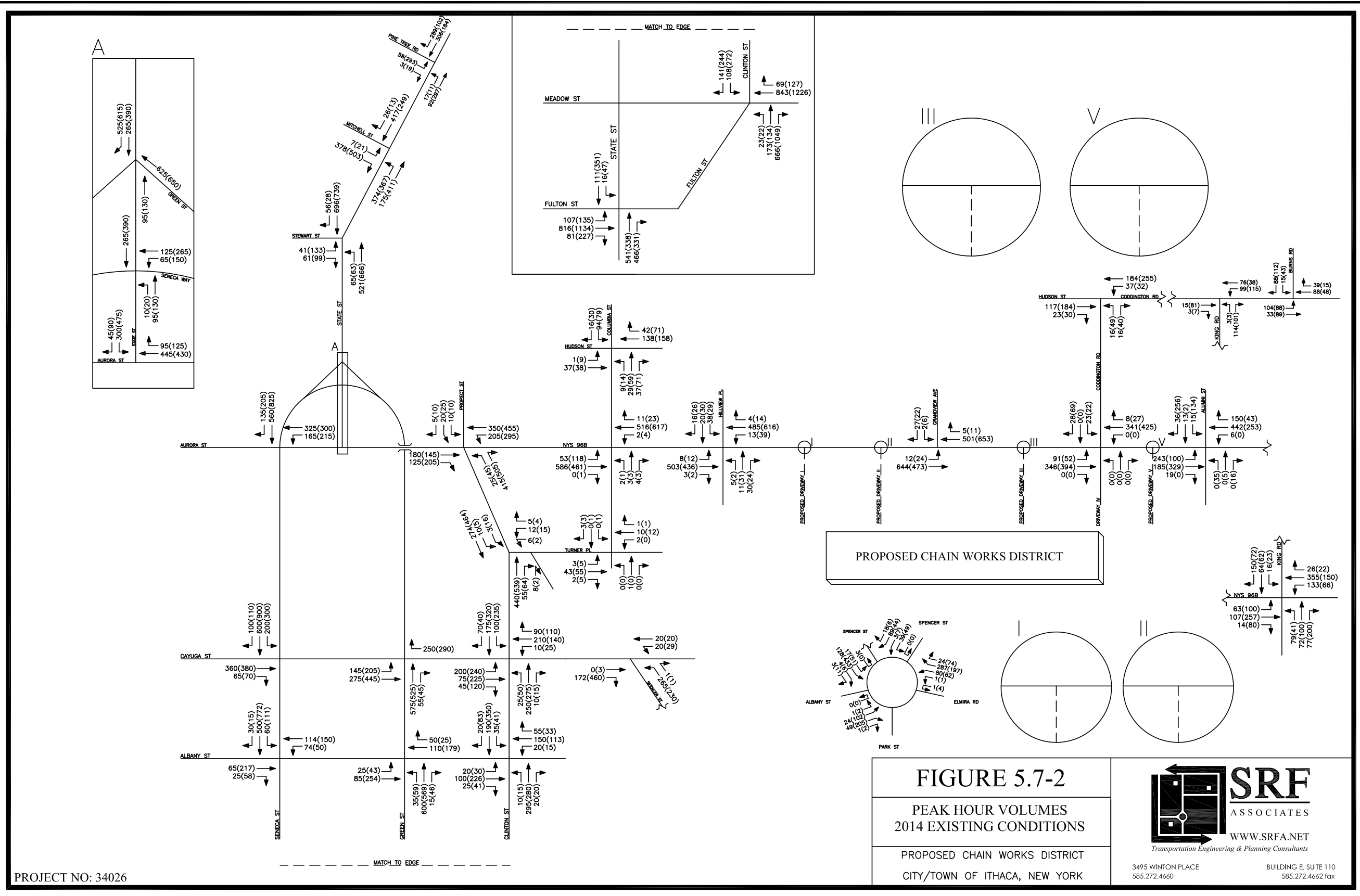


- Legend**
- Proposed Intersection
 - Study Intersection
 - Study Area
 - Site Location

