



Final Report
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Executive Summary

The City of Albany initiated this study to 1) identify transportation network enhancements that honor the historic nature of Washington Park, 2) reduce or minimize the negative effects of traffic in the study area, and 3) consider mobility and access for park users of all abilities including pedestrians, bicyclists, motorists, emergency access, parking impacts, and special events.

Existing Conditions

The Washington Park Area is centrally located within the City of Albany and sits between several major trip generators and the regional highway network. Although highway construction plans were developed in the 1950s to alleviate congestion in the Washington Park Area via a Mid-Crosstown Arterial, the highway was not fully constructed and traffic converges in the Washington Park Area today without the envisioned roadway network, ultimately contributing to conflicts in Washington Park. The Park is generally bounded by higher classification collector roadways and arterial streets with Henry Johnson Boulevard and New Scotland Avenue terminating at the Park, resulting in a major thoroughfare through Washington Park that provides a convenient route to area hospitals for emergency vehicles and employees. It is the funneling of arterial and collector road traffic into the Park that contribute to the need for this study. A review of traffic volumes shows the consequence of this historic street design as average daily traffic volumes north-south through the Park are comparable to the City streets in the area.

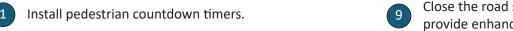
Based on the historical context, traffic volume data, and multimodal infrastructure, it is apparent that north-south traffic volumes through the park are inconsistent with the original purpose of the Park. Pedestrians also need to cross higher volume roadways while traveling to/from and within Washington Park. While there are numerous signalized pedestrian crossings surrounding the Park, not all of them have pedestrian accommodations. There is a need to calm traffic in Washington Park to promote access for all users without impacting the surrounding neighborhoods, and vehicle and emergency service operations.

Recommendations

A series of transportation enhancements recommendations were developed to address concerns identified within the Washington Park Area based on stakeholder feedback and public input. In many instances, the concerns were related to safety and quality of life; and therefore, the proposed improvements focused on mitigation measures that address these issues. Incorporating a number of enhancements will calm traffic in the Park and support the City's efforts to balance the competing needs of all park users, without diverting significant traffic volumes into adjacent neighborhoods. Figure ES-1 shows the overall study recommendations which generally fall within the following four categories:

- 1. Circulation changes to reduce the volume of traffic in Washington Park.
- 2. Intersection modifications to reduce pedestrian-vehicle conflicts and improve pedestrian comfort.
- 3. Traffic calming elements to minimize the negative effects of traffic in Washington Park.
- 4. Service entrance treatments to reinforce compliance with existing vehicle restrictions in the park.





- Reconfigure Western Avenue/Englewood Place/State Street/Washington Park intersection to reduce conflicts.
- Construct raised crosswalk to calm traffic on the segment of park road adjacent to the playground.
- Close Sprague Street park entrance to vehicle traffic. Construct raised crosswalk and path connection.
- Evaluate options to reduce pedestrian-vehicle conflicts, including removing the west leg of the Henry Johnson Boulevard/Knox Street Mall intersection.
- Close Lancaster Street park entrance and reconfigure the Washington Park Road intersection as a raised stop controlled Y-shaped intersection.
- Construct chicanes and plant additional street trees on Washington Park Road to calm traffic.
- Reduce pavement on minor legs and convert to one-way.

 Include raised crosswalk on Washington Park Road.

- Olose the road south of Washington Park Lake to vehicle traffic and provide enhanced crossing on Lake Street.
- Extend the curb to calm traffic and better define pedestrian space.
- Construct an enhanced pedestrian crossing at the Madison Avenue/Knox Street intersection including curb extensions and pedestrian refuge island.
- Provide enhanced pedestrian crossing on the internal park roadway by adding a curb extension and raised crosswalk at the Knox Street mall.
- Reduce pavement width on the minor triangle approaches and convert to one-way traffic.
- Reconfigure the Madison Avenue/Willett Street intersection to shorten the pedestrian crossing. Add leading pedestrian interval.
- Construct curb extensions at Madison Avenue/Delaware Avenue/Lark Street intersection. Add LPI to traffic signal operation.
- Re-design service entrances to provide a consistent appearance with textured pavement and gates/ bollards to reduce unwanted access.
- Remove unwarranted traffic signals. Conduct further study to confirm all-way v.s. two-way stop control.



























Chapter 1. Introduction

The City of Albany initiated this study to calm traffic in Washington Park to promote access for all users without impacting the surrounding neighborhoods, and vehicle and emergency service operations within the approximate one-third square mile study area in the City of Albany, bounded by Madison Avenue to the south, Lake Avenue to the west, Washington Avenue and Central Avenue to the north, and Swan Street to the east, referred to as the Washington Park Area.

Washington Park is the premier park in the City of Albany and the centerpiece of the Washington Park Historic District. Designed in the 1870s and inspired by famed landscape architect Frederick Law Olmsted, Washington Park is a valuable historic and recreational resource intended to provide a refuge from the surrounding urban environment by offering numerous monuments and vistas viewable from a series of carriageways. However, as automobiles surpassed carriages as the primary mode of transportation, further development in the surrounding areas as well as regional highway construction transformed these carriageways into roadways that carry a significant volume of motor vehicle traffic. Presently, Henry Johnson Boulevard is a major thoroughfare through Washington Park that provides a convenient route to area hospitals for emergency vehicles and employees. As such, the segment of Henry Johnson Boulevard within Washington Park experiences traffic flows and in some cases travel speeds that are incompatible with the park setting, thus limiting pedestrian access to and from the park.

The following Project Objectives were established:

PROJECT OBJECTIVES

- Identify transportation network enhancements that honor the historic nature of Washington Park.
- Reduce or minimize the negative effects of traffic in the study area.
- Consider mobility and access for park users of all abilities including pedestrians, bicyclists, motorists, emergency access, parking impacts, and special events.

A Stakeholder Group was established to help provide input and facilitate the flow of information. In addition, the Stakeholder Group assisted in the identification of problems and potential solutions within the general study area. Stakeholder Group members include representatives from the neighborhood associations within the study area, Walkable Albany, Washington Park Conservancy, the Lark Street BID, the Albany Parking Authority, the Capital District Transit Authority (CDTA), In Our Own Voices, Capital Latinos, Capital District Pride Center, Association of the Blind, and the Albany Bicycle Coalition. In addition to the stakeholder committee, a technical committee consisting of City departments was established. A complete list of technical and stakeholder group members is included in the Public Involvement Appendix.





Study Area

The overall study area spans an approximate one-third square mile portion of the City bounded by Lake Street, Washington Avenue/Central Avenue, Swan Street, and Madison Avenue as shown on Figure 1.1. It is noted that Washington Park was identified as a focus area due to the unique nature of the park and its distinct character from the surrounding residential neighborhoods.



Figure 1.1 Study Area

Previous and Ongoing Efforts

Several previous and ongoing efforts relevant to the study area were identified to help shape the goals and objectives of this study. Previous construction efforts undertaken by the City include bicycle lanes and traffic signal upgrades on Madison Avenue and enhanced pedestrian crossings with flashing beacons within Washington Park to improve multimodal mobility within the study area. Likewise, the City's Complete Streets Policy and Design Manual, Bicycle and Pedestrian Master Plan, and recently completed Lark Street Improvement Study provide guidance and recommendations to promote walking and bicycling. In addition to these efforts, the City is currently working with the Washington Park Conservancy on a design project to build a new playground in Washington Park that will offer a safe, engaging, and accessible space for children of all abilities to enjoy and play.





Chapter 2. Existing Conditions

This Chapter summarizes the existing land use and multimodal transportation infrastructure and operations in the study area.

Land Use

The Washington Park Area is composed of a mix of residential, commercial, and recreational uses. Within the study area, the Center Square neighborhood is a vibrant, walkable, community that contains a mix of residential and commercial uses with Lark Street functioning as a primary commercial corridor. To the west, the Washington Park Historic District includes the approximate 90 acre park and adjacent residential buildings.

Washington Park is a valuable historic and recreational resource for City residents and visitors alike. The original design of the park dates back to the 1870s. inspired by the famous landscape architect Frederick Law Olmsted who's other designs include Central Park and Prospect Park in New York City, Riverside Park in Chicago, and the Emerald Necklace in Boston. Similar to other "Olmstedian" parks, Washington Park includes a number of iconic design features that support the philosophical ideal that parks provide a relief from the urban environment through rural scenery that contrasts with the surrounding City. In order to promote an open, quiet, and natural environment, Washington Park includes numerous meandering paths and carriageways which allow patrons to enjoy the various monuments and landscape compositions including wooded areas, open meadows, and water features. In 1972, Washington Park was designated as a historic resource and added to the National Register of Historic Places.

