Chapter 3
Transportation

NFTA-METRO

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Acronyms

ADA ..... Americans with Disabilities Act
BRT ..... Bus Rapid Transit
GBNRTC ..... Greater Buffalo Niagara Regional Transportation Council
GPS ..... Global Positioning System
FTA ..... Federal Transit Administration
LOS ..... Level of Service
LRT ..... Light Rail Transit
Metro ..... Niagara Frontier Transit Metro System, Inc.
Metro Rail ..... Metro Light Rail Transit System
NFTA ..... Niagara Frontier Transportation Authority
NYSDOT ..... New York State Department of Transportation
PAL ..... Paratransit Access Line
Project ..... Buffalo-Amherst-Tonawanda Corridor Transit Expansion
STOPS ..... Simplified Trips-On-Project Software
TSP ..... Traffic Signal Priority
UB ..... University at Buffalo
VMT ..... Vehicle Miles Traveled

3. Transportation

This chapter documents existing and planned transit and roadway improvements as well as pedestrian and bicycle facilities located along the Buffalo-Amherst-Tonawanda Corridor Transit Expansion (Project) alignment and presents potential benefits and impacts during operations of the Light Rail Transit (LRT) Build Alternative and the Bus Rapid Transit (BRT) Build Alternative compared with the No Build Alternative. The ability to mitigate those impacts is addressed where adverse impacts have been identified. Section 4.17, "Construction Effects," provides a separate analysis of temporary transportation impacts during construction of the LRT Build Alternative and the BRT Build Alternative. Table 3-1 summarizes the traffic impact findings related to the LRT Build Alternative, Table 3-2 summarizes the traffic impact findings related to the BRT Build Alternative, and Table 3-3 summarizes the remaining transportation impact findings related to both Build Alternatives.

For detailed information regarding the methodology and regulatory context used to evaluate transportation, see Appendix C1, "Traffic Technical Report."

Table 3-1. LRT Build Alternative Traffic Operational Impacts Summary

Traffic Operations	Alternative Impact Summary
No Build Alternative	
No Proposed improvements to signals or roadway operations included as part of the No Build Alternative	
No Project impacts or mitigation because of the No Build Alternative	
LRT Build Alternative (2040)	
Proposed Improvements Included as Part of the Build Alternative	▪ The existing unsignalized intersections of Niagara Falls Blvd at Ford Ave/Cambridge Blvd and John James Audubon Pkwy at Sylvan Pkwy are proposed to be signalized ▪ Traffic signal optimization across the Project alignment ▪ Twenty proposed traffic capacity improvements and investments (See Section 3.4.1.2)
Intersection Impacts Before Proposed Mitigation	▪ No adverse impacts during the weekday AM peak period ▪ Four intersections adversely impacted during the weekday PM peak period ▪ Five intersections adversely impacted during the Saturday midday peak period
Proposed Mitigation Strategies	▪ Proposed mitigation strategies include an investment in embedded track along Niagara Falls Boulevard and Maple Road that allows automobiles to make left-turn movements across the track alignment at designated locations ▪ Inclusion of a forecasted mode shift from automobile travel to the Project resulting in a reduction in vehicular volumes ▪ Project design for the LRT Build Alternative will include investments, as practical, in advanced signal technologies; improving traffic LOS
Impacts After Proposed Mitigation	▪ One intersection adversely impacted during the weekday PM peak period ▪ Impacts to existing driveways are anticipated, but are not expected to be adverse ▪ Impacts to existing local roadways as a result of traffic diversions are anticipated, but are not expected to be adverse

Table 3-2. BRT Build Alternative Traffic Operational Impacts Summary

Traffic Operations	Alternative Impact Summary
No Build Alternative	
No Proposed improvements to signals or roadway operations included as part of the No Build Alternative	
No Project impacts or mitigation because of the No Build Alternative	
BRT Build (2040)	
Proposed Improvements Included as Part of the Build Alternative	▪ The existing unsignalized intersections of Niagara Falls Blvd at Ford Ave/Cambridge Blvd and John James Audubon Pkwy at Sylvan Pkwy are proposed to be signalized ▪ Traffic signal optimization across the Project alignment ▪ Twenty proposed traffic capacity improvements and investments (See Section 3.4.1.2)
Intersection Impacts Before Proposed Mitigation	▪ No adverse impacts during the weekday AM peak period ▪ Three intersections adversely impacted during the weekday PM peak period ▪ Four intersections adversely impacted during the Saturday midday peak period
Proposed Mitigation Strategies	▪ Proposed mitigation strategies include an investment in the BRT Alternative along Niagara Falls Boulevard that allows automobiles to make left-turn movements across the alignment at designated locations ▪ Inclusion of a forecasted mode shift from automobile travel to the Project resulting in a reduction in vehicular volumes ▪ Project design for the BRT Build Alternative will include investments, as practical, in advanced signal technologies; improving traffic LOS
Impacts After Proposed Mitigation	▪ No adverse impacts during the weekday AM peak period ▪ Four intersections adversely impacted during the weekday PM peak period ▪ Four intersections adversely impacted during the Saturday midday peak period ▪ Impacts to existing driveways are anticipated, but are not expected to be adverse ▪ Impacts to existing local roadways as a result of traffic diversions are anticipated, but are not expected to be adverse

Table 3-3. Transportation Impacts Summary

Alternative	Transit	Parking	Pedestrian and Bicycles	Safety and Security
No Build Alternative	▪ No Adverse Impacts	▪ No Adverse Impacts	▪ No Adverse Impacts	▪ No Adverse Impacts
LRT Build Alternative	▪ No Adverse Impacts ▪ Benefits. – The LRT Build Alternative would expand high-quality transit including expanded paratransit services	The LRT Build Alternative would affect a minimal number of existing private parking spaces because of roadway widening along Niagara Falls Boulevard. Most of these affected parcels house commercial uses that have additional property that could be used for relocating affected spaces. – Metro will monetarily compensate those affected by these parking effects based on fair market value – The LRT Build Alternative would also invest in additional public parking at Project park-and-ride facilities	▪ No Adverse Impacts ▪ Benefits: – The LRT Build Alternative would enhance existing pedestrian and bicycle facilities sidewalks, crosswalks, bicycle lanes, and median refuge areas for pedestrians. – On-street bike lanes would be added to Niagara Falls Boulevard and Maple Road	▪ No Adverse Impacts ▪ Benefits: – The LRT Build Alternative would enhance vehicle, bicycle, and pedestrian safety provisions and minimize conflicts between automobiles, bicyclists, and pedestrians – The LRT Build Alternative is expected to have a greater reduction of traffic crash fatalities and injuries annually as compared to the BRT Build Alternative
BRT Build Alternative	▪ No Adverse Impacts ▪ Benefits: – The BRT Build Alternative would expand high-quality transit including expanded paratransit services	▪ The BRT Build Alternative would affect a minimal number of existing private parking spaces because of roadway widening along Niagara Falls Boulevard. Most of these affected parcels house commercial uses that have additional property that could be used for relocating affected spaces. – Metro will monetarily compensate those affected by these parking effects based on fair market value – The BRT Build Alternative would also invest in additional public parking at Project park-and-ride facilities	▪ No Adverse Impacts ▪ Benefits: – The BRT Build Alternative would enhance existing pedestrian and bicycle facilities sidewalks, crosswalks, bicycle lanes, and median refuge areas for pedestrians. – On-street bike lanes would be added to Niagara Falls Boulevard and Maple Road	▪ No Adverse Impacts ▪ Benefits: – The BRT Build Alternative would enhance vehicle, bicycle, and pedestrian safety provisions and minimize conflicts between automobiles, bicyclists, and pedestrians

3.1 TRAFFIC ANALYSIS

VISSIM[1] traffic simulation computer models were developed to analyze traffic operations and identify the LOS at the intersections under existing and future conditions with and without the LRT Build Alternative and the BRT Build Alternative. Appendix C1, "Transportation Technical Report," presents these analyses including existing and future traffic peak hour volumes. Existing traffic conditions were established using 2018 traffic counts at Project alignment intersections, as noted in Section 3.2.

3.1.1 Analysis Impacts of the COVID-19 Pandemic

The COVID-19 pandemic, began with an outbreak of COVID-19 in December 2019, spread worldwide in early 2020. The pandemic caused severe social and economic disruption around the world. Telework or remotely working at home became much more common as the pandemic evolved. This move toward telework dramatically reduced the number of automobile trips on roadways worldwide.

A comparison of 2018 and 2023 traffic volumes at ten intersections throughout the corridor was conducted. This comparison shows an average traffic volume reduction of 17% for all ten intersections in 2023 as compared to the 2018 volumes. This comparison is summarized in Table 3-4. Utilizing traffic volumes collected before the COVID-19 pandemic represents higher traffic volumes and a conservative approach to evaluating Project traffic impacts. As such, 2018 traffic volumes have been used within this traffic assessment.

Table 3-4. Traffic Volume Comparison Before and After the COVID-19 Pandemic (2018 versus 2023)

Intersections	2018 Total Intersection Volumes (AM and PM Peak)	2023 Total Intersection Volumes (AM and PM Peak)	Percent Difference Between 2018 and 2023
Niagara Falls Blvd. and Longmeadow Rd.	7,566	6,765	-12%
Niagara Falls Blvd. and Sheridan Dr.	14,853	11,538	-29%
Niagara Falls Blvd. and Almeda Ave.	8,583	6,711	-28%
Maple Rd. and Alberta Dr.	6,999	5,891	-19%
Maple Rd. and Bailey Ave.	10,304	9,100	-13%
Maple Rd. and Hillcrest Dr.	8,453	7,741	-9%
Maple Rd. and Sweet Home Rd.	12,984	11,797	-10%
John James Audubon Pkwy. And Rensch Rd.	5,065	4,085	-24%
John James Audubon Pkwy. and Forest Rd.	4,916	4,325	-14%
John James Audubon Pkwy and Gordon R Yaeger Dr.	2,783	2,557	-9%
Average Percent Difference of all Ten Intersections			**-17%**

[1] VISSIM is a traffic-flow software package that simulates vehicle interactions and models demand, supply, and behavior.

3.1.2 Level of Service Criteria

LOS is used to quantitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. LOS standards are based on the Highway Capacity Manual and use letters A through F, with LOS A being the best and LOS F being the worst, similar to academic grading. The average delay per vehicle is the primary basis for determining the LOS for individual lane groups (grouping of movements in one or more travel lanes), the overall approaches to each intersection, and the overall intersection itself. Metro coordinated with NYSDOT and Project stakeholders regarding LOS thresholds, and for this analysis a change in intersection LOS from LOS A, B, C, or D under the No Build Alternative to LOS E or F under the Build Alternative would result in an adverse Project impact.

3.1.3 Transit

The assessment of transit service provides an overview of the existing Metro Rail, as well as public bus routes operated by Metro and University at Buffalo (UB) Stampede bus routes, that intersect with or provide service along the Project alignment. Potential impacts to these services resulting from the LRT Build Alternative and the BRT Build Alternative are identified.

The Federal Transit Administration (FTA) Simplified Trips-On-Project Software (STOPS) model was used to forecast ridership for the LRT Build Alternative and the BRT Build Alternative. The STOPS model was developed, calibrated, and tested using travel characteristics from the GBNRTC regional planning model. The latest adopted 2050 population, employment, and educational enrollment forecasts provided by the GBNRTC and 2023 UB campus shuttle ridership data were used to determine potential ridership demand for the Project. Projected commuter travel times and transit supply were used as additional inputs to the model. Appendix C2, "Travel Demand Forecasting," provides a detailed summary of ridership forecasting.

3.1.4 Parking

Existing parking facilities along the Project alignment, existing Metro Rail park & ride facilities, and on-street parking in the study area were identified to assess the potential impacts related to the implementation of the Project. Data sources include field reconnaissance, available mapping, and data from parking facility owners, including Erie County, Metro, UB, and private entities.

3.1.5 Pedestrian and Bicycle

Many transit riders would access the new service by walking or bicycling, making these travel modes important to the overall success of the Project. Pedestrian and bicycle facilities along the Project alignment were identified to assess any potential impacts related to the implementation of the Project.

Metro referenced the NYSDOT Pedestrian Safety Corridor Evaluation (2019) for Niagara Falls Boulevard for pedestrian conditions. The evaluation includes a comprehensive pedestrian safety

plan for the Niagara Falls Boulevard corridor that extends from Kenmore Avenue in the south to the Erie-Niagara county line.

The Buffalo Bicycle Facility Master Plan Update (2016) and the GBNRTC Bicycle and Pedestrian Master Plan (2020) are referenced in this chapter's assessment of bicycle facilities. The GBNRTC Bicycle and Pedestrian Master Plan is a regional vision to create a safer and more effective bicycle and pedestrian network and includes existing bike lanes along Lee Road and Sweet Home Road and planned bike lanes along Maple Road. In addition, the Towns of Amherst and Tonawanda address pedestrian and bicycle enhancements within the study area in their respective comprehensive plans.

3.2 AFFECTED ENVIRONMENT

The major roadways within the Project study area include: Main Street (NY 5) Kenmore Avenue (CR 307), Niagara Falls Boulevard (US 62), Maple Road (CR 192), Sweet Home Road (NY 952T, CR 171), Rensch Road, Mary Talbert Way (formerly Putnam Way), Lee Road, and John James Audubon Parkway. A description of these roadways is provided in Appendix C1, Traffic Technical Report".

