



VILLAGE OF WATERLOO

Circulation, Accessibility, and Parking Study

VILLAGE OF WATERLOO CIRCULATION, ACCESSIBILITY AND PARKING STUDY

December 2021

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This report was prepared by LaBella Associates in coordination with the Village and GTC.



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EXECUTIVE SUMMARY

The historic Village of Waterloo, an Erie Canal community, has served as the primary county seat for Seneca County since 1819. The Village is most noted as being the birthplace of Memorial Day, when in 1866 Henry C. Welles and General John B. Murray led a formal remembrance of all veterans who died in war. The Village has also witnessed and/or played a major role in other notable historical events including its connection to the founding of the Mormon religion and the planning for the first Women's Rights Convention in 1848.

However, like every other community in Upstate New York, Waterloo has been affected by the changes in transportation patterns over the last century. The Erie Canal, which played a prominent role in the development of the community, is no longer a primary means of transportation. Local roads like Main Street, Virginia Street and Washington Street have become State highways. Each of these changes has in turn altered traffic patterns for vehicles, pedestrians, and bicyclists in Waterloo.

Similarly, development patterns near the Canal have changed. In the past canal-dependent industries, primarily in manufacturing or distribution, lined the canal waterfront. When those buildings were demolished, properties turned into vacant, underutilized properties or parking, leaving significant gaps between the downtown core and the canal.

This study's scope is to address the negative impacts of the past transportation modifications in Downtown Waterloo and the Canal District by providing strategies to improve circulation, access and parking for vehicles, pedestrians and bicyclists.



A Memorial Day parade on Main Street in Downtown Waterloo

PROJECT AREA

The project area for the study was the entire Village of Waterloo, which is located in Seneca County and is a gateway to the Finger Lakes. Focus areas for the study include Downtown and adjacent Canal district; Waterloo High School; and Lafayette Middle School (labeled Elementary School on map). Downtown and the Canal district are primed for revitalization, and would benefit from complementary transportation improvements for all users. The schools have gaps in the pedestrian and bicycle network that will be addressed by the study.



ISSUES AND OPPORTUNITIES

The primary issues and opportunities for the focus areas include:

DOWNTOWN AND THE CANAL DISTRICT

- ✓ Gaps in the bike and pedestrian network
- ✓ Unsafe pedestrian and bicycle crossing
- ✓ Interrupted pedestrian and bicycle access between Downtown and the Canal district
- ✓ Limited streetscape amenities
- ✓ Inefficient parking layouts
- ✓ Limited gateway and directional signage
- ✓ Vehicular accidents at the Main and Virginia intersection

SCHOOL ZONES

- ✓ Major gaps in the bike and pedestrian network
- ✓ Existing sidewalks that are too narrow for bikes and pedestrians resulting in schoolchildren using vehicular travel lanes

PUBLIC AND STAKEHOLDER INPUT

Two open house public meetings were held for the project. An initial hybrid open house was held on February 23, 2021 including a presentation in-person that was broadcast via Zoom videoconferencing. The meeting was complemented by an online survey for participants who could not attend the open house meeting and make comments on boards

Another open house was held at the end of the project on August 30, 2021 in conjunction with the Village's DRI open house. Participants at the meeting were able to review and comment on the draft recommendations as shown on renderings.

An online survey was also launched for the project. Common comments at the open houses and via the survey included:

- Improvements to existing sidewalks and new sidewalks are needed to improve safety, fill in gaps in the network, and provide access to the Canal and Oak Island.
- Need for bump-outs at downtown corners to improve pedestrian safety when crossing. In addition, there were general comments that pedestrian crossing currently is not safe.
- Downtown lighting is not sufficient and sections of Main Street are dark.
- Lack of sidewalks at the high school are a major safety issue as students often walk in street



Participants at the last open house review the renderings of proposed improvements

PRIORITY PROJECT RECOMMENDATIONS



MAIN STREET COMPLETE STREET

Description: Convert Main Street to a complete street including corner bump-outs, enhanced bike lanes, center median, improved landscaping, and better lighting.

Estimated Cost: \$2,455,000



IMPROVE PARKING CONDITIONS

Description: Rearrange layout of off-street parking lots to increase number of spaces and provide better circulation. Also, add landscaping and pedestrian connections to Main Street

Estimated Cost: \$690,000



CANAL CORRIDOR PED-BIKE ZONE

Description: Cul-de-sac Locust and W. Water Street to create a car-free ped-bike zone along the Canal and provide ped-bike connections to Oak Island.

Estimated Cost: \$1,410,000



WASHINGTON STREET GATEWAY

Description: Increase the width of the sidewalk on the west side of Washington to provide a pathway wide enough for ped-bike connections to the Canal trail.

Estimated Cost: \$1,185,000

PRIORITY PROJECT RECOMMENDATIONS



INSLEE STREET SCHOOL ZONE IMPROVEMENTS

Description: Replacement or installation of 10 ft. sidewalks and addition of enhanced crosswalks to improve pedestrian and bicycle safety near the Lafayette Intermediate school.

Estimated Cost: \$370,000



CENTER STREET SCHOOL ZONE IMPROVEMENTS

Description: Replacement or installation of 10 ft. sidewalks and addition of enhanced crosswalks to improve pedestrian and bicycle safety near Waterloo high school.

Estimated Cost: \$318,000



VILLAGE OF WATERLOO

Circulation, Accessibility, and Parking Study

Section I: Inventory & Analysis

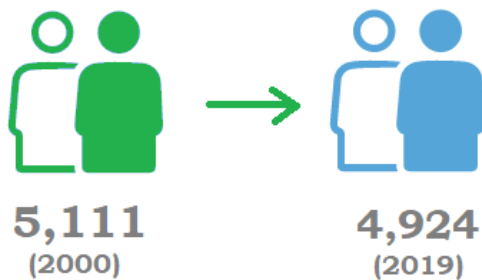
EXISTING CONDITIONS

DEMOGRAPHICS

To both understand the community and produce realistic recommendations it is imperative to understand the demographics of both Waterloo and Seneca County. A Community Profile as well as an Economic & Market Analysis was prepared as part of this project to inform the recommendation. Below are key highlights from these reports. The full Community Profile and Economic & Market Analysis are located in the Appendix.

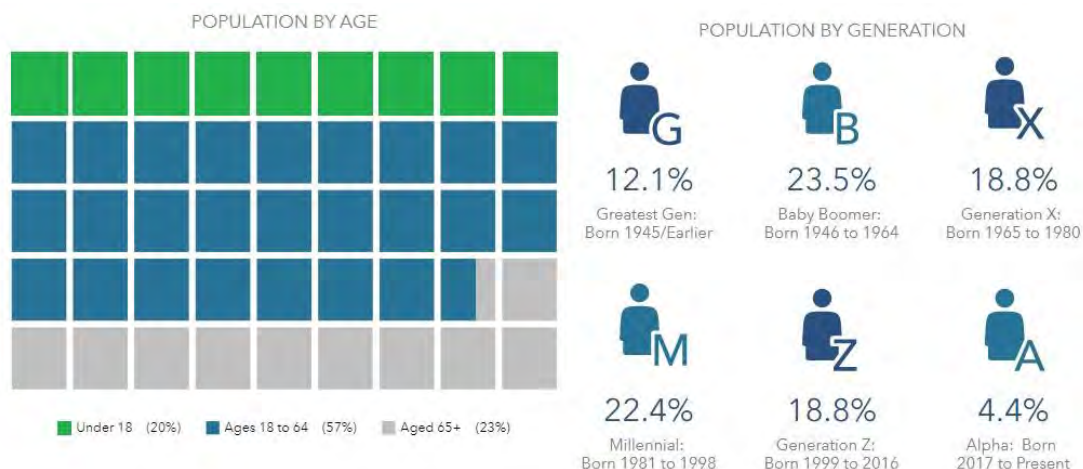
POPULATION DECLINE

Currently over 4,900 residents call the Village of Waterloo home. Over the last two decades, the population in the Village has experienced a 3.7% decline.



AGING POPULATIONS

Within the Village of Waterloo, the median age of the population has gradually increased from 39.3 years old in 2000 to 44.8 years old. There is a higher representation from both the Baby Boomer generation, at 23.5%, and the Millennial Generation, at 22.4%. National trends show that both of these age cohorts prefer walkable and bikeable communities.



SHRINKING HOUSEHOLD SIZE

The average household size in Waterloo is presently 2.34 persons per household, down from 2.39 in 2000.



2.34

Avg. Household Size

HOUSEHOLD INCOME GROWTH

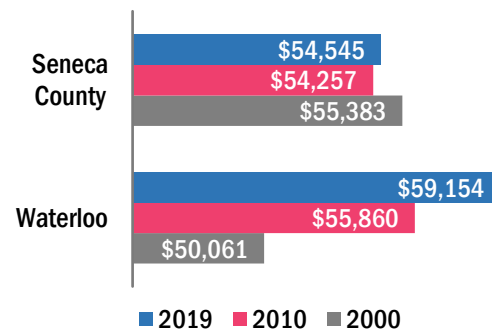
Currently the median household income in Waterloo is \$59,154. The growth in median household income throughout Waterloo has outpaced Seneca County. In 2000, the adjusted median income in Waterloo was roughly \$5,000 lower than Seneca County as a whole; now the opposite trend can be found.



\$59,154

Household Income

Adjusted for Inflation - 2019



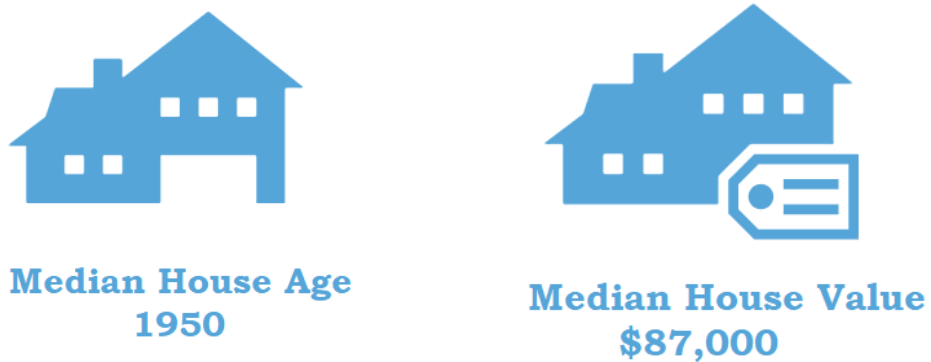
EMPLOYMENT

There are approximately 2,448 jobs located within the Village of Waterloo out of more than 15,280 jobs in Seneca County. Manufacturing, Health Care & Social Assistance, and Retail are the largest employers by sector, with over 50% of jobs being white collar.



HOUSING

Nearly three quarters of housing was built prior to 1960 in Waterloo. There is a 3:1 ratio of owner occupied to rental housing in Waterloo, and the median housing value of owner occupied housing in Waterloo is \$87,000.



COMMUTING PATTERNS

Commuting patterns provide insight into the links between the community and the greater region. Presently there is a greater migration of employees into Waterloo from the surrounding area. 1,719 people live outside of the Village but work within the Village, roughly 481 people both live and work within the Village of Waterloo, 1,894 people live within but work outside of the Village.

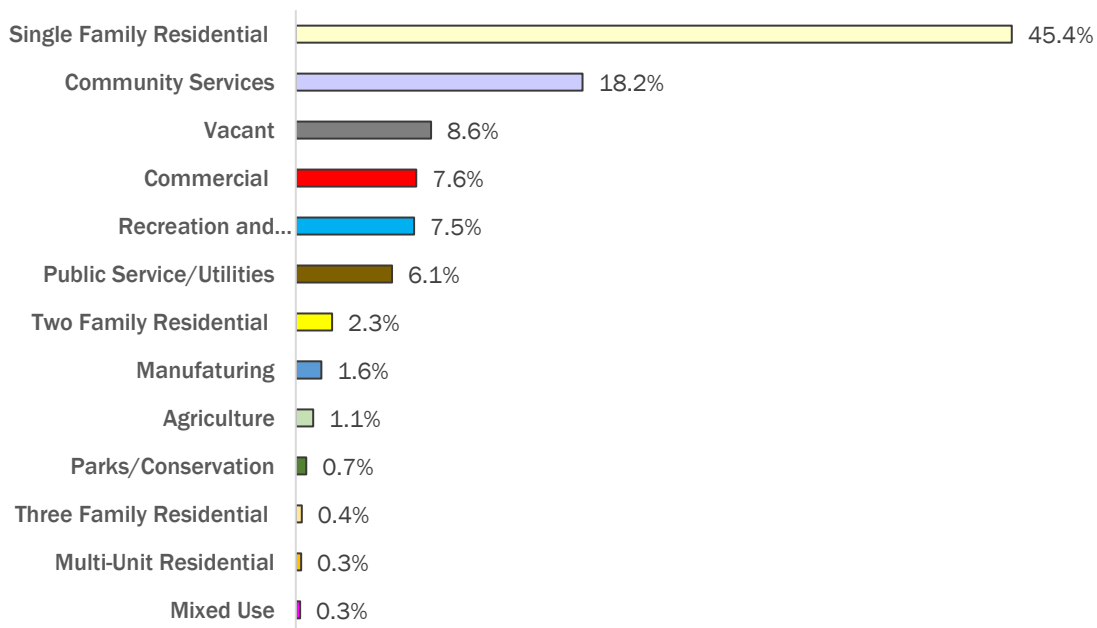


LAND USE

Figure 1 exhibits land use patterns in the Village of Waterloo. The largest percentage of land in the Village is dedicated to residential use (48.7%), followed by Community Services (18.2%) and Commercial uses (7.6%). Approximately 8.6% of the Village land is classified as vacant.

Community Services comprises the second largest amount of land use within the Village. There are several clusters of commercial uses throughout Waterloo including around the area of Rt. 5 and Rt. 96; areas surrounding the Canal; and the southern portion of the Village. Additionally Recreation and Entertainment comprise a large part of the land use, with clusters near the Canal and RT. 96 (North Rd.). Safe routes to areas with Commercial, Community Services, and Recreation should be a priority for the Village.

Land Use in the Village of Waterloo



Source: Real Property data provided by Seneca County Planning Department.

