

**Architecture/History Survey Report
Madison East-West BRT Project**

Table 13

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
E. Washington Avenue at Milwaukee Street - Station											
243310	2609 E. Washington Avenue	The Malt House	Commercial	Tavern/bar	c.1955	Contemporary	1 story; broad, irregular footprint; flat roof with wide overhanging eaves; minimal fenestration; set of three picture windows with continuous brick sill; brick and stucco cladding	New survey	Not eligible	Relatively small, modest example of mid-century modern architecture within the context of Madison; nothing to suggest potential historical or architectural significance	52
E. Washington Avenue at Marquette Street - Station											
None											

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Photo 52. AHI #243310, 2609 E. Washington Avenue, The Malt House, View East

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Map 14



Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 315 degrees (Scale 1:5,000)

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Table 14

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
E. Washington Avenue at Melvin Court - Station											
<i>None</i>											
E. Washington Avenue at Wright Street - Station											
115324	3401 E. Washington Avenue	Gardner Baking Co.	Commercial	Industrial building	1952	Contemporary	Expansive industrial building, 1- and 2-story box-like sections; brick; minimal architectural detailing; bands of windows on 2-story section with minimal fenestration elsewhere; loading dock	Resurveyed - appearance unchanged	Not eligible	Lacks sufficient architectural interest and integrity; nothing to suggest potential historical significance	53, 54
243311	3388 E. Washington Avenue	None	Residential	House	c. 1900	Queen Anne	2.5-story duplex; rectangular footprint; pedimented front gabled roof; clapboard siding; full-width porch; 2-story canted bay windows; asymmetrical façade; 1/1 windows; decorative brackets	New Survey	Not eligible	Relatively intact but overall nondistinctive example of the Queen Anne style within the context of Madison; nothing to suggest potential historical or architectural significance	55, 56

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Photo 53. AHI #115324, 3401 E. Washington Avenue, Gardner Baking Co., View East



Photo 54. AHI #115324, 3401 E. Washington Avenue, Gardner Baking Co., View Northeast

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Photo 55. AHI #243311, 3388 E. Washington Avenue, House, View West



Photo 56. AHI #243311, 3388 E. Washington Avenue, House, View North

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Map 15



Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 315 degrees (Scale 1:5,000)

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Madison East-West BRT Project**

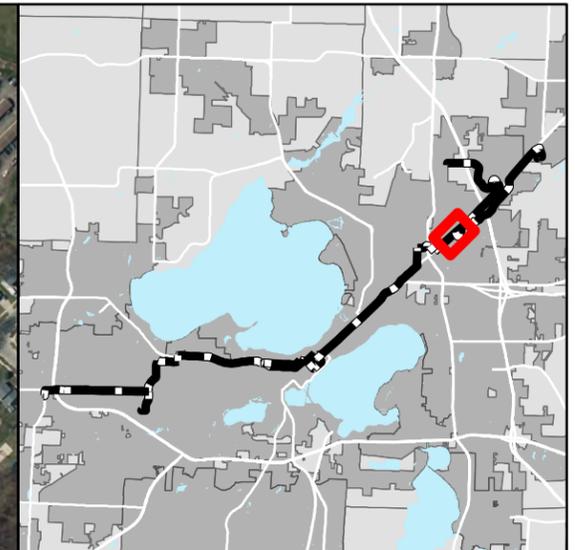
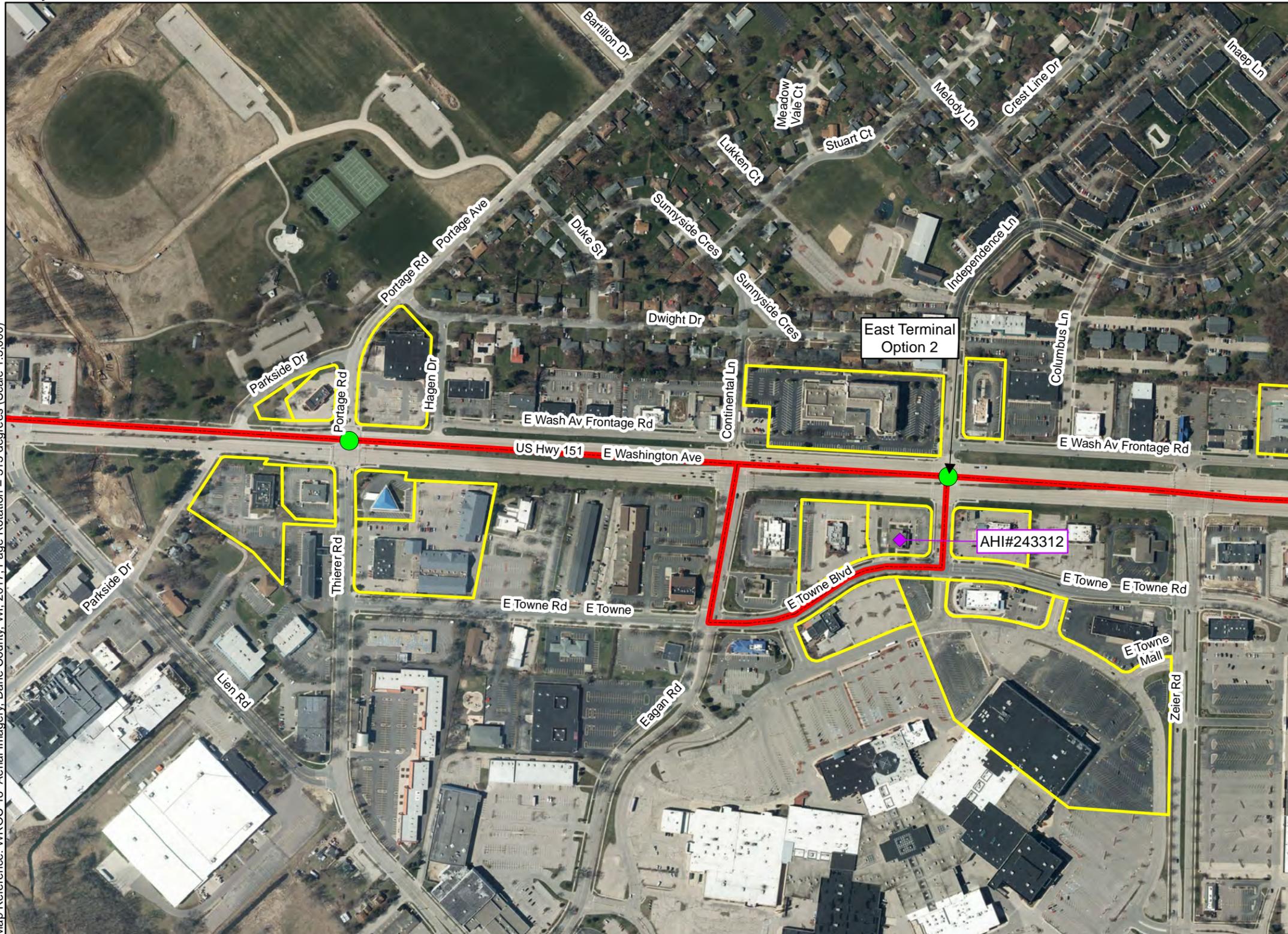
Table 15

