





CHAPTER 3 EXISTING CONDITIONS

- Zoning, Land Use
- Recent Improvements and Planned Projects
- Demographics
- Environmental Justice Areas
- Limited English Proficient Populations
- Environmental Mitigation
- Transportation Infrastructure
- Vehicle Traffic Characteristics & Level of Service
- Bicycle & Pedestrian Characteristics
- Public Transit Characteristics
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- Parking Assessment

CHAPTER 3: EXISTING CONDITIONS DOCUMENTATION + ANALYSIS

Zoning, Land Use, and Demographics

Zoning

A comprehensive zoning code helps to positively shape the community by regulating building size (height and width), lot coverage (placement of buildings), density, and land use by type. The Albany Street corridor is primarily zoned mixed-use commercial with the portion northwest of Hulett Street zoned for downtown uses. The Crane Street corridor is primarily zoned mixed-use commercial between 2nd Avenue and 6th Avenue, and two-family residential to the north and south. The one-way focus area is primarily zoned two-family residential. The study area zoning is shown on Figure 3.1.

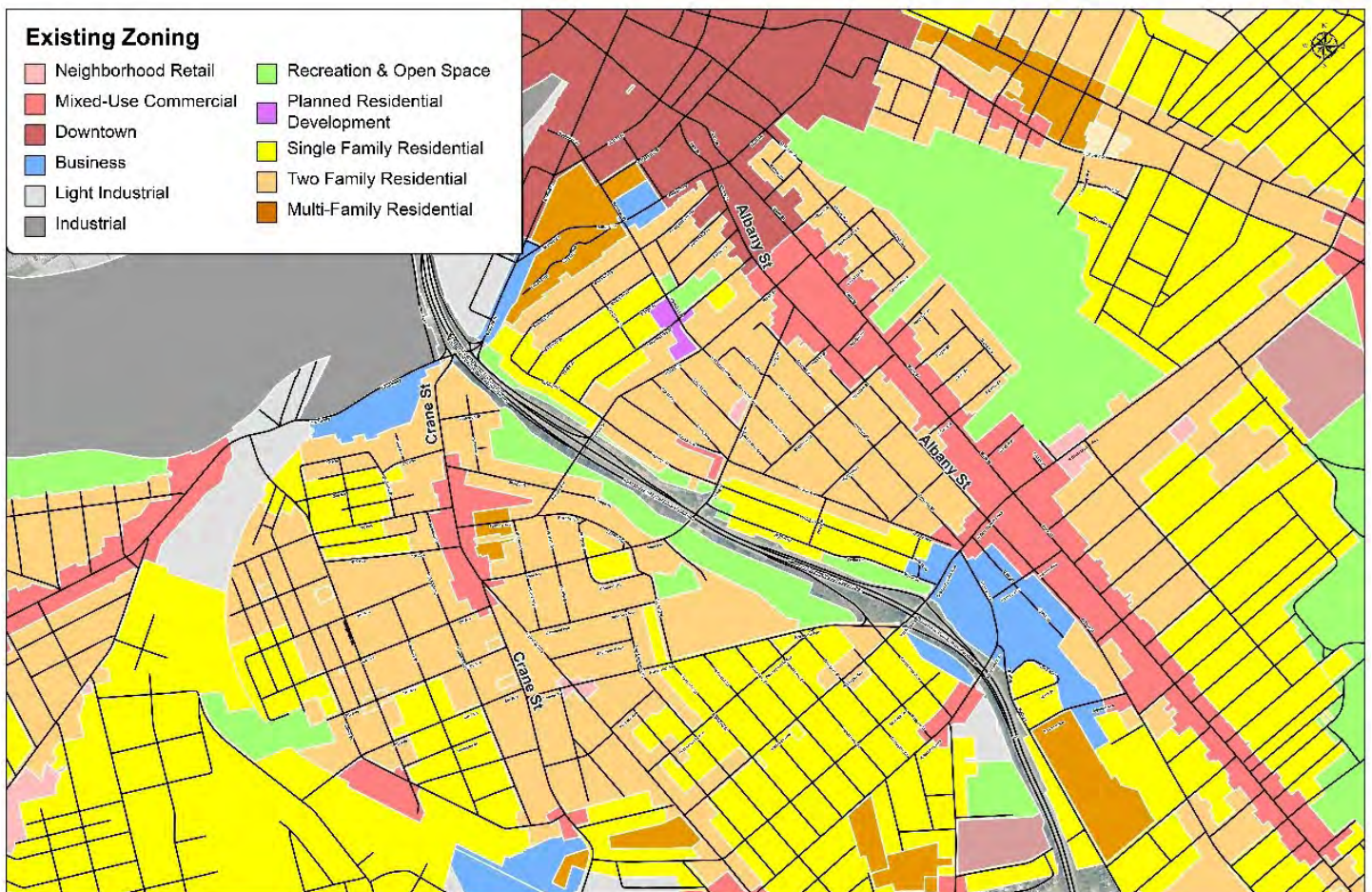


Figure 3.1: Existing Zoning

Land Use

Land uses in the study area are primarily commercial along Albany Street and Crane Street, with residential uses setback from the corridors included in the one-way study focus area. In addition to residential homes and commercial establishments, the following notable land uses are present in the study area, as shown in Figure 3.2:

Educational:

- Hamilton Elementary
- MLK Elementary
- Pleasant Valley Elementary
- Mt. Pleasant Middle School
- Steinmetz Education Center
- Washington Irving Education Center

Libraries:

- Phyllis Bornt Library & Family Literacy Center
- Mt. Pleasant Branch Library

Parks:

- Orchard Park
- Quackenbush Park
- Jerry Burrell Park
- Wallingford Park

Organizations, Institutions, & Community Services

- Miracle on Craig Street – Nonprofit organization that is focused on health and wellness.
- Boys and Girls Club – Nonprofit organization that promotes social, educational, health, leadership, and character development.
- Schenectady Community Action Program – Nonprofit organization located on Albany Street with the mission to end poverty and promote health wellness, and safety.
- Hamilton Hill Arts Center – Nonprofit organization located on Schenectady Street that promotes knowledge, preservation, and development of African and African Diasporic art and culture.
- Electric City Barn – Innovative hub that provides space and programming for emerging artists, craftsmen, and creative businesses.
- C.O.C.O.A. House – Nonprofit organization dedicated to tutoring and mentoring under-served youth.
- Hometown Health – Medical center providing primary care and preventative health services.
- Community Gardens – Garden plots owned by the City made available for public use.
- Religious Institutions for multiple faiths and denominations



Figure 3.2: Existing Land Uses

State Street Facing properties on Albany Street: The “Back Yard” Effect

Many of the properties on the east side of Albany Street whereby the property connects all the way to State Street and the property has been designed to face State Street with all curb appeal oriented in that direction. In most cases, the portion fronting on Albany Street is parking, material storage, or underutilized lawn area. In many cases, there are no landscape buffers and/or a fence exists at the edge of the property.



Many of the fences do not comply with current zoning regulations which require a minimum setback and prohibit the use of barbed wire. Many of these sites are also littered with trash and severely detract from the look and feel of the area. When these properties occur at intersections (like this one on the northwest corner of Steuben Street), the absence of the streetwall greatly detracts from the walkability of the area.



Vacant lots on both sides of Albany Street, like this one on the southwest side just south of Paige Street, contain an abundance of trash. This lot includes a rusted 6' fence covered with vines and vegetation that sometimes obstructs the public sidewalk. It also lacks the required setback and creates an uncomfortable situation where someone walking would not be able to tell if there was someone behind the fence.



This area illustrates the prevalence of “back yards” that front on Albany Street between Schenectady Street and Veeder Avenue. There are also unsightly vacant lots on the southwest of Albany Street as seen near the intersection of Schenectady Street. Image Credit: Google Earth.



While a few properties do at least have trees, the recurring presence of private parking lots equates to large gaps of inactive street wall and a lack of “eyes” on the street, which can also discourage or prohibit walking.



There is no sense of a street wall at this highly visible and important northern corner of Albany Street and Brandywine Avenue where the lot is occupied by parking and contains no street trees. This situation likely contributes to higher speeds on Albany Street. The absence of trees also calls greater attention to the unsightly overhead utility lines,



This area illustrates the prevalence of “back yards” that front on Albany Street near the Brandywine intersection. Image Credit: Google Earth.



Many of the sites fronting on State Street have been neglected on the Albany Street site and exhibit overgrown and unmaintained vegetation, an abundance of trash, and no landscape buffers to large parking areas.



The abundance of large parking areas with no tree cover greatly adds to the urban heat island effect, limiting the ability of the area to cool at night and making it much hotter during the day. This situation is an example of the disadvantages faced by environmental justice communities.

Streetscape Gaps and Vacant and Underutilized Parcels in the Crane Street Area

There are several vacant or underutilized plots of land surrounding Crane Street. While some have recently been revitalized and others have planned renovations, there are still several that are in poor condition and littered with trash.



The Bridge Christian Church has transformed a formerly vacant shopping plaza into an active community center. Adding street trees and trees to the parking lot would improve the street wall and help mitigate the urban heat island effect.



There are several vacant lots along Crane Street. Several occur on corners.



There are many mid-block and on-street “gaps” along Crane Street as shown in this Google Earth aerial view of Crane Street from 6th Avenue to 2nd Avenue. Some of these lots have seen recent transformations, others have planned renovations coming, and some remain underutilized.

1. Orchard Park was recently created to open up a formerly hidden green space and transform it into a neighborhood park with open and inviting connections to Crane Street and 2nd Avenue.
2. The Bridge Center Church occupies a formerly closed shopping center and offers many community services. While some landscaping has been added to the parking lot, the addition of street trees and more trees within the lot would help maintain the street wall and mitigate the urban heat island effect.
3. This lot is void of buildings and creates a small gap in the streetscape as currently used.
4. This inner parcel appears underutilized and could provide a potential opportunity for shared parking if connected to Crane Street.
5. DePaul Housing has plans to construct affordable apartments at this location.
6. The Mont Pleasant Library Branch Library was constructed in 2019 and provides shared parking for the business area. This parking lot would also be improved by the addition of street trees and the required sidewalk buffers.

Recent and Planned Projects

Albany Street

There are three recently completed affordable housing apartment facilities on Albany Street. The Hillside Crossings apartments include a community room and the facility at the Albany and Craig Street intersection includes retail space, although it has not yet been occupied.



Orchard Park provides needed greenspace that can be accessed from Crane Street.



Orchard Park provides needed greenspace that can be accessed from Crane Street.



The mural on the recently completed Hillside Crossing apartments serves as a gateway to the Albany Street corridor from Downtown.

Crane Street

Recent improvements include the Mont Pleasant Branch Library and a newly renovated and expanded Orchard Park. A new affordable apartment facility is planned for the core of the business area on Crane Street.



The Mont Pleasant Branch Library was completed in 20xx and is heavily used by the community.



Orchard Park was completed in 2022 and provides needed greenspace that can be accessed from Crane Street.



DePaul Housing has plans to construct affordable housing on the west side of Crane Street near the Main Avenue intersection.

Demographics

In addition to land use and zoning, demographic data was reviewed for the study area. Table 1 summarizes the available census data for census tracts within and adjacent to the study area. The table indicates that the neighborhoods within the study area generally have low household income and vehicle ownership, as well as a relatively high disability rate, indicating the need for an accessible, safe, walkable, and bike-friendly transportation network. Further, a review of the federal Justice40 initiative for environmental justice indicates that the census tracts within and adjacent to the study area are generally categorized as disadvantaged for three to five of the eight criteria, including energy, health, housing, transportation, and workforce development.

Table 1: Study Area Demographics

	Census Tract	Population	Median Age	Median Household Income	Poverty Rate	Zero Vehicle Households	Disability Rate
Study Area	209	3,654	29.4	\$28,861	33.3%	25%	14%
	210.02	2,141	40.4	\$12,463	47.1%	21%	18%
	214	2,897	34	\$31,913	23.5%	13%	26%
	215	3,314	30.5	\$34,127	38.2%	13%	18%
Adjacent to Study Area	208	3,621	36.6	\$32,193	23%	12%	17%
	210.01	921	34.4	\$30,076	38.5%	36%	14%
	216	3,634	40	\$51,170	11.5%	22%	21%
	217	3,670	38.9	\$31,812	23.3%	6%	17%
	335	2,341	39.3	\$57,411	10.8%	5%	20%

Schenectady Community Action Program (SCAP) is one of the largest community support organizations in the City of Schenectady. The Albany Street facility is one of many facilities and serves as a critical resource for many community members. It is located in the core of the hub of businesses on Albany Street.

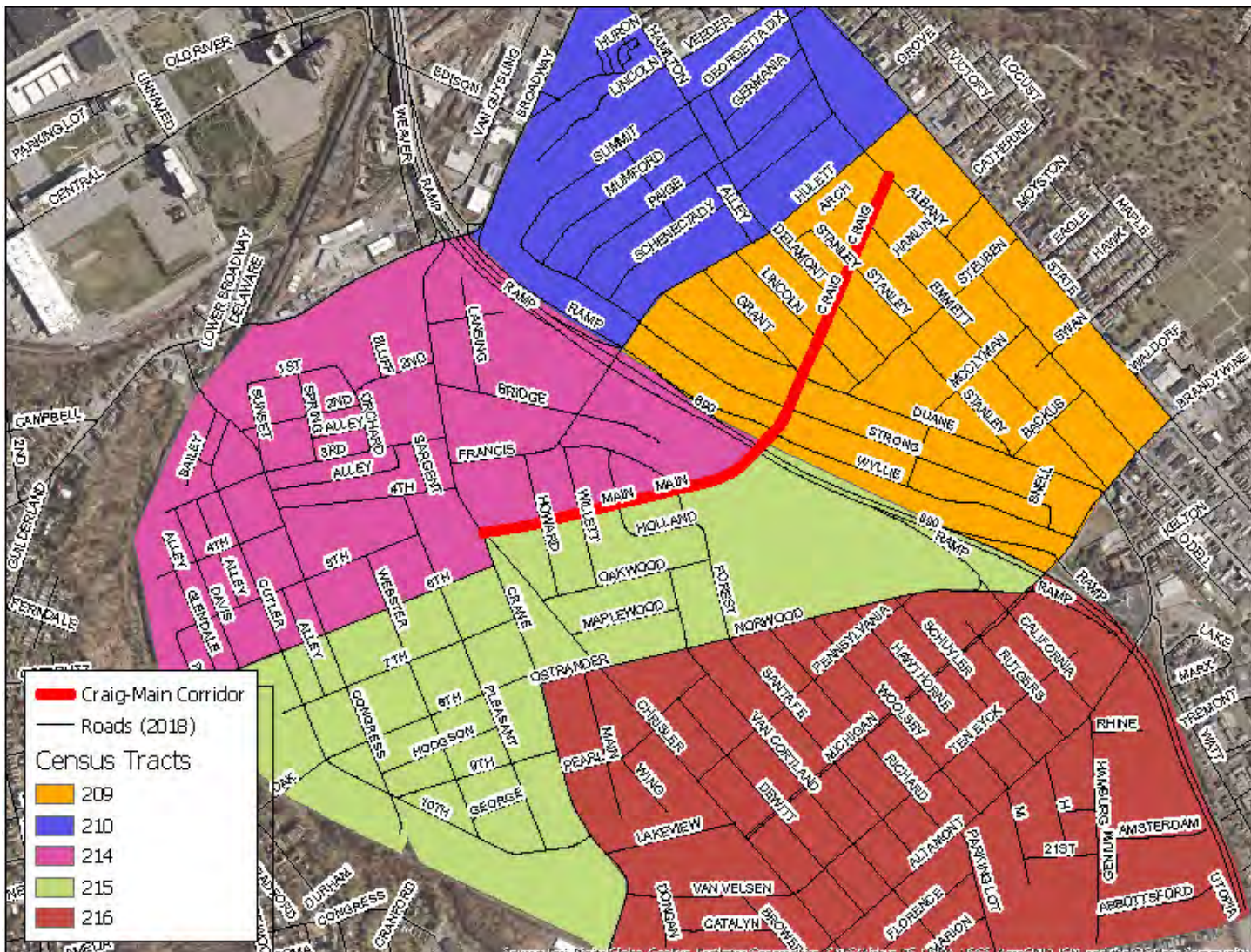


Schenectady Community Action Program flier for Services
Image Credit: Schenectady Community Action Program

Both Hamilton Hill and Mont Pleasant neighborhoods are primarily residential with the major commercial corridors located on Albany Street in Hamilton Hill and along Crane Street in Mt. Pleasant. These two neighborhoods are among the most diverse in the City of Schenectady. According to the US Census Bureau’s 2017 5-year American Community Survey, the Hamilton Hill neighborhood has a 69% minority population and the Mount Pleasant neighborhood has a 60% minority population.

