

# Appendix A

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## Public Involvement Plan (PIP)

DRAFT

# Syracuse Metropolitan Transportation Council

## RTC/MARKET AREA ACCESS AND MOBILITY STUDY SCOPE OF WORK

Approved:  
February 26, 2019

### 1. INTRODUCTION

#### *Overview*

As part of the 2018-2019 Unified Planning Work Program (UPWP), the Syracuse Metropolitan Transportation Council (SMTC) has agreed to complete an Access and Mobility Study (Study) for the William F. Walsh Regional Transportation Center/Regional Market Area (RTC/Market Area) on behalf of the City of Syracuse (Syracuse). The adopted 2018-2019 UPWP noted commencement of the planning task would occur at the end-of-program year.

The Regional Market (i.e., the farmer's market) is a year-round source of fresh, locally-grown food for the region. Destiny USA (Destiny) is located next to the Regional Market – it serves as a major retail shopping destination for the northeast and it is a major employment center for local residents.

As regional destinations, most shoppers drive to these locations. Surrounding roadways have few if any pedestrian or bicycle amenities. As such, it is difficult for walkers and bicycle riders to cross Hiawatha Boulevard and Park Street. The City of Syracuse wants to make it safer and easier to walk and bike across the road to these destinations, especially for residents who live nearby in the Park Street neighborhood and don't have access to an automobile. This Study will identify where to incorporate bicycle and pedestrian amenities across Hiawatha Boulevard and at the Park Street/NBT Bank Parkway intersection.

As a secondary focus, the SMTC will identify 'high-level' mobility issues around the RTC/Market Area and generate ideas about how to better connect these areas to each other. Other destinations within walking and bicycling distance from the RTC/Market Area include: NBT Bank Stadium, the RTC, Onondaga Creekwalk, Onondaga Lake, Loop-the-Lake Trail, Route 370 bikeway, and the Bear Trap Creek Trail. In support of other planning activities for the area, the SMTC will prepare a general list of potential mobility improvements that warrant further study.

#### *Background*

In 2014, Syracuse received a Transportation Enhancement Program (TEP) award to build the Park Street Neighborhood Greenway (Greenway) project. However, due to budget limitations, Syracuse reduced the scope of the Greenway project to include shared lane pavement markings (i.e., "sharrows") and crosswalk / curb-cut. Originally, the

Greenway project also sought to improve mobility along Park Street from Hiawatha Boulevard to NBT Bank Parkway. However, this area was also excluded from the Greenway project due to funding limitations.

The RTC/Market Area offers inter-city travel options (via train/bus) and serves as a regional shopping destination for fresh farm-grown foods. The Market and NBT Bank Stadium are regional entertainment venues. Destiny serves a major retail shopping destination for the northeast and provides a significant number of local jobs. Although these prominent amenities are within walking distance of each other, they are difficult to reach safely and comfortably by foot or by bike. This is problematic for some neighboring residents as City of Syracuse staff indicated there are households nearby where residents don't have access to a vehicle. Moreover, visitors who arrive to the area by car are not inclined to walk from destination to destination. This limits economic returns that may otherwise be realized.

The RTC/Market Area could also experience new investment and development in the foreseeable future. Syracuse is currently coordinating with the Syracuse-Onondaga County Planning Agency to develop a Local Waterfront Redevelopment Plan (LWRP) for the Lakefront and RTC/Market Area. In 2018, the SMTC completed the *SMART 1 Study*, which recommended a bus rapid transit (BRT) system with one of the proposed routes connecting to the RTC. The upcoming redevelopment decision for I-81 will also create new issues and opportunities. Since the area may experience new investment, now is an optimal time to plan for mobility needs.

To help identify mobility improvements, Syracuse requested that the SMTC identify crossing improvements for walkers and bicycle riders. To the extent practicable, the improvements should meet the unique needs of the community. Syracuse requested that the SMTC identify where the improvements are most appropriate on Hiawatha Boulevard between North Salina Street and 4<sup>th</sup> North Street. Additionally, the SMTC will identify ways to make it safer to cross Park Street at NBT Bank Parkway.

As a secondary focus, Syracuse also requested that the study identify 'high-level' issues and opportunities to enhance access and mobility within and around the RTC/Market Area in support of other planning efforts such as the LWRP. Identified issues and opportunities will be general in nature and could be considered for future study – such as in the LWRP or as independent studies.

#### *Study Area*

The primary study area extends along Hiawatha Boulevard from North Salina Street to 4<sup>th</sup> North Street. It also includes the Park Street/NBT Bank Parkway/Harborside Drive intersection. The secondary study area consists of: Park Street (from Washington Square to the city line), Hiawatha Boulevard (from Onondaga Creekwalk to 7<sup>th</sup> North Street), 7<sup>th</sup> North Street (from Hiawatha to city line), NBT Bank Parkway, Harborside Drive, Destiny USA Drive, Tex Simone Drive, and Farmer's Market Place.

## 2 . T A S K S

### Task 1: Project Initiation

#### *Develop a Study Advisory Committee*

To begin this study, the SMTC will establish a Study Advisory Committee (SAC) consisting of representatives from SMTC member agencies to provide technical and procedural guidance for the project. The SAC will not vote on approval or disapproval of project-related products and documents. The SMTC will invite the following agencies to serve:

- Central New York Regional Transportation Authority (Centro)
- Centerstate CEO (CCEO)
- City of Syracuse (Syracuse)
  - Department of Public Works (DPW)
  - Department of Planning (Planning)
  - Department of Engineering (Engineering)
- New York State Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- Central New York Regional Planning and Development Board (CNYRPDB), and
- Other agencies (such as the Regional Market Authority) as deemed appropriate by the project sponsor and the SMTC.

The SMTC will work regularly with the SAC and will prepare minutes for each meeting. It is anticipated that the SMTC will hold up to four SAC meetings during this study.

#### *Develop a Public Involvement Plan*

The SMTC will create a project-specific Public Involvement Plan (PIP) that will document how public input will be gathered and incorporated into the study. The PIP will outline the number and types of meetings and will be reviewed by the SAC.

The SMTC may meet with or conduct phone interviews with the following interested stakeholders on an as-needed basis:

- Central New York Regional Market Authority (CNYRMA)
- CSX Transportation (CSX)
- Community Based Organizations (CBO)\*
  - Center for New Americans
  - Catholic Charities
  - Refugee Resettlement Services
  - Interfaith Works
- Destiny USA (Destiny)
- Onondaga County Industrial Development Agency (OCIDA)
- Onondaga County Parks (County Parks).

*\* Syracuse's Northside has several established CBOs that provide refugee and immigrant resettlement assistance to individuals / families from multiple countries. The Northside,*

*which includes the Park Street neighborhood, has become home to many of the resettled immigrants and refugees. Based on previous Northside planning efforts (e.g., Butternut Street Corridor Study) feedback from CBOs indicate that it is not uncommon for refugees to lack driver licenses or access to a car, have limited English proficiency levels, and reside in low income households.*

Although the outcome of the PIP will determine the final set of public engagement needs, the SMTC could undertake the following:

- up to four SAC meetings
- as-needed stakeholder meetings or phone interview discussion(s), and
- if deemed necessary, set up an informational booth during an event at the market.

#### *Conduct SAC Meeting #1*

The SMTC will confirm the project purpose, goals, objectives, study area, a general project schedule, and will review the draft Public Involvement Plan (PIP) at the SAC kickoff meeting (SAC Meeting #1). The SAC will help confirm the proposed public engagement strategy. A proposed study area map will be provided and refinements will be discussed. Additional ideas will be solicited and considered for incorporation into the study, particularly SAC suggestions for data collection items included in Task 2. If additional effort is identified, the SMTC may revisit and revise this scope as necessary.

#### Task 1 Work Products:

The SMTC will document Task 1 efforts in the form of meeting minutes/notes for SAC Meeting #1. The SMTC will also produce a study area map, the final PIP, and incorporate necessary items in the draft study report.

#### **Task 2: Data Collection**

The SMTC will gather and document a variety of data for the study area. The SMTC will conduct much of Task 2 as a “desktop” planning-level assessment based on readily available information from Syracuse and SMTC member agencies. The SMTC will coordinate with its member agencies to collect existing plans, available right-of-way files, and any as-built drawings. The SMTC will also spot-check roadway lane width and shoulder measurements on a limited basis to assist with the development of planning-level access and mobility improvement options.

#### *Pedestrian Counts/Observations*

Pedestrian counts/observations will be conducted as necessary for Hiawatha Boulevard. The SMTC will conduct the pedestrian counts/observations while the Regional Market is open to observe how many residents from the Park Street neighborhood are crossing Hiawatha Boulevard and where they are crossing. Staff will note observations such as number of families with children, strollers, ADA-related needs, etc.

### *Turning Movement Counts – Intersection Capacity Analysis*

Turning movement counts will not be collected and intersection capacity analysis will not be conducted. Existing and available count and signal timing information will be referenced to assist with planning-level reviews.