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
Anderson Street at Wright Street - Station											
<i>None</i>											
Mendota Street Connection - Station											
<i>None</i>											
E. Washington Avenue at Mendota Street - Station											
<i>None</i>											

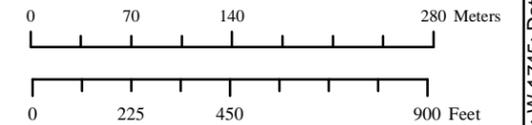
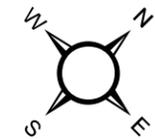
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Map 16

Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 315 degrees (Scale 1:5,000)



- Surveyed Architectural Historic Resource
- Proposed Station Location
- Proposed Route Alignment
- Parcel within Area of Potential Effects



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Table 16

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
E. Washington Avenue at Portage Road - Station											
<i>None</i>											
E. Washington Avenue at Independence Lane - Station											
243312	4402 East Towne Boulevard	Associated Bank	Commercial	Bank	c.1970	Contemporary	1-story freestanding bank building; square footprint; flat roof; brick cladding; wide overhanging eaves; full-height picture windows; expansive glass entry; drive-thru canopy	New survey	Not eligible	Nondistinctive example of modern bank building; nothing to suggest potential historical or architectural significance	57, 58

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Photo 57. AHI #243312, 4402 East Towne Boulevard, Associated Bank, View West



Photo 58. AHI #243312, 4402 East Towne Boulevard, Associated Bank, View North

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Map 17



Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 315 degrees (Scale 1:5,000)

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Madison East-West BRT Project**

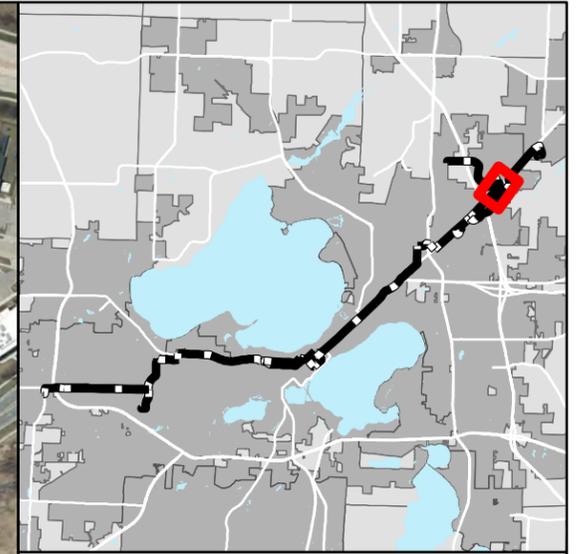
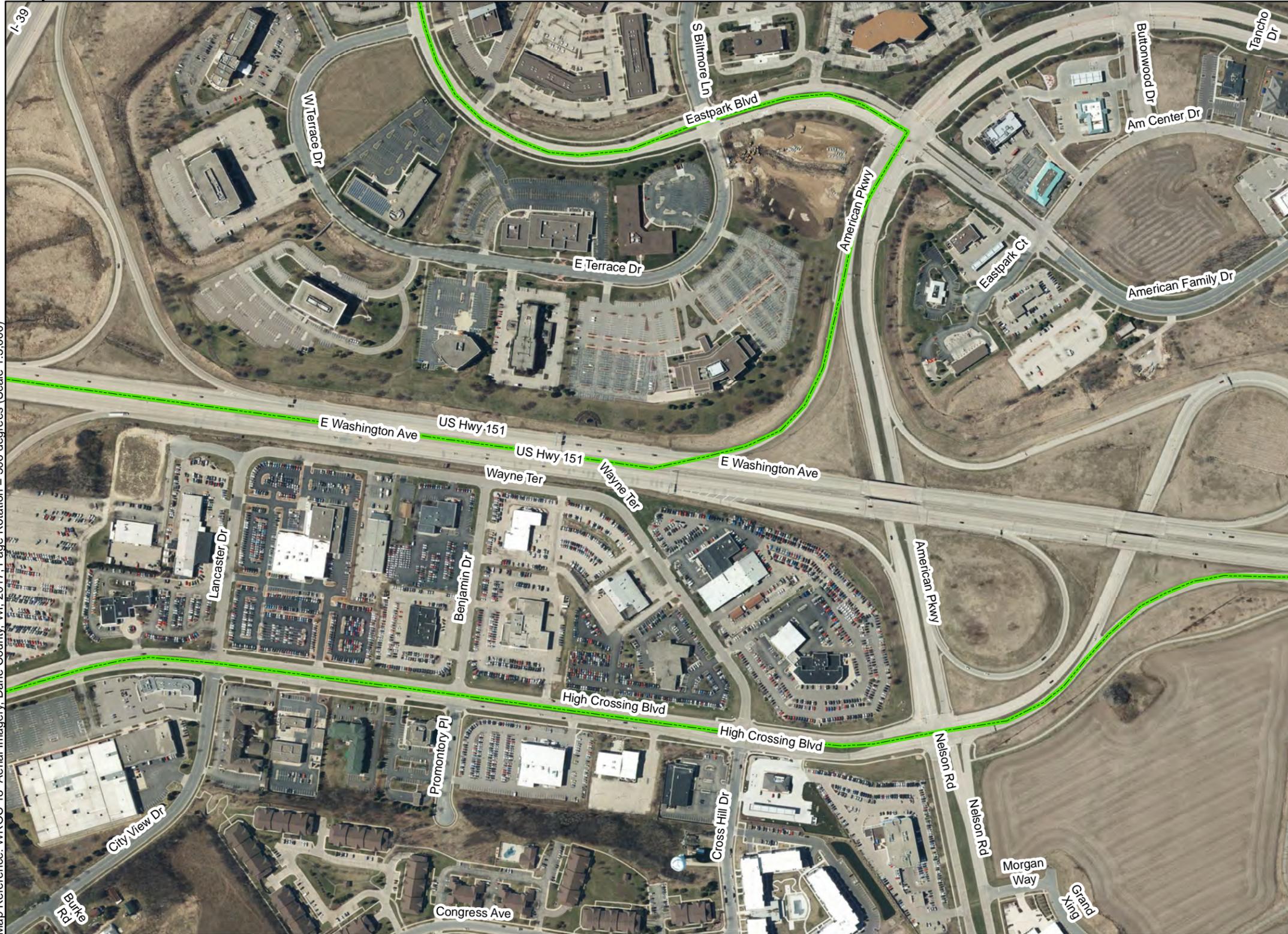
Table 17