**PROPOSED
CHAIN WORKS DEVELOPMENT
CITY/TOWN OF ITHACA, NY**



SITE LOCATION AND STUDY AREA (SRF)
FIGURE 5.7-1



PROJECT NO: 34026

2014 EXISTING CONDITIONS (SRF)
 FIGURE 5.7-2

PROJECT NO: 34026

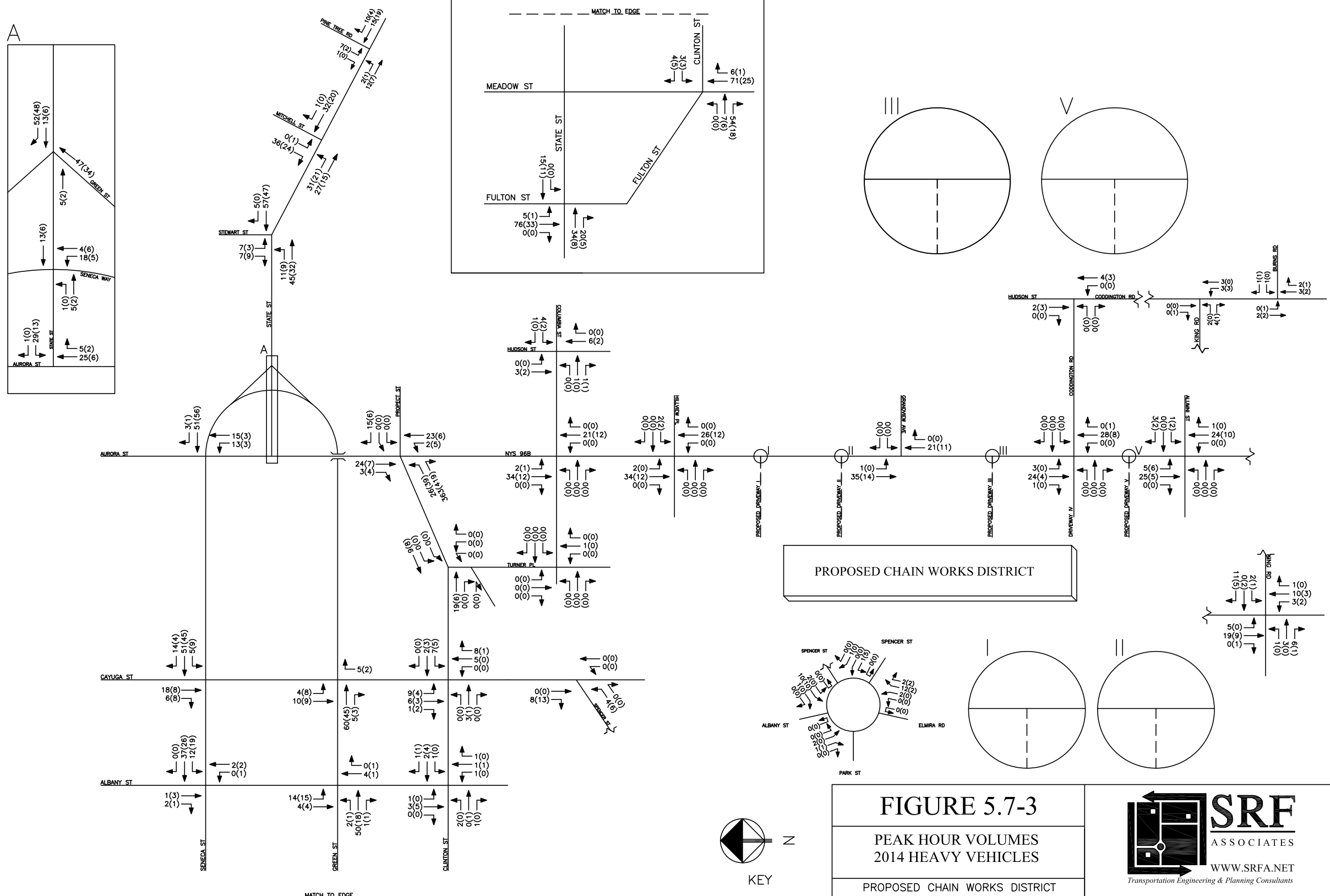


FIGURE 5.7-3

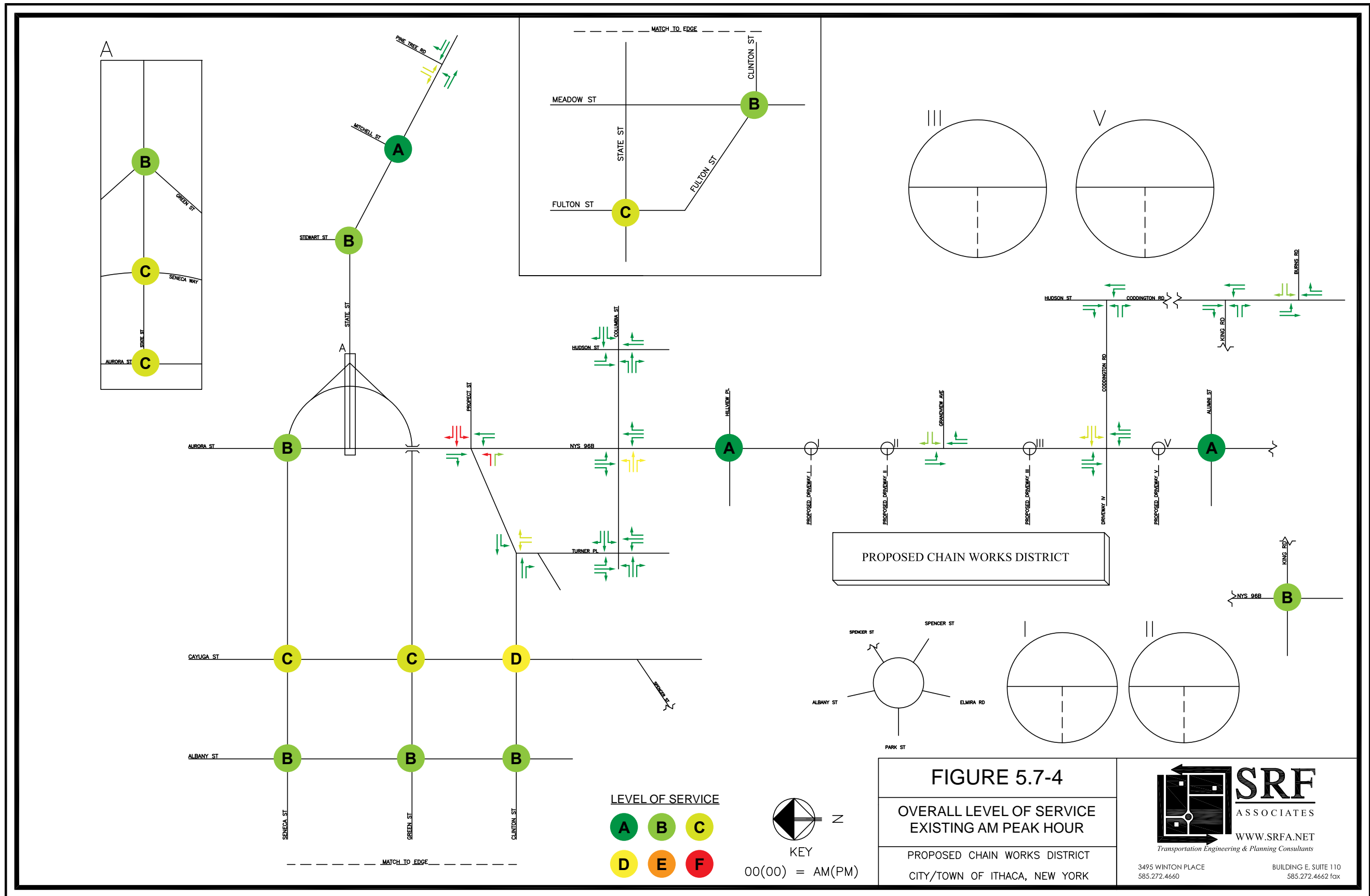
PEAK HOUR VOLUMES
2014 HEAVY VEHICLES

PROPOSED CHAIN WORKS DISTRICT
CITY/TOWN OF ITHACA, NEW YORK

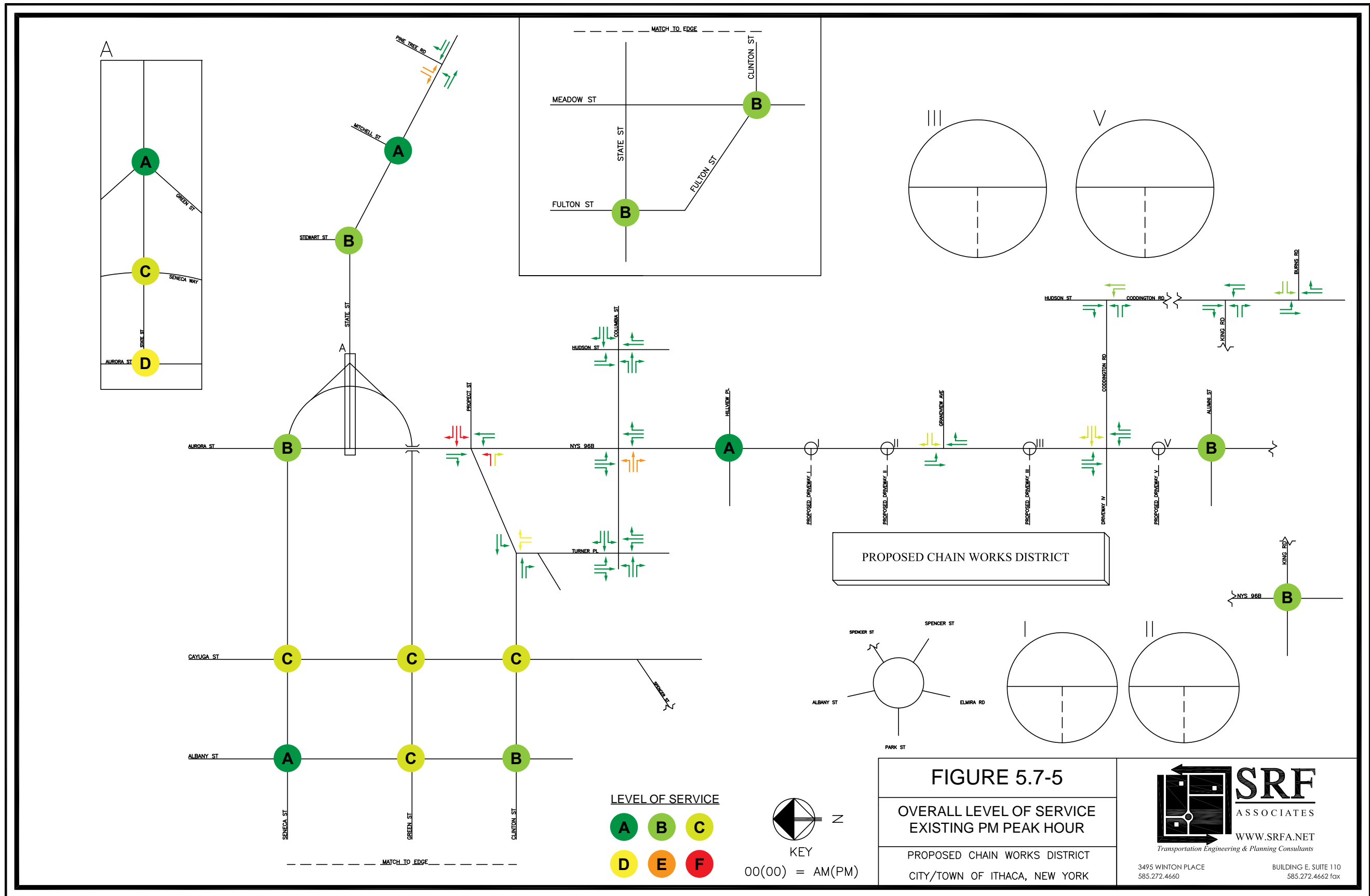


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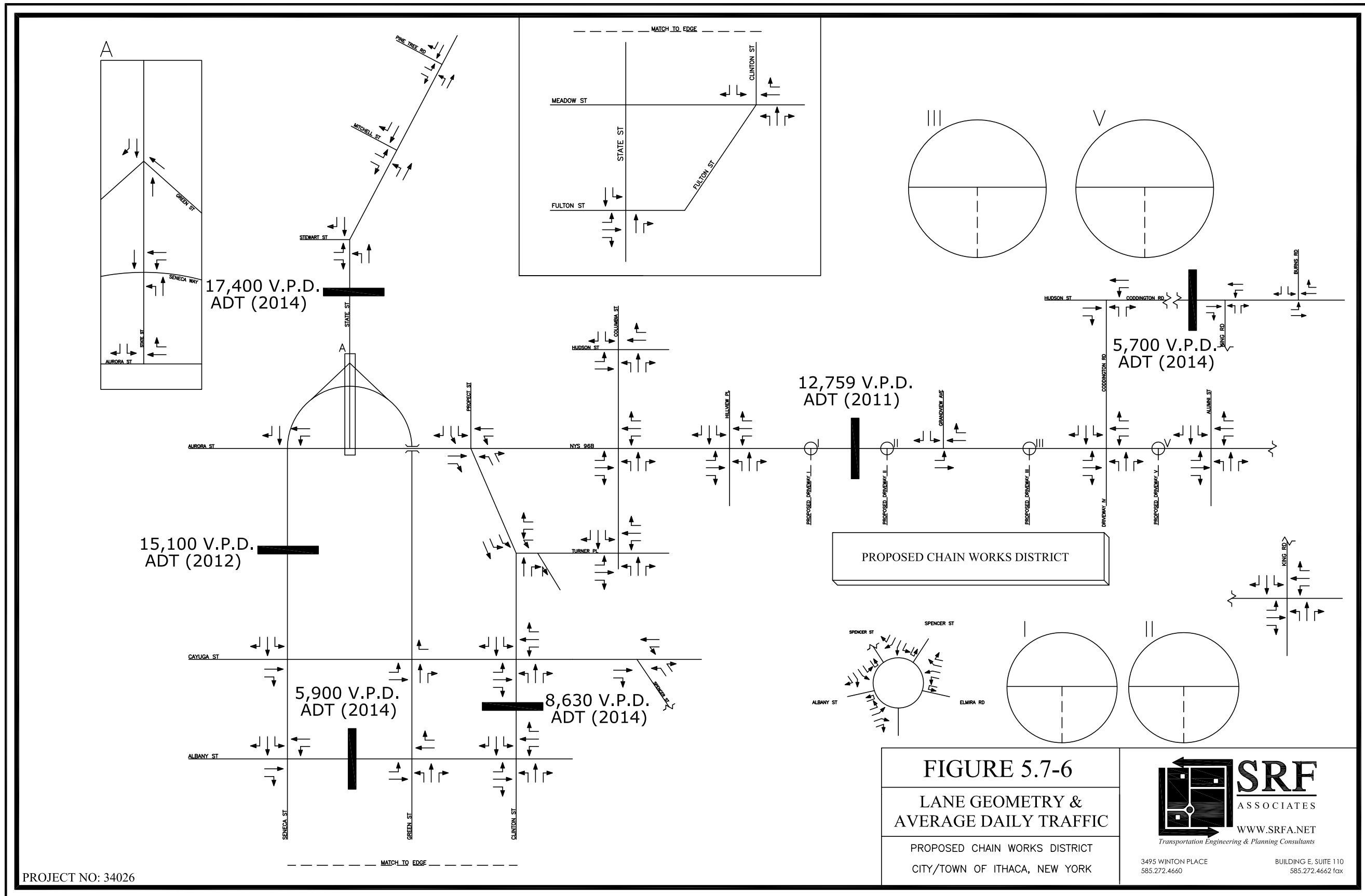
2014 HEAVY VEHICLES (SRF)
FIGURE 5.7-3



EXISTING AM PEAK HOUR (SRF)
FIGURE 5.7-4



EXISTING PM PEAK HOUR (SRF)
 FIGURE 5.7-5



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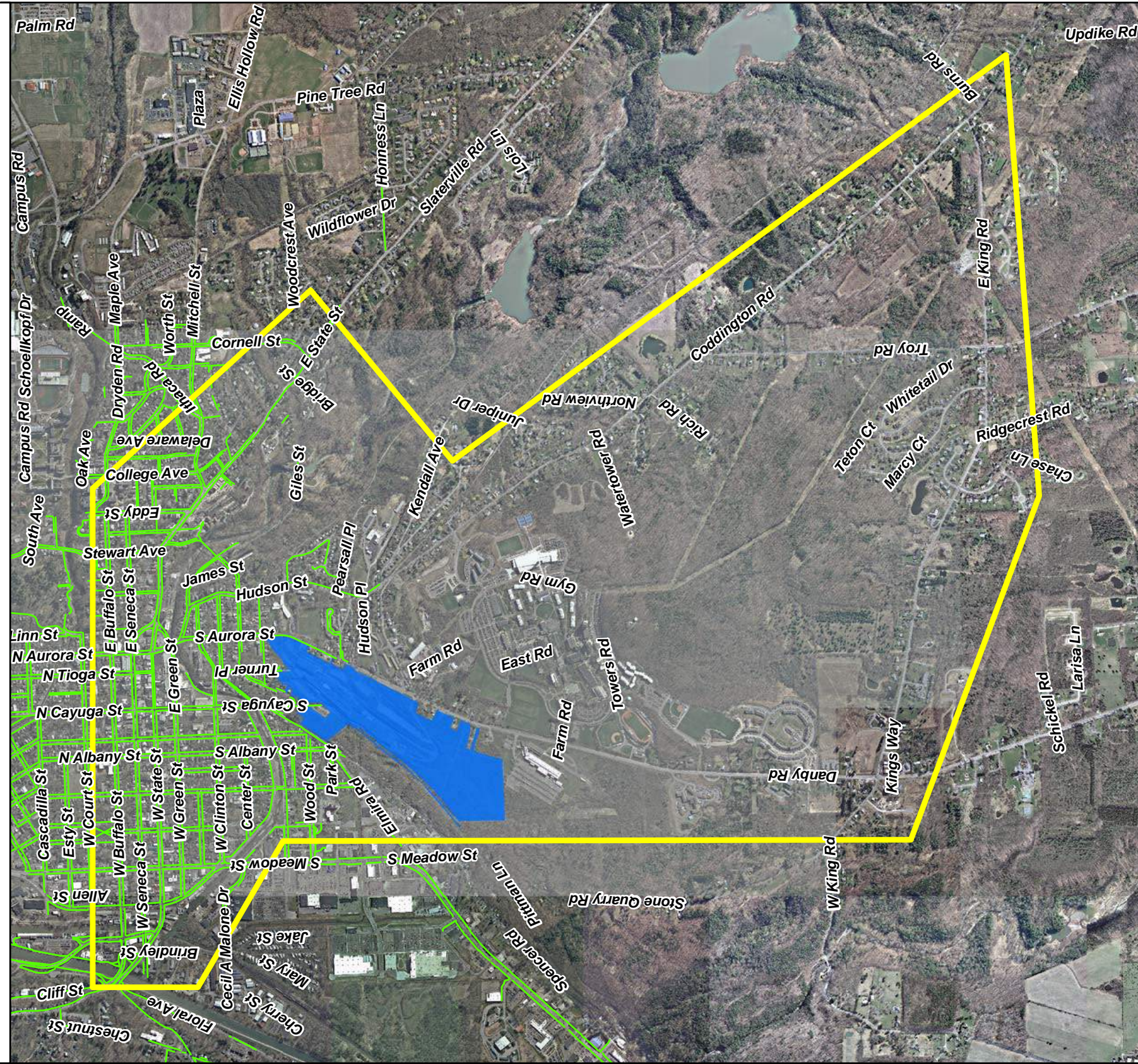
FIGURE 5.7-6
LANE GEOMETRY & AVERAGE DAILY TRAFFIC
 PROPOSED CHAIN WORKS DISTRICT
 CITY/TOWN OF ITHACA, NEW YORK



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LANE GEOMETRY (SRF)
 FIGURE 5.7-6