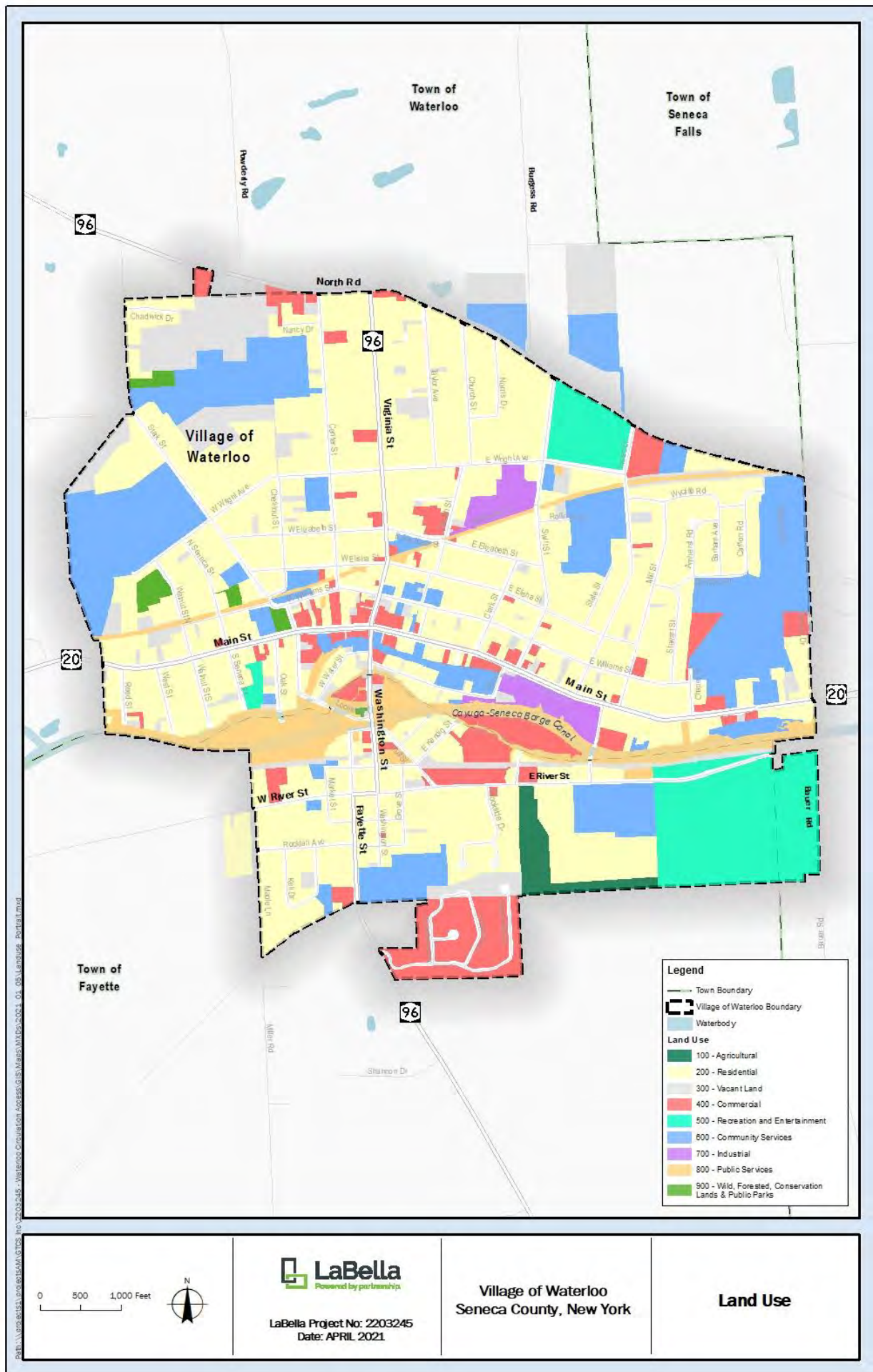


Figure 1. Land Use

EXISTING ZONING

There are currently nine distinct zoning districts within the Village of Waterloo. These districts range in intensity from low density residential to heavy industrial use.

The following defines the goals for each respective zoning district in Figure 2:

One Family Residential (R-1) As of right, this district allows one family, low-density structures in order to preserve the present character of the district.

Two Family Residential (R-2) As of right, this district allows one and two family structures in the district.

Multi-Family Low Density Residential (R-3), as of right, this district provides a variety of dwelling types, including multi-unit dwellings and townhouses, with a low to moderate population density.

Multi-Family High Density Residential (R-4) as of right, this district provides a broad variety of dwelling types, and encourages development and increased population density.

Service District (SD) provides neighborhood services mixed with or adjacent to residential areas

General Business District (GB) is an area of high concentrations or strips of intense commercial activity. The district is found along the major traffic routes within the Village.

Central Business District (CB) is the Village's core. This district provides for intense service and commercial land uses in a dense area. The CB District also serves as a cultural and historical point for the community. The land use and density of the CB District encourages pedestrian-related activities.

Light Industrial (LI) The intent of the Light Industrial District is to retain and attract industry within the Village that does not consist of intense industrial activity. The LI District encourages clean or soft industries, which will not disrupt the adjacent areas within the Village.

Heavy Industrial (HI) The intent of the Heavy Industrial District is to accommodate intensive manufacturing and industry, including additional truck traffic. Performance standards and criteria are required to provide attractive and compatible uses with areas surrounding the district.

COMMUNITY RESOURCES

Because of Waterloo's location along the Canal, and designation as the primary County seat, there are a number of civic, cultural, recreational, and historic sites found within its borders. These spaces not only provide services but also contribute to the physical and mental well-being of Waterloos residents and make the community more attractive to live and work within.

The majority of the civil and cultural facilities are located in or near the downtown core while schools and a number of the recreational facilities are further out from the downtown due to their nature. Combined, parks, recreational land, and the water areas account for nearly 11% of the Village area.

Much of the historic fabric is still intact throughout Waterloo, with the downtown designated on the National Register as a historic district and numerous buildings individually listed.



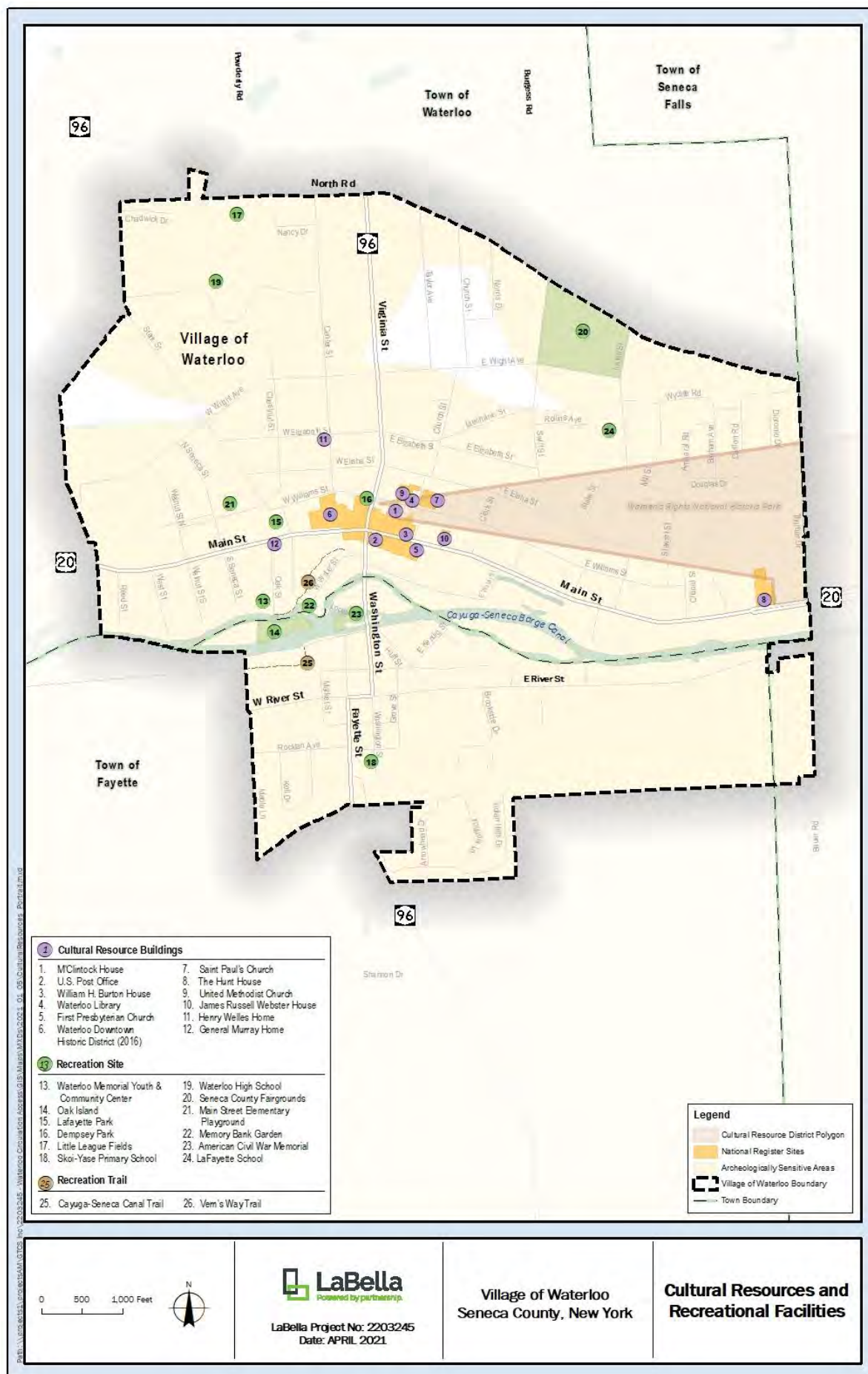


Figure 3. Community Resources

EXISTING TRANSPORTATION SYSTEMS ANALYSIS

EXISTING TRANSPORTATION SYSTEMS

Waterloo is served by an extensive vehicular transportation system. Routes 5, 20, and 96 all pass through the Downtown and Route 414 lies directly adjacent to it. These routes traverse NYS and/or link into the major routes of the NYS Thruway (I-90) and Southern Tier Expressway (I-86/NY 17).

According to the New York State Department of Transportation Urban Functional Classification System, Route 5 and 20 is a principal arterial. State Routes 96 and 414, as well as County Roads 122 and 117, are minor arterials. Locust Street; Swift between North Road and Main Street; Stark Street between West Wright Ave and West Williams; and Wright from Stark to Swift Street are all classified as major collector streets.

Annual Average Daily Traffic (AADT) counts for the State Routes and major roadways vary with the highest average daily traffic count of 9,887 on East Main Street (Route 5 and 20). West Main Street has an AADT count of 9,596 and Washington Street (Route 96) has an AADT count of 6,727. Figure 4 shows how traffic count volumes are distributed within the Village, and Table 1 provides characteristics of each roadway segment.

There are additional transportation systems available in the Downtown including public transportation service provided by Regional Transit Service (RTS) during weekdays. These public transit connections are a vital service to the County's lower income, senior, and/or disabled residents who may not have access to automobiles or have other mobility issues.

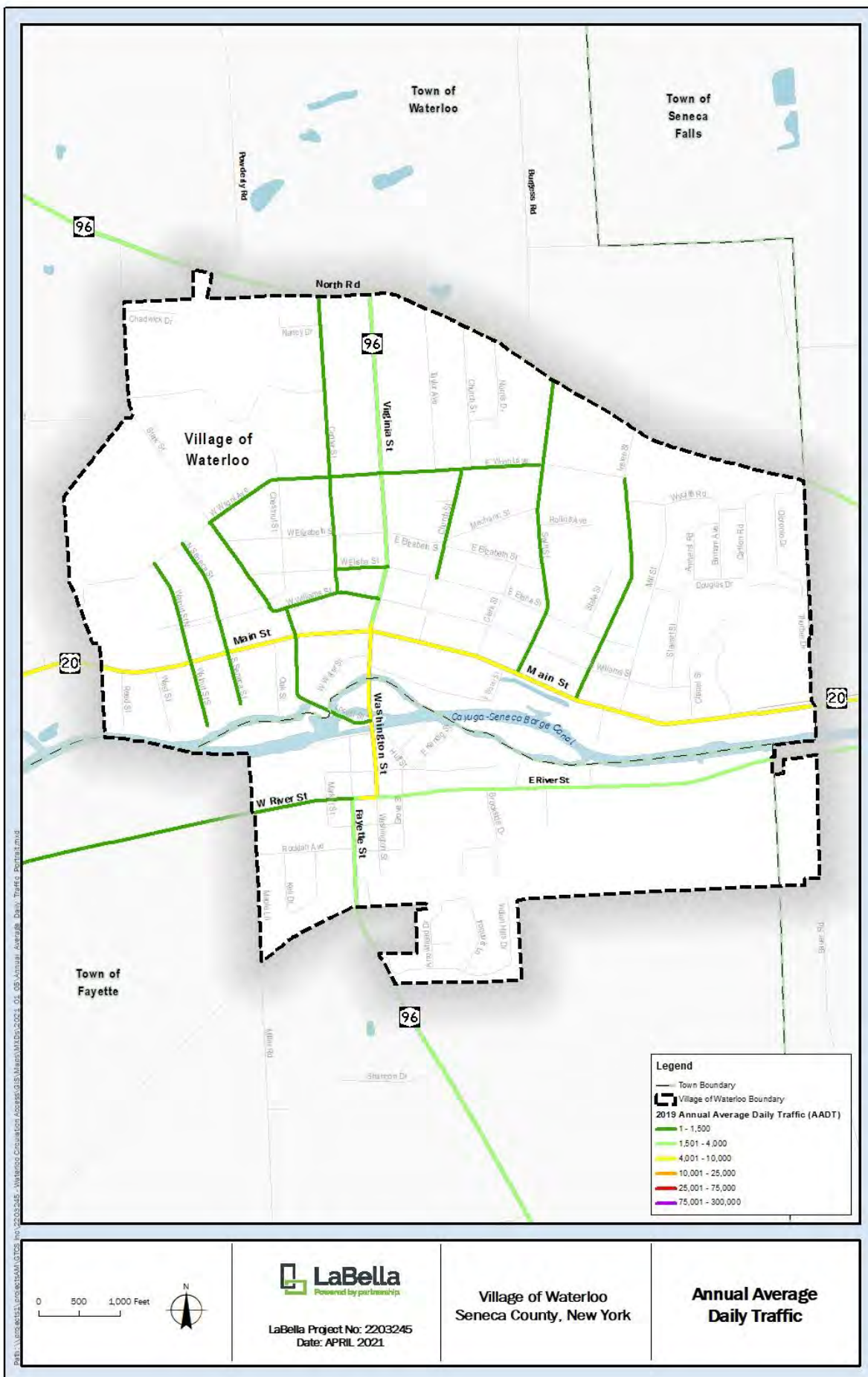


Figure 4. Annual Average Daily Traffic

VILLAGE OF WATERLOO CIRCULATION, ACCESS & PARKING STUDY

Table 1. Summary of Roadway Traffic Characteristics

Roadway	Segment	Functional Class	Jurisdiction	Speed Limit	Number of Travel Lanes	Average Daily Traffic (Year)	% of Truck Traffic Volume	ROW Width	Dedicated Bicycle Facilities	Pavement Width (approx.)
West Main St (NY 5 & US 20)	Locust St to Virginia St	Urban Principal Arterial - Other	NYSDOT	30 mph	2 (one each direction)	9,599 (2017)	5%	99 ft.	Yes (bike lanes)	64 ft.
East Main St (NY 5 & US 20)	Virginia St to Inslee St	Urban Principal Arterial - Other	NYSDOT	30 mph	2 (one each direction)	9,889 (2018)	7%	99 ft.	Yes (bike lanes)	64 ft.
North Virginia St (NY 96)	Main St to North Rd	Urban Minor Arterial	NYSDOT	30 mph	2 (one each direction)	3,610 (2015)	8%	66 ft.	No	40 ft.
South Virginia St (NY 96)	Main St to River St	Urban Minor Arterial	NYSDOT	30 mph	2 (one each direction)	6,799 (2015)	7%	66 ft.	No	38 ft.
Stark St	Wright Ave to NY 96	Urban Local	Village of Waterloo	30 mph	2 (one each direction)	N/A	N/A	66 ft.	No	24 ft.
Center St	Wright Ave to NY 96	Urban Local	Village of Waterloo	30 mph	2 (one each direction)	438 (2017)	5%	66 ft.	No	22 ft.
Inslee St	East Main St to NY 96	Urban Local	Village of Waterloo	30 mph	2 (one each direction)	976 (2017)	5%	60 ft.	No	22 ft.
Locust St	West Main St to Canal	Urban Local	Village of Waterloo	30 mph	2 (one each direction)	511 (2015)	2%	66 ft.	No	20 ft.