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
E. Washington Avenue at E. Springs Drive - Station											
<i>None</i>											

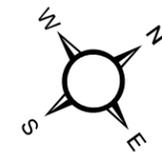
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Map 18

Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 306 degrees (Scale 1:5,000)



Local Service Extension



0 70 140 280 Meters

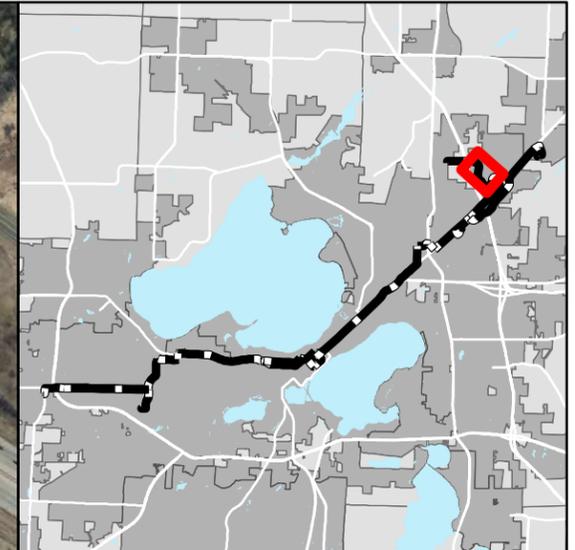
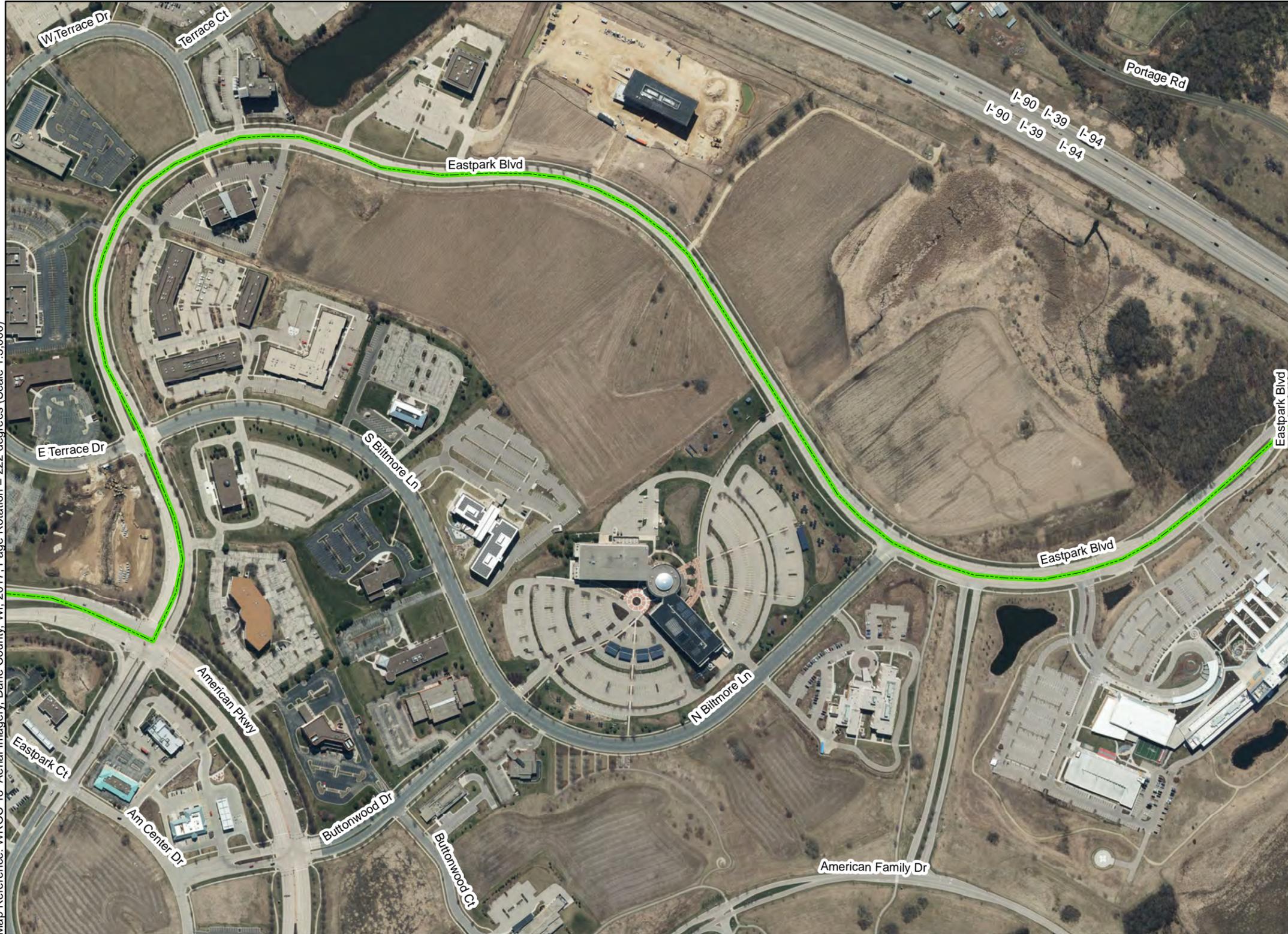
0 225 450 900 Feet