"A Park is a work of Art... The purpose of parks is to provide a feeling of relief experienced by those entering it on escaping from the cramped, confined and controlling circumstances of the streets and town."

~ Fredrick Law Olmstead



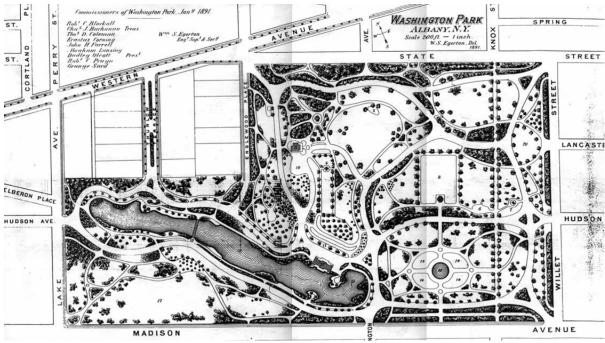


Figure 2.1 Historic 1891 Map of Washington Park

Regional Context

From a regional perspective, the Washington Park Area is centrally located within the City of Albany and sits between several major trip generators and the regional highway network. Specifically, while I-87, I-90, and I-787 generally encircle the City, access to area hospitals, colleges, and government buildings within the City is generally provided by surface roadways which experience traffic conditions typical of the urban environment. Acknowledging issues with congestion and limited access to areas within the City, the Mid-Crosstown Arterial was proposed in the 1950s, as a means to alleviate congestion and provide high-speed access to and through the City by connecting I-87, I-90, and the South Mall Arterial. Figure 2.2 shows the 1950s plans for the crosstown arterial extending north-south through the Washington Park area, including the interchange connection to the south mall expressway. Although several components of the Mid-Crosstown Arterial were constructed including the Livingston Avenue and South Mall Arterial interchanges, the project was ultimately abandoned due to funding shortfalls, changes in priorities, and local opposition. As a result, traffic still converges in the Washington Park Area today without the envisioned roadway network enhancements, ultimately contributing to conflicts in Washington Park.



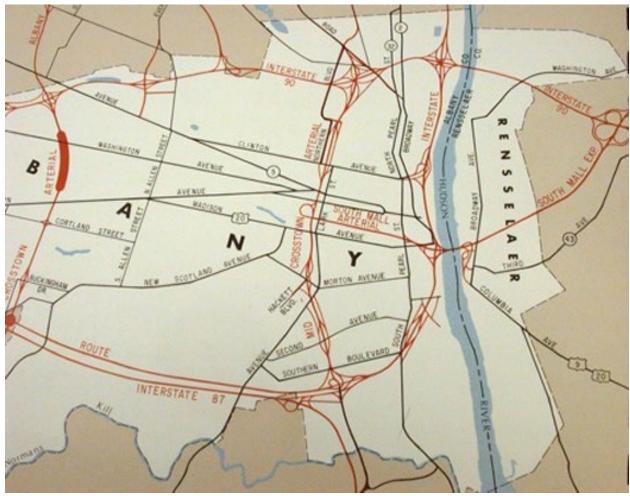


Figure 2.2 Historic Map (1950s)Mid-Crosstown Arterial (Source: All Over Albany)

Roadway and Traffic Characteristics

Individual roads and streets do not serve travel independently, but as part of a network of roads through which traffic moves. As such, roadways must balance competing functions such as access (the ability to reach a destination) and mobility (the ability to flow through an area). Roadways can serve these goals to varying extents, and are defined by the Federal Highway Administration (FHWA) in terms of functional classification based on the extent to which they balance these needs. Figure 2.3 shows the five functional classes and how they balance the competing needs of access and mobility.

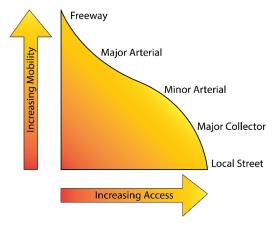


Figure 2.3 Functional Classification Access vs. Mobility





The Washington Park Area contains numerous principal and minor arterials as well as major collectors and local roads. Figure 2.4 shows the Washington Park Area roadway network and functional classification.

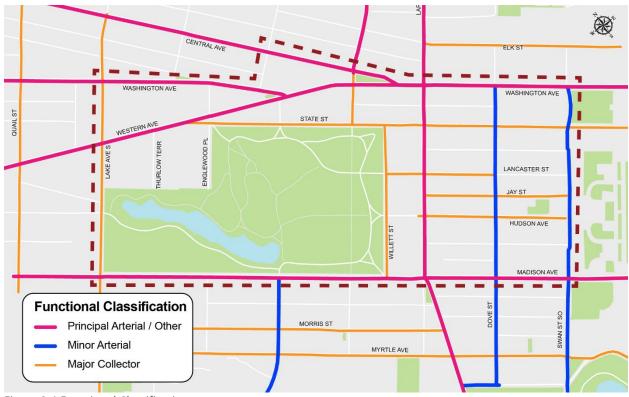


Figure 2.4 Functional Classification

A review of Figure 2.4 shows that Washington Park is generally bounded by higher classification roadways with nearly all of the park entrances served by roadways classified as major collectors. While the Washington Park Roadways are classified as local roads, it is the funneling of arterial and collector road traffic into the Park that contribute to the need for this study. A review of traffic volumes as shown on Figure 2.5 shows the consequence of this historic street design as average daily traffic volumes north-south through the Park are comparable to the Arterial streets in the area.



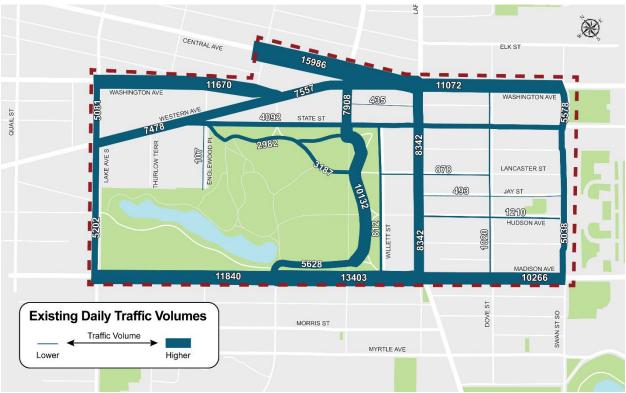


Figure 2.5 Existing Daily Traffic Volumes

The figure indicates that traffic volumes within Washington Park are consistent with the Principal Arterial roadways in the area (Washington Avenue, Madison Avenue, Lark Street). This volume of traffic negatively impacts the quality of life in the surrounding neighborhoods and reduces overall enjoyment of Washington Park.

In addition to general vehicle traffic, Washington Park also serves numerous emergency vehicles. Situated between the regional highway network and area hospitals located on New Scotland Avenue, Washington Park is a designated route for emergency vehicles. Figure 2.6 shows the primary emergency vehicle route through Washington Park.



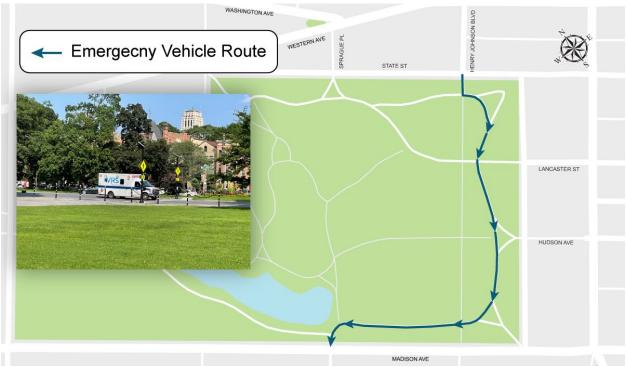


Figure 2.6 Primary Emergency Vehicle Route

In addition to the traffic characteristics in the study area, Table 2.1 summarizes the key physical characteristics of the major roadways within the Washington Park Area.

Table 2.1 Major Washington Park Area Roadways

Street	Number of Primary Lanes	Pavement Width (ft)	Parking	Sidewalk
Madison Avenue	2	60	Both Sides	Both Sides
Hudson Avenue	1	34	Both Sides	Both Sides
Jay Street	1	34	Both Sides	Both Sides
Lancaster Street	1	30	Both Sides	Both Sides
State Street	1	34	Both Sides	Both Sides
Willett Street	1	34	One Side	One Side
S. Lake Avenue	2	38	Both Sides	Both Sides
S. Dove Street	1	30	Both Sides	Both Sides
S. Swan Street	1	24	One Side	One Side





The table shows that the majority of roadways in the study area provide a single lane for one-way traffic, with parking and sidewalks on both sides of the roadway. Figure 2.7 further illustrates the one-way roadways in the area. It is noted that many of these one-way restrictions were implemented after construction of the Empire State Plaza in order to minimize traffic diversions through the adjacent neighborhood.