As per the 2019 Craig Main Connection Complete Streets Study, these neighborhoods have some of the highest concentrations of poverty within the City of Schenectady, and the statistics have most likely worsened post-pandemic. As per the Craig Main Connection Study, “According to the US Census Bureau’s 2017 5 year American Community Survey, over 82.6% of residence of Hamilton Hill and 70.73% of Mt. Pleasant residence fall within HUD’s definition of Low to Moderate Income households, by comparison 63% of residence city-wide falls within these guidelines. In Hamilton Hill, in census tract 210.02 45% of households and 65% of households with children fall below the federal poverty level. Within this census tract the median income is \$13,580. Within census tract 209, the other major census tract in Hamilton Hill, 33.9% of households and 56% of families fall below the federal poverty the median income within this census tract is \$25,154. In Mt. Pleasant, depending on the census tract, between 14.2 and 29.3% of households and between 23.9% to 42.7% of families fall below the federal poverty level. The median income of the census tracts in this neighborhood ranges from \$ 28,667 to \$46,678. By comparison city wide, 16% of households and 29.4% of households with children fall below the federal poverty level. City wide the average income is \$43,174.”

Most employment opportunities within the study area occur at small restaurants, retail, service, and convenience stores in the immediate commercial zones along the State Street/Albany Street corridor. Challenges, including lack of transportation, poverty, illiteracy, and lack of educational attainment, are factors of limited opportunity for stable employment.



Craig Main Connection Complete Streets Study Figure 1.3 2017 Census Tract Map

Residents of Mont Pleasant and Hamilton Hill also face challenges obtaining healthy and cost-efficient groceries. Corner stores, bodegas, and a dollar store are the only grocery sources in the neighborhood. This makes obtaining groceries (especially fresh vegetables, fruit, meats and household items) both difficult and costly for those with limited to no vehicle access.

According to the 2019 study, 45% of Hamilton Hill Households do not have a vehicle, including 30% of households with one worker in it. 29% of household with two workers only have one vehicle. In Mt. Pleasant Census tract 214, 24% of household and 22% with one worker do not have a vehicle. 20% of workers with two workers only have one vehicle. In Census tract 215, 29% of households with two workers only have one vehicle.

These two neighborhoods have been identified by the City of Schenectady as important areas for development. Hamilton Hill has been designated as a HUD Neighborhood Revitalization Strategy Area. This designation has allowed for additional flexibility in how the City expends its CDBG resources for housing and economic development in the neighborhood. Separately, the City has designated Mt. Pleasant for blight removal through the Mt. Pleasant Renewal Plan. This plan allows for the City to utilize its CDBG funds for efforts to combat blight in the neighborhood through demolitions, code enforcement and property management.

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.

Regional 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 2: 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 3: 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 4: 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 5: 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 6: 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 7: 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 Schenectady Albany & Crane Streets Linkage Project Study Area. The Albany & Crane Streets Linkage Study area is included in the Environmental Justice area based on the study area Census Tracts having a higher than regional average percentage of minority and low income residents. The study area is situated within a much larger Environmental Justice Area.

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.

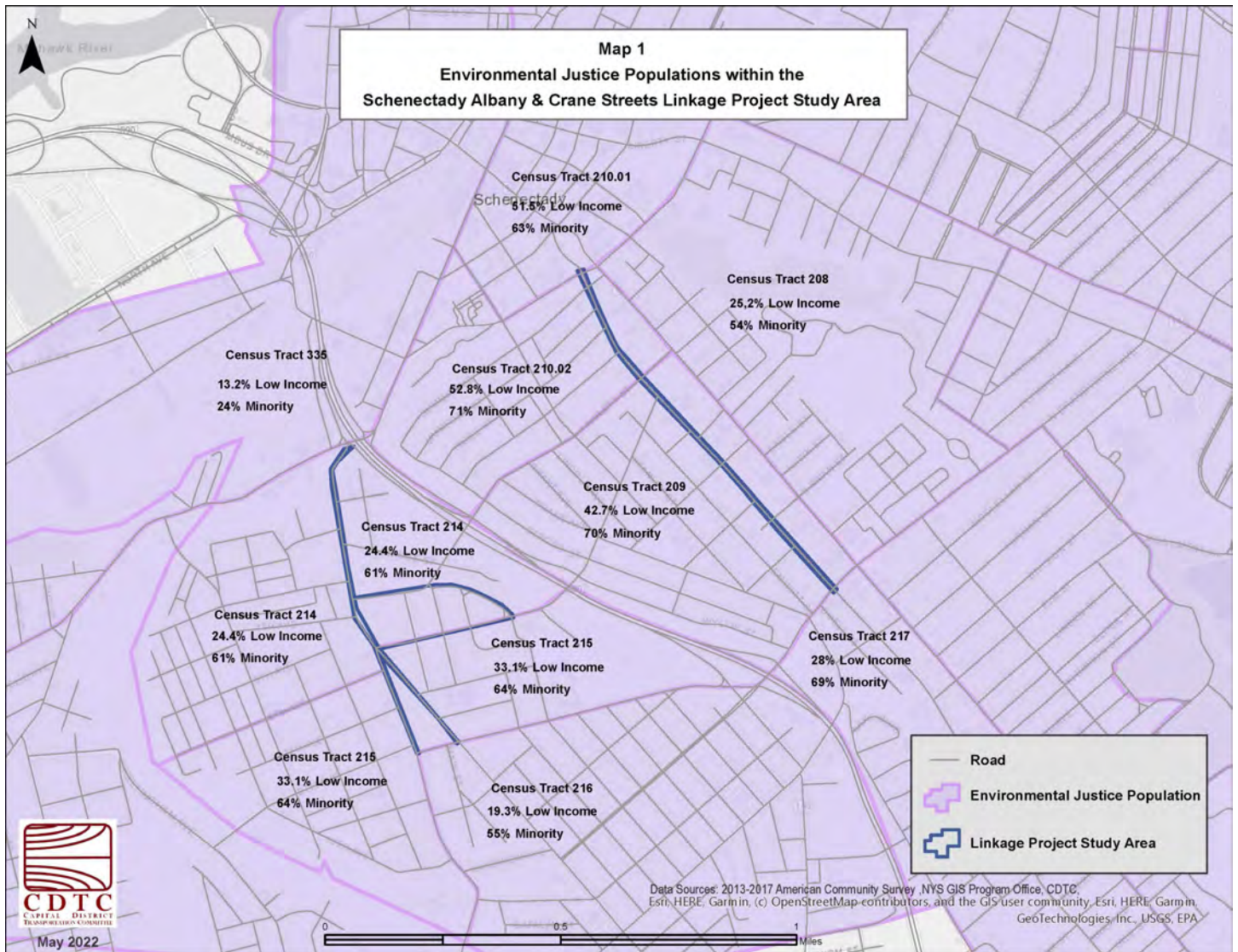


Figure 3.3: Environmental Justice Populations within the Schenectady Albany & Crane Streets Linkage Project Study Area

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, any census tract with a rate of 5% or higher of LEP persons or 1,000 LEP persons are identified as LEP census tracts.

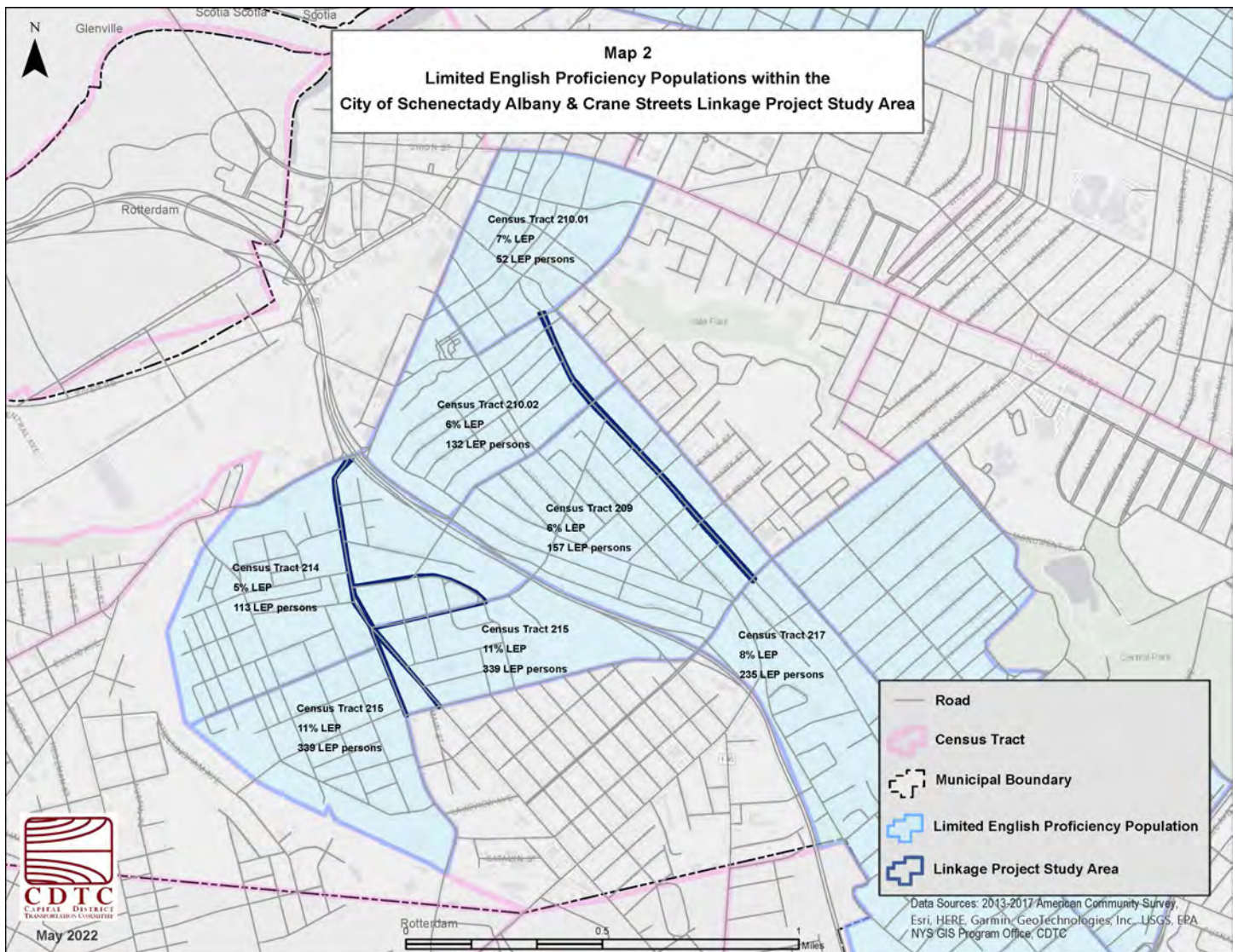


Figure 3.4: Limited English Proficiency Populations within the Schenectady Albany & Crane Streets Linkage Project Study Area

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 Schenectady Albany & Crane Streets Linkage Project Study Area. The Albany & Crane Streets Linkage Study area is included in the Limited English Proficiency area based on the study area Census Tracts having 5% or more or at least 1000 limited English proficient residents. If there are multiple census tracts within the study area, the LEP population numbers should be added together to see if they sum to 1000 or greater.

If a language group meets the 5% or 1,000 people threshold, whichever is less, the following will apply. CDTC's Limited English Proficiency Plan can be viewed at: https://www.cdtcmpo.org/images/othercdtcmpo/2020_Limited_English_Proficiency_Plan.pdf

- **Identifying Individuals who May Need Language Assistance:** CDTC staff will use Language Identification Flashcards when encountering a LEP individual to identify that person's primary language. The Language Identification Flashcards are free and available online at <http://www.lep.gov/ISpeakCards2004.pdf> and will be made available at public meetings. Once a LEP person's primary language is identified by means of the flashcards, CDTC staff will assess the feasibility of providing translation and/or interpretation assistance.
- **Language Assistance Measures:** Language assistance will be provided for LEP individuals speaking languages that meet the threshold through the translation of vital documents, as well as selected key documents on request, and oral interpreting when necessary and possible. Visitors to the website can utilize the website translate feature to view the website in different languages.
- **Translation of Written Documents:** Written executive summaries of studies conducted in geographic subareas where language groups within the population constitute 1,000 people or 5% of the subarea will be translated into those languages upon request and posted on-line.

CDTC staff will use a free online translation service for all other requests for translations of documents. The CDTC website may be translated into many different languages using free online translation services such as Google Translate. In this way, meeting agendas and minutes, notices of official actions, public comment requests, and other documents may be translated.

- **Oral Interpretation:** Upon at least one-week request of LEP individuals speaking languages that meet the threshold, CDTC will provide interpreting services at meetings, in person if possible. If formal interpretation is required and an interpreter is not available, CDTC staff will use the telephone interpreter service, Language Line, at 1-800-752-6096.

The Capital Region Indicators website, maintained by CDRPC, provides information on language spoken at home by ability to speak English that may be useful to further understand the population within a study area. Where the data shows a significant population speaking a broad language group, further investigation may be necessary. School districts maintain language data for attendees who do not speak English well and this information will generally reflect the children's families. There may be nearby religious institutions and local businesses that cater to people speaking a particular language or language group and could provide insight on the size of the population as well as appropriate ways to engage with them.