### *Review existing plans and studies*

SMTC staff will also review relevant existing planning documents for pertinent information or recommendations. These plans will include, at a minimum:

- Syracuse Park Street Neighborhood Greenway (As-Built Plans and documents)
- Previous (2002) Local Waterfront Revitalization Plan (LWRP)
- Current Local Waterfront Revitalization Plan for Lakefront and RTC/Market Area (currently underway)
- SMART 1 Study (2018 SMTC)
- Syracuse 2040 Bicycle Plan (2014 City of Syracuse)
- Bicycle Commuter Corridor Study (2013 SMTC)
- City of Syracuse Land Use Plan
- Syracuse - Rezone Syracuse initiative documents (currently underway)
- Sustainable Streets Project (2017 SMTC)
- NYS Brownfield Opportunity Area: Hiawatha-Lodi BOA Study (2014 Syracuse)
- Available turning movement counts, signal plans, tube counts, and annual average daily traffic information.

### *Demographics*

The SMTC will briefly summarize existing demographic information (based on the American Community Survey, U.S. Census, etc.) likely to influence the demand for pedestrian and bicycle facilities, such as population density, vehicle ownership, etc. The SMTC will summarize findings pertaining to minority and low-income areas of concentration and areas with populations with limited English proficiency.

### *Land use and land use regulations*

SMTC will also briefly summarize current land use, and the location of any anticipated developments that may influence future pedestrian/bicycle travel patterns (e.g., SMART 1, I-81, LWRP, etc.) based on information provided SMTC member agencies. The assessment will also include a brief summary of zoning regulations including the proposed ReZone Syracuse initiative.

### *Conduct a basic property review*

The SMTC will use GIS data to identify property ownership (i.e., public vs. private) and to identify known public and private utility easements and right-of-way.

### *Conduct a general crash assessment*

The SMTC will provide a brief overview of crash trends for the study area. The SMTC would obtain crash data from the NYSDOT's Accident Location Identification System (ALIS) database for the most recent five-year period available. SMTC staff would summarize these data and provide a list of common collision types and contributing

factors in tabular format. Intersection and non-intersection crashes will be summarized to the extent practicable. If annual average daily traffic (AADT) or turning movement count data exists, crash rates may be calculated and any calculated rates will be compared to the published statewide average rate for comparable facilities.

#### *Summarize existing roadway conditions*

The SMTC will document existing conditions for Hiawatha Boulevard and the Park Street/NBT Bank Parkway intersection based on available data sets, a limited number of field measurements, and observations including:

- Typical lane and shoulder widths along any corridors being considered (may spot-check a limited number of other study area roadways if necessary)
- Roadway ownership and functional classification
- Location of existing pedestrian and bicycle facilities, including sidewalks, crosswalks, curb ramps, pedestrian signals, bicycle lanes, and bicycle racks
- Parking regulations and posted speed limits
- Available AADT data, and turning movement count data, and
- Qualitative observations of traffic operations, parking activity, delivery truck activity, and bicycle and pedestrian activity, with an emphasis on identifying notable conflicts between users.

SMTC will request that Syracuse/NYSDOT provide available as-built plans, SYNCRHO models, and any other files that may contain right-of-way information, ideally in electronic format. If right-of-way information cannot be obtained, SMTC will approximate the available right-of-way using available parcel data in GIS. This will be a planning-level assessment only; Syracuse will need to obtain survey information and develop engineering documents to implement recommendations in the future. The SMTC does not conduct site surveys nor will site surveys be conducted as part of this planning-level effort.

#### Task 2 Work Products:

The SMTC will prepare maps, charts, and brief summary text to review at SAC Meeting #2. The SMTC will document Task 2 efforts as appropriate in the draft report. SAC feedback will be documented in the SAC meeting minutes. Please note that the following tasks identified under Task 3 will also be presented at SAC Meeting #2.

#### **Task 3: Identification of Issues**

Once the existing conditions have been documented, SMTC staff will review this information with the SAC and identify any apparent issues to consider such as:

- Significant impediments, such as limited pavement width and/or right-of-way
- Environmental and infrastructure constraints
- Zoning, relevant local laws, or other land use restrictions (existing or proposed)

- The general location of utility poles and other ROW obstructions
- Environmental considerations
- Personal safety and security issue concerns
- Traffic volumes and speeds (based on posted speed limit)
- Potential for conflicts between pedestrians/bicyclists and vehicular traffic including truck delivery traffic
- Likelihood of pedestrian/bike traffic based on demographics and land use, including presence of major generators.

*Identify areas of concern*

The SMTC will provide a brief narrative that may accompany a graphic that identifies areas of concern and problematic features such as areas without bicycle and/or pedestrian amenities, elevated highway underpasses, railroad bridge underpasses, rail road, topography, creeks, and gated access points into the RTC/Market Area. Issues will be summarized for Hiawatha Boulevard and surrounding area roadways.

*Conduct SAC Meeting #2*

The SMTC will review and confirm issues with the SAC at SAC Meeting #2. The SMTC will also discuss the need to conduct interview(s) with stakeholder(s), set up an informational booth during a Saturday.

Task 3 Work Products:

SMTC staff will compile an “issues assessment” review, which will incorporate SAC feedback. The identification of issues will be documented in the draft report. SAC feedback will be documented in the SAC meeting minutes.

**Task 4: Stakeholder Outreach/Public Engagement**

As indicated, public engagement will include stakeholder interviews conducted as an in-person meeting(s) or via telephone conversation(s). The interviews will occur on an as-needed basis throughout the study process and will include any stakeholders identified in the PIP (Task 1). Additionally, if deemed necessary, provisions could be made for the SMTC to set up an information booth during a Saturday market. A formal public meeting or open house meeting will not be conducted. Involving stakeholders throughout the planning process will allow the SMTC to:

- Identify where bicycle and pedestrian amenities are necessary and feasible
- Document the level of community interest
- Document issues and opportunities
- Identify specific community needs/issues to address
- Consider/document new ideas and concepts, such as:
  - establishing the Market Area as a “Food Campus” with enhanced walkability
  - beautifying gateways into the RTC/Market Area from roadways, highway off-ramps, the Amtrak train station – to improve first impressions
- Document what ideas the community likes/dislikes
- Emphasize that this is not a proposal to construct or build.



#### Task 4 Work Products:

SMTC staff will summarize notes from the stakeholders. Issues, opportunities and needs will be discussed and documented. If necessary, the SMTC will update the list of issues identified in Task 3 in the draft report.

#### **Task 5: Preliminary Planning-level Improvement Options**

The SMTC will consider any information received from stakeholders when developing preliminary improvement options. The SMTC will reference the American Association of State and Highway Traffic Officials (AASHTO), the National Association of City Transportation Officials (NACTO) guidelines, the Manual of Uniform Traffic Control Devices (MUTCD), and the New York State supplement to the MUTCD as necessary.

The SMTC will identify locations to make bicycle and pedestrian facility improvements across Hiawatha Boulevard and Park Street and will identify planning-level options to add on- and/or off-road bicycle and pedestrian facilities at these locations. A limited number of illustrations of typical cross sections and plan-view illustrations may be provided for these locations. The SMTC is not able to create engineering-level designs (preliminary or final), site surveys, striping plans, or detailed cost estimates. General planning-level cost estimates, based on input from member agencies could be provided.

The SMTC will also summarize issues and potential improvement opportunities that may warrant further study for surrounding area roadways. Any concepts identified for surrounding area roadways will be general in nature and are meant to assist other planning efforts such as the LWRP or future site-specific studies.

#### *Conduct SAC Meeting #3*

The preliminary recommendations will be reviewed with the SAC at SAC Meeting #3.

#### Task 5 Work Products:

Planning-level illustrations of typical cross-sections incorporating the recommended pedestrian and bicycle infrastructure, plus some additional illustrations for specific locations (to be determined) as noted above. The development of preliminary planning-level improvement options will be documented in the draft report. SAC feedback will be documented in the SAC meeting minutes.

#### **Task 6: Final Planning-level Improvement Options**

Using the feedback received from the public, stakeholder(s), and the SAC, SMTC staff will update the planning-level improvement options as appropriate and develop a final set of options. A report will be prepared that summarizes these findings and it will document the community's level of interest in developing access and mobility improvements across Hiawatha Boulevard and around the RTC/Market Area. This effort will be documented in the draft report.

#### *Conduct SAC Meeting #4*

A final SAC meeting (SAC Meeting #4) will be held to review the draft report with the SAC. If necessary, SMTC staff will make final updates to the report based on the discussion at this SAC meeting before finalizing this report for SMTC committee acknowledgment.

#### Task 6 Work Products:

The SMTC will document final recommendations in the draft report. SAC feedback will be documented in the SAC meeting minutes.

