



CITY OF RENSSELAER WATERFRONT CONNECTIVITY STUDY

March 2023

Prepared by: MJ Engineering &
Land Surveying, P.C.



Prepared for: Capital District
Transportation Committee



ACKNOWLEDGEMENTS

We would like to express our sincere gratitude to the following individuals for their valuable contributions and support in the completion of the City of Rensselaer Waterfront Connectivity Study:

- Andrew Kretschmar, City of Rensselaer 4th Ward
- Joseph Kardash, Rensselaer City Schools
- David Wells, Doane Stuart School
- Fred Mastroianni, FCM Engineering, PLLC
- Salena Dabbs, City of Rensselaer Planning Commission
- Ketura Vics, City of Rensselaer Planning Department
- Carrie Ward, Capital District Transportation Committee
- Andrew Tracy, Capital District Transportation Committee

Their expertise, insights, and dedication were instrumental in shaping the study's recommendations and ensuring its accuracy and relevance.

We would also like to thank the residents, community members, and stakeholders who participated in the public engagement process and provided valuable feedback throughout the study. Their input was essential in identifying community needs and shaping the study's recommendations.

Finally, we acknowledge the support and guidance provided by the City of Rensselaer, the Capital District Transportation Committee, and other agencies and organizations involved in the study. This study could not have been accomplished without their collaboration and cooperation.

DISCLAIMERS

This report was funded in part through grants from the Federal Highway Administration, U.S. Department of Transportation. The views and opinions expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

The recommendations in this study are conceptual in nature and do not commit City of Rensselaer or other entities to the proposed project(s). The concepts presented in this report (or in an illustration) may need to be investigated in more detail before any funding commitment is made. Additional engineering or follow up work will be based upon funding availability.

Table of Contents

CHAPTER 1 INTRODUCTION	5
STUDY APPROACH	5
STUDY PURPOSE	6
STUDY AREA.....	7
CHAPTER 2: EXISTING CONDITIONS.....	8
DATA COLLECTION.....	8
ZONING.....	9
LAND USE.....	9
PROPERTY OWNERSHIP	12
ROADWAY PHYSICAL CHARACTERISTICS	12
HILTON PARK AND BOAT RAMP.....	15
PEDESTRIAN ACCOMMODATIONS	16
BICYCLE ROUTES AND ACCOMMODATIONS.....	18
FREIGHT	18
TRANSIT	19
PARKING	20
TRAFFIC DATA	23
CRASH HISTORY	23
ENVIRONMENTAL RESOURCES.....	24
ENVIRONMENTAL JUSTICE & LIMITED ENGLISH PROFICIENCY	28
CHAPTER 3: PAST PLANNING EFFORTS	29
RENSSELAER COUNTY TRAIL PLAN (2004)	29
CITY OF RENSSELAER COMPREHENSIVE PLAN (2006).....	29
CITY OF RENSSELAER COMPLETE STREETS POLICY	29
CITY OF RENSSELAER NATURAL RESOURCES INVENTORY (2021).....	30
THE CAPITAL DISTRICT TRAILS PLAN (2019).....	30
KILIAEN’S LANDING GEIS (2018)	30
ADDITIONAL DOCUMENTS REVIEWED.....	30
CHAPTER 4: PUBLIC OUTREACH.....	31
PUBLIC WORKSHOP SESSIONS.....	31
WATERFRONT SURVEY	32
PROJECT WEBSITE	33
SOCIAL MEDIA.....	33
CHAPTER 5: CONCEPTS EVALUATION	34
STUDY AREA NEEDS.....	34
FORBES AVENUE CORRIDOR PROPOSED CONCEPTS	34
FORBES AVENUE INTERSECTION CONCEPTS.....	36
WASHINGTON AVENUE: 4 TH STREET INTERSECTION CONCEPTS	38
CHAPTER 6: RECOMMENDED IMPROVEMENTS.....	41

FORBES AVENUE CORRIDOR	42
FORBES AVENUE INTERSECTION	43
WASHINGTON AVENUE: 4 TH STREET INTERSECTION	44
WASHINGTON AVENUE CORRIDOR	45
SIDEWALK RECONSTRUCTION.....	45
ROADWAY RESURFACING.....	45
OTHER LOCAL AND REGIONAL CONNECTIONS	46
CHAPTER 7: IMPLEMENTATION STRATEGIES	48
PLANNING-LEVEL COST ESTIMATES.....	48
POTENTIAL FUNDING SOURCES	49
FEDERAL PROGRAMS:	49
STATE PROGRAMS:.....	50
LOCAL FUNDING PARTNERS & PROGRAMS:.....	52
COORDINATION WITH OUTSIDE AGENCIES.....	53

Appendices

APPENDIX A: PROPERTY OWNERSHIP MAPS

APPENDIX B: PEDESTRIAN COUNT DATA COLLECTION

APPENDIX C: CDTA RIDERSHIP DATA

APPENDIX D: PARKING UTILIZATION RATE

APPENDIX E: CRASH ANALYSIS

APPENDIX F: ENVIRONMENTAL RESOURCES

APPENDIX G: PUBLIC OUTREACH

APPENDIX H: ALTERNATIVE CONCEPTS

APPENDIX I: PLANNING LEVEL COST ESTIMATES

APPENDIX J: ENVIRONMENTAL JUSTICE AND LIMITED ENGLISH PROFICIENCY

CHAPTER 1 Introduction

The Waterfront Connectivity Study is being conducted by the Capital District Transportation Committee (CDTC) and the City of Rensselaer to improve pedestrian, bicycle, and transit connections to the waterfront area. The Connectivity Study will help explore potential options and identify universal access solutions to include those who traditionally experience transportation disadvantages.

The City of Rensselaer is a distinctive waterfront destination, with a rich history of being a walkable area and close ties to Albany, Troy, the Hudson River, major railways, and the Hudson Valley. There is a growing effort to enhance access to the riverfront and make it more accessible and safe for pedestrians and cyclists. The City is developing the Rensselaer Riverwalk, linking DeLaet's Landing, Kiliaen's Landing, Hilton Park, the Rensselaer Boat Launch, and the RPI Trail as indicated in the Capital District Trails Plan by CDTC. Furthermore, the City is working on constructing the Hollow Trail to the Rensselaer Junior/Senior High School, enhancing safety near the Doane Stuart School, and promoting growth along the riverfront, including at the Hilton Center Brownfield Redevelopment Area.

The Waterfront Connectivity Study will employ a complete street approach to improve access along the Rensselaer waterfront and identify appropriate solutions to traffic calming, parking access, steep slopes, and overall safety and operational improvements between existing schools, residential neighborhoods, planned mixed-use developments, and the general waterfront. The New York State Department of Transportation (NYSDOT) identifies a Complete Street as a roadway planned and designed to consider the safe, convenient access and mobility of all roadway users of all ages and abilities. This includes pedestrians, bicyclists, public transportation riders, and motorists; it includes children, the elderly, and persons with disabilities. Complete Street roadway design features include sidewalks, lane striping, bicycle lanes, paved shoulders suitable for use by bicyclists, signage, crosswalks, pedestrian control signals, bus pull-outs, curb cuts, raised crosswalks, ramps and traffic calming measures.

What is a Complete Street?

A Complete Street is a roadway planned and designed to consider the safe, convenient access and mobility of all roadway users of all ages and abilities. This includes pedestrians, bicyclists, public transportation riders, and motorists; it includes children, the elderly, and persons with disabilities.

- NYSDOT

Study Approach

The main tasks for this Study include:

- Data collection and review of previous studies
- Study Advisory Committee (SAC) meetings
- Development of a project website
- Existing conditions inventory and assessment

- Public engagement
 - Hybrid public workshops
 - Community Survey
 - Project Website
 - Social media outreach
- Development of alternate concept plans

The study was conducted with input and direction from the SAC, which is comprised of representatives from the Capital District Transportation Committee (CDTC), City of Rensselaer, Capital District Transportation Authority (CDTA), Capital District Regional Planning Commission (CDRPC), New York State Department of Transportation (NYSDOT), Rensselaer County, and local citizens. The purpose of the SAC was the following:

- Provide input and guidance during the life of the Study
- Meet with the consultant and provide the following:
 - Confirm understanding of the scope of work and study area boundaries
 - Confirm study principles and objectives
 - Provide guidance on expected outcomes and measures of effectiveness
 - Provide oversight on the overall study process including the roles and responsibilities of the study partners
 - Review and comment on public information materials
 - Review and comment on recommendations
- Participate in one public input session and the final public workshop
- Review and comment on study deliverables
- Serve as a two-way information conduit for groups they represent

Study Purpose

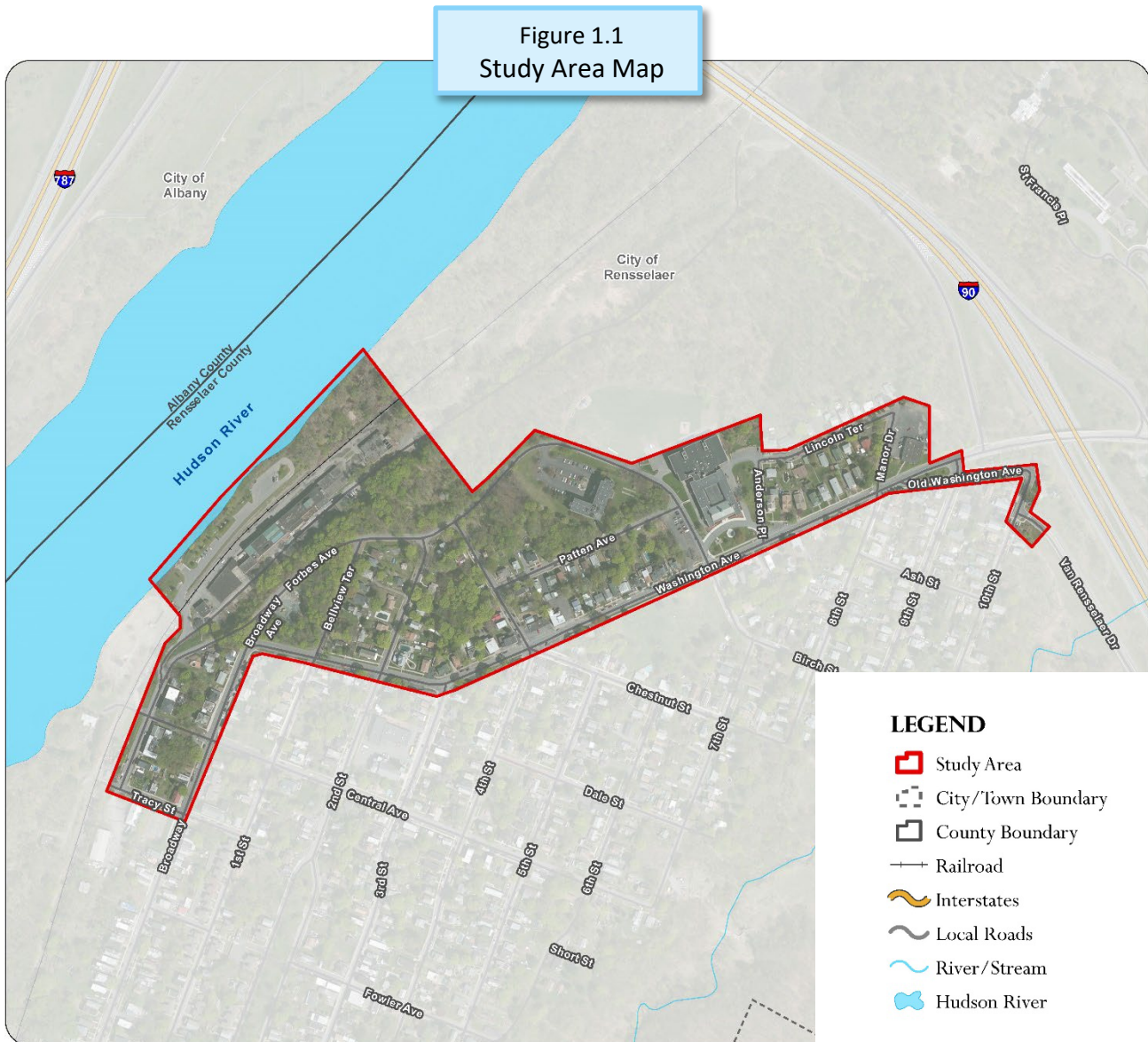
The purpose of this Study is to evaluate access options for all modes of transportation to the north waterfront area of the City of Rensselaer and to connect it with the Hollow Trail for cyclists and pedestrians. This Study aims to achieve the City's objectives of revitalizing the Rensselaer Waterfront and the Hilton Center Brownfield Redevelopment Area, connecting the City to the proposed Rensselaer Riverwalk, Kiliaen's Landing, and the Hollow Trail, promoting economic growth, improving safety, and creating a connected multi-modal transportation network accessible to all, including pedestrians, cyclists, drivers, transit users, freight, emergency vehicles, children, seniors, and people with disabilities.

The study will establish concepts along with opinion of probable costs that can be used by the City of Rensselaer to prioritize improvements and apply for funding to ultimately design and construct the recommended improvements. The study and the concepts developed will expand upon the connectivity recommendations suggested for the Hilton Park and Boat Ramp from multiple previously conducted studies.

This Study gave special attention to the transportation needs of marginalized populations, including but not limited to individuals who walk or cycle as their primary mode of transportation, people of color, low-wage earners, people without a personal vehicle, people with disabilities, people over 65 or under 16 years old, and non-English speakers. These transportation-related needs include clean air, access to schools, parks, business districts, and employment locations, traffic crash avoidance, increased physical activity, safety and security, and access to affordable housing.

Study Area

The study area, shown in **Figure 1.1**, was defined to include the City of Rensselaer Hilton Center Brownfield Redevelopment Area and potential connections to the Rensselaer Riverwalk/RPI Trail. The study area also extends to the east towards the Hollow Trail and Rensselaer Junior/Senior High School.



CHAPTER 2: Existing Conditions

Data Collection

An inventory of the physical characteristics was performed along with a parking inventory throughout the study area. Site visits were performed at multiple points in the study and the entire study area was mapped using MJ4D technology (<https://mj4d.mjels.com>). This allowed for everyone including the project team, SAC committee members, and public to view and measure existing conditions in the study area and note conditions for vehicles, transit users, pedestrians, and bicyclists.

Additional existing conditions information was obtained from readily available sources as described throughout the following sections.



Top L: City Officials, CDTC, MJ Engineering Field Walk
Top R: Hilton Center 2022
Bottom L: Washington Ave, 4th St, Chestnut St intersection
Bottom R: Future site of the path to Livingston Ave bridge



Zoning

As the City of Rensselaer looks to redevelop areas along the Hudson River waterfront it is crucial to analyze the current zoning. **Figure 2.1** identifies the zoning within the study area.

Zoning in the study area falls within 4 distinct districts including Downtown Mixed-Use (MU-1), Waterfront Mixed-Use (MU-2), Open Space and Conservation (OS), and Residential District #2 (R-2).

Downtown Mixed-Use (MU-1) The purpose of this district is to accommodate a mix of higher-density residential and commercial uses that will encourage a vibrant, walkable central core consistent with the historic character for the City of Rensselaer.

Waterfront Mixed-Use (MU-2) The purpose of this district is to capitalize on the City of Rensselaer's waterfront and convenient access to water and rail transportation by encouraging a mix of residential, commercial, and public uses. All private development, where applicable, in the Waterfront Mixed-Use District shall include public access directly adjacent to the water in the form of a 25-foot easement from the mean high tide, which may be waived by the Planning Commission in cases which the City does not feel access is appropriate for reasons of public health, safety or welfare.

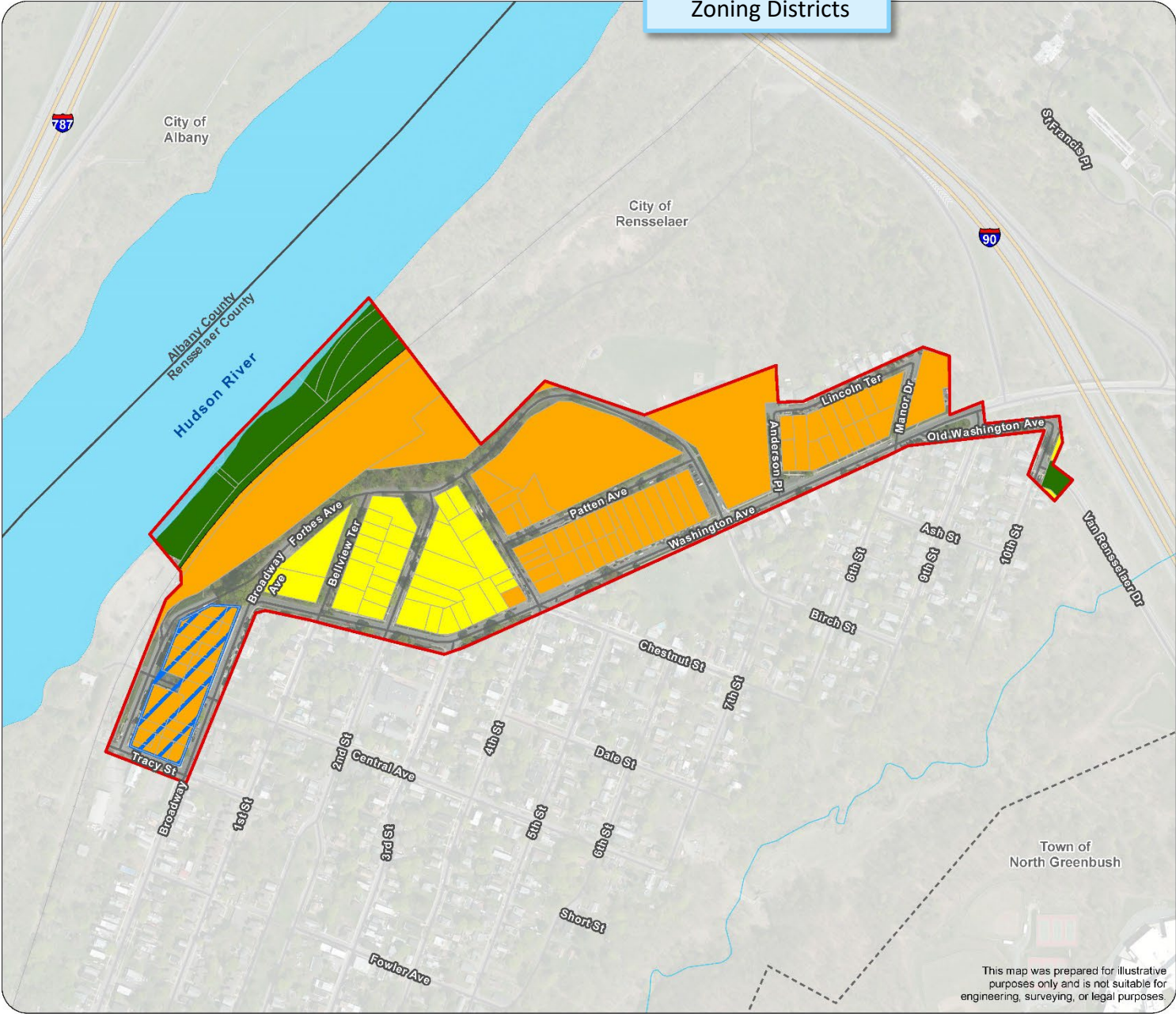
Open Space and Conservation (OS) The purpose of this district is to preserve the historic, scenic, recreational and environmental value of officially designated parkland, environmentally sensitive areas, heavily wooded areas, and other open spaces, which may or may not be accessible by the public. Further, the intent of the Open Space and Conservation District is to provide areas for the development of new passive and active parks, multi-use trails, and small-scale environmental interpretive sites.

Residential District #2 (R-2) The purpose of this district is to ensure that future residential and commercial development respects the scale and character of existing neighborhoods in the City of Rensselaer. The specific intent of the R-2 District is to: Provide a mix of housing options including single-family and two-family homes in structures originally intended for two or more families, which preserve the historic nature of existing neighborhoods; and Provide for a walkable, pedestrian-oriented environment built around single-family and two-family residential dwellings on small city lots.

Land Use

Land use refers to the actual utilization of a piece of land, whereas zoning encompasses the types of land uses that are permitted by local zoning regulations. These regulations are reflective of the unique character and characteristics of the community. Given the significant size of the study area, the variety of land uses is substantial and ranges from single to multi-family residential areas, as well as commercial and industrial areas. Additionally, the Hilton Park and Boat Ramp area also encompasses the Hilton Center Brownfield Redevelopment Area. **Figure 2.2** identifies the land use within the study area.

Figure 2.1
Zoning Districts



CITY OF RENSSELAER
Waterfront Connectivity
Study

Zoning Districts
April 2022

- LEGEND**
- Study Area
 - City/Town Boundary
 - County Boundary
 - Railroad
 - Interstates
 - Local Roads
 - River/Stream
 - Hudson River
 - Tax Parcel Boundary
 - Downtown Mixed-Use (MU-1)
 - Residential District #2 (R-2)
 - Open Space and Conservation (OS)
 - Historic District Overlay



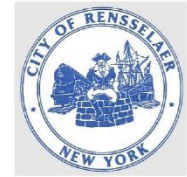
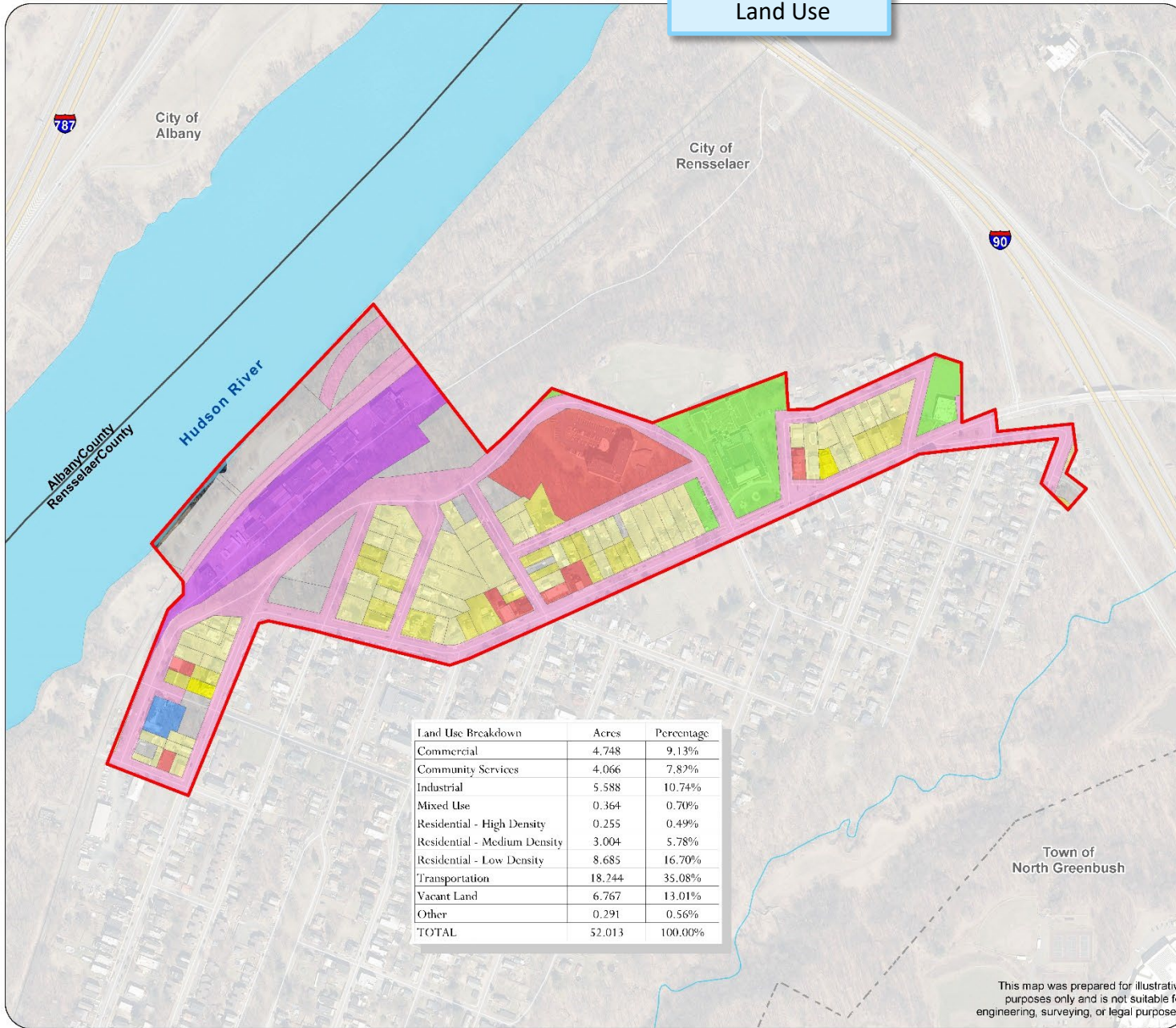
This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.



Sources:
Esri, NYS ITS, City of Rensselaer,
Rensselaer County

Engineering and Land Surveying, P.C.
1550 Crockett Road - Clifton Park, NY 12065

Figure 2.2
Land Use



CITY OF RENSSELAER
Waterfront Connectivity
Study

Land Use
April 2022

Legend

- Commercial
- Community Services
- Industrial
- Mixed Use
- Residential - High Density
- Residential - Medium Density
- Residential - Low Density
- Transportation
- Vacant Land



This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.



Sources:
Esri, NYS ITS, City of Rensselaer,
Rensselaer County

0 200 400
Feet

 **Engineering and
Land Surveying, P.C.**
1550 Crocker Road - Clifton Park, NY 12018

Property Ownership

Most properties within the study area are residential in use. The Hilton Park and Boat Ramp, Van Rensselaer Heights, and the Doane Stuart School represent the 3 largest parcels in the study area. **Appendix A** includes a full study area property ownership map.

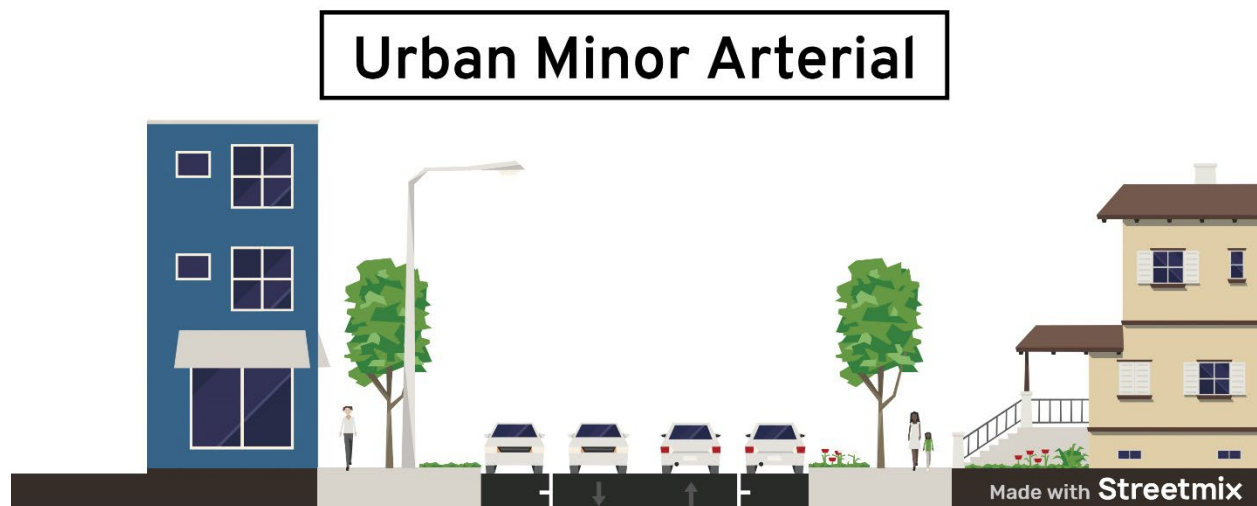
Roadway Physical Characteristics

Roadways

The study area is comprised of numerous roadways located in the City of Rensselaer. All roadways have a NYSDOT functional classification of either Urban Minor Arterial or Urban Local.

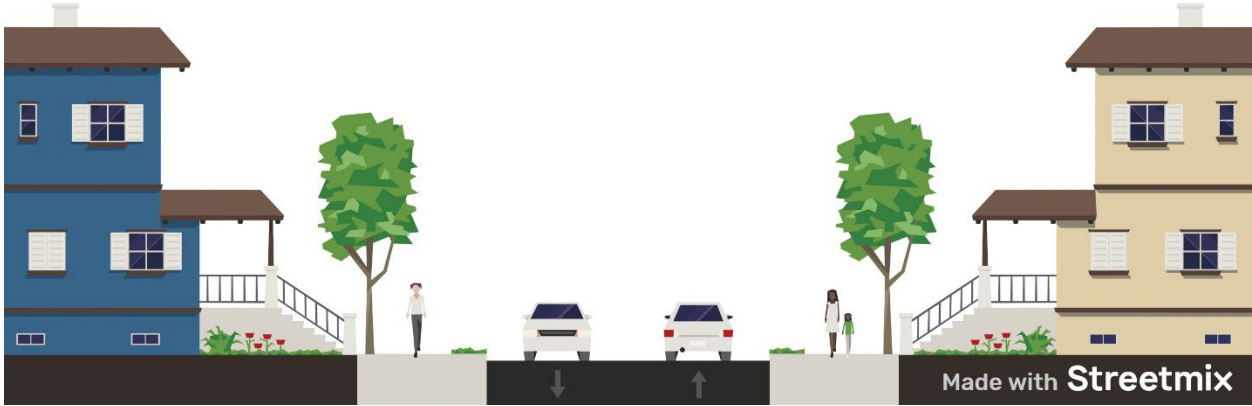
Urban Minor Arterial	Urban Local
Urban Minor Arterials provide service for trips of moderate length, interconnect and augment the higher Arterial system, provide intra-community continuity, and may carry local bus routes.	Urban local roads account for the largest percentage of all roadways in terms of mileage and are often designed to discourage through traffic. Their purpose is to provide direct access to adjacent land and higher systems.
- FHWA	

The urban local streets within the study area are low speed, fairly narrow streets that users travel primarily to access residences. The urban minor arterials bisect the study area, intersecting with many of the local streets to collect vehicular traffic. Arterials often carry traffic to more heavily traveled corridors, into commercial districts and to neighboring communities. Schematic representations of the two roadway classifications found within the study area are below:



Typical features: two (2) travel lanes, on-street parking, street lighting, mixed use development

Urban Local



Typical features: two (2) travel lanes, limited or no on-street parking, residential

A summary of the roadways within the study area is provided in **Table 1** below:

Table 1: Summary of Roadways within Study Area

Roadway Name	From	To	Functional Class	Number of Lanes
Broadway	Tracy St	Washington Ave	16	2
Washington Ave	Broadway	I-90 EB Off Ramp	16	2
Tracy St	Broadway	Forbes Ave	19	2
Forbes Ave	Tracy St	Washington Ave	19	2
Central Ave Ext	Forbes Ave	Broadway	19	2
Bellview Tr	Washington Ave	Forbes Ave	19	2
Second St	Washington Ave	Forbes Ave	19	2
Fourth St	Washington Ave	Forbes Ave	19	2
Patten Ave	Fourth St	Forbes Ave	19	2
Anderson Pl	Washington Ave	Lincoln Tr	19	1
Lincoln Tr	Anderson Pl	Manor Dr	19	2
Manor Dr	Lincoln Tr	Washington Ave	19	2
Old Washington Ave	Washington Ave	Tenth St	19	2
Tenth St	Old Washington Ave	Van Rensselaer Dr	19	2

Note: Functional Class 16 – Urban Minor Arterial, Functional Class 19 – Urban Local

Intersections

A summary of the intersections within the study area is provided in **Table 2** below:

Table 2: Summary of Intersections within Study Area

Main Roadway	Intersecting Street(s)	Existing Traffic Control System
Broadway	Tracy St	Stop-controlled on minor street
Broadway	Central Ave	Stop-controlled on minor street
Broadway	Forbes Ave / Washington Ave	Stop-controlled on minor st / yield on main st
Washington Ave	First St / Bellview Tr	Stop-controlled on minor streets
Washington Ave	Second St	Stop-controlled on minor street
Washington Ave	Third St	Stop-controlled on minor street
Washington Ave	Fourth St / Chestnut St	Stop-controlled on minor streets
Washington Ave	Forbes Ave / Seventh St	Signalized
Washington Ave	Anderson Pl	Stop-controlled on minor street
Washington Ave	Mason Dr / Eighth St	Stop-controlled on minor streets
Washington Ave	Old Washington Ave	One way slip ramp
Washington Ave	Ninth St	Stop-controlled on minor streets
Tracy St	Forbes Ave	Uncontrolled
Forbes Ave	Forbes Ave	Stop-controlled on minor streets
Forbes Ave	Bellview Tr	Uncontrolled
Forbes Ave	Second St	Uncontrolled
Forbes Ave	Fourth St	Uncontrolled
Forbes Ave	Patten Ave	Stop-controlled on major street
Fourth St	Patten Ave	Stop-controlled on minor streets
Anderson Pl	Lincoln Tr	Uncontrolled
Lincoln Tr	Manor Dr	Uncontrolled
Old Washington Ave	Ninth St	Stop-controlled all ways
Old Washington Ave	Tenth St	Uncontrolled
Tenth St	Van Rensselaer Dr	Stop-controlled all ways

School Zone

Both Forbes Avenue and Washington Avenue have pavement markings in advance of the Doane Stuart School to provide advanced warning to motorists of the upcoming school zone. The advanced warning is limited to pavement markings, as no signage has been installed. Doane Stuart School also has an approximately 50 car, faculty parking lot across Forbes Avenue. Faculty need to cross Forbes Avenue to enter the school. The faculty lot crosswalk has stop signs from both directions to allow pedestrians to cross safely.



Doane Stuart School Zone

Hilton Park And Boat Ramp

As part of the waterfront connections study, the Hilton Park and Boat Ramp emerged as a critical element in the city's waterfront infrastructure. During the study process, members of the Study Advisory Committee (SAC) and the general public brought attention to several pressing issues concerning the park, including the limited access to the park via Forbes Avenue and the hairpin turn (Figure 2.3) that diverts drivers with boats to Tracy Street.

Furthermore, the park's location at the bottom of a steep slope that descends from Doane Stewart School at the top of the Forbes Avenue hill presents additional access challenges. The ongoing Hilton redevelopment project, which seeks to transform the area into a mixed-use development, highlights the pressing need for a comprehensive analysis and planning of the park's access and overall design.

Figure 2.3



Forbes Avenue to boat launch access

In response to these challenges, the study has established a full approach to improving access to the park and enhancing its overall functionality as a popular boating destination. This includes a thorough evaluation of the park's topography, location, and future use projections, with particular attention to the limited access via Forbes Avenue, the steep slope from Doane Stewart School, and the expected impact of the Hilton redevelopment project on park access. The study also considered the at-grade CSX train crossing and its effect on park access.

The results of the study will provide valuable insights for decision-makers and stakeholders as they work to enhance the park and the surrounding area. It is essential that the park's access and design be carefully planned in order to ensure its continued viability as a popular boating destination, and the comprehensive analysis will play a critical role in ensuring the park's future success.

Pedestrian Accommodations

Pedestrian Counts

The number of pedestrians utilizing pedestrian infrastructure within the study limits were counted at four (4) intersection on May 31, 2022 within the project limits. The counts were conducted during the anticipated morning and afternoon peaks associated with the school day schedule. Refer to **Table 3** for a summary of the pedestrian volumes for the intersections studied. The pedestrian count location plan and data collection sheets can be found in **Appendix B**.

Table 3: Pedestrian Volumes

Intersection	Tuesday May 31, 2022 7:00 to 9:00 AM		Tuesday May 31, 2022 2:30 to 4:30 PM	
	Pedestrians	Bicyclists	Pedestrians	Bicyclists
Washington Ave and Broadway	12	0	36	8
Washington Ave and Third St	22	0	37	1
Washington Ave and Forbes Ave	56	0	82	8
Washington Ave and Eighth St	22	0	32	9

Sidewalks and Crosswalks

In general, concrete sidewalks are located along both sides of Broadway, Washington Avenue, Tracy Street, Second Street, Fourth Street, Patten Avenue, Lincoln Terrace, and Manor Drive through the entire study area. Additionally, sidewalks are also located along one side of Bellview Terrace (east), Anderson Place (east), Old Washington Avenue (south), and Tenth Street (west). All sidewalks within the study area have a grass utility strip to separate them from the roadways. The sidewalk is deteriorated in

many locations, with some areas exceeding the maximum two (2) percent cross slope per the Public Rights-of-Way Accessibility Guidelines (PROWAG).

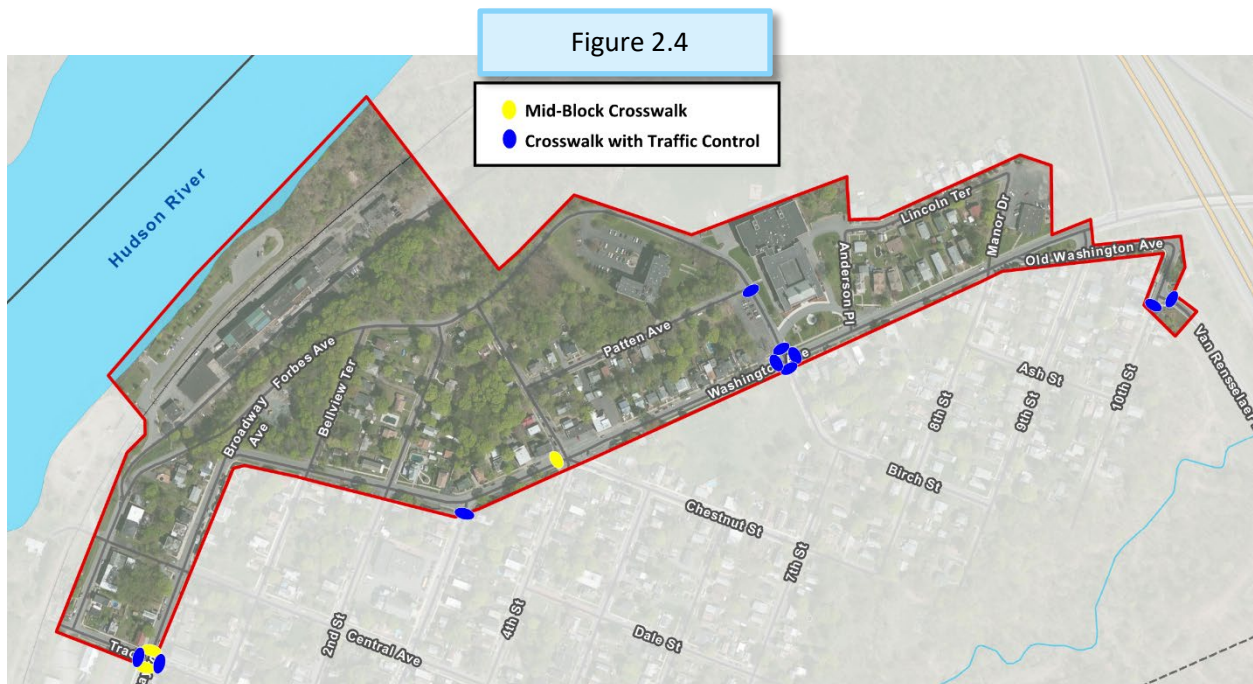
Curb ramps are present at each intersection's pedestrian crossing locations. The majority of the existing ramps do not meet PROWAG due to at least one of the following elements:

- Excessive running grade
- Excessive cross slope
- Lack of or poor condition of detectable warning unit
- Insufficient turning space or;
- Exit/entrance elevation of the roadway versus ramp elevation exceeds ¼ inch

The curb ramps at the intersection of Washington Avenue and Forbes Avenue have recently been reconstructed and meet ADA Standards. It should be noted that federally-funded projects are obligated to provide pedestrian facilities consistent with the PROWAG, regardless of project type. Should non-federal funds be used to construct improvements, the City may choose to upgrade pedestrian infrastructure as part of the project, or upgrade at a later time.

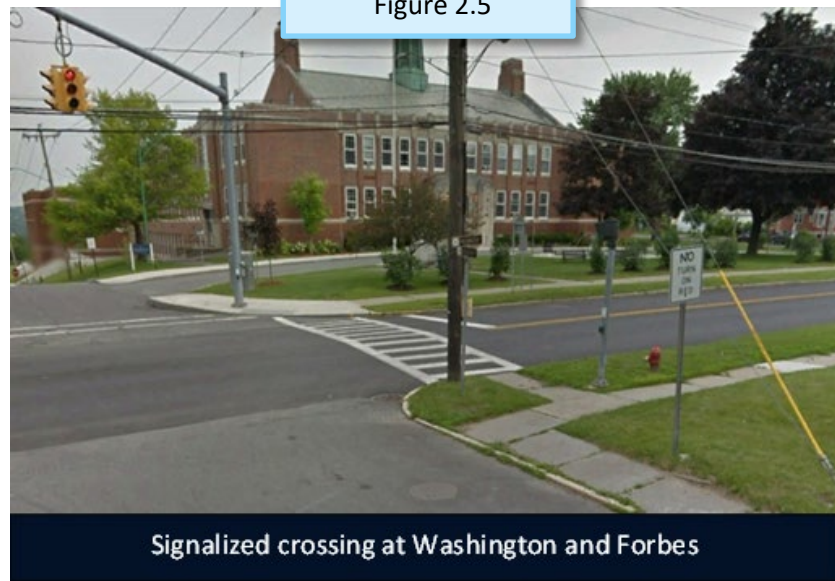
Striped pedestrian crosswalks have been installed at various locations within the study area, as identified on **Figure 2.4** below. In some locations the paint has not been maintained and is difficult to see.

The crosswalk on Forbes Avenue near the intersection with Patten Avenue is not a mid-block crossing since stop signs have been installed to control traffic on Forbes; however, eastbound traffic on Patten Avenue is not stop controlled approaching Forbes Avenue. None of the mid-block crossings identified on the figure have advanced warning signs or crosswalk signs to alert motorists of the crossing.



Pedestrian Signal Equipment

Pedestrian signal equipment has been installed in association with the traffic signal at Washington Avenue and Forbes Avenue, as shown in **Figure 2.5**. Although all four legs of the intersection have crosswalks, pedestrian signals have been installed for use by pedestrians crossing Washington Avenue on the east side of the intersection. The existing pedestrian signals do not meet the current standards which requires that pedestrian signals include a combination hand/man symbol



indication along with a countdown timer indication at each pedestrian signal location. At a minimum, additional pedestrian signals should be installed for the Washington Avenue crossing on the west approach. Future projects should consider the installation of pedestrian signals for all crossings.

Pedestrian Amenities

No pedestrian amenities currently exist along the roadways within the study area. However, the Hilton Park and Boat Ramp has several pedestrian amenities, such as picnic tables, benches, and trash receptacles, as well as decorative pedestrian lighting throughout the area.

Bicycle Routes and Accommodations

The study area is facing some challenges for safe and comfortable bicycle travel. Due to the limited shoulder width along several of the roadways and the presence of on-street parking, bicyclists are required to share the travel lanes with motor vehicles. This situation can result in potential conflicts with individuals exiting parked vehicles, as well as increase the risk of crashes. Moreover, there are no signs or pavement markings present to alert motorists of the shared-use condition, which can lead to confusion and unsafe conditions for both bicyclists and drivers. Additionally, the study area currently lacks any bicycle-friendly amenities, such as bike lanes, bike parking facilities, or bike-friendly infrastructure, which can further reduce the safety and comfort of bicycle travel.

Freight

Freight, or heavy truck traffic, is known to utilize Broadway and Washington Ave to access points within the City of Rensselaer between the Dunn Memorial Bridge and I-787 south of the study area, and I-90 north of the study area. None of the roadways within the study area are included in the National

Highway System. A summary of the available truck traffic percentages from the NYSDOT Traffic Data Viewer is provided in **Table 4** below:

Table 4: Truck Traffic within Study Area

Roadway	Truck Traffic Percentage
Broadway	3.0%
Tracy St	7.0%
Washington Ave	7.0%
Second St	0.0%

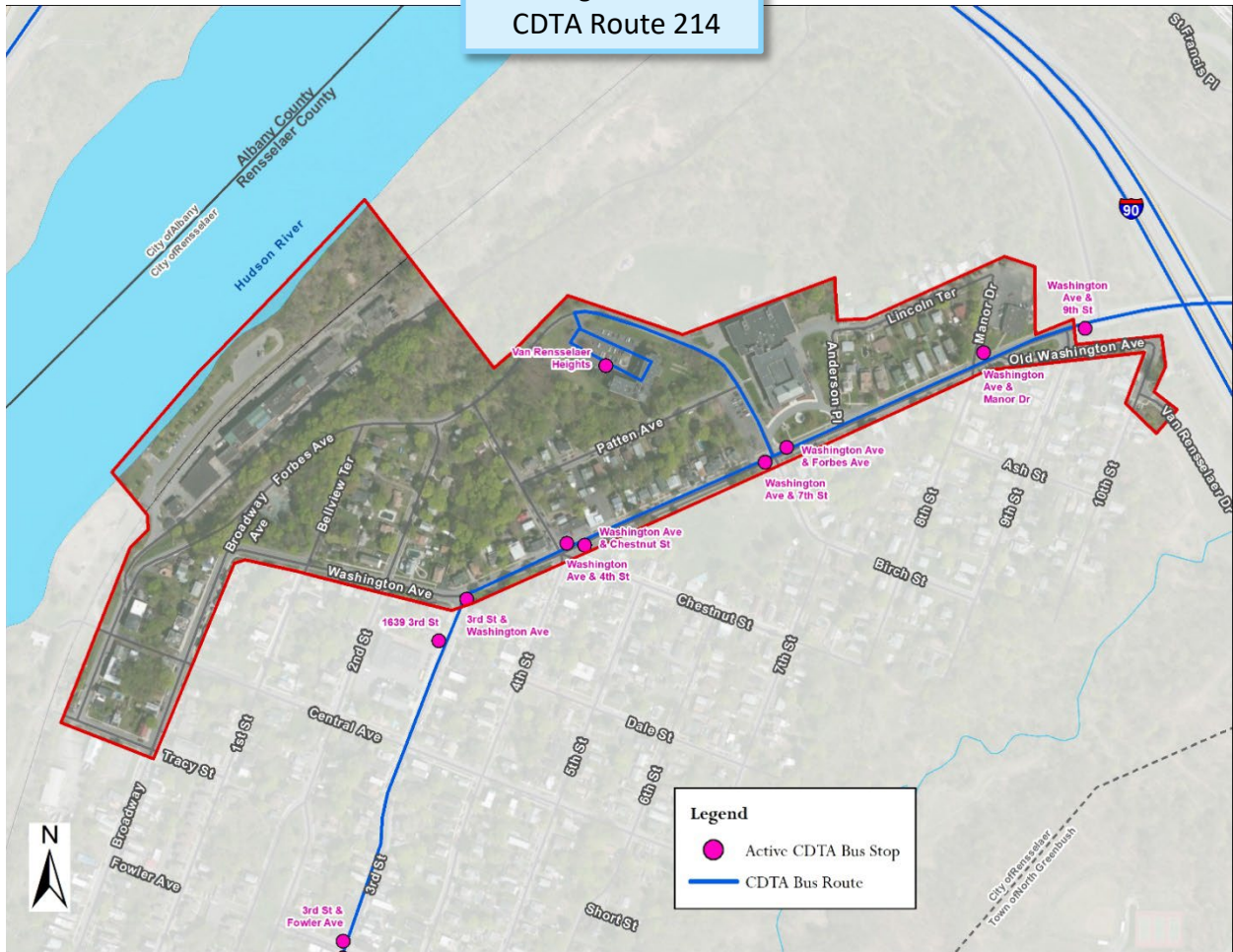
Transit

The study area is served by a single bus route, CDTA Route 214, operated by the Capital District Transportation Authority (CDTA). Prior to the COVID-19 pandemic, two additional routes, Routes 808 and 821, passed through the study area but have since been discontinued. CDTA Route 214 runs from the Empire State Plaza Concourse in Albany to the Walmart in Rensselaer Plaza and has three stops in the westbound direction and four stops in the eastbound direction along Washington Avenue. The bus stops are located at the intersections of Washington Avenue and Manor Drive, Washington Avenue and Forbes Avenue, Washington Avenue and Fourth Street, Washington Avenue and Third Street, Washington Avenue and Chestnut Street, Washington Avenue and Seventh Street, and Washington Avenue and Ninth Street.

There are three marked pedestrian crossings on Washington Avenue, and the closest crossings to the westbound stop at Chestnut and the eastbound stop at Manor Drive are 500 feet west and 370 feet east, respectively. The route begins running in Albany and Rensselaer at 6:23 am and 6:40 am, Monday through Friday, and 7:28 am and 6:55 am on Saturdays. Buses run approximately every 30-40 minutes.

Ridership data for Route 214 from September 1, 2019 to January 31, 2020 and September 1, 2021 to January 31, 2022 is available in **Appendix C**, providing an opportunity to compare pre-COVID-19 and post-COVID-19 ridership. The transit routes and stops along Washington Avenue, shown below in **Figure 2.6**, and can be seen on the Transit Facilities Map, located in **Appendix C**.

Figure 2.6
CDTA Route 214



Parking

Parking Overview

The study area offers parking options through a combination of private lots and on-street parking. A number of facilities, such as private businesses and Doane Stuart School, own and maintain private lots. Additionally, Hilton Park has a public parking lot that accommodates both passenger vehicles and boat trailers.

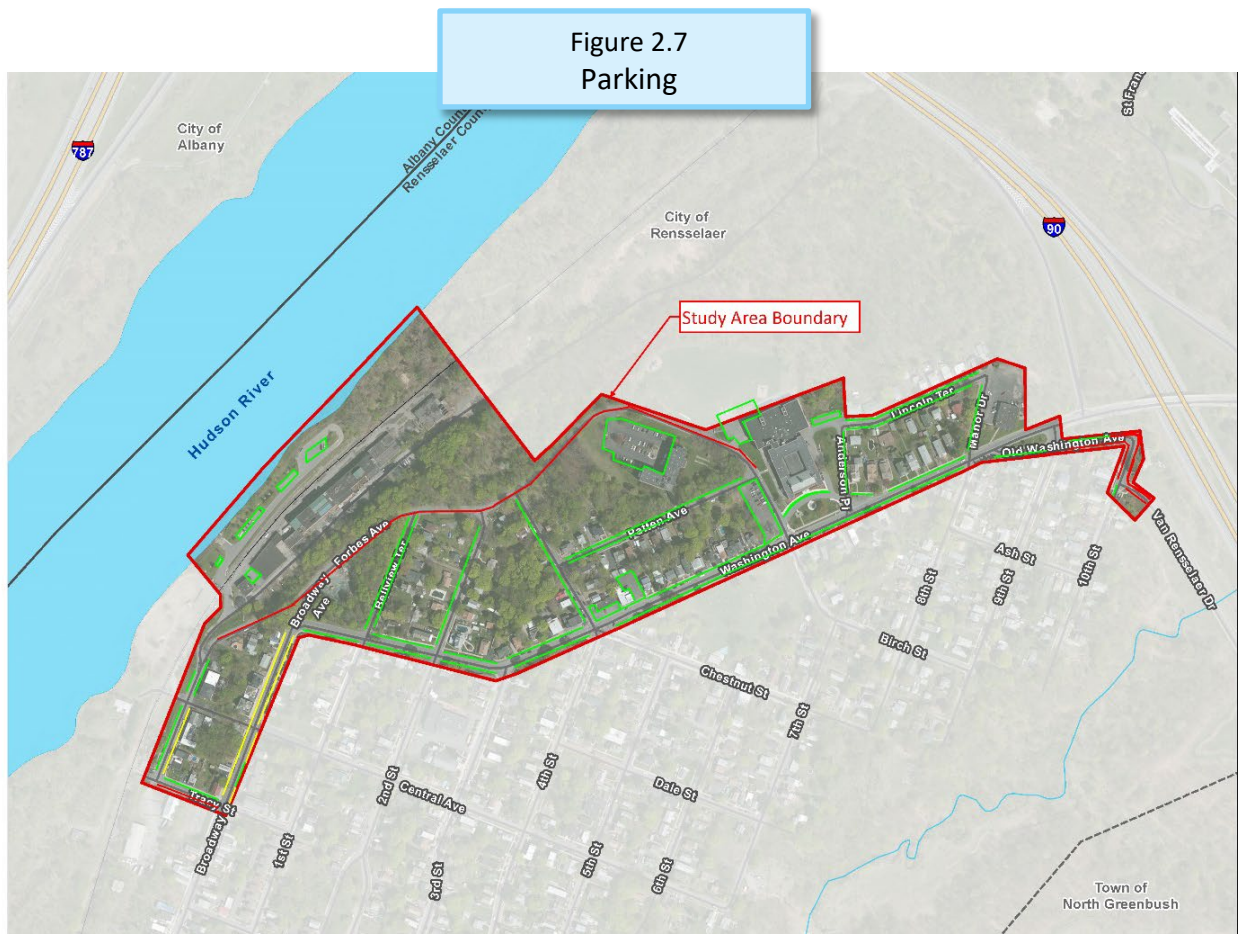
On-street parking is permitted along both sides of Broadway and Washington Avenue, as well as the majority of side streets within the study area. **Figure 2.7** depicts the specific locations for on-street parking. Parking is available for a small portion of Forbes Avenue for residents, and there is an unofficial gravel lot at the intersection of Forbes Avenue and Broadway. Additionally, there is a parking lot at the north end of Forbes Avenue owned by Doane Stuart School.

According to City Code, Chapter 71.03 Parking Restrictions, streets and avenues that are less than 25 feet wide from curb to curb are restricted to parking on only one side. Parking is also prohibited in all alleys, within 25 feet in front of a church, school, hotel, theater, hospital, railway station, bus station, public meeting place, or public meeting hall. School buses and trucks with a capacity exceeding one-half ton are prohibited from parking on Washington Avenue. Where parking is permitted, vehicles must not obstruct driveways or fire hydrants. Areas designated for on-street parking are marked in green on the map.

Parking Utilization

The on-street parking utilization rate can provide valuable information for transportation planning and management. The utilization rate is the percentage of available parking spaces that are occupied at a given time. This information can help to understand the demand for parking in a particular area and inform decisions related to the management and expansion of parking resources. For example, if the utilization rate is consistently high, it may indicate a need for additional parking spaces or the implementation of parking management strategies, such as time limits, to ensure the efficient use of the available resources.

The data collection effort to determine the on-street parking utilization rate was conducted on four (4) separate days. Data was collected on August 11, 2022 and August 12, 2022 for daytime counts and



August 15, 2022 and August 17, 2022 for nighttime counts. A summary of the parking utilization study can be found in **Table 5**, with the roadway segment, available spaces and average rates shown. A full parking utilization table is shown in **Appendix D**. The data was collected using manual counts and was performed at different times and days of the week to capture the full range of parking demand.

Table 5: Parking Inventory

Street	Segment	Available Spaces	Average Number of Parked Cars	Average Utilization
Tracy St	Broadway to Forbes Ave	5	1	20%
Broadway	Tracy St to Washington Ave	38	6	16%
Washington Ave	Broadway to Bellview Tr	6	1	17%
Washington Ave	Bellview Tr to Second St	7	1	14%
Washington Ave	Second St to Fourth St	31	2	6%
Washington Ave	Fourth St to Forbes Ave	32	3	9%
Washington Ave	Forbes Ave to Manor Dr	24	1	4%
Forbes Ave	Tracy St to Washington Ave	24	5	21%
Central Ave Ext.	Forbes Ave to Broadway	6	2	33%
Bellview Tr	Washington Ave to Forbes Ave	31	7	23%
2nd St	Washington Ave to Forbes Ave	27	8	30%
4th St	Washington Ave to Forbes Ave	34	16	47%
Patten Ave	Fourth St to Forbes Ave	45	15	33%
Anderson Pl	Washington Ave to Lincoln Tr	7	2	29%
Lincoln Tr	Anderson Pl to Manor Dr	24	10	42%

Table 5: Parking Inventory

Street	Segment	Available Spaces	Average Number of Parked Cars	Average Utilization
Manor Dr	Lincoln Tr to Washington Ave	5	2	40%
Old Washington Ave	Washington Ave to Tenth St	11	5	45%
Tenth St	Old Washington Ave to Van Rensselaer Dr	2	2	100%

Analysis of parking utilization rates supported the retention of the two existing parking lanes along Fourth Street and Lincoln Avenue. The remaining streets had utilization rates that supported the removal of a parking lane. Alternating parking is to remain as-is along Broadway.

Traffic Data

Existing traffic volume and speed data for the study area was obtained from the NYSDOT Traffic Data Viewer and is summarized in **Table 6** below. If information was not available at a particular street or intersection, it has been omitted from the table.

Table 6: Traffic Summary of Roadways within Study Area

Roadway Name	AADT ¹	Calculation Year	Posted Speed	Average Speed	85 th Percentile Speed ²	Year Speed Data Obtained
Tracy Street	216	2019	-	-	-	-
Broadway	2,227	2019	30	26	34	2015
Washington Ave	5,651	2019	30	28	34	2016
Second Street	82	2019	30	14	20	2017

Notes:

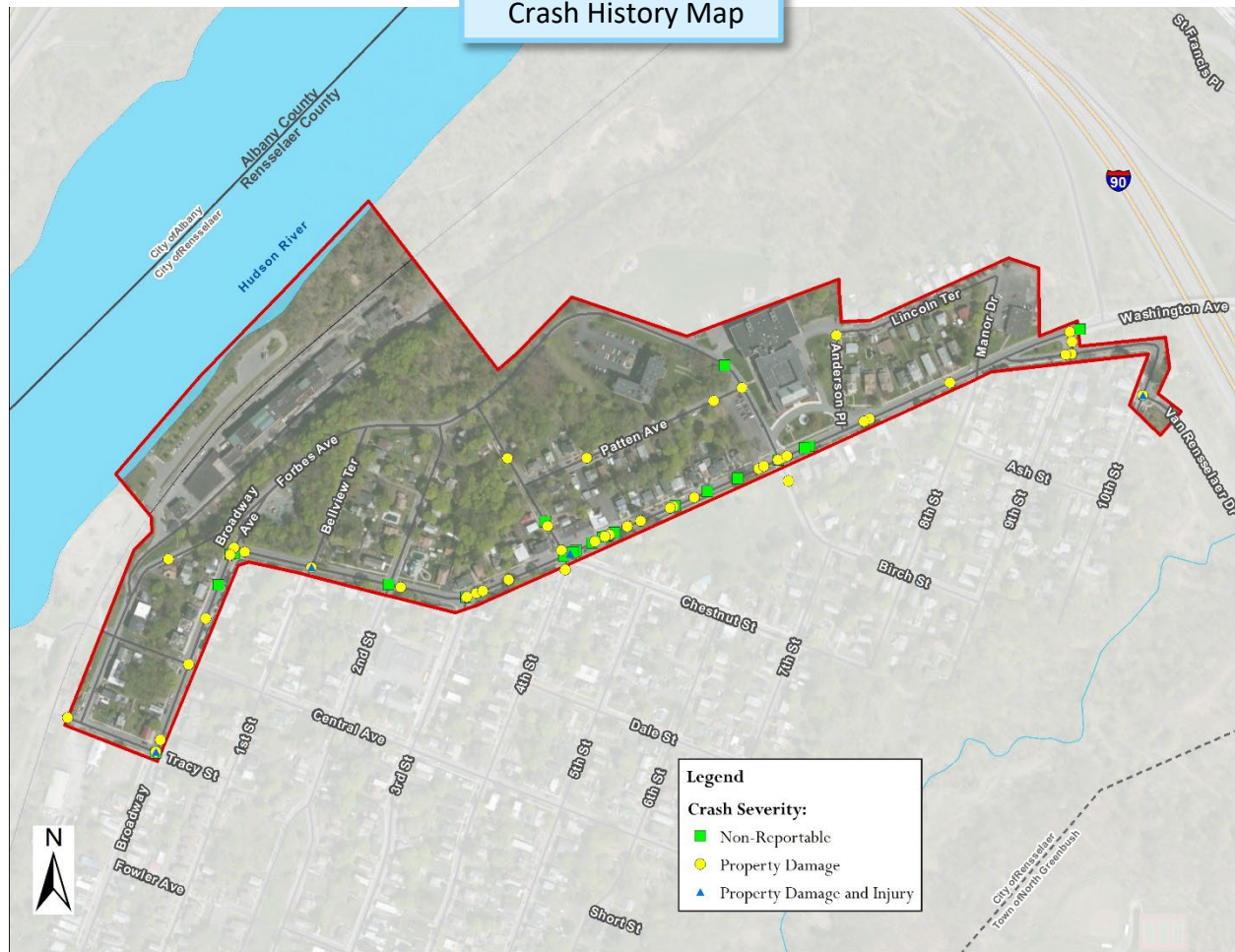
1. AADT – Average Annual Daily Traffic
2. The 85th percentile speed is defined as the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions past a monitored point.

Crash History

Crash data was provided by the CDTC for the most recent five years of available data (November 1, 2016 to October 31, 2021). Data on these crashes was retrieved using the NYSDOT Accident Location Information System (ALIS). Crash data was examined on all road segments within the study area.

During this five-year period, 83 crashes were recorded in the study area, with 64 occurring on Washington Avenue. Refer to **Figure 2.8** for a map of the crash locations. Of the 83 crashes within the study area, one (1) crash involved bicyclists, and none involved pedestrians. Four (4) of the reported crashes resulted in personal injury, with no fatalities resulting from the crash. A large percentage of reported crashes were between two or more vehicles, with 51 resulting in property damage. A full analysis of this data is located in **Appendix E**.

Figure 2.8
Crash History Map



Environmental Resources

The study area was screened for environmental resources that may be present within or adjacent to the study limits using available online state and federal databases.

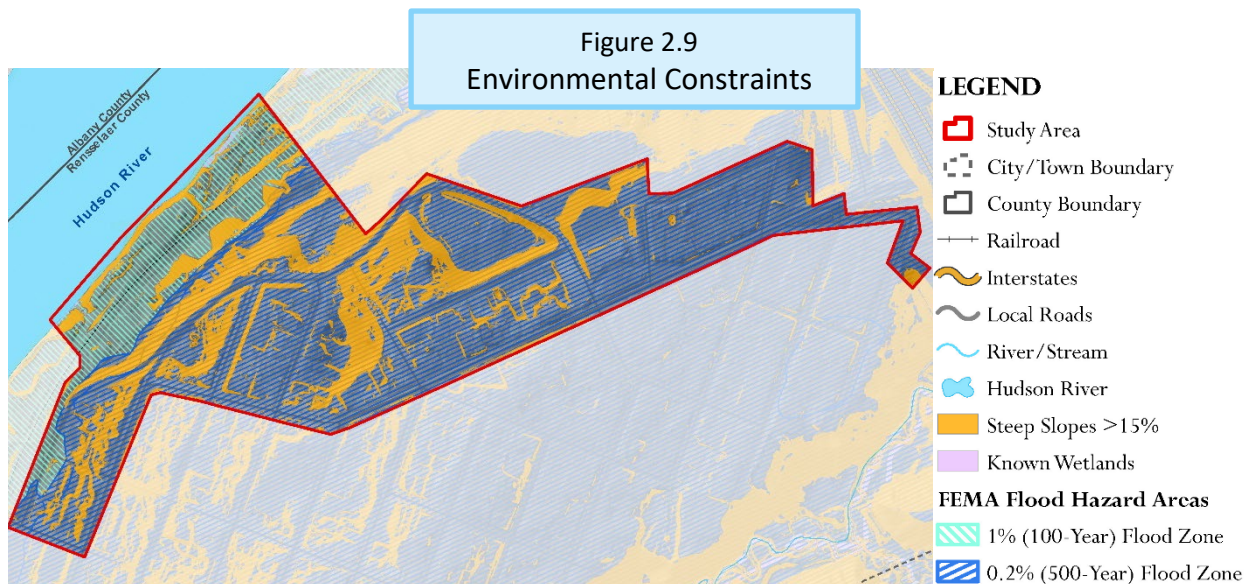
Surface Waterbodies and Watercourses

The study area is bordered on the west by the Hudson River, which is rated as a Class C, Standard C stream by the New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (ERM). The best usage of this classification of waters is for fishing, and the Hudson

River is considered a protected stream and a Navigable Water, which is recognized as Waters of the U.S. by the federal government. The study area includes Hilton Park and Boat Ramp, which provides residents with access to fishing and boating opportunities on the Hudson River.

Steep Slopes

For the purposes of this study, steep slopes are defined as areas of land that have a significant incline, with a slope grade of 15% or greater. They can be found in various locations in the study area and can present challenges for development and transportation. In the City of Rensselaer, steep slopes are a defining feature of the area and can greatly vary from rolling hills to low-lying areas. Environmental Constraints map below (**Figure 2.9**) indicates areas that have a slope of 15% or greater. These slopes can make it difficult for activities other than motor vehicle travel and can have an impact on the development and transportation options in the area.



Wetlands

Based on a review of the NYSDEC Environmental Resource Mapper (ERM), there are no state-regulated or federal jurisdictional wetlands located within the study area. Two (2) federal jurisdictional wetlands exist immediately north of the study area. Refer to **Appendix F** for the Wetland Map.

Floodplains

The western part of the study area is located within the 100-year and 500-year flood plain of the Hudson River, as indicated by the Federal Emergency Management Agency (FEMA) on the National Flood Hazard Layer (NFHL). This is a geospatial database that contains current effective flood hazard data. Due to existing topography, the floodplains extend partially to Tracy Street and Forbes Avenue. Refer to the FEMA Floodplain Map in **Appendix F**.

Natural Communities

A Significant Natural Community, as defined by the New York State Department of Environmental Conservation (NYSDEC), refers to an area or ecosystem that is considered important due to its unique biodiversity, ecological significance, and/or rarity. The Hudson River Estuary is one such community and is considered significant due to its unique environmental conditions, variety of habitats, and high concentration of species that are dependent on the estuary for survival. The study area being located within the Hudson River Estuary highlights the importance of considering and protecting the natural resources in the area during any development or land use changes.

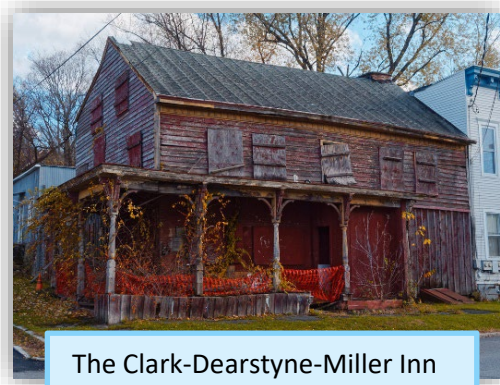
Endangered and Threatened Species

The study area was evaluated for the presence of rare, endangered, or threatened species. According to the NYSDEC (ERM), the area falls within the Hudson River Estuary, which is considered a Significant Natural Community. This means that rare species like freshwater mussels, the endangered Shortnose Sturgeon, and rare dragonflies and damsel flies could exist within the study area or near the Hudson River shoreline. The United States Fish and Wildlife Service (USFWS) Information, Planning and Conservation (IPaC) system also shows that the Northern Long-Eared Bat has the potential to be found within the study area. In addition, there may be a Bald Eagle habitat located within or near the study area, even though the Bald Eagle is no longer on the state and federal endangered species list, it still has protection under the Bald and Golden Eagle Protection Act (BGEPA).

Historic and Cultural Resources

The study area is also home to several historic properties. According to the NYS Office of Parks, Recreation and Historic Preservation's (OPRHP) Cultural Resource Information System (CRIS), eight properties listed on the National Register can be found along Forbes Avenue. These properties have cultural and historical significance and are considered important to the area's heritage. It is important to consider the potential impacts that any proposed development in the area may have on these historic resources.

The Clark-Dearstyne-Miller Inn, built in 1791 in the Federal style, is slated for demolition despite being listed on the National Register of Historic Places. This is a common fate for historic buildings that fall into disrepair. Preservation organizations may advocate for preservation and provide resources for restoration, but the final decision should consider the importance of preserving historic resources for the future.