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.

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 Schenectady Albany & Crane Streets Linkage Project Study study area as well as within a quarter mile buffer of the defined study area boundary.

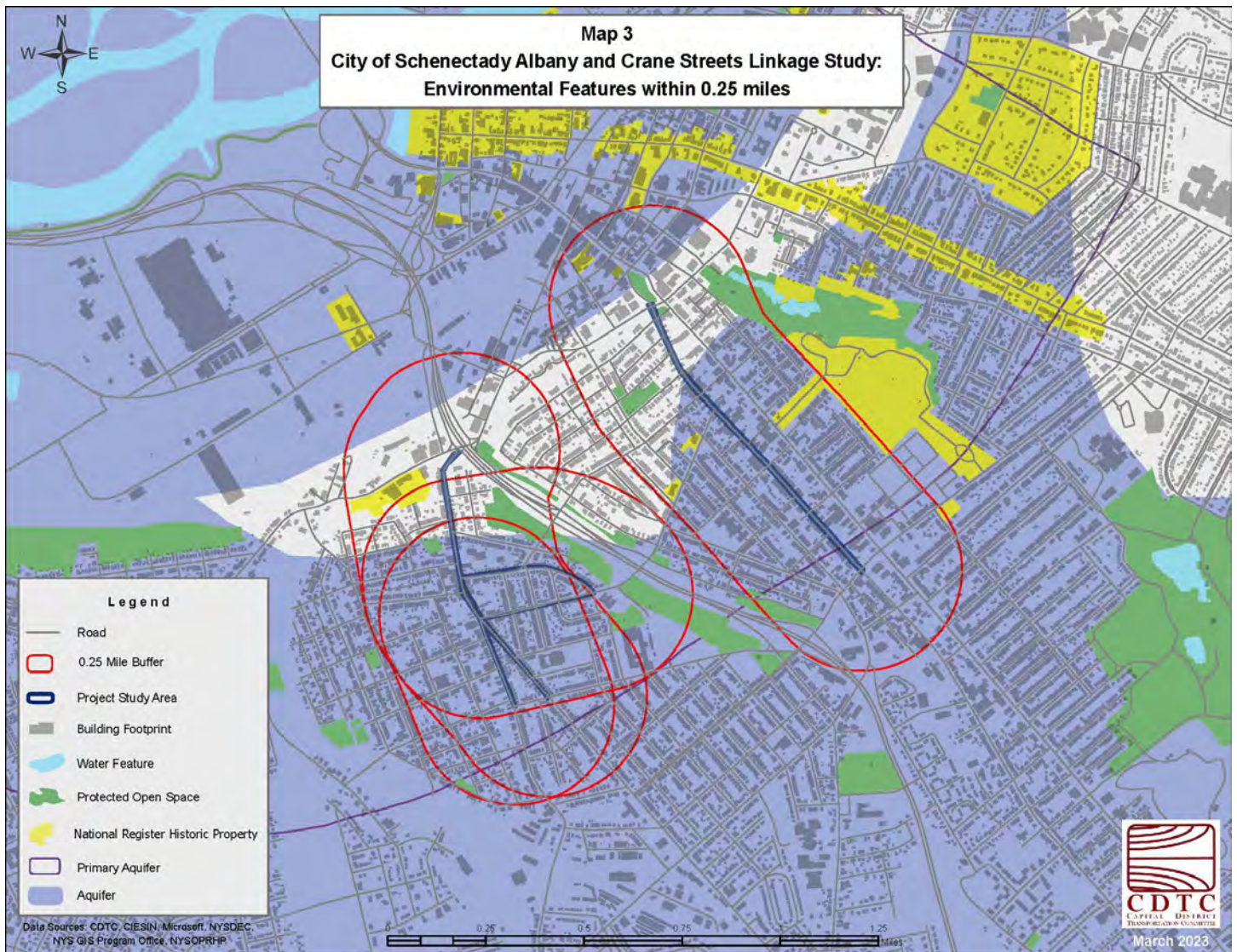


Figure 3.4: Environmental Features within 0.25 miles of the Schenectady Albany & Crane Streets Linkage Project Study Area

Conclusion

There are several City Parks and historic properties within the study area and its surroundings, however, with the exception of Orchard Park, these sites are largely, if not entirely outside of the viewshed of the corridors.

The Schenectady Albany & Crane Streets Linkage Project Study makes recommendations for land use, access management and street-scapes improvements, pedestrian-bicycle facilities, and transit improvements which, if implemented, will have no known impact on the environmentally sensitive features in the study area, with the exception of potentially providing safer and better connections.

Transportation Infrastructure

Albany Street

Albany Street provides northwest/southeast travel through the City of Schenectady between Brandywine Avenue and Veeder Avenue and is classified as a minor arterial. From Brandywine Avenue to Craig Street, Albany Street is an approximate 36 foot-wide roadway with a single travel lane in each direction and parking permitted on both sides. The segment of Albany Street from Craig Street to Schenectady Street is wider, approximately 45 feet-wide, before narrowing back to the approximate 36 foot-wide cross section between Schenectady Street and Veeder Avenue. Sidewalks are generally provided on both sides of the road and the posted speed limit is 30 mph.

Crane Street

Crane Street provides north/south travel from Broadway to Norwood Avenue and is classified as a minor arterial. From Broadway to Francis Avenue, Crane Street is an approximate 36 foot-wide roadway with a single travel lane in each direction and parking permitted on both sides. The segment of Crane Street from Francis Avenue to Main Avenue is wider, approximately 45 feet-wide, before narrowing to approximately 30 feet-wide between Main Avenue and Norwood Avenue with parking restricted on the east side. Sidewalks are generally provided on both sides of the road and the posted speed limit is 30 mph.

Multi-Modal Infrastructure

Figure 3.6 identifies the existing multi-modal infrastructure along Albany Street, Crane Street, Forest Road, and Francis Avenue. Sidewalks are present on both sides of the study area roadways with width ranging from four to five feet wide for most residential segments and 8 to 10-foot wide in commercial areas. Some blocks provide a grass or paved maintenance strip, while the sidewalk is directly adjacent to the roadway in other areas. Relative to sidewalk condition, sidewalks along Albany Street, Forest Road, and Francis Avenue are generally in fair or poor condition with some segments exhibiting significant distress. In contrast, sidewalks on Crane Street are generally in good condition.

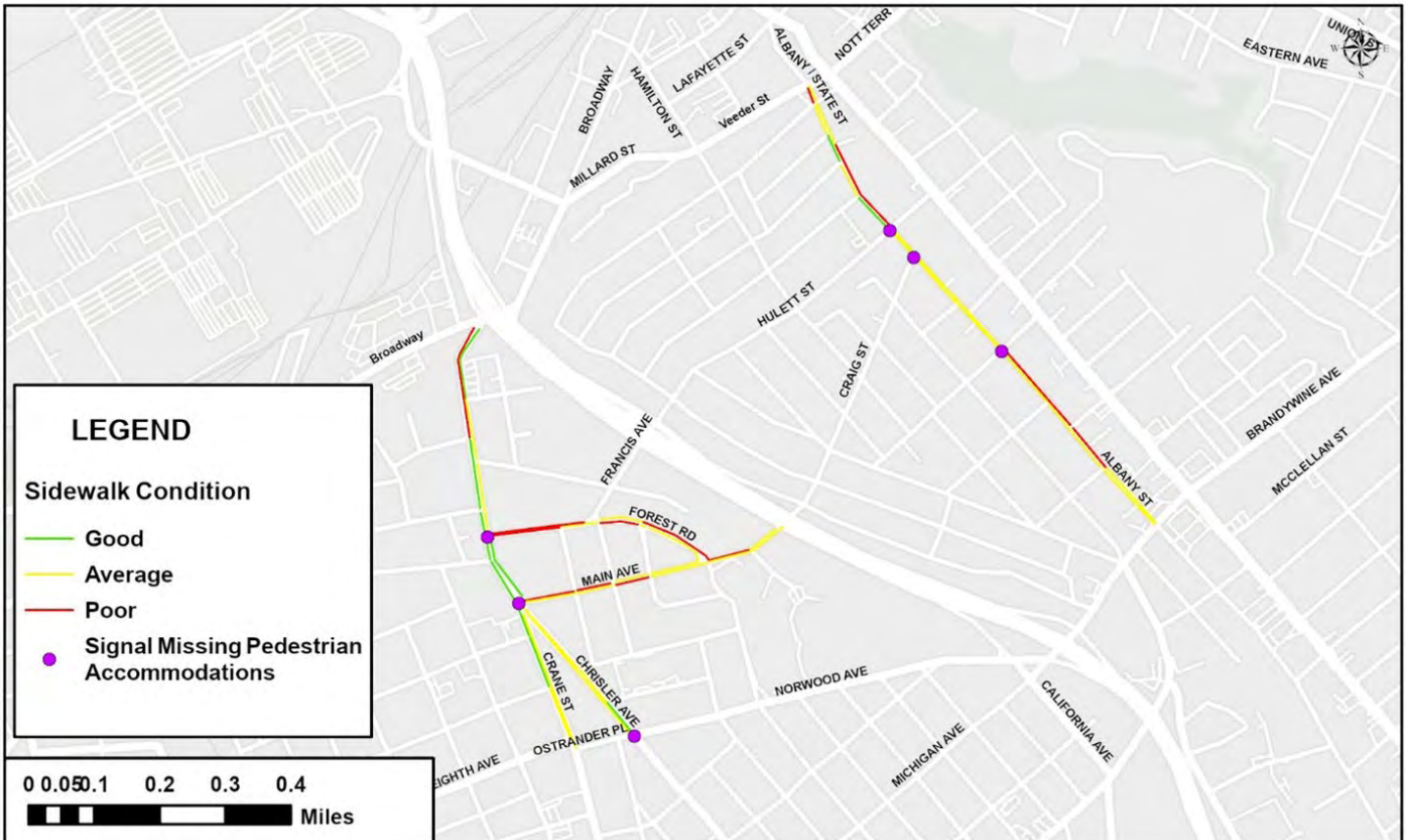


Figure 3.6: Existing Multi-Modal Infrastructure

Intersections

There are two signalized intersections on Crane Street and four signalized intersections on Albany Street, all of which include pedestrian signal heads, push buttons, curb ramps and crosswalks across at least one leg of the intersection. It is noted that none of the study intersections provide full pedestrian accommodations across all intersection legs and the accommodations that are present are generally older style buttons and signal heads.

Sidewalk Conditions and Challenges

Common Sidewalk Challenges

There are four primary types of challenges to being able to use the sidewalks in the study area:

1. The majority of sidewalks are in poor condition and have either been paved over with asphalt (which is not allowed by the City Code), are deteriorating, or have been paved over with steep cross-slopes that prohibit safe use, particularly after weather events that may make them slippery.
2. Many of the curbs in the study area have either no or little height remaining and vehicular users frequently park their cars straddling the curb, on the sidewalk, and/or in the front yard setbacks (where it is not permitted). In some areas, the road is higher than the sidewalk, resulting in drainage going onto and sometimes pooling on the sidewalk.
3. Sidewalks are frequently blocked by either neglected vegetation from adjacent properties or private snow plowing practices whereby adjacent property owners plow snow from their properties onto the public sidewalk.
4. There are very few street trees in the study area, which results in an absence of needed traffic calming measures and discourages walking during the hotter months of the year.

Albany Street Sidewalks



There are many areas along the Albany Street corridor where the curb is barely evident and the sidewalks have been paved over with asphalt. Tree lawns have also been paved over and this, in combination with the absence of street trees, has led to cars regularly parking in the tree lawn and on the sidewalk. This photo was taken on Albany Street between Brandywine Avenue and Steuben Street.



There are many areas along the corridor where the sidewalk is frequently blocked by parked cars. This photo was taken on Albany Street between Brandywine Avenue and Steuben Street.



This section of sidewalk between Brandywine Avenue and Steuben Street longer exists.



Cars are frequently parked in front yard areas between Brandywine Avenue and Steuben Street.



This section of sidewalk between Brandywine Avenue and Steuben Street longer has been partially paved over with asphalt that is now deteriorating. Parking on sidewalks is such a problem that this resident has painted a “no parking message” on the asphalt-covered front yard setback.



Many of the properties that front on State Street have large, neglected areas that front on Albany Street. This photo was taken between Brandywine Avenue and Steuben Street and is a good example of how there are places where the vegetation from neighboring properties has made the sidewalk impassable in some locations.



Non-existent curbs and uninterrupted asphalt detracts from the walkability of the street and encourages detrimental parking habits. This photo was taken on Albany Street between Brandywine Avenue and Steuben Street.



In some area, the road has been paved higher than the sidewalk, and when combined with the poor condition of the sidewalk, this leads to drainage conflicts and pooling of stormwater in walking areas. This photo was taken on Albany Street between Brandywine Avenue and Steuben Street.



Many people use Albany Street as a connection between Downtown Schenectady and other parts of the City and this contributes to the high prevalence of trash in the study area. This photo was taken on Albany Street between Brandywine Avenue and Steuben Street.



There are some ADA cross ramps that have been added recently, but most intersections do not have crosswalk striping and the curb ramps often lead to sections of sidewalk that are no longer accessible due to their condition. This photo was taken at the Steuben Street intersection.



There are a few waste receptacles along the commercial portion of the corridor, but many are in poor condition. This photo was taken between Steuben Street and Craig Street.



There is a general absence of street trees within the hub of commercial businesses. This photo was taken between Steuben Street and Craig Street.



Cars frequently park on the sidewalk in the hub of commercial businesses. This photo was taken between Steuben Street and Craig Street.



Several intersections are lacking in ADA curb ramps and crosswalk striping. This photo was taken between Steuben Street and Craig Street.



Many of the curbs are at or below street level as seen in this photo taken between Steuben Street and Craig Street.



The three mixed-use affordable housing developments between Craig Street and Veeder Avenue each include new sidewalks, full size curb reveals, and street trees.



In some areas, the curb and sidewalk have been replaced, but the sidewalk remains narrow and there are no street trees or vertical barriers to increase pedestrian safety and calm traffic. This photo was taken between Craig Street and Veeder Avenue.



Many areas that occur along the “back yards” of businesses that front on State Street are missing sidewalks and have become impassable. This photo was taken between Craig Street and Veeder Avenue.



The three mixed-use affordable housing developments between Craig Street and Veeder Avenue each include new sidewalks, full size curb reveals, and street trees.



There are some areas where the sidewalk is quite narrow with no buffer to the street edge. Even in situations with higher curb elevations, cars can be seen parked on the sidewalk, making these areas even more difficult for pedestrians to navigate. This photo was taken between Craig Street and Veeder Avenue.



This section of sidewalk on the west side of Albany Street between Paige Street and Veeder Avenue illustrates the challenges posed by narrow sidewalks, topography, and excess litter along the corridor.