Job: W-1745; Date Saved: 8/24/2021 3:06:36 PM

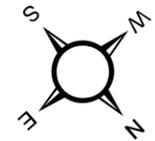
Architecture/History Survey Report
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Map 19

Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 222 degrees (Scale 1:5,000)



Local Service Extension



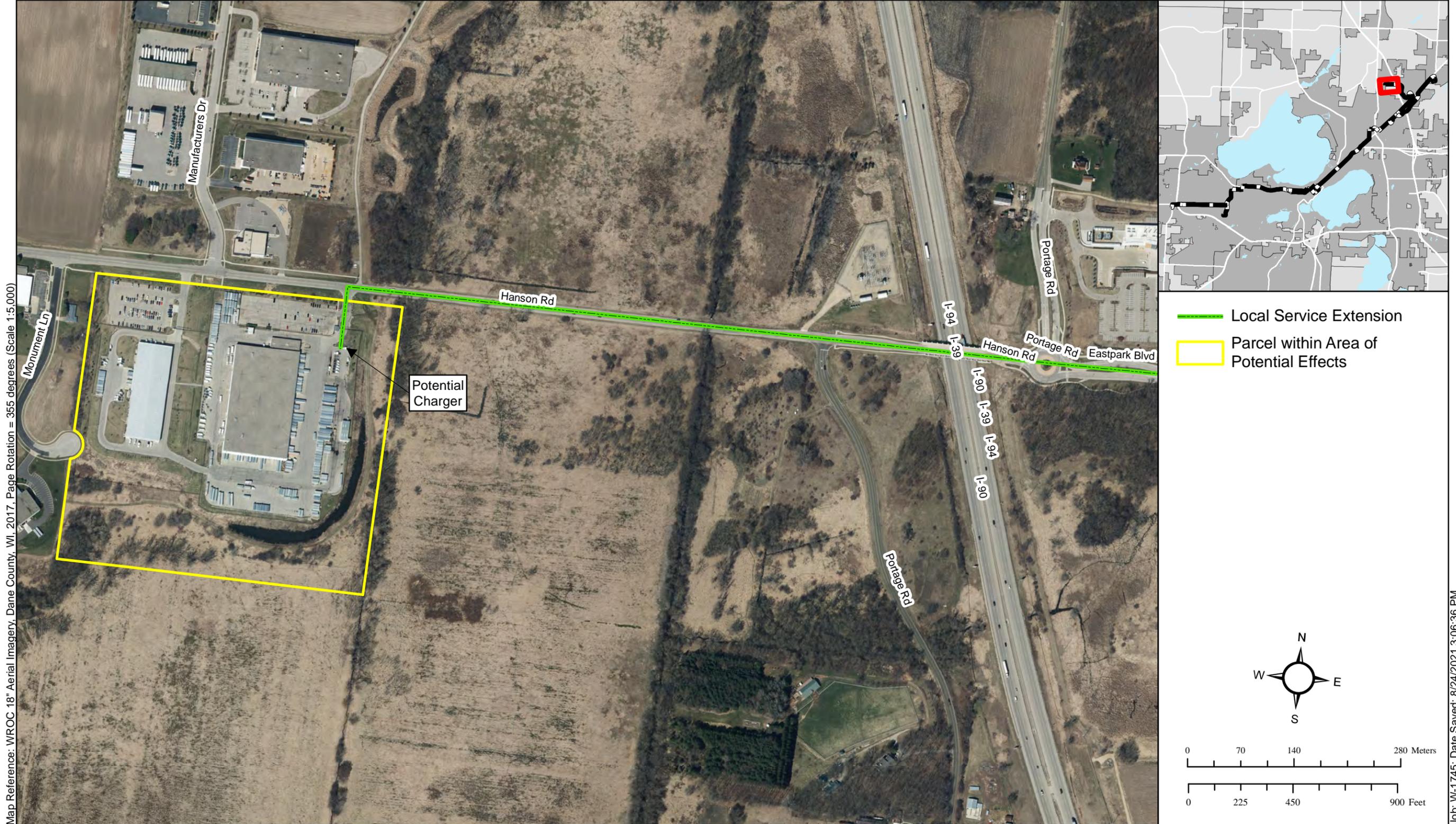
0 70 140 280 Meters

0 225 450 900 Feet

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Architecture/History Survey Report
Madison East-West BRT Project

Map 20



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Table 20

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
Metro Transit Satellite Facility, 3923 Hanson Road - Potential Bus Charger											
None											

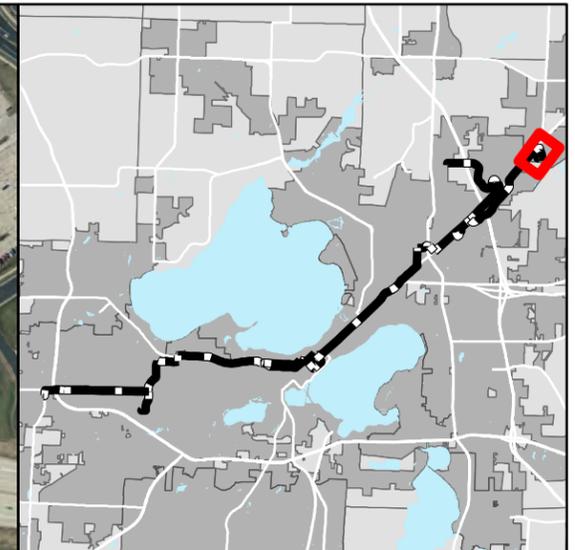
Architecture/History Survey Report
Madison East-West BRT Project