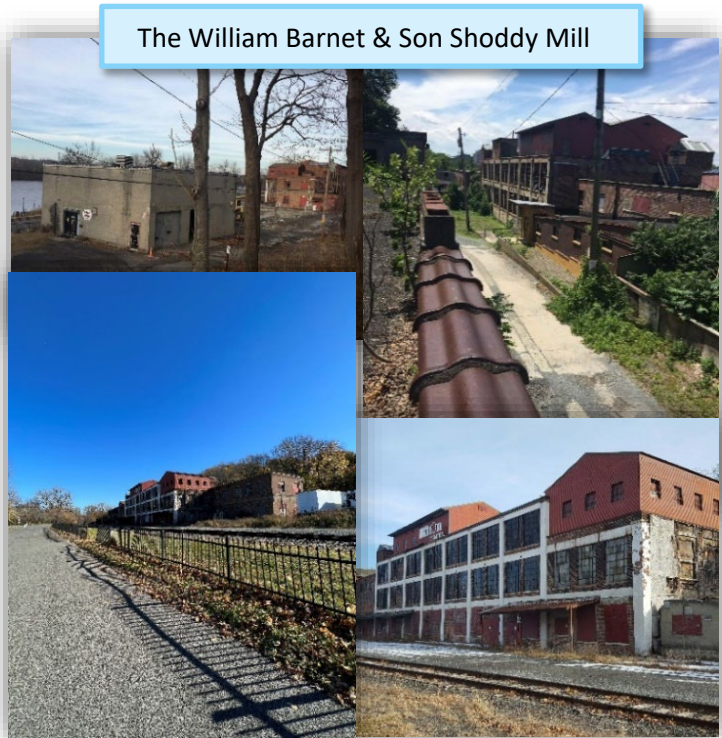
The Clark-Dearstyne-Miller Inn



The Patroon Agent's House

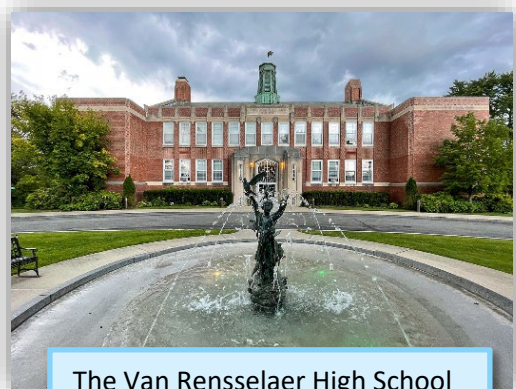
The Patroon Agent's House and Office, located in the study area, is a historic property with significant architectural and historical value. It was constructed in 1839 and consists of two structures - a 2 1/2-story rectangular brick residence and a 1-story rectangular brick office. The two structures were originally connected but were separated in 1865. The building has Greek Revival architectural style and was added to the National Register of Historic Places in 1979.

The William Barnet & Son Shoddy Mill was a textile mill that processed fibers recycled from clothing and textiles. Shoddy, the product produced at the mill, was a low-quality material used to make new textiles, such as blankets and rugs. The mill was an important part of the textile manufacturing industry in the Capital District, playing a significant role in the region's economic growth. The four contributing resources of the mill complex illustrate the various stages of the shoddy production process, including storage, management, garnetting, and boiling. Despite a fire in 1915 that damaged several of the structures, the mill was rebuilt and continued to operate until its closure. The mill was added to the National Register of Historic Places in 2020, due to its significant association with the history of textile manufacturing in the Capital District. The William Barnet & Son Shoddy Mill is now referred to as the Hilton Center and is slated for redevelopment.



The William Barnet & Son Shoddy Mill

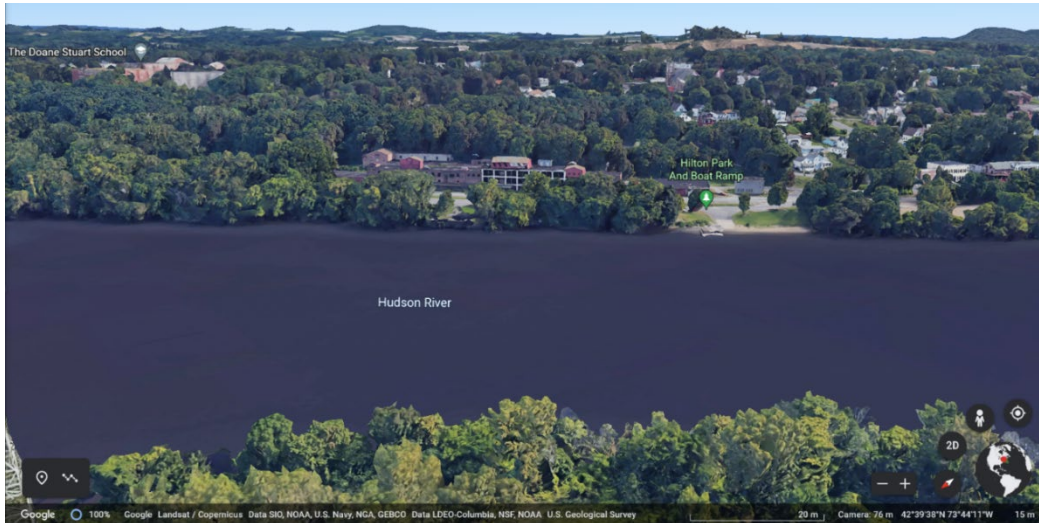
The Van Rensselaer High School, which is now home to the Doane Stuart School, is a historic building in the city of Rensselaer. It was constructed in 1931 and expanded with an addition completed in 1939. The building was designed with Art Deco architectural influences and is considered a notable example of this style in the Capital District. The Doane Stuart School currently operates in the building and offers education to students in the region.



The Van Rensselaer High School

Coastal Resources

A portion of the study area lies within the landward coastal area boundary of the Hudson River and is regulated by the NYS Department of State (NYSDOS). In 1987, the City of Rensselaer posted a Notice to the Public that their Local Waterfront Revitalization Plan (LWRP) was approved. The City of Rensselaer LWRP refines and supplements the State's Coastal Management Program and provides a comprehensive framework within which critical waterfront issues can be addressed, and planned waterfront improvement projects can be pursued and implemented.



Birdseye photo viewing the study area bordering the Hudson River. Source: Google

Resources Not Present

A desktop analysis of the study area also included a review of the following resources and it has been determined that the resource is not present within the study area:

- Aquifers
- Critical Environmental Areas
- Farmlands

Environmental Justice & Limited English Proficiency

An Environmental Justice scan and a Limited English Proficiency scan was performed by the CDTC using data from the 2013-2017 American Community Survey (ACS). The study area is located entirely within Census Tract 516. This Census Tract is identified as containing a minority population of 22%, which is just above the regional rate of 21.5%. A full analysis of the data obtained, as well as figures illustrating the Environmental Justice Populations, Limited English Proficiency populations, and the environmental features within the study area, is located in **Appendix J**.

CHAPTER 3: Past Planning Efforts

The City of Rensselaer has undertaken several planning efforts in recent years that have included the development of trail connections and waterfront connections. For example, the City of Rensselaer's LWRP lays out a comprehensive framework for improving the city's waterfront and includes plans for expanding trail connections and enhancing public access to the Hudson River. Additionally, the city has worked with various organizations and agencies, such as the Hudson River Valley Greenway, to implement projects and initiatives that promote walkability, bikeability, and access to the waterfront and other green spaces. These efforts demonstrate the city's commitment to promoting livable, sustainable communities and enhancing public access to natural and cultural resources.

Rensselaer County Trail Plan (2004)

The Rensselaer County Trail Plan is a plan for the development of a trail network in Rensselaer County, focused on connecting the Livingston Avenue Bridge to the Troy-Menands Bridge. The plan's goals include improving connectivity and access to recreational trails and open spaces, promoting alternative modes of transportation such as biking and hiking, and encouraging physical activity and healthy lifestyles for residents. The plan outlines proposed trail alignments, recommendations for trail design and construction, and a strategy for securing funding and implementing the trail plan. The plan is part of a larger effort to improve quality of life and promote economic development in Rensselaer County through increased access to outdoor recreation opportunities.

City of Rensselaer Comprehensive Plan (2006)

The City of Rensselaer Comprehensive Plan is a long-range planning document that outlines the vision, goals, and policies for the future development of the City of Rensselaer. The plan was last updated in 2006 and is updated as needed to reflect changes in the community and its priorities. The comprehensive plan provides a framework for decision-making regarding land use, transportation, housing, economic development, parks and open space, and other important aspects of the city's future development. It is used by city officials, developers, and community members to guide the growth and development of the city in a sustainable and coordinated manner.

City of Rensselaer Complete Streets Policy

The City of Rensselaer Complete Streets Policy prioritizes the needs of all users of the street network, including pedestrians, bicyclists, transit users, and motorists. The policy aims to make streets safer, more accessible, and more enjoyable for everyone, regardless of age, ability, or mode of transportation. Recommendations include the implementation of various infrastructure improvements such as sidewalks, bike lanes, accessible transit stops, and traffic calming measures. The policy aims to create a balanced transportation system that accommodates the needs of all users, supports sustainable transportation choices, and enhances the quality of life in the city.

City of Rensselaer Natural Resources Inventory (2021)

The natural resources inventory is a comprehensive snapshot of the city's physical and biological resources. The purpose of the inventory is to outline the natural resources in the area and assesses their current condition and future potential. The document is structured to provide an overview of the different aspects of the natural resources in Rensselaer, including water resources, air quality, wildlife habitats, and parklands, among others. The document provides recommendations for the protection and management of these resources. These recommendations may include measures to improve the quality of the environment, promote sustainability, and protect sensitive ecosystems. Ultimately, the recommendations aim to ensure that the natural resources of Rensselaer are preserved for future generations and that the community can continue to enjoy their benefits.

The Capital District Trails Plan (2019)

The Capital District Trails Plan is a plan developed by the Capital District Transportation Committee (CDTC) in 2019. The purpose of the plan is to create a comprehensive, regional trail network in the Capital District region. The plan includes recommendations for new trails, improvements to existing trails, and connections between trails to create a seamless network of pedestrian and bicycle facilities. The plan also includes recommendations for supporting infrastructure, such as parking, wayfinding, and amenities, to enhance the user experience. The Capital District Trails Plan is intended to provide guidance for local communities and stakeholders to plan, develop, and implement new trails and trail improvements.

Kiliaen's Landing GEIS (2018)

The Kiliaen's Landing GEIS (Generic Environmental Impact Statement) is a study that analyzed the potential environmental impacts of the proposed development of the Kiliaen's Landing project in the City of Rensselaer. The purpose of the GEIS was to identify and analyze the potential environmental impacts associated with the proposed project and to provide information to decision-makers and the public on the potential impacts. This information was then used to develop mitigation measures to reduce or eliminate any adverse impacts to the environment.

Additional Documents Reviewed

In addition to the above documents, the planning process is also considering the Capital District Transportation Committee (CDTC) Public Participation Plan, which outlines the steps and procedures for ensuring public involvement in transportation planning in the Capital District. The Capital District Complete Streets Design Guide is also being considered, as it provides a comprehensive guide for designing and constructing streets that are safe, accessible, and convenient for people of all ages, abilities, and modes of transportation. The planners are also taking into account proposed nearby development and redevelopment plans, such as the Hilton Center Brownfield Redevelopment Area. Moreover, the planners are also taking into account industry best practices and contemporary thought on pedestrian and bicycle travel and infrastructure.

CHAPTER 4: Public Outreach

Public Outreach for the Waterfront Connectivity Study is critical to the success of the project. It is designed to engage with the community, understand their needs and perspectives, and gather input on the proposed improvements. The goal of public outreach is to ensure that the study is responsive to the needs of the City of Rensselaer's residents and stakeholders.

The following activities were included in Public Outreach for the study:

- **Public Workshop Sessions:** These sessions provided an opportunity for attendees to engage with project staff, share their experiences and perspectives, and provide input on the proposed improvements.
- **Survey:** Survey was used to gather input from a larger audience and reach those who are unable to attend the input sessions.
- **Project Website:** A project website was used to provide information about the study, share project materials, and encouraged attendees to sign up for project updates and notifications.
- **Social Media:** Social media platforms were used to engage with the community, share information about the study, and meeting updates.

During public outreach, it was crucial to include all community members, including those with limited English proficiency, by providing access to essential information and opportunities to provide input on proposed improvements. By using plain language and visual aids, formatting documents and text to be easily translated, holding events in easily accessible community spaces, and utilizing multiple communication channels the project team was able to reach as many people as possible.

Public Outreach was designed to be inclusive, transparent, and responsive to the needs of the community. This will help ensure that the study's outcomes reflect the community's priorities and provide a roadmap for improving the waterfront transportation system for all users.

Public Workshop Sessions

Waterfront Connectivity Study Public Workshop #1

The City of Rensselaer held the first public workshop on June 16, 2022 to introduce the City's Waterfront Connectivity Study. The workshop was a hybrid event, held both in person and virtually, and was attended by over 30 members of the public. The meeting was led by the consultant team from MJ Engineering & Land Surveying and included representatives from the City of Rensselaer Planning Department and the Capital District Transportation Committee (CDTC). The purpose of the workshop was to introduce the study, provide an overview of existing conditions, and gather feedback from the community on their needs and opportunities. The study schedule and scope were also discussed, with the final public workshop taking place in Fall/Winter 2022. A full summary of the meeting and PowerPoint presentation can be found in **Appendix G**.

Waterfront Connectivity Study Public Workshop #2

The City of Rensselaer held the public meeting on December 8, 2022 as part of its Waterfront Connectivity Study to engage with the community. The event was hybrid, held in person and virtually via Zoom and over 20 members of the public attended. The meeting included a presentation on the program and schedule, survey summary, and opportunity to respond to concepts developed. Results from a community survey taken from June 16 to August 1, 2022 showed common themes such as a lack of pedestrian infrastructure, difficulty in moving around the study area, and drivers not yielding to pedestrians. People were encouraged to leave additional feedback on the project website, which was provided as part of the presentation. This allowed members of the public to continue to provide input and stay informed on the progress of the Waterfront Connectivity Study. A full summary of the meeting and PowerPoint presentation can be found in **Appendix G**.

Waterfront Survey

A community survey was conducted as part of the public engagement component of the City of Rensselaer Waterfront Connectivity Study. Its purpose was to identify the community's vision and priorities for the waterfront area of the city. A 23-question survey was created and distributed using the Survey Monkey platform and was open from June 16th to August 1st, 2022. 84 responses were received. The survey questions were organized around four topic areas: Demographic Information, Use, Experience, and Suggestions for the Future.

Demographic Information: Participants were asked questions about their demographic data and residency information, such as their zip code, age range, and whether they were residents, property owners, visitors, etc.

Use: The survey sought to understand how community members were interacting with the existing waterfront resources and which resources they were using.

Experience: The survey participants were asked questions about their perceived challenges and opportunities for the study area and its waterfront resources, as well as their feeling of safety around the area.

Suggestions for the Future: The survey provided a place for participants to share any additional thoughts or suggestions for the future.

Some common themes that emerged from the responses include:

- Majority of respondents disagreed with the statement that drivers yield to pedestrians and think landscaping is attractive



Survey Card

- Bus service is reliable and buses come often enough
- Many respondents do not feel safe walking or biking on Forbes Ave due to narrow road width and lack of guardrails and pedestrian lighting
- More respondents feel safe walking on Washington Ave compared to Forbes Ave but improvements could be made in crosswalks and sidewalk cleanliness
- All modes of transportation, including walking, driving, biking, and bus, are considered important
- Most preferred bicycle facilities are on-street bicycle lanes and bicycle parking racks
- Preferred streetscape elements are street lighting, more sidewalks, and better pedestrian crossings
- Top transit amenities identified are benches at bus stops, shelters at bus stops, and lighting at bus stops

A full summary of the survey and all the responses received can be found in **Appendix G**.

Project Website

A project website was developed and available throughout the duration of the Waterfront Connectivity Study. The site included an "About" page, a "Documents" page, a "Get Involved" page, and a "Contact" page. These pages were designed to provide information and facilitate communication with stakeholders and residents. The website aimed to summarize relevant planning documents and efforts, present a preliminary vision and goals for the project, and provide a map of the study area and a place for users to submit comments and suggestions. The project website was available at:

www.rensselaerriverfrontconnections.com.



Project Website

Social Media

During the City of Rensselaer Waterfront Connectivity Study, the city used Facebook and email lists as channels to disseminate information to the community. The goal was to reach a wide audience and ensure that stakeholders were kept informed and up-to-date on the progress of the study. By leveraging social media and email communication, the city was able to effectively engage with residents and other stakeholders in the community.

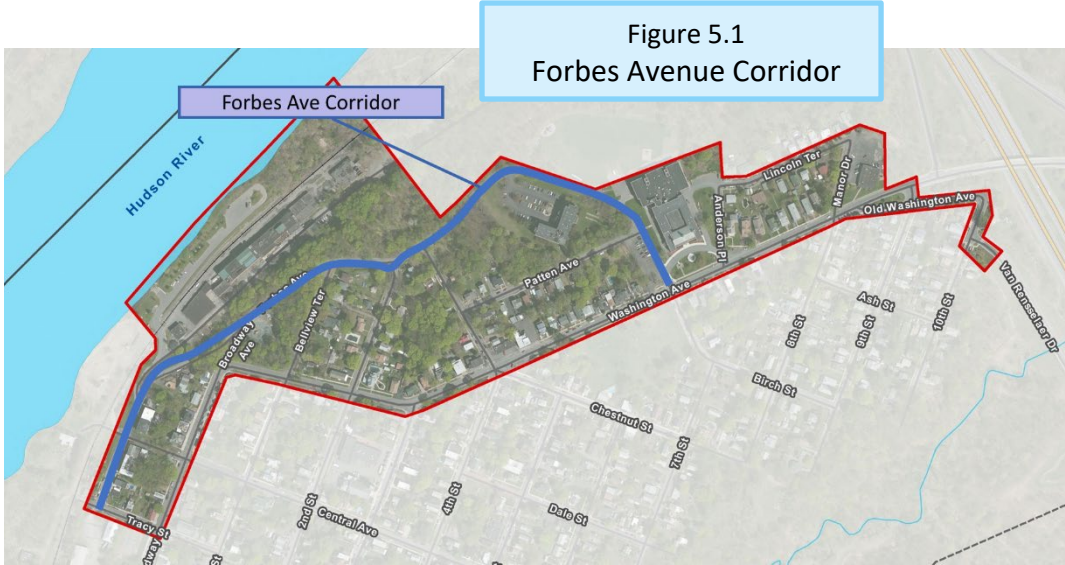
CHAPTER 5: Concepts Evaluation

Study Area Needs

Based on the input received from public feedback, Study Advisory Committee (SAC), and previous studies conducted, alternative concepts for transportation improvement were developed to address the needs and improve the character of the study area. The objectives of these concepts were to reduce vehicular speed, improve safety and quality of life for pedestrians, bicyclists, and vehicular traffic, provide pedestrian and bicycle accommodations and amenities, connect to existing multi-modal infrastructure, and evaluate curb cuts. In particular, the aim was to enhance pedestrian and bicycle facilities along the Forbes Avenue and Washington Avenue corridor, particularly at locations with elevated crash rates like the 5-way Intersection on Washington Avenue. The transportation improvement concepts were developed keeping in mind the public's concerns about safety and quality of life.

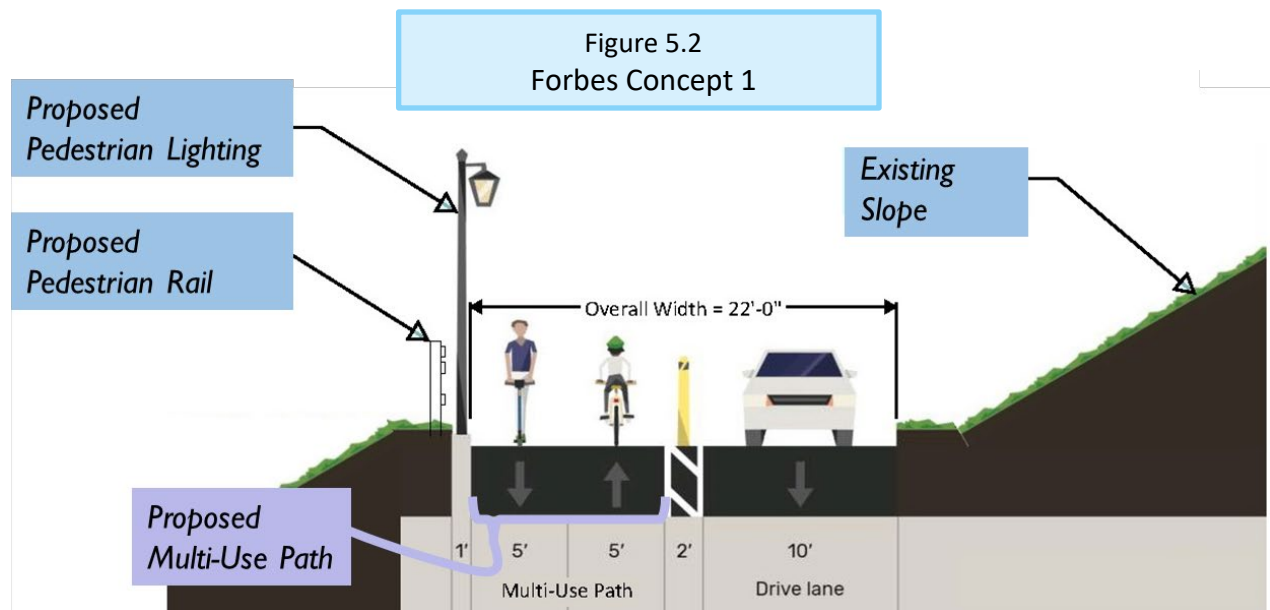
Forbes Avenue Corridor Proposed Concepts

Forbes Avenue (Figure 5.1) is a vital roadway that connects the heart of Rensselaer's waterfront with the surrounding neighborhoods. The avenue serves as a critical link for commuters and residents providing access to several key destinations in the area. However, the corridor faces numerous challenges, including safety concerns, steep slopes, and inadequate pedestrian and bicycle infrastructure. To address these issues, the team developed alternatives to enhance safety and improve access for all modes of transportation, including motorists, pedestrians, and bicyclists.



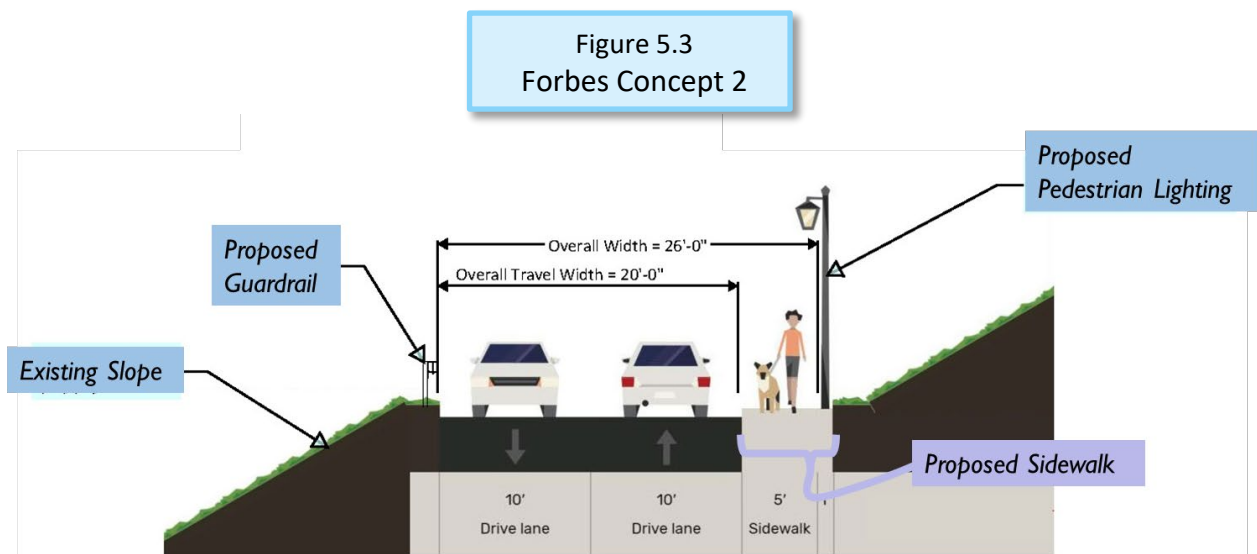
Concept 1 (Figure 5.2) proposed a one-way drive lane with a separated multi-use path on Forbes Avenue. The one-way traffic would be allowed to travel south or downhill, the one way would start at the Van Rensselaer Heights entrance to allow for continued emergency vehicle access to Van Rensselaer Heights. The overall width of the roadway would be 24ft, including a 12ft multi-use path for bicyclists and pedestrians. To achieve the proposed roadway width, box widening would be required to increase

the width from approximately 20ft to 24ft. The proposal includes pedestrian lighting and railings due to the embankment slope beyond the curb.. The overall railing height, and the height of the specific rails should accommodate safe travel by pedestrians and bicyclists.



This alternative prioritizes pedestrian safety and comfort, by providing a designated and separated space for pedestrians to walk, bike, or travel, with lighting and railings for protection. The one-way drive lane may also help improve traffic flow.

Concept 2 (Figure 5.3) proposes a different road section for Forbes Avenue. This alternative includes two-way drive lanes with a separated sidewalk. The overall width of the road would be 26ft, with a 5ft sidewalk for pedestrians. The roadway would need to be widened by approximately 4ft to accommodate this section. Pedestrian lighting and a guard rail would also be included for safety.

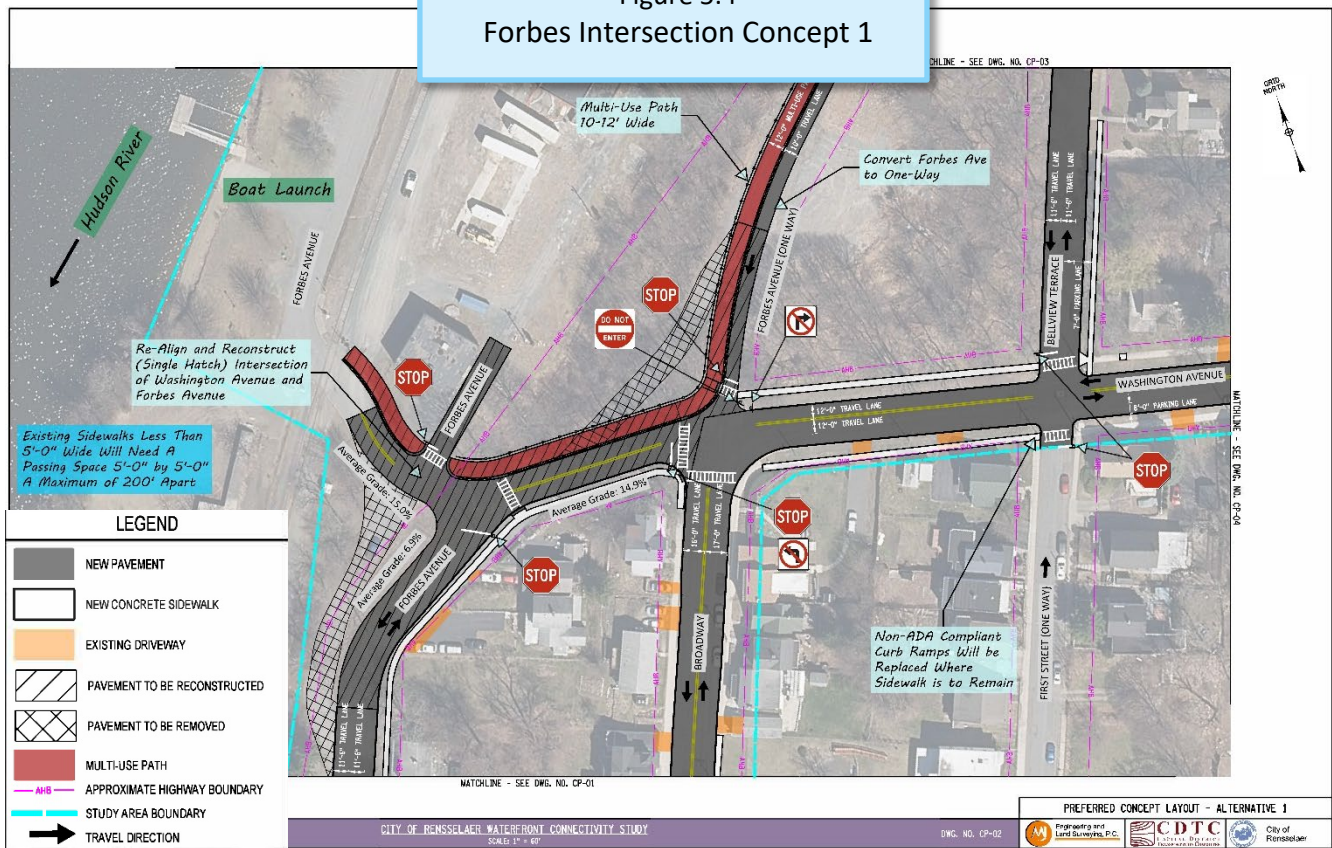


Compared to **Concept 1**, this proposal would provide two-way traffic flow, which may be more convenient for drivers. However, the 5'-0" wide pedestrian sidewalk may not provide as much space and comfort for pedestrians compared to the multi-use path proposed in Concept 1. The level of bicycle traffic on the roadway would remain the same as current conditions since bicyclists older than pre-teens are prohibited from riding on sidewalks. The guiderail may also help to provide added protection for drivers, but it could potentially take up more space on the road.

Forbes Avenue Intersection Concepts

In addition to analyzing the entire corridor, a specific focus was placed on the intersection of Forbes Avenue, Washington Avenue, Broadway and access to the Hilton Center. Currently, the intersection leading to the Hilton Center and boat launch is only safely accessible from one direction via Tracy Street to Forbes Avenue. This issue was identified early on in the planning process and multiple solutions were explored.

Figure 5.4
Forbes Intersection Concept 1



Several alternative options were proposed, each of which aimed to realign the access point for the Hilton Center and boat launch to provide a more direct approach from all directions. These alternative plans were carefully considered, with the goal of creating a safer and more efficient intersection that could better serve as the main access point to the Hilton Center and boat launch.

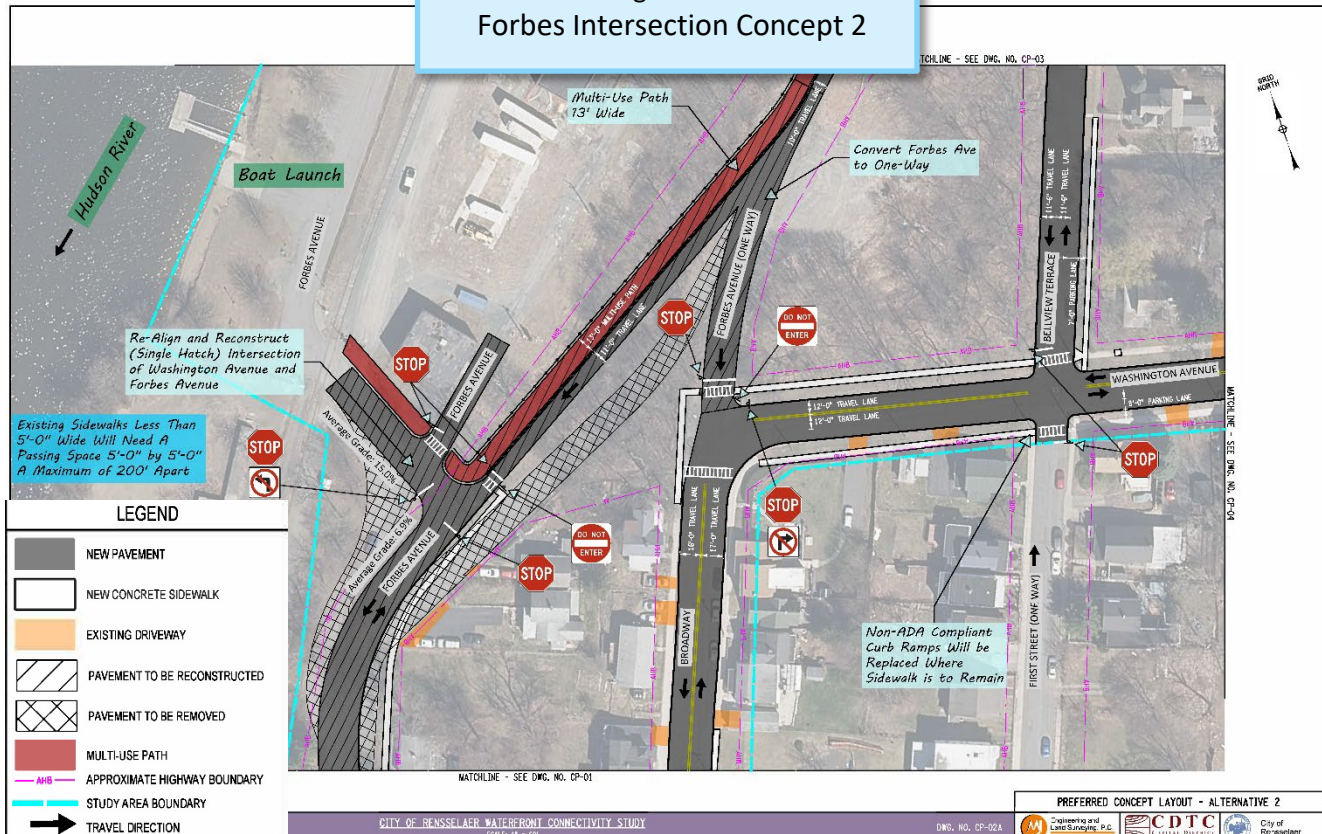
By implementing one of the proposed alternative plans, the intersection would be transformed into a more accessible and functional space. This, in turn, would enhance the overall experience of visitors and help to alleviate concerns related to safety and accessibility. Overall, it is clear that addressing the issue of limited access to the Hilton Center and boat launch is a key priority, and implementing a realignment of the intersection is a crucial step towards achieving this goal.

Forbes Avenue Intersection **Concept 1 (Figure 5.4)** proposes several changes to Forbes Avenue. The first change is to re-align and reconstruct the intersection of Washington Avenue and Forbes Avenue. This would help to improve traffic flow and allow a more direct access route to folks who may be towing to get to the boat launch. With the current configuration access to the boat launch is only feasible going down Tracy Street, making a right on Forbes and bearing left to the boat launch.

Additionally, **Concept 1** proposes to extend Washington Avenue to eliminate the hairpin turns and create a more direct route to the waterfront and to the proposed Hilton Center redevelopment. This may help to provide better access to the area for drivers and may help to distribute traffic more evenly throughout the area. With the extension of Washington Avenue to the waterfront, steep roadway grades will be required to connect the realigned intersection and Washington Avenue.

Forbes Avenue Intersection **Concept 2 (Figure 5.5)** proposes a different set of changes to Forbes Avenue in Rensselaer. The proposal is to re-align and reconstruct Forbes Avenue, creating a "Y" shaped intersection at the end of Forbes Avenue. This would allow for one-way traffic to be implemented with a separated "Y" at the end of Forbes.

Figure 5.5
Forbes Intersection Concept 2



The benefits of this alternative may include improved traffic flow and safety, as one-way traffic can help to improve overall traffic movement. The separated "Y" intersection may also help to improve safety and accessibility for drivers in the area.

However, it's important to consider the potential impacts of these changes on pedestrians and other road users, particularly if there is a reduction in road space available for drivers or if the separated "Y" intersection creates confusion for drivers.

Washington Avenue: 4th Street Intersection Concepts

Early on in the planning process, it became apparent that the 5-way intersection at Washington Avenue was problematic for both pedestrians and drivers alike. This intersection, where Washington Avenue, 4th Street, and Chestnut Street converge, presented multiple issues that needed to be addressed. A potential solution to resolving traffic concerns at the intersection of Washington Avenue and 4th Street could be the installation of a traffic signal. Certain standards must be met to ensure the investment will benefit traffic operations and enhance safety.

Traffic Signal Warrant Analysis

Vehicular volumes were analyzed for Washington Avenue to determine whether a traffic signal is warranted at this intersection, in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). For this intersection, Washington Avenue traffic volumes were analyzed, and results compared to three (3) signal warrant criteria. A traffic signal is warranted if any of the three (3) applicable warrant criteria are met.

Warrant 1 – Eight Hour

- Only two (2) out of eight (8) hours meet the requirements for Condition A
- No hours meet the requirements for Condition B
- Only four (4) out of eight (8) hours meet the requirements for combination of Conditions A & B
- Requirements for Warrant 1 are not satisfied

Warrant 2 – Four Hour

- Four (4) highest recorded hourly counts on Washington Avenue were utilized
- Required minor street volume is more than 200 vehicles per hour, which is unlikely in this location given the low number of residential properties along the side roadways
- Requirements for Warrant 2 are not satisfied

Warrant 3 – Peak Hour

- Highest hourly count the major street (Washington Avenue) corresponds to more than 350 vehicles during the peak hour on the minor approach which is unlikely in this location given the low number of residential properties along the side roadways
- Requirements for Warrant 3 are not satisfied

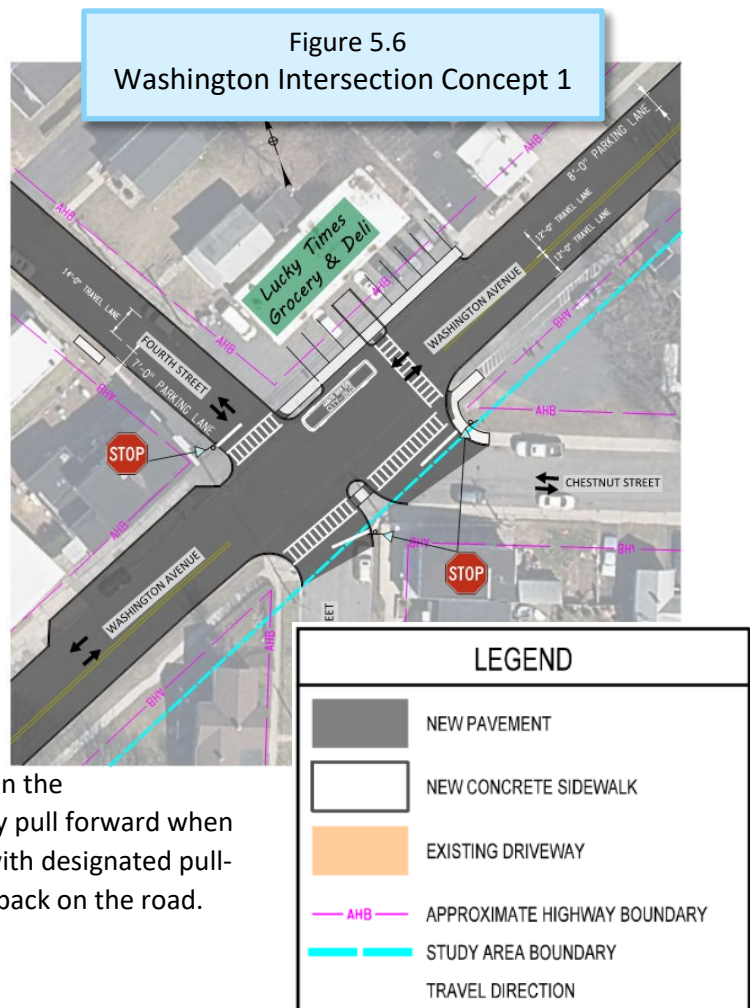
Three alternative plans were developed with the goal of improving both pedestrian safety and traffic flow of the intersection. This was a crucial step in ensuring that the intersection could effectively accommodate the flow of vehicles and pedestrians from multiple streets, as well as the existing roadway grades.

A primary concern related to the intersection was the front parking access to Lucky Times Grocery & Deli, which is combined with a nearby bus stop and sidewalk. This creates multiple points of conflict for travelers, as they navigate the intersection. To address this issue, the alternative plans propose a redesign of the intersection layout, aimed at reducing the number of conflict points and creating a safer and more efficient space for pedestrians and drivers alike.

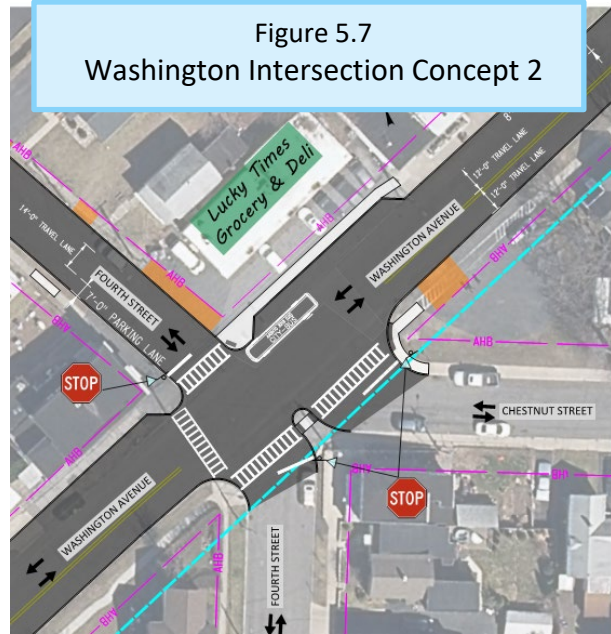
Overall, the redesign of the 4th Street / Washington Avenue intersection is a critical aspect of the planning process. Through careful consideration of alternative plans, the intersection can be transformed into a more efficient, accessible, and safer space that enhances the overall experience of travelers.

Concept 1 shown in **Figure 5.6**, proposes reconfiguration of pedestrian access to Lucky Times Grocery & Deli and the bus stop. The reconfigured access would allow pedestrians to cross from Chestnut Street to a sidewalk island in front of the Lucky Times Grocery & Deli. From there, pedestrians could safely access the store and the bus stop. The island would make a clear delineation between pedestrian space and car parking, which is currently lacking. Full Concept Plans can be found in **Appendix H**.

In addition to the pedestrian access, the bus stop would be on a bump-out, and the bus would stop in the lane. Conversations with Capital District Transportation Authority (CDTA), who maintain the stop, deemed that the bump-out curb was the best approach as it allows the bus to remain in the lane while picking up passengers and to easily pull forward when the doors close. CDTA noted that bus stops with designated pull-ins can cause safety issues for the bus to get back on the road.

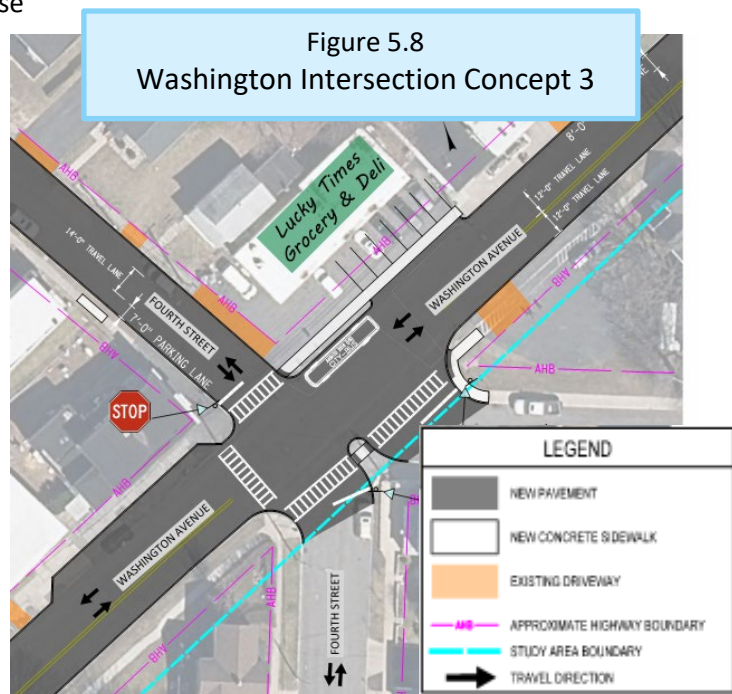


Concept 2 shown in **Figure 5.7**, is a proposal to change the pedestrian infrastructure in the intersection area. This alternative would not include the pedestrian island in front of Lucky Times and would be moving the crosswalk to be in front of the bus stop, across Fourth Street from Lucky Times. Curbed parking would be constructed to mirror the west side of the intersection, providing on-street parking for Lucky Times. Additional curb bump outs would be added between Fourth Street and Chestnut Street to shorten the distance pedestrians have to travel to be out of the driving lane. These changes could potentially improve pedestrian safety and convenience in the area, while also addressing any traffic congestion issues that may exist.



The final concept alternative, **Concept 3**, shown in **Figure 5.8**, is a proposal similar to **Concept 2**. The crosswalk would be in front of the bus stop, curb bump outs would be added between Fourth Street and Chestnut Street to shorten the distance pedestrians have to travel. Parking spaces would remain in the same existing configuration at Lucky Times, with a reduced number to accommodate larger the bus stop.

All 3 alternatives for the Washington Avenue 5-way intersection also include pavement rehabilitation by means of resurfacing on all streets throughout the study limits. Existing pedestrian facilities will be improved, with non-ADA accessible sidewalk segments and curb ramps being replaced to enhance pedestrian access throughout the study limits. In addition to sidewalk rehabilitation, existing crosswalk striping will be replaced and added where these facilities are currently lacking. Furthermore, Chestnut Street could be considered to be turned into a south bound one way to improve operations at its intersection with Washington Avenue. During the study process the idea of turning several streets outside the study area into one-way streets was brought up, as some streets are too narrow to safely accommodate both two-way travel and parking on both sides. The city should consider completing a traffic study City wide to see the feasibility. The neighbor to the North, City of Troy, implemented one-way streets and this approach has worked well for traffic flow and similar neighborhoods.



CHAPTER 6: Recommended Improvements

The design alternatives discussed in **Chapter 5** were presented to the City of Rensselaer, CDTC, the SAC, NYSDOT, and CDTA. All entities were given the opportunity to review the alternatives and provide feedback.

Based on feedback from the public, stakeholders, and the Study Advisory Committee (SAC), transportation improvement alternatives were developed to address the needs of the Forbes Avenue Corridor, Broadway Corridor, Washington Avenue Corridor, and other local connections. These alternatives aimed to reduce vehicular speeds, improve pedestrian and bicycle facilities and safety, provide pedestrian and bicycle amenities, connect to existing multi-modal infrastructure, and implement access management strategies. In order to address these objectives, specific improvements have been recommended for intersections including Forbes Avenue and Washington Avenue and the 5-way intersection at Washington Avenue and Fourth and Chestnut Streets.

The preferred alternatives include pavement rehabilitation by means of resurfacing on all streets throughout the study limits to promote safe travel for all modes. Existing pedestrian facilities will be improved, with non-ADA accessible sidewalk segments and curb ramps being replaced to enhance pedestrian access throughout the study limits. In addition to sidewalk rehabilitation, existing crosswalk striping will be replaced and added where these facilities are currently lacking. Furthermore, signage throughout the study area should be updated and implemented where missing.

All recommendations have been developed with input from municipal agencies, businesses, and the public and are detailed in the full Concept Plans found in **Appendix H**.

In transportation planning, a concept plan is an *initial* proposal for transportation improvements in a specific area. Concept plans typically involve broad goals and strategies for improving transportation infrastructure.

Once a concept plan has been developed, it must be refined and developed into a detailed plan for construction. This involves detailed design, environmental review, permitting, funding, and construction. The detailed design phase involves developing engineering plans, specifications, and costs for the proposed improvements.

Environmental review is a critical step in the process of moving from a concept plan to construction. Environmental review ensures that the project complies with all applicable environmental regulations and requirements. This step may involve environmental assessments, impact statements, and public comment periods.

Once the environmental review is complete, the project must obtain all necessary permits and approvals from regulatory agencies. This may include permits for wetlands, air quality, stormwater management, and other environmental concerns.

Funding is a critical step in the process of moving from a concept plan to construction. Funding may come from a variety of sources, including federal, state, and local grants, as well as private investment. Once the project has been designed, reviewed, and permitted, funding must be secured to pay for the construction.

After all necessary approvals and funding are in place, construction can begin. This phase typically involves site preparation, grading, excavation, installation of drainage systems and utilities, and paving. Throughout the process, there may be changes to the original concept plan, based on the findings of detailed design, environmental review, and public input.

The process of moving from a concept plan to construction is complex; however, the process is well-defined and has been developed to ensure that communities are safe, accessible, and connected. By carefully planning and designing transportation improvements, communities can benefit from increased economic development, improved quality of life, and enhanced mobility for all users.

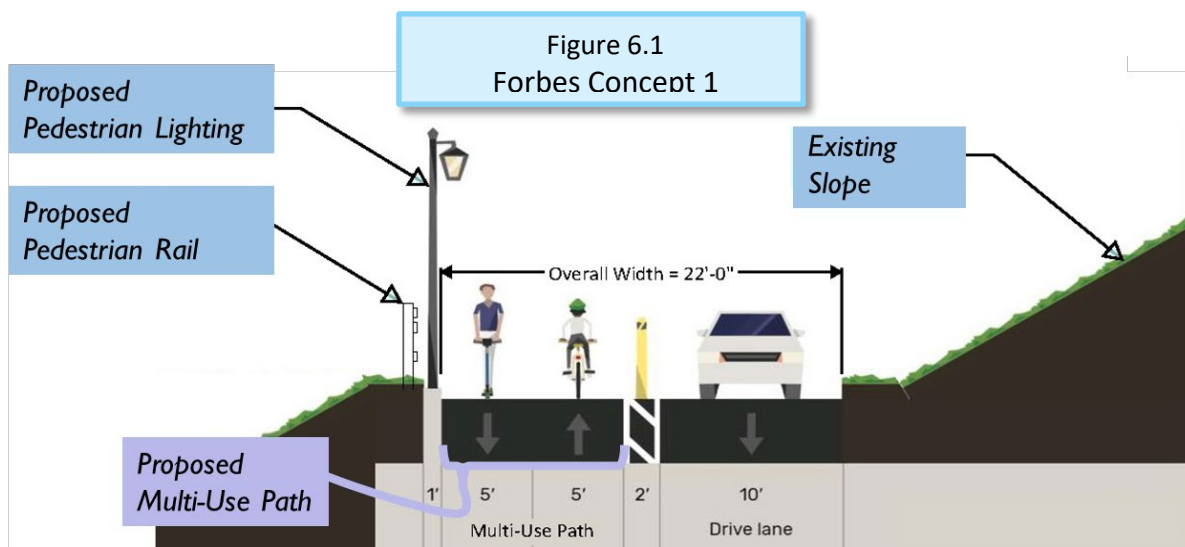
The recommended improvements have been organized into six (6) different concepts based on the location and type of improvements.

Forbes Avenue Corridor

Along the Forbes Avenue corridor, the preferred concept is **Concept 1**. From Van Rensselaer Heights to the proposed Washington Avenue extension, Forbes Avenue will be converted into a southbound one-way street. Additionally, a multi-use path will be constructed along the northern side of the Forbes Avenue segment, providing access to the waterfront for residents within the study area. Refer to **Figure 6.1** for a schematic cross section. Retaining walls are anticipated to be required along the Doane Stuart property to prevent excessive earthwork operations.

However, from Van Rensselaer Heights to the intersection with Washington Avenue extension, Forbes Avenue will remain a two-way street. This may help to maintain traffic flow and accessibility for drivers in the area. The proposed curbing of the multi-use path along the northern side of the Forbes Avenue segment will allow for the path to extend to Washington Avenue.

Finally, on the lower portion of Forbes Avenue, between Tracy Street and Central Avenue, it is recommended to add lighting that matches the historical character of the buildings. This will help to improve visibility and safety for pedestrians in the area.



Overall, these proposed changes prioritize pedestrian access and safety, while still considering the needs of drivers in the area. The multi-use path and curbing will help to provide a designated and separated

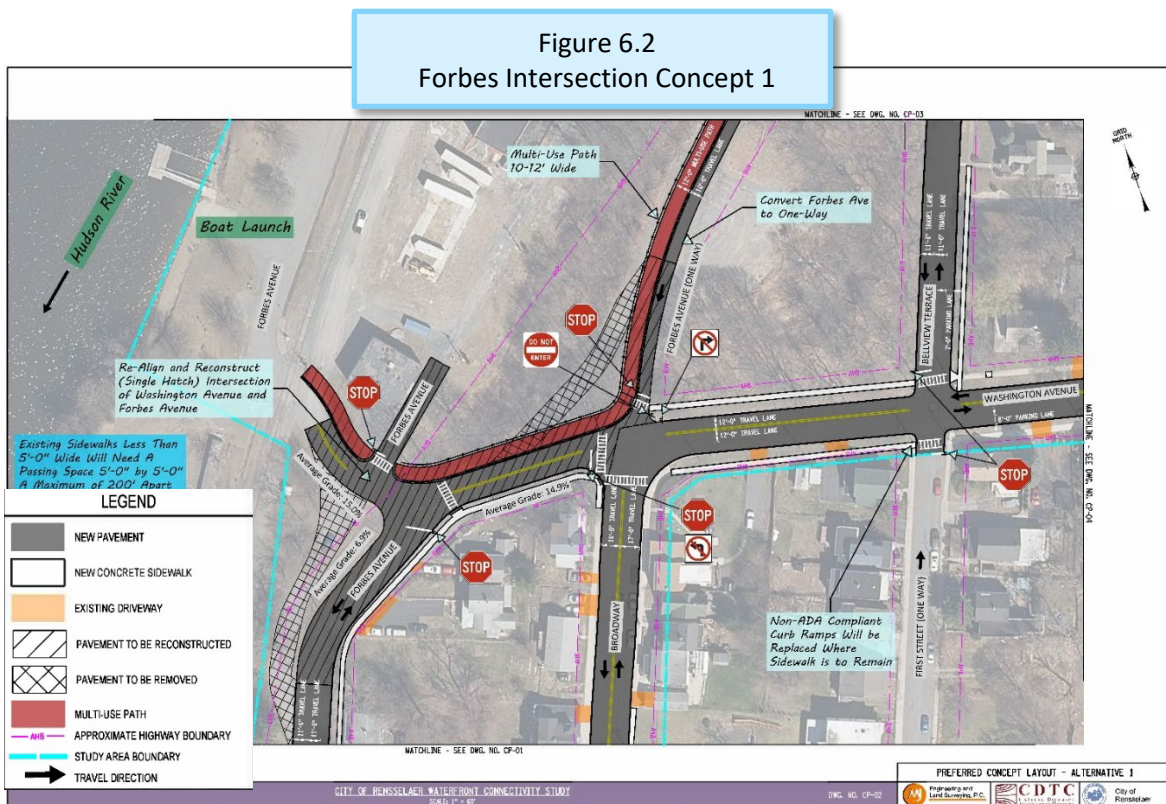
space for pedestrians, while the addition of historical lighting may improve visibility and aesthetic appeal.

Forbes Avenue Intersection

The preferred concept alternative for the Forbes Avenue intersection is **Concept 1**. **Concept 1**, as depicted in **Figure 6.2**, includes several key changes aimed at improving traffic flow and access to the boat launch and waterfront. Firstly, the lower intersection of Washington Avenue and Forbes Avenue would be realigned and reconstructed, providing a more direct access point for those who may be towing boats or other equipment to the launch area.

Currently, the only feasible access point to the boat launch is through Tracy Street, which requires a right turn onto Forbes Avenue and then bearing left to reach the launch area. By re-aligning the intersection and reconstructing the area, drivers can have a more direct route to the launch area, which would help to alleviate congestion and improve the overall flow of traffic in the area.

In addition to the intersection changes, **Concept 1** proposes to extend Washington Avenue and create a terminus for two-way traffic and provide direct access to the realigned waterfront entrance. The resulting geometry is a single intersection that eliminates the existing waterfront and boat launch entrance that is difficult to maneuver. This would help to provide better access to the area for drivers and could potentially distribute traffic more evenly throughout the area. This change could also improve the overall accessibility of the area for visitors, providing them with additional access points and potential routes to reach their destination.

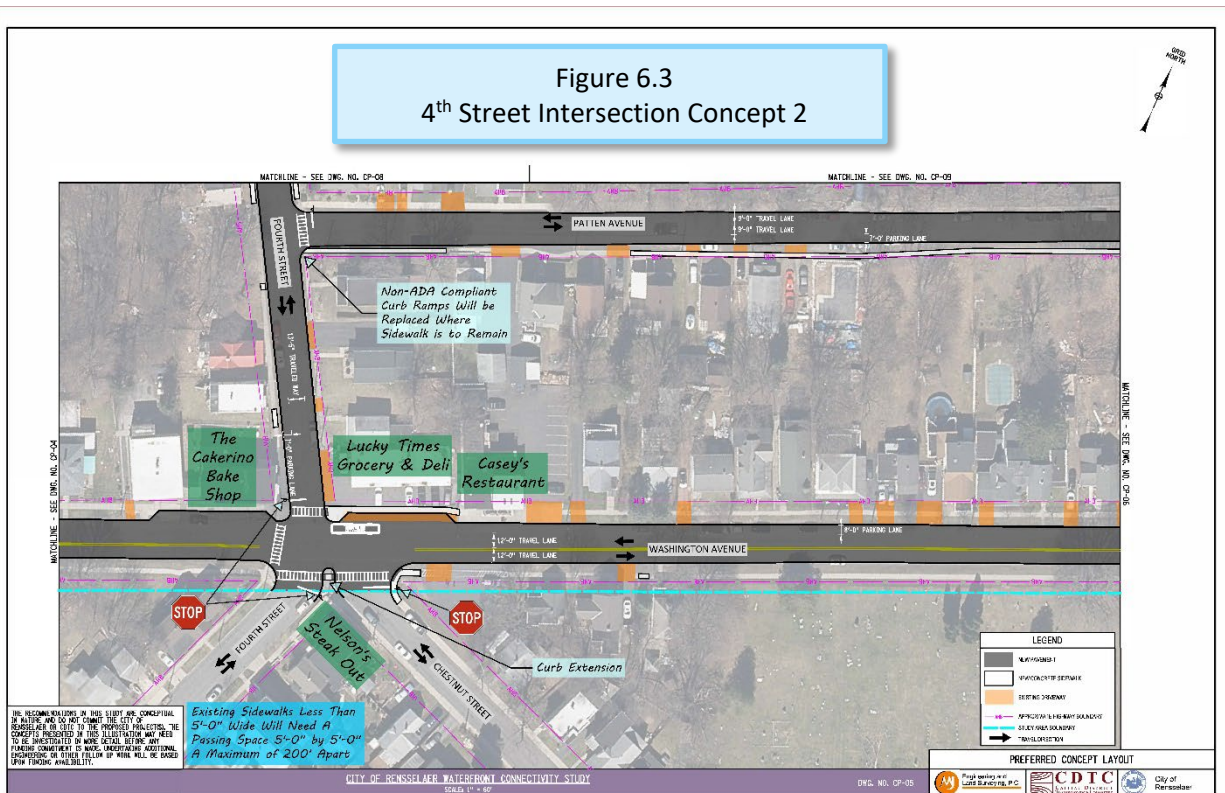


The Washington Avenue extension will continue the multi-use path along Forbes Avenue, facilitating increased multi-modal access to the waterfront and within the community. The existing Forbes Avenue roadbed will be removed and restored with topsoil, seed and landscaping.

Overall, **Concept 1** presents a comprehensive solution to the issues related to the Forbes Avenue intersection. By re-aligning the intersection and extending Washington Avenue, this alternative aims to improve traffic flow, provide better access to the boat launch, and enhance overall accessibility in the area. Through careful consideration of the proposed changes, the intersection can be transformed into a more efficient and functional space, benefiting all who use it. A site survey may be required to evaluate the proposed roadway grades prior to implementation.

Washington Avenue: 4th Street Intersection

The intersection of 4th Street and Washington Avenue will be modified (**Figure 6.3**) to reduce pedestrian crossing distances with the implementation of a curb extension between the approach legs of Chestnut Street and 4th Street. Street-side parking will be made available for the convenience store located at the intersection, eliminating customers backing into traffic on Washington Avenue. Using the results of a parking utilization study, parking will be restricted to one side along Washington Avenue to provide standard travel lanes for motorists while maintaining sufficient on-street parking.



Washington Avenue Corridor

Based on the results of the parking utilization study, the Washington Avenue roadway section will be modified where the parking utilization study supports the removal of one parking lane. The street will be resurfaced and re-striped to provide standard-width travel and parking lanes.

Limited sidewalk reconstruction is proposed to provide ADA-accessible walking paths, as well as new curb ramps and painted crosswalks. The parking area at the Anderson Place intersection will be re-striped to delineate travel ways and parking areas.

The 3rd Street and Washington Avenue Intersection will have improved geometry to shorten pedestrian crossing distances and serves as a transition where on-street parking switches from the north side to the south side of Washington Avenue.

Sidewalk Reconstruction

Outside of the Forbes Avenue and Washington Avenue corridors, non-ADA accessible pedestrian facilities will be replaced. This includes sidewalk reconstruction, curb ramps and crosswalks as identified on the concept plans for Tracy Street, Broadway, Bellview Terrace, 2nd Street, 4th Street, Patten Avenue, Anderson Place, Lincoln Terrace, Manor Drive, and 10th Street.

Table 7: Recommended Sidewalk Reconstruction

Street	Approximate Length of Sidewalk to be Replaced
Lower Forbes Avenue	130 ft
Broadway	320 ft
Bellview Terrace	260 ft
2 nd Street	600 ft
4 th Street	450 ft
Patten Avenue	540 ft
Lincoln Terrace	680 ft
Manor Drive	260 ft

Roadway Resurfacing

Several streets within the study limits are proposed to be resurfaced to provide an enhanced driving experience, and safe travel for bicycles and pedestrians. Based on the condition of the existing wearing surface, a 2" mill and top course overlay is recommended. Striping, as needed, shall be replaced in kind. Alternating parking will remain as-is along Broadway.

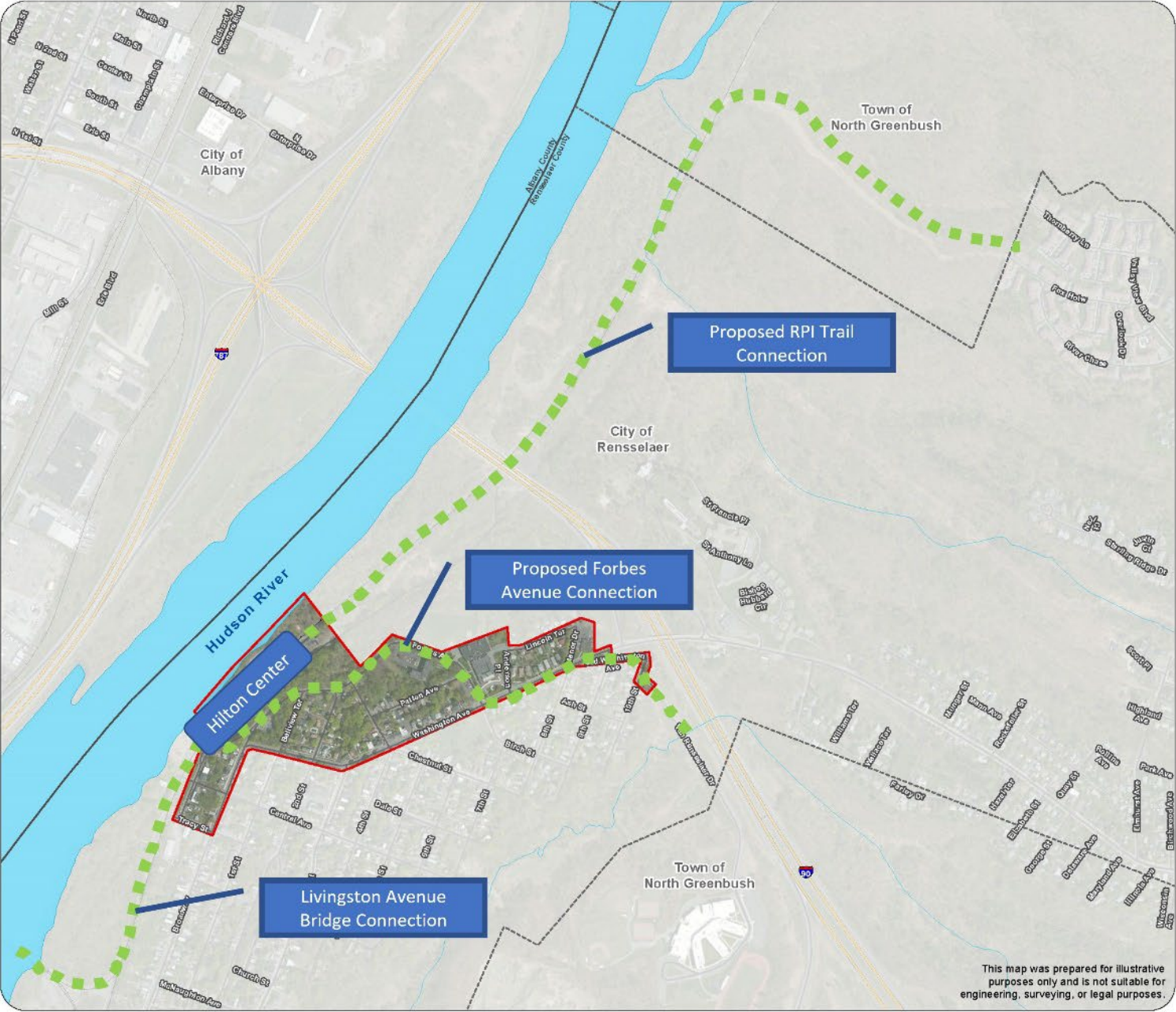
Other Local and Regional Connections

The importance of considering other local and regional connections in the Waterfront Connectivity Study cannot be overstated. By taking a holistic approach to connecting resources, the City of Rensselaer can ensure that all residents and visitors have safe and convenient access to the numerous trails, recreational areas, and community resources that the area has to offer. It is particularly important to consider pedestrian and bike connections, as these modes of transportation are increasingly popular and offer numerous health and environmental benefits.

Improving local connections within the City of Rensselaer, such as the connection from the Livingston Avenue bridge to DeLaet's Landing and the Hilton Center, will not only make these resources more accessible, but also encourage their use by community members. Additionally, regional connections, such as the proposed RPI Trail that would connect to North Greenbush and the City of Troy, have the potential to attract visitors from surrounding areas and enhance economic development in Rensselaer.

It is also crucial to consider the needs of those who may not have access to a vehicle, as they may rely on pedestrian and bike connections to access important resources. This is particularly important for children who need to cross Washington Avenue to access the public school safely. Moreover, the proposed Forbes Avenue concept, which includes a separated multi-use path, pedestrian lighting, and pedestrian rail, could easily be integrated into the larger network of connections to provide safe and convenient access. Overall, by considering and implementing these local and regional connections, the City of Rensselaer can create a more connected, accessible, and vibrant community for all.

Figure 6.4





CITY OF RENSSELAER
Waterfront Connectivity
Study

Potential Local/Regional
Connections
 March 2023

- LEGEND**
-  Study Area
 -  City/Town Boundary
 -  County Boundary
 -  Railroad
 -  Interstates
 -  State Routes
 -  Local Roads
 -  River/Stream
 -  Hudson River
 -  Potential Local/Regional Connections



This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.

Sources: Esri, NYS ITS, City of Rensselaer, Rensselaer County
 Engineering and Land Surveying, P.C.
 1833 Chancellors - Catskill, NY 12246
 0 400 800 Feet

CHAPTER 7: Implementation Strategies

This chapter provides information to assist the City of Rensselaer with implementation of the recommended improvements. The implementation plan consists of anticipated planning-level cost estimates, identification of potential funding sources, and anticipated project partners.

Planning-Level Cost Estimates

The recommendations identified in Chapter 6 together meet the project objectives; however, phasing of those improvements may be required to accommodate funding acquisition and approval processes. Rough-order-of-magnitude, planning-level cost estimates have been prepared for the recommended improvements as shown below. Detailed construction cost estimates are provided in **Appendix I**.

Table 8: Planning Level Cost Estimate Summary

	Description of Improvements	Construction Costs ^{1,2} (2023 Dollars)	Engineering Costs ³ (+/-40%)	Planning-Level Cost ⁴ (2023 Dollars)
Signs	Install signage throughout the study area to improve safety and mobility of pedestrians and bicyclists, including advanced warnings for vehicles and regulatory speed signs.	\$20,000	\$10,000	\$30,000
Sidewalks	Sidewalk reconstruction, ADA-compliant ramps and crosswalks on Lower Forbes, Broadway, Bellview Terr, 2 nd St, 4 th St, Patten Ave, Lincoln Terr, and Manor Dr	\$350,000	\$140,000	\$490,000
Washington Avenue/4th Street Intersection Concept 1	Curb extensions and ADA-compliant ramps, crosswalks, deli parking lot modifications, on-street parking	\$245,000	\$95,000	\$340,000
Washington Avenue Corridor	Re-stripe centerline; curb extensions at 3 rd Street, crosswalks and limited sidewalk reconstruction; re-stripe and resurface parking area at Anderson Pl;	\$685,000	\$250,000	\$935,000
Forbes Avenue Concept 1	Striping, bollards, lighting, pedestrian rail to convert to one-way with multi-use path; sidewalks, ADA-compliant ramps, crosswalks; retaining wall; resurface Forbes Ave	\$1,365,000	\$540,000	\$1,905,000

Table 8: Planning Level Cost Estimate Summary

	Description of Improvements	Construction Costs ^{1,2} (2023 Dollars)	Engineering Costs ³ (+/-40%)	Planning-Level Cost ⁴ (2023 Dollars)
Forbes Intersection Concept 1	Re-align Forbes at Broadway and extend Washington Avenue; multi-use path, crosswalks, ADA-compliant ramps, remove and restore existing road beds with landscape elements.	\$1,380,000	\$550,000	\$1,930,000
Roadway Resurfacing	Resurface (mill and top course overlay) Tracy St, Broadway, Bellview Terr, 2 nd St, 4 th St, Patten Ave, Anderson Place, Lincoln Terr, Manor Dr, 10 th St	\$615,000	\$215,000	\$830,000

¹Construction costs were prepared using NYSDOT items and recent, local unit price data.

²Construction costs include a 30% contingency. See attached summary sheets for each project.

³Engineering costs include survey, design, and construction oversight and are likely to vary significantly depending on the funding source and grant requirements. Approximate upper level costs are provided.

⁴The estimated costs do not include the cost of right-of-way incidentals or acquisitions, if required.

Potential Funding Sources

There are various potential funding sources that the City of Rensselaer can pursue to fund implementation of the recommended improvements. The potential funding sources vary between federal, state, and local sources. It is important for the City to submit applications for funding to the appropriate program, at the right time for the project, and with ample project information and support to show why the project is important to the City and that the City is prepared to provide the required local match. Since funding opportunities can arise throughout the year, it is imperative that the City maintain contact with NYSDOT Region 1 Local Programs Bureau to ensure that no funding opportunities are missed.