3.2.1 Traffic Operations

Metro developed VISSIM models to analyze existing condition (2018) traffic operations. Figure 3-1 shows the location of intersections that were included in the traffic operations analysis. Table 3-5 through Table 3-10 present the existing conditions of the overall LOS for intersections in the study area as well as the specific traffic movements that operate at LOS E or F during the weekday AM, weekday PM, and Saturday midday peak hours, respectively. During the AM peak period, all signalized intersections operate at an overall acceptable LOS (LOS D or better). A total of 11 individual movements operate at LOS E or F. During the PM peak, the intersection of Maple Road and Sweet Home Road operates at LOS E. A total of 31 movements operate at LOS E or F. During the Saturday midday peak hour, the intersection of Niagara Falls Boulevard and Brighton/Maple Road operates at LOS E. A total of 21 movements operate at LOS E or F. For a detailed description of the LOS for individual intersection movements refer to Appendix C1, "Transportation Technical Report."

Figure 3-1. Traffic Analysis Intersections

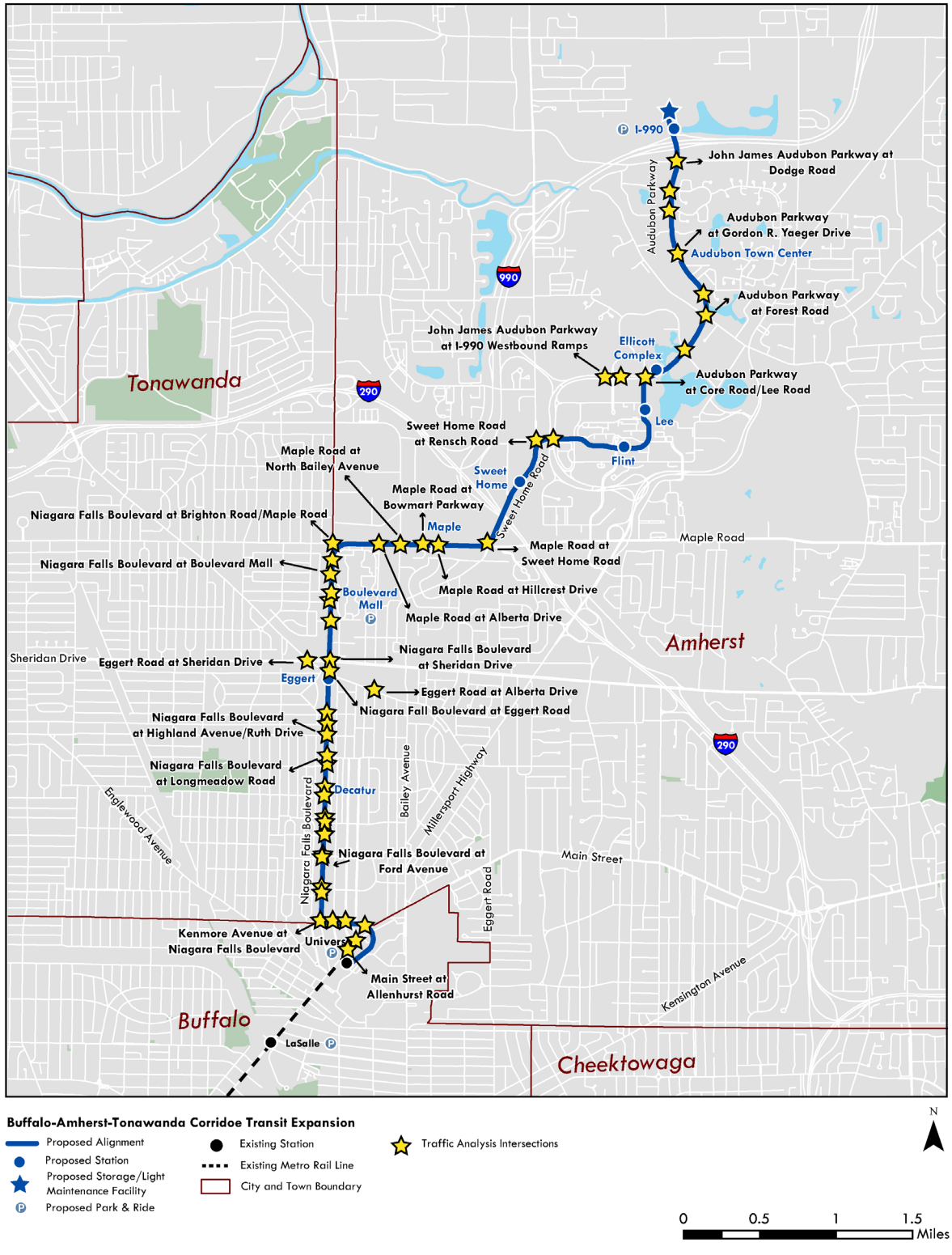


Table 3-5. Existing Conditions: Weekday AM Peak-Hour Levels of Service for Signalized Intersections

Intersection	Delay	Overall LOS	Traffic Movements at LOS E or F
Main St and Kenmore Ave	16.2	B	None
Kenmore Ave and Niagara Falls Blvd	28.4	C	Eastbound left
Niagara Falls Blvd and Decatur Rd	7.4	A	None
Niagara Falls Blvd and Longmeadow Rd	5.8	A	None
Niagara Falls Blvd and Eggert Rd	20.4	C	Northbound left and Westbound left
Niagara Falls Blvd and Sheridan Dr	30.7	C	Southbound left and Eastbound left
Niagara Falls Blvd and Treadwell Rd	10.5	B	Eastbound left
Niagara Falls Blvd and Mall Entrance	6.9	A	Westbound left
Niagara Falls Blvd and Brighton Rd/Maple Rd	30.9	C	None
Maple Rd and Alberta Dr	6.4	A	None
Maple Rd and Bailey Ave	17.6	B	None
Maple Rd and Bowmart Pkwy	5.0	A	None
Maple Rd and Hillcrest Dr	5.7	A	None
Maple Rd and Sweet Home Rd	28.7	C	None
Sweet Home Rd and Rensch Rd	22.3	C	None
John James Audubon Pkwy and Rensch Rd	16.3	B	None
John James Audubon Pkwy and Hamilton Rd	10.4	B	None
John James Audubon Pkwy and Frontier Rd	6.7	A	None
John James Audubon Pkwy and N Forest Rd	12.4	B	None
John James Audubon Pkwy and Gordon R Yaeger Dr	0.8	A	None
John James Audubon Pkwy and Dodge Rd	35.6	D	Westbound approach, left, through, and right
Eggert Rd and Sheridan Dr	25.3	C	None
Eggert Rd and Alberta Dr	34.1	C	None

Table 3-6. Existing Conditions: Weekday AM Peak-Hour Levels of Service for Unsignalized Intersections

Intersection	Delay	LOS	Worst Performing Approach
Main St and Allenhurst Rd	10.1	B	Eastbound
Main St and Capen Blvd	9.0	A	Eastbound
Kenmore Ave and Capen Blvd	15.8	C	Northbound
Kenmore Ave and Allenhurst Rd	11.8	B	Northbound
Niagara Falls Blvd and Kenilworth Ave	9.2	A	Eastbound
Niagara Falls Blvd and Princeton Ave	7.1	A	Westbound
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	10.3	B	Eastbound
Niagara Falls Blvd and Paige Ave	9.3	A	Eastbound
Niagara Falls Blvd and Oxford Ave	7.9	A	Westbound
Niagara Falls Blvd and Chalmers Ave	9.6	A	Eastbound
Niagara Falls Blvd and Yale Ave	7.9	A	Westbound
Niagara Falls Blvd and Lincoln Park Dr	8.6	A	Eastbound
Niagara Falls Blvd and Highland Ave/Ruth Dr	11.1	B	Eastbound
Niagara Falls Blvd and Harrison Ave	10.0	B	Eastbound
Niagara Falls Blvd and Betina Ave/Moore Ave	12.0	B	Eastbound
Niagara Falls Blvd and Franklin Ave/Rochelle Pl	7.5	A	Westbound
*John James Audubon Pkwy and Core Rd/Lee Rd	4.1	A	Eastbound
John James Audubon Pkwy and Sylvan Pkwy	7.7	A	Westbound
John James Audubon Pkwy and Bryant Woods S	8.6	A	Eastbound
John James Audubon Pkwy and Bryant Woods N	8.4	A	Eastbound
John James Audubon Pkwy and I-990 EB Off Ramp	15.4	C	Eastbound
John James Audubon Pkwy and I-990 WB Off Ramp	8.9	A	Westbound

Note: Level of service for unsignalized intersections was determined using the worst performing stop-controlled approach.
* Indicates an unsignalized roundabout intersection

Table 3-7. Existing Conditions: Weekday PM Peak-Hour Levels of Service for Signalized Intersections

Intersection	Delay	Overall LOS	Traffic Movements at LOS E or F
Main St and Kenmore Ave	15.0	B	None
Kenmore Ave and Niagara Falls Blvd	34.3	C	Southbound left, Eastbound approach, and Eastbound left
Niagara Falls Blvd and Decatur Rd	6.1	A	None
Niagara Falls Blvd and Longmeadow Rd	7.9	A	None
Niagara Falls Blvd and Eggert Rd	25.8	C	Northbound left and Westbound left
Niagara Falls Blvd and Sheridan Dr	36.1	D	Southbound left
Niagara Falls Blvd and Treadwell Rd	19.4	B	Northbound left and Westbound left
Niagara Falls Blvd and Mall Entrance	16.7	B	Northbound left, Eastbound left, and Westbound left
Niagara Falls Blvd and Brighton Rd/Maple Rd	44.9	D	Northbound left and Southbound left. Eastbound approach, left, and through. Westbound through.
Maple Rd and Alberta Dr	16.8	B	None
Maple Rd and Bailey Ave	46.7	D	Southbound left, through, and approach.
Maple Rd and Bowmart Pkwy	11.7	B	None
Maple Rd and Hillcrest Dr	5.2	A	None
Maple Rd and Sweet Home Rd	56.5	E	Northbound left, through, and approach. Southbound left, through, and approach. Eastbound left.
Sweet Home Rd and Rensch Rd	31.4	C	Northbound left
John James Audubon Pkwy and Rensch Rd	22.2	C	None
John James Audubon Pkwy and Hamilton Rd	9.5	A	None
John James Audubon Pkwy and Frontier Rd	9.4	A	None
John James Audubon Pkwy and N Forest Rd	15.4	B	None
John James Audubon Pkwy and Gordon R Yaeger Dr	3.1	A	None
John James Audubon Pkwy and Dodge Rd	31.3	C	Eastbound left, through, and approach.
Eggert Rd and Sheridan Dr	31.3	C	None
Eggert Rd and Alberta Dr	28.8	C	None

Table 3-8. Existing Conditions: Weekday PM Peak-Hour Levels of Service for Unsignalized Intersections

Intersection	Delay	LOS	Worst Performing Approach
Main St and Allenhurst Rd	9.8	A	Eastbound
Main St and Capen Blvd	10.0	A	Eastbound
Kenmore Ave and Capen Blvd	12.7	B	Northbound
Kenmore Ave and Allenhurst Rd	13.0	B	Northbound
Niagara Falls Blvd and Kenilworth Ave	10.5	B	Eastbound
Niagara Falls Blvd and Princeton Ave	9.0	A	Westbound
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	11.2	B	Eastbound
Niagara Falls Blvd and Paige Ave	8.7	A	Eastbound
Niagara Falls Blvd and Oxford Ave	10.6	B	Westbound
Niagara Falls Blvd and Chalmers Ave	9.6	A	Northbound
Niagara Falls Blvd and Yale Ave	11.1	B	Westbound
Niagara Falls Blvd and Lincoln Park Dr	10.7	B	Eastbound
Niagara Falls Blvd and Highland Ave/Ruth Dr	13.3	B	Eastbound
Niagara Falls Blvd and Harrison Ave	12.1	B	Eastbound
Niagara Falls Blvd and Betina Ave/Moore Ave	14.6	B	Eastbound
Niagara Falls Blvd and Franklin Ave/Rochelle Pl	8.1	A	Westbound
*John James Audubon Pkwy and Core Rd/Lee Rd	10.0	B	Westbound
John James Audubon Pkwy and Sylvan Pkwy	9.0	A	Westbound
John James Audubon Pkwy and Bryant Woods S	9.0	A	Eastbound
John James Audubon Pkwy and Bryant Woods N	8.3	A	Eastbound
John James Audubon Pkwy and I-990 EB Off Ramp	12.4	B	Eastbound
John James Audubon Pkwy and I-990 WB Off Ramp	8.5	A	Westbound

Note: Level of service for unsignalized intersections was determined using the worst performing stop-controlled approach.
* Indicates an unsignalized roundabout intersection

Table 3-9. Existing Conditions: Saturday Midday Peak-Hour Levels of Service for Signalized Intersections

Intersection	Delay	Overall LOS	Traffic Movements at LOS E or F
Main St and Kenmore Ave	15.2	B	None
Kenmore Ave and Niagara Falls Blvd	29.5	C	Eastbound left
Niagara Falls Blvd and Decatur Rd	7.7	A	None
Niagara Falls Blvd and Longmeadow Rd	6.1	A	None
Niagara Falls Blvd and Eggert Rd	22.8	C	Northbound left and Westbound left
Niagara Falls Blvd and Sheridan Dr	37.6	D	Southbound left. Eastbound left and Eastbound approach.
Niagara Falls Blvd and Treadwell Rd	21.2	C	Northbound left and Westbound through
Niagara Falls Blvd and Mall Entrance	18.7	B	Northbound left and Eastbound left
Niagara Falls Blvd and Brighton Rd/Maple Rd	60.6	E	Northbound left. Southbound left. Eastbound left, through, right, and approach. Westbound left, through, right, and approach.
Maple Rd and Alberta Dr	20.1	C	None
Maple Rd and Bailey Ave	30.1	C	Southbound left
Maple Rd and Bowmart Pkwy	10.0	A	None
Maple Rd and Hillcrest Dr	1.9	A	None
Maple Rd and Sweet Home Rd	29.1	C	None
Sweet Home Rd and Rensch Rd	19.1	B	None
John James Audubon Pkwy and Rensch Rd	11.7	B	None
John James Audubon Pkwy and Hamilton Rd	9.4	A	None
John James Audubon Pkwy and Frontier Rd	6.0	A	None
John James Audubon Pkwy and N. Forest Rd	8.5	A	None
John James Audubon Pkwy and Gordon R Yaeger Dr	2.1	A	None
John James Audubon Pkwy and Dodge Rd	13.6	B	None
Eggert Rd and Sheridan Dr	29.3	C	None
Eggert Rd and Alberta Dr	29.0	C	None