Map 21

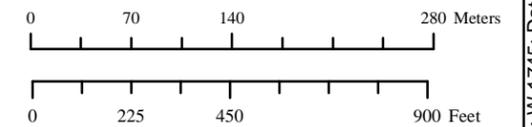
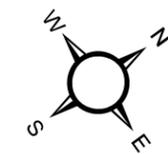


Architecture/History Survey Report
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Map 22



- Local Service Extension
- Parcel within Area of Potential Effects



Map Reference: WROC 18" Aerial Imagery, Dane County, WI, 2017, Page Rotation = 306 degrees (Scale 1:5,000)

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Table 22

AHI No.	Address	Property Name	Property Type	Resource Type	Year Built	Architectural Form/Style	Architectural Details	Survey Status	Eligibility Recommendation	Additional Comments	Photos
Sun Prairie Park-and-Ride, 1704 Reiner Road - Potential Bus Charger and Restroom Facility											
<i>None</i>											

**Phase I Archaeology Survey Report
East-West Bus Rapid Transit (BRT) Project
City of Madison
Dane County, Wisconsin**

Prepared for

City of Madison Metro Transit

Prepared by

Commonwealth Heritage Group, Inc.

**Megan Harding, MS, Project Archaeologist
Rhiannon Jones, MA, RPA, Principal Investigator**

October 2021

W-1745/WR-1920

1.0 INTRODUCTION

The City of Madison (City) is in the preliminary design phase for a Bus Rapid Transit (BRT) system. The City is pursuing federal funding through the Federal Transit Administration (FTA) to implement the BRT project and therefore it must comply with Section 106 of the National Historic Preservation Act (Section 106) and its implementing regulations 36 CFR Part 800. Section 106 requires the consideration of effects to historic properties, which are defined as properties listed on, or determined eligible for listing on, the National Register of Historic Places (National Register). The BRT project also will need to comply with Wisconsin's burial sites law, Wisconsin Statute §157.70, which provides legal protection for human burial sites from unauthorized disturbance.

Commonwealth Heritage Group, Inc. (Commonwealth) was contracted to complete a Phase I archaeological survey for the BRT project in accordance with Section 106 to identify historic properties that may be affected. The results of Commonwealth's archaeological survey are provided in this report.

2.0 PROJECT DESCRIPTION

2.1 Project Overview

The East-West Bus Rapid Transit (BRT) project is a proposed 15-mile BRT route in Madison, Wisconsin. It will serve transit needs through the center of the city, running along E. Washington Avenue, around the Capitol, through the University of Wisconsin-Madison campus, and along University Avenue and Mineral Point Road to the West Towne area. See Appendix A:Figure 1 for a map of the BRT route. It will be an on-street system with buses operating in a combination of exclusive, semi-exclusive, and mixed traffic lanes, with running way improvements such as limited stops, transit signal priority, and other various intersection improvements. The BRT route will have a total of 32 station locations and terminate to the east near the intersection of E. Washington Avenue and E. Springs Boulevard and to the west at a proposed new park-and-ride on Junction Road, just west of the Madison Beltline (USH 12/14) and south of Mineral Point Road.

In general, the BRT project consists of these elements:

- Construction of an approximately 15-mile BRT line consisting of exclusive and semi-exclusive bus-only lanes and mixed traffic lanes, primarily using existing roadways.
- Construction of 32 BRT stations.
- Construction of an approximately 170-space park-and-ride lot at Junction Road south of Mineral Point Road to serve as the west terminal station and include local bus bays to facilitate transfers between local and BRT service.
- Purchase of 41 60-foot buses (combination of battery-electric and diesel).
- Traffic signal priority.
- Electric bus charging infrastructure.

Implementation of the BRT system in Madison is expected to result in the following:

- Replacement of local bus service, resulting in similar or reduced bus volumes on the BRT route
- Increases in the use of electric buses, reducing existing noise and air impacts
- No property relocations
- No repurposing of lanes during rush hour on the route's most congested roadways (E. Washington Avenue, University Avenue, and Mineral Point Road).
- No increase in bus travel speeds.

Project elements are described in greater detail below.

2.2 Operations

The BRT route would serve stations from Junction Road near Mineral Point Road to E. Washington Avenue at E. Springs Drive. From E. Springs Drive the route would split into two alternating local service patterns and connect with the existing Sun Prairie Park-and-Ride or continue onto the Madison Metro Satellite Maintenance Facility, where electric bus charging will occur during layovers. The BRT route would run in a combination of exclusive and semi-exclusive center running and side running bus-only lanes and mixed traffic lanes with priority at traffic signals and stations. More specifically, the project includes the following, from west to east:

- Junction Road – Buses would operate in mixed traffic. No roadway widening or reconstruction is required outside the station area except for a new traffic signal to access the Junction Terminal park-and-ride.