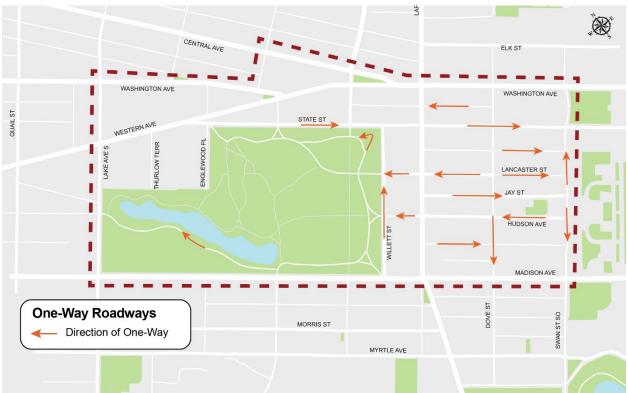


Figure 2.7 Existing One-Way Roadways

Intersection traffic control varies within the study area. Marked crosswalks, pedestrian signals, and countdown timers are generally majority present the of signalized at intersections within the study area, although some of the older traffic signals in the Center Square neighborhood are lacking pedestrian signals. In addition to the traffic signals, the study area contains a number of unsignalized intersections operating under stop sign and yield control. Specifically, included in the original Washington Park design, some of the internal intersections within the Park provide two-way traffic around a triangular islands that operate with a mix of stop and yield control approaches.

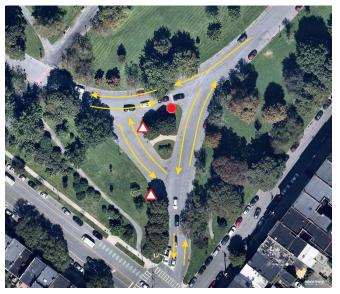


Figure 2.8 Washington Park Triangle Traffic Control





Figure 2.9 Intersection Control

Pedestrian and Bicycle Accommodations

Outside of Washington Park, pedestrians are generally accommodated on sidewalks located on one or both sides of the roadways. Within the park, the Olmstedian design provides numerous meandering paths, as well as the Knox Street mall which provides a straight connection between Madison Avenue and State Street. It is noted that these paths are generally not adjacent to the park roadways, or are setback from the roadway on segments with an adjacent path. A pedestrian infrastructure condition assessment was conducted for the paths, sidewalks, crosswalks, and curb ramps within the study area. Infrastructure condition was classified based on the criteria outlined in Table 2.2 and is shown on Figure 2.10. In addition to the Washington Park paths, the internal Washington Park roadways are closed to vehicle traffic by bollards and chains, with the exception of typical park maintenance and special event access. Only the park roadways shown in white on Figure 2.10 are open to traffic.



Table 2.2 Pedestrian Infrastructure Condition Criteria

Condition	Good	Fair	Poor		
Crosswalk	Minimal striping fading Minimal surface damage (≤ 1/4")	Striping mostly visible Minor surface damage (> 1/4")	Mostly faded striping Frequent surface damage (> 1/4")		
Curb Ramp	Has detectable warning Ramp has reasonable slope and condition Level with road at curb (< 1/4") Turning Space at Top and Bottom of Ramp	Worn / Faded Detectable Ramp is in acceptable condition Generally level with Road With or without Turning Space OR Ramp is in good condition as described above Ramp is missing detectable	Ramp has unlevel areas of damage and possible heaves Ramp is not level with road (>1/4") Ramp is missing detectable		
Sidewalk Segment	Level with minimal damage Cracking okay if generally smooth (<1/4"), but cracking with uneven surfaces not okay Width ≥ 4'	Mostly level with minor damage Diamond grinding would take care of most defects Width ≥ 3'	Unlevel Large areas of damage with > 1" heaves at panels that diamond grinding will not fix		
Shared Use Path Segment	Firm and smooth hard surface Width 8' to 12'	Firm and smooth hard surface with a small amount of depressions / puddles Width ≥ 4' with suitable passing space where needed Path may be brought to good condition with minor regrading	Soft or rough surface with large amounts of depressions / puddles Width < 4' Path may be brought to good condition by replacing material and regrading		

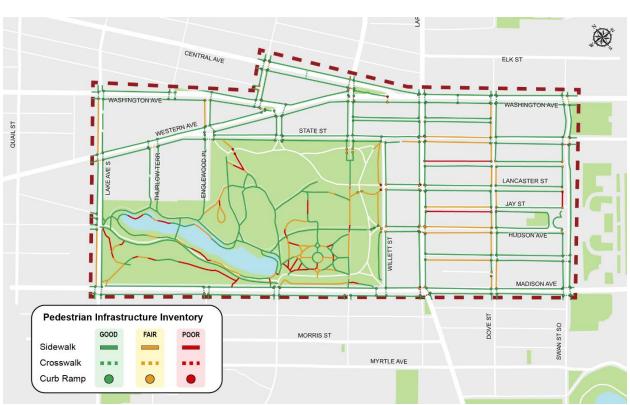


Figure 2.10 Pedestrian Infrastructure Inventory





Within Washington Park, bicyclists utilize the multi-use paths and internal park roadways. Outside of the park and with the exception of Madison Avenue, dedicated bicycle infrastructure is not provide and bicyclists share the travel lane with vehicles.

A review of the Albany Complete Street Policy and Design Manual indicates that these treatments are generally consistent with the "Neighborhood Mixed Use" and "Neighborhood Residential" street typologies found in the Center Square neighborhood. Specifically, the manual identifies bicycle boulevards as a preferred treatment in residential areas with generally low traffic volumes and speeds, while higher level accommodations such as striped bicycle lanes and shared use markings are preferred on mixed-use and commercial roadways.

Special Events

In addition to typical use, Washington Park is host to a variety of events within the City, ranging from small reoccurring events, to larger scale gatherings. In 2021, over 37 events were scheduled in Washington Park, all of which have the potential to create unique issues and conditions for vehicle traffic, pedestrian access, and parking availability. Table 2.3 groups events in Washington Park by type based on the size and frequency of events, and identifies the current management practices in place to accommodate these events.

Table 2.3 Washington Park Special Events

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Event Type	Event Type Frequency / Duration Example Management Plan (all modes) Bike/Ped			Impacts and Conditions				
Event Type			Bike/Ped	Transit	Traffic	Parking		
SMALL		Farmer's Market / Yoga/ Park playhouse	None	None	None	None	Increased demand, but adequate capacity	
MEDIUM	Monthly / short duration (half day)		select park roads No Access to select park roads; Henry	Limited vehicular access improves conditions for bikes/peds <i>in the</i> <i>park</i>	None	South demand	Increased demand with limited capacity	
RUNS	Monthly / short duration (half day)		No Parking on all park roads and select local roads No Access to all park roads and select local roads	Restricted vehicular access improves conditions for bikes/peds in the park Increased congestion on local streets generally slows speeds	Stop locations on Madison, State	Limiting access forces North- South demand onto Madison, Lark, Lake, Western	Parking demand from event attendees exceeds the limited capacity Event attendees park on Madison, State, Willett, etc.	



Event Type	Frequency /	Example	Management Plan	· · · · · · · · · · · · · · · · · · ·			
Lveiit Type	Duration		(all modes) Bike/Ped		Transit	Traffic	Parking
LARGE	Less frequent (Annually) / All-day	Capital Pride Parade and Festival, city festival Tulip fest/ Corporate Challenge	No Parking on all park roads and select local roads No Access to all park roads and select local roads (including Willet, Hudson, Lancaster, Jay, State, west of Park; Henry	bikes/peds in the park Increased congestion on local streets	Road closures on local streets impact bus routes Stop locations on Madison, State and other streets are moved	Traffic congestion through downtown (Empire State Plaza to St. Rose; I-87 to I- 90)	Event attendees park on Madison, State, Willett, etc. Parking demand from event attendees exceeds capacity which is limited
SNOW EMERGENCY	Seasonally/ select days	N/A	No Parking on adjacent local roads Parking allowed in normally restricted part of the park		None	None	Residents who cannot park on Madison, State, Willett, etc. are allowed to use "all roadways and parking areas" in park

Conclusions

Based on the above historical context, traffic volume data and multimodal infrastructure, it is apparent that north-south traffic volumes through the park are inconsistent with the original purpose of the Park. Pedestrians also need to cross higher volume roadways while traveling to/from Washington Park. While there are numerous signalized pedestrian crossings that could be utilized, not all of them have pedestrian accommodations. There is a need to calm traffic in Washington Park to promote access for all users without impacting the surrounding neighborhoods, and vehicle and emergency service operations.