Table 3-10. Existing Conditions: Saturday Midday Peak-Hour Levels of Service for Unsignalized Intersections

Intersection	Delay	LOS	Worst Performing Approach
Main St and Allenhurst Rd	9.8	A	Eastbound
Main St and Capen Blvd	9.4	A	Eastbound
Kenmore Ave and Capen Blvd	15.1	C	Northbound
Kenmore Ave and Allenhurst Rd	17.6	C	Northbound
Niagara Falls Blvd and Kenilworth Ave	9.7	A	Eastbound
Niagara Falls Blvd and Princeton Ave	7.6	A	Westbound
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	10.1	B	Eastbound
Niagara Falls Blvd and Paige Ave	8.7	A	Eastbound
Niagara Falls Blvd and Oxford Ave	8.1	A	Westbound
Niagara Falls Blvd and Chalmers Ave	9.6	A	Eastbound
Niagara Falls Blvd and Yale Ave	8.7	A	Westbound
Niagara Falls Blvd and Lincoln Park Dr	10.1	B	Eastbound
Niagara Falls Blvd and Highland Ave/Ruth Dr	12.2	B	Eastbound
Niagara Falls Blvd and Harrison Ave	12.0	B	Eastbound
Niagara Falls Blvd and Betina Ave/Moore Ave	15.1	C	Eastbound
Niagara Falls Blvd and Franklin Ave/Rochelle Pl	9.8	A	Westbound
*John James Audubon Pkwy and Core Rd/Lee Rd	2.6	A	Westbound
John James Audubon Pkwy and Sylvan Pkwy	7.1	A	Westbound
John James Audubon Pkwy and Bryant Woods S	7.0	A	Westbound
John James Audubon Pkwy and Bryant Woods N	6.7	A	Westbound
John James Audubon Pkwy and I-990 EB Off Ramp	7.9	A	Eastbound
John James Audubon Pkwy and I-990 WB Off Ramp	7.1	A	Westbound

Note: Level of service for unsignalized intersections was determined using the worst performing stop-controlled approach.
* Indicates an unsignalized roundabout intersection

3.2.2 Transit

Metro is the public transportation operator in the Buffalo-Niagara metropolitan region and the Project Corridor, operating the Metro Rail LRT system and a network of bus lines.

3.2.2.1 Metro Rail

Metro Rail runs along Main Street between the Erie Canal Harbor Station in downtown Buffalo and University Station on the UB South Campus. The line has 13 fully operational stations. Independent of the proposed Project, a new station (DL&W Station) is under construction and scheduled for completion in 2025. The DL&W Station will replace existing service at the Special Event station which is now closed. For further Metro Rail operational information refer to Appendix C1, "Traffic Technical Report."

3.2.2.2 Metro Bus

Metro Bus service in Erie and Niagara Counties currently includes ten express bus routes and 37 regular bus routes. Many of these routes intersect with or serve a portion of the study area, including the following: Metro Bus Route 34-Niagara Falls Boulevard, Metro Bus Route 35-Sheridan, Metro Bus Route 44-Lockport, Metro Bus Route 47-Wehrle, Metro Bus Route 48-Williamsville, Metro Bus Route 49-East Amherst, Metro Bus Route 64-Lockport, Metro Bus Route 66. These are shown in Figure 3-2. For further Metro Bus operational information refer to Appendix C1, "Traffic Technical Report."

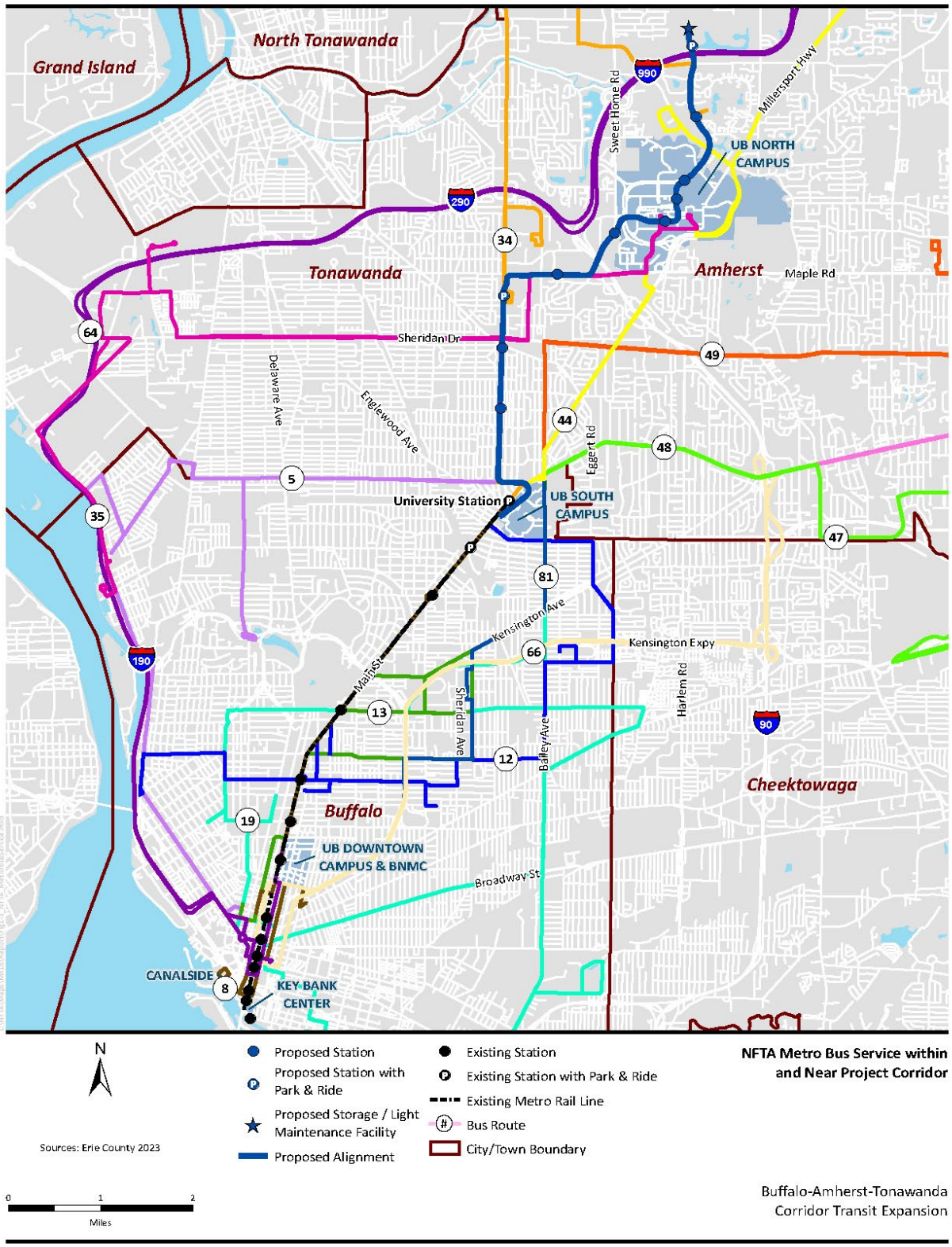
3.2.2.3 Paratransit

Metro's complementary Paratransit Access Line (PAL) service is a shared-ride service that provides origin-to-destination transportation for paratransit eligible individuals under the Americans with Disabilities Act (ADA). The complementary PAL service is provided within 0.75 miles of Metro Bus routes or rail stations during the same hours and on the same days as the Metro fixed-route service.

3.2.2.4 University at Buffalo Bus Service

UB provides extensive bus and shuttle services for its students, faculty, staff, and visitors. The shuttle services are free for users and the costs are covered as a component of the University's comprehensive fee, which is paid by all students at the University at Buffalo. The bus and shuttle services include Stampede Service (the main service), University at Buffalo North Campus Shuttles (Express Service, North Campus Shuttle, Green Line Shuttle, and On-Demand North Campus Weekend Shuttle), and University at Buffalo South/Downtown Campus Shuttles (Orange Line Shuttle, Blue Line Shuttle, Mall/Market Shuttle, and On-Demand Shuttles). For further UB bus operational information refer to Appendix C1, "Transportation Technical Report."

Figure 3-2. Metro Bus Routes Near Proposed Alignment



3.2.3 Parking

The Project alignment contains no on-street parking. However, on-street parking is available on side streets that intersect Kenmore Avenue and Niagara Falls Boulevard. Several parking lots are associated with the Boulevard Mall and adjacent commercial establishments along Niagara Falls Boulevard and Maple Road. Other parking facilities are on the UB North and South Campuses and are used by students, faculty, staff, visitors, and those attending events at university facilities. Existing Metro Rail park & ride facilities are located at the LaSalle and University Stations.

3.2.4 Pedestrians and Bicycles

3.2.4.1 Pedestrians

Pedestrian infrastructure along the Project alignment consists of sidewalks along both sides of the street from the existing University Station to the UB North Campus. Sidewalks are absent along portions of the west side of Niagara Falls Boulevard between Sheridan Drive and Maple Road. There are sidewalks within the UB North and South Campuses. North of the UB North Campus there is a shared bicycle and pedestrian pathway along the eastern side of John James Audubon Parkway between Lee Road and North Forest Road; this pathway splits at the Ellicott Creek following the western side of the creek north to Ellicott Creek Park and beyond. Sidewalks do not exist along the remaining portion of John James Audubon Parkway within the study area. There are several trails that meander through the Audubon community. While crosswalks are located at major intersections, not all pedestrian intersection ramps meet ADA accessibility requirements.

The NYSDOT's Pedestrian Safety Corridor Evaluation (2019) reported a number of deficiencies in the pedestrian corridor along Niagara Falls Boulevard. Section 3.3.4 describes the projects that are being progressed to address those deficiencies. There are proposed pedestrian facilities within the study area identified in local comprehensive plans that would support pedestrians for the No Build Alternative, LRT Build Alternative, and BRT Build Alternative. These are discussed in Section 3.3.4.

3.2.4.2 Bicycles

Bicycle facilities are a mixture within the study area. There are bidirectional designated bicycle lanes along Kenmore Avenue between the Tonawanda Rails to Trails and Main Street; these lanes are unprotected and designated with lane markings. No designated bicycle lanes exist along the Project alignment from the start of Niagara Falls Boulevard at Kenmore Avenue to the intersection of Maple Road and Sweet Home Road (included in existing and No Build evaluations). Sweet Home Road is designated as part of the Intercampus Bikeway and consists of striped bike lanes between Maple Road and Rensch Road. Bicycle lane markings exist on some roadways within the campus.

UB has a bikeshare program (UB Bikeshare) for students, faculty, and staff, which is powered by Social Bicycles and offers a GPS-enabled bike.

There are proposed bicycle facilities within the study area identified in local comprehensive plans that would support local bicyclists for the No Build Alternative, LRT Build Alternative, and BRT Build Alternative. These are discussed in Section 3.3.4.

3.2.5 Transit Safety and Security

NFTA provides security, law enforcement, and roving patrols for transit vehicles, transit stations, and park & ride facilities. Surveillance of the transit stations is conducted through monitoring of closed-circuit televisions placed on each station platform and in park & ride facilities. Blue light emergency phones and lighting are located on station platforms and throughout the park & ride facilities, and passenger assistance phones for non-emergency use are located on each of the ticket vending machines in the stations.

3.3 NO BUILD ALTERNATIVE

The No Build Alternative would consist of a future scenario with no changes to the Project Corridor beyond the projects that are already committed. The No Build Alternative did not account for the following roadway improvements, because these projects were not planned at the time that the traffic model was developed:

- The reconstruction of the Frontier/John James Audubon Parkway intersection into a roundabout.
- The reduction of John James Audubon Parkway to one lane in each direction using the former southbound travel lanes between Lee Road and North Forest Road.

Additional roadway projects are planned by others but not included within the No Build Alternative. The GBNRTC Transportation Improvement Program includes a roadway improvement project within the study area along North Forest Road in Amherst between Route 263 (Millersport Highway) and Dodge Road. This project entails pavement resurfacing for a 1.67-mile stretch of North Forest Road. The Town of Amherst is considering converting John James Audubon Parkway to a two-lane roadway utilizing the southbound lanes and abandoning the northbound lanes between the traffic circle at Lee Road and Dodge Road.

3.3.1 Traffic Operations

Compared to existing conditions, the No Build Alternative network is consistent with the GBNRTC's adopted transportation plans, includes an adjustment for anticipated vehicular traffic growth rates, and funded improvements such as the roundabout at the I-990 southbound off-ramp at John James Audubon Parkway. Metro derived the growth rates from GBNRTC's regional travel demand model, which accounts for anticipated population and land use changes in the

region. In addition, the No Build Alternative assumes optimized signal timing would be implemented by others without the Project.

Using the projected changes in future traffic volumes, the No Build Alternative traffic LOS was determined for each of the traffic analysis intersections. Appendix C1, "Transportation Technical Report" presents the resulting overall LOS at each intersection in the study area as well as the specific traffic movements that operate at LOS E or F during the weekday and Saturday peak hours, respectively.