### **3 . D E L I V E R A B L E S**

- Public Involvement Plan
- SAC meeting minutes
- Stakeholder(s) interview notes, and
- Draft and final reports with maps and graphics.

### **4 . S C H E D U L E**

The study is anticipated to take up to 12 months to complete following acknowledgement of this scope of work.

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# Appendix B

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## Public Involvement Plan (PIP)

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## ***Public Involvement Plan***

April 26, 2019

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## I. Introduction

Engaging the public early and often in the planning process is critical to the success of any transportation plan or program. When people are involved in a decision-making process and can see how their input has influenced that process, they are more likely to adopt its outcomes. As the Federal Highway Administration/Federal Transit Administration guidebook *Public Involvement Techniques for Transportation Decision-Making* states: “Through continued interaction with the entire community, agencies build community support and, more importantly, assure that the public has the opportunity to help shape the substance of plans and projects.”

The importance of public involvement is underscored by the fact that it is required by numerous state and federal laws. Metropolitan Planning Organizations (MPO) such as the Syracuse Metropolitan Transportation Council (SMTC) must provide citizens, affected public agencies, businesses, local government, and other interested parties with a reasonable opportunity to comment on transportation plans and programs. This Public Involvement Plan (PIP) is intended to supplement the Scope of Work approved in February 2019.

## II. Background

The RTC/Market Area offers inter-city travel options (via train/bus) and serves as a regional shopping destination for fresh farm-grown foods. The Market and NBT Bank Stadium are regional entertainment venues. Destiny USA serves a major retail shopping destination for the northeast and provides a significant number of local jobs. Although these prominent amenities are within walking distance of each other, they are difficult to reach safely and comfortably by foot or by bike. This is problematic for some neighboring residents as some do not have access to a vehicle. Moreover, visitors who arrive to the area by car are not inclined to walk from destination to destination.

In 2014, the City of Syracuse (Syracuse) received a Transportation Enhancement Program (TEP) award to build the Park Street Neighborhood Greenway (Greenway) project, which initially was to extend all the way north to the city line. However, due to budget limitations, Syracuse reduced the scope of the Greenway project and did not make any improvements north of U.S. 11 (Wolf Street).

The primary study area for the RTC/Market Area extends along Hiawatha Boulevard from North Salina Street to 4th North Street. It also includes the Park Street/NBT Bank Parkway/Harborside Drive intersection. To help identify mobility improvement options, Syracuse requested that the SMTC identify crossing improvements for walkers and bicycle riders. To the extent practicable, the improvements should meet the unique needs of the community. As a secondary focus, the SMTC will also review ‘high-level’ mobility issues and opportunities that may warrant further study for the greater area.

### III. Purpose

The purpose of the **RTC/Market Area Access and Mobility Study (Study)** is to identify potential options to improve pedestrian and bicycle facilities at various locations across Hiawatha Boulevard and across Park Street at NBT Bank Parkway.

### IV. Goals

The intent of the Public Involvement Plan (PIP) for the Study is to engage the public by:

- (1) Creating public awareness of the Study’s goals, objectives, and process, as well as to document public comment on draft recommendations, and
- (2) Solicit public input into the decision making process.

### V. Study Advisory Committee

A Study Advisory Committee (SAC) will be established to provide technical and procedural guidance throughout the Study. At a minimum, a representative from the following agencies will serve on the SAC:

- New York State Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- Central New York Regional Transportation Authority (CENTRO)
- City of Syracuse (Public Works, Planning and Sustainability, Engineer)

The SAC will meet as needed with the SMTC to assist in the Study. The SAC’s role will be to advise the SMTC on the technical content of deliverables and to provide needed input and guidance. The SAC will not vote on approval or disapproval of Study-related documents. The SMTC anticipates holding up to four SAC meetings (as needed) over the course of this Study, as shown below.

SAC meeting no.	Anticipated purpose
1	Kickoff: confirm study purpose, goals, objectives, schedule, and PIP.
2	Review and confirm existing conditions findings, facility opportunities, and issues. Brainstorm recommendations and public engagement needs.
3	Review facility improvement options and public feedback.
4	Review the draft report.

Securing a SAC meeting location, announcing SAC meetings through mail/e-mail, conducting SAC meetings (including preparation of agenda, materials, presentations, etc.), and preparing the minutes from each meeting will be the responsibility of the SMTC.

## **VI. Public Outreach**

A planning-level technical assessment identifies several options for consideration that appear to be feasible, but does not select specific recommendations for advancement. Instead, a ‘menu’ of options is presented to the owner of the roadway and it is the road owner’s decision whether to identify, design, fund, and construct a preferred option of its choice. This Study is envisioned as a technical assessment.

Although technical assessments typically do not include extensive public outreach, the SMTC recognizes that this Study would benefit from understanding the local community’s unique needs to improve pedestrian access and mobility between the neighborhoods and the greater RTC/Market Area. As mentioned, many neighboring households do not have access to a car. It is also likely that the surrounding neighborhoods include low-income households and are becoming increasingly diverse with multiple languages spoken as refugees resettle within the area.

Syracuse’s north side is home to several community-based organizations (CBOs) that provide resettlement services for refugees from throughout the world. Given the diversity of the programs that service refugees from multiple countries, the SMTC will engage with the CBOs to determine if there are concentrations of refugee populations locally, and if so, what is the best way to receive their feedback. Conducting a traditional public meeting may not be the most effective way to solicit and receive feedback, especially if there is a need to translate English into multiple languages during a meeting. As such, it may be much more worthwhile to coordinate with a single representative from each CBO to request assistance to help facilitate discussions with the refugee populations they serve. If necessary, the SMTC may attend CBO-sponsored community meetings at their request and present as an agenda item at their meeting.

The SMTC may also conduct outreach to the Regional Market Authority (RMA) to receive feedback about its clientele’s mobility needs. If necessary, the SMTC may also set up a booth during a Saturday morning Farmer’s Market to engage with customers about mobility issues and opportunities. If so, the SMTC would welcome representation from any of the CBOs to help facilitate conversations with refugee customers, which would be a unique opportunity to engage with the public directly.

If necessary, the SMTC may also choose to post the draft report online and notify the public through a press release that it is available for public review and comment. If so, the SMTC will send a copy of the press release to the SAC and to stakeholders – including any interested CBOs - for further dissemination throughout the community. The SMTC may also include the press release on the homepage of its website ([www.smtcmpo.org](http://www.smtcmpo.org)) and share the press release through its social media (i.e., Facebook) page.

## VII. Additional public outreach

### *Stakeholders list*

Stakeholders are those individuals that have a significant personal or professional interest in the Study. In consultation with the SAC, the SMTC will work refine the initial list of stakeholders based on staff and SAC members' existing knowledge of the community. Additional stakeholders will be added continuously at the request of the SAC or any community member. The stakeholders will be sent pertinent Study information, kept apprised of significant Study developments, notified of all public outreach opportunities, and encouraged to provide feedback and comment regarding the assessment.

Based on initial discussions during the scoping process, the SMTC suggests conducting phone interviews with the following stakeholders on an as-needed basis:

- Central New York Regional Market Authority (CNYRMA)
- CSX Transportation (CSX)
- Community Based Organizations (CBOs)
  - Center for New Americans
  - Catholic Charities
  - Refugee Resettlement Services
  - Interfaith Works
- Destiny USA (Destiny)
- Onondaga County Industrial Development Agency (OCIDA)
- Onondaga County Parks (County Parks)
- CenterState Corporation for Economic Opportunity (CenterState CEO)
- Northside Urban Partnership (Northside UP)
- Byrne Dairy.

### *Coordination with community groups*

If necessary, staff from the SMTC may reach out to existing community groups (such as the CBOs and other stakeholders previously mentioned) in the Study area and seek their assistance in notifying their members about the Study and soliciting participation and feedback. If requested, SMTC staff may attend existing community meetings to provide a brief overview of the Study. The SMTC will work with the SAC to refine or update this list as necessary throughout the Study.

### *Distribution of Study materials*

If deemed necessary (at the discretion of the SAC and/or other appropriate SMTC committees), the SMTC may distribute Study-specific information at sites throughout the Study area (e.g. schools, community centers, libraries, etc.). This information may include one or more of the following: introductory flier, meeting notice, comment card, and a pre-addressed survey on a particular Study issue. It is also the SMTC's intent to



work with and encourage other agencies to include this information in their publications or to assist in material distribution.

Approved documents, such as the Study's Final Report, may be made available at libraries in the vicinity of the Study area. News releases will be produced to announce the availability of such items, as well as invite written comments to be submitted to the SMTC.

#### *Public comment*

All interested individuals are encouraged to submit comments to the SMTC. This message will be publicized and made clear verbally and on Study material and publications. The public is also welcome to attend any of the publicized SMTC Executive, Planning and Policy Committee meetings, at which the Study may be on the agenda as a discussion item.