Chapter 3. Public Involvement and Alternatives

Public Involvement

While the above summary provides a data oriented approach to identifying traffic operating conditions within the Washington Park Area, it is important to provide citizens a meaningful way to contribute their own knowledge of issues and ideas for potential solutions. Public involvement was conducted in two phases. The first phase solicited feedback on issues and potential solutions in the study area. The second phase presented several roadway options to address these issues, and asked for feedback on these options. The first phase of public involvement is summarized below, while the second phase is discussed at the end of this chapter.

The first phase of public engagement consisted of targeted stakeholder meetings and a pop-up event within Washington Park to solicit input from park users and neighborhood residents. Stakeholder meetings included three separate meetings with the Washington Park Conservancy, the Study Advisory Committee including residents and members of the business community and public interest groups, and Technical Committee consisting of City departments. The purpose of these meetings was to review the project goals and existing conditions within the study area to identify issues and potential solutions. Following these stakeholder meetings, a pop-up event was held in Washington Park on

"Change the character of traffic within the park without changing the character of the park itself." -Anonymous

July 19, 2021. The event was attended by over 60 residents, stakeholders, and study representatives present. The purpose of the event was to inform the public about this transportation planning study, let them know the different methods by which they can provide comments, and obtain input from the public about concerns in the area and ideas for improvements. Attendees had several opportunities to provide input, ask questions, and offer comments. This included a station oriented mapping session where facilitators interacted with the public to solicit input, as well as a SWOT (Strengths, Weaknesses, Opportunities, Threats) assessment of the study area. The following summary organizes comments received by overall theme. Raw meeting notes from the mapping and SWOT exercises are included in the public involvement Appendix.

- Improve bicycle and pedestrian access to Washington Park. Residents and park users indicated that bicycle and pedestrian access to Washington Park is sometimes limited by the automobile oriented design of the adjacent roadways. Specifically, wide intersections with long pedestrian crossing distances and heavy turning movements can make walking in the area feel uncomfortable. Reducing pavement width through the use of curb extensions and minimizing conflict points by restricting traffic circulation at key locations were identified as potential solutions to improve walkability and access to Washington Park.
- Calm traffic to reduce vehicle speeds. Event attendees noted that perceived traffic speeds in
 Washington Park generally contribute to feelings of pedestrian discomfort and detract from the





park environment. Several potential solutions to calm traffic include the addition of raised crosswalks or intersections, narrowing the park roadways, and planting additional trees.

• Reduce traffic volumes in Washington
Park. Comments received at the pop-up
event support the above assessment that
traffic volumes in Washington Park are
generally incompatible with the park
environment. A number of circulation
changes were proposed including closing
the park completely or partially to
vehicular traffic, and converting area
roadways to one-way traffic.



Based on stakeholder feedback and the ideas received at the Washington Park popup event, a series of transportation improvements were developed to address concerns identified within the Washington Park Area. In many instances, the concerns were related to safety and quality of life; and therefore, the proposed improvements focused on mitigation measures that address these issues. The descriptions below summarize the complete streets enhancements evaluated to address the above concerns:

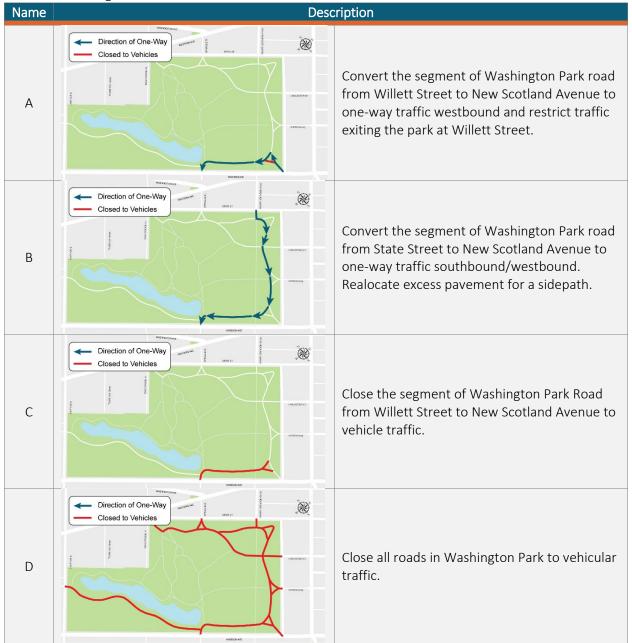
- 1. Circulation changes to reduce the volume of traffic in Washington Park.
- 2. Intersection modifications to reduce pedestrian-vehicle conflicts and improve pedestrian comfort.
- 3. Traffic calming elements to minimize the negative effects of traffic in Washington Park.
- 4. Service entrance treatments to reinforce compliance with existing vehicle restrictions in the park.

Traffic Circulation Alternatives

One-way traffic circulation and vehicle restrictions are a valuable tool to control the flow of traffic within a network. Converting roadways to one-way traffic or restricting vehicular access on certain roadway segments is an effective method to reduce traffic volumes in designated areas, although network wide effects may be felt from these modifications resulting in unintended consequences on adjacent roadways. Table 3.1 shows the potential circulation alternatives examined for Washington Park.



Table 3.1 Washington Park Circulation Alternatives



Traffic diversions were estimated for each of the above circulation changes based on existing travel patterns derived from a combination of origin-destination counts at the Washington Park entrances and manual turning movement counts. Table 3.2 summarizes the anticipated traffic diversions in terms of vehicles per day (vpd) and vehicles per hour (vph) for each alternative.



Table 3.2 Alternative Circulation Traffic Diversions

Alternative	Daily Traffic Removed from Washington Park (vpd)	AM Peak Hour Traffic Removed from Washington Park (vph)	PM Peak Hour Traffic Removed from Washington Park (vph)	Streets Experiencing Traffic Increases
А	2,300	240	330	Madison Avenue
В	4,200	410	560	Madison Avenue, Lark Street, S. Lake Avenue Neighborhood Streets
С	5,300	615	530	Madison Avenue, Lark Street, S. Lake Avenue Neighborhood Streets
D	9,700	1,055	1,060	All area roadways

As shown in the table, the circulation alternatives will result in decreases in traffic through Washington Park, with increases on the surrounding area roadways. Specifically, restrictions to the segment of Washington Park Road parallel to Madison Avenue are expected to result in increased traffic volumes on the neighboring roadways, primarily on Madison Avenue, while more extensive restrictions in the park will cause diversions with impacts to Lark Street, and S. Lake Avenue in the immediate area, and neighborhood streets. Further review of regional traffic volumes indicates that under Alternative D, traffic diversions will be more extensive, resulting in impacts to the local roadways within the Washington Park area, but also other routes in and out of the City such as Holland Avenue and New Scotland Avenue. Based on the potential for widespread impacts that extend beyond the study area, it was determined that Alternative D is not feasible at this time.

Accounting for the above diversions, traffic analysis of the potential circulation alternatives was performed using Synchro Software which automates the procedures contained in the *Highway Capacity Manual*. It is noted that intersection level of service (LOS) was limited to the major intersections adjacent to Washington Park which are expected to experience increases in traffic volumes resulting from the proposed circulation changes. The results of the LOS analysis are summarized in Table 3.2.