Federal Programs:

Transportation Improvement Program (TIP): This project is eligible for funding under the Federal Highway Administration’s Surface Transportation Block Grant Program (STBG) and Highway Safety Improvement Program (HSIP). These reimbursement programs cover up to 80% of the project cost and the project Sponsor is responsible for the remaining 20%.



- **Surface Transportation Block Grant Program (STBG):** The STBG program provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.
- **Highway Safety Improvement Program (HSIP):** Program that provides funds for projects that aim

to achieve significant reduction in traffic fatalities and serious injuries on all public roads. The HSIP fund source will reimburse up to 90% of the project cost for eligible improvements.

To apply for federal funding, the City can respond to a TIP solicitation advertised by the CDTC. CDTC staff review applications and recommend projects to be funded, while the ultimate decision is made by CDTC's Policy Board and is subject to public comment.

Applications for projects were due to CDTC in the fall of 2021 in advance of the Federal Fiscal Years (FFYs) 2022-2027 TIP update. TIP solicitations have historically been advertised every three years, so the next open solicitation can be expected in the Fall of 2024. The funding ranges for these grants are not specified.

For more information, visit:

<https://www.cdtcmo.org/transportation-plans/transportation-improvement-program>.

State Programs:



NYSDOT TAP-CMAQ Program (TAP/CMAQ): Funding is available through NYSDOT to support bicycle, pedestrian, multi-use path, and non-motorized transportation-related projects and programs that support the goals of New York's national-led Climate Leadership and Community Protection Act (CLCPA). Although these programs are administered by NYSDOT, the fund sources are ultimately federal and require a 20% local match. All roadways evaluated as part of this study are eligible. Funded projects will receive a minimum of \$500,000 and a maximum of \$5,000,000 (prior to the 20% local match). Municipalities may request funding from two different fund sources:

- **Transportation Alternatives Program (TAP):** TAP funding helps communities deliver safe, transformative, and innovative transportation projects which expand, enhance, and modernize walking and biking options and connections to transit. TAP project funding focuses primarily on benefits for bicyclists, pedestrians, and other amenities for non-drivers. Projects are expected to improve mobility, accessibility, and the community's transportation character such that the street network is more vibrant, walkable, and safer for all transportation mode users, pedestrians, bicyclists, transit users, and drivers. Specific project categories directly related to the proposed projects include:
 - Planning, design and construction of infrastructure-related projects to improve non-driver safety and access to public transportation and enhanced mobility;
 - Safe routes to school (enable and encourages children to walk or bike to school); and
 - Planning, design and construction of on-road and off-road trail facilities for pedestrians, bicyclists and non-motorized transportation users.
- **The Congestion Mitigation and Air Quality Improvement (CMAQ) Program:** The CMAQ program provides funding to State and local entities for transportation projects that reduce vehicle emissions and traffic congestion in areas where air quality does not meet or previously did not attain the National Ambient Air Quality Standards. Solicitations for TAP and CMAQ are typically released together, however the projects described in Chapter 3 of this study are not likely eligible for funding under CMAQ.

The NYSDOT will typically advertise a Notice of Funding Availability every two years. The most recent

Notice was advertised in July of 2021, applications were due in the Fall of 2021 and projects were awarded in July 2022. To apply for TAP or CMAQ funding, the City can submit an application to NYSDOT through the NYS Grants Gateway system.

For more information, visit:

<https://www.dot.ny.gov/divisions/operating/opdm/local-programs-bureau/tap-cmaq>.



Climate Smart Communities

NYSDEC Climate Smart Communities Program

(CSC): The Climate Smart Communities Grant program was established in 2016 to provide 50/50 matching grants to cities, towns, villages, and counties of the State of New York for eligible climate change mitigation, adaptation, and planning and assessment projects. Municipalities need not be a registered or certified Climate Smart Community to apply for a grant. Implementation projects for which funding can be sought are those related to the reduction of greenhouse gas (typically transportation alternatives) and climate change adaptation. There are two funding pools for this grant. The first funding pool includes projects requesting funds ranging from \$5 million to \$100 million. The second funding pool includes projects requesting funds ranging from \$250,000 to \$4,999,999.

The NYSDEC typically requests applications for the Climate Smart Community Grant Program annually. Applications are prepared and submitted online using the NYS Consolidated Funding Application (CFA).

NYSDOS Brownfield Opportunity Area (BOA): The NYSDOS Brownfield Opportunity Area Program is a neighborhood planning initiative that aims to assess and redevelop brownfields and abandoned properties. The program helps to transform unproductive properties into productive uses, creating jobs, housing, and community amenities for residents and visitors. Planning grants are provided to municipalities or community-based organizations through the competitive NYS Consolidated Funding Application (CFA) process. Communities that have undertaken significant planning or have the capacity to complete a Nomination plan without State funding can also submit plans to the State for BOA Designation and other benefits.

NYSDOT Multi-Modal Program (MM): The Multi-Modal Program is managed through NYSDOT's Local Programs Bureau and provides reimbursement funding for five (5) specifically authorized transportation capital project "modes" found in State Transportation Law 14-k and NYSDOT Program Policy - Rail, Port, Fixed Ferry Facilities, Airport, and State and Local Highway and Bridge projects. The program does not have a required local match.

To obtain funding through the NYSDOT's Multi-Modal Program, the Governor or a Legislative Member must nominate the project, and NYSDOT will be notified when funding is secured. Additional information and current opportunities should be discussed with the NYSDOT Region 1 Local Programs Bureau. The funding ranges for this grant are not specified.

New York State Touring Route Program: The New York State Touring Route Program provides \$100 million in State funds to cities, towns, and villages for highway-related purposes such as the construction and repair of highways, bridges, highway-railroad crossings, and other transportation facilities. To be eligible for State Touring Route Capital reimbursement, a capital project must be undertaken by a municipality, have a service life of 10 years or more with normal maintenance, follow the State Touring

Route Guidelines, and be for highway-related purposes. The guidelines prefer roads located on a State highway that are maintained by a municipality and designated as a Touring Route, but funds may also be used on an eligible roadway listed on the Local Highway Inventory (LHI). Items that are not eligible for reimbursement include operation and maintenance activities, State highways that are not locally maintained State arterials, and purchase of equipment. It's important to note that the study area may not be eligible for this program, but it's crucial to review the guidelines carefully, as they change and, several connecting roads may qualify for funding.

Regional Economic Development Council (REDC) Grants: Through the REDCs, community, business, academic leaders, and members of the public in each region of the state put to work their unique knowledge and understanding of local priorities and assets to help direct state investment in support of job creation and economic growth. The City may consider REDC grants to fund sidewalk projects that will connect residents to businesses or to public transportation.

REDC Grants may be applied for through the Consolidated Funding Application (CFA), which allows applicants to be considered for multiple sources of funding for a project by filling out just one application. The CFAs are typically announced in May each year with applications due at the end of July. Several of the grants under the CFA have a minimum funding amount, ranging from \$25,000 to \$150,000.

Community Resiliency, Economic Sustainability and Technology (CREST) Grant Program: The CREST program, administered by the Dormitory Authority of the State of New York (DASNY), provides reimbursement-based grants of capital costs for projects undertaken by eligible entities. The minimum grant award is \$50,000.

To obtain funding, a grant request must be submitted to Senator Jacob Ashby (NY Senate District 43), and if chosen, will be passed to the Senate Finance Committee for initial approval and submission to DASNY. The CREST grants are typically announced in July each year with applications due at the beginning of August.

The New York Housing Compact: Governor Hochul's proposed FY 2024 Executive Budget aims to address New York's severe housing shortage by building 800,000 new homes in the next decade. The multifaceted approach of the New York Housing Compact focuses on removing barriers to housing production, incentivizing new construction, and setting local housing targets across every community in New York. Through the expansion of housing production, the New York Housing Compact seeks to provide better living conditions for families, assist employers in accommodating their workforce, and promote equitable access to quality housing throughout the state.

It should be noted that the New York Housing Compact has not yet been fully adopted. Therefore, local departments should continue to monitor its developments to ensure that their policies are aligned. In addition, if the New York Housing Compact is implemented, there may be opportunities for communities connected by rail to receive grants for infrastructure work.

Local Funding Partners & Programs:



National Grid Grants (GRID): National Grid Economic Development offers grant assistance for many different phases of economic development and community

revitalization projects. National Grid may be able to help with staff assistance and resources from their Public Service Commission approved Economic Development Plan. These grants could be explored for assisting with relocation of existing utility poles and infrastructure, and installation of energy efficient site lighting. This grant can be considered in order to implement street lighting at intersections throughout the City.

Coordination with Outside Agencies

To fully implement the Waterfront Connectivity Study, coordination with several outside agencies will be necessary. This list includes the New York State Department of Transportation, Rensselaer County, CSX for train track crossing(s), the Town of North Greenbush, the Town of East Greenbush, developers with the Hilton Center redevelopment, and the New York State Department of Environmental Conservation (DEC). It should be noted that this is not a comprehensive list of all potential outside agencies that may need to be involved in the project. However, these are some of the main agencies that will need to be consulted and coordinated with in order to ensure successful implementation of the study's recommendations.

Although NYSDOT does not have jurisdiction over roadways within the Study Area, NYSDOT's involvement will be beneficial in the implementation of bicycle and pedestrian connections. NYSDOT is currently executing the approximately \$400M Livingston Avenue Rail Bridge Project that includes bicycle and pedestrian facilities, and coordination with their designers to ensure logical connections are provided will be critical.

Similarly, coordination with Rensselaer County will be necessary for improvements along county-maintained roads. The county can also provide valuable resources for trail development and maintenance.

CSX operates the rail line that runs parallel to the Hudson River and intersects with many of the roads and trails in the study area. Collaboration with CSX will be necessary to ensure that any proposed improvements do not interfere with the safe and efficient operation of the rail line.

The Town of North Greenbush and the Town of East Greenbush are adjacent to Rensselaer and share many of the same resources, such as the proposed RPI Trail. Coordination with these towns will be necessary to ensure that any proposed improvements align with their respective plans and goals for the area.

Developers with the Hilton Center redevelopment will be key partners in implementing the proposed improvements in that area. Collaboration with the developers will be necessary to ensure that the proposed improvements align with their vision for the redevelopment.

Finally, involvement from NYSDEC will be necessary for any proposed improvements in environmentally sensitive areas, such as wetlands or areas with endangered species. The agency's expertise in environmental regulations and requirements will be valuable in ensuring that the proposed improvements meet state and federal environmental standards.

Overall, the involvement and coordination of these agencies and stakeholders will be essential in implementing the Waterfront Connectivity Study's recommendations and realizing the vision of a connected, accessible waterfront for the City of Rensselaer.



CITY OF RENSSELAER
WATERFRONT CONNECTIVITY STUDY
APPENDICES
March 2023

Appendices

APPENDIX A: PROPERTY OWNERSHIP MAPS3

APPENDIX B: PEDESTRIAN COUNT DATA COLLECTION.....10

APPENDIX C: CDTA RIDERSHIP DATA.....20

APPENDIX D: PARKING UTILIZATION RATE24

APPENDIX E: CRASH ANALYSIS49

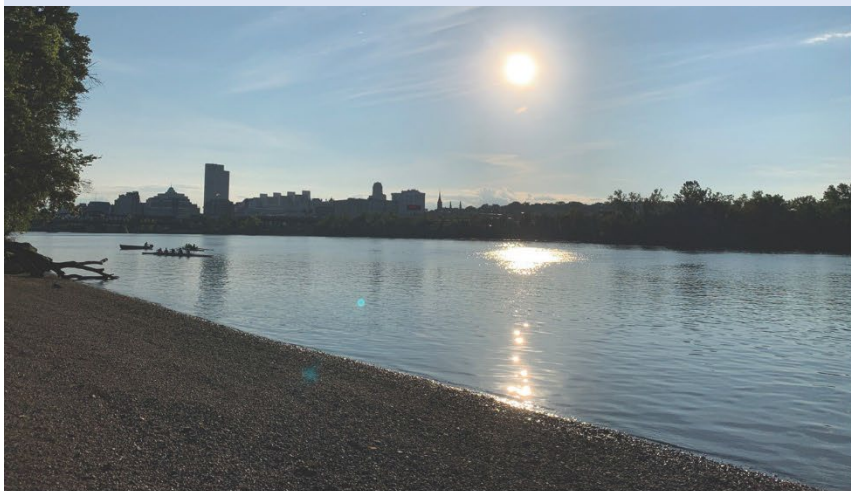
APPENDIX F: ENVIRONMENTAL RESOURCES53

APPENDIX G: PUBLIC OUTREACH58

APPENDIX H: ALTERNATIVE CONCEPTS125

APPENDIX I: PLANNING LEVEL COST ESTIMATES.....144

APPENDIX J: ENVIRONMENTAL JUSTICE AND LIMITED ENGLISH
PROFICIENCY.....152



APPENDIX A: PROPERTY OWNERSHIP MAPS



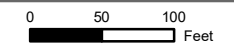
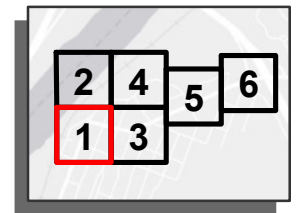
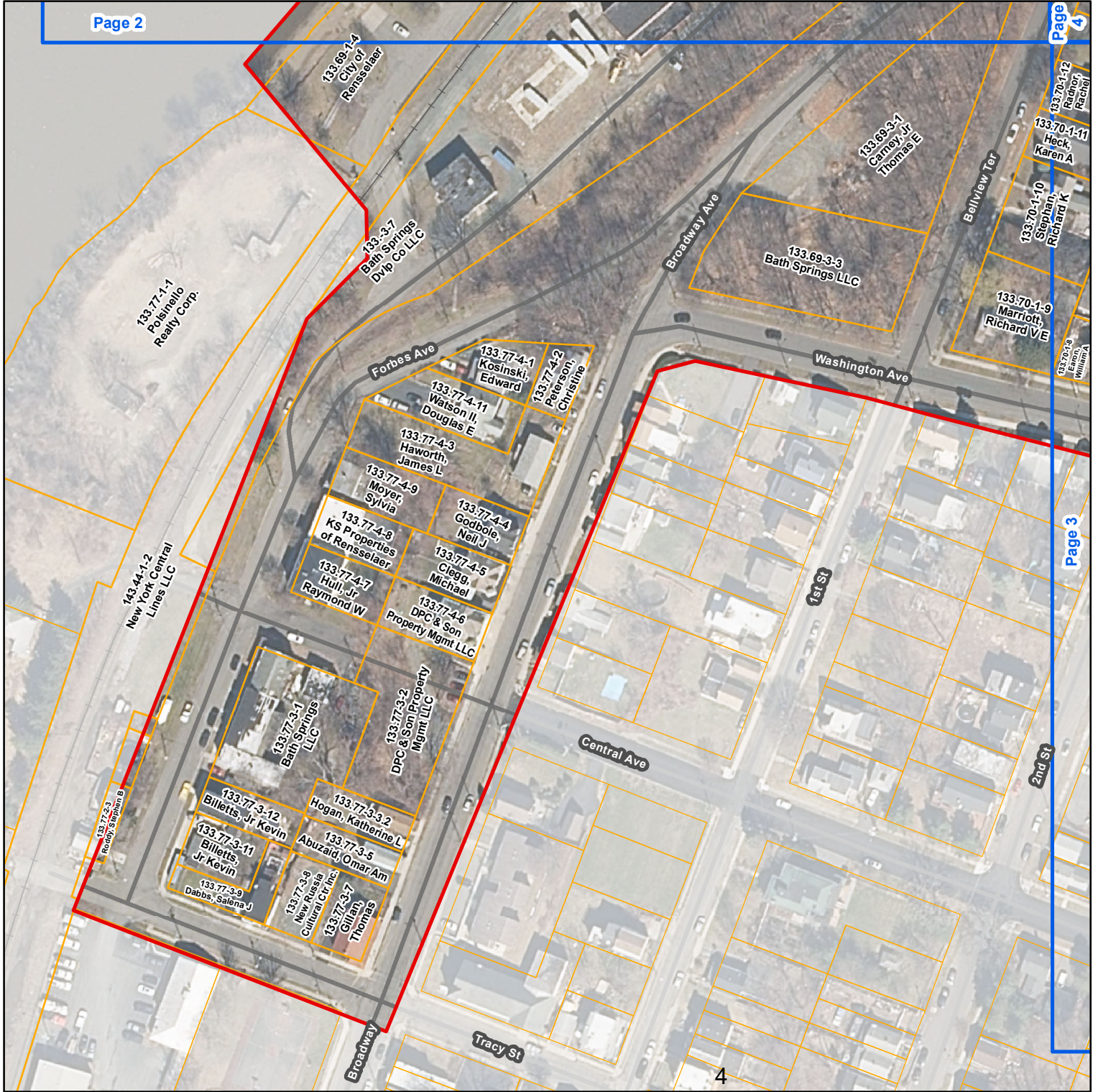
CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership April 2022

DRAFT

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Local Roads
- 2021 Tax Parcels





CITY OF RENSSELAER

Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Local Roads
- 2021 Tax Parcels

Albany County
Rensselaer County

Page 4

Page 1

5

Page 3

133.69-1-1
City of
Rensselaer

143.44-1-2
New York Central
Lines LLC

133.69-3-7
Bath Springs
Dvip Co LLC

133.3-1
Rensselaer
Polytechnic Inst

133.3-1
Rensselaer
Polytechnic Inst

133.69-1-4
City of
Rensselaer

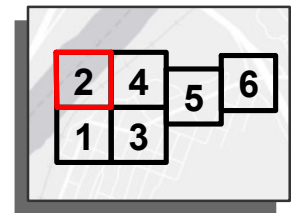
133.69-1-4
City of
Rensselaer

Forbes Ave

133.69-3-1
Carney Jr
Thomas E

Bellview Ter

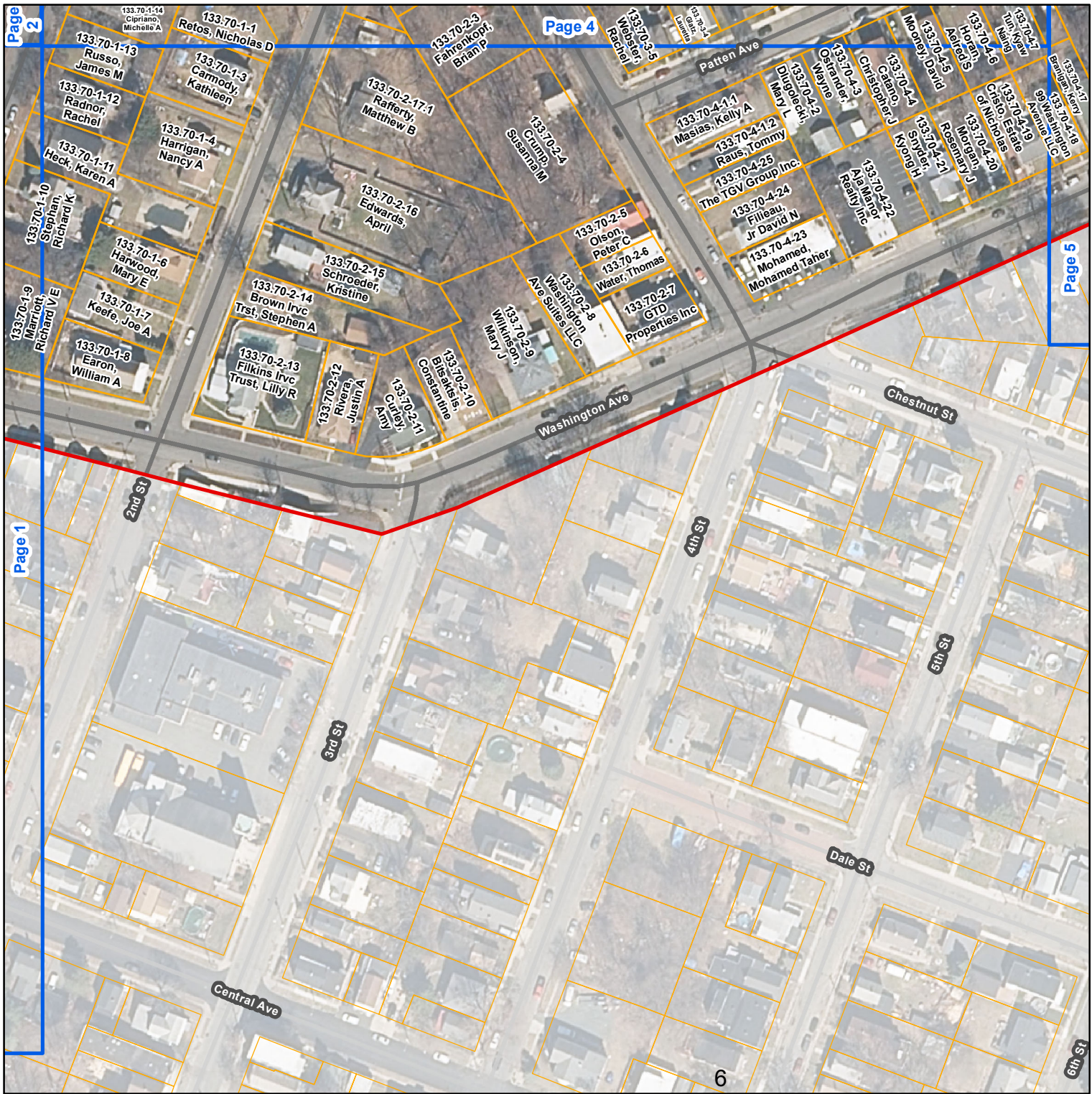
Page 2



0 50 100 Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER

Waterfront Connectivity Study

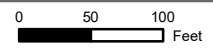
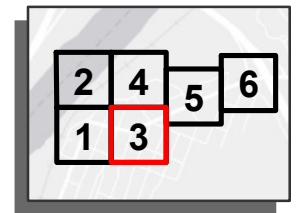
Property Ownership
 April 2022

DRAFT

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Local Roads
- 2021 Tax Parcels

Page 3





CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

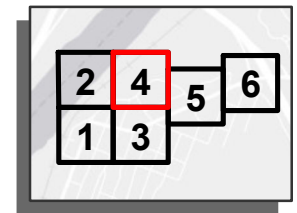
DRAFT

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Local Roads
- 2021 Tax Parcels



Page 4



0 50 100 Feet





CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership April 2022

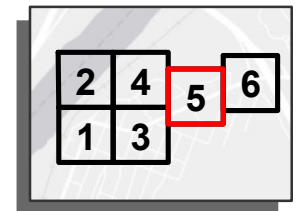
DRAFT

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Local Roads
- 2021 Tax Parcels



Page 5



0 50 100 Feet





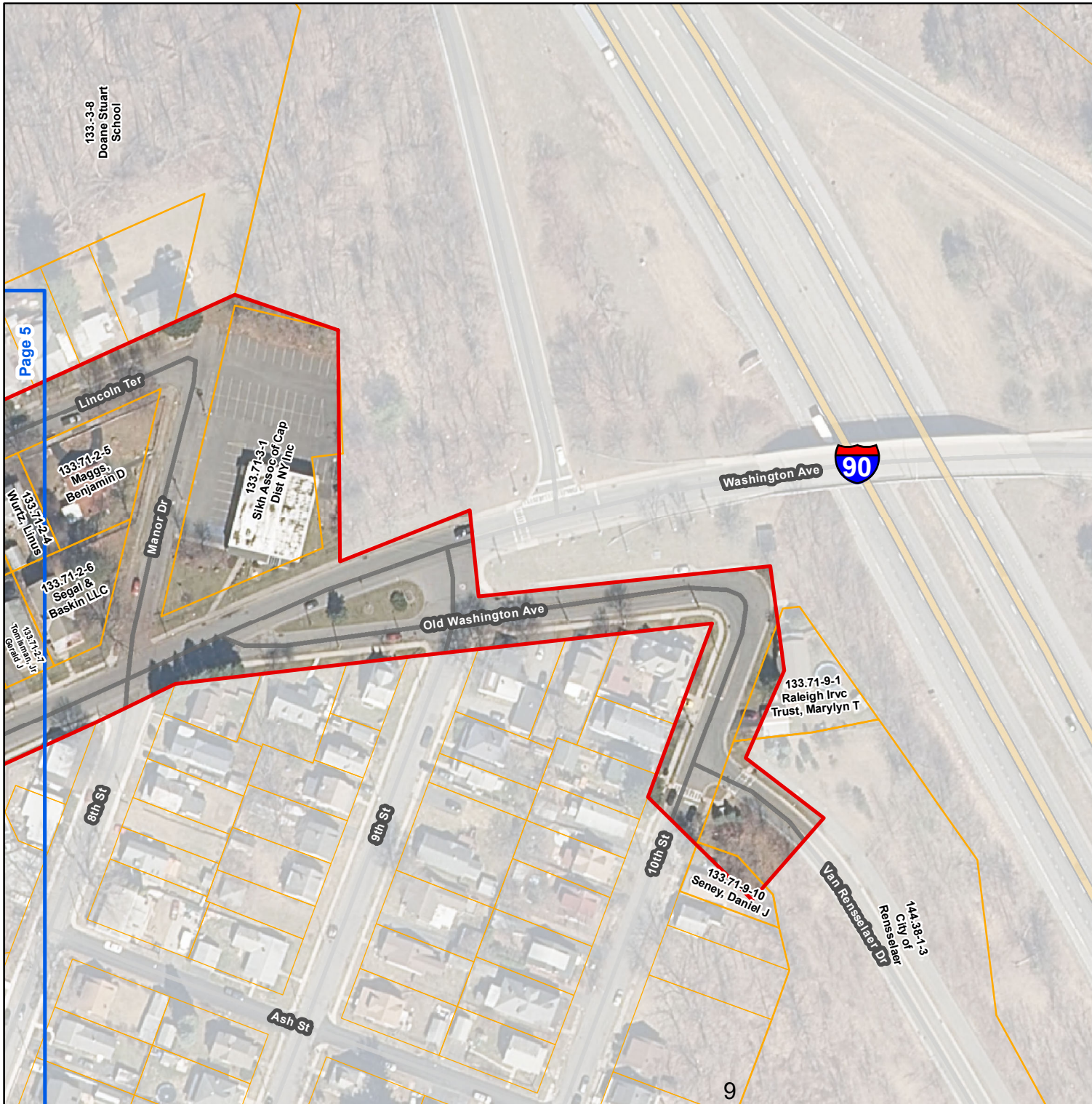
CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

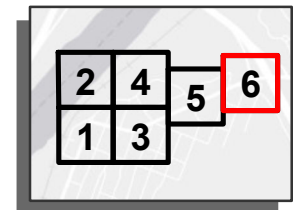
DRAFT

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Interstates
- Local Roads
- 2021 Tax Parcels



Page 6



0 50 100 Feet



**APPENDIX B: PEDESTRIAN COUNT DATA
COLLECTION**

MJ 1536
Rensselaer Waterfront Connectivity Study
Data Collection Plan

05/04/2022



STUDY AREA

Hudson River

Forbes Ave

Broadway

1

2nd St

3rd St

Washington Ave

2

Date St

Washington Ave

3

7th St

Birch St

8th St

9th St

10th St

90

90

LEGEND:

PEDESTRIAN / BICYCLE
COUNT LOCATION



WEEKDAY COUNTS FROM:
7:00 - 9:00 AM
2:30 - 4:30 PM



Engineering and
Land Surveying, P.C.

WASHINGTON

	PED	BIKE		PED	BIKE
45-60	1		105-120		
30-45			90-105	1	
15-30			75-90		
0-15			60-75		

UPHILL →

	PED	BIKE		PED	BIKE
45-60	1		105-120		
30-45	1		90-105		
15-30			75-90		
0-15			60-75	1	

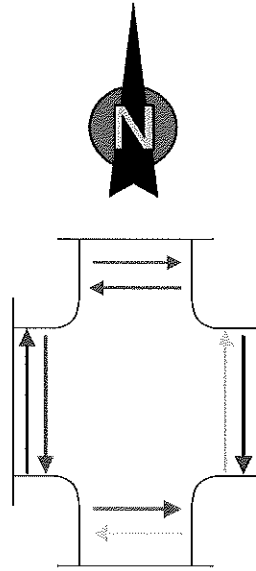
← DOWNHILL

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

↓

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

↑



	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75	1	

↓

	PED	BIKE		PED	BIKE
45-60	1		105-120		
30-45	1		90-105		
15-30			75-90		
0-15	1		60-75		

↑

BWAY

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

→

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

←

JOB: RENSSELAIRE LINKAGE
 DATE: 5/31 TIME OF DAY: 7-9 AM
 RECORDER: Ketina Vics
 INTERSECTION: WASH/BWAY



M.J. Engineering and Land Surveying, P.C.
 6555 Research Road, Raleigh, NC 27612
 Phone: 919.488.1234 or 919.488.1232
 www.mj-engineering.com

PEDESTRIAN MOVEMENTS

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

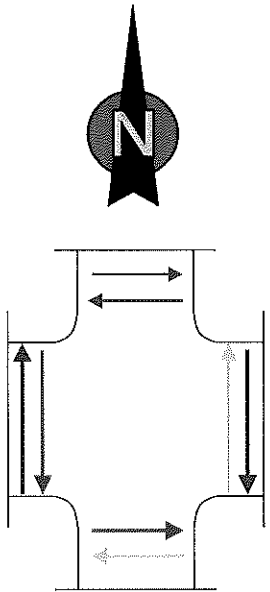
	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

Even Wash

odd Wash

	PED	BIKE		PED	BIKE
45-60	1	0	105-120	0	0
30-45		0	90-105	0	0
15-30	1	0	75-90	0	0
0-15	0	0	60-75	0	0

	PED	BIKE		PED	BIKE
45-60	1	0	105-120	0	0
30-45	1	0	90-105	0	0
15-30	0	0	75-90	0	0
0-15	0	0	60-75	0	0



	PED	BIKE		PED	BIKE
45-60	0	0	105-120	0	0
30-45		0	90-105	0	0
15-30	1	0	75-90	0	0
0-15	0	0	60-75	0	0

	PED	BIKE		PED	BIKE
45-60	0	0	105-120	0	0
30-45	0	0	90-105	0	0
15-30	0	0	75-90	0	0
0-15	0	0	60-75	0	0

Even Wash

	PED	BIKE		PED	BIKE
45-60	0	0	105-120	0	0
30-45		0	90-105	0	0
15-30	1	0	75-90	1	0
0-15	0	0	60-75	1	0

	PED	BIKE		PED	BIKE
45-60	0	0	105-120	1	0
30-45		0	90-105	0	0
15-30	0	0	75-90	0	0
0-15	0	0	60-75	0	0

Third

Even Wash

JOB: _____
 DATE: 5/11/20 TIME OF DAY: 7-9
 RECORDER: Andrew Kretschmar
 INTERSECTION: Washington & Third

M.J. Engineering and Land Surveying, P.C.
 3333 University Blvd, Suite 100, Raleigh, NC 27607
 Phone: 919.876.1111 Fax: 919.876.1112
 www.mj-engineering.com

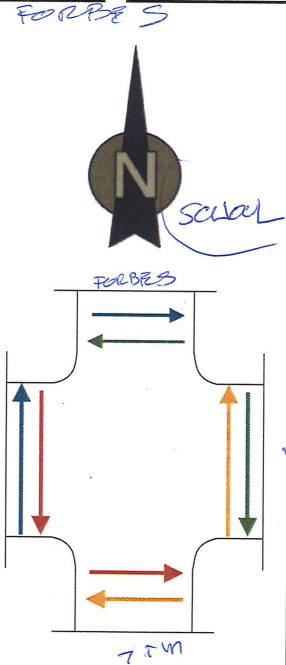
PEDESTRIAN MOVEMENTS

	PED	BIKE		PED	BIKE
7-715 (1)			60-75	###	###
715-730 (2)	###		75-90	###	
730-745 (3)	###		90-105		
745-800 (4)	###		105-120		

	PED	BIKE		PED	BIKE
			60-75		
			75-90		
			90-105		
			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		



	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60	###		105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

JOB: 1536
 DATE: 05-31-22 TIME OF DAY: 7:00-9:00 AM
 RECORDER: N. GIBSON
 INTERSECTION: #3 WASH. / 7TH ST / FORBES

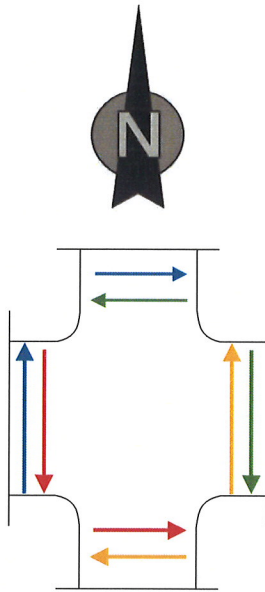
M.J. Engineering and Land Surveying, P.C.
 1530 Crescent Road, Clifton Park, NY 12065
 Phone: 518.371.0999 / Fax: 518.371.0812
 www.mjel.com

PEDESTRIAN MOVEMENTS

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		



	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

JOB: _____
 DATE: 5/31 TIME OF DAY: 7-9 A.M.
 RECORDER: Jesse O'Dell
 INTERSECTION: #4 8th/Washington 15



PEDESTRIAN MOVEMENTS

WASH

	PED	BIKE		PED	BIKE
45-60	1		105-120		
30-45		1	90-105		
15-30			75-90		
0-15		1	60-75		

UP →

	PED	BIKE		PED	BIKE
45-60	1		105-120		
30-45	1		90-105	1	
15-30	1		75-90		
0-15			60-75		

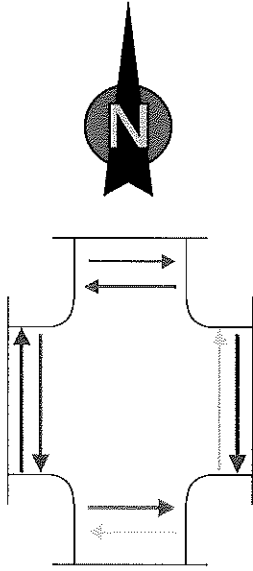
← DOWN

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

↓

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

↑



	PED	BIKE		PED	BIKE
45-60	1	1	105-120		
30-45	1	1	90-105	1	1
15-30	1		75-90		
0-15			60-75		

↓

BWAY

	PED	BIKE		PED	BIKE
45-60	1		105-120		1
30-45	1	1	90-105	1	1
15-30	1		75-90	1	
0-15	1	1	60-75	1	

↑

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

→

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

←

JOB: RENSP LINKAGE
 DATE: 5/31 TIME OF DAY: 9:30-1:30
 RECORDER: Ketura Vico
 INTERSECTION: WASH / BWAY



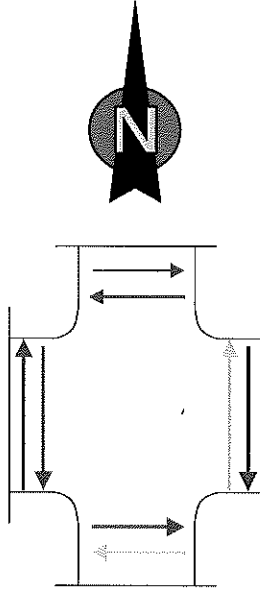
M.J. Engineering and Land Surveying, P.C.
 15111 Woodloch Forest Drive, Suite 100
 Houston, TX 77057
 Phone: 281.311.0770 or 281.311.0772
 www.mje.com

PEDESTRIAN MOVEMENTS

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60	0	0	105-120		
30-45	0	0	90-105		0
15-30	0	0	75-90	0	0
0-15	0	0	60-75		0



	PED	BIKE		PED	BIKE
45-60	0	0	105-120		
30-45	0	0	90-105		0
15-30	0	0	75-90		0
0-15	0	0	60-75	0	0

	PED	BIKE		PED	BIKE
45-60	1	0	105-120		
30-45	0	0	90-105	0	0
15-30	0	0	75-90		0
0-15	0	0	60-75	0	0

	PED	BIKE		PED	BIKE
45-60	0	0	105-120		
30-45	0	0	90-105		0
15-30	0	0	75-90	0	0
0-15	0	0	60-75	0	0

Even Wash

	PED	BIKE		PED	BIKE
45-60	0	0	105-120	1	
30-45	0	0	90-105	1	0
15-30			75-90		0
0-15			60-75	0	0

	PED	BIKE		PED	BIKE
45-60		0	105-120	1	
30-45		0	90-105		0
15-30		0	75-90		0
0-15	0	0	60-75		0

ODD SIDE WASH

Third

JOB: _____
 DATE: 9/3/22 TIME OF DAY: 2:30-4:50
 RECORDER: Andrew K. [unclear]
 INTERSECTION: Wash. Third



M.J. Engineering and Land Surveying, P.C.
 PEDESTRIAN MOVEMENTS

2:30-2:45
 2:45-3:00
 3:00-3:15
 3:15-3:30

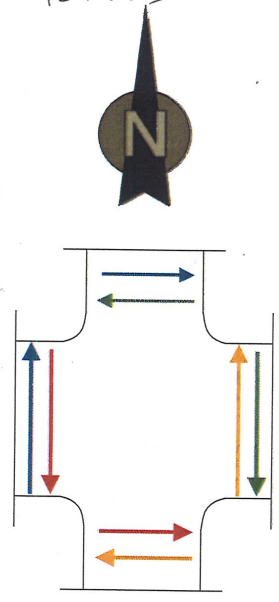
	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

3:30-3:45
 3:45-4:00
 4:00-4:15
 4:15-4:30

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

FORBES



	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

WASHINGTON

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

WASHINGTON

7TH

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

	PED	BIKE		PED	BIKE
0-15			60-75		
15-30			75-90		
30-45			90-105		
45-60			105-120		

JOB: 1530
 DATE: 05-31-22 TIME OF DAY: 2:30-4:30
 RECORDER: N. GIBSON
 INTERSECTION: #3 - WASHINGTON / 7th St. / FORBES



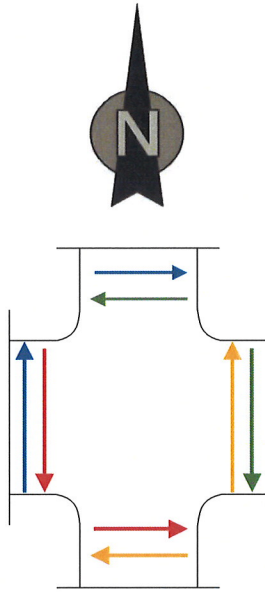
M.J. Engineering and Land Surveying, P.C.
 2223 Chestnut Road, Clinton Park, NY 12505
 Phone: 518-376-9999 Fax: 518-376-8822
 www.mjels.com

PEDESTRIAN MOVEMENTS

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		



	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

	PED	BIKE		PED	BIKE
45-60			105-120		
30-45			90-105		
15-30			75-90		
0-15			60-75		

JOB: _____
 DATE: 5/31/22 TIME OF DAY: 2:30 - 4:30
 RECORDER: Jesse O'Dell
 INTERSECTION: #4 8th / Washington 19

M.J. Engineering and
 Land Surveying, P.C.
 1533 Crescent Road, Clifton Park, NY 12065
 Phone: 518.371.0200 / Fax: 518.371.0822
 www.mjell.com

PEDESTRIAN MOVEMENTS

APPENDIX C: CDTA RIDERSHIP DATA



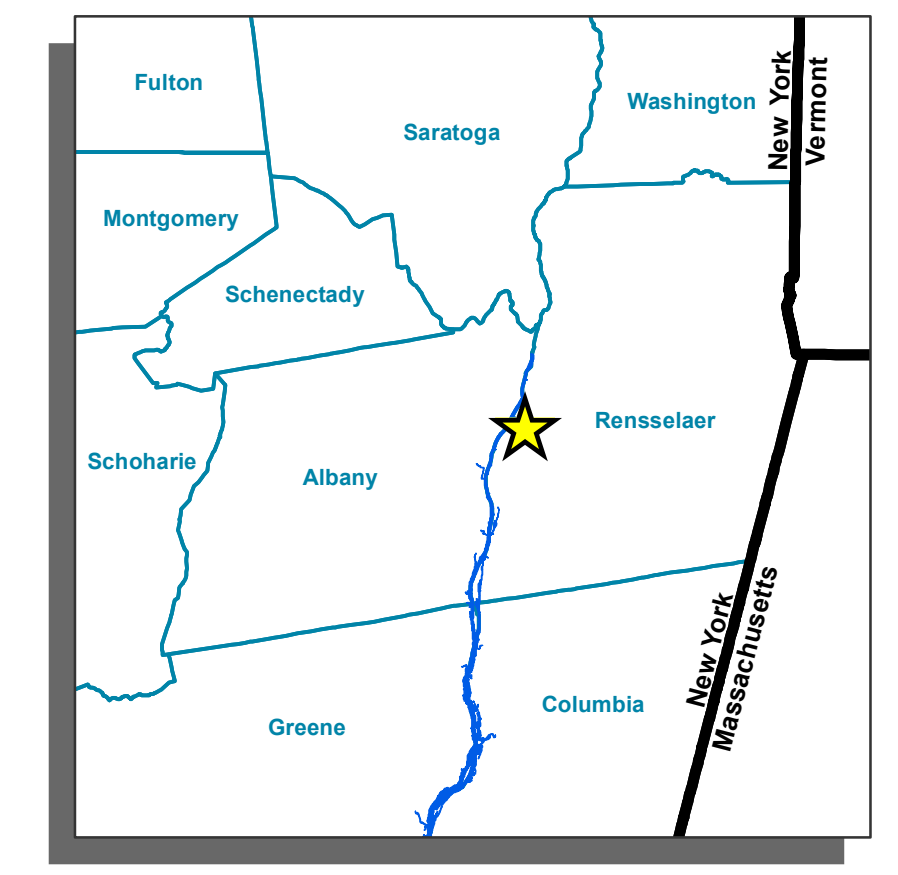
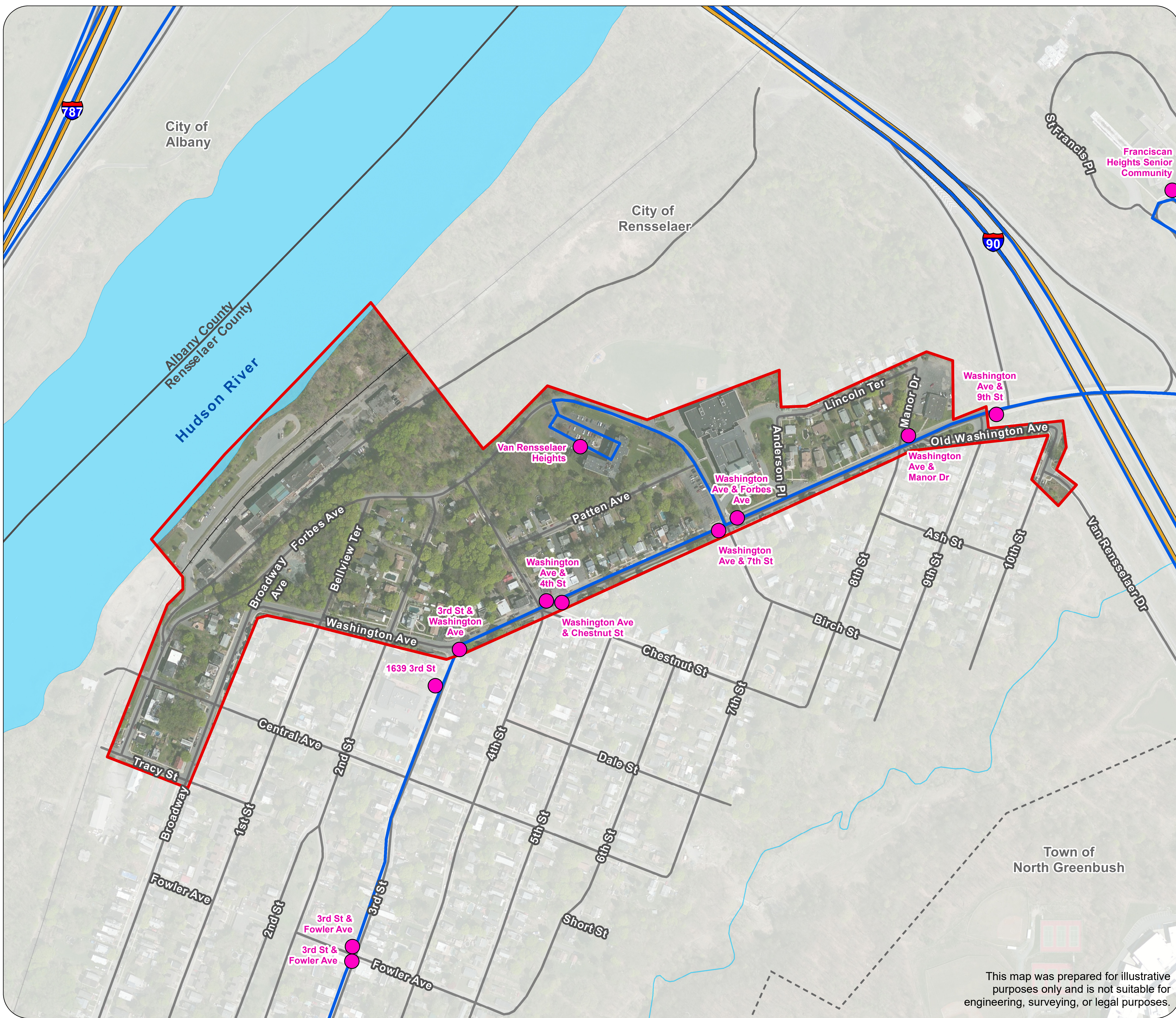
CITY OF RENSSELAER

Waterfront Connectivity Study

DRAFT
Transportation
April 2022

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Railroad
- Interstates
- Local Roads
- River/Stream
- Hudson River
- CDTA Bus Route
- Active CDTA Bus Stop



This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.

Sources:
Esri, NYS ITS, City of Rensselaer, Rensselaer County

0 200 400 Feet

Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

CDTA Ridership in Rensselaer Waterfront Study Area
Date Range: 9/1/2019-1/31/2020 vs. 9/1/2021-1/31/2022
Data Source: INIT MOBILEStatistics

Stop	Route No.	Direction	Stop no	2019-
				Daily boardings
Washington Ave & 7th St	214	EB	10746	4.1
Washington Ave & 9th St	214	EB	10751	2.9
Washington Ave & Manor Dr	214	WB	10782	4.1
Washington Ave & Forbes Ave	214	WB	10783	11.5
Washington Ave & 4th St	214	WB	10785	0.8
3rd St & Washington Ave	214	EB	11406	5.4
Washington Ave & Chestnut St	214	EB	11407	2.9

20 (pre-shutdown)		2021-2022			Change (Count)		
Daily alightings	Total activity	Daily boardings	Daily alightings	Total activity	Daily boardings	Daily alightings	Total activity
2.8	6.9	4.1	4.5	8.6	0	-2	-2
7.8	10.7	1.3	3.4	4.7	2	4	6
2.5	6.6	4.1	2.4	6.5	0	0	0
9.9	21.4	4.8	5.0	9.9	7	5	12
3.0	3.8	8.2	6.0	14.2	-7	-3	-10
7.0	12.4	2.9	4.2	7.1	3	3	5
0.9	3.9	7.0	7.3	14.3	-4	-6	-10

Change (%)			Notes
Daily boardings	Daily alightings	Total activity	
0%	58%	24%	
-56%	-56%	-56%	
0%	-1%	-1%	
-58%	-49%	-54%	
903%	99%	269%	
-47%	-39%	-43%	
140%	675%	270%	

APPENDIX D: PARKING UTILIZATION RATE

Parking Inventory

Street	Segment	Available Spaces*	8/11/22 12PM		8/12/22 8AM		8/15/22 10PM		8/15/22 10PM	
			Utilized Spaces	% Util.	Utilized Spaces	% Util.	Utilized Spaces	% Util.	Utilized Spaces	% Util.
Tracy St	Broadway to Forbes Ave	5	1	20%	1	20%	1	20%	1	20%
Broadway	Tracy St to Washington Ave	38	7	18%	2	5%	7	18%	5	13%
Washington Ave	Broadway to Bellview Tr	6	1	17%	1	17%	0	0%	0	0%
Washington Ave	Bellview Tr to Second St	7	0	0%	0	0%	2	29%	2	29%
Washington Ave	Second St to Fourth St	31	1	3%	1	3%	2	6%	2	6%
Washington Ave	Fourth St to Forbes Ave	32	0	0%	0	0%	5	16%	5	16%
Washington Ave	Forbes Ave to Manor Dr	24	2	8%	0	0%	0	0%	1	4%
Forbes Ave	Tracy St to Washington Ave	24	2	8%	0	0%	7	29%	9	38%
Central Ave Ext.	Forbes Ave to Broadway	6	1	17%	1	17%	2	33%	2	33%
Bellview Tr	Washington Ave to Forbes Ave	31	8	26%	7	23%	6	19%	4	13%
2nd St	Washington Ave to Forbes Ave	27	7	26%	5	19%	8	30%	9	33%
4th St	Washington Ave to Forbes Ave	34	10	29%	14	41%	13	38%	27	79%
Patten Ave	Fourth St to Forbes Ave	45	11	24%	18	40%	13	29%	17	38%
Anderson Pl	Washington Ave to Lincoln Tr	7	1	14%	1	14%	3	43%	2	29%
Lincoln Tr	Anderson Pl to Manor Dr	24	4	17%	11	46%	13	54%	9	38%
Manor Dr	Lincoln Tr to Washington Ave	5	0	0%	1	20%	2	40%	2	40%
Old Washington Ave	Washington Ave to Tenth St	11	2	18%	2	18%	11	100%	5	45%
Tenth St	Old Washington Ave to Van Rensselaer Dr	2	1	50%	2	100%	2	100%	2	100%



CITY OF RENSSELAER Waterfront Connectivity Study

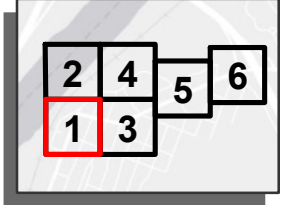
Property Ownership
April 2022

LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Thursday,
8/11/2022
12:00 PM

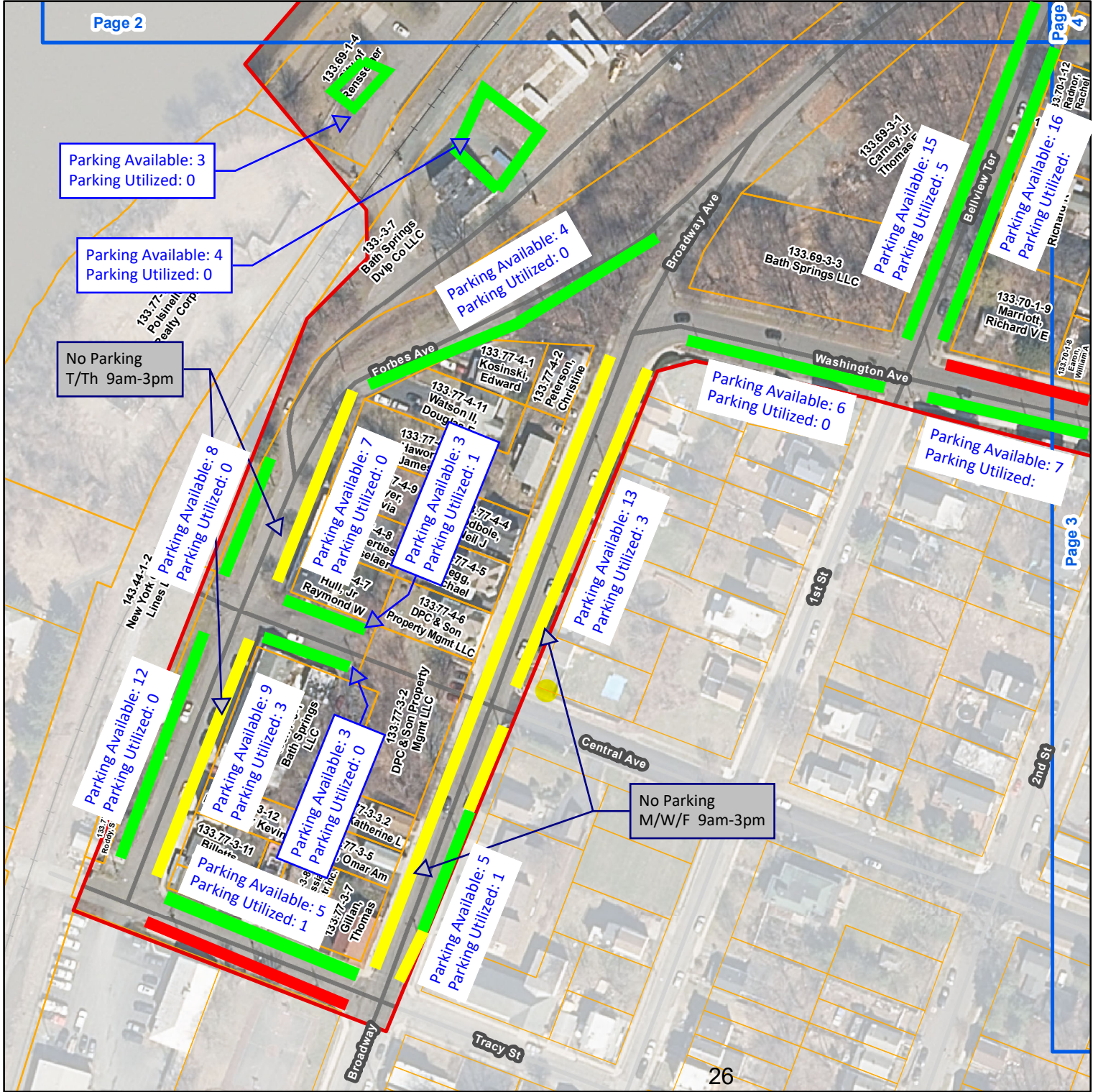
Page 1



0 50 100 Feet



Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065





CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

Albany County
Rensselaer County

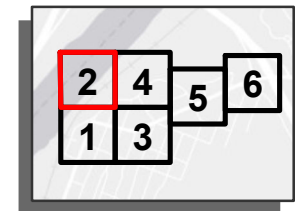
Page 4

LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Thursday,
8/11/2022
12:00 PM

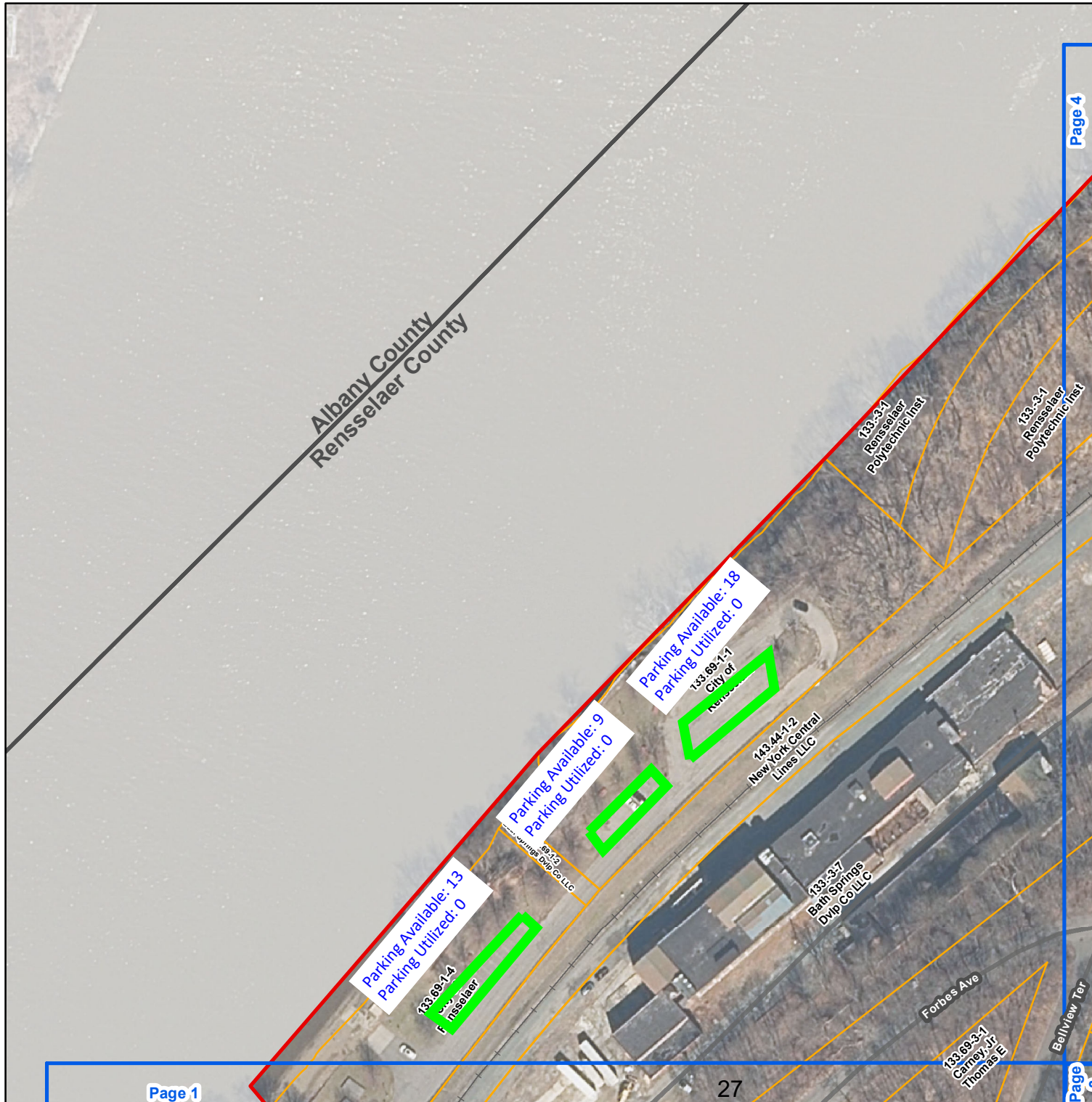
Page 2

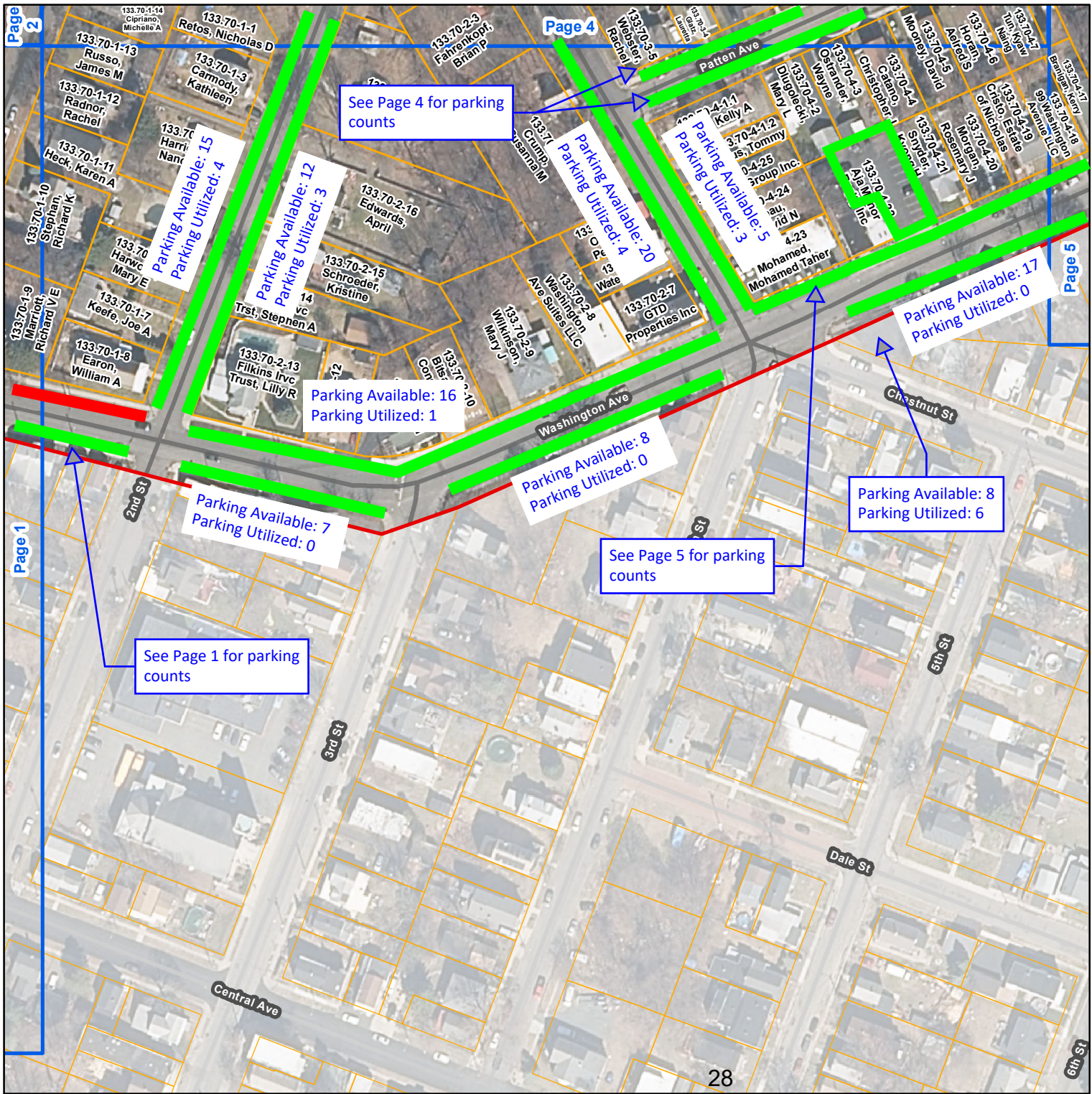


0 50 100 Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065





CITY OF RENSSELAER
Waterfront Connectivity Study

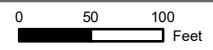
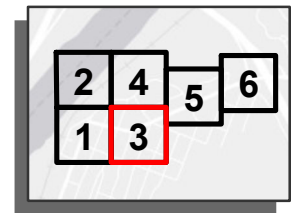
Property Ownership
April 2022

LEGEND

- █ NO PARKING / NO STANDING
- █ PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- █ PARKING PERMITTED (TIME CONSTRAINTS)

Thursday,
8/11/2022
12:00 PM

Page 3

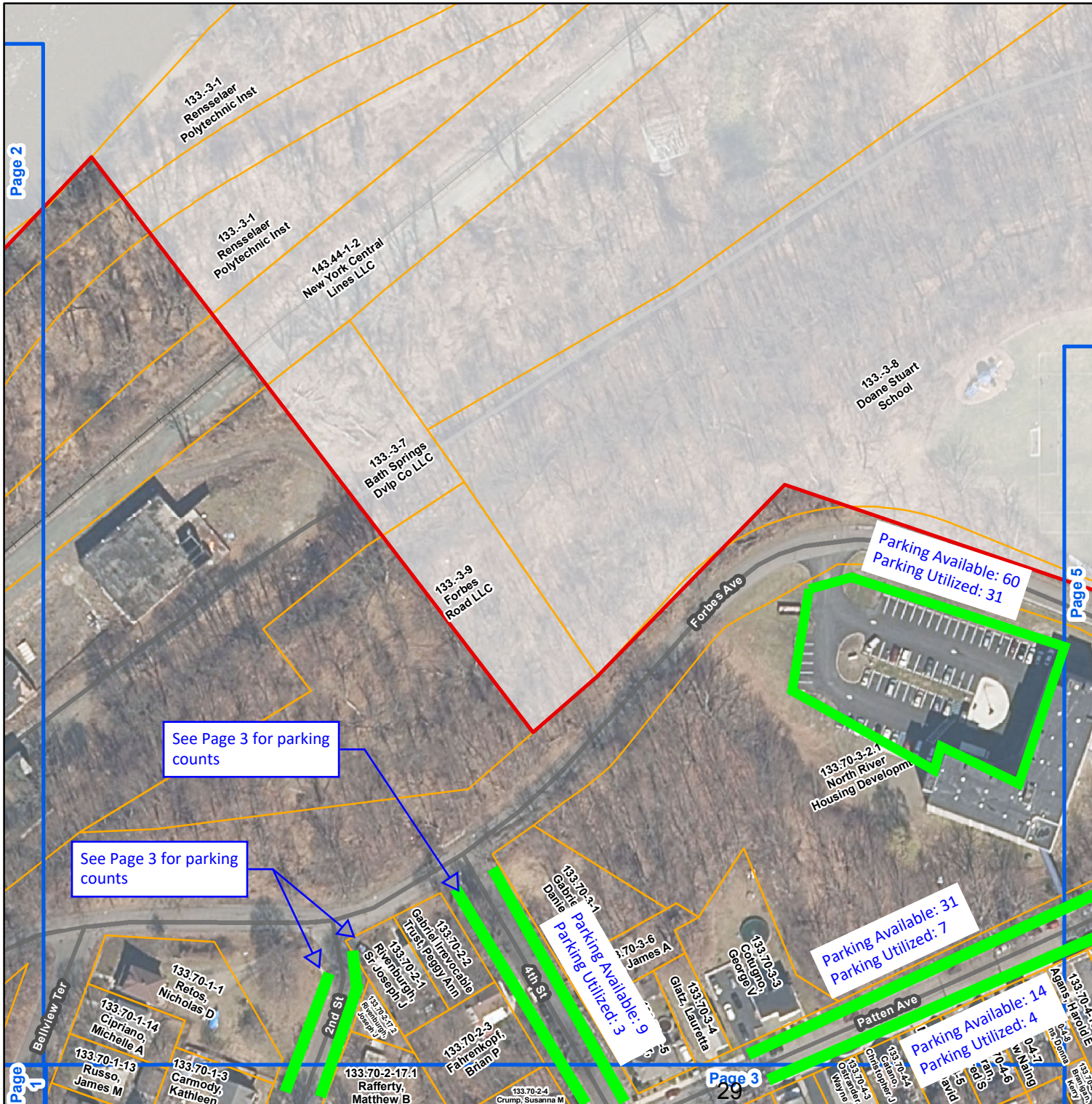




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

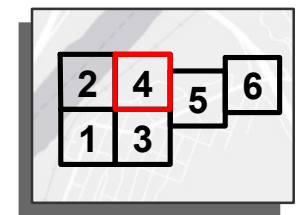


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Thursday,
8/11/2022
12:00 PM

Page 4



0 50 100 Feet

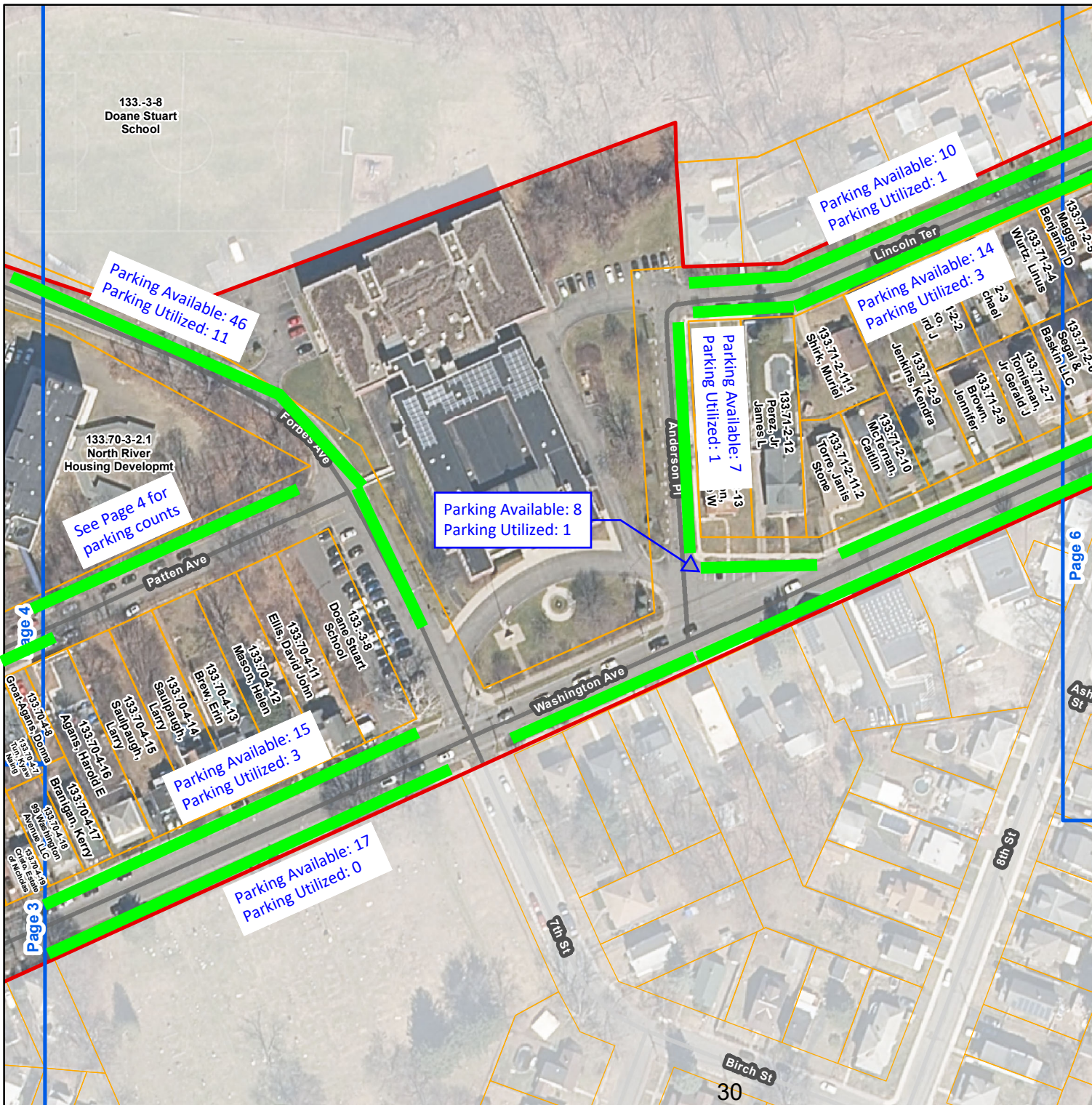




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

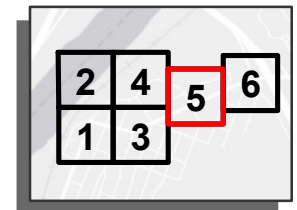


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Thursday,
8/11/2022
12:00 PM