FIGURE 5.7-7 - SIDEWALK NETWORK

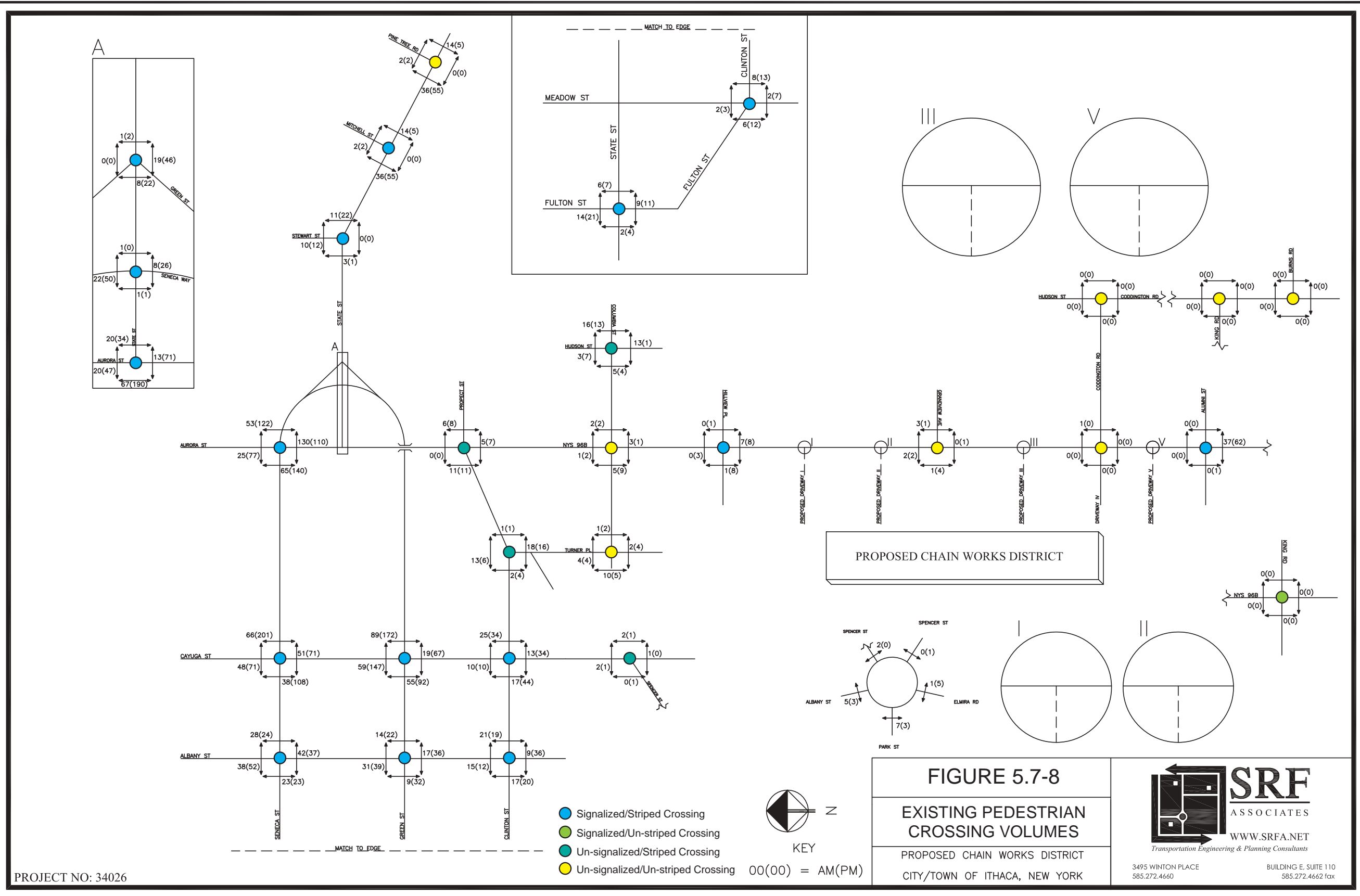


Legend
 Study Area
 Sidewalk Network
 Site Location

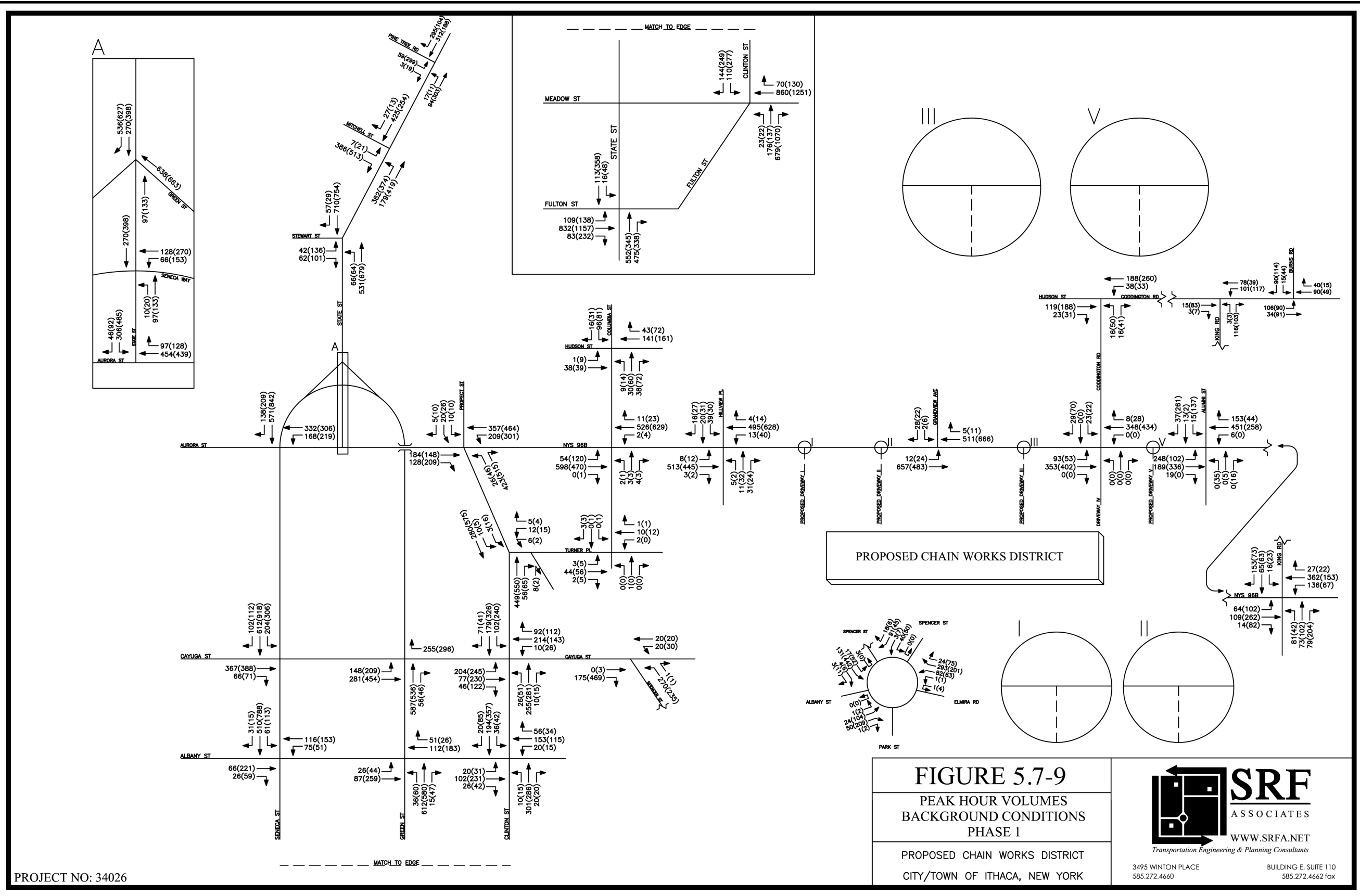
**PROPOSED
 CHAIN WORKS DEVELOPMENT**
 CITY/TOWN OF ITHACA, NY



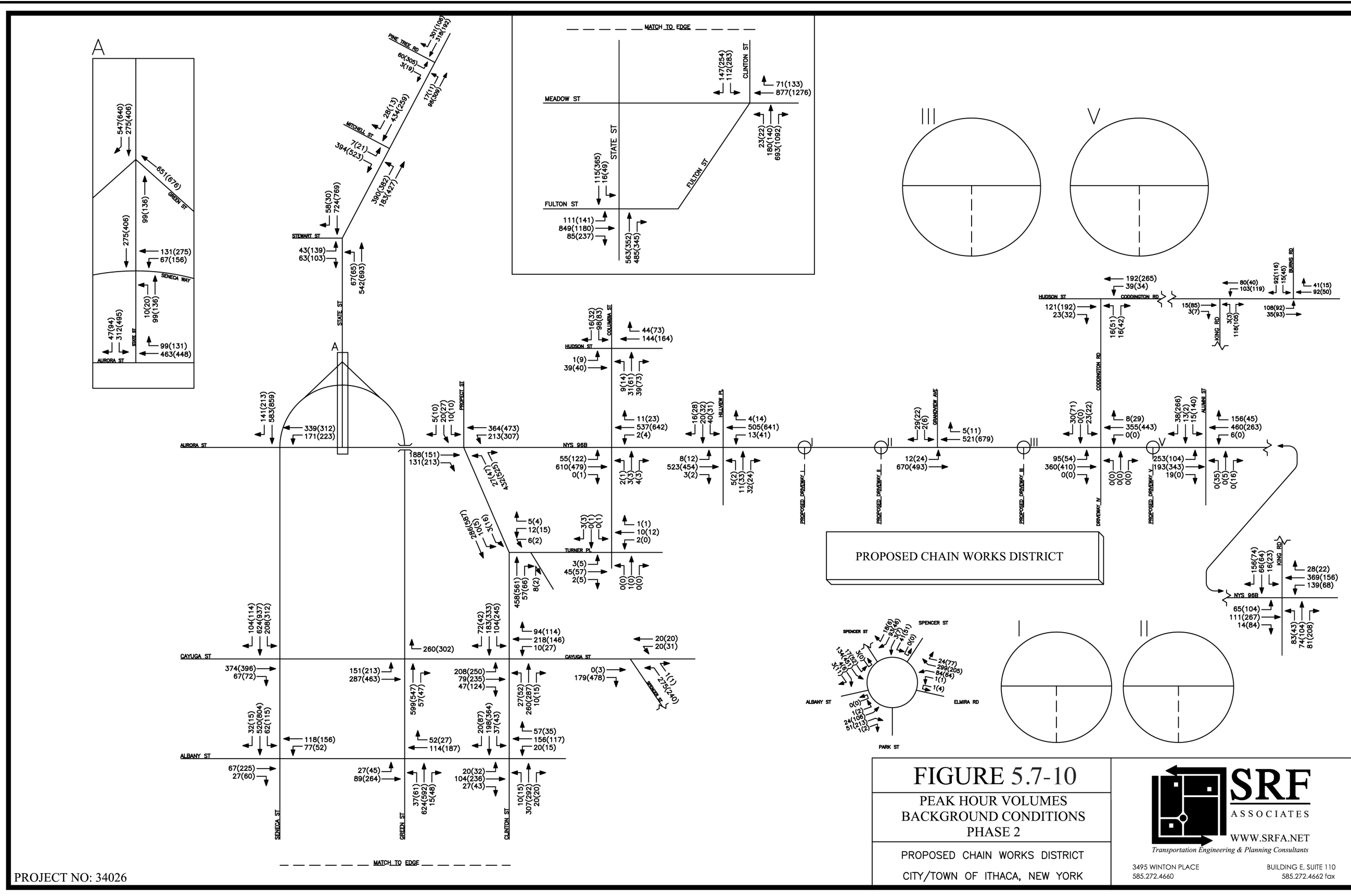
SIDEWALK NETWORK (SRF)
 FIGURE 5.7-7



PEDESTRIAN CROSSING VOLUMES (SRF)
FIGURE 5.7-8



PHASE I BACKGROUND CONDITIONS (SRF)
 FIGURE 5.7-9

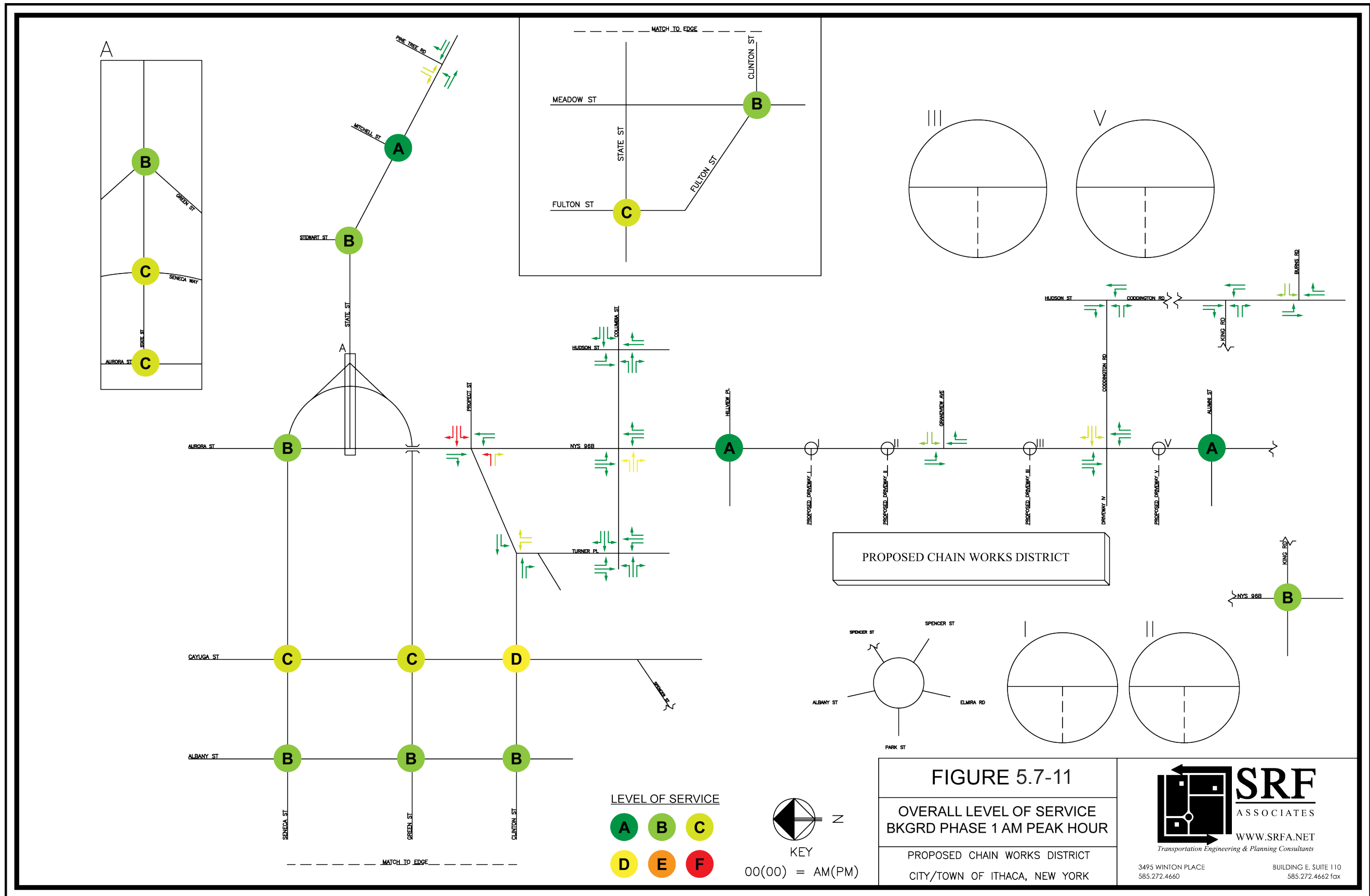


PROJECT NO: 34026

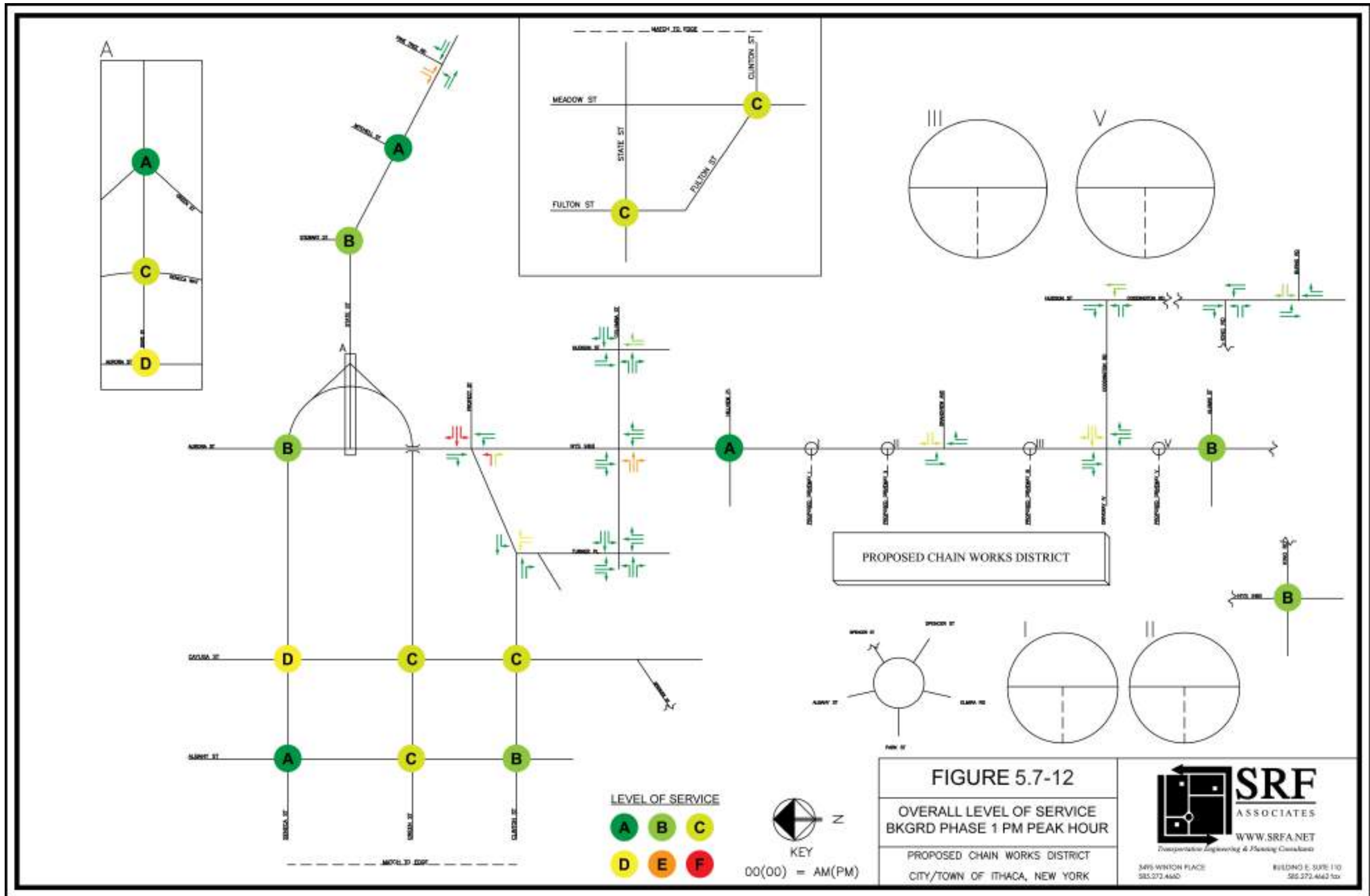
FIGURE 5.7-10
 PEAK HOUR VOLUMES
 BACKGROUND CONDITIONS
 PHASE 2
 PROPOSED CHAIN WORKS DISTRICT
 CITY/TOWN OF ITHACA, NEW YORK

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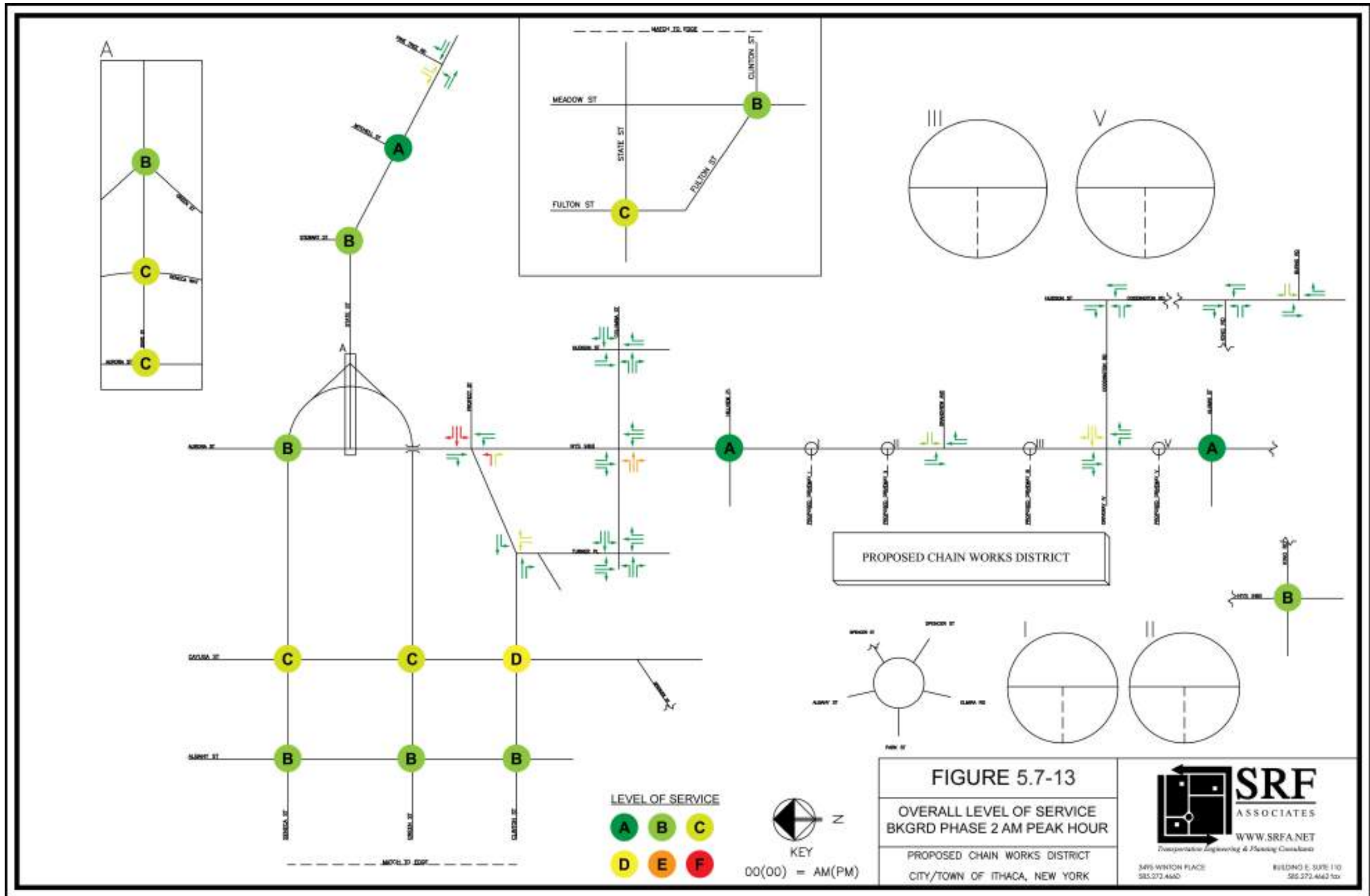
PHASE II BACKGROUND CONDITIONS (SRF)
 FIGURE 5.7-10