Table 3.3 Circulation Alternative LOS Summary

			AM Pea	ak Hour			PM Pea	ak Hour	
Intersection	Intersection		Alt A	Alt B	Alt C	Existing	Alt A	Alt B	Alt C
New Scotland/Wash Park/Mad Ave	dison								
Madison Ave EB Madison Ave WB	L TR L	A (7.9) D (43.8) C (32.1)	 E (61.6) E (75.1)	 D (48.7) D (39.8)	 F (152) C (28.3)	B (16.7) D (46.1) B (14.2)	 E (68.7) B (16.4)	D (42.9) B (14.0)	 D (46.6) B (11.6)
New Scotland Ave NB	TR [T] L	B (16.8) D (38.3)	 B (11.7) C (31.3)	 B (12.8) E (75.5)	 A (2.4) E (60.5)	C (24.1) E (55.1)	 B (14.6) D (35.7)	B (17.9) F (91.2)	 A (7.2) C (30.6)
Washington Park SB Overall	TR [R] LTR	D (40.5) E (74.1) D (43.3)	B (19.6) F (85.0) D (54.0)	 C (21.1) E (76.8) D (47.4)	B (13.8) E (67.0)	D (54.3) C (31.8) D (39.4)	C (24.3) D (42.0) D (40.2)	E (59.9) C (31.6) D (41.7)	C (34.9) C (27.8)
Willett/Wash Park/Madison A	VP.	2 (13.3)	D (3 1.0)	5 (17.1)	2 (07.0)	5 (33.1)	D (10.2)	5 (12.7)	C (27.0)
Madison Ave EB	L T	A (7.4) B (12.0)	A (1.0) A (0.7)	A (6.7) B (14.0)	B (15.1) A (8.4)	A (9.5) B (11.4)	A (2.8) A (0.6)	A (5.7) B (13.8)	E (55.2) A (8.4)
Madison Ave WB Washington Park SB	TR LR	B (15.6) C (28.6)	A (1.8) 	B (15.1) C (28.6)	C (27.7)	B (15.9) C (28.4)	A (3.7) 	C (20.5) C (28.4)	C (31.0)
	[L] [R]				E (67.0) E (68.3)				E (59.1) C (33.4)
Overall	. ,	B (16.6)	A (1.2)	B (17.1)	C (34.1)	B (16.5)	A (2.5)	B (19.3)	D (36.4)
Delaware/Lark/Madison Ave	-								
Madison Ave EB	L T	C (25.6) C (29.4)		D (38.3) D (35.9)		C (23.6) C (23.5)		D (42.4) C (29.1)	
Madison Ave WB Delaware Ave NB	R LTR L	D (36.9) E (63.7) B (19.3)		D (48.4) E (63.0) B (15.3)		C (22.9) E (58.8) C (22.8)		C (29.9) E (57.9) B (17.9)	
Lark St SB Overall	TR LTR	B (16.5) D (40.0) D (36.0)		B (14.7) C (34.1) D (37.2)		C (20.4) D (43.9) C (34.4)		B (18.2) D (37.9) C (34.6)	
Washington/Lark	-	2 (30.0)	Same as	2 (07.2)	Same as	0 (0)	Same as	0 (00)	Same as
Washington Ave EB Washington Ave WB	LT,TR L T	C (30.6) A (4.7) A (6.0)	Existing.	C (30.6) A (4.7) A (6.0)	Existing.	E (69.3) B (11.3) B (15.0)	Existing.	E (69.3) B (11.3) B (15.0)	Existing.
Lark St NB	TR L TR	A (5.4) C (29.1) D (44.5)		A (5.4) D (37.0) D (44.5)		B (14.8) D (46.0) D (49.9)		B (14.8) F (212) D (49.9)	
Lark St SB Overall	L TR	D (36.4) C (32.1) C (27.1)		D (36.4) C (33.7) C (28.2)		D (38.4) E (55.9) D (41.1)		D (38.4) E (55.9) E (61.4)	

The analysis indicates that the existing roadway network generally operates near capacity under current traffic conditions, and is not well suited to accommodate circulation changes in Washington Park. Specifically, traffic diversions to Madison Avenue and Lark Street will result in additional vehicle delay and queuing impacts with multiple approaches operate at LOS E/F.

In addition to the above level of service analysis, additional factors were considered for each circulation alternative including the extent to which the proposed modifications honor the historic nature of





Washington Park, ability to accommodate emergency vehicles to/from the area hospitals, ability to accommodate special event traffic, and potential parking impacts. In general, the proposed circulation alternatives are in conflict with the original design of Washington Park which was intended to promote free circulation in order to enjoy the park atmosphere. Likewise, while the one-way alternatives maintain emergency vehicle access to the area hospitals, they limit the ability for planned traffic diversions during special events on Lark Street. Similarly, the closure alternatives will have negative impacts for emergency vehicles as well as result in a reduction in available parking.

In addition to the above circulation alternatives, additional circulation concept submitted by the public were reviewed and evaluated. Figure 3.1 shows a concept that is largely similar to the one-way concept assessed in Alternative B. However, the concept includes several additional proposed one-way changes that would restrict access to Hudson Avenue, Willett Street, and Lancaster Street. Based on the potential for this concept to increase overall vehicle circulation and restrict local access to the neighborhood, the less restrictive one-way alternatives were identified as preferable means to achieve the same goals. It is noted that while numerous combinations of one-way configurations and road closures could have been considered, the above circulation alternatives were identified based on their potential to result in major changes and reduce traffic volumes in Washington Park.

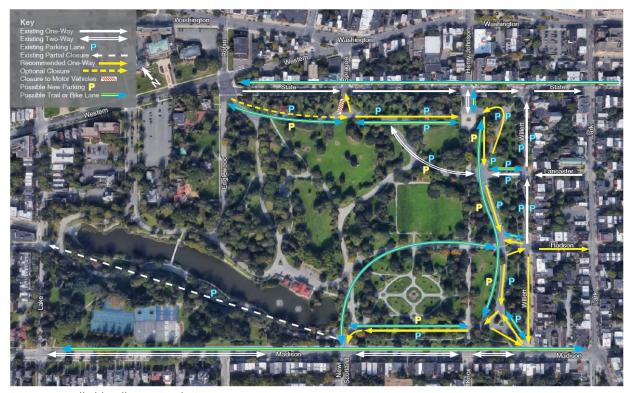


Figure 3.1 Walkable Albany Circulation Concept

Standalone Circulation Options

Based on the above alternatives analysis and input from residents, an additional concept was developed to assess standalone circulation options. The intent of this concept is to improve pedestrian access to Washington Park at key locations without impacting the overall transportation network. As such, these





options could be implemented on their own, or in any combination. Elements of the concept are shown below in Figure 3.2 and include closing the Lancaster Street and Sprague Place Washington Park entrances, as well as the roadway segment south of the Washington Park Lake to vehicular traffic. The standalone options also include removal of the eastbound approach to Henry Johnson Boulevard in front of the Soldiers and Sailors monument and converting the park road adjacent to the playground to one-way westbound.



Figure 3.2 Standalone Circulation Concept

An assessment of the standalone circulation option indicates that as a whole, they would result in minor traffic diversions (approximately 50 vehicles or less), all of which could be accommodated by the existing roadway network. Likewise, the proposal to close the Sprague Place and Lancaster Street park entrances honors the historic nature of the park since these entrances were not included as carriageways in the original park design. While the standalone circulation options will not result in negative impacts to emergency vehicles or the ability to accommodate special event traffic, it is noted that the changes as shown would result in a decrease of available parking spaces.

Although the standalone circulation concept includes a proposal to convert the segment of Washington Park Road adjacent to the playground to one-way westbound, this improvement is heavily dependent on the future roadway design. Specifically, while converting the road to one-way traffic may result in a pedestrian improvement and reduce pedestrian-vehicle conflicts, there is potential for increased vehicle speeds on a wide one-way roadway. As such, the one-way option should only be progressed in conjunction with other design elements that can reduce vehicle speeds such as roadway narrowing or allowing parking on both sides of the roadway. As such, the final design will be contingent on future engineering and planning analysis.



Figure 3.3 below summarizes the evaluation of the circulation alternatives.

	Evaluation of Options							
Negative	Standalone	А	В	С	Close Washington Park Road All Park Roads			
Neutral	Circulation Options	One-Way Willett Street to	One-Way Washington Park Road	Close Washington Park Road				
Positive		New Scotland Avenue	State Street to New Scotland Avenue	Willett Street to New Scotland Avenue				
Alternative Performance Measure								
Reduce Traffic Volumes in Park	• • 0 0 0	• 0 0 0 0	• • • • •	• 0 0 0 0	• • • • •			
Improve Bicycle & Pedestrian Access	• • • • •	•0000	• • • • •	• 0 0 0 0	• • • • 0			
Maintain Overall Traffic Operations & Minimize Impacts to Neighborhoods	• • • •	• • • 0 0	• • • • •	• 0 0 0 0	00000			
Honor Historic Character of Park	• • • 0 0	• • 0 0 0	• • • • •	••000	• • • • •			
Accommodate Emergency Vehicles	• • • • •	• • 0 0 0	• • • • •	• • • • •	00000			
Accommodate Lark Street Events	• • • •	••000	• 0 0 0 0	• • • • •	• 0 0 0 0			
Minimize Parking Impacts in Park	• • 0 0 0	• • • • 0	• • • • •	• • • • •	• 0 0 0 0			
Washington Park Area Complete Streets Study Washington Park Area Complete Streets Study								

Figure 3.3 Evaluation of Circulation Alternatives





Intersection Modification Concepts

While the above circulation alternatives considered the potential to remove traffic from Washington Park, modification of the existing intersections in and around the park was also identified as a means to reduce pedestrian-vehicle conflicts and improve pedestrian comfort. Figure 3.4 shows the location of potential intersection modifications detailed further in this section.



Figure 3.4 Intersection Modification Index Map



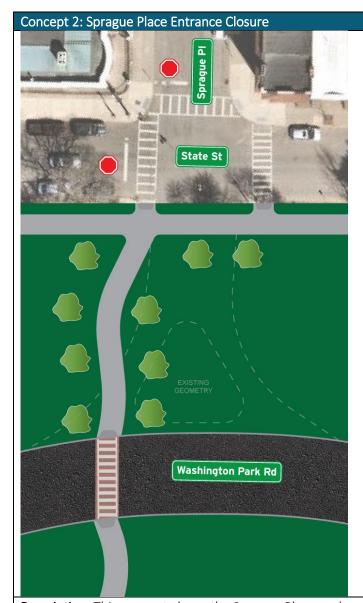


Description: This concept reconfigures the Englewood Place park entrance to separate the Englewood Place and State Street approaches from the Western Avenue approaches. Specifically, the eastbound slip lane from Western Avenue to State Street/Englewood Place/ Washington Park would be removed, simplifying the Western Avenue/Washington Park intersection to a traditional four leg intersection. The new Englewood Place/State Street intersection would operate under stop sign control on the Englewood Place approach.