Seneca County Regional Transit Service

Regional Transit Service (RTS) provides two bus routes that service Waterloo and the region. Bus routes 281 and 282 service pass through downtown Waterloo and make stops to grocery and retail stores; residential areas; to municipal offices, and with connections to both Geneva and Seneca Falls. Additionally, RTS service provides connections to their routes in Ontario and Wayne County.

Sidewalks are available on at least one, if not both, sides of all major streets within the Downtown. However, throughout the residential areas sidewalks are inconsistent with several gaps noted. Crosswalks are available at nearly every intersection but are absent for midblock crossings.

VEHICLE LEVEL OF SERVICE AND MOBILITY

A traffic analysis was performed at the intersection of Main Street (Route 5 and 20) and Virginia Street (Route 96) in Downtown Waterloo to determine how well the intersection operates with regard to traffic and if any improvements are warranted. Traffic counts were taken on April 15, 2021 during the afternoon peak-commuter period, and the peak hour of traffic was determined to be 4:00 to 5:00 PM. The peak hour traffic volumes are depicted below.

A Level of Service (LOS) analysis was performed (Figure 5 & Table 3) for the afternoon peak hour. LOS is a measure of traffic operation and corresponds to the average delay that a vehicle experiences while traveling through the intersection. It is reported as a letter from “A” to “F”, where LOS “A” indicates free-flowing traffic with minimal delay, and LOS “F” indicates significant delay and congestion. Generally, Level of Service “D” or better is considered acceptable traffic operation. The following table summarizes the results of the LOS analysis.

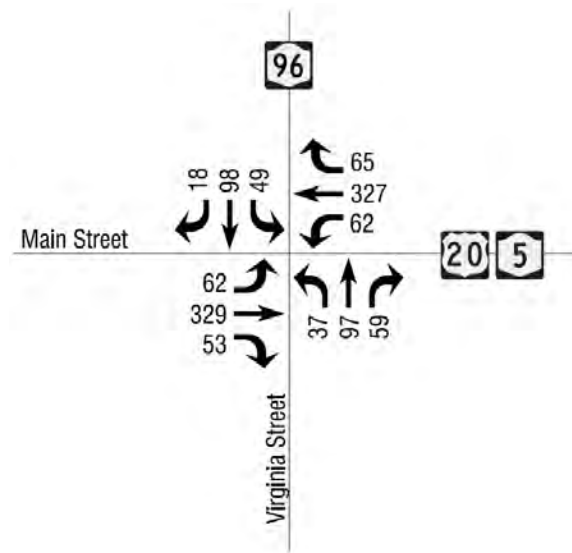


Figure 5. Turning movements at Virginia/Main Street intersection

Table 2. Vehicle Level of Service

Summary of Level of Service (LOS) and Delay			
Intersection	Approach	Movement	Existing (2021) PM Peak Hour LOS (Delay)
Main St (NY 5 & US 20) & Virginia St (NY 96)	Eastbound	Left	A (8.8)
		Thru / Right	C (20.3)
	Westbound	Left	A (9.0)
		Thru / Right	B (17.8)
	Northbound	Left / Thru	B (18.6)
		Right	B (13.5)
	Southbound	Left / Thru / Right	C (21.9)
Overall			B (18.0)

The analysis indicates that the intersection of Main Street and Virginia Street currently operates well during the afternoon peak hour, with minimal delay for traffic. Overall intersection operation was determined to be LOS “B”, with LOS “C” or better for all individual movements.

PEDESTRIAN LEVEL OF SERVICE AND MOBILITY

A qualitative assessment of Pedestrian Level of Service (LOS) was performed using a model from the Highway Capacity Manual (HCM), which is based on pedestrian flow rate (incorporating speed, density and volume) and sidewalk space. Pedestrian LOS is reported as a letter ranging from “A” to “F”, where LOS “A” indicates that pedestrians move in desired paths without altering movements in response to other pedestrians, and LOS “F” indicates severely restricted walking speeds, unavoidable contact and congestion.

General observations of pedestrian activity near the intersection of Main Street & Virginia Street were performed during the afternoon and early evening on April 15, 2021, and the number of pedestrians observed during the peak hour was approximately 50. Considering the observations were performed during the COVID-19 pandemic, as well as during the off-season (higher pedestrian volumes would be expected during the summer months), it is assumed that peak hour pedestrian volumes could be approximately 100 per hour. The volume criteria for Pedestrian LOS “A” is less than 5 pedestrians per minute per foot, which equates to 300 pedestrians per hour. The pedestrian volumes in Downtown Waterloo are assumed to be less than this threshold, and therefore the Downtown pedestrian facilities operate at Pedestrian LOS “A”.

SIDEWALK CONDITIONS AND GAPS

- Downtown sidewalks are generally in good condition. Spot repairs are needed in some locations. Concrete with decorative brick/paver band present in most areas.
- Sidewalk widths along Main Street seem appropriate. Virginia Street sidewalks are generally narrower with more obstructions.
- Obstructions within the sidewalk area are present at many locations – stairs/landings protruding from buildings, signposts, guy wires, hydrants, hedges along Post Office on S. Virginia Street.
- Sidewalk ramps appear generally compliant with current standards, but most are not directional (separate ramps for each direction of travel). Detectable warning surfaces present, but some need spot repairs.
- Narrow sidewalks along Route 96 and on bridges south of Main Street.
- Inconsistent snow clearing / salting / maintenance was noted in downtown area.
- Outside of downtown, sidewalks are generally in fair to poor condition with gaps and inconsistent maintenance present.

- Schools – sidewalks on school properties end at the adjacent streets; pedestrian routes to schools need to be established or improved. No sidewalks on Inslee Street (Lafayette School). No sidewalks on Stark Street (Middle/High School). Sidewalk present only on east side of Center Street, south of middle school; no sidewalks on Center Street north of school.

PEDESTRIAN CROSSINGS

- Railroad crossings – many local streets cross the railroad, sometimes at awkward intersections (ex. Church Street & Elizabeth Street, Stark Street / William Street & Chestnut Street). Pedestrian crossings could be added where missing, or improved & better delineated.
- Fairgrounds – no pedestrian facilities present on surrounding streets (Wright Ave, Inslee St, North Rd, Swift St.
- Despite having many nice amenities, the downtown core feels very car-centric and could use improvements to enhance the pedestrian scale. Examples – large signs & signposts within sidewalk areas, lighting is decorative but not pedestrian-scale, wayfinding signs present for drivers but not pedestrians.

Pedestrian crossings on 5 & 20 and Route 96 would benefit from bump-outs to reduce crossing distance. There appears to be room to do this at most locations and would result in recessed parking lanes.

BICYCLE LEVEL OF SERVICE AND MOBILITY

The Bicycle Compatibility Index (BCI) model was used to evaluate the existing street network within Downtown Waterloo with regard to bicycle mobility and safety (Table 4). The BCI model assesses the “bicycle friendliness” of a roadway and considers characteristics such as curb lane width, traffic volumes, vehicle speeds, and presence of trucks. Results of the BCI model calculations (Table 5 and Figure 6) correspond to Level of Service (LOS), which range from “A” to “F” where LOS “A” indicates very favorable conditions for bicycle mobility and LOS “F” indicates very unfavorable conditions for bicyclists.

Table 3. Bicycle Level of Service Compatibility Levels

Bicycle Compatibility Index (BCI) and LOS		
Level of Service (LOS)	BCI Range	Compatibility Level
A	< 1.50	Extremely High
B	1.51 - 2.30	Very High
C	2.31 - 3.40	Moderately High
D	3.41 - 4.40	Moderately Low
E	4.41 - 5.30	Very Low
F	> 5.30	Extremely Low

Table 4. Village of Waterloo Bicycle Compatibility and Level of Service

Village of Waterloo Bicycle Compatibility (BCI) and Level of Service (LOS)				
Roadway	Segment	Bicycle Compatibility Index (BCI)	Level of Service (LOS)	Bicycle Compatibility
W. Main Street	Locust Street to Virginia Street	3.28	C	Moderately High
E. Main Street	Virginia Street to Clark Street	3.3	C	Moderately High
N. Virginia Street	Main Street to Williams Street	4.67	E	Very Low
N. Virginia Street	Williams Street to North Road	3.57	D	Moderately Low
S. Virginia Street	Main Street to Water Street	4.54	E	Very Low
S. Virginia Street	Water Street to Huff Street	1.91	B	Very High

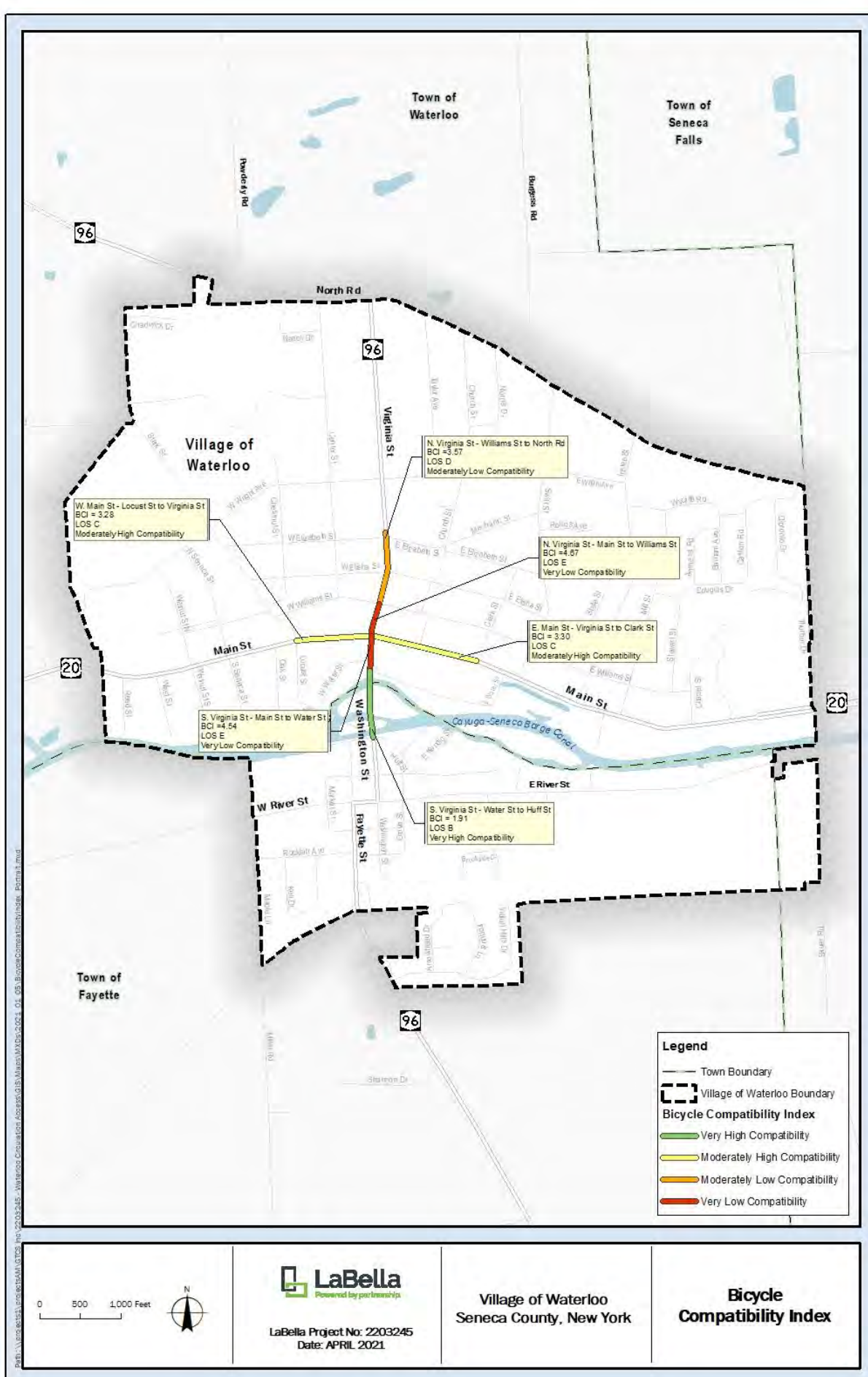


Figure 6. Bicycle Compatibility Index

PARKING SUPPLY AND DEMAND

To determine the need for parking in Downtown Waterloo, an analysis of parking supply and demand figures were compared. Supply was calculated by simply adding up the existing parking spaces in surface lots and on-street parking.