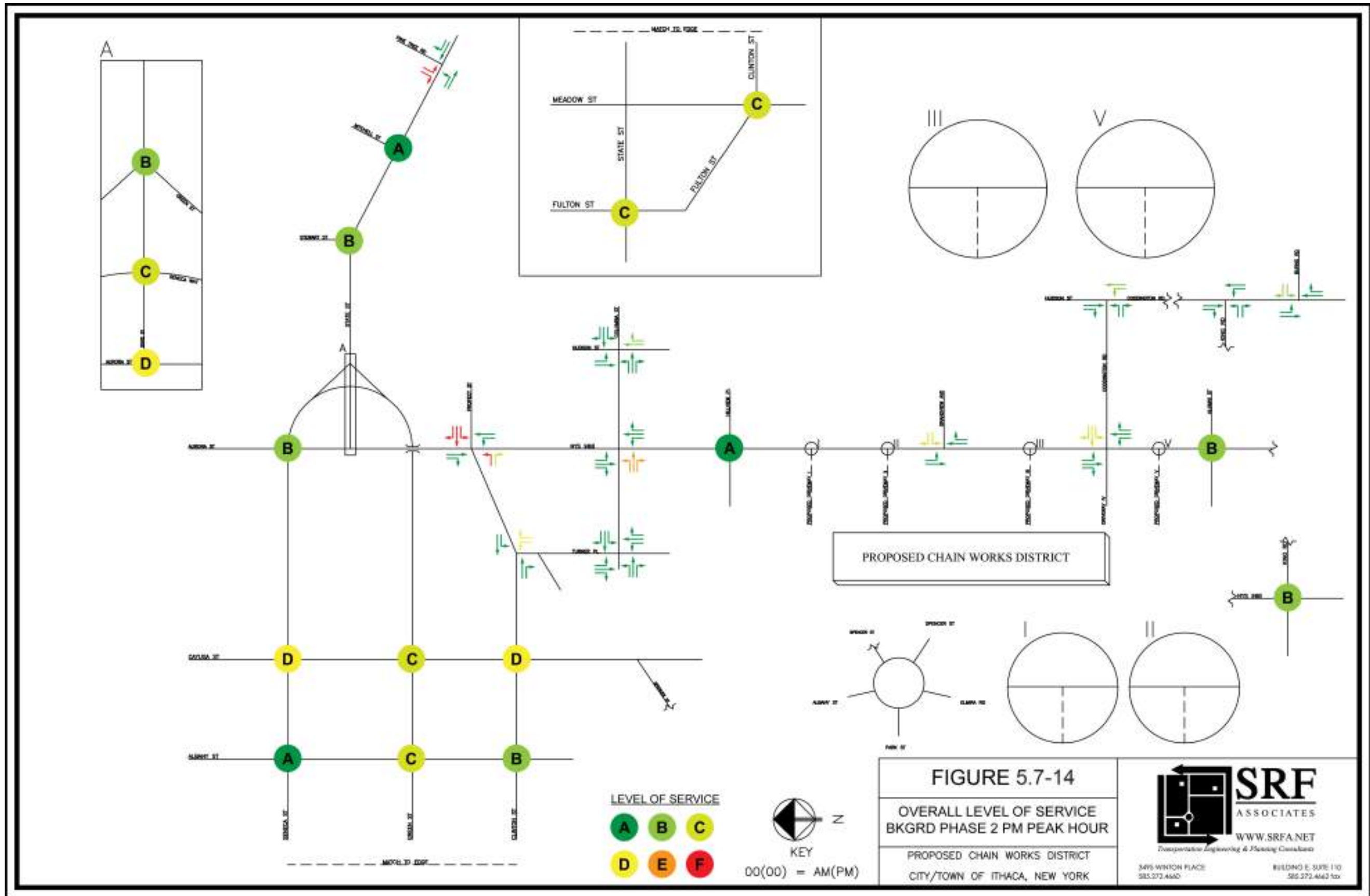
PHASE I AM LEVEL OF SERVICE (SRF)
 FIGURE 5.7-11



PHASE I PM LEVEL OF SERVICE (SRF)
FIGURE 5.7-12

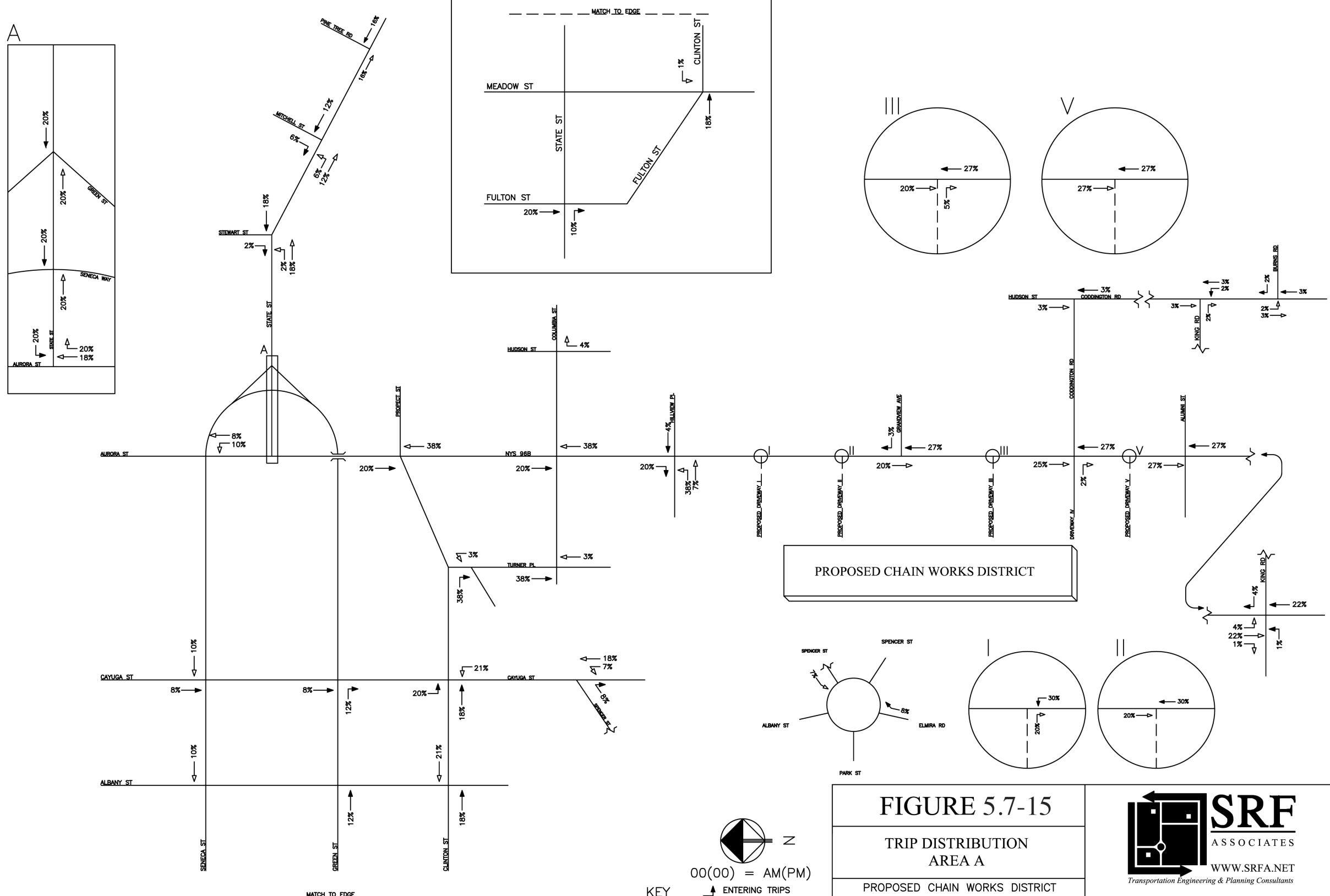


PHASE II PM LEVEL OF SERVICE (SRF)
FIGURE 5.7-13

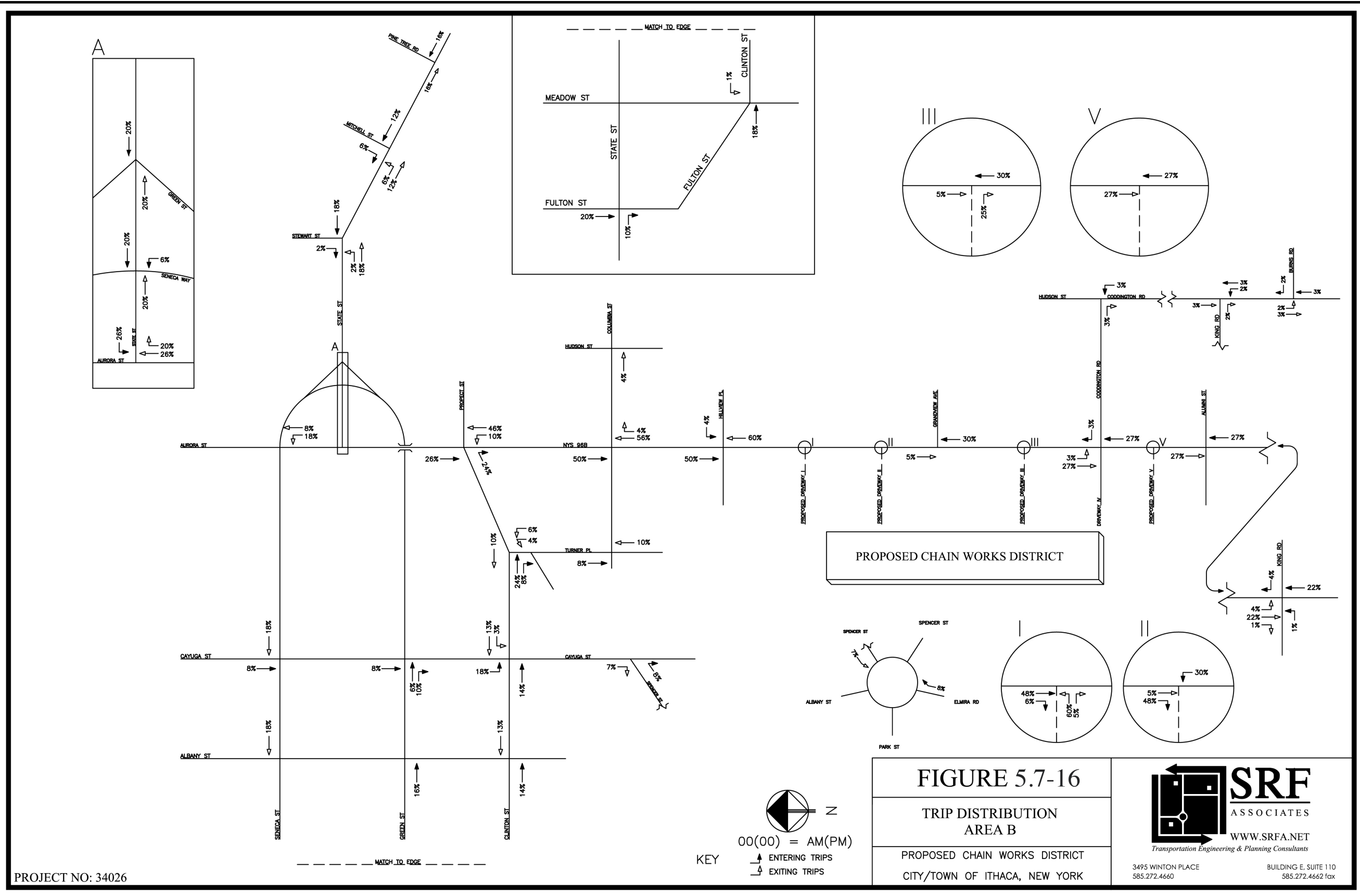


PHASE II PM LEVEL OF SERVICE (SRF)
FIGURE 5.7-14

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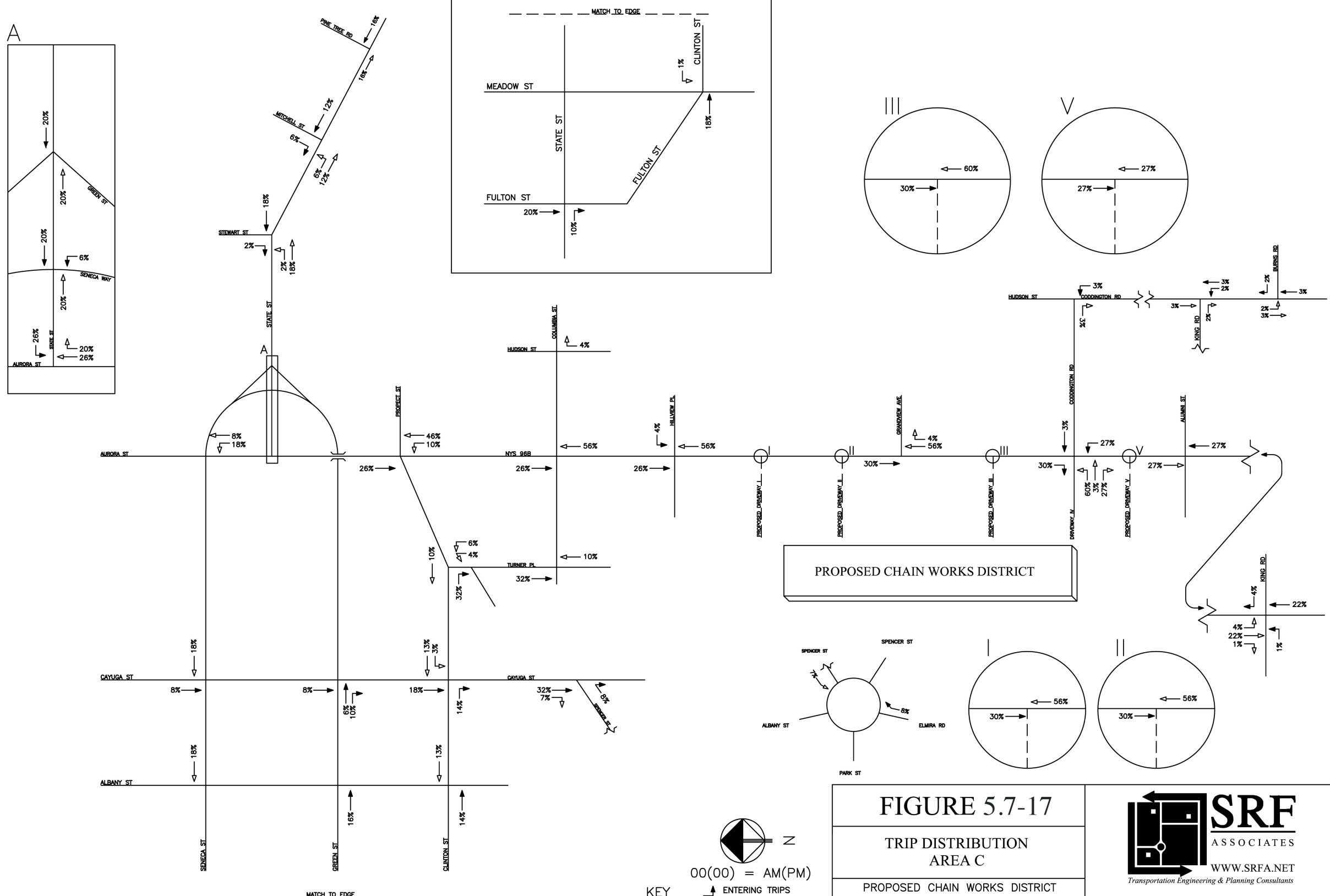