A comparison of the overall intersection LOS and individual traffic movement LOS shows that due to the additional volumes generated by the background traffic growth, additional locations would operate at mid LOS (D or worse) under the No Build Alternative as compared to existing conditions. The intersection of Maple Road and Sweet Home Road would continue to operate an overall LOS E during the weekday PM peak period as compared to existing conditions. The intersection of Niagara Falls Boulevard and Brighton Road/Maple Road would continue to operate an overall LOS E during the Saturday midday peak period as compared to existing conditions.

3.3.2 Transit

Under the No Build Alternative, the existing Metro Rail, Metro Bus, and PAL service, as well as the UB bus service, would operate as they currently do. Table 3-11 summarizes the anticipated ridership on the existing Metro Rail under the No Build Alternative.

Table 3-11. No Build Alternative Weekday Total (All Access Modes) Boardings by Metro Rail Station

Station	No Build Alternative (2045)	Station	No Build Alternative (2045)
DL&W*	99	Summer-Best	753
Erie Canal Harbor	614	Utica	1,107
Seneca	451	Delavan-Canisius College	588
Church Street	1,267	Humboldt	376
Lafayette	1,538	Amherst	911
Fountain Plaza	2,042	LaSalle	755
Allen-Medical Campus	946	University Station	1,923
		Subtotal of all Stations	**13,370**

Source: STOPS Model Runs
*Note: Forecasted ridership estimates based on the Special Event station is assumed to occur at the future DL&W station.

3.3.3 Parking

Parking facilities under the No Build Alternative would continue to consist of existing nearby on-street parking, off-street residential and commercial establishment parking lots, UB on-campus parking, and the existing Metro Rail park-and-ride facilities located at the LaSalle and University Stations.

3.3.4 Pedestrian and Bicycle

Under the No Build Alternative, the NYSDOT Pedestrian Safety Corridor Evaluation reported the following projects as being progressed along Niagara Falls Boulevard within the Project Corridor by NYSDOT:

- **Niagara Falls Boulevard/Almeda Drive/Rochelle Place,** where ADA-compliant detectable warning fields on the Almeda Drive crossing and transverse crosswalks (parallel lines) on Almeda Drive and Rochelle Place approaches will be added.
- **Niagara Falls Boulevard/Boulevard Mall Driveway,** where accessible pedestrian signals will be added, ADA ramps will be updated, and high-visibility crosswalks will be installed at the southbound and westbound crossings.
- **The Niagara Falls Boulevard corridor from Sheridan Drive to Tonawanda Creek Road,** where there will be traffic signal coordination including an analysis of detailed signal connections with consideration for leading pedestrian intervals.

In the Town of Amherst Bicentennial Comprehensive Plan (Amended December 2020) there are proposed on-street bicycle/pedestrian networks on roads within the study area, including Eggert Road, Niagara Falls Boulevard, Maple Road, Sweet Home Road, Augspurger Road, North Forest Road, and John James Audubon Parkway. These networks would frequently contain safe, clearly demarcated crossings. The Town of Tonawanda Comprehensive Plan demarcates one proposed bike lane on Kenmore Avenue and an off-road trail that runs along the waterway behind Evergreen Drive within the study area. The plan also outlines improved pedestrian crossings at Niagara Falls Boulevard and Sheridan Drive, Treadwell Road, and Maple Road. Both plans emphasize the desire to restripe and redesign streets as complete streets that are conducive to multimodal transportation.

3.3.5 Safety and Security

The No Build Alternative would continue to consist of existing safety and security measures within the Project Corridor.

3.4 ENVIRONMENTAL CONSEQUENCES OF THE BUILD ALTERNATIVES

The following sections describe the potential impacts to the transportation system (traffic, transit, pedestrian and bicycle, and safety and security) which would result from the LRT Build Alternative and the BRT Build Alternative.

3.4.1 Traffic Operations

The VISSIM traffic simulation models for the LRT Build Alternative and the BRT Build Alternative include the same vehicle volume growth evaluated under the No Build Alternative.

3.4.1.1 Build Alternative Network Changes

The inclusion of the LRT Build Alternative and the BRT Build Alternative within the constraints of the existing Project right-of-way would require a lane repurposing. Lane repurposing is defined as converting an automobile travel lane to a dedicated transit lane for the LRT Build Alternative or BRT Build Alternative. This lane repurposing is described as follows:

- Lane repurposing is proposed to occur on Niagara Falls Boulevard between the proposed Metro Rail tunnel portal (between Kenilworth Avenue and Princeton Avenue) and Maple Road. Lane repurposing would entail converting a northbound and southbound through travel lane to a dedicated transit lane. The Project alignment would enter the Boulevard Mall property north of Treadwell Road.

- Lane repurposing is proposed to occur on Maple Road between Alberta Drive, where the Project alignment is proposed to exit the Boulevard Mall property, and Bowmart Parkway. Lane repurposing would entail converting one westbound through travel lane to a dedicated transit lane.

- Lane repurposing is proposed to occur on John James Audubon Parkway between North Forest Road and the I-990 southbound on and off bound ramps at the at-grade roundabout. Lane repurposing would entail converting John James Audubon Parkway from a four-lane divided facility to a two-lane roadway utilizing the existing two-lane southbound facility; the LRT Build Alternative and the BRT Build Alternative would operate on the vacated two-lane northbound travel lanes from North Forest Road to the I-990 southbound ramps.

Defined as a traffic diversion, this lane repurposing is expected to result in diverting a portion of the automobile traffic to the grid network of neighborhood streets, as summarized in Table 3-12. Based on capacity analyses of local intersections within the traffic diversion area, the adjacent street network is anticipated to have adequate capacity to absorb the diversion of traffic calculated for the Build Alternatives. When determining traffic future year growth factors, any traffic reductions due to reduction in capacity or significant socioeconomic changes were not implemented into the models. This decision ensures that the conducted traffic analysis is conservative in nature and represents a worse-case scenario.

Table 3-12. Anticipated Traffic Diversions as a Result Lane Repurposing on Niagara Falls Boulevard

Study Area Roadway	Segment	Direction of Travel	Percent Change in Daily Vehicle Volumes (2040)
Niagara Falls Boulevard	Kenmore Avenue to Sheridan Drive	Northbound	Reduction of 17% to 22%
		Southbound	Reduction of 17% to 21%
Maple Road	Niagara Falls Boulevard to Sweet Home Road	Westbound	Reduction of 4% to 10%
		Eastbound	Reduction of 3% to 6%
Parker Boulevard	Englewood Avenue to Eggert Road	Northbound	Increase of 6% to 11%
		Southbound	Increase of 7% to 12%

Study Area Roadway	Segment	Direction of Travel	Percent Change in Daily Vehicle Volumes (2040)
Parkhurst Boulevard	Englewood Avenue to Eggert Road	Northbound	Increase of 6% to 17%
		Southbound	Increase of 6% to 19%
Alberta Drive	Sheridan Drive to Maple Road	Northbound	Increase of 7%
		Southbound	Increase of 7%
Bailey Avenue	Main Street to Sheridan Drive	Northbound	Increase of 1% to 5%
		Southbound	Increase of 3% to 6%
North Bailey Avenue	Sheridan Drive to Maple Road	Northbound	Increase of 0% to 1%
		Southbound	Increase of 0% to 1%
Sweet Home Road	Sheridan Drive to Maple Road	Northbound	Increase of 3%
		Southbound	Increase of 5%
Grover Cleveland / Millersport Highways	Bailey Avenue to Sheridan Drive	Northbound	Increase of 3% to 4%
		Southbound	Increase of 1% to 2%
Eggert Road	Parker Boulevard to Niagara Falls Boulevard	Westbound	Reduction of 7% to 9%
		Eastbound	Reduction of 6% to 7%
Eggert Road	Niagara Falls Boulevard to Main Street	Westbound	Increase of 3% to 5%
		Eastbound	Increase of 1% to 3%
Sheridan Drive	Parker Boulevard to Niagara Falls Boulevard	Westbound	0% Change
		Eastbound	Reduction of 0% to 1%
Sheridan Drive	Niagara Falls Boulevard to Millersport Highway	Westbound	Increase of 1% to 4%
		Eastbound	Increase of 1% to 4%
Highland Avenue	Parker Boulevard to Niagara Falls Boulevard	Westbound	Increase of 4% to 8%
		Eastbound	Increase of 5% to11%
Longmeadow Road	Niagara Falls Boulevard to Bailey Avenue	Westbound	Reduction of 3% to 6%
		Eastbound	Reduction of 3% to 7%
Longmeadow Road	Bailey Avenue to Millersport Highway	Westbound	Increase of 1% to 2%
		Eastbound	Increase of 0% to 2%
Decatur Road	Parker Boulevard to Parkhurst Boulevard	Westbound	0% Change
		Eastbound	Reduction of 3%
Decatur Road	Parkhurst Boulevard to Niagara Falls Boulevard	Westbound	Increase of 5% to 11%
		Eastbound	Increase of 2% to 7%
Englewood Avenue	Parker Boulevard to Kenmore Avenue	Westbound	Increase of 5% to 7%
		Eastbound	Increase of 3% to 6%
Kenmore Avenue	Englewood Avenue to Main Street	Westbound	Reduction of 5% to 11%
		Eastbound	Reduction of 4% to 9%

Source: GBNRTC Traffic Demand Model, 2019 Evaluation of 2040 Traffic Volume Diversions as a Result of the Project
Note: The GBNRTC Traffic Demand Model and its analysis network does not include all roadways

3.4.1.2 Build Alternative Traffic and Roadway Capacity Investments

Recognizing the impacts of the lane repurposing described above, Metro included traffic and roadway capacity investments and changes to offset the impacts. Table 3-13 lists the traffic modifications proposed for the Build Alternatives. Per the MUTCD, warrants will be met and an engineering study will be conducted to support the proposed signal installations. The additional capacity for each Build Alternative is shown in Appendix B, "Conceptual Plans"..

Table 3-13. LRT Build Alternative and BRT Build Alternative: Traffic Modifications

Corridor Location	Direction	Modification (Capacity or Operations)
Niagara Falls Boulevard between Kenilworth Avenue and Treadwell Road	Northbound and Southbound	Repurpose one lane of traffic for Project operations (Capacity).
Niagara Falls Boulevard at Ford and Cambridge Avenues	Northbound and Southbound	Add Northbound left turn at Ford Avenue and a Southbound turn lane at Cambridge Avenue (Capacity).
	Northbound and Southbound	Implementation of traffic signal control (Operations).
Niagara Falls Boulevard at Longmeadow Road	Northbound	Dedicated right-turn lane at Longmeadow Road (Capacity).
Niagara Falls Boulevard at Eggert Road	Southbound	Add Southbound left-turn lane on Niagara Falls Boulevard at Eggert Road (Capacity).
	Southbound	Add a 200-foot Southbound receiving lane on Niagara Falls Boulevard south of the Eggert Road intersection (Capacity).
	Southbound	Additional left-turn lane; one through and one shared through/right-turn travel lane (Capacity).
Sheridan Drive and Niagara Falls Boulevard	Northbound	Eliminate one through travel lane and create a shared through/right-turn lane (Capacity).
	Southbound	Convert the dedicated right-turn lane to a shared through/right-turn lane and eliminate one through lane (Capacity).
Niagara Falls Boulevard at Maple Road/ Brighton Road	Westbound	Add Westbound left-turn lane on Maple Road at Niagara Falls Boulevard (Capacity).
	Westbound	Additional left-turn bay and dual left turn (Capacity).
	Eastbound	Add Eastbound through lane on Brighton Road at Niagara Falls Boulevard and extended through and through/right lanes west for more storage (Capacity).
Maple Road and North Bailey Avenue	Northbound	Increase in dedicated right turn storage starting at Argosy Drive (Capacity).

Corridor Location	Direction	Modification (Capacity or Operations)
	Southbound	Additional left-turn lane (Capacity).
Maple Road and Sweet Home Middle School eastern driveway	Eastbound	Additional left-turn lane proposed for both Build Alternatives (Capacity). BRT Build Alternative includes traffic signal at this location (Operations).
Maple Road at Sweet Home Road	Northbound	Convert the dedicated right-turn lane to a shared through/right-turn lane at intersection with Maple Road at Sweet Home Road (Capacity).
	Northbound	Convert right-turn-only lane to shared through/right-turn lane and remove Northbound bicycle lane (Capacity).
	Southbound	Add additional receiving lane Southbound on Sweet Home Road south of Maple Road (Capacity).
	Southbound	Add a Southbound through lane that connects to a 200-foot Southbound receiving lane on Sweet Home Road (Capacity).
Sweet Home Road	Northbound Southbound	Restrict left turns at driveways between Maple Road and I-290 Bridge (Operations).
John James Audubon Parkway	Northbound	The Project would operate along the vacated Northbound travel lanes of John James Audubon Parkway (Capacity).
John James Audubon Parkway and Sylvan Parkway	All directions	Signalize intersection (Operations).
John James Audubon Parkway at Bryant Woods.	Northbound and Southbound	Provide additional left-turn lanes at intersections with Bryant Woods North and Bryant Woods South (Capacity).
John James Audubon Parkway at Dodge Road	Eastbound and Westbound	Additional left-turn lane on Dodge Road for both directions (Capacity).
John James Audubon Parkway at I-990	Northbound and Southbound	Provide an additional Southbound through lane between the I-990 Westbound off-ramp and Dodge Road (Capacity).