To determine demand an initial information gathering of the amount of available space for each property within the business district (East and West Main Street and North Virginia Street) was conducted. Assumptions were made regarding potential uses. Retail, office or restaurant uses assumed for the ground floor while upper stories were considered apartment space. This area figure was then multiplied by a “Parking Generation Rate” for each property to determine the number of parking spaces required.

A Parking Generation Rate is defined as the number of parking spaces required for each 1,000 square feet of space. These rates are “downtown” generation rates, which differ from non-downtown rates as downtown property owners’ share public parking and those utilizing the parking spaces, tend to make multi-purpose errands once parked.

PARKING SUPPLY

Public parking facilities within the Village of Waterloo include on-street spaces along Main Street and Virginia Street, as well as three (3) municipal off-street parking lots (Figure 7). Within the downtown area, most on-street parking spaces are striped and are limited to 2 hour parking between 9AM and 6PM. Outside of downtown, parking lanes or shoulders are present and no restrictions are posted. Observations during the afternoon and evening hours indicate approximately 25% to 50% parking utilization in the downtown area, with the highest utilization observed on East Main Street (Virginia Street to Church Street) and North Virginia Street (Main Street to Williams Street).

The three public off-street parking lots include the following:

- Surface lot in the southwest quadrant of downtown, between W. Main Street and Water Street: approximately 71 spaces; occupancy observed to be approximately 15%.
- Surface lot at the corner of N. Virginia Street and Williams Street: approximately 24 spaces; occupancy observed to be approximately 20%.
- Surface lot in the northeast quadrant of downtown, behind the “Shop Centre”: approximately 37 spaces; occupancy observed to be approximately 60%.

Parking facilities and occupancy are depicted in the following figure. A count of the total on and off-street public parking spaces found there are currently about 200 public parking spaces in the Village. Public lot usage was found to be approximately 20% during one visit to the site.

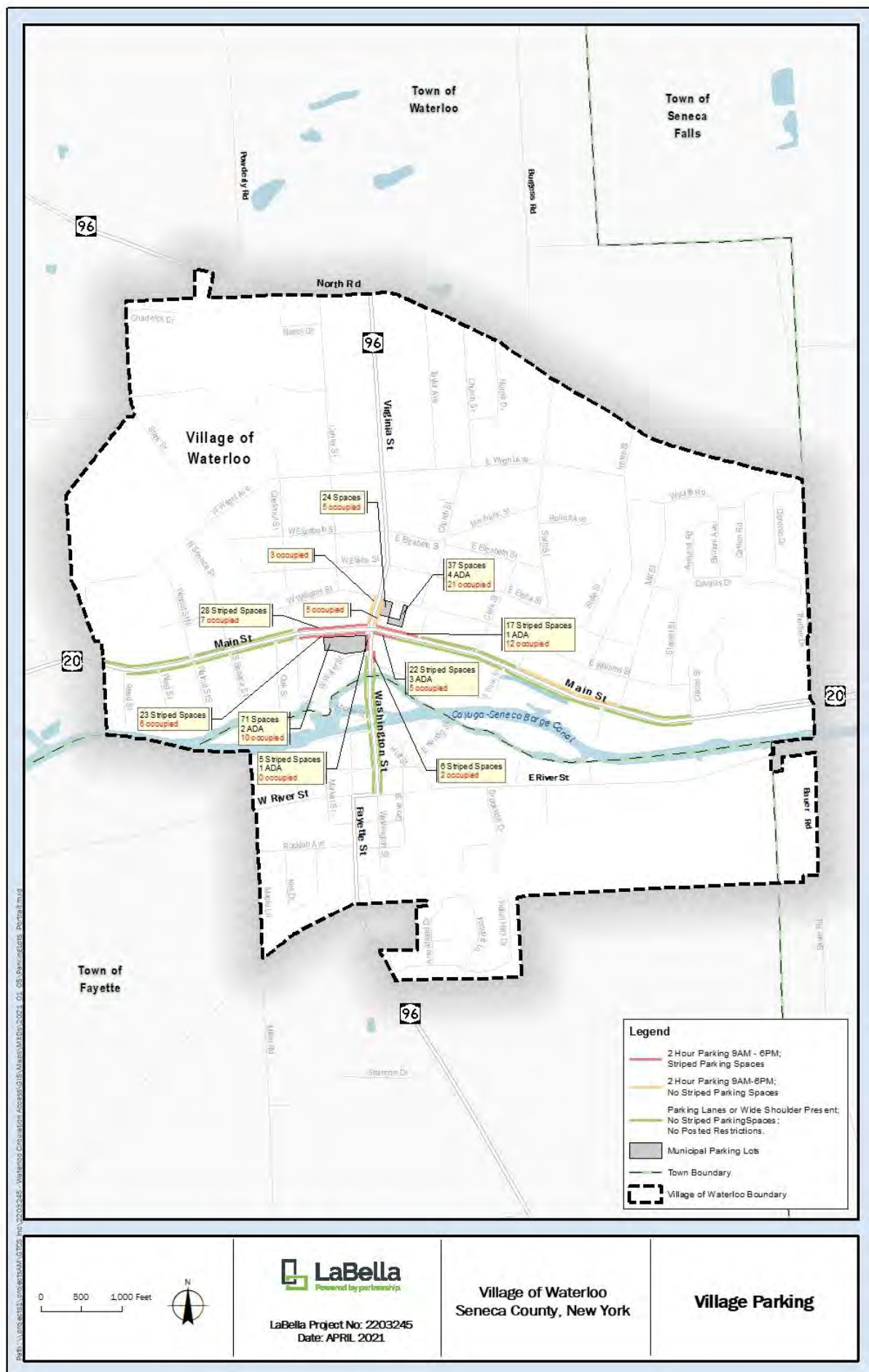


Figure 7. Parking Supply and Occupancy

PARKING DEMAND

There is approximately 110,000 square feet of potential space in the downtown core. Utilizing the downtown parking generation rates listed below; there is an estimated demand of 630 parking spaces.

Parking Generation (per 1,000 sq. ft.) rates for this analysis:

- | | |
|-----------------------|------------|
| • Office Space | 2.2 |
| • Retail Space | 2.0 |
| • Bank/Post Office | 3.0 |
| • Restaurant/Bar | 10.0 |
| • Apartment/Residence | 2 per unit |
| • Village Hall | 2.5 |

While the approximately 200 existing park spots available within the downtown area appear to be sufficient at this time, it is clear that additional spaces will be needed to meet parking needs in the future if more of the downtown space is utilized.



TRAFFIC ACCIDENTS

Traffic Accident data for the Waterloo project area was provided by GTC (Table 6). The accident data spans a five-year period from January 1, 2015 to December 31, 2019, and 336 crashes were documented. A “Hot Spot” map depicts the level of crashes at various locations within the project area (Figure 8).

Table 5. Summary of Crash History & Severity – CAP Project Area

Five-Year Period (1/1/2015 to 12/31/2019)		
Type of Crash	Number	Percentage
Rear End	83	25%
Fixed Object	55	16%
Right Angle	54	16%
Other / Unknown	52	15%
Overtaking	23	7%
Left Turn	21	6%
Sideswipe	13	4%
Right Turn	10	3%
Animal	10	3%
Bicycle	7	2%
Pedestrian	4	1%
Ran Off Road	2	1%
Overturned	1	0.5%
Head On	1	0.5%
Total	336	100%
Severity	Number	Percentage
Non-Reportable	55	16%
Property Damage	215	64%
Injury	66	20%
Fatality	0	0%
Total	336	100%

Traffic Accident Findings

- The majority of accidents occur at the intersection of Rte. 20 and Rte. 96.
- High levels of incidents occur at the cross street intersections located along both Rte. 5 and Rte. 96
- A large number of the accidents were rear end collisions

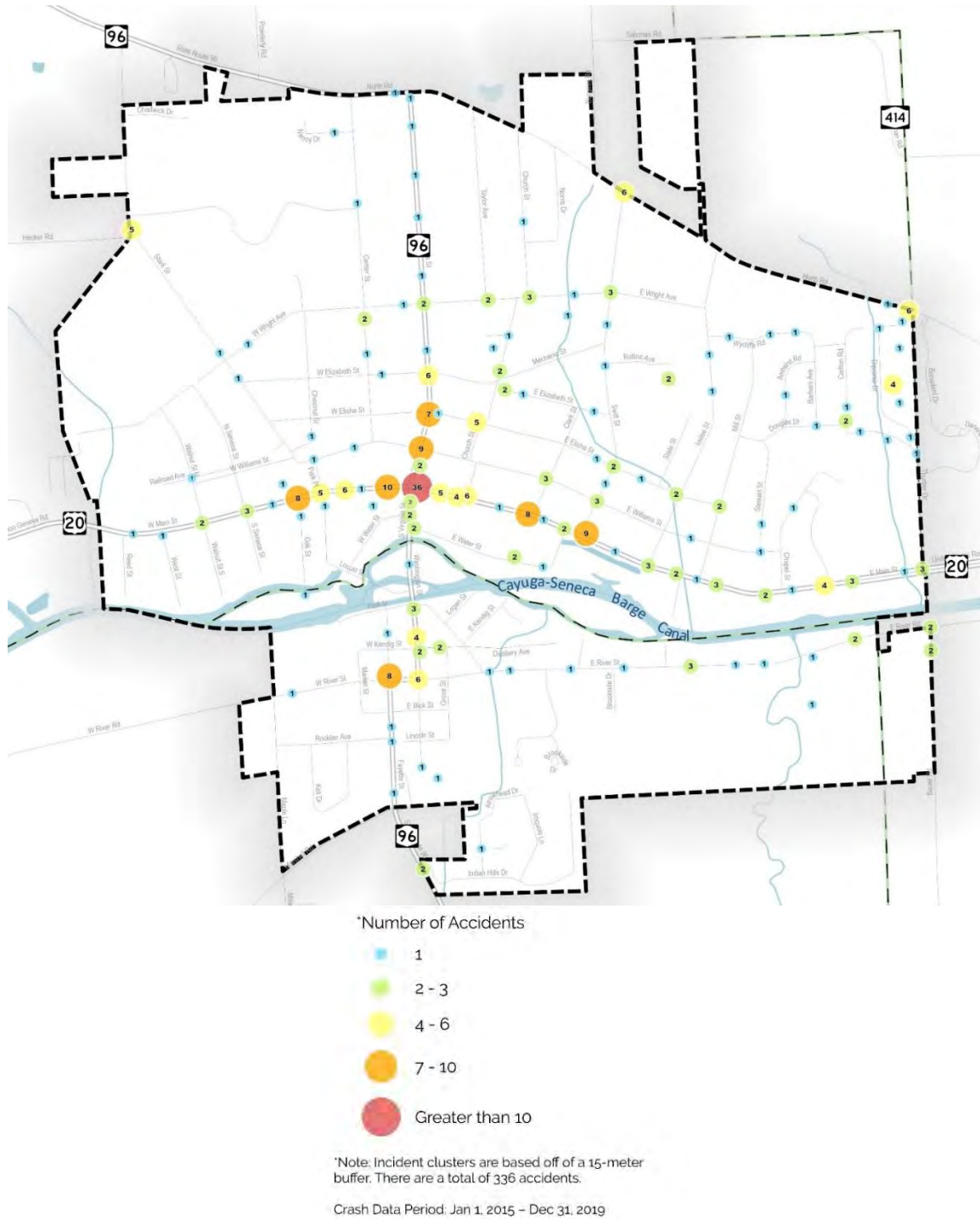


Figure 8. Crash History January 2015 – December 31, 2019

PAST AND CURRENT PLANNING EFFORTS

Recent reports prepared for the Village of Waterloo and its regional partners included recommendations that are relevant for the Waterloo Circulation, Accessibility, and Parking Study. A summary and key relevant recommendations of each follows.

VILLAGE OF WATERLOO COMPREHENSIVE PLAN (2017)

The Villages first Comprehensive Plan was undertaken with the mission to make the community more competitive and productive in the face of ongoing changes while maintaining the existing quality of life.

Relevant goals and recommendations

GOAL 12 – Increase connectivity between and among waterfront facilities, amenities, attractions, the downtown, and adjacent residential neighborhoods.

- Construct a connection between the existing terminus of the Vern's Way Trail and Main Street
- Establish a way-finding system to connect various waterfront sites
- Repair/restore the Locust Street Bridge, with two-way traffic and pedestrian access
- Construct a pedestrian bridge across the canal on the east side
- Improve sidewalk connectivity between the canal and Downtown.
- Construct a pedestrian bridge to Distillery Island
- Work with neighboring communities to connect and share services via trails, waterway, or roads.
- Complete the Cayuga-Seneca Canal Trail.

GOAL 18: Improve connectivity between the Downtown, waterfront, and area attractions

- Complete the Downtown/Waterfront connector trail

GOAL 20: Improve and Maintain Downtown's Public Realm

- Measure the success of the DOT traffic calming measures and continue efforts to build upon them
- Complete the renovation of the parking area behind West Main Street to maximize parking, provide safe pedestrian passage, and increase green space and landscaping.
- Add new, and replace older, street furniture as needed, including benches, flower planters, garbage receptacles, etc.
- Ensure adequate public parking is available to service the various downtown users, including customers, employees, and residents.

GOAL 21: Establish Downtown as an intermodal transportation center.

- Continue to develop a network of bike lanes through the Village.
- Provide facilities for bikers, including racks, covered parking, etc.

PUBLIC SPACE ENHANCEMENT MASTER PLAN (ONGOING)

The Public Space Enhancement Master Plan included metrics relating to existing public space and programs. Recommendations were informed from site evaluations and findings from the modality survey, completed as part of the Downtown Market Analysis.

Relevant recommendations

- Crosswalks across Routes 5 & 20 including mid-block crosswalks
- Main Street Gateway & Ramp: Linking Downtown to Oak Island, with a ramp to improve accessibility
- Vern's Way Trail-head improvements: To include new amenities and possible event space
- Lower Vern's way improvements: To improve accessibility and create more even pavement for all users.
- Lafayette Park improvements: To include improvements to allow for increased vendor use with improved loading/unloading areas and parking spaces which may accommodate food trucks
- Municipal rear parking improvements: Reconfigure parking areas to accommodate additional vehicles.
- Cayuga-Seneca Trail access & wayfinding: accommodate trail users and visitors with better signage and wayfinding, which directs users into the downtown area.
- Circulation and Accessibility improvements: to create safe routes throughout the Village, especially to key points of interest such as schools, community centers, trails and public spaces.

VILLAGE OF WATERLOO COMPLETE STREETS ORDINANCE (2019)

In 2019, the Village of Waterloo enacted a Complete Streets Ordinance, which included 11 guidelines for current and future development.