Pros: Reduces the pedestrian crossing distance and minimizes conflicts from turning vehicles. May result in improved vehicle operations due to shorter pedestrian clearance intervals and simplified signal phasing.

Cons: Parking reduction (approximately 10 spaces).



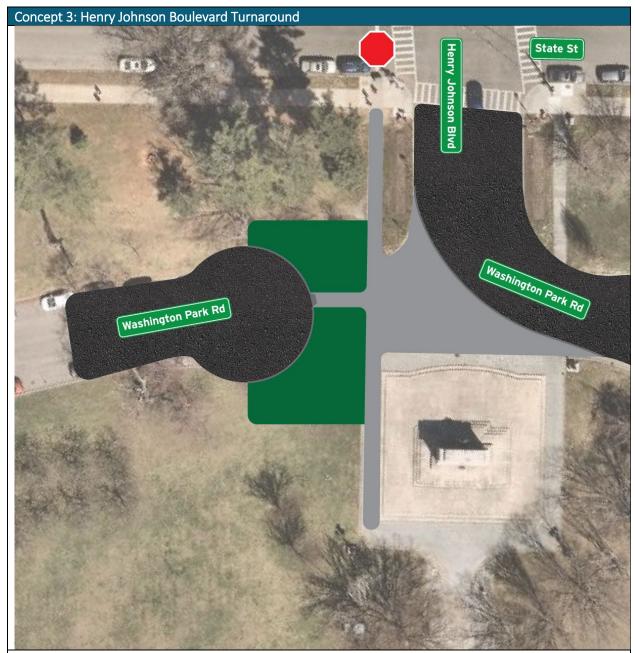


Description: This concept closes the Sprague Place park entrance to vehicle traffic and adds a path connection from the existing State Street/Sprague Place intersection to the playground area, including a raised crosswalk across Washington Park Road.

Pros: Restores the historic park design which did not include a carriageway at Sprague Place. Minimizes vehicle conflicts and improves pedestrian access to the playground area. Calms traffic within Washington Park.

Cons: Minor traffic diversions to State Street and Western Avenue.





Description: This concept closes the eastbound approach at the Henry Johnson Boulevard/Washington Park Road intersection to vehicular traffic. The concept realigns Henry Johnson Boulevard around the monument to calm traffic and creates a turnaround internal to the park to maintain existing parking.

Pros: Minimizes vehicle-vehicle and vehicle-pedestrian conflicts by eliminating the eastbound approach.

Cons: Minor parking impacts (approximately two spaces)



Concept 4: Lancaster Street Entrance Closure







Description: This concept proposes to close the Lancaster Street entrance to Washington Park to vehicular traffic. Alternative A maintains the existing alignment of Lancaster street and incorporates a turnaround with paths on either side of the road. Alternative B realigns Washington Park Road to create a three-leg stop controlled intersection that incorporates the Knox Street Mall into the third leg. Alternative C maintains the existing roadway alignment and traffic signal.

Pros: Restores the historic park design which did not have a carriage entrance at Lancaster Street. Improves pedestrian access to Washington Park by minimizing vehicle conflicts..

Cons: Minor traffic diversions on Lark Street.



Concept 5: Hudson Avenue Triangle



Description: This concept converts the entering and exiting legs of the Hudson Avenue triangle to one-way traffic with curb extensions to narrow the roadway and calm traffic, while maintaining two-way traffic on the primary park roadway. Similar concepts may be implemented at other park entrances that currently have excess pavement, such as the Lake Street entrance.

Pros: Reduces confusion at the existing triangle. Minimizes vehicle-pedestrian conflicts and calms traffic entering Washington Park.

Cons: Parking reduction (approximately 10 spaces).





Concept 6: Willett Street Triangle



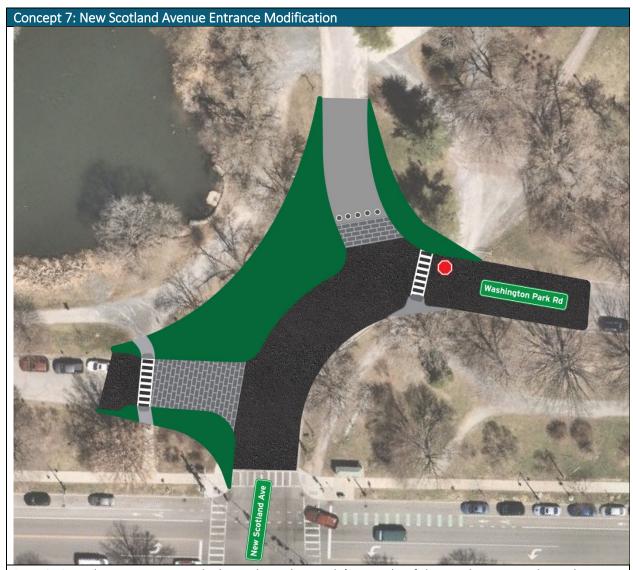


Description: This concept simplifies traffic flow around the triangle by converting some or all of the legs to one-way. Option A provides one-way traffic flows around the entirety of the triangle island, operating similar to a traditional roundabout while Option B is similar to the Hudson Avenue concept above.

Pros: Minimizes vehicle-pedestrian conflicts and calms traffic entering Washington Park.

Cons: Parking reduction (approximately 10 spaces).





Description: This concept extends the curb on the north/west side of the Washington Park Road approach to Madison Avenue in order to better define pedestrian and vehicle space along the curve. The concept also includes a curb extension and marked crosswalk on the westbound stop controlled Washington Park Road approach.

Pros: Minimizes vehicle-pedestrian conflicts and calms traffic entering Washington Park. Increases pedestrian visibility and improves access to the interior of Washington Park.

Cons: None.





Description: This concept provides an enhanced pedestrian crossing on the west leg of the Madison Avenue/Knox Street intersection including curb extensions on the north and south sides of Madison Avenue and a raised pedestrian refuge island in the center of the street.

Pros: Reduces out of direction pedestrian travel by providing a crossing that does not currently exist.

Cons: Parking reduction (approximately four spaces).





Description: This concept reconfigures the Madison Avenue/Willett Street intersection to remove the split approach on the north leg of the intersection and extend the northeast curb to create channelized access to Willett Street from a new drive aisle within Washington Park.

Pros: Reduces the pedestrian crossing distance and minimizes conflicts from turning vehicles. May result in improved vehicle operations due to shorter pedestrian clearance intervals.

Cons: Parking reduction (approximately seven spaces).







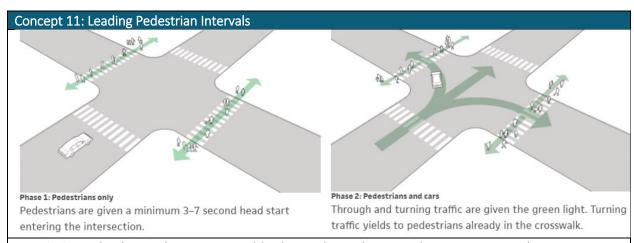
Description: This concept proposes curb extensions at the Madison Avenue/Lark Street/Delaware Avenue intersection.

Pros: Improves pedestrian comfort by reducing pedestrian crossing distances and enhancing pedestrian visibility.

Cons: None.

Conclusion: This alternative was accepted.





Description: A leading pedestrian interval (LPI) provides pedestrians the opportunity to begin crossing before vehicle traffic gets a green light. This concept proposes LPIs at the Madison Avenue/Willett Street and Madison Avenue/Lark Street/Delaware Avenue intersections.

Pros: Improves pedestrian visibility and reinforces pedestrian right of way over turning vehicles. LPIs are a proven safety measure per FHWA guidance.

Cons: Approximate 10-20 seconds of additional vehicle delay. Precludes major circulation changes within Washington Park.

Conclusion: This alternative was accepted.





Description: This concept proposes the addition of pedestrian countdown timers at the Washington Avenue/Henry Johnson Boulevard intersection.

Pros: Creates a more predictable crossing environment and gives information to pedestrians attempting to cross. Increases pedestrian compliance.

Cons: None.

Conclusion: This alternative was accepted.