Page 5



0 50 100 Feet

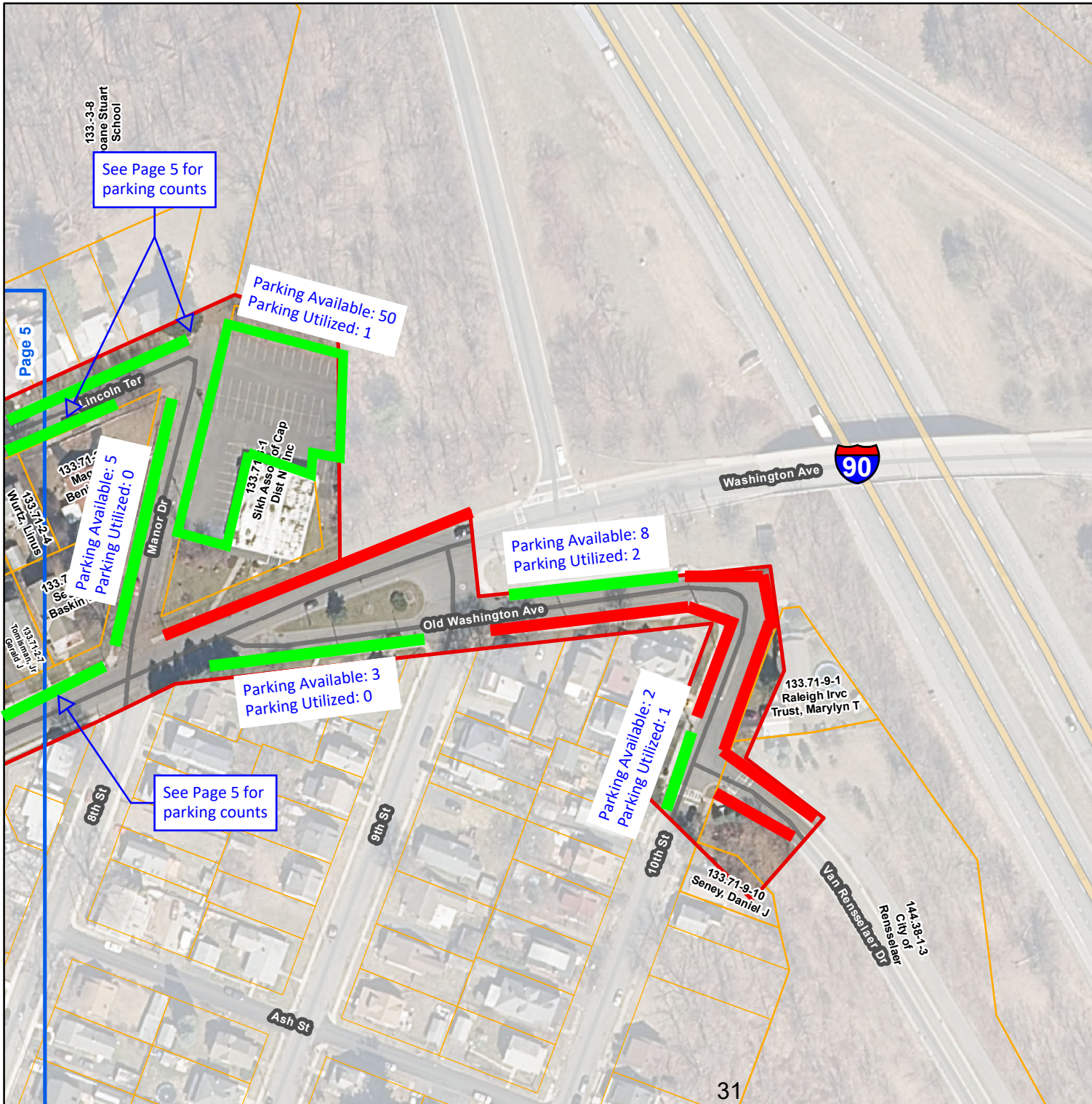




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

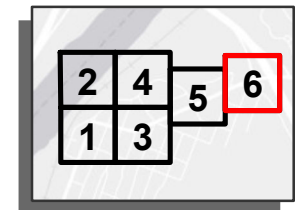


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Thursday,
8/11/2022
12:00 PM

Page 6



0 50 100 Feet





CITY OF RENSSELAER Waterfront Connectivity Study

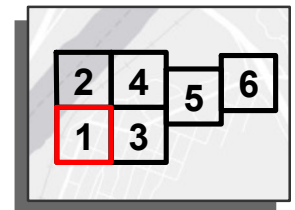
Property Ownership
April 2022

LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Friday,
8/11/2022
8:00 AM

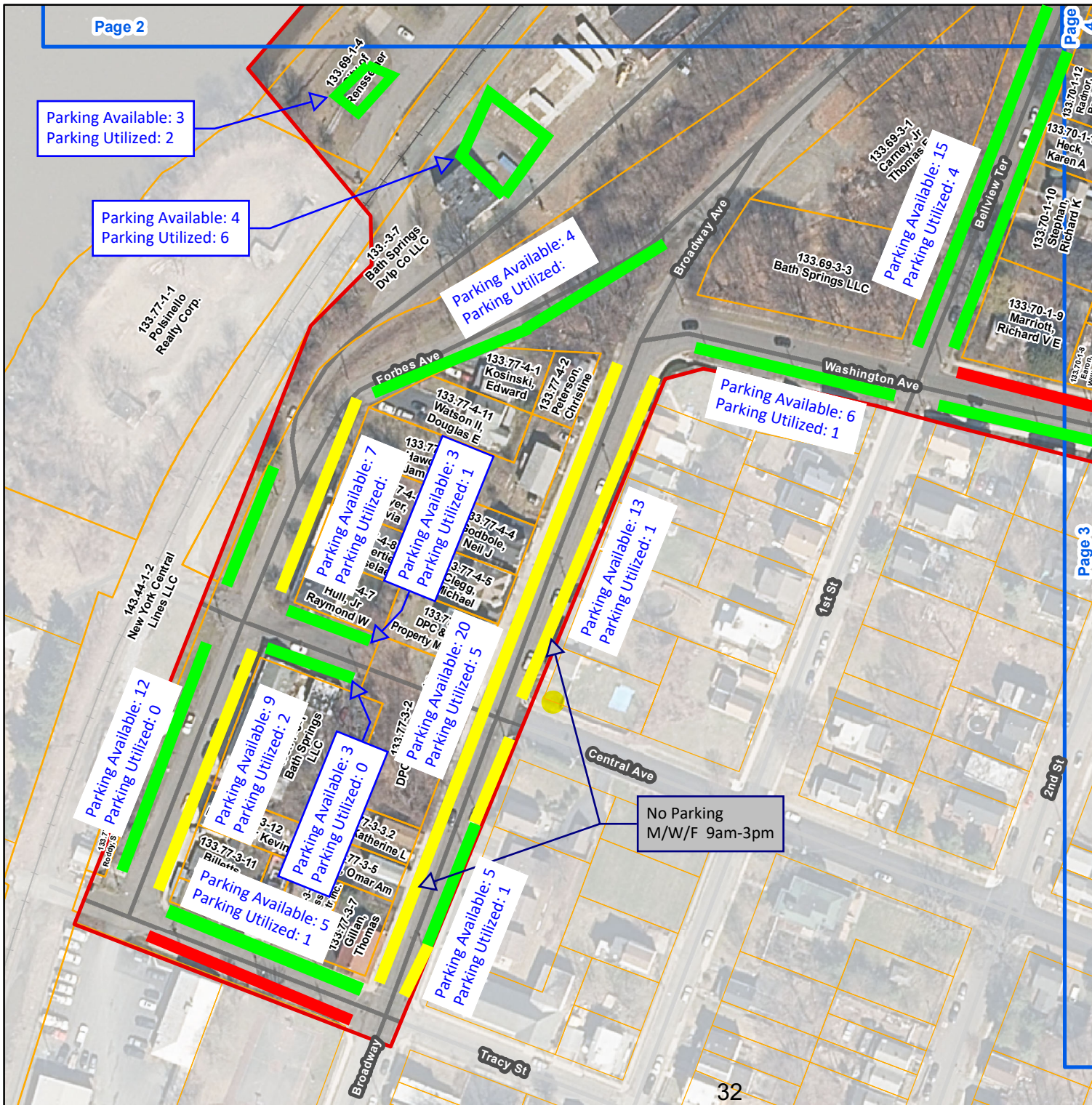
Page 1



0 50 100 Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065





CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

Albany County
Rensselaer County

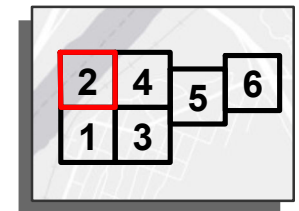
Page 4

LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Friday,
8/11/2022
8:00 AM

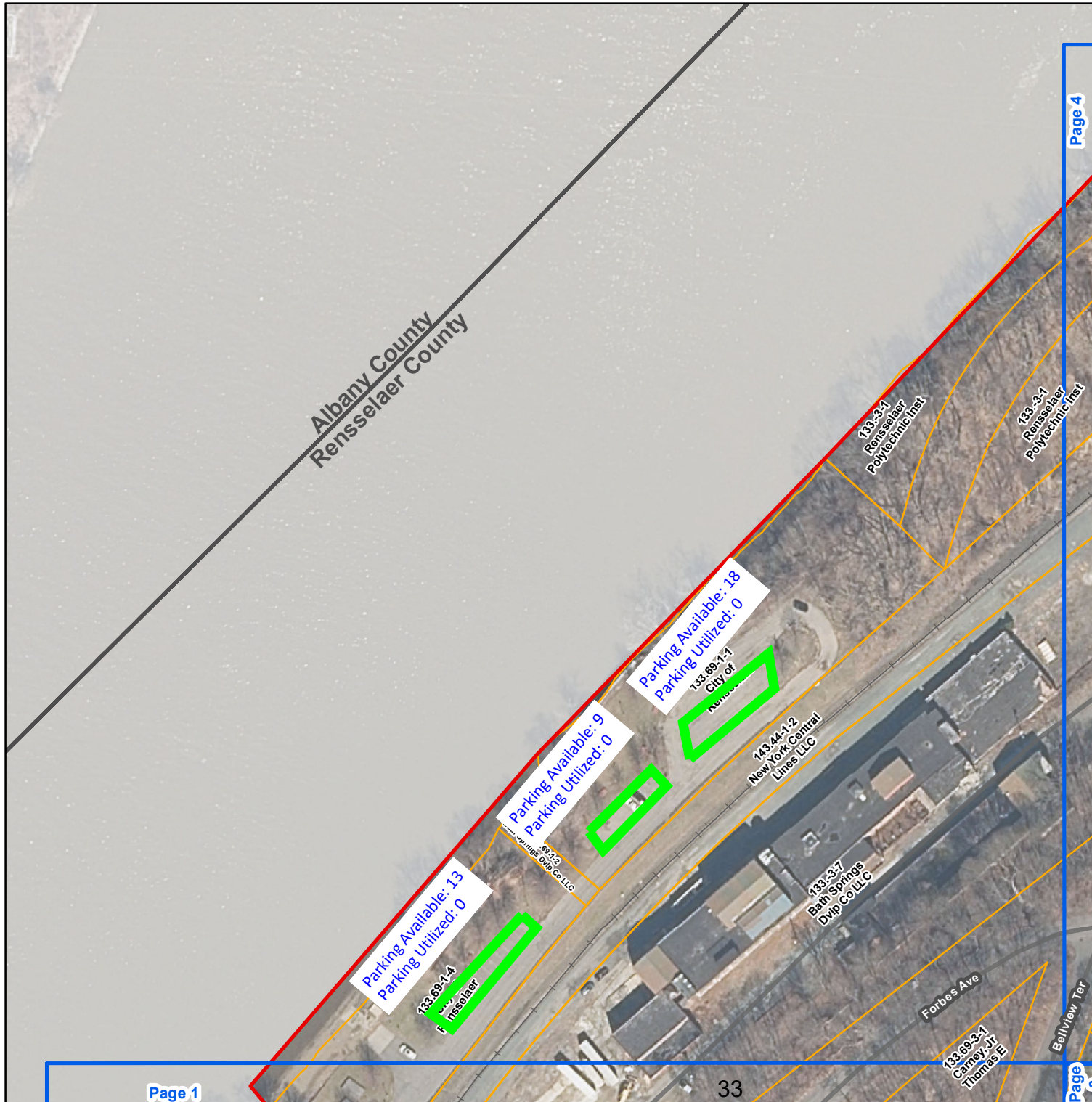
Page 2



0 50 100 Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

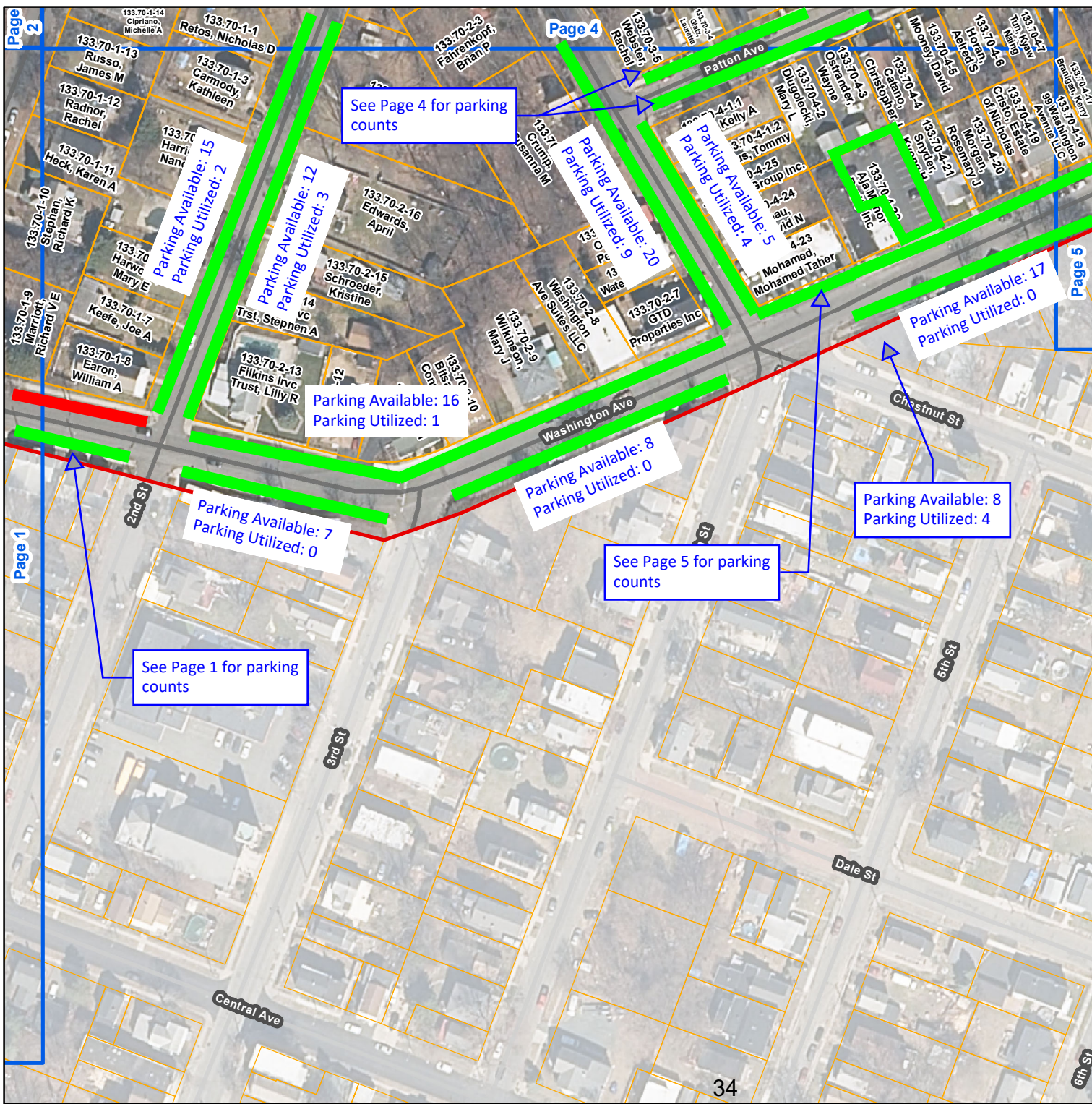




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

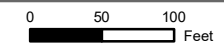
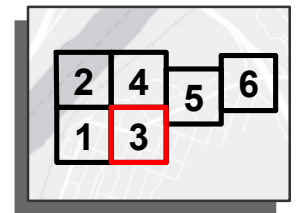


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Friday,
8/11/2022
8:00 AM

Page 3



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



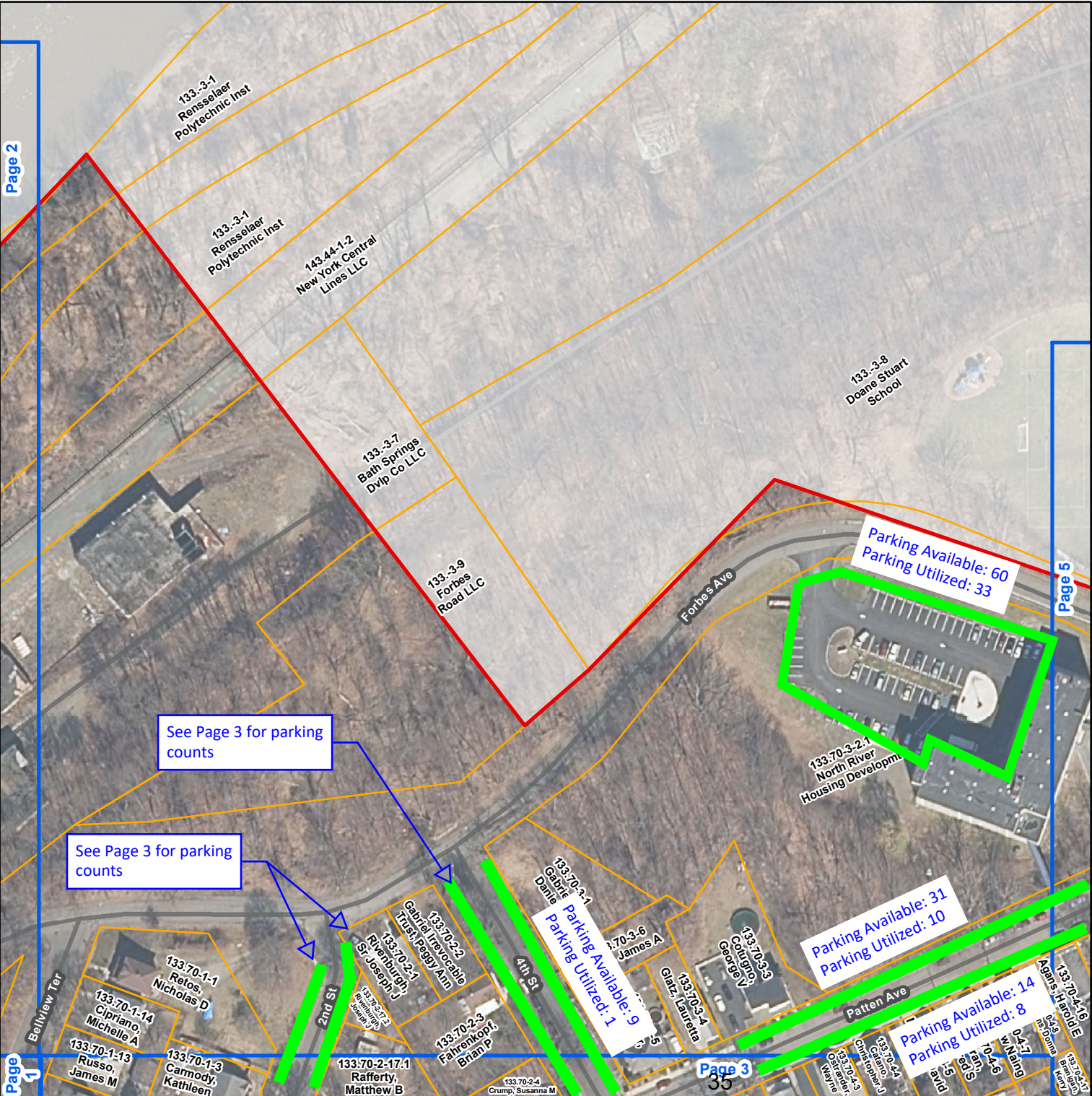
CITY OF RENSSELAER
Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

Page 2

Page 1

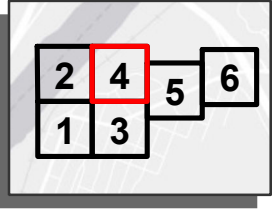


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Friday,
8/11/2022
8:00 AM

Page 4



0 50 100 Feet

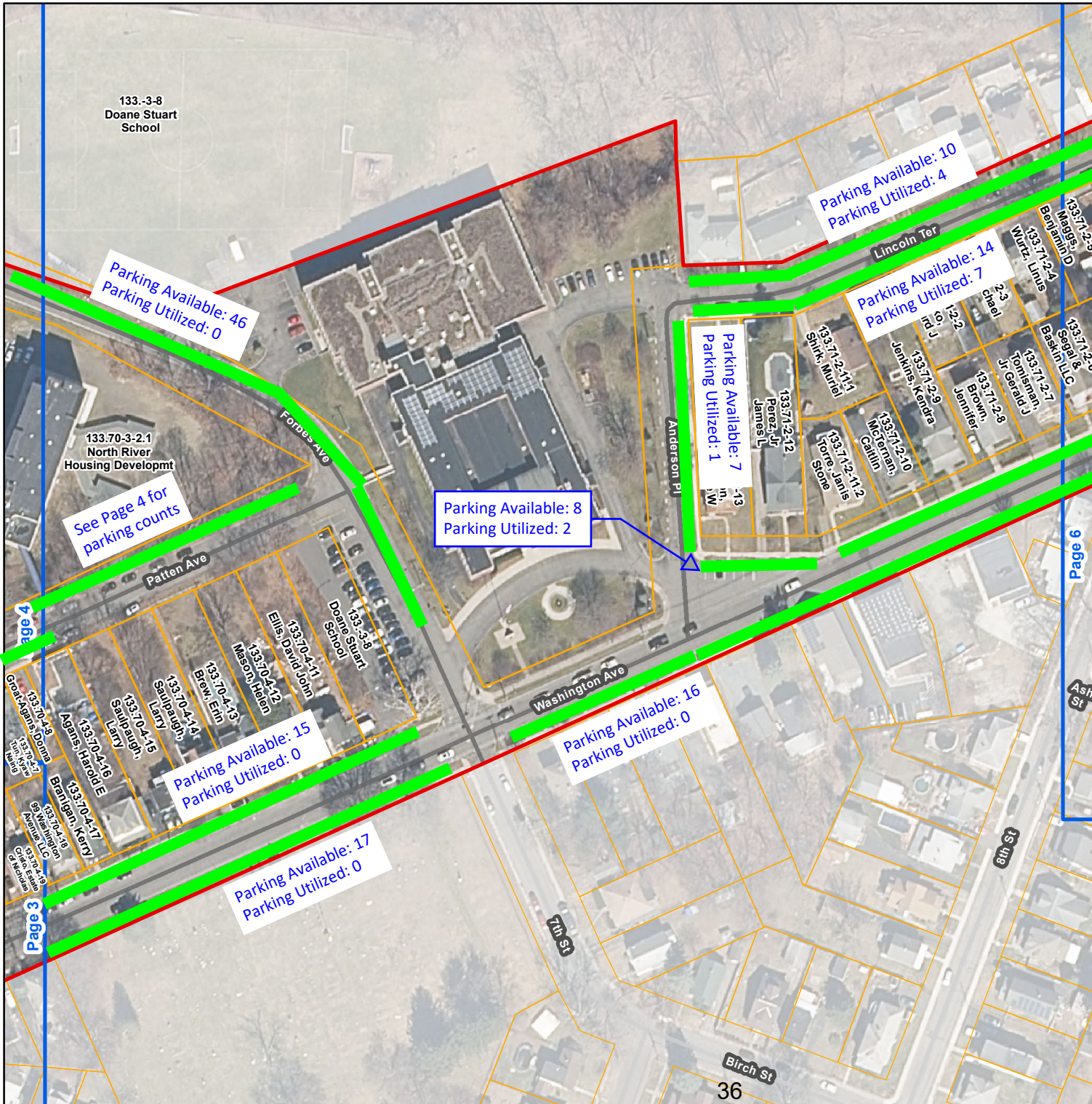




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

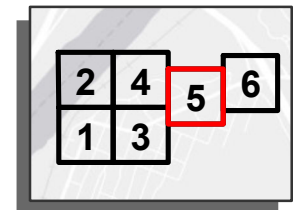


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Friday,
8/12/2022
8:00 AM

Page 5



0 50 100 Feet

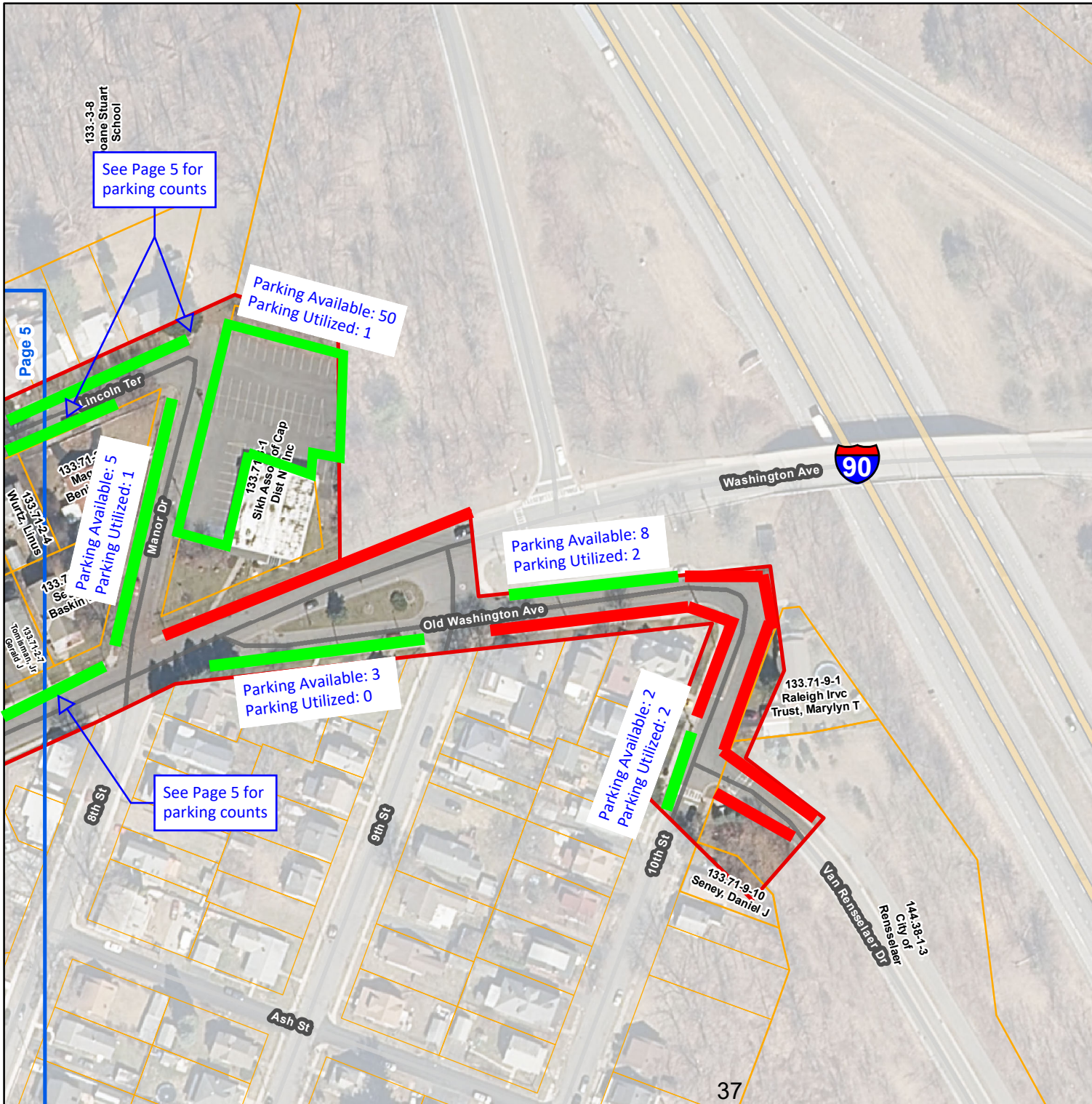




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

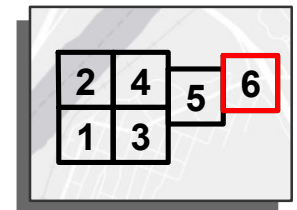


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Friday,
8/11/2022
8:00 AM

Page 6



0 50 100 Feet

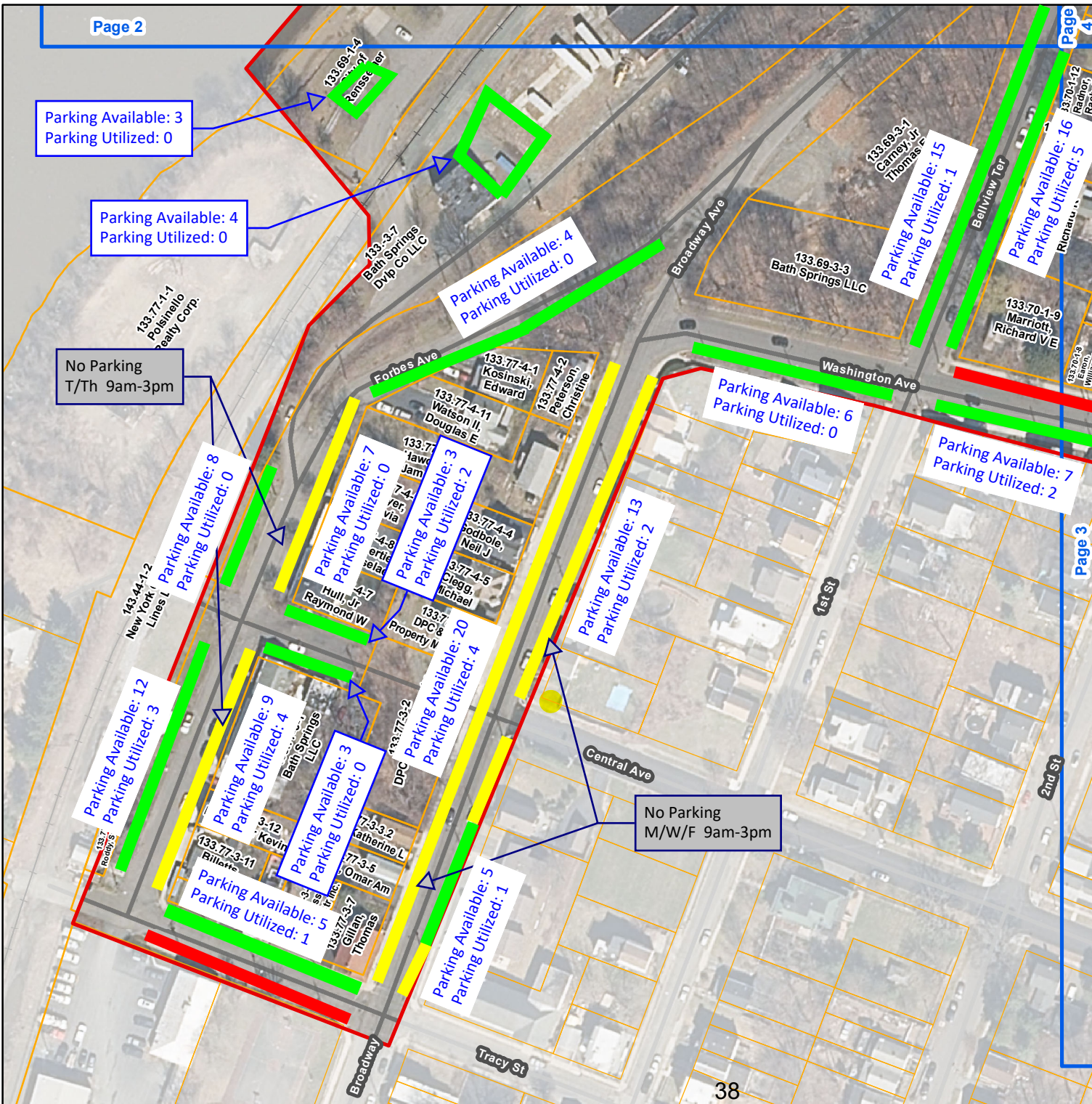




CITY OF RENSSELAER
Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

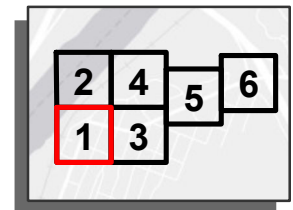


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Monday,
8/15/2022
10:00 PM

Page 1



0 50 100 Feet





CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

Albany County
Rensselaer County

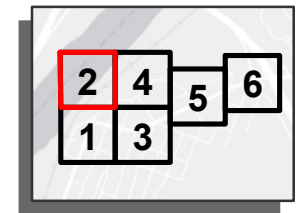
Page 4

LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Monday,
8/15/2022
10:00 PM

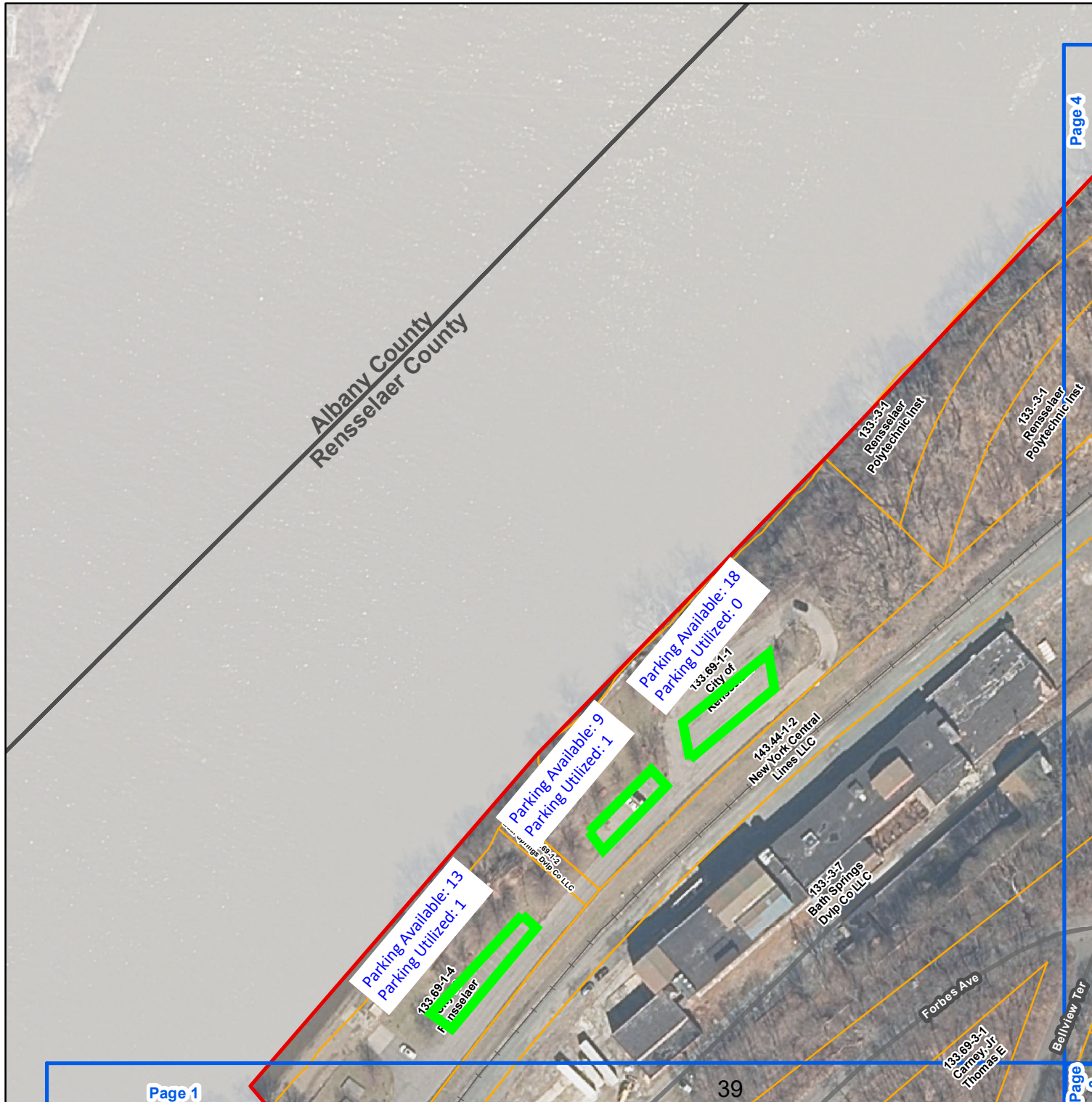
Page 2



0 50 100 Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



Page 1

39

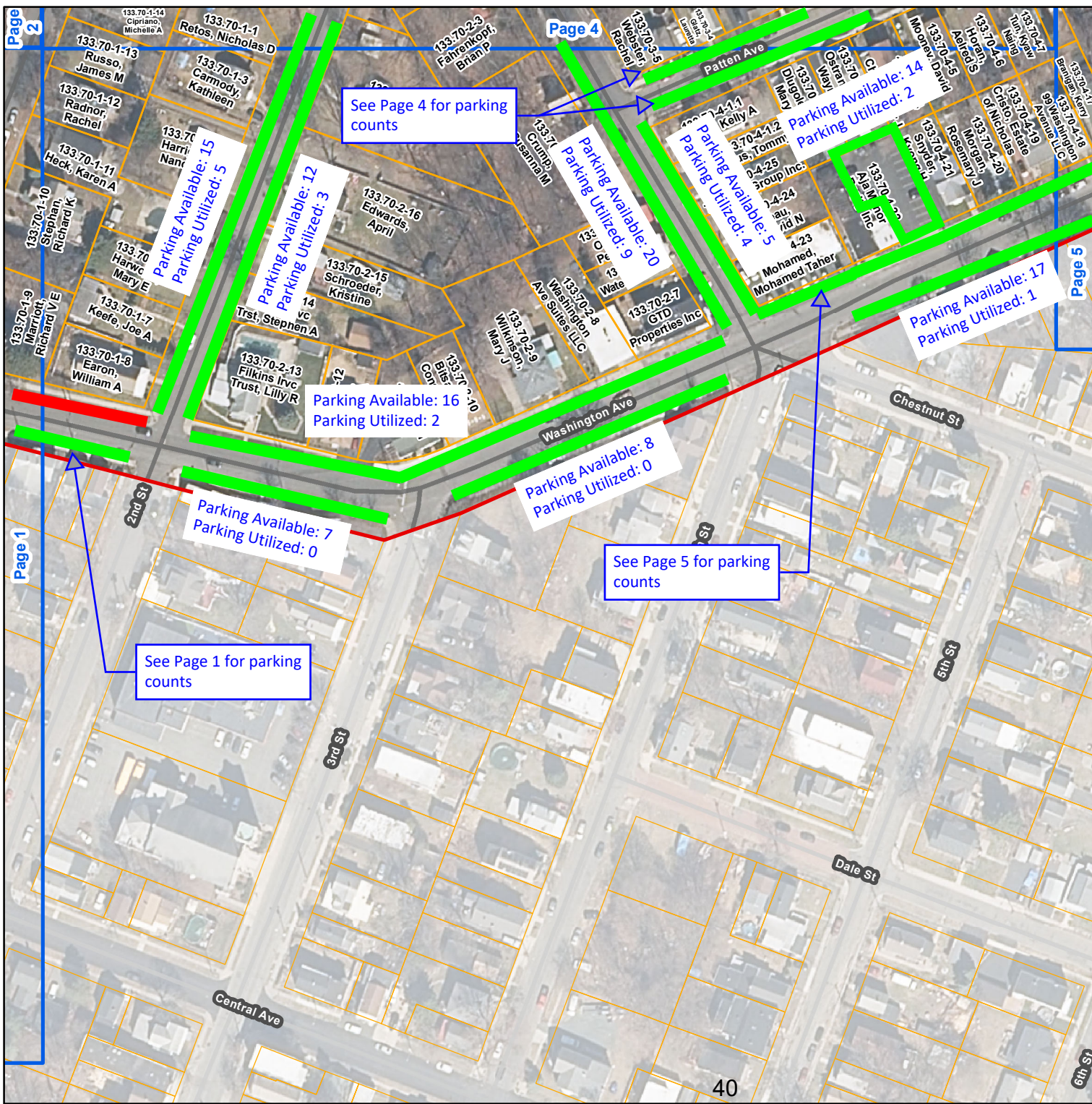
Page 3



CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership April 2022

DRAFT

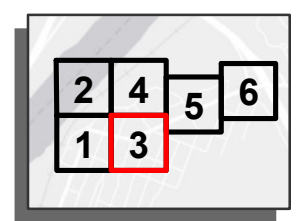


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Monday,
8/15/2022
10:00 PM

Page 3



0 50 100 Feet



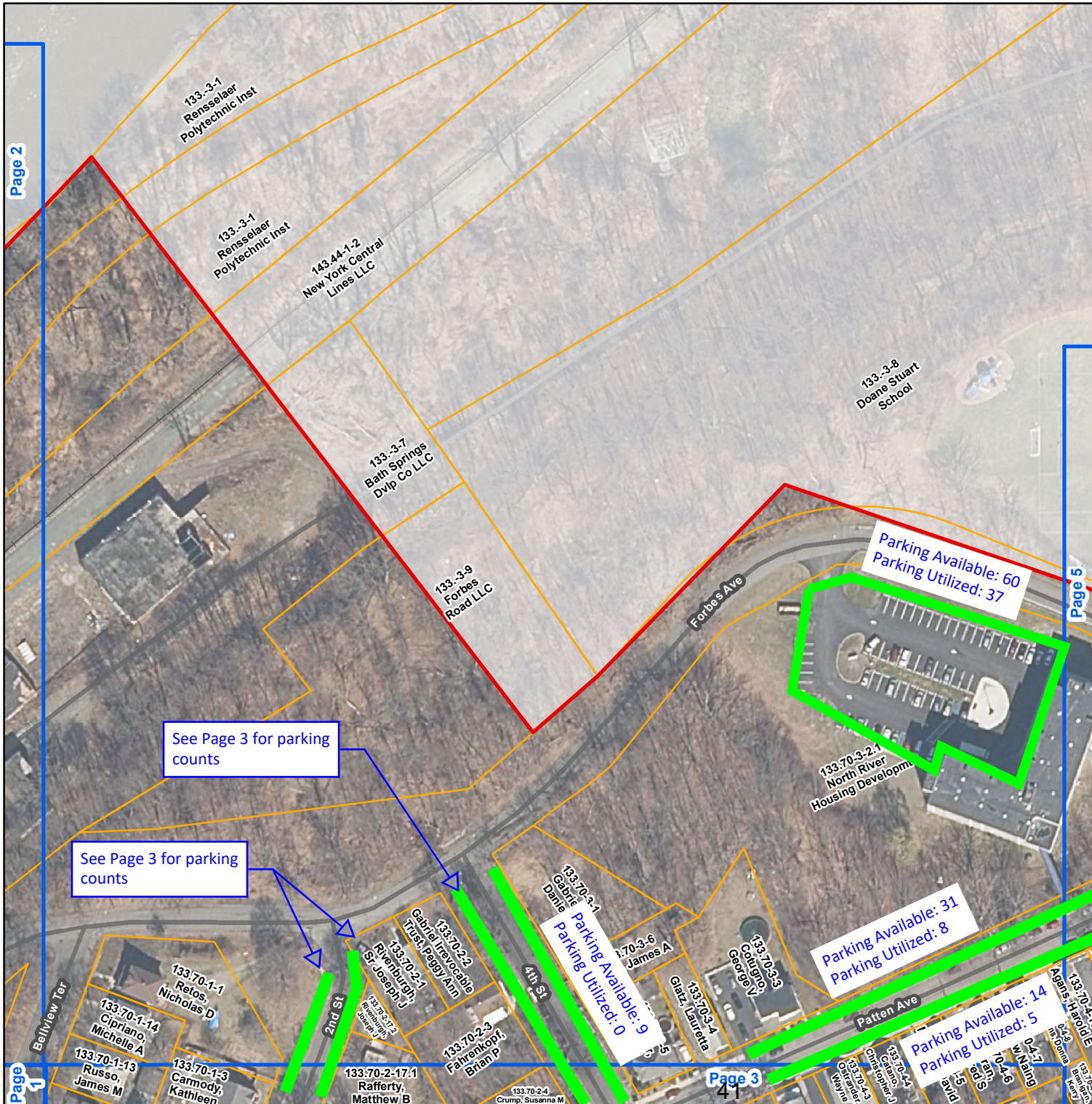
Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

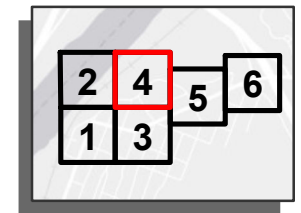


LEGEND

- █ NO PARKING / NO STANDING
- █ PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- █ PARKING PERMITTED (TIME CONSTRAINTS)

**Monday,
8/15/2022
10:00 PM**

Page 4



0 50 100 Feet



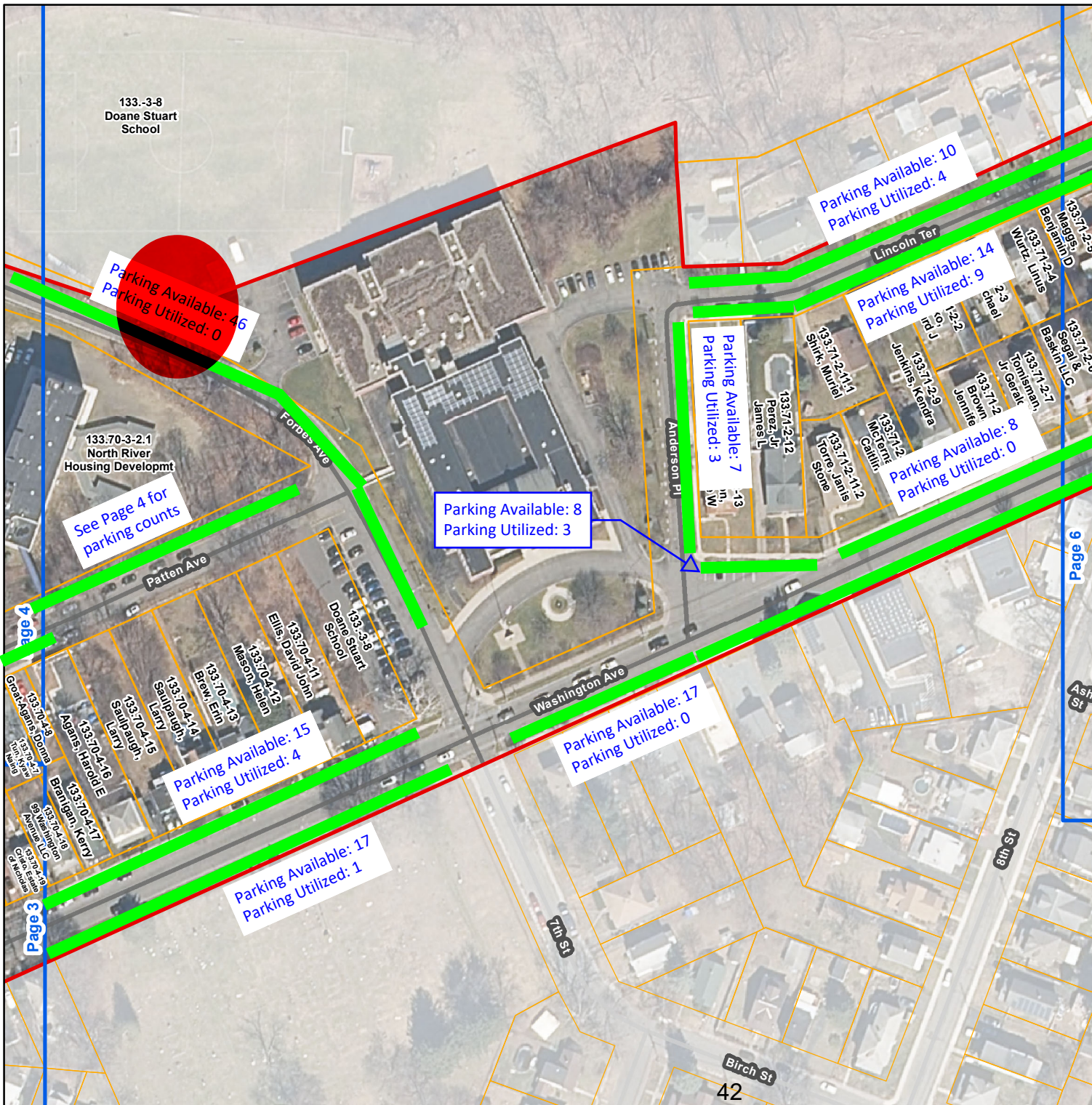
M Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

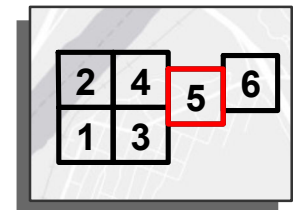


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Monday,
8/15/2022
10:00 PM

Page 5



0 50 100 Feet



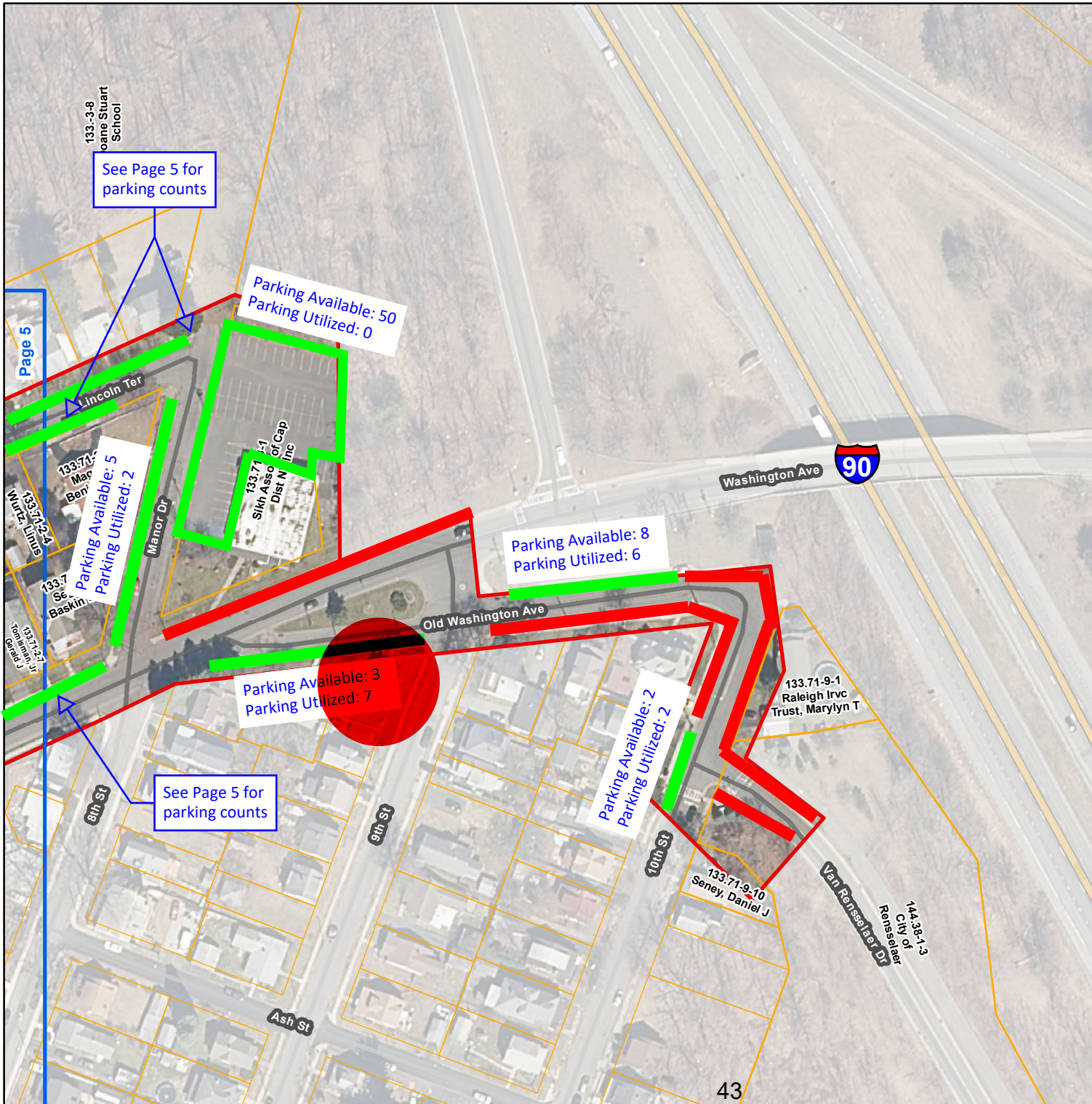
Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

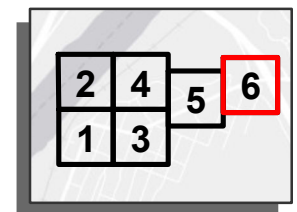


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Monday,
8/15/2022
10:00 PM

Page 6



0 50 100 Feet





CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

Albany County
Rensselaer County

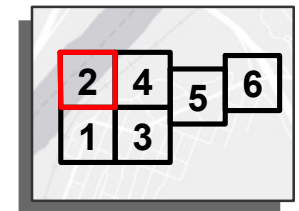
Page 4

LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Wednesday,
8/15/2022
10:00 PM

Page 2



0 50 100 Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

Page 1

45

Page 3

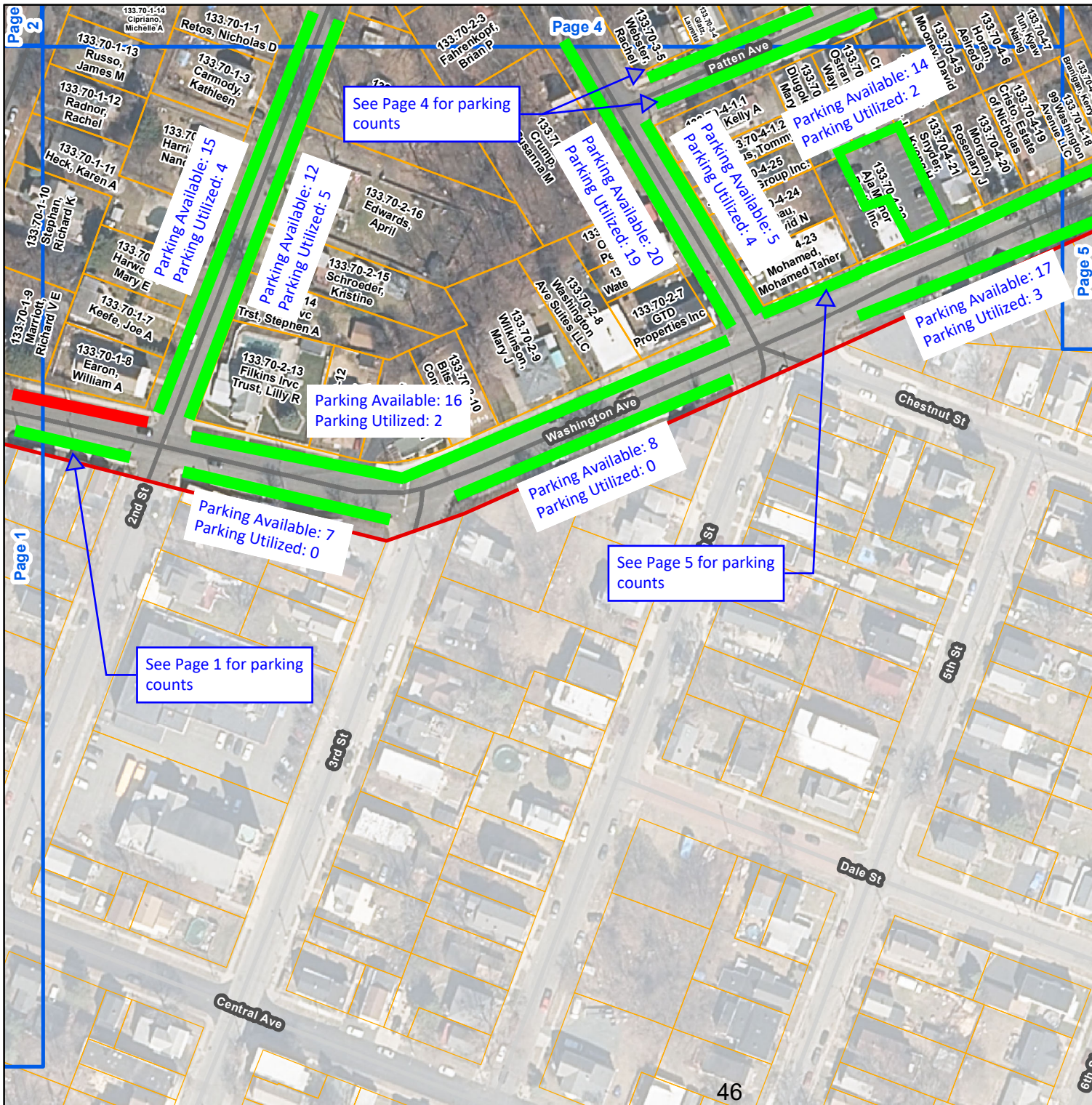




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

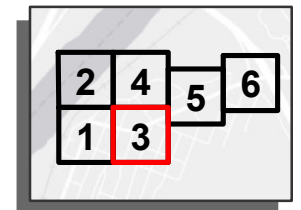


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Wednesday,
8/15/2022
10:00 PM

Page 3



0 50 100 Feet



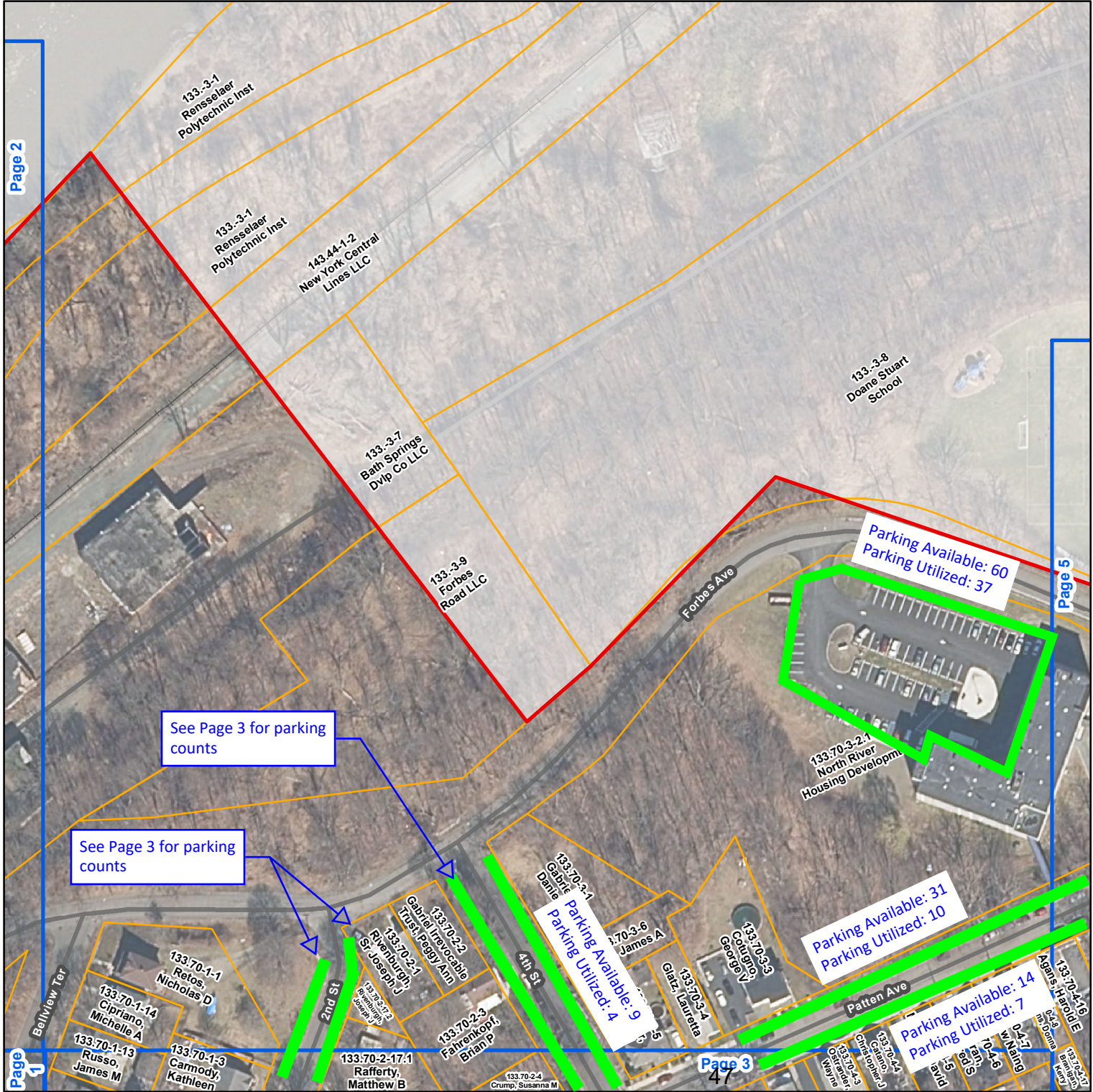
Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

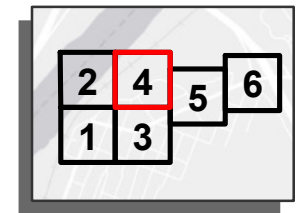


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Wednesday,
8/15/2022
10:00 PM

Page 4



0 50 100 Feet

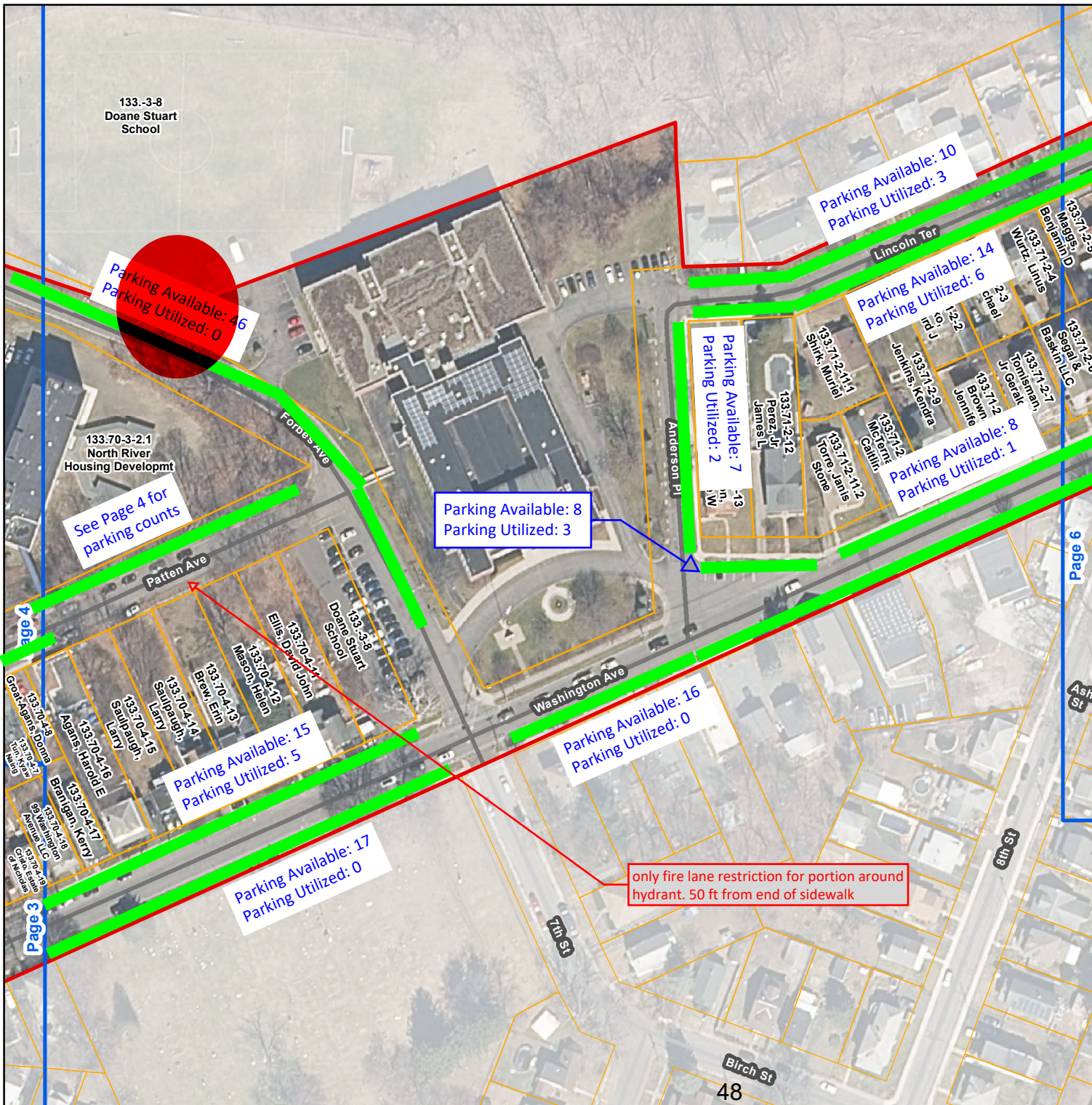




CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

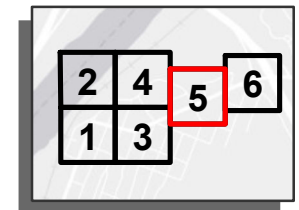


LEGEND

- NO PARKING / NO STANDING
- PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- PARKING PERMITTED (TIME CONSTRAINTS)

Wednesday,
8/15/2022
10:00 PM

Page 5



0 50 100 Feet



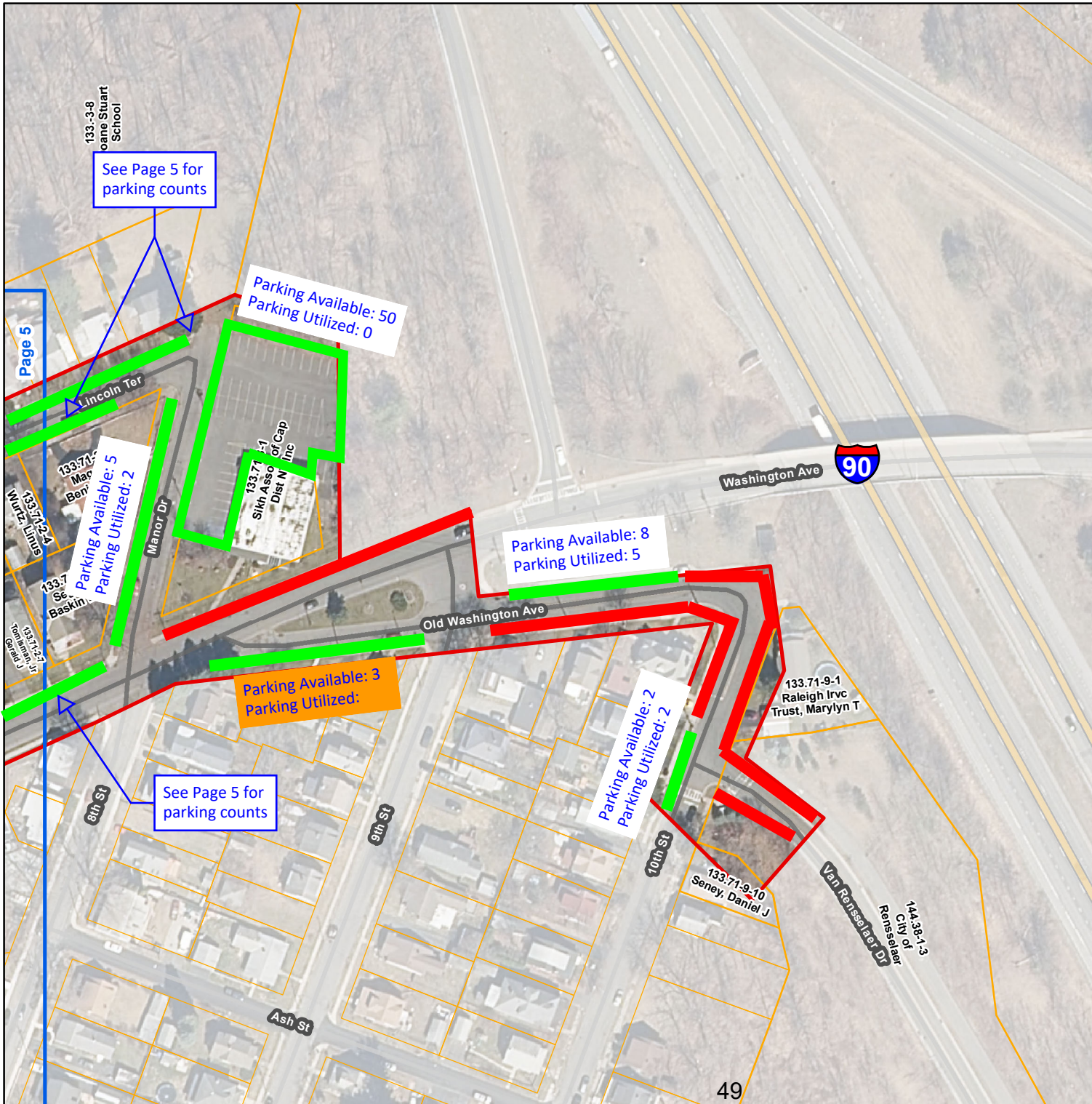
Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER Waterfront Connectivity Study

Property Ownership
April 2022

DRAFT

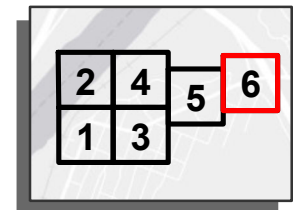


LEGEND

- █ NO PARKING / NO STANDING
- █ PARKING PERMITTED (EXCLUDING DRIVEWAYS)
- █ PARKING PERMITTED (TIME CONSTRAINTS)

Wednesday,
8/15/2022
10:00 PM

Page 6



0 50 100 Feet



Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

APPENDIX E: CRASH ANALYSIS

APPENDIX E – CRASH HISTORY

Crash data was examined for the most recent five-year period available, from November 1st, 2016 through October 31st, 2021. Data on these crashes was retrieved using NYSDOT ALIS (Accident Location Information System). Crash data was examined on all road segments within the study area boundary.