- Mineral Point Road – Buses would operate in mixed traffic between Junction Road and Big Sky Drive/Tree Lane. The project would shift the existing Mineral Point Road curbside bus-only lanes to center bus-only lanes between Big Sky Drive/Tree Lane and Whitney Way. To accommodate bikes, the sidewalk on the north side of Mineral Point Road will be reconstructed as a shared-use path.
- Whitney Way – Buses would operate in mixed traffic between Mineral Point Road and Tokay Boulevard. Center lanes will be re-stripped to bus-only from Mineral Point Road to Sheboygan Avenue. No roadway widening or reconstruction is anticipated outside station areas.
- Sheboygan Avenue and Segoe Road – Buses would operate in mixed traffic. No roadway widening or reconstruction is required outside station areas.
- University Avenue between Segoe Road and University Bay Drive/Farley Avenue – Buses would operate in mixed traffic, with some exceptions. Eastbound, a curbside bus-only lane will be created between Segoe Road and Rose Place/Midvale Boulevard, requiring roadway widening and reconstruction of sidewalks on the south side of University Avenue in some locations. Westbound, buses would operate in mixed traffic with the exception of the approach to the Midvale Boulevard station where buses would share the right lane with right-turning vehicles. Existing eastbound and westbound general-purpose traffic lanes would be maintained. No other roadway widening or reconstruction is required outside station areas.
- Campus Drive between University Bay Drive/Farley Avenue and University Avenue – Buses would operate in a new bus lane that is a converted shoulder in one direction only (westbound on the west part of Campus Drive, and eastbound on the east part of Campus Drive). Outside these areas, buses will operate in mixed traffic. Some roadway reconstruction will be required to convert the shoulder to a bus lane.
- University Avenue (westbound) through the UW campus – BRT would use the existing bus-only lane. No roadway widening or reconstruction is required outside station areas.
- Johnson Street (eastbound) through the UW campus – The existing right-most lane will be striped as bus-only, with right turning vehicles sharing the lane near intersections. No roadway widening or reconstruction is required outside station areas, aside from minor intersection modifications at Randall Avenue.
- State Street – BRT would use the existing transit mall which is restricted to buses, bikes, and authorized vehicles. No roadway widening or reconstruction is required outside station areas.
- Capitol Square – BRT would use existing bus-only lanes. No roadway widening or reconstruction is required outside station areas.
- East Washington Avenue between the Capitol Square and Wright Street – Buses would operate in mixed traffic between Webster Street and Hancock Street. Left lanes would be re-stripped to bus-only from Hancock Street to Lexington Avenue (near the Wright Street/Fair Oaks Avenue station). The eastbound left lane from Sixth Street to Lexington Avenue would be open to general purpose traffic between 4:00 pm and 6:00 pm. The westbound left lane from Lexington Avenue to McCormick Avenue would be open to general purpose traffic between 7:00 am and 9:00 am. No roadway widening or reconstruction is required outside station areas.
- Wright, Anderson, and Mendota Streets – Buses would operate in mixed traffic. Construction of a short bus-only lane (about 125 feet long) is needed to connect Mendota Street to the intersection of Anderson Street and Stoughton Road. No other widening or reconstruction of existing roadway is required outside station areas.
- East Washington Avenue between Mendota Street and Portage Road/Thierer Road – Buses would operate in mixed traffic. No roadway widening or reconstruction is required outside station areas.
- East Washington Avenue between Portage Road/Thierer Road and East Springs Drive – Curbside lanes would be re-stripped as bus-only. No roadway widening or reconstruction is required outside station areas.

Much of the BRT routing replaces and/or complements local bus service which already exists in these corridors. The below table summarizes the approximate number of weekday buses in 2019 (pre-COVID) and the projected number of BRT buses proposed on weekdays in 2024 along the BRT route.

BRT Route Location	2019 Weekday Buses	2024 BRT Weekday Buses
Mineral Point Road, West of High Point Road	36	128
Mineral Point Road, West of Island Drive	120	128
Whitney Way, South of Mineral Point Road	252	256
Whitney Way, North of Mineral Point Road	156	128
Sheboygan Avenue, East of Eau Claire Avenue	302	256
University Avenue at Shorewood Boulevard	504	240
Campus Drive	402	240
University Avenue and Johnson Street at Brooks Street	831	240 + local service
University Avenue and Johnson Street, Lake Street to Bassett Street	711	368 + local service
State Street at Fairchild Street	618	368
Capitol Square at Wisconsin Avenue and MLK Jr Boulevard	786	368 + local service
East Washington Avenue at Ingersoll Street	282	256
East Washington Avenue, East of Milwaukee Street	183	128
East Washington Avenue, East of Highway 30	129	128
East Washington Avenue at Thierer Road	123	128

The BRT span of service (hours of operation) will be the same as local service (pre-COVID pandemic), generally from about 5:00 am to midnight on weekdays. Along most of the route, bus volumes will remain about the same since the BRT project will replace bus service hours already in the corridor. On some portions of the BRT route, the number of buses will be reduced, a result of replacing 40-foot buses with 60-foot buses (higher capacity buses means fewer buses are needed), as well as the overall restructuring of service to be more efficient. The majority of motor vehicle traffic capacity is expected to be preserved during peak periods on the most congested corridors. As noted, the transit lane on Mineral Point Road will be relocated, but the number of through general purpose lanes will be maintained; on University Avenue from Segoe Road to University Bay Drive BRT will run in mixed traffic; and on E. Washington Avenue the number of through general purpose lanes in the peak direction will be maintained.

2.3 Stations

The project includes 32 station locations, including side running station pairs, center stations, and off-street stations. Stations will generally be between 50 and 60 feet long, and between 9 and 26 feet wide. The Capitol Square station includes two platforms and two auxiliary stops: eastbound and westbound BRT platforms on the Capitol Square itself (Mifflin and Main Streets), as well as auxiliary stops on the Capitol Loop (Dayton and Doty Streets) for use during detours, which are estimated to occur about 70 times per year. Stations are currently proposed at the following locations, from west to east:

Station Name	Position	Station Name	Position
Junction Road	Off street	State Street	Side pair
High Point Road	Center	Capitol Square	Side pair
Westfield Road	Center	Blair Street	Center

Grand Canyon Drive	Center	Paterson Street	Center
Island Drive	Center	Baldwin Street	Center
Rosa Road	Center	First Street	Center
West Transfer Point (optional)	Off street	Fourth Street	Center
Whitney Way/Mineral Point Road	Center	Milwaukee/North Street	Center
Regent Street	Center	Marquette Street	Center
Eau Claire Avenue	Center	Melvin Court/Rethke Avenue	Center
Segoe Road	Side pair	Wright Street/Fair Oaks Avenue	Center
Midvale Boulevard	Side pair	Anderson Street	Side pair
Shorewood Boulevard	Side pair	Mendota Street	Side pair
University Bay Drive	Side pair	Thierer Road – Portage Road	Side pair
Orchard Street	Side pair	Independence Lane	Side pair
East Campus Mall	Side pair	E. Springs Drive	Side pair

Stations will be typical of modern BRT facilities. They are intended to provide enough space for people to circulate on the platform, be accessible to people with disabilities, and offer a better passenger experience than a typical bus stop. Anticipated features of the BRT stations include level boarding, fare payment equipment, enhanced shelter, seating, and lighting, potential heating, real-time information, security cameras, public Wi-Fi, and enhanced landscaping. Center stations will typically consist of one double-sided platform serving buses in both directions, while side pair stations will consist of a single platform in each direction.