Key Components

- Establish Waterloo as a welcoming, attractive and accessible community by improving pedestrian and bicycle friendliness through consistent public realm design standards;
- Streets shall integrate multiple transportation choices for pedestrians, bicycles, and transit, with special consideration for children, the elderly and people with disabilities;
- Plan for, design, construct, operate and maintain appropriate facilities for all transportation users in all new construction, retrofit and reconstruction projects;
- Partner with the state, county, school district, citizens, businesses, interest groups and neighborhoods to implement complete streets;
- The Highway department will consider methods of providing development flexibility within safe design parameters.

CAYUGA-SENECA CANALWAY TRAIL PHASE II STUDY (2020)

This study sought to develop and evaluate concepts and alternative route scenarios for a 3+-mile trail extension of the existing Cayuga-Seneca Canalway Trail into the Ludovico Sculpture Trail located in Seneca Falls. As part of this plan a comprehensive inventory and analysis of existing conditions was completed.

Additionally, a number of opportunities and constraints were identified including: connectivity to existing trail systems; connection between Waterloo and Seneca Falls communities; active transportation; scenic views; property ownership; bridges; historic resources; and habitat diversity.

Relevant recommendations

Recommended Route:

- Segment 1 – Cayuga-Seneca Canalway Phase I Trail (East end of trail) to Gorham Street
- Segment 2 – Gorham Street to Water Falls Bridge
- Segment 3 – Water Falls Bridge to Kingdom Road
- Segment 4 – Kingdom Road to Ludovico Sculpture Trail (west end of trail) at Elks Club Lodge

A VISION FOR DOWNTOWN WATERLOO: 2018 DOWNTOWN MARKET ANALYSIS (2018)

This plan assessed the existing and future potential for both commercial and residential space within Waterloo and how the Village fit within the context of the larger regions market demand. A condition analysis of downtown properties was conducted to determine each buildings potential market use, as well as the feasibility considering the structures current physical state.

Relevant findings

- Consumers increasingly want to live in small-scale urban communities
- The residential market will be the catalyst for downtown revitalization
- Waterloo's target markets are young singles/couples (aged 25-39) and empty nesters (55+)
- Currently low rental rates, with potential to increase in the future by effective targeting of market to desirable properties
- Limited population growth and an aging population
- Regional hotel market is saturated
- Existing developer interest
- Prominent buildings remain vacant and poorly maintained
- In midst of a regional economic renaissance.

VISION WATERLOO: TOWN OF WATERLOO COMPREHENSIVE PLAN (2017)

This plan provides a guide for all future actions as well as positions the Town to be competitive for future grant and programming opportunities.

Relevant recommendations

- **Senior Services**
 - Increased sensitivity to sidewalk maintenance specifically to address safety and increase mobility for senior pedestrians
- **Smart Growth**
 - Make the Town more “walkable” by establishing safe routes for pedestrians (and bicyclists) to encourage healthy living.
 - Create a plan to connect the Town with the Seneca Lake State Park. This to include a trail from the Village to the park.
 - Establish “walkability zones” in areas defined as key corridors to connect commercial and residential areas to support compatible business development

REGIONAL ENGAGEMENT: REVITALIZATION OPPORTUNITY REPORT – SENECA COUNTY (2016)

This report provides an outline of existing conditions as well as a detailed overview of economic development, community development and land use through the lenses of: Land Use; Brownfields; Economic Distress; Downtowns; Tourism and Recreation; Waterfronts; Environmental; Water and Natural Resources; Energy; Housing; Infrastructure; and Preservation/Cultural.

Relevant recommendations

- **Waterfront to Downtown Connectivity Project:**
“Various improvements to complete the trail connections in the Village of Waterloo from the Cayuga-Seneca Canal and the Oak Island canal port to South Virginia Street, and then to Downtown”

Relevant Goals and Objectives

- **Downtowns**
 - Improve pedestrian access and walkability
- **Waterfronts**
 - Improve public access to waterfront
- **Infrastructure**
 - Address traffic limitations/bottlenecks and continue to monitor traffic counts and conditions of bridges
- **Tourism**
 - Leverage location as the ‘Gateway to the Finger Lakes’

DOWNTOWN WATERLOO NEEDS ASSESSMENT (2012)

This plan laid the groundwork for the 2017 Comprehensive Plan and other planning efforts that led up to the Circulation, Accessibility and Parking Assessment Study.

Relevant findings

- Resident Survey
 - Most Residents said that the availability of parking was satisfactory
- Building Owner Survey
 - Several noted that the municipal parking areas need to be improved via new paving and signage and that downtown Waterloo needed to be more appealing.
- Business Owner Survey
 - Business Owners voiced concern regarding the traffic flow on Main Street. Many felt the need to slow traffic or reduce the number of lanes on Main Street.
 - Some noted that people do not want to stop and shop in Waterloo.
 - Stated that the parking lots need to be fixed and more attractive

DOWNTOWN WATERLOO MODALITY SURVEY (2018)

A downtown modality survey was undertaken as part of the Downtown Waterloo Market Analysis. The survey received over 400 responses relating to topics on household demographics, where individuals lived in proximity to the downtown, perceived barriers to walking, bicycling and driving downtown, frequency of trips downtown, and desired activities and amenities for the downtown area.

Relevant findings

- Distance did not play a significant role in people walking downtown
- Lack of preferred places to go is cited as the number one reason people don't drive downtown
- The majority of residents make 1-5 trips per week through the downtown
- Health/Age, poor sidewalk conditions, and lack of options were the main factors preventing walking trips downtown
- The majority of residents (78%) will not bicycle, citing a lack of interest as the main reason, with aging/ health coming in second
- A majority of respondents wished to have the following amenities in the downtown area: Concerts (63%), Events in Public Spaces (55%), and Art Walk (78%)
- Other Activities respondents stated they wish to have in their area include: gazebo with live music, house tours, garden tours, singles groups, music, outdoor dining, food trucks, and work out trails
- Other amenities identified include: Grocery store, Dog Park, ice cream shop, outdoor dining, craft shop, more businesses, fast food, hobby and craft shows, a "good family restraint", and a farmers market

MARKET ANALYSIS

A look at the existing economic and market trends helps to predict potential new development that is likely to occur within the area. This new demand would impact the existing transportation system by altering trip generation patterns, land use and density, as well the design of streets and sites throughout the community. A brief overview of the implications from this analysis is provided below.

MARKET SEGMENTS

To understand the preferences of market segments within the Village of Waterloo the ESRI Tapestry Segmentation System tool was employed. This tool utilizes MRI GfK Consumer Preference Surveys, and then extrapolates the data, to develop each individual consumer profile. This tool segments households by their tastes / preferences and then identifies potential retail and commercial development that may be expected by meeting this demand.

Within Waterloo, there are five distinct market segments: Traditional Living, which represent approximately 35% of the population, Rustbelt Traditions, which account for 22% of the population, Heartland Communities, which represent nearly 20% of the population, Salt of the Earth, which comprise 19% of the population, and Senior Escapes representing the remaining residents.



LifeMode Group: Hometown
Traditional Living

Households: 2,395,200
Average Household Size: 2.51
Median Age: 35.5
Median Household Income: \$39,300

The Traditional Living are a younger market, made up primarily by young families living in single-family homes. Many of these households include multiple generations who have lived in the same location, and their children are likely to follow suit. This segment tends to work in manufacturing, retail trades, or health care and often own two or more vehicles. Half of this segment has abandoned landline phones, using cell phones exclusively. Shopping is conducted mainly at



discount stores including Walmart and they frequent fast food establishment's frequently. The Traditional Living segment spend their free time outdoors fishing or at the zoo. This segment also tends to carry credit card debt and personal loans.




LifeMode Group: GenXurban
Rustbelt Traditions

Households: 2,716,800
Average Household Size: 2.47
Median Age: 39.0
Median Household Income: \$51,800

The Rustbelt Traditions segment is made up of a mix of married-couple families and singles who live in older single-family developments. This segment is primarily white collar workers, with a high concentration of skilled workers employed in manufacturing, health care, and retail. This group is family oriented and spent a large portion of their time at home. As a result, this segment lives works and shops locally. The Rustbelt Tradition segment are budget conscious and prefer American made goods. For relaxation, they tend to watch television, with many households owning more than four TV sets.

LifeMode Group: Cozy Country Living
Heartland Communities

Households: 2,850,600
Average Household Size: 2.39
Median Age: 42.3
Median Household Income: \$42,400

The Heartland Communities is made up of older households living in rural communities or small towns. This group has paid off their mortgages, their children have moved away but they plan to stay in their current house and not

downsize. This segment appreciates a slower pace of life and actively participate in outdoor activities and community events. Heartland Communities are often patriotic and traditional in their lifestyle. They support local businesses, buy American made goods, and favor driving to destinations for vacation rather than flying to more remote spots. This segment do not include home remodeling as a priority but do conduct regular maintenance and lawn care. They spend their free time hunting, fishing or motorcycling. Walking is their main form of exercise.



LifeMode Group: Cozy Country Living
Salt of the Earth

Households: 3,545,800
Average Household Size: 2.59
Median Age: 44.1
Median Household Income: \$56,300

The Salt of the Earth segment have traditional, rural lifestyles. They are older with more than half of households having children that have already moved out of the home. This segment tends to owns two or more vehicles, which are used for their long commutes to work. This group enjoy spending their time with family, gardening, and cooking. For recreation, they spend their free time outdoors either fishing, boating, or camping. The Salt of the Earth segment has found steady employment in manufacturing, construction, or related industries. This segment is cost conscious, and brand loyal. They tend to focus on buying American made goods as well.



LifeMode Group: Senior Styles
Senior Escapes

Households: 1,116,000
Average Household Size: 2.20
Median Age: 54.6
Median Household Income: \$38,700

The Senior Escapes are the last segment found within Waterloo. This group live in areas seasonally, often with homes in warmer states such as Florida, California, and Arizona. A significant portion live within mobile homes. This group is conservative in both their political and religious beliefs. Over half of this segment are already collecting social security income and may have lifestyle limitations due to medical conditions. This group takes great care of their vehicles but are not likely to have purchased a new one in over five years. This group only spends within their means and do not carry credit card debt. For recreation, this group enjoys watching television, doing trivia, bicycling, boating, or fishing.

RETAIL OPPORTUNITY

The consumer demand for various retail goods and food services in 2017 was approximately \$52 million by residents of Waterloo (Census Designated Place or CDP). The retail sales (supply) in 2017 were \$14.5 million in the Village, showing a net leakage of \$37.8 million. This statistic implies that Waterloo residents are venturing outside the Village boundaries to meet their shopping and professional service needs.

As such, retail demand and sales for all of Seneca County were also considered. The consumer demand for various retail goods and food services in 2017 was approximately \$429 million by Seneca County residents. The retail sales in 2017 were \$475 million in the County, showing a net surplus of \$46 million out of Seneca County. Seneca County acts as a regional hub attracting consumers from neighboring communities in the adjacent counties.

The largest leakages, when local retail demand is not being met by existing businesses, are found in the following categories: furniture stores, drinking places, other motor vehicle dealers, and home furnishing stores amongst others. While some demand is being met by existing stores within Seneca County, supply is limited resulting in most County residents going outside of the County to obtain these goods and services. Even flourishing merchandise lines that are currently experiencing a surplus (such as clothing stores and automotive parts, accessories, and tires stores) have the opportunity to expand by marketing to the regional market outside of Seneca County and to tourists.

VILLAGE OF WATERLOO CIRCULATION, ACCESS & PARKING STUDY

Table 6. Retail Opportunity Gap Summary

Merchandise Lines	Demand (\$)	Supply (\$)	Opportunity Gap/Surpluses (\$)	Leakage/Surplus Index	Estimated Supportable New SF of Retail through Recapture		
					5%	15%	25%
Automotive Dealers	71,880,461	61,003,397	(10,877,064)	0.85	2,175	6,526	10,877
Other Motor Vehicle Dealers	6,809,149	840,300	(5,968,849)	0.12	1,194	3,581	5,969
Automotive Parts, Accessories, & Tire Stores	6,323,112	17,725,116	11,402,004	2.80	(2,280)	(6,841)	(11,402)
Furniture Stores	6,671,393	574,925	(6,096,468)	0.09	1,219	3,658	6,096
Home Furnishing Stores	6,482,742	921,851	(5,560,891)	0.14	1,112	3,337	5,561
Electronics & Appliance Stores	13,536,636	5,194,869	(8,341,767)	0.38	1,668	5,005	8,342
Building Material & Supply Dealers	23,592,824	24,850,103	1,257,279	1.05	(251)	(754)	(1,257)
Lawn/Garden Equipment & Supplies Stores	2,365,643	474,292	(1,891,351)	0.20	378	1,135	1,891
Grocery Stores	57,817,888	57,153,929	(663,959)	0.99	133	398	664
Specialty Food Stores	4,461,954	1,815,542	(2,646,412)	0.41	529	1,588	2,646
Beer, Wine, & Liquor Stores	4,977,848	1,736,607	(3,241,241)	0.35	648	1,945	3,241
Health & Personal Care Stores	34,348,576	25,994,190	(8,354,386)	0.76	1,671	5,013	8,354
Gasoline Stations	41,078,224	50,040,835	8,962,611	1.22	(1,793)	(5,378)	(8,963)
Clothing Stores	20,133,554	36,708,493	16,574,939	1.82	(3,315)	(9,945)	(16,575)
Shoe Stores	3,306,525	20,324,341	17,017,816	6.15	(3,404)	(10,211)	(17,018)
Jewelry, Luggage, & Leather Goods Stores	4,633,304	3,600,627	(1,032,677)	0.78	207	620	1,033
Sporting Goods/Hobby/Musical Instr Stores	8,841,004	11,084,659	2,243,655	1.25	(449)	(1,346)	(2,244)
Book, Periodical & Music Stores	1,652,700	0	(1,652,700)	0.00	331	992	1,653
General Merchandise Stores	44,656,747	54,907,599	10,250,852	1.23	(2,050)	(6,151)	(10,251)
Florists	1,273,385	484,306	(789,079)	0.38	158	473	789
Office Supplies, Stationery, & Gift Stores	4,273,075	715,673	(3,557,402)	0.17	711	2,134	3,557
Used Merchandise Stores	1,643,989	1,924,936	280,947	1.17	(56)	(169)	(281)
Other Miscellaneous Store Retailers	7,946,928	55,151,192	47,204,264	6.94	(9,441)	(28,323)	(47,204)
Electronic Shopping & Mail-Order Houses	9,451,838	2,487,360	(6,964,478)	0.26	1,393	4,179	6,964
Vending Machine Operators	200,472	2,025,439	1,824,967	10.10	(365)	(1,095)	(1,825)
Direct Selling Establishments	2,005,908	4,048,855	2,042,947	2.02	(409)	(1,226)	(2,043)
Special Food Services	1,735,172	1,014,404	(720,768)	0.58	144	432	721
Drinking Places - Alcoholic Beverages	2,086,476	199,834	(1,886,642)	0.10	377	1,132	1,887
Restaurants/Other Eating Places	34,639,702	32,010,205	(2,629,497)	0.92	526	1,578	2,629
Total:	\$428,827,229	\$475,013,879	46,186,650	1.11	(9,237)	(27,712)	(46,187)



VILLAGE OF WATERLOO

Circulation, Accessibility, and Parking Study

Section II: Community Engagement

The Village of Waterloo CAP process has included community outreach through multiple forms. A Community Participation Plan was developed to provide a comprehensive engagement strategy to encourage input from the public and stakeholders. Public and stakeholder input, in turn, will be a key ingredient helping the Project Advisory Committee (PAC) assess and select recommended projects. The Community Participation Plan included the following broad approach to community engagement: PAC meetings, public survey, public meetings and stakeholder meetings. Because of the Covid-19 emergency, the plan included virtual and hybrid community participation options.