While there are many portions of the corridor between Craig Street and Veeder Avenue where parking appears to be underutilized, it is used on both sides in the areas closest to active businesses such as Newest Lunch, just south of the Veeder Avenue intersection.

Crane Street Sidewalks



Many sections of Crane Street include sidewalks that have been paved over with asphalt, as well as cars that frequently park in the sidewalk zone, making use of the sidewalk difficult, if not impossible. This photo was taken just south of Ostrander Place, but illustrates a common condition along Crane Street.



This section of sidewalk has been paved over with asphalt and the business owner is using planters to prohibit parking on the sidewalk and visually enhance the corridor. New sidewalks are often cost prohibitive for small, local businesses and area residents. This photo was taken between Main Avenue and Ostrander Place.



Some ADA curb ramps have been added, but many intersections lack crosswalk striping. This photo was taken between Main Avenue and Ostrander Place.



Drainage is challenging and problematic in areas like this one between Main Avenue and Ostrander Place where the road is higher than the edge of sidewalk and there is no curb reveal. This photo was taken between Main Avenue and Ostrander Place.



Many areas like this one between Main Avenue and Ostrander Place have severely deteriorated sidewalks.



Parking on the sidewalks happens even more frequently during snow events. This photo was taken between Main Avenue and Ostrander Place.



Many areas of sidewalk have been paved over with asphalt as shown here at the 6th Avenue intersection.



Many of the driveway transitions are in poor condition and make sidewalk use difficult for anyone with walking challenges or pushing a stroller. This photo was taken between Main Avenue and Ostrander Place.



Many intersections are lacking ADA curb ramps and striped crosswalks as shown here at the 6th Avenue intersection.



The new Mont Pleasant Library branch includes new sidewalks and higher curb reveals, but unfortunately no street tree and few vertical barriers between the roadway and the sidewalk.



The off-street parking lot adjacent to the Mont Pleasant Branch Library is heavily used by patrons visiting the commercial core of Crane Street. Adding the required landscape buffers would visually enhance the corridor and increase traffic calming measures.



The sidewalk on the east side of Crane is missing in the south area closest to the Main / Crane / Chrysler intersection, which makes walking more challenging, encourages higher speeds, and adds to the general confusion in the area of the intersection..



The absence of a curb and sidewalk on the Crane Street side of the Crane / Main / Chrysler intersection gas station equates to a 130 foot curb cut, allowing cars to enter and exit the site anywhere along that stretch, including very close to the intersection. This also makes it much more challenging for pedestrians.



The Crane / Main / Chrysler intersection is very large, which makes the intersection more confusing and difficult to navigate for all users.



There is an ADA access ramp at the point of the property between Crane and Chrysler, but it leads to the center of the intersection, encourages maximum length and exposure crossings, and there is no crosswalk striping at the intersection.



Snow plowed from a private parking lot at the corner of Main Avenue and Crane / Chrysler onto the public sidewalk forces pedestrians to walk within the very busy Crane / Main / Chrysler intersection.



The parking lot at the Crane / Main / Chrysler intersection has a low to zero curb reveal, which functions as a 170' curb cut and encourages cars to back into the road at points very close to the intersection. It is also lacking in any vertical elements that could help with traffic calming and enhancing the pedestrian experience.



Some portions of the sidewalk have pavement that is in relatively good condition and there are a few street trees along the corridor to the north of Main Avenue.



Multiple business owners on the corridor commented that residents often leave their cars in the on-street parking spaces for long periods of time, as scene here where the car is parked on a portion of the sidewalk. This photo was taken just north of the Main Avenue intersection.



Portions of the sidewalk are very narrow and sometimes cluttered with utilities. This photo was taken between Main Avenue and Francis Avenue.



There are a few waste receptacles along the corridor, such as the one shown here between Main Avenue and Francis Avenue.



A CDPHP cycle station in the commercial core of Crane Street provides access to rent-able bicycles during spring, summer, fall. The bikes are stored off-site during the winter. This photo was taken between Main Avenue and Francis Avenue.



In some places, the road is higher than the absent curb reveal, leading to ponding along the sidewalk. This photo was taken between Main Avenue and Francis Avenue.



This photo taken in the area between Main Avenue and Francis Avenue illustrates that there is still some available parking during the lunch hour and that most parking is concentrated around businesses that are open and active.



Crane Street feels very wide in areas where on-street parking is underutilized, which likely encourages higher speeds in some areas. This photo was taken in the area between Francis Avenue and Bridge Street.



Most of the Crane Street corridor is absent of street trees, which can discourage walking in warmer weather while also contributing to the urban heat island effect that disproportionately affects environmental justice communities. This photo was taken in the area between Francis Avenue and Bridge Street.



Even in areas where the road is wider, cars frequently park on the sidewalk. This photo was taken in the area between Francis Avenue and Bridge Street.



Parked cars make it difficult for pedestrians to use the public sidewalk as seen here between Francis Avenue and Bridge Street.



Large portions of the sidewalk are in poor condition, particularly where cars are parking and driving on them. The curb reveal is also largely absent in many locations. This photo was taken in the area between Bridge Street and Broadway.



Cars frequently park on the sidewalk in the section of Crane between Bridge Street and Broadway. This area is also fairly steep. This photo was taken in the area between Bridge Street and Broadway.



Large sections of sidewalk have been replaced with asphalt between Bridge Street and Broadway. The sidewalk is also very narrow in several places where utility poles exist and there are no street trees on the west side.



In addition to cars parking on the sidewalk zone, many vehicles parked in private driveways hang in the right-of-way, making pedestrian travel difficult.



In some areas between Bridge Street and Broadway, private owners have paved over the sidewalk with steep areas of asphalt as a way to reduce the slope in their driveways. This makes the cross-slope steep and difficult to navigate, particularly in precipitous weather.



Pedestrian and bicycle options for navigating the Crane and Broadway intersection are extremely limited and require first going in the opposite direction that is desired.

Chrisler Avenue Sidewalks



Several sections of sidewalk along Chrisler Avenue have ponding issues. Parking during the day is fairly minimal. The road is also narrow for a two lane road with one aisle of parking and there are almost no street trees.



Many vehicles park on sidewalks on the east side of parking, even though parking is not allowed on that side of the road.

Main Avenue Sidewalks



The sidewalk closest to the Crane / Main / Chrysler intersection doubles as a vehicular use area where there is no curb reveal and cars back over it to enter and exit the parking area.



The sidewalk zone on the north side of Main and closest to the Crane / Main / Chrysler intersection is very narrow with no vertical buffers. As seen here, litter is a common occurrence near the commercial core of Crane Street.



Main Avenue is narrow in the section between Crane Street and Willett Street and cars frequently park on and obstruct the public sidewalk.



There are very few street trees and traffic calming measures on Main Avenue. In addition, the curb reveal is absent for many stretches of roadway.



Portions of the sidewalk have been paved over with asphalt. In the instance above, this long garage prohibits on-street parking and preferences vehicular use over pedestrian travel.



The portion of Main Avenue closest to Crane Street limits parking to half an hour.



Tire tracks can be seen throughout the tree lawn where the curb is almost gone and cars routinely drive and park.



Cars are sometimes parked in the front yards of houses along Main Avenue as seen above.



The section of Main Avenue closest to Forest Road has wider tree lawns, but very few street trees.



The intersection of Main Avenue and Forest Road is very large.

Forest Road + Francis Avenue Sidewalks



Forest Road has many more driveway cuts and on-street parking tends to be more heavily used. This may be due to the nearby schools.



Much of the curb reveal on Forest Road and Francis Avenue is missing. There are also very few street trees. Sidewalks tend to be in better condition than surrounding streets, but several show signs of spalling, heaving and breaking, particularly at driveway locations.



There are almost no trees on Francis Avenue.



Cars frequently straddle the curb on Francis Avenue. In many locations, the road is higher than the curb and the tree lawn fills with ponding during storm events.

Automobile Traffic Characteristics (Speeds, Volumes, and Operations) for Main Avenue

Volume and Speed

An automatic traffic recorder (ATR) was installed on Main Avenue for one full week in December 2022 to document traffic characteristics including daily traffic volumes, peak travel times, and travel speed information, and to provide a comparison to data collected in March 2019 as part of the Craig-Main Connection Study. Likewise, available traffic data from NYSDOT and the Craig-Main Connection Study was supplemented with new intersection turning movement counts that were also conducted in December 2022 to facilitate the development of a traffic simulation model. The existing traffic data is summarized in the charts and figures below.

TABLE 2: TRAFFIC VOLUME AND SPEED SUMMARY

	Albany Street (May 2019)	Crane Street (October 2015*)	Main Avenue (Dec 2022)
Volume			
ADT (vpd)	5,200	4,700	1,860
Peak Hour (vph)	380 (5:00 p.m.)	390 (5:00 p.m.)	185 (3:00 pm)
Classification	2% Trucks/Buses	2% Trucks/Buses	6% Trucks/Buses
Speed (mph)			
Average Northbound (Eastbound)	27.4	30.0	23.3
Average Southbound (Westbound)	27.6	29.8	22.3
85 th Percentile Northbound (Eastbound)	30.0	32.5	28.0
85 th Percentile Southbound (Westbound)	30.0	31.0	28.3

*Speed data collected in December 2022

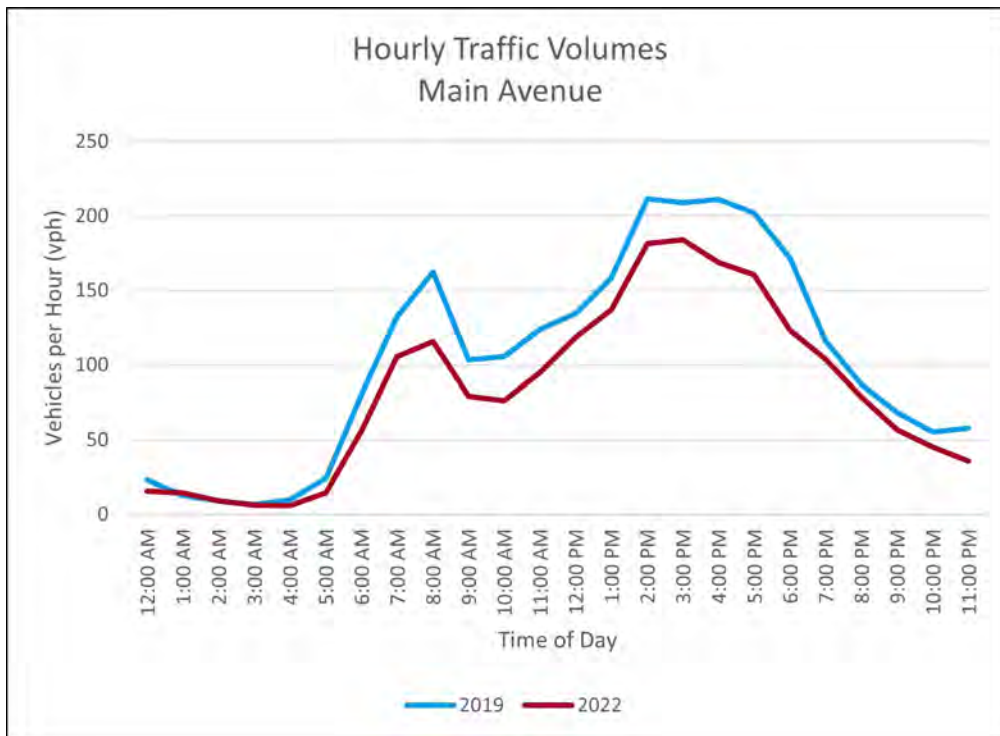
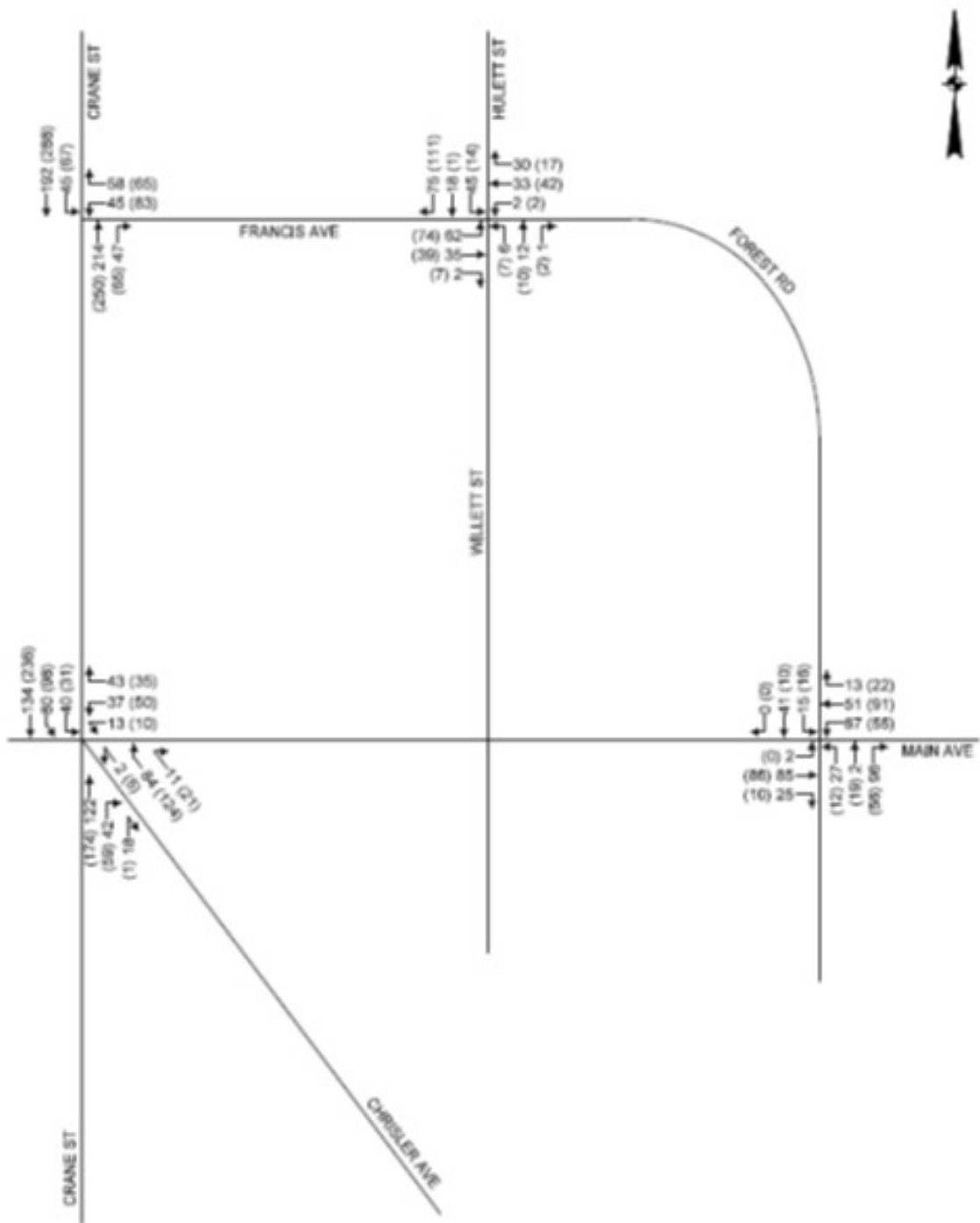


Figure 3.7 : Hourly Traffic Variation by Direction- Main Avenue

Figure 3.7 shows that the 2022 traffic volumes collected on Main Avenue are approximately 20 percent lower than those collected in 2019, likely due to changes in travel patterns resulting from the Covid-19 Pandemic. The chart also shows that Main Avenue continues to exhibit morning and evening peaking characteristics, which has generally become less common since the Covid-19 Pandemic in which morning peak hour traffic has generally decreased. This peaking characteristic is likely maintained due to the number of schools in the vicinity, which maintain pre-pandemic schedules.



