Section 4.16
Utilities

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Acronyms and Abbreviations

BRT ..... Bus Rapid Transit
ECWA ..... Erie County Water Authority
GIS ..... Geographic Information System
LRT ..... Light Rail Transit
Metro ..... Niagara Frontier Transit Metro System, Inc.
Project ..... Buffalo-Amherst-Tonawanda Corridor Transit Expansion
UB ..... University at Buffalo

4.16 UTILITIES

This section reviews the possible impacts to utilities that could result from the Project. This section also describes existing conditions of current service providers, future conditions expected for the No Build Alternative, and the potential impacts of the LRT Build Alternative and the BRT Build Alternative. This section also discusses strategies to be undertaken by Metro to minimize effects based on the design of the LRT Build Alternative and the BRT Build Alternative.

The study area for the analysis of utility impacts is 0.25 mile on either side of the Project alignment and a 0.5-mile radius around each Build Alternative station location. For utilities, Metro conducted research into county-level and municipal (towns/cities) utilities. Utility mapping data was obtained from the towns of Tonawanda and Amherst, the City of Buffalo, and UB, as well as directly from utility providers. Several Geographic Information System (GIS) shapefiles and as-built plans were received and used as reference in developing this section. Effects were determined by analyzing how the LRT Build Alternative and the BRT Build Alternative could create direct or indirect effects to utilities within the study area.

4.16.1 Affected Environment

This section provides an overview of utility services in the study area, including water, sewer, electricity, gas, and telecommunications. Known connections for water, electric, gas, and telecommunications in the study area are detailed in maps requested from and provided by the service providers.

Water Service

Water service in the study area is divided by municipality. The portion of the Project alignment within the City of Buffalo is serviced by Buffalo Water,[1] the Town of Tonawanda portion is serviced by the Town of Tonawanda Water and Sewer Maintenance Division,[2] and the Town of Amherst portion is serviced by Erie County Water Authority (ECWA).[3]

The portion of the study area south of Sheridan Drive is a direct service area with waterlines owned by the ECWA. The ECWA is responsible for maintenance and capital improvements in this area outside of the City of Buffalo and Town of Tonawanda limits, where water is sent to a contracted municipality. The area north of Sheridan Drive is a lease managed area, where the Town of Amherst owns the waterlines and is responsible for capital improvements to the waterlines. The ECWA operates the system on behalf of the Town of Amherst and is responsible for customer service, billing, and maintenance for this area.

1 *https://buffalowater.org*

2 *https://www.tonawanda.ny.us/government/water-sewer-maintenance.html*

3 *https://www.ecwa.org*

Sanitary and Storm Sewer Service

Similar to water service, sewer service within the study area is divided by municipal boundaries. The Buffalo Sewer Authority[4] provides sanitary sewer service to the City of Buffalo portion of the Project. The Town of Amherst[5] provides sanitary sewer service and owns its own sewage infrastructure and treatment plant. Maintenance of sanitary sewers is performed by the Engineering Department Sewage Maintenance Division located at 1100 North Forest Road. The treatment plant is operated and maintained by the Engineering Department Water Pollution Control Facility Division located at 455 Tonawanda Creek Road. The Town of Tonawanda[6] is served by its Water and Sewer Maintenance Division, which operates and maintains the Town's sanitary sewer and storm sewer systems from its 525 Belmont Avenue facility.

Electricity Service

National Grid[7] is the energy provider that serves the study area. National Grid carries out its business through several subsidiary companies. In Western New York, this subsidiary is Niagara Mohawk Power Corporation, which National Grid acquired in 2000.[8]

Natural Gas Service

National Fuel[9] is the natural gas provider that serves the study area.

Telecommunications Service

Verizon[10] is a major telecommunications provider in the study area. Verizon Fios (fiber optics) services are also available to customers in the towns of Tonawanda and Amherst.[11] Spectrum[12] is another major provider of telecommunications services in the study area. FiberTechs[13] also services a portion of the study area with fiberoptic telecommunications.

4.16.2 No Build Alternative

The No Build Alternative would consist of a future scenario without the Project. The No Build Alternative would result in no Project-related impacts to utilities.

4 *https://buffalosewer.org*

5 *https://www.amherst.ny.us/content/departments.php?dept_id=dept_10*

6 *https://www.tonawanda.ny.us/government/water-sewer-maintenance.html*

7 *https://www.nationalgridus.com*

8 National Grid Buys Niagara Mohawk for $8.9 Billion, *http://www.energyonline.com/Industry/News.aspx?NewsID=3898&National_Grid_Buys_Niagara_Mohawk_for_%248.9_Billion*

9 *https://www.nationalfuel.com*

10 *https://www.verizon.com/local/ny/buffalo*

11 *https://www.verizon.com/local/ny/buffalo/internet*

12 *https://www.spectrum.com/services/new-york*

13 *https://fibertechs.com*

4.16.3 Build Alternatives

The LRT Build Alternative and the BRT Build Alternative could affect utility usage and supply as well as its supporting infrastructure. For this analysis, utilities evaluated included electrical power, water and sewer facilities, storm drainage systems, natural gas lines, and telecommunications transmission lines.