3.4.1.3 LRT Build Alternative

The LRT Build Alternative alignment is proposed to operate in a tunnel from the existing Metro Rail University Station to the median along Niagara Falls Boulevard and Maple Road. At the intersection of Maple Road and Sweet Home Road, the LRT Build Alternative alignment would pass under the intersection using cut and cover tunnel and structures. The LRT Build Alternative alignment would then continue north along Sweet Home Road, though UB North Campus, and John James Audubon Parkway. For more information Refer to Chapter 2, "Alternatives Considered." Table 3-14 summarizes the techniques proposed to construct the anticipated LRT track.

Table 3-14. LRT Build Alternative Track Construction

Element	Description
Ballast Track	For portions of the LRT Build Alternative alignment that does not intersect or interact with a signalized intersection, the track would be built on top of ballast. Ballast is defined as gravel or coarse stone used to form the bed of a railroad track. LRT track with ballast cannot be safely traversed by automobile traffic, therefore left-turn movements from crossing streets at unsignalized intersections would not be permitted. It is anticipated that either one or a combination of the following measures would be used to restrict these left-turn movements; physical separation (i.e., a curb), rail crossing gates, and/or warning signals.
Embedded Track	For portions of the LRT Build Alternative alignment that intersects or interacts with a signalized intersection or select driveways, the track would be unballasted or embedded. Embedded track is defined as track that is set within a medium (concrete slab or other) and is level with the roadway. This embedded track is commonly found at railway crossings. As a result of being flush with the roadway, automobile traffic can safely traverse the tracks.
Interaction with Signalized Intersections and Signal Preemption	At LRT Build Alternative signalized intersections, it is anticipated that each traffic signal would be upgraded to allow, as needed, for a transit signal preemption scheme. Transit signal preemption is defined as an overriding traffic signal phase prioritizing a transit movement. Each LRT vehicle would be equipped with a transponder or trip a train wheel sensor that communicates with the corresponding traffic signal. As the LRT vehicle approaches the signal, the transit signal preemption scheme is triggered, restricting any conflicting automobile traffic movements or pedestrian movements to avoid an unsafe conflict between transit operations and both automobile and pedestrian travel. A transit signal preemption scheme ensures that any automobile traffic crossing the LRT Build Alternative rail track would have sufficient time to clear the area. Automobile travel not in conflict with the LRT operations would also be allowed to move through the intersection. An example is automobile traffic travelling parallel to the transit service but not crossing. During design and construction, it is anticipated that additional warning systems and crossing gates may be considered at these conflicting turning movements to ensure the traveling public's safety. Left-turn phases would be protected-only while the LRT vehicle is passing through the intersection. It also anticipated that emergency response vehicles could also be equipped with these same transponders, triggering the transit signal preemption scheme and allowing emergency services to quickly and safely bypass congestion.
Maple and Sweet Home Road	The LRT Build Alternative would be designed to pass under the intersection of Maple Road and Sweet Home Road due to track turning radius requirements, vertical clearance requirements, and the need to pass under the I-290 overpass of Sweet Home Road.
I-990 Off Ramp	The LRT Build Alternative would reconstruct and shift 60 feet westwards the roundabout at John James Audubon Parkway and the southbound I-990 ramps at the Muir Woods Multifamily Residential Development. This modification improves safety by creating only one conflict point where the LRT tracks would traverse across the I-990 off-ramp. Appendix C3, "Access Modification Report," details the traffic operations analysis to determine the potential traffic impacts of implementing the LRT Build Alternative with a roundabout versus a signalized intersection at the southbound I-990 ramps.

Using the VISSIM model, Metro determined the LRT Build Alternative traffic LOS for the 45 traffic analysis locations for the year 2040. Table 3-15 compares the overall LOS for signalized and unsignalized intersections in the study area for the LRT Build Alternative compared to the No Build Alternative. For a detailed description of the LOS for individual intersection movements refer to Appendix C1, "Transportation Technical Report."

Table 3-15. LRT Build Alternative: Peak-Hour Levels of Service Compared to the No Build Alternative (Signalized and Unsignalized)

Intersection	Peak-Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	No Build	LRT	No Build	LRT	No Build	LRT
Main St and Allenhurst Rd*	B	A	A	A	A	A
Main St and Capen Blvd*	A	A	B	A	A	A
Main St and Kenmore Ave	B	B	B	B	B	B
Kenmore Ave and Capen Blvd*	B	B	B	C	C	B
Kenmore Ave and Allenhurst Rd*	B	B	B	B	C	B
Kenmore Ave and Niagara Falls Blvd	C	C	C	C	C	C
Niagara Falls Blvd and Kenilworth Ave*	A	A	B	A	A	A
Niagara Falls Blvd and Princeton Ave*	A	A	A	B	A	A
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	B	B	B	C	B	B
Niagara Falls Blvd and Paige Ave*	A	B	A	C	A	B
Niagara Falls Blvd and Oxford Ave*	A	B	B	F	A	B
Niagara Falls Blvd and Chalmers Ave*	A	B	A	B	A	B
Niagara Falls Blvd and Decatur Rd	A	B	A	D	A	C
Niagara Falls Blvd and Yale Ave*	A	B	B	F	A	E
Niagara Falls Blvd and Lincoln Park Dr*	A	B	B	C	A	C
Niagara Falls Blvd and Longmeadow Rd	A	B	A	D	A	D
Niagara Falls Blvd and Highland Ave/Ruth Dr*	B	A	B	A	B	A
Niagara Falls Blvd and Harrison Ave*	A	C	B	C	B	E
Niagara Falls Blvd and Betina Ave/Moore Ave*	B	C	B	E	C	F
Niagara Falls Blvd and Eggert Rd	C	C	C	D	C	D
Niagara Falls Blvd and Sheridan Dr	C	D	D	E	D	E
Niagara Falls Blvd and Franklin Ave/Rochelle Pl*	A	A	A	A	B	B
Niagara Falls Blvd and Treadwell Rd	A	C	C	B	C	C
Niagara Falls Blvd and Mall Entrance	A	B	B	C	B	C
Niagara Falls Blvd and Brighton Rd/Maple Rd	C	C	D	D	E	D

Intersection	Peak-Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	No Build	LRT	No Build	LRT	No Build	LRT
Maple Rd and Alberta Dr	A	C	B	C	C	D
Maple Rd and Bailey Ave	B	C	D	E	D	E
Maple Rd and Bowmart Pkwy	A	A	B	B	B	B
Maple Rd and Hillcrest Dr	A	B	A	B	A	A
Maple Rd and Sweet Home Rd	C	C	E	D	D	C
Sweet Home Rd and Rensch Rd	C	C	C	C	C	B
John James Audubon Pkwy and Rensch Rd	B	B	D	C	B	B
John James Audubon Pkwy and Hamilton Rd	B	B	B	A	A	A
John James Audubon Pkwy and Core Rd/Lee Rd	A	A	C	D	A	A
John James Audubon Pkwy and Frontier Rd	A	B	B	B	A	A
John James Audubon Pkwy and N Forest Rd	B	C	C	D	A	B
John James Audubon Pkwy and Sylvan Pkwy	A	B	A	B	A	A
John James Audubon Pkwy and Gordon R Yaeger Dr	A	A	A	A	A	A
John James Audubon Pkwy and Bryant Woods S*	B	B	B	B	A	B
John James Audubon Pkwy and Bryant Woods N*	A	B	A	B	A	A
John James Audubon Pkwy and Dodge Rd	C	C	C	D	B	B
John James Audubon Pkwy and I-990 EB Off-Ramp*	D	A	C	B	A	A
John James Audubon Pkwy and I-990 WB Off-Ramp*	A	A	A	A	A	A
Eggert Rd and Sheridan Dr	C	C	C	C	C	D
Eggert Rd and Alberta Dr	C	A	C	A	C	A

* Unsignalized intersection: Level of service was determined using the worst performing stop-controlled approach.

The LRT Build Alternative would result in the adverse traffic impacts at the intersections summarized in Table 3-16.

Table 3-16. LRT Build Alternative LOS Impact Summary

Period	Condition	LOS Summary (2040)
Weekday AM peak	Existing	All intersections operate at overall LOS D or better.
	No Build	All intersections operate at overall LOS D or better. No adverse impact.
	LRT Build Alternative	All intersections operate at overall LOS D or better. The LRT Build Alternative does not result in adverse traffic impacts during the weekday AM peak travel period.
Weekday PM peak	Existing	One intersection operates at LOS E during the weekday PM peak period, Maple Rd and Sweet Home Rd.
	No Build	The Maple Rd and Sweet Home Rd intersection continues to operate LOS E. No adverse impact.
	LRT Build Alternative	Five intersections are adversely impacted during the weekday PM peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave degrades from a No Build LOS B to a LOS E ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E
Saturday Midday Peak	Existing	One signalized intersection operates at LOS E, Niagara Falls Blvd and Brighton Rd/Maple Rd.
	No Build	The Niagara Falls Blvd and Brighton Rd/Maple Rd intersection continues to operate LOS E. No adverse impact.
	LRT Build Alternative	Five intersections are adversely impacted during the Saturday midday peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS A to a LOS E ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave degrades from a No Build LOS B to a LOS E ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave degrades from a No Build LOS C to a LOS F ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E

3.4.1.4 BRT Build Alternative

For the BRT Build Alternative, Metro BRT vehicles would operate on dedicated lanes with peak five-minute headways and 30-second station dwell times during operating hours. The BRT Build Alternative alignment is proposed to operate in the median along Niagara Falls Boulevard and Maple Road. For more information Refer to Chapter 2, "Alternatives Considered." Table 3-17 summarizes the techniques proposed to construct the anticipated BRT service.

Table 3-17. BRT Build Alternative Construction

Element	Description
Busway	For portions of the BRT Build Alternative alignment that does not intersect or interact with a signalized intersection, the median-dedicated busway would include a separation between the BRT lanes and the general purpose lanes to prohibit encroachment onto the busway. Left-turn movements from crossing streets at unsignalized intersections would not be permitted. It is anticipated that either one or a combination of the following measures would be used to restrict these left-turn movements; physical separation (i.e., a curb), crossing gates, and/or warning signals.
Traffic Signal Priority	At BRT Build Alternative signalized intersections, it is anticipated that each traffic signal would be upgraded to allow for traffic signal priority (TSP)[2] technology. TSP would be utilized along the entire Project alignment at all signalized intersections. Each BRT vehicle would be equipped with a transponder that communicates with the corresponding traffic signal. As the BRT vehicle approaches the signal, the TSP scheme is triggered, restricting any conflicting automobile traffic movements to avoid an unsafe conflict between transit operations and automobile travel. A TSP scheme ensures that any automobile traffic crossing the BRT Build Alternative dedicated lane would have time to clear the area. Automobile travel not in conflict with the BRT operations would also be allowed to move through the intersection. An example is automobile traffic travelling parallel to the transit service, but not crossing. It also anticipated that emergency response vehicles could also be equipped with these same transponders, triggering the TSP scheme and allowing emergency services to quickly and safely bypass congestion.
Differences as Compared to LRT Build Alternative	The BRT Build Alternative alignment would be consistent with the LRT Build Alternative, except for the following locations: ▪ Between University Station and Niagara Falls Boulevard, The BRT Build alignment would travel in mixed traffic along Main Street and Kenmore Avenue onto Niagara Falls Boulevard, then into the median-dedicated alignment on Niagara Falls Boulevard near Kenilworth Avenue. ▪ The BRT Build alignment would not utilize an underground crossing at the intersection of Maple Road and Sweet Home Road, but rather operate within a dedicated BRT lane and travel through the intersection at-grade utilizing traffic signal priority (TSP)3 technology. ▪ The BRT Build Alternative would operate in mixed traffic north of Dodge Road.

Using the VISSIM model, the BRT Build Alternative traffic LOS was determined for the 45 traffic analysis locations. Other than the alignment changes described above, the modeling assumptions for the BRT Build Alternative differed from the LRT Build Alternative with respect to service operations characteristics. These operational characteristics include service

[2] Traffic signal priority gives special treatment to transit vehicles at signalized intersections. Since transit vehicles can hold many people, giving priority to transit can potentially increase the person throughput of an intersection.

[3] Traffic signal priority gives special treatment to transit vehicles at signalized intersections. Since transit vehicles can hold many people, giving priority to transit can potentially increase the person throughput of an intersection.

frequencies (peak weekday headways of five minutes with BRT and 10 minutes with LRT) and the BRT Build Alternative's use of TSP at all signalized intersections (10 second maximum early or extend of priority phase) versus the LRT Build Alternative's use of signal pre-emption at all signalized intersections. Table 3-18 compares the overall LOS for signalized and unsignalized intersections in the study area for the BRT Build Alternative to the No Build Alternative. For a detailed description of the LOS for individual intersection movements refer to Appendix C1, "Transportation Technical Report."