TRIP DISTRIBUTION AREA A (SRF)
 FIGURE 5.7-15



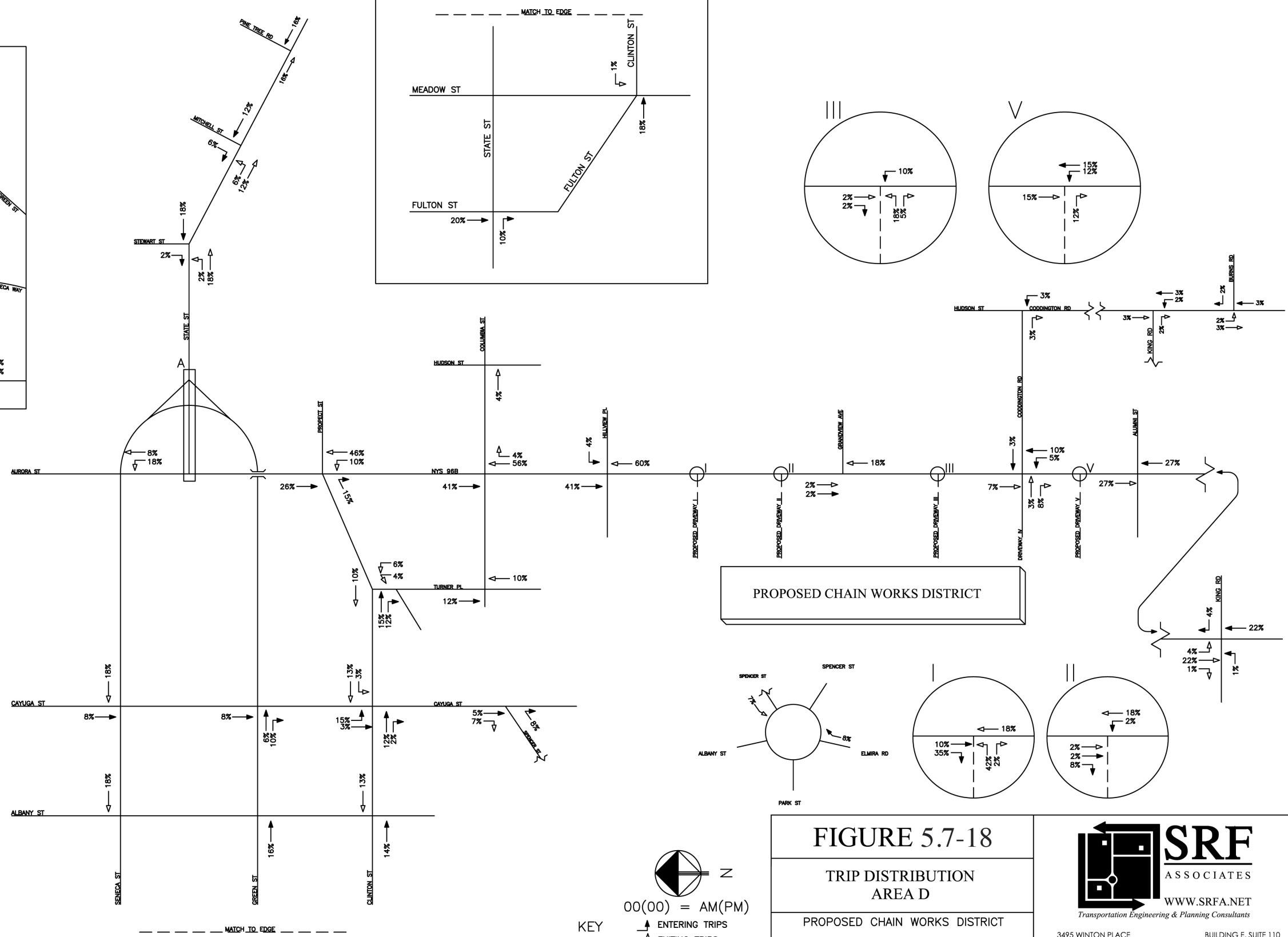
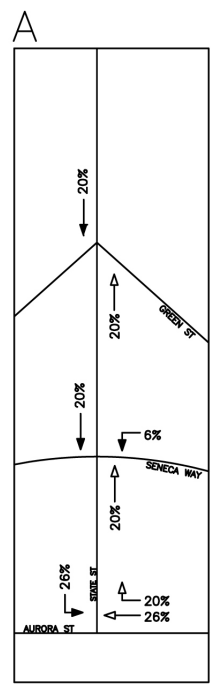
TRIP DISTRIBUTION AREA B (SRF)
 FIGURE 5.7-16

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TRIP DISTRIBUTION AREA C (SRF)
 FIGURE 5.7-17

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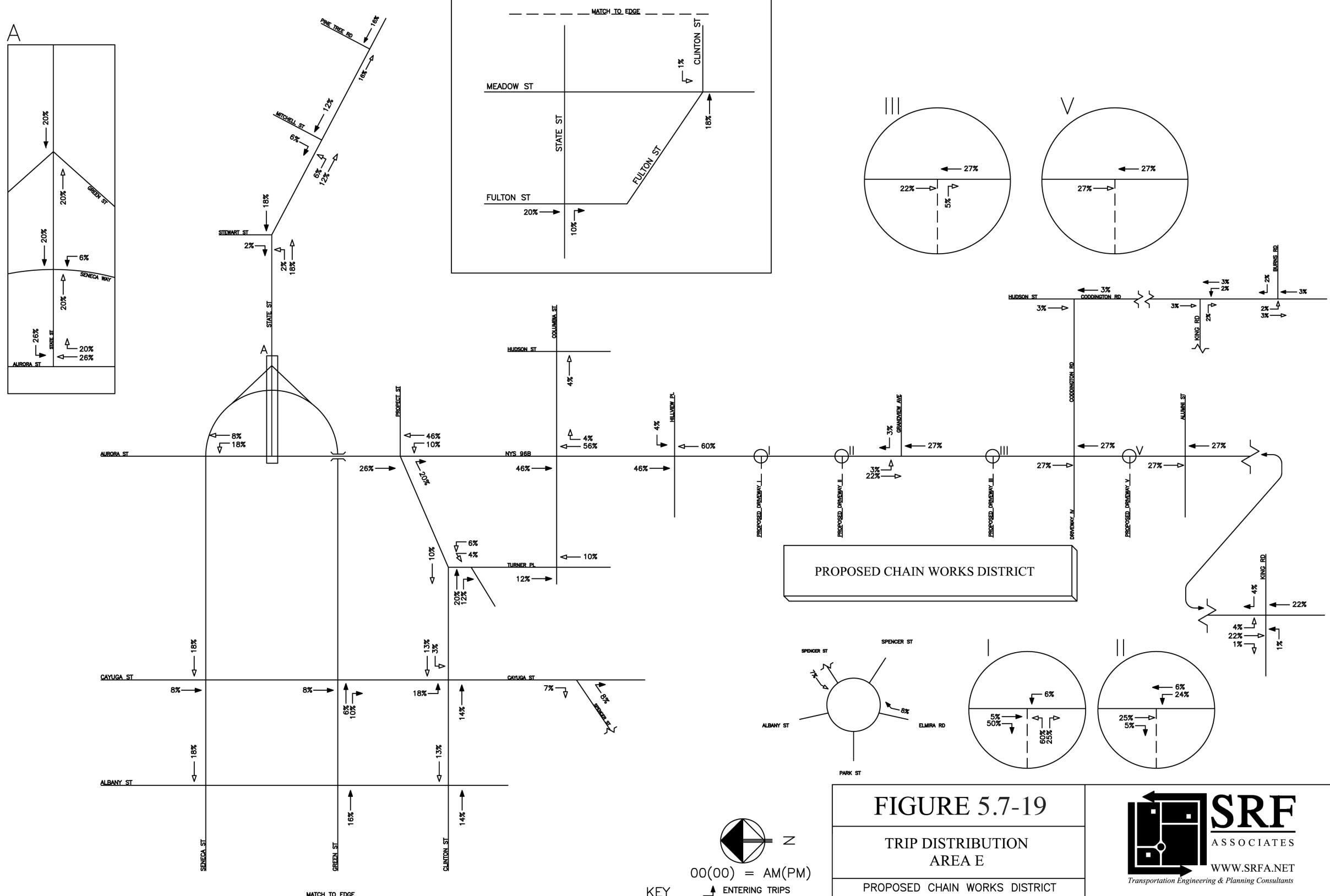
KEY
 N
 00(00) = AM(PM)
 ENTERING TRIPS
 EXITING TRIPS

FIGURE 5.7-18
 TRIP DISTRIBUTION
 AREA D
 PROPOSED CHAIN WORKS DISTRICT
 CITY/TOWN OF ITHACA, NEW YORK

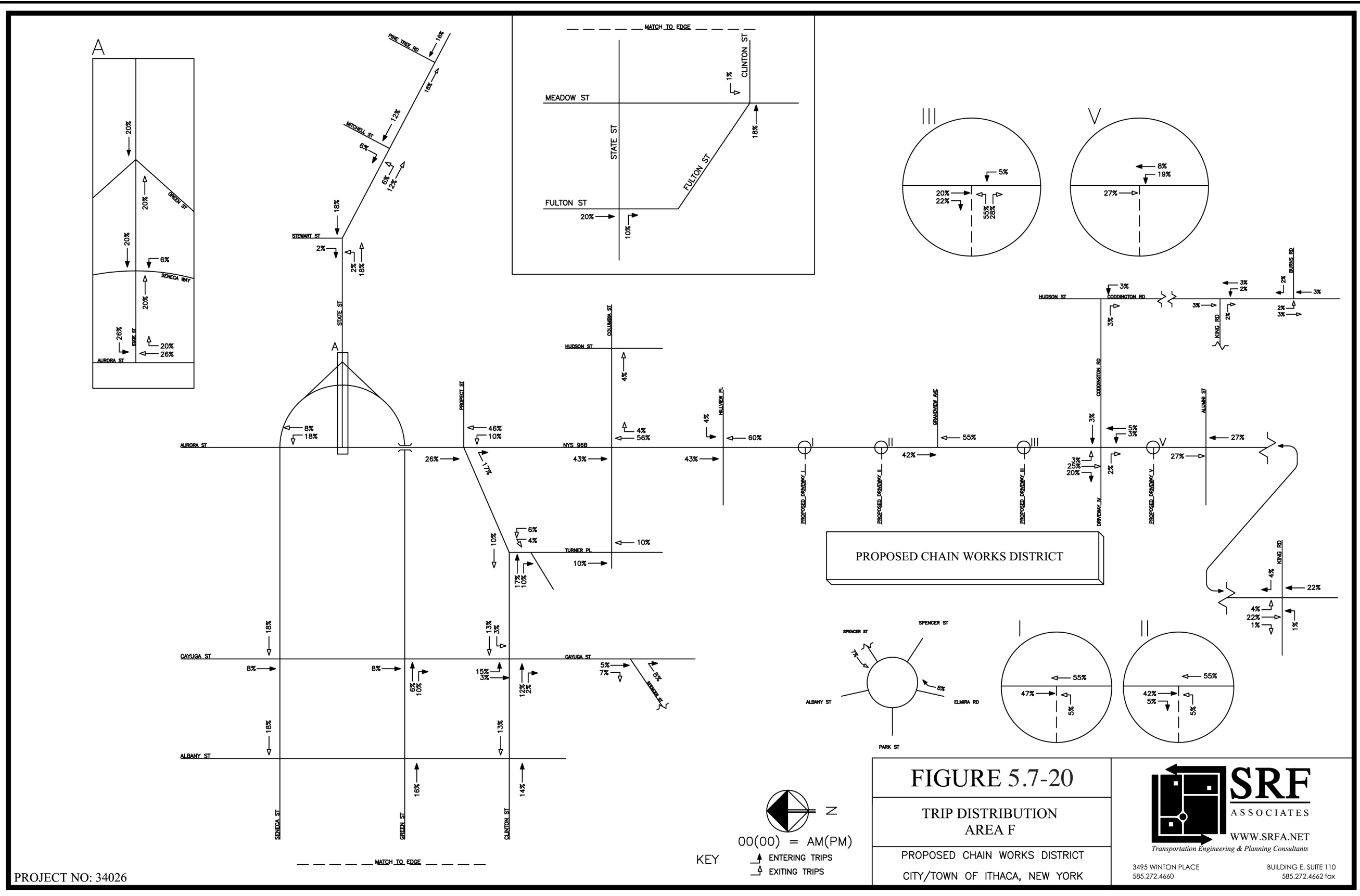
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TRIP DISTRIBUTION AREA D (SRF)
 FIGURE 5.7-18