Utility Supply and Usage

Electrical power to operate the LRT Build Alternative and the BRT Build Alternative would be drawn from existing National Grid service. Proposed Project stations would also use power and water. When comparing the Project Build Alternatives to the No Build Alternative, the following was identified:

- LRT Build Alternative would require the placement of electrical substations for rail operations.
- BRT Build Alternative would require the placement of electric charging infrastructure at various stations.

Power and water supplies exist within the study area and will be evaluated and adjusted, as needed, during final construction design plans to support the LRT Build Alternative and the BRT Build Alternative. Proposed project utilities will be sited properly, co-located, and concealed to the extent possible. The capacity to provide power and water within the study area would not be impacted by the LRT Build Alternative and the BRT Build Alternative. Therefore, the LRT Build Alternative and the BRT Build Alternative would not adversely impact supply or usage of utilities within the Project study area.

Utility Infrastructure

Within the Project study area and along the Project alignment the presence of the following utilities was defined:

- Electrical power utilities (both underground and above ground, including poles)
- Telecommunication, including telephone, fiber, and cable (both above and below ground)
- Water and sewer mains
- Natural gas utilities
- Oil pipelines
- UB steam lines
- Traffic signals and communications

As such, the impact to these systems from the construction of the chosen Build Alternative would be assessed during final design, though it is likely that some utilities would need to be relocated or improved. As stated in Chapter 3, "Transportation", signalized intersections would be upgraded to allow for a transit signal preemption scheme for the LRT Build Alternative and

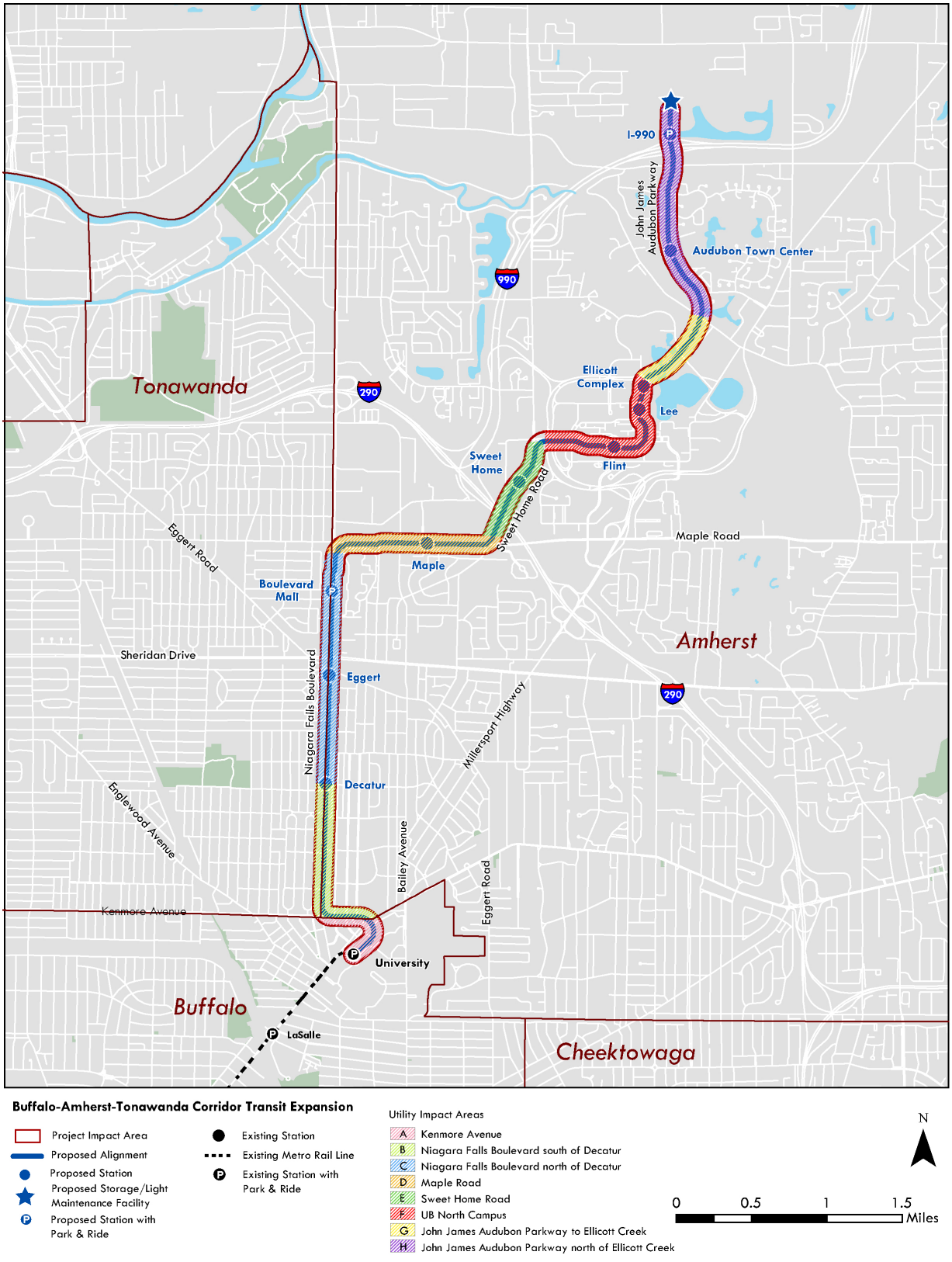
traffic signal priority (TSP)[14] technology for the BRT Build Alternative. The LRT Build Alternative and the BRT Build Alternative would affect the existing utilities (organized by roadway) summarized in Table 4.16-1 and shown in Figure 4.16-1.