Traffic Calming Concepts

In addition to the above treatments, several traffic calming elements can be incorporated into the Washington Park roadways in order to promote pedestrian safety and comfort. Specifically, offset curb extensions, known as chicanes, can be incorporated on the segment of Washington Park Road between State Street and Madison Avenue in order to introduce a horizontal shift that slows traffic speeds. Similarly, vertical traffic calming elements such as raised intersections and crosswalks are an effective method of slowing traffic and enhancing pedestrian visibility in order to promote pedestrian safety. Other vertical elements such as street trees also provide a traffic calming effect by altering drivers' perceptions of the roadway. Figure 3.5 shows how these traffic calming elements can be incorporated into Washington Park.





Figure 3.5 Washington Park Traffic Calming Elements

Service Entrance Treatments

Public input indicated that the existing vehicle restrictions on the internal Washington Park roads are often disregarded, and as such, there is an opportunity to improve compliance. Specifically, the existing service entrance design utilizes bollards with a chain to restrict access to these internal roadways while allowing service vehicles to pass through when needed. However, the current chain and bollard system is cumbersome, with reports of staff and the general public circumventing it or driving around it. In order to remedy the above issues, a typical service entrance design treatment was developed as shown in Figure 3.6.

The design includes a reduced radius at these entrances, and textured pavement to differentiate between roadways open to the general public and service roadways with restricted access. The concept also includes new barriers and landscaping set back from the roadway to further enforce compliance with the internal roadway restrictions while still allowing maintenance access for authorized vehicles. It is noted that the design of these barriers will be sensitive to the historic park context. Likewise, the specific type of barrier (i.e. gates,

bollards, chains) and operation (i.e. manual or mechanical) will be determined during a future design phase and will consider

Figure 3.6 Service Entrance Treatment

technical elements such as the need for power. Additional elements such as mountable curb may be considered during design to further differentiate the service entrances from general access roadways.





Traffic Signal Removals

The existing conditions assessment showed that several study area signals are older and lacking pedestrian accommodations, and should be considered for removal, or upgraded if they meet one of the Traffic Signal Warrants contained in the National Manual on Uniform Traffic Control Devices (NMUTCD). As per the National MUTCD (Section 4B.02), "if changes in traffic patterns eliminate the need for a traffic control signal, consideration should be given to removing it and replacing it with appropriate alternative traffic control devices." Similarly, according to the National Association of City Transportation Officials, (NACTO) "Signalization is not always the best option for a given intersection. Stop or yield control may be preferable at intersecting local or residential streets." The signals in question are generally located at lower volume intersections and were considered for removal as discussed below.

The existing traffic conditions and physical characteristics of the intersections were compared to signal warrant criteria contained in the NMUTCD, published by the Federal Highway Administration (FHWA) to determine if existing traffic conditions warrant a traffic signal. The NMUTCD specifies the minimum criteria that must be met in order for a traffic signal to be justified. The satisfaction of a signal warrant in itself is not necessarily justification for a traffic signal. Other engineering and operational factors must be considered. The NMUTCD contains eight warrants, four of which were applicable and evaluated in detail:

- Warrant 1 Eight-Hour Vehicular Volume This warrant is satisfied if for any eight hours of an average day the traffic volumes for Condition A or Condition B specified in Table 4C-1 of the NMUTCD are met for the main arterial and the higher volume side road approach to the intersection.
- Warrant 2 Four-Hour Vehicular Volume This warrant is met when for any four hours of an average day, points plotted on the graph presented on Figure 4C-1 of the NMUTCD fall above the appropriate curve.
- <u>Warrant 3 Peak Hour</u> This warrant is met when for any one hour of an average day, points plotted on the graph presented on Figure 4C-3 of the NMUTCD fall above the appropriate curve.

Table 3.4 – Summary of Signal Warrant Analysis

	Existing Volumes (Peak Hour)		Signal War	Signal Warrants Met?			
Intersections	Main	Side	#1	#1		#3	
			Cond. A	Cond. B	#2	#3	
Dove St – Chestnut St	138	64	No	No	No	No	
Dove St – Hudson Ave	113	68	No	No	No	No	
Lake St – Hudson Ave	524	42	No	No	No	No	
Willet St – Hudson Ave	78	40	No	No	No	No	
Willet St – Lancaster St	75	58	No	No	No	No	
Sprague Pl – State St	145	42	No	No	No	No	
Required Volumes	Two Lane Major Street		500	750	See Figure	See Figure	
	Two Lane Minor Street		150	75	4C-1	4C-3	
Overall Warrant Met?			No	No	No	No	





The assessment shows that none of the six intersections studied meet any of the applicable traffic signal warrants, and that the traffic signals can be removed. Further study will be needed by the City to address any sight distance issues and confirm the alternative traffic control – ie All-way Stop, or two-way Stop. Bump-outs can be considered to mitigate sight distance issues. It is noted that in addition to the above warrants, the NMUTCD allows for engineering judgement in the decision to remove or maintain an existing traffic signal. Therefore, the City should consider additional factors such as pedestrian benefits and the park setting prior to removing the above signals.

Public Feedback on Alternatives

In winter 2021-2022, the above analysis and concepts were presented to the stakeholder groups, advisory committee, and technical committee over the course of several meetings. The purpose of these meeting was to update these groups about the preliminary concepts developed for the study area, and to discuss and determine which features are desirable. The meetings began with a brief presentation to provide an overview of the design concepts developed for this planning study, followed by a facilitated discussion on the pros and cons of each design concept in which meeting attendees were asked to provide input, ask questions, and offer comments. In general, the stakeholder groups and committees were supportive of the proposed concepts and were eager to see them progressed to a final comprehensive design that could be implemented by the City in the future. The following summarizes the general feedback from the stakeholder groups:

There is mixed support for changing vehicle circulation in Washington Park. Feedback received through the stakeholder groups indicated that about half of the stakeholders favor large scale closures and one-way traffic flows in Washington Park while the other half is generally opposed. There was greater support for the standalone circulation alternative which achieves many of the study goals with less of an overall change to Washington Park. Many stakeholders recognize the need to maintain emergency access to the area hospitals and that changes to circulation could have negative impacts. Likewise, the stakeholders agreed that closures and diversions will cause undesirable diversions into the adjacent neighborhoods.

There is widespread support for traffic calming in Washington Park. The stakeholders support context sensitive traffic calming measures, such as raised crosswalks, to improve pedestrian access. Traffic calming elements were particularly well received in the playground area. Implementing these traffic calming measures can change the nature of the park roads to make them less desirable as a through route, without prohibiting traffic.

Design of potential improvements needs to honor the historic nature of Washington Park. The stakeholders noted that there is a need to avoid introducing numerous traffic signs and pavement marking in Washington Park. The recommended improvements should consider the park context.





In addition to the input provided by the stakeholder groups, a "Join at Your Own Pace" online public workshop was held to provide the public an opportunity to review the material and provide further comment. The online presentation was available for review and public comment on the study website from July 27, 2022 to August 31, 2022. During this period, 381 individuals watched the recording and 158 submitted responses to the online survey. In general, survey respondents indicated that they like that the draft recommendations address pedestrian safety and promote traffic calming within the park, with approximately 25 percent of respondents indicating that they liked everything included in the draft recommendations. Survey respondents indicated that they disliked that the draft recommendations maintain vehicles in the park and did not include bicycle facilities. When asked to improvements, respondents ranked closing the road south of Washington Park Lake to vehicle traffic

Public Comment Period Open

Traffic Engineering invite residents, businesses, and community via a survey for the Washington Park Area Complete Streets for all users of Washington Park.

Introduction

enable safe, convenient, and comfortable travel/access for users of all ages and abilities regardless of their mode of transportation.

Study Objective

- that honor the historical nature of Washington
- the study area.
- Consider mobility and access for park use
- abilities including pedestrians, bicyclists, motorists, emergency access, parking impacts, and special eve
- Draft Report
- Draft Executive Summary



"Join at Your Own Pace" public Workshop



highest, followed by improvements to the park entrances at New Scotland Avenue, Madison Avenue /Willett Street, and Englewood Place. The recommendation to construct a turn-around at the Henry Johnson park entrance was ranked least favorably.

Twenty two written comments were also received from various stakeholders and members of the public to provide input on the draft recommendations. In general, these remarks supported the traffic calming recommendations included in the draft report and offered a number of design related comments to ensure that the implementation of the recommendations achieves the desired goals of promoting pedestrian safety and traffic calming. Other common themes from the written comments include concerns about maintaining traffic in Washington Park, removing parking, and emergency vehicle access through the park.





Chapter 4. Conclusions and Recommendations

The Washington Park Area is a vibrant historic district within the City of Albany that is centrally located between area highways and major trip generators within the City. As such, the Park experiences traffic conditions that are incompatible with its original intent. A fundamental objective of this study was to minimize the negative effects of traffic in the study area while honoring the historic nature of Washington Park. The technical studies show that incorporating a number of enhancements will calm traffic in the Park and support the City's efforts to balance the competing needs of all park users, without diverting significant traffic volumes into adjacent neighborhoods.