2.4 Fleet

A total of 41 sixty-foot buses would be procured for the project. Of the vehicles purchased, 27 will be low-floor, battery electric buses. The remaining 14 buses will be diesel-powered vehicles. Additionally, three overhead pantograph chargers and 15 depot chargers would be procured for the project.

2.5 Facilities

The project includes construction of an approximately 170-space park-and-ride lot at Junction Road south of Mineral Point Road. This will serve as the west terminal station and include local bus bays to facilitate transfers between local and BRT service. There are no new buildings planned at this location.

Madison Metro Transit also is preparing to upgrade and open a new Satellite Maintenance Facility at 3901 Hanson Road in Madison. That facility will be operational well before the BRT project and meet system-wide needs including BRT operation. However, the BRT project will include the cost and construction of electric bus charging infrastructure at the facility.

Additionally, the project will include the cost and construction of electric bus charging and bathroom infrastructure at the existing Sun Prairie Park-and-Ride at 2751 O’Keeffe Avenue in the city of Sun Prairie, approximately three miles northeast of the East Springs terminal station. BRT electric buses are expected to use the new Satellite Maintenance Facility and Sun Prairie Park-and-Ride for layovers and electric charging.

The project also includes construction staging on a City-owned block bounded by E. Washington Avenue, Main Street, Butler Street, and Hancock Street near the proposed Blair Street station. Once construction is complete, this site is planned to be redeveloped using the FTA’s Joint Development program. This

development would likely take the form of a mixed-use building, occupying the entire site and rising up to 10 stories.

2.6 Concurrent Projects

The City of Madison has various construction projects underway and planned along the BRT route or within the BRT project area, which largely focus on pavement replacement, incorporating multi-modal enhancements for biking and walking, and decreasing fatalities and critical injuries caused by motor vehicle crashes. The BRT route includes some of Madison’s highest volume streets that are on the “High Injury Network,” and thus safety improvements have been directed to these areas. Projects on the BRT route include the following:

Project	Description
E. Washington Avenue Pinckney to Marquette	Reduced speed limit, enhanced crosswalk markings
E. Washington Avenue at Livingston Street	Added median bollards for pedestrian refuge
Whitney Way Sheboygan Avenue to Tokay Boulevard	Reduced speed limit, added buffered bike lanes, improved pedestrian crossings
Mineral Point Road at Whitney Way	Reduced speed limit, added driver feedback board
University Avenue (in 2022) Shorewood Boulevard to University Bay Drive	Total reconstruction. Bicycle facilities added.
5339b Grant Upgrades	Purchase of three 60-foot buses; upgrade Metro Satellite Maintenance Facility to service 60-foot buses; install dedicated runningway for 1.2 miles of E. Washington Avenue (and eliminate existing curb bumpouts); install dedicated runningway for 0.75 miles of Whitney Way; install red pavement on existing Mineral Point Road; implement spot geometric improvements at East Transfer Point.

These projects were/are separate from the BRT project with independent utility and BRT can operate with or without their construction.

3.0 AREA OF POTENTIAL EFFECTS

A project's Area of Potential Effects (APE) is broadly defined under Section 106 as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties." The APE for the BRT project for archaeological resources encompasses properties that may be affected directly by any associated ground disturbing project activities.

At this time, the existing roadway footprint is not expected to change significantly along most portions of the BRT route and the addition of dedicated bus-only lanes through the changing of roadway markings will not involve ground disturbing activities. For these reasons, most archaeological and cemetery/burial sites along the BRT route are not likely to be affected by the BRT project. Areas outside of the existing roadway footprint or where right-of-way will need to be acquired are of increased sensitivity for archaeological resources.

Defining the APE for direct effects is critical for determining whether archaeological and cemetery/burial sites have the potential to be impacted and for making final recommendations regarding future archaeological work needed to comply with Section 106 and Wisconsin Statute §157.70. If ground disturbance is required for construction of BRT stations or for other purposes, including within the existing roadbed, such ground disturbing activities have the potential to impact archaeological and cemetery/burial sites. The proposed BRT route is heavily urbanized, however, and can be expected to have been largely previously disturbed. Further, subsurface testing within previously reported cemetery/burial sites and archaeological sites coincident with the BRT route either is not possible due to the built environment (pavement, utilities, etc.), or would not yield informative results. Commonwealth recommends visual inspection of the proposed BRT route to document disturbances. If ground disturbance is necessary within cemetery/burial sites, Commonwealth recommends archaeological monitoring by a "qualified archaeologist," as specified under Wisconsin Statute §157.70 (1) (i) and the Wisconsin Administrative Code §HS 2.04 (6), during ground disturbing activities. Archaeological monitoring is not required if no ground disturbance will occur within these sites.

The Wisconsin State Historic Preservation Office (SHPO) commented on May 24, 2021, that the archaeological APE was appropriate.

4.0 DESCRIPTION OF THE PROJECT AREA

The proposed BRT route connects Madison's far west side to its far east side through the center of the city. Beginning at the east terminus near the East Towne Mall, buses will operate along E. Washington Avenue, a major commercial thoroughfare and connecting highway, to the Capitol Square. Buses will be routed off E. Washington Avenue at Mendota Street to service the Madison Area Technical College. After circling the Capitol Square buses will proceed along State Street, a pedestrian mall with retail shops and bars/restaurants, and through the University of Wisconsin-Madison campus. The route then follows University Avenue, another major commercial thoroughfare, to the Hilldale Shopping Center. Buses will then travel down Segoe Road and Sheboygan Avenue past the Hill Farms State Office Building. From there, the BRT route follows Whitney Way through the University Hill Farms neighborhood to the existing Madison Transit West Transfer Point. Buses will then follow Mineral Point Road, past the West Towne Mall, to the West Towne area and the west terminus at a proposed park-and-ride on Junction Road, just west of the Madison Beltline.