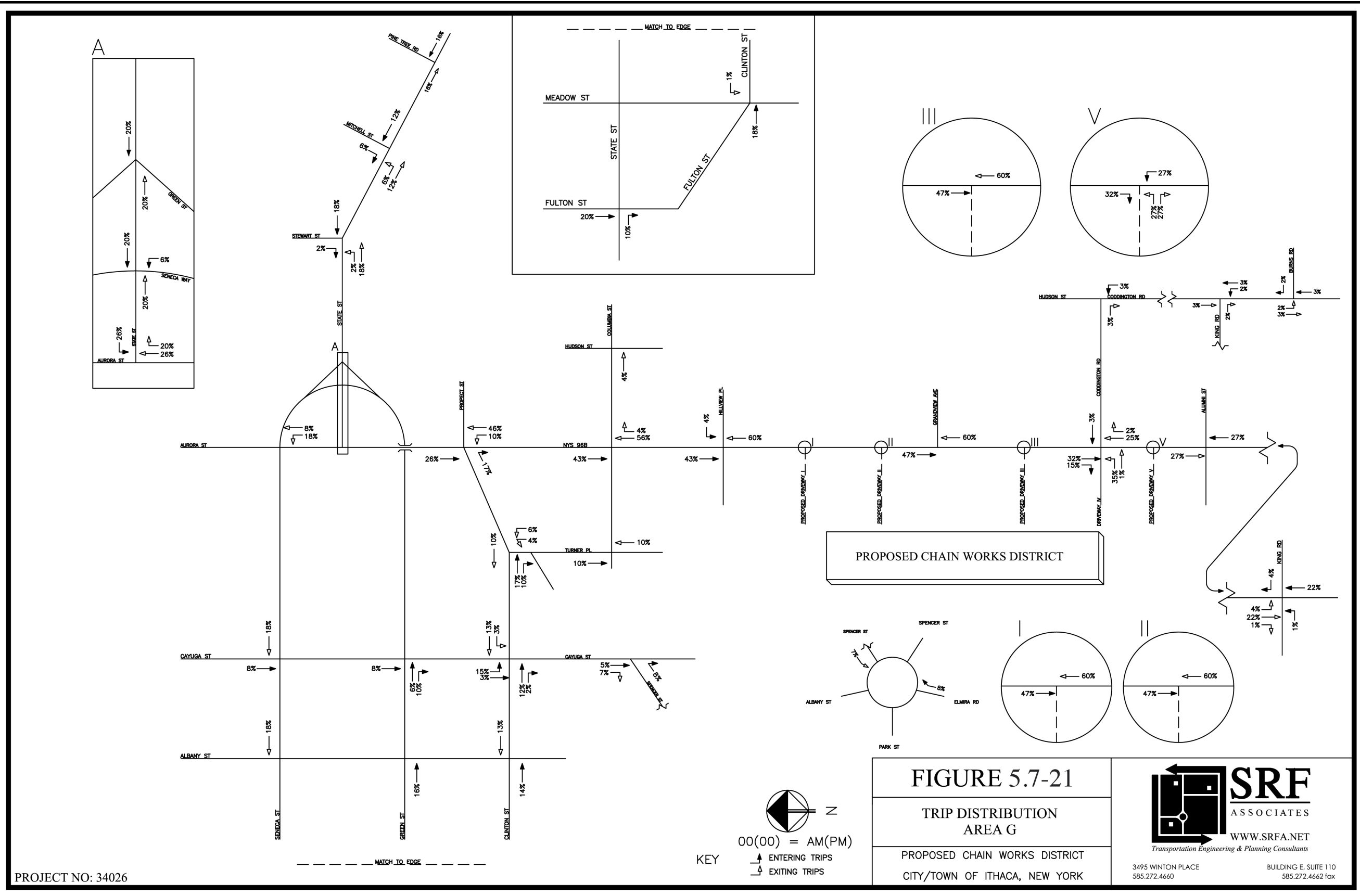
PROJECT NO: 34026



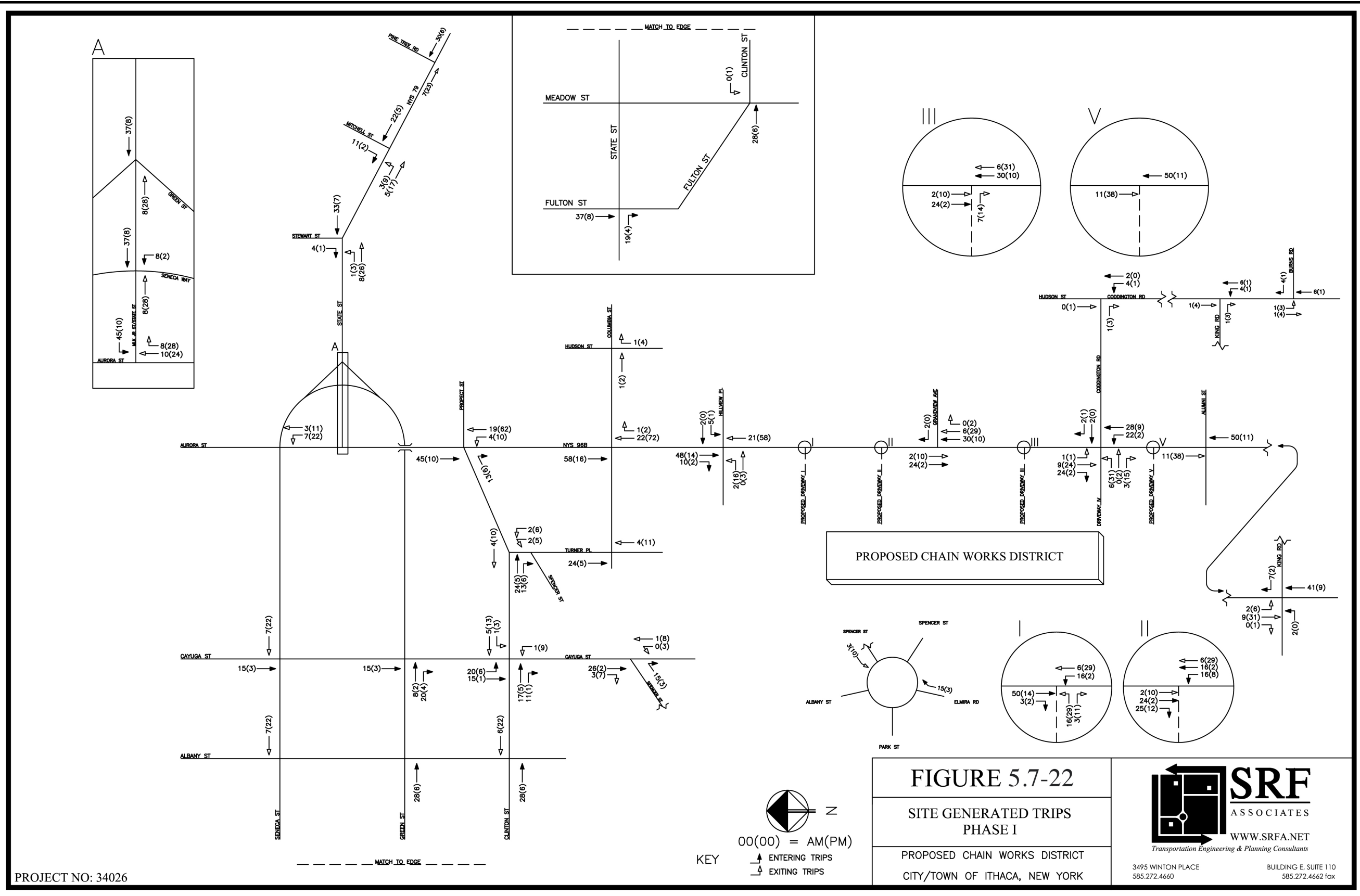
TRIP DISTRIBUTION AREA E (SRF)
 FIGURE 5.7-19



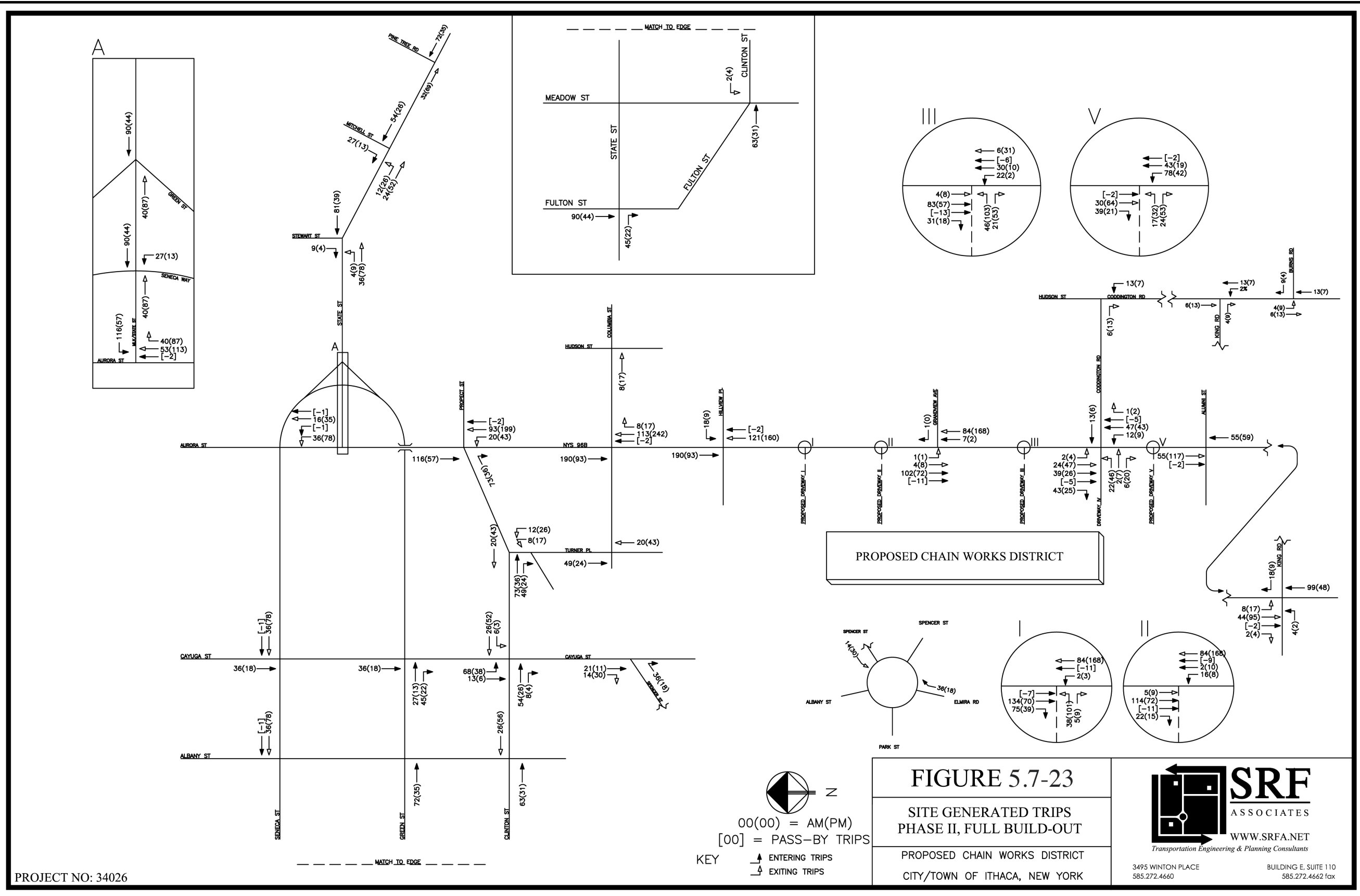
TRIP DISTRIBUTION AREA F (SRF)
 FIGURE 5.7-20