Recommendations

The overall study recommendations are shown on Figure 4.1 and are described in further detail below. The following descriptions begin at the northwest corner of Washington Park and continue from east to west and are not in priority order. The numbering corresponds to the east to west convention on Figure 4.1.

- Beginning at the Washington Avenue/Henry Johnson Boulevard intersection, the study recommends adding pedestrian countdown timers to the existing traffic signal in order to improve pedestrian access between Washington Park and the Arbor Hill Neighborhood.
- In the northwest quadrant of Washington Park, reconfiguring the Englewood Place entrance will reduce vehicle-pedestrian conflicts, shorten crossing distances, calm traffic, and improve pedestrian access to and from Washington Park.

Continuing east within Washington Park, a raised crosswalk will enhance the existing marked

- crosswalk, calming traffic and providing enhanced pedestrian visibility. This raised crosswalk will function in coordination with the proposed crosswalk at the Sprague Place entrance as described below. The final design and location of these crosswalks will be coordinated with the Park's playground project. Likewise, this segment of Washington Park Road could be converted to oneway westbound traffic if design elements are incorporated to narrow the roadway such as moving curbs or adding two-sided parking.
- The study recommends closing the Sprague Place Washington Park entrance to vehicular traffic, consistent with the original park design. This will reduce the number of conflict points and improve pedestrian access to the playground area.
- Continuing east, the study recommends evaluating options to reduce pedestrian-vehicle conflicts, including removing the west leg of the Henry Johnson Boulevard/Knox Street Mall intersection. The Park entrance at Henry Johnson Blvd and near the Soldiers and Sailors Monument could incorporate gateway features to slow traffic and convey to motorists that they are entering a park setting.





- The study recommends closing the Lancaster Street Washington Park entrance to vehicular traffic, consistent with the original park design. The Lancaster Street/Washington Park Road intersection should also be reconfigured to calm traffic and incorporate pedestrian crossings. Several concepts were evaluated here, and the three-legged Y-shaped intersection operating under all-way stop control is preferred.
- Continuing south, a two chicanes are recommended (one each north and south of the Hudson Avenue park entrance) to calm traffic and bring speeds down to match the surrounding park context. Likewise, planting additional trees adjacent to the roadway will further calm traffic on this segment.
- At the Hudson Avenue entrance, it is recommended that the minor triangle approaches entering and exiting the park be narrowed through the use of curb extensions and operate as one-way traffic while maintaining two-way traffic on the primary Park road. Likewise, a raised crosswalk across the Washington Park Road will improve pedestrian visibility and access to the park interior. A similar entrance treatment may be implemented at the Lake Avenue entrance, pending further design.
- South of the Washington Park Lake, it is recommended to close the lake road to vehicle traffic to promote pedestrian and bicycle access around the lake.
- At the New Scotland Avenue park entrance, the study recommends extending the curb to calm traffic entering the park and better define pedestrian space. A curb extension and crosswalk will also improve access to the interior of the park.
- Continuing east, constructing an enhanced pedestrian crossing, including curb extensions and a refuge island, on Madison Avenue at the Knox Street intersection will improve pedestrian access to Washington Park by enhancing pedestrian comfort and visibility.
- Similar to the Madison Avenue/Knox Street treatment, curb extension and a raised crosswalk should be implemented on the internal park roadway at the Knox Street mall.
- The study recommends modifying traffic flow around the triangle at the Willett Street entrance to create a one-way traffic flow, similar to the Hudson Avenue concept, in order to calm traffic and reduce conflicts in the confusing area.
- South of the triangle, modifications to the Madison Avenue/Willett Street intersection are recommended to shorten the pedestrian crossing distance, minimize conflict points, and improve access to the park. Similar to the Henry Johnson entrance, gateway features will be explored during design to establish the Park entrance differently than a City Street.
- This study supports the recommendations for curb extensions at the Madison Avenue/Lark Street/Delaware Avenue intersection as proposed in the Lark Street Improvement Study.





- In addition to the above recommendations, the study recommends a typical service entrance treatment to be included at all locations within Washington Park where motor vehicle access is restricted to the general public but maintained for service and special event access.
- Several older unwarranted traffic signals are recommended for removal. The new traffic control (All-way stop or two-way stop), and the need for curb extensions/bump-outs to mitigate sight distance issues require further study. The six signals to be removed included:
 - Dove St Chestnut St
 - Dove St Hudson Ave
 - Lake St Hudson Ave
 - Willet St Hudson Ave
 - Willet St Lancaster St
 - Sprague Pl State St

The study recommendations as shown are conceptual in nature and may vary significantly from final design. As noted above, it is important that the implementation of these recommendations give careful consideration to the historic characteristic of Washington Park. Therefore, the City should work with a historic landscape architect to ensure that the final design is in harmony with the park aesthetic. To this end, signage and pavement markings should be minimized to the extent possible, recognizing that certain traffic control will be needed for raised crosswalks, stop signs, and one-way traffic patterns. Likewise, park entrances should receive particular attention to create a welcoming gateway for visitors that is in line with the adjacent park context.

Implementation and Funding

This study recommendations range from relatively low cost short and mid-term improvements that could be implemented within approximately one and a half to two years, including traffic calming elements such as raised crosswalks and curb extensions, and modification to traffic control, to longer term projects such as intersection reconfiguration. The City should work proactively to identify local funding. Private funding through cooperative arrangements, site plan approval and SEQR mitigation should also play a role. The following table (4.1) summarizes the estimated costs, including design and construction inspection.





Table 4.1 Implementation Plan and Costs

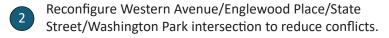
Description	Estimated Cost*	
1. Install Pedestrian Countdown Timers	\$15,000	
2. Western Avenue/Robin Street/State Street/ Washington Park Intersection Reconfiguration	\$625,000	
3. Raised Crosswalk	\$70,000	
4. Sprague Place Entrance Modification	\$280,000	
5. Henry Johnson Boulevard Entrance Modification	\$380,000	
6. Lancaster Street Entrance Modification	\$625,000	
7. Washington Park Road Chicanes	\$450,000	
8. Hudson Avenue Triangle Modification	\$325,000	
9. Washington Park Lake Closure	\$105,000	
10. New Scotland Avenue Entrance Modification	\$95,000	
11. Madison Avenue/Knox Street Pedestrian Crossing	\$205,000	
12. Washington Park Road/Knox Street Mall Pedestrian Crossing	\$90,000	
13. Willett Street Triangle Modification	\$345,000	
14. Willett Street Entrance Modification	\$515,000	
15. Madison Avenue/Lark Street/Delaware Avenue Curb Extensions	\$140,000	
S. Redesign Service Entrances	\$600,000	
G. Traffic Signal Removals	\$135,000	

^{*}Estimates are in 2022 dollars and will need to be adjusted for inflation and does not include consideration of NEPA requirements

In conclusion, implementation of the study recommendations will calm traffic in the park while providing good overall multi-modal traffic operations in the study area.







- Construct raised crosswalk to calm traffic on the segment of park road adjacent to the playground.
- Close Sprague Street park entrance to vehicle traffic. Construct raised crosswalk and path connection.
- Evaluate options to reduce pedestrian-vehicle conflicts, including removing the west leg of the Henry Johnson Boulevard/Knox Street Mall intersection.
- Close Lancaster Street park entrance and reconfigure the Washington Park Road intersection as a raised stop controlled Y-shaped intersection.
- Construct chicanes and plant additional street trees on Washington Park Road to calm traffic.
- Reduce pavement on minor legs and convert to one-way.

 Include raised crosswalk on Washington Park Road.

- Close the road south of Washington Park Lake to vehicle traffic and provide enhanced crossing on Lake Street.
- 10 Extend the curb to calm traffic and better define pedestrian space.
- Construct an enhanced pedestrian crossing at the Madison Avenue/Knox Street intersection including curb extensions and pedestrian refuge island.
- Provide enhanced pedestrian crossing on the internal park roadway by adding a curb extension and raised crosswalk at the Knox Street mall.
- Reduce pavement width on the minor triangle approaches and convert to one-way traffic.
- Reconfigure the Madison Avenue/Willett Street intersection to shorten the pedestrian crossing. Add leading pedestrian interval.
- Construct curb extensions at Madison Avenue/Delaware
 Avenue/Lark Street intersection. Add LPI to traffic signal operation.
- Re-design service entrances to provide a consistent appearance with textured pavement and gates/ bollards to reduce unwanted access.
- Remove unwarranted traffic signals. Conduct further study to confirm all-way v.s. two-way stop control.