### **VIII. Press releases and media coverage**

The SMTC may issue press releases announcing the details of the public comment period to all major and minor newspapers in advance. If necessary, the SMTC may also send additional news releases, or take the initiative to promote media coverage on pertinent developments pertaining to the Study.

All media inquiries should be directed to the SMTC director or project manager. However, this is not always possible. If you (e.g. SMTC committee members, SAC members, and/or interested stakeholders associated with the Study) are interviewed by the media, please limit your comments to your respective agency's opinion or involvement in the Study. Speaking to the media on specific issues and questions regarding the Study, including its progress and development, is the exclusive responsibility of the SMTC.

### **IX. SMTC publications**

The SMTC publishes a newsletter, *DIRECTIONS*, that offers news about its activities and particular studies. This newsletter is distributed to over 5,000 individuals, some of whom include the media; local, state, and federal agencies associated with the SMTC; municipal and elected officials; community agencies and representatives; and a large number of interested citizens. It is anticipated that articles on the Study (e.g. Study development issues or the announcement of a public comment period) may be published in future issues of *DIRECTIONS*. Should the need arise for the production of a separate newsletter/flier/report to convey a timely Study development, the SMTC staff is prepared to perform this additional task. It is also important to note that the mailing list of the SMTC newsletter, *DIRECTIONS*, will be updated to include all members of the SAC, stakeholders, and others interested or involved in the Assessment.

The SMTC web site ([www.smtcmpo.org](http://www.smtcmpo.org)) may also serve as a resource for general information about the SMTC, the Assessment, and any final reports.

**X. Conclusion**

It is important for the SMTC to understand public attitudes and values throughout the Study. Through the activities described in this public involvement plan, the SMTC will solicit public input and provide opportunities for the public to develop greater awareness of, and active involvement, in the Study.

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# Appendix C

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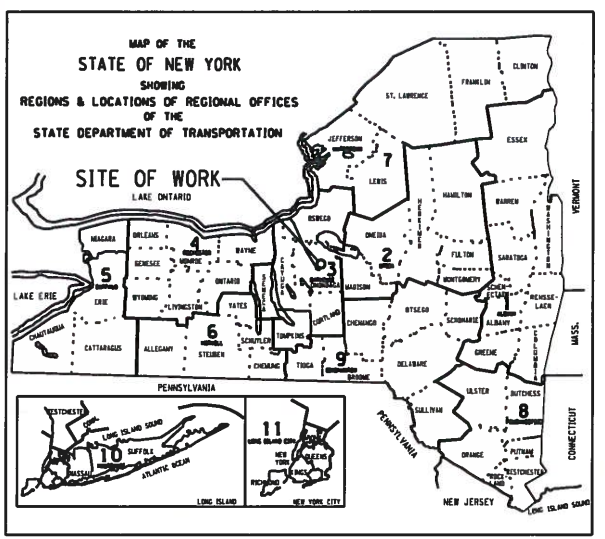
**Selections from the Park Street Greenway  
Contract Plans**

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FILE NAME = I:\shered\100\140024\140024\_CDW.dgn  
 DATE = 3/15/2017  
 TIME = 12:50:59 PM

IN CHARGE OF \_\_\_\_\_ DESIGN BY \_\_\_\_\_ ASK/JBN \_\_\_\_\_ CHECKED BY \_\_\_\_\_ MCB \_\_\_\_\_  
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# CITY OF SYRACUSE PARK STREET NEIGHBORHOOD GREENWAY

PIN 3950.56  
 D034843

CITY OF SYRACUSE  
 STEPHANIE A. MINER  
 MAYOR

## CONTRACT PLANS MARCH 2017

DRAFT

CONTRACT BEGINS  
 STA. 24+00.00



PROJECT LOCATION

CONTRACT ENDS  
 STA. 125+88.00

CONTRACTOR'S NAME _____	
AWARD DATE _____	
COMPLETION DATE _____	
FINAL ACCEPTANCE DATE _____	
ENGINEER IN CHARGE _____	
FINAL COST TOTAL _____	
FISCAL SHARE _____	COST(S) _____

**STANDARD SHEETS**

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY THE NYS DOT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEET(S) UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (US CUSTOMARY/METRIC) REFERENCED IN THE CONTRACT PROJECT "PROPOSAL" EXCEPT AS MODIFIED BY THESE PLANS OR BY CHANGES SET FORTH IN THE CONTRACT PROJECT "PROPOSAL".

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

THE CONTRACT PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH NYS DOT GUIDELINES AND POLICIES AND THE FINAL DESIGN REPORT APPROVED ON 8/26/2016.

APPROVED BY

MARY E. ROBISON, P.E.  
 CITY ENGINEER

DATE



PREPARED AND RECOMMENDED BY



03/16/17  
 DATE

JOHN P. DONOHUE, P.E.  
 N.Y.S. P.E. LICENSE NO. 067059

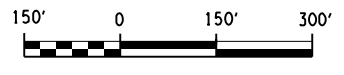
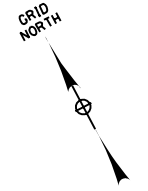
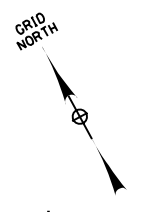
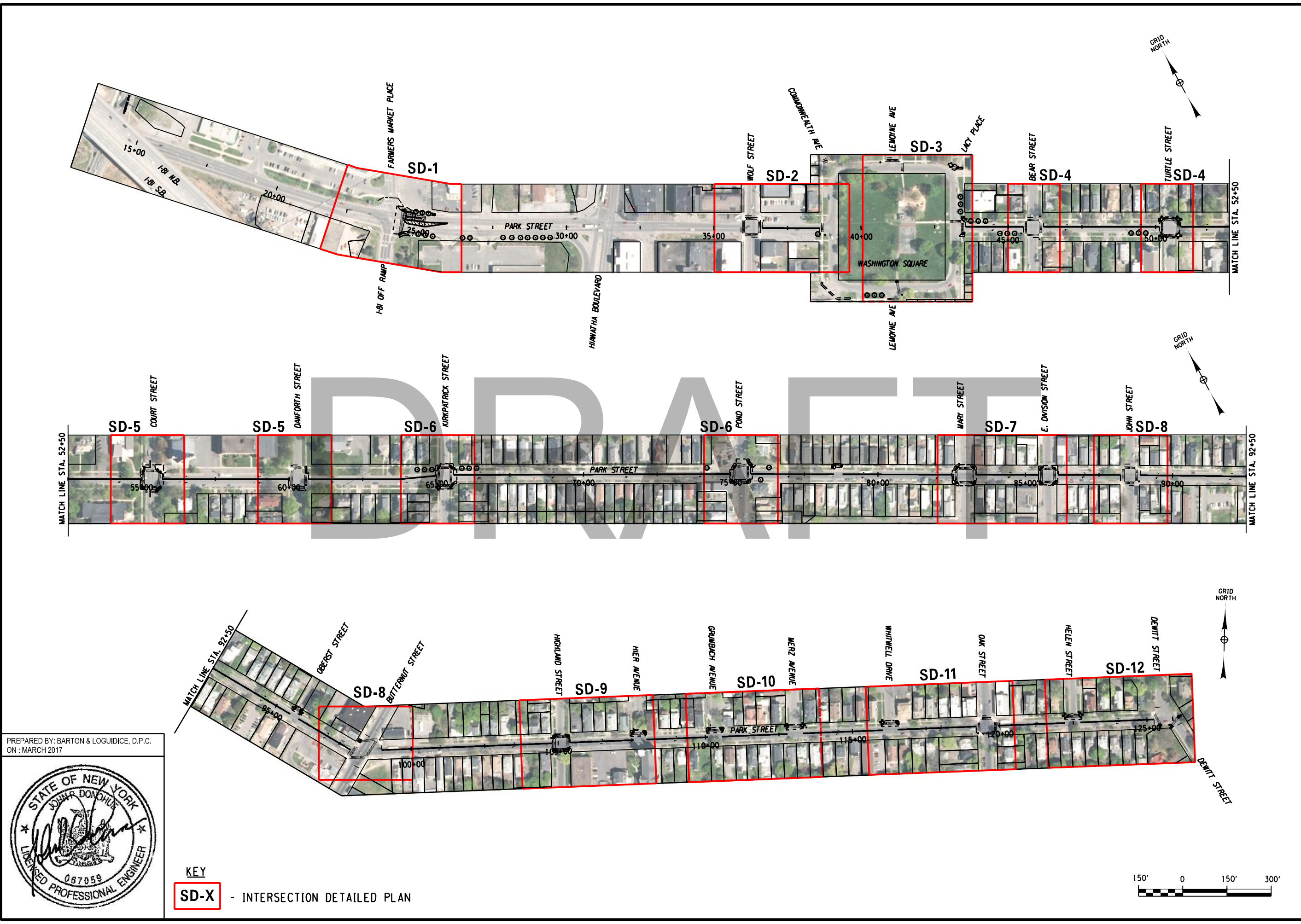
PARK STREET NEIGHBORHOOD GREENWAY			
CITY OF SYRACUSE, ONONDAGA COUNTY			
PIN 3950.56			
FED. ROAD REG. NO.	STATE	SHEET NO.	TOTAL SHEETS
	N.Y.	1	36
FEDERAL AID PROJECT NO.			
CAPITAL PROJECT IDENTIFICATION NO.		3950.56	
INDEX ON SHEET NO. 2			