LEGEND:

AM PEAK HOUR (PM PEAK HOUR)

Figure 3.8: Existing Peak Hour Traffic Volumes

Intersections

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Evaluations of the signalized intersections were made using Synchro Version 11 software, which automates the procedures in the Highway Capacity Manual published by the Transportation Research Board (TRB). Levels of service range from A to F, with LOS A conditions considered excellent (less than 10 seconds of delay), while LOS F represents conditions with very long delays (greater than 50 seconds at unsignalized intersections or 80 seconds at signalized intersections). Table 3 summarizes the existing LOS results in the one-way focus area.

TABLE 3 – LEVEL OF SERVICE SUMMARY

Intersection	Control	2022 Existing	
		AM Peak Hour	PM Peak Hour
Crane St/Francis Ave	S		
Francis Ave WB LR		A (9.4)	A (9.9)
Crane St NB TR		B (11.7)	B (12.6)
Crane St SB LT		B (10.9)	B (12.3)
Overall		B (11.0)	B (12.0)
Francis Ave/Forest Rd/Hulett St/Willett St	U		
Francis Ave EB LTR		A (8.8)	A (8.5)
Forest Rd WB LTR		A (7.7)	A (7.7)
Willett St NB LTR		A (7.8)	A (7.7)
Hulett St SB LTR		A (8.4)	A (7.8)
Overall		A (8.3)	A (8.0)
Main Ave/Crane St/Chrisler Ave	S		
Main Ave WB LLR		B (16.1)	B (16.7)
Crane St NB TRR		B (13.2)	B (11.9)
Crane St SB LLT		A (3.6)	A (3.7)
Chrisler Ave NWB LTR		B (11.0)	B (12.6)
Overall		A (9.4)	A (9.1)
Main Ave/Forest Rd	U		
Main Ave EB LTR		A (8.6)	A (8.0)
Main Ave WB LTR		A (9.1)	A (8.6)
Forest Rd NB LTR		A (8.6)	A (8.3)
Forest Rd SB LTR		A (8.7)	A (8.0)
Overall		A (8.8)	A (8.3)

S, U = Traffic Signal or Unsignalized controlled intersection
 EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
 L, T, R = Left-turn, Through, and/or Right-turn movements
 X (Y.Y) = Level of service (Average delay in seconds per vehicle)
 NA = Not Available

Table 3 shows that traffic operations are very good, with motorists experiencing short delays with overall average vehicle delays of approximately 12 seconds or less during peak times. All intersections operate at overall LOS B or better with individual approaches operating at LOS B or better during both peak hours.



Some ADA access ramps have been added along Albany Street, but much of the crosswalk striping is absent or heavily worn as scene here at the Albany Street and Craig Street intersection.

PEDESTRIAN AND BICYCLE CHARACTERISTICS (VOLUMES, OPERATIONS)

Pedestrian and bicycle counts were conducted simultaneously with the intersection turning movement counts. Table 2.4 shows the number of pedestrian crossings within the study area. It should be noted that these counts only account for pedestrians and bicycles crossing at the observed intersections and do not include mid-block crossings or pedestrians traveling around corners.

TABLE 4 –PEDESTRIAN AND BICYCLE SUMMARY

Intersection	AM Peak Hour		PM Peak Hour	
	Pedestrians	Bicycles	Pedestrians	Bicycles
Crane Street / Chrisler Avenue/Main Avenue	78	1	83	2
Main Avenue / Forest Road	154	0	116	0
Crane Street / Francis Avenue	28	0	62	6
Willett Street /Francis Avenue /Forest Road/Hulett Street	23	1	8	4
Total	283	2	269	12

The data shows a total of 283 pedestrian crossings during the AM peak, and 269 crossings during the PM peak hour. The busiest crossing location is the Main Avenue/Forest Road intersection with 154 crossings during the AM peak hour and 116 during the PM peak hour, likely due to the heavy influence of the Pleasant Valley Elementary and Mont Pleasant Middle schools. Bicycle activity in the study area is much lower with two (2) bicycles observed during the AM peak and 12 observed during the PM peak.

Bicyclist stress was assessed using the Level of Traffic Stress (LTS) model developed by the Mineta Transportation Institute. The LTS classifies roadway segments into four levels of stress cyclists are expected to experience based upon roadway and bicycle facility design characteristics. To determine a cyclist’s exposure to traffic, the LTS model considers the number of travel lanes, vehicle speeds, presence of on-street parking and bicycle facilities, and available space for bicyclists. Roadway segments in which cyclists experience higher levels of exposure result in a higher LTS classification (LTS 3 or 4) and are considered higher stress for cyclists. Conversely, roadway segments with lower levels of cyclist exposure, including separated bicycle facilities, result in a lower LTS classification (LTS 1 or 2) and are considered friendlier to cyclists.

Table 5 summarizes the existing LTS for the study area corridors, and shows that bicyclists generally experience LTS 3 on Albany and Crane Streets and LTS 2 within the neighborhoods.

TABLE 5 – LEVEL OF TRAFFIC STRESS

Road	Segment	Existing LTS
Crane Street	Broadway to Van Velsen St	LTS 3
Chrisler Avenue	Crane St to Norwood Ave	LTS 2
Main Avenue	Crane St/Chrisler Ave to Forest Rd	LTS 2
Francis Avenue	Crane St to Forest Rd	LTS 2
Forest Road	Francis Ave to Main Ave	LTS 2
Albany Street	Veeder Ave to Brandywine Ave	LTS 3



CDPHP Cycle Station on Crane Street - bikes are available in spring, summer and fall, but not winter.



CDTA Bus on Albany Street

PUBLIC TRANSIT CHARACTERISTICS (ROUTES, RIDERSHIP)

The Capital District Transportation Authority (CDTA) provides transit service throughout Schenectady, Albany, Rensselaer, Saratoga, and Montgomery counties. CDTA Route 353 provides bus service between Scotia and Rotterdam and operates along the Albany Street, Craig-Main, and Crane Street corridors. Route 353 is classified as a neighborhood route and operates seven days per week with service every 20 minutes from 6:00 a.m. to 11:00 p.m. on weekdays. Weekend service operates on a shorter span and with longer headways. In addition to Route 353, CDTA operates the Red Line bus rapid transit (BRT) service on State Street parallel to the Albany Street corridor with stations at Nott Terrace and Steuben Street near the study area. Figure 3.9 shows the transit routes within the study area.

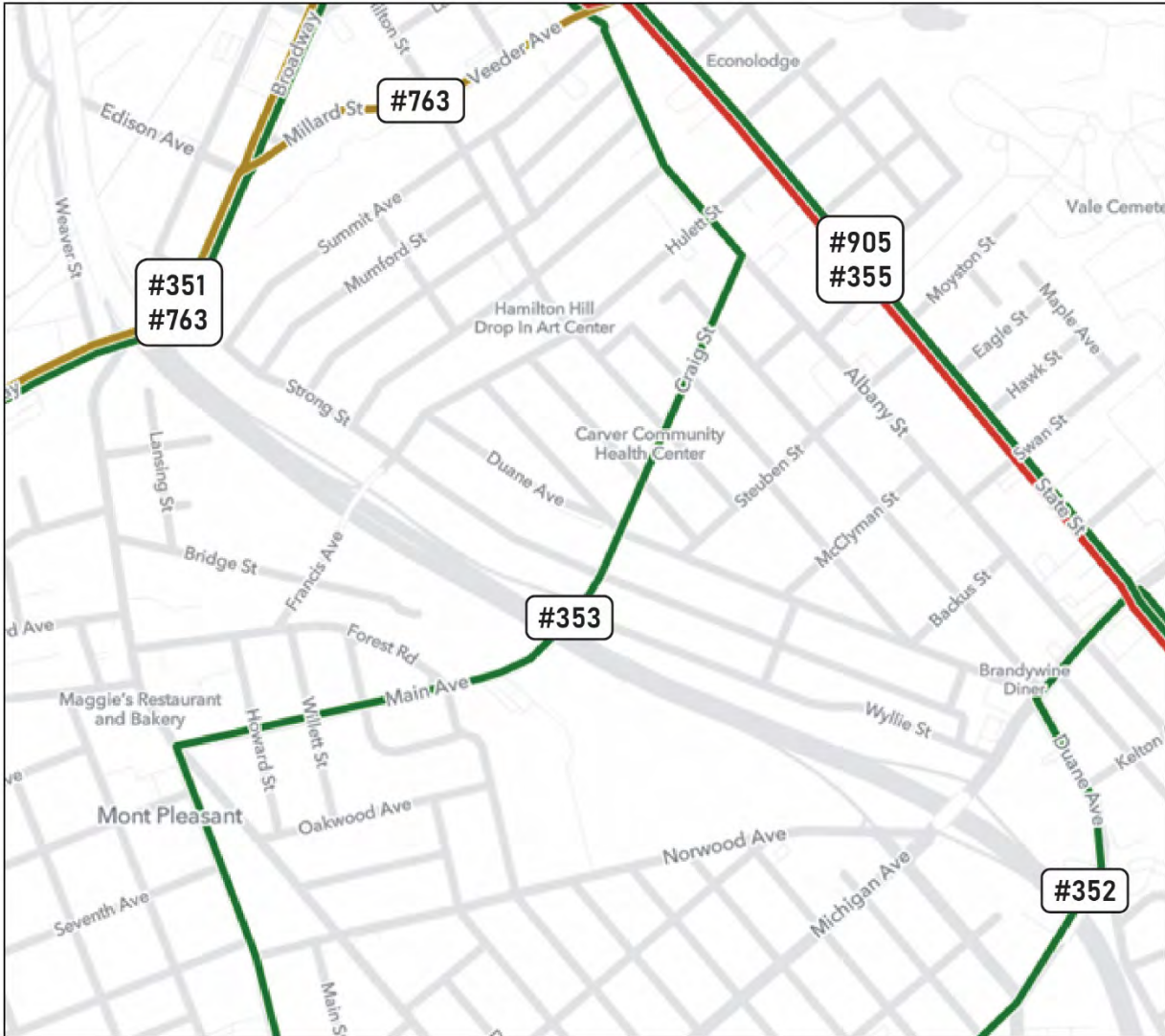


Figure 3.9: Transit Routes

CRASH DATA

Crash data was provided by CDTC for the most recent five years of available data (June 1, 2017 to May 31, 2022), for the Crane Street/Chrisler Street and Albany Street corridors. The source data was a spreadsheet summarizing crash data from the NYSDOT Accident Location Information System (ALIS). In total, 395 crashes occurred on Albany Street and 320 crashes occurred on Crane Street and Chrisler Avenue within the study area over the five-year period, as shown on Figure 3.10. Tables 6 through 8 summarize the crash analysis.



Figure 3.10: Study Area Crashes

TABLE 6 – SUMMARY OF CRASH SEVERITY

Type	Albany Street	Crane Street/Chrisler Avenue
Property Damage	307	262
Injury	88	56
Fatal	0	2
Total	395	320

TABLE 7 – SUMMARY OF CRASH TYPES

Type	Albany Street	Crane Street/Chrisler Avenue
Pedestrian	17	18
Bicycle	14	4
Vehicle		
Overtaking/Sideswipe	109	103
Right Angle	90	59
Rear End	76	53
Fixed Object	22	23
Head On	11	5
Left Turn	20	18
Right Turn	10	7
Other	26	30
Total	395	320

TABLE 8 – SUMMARY OF CRASH RATES

Segment	Number of Crashes	Crash Rate (Acc/MVM)
Albany Street	395	53.06
Crane Street	263	46.15
Chrisler Avenue*	57	45.46

* Crane Street/Chrisler Avenue/Maine Avenue intersection included in Crane Street crash rate

Review of this crash data shows a number of characteristics summarized below:

- The map indicates that crashes in the Albany Street and Crane Street corridors generally cluster around intersections.
- The data indicates that injury crashes account for approximately 20 percent of all crashes within the study area with the Albany Street corridor having a slightly higher percentage than the Crane Street/Chrisler Avenue corridor.
- There were two fatal crashes that occurred within the study area, both of which occurred on Crane Street. One of these fatal crashes occurred on the segment south of Main Avenue in which a motorist lost consciousness and collided with a fixed object. The other fatal crash occurred south of Francis Avenue and was coded as a right-angle collision with failure to yield right of way and unsafe lane change coded as contributing factors.
- There was generally an even number of pedestrian crashes on both the Albany Street (17) and Crane Street/Chrisler Avenue corridors (18). However, the Albany Street corridor experienced a greater number of bicycle crashes – 14 vs four (4). This could in part be due to higher traffic volumes on Albany Street.
- Overtaking and sideswipe collisions are the most common type in both corridors, accounting for approximately 30 percent of all crashes, followed by right angle and rear end collisions.
- A review of crash rates indicates that the Albany Street, Crane Street, and Chrisler Avenue corridors have high crash rates that are much greater than would be expected on similar facilities.

In addition to the total crash data, bicycle and pedestrian crashes were mapped to identify any spatial trends. Figure 3.11 shows that pedestrian crashes generally occurred at intersections, with clusters on Crane Street near the Main Avenue intersection and on Albany Street near the Craig Street and Hulett Street intersections.