During this five-year period, 83 crashes were recorded in the study area. Of the 83 total crashes, 64 occurred on Washington Ave.

The most common accident type was collision between two motor vehicles, accounting for 71 crashes. There was one reported crash with a bicyclist, and no reported crashes with pedestrians. Collisions with various fixed objects, including curbing, accounted for nine of the crashes. Table 1 below summarizes collisions by type.

Collision Type	Number of Crashes
Collision with Light Support / Utility Pole	3
Collision with Animal	1
Collision with Bicyclist	1
Collision with Building / Wall	1
Collision with Curbing	3
Collision with Fire Hydrant	1
Collision with Motor Vehicle	71
Collision with Sign Post	1
Overtaken	1
Total	83

In the five-year period examined, no fatal crashes occurred. Four crashes involved injuries. The remaining 79 crashes involved only property damage or damage below the reportable threshold. The four injury involved crashes all occurred at intersections: one (1) at Broadway and Tracy Street, one (1) at Washington Avenue and Bellview Terrace, one (1) at Washington Avenue, Fourth Street, and Chestnut Street, and one (1) at Washington Avenue and Tenth Street (at the east boundary of the study area).

Collision Severity	Number of Crashes
Non-Reportable	28
Property Damage	51
Property Damage and Injury	4
Total	83

Table 3 below summarizes collisions between motor vehicles by type. The most common type was rear end collisions (23 crashes), followed by overtaking collisions (19 crashes). Collisions caused by right- or left-turning vehicles were relatively rare. Of the 19 overtaking crashes, 13 occurred in a one-block segment of Washington Ave between Fourth Street and Seventh Street / Forbes Avenue. Contributing

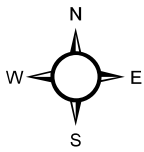
factors may include the high driveway density and lack of pavement striping. The prevalence of rear-end and overtaking collisions suggests that improved signage and striping may be needed to give drivers a better idea of where and when other vehicles may be slowing, stopping, or turning. Traffic calming measures that moderate vehicle speed may also reduce the frequency and severity of rear-end collisions.

Table 3	
Collision Types (Motor Vehicles)	Number of Crashes
Left Turn (Against Other Car)	5
Other	15
Overtaking	19
Rear End	23
Right Angle	11
Right Turn (With Other Car)	1
Sideswipe	6
Unknown	3
Total	83

Most of the reported crashes occurred in clear conditions. There were 16 crashes that occurred in adverse conditions (rain or snow). Table 4 below summarizes crashes by weather conditions.

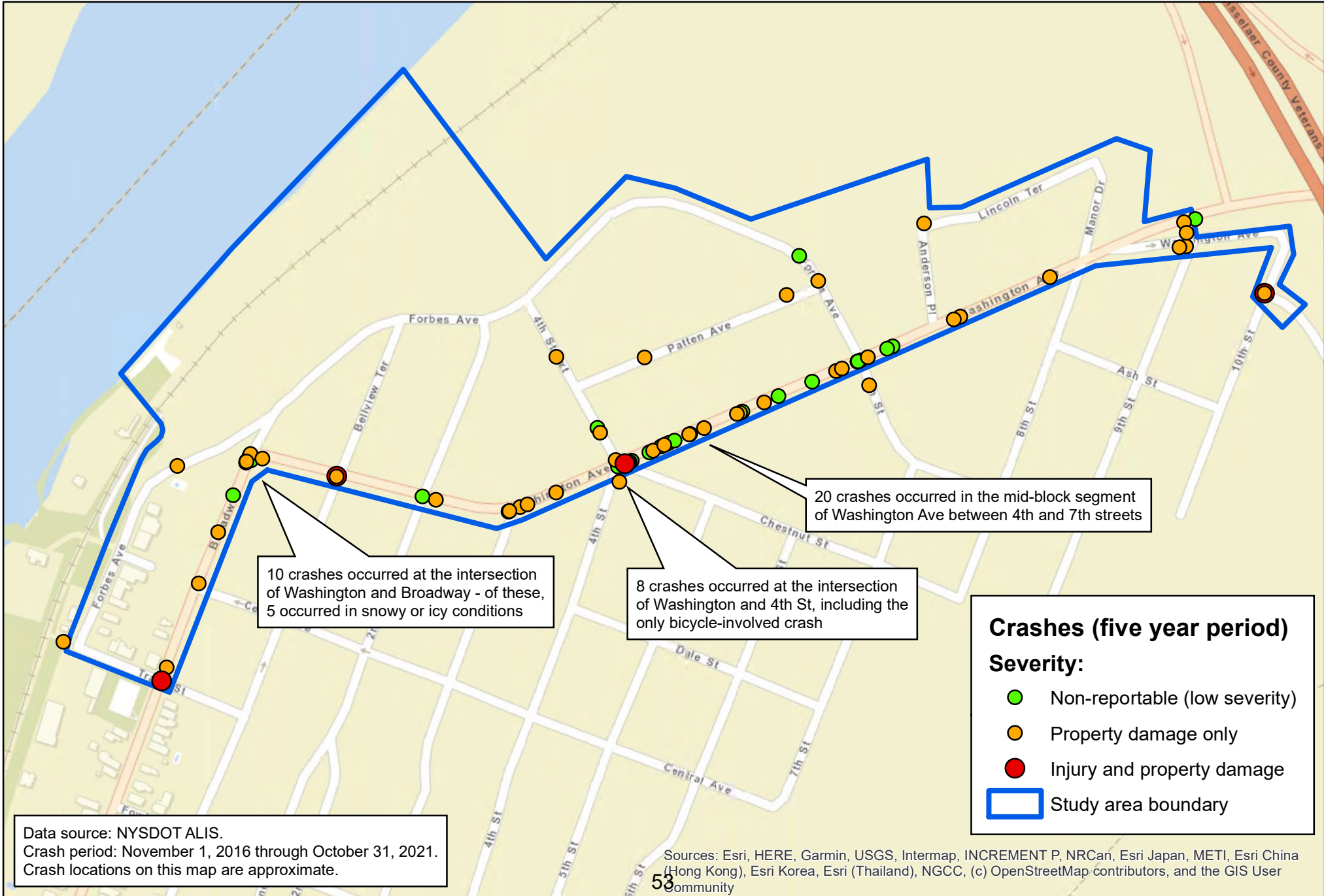
Table 4	
Weather Condition	Number of Crashes
Clear	50
Cloudy	16
Rain	6
Snow	10
Unknown	1
Total	83

The intersection with the most crashes was Washington Avenue and Broadway, with 10 crashes in the period examined. The five-legged intersection of Washington Avenue, Fourth Street, and Chestnut Street had 8 crashes, including the only bicycle-involved crash. The bicycle crash did not have a reported injury. The road segment with the most crashes was Washington Avenue, between Fourth Street and Seventh Street. This one-block segment had 20 total crashes, not including those at the intersections.



Rensselaer Waterfront Connections - Crash History

City of Rensselaer, NY



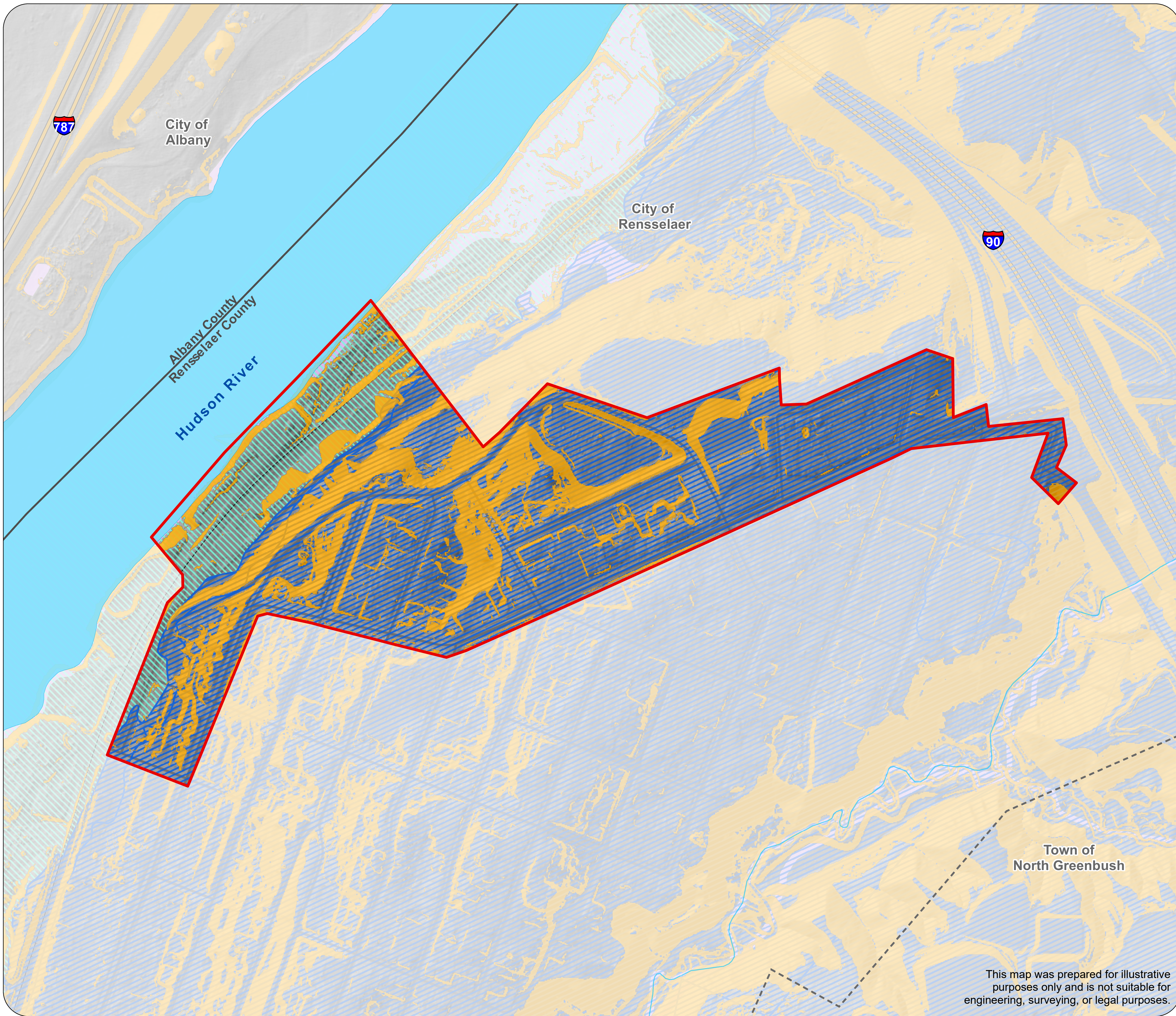
APPENDIX F: ENVIRONMENTAL RESOURCES



CITY OF RENSSELAER

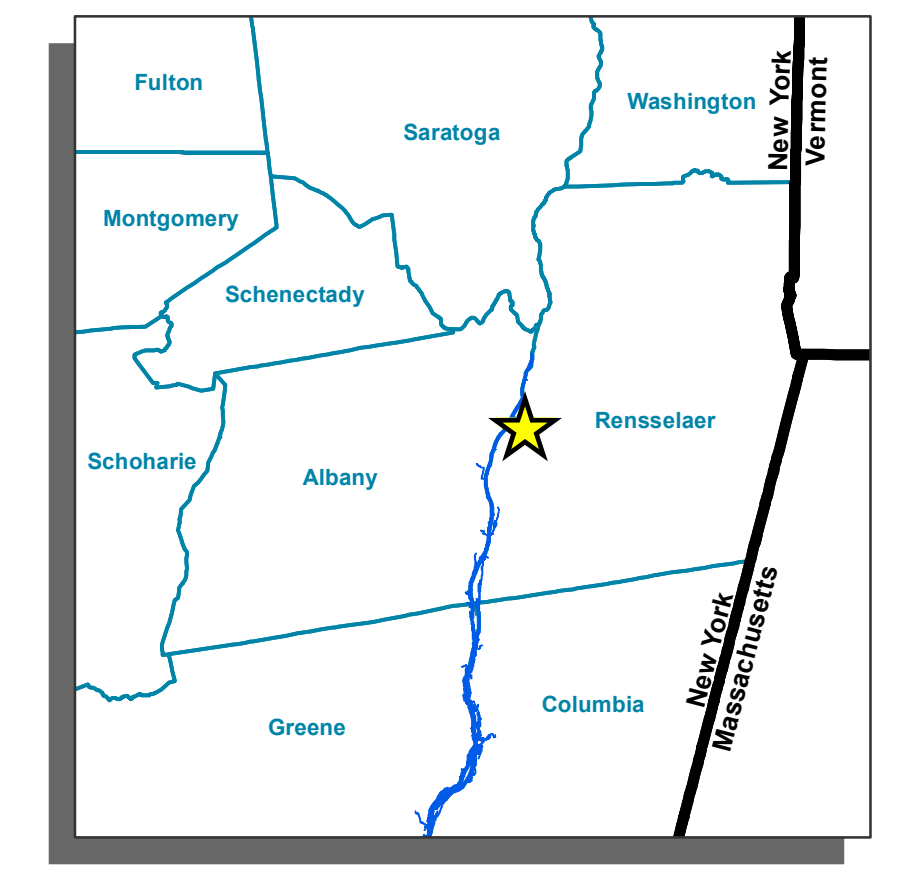
Waterfront Connectivity Study

DRAFT
Environmental Constraints
April 2022



LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Railroad
- Interstates
- Local Roads
- River/Stream
- Hudson River
- Steep Slopes >15%
- Known Wetlands
- FEMA Flood Hazard Areas**
 - 1% (100-Year) Flood Zone
 - 0.2% (500-Year) Flood Zone

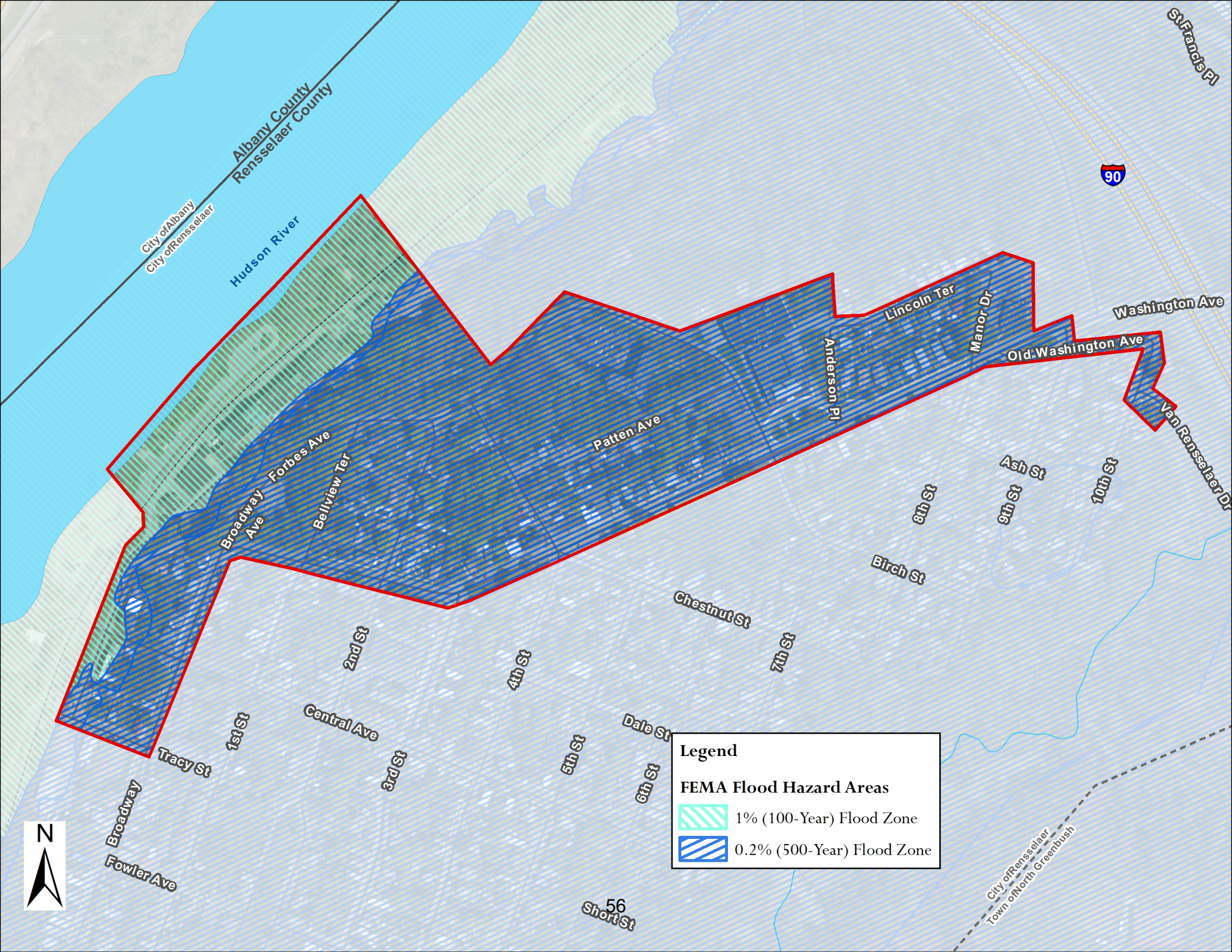


This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.

Sources:
Esri, NYS ITS, City of Rensselaer, Rensselaer County

0 200 400 Feet

Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



Albany County
Rensselaer County

City of Albany
City of Rensselaer

Hudson River

90

St. Francis Pl

Washington Ave

Lincoln Ter

Manor Dr

Old Washington Ave

Van Rensselaer Dr

Anderson Pl

Patten Ave

Ash St

9th St

10th St

8th St

Birch St

Chestnut St

7th St

4th St

2nd St

Dale St

6th St

5th St

Central Ave

3rd St

1st St

Tracy St

Broadway

Fowler Ave

56 Short St

City of Rensselaer
Town of North Greenbush

Legend

FEMA Flood Hazard Areas

- 1% (100-Year) Flood Zone
- 0.2% (500-Year) Flood Zone





CITY OF RENSSELAER

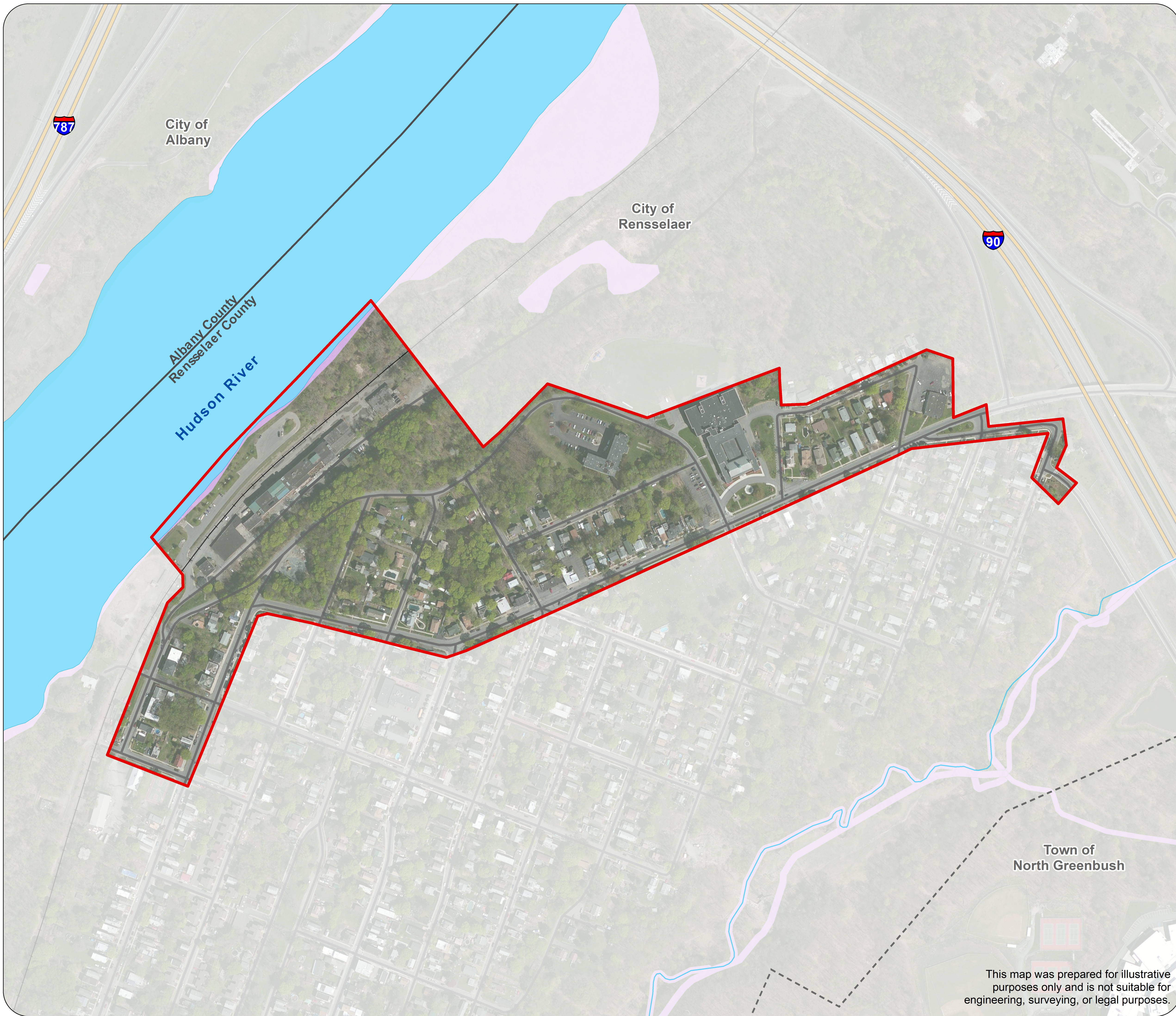
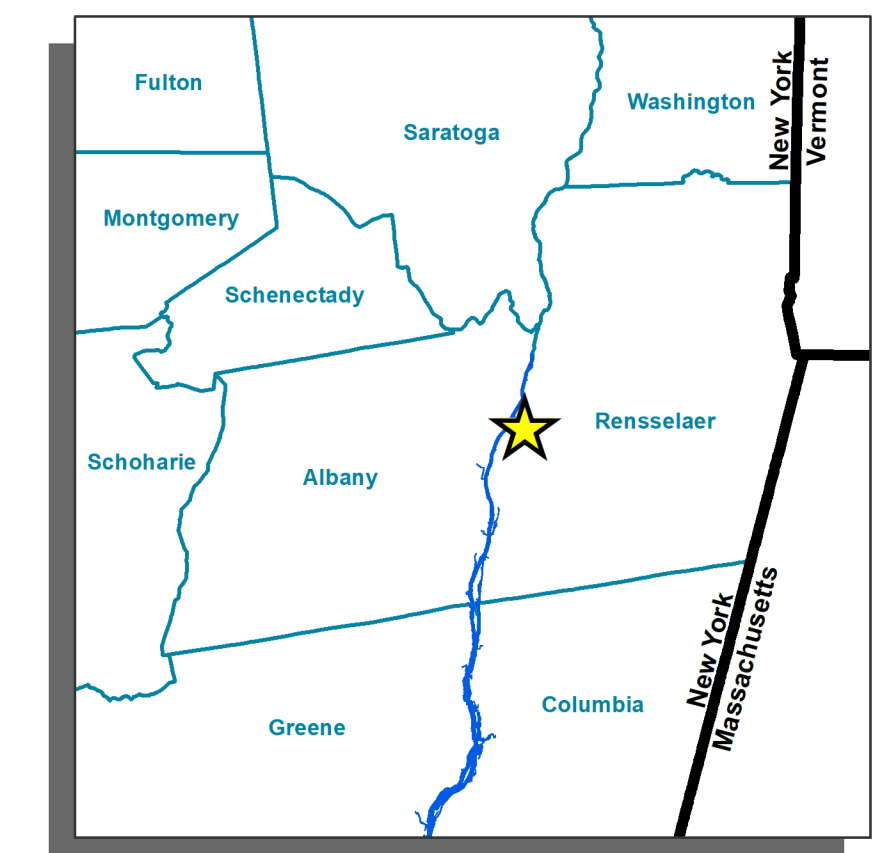
Waterfront Connectivity Study

DRAFT

Wetlands
April 2022

LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Railroad
- Interstates
- Local Roads
- River/Stream
- Hudson River
- Known Wetlands



This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.



Sources:
Esri, NYS ITS, City of Rensselaer,
Rensselaer County

0 200 400
Feet



Engineering and
Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065



CITY OF RENSSELAER

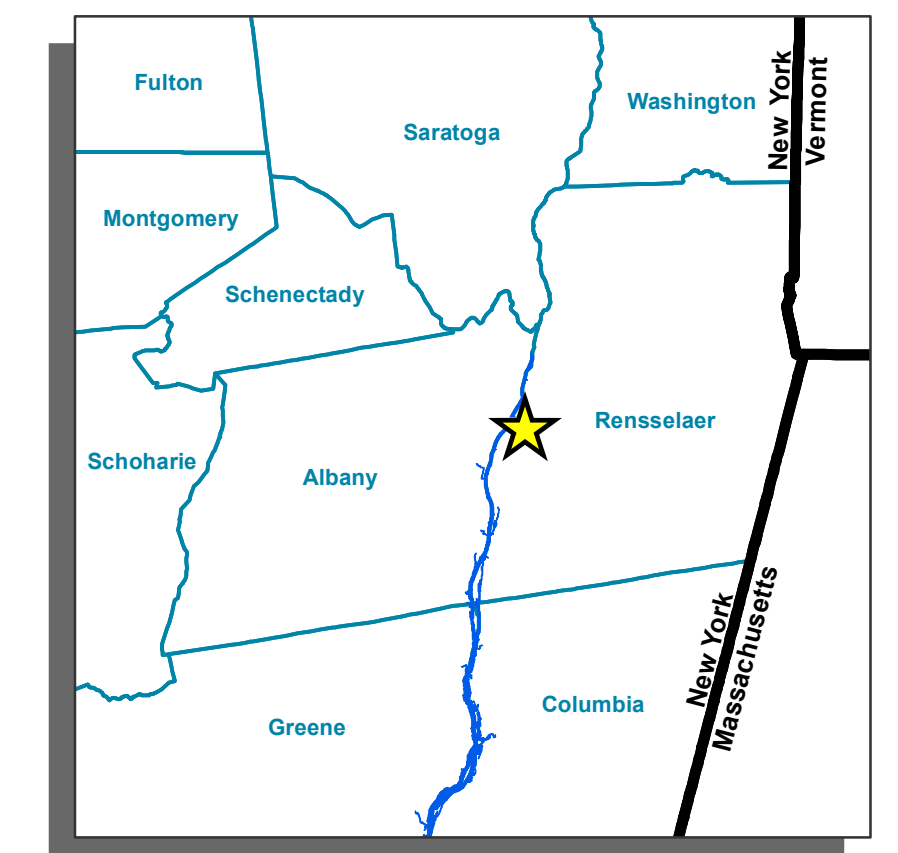
Waterfront Connectivity Study

DRAFT
Parks and Recreation Land
April 2022

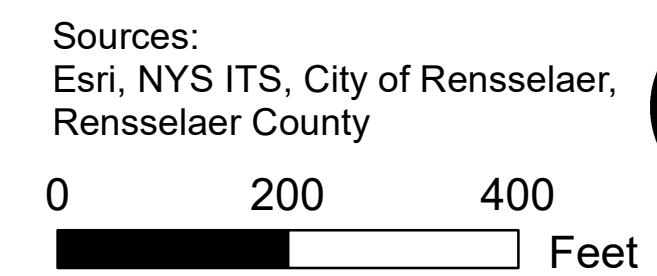
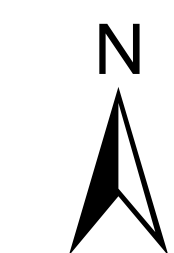


LEGEND

- Study Area
- City/Town Boundary
- County Boundary
- Railroad
- Interstates
- Local Roads
- River/Stream
- Hudson River
- Hilton Park and Boat Ramp



This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.



Sources:
Esri, NYS ITS, City of Rensselaer, Rensselaer County

Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

APPENDIX G: PUBLIC OUTREACH

CITY OF RENSSELAER

WATERFRONT CONNECTIVITY STUDY

Public Meeting #1
Thursday, June 16, 2022
6:00 – 7:30pm



Rensselaer Jr./Sr. High School - 25 Van Rensselaer Dr, Rensselaer, NY
With Zoom Option Available

Agenda

1. Welcome and Introductions
2. Project and Schedule Overview
3. Highlights of Existing Conditions
4. Breakout Sessions
5. Next Steps

For more information visit:
<https://www.rensselaerriverfrontconnections.com/>

WATERFRONT CONNECTIVITY STUDY MEETING SUMMARY

Purpose: Public Meeting #1 (Virtual and In-person)
Date and Time: Thursday, June 16, 2022, 6:00 pm
Location: Rensselaer Jr. / Sr. High School and Via Zoom

AGENDA ITEM	DISCUSSION
	<p>As part of the public engagement component of the City of Rensselaer Water Connectivity Study, a Public Meeting was held on Thursday, June 16, 2022, at 6:00 PM. The purpose of the public workshop was to introduce the program and schedule, provide an overview of existing conditions, and learn about the needs and opportunities of the community. The interactive workshop included a presentation with a community brainstorming session, as well as a live question and answer session.</p> <p>The public workshop was hybrid format, held in person and virtually via Zoom. Registration for Zoom was required and could be accessed through the project website www.rensselaerriverfrontconnections.com. Over 30 members of the public attended to participate.</p> <p>The event was publicized through a variety of platforms including the City website, project website, project email distribution, social media, and direct mailer flyers.</p> <p>Members of the City of Rensselaer, CDTC, and the consultant team participated as presenters during the event.</p>
<p>Welcome & Introductions</p>	<p>Jaclyn Hakes (MJ) introduced the consultant team including Sarah Starke Hesse (MJ) (via Zoom), Nora Culhane Friedel (MJ), Jesse McCaughey (MJ), and Jacob Landis (MJ).</p> <p>Jaclyn Hakes (MJ) introduced Ketura Vics from the City of Rensselaer Planning Department and Andrew Tracy from CDTC, then Jaclyn Hakes (MJ) presented an overview of the agenda for the meeting which included the following:</p> <ul style="list-style-type: none"> • Welcome and Introductions • Project and Schedule Overview • Highlights of Existing Conditions • Group Breakout Session • Next Steps

<p>Welcome & Introductions Continued</p>	<p>Jaclyn Hakes (MJ) gave an overview of the meeting format, including directions on how to participate in person and through Zoom</p> <p>The following attendees were introduced:</p> <ul style="list-style-type: none"> • Project Sponsors: City of Rensselaer, Capital District Transportation Committee (CDTC) • Grant Program: Community and Transportation Linkage Program (CDTC) • Consultant: MJ Engineering & Land Surveying, P.C. • Study Advisory Committee: Salena Dabbs (Planning Commission), Andrew Kretschmar (Aldersperson), Fred Mastroianni (Engineer), Joe Kardash (RCSO Superintendent), Paul Bednarczyk (RCFD Firefighter/Civil Engineer), David Wells (Doane Stewart) <p>Jaclyn Hakes (MJ) introduced Andrew Tracy from CDTC to talk about the Capital District Transportation Committee.</p> <ul style="list-style-type: none"> • CDTC is the designated Metropolitan Planning Organization (MPO) for Albany, Saratoga, Schenectady, and Rensselaer Counties • The study funded by the City of Rensselaer and CDTC through the CDTC 2021-2022 Community and Transportation Linkage Planning Program • Visit at cdtcmpo.org <p>Andrew Tracy (CDTC) introduces Ketura Vics (Rensselaer Planning) to talk about the study.</p> <ul style="list-style-type: none"> • How can people access the waterfront in the City, especially around Forbes Avenue? • What are the issues? How might they be resolved? How can we foster connections between major arterials?
	<p>Jaclyn Hakes (MJ) presented an overview of the Waterfront Connectivity Study. The following is a summary of topics discussed during the overview presentation.</p> <p>Objectives</p> <ul style="list-style-type: none"> • Washington and Forbes Ave access improvements

<p>Project and Schedule Overview</p>	<ul style="list-style-type: none"> • Enhance the Rensselaer Waterfront and the Hilton Center Brownfield Redevelopment Area • Connecting the City to: <ul style="list-style-type: none"> ○ Rensselaer Riverwalk ○ Kiliaen’s Landing ○ Hollow Trail • Connect, promote, improve, create economic development • Improving safety • Creating a connected and integrated multi-modal transportation network for users of all ages and abilities, including pedestrians, bicyclists, motorists, transit users, freight, emergency vehicles, children, elderly, and people with disabilities. • At the end, have a foundation for the City to move forward with and implement ideas that stem from this project <p>Study Area</p> <ul style="list-style-type: none"> • The study area was defined to include the City of Rensselaer Hilton Center Brownfield Redevelopment Area and potential connections to the Rensselaer Riverwalk/RPI Trail. • The study area also extends to the east towards the Hollow Trail and Rensselaer Junior/Senior High School. • It is a compact study area <p>Key focus Locations</p> <ul style="list-style-type: none"> • Forbes Avenue and Washington Avenue • 4 Intersections of interest in which information is already getting gathered: <ul style="list-style-type: none"> ○ Broadway & Washington ○ Washington & 3rd ○ Washington, Forbes, and 7th ○ Washington, Manor, and 8th <p>Project Schedule & Scope</p> <ul style="list-style-type: none"> • Winter/ Spring 2022 <ul style="list-style-type: none"> ○ Task 1: Project Initiation/ Coordination • Spring 2022 <ul style="list-style-type: none"> ○ Task 2: Existing Conditions Assessment • Summer 2022 <ul style="list-style-type: none"> ○ Task 4: Draft Waterfront Connectivity Study • Summer/ Fall 2022 <ul style="list-style-type: none"> ○ Task 5: Final Public Workshop
---	--

	<ul style="list-style-type: none"> • Fall 2022 <ul style="list-style-type: none"> ○ Task 6: Final Waterfront Connectivity Study • *Note* Task3: Public Input – Occurs throughout the process • Use the study as a basis for grants and buildout <p>Project Website</p> <ul style="list-style-type: none"> • Rensselaerriverfrontconnections.com • Available for the duration of the project!
<p>Highlights of Existing Conditions</p>	<p>Jaclyn Hakes (MJ) turned it to Nora Culhane Friedel (MJ) to discuss Highlights of Existing Conditions.</p> <p>Background</p> <ul style="list-style-type: none"> • Study Area Zoning and Land Use • Transportation Elements • Previous Plans/ Relevant Documents <p>Zoning</p> <p>Nora Culhane Friedel (MJ) explained the accommodating map, which is available on the website. Zoning in the study area falls within 4 distinct districts including:</p> <ul style="list-style-type: none"> • Downtown Mixed-Use (MU-1) <ul style="list-style-type: none"> ○ mix of higher-density residential and commercial uses • Waterfront Mixed-Use (MU-2) <ul style="list-style-type: none"> ○ mix of residential, commercial, and public uses (shall include public access directly adjacent to the water in the form of a 25-foot easement) • Open Space and Conservation (OS) <ul style="list-style-type: none"> ○ preserve historic, scenic, recreational and environmental value of open spaces • Residential District #2 (R-2) <ul style="list-style-type: none"> ○ mix of housing options including single-family and two-family homes in structures originally intended for two or more families <p>Land Use</p> <p>Land use and Zoning are a direct reflection of the community character that exists today. Nora Culhane Friedel (MJ) took the group through a map highlighting the following land uses:</p> <ul style="list-style-type: none"> • Commercial • Community Services • Industrial • Mixed-Uses • Residential – High Density • Residential – Medium Density • Residential – Low Density • Transportation
<p>Highlights of Existing Conditions Continued</p>	

	<ul style="list-style-type: none"> • Vacant Land <p>Notes that there is a large industrial use near the waterfront.</p> <p>Pedestrian Accommodations Map</p> <ul style="list-style-type: none"> • Sidewalks and Crosswalks <ul style="list-style-type: none"> ○ Concrete sidewalks are available along majority of roadways ○ Striped pedestrian crosswalks have been installed at various locations • Hilton Park and Boat Ramp has several pedestrian amenities, such as picnic tables, benches, and trash receptacles, as well as decorative pedestrian lighting throughout the area <p>Nora Culhane Friedel (MJ) outlined on a map Mid-Block Crosswalks and Crosswalk with Traffic Control.</p> <p>Crash History Map</p> <ul style="list-style-type: none"> • Most recent five years of available data November 1, 2016 to October 31, 2021 • During this five-year period, 83 crashes were recorded in the study area, with 64 (77%) occurring on Washington Avenue <p>Appears that most incidents are along Washington Avenue. Data is from where police reports were taken, not necessarily where they occur.</p> <p>Relevant Planning Documents</p> <p>*Can be made available for anyone interested upon request*</p> <ul style="list-style-type: none"> • CDTC’s Public Participation Plan • CDTC’s Capital District Trails Plan (2018) • Rensselaer County Trail Plan, Livingston Avenue Bridge to Troy-Menands Bridge • Forbes Avenue Transportation Study • City of Rensselaer Comprehensive Plan • City of Rensselaer Complete Streets Policy • Kiliaen’s Landing GEIS • On-going CDTC Transportation Improvement Program projects - Riverfront Multi-Use Trail and Bicycle and Pedestrian Safety and Access Improvements • City of Rensselaer plans regarding the extension of the Hollow Trail • Proposed nearby development and redevelopment plans - the Hilton Center Brownfield Redevelopment Area • CDTA’s bus routes and the CDPHP Cycle! bikeshare system
--	--

	<ul style="list-style-type: none"> • Other completed and planned changes in the City’s transportation and built infrastructure
<p>Group Breakout Session</p>	<p>Jaclyn Hakes (MJ) posed 3 questions about the Waterfront Connectivity Study Area to participants. The following questions received answers from residents and interested members of the public. The answers were recorded via note-takers and can be seen below.</p> <p><i>How do you travel to and through the study area and/ or access the waterfront: walk, bike, drive?</i></p> <ul style="list-style-type: none"> • Bicycle • Scooter/ skateboards • Vehicle • Walk <ul style="list-style-type: none"> ○ Go by Doane Stewart to get to the riverfront ○ Access the waterfront via unkept stone stairways that have pipe railing and cobblestones which can be dangerous in the winter or during rain. ○ Many people walk down Forbes Avenue and are likely residents rather than out-of-towners looking to use the boat launch • All-Terrain Vehicles <p><i>What challenges do you experience traveling in the study area, Forbes Avenue and accessing the Waterfront?</i></p>
<p>Group Breakout Session Continued</p>	<ul style="list-style-type: none"> • If someone is using a trailer for their boat, the entrance from the north has an extremely tight turn. Tracy Street is a better approach for vehicles with trailers. • Tracy Street – Freight trucking blocks traffic in the morning and evening (7:30-7:45 am). Residents and buses impacted significantly. • Broadway & Washington Ave <ul style="list-style-type: none"> ○ Has many children who do not pay attention to the traffic on the street. ○ 5 point intersection is not safe! People do not yield despite signage. Walking is “treacherous” for crossing either side. • 3rd & Washington is an unsafe intersection with no traffic signs or crosswalks <ul style="list-style-type: none"> ○ Lack of visibility due to fences and overgrown vegetation. • ATV’s are prevalent on the street and measures should be taken to limit their use on the street. • Many have no idea that there is even a boat launch there. <ul style="list-style-type: none"> ○ Lack of adequate signage, missing stairs to boat launch, difficult to find if you are not a resident

<p>Group Breakout Session Continued</p>	<ul style="list-style-type: none"> • There is the Old Hilton Center which is off-putting and not welcoming. • Casey’s Restaurant is dangerous with cars constantly pulling in and out. • Lack of sidewalks or good condition sidewalks. • Residents without driveways park on the road making the streetscape more condensed and increases hazards and danger to all who use it. • Litter and lack of receptacles. • Concerns around sea level rise and the impact it has on the waterfront in Rensselaer. • Grade issues in the area that impact all means of transportation <ul style="list-style-type: none"> ○ Makes Forbes Ave the place to go for using bikes in the area ○ Issue of low visibility makes the area dangerous for bikers and pedestrians <p><i>What would you like to see changed from connections, travel, and accessibility perspective?</i></p> <ul style="list-style-type: none"> • Forbes Avenue <ul style="list-style-type: none"> ○ Addition and redevelopment of sidewalks ○ Ideally protected bike lanes / realistically wider shoulders would be useful for bike safety ○ Suggestion: A central connection to Forbes Avenue for residents and visitors to use • Wayfinding: better signage and info (for boat launch, trailer access, general directions) • Reconstruction of the cobblestone path from the foot of Washington Avenue to Forbes (may have no railing currently!) <ul style="list-style-type: none"> ○ Must be fixed because of how dangerous and unkempt it is • Washington Avenue <ul style="list-style-type: none"> ○ Biking is extremely dangerous. Often cars are parked on both sides of the road with two lanes of traffic. • Additional safety measures (“Blue Light” emergency system specifically brought up) • Adequate lighting throughout the study area is needed, especially by the boat launch area. • Broadway & Washington needs to have intersection safety addressed • 3rd & Washington needs a traffic control device. • Kayak and Canoe launch • Maintenance of the fence along the shore for safety (there is about a 10-foot drop along this segment of the shore) • Access for All: All modes and all users should be able to use the waterfront. • Young people should be involved in the planning process and have their ideas considered and/or implemented.
--	---

	<ul style="list-style-type: none"> • Share the road education and enforcement will be needed with the addition of any new roadway infrastructure or safety installments. <ul style="list-style-type: none"> ○ Community has a responsibility to help with this education and teach children, family, and friends about new traffic safety precautions. • Maintenance and inventory of natural habitat and natural resources. • Trees in the streetscape help mitigate industrial uses and bring green to an urban environment <ul style="list-style-type: none"> ○ Should only be types that can thrive within an urban setting without disrupting infrastructure like roads and sidewalks ○ Power lines necessitate tree trimming/ maintenance which can benefit the viewsheds of the River and Albany which are assets to some residents.
<p>Next Steps</p>	<p>Jaclyn Hakes (MJ) makes closing remarks and discusses the Next Steps of the Waterfront Connectivity Study.</p> <ul style="list-style-type: none"> • Finalize Existing Conditions • Public Workshop #2 – Fall • Outstanding Data Collection • Bike/Pedestrian Counts <p>Thank you to the City of Rensselaer, CDTA, Superintendent Kardash, and the members of the public who took their time to attend this public meeting.</p>

This meeting summary conveys our understanding of the items discussed and agreements reached at this meeting. Please forward any additions, corrections and/or questions to my attention.

Submitted by:
Jacob Landis, MJ Engineering and Land Surveying, PC

cc: Consultant Team, Project File, City, CDTC, Project Website

CITY OF RENSSELAER

WATERFRONT CONNECTIVITY STUDY

Public Meeting #2
Thursday, December 8, 2022
6:00 – 7:30pm



Rensselaer Jr./Sr. High School - 25 Van Rensselaer Dr, Rensselaer, NY
With Zoom Option Available

Agenda

1. Welcome and Introductions
2. Project and Schedule Overview
3. Discussion of Draft Corridor Recommendations
 - a. Forbes Avenue
 - b. Broadway
 - c. Washington Avenue
 - d. Other Local Connections
4. Next Steps

For more information visit:

<https://www.renselaerwaterfrontconnections.com/>

Poll Questions

Please go to pollev.com/mjplanning518

OR

Text 37607 with the message MJPlanning518

OR

Scan the QR code below



WATERFRONT CONNECTIVITY STUDY MEETING SUMMARY

Purpose: Public Meeting #2 (Virtual and In-person)
Date and Time: Thursday, December 8, 2022, 6:00 pm
Location: Rensselaer Jr. / Sr. High School and Via Zoom

AGENDA ITEM	DISCUSSION
	<p>As part of the public engagement component of the City of Rensselaer Water Connectivity Study, a Public Meeting was held on Thursday, December 8, 2022, at 6:00 PM. The purpose of the public workshop was to introduce the concepts and get initial feedback from the public. The interactive workshop included a presentation with a community feedback, as well as a live question and answer session.</p> <p>The public workshop was hybrid format, held in person and virtually via Zoom. Registration for Zoom was required and could be accessed through the project website www.rensselaerwaterfrontconnections.com. Over 20 members of the public attended to participate.</p> <p>The event was publicized through a variety of platforms including the City website, project website, project email distribution, social media, and direct mailer flyers.</p> <p>Members of the City of Rensselaer, CDTC, and the consultant team participated as presenters during the event.</p>
<p>Welcome & Introductions</p>	<p>Jaclyn Hakes (MJ) introduced the consultant team including Sarah Starke Hesse (MJ) (via Zoom), Chad Schneider (MJ), and Andris Blumbergs (MJ).</p> <p>Jaclyn Hakes (MJ) introduced Ketura Vics from the City of Rensselaer Planning Department. Ketura Vics described the reason for the project and its partnerships with CDTC and MJ.</p> <p>The following were introduced:</p> <ul style="list-style-type: none"> • Project Sponsors: City of Rensselaer, Capital District Transportation Committee (CDTC) • Grant Program: Community and Transportation Linkage Program (CDTC) • Consultant: MJ Engineering & Land Surveying, P.C. • Study Advisory Committee: Salena Dabbs (Planning Commission), Andrew Kretschmar (Alderman), Fred Mastroianni (Engineer), Joe

	<p>Kardash (RCSD Superintendent), Paul Bednarczyk (RCFD Firefighter/Civil Engineer), David Wells (Doane Stewart)</p> <p>Ketura Vics introduced Sandy Misiewicz, Executive Director of CDTC who described the Community and Transportation Linkage Planning Program. Jaclyn Hakes (MJ) then presented an overview of the agenda for the meeting which included the following:</p> <ul style="list-style-type: none"> • Welcome and Introductions • Project and Schedule Overview • Discussion of Draft Corridor <ul style="list-style-type: none"> ○ Recommendations <ul style="list-style-type: none"> ▪ Forbes Avenue ▪ Broadway ▪ Washington Avenue ▪ Other Local Connections • Next Steps
<p>Project and Schedule Overview</p>	<p>Jaclyn Hakes (MJ) presented an overview of the Waterfront Connectivity Study. The following is a summary of topics discussed during the overview presentation.</p> <p>Jaclyn Hakes (MJ) presented a map of the Study Area and described it to the participants.</p> <ul style="list-style-type: none"> • The Study Area was defined to include the City of Rensselaer Hilton Center Brownfield Redevelopment Area and potential connections to the Rensselaer Riverwalk/ RPI Trail. • The Study Area also extends to the east towards the Hollow Trail and Rensselaer Junior/ Senior Highschool. <p>Project Overview: Objectives</p> <ul style="list-style-type: none"> • Washington and Forbes Ave access improvements • Connect, promote, improve, create economic development • Improving safety • Creating a connected and integrated multi-modal transportation network for users of all ages and abilities including pedestrians, bicyclists, motorists, transit users, freight, emergency vehicles, children, elderly, and people with disabilities <p>Project Schedule & Scope</p> <ul style="list-style-type: none"> • Winter/ Spring 2022 <ul style="list-style-type: none"> ○ Task 1: Project Initiation/ Coordination • Spring 2022

**Project and
Schedule
Overview
Continued**

- Task 2: Existing Conditions Assessment
- Summer 2022
 - Task 4: Draft Waterfront Connectivity Study
- Summer/ Fall 2022
 - Task 5: Final Public Workshop
- Fall 2022
 - Task 6: Final Waterfront Connectivity Study
- *Note* Task 3: Public Input – Occurs throughout the process
- Use the study as a basis for grants and buildout

Project Website

- Rensselaerriverfrontconnections.com
- Available for the duration of the project!

Public Input To Date: Public Meeting #1 – Hybrid

- Thursday, June 16, 2022, 6:00 pm
- Rensselaer Jr./ Senior High School and via Zoom
- Over 20 people attended
- Common themes:
 - Sidewalks – don't exist, are in disrepair and/or cars park on them
 - Topography is an issue, but residents know how to traverse
 - Boat launch access can be a challenge
 - Limited wayfinding signage throughout
 - Accessibility/ Connections throughout neighborhoods

Public Input to Date: Community Survey

- June 16, 2022 to August 1, 2022
- Publicized through survey cards, email blasts, project and city websites and Facebook
- 84 Responses
 - 75% from 12144 zip code
 - 27% 45 to 54 years old
 - 19% 35 to 44 years old
 - 19% 55 to 64 years old
 - 14% 25 to 34 years old
- Survey Common Themes: Challenges
 - Difficult to move around the study area and beyond
 - Lack of pedestrian infrastructure including sidewalks, bike lanes, or lighting (feels unsafe at times)
 - Drivers do not yield to pedestrians
 - Landscaping is not attractive
 - Driver speeding is a problem
 - Drivers do not stop behind crosswalks

	<ul style="list-style-type: none"> ● Survey Common Themes: Positive Feedback <ul style="list-style-type: none"> ○ Bus service is reliable ○ Frequency of buses ○ Water drains quickly after rainstorms
<p>Discussion of Draft Corridor</p>	<p>Jaclyn Hakes (MJ) began the discussion of Draft Corridor recommendations at: Forbes Ave Corridor, Broadway, Washington Ave Corridor, Key Intersections, and Connections.</p> <p>Jaclyn Hakes (MJ) turned it to Andris Blumbergs (MJ) to discuss the Draft Corridor:</p> <p>Forbes Avenue Exiting Conditions:</p> <ul style="list-style-type: none"> ● 11 ft two-way drive lanes ● Lack of pedestrian infrastructure ● Steep existing slope ● Access to the waterfront is difficult to impossible when traveling south <p>Forbes Avenue Corridor Proposed Alternatives:</p> <p>Alternative 1</p> <ul style="list-style-type: none"> ● One-way drive lane with a separated multi-use path ● 22 ft overall width ● 10 ft multi-use path ● Pedestrian lighting ● Pedestrian rail <p>Alternative 2</p> <ul style="list-style-type: none"> ● Two-way drive lanes separating sidewalk ● 26 ft overall width ● 5 ft sidewalk ● Pedestrian lighting ● Guard rail <p>Andris Blumbergs (MJ) asked attendees to join a participant poll and vote on which alternative they preferred.</p> <ul style="list-style-type: none"> ● Alternative 1: 60% of attendees ● Alternative2: 40% of attendees <p>Proposed Intersection Alternatives:</p> <p>Alternative 1: Washington Ave Extension</p> <ul style="list-style-type: none"> ● Realign and reconstruct the intersection of Washing Ave and Forbes Ave ● Keep 2-way traffic <p>Alternative 2: Forbes Realignment “Y”</p> <ul style="list-style-type: none"> ● Realign and Reconstruct Intersection of Washington Ave and Forbes Ave ● 1-way to be implemented with a separated “Y” at the end of Forbes Ave

**Discussion of
Draft Corridor
Continued**

Andris Blumbergs (MJ) asked attendees to join a participant poll and vote on which alternative they preferred.

- Alternative 1: 100% of attendees
- Alternative 2: 0% of attendees

Broadway Corridor Recommendations:

Broadway Existing Conditions:

- Two-way drive lanes with no pavement markings
- Parking on both sides (varying width)
- Planting strips (varying width)

Broadway Proposed Improvements

- Additional Signage throughout (stop signs, no parking)
- Add crosswalks
- ADA compliance improvements

Andris Blumbergs (MJ) asked attendees to join a participant poll and vote on if they would like to see additional improvements on Broadway.

- No, you've covered them: 100% of attendees
- Yes, I have additional ideas: 0% of attendees

Washington Avenue Concept

Existing Conditions

- 16 ft width for drive lanes
- 8 ft parking on both sides
- Planting strips (varying width)

Proposed Concept

- 24 ft width for drive lanes
- 8 ft parking on one side
- Additional landscaping

Washington Avenue 5-Way Intersection

Existing Conditions

- Difficult to navigate via car or as a pedestrian
- Missing crosswalks and sidewalks
- Multiple conflict points

Proposed Concept

- Intersection of Washington Ave, Chestnut Ave, and Fourth Street
- Explore additional options for pedestrian connections
- Bump out/ curb extensions
- ADA compliance improvements

Andris Blumbergs (MJ) asked attendees to join a participant poll and vote on if they would like to see additional improvements on Washington Ave.

	<ul style="list-style-type: none"> • No, you’ve covered them: 40% of attendees • Yes, I have additional ideas: 60% of attendees <p>Discussion of Draft Corridor Recommendations</p> <p>Other Local Connections Existing Conditions</p> <ul style="list-style-type: none"> • Inconsistent pedestrian infrastructure (sidewalks, crosswalks, lighting) • Missing signage • Inconsistent/ lack of parking delineation • Narrow drive lanes <p>Other Local Connections</p> <ul style="list-style-type: none"> • Create consistent pedestrian infrastructure (sidewalks, crosswalks, lighting) • Add signage (Stop, One-way, Do Not Enter) • Define parking/ no parking zones <p>Andris Blumbergs (MJ) concluded his part of the presentation and turned it over to Jaclyn Hakes (MJ) for General Discussion.</p>
<p>Group Discussion</p>	<p>Jaclyn Hakes (MJ) posed 3 questions about the Waterfront Connectivity Study Area to participants. The following questions received answers from residents and interested members of the public. The answers were recorded via note-takers and can be seen below.</p> <p><i>Are there other improvements you would like to see considered?</i></p> <ul style="list-style-type: none"> • Participant notes that on Forbes, the vehicle traffic in both directions seems significantly safer, as opposed to the one-way. <ul style="list-style-type: none"> ○ The firehouse is nearby and concerns about emergency access will be addressed by the Fire Chief, who is on the Study Committee. • Participant was concerned about the view of Albany, asking residents to change their property, and introducing new streetscape features. <ul style="list-style-type: none"> ○ The viewsheds in the Study Area will not be impacted by the proposed improvements. All improvements will occur with the proper permissions and approvals. Any conceptual or proposed improvements will appropriately fit into the existing street after extensive reviews and permit processes. • Participant was concerned about the 5-Way Intersection on Washington Ave. <ul style="list-style-type: none"> ○ There is a lot of further work that needs to be balanced. The idea of introducing sidewalks in feasible locations, introducing crosswalks and bump-outs, will help create a safer environment for pedestrians and motorists alike. • Participant notes the lack of speed limit signs and additional signage or lights.

<p>Group Discussion Continued</p>	<p><i>What improvements are you most excited about?</i> <i>General Thoughts and Ideas?</i></p> <ul style="list-style-type: none"> • Participant asked: Who is paying for it, what is the cost? <ul style="list-style-type: none"> ○ The cost has not yet been identified. This is a study phase to identify feasible improvements and to provide the city with adequate information on improvements. ○ This study will allow the city to become eligible and more competitive to receive funding to bring the concepts discussed to reality. ○ This is a concept study. Next steps would include securing funding, engineering, constructions etc. • Participant asked: Will the historic character of the neighborhood be impacted? <ul style="list-style-type: none"> ○ The improvements will not impact the existing properties and buildings as they stand. The project team is aware of the character and nature of the neighborhood and will work to find a way to create recommendations that account for the concerns of those living in the neighborhood. ○ Only development that is happening on the waterfront is the adaptive reuse Hilton Center and trails. There are no proposed development (apartments, houses, etc) in that area. • Participant was concerned that adding improved side streets will mean people drive faster. • Jaclyn Hakes (MJ) reminded the participants that the improvements will not all come at once. There are short, mid-term, and long-term projects.
<p>Next Steps</p>	<p>Jaclyn Hakes (MJ) makes closing remarks and discusses the Next Steps of the Waterfront Connectivity Study.</p> <ul style="list-style-type: none"> • Finalize Concepts based on input • Prepare Draft Study • A recording of this meeting will be available on the project website • Please leave any additional comments here: rensselaerriverfrontconnections.com <p>Thank you to the City of Rensselaer, CDTA, Superintendent Kardash, and the members of the public who took the time to attend this public meeting.</p>

This meeting summary conveys our understanding of the items discussed and agreements reached at this meeting. Please forward any additions, corrections and/or questions to my attention.

Submitted by:
Jacob Landis, MJ Engineering and Land Surveying, PC

cc: Consultant Team, Project File, City, CDTC, Project Website

DRAFT



DRAFT Waterfront Survey Summary

September 2022

Survey Overview

As part of the public engagement component of the City of Rensselaer Waterfront Connectivity Study, an online survey was developed. The purpose of the survey was to identify the community's vision and priorities for the waterfront area of the city. The information gathered from the survey and other public engagement events will help shape the vision and goals for the project area.



Survey Card

A twenty-three (23) question survey was created and distributed using the Survey Monkey platform. The survey opened Wednesday, June 16th, 2022, and remained open until Monday, August 1, 2022. There were 84 responses received.

The survey was available on the project website at www.rensselaerriverfrontconnections.com and was advertised on the city website. An information flyer which included a link to the online survey was prepared and distributed through social media and email. In addition, survey cards were prepared which included a Quick Response (QR) code for direct access to the survey on a smartphone or tablet.

Data Limitations

The survey is one of multiple public engagement activities intended to gather input from the community. The survey responses are self-selecting and are not statistically valid. The survey alone cannot be used to find the "answer" or "solution" but can in part help identify common themes and trends.

Survey Topic Areas

The survey questions were organized around four topic areas: Demographic Information, Use, Experience, and Suggestions for the Future.

Participant Information

Participant information questions sought to establish the demographics of the people taking the survey. Questions about demographic data and residency information were included in this section. Getting a broad range of survey participants from the local area is important to address the needs of different

demographics. Understanding the age of the survey participants can help inform how to best address their needs. Furthermore, knowing that responses are representative of a variety of community members can assist in inclusive decision-making.

Use

Questions pertaining to the Use sought to understand which resources survey participants are interacting with, what activities they are taking part in, and how they access those resources. Understanding how community members are interacting with the existing waterfront resources is important to identify where there may be opportunities for new or expanded resources.

Experience

This section asked survey participants questions about their perceived challenges and opportunities for the study area and its waterfront resources. Questions about the feeling of safety around the study area were concentrated in this section.

Suggestions for the Future

This section provided a place for survey participants to include any additional thoughts. There was also the opportunity for respondents to leave their email address to receive project updates.

Survey Highlights

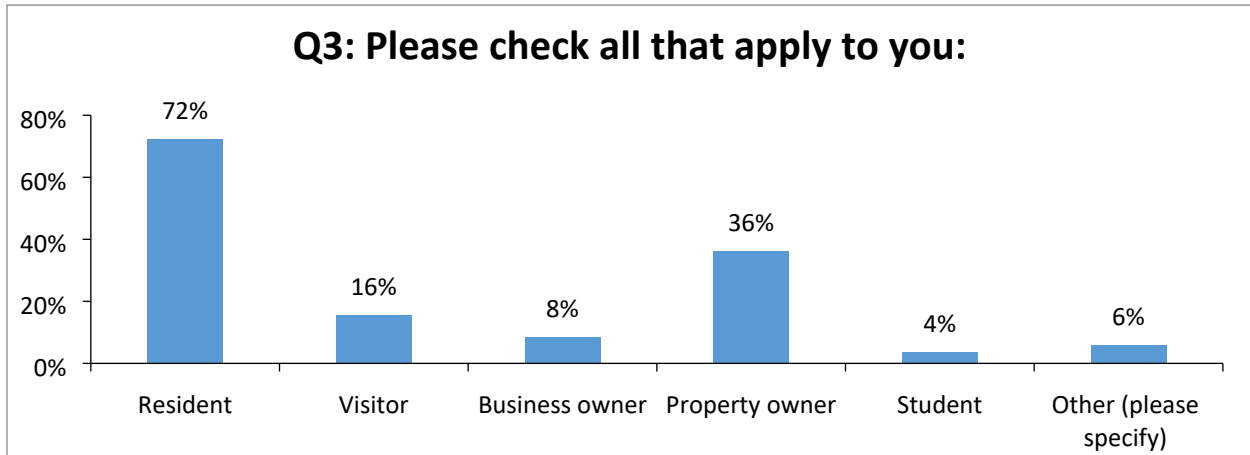
The following is a brief highlight of each question of the survey. For the full survey results see the attached survey questions and responses.

Participant Information

Question 1 (Q1) asked participants to enter their zip code. This is a key consideration to see local responses as well as visitors who may be coming to use a facility like the boat launch. The study area is located entirely in the 12144 zip code. Of the 72 responses received, 75% (54) were from the 12144 zip code. The remaining responses were divided among others from around the capital district.

Question 2 (Q2) of the survey determined the age ranges in which the respondents fell. Largest age cohort was 45 to 54 years old (26.5%). There were also a large group of respondents who reported as being 35 to 44 years old (19.2%) and 55 to 64 years old (18.7%). Having participants of varying age ranges providing input can ensure the study reflects the local demographic.

Question 3 (Q3) asked participants to identify all the categories they identify with, including Resident, Visitor, Business owner, Property owner, Student and Other with a place to write in. A significant portion (72.3% or 60 people) selected Resident. The next most selected was Property owner with 36.1% or 30 people followed by Visitor with 15.7% or 13 people. This shows a good mix of folks taking the survey.



Question 4 (Q4) asked participants if they live within the area outlined in RED on a map showing the study area. The responses received showed 69% selected No and 31% selected Yes. This helps identify the outreach was able to capture both people living in and outside the immediate study area.

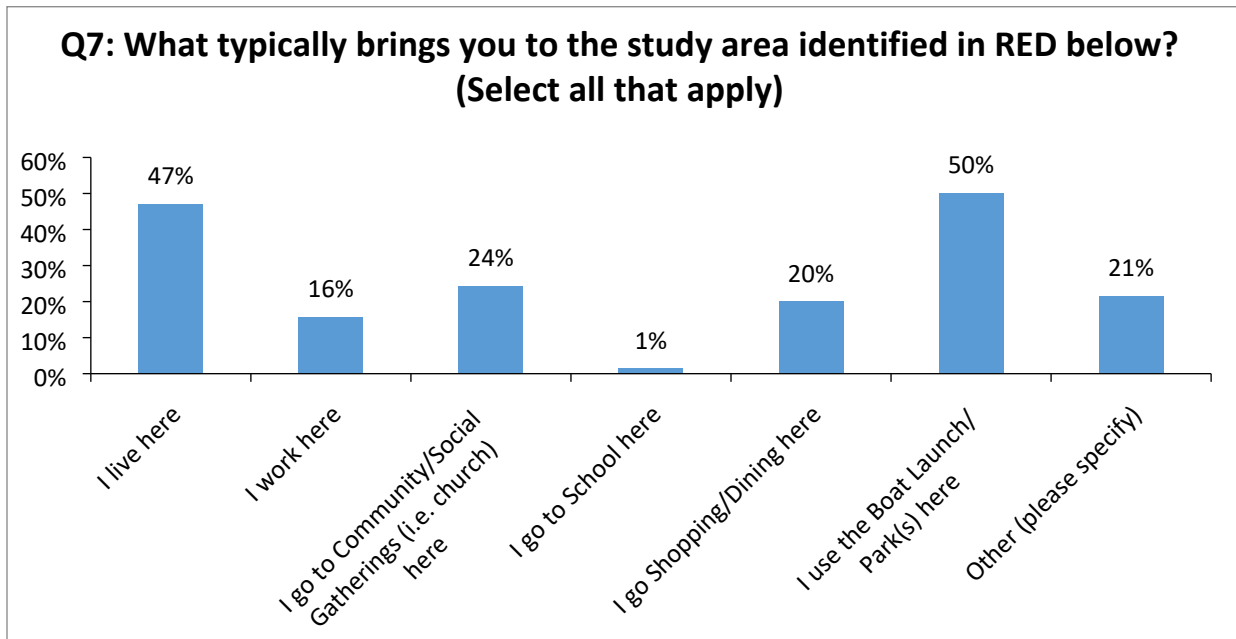
Question 5 (Q5) asked participants if they own property within the area outlined in RED on a map showing the study area. The responses received showed 71% selected No and 29% selected Yes.

Question 6 (Q6) asked participants to identify if they have a disability that limits their ability to walk, drive, etc. The responses received indicated that 86% selected no they do not and 14% selected yes.

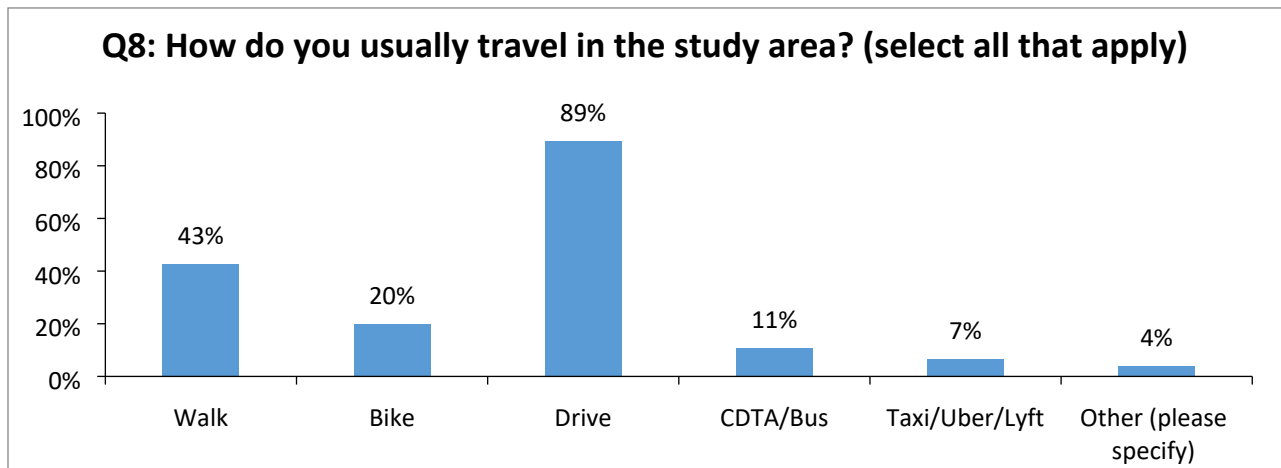
Use

Question 7 (Q7) asked participants what typically brings them to the study area and responders had the option to select all that apply with an option for other to write in a response. I use the Boat Launch/Park(s)

is the highest response, by 50% (35) of responders exceeding I live here, selected by 47% (33). The participants who selected other and wrote in a response, indicated they commute through the area either on foot, bike or car.