PN 140.024

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PREPARED BY: BARTON & LOGUIDICE, D.P.C.  
 ON: MARCH 2017

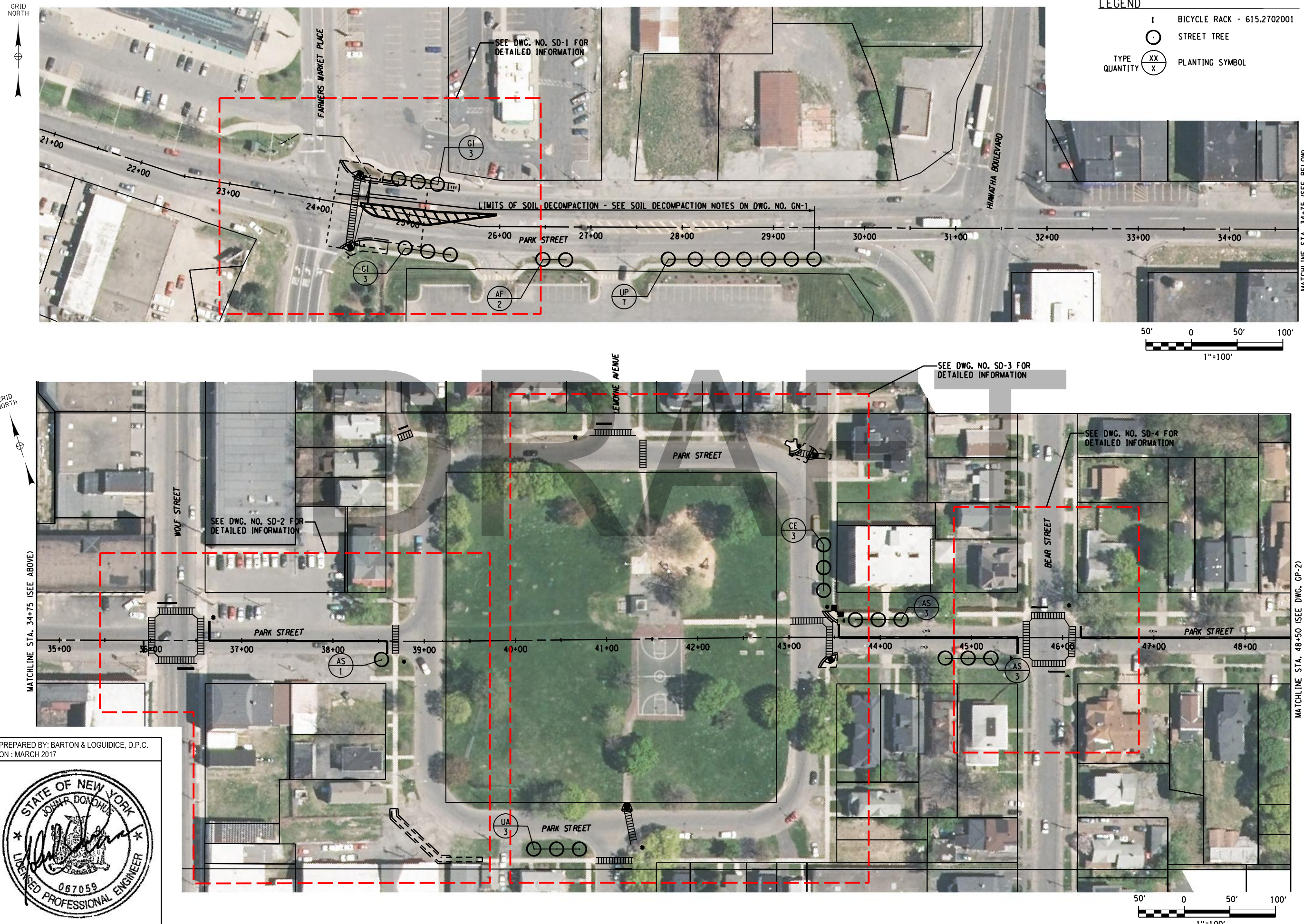
**KEY**  
**SD-X** - INTERSECTION DETAILED PLAN

		NO. / DATE / BY / REVISION	
		8 / 36	
<b>Park Street Neighborhood Greenway</b>		<b>City of Syracuse</b>	
<b>Onondaga County</b>		<b>P.I.N. 3950.56</b>	
<b>KEY PLAN</b>			
SCALE: AS SHOWN			
DATE ISSUED: 03/2017			
DRAWING			
K-1			

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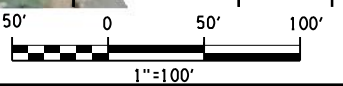
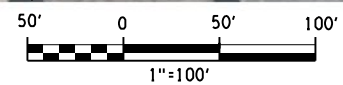
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IN CHARGE OF JPD DESIGN BY ASK/JBN CHECKED BY MCB ESTIMATED BY AAM/JBN CHECKED BY ASK DRAFTED BY ASK CHECKED BY MCB





**LEGEND**

- BICYCLE RACK - 615.2702001
- STREET TREE
- TYPE QUANTITY PLANTING SYMBOL



PREPARED BY: BARTON & LOGUIDICE, D.P.C.  
 ON : MARCH 2017



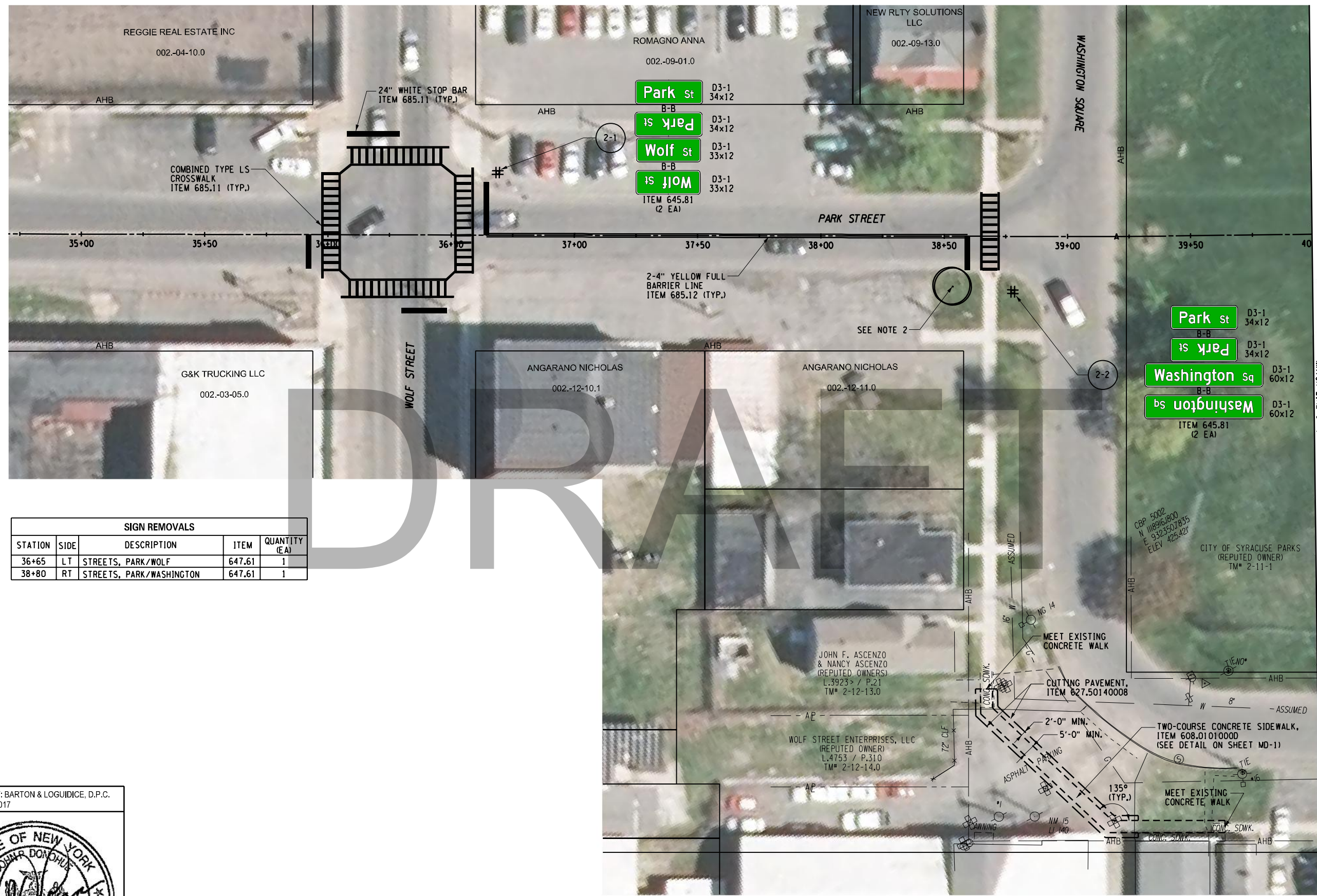
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PARK STREET NEIGHBORHOOD GREENWAY CITY OF SYRACUSE ONONDAGA COUNTY P.I.N. 3950.56	GENERAL PLAN SCALE: AS SHOWN DATE ISSUED: 03/2017 DRAWING GP-1
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209	