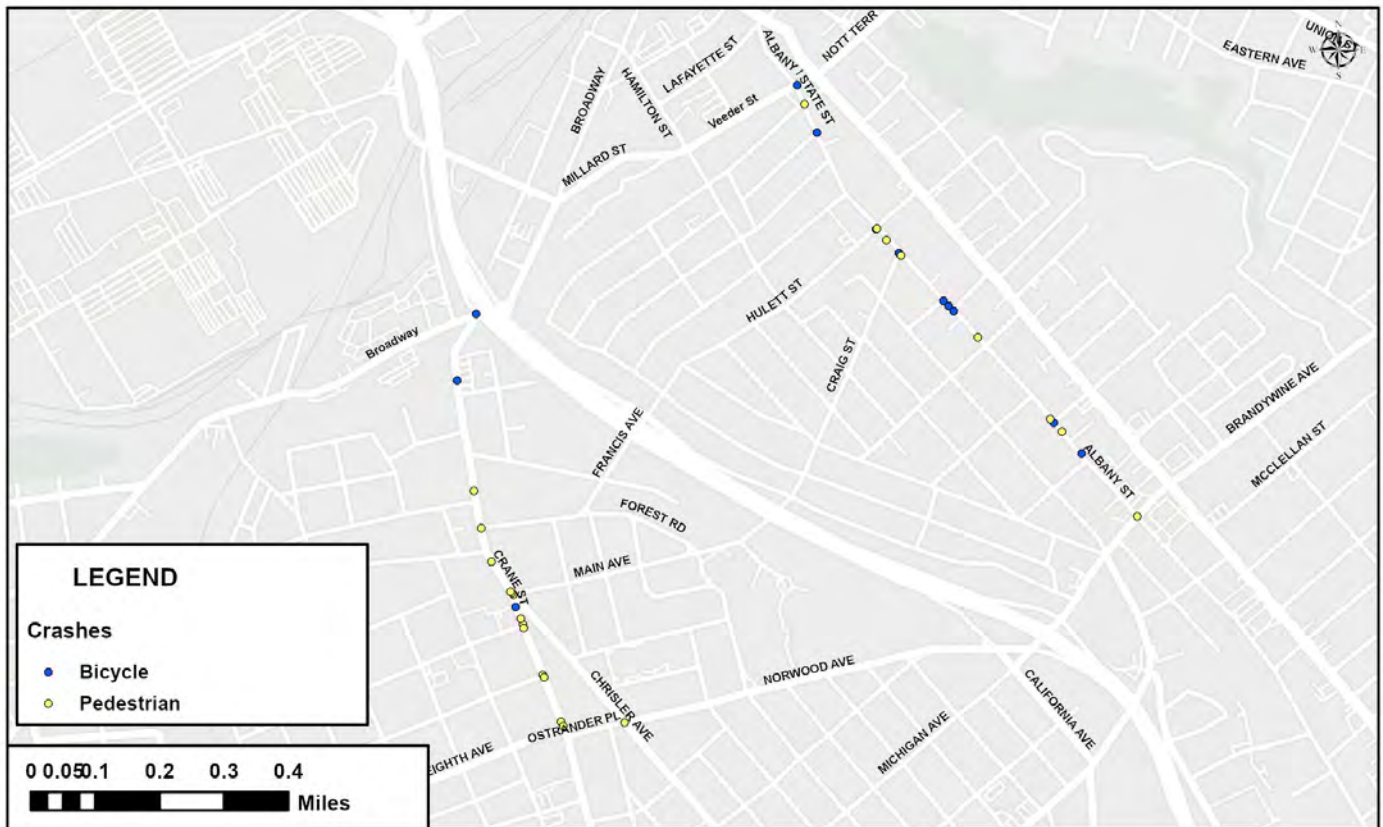


Figure 3.11: Bicycle and Pedestrian Crashes

Figure 3.11 shows that pedestrian crashes generally occurred at intersections, with clusters on Crane Street near the Main Avenue intersection and on Albany Street near the Craig Street and Hulett Street intersections.



The Crane / Main / Chrysler intersection has a high concentration of accidents involving bicycle users and pedestrians. As seen here, there are few pedestrian accommodations and most of the crosswalk striping is either worn away or missing.

PARKING - ALBANY STREET AND CRANE STREET

On-street parking is generally provided on both sides of Albany Street between Georgetta Dix Plaza and Brandywine Avenue. Several loading zones restrict parking on Albany Street in the vicinity of Schenectady Street and Craig Street. Likewise, parking on the southwest side of Albany Street is limited to 2 hours from 8am to 6pm from Steuben Street to Backus Street. On Crane Street, parking is permitted on the west side of the roadway from Broadway to Yorkston Street before allowing parking on both sides between Yorkston Street and Main Avenue. South of Main Avenue, parking is permitted on the west side of Crane Street and Chrysler Avenue. It is noted that the block of Crane Street north of Francis Avenue is restricted to one-hour parking. Within the one-way focus area, parking is restricted on the south side of Main Avenue, Francis Avenue, and Forest Road, resulting on parking allowed on only one side of the roadway.

Figures 3.12 and 3.13 illustrate parking observations during the midday (12:00 p.m.) and evening (7:00 p.m.) peak periods within an approximate ¼ mile walking distance from the Albany Street and Crane Street corridors. The observations indicate that daytime parking demand is generally greater than evening parking demand. Areas with high parking utilization include Crane Street in the vicinity of Main Avenue and Francis Avenue as well as the roadways adjacent to the schools in the Mont Pleasant neighborhood. Relative to the Albany Street corridor, parking demand was generally highest in the vicinity of Craig Street and the residential segments to the southeast. It is noted that observations indicated that parked vehicles on Albany Street and Crane Street often encroach on the sidewalk.



With limited off-street parking opportunities for many of the residences along the Albany and Crane Street corridors, parking on sidewalks and in the public Right-of-Way is a common occurrence. This photo was taken on Crane Street.



Forest Road and the surrounding residential streets are more heavily used during the school day, which is likely a result of the high concentration of schools and youth-focused organizations in the study area.



Areas with fewer open storefronts and those occupying slopes have lower rates of use for on-street parking. This photo was taken on Albany Street in the commercial core near Craig Street.



Areas near active businesses have some of the highest demands for on-street parking as seen on Albany Street just above Veeder Avenue.

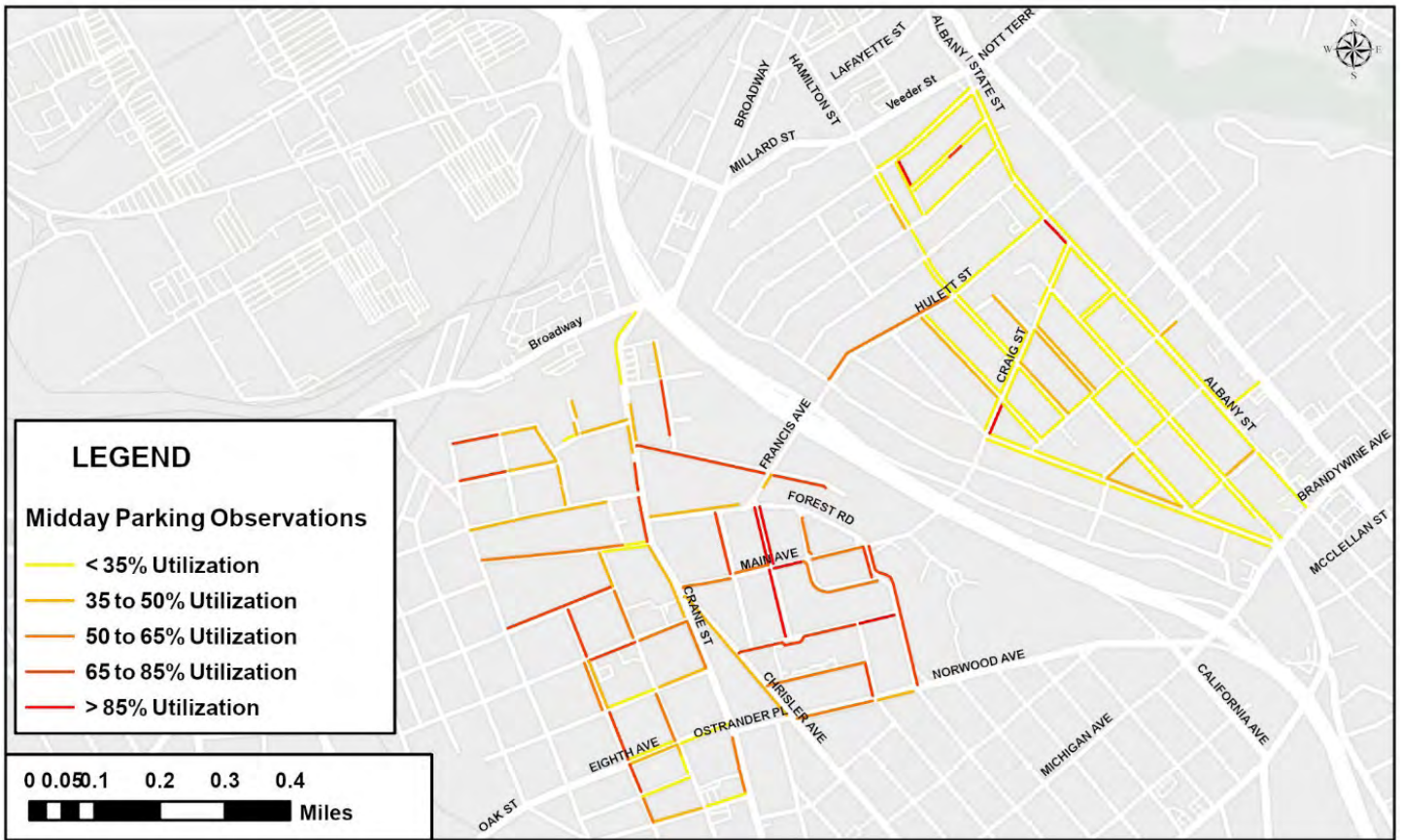


Figure 3.12: Midday Parking Observations

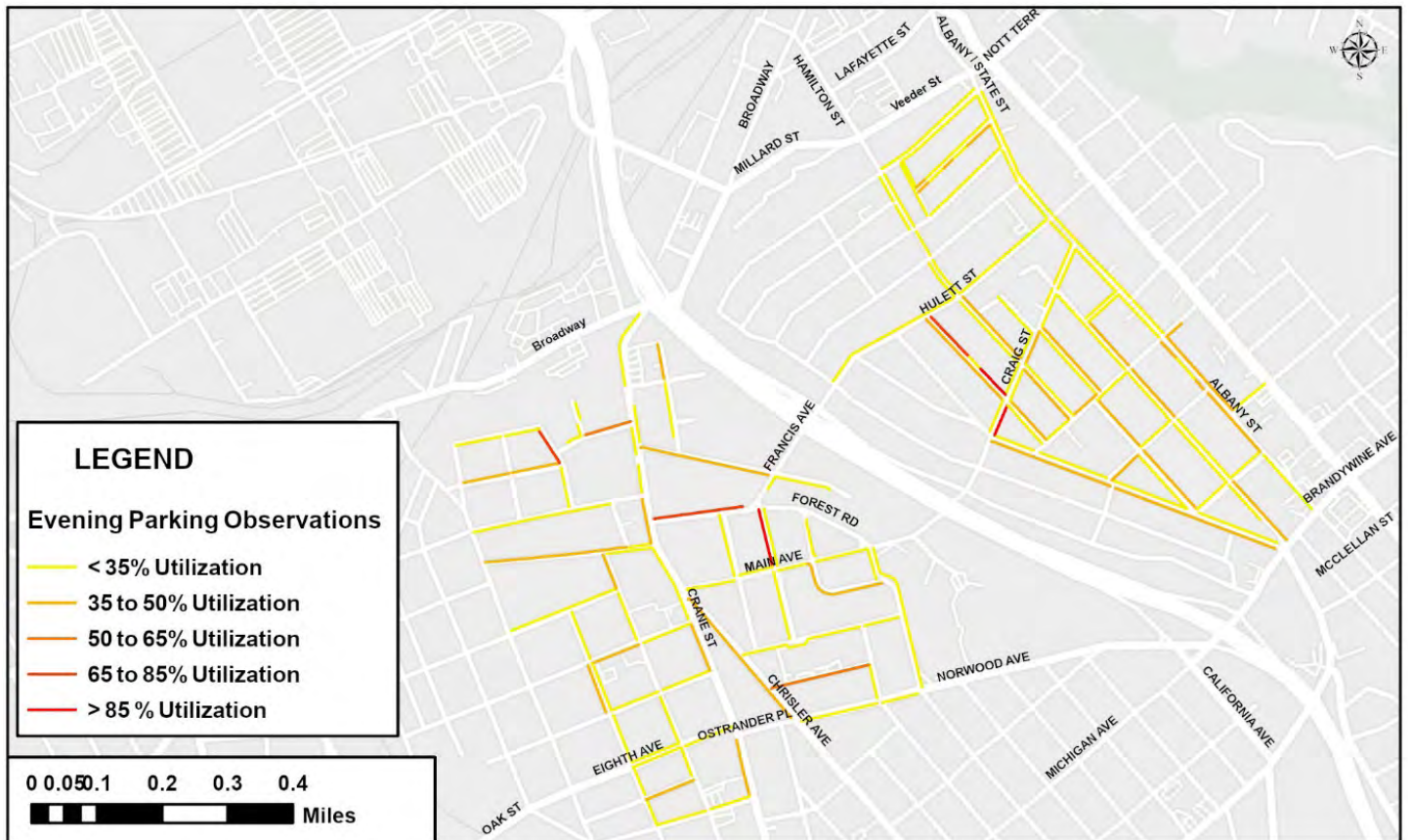


Figure 3.13: Evening Parking Observations

PARKING - 2019 CRAIG STREET AND MAIN AVENUE PARKING ANALYSIS

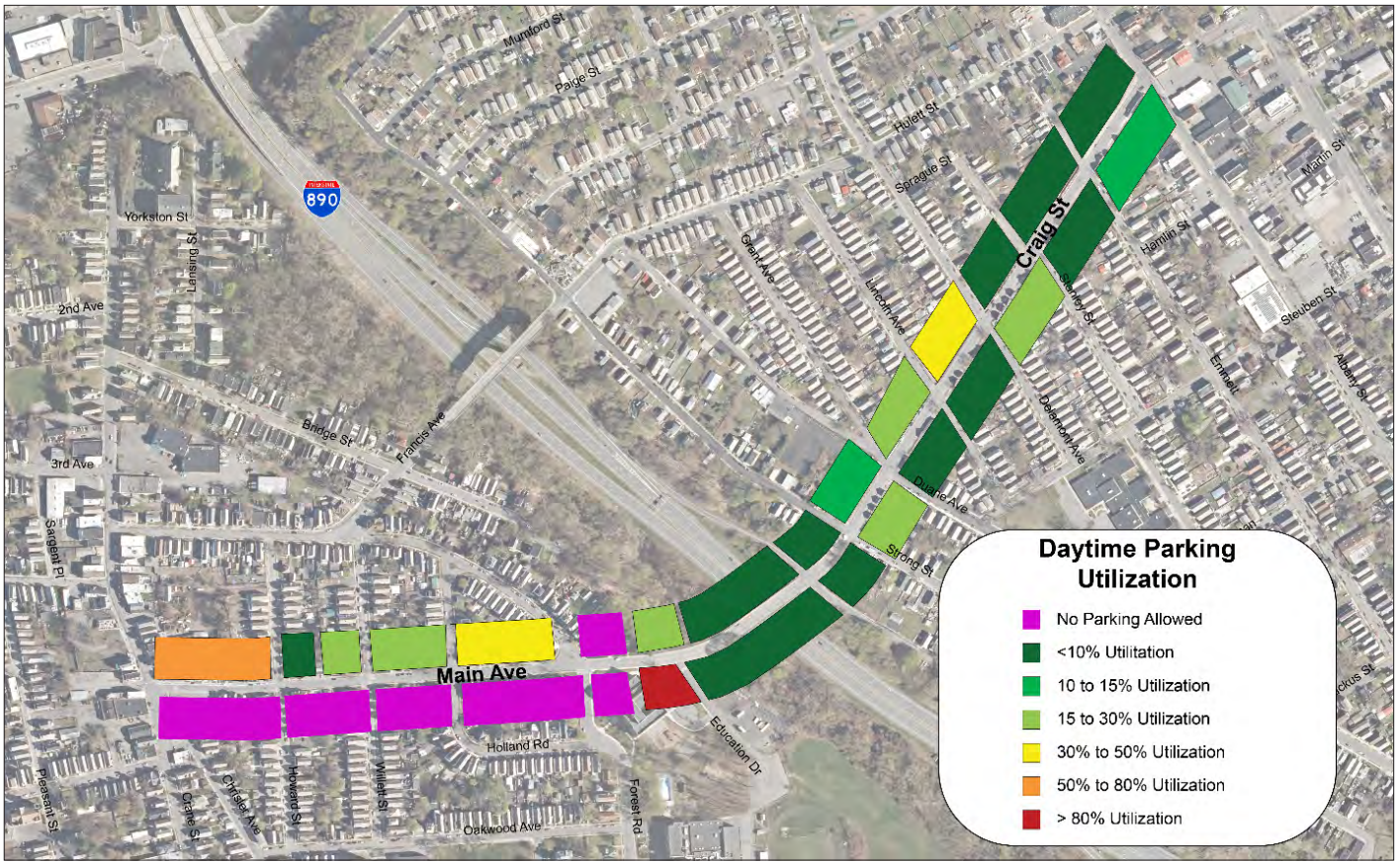
Existing Conditions Data from 2019 for the Craig-Main Connection Complete Streets Study showed that on-street parking is generally provided on one side of Main Avenue and both from Crane Street/Chrisler Avenue to Forest Road.