PROJECT ADVISORY COMMITTEE (PAC)

The Project Advisory Committee (PAC) is a group of community leaders, including residents, business owners and local government representatives. CAP Study Consultants engages the PAC to apprise them of progress or to ask them for input on the project. Coordination of PAC meetings occurred in-person and/or virtually via Zoom online videoconferencing.

The PAC met twice. At their kickoff meeting on December 10, 2020, project consultants discussed the project scope and schedule. The consensus of the PAC was that the schedule and scope met their expectations of the project and recommended the consultant team follow the scope. In addition, the consultant team presented a community participation plan and asked PAC members about recent studies the project should acknowledge or build upon.

A second steering committee meeting was held in late April 2021. The focus of the meeting was to review the key findings from the existing conditions analysis and to discuss the draft priority concepts for potential improvements within the study area.

PUBLIC SURVEY

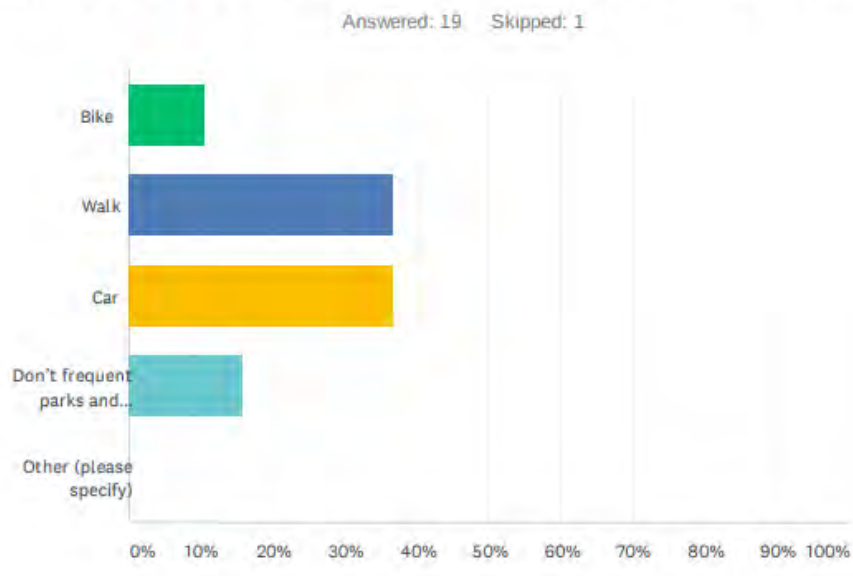
To complement CAP meetings an online public survey was launched in early April 2021 to provide another opportunity for input, especially for those who were not able to attend the public meeting. Although 19 people have responded to the survey, the information provided has been insightful and instructive. Some of the key findings from the survey include:

BICYCLE AND PEDESTRIAN CONNECTIONS

Over half of the respondents stated that bicycle and pedestrian connections to Oak Island and the Cayuga-Seneca Canal Trail should be improved.

More than sixty percent of respondents either walk or drive to parks and recreational trails in the Village, such as Oak Island and the Cayuga-Seneca Canal Trail. Ten percent said they bike to these facilities.

Q5 How do you typically travel to parks and recreational trails in the Village, such as Oak Island and the Cayuga-Seneca Canal Trail?



Comments included:

- “The bike lanes on the Main Street just seem to end after a short distance. There should be bike lanes on the south end of Virginia St approaching the canal path.”
- “Access to Oak Island, the south end of Virginia St - poor sidewalks throughout Waterloo on the side streets. Help fund those improvements.”
- “Add sidewalks to village streets that don't currently have them, improve existing sidewalks for those that do.”
- “Repair the [Locust Street] bridge.”

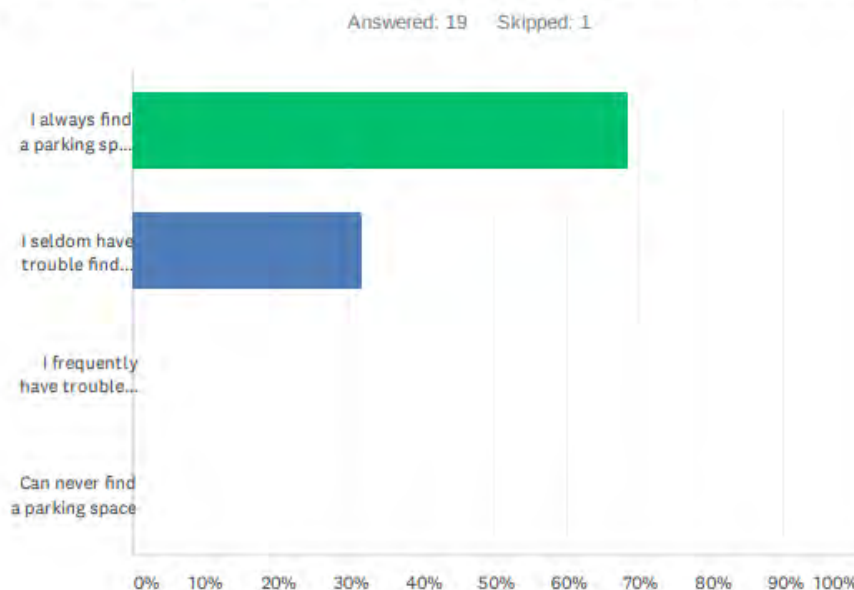
PARKING

Nearly 90 percent of the respondents stated that they are aware of the public parking lots in the Village.

All of the respondents indicated that they are either always able to find a parking spot or seldom have trouble finding a spot.

Over 80 percent of the respondents said that they park in on-street spots in the Village. Approximately 15 percent park in the municipal lots.

Q9 What is your experience regarding parking in the Village?



Comments included:

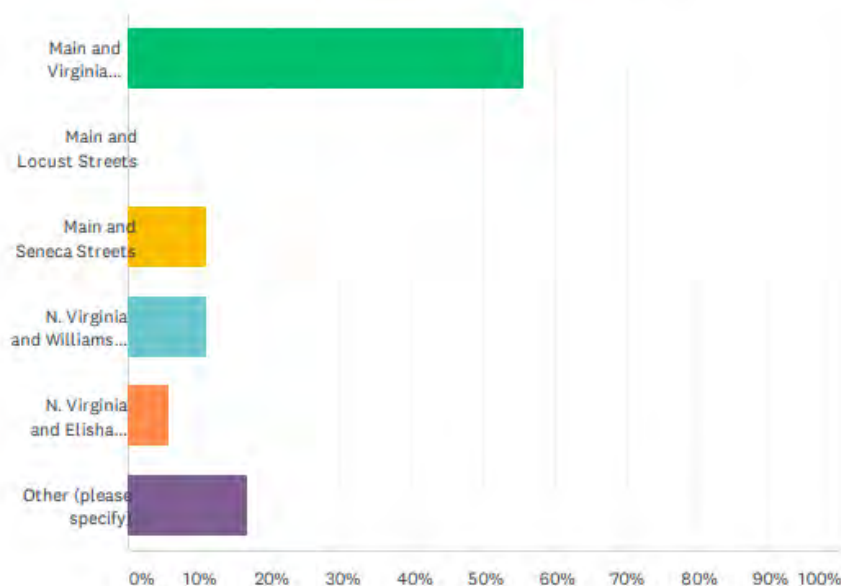
- “Depends on the time of day. Daytime never an issue to find parking. Evenings becomes more cumbersome when events and restaurant patrons come to town to eat or visit.”
- “I think parking has been well done.”

INTERSECTIONS

Over half of the respondents indicated that Main and Virginia Streets is the most difficult intersection in the Village to cross. More than ten percent each said that the Virginia and Williams, and Virginia and Seneca Street intersections were the most difficult.

Q10 Which intersection downtown is the most difficult to cross?

Answered: 18 Skipped: 2



Comments included:

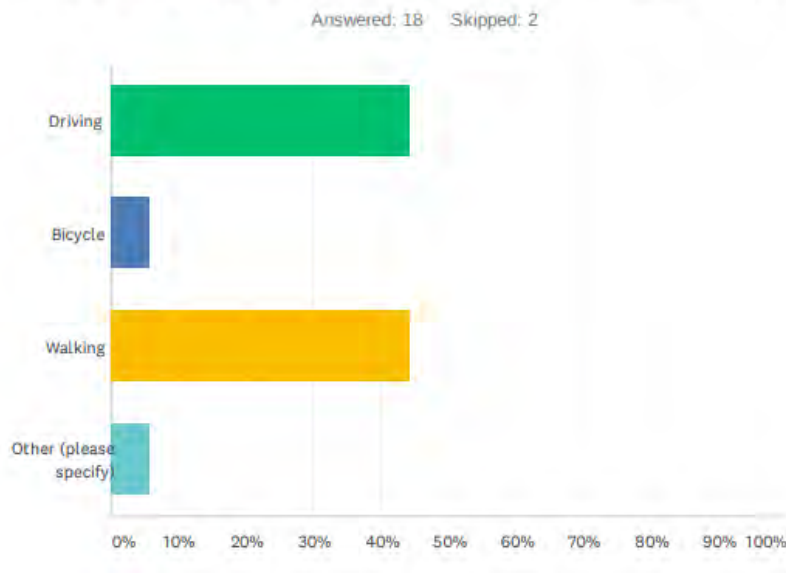
- “Any intersections crossing Main Street within the Downtown business district [should be improved]. Virginia and William St intersection.”
- “Four corners is the busiest [intersection] by far. Many complications when to cross. The most dangerous component is simply vehicles speeding thru to "beat" the light.”

GENERAL TRANSPORTATION

Over 50 percent of respondents stated that their preferred means of travel in the Village is by car. Approximately 40 percent said that walking is their preferred method.

Most respondents indicated that driving and walking (over 40 percent each) should be prioritized in the Village. Only 5 percent said that bicycling should be prioritized.

Q11 What form of transportation should we prioritize?



Comments included:

- “Bikers don't know which direction to ride on...I would be very nervous riding a bike in the bike lane downtown where car doors swing open.”
- [Bicycle Safety] is fine on Main Street. Virginia & Washington Streets are narrow as is. When we used to bicycle many years ago, we used the sidewalks on Virginia St.”
- “There needs to be monitoring of speed limits on Virginia St... even if you just put up one of the automated signs that shows the speed limit as folks drive by.”

PUBLIC MEETINGS

Two public Open House meetings were held during the course of the project to obtain input and engage the community with the CAP study, including:

The first Open House was held on February 23, 2021. The meeting was held in-person at the Village Hall. A virtual Zoom option was also made available. Ten people attended in person and a handful of others participated in the Zoom presentation.

The agenda included a CAP Study overview and a discussion on the goals of the project. An early overview of the existing conditions was also provided.

Public comments made during the Open House included:

- Sidewalks should blink/ light up at night
- Many students walk and ride bike
- Improve sidewalks and lighting
- Bump outs where needed
- Improve downtown lighting
- More crosswalks increase visibility
- Bump outs on Main St.
- Add sidewalks from W. Main to Oak Island

An online link to provide comments during or after the meeting was also distributed during the meeting to solicit additional input. Comments received included:

- In order to make downtown more accessible to our aging population, we need to make crossing over 5/20 safer so that they will not be intimidated by the traffic flow
- Destinations in need of new or additional signage include: parking, canal, trail, "Downtown" shops and restaurants, Oak Island, the Community Center, Verns Way/Towpath., Lafayette and Dempsey Parks
- Stark Street is in need of sidewalks, "I remember taking that route to walk home from school every day and I don't remember ever walking on a sidewalk."
- "The old canal towpath trail could use at least a new ramp down onto it to ensure accessibility."

A Final Public Open House was held on August 30, 2021 in conjunction with the Village's DRI public meeting. Boards of each of the priority projects were displayed at the meeting to obtain input from the public. The public comments were very favorable toward all of the projects and the public appreciated how the renderings helped their understanding of the priority project components.

VILLAGE OF WATERLOO CIRCULATION, ACCESS & PARKING STUDY



PEDESTRIAN SAFETY CIRCULATION & ACCESS: DOWNTOWN & CANAL

Side walks
Both sides
of center
street

X walk @
Main Street
School

CROSSWALK
by Main St
School

#1 (Zone)
#2 (Locust)

Bump outs
where
needed

① DOWNTOWN
LIGHTING (CROSS)
② MORE CROSSWALKS
(IMPROVE VISIBILITY)
③ SIDEWALK AND
CROSSWALKS
④ ADD SIDEWALK AND
MAINTAIN
PARKING LOT MAINTENANCE
TO IMPROVE
LACK PARKING

STREETCARTS
NEAR
LANSING
STREET
CROSSING
STREETCARTS
STREETCARTS
STREETCARTS

Pick 2 of each – highest priority projects



Lack of complete sidewalk
network or connections

1

Upgraded or new
crosswalks



Top: Public meeting comments on pedestrian safety and access issues at the first public meeting
Bottom: The second public provided resident an opportunity to comment on proposed recommendations

STAKEHOLDER MEETINGS

Members of the CAP Study Consultant Team met with sixteen stakeholders in the community representing individuals and organizations, private businesses, county government and the Chamber of Commerce. The meetings were held both in-person and virtually by phone or online video conferencing format, depending on individual preference.