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IN CHARGE OF JPD DESIGN BY ASK/JBN CHECKED BY MCB ESTIMATED BY AAM/JBN CHECKED BY ASK DRAFTED BY ASK CHECKED BY MCB



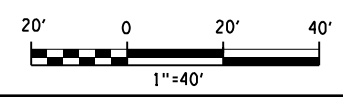
SIGN REMOVALS				
STATION	SIDE	DESCRIPTION	ITEM	QUANTITY (EA)
36+65	LT	STREETS, PARK/WOLF	647.61	1
38+80	RT	STREETS, PARK/WASHINGTON	647.61	1

PREPARED BY: BARTON & LOGUIDICE, D.P.C.  
 ON: MARCH 2017



- NOTES**
- REFER TO DWG. NO. MD-1 FOR FULL DEPTH RECONSTRUCTION DETAILS
  - REFER TO DWG. NO. LD-1 & GENERAL PLANS FOR DETAILS & QUANTITIES
  - JOINT ADHESIVE (ITEM 418.7603) SHALL BE APPLIED AT ALL VERTICAL PAVEMENT JOINTS.

**PARK STREET AND WOLF STREET  
 PARK STREET AND WASHINGTON SQUARE  
 INTERSECTION IMPROVEMENTS**

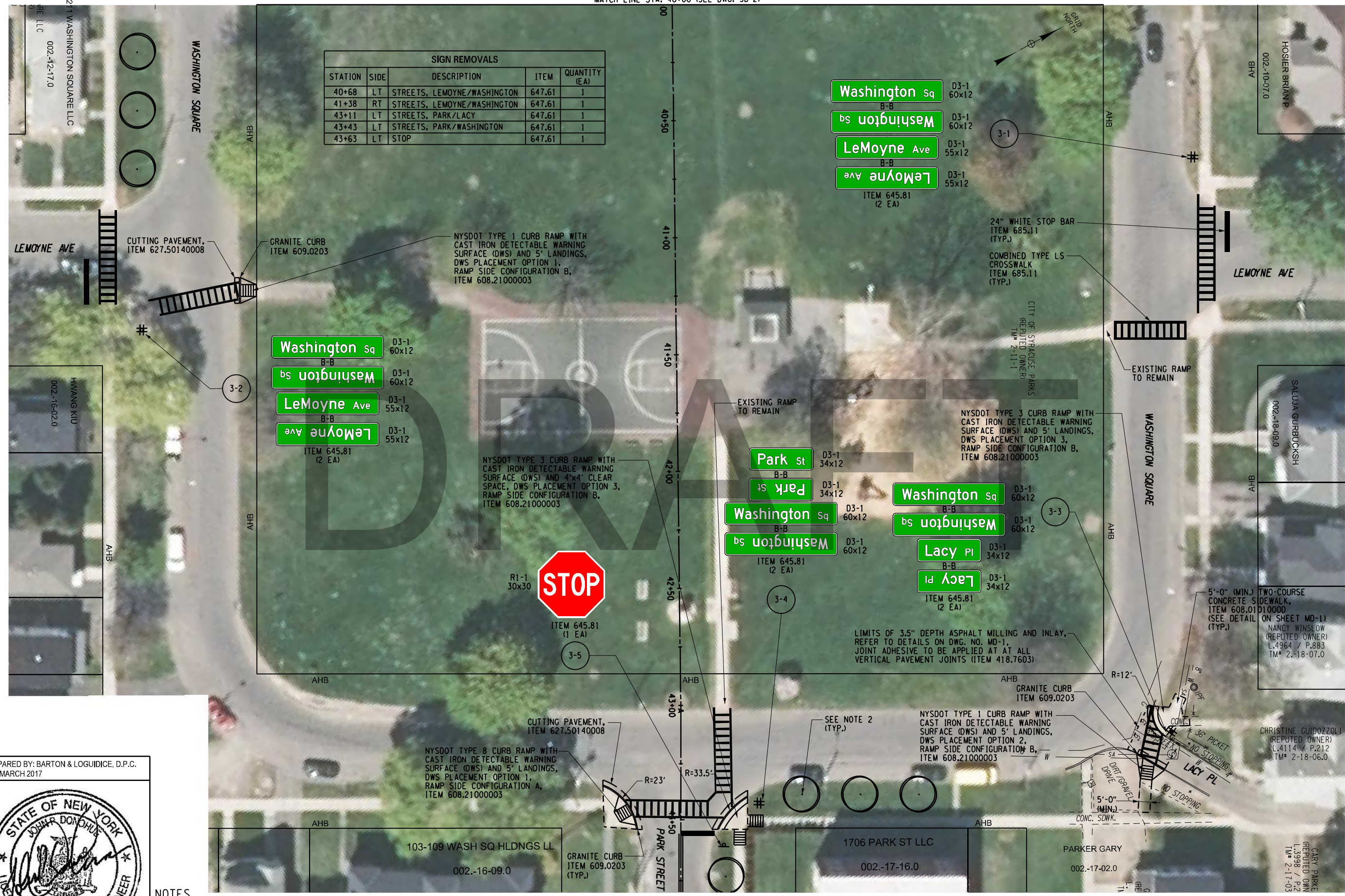


19 36			
NO.	DATE	BY	REVISION
<small>UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW ARTICLE 145 SECTION 7209</small>			
PARK STREET NEIGHBORHOOD GREENWAY		CITY OF SYRACUSE	
CITY OF SYRACUSE		ONONDAGA COUNTY	
P.I.N. 3950.56			
INTERSECTION DETAIL PLAN			
SCALE: AS SHOWN			
DATE ISSUED: 03/2017			
DRAWING SD-2			



MATCH LINE STA. 40+00 (SEE DWG. SD-2)

SIGN REMOVALS				
STATION	SIDE	DESCRIPTION	ITEM	QUANTITY (EA)
40+68	LT	STREETS, LEMOYNE/WASHINGTON	647.61	1
41+38	RT	STREETS, LEMOYNE/WASHINGTON	647.61	1
43+11	LT	STREETS, PARK/LACY	647.61	1
43+43	LT	STREETS, PARK/WASHINGTON	647.61	1
43+63	LT	STOP	647.61	1

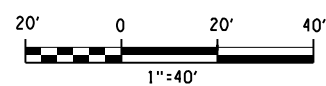


PREPARED BY: BARTON & LOGUIDICE, D.P.C.  
 ON: MARCH 2017



- NOTES**
- REFER TO DWG. NO. MD-1 FOR FULL DEPTH RECONSTRUCTION DETAILS
  - REFER TO DWG. NO. LD-1 & GENERAL PLANS FOR DETAILS & QUANTITIES
  - JOINT ADHESIVE (ITEM 418.7603) SHALL BE APPLIED AT ALL VERTICAL PAVEMENT JOINTS.