On-street parking utilization was observed during a typical weekday in March 2019 for the mid-day (12:00 p.m.) and evening (7:00 p.m.) periods in order to determine the typical weekday peak hour occupancy. These time periods were identified based on ITE parking generation data for retail and residential land uses which are the primary land uses within the study area.

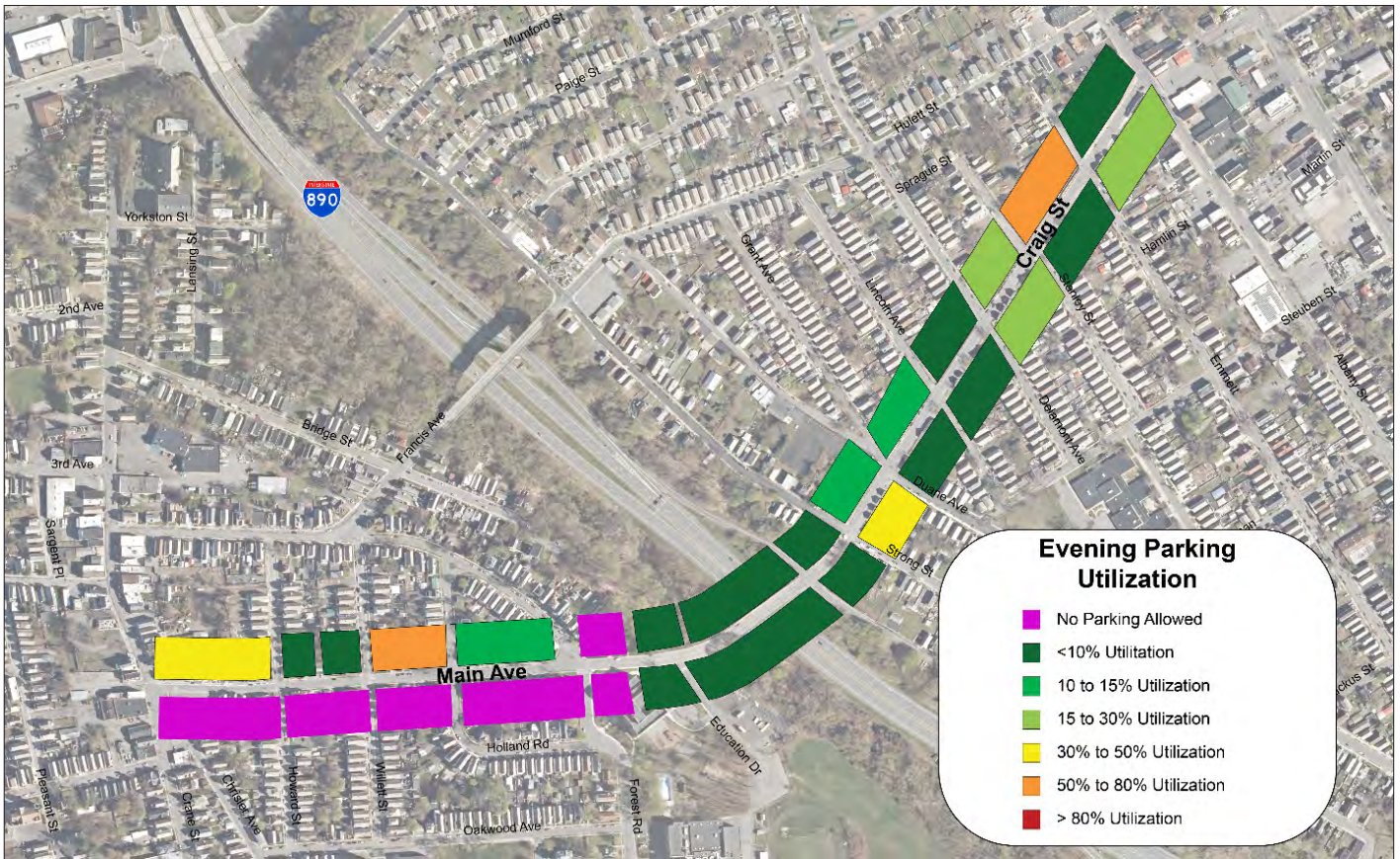
The results of the parking utilization counts are depicted in the Craig-Main Connection Figures A.20 and A.21. The data shows that on average, 15% to 20% of the available on-street parking spaces in the Craig-Main corridor are utilized. Utilization does vary by block-face with parking near the Crane Street businesses and in front of Pleasant Valley Elementary School being highly utilized during the day.



Craig Main Connection Complete Streets Study Figure A.19 2019 Existing Parking Inventory



Craig Main Connection Complete Streets Study Figure A.21 2019 Existing Daytime Parking Utilization



Craig Main Connection Complete Streets Study Figure A.20 2019 Existing Evening Parking Utilization

Concept Assessment

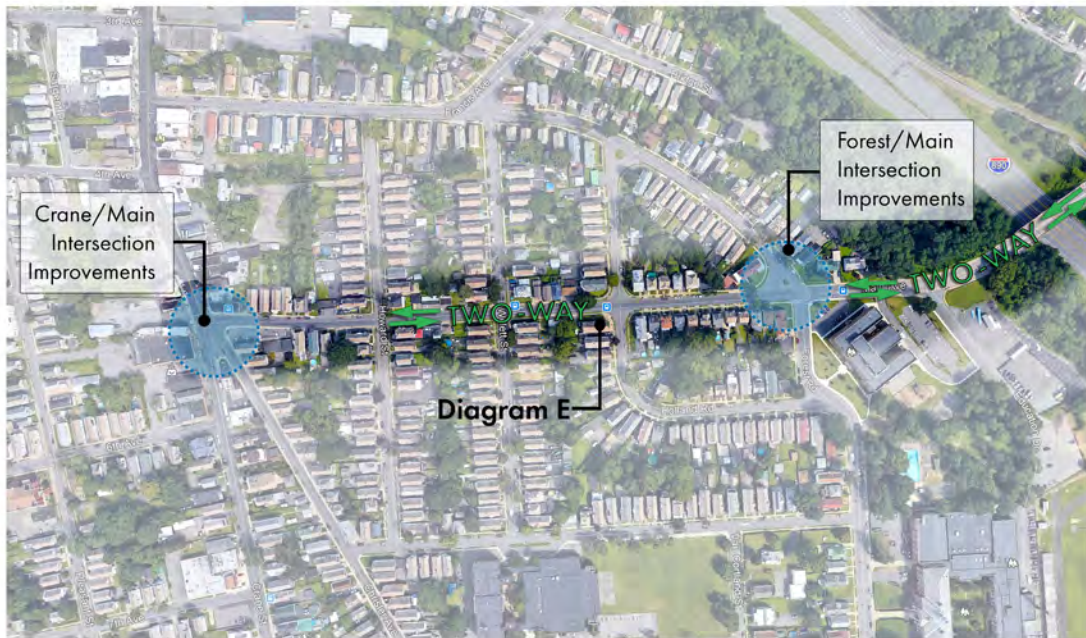
The Craig Main Connection explored three design concepts to add bicycle accommodations on Main Avenue from Crane Street to the I-890 Bridge. Due to the narrow width on Main Avenue, the three concepts included one-way traffic patterns to reduce the overall space needed for vehicles and provide the needed pavement width for a separated bicycle facility. The circulation concepts identified for further study as part of the Craig Main Connection are summarized in further detail below (Note the images shown are from the Craig-Main Connection Study where more detail can be found).

Improve Main Avenue Existing Conditions: This option maintains the existing two-way vehicular traffic pattern on Main Avenue and does not include a dedicated bicycle facility. Under this concept, multi-modal operations would remain largely unchanged.

OPTION 3 - DIAGRAM E: MAIN AVE PEDESTRIAN IMPROVEMENTS



CONCEPT IMAGE BUMPS OUTS



Pro's

- + Two-way traffic to remain
- + Implement street trees where possible
- + Improved sidewalks
- + Main Ave to maintain on-street parking
- + Intersection Improvements

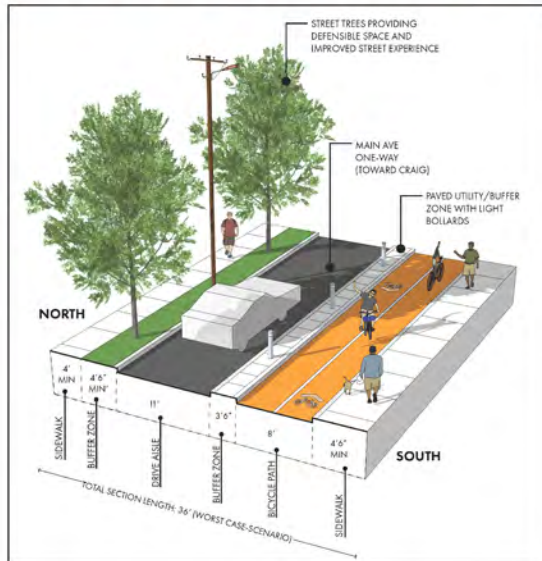
Trade Offs

- No direct bicycle connection
- Few opportunities for street trees
- On-street parking lane very narrow

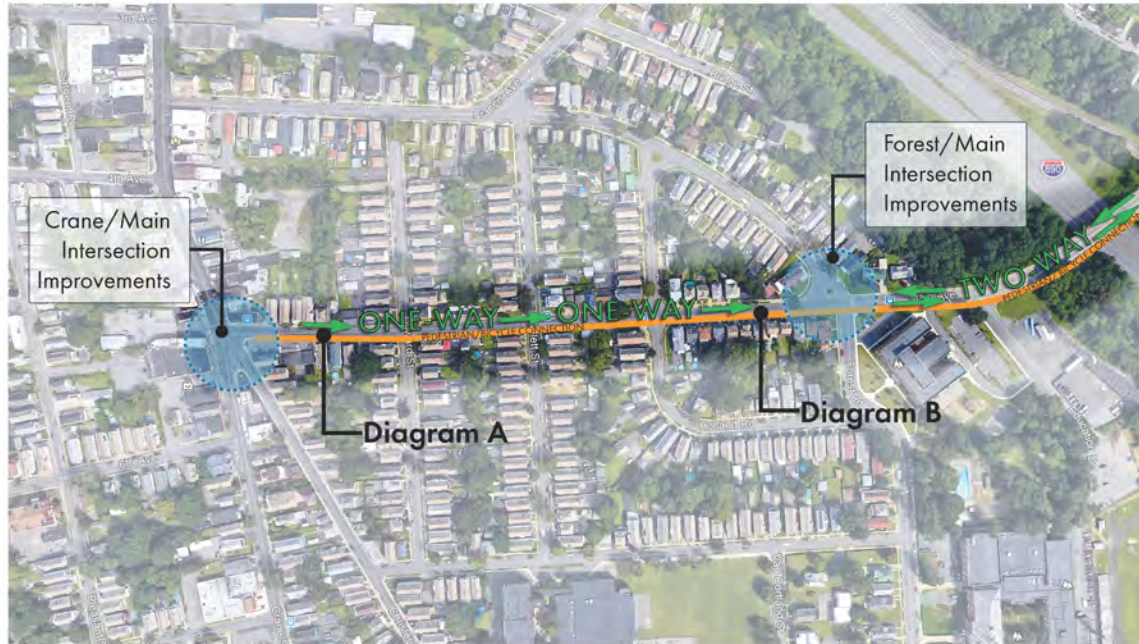
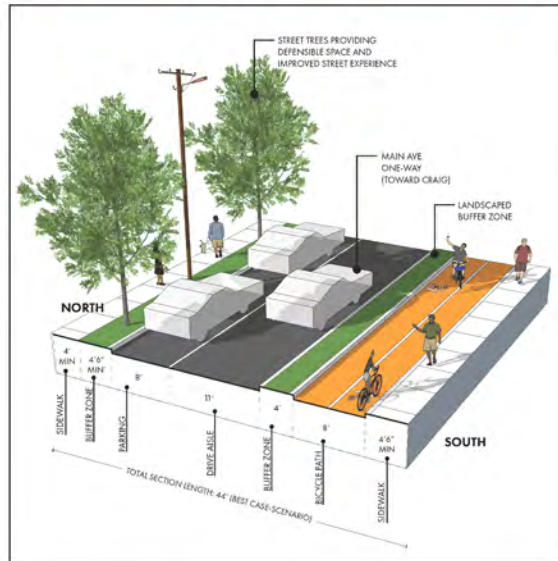
Figure 3.14: Main Avenue Improve Existing Conditions Concept as presented in the Craig-Main Connection Complete Streets Study.

Main Ave One-Way: This concept would convert Main Avenue to one-way vehicular traffic eastbound from Crane Street to Forest Road and maintain parking on the segment from Holland Road to Forest Road. Space gained by removing the westbound vehicle lane would be used for a two-way separated bicycle lane on the south side of the roadway.