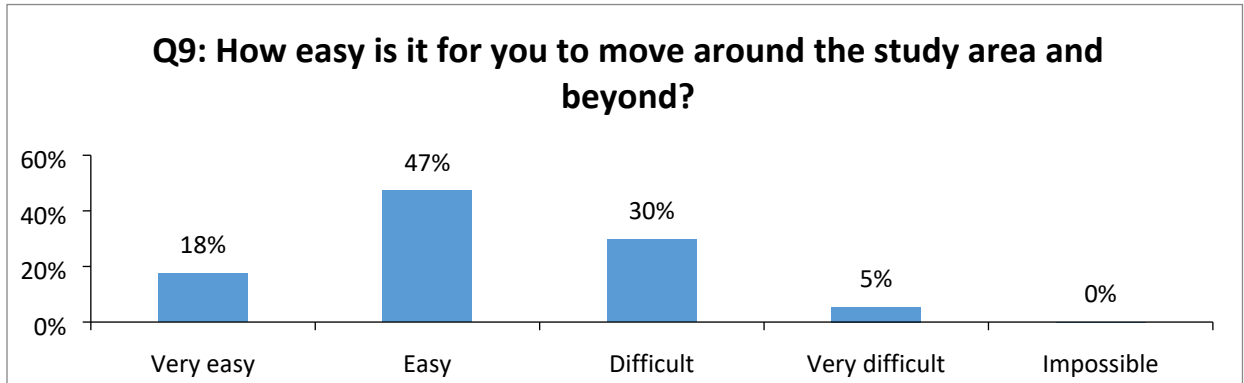


Question 8 (Q8) is similar in structure to **Q7** as it asks respondents to identify all of the ways folks travel within the study area. The large majority selected drive 89% followed by walk with 43% and bike with 20%.



Question 9 (Q9) of the survey asked respondents how easy it is for them to move around the study area and beyond. With options including Very easy, Easy, Difficult, Very difficult, and/or Impossible. A large portion of the responses received selected Easy (47%) or Very easy (18%). The remaining selected difficult 30% or Very difficult (5%) with no one selecting impossible. Looking at responses from folks who selected

“Drive” in Q8 show they are much more likely to select very easy or easy. Folks who selected anything other than “Drive” in Q8 lean more to Difficult or very difficult.



Question 10 (Q10) was a follow up question to **Question 9** and asked survey participants if they selected difficult, to let us know why. As an open-ended question that received 24 responses some themes that emerged are the lack of infrastructure including sidewalks, bike lanes, or lighting.

Experience

Question 11 (Q11) was an in-depth matrix rating type question asking participants when traversing the study area, how do they feel about a multitude of topics. Topics included everything from curb ramps are textured for the visually impaired, ADA accessibility, water drains quickly after rain storms, to buses come often enough. All the topics had rankings from Strongly Agree to Strongly Disagree. Challenges that emerged through responses received, show majority of responders disagree or strongly disagree about the following:

- Drivers yield to pedestrians
- Landscaping is attractive
- Driver speeding is not a problem
- Drivers stop behind crosswalks

Responses also identified a theme in items that do not need attention and are working as they should, including:

- Bus service is reliable
- Buses come often enough
- Water drains quickly after rainstorms

Question 12 (Q12) asked participants if they feel safe walking on Forbes Ave. The responders had 3 options to choose from including; not applicable (N/A), yes, and no with a write in on why they chose no. The highest selected response (49%) was no and wrote in a response. Themes that emerged from write

in responses show the road is not wide enough, car speed is a concern, and no guardrails or pedestrian lighting. Only 17% of responders selected yes, they feel safe walking on Forbes Ave.

Question 13 (Q13) asked survey respondents if they feel safe riding a bike on Forbes Ave. Like the previous question the responders had 3 options to choose from including; not applicable, yes, and no with a write in on why they chose no. The responses received showed (44%) chose no and wrote in a response. The same themes from **Q12** came through, the road is not wide enough, and no guardrails or pedestrian lighting. A bigger portion (40%) selected N/A further showing less people bike in the study area.

Question 14 (Q14) asked participants if they feel safe walking on Washington Ave. Here the majority (62%) selected yes, and only 19% selected no and wrote in a response. The write in responses showed that folks do walk on Washington Ave but, there could be improvements in crosswalks, and cleanliness of the sidewalks. The remaining 19% selected N/A.

Question 15 (Q15) asked survey respondents if they feel safe riding a bike on Washington Ave. Like the previous question the responders had 3 options to choose from including; not applicable, yes, and no with a write in on why they chose no. The responses received showed most (38%) chose no and wrote in a response. The same themes from Q12 came through, the road is not wide enough for folks to feel safe riding a bike. A portion (33%) selected N/A further showing less people bike in the study area and the remaining 29% selected yes, they feel safe.

Question 16 (Q16) asked participants how important it is to accommodate all types of transportation, including all modes driving, walking, bicycling, and buses. Here all modes scored high for importance of being accommodated. Walking scored highest, 94% selected very important followed by driving 78%, and bicycling 77% and lastly buses 73% selecting very important.

Question 17 (Q17) asked participants to select their top two (2) bicycle facilities they would like to see. The two most selected were on-street bicycle lanes (60%) followed by bicycle parking racks (58%).

Question 18 (Q18) was a follow up question to **Q17** asking respondents where they would you like to see the facilities selected. The answer options included, Forbes Ave, Washington Ave, Broadway, Bellview Ter, Patten Ave, Tracy St, and Other with a place to write in. The top three streets selected were Washington Ave (87%), Broadway (74%), and Forbes Ave (56%).

Question 19 (Q19) asked participants to select their top three (3) streetscape elements they would like to see. The top three that emerged were street lighting (69%), more sidewalks (68%), and more or better pedestrian crossings (66%). Lowest scoring were street trees with 34% selecting.

Question 20 (Q20) was a follow up question to **Q19** asking responders where they would you like to see the streetscape elements selected. The answer options included, Forbes Ave, Washington Ave, Broadway,

Bellview Ter, Patten Ave, Tracy St, and Other with a place to write in. The top three streets were Washington Ave (85%), Broadway (76%), and Forbes Ave (63%). These answers line up with **Q18** responses!

Question 21 (Q21) asked participants to select their top three (3) transit amenities they would like to see. The top three amenities identified were benches at bus stops (70%), shelters at bus stops (66%), and finally lighting at bus stops (57%)

Suggestions for the Future

Question 22 (Q22) asked participants to share any additional ideas and/or comments they may have. Themes that emerged are specific concerns about parking availability and consider connectivity to other neighborhoods in the area.

Question 23 (Q23) was optional and allowed participants to leave their email to receive project updates.

Q1 Please enter your zip code.

Answered: 72 Skipped: 12

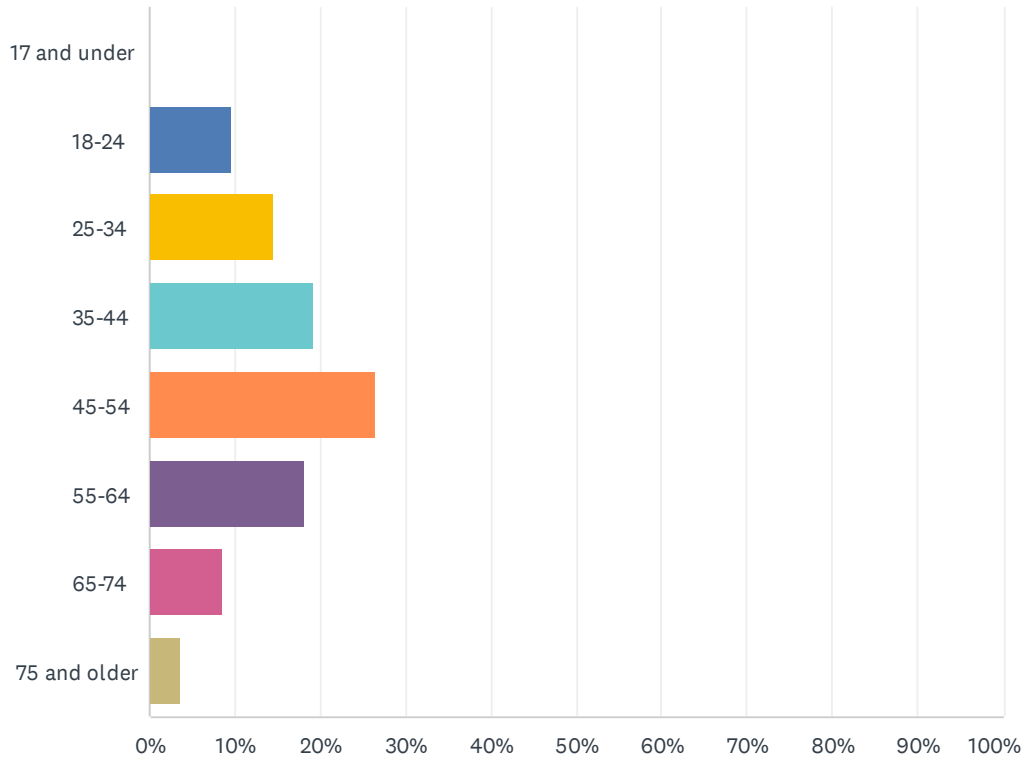
#	RESPONSES	DATE
1	12208	8/1/2022 1:56 PM
2	12061	8/1/2022 12:33 PM
3	12208	7/29/2022 11:07 AM
4	12144	7/25/2022 8:53 AM
5	12144	7/25/2022 8:44 AM
6	12144	7/23/2022 4:11 PM
7	12144	7/23/2022 3:53 PM
8	12144	7/22/2022 10:26 AM
9	12084	7/21/2022 10:56 PM
10	30144	7/19/2022 3:24 PM
11	12180	7/19/2022 3:18 PM
12	12144	7/19/2022 2:49 PM
13	12144	7/19/2022 2:42 PM
14	12144	7/19/2022 10:54 AM
15	12144	7/19/2022 10:54 AM
16	12144	7/19/2022 10:47 AM
17	12061	7/14/2022 2:33 PM
18	12144	7/14/2022 12:49 PM
19	12063	7/13/2022 10:25 PM
20	12198	7/13/2022 9:43 PM
21	12144	7/13/2022 5:13 PM
22	12061	7/13/2022 3:55 PM
23	12144	7/13/2022 2:50 PM
24	12144	7/13/2022 2:39 PM
25	12144	7/13/2022 2:17 PM
26	12303	7/13/2022 1:59 PM
27	12144	7/13/2022 1:57 PM
28	12144	7/13/2022 1:30 PM
29	12144	7/13/2022 1:21 PM
30	12211	7/13/2022 11:35 AM
31	12144	7/12/2022 8:36 PM
32	12144	7/10/2022 8:03 PM
33	12155	7/10/2022 10:57 AM

City of Rensselaer Waterfront Connectivity Study

34	12144	7/9/2022 3:21 PM
35	12144	7/9/2022 10:17 AM
36	12144	7/8/2022 9:23 PM
37	12144	7/8/2022 3:47 PM
38	12144	7/8/2022 1:14 PM
39	12244	7/8/2022 11:42 AM
40	12144	7/8/2022 11:03 AM
41	12144	7/8/2022 7:48 AM
42	12144	7/6/2022 12:13 PM
43	12144	7/6/2022 10:54 AM
44	12144	7/6/2022 10:39 AM
45	12061	7/5/2022 11:20 AM
46	12203	7/3/2022 4:57 PM
47	12144	7/2/2022 7:40 AM
48	12144	7/1/2022 8:53 PM
49	12144	7/1/2022 10:50 AM
50	12144	7/1/2022 10:11 AM
51	12144	7/1/2022 7:50 AM
52	12144	7/1/2022 7:13 AM
53	12144	7/1/2022 12:07 AM
54	12144	6/30/2022 9:20 PM
55	12144	6/30/2022 8:14 PM
56	12866	6/30/2022 5:05 PM
57	12144	6/30/2022 2:29 PM
58	12144	6/30/2022 1:59 PM
59	12075	6/30/2022 1:58 PM
60	12144	6/30/2022 1:51 PM
61	12144	6/30/2022 1:49 PM
62	12144	6/27/2022 2:03 PM
63	12144	6/18/2022 4:43 PM
64	12144	6/18/2022 4:16 PM
65	12144	6/17/2022 4:59 PM
66	12144	6/17/2022 11:47 AM
67	12144	6/17/2022 11:41 AM
68	12144	6/17/2022 10:19 AM
69	12144	6/17/2022 9:06 AM
70	12144	6/17/2022 8:57 AM
71	12144	6/16/2022 7:36 PM

Q2 Please indicate your age.

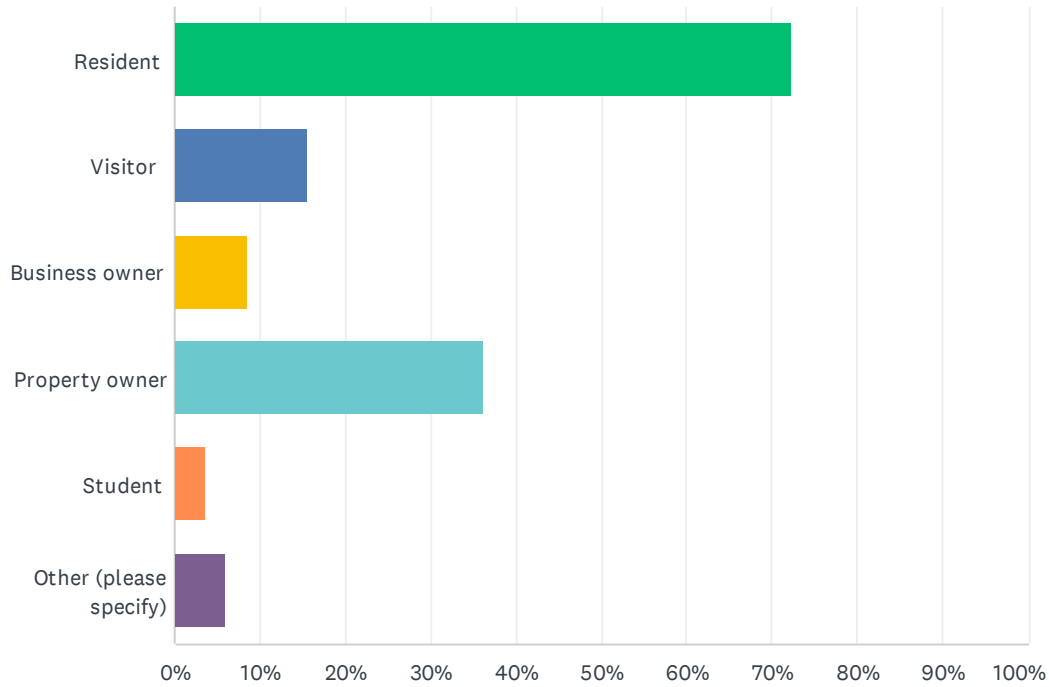
Answered: 83 Skipped: 1



ANSWER CHOICES	RESPONSES	
17 and under	0.00%	0
18-24	9.64%	8
25-34	14.46%	12
35-44	19.28%	16
45-54	26.51%	22
55-64	18.07%	15
65-74	8.43%	7
75 and older	3.61%	3
TOTAL		83

Q3 Please check all that apply to you:

Answered: 83 Skipped: 1

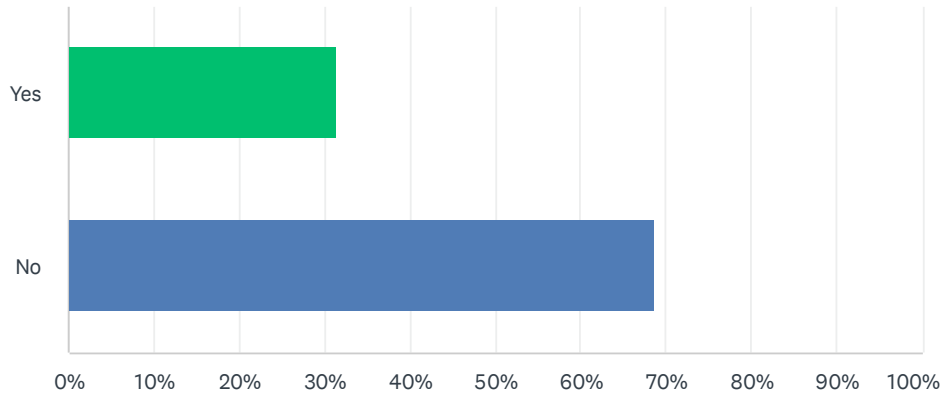


ANSWER CHOICES	RESPONSES
Resident	72.29% 60
Visitor	15.66% 13
Business owner	8.43% 7
Property owner	36.14% 30
Student	3.61% 3
Other (please specify)	6.02% 5
Total Respondents: 83	

#	OTHER (PLEASE SPECIFY)	DATE
1	neighboring area	7/19/2022 2:42 PM
2	Former resident	7/3/2022 4:57 PM
3	Work in the city, on a waterfront property.	6/30/2022 2:53 PM
4	employed in the city	6/30/2022 1:58 PM
5	Government	6/27/2022 2:03 PM

Q4 Do you live within the area outlined in RED on the map below?

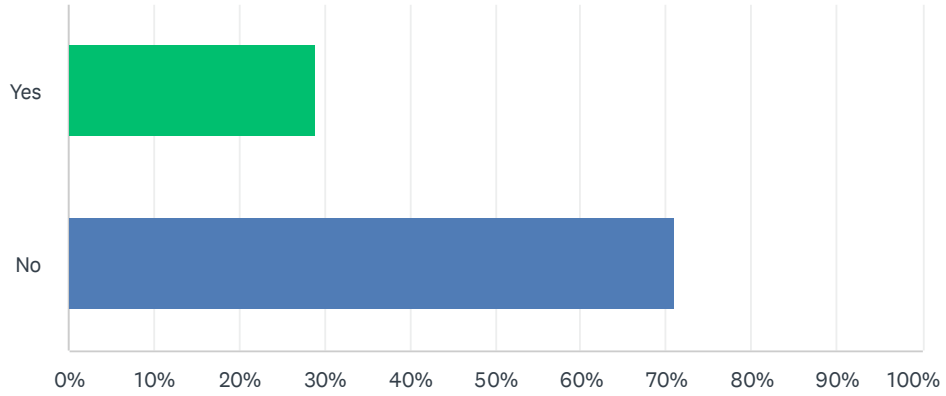
Answered: 80 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	31.25%	25
No	68.75%	55
TOTAL		80

Q5 Do you own property within the area outlined in RED on the map above?

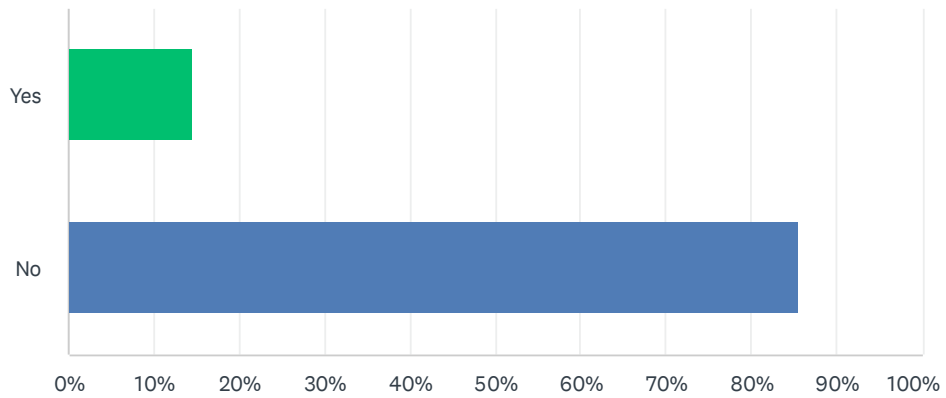
Answered: 83 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	28.92%	24
No	71.08%	59
TOTAL		83

Q6 Do you have a disability that limits your ability to walk, drive, etc.?

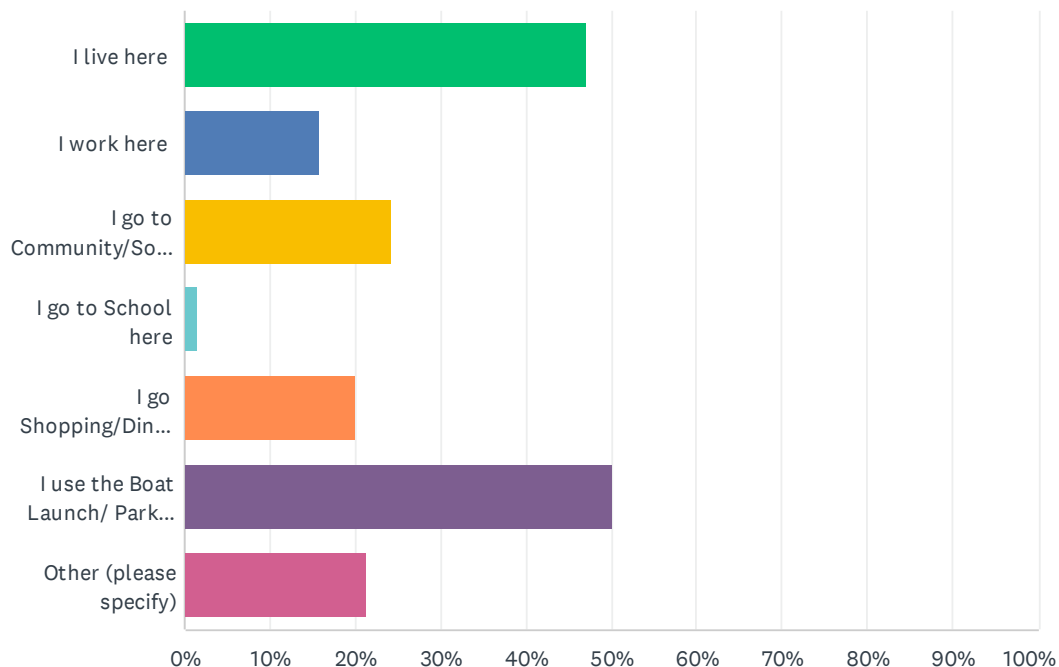
Answered: 83 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	14.46%	12
No	85.54%	71
TOTAL		83

Q7 What typically brings you to the study area identified in RED below? (Select all that apply)

Answered: 70 Skipped: 14



ANSWER CHOICES	RESPONSES
I live here	47.14% 33
I work here	15.71% 11
I go to Community/Social Gatherings (i.e. church) here	24.29% 17
I go to School here	1.43% 1
I go Shopping/Dining here	20.00% 14
I use the Boat Launch/ Park(s) here	50.00% 35
Other (please specify)	21.43% 15
Total Respondents: 70	

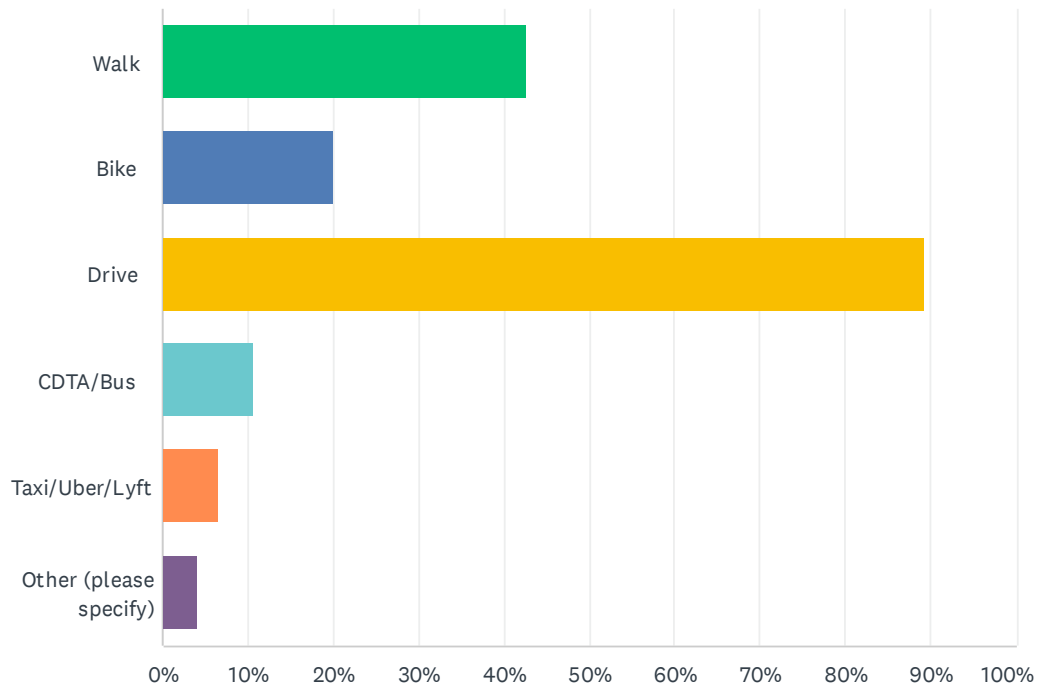
#	OTHER (PLEASE SPECIFY)	DATE
1	recreation	7/19/2022 2:44 PM
2	Neighboring town	7/13/2022 9:44 PM
3	bike or dive thru	7/13/2022 2:41 PM
4	I do not travel here unless passing through due to lack of things to do	7/13/2022 2:21 PM
5	I drive through	7/13/2022 1:22 PM
6	Friends live in the area	7/10/2022 8:04 PM

City of Rensselaer Waterfront Connectivity Study

7	I occasionally take a walk there.	7/6/2022 10:41 AM
8	Occasional train station commuter	7/3/2022 5:06 PM
9	Nothing	7/1/2022 10:51 AM
10	life long resident, I care about the city and residents	7/1/2022 10:13 AM
11	Dog walking. Bike riding	6/30/2022 9:22 PM
12	My family lives in Rensselaer County nearby	6/30/2022 5:06 PM
13	Walking	6/22/2022 11:34 AM
14	City resident, I drive through area often	6/17/2022 5:01 PM
15	I regularly go on walks/drives through here	6/17/2022 10:30 AM

Q8 How do you usually travel in the study area? (select all that apply)

Answered: 75 Skipped: 9

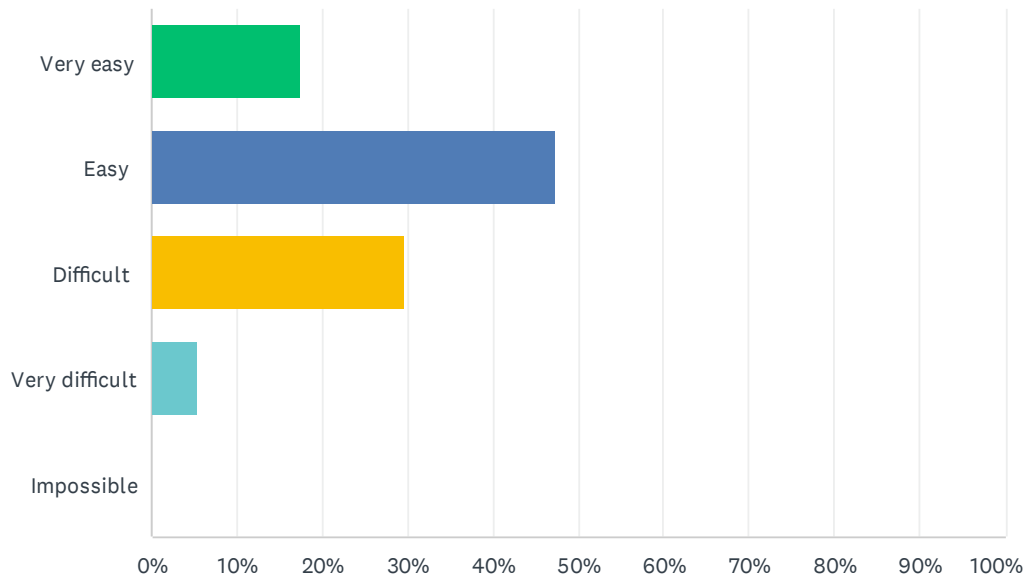


ANSWER CHOICES	RESPONSES
Walk	42.67% 32
Bike	20.00% 15
Drive	89.33% 67
CDTA/Bus	10.67% 8
Taxi/Uber/Lyft	6.67% 5
Other (please specify)	4.00% 3
Total Respondents: 75	

#	OTHER (PLEASE SPECIFY)	DATE
1	Would prefer to bike, but paint is not protection.	7/22/2022 10:29 AM
2	Wheelchair	7/1/2022 8:55 PM
3	I don't	7/1/2022 10:51 AM

Q9 How easy is it for you to move around the study area and beyond?

Answered: 74 Skipped: 10



ANSWER CHOICES	RESPONSES	
Very easy	17.57%	13
Easy	47.30%	35
Difficult	29.73%	22
Very difficult	5.41%	4
Impossible	0.00%	0
TOTAL		74

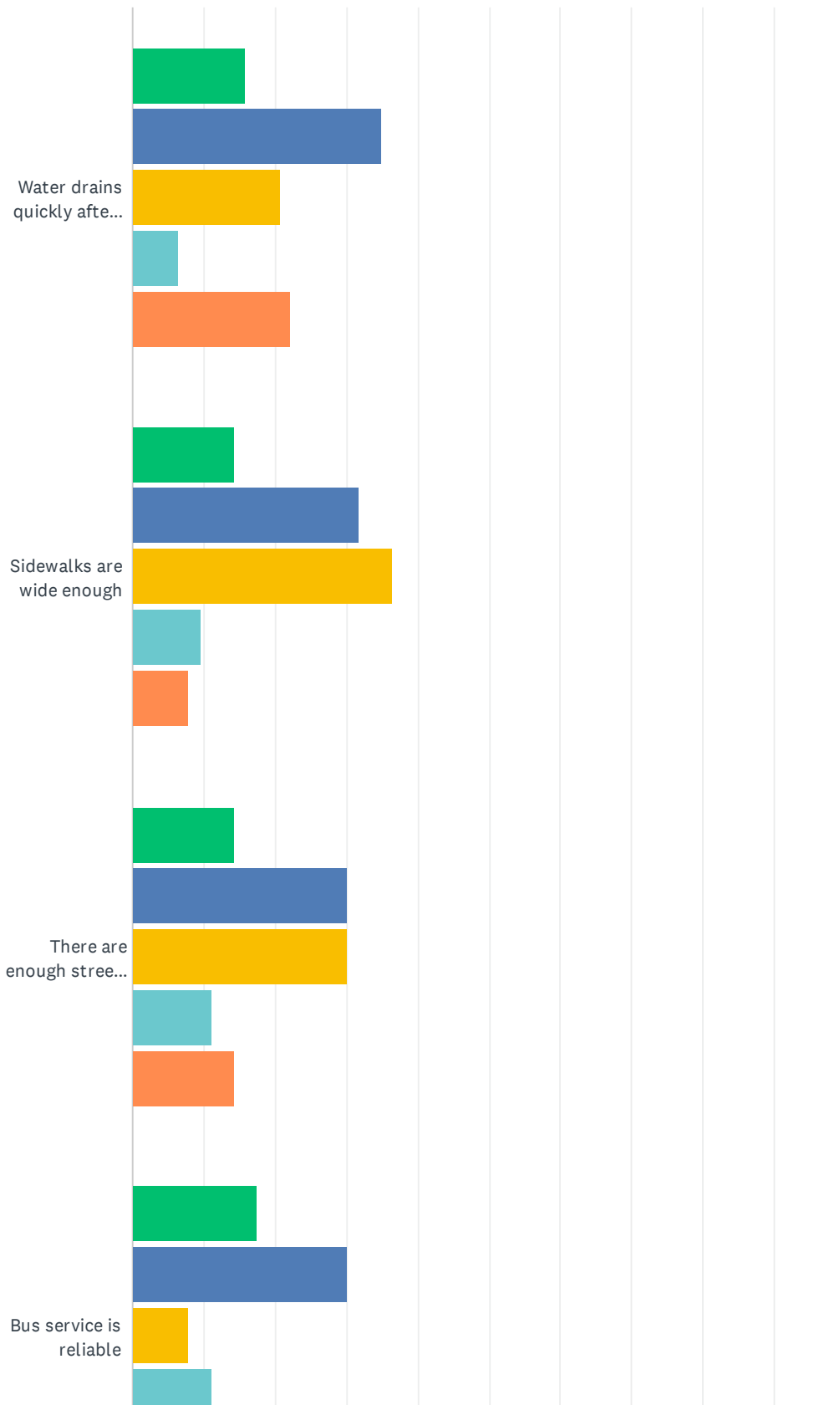
Q10 If difficult please let us know why.

Answered: 24 Skipped: 60

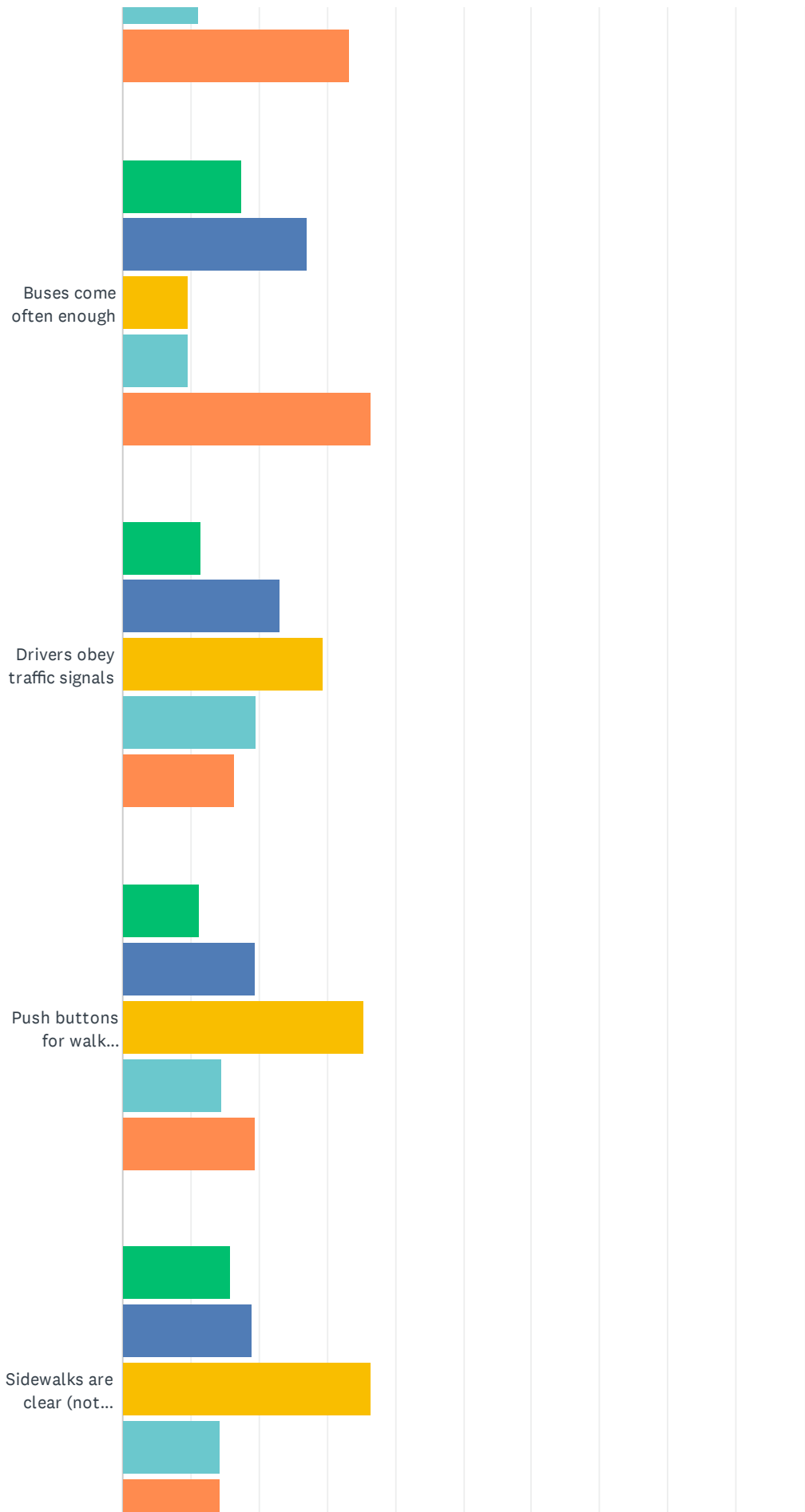
#	RESPONSES	DATE
1	Not enough bike infrastructure	7/29/2022 11:08 AM
2	Forbes ave and Washington ave are narrow. . There are no lights on either road. The cars on Washington ave make t difficult for cars to drive on eiter side at same time. forbes ave is not wide enough and i am afraid to walk down at any time because of the cars are so close and there is not a rail next to the edge.	7/25/2022 8:58 AM
3	Roads are narrow. there is not adequate lighting.	7/25/2022 8:46 AM
4	There is a lighting issues, lack of crosswalks, congestion where parking is on both sides and narrow road leading to boat launch area.	7/23/2022 4:12 PM
5	Not enough parking on city the streets. No some sections of bad sidewalks (across from caseys, end on Washington, side streets). small road going to boat launch	7/23/2022 3:55 PM
6	The intersection of Broadway and washington needs better traffic control. Especially in summer, overgrowth creates a blind turn at this intersection.	7/22/2022 10:29 AM
7	It difficult cause there is a lot of water front here	7/21/2022 10:58 PM
8	Mobility issues mean i use canes	7/19/2022 2:50 PM
9	no choice between easy & difficult	7/13/2022 2:41 PM
10	wayfinding could be better. defined bike lanes would be helpful	7/13/2022 2:21 PM
11	The streets are very narrow in the study. Cars are coming in opposite directions don't have enough room to get by each other at the same time. As you drive down the road you have to pull over and stop to let the other vehicle pass you.	7/8/2022 6:31 PM
12	Some of the area sidewalks are in complete disrepair or nonexistent. No marked cross walks. No easy pedestrian access to boat launch	7/8/2022 7:50 AM
13	Uneven roads/sidewalks Sidewalks blocked No access	7/1/2022 8:55 PM
14	it would be great to have a walk way through the city	7/1/2022 10:13 AM
15	Hills, lack of bicycle and pedestrian space, lack of connections	7/1/2022 12:08 AM
16	Broken sidewalks. Areas with no sidewalks. Poor lighting	6/30/2022 9:22 PM
17	Not great access for walking or biking.	6/30/2022 5:06 PM
18	Most of it is wooded, dark n small roads	6/30/2022 2:33 PM
19	Washington Ave near Casey's is very difficult. Road needs parking on it. Bottom of Washington Ave is a nightmare with Broadway and Forbes intersection. FORBES AVE IS AWFUL	6/30/2022 1:52 PM
20	school zone speed trap and two sided parking	6/30/2022 1:50 PM
21	In some areas the sidewalks are terrible or nearly nonexistent	6/27/2022 2:05 PM
22	Difficult to navigate and know how to get to the boat launch or the waterfront area.	6/18/2022 7:21 PM
23	Cannot walk for a long period of time	6/17/2022 11:45 AM
24	Most areas are not very pedestrian friendly with no designated area to walk. Guardrails or other barriers are not present in hazardous areas, such as Forbes Ave. It can be very difficult for pedestrians to cross from the corner store on Washington Ave to the other side of the street, and cars occasionally have trouble leaving the area, especially as there is a CDTA bus stop located right there.	6/17/2022 10:30 AM

Q11 When traversing the study area, how do you feel about the following:

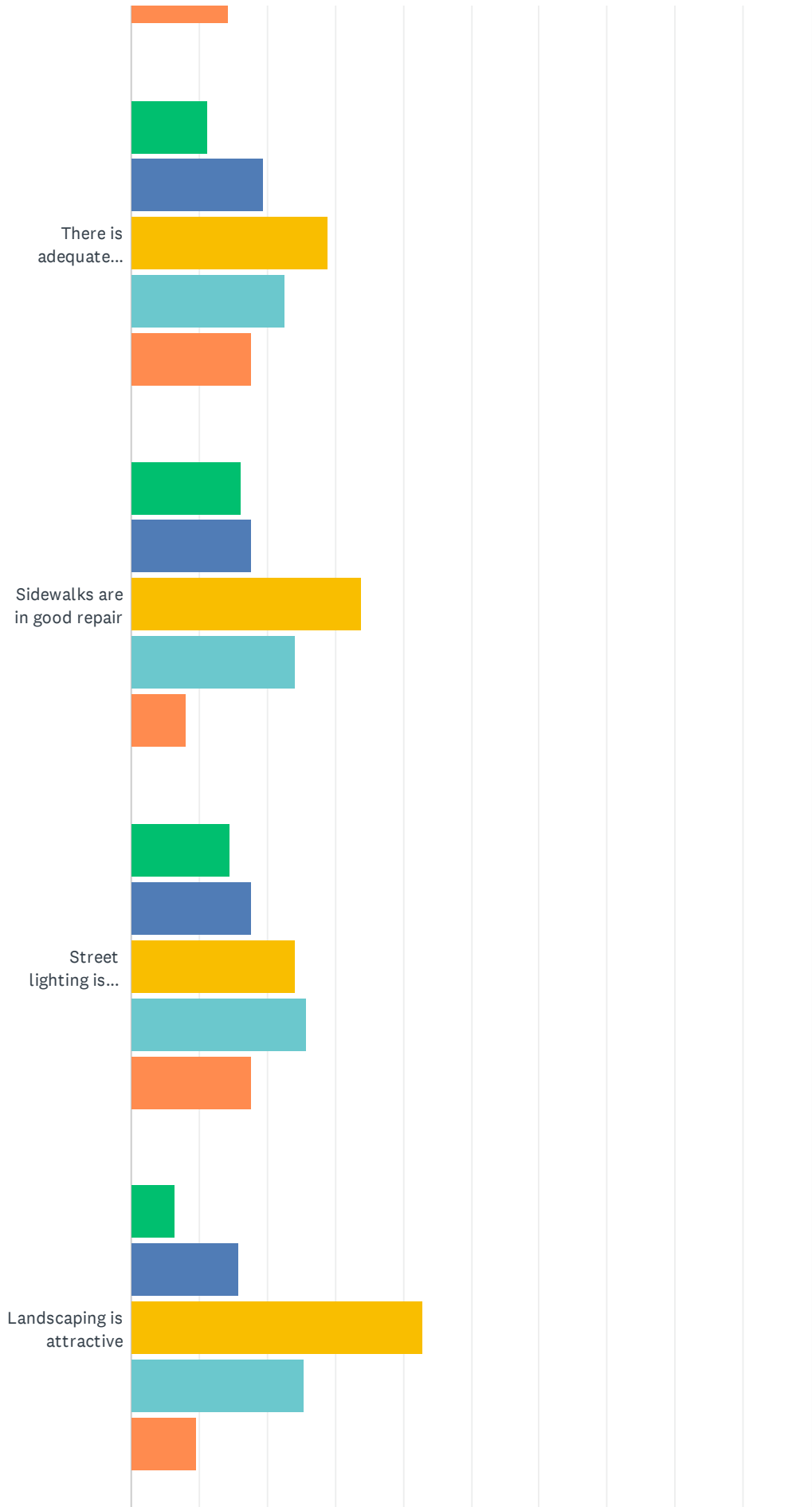
Answered: 63 Skipped: 21



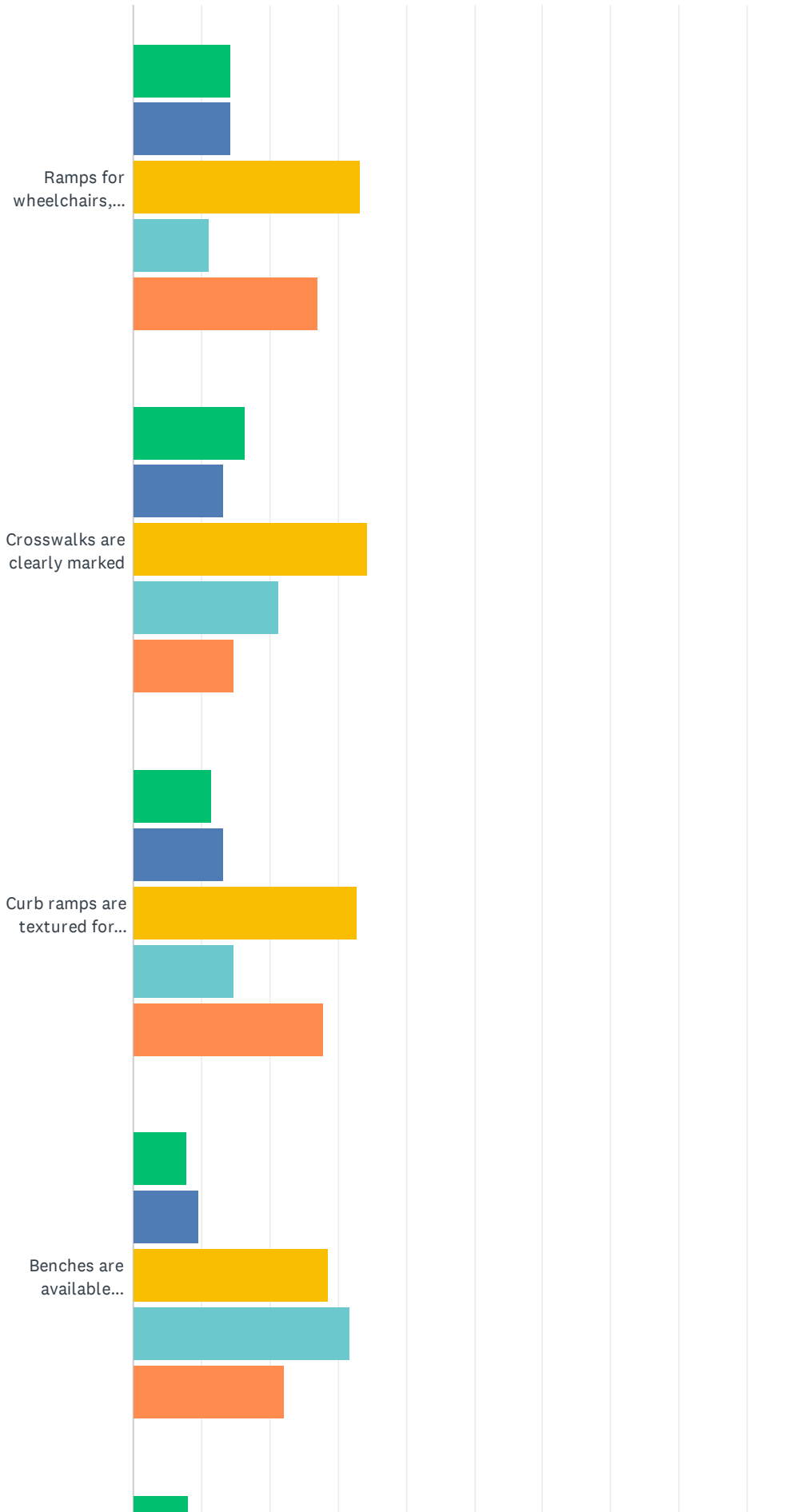
City of Rensselaer Waterfront Connectivity Study



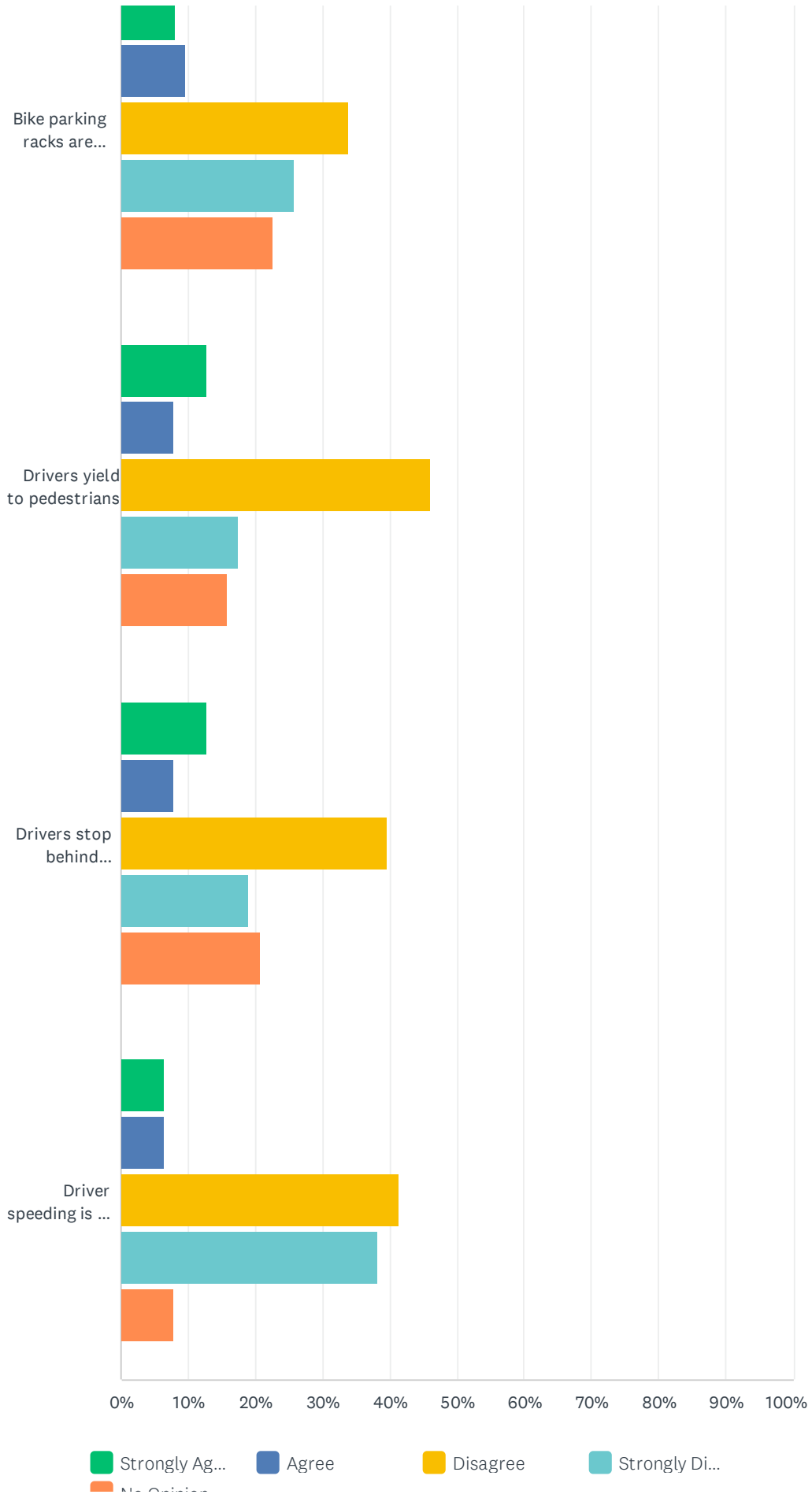
City of Rensselaer Waterfront Connectivity Study



City of Rensselaer Waterfront Connectivity Study



City of Rensselaer Waterfront Connectivity Study



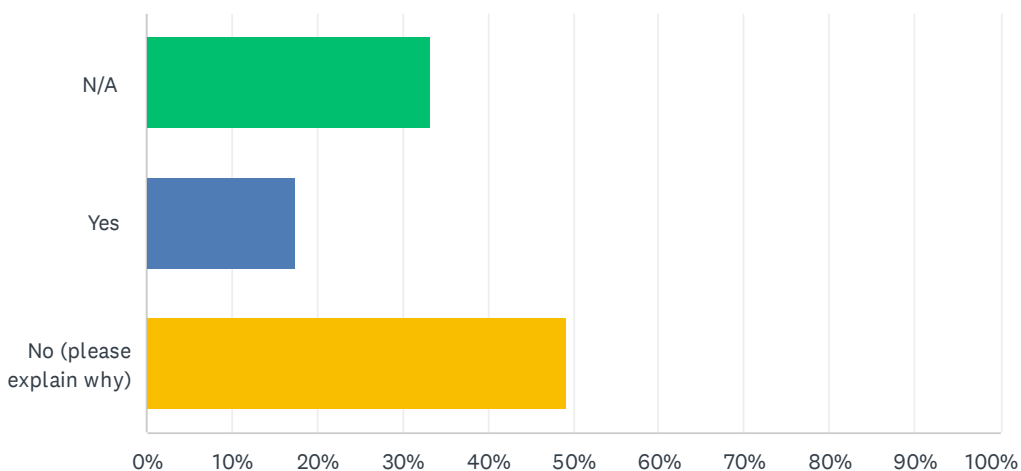
City of Rensselaer Waterfront Connectivity Study

■ No Opinion...

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO OPINION/NOT SURE	TOTAL	WEIGHTED AVERAGE
Water drains quickly after rain storms	15.87% 10	34.92% 22	20.63% 13	6.35% 4	22.22% 14	63	1.73
Sidewalks are wide enough	14.29% 9	31.75% 20	36.51% 23	9.52% 6	7.94% 5	63	2.25
There are enough street trees	14.29% 9	30.16% 19	30.16% 19	11.11% 7	14.29% 9	63	2.10
Bus service is reliable	17.46% 11	30.16% 19	7.94% 5	11.11% 7	33.33% 21	63	1.46
Buses come often enough	17.46% 11	26.98% 17	9.52% 6	9.52% 6	36.51% 23	63	1.38
Drivers obey traffic signals	11.48% 7	22.95% 14	29.51% 18	19.67% 12	16.39% 10	61	2.25
Push buttons for walk signals are available and work as they should	11.29% 7	19.35% 12	35.48% 22	14.52% 9	19.35% 12	62	2.15
Sidewalks are clear (not blocked by poles, signs, shrubs, etc.)	15.87% 10	19.05% 12	36.51% 23	14.29% 9	14.29% 9	63	2.21
There is adequate on-street parking	11.29% 7	19.35% 12	29.03% 18	22.58% 14	17.74% 11	62	2.27
Sidewalks are in good repair	16.13% 10	17.74% 11	33.87% 21	24.19% 15	8.06% 5	62	2.50
Street lighting is sufficient	14.52% 9	17.74% 11	24.19% 15	25.81% 16	17.74% 11	62	2.26
Landscaping is attractive	6.35% 4	15.87% 10	42.86% 27	25.40% 16	9.52% 6	63	2.68
Ramps for wheelchairs, strollers, etc. are available	14.29% 9	14.29% 9	33.33% 21	11.11% 7	26.98% 17	63	1.87
Crosswalks are clearly marked	16.39% 10	13.11% 8	34.43% 21	21.31% 13	14.75% 9	61	2.31
Curb ramps are textured for the visually impaired	11.48% 7	13.11% 8	32.79% 20	14.75% 9	27.87% 17	61	1.95
Benches are available throughout	7.94% 5	9.52% 6	28.57% 18	31.75% 20	22.22% 14	63	2.40
Bike parking racks are available	8.06% 5	9.68% 6	33.87% 21	25.81% 16	22.58% 14	62	2.32
Drivers yield to pedestrians	12.70% 8	7.94% 5	46.03% 29	17.46% 11	15.87% 10	63	2.37
Drivers stop behind crosswalks	12.70% 8	7.94% 5	39.68% 25	19.05% 12	20.63% 13	63	2.24
Driver speeding is not a problem	6.35% 4	6.35% 4	41.27% 26	38.10% 24	7.94% 5	63	2.95

Q12 Do you feel safe walking on Forbes Ave?

Answered: 63 Skipped: 21



ANSWER CHOICES	RESPONSES	
N/A	33.33%	21
Yes	17.46%	11
No (please explain why)	49.21%	31
TOTAL		63

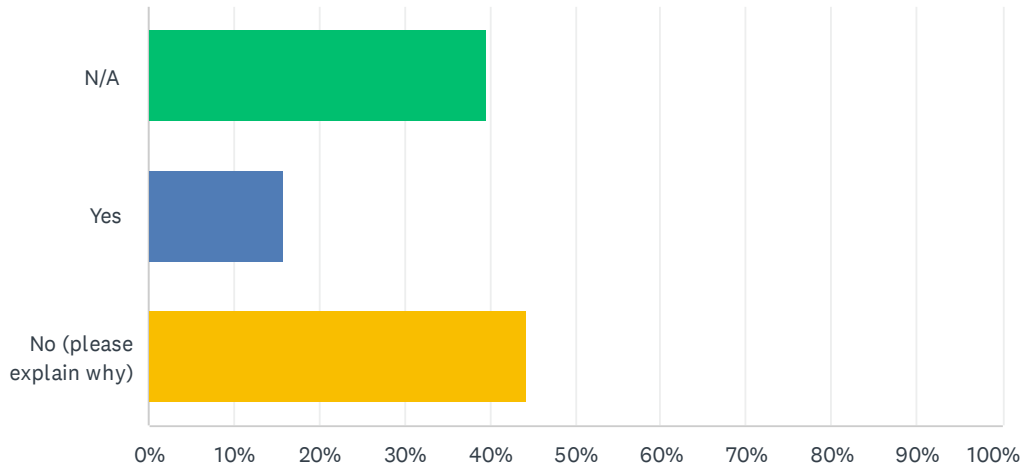
#	NO (PLEASE EXPLAIN WHY)	DATE
1	The road is in terrible condition and not wide enough. There is not enough lighting or a sidewalk.	7/25/2022 9:08 AM
2	No lighting. Narrow road with no guardrail.	7/25/2022 8:48 AM
3	I do not like to walk along Forbes Ave because the road is not wide enough and cars fly up/down. The lighting is non existent.	7/23/2022 4:16 PM
4	NOT WIDE ENOUGH. no sidewalks or lighting.	7/23/2022 4:00 PM
5	Drivers do not share the road	7/22/2022 10:38 AM
6	It's a dump. There's no pride in ownership, the people who live here are uneducated low income people that don't care about the city being nicer.	7/19/2022 10:52 AM
7	The residents of this place do not follow stop signs and speed limits.	7/14/2022 12:54 PM
8	It's poorly lit. And there are no sidewalks	7/13/2022 2:04 PM
9	Not enough visibility	7/10/2022 11:01 AM
10	No sidewalks	7/8/2022 11:46 AM
11	Speeding	7/8/2022 11:08 AM
12	Not well lighted. You HAVE to walk in the street. Over grown.	7/8/2022 8:01 AM
13	No light at night	7/6/2022 10:58 AM
14	Traffic moves too fast. I was once followed by a group of teens who were yelling awful comments at me.	7/5/2022 11:29 AM

City of Rensselaer Waterfront Connectivity Study

15	Have you seen 4th avenue	7/1/2022 10:58 AM
16	the city isn't taken care of like it used to be	7/1/2022 10:21 AM
17	Last time I was there the road was on tough shape	7/1/2022 9:53 AM
18	Difficult for drivers to see people walking, difficult to navigate	7/1/2022 12:18 AM
19	Poor lighting. Narrow road. No sidewalks	6/30/2022 9:27 PM
20	No sidewalks, blind turns, no lighting, overgrown brush, large drop into woods	6/30/2022 8:26 PM
21	Not attractive place to want to walk around, narrow road and no sidewalks	6/30/2022 5:11 PM
22	No sidewalks dark n road only wide enough for 1 vehicle at a time	6/30/2022 2:40 PM
23	Heavy growth, no sidewalks, poor lighting.	6/30/2022 2:28 PM
24	Road is NOT WIDE ENOUGH. There are no lights or sidewalks. No guard rails so I might fall down hill.	6/30/2022 1:56 PM
25	Dark, poorly lite, no sidewalks	6/27/2022 2:18 PM
26	Narrow, dark and no sidewalks	6/18/2022 7:32 PM
27	Cars speed narrow road. Drivers on phones	6/18/2022 4:48 PM
28	Dark. Traffic no sidewalk	6/18/2022 4:21 PM
29	Not pedestrian friendly	6/17/2022 5:07 PM
30	Dark, secluded, narrow	6/17/2022 10:39 AM
31	Tight road so drives can't drive on both sides simultaneously. Dark. Fast drivers	6/17/2022 9:03 AM

Q13 Do you feel safe riding a bike on Forbes Ave?

Answered: 63 Skipped: 21



ANSWER CHOICES	RESPONSES	
N/A	39.68%	25
Yes	15.87%	10
No (please explain why)	44.44%	28
TOTAL		63

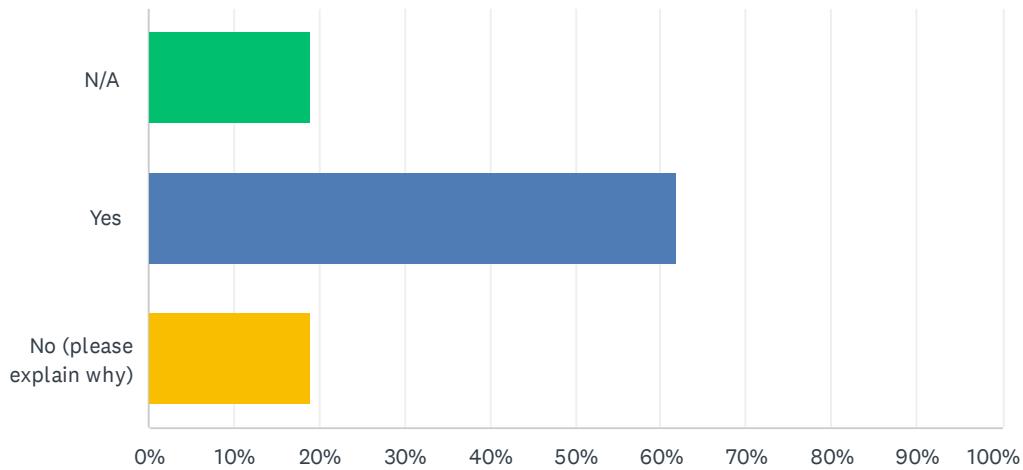
#	NO (PLEASE EXPLAIN WHY)	DATE
1	The road is in terrible condition and not wide enough. There is not enough lighting or a sidewalk.	7/25/2022 9:08 AM
2	No lighting. Narrow road with no guardrail.	7/25/2022 8:48 AM
3	no where to ride bike.	7/23/2022 4:16 PM
4	NOT WIDE ENOUGH. no sidewalks/protected bike lane or lighting.	7/23/2022 4:00 PM
5	Drivers do not share the road	7/22/2022 10:38 AM
6	Same as above	7/14/2022 12:54 PM
7	no bike lane	7/13/2022 2:26 PM
8	Same as above	7/13/2022 2:04 PM
9	Not safe	7/12/2022 8:40 PM
10	Speeding	7/8/2022 11:08 AM
11	See above	7/8/2022 8:01 AM
12	No light at night	7/6/2022 10:58 AM
13	No continuous bike network means drivers are not sure where bikes are going.	7/3/2022 5:06 PM
14	It's a mess	7/1/2022 10:58 AM
15	the city isn't taken care of like it used to be	7/1/2022 10:21 AM

City of Rensselaer Waterfront Connectivity Study

16	Same as walking	7/1/2022 12:18 AM
17	Narrow. Speeding cars.	6/30/2022 9:27 PM
18	Speeding cars, road not wide enough, there should be a paved bike lane / sidewalk	6/30/2022 8:26 PM
19	Too busy on road	6/30/2022 5:11 PM
20	Same answer as #12	6/30/2022 2:40 PM
21	Heavy growth, no sidewalks, poor lighting	6/30/2022 2:28 PM
22	guard rails so I might fall down hill.	6/30/2022 1:56 PM
23	Dark and no sidewalks and cars travel fast especially with the curves	6/27/2022 2:18 PM
24	Narrow and dark	6/18/2022 7:32 PM
25	Holes in road. Speeding cars. Rough roads. Narrow roads rocks	6/18/2022 4:48 PM
26	Narrow roads. No lights	6/18/2022 4:21 PM
27	Not pedestrian friendly	6/17/2022 5:07 PM
28	Road in terrible condition and drivers are crazy	6/17/2022 9:03 AM

Q14 Do you feel safe walking on Washington Ave?

Answered: 63 Skipped: 21

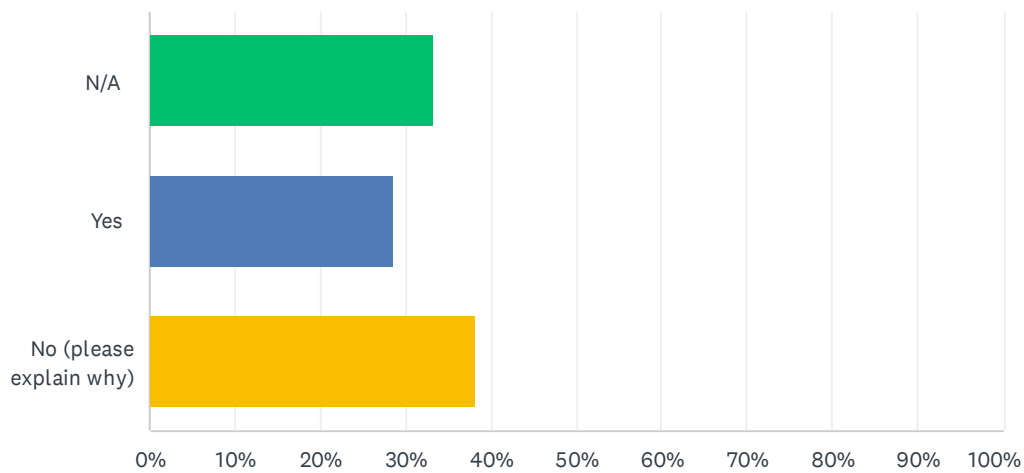


ANSWER CHOICES	RESPONSES	
N/A	19.05%	12
Yes	61.90%	39
No (please explain why)	19.05%	12
TOTAL		63

#	NO (PLEASE EXPLAIN WHY)	DATE
1	yes and no. mostly yes but there are no sidewalks painted. certain business owners get to blacktop over sidewalks.	7/23/2022 4:00 PM
2	not pedestrian friendly	7/19/2022 2:47 PM
3	Criminals hanging out outside all the time. No efforts to clean up the city, repair pot holes, repave streets, water flowers, fix veterans banners, mow and weed whack. There are bigger priorities to fix than worrying about the waterfront.	7/19/2022 10:52 AM
4	Drivers speed down the hill	7/8/2022 11:08 AM
5	The sidewalks between bellview terr and Broadway are in disrepair and vegetation is overgrown	7/8/2022 8:01 AM
6	the city isn't taken care of like it used to be	7/1/2022 10:21 AM
7	No cross signals.	6/30/2022 9:27 PM
8	Not attractive area for walking	6/30/2022 5:11 PM
9	Cars drive too fast. Hill too steep. Top of hill at store has 4 intersections traffic gets congested esp w 3 parking areas for businesses on same intersection	6/30/2022 2:40 PM
10	Heavy growth, no sidewalks, poor lighting	6/30/2022 2:28 PM
11	There are no crosswalks.	6/30/2022 1:56 PM
12	Only one side has decent sidewalks and there are no street crossing lines or stop lines	6/27/2022 2:18 PM

Q15 Do you feel safe riding a bike on Washington Ave?

Answered: 63 Skipped: 21



ANSWER CHOICES	RESPONSES	
N/A	33.33%	21
Yes	28.57%	18
No (please explain why)	38.10%	24
TOTAL		63

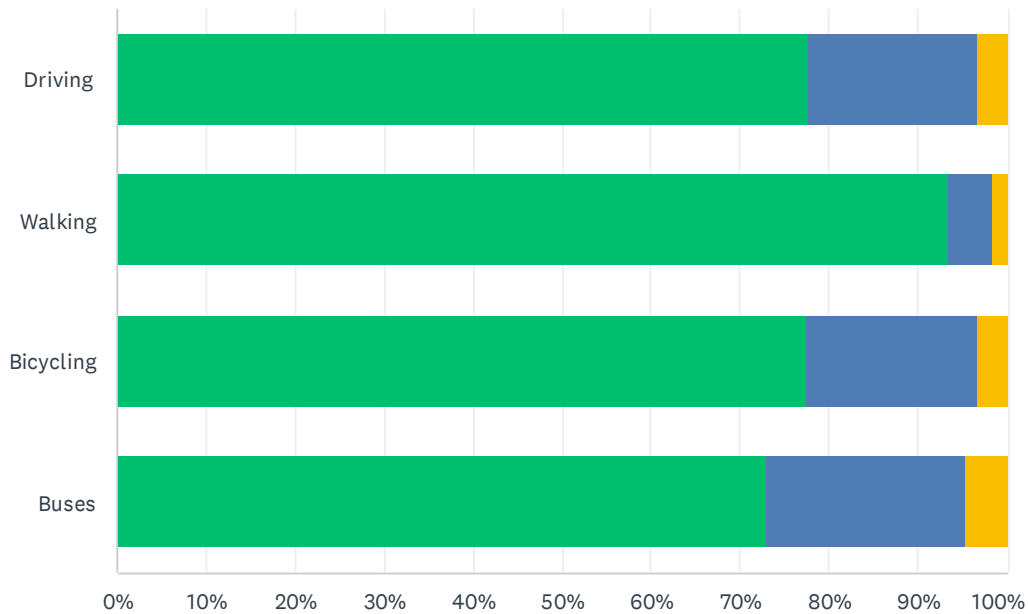
#	NO (PLEASE EXPLAIN WHY)	DATE
1	yes and no. mostly yes but there are no sidewalks painted. certain business owners get to blacktop over sidewalks. I do not want to ride bike in road. even if you paint those bike lanes in the road it is still not a protected bike lane so it is a waste	7/23/2022 4:00 PM
2	Drivers do not share the road, road is too narrow to safely pass a cyclist, and the incline prevents cyclists from pacing with traffic, while automobile must substantially increase power to climb the hill. This creates a very unsafe condition.	7/22/2022 10:38 AM
3	not bike friendly, fast vehicles	7/19/2022 2:47 PM
4	irresponsible drivers	7/19/2022 10:57 AM
5	no designated bike lane	7/13/2022 2:26 PM
6	Not safe	7/12/2022 8:40 PM
7	Drivers speed constantly	7/8/2022 11:08 AM
8	Heavy traffic, shouldn't ride on sidewalk	7/6/2022 10:58 AM
9	Drivers do not share the road.	7/5/2022 11:29 AM
10	No continuous bike network means drivers are not sure where bikes are going.	7/3/2022 5:06 PM
11	The large sidewalk on the Northside has the entrance and exit ramps! The narrower sidewalk is on the right where you don't have to worry about traffic.	7/1/2022 10:58 AM
12	the city isn't taken care of like it used to be	7/1/2022 10:21 AM

City of Rensselaer Waterfront Connectivity Study

13	Drivers go too fast and pass too close with shared lanes	7/1/2022 12:18 AM
14	Narrow roads. Speeding cars. No bike lanes.	6/30/2022 9:27 PM
15	Too much traffic in both directions, cars parked on both sides of road and pulling out of parking lots	6/30/2022 8:26 PM
16	Too busy and fast moving cars	6/30/2022 5:11 PM
17	Same as #14	6/30/2022 2:40 PM
18	Heavy growth, poor sidewalks, poor lighting, Broadway to 4th St.	6/30/2022 2:28 PM
19	See above	6/27/2022 2:18 PM
20	A lot of traffic and speeding	6/18/2022 7:32 PM
21	Sometimes. Depending on traffic	6/18/2022 4:48 PM
22	No bike lane	6/18/2022 4:21 PM
23	No dedicated bike lanes	6/17/2022 5:07 PM
24	no bike path; parking both sides is select areas; speed	6/16/2022 7:44 PM

Q16 How important is it to accommodate all types of transportation?