Although the stakeholders come to the CAP process with varying perspectives, common areas of concern were expressed, including the following:

IMPEDIMENTS TO WALKING AND CYCLING

- Sidewalks on side streets are either missing or deteriorated. Many people just walk in the street. Responsibility for sidewalk repair or replacement is not clear (Village or property owner)
- The Locust Street bridge has been closed for several years, leaving only the S. Virginia Street to access the Cayuga-Seneca Canal Trail and the Lock CS-4
- The steps down to the towpath trail from Locust Street are not accessible, making it difficult to access Oak Island from Vern's Way or Water Street

BICYCLE AND PEDESTRIAN CONNECTIONS

- Connections to Oak Island and the Cayuga-Seneca Canal Trail are in need of improvement
- Better signage to the trail is needed

PRIORITIES FOR IMPROVEMENT

- Several stakeholders reported that Stark Street and Center Streets leading to the High School are a priority for improvement and connectivity
- Oak Street between Main Street and Oak Island was also mentioned a priority for sidewalks since the Recreation Center and Oak Island Park are located on the Street.
- More and better-defined crosswalks are desired, particularly at N. Virginia and William Streets and Oak and Main Streets.

EXPERIENCE REGARDING PARKING

- Most stakeholders expressed that parking is currently adequate in the Village and they rarely if ever have trouble finding parking. However, there was a broad opinion that off-street public parking should be better organized, signed and lighted. Individual businesses may also require more parking during peak times

Respondents were also asked what places they would like Waterloo to emulate and what qualities those places have. The majority of respondents liked communities that are walkable and take advantage of their waterfronts, including Skaneateles and Geneva. Qualities liked by participants included a mix of uses, street trees and landscaping and a variety of shops and restaurants.

Other Places We Like and What We Like About Them:





VILLAGE OF WATERLOO

Circulation, Accessibility, and Parking Study

Section III: Needs and Opportunities

Based on a review of the existing conditions and input received as part of the community engagement strategy several needs and opportunities emerged during the study. A summary of the needs and opportunities is separated into four areas:

- Pedestrian and Bicycle
- Vehicular
- Parking
- Signs

PEDESTRIAN AND BICYCLE ISSUES AND OPPORTUNITIES

The majority of concerns throughout the project area were related to pedestrian concerns. The figures on the following pages help illustrate pedestrian issues in the project area:

DOWNTOWN AND CANAL DISTRICT (FIGURE 9)

NEED FOR NEW OR ENHANCED CROSSWALKS

- 1. W. MAIN ST. & LOCUST ST.** Enhanced crosswalks to complement redevelopment of the former school and provide access to Canal district.
- 2. W. MAIN ST. & VIRGINIA ST.** Bump outs to reduce crossing distance and calm traffic.
- 3. WILLIAMS ST. & VIRGINIA ST.** Upgraded crosswalk striping to improve pedestrian safety.
- 4. VIRGINIA ST. & W. WATER ST.** Potential for new crosswalk to improve pedestrian connections to downtown from east side of Village.
- 5. WASHINGTON ST. & HUFF ST.** Potential new crosswalk to improve safety of crossing for pedestrian and bikers between existing Canal trail on west side with proposed Canal trail extension going east.
- 6. E. MAIN ST. & CHURCH** Potential new crosswalk to provide safe crossing at east end of downtown.

LACK OF A COMPLETE SIDEWALK OR BIKE NETWORK

- 1. OAK ST.** Limited or deteriorated sidewalks on a street, which provides access to Oak Island and the recreation center. No bike accommodations.
- 2. LOCUST ST.** Limited, narrow or deteriorated sidewalks. The Locust Street bridge over the canal is also closed for any form of traffic. No bike accommodations.
- 3. W. WATER ST.** No sidewalks and no bike accommodations.
- 4. HUFF ST.** No clear pedestrian or bike amenities to connect to Canal trail
- 5. W. WILLIAMS ST.** Deteriorated or narrow sidewalks that need improvements.
- 6. E. WILLIAMS ST.** Deteriorated or narrow sidewalks that need improvements.



Figure 9. Pedestrian and bike safety, circulation and access issues in the Downtown and Canal districts

LAFAYETTE INTERMEDIATE SCHOOL (FIGURE 10)

LACK OF A COMPLETE SIDEWALK OR BIKE NETWORK

1. INSLEE STREET Limited, narrow, or deteriorated sidewalks and no bike accommodations.

2. SWIFT STREET Limited, narrow, or deteriorated sidewalks and no bike accommodations.

Note: State Street does have sidewalks on one side of the street and an extension of the sidewalk on school grounds.

WATERLOO HIGH SCHOOL (FIGURE 11)

LACK OF A COMPLETE SIDEWALK OR BIKE NETWORK

1. STARK STREET Limited, narrow, or deteriorated sidewalks and no bike accommodations.

2. CENTER STREET Limited, narrow, or deteriorated sidewalks and no bike accommodations.

3. W. WRIGHT STREET Limited, narrow, or deteriorated sidewalks and no bike accommodations.

Note: There is a closed school right-of-way, with an entry on Wright Street, that provides direct access to the School grounds. The access was closed more than a decade ago, because of vandalism, but the study project advisory committee believe it is time to reconsider reopening and improving the right-of-way as it provides very safe access to the high school.



Lack of complete sidewalk or bike network or connections

Figure 10. Pedestrian and bike safety, circulation and access issues near the Lafayette Intermediate School

Lack of complete sidewalk or bike network or connections

Figure 11. Pedestrian and bike safety, circulation and access issues near the high school

VEHICULAR

There were not any major vehicular access or circulation issues in the downtown area. However, there were 36 accidents at the intersection of Main Street (State Route 20) and Virginia Street (State Route 96) over a five-year period. The majority of the accidents were rear-end collisions, suggesting high speeds and/or driver inattention.

Traffic calming measures to narrow the roadway may help reduce speeding and increase driver attention. Additional traffic calming measures will also increase pedestrian safety by reducing the width and time to cross both streets while providing increased visibility of traffic.



The intersection of Main Street (State Route 20) and Virginia Street (State Route 96) could benefit from safety improvements to reduce traffic accidents

PARKING

Currently parking is not an issue in the project area and specifically in the downtown and canal districts. The counts taken reveal an overall average occupancy of 20% to 50% (or 40-100 spaces) of the 200 on and off-street parking spaces in the downtown core.

However, there is a potential future demand of approximately 630 spaces if the current downtown buildings are fully occupied and other development takes place in the downtown core. Downtown housing is a strategic target of the Village to utilize mostly vacant upper floors. Developers will enquire what the Village's plan is for accommodating residents and therefore the Village will need a parking strategy that may include future areas for parking and/or a parking permit program.

Some obvious low-cost opportunities for increasing current parking supply is re-organization of the existing public parking lots in the downtown core. InSite Architecture has generated concepts for re-organizing the parking lots in the northeast sector of downtown. A similar strategy should also be considered for the larger public parking lot in the southwest corner of downtown, which has an inefficient layout, lacks landscaping and acts as a barrier between downtown and the canal district. The owner of Conquinos is also considering acquiring additional properties for private parking which also another solution to private parking issues.



The Village parking lot in the southwest quadrant of downtown could benefit from a new, more efficient layout to increase downtown parking supply and to provide better connectivity to the canal district.

SIGNAGE

Currently there is a lack of directional and gateway signage in the downtown and canal districts in Waterloo. While there are some signs for the public parking lots, they are not visible because they are small and are not placed strategically (by location and angle).

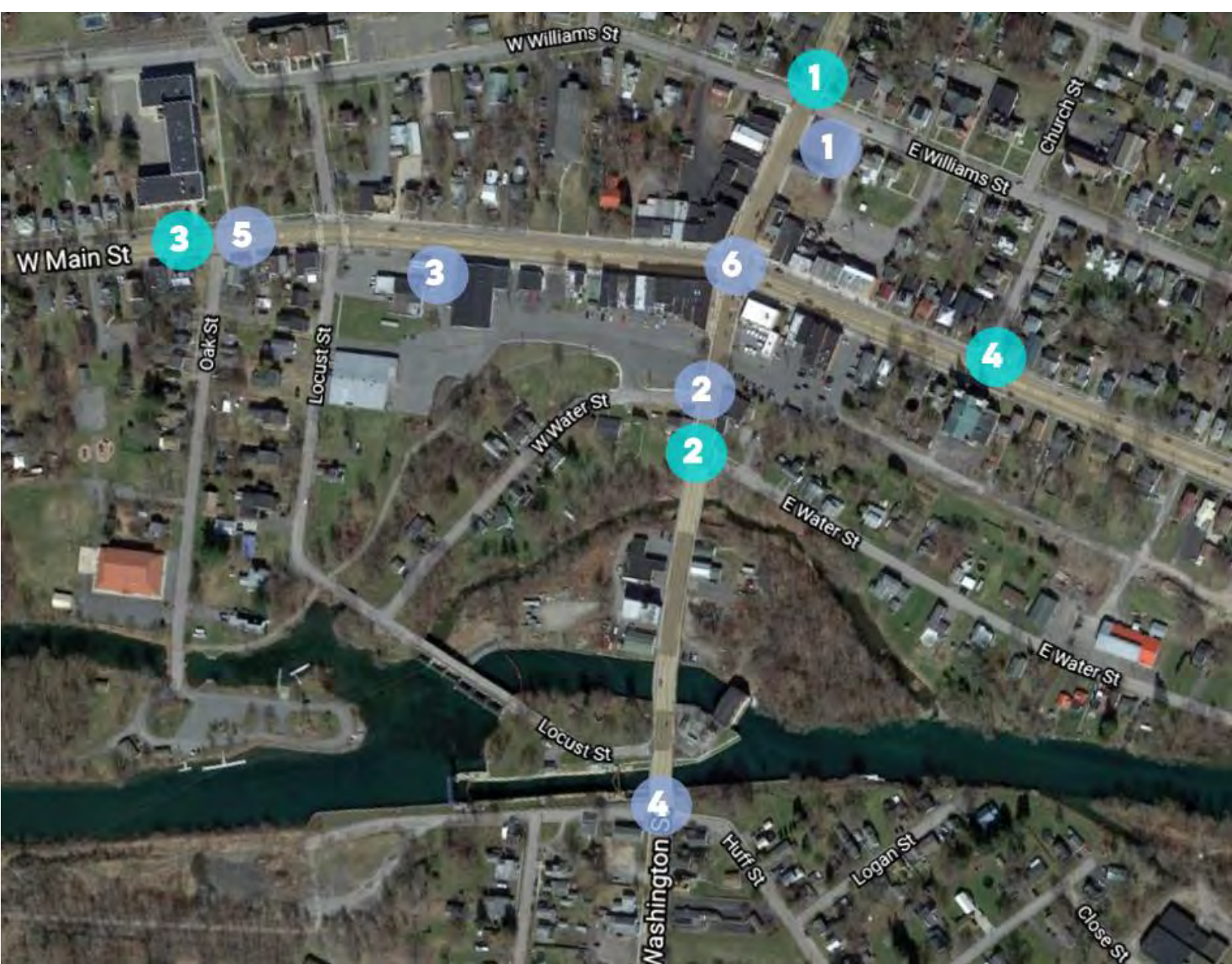
A summary of the potential location for directional and gateway signage is summarized below and in Figure 12. Note that many of these signs could be combined into one sign (i.e. gateway and directional; parking and directional).

POTENTIAL GATEWAY SIGN LOCATIONS

- 1. WILLIAMS ST. & VIRGINIA STREET** This is a primary entrance into downtown for many tourists traveling from I-90 south.
- 2. WASHINGTON ST. & W. WATER ST.** This location is another key spot to welcome tourists traveling north to I-90 into downtown.
- 3. W. MAIN ST. & OAK ST** For tourists traveling east this location is the beginning of downtown.
- 4. E. MAIN ST. & CHURCH ST.** Travelers headed west could be welcomed here where the historic downtown begins.

POTENTIAL DIRECTIONAL SIGN LOCATIONS

- 1. PUBLIC PARKING LOT AT WILLIAMS AND VIRGINIA**
The existing public parking sign is too small to read for travelers.
- 2. PUBLIC PARKING LOT AT W. WATER AND WASHINGTON** The existing public parking sign is too small to read for travelers.
- 3. PUBLIC PARKING LOT SIGN** Signs near Village Hall directing drivers to the public parking lot.
- 4. CANAL TRAIL SIGN** Larger signs in a more prominent location needed.
- 5. OAK ISLAND AND CANAL SIGN** To direct travelers to key tourist sites
- 6. DOWNTOWN SITES**
Coordinated signs at each corner, in each direction, directing travelers to tourist sites, historic sites, government buildings and parking.



1

Gateway Signs

2

Directional signage – to parking
or sites

Figure 12. Potential directional and gateway sign locations



VILLAGE OF WATERLOO

Circulation, Accessibility, and Parking Study

Section IV: Recommendations

SUMMARY OF RECOMMENDATIONS

Based on existing conditions, public input, and analysis of key issues and opportunities, five priority projects emerged from the study. A summary of each is provided below and subsequent pages provide more detailed information.



MAIN STREET COMPLETE STREET

Description: Convert Main Street to a complete street including corner bump-outs, enhanced bike lanes, center median, improved landscaping, and better lighting.

Estimated Cost: \$2,455,000



IMPROVE PARKING CONDITIONS

Description: Rearrange layout of off-street parking lots to increase number of spaces and provide better circulation. Also, add landscaping and pedestrian connections to Main Street.

Estimated Cost: \$690,000



CANAL CORRIDOR PED-BIKE ZONE

Description: Cul-de-sac Locust and W. Water Street to create a car-free ped-bike zone along the Canal and provide ped-bike connections to Oak Island.

Estimated Cost: \$1,410,000



WASHINGTON STREET GATEWAY

Description: Increase the width of the sidewalk on the west side of Washington to provide a pathway wide enough for ped-bike connections to the Canal trail.

Estimated Cost: \$1,185,000

SUMMARY OF RECOMMENDATIONS



INSLEE STREET SCHOOL ZONE IMPROVEMENTS

Description: Replacement or installation of 10 ft. sidewalks and addition of enhanced crosswalks to improve pedestrian and bicycle safety near the Lafayette Intermediate school.

Estimated Cost: \$370,000



CENTER STREET SCHOOL ZONE IMPROVEMENTS

Description: Replacement or installation of 10 ft. sidewalks and addition of enhanced crosswalks to improve pedestrian and bicycle safety near Waterloo high school.