TRIP DISTRIBUTION AREA G (SRF)
 FIGURE 5.7-21

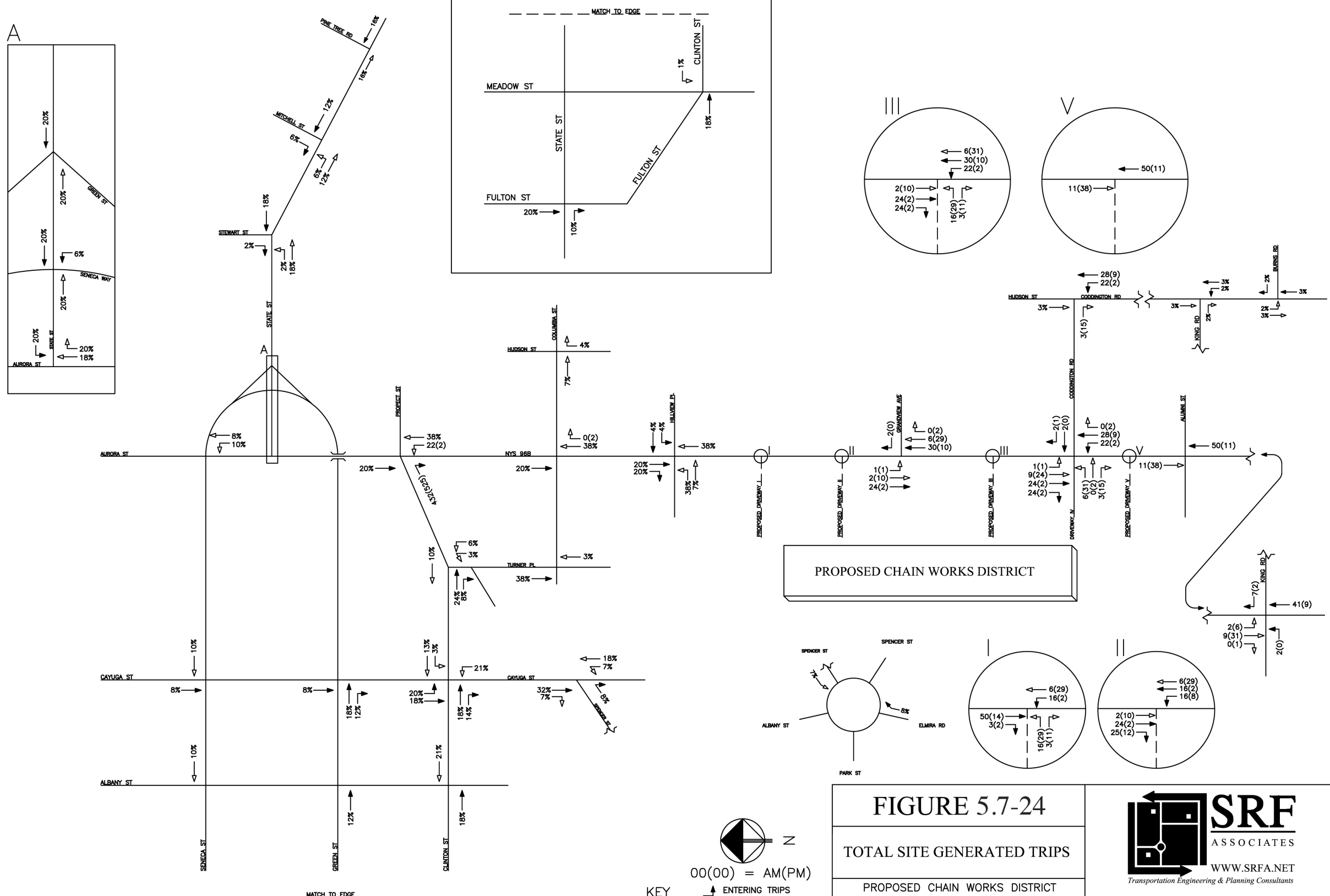


PHASE I SITE GENERATED TRIPS (SRF)
FIGURE 5.7-22

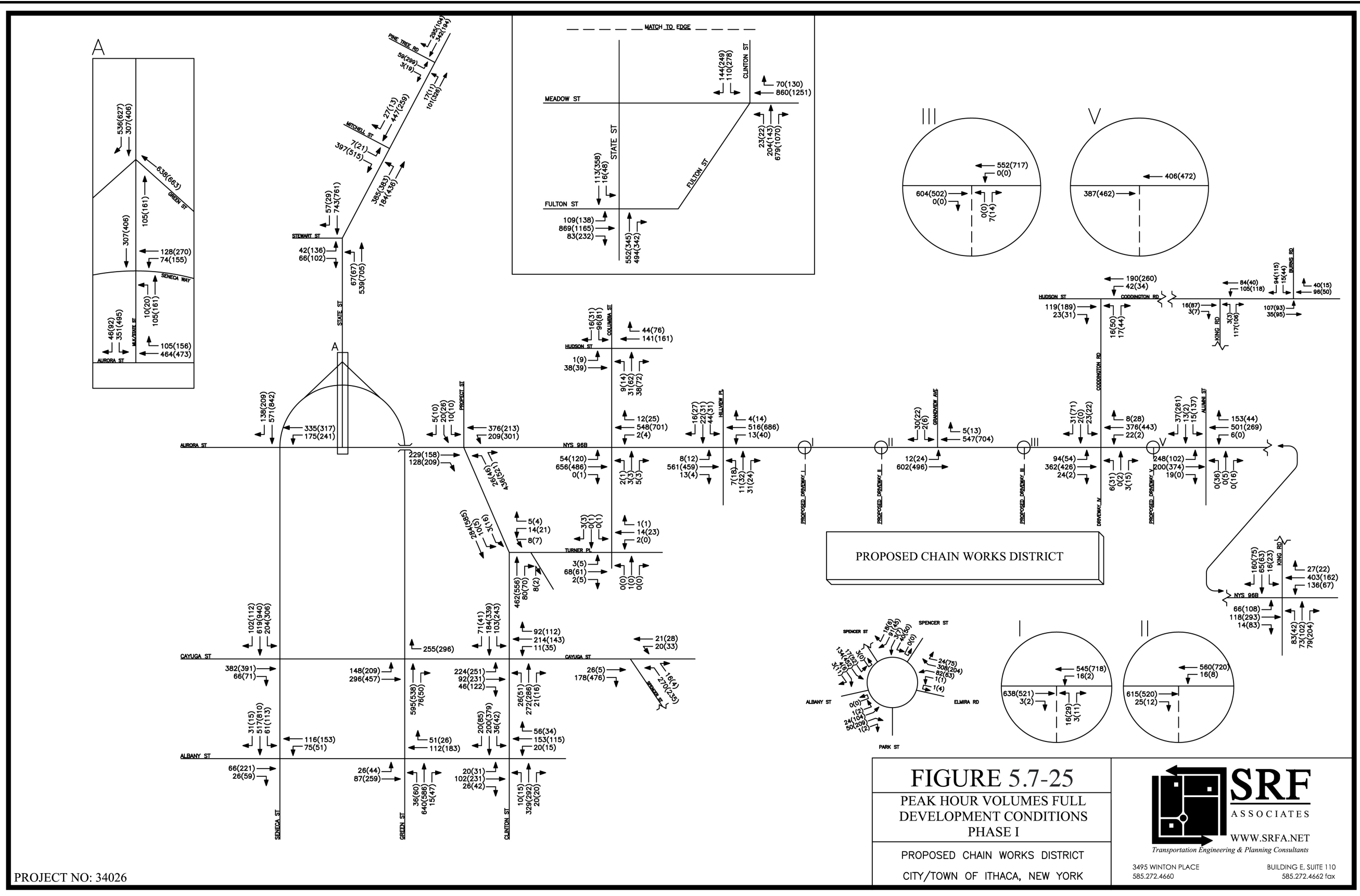


PHASE II SITE GENERATED TRIPS (SRF)
 FIGURE 5.7-23

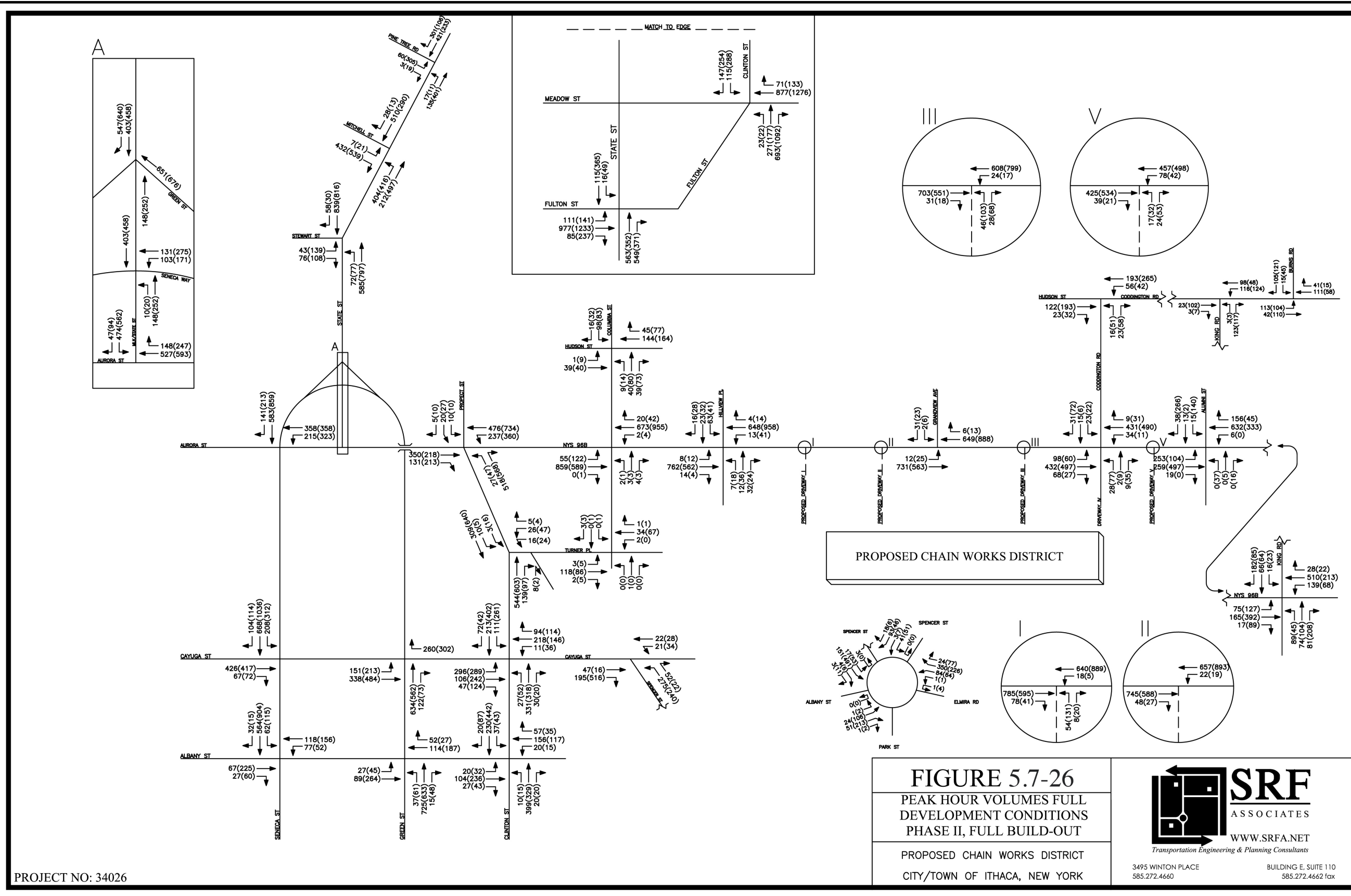
PROJECT NO: 34026



TOTAL SITE GENERATED TRIPS (SRF)
FIGURE 5.7-24



PHASE I PEAK HOUR VOLUMES FULL DEVELOPMENT CONDITIONS (SRF)
 FIGURE 5.7-25

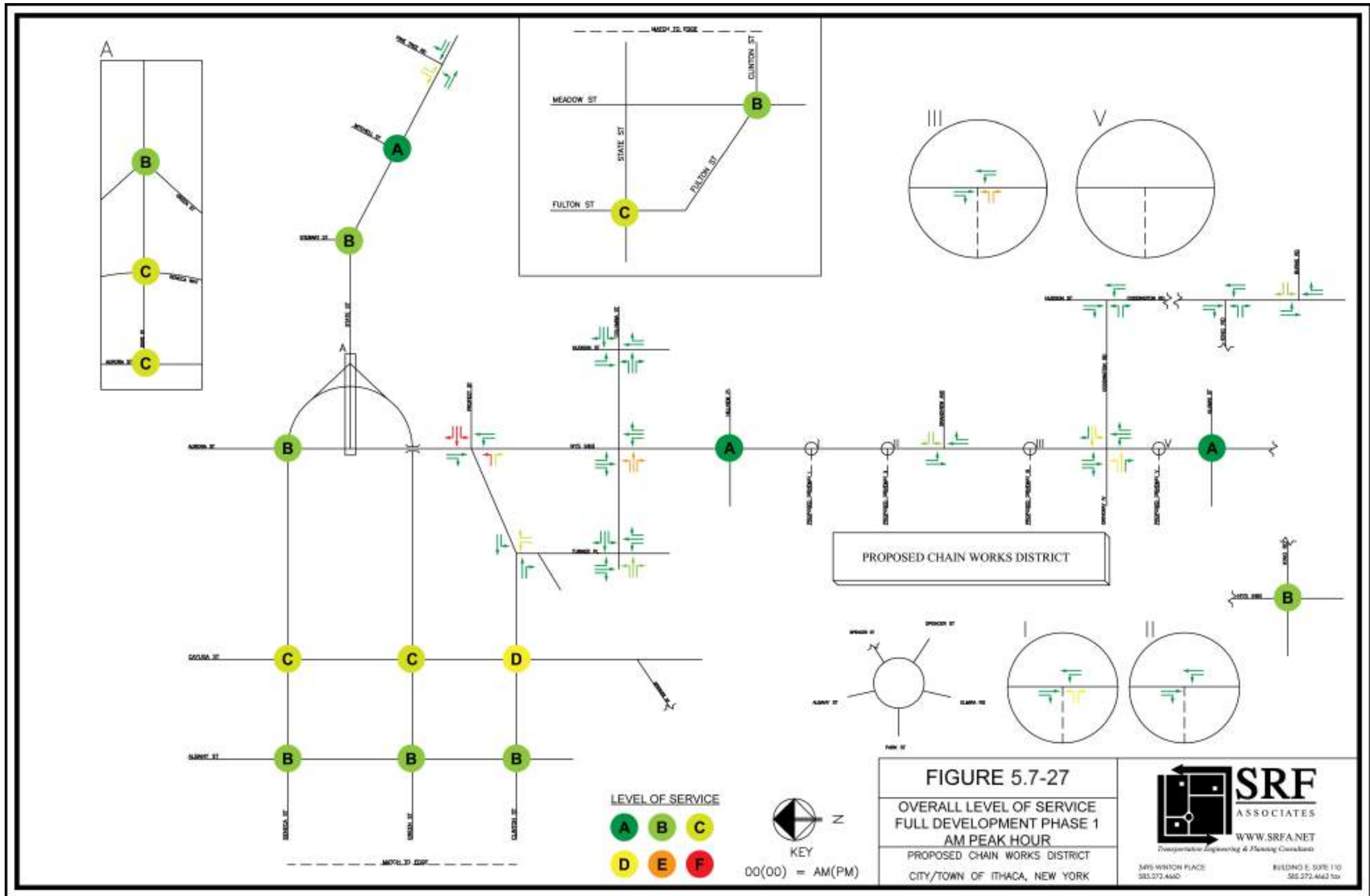


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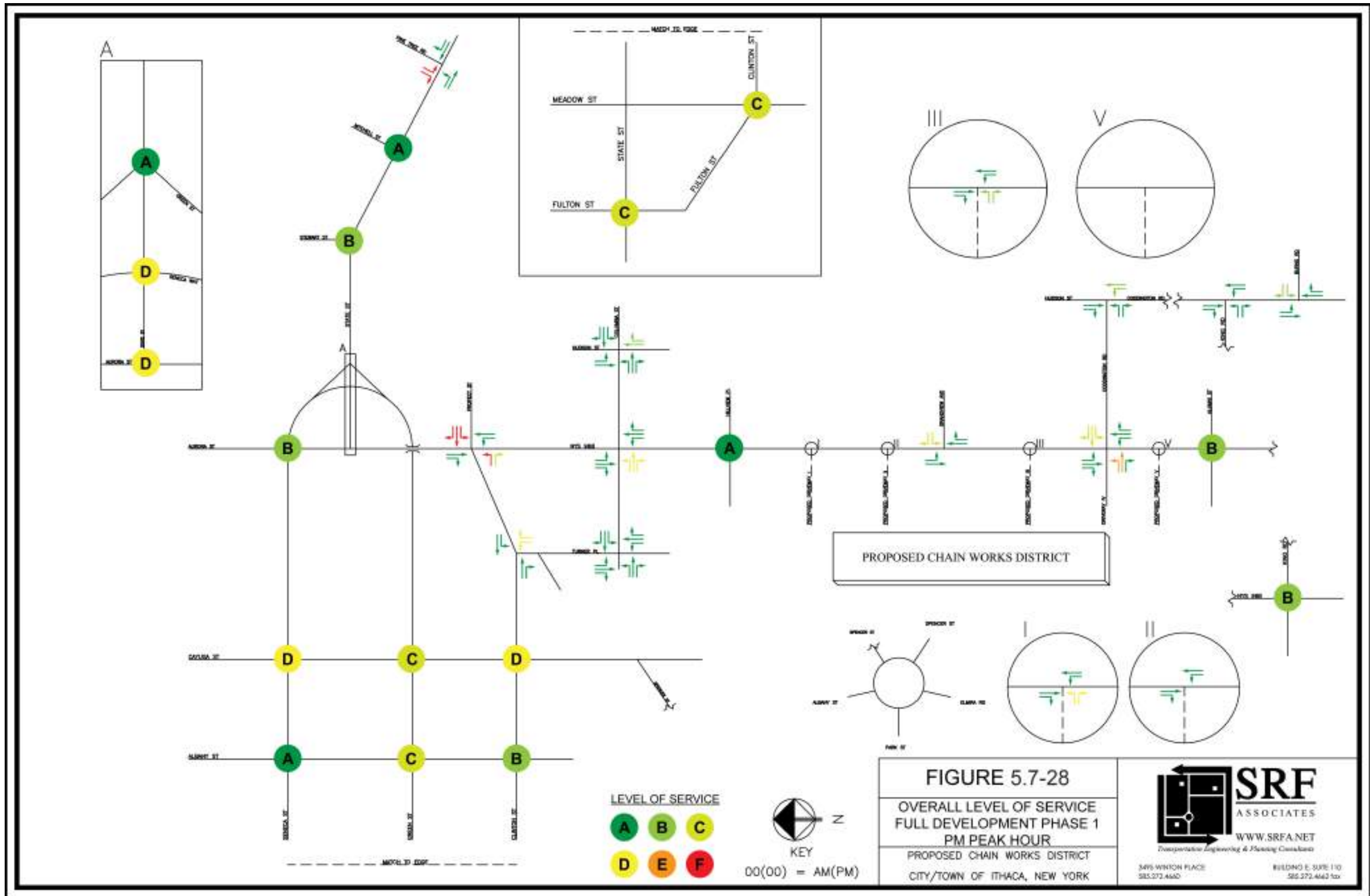
FIGURE 5.7-26
 PEAK HOUR VOLUMES FULL
 DEVELOPMENT CONDITIONS
 PHASE II, FULL BUILD-OUT
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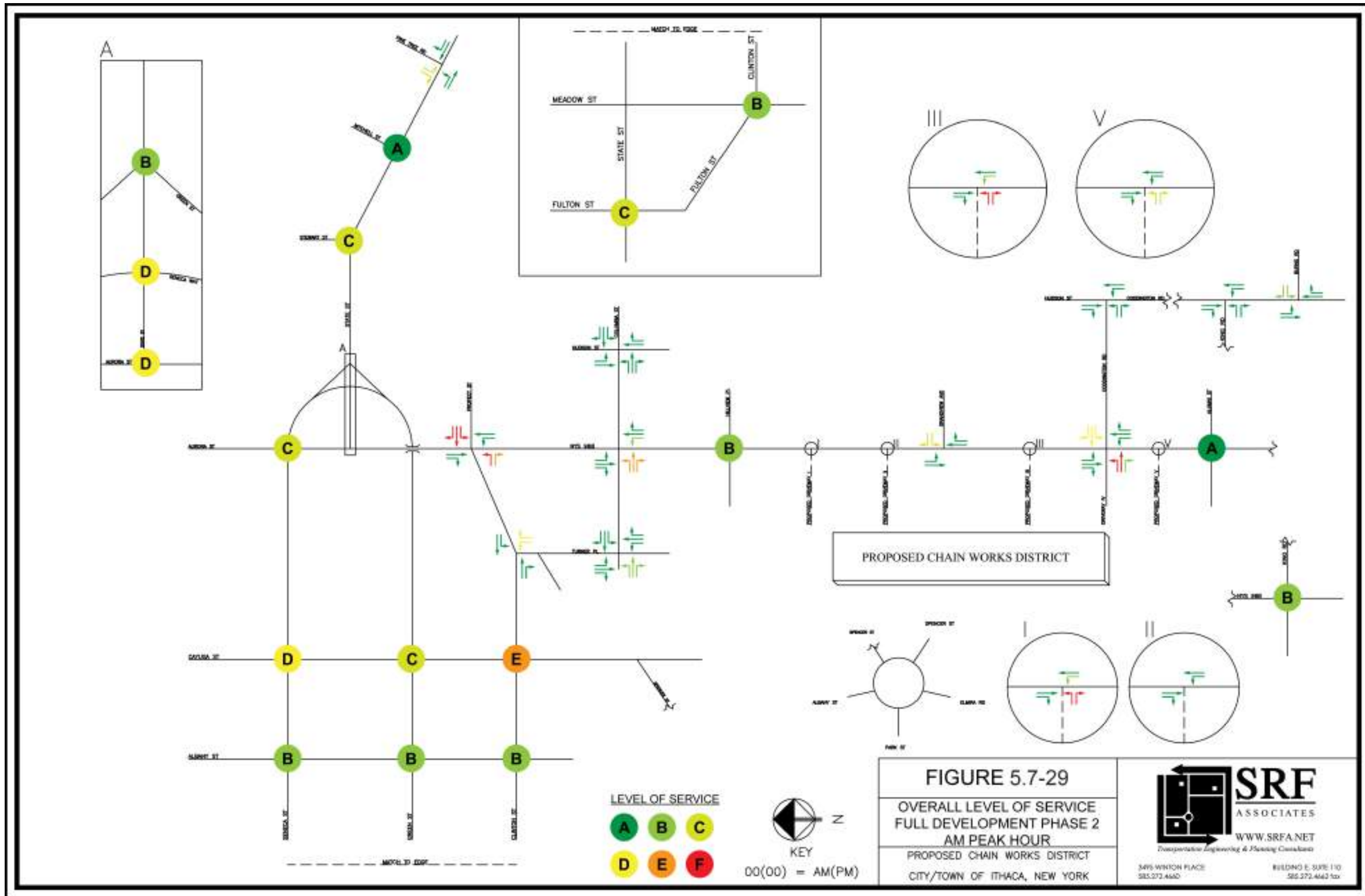
PHASE II PEAK HOUR VOLUMES FULL DEVELOPMENT CONDITIONS (SRF)
 FIGURE 5.7-26