Table 3-18. BRT Build Alternative: Peak-Hour Levels of Service Compared to the No Build Alternative (Signalized and Unsignalized)

Intersection	Peak Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	No Build	BRT	No Build	BRT	No Build	BRT
Main St and Allenhurst Rd*	B	A	A	A	A	A
Main St and Capen Blvd*	A	B	B	B	A	A
Main St and Kenmore Ave	B	B	B	B	B	B
Kenmore Ave and Capen Blvd*	B	C	B	B	C	B
Kenmore Ave and Allenhurst Rd*	B	B	B	B	C	B
Kenmore Ave and Niagara Falls Blvd	C	C	C	C	C	C
Niagara Falls Blvd and Kenilworth Ave*	A	A	B	A	A	A
Niagara Falls Blvd and Princeton Ave*	A	A	A	B	A	A
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	B	B	B	C	B	B
Niagara Falls Blvd and Paige Ave*	A	B	A	C	A	B
Niagara Falls Blvd and Oxford Ave*	A	B	B	F	A	B
Niagara Falls Blvd and Chalmers Ave*	A	B	A	B	A	B
Niagara Falls Blvd and Decatur Rd	A	B	A	D	A	C
Niagara Falls Blvd and Yale Ave*	A	B	B	F	A	D
Niagara Falls Blvd and Lincoln Park Dr*	A	B	B	C	A	C
Niagara Falls Blvd and Longmeadow Rd	A	B	A	D	A	D
Niagara Falls Blvd and Highland Ave/Ruth Dr*	B	A	B	A	B	A
Niagara Falls Blvd and Harrison Ave*	A	D	B	C	B	E
Niagara Falls Blvd and Betina Ave/Moore Ave*	B	C	B	D	C	D
Niagara Falls Blvd and Eggert Rd	C	C	C	D	C	C

Intersection	Peak Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	No Build	BRT	No Build	BRT	No Build	BRT
Niagara Falls Blvd and Sheridan Dr	C	D	D	D	D	E
Niagara Falls Blvd and Franklin Ave/Rochelle Pl*	A	A	A	D	B	B
Niagara Falls Blvd and Treadwell Rd	A	C	C	C	C	C
Niagara Falls Blvd and Mall Entrance	A	B	B	D	B	C
Niagara Falls Blvd and Brighton Rd/Maple Rd	C	C	D	D	E	D
Maple Rd and Alberta Dr	A	C	B	C	C	E
Maple Rd and Bailey Ave	B	C	D	E	D	E
Maple Rd and Bowmart Pkwy	A	A	B	B	B	B
Maple Rd and Hillcrest Dr	A	B	A	B	A	A
Maple Rd and Sweet Home Rd	C	D	E	E	D	D
Sweet Home Rd and Rensch Rd	C	C	C	C	C	B
John James Audubon Pkwy and Rensch Rd	B	D	D	D	B	C
John James Audubon Pkwy and Hamilton Rd	B	B	B	A	A	A
John James Audubon Pkwy and Core Rd/Lee Rd	A	A	C	D	A	A
John James Audubon Pkwy and Frontier Rd	A	B	B	B	A	A
John James Audubon Pkwy and N Forest Rd	B	C	C	D	A	B
John James Audubon Pkwy and Sylvan Pkwy	A	B	A	C	A	A
John James Audubon Pkwy and Gordon R Yaeger Dr	A	A	A	A	A	A
John James Audubon Pkwy and Bryant Woods S*	B	B	B	B	A	A
John James Audubon Pkwy and Bryant Woods N*	A	B	A	D	A	A
John James Audubon Pkwy and Dodge Rd	C	C	C	D	B	B
John James Audubon Pkwy and I-990 EB Off-Ramp*	D	A	C	B	A	A
John James Audubon Pkwy and I-990 WB Off-Ramp*	A	A	A	A	A	A
Eggert Rd and Sheridan Dr	C	C	C	C	C	C
Eggert Rd and Alberta Dr	C	A	C	A	C	A

* Unsignalized intersection: Level of service was determined using the worst performing stop-controlled approach.

The BRT Build Alternative would result in adverse traffic impacts at intersections as summarized in Table 3-19.

Table 3-19: BRT Build Alternative LOS Impact Summary

Period	Condition	LOS Summary (2040)
Weekday AM peak	Existing	All intersections operate at overall LOS D or better.
	No Build	All intersections operate at overall LOS D or better. No adverse impact.
	BRT Build Alternative	All intersections operate at overall LOS D or better. The BRT Build Alternative does not result in adverse traffic impacts during the weekday AM peak travel period.
Weekday PM peak	Existing	One intersection operates at LOS E during the weekday PM peak period, Maple Rd and Sweet Home Rd.
	No Build	The Maple Rd and Sweet Home Rd intersection continues to operate LOS E. No adverse impact.
	BRT Build Alternative	Three intersections are adversely impacted during the weekday PM peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS B to a LOS F ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E
Saturday Midday Peak	Existing	One signalized intersection operates at LOS E, Niagara Falls Blvd and Brighton Rd/Maple Rd.
	No Build	The Niagara Falls Blvd and Brighton Rd/Maple Rd intersection continues to operate LOS E. No adverse impact.
	BRT Build Alternative	Four intersections are adversely impacted during the Saturday midday peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave degrades from a No Build LOS B to a LOS E ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Alberta Dr would degrade from a No Build LOS C to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E

3.4.2 Transit

The LRT Build Alternative and the BRT Build Alternative would expand high-quality transit from the Metro Rail terminus at University Station, along Kenmore Avenue, Niagara Falls Boulevard, Maple Road, and Sweet Home Road, through the UB North Campus to John James Audubon Parkway and I-990. Ten stations are proposed—two with park & ride facilities—and a light maintenance/storage facility is proposed at the Muir Woods development. The LRT Build Alternative and the BRT Build Alternative would expand the area that would have access to

high-quality transit service. Additionally, Metro will conduct a comprehensive operational analysis of all local Metro bus routes and consider schedule and route structure refinement upon selection of the preferred Build Alternative. It is anticipated that UB would cancel the Stampede service upon construction of the Project.

The LRT Build Alternative would provide a "one-seat ride" or transit service without a transfer from UB North Campus to Downtown Buffalo. The BRT Build Alternative would require a transfer at the existing Metro Rail station on UB South Campus.

Table 3-20 presents the ridership forecasts for the LRT Build Alternative compared to the BRT Build Alternative.

Table 3-20. Average Weekday Total Boardings for LRT Build Alternative and BRT Build Alternative (2045)

Station	No Build Alternative (2045)	LRT Build Alternative (2045)	BRT Build Alternative (2045)
DL&W***	99	101	90
Erie Canal Harbor*	614	629	579
Seneca*	451	478	428
Church Street*	1,267	1,335	1,119
Lafayette*	1,538	1,623	1,459
Fountain Plaza*	2,042	2,107	1,835
Allen-Medical Campus*	946	980	921
Summer-Best*	753	780	746
Utica*	1,107	1,155	1,062
Delavan-Canisius College*	588	666	579
Humboldt*	376	433	363
Amherst*	911	1,103	922
LaSalle*	755	771	735
University Station*	1,923	5,217	6,085**
Decatur		380	70
Eggert		559	189
Boulevard Mall		1,155	134
Maple		275	139
Sweet Home		258	88
Flint		5,268	5,006
Lee		1,768	1,411
Ellicott Complex		3,659	3,633
Audubon Parkway		265	83
I-990		276	70
TOTAL	**13,370**	**31,241**	**27,746**

Source: STOPS Model Runs
*Note: Existing Metro Rail stations, LRT service only
**Note: Higher BRT boardings is a result of the forced transfer from BRT to LRT service at the existing Metro Rail University station.
***Note: Forecasted ridership estimates based on the Special Event station is assumed to occur at the future DL&W station.

For both Build Alternatives, the STOPS model was used to forecast the number of new riders attracted to each alternative as summarized in Table 3-21. New riders are defined as transit patrons using the transit service that would not otherwise use transit as a means of travel.

An important Metro agency goal is the provision of transit services that serves transit dependent populations. Transit dependency is defined as members of the community who rely on transit for mobility. For both Build Alternatives, the STOPS model was used to forecast the number of transit dependent riders.

Transit operations are seen as critical mobility options to help manage the region's travel needs. For both Build Alternatives, the STOPS model was used to forecast the reduction in the number of annual automobile Vehicles Miles Traveled (VMT). VMT is defined as the amount of travel for all vehicles in a geographic region over a given period of time, typically a one-year period. It is calculated as the sum of the number of miles traveled by each vehicle. For both Build Alternatives, the STOPS model was used to forecast the reduction in annual VMT as a result of the Project. Table 3-21 summarizes each Build Alternative's impact on attracting new riders, serving transit dependent trips, and annual reduction in VMT. For more detailed information regarding Project ridership forecasts refer to Appendix C2, "Travel Demand Forecasting." Given the LRT Build Alternative's forecasted ability to serve more riders and attract more new riders, there is a greater reduction in VMT as compared to the BRT Build Alternative.

Table 3-21. New Riders, Transit Dependent Riders, and Annual Reduction in VMT

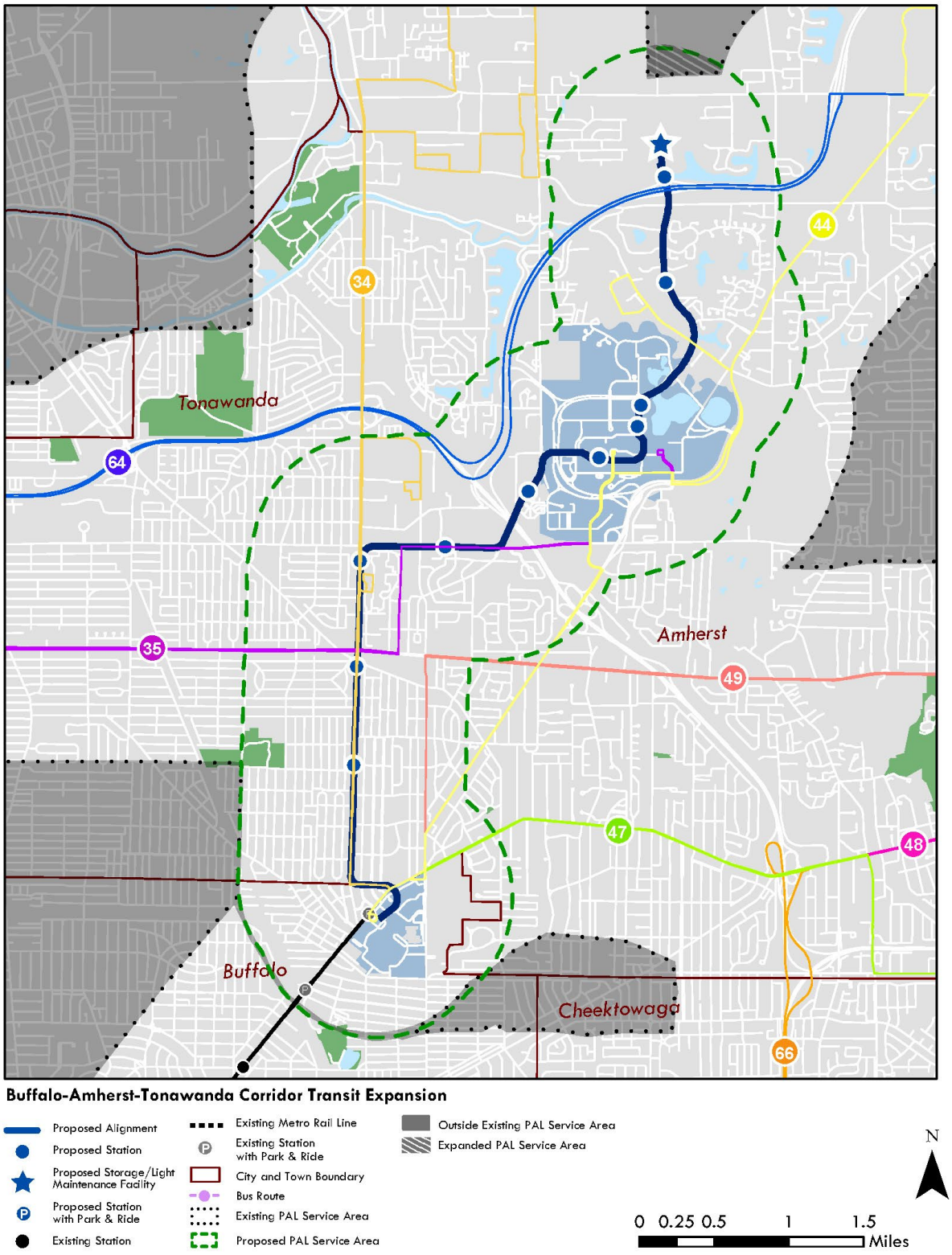
Build Alternative	Annual New Weekday Transit Rider Boardings	Annual Weekday Transit Dependent Rider Boardings	Annual Weekday Reduction in VMT
LRT Build Alternative	873,340	2,493,400	11,646,180
BRT Build Alternative	119,080	1,924,780	763,880

Source: STOPS Model Runs (Average weekday boardings, annualized using a factor of 260)

3.4.2.1 Paratransit

Figure 3-3 shows that the PAL service area would be expanded slightly to the north to reflect the new transit service at the proposed I-990 station provided by both the LRT Build Alternative and the BRT Build Alternative. This expanded PAL service area would include the Muir Woods Multifamily Residential Development.

Figure 3-3. Paratransit Service Area



3.4.2.2 University at Buffalo

With the LRT Build Alternative and the BRT Build Alternative, UB Stampede bus services would be redundant and therefore discontinued by UB. This discontinuation of the Stampede service would be replaced by the Project and the Project's anticipated increase in ridership capacity which would serve the same market currently served by the Stampede service. This has been discussed at several coordination meetings with UB and is anticipated to be included within a forthcoming Memorandum of Agreement (MOA) between Metro and UB. This MOA is expected to be included within the Final EIS document. The discontinuation of the UB Stampede is not expected to have adverse impacts on current users because users would shift to, and benefit from, the new Metro transit service. Discontinued services include the following:

- UB Stampede (Blue Line, Main Circle to/from Flint Circle and Ellicott)
- UB Stampede North–South Express (Yellow Line, Main Circle to/from Flint Circle with stops at Maynard, Service Center Road, and Goodyear Residence Hall[4])

Other UB shuttle services would remain in operation including the Lee-Ellicott Express (Red Line) and the North Campus Shuttle.