Answered: 64 Skipped: 20

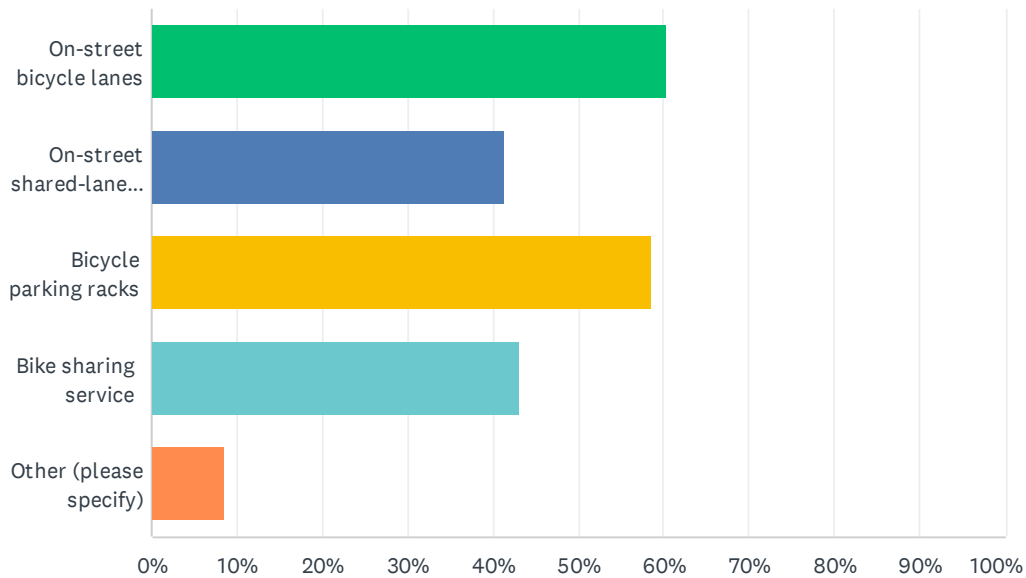


■ Very import...
 ■ Somewhat i...
 ■ Not Import...

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	TOTAL	WEIGHTED AVERAGE
Driving	77.78% 49	19.05% 12	3.17% 2	63	2.75
Walking	93.55% 58	4.84% 3	1.61% 1	62	2.92
Bicycling	77.42% 48	19.35% 12	3.23% 2	62	2.74
Buses	73.02% 46	22.22% 14	4.76% 3	63	2.68

Q17 What bicycle facilities would you like to see, if any? (select 2)

Answered: 58 Skipped: 26

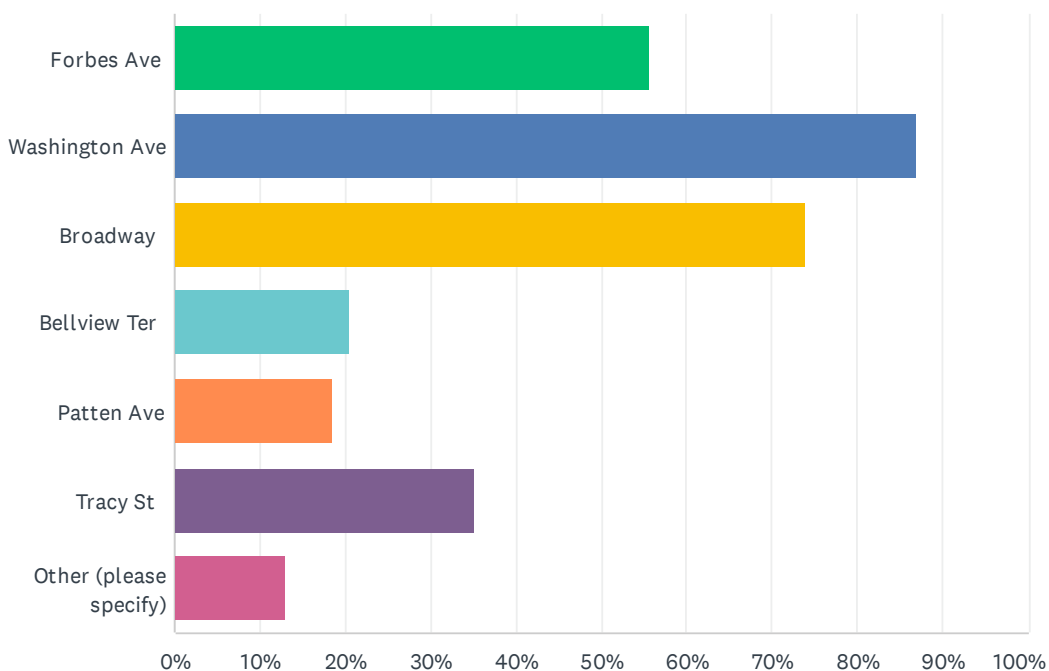


ANSWER CHOICES	RESPONSES	
On-street bicycle lanes	60.34%	35
On-street shared-lane markings (sharrows)	41.38%	24
Bicycle parking racks	58.62%	34
Bike sharing service	43.10%	25
Other (please specify)	8.62%	5
Total Respondents: 58		

#	OTHER (PLEASE SPECIFY)	DATE
1	No sharrows!! They do not encourage enough awareness of cyclists and can lead to more confusion and conflict between road users.	7/29/2022 11:11 AM
2	Bike path	7/10/2022 11:01 AM
3	Bike path	7/9/2022 1:44 PM
4	bike and walking route	7/1/2022 10:21 AM
5	Trails and protected bike lanes	7/1/2022 12:18 AM

Q18 Where would you like to see the facilities you selected?

Answered: 54 Skipped: 30

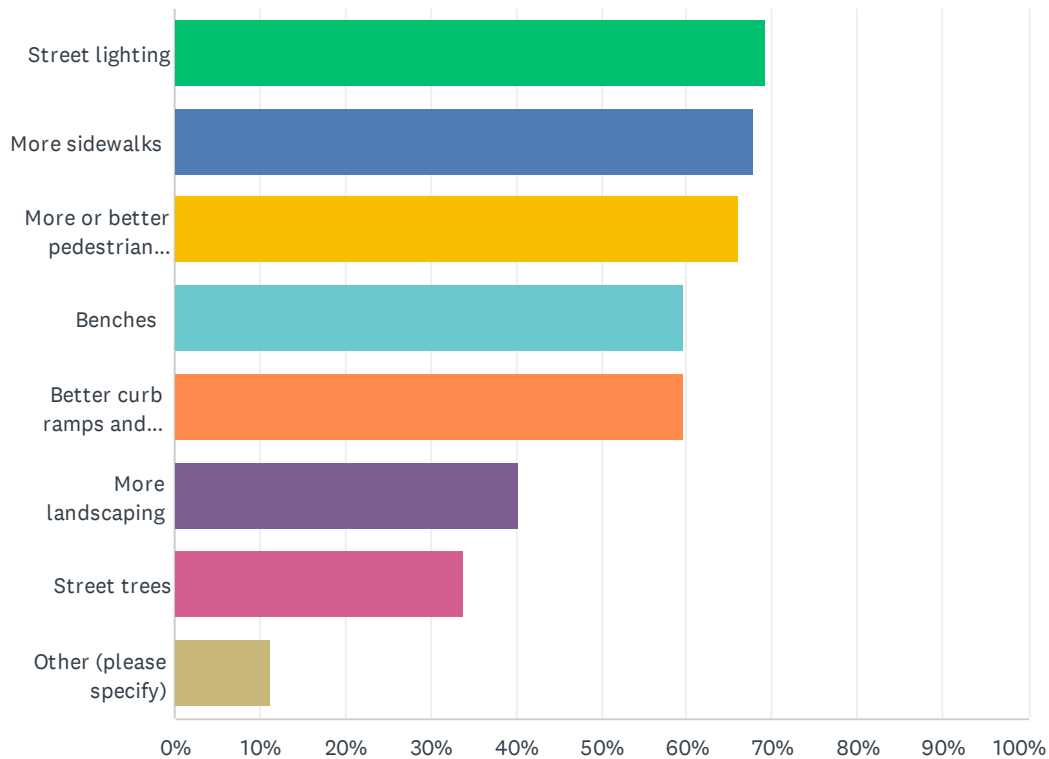


ANSWER CHOICES	RESPONSES	
Forbes Ave	55.56%	30
Washington Ave	87.04%	47
Broadway	74.07%	40
Bellview Ter	20.37%	11
Patten Ave	18.52%	10
Tracy St	35.19%	19
Other (please specify)	12.96%	7
Total Respondents: 54		

#	OTHER (PLEASE SPECIFY)	DATE
1	3rd Avenue from broadway to High Street.	7/22/2022 10:38 AM
2	By the river	7/9/2022 1:44 PM
3	3rd st needs speeding attention, no one is stopping speeding there	7/8/2022 11:08 AM
4	A continuous network of cycleways would make this a desirable green city for residents and businesses.	7/3/2022 5:06 PM
5	anywhere throughout the city	7/1/2022 10:21 AM
6	Second street	6/30/2022 9:27 PM

Q19 What streetscape elements would you like to see, if any? (select 3)

Answered: 62 Skipped: 22



ANSWER CHOICES	RESPONSES
Street lighting	69.35% 43
More sidewalks	67.74% 42
More or better pedestrian crossings	66.13% 41
Benches	59.68% 37
Better curb ramps and accessibility improvements	59.68% 37
More landscaping	40.32% 25
Street trees	33.87% 21
Other (please specify)	11.29% 7
Total Respondents: 62	

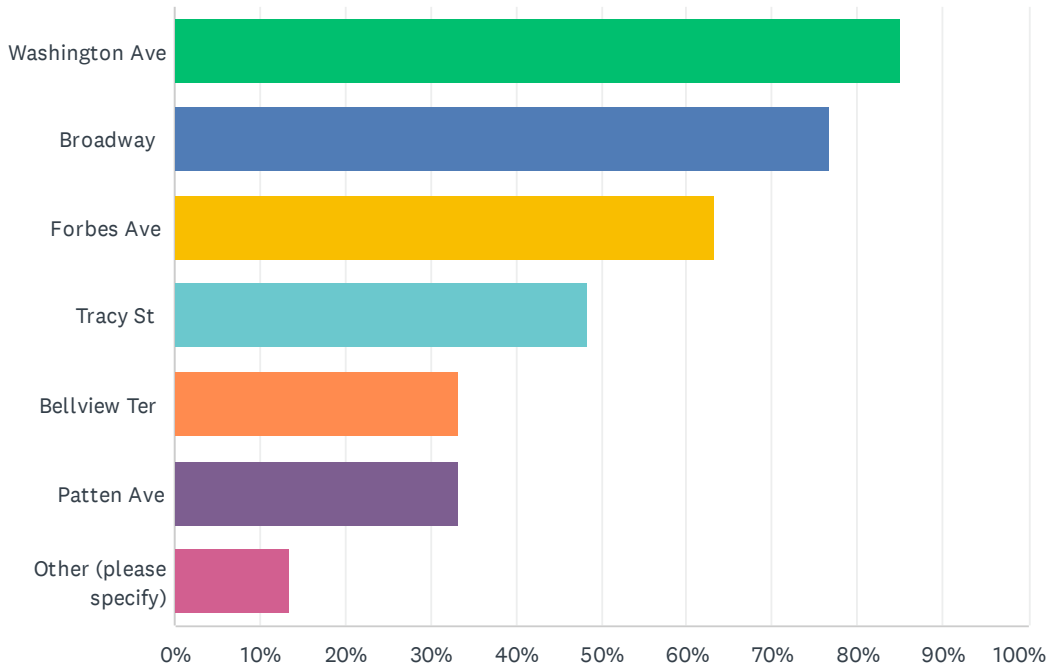
#	OTHER (PLEASE SPECIFY)	DATE
1	Anything to slow traffic on East Street. A better place than the corner of East and Herrick for CDTA drivers to take their breaks. Busses often block the intersection and north bound lane of East Street.	7/22/2022 10:38 AM
2	the city should take more pride in all the trash dumped throughout the city	7/19/2022 10:57 AM
3	Signage is terrible	7/13/2022 2:04 PM

City of Rensselaer Waterfront Connectivity Study

4	TRASHCANS	7/8/2022 11:08 AM
5	Bike lanes	6/30/2022 9:27 PM
6	Wider roads, better traffic flow	6/30/2022 2:40 PM
7	Well defined pedestrian areas especially crosswalks	6/27/2022 2:18 PM

Q20 Where would you like to see the streetscape elements you selected?

Answered: 60 Skipped: 24

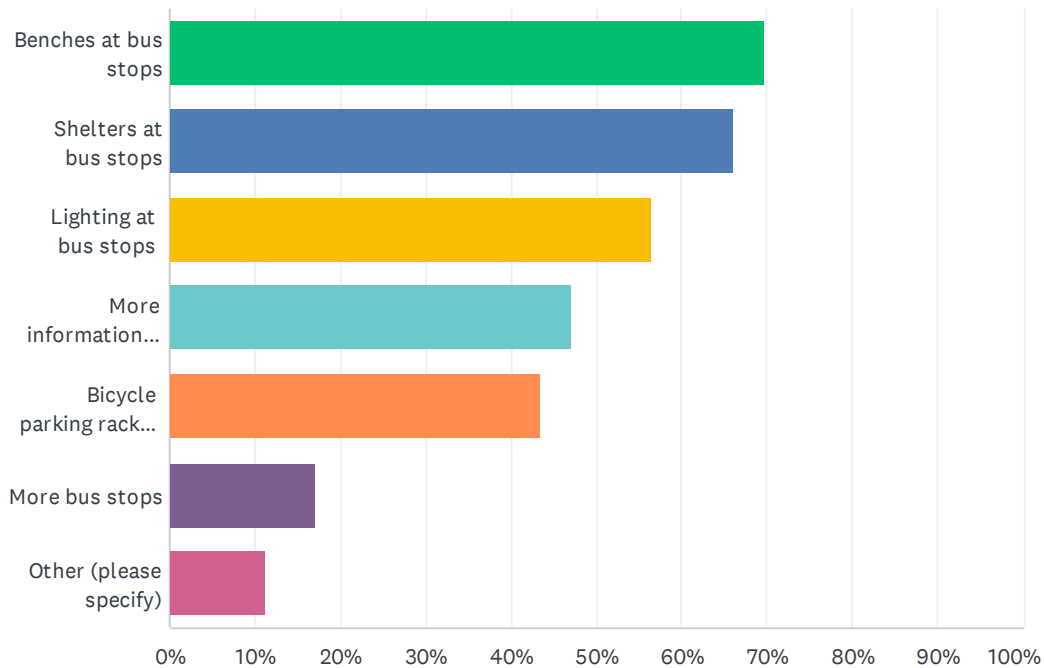


ANSWER CHOICES	RESPONSES	
Washington Ave	85.00%	51
Broadway	76.67%	46
Forbes Ave	63.33%	38
Tracy St	48.33%	29
Bellview Ter	33.33%	20
Patten Ave	33.33%	20
Other (please specify)	13.33%	8
Total Respondents: 60		

#	OTHER (PLEASE SPECIFY)	DATE
1	East Street	7/22/2022 10:38 AM
2	Patten ave has enough drunks. Don't give them more benches	7/14/2022 12:54 PM
3	Columbia street	7/13/2022 2:04 PM
4	By the river	7/9/2022 1:44 PM
5	3rd st	7/8/2022 11:08 AM
6	2nd Street	7/6/2022 10:58 AM
7	anywhere throughout the city	7/1/2022 10:21 AM

Q21 What transit amenities would you like to see, if any? (select 3)

Answered: 53 Skipped: 31



ANSWER CHOICES	RESPONSES
Benches at bus stops	69.81% 37
Shelters at bus stops	66.04% 35
Lighting at bus stops	56.60% 30
More information about bus routes and schedules	47.17% 25
Bicycle parking racks at bus stops	43.40% 23
More bus stops	16.98% 9
Other (please specify)	11.32% 6
Total Respondents: 53	

#	OTHER (PLEASE SPECIFY)	DATE
1	Information about accessibility at major stops	7/19/2022 2:53 PM
2	Trashcans	7/8/2022 11:08 AM
3	Schedules that offer increased coverage.	7/5/2022 11:29 AM
4	Love CDTA, but the bus routes and times are difficult to understand here	7/1/2022 12:18 AM
5	Cut-ina for bus stops so traffic can go past on Washington Ave	6/30/2022 8:26 PM
6	street cutout at bus stop for buses to park	6/16/2022 7:44 PM

Q22 Please share any additional ideas and/or comments you have!

Answered: 25 Skipped: 59

#	RESPONSES	DATE
1	More bike infrastructure please! A connection to the Empire State Trail, or making new bike infrastructure the EST, would be crucial	7/29/2022 11:12 AM
2	I would like to see the kids have a great way to get to school and stay out of trouble. they do not have a fun safe way to walk to school. they should have never stopped bussing all kids when they said they would bus every kid when they built that school. More activities for the kids that will keep them out of trouble. Forbes Ave needs to be safer for thr kids to walk or ride their bike and scooters. The same for Washington ave and Broadway. Hopefully if you can get ths done for this area it can expand to the whole city. great job everyone. . -Maggie	7/25/2022 9:15 AM
3	If you could somehow add a walking area and/or bike lane on Forbes ave that is protected from cars i would feel safe letting my 12 year old walk that road with his friends to the park and back. with all the trees hanging over the road it creates a dark damp area. There needs to be lighting and the road NEEDS to be striped so cars do not drice crazy	7/25/2022 8:51 AM
4	Signs in the area need to be improved. the last year signs have become better i.e. they have been repositioned/straightened but some need to be replaced and others need to be added. If you don't live in the city then you would not know how to get to the boat launch.	7/23/2022 4:19 PM
5	there needs to be more parking along Washington Ave. the road is not wide enough for double sided on street parking. you have grassy sides on each road that are HUGE...maker them parking like near riverfront. there needs to be sidewalks along Forbes with railing and lights (not lights on the telephone polls but fancy lighting like on Broadway near riverfront.	7/23/2022 4:03 PM
6	Police need to be more present and aware of stop signs and people speeding. They don't seem to care.	7/14/2022 12:55 PM
7	This is a great idea please get it right.	7/13/2022 9:49 PM
8	The boat launch needs to be refigured, it lays on the ground at low tide. Can't get back to shore for hours later, until the tide comes in some	7/13/2022 2:55 PM
9	I love how thorough the questions are. It feels like all areas are being considered, even ones I didn't think about.	7/13/2022 1:25 PM
10	It would be great to have a bike/pedestrian path the runs along the river- it is very difficult to get to the path in Albany or to the path in east Greenbush	7/9/2022 1:46 PM
11	3rd st by Washington has an obscene amount of speeding and the parking lot on the corner of Washington and 3rd appears to be a source of either drug deals or prostitution. There is constant activity in it late at night that the police is not addressing.	7/8/2022 11:10 AM
12	Consider the use of large trucks, such as fire apparatus, to be able to safely and efficiently maneuver in these areas with added changes. Revamp the entrance to the boat launch from Forbes Ave to allow better in and out traffic flow. Add a guardrail or other safety measures along the wooded side of Forbes Ave for vehicle safety. Consider underground water infrastructure replacement/addition to bring better fire protection to the area in red	7/8/2022 8:06 AM
13	Neighborhoods/businesses/groups adopt streets to pick up trash, etc?	7/5/2022 11:29 AM
14	Cycle/ Active transport connections between Rensselear, Troy, Albany and the Empire State network is/could be a HUGE draw for residents and business owners.	7/3/2022 5:08 PM
15	Spend money wisely. Trees on Washington Ave all died from the last upgrade. Good sidewalks and paved streets are important. Crossing signals are a waste of money no one uses them and there is not enough traffic. Improve the safety near handy Andy's and Nelson's on Washington Ave.!!!	7/1/2022 11:02 AM
16	On Washington ave cut into city areas and add off street parking. Cut in so you're not	6/30/2022 9:28 PM

City of Rensselaer Waterfront Connectivity Study

	narrowing road	
17	The wasted forrest land behind Forbes Ave/Doanne Stuart needs to be leveled. Roadways widened & sidewalks added along with a YOUTH SPORTS RECREATIONAL FACILITY FOR THESE KIDS IN THE CITY!!	6/30/2022 2:42 PM
18	Designer Street trash cans	6/30/2022 2:29 PM
19	The even side of Washington Ave near cemetery. The grass area should be taken in so cars can park there and the side walks should be lower which would make it easier for people to get in and out of cars. You could build a wall between sidewalk and cemetery in order to lower the sidewalk and create appropriate curb area	6/30/2022 1:58 PM
20	Groves ave needs to be completely done over if that is going to be used for waterfront access. There is little to no sidewalks, lighting is terrible, there are no road markings or cross walks. It is basically a country road in a city.	6/27/2022 2:22 PM
21	I would like to see some paths between the train bridge and boat launch and better amenities for those fishing at the boat launch. However I worry about the people we will attract to Rensselaer if the train bridge is redone and becomes pedestrian friendly.	6/22/2022 11:39 AM
22	Improved parking design for Washington Ave and ADA compliant infrastructure	6/17/2022 5:09 PM
23	Anything to improve the city.	6/17/2022 11:51 AM
24	There are children that walk to the corner store on Washington Ave (Handy Andy's), so having a safe way for them to cross the street to leave that area and sufficient lighting is important, as men and other adults often linger alone or in groups outside the store. Some may be waiting for a bus, so a bench for them to sit on would give them somewhere to go other than their intimidating spot in the shadows of the store	6/17/2022 10:42 AM
25	**Consider needs of senior citizens in study area **Ask for suggestions from RSHS students/Doane Stuart **Plan one (1) community event in 2022 to promote waterfront connection	6/16/2022 7:48 PM

Q23 To receive project updates please provide your email below. (optional)

Answered: 26 Skipped: 58

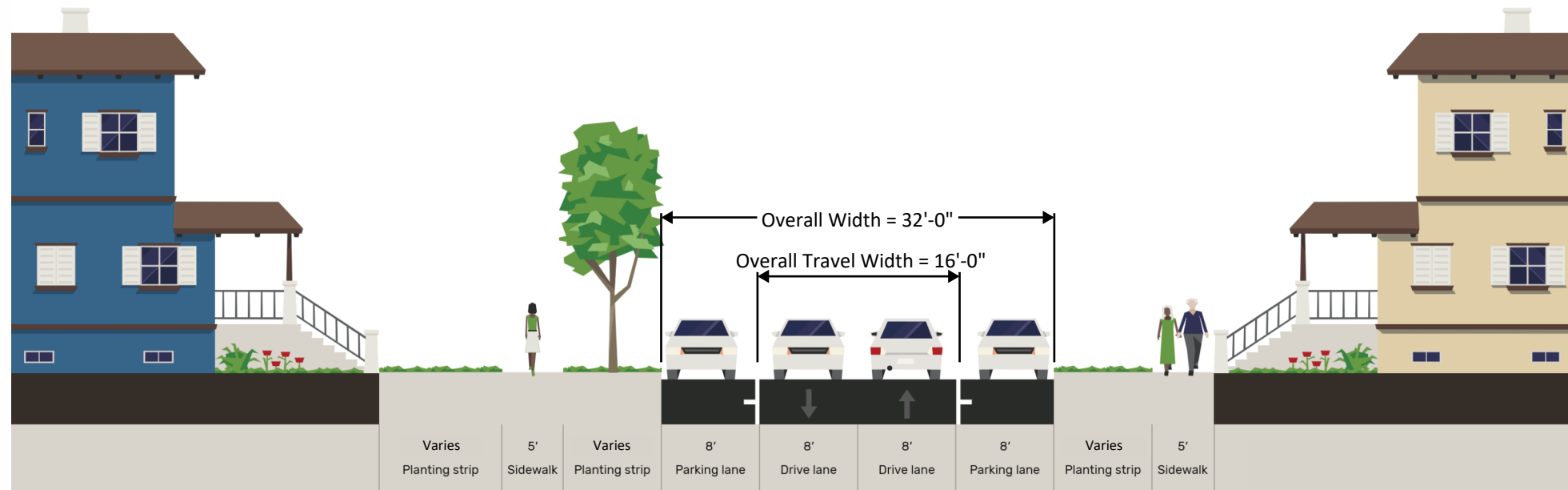
ANSWER CHOICES	RESPONSES	
Name	0.00%	0
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	100.00%	26
Phone Number	0.00%	0

#	NAME	DATE
	There are no responses.	
#	COMPANY	DATE
	There are no responses.	
#	ADDRESS	DATE
	There are no responses.	
#	ADDRESS 2	DATE
	There are no responses.	
#	CITY/TOWN	DATE
	There are no responses.	
#	STATE/PROVINCE	DATE
	There are no responses.	
#	ZIP/POSTAL CODE	DATE
	There are no responses.	
#	COUNTRY	DATE
	There are no responses.	
#	EMAIL ADDRESS	DATE
1	maggiebu28@nycap.rr.com	7/25/2022 9:15 AM
2	ezequielgauge63@gmail.com	7/21/2022 11:02 PM
3	vscholz@nycap.rr.com	7/21/2022 9:29 PM
4	ghostlightmater@yahoo.com	7/19/2022 3:26 PM
5	saverensselaer@gmail.com	7/19/2022 10:59 AM

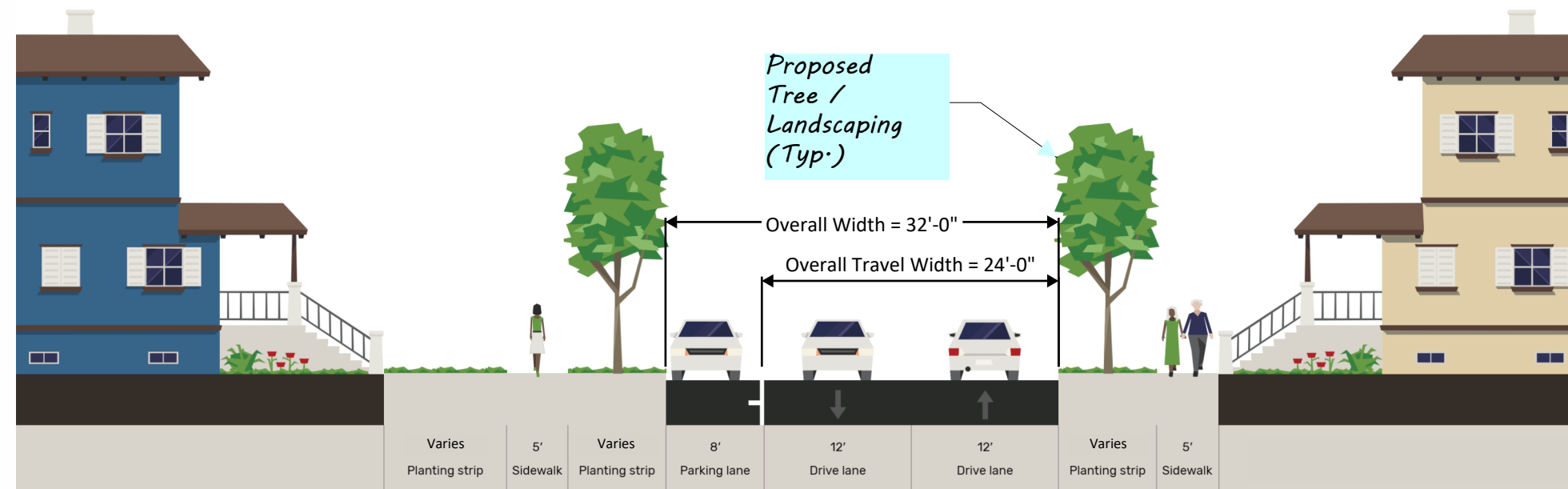
City of Rensselaer Waterfront Connectivity Study

6	dpwilson@nycap.rr.com	7/13/2022 9:49 PM
7	mrusso73@gmail.com	7/13/2022 5:17 PM
8	jaymepmurphy@gmail.com	7/13/2022 2:55 PM
9	waynesmo@yahoo.com	7/12/2022 8:40 PM
10	loreebrown30@gmail.com	7/12/2022 1:23 PM
11	elnwheeler@hotmail.com	7/9/2022 8:09 PM
12	rcooney2@nycap.rr.com	7/9/2022 1:46 PM
13	sstephan@nycap.rr.com	7/8/2022 11:47 AM
14	bmackrel@gmail.com	7/3/2022 5:08 PM
15	kdalessandro@nycap.rr.com	7/1/2022 7:15 AM
16	dellis12144@gmail.com	6/30/2022 8:26 PM
17	playa719.828@gmail.com	6/30/2022 2:42 PM
18	stall_brian@yahoo.com	6/27/2022 2:22 PM
19	ph2976@yahoo.com	6/22/2022 11:39 AM
20	kevinmk726@msn.com	6/18/2022 4:48 PM
21	krisinrenss@hotmail.com	6/18/2022 4:21 PM
22	chasghall31@yahoo.com	6/17/2022 5:09 PM
23	patschroeder@nycap.rr.com	6/17/2022 11:51 AM
24	izzy9250@gmail.com	6/17/2022 10:42 AM
25	isitjustme@gmail.com	6/17/2022 9:12 AM
26	raymondstevens@nycap.rrr.com	6/16/2022 7:48 PM
#	PHONE NUMBER	DATE
	There are no responses.	

APPENDIX H: ALTERNATIVE CONCEPTS



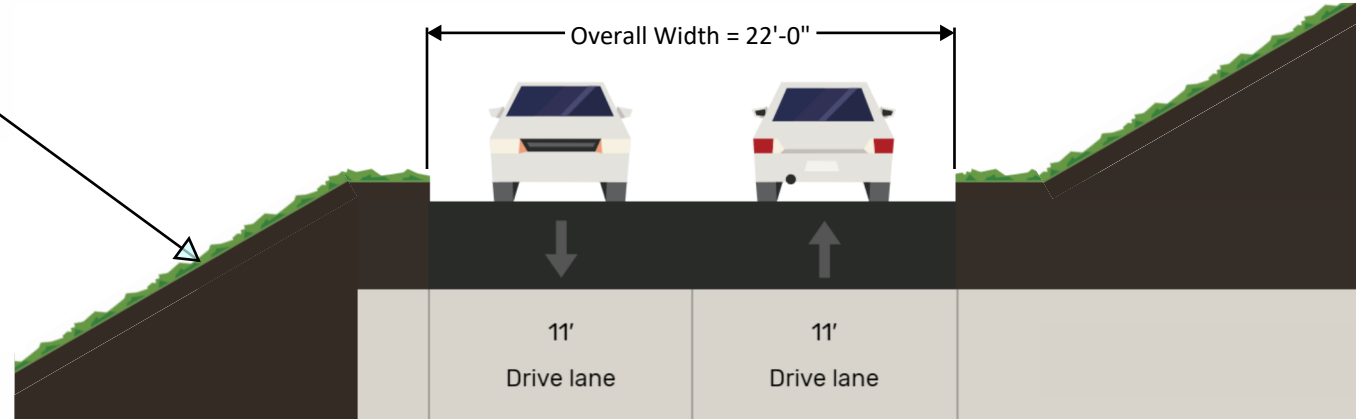
**EXISTING TYPICAL SECTION
WASHINGTON AVENUE**



**PROPOSED TYPICAL SECTION
WASHINGTON AVENUE**

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

Existing Slope (Typ.)

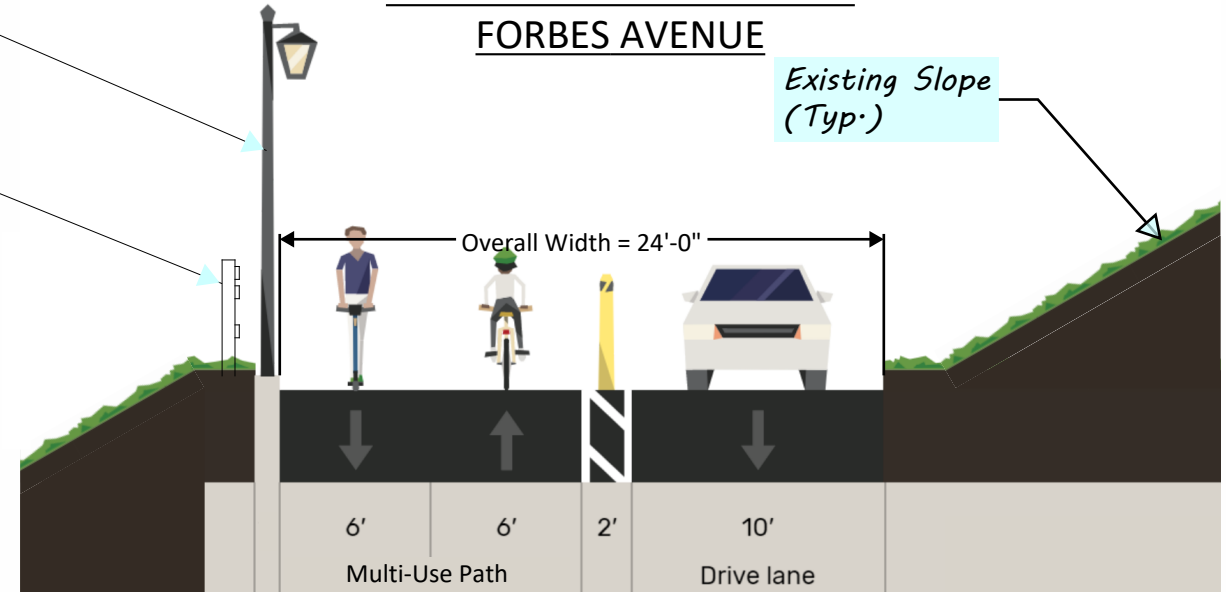


EXISTING TYPICAL SECTION
FORBES AVENUE

Proposed Pedestrian Lighting (Typ.)

Proposed Pedestrian Rail

Existing Slope (Typ.)

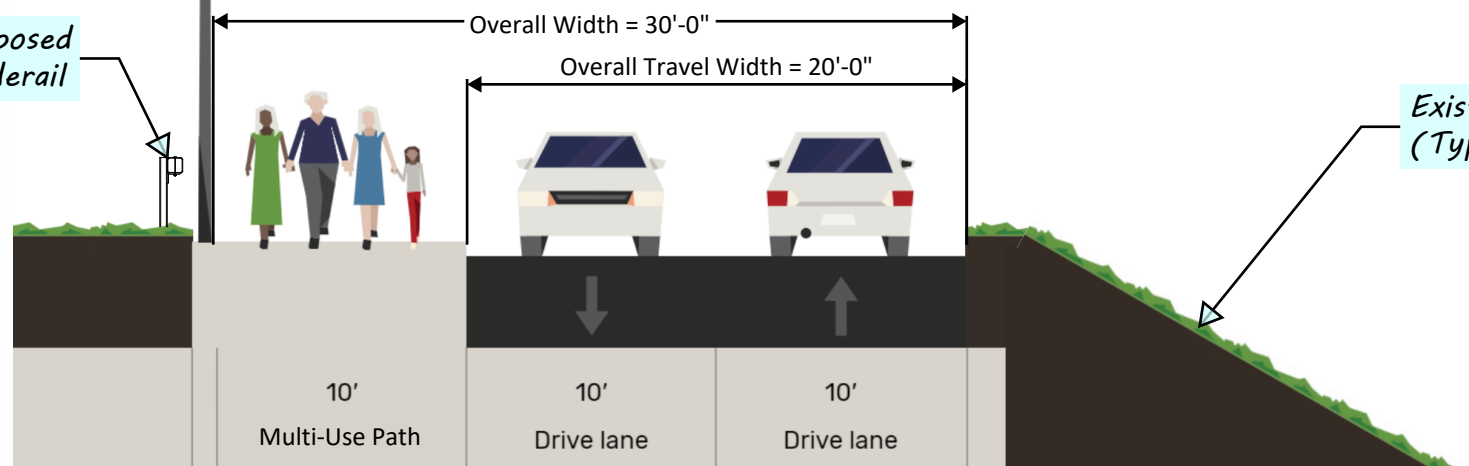


FORBES AVENUE PROPOSED TYPICAL SECTION
WASHINGTON AVENE EXTENSION TO VAN RENSSELAER HEIGHTS

Proposed Pedestrian Lighting (Typ.)

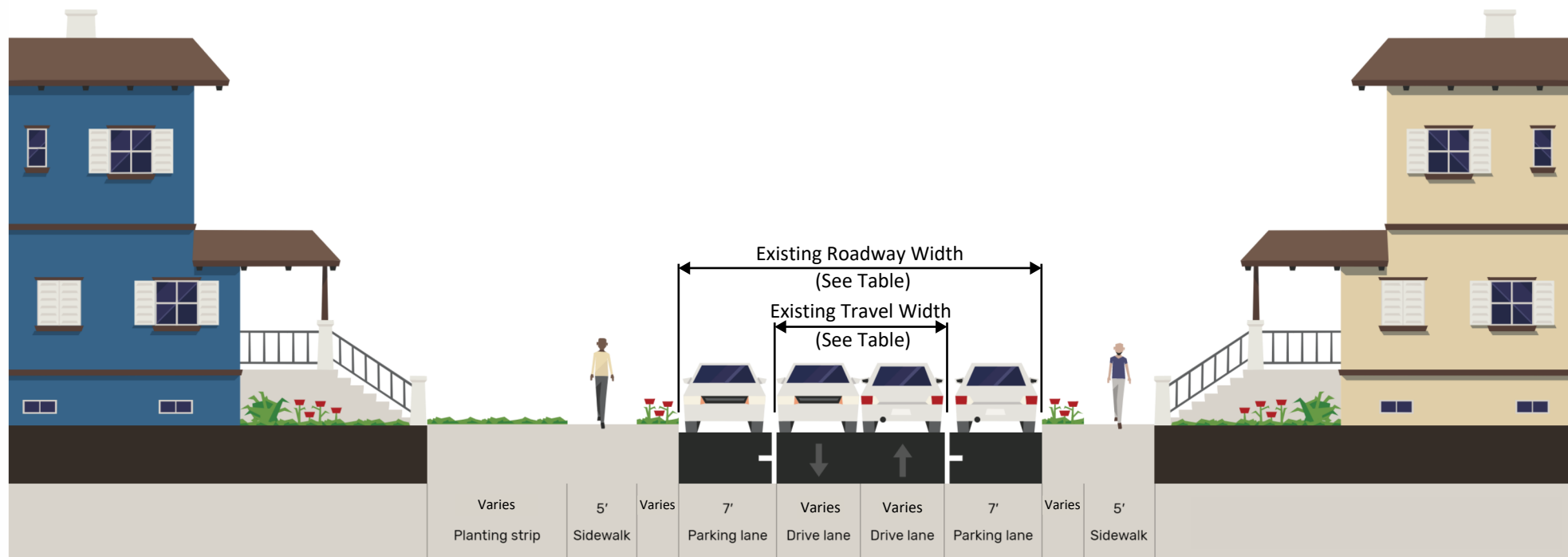
Proposed Guiderail

Existing Slope (Typ.)



FORBES AVENUE PROPOSED TYPICAL SECTION
VAN RENSSELAER HEIGHTS TO WASHINGTON AVENUE

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

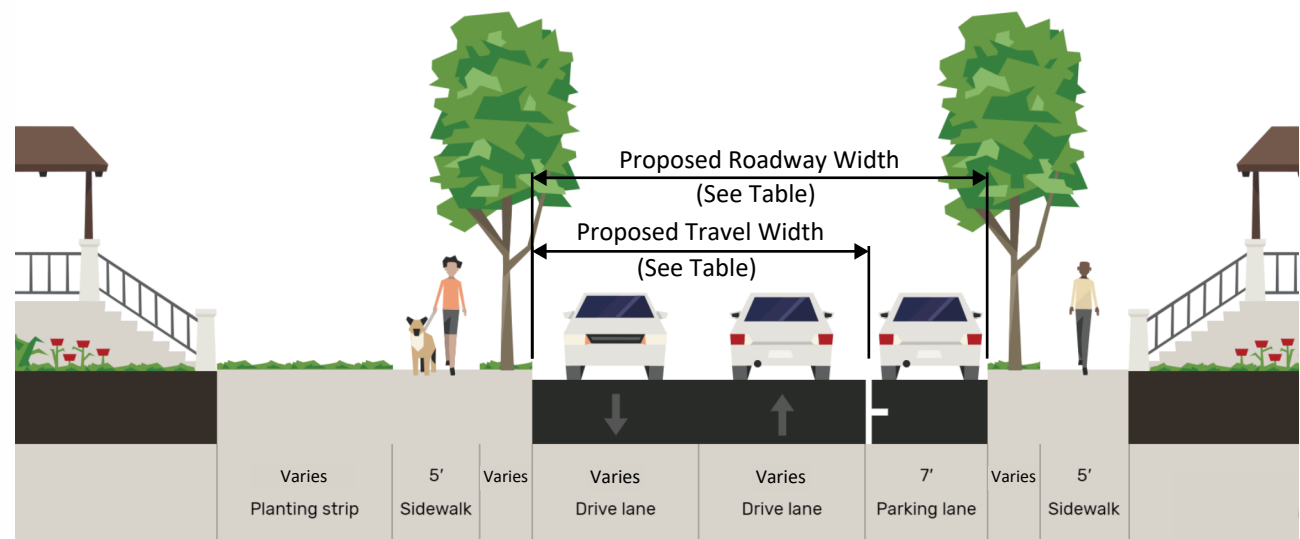


Street	Existing Widths (ft)			Proposed Widths (ft)		
	Roadway	Parking	Travel	Roadway	Parking	Travel
Tracy Street	26	7 (1)	9.5 (2)	26	7 (1)	9.5 (2)
Forbes (Tracy to Broadway)	30	7 (2)	7 (2)	30	7 (1)	11.5 (2)
Bellview Terrace	30	7 (2)	8 (2)	30	7 (1)	11.5 (2)
Second Street	25	7 (2)	5.5 (2)	25	7 (1)	9 (2)
Fourth Street	28	7 (2)	7 (2)	28	7 (2)	7 (2)
Fourth Street (1-way)	27	7 (2)	13 (1)	27	7 (2)	13 (1)
Patten Avenue	26 - 27	7 (2)	6 (2)	26-27	7 (1)	9.5 (2)
Anderson Place	21 - 22	7 (1)	7 (2)	21-22	7 (1)	7 (2)
Lincoln Avenue	26	7 (2)	6 (2)	26	7 (2)	6 (2)
Manor Drive	26	7 (2)	6 (2)	26	7 (1)	9.5 (2)
Tenth Street	28	7 (1)	10.5 (2)	28	7 (1)	10.5 (2)

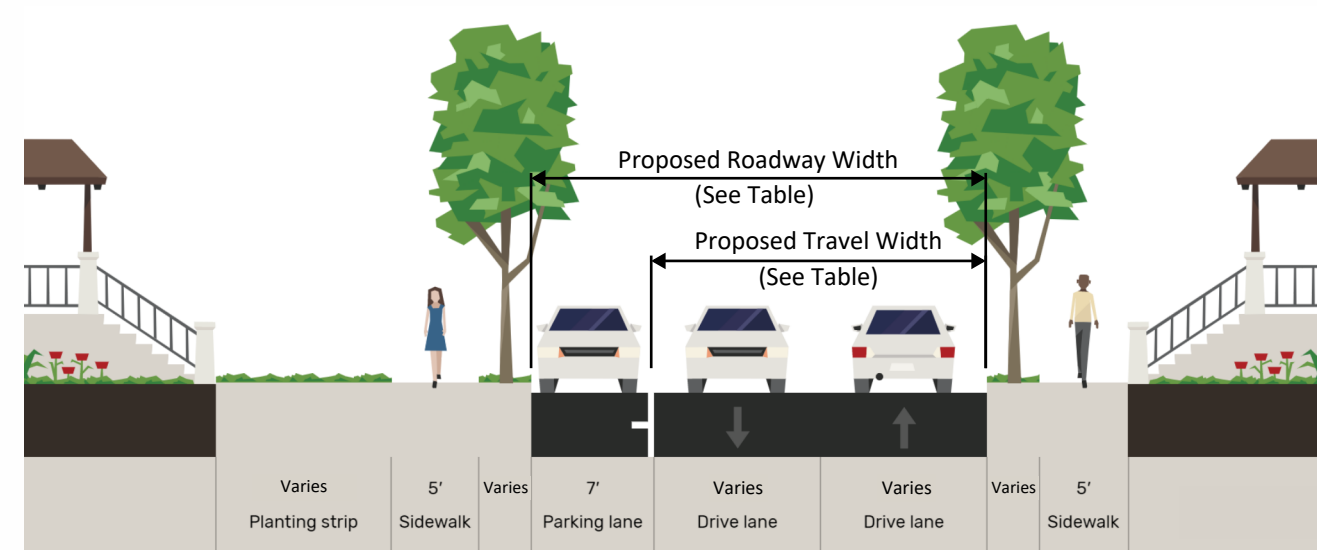
(#) denotes number of each lane available / proposed

**EXISTING TYPICAL SECTION
SIDE ROADS**

(SEE TABLE THIS DRAWING FOR SIDE ROADS INCLUDED IN THE STUDY AND ROADWAY WIDTHS)

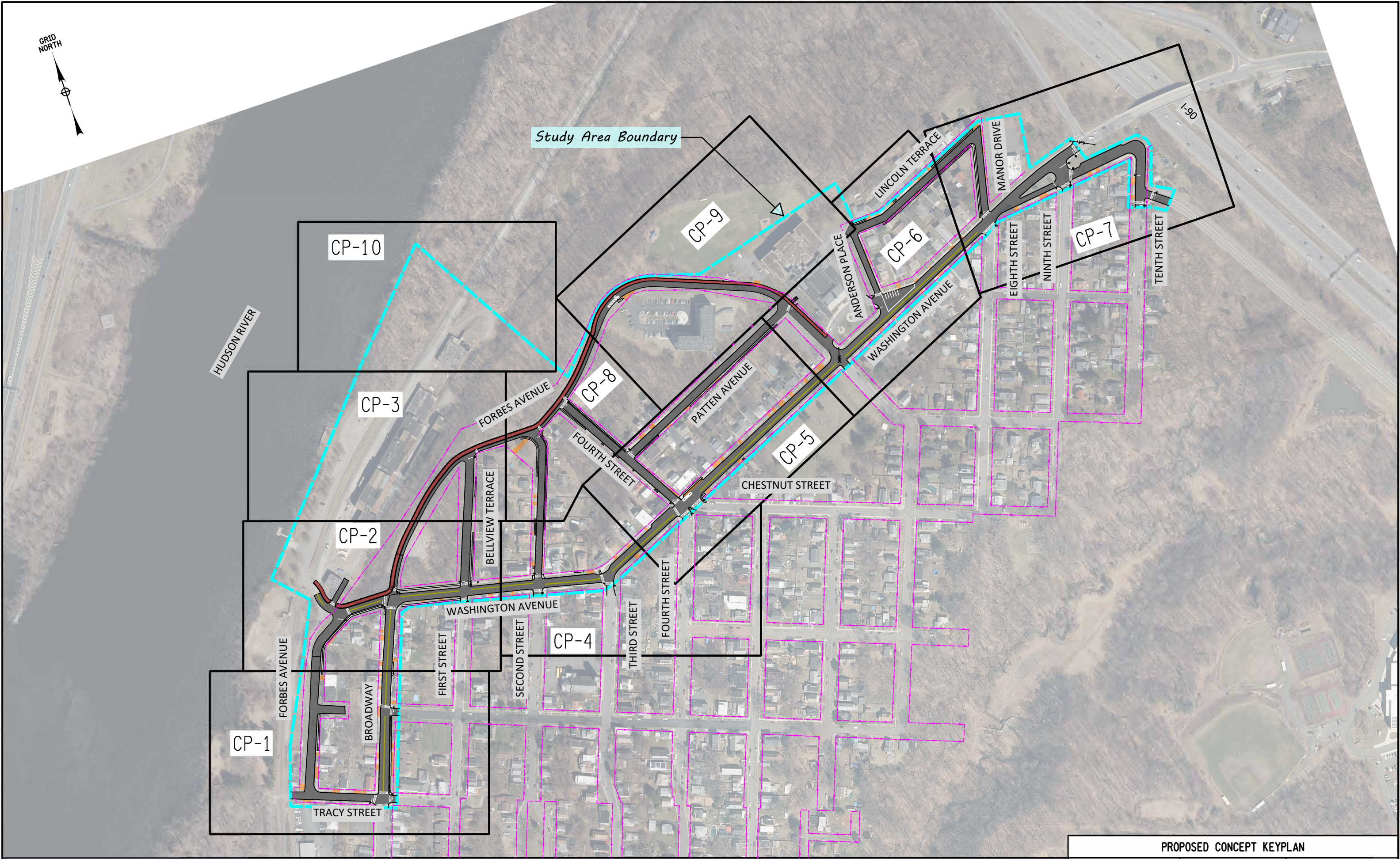


**PROPOSED TYPICAL SECTION - RIGHT SIDE PARKING
SIDE ROADS**



**PROPOSED TYPICAL SECTION - LEFT SIDE PARKING
SIDE ROADS**

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.



Study Area Boundary

CP-10

CP-9

CP-6

CP-7

CP-3

CP-8

CP-5

CP-2

CP-4

CP-1

HUDSON RIVER

I-90

FORBES AVENUE

BROADWAY

TRACY STREET

FIRST STREET

SECOND STREET

THIRD STREET

FOURTH STREET

BELLVIEW TERRACE

WASHINGTON AVENUE

FOURTH STREET

PATTEN AVENUE

CHESTNUT STREET

WASHINGTON AVENUE

EIGHTH STREET

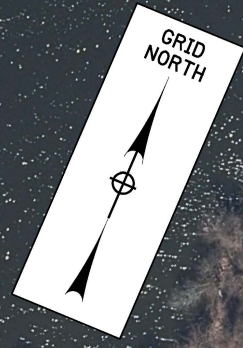
NINTH STREET

TENTH STREET

LINCOLN TERRACE

MANOR DRIVE

ANDERSON PLACE



Average Grade: 3.1%

LOWER FORBES AVENUE

FORBES AVENUE

FORBES AVENUE

FORBES AVENUE

Average Grade: 3.7%

BELLVIEW TERRACE

Average Grade: 6.5%

BROADWAY

FOURTH STREET (ONE WAY)

Average Grade: 10.5%

Average Grade: 8.7%

SECOND STREET

FORBES AVENUE

BROADWAY

FIRST STREET (ONE WAY)

WASHINGTON AVENUE

Average Grade: 8.1%

PATTEN AVENUE

TRACY STREET

CENTRAL AVENUE (ONE WAY)

SECOND STREET

WASHINGTON AVENUE

Average Grade: 7.1%

THIRD STREET

FOURTH STREET

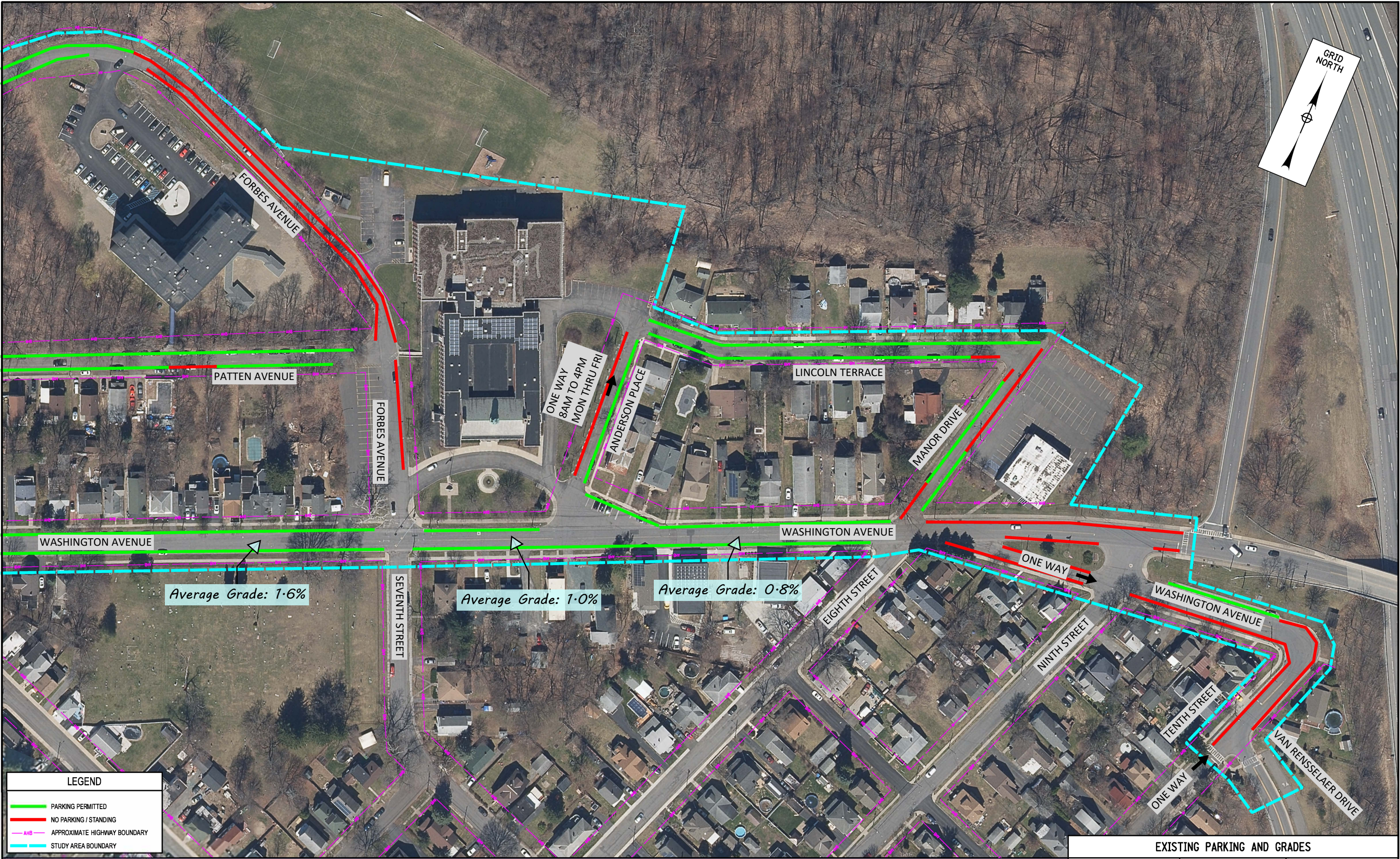
CHESTNUT STRER

LEGEND

- PARKING PERMITTED
- NO PARKING / STANDING
- APPROXIMATE HIGHWAY BOUNDARY
- STUDY AREA BOUNDARY

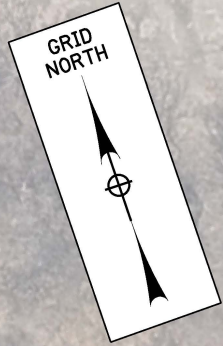
EXISTING PARKING AND GRADES

Engineering and Land Surveying, P.C. CDTTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE City of Rensselaer

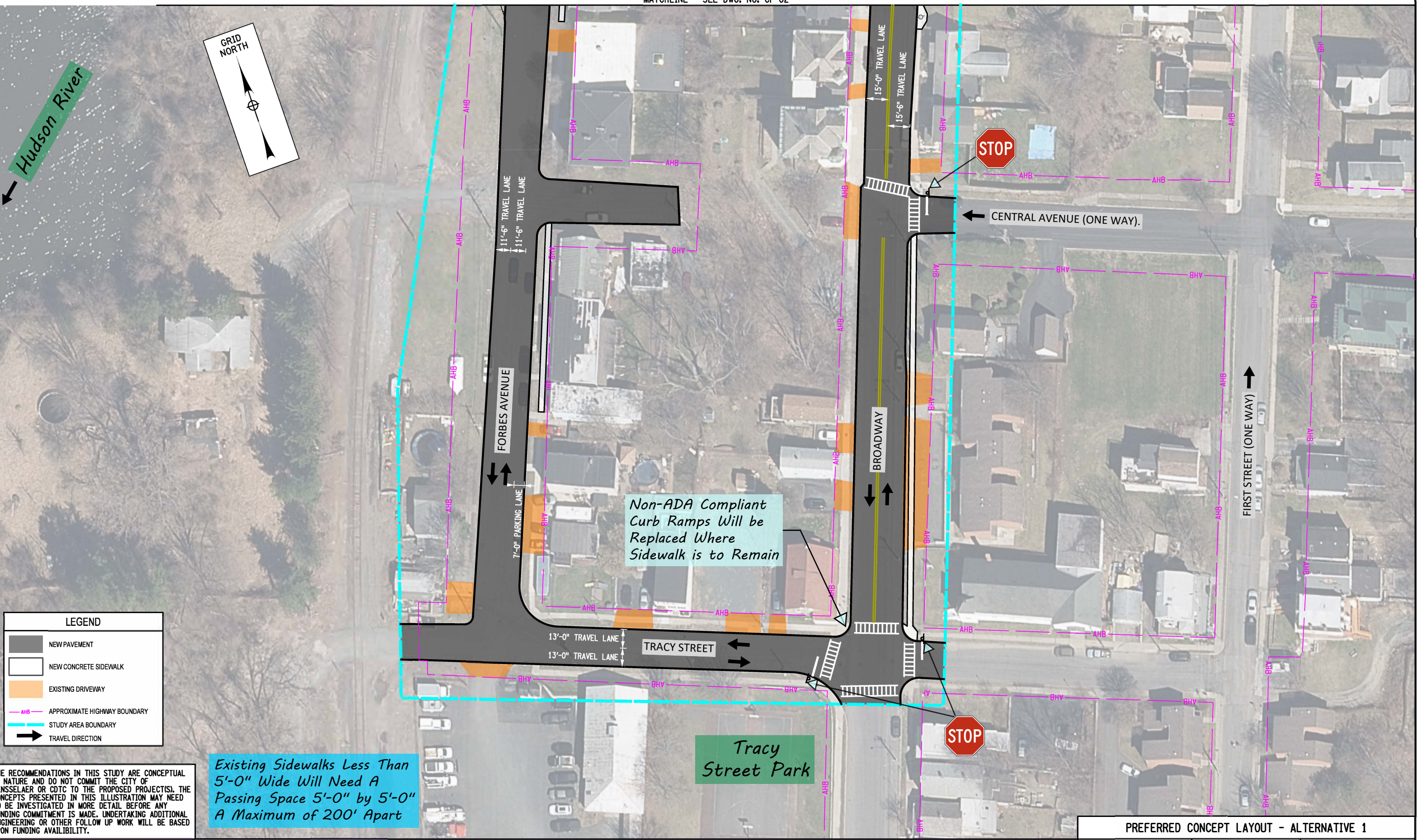


LEGEND	
—	PARKING PERMITTED
—	NO PARKING / STANDING
- - -	APPROXIMATE HIGHWAY BOUNDARY
- - -	STUDY AREA BOUNDARY

EXISTING PARKING AND GRADES



Hudson River



Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

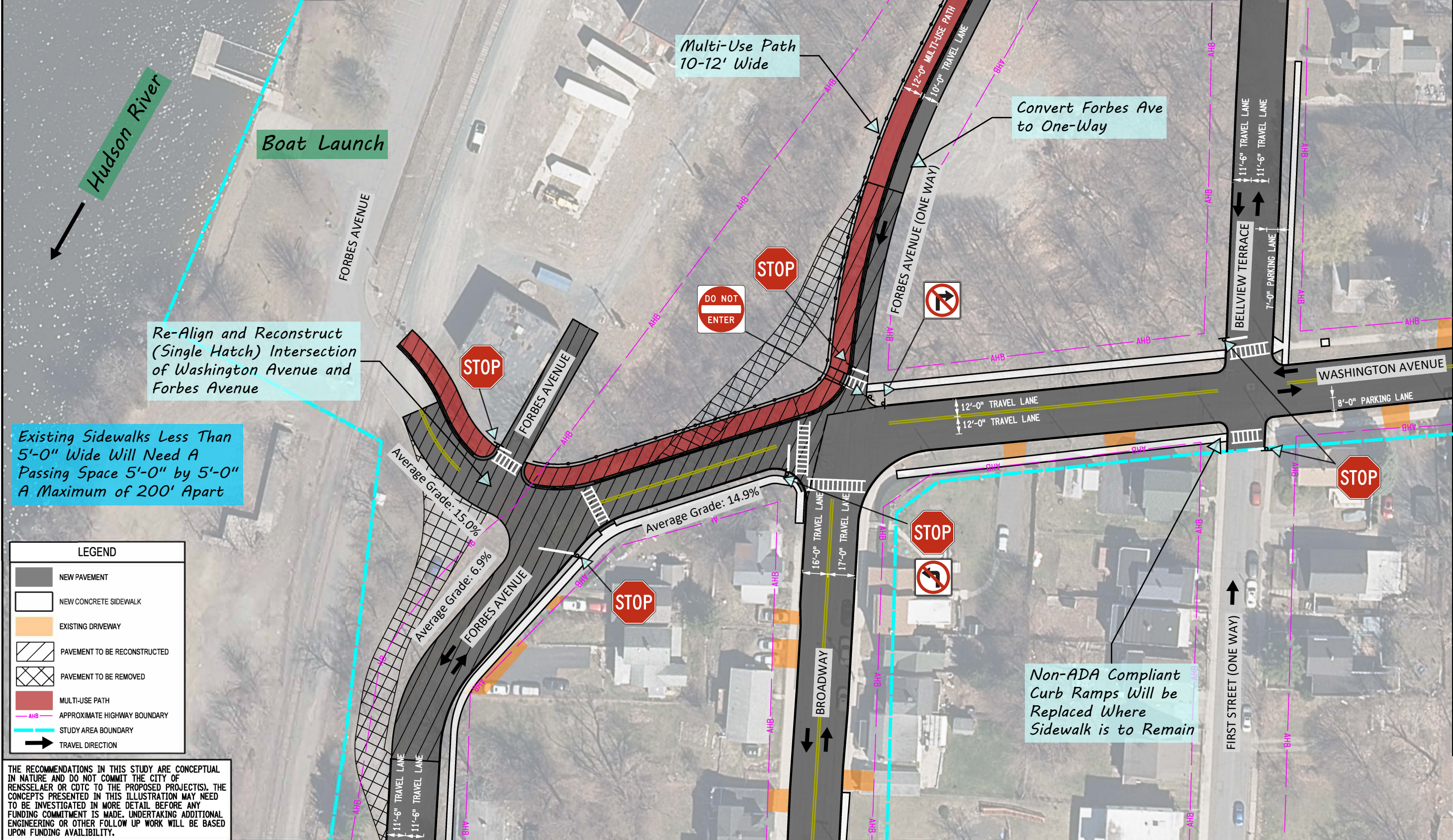
Tracy Street Park

LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

PREFERRED CONCEPT LAYOUT - ALTERNATIVE 1

Engineering and Land Surveying, P.C.	CAPITAL DISTRICT TRANSPORTATION COMMITTEE	City of Rensselaer
--------------------------------------	---	--------------------



Re-Align and Reconstruct (Single Hatch) Intersection of Washington Avenue and Forbes Avenue

Multi-Use Path 10-12' Wide

Convert Forbes Ave to One-Way

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

LEGEND

- NEW PAVEMENT
- NEW CONCRETE SIDEWALK
- EXISTING DRIVEWAY
- PAVEMENT TO BE RECONSTRUCTED
- PAVEMENT TO BE REMOVED
- MULTI-USE PATH
- APPROXIMATE HIGHWAY BOUNDARY
- STUDY AREA BOUNDARY
- TRAVEL DIRECTION

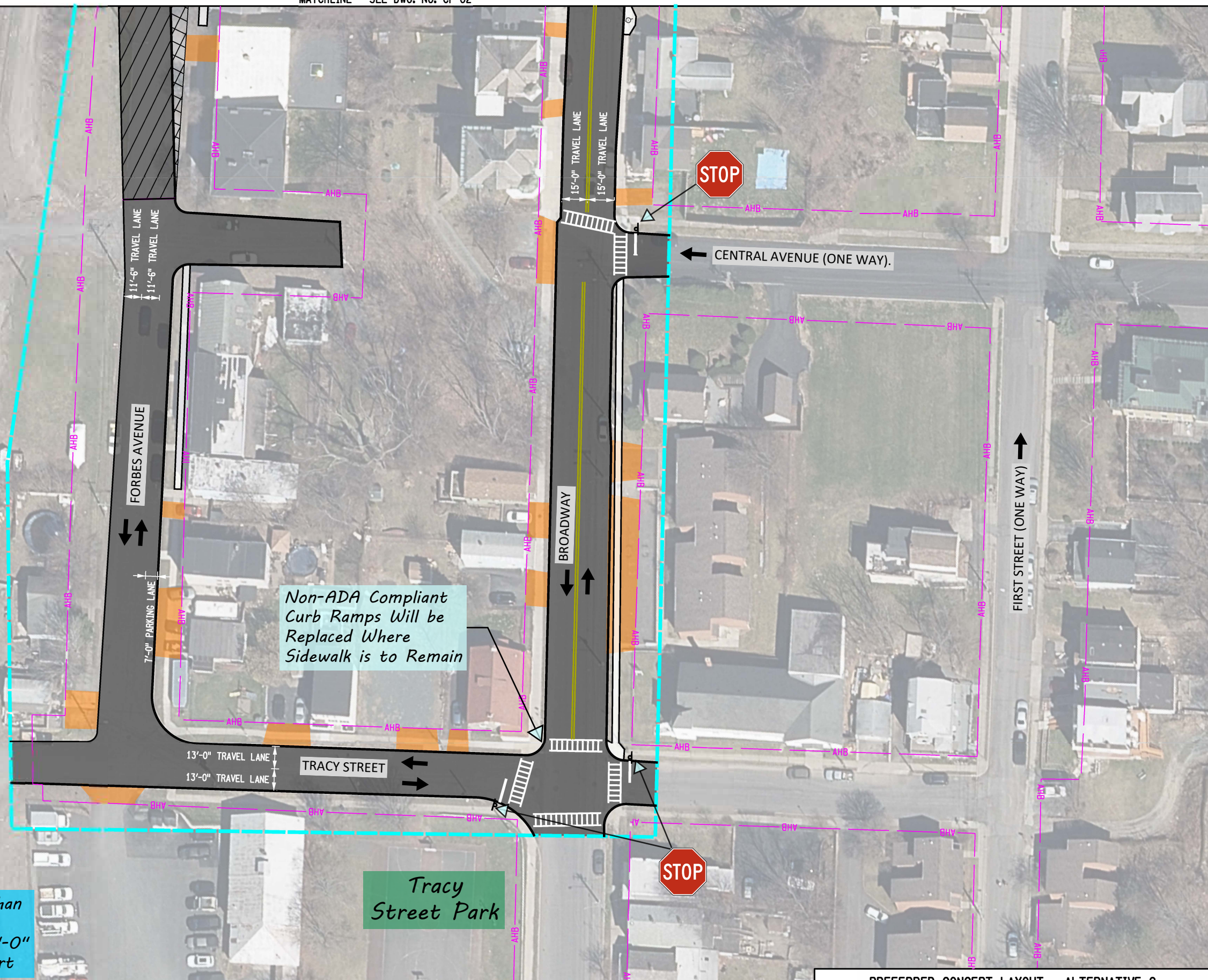
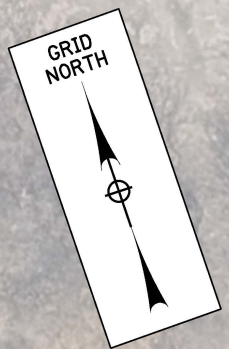
THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

MATCHLINE - SEE DWG. NO. CP-01

MATCHLINE - SEE DWG. NO. CP-04

PREFERRED CONCEPT LAYOUT - ALTERNATIVE 1

Hudson River

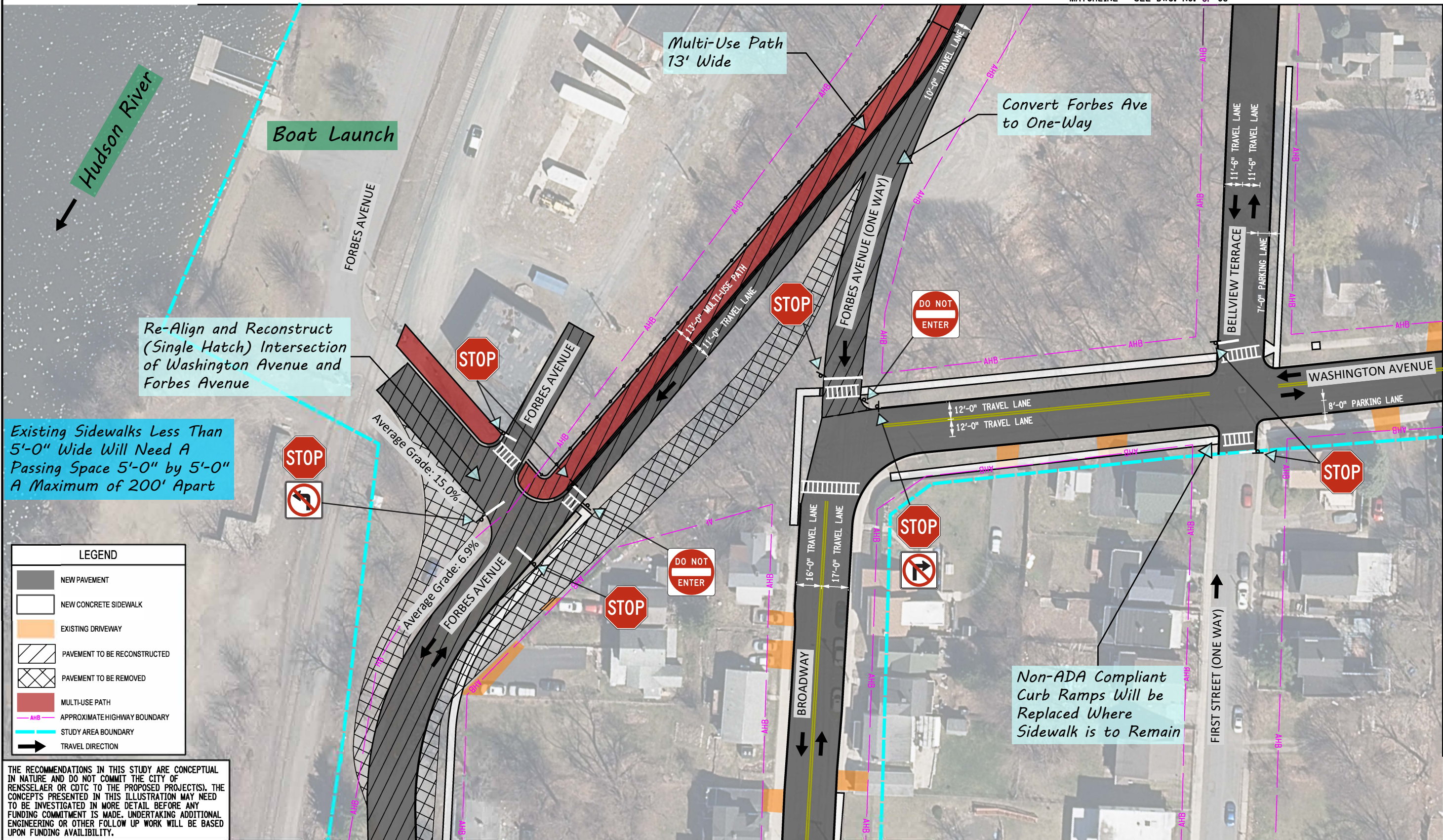


Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	PAVEMENT TO BE RECONSTRUCTED
	PAVEMENT TO BE REMOVED
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.