**PARK STREET AND WASHINGTON SQUARE  
 LEMOYNE AVE AND WASHINGTON SQUARE  
 INTERSECTION IMPROVEMENTS**



NO.	DATE	BY	REVISION



**Barton & Loguidice, D.P.C.**  
 CITY OF SYRACUSE  
 ONONDAGA COUNTY  
 P.I.N. 3950.56

**PARK STREET NEIGHBORHOOD GREENWAY**  
 INTERSECTION  
 DETAILED PLAN

SCALE: AS SHOWN  
 DATE ISSUED: 03/2017  
 DRAWING  
 SD-3

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209

# Appendix A

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## Synchro Summary Reports

DRAFT

Lanes, Volumes, Timings (For RTC Project)  
Hiawatha Blvd & Park St.

p.m. peak (Existing Conditions)

11/21/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷	↶	↷		↶	↷		↶	↷	↷
Traffic Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Future Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	0		0	90		0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99	0.99	1.00		1.00	1.00				
Fr <sub>t</sub>			0.850		0.991			0.986				0.850
Fl <sub>t</sub> Protected	0.950			0.950			0.950	0.980		0.950		
Satd. Flow (prot)	1787	1881	1599	1787	1862	0	1626	3308	0	1752	1845	1568
Fl <sub>t</sub> Permitted	0.950			0.950			0.950	0.980		0.950		
Satd. Flow (perm)	1777	1881	1578	1777	1862	0	1623	3305	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			384		3			10				84
Link Speed (mph)		30			30			30				30
Link Distance (ft)		896			774			453				637
Travel Time (s)		20.4			17.6			10.3				14.5
Confl. Peds. (#/hr)	4		4	4		4	2					2
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	75	151	384	55	138	9	401	223	41	16	300	84
Shared Lane Traffic (%)							45%					
Lane Group Flow (vph)	75	151	384	55	147	0	221	444	0	16	300	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Analyst = SMTC

(Source: Hard Copy Synchro Reports done by GTS Consulting for Dunkin Donuts in Nov. 2018)

Synchro 9 Report

Page 1

Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

p.m. peak (Existing Conditions)

11/21/2019

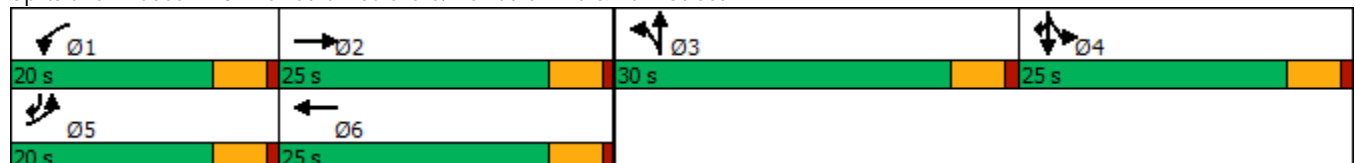


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Free	Prot	NA		Split	NA		Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3		4	4	4 5
Permitted Phases	Free											
Detector Phase	5	2		1	6		3	3		4	4	4 5
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	15.0		11.0	15.0		15.0	15.0		15.0	15.0	
Total Split (s)	20.0	25.0		20.0	25.0		30.0	30.0		25.0	25.0	
Total Split (%)	20.0%	25.0%		20.0%	25.0%		30.0%	30.0%		25.0%	25.0%	
Maximum Green (s)	15.0	20.0		15.0	20.0		25.0	25.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	9.0	16.1	73.9	8.3	12.7		17.4	17.4		17.0	17.0	28.1
Actuated g/C Ratio	0.12	0.22	1.00	0.11	0.17		0.24	0.24		0.23	0.23	0.38
v/c Ratio	0.34	0.37	0.24	0.28	0.46		0.58	0.57		0.04	0.71	0.13
Control Delay	39.1	32.6	0.4	39.1	36.4		34.1	29.0		27.6	39.9	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	39.1	32.6	0.4	39.1	36.4		34.1	29.0		27.6	39.9	5.3
LOS	D	C	A	D	D		C	C		C	D	A
Approach Delay		13.1			37.1			30.7			32.1	
Approach LOS		B			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 73.9  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 26.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 56.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 3: Hiawatha Boulevard/Hiawatha Blvd & Park Street



Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

p.m. peak (w/ SB Left-Thru Lane)

11/21/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷	↶	↷		↶	↷		↶	↷	↷
Traffic Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Future Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	0		0	90		0
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99	0.99	1.00		1.00	1.00				
Frt			0.850		0.991			0.986				0.850
Flt Protected	0.950			0.950			0.950	0.980			0.997	
Satd. Flow (prot)	1787	1881	1599	1787	1862	0	1626	3308	0	0	1839	1568
Flt Permitted	0.950			0.950			0.950	0.980			0.997	
Satd. Flow (perm)	1777	1881	1578	1777	1862	0	1623	3305	0	0	1839	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			384		3			10				84
Link Speed (mph)		30			30			30				30
Link Distance (ft)		896			774			453				637
Travel Time (s)		20.4			17.6			10.3				14.5
Confl. Peds. (#/hr)	4		4	4		4	2					2
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	75	151	384	55	138	9	401	223	41	16	300	84
Shared Lane Traffic (%)							45%					
Lane Group Flow (vph)	75	151	384	55	147	0	221	444	0	0	316	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Analyst = SMTC

(Source: Hard Copy Synchro Reports done by GTS Consulting for Dunkin Donuts in Nov. 2018)

Synchro 9 Report

Page 1

Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

p.m. peak (w/ SB Left-Thru Lane)

11/21/2019

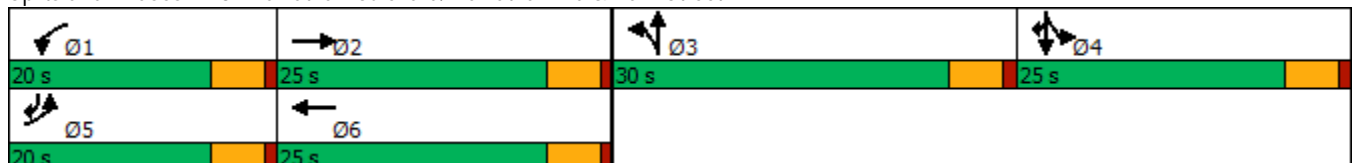


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Free	Prot	NA		Split	NA		Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3		4	4	4 5
Permitted Phases			Free									
Detector Phase	5	2		1	6		3	3		4	4	4 5
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	15.0		11.0	15.0		15.0	15.0		15.0	15.0	
Total Split (s)	20.0	25.0		20.0	25.0		30.0	30.0		25.0	25.0	
Total Split (%)	20.0%	25.0%		20.0%	25.0%		30.0%	30.0%		25.0%	25.0%	
Maximum Green (s)	15.0	20.0		15.0	20.0		25.0	25.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	9.0	16.0	74.7	8.3	12.7		17.4	17.4			17.9	29.0
Actuated g/C Ratio	0.12	0.21	1.00	0.11	0.17		0.23	0.23			0.24	0.39
v/c Ratio	0.35	0.38	0.24	0.28	0.46		0.58	0.57			0.72	0.13
Control Delay	39.4	32.9	0.4	39.4	36.8		34.6	29.4			40.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	39.4	32.9	0.4	39.4	36.8		34.6	29.4			40.1	5.3
LOS	D	C	A	D	D		C	C			D	A
Approach Delay		13.2			37.5			31.1			32.8	
Approach LOS		B			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 74.7  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 26.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 56.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 3: Hiawatha Boulevard/Hiawatha Blvd & Park Street



Lanes, Volumes, Timings (For RTC Project)  
Hiawatha Blvd & Park St.

p.m. peak (w/ SB Left-Thru & NB 2 Lefts)

11/21/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Future Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	0		0	90		0
Storage Lanes	1		1	1		0	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99	0.99	1.00		1.00					
Frt			0.850		0.991			0.977				0.850
Flt Protected	0.950			0.950			0.950				0.997	
Satd. Flow (prot)	1787	1881	1599	1787	1861	0	3467	1838	0	0	1839	1568
Flt Permitted	0.950			0.950			0.950				0.997	
Satd. Flow (perm)	1771	1881	1578	1777	1861	0	3455	1838	0	0	1839	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			384		3			9				84
Link Speed (mph)		30			30			30				30
Link Distance (ft)		896			774			453				637
Travel Time (s)		20.4			17.6			10.3				14.5
Confl. Peds. (#/hr)	4		4	4		4	2					2
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	75	151	384	55	138	9	401	223	41	16	300	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	151	384	55	147	0	401	264	0	0	316	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			36				36
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Analyst = SMTC

(Source: Hard Copy Synchro Reports done by GTS Consulting for Dunkin Donuts in Nov. 2018)

Synchro 9 Report

Page 1

Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

p.m. peak (w/ SB Left-Thru & NB 2 Lefts)

11/21/2019

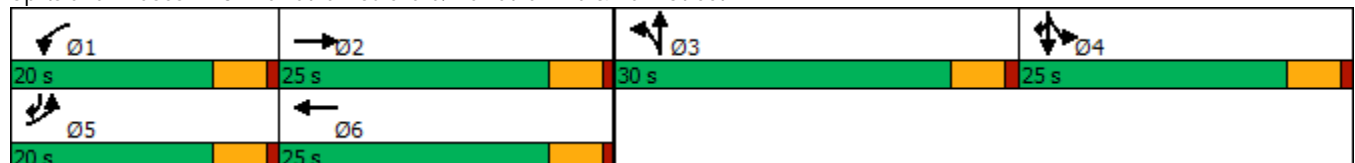


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Free	Prot	NA		Split	NA		Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3		4	4	4 5
Permitted Phases			Free									
Detector Phase	5	2		1	6		3	3		4	4	4 5
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	15.0		11.0	15.0		15.0	15.0		15.0	15.0	
Total Split (s)	20.0	25.0		20.0	25.0		30.0	30.0		25.0	25.0	
Total Split (%)	20.0%	25.0%		20.0%	25.0%		30.0%	30.0%		25.0%	25.0%	
Maximum Green (s)	15.0	20.0		15.0	20.0		25.0	25.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	9.0	16.0	74.8	8.3	12.7		17.5	17.5			17.8	29.0
Actuated g/C Ratio	0.12	0.21	1.00	0.11	0.17		0.23	0.23			0.24	0.39
v/c Ratio	0.35	0.37	0.24	0.28	0.46		0.50	0.61			0.72	0.13
Control Delay	39.5	33.0	0.4	39.5	36.8		28.6	33.1			40.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	39.5	33.0	0.4	39.5	36.8		28.6	33.1			40.3	5.3
LOS	D	C	A	D	D		C	C			D	A
Approach Delay		13.3			37.6			30.4			33.0	
Approach LOS		B			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 74.8  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 26.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 3: Hiawatha Boulevard/Hiawatha Blvd & Park Street