3.4.3 Parking

Under the LRT Build Alternative and the BRT Build Alternative, park & ride facilities would be constructed at Boulevard Mall Station (300 parking spaces) and I-990 Station (50 parking spaces). These two park & ride facilities would provide approximately 350 additional parking spaces with no fees and would increase parking capacity for Metro passengers. To determine the number of parking spaces needed by the Project, ridership forecasts include the anticipated number of riders who would park an automobile and then board the Project.

The Project alignment would traverse the median of Niagara Falls Boulevard and Maple Road, and roadway widening would be required. As a result, potential impacts would occur to existing private parking facilities along these roadways. Based on the conceptual design of the LRT Build Alternative and BRT Build Alternative (Appendix B, "Conceptual Design Plans"), parcels along the Project Corridor could have their existing parking reduced to some degree. Approximately 552 parking spaces could be impacted by the LRT Build Alternative and 515 parking spaces by the BRT Build Alternative. Many properties that may experience parking impacts have additional space that could be used for relocating affected spaces. As described in Section 4.1, "Property Acquisitions and Displacements", property owners impacted by either the LRT Build Alternative or the BRT Build Alternative will be compensated according to all federal and state regulations.

[4] Stop at Goodyear is made in the southbound direction only.

3.4.4 Pedestrian and Bicycle

Going beyond the improvements in the No Build Alternative, Metro has included investments in the LRT Build Alternative and the BRT Build Alternative that would further enhance existing pedestrian and bicycle facilities with multiuse paths, bicycle lanes, and median refuge areas for pedestrians. On-street bike lanes are proposed to be added to Niagara Falls Boulevard and Maple Road. The LRT Build Alternative and the BRT Build Alternative would also provide continuous sidewalks along both sides of the alignment—filling in gaps where sidewalks are inconsistent or in poor condition—and a new multiuse bike and pedestrian trail would be constructed along John James Audubon Parkway. These connections would improve bicycle and pedestrian access to the proposed stations and promote station connectivity. For pedestrian and wheelchair accessibility, multiuse paths leading up to all station areas would be constructed and intersections along the corridor would be upgraded with ADA-compliant ramps and crosswalk push buttons, further facilitating walkability within the study area.

The Project will take into consideration the planned pedestrian and bicycle improvement recommendations as described within the Town of Amherst Bicentennial Comprehensive Plan (Amended December 2020) and the Town of Tonawanda Comprehensive Plan.

3.4.5 Safety and Security

Vehicle, bicycle, and pedestrian safety provisions, such as signalization, signage, and infrastructure investments, would minimize conflicts between automobiles, bicyclists, and pedestrians. Pedestrian crossings would be clearly marked with signage and limited to dedicated locations such as signalized intersections. During Project design signalized mid-block pedestrian crossing will be evaluated. In locations where pedestrian crossings are prohibited, Project design will evaluate the opportunity to restrict crossings through as use of signage, or a physical barrier, or both. For both the LRT Build Alternative and BRT Build Alternative, safety measures will be put in place to protect the traveling public. For a detailed description of anticipated measures refer to Appendix C1, “Traffic Technical Report.”

For both Build Alternatives, the STOPS model was used to forecast the reduction in annual crashes because of the Project’s transit operations. To measure change in safety, Metro uses FTA guidelines and changes in VMT to calculate changes in disabling injuries and fatalities for automobiles and transit. The key difference in reducing crashes between the LRT Build Alternative and BRT Build Alternative is predicated on the forecasted change of VMT per Alternative which is summarized in Table 3-21. Table 3-22 summarizes each Build Alternative’s impact on reducing crashes resulting in fatalities and injuries.

Table 3-22. Project Reduction in Crashes Resulting in Fatalities and Disabling Injuries

Build Alternative	2045 Annual Weekday Reduction in Fatalities (Based on Annual Weekday VMT Reduction)	2045 Annual Weekday Reduction in Injuries (Based on Annual Weekday VMT Reduction)
LRT Build Alternative	0.15	2.27
BRT Build Alternative	0.001	0.15

Source: STOPS Model Runs (Per million average weekday VMT reduction, annualized VMT using a factor of 260)

3.5 PROPOSED MITIGATION STRATEGIES

The following section describes the proposed mitigation strategies (traffic, transit, pedestrian and bicycle, and safety and security) to reduce the anticipated impacts as a result of the LRT Build Alternative and the BRT Build Alternative.

3.5.1 Traffic Operations

Metro coordinated with NYSDOT and Project stakeholders regarding LOS thresholds, and for this analysis a change in intersection LOS from LOS A, B, C, or D under the No Build Alternative to LOS E or F under the Build Alternative would result in an adverse Project impact. Compared to the No Build Alternative, adverse traffic impacts were identified at the intersections summarized in Table 3-23 (Signalized) and Table 3-24 (Unsignalized).

Table 3-23. Summary of Intersection Impacts to Signalized Intersections as a Result of the Project without Mitigation

Build Alternative	AM Peak (2040)	PM Peak (2040)	Midday Saturday (2040)
LRT Build Alternative without Mitigation	No Adverse Impact	Two Intersection Impacts: ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E	Two Intersection Impacts: ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E
BRT Build Alternative without Mitigation	No Adverse Impact	One Intersection Impact: ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd and Sweet Home Rd continues to operate at LOS E	Three Intersection Impacts: ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Alberta Dr would degrade from a No Build LOS C to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E

Table 3-24. Summary of Intersection Impacts to Unsignalized Intersections as a Result of the Project without Mitigation

Build Alternative	AM Peak (2040)	PM Peak (2040)	Midday Saturday (2040)
LRT Build Alternative without Mitigation	No Adverse Impact	Three Adverse Intersection Impacts: ▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave degrades from a No Build LOS B to a LOS E	Three Adverse Intersection Impacts: ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS A to a LOS E ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave degrades from a No Build LOS B to a LOS E ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave degrades from a No Build LOS C to a LOS F
BRT Build Alternative without Mitigation	No Adverse Impact	Two Adverse Intersection Impacts: ▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS B to a LOS F	One Adverse Intersection Impact: ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave degrades from a No Build LOS B to a LOS E

3.5.1.1 Proposed Mitigation Strategies

For the LRT Build Alternative, proposed mitigation strategies include an investment in non-ballasted (embedded) track along Niagara Falls Boulevard and Maple Road. This investment in embedded track would allow automobiles to transverse the LRT track alignment at designated locations, no longer requiring the prohibition of left-turn movements onto Niagara Falls Boulevard from intersecting east-west neighborhood streets. Likewise, proposed mitigation strategies for the BRT Build Alternative also include allowing left-turn movements at the same designated intersections.

Intersections were selected based on their location to nearby signalized intersections and projected left-turn traffic demand and are listed as follows:

- Niagara Falls Boulevard at Rochelle Place/Almeda Avenue (including the addition of 250-foot northbound and southbound left-turn lanes)
- Niagara Falls Boulevard at Moore Avenue/Betina Avenue
- Niagara Falls Boulevard at Harrison Avenue
- Niagara Falls Boulevard at Highland Avenue/ Ruth Drive
- Niagara Falls Boulevard at Oxford Avenue

For both Build Alternatives, a detailed traffic management plan will be developed during Project design to validate the proposed left-turn mitigation measures described above. Additional plans will be developed to ensure the traveling public's safety at these left-turn movements, which may include additional signalization or other safety measures. During design, the Project will also evaluate the benefits of implementing advanced signal technologies and traffic management systems. Technologies such as Intelligent Transportation Systems and intelligent traffic signals are traffic control systems that combine traditional traffic lights with an array of sensors and artificial intelligence to intelligently route vehicle and pedestrian traffic based on volume and congestion.

SHIFT IN TRAVEL CHARACTERISTICS AS A RESULT OF THE PROJECT (MODE SHIFT)

The operation of the Project is forecasted to encourage a portion of automobile users to shift their travel preferences to transit. This is defined as a mode shift. This forecasted mode shift will reduce the vehicular demand within the Project corridor. For the purposes of transparency and full disclosure, this mode shift was not included within the Project Build Alternatives to document traffic impacts. This expected mode shift is a benefit of each Build Alternative. However, for the purposes of the EIS, it is conservatively assumed as a proposed mitigation strategy.

The proposed traffic mitigation strategies for both Build Alternatives did not account for a mode shift. To evaluate the benefit of this forecasted mode shift and resulting reduction in automobile volumes within the Project corridor, data from the STOPS model analysis was used. As documented in tables C-23 and C-31 of Appendix C2, "Travel Demand Forecasting," incremental transit trips were forecasted for each Build Alternative. Incremental transit trips are defined as new transit riders generated by the proposed Project that were previously traveling by automobile. The following assumptions were used to evaluate this forecasted mode shift benefit:

- Conservatively, only new transit riders (incremental trips) forecasted during the peak travel periods were taken into consideration for the evaluation of this forecasted transit benefit.
- Conservatively, using regional travel information, it was assumed that an average of 1.5 persons travel per automobile within the Project corridor. This factor is defined as the automobile occupancy factor.
- To calculate the forecasted reduction in automobile volumes as a result of the Project, forecasted new transit riders were divided by the vehicle occupancy factor described above.
- The resulting forecasted reduction in automobile volumes was then subtracted from the total automobile volumes used in the analysis of each Build Alternative with proposed mitigation strategies.

Using the assumptions described above, Table 3-25 summarizes the forecasted reduction in automobile volumes as a result of the Project's mode shift benefit. The reduction in vehicle volumes as compared to all vehicle volumes with the Project corridor are also presented as a

mode shift percentage. Given the LRT Build Alternative's forecasted ability to serve more riders and attract more new riders, there is a greater mode shift as compared to the BRT Build Alternative.

Table 3-25. Forecasted Mode Shift Benefit of the Project (Daily Ridership and Vehicle Volumes)

Alternative	Forecasted New Transit Riders During the Peak Period (2045)	Resulting Reduction in Corridor Vehicle Volumes (2045)	Percent Reduction of All Vehicle Volumes in Project Corridor
LRT Build Alternative	2,328 New Transit Riders as a Result of the Project	1,552 Vehicle Reduction as a Result of Forecasted Mode Shift	7.2% Reduction of Vehicles in Peak Period
BRT Build Alternative	257 New Transit Riders as a Result of the Project	171 Vehicle Reduction as a Result of Forecasted Mode Shift	1.2 % Reduction of Vehicles in Peak Period

3.5.1.2 LRT Build Alternative Mitigation Strategy Results

Table 3-26 compares the overall LOS for signalized and unsignalized intersections for the LRT Build Alternative with Mitigation to the LRT Build Alternative without Mitigation. Table 3-27 summarizes the intersections impacts with the proposed mitigation strategy. For a detailed description of the LOS for individual intersection movements refer to Appendix C1, "Transportation Technical Report."

Table 3-26. LRT Build Alternative with Mitigation: Peak-Hour Levels of Service Compared to the LRT Build Alternative without Mitigation (Signalized and Unsignalized)

Intersection	Peak-Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	LRT Build without Mitigation	LRT Build with Mitigation	LRT Build without Mitigation	LRT Build with Mitigation	LRT Build without Mitigation	LRT Build with Mitigation
Main St and Allenhurst Rd*	A	A	A	A	A	A
Main St and Capen Blvd*	A	A	A	A	A	A
Main St and Kenmore Ave	B	B	B	B	B	B
Kenmore Ave and Capen Blvd*	B	B	C	B	B	B
Kenmore Ave and Allenhurst Rd*	B	B	B	B	B	B
Kenmore Ave and Niagara Falls Blvd	C	C	C	C	C	C
Niagara Falls Blvd and Kenilworth Ave*	A	A	A	A	A	A
Niagara Falls Blvd and Princeton Ave*	A	A	B	B	A	A
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	B	A	C	B	B	B
Niagara Falls Blvd and Paige Ave*	B	B	C	B	B	B
Niagara Falls Blvd and Oxford Ave*	B	B	F	D	B	B
Niagara Falls Blvd and Chalmers Ave*	B	B	B	B	B	B
Niagara Falls Blvd and Decatur Rd	B	B	D	C	C	B
Niagara Falls Blvd and Yale Ave*	B	B	F	C	E	B
Niagara Falls Blvd and Lincoln Park Dr*	B	B	C	C	C	B
Niagara Falls Blvd and Longmeadow Rd	B	A	D	C	D	B
Niagara Falls Blvd and Highland Ave/Ruth Dr*	A	B	A	C	A	C
Niagara Falls Blvd and Harrison Ave*	C	C	C	D	E	D
Niagara Falls Blvd and Betina Ave/Moore Ave*	C	C	E	D	F	D
Niagara Falls Blvd and Eggert Rd	C	C	D	C	D	C
Niagara Falls Blvd and Sheridan Dr	D	D	E	D	E	D
Niagara Falls Blvd and Franklin Ave/Rochelle Pl*	A	A	A	A	B	B

Intersection	Peak-Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	LRT Build without Mitigation	LRT Build with Mitigation	LRT Build without Mitigation	LRT Build with Mitigation	LRT Build without Mitigation	LRT Build with Mitigation
Niagara Falls Blvd and Treadwell Rd	C	C	B	B	C	B
Niagara Falls Blvd and Mall Entrance	B	B	C	C	C	B
Niagara Falls Blvd and Brighton Rd/Maple Rd	C	C	D	D	D	D
Maple Rd and Alberta Dr	C	C	C	C	D	D
Maple Rd and Bailey Ave	C	C	E	D	E	D
Maple Rd and Bowmart Pkwy	A	A	B	B	B	B
Maple Rd and Hillcrest Dr	B	B	B	A	A	A
Maple Rd and Sweet Home Rd	C	C	D	C	C	C
Sweet Home Rd and Rensch Rd	C	B	C	C	B	B
John James Audubon Pkwy and Rensch Rd	B	B	C	C	B	B
John James Audubon Pkwy and Hamilton Rd	B	B	A	A	A	A
John James Audubon Pkwy and Core Rd/Lee Rd	A	A	D	C	A	A
John James Audubon Pkwy and Frontier Rd	B	B	B	B	A	A
John James Audubon Pkwy and N Forest Rd	C	C	D	C	B	B
John James Audubon Pkwy and Sylvan Pkwy	B	B	B	B	A	A
John James Audubon Pkwy and Gordon R Yaeger Dr	A	A	A	A	A	A
John James Audubon Pkwy and Bryant Woods S*	B	B	B	B	B	B
John James Audubon Pkwy and Bryant Woods N*	B	B	C	B	A	A
John James Audubon Pkwy and Dodge Rd	C	C	D	D	B	B
John James Audubon Pkwy and I-990 EB Off-Ramp*	A	A	B	B	A	A
John James Audubon Pkwy and I-990 WB Off-Ramp*	A	A	A	A	A	A
Eggert Rd and Sheridan Dr	C	C	C	C	D	C
Eggert Rd and Alberta Dr	C	A	A	A	A	A

* Unsignalized intersection: Level of service was determined using the worst performing stop-controlled approach.