Re-Align and Reconstruct (Single Hatch) Intersection of Washington Avenue and Forbes Avenue

Multi-Use Path 13' Wide

Convert Forbes Ave to One-Way

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

LEGEND

- NEW PAVEMENT
- NEW CONCRETE SIDEWALK
- EXISTING DRIVEWAY
- PAVEMENT TO BE RECONSTRUCTED
- PAVEMENT TO BE REMOVED
- MULTI-USE PATH
- APPROXIMATE HIGHWAY BOUNDARY
- STUDY AREA BOUNDARY
- TRAVEL DIRECTION

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

MATCHLINE - SEE DWG. NO. CP-01

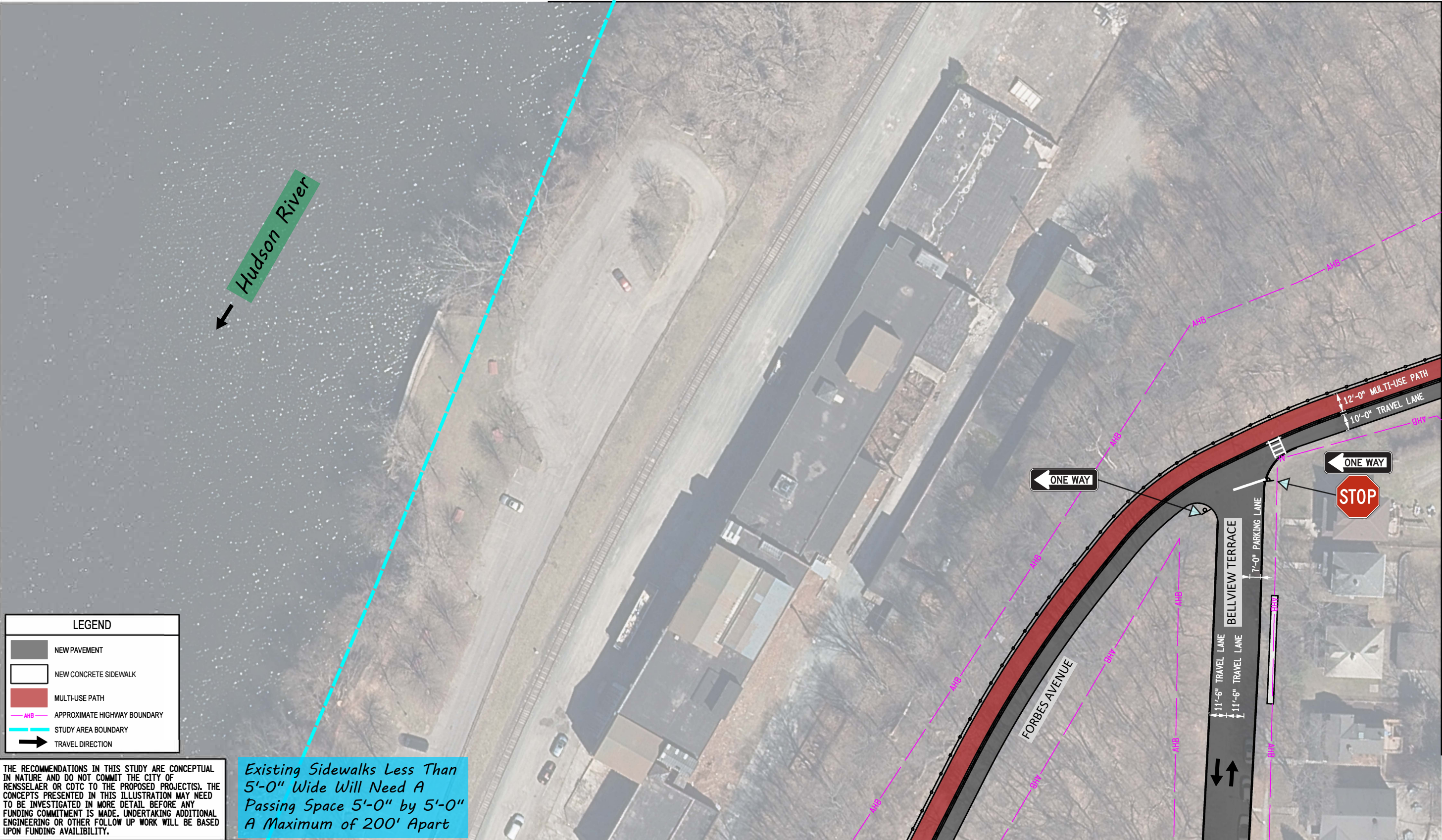
MATCHLINE - SEE DWG. NO. CP-04

PREFERRED CONCEPT LAYOUT - ALTERNATIVE 2

MATCHLINE - SEE DWG. NO. CP-10



Hudson River



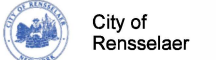
LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	MULTI-USE PATH
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

MATCHLINE - SEE DWG. NO. CP-02

MATCHLINE - SEE DWG. NO. CP-08





MATCHLINE - SEE DWG. NO. CP-08

Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

Curb Extensions

MATCHLINE - SEE DWG. NO. CP-05

MATCHLINE - SEE DWG. NO. CP-05



MATCHLINE - SEE DWG. NO. CP-02

12'-0" TRAVEL LANE
12'-0" TRAVEL LANE

SECOND STREET

THIRD STREET

FOURTH STREET

DALE STREET

FIFTH STREET

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

CEO's Rensselaer Family Resource Center

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECTS. THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

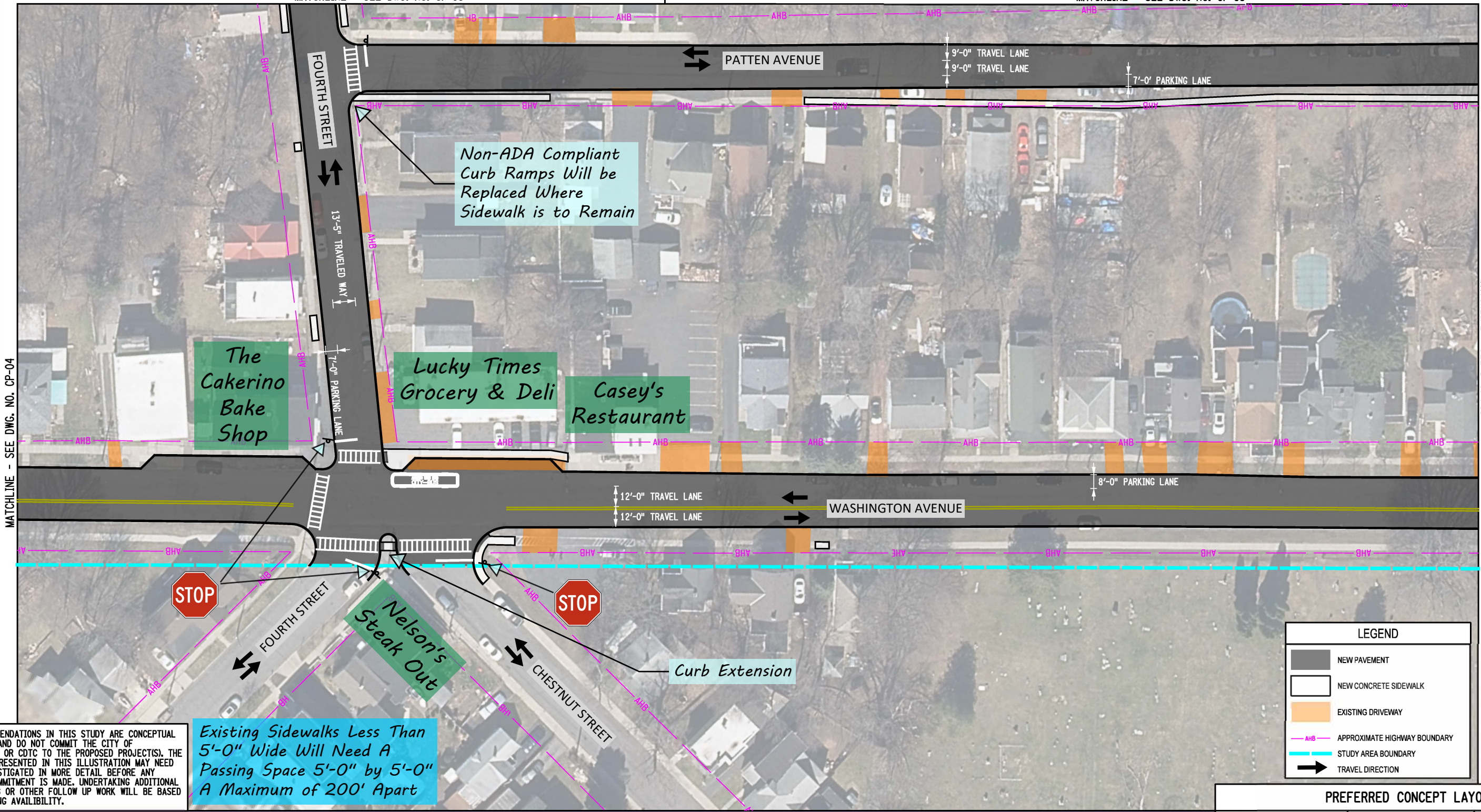
PREFERRED CONCEPT LAYOUT





MATCHLINE - SEE DWG. NO. CP-08

MATCHLINE - SEE DWG. NO. CP-09



Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

The Cakerino Bake Shop

Lucky Times Grocery & Deli

Casey's Restaurant

Nelson's Steak Out

Curb Extension



THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTIC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

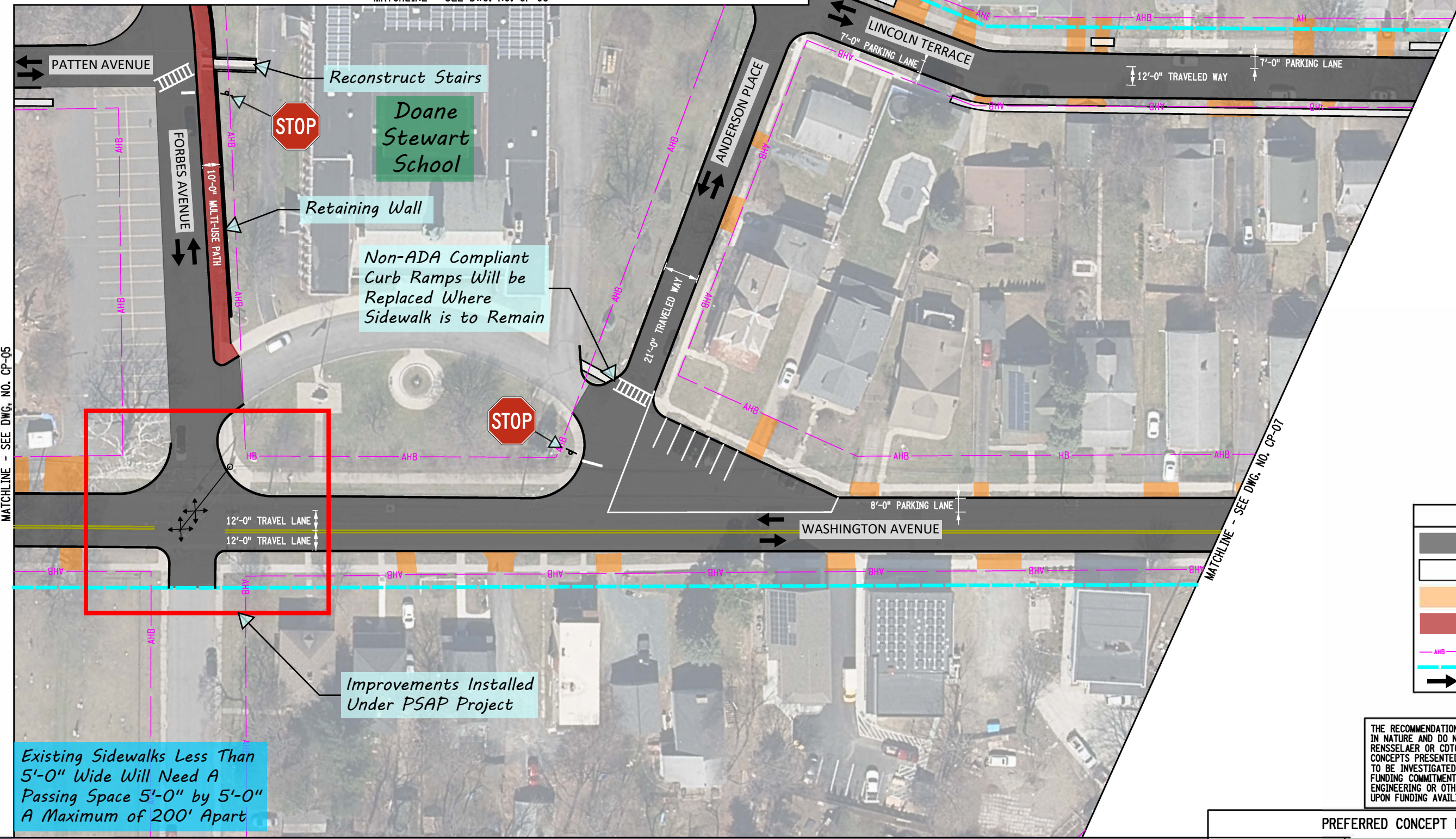
Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	AHB APPROXIMATE HIGHWAY BOUNDARY
	BHV STUDY AREA BOUNDARY
	TRAVEL DIRECTION

PREFERRED CONCEPT LAYOUT



MATCHLINE - SEE DWG. NO. CP-09



MATCHLINE - SEE DWG. NO. CP-05

MATCHLINE - SEE DWG. NO. CP-07

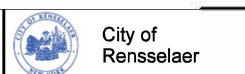
LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	MULTI-USE PATH
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

Improvements Installed Under PSAP Project

PREFERRED CONCEPT LAYOUT





Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain

Capital Gurudwara

I-90

MATCHLINE - SEE DWG. NO. CP-06

LEGEND

- NEW PAVEMENT
- NEW CONCRETE SIDEWALK
- EXISTING DRIVEWAY
- APPROXIMATE HIGHWAY BOUNDARY
- STUDY AREA BOUNDARY
- TRAVEL DIRECTION

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTIC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

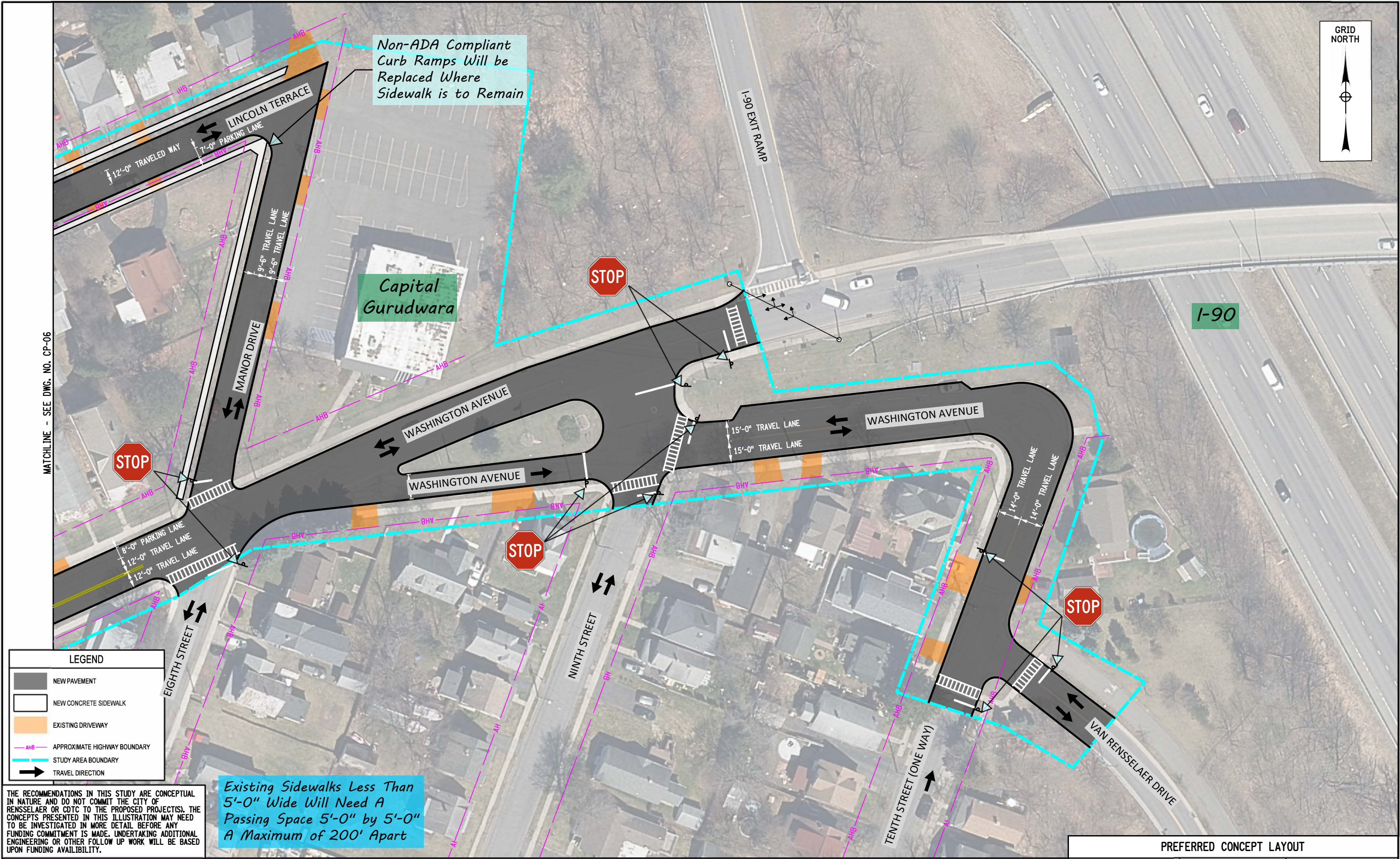
Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

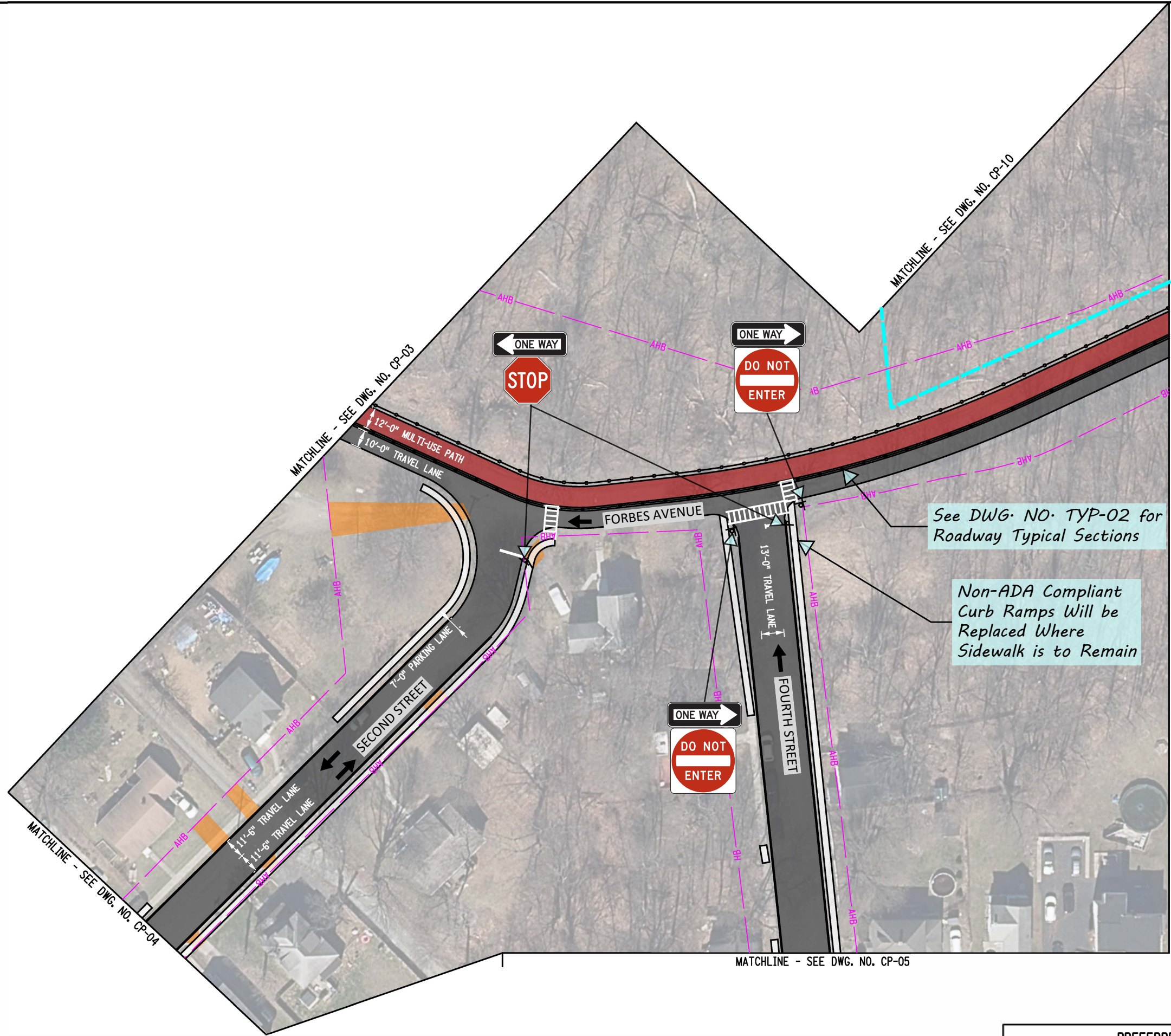
PREFERRED CONCEPT LAYOUT

Engineering and Land Surveying, P.C.

CAPITAL DISTRICT TRANSPORTATION COMMITTEE

City of Rensselaer





Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	MULTI-USE PATH
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.

See DWG. NO. TYP-02 for Roadway Typical Sections

Non-ADA Compliant Curb Ramps Will be Replaced Where Sidewalk is to Remain



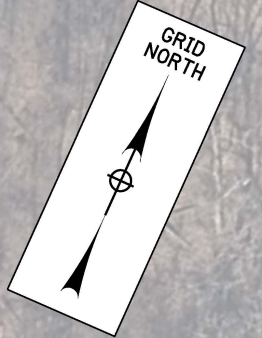
Engineering and Land Surveying, P.C.



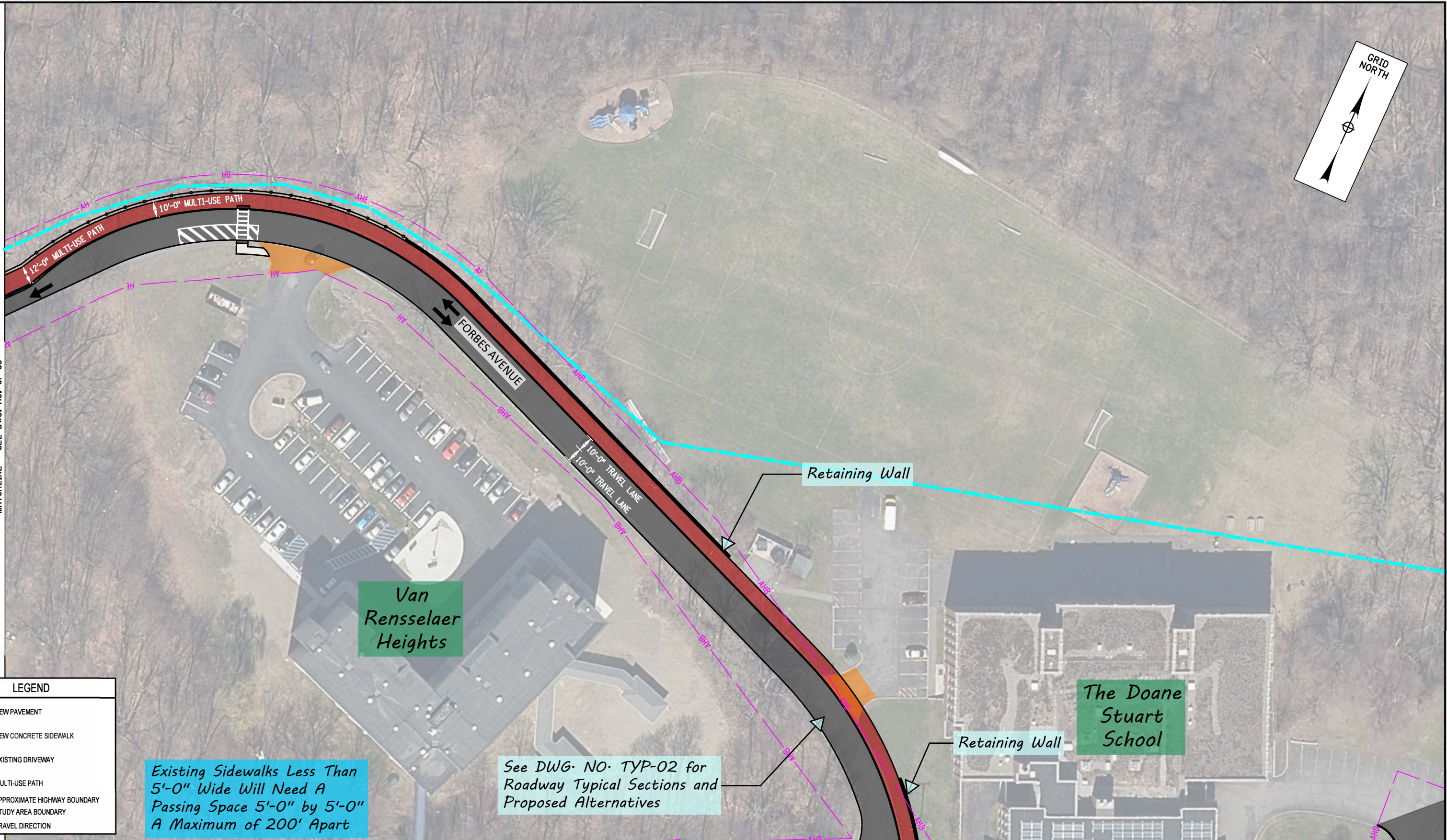
CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE



City of Rensselaer



MATCHLINE - SEE DWG. NO. CP-08



LEGEND	
	NEW PAVEMENT
	NEW CONCRETE SIDEWALK
	EXISTING DRIVEWAY
	MULTI-USE PATH
	APPROXIMATE HIGHWAY BOUNDARY
	STUDY AREA BOUNDARY
	TRAVEL DIRECTION

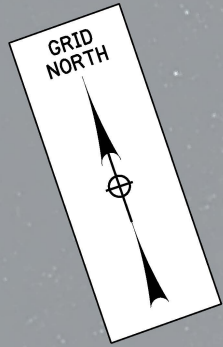
Existing Sidewalks Less Than 5'-0" Wide Will Need A Passing Space 5'-0" by 5'-0" A Maximum of 200' Apart

See DWG. NO. TYP-02 for Roadway Typical Sections and Proposed Alternatives

MATCHLINE - SEE DWG. NO. CP-05

MATCHLINE - SEE DWG. NO. CP-06

THE RECOMMENDATIONS IN THIS STUDY ARE CONCEPTUAL IN NATURE AND DO NOT COMMIT THE CITY OF RENSSELAER OR CDTC TO THE PROPOSED PROJECT(S). THE CONCEPTS PRESENTED IN THIS ILLUSTRATION MAY NEED TO BE INVESTIGATED IN MORE DETAIL BEFORE ANY FUNDING COMMITMENT IS MADE. UNDERTAKING ADDITIONAL ENGINEERING OR OTHER FOLLOW UP WORK WILL BE BASED UPON FUNDING AVAILABILITY.



LEGEND

— STUDY AREA BOUNDARY

MATCHLINE - SEE DWG. NO. CP-10

MATCHLINE - SEE DWG. NO. CP-03

PREFERRED CONCEPT LAYOUT

APPENDIX I: PLANNING LEVEL COST ESTIMATES



M.J. Engineering and
Land Surveying, P.C.

1533 Crescent Road, Clifton Park, NY 12065
Phone: 518.371.0799 / Fax: 518.371.0822
www.mjels.com

Project: Rensselaer Waterfront Connectivity Study
MJ No. 1536 PIN -
Date: March 2, 2023

Concept 2 - Sidewalks

CONCEPT Engineer's Estimate Summary

ITEM	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	TOTAL PRICE
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	511.0	\$ 50.00	\$ 25,550.00
304.12	SUBBASE COURSE, TYPE 2	CY	310.0	\$ 60.00	\$ 18,600.00
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	163.0	\$ 1,000.00	\$ 163,000.00
610.1403	TOPSOIL - LAWNS	CY	109.1	\$ 85.00	\$ 9,272.35
610.1602	TURF ESTABLISHMENT - LAWNS	SY	981.8	\$ 2.00	\$ 1,963.56
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0	\$ 10,000.00	\$ 10,000.00
625.01	SURVEY OPERATIONS	LS	1.0	\$ 10,000.00	\$ 10,000.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	2.0	\$ 3,000.00	\$ 6,000.00
697.03	FIELD CHANGE PAYMENT (5%)	DC	\$ 13,000.00	1.0	\$ 13,000.00
699.040001	MOBILIZATION (4%)	LS	1.0	\$ 9,800.00	\$ 9,800.00

Sub-Total: **\$267,185.90**

30%

Contingency: **\$80,155.77**

Total: **\$347,341.67**

Rounded: **\$350,000.00**



Concept 3 - 4th Street Intersection

CONCEPT Engineer's Estimate Summary

ITEM	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	TOTAL PRICE
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	150.0	\$ 50.00	\$ 7,500.00
203.03	EMBANKMENT IN PLACE	CY	60.0	\$ 50.00	\$ 3,000.00
304.12	SUBBASE COURSE, TYPE 2	CY	60.0	\$ 60.00	\$ 3,600.00
404.127201	12.5 F2 TOP COURSE WMA, 70 SERIES COMPACTION	TON	78.0	\$ 150.00	\$ 11,700.00
404.197901	19 F9 BINDER COURSE WMA, 70 SERIES COMPACTION	TON	16.0	\$ 160.00	\$ 2,560.00
404.377901	37.5 F9 BASE COURSE WMA, 70 SERIES COMPACTION	TON	25.0	\$ 160.00	\$ 4,000.00
407.0102	DILUTED TACK COAT	GAL	60.0	\$ 5.00	\$ 300.00
490.10	PRODUCTION COLD MILLING OF BITUMINOUS CONCRETE	SY	954.0	\$ 4.00	\$ 3,816.00
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	12.0	\$ 1,000.00	\$ 12,000.00
609.0212	STONE CURB NEAR VERTICAL FACE (NVF)	LF	235.0	\$ 50.00	\$ 11,750.00
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0	\$ 40,000.00	\$ 40,000.00
625.01	SURVEY OPERATIONS	LS	1.0	\$ 20,000.00	\$ 20,000.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	2.0	\$ 3,000.00	\$ 6,000.00
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	1,905.0	\$ 2.00	\$ 3,810.00
685.12	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	75.0	\$ 2.00	\$ 150.00
	DRAINAGE & STORMWATER	LS	1.0	\$ 25,000.00	\$ 25,000.00
	LANDSCAPING	LS	1.0	\$ 10,000.00	\$ 10,000.00
	UTILITIES	LS	1.0	\$ 5,000.00	\$ 5,000.00
697.03	FIELD CHANGE PAYMENT	DC	\$ 9,000.00	1.0	\$ 9,000.00
698.04	ASPHALT PRICE ADJUSTMENT	DC	\$ 2,500.00	1.0	\$ 2,500.00
698.05	FUEL PRICE ADJUSTMENT	DC	\$ 1,000.00	1.0	\$ 1,000.00
699.040001	MOBILIZATION	LS	1.0	\$ 5,300.00	\$ 5,300.00

	Sub-Total:	\$187,986.00
30%	Contingency:	\$56,395.80
	Total:	\$244,381.80
	Rounded:	\$245,000.00



Concept 4 - Washington Corridor

CONCEPT Engineer's Estimate Summary

ITEM	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	TOTAL PRICE
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	200.0	\$ 50.00	\$ 10,000.00
203.03	EMBANKMENT IN PLACE	CY	90.0	\$ 50.00	\$ 4,500.00
304.12	SUBBASE COURSE, TYPE 2	CY	80.0	\$ 60.00	\$ 4,800.00
404.127201	12.5 F2 TOP COURSE WMA, 70 SERIES COMPACTION	TON	1,200.0	\$ 120.00	\$ 144,000.00
404.197901	19 F9 BINDER COURSE WMA, 70 SERIES COMPACTION	TON	6.0	\$ 160.00	\$ 960.00
404.377901	37.5 F9 BASE COURSE WMA, 70 SERIES COMPACTION	TON	9.0	\$ 160.00	\$ 1,440.00
407.0102	DILUTED TACK COAT	GAL	610.0	\$ 5.00	\$ 3,050.00
490.10	PRODUCTION COLD MILLING OF BITUMINOUS CONCRETE	SY	11,029.0	\$ 4.00	\$ 44,116.00
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	36.0	\$ 1,000.00	\$ 36,000.00
609.0212	STONE CURB NEAR VERTICAL FACE (NVF)	LF	180.0	\$ 50.00	\$ 9,000.00
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0	\$ 100,000.00	\$ 100,000.00
625.01	SURVEY OPERATIONS	LS	1.0	\$ 10,000.00	\$ 10,000.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	2.0	\$ 3,000.00	\$ 6,000.00
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	3,970.0	\$ 2.00	\$ 7,940.00
685.12	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	4,350.0	\$ 2.00	\$ 8,700.00
	DRAINAGE & STORMWATER	LS	1.0	\$ 50,000.00	\$ 50,000.00
	LANDSCAPING	LS	1.0	\$ 25,000.00	\$ 25,000.00
	UTILITIES	LS	1.0	\$ 5,000.00	\$ 5,000.00
697.03	FIELD CHANGE PAYMENT	DC	\$ 24,000.00	1.0	\$ 24,000.00
698.04	ASPHALT PRICE ADJUSTMENT	DC	\$ 10,000.00	1.0	\$ 10,000.00
698.05	FUEL PRICE ADJUSTMENT	DC	\$ 5,000.00	1.0	\$ 5,000.00
699.040001	MOBILIZATION	LS	1.0	\$ 15,700.00	\$ 15,700.00

Sub-Total: **\$525,206.00**

30%

Contingency: **\$157,561.80**

Total: **\$682,767.80**

Rounded: **\$685,000.00**



Concept 5 - Forbes Corridor

CONCEPT Engineer's Estimate Summary

ITEM	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	TOTAL PRICE
201.07	CLEARING AND GRUBBING	LS	1.0	\$ 25,000.00	\$ 25,000.00
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	720.0	\$ 50.00	\$ 36,000.00
203.03	EMBANKMENT IN PLACE	CY	710.0	\$ 50.00	\$ 35,500.00
304.12	SUBBASE COURSE, TYPE 2	CY	430.0	\$ 60.00	\$ 25,800.00
404.127201	12.5 F2 TOP COURSE WMA, 70 SERIES COMPACTION	TON	583.0	\$ 120.00	\$ 69,960.00
404.197901	19 F9 BINDER COURSE WMA, 70 SERIES COMPACTION	TON	64.0	\$ 160.00	\$ 10,240.00
404.377901	37.5 F9 BASE COURSE WMA, 70 SERIES COMPACTION	TON	103.0	\$ 160.00	\$ 16,480.00
407.0102	DILUTED TACK COAT	GAL	325.0	\$ 5.00	\$ 1,625.00
490.10	PRODUCTION COLD MILLING OF BITUMINOUS CONCRETE	SY	5,357.0	\$ 4.00	\$ 21,428.00
606.10	BOX BEAM GUIDE RAILING	LF	470.0	\$ 60.00	\$ 28,200.00
606.100002	BOX BEAM GUIDE RAILING (SHOP BENT OR SHOP MITERED)	LF	920.0	\$ 50.00	\$ 46,000.00
606.120101	BOX BEAM END PIECE	EACH	1.0	\$ 400.00	\$ 400.00
607.96000001	WOODEN PEDESTRIAN RAILING	LF	1,070.0	\$ 60.00	\$ 64,200.00
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	2.0	\$ 1,000.00	\$ 2,000.00
608.020102	ASPHALT SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS, AND VEGETATION CONTROL STRIPS	TON	240.0	\$ 160.00	\$ 38,400.00
609.0212	STONE CURB NEAR VERTICAL FACE (NVF)	LF	1,000.0	\$ 50.00	\$ 50,000.00
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0	\$ 80,000.00	\$ 80,000.00
625.01	SURVEY OPERATIONS	LS	1.0	\$ 25,000.00	\$ 25,000.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	4.0	\$ 3,000.00	\$ 12,000.00
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	2,715.0	\$ 2.00	\$ 5,430.00
	DRAINAGE & STORMWATER	LS	1.0	\$ 100,000.00	\$ 100,000.00
	LANDSCAPING	LS	1.0	\$ 40,000.00	\$ 40,000.00
	UTILITIES	LS	1.0	\$ 10,000.00	\$ 10,000.00
	RETAINING WALLS	LS	1.0	\$ 225,000.00	\$ 225,000.00
697.03	FIELD CHANGE PAYMENT	DC	\$ 49,000.00	1.0	\$ 49,000.00
698.04	ASPHALT PRICE ADJUSTMENT	DC	\$ 5,000.00	1.0	\$ 5,000.00
698.05	FUEL PRICE ADJUSTMENT	DC	\$ 2,500.00	1.0	\$ 2,500.00
699.040001	MOBILIZATION	LS	1.0	\$ 23,800.00	\$ 23,800.00

	Sub-Total:	\$1,048,963.00
30%	Contingency:	\$314,688.90
	Total:	\$1,363,651.90
	Rounded:	\$1,365,000.00



Concept 6 - Forbes Intersection

CONCEPT Engineer's Estimate Summary

ITEM	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	TOTAL PRICE
201.07	CLEARING AND GRUBBING	LS	1.0	\$ 50,000.00	\$ 50,000.00
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	2,150.0	\$ 50.00	\$ 107,500.00
203.03	EMBANKMENT IN PLACE	CY	4,260.0	\$ 50.00	\$ 213,000.00
304.12	SUBBASE COURSE, TYPE 2	CY	800.0	\$ 60.00	\$ 48,000.00
404.127201	12.5 F2 TOP COURSE WMA, 70 SERIES COMPACTION	TON	149.0	\$ 150.00	\$ 22,350.00
404.197901	19 F9 BINDER COURSE WMA, 70 SERIES COMPACTION	TON	248.0	\$ 160.00	\$ 39,680.00
404.377901	37.5 F9 BASE COURSE WMA, 70 SERIES COMPACTION	TON	397.0	\$ 160.00	\$ 63,520.00
407.0102	DILUTED TACK COAT	GAL	205.0	\$ 5.00	\$ 1,025.00
606.10	BOX BEAM GUIDE RAILING	LF	145.0	\$ 60.00	\$ 8,700.00
606.100002	BOX BEAM GUIDE RAILING (SHOP BENT OR SHOP MITERED)	LF	180.0	\$ 50.00	\$ 9,000.00
606.120101	BOX BEAM END PIECE	EACH	1.0	\$ 400.00	\$ 400.00
607.96000001	WOODEN PEDESTRIAN RAILING	LF	395.0	\$ 60.00	\$ 23,700.00
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	24.0	\$ 1,000.00	\$ 24,000.00
608.020102	ASPHALT SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS,AND VEGETATION CONTROL STRIPS	TON	123.0	\$ 160.00	\$ 19,680.00
609.0212	STONE CURB NEAR VERTICAL FACE (NVF)	LF	335.0	\$ 50.00	\$ 16,750.00
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0	\$ 80,000.00	\$ 80,000.00
625.01	SURVEY OPERATIONS	LS	1.0	\$ 40,000.00	\$ 40,000.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	5.0	\$ 3,000.00	\$ 15,000.00
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	1,780.0	\$ 2.00	\$ 3,560.00
685.12	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	325.0	\$ 2.00	\$ 650.00
	DRAINAGE & STORMWATER	LS	1.0	\$ 125,000.00	\$ 125,000.00
	LANDSCAPING	LS	1.0	\$ 50,000.00	\$ 50,000.00
	UTILITIES	LS	1.0	\$ 10,000.00	\$ 10,000.00
697.03	FIELD CHANGE PAYMENT	DC	\$ 49,000.00	1.0	\$ 49,000.00
698.04	ASPHALT PRICE ADJUSTMENT	DC	\$ 5,000.00	1.0	\$ 5,000.00
698.05	FUEL PRICE ADJUSTMENT	DC	\$ 2,500.00	1.0	\$ 2,500.00
699.040001	MOBILIZATION	LS	1.0	\$ 31,500.00	\$ 31,500.00

	Sub-Total:	\$1,059,515.00
30%	Contingency:	\$317,854.50
	Total:	\$1,377,369.50
	Rounded:	\$1,380,000.00



Concept 7 - Roadway Resurfacing

CONCEPT Engineer's Estimate Summary

ITEM	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	TOTAL PRICE
404.127201	12.5 F2 TOP COURSE WMA, 70 SERIES COMPACTION	TON	1,931.0	\$ 120.00	\$ 231,720.00
407.0102	DILUTED TACK COAT	GAL	980.0	\$ 5.00	\$ 4,900.00
490.10	PRODUCTION COLD MILLING OF BITUMINOUS CONCRETE	SY	17,749.0	\$ 4.00	\$ 70,996.00
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0	\$ 60,000.00	\$ 60,000.00
625.01	SURVEY OPERATIONS	LS	1.0	\$ 10,000.00	\$ 10,000.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	5.0	\$ 3,000.00	\$ 15,000.00
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	6,130.0	\$ 2.00	\$ 12,260.00
	DRAINAGE & STORMWATER	LS	1.0	\$ 15,000.00	\$ 15,000.00
	UTILITIES	LS	1.0	\$ 5,000.00	\$ 5,000.00
697.03	FIELD CHANGE PAYMENT	DC	\$ 22,000.00	1.0	\$ 22,000.00
698.04	ASPHALT PRICE ADJUSTMENT	DC	\$ 5,000.00	1.0	\$ 5,000.00
698.05	FUEL PRICE ADJUSTMENT	DC	\$ 2,500.00	1.0	\$ 2,500.00
699.040001	MOBILIZATION	LS	1.0	\$ 16,200.00	\$ 16,200.00

Sub-Total: **\$470,576.00**

30%

Contingency: **\$141,172.80**

Total: **\$611,748.80**

Rounded: **\$615,000.00**

APPENDIX J: ENVIRONMENTAL JUSTICE AND LIMITED ENGLISH PROFICIENCY

Environmental Justice

Introduction

Per federal requirements, the Capital District Transportation Committee (CDTC) undertakes an analysis of Environmental Justice in all Community and Transportation Linkage Planning Program (Linkage Program) initiatives to evaluate if transportation concepts and recommendations impact Environmental Justice populations. Impacts may be defined as those that are positive, potentially negative and neutral as described in CDTC's Environmental Justice Analysis document, dated March 2020. The goal of this analysis is to ensure that both the positive and negative impacts of transportation planning conducted by CDTC and its member agencies are fairly distributed and that defined Environmental Justice populations do not bear disproportionately high and adverse effects.

This goal has been set to:

- Ensure CDTC's compliance with Title VI of the Civil Rights Act of 1964, which states that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance,"
- Assist the United State Department of Transportation's agencies in complying with Executive Order 12898 stating, "Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."
- Address FTA C 4702.1B TITLE VI REQUIREMENTS AND GUIDELINES FOR FEDERAL TRANSIT ADMINISTRATION RECIPIENTS, which includes requirements for MPOs that are some form of a recipient of FTA, which CDTC is not.

Data and Analysis

CDTC staff created demographic parameters using data from the 2013-2017 American Community Survey (ACS). Threshold values were assigned at the census tract level to identify geographic areas with significant populations of minority or low-income persons. Tracts with higher than the regional average percentage of low-income or minority residents are identified as Environmental Justice populations. Minority residents are defined as those who identify themselves as anything but white only, not Hispanic or Latino. Low-income residents are defined as those whose household income falls below the poverty line.

The transportation patterns by race/ethnicity, income, age, English ability, disability status, and sex in CDTC's planning area are depicted in table III-2 through III-7, using the commute to work as a proxy for all travel. The greatest difference between the defined minority and non-minority population is in the Drive Alone and Transit categories: The minority population is almost 20% less likely to drive alone, 11% more likely to take transit, and is also more likely to walk and carpool. The defined low-income

population and the non-low-income population follow the same trend, with the low-income population 20% less likely to drive alone, 10% more likely to commute via transit, and more likely to walk and carpool. Other categories showed a lesser difference.

Table 1: Commute Mode by Race/Ethnicity

By Race/Ethnicity	Drive Alone	Carpool	Transit	Other	Walk	Work at Home
All Workers (16+)	80.0%	7.6%	3.7%	1.2%	3.4%	4.1%
White Alone Not Hispanic or Latino	83.3%	6.9%	1.8%	1.0%	2.7%	4.2%
Minority	63.8%	11.0%	12.9%	2.0%	7.0%	3.3%

Table 2: Commute Mode by Income

By Income	Drive Alone	Carpool	Transit	Other	Walk	Work at Home
At/Above 100% Poverty Level	81.8%	7.4%	3.2%	1.1%	2.6%	3.9%
Below 100% Poverty Level	61.3%	11.3%	13.2%	2.4%	8.8%	3.0%

Table 3: Commute Mode By Age

By Age	Drive Alone	Carpool	Transit	Other	Walk	Work at Home
16-19 Years	59.9%	16.2%	4.3%	2.9%	13.0%	3.8%
20-64 Years	80.8%	7.4%	3.7%	1.1%	3.1%	3.9%
65+ years	80.7%	5.0%	2.9%	1.3%	2.5%	7.6%

Table 4: Commute Mode by English Ability

By English Ability	Drive Alone	Carpool	Transit	Other	Walk	Work at Home
Speak English Very Well	70.3%	11.7%	4.8%	1.8%	7.0%	4.4%
Speak English Less than Very Well	65.6%	14.3%	8.3%	1.2%	7.4%	3.2%

Table 5: Commute Mode by Disability

By Disability Status*	Drive Alone	Carpool	Transit	Other	Walk	Work at Home
Without any Disability	80.7%	7.4%	3.5%	1.1%	3.4%	4.0%
With a Disability	71.1%	11.2%	6.7%	2.4%	4.3%	4.3%

Table 6: Commute Mode by Sex

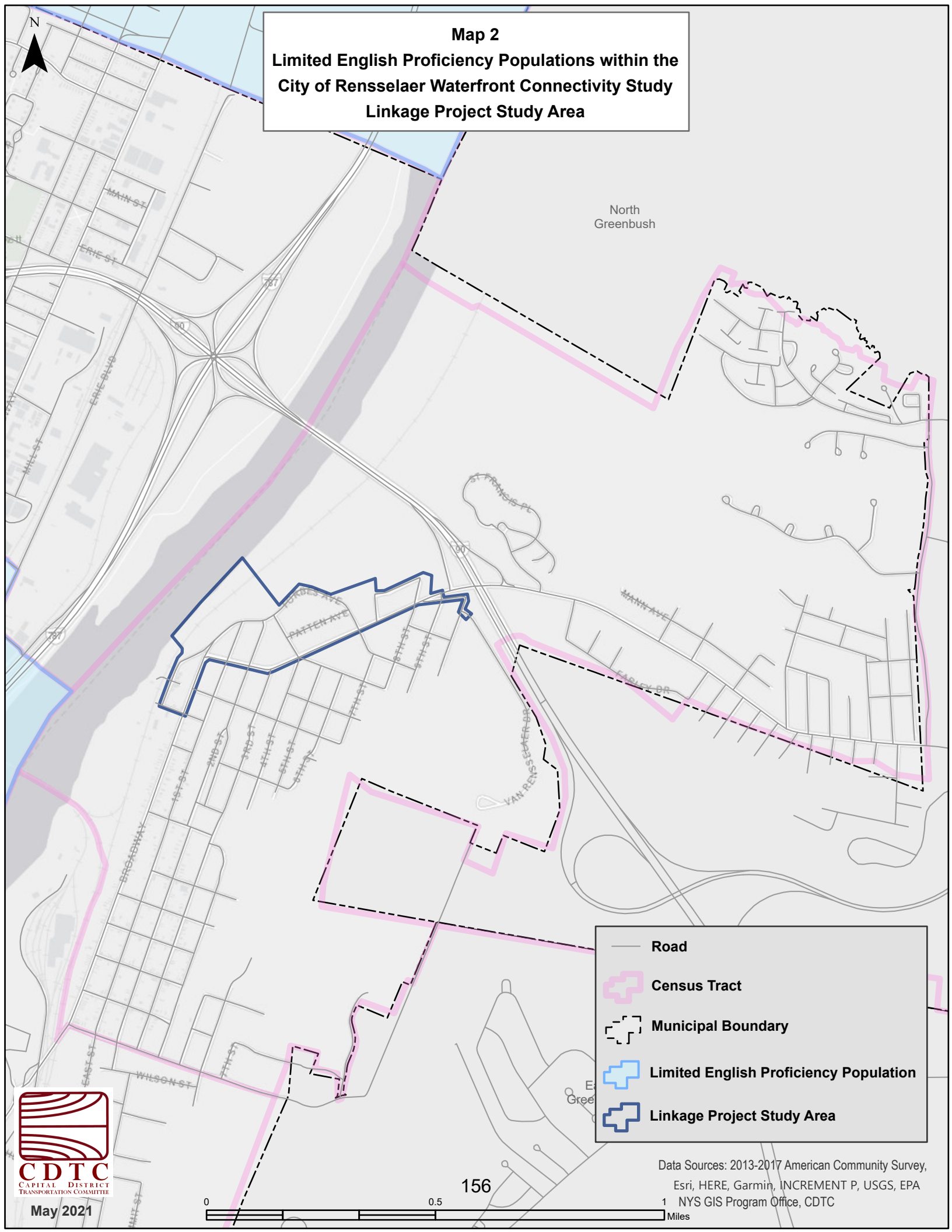
By Sex*	Drive Alone	Carpool	Transit	Other	Walk	Work at Home
Male	80.1%	7.5%	3.4%	1.5%	3.7%	3.9%
Female	80.2%	7.8%	3.9%	0.9%	3.1%	4.3%

Data is from the American Community Survey 2017 5-year estimates, tables S0802, B08105H, B08101, B08122, S0801, B08113, and S1811. Other includes taxi, motorcycle, and bicycle. *Data for sex and disability status include all people in Albany, Rensselaer, Saratoga, and Schenectady Counties.






Map 1 provides an overview of the Rensselaer Waterfront Connectivity study area. The Rensselaer Waterfront Connectivity study area is included in the Environmental Justice area based on the study area Census Tracts having a higher than regional rate of minority residents. The study area is entirely within Census Tract 516. This Census Tract is identified as containing a minority population of 22%, which is just above the regional rate of 21.5%. The Census Tract does not meet the threshold for Low Income populations, as it is below the regional rate.

The Capital Region Indicators website, maintained by the Capital District Regional Planning Commission (CDRPC), provides information by race and ethnicity (White, Black or African American, Asian, and Hispanic or Latino) that may be useful to further understand the population within a study area. Since this document is a regional analysis performed at the census tract level, small scale populations may be overlooked. It therefore may still be useful to scan the project area, particularly if the project area is small, as minority or low-income populations may form a significant portion of the study area residents but not be reflected in the larger census tract areas. In addition, the project should look for worksites and other generators where minority and/or low-income people are over-represented, as the data only captures the residential population. The Capital Region Indicators page for the study area Census Tract may be found here: <https://www.capitalregionindicators.org/profile/36083051600>

Map 2
Limited English Proficiency Populations within the
City of Rensselaer Waterfront Connectivity Study
Linkage Project Study Area

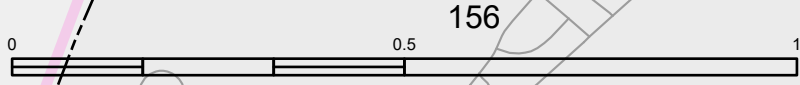


North
Greenbush

-  Road
-  Census Tract
-  Municipal Boundary
-  Limited English Proficiency Population
-  Linkage Project Study Area



May 2021



Data Sources: 2013-2017 American Community Survey,
 Esri, HERE, Garmin, INCREMENT P, USGS, EPA
 1 NYS GIS Program Office, CDTC

Consideration for including minority in the planning process was given in the following ways:

- The Internet was used to display and advertise information about the study.
- Social media was used to provide information and input opportunities.
- Two formal public participation opportunities were provided.
- Public comment was accepted throughout the study process.
- Final products will be posted to CDTC's website, the City of Rensselaer website and on social media.

Conclusion

CDTC defines plans and projects with a primary or significant focus on transit, bicycling, walking, or carpool as being "positive". The purpose of this study is to generate concepts for improved multimodal travel in the study area for all roadway users. Transportation improvements that result from this study are expected to improve connections to the Rensselaer Waterfront, as well as local schools and places of business. Consideration is given to roadway users of all ages and abilities, including pedestrians, bicyclists, motorists, transit users, freight, emergency vehicles, children, elderly, and people with disabilities. As such, the project outcomes are expected to be positive for all residents in and around the study area.

Limited English Proficiency

Introduction

Inclusive public participation is a priority consideration in CDTC-sponsored plans, studies, and programs. Understanding and involvement are encouraged throughout the process. CDTC encourages input from all stakeholders and ensures that all segments of the population, including those that do not speak English as their primary language and who have a limited ability to speak, read, write, or understand English, have the opportunity to be involved in the transportation planning process.

Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency" (LEP) was signed in 2000 to improve access to federally assisted programs and activities for persons who, as a result of national origin, are limited in their English proficiency. To ensure that programs and activities normally provided in English are accessible to LEP persons and thus do not discriminate on the basis of national origin in violation of Title VI of the Civil Rights Act of 1964, recipients must take reasonable steps to ensure meaningful access to their programs and activities by LEP persons.

Data and Analysis

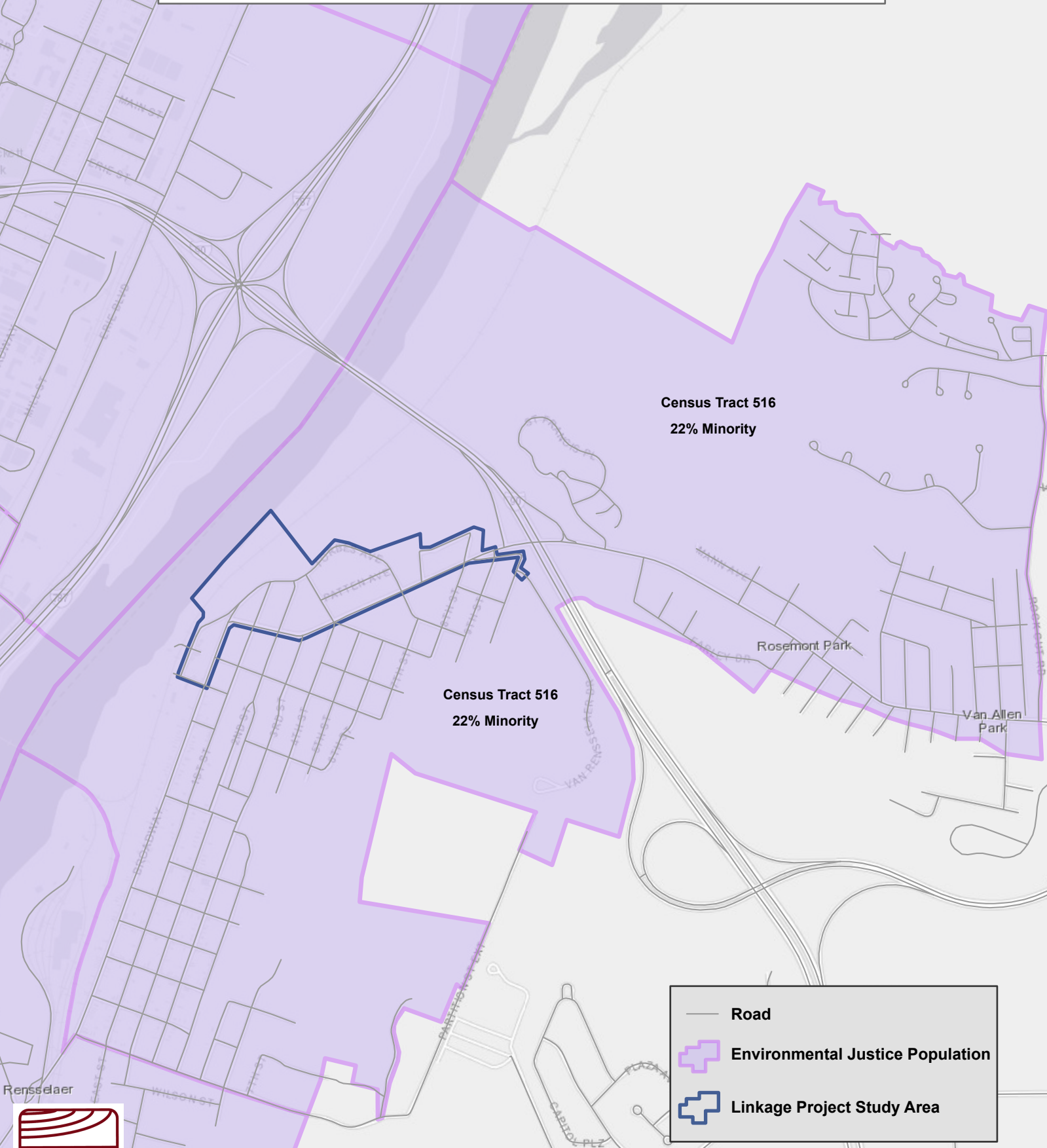
According to 2013-2017 data from the American Community Survey (ACS) table B16004, 3.2 percent of the region's population 5 years of age and older, or over 25,000 people, reported that they do not speak English "very well". USDOT guidance sets a written translation threshold at 5% eligible to be served or 1,000 people, whichever is less. Thus, census tracts with a rate of 5% or higher of LEP persons or 1,000 LEP persons are identified as LEP census tracts.

The CDTC project manager should seek further data sources or community knowledge to indicate which languages are present. If any of them constitute 1,000 people or 5% of the total study area population, whichever is less, key documents will be translated into those languages on request, and requested oral interpreting services will be provided when necessary and possible. In addition, initial outreach materials should be translated into languages meeting the above criteria.

Map 2 provides an overview of the Rensselaer Waterfront Connectivity study area. Although there are no LEP populations in the study area according to the LEP thresholds (5% or 1,000 people), the 2018 data in CDRPC's Community Indicators page for Census Tract 516 indicates 93 people who speak Spanish at home and speak English less than very well. That is about 1.5% percent of the total Census Tract population.

Since this document is a regional analysis performed at the census tract level, small scale populations may be overlooked. It therefore may still be useful to scan the project area, particularly if the project area is small, as people who don't speak English very well may form a significant portion of the study area residents but not be reflected in the larger census tract areas. In addition, the project should look for worksites and other generators where people who don't speak English very well are over-represented, as the data only captures the residential population.

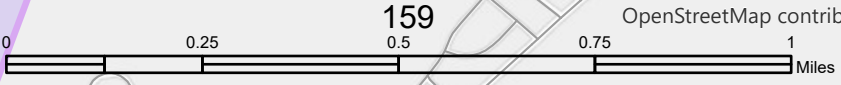
Map 1
Environmental Justice Populations within the
City of Rensselaer Waterfront Connectivity Study Linkage Project Study Area



	Road
	Environmental Justice Population
	Linkage Project Study Area



Data Sources: 2013-2017 American Community Survey, NYS GIS Program Office, CDTC, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



May 2021

Environmental Mitigation

Introduction

Per federal requirements, the Capital District Transportation Committee (CDTC) undertakes an Environmental Features Scan in all Community and Transportation Linkage Planning Program (Linkage Program) initiatives. The Environmental Features Scan identifies the location of environmentally sensitive features, both natural and cultural in relation to project study areas. Although the conceptual planning stage is too early in the transportation planning process to identify specific potential impacts to environmentally sensitive features, the early identification of environmentally sensitive features is an important part of the environmental mitigation process. It should also be noted here that as specific projects advance through the project development process, the applicable NEPA and SEQRA regulations requiring potential environmental impact identification, analysis and mitigation will be followed by the implementing agencies as required by federal and state law. CDTC is not an implementing agency.

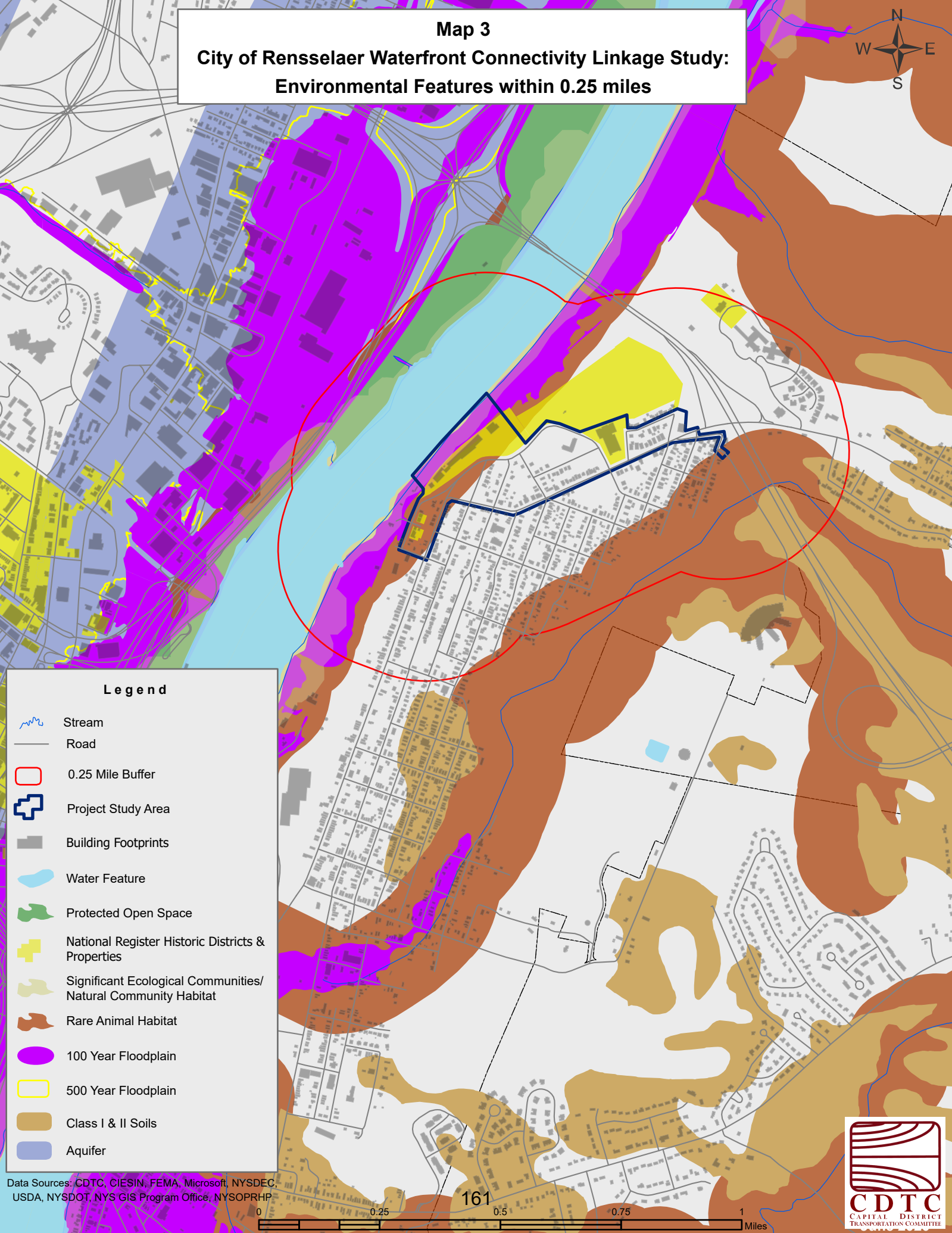
Data and Analysis

CDTC staff relies on data from several state and federal agencies to maintain an updated map-based inventory of both natural and cultural resources. The following features are mapped and reviewed for their presence within each study area as well as within a quarter mile buffer of the defined study area boundary.















- sole source aquifers
- aquifers
- reservoirs
- water features (streams, lakes, rivers and ponds)
- wetlands
- watersheds
- 100 year flood plains
- rare animal populations
- rare plant populations
- significant ecological sites
- significant ecological communities
- state historic sites
- national historic sites
- national historic register districts
- national historic register properties
- federal parks and lands
- state parks and forests
- state unique areas
- state wildlife management areas
- county forests and preserves
- municipal parks and lands
- land trust sites
- NYS DEC lands
- Adirondack Park
- agricultural districts
- NY Protected Lands
- natural community habitats
- rare plant habitats
- Class I & II soils

Map 3 provides an overview of the environmentally sensitive (cultural and natural) features located within the Rensselaer Waterfront Connectivity study area as well as within a quarter mile buffer of the defined study area boundary.

Map 3
City of Rensselaer Waterfront Connectivity Linkage Study:
Environmental Features within 0.25 miles



Legend

-  Stream
-  Road
-  0.25 Mile Buffer
-  Project Study Area
-  Building Footprints
-  Water Feature
-  Protected Open Space
-  National Register Historic Districts & Properties
-  Significant Ecological Communities/ Natural Community Habitat
-  Rare Animal Habitat
-  100 Year Floodplain
-  500 Year Floodplain
-  Class I & II Soils
-  Aquifer

Data Sources: CDTC, CIESIN, FEMA, Microsoft, NYSDEC, USDA, NYSDOT, NYS GIS Program Office, NYSOPRHP



Conclusion

A number of environmental and cultural features are in or within a quarter-mile of the study area:

- The study area contains National Register Historic Districts & Properties, including the Hilton Center and Doane Stuart School
- The riverfront portion of the study area is within the 100-year Hudson River floodplain
- Rare animal habitats are identified in the riverfront area, and within the quarter-mile buffer east of the study area

The purpose of this study is to improve multimodal connections within the study area, and the study is therefore not expected to negatively impact environmental or cultural features. No new roadway construction or increase in impermeable surface area is expected.