Estimated Cost: 318,000

MAIN STREET COMPLETE STREET

DESCRIPTION: Main Street (State Route 20) recently benefitted from traffic-calming improvements as part of a NYSDOT improvement project. The former four-lane street was converted into a two-lane road with a center turning lane and bike lanes on each side of the street.

While these recent upgrades have improved both traffic and pedestrian safety, there are additional enhancements that would increase pedestrian safety and encourage drivers to slow down. Reducing travel speed through traffic calming would partly address the high level of accidents at the corner of Main Street and Virginia Street.

Additional streetscape improvements will also help to transform the “vehicle-centric” perception of Main Street into a complete street for all users.

Additional enhancements to Main Street include (Figure 13):

1. Addition of a raised, landscaped median with decorative lighting including milling and replacement of adjacent asphalt
2. Corner bump-outs at key intersections.
3. Mid-block rain garden bump-outs
4. Replacement and addition of street trees at a denser pattern (closer spacing) than what currently exists
5. Sidewalk replacement in areas not addressed by recent roadway upgrades
6. Replacement of highway-style lighting standards with pedestrian scale decorative lighting
7. Enhancement of bike lanes with decorative pavement

BENEFITS: Establishing a complete street has multiple benefits:

- Improved pedestrian safety with corner bump outs to increase visibility of oncoming traffic while reducing the distance to cross. Sidewalk replacements will also increase pedestrian safety.
- The landscaped median may encourage vehicular traffic to slow down and improve the aesthetics the Main Street corridor.
- New lighting will improve pedestrian safety at night, which was mentioned by project advisory committee members and members of the public.
- Rain gardens will reduce the volume and pollutants entering the storm water systems.
- Enhanced bike lanes will improve bicyclist safety by providing a visual separation from vehicular traffic.

ESTIMATED COST: \$2,455,000

MAIN STREET COMPLETE STREET



Figure 13. Main Street Complete Street Plan view



W. Main Street facing west illustrating bump outs, bike lanes, street trees and enhanced crosswalks

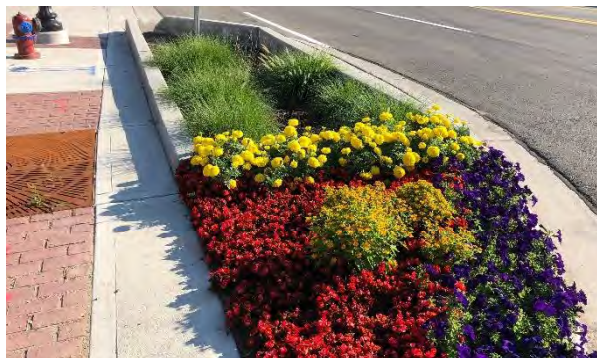
MAIN STREET COMPLETE STREET



W. Main Street facing east illustrating bike lanes, rain gardens, and landscaped median



Pedestrian-scaled lighting
I-80



Landscaped median (top) and rain garden (bottom)



Corner bump-out

MAIN STREET COMPLETE STREET**POTENTIAL FUNDING SCENARIOS FOR \$2,455,000 PROJECT**

PROGRAM/AGENCY	PROGRAM FUNDING	SCENARIO 1	SCENARIO 2
Transportation Alternatives Program (TAP) – NYS DOT	80% funding up to \$5 million	\$1,964,000	\$1,964,000
Climate Smart Communities (CSC) – NYS DEC	50% funding up to \$100,000	\$100,000	
Local Match	Village of Waterloo match	\$391,000	\$491,000

IMPROVE PARKING OPPORTUNITIES

DESCRIPTION: As noted in the previous section, downtown Waterloo currently does not have a parking supply issue. Based on observations, the average occupancy of any lot downtown is no more than 50 percent. However, if the vacant commercial and anticipated upper-floor spaces were fully occupied there would be a significant shortage of spaces of more than 400 spots.

Consequently, the parking strategy for downtown would be a phased approach. An initial phase would address any current issues in the near term. A long-term strategy could address future needs.

The parking recommendations in this report address near-term parking issues and are focused on low-cost strategies including (Figures 14 & 15):

1. Reconfiguring the layout of downtown parking lots to increase current supply, improve access, and enhance circulation.
2. Addition of landscaping to improve the appearance of lots, reduce storm water runoff, and buffer vehicles from the public viewshed.
3. Improved pedestrian circulation within and through parking lots including connections from Main Street to the Canal district.
4. Establishing a resident parking permit program to facilitate redevelopment of upper floor vacant spaces into apartments.

With the maximum estimated demand of 100 spaces, the Village has an excess of 100 spaces with its 200 public spaces. Based on the market analysis, the majority of future development downtown will be residential apartments with minor commercial growth. Assuming 90 percent residential growth and 10 percent commercial growth, the 100 spaces will support approximately 45 residential units and 3,000-4,000 sq. ft. of commercial space. Reconfiguration of off-street lot layouts would provide another 80 spots downtown to facilitate another 36 residential units and 2,000 sq. ft. of commercial space. However, the Village should closely monitor downtown development metrics annually and have a long-term capital improvement plan, including budget reserves, to acquire additional land and construct public parking.

BENEFITS:

- Reconfiguration of the off-street lots would increase supply from 76 to 156, thereby supporting future downtown development.
- Landscaping would improve the appearance of lots, reduce storm water flow, and enhance the pedestrian experience.

ESTIMATED COSTS: W. Main Parking lot (including ADA ped path from Main to Vern's way): \$485,000; E. Main lot (not including minor acquisition costs of lawn area from National Parks) \$205,000.

IMPROVE PARKING OPPORTUNITIES



Figure 14. West Main Street lot upgrades



Current lot layout (Credit: Google Earth)

IMPROVE PARKING OPPORTUNITIES



Figure 15. E. Main Street lot upgrades



Current lot layout (Credit; Google Earth)

IMPROVE PARKING OPPORTUNITIES



A new, formalized entrance to W. Main lot from W. Main Street including ADA accessible sidewalk

POTENTIAL FUNDING: Since the costs for the project are relatively low, the potential for grant funding of these projects is reduced. Some potential funding scenarios for the \$700 project include:

- Request a State and Municipal (SAM) Facilities grant for the entire amount
- Short Term Bond Anticipation Note (BAN) – Conservatively assuming a 2 percent interest rate for a 5-year term, the Village could budget \$148,600 annually.
- BAN and NYS Canals Grant (\$150,000 max, 50% match) – Fund \$150,000 with a Canals grant and finance the remainder with a 5-year BAN at \$107,000 annually.

CANAL CORRIDOR PED-BIKE ZONE

DESCRIPTION: The Locust Street bridge has been closed for several years because of safety concerns. This has completely changed vehicular traffic patterns in downtown, as it was a “shortcut” from W. Main to Washington Street. Nevertheless, it has also created opportunities for improved pedestrian and bicycle accessibility to the canal. The New York State Canal system’s Reimagine the Canals initiative has also proposed improvements to the Locust Street bridge to convert it to a pedestrian and bike only bridge (see Appendices).

Based on the changes from a predominantly vehicular corridor to a ped-bike corridor several significant changes are proposed (Figure 16):

1. Terminating Locust Street and W. Water Street at the Canal, via cul-de-sacs, and converting that section of Locust Street into a pedestrian and bike path to Washington Street including replacing the roadway top with decorative asphalt pavement.
2. Creating a formal plaza with benches and a gazebo at the intersection of Vern’s Way with the new path.
3. Installing (or replacing sections of narrow sidewalk) a new 5-foot sidewalk on Locust from W. Main to the plaza. The paved portion of Locust Street would also be designated a shared vehicular and bike road with markings.
4. Constructing a new ADA sloped, switchback sidewalk and two pedestrian bridges to connect the new path with the section of Vern’s Way along the canal to Oak Island. A canal overlook will be located along the path.

BENEFITS: The conversion of a section of the Locust Street corridor into a pedestrian bike path will have multiple benefits:

- Significantly improved pedestrian and bicycle accessibility and safety to the Canal, Oak Island, Recreation Center and Washington Street.
- Re-energizing a long vacant corridor to activate the canal front
- Complements the proposed NYS Canals Reimagine the Canals potential project to re-purpose the Locust Street bridge.

ESTIMATED COST: \$1,410,000

CANAL CORRIDOR PED-BIKE ZONE



Figure 16. Canal corridor ped-bike Zone



Existing conditions (Credit: Google Earth)

CANAL CORRIDOR PED-BIKE ZONE

View of Locust Street conversion to pedestrian-bike corridor and sidewalk along the canal to the pedestrian bridge looking west.



View of the overlook along the path and ped bridge over the canal to connect to Vern's Way, Oak Island and the Recreation Center.

CANAL CORRIDOR PED-BIKE ZONE

POTENTIAL FUNDING SCENARIOS FOR A \$1,410,000 PROJECT

PROGRAM/AGENCY	PROGRAM FUNDING	SCENARIO 1	SCENARIO 2
Transportation Alternatives Program (TAP) – NYS DOT	80% funding up to \$5 million	\$1,128,000	\$1,128,000
Climate Smart Communities (CSC) – NYS DEC	50% funding up to \$100,000		\$100,000
Environmental Protection Fund (EPF) – NYS OPRHP*	75% up to \$500,000	\$282,000	
Canalway Grant - NYS Canals	50% up to \$150,000		\$150,000
Local Match	Village of Waterloo match		\$32,000

* The Village of Waterloo qualifies for a 75% grant (vs. standard 50%) because the area has a poverty rate above 10%

WASHINGTON STREET GATEWAY

DESCRIPTION: Washington Street (State Route 96) is the gateway into the Village for Finger Lakes tourists traveling north and west. The roadway also passes through the Village's Canal district.

However, the current roadway layout is not pedestrian and bike friendly. The street also acts as a barrier between the east and west sides of the Village while discouraging connections between downtown and the Erie Canal trail.

The Washington Street Gateway project would provide enhanced connections between downtown, the Canal and the Canal trail. Proposed improvements include (Figure 17):

1. Increasing the width of the sidewalk on the west side of Washington Street from 5 ft. to 13 ft. by eliminating the parking lane (a parking lane will be maintained on the east side to serve businesses). This new 13 ft. sidewalk will allow enough room for both pedestrians and bicyclists to travel between downtown, the canal, and the Erie Canal trail.
2. Installing corner bump-outs at the Huff Street intersection to increase pedestrian and bicycle safety crossing from east to west. This will be especially important when the Canal trail is developed east of Washington Street.
3. Addition of decorative lighting, with banners, on the 13 ft. sidewalk to act as a gateway into the Village, enhance the ped/bike experience, and complement and rebrand the area's Canal heritage.
4. Connections to the Canal ped-bike zone (converted Locust Street) to create a continuous ped-bike "loop" network between downtown and the canal.

There was not enough room to install street trees and grates on the 13 ft. sidewalk to maintain a 10 ft. minimum path width. However, if it is determined during the design stage that trees can be installed (i.e. with permeable pavement instead of grates); they should be included in the final plans.

BENEFITS: Washington Street gateway improvements provide the following benefits:

- Improved connections between Downtown Waterloo, the Erie Canal waterfront, and the Erie Canal trail.
- Enhanced safety for pedestrians and bicyclists
- Gateway upgrades will change the perception of the Village and welcome tourists.

ESTIMATED COST: \$1,185,000

WASHINGTON STREET GATEWAY



Figure 17. Washington Street Gateway



Existing conditions (Credit: Google Earth)

WASHINGTON STREET GATEWAY



Existing conditions (Credit: Google Earth) on top and desired wide sidewalk lined with decorative lighting and banners (Credit: University of Wisconsin Extension)

POTENTIAL FUNDING SCENARIO FOR A \$1,185,000 PROJECT

WASHINGTON STREET GATEWAY

PROGRAM/AGENCY	PROGRAM FUNDING	SCENARIO 1
Transportation Alternatives Program (TAP) – NYS DOT	80% funding up to \$5 million	\$948,000
Climate Smart Communities (CSC) – NYS DEC	50% funding up to \$100,000	
Canalway Grant - NYS Canals	50% up to \$150,000	\$150,000
Local Match	Village of Waterloo match	\$87,000

SCHOOL ZONE IMPROVEMENTS

DESCRIPTION: Pedestrian and bicycle access to the Lafayette Intermediate School and Waterloo High School includes multiple gaps in the sidewalk system. As a result, safety of schoolchildren walking to school or riding their bikes is compromised.

The Project Advisory Committee (PAC) and consultant team first had to determine which streets to consider for pedestrian and bike improvements. For both schools, streets selected included those:

- That had the best right-of-way conditions: no power line corridors, minimal private encroachment, and preferably the existence of sidewalks to reduce resident resistance to installation of new sidewalks.
- With direct access to the schools
- Providing connections to other sidewalks in the Village

Other options such as protected pathways were considered.

Inslee Street provided the best conditions for the Intermediate School and Center Street offered advantages for the High School. The basic scope included (Figures 18 & 19):

1. Replacement of sidewalks, or installation of new sidewalks 10 ft. in width to allow appropriate space for walkers and bikers
2. Select removal & replacement of trees (only when necessary) and planting of new trees between the new sidewalk and roadway to provide additional protection for safety as well as improved aesthetics
3. Enhanced crosswalks at intersections or entrances to the school grounds

BENEFITS: School zone pedestrian and bike path improvements will provide the following benefits:

- Improved safety for schoolchildren walking and biking to school
- Additional street trees will enhance the appearance of the streets and slow down storm water infiltration.

ESTIMATED COST: Inslee Street (Intermediate School access) - \$370,000; Center Street (High School access) - \$318,000.

SCHOOL ZONE IMPROVEMENTS



Figure 18. Inslee Street 10 ft. sidewalk to Lafayette Intermediate School



Existing Conditions (Credit: Google Earth) – note current sidewalk ends before school property

SCHOOL ZONE IMPROVEMENTS



Figure 19. Center Street 10 ft. path to Waterloo High School



Existing Conditions (Credit: Google Earth) – note current sidewalk gaps before school driveway

SCHOOL ZONE IMPROVEMENTS

POTENTIAL FUNDING SCENARIOS FOR A \$688,000 PROJECT (\$318,000 + \$370,000)

PROGRAM/AGENCY	PROGRAM FUNDING	SCENARIO 1
Transportation Alternatives Program (TAP)/Safe Routes to Schools – NYS DOT	80% funding up to \$5 million	\$550,400
School District Match	School Match	\$68,800
Local Match	Village of Waterloo match	\$68,800

Another much more affordable option is to pursue reestablishing and upgrading the abandon protected path for a cost of \$86,000. However, note the cost does not include lighting improvements, which would be needed for safety.