Lanes, Volumes, Timings (For RTC Project)  
Hiawatha Blvd & Park St.

p.m. peak (w/ SB LTR & NB 2 Lefts)  
11/21/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Future Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	0		0	90		0
Storage Lanes	1		1	1		0	2		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99	0.99	1.00		1.00					1.00
Frt			0.850		0.991			0.977				0.972
Flt Protected	0.950			0.950			0.950					0.998
Satd. Flow (prot)	1787	1881	1599	1787	1861	0	3467	1838	0	0	1784	0
Flt Permitted	0.950			0.950			0.950					0.998
Satd. Flow (perm)	1771	1881	1578	1777	1861	0	3456	1838	0	0	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			384		3			9				12
Link Speed (mph)		30			30			30				30
Link Distance (ft)		896			774			453				637
Travel Time (s)		20.4			17.6			10.3				14.5
Confl. Peds. (#/hr)	4		4	4		4	2					2
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	75	151	384	55	138	9	401	223	41	16	300	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	151	384	55	147	0	401	264	0	0	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			36				36
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

p.m. peak (w/ SB LTR & NB 2 Lefts)  
 11/21/2019

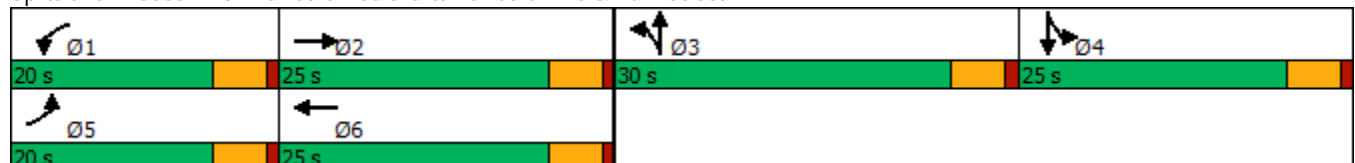


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Free	Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			Free									
Detector Phase	5	2		1	6		3	3		4	4	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	15.0		11.0	15.0		15.0	15.0		15.0	15.0	
Total Split (s)	20.0	25.0		20.0	25.0		30.0	30.0		25.0	25.0	
Total Split (%)	20.0%	25.0%		20.0%	25.0%		30.0%	30.0%		25.0%	25.0%	
Maximum Green (s)	15.0	20.0		15.0	20.0		25.0	25.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	8.9	15.8	77.1	8.2	12.5		17.4	17.4			20.7	
Actuated g/C Ratio	0.12	0.20	1.00	0.11	0.16		0.23	0.23			0.27	
v/c Ratio	0.36	0.39	0.24	0.29	0.49		0.51	0.63			0.82	
Control Delay	40.2	33.4	0.4	40.0	37.6		29.4	34.3			45.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	40.2	33.4	0.4	40.0	37.6		29.4	34.3			45.6	
LOS	D	C	A	D	D		C	C			D	
Approach Delay		13.4			38.3			31.4			45.6	
Approach LOS		B			D			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 77.1  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 29.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 3: Hiawatha Boulevard/Hiawatha Blvd & Park Street



Lanes, Volumes, Timings (For RTC Project) p.m. peak (w/ SB LTR & NB 2 Lefts & no EBR slip)  
 Hiawatha Blvd & Park St. 11/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Future Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	0		0	90		0
Storage Lanes	1		1	1		0	2		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.98	0.99	1.00		1.00					1.00
Frt			0.850		0.991			0.977				0.972
Flt Protected	0.950			0.950			0.950					0.998
Satd. Flow (prot)	1787	1881	1599	1787	1861	0	3467	1838	0	0	1784	0
Flt Permitted	0.950			0.950			0.950					0.998
Satd. Flow (perm)	1771	1881	1569	1777	1861	0	3456	1838	0	0	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			384		3			9				12
Link Speed (mph)		30			30			30				30
Link Distance (ft)		896			774			453				637
Travel Time (s)		20.4			17.6			10.3				14.5
Confl. Peds. (#/hr)	4		4	4		4	2					2
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	75	151	384	55	138	9	401	223	41	16	300	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	151	384	55	147	0	401	264	0	0	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			36				36
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings (For RTC Project) p.m. peak (w/ SB LTR & NB 2 Lefts & no EBR slip)  
 Hiawatha Blvd & Park St. 11/22/2019

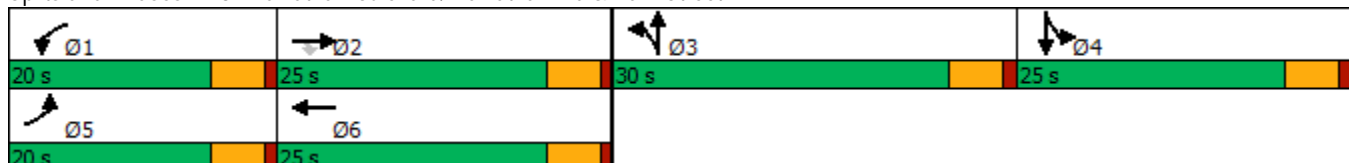


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2									
Detector Phase	5	2	2	1	6		3	3		4	4	
Switch Phase												
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	15.0	15.0	11.0	15.0		15.0	15.0		15.0	15.0	
Total Split (s)	20.0	25.0	25.0	20.0	25.0		30.0	30.0		25.0	25.0	
Total Split (%)	20.0%	25.0%	25.0%	20.0%	25.0%		30.0%	30.0%		25.0%	25.0%	
Maximum Green (s)	15.0	20.0	20.0	15.0	20.0		25.0	25.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effect Green (s)	9.0	16.3	16.3	8.2	12.9		17.4	17.4			20.7	
Actuated g/C Ratio	0.12	0.21	0.21	0.11	0.17		0.22	0.22			0.27	
v/c Ratio	0.37	0.38	0.61	0.29	0.47		0.52	0.63			0.82	
Control Delay	40.7	33.0	8.3	40.5	36.9		29.8	34.9			46.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	40.7	33.0	8.3	40.5	36.9		29.8	34.9			46.3	
LOS	D	C	A	D	D		C	C			D	
Approach Delay		18.4			37.9			31.8			46.3	
Approach LOS		B			D			C			D	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 77.7  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 31.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 3: Hiawatha Boulevard/Hiawatha Blvd & Park Street



Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

experimental(2)  
 12/06/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖			↕	
Traffic Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Future Volume (vph)	70	140	357	47	119	8	349	194	36	14	267	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	0		0	90		0
Storage Lanes	0		1	0		0	2		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.98		1.00		1.00					1.00
Frt			0.850		0.994			0.977				0.972
Flt Protected		0.984			0.987		0.950					0.998
Satd. Flow (prot)	0	1851	1599	0	1843	0	3467	1838	0	0	1784	0
Flt Permitted		0.814			0.837		0.950					0.998
Satd. Flow (perm)	0	1528	1569	0	1561	0	3456	1838	0	0	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			384		2			9				14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		896			774			453				637
Travel Time (s)		20.4			17.6			10.3				14.5
Confl. Peds. (#/hr)	4		4	4		4	2					2
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	75	151	384	55	138	9	401	223	41	16	300	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	384	0	202	0	401	264	0	0	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			36				36
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings (For RTC Project)  
 Hiawatha Blvd & Park St.

experimental(2)  
 12/06/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Split	NA		Split	NA	
Protected Phases		2			6		3	3		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	6	6		3	3		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		28.0	28.0		37.0	37.0	
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		28.0%	28.0%		37.0%	37.0%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		23.0	23.0		32.0	32.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0			5.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		18.1	18.1		18.1		17.1	17.1			21.2	
Actuated g/C Ratio		0.25	0.25		0.25		0.24	0.24			0.29	
v/c Ratio		0.59	0.57		0.52		0.49	0.60			0.75	
Control Delay		33.3	6.6		30.7		28.3	32.9			33.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay		33.3	6.6		30.7		28.3	32.9			33.9	
LOS		C	A		C		C	C			C	
Approach Delay		16.5			30.7			30.2			33.9	
Approach LOS		B			C			C			C	

DRAFT

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 72.5  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 26.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 70.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 3: Hiawatha Boulevard/Hiawatha Blvd & Park Street