Table 4.16-1. Summary of Existing Utility Impacts

Roadway	Map Area (As Shown in Figure)	LRT and BRT Build Alternative Impacts
Along Kenmore Avenue	A	▪ Underground primary electrical and street lighting electrical ▪ Underground telecommunications ▪ Water and sewer mains ▪ Natural gas ▪ Traffic signals and communications
Along Niagara Falls Boulevard south of the proposed Decatur Station	B	▪ Underground street lighting and poles ▪ Telecommunication duct bank ▪ Water and sewer mains ▪ Natural gas ▪ Traffic signals and communications
Along Niagara Falls Boulevard north of the proposed Decatur Station	C	▪ Electrical utility poles ▪ Telecommunication duct bank ▪ Water and sewer mains ▪ Natural gas ▪ Traffic signals and communications
Along Maple Road	D	▪ Electrical utility poles ▪ Underground and above ground telecommunications; underground fiber (near the Bowmart Parkway intersection and between Sweet Home Middle School, Hillcrest Drive, and Sweet Home Road) ▪ Water (Alberta Drive to North Baily Avenue) and Sewer (Niagara Falls Boulevard to North Baily Avenue) ▪ Natural gas ▪ Traffic signals and communications
Along Sweet Home Road	E	▪ Underground fiber ▪ Sewer mains (near the intersection with Maple Road) ▪ Water (potentially) ▪ Natural gas ▪ Traffic signals and communications
Through the UB North Campus	F	▪ Underground electrical (including light poles) ▪ Underground communications ▪ Water and sewer mains ▪ UB steam lines ▪ Natural gas ▪ Oil pipelines ▪ Traffic signals at the Rensch Entrance and John James Audubon Parkway ▪ Traffic signals and communications
Along John James Audubon Parkway at or South of Ellicott Creek	G	▪ Underground electric
Along John James Audubon Parkway north of Ellicott Creek	H	▪ Underground electrical primary ▪ Underground communications ▪ Water and sewer mains ▪ Natural gas ▪ Traffic signals and communications

[14] 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.

Figure 4.16-1. Utility Impact Areas



It is anticipated that construction of either Build Alternative would impact utility infrastructure along the Project Alignment. However, Project impacts along John James Audubon Parkway north of Ellicott Creek will be minimized considering the alignment utilizes the northbound travel lanes and follows the existing road alignment. Design of the Project alignment, stations, substations, and catenary structures will be further defined during Project final design and will include and incorporate any necessary utility relocations.

4.16.4 Potential Mitigation Strategies

The conceptual design of the LRT Build Alternative and the BRT Build Alternative incorporated mitigation measures to reduce the impacts and costs associated with relocation of utilities both above and below ground. Where feasible, possible utility conflicts would be minimized during final design.

Mitigation techniques would include relocation, removal, and protection (*e.g.*, pipe casing). Utility conflicts would be addressed typically via in-kind replacement. In certain cases, overhead utilities could be relocated underground. Existing utilities in conflict with the chosen Build Alternative could be relocated to "utility corridors," which could be located between the back-of-curb and the outside right-of-way. In addition, there could be an opportunity to collaborate with utility providers who have been considering utility upgrades or improvements to their systems.

Construction equipment typically required for relocating utilities would include excavators/backhoes, trenchers, boring machines, trucks, cranes, and generators/compressors. Utility relocations in existing streets would require the demolition of pavement, sidewalks, and curbs where open trench construction would be employed. This work would require breaking operations consistent with sawing or jack hammering. To repair the damaged structures, concrete or asphalt construction methods would be used. Jack-and-bore and tunneling methods would reduce the demolition needed and would typically be employed at sensitive locations, major intersections, and perpendicular crossings. The design of utility adjustments and relocations would be developed as part of the final construction plans. Relocations would be addressed in the traffic control plans by using lane closures or temporary road closures.

To minimize scheduling conflicts and coordination issues during construction, the necessary utility relocations would occur before major construction activities begin. This advance utility relocation would facilitate the subsequent construction and minimize delays required to resolve utility conflicts.