Table 3-27. LRT Build Alternative with Mitigation LOS Impact Summary

Period	Condition	LOS Summary (2040)
Weekday AM peak	LRT Build Alternative without Mitigation	All intersections operate at overall LOS D or better. The LRT Build Alternative does not result in adverse traffic impacts during the weekday AM peak travel period.
	LRT Build Alternative with Mitigation	All intersections operate at overall LOS D or better. The LRT Build Alternative with proposed mitigation does not result in adverse traffic impacts during the weekday AM peak travel period.
Weekday PM peak	LRT Build Alternative without Mitigation	Five intersections are adversely impacted during the weekday PM peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave degrades from a No Build LOS B to a LOS E ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E
	LRT Build Alternative with Mitigation	All intersections operate at overall LOS D or better. The LRT Build Alternative with proposed mitigation does not result in adverse traffic impacts during the weekday PM peak travel period.
Saturday Midday Peak	LRT Build Alternative without Mitigation	Five intersections are adversely impacted during the Saturday midday peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS A to a LOS E ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave degrades from a No Build LOS B to a LOS E ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave degrades from a No Build LOS C to a LOS F ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E
	LRT Build Alternative with Mitigation	All intersections operate at overall LOS D or better. The LRT Build Alternative with proposed mitigation does not result in adverse traffic impacts during the Saturday midday peak travel period.

3.5.1.3 BRT Build Alternative with Mitigation Results

Table 3-28**Error! Reference source not found.** compares the overall LOS for signalized and unsignalized intersections for the BRT Build Alternative with Mitigation to the BRT Build Alternative without Mitigation. Table 3-29 summarizes the intersection impacts with the proposed mitigation strategy. For a detailed description of the LOS for individual intersection movements refer to Appendix C1, "Transportation Technical Report."

Table 3-28. BRT Build Alternative with Mitigation: Peak-Hour Levels of Service Compared to the BRT Build Alternative without Mitigation (Signalized and Unsignalized)

Intersection	Peak Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	BRT Build without Mitigation	BRT Build with Mitigation	BRT Build without Mitigation	BRT Build with Mitigation	BRT Build without Mitigation	BRT Build with Mitigation
Main St and Allenhurst Rd*	A	A	A	A	A	A
Main St and Capen Blvd*	B	A	B	B	A	A
Main St and Kenmore Ave	B	B	B	B	B	B
Kenmore Ave and Capen Blvd*	C	C	B	B	B	B
Kenmore Ave and Allenhurst Rd*	B	B	B	B	B	B
Kenmore Ave and Niagara Falls Blvd	C	C	C	C	C	C
Niagara Falls Blvd and Kenilworth Ave*	A	A	A	A	A	A
Niagara Falls Blvd and Princeton Ave*	A	A	B	B	A	A
Niagara Falls Blvd and Ford Ave/Cambridge Blvd	B	B	C	C	B	B
Niagara Falls Blvd and Paige Ave*	B	B	C	C	B	B
Niagara Falls Blvd and Oxford Ave*	B	B	F	C	B	C
Niagara Falls Blvd and Chalmers Ave*	B	B	B	C	B	B
Niagara Falls Blvd and Decatur Rd	B	B	D	C	C	B
Niagara Falls Blvd and Yale Ave*	B	B	F	D	D	C
Niagara Falls Blvd and Lincoln Park Dr*	B	B	C	C	C	C
Niagara Falls Blvd and Longmeadow Rd	B	B	D	C	D	B
Niagara Falls Blvd and Highland Ave/Ruth Dr*	A	C	A	C	A	D
Niagara Falls Blvd and Harrison Ave*	D	C	C	D	E	E
Niagara Falls Blvd and Betina Ave/Moore Ave*	C	C	D	E	D	E
Niagara Falls Blvd and Eggert Rd	C	C	D	C	C	C
Niagara Falls Blvd and Sheridan Dr	D	C	D	D	E	D
Niagara Falls Blvd and Franklin Ave/Rochelle Pl*	A	A	D	B	B	B

Intersection	Peak Hour Level of Service (2040)					
	Weekday AM		Weekday PM		Saturday MD	
	BRT Build without Mitigation	BRT Build with Mitigation	BRT Build without Mitigation	BRT Build with Mitigation	BRT Build without Mitigation	BRT Build with Mitigation
Niagara Falls Blvd and Treadwell Rd	C	C	C	C	C	B
Niagara Falls Blvd and Mall Entrance	B	B	D	D	C	C
Niagara Falls Blvd and Brighton Rd/Maple Rd	C	C	D	D	D	D
Maple Rd and Alberta Dr	C	C	C	C	E	E
Maple Rd and Bailey Ave	C	C	E	E	E	E
Maple Rd and Bowmart Pkwy	A	A	B	B	B	B
Maple Rd and Hillcrest Dr	B	B	B	A	A	A
Maple Rd and Sweet Home Rd	D	D	E	E	D	D
Sweet Home Rd and Rensch Rd	C	C	C	C	B	B
John James Audubon Pkwy and Rensch Rd	D	C	D	D	C	C
John James Audubon Pkwy and Hamilton Rd	B	B	A	A	A	A
John James Audubon Pkwy and Core Rd/Lee Rd	A	A	D	C	A	A
John James Audubon Pkwy and Frontier Rd	B	B	B	B	A	A
John James Audubon Pkwy and N Forest Rd	C	C	D	D	B	B
John James Audubon Pkwy and Sylvan Pkwy	B	B	C	B	A	A
John James Audubon Pkwy and Gordon R Yaeger Dr	A	A	A	A	A	A
John James Audubon Pkwy and Bryant Woods S*	B	B	B	C	A	A
John James Audubon Pkwy and Bryant Woods N*	B	B	D	E	A	A
John James Audubon Pkwy and Dodge Rd	C	C	D	D	B	B
John James Audubon Pkwy and I-990 EB Off-Ramp*	A	A	B	B	A	A
John James Audubon Pkwy and I-990 WB Off-Ramp	A	A	B	C	A	A
Eggert Rd and Sheridan Dr	C	C	C	C	C	C
Eggert Rd and Alberta Dr	A	A	A	A	A	A

* Unsignalized intersection: Level of service was determined using the worst performing stop-controlled approach.

Table 3-29. BRT Build Alternative with Mitigation LOS Impact Summary

Period	Condition	LOS Summary (2040)
Weekday AM peak	BRT Build Alternative without Mitigation	All intersections operate at overall LOS D or better. The BRT Build Alternative does not result in adverse traffic impacts during the weekday AM peak travel period.
	BRT Build Alternative with Mitigation	All intersections operate at overall LOS D or better. The BRT Build Alternative with proposed mitigation does not result in adverse traffic impacts during the weekday AM peak travel period.
Weekday PM peak	BRT Build Alternative without Mitigation	Three intersections are adversely impacted during the weekday PM peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave degrades from a No Build LOS B to a LOS F ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave degrades from a No Build LOS B to a LOS F ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Sweet Home Rd would degrade from a No Build LOS D to LOS E
	BRT Build Alternative with Mitigation	▪ The unsignalized intersection of Niagara Falls Blvd and Oxford Ave improves from a Build LOS F to a Build with Mitigation LOS C ▪ The unsignalized intersection of Niagara Falls Blvd and Yale Ave improves from a Build LOS F to a Build with Mitigation LOS E Four intersections are adversely impacted during the weekday PM peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave would degrade from a No Build LOS B and Build LOS D to a Build Alternative with Mitigation LOS E ▪ The unsignalized intersection of John James Audubon Pkwy and Bryant Woods N. would degrade from a No Build LOS A and Build LOS D to a Build with Alternative with Mitigation LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would continue to operate at LOS E with the Build Alternative with Mitigation ▪ The signalized intersection of Maple Rd at Sweet Home Rd would continue to operate at LOS E with the Build Alternative with Mitigation
Saturday Midday Peak	BRT Build Alternative without Mitigation	Four intersections are adversely impacted during the Saturday midday peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave degrades from a No Build LOS B to a LOS E ▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr degrades from a No Build LOS D to LOS E ▪ The signalized intersection of Maple Rd at Alberta Dr would degrade from a No Build LOS C to LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would degrade from a No Build LOS D to LOS E

Period	Condition	LOS Summary (2040)
	BRT Build Alternative with Mitigation	▪ The signalized intersection of Niagara Falls Blvd and Sheridan Dr would improve from a Build LOS E to a Build Alternative with Mitigation LOS D Four intersections are adversely impacted during the Saturday midday peak: ▪ The unsignalized intersection of Niagara Falls Blvd and Harrison Ave would continue to operate at LOS E with the Build Alternative with Mitigation ▪ The unsignalized intersection of Niagara Falls Blvd and Betina Ave/Moore Ave would degrade from a No Build LOS B and Build LOS D to a Build Alternative with Mitigation LOS E ▪ The signalized intersection of Maple Rd at Alberta Dr would continue to operate at LOS E ▪ The signalized intersection of Maple Rd at Bailey Ave would continue to operate at LOS E

3.5.1.4 Intersection Impacts with Proposed Mitigation Strategies

Compared to the Build Alternative, a summary of adverse traffic impacts with the Build Alternative's proposed mitigation strategies are summarized in Table 3-30.

Table 3-30. Summary of Intersection Impacts to Signalized Intersections as a Result of the Project's Proposed Mitigation Strategies

Build Alternative	AM Peak (2040)	PM Peak (2040)	Midday Saturday (2040)
LRT Build Alternative with Proposed Mitigation Strategies	No Impacts	▪ No adverse impacts after mitigation. ▪ The proposed strategies for the LRT Build Alternative result in mitigating four adversely impacted intersections during the weekday PM peak period. ▪ While allowances for left-turn movements at select locations on Niagara Falls Boulevard improves traffic progression along the corridor, one adverse impact is expected	▪ No adverse impacts after mitigation. ▪ The proposed strategies for the LRT Build Alternative results in mitigating all five adversely impacted intersections during the Saturday midday peak period.

Build Alternative	AM Peak (2040)	PM Peak (2040)	Midday Saturday (2040)
BRT Build Alternative with Proposed Mitigation Strategies	No Impacts	▪ Adverse impacts expected. ▪ The proposed strategies for the BRT Build Alternative results in mitigating two adversely impacted intersections during the weekday PM peak period. ▪ With the proposed strategies for the BRT Build Alternative four intersections are still adversely impacted. While allowances for left-turn movements at select locations on Niagara Falls Boulevard improves traffic progression along the corridor, additional adverse impacts are expected. The BRT Build Alternative is expected to have less of a reduction on vehicle volumes given fewer new transit riders are attracted to the BRT service.	▪ Adverse impacts expected. ▪ The proposed strategies for the BRT Build Alternative result in mitigating one adversely impacted intersection during the Saturday midday peak period. ▪ With the proposed strategies for the BRT Build Alternative four intersections are still adversely impacted. While allowances for left-turn movements at select locations on Niagara Falls Boulevard improves traffic progression along the corridor, additional adverse impacts are expected. The BRT Build Alternative is expected to have less of a reduction on vehicle volumes given fewer new transit riders are attracted to the BRT service.

3.5.2 Proposed Parking Mitigation

Compared to the No Build Alternative, the following temporary adverse parking impacts were identified as a result of constructing either the LRT Build Alternative or BRT Build Alternative:

- Approximately 552 parking spaces are anticipated to be impacted by the LRT Build Alternative as result of property easement needs.
- Approximately 515 parking spaces are anticipated to be impacted by the BRT Build Alternative as result of property easement needs.

Many properties that may experience parking impacts have additional space that could be used for relocating affected spaces. As described in Section 4.1, "Property Acquisitions and Displacements," property owners impacted by either the LRT Build Alternative or the BRT Build Alternative will be compensated according to all federal and state regulations. Considerations that impacted the use of the property included determining if a reduction in parking met local zoning codes, or proximity of limits of disturbance to the main access point to the building. If either of these considerations were not met, the parcel is considered a full acquisition rather than an easement. This proposed mitigation measure is also described in Section 4.17, "Construction Effects." Both Build Alternatives propose mitigation strategies such as the investment in park & ride lots at UB South Campus, the Boulevard Mall, and the Muir Woods development, where the storage and light maintenance facility is proposed. Combined, these park & ride lots constructed as result of the project will add 350 additional public parking spaces with no fees.

3.5.3 Transit, Pedestrian, Bicycle, Safety, and Security

There are no anticipated impacts to transit, pedestrian, bicycle, safety, and security therefore no mitigation strategies are required.