OPTION 1 - DIAGRAM A:
MAIN AVE ONE - WAY 36' BLOCK (Crane-Holland)



OPTION 1 - DIAGRAM B:
MAIN AVE ONE - WAY 44' BLOCK (Holland-Forest)



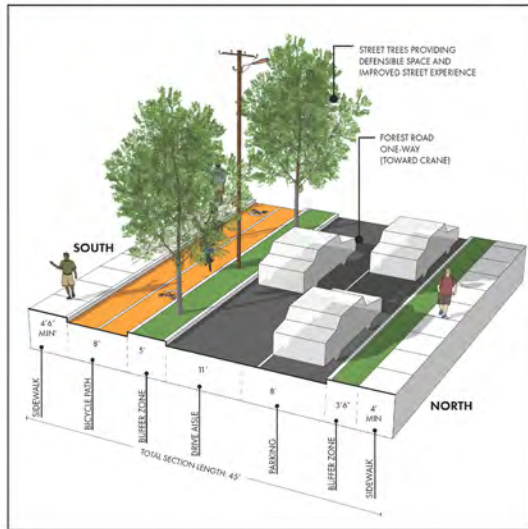
- Pro's**
- + Connects Albany Street neighborhood commercial district to Crane Street neighborhood district
 - + Intersection improvements on Forest/Main
 - + Direct continued bike/ped connection along corridor
 - + Most houses along Main Ave front on side streets (Limited driveway transitions)

- Trade Offs**
- Main Ave becomes one-way
 - Main Ave loses on-street parking from Crane Ave to Holland Rd
 - Possible increase in traffic to adjacent roads

Figure 3.15: Main Avenue One-Way Concept as presented in the Craig-Main Connection Complete Streets Study

Main Avenue & Forest Road One-Way Pair: This concept would convert Main Avenue to one-way eastbound vehicular traffic from Crane Street to Forest Road and maintain the existing parking and sidewalk. Likewise, under this option Francis Avenue/Forest Road would be converted to one-way westbound vehicular traffic from Main Avenue to Crane Street with parking maintained on one side of the roadway. Space gained on Francis Avenue/Forest Road would be used for a two-way separated bicycle lane on the north side of Forest Road/Francis Avenue.

**OPTION 2 - DIAGRAM C:
FOREST AVE ONE-WAY WITH CONNECTION**



**OPTION 2 - DIAGRAM D:
MAIN AVE ONE-WAY WITH PEDESTRIAN SIDEWALK**



Pro's

- + Connects Albany Street neighborhood commercial district to Crane Street neighborhood district
- + Forest Road width allows more flexibility
- + Intersection improvements on Francis/Forest and Forest/Main
- + Main Ave to maintain on-street parking

Trade Offs

- Forest Road and Main Ave become one-way
- Forest Road limited to one side of on-street parking
- Bike/ped connection not along direct corridor
- More houses front along Forest Road (More driveway transitions)
- Possible increase in traffic to adjacent roads

Figure 3.16: Main Avenue & Forest Road Once-Way Concept as presented in the Craig-Main Connection Complete Streets Study

TRAFFIC ASSESSMENT

Vehicular traffic diversions were estimated for each of the above circulation changes based on existing travel patterns derived from the intersection turning movement counts. Accounting for these diversions, intersection level of service was evaluated at each of the study area intersections to assess potential impacts of the one-way conversions. Table 9 summarizes the results of the level of service analysis and indicates that intersection vehicle delay under each of the one-way design concepts will generally be similar to existing conditions.

TABLE 9 – 2022 LEVEL OF SERVICE SUMMARY

Intersection	Control	AM Peak			PM Peak		
		Existing	Main Ave One-Way	One-Way Pair	Existing	Main Ave One-Way	One-Way Pair
Crane St/Francis Ave	S						
Francis Ave WB LR		A (9.4)	B (11.0)	B (11.0)	A (9.9)	B (11.7)	B (11.7)
Crane St NB TR		B (11.7)	B (11.7)	--	B (12.6)	B (12.6)	--
[T]		--	--	B (10.6)	--	--	B (11.0)
Crane St SB LT		B (10.9)	B (10.9)	--	B (12.3)	B (12.9)	--
[T]		--	--	B (11.1)	--	--	B (12.8)
Overall		B (11.0)	B (11.2)	B (10.9)	B (12.0)	B (12.5)	B (11.9)
Francis Ave/Forest Rd/Hulett St/Willett St	U						
Francis Ave EB LTR		A (8.8)	A (9.1)	--	A (8.5)	A (8.7)	--
Forest Rd WB LTR		A (7.7)	A (8.9)	A (8.8)	A (7.7)	A (8.8)	A (8.8)
Willett St NB LTR		A (7.8)	A (8.4)	--	A (7.7)	A (8.1)	--
[LT]		--	--	A (8.5)	--	--	A (8.3)
Hulett St SB LTR		A (8.4)	A (8.9)	--	A (7.8)	A (8.2)	--
[TR]		--	--	A (8.3)	--	--	A (7.9)
Overall		A (8.3)	A (8.9)	A (8.5)	A (8.0)	A (8.6)	A (8.4)
Main Ave/Crane St/Chrisler Ave	S						
Main Ave WB LLR		B (16.1)	--	--	B (16.7)	--	--
Crane St NB TRR		B (13.2)	A (8.7)	A (9.0)	B (11.9)	A (8.0)	A (9.6)
Crane St SB LLT		A (3.6)	A (0.1)	A (0.1)	A (3.7)	A (0.1)	A (0.2)
Chrisler Ave NWB LTR		B (11.0)	A (6.2)	A (6.2)	B (12.6)	A (6.4)	A (6.4)
Overall		A (9.4)	A (3.8)	A (3.6)	A (9.1)	A (3.8)	A (3.7)
Main Ave/Forest Rd	U						
Main Ave EB LTR		A (8.6)	A (8.2)	--	A (8.0)	A (8.0)	--
[TR]		--	--	A (8.7)	--	--	A (8.0)
Main Ave WB LTR		A (9.1)	A (8.4)	--	A (8.6)	A (8.0)	--
[LR]		--	--	A (8.5)	--	--	A (8.0)
Forest Rd NB LTR		A (8.6)	A (8.5)	--	A (8.3)	A (7.9)	--
[TR]		--	--	A (8.4)	--	--	A (7.9)
Forest Rd SB LTR		A (8.7)	A (8.5)	--	A (8.0)	A (7.9)	--
Overall		A (8.8)	A (8.4)	A (8.5)	A (8.3)	A (8.0)	A (8.0)

S, U = Traffic Signal or Unsignalized controlled intersection

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

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

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

NA = Not Available

Although the intersection level of service indicates little to no change in intersection delay, additional travel time may result from out of direction travel delay under the proposed one-way alternatives. Table 10 summarizes additional measures of effectiveness and shows that the two one-way concepts will result in minimal increases to peak hour travel time, distance, and fuel consumption.

TABLE 10 – ONE-WAY MEASURES OF EFFECTIVENESS

Measure of Effectiveness	AM Peak			PM Peak		
	Existing	Main Ave One-Way	One-Way Pair	Existing	Main Ave One-Way	One-Way Pair
Travel Time (hrs)	15	16	16	17	19	18
Distance Traveled (mi)	252	286	283	297	339	325
Fuel Used (gal)	20	22	21	24	26	25

BICYCLE AND PEDESTRIAN ASSESSMENT

A key goal of this study is to improve bicycle and pedestrian comfort in the Mt. Pleasant neighborhood by extending the Craig Street bicycle facility west to connect to Crane Street, either via Main Avenue or Forest Road/Francis Avenue. Table 11 summarizes the LTS assessment for the three proposed alternatives and indicates that providing a dedicated bicycle facility on Main Avenue or Forest Road/Francis Avenue will result in LTS 1 on that facility. It is noted that converting Main Avenue to one-way without providing a bicycle facility, as proposed under option 3, will result in an increase in level of traffic stress from LTS 2 to LTS 3 due to additional traffic volumes and cyclist exposure.

TABLE 11: ALTERNATIVE LTS ASSESSMENT

Road	Segment	Existing	Main Ave One-Way	One-Way Pair
Crane Street	Broadway to Van Velsen St	LTS 3	LTS 3	LTS 3
Chrisler Avenue	Crane St to Norwood Ave	LTS 2	LTS 2	LTS 2
Main Avenue	Crane St/Chrisler Ave to Forest Rd	LTS 2	LTS 1	LTS 3
Francis Avenue	Crane St to Forest Rd	LTS 2	LTS 2	LTS 1
Forest Road	Francis Ave to Main Ave	LTS 2	LTS 2	LTS 1
Albany Street	Veeder Ave to Brandywine Ave	LTS 3	LTS 3	LTS 3

In addition to changes in LTS, each of the concepts has the potential to affect bicycle travel distance. Specifically, the One-Way Pair concept would increase the overall travel distance for cyclists traveling westbound on Main Avenue by approximately 0.25 miles, assuming these trips utilize the proposed bicycle facility. Conversely, cyclists traveling eastbound could experience the same additional travel distance, or forgo using the proposed facility and continue riding eastbound in mixed traffic.

TRANSIT ASSESSMENT

The proposed one-way concepts have the potential to impact CDTA service on the #353, which currently serves the Main Avenue corridor. Specifically, by converting Main Avenue to one-way eastbound, westbound buses would be required to deviate onto Francis Avenue/Forest Road, thus experiencing longer travel times. Under this option, CDTA may wish to also move eastbound buses to Francis Avenue/Forest Road in order to maintain stop pairs, although this would come at an additional travel time cost. Table 12 summarizes the existing and anticipated peak travel time under each concept and compares it to the overall transit cycle time.

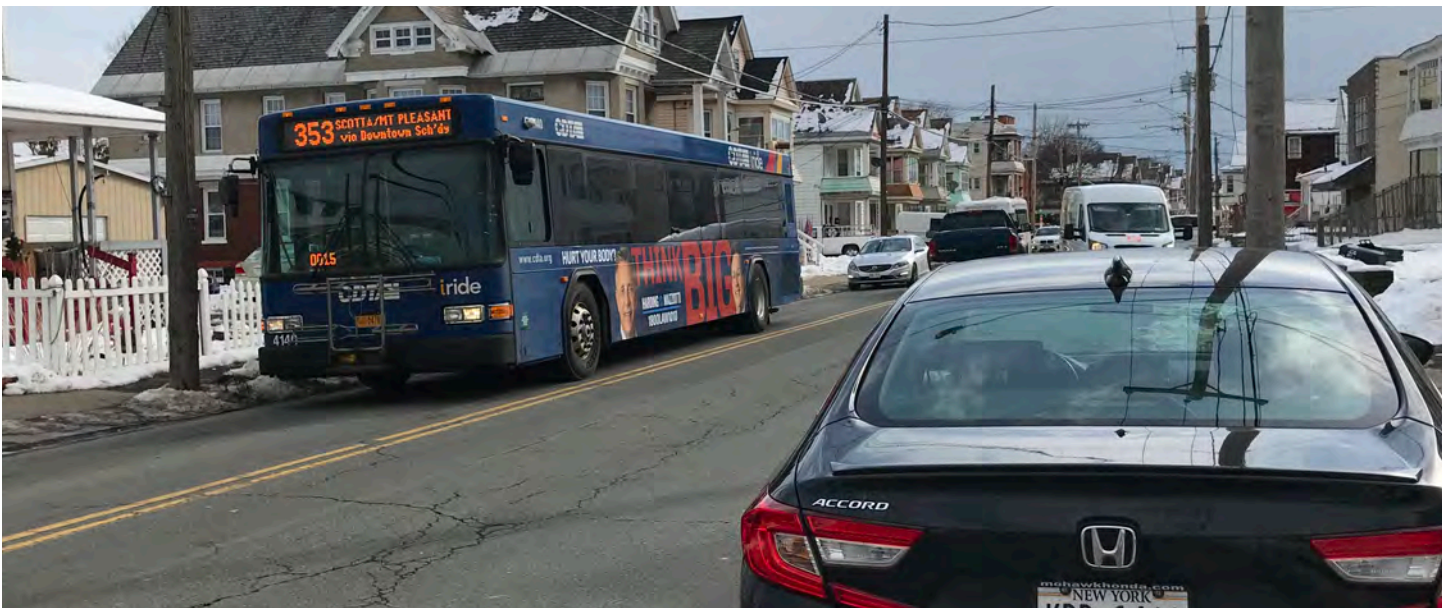
TABLE 12: ROUTE 353 TRANSIT RUN TIME ASSESSMENT

Concept	Run Time (min)			Total Cycle Length (min)	Recovery Time (min)	Recovery %
	Eastbound	Westbound	Overall			
Existing	35	36	71	80	9	13%
Main Ave One-Way	37	38	75	80	5	7%
One-Way Pair	35	38	73	80	7	10%

The table indicates that during peak operation, CDTA allots the existing #353 route 71 minutes of travel time and 9 minutes of recovery to operate on an overall 80 minute cycle length which requires four buses to maintain the existing 20 minute headways. Under the one-way concepts the #353 run time is expected to increase by two to four minutes, resulting in an equal decrease in recovery time.

The transit industry standard for recovery time is to provide approximately 15% of the run time as recovery in order to avoid subsequent trips from starting late and creating delays that can cascade throughout the day. As indicated above, the existing #353 currently operates just below the industry standard threshold. Under the proposed one-way concepts, the recovery time drops further below that threshold, which would likely increase in service delays. As such, in order to maintain service reliability, the cycle length under the one-way concepts would likely need to be increased to 90 minutes, subject to discussions with CDTA. In order to maintain the existing 20 minute headway under this scenario, an additional bus would be required for daily operation. In contrast, maintaining the existing four buses in service, the 90 minute cycle would require a reduction in frequency to a 25 minute headway.

Based on the above assessment, CDTA should be consulted to discuss the concept analysis, potential reductions in transit recovery time or frequency, or increased resources needed to maintain the existing frequency on the #353.



Public transit serves as the primary means of transportation for many residents in the study area.

SUMMARY

Table 13 below summarizes the results of the multi-modal assessment for the proposed one-way concepts and illustrates the benefits and drawbacks of each option.

TABLE 13: CONCEPT ASSESSMENT SUMMARY

Concept		Existing	Main One-Way	One-Way Pair
Vehicle	Pros	No Change in vehicle delay or travel time.	Negligible change in vehicle delay.	Negligible change in vehicle delay.
	Cons	No negative impacts to vehicles.	Increased trip length.	Increased trip length.
Bicycle & Pedestrian	Pros	Minimal improvement to pedestrian comfort from streetscape improvements.	Increased bicycle and pedestrian comfort on Main Avenue.	Increased bicycle and pedestrian comfort on Forest Road/Francis Avenue.
	Cons	No benefit to bicyclists.	None.	Decreased comfort on Main Avenue and increased travel length for cyclists using the bicycle facility on Forest Road/Francis Avenue.
Transit	Pros	No changes to Route #353 alignment, frequency, or cost.	None.	None.
	Cons	None.	Possible additional cost, reduced recovery, or reduction in frequency	Possible additional cost, reduced recovery, or reduction in frequency.



Other than parking areas for CDPHP cycle rentals, as seen here on Crane Street, there is no public bicycle parking on either Crane Street or Albany Street.