4.1 Environmental Context

The modern landscape of central Dane County was shaped by the movements the Green Bay Lobe of glacial ice during the last glacial maximum. The area has been ice-free since about 19,000 years ago, but lakes formed by glacial meltwater persisted in the area for some time after (Mickelson and Attig 2016). The glaciers left behind till deposits, burying the bedrock by as much as 200 feet (ft) (60 meters [m]) in the vicinity of the Project (Trotta and Cotter 1973). The project area is mantled by glacial till and lake sediments deposited under Glacial Lake Yahara, the precursor of the modern lakes of the Madison region (Mickelson 2007:22–23; Wisconsin Department of Natural Resources [WI DNR] 2015:Map S12). The Project is in an area of glacial till (Clayton and Attig 1997:Plate 1). On and southwest of the isthmus, the glacial terrain is relatively flat and free of drumlins and moraines. The southwestern part of the Project is in an area of gently hummocky glacial till deposits. This till may be covered by thin layers of offshore sediment and/or loess (Clayton and Attig 1997:23–23). On the isthmus are areas of offshore lake sediment, possibly both glacial and post-glacial in origin (Clayton and Attig 1997:32–33, Plate 1). Soils in the region are generally silty and loamy and formed in loess over outwash or glacial till (United States Department of Agriculture—Natural Resources Conservation Service [USDA—NRCS] 2021a, 2021b). At the time of Euroamerican settlement, the project area was covered in oak forest (white oak, black oak, bur oak) with areas of prairie and wetlands (Finley 1976). These vegetation communities had replaced the tundra and boreal forests that grew here at the end of glacial retreat. At present, the BRT project area is entirely urban and suburban, occupied by dense residential and commercial districts.

4.2 Occupational History

The history of the upper Great Lakes region spans approximately 10,000 to 12,000 years of Native American presence and nearly 400 years of Euroamerican occupation and use. Understanding the cultural history of the study area requires a broader cultural milieu. In presenting a general framework within which the archaeological record of the proposed BRT project area may be interpreted, the following overview draws on trends elsewhere in the upper Great Lakes and eastern Wisconsin. General cultural overviews germane to the project area include Benchley et al. (1997); Birmingham et al. (1997); Halsey (1999); and Mason (2002).

4.2.1 Paleoindian Tradition

The Paleoindian tradition, representing the first evidence of human occupation in the upper Great Lakes region, occurred at the end of the Pleistocene epoch as the glaciers began to recede. As the ice retreated,

the landscape supported first a tundra environment, then a boreal forest that eventually gave way to deciduous forest. Wildlife in the region included mega-fauna such as mammoths and mastodons. The Paleoindian tradition is divided by archaeologists into two stages characterized by distinctive point types. The Early Paleoindian stage is distinguished by the presence of fluted points such as Clovis and Folsom and the Late Paleoindian stage by unfluted points (Mason 1997:81–82). Three sites within 1.0 mi (1.6 km) of the APE are reported to have Paleoindian components: 47DA0413, 47DA0817, and 47DA1550 (Appendix B). Site 47DA0817 is a multi-component collection of lithic artifacts from a former farm and overlaps the proposed route alignment and multiple proposed stations.

4.2.2 *Archaic Tradition*

The Archaic tradition (8,000 B.C. to 500 B.C.) overlaps and follows the Paleoindian tradition in Wisconsin. The Archaic is defined in relation to the preceding Paleoindian tradition by changes in projectile point forms, a hunter-forager subsistence base that incorporated a wider range of plant and animal resources relative to the Paleoindian tradition, and evidence of increasing social complexity, including cemeteries and greater interregional exchange (Pleger and Stoltman 2009:697–698; Stoltman 1997:112). During this time, the environmental conditions shifted from a glacial climate to a modern one. The Archaic tradition is sub-divided into Early, Middle, and Late Archaic stages, which are distinguished archaeologically in part by various diagnostic stemmed and notched point styles. The Early Archaic stage is less well understood than the Middle and Late Archaic stages. Fourteen sites within 1.0 mi (1.6 km) of the project area are reported to have Archaic components (Appendix B). These sites primarily feature Early and Late Archaic components (WHS 2021). Other than site 47DA0817, none overlap the APE.

Copper artifacts first appear in the region during the Archaic tradition. Many of these artifacts are associated with the Old Copper complex, a Middle and Late Archaic cultural development with its heartland in eastern Wisconsin (Pleger and Stoltman 2009:704–712). Old Copper sites are most common in the eastern part of the state and very few are recorded in Dane County (Pleger and Stoltman 2009:708; WHS 2021). No Old Copper sites have been reported within 1 mile (mi) (1.6 kilometers [km]) of the project area. A burial complex known as Red Ocher has been defined for the transitional Late Archaic and Early Woodland across much of the Midwest and Great Lakes area (Benchley et al. 1997:107; Pleger and Stoltman 2009:715–718; Ritzenthaler and Quimby 1962). The dates, distribution, and overall configuration of the Red Ocher complex suggest that there is cultural continuity between it and the Old Copper culture, but the distribution of grave goods suggests Red Ocher cultures were more stratified than those that make up the Old Copper complex (Pleger and Stoltman 2009:715–716; Stevenson et al. 1997:144, 146). In Wisconsin, Red Ocher is best known from the eastern part of the state, close to Lake Michigan. Reported Red Ochre sites are unknown in Dane County outside of one isolated find (47DA0448), located over 10 mi (16 km) south of the project area (WHS 2021).

4.2.3 *Woodland Tradition*

The Woodland tradition (500 B.C. to A.D. 1200) saw the advent of ceramics, burial mounds, and agriculture. The appearance of ceramics occurred at different times across Wisconsin, arriving later in the northern part of the state than in the south. In southern Wisconsin, the Woodland tradition is divided into the Early, Middle, and Late stages. The Early Woodland in southern Wisconsin dates between approximately 500 B.C. and 200 B.C. and is best viewed as a transition between the Late Archaic hunting and gathering adaptation and the Woodland horticultural adaptation (Flick 1995; Stevenson et al. 1997:150). Ceramics represent the first phase of this transition, reflecting a shift toward greater residential stability and the means to harvest, process, and store sufficient quantities of resources to make ceramics advantageous. Projectile points characteristic of the Early Woodland include both stemmed varieties (Kramer straight-stemmed points and Waubesa/Dickson/Adena contracting-stemmed points) and possible continued use of earlier Late Archaic styles (e.g. Durst). The Early Woodland stage in southern Wisconsin can be further subdivided into two