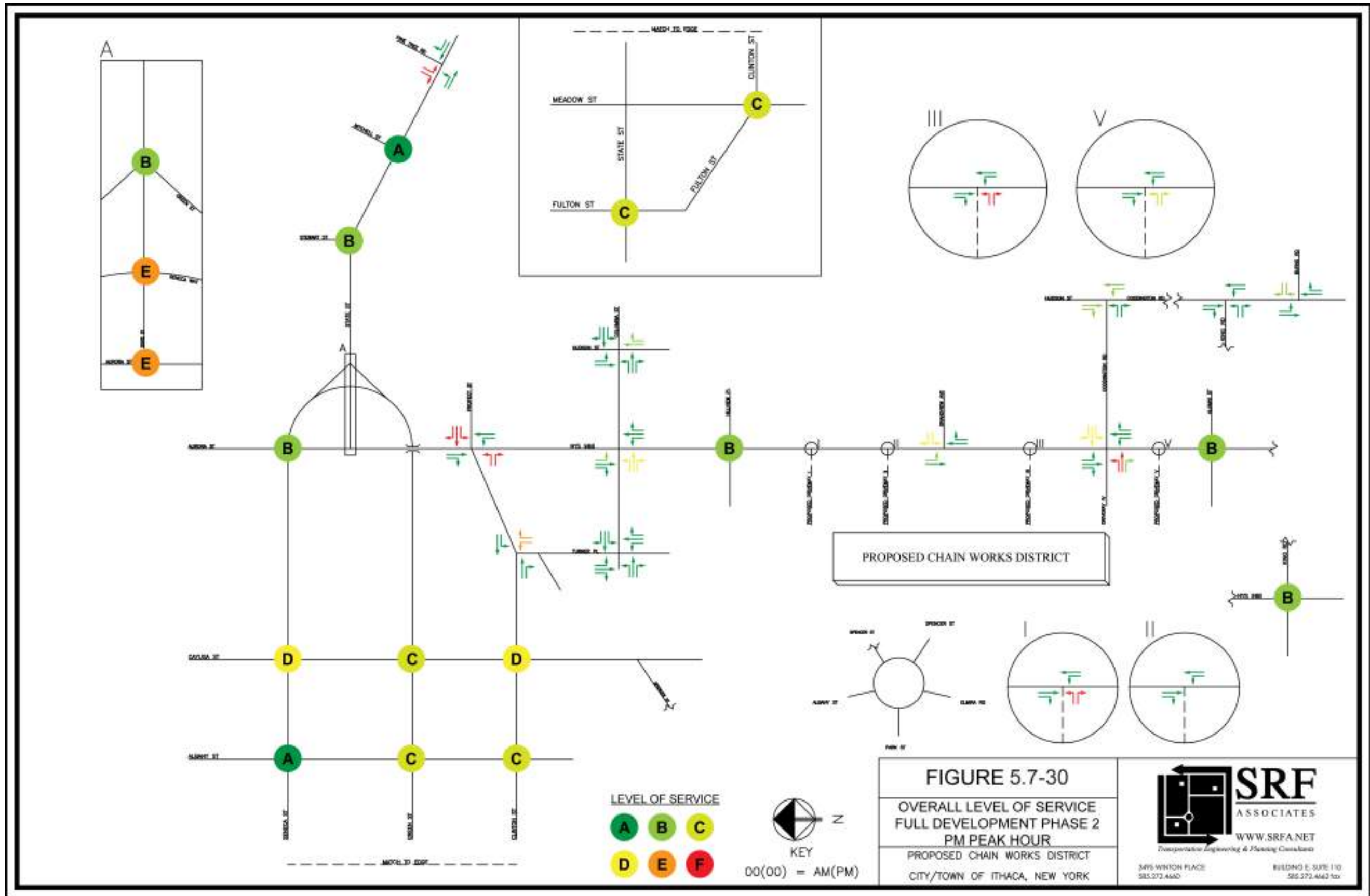
OVERALL LEVEL OF SERVICE PHASE I AM PEAK HOUR (SRF)
FIGURE 5.7-27



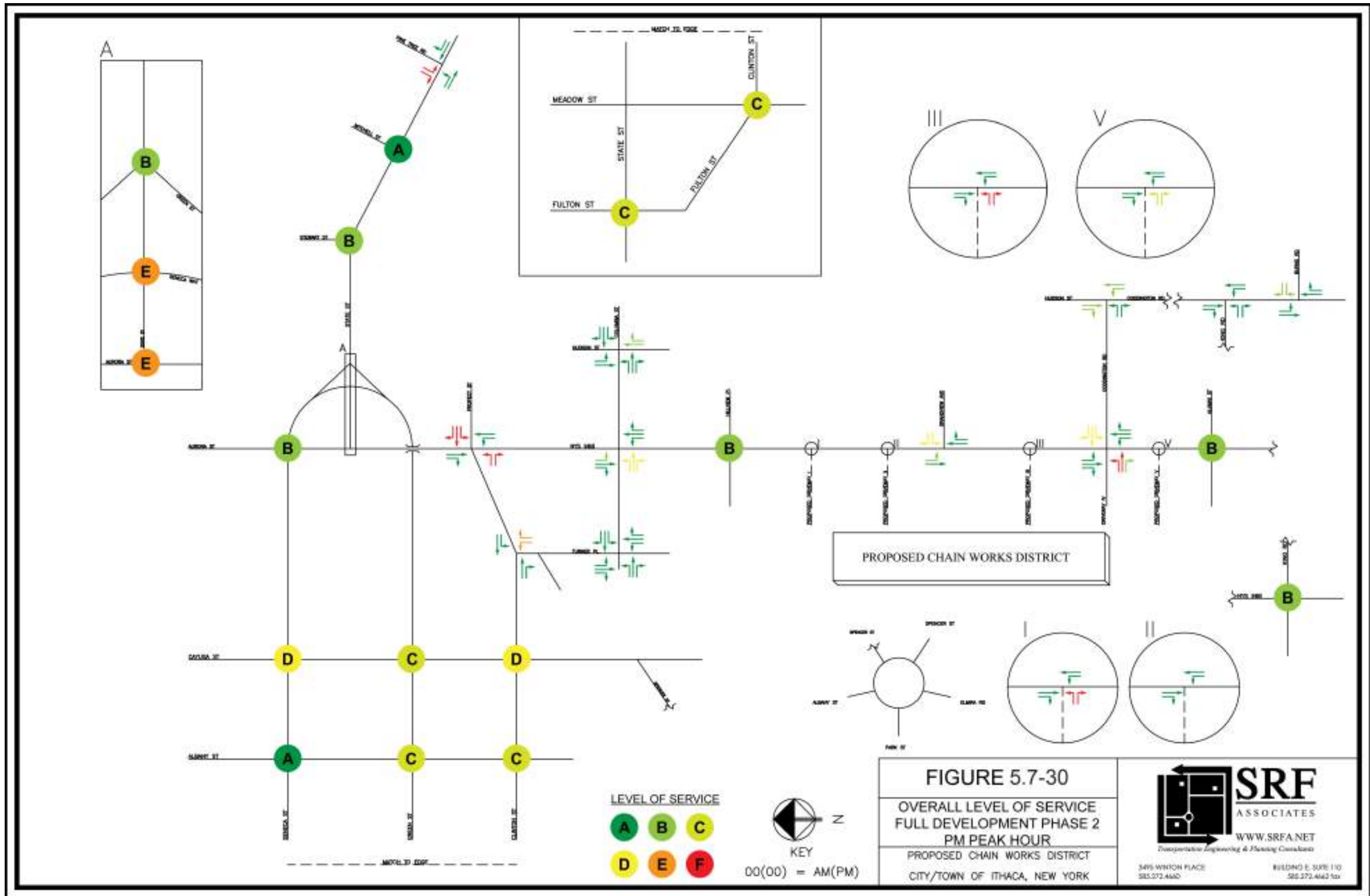
OVERALL LEVEL OF SERVICE PHASE I PM PEAK HOUR (SRF)
FIGURE 5.7-28



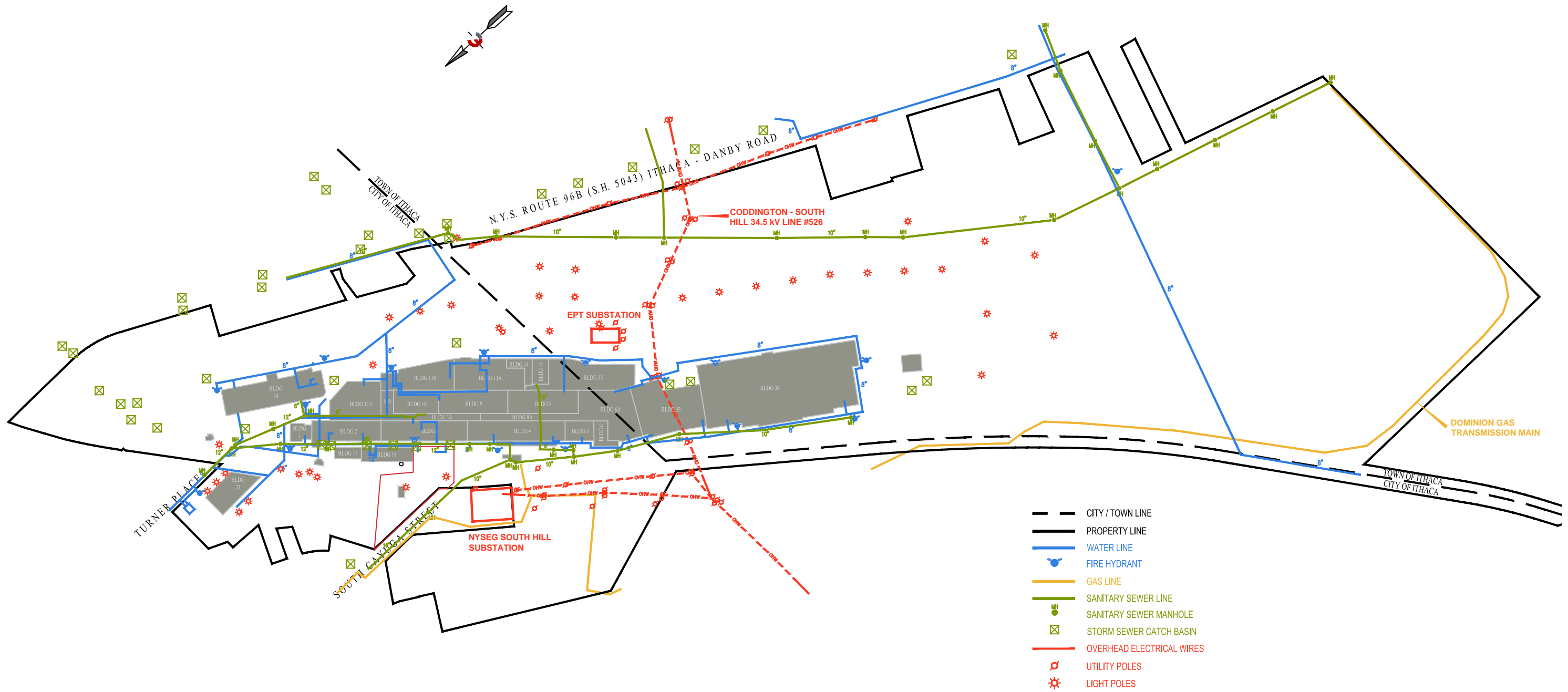
OVERALL LEVEL OF SERVICE PHASE II AM PEAK HOUR (SRF)
FIGURE 5.7-29



OVERALL LEVEL OF SERVICE PHASE II PM PEAK HOUR (SRF)
FIGURE 5.7-30



OVERALL LEVEL OF SERVICE PHASE II PM PEAK HOUR (SRF)
FIGURE 5.7-30



- CITY / TOWN LINE
- PROPERTY LINE
- WATER LINE
- FIRE HYDRANT
- GAS LINE
- SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- ⊠ STORM SEWER CATCH BASIN
- OVERHEAD ELECTRICAL WIRES
- ⊙ UTILITY POLES
- ★ LIGHT POLES

EXISTING SITE UTILITIES (FE)
FIGURE 5.8-1